

GRE

FEBRURAY 2026

PROJECT ID:
WITH: N/A

4997-05-73

COUNTY:

DOOR

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 = 212



DESIGN DESIGNATION 4997-05-72

A.A.D.T.	2026	=	3,900
A.A.D.T.	2046	=	4,350
D.H.V.		=	478
D.D.		=	60/40
T.		=	7.2%
DESIGN SPEED		=	40
ESALS		=	550,000

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

MARSH AREA

WOODED OR SHRUB AREA



PROFILE

GRADE LINE

ORIGINAL GROUND

MARSH OR ROCK PROFILE
(To be noted as such)

SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC

FIBER OPTIC

GAS

SANITARY SEWER

STORM SEWER

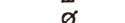
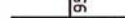
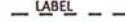
TELEPHONE

WATER

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C STURGEON BAY, SOUTH DULUTH AVENUE

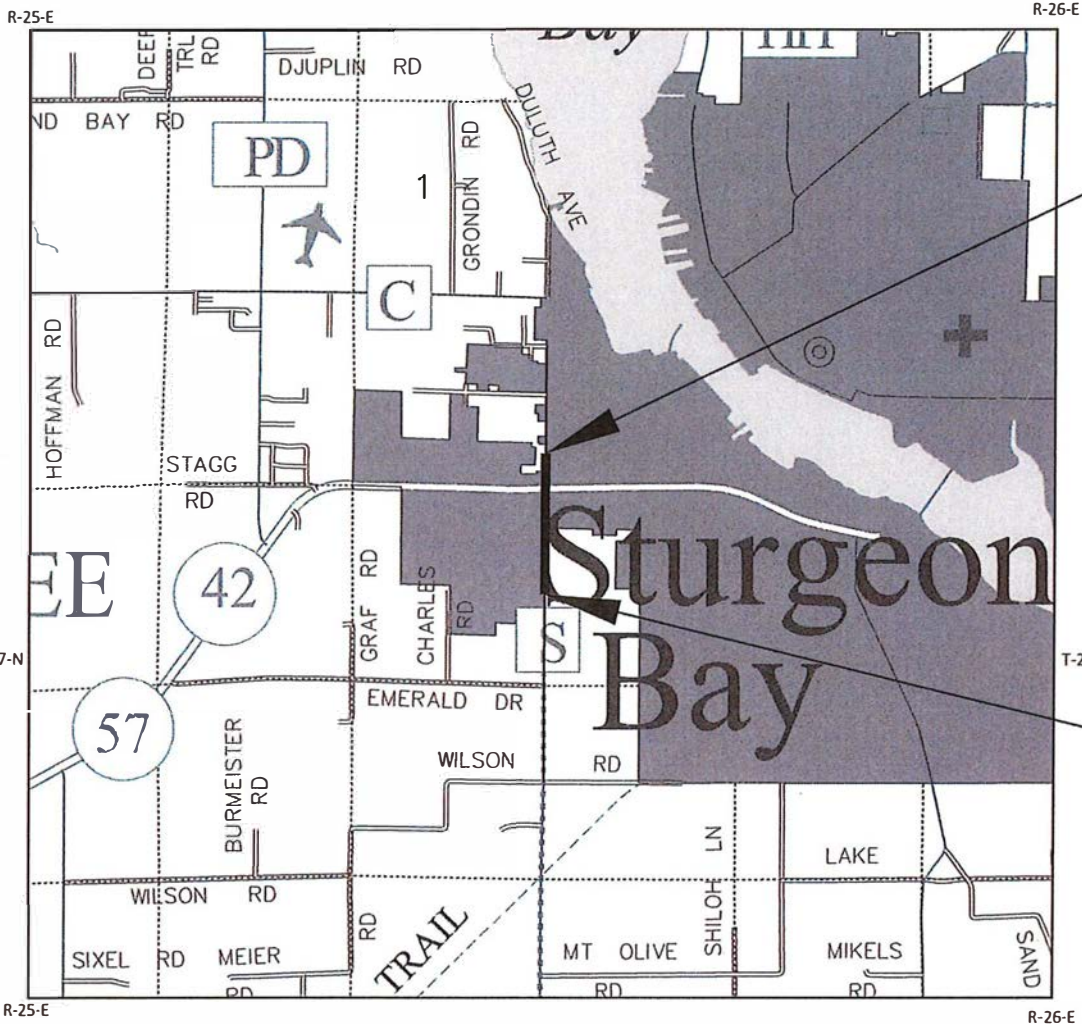
EMERALD DRIVE TO SPRUCE DRIVE

CTH S

DOOR COUNTY

STATE PROJECT NUMBER

4997-05-73



END PROJECT

STA 42+49.03

Y = 153879.063

X = 488501.880

BEGIN PROJECT

STA 9+88.11

Y = 150618.246

X = 488485.556

LAYOUT

SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.618 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN
COORDINATE REFERENCE SYSTEM (WISCRS), DOOR COUNTY,
NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID
COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES
ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED
ELEVATIONS ARE BASED ON GEOID 2018.

STATE PROJECT

4997-05-73

FEDERAL PROJECT

PROJECT

WISC 2026191

CONTRACT

1

ACCEPTED FOR

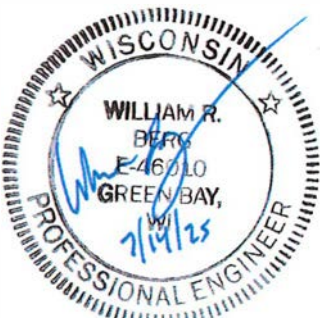
CITY OF STURGEON BAY

7-14-25 *William Berg*

Date (Signature and Title of Official)

Senior Eng. Tech.

ORIGINAL PLANS PREPARED BY



DATE: 7/14/25 *William Berg*

(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor CEDAR CORPORATION

Designer CEDAR CORPORATION

Project Manager KATIE SCHWARTZ, P.E.

Regional Examiner NORTHEAST REGION

Regional Supervisor KIMBERLY SLEZAK, P.E.

APPROVED FOR THE DEPARTMENT

7/14/2025

DATE: (Signature)

E

GENERAL NOTES

THE LOCATIONS 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.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

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

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

RADIUS DIMENSIONS FOR THE CURB AND GUTTER ARE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.

CURVE DATA IS BASED ON THE ARC DEFINITION.

CURB AND GUTTER PLAN GRADES ARE AT THE FLANGE LINE UNLESS OTHERWISE NOTED.

SAWCUTS, AS SHOWN ON THE PLANS, ARE SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING, PLACING CONCRETE (INCLUDING CURING) OR PIPE REMOVAL OR LAYING OPERATIONS WHICH REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS EXCEPT FOR THE PURPOSE OF CONCRETE CURING. IF A LANDOWNER HAS MULTIPLE DRIVEWAYS, MAINTAIN FULL ACCESS TO AT LEAST ONE (1) DRIVEWAY AT ALL TIMES.

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- CURB RAMP DETAILS
- EROSION CONTROL DETAILS
- STORM SEWER DETAILS
- PERMANENT SIGNING & PAVEMENT MARKING DETAILS
- TRAFFIC CONTROL SIGNAL DETAILS
- TEMPORARY TRAFFIC CONTROL DETAILS
- DETOUR MAP (BY OTHERS, FOR INFORMATION ONLY)
- ALIGNMENT DATA DETAILS

UTILITIES CONTACTS

AT&T DISTRIBUTION
TELECOMS/INTERNET
KYLE WEBER
205 S JEFFERSON ST
GREEN BAY, WI 54301
PHONE: (920) 221-5969
EMAIL: kw715w@att.com

CHARTER COMMUNICATIONS
TELECOMS/INTERNET
ERIC VERTZ
2580 W MASON ST.
GREEN BAY, WI 54303
PHONE: (920) 831-9228
EMAIL: Eric.Vertz@charter.com

NET LEC LLC
TELECOMS/INTERNET
RICK VINCENT
470 SECURITY BOULEVARD
GREEN BAY, WI 54313
PHONE: (920) 617-7316
EMAIL: rick.vincent@nsight.com

DOOR COUNTY FIBER OPTIC UTILITY
FIBER OPTIC
ASHLEY DEGRAVE
421 NEBRASKA STREET - TECH SERVICES
STURGEON BAY, WI 54235
PHONE: (920) 746-2395
EMAIL: adegrave@co.door.wi.us

STURGEON BAY UTILITIES
ELECTRIC
JASON BIERI - ELECTRIC MANAGER
230 E. VINE STREET, PO BOX 27
STURGEON BAY, WI 54235-0027
PHONE: (920) 746-2820
EMAIL: jbieri@sbunet.com

STURGEON BAY UTILITIES
SANITARY/WATER
JEFF HOFFMAN - WATER AND SANITARY MANAGER
230 E. VINE STREET, PO BOX 27
STURGEON BAY, WI 54235-0027
PHONE: (920) 746-2820
EMAIL: jhoffman@sbunet.com

WISCONSIN PUBLIC SERVICE
ELECTRIC
JUSTIN VEESER
44 N 14TH AVE
STURGEON BAY, WI 54235
PHONE: (920) 746-3059
EMAIL: justin.veeser@wisconsinpublicservice.com

WISCONSIN PUBLIC SERVICE
GAS
KASEY KAPPELMAN
800 COLUMBUS ST
TWO RIVERS, WI 54241
PHONE: (920) 657-1862
EMAIL: kasey.kappelman@wisconsinpublicservice.com

DIGGERSHOTLINE

Dial 811 or (800)242-8511

www.DiggersHotline.com

DESIGN PROJECT LEADER

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GREEN BAY, WI 54311
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CITY OF STURGEON BAY

BRIAN SPETZ
SENIOR ENGINEERING TECHNICIAN
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EMAIL: bspetz@sturgeonbaywi.gov

DESIGN PROJECT MANAGER

KATIE SCHWARTZ, P.E.
NORTHEAST REGION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
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EMAIL: katiea.schwartz@dot.wi.gov

DOOR COUNTY HIGHWAY

THAD ASH
HIGHWAY COMMISSIONER
1001 S DULUTH AVE
STURGEON BAY, WI 54235
PHONE: (920) 746-2504
EMAIL: tash@co.door.wi.us

WISCONSIN DNR LIAISON

MATT SCHAEVE
NORTHEAST REGION
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: (920) 366-1544
EMAIL: matthew.schaeve@wisconsin.gov

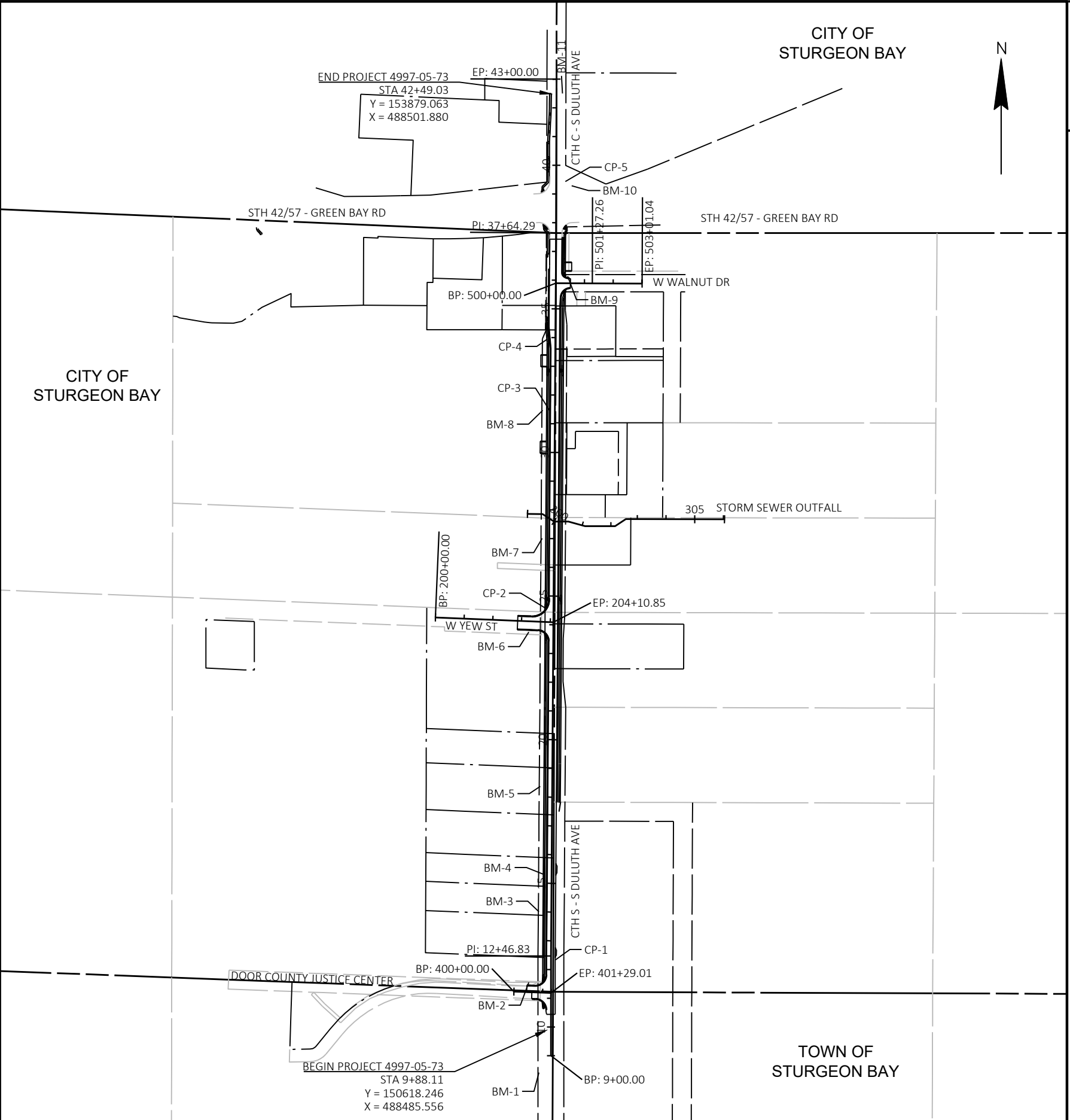
RUNOFF COEFFICIENT TABLE

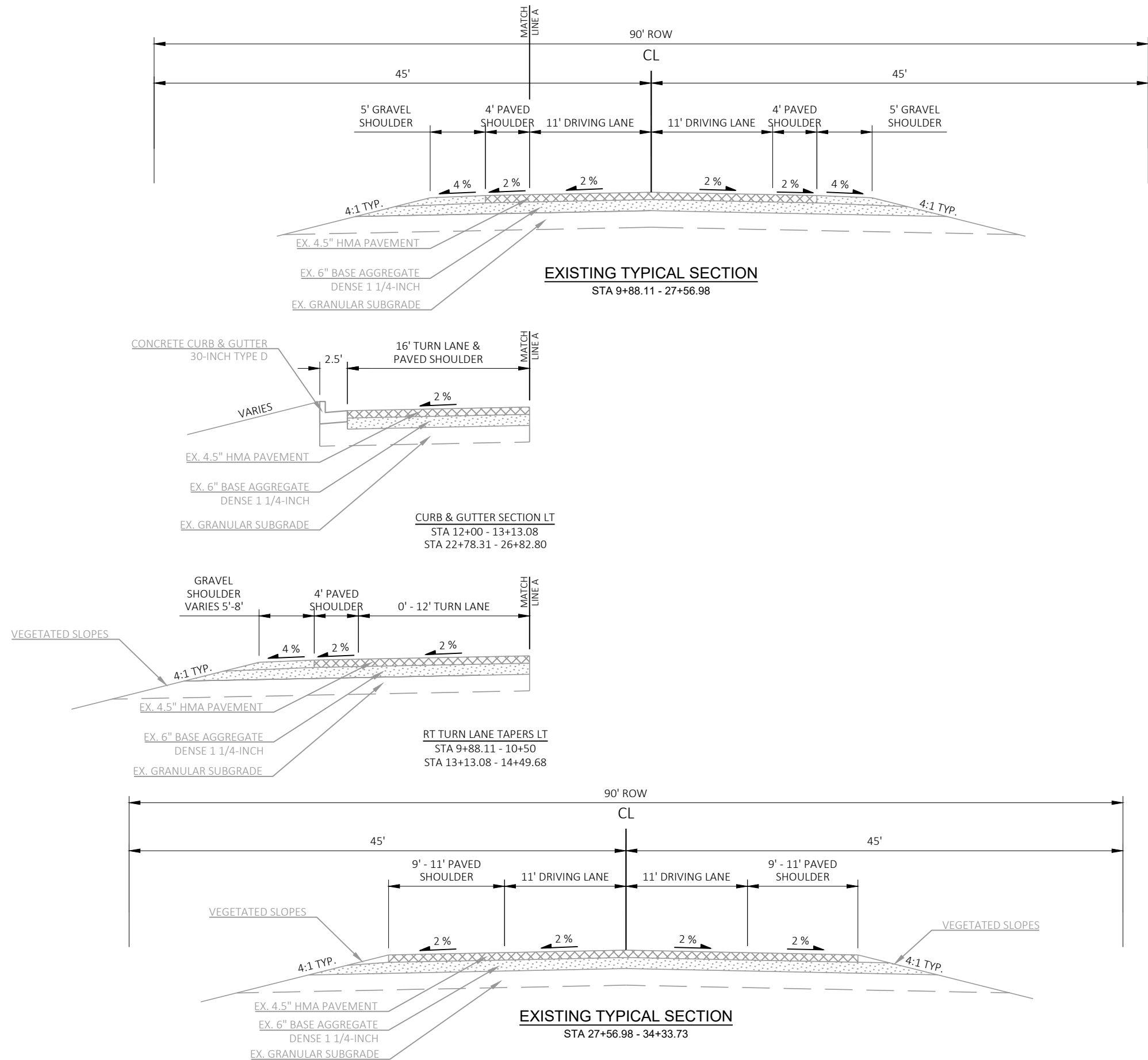
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26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

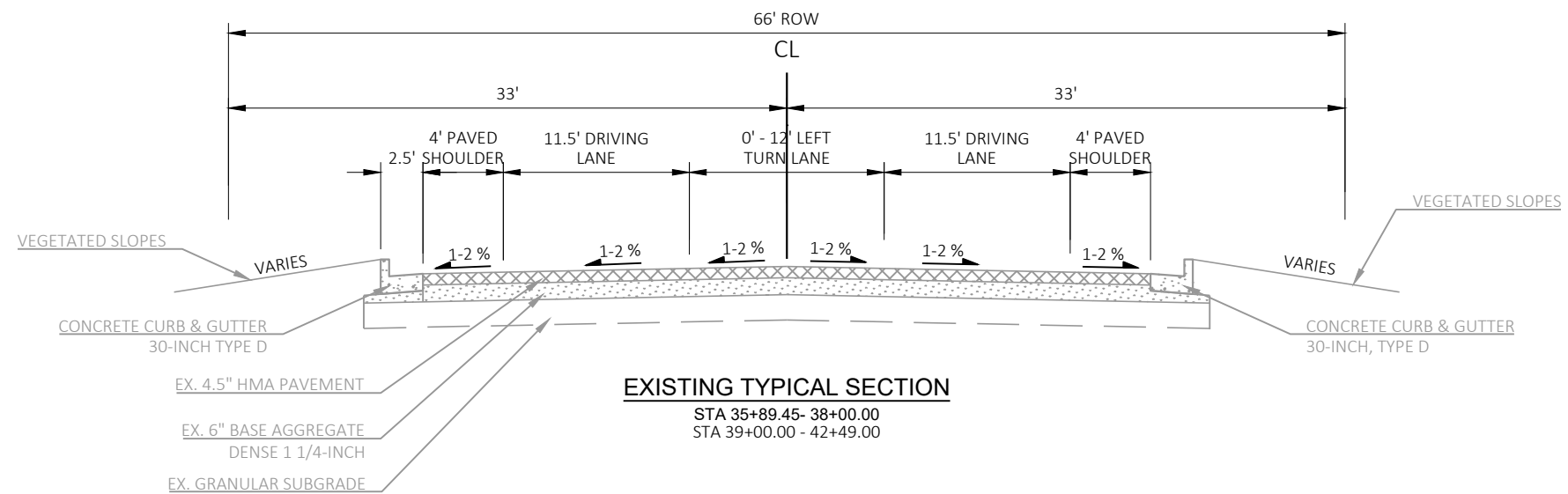
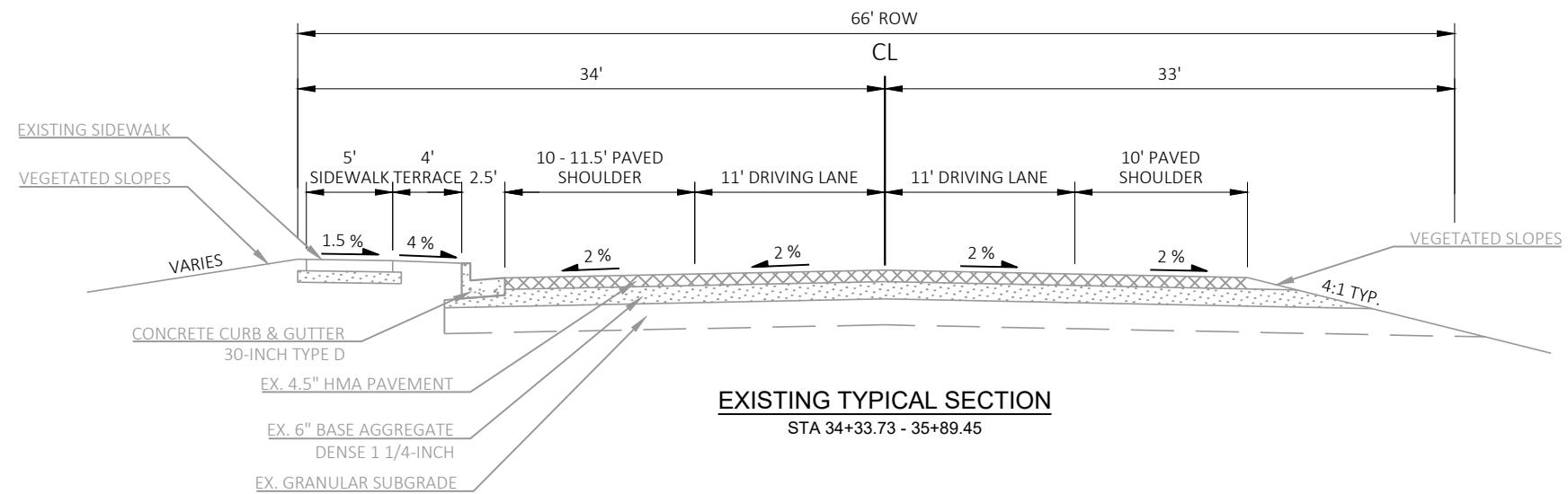
TOTAL PROJECT AREA = 7.855 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.488 ACRES

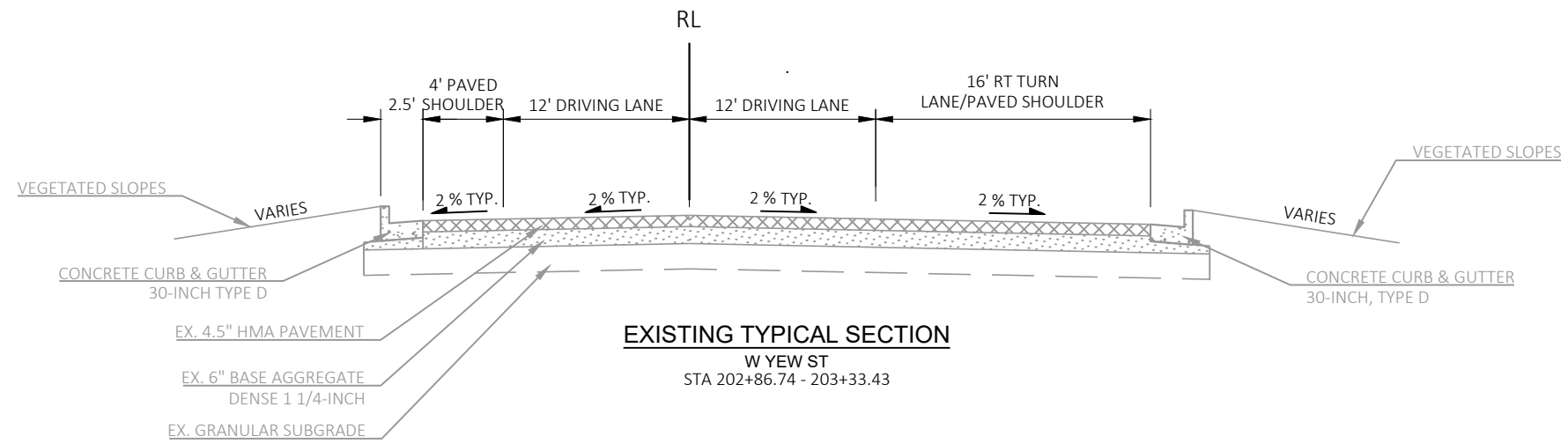
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-1	N/A, LT	721.36	NW FLANGE BOLT ON HYD AT APPROX 150 FT SOUTH OF PROJECT LIMITS
BM-2	11+54.36, 77.50' LT	721.51	BURY BOLT ON HYD AT NW QUADRANT AT ENTRANCE TO CIRCUIT COURT
BM-3	14+00.33, 43.04' LT	716.05	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-4	15+30.96, 28.38' LT	715.40	NORTH RIM OF SANITARY MANHOLE
BM-5	18+37.13, 41.72' LT	713.43	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-6	23+74.27, 85.24' LT	706.96	BURY BOLT ON HYD, SW QUADRANT AT W YEW ST
BM-7	27+00.71, 41.13' LT	703.89	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-8	31+46.48, 41.82' LT	702.20	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-9	36+14.97, 41.36' RT	698.66	NW FLANGE BOLT OH HYD, NE QUADRANT AT W WALNUT ST
BM-10	39+28.08, 54.04' RT	694.98	BURY BOLT ON HYD, NE QUADRANT AT STH 42/STH 57
BM-11	42+50.62, 21.04' RT	693.71	BURY BOLT ON HYD, EAST SIDE OF ROAD

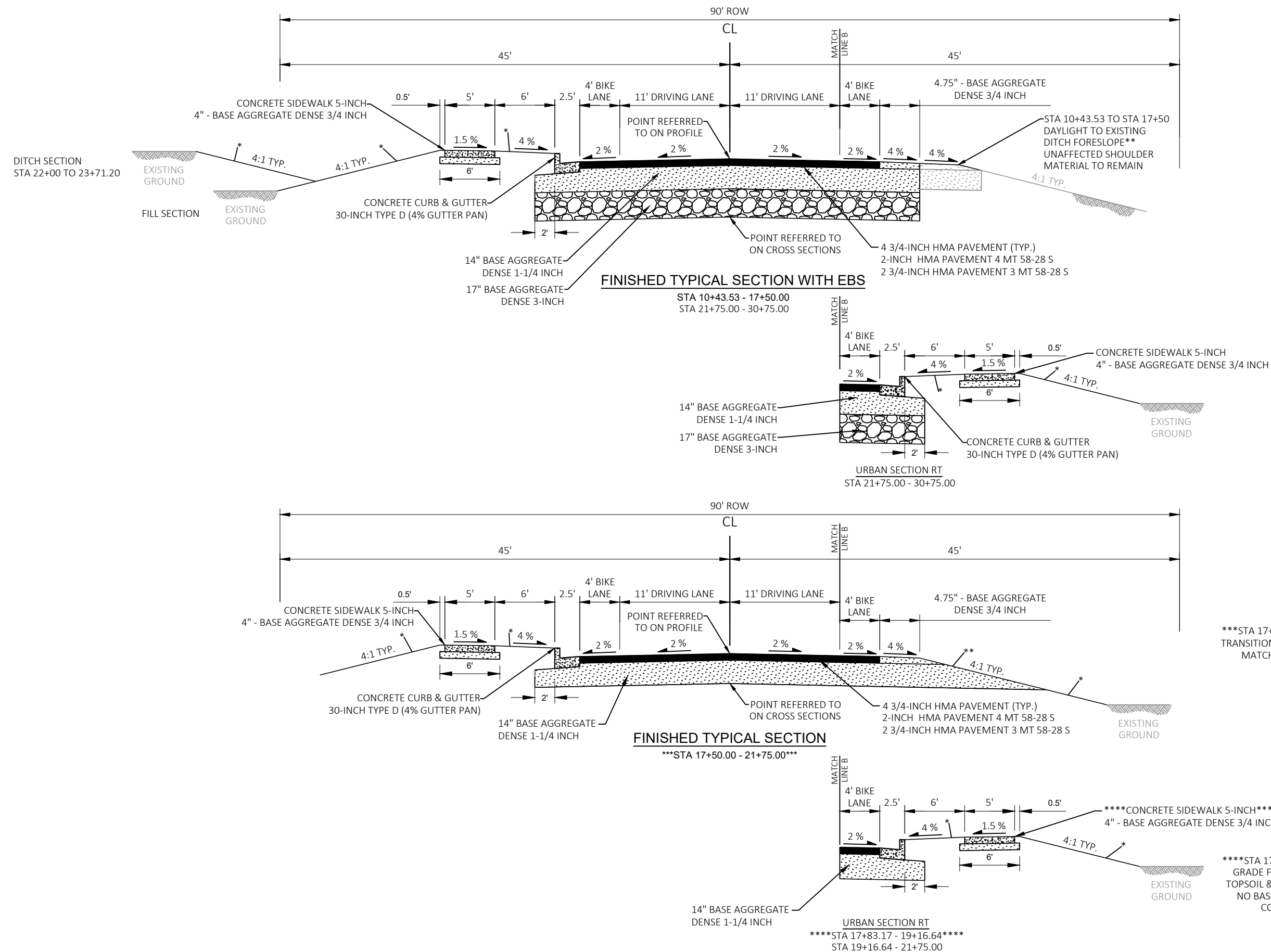
CONTROL POINTS					
NO.	STATION	ELEV.	X COORD.	Y COORD.	DESCRIPTION
CP-1	12+33.10, 16.06' RT	718.52	488516.829	150863.210	EXISTING CONTROL POINT, MAG NAIL AT EAST EDGE OF ROAD
CP-2	24+58.90, 29.42' LT	704.62	488479.943	152089.200	EXISTING CONTROL POINT, MAG NAIL IN ROAD
CP-3	31+46.48, 17.82' LT	701.56	488496.410	152776.685	EXISTING CONTROL POINT, MAG NAIL IN ROAD
CP-4	33+94.82, 28.09' LT	699.10	488487.895	153025.086	EAST RIM OF STORM MANHOLE, WEST SIDE OF ROAD
CP-5	39+43.91, 50.09' LT	693.43	488550.648	153573.892	NORTH RIM OF SANITARY MANHOLE, NE QUADRANT AT STH 42/STH 57

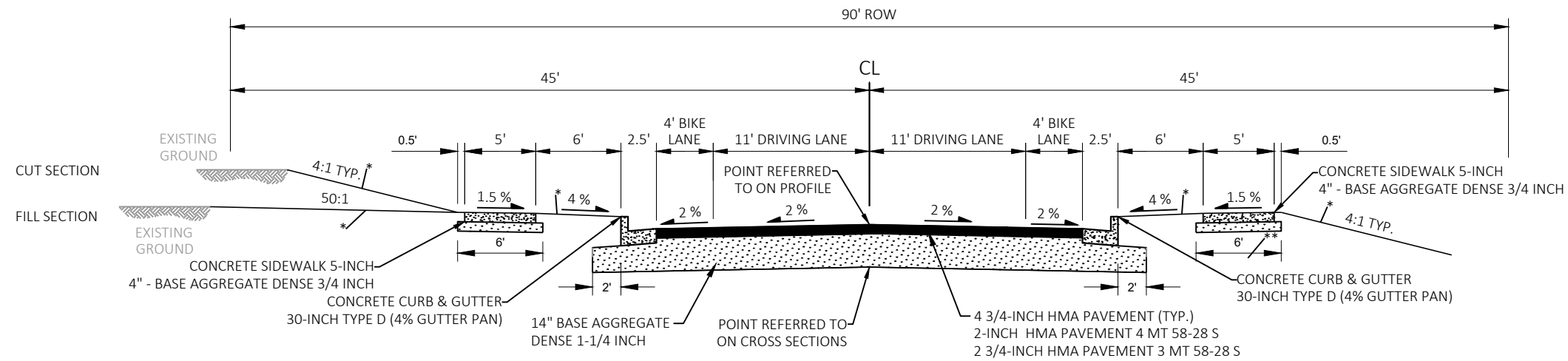




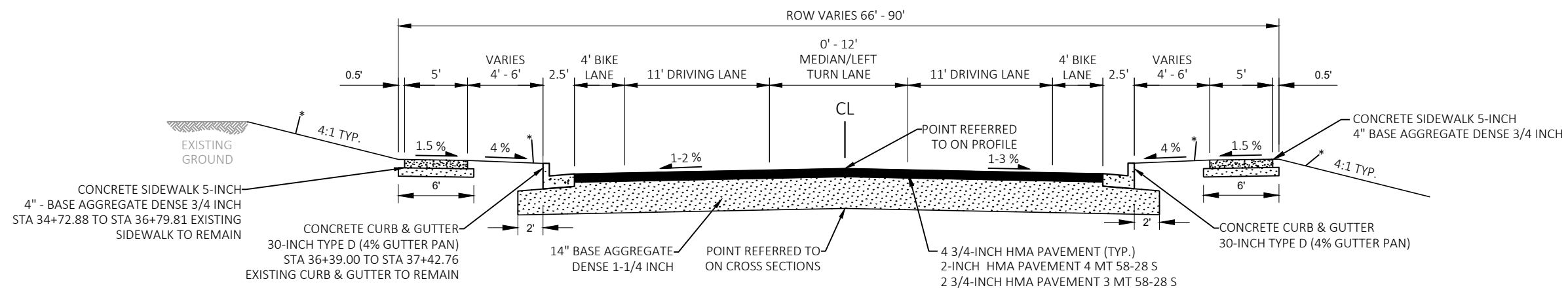




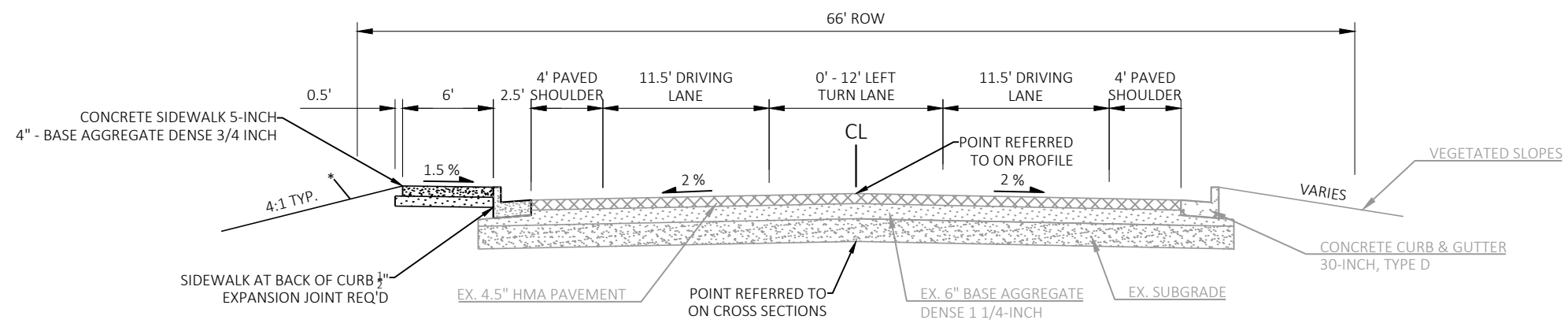


**FINISHED TYPICAL SECTION**

STA 30+75.00 - 33+60.49

**FINISHED TYPICAL SECTION**

STA 33+62.49 - 37+42.76

**FINISHED TYPICAL SECTION**

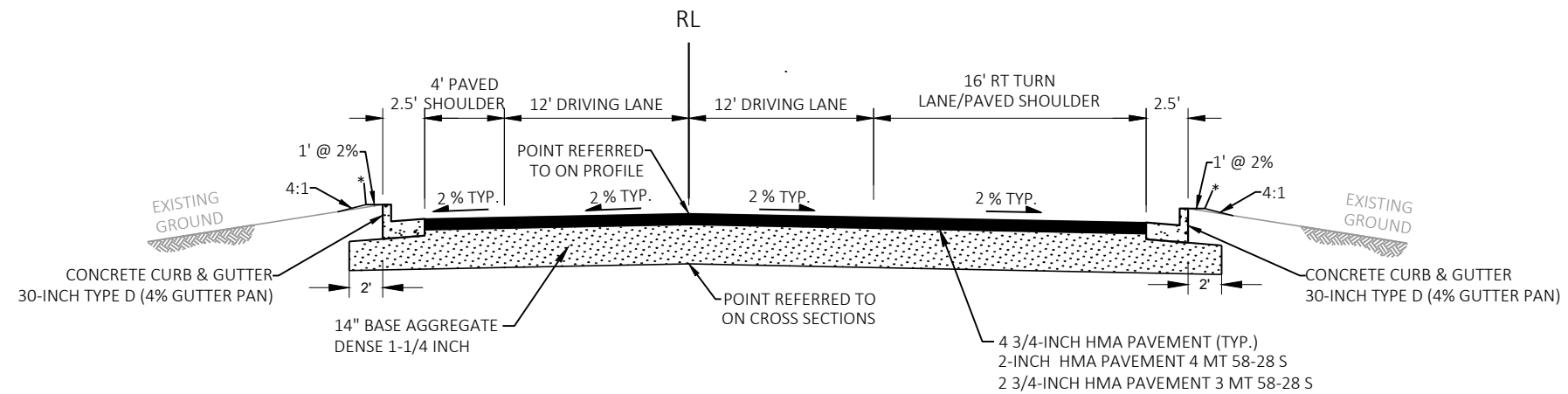
STA 39+00.00 - 42+49.00

NOTES:

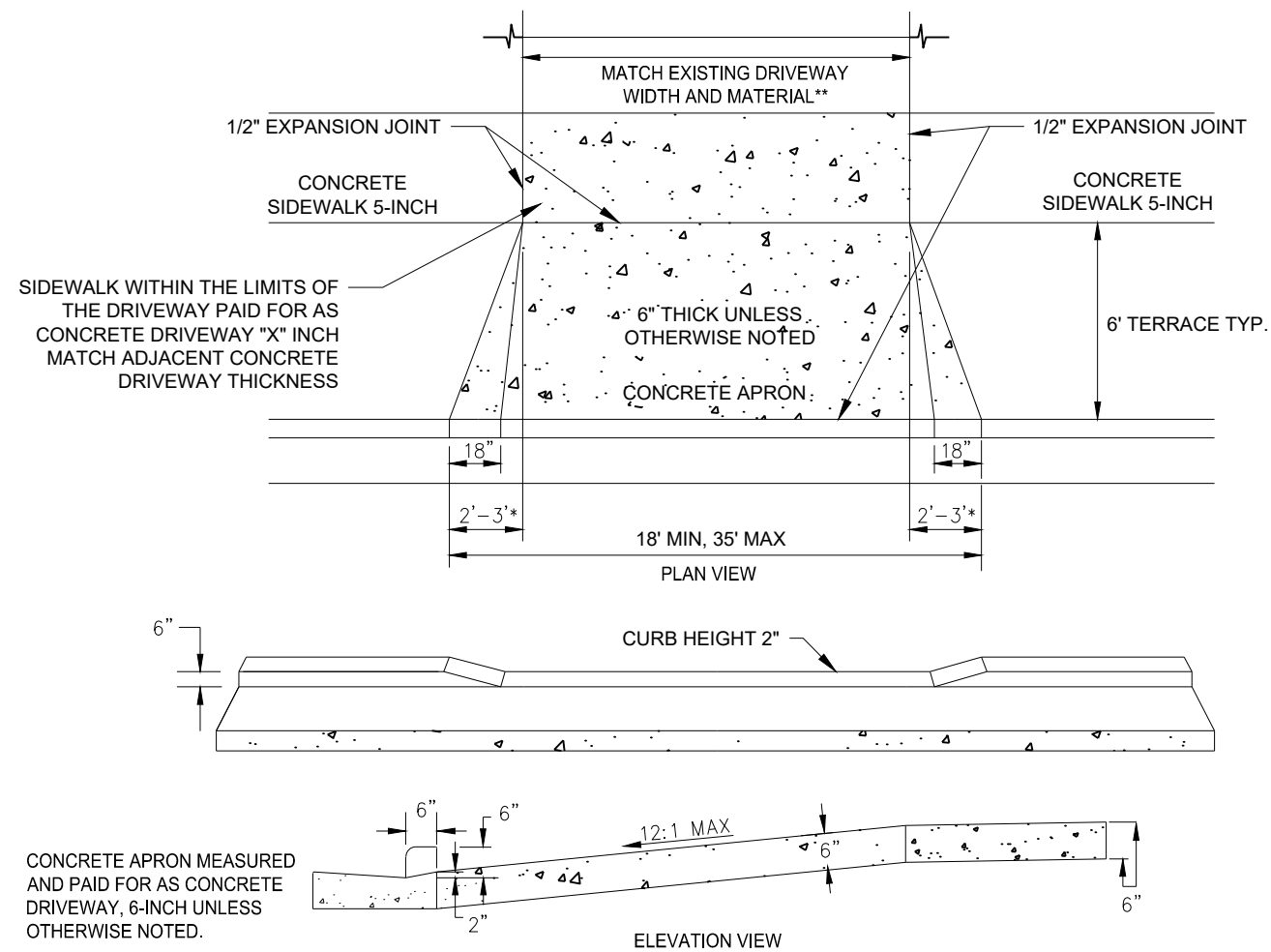
*RESTORE AREA WITH TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B

**OVERSEED GRAVEL WITH SEEDING MIXTURE NO. 40 & FERTILIZER TYPE B

NOTES:
*RESTORE AREA WITH TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, & EROSION MAT URBAN CLASS I TYPE B

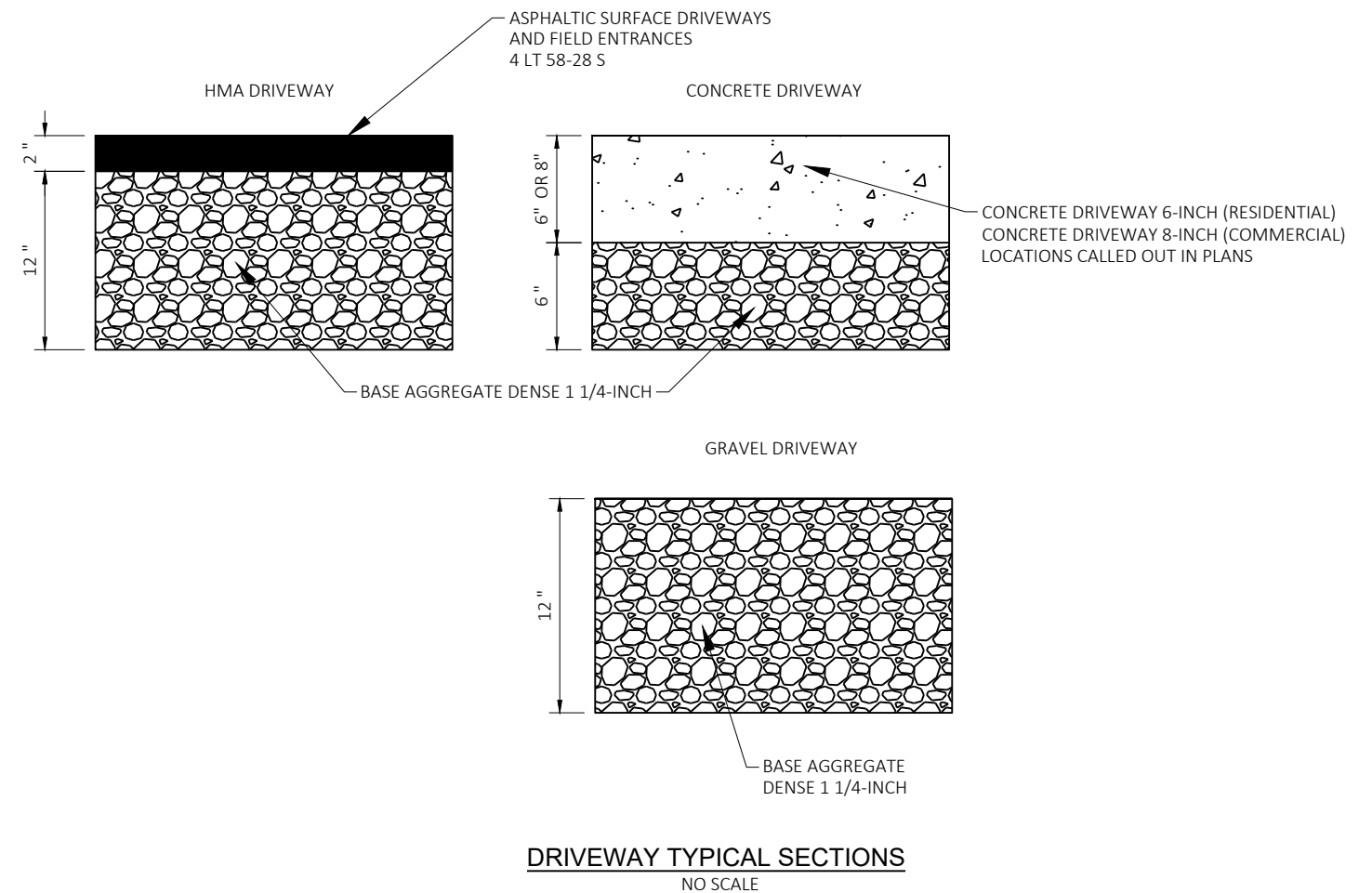
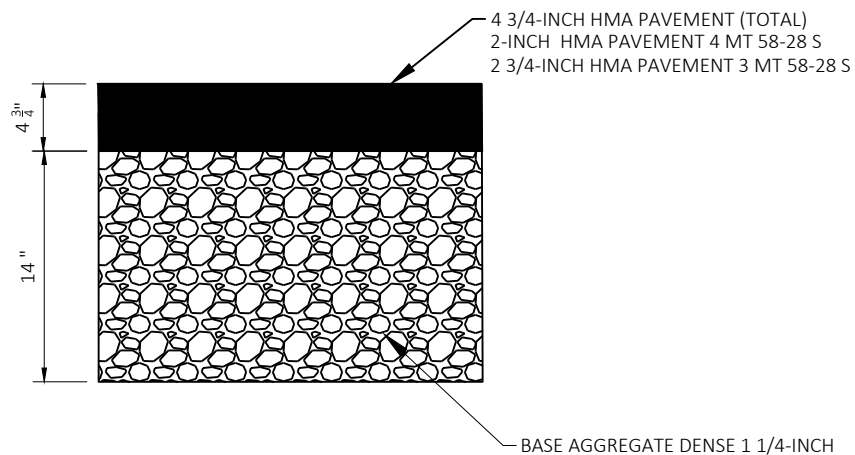


FINISHED TYPICAL SECTION
W YEWS ST
STA 202+86.74 - 203+33.43

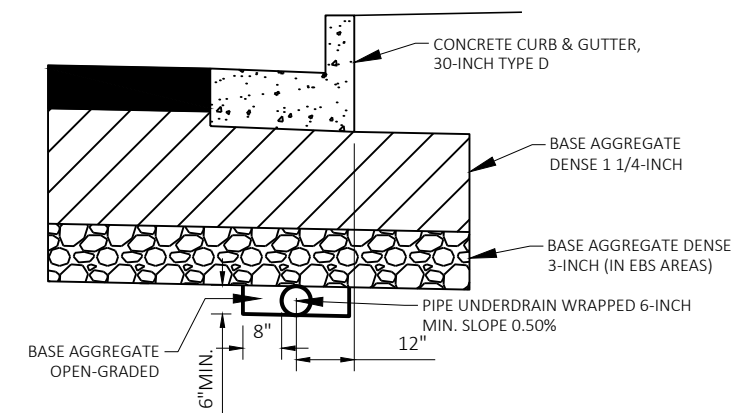


SIDE ROAD TYPICAL SECTIONS
NO SCALE

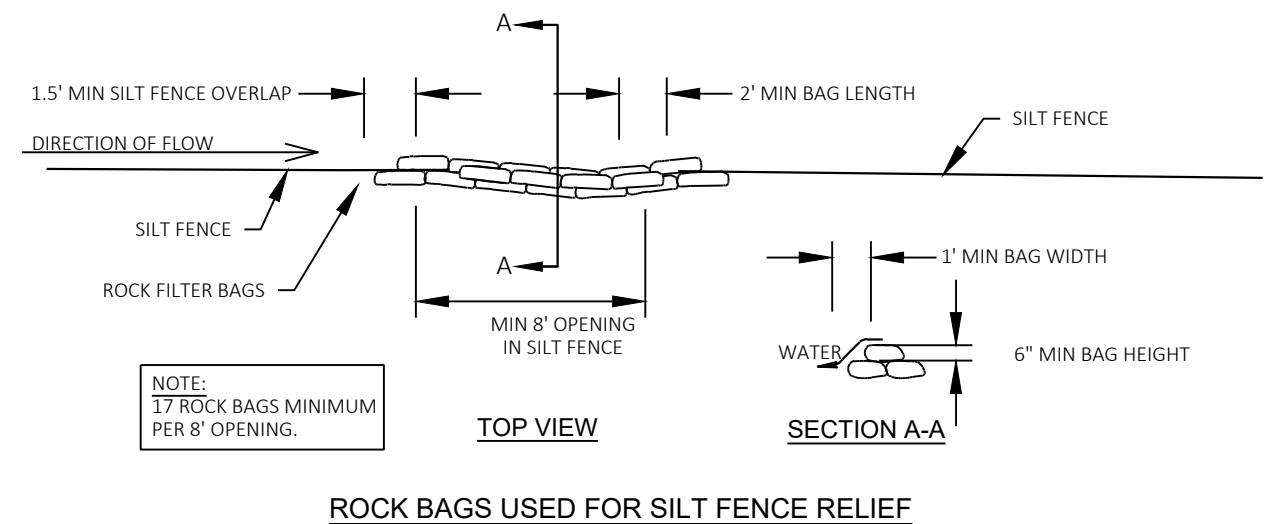
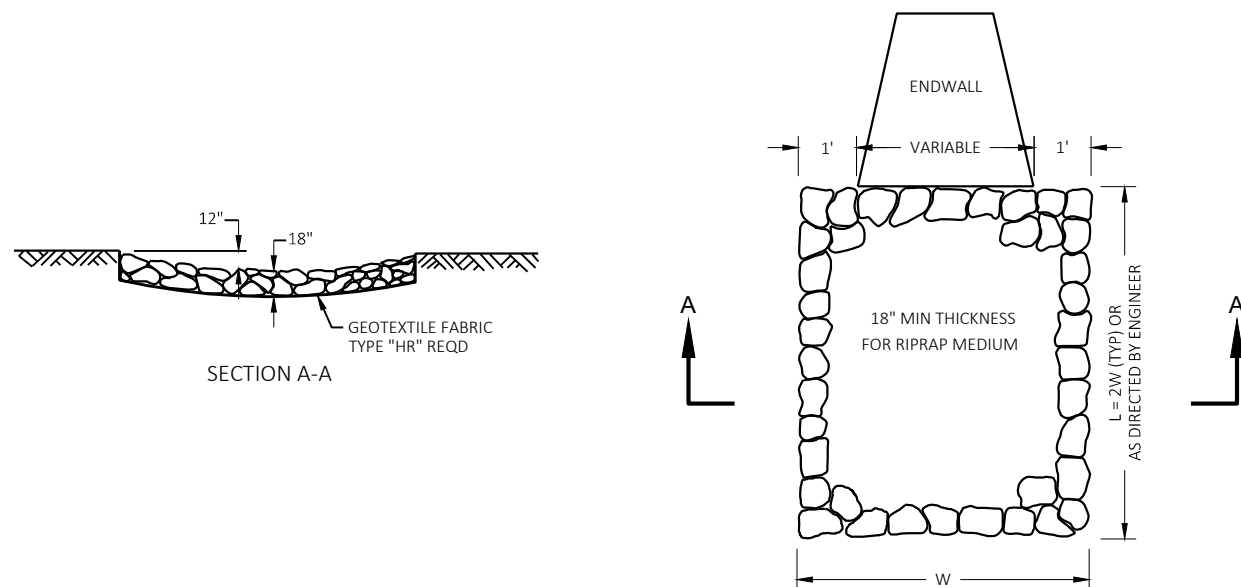
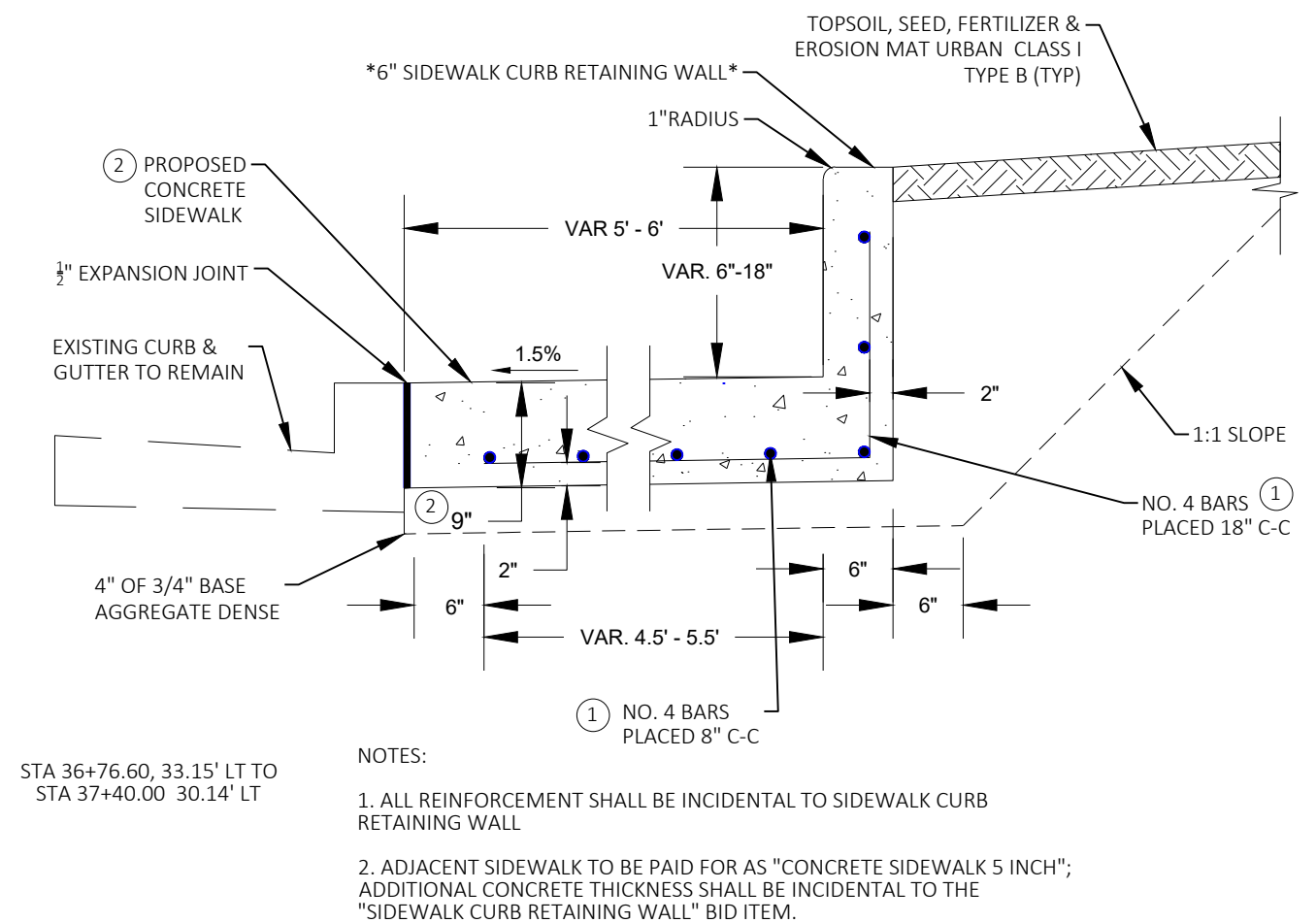
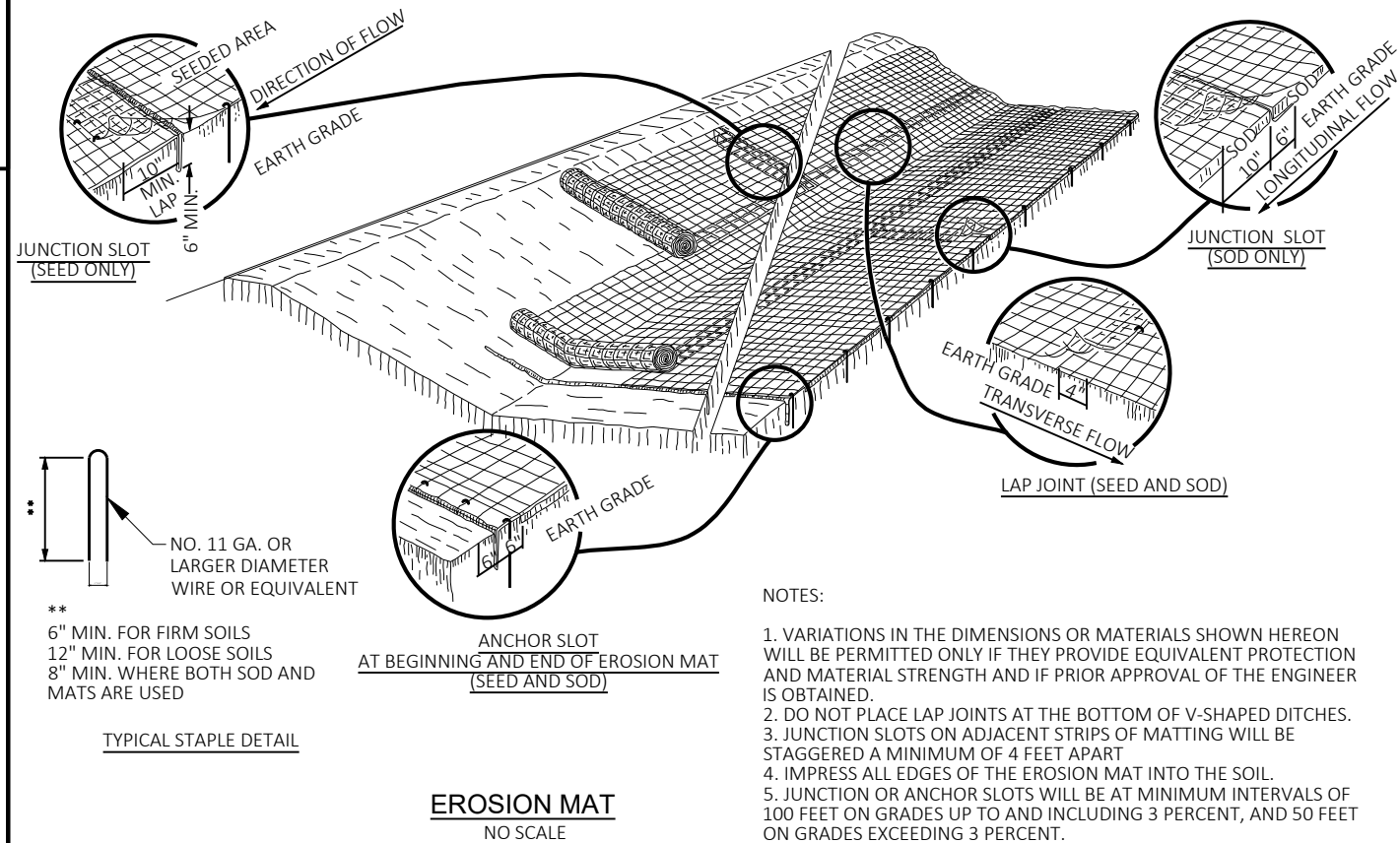
CIRCUIT COURT DRIVEWAY
W WALNUT AVE

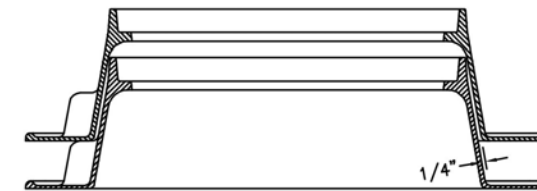
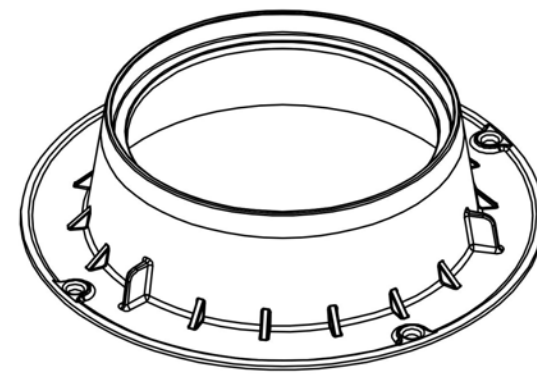
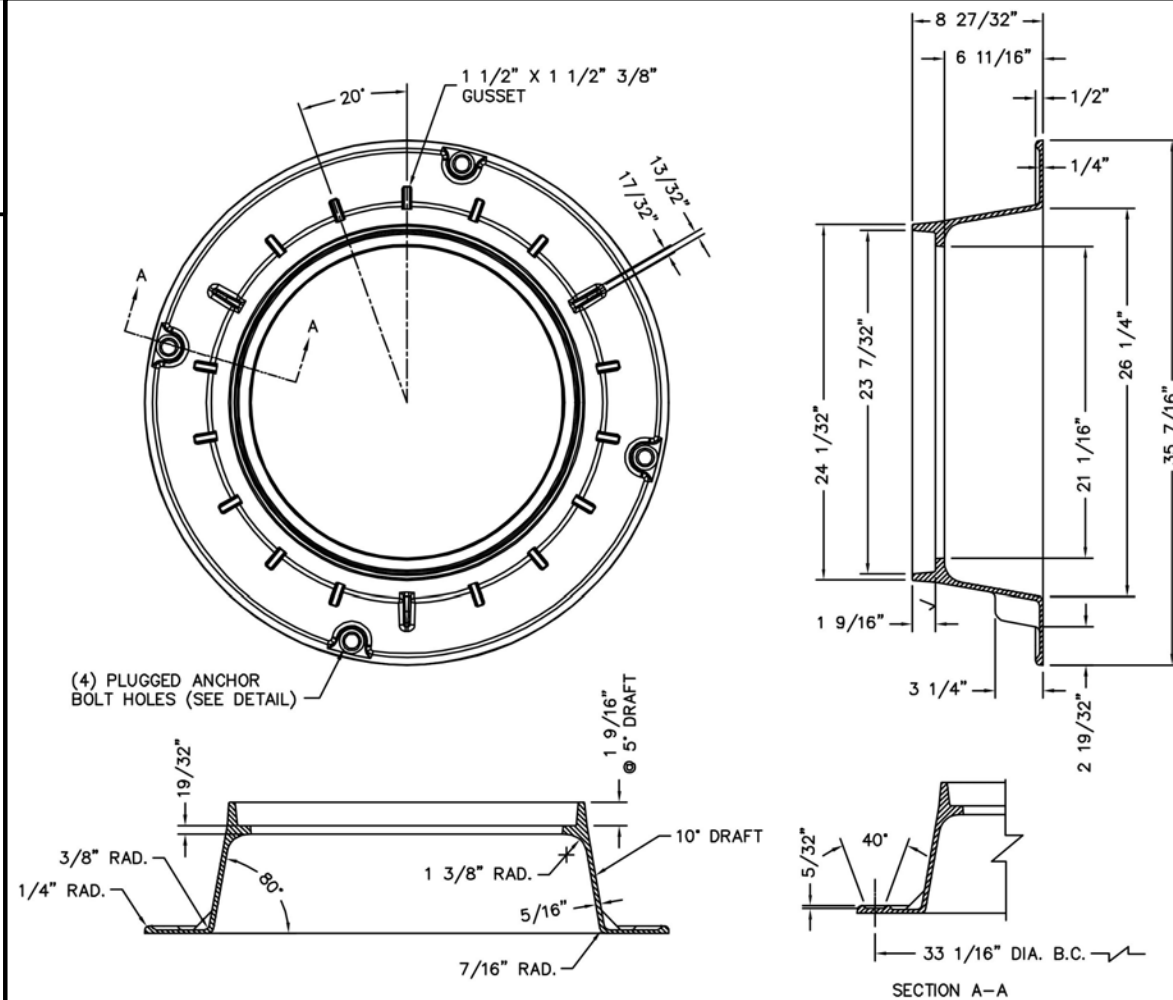


EDGEDRAIN DETAIL
NO SCALE



- NOTES:
1. CONNECT EDGEDRAIN TO INLETS AND CATCH BASINS 2X3-FT ACCORDING TO STANDARD SPEC 611.3 AND S.D.D. 8D-15A, 8D-15B.
 2. EDGEDRAIN TO EXTEND UPSTREAM 50' FROM CONNECTED INLET AT EACH LOCATION.
 3. EDGEDRAIN CONNECTIONS, AND EXCAVATION SHALL BE INCIDENTAL TO LENGTH OF PIPE UNDERDRAIN WRAPPED 6-INCH.
 4. BASE AGGREGATE OPEN-GRADED BACKFILL SHALL BE PAID FOR UNDER SEPARATE BID ITEM.



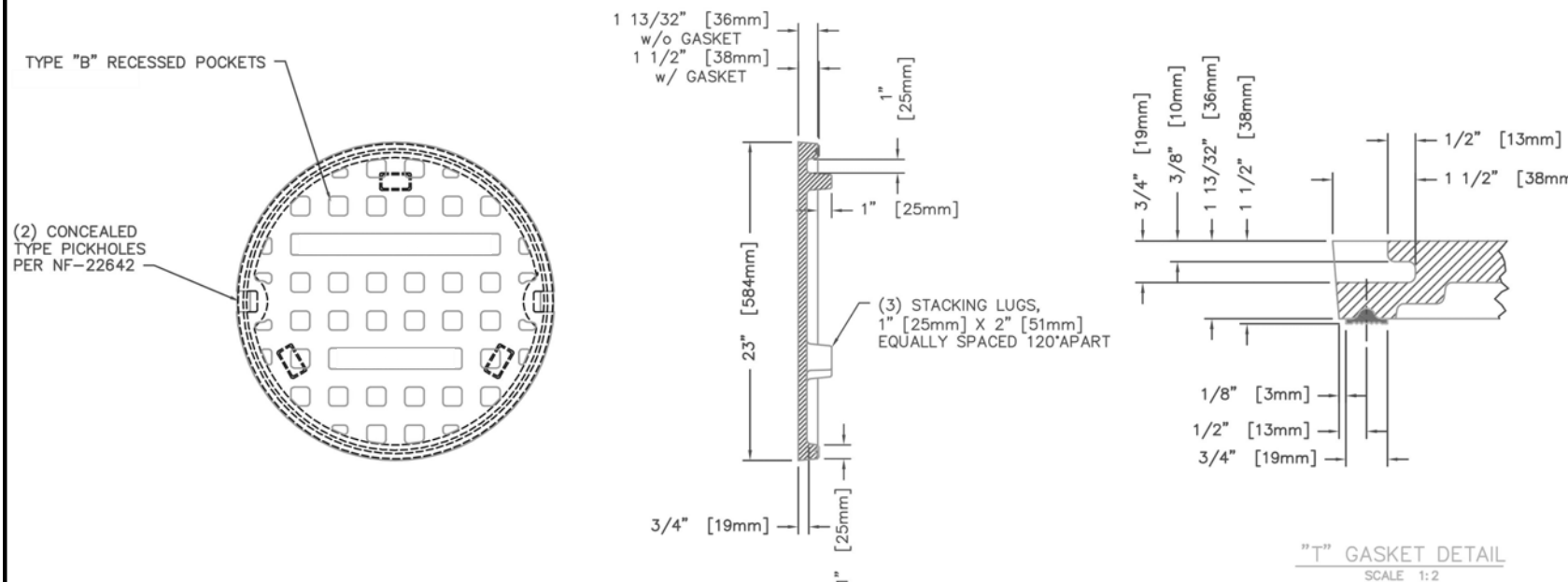


STACKING DETAIL

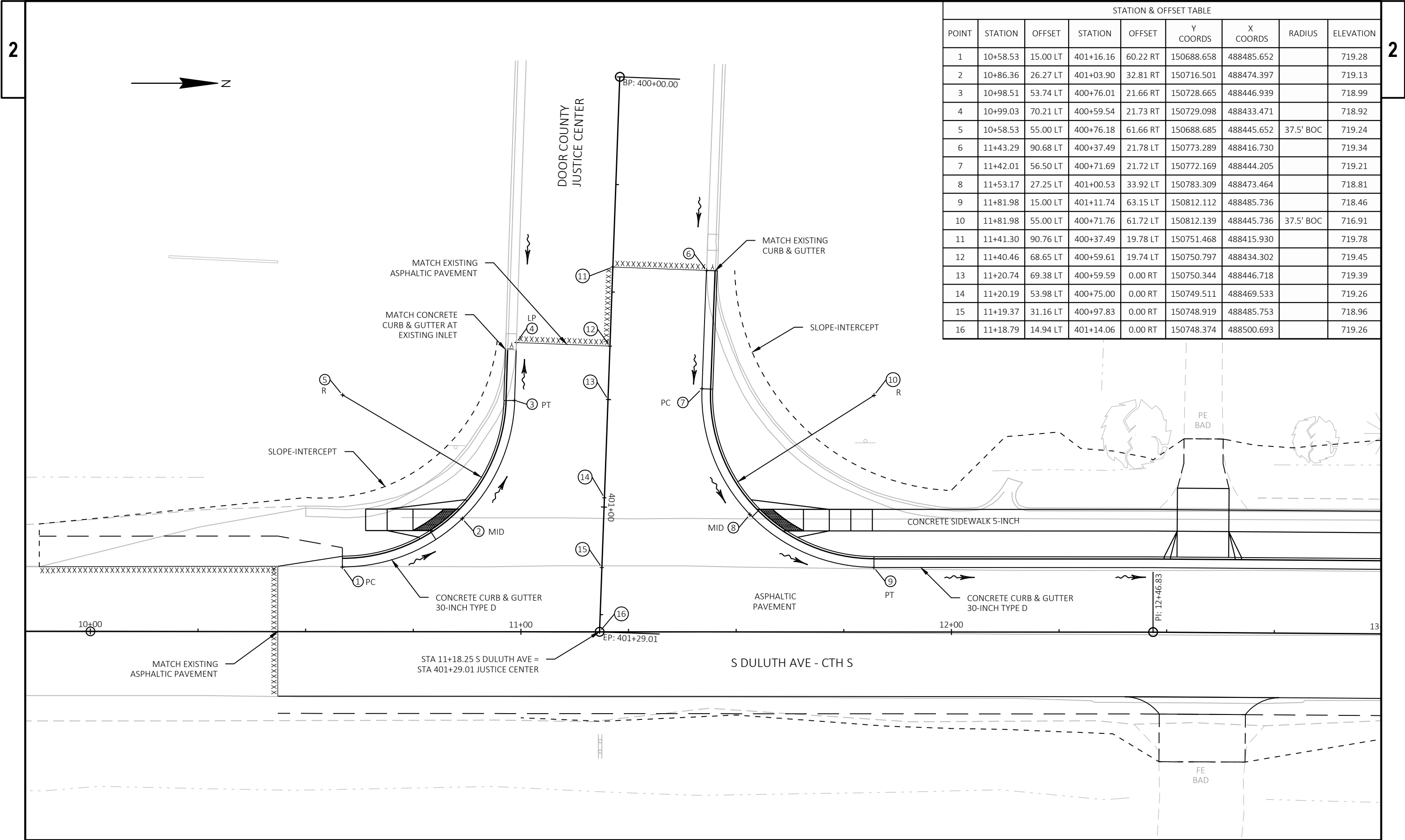
NOTES: MEETS LOADING REQUIREMENTS OF HS-25.
MADE IN THE USA.
QUALIFIES FOR "LEED" CREDITS.
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 40A
FINISH: NO PAINT
WEIGHT: 116# WAS 1050T09

NOTES:

USE SPECIFIED CASTING AND COVER OR
APPROVED EQUAL FOR SANITARY MANHOLES.

SANITARY MANHOLE CASTING DETAILSANITARY MANHOLE COVER DETAIL

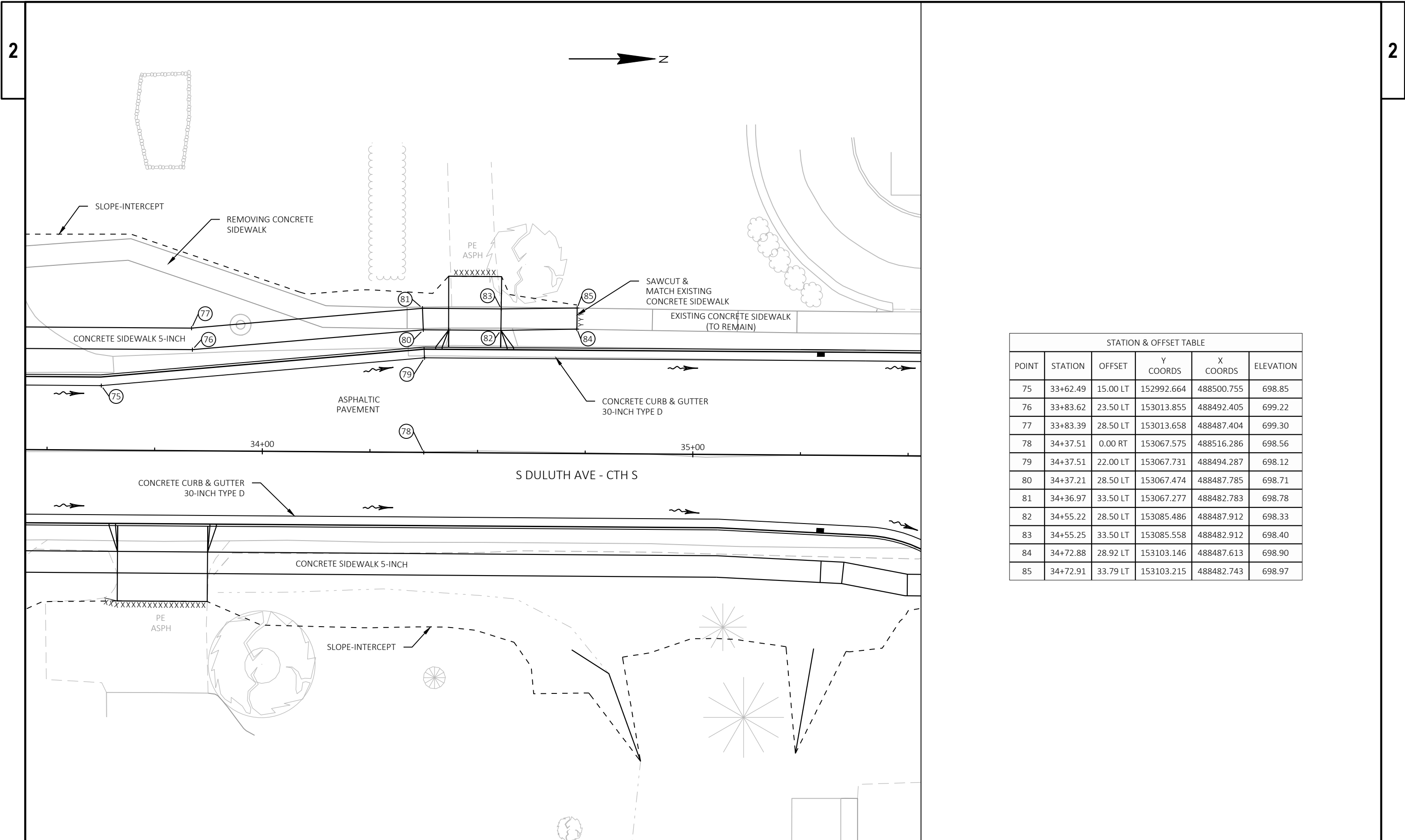
NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND [METRIC]
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT
WEIGHT: 90#



STATION & OFFSET TABLE								
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	RADIUS	ELEVATION
1	10+58.53	15.00 LT	401+16.16	60.22 RT	150688.658	488485.652		719.28
2	10+86.36	26.27 LT	401+03.90	32.81 RT	150716.501	488474.397		719.13
3	10+98.51	53.74 LT	400+76.01	21.66 RT	150728.665	488446.939		718.99
4	10+99.03	70.21 LT	400+59.54	21.73 RT	150729.098	488433.471		718.92
5	10+58.53	55.00 LT	400+76.18	61.66 RT	150688.685	488445.652	37.5' BOC	719.24
6	11+43.29	90.68 LT	400+37.49	21.78 LT	150773.289	488416.730		719.34
7	11+42.01	56.50 LT	400+71.69	21.72 LT	150772.169	488444.205		719.21
8	11+53.17	27.25 LT	401+00.53	33.92 LT	150783.309	488473.464		718.81
9	11+81.98	15.00 LT	401+11.74	63.15 LT	150812.112	488485.736		718.46
10	11+81.98	55.00 LT	400+71.76	61.72 LT	150812.139	488445.736	37.5' BOC	716.91
11	11+41.30	90.76 LT	400+37.49	19.78 LT	150751.468	488415.930		719.78
12	11+40.46	68.65 LT	400+59.61	19.74 LT	150750.797	488434.302		719.45
13	11+20.74	69.38 LT	400+59.59	0.00 RT	150750.344	488446.718		719.39
14	11+20.19	53.98 LT	400+75.00	0.00 RT	150749.511	488469.533		719.26
15	11+19.37	31.16 LT	400+97.83	0.00 RT	150748.919	488485.753		718.96
16	11+18.79	14.94 LT	401+14.06	0.00 RT	150748.374	488500.693		719.26

STATION & OFFSET TABLE								
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	RADIUS	ELEVATION
31	23+42.06	15.00 LT	203+98.10	67.13 RT	151972.256	488493.532		704.83
32	23+69.85	26.23 LT	203+85.94	39.73 RT	152000.125	488482.499		704.69
33	23+82.03	53.62 LT	203+58.16	28.47 RT	152012.504	488455.200		704.54
34	23+82.47	66.28 LT	203+45.49	28.46 RT	152013.032	488442.542		704.50
35	23+84.76	124.94 LT	202+86.79	28.14 RT	152015.741	488383.901		705.14
36	23+42.06	55.00 LT	203+58.12	68.47 RT	151972.539	488453.533	37.5' BOC	704.97
37	24+28.85	123.45 LT	202+86.79	15.97 LT	152059.818	488385.696		705.47
38	24+27.74	87.83 LT	203+22.43	16.06 LT	152058.453	488421.309		705.05
39	24+27.40	76.83 LT	203+33.43	16.09 LT	152058.039	488432.306		704.86
40	24+44.31	33.23 LT	203+76.45	34.45 LT	152074.633	488476.030		704.06
41	24+87.38	15.00 LT	203+93.21	78.11 LT	152117.572	488494.561		703.59
42	24+08.71	0.00 RT	204+10.85	0.00 RT	152038.806	488509.004		704.48
43	24+09.22	15.03 LT	203+95.81	0.00 RT	152039.419	488493.976		704.34
44	24+09.92	35.83 LT	203+75.00	0.00 RT	152040.266	488473.183		704.67
45	24+10.76	60.82 LT	203+50.00	0.00 RT	152041.283	488448.204		705.09
46	24+11.60	85.80 LT	203+25.00	0.00 RT	152042.301	488423.224		705.34
47	24+12.89	123.99 LT	202+86.79	0.00 RT	152043.857	488385.046		705.74
48	24+87.38	75.00 LT	203+33.25	76.09 LT	152117.997	488434.563	57.5' BOC	701.43

STATION & OFFSET TABLE								
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	RADIUS	ELEVATION
31	23+42.06	15.00 LT	203+98.10	67.13 RT	151972.256	488493.532		704.83
32	23+69.85	26.23 LT	203+85.94	39.73 RT	152000.125	488482.499		704.69
33	23+82.03	53.62 LT	203+58.16	28.47 RT	152012.504	488455.200		704.54
34	23+82.47	66.28 LT	203+45.49	28.46 RT	152013.032	488442.542		704.50
35	23+84.76	124.94 LT	202+86.79	28.14 RT	152015.741	488383.901		705.14
36	23+42.06	55.00 LT	203+58.12	68.47 RT	151972.539	488453.533	37.5' BOC	704.97
37	24+28.85	123.45 LT	202+86.79	15.97 LT	152059.818	488385.696		705.47
38	24+27.74	87.83 LT	203+22.43	16.06 LT	152058.453	488421.309		705.05
39	24+27.40	76.83 LT	203+33.43	16.09 LT	152058.039	488432.306		704.86
40	24+44.31	33.23 LT	203+76.45	34.45 LT	152074.633	488476.030		704.06
41	24+87.38	15.00 LT	203+93.21	78.11 LT	152117.572	488494.561		703.59
42	24+08.71	0.00 RT	204+10.85	0.00 RT	152038.806	488509.004		704.48
43	24+09.22	15.03 LT	203+95.81	0.00 RT	152039.419	488493.976		704.34
44	24+09.92	35.83 LT	203+75.00	0.00 RT	152040.266	488473.183		704.67
45	24+10.76	60.82 LT	203+50.00	0.00 RT	152041.283	488448.204		705.09
46	24+11.60	85.80 LT	203+25.00	0.00 RT	152042.301	488423.224		705.34
47	24+12.89	123.99 LT	202+86.79	0.00 RT	152043.857	488385.046		705.74
48	24+87.38	75.00 LT	203+33.25	76.09 LT	152117.997	488434.563	57.5' BOC	701.43

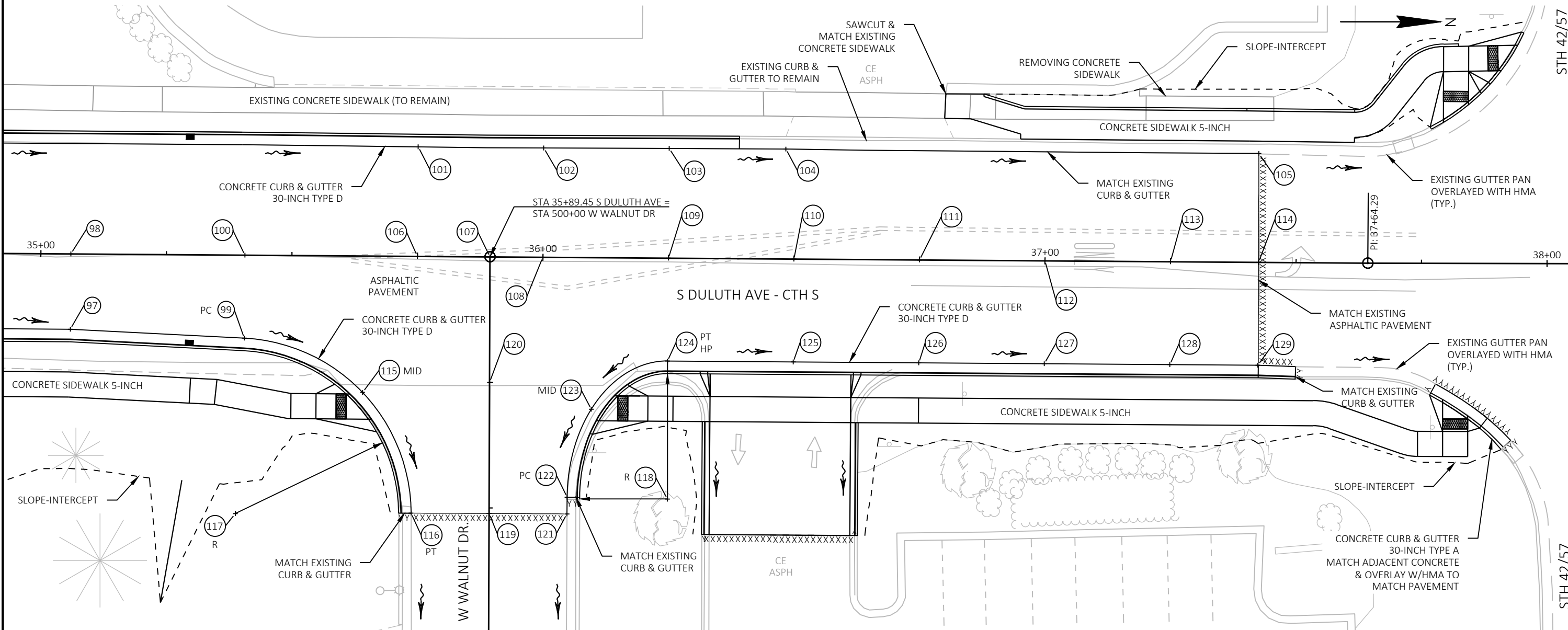


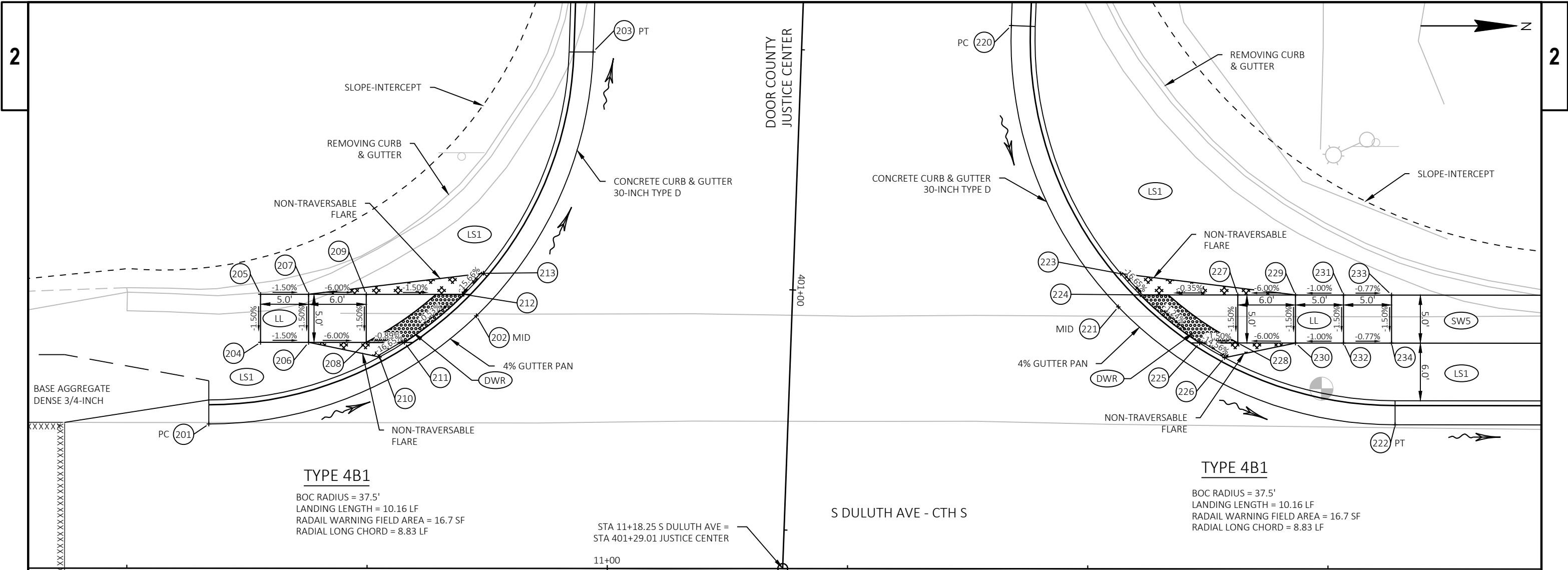
STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
75	33+62.49	15.00 LT	152992.664	488500.755	698.85
76	33+83.62	23.50 LT	153013.855	488492.405	699.22
77	33+83.39	28.50 LT	153013.658	488487.404	699.30
78	34+37.51	0.00 RT	153067.575	488516.286	698.56
79	34+37.51	22.00 LT	153067.731	488494.287	698.12
80	34+37.21	28.50 LT	153067.474	488487.785	698.71
81	34+36.97	33.50 LT	153067.277	488482.783	698.78
82	34+55.22	28.50 LT	153085.486	488487.912	698.33
83	34+55.25	33.50 LT	153085.558	488482.912	698.40
84	34+72.88	28.92 LT	153103.146	488487.613	698.90
85	34+72.91	33.79 LT	153103.215	488482.743	698.97

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
97	35+05.97	15.00 RT	153135.931	488531.770	697.84
98	35+05.97	0.00 RT	153136.038	488516.771	698.14
99	35+40.64	16.53 RT	153170.591	488533.543	697.67
100	35+40.64	0.00 RT	153170.708	488517.016	697.97
101	35+75.00	21.81 LT	153205.218	488495.448	697.40
102	36+00.00	21.78 LT	153230.217	488495.660	697.34
103	36+25.00	21.87 LT	153255.217	488495.745	697.27
104	36+48.24	21.89 LT	153278.459	488495.888	697.21
105	37+42.44	21.68 LT	153372.655	488496.767	696.62
106	35+75.00	0.00 LT	153205.063	488517.259	697.83
108	35+99.99	0.00 RT	153230.053	488517.436	697.73

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
109	36+25.00	0.00 LT	153255.062	488517.613	697.63
110	36+50.00	0.00 LT	153280.062	488517.790	697.53
111	36+75.00	0.00 RT	153305.061	488517.967	697.43
112	37+00.00	0.00 RT	153330.060	488518.144	697.30
113	37+25.00	0.00 LT	153355.060	488518.321	697.00
114	37+42.53	0.00 RT	153372.592	488518.445	696.79
125	36+50.00	20.50 RT	153279.916	488538.290	697.12
126	36+75.00	20.50 RT	153304.916	488538.466	696.90
127	37+00.00	20.50 RT	153329.915	488538.643	696.68
128	37+25.00	20.50 RT	153354.915	488538.820	696.45
129	37+42.53	20.50 RT	153372.447	488538.944	696.30

STATION & OFFSET TABLE								
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	RADIUS	ELEVATION
107	35+89.45	0.00 LT	500+00.00	0.00 RT	153219.518	488517.361		697.78
115	35+64.27	27.18 RT	500+27.08	25.28 RT	153194.145	488544.358		697.08
116	35+74.10	51.16 RT	500+51.10	15.54 RT	153203.802	488568.410		696.49
117	35+39.10	51.49 RT	500+51.31	50.54 RT	153168.802	488568.498	32.5' BOC	694.15
118	36+25.14	48.00 RT	500+48.13	35.51 LT	153254.861	488565.612	17.5' BOC, 25' BOC	696.75
119	35+89.64	51.12 RT	500+51.12	0.00 RT	153219.342	488568.485		696.81
120	35+89.55	25.00 RT	500+25.00	0.00 RT	153219.432	488542.361		697.47
121	36+05.15	51.09 RT	500+51.14	15.51 LT	153234.850	488568.559		696.54
122	36+05.14	47.76 RT	500+47.82	15.51 LT	153234.867	488565.232		696.60
123	36+09.84	30.21 RT	500+30.28	20.27 LT	153239.686	488547.712		696.91
124	36+24.95	20.50 RT	500+20.63	35.42 LT	153254.867	488538.112		697.23



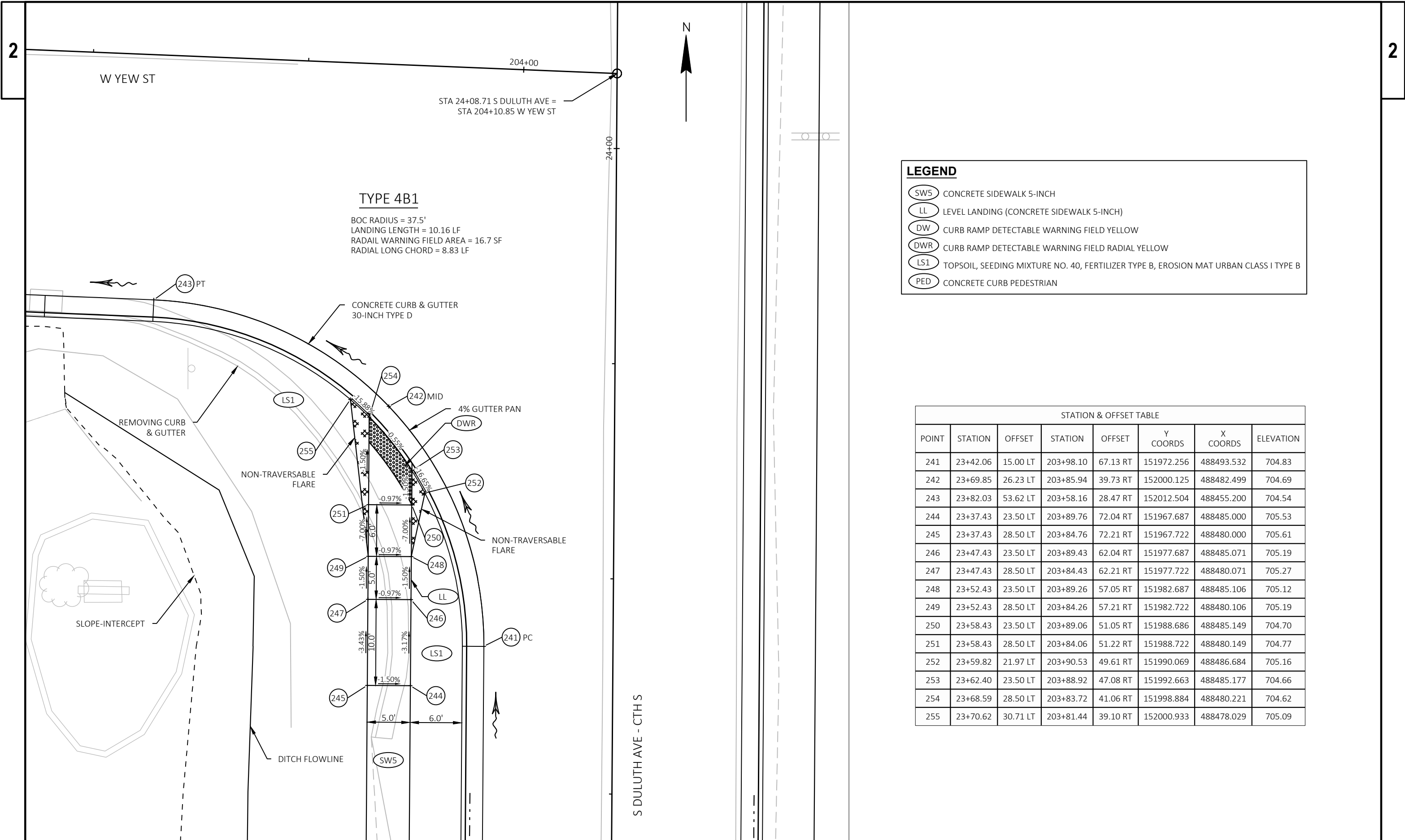


STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
201	10+58.53	15.00 LT	401+16.16	60.22 RT	150688.658	488485.652	719.28
202	10+86.36	26.27 LT	401+03.90	32.81 RT	150716.501	488474.397	719.13
203	10+98.51	53.74 LT	400+76.01	21.66 RT	150728.665	488446.939	718.99
204	10+63.90	23.50 LT	401+07.47	55.16 RT	150694.035	488477.156	719.57
205	10+63.90	28.50 LT	401+02.47	55.34 RT	150694.038	488472.156	719.65
206	10+68.90	23.50 LT	401+07.29	50.16 RT	150699.035	488477.159	719.50
207	10+68.90	28.50 LT	401+02.30	50.34 RT	150699.038	488472.159	719.57
208	10+74.90	23.50 LT	401+07.08	44.17 RT	150705.035	488477.163	719.14
209	10+74.90	28.50 LT	401+02.08	44.35 RT	150705.038	488472.163	719.21
210	10+76.29	21.97 LT	401+08.55	42.72 RT	150706.427	488478.690	719.60
211	10+78.87	23.50 LT	401+06.94	40.19 RT	150709.011	488477.166	719.10
212	10+85.03	28.47 LT	401+01.75	34.22 RT	150715.200	488472.170	719.06
213	10+87.09	30.71 LT	400+99.44	32.24 RT	150717.235	488469.966	719.54

LEGEND

- SW5 CONCRETE SIDEWALK 5-INCH
- LL LEVEL LANDING (CONCRETE SIDEWALK 5-INCH)
- DW CURB RAMP DETECTABLE WARNING FIELD YELLOW
- DWR CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW
- LS1 TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- PED CONCRETE CURB PEDESTRIAN

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
220	11+42.01	56.50 LT	400+71.69	21.72 LT	150772.169	488444.205	719.21
221	11+53.17	27.25 LT	401+00.53	33.92 LT	150783.309	488473.464	718.81
222	11+81.98	15.00 LT	401+11.74	63.15 LT	150812.112	488485.736	718.46
223	11+53.41	30.71 LT	400+97.07	34.04 LT	150783.556	488470.011	719.24
224	11+55.45	28.50 LT	400+99.20	36.15 LT	150785.588	488472.218	718.74
225	11+61.63	23.50 LT	401+03.97	42.51 LT	150791.771	488477.222	718.64
226	11+64.22	21.97 LT	401+05.40	45.15 LT	150794.353	488478.749	719.08
227	11+65.61	28.50 LT	400+98.83	46.31 LT	150795.751	488472.225	718.77
228	11+65.61	23.50 LT	401+03.83	46.49 LT	150795.747	488477.225	718.70
229	11+71.61	28.50 LT	400+98.62	52.30 LT	150801.751	488472.229	719.13
230	11+71.61	23.50 LT	401+03.62	52.48 LT	150801.747	488477.229	719.06
231	11+76.61	28.50 LT	400+98.44	57.30 LT	150806.751	488472.232	719.18
232	11+76.61	23.50 LT	401+03.44	57.48 LT	150806.747	488477.232	719.11
233	11+81.61	28.50 LT	400+98.26	62.30 LT	150811.751	488472.236	719.15
234	11+81.61	23.50 LT	401+03.26	62.48 LT	150811.747	488477.236	719.07



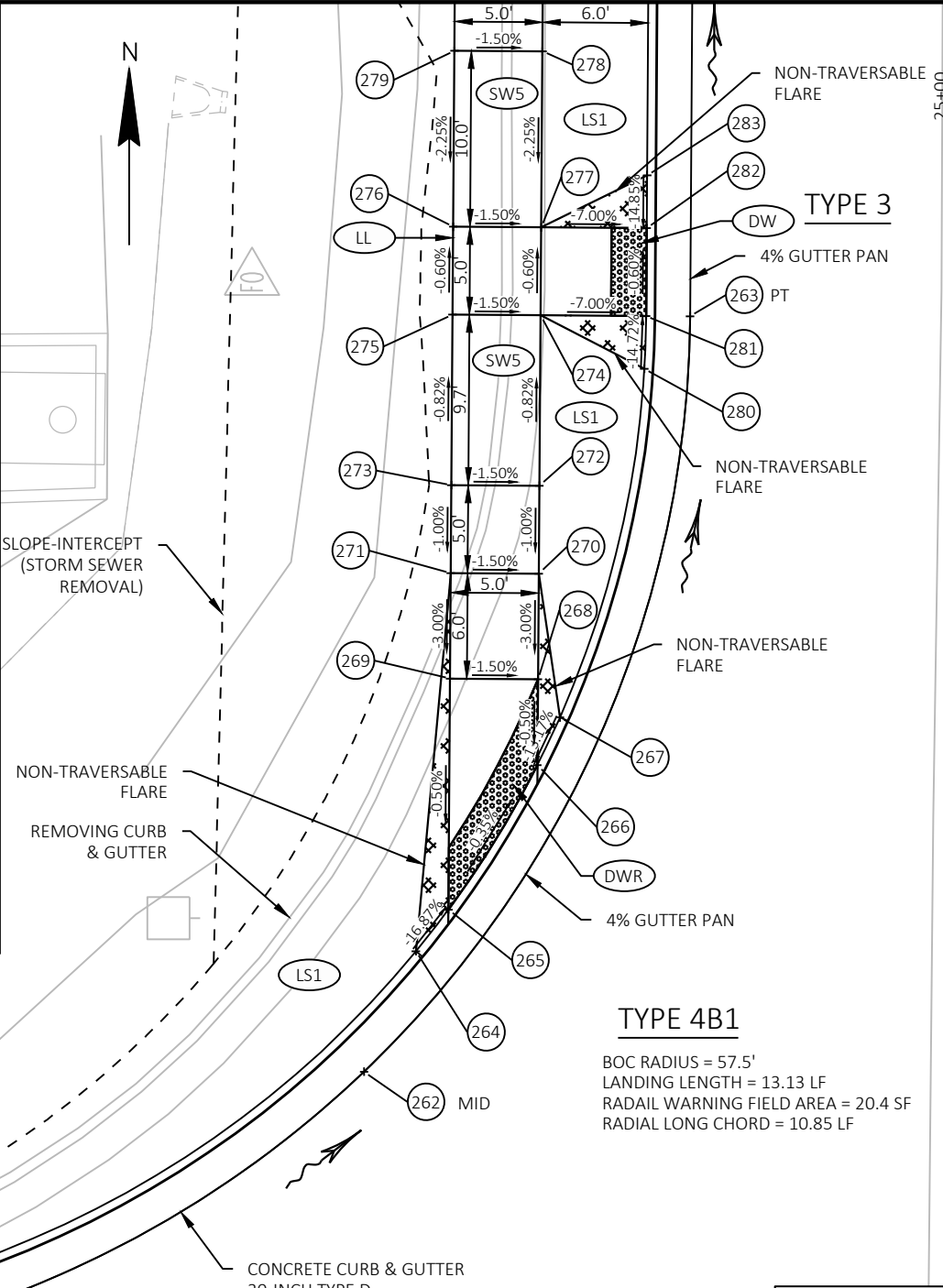
LEGEND

- (SW5) CONCRETE SIDEWALK 5-INCH
- (LL) LEVEL LANDING (CONCRETE SIDEWALK 5-INCH)
- (DWR) CURB RAMP DETECTABLE WARNING FIELD YELLOW
- (DWR) CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW
- (LS1) TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- (PED) CONCRETE CURB PEDESTRIAN

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
241	23+42.06	15.00 LT	203+98.10	67.13 RT	151972.256	488493.532	704.83
242	23+69.85	26.23 LT	203+85.94	39.73 RT	152000.125	488482.499	704.69
243	23+82.03	53.62 LT	203+58.16	28.47 RT	152012.504	488455.200	704.54
244	23+37.43	23.50 LT	203+89.76	72.04 RT	151967.687	488485.000	705.53
245	23+37.43	28.50 LT	203+84.76	72.21 RT	151967.722	488480.000	705.61
246	23+47.43	23.50 LT	203+89.43	62.04 RT	151977.687	488485.071	705.19
247	23+47.43	28.50 LT	203+84.43	62.21 RT	151977.722	488480.071	705.27
248	23+52.43	23.50 LT	203+89.26	57.05 RT	151982.687	488485.106	705.12
249	23+52.43	28.50 LT	203+84.26	57.21 RT	151982.722	488480.106	705.19
250	23+58.43	23.50 LT	203+89.06	51.05 RT	151988.686	488485.149	704.70
251	23+58.43	28.50 LT	203+84.06	51.22 RT	151988.722	488480.149	704.77
252	23+59.82	21.97 LT	203+90.53	49.61 RT	151990.069	488486.684	705.16
253	23+62.40	23.50 LT	203+88.92	47.08 RT	151992.663	488485.177	704.66
254	23+68.59	28.50 LT	203+83.72	41.06 RT	151998.884	488480.221	704.62
255	23+70.62	30.71 LT	203+81.44	39.10 RT	152000.933	488478.029	705.09

2

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
261	24+27.40	76.83 LT	203+33.43	16.09 LT	152058.039	488432.306	704.86
262	24+44.31	33.23 LT	203+76.45	34.45 LT	152074.633	488476.030	704.06
263	24+87.38	15.00 LT	203+93.21	78.11 LT	152117.572	488494.561	703.59
264	24+51.17	30.33 LT	203+79.11	41.42 LT	152081.479	488478.978	704.33
265	24+53.55	28.50 LT	203+80.86	43.85 LT	152083.846	488480.822	703.84
266	24+61.80	23.50 LT	203+85.58	52.27 LT	152092.060	488485.880	703.74
267	24+64.52	22.24 LT	203+86.75	55.03 LT	152094.771	488487.163	704.19
268	24+66.69	23.50 LT	203+85.41	57.15 LT	152096.945	488485.915	703.82
269	24+66.69	28.50 LT	203+80.42	56.98 LT	152096.980	488480.915	703.89
270	24+72.69	23.50 LT	203+85.21	63.15 LT	152102.945	488485.957	704.00
271	24+72.69	28.50 LT	203+80.21	62.98 LT	152102.980	488480.957	704.07
272	24+77.69	23.50 LT	203+85.04	68.14 LT	152107.945	488485.993	704.05
273	24+77.69	28.50 LT	203+80.05	67.98 LT	152107.980	488480.993	704.12
274	24+87.38	23.50 LT	203+84.72	77.83 LT	152117.632	488486.061	703.97
275	24+87.38	28.50 LT	203+79.72	77.66 LT	152117.668	488481.061	704.04
276	24+92.38	28.50 LT	203+79.55	82.66 LT	152122.668	488481.097	704.01
277	24+92.38	23.50 LT	203+84.55	82.82 LT	152122.632	488486.097	703.94
278	25+02.38	23.50 LT	203+84.21	92.82 LT	152132.632	488486.167	704.16
279	25+02.38	28.50 LT	203+79.22	92.65 LT	152132.667	488481.168	704.23
280	24+84.38	17.58 LT	203+90.74	75.03 LT	152114.592	488491.962	703.99
281	24+87.38	17.50 LT	203+90.71	78.03 LT	152117.590	488492.061	703.54
282	24+92.38	17.50 LT	203+90.55	83.03 LT	152122.590	488492.097	703.52
283	24+95.38	17.50 LT	203+90.45	86.02 LT	152125.590	488492.118	703.96



2

STATION & OFFSET TABLE						STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
284	24+84.38	17.50 RT	152114.342	488527.039	704.01	293	24+71.05	23.50 RT	152100.979	488532.945	703.82
285	24+87.38	17.50 RT	152117.342	488527.060	703.54	294	24+82.38	28.50 RT	152112.264	488538.025	704.01
286	24+92.38	17.50 RT	152122.342	488527.096	703.50	295	24+82.38	23.50 RT	152112.300	488533.025	703.94
287	24+95.38	17.50 RT	152125.342	488527.117	703.96	296	24+87.38	28.50 RT	152117.264	488538.060	703.91
288	24+34.87	23.50 RT	152064.800	488532.689	704.62	297	24+87.38	23.50 RT	152117.300	488533.060	703.84
289	24+34.87	28.50 RT	152064.765	488537.688	704.70	298	24+92.38	28.50 RT	152122.264	488538.095	703.88
290	24+49.87	28.50 RT	152079.764	488537.795	704.05	299	24+92.38	23.50 RT	152122.300	488533.096	703.81
291	24+49.89	23.50 RT	152079.818	488532.795	703.97	300	25+02.38	28.50 RT	152132.264	488538.166	704.23
292	24+71.10	28.50 RT	152100.943	488537.944	703.90	325	25+02.38	23.50 RT	152132.299	488533.166	704.16

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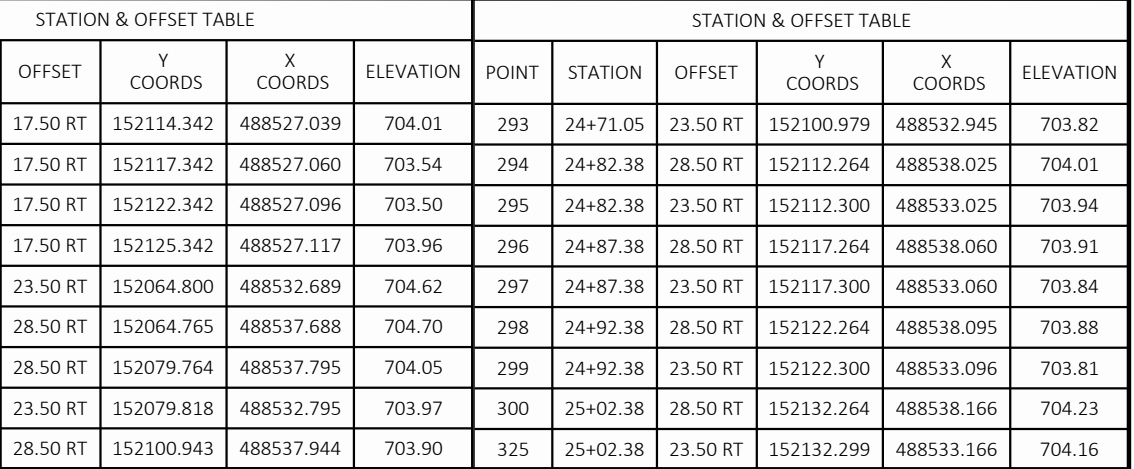
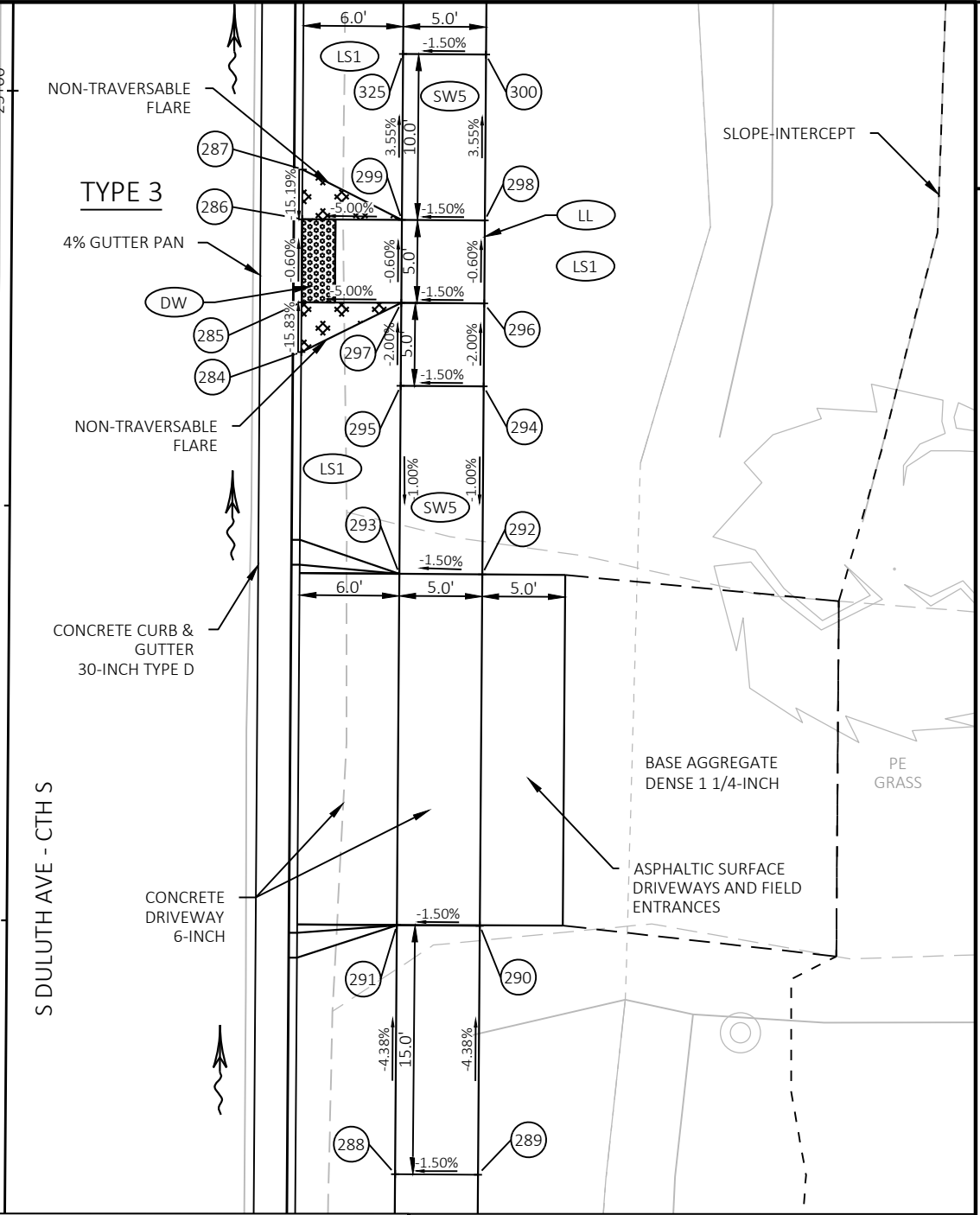
STATION & OFFSET TABLE						STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
284	24+84.38	17.50 RT	152114.342	488527.039	704.01	293	24+71.05	23.50 RT	152100.979	488532.945	703.82
285	24+87.38	17.50 RT	152117.342	488527.060	703.54	294	24+82.38	28.50 RT	152112.264	488538.025	704.01
286	24+92.38	17.50 RT	152122.342	488527.096	703.50	295	24+82.38	23.50 RT	152112.300	488533.025	703.94
287	24+95.38	17.50 RT	152125.342	488527.117	703.96	296	24+87.38	28.50 RT	152117.264	488538.060	703.91
288	24+34.87	23.50 RT	152064.800	488532.689	704.62	297	24+87.38	23.50 RT	152117.300	488533.060	703.84
289	24+34.87	28.50 RT	152064.765	488537.688	704.70	298	24+92.38	28.50 RT	152122.264	488538.095	703.88
290	24+49.87	28.50 RT	152079.764	488537.795	704.05	299	24+92.38	23.50 RT	152122.300	488533.096	703.81
291	24+49.89	23.50 RT	152079.818	488532.795	703.97	300	25+02.38	28.50 RT	152132.264	488538.166	704.23
292	24+71.10	28.50 RT	152100.943	488537.944	703.90	325	25+02.38	23.50 RT	152132.299	488533.166	704.16

2

STATION & OFFSET TABLE						STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
284	24+84.38	17.50 RT	152114.342	488527.039	704.01	293	24+71.05	23.50 RT	152100.979	488532.945	703.82
285	24+87.38	17.50 RT	152117.342	488527.060	703.54	294	24+82.38	28.50 RT	152112.264	488538.025	704.01
286	24+92.38	17.50 RT	152122.342	488527.096	703.50	295	24+82.38	23.50 RT	152112.300	488533.025	703.94
287	24+95.38	17.50 RT	152125.342	488527.117	703.96	296	24+87.38	28.50 RT	152117.264	488538.060	703.91
288	24+34.87	23.50 RT	152064.800	488532.689	704.62	297	24+87.38	23.50 RT	152117.300	488533.060	703.84
289	24+34.87	28.50 RT	152064.765	488537.688	704.70	298	24+92.38	28.50 RT	152122.264	488538.095	703.88
290	24+49.87	28.50 RT	152079.764	488537.795	704.05	299	24+92.38	23.50 RT	152122.300	488533.096	703.81
291	24+49.89	23.50 RT	152079.818	488532.795	703.97	300	25+02.38	28.50 RT	152132.264	488538.166	704.23
292	24+71.10	28.50 RT	152100.943	488537.944	703.90	325	25+02.38	23.50 RT	152132.299	488533.166	704.16

2

STATION & OFFSET TABLE						STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
284	24+84.38	17.50 RT	152114.342	488527.039	704.01	293	24+71.05	23.50 RT	152100.979	488532.945	703.82
285	24+87.38	17.50 RT	152117.342	488527.060	703.54	294	24+82.38	28.50 RT	152112.264	488538.025	704.01
286	24+92.38	17.50 RT	152122.342	488527.096	703.50	295	24+82.38	23.50 RT	152112.300	488533.025	703.94
287	24+95.38	17.50 RT	152125.342	488527.117	703.96	296	24+87.38	28.50 RT	152117.264	488538.060	703.91
288	24+34.87	23.50 RT	152064.800	488532.689	704.62	297	24+87.38	23.50 RT	152117.300	488533.060	703.84
289	24+34.87	28.50 RT	152064.765	488537.688	704.70	298	24+92.38	28.50 RT	152122.264	488538.095	703.88
290	24+49.87	28.50 RT	152079.764	488537.795	704.05	299	24+92.38	23.50 RT	152122.300	488533.096	703.81
291	24+49.89	23.50 RT	152079.818	488532.795	703.97	300	25+02.38	28.50 RT	152132.264	488538.166	704.23
292	24+71.10	28.50 RT	152100.943	488537.944	703.90	325	25+02.38	23.50 RT	152132.299	488533.166	704.16



2

STATION & OFFSET TABLE						STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
284	24+84.38	17.50 RT	152114.342	488527.039	704.01	293	24+71.05	23.50 RT	152100.979	488532.945	703.82
285	24+87.38	17.50 RT	152117.342	488527.060	703.54	294	24+82.38	28.50 RT	152112.264	488538.025	704.01
286	24+92.38	17.50 RT	152122.342	488527.096	703.50	295	24+82.38	23.50 RT	152112.300	488533.025	703.94
287	24+95.38	17.50 RT	152125.342	488527.117	703.96	296	24+87.38	28.50 RT	152117.264	488538.060	703.91
288	24+34.87	23.50 RT	152064.800	488532.689	704.62	297	24+87.38	23.50 RT	152117.300	488533.060	703.84
289	24+34.87	28.50 RT	152064.765	488537.688	704.70	298	24+92.38	28.50 RT	152122.264	488538.095	703.88
290	24+49.87	28.50 RT	152079.764	488537.795	704.05	299	24+92.38	23.50 RT	152122.300	488533.096	703.81
291	24+49.89	23.50 RT	152079.818	488532.795	703.97	300	25+02.38	28.50 RT	152132.264	488538.166	704.23
292	24+71.10	28.50 RT	152100.943	488537.944	703.90	325	25+02.38	23.50 RT	152132.299	488533.166	704.16

2

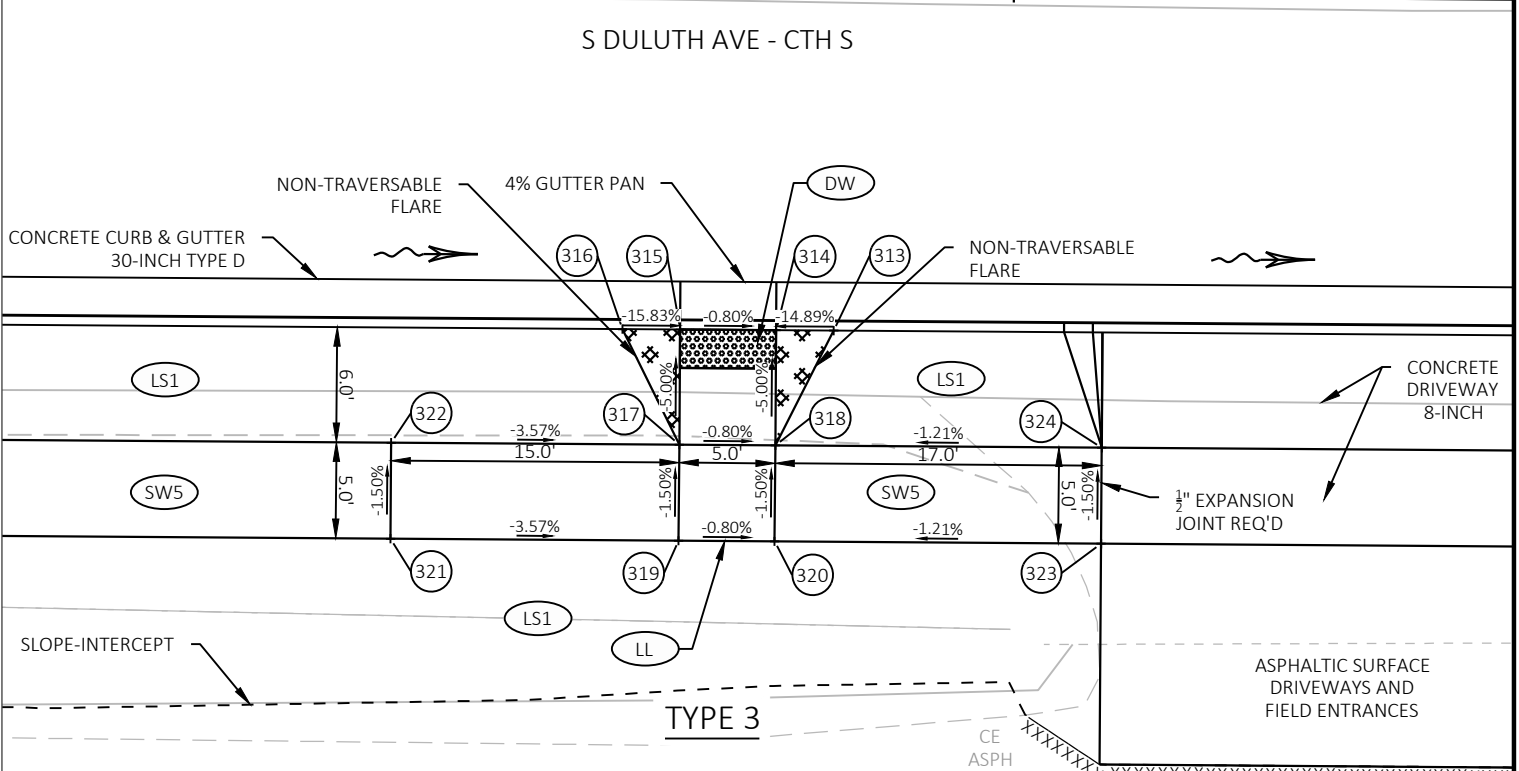
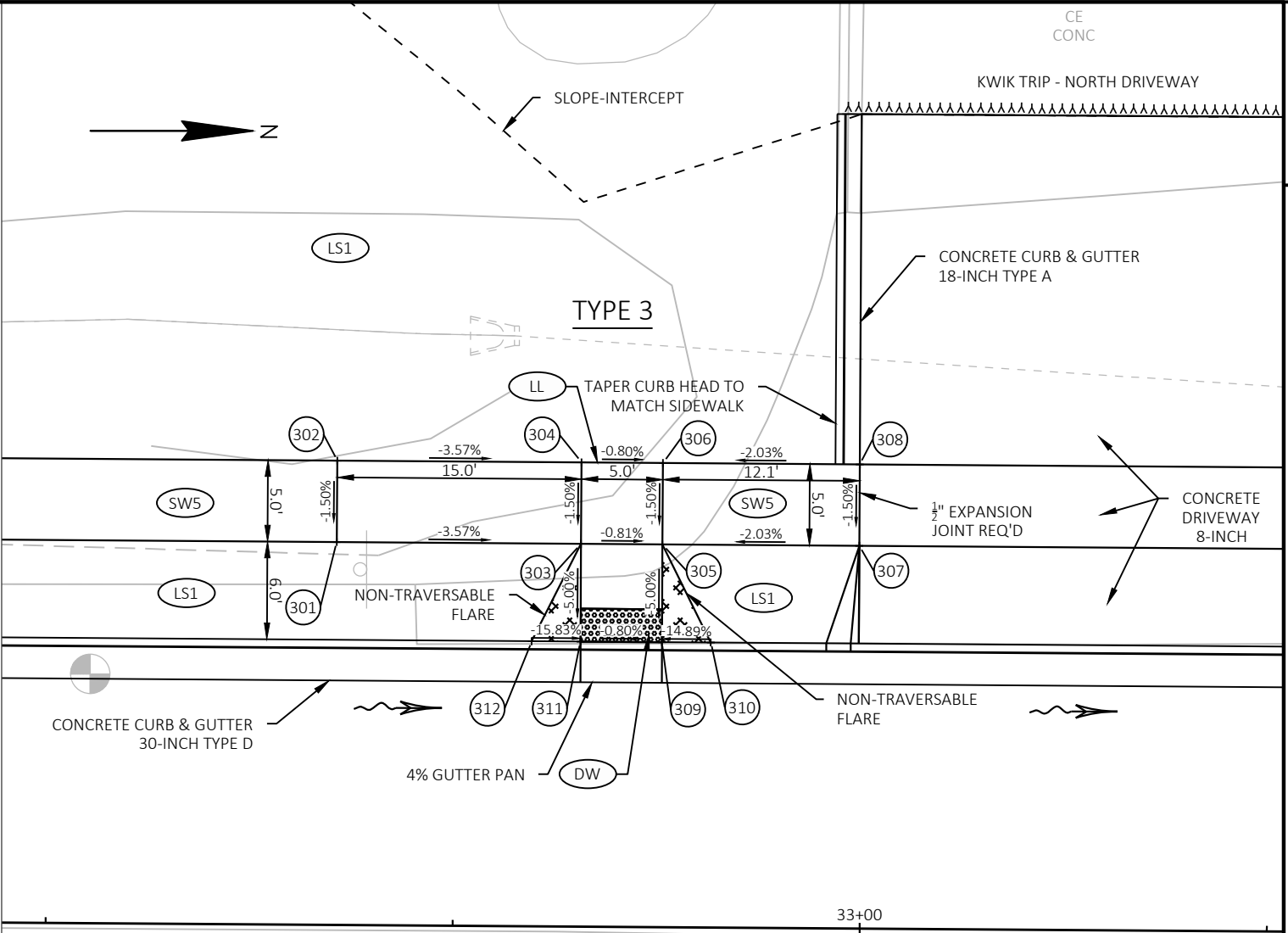
STATION & OFFSET TABLE						STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
284	24+84.38	17.50 RT	152114.342	488527.039	704.01	293	24+71.05	23.50 RT	152100.979	488532.945	703.82
285	24+87.38	17.50 RT	152117.342	488527.060	703.54	294	24+82.38	28.50 RT	152112.264	488538.025	704.01
286	24+92.38	17.50 RT	152122.342	488527.096	703.50	295	24+82.38	23.50 RT	152112.300	488533.025	703.94
287	24+95.38	17.50 RT	152125.342	488527.117	703.96	296	24+87.38	28.50 RT	152117.264	488538.060	703.91
288	24+34.87	23.50 RT	152064.800	488532.689							

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
301	32+67.72	23.50 LT	152897.959	488491.585	700.27
302	32+67.72	28.50 LT	152897.995	488486.585	700.35
303	32+82.72	23.50 LT	152912.959	488491.691	699.74
304	32+82.72	28.50 LT	152912.994	488486.691	699.81
305	32+87.72	23.50 LT	152917.959	488491.726	699.70
306	32+87.72	28.50 LT	152917.994	488486.726	699.77
307	32+99.81	23.50 LT	152930.050	488491.812	699.94
308	32+99.81	28.50 LT	152930.079	488486.812	700.02
309	32+87.73	17.50 LT	152917.928	488497.726	699.39
310	32+90.73	17.50 LT	152920.928	488497.747	699.84
311	32+82.73	17.50 LT	152912.928	488497.691	699.43
312	32+79.73	17.50 LT	152909.928	488497.670	699.91

LEGEND

- SW5 CONCRETE SIDEWALK 5-INCH
- LL LEVEL LANDING (CONCRETE SIDEWALK 5-INCH)
- DW CURB RAMP DETECTABLE WARNING FIELD YELLOW
- DWR CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW
- LS1 TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- PED CONCRETE CURB PEDESTRIAN

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
313	32+90.74	17.50 RT	152920.690	488532.747	699.84
314	32+87.74	17.50 RT	152917.690	488532.725	699.40
315	32+82.74	17.50 RT	152912.691	488532.690	699.44
316	32+79.74	17.50 RT	152909.691	488532.669	699.91
317	32+82.74	23.50 RT	152912.648	488538.690	699.74
318	32+87.74	23.50 RT	152917.648	488538.725	699.69
319	32+82.74	28.50 RT	152912.613	488543.690	699.81
320	32+87.74	28.50 RT	152917.613	488543.725	699.77
321	32+67.74	28.50 RT	152897.613	488543.584	700.35
322	32+67.74	23.50 RT	152897.648	488538.584	700.27
323	33+04.74	28.50 RT	152934.610	488543.845	699.98
324	33+04.74	23.50 RT	152934.645	488538.846	699.90



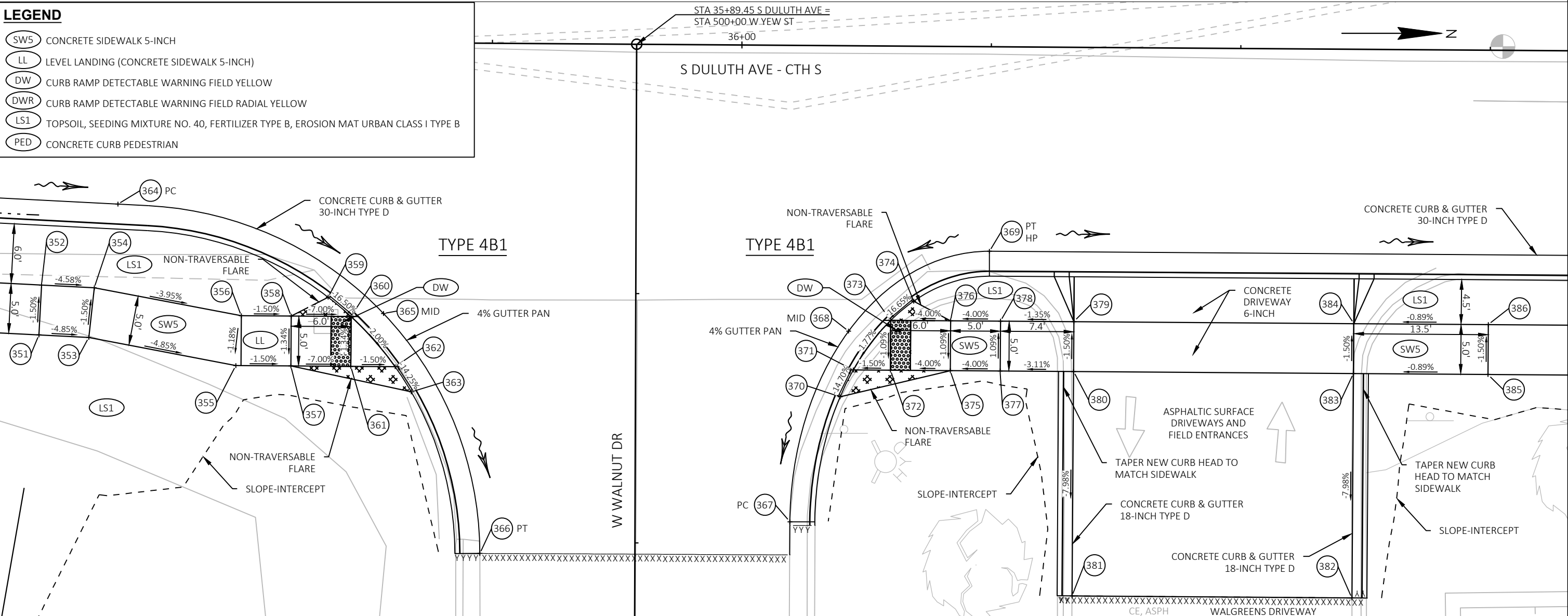
STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
351	35+29.76	29.56 RT	300+29.34	59.80 RT	153159.617	488546.499	698.43
352	35+29.98	24.57 RT	300+24.35	59.56 RT	153159.872	488541.506	698.35
353	35+34.76	29.78 RT	300+29.58	54.81 RT	153164.610	488546.755	698.19
354	35+35.27	24.80 RT	300+24.60	54.28 RT	153165.158	488541.776	698.11
355	35+49.51	32.50 RT	300+32.35	40.06 RT	153179.342	488549.578	697.46
356	35+50.02	27.50 RT	300+27.36	39.53 RT	153179.893	488544.582	697.48
357	35+55.02	32.50 RT	300+32.37	34.55 RT	153184.858	488549.617	697.38
358	35+55.02	27.50 RT	300+27.37	34.53 RT	153184.893	488544.617	697.44
359	35+58.72	25.58 RT	300+25.47	30.83 RT	153188.601	488542.724	697.52
360	35+61.02	27.50 RT	300+27.40	28.53 RT	153190.893	488544.660	697.02
361	35+61.02	32.50 RT	300+32.40	28.55 RT	153190.858	488549.659	696.96
362	35+65.47	32.50 RT	300+32.41	24.10 RT	153195.308	488549.691	696.89

