

GRE MAY 2026
PROJECT ID: 9277-03-73
WITH: N/A
COUNTY: BROWN

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 = 208



DESIGN DESIGNATION		
A.A.D.T.	(2026)	= 5,600
A.A.D.T.	(2046)	= 8,100
D.H.V.		= -
D.D.		= 50/50
T.		= 8.0%
DESIGN SPEED		= 50 MPH
ESALS		= 1,800,000

CONVENTIONAL SYMBOLS

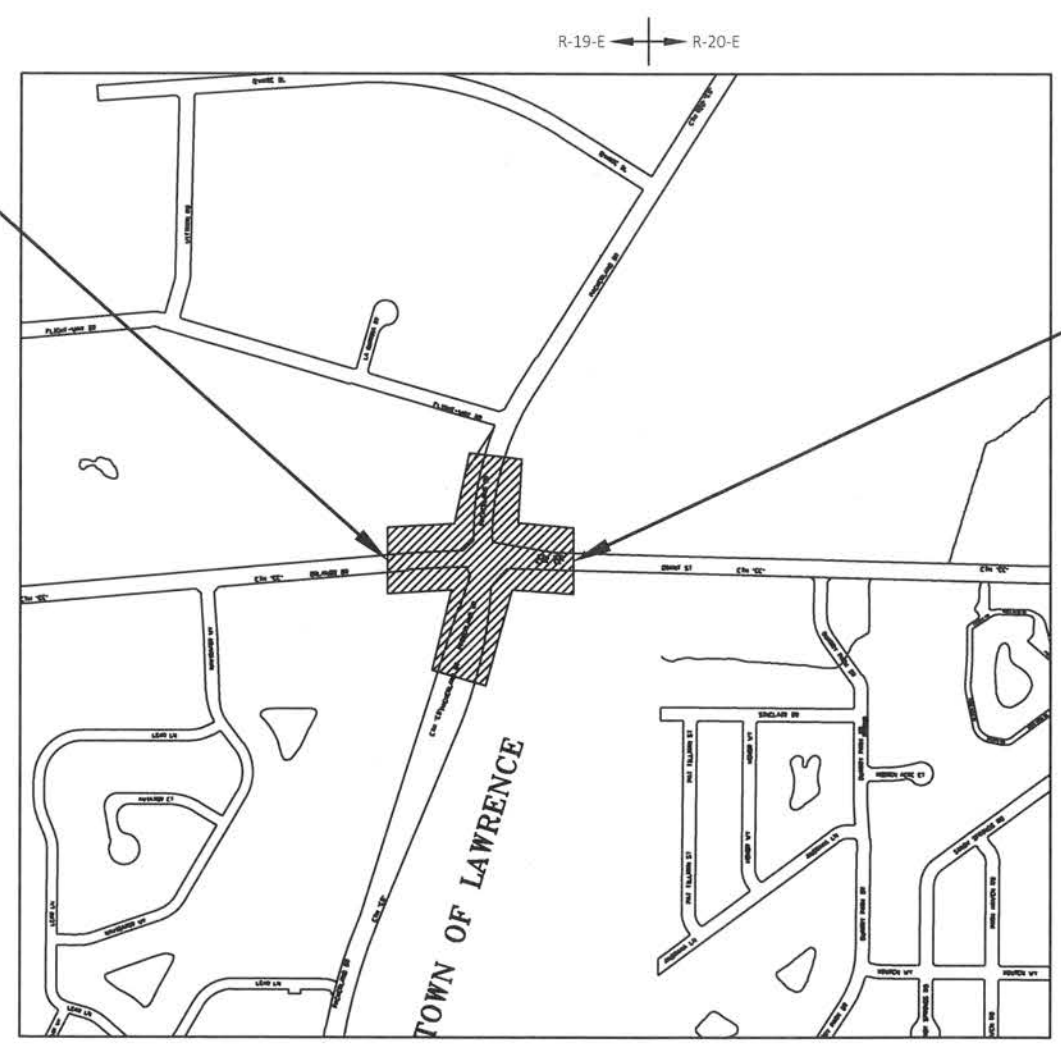
PLAN		PROFILE
CORPORATE LIMITS		GRADE LINE
PROPERTY LINE		ORIGINAL GROUND
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH
EXISTING RIGHT OF WAY		GRADE ELEVATION
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)
SLOPE INTERCEPT		UTILITIES
REFERENCE LINE		ELECTRIC
EXISTING CULVERT		FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)		GAS
COMBUSTIBLE FLUIDS		SANITARY SEWER
		STORM SEWER
		TELEPHONE
MARSH AREA		WATER
		UTILITY PEDESTAL
		POWER POLE
WOODED OR SHRUB AREA		TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BROWN CO, CTH EE
NAVIGATOR WAY - QUARRY PARK DR
CTH EE
BROWN COUNTY

STATE PROJECT NUMBER
9277-03-73



LAYOUT
SCALE 0 1000 FT
TOTAL NET LENGTH OF CENTERLINE = 0.221 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BROWN 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 18.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9277-03-73	WISC 2026317	1

APPROVED FOR BY
BROWN COUNTY

1/12/2026
DATE
HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY
AYRES
WISCONSIN
ANDREW C. DANA
34172
OCONTO, WI
PROFESSIONAL ENGINEER
1-12-2026
(Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor AYRES
Designer AYRES
Project Manager MICHAEL COHEN
Regional Supervisor KIMBERLY SLEZAK

APPROVED FOR THE DEPARTMENT
DATE: 1/14/2026
Michael Cohen
(Signature)

E

UTILITIES CONTACTS

AT&T
COMMUNICATIONS
KYLE WEBER
205 JEFFERSON ST
GREEN BAY, WI 54301
PHONE: 920-224-5969
EMAIL: kw715w@att.com

VILLAGE OF ASHWAUBENON WATER DEPARTMENT
WATER AND SEWER UTILITY
AL FARVOUR
2155 HOLMGREN WAY
GREEN BAY, WI 54304
PHONE: 920-492-2335
EMAIL: afarvour@ashwaubenon.gov