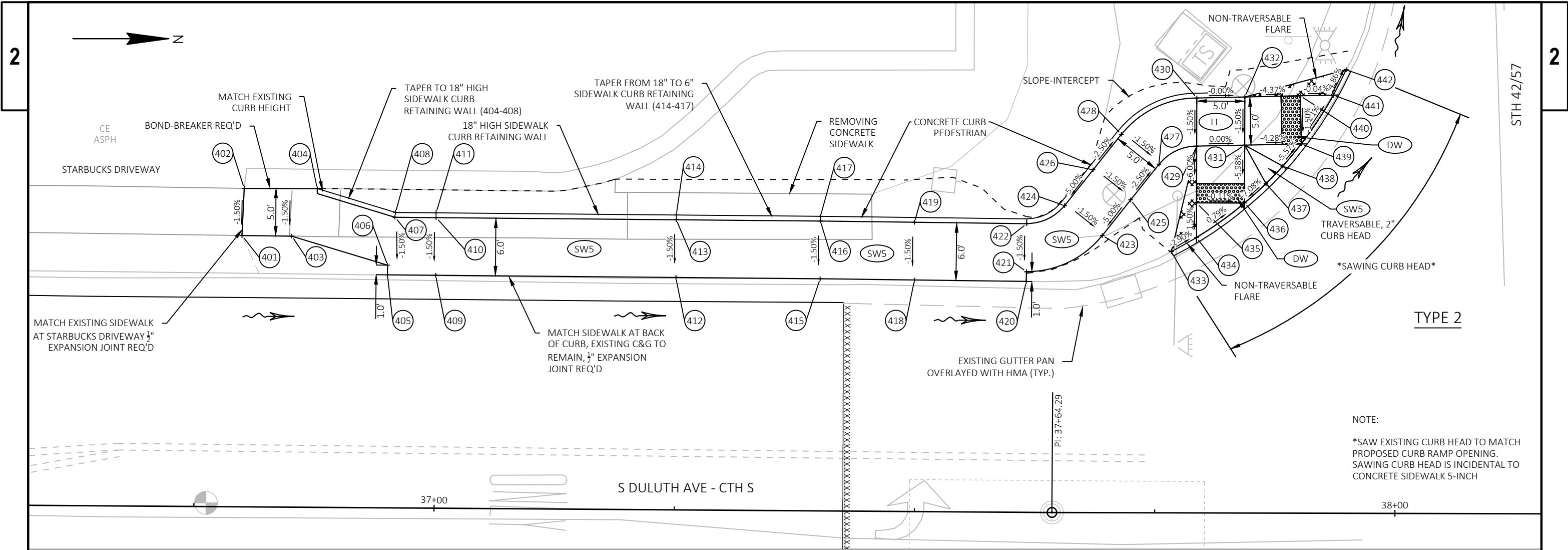
STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
363	35+67.11	35.01 RT	300+34.93	22.47 RT	153196.929	488552.215	697.32
364	35+37.58	16.39 RT	300+16.20	51.94 RT	153167.523	488533.386	697.66
365	35+64.27	27.18 RT	300+27.08	25.28 RT	153194.145	488544.358	697.08
366	35+74.10	51.16 RT	300+51.10	15.54 RT	153203.802	488568.410	696.49
367	36+05.14	47.76 RT	300+47.82	15.51 LT	153234.867	488565.232	696.60
368	36+10.89	28.61 RT	300+28.69	21.34 LT	153240.755	488546.123	696.94
369	36+24.95	20.50 RT	300+20.63	35.42 LT	153254.867	488538.112	697.23
370	36+10.09	35.20 RT	300+35.28	20.51 LT	153239.904	488552.708	697.25
371	36+11.39	32.50 RT	300+32.58	21.82 LT	153241.227	488550.016	696.81
372	36+15.11	32.50 RT	300+32.59	25.53 LT	153244.939	488550.042	696.87
373	36+15.11	27.50 RT	300+27.59	25.55 LT	153244.974	488545.042	696.92
374	36+17.40	25.56 RT	300+25.66	27.85 LT	153247.279	488543.121	697.42

STATION & OFFSET TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
375	36+21.11	32.50 RT	300+32.61	31.53 LT	153250.939	488550.085	697.08
376	36+21.11	27.50 RT	300+27.61	31.55 LT	153250.974	488545.085	697.13
377	36+26.11	32.50 RT	300+32.63	36.53 LT	153255.939	488550.120	697.33
378	36+26.11	27.50 RT	300+27.63	36.55 LT	153255.974	488545.120	697.25
379	36+33.47	27.50 RT	300+27.66	43.91 LT	153263.336	488545.172	697.46
380	36+33.47	32.50 RT	300+32.66	43.90 LT	153263.301	488550.172	697.54
381	36+33.47	55.00 RT	300+55.16	43.81 LT	153263.142	488572.672	695.74
382	36+61.52	55.00 RT	300+55.26	71.86 LT	153291.191	488572.870	695.57
383	36+61.52	32.50 RT	300+32.76	71.95 LT	153291.350	488550.371	697.36
384	36+61.52	27.50 RT	300+27.76	71.96 LT	153291.386	488545.371	697.29
385	36+75.00	32.50 RT	300+32.81	85.43 LT	153304.831	488550.465	697.48
386	36+75.00	27.50 RT	300+27.81	85.44 LT	153304.865	488545.465	697.41

LEGEND

- SW5 CONCRETE SIDEWALK 5-INCH
- LL LEVEL LANDING (CONCRETE SIDEWALK 5-INCH)
- DW CURB RAMP DETECTABLE WARNING FIELD YELLOW
- DWR CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW
- LS1 TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- PED CONCRETE CURB PEDESTRIAN





STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
401	36+79.81	28.20 LT	153310.075	488489.803	697.72
402	36+80.00	33.11 LT	153310.298	488484.890	697.79
403	36+84.99	28.18 LT	153315.252	488489.856	697.62
404	36+87.61	33.12 LT	153317.903	488484.935	698.14
405	36+94.98	24.23 LT	153325.212	488493.882	697.36
406	36+94.98	25.23 LT	153325.221	488492.882	697.36
407	36+95.71	30.23 LT	153325.985	488487.889	697.43
408	36+95.78	30.73 LT	153326.062	488487.389	698.91
409	37+00.00	24.22 LT	153330.232	488493.928	697.31
410	37+00.00	30.22 LT	153330.274	488487.928	697.40
411	37+00.00	30.72 LT	153330.278	488487.428	698.90
412	37+25.00	24.17 LT	153355.231	488494.153	697.11
413	37+25.00	30.17 LT	153355.273	488488.154	697.20
414	37+25.00	30.67 LT	153355.277	488487.653	698.68

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
415	37+40.00	24.14 LT	153370.230	488494.293	696.92
416	37+40.00	30.14 LT	153370.273	488488.289	697.01
417	37+40.00	30.64 LT	153370.275	488487.789	697.51
418	37+50.00	24.08 LT	153380.062	488494.417	696.82
419	37+50.00	30.08 LT	153380.062	488488.417	696.91
420	37+58.79	24.02 LT	153391.684	488494.575	696.61
421	37+58.79	25.02 LT	153391.696	488493.558	696.63
422	37+58.82	30.02 LT	153391.737	488488.558	696.70
423	37+65.72	27.63 LT	153399.597	488489.790	696.85
424	37+62.22	31.33 LT	153395.687	488486.674	696.93
425	37+70.87	32.29 LT	153402.551	488486.084	697.09
426	37+67.58	36.05 LT	153398.640	488482.968	697.16
427	37+76.03	36.95 LT	153405.504	488482.378	696.97
428	37+72.78	40.75 LT	153401.594	488479.262	697.04

STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
429	37+79.27	38.14 LT	153409.427	488480.494	696.74
430	37+79.27	43.14 LT	153409.440	488475.493	696.82
431	37+84.27	38.26 LT	153414.427	488480.390	696.75
432	37+84.27	43.26 LT	153414.440	488475.389	696.82
433	37+76.65	27.17 LT	153406.781	488491.460	696.42
434	37+79.27	28.63 LT	153409.403	488490.004	696.34
435	37+79.27	32.24 LT	153409.412	488486.401	696.39
436	37+84.27	32.24 LT	153414.412	488486.413	696.39
437	37+86.48	34.25 LT	153416.630	488484.403	696.60
438	37+88.23	36.08 LT	153418.382	488482.578	696.66
439	37+90.16	38.40 LT	153420.312	488480.268	696.49
440	37+90.04	43.40 LT	153420.208	488475.269	696.57
441	37+93.48	43.48 LT	153423.652	488475.197	696.57
442	37+94.82	46.12 LT	153424.993	488472.552	696.71

LEGEND

SW5

CONCRETE SIDEWALK 5-INCH

LL

LEVEL LANDING (CONCRETE SIDEWALK 5-INCH)

DW

CURB RAMP DETECTABLE WARNING FIELD YELLOW

DWR

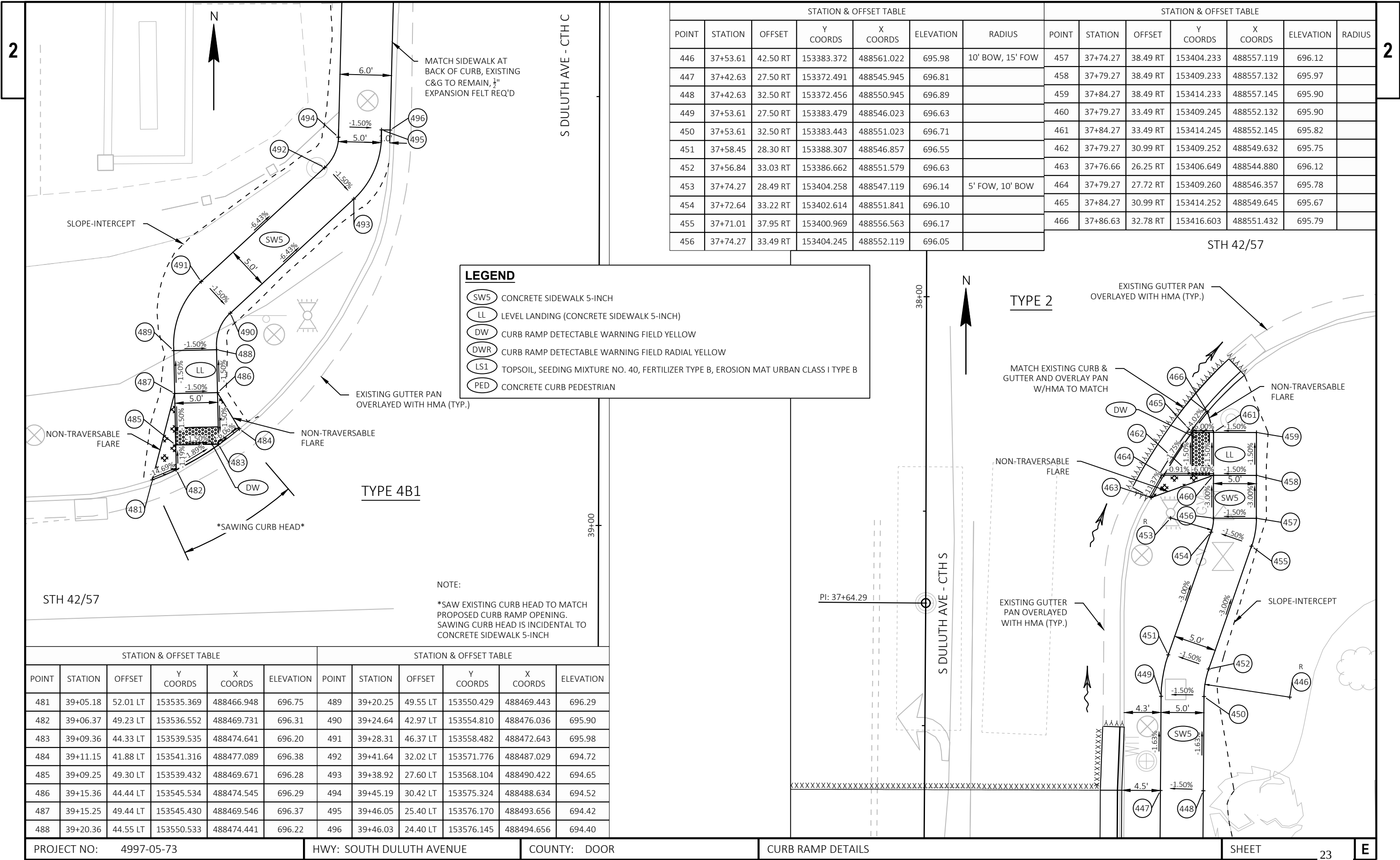
CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW

LS1

TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B

PED

CONCRETE CURB PEDESTRIAN



LEGEND

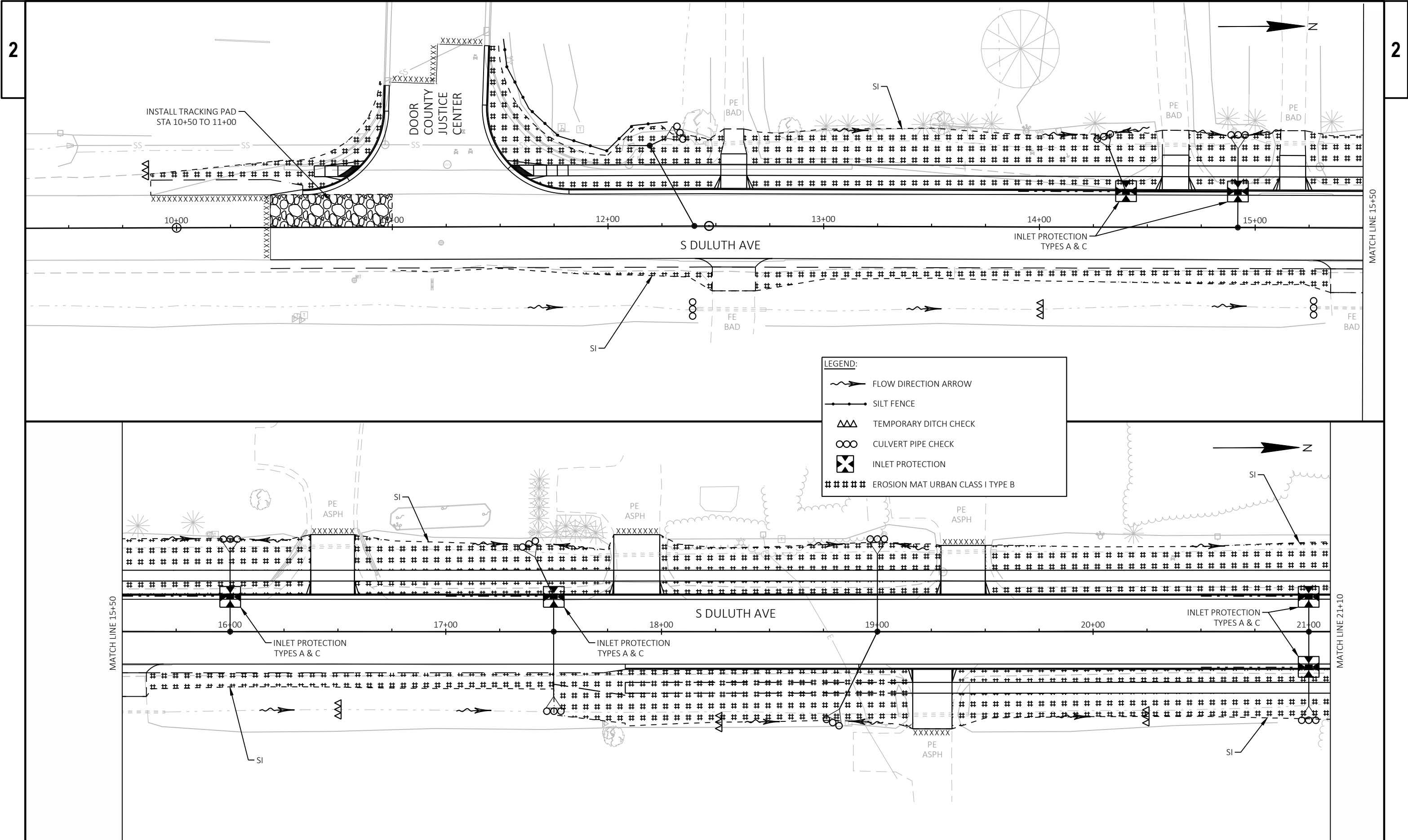
- SW5 CONCRETE SIDEWALK 5-INCH
- LL LEVEL LANDING (CONCRETE SIDEWALK 5-INCH)
- DW CURB RAMP DETECTABLE WARNING FIELD YELLOW
- DWR CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW
- LS1 TOPSOIL, SEEDING MIXTURE NO. 40, FERTILIZER TYPE B, EROSION MAT URBAN CLASS I TYPE B
- PED CONCRETE CURB PEDESTRIAN

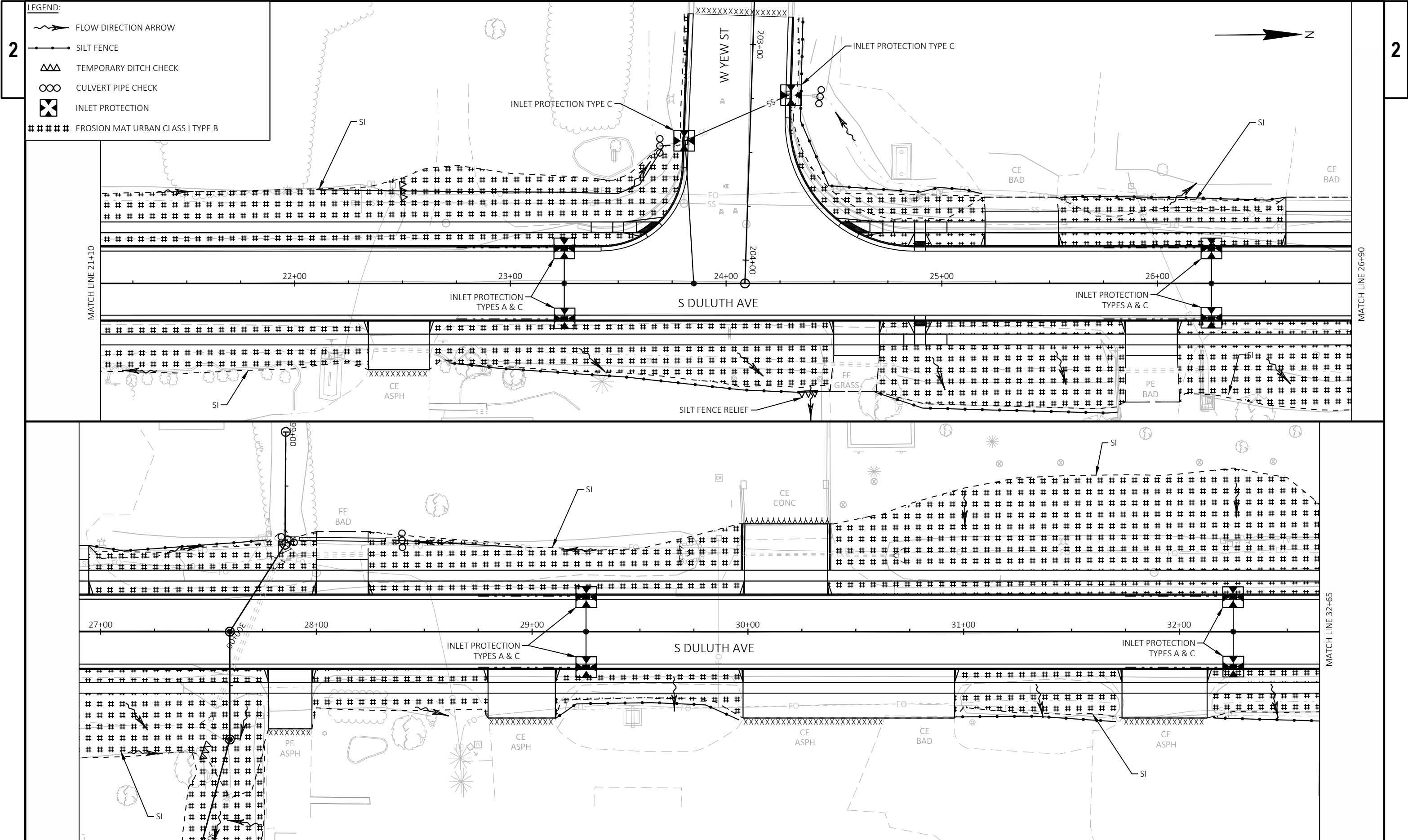
NOTE:
*SAW EXISTING CURB HEAD TO MATCH PROPOSED CURB RAMP OPENING. SAWING CURB HEAD IS INCIDENTAL TO CONCRETE SIDEWALK 5-INCH

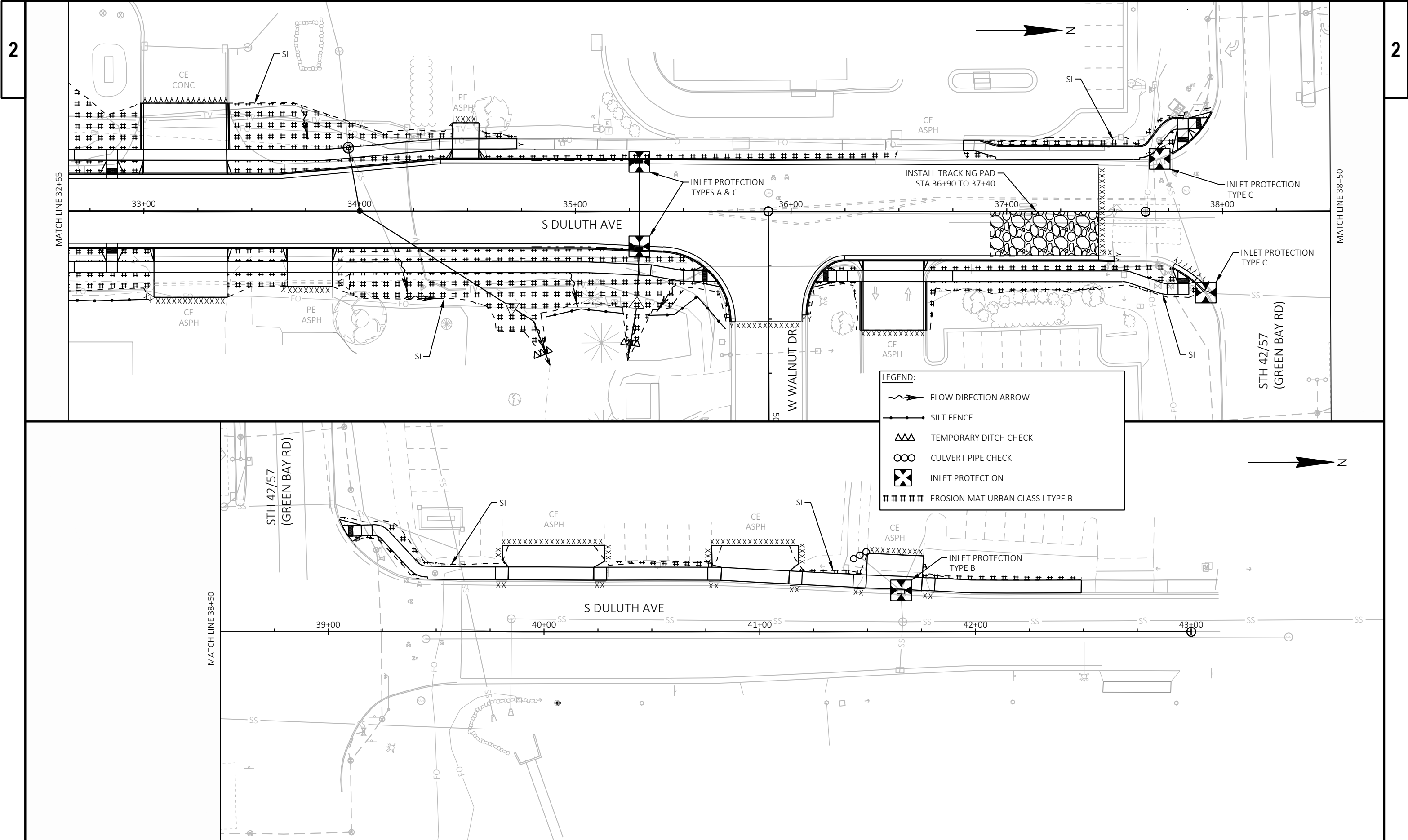
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POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
481	39+05.18	52.01 LT	153535.369	488466.948	696.75	489	39+20.25	49.55 LT	153550.429	488469.443	696.29
482	39+06.37	49.23 LT	153536.552	488469.731	696.31	490	39+24.64	42.97 LT	153554.810	488476.036	695.90
483	39+09.36	44.33 LT	153539.535	488474.641	696.20	491	39+28.31	46.37 LT	153558.482	488472.643	695.98
484	39+11.15	41.88 LT	153541.316	488477.089	696.38	492	39+41.64	32.02 LT	153571.776	488487.029	694.72
485	39+09.25	49.30 LT	153539.432	488469.671	696.28	493	39+38.92	27.60 LT	153568.104	488490.422	694.65
486	39+15.36	44.44 LT	153545.534	488474.545	696.29	494	39+45.19	30.42 LT	153575.324	488488.634	694.52
487	39+15.25	49.44 LT	153545.430	488469.546	696.37	495	39+46.05	25.40 LT	153576.170	488493.656	694.42
488	39+20.36	44.55 LT	153550.533	488474.441	696.22	496	39+46.03	24.40 LT	153576.145	488494.656	694.40

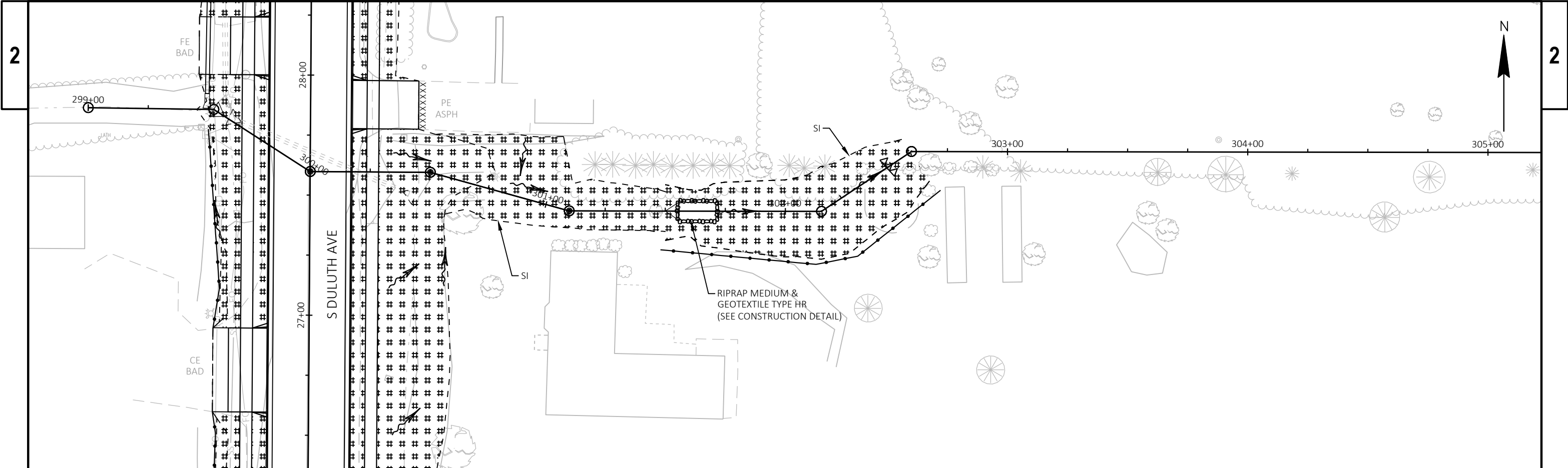
STATION & OFFSET TABLE							STATION & OFFSET TABLE						
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	RADIUS	POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION	RADIUS
446	37+53.61	42.50 RT	153383.372	488561.022	695.98	10' BOW, 15' FOW	457	37+74.27	38.49 RT	153404.233	488557.119	696.12	
447	37+42.63	27.50 RT	153372.491	488545.945	696.81		458	37+79.27	38.49 RT	153409.233	488557.132	695.97	
448	37+42.63	32.50 RT	153372.456	488550.945	696.89		459	37+84.27	38.49 RT	153414.233	488557.145	695.90	
449	37+53.61	27.50 RT	153383.479	488546.023	696.63		460	37+79.27	33.49 RT	153409.245	488552.132	695.90	
450	37+53.61	32.50 RT	153383.443	488551.023	696.71		461	37+84.27	33.49 RT	153414.245	488552.145	695.82	
451	37+58.45	28.30 RT	153388.307	488546.857	696.55		462	37+79.27	30.99 RT	153409.252	488549.632	695.75	
452	37+56.84	33.03 RT	153386.662	488551.579	696.63		463	37+76.66	26.25 RT	153406.649	488544.880	696.12	
453	37+74.27	28.49 RT	153404.258	488547.119	696.14	5' FOW, 10' BOW	464	37+79.27	27.72 RT	153409.260	488546.357	695.78	
454	37+72.64	33.22 RT	153402.614	488551.841	696.10		465	37+84.27	30.99 RT	153414.252	488549.645	695.67	
455	37+71.01	37.95 RT	153400.969	488556.563	696.17		466	37+86.63	32.78 RT	153416.603	488551.432	695.79	
456	37+74.27	33.49 RT	153404.245	488552.119	696.05								

STH 42/57



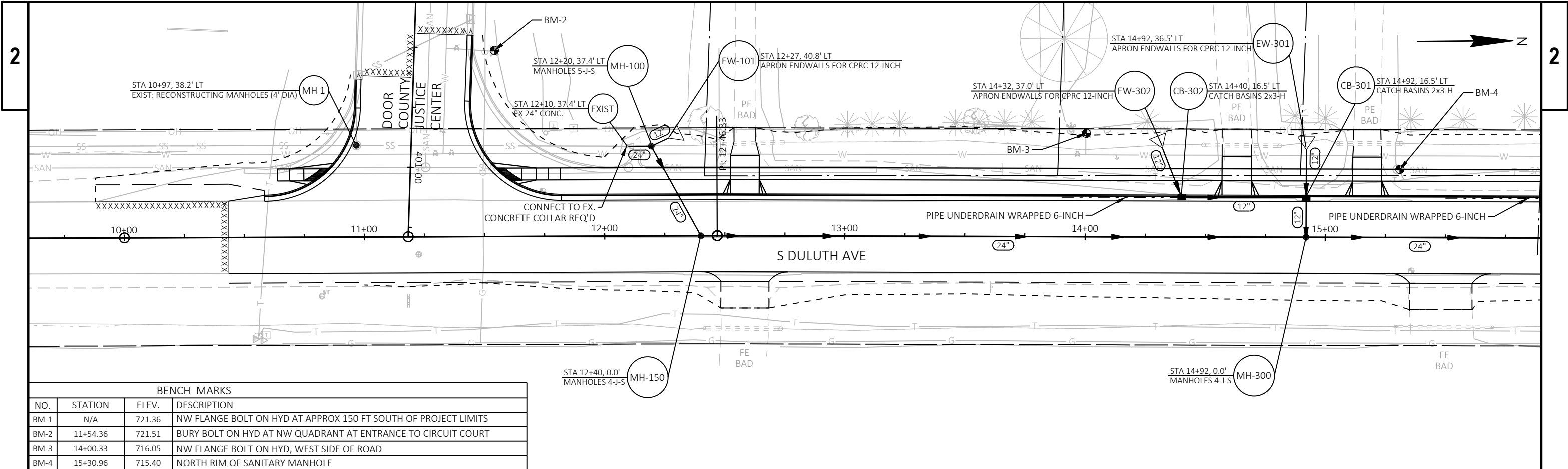




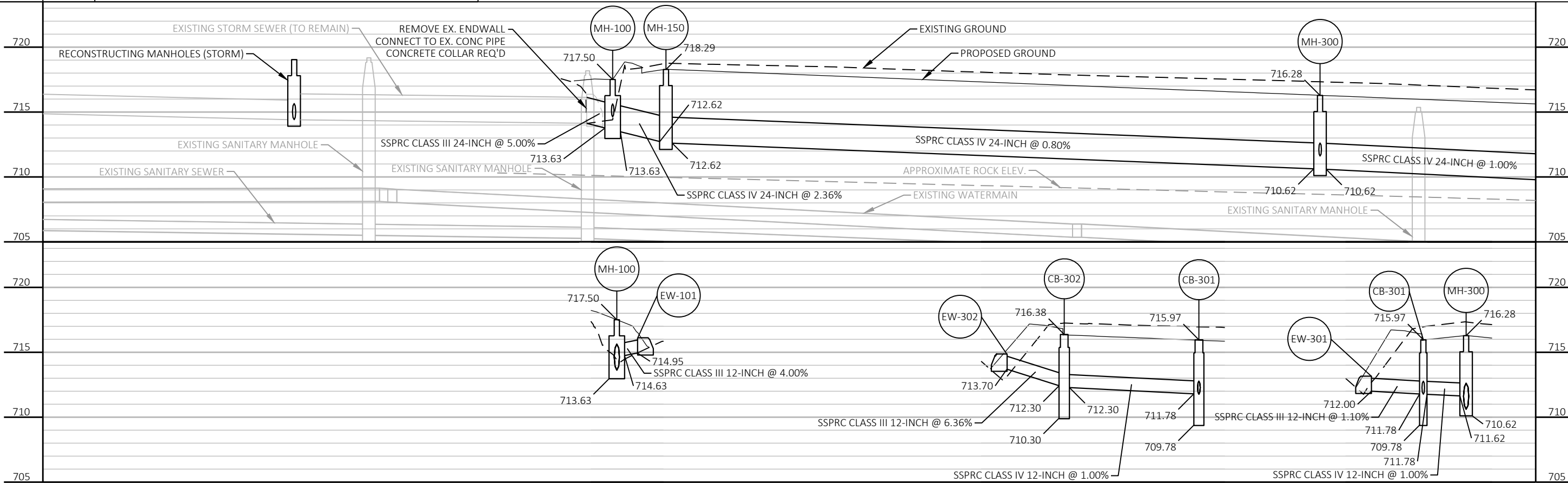


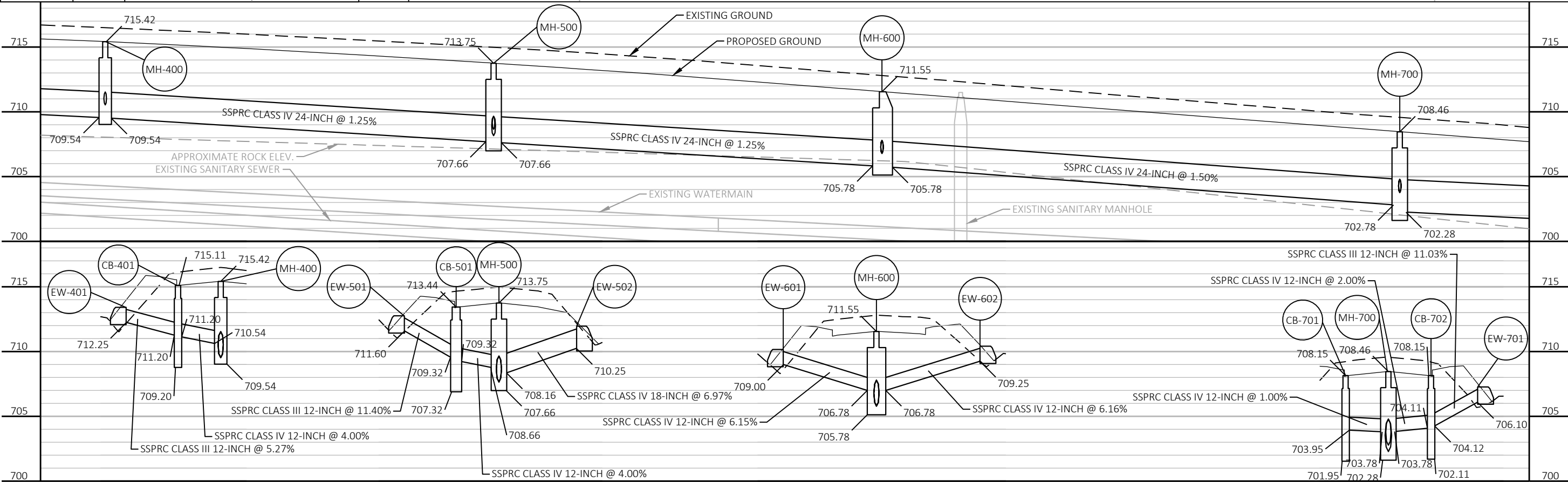
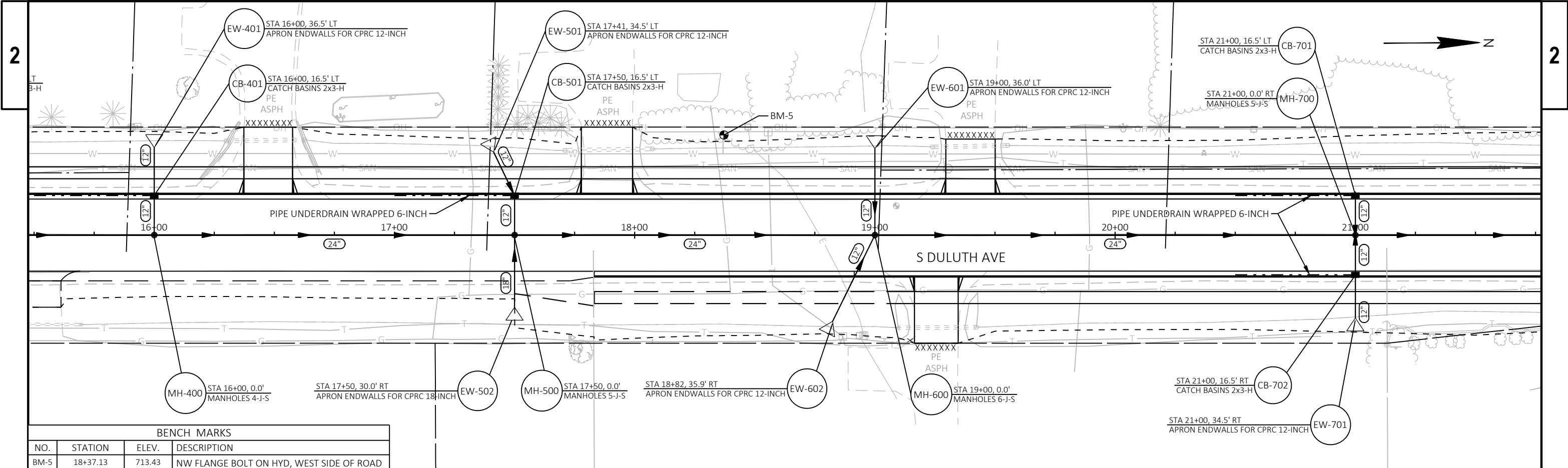
LEGEND:

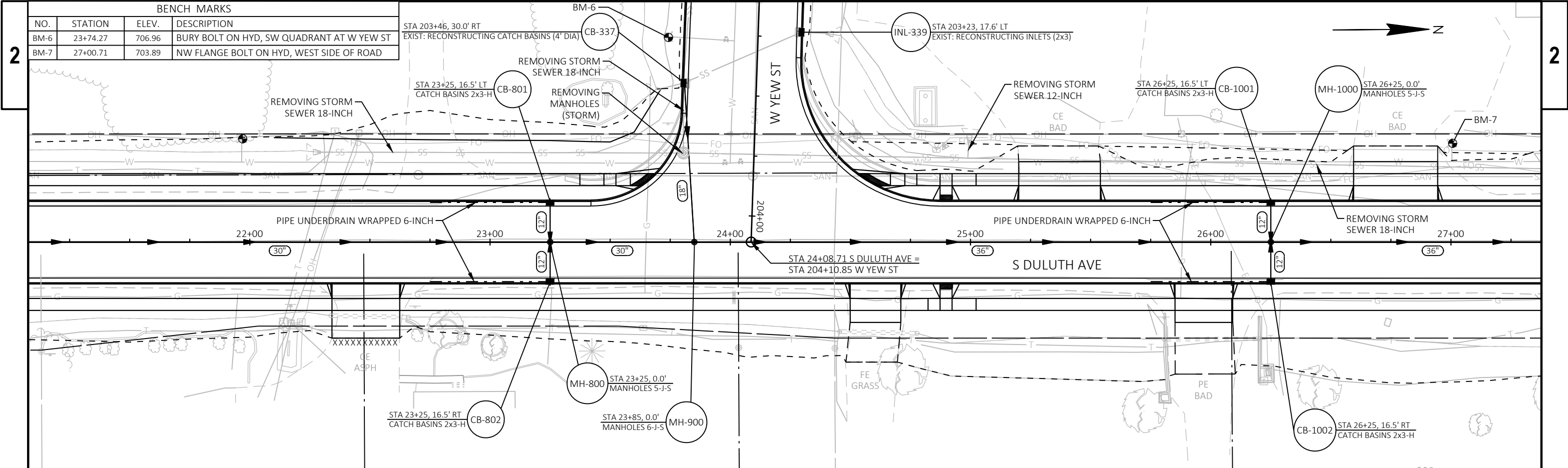
- FLOW DIRECTION ARROW
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- INLET PROTECTION
- EROSION MAT URBAN CLASS I TYPE B



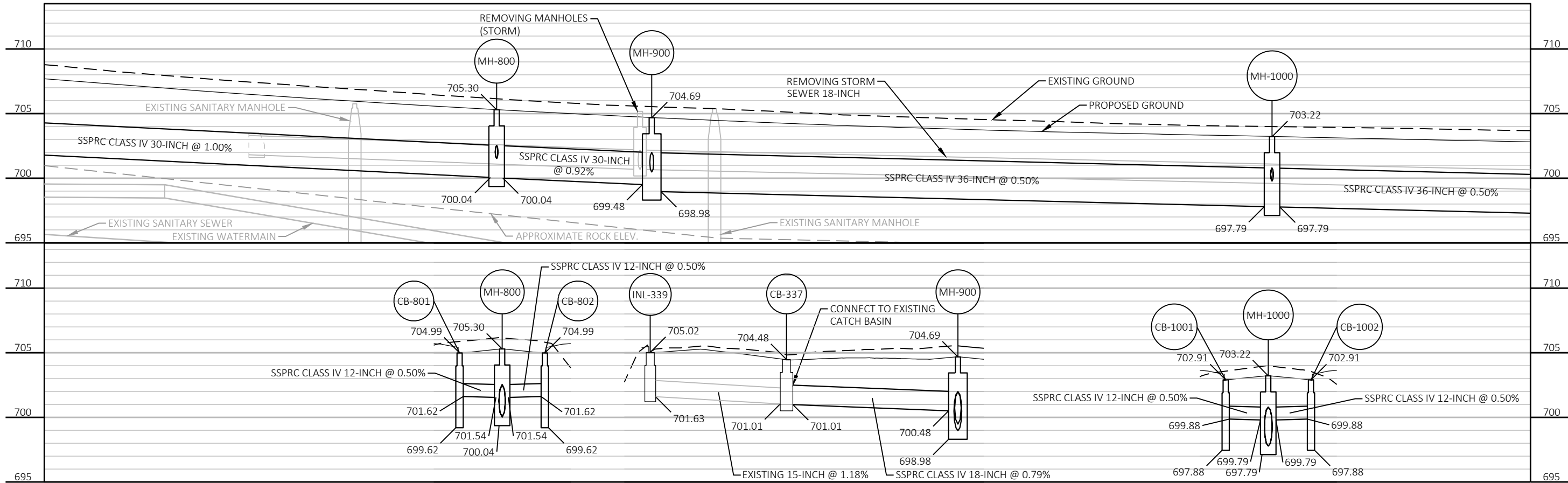
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-1	N/A	721.36	NW FLANGE BOLT ON HYD AT APPROX 150 FT SOUTH OF PROJECT LIMITS
BM-2	11+54.36	721.51	BURY BOLT ON HYD AT NW QUADRANT AT ENTRANCE TO CIRCUIT COURT
BM-3	14+00.33	716.05	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-4	15+30.96	715.40	NORTH RIM OF SANITARY MANHOLE

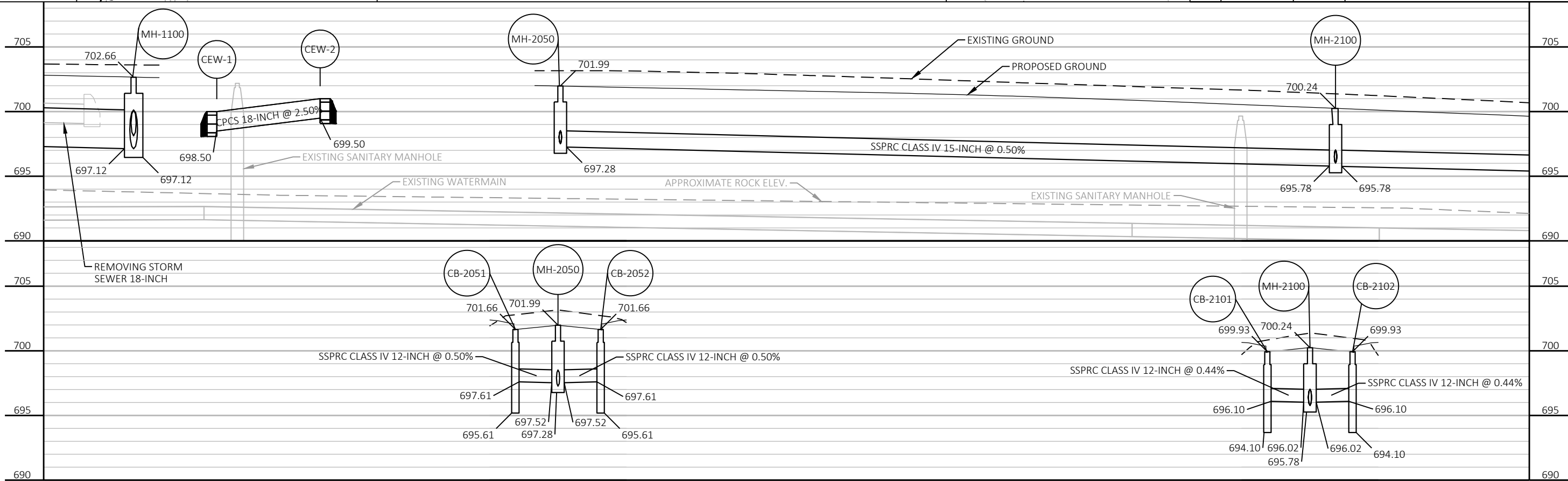
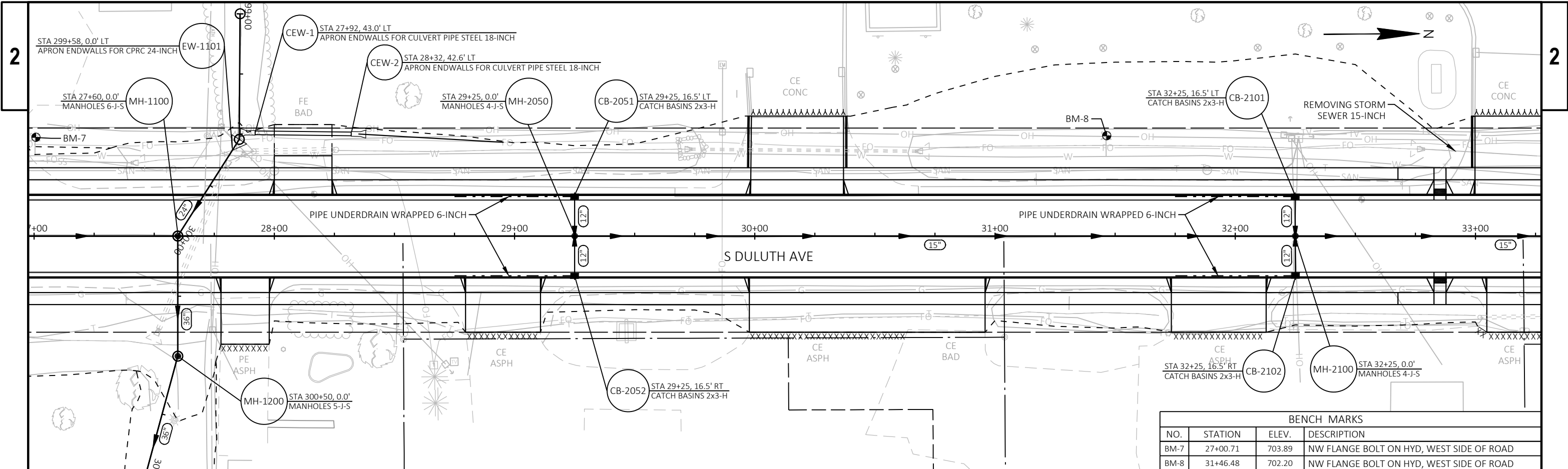


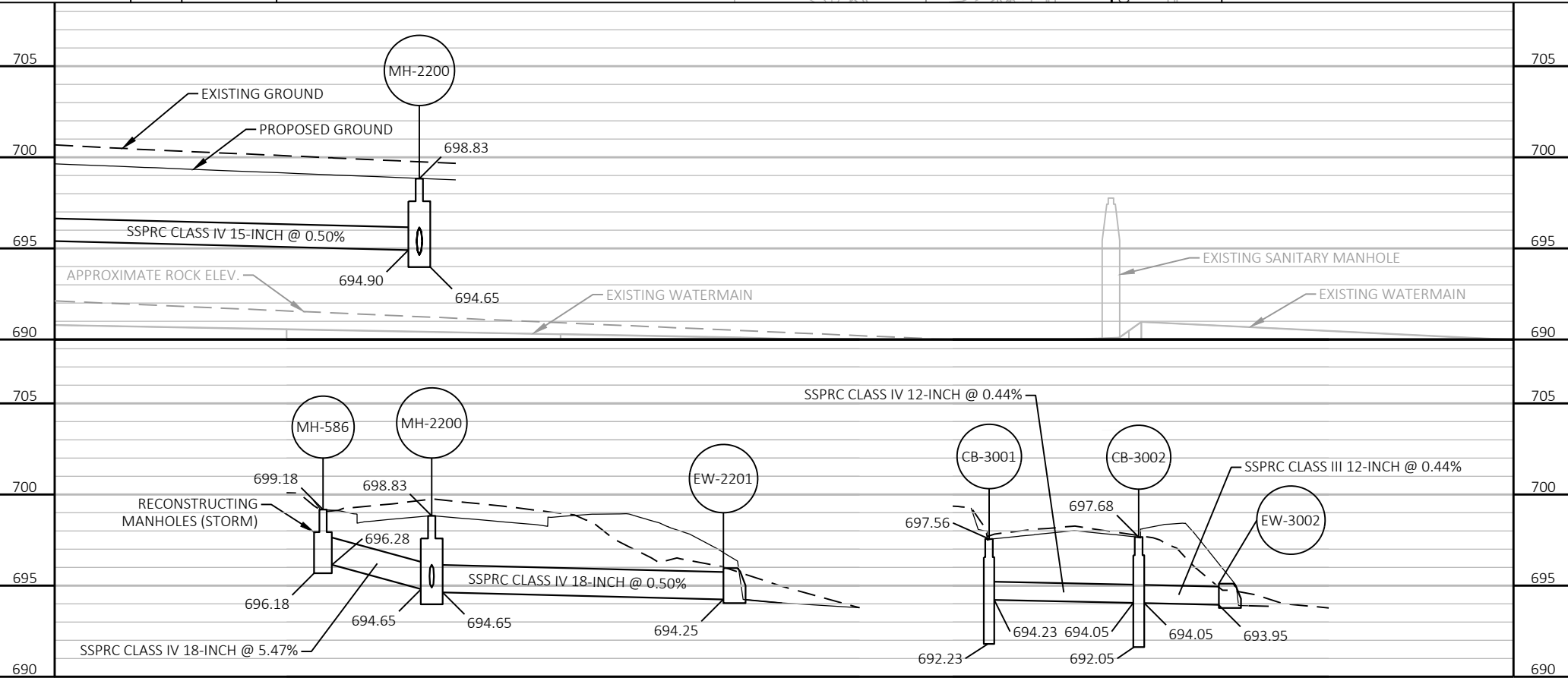
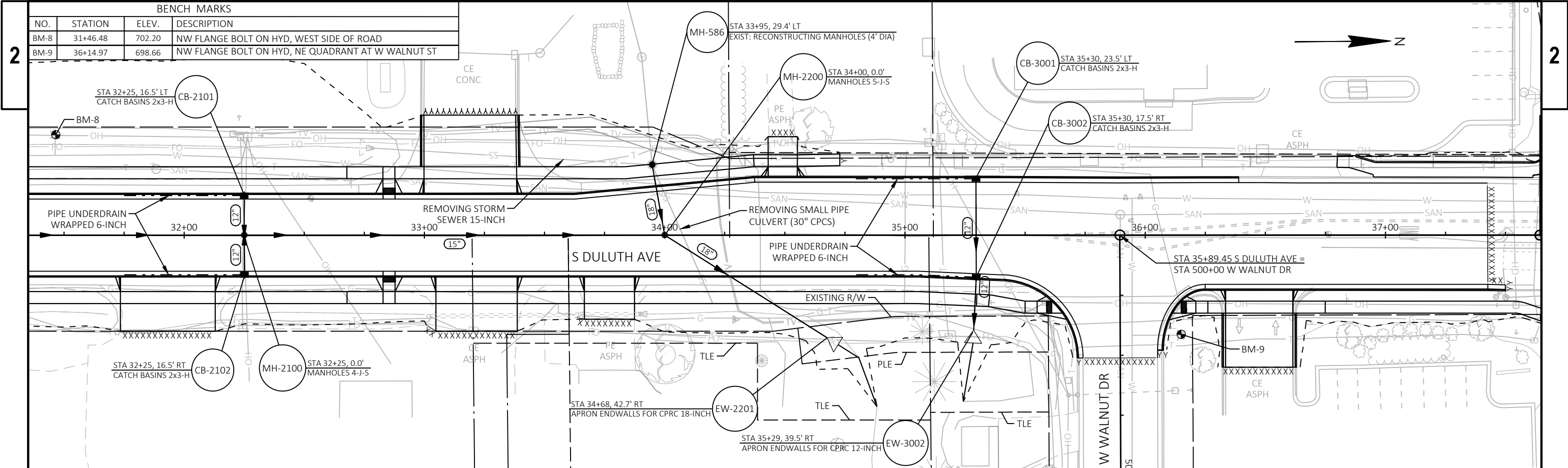


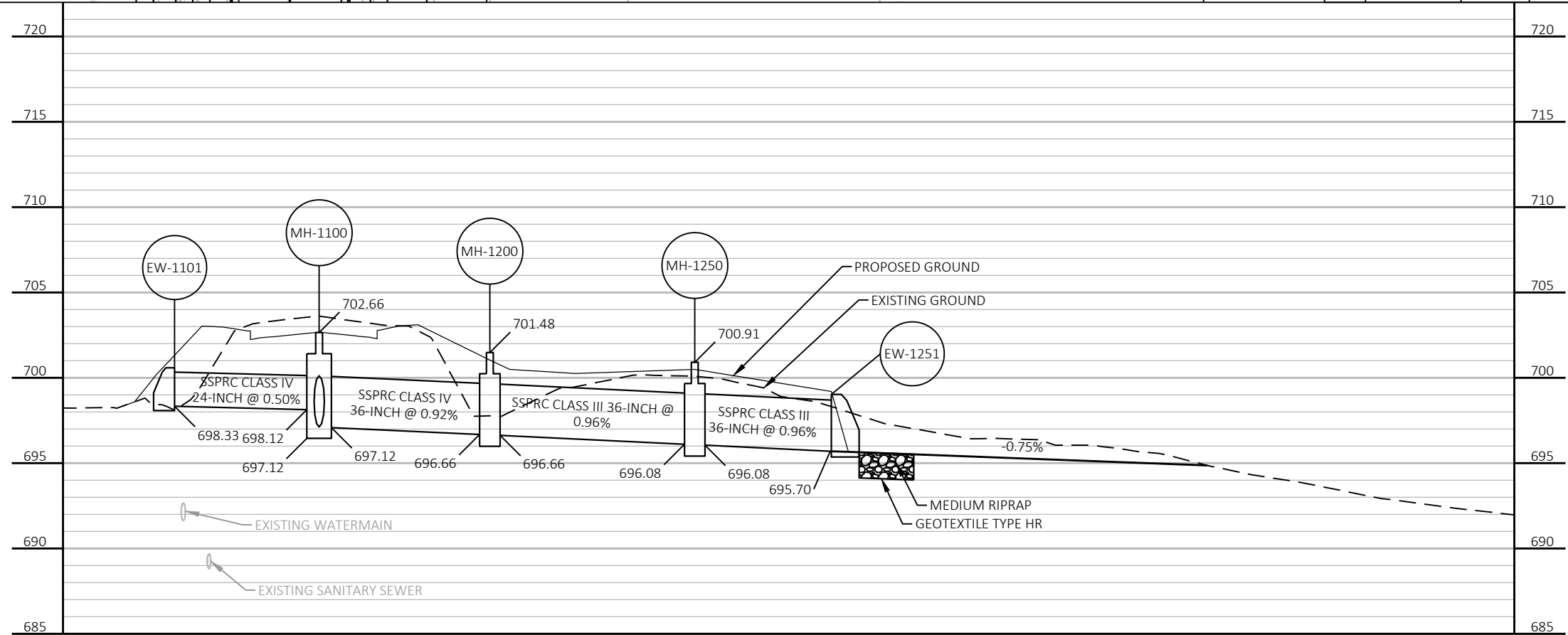
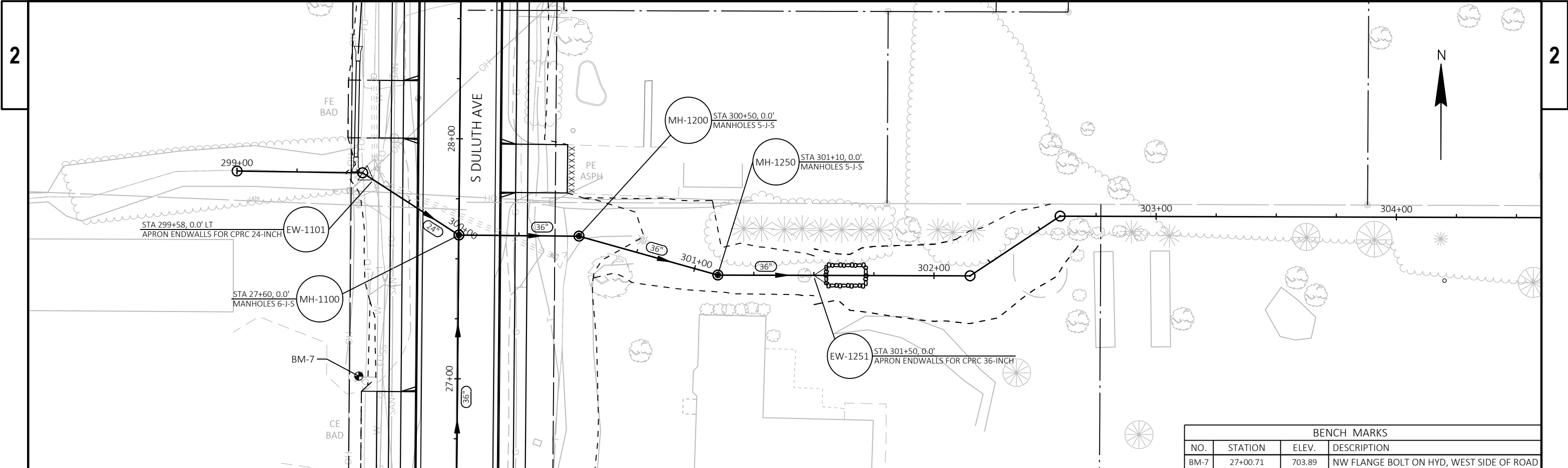


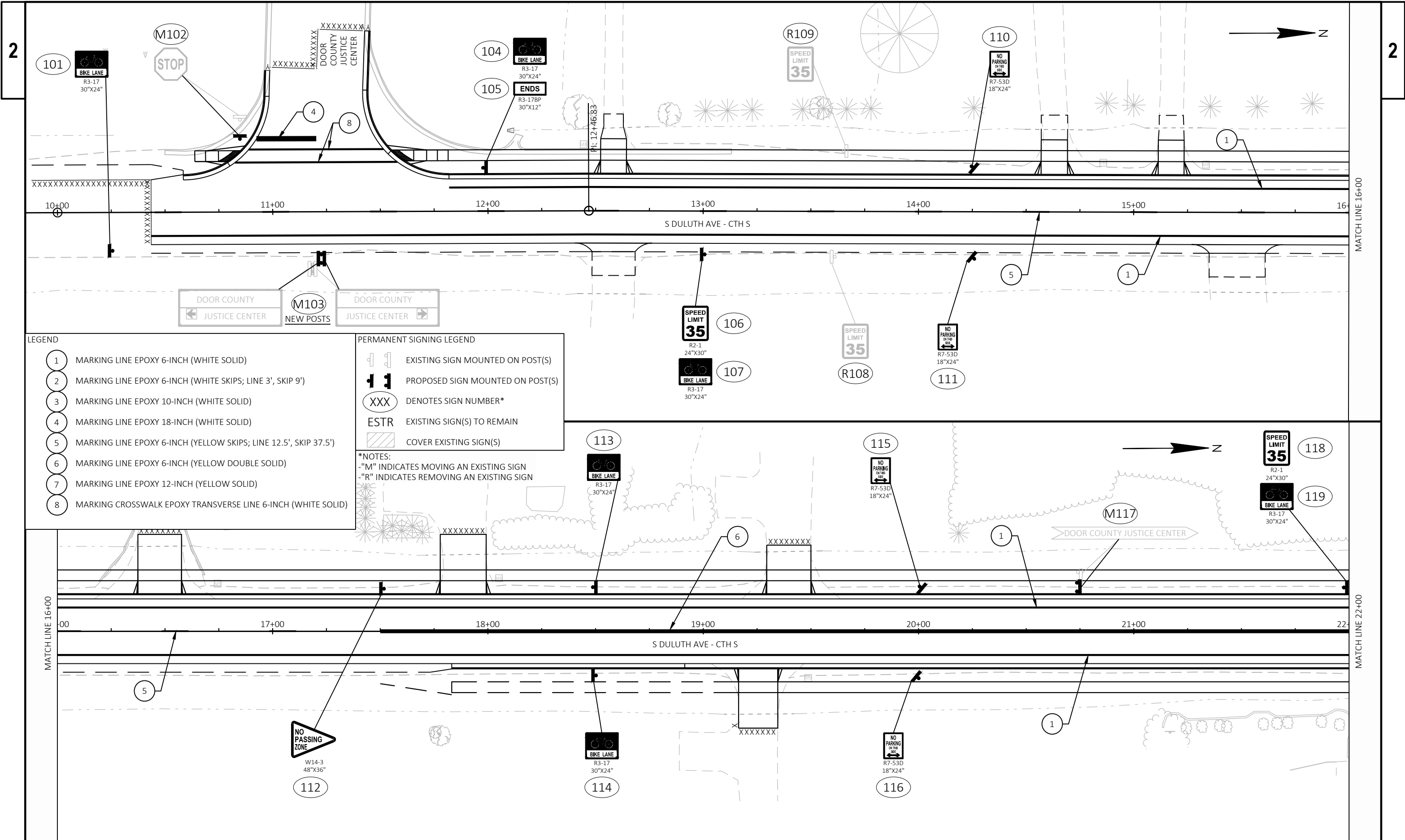
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-6	23+74.27	706.96	BURY BOLT ON HYD, SW QUADRANT AT W YEW ST
BM-7	27+00.71	703.89	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD











LEGEND

- 1 MARKING LINE EPOXY 6-INCH (WHITE SOLID)
- 2 MARKING LINE EPOXY 6-INCH (WHITE SKIPS; LINE 3', SKIP 9')
- 3 MARKING LINE EPOXY 10-INCH (WHITE SOLID)
- 4 MARKING LINE EPOXY 18-INCH (WHITE SOLID)
- 5 MARKING LINE EPOXY 6-INCH (YELLOW SKIPS; LINE 12.5', SKIP 37.5')
- 6 MARKING LINE EPOXY 6-INCH (YELLOW DOUBLE SOLID)
- 7 MARKING LINE EPOXY 12-INCH (YELLOW SOLID)
- 8 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE SOLID)

PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- XXX DENOTES SIGN NUMBER*
- ESTR EXISTING SIGN(S) TO REMAIN
- COVER EXISTING SIGN(S)

*NOTES:
-"M" INDICATES MOVING AN EXISTING SIGN
-"R" INDICATES REMOVING AN EXISTING SIGN

PROJECT NO: 4997-05-73

HWY: SOUTH DULUTH AVENUE

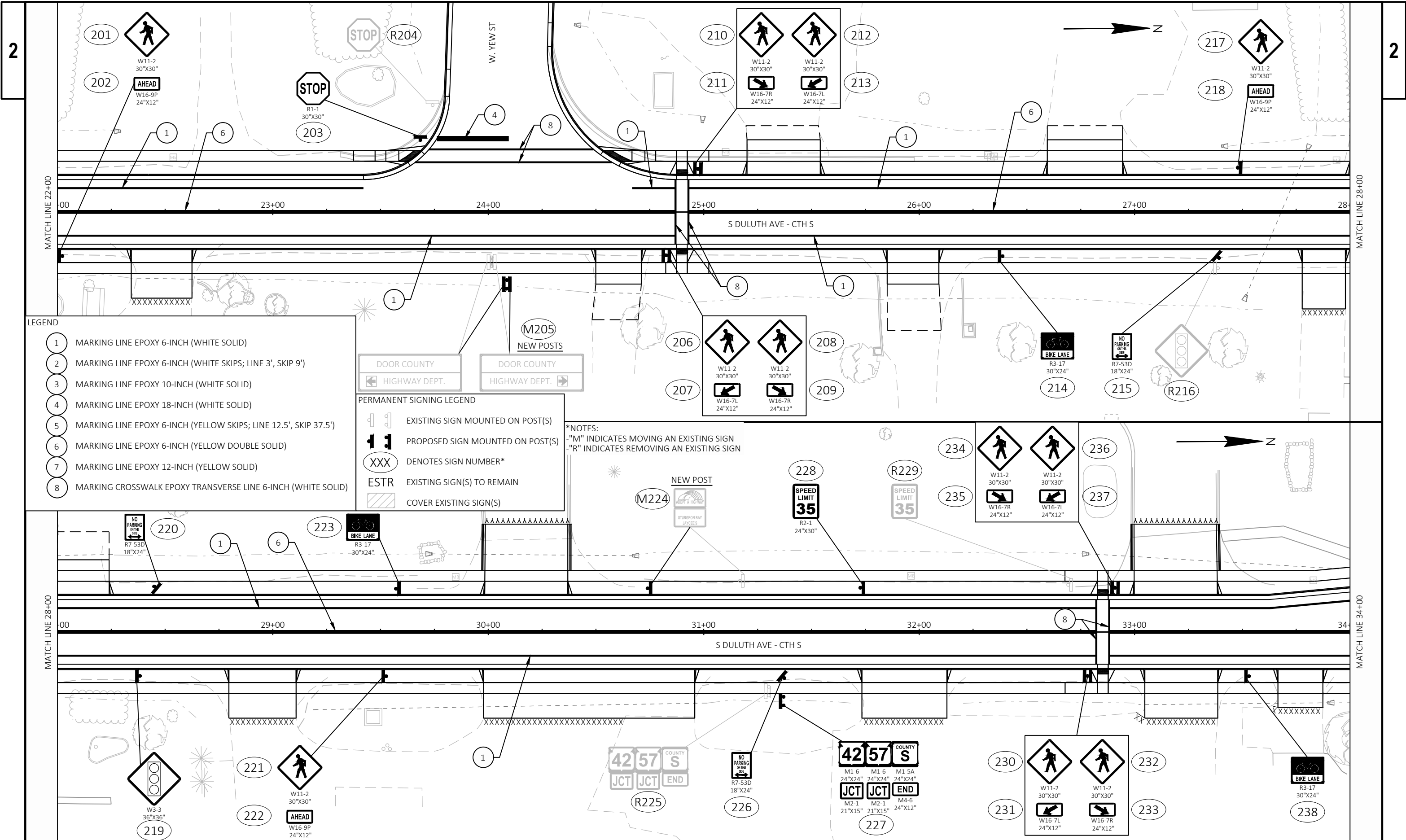
COUNTY: DOOR

PAVEMENT MARKING

SHEET

34

E



- LEGEND
- 1 MARKING LINE EPOXY 6-INCH (WHITE SOLID)
 - 2 MARKING LINE EPOXY 6-INCH (WHITE SKIPS; LINE 3', SKIP 9')
 - 3 MARKING LINE EPOXY 10-INCH (WHITE SOLID)
 - 4 MARKING LINE EPOXY 18-INCH (WHITE SOLID)
 - 5 MARKING LINE EPOXY 6-INCH (YELLOW SKIPS; LINE 12.5', SKIP 37.5')
 - 6 MARKING LINE EPOXY 6-INCH (YELLOW DOUBLE SOLID)
 - 7 MARKING LINE EPOXY 12-INCH (YELLOW SOLID)
 - 8 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE SOLID)

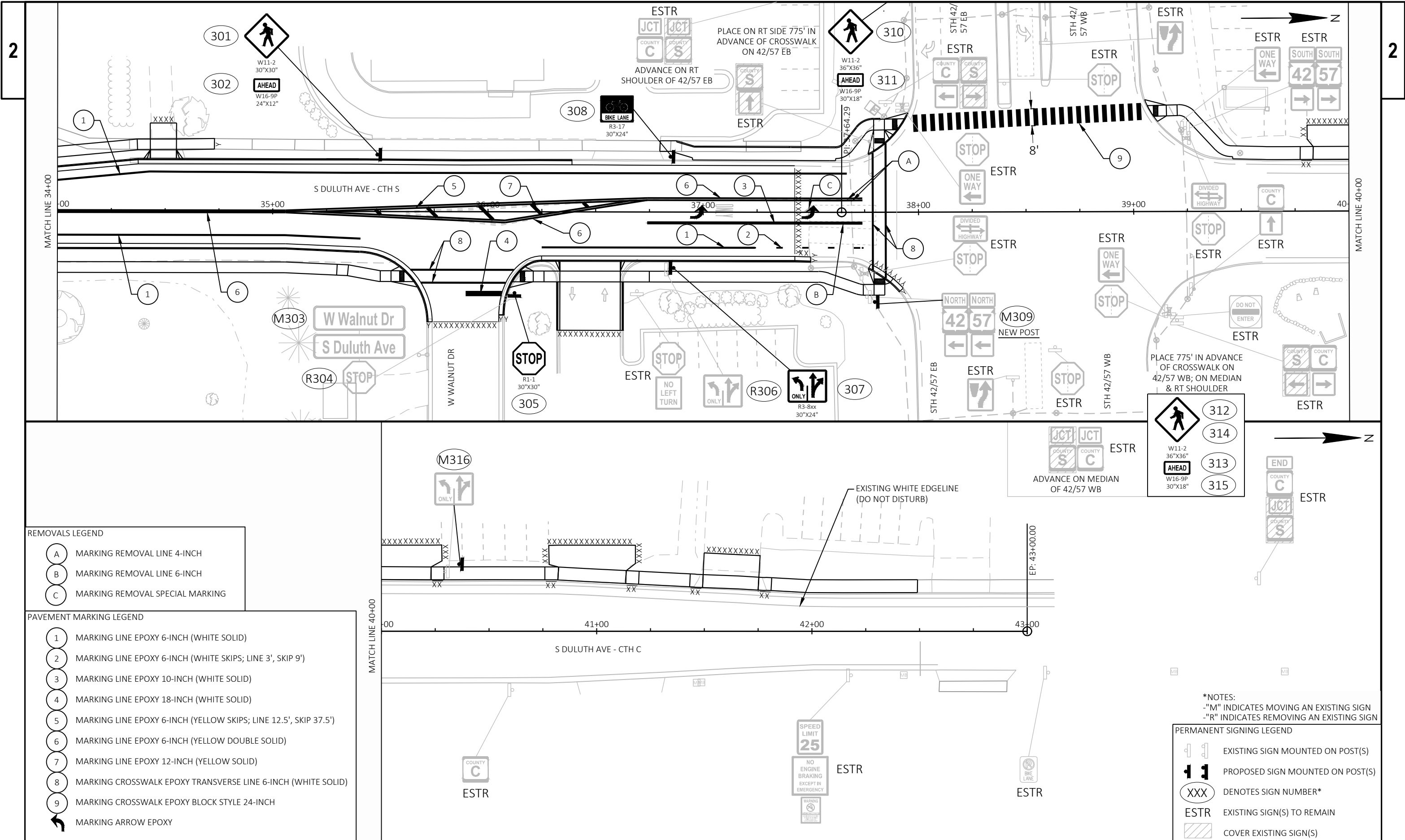
DOOR COUNTY
HIGHWAY DEPT.

DOOR COUNTY
HIGHWAY DEPT.

PERMANENT SIGNING LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- XXX DENOTES SIGN NUMBER*
- ESTR EXISTING SIGN(S) TO REMAIN
- COVER EXISTING SIGN(S)

*NOTES:
-"M" INDICATES MOVING AN EXISTING SIGN
-"R" INDICATES REMOVING AN EXISTING SIGN



REMOVALS LEGEND

A	MARKING REMOVAL LINE 4-INCH
B	MARKING REMOVAL LINE 6-INCH
C	MARKING REMOVAL SPECIAL MARKING

PAVEMENT MARKING LEGEND

1	MARKING LINE EPOXY 6-INCH (WHITE SOLID)
2	MARKING LINE EPOXY 6-INCH (WHITE SKIPS; LINE 3', SKIP 9')
3	MARKING LINE EPOXY 10-INCH (WHITE SOLID)
4	MARKING LINE EPOXY 18-INCH (WHITE SOLID)
5	MARKING LINE EPOXY 6-INCH (YELLOW SKIPS; LINE 12.5', SKIP 37.5')
6	MARKING LINE EPOXY 6-INCH (YELLOW DOUBLE SOLID)
7	MARKING LINE EPOXY 12-INCH (YELLOW SOLID)
8	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE SOLID)
9	MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH
↩	MARKING ARROW EPOXY

*NOTES:
-"M" INDICATES MOVING AN EXISTING SIGN
-"R" INDICATES REMOVING AN EXISTING SIGN

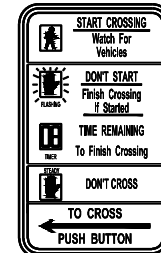
PERMANENT SIGNING LEGEND

⌋ ⌋	EXISTING SIGN MOUNTED ON POST(S)
⌋ ⌋	PROPOSED SIGN MOUNTED ON POST(S)
(XXX)	DENOTES SIGN NUMBER*
ESTR	EXISTING SIGN(S) TO REMAIN
▨	COVER EXISTING SIGN(S)

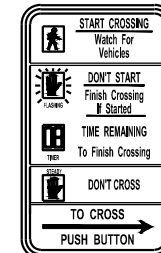
CONFIGURATION WITH HEAD NUMBERS			
3-V	3-H	4-VLFY	1-P
3, 4, 5 8, 9, 10 11, 13, 14 16	12, 15	1, 2 6, 7	17, 18 19, 20



R10-6
24"X36"



Install on SB11 & SB12



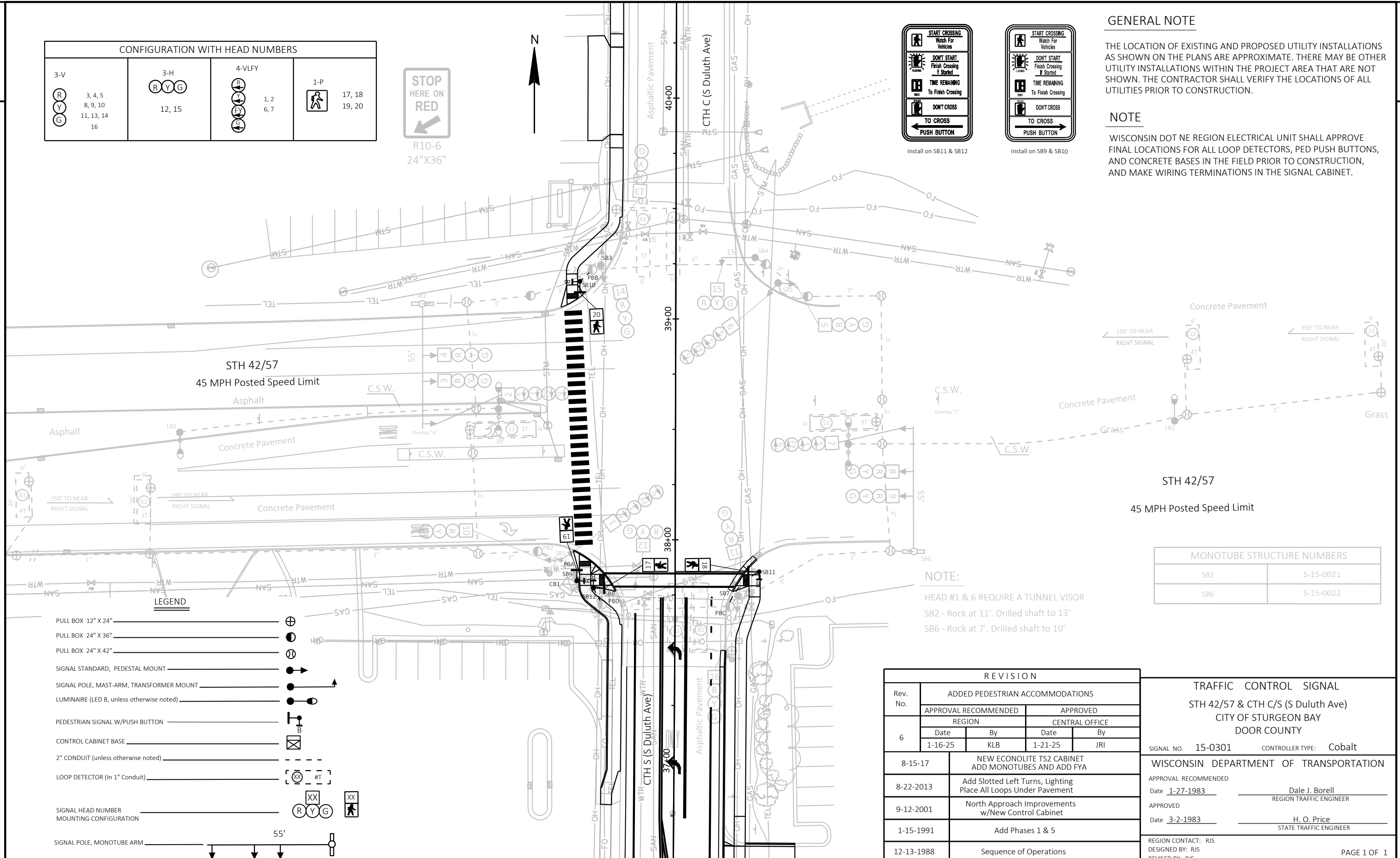
Install on SB9 & SB10

GENERAL NOTE

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. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

NOTE

WISCONSIN DOT NE REGION ELECTRICAL UNIT SHALL APPROVE FINAL LOCATIONS FOR ALL LOOP DETECTORS, PED PUSH BUTTONS, AND CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION, AND MAKE WIRING TERMINATIONS IN THE SIGNAL CABINET.



PROJECT NO: 4997-05-72

HWY: STH 42/57

COUNTY: DOOR

TRAFFIC CONTROL SIGNAL - S15-0301

SHEET

37

E

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 PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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 OR AS APPROVED BY THE ENGINEER.

SEE SDD FOR BARRICADES AND SIGNS FOR SIDEROAD CLOSURES DETAILS 3 AND 4 FOR SIDE ROAD TRAFFIC CONTROL.

SEE SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES SHEET A, DETAIL B AND SDD BARRICADES AND SIGNS FOR VARIOUS CLOSURES SHEET B, DETAIL E.

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

SEE TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION FOR TEMPORARY PEDESTRIAN BARRICADE DETAIL.

DOOR COUNTY HIGHWAY DEPARTMENT TO SIGN DETOUR ROUTE. SEE DETOUR ROUTE DETAIL FOR INFORMATION ONLY.

NOTIFY NORTHEAST REGION TRAFFIC SECTION AT 920-366-8033 THREE BUSINESS DAYS BEFORE DEPLOYING OR CHANGING A MESSAGE ON A PCMS TO OBTAIN APPROVAL OF THE PROPOSED MESSAGE.

PCMS BOARDS MUST BE DEPLOYED 7 DAYS BEFORE THE ROADWAY CLOSURE.

LEGEND

I / I

TYPE II / III BARRICADE

I / I

TYPE II / III BARRICADE WITH ATTACHED SIGN

●

TRAFFIC CONTROL DRUM

⦿

SIGN ON PERMANENT SUPPORT

▨

WORK AREA

⦿

TYPE A WARNING LIGHT (FLASHING)

MB

PORTABLE CHANGEABLE MESSAGE BOARD

TEMPORARY PEDESTRIAN BARRICADE

1

TYPE III BARRICADE

2

TYPE III BARRICADE

3

ROAD WORK AHEAD

4

ROAD CLOSED AHEAD

5

ROAD CLOSED 1000 FT

6

ROAD CLOSED 500 FT

7

SHOULDER WORK

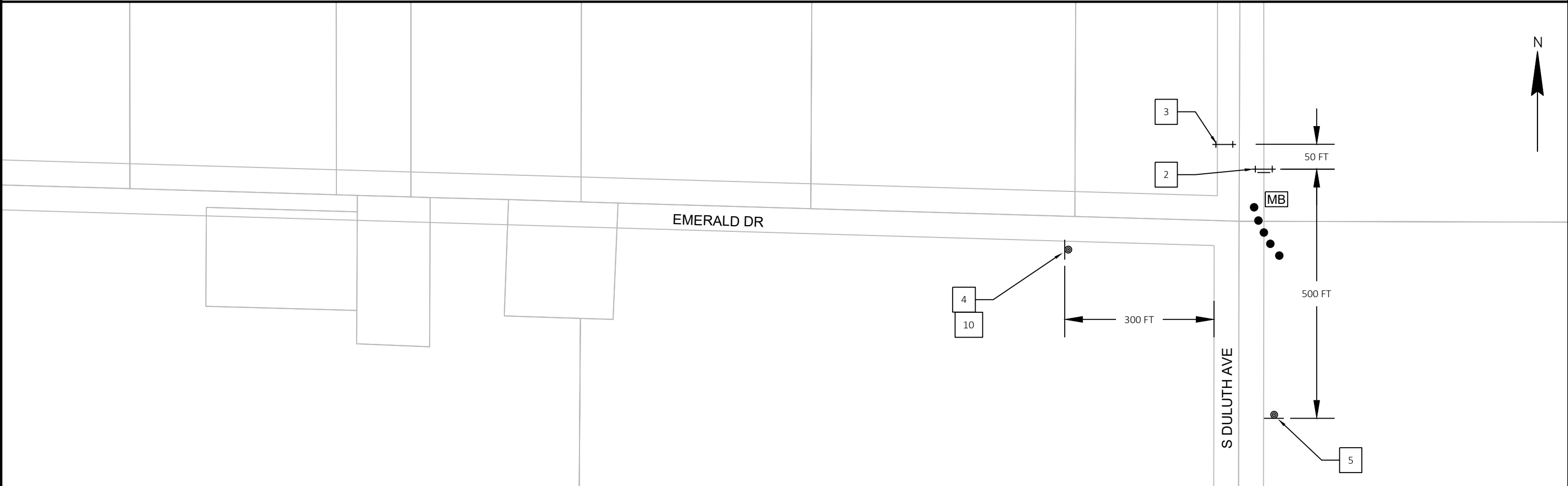
8

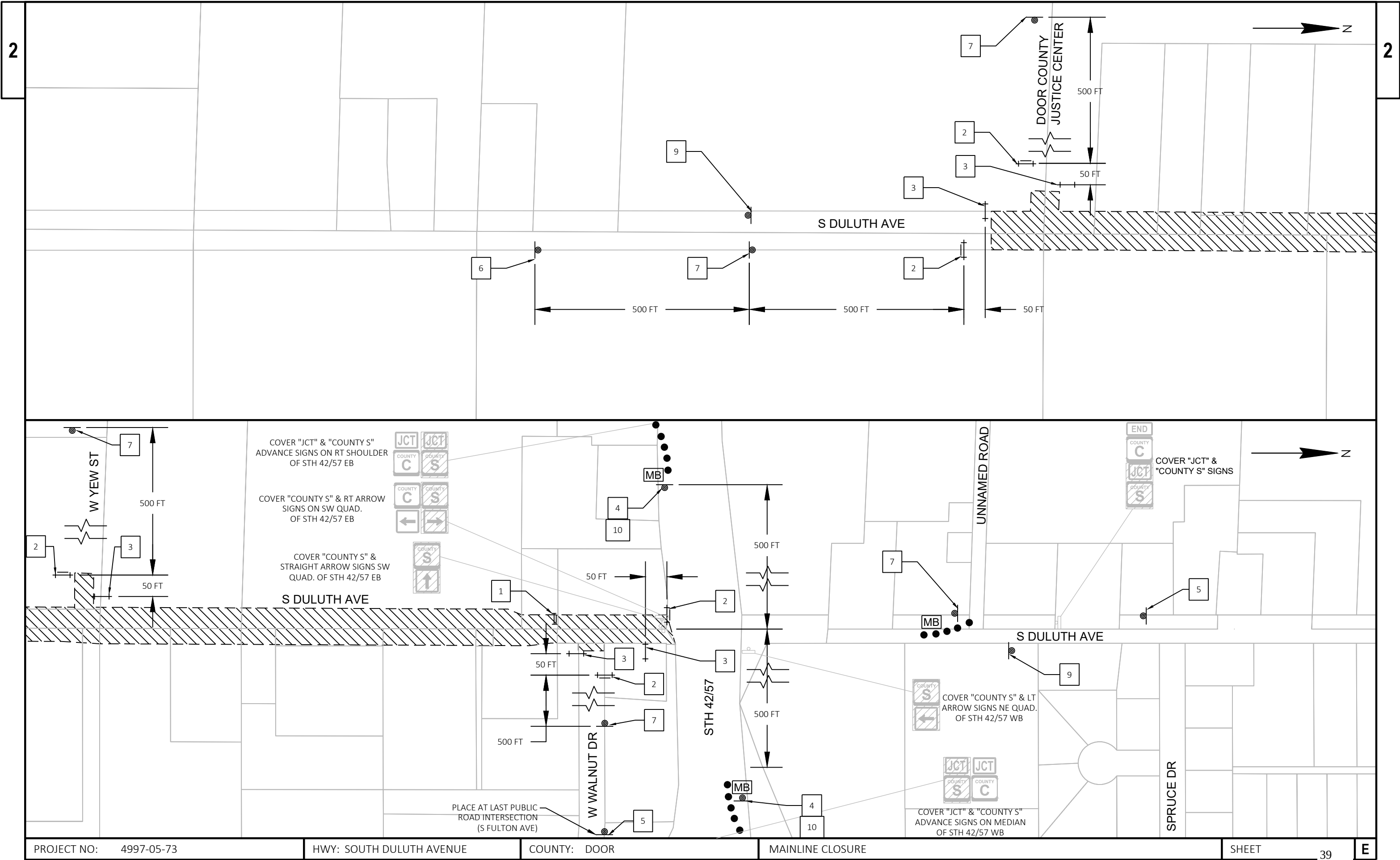
END ROAD WORK

9

S DULUTH AVE

10





2

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 PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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 OR AS APPROVED BY THE ENGINEER.

SEE SDD FOR BARRICADES AND SIGNS FOR SIDEROAD CLOSURES DETAILS 3 AND 4 FOR SIDE ROAD TRAFFIC CONTROL.

SEE SDD BARRICADES AND SIGNS FOR MAINLINE CLOSURES SHEET A, DETAIL B AND SDD BARRICADES AND SIGNS FOR VARIOUS CLOSURES SHEET B, DETAIL E.

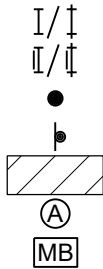
SEE TRAFFIC CONTROL, ADVANCED WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC.

***SEE SDD TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY.

TRAFFIC CONTROL FOR MAINLINE CLOSURE SOUTH OF STH 42/52 (SHOWN GREY FOR INFORMATION PURPOSES) TO REMAIN DURING SHOULDER CLOSURE FOR WORK NORTH OF STH 42/57.

DOOR COUNTY HIGHWAY DEPARTMENT TO SIGN DETOUR ROUTE. SEE DETOUR ROUTE DETAIL FOR INFORMATION ONLY.

LEGEND



TYPE II / III BARRICADE

TYPE II / III BARRICADE WTH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

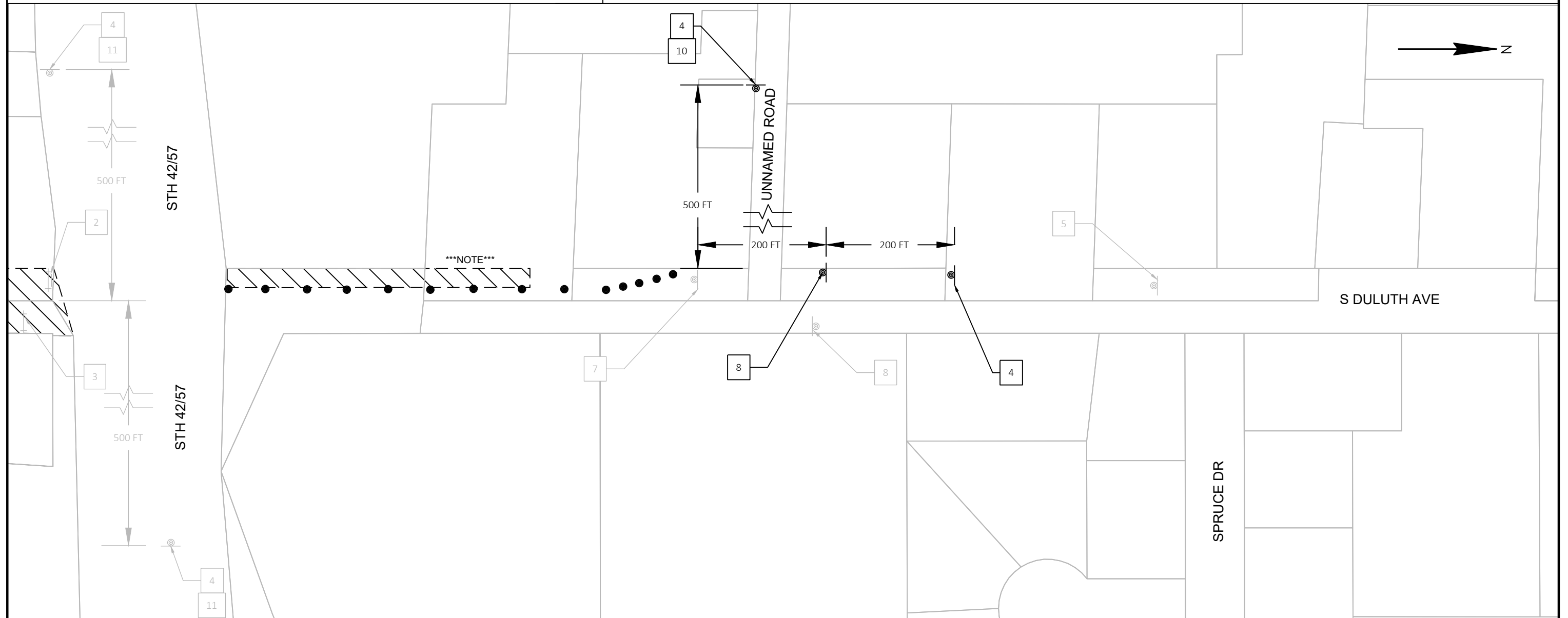
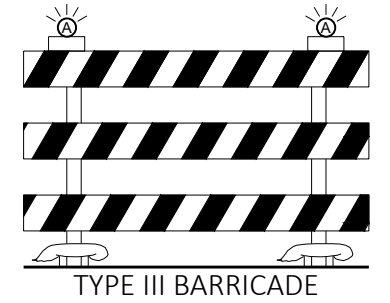
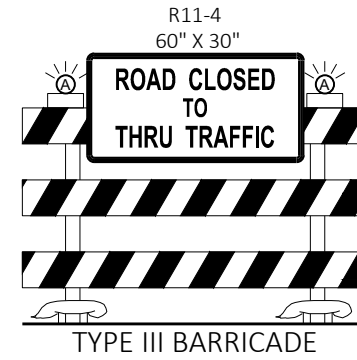
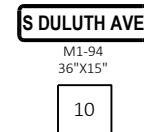
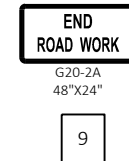
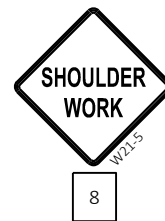
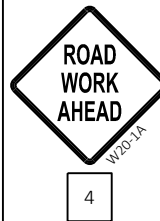
WORK AREA

TYPE A WARNING LIGHT (FLASHING)

PORTABLE CHANGEABLE MESSAGE BOARD



TEMPORARY PEDESTRIAN BARRICADE



PROJECT NO:	4997-05-73
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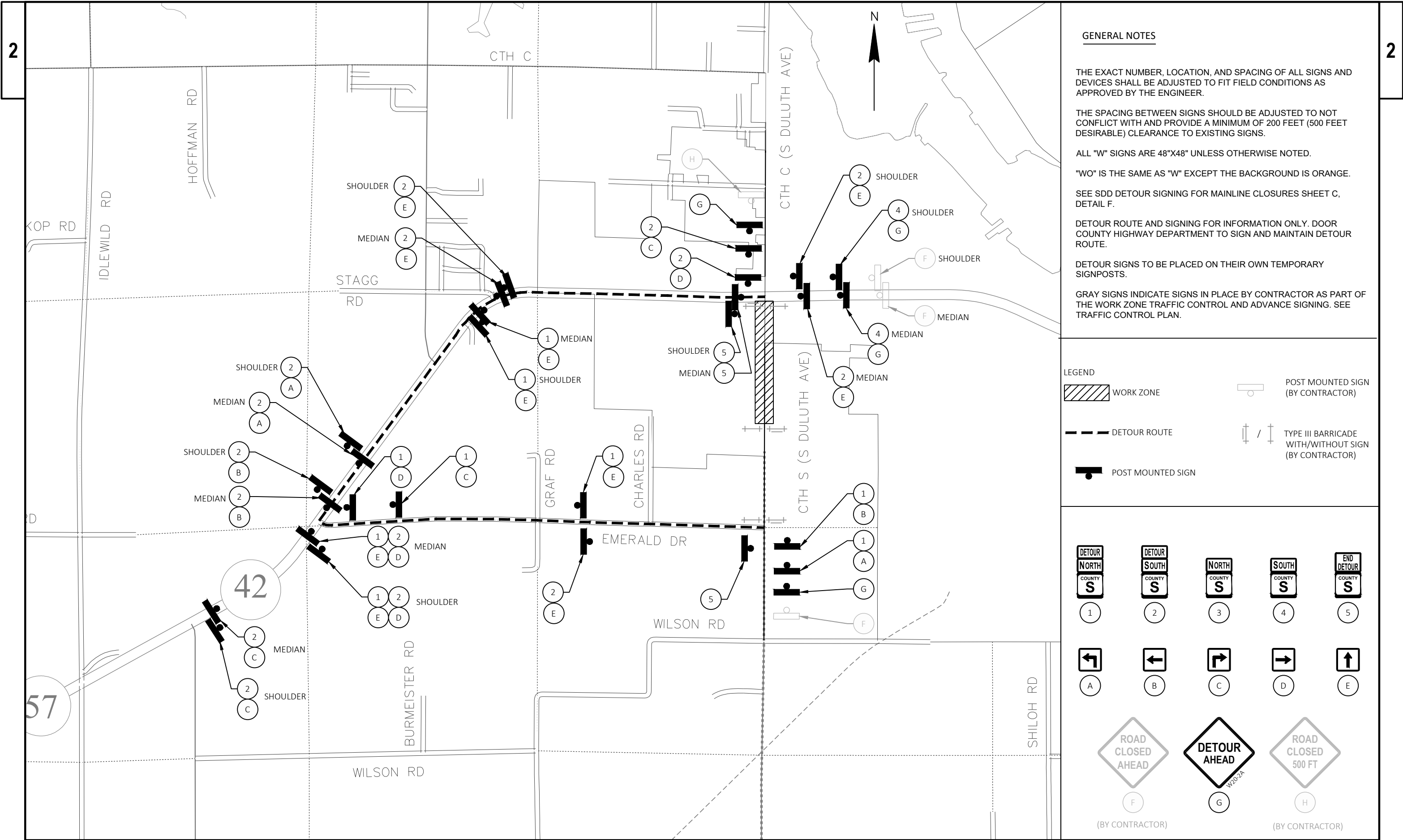
HWY: SOUTH DULUTH AVENUE

COUNTY: DOOR

SHOULDER CLOSURE NORTH OF STH 42_57

SHEET 40

E



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 PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

ALL "W" SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

SEE SDD DETOUR SIGNING FOR MAINLINE CLOSURES SHEET C, DETAIL F.

DETOUR ROUTE AND SIGNING FOR INFORMATION ONLY. DOOR COUNTY HIGHWAY DEPARTMENT TO SIGN AND MAINTAIN DETOUR ROUTE.

DETOUR SIGNS TO BE PLACED ON THEIR OWN TEMPORARY SIGNPOSTS.

GRAY SIGNS INDICATE SIGNS IN PLACE BY CONTRACTOR AS PART OF THE WORK ZONE TRAFFIC CONTROL AND ADVANCE SIGNING. SEE TRAFFIC CONTROL PLAN.

LEGEND

 WORK ZONE

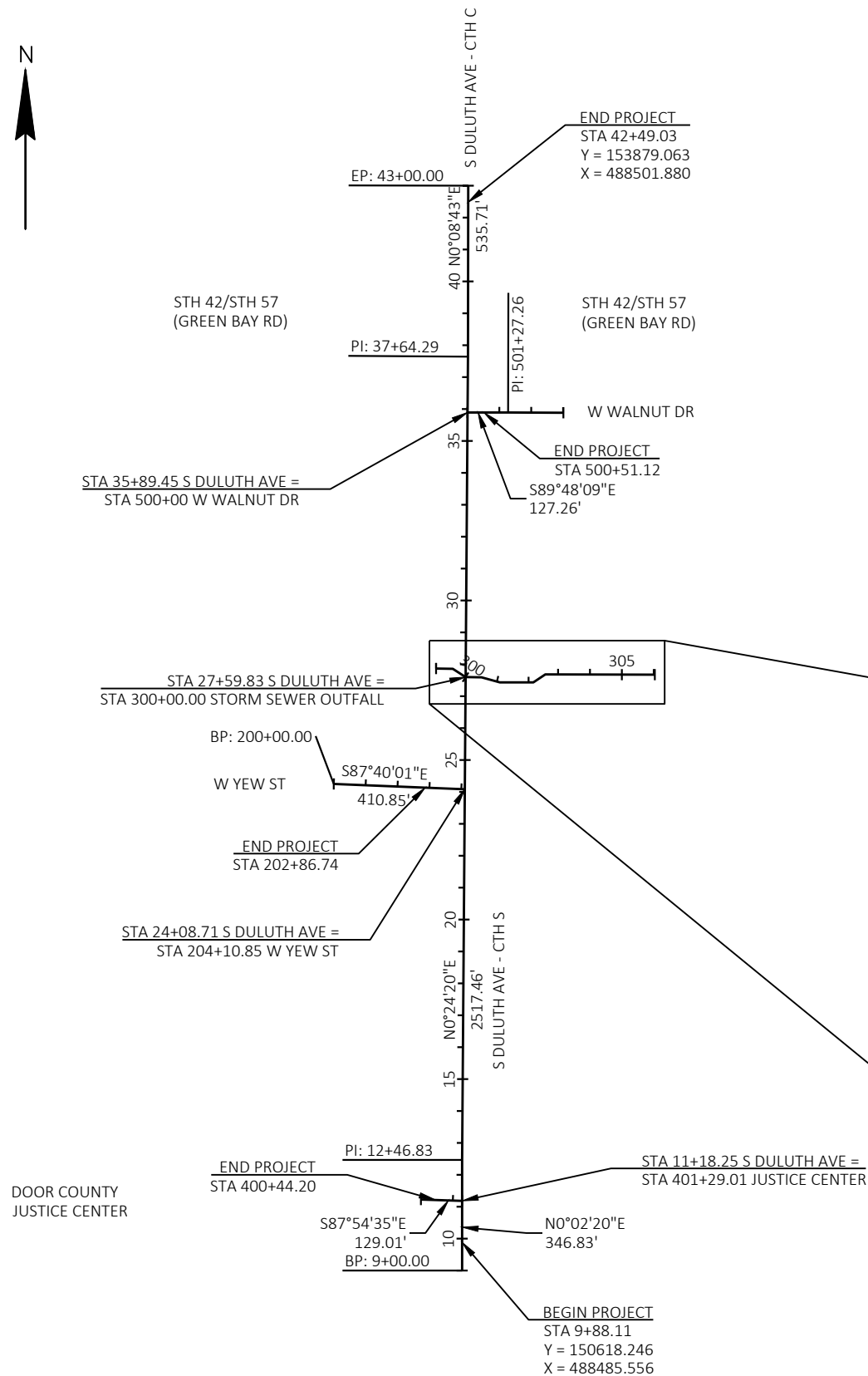
 POST MOUNTED SIGN (BY CONTRACTOR)

 DETOUR ROUTE

 TYPE III BARRICADE WITH/WITHOUT SIGN (BY CONTRACTOR)

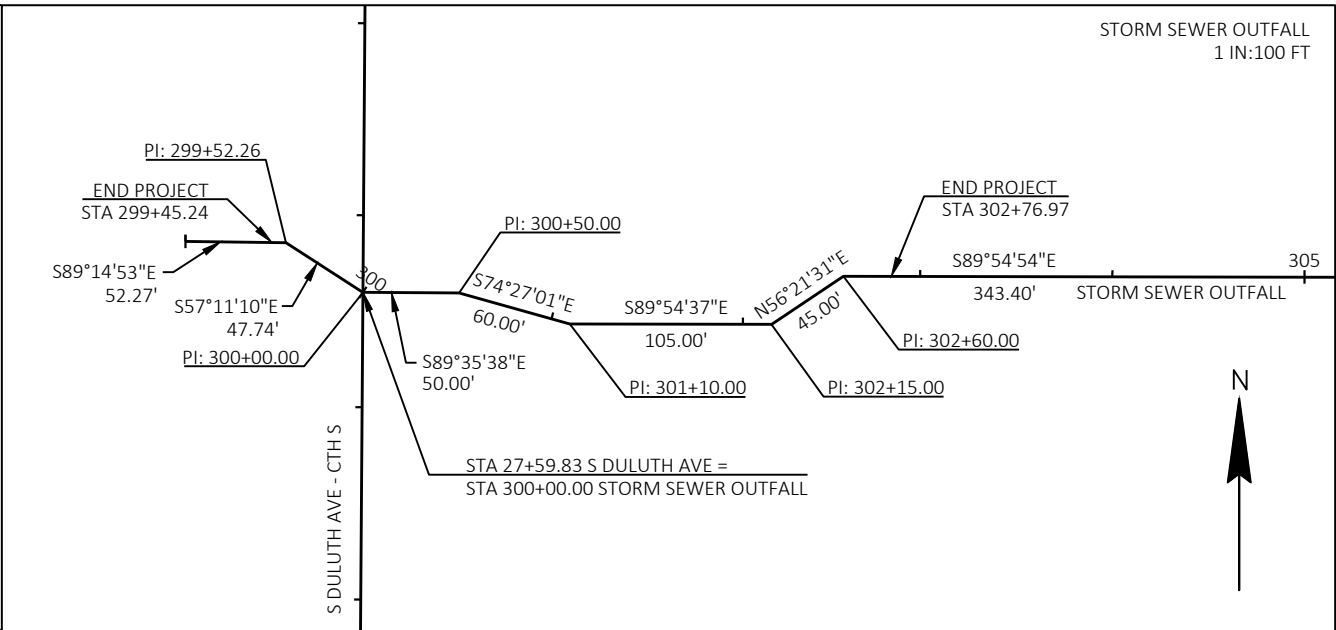
 POST MOUNTED SIGN

				
1	2	3	4	5
				
A	B	C	D	E
				
F	G	H		
(BY CONTRACTOR)		(BY CONTRACTOR)		



BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-1	N/A, LT	721.36	NW FLANGE BOLT ON HYD AT APPROX 150 FT SOUTH OF PROJECT LIMITS
BM-2	11+54.36, 77.50' LT	721.51	BURY BOLT ON HYD AT NW QUADRANT AT ENTRANCE TO CIRCUIT COURT
BM-3	14+00.33, 43.04' LT	716.05	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-4	15+30.96, 28.38' LT	715.40	NORTH RIM OF SANITARY MANHOLE
BM-5	18+37.13, 41.72' LT	713.43	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-6	23+74.27, 85.24' LT	706.96	BURY BOLT ON HYD, SW QUADRANT AT W YEW ST
BM-7	27+00.71, 41.13' LT	703.89	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-8	31+46.48, 41.82' LT	702.20	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-9	36+14.97, 41.36' RT	698.66	NW FLANGE BOLT OH HYD, NE QUADRANT AT W WALNUT ST
BM-10	39+28.08, 54.04' RT	694.98	BURY BOLT ON HYD, NE QUADRANT AT STH 42/STH 57
BM-11	42+50.62, 21.04' RT	693.71	BURY BOLT ON HYD, EAST SIDE OF ROAD

CONTROL POINTS					
NO.	STATION	ELEV.	X COORD.	Y COORD.	DESCRIPTION
CP-1	12+33.10, 16.06' RT	718.52	488516.829	150863.210	EXISTING CONTROL POINT, MAG NAIL AT EAST EDGE OF ROAD
CP-2	24+58.90, 29.42' LT	704.62	488479.943	152089.200	EXISTING CONTROL POINT, MAG NAIL IN ROAD
CP-3	31+46.48, 17.82' LT	701.56	488496.410	152776.685	EXISTING CONTROL POINT, MAG NAIL IN ROAD
CP-4	33+94.82, 28.09' LT	699.10	488487.895	153025.086	EAST RIM OF STORM MANHOLE, WEST SIDE OF ROAD
CP-5	39+43.91, 50.09' LT	693.43	488550.648	153573.892	NORTH RIM OF SANITARY MANHOLE, NE QUADRANT AT STH 42/STH 57



Estimate Of Quantities

4997-05-73

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0004	201.0220	Grubbing	ID	36.000	36.000
0006	203.0100	Removing Small Pipe Culverts	EACH	15.000	15.000
0008	204.0100	Removing Concrete Pavement	SY	112.000	112.000
0010	204.0150	Removing Curb & Gutter	LF	1,082.000	1,082.000
0012	204.0155	Removing Concrete Sidewalk	SY	110.000	110.000
0014	204.0190	Removing Surface Drains	EACH	1.000	1.000
0016	204.0210	Removing Manholes	EACH	1.000	1.000
0018	204.0245	Removing Storm Sewer (size) 01. 12-INCH	LF	8.000	8.000
0020	204.0245	Removing Storm Sewer (size) 02. 15-INCH	LF	116.000	116.000
0022	204.0245	Removing Storm Sewer (size) 03. 18-INCH	LF	540.000	540.000
0024	205.0100	Excavation Common	CY	14,426.000	14,426.000
0026	213.0100	Finishing Roadway (project) 01. 4997-05-73	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	718.000	718.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	11,402.000	11,402.000
0032	305.0130	Base Aggregate Dense 3-Inch	TON	6,221.000	6,221.000
0034	310.0110	Base Aggregate Open-Graded	TON	60.000	60.000
0036	416.0610	Drilled Tie Bars	EACH	6.000	6.000
0038	450.4000	HMA Cold Weather Paving	TON	721.000	721.000
0040	455.0605	Tack Coat	GAL	528.000	528.000
0042	460.2000	Incentive Density HMA Pavement	DOL	1,850.000	1,850.000
0044	460.6223	HMA Pavement 3 MT 58-28 S	TON	1,669.000	1,669.000
0046	460.6224	HMA Pavement 4 MT 58-28 S	TON	1,214.000	1,214.000
0048	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	93.000	93.000
0050	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0052	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	2.000	2.000
0054	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	40.000	40.000
0056	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	9.000	9.000
0058	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0060	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0062	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000
0064	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	86.000	86.000
0066	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	46.000	46.000
0068	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	18.000	18.000
0070	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	4,745.000	4,745.000
0072	601.0600	Concrete Curb Pedestrian	LF	49.000	49.000
0074	602.0410	Concrete Sidewalk 5-Inch	SF	19,406.000	19,406.000
0076	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	100.000	100.000
0078	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	71.000	71.000
0080	602.0810	Concrete Driveway 6-Inch	SY	393.000	393.000
0082	602.0820	Concrete Driveway 8-Inch	SY	667.000	667.000
0084	606.0200	Riprap Medium	CY	7.000	7.000
0086	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	130.000	130.000
0088	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	10.000	10.000
0090	608.0336	Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	LF	100.000	100.000
0092	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	388.000	388.000
0094	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	475.000	475.000
0096	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	206.000	206.000
0098	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	945.000	945.000

Estimate Of Quantities

4997-05-73

Line	Item	Item Description	Unit	Total	Qty
0100	608.0430	Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	LF	285.000	285.000
0102	608.0436	Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	LF	425.000	425.000
0104	611.0410	Reconstructing Catch Basins	EACH	1.000	1.000
0106	611.0420	Reconstructing Manholes	EACH	11.000	11.000
0108	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0110	611.0535	Manhole Covers Type J-Special	EACH	16.000	16.000
0112	611.0624	Inlet Covers Type H	EACH	16.000	16.000
0114	611.1230	Catch Basins 2x3-FT	EACH	16.000	16.000
0116	611.2004	Manholes 4-FT Diameter	EACH	5.000	5.000
0118	611.2005	Manholes 5-FT Diameter	EACH	8.000	8.000
0120	611.2006	Manholes 6-FT Diameter	EACH	3.000	3.000
0122	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	750.000	750.000
0124	618.0100	Maintenance and Repair of Haul Roads (project) 01. 4997-05-73	EACH	1.000	1.000
0126	619.1000	Mobilization	EACH	1.000	1.000
0128	624.0100	Water	MGAL	275.000	275.000
0130	625.0100	Topsoil	SY	9,939.000	9,939.000
0132	628.1504	Silt Fence	LF	1,297.000	1,297.000
0134	628.1520	Silt Fence Maintenance	LF	1,297.000	1,297.000
0136	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0138	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0140	628.2008	Erosion Mat Urban Class I Type B	SY	11,430.000	11,430.000
0142	628.7005	Inlet Protection Type A	EACH	16.000	16.000
0144	628.7010	Inlet Protection Type B	EACH	1.000	1.000
0146	628.7015	Inlet Protection Type C	EACH	18.000	18.000
0148	628.7504	Temporary Ditch Checks	LF	148.000	148.000
0150	628.7555	Culvert Pipe Checks	EACH	57.000	57.000
0152	628.7560	Tracking Pads	EACH	2.000	2.000
0154	628.7570	Rock Bags	EACH	17.000	17.000
0156	629.0210	Fertilizer Type B	CWT	7.000	7.000
0158	630.0140	Seeding Mixture No. 40	LB	223.000	223.000
0160	630.0500	Seed Water	MGAL	223.000	223.000
0162	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	2.000	2.000
0164	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	21.000	21.000
0166	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	18.000	18.000
0168	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	3.000	3.000
0170	637.2210	Signs Type II Reflective H	SF	124.760	124.760
0172	637.2230	Signs Type II Reflective F	SF	151.810	151.810
0174	638.2102	Moving Signs Type II	EACH	10.000	10.000
0176	638.2602	Removing Signs Type II	EACH	8.000	8.000
0178	638.3000	Removing Small Sign Supports	EACH	17.000	17.000
0180	642.5001	Field Office Type B	EACH	1.000	1.000
0182	643.0300	Traffic Control Drums	DAY	8,471.000	8,471.000
0184	643.0420	Traffic Control Barricades Type III	DAY	1,908.000	1,908.000
0186	643.0705	Traffic Control Warning Lights Type A	DAY	3,816.000	3,816.000
0188	643.0900	Traffic Control Signs	DAY	3,225.000	3,225.000
0190	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0192	643.1000	Traffic Control Signs Fixed Message	SF	18.750	18.750
0194	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0196	643.5000	Traffic Control	EACH	1.000	1.000

Estimate Of Quantities

4997-05-73

Line	Item	Item Description	Unit	Total	Qty
0198	644.1810	Temporary Pedestrian Barricade	LF	5.000	5.000
0200	645.0120	Geotextile Type HR	SY	24.000	24.000
0202	646.2020	Marking Line Epoxy 6-Inch	LF	9,550.000	9,550.000
0204	646.4020	Marking Line Epoxy 10-Inch	LF	100.000	100.000
0206	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0208	646.6120	Marking Stop Line Epoxy 18-Inch	LF	78.000	78.000
0210	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	10,400.000	10,400.000
0212	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	100.000	100.000
0214	646.7120	Marking Diagonal Epoxy 12-Inch	LF	28.000	28.000
0216	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	629.000	629.000
0218	646.7520	Marking Crosswalk Epoxy Block Style 24-Inch	LF	216.000	216.000
0220	646.9000	Marking Removal Line 4-Inch	LF	62.000	62.000
0222	646.9002	Marking Removal Line 6-Inch	LF	31.000	31.000
0224	646.9300	Marking Removal Special Marking	EACH	1.000	1.000
0226	650.4000	Construction Staking Storm Sewer	EACH	45.000	45.000
0228	650.4500	Construction Staking Subgrade	LF	2,899.000	2,899.000
0230	650.5000	Construction Staking Base	LF	2,899.000	2,899.000
0232	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	4,979.000	4,979.000
0234	650.9000	Construction Staking Curb Ramps	EACH	14.000	14.000
0236	650.9500	Construction Staking Sidewalk (project) 01. 4997-05-73	EACH	1.000	1.000
0238	650.9911	Construction Staking Supplemental Control (project) 01. 4997-05-73	EACH	1.000	1.000
0240	650.9920	Construction Staking Slope Stakes	LF	3,560.000	3,560.000
0242	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	50.000	50.000
0244	653.0900	Adjusting Pull Boxes	EACH	2.000	2.000
0246	654.0101	Concrete Bases Type 1	EACH	4.000	4.000
0248	655.0230	Cable Traffic Signal 5-14 AWG	LF	791.000	791.000
0250	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	216.000	216.000
0252	655.0700	Loop Detector Lead In Cable	LF	20.000	20.000
0254	657.0100	Pedestal Bases	EACH	4.000	4.000
0256	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	4.000	4.000
0258	658.0416	Pedestrian Signal Face 16-Inch	EACH	4.000	4.000
0260	658.0500	Pedestrian Push Buttons	EACH	4.000	4.000
0262	658.5070	Signal Mounting Hardware (location) 01. S DULUTH AVE	EACH	1.000	1.000
0264	680.0100	Public Land Reference Monument Verify and Reset	EACH	2.000	2.000
0266	690.0150	Sawing Asphalt	LF	785.000	785.000
0268	690.0250	Sawing Concrete	LF	133.000	133.000
0270	740.0440	Incentive IRI Ride	DOL	4,090.000	4,090.000
0272	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0274	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0276	SPV.0060	Special 01. Adjusting Water Valve Boxes	EACH	15.000	15.000
0278	SPV.0060	Special 02. Sanitary Manhole Casting	EACH	2.000	2.000
0280	SPV.0060	Special 03. Frame and Chimney Seal	EACH	9.000	9.000
0282	SPV.0060	Special 04. Research and Locate Existing Property Monuments	EACH	18.000	18.000
0284	SPV.0060	Special 05. Verify and Replace Existing Property Monuments	EACH	6.000	6.000
0286	SPV.0090	Special 01. Sidewalk Curb Retaining Wall	LF	53.000	53.000

4997-05-73

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	201.0205	201.0220	REMARKS
						GRUBBING STA	GRUBBING ID	
0010	28+05	-	28+30	RT	CTY-S_S DULUTH	1	-	ARBOR VITAE
0010	302+40	-	302+80	LT, RT	STORM SEWER OUTFALL	1	-	SHRUBS/BRUSH IN CHANNEL OF STORM OUTFALL
0010	27+42	-	27+42	62' RT	CTY-S_S DULUTH	-	36	WILLOW TREE IN FRONT YARD (CLEARED BY OTHERS)
TOTAL 0010						2	36	

CONCRETE REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0150	204.0155	REMARKS
					REMOVING CURB & GUTTER LF	REMOVING CONCRETE SIDEWALK SY	
0010	10+50	-	10+97	LT CTY-S_S DULUTH	69	-	SW QUAD CIRCUIT COURT
0010	11+45	-	13+13	LT CTY-S_S DULUTH	199	-	NW QUAD CIRCUIT COURT
0010	23+31	-	23+83	LT CTY-S_S DULUTH	132	-	SW QUAD W YEW ST
0010	24+30	-	25+98	LT CTY-S_S DULUTH	241	-	NW QUAD W YEW ST
0010	29+97	-	29+98	LT CTY-S_S DULUTH	7	-	KT DW (S)
0010	30+38	-	30+39	LT CTY-S_S DULUTH	7	-	KT DW (S)
0010	32+98	-	32+99	LT CTY-S_S DULUTH	6	-	KT DW (N)
0010	33+38	-	33+39	LT CTY-S_S DULUTH	3	-	KT DW (N)
0010	33+40	-	34+73	LT CTY-S_S DULUTH	-	74	
0010	34+34	-	36+48	LT CTY-S_S DULUTH	215	-	LT MAINLINE
0010	35+72	-	35+72	RT CTY-S_S DULUTH	1	-	SE QUAD W WALNUT DR MATCH
0010	36+07	-	36+33	RT CTY-S_S DULUTH	68	-	NE QUAD W WALNUT DR & S. SIDE OF WALGREENS DW
0010	36+62	-	37+50	RT CTY-S_S DULUTH	116	-	N SIDE OF WALGREENS DW & RT MAINLINE TO 42/57 MATCH
0010	36+80	-	37+45	LT CTY-S_S DULUTH	-	36	
0010	37+77	-	37+91	RT CTY-S_S DULUTH	18	-	SE QUAD 42/27 AT CURB RAMP
TOTAL 0010					1,082	110	

DRAINAGE REMOVALS

CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	203.0100	204.0190	204.0210	204.0245.01	204.0245.02	204.0245.03	REMARKS
						REMOVING SMALL PIPE CULVERTS EACH	REMOVING SURFACE DRAINS EACH	REMOVING MANHOLES EACH	REMOVING STORM SEWER (SIZE) (01. 12-INCH) LF	REMOVING STORM SEWER (SIZE) (02. 15 INCH) LF	REMOVING STORM SEWER (SIZE) (03. 18-INCH) LF	
0010	12+08	-	12+17	LT	CTY-S_S DULUTH	-	1	-	-	-	-	CONCRETE FLUME ON LT PVT EDGE
0010	12+45	-	12+75	LT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS*, 1147 DW
0010	14+49	-	14+81	LT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 1139 DW
0010	15+05	-	15+32	LT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 1131 DW
0010	16+31	-	16+63	LT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 1107 DW
0010	17+71	-	18+07	LT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 1061 DW
0010	19+10	-	19+42	RT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 3010 DW
0010	19+24	-	19+55	LT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 1049 DW
0010	22+30	-	23+80	LT	CTY-S_S DULUTH	-	-	-	-	-	150	RCP
0010	22+34	-	22+66	RT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 3026/3028 DW
0010	23+80	-	23+80	LT	CTY-S_S DULUTH	-	-	1	-	-	-	STM MH IN W YEW ST INT
0010	23+80	-	27+40	LT	CTY-S_S DULUTH	-	-	-	-	-	360	RCP
0010	24+45	-	24+78	RT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 3050 FE
0010	24+99	-	25+00	LT	CTY-S_S DULUTH	-	-	-	8	-	-	RCP, ENDWALL STUB FROM EXISTING SS
0010	25+81	-	26+20	RT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 3050 DW
0010	27+52	-	27+80	LT, RT	CTY-S_S DULUTH	1	-	-	-	-	-	24" CPCS, CROSSING S DULUTH AVE MAINLINE
0010	27+91	-	28+26	LT	CTY-S_S DULUTH	1	-	-	-	-	-	24" CPCS, S ACCESS TO 901
0010	29+74	-	30+67	LT	CTY-S_S DULUTH	1	-	-	-	-	-	12" CPP**, 901 DW (S)
0010	32+76	-	33+95	LT	CTY-S_S DULUTH	-	-	-	-	116	-	15" CPP, KT DW (N)
0010	33+02	-	33+90	RT	CTY-S_S DULUTH	1	-	-	-	-	-	18" CPCS, 862 (N)/836 DW'S
0010	33+95	-	34+20	LT, RT	CTY-S_S DULUTH	1	-	-	-	-	-	30" CPCS CROSSING MAINLINE OF S DULUTH AVE
0010	203+45	-	203+75	RT	W YEW ST	-	-	-	-	-	30	FROM EXISTING INLET
TOTAL 0010						15	1	1	8	116	540	

*CPCS STANDS FOR CULVERT PIPE CORRUGATED STEEL
**CPP STANDS FOR CULVERT PIPE CORRUGATED STEEL

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		AVAILABLE MATERIAL (5)	REDUCED EBS IN FILL (9)	EXPANDED EBS BACKFILL (11)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE
			CUT (2)	EBS EXCAVATION (3)		FACTOR 0.85	FACTOR 1.20		FACTOR 1.20		
DIVISION 1											
S DULUTH AVE	10+43.53/42+50.00	S DULUTH AVE	9,974	3,817	9,974	3,244	4,580	2,559	-823	10,797	10,797
CIRCUIT COURT	400+62.58/401+18.00	CIRCUIT COURT	132	7	132	6	8	0	-7	139	139
W YEW ST	202+86.79/203+99.84	W YEW ST	383	4	383	3	5	0	-4	387	387
W WALNUT DR	500+11.00/500+51.13	W WALNUT DR	78	0	78	0	0	0	0	78	78
STORM OUTFALL	300+50.00/302+60.00	STORM OUTFALL	31	0	31	0	0	142	170	-139	0
DIVISION 1 SUBTOTAL			10,598	3,828	10,598	3,254	4,594	2,701	-663	11,261	11,401
GRAND TOTAL			10,598	3,828	10,598	3,254	4,594	2,701	-663	11,261	11,401
TOTAL COMMON EXC			14,426								

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH BASE AGGREGATE DENSE 3-INCH.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = .85
(11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BASE AGGREGATE DENSE 3-INCH.
(13) EXPANDED FILL FACTOR = 1.20
EXPANDED FILL = (UNEXPANDED FILL- REDUCED EBS) * FILL FACTOR
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

BASE AGGREGATES

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	305.0130	624.0100	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	BASE AGGREGATE DENSE 3-INCH TON	WATER MGAL	
0010	9+88	-	10+59	LT CTY-S_S DULUTH	14	-	-	0.2	LT SHOULDER
0010	10+43	-	17+83	RT CTY-S_S DULUTH	129	-	-	1.9	RT SHOULDER
0010	10+43	-	17+83	LT, RT CTY-S_S DULUTH	-	2,742	-	41.1	MAINLINE
0010	17+83	-	37+42	LT, RT CTY-S_S DULUTH	-	6,604	-	99.1	MAINLINE
0010	10+50	-	17+50	LT, RT CTY-S_S DULUTH	-	-	2,865	43.0	EBS
0010	22+00	-	30+20	LT, RT CTY-S_S DULUTH	-	-	3,356	50.3	EBS
0010	400+44	-	401+10	LT, RT CIRCUIT COURT	-	287	-	4.3	SIDEROAD
0010	202+87	-	203+92	LT, RT W YEW ST	-	568	-	8.5	SIDEROAD
0010	300+23	-	300+51	LT, RT W WALNUT DR	-	119	-	1.8	SIDEROAD
0010	10+63	-	42+49	LT, RT CTY-S_S DULUTH	575	-	-	8.6	SIDEWALK
0010	12+38	-	12+78	RT CTY-S_S DULUTH	-	24	-	0.4	FIELD ENTRANCE
0010	12+49	-	12+67	LT CTY-S_S DULUTH	-	19	-	0.3	1147 DW
0010	14+54	-	14+72	LT CTY-S_S DULUTH	-	21	-	0.3	1139 DW
0010	15+08	-	15+26	LT CTY-S_S DULUTH	-	20	-	0.3	1131 DW
0010	15+27	-	15+69	RT CTY-S_S DULUTH	-	31	-	0.5	FIELD ENTRANCE
0010	16+35	-	16+60	LT CTY-S_S DULUTH	-	33	-	0.5	1107 DW
0010	17+76	-	18+01	LT CTY-S_S DULUTH	-	35	-	0.5	1061 DW
0010	19+14	-	19+37	RT CTY-S_S DULUTH	-	30	-	0.5	3010 DW
0010	19+28	-	19+52	LT CTY-S_S DULUTH	-	26	-	0.4	1049 DW
0010	22+32	-	22+64	RT CTY-S_S DULUTH	-	36	-	0.5	3026/3028 DW
0010	24+48	-	24+73	RT CTY-S_S DULUTH	-	43	-	0.6	3050 DW/FE
0010	25+18	-	25+56	LT CTY-S_S DULUTH	-	43	-	0.6	951 DW
0010	25+83	-	26+11	RT CTY-S_S DULUTH	-	58	-	0.9	3050 DW
0010	26+58	-	26+96	LT CTY-S_S DULUTH	-	44	-	0.7	941 DW
0010	27+76	-	28+00	RT CTY-S_S DULUTH	-	33	-	0.5	932 DW
0010	32+98	-	33+40	LT CTY-S_S DULUTH	-	42	-	0.6	FIELD ENTRANCE
0010	28+78	-	29+13	RT CTY-S_S DULUTH	-	40	-	0.6	922 DW
0010	29+96	-	30+39	LT CTY-S_S DULUTH	-	47	-	0.7	901 DW (KT, S)
0010	29+96	-	30+98	RT CTY-S_S DULUTH	-	124	-	1.9	862 DW
0010	31+71	-	32+15	RT CTY-S_S DULUTH	-	50	-	0.8	862 DW, S
0010	32+98	-	33+40	LT CTY-S_S DULUTH	-	47	-	0.7	901 DW (KT, N)
0010	33+03	-	33+41	RT CTY-S_S DULUTH	-	43	-	0.6	862 DW, N
0010	33+65	-	33+89	RT CTY-S_S DULUTH	-	19	-	0.3	836 DW
0010	34+40	-	34+58	LT CTY-S_S DULUTH	-	11	-	0.2	835 DW
0010	36+31	-	36+64	RT CTY-S_S DULUTH	-	57	-	0.9	808 DW
0010	39+83	-	40+23	LT CTY-S_S DULUTH	-	43	-	0.7	621 DW S
0010	40+82	-	41+14	LT CTY-S_S DULUTH	-	39	-	0.6	621 DW N
0010	41+49	-	41+75	LT CTY-S_S DULUTH	-	25	-	0.4	601 DW
TOTAL 0010					718	11,402	6,221	275	

HMA PAVEMENT											
						450.4000 HMA COLD WEATHER PAVING	455.0605 TACK COAT	460.6223 HMA PAVEMENT 3 MT 58-28 S	460.6224 HMA PAVEMENT 4 MT 58-28 S	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	
CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	TON	GAL	TON	TON	TON	REMARKS
0010	10+44	-	37+43	LT, RT	CTY-S_S DULUTH	640	468	1,481	1,077	-	
0010	400+44	-	401+16	LT, RT	DOOR COUNTY JUSTICE CENTER	25	18	58	42	-	
0010	12+38	-	12+78	RT	CTY-S_S DULUTH	-	-	-	-	1	FIELD ENTRANCE
0010	12+52	-	12+64	LT	CTY-S_S DULUTH	-	-	-	-	1	1147 DW
0010	14+57	-	14+69	LT	CTY-S_S DULUTH	-	-	-	-	1	1139 DW
0010	15+11	-	15+23	LT	CTY-S_S DULUTH	-	-	-	-	1	1131 DW
0010	15+27	-	15+69	RT	CTY-S_S DULUTH	-	-	-	-	2	FIELD ENTRANCE
0010	16+37	-	16+58	LT	CTY-S_S DULUTH	-	-	-	-	4	1107 DW
0010	17+78	-	17+99	LT	CTY-S_S DULUTH	-	-	-	-	4	1061 DW
0010	19+16	-	19+35	RT	CTY-S_S DULUTH	-	-	-	-	4	3010 DW
0010	19+30	-	19+50	LT	CTY-S_S DULUTH	-	-	-	-	3	1049 DW
0010	22+34	-	22+62	RT	CTY-S_S DULUTH	-	-	-	-	4	3046/3028 DW
0010	202+87	-	203+97	LT, RT	W YEW ST	46	33	106	77	-	
0010	24+50	-	24+71	RT	CTY-S_S DULUTH	-	-	-	-	1	FIELD ENTRANCE (3050)
0010	25+20	-	25+54	LT	CTY-S_S DULUTH	-	-	-	-	2	951 DW
0010	25+85	-	26+09	RT	CTY-S_S DULUTH	-	-	-	-	1	3050 DW
0010	26+60	-	26+94	LT	CTY-S_S DULUTH	-	-	-	-	2	945/941 DW
0010	27+78	-	27+98	RT	CTY-S_S DULUTH	-	-	-	-	4	932 DW
0010	27+98	-	28+26	LT	CTY-S_S DULUTH	-	-	-	-	1	FIELD ENTRANCE (KWIK TRIP)
0010	28+80	-	29+11	RT	CTY-S_S DULUTH	-	-	-	-	5	922 DW (SOUTH)
0010	29+98	-	30+96	RT	CTY-S_S DULUTH	-	-	-	-	14	922 DW (NORTH)
0010	31+73	-	32+13	RT	CTY-S_S DULUTH	-	-	-	-	6	862 DW (SOUTH)
0010	33+05	-	33+39	RT	CTY-S_S DULUTH	-	-	-	-	5	862 DW (NORTH)
0010	33+67	-	33+87	RT	CTY-S_S DULUTH	-	-	-	-	2	836 DW
0010	34+43	-	34+55	LT	CTY-S_S DULUTH	-	-	-	-	1	835 DW
0010	500+18	-	500+51	LT, RT	W WALNUT DT	10	8	24	17	-	
0010	36+33	-	36+62	RT	CTY-S_S DULUTH	-	-	-	-	8	808 DW (WALGREENS)
0010	39+80	-	40+28	LT	CTY-S_S DULUTH	-	-	-	-	6	621 DW (SOUTH)
0010	40+77	-	41+18	LT	CTY-S_S DULUTH	-	-	-	-	6	621 DW (NORTH)
0010	41+49	-	41+76	LT	CTY-S_S DULUTH	-	-	-	-	3	601 DW
TOTAL 0010						721	528	1,669	1,214	93	

CULVERTS							
CATEGORY	STATION	TO	STATION	LOCATION	521.1018	521.3118	REMARKS
					APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	CULVERT PIPE CORRUGATED STEEL 18-INCH	
					EACH	LF	
0010	27+92	-	28+32	CTY-S_S DULUTH	2	40	NEW DRIVEWAY LT; MIN. THICKNESS 0.064 IN
TOTAL 0010					2	40	