WISCONSIN PUBLIC SERVICE
ELECTRIC UTILITY
STUART SENECA
2850 S ASHLAND AVE P.O. BOX 19001
GREEN BAY, WI 54304
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EMAIL: stuart.senecal@wisconsinpublicservice.com

CENTRAL BROWN COUNTY WATER AUTHORITY
WATER UTILITY
ZACH PETHAN
1303 S. 8TH ST
MANITOWOC, WI 54220
PHONE: 920-686-4244
EMAIL: zpethan@mpu.org

VILLAGE OF HOBART
WATER & SEWER UTILITY
JERRY LANCELE
2990 S. PINE TREE RD
HOBART, WI 54155
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EMAIL: jerry@hobartwi.gov

WISCONSIN PUBLIC SERVICE
GAS UTILITY
MATT CURTIN
2850 S ASHLAND AVE
GREEN BAY, WI 54304
PHONE: 920-617-2106
EMAIL: matt.curtin@wisconsinpublicservice.com

CITY OF DE PERE WEST DE PERE SCHOOLS
COMMUNICATIONS
RICK VINCENT
470 SECURITY BLVD
GREEN BAY, WI 54313
PHONE: 920-617-7316
EMAIL: rick.vincent@nsight.com

VILLAGE OF WRIGHTSTOWN
WATER UTILITY
ANDY VICKMAN
352 HIGH STREET
WRIGHTSTOWN, WI 54180
PHONE: 920-532-5567
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NET LEC
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RICK VINCENT
470 SECURITY BLVD
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PHONE: 920-617-7316
EMAIL: rick.vincent@nsight.com

WISCONSIN INDEPENDENT NETWORK
COMMUNICATIONS
KEN WHITING
4955 BULLIS FARM ROAD
EAU CLAIRE, WI 54701
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SPECTRUM
COMMUNICATIONS
STEVE TOBIN
3545 PLANK ROAD
APPLETON, WI 54915
PHONE: 920-572-5616
EMAIL: steve.tobin@charter.com

WISCONSIN DNR LIAISON

JIM DOPERALSKI
NORTHEAST REGION
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
PHONE: 920-412-0165
EMAIL: james.doperalski@wisconsin.gov

DESIGN PROJECT MANAGER

AYRES ASSOCIATES
ANDY DANA, PE
700 PILGRIM WAY, SUITE 180
GREEN BAY, WI 54304
PHONE: 920-498-1200
EMAIL: danaa@ayresassociates.com

GENERAL NOTES

THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

A VERTICAL SAW JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

CURVE DATA IS BASED ON ARC DEFINITION.

BEARINGS SHOWN ON THE PLAN ARE TRUE BEARINGS.

PROPERTY LINES SHOWN ARE APPROXIMATE.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WETLANDS.

STATIONING, DISTANCES, AND OFFSETS FOR SIGNS AND TRAFFIC CONTROL DEVICES SHOWN IN THE PLANS ARE APPROXIMATE. EXACT LOCATIONS ARE DETERMINED BY THE ENGINEER.

THE EXACT LOCATIONS OF ENTRANCES ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER. ALL DRIVEWAYS ARE TO BE REPLACED IN KIND UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE PLANS.

EROSION CONTROL LOCATIONS AS SHOWN ON THE EROSION CONTROL PLAN ARE APPROXIMATE. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

RUNOFF COEFFICIENT TABLE

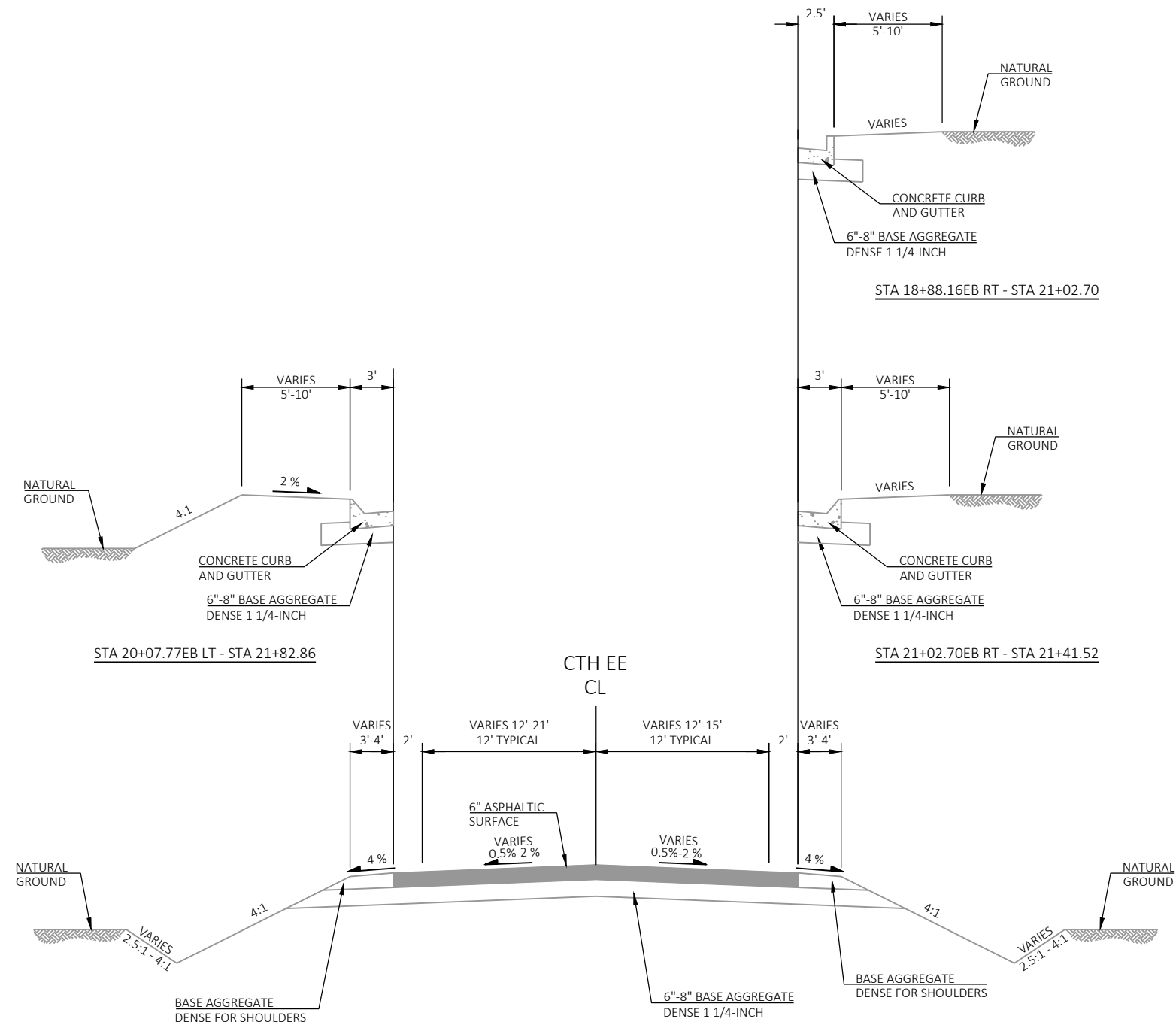
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.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 = 4.623 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.882 ACRES