ENDWALLS										
					522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	* 650.4000 CONSTRUCTION STAKING STORM SEWER	
CATEGORY	STRUCTURE	STATION	OFFSET	LOCATION	EACH	EACH	EACH	EACH	EACH	
0010	EW-101	12+26.74	40.78' LT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-301	14+91.98	36.50' LT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-302	14+32.04	36.97' LT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-401	16+00.00	36.50' LT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-501	17+41.34	34.53' LT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-502	17+50.00	30.00' RT	CTY-S_S DULUTH	-	1	-	-	1	
0010	EW-601	19+00.00	36.00' LT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-602	18+82.40	35.92' RT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-701	21+00.00	34.50' RT	CTY-S_S DULUTH	1	-	-	-	1	
0010	EW-1101	299+57.66	0+00	STORM SEWER OUTFALL	-	-	1	-	1	
0010	EW-1251	301+50.00	0+00	STORM SEWER OUTFALL	-	-	-	1	1	
0010	EW-2201	34+67.63	42.73' RT	CTY-S_S DULUTH	-	1	-	-	1	
0010	EW-3002	35+28.65	39.52' RT	CTY-S_S DULUTH	1	-	-	-	1	
TOTAL 0010					9	2	1	1	13	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE CURB AND GUTTER													
CATEGORY	STATION	TO	STATION	LOCATION	416.0610	601.0405	601.0407	601.0409	601.0411	601.0600	650.5500	SPV.0090.01	REMARKS
					DRILLED TIE BARS EACH	CONCRETE CURB & GUTTER 18-INCH TYPE A LF	CONCRETE CURB & GUTTER 18-INCH TYPE D LF	CONCRETE CURB & GUTTER 30-INCH TYPE A LF	CONCRETE CURB & GUTTER 30-INCH TYPE D LF	CONCRETE CURB PEDESTRIAN LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	SPECIAL (01. SIDEWALK CURB RETAINING WALL) LF	
0010	400+63	-	401+16	RT	DOOR COUNTY JUSTICE CENTER	-	-	-	72	-	72	-	ADD NEW DW OPENING IN CURB HEAD FROM STA 23+94 TI STA 24+22
0010	400+44	-	401+12	LT	DOOR COUNTY JUSTICE CENTER	-	-	-	89	-	89	-	
0010	11+44	-	11+45	LT	CTY-S_S DULUTH	-	-	-	27	-	27	-	
0010	11+82	-	23+42	LT	CTY-S_S DULUTH	-	-	-	1160	-	1,160	-	
0010	17+83	-	35+41	RT	CTY-S_S DULUTH	-	-	-	1757	-	1,757	-	
0010	202+87	-	203+97	RT	W YEW ST	-	-	-	130	-	130	-	KWIK TRIP S DW KWIK TRIP S DW KWIK TRIP N DW KWIK TRIP N DW
0010	202+87	-	203+93	LT	W YEW ST	-	-	-	140	-	140	-	
0010	24+87	-	36+40	LT	CTY-S_S DULUTH	-	-	-	1161	-	1,161	-	
0010	29+97	-	29+98	LT	CTY-S_S DULUTH	-	22	-	-	-	22	-	
0010	30+38	-	30+38	LT	CTY-S_S DULUTH	-	21	-	-	-	21	-	
0010	32+99	-	32+99	LT	CTY-S_S DULUTH	-	21	-	-	-	21	-	WALGREENS DW WALGREENS DW BEHIND SW IN FRONT OF STARBUCKS SW QUAD 42/57 SE QUAD 42/57
0010	33+38	-	33+38	LT	CTY-S_S DULUTH	-	22	-	-	-	22	-	
0010	300+18	-	300+51	RT	W WALNUT DR	-	-	-	50	-	50	-	
0010	300+21	-	300+51	RT	W WALNUT DR	-	-	-	34	-	34	-	
0010	36+25	-	37+50	RT	CTY-S_S DULUTH	-	-	-	125	-	125	-	
0010	36+32	-	36+32	RT	CTY-S_S DULUTH	-	-	23	-	-	23	-	
0010	36+63	-	36+63	RT	CTY-S_S DULUTH	-	-	23	-	-	23	-	
0010	36+87	-	37+40	LT	CTY-S_S DULUTH	-	-	-	-	-	53	53	
0010	37+60	-	37+84	LT	CTY-S_S DULUTH	-	-	-	-	49	49	-	
0010	37+77	-	37+91	RT	CTY-S_S DULUTH	6	-	18	-	-	18	-	
TOTAL 0010						6	86	46	18	4,745	49	4,997	53

CONCRETE SIDEWALKS									

STORM SEWER PIPE

CATEGORY	FROM	TO	LOCATION	INLET	DISCHARGE	SLOPE (FT/FT)	520.8000	608.0312	608.0324	608.0336	608.0412	608.0415	608.0418	608.0424	608.0430	608.0436
							CONCRETE COLLARS FOR PIPE EACH	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 36-INCH LF
0010	EXIST	-	MH-100	CTY-S_S DULUTH	714.13	713.63	0.0500	1	-	10	-	-	-	-	-	-
0010	EW-101	-	MH-100	CTY-S_S DULUTH	714.95	714.63	0.0400	-	8	-	-	-	-	-	-	-
0010	MH-100	-	MH-150	CTY-S_S DULUTH	713.63	712.62	0.0236	-	-	-	-	-	-	43	-	-
0010	MH-150	-	MH-300	CTY-S_S DULUTH	712.62	710.62	0.0080	-	-	-	-	-	-	252	-	-
0010	EW-302	-	CB-302	CTY-S_S DULUTH	713.70	712.30	0.0636	-	22	-	-	-	-	-	-	-
0010	CB-302	-	CB-301	CTY-S_S DULUTH	712.30	711.78	0.0100	-	-	-	52	-	-	-	-	-
0010	EW-301	-	CB-301	W YEW ST	712.00	711.78	0.0110	-	20	-	-	-	-	-	-	-
0010	CB-301	-	MH-300	CTY-S_S DULUTH	711.78	711.62	0.0100	-	-	-	17	-	-	-	-	-
0010	MH-300	-	MH-400	CTY-S_S DULUTH	710.62	709.54	0.0100	-	-	-	-	-	-	108	-	-
0010	EW-401	-	CB-401	CTY-S_S DULUTH	712.25	711.20	0.0527	-	20	-	-	-	-	-	-	-
0010	CB-401	-	MH-400	CTY-S_S DULUTH	711.20	710.54	0.0400	-	-	-	17	-	-	-	-	-
0010	MH-400	-	MH-500	CTY-S_S DULUTH	709.54	707.66	0.0125	-	-	-	-	-	-	150	-	-
0010	EW-501	-	CB-501	CTY-S_S DULUTH	711.60	709.32	0.1140	-	20	-	-	-	-	-	-	-
0010	CB-501	-	MH-500	CTY-S_S DULUTH	709.32	708.66	0.0400	-	-	-	17	-	-	-	-	-
0010	EW-502	-	MH-500	CTY-S_S DULUTH	710.25	708.16	0.0697	-	-	-	-	-	30	-	-	-
0010	MH-500	-	MH-600	CTY-S_S DULUTH	707.66	705.78	0.0125	-	-	-	-	-	-	150	-	-
0010	EW-602	-	MH-600	CTY-S_S DULUTH	709.25	706.78	0.0616	-	-	-	40	-	-	-	-	-
0010	EW-601	-	MH-600	CTY-S_S DULUTH	709.00	706.78	0.0615	-	-	-	36	-	-	-	-	-
0010	MH-600	-	MH-700	CTY-S_S DULUTH	705.78	702.78	0.0150	-	-	-	-	-	-	200	-	-
0010	CB-701	-	MH-700	CTY-S_S DULUTH	703.95	703.78	0.0100	-	-	-	17	-	-	-	-	-
0010	EW-701	-	CB-702	CTY-S_S DULUTH	706.10	704.12	0.1103	-	18	-	-	-	-	-	-	-
0010	MH-700	-	CB-702	CTY-S_S DULUTH	704.11	703.78	0.0200	-	-	-	17	-	-	-	-	-
0010	MH-700	-	MH-800	CTY-S_S DULUTH	702.28	700.04	0.0100	-	-	-	-	-	-	-	225	-
0010	CB-801	-	MH-800	CTY-S_S DULUTH	701.62	701.54	0.0050	-	-	-	17	-	-	-	-	-
0010	CB-802	-	MH-800	CTY-S_S DULUTH	701.62	701.54	0.0050	-	-	-	17	-	-	-	-	-
0010	MH-800	-	MH-900	CTY-S_S DULUTH	700.04	699.48	0.0092	-	-	-	-	-	-	-	60	-
0010	CB-337	-	MH-900	CTY-S_S DULUTH	701.01	700.48	0.0079	-	-	-	-	-	66	-	-	-
0010	MH-900	-	MH-1000	CTY-S_S DULUTH	698.98	697.79	0.0050	-	-	-	-	-	-	-	-	240
0010	CB-1001	-	MH-1000	CTY-S_S DULUTH	699.88	699.79	0.0050	-	-	-	17	-	-	-	-	-
0010	CB-1002	-	MH-1000	STORM SEWER OUTFALL	699.88	699.79	0.0050	-	-	-	17	-	-	-	-	-
0010	MH-1000	-	MH-1100	CTY-S_S DULUTH	697.79	697.12	0.0050	-	-	-	-	-	-	-	-	135
0010	EW-1101	-	MH-1100	CTY-S_S DULUTH	698.33	698.12	0.0050	-	-	-	-	-	-	42	-	-
0010	MH-1100	-	MH-1200	CTY-S_S DULUTH	697.12	696.66	0.0092	-	-	-	-	-	-	-	-	50
0010	MH-1200	-	MH-1250	CTY-S_S DULUTH	696.66	696.08	0.0096	-	-	60	-	-	-	-	-	-
0010	MH-1250	-	EW-1251	CTY-S_S DULUTH	696.08	695.70	0.0096	-	-	40	-	-	-	-	-	-
0010	CB-2051	-	MH-2050	CTY-S_S DULUTH	697.61	697.52	0.0050	-	-	-	17	-	-	-	-	-
0010	CB-2052	-	MH-2050	CTY-S_S DULUTH	697.61	697.52	0.0050	-	-	-	17	-	-	-	-	-
0010	MH-2050	-	MH-2100	CTY-S_S DULUTH	697.28	695.78	0.0050	-	-	-	-	300	-	-	-	-
0010	CB-2101	-	MH-2100	CTY-S_S DULUTH	696.10	696.02	0.0044	-	-	-	16	-	-	-	-	-
0010	CB-2102	-	MH-2100	STORM SEWER OUTFALL	696.10	696.02	0.0044	-	-	-	16	-	-	-	-	-
0010	MH-2100	-	MH-2200	STORM SEWER OUTFALL	695.78	694.90	0.0050	-	-	-	-	175	-	-	-	-
0010	MH-2200	-	MH-586	STORM SEWER OUTFALL	696.28	694.65	0.0547	-	-	-	-	-	30	-	-	-
0010	MH-2200	-	EW-2201	CTY-S_S DULUTH	694.65	694.25	0.0050	-	-	-	-	-	80	-	-	-
0010	CB-3001	-	CB-3002	CTY-S_S DULUTH	694.23	694.05	0.0044	-	-	-	41	-	-	-	-	-
0010	CB-3002	-	EW-3002	CTY-S_S DULUTH	694.05	693.95	0.0044	-	22	-	-	-	-	-	-	-
TOTAL 0010							1	130	10	100	388	475	206	945	285	425

RECONSTRUCTING STRUCTURES

CATEGORY	STRUCTURE	STATION	OFFSET	EX RIM ELEV	PROP RIM ELEV	PROP ADJUSTMENT	LOCATION	611.0410	611.0420	611.0430	SPV.0060.02	SPV.0060.02	REMARKS
								RECONSTRUCTING CATCH BASINS EACH	RECONSTRUCTING MANHOLES EACH	RECONSTRUCTING INLETS EACH	SPECIAL (02. SANITARY MANHOLE CASTING) EACH	SPECIAL (03. FRAME AND CHIMNEY SEAL) EACH	
0010	EX MH-1	10+96.80	38.18' LT	719.14	719.08	-0.06	CTY-S_S DULUTH	-	1	-	-	-	STM MH - DOOR COUNTY JUSTICE CENTER
0010	INL-339	203+22.78	17.56' LT	705.03 (FL)	704.93	-0.10	W YEW ST	-	-	1	-	-	
0010	CB-337	203+45.63	29.96' RT	704.81 (FL)	704.48	-0.33	W YEW ST	1	-	-	-	-	
0010	EX MH-586	33+94.75	29.31' LT	699.08	699.18	0.10	CTY-S_S DULUTH	-	1	-	-	-	STM MH - IN FRONT OF KT
TOTAL 0010								1	2	1	0	0	
0020		11+25.58	28.90' LT	719.17	719.12	-0.05	CTY-S_S DULUTH	-	1	-	-	1	SAN MH - CIRCUIT COURT INTERSECTION
0020		12+09.88	28.60' LT	718.18	718.97	0.79	CTY-S_S DULUTH	-	1	-	-	1	SAN MH IN EXISTING FLUME
0020		15+29.92	28.30' LT	715.36	716.41	1.05	CTY-S_S DULUTH	-	1	-	-	1	SAN MH NEAR DW 1131
0020		19+30.40	27.67' LT	711.49	711.34	-0.15	CTY-S_S DULUTH	-	1	-	-	1	SAN MH IN DW 1049
0020		22+70.12	27.97' LT	705.76	706.21	0.45	CTY-S_S DULUTH	-	1	-	-	1	SAN MH IN DW 1005
0020		24+09.32	27.52' LT	705.38	704.49	-0.89	CTY-S_S DULUTH	-	1	-	1	1	SAN MH IN W YEW ST INT
0020		28+00.00	27.21' LT	702.19	702.92	0.73	CTY-S_S DULUTH	-	1	-	-	1	SAN MH NEAR EXISTING FE
0020		31+88.30	27.49' LT	699.66	700.97	1.31	CTY-S_S DULUTH	-	1	-	-	1	SAN MH IN EX LT DITCH, RISER SECTION REQ'D
0020		35+89.63	8.50' LT	697.76	697.61	-0.15	CTY-S_S DULUTH	-	1	-	1	1	SAN MH IN W WALNUT DR INT
TOTAL 0020								0	9	0	2	9	
PROJECT TOTAL								1	11	1	2	9	

STORM SEWER STRUCTURES														
CATEGORY	STRUCTURE	STATION	OFFSET*	RIM**	INVERT***	DEPTH****	LOCATION	611.0535	611.0624	611.1230	611.2004	611.2005	611.2006	* 650.4000
				ELEVATION	ELEVATION	FT		MANHOLE COVERS TYPE J-SPECIAL	INLET COVERS TYPE H	CATCH BASINS 2X3-FT	MANHOLES 4-FT DIAMETER	MANHOLES 5-FT DIAMETER	MANHOLES 6-FT DIAMETER	CONSTRUCTION STAKING STORM SEWER
								EACH	EACH	EACH	EACH	EACH	EACH	EACH
0010	MH-100	12+19.50	37.37' LT	717.50	713.63	3.05	CTY-S_S DULUTH	1	-	-	-	1	-	1
0010	MH-150	12+40.00	0	718.29	712.62	4.84	CTY-S_S DULUTH	1	-	-	1	-	-	1
0010	CB-302	14+40.11	16.50' LT	716.38	710.30	5.25	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-301	14+91.98	16.50' LT	715.97	709.78	5.36	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-300	14+91.98	0	716.28	710.62	4.84	CTY-S_S DULUTH	1	-	-	1	-	-	1
0010	CB-401	16+00.00	16.50' LT	715.11	709.20	5.08	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-400	16+00.00	0	715.42	709.54	5.06	CTY-S_S DULUTH	1	-	-	1	-	-	1
0010	CB-501	17+50.00	16.50' LT	713.44	707.32	5.28	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-500	17+50.00	0	713.75	707.66	5.26	CTY-S_S DULUTH	1	-	-	-	1	-	1
0010	MH-600	19+00.00	0	711.55	705.78	4.94	CTY-S_S DULUTH	1	-	-	-	-	1	1
0010	CB-701	21+00.00	16.50' LT	708.15	701.95	5.36	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-702	21+00.00	16.50' RT	708.15	702.11	5.20	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-700	21+00.00	0	708.46	702.29	5.39	CTY-S_S DULUTH	1	-	-	-	1	-	1
0010	CB-801	23+25.00	16.50' LT	704.99	699.62	4.54	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-802	23+25.00	16.50' RT	704.99	699.62	4.54	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-800	23+25.00	0	705.30	700.04	4.48	CTY-S_S DULUTH	1	-	-	-	1	-	1
0010	MH-900	23+85.00	0	704.69	698.98	4.96	CTY-S_S DULUTH	1	-	-	-	-	1	1
0010	CB-1001	26+25.00	16.50' LT	702.91	697.88	4.20	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-1002	26+25.00	16.50' RT	702.91	697.88	4.20	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-1000	26+25.00	0	703.22	697.79	4.69	CTY-S_S DULUTH	1	-	-	-	1	-	1
0010	MH-1100	27+59.83	0	702.66	697.12	4.80	CTY-S_S DULUTH	1	-	-	-	-	1	1
0010	MH-1200	300+50.00	0	701.48	696.66	4.08	STORM SEWER OUTFALL	1	-	-	-	1	-	1
0010	MH-1250	301+10.00	0	700.91	696.08	4.08	STORM SEWER OUTFALL	1	-	-	-	1	-	1
0010	CB-2051	29+25.00	16.50' LT	701.66	695.61	5.22	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-2052	29+25.00	16.50' RT	701.66	695.61	5.22	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-2050	29+25.00	0	701.99	697.28	3.83	CTY-S_S DULUTH	1	-	-	1	-	-	1
0010	CB-2101	32+25.00	16.50' LT	699.93	694.10	5.00	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-2102	32+25.00	16.50' RT	699.93	694.10	5.00	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	MH-2100	32+25.00	0	700.24	695.78	3.58	CTY-S_S DULUTH	1	-	-	1	-	-	1
0010	MH-2200	34+00.00	0	698.83	694.65	3.32	CTY-S_S DULUTH	1	-	-	-	1	-	1
0010	CB-3001	35+29.58	23.50' LT	697.56	692.23	4.50	CTY-S_S DULUTH	-	1	1	-	-	-	1
0010	CB-3002	35+29.69	17.55' RT	697.68	692.05	4.80	CTY-S_S DULUTH	-	1	1	-	-	-	1
SUBTOTAL "STORM SEWER STRUCTURES"								16	16	16	5	8	3	32
SUBTOTAL "ENDWALLS"								-	-	-	-	-	-	13
TOTAL 0010								16	16	16	5	8	3	45

REMARKS:
*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
**RIM ELEV IS AT THE INLET COVER FLANGE LOCATION
***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 - 4-INCH ADJUSTMENT RING HEIGHT

EDGE DRAIN						
CATEGORY	STATION	TO	STATION	LOCATION	310.0110	612.0406
					BASE AGGREGATE OPEN-GRADED TON	PIPE UNDERDRAIN WRAPPED 6-INCH LF
0010		-				
0010	13+90	-	14+40	LT CTY-S_S DULUTH	4	50
0010	15+50	-	16+00	LT CTY-S_S DULUTH	4	50
0010	17+00	-	17+50	LT CTY-S_S DULUTH	4	50
0010	20+50	-	21+00	LT CTY-S_S DULUTH	4	50
0010	20+50	-	21+00	RT CTY-S_S DULUTH	4	50
0010	22+75	-	23+25	LT CTY-S_S DULUTH	4	50
0010	22+75	-	23+25	RT CTY-S_S DULUTH	4	50
0010	25+75	-	26+25	LT CTY-S_S DULUTH	4	50
0010	25+75	-	26+25	RT CTY-S_S DULUTH	4	50
0010	28+75	-	29+25	LT CTY-S_S DULUTH	4	50
0010	28+75	-	29+25	RT CTY-S_S DULUTH	4	50
0010	31+75	-	32+25	LT CTY-S_S DULUTH	4	50
0010	31+75	-	32+25	RT CTY-S_S DULUTH	4	50
0010	34+80	-	35+30	LT CTY-S_S DULUTH	4	50
0010	34+80	-	35+30	RT CTY-S_S DULUTH	4	50
TOTAL 0010					60	750

EROSION CONTROL													
CATEGORY	STATION	OFFSET	LOCATION	628.1504	628.1520	628.7005	628.7010	628.7015	628.7504	628.7555	628.7560	628.7570	REMARKS
				SILT FENCE LF	SILT FENCE MAINTENANCE LF	INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE B EACH	INLET PROTECTION TYPE C EACH	TEMPORARY DITCH CHECKS LF	CULVERT PIPE CHECKS EACH	TRACKING PADS EACH	ROCK BAGS EACH	
0010	10+50 - 11+00	LT	CTY-S_S DULUTH	-	-	-	-	-	-	-	1	-	S END OF PROJECT
0010	11+52 - 12+28	LT	CTY-S_S DULUTH	110	110	-	-	-	-	-	-	-	
0010	12+32	42' LT	CTY-S_S DULUTH	-	-	-	-	-	-	3	-	-	SS ENDWALL
0010	14+00	38' RT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	EX RT DITCH FL
0010	12+31	38' RT	CTY-S_S DULUTH	-	-	-	-	-	-	5	-	-	EX FE CULVERT
0010	14+30	42' LT	CTY-S_S DULUTH	-	-	-	-	-	-	3	-	-	SS ENDWALL
0010	14+40	16.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-302
0010	14+92	16.50' LT, 42' LT	CTY-S_S DULUTH	-	-	1	-	1	-	3	-	-	CB-301, SS ENDWALL
0010	15+29	37' RT	CTY-S_S DULUTH	-	-	-	-	-	-	5	-	-	EX FE CULVERT
0010	16+00	16.5' LT, 42' LT	CTY-S_S DULUTH	-	-	1	-	1	-	3	-	-	CB-401, SS ENDWALL
0010	16+50	36' RT	CTY-S_S DULUTH	-	-	-	-	-	14	-	-	-	EX RT DITCH FL
0010	17+39	39' LT	CTY-S_S DULUTH	-	-	-	-	-	-	3	-	-	SS ENDWALL
0010	17+50	16.50' LT, 35' RT	CTY-S_S DULUTH	-	-	1	-	1	-	5	-	-	CB-501, SS ENDWALL
0010	18+25	41' RT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	
0010	18+80	41' RT	CTY-S_S DULUTH	-	-	-	-	-	-	3	-	-	SS ENDWALL
0010	19+00	41' LT	CTY-S_S DULUTH	-	-	-	-	-	-	3	-	-	SS ENDWALL
0010	20+25	39' RT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	RT DITCH FL
0010	21+00	16.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-701
0010	21+00	16.5' RT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-702
0011	22+50	LT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	LT DITCH FL
0010	22+71 - 24+44	RT	CTY-S_S DULUTH	174	174	-	-	-	-	-	-	-	
0010	23+25	16.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-801
0010	23+25	16.5' RT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-802
0010	203+23	17.56' LT	W YEW ST	-	-	-	-	1	-	-	-	-	INL-339
0010	203+23	31' LT	W YEW ST	-	-	-	-	-	-	3	-	-	EX SS ENDWALL
0010	203+46	30' RT	W YEW ST	-	-	-	-	1	-	-	-	-	CB-337
0010	203+48	40' RT	W YEW ST	-	-	-	-	-	-	3	-	-	EX SS ENDWALL
0010	24+34 - 25+19	LT	CTY-S_S DULUTH	152	152	-	-	-	-	-	-	-	
0010	24+38	50' RT	CTY-S_S DULUTH	-	-	-	-	-	-	-	-	17	SILT FENCE RELIEF
0010	24+72 - 25+81	RT	CTY-S_S DULUTH	116	116	-	-	-	-	-	-	-	
0010	25+55 - 26+60	LT	CTY-S_S DULUTH	105	105	-	-	-	-	-	-	-	
0010	26+25	16.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-1001
0010	26+25	16.5' RT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-1002
0010	26+94 - 27+77	LT	CTY-S_S DULUTH	83	83	-	-	-	-	-	-	-	
0010	27+50	54' RT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	RT YARD SWALE/DITCH FL
0010	301+48 - 302+70	RT	STORM OUTFALL	127	127	-	-	-	-	-	-	-	
0010	302+50		STORM OUTFALL	-	-	-	-	-	20	-	-	-	STORM OUTFALL SWALE
0010	27+85	40' LT	CTY-S_S DULUTH	-	-	-	-	-	-	7	-	-	NEW SS ENDWALL, (EX CMCP)
0010	28+40	LT	CTY-S_S DULUTH	-	-	-	-	-	-	5	-	-	DW CULVERT
0010	29+11 - 29+96	RT	CTY-S_S DULUTH	87	87	-	-	-	-	-	-	-	
0010	29+25	16.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-2051
0010	29+25	16.5' RT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-2052
0010	30+96 - 31+71	RT	CTY-S_S DULUTH	74	74	-	-	-	-	-	-	-	
0010	32+16 - 33+03	RT	CTY-S_S DULUTH	87	87	-	-	-	-	-	-	-	
0010	32+25	16.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-2101
0010	32+25	16.5' RT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-2102
0010	34+85	66' RT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	SS OUTLET SWALE
0010	34+86 - 35+23	RT	CTY-S_S DULUTH	37	37	-	-	-	-	-	-	-	
0010	35+25	62' RT	CTY-S_S DULUTH	-	-	-	-	-	12	-	-	-	SS OUTLET SWALE
0010	35+30	23.5' LT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-3001
0010	35+30	17.5' RT	CTY-S_S DULUTH	-	-	1	-	1	-	-	-	-	CB-3002
0010	35+34 - 35+70	RT	CTY-S_S DULUTH	45	45	-	-	-	-	-	-	-	
0010	36+90 - 37+40		CTY-S_S DULUTH	-	-	-	-	-	-	-	1	-	N END AT 42/57
0010	41+47	34' LT	CTY-S_S DULUTH	-	-	-	-	-	-	3	-	-	EX PVC
0010	41+65	18.7' LT	CTY-S_S DULUTH	-	-	-	1	-	-	-	-	-	INL-926
0010				100	100	-	-	-	30	-	-	-	UNDISTRIBUTED
TOTAL 0010				1,297	1,297	16	1	18	148	57	2	17	

RESTORATION											
						625.0100	628.2008	629.0210	630.0140	630.0500	
						TOPSOIL	EROSION MAT URBAN	FERTILIZER	SEEDING MIXTURE	SEED	
						SY	CLASS I TYPE B	TYPE B	NO. 40	WATER	
CATEGORY	STATION	TO	STATION		LOCATION			CWT	LB	MGAL	REMARKS
0010	9+88	-	10+96	LT	CTY-S_S DULUTH	110	110	0.07	2	2.46	S OF DOOR COUNTY JUSTICE CENTER
0010	10+97	-	12+48	RT	CTY-S_S DULUTH	1826	1,826	1.15	33	41.01	DOOR COUNTY JUSTICE CENTER TO W YEW ST (RT)
0010	11+44	-	12+54	LT	CTY-S_S DULUTH	2620	2,620	1.65	47	58.84	DOOR COUNTY JUSTICE CENTER TO W YEW ST (LT)
0010	202+86	-	203+59	LT	W YEW ST	24	24	0.02	0	0.54	W YEW ST
0010	24+30	-	25+20	LT	CTY-S_S DULUTH	2499	2,499	1.57	45	56.13	W YEW ST TO 42/57 (LT)
0010	24+70	-	25+85	RT	CTY-S_S DULUTH	2010	2,010	1.27	36	45.15	W YEW ST TO W WALNUT DR (RT)
0010	300+50	-	301+50		STORM SEWER OUTFALL	640	640	0.40	12	14.38	STORM SEWER OUTFALL
0010	36+08	-	36+32	RT	CTY-S_S DULUTH	138	138	0.09	2	3.10	W WALNUT DR TO 42/57 (RT)
0010	39+05	-	39+83	LT	CTY-S_S DULUTH	71	71	0.04	1	1.60	N OF 42/57 (LT)
0010	-	-	-	-	PROJECT	-	1,492	-	45	-	UNDISTRIBUTED
TOTAL 0010						9,939	11,430	7	223	223	

SIGNING (SHEET 1 OF 2)														
					634.0612	634.0614	634.0616	634.0618	637.2210	637.2230	638.2102	638.2602	638.3000	
					POSTS WOOD	POSTS WOOD	POSTS WOOD	POSTS WOOD	SIGNS TYPE II	SIGNS TYPE II	MOVING SIGNS TYPE	REMOVING SIGNS	REMOVING SMALL	
					4X6-INCH X 12-FT	4X6-INCH X 14-FT	4X6-INCH X 16-FT	4X6-INCH X 18-FT	REFLECTIVE H	REFLECTIVE F	II	TYPE II	SIGN SUPPORTS	
CATEGORY	SIGN NO	STATION	OFFSET	SIGN CODE	WXH	EACH	EACH	EACH	SF	SF	EACH	EACH	EACH	REMARKS
0010	101	10+25	RT	R3-17	30 X 24	-	1	-	5.00	-	-	-	-	BIKE LANE
0010	M102	10+85	LT	R1-1	30"X30"	-	-	-	-	-	1	-	-	MOVE STOP
0010	M103	11+18	RT	-	-	-	-	2	-	-	2	-	2	MOVE "DOOR COUNTY JUSTICE CENTER" SIGNS
0010	104	12+00	LT	R3-17	30 X 24	-	-	1	5.00	-	-	-	-	BIKE LANE
0010	105	12+00	LT	R3-17BP	30 X 12	-	-	-	2.50	-	-	-	-	ENDS
0010	106	13+00	RT	R2-1	24 X 30	-	-	1	5.00	-	-	-	-	SPEED LIMIT 35
0010	107	13+00	RT	R3-17	30 X 24	-	-	-	5.00	-	-	-	-	BIKE LANE
0010	R108	13+61	21RT	R2-1	24"X30"	-	-	-	-	-	-	1	1	REMOVE SPEED LIMIT SIGN
0010	R109	13+65	28 LT	R2-1	24"X30"	-	-	-	-	-	-	1	1	REMOVE SPEED LIMIT SIGN
0010	110	14+25	LT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	111	14+25	RT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	112	17+50	LT	W14-3	48 X 36	-	1	-	-	5.56	-	-	-	NO PASSING ZONE
0010	113	18+50	LT	R3-17	30 X 24	-	1	-	5.00	-	-	-	-	BIKE LANE
0010	114	18+50	RT	R3-17	30 X 24	-	1	-	5.00	-	-	-	-	BIKE LANE
0010	115	20+00	LT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	116	20+00	RT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	M117	20+73	LT	-	-	2	-	-	-	-	1	-	2	MOVE "DOOR COUNTY JUSTICE CENTER"
0010	118	22+00	LT	R2-1	24 X 30	-	-	1	5.00	-	-	-	-	SPEED LIMIT 35
0010	119	22+00	LT	R3-17	30 X 24	-	-	-	5.00	-	-	-	-	BIKE LANE
0010	201	22+00	RT	W11-2	30 X 30	-	-	1	-	6.25	-	-	-	PED XING
0010	202	22+00	RT	W16-9P	24 X 12	-	-	-	-	2.00	-	-	-	AHEAD
0010	203	23+69	LT	R1-1	30 X 30	-	1	-	5.18	-	-	-	-	STOP
0010	R204	23+74	49 LT	R1-1	30"X30"	-	-	-	-	-	-	1	1	REMOVE STOP
0010	M205	24+01	RT	-	-	-	2	-	-	-	2	-	2	MOVE "DOOR COUNTY HIGHWAY DEPT" SIGNS
0010	206	24+81	RT	W11-2	30 X 30	-	-	1	-	6.25	-	-	-	PED XING
0010	207	24+81	RT	W16-7L	24 X 12	-	-	-	-	2.00	-	-	-	ARROW
0010	208	24+81	RT	W11-2	30 X 30	-	-	-	-	6.25	-	-	-	PED XING
0010	209	24+81	RT	W16-7R	24 X 12	-	-	-	-	2.00	-	-	-	ARROW
0010	210	24+97	LT	W11-2	30 X 30	-	-	1	-	6.25	-	-	-	PED XING
0010	211	24+97	LT	W16-7R	24 X 12	-	-	-	-	2.00	-	-	-	ARROW
0010	212	24+97	LT	W11-2	30 X 30	-	-	-	-	6.25	-	-	-	PED XING
0010	213	24+97	LT	W16-7L	24 X 12	-	-	-	-	2.00	-	-	-	ARROW
0010	214	26+40	RT	R3-17	30 X 24	-	1	-	5.00	-	-	-	-	BIKE LANE
0010	215	27+40	RT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	R216	27+40	26 RT	W3-3	36"X36"	-	-	-	-	-	-	1	1	REMOVE "TRAFFIC SIGNAL AHEAD"
0010	217	27+50	LT	W11-2	30 X 30	-	-	1	-	6.25	-	-	-	PED XING
0010	218	27+50	LT	W16-9P	24 X 12	-	-	-	-	2.00	-	-	-	AHEAD
0010	219	38+40	RT	W3-3	36 X 36	-	-	1	-	9.00	-	-	-	TRAFFIC SIGNAL AHEAD
0010	220	28+45	LT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	221	29+50	RT	W11-2	30 X 30	-	-	1	-	6.25	-	-	-	PED XING
0010	222	29+50	RT	W16-9P	24 X 12	-	-	-	-	2.00	-	-	-	AHEAD
0010	223	29+60	LT	R3-17	30 X 24	-	1	-	5.00	-	-	-	-	BIKE LANE
0010	M224	30+75	LT	I55-56	30 X 36	-	-	1	-	-	1	-	1	MOVE ADOPT A HIGHWAY & SPONSER
0010	R225	31+31	27 RT	M1-6	24X24	-	-	-	-	-	-	1	2	REMOVE "TYPE J ASSEMBLY" 2-3
0010	226	31+37	RT	R7-53D	18 X 24	-	1	-	3.00	-	-	-	-	NO PARKING
0010	227	31+37	RT	M1-6	24 X 24	-	-	2	4.00	-	-	-	-	STH 42 - "TYPE J" ASSEMBLY, 2-3
0010	227	31+37	RT	M1-6	24 X 24	-	-	-	4.00	-	-	-	-	STH 57 (ON "TYPE J" ASSEMBLY, 2-3)
0010	227	31+37	RT	M1-5A	24 X 24	-	-	-	4.00	-	-	-	-	CTH 5 (ON "TYPE J" ASSEMBLY, 2-3)
0010	227	31+37	RT	M2-1	21 X 15	-	-	-	2.20	-	-	-	-	JCT (ON "TYPE J" ASSEMBLY, 2-3)
0010	227	31+37	RT	M2-1	21 X 15	-	-	-	2.20	-	-	-	-	JCT (ON "TYPE J" ASSEMBLY, 2-3)
SUBTOTAL SHEET 1						2	16	14	0	95.08	72.31	7	5	13

SIGNING (SHEET 2 OF 2)															
CATEGORY	SIGN NO	STATION	OFFSET	SIGN CODE	WXH	634.0612	634.0614	634.0616	634.0618	637.2210	637.2230	638.2102	638.2602	638.3000	REMARKS
						POSTS WOOD 4X6-INCH X 12-FT	POSTS WOOD 4X6-INCH X 14-FT	POSTS WOOD 4X6-INCH X 16-FT	POSTS WOOD 4X6-INCH X 18-FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F	MOVING SIGNS TYPE II	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
						EACH	EACH	EACH	EACH	SF	SF	EACH	EACH	EACH	
0010	227	31+37	RT	M4-6	24 X 12	-	-	-	-	2.00	-	-	-	-	END (ON "TYPE J" ASSEMBLY, 2-3)
0010	228	31+75	LT	R2-1	24 X 30	-	1	-	-	5.00	-	-	-	-	SPEED LIMIT
0010	R229	32+69	22L	R2-1	24X30	-	-	-	-	-	-	-	1	1	REMOVE SPEED LIMIT SIGN
0010	230	32+78	RT	W11-2	30 X 30	-	-	1	-	-	6.25	-	-	-	PED XING
0010	231	32+78	RT	W16-7L	24 X 12	-	-	-	-	-	2.00	-	-	-	ARROW
0010	232	32+78	RT	W11-2	30 X 30	-	-	-	-	-	6.25	-	-	-	PED XING
0010	233	32+78	RT	W16-7R	24 X 12	-	-	-	-	-	2.00	-	-	-	ARROW
0010	234	32+92	LT	W11-2	30 X 30	-	-	1	-	-	6.25	-	-	-	PED XING
0010	235	32+92	LT	W16-7R	24 X 12	-	-	-	-	-	2.00	-	-	-	ARROW
0010	236	32+92	LT	W11-2	30 X 30	-	-	-	-	-	6.25	-	-	-	PED XING
0010	237	32+92	LT	W16-7L	24 X 12	-	-	-	-	-	2.00	-	-	-	ARROW
0010	238	33+50	RT	R3-17	30 X 24	-	1	-	-	5.00	-	-	-	-	BIKE LANE
0010	301	35+49	LT	W11-2	30 X 30	-	-	1	-	-	6.25	-	-	-	PED XING
0010	302	35+49	LT	W16-9P	24 X 12	-	-	-	-	-	2.00	-	-	-	AHEAD
0010	M303	36+11	RT	-	-	-	-	-	-	-	-	1	-	-	MOVE ROAD NAMES & POST
0010	R304	36+11	38 R	R1-1	30X30	-	-	-	-	-	-	-	1	-	REMOVE STOP
0010	305	36+12	RT	R1-1	30 X 30	-	-	-	-	5.18	-	-	-	-	STOP (INSTALL ON POST WITH ROAD NAMES)
0010	R306	36+84	27 R	R3-8LF	30 X 36	-	-	-	-	-	-	-	1	1	REMOVE TURN ARROWS
0010	307	36+85	RT	R3-8LF	30 X 36	-	1	-	-	7.50	-	-	-	-	LANE TURN ARROWS
0010	308	36+85	LT	R3-17	30 X 24	-	1	-	-	5.00	-	-	-	-	BIKE LANE
0010	M309	37+76	RT	M1-6	24X24	-	-	1	-	-	-	1	-	1	MOVE "TYPE J ASSEMBLY" 3-2
0010	310			W11-2	36 X 36	-	-	-	1	-	9	-	-	-	PED XING STH 42/57 EB
0010	311			W16-9P	30 X 18	-	-	-	-	-	3.75	-	-	-	"AHEAD" STH 42/57 EB
0010	312			W11-2	36 X 36	-	-	-	1	-	9	-	-	-	PED XING STH 42/57 WB, IN MEDIAN
0010	313			W16-9P	30 X 18	-	-	-	-	-	3.75	-	-	-	"AHEAD" STH 42/57 WB IN MEDIAN
0010	314			W11-2	36 X 36	-	-	-	1	-	9	-	-	-	PED XING STH 42/57 WB ON RT SHOULDER
0010	315			W16-9P	30 X 18	-	-	-	-	-	3.75	-	-	-	"AHEAD" STH 42/57 WB ON RT SHOULDER
0010	316	40+29	LT	R3-8XX	36X30	-	1	-	-	-	-	1	-	1	MOVE TURN ARROWS
SUBTOTAL SHEET 2						0	5	4	3	29.68	79.50	3	3	4	
TOTAL 0010						2	21	18	3	124.76	151.81	10	8	17	

TRAFFIC CONTROL															
			643.0300		643.0420		643.0705		643.0900		643.0920	643.1000	643.1050	644.1810	
			TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL SIGNS FIXED MESSAGE	TRAFFIC CONTROL SIGNS PCMS	TEMPORARY PEDESTRIAN BARRICADE	
CATEGORY	LOCATION	DAYS	QUANTITY	DAY	QUANTITY	DAY	QUANTITY	DAY	QUANTITY	DAY	CYCLES	EACH	SF	DAY	LF
0010		159	52	8,268	-	-	-	-	-	-	-	-	-	-	-
0010	CTY-S_S DULUTH	7	5	35	-	-	-	-	-	-	-	3.75	7	-	-
0010	CTY-S_S DULUTH	159	-	-	2	318	4	636	3	477	-	-	-	-	-
0010	CTY-S_S DULUTH	159	-	-	2	318	4	636	4	636	-	-	-	-	-
0010	DOOR COUNTY JUSTICE CENTER	159	-	-	2	318	4	636	2	318	-	-	-	-	-
0010	W YEW ST	159	-	-	2	318	4	636	2	318	-	-	-	-	-
0010	W WALNUT DR	159	-	-	2	318	4	636	3	477	-	-	-	-	-
0010	CTH C_S DULUTH	159	-	-	2	318	4	636	1	159	-	-	-	5	-
0010	STH 42/57	7	10	70	-	-	-	-	2	318	-	-	7.50	7	-
0010	CTH C_S DULUTH	7	-	-	-	-	-	-	3	477	-	-	3.75	7	-
0010	CTH C_S DULUTH	7	14	98	-	-	-	-	3	45	-	-	3.75	7	-
0010	CTH C_S DULUTH	159	-	-	-	-	-	-	-	-	1	1	-	-	-
0010	RT SHOULDER EB ON STH 42/57	159	-	-	-	-	-	-	-	-	1	1	-	-	-
0010	MEDIAN WB ON STH 42/57	159	-	-	-	-	-	-	-	-	1	1	-	-	-
0010	NE QUAD STH 42/57	159	-	-	-	-	-	-	-	-	1	1	-	-	-
0010	SW QUAD STH 42/57	159	-	-	-	-	-	-	-	-	1	1	-	-	-
0010	SW QUAD STH 42/57	159	-	-	-	-	-	-	-	-	1	1	-	-	-
TOTAL 0010				8,471		1,908		3,816		3,225		6	18.75	28	5

PAVEMENT MARKING																
						646.2020 MARKING LINE EPOXY 6-INCH		646.4020 MARKING LINE EPOXY 10-INCH	646.5020 MARKING ARROW EPOXY	646.6120 MARKING STOP LINE EPOXY 18-INCH	646.6466 COLD WEATHER MARKING EPOXY 6-INCH	646.6470 COLD WEATHER MARKING EPOXY 10-INCH	646.7120 MARKING DIAGONAL EPOXY 12-INCH	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	646.7520 MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH	
CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	WHITE LF	YELLOW LF	LF	EACH	LF	LF	LF	LF	LF	LF	REMARKS
0010	10+44	-	17+50	LT, RT	CTY-S_S DULUTH	-	177	-	-	-	177	-	-	-	-	CL SKIPS
0010	10+44	-	24+87	RT	CTY-S_S DULUTH	1443	-	-	-	-	1443	-	-	-	-	RT FOG
0010	10+83	-	11+58	LT	CTY-S_S DULUTH	-	-	-	-	-	75	-	-	75	-	CC X-WALK
0010	10+89	-	11+52	LT	CTY-S_S DULUTH	-	-	-	-	-	63	-	-	63	-	CC X-WALK
0010	10+93	-	11+20	LT	CTY-S_S DULUTH	-	-	-	-	28	-	-	-	-	-	CIRCUIT COURT STOP BAR
0010	11+82	-	23+42	LT	CTY-S_S DULUTH	1160	-	-	-	-	1160	-	-	-	-	LT FOG
0010	17+50	-	24+87	LT	CTY-S_S DULUTH	-	737	-	-	-	737	-	-	-	-	CL SOLID
0010	17+50	-	24+87	RT	CTY-S_S DULUTH	-	737	-	-	-	737	-	-	-	-	CL SOLID
0010	23+66	-	24+57	LT	CTY-S_S DULUTH	-	-	-	-	-	91	-	-	91	-	W YEW X-WALK
0010	23+72	-	24+49	LT	CTY-S_S DULUTH	-	-	-	-	-	76	-	-	76	-	W YEW X-WALK
0010	23+76	-	24+10	LT	CTY-S_S DULUTH	-	-	-	-	33	-	-	-	-	-	YEW STOP
0010	24+67	-	24+87	LT	CTY-S_S DULUTH	20	-	-	-	-	20	-	-	-	-	LT FOG
0010	24+87	-	24+87	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	30	-	-	30	-	W YEW MIDBLOCK X-WALK (S)
0010	24+93	-	32+82	LT	CTY-S_S DULUTH	789	-	-	-	-	789	-	-	-	-	LT FOG
0010	24+93	-	32+82	LT	CTY-S_S DULUTH	-	789	-	-	-	789	-	-	-	-	CL SOLID
0010	24+93	-	32+82	RT	CTY-S_S DULUTH	789	-	-	-	-	789	-	-	-	-	RT FOG
0010	24+93	-	32+82	RT	CTY-S_S DULUTH	-	789	-	-	-	789	-	-	-	-	CL SOLID
0010	24+93	-	24+93	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	30	-	-	30	-	W YEW MIDBLOCK X-WALK (N)
0010	32+82	-	32+82	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	30	-	-	30	-	MIDBLOCK X-WALK (S)
0010	32+88	-	37+67	LT	CTY-S_S DULUTH	479	-	-	-	-	479	-	-	-	-	LT FOG
0010	32+88	-	35+06	LT	CTY-S_S DULUTH	-	218	-	-	-	218	-	-	-	-	CL SOLID
0010	32+88	-	35+41	RT	CTY-S_S DULUTH	252	-	-	-	-	252	-	-	-	-	RT FOG
0010	32+88	-	35+06	RT	CTY-S_S DULUTH	-	218	-	-	-	218	-	-	-	-	CL SOLID
0010	32+88	-	32+88	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	30	-	-	30	-	MIDBLOCK X-WALK (N)
0010	35+06	-	36+74	LT	CTY-S_S DULUTH	-	168	-	-	-	168	-	-	-	-	CL SOLID TAPER LT
0010	35+06	-	36+08	RT	CTY-S_S DULUTH	-	102	-	-	-	102	-	-	-	-	CL SOLID TAPER RT
0010	35+18	-	36+08	RT	CTY-S_S DULUTH	-	90	-	-	-	90	-	-	-	-	CL SOLID TAPER RT
0010	35+18	-	36+74	LT	CTY-S_S DULUTH	-	156	-	-	-	156	-	-	-	-	CL SOLID TAPER LT
0010	35+48	-	35+50	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	-	-	3	-	-	MEDIAN STRIPES/DIAGONALS
0010	35+64	-	36+12	RT	CTY-S_S DULUTH	-	-	-	-	-	48	-	-	48	-	W WALNUT X-WALK
0010	35+69	-	36+08	RT	CTY-S_S DULUTH	-	-	-	-	-	39	-	-	39	-	W WALNUT X-WALK
0010	35+72	-	35+76	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	-	-	6	-	-	MEDIAN STRIPES/DIAGONALS
0010	35+90	-	36+06	RT	CTY-S_S DULUTH	-	-	-	-	17	-	-	-	-	-	W WALNUT STOP
0010	35+96	-	36+02	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	-	-	9	-	-	MEDIAN STRIPES/DIAGONALS
0010	36+08	-	36+65	RT	CTY-S_S DULUTH	-	58	-	-	-	58	-	-	-	-	CL SOLID TAPER RT
0010	36+08	-	36+74	LT, RT	CTY-S_S DULUTH	-	67	-	-	-	67	-	-	-	-	CL SOLID TAPER RT
0010	36+20	-	36+25	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	-	-	7	-	-	MEDIAN STRIPES/DIAGONALS
0010	36+25	-	37+24	RT	CTY-S_S DULUTH	-	99	-	-	-	99	-	-	-	-	RT FOG
0010	36+44	-	36+47	LT	CTY-S_S DULUTH	-	-	-	-	-	-	-	3	-	-	MEDIAN STRIPES/DIAGONALS
0010	36+74	-	37+74	LT	CTY-S_S DULUTH	-	100	-	-	-	100	-	-	-	-	CL SOLID
0010	36+74	-	37+74	LT	CTY-S_S DULUTH	-	100	-	-	-	100	-	-	-	-	CL SOLID
0010	36+74	-	37+74	RT	CTY-S_S DULUTH	-	-	100	-	-	-	100	-	-	-	LT TURN LANE LINE
0010	36+94	-	37+02	LT, RT	CTY-S_S DULUTH	-	-	-	1	-	-	-	-	-	-	LT ARROW
0010	37+24	-	37+74	RT	CTY-S_S DULUTH	13	-	-	-	-	13	-	-	-	-	RT DASHES (END BIKE LANE)
0010	37+46	-	37+54	LT, RT	CTY-S_S DULUTH	-	-	-	1	-	-	-	-	-	-	LT ARROW
0010	37+79	-	37+79	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	54	-	-	54	-	S DULUTH X-WALK
0010	37+85	-	37+85	LT, RT	CTY-S_S DULUTH	-	-	-	-	-	63	-	-	63	-	S DULUTH X-WALK
0010	37+98	-	39+03	LT	CTY-S_S DULUTH	-	-	-	-	-	221	-	-	-	216	42/57 CROSSWALK
TOTAL 0010						9,550		100	2	78	10,400	100	28	629	216	

PAVEMENT MARKING REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	646.9000	646.9002	646.9300	REMARKS
					MARKING REMOVAL LINE 4-INCH LF	MARKING REMOVAL LINE 6-INCH LF	MARKING REMOVAL SPECIAL MARKING EACH	
0010	37+43	-	37+74	CTY-S_S DULUTH	62	31	-	DOUBLE YELLOW CL & WHITE LANE LINE
0010	37+46	-	37+54	CTY-S_S DULUTH	-	-	1	LT TURN ARROW
TOTAL 0010					62	31	1	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500	650.5000	650.9920	REMARKS
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING SLOPE STAKES LF	
0010	9+88	-	37+95	CTY-S_S DULUTH	-	-	2,807	
0010	10+43	-	37+43	CTY-S_S DULUTH	2,700	2,700	-	
0010	39+05	-	42+49	CTY-S_S DULUTH	-	-	344	
0010	400+44	-	401+10	DOOR COUNTY JUSTICE CENTER	66	66	66	
0010	202+87	-	203+92	W YEW ST	105	105	105	
0010	300+23	-	300+51	W WALNUT DR	28	28	28	
0010	300+50	-	302+60	STORM SEWER OUTFALL	-	-	210	
0010	-	-	-		-	-	-	PROJECT
TOTAL 0010					2,899	2,899	3,560	

MONUMENTS

CATEGORY	LOCATION	680.0100	SPV.0060.04	SPV.0060.05	REMARKS
		PUBLIC LAND SURVEY MONUMENT VERIFY AND RESET EACH	SPECIAL (04. RESEARCH AND LOCATE EXISTING PROPERTY MONUMENTS) EACH	SPECIAL (05. VERIFY AND REPLACE EXISTING PROPERTY MONUMENTS) EACH	
0010	PROJECT	-	18	6	
0020	STATION 11+22	1	-	-	SECTION CORNER NEAR JUSTICE CENTER ENTRANCE
0020	STATION 37+64	1	-	-	SECTION CORNER S OF STH 42/57
TOTAL 0010		2	18	6	

ADJUSTING PULL BOXES

CATEGORY	STATION	TO	OFFSET	LOCATION	653.0900	REMARKS
					ADJUSTING PULL BOXES EACH	
0010	37+70.69	-	33.06' LT	CTY-S_S DULUTH	1	IN SIDEWALK ON SW QUAD OF 42/57
0010	39+49.45	-	27.03' LT	CTY-S_S DULUTH	1	IN SIDEWALK ON NW QUAD OF 42/57
TOTAL 0010					2	

CONDUIT RIGID NONMETALLIC SCHEDULE 40

LOCATION				0
S1001 4 Dulut FUTURE				
				CONDUIT RIGID NONMETALLIC SCHEDULE 40 INCH
CATEGOR	FROM	TO	LF	
0010	PBA	SB	5	
0010	PBB	SB10	10	
0010	PBC	SB11	25	
0010	PBD	SB1	10	
TOTALS				0

CONCRETE BASES

LOCATION			654.0101
S15-0301 (42-57 & Duluth) FUTURE			CONCRETE BASES TYPE 1
CATEGORY	Station	Offset	EACH
0010	SB9	37+81.3	44.5' LT 1
0010	SB10	39+17	43.5' LT 1
0010	SB11		RT 1
0010	SB1	37+78	LT 1
TOTALS			4

TRAFFIC SIGNAL CABLE

LOCATION						00	00	000
S1001 4 Dulut FUTURE						14	Ba to Had	Loo Dtctor
						AWG	14	Lad In
						HEAD		Cal
						NO		
CATEGOR	Fro CB1 to	LF	LF					LF
0010	SB	53	26	1				5
0010	SB10	393	26	0				5
0010	SB11	1	26	1				5
0010	SB1	73	26	1				5
Su Total		687	104					0
TOTALS			1					0

Signal Indication		Conductor Color	
Rd	=	Rd	
llo	=	Orang	
Grn	=	Grn	
Rd Arro	=	Rd Blac Tracr	
llo Arro	=	Blac Wit	
llo Flaing Arro	=	Wit Blac	
Grn Arro	=	Blu Blac	

PEDS			
Wal	=	Grn	
Dont Wal	=	Rd	
Button	=	Blac Orang	

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

LOCATION				01
S1001 4 Dulut FUTURE				ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG
				Euint Grounding Conductor Grn
CATEGOR	FROM	TO	LF	
0010	SB	CB1	53	
0010	SB10	SB	4	
0010	SB	SB11	66	
0010	SB1	SB	1	
TOTAL			1	

TRAFFIC SIGNALS

LOCATION						0100	040	041	000	00
S1001 4 Dulut FUTURE							Traic Signal	Pdtrian Signal		Signal Mounting
						Pdtal	Standard	Fac	Pdtrian	Hardar
						Ba	Aluinu 10FT	1Inc	Pu Button	
						EACH	EACH	EACH	EACH	EACH
0010						4	4	4	4	1
TOTALS						4	4	4	4	1

SAWING									
CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	690.0150	690.0250	REMARKS	
						SAWING	SAWING		
						ASPHALT	CONCRETE		
						LF	LF		
0010	9+88	-	10+44	LT	CTY-S_S DULUTH	55	-	LT SHOULDER/PVT EDGE S OF CIRCUIT COURT	
0010	10+44	-	10+44	LT, RT	CTY-S_S DULUTH	30	-	ACROSS MAINLINE S END	
0010	400+62	-	400+62	RT	DOOR COUNTY JUSTICE CENTER	-	3	C&G MATCH SW QUAD CIRCUIT COURT	
0010	400+44	-	400+63	LT, RT	DOOR COUNTY JUSTICE CENTER	62	-	ACROSS JUSTICE CENTER DW	
0010	400+44	-	400+44	LT	DOOR COUNTY JUSTICE CENTER	-	3	C&G MATCH NW QUAD CIRCUIT COURT	
0010	16+37	-	16+58	LT	CTY-S_S DULUTH	20	-	1107 DW	
0010	17+78	-	17+99	LT	CTY-S_S DULUTH	21	-	1061 DW	
0010	19+16	-	19+35	RT	CTY-S_S DULUTH	21	-	3010 DW	
0010	19+30	-	19+50	LT	CTY-S_S DULUTH	21	-	1049 DW	
0010	22+34	-	22+62	RT	CTY-S_S DULUTH	28	-	3026/3028 DW	
0010	202+86	-	202+86	RT	W YEW ST	-	2	C&G MATCH SW QUAD W YEW ST	
0010	202+86	-	202+86	LT, RT	W YEW ST	44	-	ACROSS W YEW ST	
0010	202+86	-	202+86	LT	W YEW ST	-	2	C&G MATCH NW QUAD W YEW ST	
0010	27+78	-	27+98	RT	CTY-S_S DULUTH	20	-	932 DW	
0010	28+80	-	29+11	RT	CTY-S_S DULUTH	31	-	922 DW (S)	
0010	29+97	-	30+38	LT	CTY-S_S DULUTH	-	41	901 DW (KT S)	
0010	29+98	-	30+63	RT	CTY-S_S DULUTH	66	-	922 DW (N)	
0010	31+73	-	32+13	RT	CTY-S_S DULUTH	39	-	862 DW (S)	
0010	32+98	-	33+39	LT	CTY-S_S DULUTH	-	41	901 DW (KT (N)	
0010	33+01	-	33+39	RT	CTY-S_S DULUTH	39	-	862 DW (N)	
0010	33+64	-	33+87	RT	CTY-S_S DULUTH	24	-	836 DW	
0010	34+43	-	34+54	LT	CTY-S_S DULUTH	11	-	835 DW	
0010	34+73	-	34+73	LT	CTY-S_S DULUTH	-	5	SW MATCH LT	
0010	300+51	-	300+51	RT	W WALNUT DR	-	3	C&G MATCH SE QUAD W WALNUT DR	
0010	300+51	-	300+51	LT, RT	W WALNUT DR	31	-	ACROSS W WALNUT DR	
0010	300+48	-	300+48	RT	W WALNUT DR	-	3	C&G MATCH NE QUAD W WALNUT DR	
0010	36+32	-	36+33	RT	CTY-S_S DULUTH	-	2	C&G MATCH WALGREENS DW	
0010	36+33	-	36+62	RT	CTY-S_S DULUTH	28	-	808 DW (WALGREENS)	
0010	36+62	-	36+63	RT	CTY-S_S DULUTH	-	2	C&G MATCH WALGREENS DW	
0010	37+42	-	37+43	LT, RT	CTY-S_S DULUTH	42	-	ACROSS MAINLINE N END	
0010	37+43	-	37+50	RT	CTY-S_S DULUTH	7	-	C&G MATCH N END S OF 42/57	
0010	37+50	-	37+50	RT	CTY-S_S DULUTH	-	2	C&G MATCH N END S OF 42/57	
0010	37+77	-	37+93	RT	CTY-S_S DULUTH	-	24	SE QUAD 42/57 FOR CURB RAMP C&G	
0010	39+81	-	40+28	LT	CTY-S_S DULUTH	61	-	621 DW (S)	
0010	40+78	-	41+18	LT	CTY-S_S DULUTH	58	-	621 DW (N)	
0010	41+50	-	41+76	LT	CTY-S_S DULUTH	26	-	601 DW	
TOTAL 0010						785	133		

ADJUSTING WATER VALVE BOXES									
CATEGORY	STATION	OFFSET	EX ELEV	PROP ELEV	ADJUSTMENT	LOCATION	EACH	REMARKS	
0020	400+50.06	17.73' LT	719.39	719.40	0.01	DOOR COUNTY JUSTICE CENTER	1	DOOR COUNTY JUSTICE CENTER INTERSECTION	
0020	400+84.33	13.37' LT	719.21	719.18	-0.03	DOOR COUNTY JUSTICE CENTER	1	DOOR COUNTY JUSTICE CENTER INTERSECTION	
0020	400+93.73	16.88' LT	719.06	719.06	0.00	DOOR COUNTY JUSTICE CENTER	1	DOOR COUNTY JUSTICE CENTER INTERSECTION	
0020	400+94.20	10.19' LT	719.18	719.16	-0.02	DOOR COUNTY JUSTICE CENTER	1	DOOR COUNTY JUSTICE CENTER INTERSECTION	
0020	13+96.63	34.14' LT	713.59	716.32	2.73	CTY-S_S DULUTH	1	IN EXISTING WEST DITCH FORESLOPE	
0020	20+37.00	33.76' LT	707.27	708.81	1.54	CTY-S_S DULUTH	1	IN EXISTING WEST DITCH FORESLOPE	
0020	203+27.19	13.25' RT	705.22	704.97	-0.25	W YEW ST	1	EB (RT) LANE	
0020	203+66.05	9.84' RT	705.42	704.66	-0.76	W YEW ST	1	W YEW ST INTERSECTION	
0020	203+77.82	5.51' RT	705.34	704.56	-0.78	W YEW ST	1	W YEW ST INTERSECTION	
0020	203+78.46	12.03' RT	705.30	704.55	-0.75	W YEW ST	1	W YEW ST INTERSECTION	
0020	27+87.06	33.59' LT	699.01	701.97	2.96	CTY-S_S DULUTH	1	IN EXISTING WEST DITCH FORESLOPE	
0020	35+46.64	16.91' LT	697.92	697.61	-0.31	CTY-S_S DULUTH	1	SB LANE S OF W WALNUT DR	
0020	35+91.86	15.24' LT	697.71	697.47	-0.24	CTY-S_S DULUTH	1	W WALNUT DR INTERSECTION	
0020	35+94.55	6.16' LT	697.90	697.63	-0.27	CTY-S_S DULUTH	1	W WALNUT DR INTERSECTION	
0020	35+97.99	15.53' LT	697.66	697.45	-0.21	CTY-S_S DULUTH	1	W WALNUT DR INTERSECTION	
TOTAL 0020							15		

CONVENTIONAL SYMBOLS			
SECTION LINE		SECTION CORNER SYMBOL	
QUARTER LINE		SECTION CORNER MONUMENT	
SIXTEENTH LINE		GEODETIC SURVEY MONUMENT	
NEW REFERENCE LINE		SIXTEENTH CORNER MONUMENT	
NEW R/W LINE		SIGN	
EXISTING R/W OR HE LINE		OFF-PREMISE SIGN	
PROPERTY LINE		COMPENSABLE	
LOT, TIE & OTHER MINOR LINES		NON-COMPENSABLE	
SLOPE INTERCEPT		ELECTRIC POLE	
CORPORATE LIMITS		TELEPHONE POLE	
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)		PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)		ACCESS RESTRICTED BY ACQUISITION	
TEMPORARY LIMITED EASEMENT AREA		NO ACCESS (BY STATUTORY AUTHORITY)	
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
TRANSMISSION STRUCTURES		NO ACCESS (NEW HIGHWAY)	
BUILDING TO BE REMOVED		PARCEL NUMBER 25	
BRIDGE		UTILITY NUMBER 40	
CULVERT		PARALLEL OFFSETS	
CONVENTIONAL UTILITY SYMBOLS			
WATER			
GAS			
TELEPHONE			
OVERHEAD TRANSMISSION LINES			
ELECTRIC			
CABLE TELEVISION			
FIBER OPTIC			
SANITARY SEWER			
STORM SEWER			
ELECTRIC TOWER			
CONVENTIONAL ABBREVIATIONS			
ACCESS RIGHTS	AR	POINT OF CURVATURE	PC
ACRES	AC	POINT OF COMPOUND CURVE	PCC
AHEAD	AH	POINT OF INTERSECTION	PI
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	REMAINING	REM
CERTIFIED SURVEY MAP	CSM	RESTRICTIVE DEVELOPMENT	RDE
CONCRETE	CONC	EASEMENT	
COUNTY	CO	RIGHT	RT
COUNTY TRUNK HIGHWAY	CTH	RIGHT OF WAY	R/W
DISTANCE	DIST	SECTION	SEC
CORNER	COR	SEPTIC VENT	SEPV
DOCUMENT NUMBER	DOC	SQUARE FEET	SF
EASEMENT	EASE	STATE TRUNK HIGHWAY	STH
EXISTING	EX	STATION	STA
FOUND/RECOVERED	FND	TELEPHONE PEDESTAL	TP
GAS VALVE	GV	TEMPORARY LIMITED	TLE
GRID NORTH	GN	EASEMENT	
HIGHWAY EASEMENT	HE	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED	PLE		
EASEMENT			
POINT OF BEGINNING	POB		

NOTES:

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

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

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

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.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY/NE REGION.

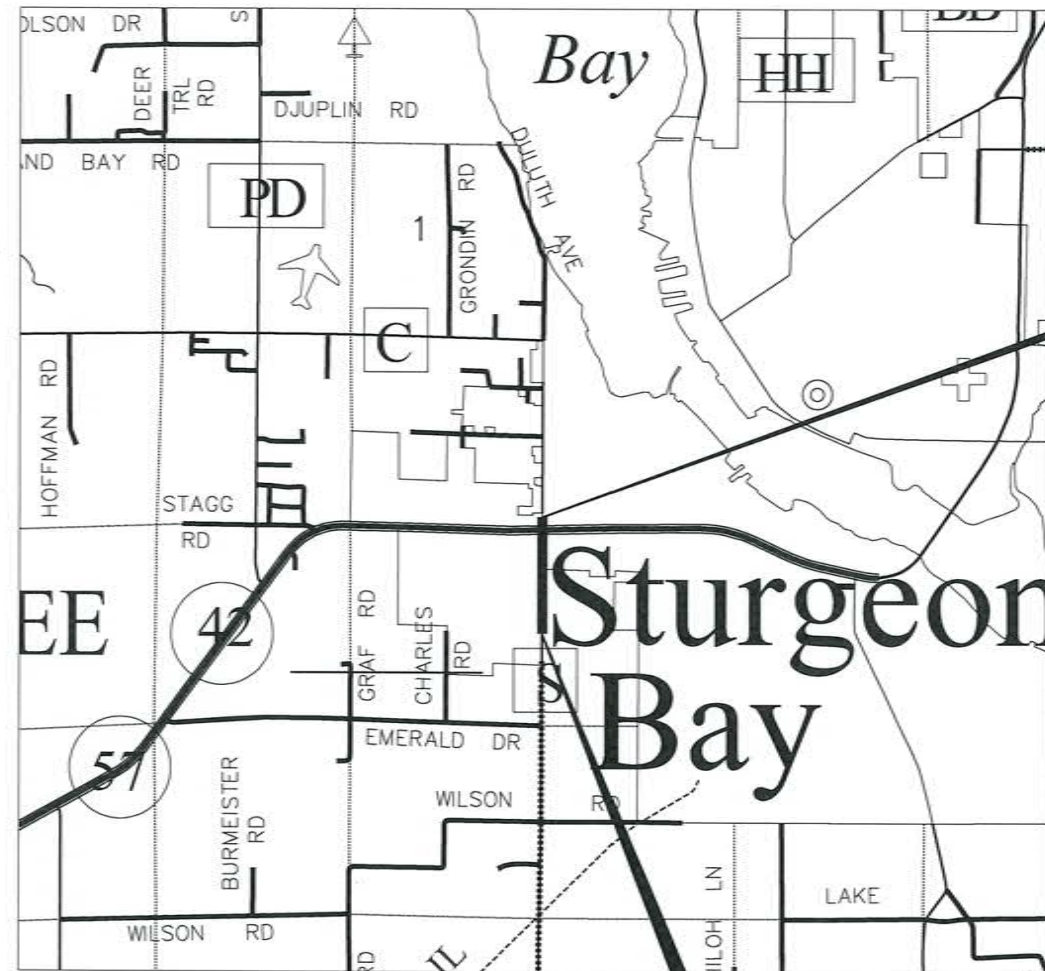
PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, 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 THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL TLEs EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD. 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 SOUTH DULUTH AVENUE R/W SHOWN HEREIN IS BASED ON HIGHWAY EASEMENT DOCUMENTS RECORDED IN JUNE AND JULY OF 1965 FOR PLAT OF RIGHT OF WAY REQUIRED PROJECT S 0426 (3) DATED 6-17-64. THE CENTERLINE OF CTH S, AS ESTABLISHED FOR SAID PROJECT S 0426 (3), WAS RE-ESTABLISHED IN 2024 FROM SAID DOCUMENTS AND FIELD MONUMENTS RECOVERED/FOUND IN SURVEYS CONDUCTED IN 2024. EXISTING R/W SHOWN AT PARCELS 19 & 20 (SEE SHEET 4.07 OF THIS PLAT) ARE COMPUTED TO MATCH THE R/W SHOWN IN CSM NO. 3575 WHICH IS A 66-FOOT-WIDE R/W CORRIDOR CENTERED ON THE SECTION LINE. THIS 66-FOOT-WIDE CORRIDOR WAS ALSO USED FOR THE RIGHT (EAST) SIDE OF THE EXISTING R/W AT PARCELS 24 & 23 AND FOR PART OF PARCEL 22 UNTIL IT INTERSECTED WITH THE R/W ESTABLISHED BY HIGHWAY EASEMENT DOE NO 324492, ALSO SHOWN ON SHEET 4.6 OF SAID 1964 PLAT.



END RELOCATION ORDER

STA 41+81.00

416.71 FT NORTH AND 1.06 FT EAST OF THE
SOUTHEAST QUARTER CORNER OF
SEC. 12, T 27 N, R 25 E

BEGIN RELOCATION ORDER

STA 10+80.00

42.26 FT SOUTH AND 7.66 FT WEST
OF THE EAST QUARTER CORNER OF
SEC. 13, T 27 N, R 25 E

TOTAL NET LENGTH OF CENTERLINE = 0.587 MILES

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR
REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO
DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

ACCEPTED FOR

CITY OF STURGEON BAY

Date: 2-5-2025 David J. Ward, CITY MAYOR

ORIGINAL PLANS PREPARED BY

Cedar
CORPORATION

www.cedarcorp.com
1695 Bellevue Street
Green Bay, WI 54311
920-491-9081
FAX 920-491-9020

Community Infrastructure • Architecture • Environmental Services



SURVEYOR'S CERTIFICATE:

The property as shown and described on this map
was surveyed under my direction and control
according to the Wisconsin Administrative Code,
Chapter A-E7 of Minimum Standards for Property
Surveys, and is a correct representation of said
survey, to the best of my knowledge and belief.

Date: 01/07/25 Greg J. Salentine, P.L. 60

SCHEDULE OF LANDS & INTERESTS REQUIRED

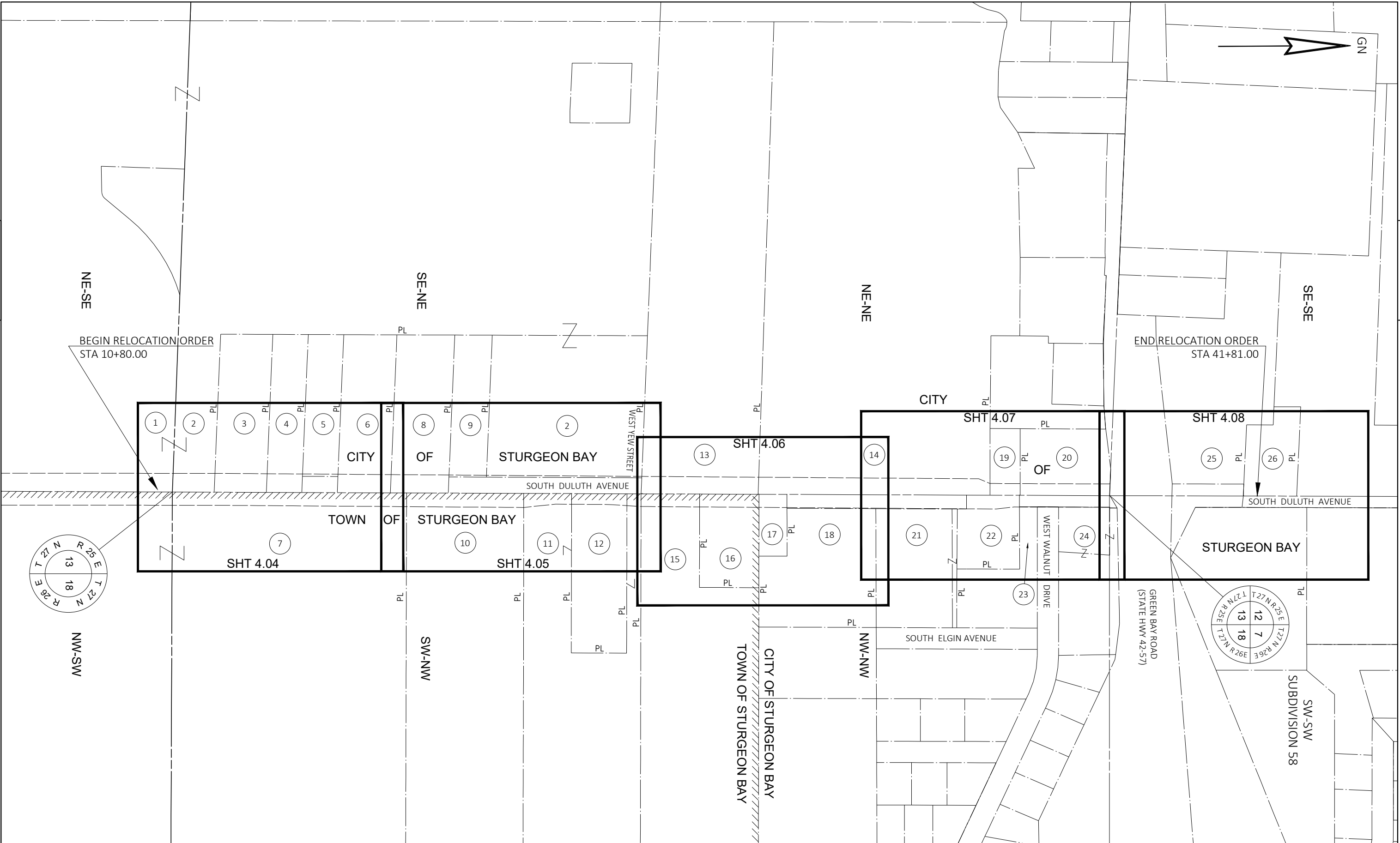
*** AREAS SHOWN IN THE TOTAL EXISTING ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE CITY OF STURGEON BAY.

PARCEL NO.	DOOR COUNTY TAX PARCEL NO.	SHEET NO.	OWNERSHIP	MORTGAGE RELEASE	INTEREST REQUIRED	***TOTAL EXISTING ACRES	NEW R/W ACQUIRED ACRES	EXISTING R/W ACQUIRED ACRES	TOTAL R/W ACQUIRED ACRES	REMAINING ACRES	T.L.E. REQUIRED SQUARE FEET	P.L.E. REQUIRED SQUARE FEET
1	2816613001301	4.04	COUNTY OF DOOR (JUSTICE CENTER)	-	TLE	29.00	-	-	-	29.00	2257	
2	2816613000406	4.04 & 4.05	COUNTY OF DOOR (HIGHWAY SHOP)	0	FEE & TLE	27.45	0.00	0.14	0.14	27.31	2581	
	2816613000401					4.32	0.00	0.48	0.48	3.84	9253	
3	2816613000405	4.04	DOUGLAS T. GOEHRING	1	FEE & TLE	1.50	0.00	0.18	0.18	1.32	735	
4	2816613000407	4.04	JRR APARTMENTS LLC	0	FEE & TLC	1.03	0.00	0.12	0.12	0.91	506	
5	2816613000404	4.04	JAMES A. MALLIEN	0	FEE & TLE	1.02	0.00	0.12	0.12	0.90	500	
6	2816613000403B	4.04	ROGER D. & MARVEL E. HARTEL	0	FEE & TLE	1.53	0.00	0.18	0.18	1.35	750	
7	0240218272623C	4.04	BETTY G. GRAF, TRUSTEE OF THE BETTY G GRAF MARITAL TRUST	0	FEE	19.00	0.00	0.57	0.57	18.43	-	
8	2816613000403A	4.05	TROY W. AND CECILIA M. BASKETT	1	FFF & TLF	1.67	0.00	0.19	0.19	1.48	815	
9	2816613000402	4.05	JOHN M. AND MARY ANN LOGERQUIST	0	FEE	1.00	0.00	0.12	0.12	0.88	-	
10	0240218272623B	4.05	THE FYRN M. JILOT MARITAL TRUST	0	FEE & TLE	10.00	0.00	0.30	0.30	9.70	785	
11	0240218272623A2	4.05	MASS' FLORAL AND GREENHOUSE LLP	2	FEE & TLC	8.50	0.00	0.13	0.13	8.37	1872	
12	0240218272623A1	4.05	TODD L. AND CHRISTINE MAAS	1	FEE & TLE	1.61	0.00	0.11	0.11	1.50	2028	
13	2816613000109	4.06	PHILL-MART OF STURGEON BAY, INC.	0	FEE & TLE	10.00	0.00	0.37	0.37	9.63	166	
14	2816613000110	4.06 & 4.07	KWIK TRIP, INC.	0	FEE & TLE	19.90	0.00	0.70	0.70	19.20	12656	
15	0240218272622C	4.06	WILLIAM M. AND DEBRA L. OVERBECK	1	FFF & TLF	9.00	0.00	0.14	0.14	8.86	3801	
16	0240218272622C1	4.06	WILLIAM OVERBECK	0	FEE, TLE & PLE	1.00	0.00	0.14	0.14	0.86	9138	4709
17	2816818000606	4.06	TODD J. DEAL	1	FEE & TLE	0.32	0.00	0.07	0.07	0.25	1080	
18	2816818000605A	4.06	RM TRAVEL PLAZA LLC	0	FEE & TLC	1.44	0.01	0.22	0.23	1.21	624	
19	2816613000101B	4.07	THE SIMPLE LIFE DECOR LLC	1	FEE & TLE	0.36	0.00	0.06	0.06	0.30	1103	
20	2816613000101A	4.07	JOSEPH D. AND CATHERINE A. HARTMAN	0	FEE & TLE	1.07	12 SF	8353 SF	0.19	0.88	1624	
21	2816818000604	4.07	SCHARTNER IMPLEMENT, INC.	0	FEE & TLE	1.87	0.00	0.19	0.19	1.68	1082	
	2816818000602				FEE & TLE	0.12	0.00	0.01	0.01	0.11	70	
22	2816818000603	4.07	MARC C. AND JUDITH K. PAULSON	1	FEE, TLE & PLE	0.84	0.00	0.15	0.15	0.69	2611	815
23	2814670000100	4.07	BAYVIEW APARTMENTS II, LLC AND BAYVIEW APARTMENTS III, LLC	1	TLE & PLE	1.11				1.11	1234	740
24	2816818000601A	4.07	GNI OF STURGEON BAY LLC	1	FEE & TLC	0.44	32 SF	-	-	10843 SF	2120	
	2816818000601B				FEE & TLE	1.19	79 SF	-	-		107	
25	2816612001601	4.08	LAMPFERT YARDS, INC.	-	TLF	3.72	-	-	-	3.72	2424	
26	2816612001606	4.08	HAI-I, LLC	-	TLE	0.79	-	-	-	0.79	344	

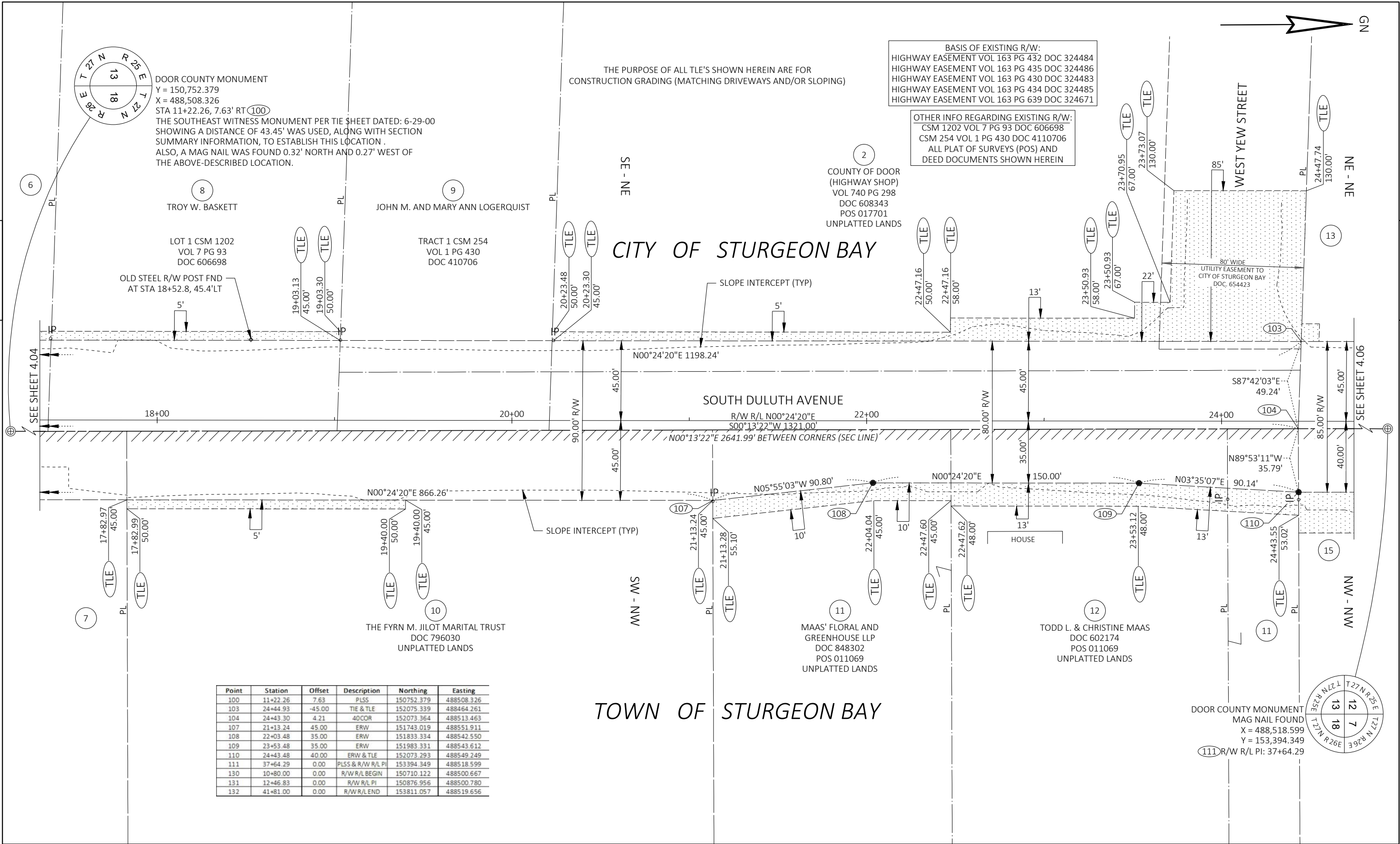
PARCEL NO.	SHEET NO.	OWNERSHIP	INTEREST REQUIRED
200	4.07	STURGEON BAY UTILITIES	RELEASE OF RIGHTS
201	4.07	WISCONSIN PUBLIC SERVICE CORPORATION	RELEASE OF RIGHTS
202	4.07	AT&T	RELEASE OF RIGHTS

4

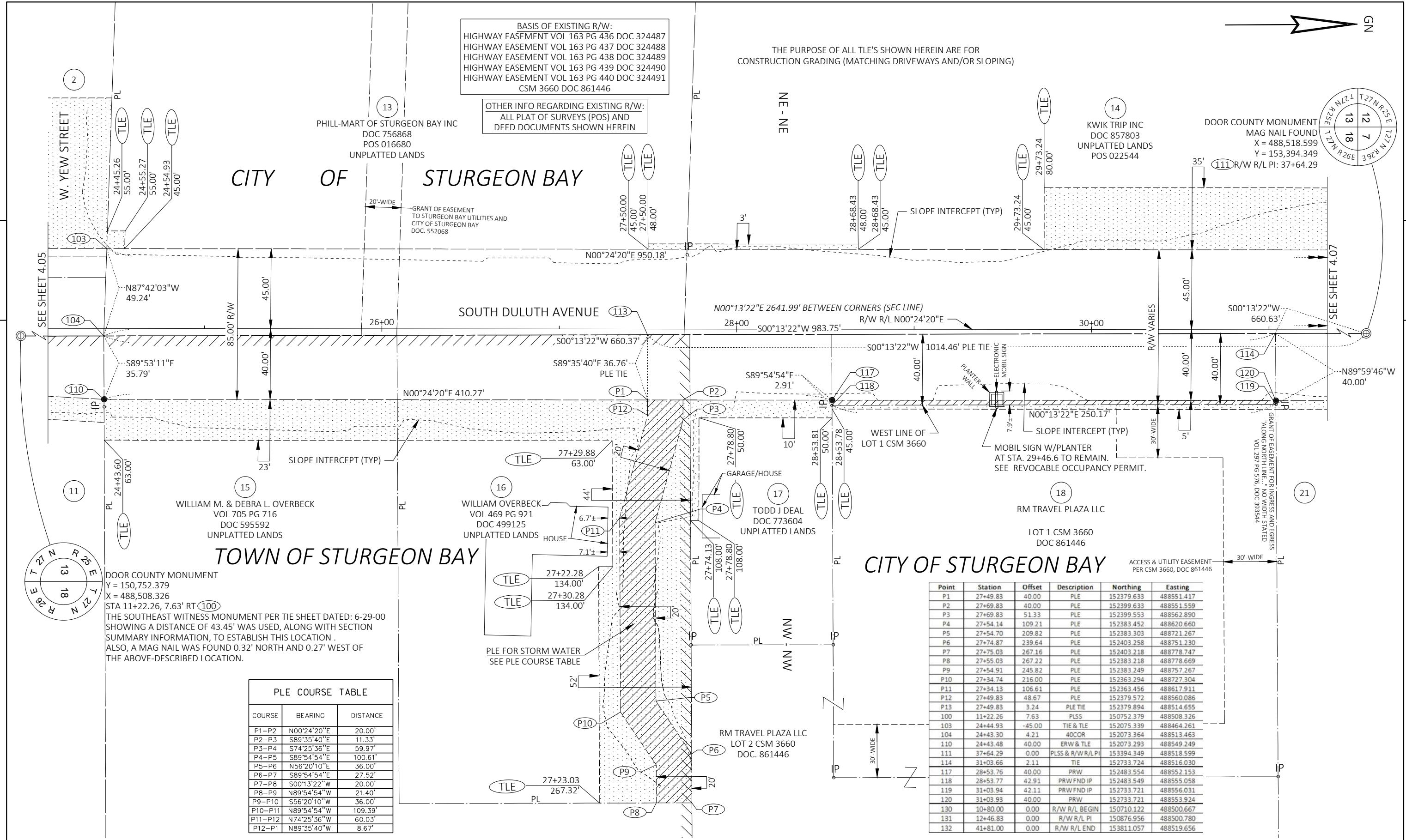


4

REVISION DATE 	DATE 01/07/2025		SCALE, FEET 0 125' 250' 	HWY: SOUTH DULUTH AVENUE	STATE R/W PROJECT NUMBER 4997-05-72	PLAT SHEET 4.03	E
	GRID FACTOR NA			COUNTY: DOOR	CONSTRUCTION PROJECT NUMBER 4997-05-73	PS&E SHEET — 62	



REVISION DATE 	DATE 01/07/2025		SCALE, FEET 0 25 50	HWY: SOUTH DULUTH AVENUE	STATE R/W PROJECT NUMBER 4997-05-72	PLAT SHEET 4.05	E
	GRID FACTOR NA			COUNTY: DOOR	CONSTRUCTION PROJECT NUMBER 4997-05-73	PS&E SHEET — 64	



REVISION DATE				DATE 01/07/2025		SCALE, FEET 02550	HWY: SOUTH DULUTH AVENUE		STATE R/W PROJECT NUMBER 4997-05-72		PLAT SHEET 4.06		E
				GRID FACTOR NA			COUNTY: DOOR		CONSTRUCTION PROJECT NUMBER 4997-05-73		PS&E SHEET — 65		

BASIS OF EXISTING R/W:
HIGHWAY EASEMENT VOL 163 PG 437 DOC 324488
HIGHWAY EASEMENT VOL 163 PG 406 DOC 324461
HIGHWAY EASEMENT VOL 163 PG 441 DOC 324492
CSM 3575 DOC 853958
SOUTH HILL SUBDIVISION, HANGER 10 PG 8 DOC 397920

OTHER INFO REGARDING EXISTING R/W:
CSM 1596 VOL 9 PG 286 DOC 641341
WARRANTY DEED VOL 276 PG 197 DOC 381392
TPP NO: 4430-12-00 - 4.11 DOC 773383
ALL PLAT OF SURVEYS (POS) AND
DEED DOCUMENTS SHOWN HEREIN

THE PURPOSE OF ALL TLE'S SHOWN HEREIN ARE FOR
CONSTRUCTION GRADING (MATCHING DRIVEWAYS AND/OR SLOPING)

DOOR COUNTY MONUMENT
Y = 150,752.379
X = 488,508.326
STA 11+22.26, 7.63' RT (100)
THE SOUTHEAST WITNESS MONUMENT PER TIE SHEET DATED: 6-29-00
SHOWING A DISTANCE OF 43.45' WAS USED, ALONG WITH SECTION
SUMMARY INFORMATION, TO ESTABLISH THIS LOCATION.
ALSO, A MAG NAIL WAS FOUND 0.32' NORTH AND 0.27' WEST OF
THE ABOVE-DESCRIBED LOCATION.

14
KWIK TRIP INC
DOC 857803
UNPLATTED LANDS
POS 022544

CITY OF
NE - NE

19
THE SIMPLE LIFE DECOR LLC
LOT 2 CSM 3575
DOC 853958

20
JOSEPH D. & CATHERINE A. HARTMAN
LOT 1 CSM 3575
DOC 853958

DOOR COUNTY MONUMENT
MAG NAIL FOUND
X = 488,518.599
Y = 153,394.349
(111) R/W R/L PI: 37+64.29

STURGEON BAY UTILITIES
GUY ANCHOR

GREEN BAY ROAD
(STATE HWY 42-57)

SE - SE

SLOPE INTERCEPT (TYP)

SOUTH DULUTH AVENUE

WEST WALNUT DRIVE

STURGEON BAY

SW-SW
SUBDIVISION 58

Point	Station	Offset	Description	Northing	Easting
P20	35+59.64	33.65	PLE	153189.463	488550.803
P21	35+59.74	48.65	PLE	153189.458	488565.803
P22	34+96.23	48.86	PLE	153125.952	488565.556
P23	34+57.24	53.65	PLE	153086.927	488570.069
P24	34+55.41	38.76	PLE	153085.204	488555.169
100	11+22.26	7.63	PLSS	150752.379	488508.326
103	24+44.93	-45.00	ERW	152075.339	488464.261
104	24+43.30	4.21	40 COR	152073.364	488513.463
111	37+64.29	0.00	PLSS & R/W R/L PI	153394.349	488518.599
112	35+09.94	0.81	TIE	153140.001	488517.610
113	34+27.04	1.08	TIE	153057.102	488517.288
114	31+03.66	2.11	TIE	152733.724	488516.030
115	33+95.11	-45.00	ERW	153025.496	488470.987
116	34+26.86	-31.92	ERW	153057.153	488484.288
120	31+03.93	40.00	PRW	152733.721	488553.924
121	34+45.29	40.00	ERW	153075.074	488556.340
122	34+95.29	33.86	ERW	153125.116	488550.552
123	37+53.73	33.03	PRW	153383.560	488551.557
124	37+64.39	39.00	PRW	153394.349	488557.599
125	37+85.69	39.00	PRW	153415.646	488557.653
126	37+84.78	0.00	TIE	153414.841	488518.651
127	37+60.46	-32.99	PRW	153390.756	488485.585
128	37+65.81	-37.99	PRW	153395.968	488480.609
129	35+10.29	33.81	POINT A	153140.113	488550.611
130	10+80.00	0.00	R/W R/L BEGIN	150710.122	488500.667
131	12+46.83	0.00	R/W R/L PI	150876.956	488500.780
132	41+81.00	0.00	R/W R/L END	153811.057	488519.656
133	37+53.63	0.03	TIE	153383.688	488518.558
134	35+10.44	48.81	TIE	153140.163	488565.611

21
SCHARTNER IMPELMENT, INC.
DOC 471597
UNPLATTED LANDS

PLE COURSE TABLE		
COURSE	BEARING	DISTANCE
129-134	N89°48'22"E	15.00'
134-P22	S00°13'22"W	14.21'
P22-P23	S06°35'50"E	39.28'
P23-P24	S83°24'10"W	15.00'
P24-122	N06°35'50"W	40.18'
122-129	N00°13'22"E	15.00'
129-P20	N00°13'22"E	49.35'
P20-P21	S89°58'42"E	15.00'
P21-P22	S00°13'22"W	63.51'

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
111-133	S00°13'22"W	10.66'
133-123	S89°46'38"E	33.00'
123-124	N29°14'52"E	12.37'
124-125	N00°08'43"E	21.30'
125-126	S88°48'59"W	39.01'
126-111	S00°08'43"W	20.49'

22
MARC C & JUDITH K PAULSON
DOC 830061 & 836725
UNPLATTED LANDS

PLE FOR STORM WATER
SEE PLE COURSE TABLE

202
AT&T
HANDHOLE &
CABLES
PRESCRIPTIVE

23
BAYVIEW
APARTMENTS II, LLC
AND
BAYVIEW
APARTMENTS III, LLC
DOC 863799

LOT 1
SOUTH HILL SUBDIVISION
HANGER 10 PG 8
DOC 397920

201
WISCONSIN PUBLIC
SERVICE CORP.
GAS IN 12' WIDE
UTILITY EASEMENT

24
G N I OF STURGEON BAY LLC
LOT 1 CSM 1596
VOL 9 PG 286
DOC 641341

SEE SHEET 4.06

SEE SHEET 4.08

REVISION DATE				

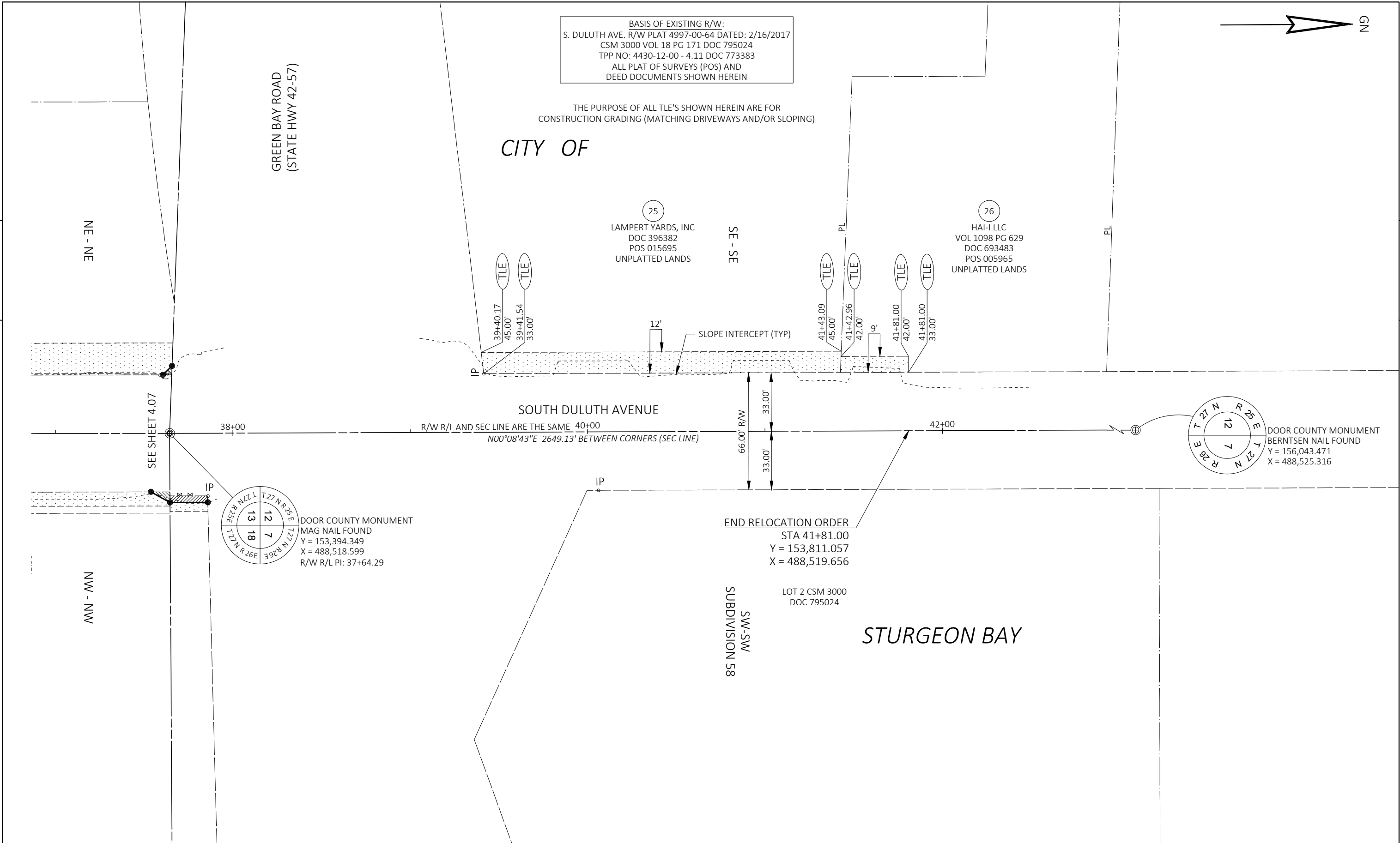
DATE 01/07/2025
GRID FACTOR NA

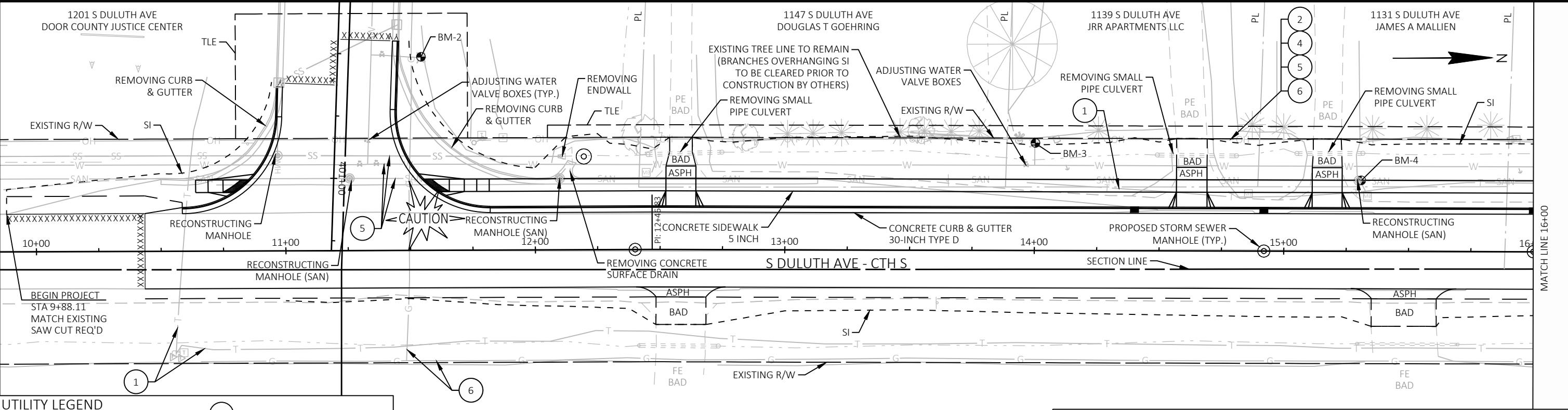


HWY: SOUTH DULUTH AVENUE
COUNTY: DOOR

STATE R/W PROJECT NUMBER 4997-05-72
CONSTRUCTION PROJECT NUMBER 4997-05-73

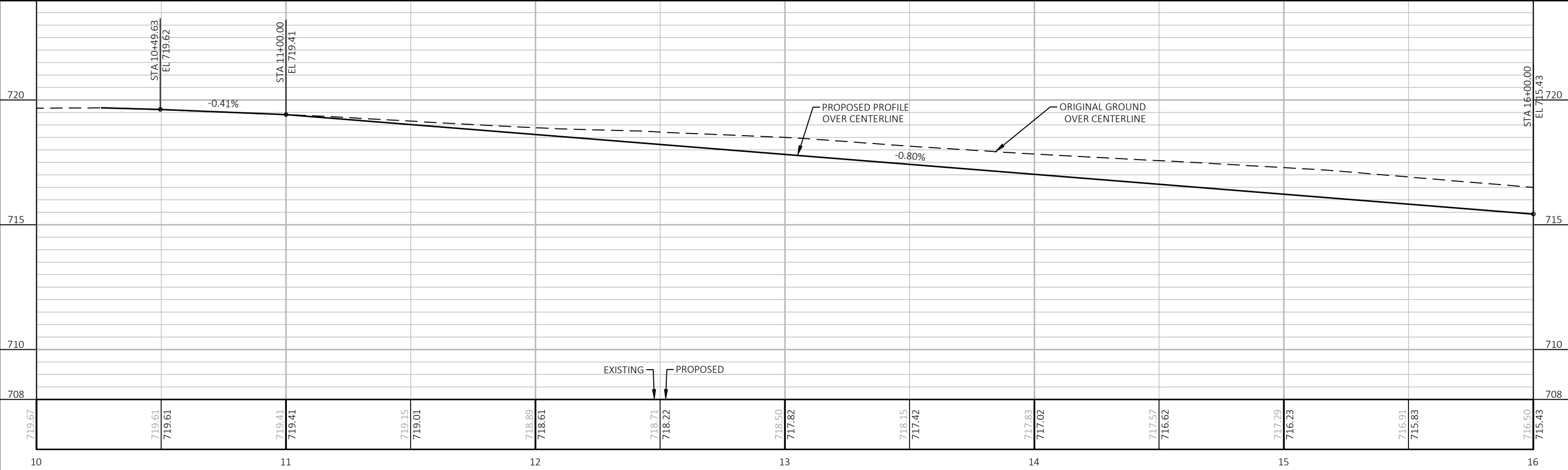
PLAT SHEET 4.07
PS&E SHEET

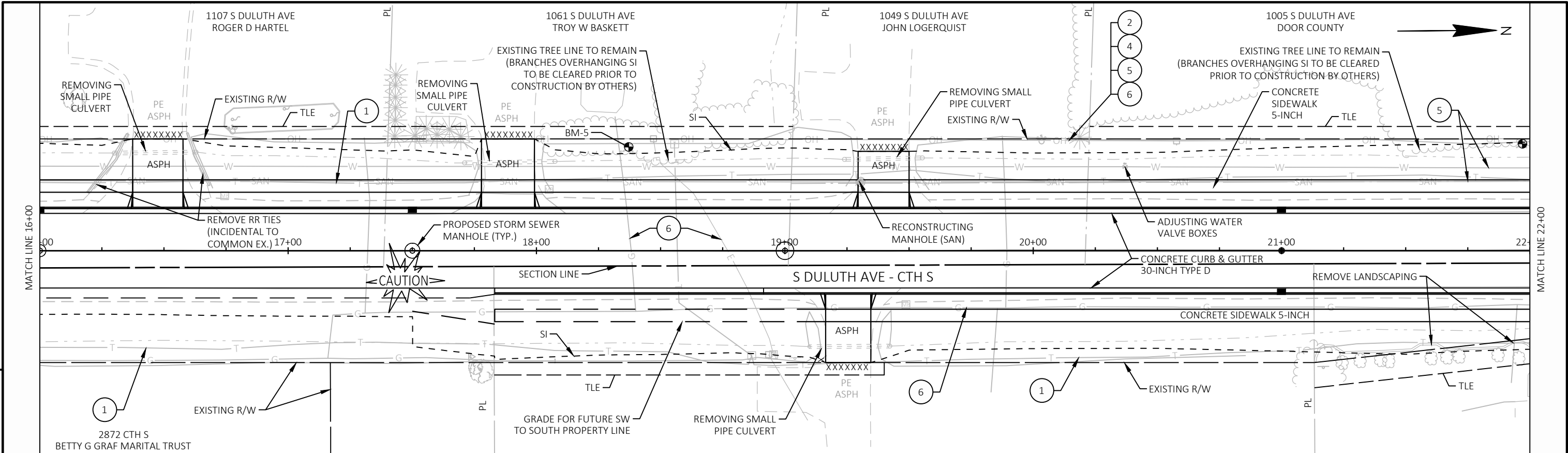




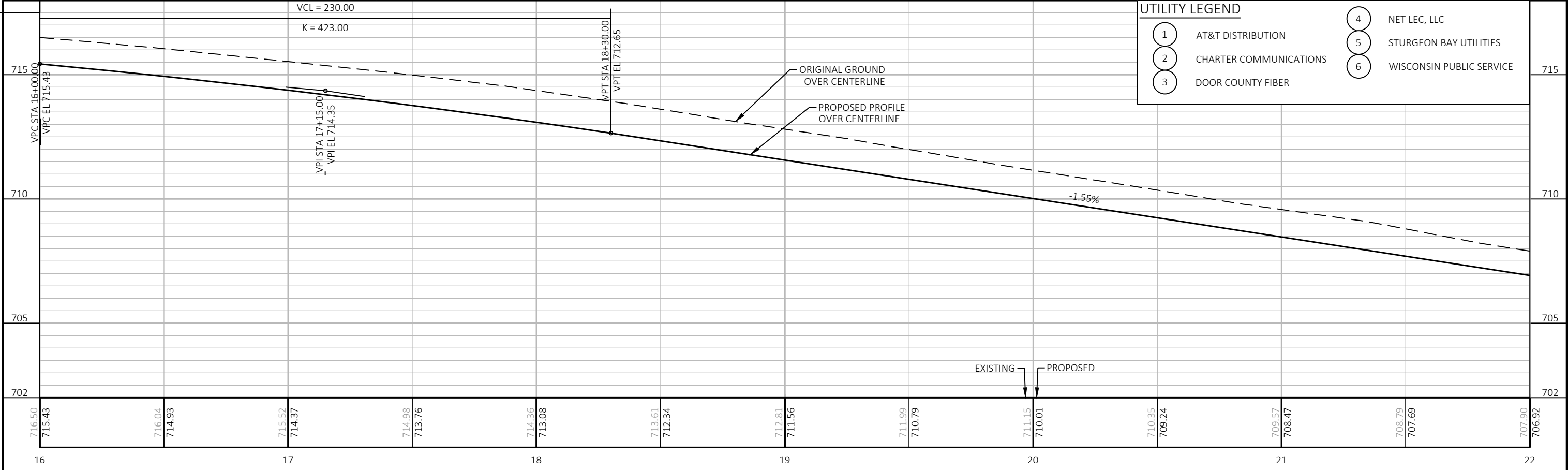
UTILITY LEGEND	
1	AT&T DISTRIBUTION
2	CHARTER COMMUNICATIONS
3	DOOR COUNTY FIBER
4	NET LEC, LLC
5	STURGEON BAY UTILITIES
6	WISCONSIN PUBLIC SERVICE

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-1	N/A	721.36	NW FLANGE BOLT ON HYD AT APPROX 150 FT SOUTH OF PROJECT LIMITS
BM-2	11+54.36	721.51	BURY BOLT ON HYD AT NW QUADRANT AT ENTRANCE TO CIRCUIT COURT
BM-3	14+00.33	716.05	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD
BM-4	15+30.96	715.40	NORTH RIM OF SANITARY MANHOLE

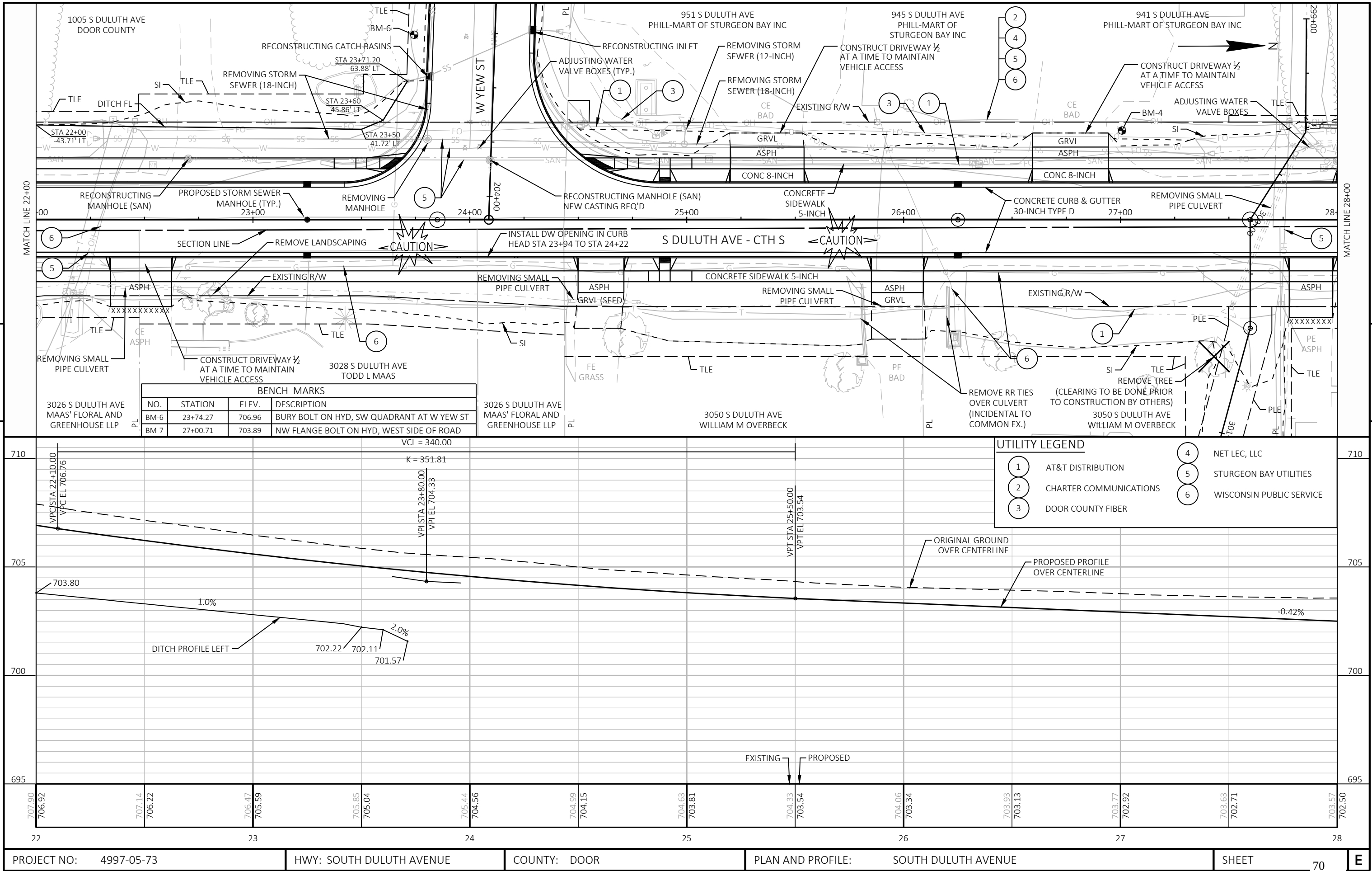




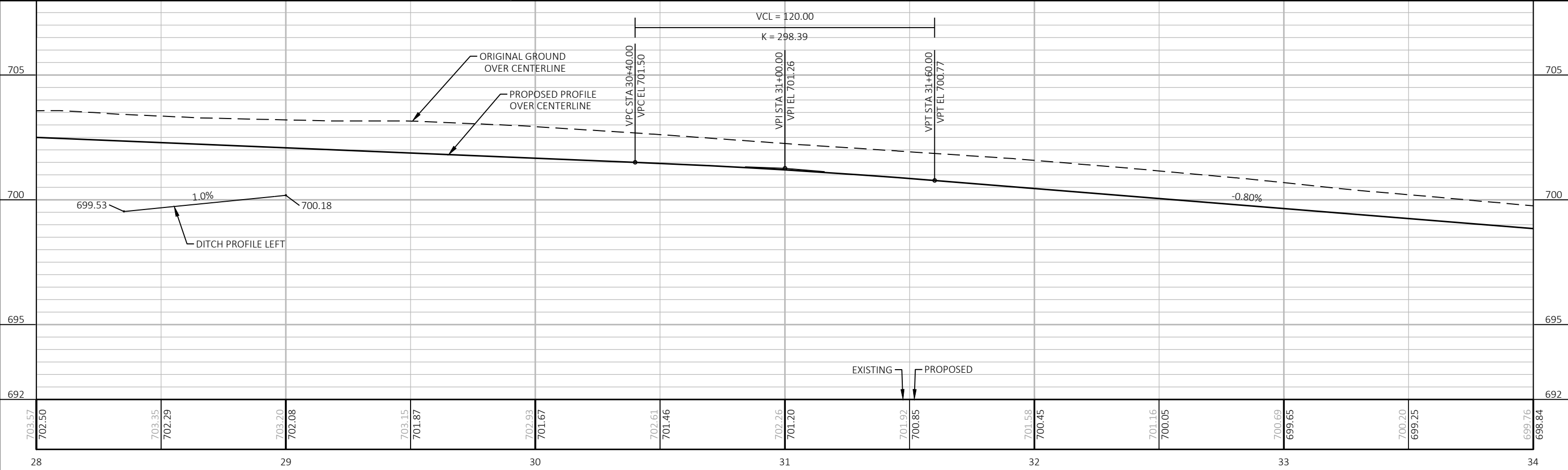
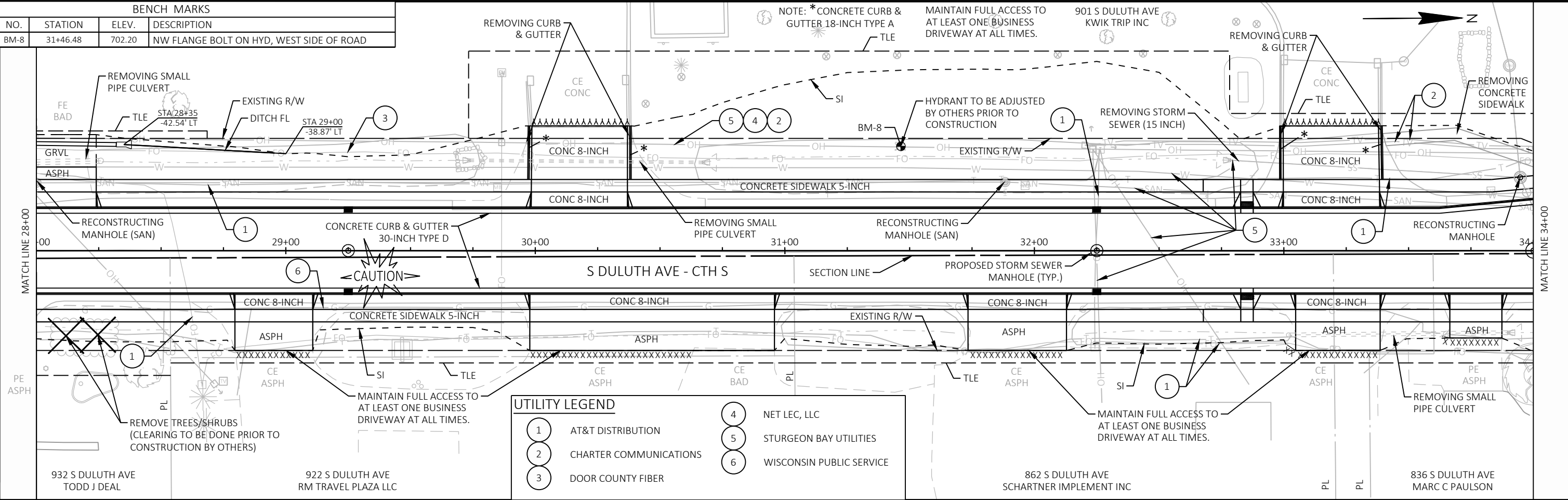
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-5	18+37.13	713.43	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD



UTILITY LEGEND	
1	AT&T DISTRIBUTION
2	CHARTER COMMUNICATIONS
3	DOOR COUNTY FIBER
4	NET LEC, LLC
5	STURGEON BAY UTILITIES
6	WISCONSIN PUBLIC SERVICE

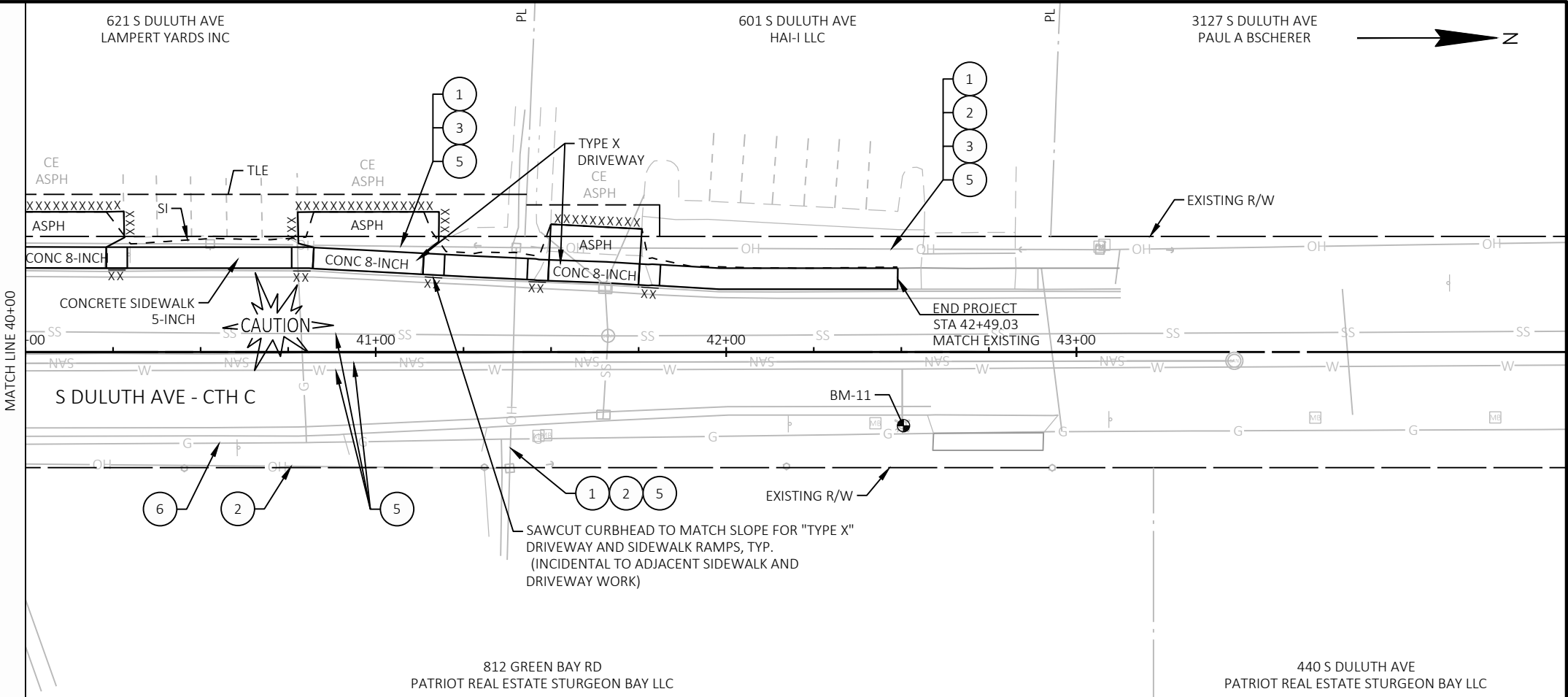


BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-8	31+46.48	702.20	NW FLANGE BOLT ON HYD, WEST SIDE OF ROAD

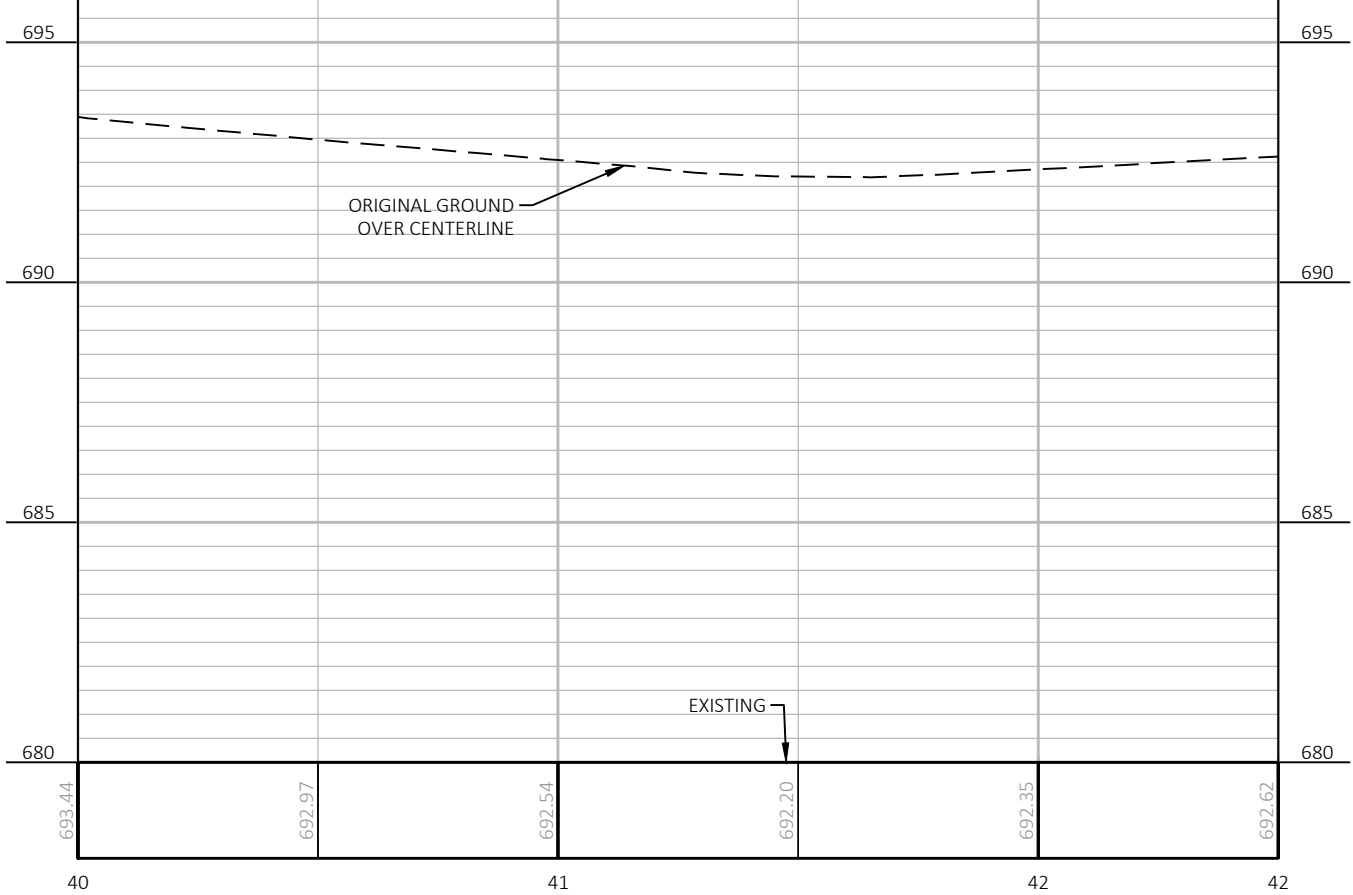


PROJECT NO:	4997-05-73	HWY: SOUTH DULUTH AVENUE	COUNTY: DOOR	PLAN AND PROFILE:	SOUTH DULUTH AVENUE	SHEET	71	E
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BENCH MARKS			
	STATION	ELEV.	DESCRIPTION
BM-11	42+50.62	693.71	BURY BOLT ON HYD, EAST SIDE OF ROAD



UTILITY LEGEND			
1	AT&T DISTRIBUTION	4	NET LEC, LLC
2	CHARTER COMMUNICATIONS	5	STURGEON BAY UTILITIES
3	DOOR COUNTY FIBER	6	WISCONSIN PUBLIC SERVICE



UTILITY LEGEND

1

AT&T DISTRIBUTION

2

CHARTER COMMUNICATIONS

3

DOOR COUNTY FIBER

4

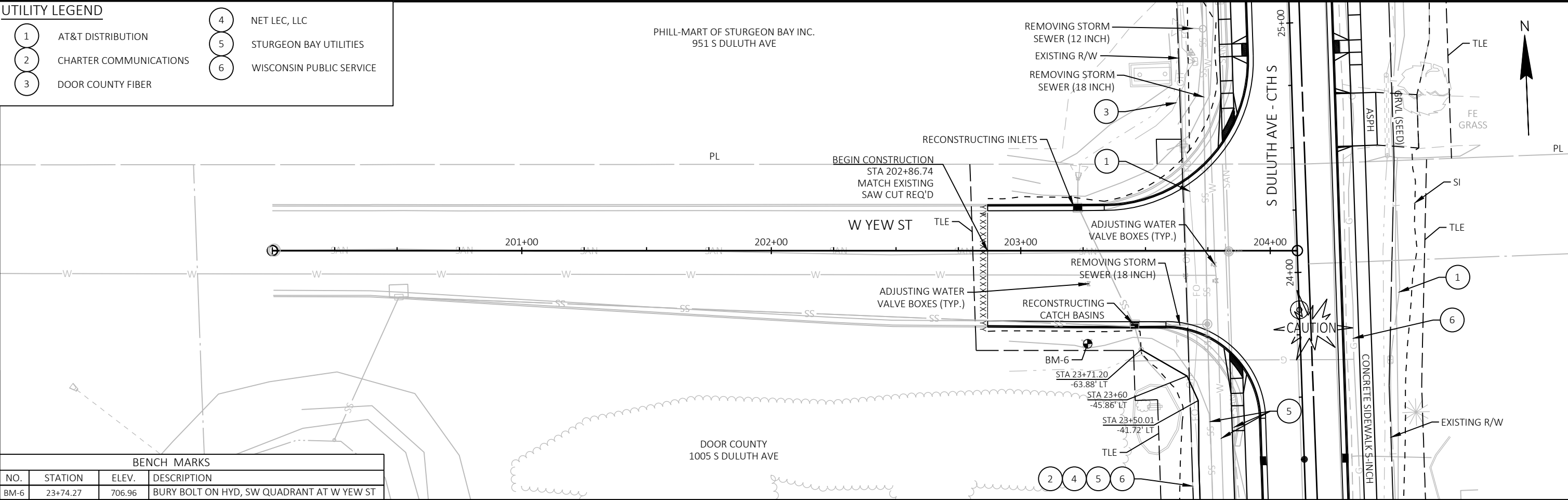
NET LEC, LLC

5

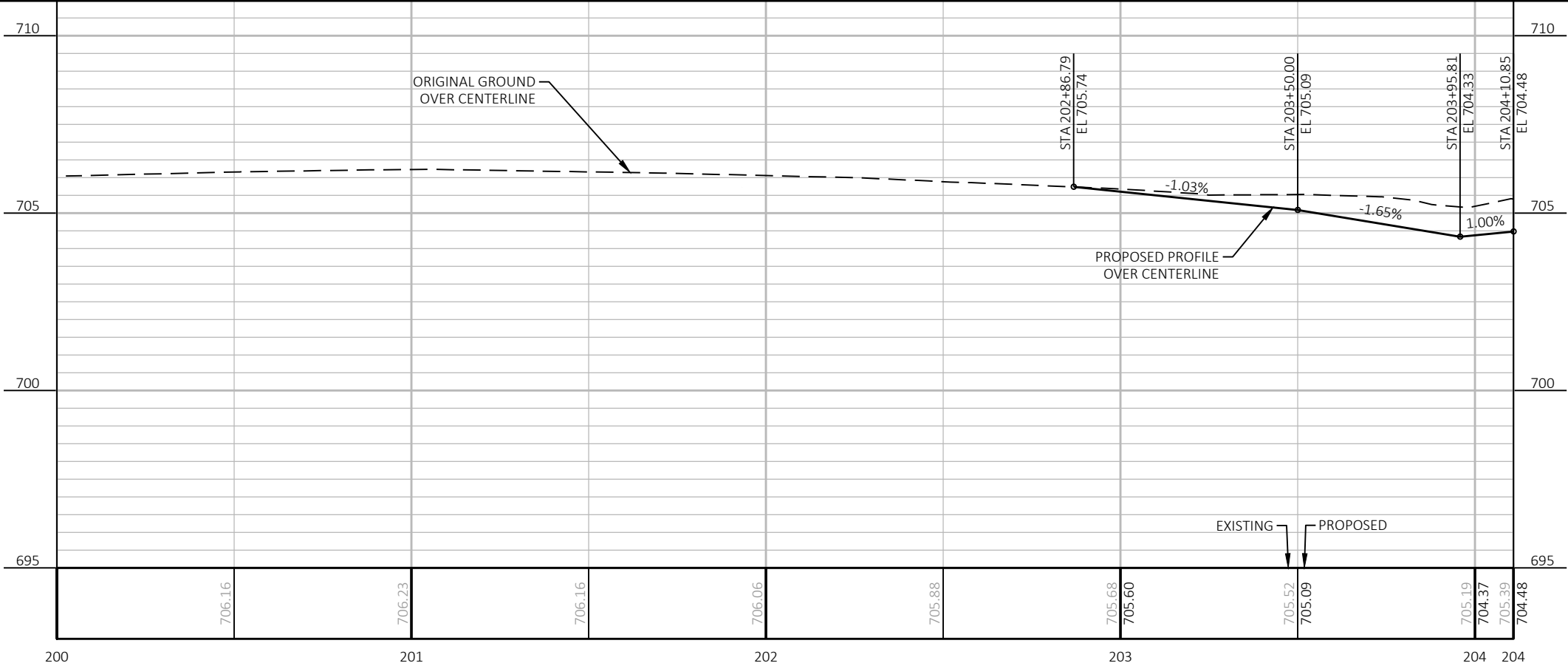
STURGEON BAY UTILITIES

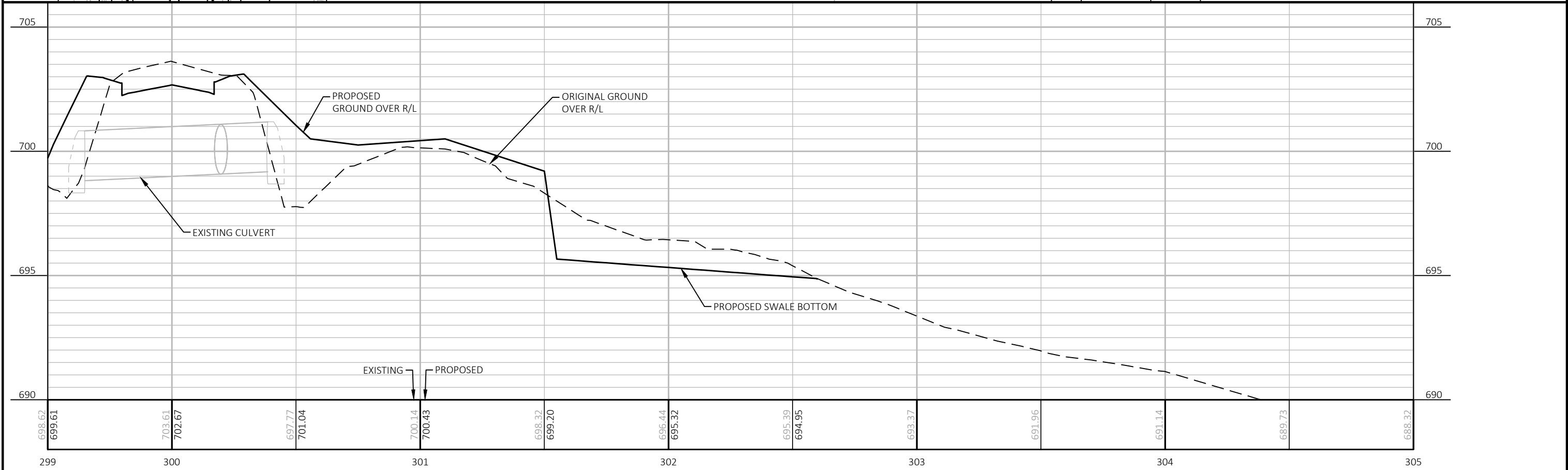
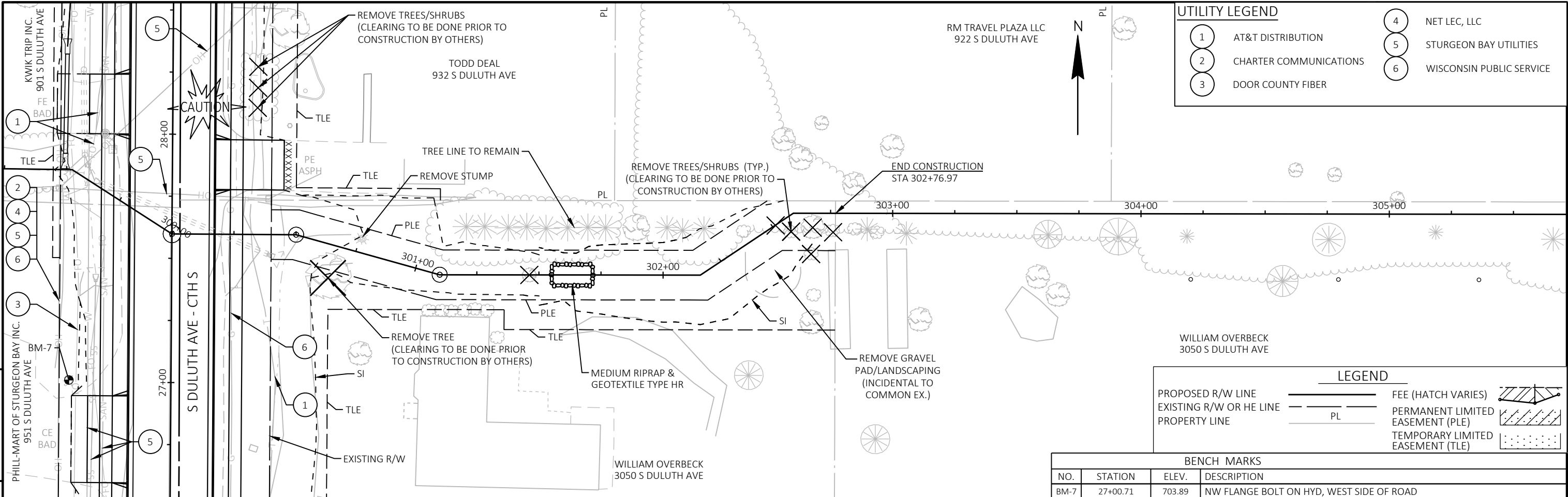
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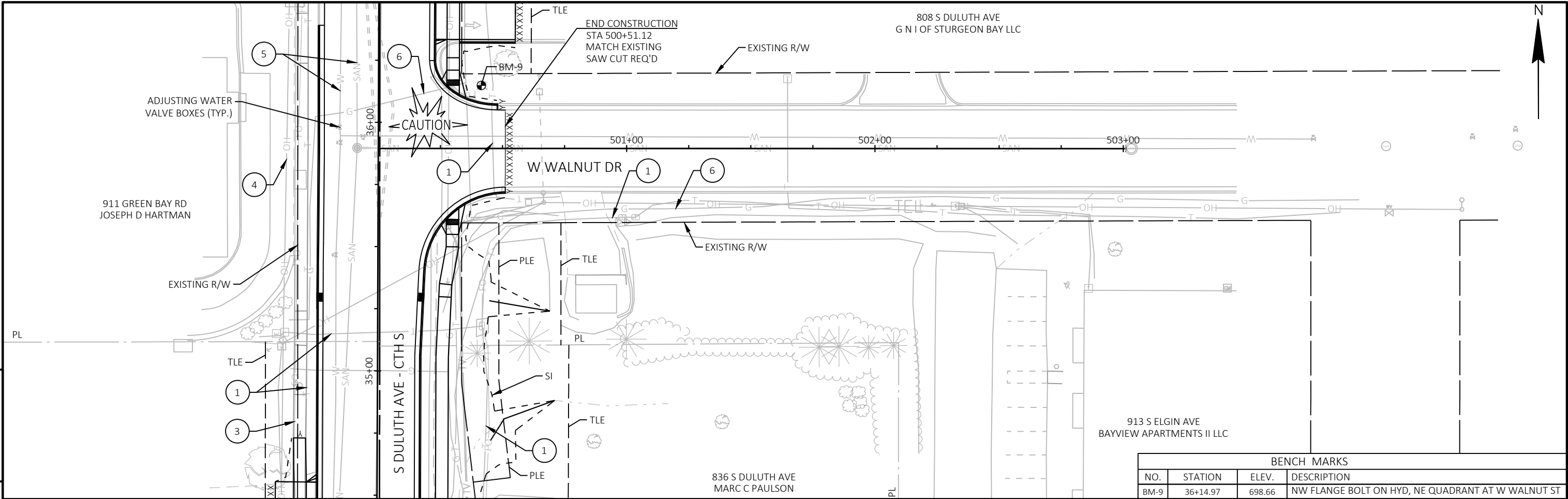
WISCONSIN PUBLIC SERVICE



BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-6	23+74.27	706.96	BURY BOLT ON HYD, SW QUADRANT AT W YEW ST

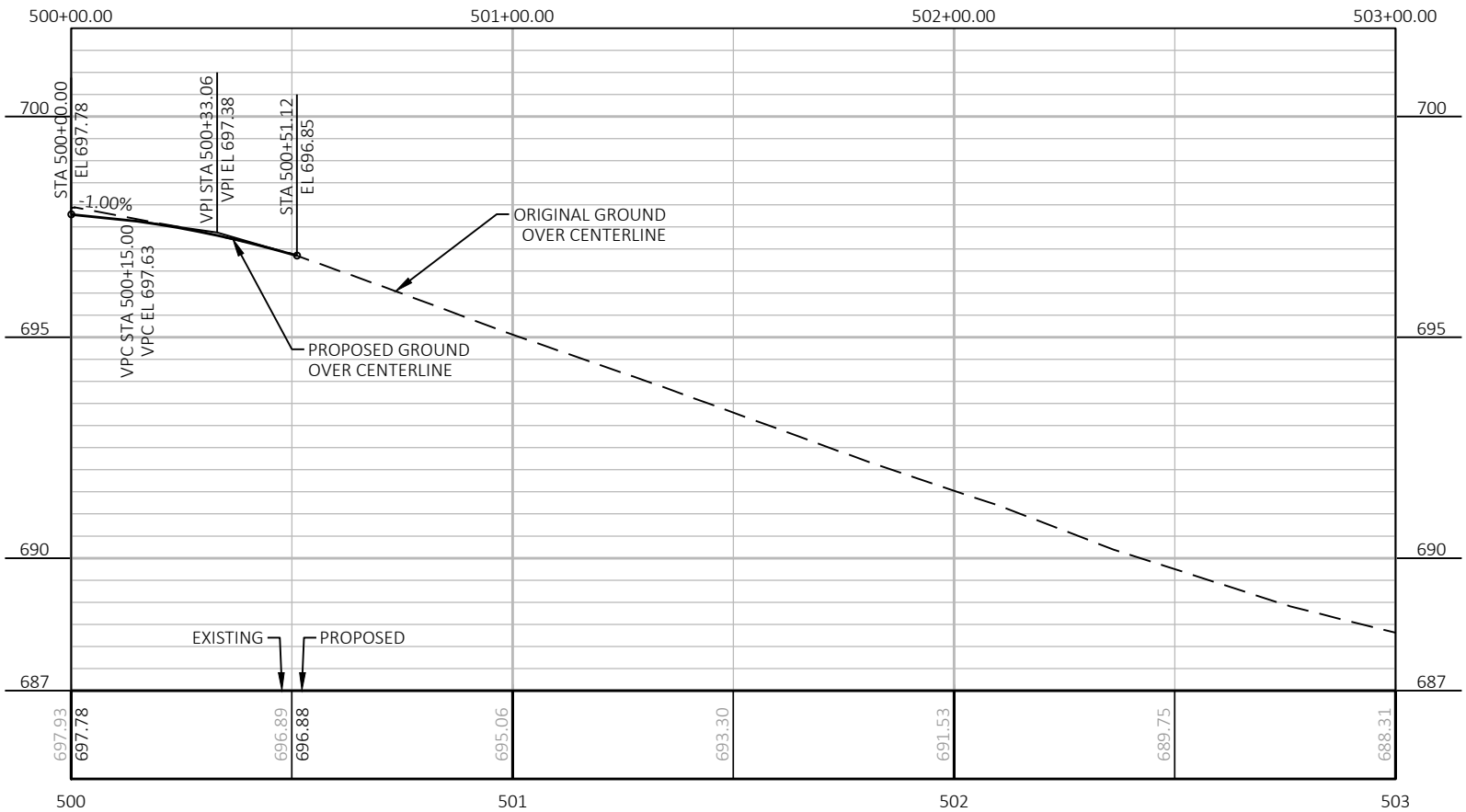






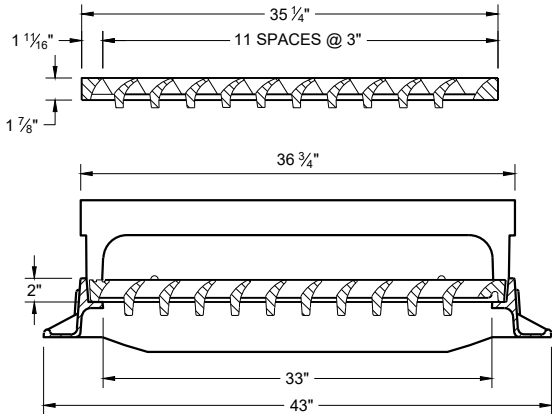
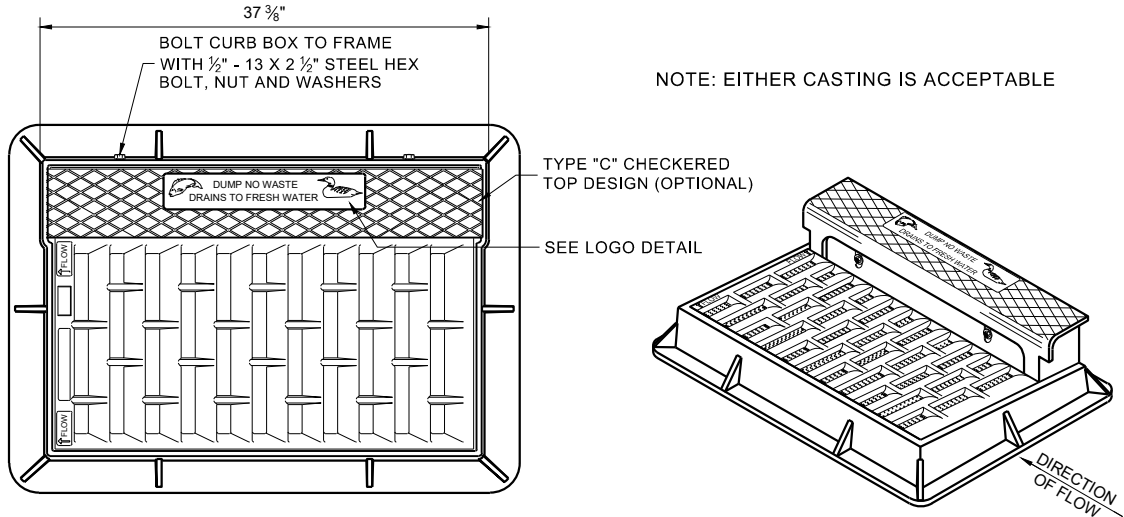
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM-9	36+14.97	698.66	NW FLANGE BOLT ON HYD, NE QUADRANT AT W WALNUT ST

UTILITY LEGEND	
1	AT&T DISTRIBUTION
2	CHARTER COMMUNICATIONS
3	DOOR COUNTY FIBER
4	NET LEC, LLC
5	STURGEON BAY UTILITIES
6	WISCONSIN PUBLIC SERVICE

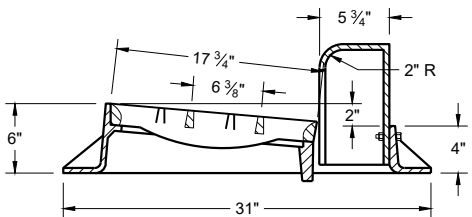
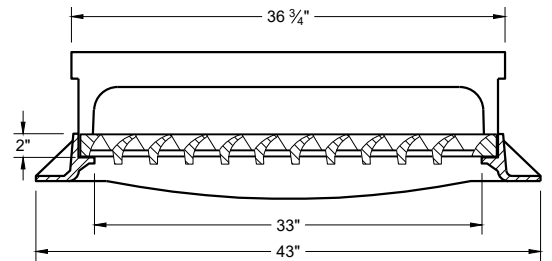
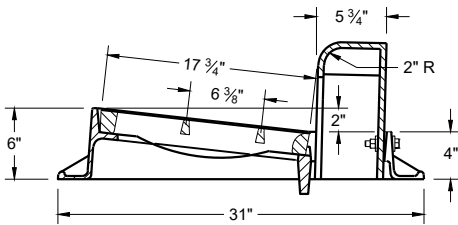


Standard Detail Drawing List

08A05-22A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-22E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08A08-03	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-03	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPES 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D15-05B	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D15-05C	EDGEDRAIN AND BASE AGGREGATE OPEN GRADED
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D18-05	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C07-16C	PAVEMENT MARKING ARROWS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C29-08A	BICYCLE LANE MARKING
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

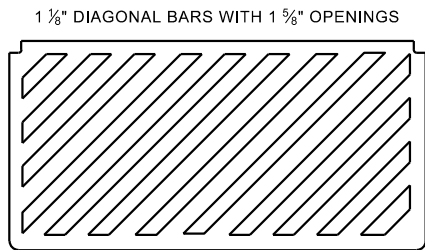


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

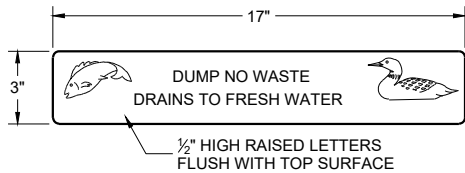


TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE



SPECIAL GRATE FOR TYPE "H" COVER
(MEASURES 35" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



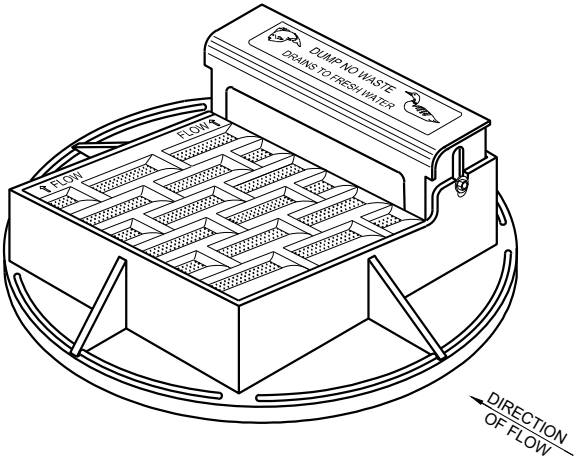
LOGO DETAIL

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.

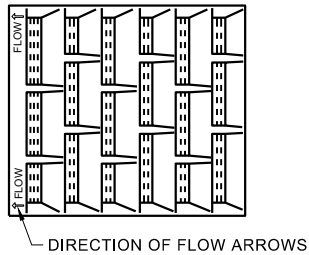
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

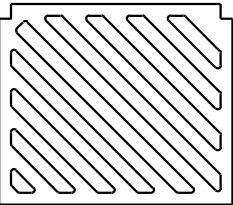


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

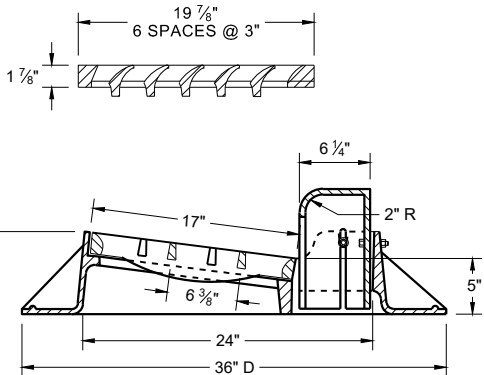
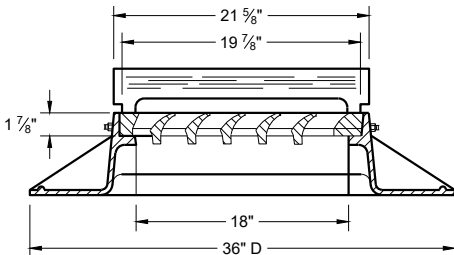
NOTE: EITHER CASTING IS ACCEPTABLE



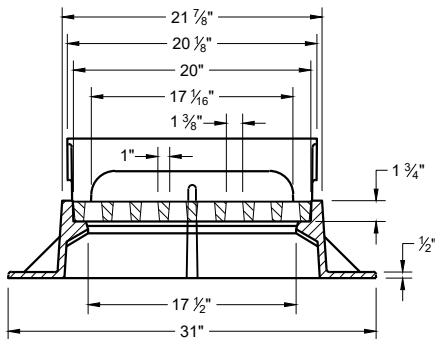
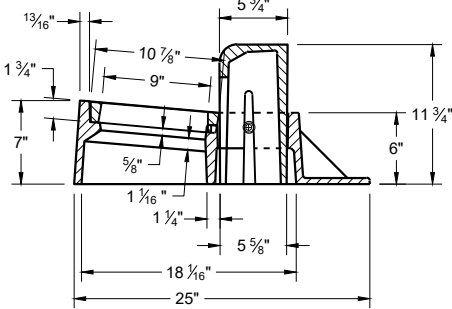
1" DIAGONAL BARS WITH 1 1/2" OPENINGS



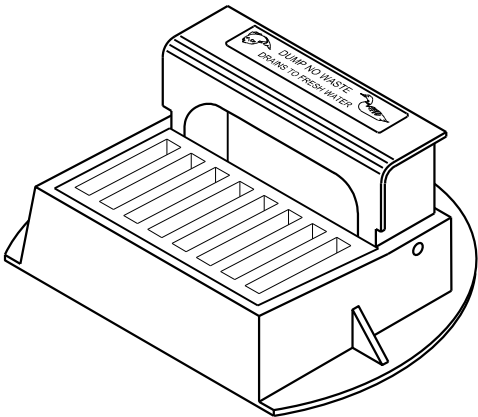
SPECIAL GRATE FOR TYPE "A" COVER
(MEASURES 19 3/4" X 17" X 1 7/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



TYPE "Z"



INLET COVERS
TYPES A, H, A-S, H-S AND Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

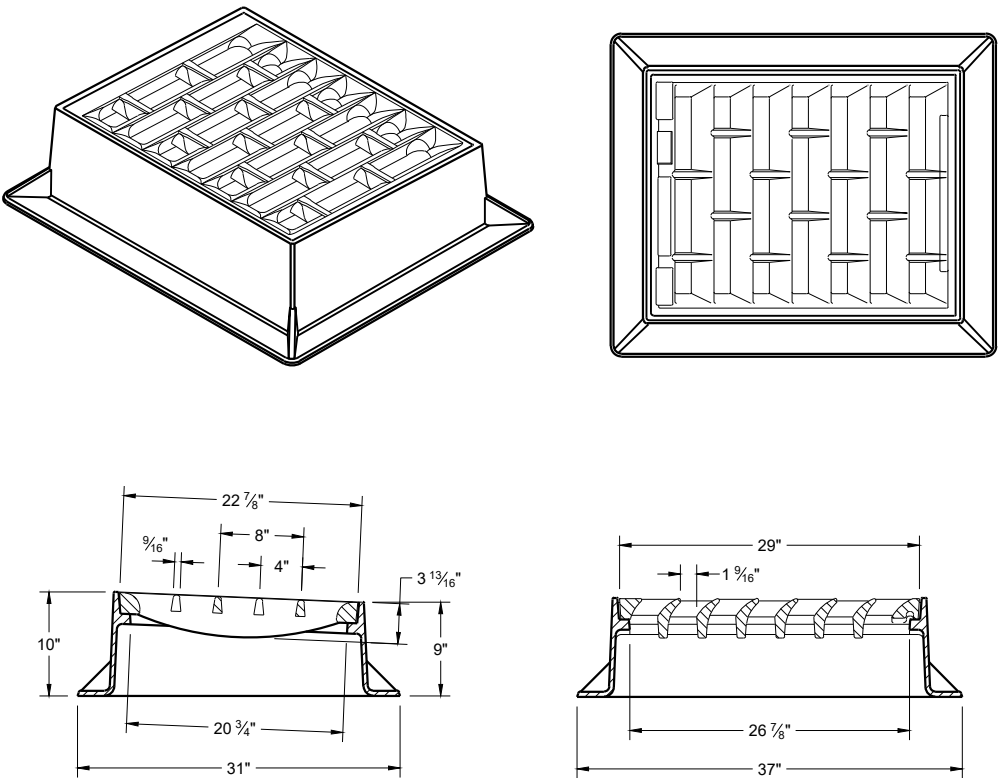
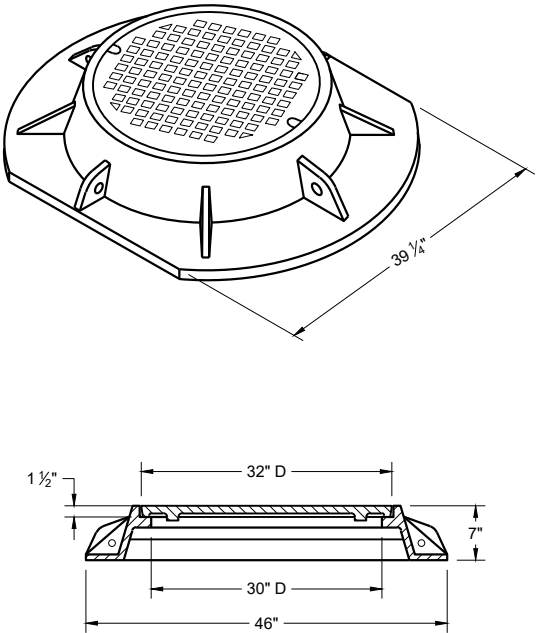
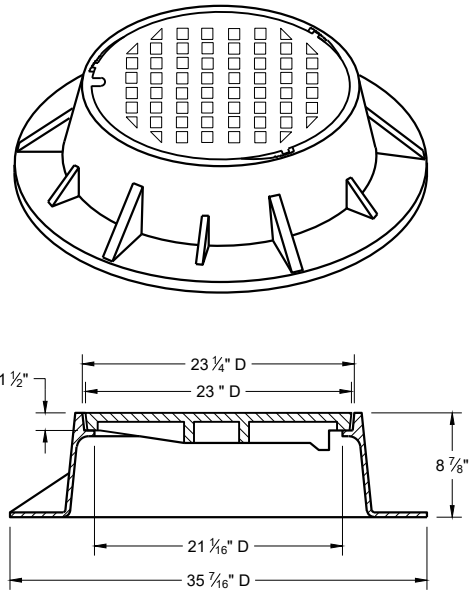
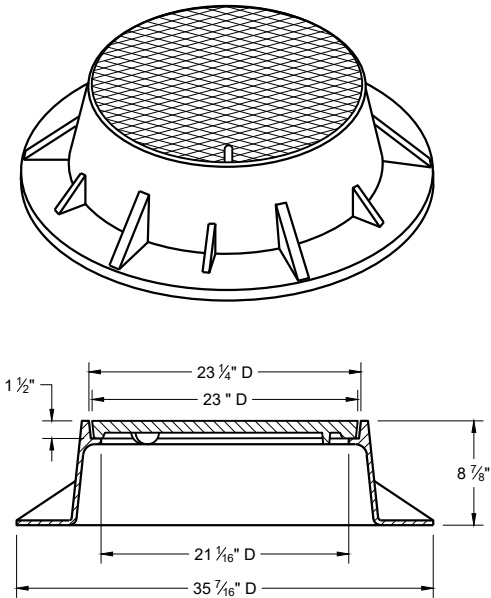
APPROVED
February 2025
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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.

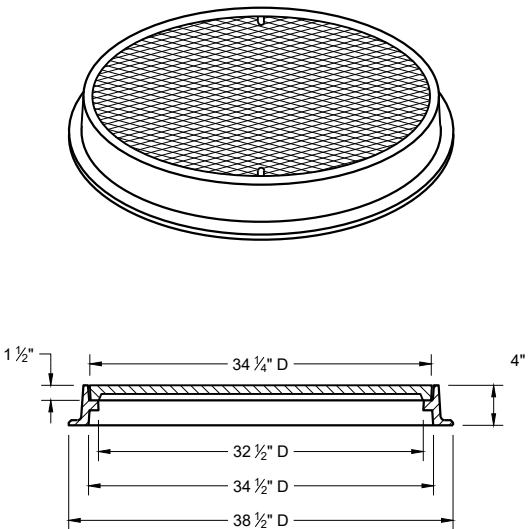
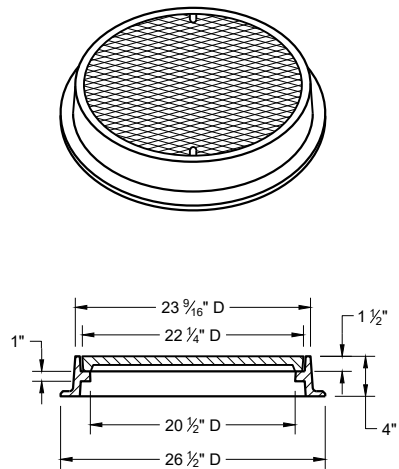
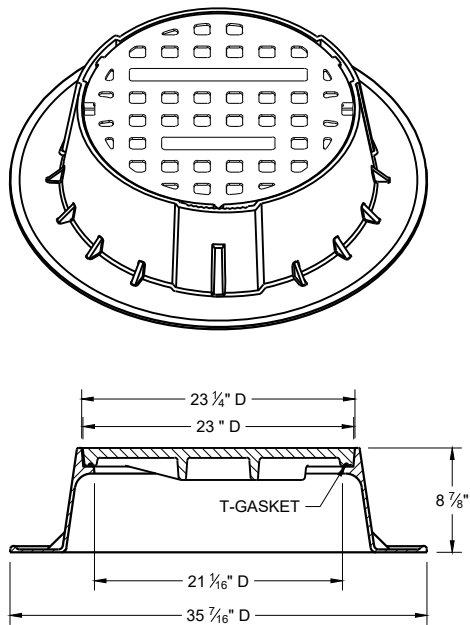
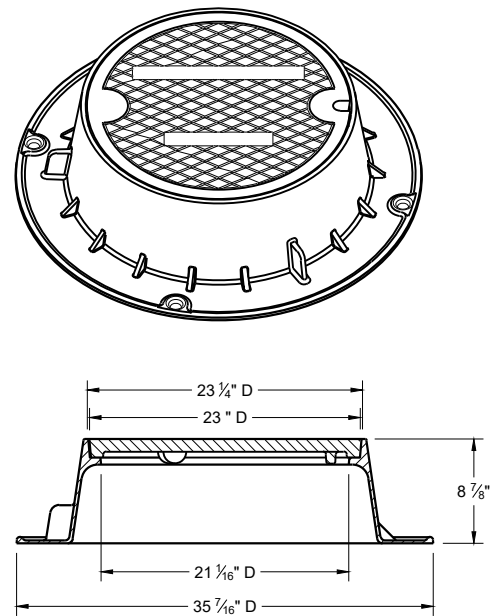
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



TYPE "K"

INLET COVER TYPE "BW"



TYPE "J"

TYPE "J" SPECIAL

TYPE "L"

TYPE "M"

NOTE: EITHER CASTING IS ACCEPTABLE

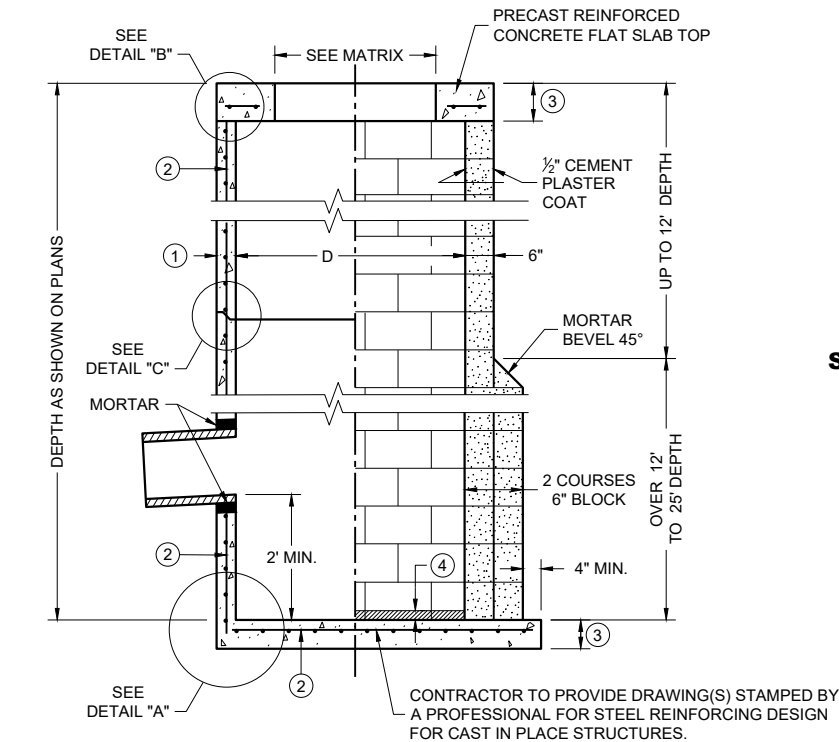
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

INLET COVERS TYPES BW
MANHOLE COVERS TYPES K,
J, J-S, L, AND M

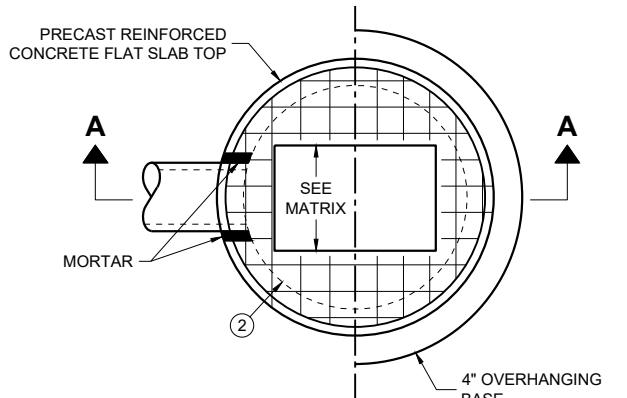
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

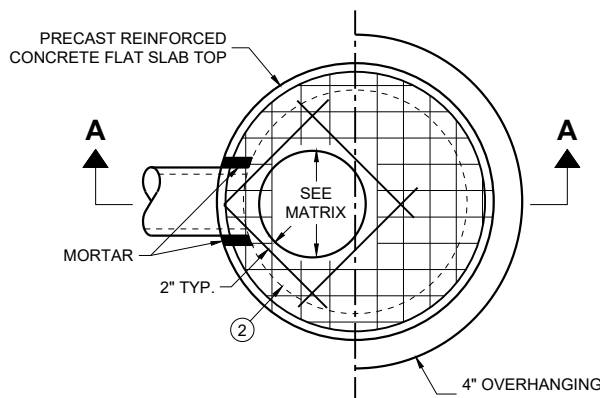


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

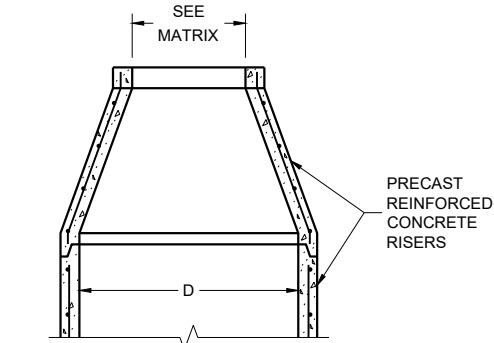
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE ②



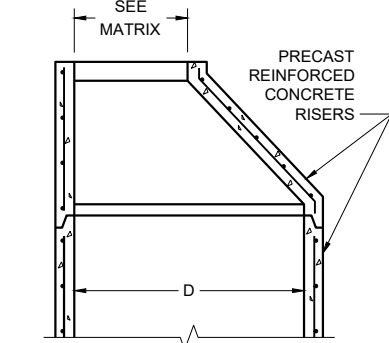
PLAN VIEW RECTANGULAR OPENING



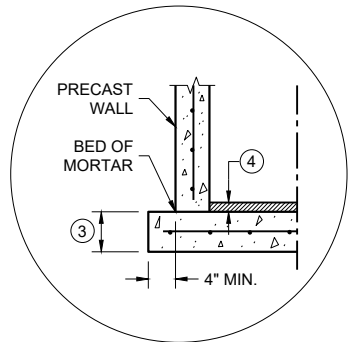
PLAN VIEW CIRCULAR OPENING



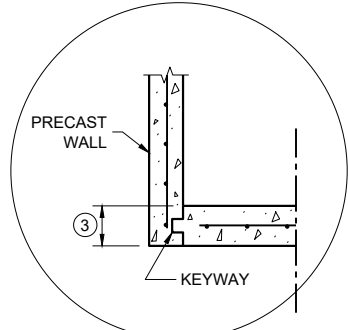
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



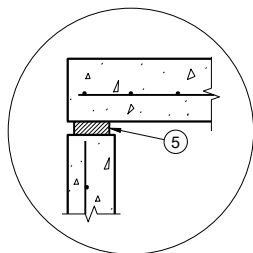
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



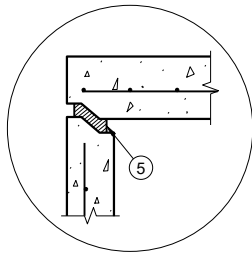
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



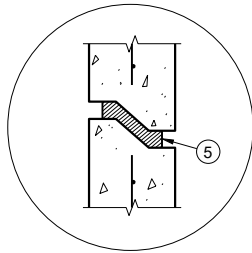
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

**CATCH BASINS
3-FT, 4-FT, 5-FT AND 6-FT DIAMETER**

CATCH BASIN 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	30

PIPE MATRIX

* REQUIRES 5-FT DIAMETER OR LARGER STRUCTURE

CATCH BASIN SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V V-B	VV-B	WM	Z
	OPENING SIZE (FT.)												
3-FT	2 X 2	X	X					X		X			
	2 DIA.				X								X
4-FT TO 6-FT	2 X 2	X	X					X		X			
	2 X 2.5			X				X	X	X		X	
	2 DIA.				X								X
	2 X 3						X						
	2.5 X 3					X							
	2 X 3.5*										X*		

COVER MATRIX

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

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USE 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 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

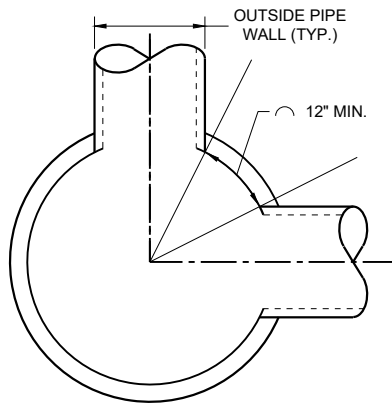
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

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

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 "D".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.
- ② FOR PRECAST CATCH BASINS AND REINFORCED CONCRETE BASES 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".
- ④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.
- ⑤ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFROMING TO ASTM C443.

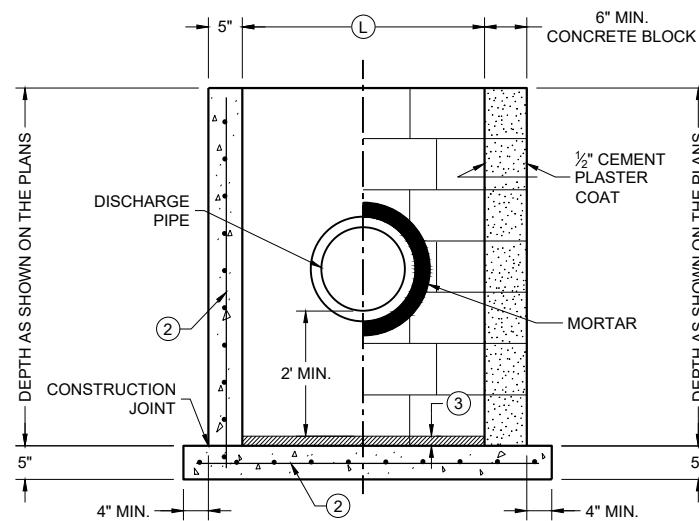
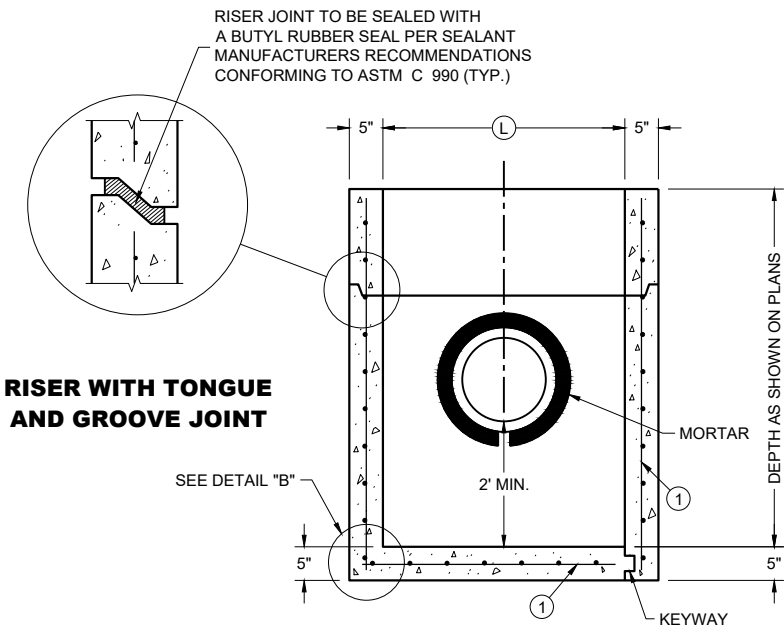
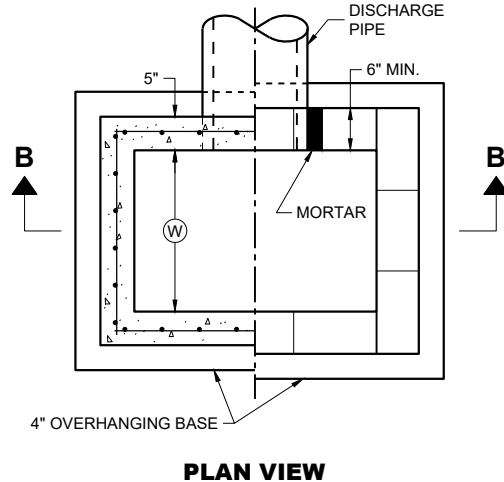
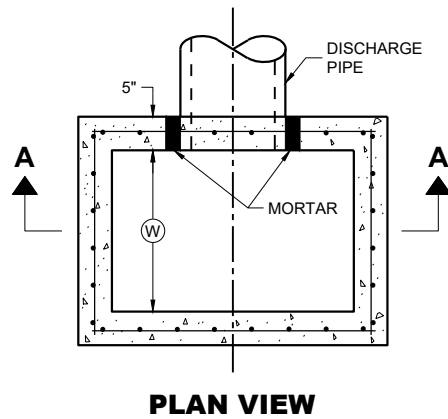


MINIMUM HORIZONTAL PIPE SEPARATION

**CATCH BASINS, 3-FT.
4-FT., 5 FT., AND
6-FT. DIAMETER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA



- 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 CATCH BASIN 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 PRECAST CATCH BASIN 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" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.
- FOR PRECAST CATCH BASINS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
 - CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
 - 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE	
			F	ALL H'S
2 X 3-FT	2	3		X
2.5 X 3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER (IN)	
	WIDTH (W) (IN)	LENGTH (L) (IN)
2 X 3-FT	12	24
2.5 X 3-FT	18	24

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

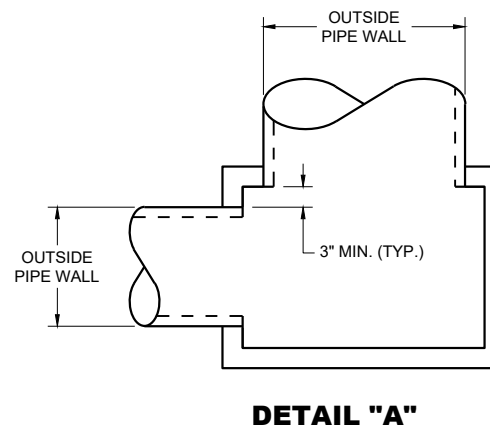
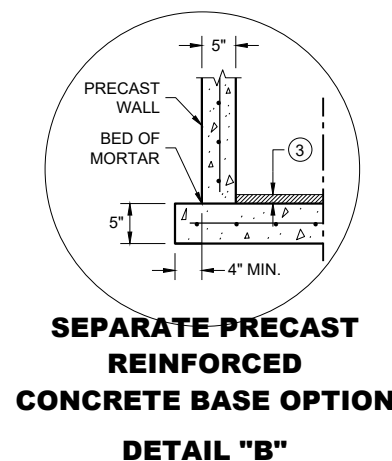
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

SECTION A - A

CAST IN PLACE REINFORCED CONCRETE

CONCRETE BLOCK ON CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE ①

SECTION B - B

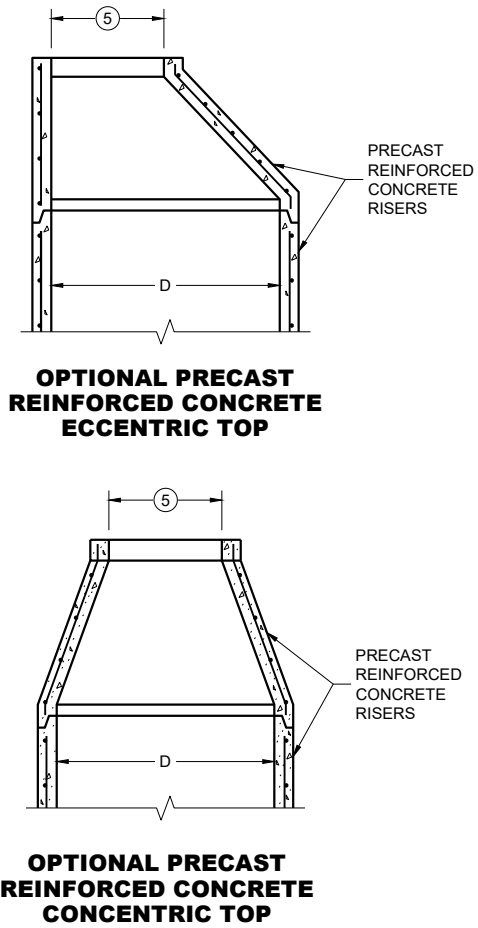
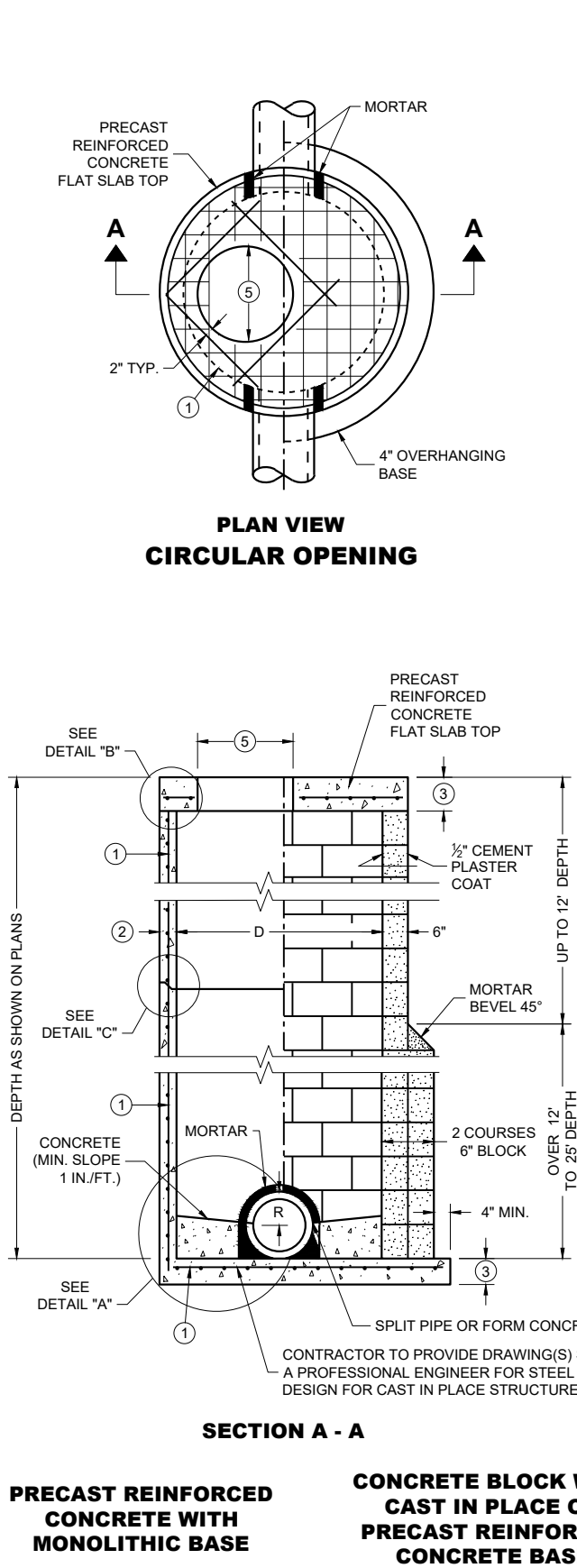


CATCH BASINS 2X3-FT AND 2.5X3-FT

CATCH BASINS 2 X 3-FT AND 2.5 X 3-FT

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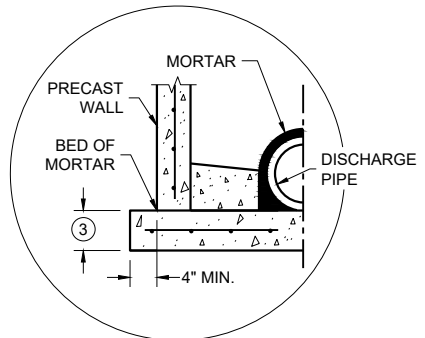
MANHOLE COVER OPENING MATRIX

MANHOLE COVER OPENING SIZE (FT.)	C	ALL JS	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

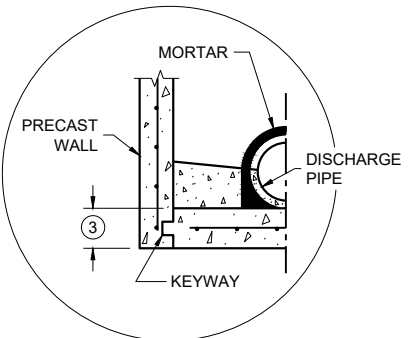
PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

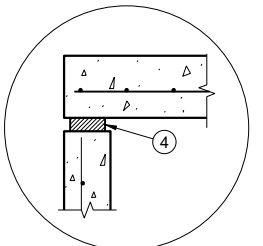


SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

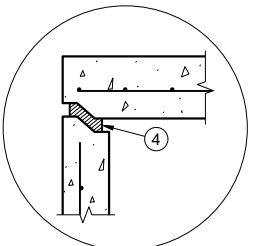


PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION

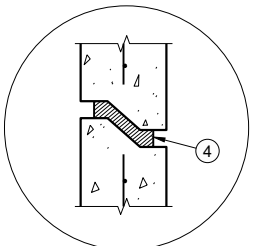
DETAIL "A"



TOP WITH PLAIN
END JOINT



TOP WITH TONGUE
AND GROOVE JOINT



RISER WITH TONGUE
AND GROOVE JOINT

DETAIL "B"

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

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. 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 IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 3/8 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

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

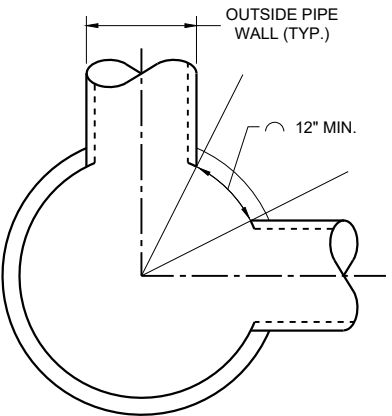
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

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

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 "D".

- 1 FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- 2 SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- 3 SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- 4 JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.
- 5 SEE MANHOLE COVER OPENING MATRIX.



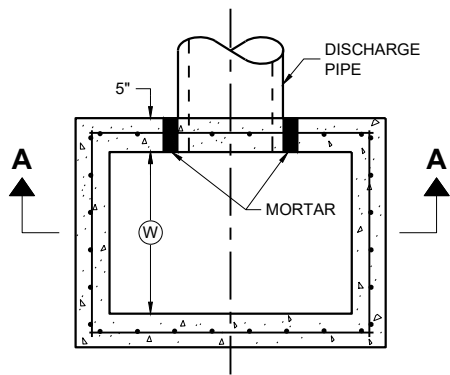
MINIMUM HORIZONTAL
PIPE SEPARATION

DETAIL "D"

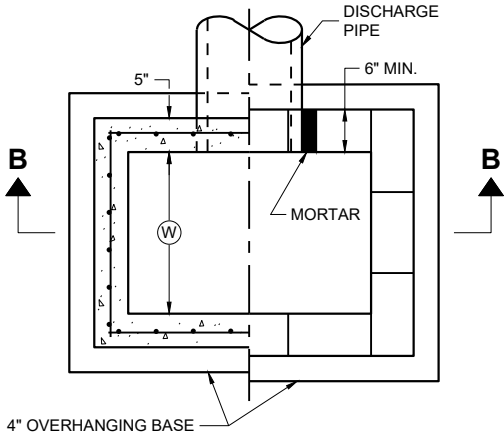
MANHOLES, 3-FT, 4-FT
5-FT, 6-FT, 7-FT, 8-FT, 9-FT
AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

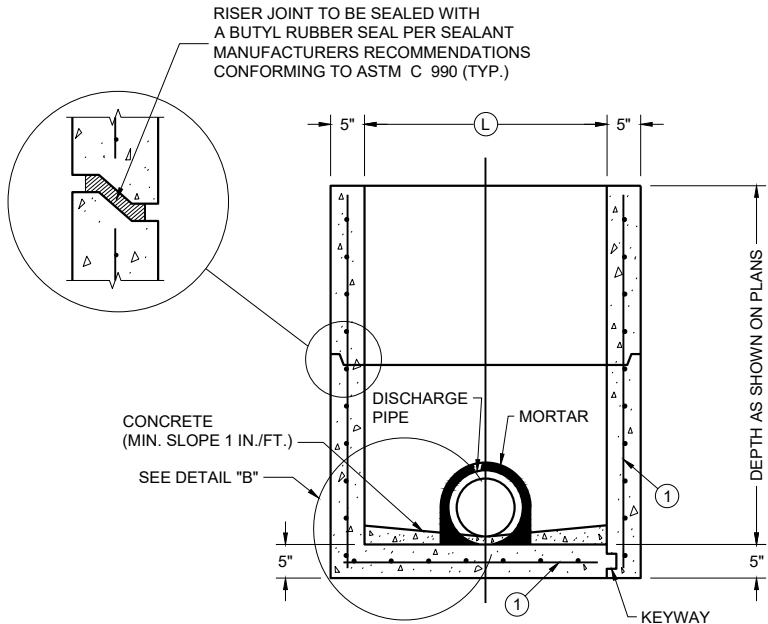
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PLAN VIEW



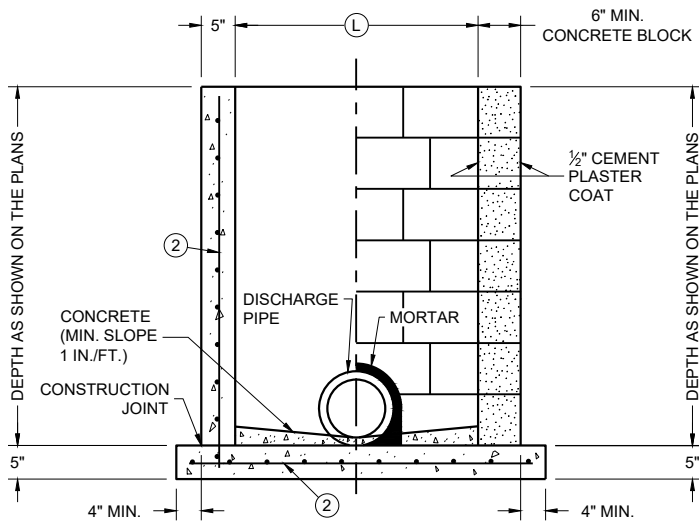
PLAN VIEW



PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

PRECAST REINFORCED
CONCRETE WITH
INTEGRAL BASE

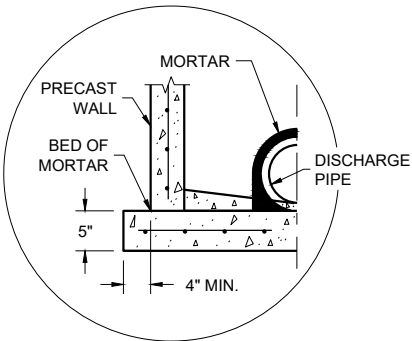
SECTION A - A



CAST IN PLACE
REINFORCED
CONCRETE

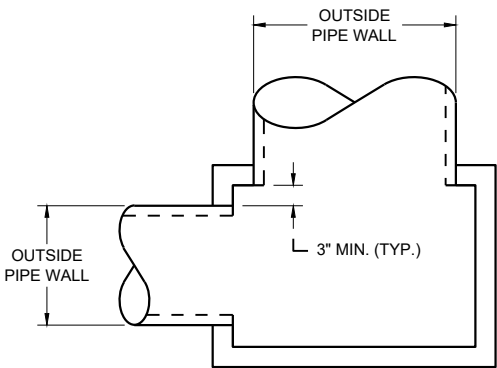
CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE ①

SECTION B - B



SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

GENERAL NOTES

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MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" 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 AND REINFORCED CONCRETE BASES 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.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

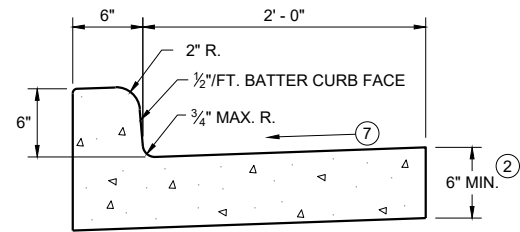
PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

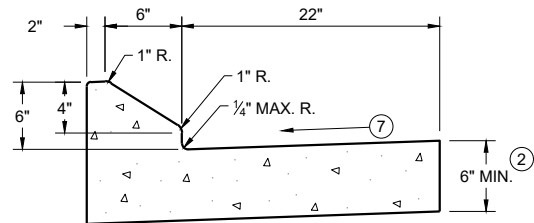
INLETS 2 X 2-FT, 2 X 2.5-FT,
2 X 3-FT, 2.5 X 3-FT
AND 2 X 3.5-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

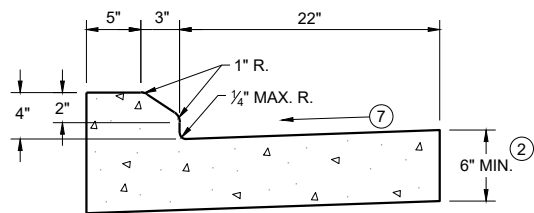
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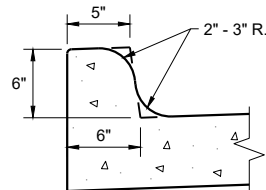
TYPES A^① & D



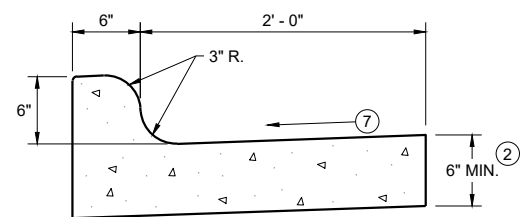
6" SLOPED CURB TYPES G^① & J



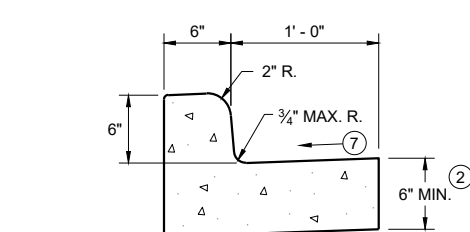
4" SLOPED CURB TYPES G^① & J



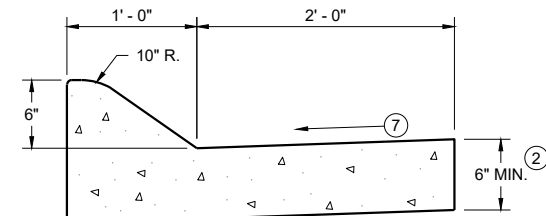
TYPES K^① & L
(OPTIONAL CURB SHAPE)



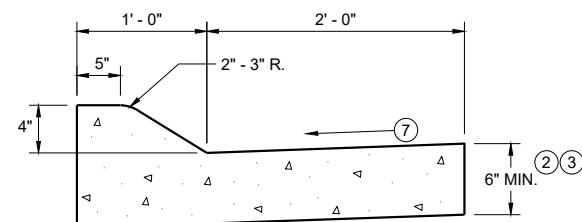
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



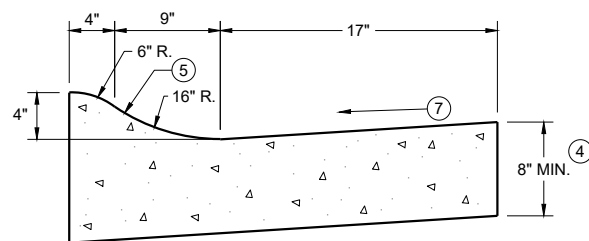
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

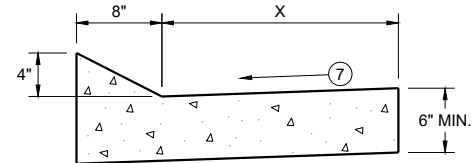


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

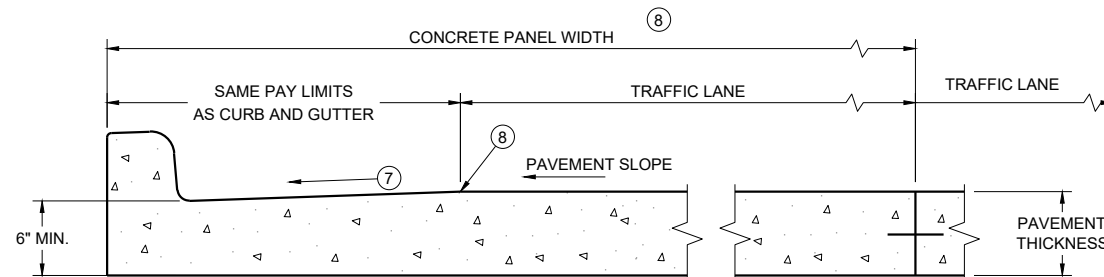
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

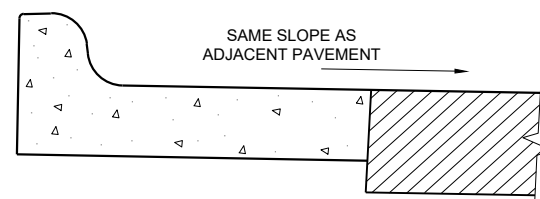
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

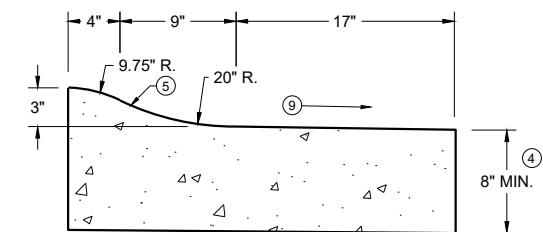


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

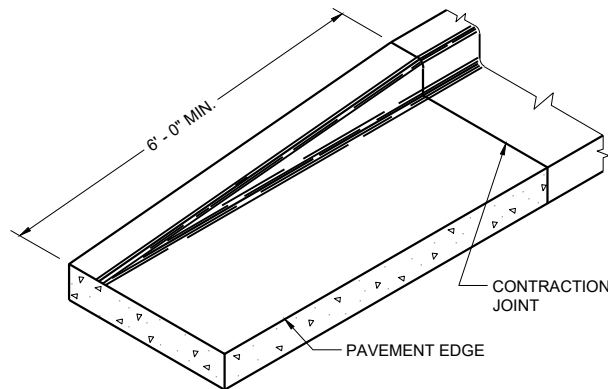
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

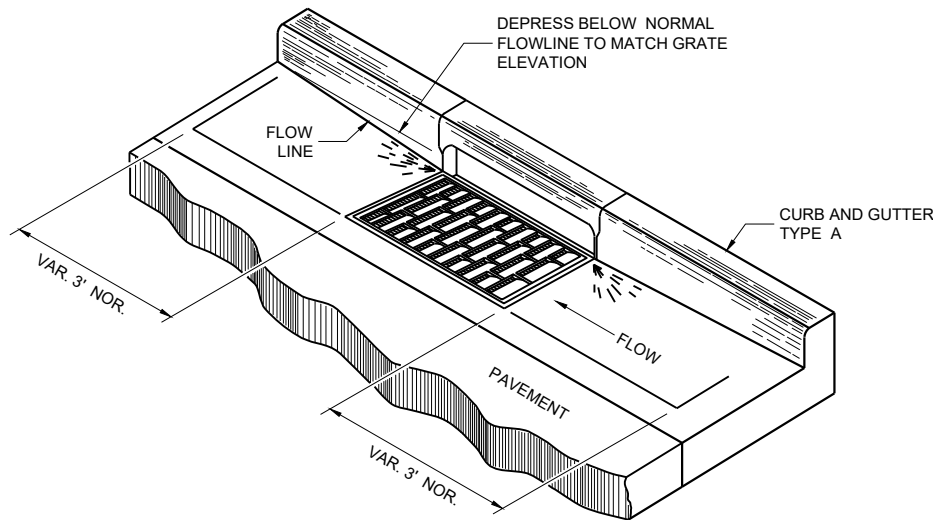
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY

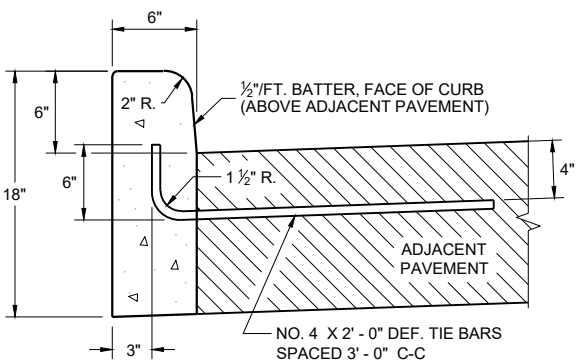


END SECTION CURB AND GUTTER

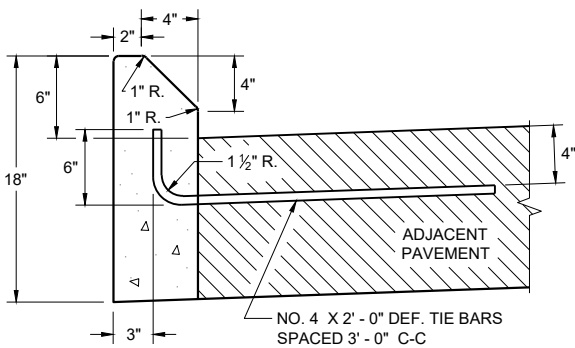


DETAIL OF CURB AND GUTTER AT INLETS

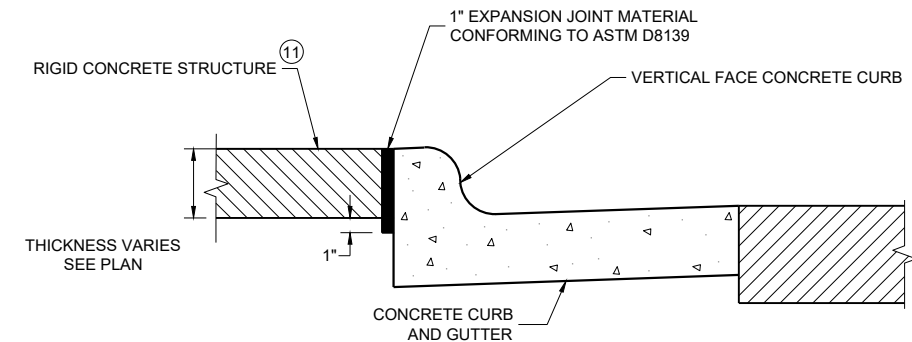
(TYPICAL H INLET COVER SHOWN)



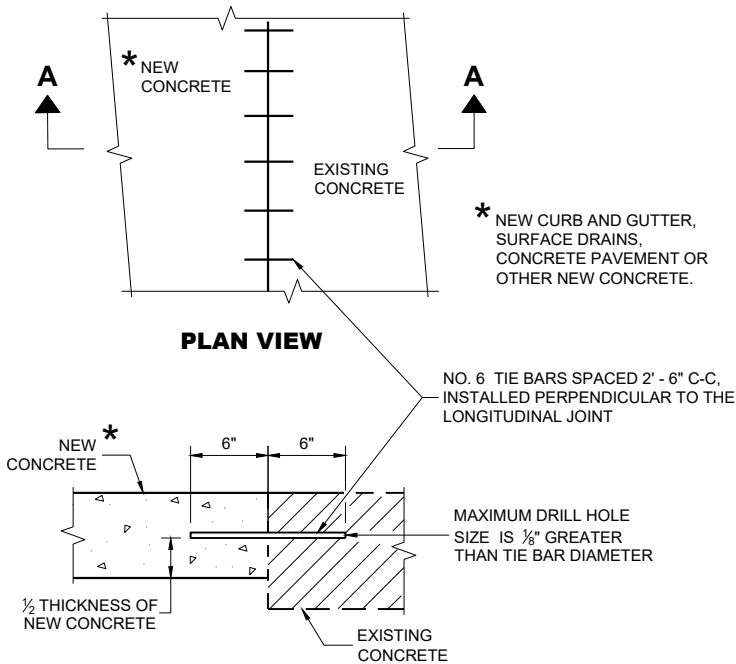
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

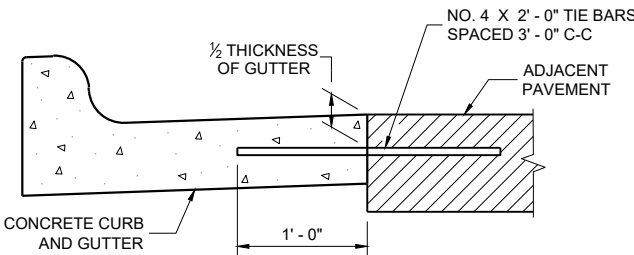
GENERAL NOTES

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

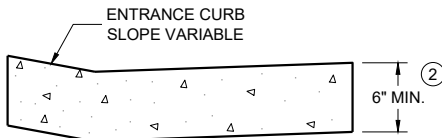
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



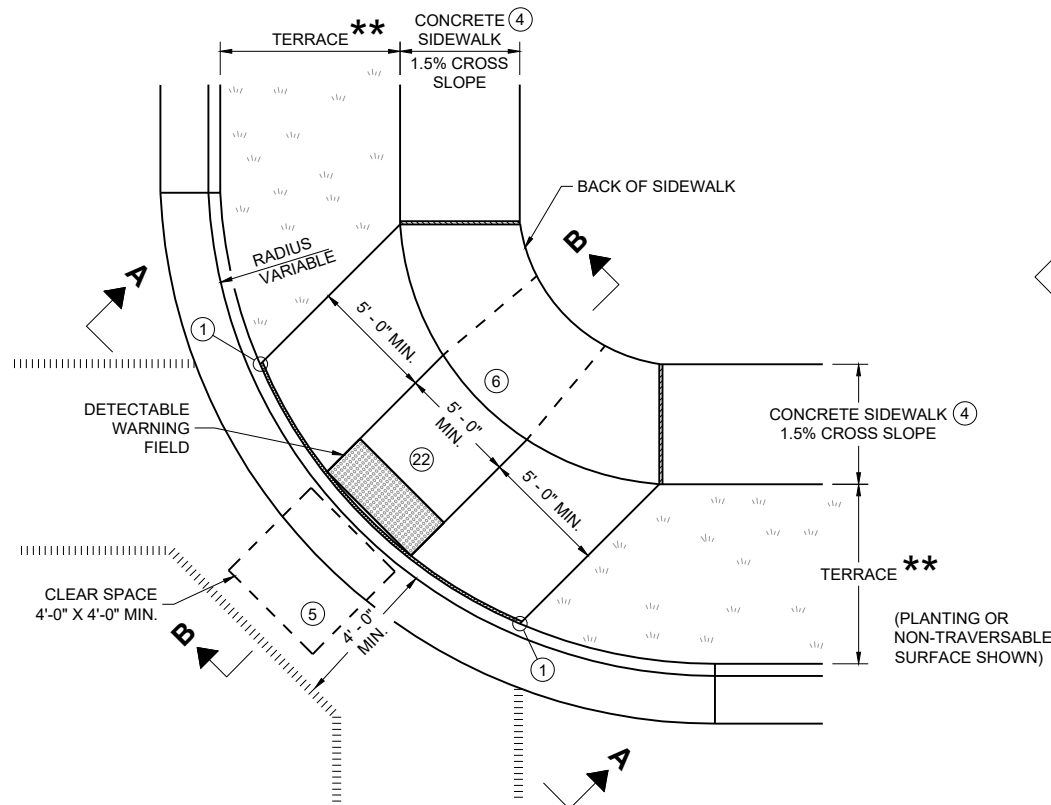
DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

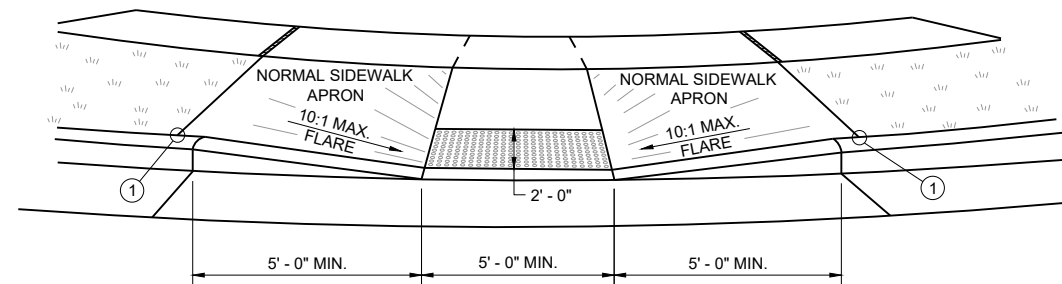
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

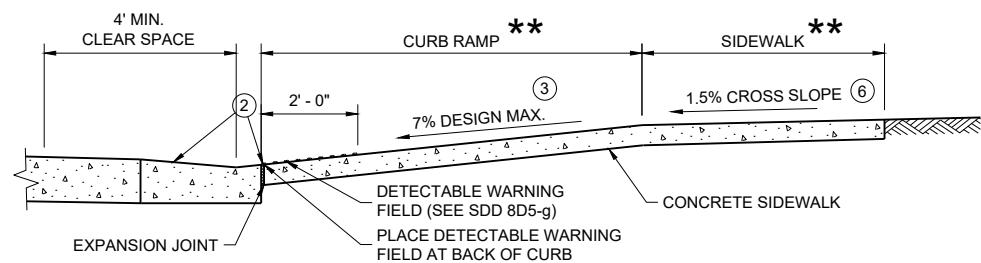
FHWA



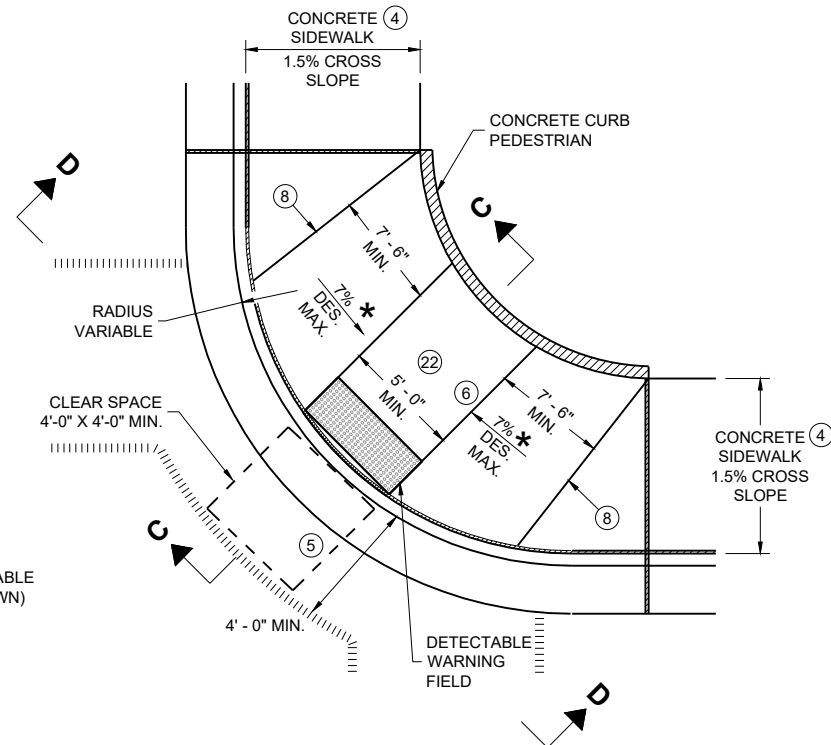
PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)



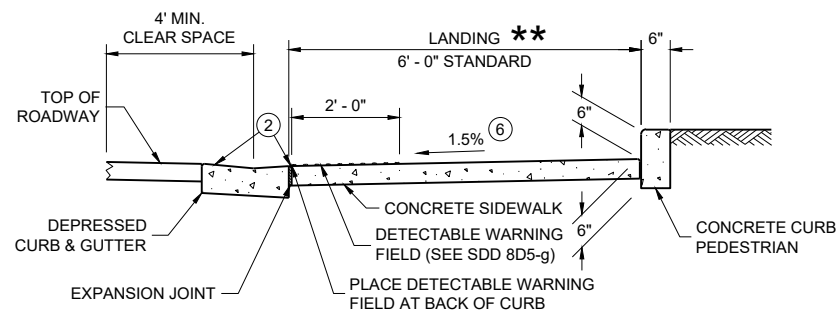
VIEW A - A FOR TYPE 1



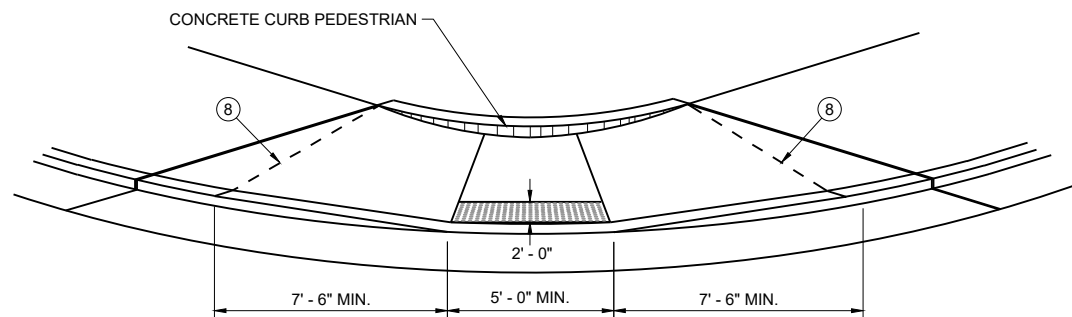
SECTION B - B FOR TYPE 1



PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

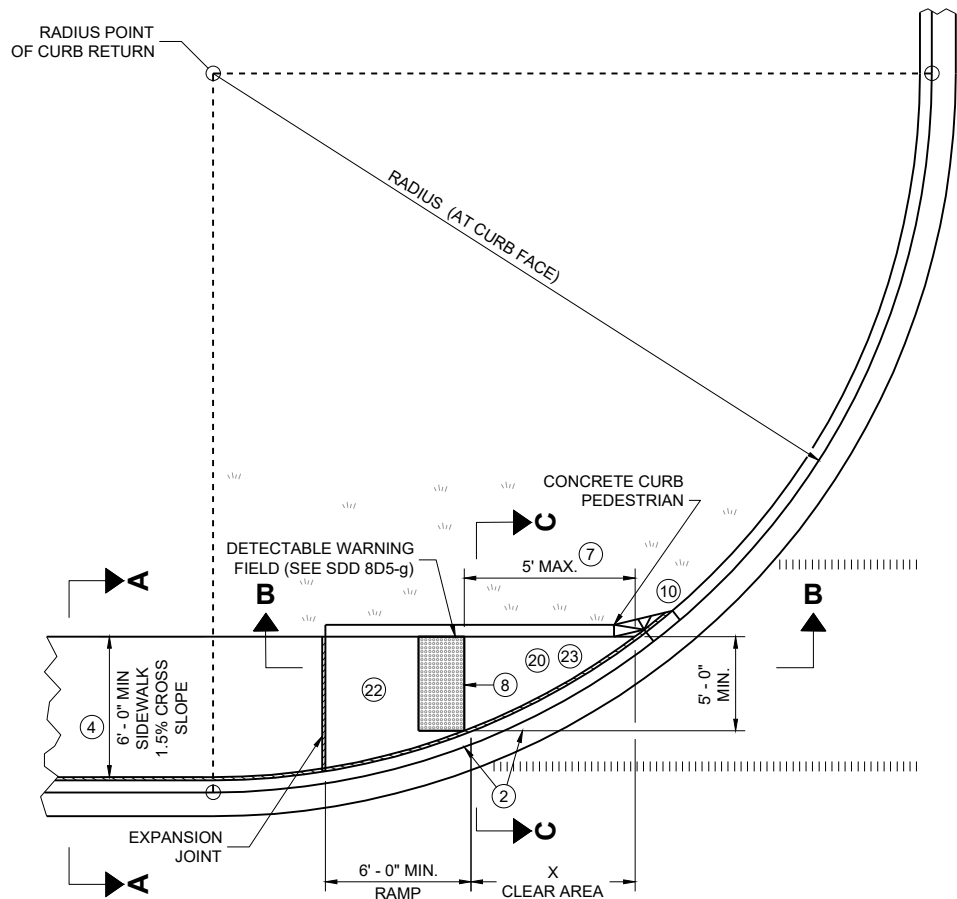
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑪ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑫ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

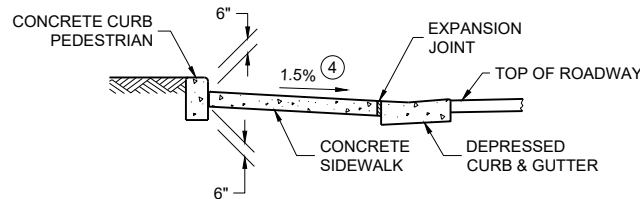
- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS
TYPE 1 AND 1-A

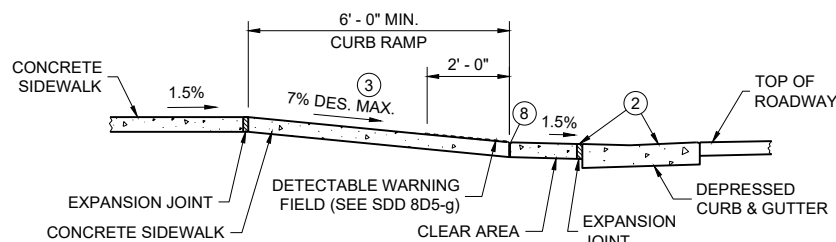
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A

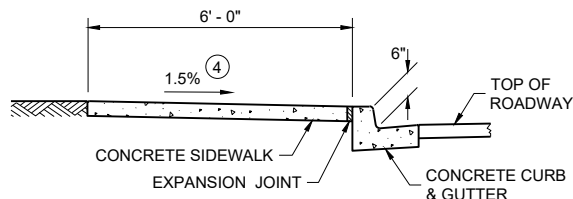


SECTION B - B FOR
TYPE 4A AND TYPE 4A1

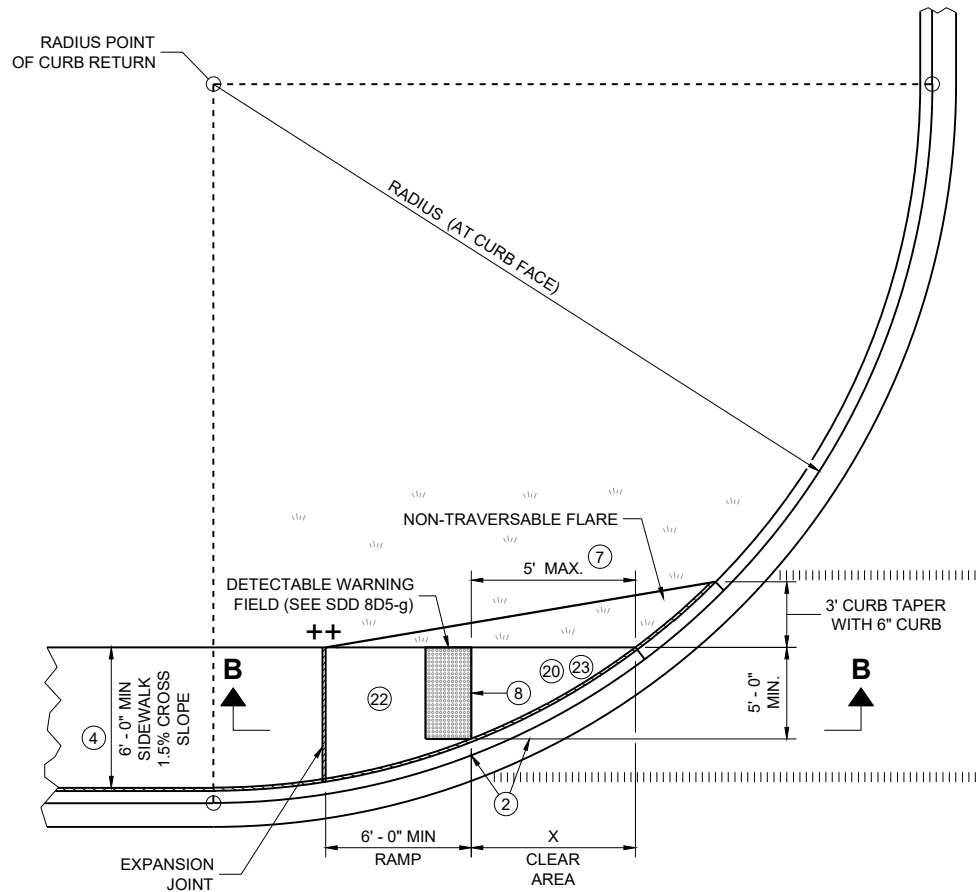
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED



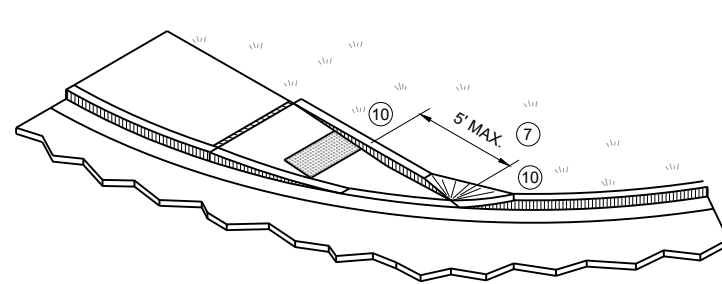
SECTION A - A FOR TYPE 4A



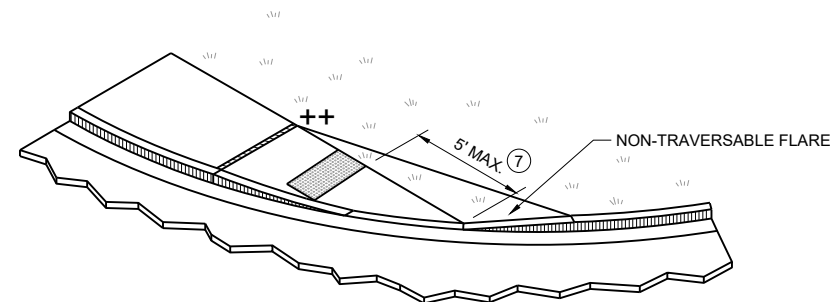
PLAN VIEW
CURB RAMP TYPE 4A1

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



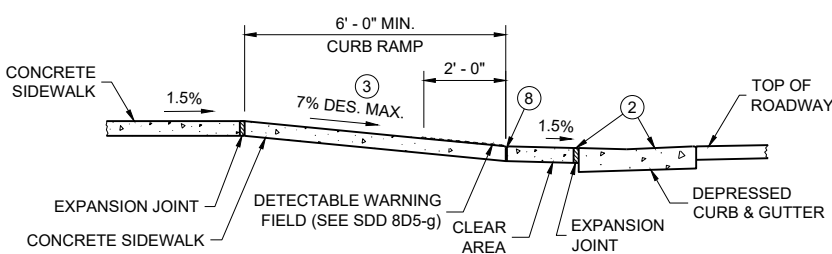
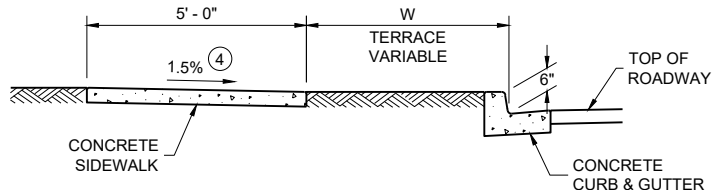
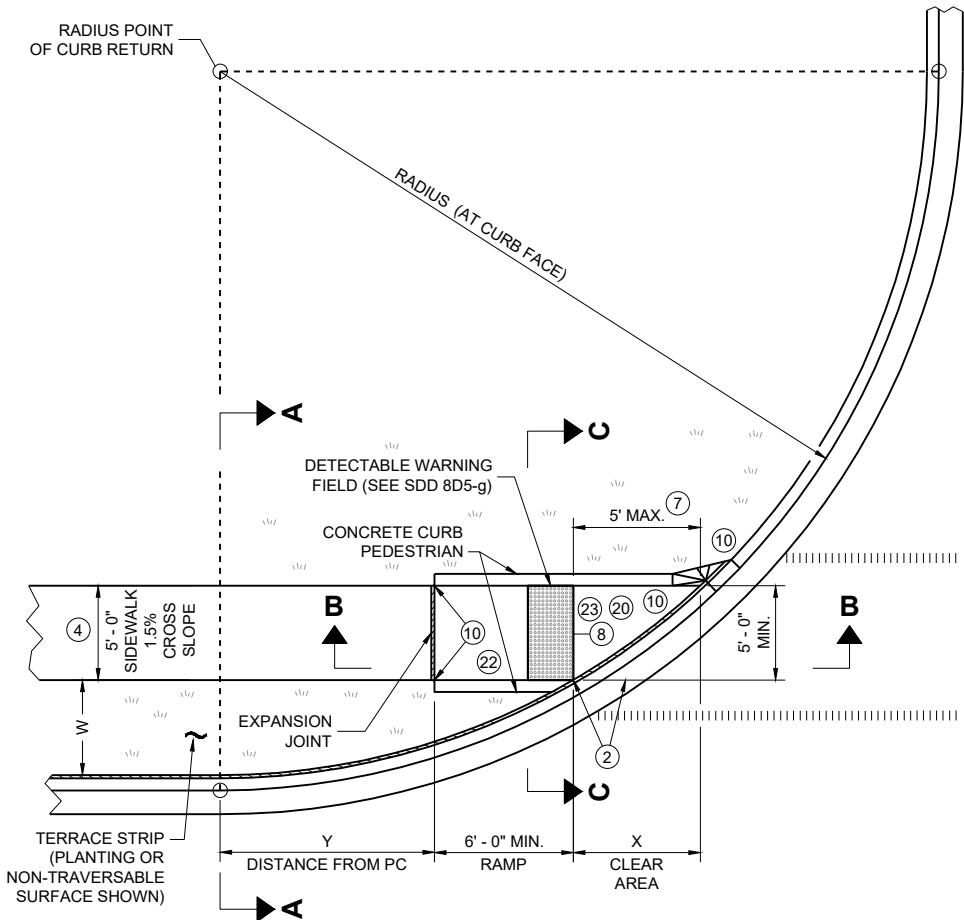
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

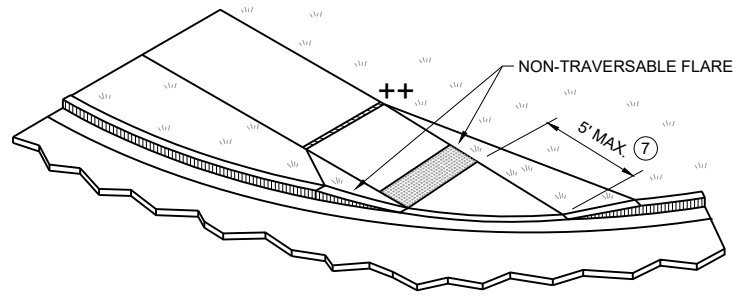
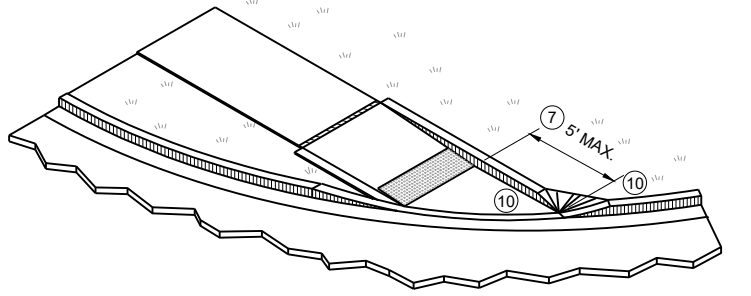
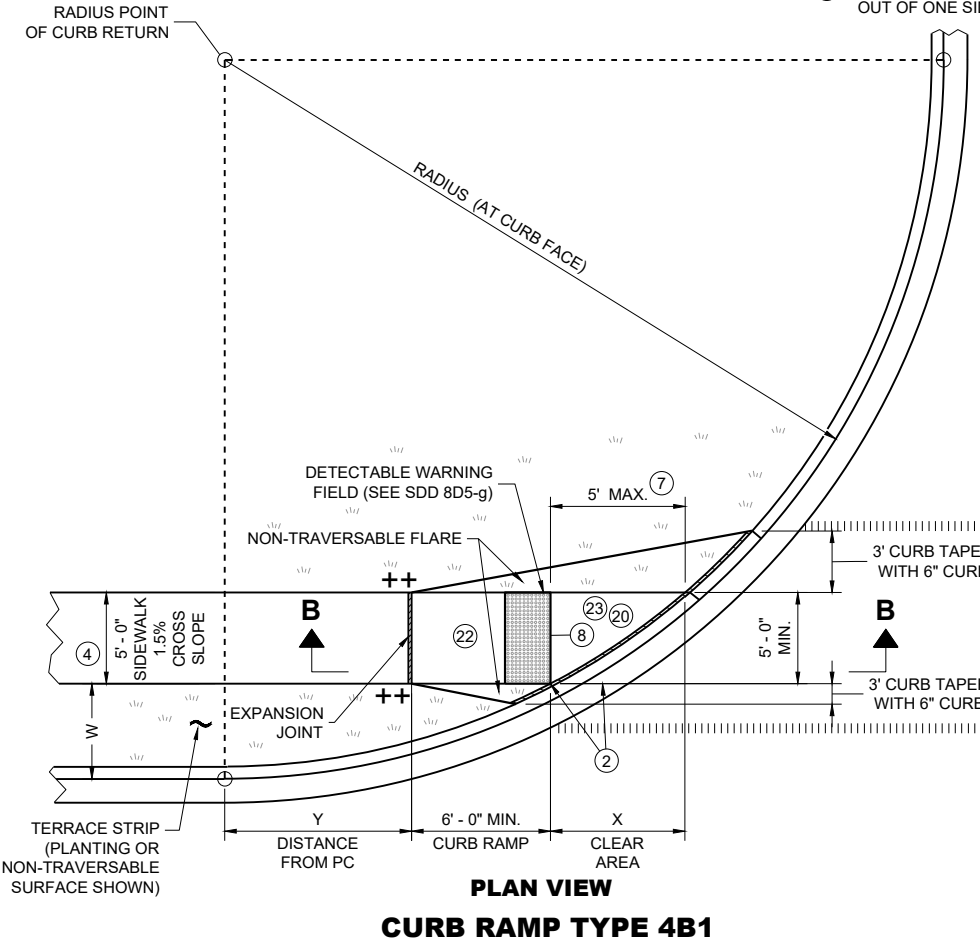
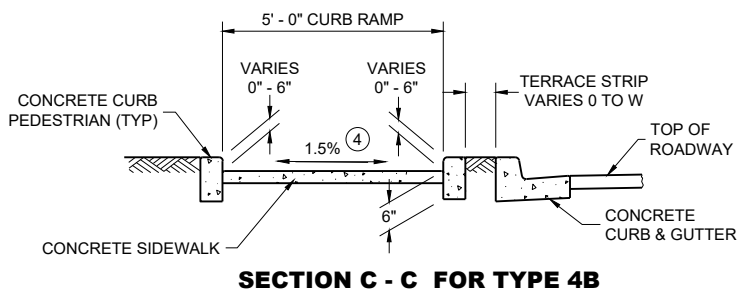
**CURB RAMPS
TYPE 4A AND 4A1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 3/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

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

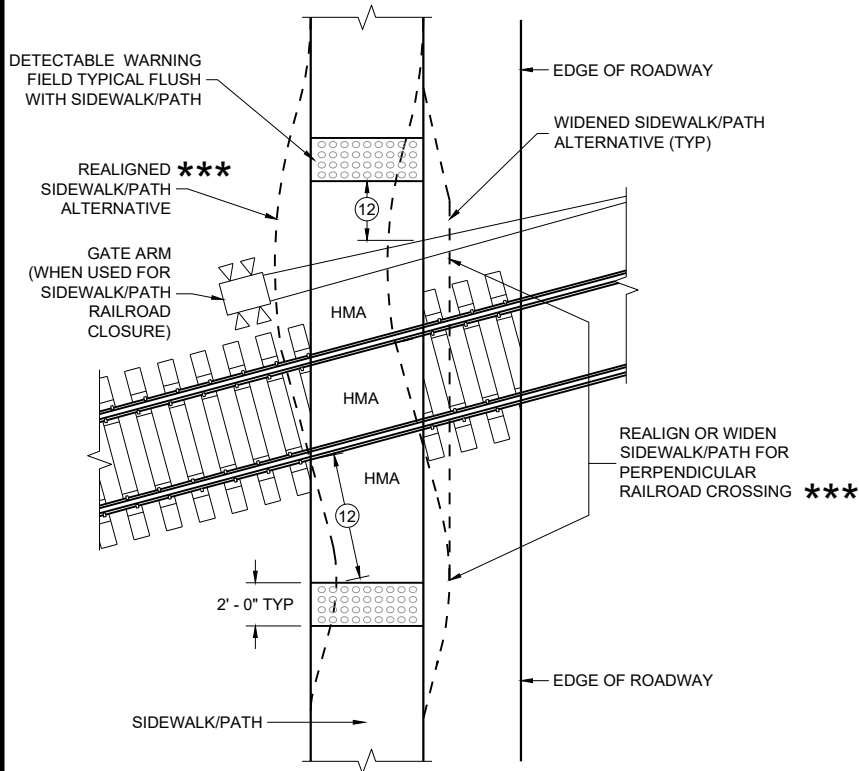


- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

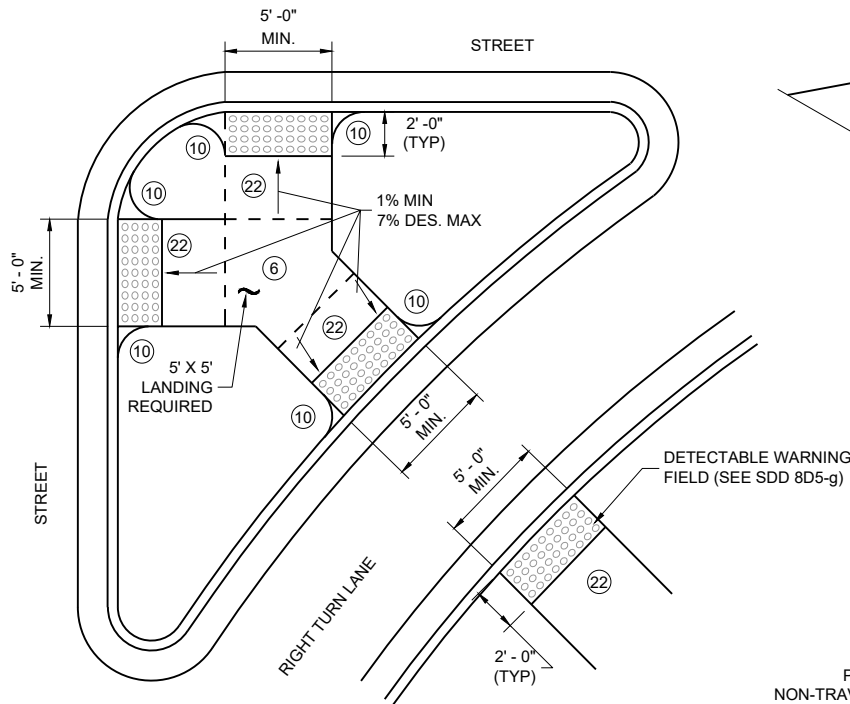
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

**CURB RAMPS
TYPE 4B AND 4B1**

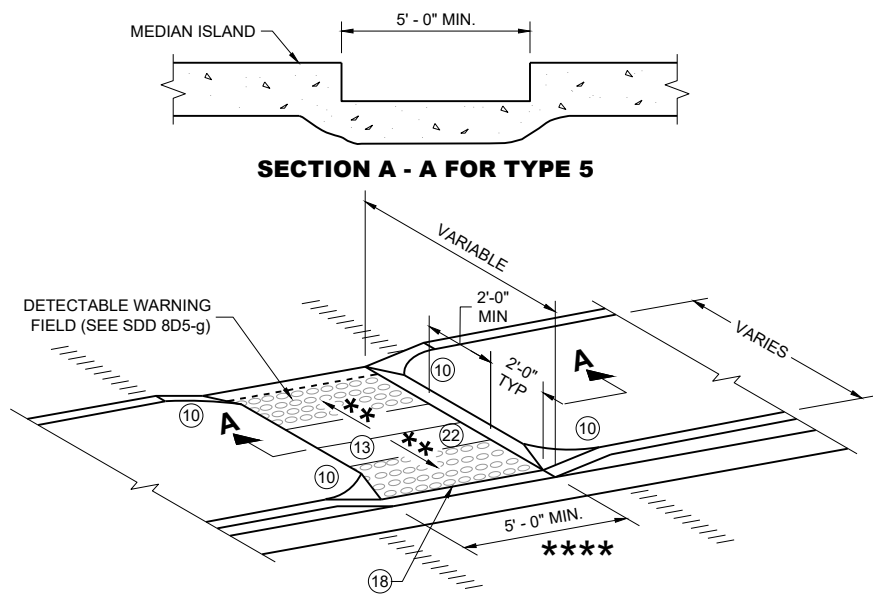


CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS

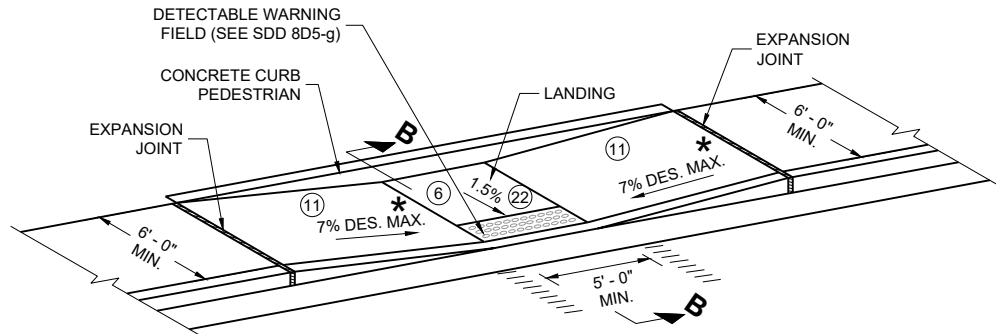


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

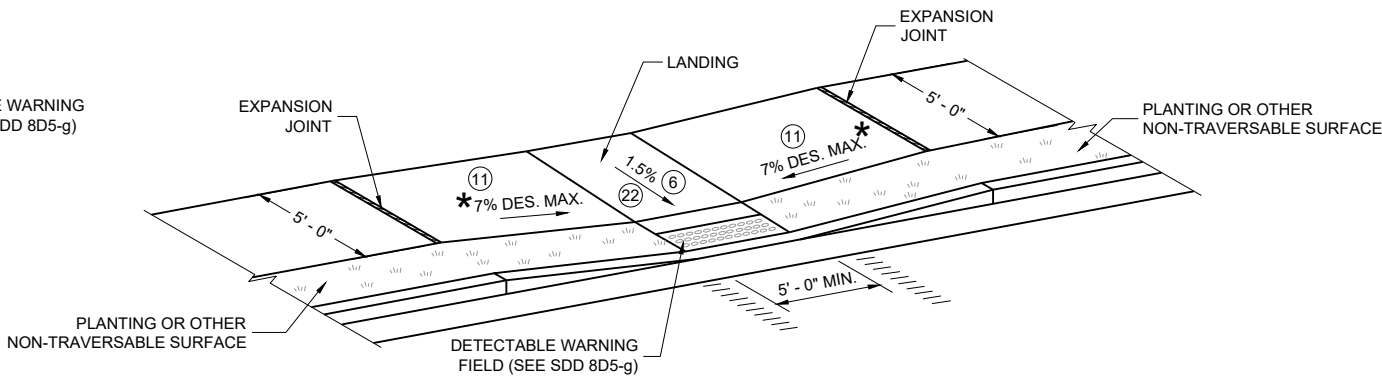
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS



CURB RAMP TYPE 7B
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS

GENERAL NOTES

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

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

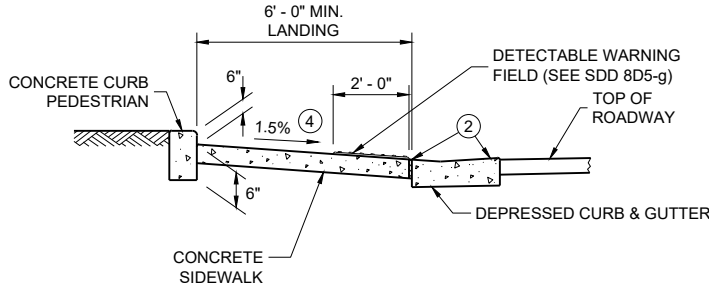
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑱ WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.
- ⑳ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- MAXIMUM 8.3%
- 1% MINIMUM (PROVIDE DRAINAGE)
- DETAILS TO BE DETERMINED BY ENGINEER
- FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK



SECTION B - B FOR TYPE 7A

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Diagram illustrating a cross-slope expansion joint with a detectable warning field radial. The diagram shows a cross-section of a road surface with a 1.5% cross slope. A 6'-0" sidewalk is shown on the left, adjacent to a 6'-0" minimum curb ramp. The expansion joint is located at the curb ramp. A detectable warning field radial is shown, consisting of a series of rectangular blocks (15) and circular blocks (16). The radial is 2'-0" wide and has a minimum 2'-0" DWF coverage. The radial is located within a 6'-0" minimum clear area 'XR'. The diagram also shows a 3' curb width and a 5'-0" minimum clearance for the radial. A callout 'A' points to the radial. A note indicates that the grade break distance per SDD 8D5-c is exceeded. A reference to 'SEE DETAIL A' is also present.

Diagram illustrating the cross-section of a depressed curb and gutter. Key components and dimensions include:

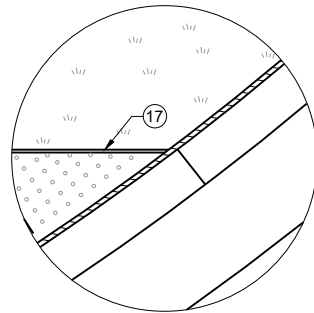
- EXPANSION JOINT**: Located at the left and right ends of the curb ramp.
- CONCRETE SIDEWALK**: Located on the left side of the curb ramp.
- 6' - 0" MIN.**: Minimum length of the curb ramp.
- CURB RAMP**: The sloped section of the pavement.
- 7% DES. MAX.**: Maximum design slope of the curb ramp.
- *****: Three asterisks indicating a specific condition or material.
- * 1.5%**: A 1.5% slope indicated on the right side of the curb ramp.
- CLEAR AREA 'XR' (14)**: The distance from the curb ramp to the expansion joint on the right.
- EXPANSION JOINT**: Located at the right end of the curb ramp.
- TOP OF ROADWAY**: The top edge of the pavement on the right.
- DEPRESSED CURB & GUTTER**: The structure on the right side of the curb ramp.
- RADIAL DETECTABLE WARNING FIELD (SEE SDD 8D5-g)**: A field of detectable warning material located on the right side of the curb ramp.
- (8)**: A circled number 8 indicating a specific condition or material.
- (2)**: A circled number 2 indicating a specific condition or material.

**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-d IS EXCEEDED**

PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

[illegible]

	1/2" EXPANSION JOINT SIDEWALK
	CONTRACTION JOINT SIDEWALK
	PAVEMENT MARKING CROSSWALK (WHITE)
	WIDTH SHOWN ELSEWHERE IN THE PLANS
	MAXIMUM 8.3%
	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



NOTE: SECOND TYPE
RAMP NOT SHOWN

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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.

DETECTABLE WARNING FIELDS 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 UTILITY COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- 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 $\frac{1}{8}$ " DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- ⑮ 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 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑰ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑳ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ㉒ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ㉓ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

NOTE: SECOND TYPE 2 RAMP NOT SHOWN

CONCRETE SIDEWALK

SLOPE 'A'

10:1 TRAVERSABLE FLARE

DETECTABLE WARNING FIELD RADIAL

SEE DETAIL C

5' - 0" MIN.

SLOPE 'A'

3' CURB TAPER WITH 6" CURB

NON-TRAVERSABLE FLARE

CLEAR AREA "X" TERRACE

TERRACE STRIP (PLANTING OR NON-TRAVERSABLE SURFACE SHOWN)

19

22

8

14

20

23

15

2' - 0"

**

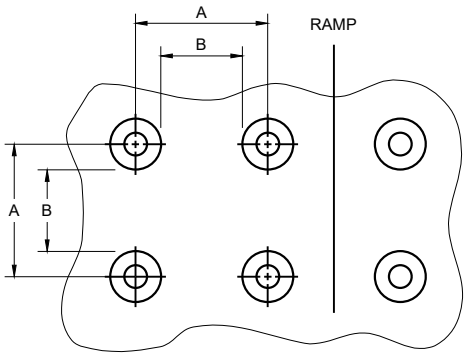
**(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)**

[illegible]

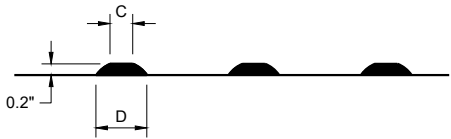
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	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.

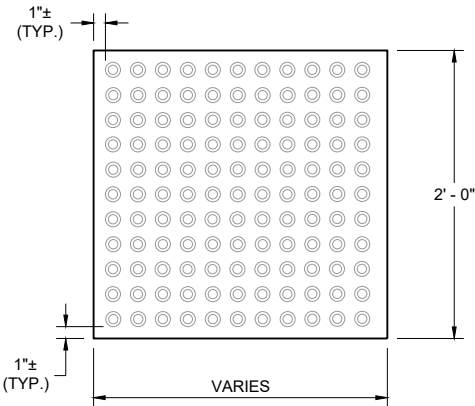


PLAN VIEW

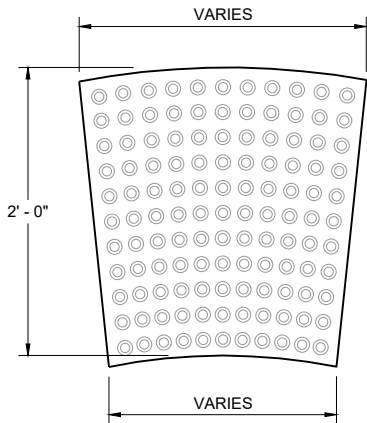


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

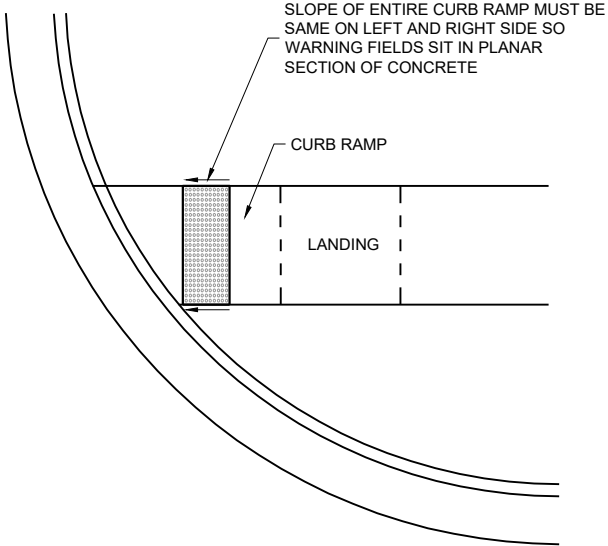


RECTANGULAR
PLATES

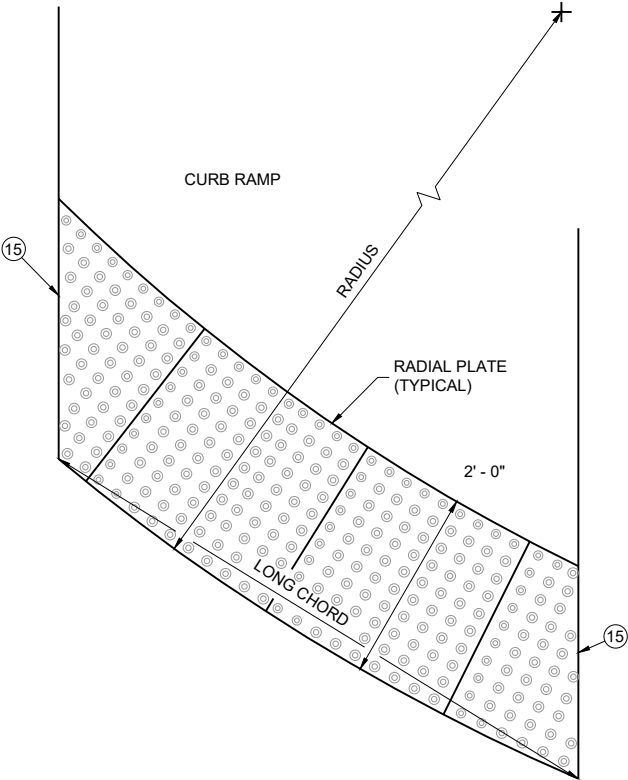


RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD
PLANAR INSTALLATION



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

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

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

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

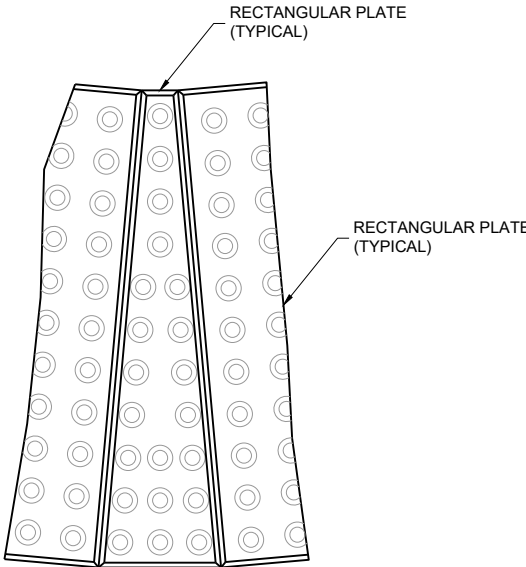
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8\"/>



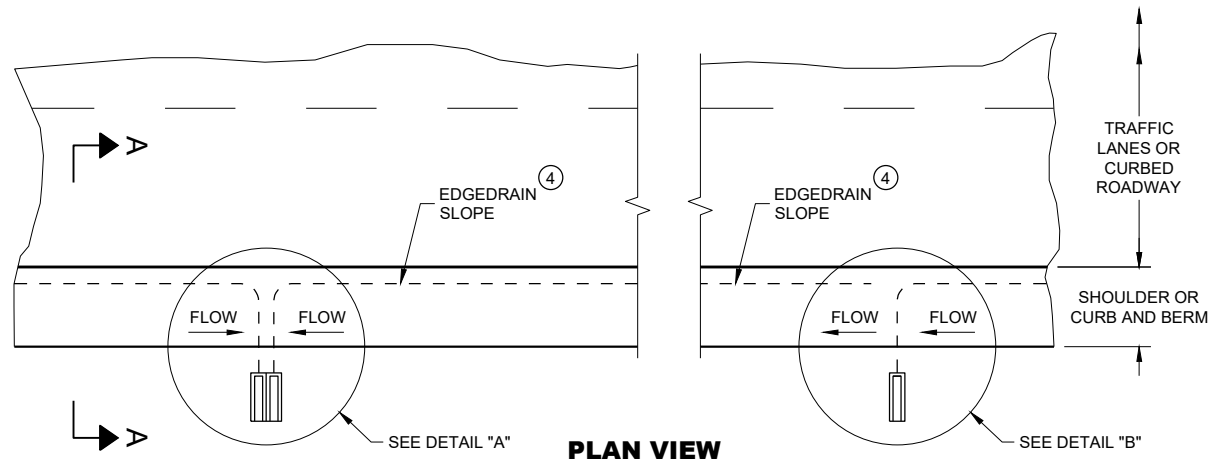
PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

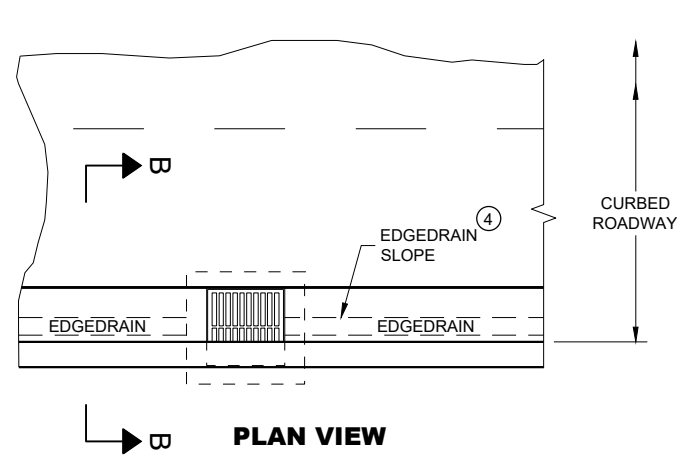
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE <position>

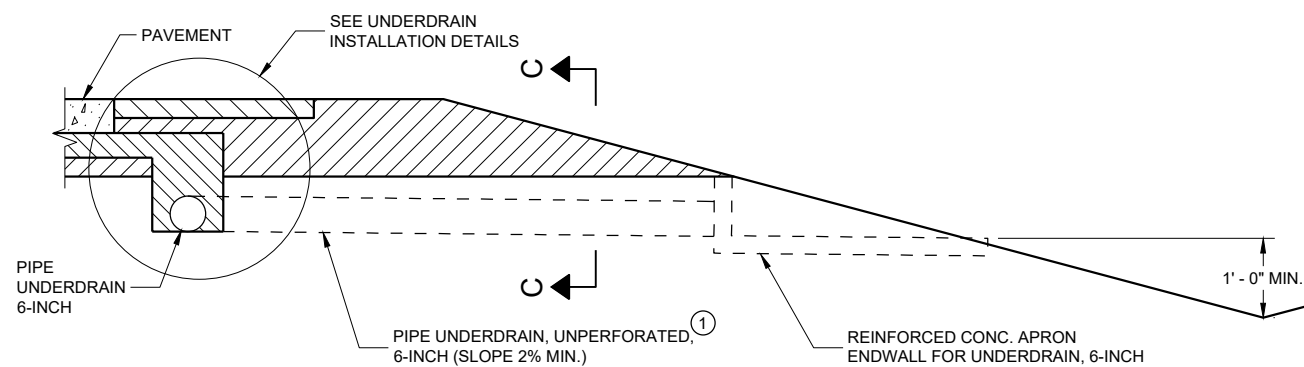
FHWA



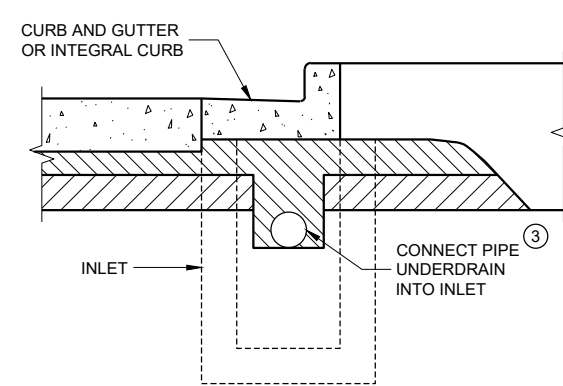
**ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN CONNECTS TO ROADSIDE) ②**



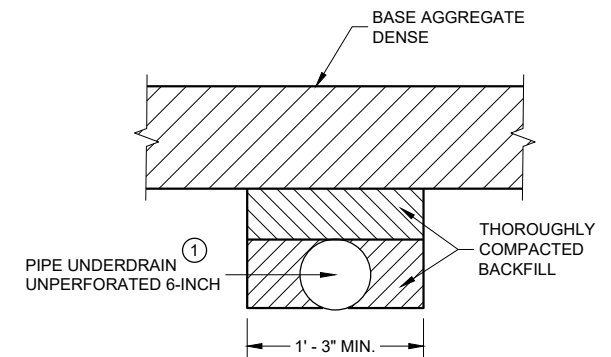
**ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**



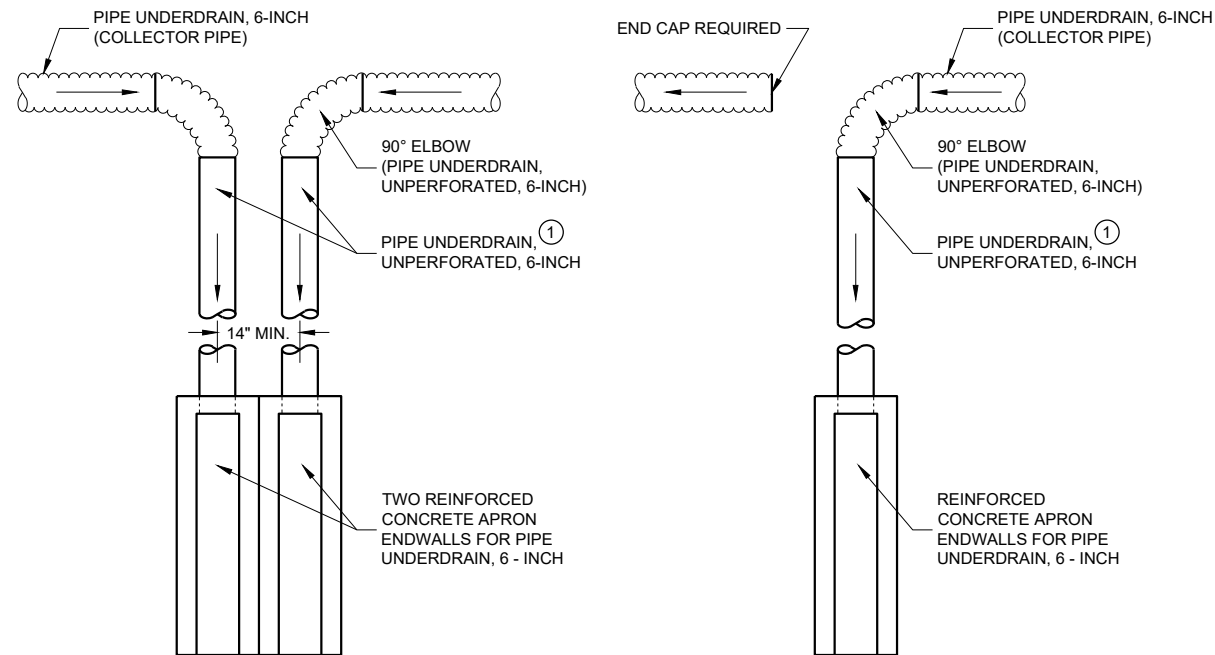
**SECTION A - A
RURAL CROSS SECTION**



**SECTION B - B
URBAN CROSS SECTION**



**SECTION C - C
TRENCH FOR OUTFALL PIPE**



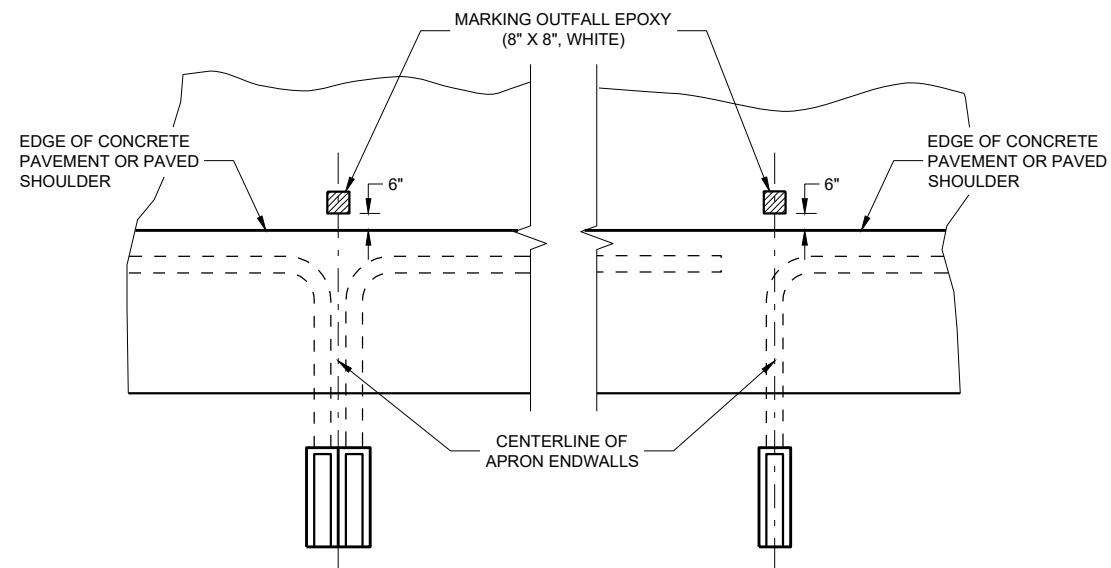
DETAIL "A"

TO BE USED AT LOW POINT LOCATIONS

DETAIL "B"

TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



LOW POINT LOCATIONS

INTERMEDIATE LOCATIONS

PAVEMENT MARKINGS FOR OUTFALL MARKERS

GENERAL NOTES

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

- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

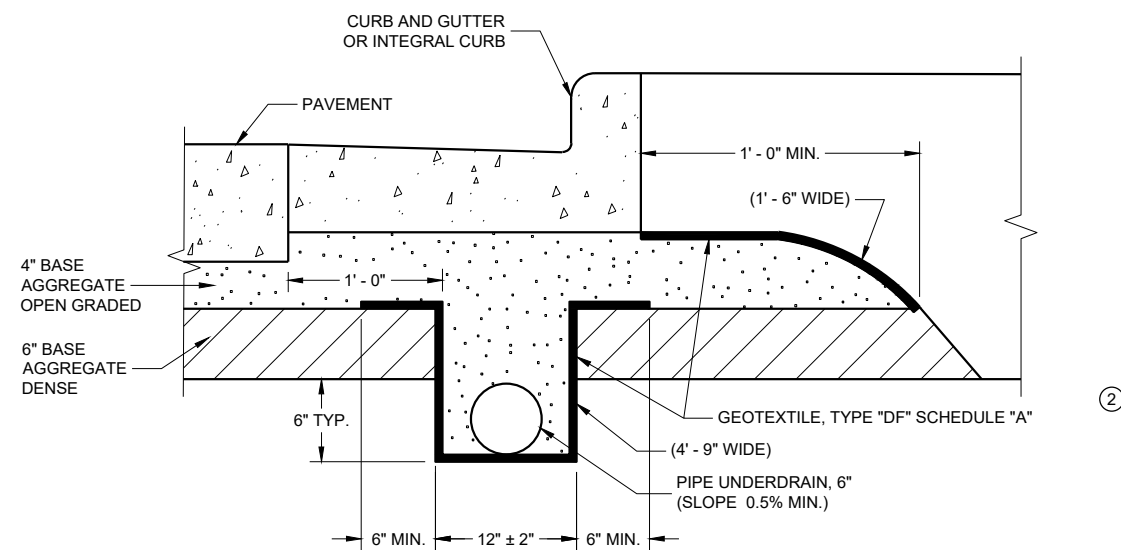
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

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

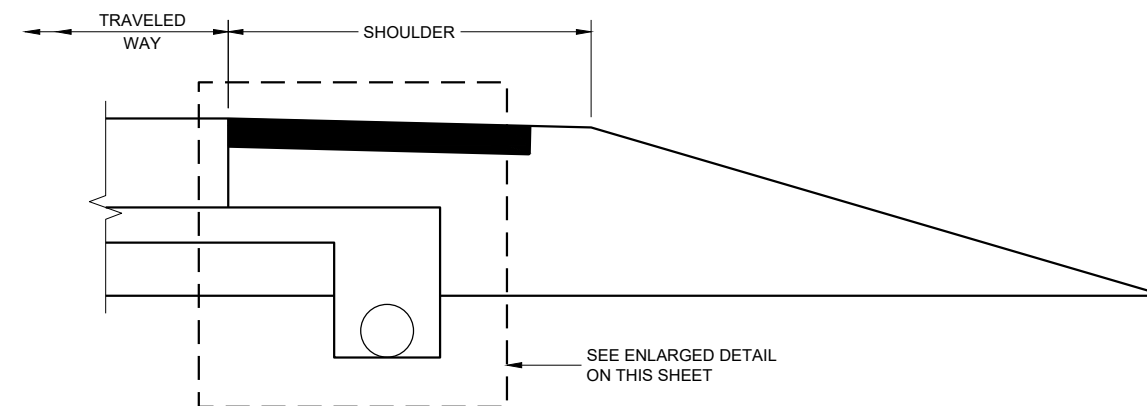
- ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.