ORDER OF SECTION 2 DETAIL SHEETS

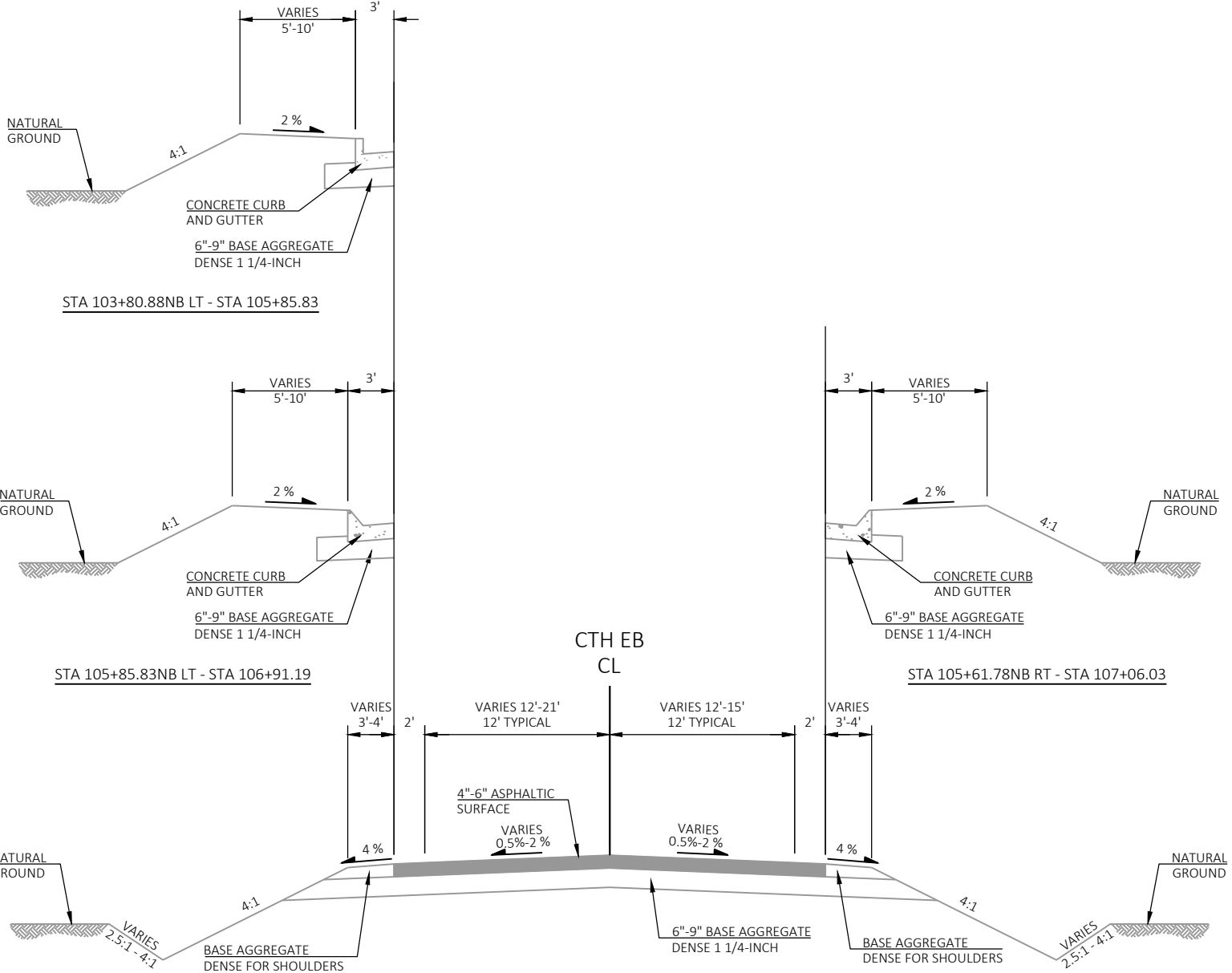
- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- PLAN GRADES
- PLAN OFFSETS
- CURB RAMP DETAILS
- EROSION CONTROL
- STORM SEWER PLAN
- PERMANENT SIGNING
- LIGHTING PLAN
- PAVEMENT MARKING
- DETOURS
- ALIGNMENT
- SUPERELEVATION

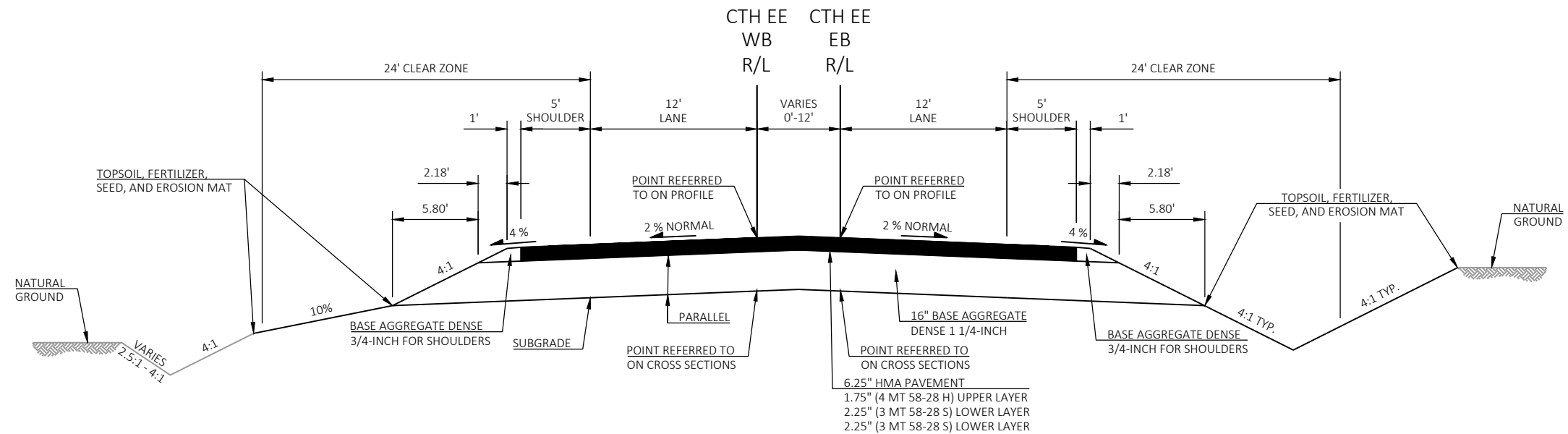


EXISTING TYPICAL SECTION FOR CTH EE
STA 15+00.00EB - STA 26+65.00EB

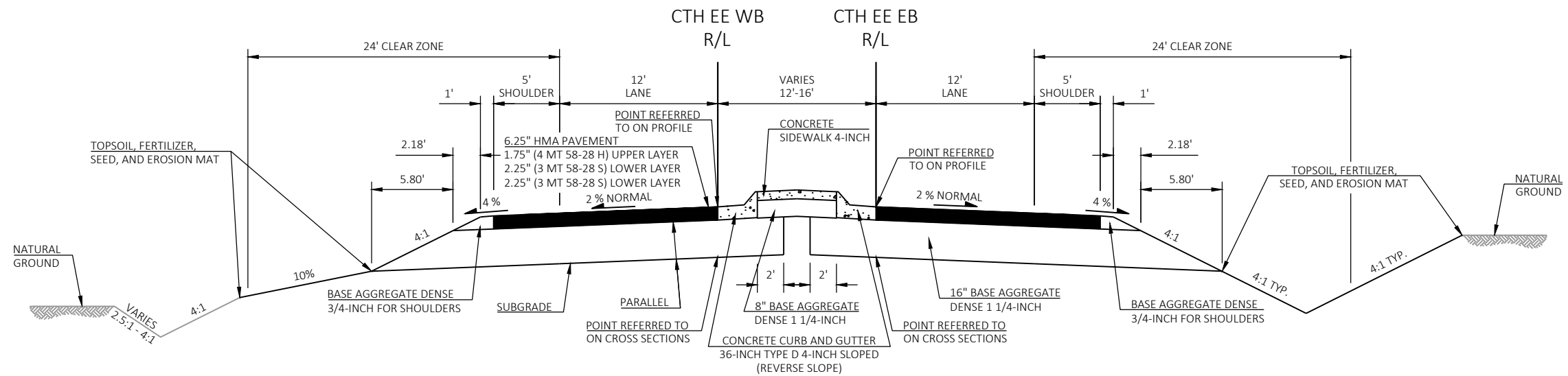
2

2



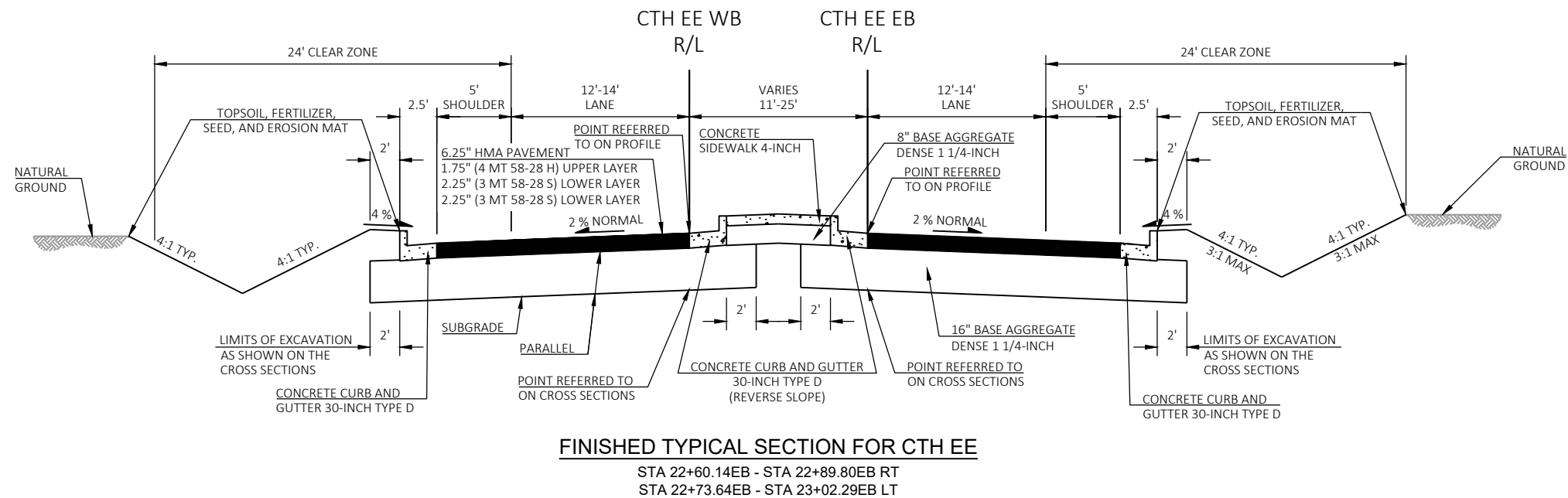
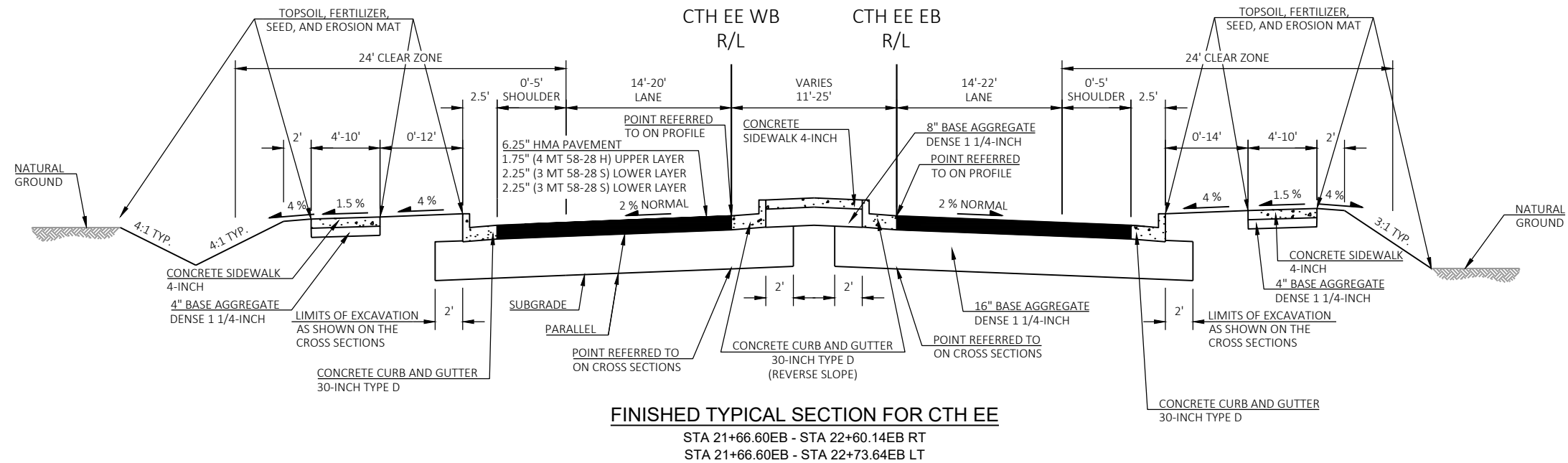