**EDGEDRAIN OUTLET
AND OUTFALL MARKERS**

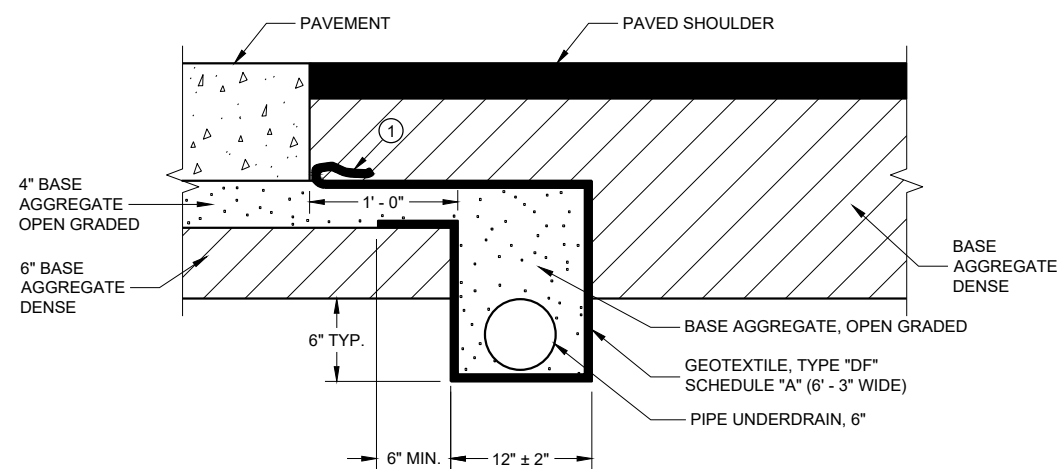
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



EDGEDRAIN IN URBAN ROADWAY

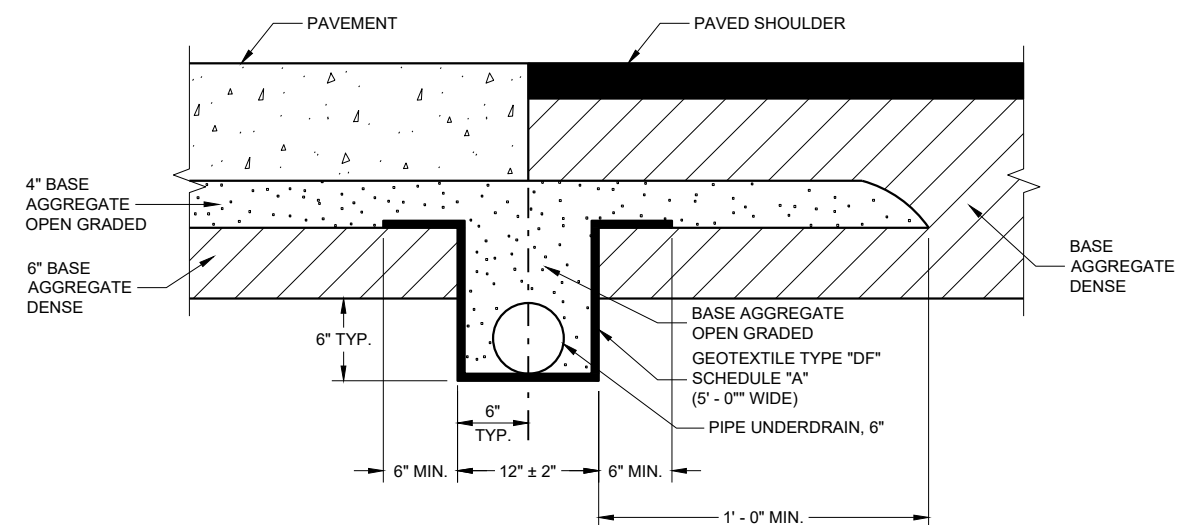


RURAL CROSS SECTION



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)

EDGEDRAIN IN RURAL ROADWAY



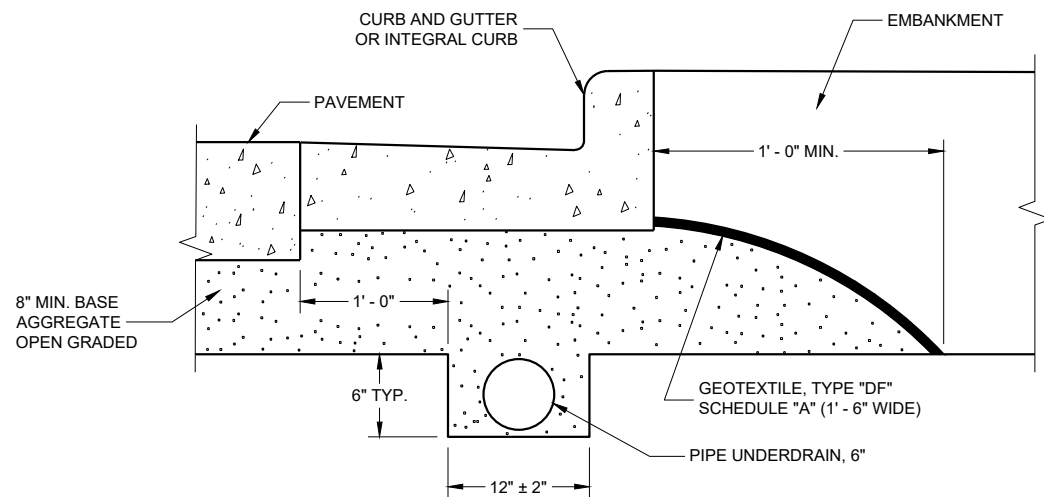
PRE-PAVING INSTALLATION ALTERNATIVE

**EGEDRAIN AND BASE
AGGREGATE OPEN GRADED**

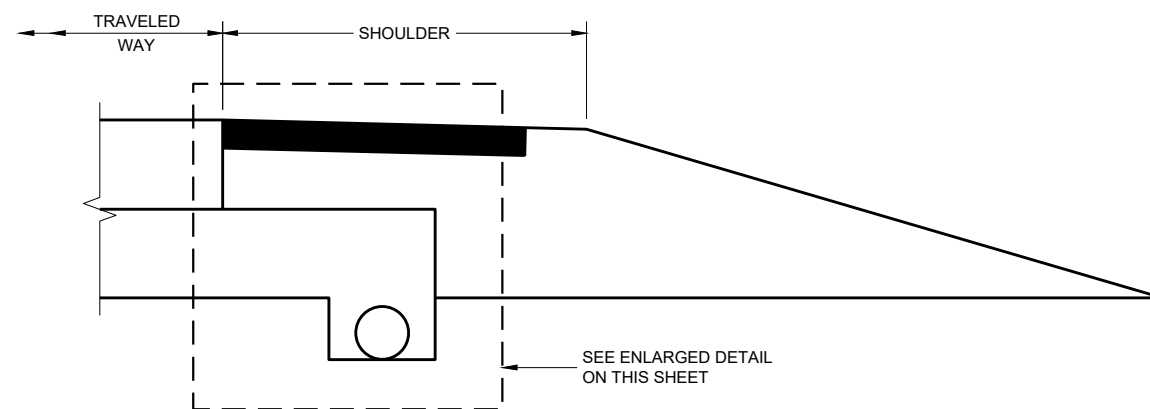
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 94

SDD08D15 - 05b

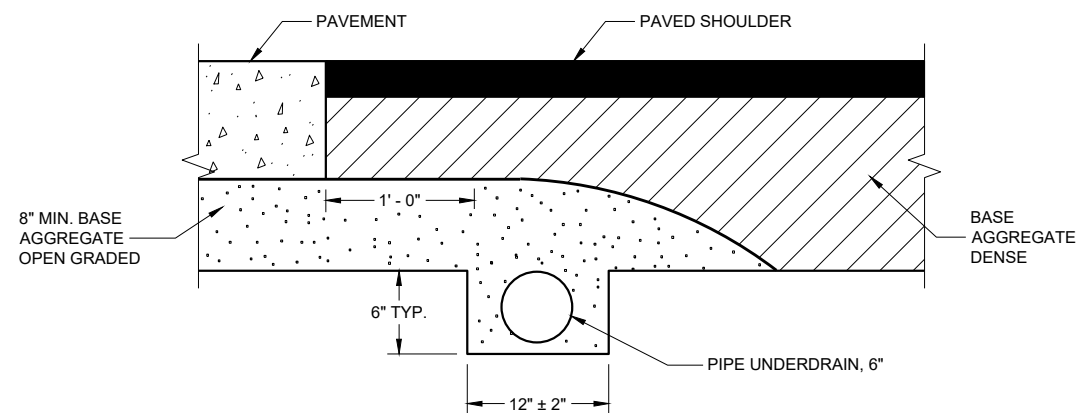
SDD08D15 - 05b



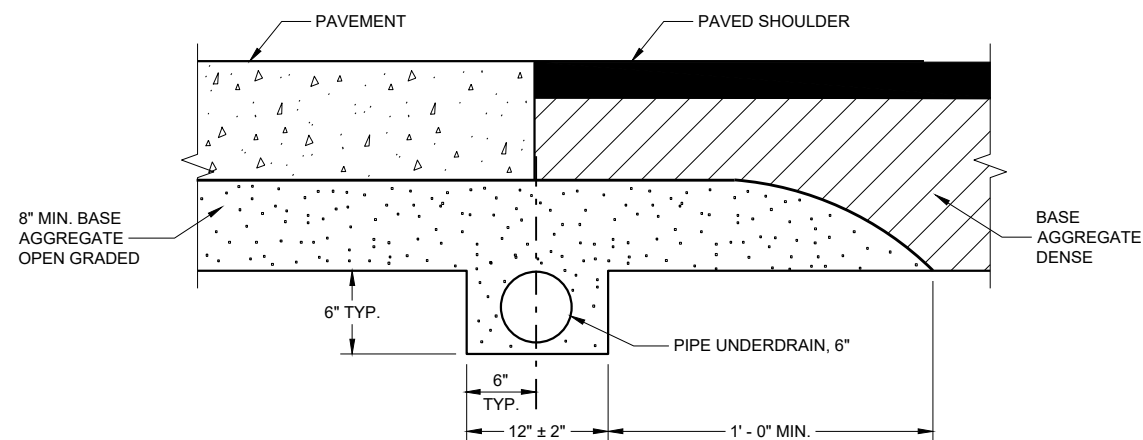
EDGEDRAIN IN URBAN ROADWAY



RURAL CROSS SECTION



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN IN RURAL ROADWAY

GENERAL NOTES

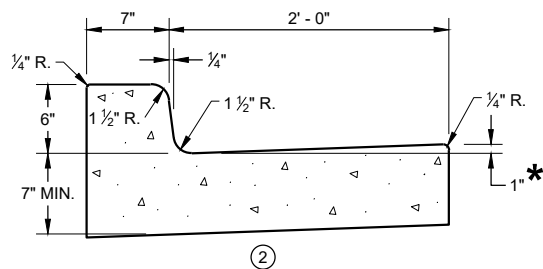
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

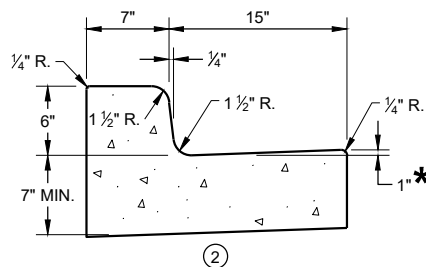
**EDGEDRAIN AND BASE
AGGREGATE OPEN GRADED**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

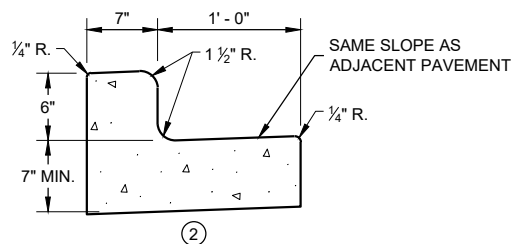
APPROVED
September 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR 95
FHWA



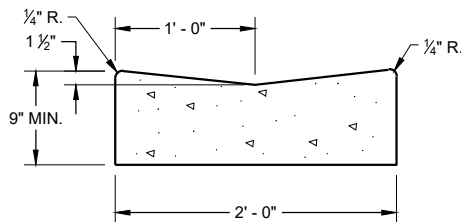
CONCRETE CURB AND GUTTER 31" ①



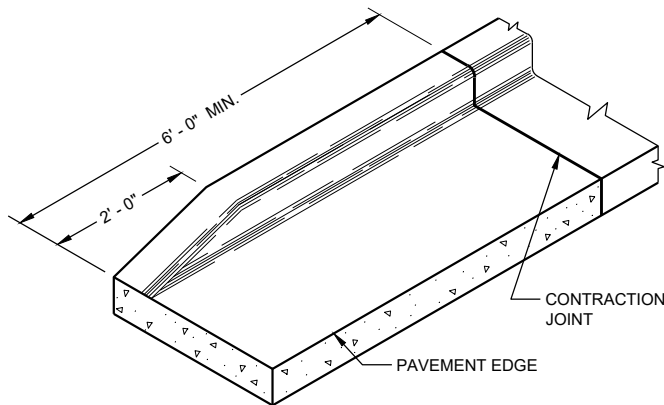
CONCRETE CURB AND GUTTER 22" ①



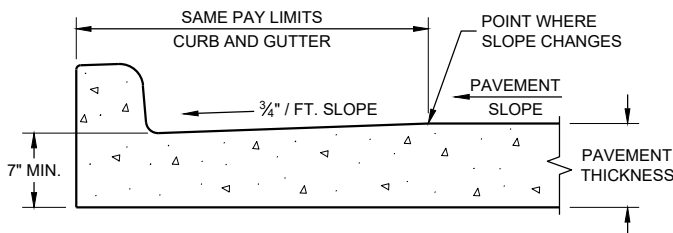
CONCRETE CURB AND GUTTER 19" ①



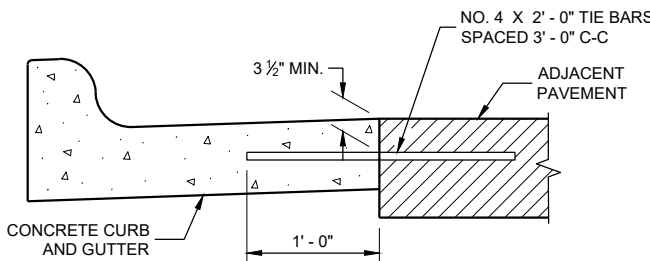
CONCRETE GUTTER 24" ①



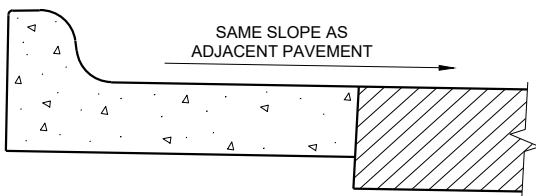
END SECTION CURB AND GUTTER



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



TYPICAL TIE BAR LOCATION ①



HIGH SIDE SECTION ③
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

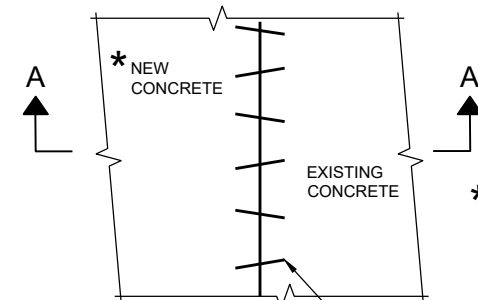
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

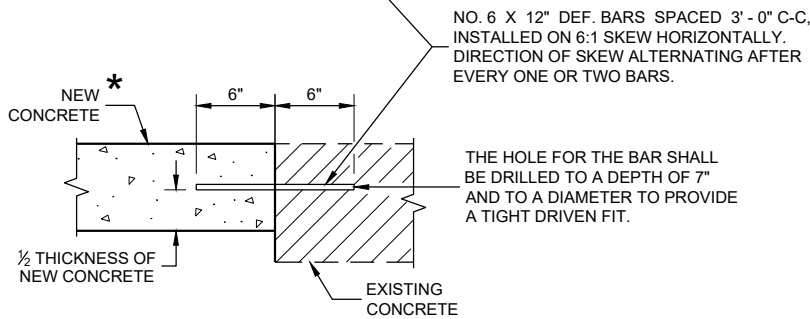
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



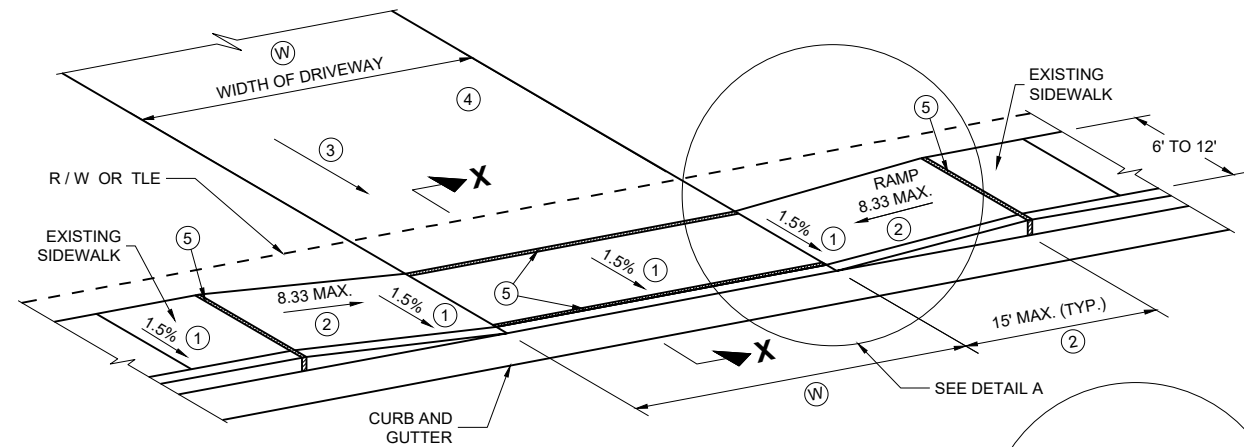
PLAN VIEW



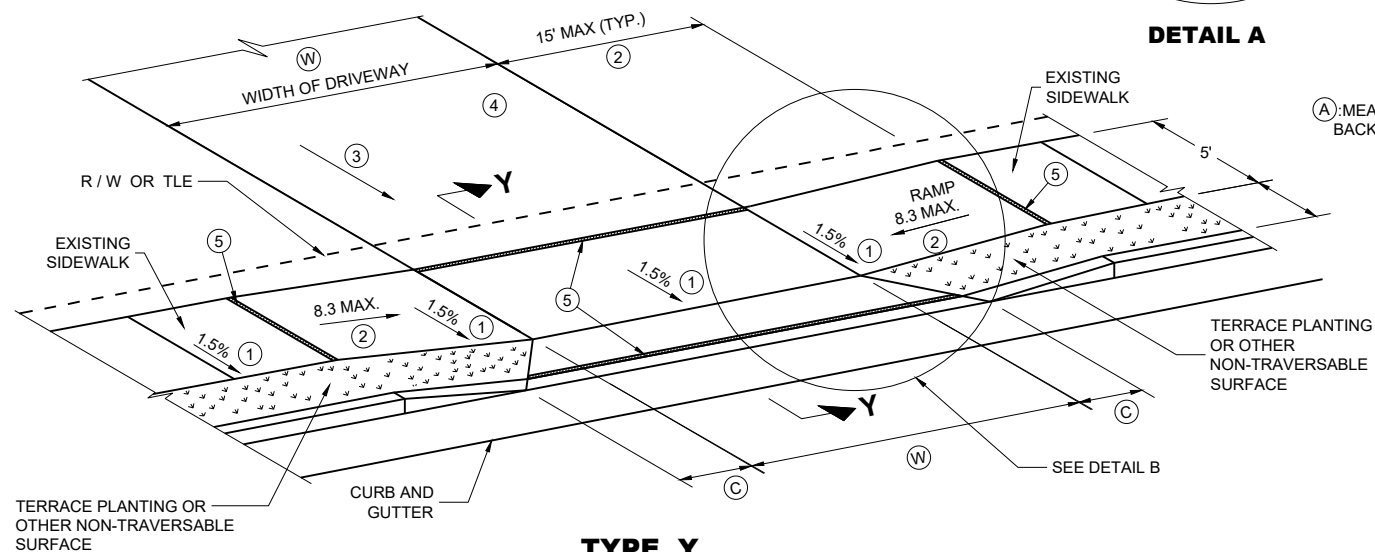
SECTION A - A

PAVEMENT TIES

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES (For Optional use in Milwaukee Co. Only)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER 96
FHWA	



TYPE X
SIDEWALK ABUTS CURB AND GUTTER
TERRACE VARIES 0 TO 3 FEET



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

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.

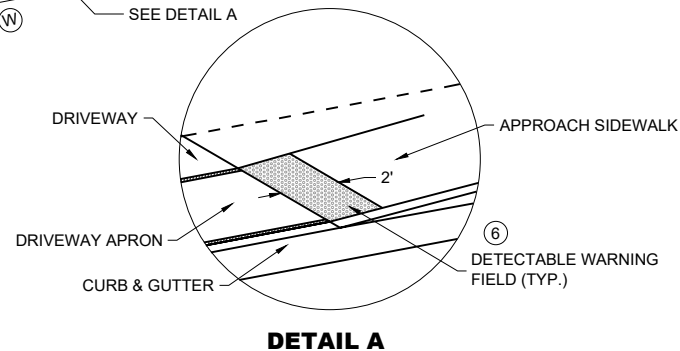
- ① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.
- ② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT 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.)

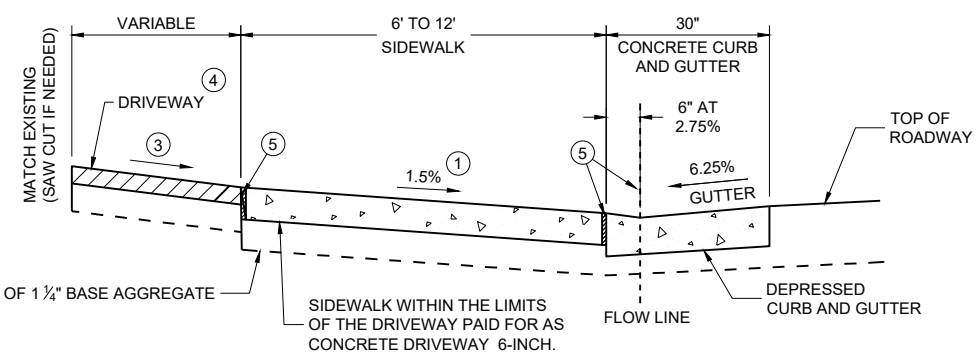
- ⑤ 1/2" EXPANSION JOINT FILLER

- ⑥ DETECTABLE WARNING FIELDS ARE REQUIRED WHEN A PEDESTRIAN CIRCULATION ROUTE CROSSES A DRIVEWAY THAT IS TRAFFIC SIGNAL, STOP, OR YIELD SIGN CONTROLLED. DETECTABLE WARNING FIELDS TO BE 2 FT DEEP AND EXTEND THE WIDTH OF THE PEDESTRIAN CIRCULATION ROUTE.



DETAIL A

(A): MEASURE FROM BACK OF CURB

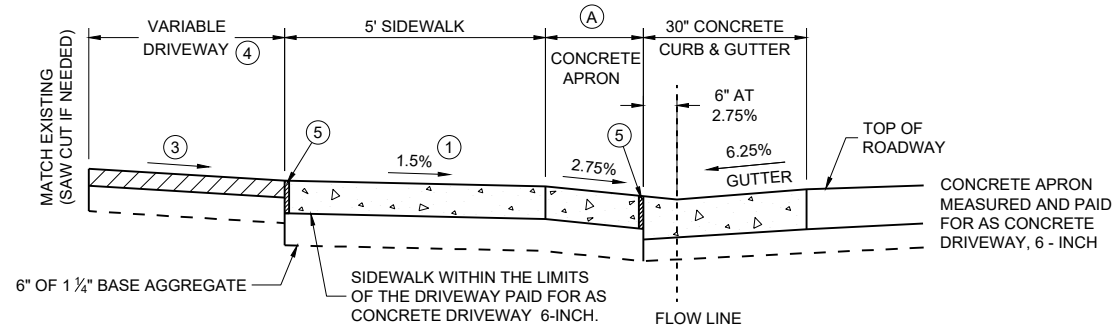


SECTION X - X

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

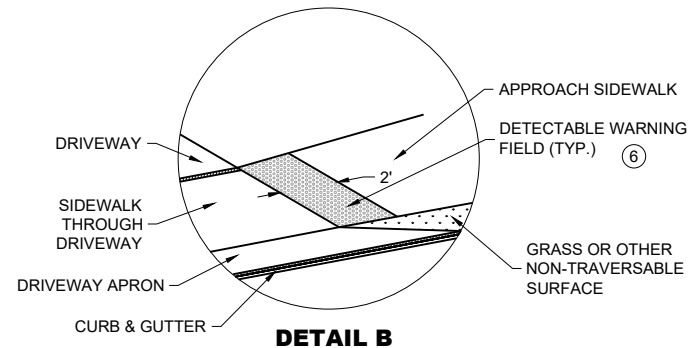
TABLE Y

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

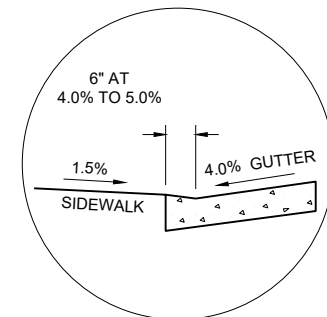


NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

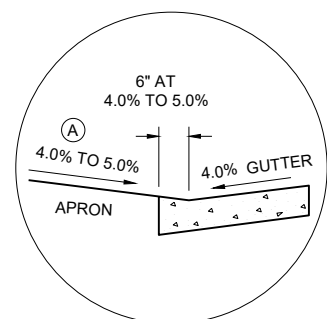
SECTION Y - Y
DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER
(URBAN AND SUBURBAN)



DETAIL B



SECTION X - X
4% GUTTER SLOPE



SECTION Y - Y
4% GUTTER SLOPE

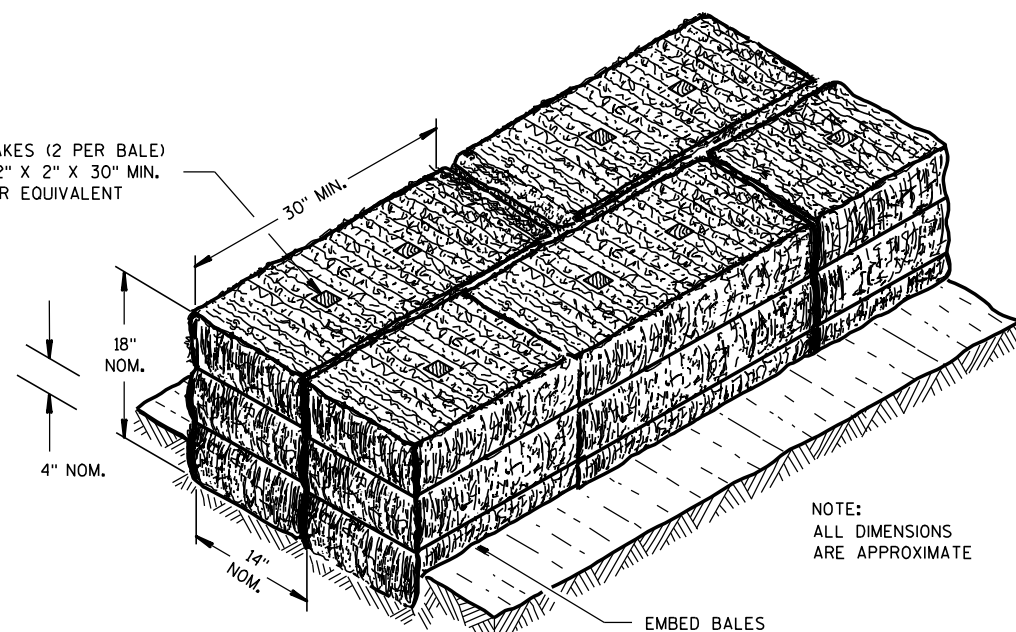
DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE

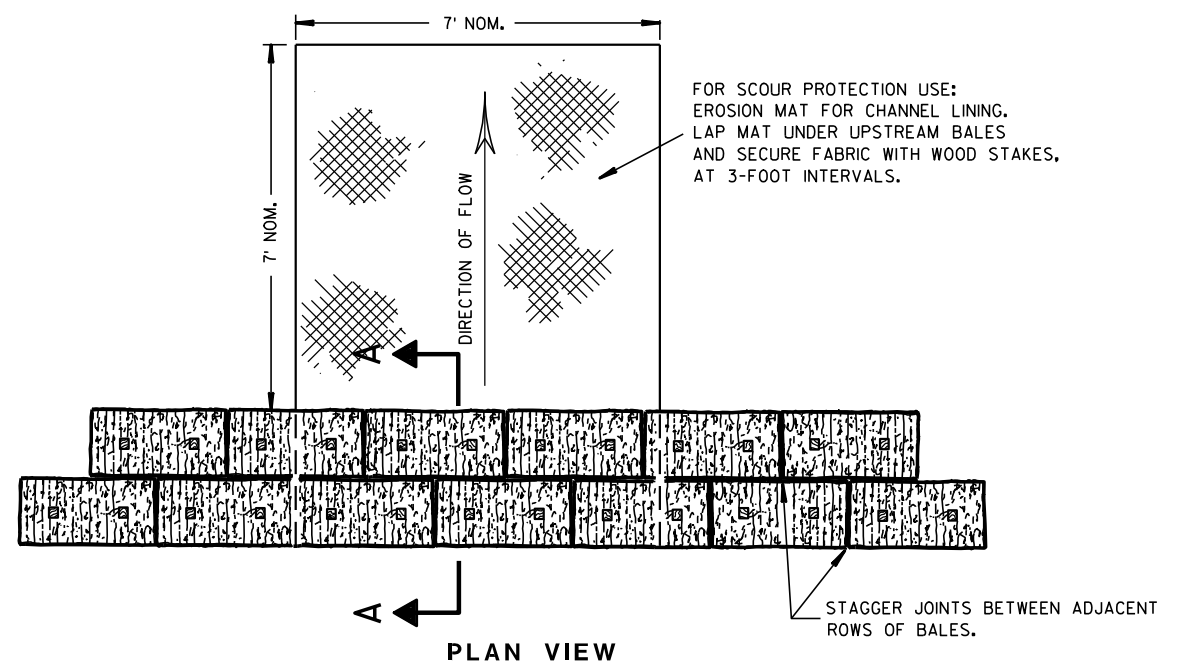
FHWA

WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT

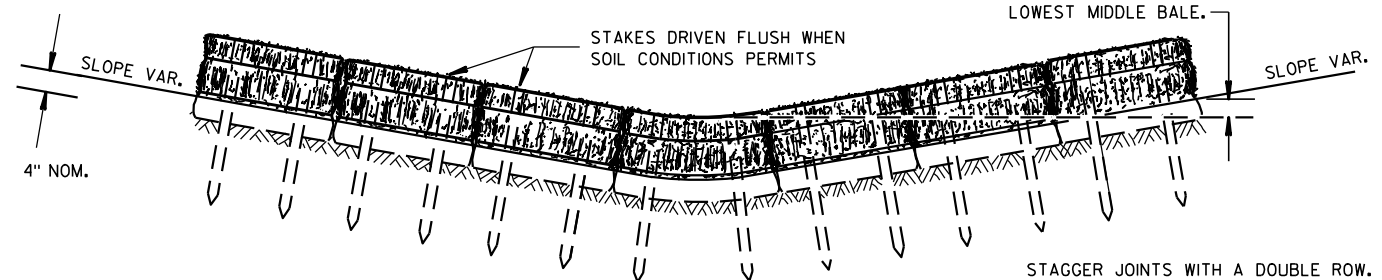


SECTION A-A

NOTE:
ALL DIMENSIONS
ARE APPROXIMATE



PLAN VIEW



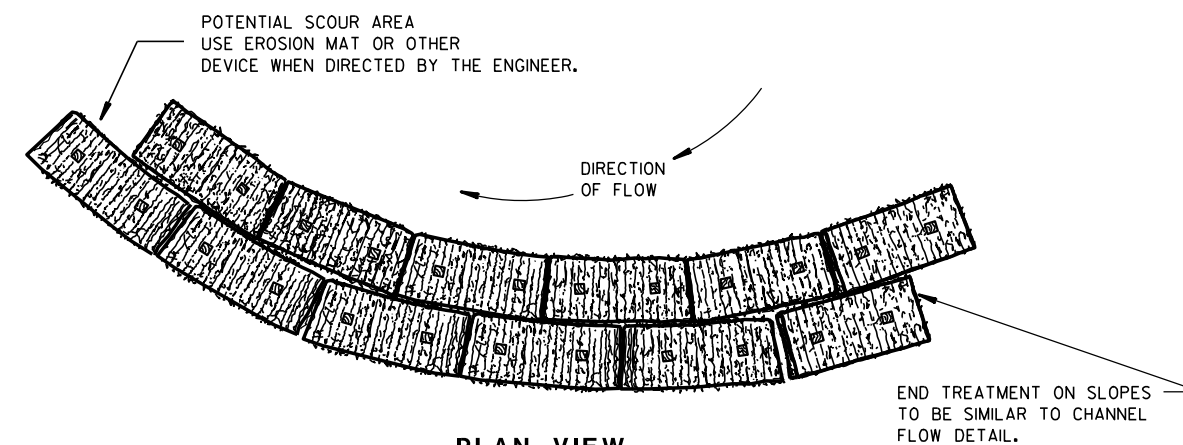
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

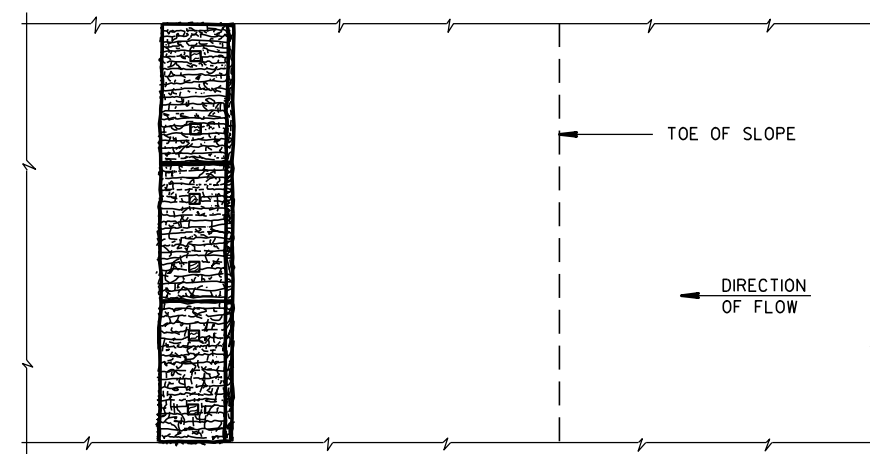
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

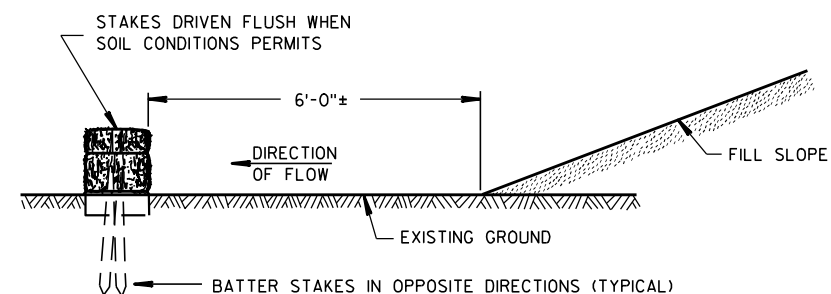


PLAN VIEW

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

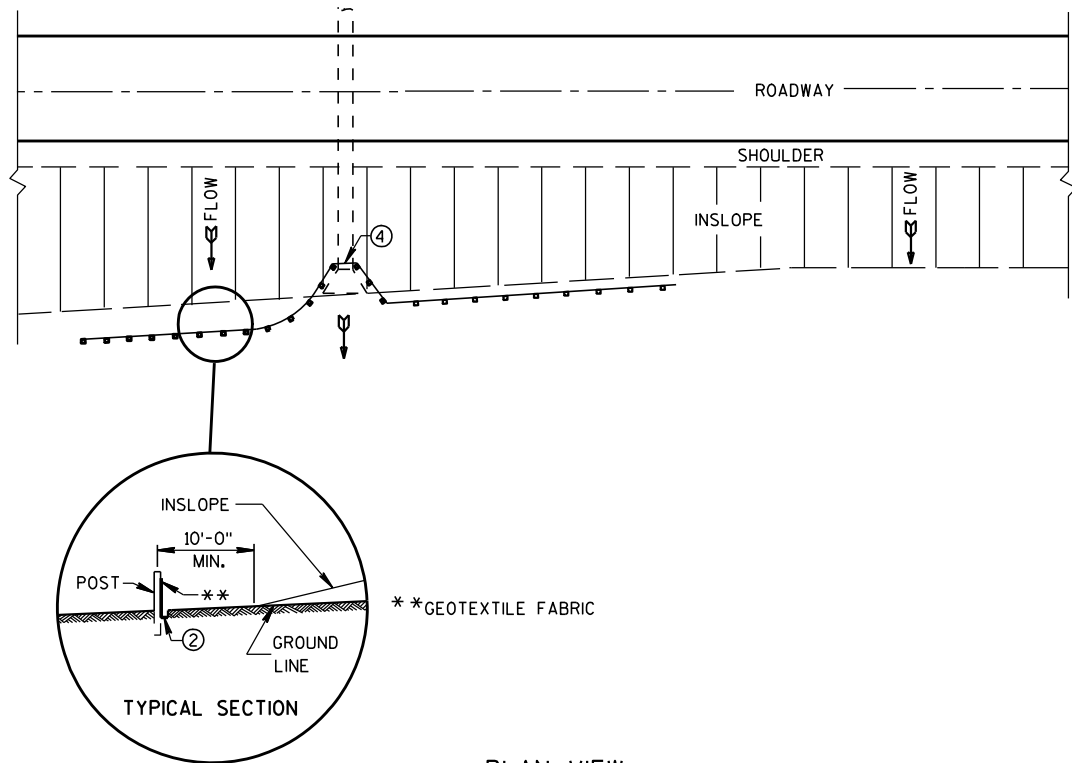
APPROVED

6/04/02
DATE

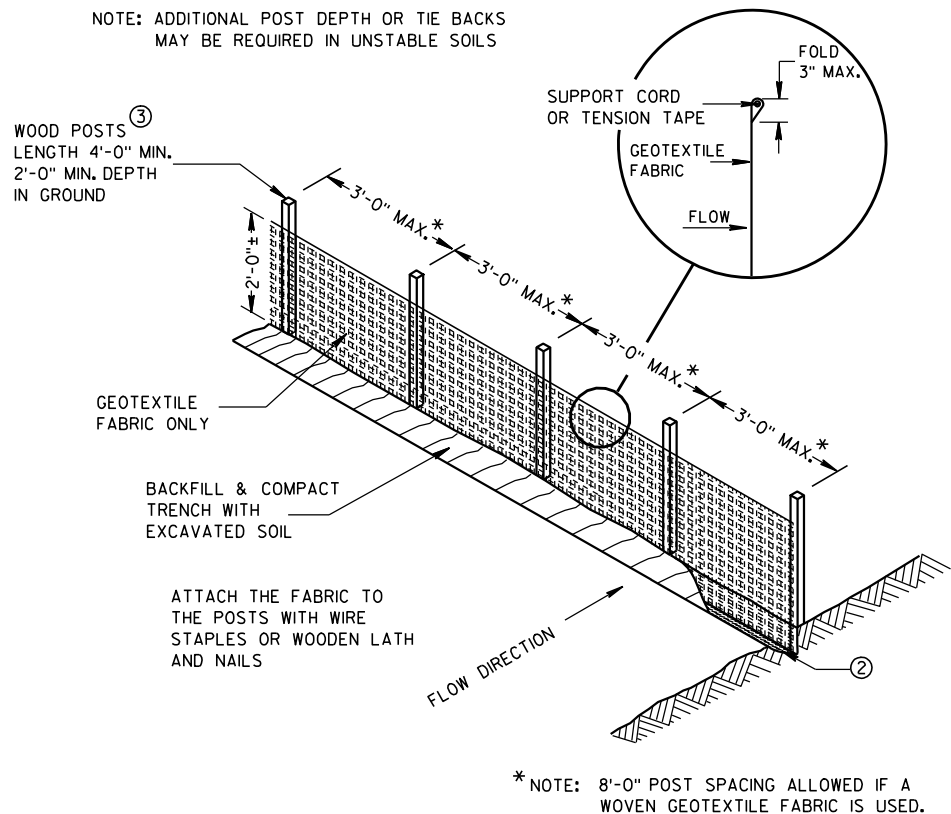
/S/ Beth Connolly
CHIEF ROADWAY DEVELOPER

ENGINEER

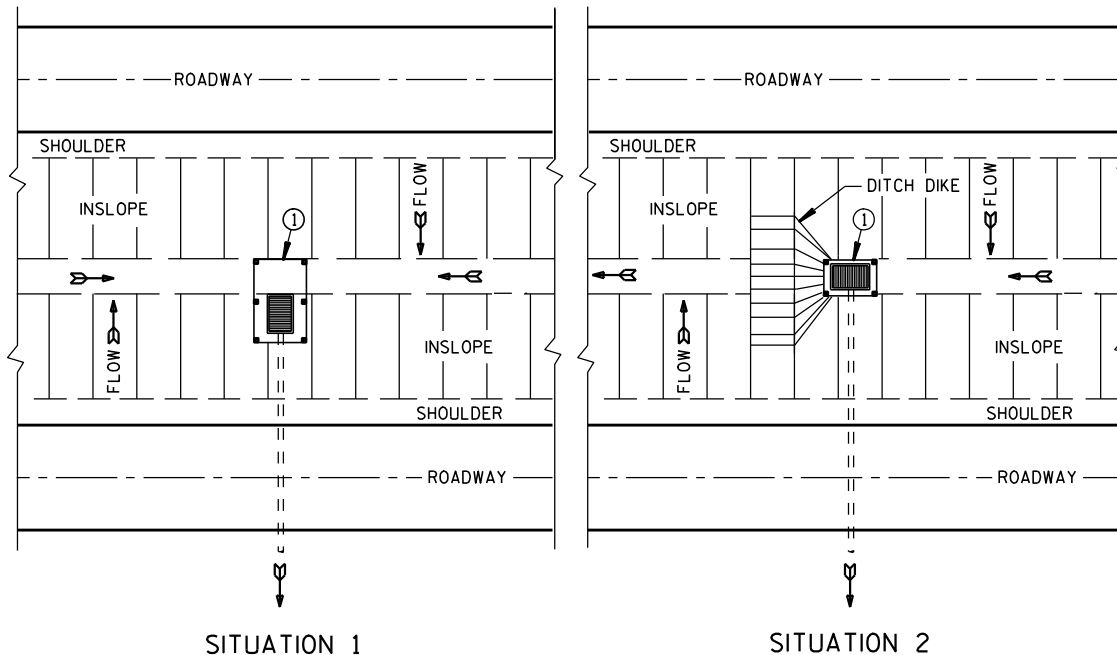
FHWA



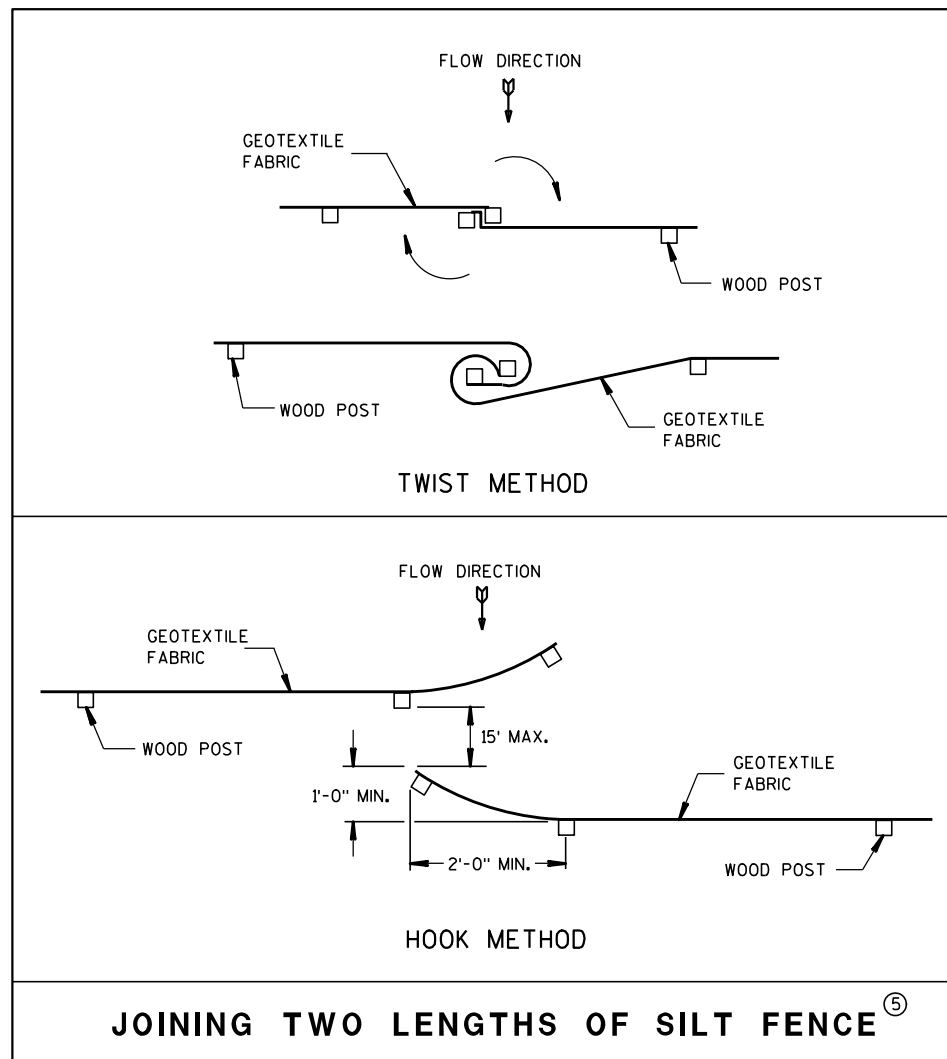
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

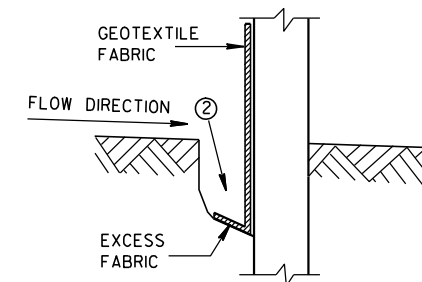


JOINING TWO LENGTHS OF SILT FENCE (5)

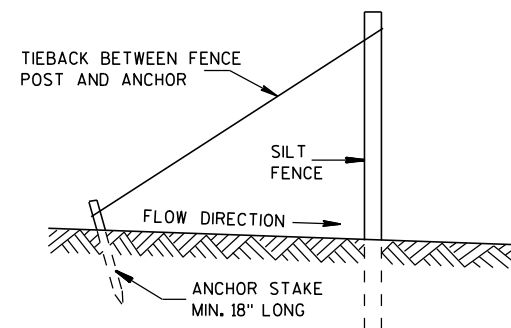
GENERAL NOTES

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 1 1/8" X 1 1/8" 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.

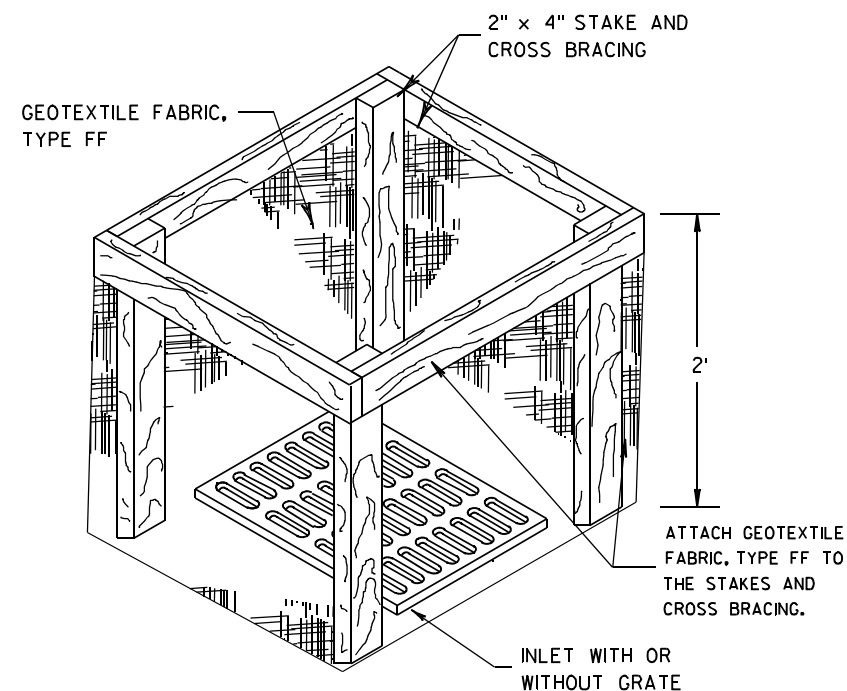
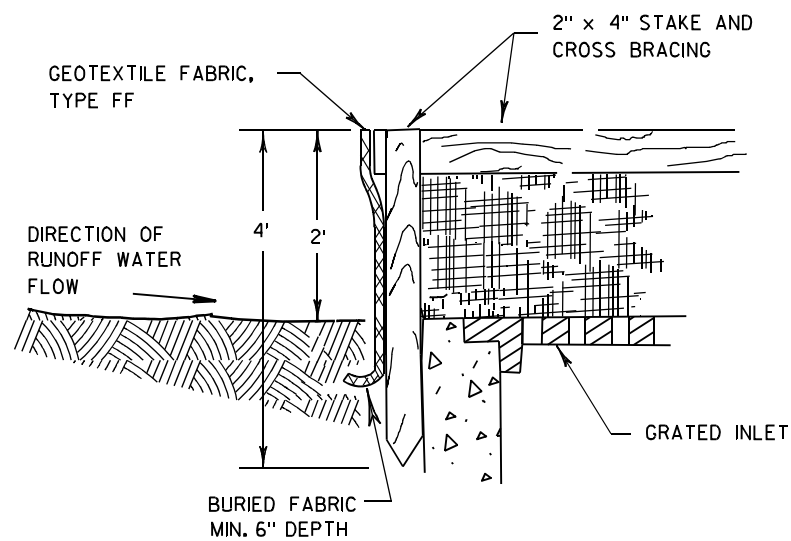


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Conn CHIEF ROADWAY DEVELOPER 99 ENGINEER
FHWA	



INLET PROTECTION, TYPE A

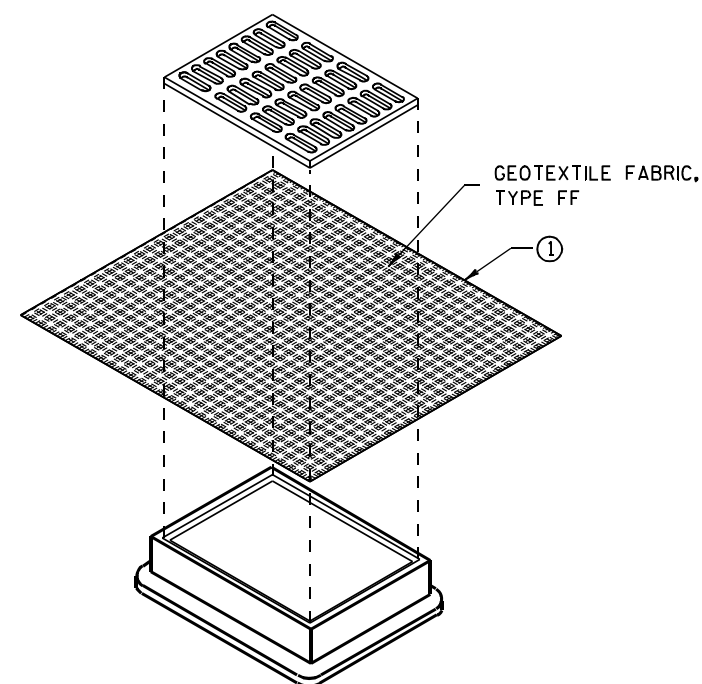
GENERAL NOTES

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.

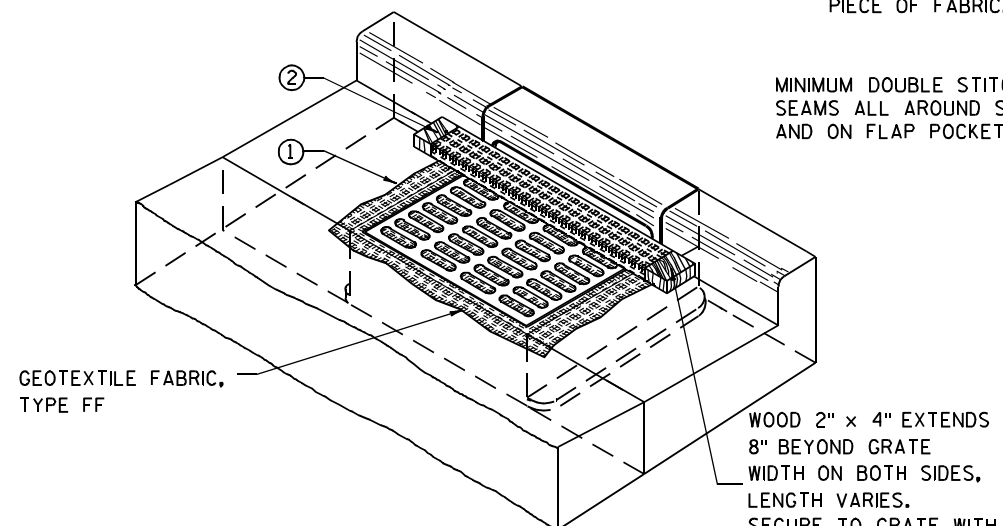
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

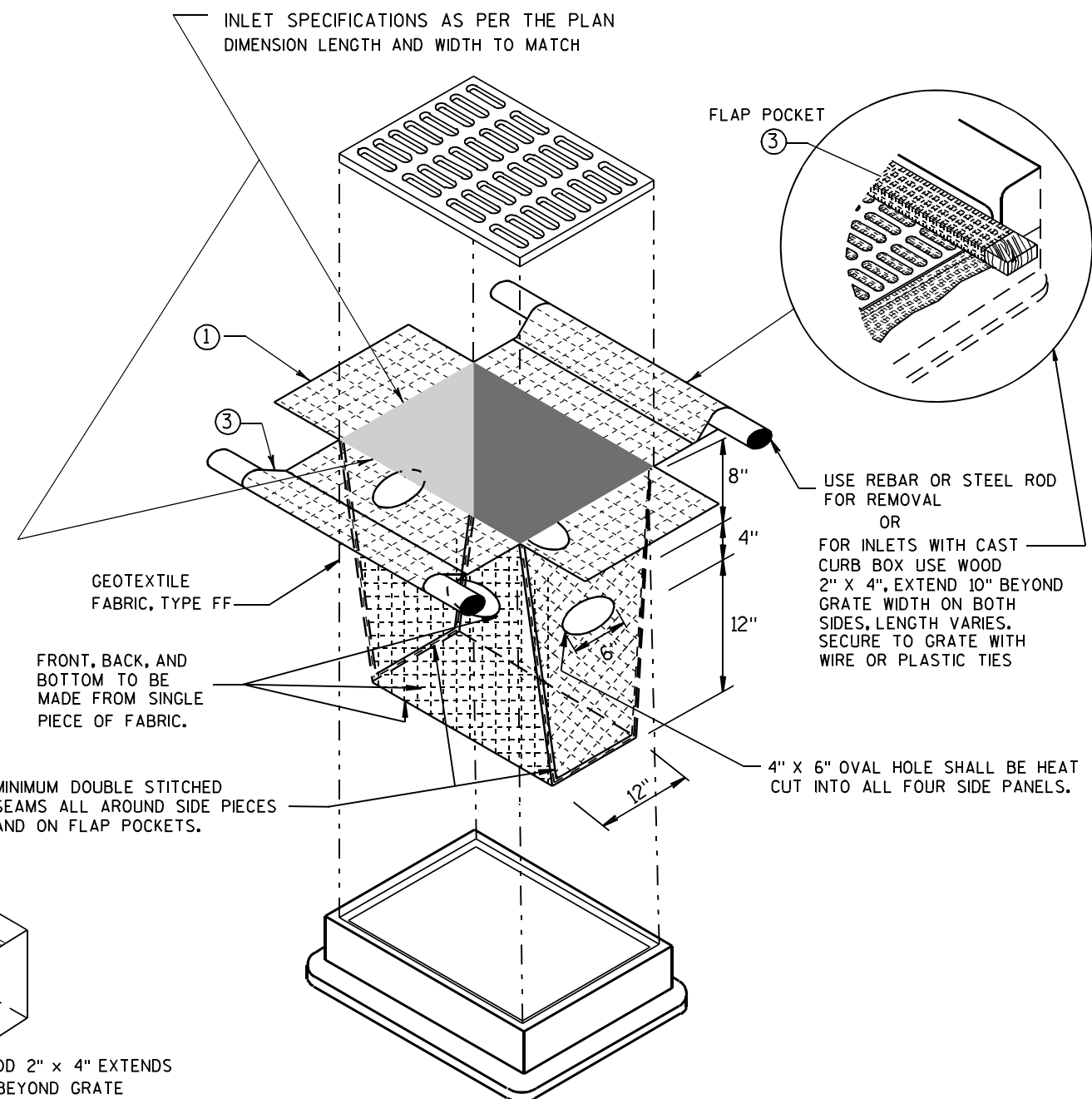
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



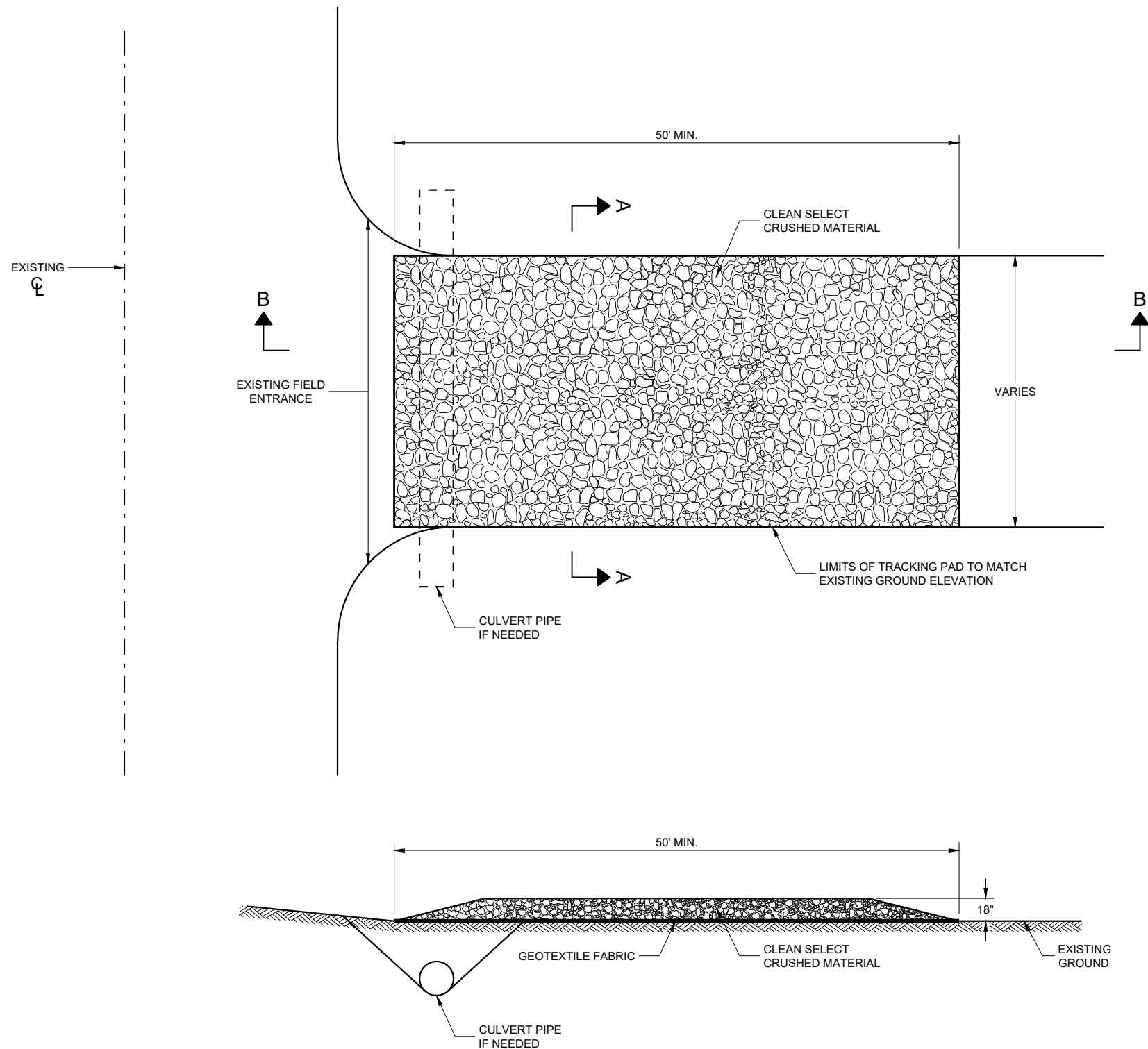
INLET PROTECTION, TYPE D

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

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 100
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



SECTION B - 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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

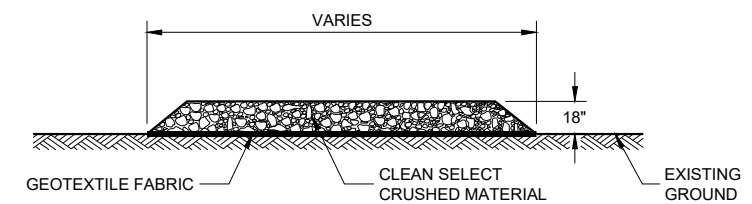
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



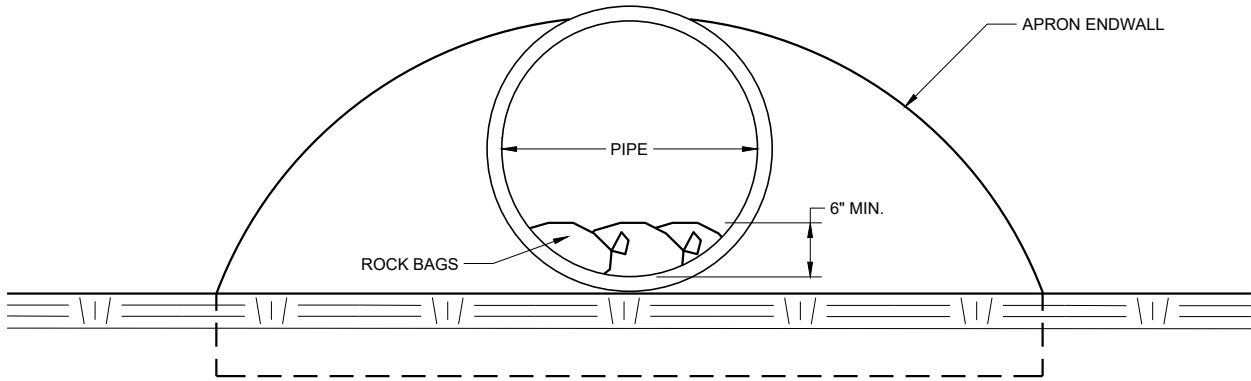
SECTION A - A

TRACKING PAD

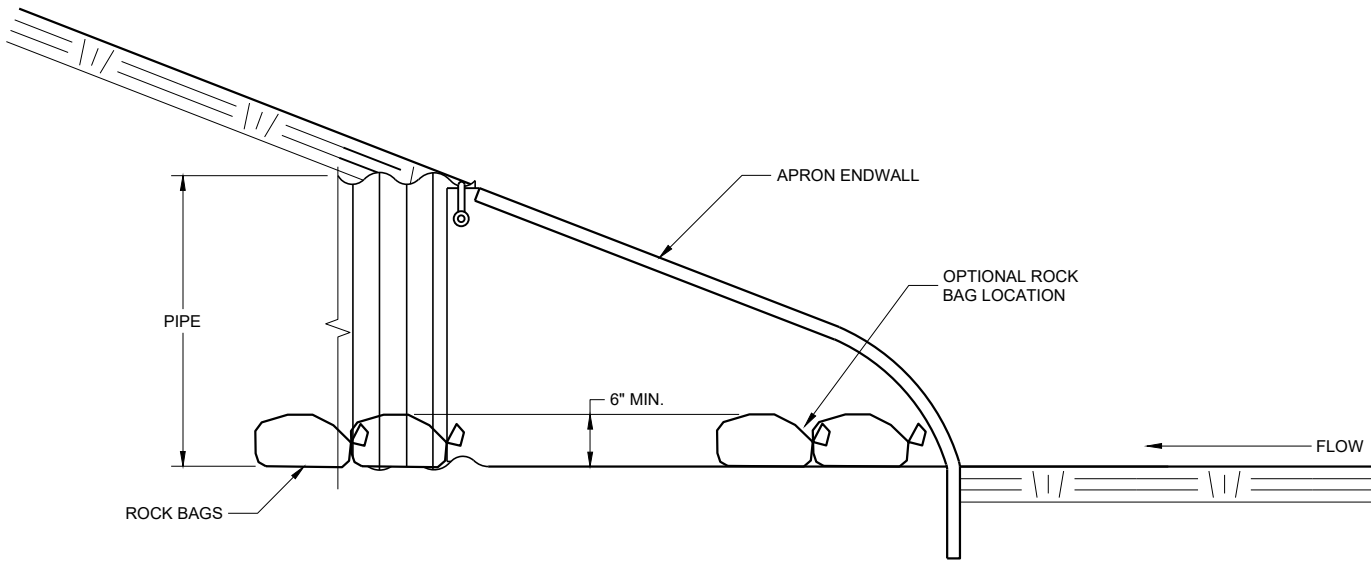
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVE
ENGINEER 101

FHWA



END VIEW



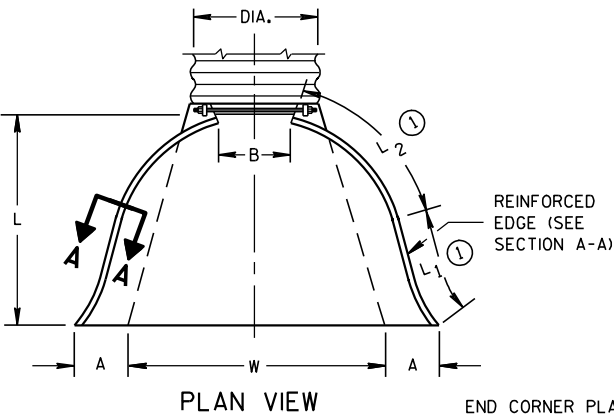
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

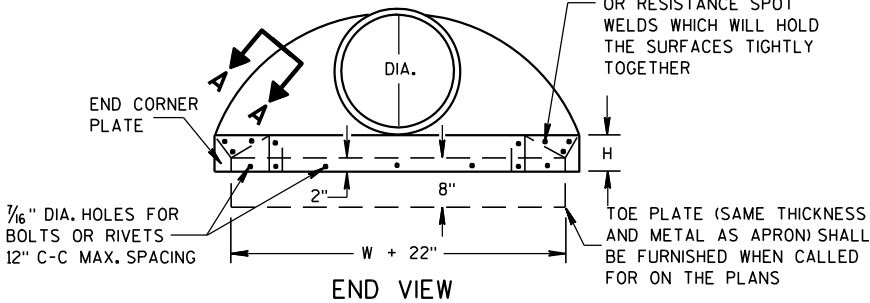
CULVERT PIPE CHECK			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
May 2019	/S/ Daniel Schave		
DATE	EROSION CONTROL ENGI	102	
FHWA			

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1½")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17½	24	2½ to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21¾	30	2½ to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28¼	36	2½ to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29⅝	42	2½ to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37¼	48	2½ to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52¼	60	2½ to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59¾	72	2½ to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75⅝	84	2½ to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2¼ to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85½	102	2¼ to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	—	132	1½ to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1½ to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1½ to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1½ to 1	3 Pc.	

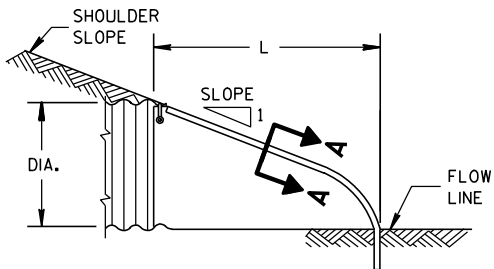
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



REINFORCED
EDGE (SEE
SECTION A-A)

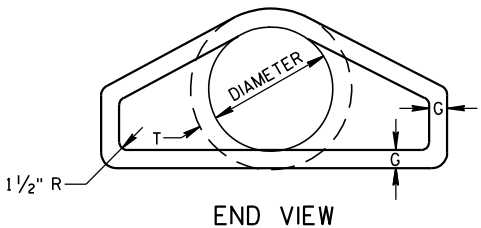
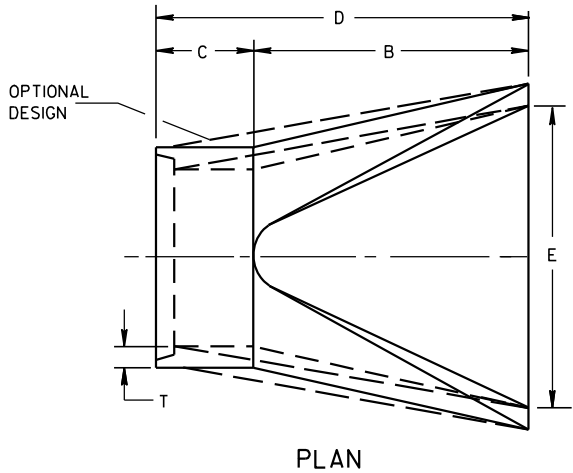


SIDE ELEVATION
METAL ENDWALLS

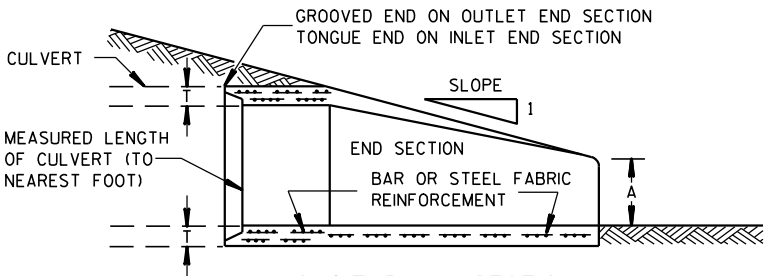


REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43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

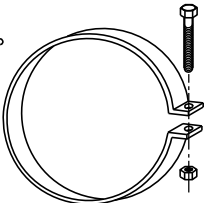
*MINIMUM
**MAXIMUM



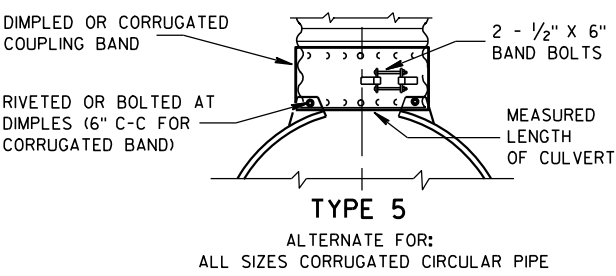
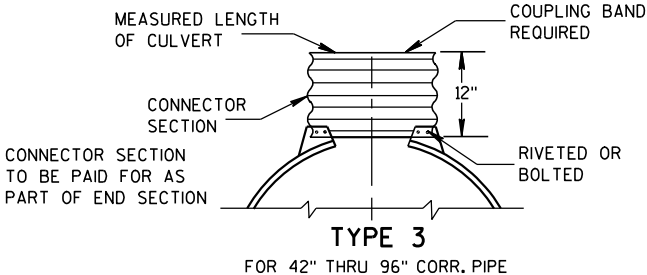
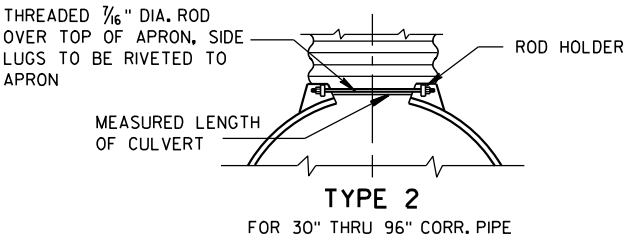
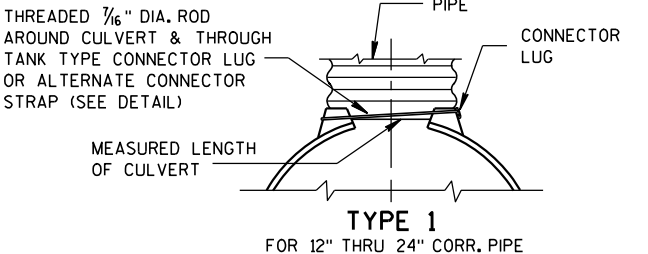
LONGITUDINAL SECTION
CONCRETE ENDWALLS



1" WIDE, 12 GA. (0.109"
THICK) GALVANIZED STRAP
WITH STANDARD 6" X 1/2"
BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



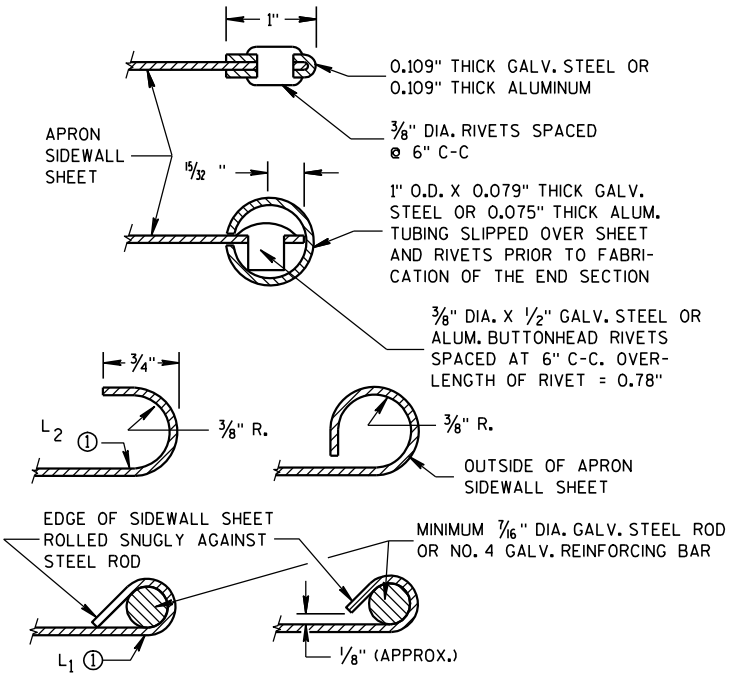
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

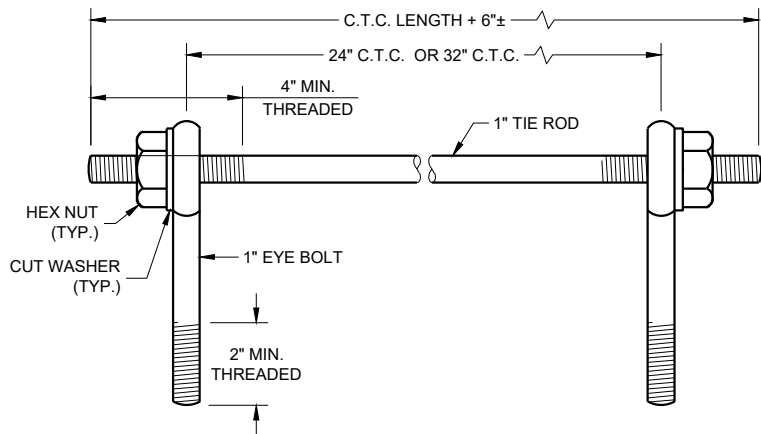
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

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

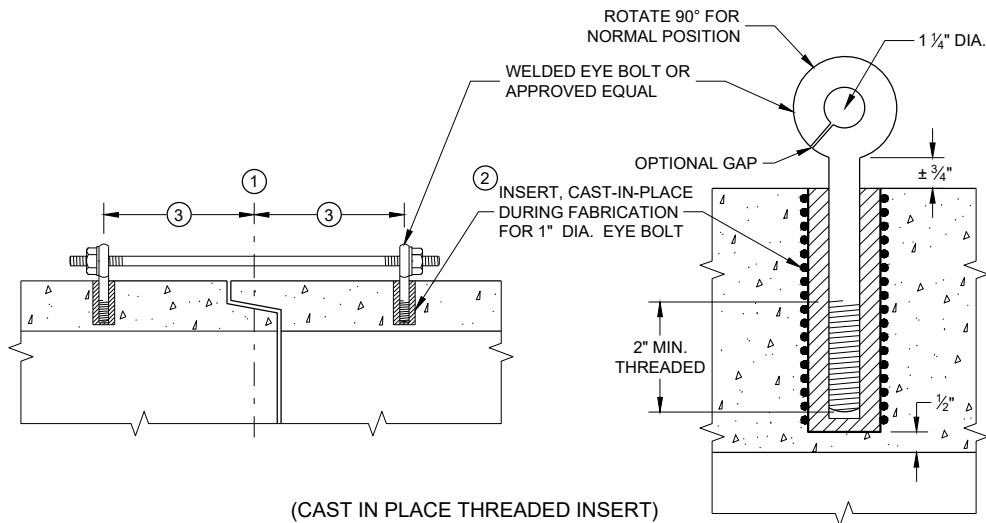
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 11/30/94 DATE	/S/ Rory L. Rhin... CHIEF ROADWAY DEVELOP	103	NEER
FHWA			



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

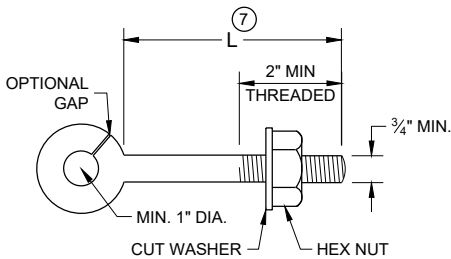
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

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

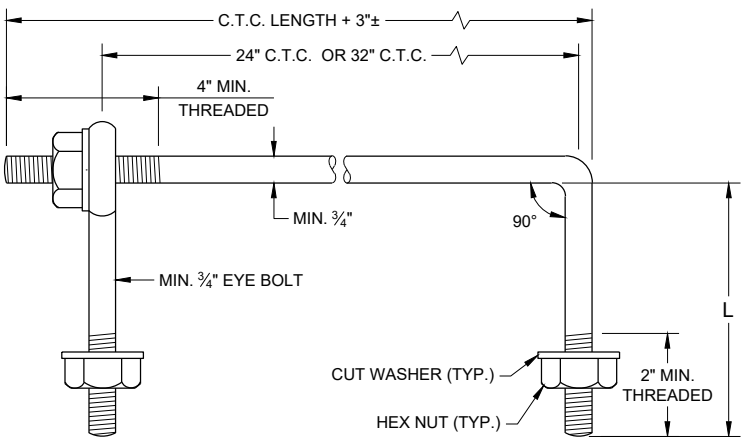
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

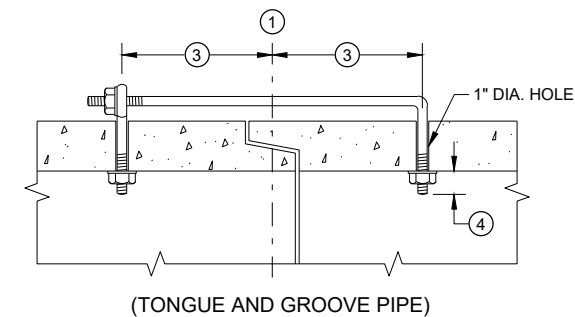


EYE BOLT 7

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



EYE BOLT AND TIE ROD

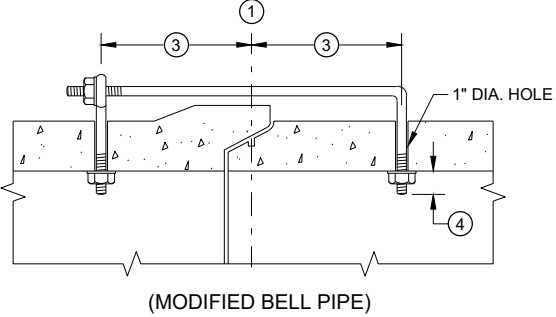


(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION

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

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

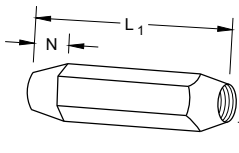


(MODIFIED BELL PIPE)

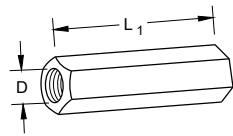
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

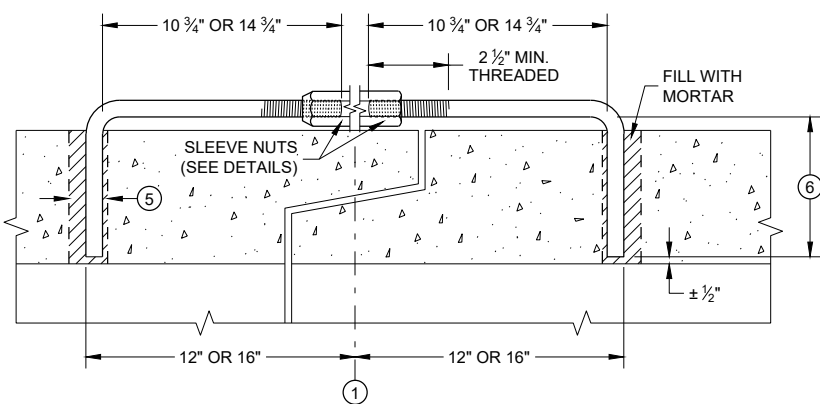


TAPERED



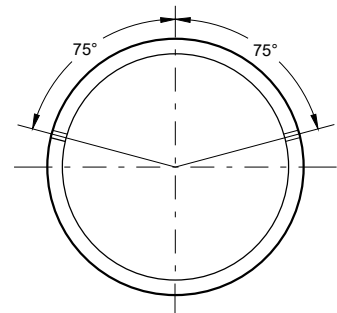
PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS



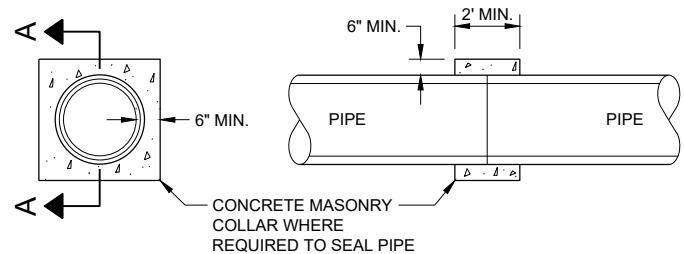
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



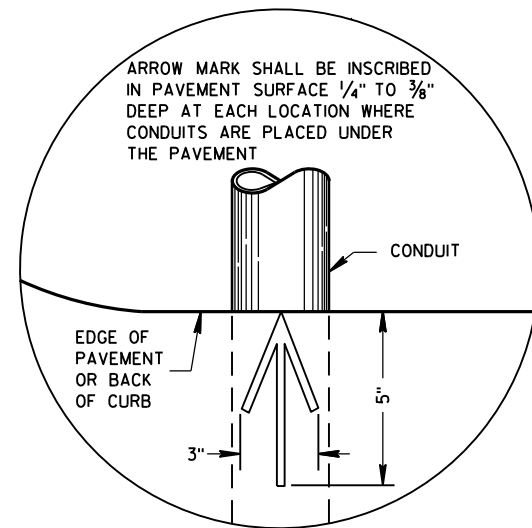
SECTION A - A

CONCRETE COLLAR DETAIL

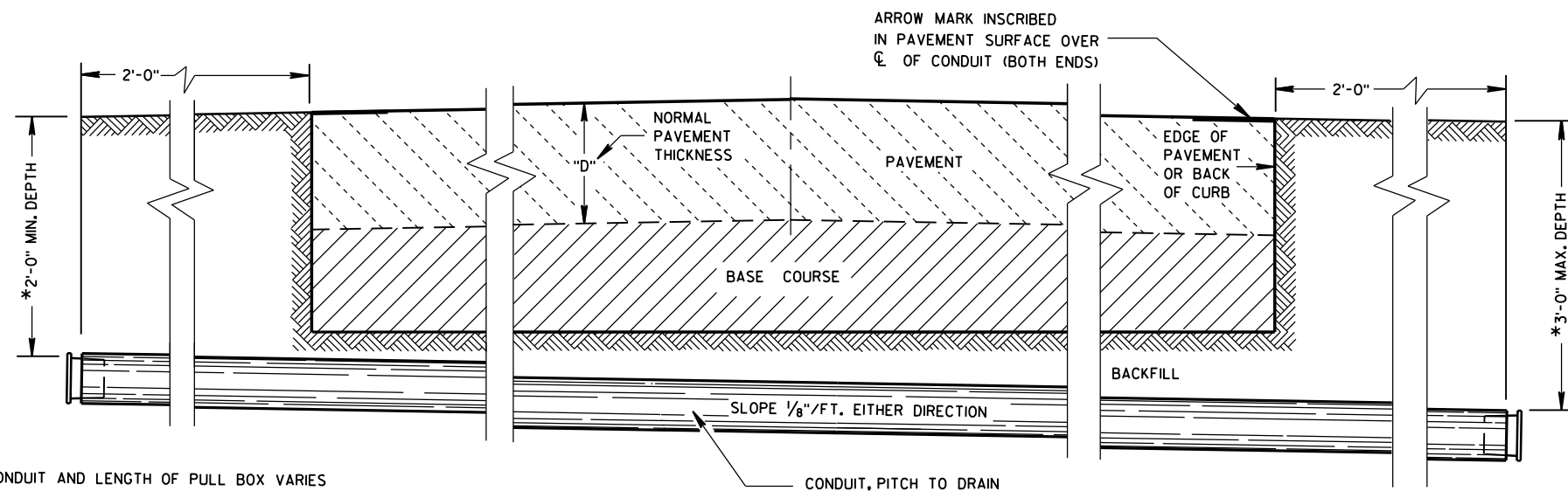
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 104
FHWA



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

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.

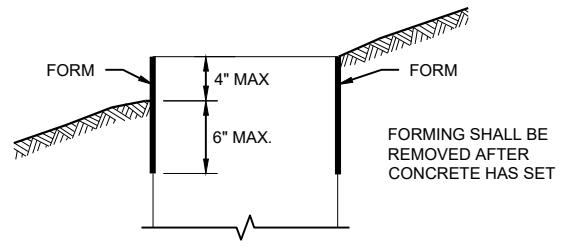
ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 105
FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



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

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 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.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X 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 NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC 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 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES 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 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

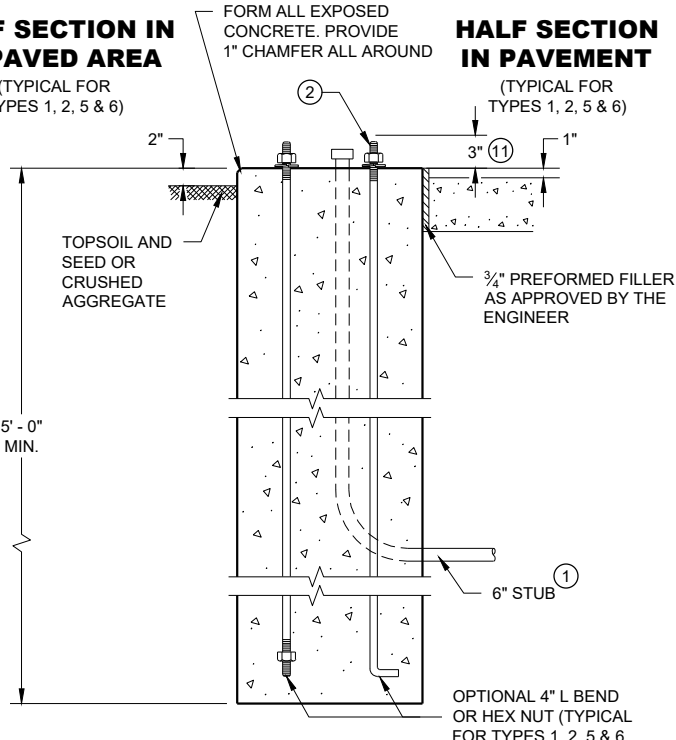
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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).

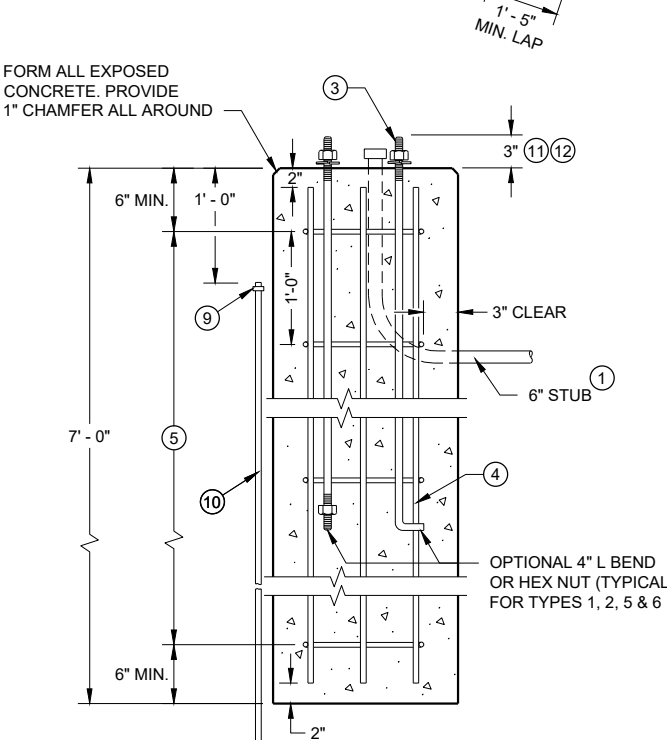
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF 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.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



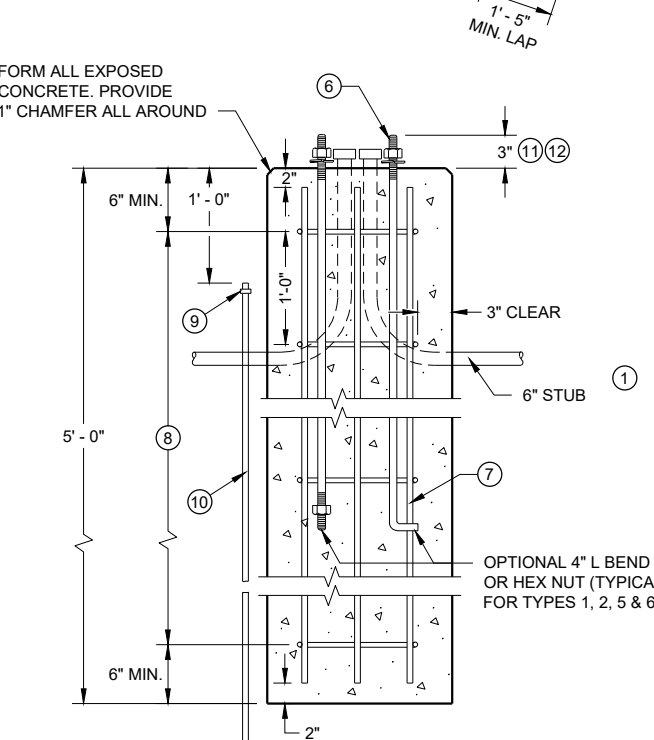
TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2

CONCRETE BASES



TYPE 5 & 6

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 531.2.2 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.

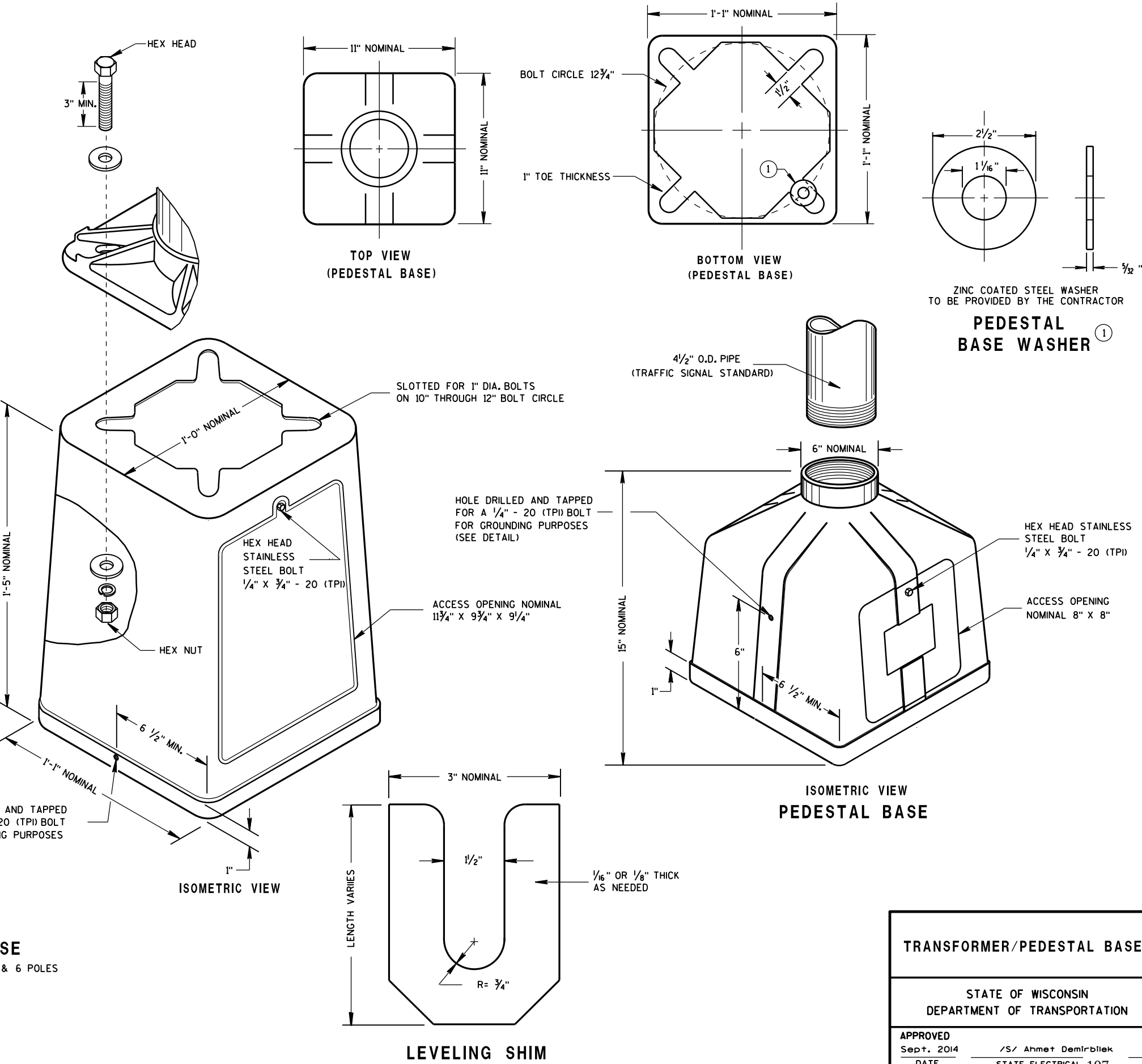
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

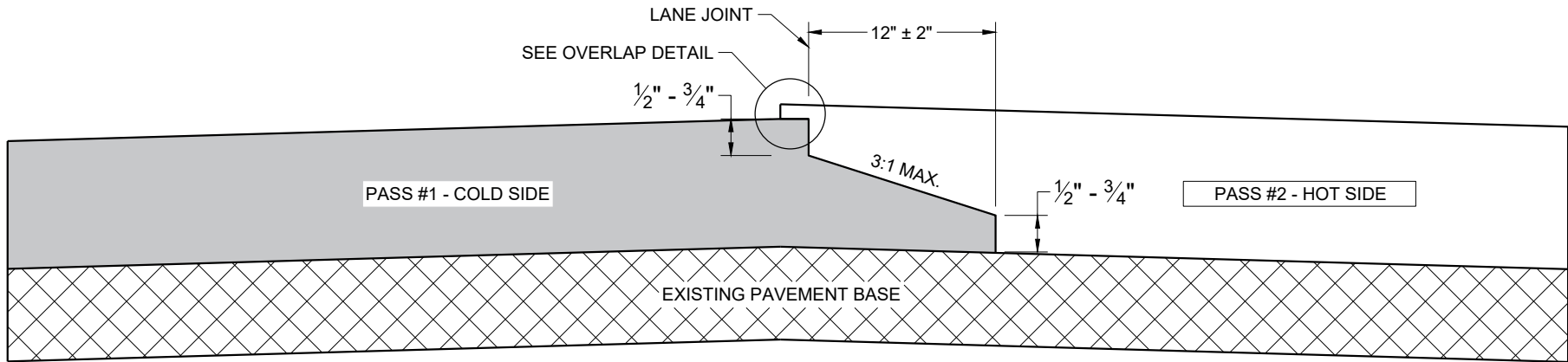
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



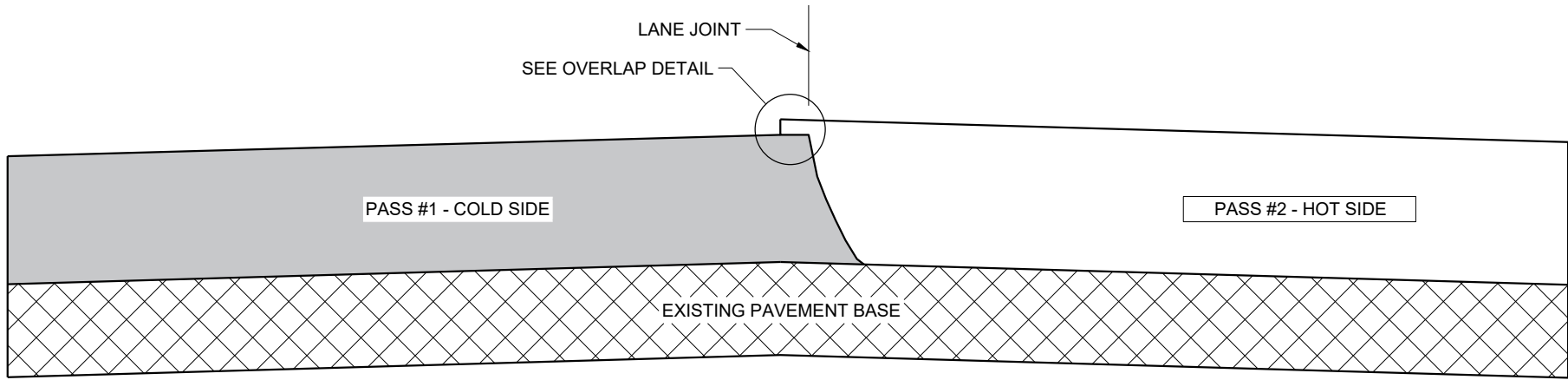
TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

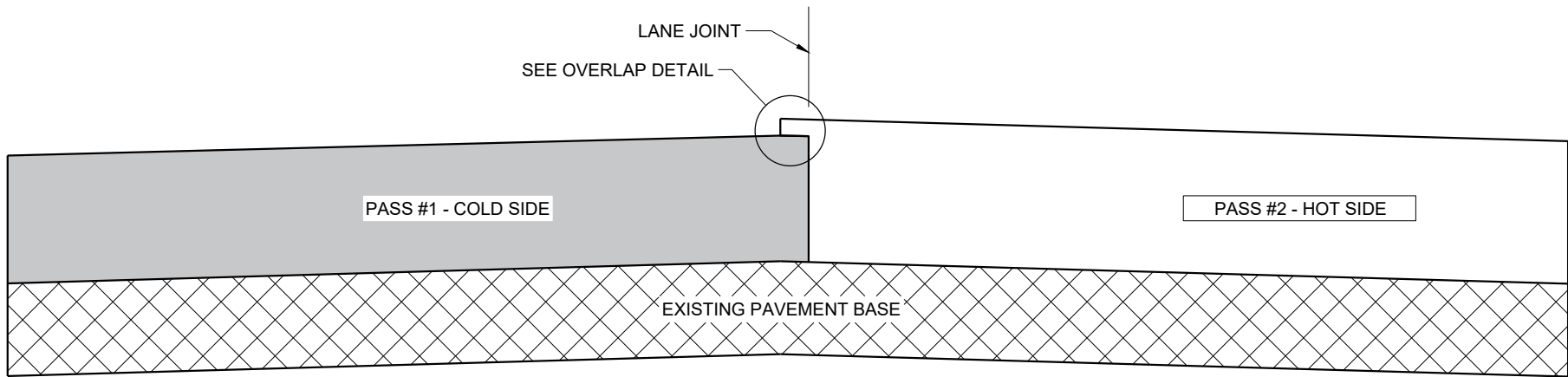
APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 107
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

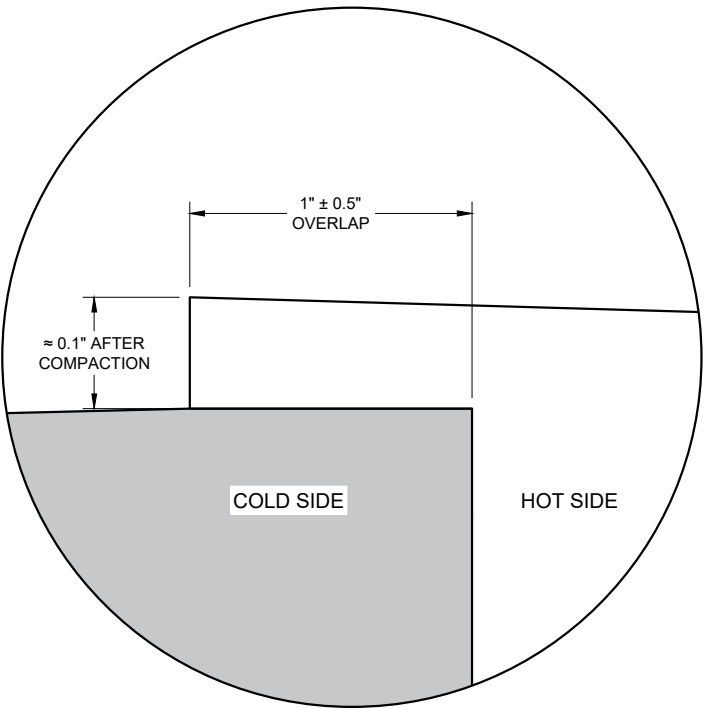
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



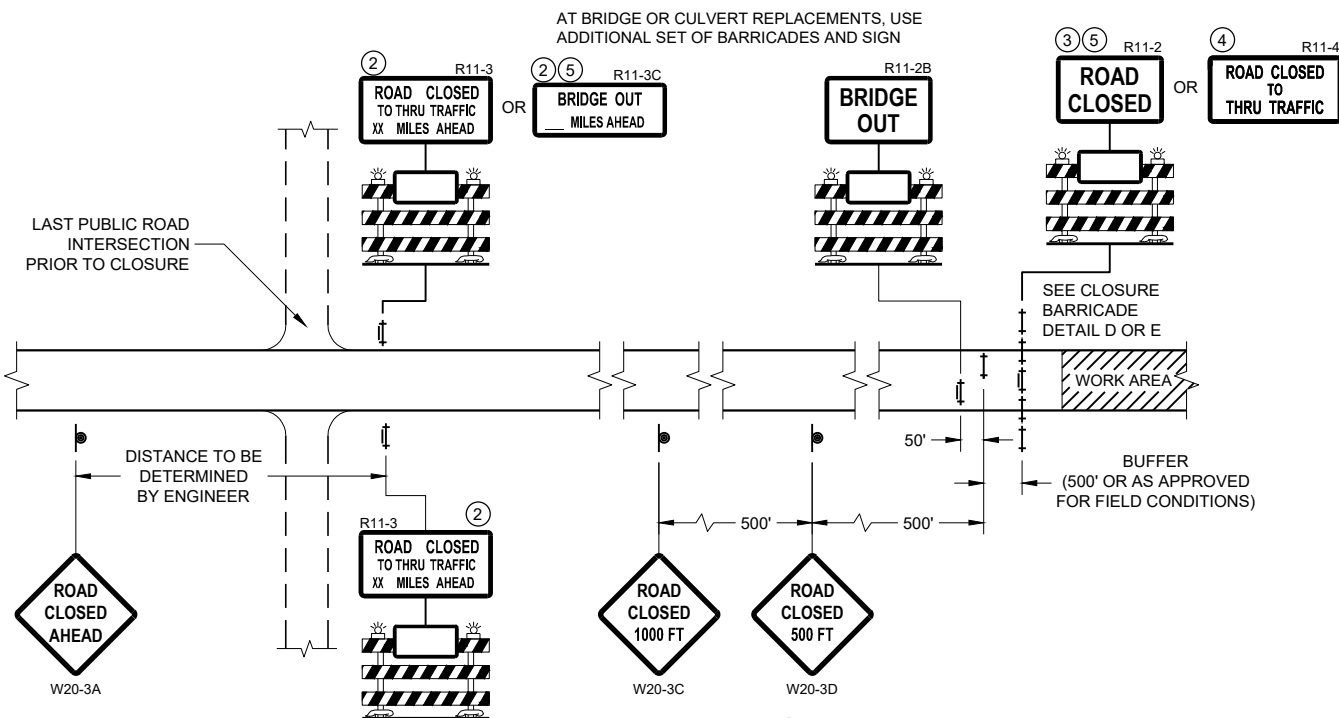
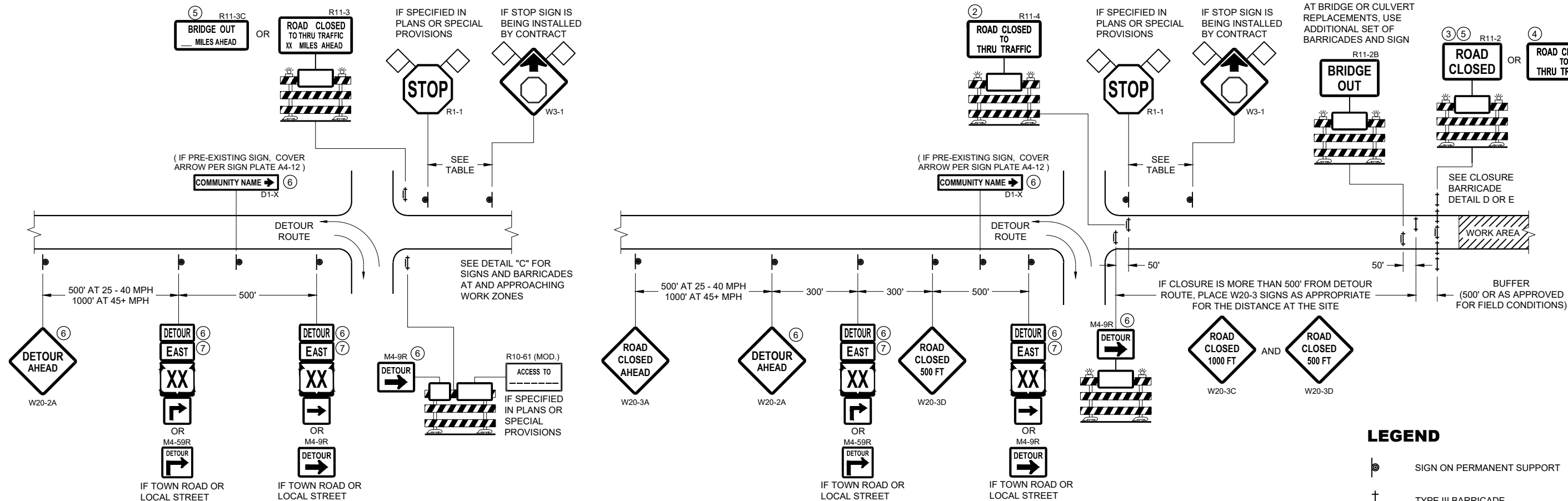
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 108

FHWA



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

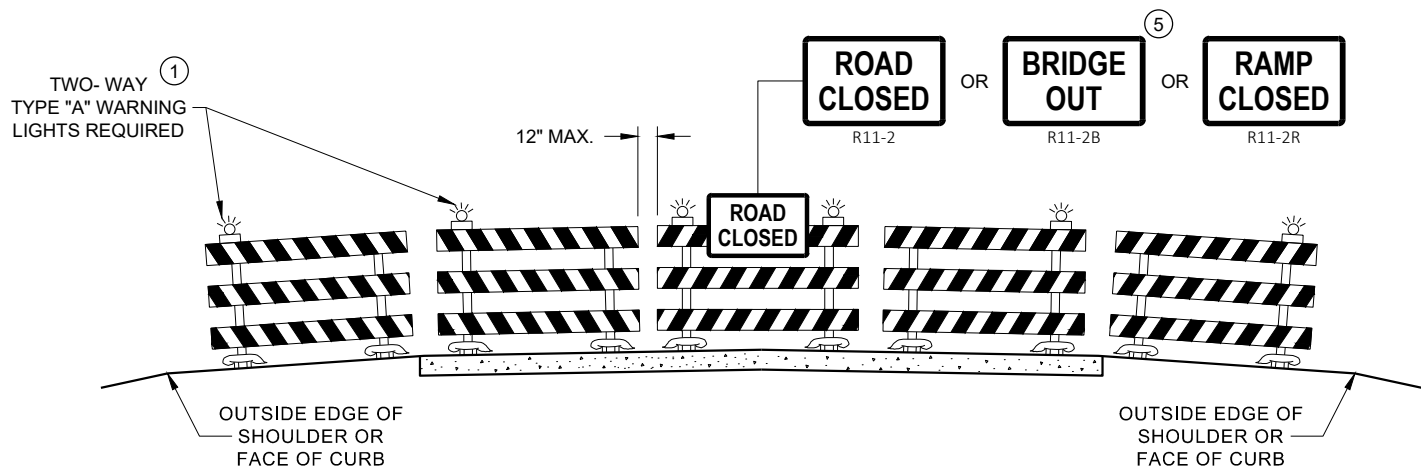
SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

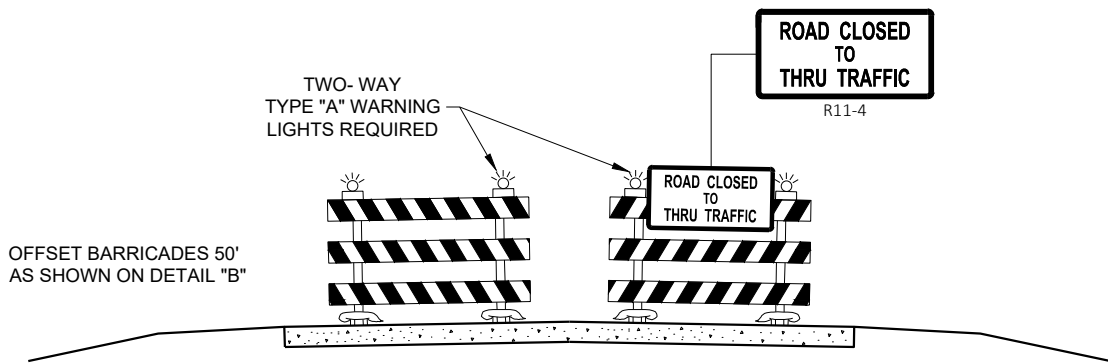
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 109

FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

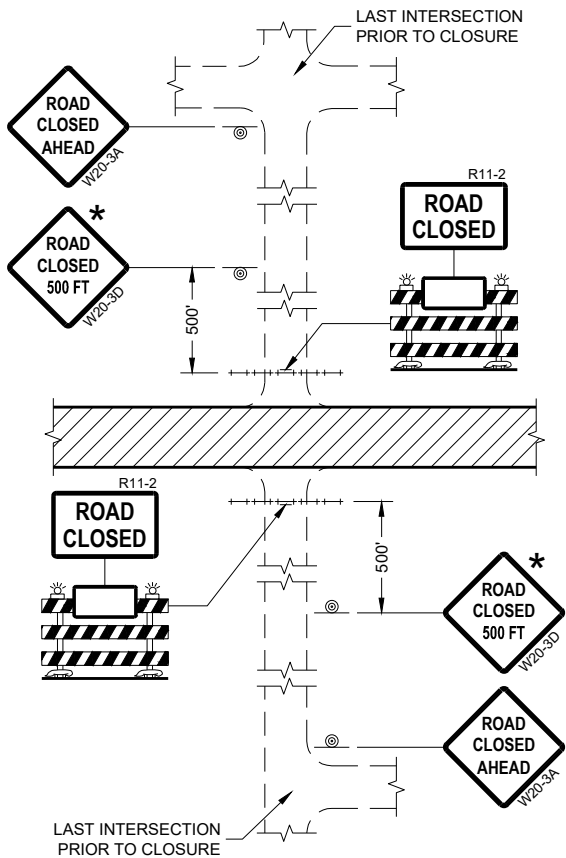
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

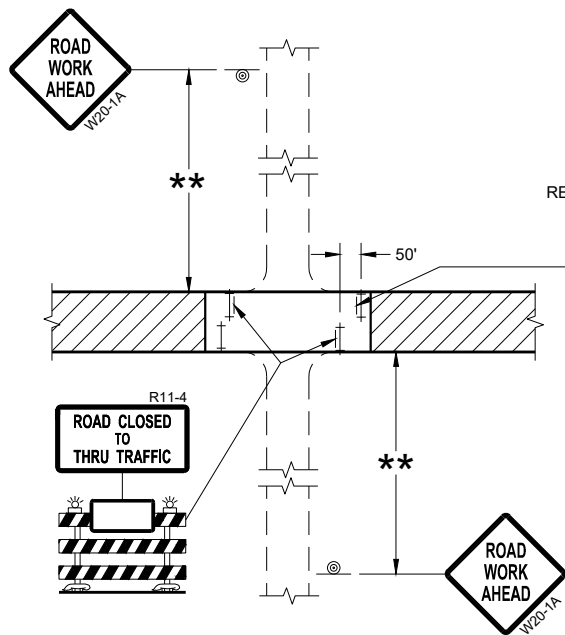
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 110

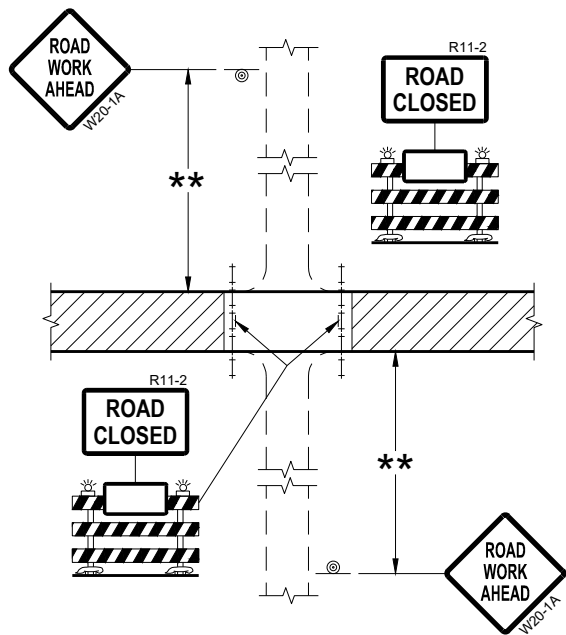
FHWA



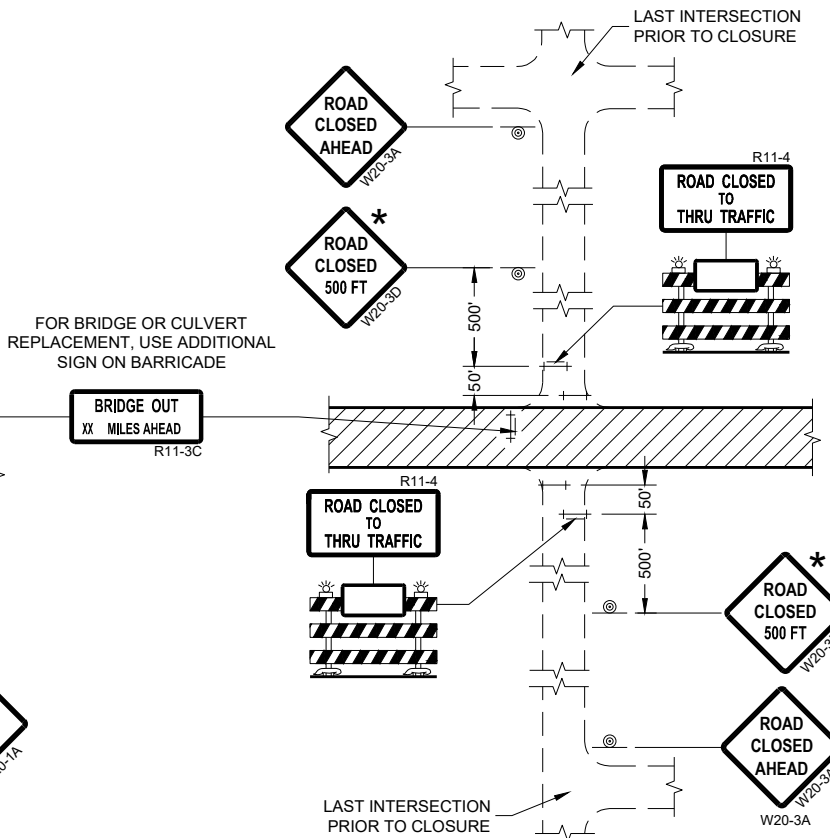
DETAIL 1
(NO ACCESS TO PROJECT)



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



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

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

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

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

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

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

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 111

FHWA

GENERAL NOTES

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

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

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

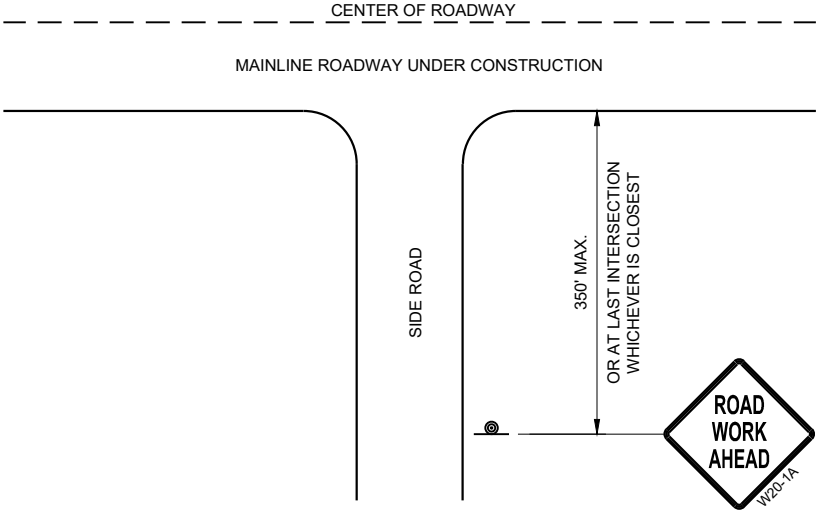
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

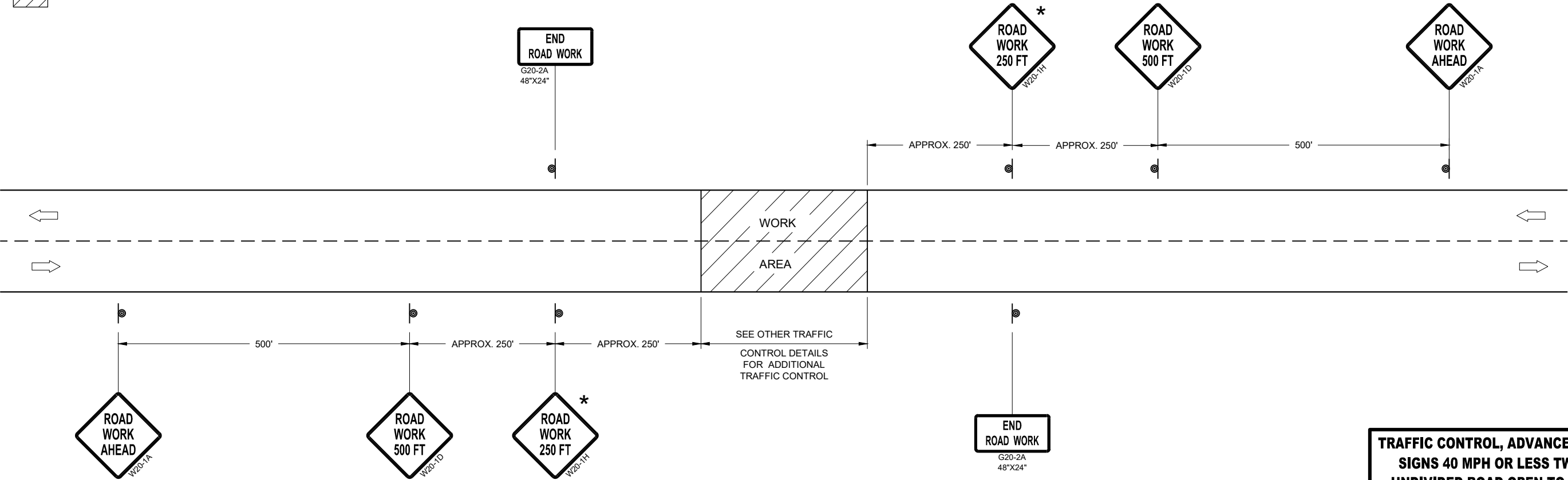
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

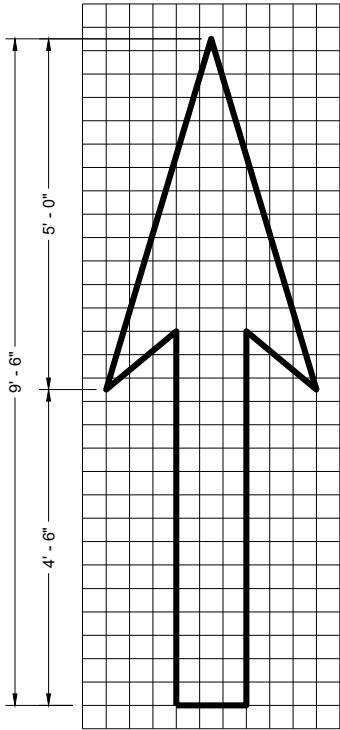


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

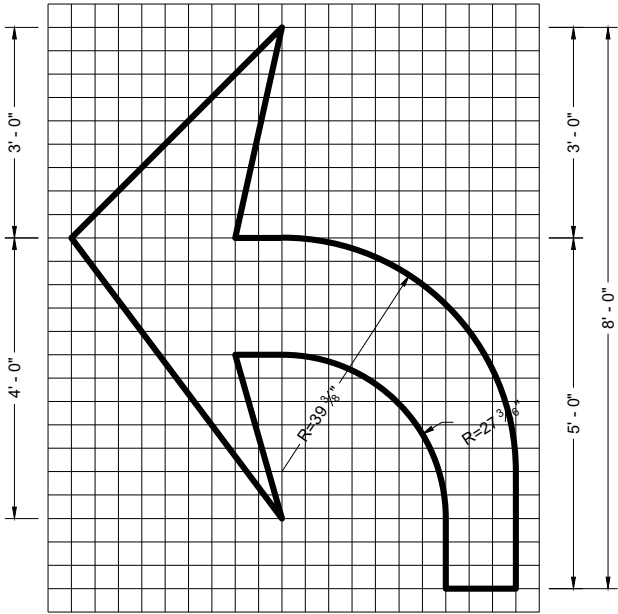
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

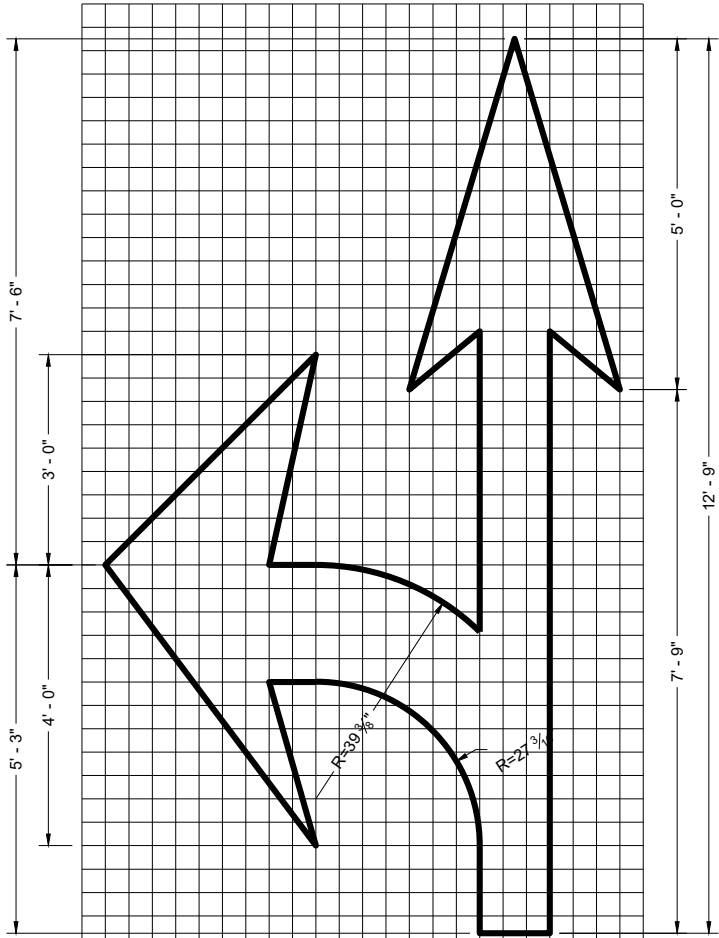
APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 112
FHWA



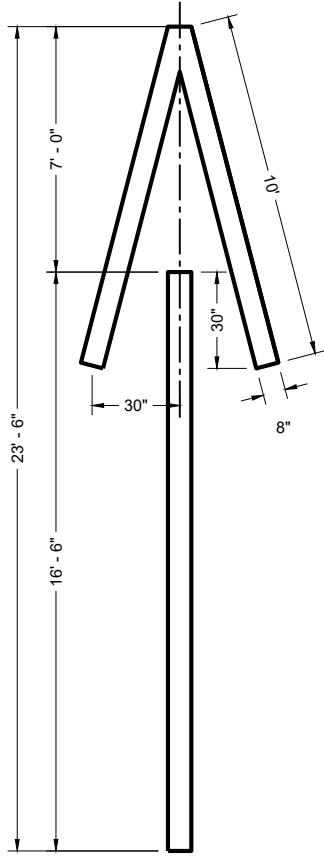
TYPE 1



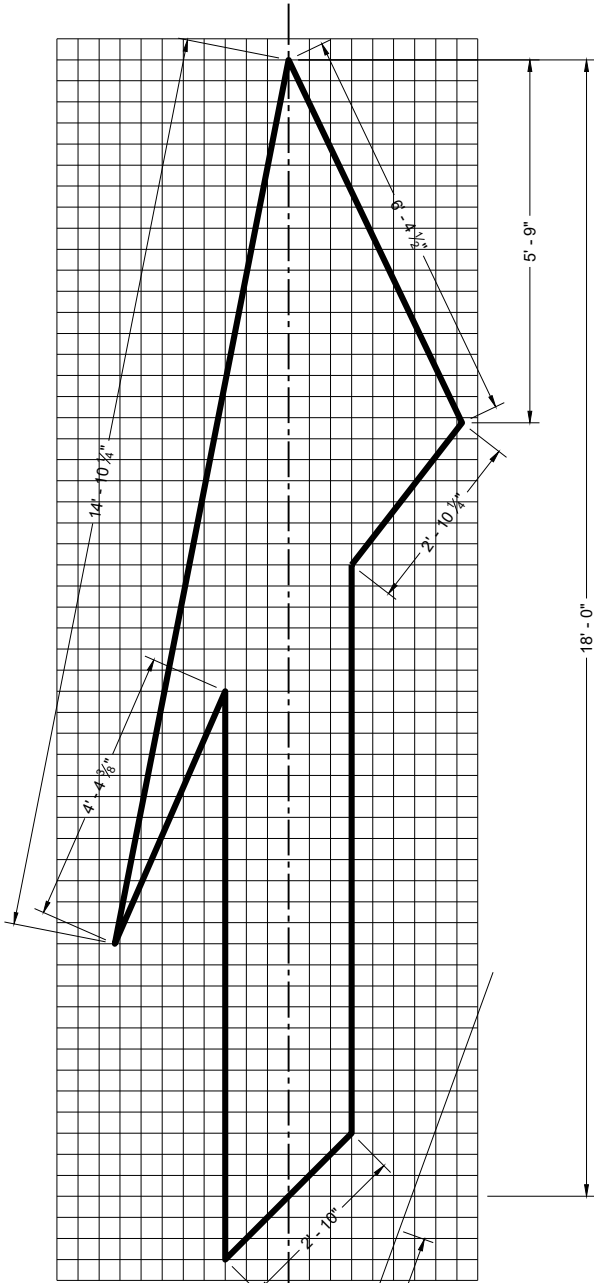
TYPE 2



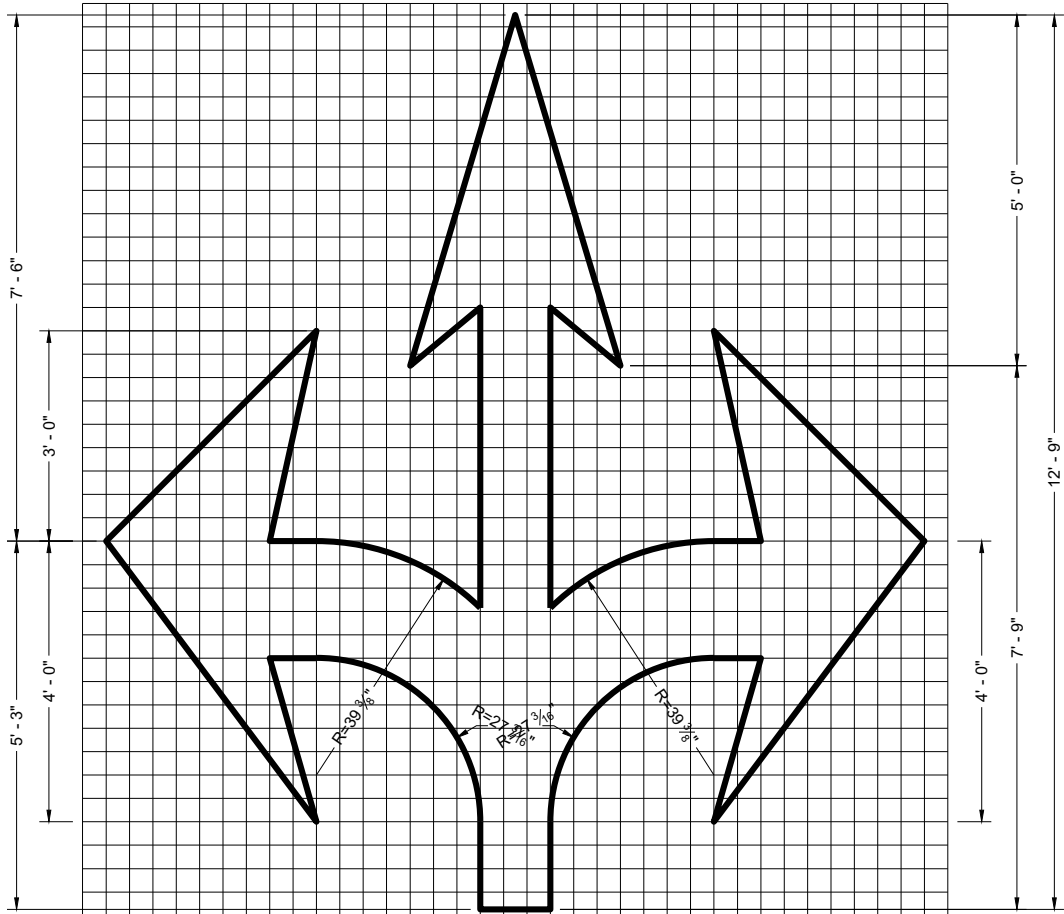
TYPE 3



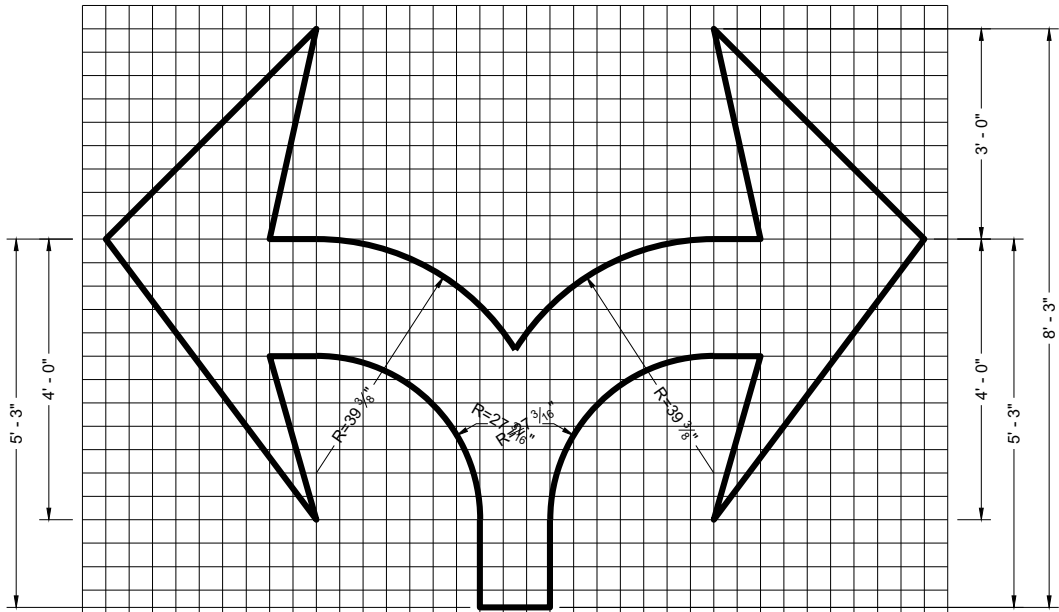
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

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.