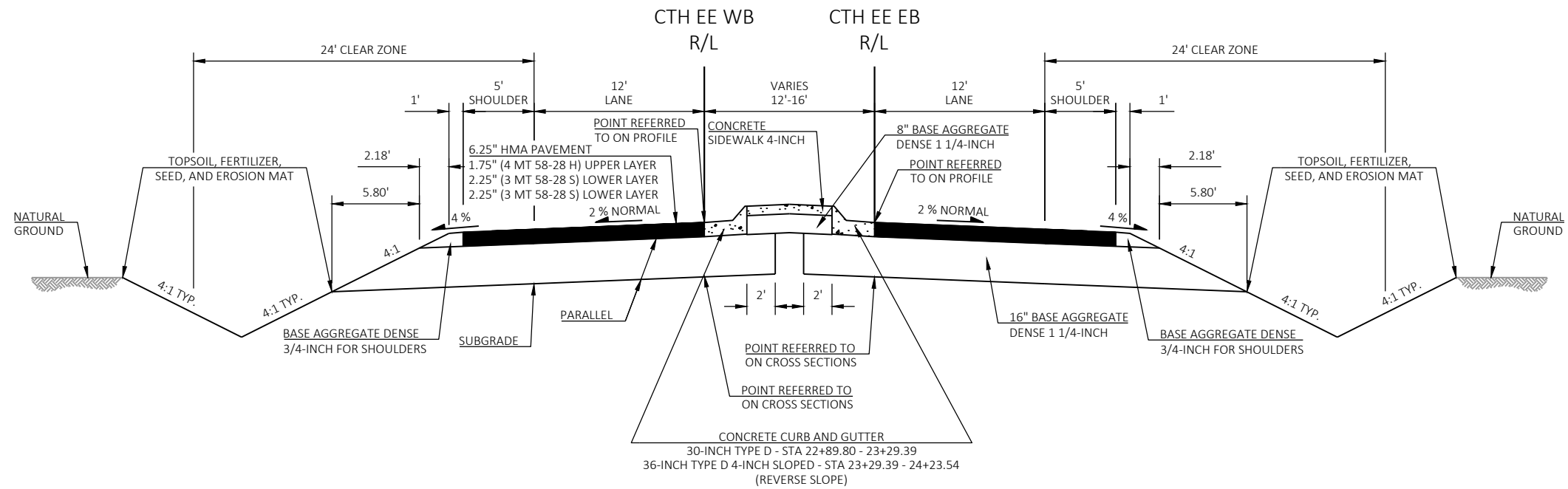
FINISHED TYPICAL SECTION FOR CTH EE
STA 15+00.00EB - STA 17+22.22EB



FINISHED TYPICAL SECTION FOR CTH EE
STA 17+22.22EB - STA 18+00.00EB

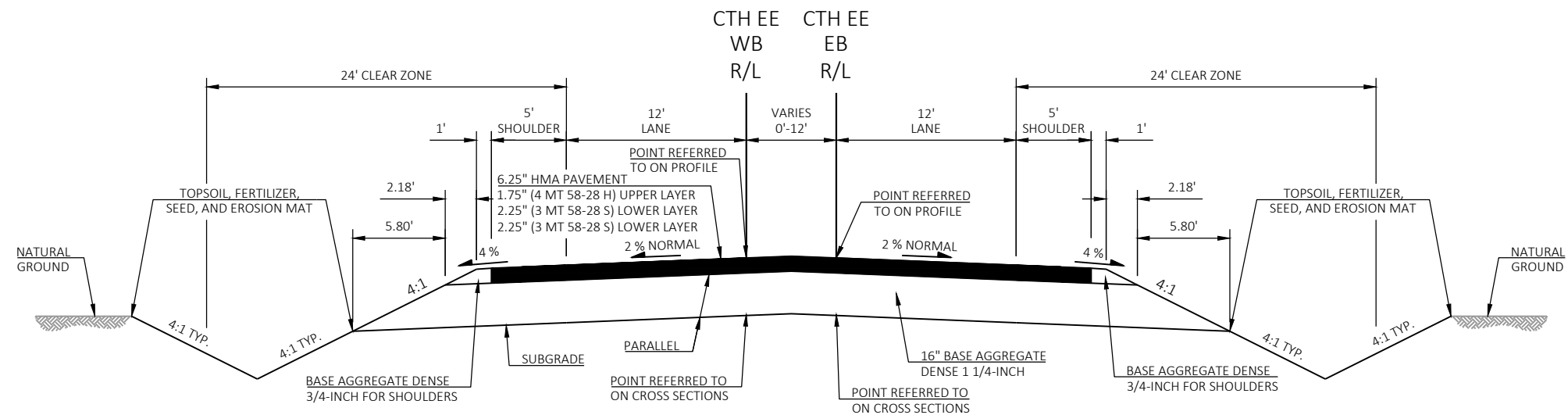






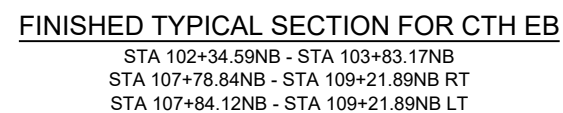
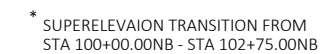
FINISHED TYPICAL SECTION FOR CTH EE

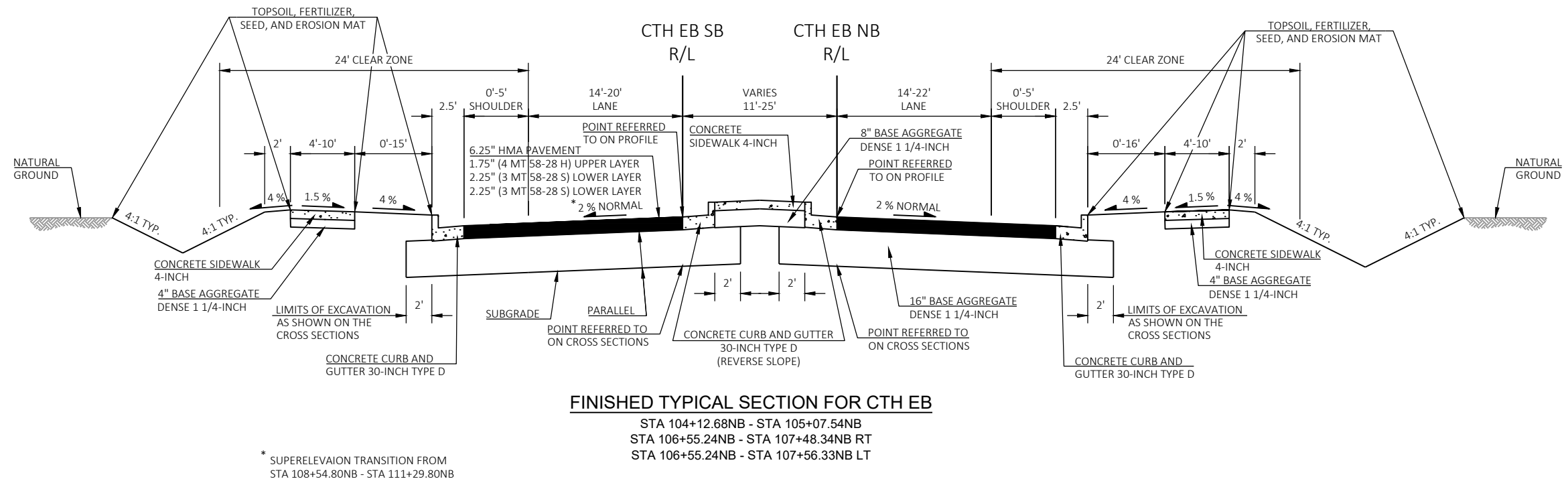
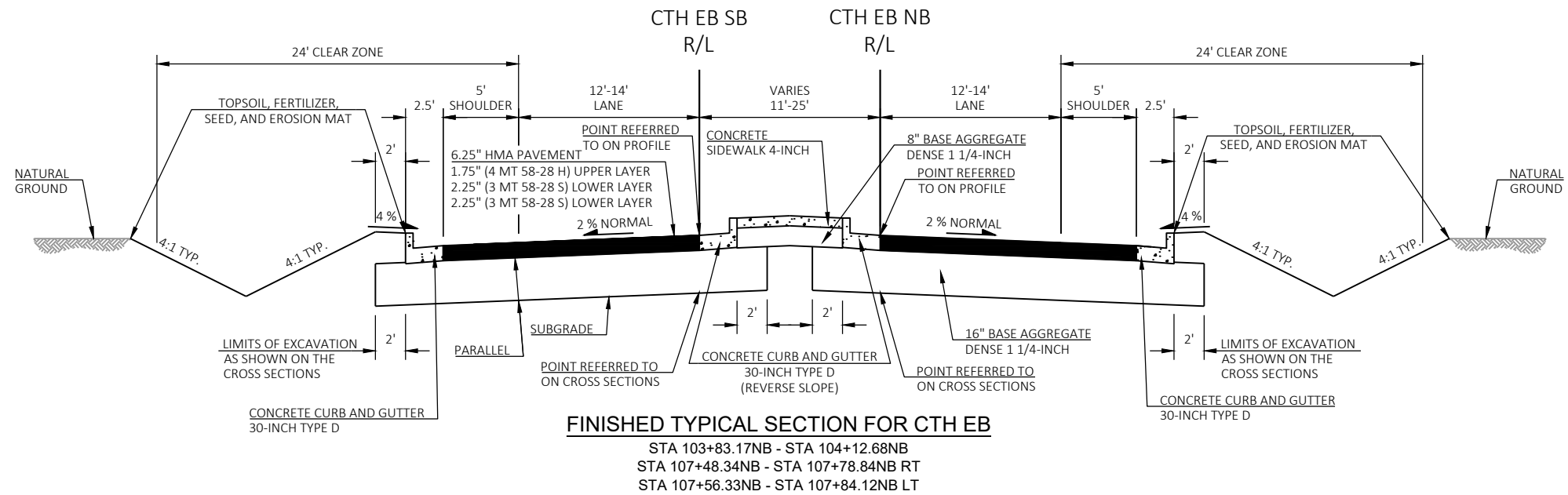
STA 22+89.80EB - STA 24+23.54EB RT
STA 23+02.29EB - STA 24+23.54EB LT