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 /S/ Jeannie Silver
DATE STATE SIGNING AND MARKING ENGINEER

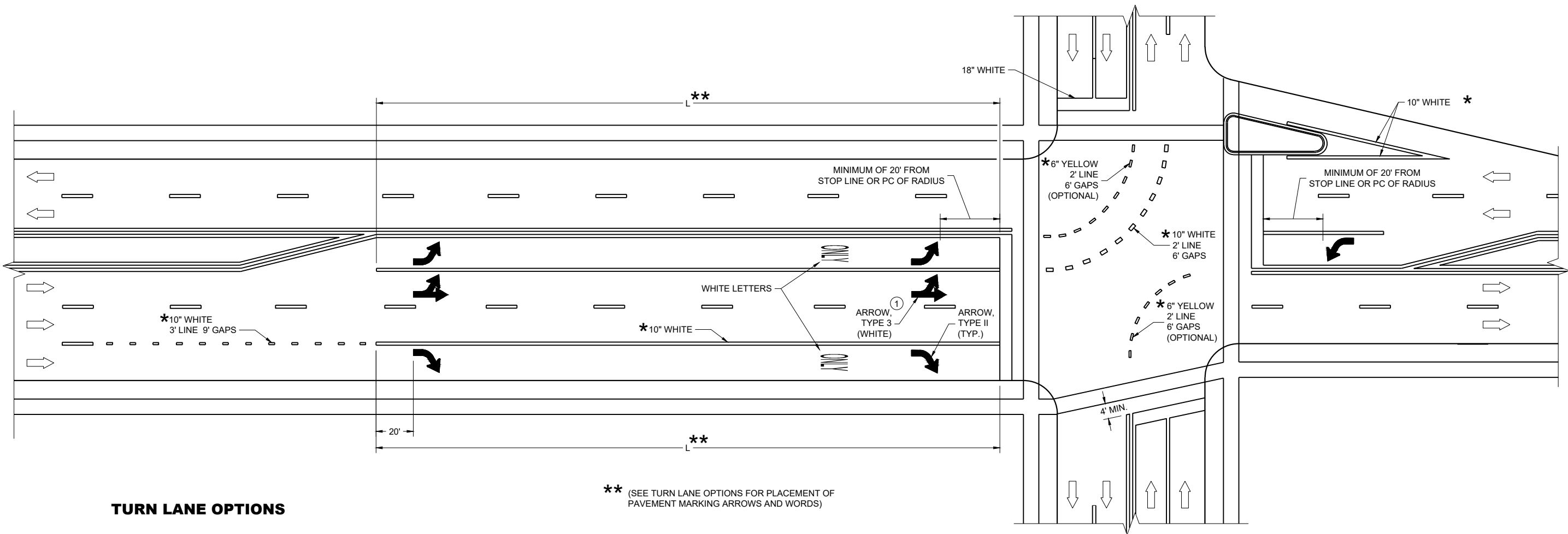
FHWA

SDD 15C08-24a



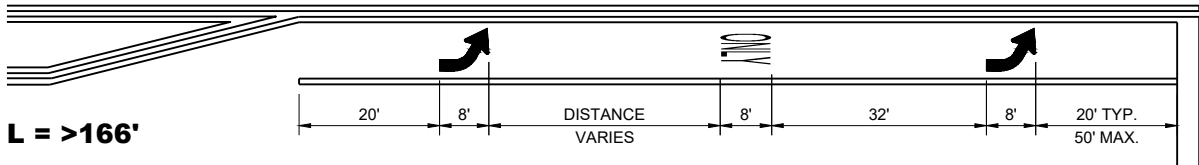
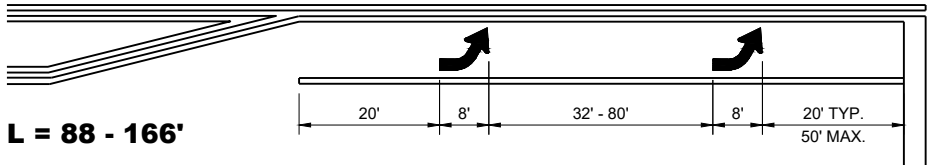
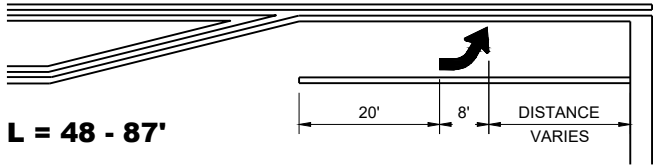
114

SDD 15C08-24a



TURN LANE OPTIONS

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



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

GENERAL NOTES

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

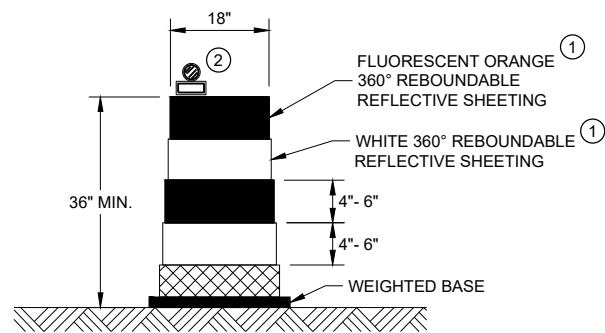
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

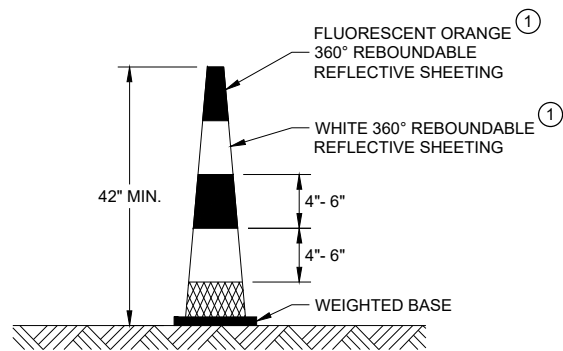
PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



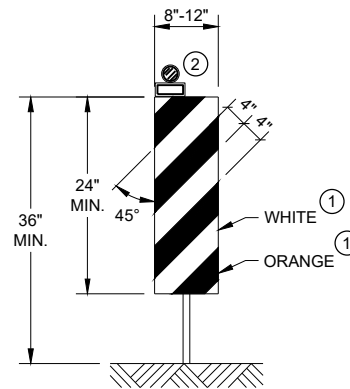
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



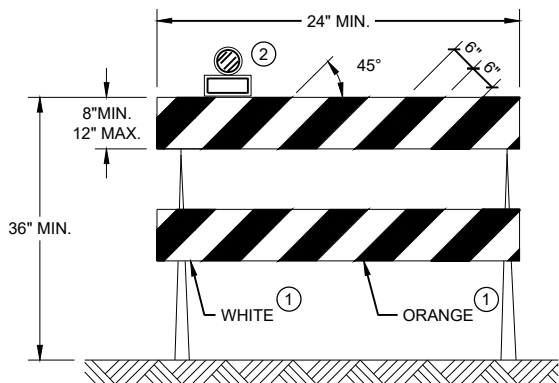
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



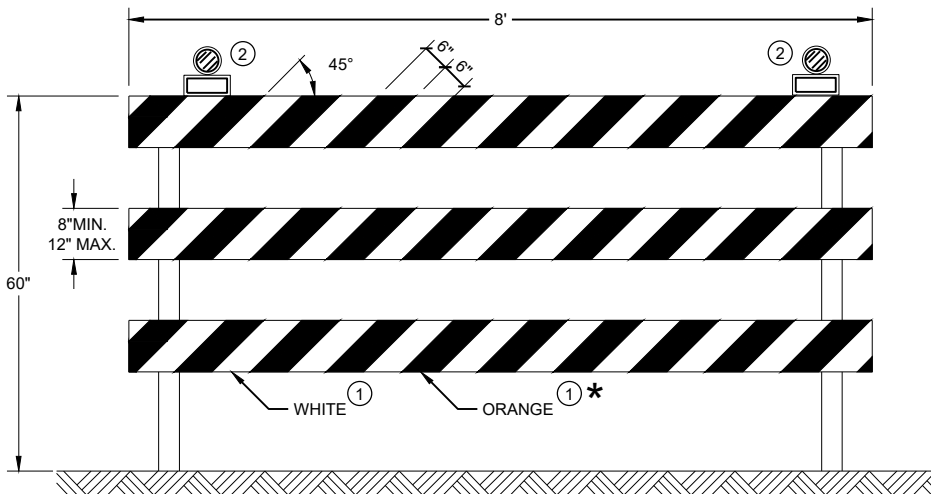
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

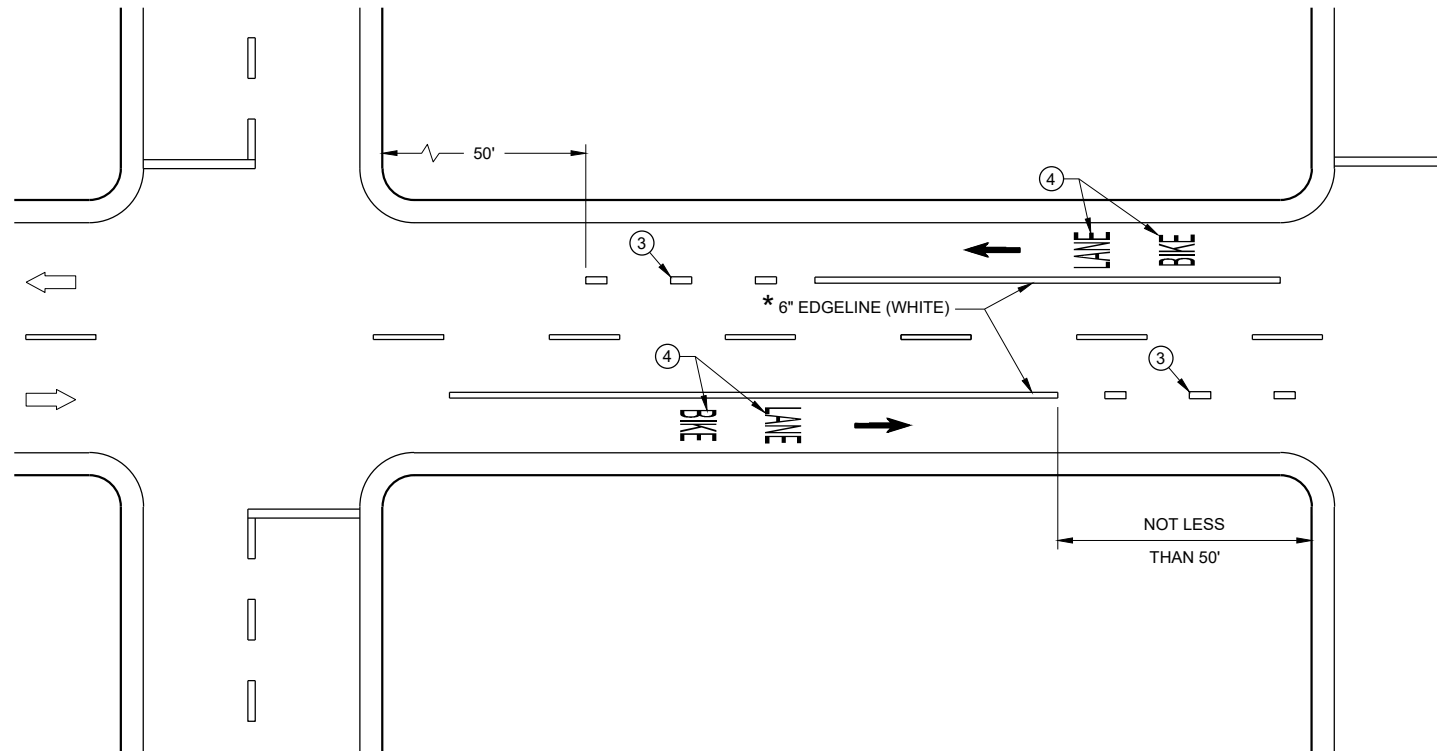
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

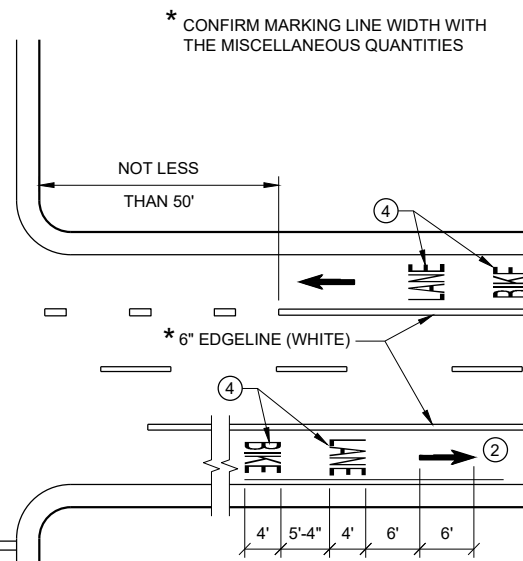
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 116

FHWA

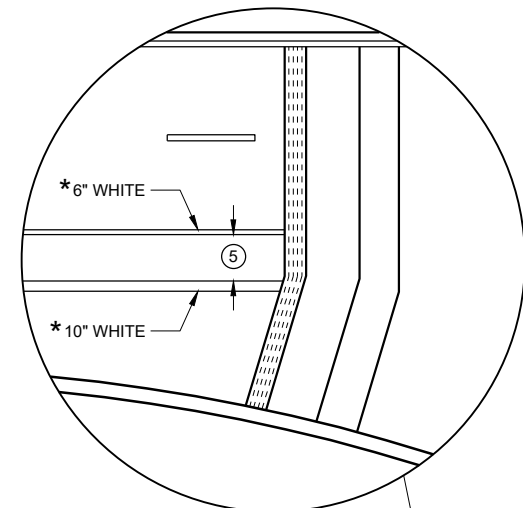


DESIGNATED BIKE LANE - NO PARKING

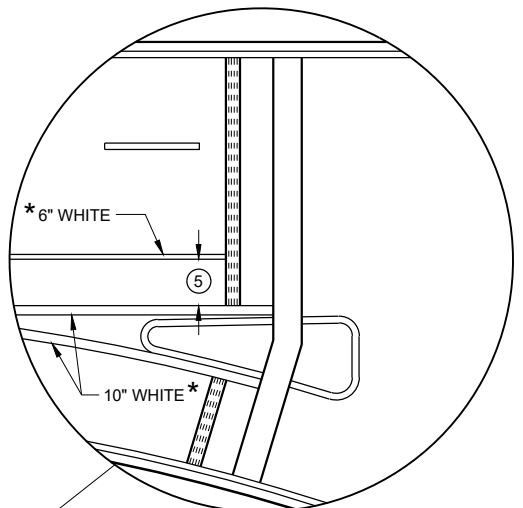


* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

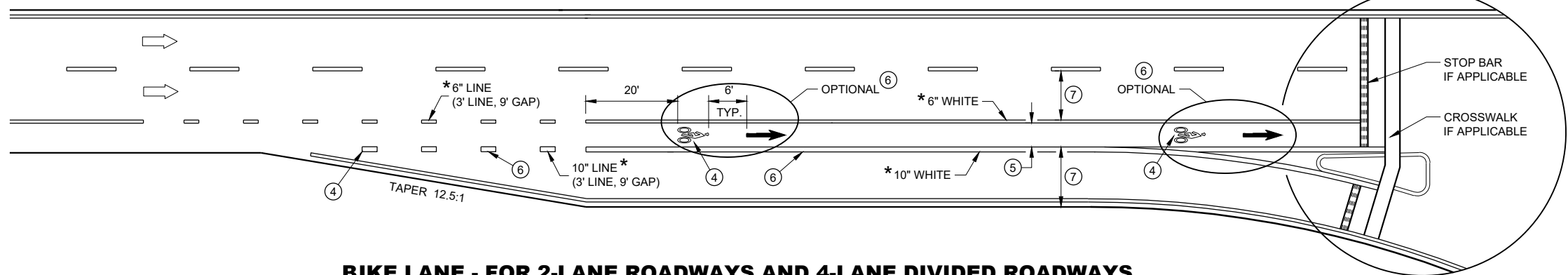
- GENERAL NOTES**
- ① DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
 - ② MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
 - ③ DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
 - ④ BIKE SYMBOLS OR WORDS MAY BE USED.
 - ⑤ BIKE ACCOMMODATION IS TYPICAL 5 FEET WIDE AND MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT ≥ 45 MPH.
 - ⑥ OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FOOT WIDE TURN LANE).
 - ⑦ REFER TO CONTRACT PLANS FOR LANE WIDTH.
- DIRECTION OF TRAVEL



4 LANE DIVIDED WITHOUT ISLAND

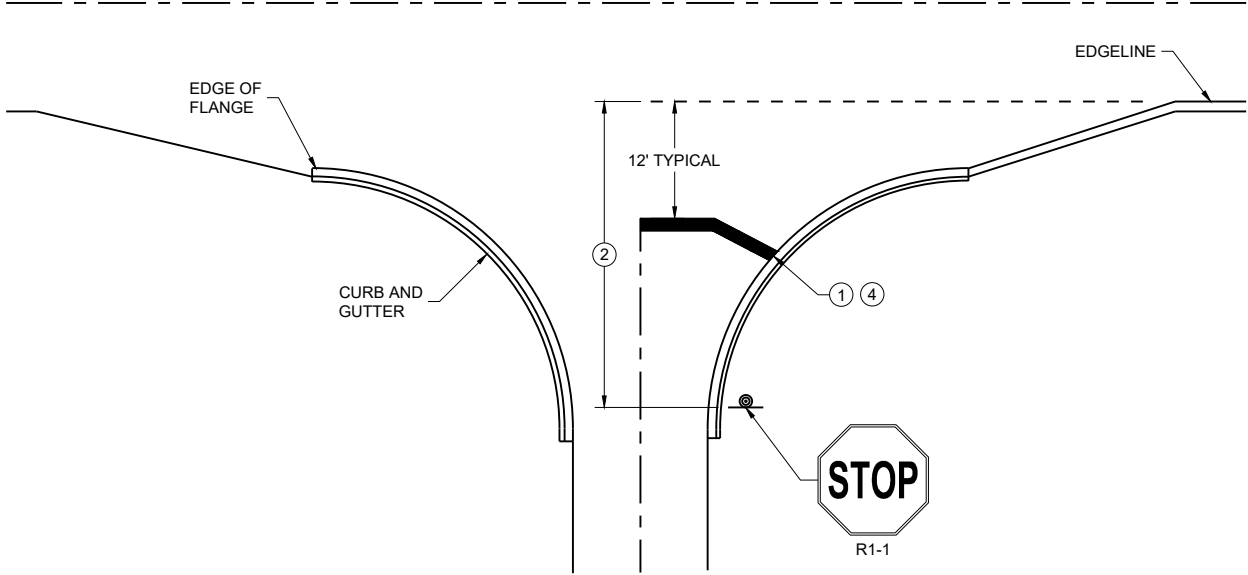


4 LANE DIVIDED WITH ISLAND

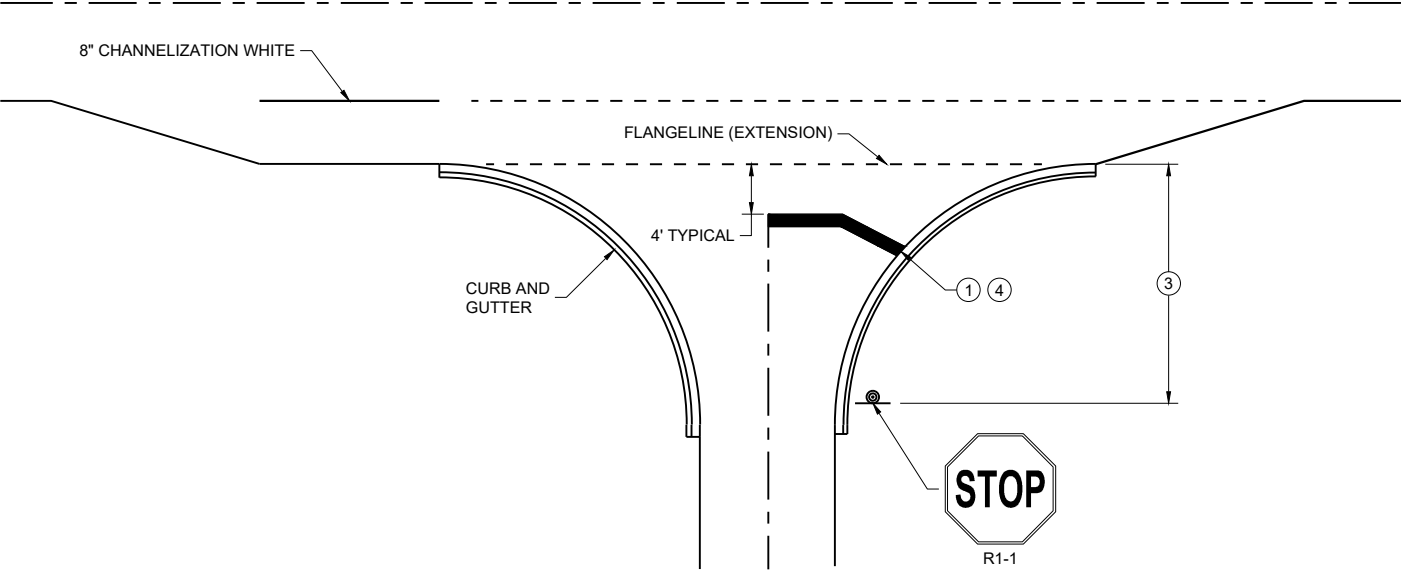


BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS
(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

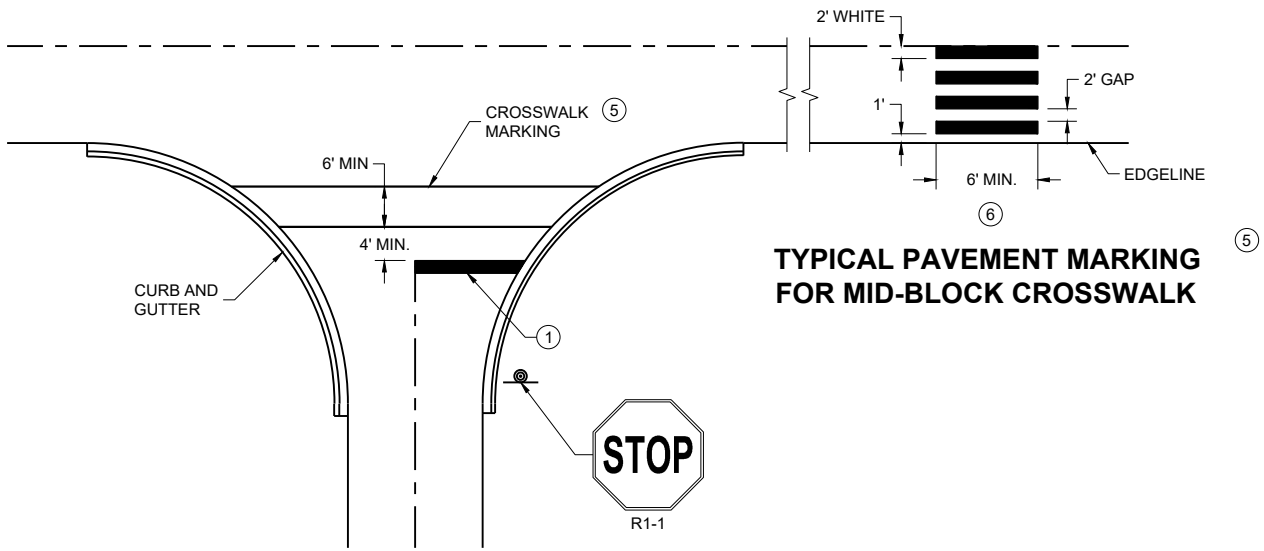
BIKE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Matthew Rauch STATE SIGNING AND MAP ENGINEER
FHWA 117	



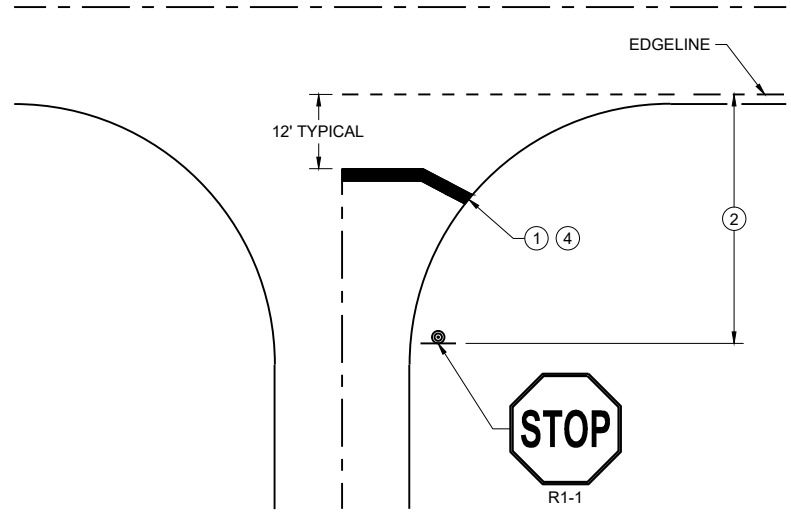
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS 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 REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- ⑥ POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER
FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

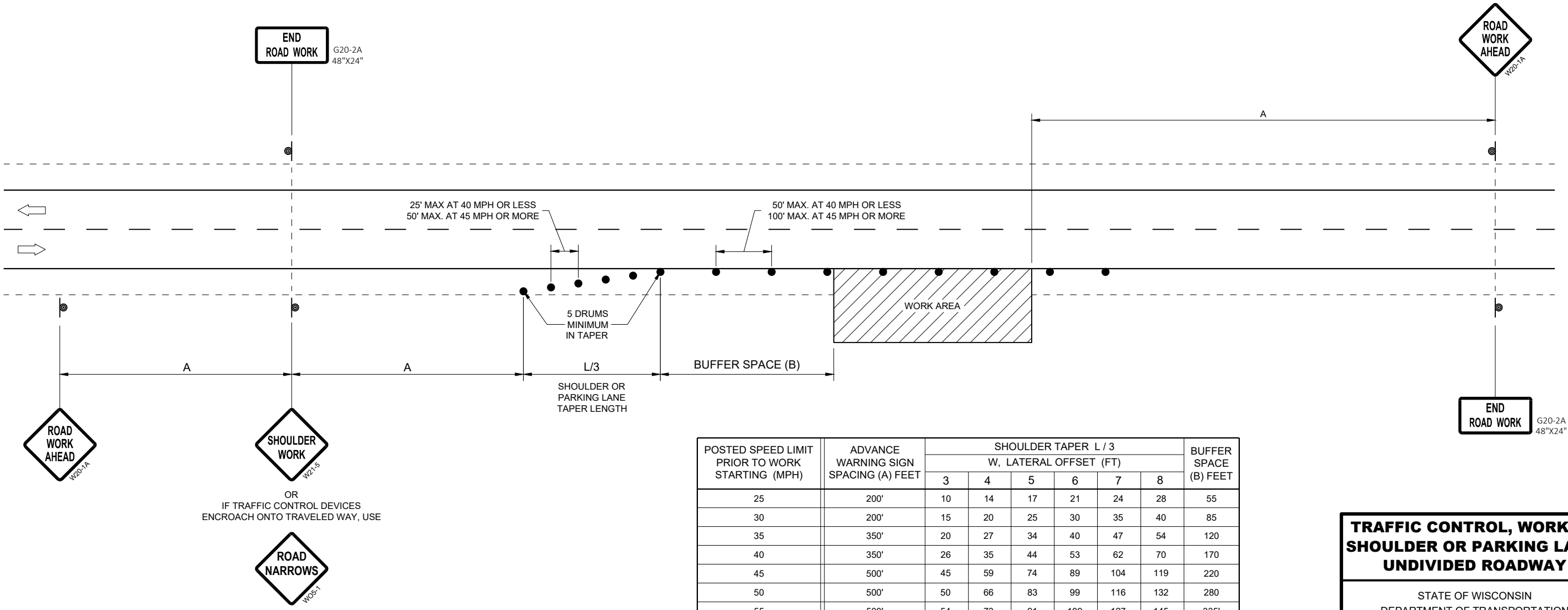
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



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

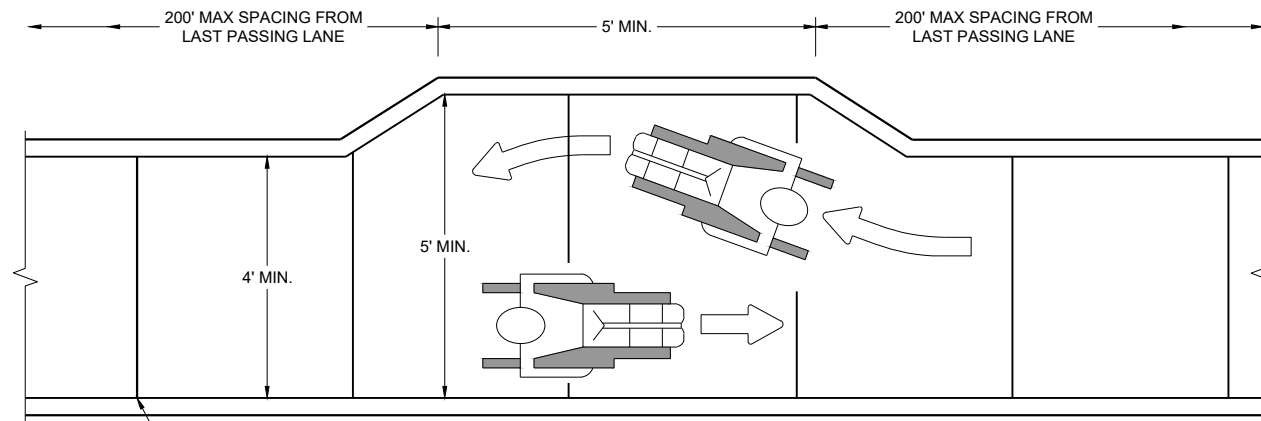
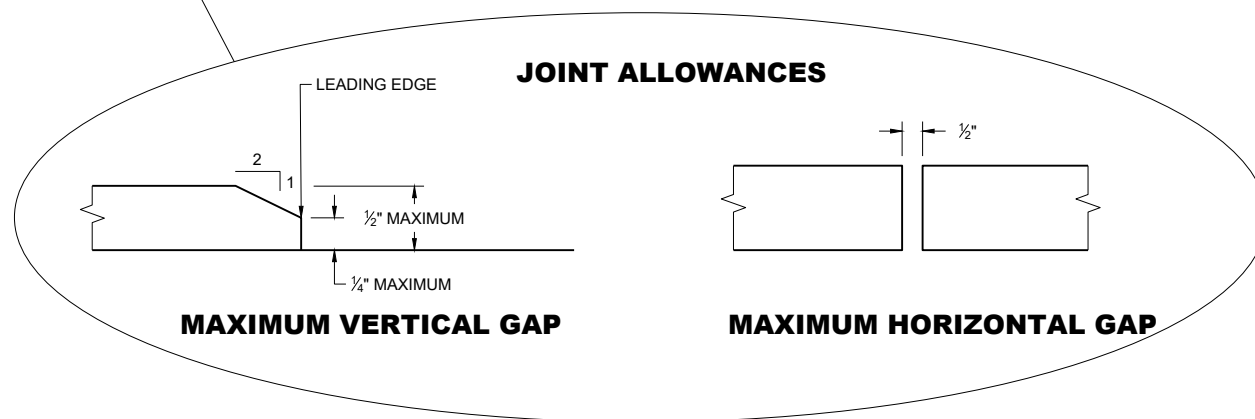
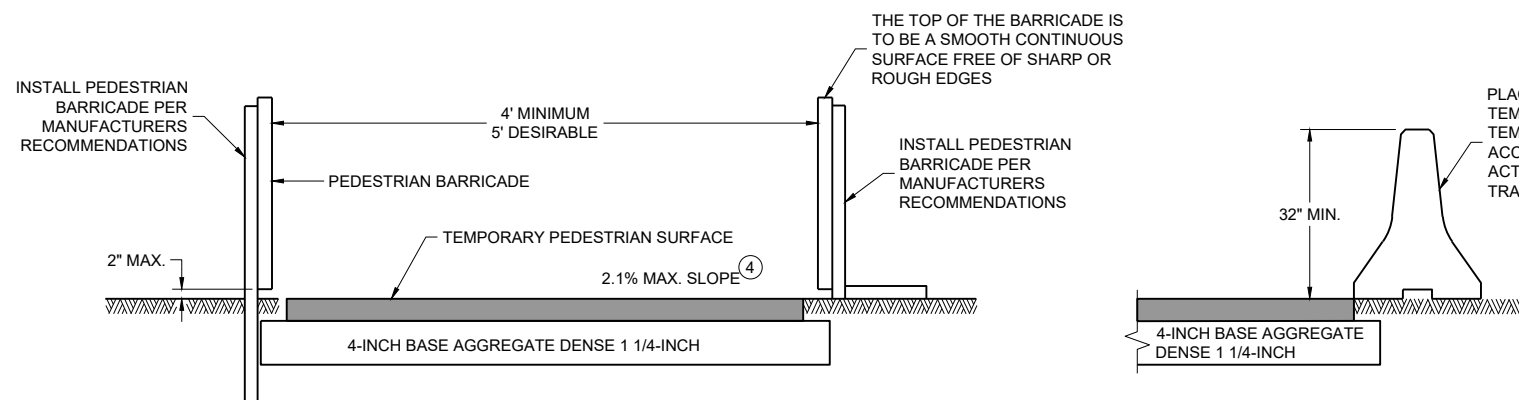
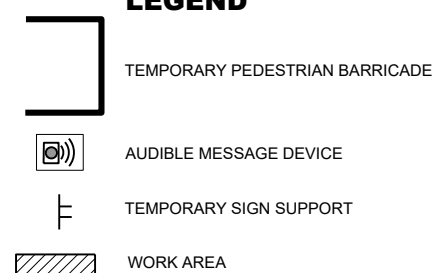
TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE T SAFETY ENGINEER 119
FHWA

SDD 15D28 - 04

SDD 15D28 - 04

**NARROW SIDEWALK PASSING DETAIL****MAXIMUM VERTICAL GAP****MAXIMUM HORIZONTAL GAP****TEMPORARY PEDESTRIAN ACCESS****LEGEND**

TEMPORARY PEDESTRIAN BARRICADE

AUDIBLE MESSAGE DEVICE

TEMPORARY SIGN SUPPORT

WORK AREA

GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

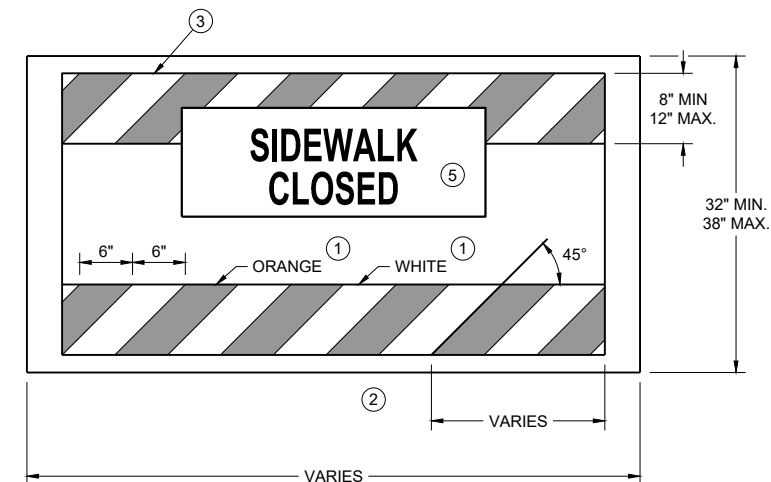
② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

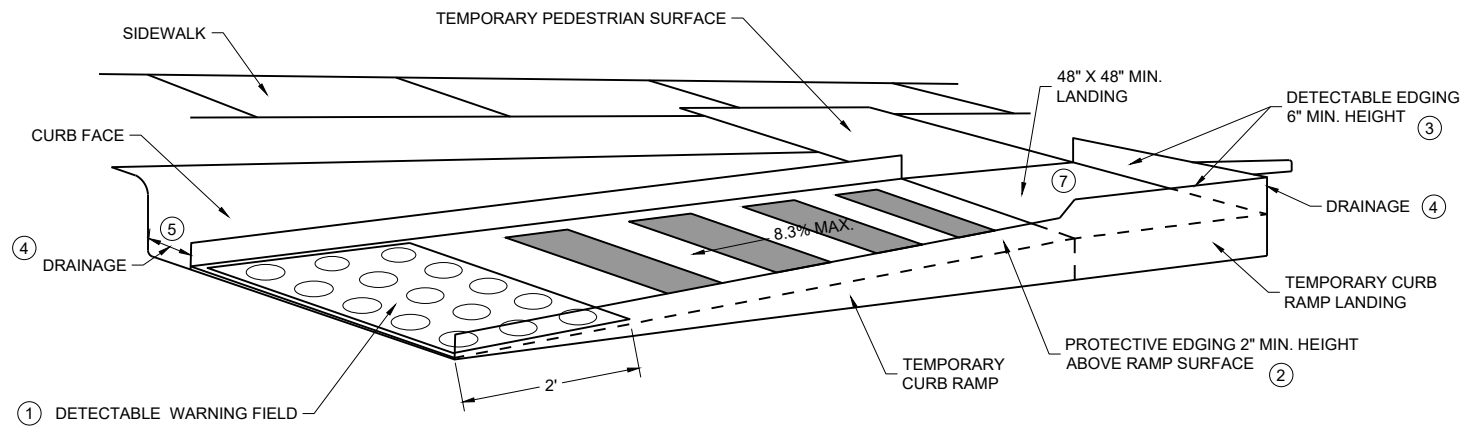
③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

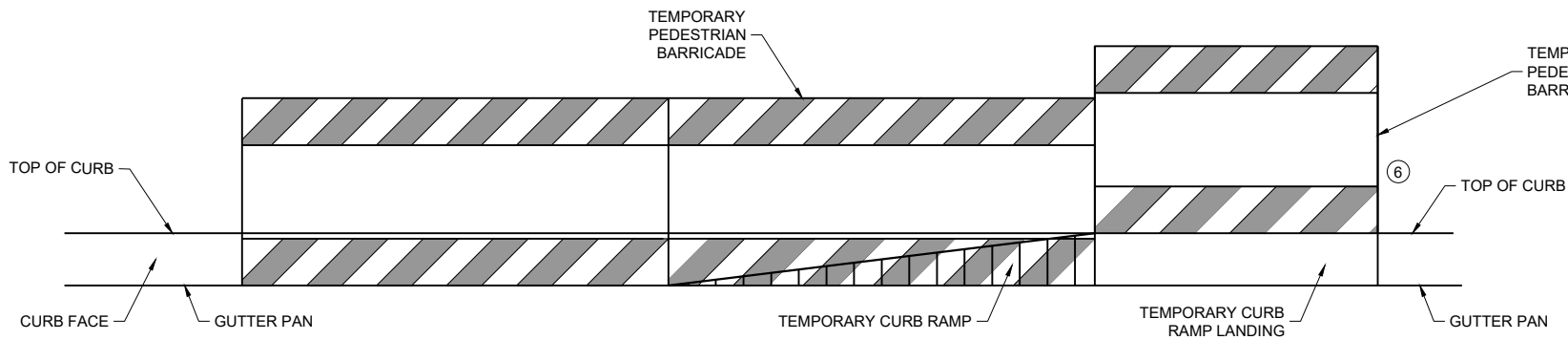
④ WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

⑤ WHERE SIGNS FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS ARE SHOWN BEING PLACED BEHIND TEMPORARY PEDESTRIAN BARRICADE, THE SIGNS MAY BE MOUNTED ON THE TEMPORARY PEDESTRIAN BARRICADE INSTEAD. A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE SHALL BE USED IF MOUNTED ON THE BARRICADE. THE TOP OF THE SIGN SHALL BE MOUNTED BELOW THE TOP OF THE BARRICADE TO ALLOW A CONTINUOUS HAND-TRAILING EDGE.

**TEMPORARY PEDESTRIAN BARRICADE *****TEMPORARY PEDESTRIAN FLAGGING****TRAFFIC CONTROL,
PEDESTRIAN
ACCOMMODATION**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

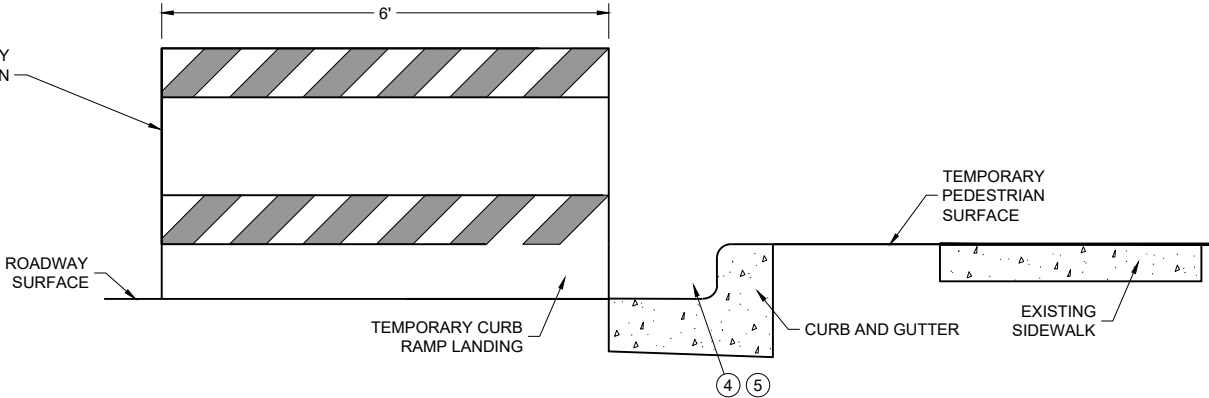


PERSPECTIVE VIEW



FRONT VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB



SIDE VIEW

GENERAL NOTES

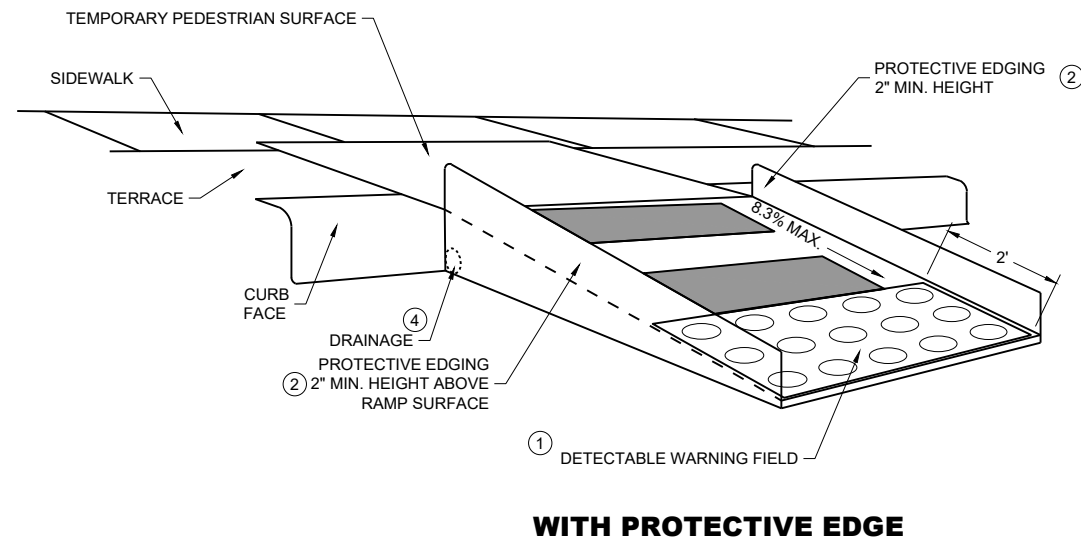
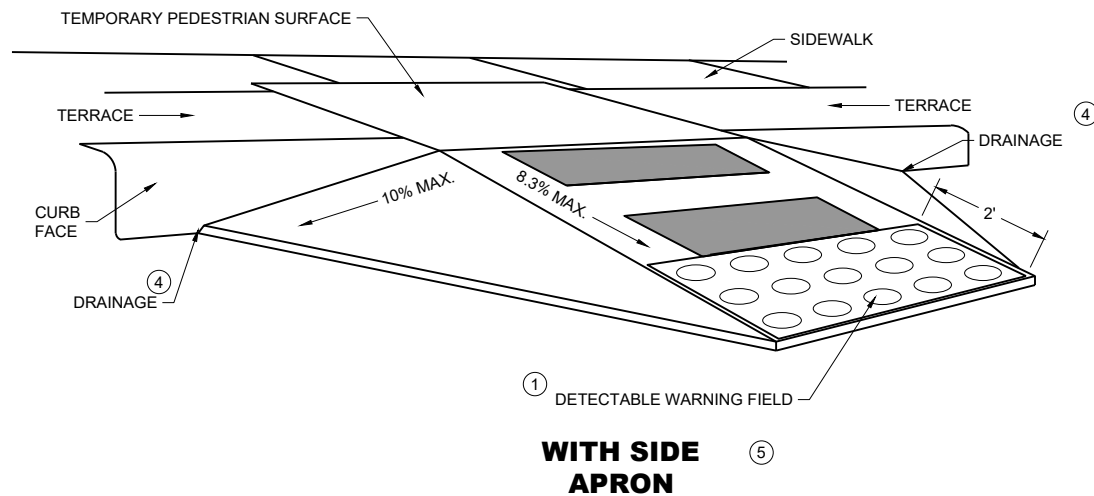
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
- ⑦ LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

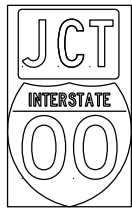
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

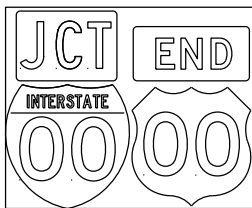
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

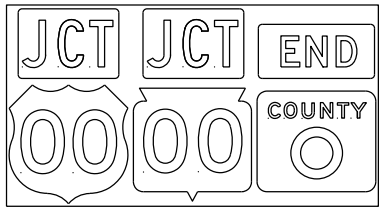
TYPICAL ASSEMBLIES



J1-1



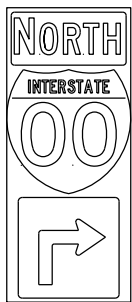
J1-2



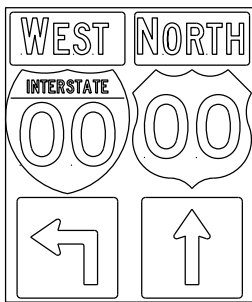
J1-3



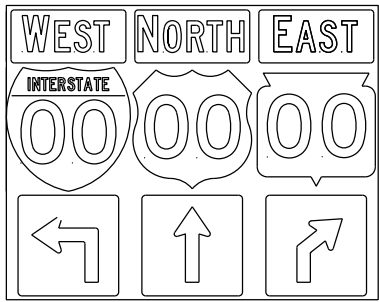
JR1-1



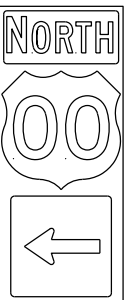
J2-1



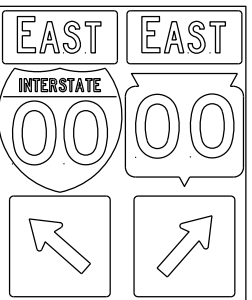
J2-2



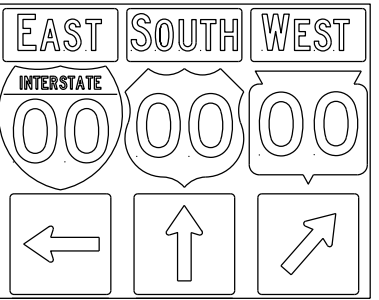
J2-3



J3-1



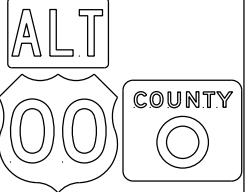
J3-2



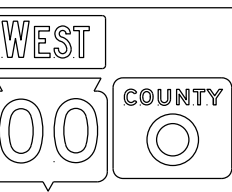
J3-3



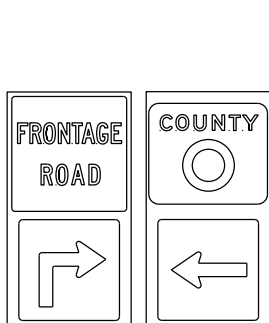
J4-1



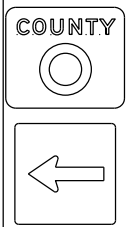
J4-2



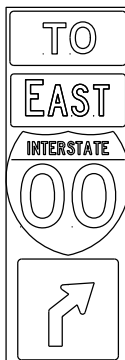
J4-2



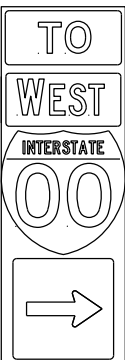
J12-1



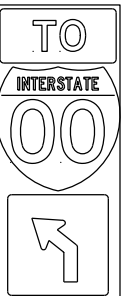
J13-1



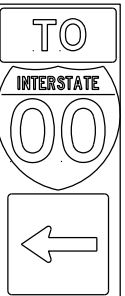
J32-1



J33-1



J22-1



J23-1



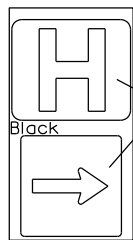
JR13-1



JR23-1



JR99-1

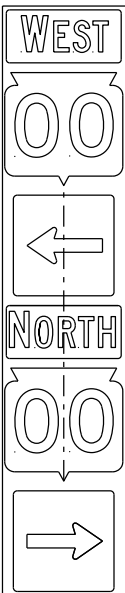
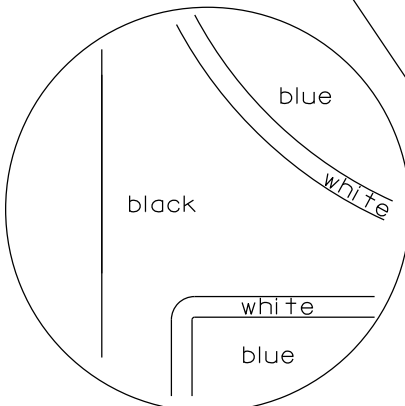


JH-1

Blue Background

Black

blue background with interstate

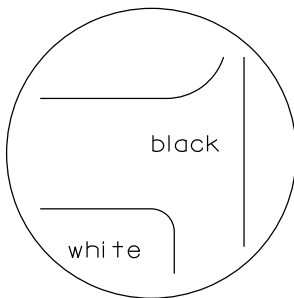
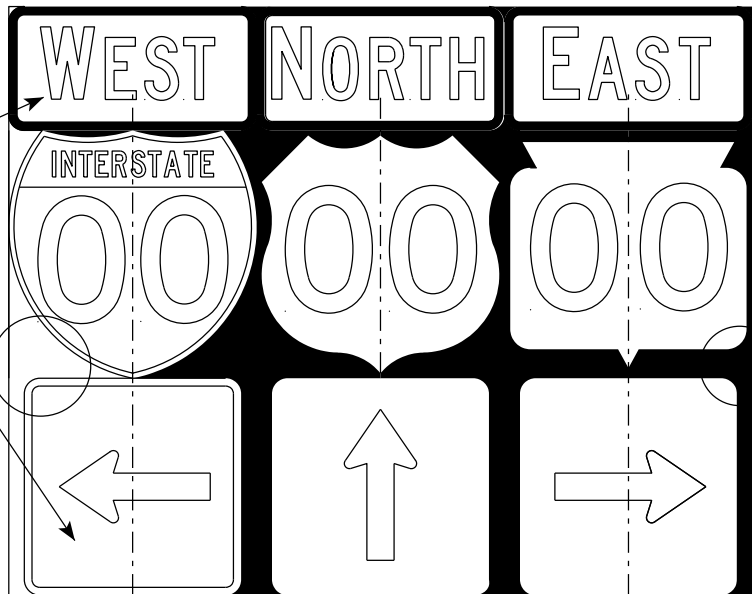


JV

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

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
Background - Black Non-reflective
Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. 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.
6. 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.
7. 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.
8. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (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.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.



black background

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

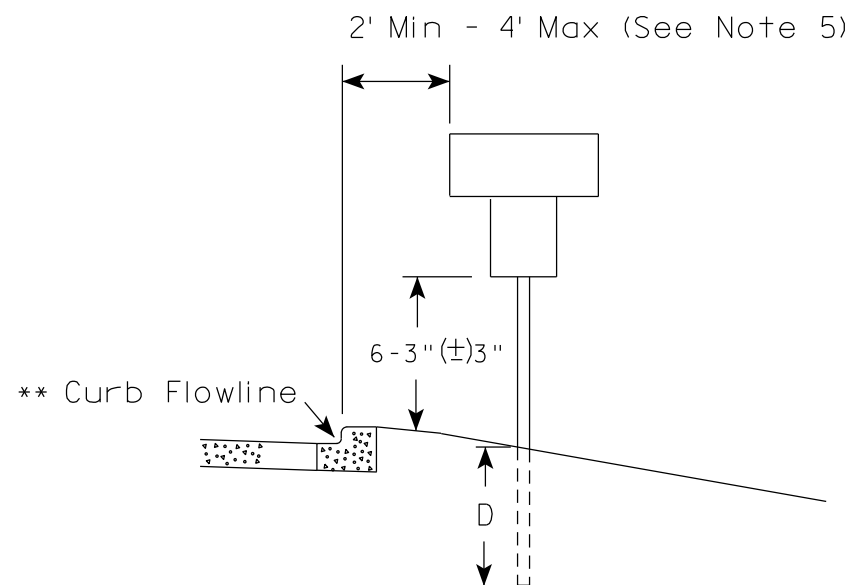
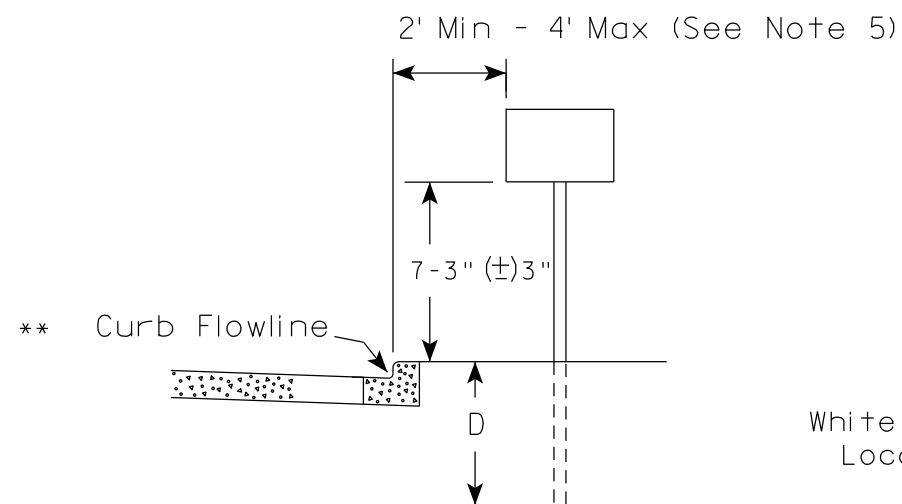
DATE 6/7/23 PLATE NO. A2-1S.10

PROJECT NO:

SHEET NO: 123

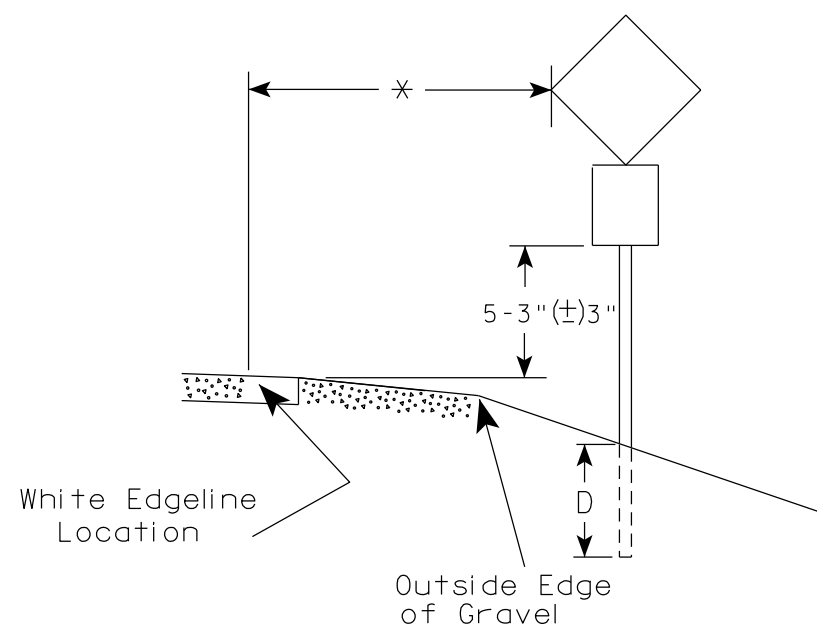
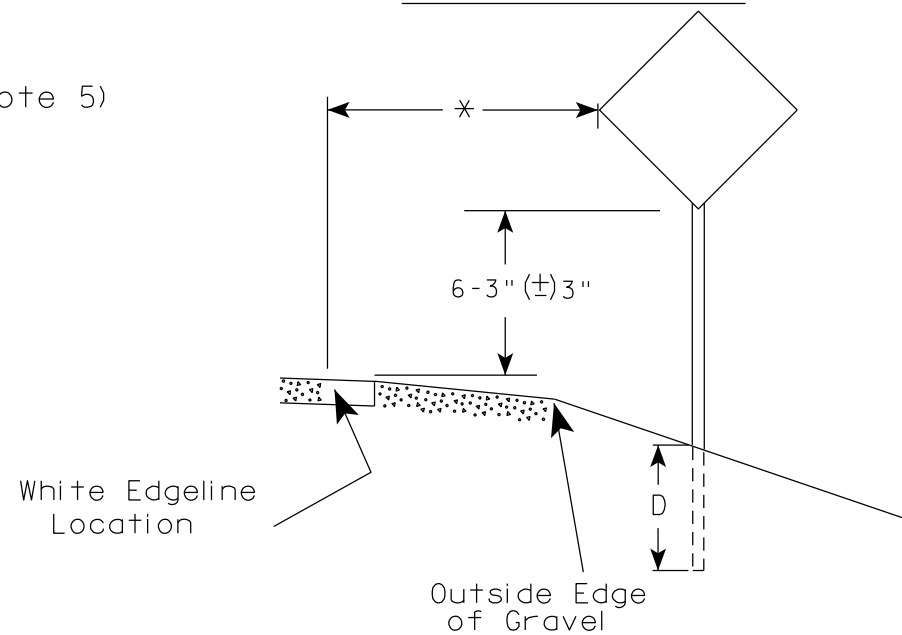
E

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



* 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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

PROJECT NO:

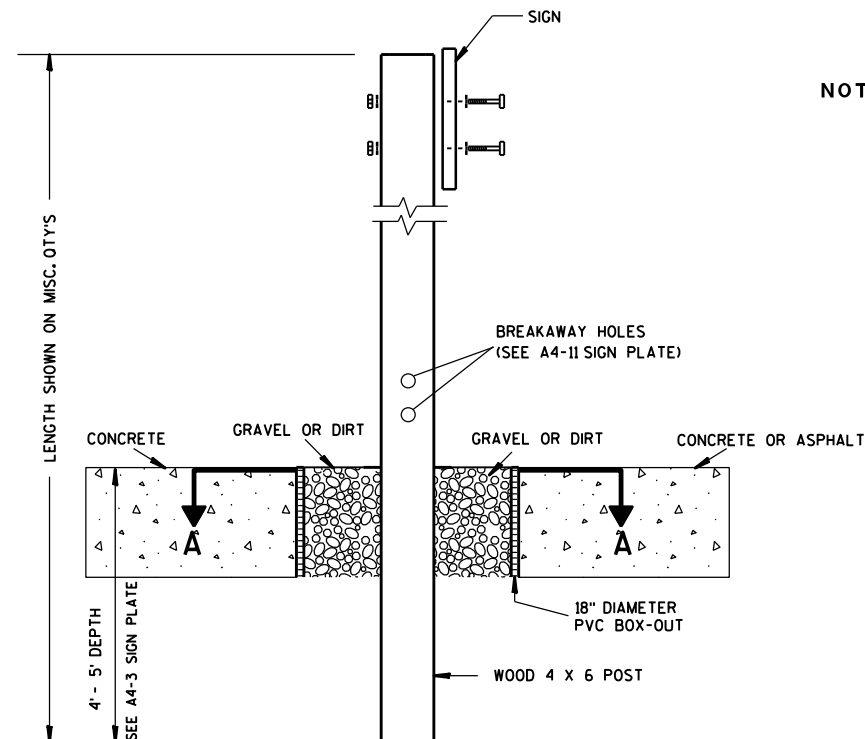
HWY:

COUNTY:

SHEET NO:

124

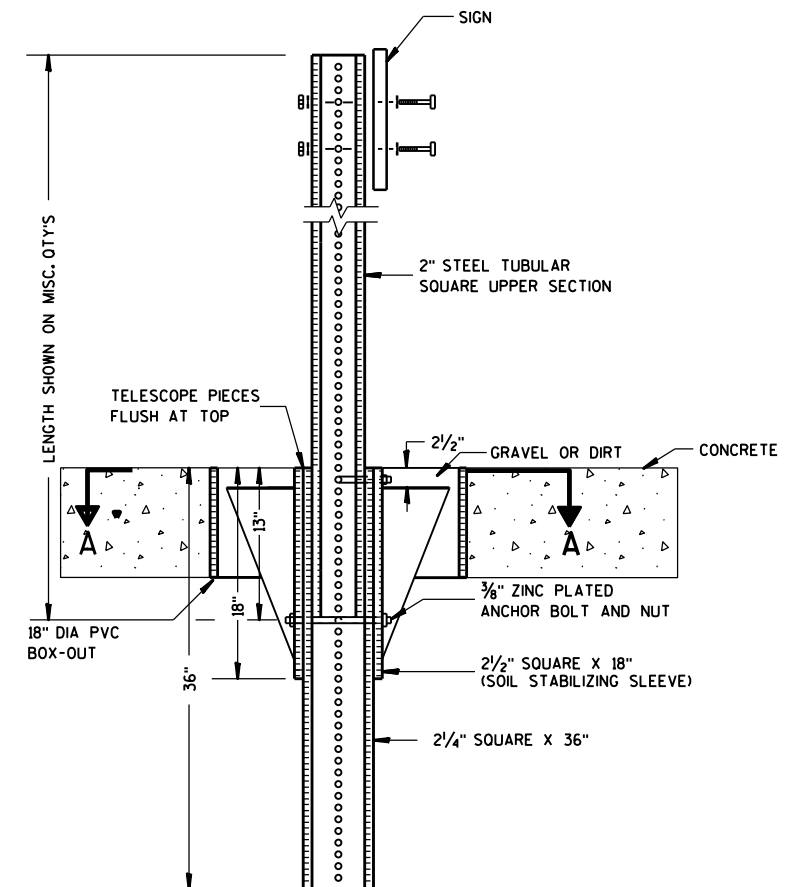
E



ELEVATION VIEW

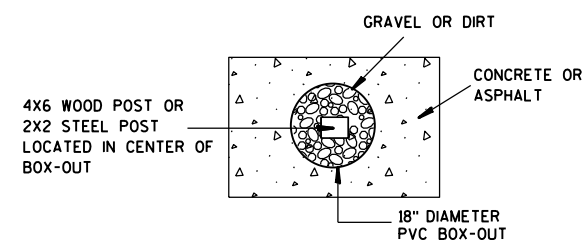
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLAT 125 A4-3B.1

PROJECT NO:

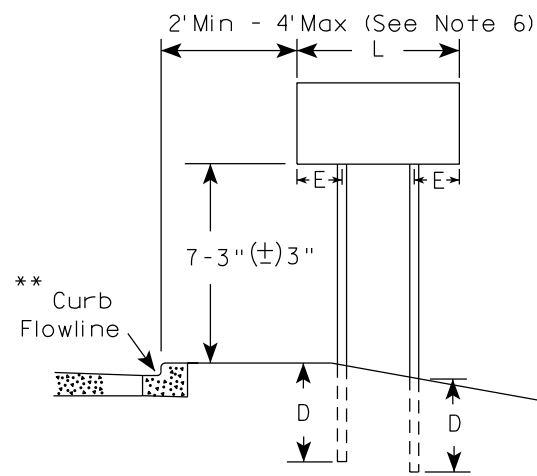
HWY:

COUNTY:

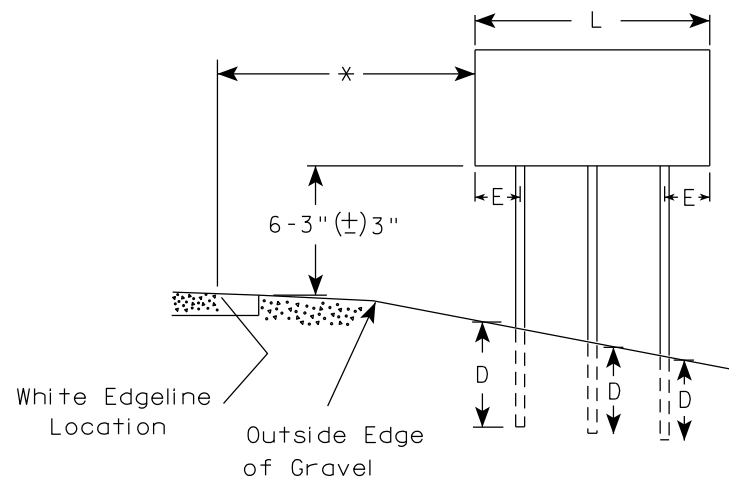
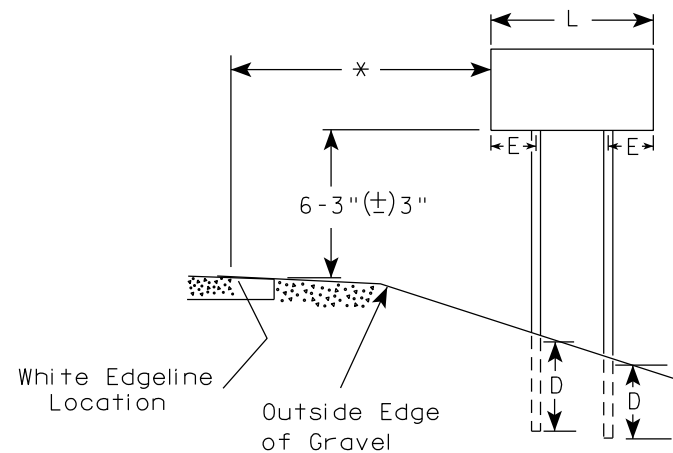
SHEET NO:

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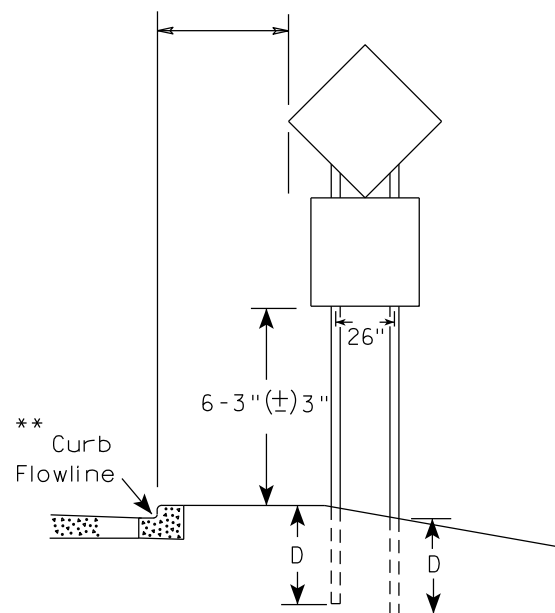
URBAN AREA



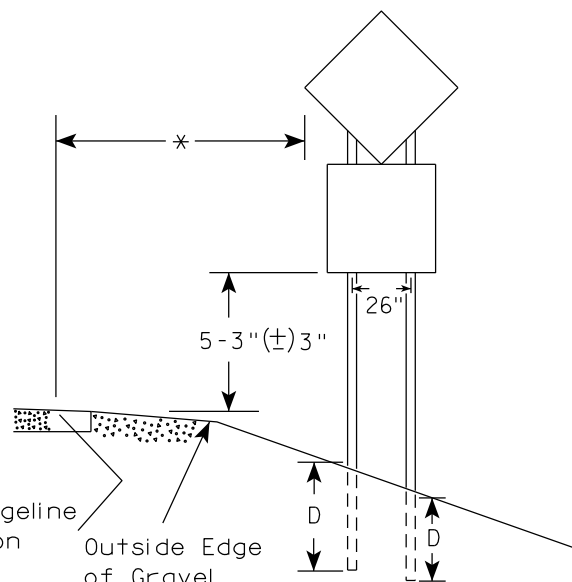
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 3".

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

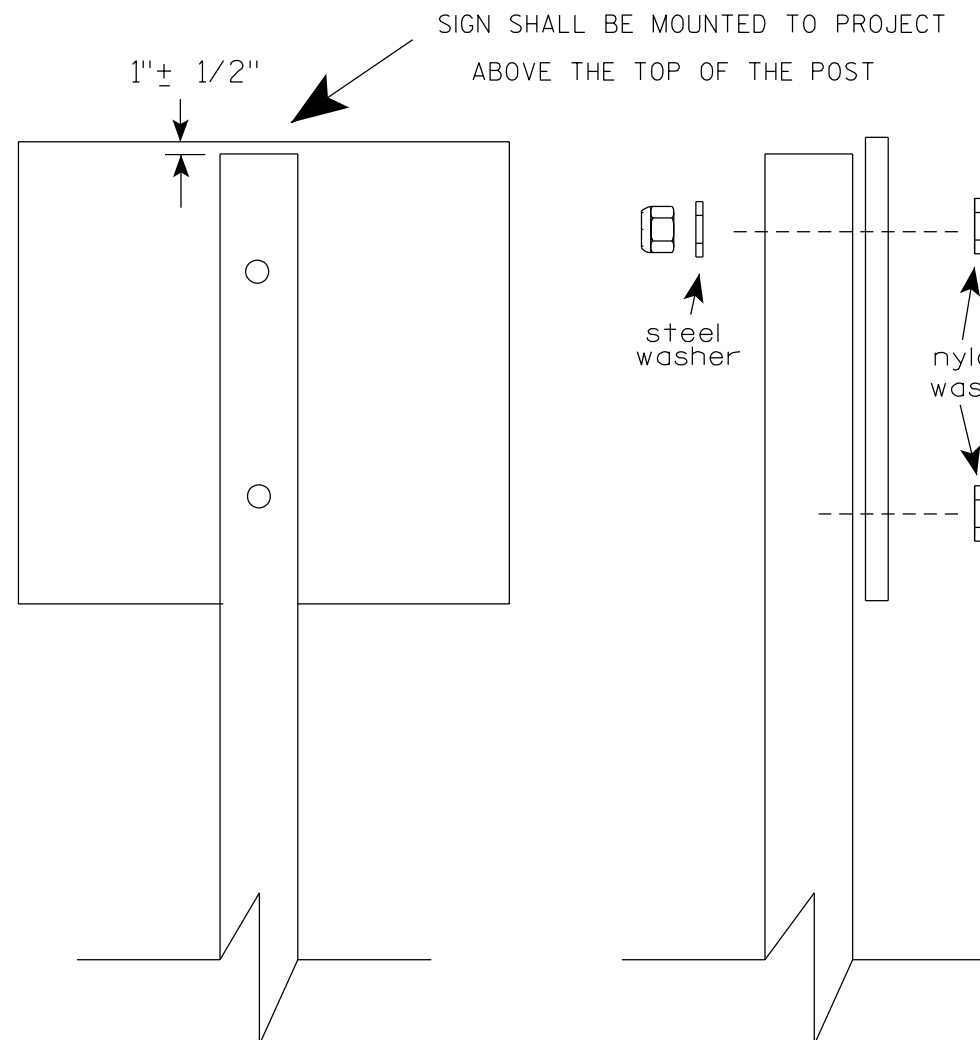
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16



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.

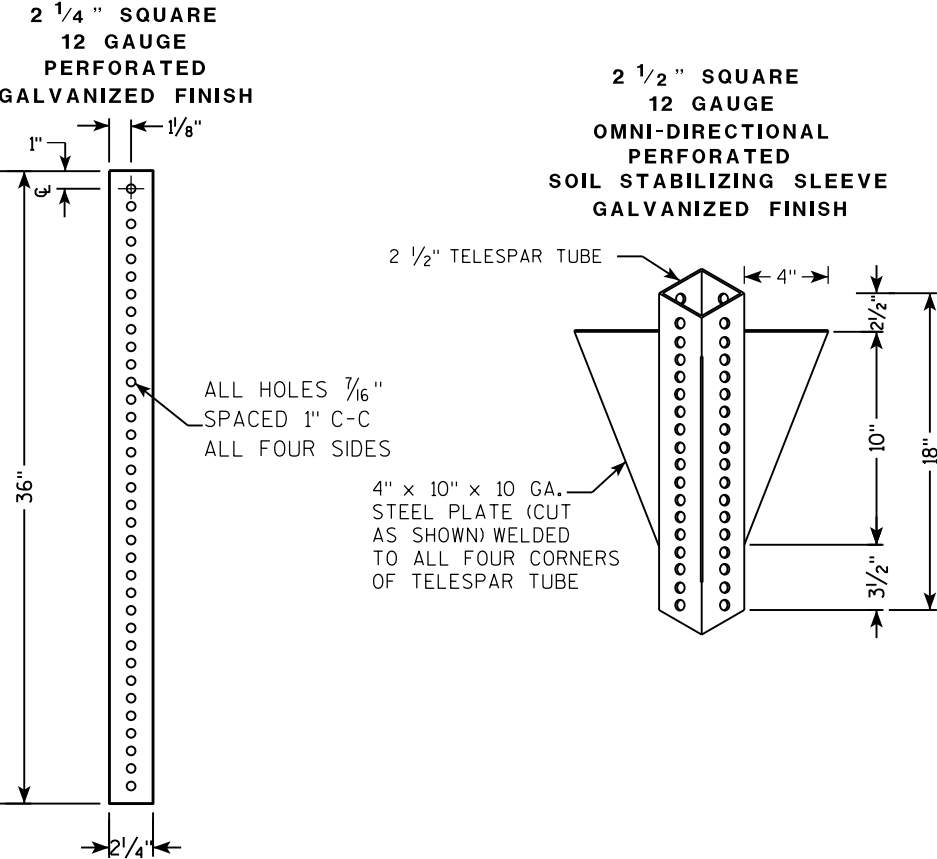
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

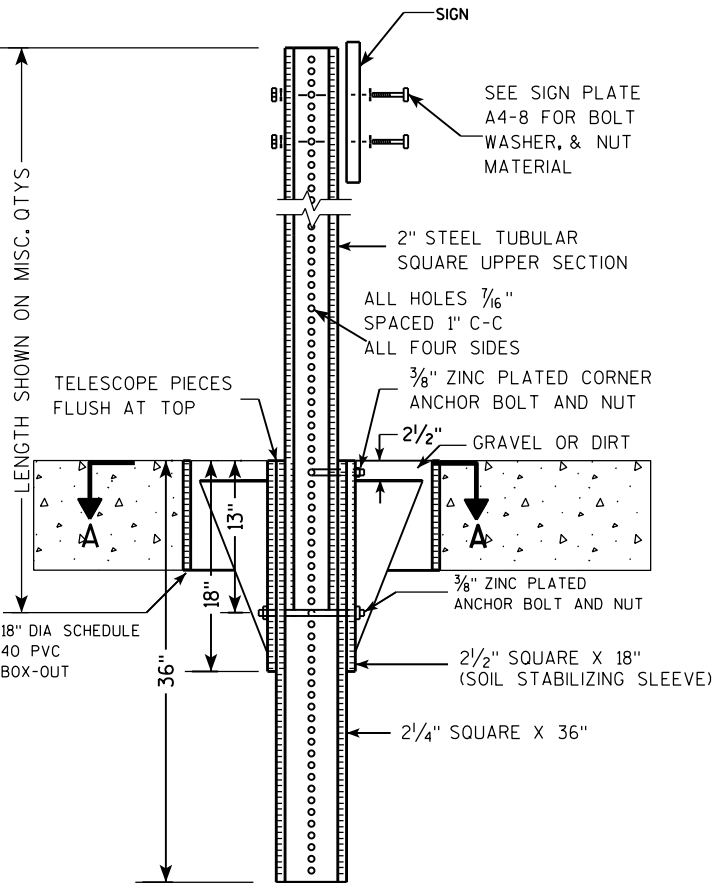
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

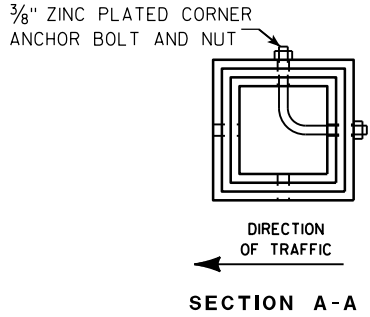
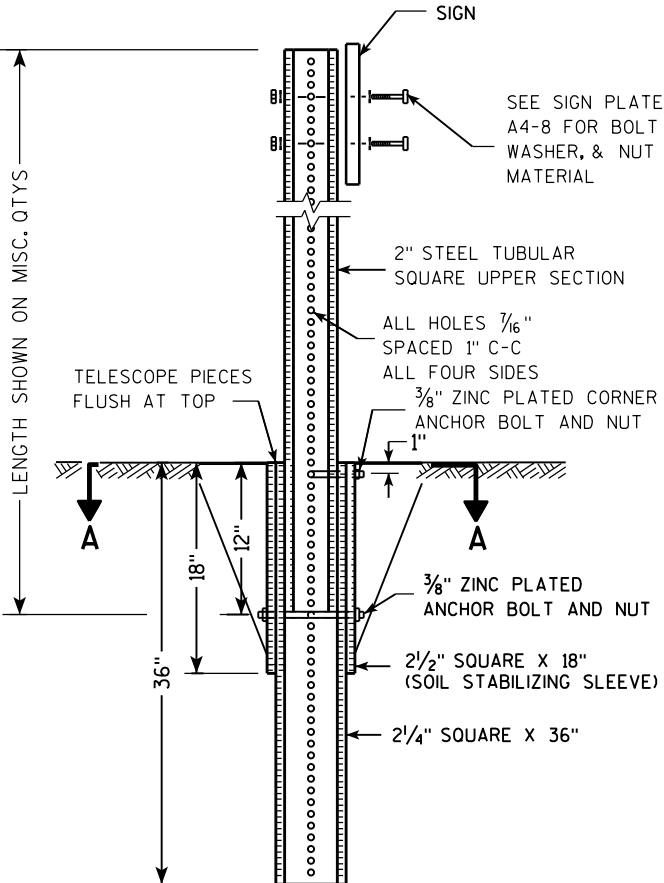
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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)



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).

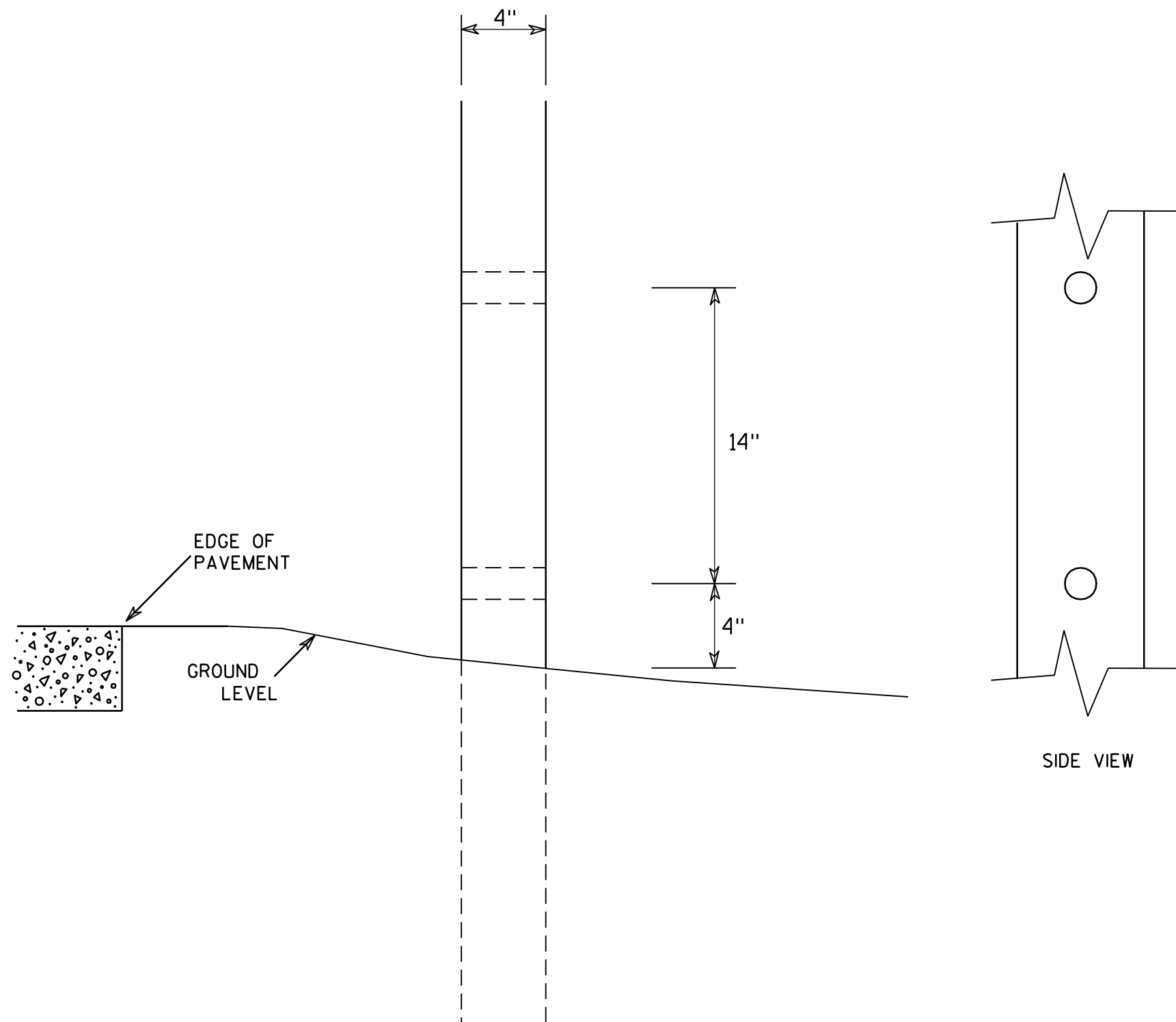
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 128 14-9.9

7



GENERAL NOTES

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

7

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:

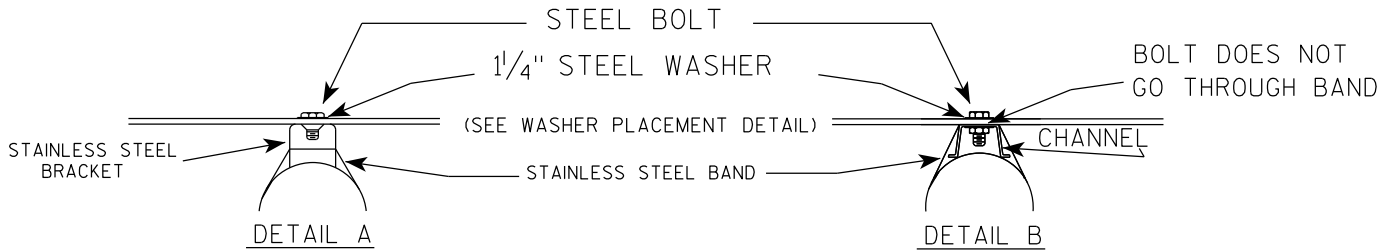
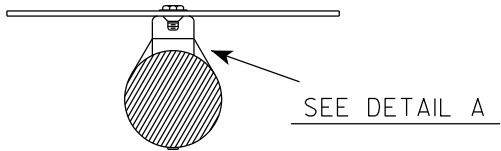
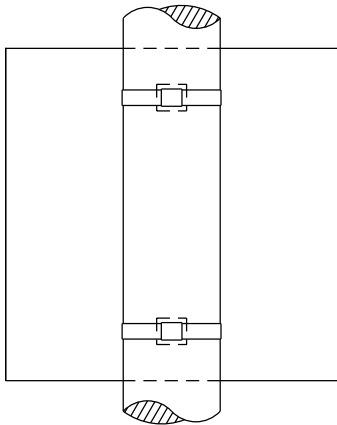
COUNTY:

SHEET NO: 129

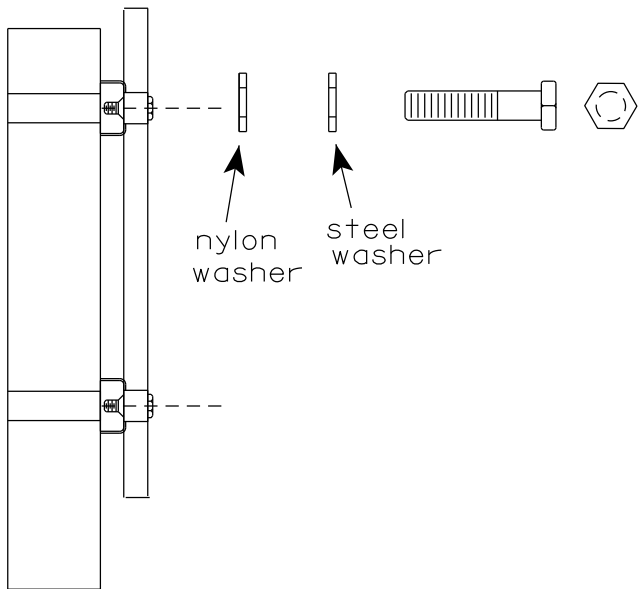
E

BANDING

SINGLE SIGN



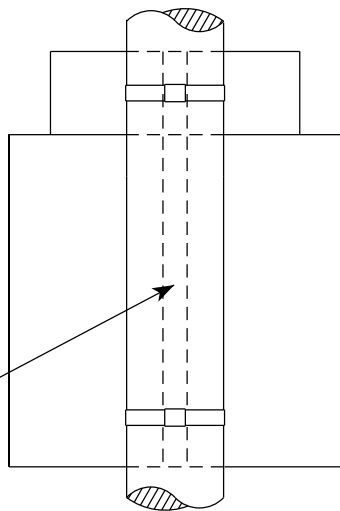
WASHER PLACEMENT



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

CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

"J" ASSEMBLY



SEE DETAIL B

- GENERAL NOTES
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
 3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

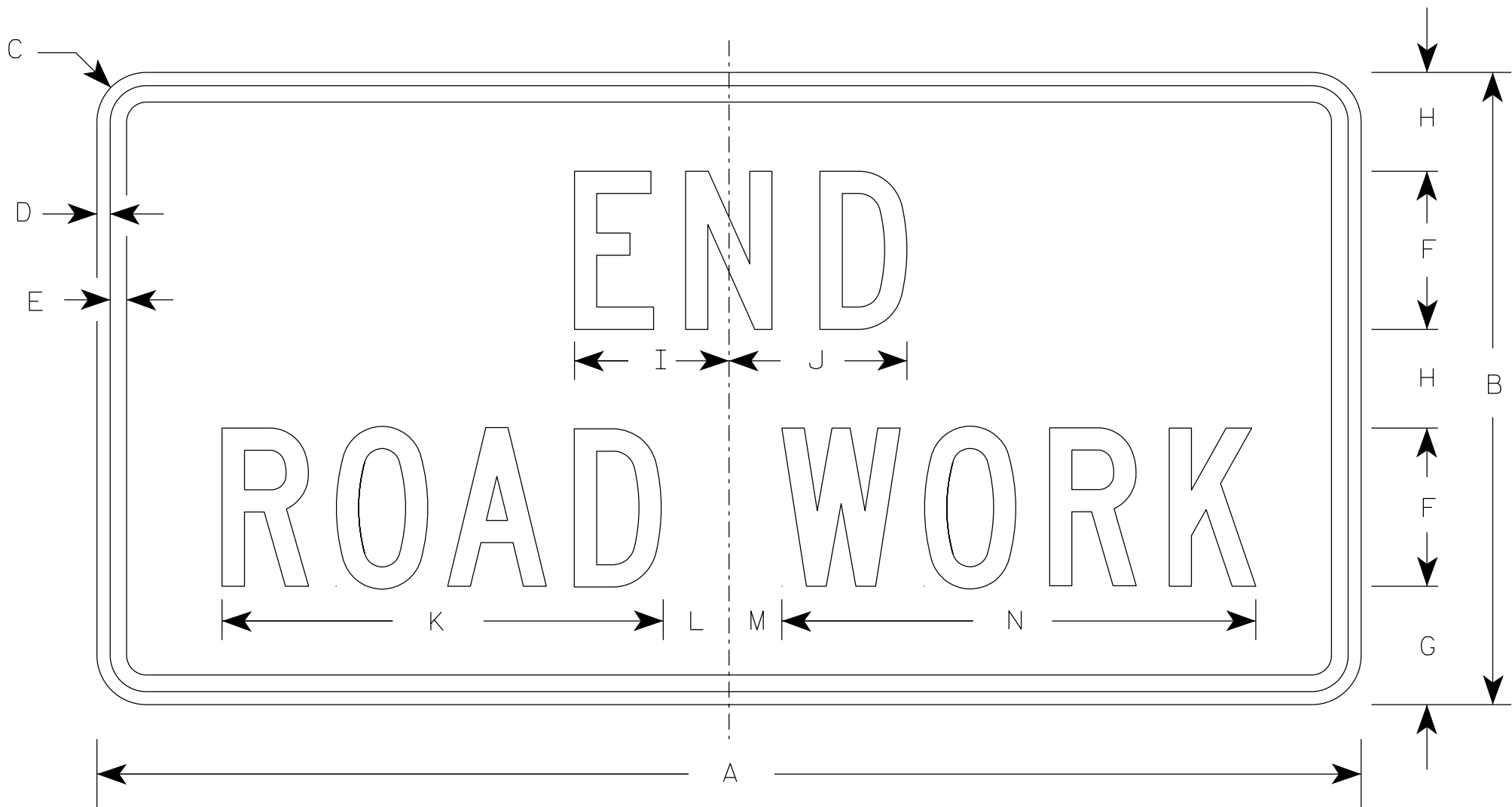
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

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.



G20-2A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	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
2	48	24	1 7/8	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
2M	48	24	1 7/8	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
3	48	24	1 7/8	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
4	48	24	1 7/8	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
5	48	24	1 7/8	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

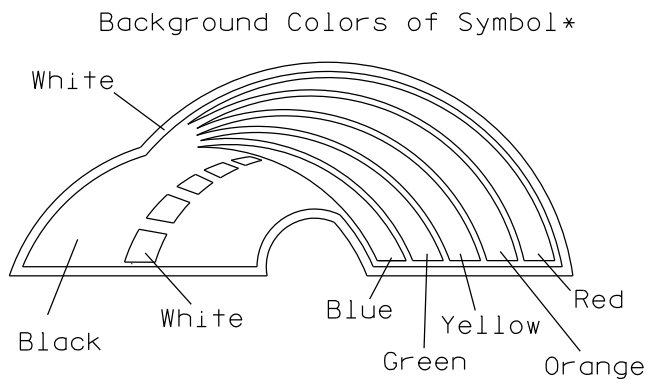
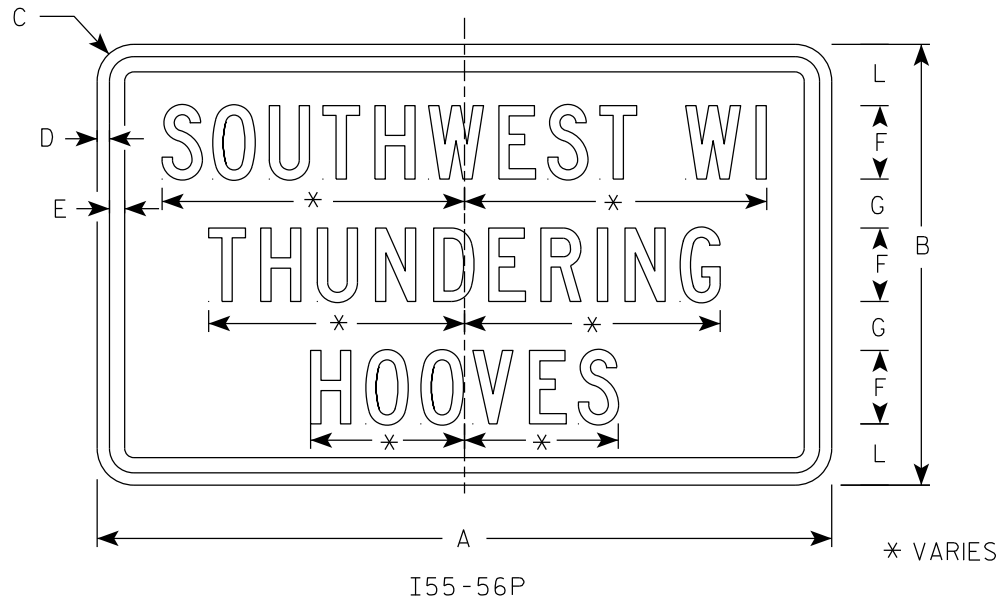
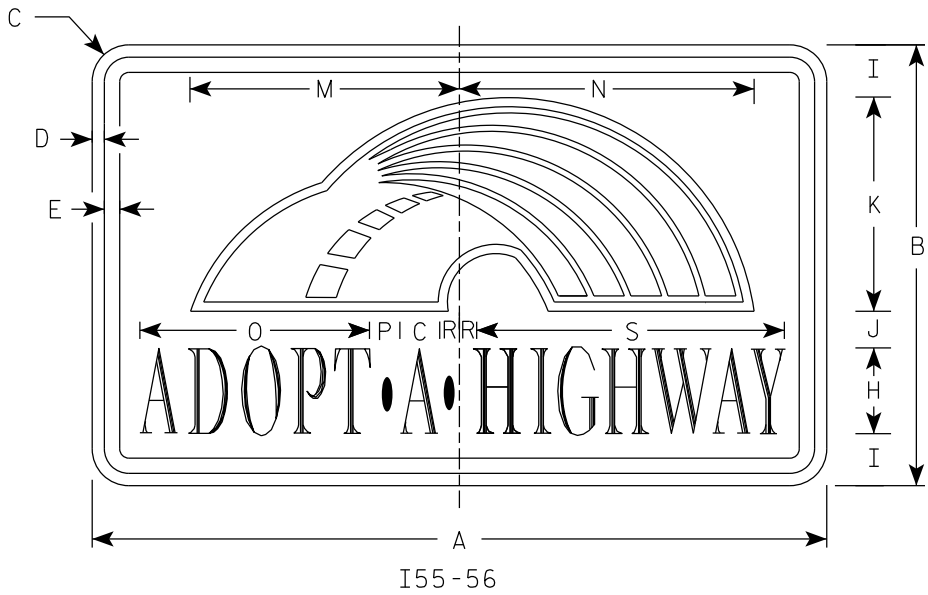
STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

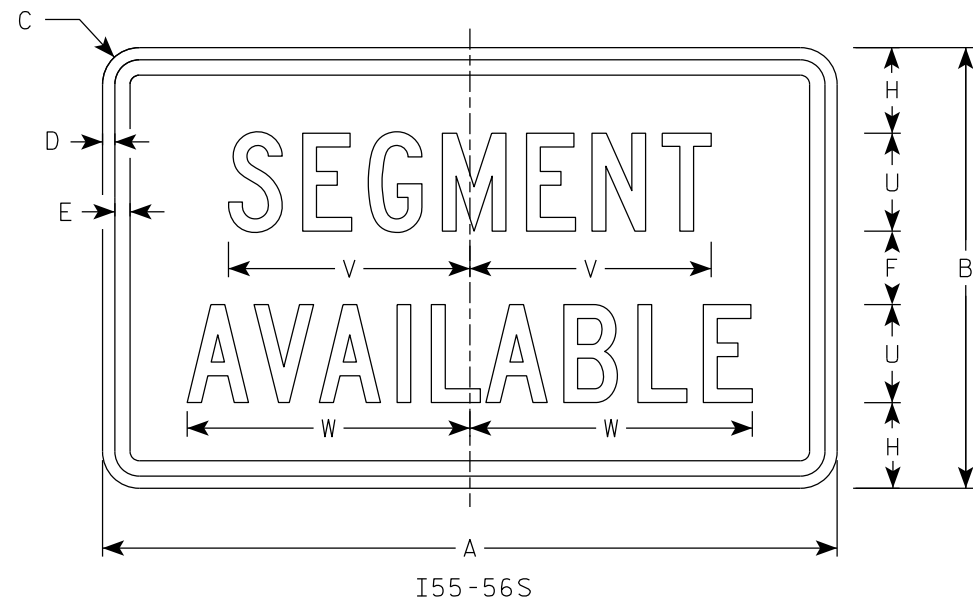
DATE 1/26/2023 PLATE NO. G20-2A.10



*1/4" Black Border between each color of rainbow and border of rainbow
*3/8" White Border surrounds the whole image of the rainbow

NOTES

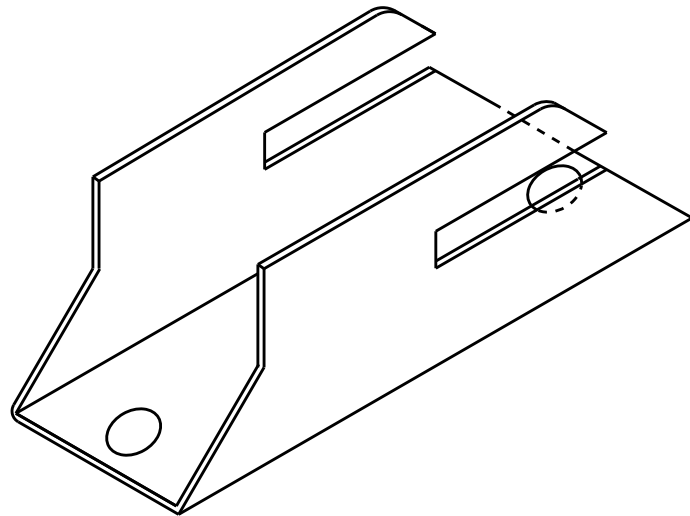
- Sign is Type II - Type H Reflective
- Color:
Background - Blue
Message - White
Rainbow detail - See Below
- Message Series - Adopt a Highway - Dutch 8011L
All other Text - Series C
- Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



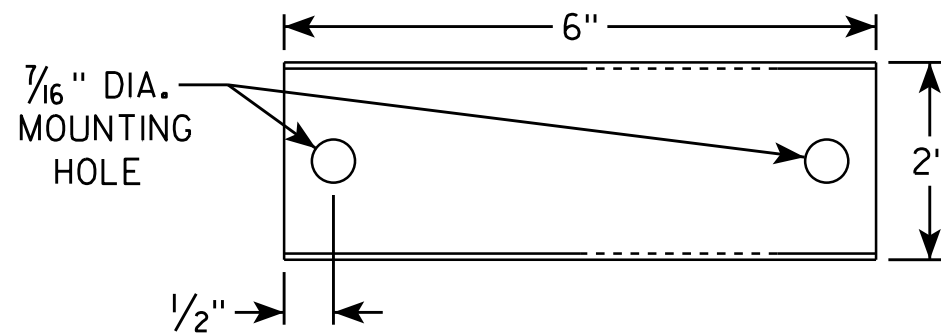
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 1/4	1 1/2	8 1/2	2 1/2	11	12	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

STANDARD SIGN I55-56	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/13/2025	PLATE NO. I55-56.5

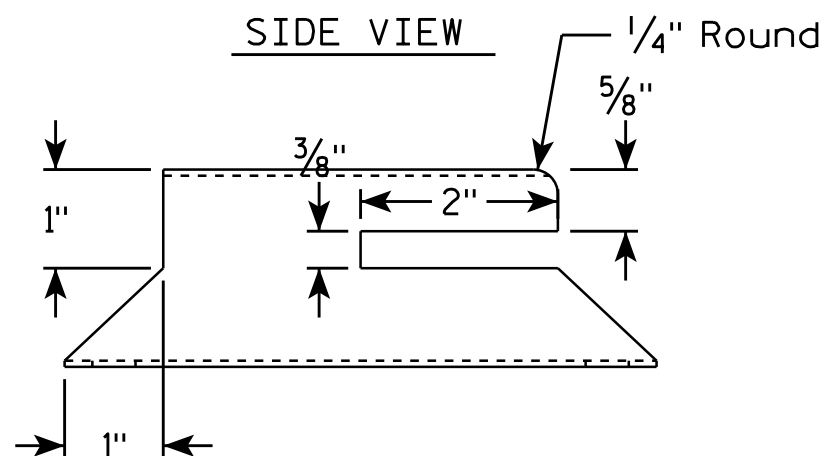
ISOMETRIC VIEW



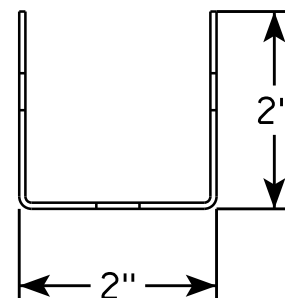
TOP VIEW



SIDE VIEW



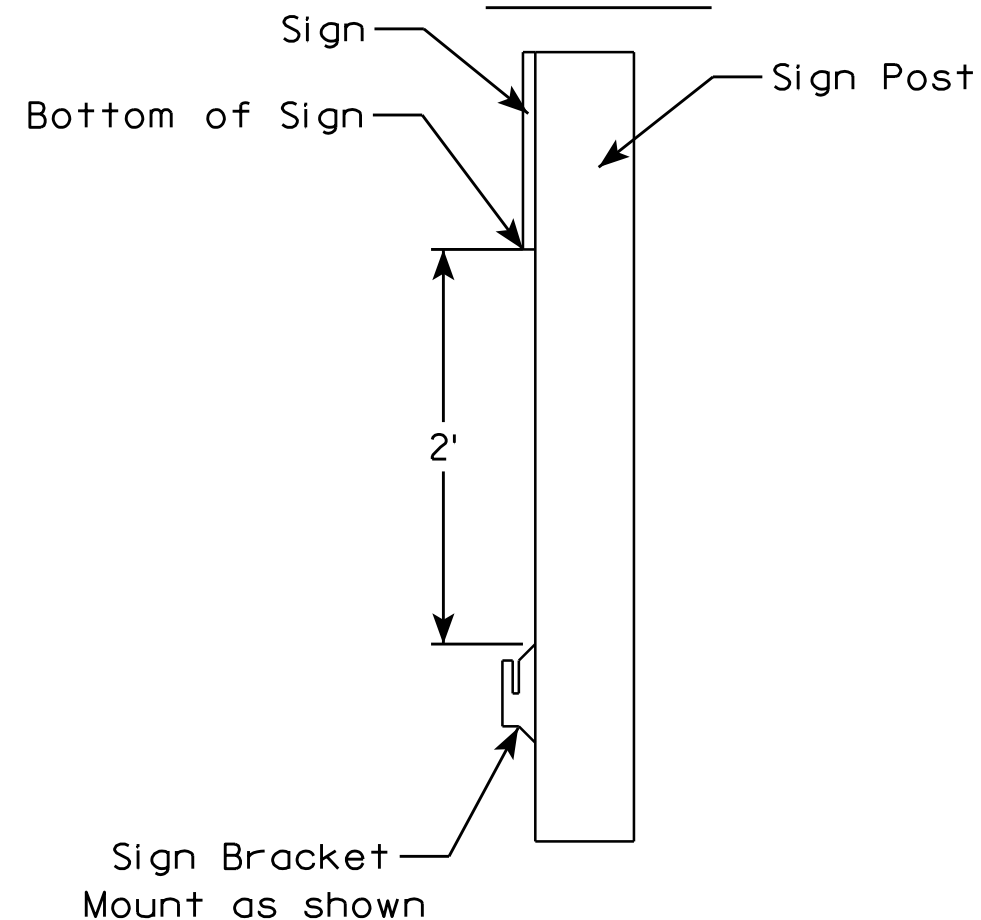
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLA 134 I55-56B.2

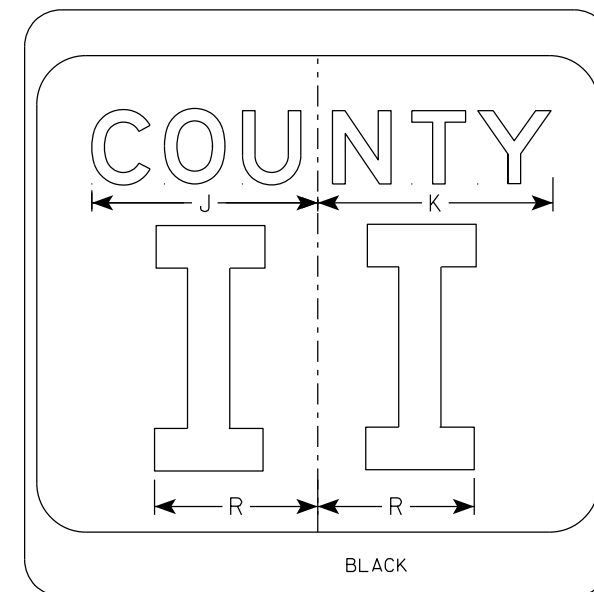
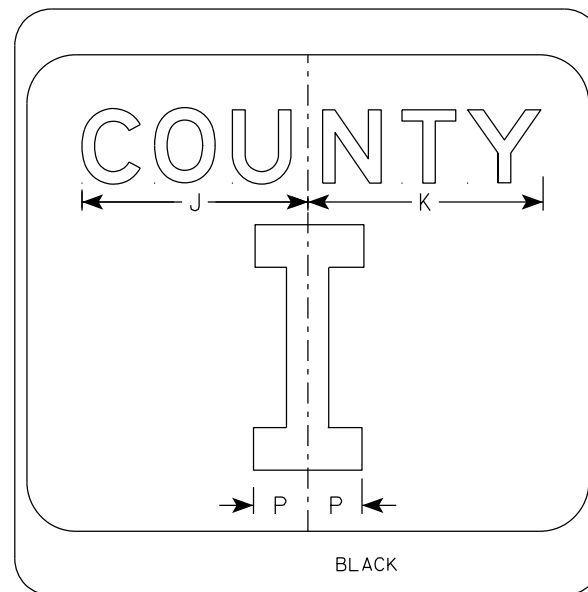
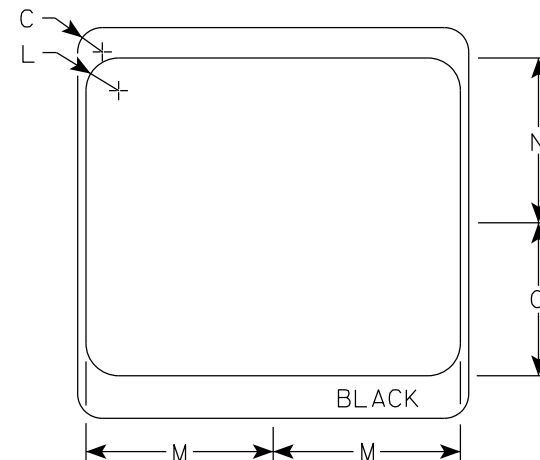
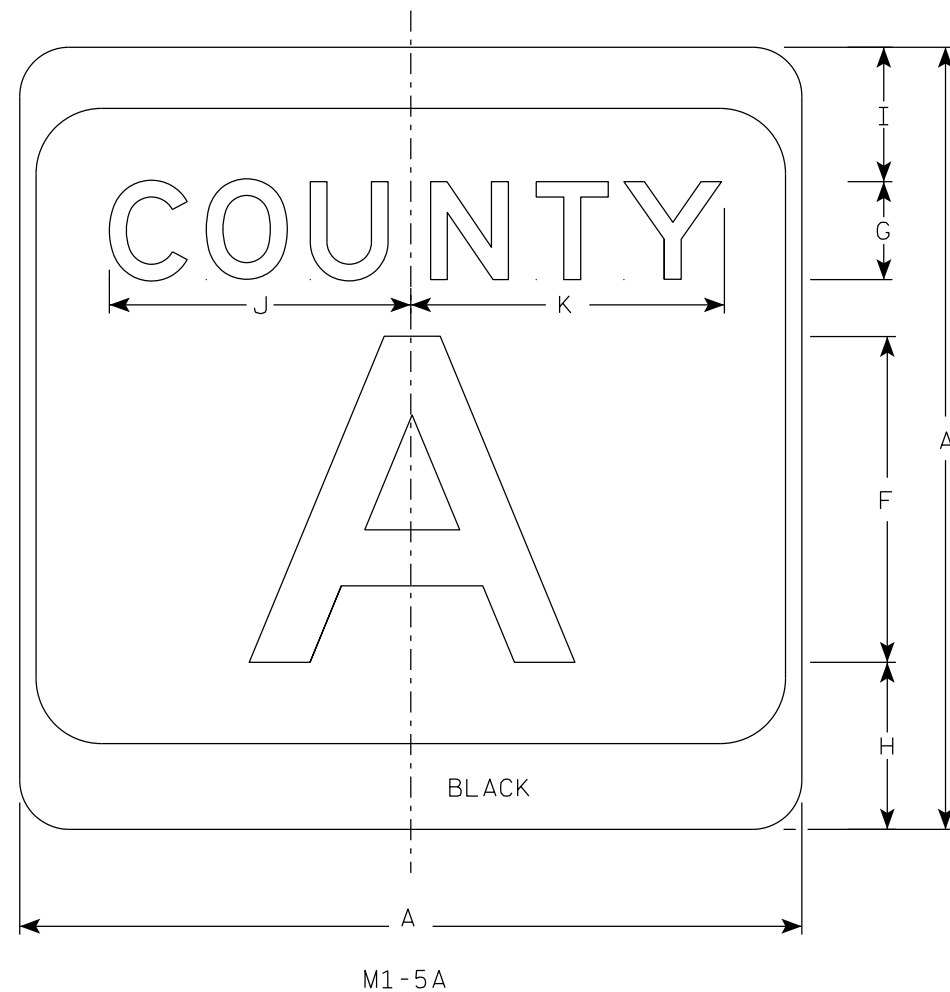
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

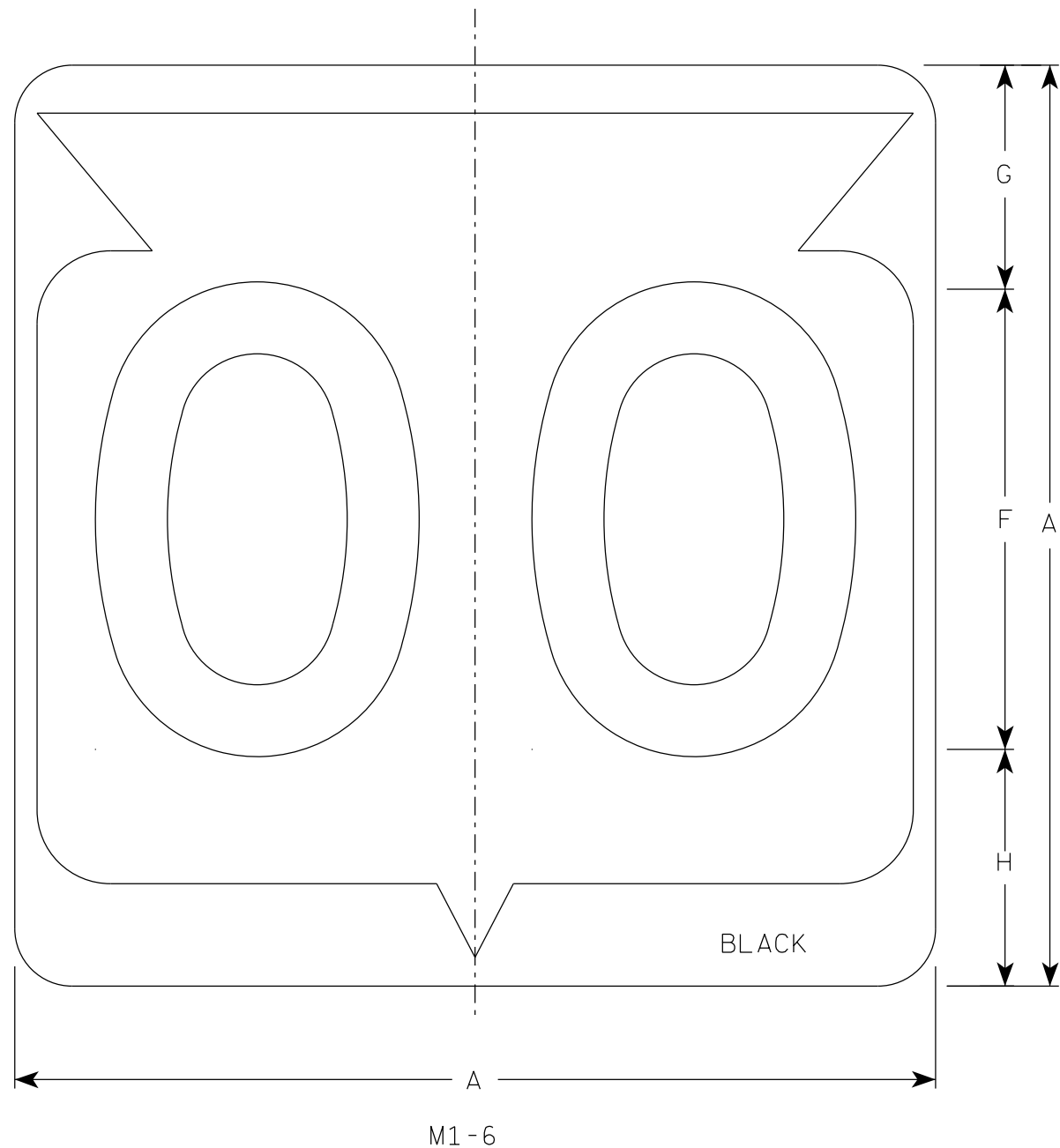
1. Sign is Type II - Type H Reflective
2. Color:
Background - White & Black
Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
Message Series D for 2 letters unless
message is too big then Series C.
Message Series C for 3 letters unless
message is too big then Series B.
5. Substitute appropriate letters & optically
center to achieve proper balance.

[illegible]

CTH MARKER	
M1-5A FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R Rauch</u> For State Traffic Engineer
DATE 11/8/2022	PLATE NO. M1-5A.9

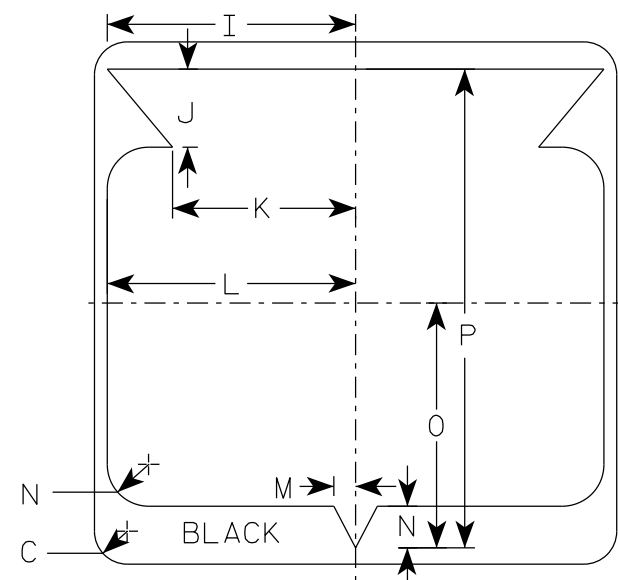
PROJECT NO.:	HWY.:	COUNTY:	SHEET NO.:	E
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7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C



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
2M	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

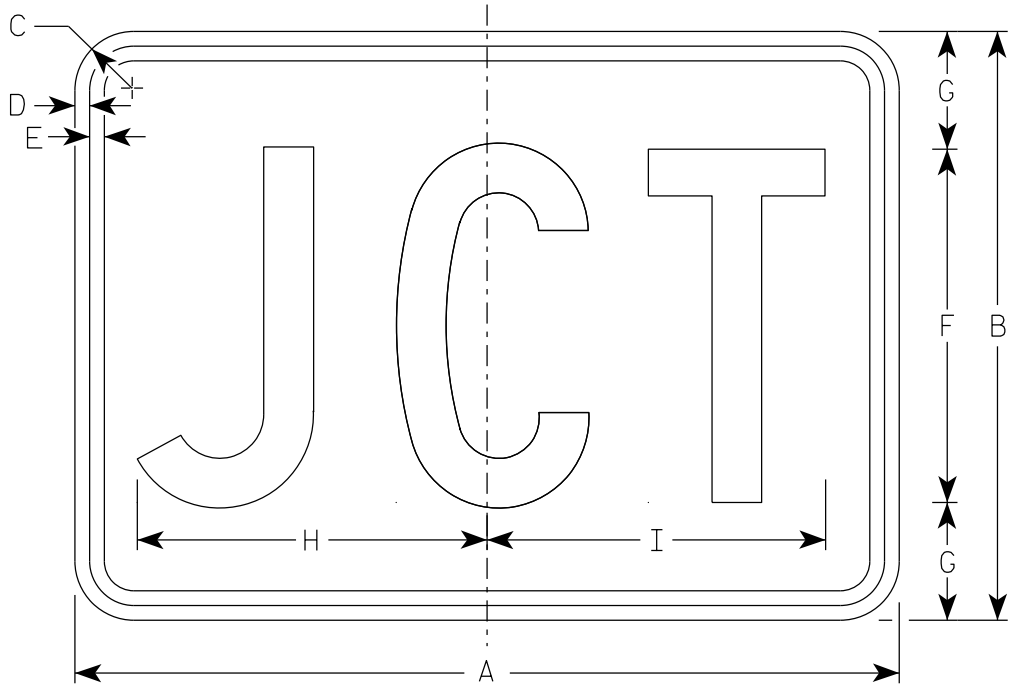
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

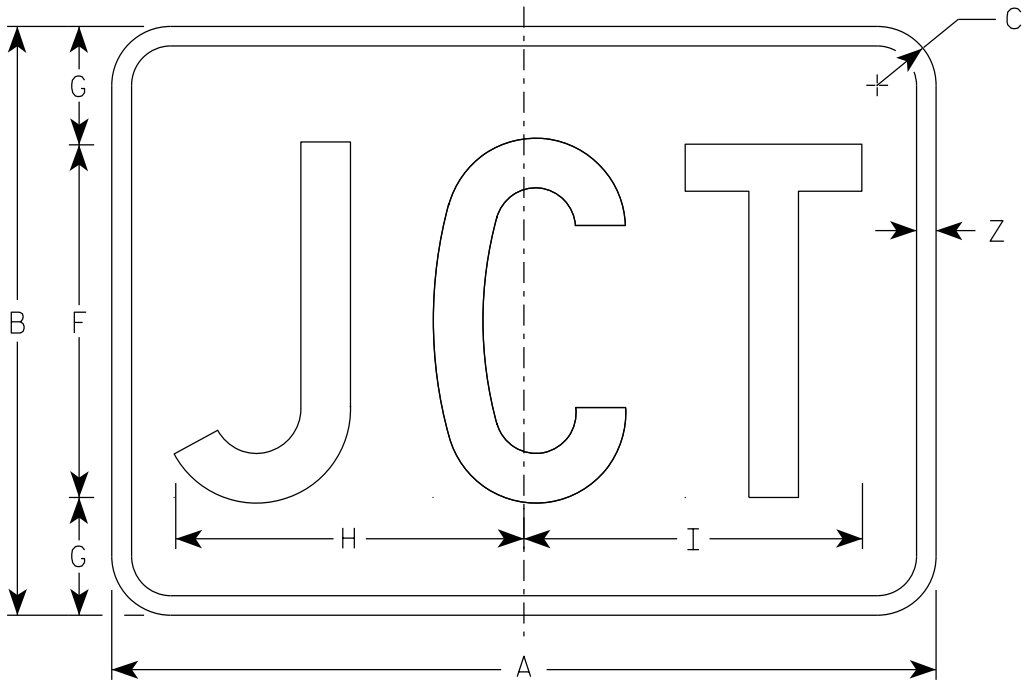
DATE 11/8/2022 PLATE NO. M1-6.11

7

7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. 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																											
2S	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
2M	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
3	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
4	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
5	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40

PROJECT NO:

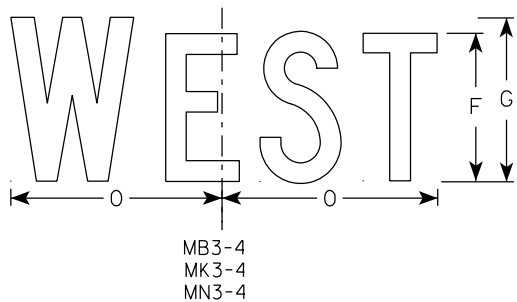
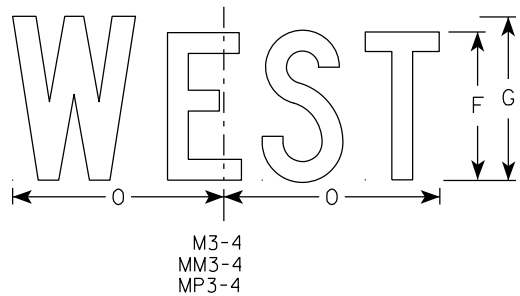
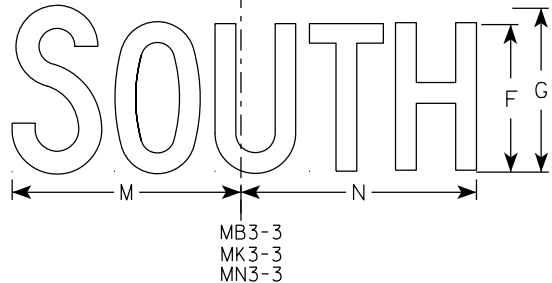
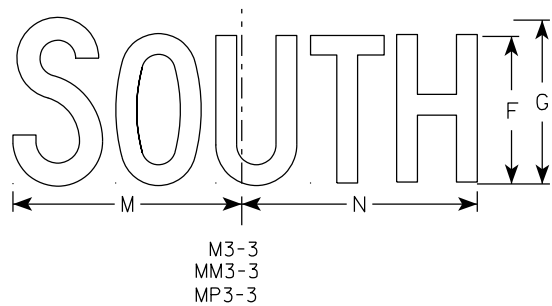
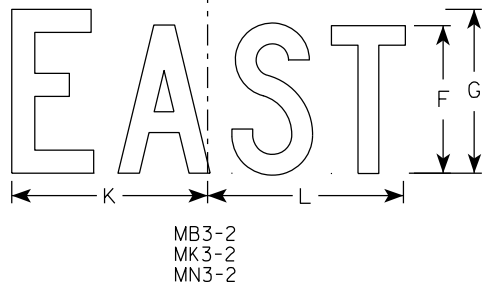
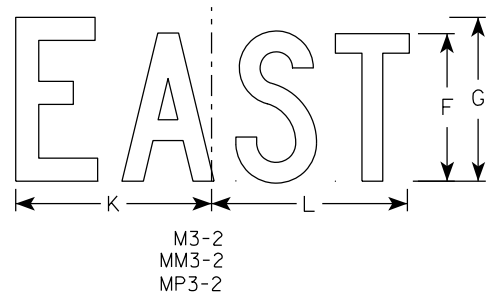
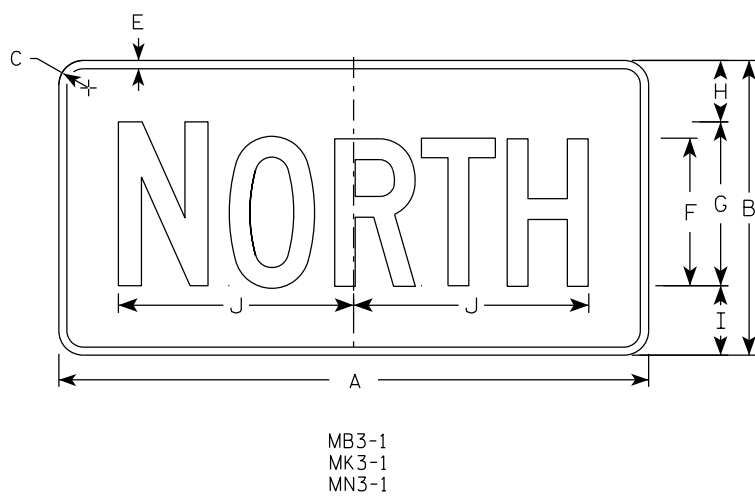
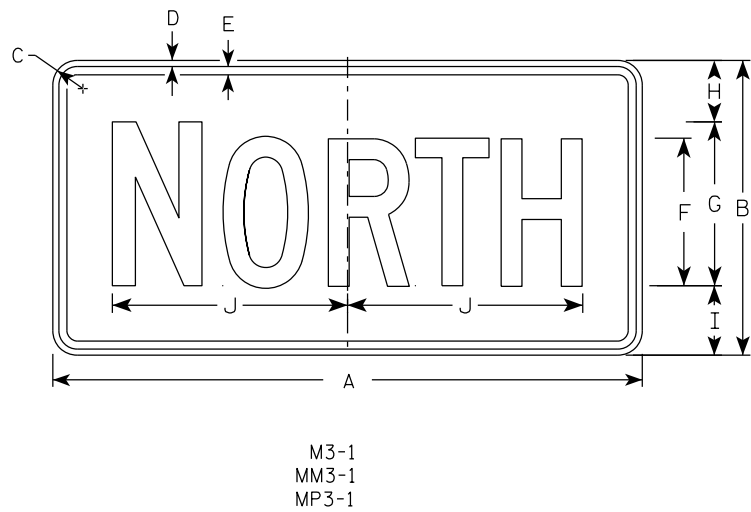
HWY:

COUNTY:

SHEET NO: 137

E

7



NOTES

1. All Signs Type II - Type H Reflective
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																											
2S	24	12	1 1/2	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												2.00
2M	24	12	1 1/2	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												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

PROJECT NO:

HWY:

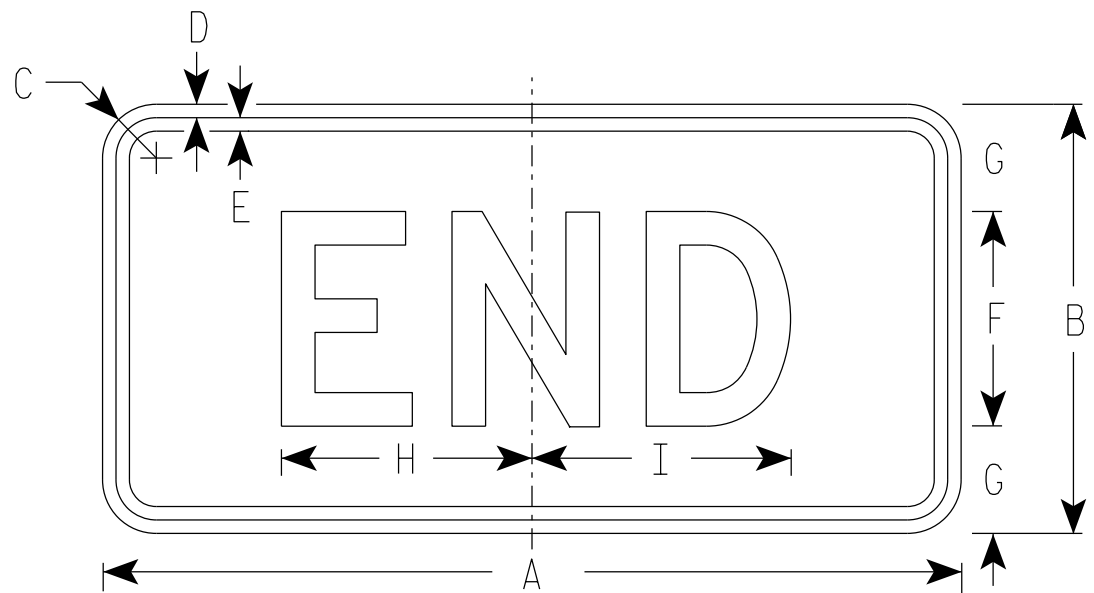
COUNTY:

SHEET NO: 138

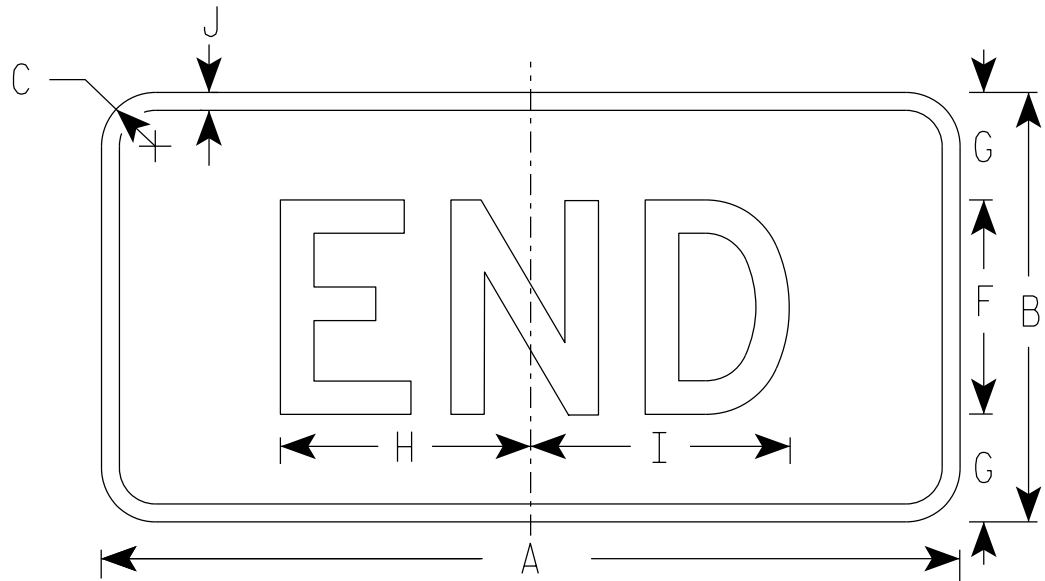
E

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - D
- 4. M4-6 Background - White
 Message - Black
- MB4-6 Background - Blue
 Message - White
- MK4-6 Background - Green
 Message - White
- MM4-6 Background - White
 Message - Green
- MN4-6 Background - Brown
 Message - White
- MP4-6 Background - White
 Message - Blue
- MR4-6 Background - Brown
 Message - Yellow



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	3	7	7 1/4	1/2																	2.00
2M	24	12	1 1/2	3/8	3/8	6	3	7	7 1/4	1/2																	2.00
3	36	18	1 1/2	3/8	1/2	9	4 1/2	12	11 7/8	1/2																	4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	12	11 7/8	1/2																	4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	12	11 7/8	1/2																	4.5

STANDARD SIGN

M4-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M4-7.11

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 139

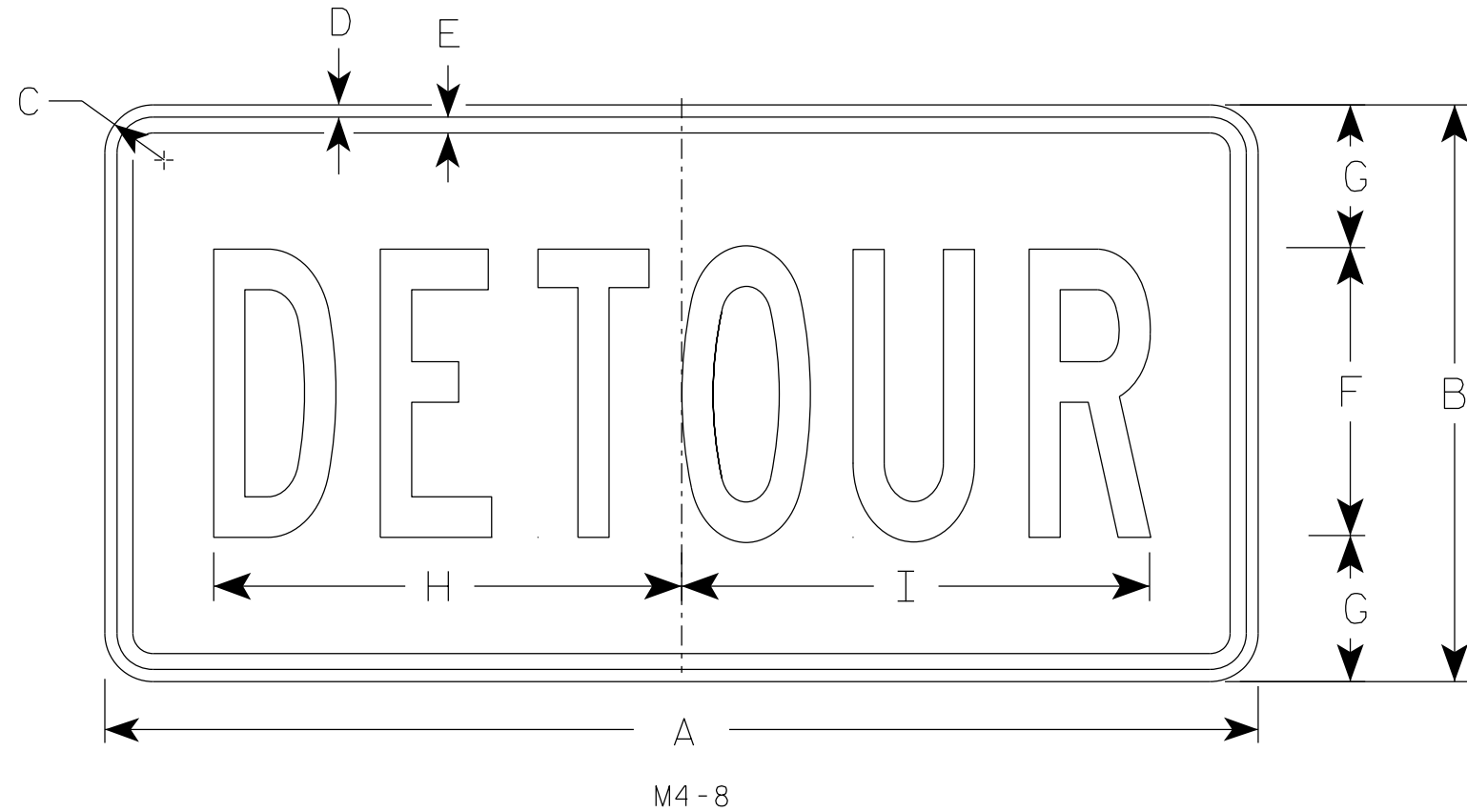
E

7

7

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN

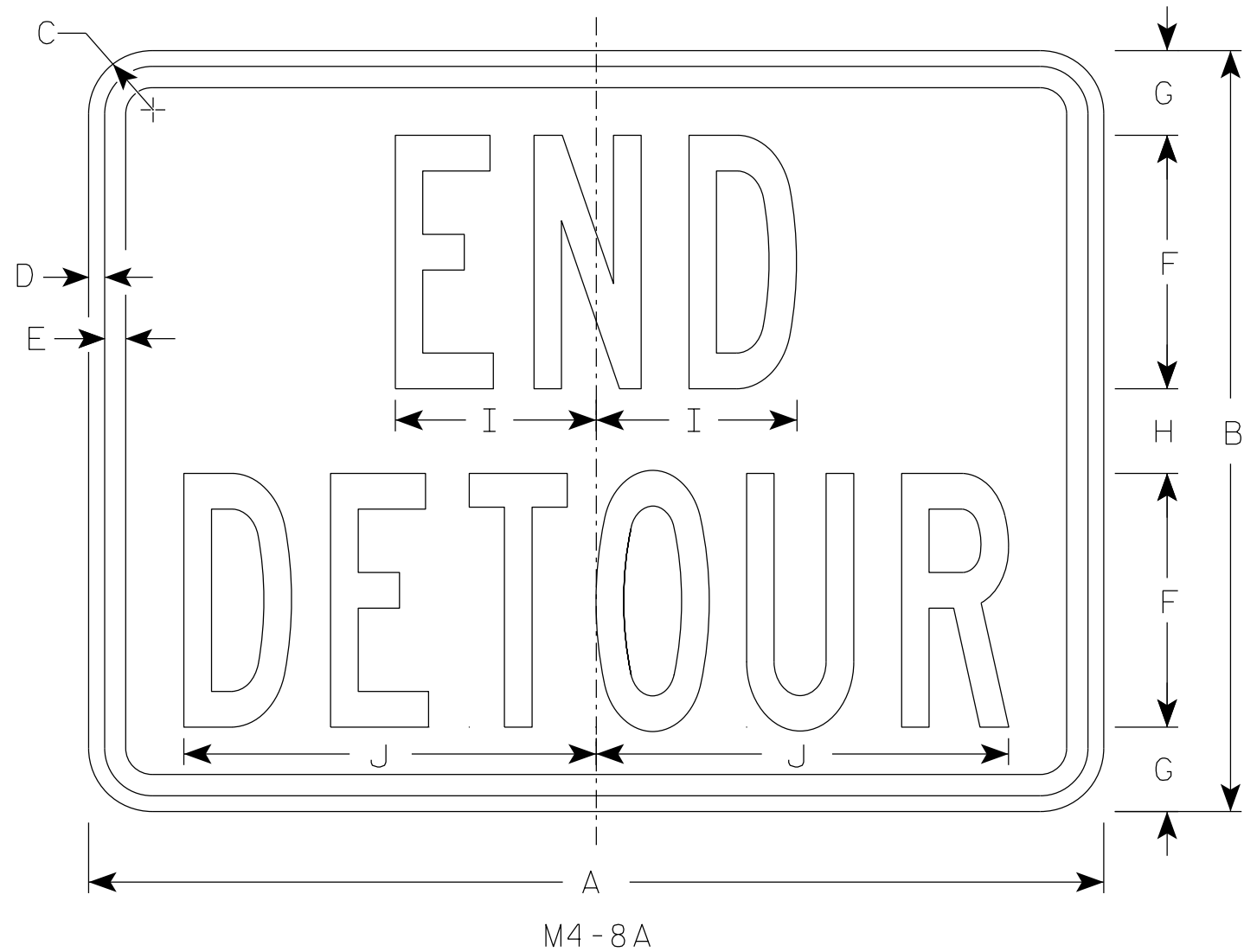
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

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

7

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	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
2M	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
5	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0

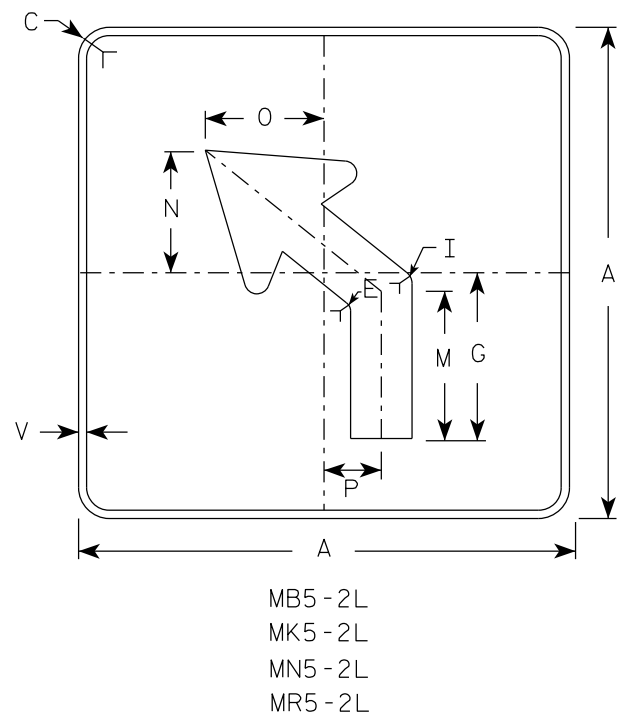
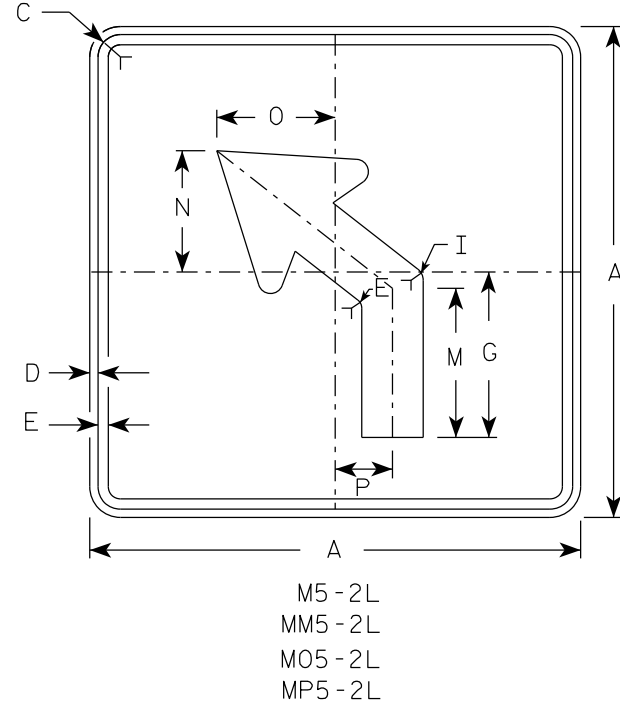
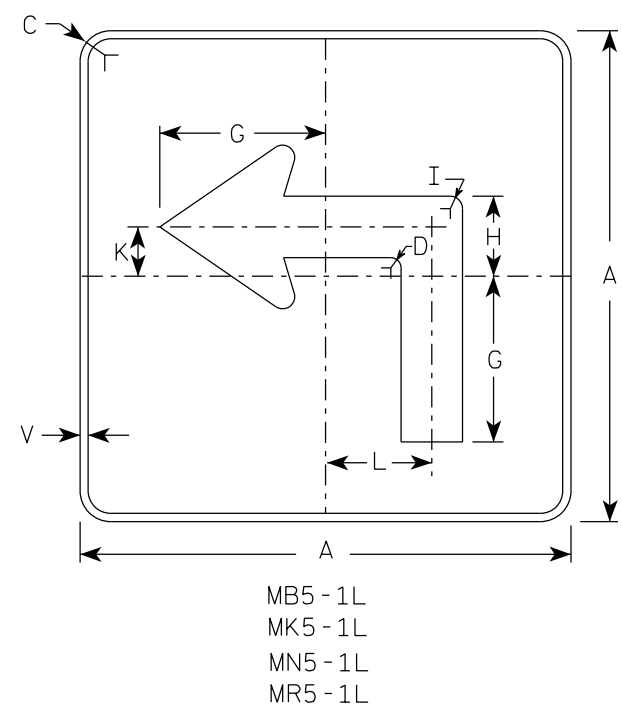
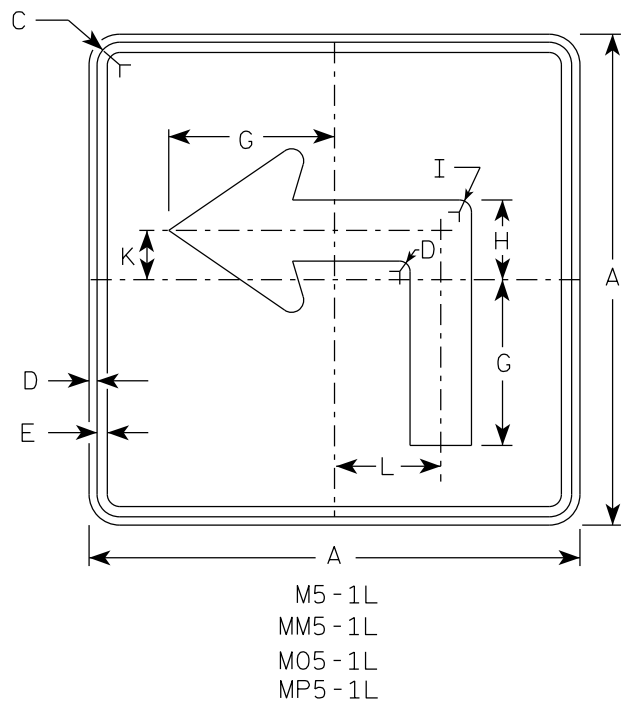
STANDARD SIGN

M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

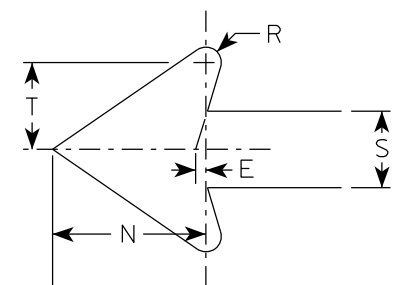
DATE 2/9/2023 PLATE NO. M4-8A.4



NOTES

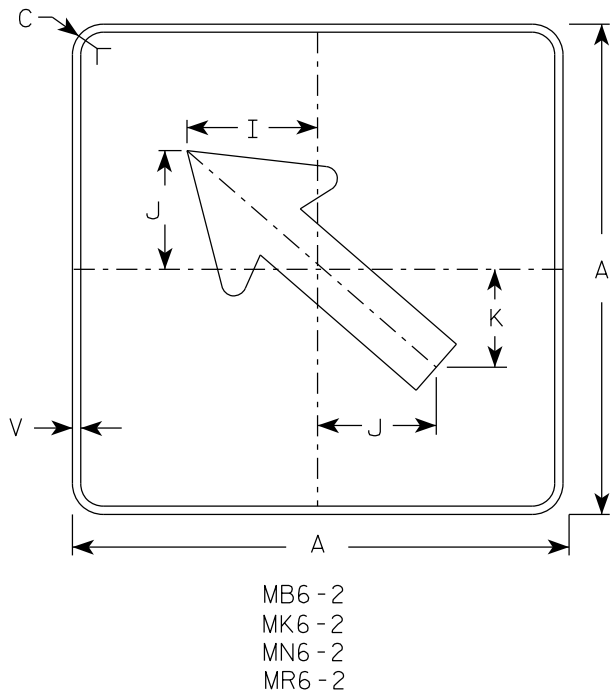
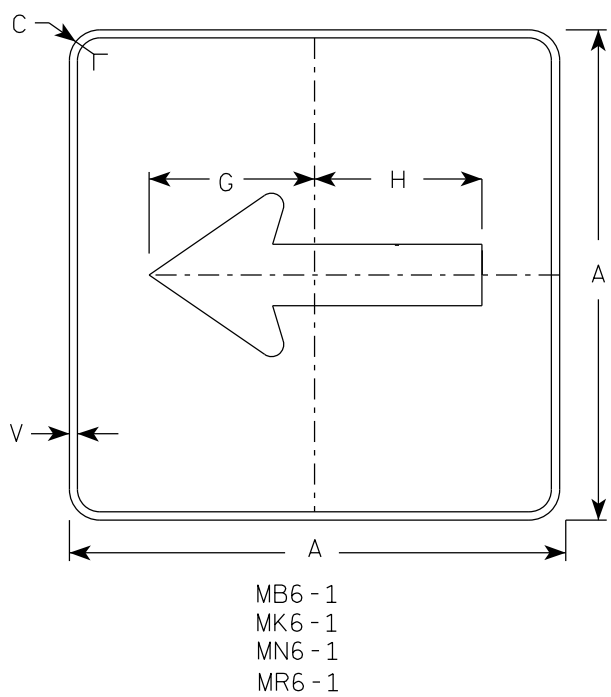
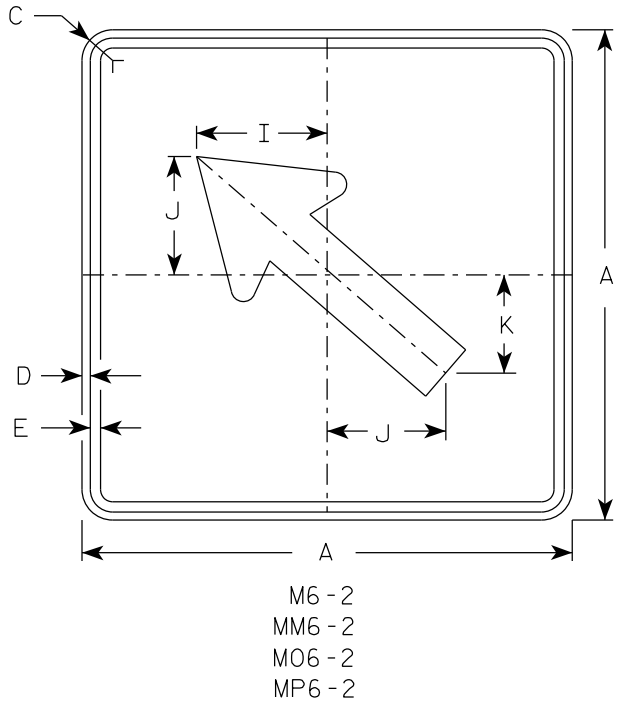
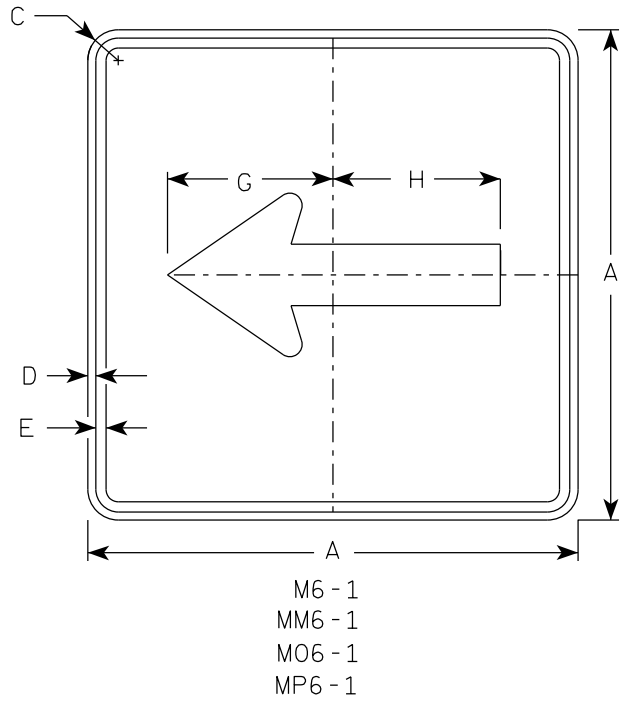
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|
| 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 |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
| | | Message - Black |
| MP5-1 and | MP5-2 | Background - White |
| | | Message - Blue |
| MR5-1 and | MR5-2 | Background - Brown |
| | | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL

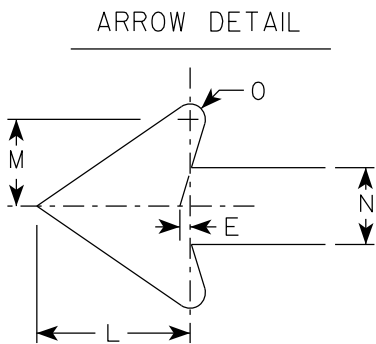


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	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		1/2					6.25
4	30		1 7/8	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		1/2					6.25
5	30		1 7/8	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		1/2					6.25

PROJECT NO:		HWY:		COUNTY:		SHEET NO: 142		E
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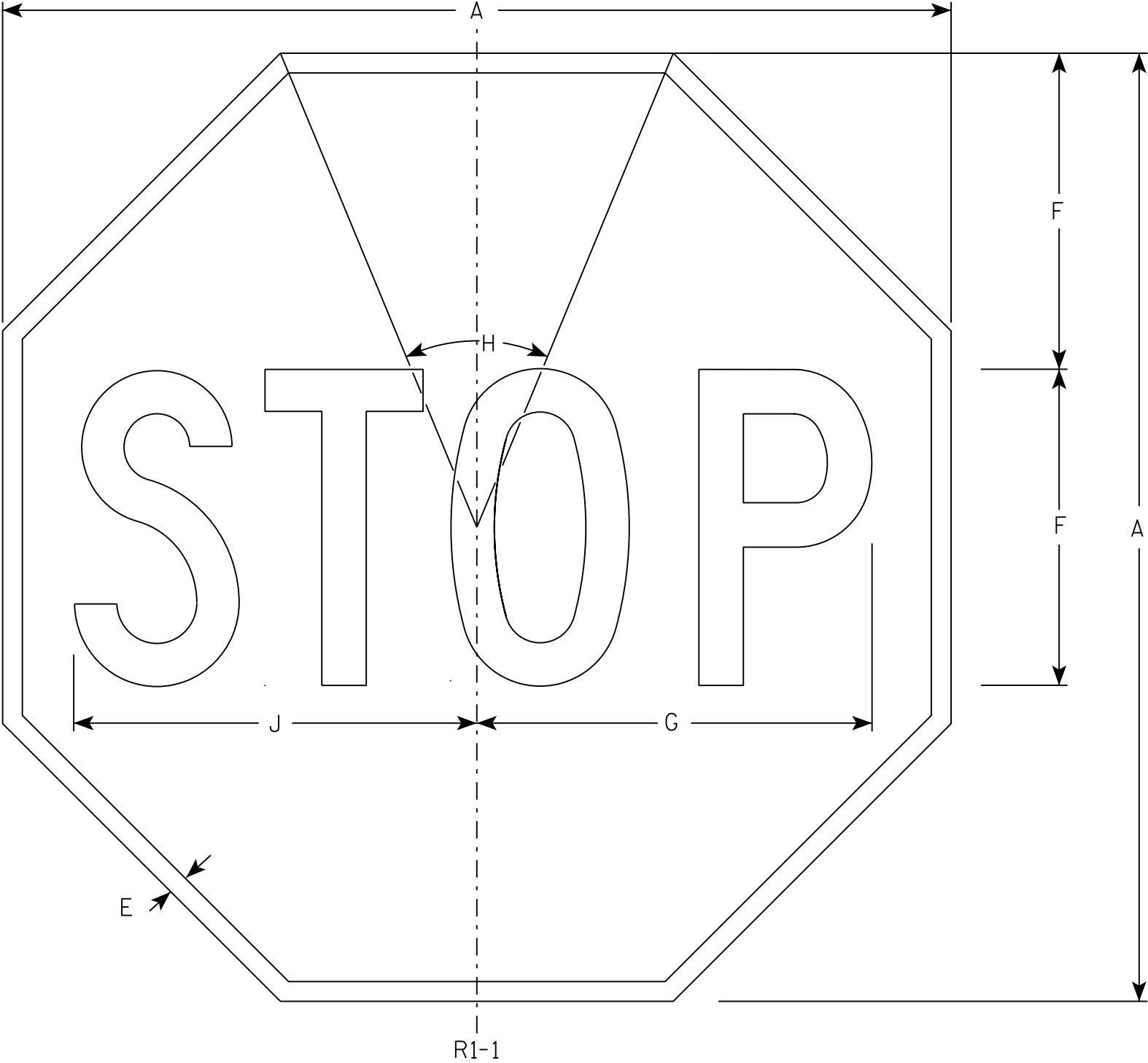


- NOTES**
- Signs are Type II - Type H Reflective except as Shown
 - Color:
Background - See note 4
Message - See note 4
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - M6-1 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
M06-1 and M06-2 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



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	21		1 1/2	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							1/2					3.06
2M	21		1 1/2	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							1/2					3.06
3	30		1 7/8	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							1/2					6.25
4	30		1 7/8	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							1/2					6.25
5	30		1 7/8	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							1/2					6.25

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 - Red
Message - White
- 3. Message Series - C

7

R1-1

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

STANDARD SIGN

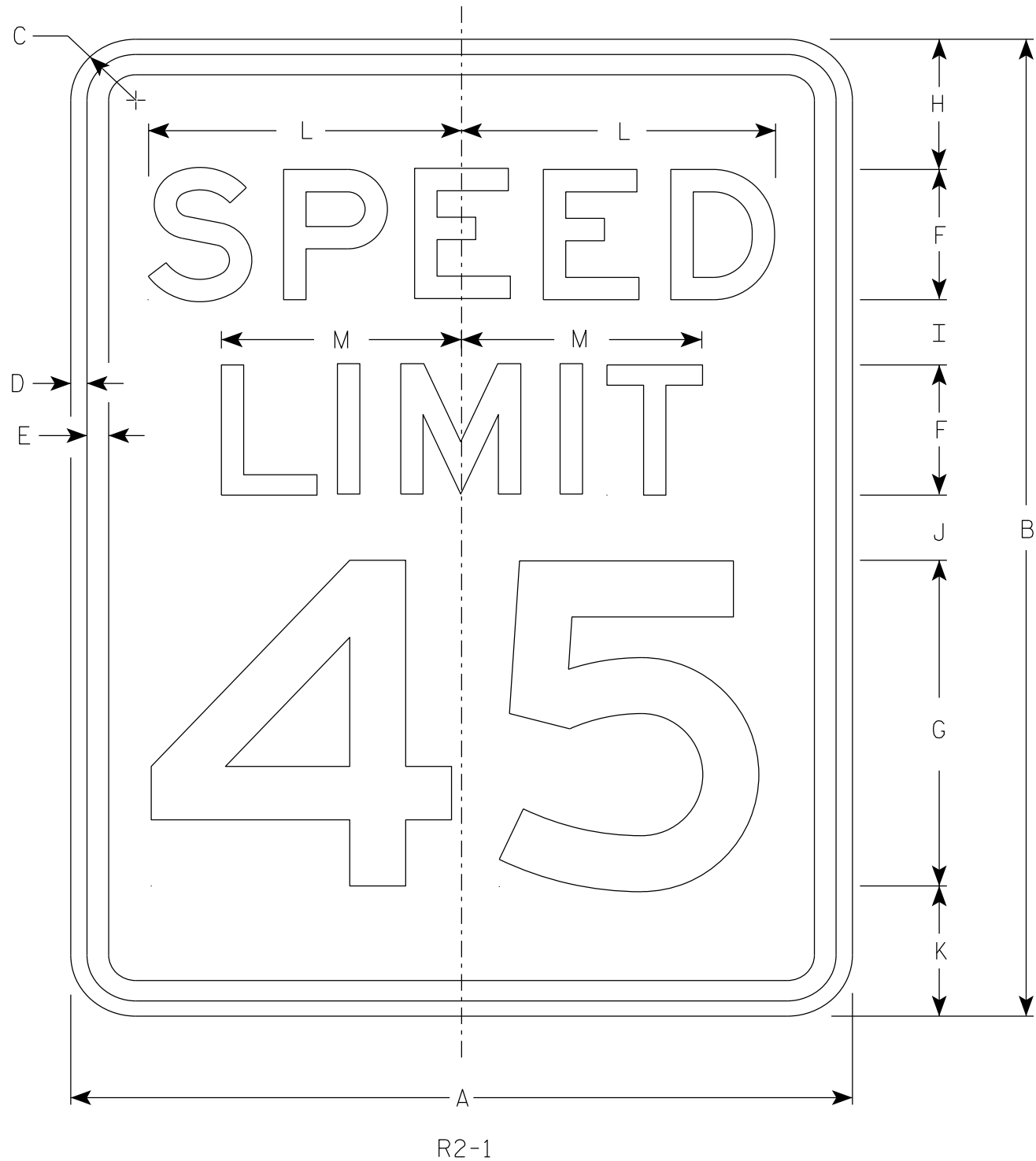
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

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 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	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 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

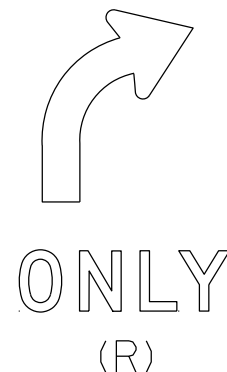
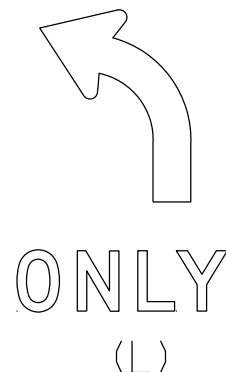
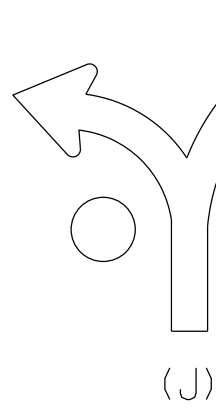
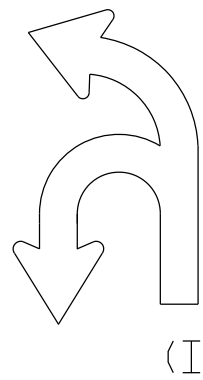
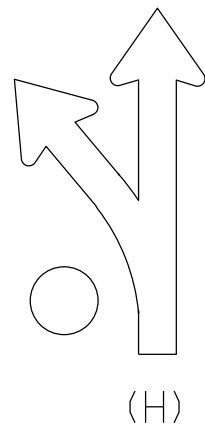
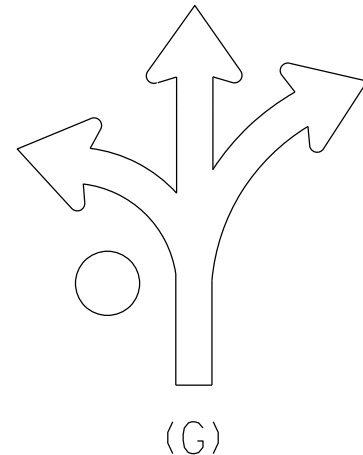
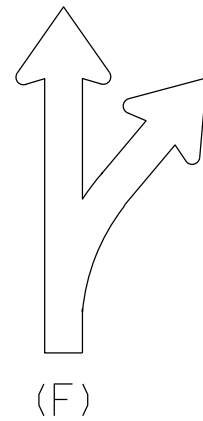
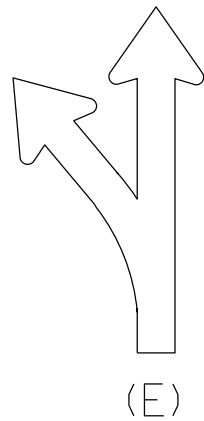
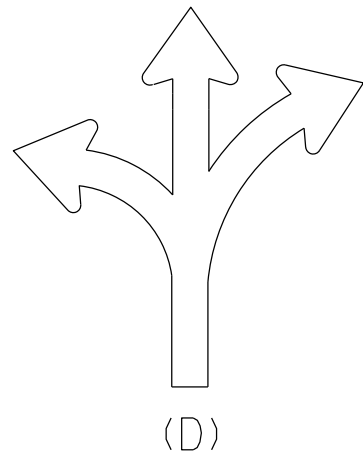
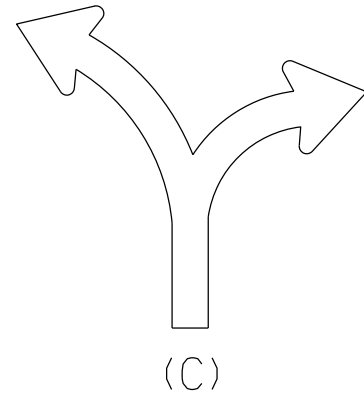
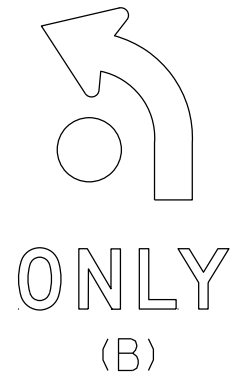
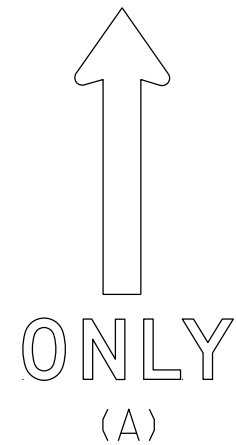
STANDARD SIGN

R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14



NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq. Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn

PLOT DATE : 14-FEB 2023 3:01

PLOT BY : mscj9h

PLOT NAME :

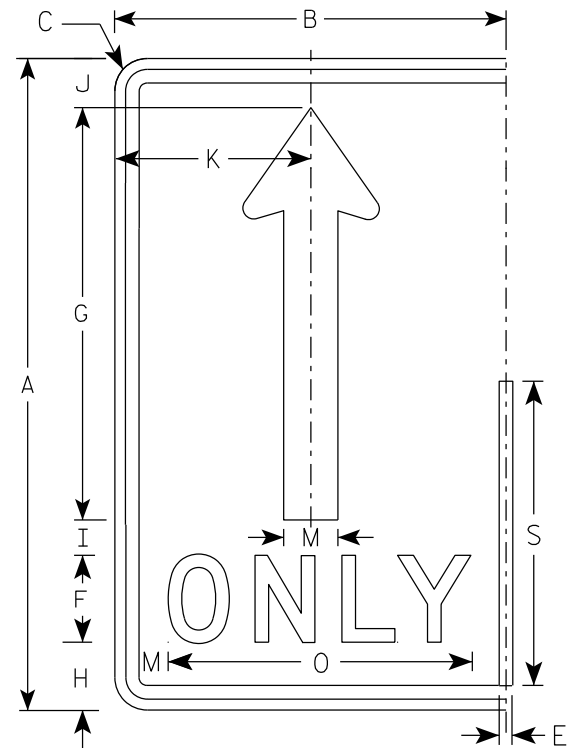
SHEET NO: 146

E

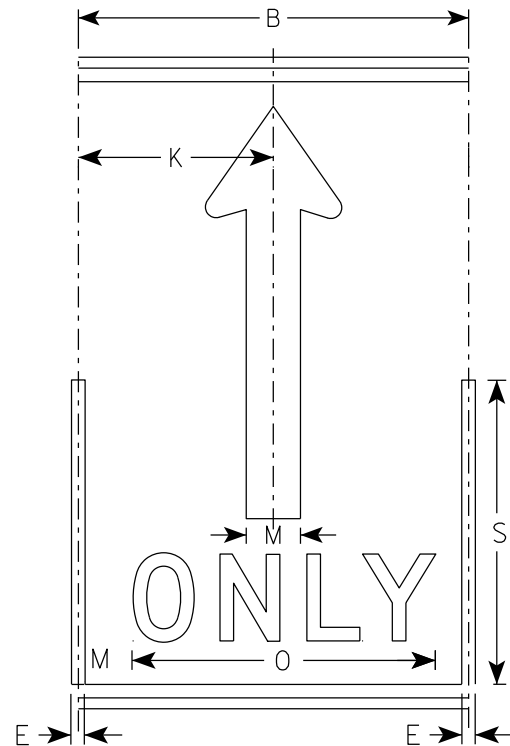
WISDOT/CADDs SHEET 42

NOTES

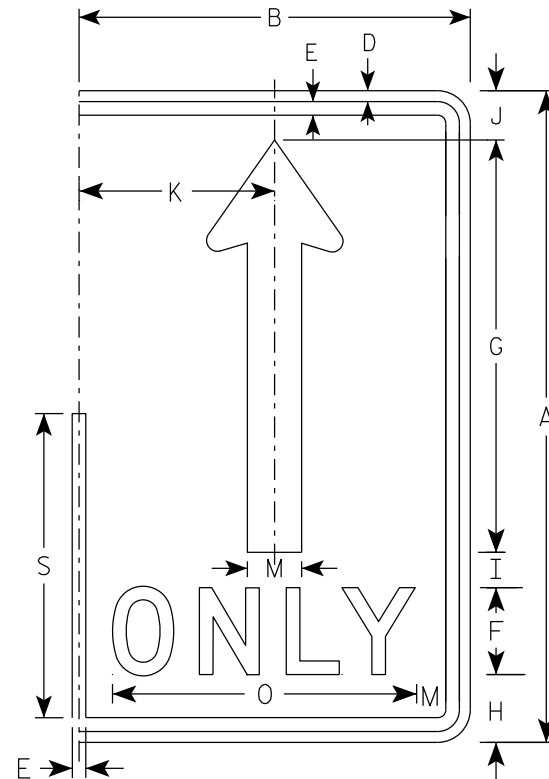
- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



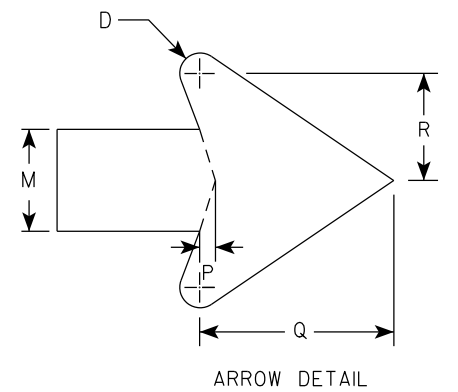
(A)



(A)



(A)



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	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

7

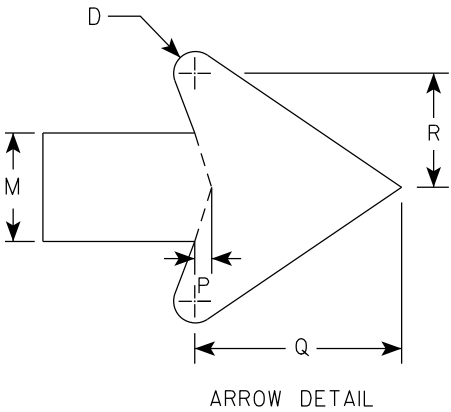
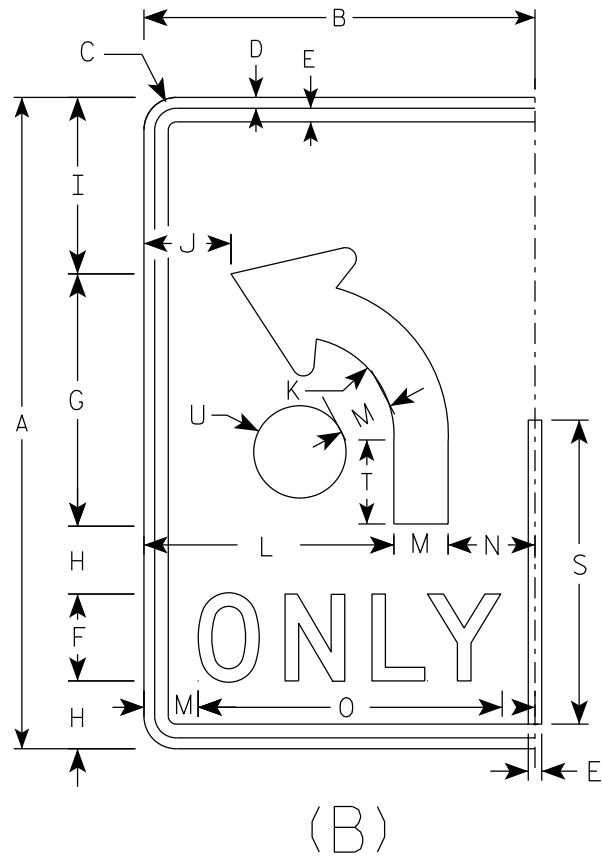
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black

Message 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																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

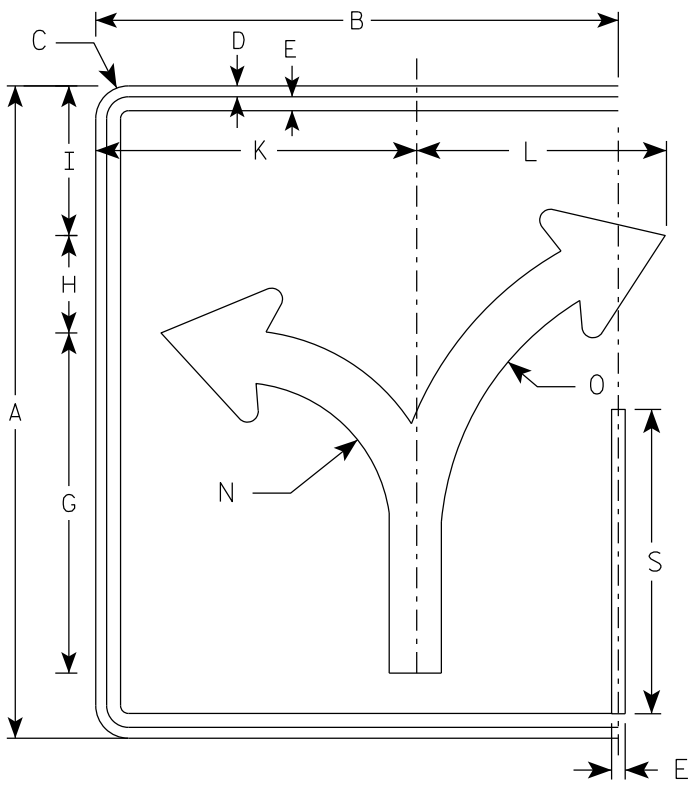
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

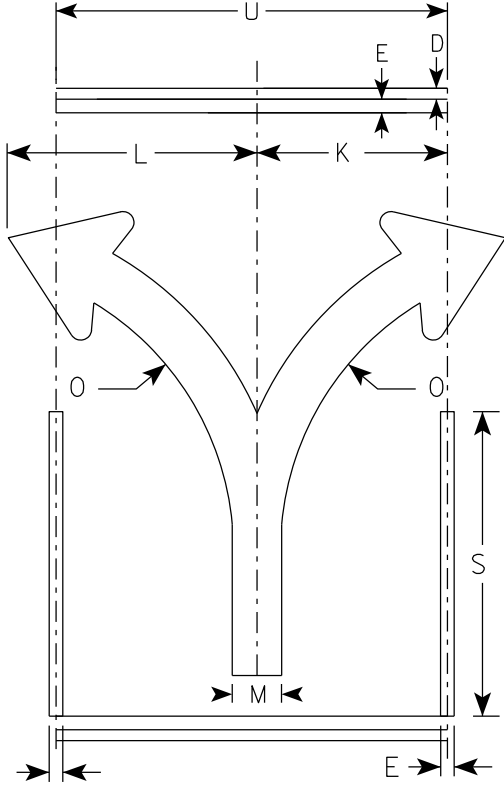
7

NOTES

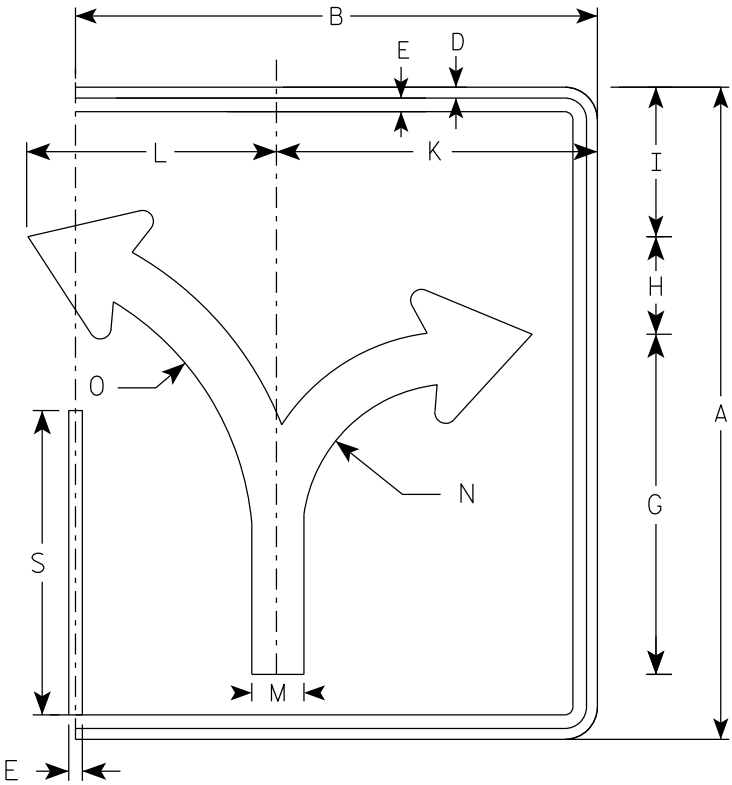
- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



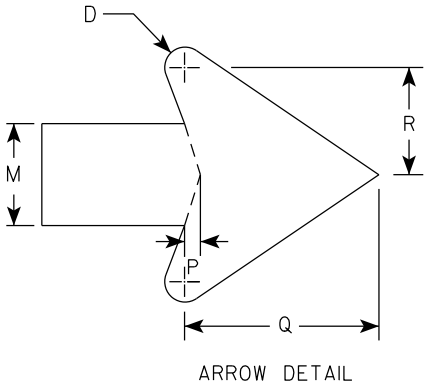
(C)



(C)



(C)



7

																											ENDS	MIDDLE
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 sq. ft.
1																												
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 149

E

STANDARD SIGN
R3-8 (C) Arrow

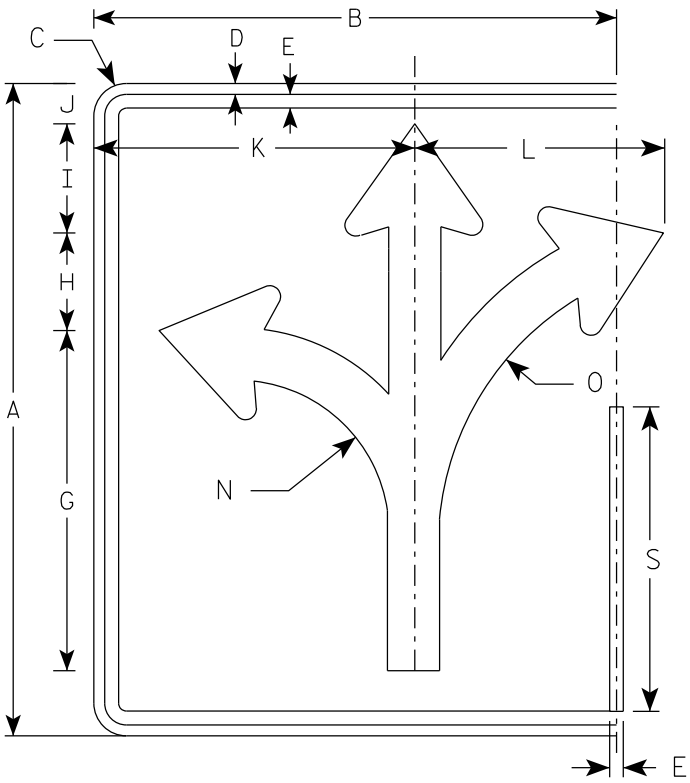
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

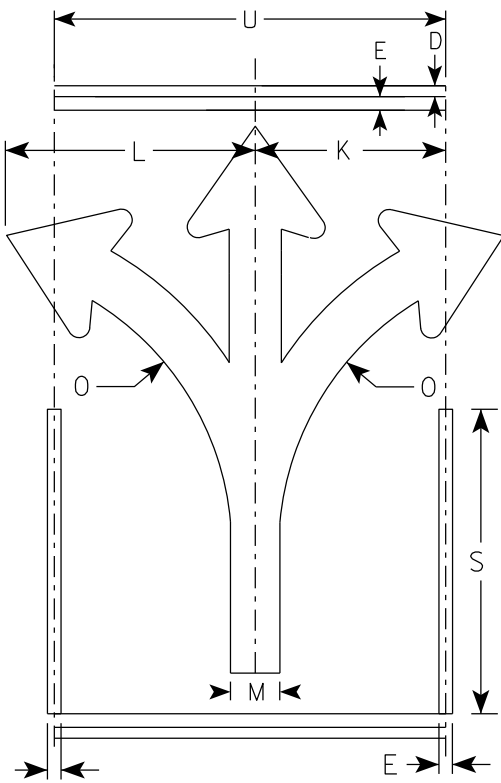
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

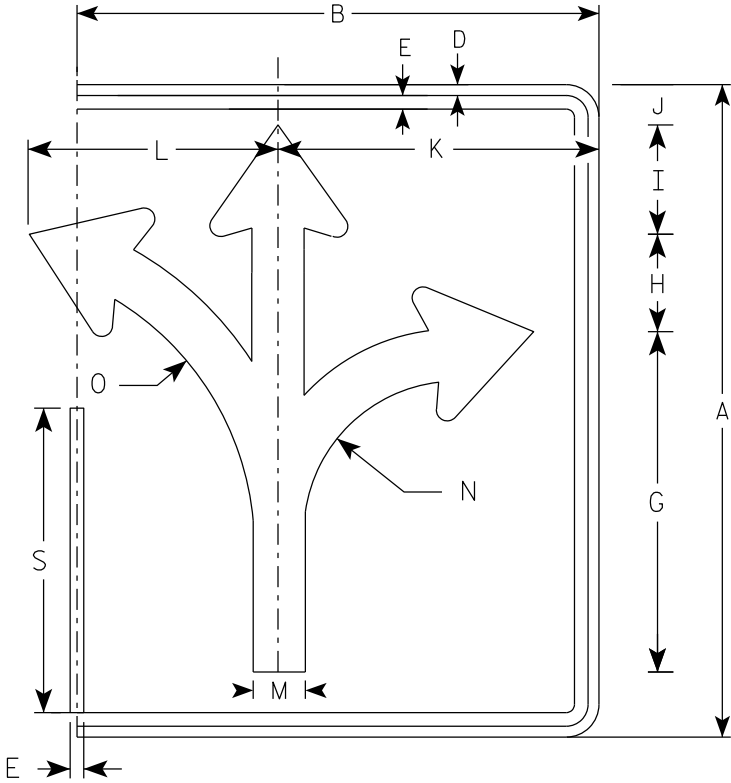
- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



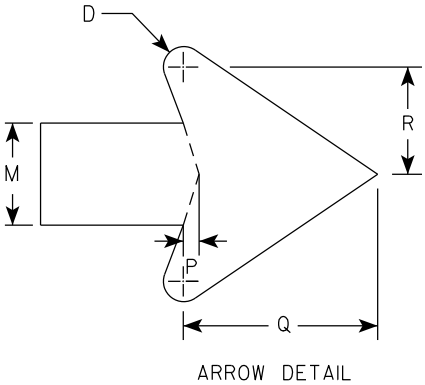
(D)



(D)



(D)



																												ENDS	MIDDLE
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 sq. ft.	
1																													
2S	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75	
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75	
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0	
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0	
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0	

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 150

E

STANDARD SIGN
R3-8 (D) Arrow

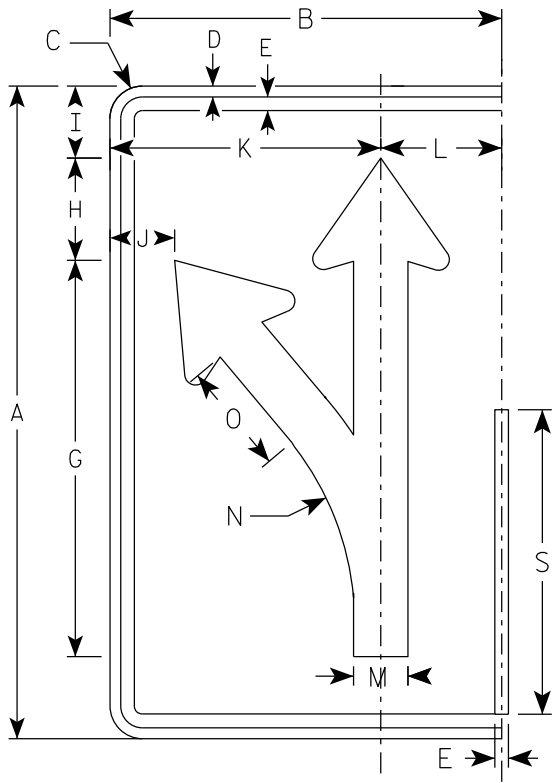
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

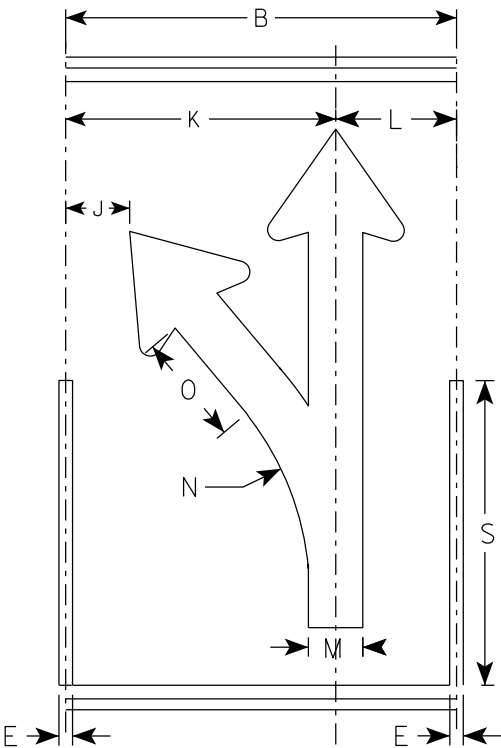
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

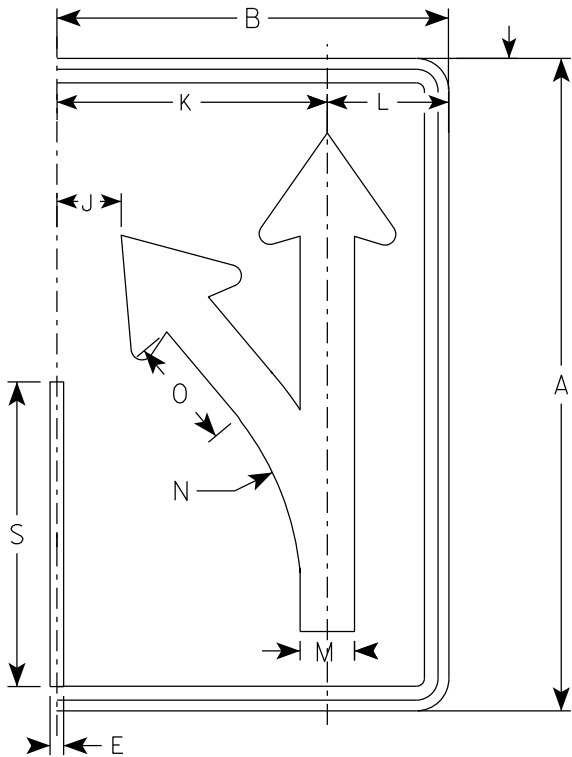
- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



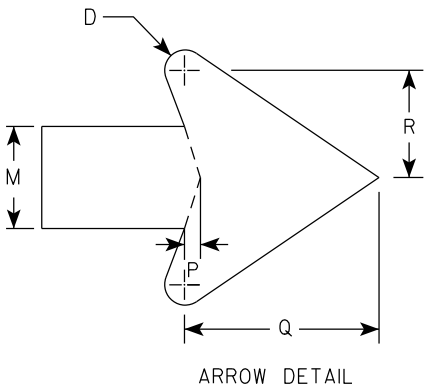
(E)



(E)



(E)



ARROW DETAIL

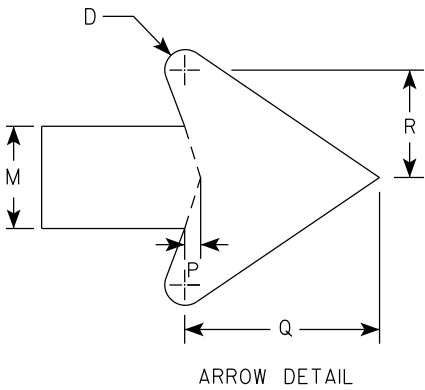
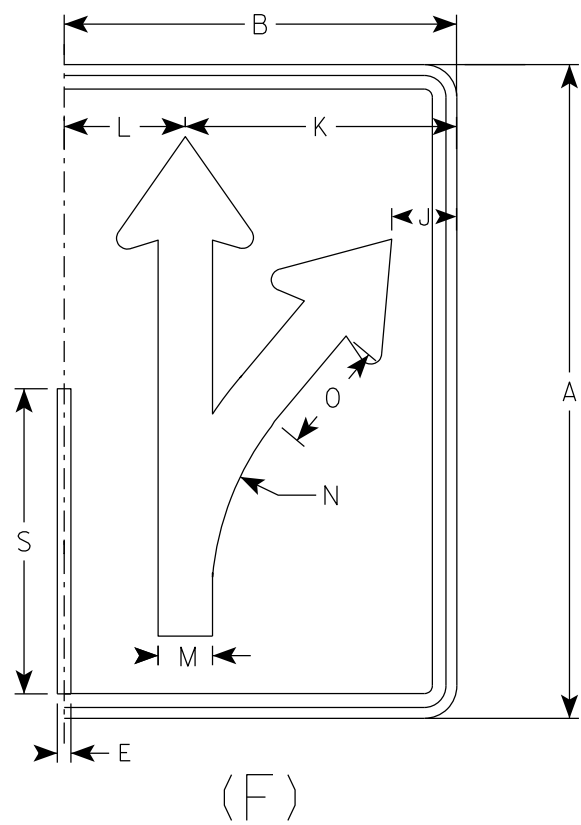
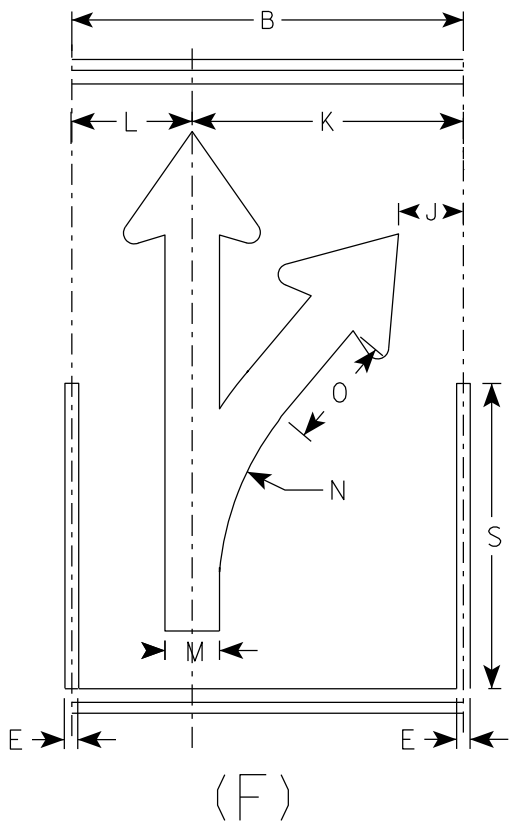
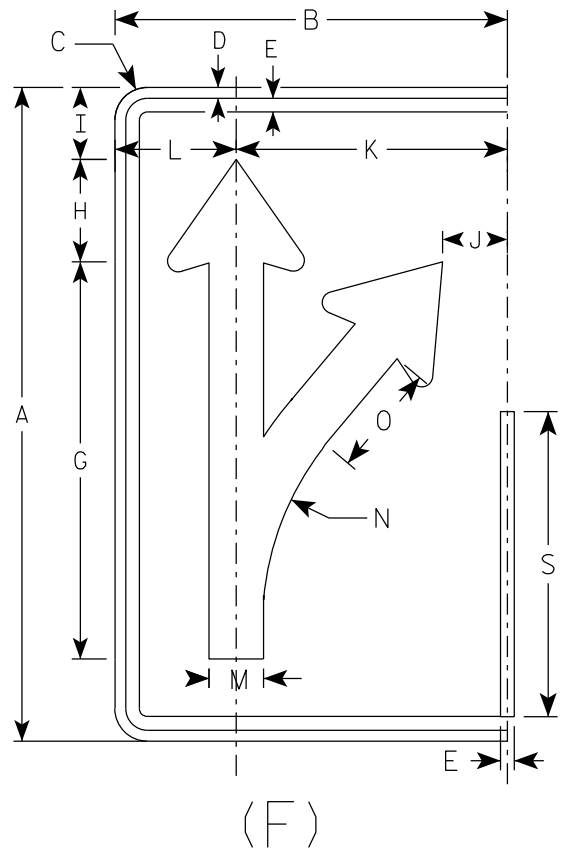
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



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	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 152

E

STANDARD SIGN
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

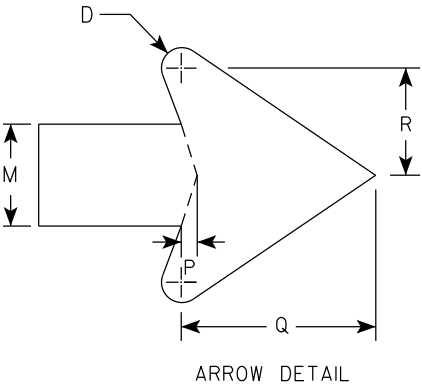
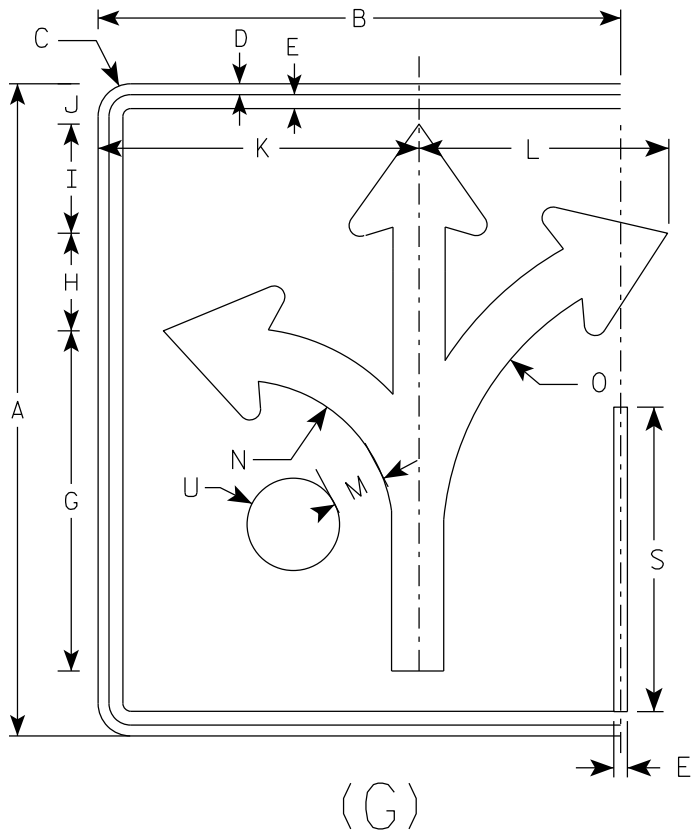
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



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	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 153

E

STANDARD SIGN

R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

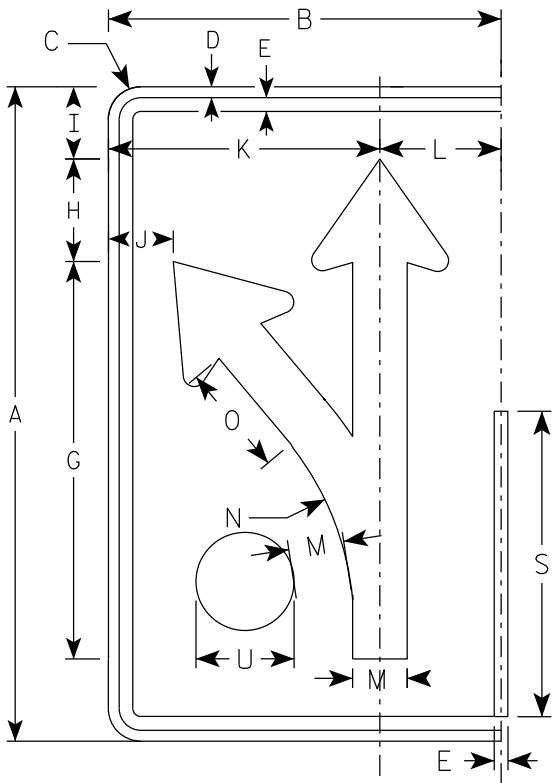
7

NOTES

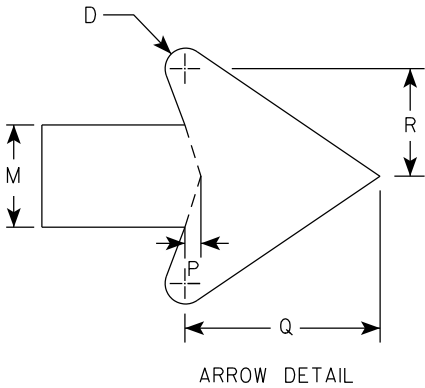
1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



(H)



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	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 1/2	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN

R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

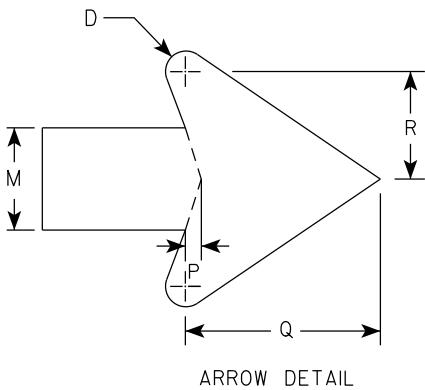
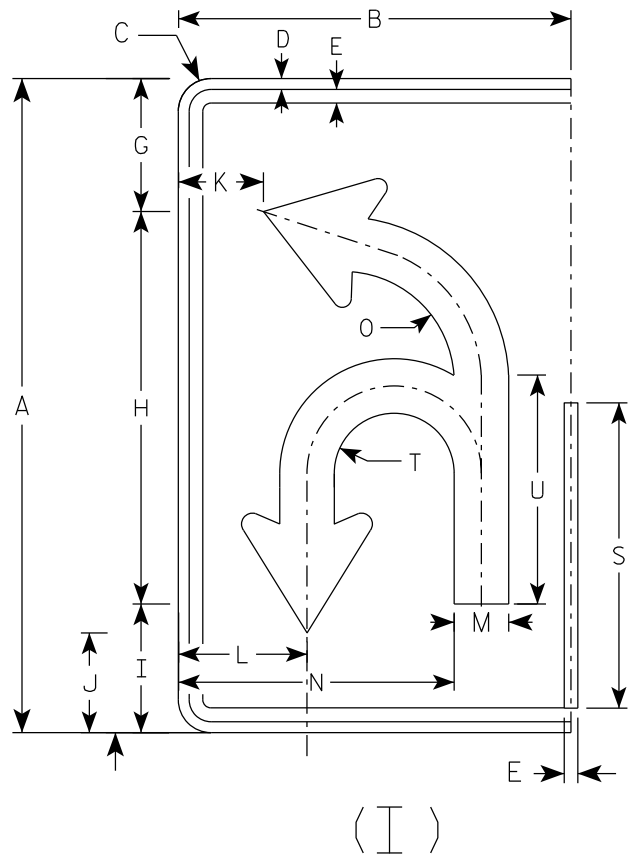
DATE 2/14/23 PLATE NO. R3-8.2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



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	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 1/2	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 1/2	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 155

E

STANDARD SIGN

R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

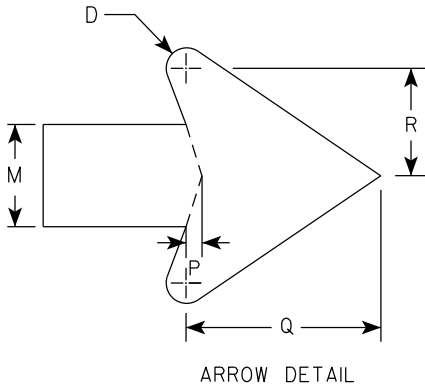
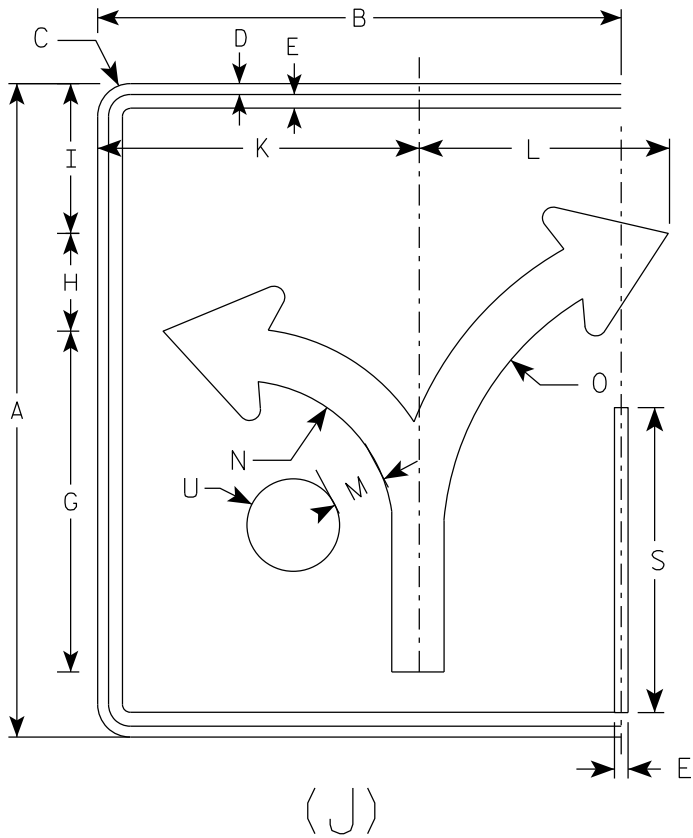
7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



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	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 1/2	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 1/2	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 156

E

STANDARD SIGN

R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

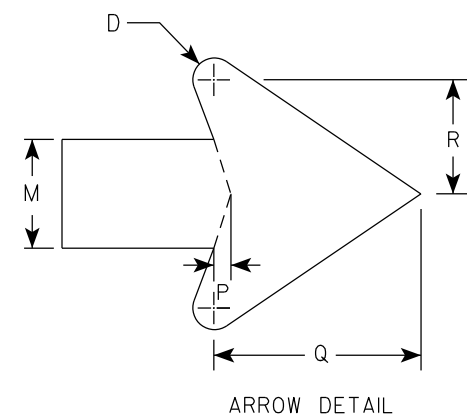
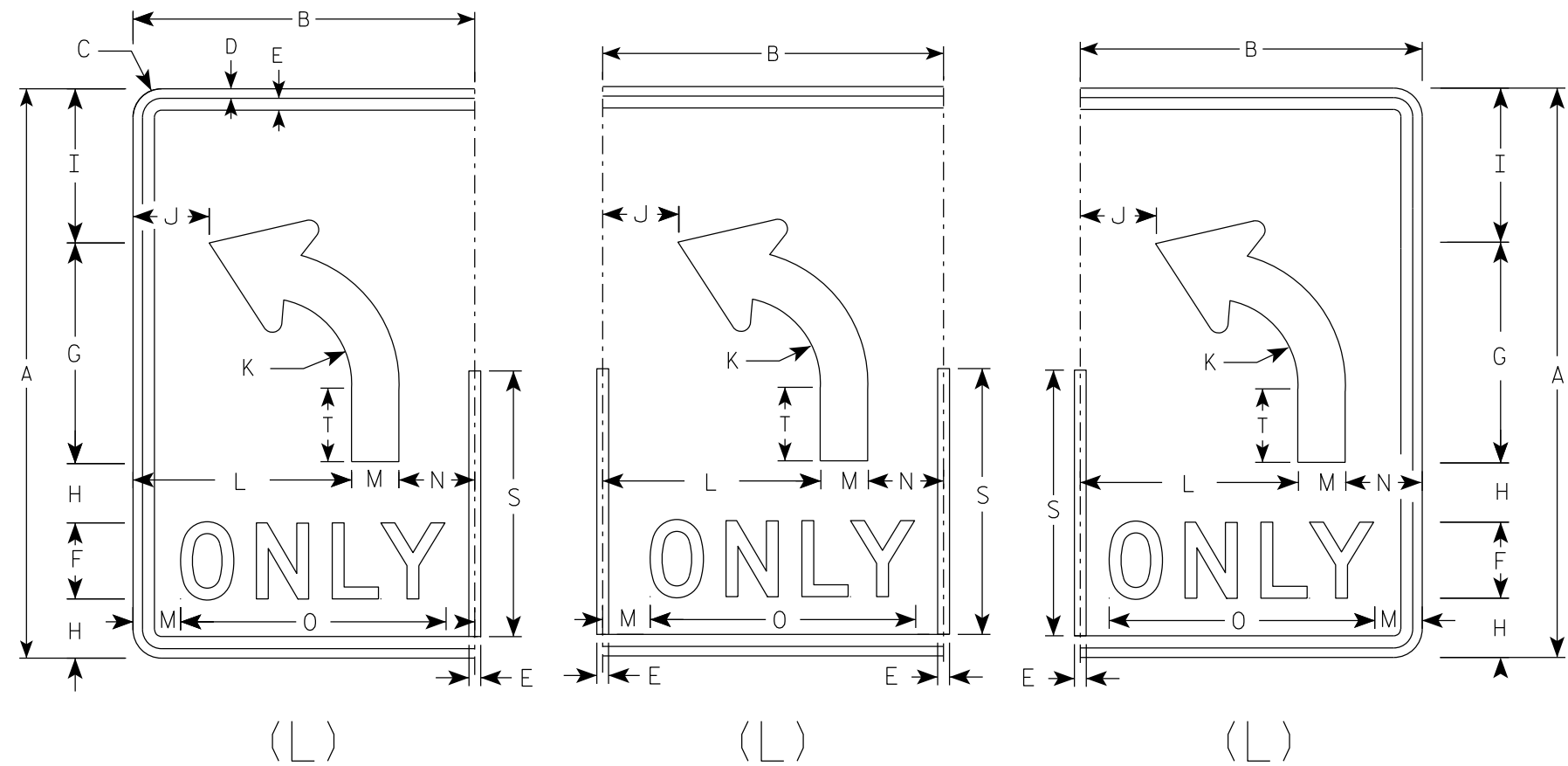
for State Traffic Engineer

DATE 2/14/23

PLATE NO. R3-8.2

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message 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																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (L) Arrow

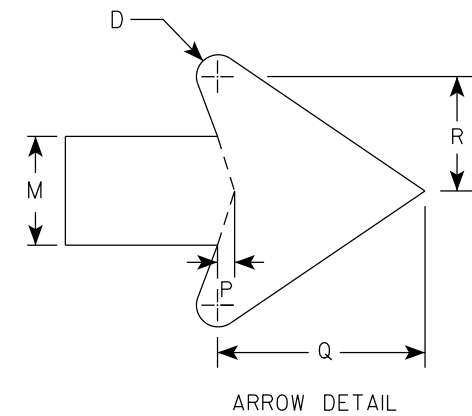
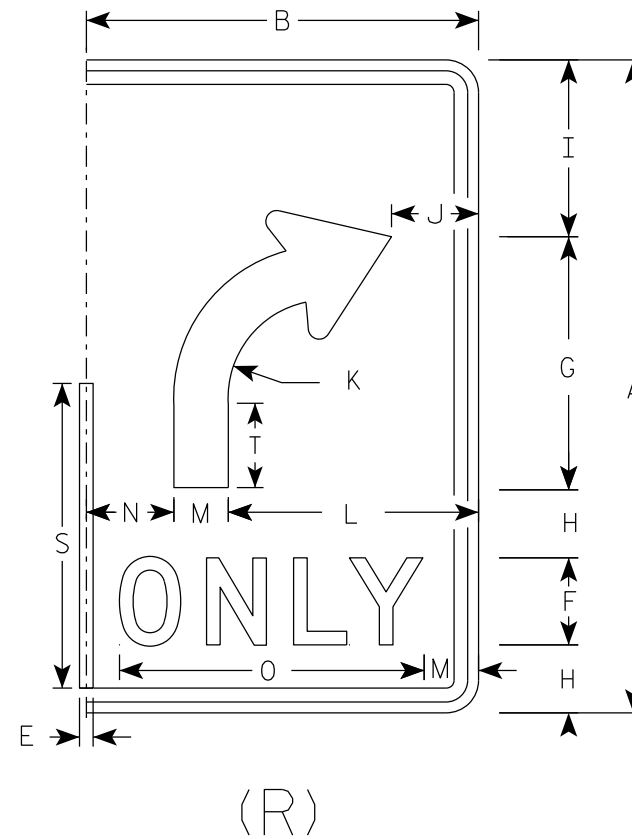
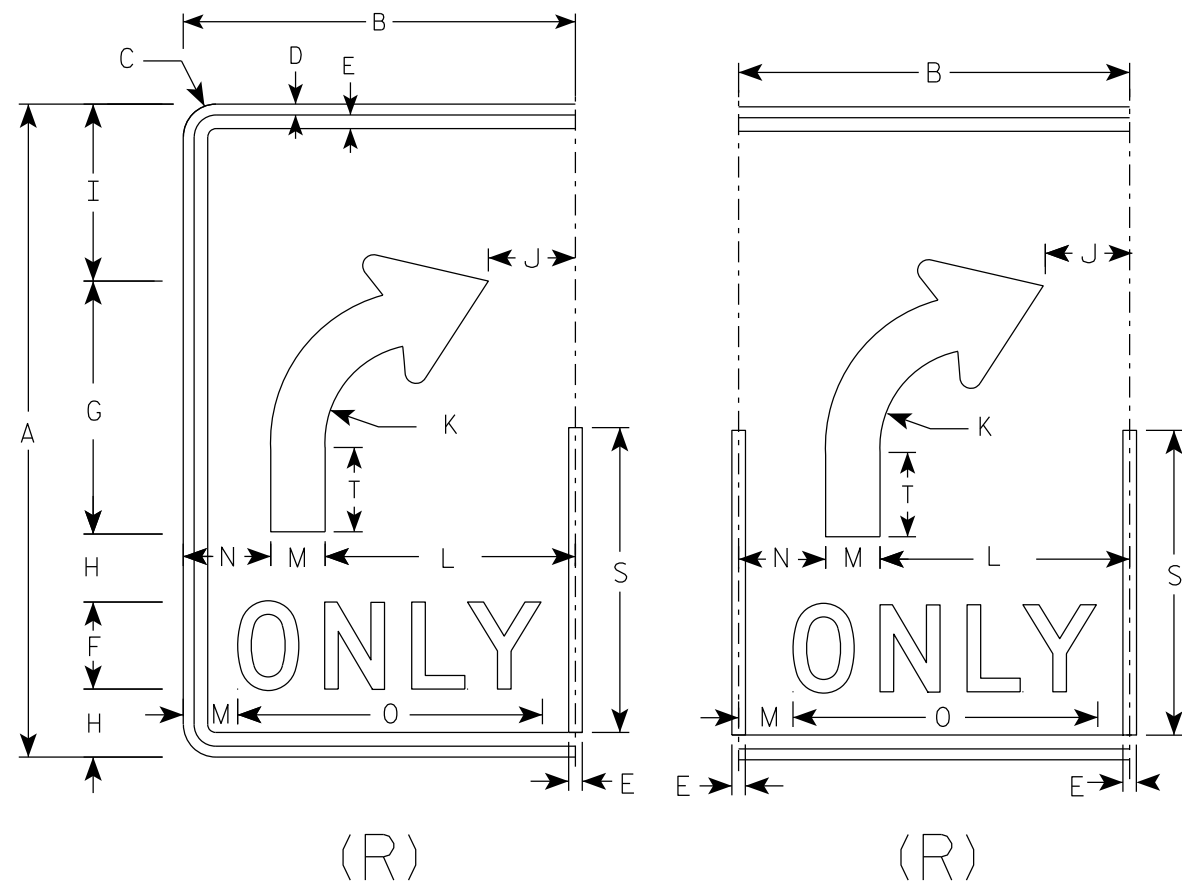
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message 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																											
2S	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 1/2	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 1/2	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN

R3-8 (R) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 2/14/23

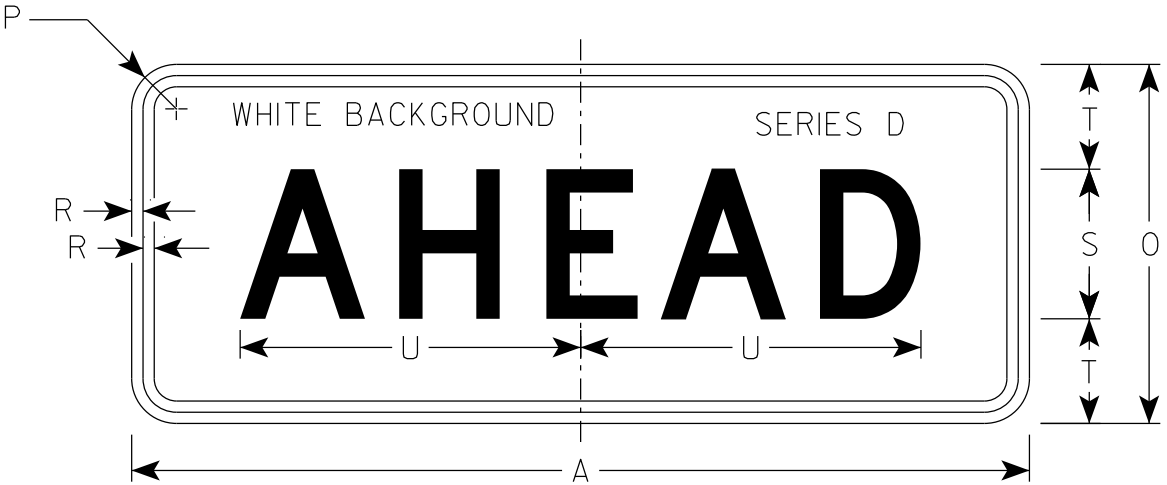
PLATE NO. R3-8.2



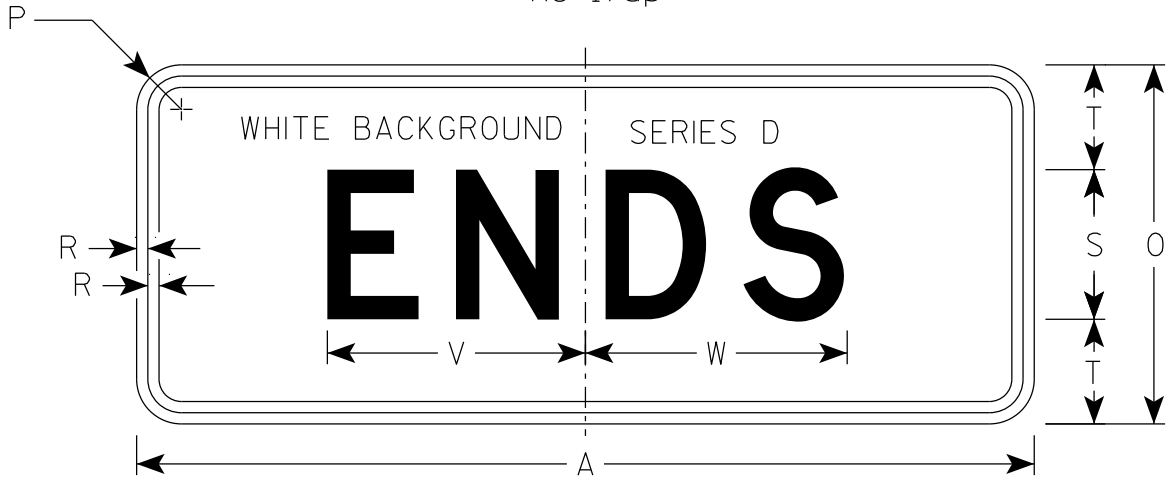
R3-17

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - AS SHOWN
Message - BLACK
- 3. Message Series - C or as noted



R3-17ap



R3-17bp

																												R3-17	R3-17ap	R3-17bp
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 sq. ft.	Area sq. ft.	
1																														
2S	30	24	1 1/2	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/2	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5	
2M	30	24	1 1/2	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/2	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5	
3																														
4																														
5																														

STANDARD SIGN

R3-17 & R3-17a&bp

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

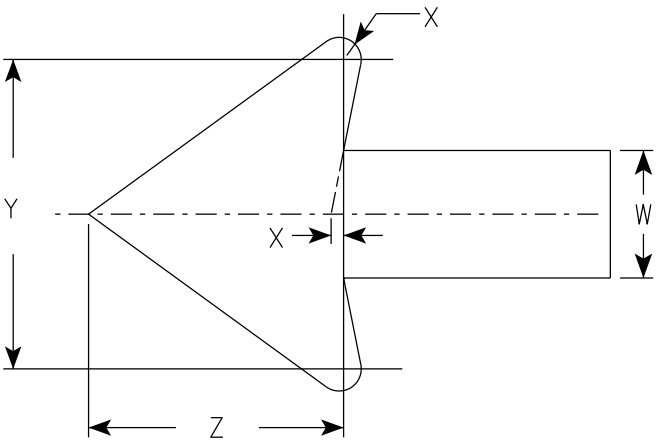
DATE 2/23/23 PLATE NO. R3-17.3



R7-53

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Red
- 3. Message Series - See Note 4
- 4. Lines 1, 3 and 4 are series C, line 2 is series B.
- 5. R7-53D (double arrow)
R7-53L (left arrow)
R7-53R (right arrow)



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	12	18	1 1/2	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 5/8	1 3/4	1/4	4 1/2	2 3/8	3 7/8	3/4	1/8	1 3/4	1 1/2	1.5
2S	18	24	1 1/2	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	3 3/8	1 1/2	5/8	5 3/8	3	5 7/8	1 1/8	1/4	2 5/8	2 1/4	3.0
2M	24	30	1 1/2	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	4	2	5/8	6 5/8	3 5/8	7 3/4	1 1/2	1/4	3 1/2	3	5.0
3	24	30	1 1/2	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	4	2	5/8	6 5/8	3 5/8	7 3/4	1 1/2	1/4	3 1/2	3	5.0
4																											
5																											

PROJECT NO:

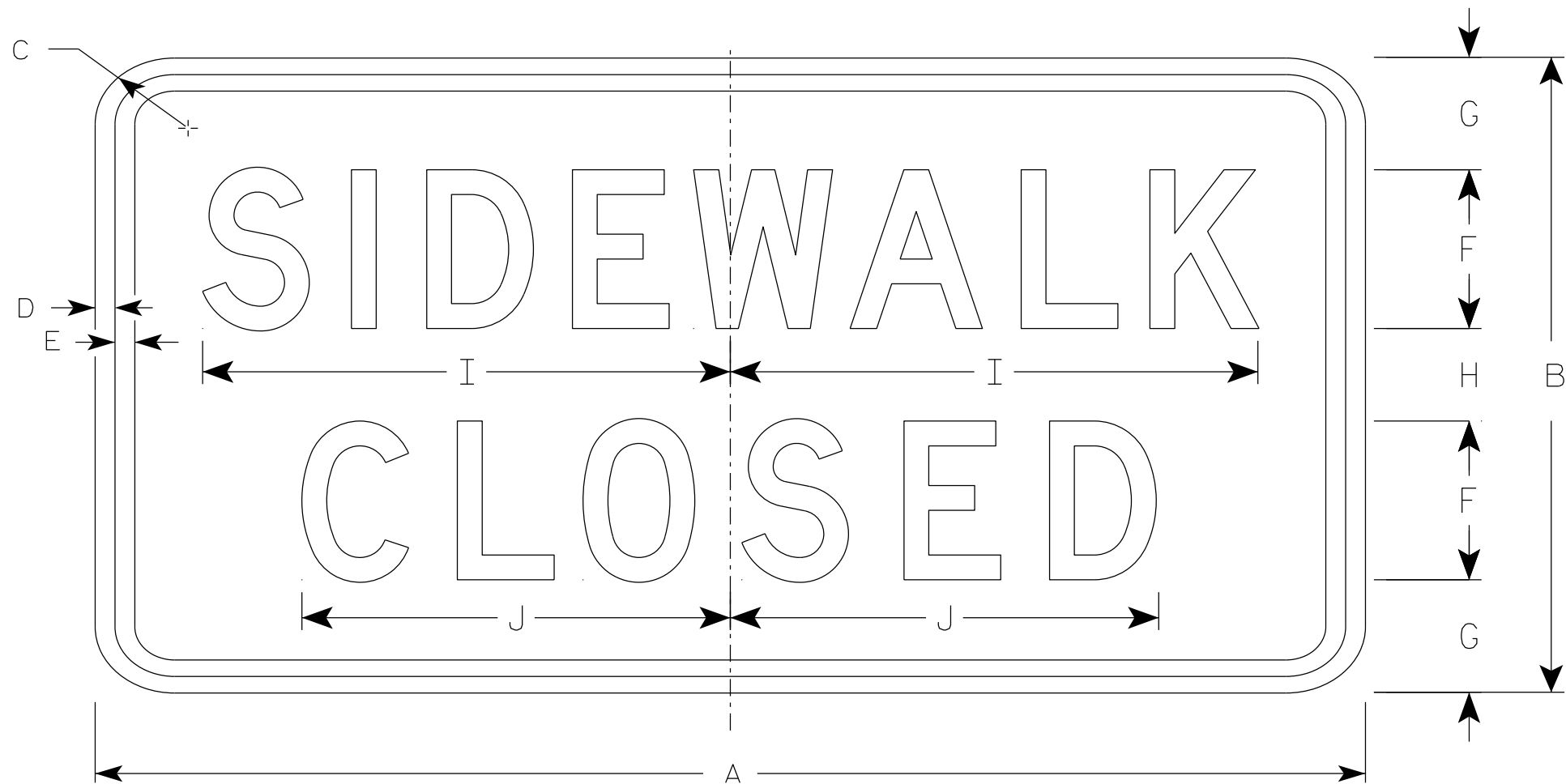
HWY:

COUNTY:

SHEET NO: 160

E

7



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

7

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

PROJECT NO:

HWY:

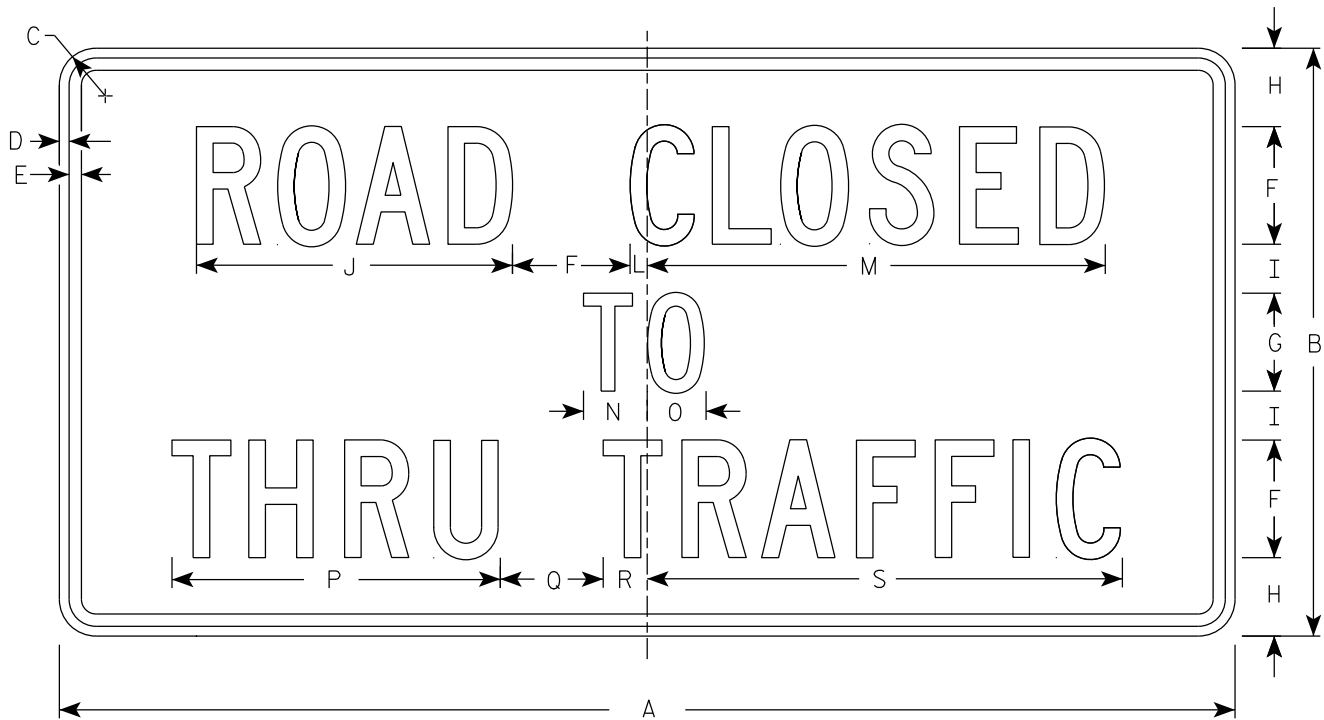
COUNTY:

SHEET NO: 161

E

NOTES

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



R11-4

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																											
2S	60	30	1 7⁄8	1⁄2	5⁄8	6	5	4	2 1⁄2	16 1⁄8		7⁄8	23 3⁄8	3 1⁄4	3	16 3⁄4	5 1⁄4	2 1⁄4	24 1⁄4								12.5
2M	60	30	1 7⁄8	1⁄2	5⁄8	6	5	4	2 1⁄2	16 1⁄8		7⁄8	23 3⁄8	3 1⁄4	3	16 3⁄4	5 1⁄4	2 1⁄4	24 1⁄4								12.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 162

E

STANDARD SIGN

R11 - 4

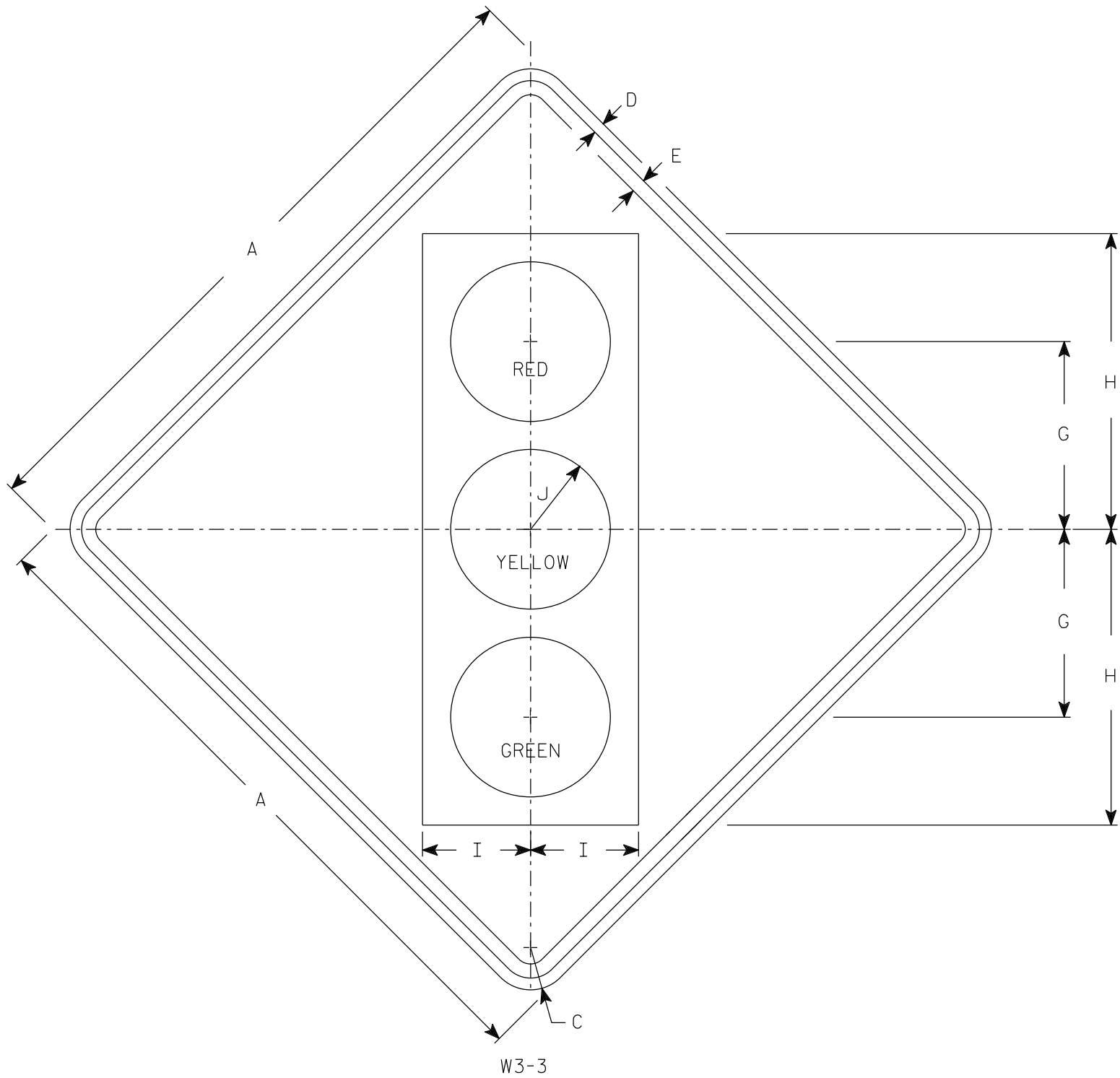
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 2/5/24

PLATE NO. R11-4.4



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - See Note 3
3. 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 7⁄8	1⁄2	5⁄8		8 3⁄4	13 3⁄4	5	3 3⁄4																	6.25
2S	36		2 1⁄4	5⁄8	3⁄4		10	15 3⁄4	5 3⁄4	4 1⁄4																	9.0
2M	36		2 1⁄4	5⁄8	3⁄4		10	15 3⁄4	5 3⁄4	4 1⁄4																	9.0
3	36		2 1⁄4	5⁄8	3⁄4		10	15 3⁄4	5 3⁄4	4 1⁄4																	9.0
4	48		3	3⁄4	1		12 1⁄2	20	7 1⁄2	5																	16.0
5	48		3	3⁄4	1		12 1⁄2	20	7 1⁄2	5																	16.0

STANDARD SIGN

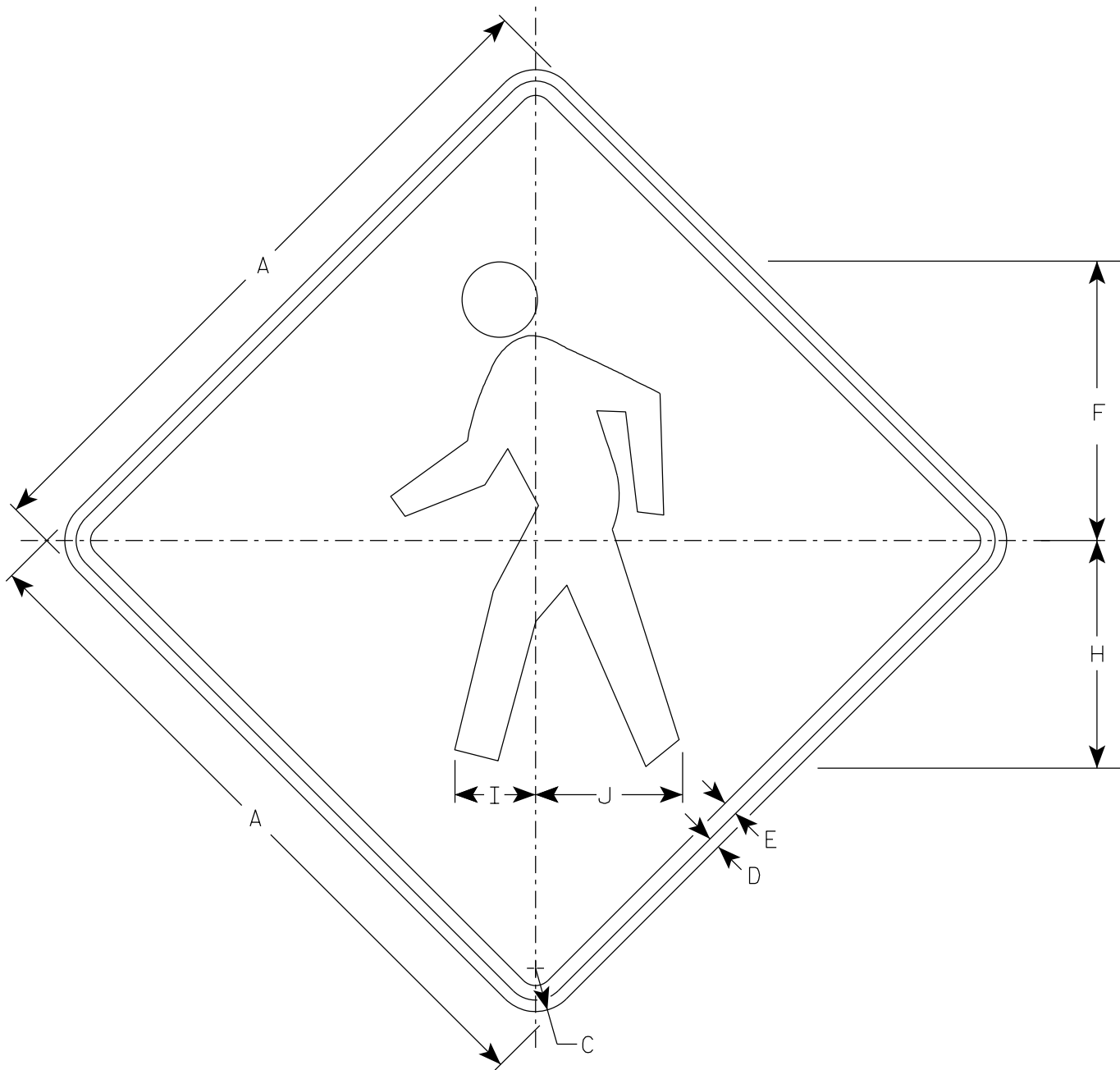
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/2023 PLATE NO. W3-3.12

7



W11-2

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black

7

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 1/2	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 7/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		2 1/4	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		2 1/4	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN
W11-2

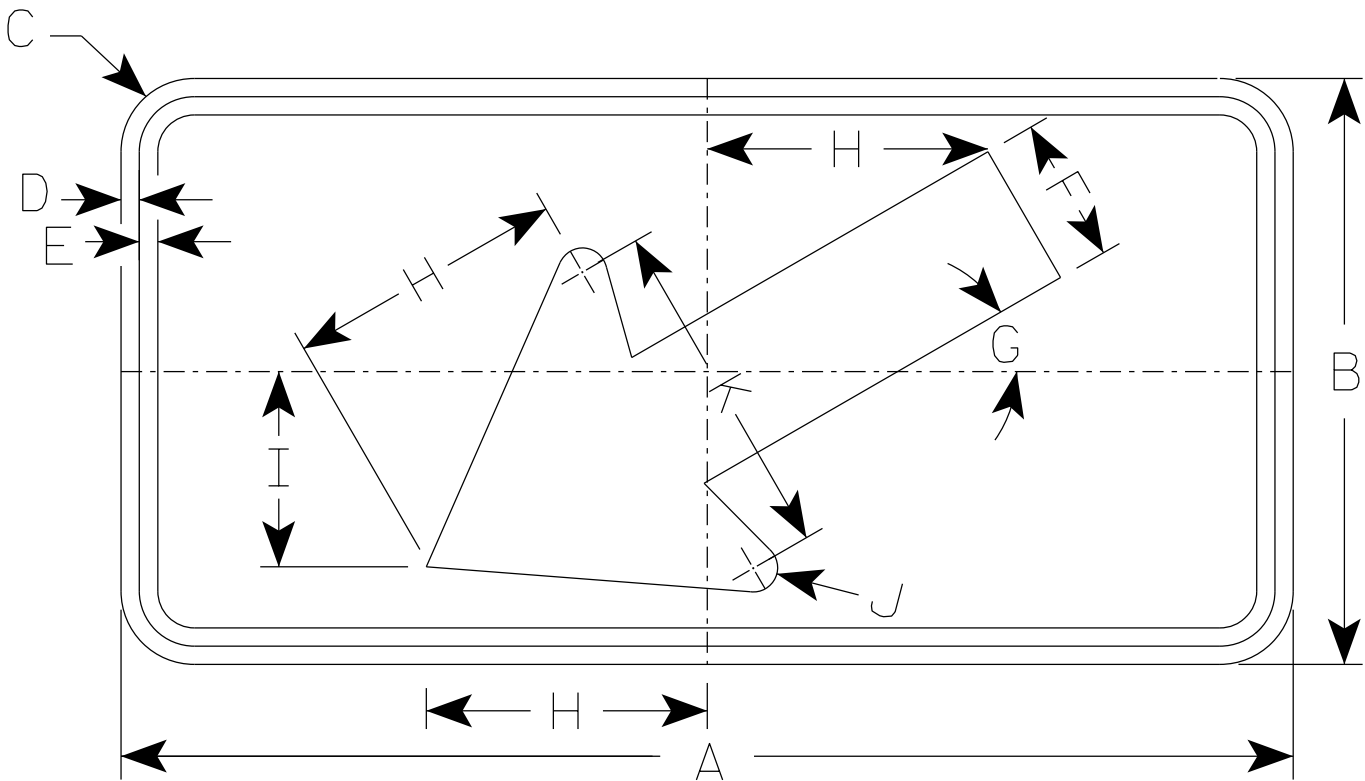
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/15/2023 PLATE NO. W11-2.9

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W16-7R is the same as W16-7L
except the arrow is reversed along
the vertical centerline.



W16-7L

- * For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
- * For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	1 1/2	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	1 1/2	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1 7/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
5																											

STANDARD SIGN

W16-7

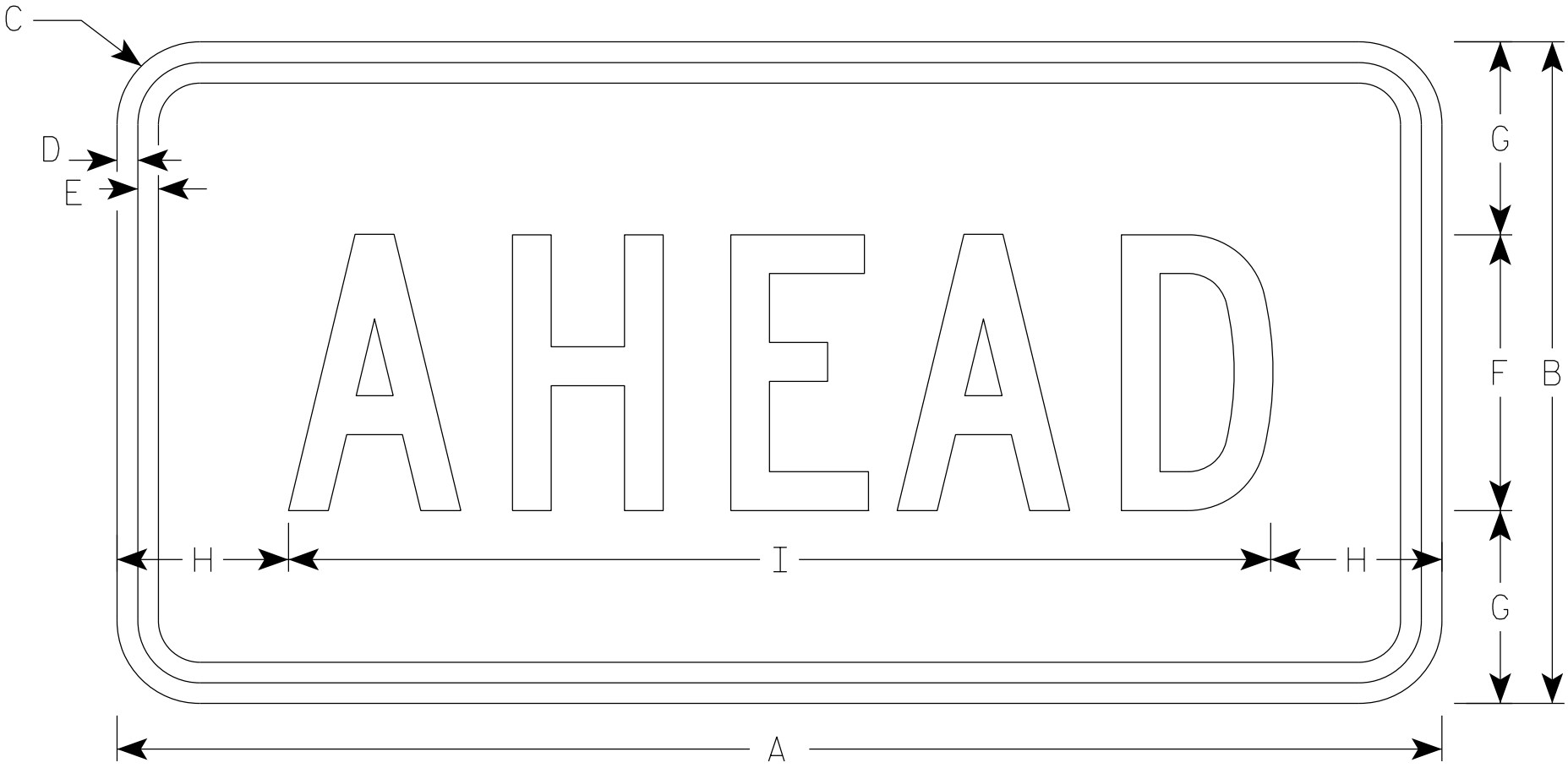
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/9/2024 PLATE NO. W16-7.9

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - C



W16-9P

- * For 36" x 36" Warning Signs, use 30" x 18" W16-9P signs.
- * For 48" x 48" Warning Signs, use 48" x 24" W16-9P signs.

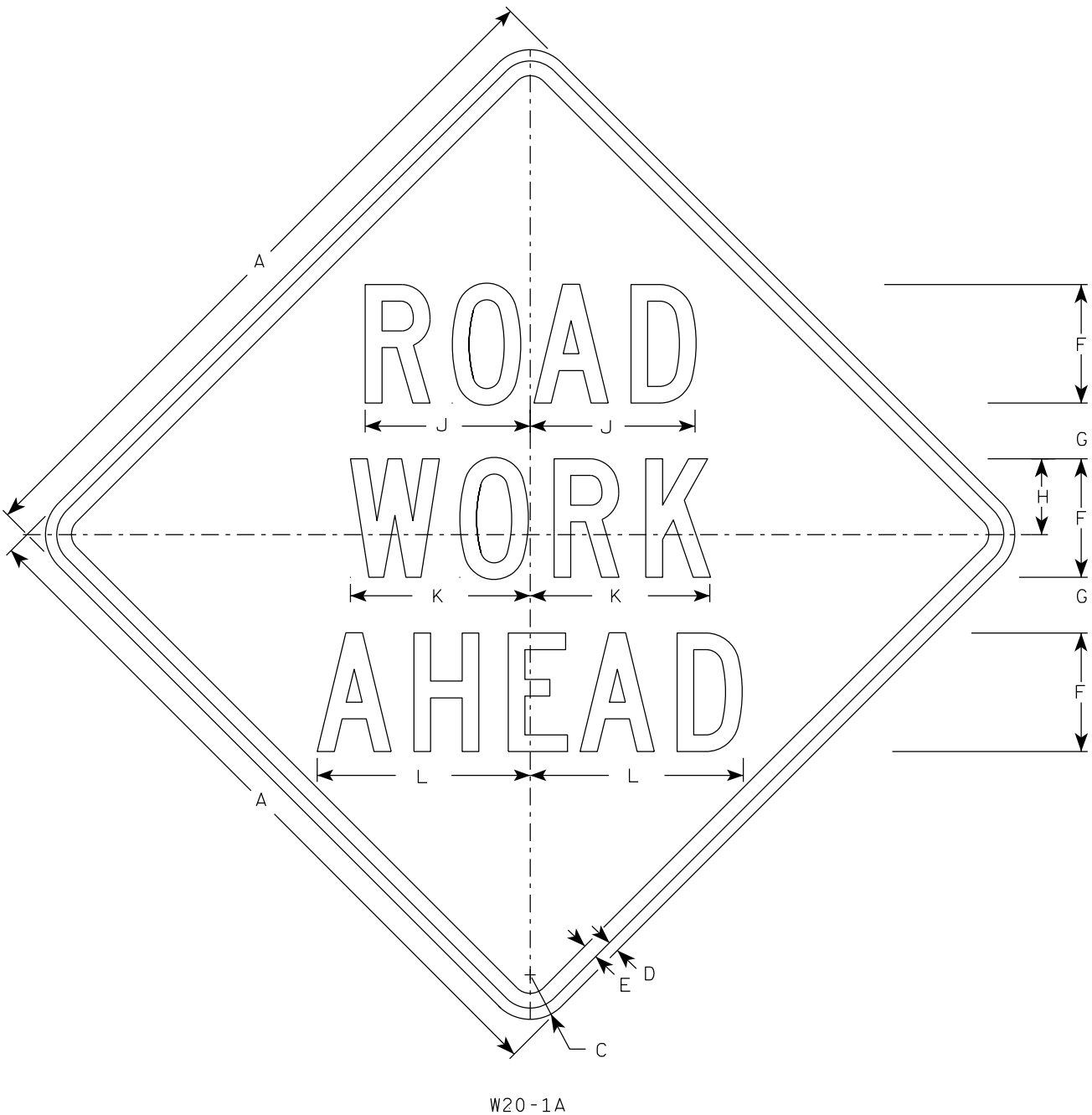
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/2	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/2	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 7/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
W16-9P

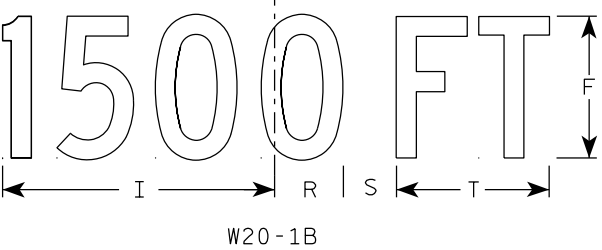
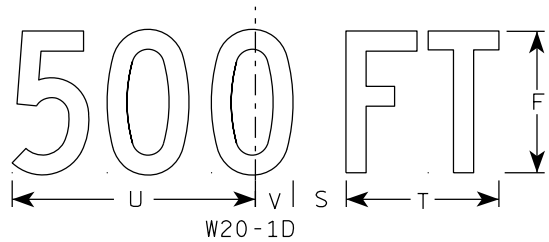
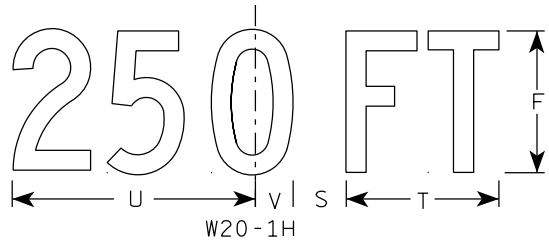
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/9/2024 PLATE NO. W16-9P.9

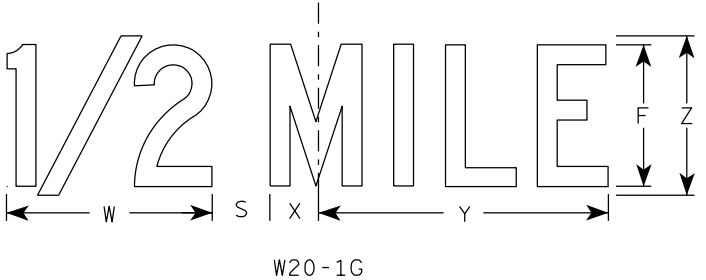


W20-1A

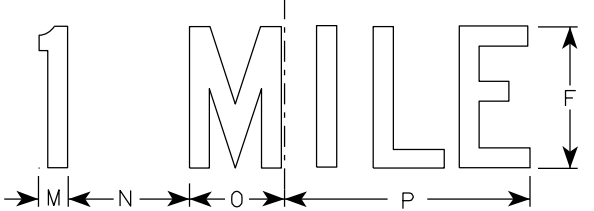


W20-1B

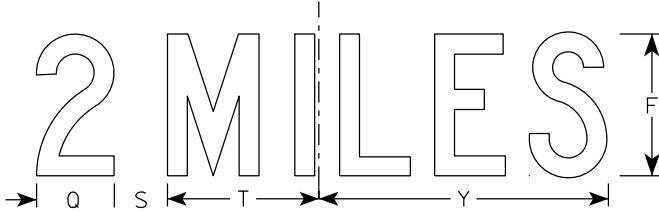
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G

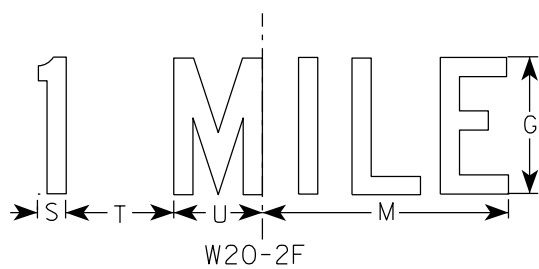
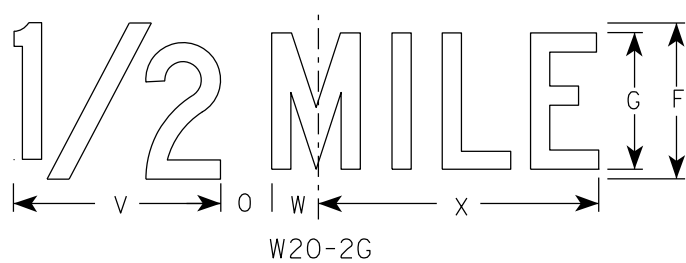
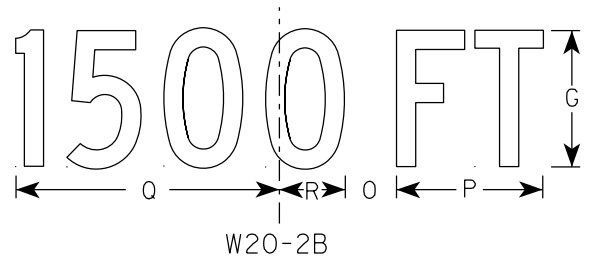
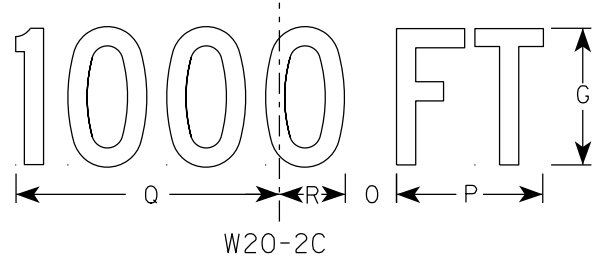
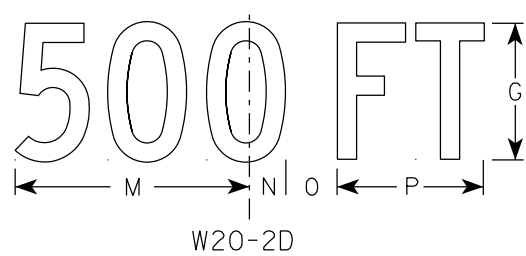
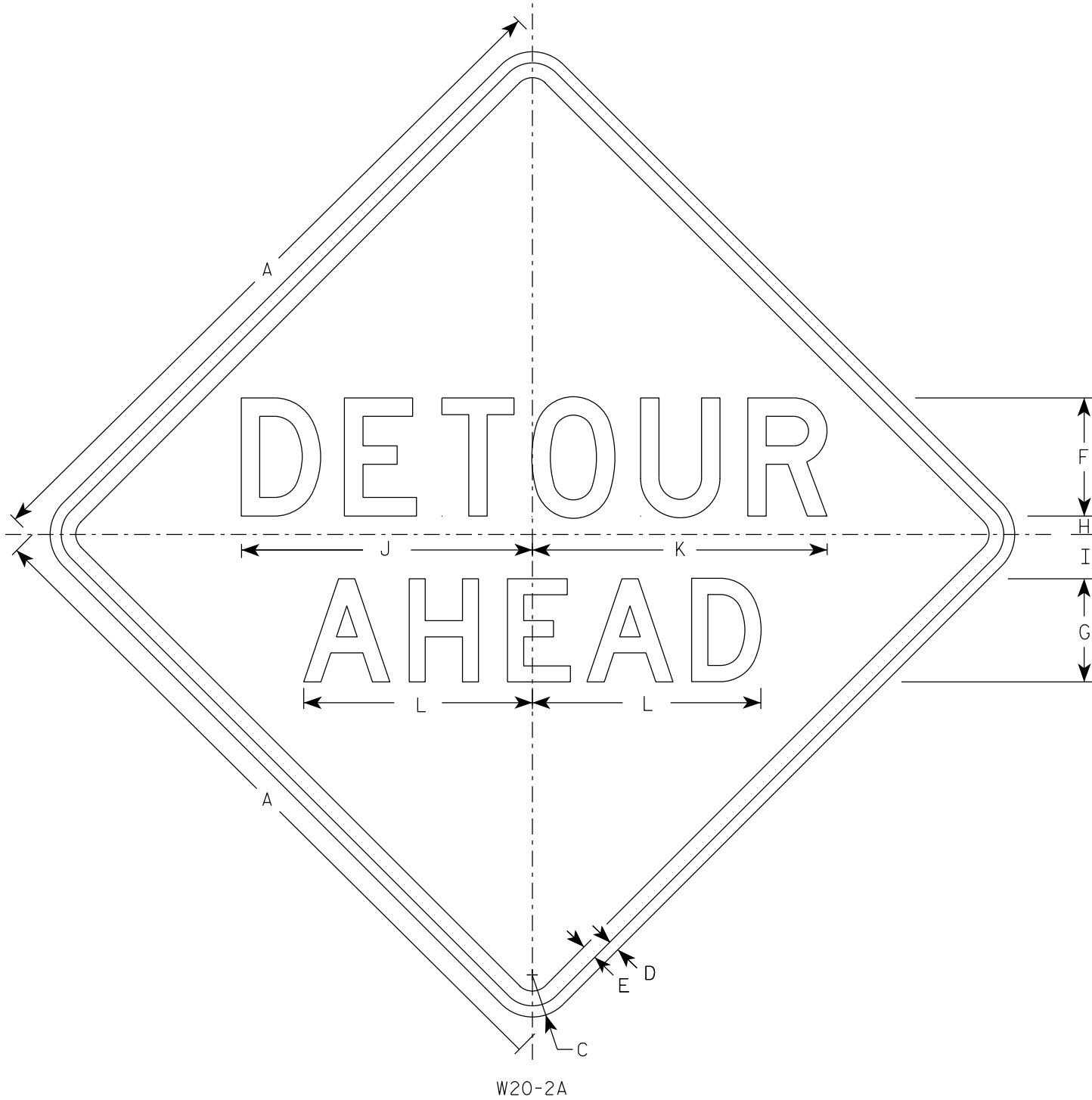


W20-1F



W20-1E

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



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - See note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Line 1 is Series 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	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	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		3	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		3	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		3	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		3	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		3	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

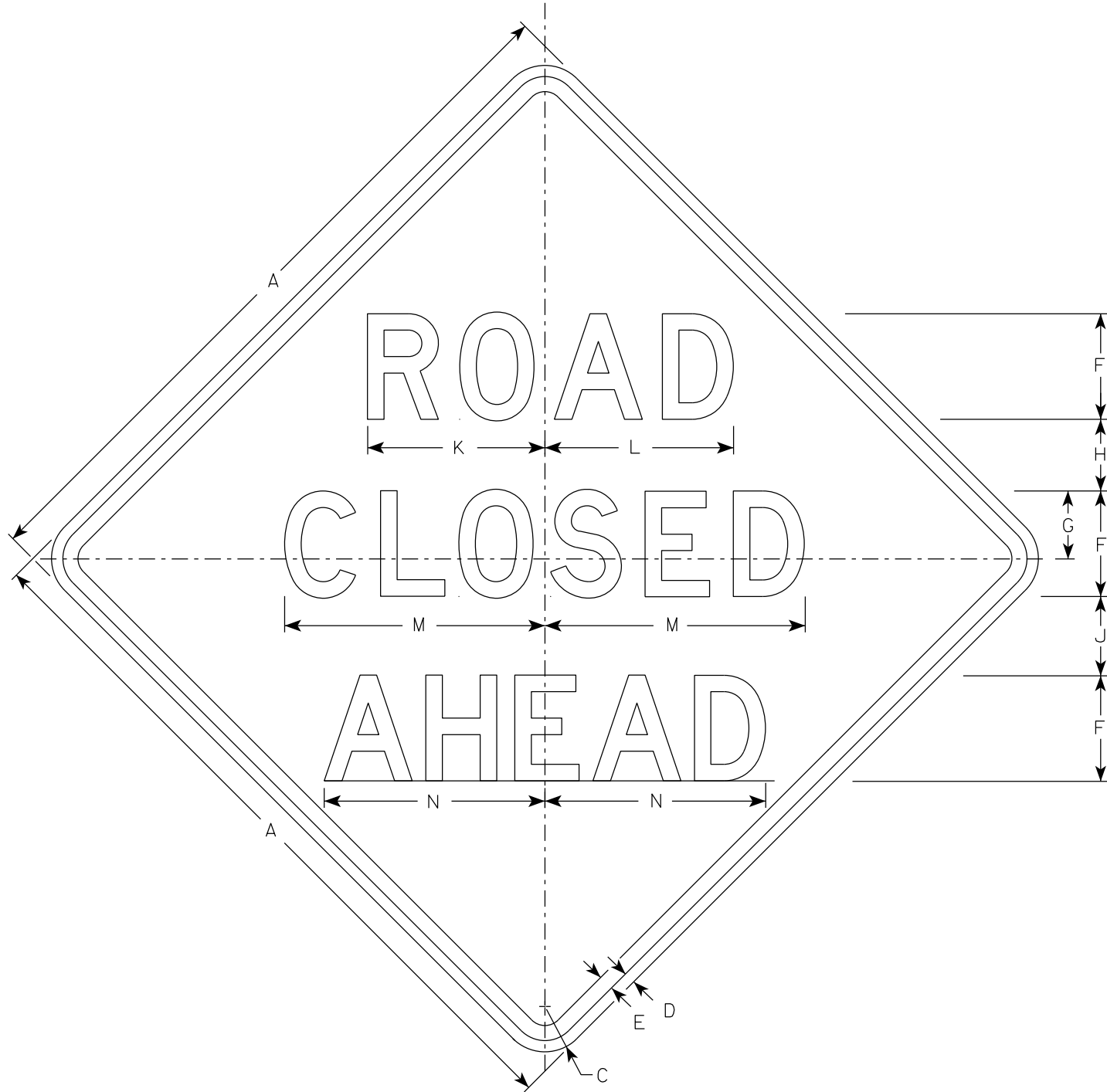
STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

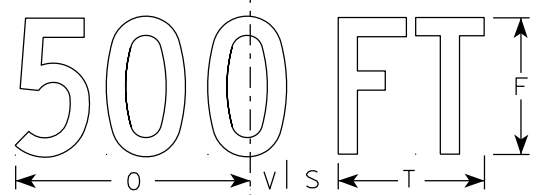
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-2.7

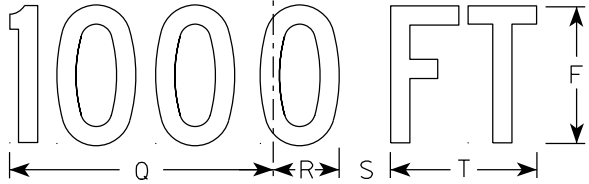
7



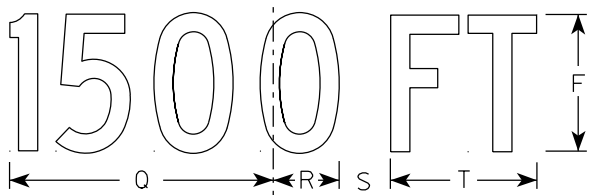
W20-3A



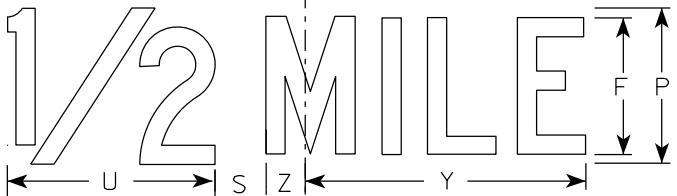
W20-3D



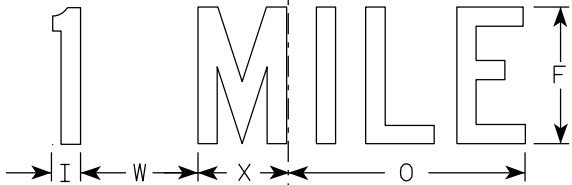
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

7

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		2 1/4	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		3	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		3	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		3	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		3	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		3	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

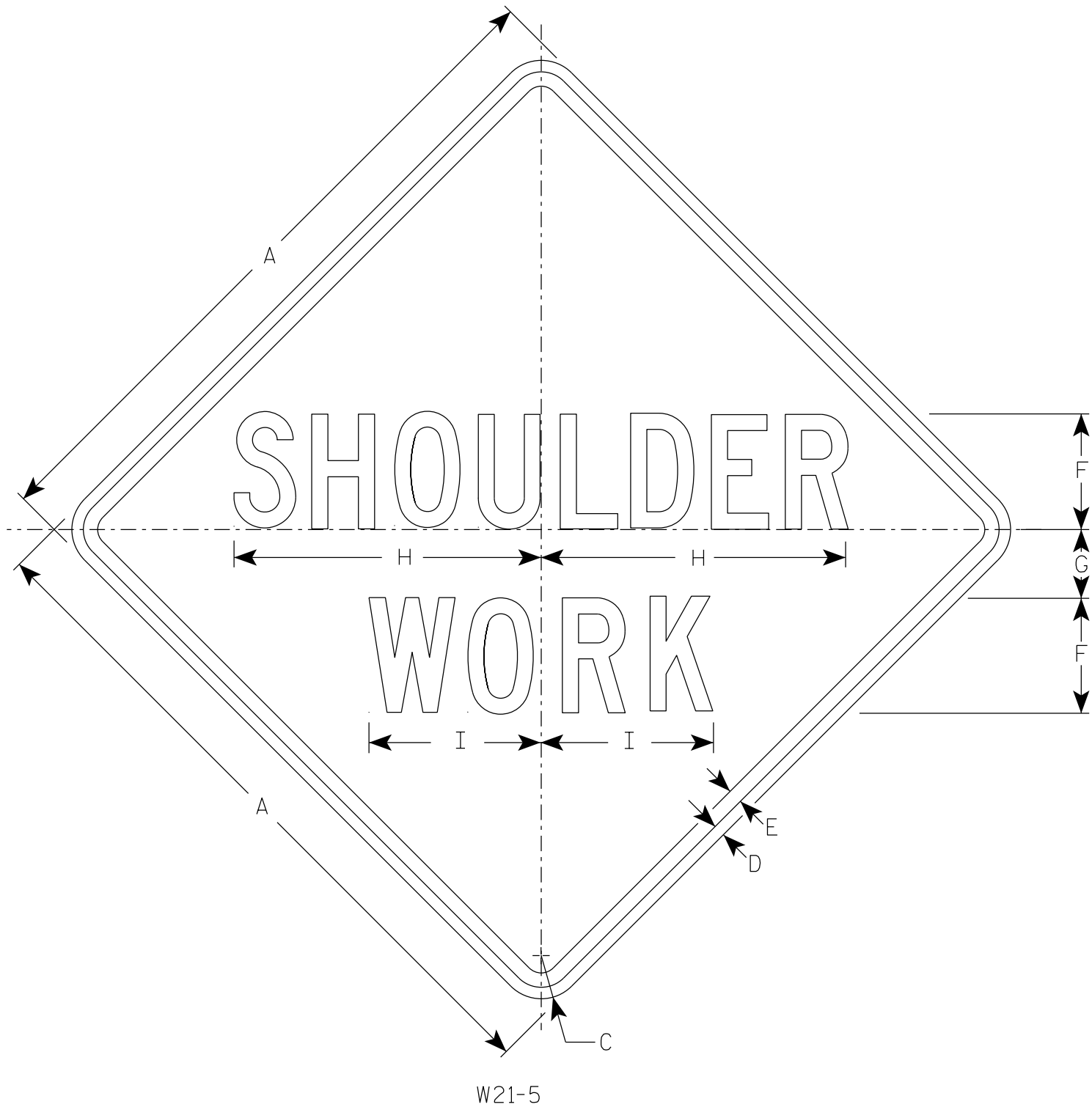
STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C

7

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		2 1/4	5/8	3/4	6	3 1/2	16	9																		9.0
2S	48		3	3/4	1	8	5	21 3/8	11 1/4																		16.0
2M	48		3	3/4	1	8	5	21 3/8	11 1/4																		16.0
3	48		3	3/4	1	8	5	21 3/8	11 1/4																		16.0
4	48		3	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		3	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN

W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/11/2024 PLATE NO. W21-5.7

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 170

E

DIVISION - CTY-S_S DULUTH

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDNATE
						NOTE 1	NOTE 3		1.00 NOTE 1	1.20	1.20 NOTE 5	0.85 NOTE 7	NOTE 8
10+43.53	1043.53	0.00	24.34	0.00	0.00	0	0	0	0	0	0	0	0
10+45.00	1045.00	1.47	74.43	0.00	58.14	3	0	2	3	-2	2	2	5
10+50.00	1050.00	5.00	74.98	0.00	58.22	14	0	11	17	-13	16	11	30
10+55.00	1055.00	5.00	73.08	0.00	58.32	14	0	11	31	-24	29	20	55
10+60.00	1060.00	5.00	53.67	0.02	61.64	12	0	11	43	-36	42	30	79
10+65.00	1065.00	5.00	53.35	0.37	61.97	10	0	11	53	-47	55	39	100
10+70.00	1070.00	5.00	55.20	0.36	60.24	10	0	11	63	-58	68	48	121
10+75.00	1075.00	5.00	58.51	0.31	58.70	11	0	11	74	-69	82	58	143
10+80.00	1080.00	5.00	63.31	0.30	58.52	11	0	11	85	-81	95	67	166
10+85.00	1085.00	5.00	70.08	0.41	58.52	12	0	11	97	-92	108	77	189
10+90.00	1090.00	5.00	79.86	0.40	58.53	14	0	11	111	-103	121	86	214
10+95.00	1095.00	5.00	81.17	0.00	58.53	15	0	11	126	-114	134	95	240
11+00.00	1100.00	5.00	73.89	0.00	58.49	14	0	11	140	-125	148	105	265
11+05.00	1105.00	5.00	66.30	0.00	58.49	13	0	11	153	-137	161	114	290
11+10.00	1110.00	5.00	58.53	0.00	58.07	12	0	11	165	-148	174	123	313
11+15.00	1115.00	5.00	51.18	0.00	51.12	10	0	10	175	-158	186	132	333
11+18.25	1118.25	3.25	46.47	0.00	46.67	6	0	6	181	-164	193	137	345
11+20.00	1120.00	1.75	47.93	0.00	47.87	3	0	3	184	-167	197	139	351
11+25.00	1125.00	5.00	55.46	0.00	54.30	10	0	9	194	-176	208	147	370
11+30.00	1130.00	5.00	63.29	0.00	58.62	11	0	10	205	-187	220	156	392
11+35.00	1135.00	5.00	71.51	0.00	58.65	12	0	11	217	-198	233	165	415
11+40.00	1140.00	5.00	80.17	0.00	58.62	14	0	11	231	-209	246	174	440
11+45.00	1145.00	5.00	88.89	0.00	58.62	16	0	11	247	-220	259	184	467
11+50.00	1150.00	5.00	89.58	0.10	58.56	17	0	11	264	-232	272	193	496
11+55.00	1155.00	5.00	78.80	0.14	58.58	16	0	11	280	-243	286	202	523
11+60.00	1160.00	5.00	71.34	0.09	58.63	14	0	11	294	-254	299	212	548
11+65.00	1165.00	5.00	66.45	0.13	58.73	13	0	11	307	-265	312	221	572
11+70.00	1170.00	5.00	63.53	0.16	60.12	12	0	11	319	-276	325	230	595
11+75.00	1175.00	5.00	61.95	0.12	61.89	12	0	11	331	-288	338	240	619
11+80.00	1180.00	5.00	61.60	0.09	62.76	11	0	12	342	-300	353	250	642
11+85.00	1185.00	5.00	61.37	2.82	64.51	11	0	12	353	-312	367	260	665
11+90.00	1190.00	5.00	61.88	2.91	64.42	11	1	12	364	-323	382	270	687
11+93.30	1193.30	3.30	62.12	2.80	64.44	8	0	8	372	-331	391	277	703
12+00.00	1200.00	6.70	62.69	3.27	64.51	15	1	16	387	-346	410	291	733
12+46.83	1246.83	46.83	74.79	5.19	65.04	119	7	112	506	-452	545	386	958
12+50.00	1250.00	3.17	83.09	1.39	65.09	9	0	8	515	-460	554	393	975
12+58.26	1258.26	8.26	107.77	0.00	60.94	29	0	19	544	-480	577	409	1,024
13+00.00	1300.00	41.74	81.77	14.60	65.13	147	11	97	691	-566	694	491	1,257
13+50.00	1350.00	50.00	81.51	23.05	65.13	151	35	121	842	-647	839	594	1,489
14+00.00	1400.00	50.00	83.93	27.08	65.13	153	46	121	995	-715	984	697	1,710
14+50.00	1450.00	50.00	93.80	16.03	65.13	165	40	121	1,160	-791	1,129	800	1,951
14+63.05	1463.05	13.05	124.73	0.00	60.94	53	4	30	1,213	-816	1,165	825	2,029
15+00.00	1500.00	36.95	97.44	25.01	65.13	152	17	86	1,365	-884	1,268	898	2,249
15+17.34	1517.34	17.34	125.32	0.00	60.94	72	8	40	1,437	-915	1,316	932	2,352
15+50.00	1550.00	32.66	103.64	24.20	65.13	138	15	76	1,575	-974	1,408	997	2,549
SUBTOTAL						1,575		1,173		-974			2,549

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDNATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION - CTY-S_S DULUTH

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
						NOTE 1	NOTE 3		1.00 NOTE 1	1.20	1.20 NOTE 5	0.85 NOTE 7	NOTE 8
16+00.00	1600.00	50.00	94.93	27.38	65.13	184	48	121	1,759	-1,040	1,553	1,100	2,799
16+50.00	1650.00	50.00	132.46	0.00	60.94	211	25	117	1,970	-1,130	1,693	1,199	3,100
17+00.00	1700.00	50.00	101.95	17.17	65.13	217	16	117	2,187	-1,230	1,834	1,299	3,417
17+50.00	1750.00	50.00	104.26	17.09	65.13	191	32	121	2,378	-1,315	1,979	1,402	3,693
17+88.48	1788.48	38.48	133.10	25.45	0.00	169	30	46	2,547	-1,326	2,034	1,441	3,873
18+00.00	1800.00	11.52	110.90	24.32	0.00	52	11	0	2,599	-1,313	2,034	1,441	3,912
18+50.00	1850.00	50.00	99.73	35.83	0.00	195	56	0	2,794	-1,245	2,034	1,441	4,039
19+00.00	1900.00	50.00	98.54	42.65	0.00	184	73	0	2,978	-1,158	2,034	1,441	4,136
19+25.54	1925.54	25.54	133.33	5.82	0.00	110	23	0	3,088	-1,130	2,034	1,441	4,218
19+39.77	1939.77	14.23	129.10	2.02	0.00	69	2	0	3,157	-1,128	2,034	1,441	4,285
19+50.00	1950.00	10.23	120.22	15.40	0.00	47	3	0	3,204	-1,124	2,034	1,441	4,328
20+00.00	2000.00	50.00	92.86	31.23	0.00	197	43	0	3,401	-1,073	2,034	1,441	4,474
20+50.00	2050.00	50.00	92.95	33.37	0.00	172	60	0	3,573	-1,001	2,034	1,441	4,574
21+00.00	2100.00	50.00	91.91	40.97	0.00	171	69	0	3,744	-918	2,034	1,441	4,662
21+50.00	2150.00	50.00	89.76	53.77	0.00	168	88	0	3,912	-812	2,034	1,441	4,724
22+00.00	2200.00	50.00	84.95	49.35	69.62	162	95	64	4,074	-763	2,111	1,495	4,837
22+50.00	2250.00	50.00	116.94	2.45	65.50	187	48	125	4,261	-833	2,261	1,601	5,094
22+76.80	2276.80	26.80	125.54	19.37	69.62	120	11	67	4,381	-888	2,341	1,658	5,269
23+00.00	2300.00	23.20	109.51	22.55	69.62	101	18	60	4,482	-928	2,413	1,709	5,410
23+42.06	2342.06	42.06	106.43	27.01	69.65	168	39	108	4,650	-991	2,543	1,801	5,641
23+45.00	2345.00	2.94	109.17	26.98	68.74	12	3	8	4,662	-996	2,552	1,808	5,658
23+50.00	2350.00	5.00	119.47	27.42	67.47	21	5	13	4,683	-1,003	2,568	1,819	5,686
23+55.00	2355.00	5.00	126.07	28.02	65.30	23	5	12	4,706	-1,009	2,582	1,829	5,715
23+60.00	2360.00	5.00	130.73	28.80	63.99	24	5	12	4,730	-1,016	2,597	1,839	5,746
23+65.00	2365.00	5.00	129.83	29.80	64.11	24	5	12	4,754	-1,022	2,611	1,850	5,776
23+70.00	2370.00	5.00	118.64	31.36	64.09	23	6	12	4,777	-1,027	2,626	1,860	5,804
23+75.00	2375.00	5.00	122.04	34.26	64.04	22	6	12	4,799	-1,032	2,640	1,870	5,831
23+80.00	2380.00	5.00	129.48	36.68	63.98	23	7	12	4,822	-1,036	2,654	1,880	5,858
23+85.00	2385.00	5.00	120.37	39.04	63.94	23	7	12	4,845	-1,040	2,669	1,890	5,885
23+90.00	2390.00	5.00	110.45	41.16	64.09	21	7	12	4,866	-1,044	2,683	1,901	5,910
23+95.00	2395.00	5.00	99.44	43.03	64.42	19	8	12	4,885	-1,046	2,698	1,911	5,931
24+00.00	2400.00	5.00	88.15	44.70	64.71	17	8	12	4,902	-1,049	2,712	1,921	5,951
24+05.00	2405.00	5.00	77.09	46.56	57.23	15	8	11	4,917	-1,050	2,725	1,930	5,967
24+10.00	2410.00	5.00	70.03	47.37	52.49	14	9	10	4,931	-1,050	2,737	1,939	5,981
24+15.00	2415.00	5.00	80.50	47.46	59.59	14	9	10	4,945	-1,049	2,749	1,947	5,994
24+20.00	2420.00	5.00	91.18	48.14	64.92	16	9	12	4,961	-1,051	2,764	1,958	6,012
24+25.00	2425.00	5.00	102.14	48.97	64.74	18	9	12	4,979	-1,052	2,778	1,968	6,031
24+30.00	2430.00	5.00	112.78	49.86	64.60	20	9	12	4,999	-1,054	2,792	1,978	6,053
24+35.00	2435.00	5.00	123.17	50.60	64.47	22	9	12	5,021	-1,055	2,807	1,988	6,076
24+40.00	2440.00	5.00	133.12	45.61	64.30	24	9	12	5,045	-1,056	2,821	1,998	6,101
24+45.00	2445.00	5.00	125.27	34.58	64.16	24	7	12	5,069	-1,060	2,836	2,009	6,129
24+50.00	2450.00	5.00	132.88	0.00	59.86	24	3	11	5,093	-1,068	2,849	2,018	6,161
24+55.00	2455.00	5.00	127.17	0.00	59.72	24	0	11	5,117	-1,079	2,862	2,027	6,196
24+60.00	2460.00	5.00	122.50	0.00	59.55	23	0	11	5,140	-1,090	2,875	2,037	6,230
24+65.00	2465.00	5.00	114.18	0.00		22	0	11	5,162	-1,102	2,888	2,046	6,264
SUBTOTAL						3,587		1,234		-61			3,464

NOTES:	
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5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION - CTY-S_S DULUTH

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
									1.00	1.20	1.20	0.85	
						NOTE 1	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
24+70.00	2470.00	5.00	105.83	0.10	60.14	20	0	11	5,182	-1,113	2,902	2,055	6,295
24+75.00	2475.00	5.00	85.80	15.35	66.01	18	1	12	5,200	-1,124	2,916	2,066	6,324
24+80.00	2480.00	5.00	82.77	33.66	67.49	16	5	12	5,216	-1,130	2,930	2,076	6,346
24+85.00	2485.00	5.00	81.57	37.22	68.13	15	7	13	5,231	-1,135	2,946	2,087	6,366
24+87.38	2487.38	2.38	79.98	39.40	69.32	7	3	6	5,238	-1,137	2,953	2,092	6,375
25+00.00	2500.00	12.62	85.14	84.91	69.62	39	29	32	5,277	-1,135	2,992	2,119	6,412
25+37.09	2537.09	37.09	107.61	89.04	65.49	132	119	93	5,409	-1,087	3,103	2,198	6,496
25+50.00	2550.00	12.91	105.73	89.58	65.49	51	43	31	5,460	-1,067	3,140	2,224	6,527
26+00.00	2600.00	50.00	103.99	1.85	65.50	194	85	121	5,654	-1,089	3,286	2,327	6,743
26+50.00	2650.00	50.00	77.73	83.98	69.62	168	79	125	5,822	-1,121	3,436	2,434	6,943
26+76.98	2676.98	26.98	99.85	100.39	65.50	89	92	68	5,911	-1,080	3,517	2,491	6,991
27+00.00	2700.00	23.02	79.49	88.99	69.59	76	81	58	5,987	-1,042	3,587	2,541	7,029
27+50.00	2750.00	50.00	85.82	70.03	69.62	153	147	129	6,140	-998	3,742	2,650	7,138
27+87.85	2787.85	37.85	106.47	45.24	65.50	135	81	95	6,275	-997	3,856	2,731	7,272
28+00.00	2800.00	12.15	104.40	4.82	65.50	47	11	29	6,322	-1,014	3,890	2,756	7,336
28+50.00	2850.00	50.00	91.04	24.22	69.62	181	27	125	6,503	-1,109	4,040	2,862	7,612
29+00.00	2900.00	50.00	115.32	10.75	65.50	191	32	125	6,694	-1,198	4,190	2,968	7,892
29+50.00	2950.00	50.00	106.64	10.03	69.62	206	19	125	6,900	-1,303	4,340	3,074	8,203
30+00.00	3000.00	50.00	182.13	0.00	61.38	267	9	121	7,167	-1,415	4,486	3,177	8,582
30+19.88	3019.88	19.88	178.45	0.00	61.38	133	0	45	7,300	-1,461	4,540	3,216	8,761
30+50.00	3050.00	30.12	129.01	0.17	0.00	171	0	34	7,471	-1,496	4,580	3,244	8,967
31+00.00	3100.00	50.00	94.44	44.11	0.00	207	41	0	7,678	-1,447	4,580	3,244	9,125
31+50.00	3150.00	50.00	88.70	69.47	0.00	170	105	0	7,848	-1,321	4,580	3,244	9,169
32+00.00	3200.00	50.00	115.35	52.93	0.00	189	113	0	8,037	-1,185	4,580	3,244	9,222
32+50.00	3250.00	50.00	89.44	63.67	0.00	190	108	0	8,227	-1,055	4,580	3,244	9,282
33+00.00	3300.00	50.00	136.03	7.21	0.00	209	66	0	8,436	-976	4,580	3,244	9,412
33+50.00	3350.00	50.00	94.56	0.12	0.00	214	7	0	8,650	-968	4,580	3,244	9,618
33+62.49	3362.49	12.49	91.35	0.12	0.00	43	0	0	8,693	-968	4,580	3,244	9,661
34+00.00	3400.00	37.51	95.99	18.03	0.00	130	13	0	8,823	-952	4,580	3,244	9,775
34+37.51	3437.51	37.51	101.89	21.42	0.00	137	27	0	8,960	-920	4,580	3,244	9,880
34+50.00	3450.00	12.49	115.87	19.40	0.00	50	9	0	9,010	-909	4,580	3,244	9,919
35+00.00	3500.00	50.00	77.82	22.91	0.00	179	39	0	9,189	-862	4,580	3,244	10,051
35+05.98	3505.98	5.98	77.16	22.55	0.00	17	5	0	9,206	-856	4,580	3,244	10,062
35+40.64	3540.64	34.66	75.99	1.09	0.00	98	15	0	9,304	-838	4,580	3,244	10,142
35+45.00	3545.00	4.36	77.86	0.27	0.00	12	0	0	9,316	-838	4,580	3,244	10,154
35+50.00	3550.00	5.00	79.75	0.18	0.00	15	0	0	9,331	-838	4,580	3,244	10,169
35+55.00	3555.00	5.00	83.12	0.20	0.00	15	0	0	9,346	-838	4,580	3,244	10,184
35+60.00	3560.00	5.00	88.06	0.29	0.00	16	0	0	9,362	-838	4,580	3,244	10,200
35+65.00	3565.00	5.00	94.75	0.00	0.00	17	0	0	9,379	-838	4,580	3,244	10,217
35+70.00	3570.00	5.00	88.47	0.00	0.00	17	0	0	9,396	-838	4,580	3,244	10,234
35+75.00	3575.00	5.00	81.11	0.00	0.00	16	0	0	9,412	-838	4,580	3,244	10,250
35+80.00	3580.00	5.00	74.09	0.00	0.00	14	0	0	9,426	-838	4,580	3,244	10,264
35+85.00	3585.00	5.00	67.46	0.00	0.00	13	0	0	9,439	-838	4,580	3,244	10,277
35+90.00	3590.00	5.00	62.29	0.00	0.00	12	0	0	9,451	-838	4,580	3,244	10,289
35+95.00	3595.00	5.00	69.14	0.00	0.00	12	0	0	9,463	-838	4,580	3,244	10,301
						4,301		1,410		275			4,006

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION - CTY-S_S DULUTH

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDNATE
						NOTE 1	NOTE 3		1.00	1.20	1.20	0.85	
						NOTE 1	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
36+00.00	3600.00	5.00	76.34	0.00	0.00	13	0	0	9,476	-838	4,580	3,244	10,314
36+05.00	3605.00	5.00	83.14	0.00	0.00	15	0	0	9,491	-838	4,580	3,244	10,329
36+10.00	3610.00	5.00	89.33	0.00	0.00	16	0	0	9,507	-838	4,580	3,244	10,345
36+15.00	3615.00	5.00	87.65	0.05	0.00	16	0	0	9,523	-838	4,580	3,244	10,361
36+20.00	3620.00	5.00	81.43	0.17	0.00	16	0	0	9,539	-838	4,580	3,244	10,377
36+24.95	3624.95	4.95	77.41	1.46	0.00	15	0	0	9,554	-838	4,580	3,244	10,392
36+50.00	3650.00	25.05	80.60	1.90	0.00	73	2	0	9,627	-836	4,580	3,244	10,463
37+00.00	3700.00	50.00	79.92	4.05	0.00	149	6	0	9,776	-829	4,580	3,244	10,605
37+50.00	3750.00	50.00	8.60	1.05	0.00	82	5	0	9,858	-823	4,580	3,244	10,681
37+64.29	3764.29	14.29	5.23	0.00	0.00	4	0	0	9,862	-823	4,580	3,244	10,685
37+75.00	3775.00	10.71	0.21	0.00	0.00	1	0	0	9,863	-823	4,580	3,244	10,686
39+00.00	3900.00	125.00	0.00	0.00	0.00	0	0	0	9,863	-823	4,580	3,244	10,686
39+00.00	3900.00	0.00	0.00	0.00	0.00	0	0	0	9,863	-823	4,580	3,244	10,686
39+50.00	3950.00	50.00	0.20	0.53	0.00	0	0	0	9,863	-823	4,580	3,244	10,686
40+00.00	4000.00	50.00	16.59	0.00	0.00	16	0	0	9,879	-823	4,580	3,244	10,702
40+50.00	4050.00	50.00	5.73	0.00	0.00	21	0	0	9,900	-823	4,580	3,244	10,723
41+00.00	4100.00	50.00	17.61	0.00	0.00	22	0	0	9,922	-823	4,580	3,244	10,745
41+50.00	4150.00	50.00	15.92	0.00	0.00	31	0	0	9,953	-823	4,580	3,244	10,776
42+00.00	4200.00	50.00	3.16	0.00	0.00	18	0	0	9,971	-823	4,580	3,244	10,794
42+50.00	4250.00	50.00	0.00	0.00	0.00	3	0	0	9,974	-823	4,580	3,244	10,797
42+50.00	4250.00	0.00	0.00	0.00	0.00	0	0	0	9,974	-823	4,580	3,244	10,797
SUBTOTAL						511		0		16			482
S DULUTH AVE TOTAL						9,974		3,817		-823			10,797

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDNATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION - CIRCUIT COURT DRIVEWAY

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
						NOTE 1	NOTE 3		1.00 NOTE 1	1.20	1.20 NOTE 5	0.85 NOTE 7	NOTE 8
400+62.58	40062.58	0.00	73.91	0.35	0.00	0	0	0	0	0	0	0	0
400+65.00	40065.00	2.42	74.59	0.34	0.00	7	0	0	7	0	0	0	7
400+70.00	40070.00	5.00	75.43	0.35	0.00	14	0	0	21	0	0	0	21
400+75.00	40075.00	5.00	76.40	0.61	0.00	14	0	0	35	0	0	0	35
400+80.00	40080.00	5.00	79.17	0.52	0.00	14	0	0	49	0	0	0	49
400+85.00	40085.00	5.00	83.39	0.44	0.00	15	0	0	64	0	0	0	64
400+90.00	40090.00	5.00	89.22	0.29	0.00	16	0	0	80	0	0	0	80
400+95.00	40095.00	5.00	82.25	0.00	0.00	16	0	0	96	0	0	0	96
401+00.00	40100.00	5.00	65.50	0.00	0.00	14	0	0	110	0	0	0	110
401+05.00	40105.00	5.00	46.80	0.00	0.00	10	0	0	120	0	0	0	120
401+10.00	40110.00	5.00	27.70	0.00	28.22	7	0	3	127	-3	4	3	130
401+15.00	40115.00	5.00	10.54	0.00	9.35	4	0	3	131	-6	7	5	137
401+18.00	40118.00	3.00	0.00	0.00	0.00	1	0	1	132	-7	8	6	139
SUBTOTAL						132		7		-7			139

DIVISION - W YEW ST

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
						NOTE 1	NOTE 3		1.00 NOTE 1	1.20	1.20 NOTE 5	0.85 NOTE 7	NOTE 8
202+86.79	20286.79	0.00	76.43	0.39	0.00	0	0	0	0	0	0	0	0
203+00.00	20300.00	13.21	80.26	0.42	0.00	38	0	0	38	0	0	0	38
203+25.00	20325.00	25.00	87.15	0.06	0.00	78	0	0	116	0	0	0	116
203+33.43	20333.43	8.43	89.52	0.00	0.00	28	0	0	144	0	0	0	144
203+35.00	20335.00	1.57	90.53	0.00	0.00	5	0	0	149	0	0	0	149
203+40.00	20340.00	5.00	96.55	0.09	0.00	17	0	0	166	0	0	0	166
203+45.00	20345.00	5.00	102.81	0.25	0.00	18	0	0	184	0	0	0	184
203+50.00	20350.00	5.00	112.28	0.06	0.00	20	0	0	204	0	0	0	204
203+55.00	20355.00	5.00	125.53	0.08	0.00	22	0	0	226	0	0	0	226
203+60.00	20360.00	5.00	128.73	0.02	0.00	24	0	0	250	0	0	0	250
203+65.00	20365.00	5.00	132.53	0.07	0.00	24	0	0	274	0	0	0	274
203+70.00	20370.00	5.00	141.88	0.00	0.00	25	0	0	299	0	0	0	299
203+75.00	20375.00	5.00	126.36	0.00	0.00	25	0	0	324	0	0	0	324
203+80.00	20380.00	5.00	103.12	0.00	0.00	21	0	0	345	0	0	0	345
203+85.00	20385.00	5.00	78.31	0.00	0.00	17	0	0	362	0	0	0	362
203+90.00	20390.00	5.00	51.35	0.00	0.00	12	0	0	374	0	0	0	374
203+95.00	20395.00	5.00	25.17	0.00	17.10	7	0	2	381	-2	2	2	383
203+99.84	20399.84	4.84	0.00	0.00	0.00	2	0	2	383	-4	5	3	387
SUBTOTAL						383		4		-4			387

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

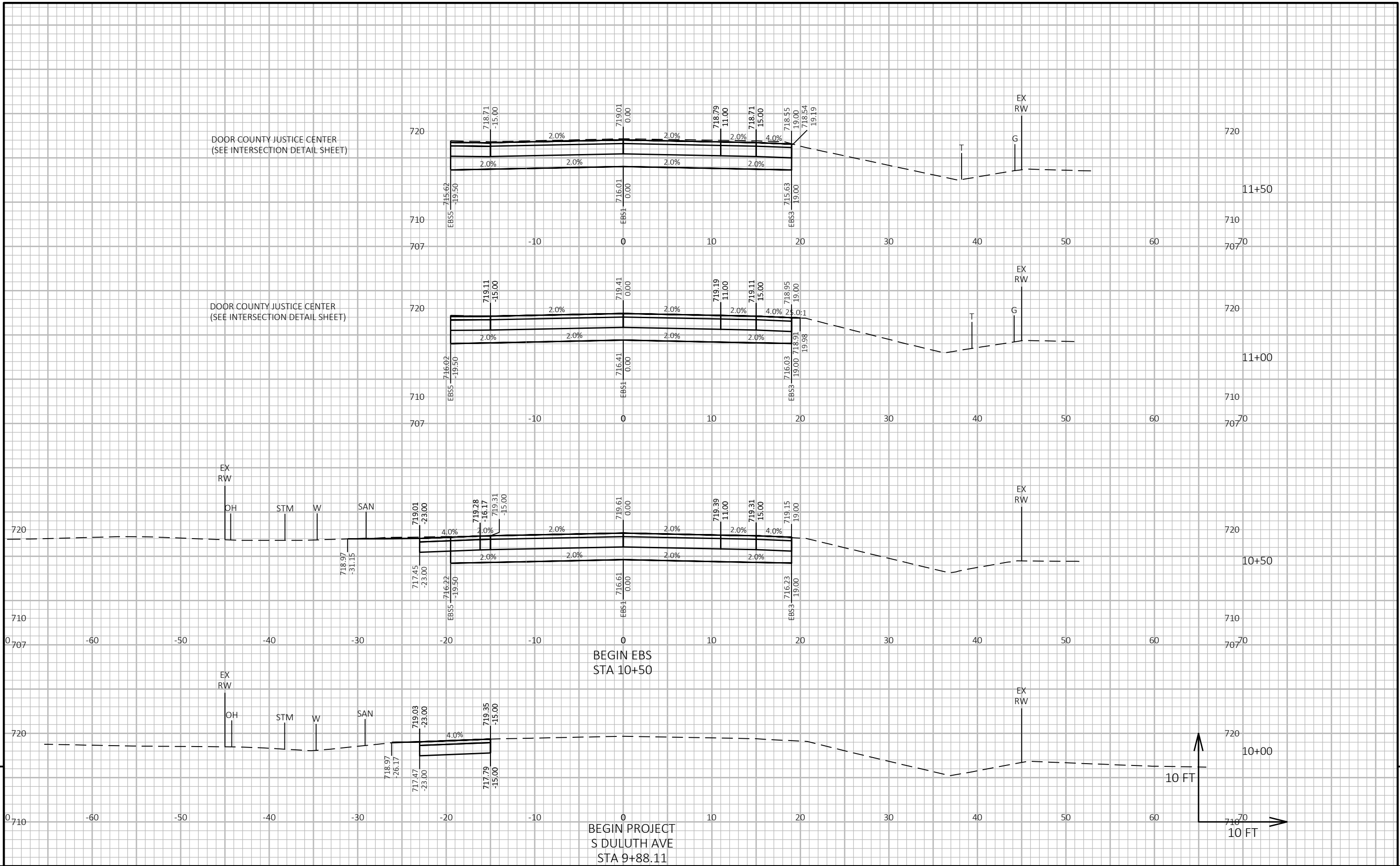
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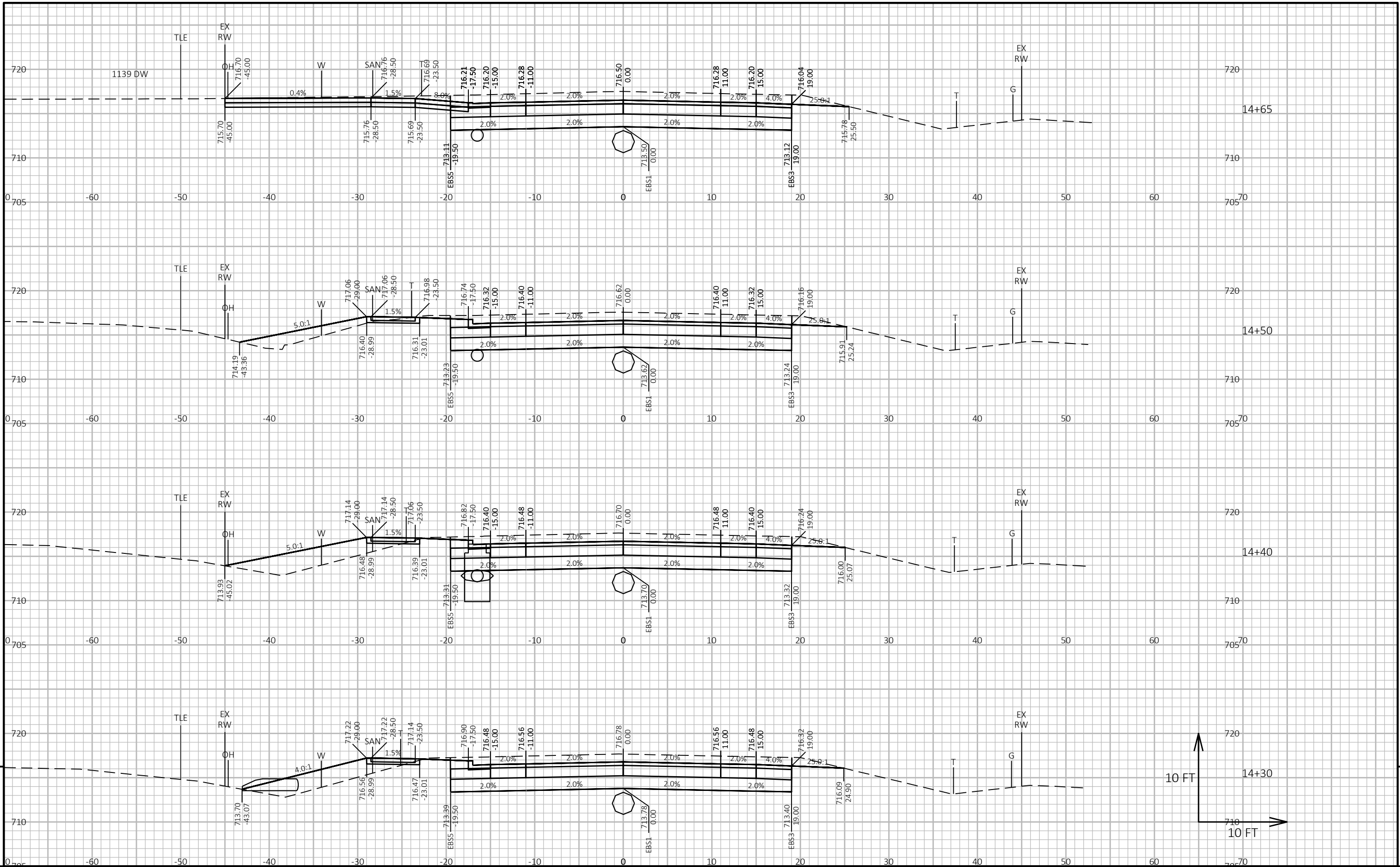
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDNATE
									1.00	1.20	1.20	0.85	
						NOTE 1	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
500+11.00	50011.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0
500+15.00	50015.00	4.00	16.41	0.00	0.00	1	0	0	1	0	0	0	1
500+20.00	50020.00	5.00	38.59	0.00	0.00	5	0	0	6	0	0	0	6
500+25.00	50025.00	5.00	61.56	0.00	0.00	9	0	0	15	0	0	0	15
500+30.00	50030.00	5.00	79.07	0.00	0.00	13	0	0	28	0	0	0	28
500+35.00	50035.00	5.00	69.83	0.22	0.00	14	0	0	42	0	0	0	42
500+40.00	50040.00	5.00	62.53	0.17	0.00	12	0	0	54	0	0	0	54
500+45.00	50045.00	5.00	58.03	0.15	0.00	11	0	0	65	0	0	0	65
500+50.00	50050.00	5.00	59.81	0.16	0.00	11	0	0	76	0	0	0	76
500+51.13	50051.13	1.13	57.97	0.16	0.00	2	0	0	78	0	0	0	78
SUBTOTAL						78		0		0			78

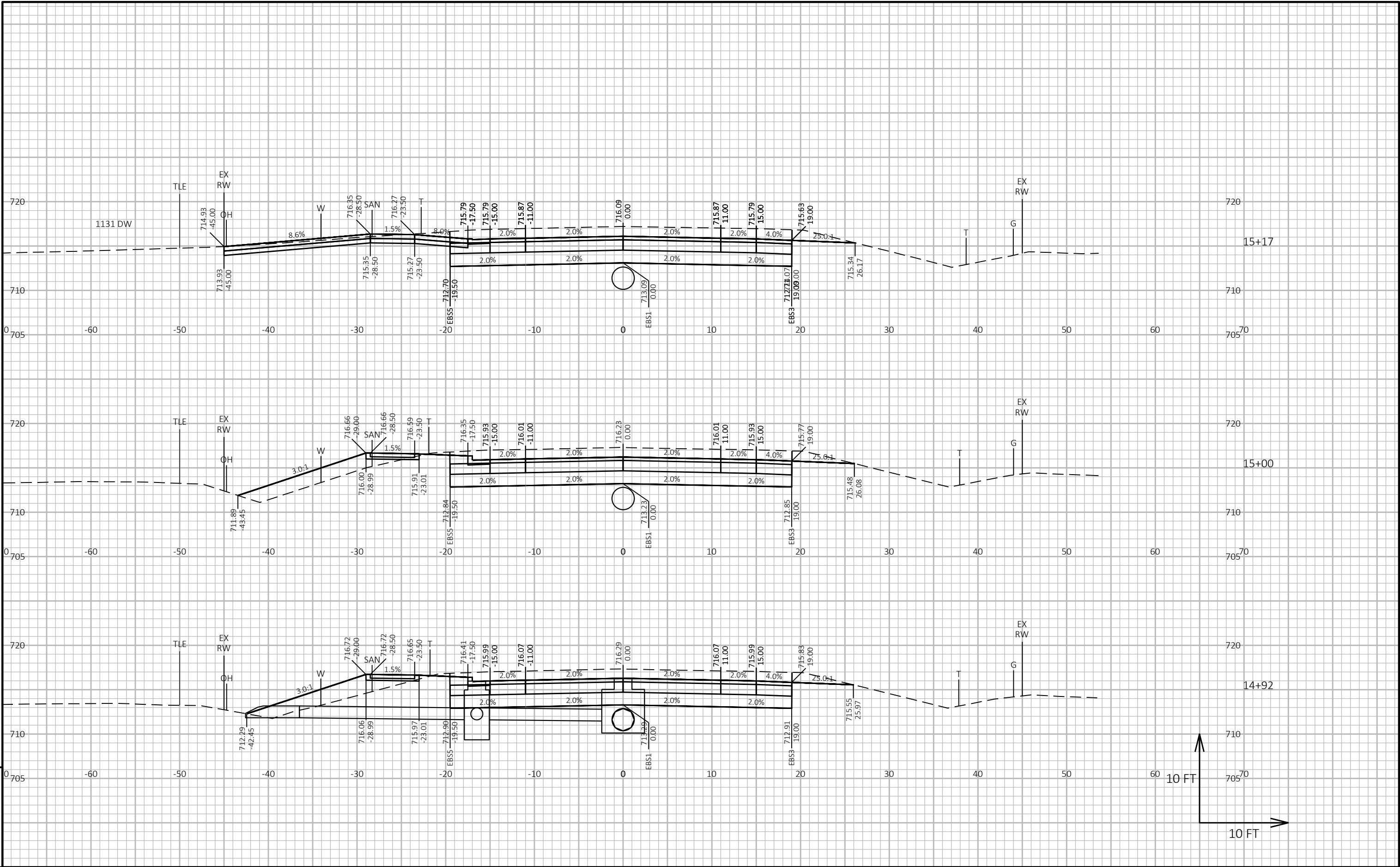
DIVISION - STORM SEWER OUTFALL

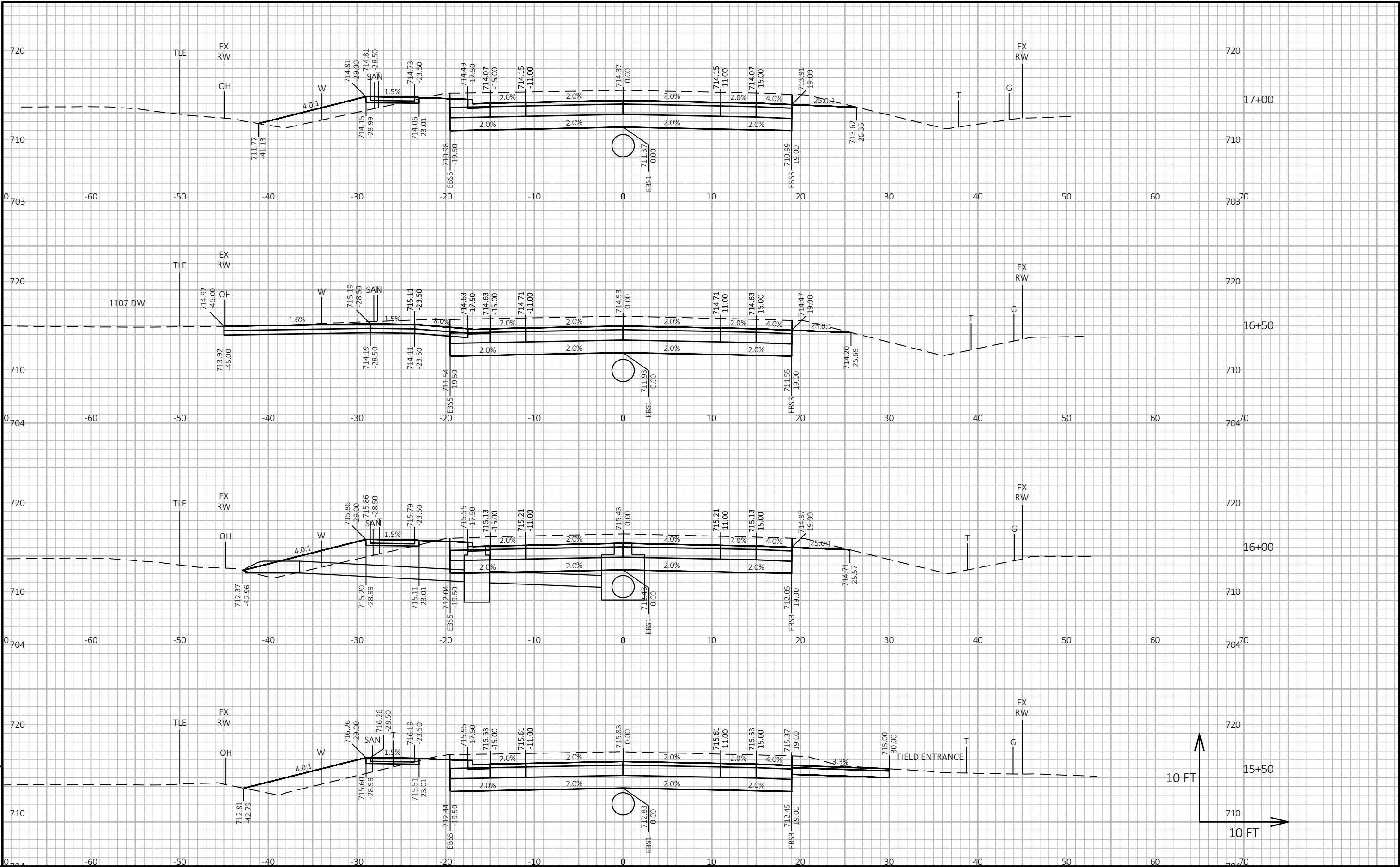
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
			CUT	FILL	EBS	CUT	FILL	EBS	CUT	EXPANDED FILL	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDNATE
									1.00	1.20	1.20	0.85	
						NOTE 1	NOTE 3		NOTE 1		NOTE 5	NOTE 7	NOTE 8
300+50.00	30050.00	0.00	0.00	111.24	0.00	0	0	0	0	0	0	0	0
300+75.00	30075.00	25.00	0.00	37.93	0.00	0	69	0	0	83	0	0	-83
301+00.00	30100.00	25.00	0.09	12.08	0.00	0	23	0	0	110	0	0	-110
301+10.00	30110.00	10.00	0.91	2.86	0.00	0	3	0	0	114	0	0	-114
301+25.00	30125.00	15.00	2.90	2.03	0.00	1	1	0	1	115	0	0	-114
301+50.00	30150.00	25.00	1.06	4.48	0.00	2	3	0	3	119	0	0	-116
301+75.00	30175.00	25.00	13.90	4.01	0.00	7	4	0	10	124	0	0	-114
302+00.00	30200.00	25.00	8.72	13.08	0.00	10	8	0	20	133	0	0	-113
302+15.00	30215.00	15.00	7.19	18.00	0.00	4	9	0	24	144	0	0	-120
302+25.00	30225.00	10.00	6.45	16.51	0.00	3	6	0	27	151	0	0	-124
302+40.00	30240.00	15.00	4.64	15.95	0.00	3	9	0	30	162	0	0	-132
302+50.00	30250.00	10.00	2.55	12.47	0.00	1	5	0	31	168	0	0	-137
302+60.00	30260.00	10.00	0.00	0.00	0.00	0	2	0	31	170	0	0	-139
SUBTOTAL						31		0		170			-139
SIDEROAD TOTALS						624		11		159			744

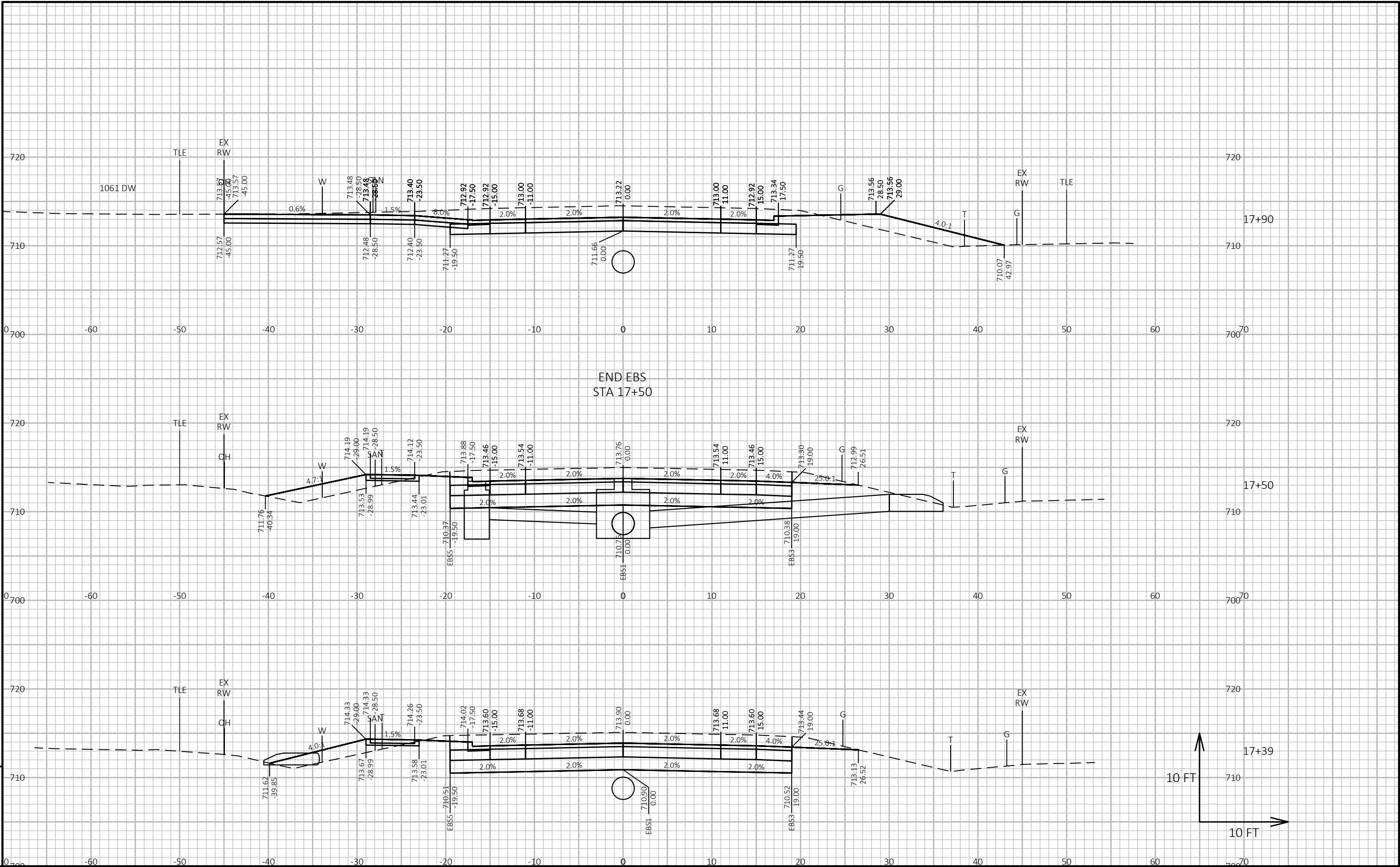
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
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8 - MASS ORDNATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

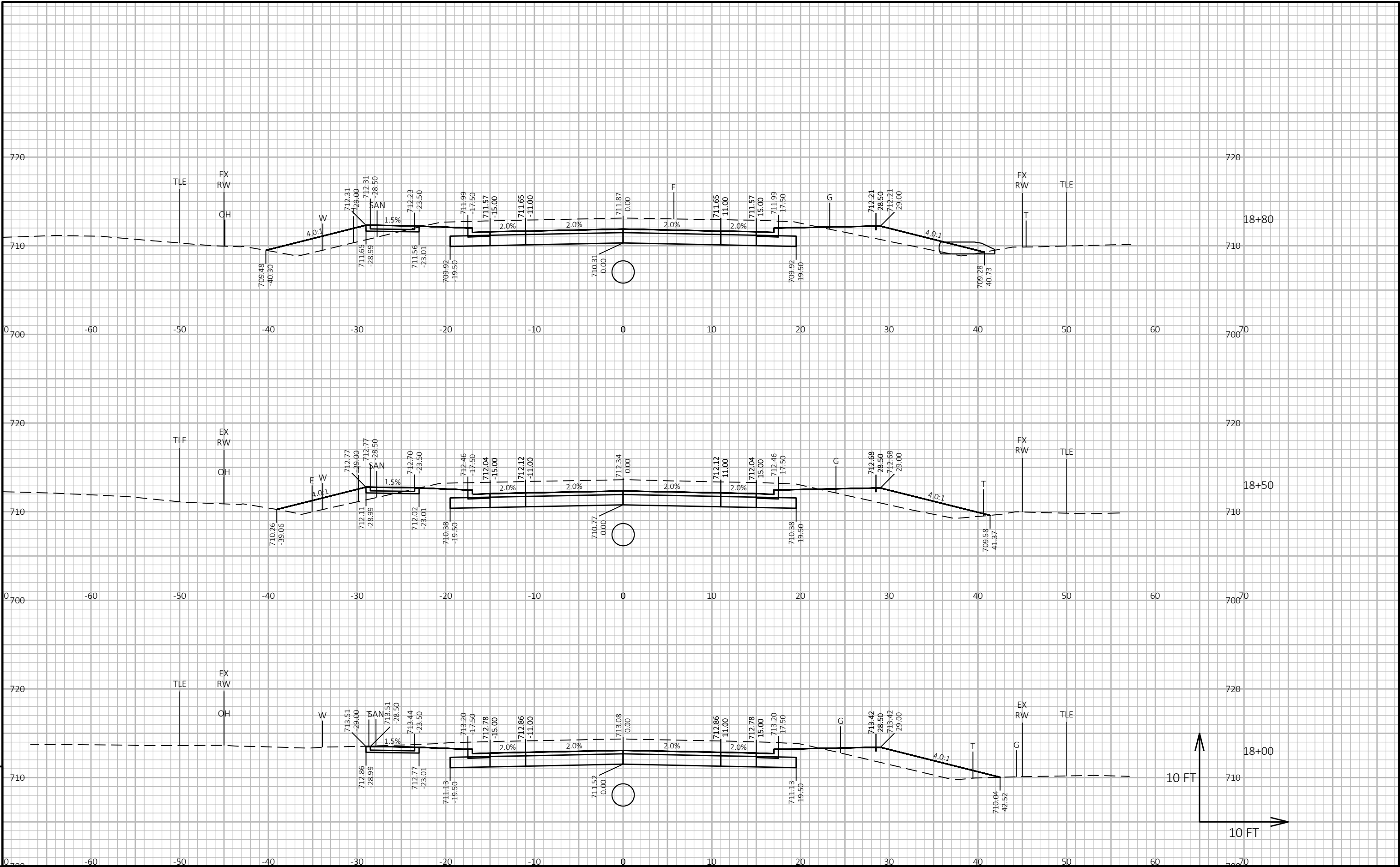


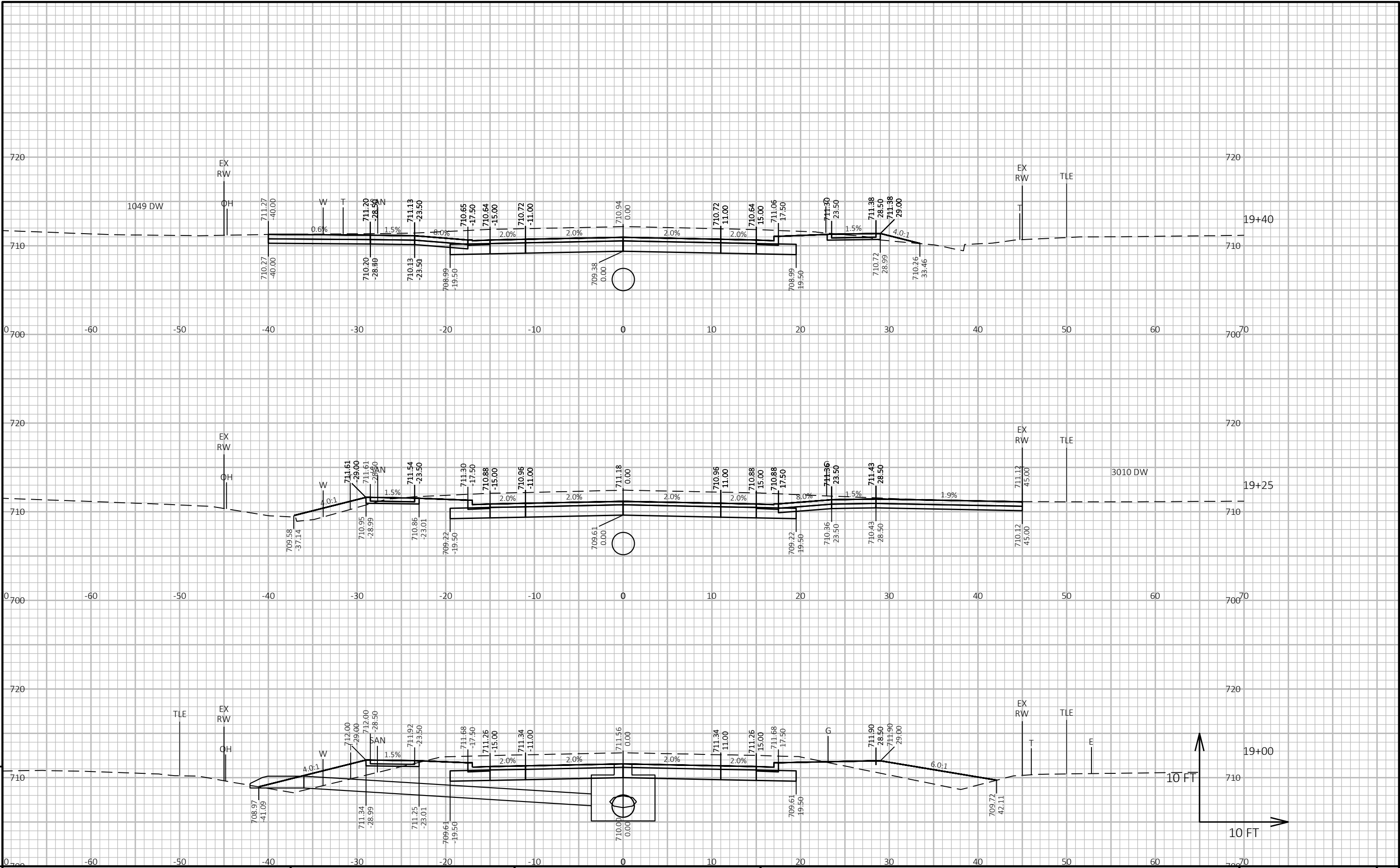


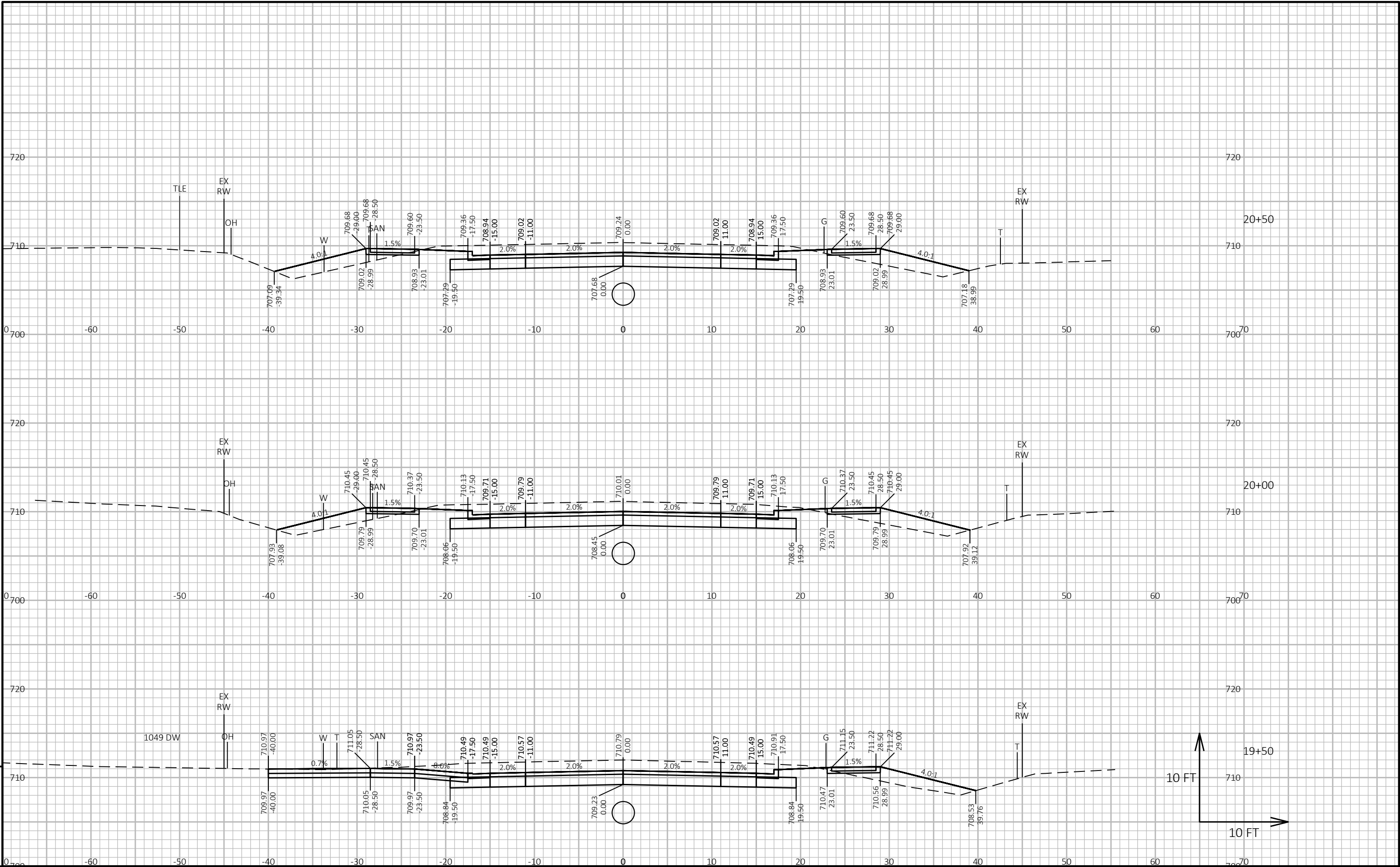


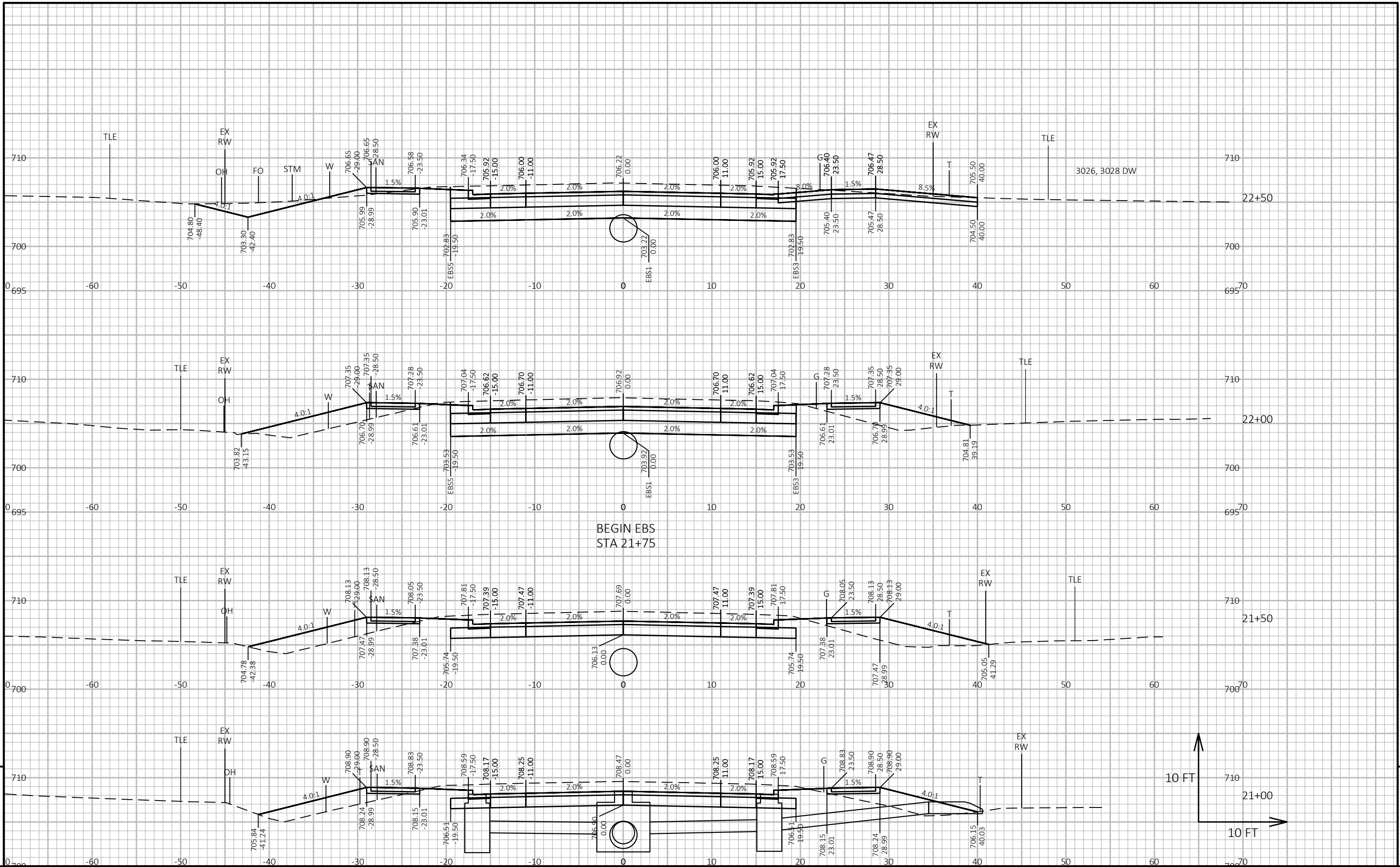


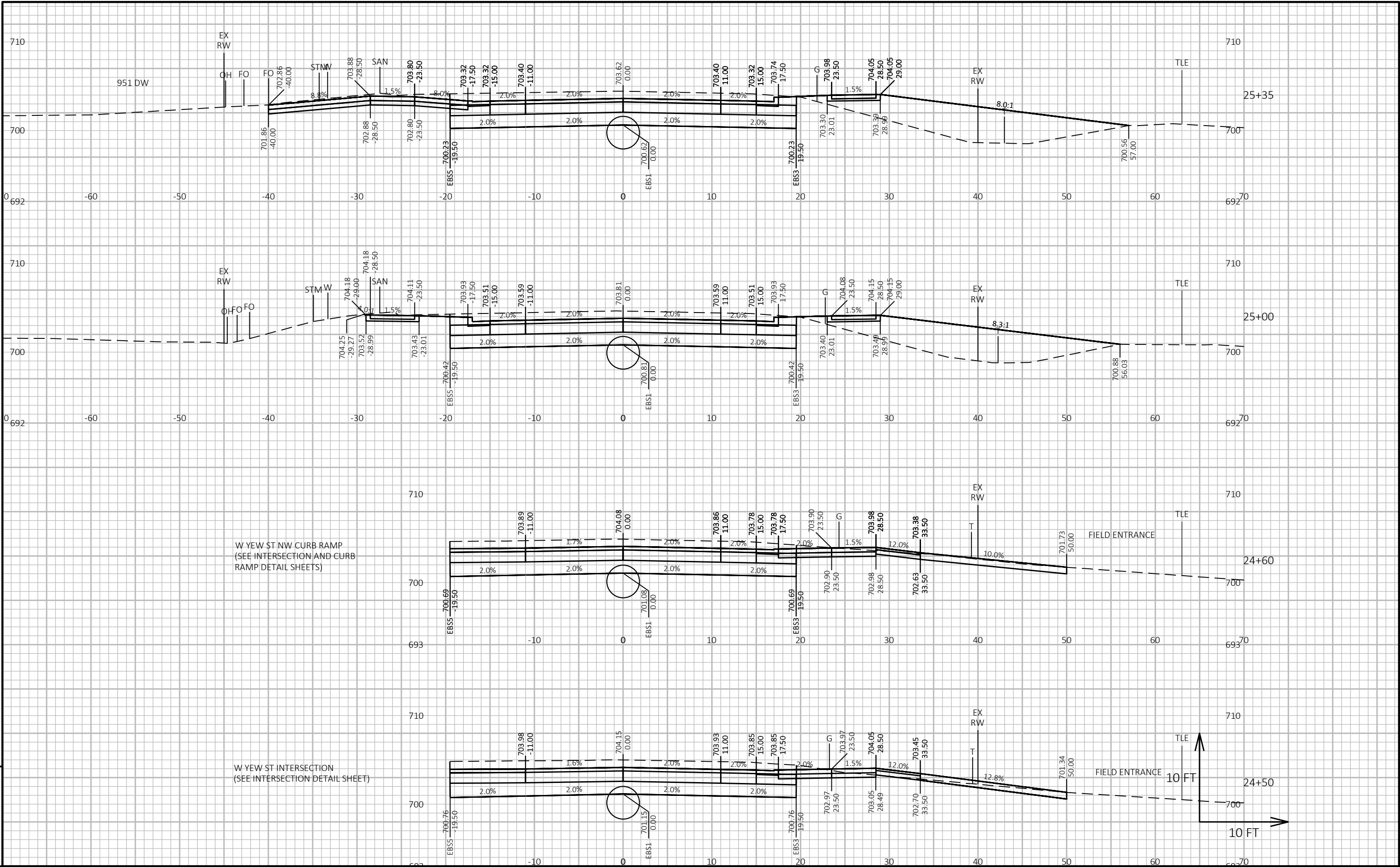


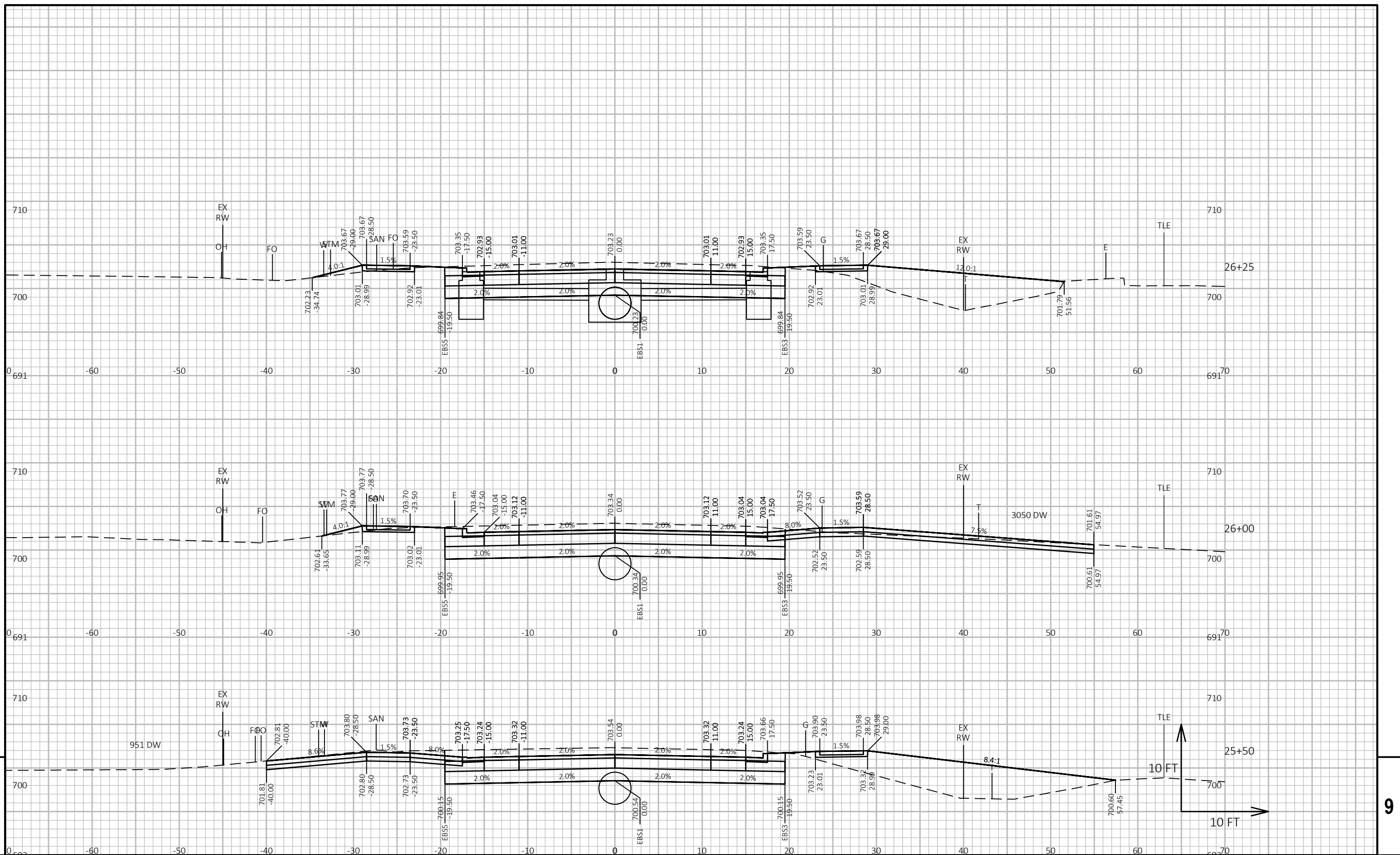


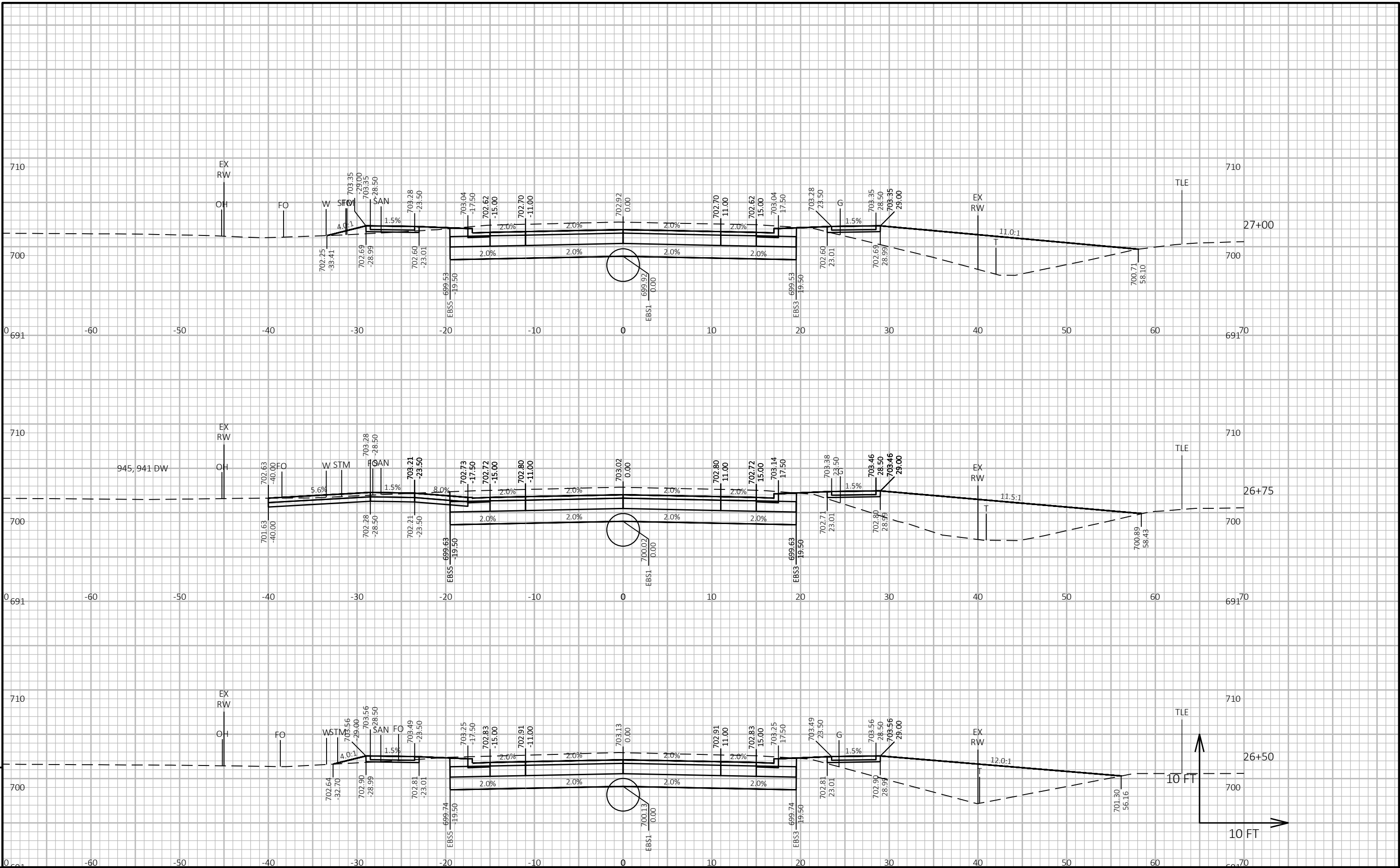


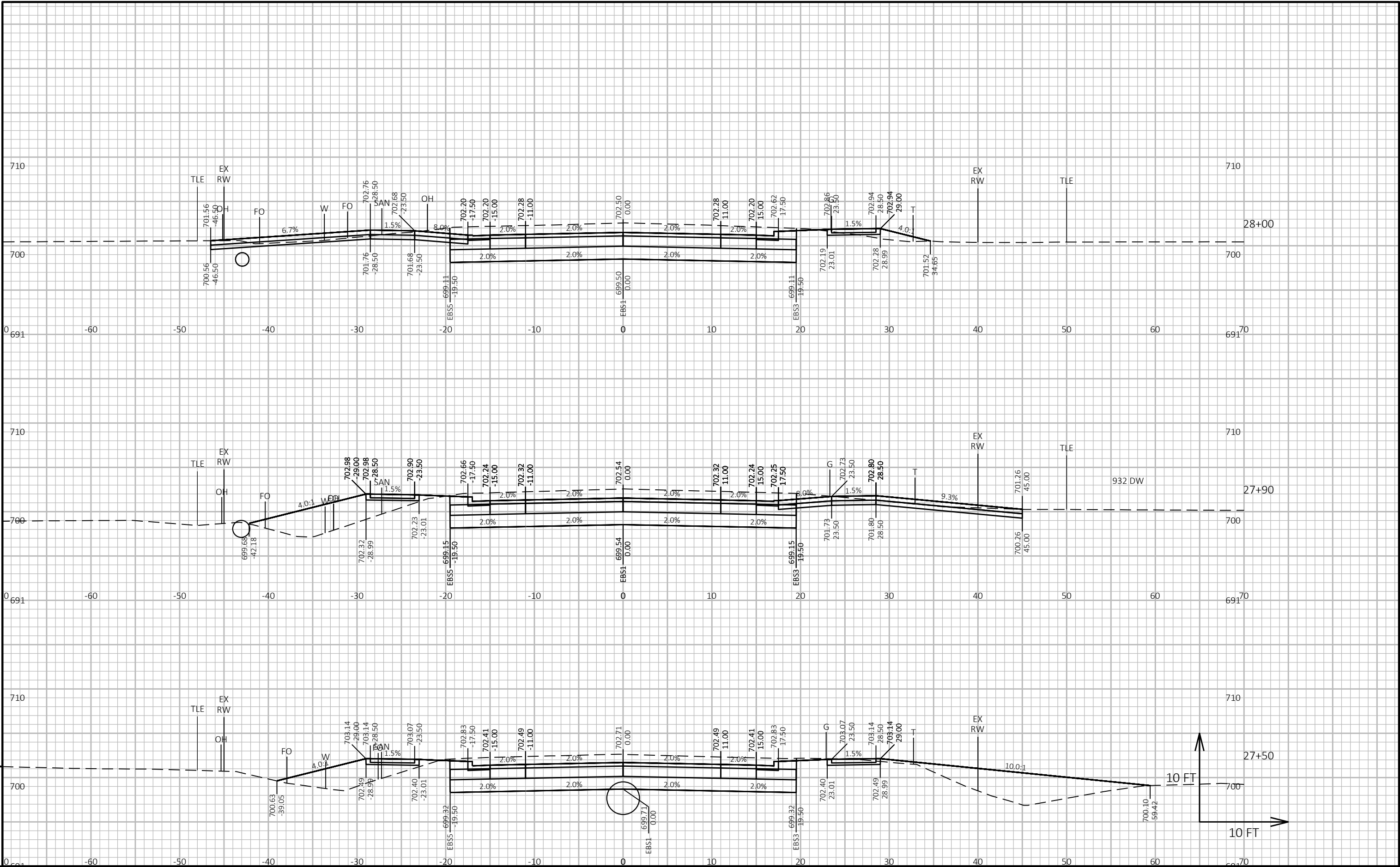


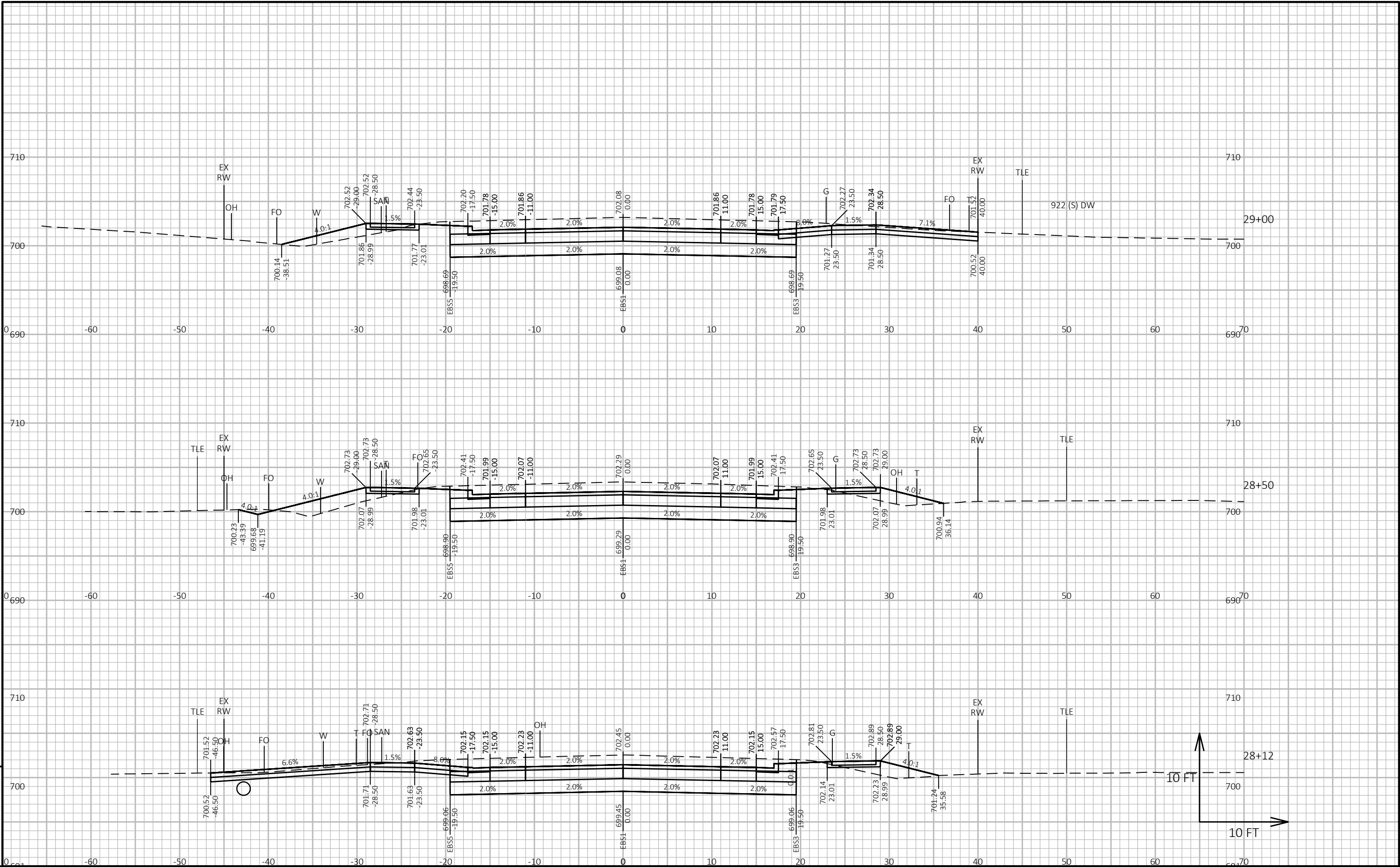


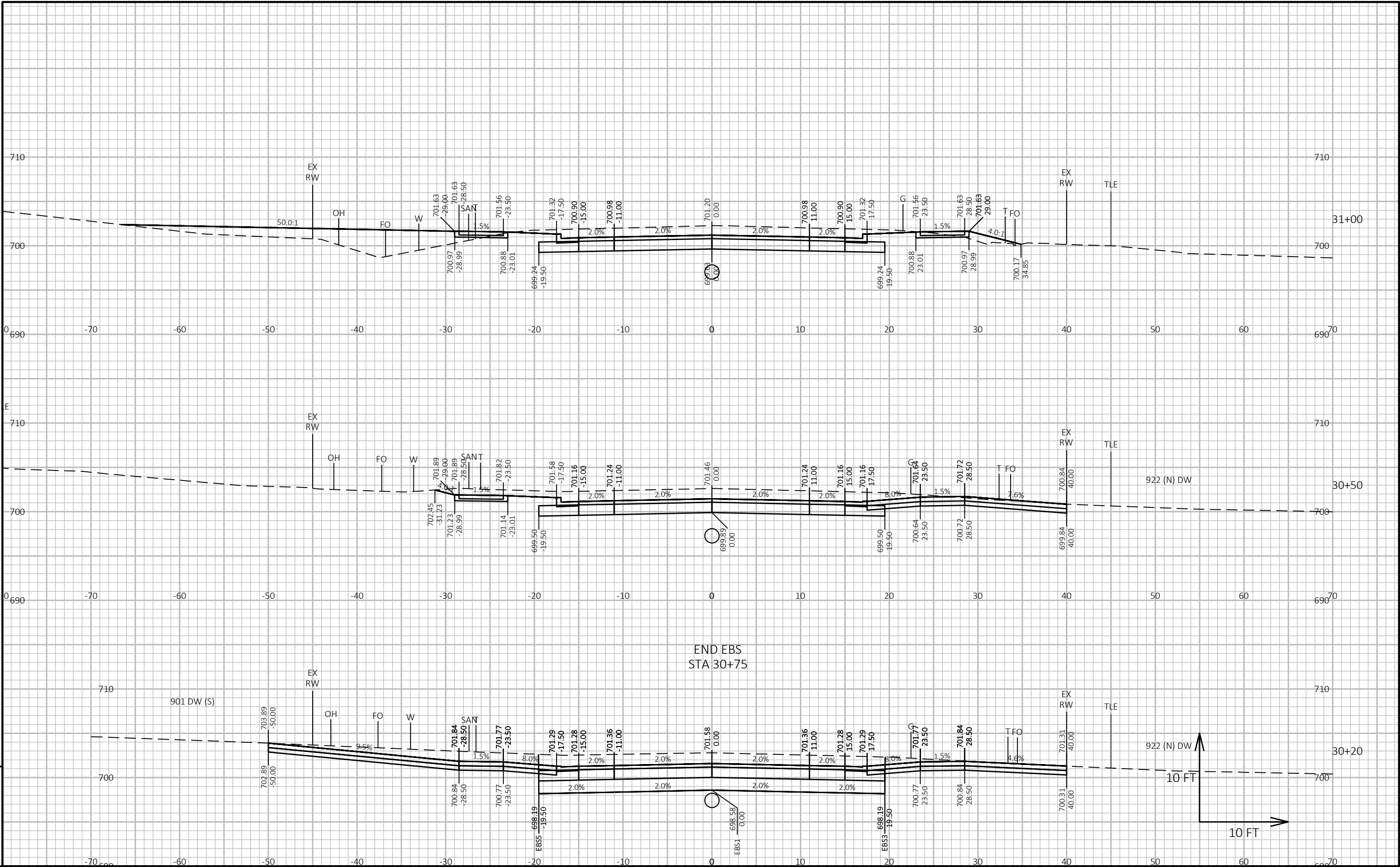


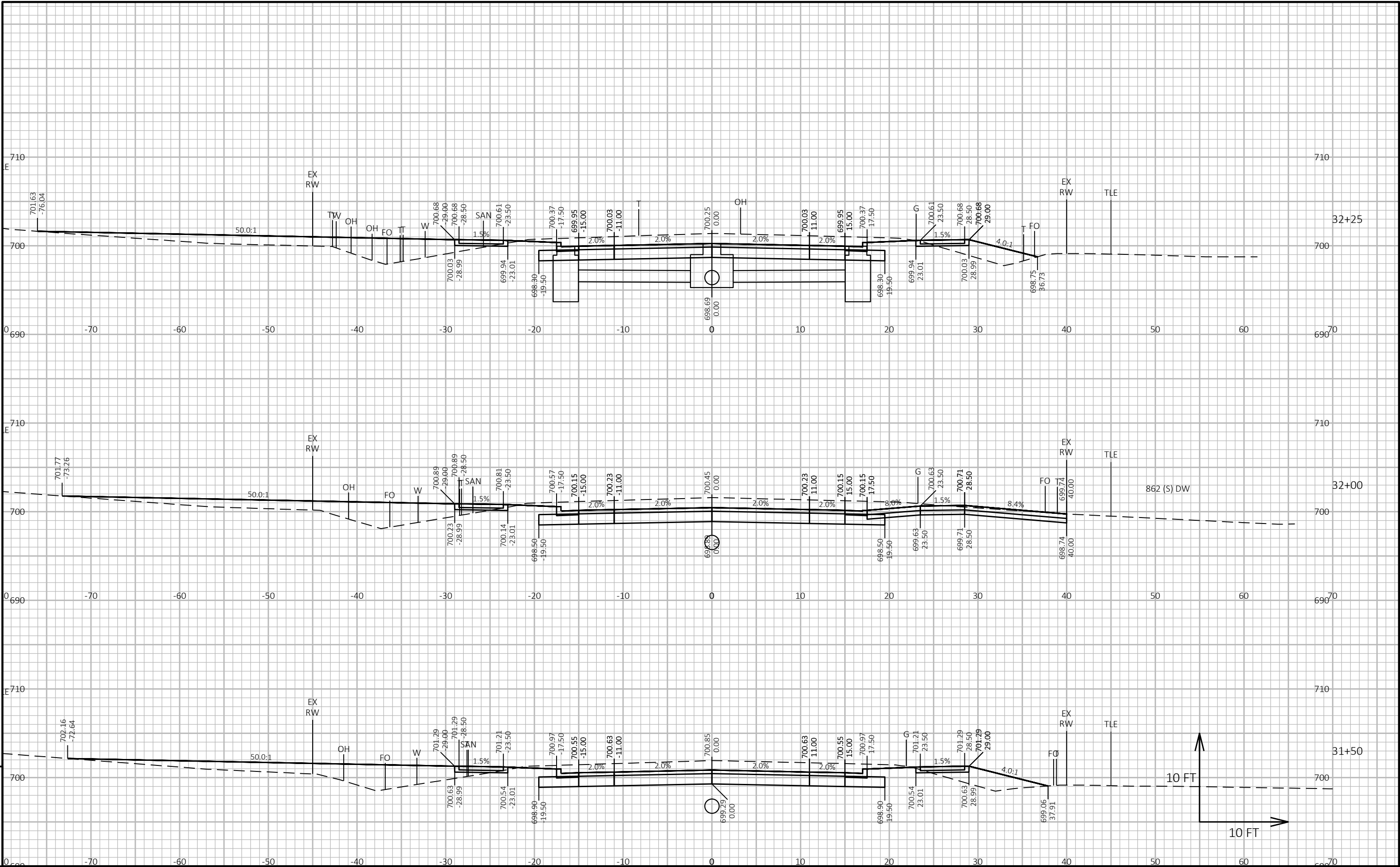




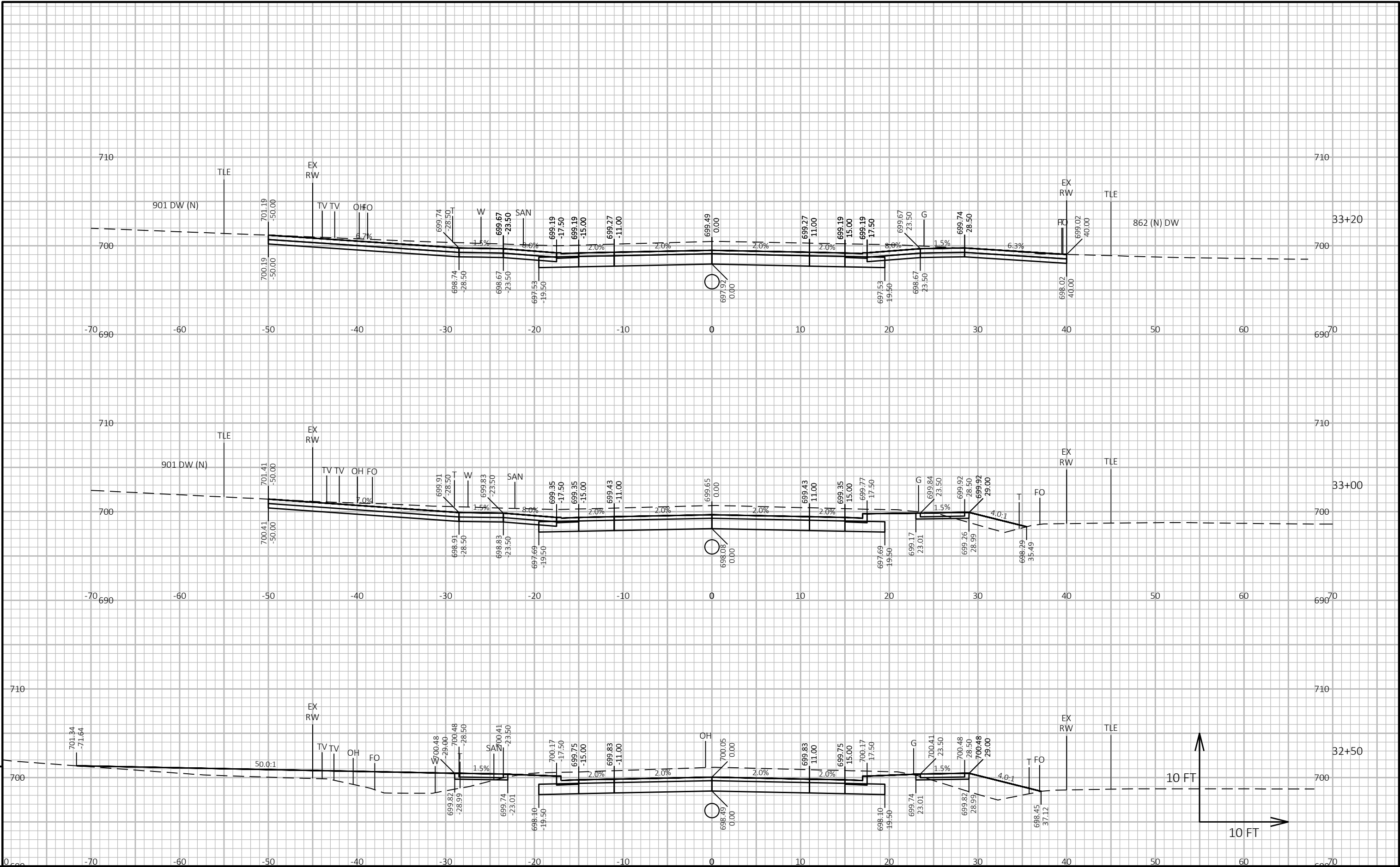


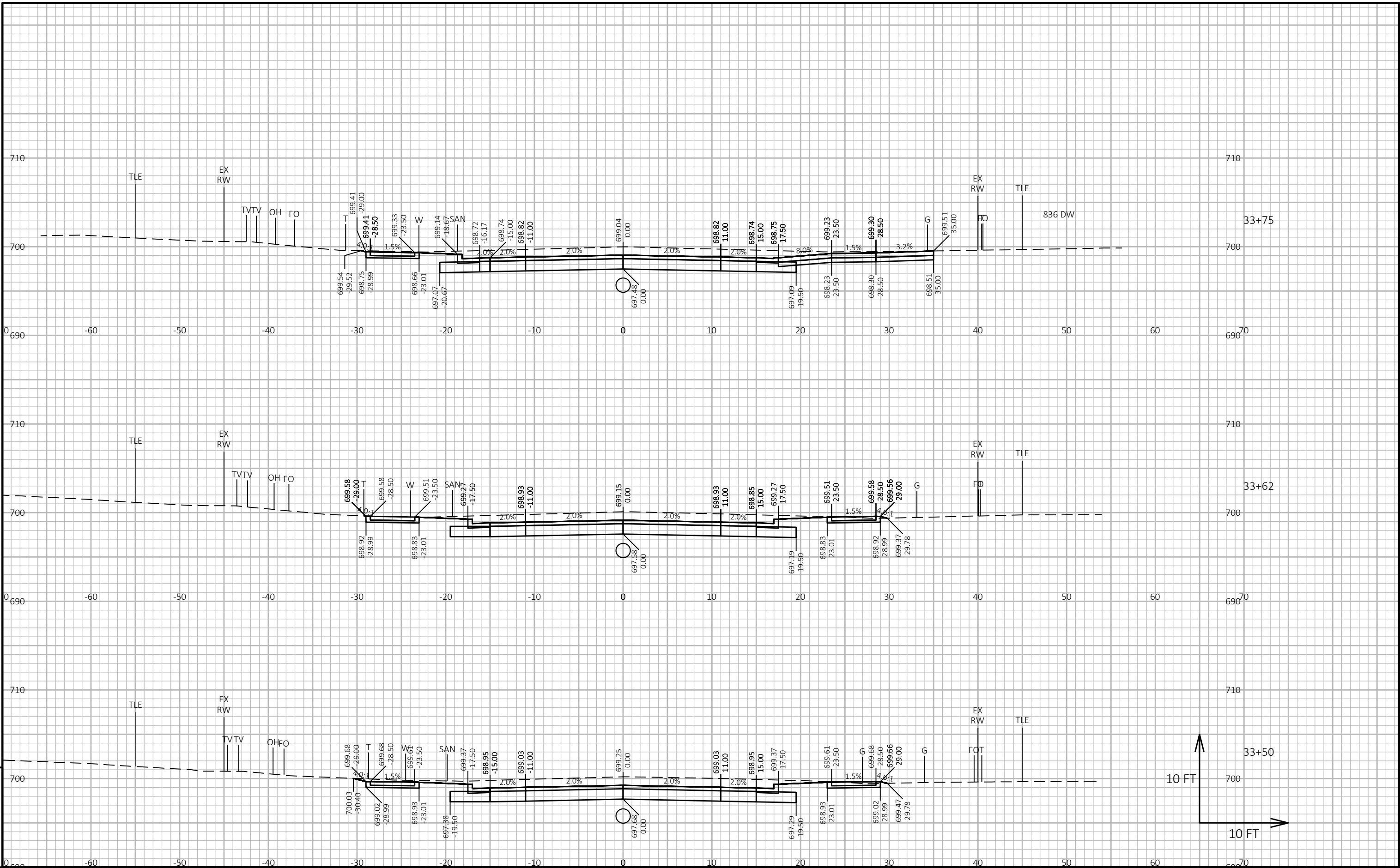


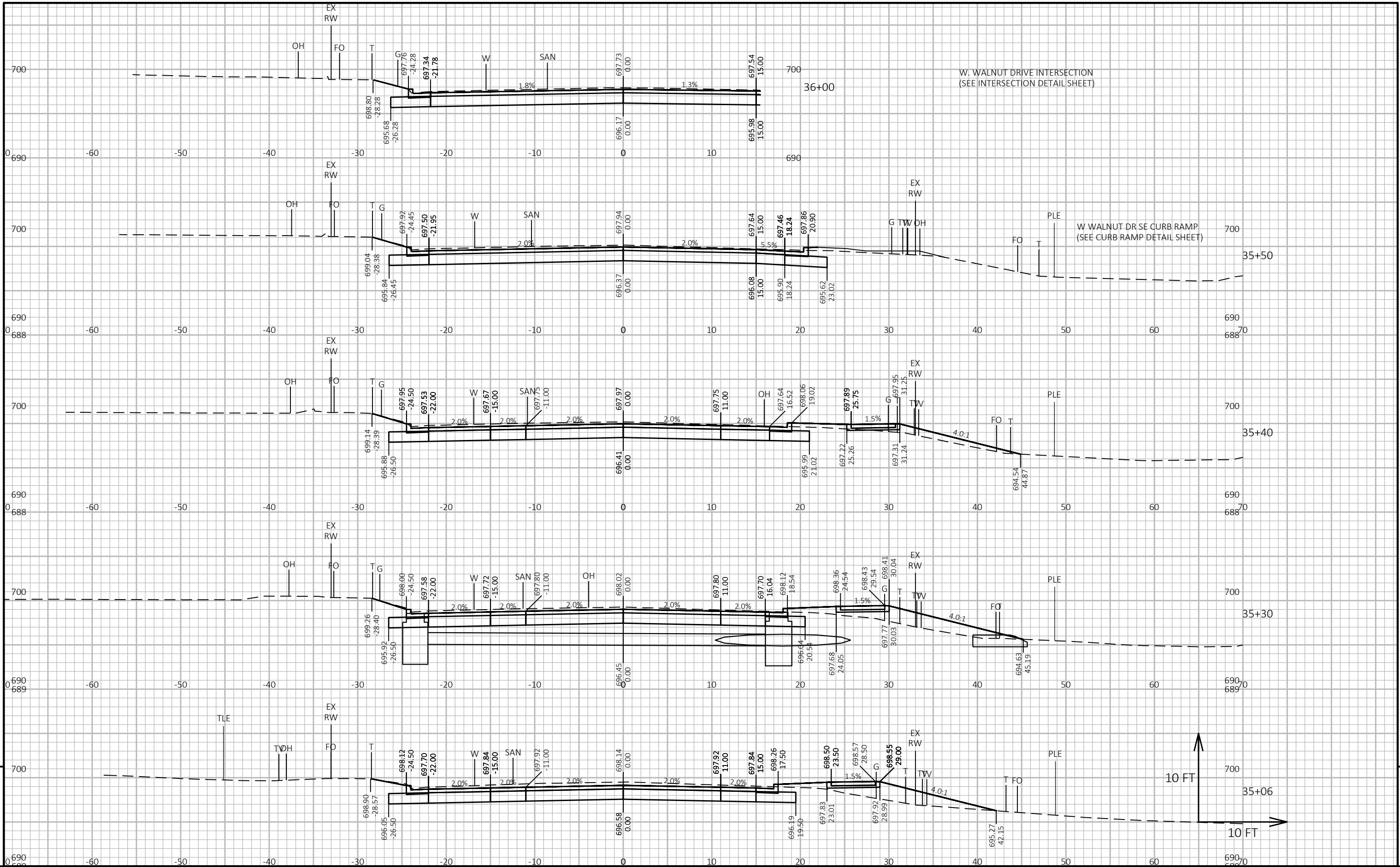




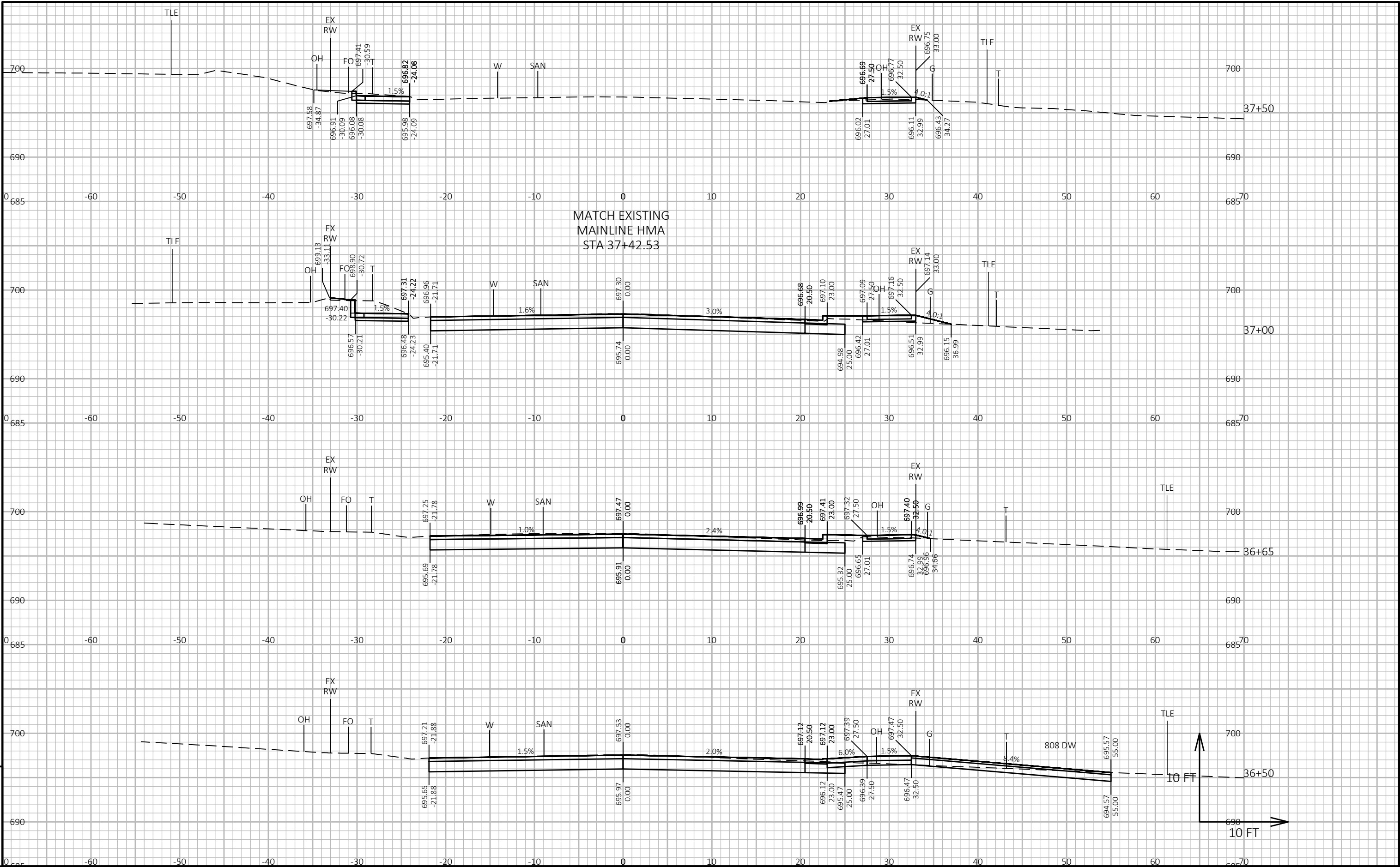
PROJECT NO: 4997-05-73	HWY: SOUTH DULUTH AVENUE	COUNTY: DOOR	CROSS SECTIONS: SOUTH DULUTH AVENUE	SHEET 196
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PROJECT NO: 4997-05-73	HWY: SOUTH DULUTH AVENUE	COUNTY: DOOR	CROSS SECTIONS: SOUTH DULUTH AVENUE	SHEET 200
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PROJECT NO: 4997-05-73

HWY: SOUTH DULUTH AVENUE

COUNTY: DOOR

CROSS SECTIONS: SOUTH DULUTH AVENUE

SHEET 201

E

FILE NAME : I:\CLIENTS-GRBAY\W\W3910 WDOT NE REGION - GREEN BAY\014 4997-05-72 S DULUTH AVENUE DOOR COUNTY\04 CADD\49970572\00 SHEETS\PLAN\090201-XS.DWG
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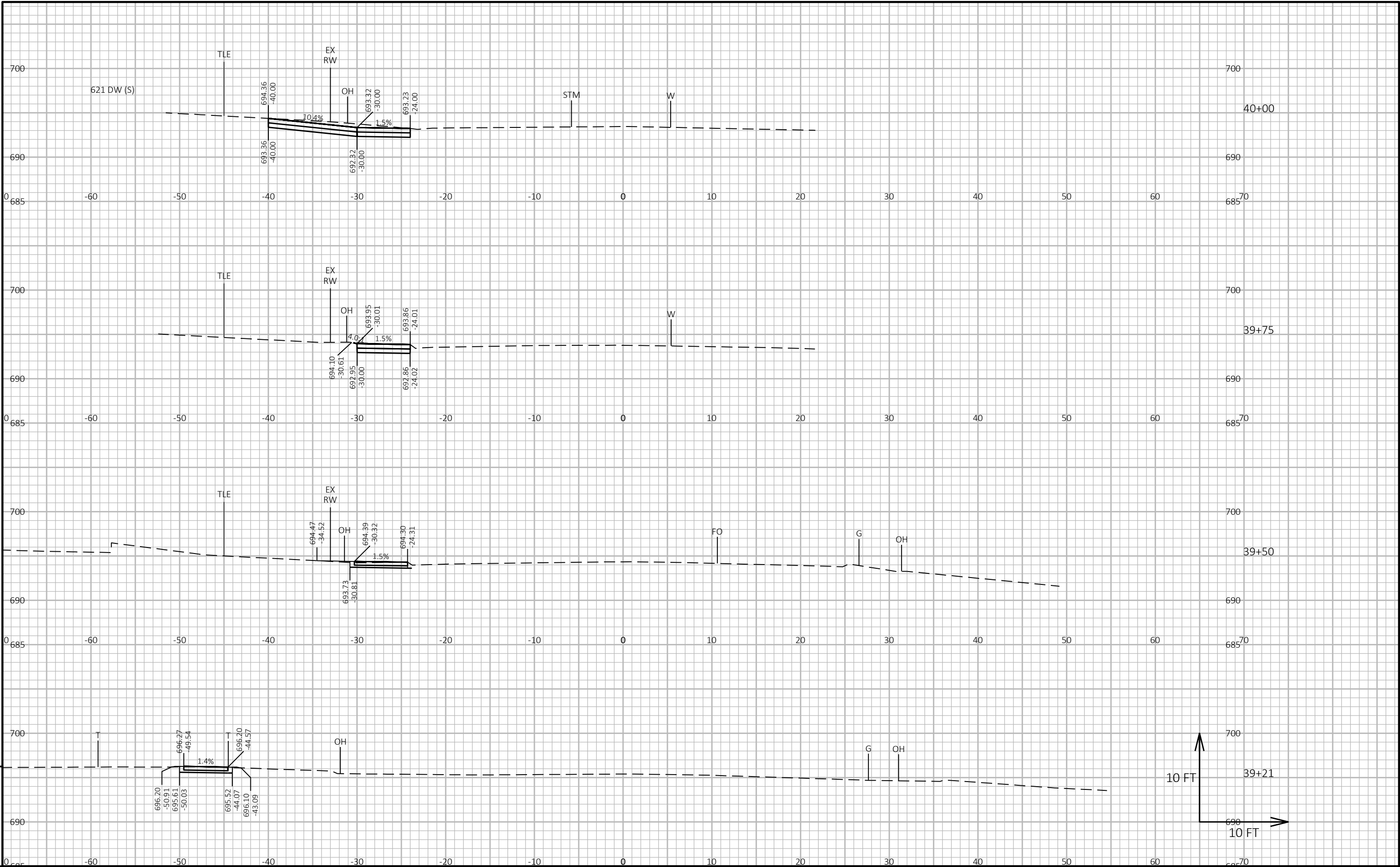
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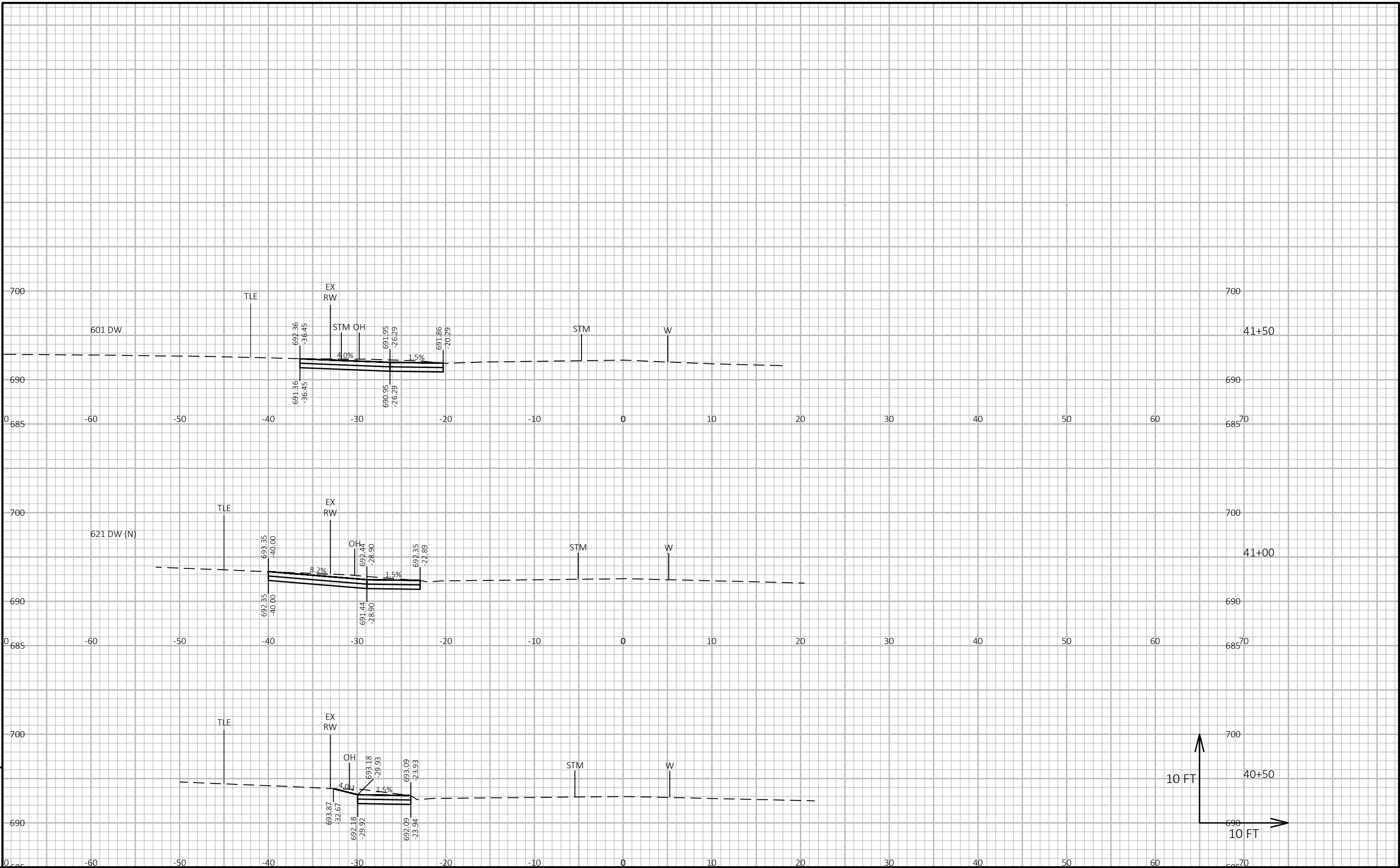
PLOT BY : WILLIAM BERG

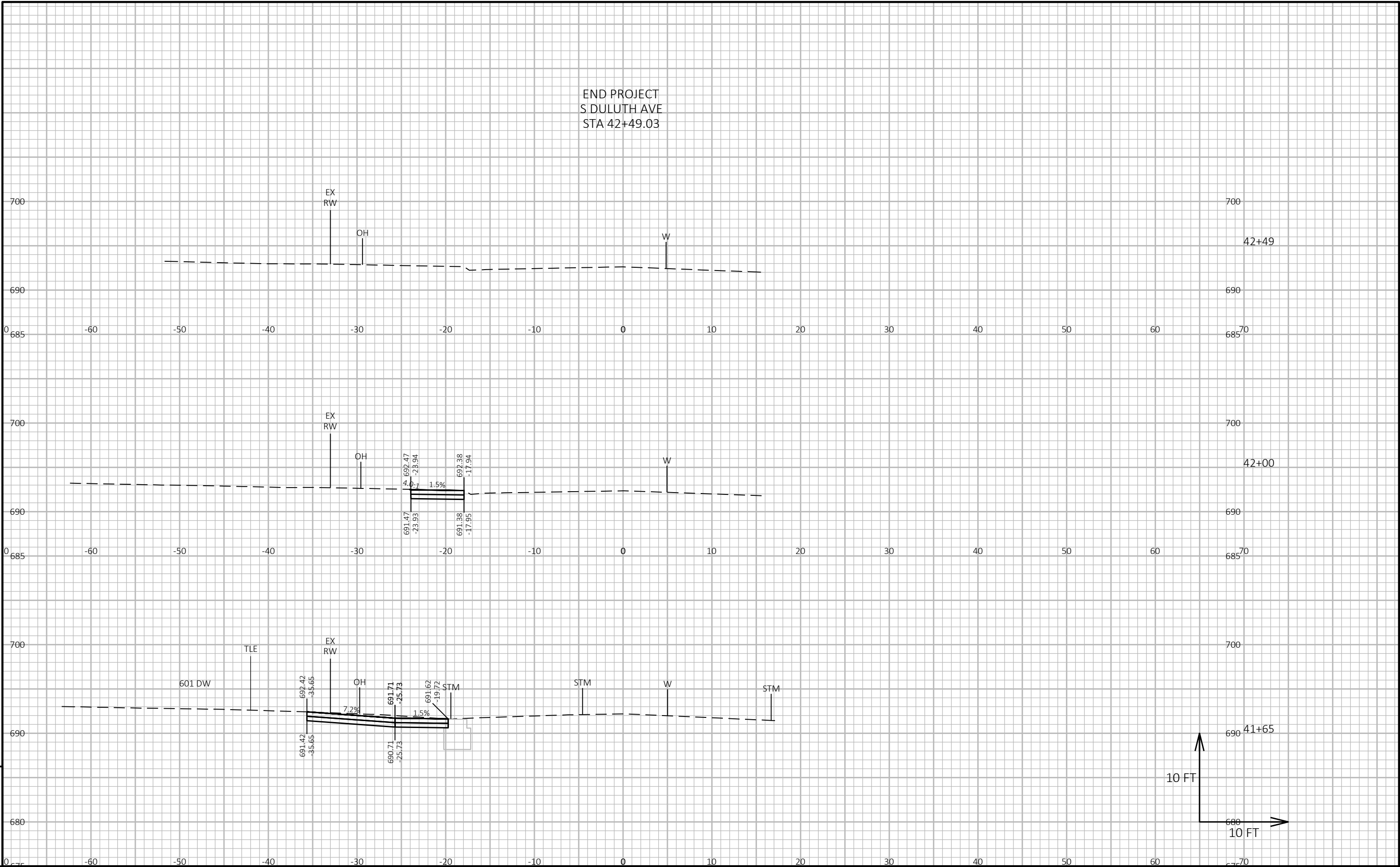
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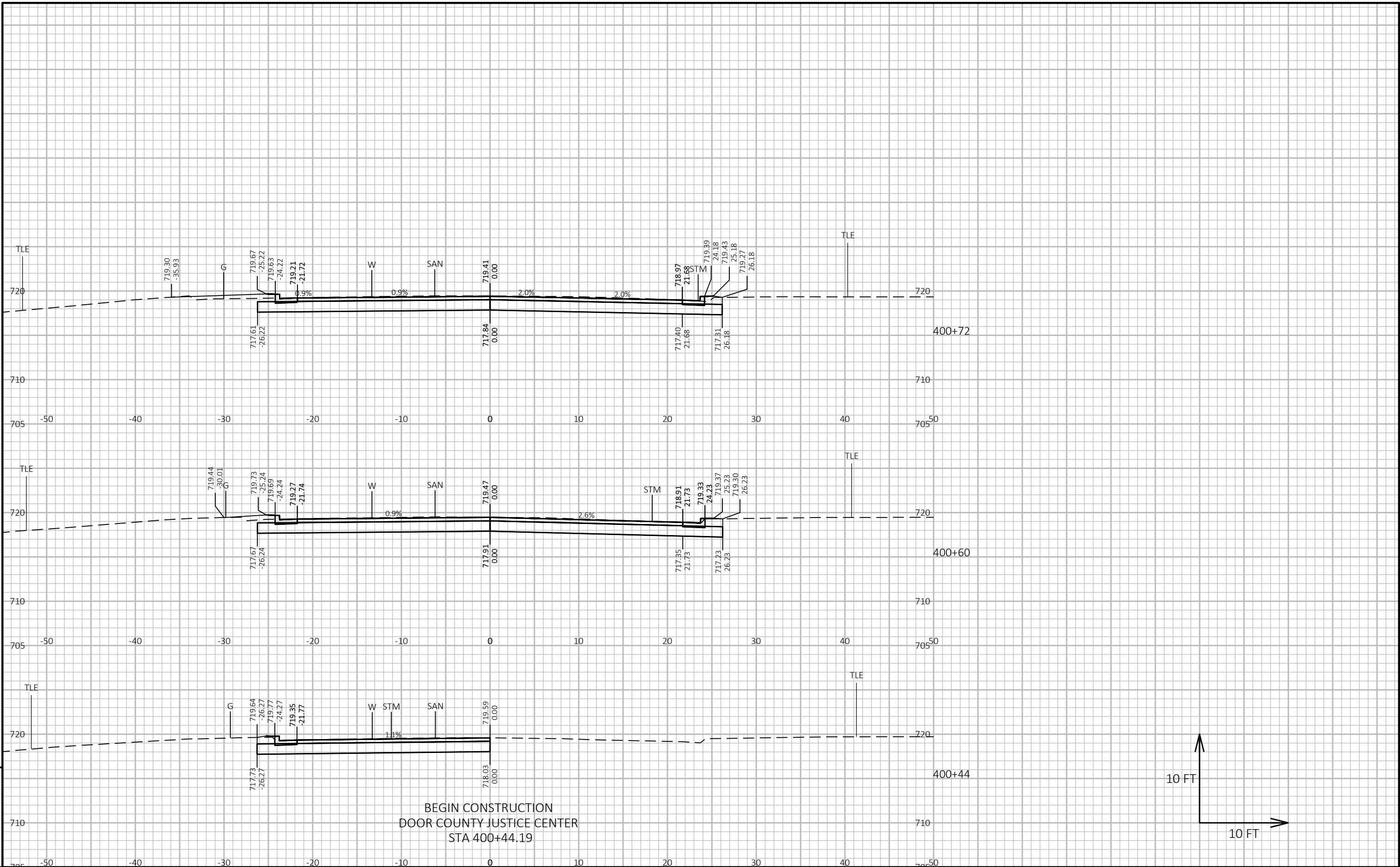
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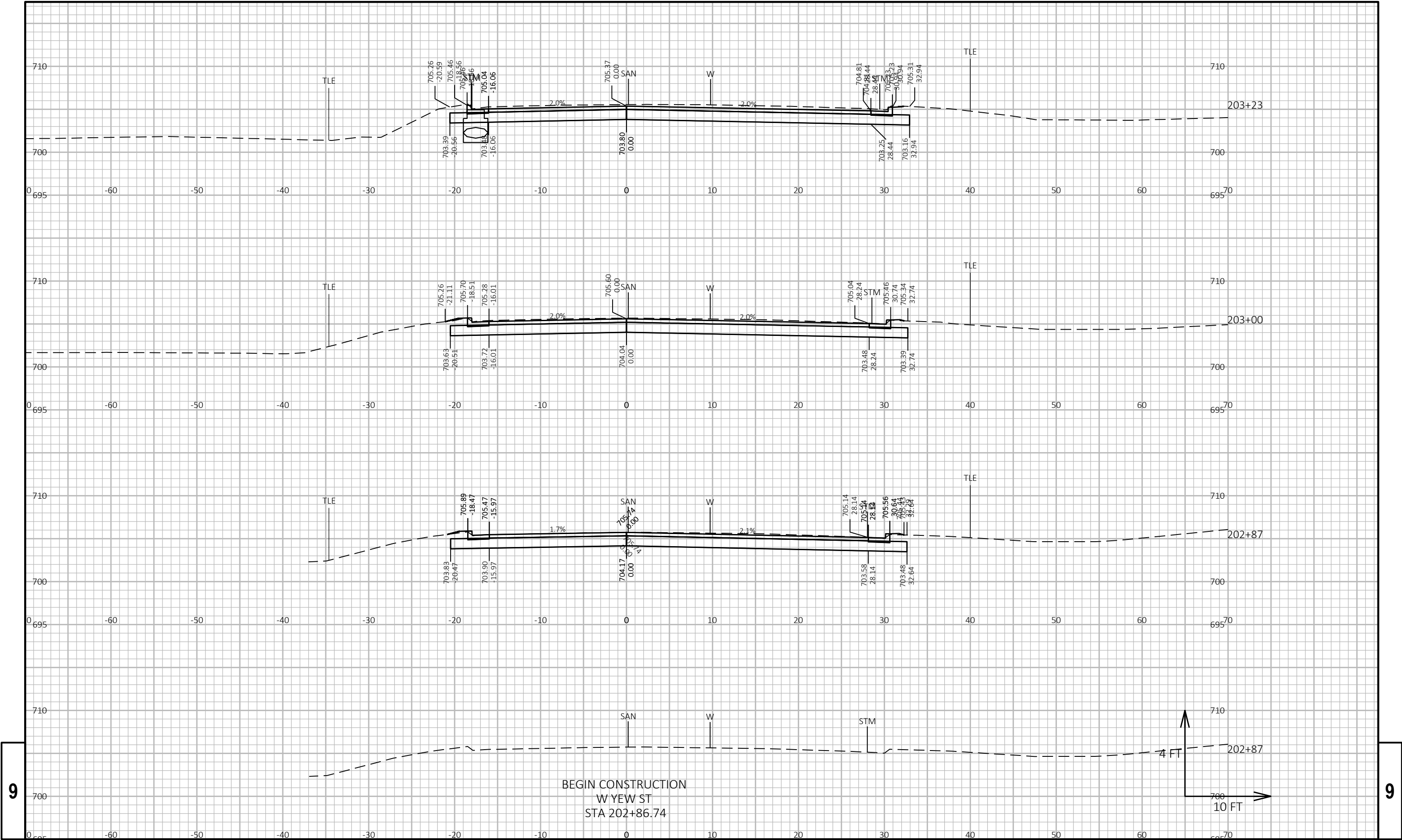


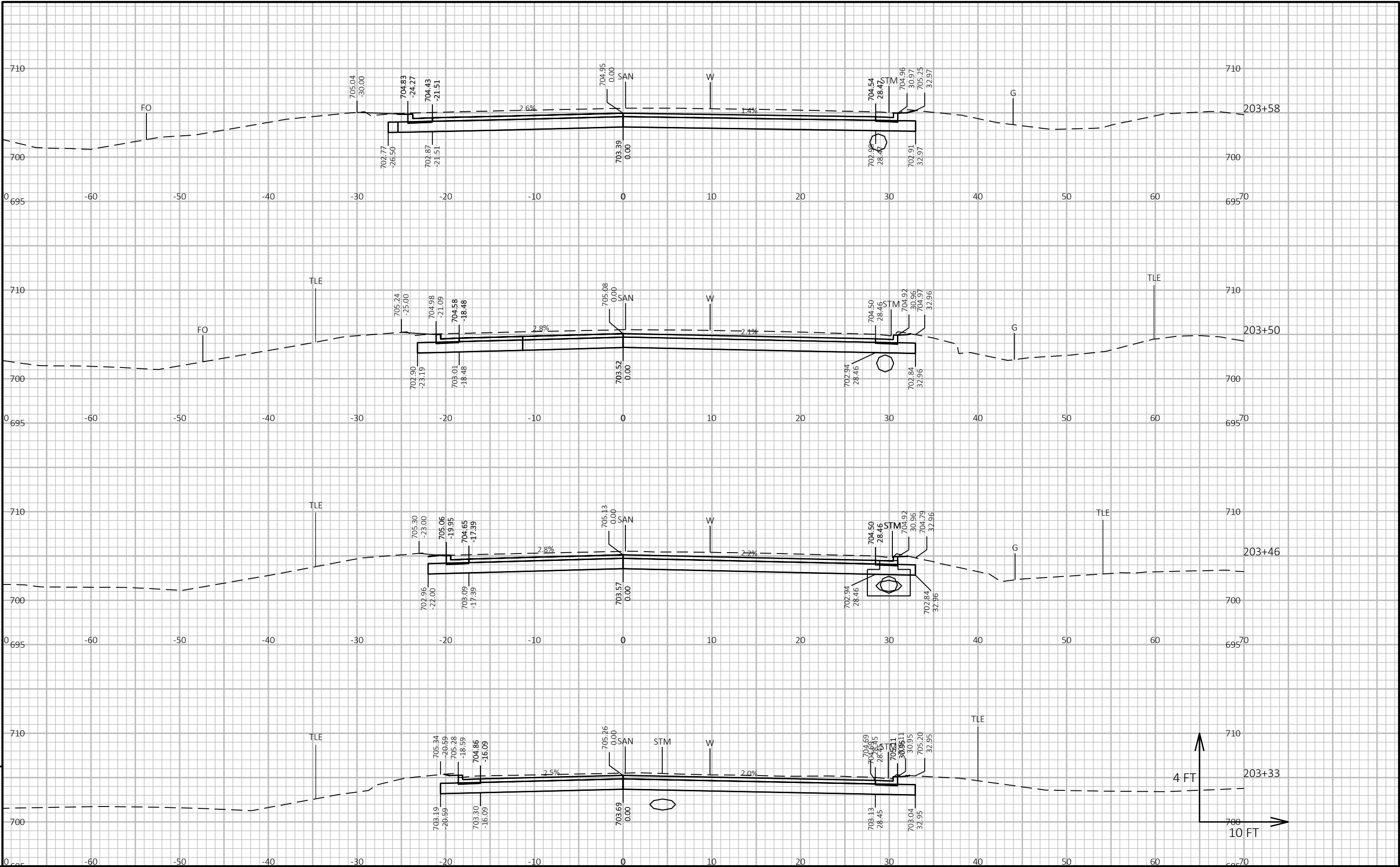


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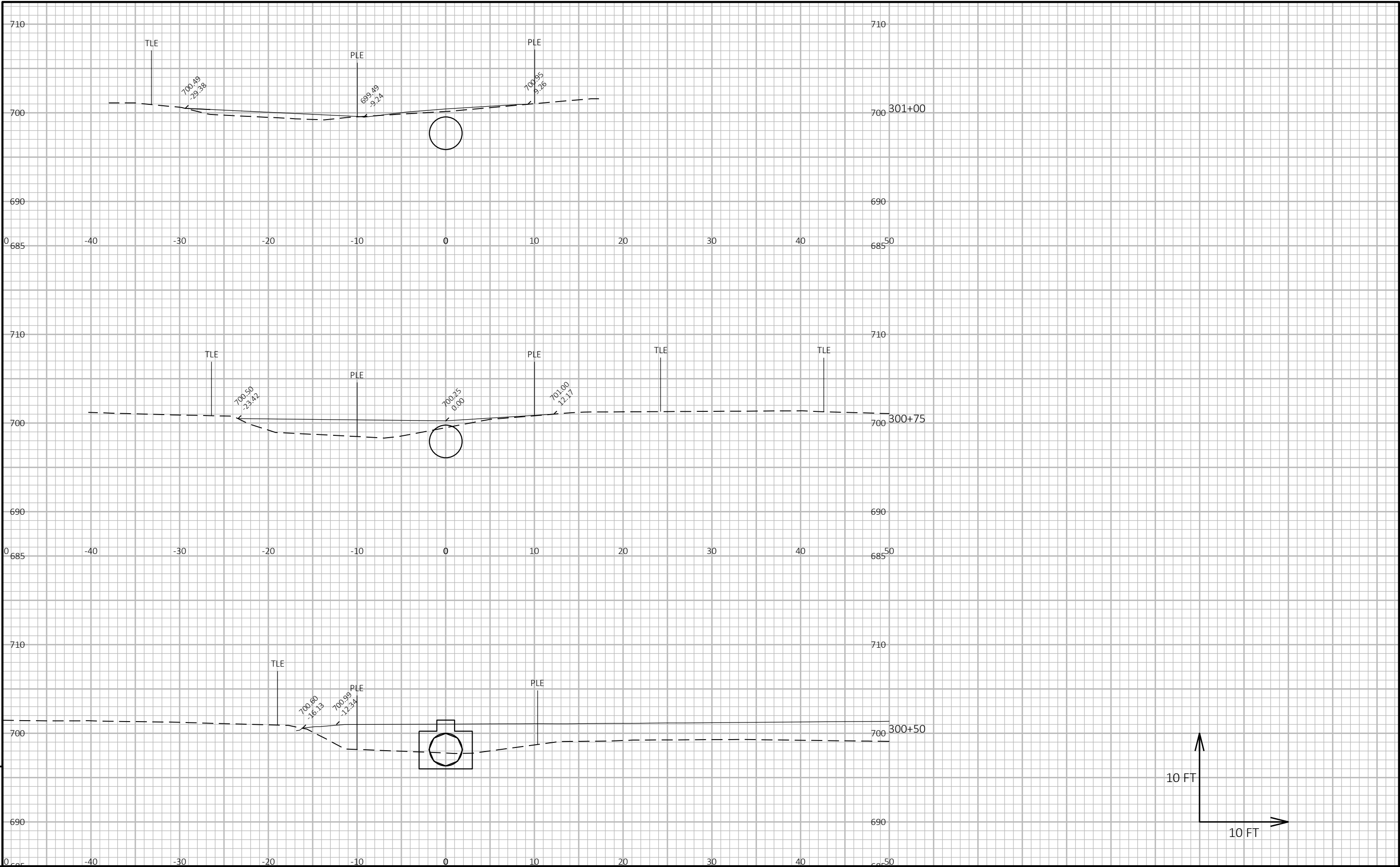


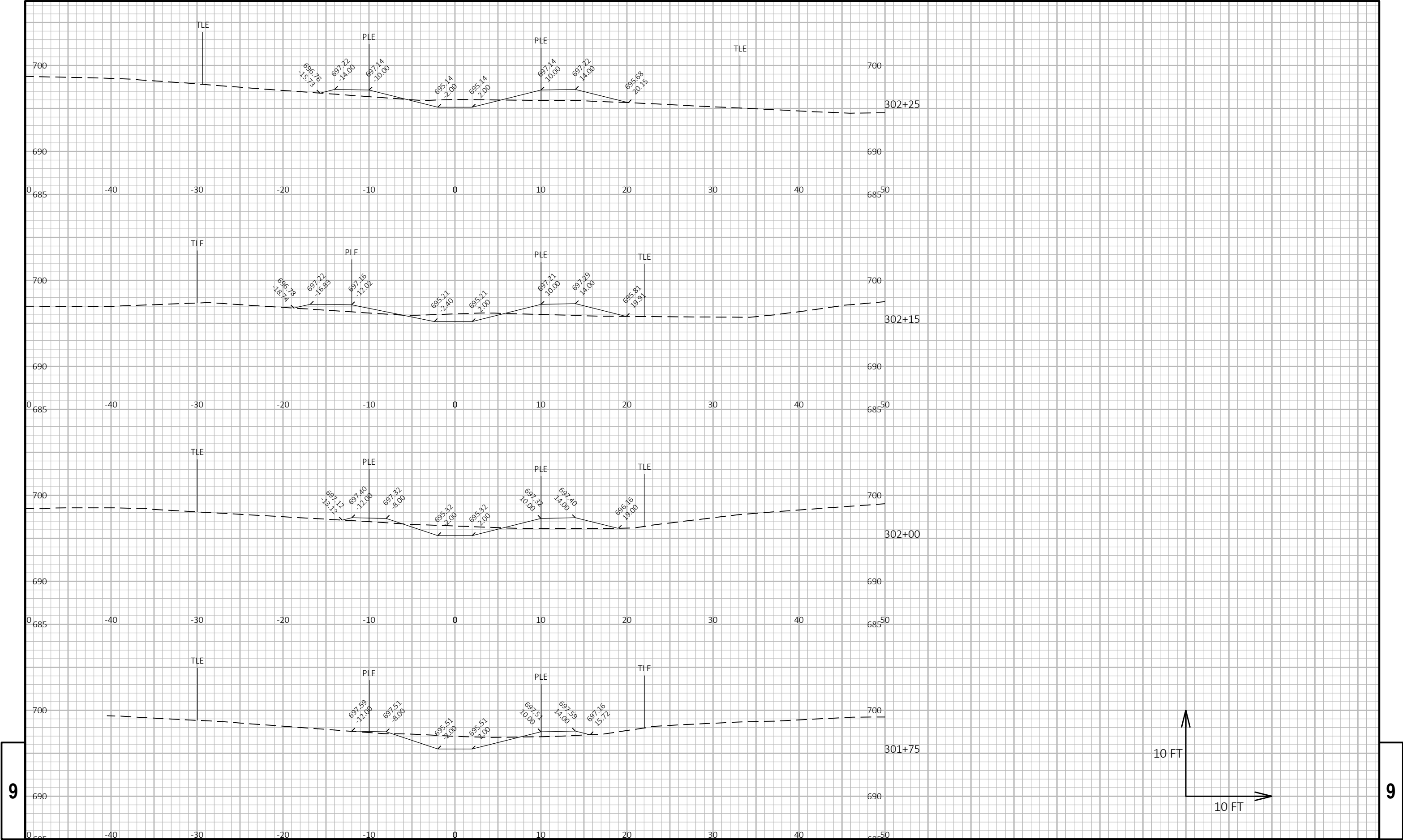
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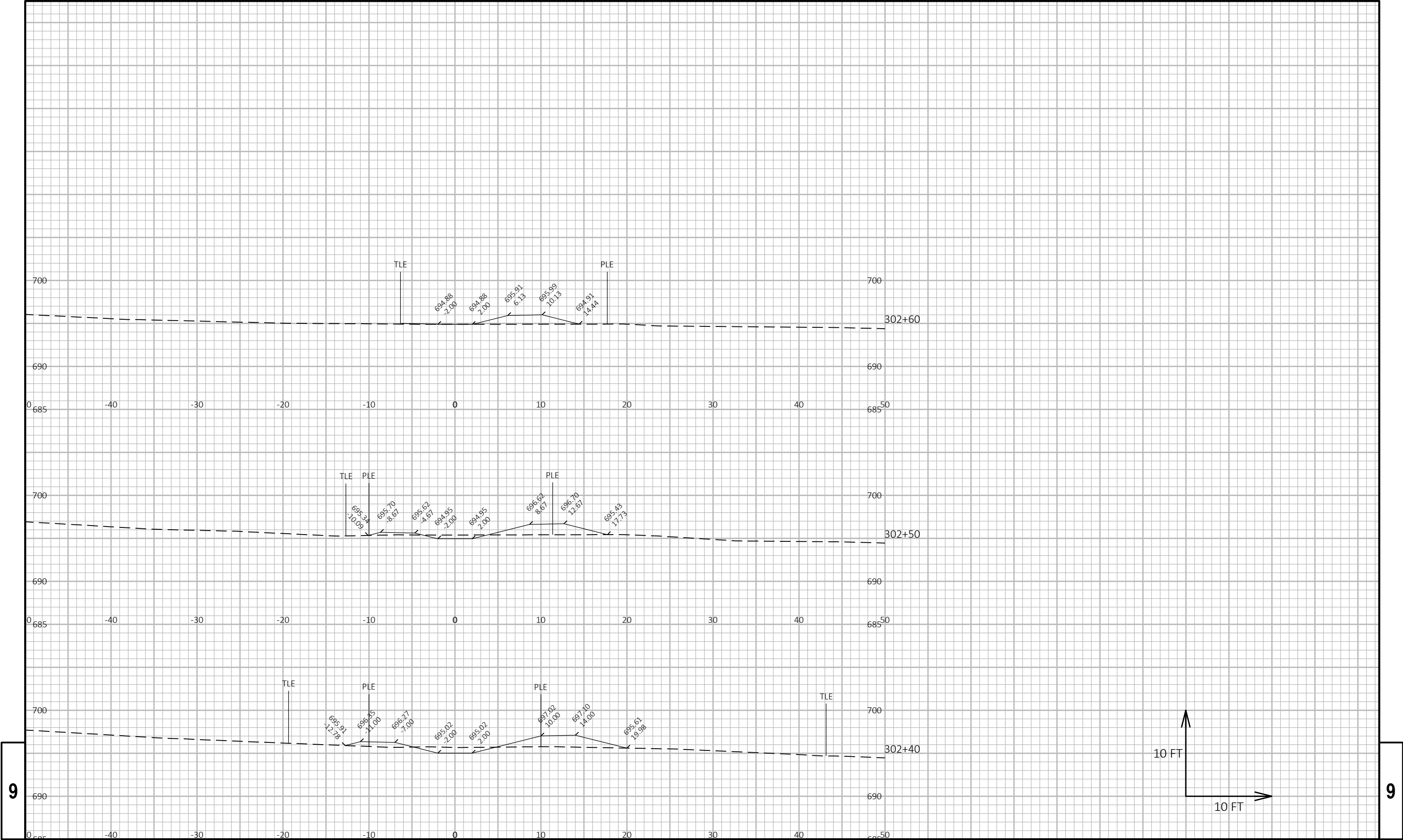
PROJECT NO: 4997-05-73	HWY: SOUTH DULUTH AVENUE	COUNTY: DOOR	CROSS SECTIONS: W YEW ST	SHEET 207	E
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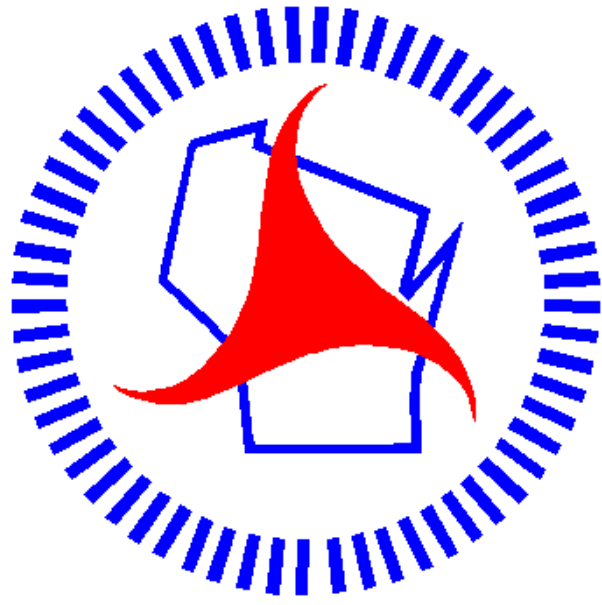
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Wisconsin Department of Transportation

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