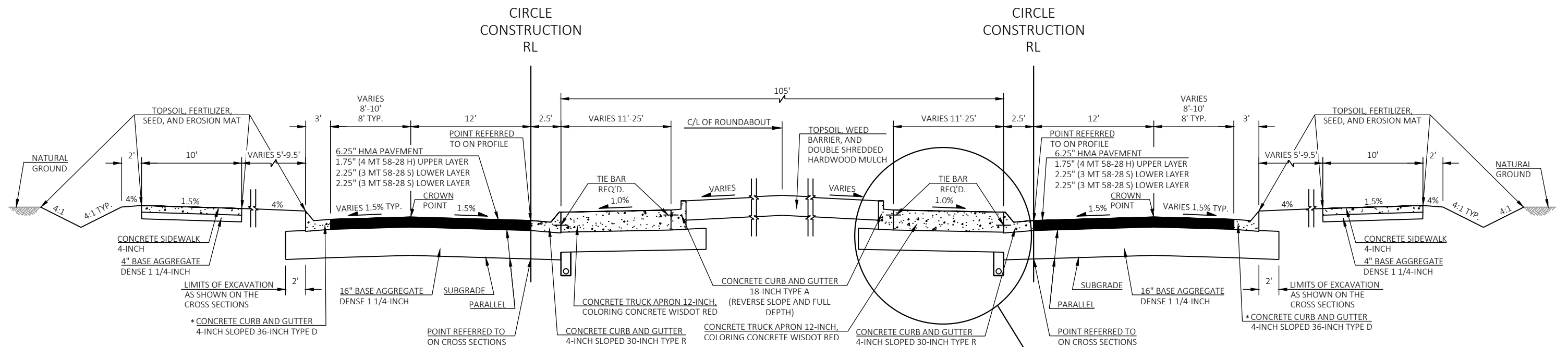


FINISHED TYPICAL SECTION FOR CTH EE

STA 24+23.54EB - STA 26+65.00EB

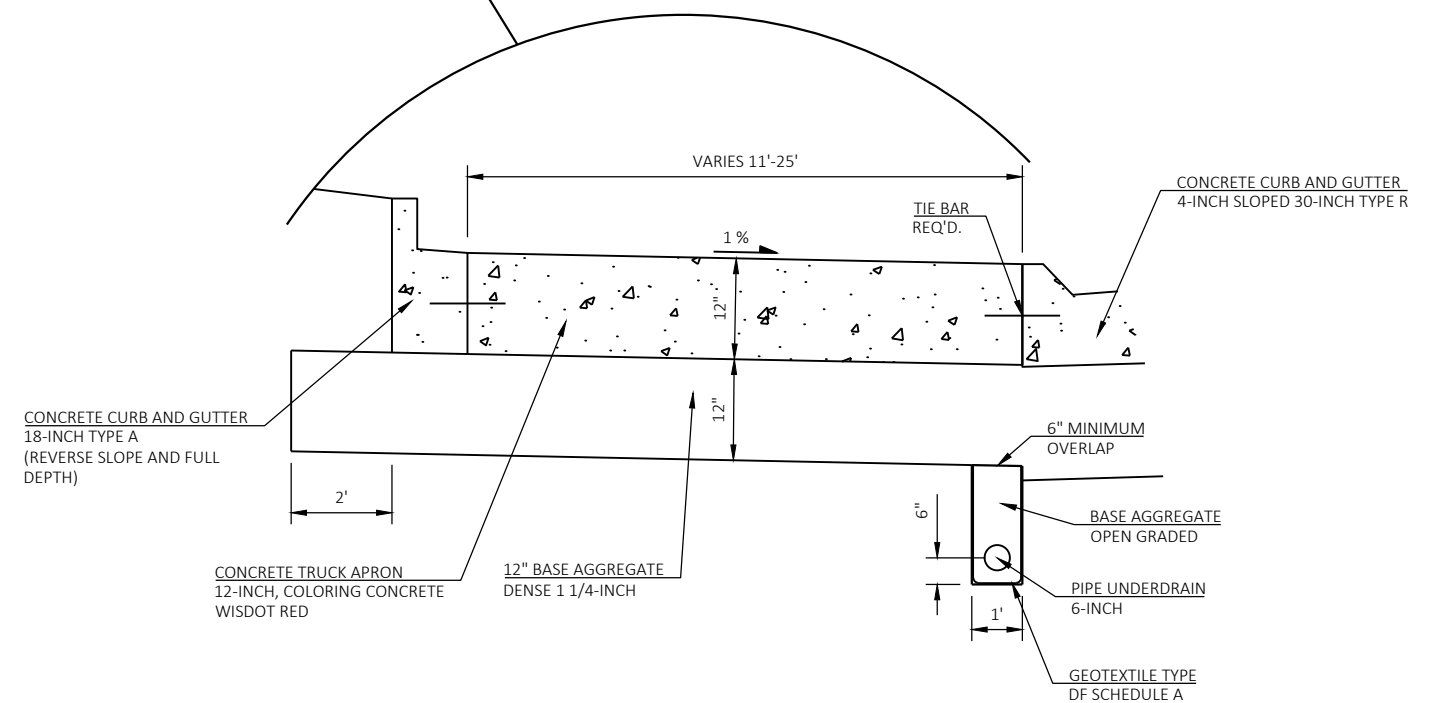




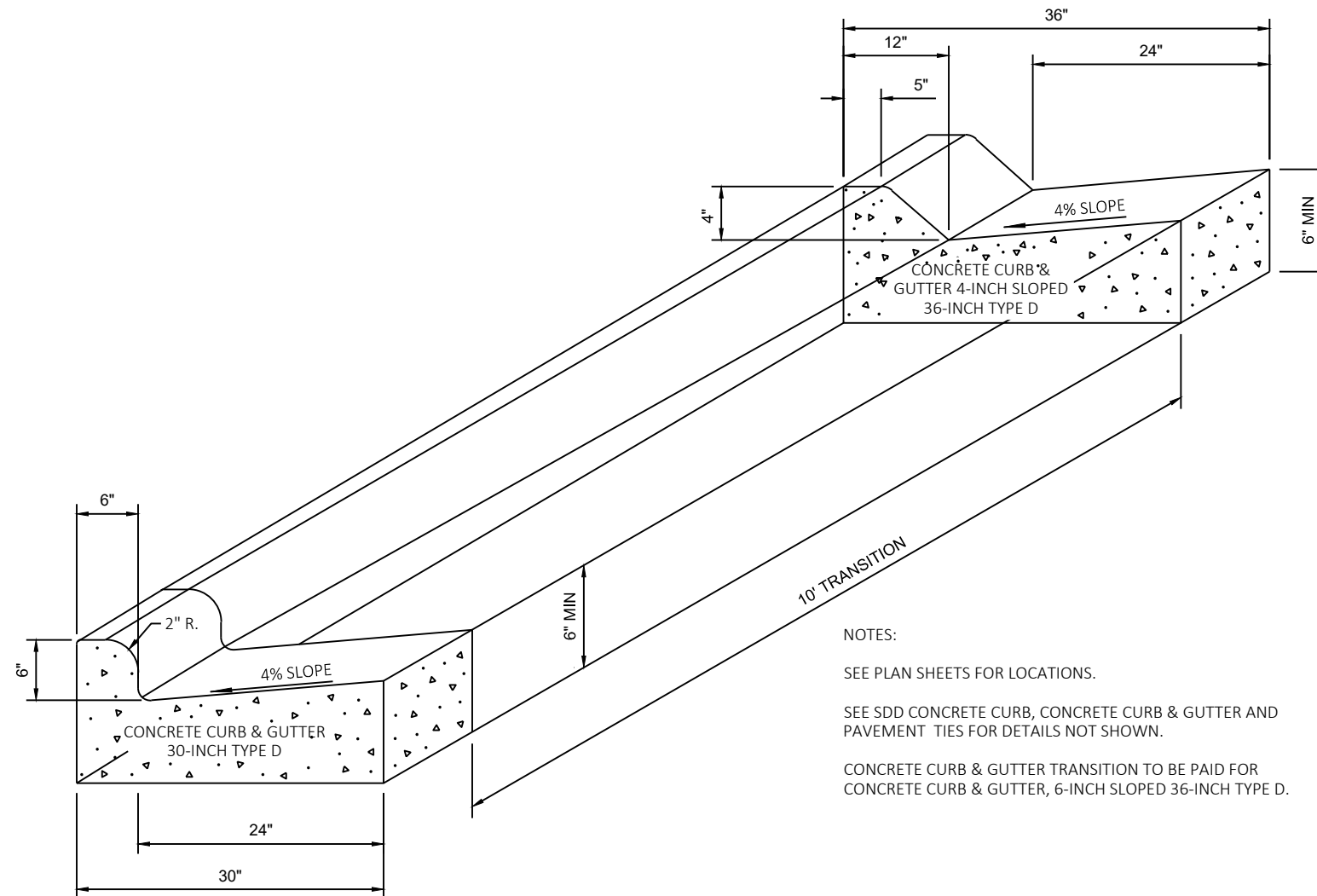


FINISHED TYPICAL SECTION FOR CTH EE/EB ROUNDABOUT

* CONCRETE CURB AND GUTTER
30-INCH TYPE D IN THE NORTHEAST
QUADRANT.



TRUCK APRON (TYPICAL)



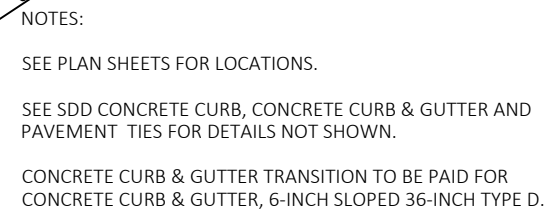
NOTES:

SEE PLAN SHEETS FOR LOCATIONS.

SEE SDD CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES FOR DETAILS NOT SHOWN.

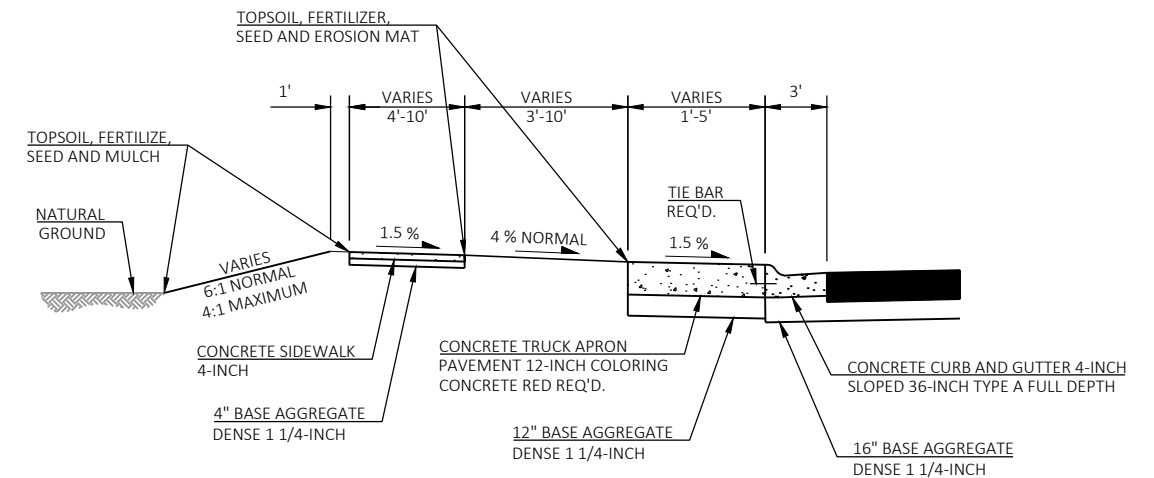
CONCRETE CURB & GUTTER TRANSITION TO BE PAID FOR CONCRETE CURB & GUTTER, 6-INCH SLOPED 36-INCH TYPE D.

CONCRETE CURB & GUTTER TRANSITION DETAIL
CONCRETE CURB AND GUTTER 30-INCH TYPE D
TRANSITION TO CONCRETE
CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D

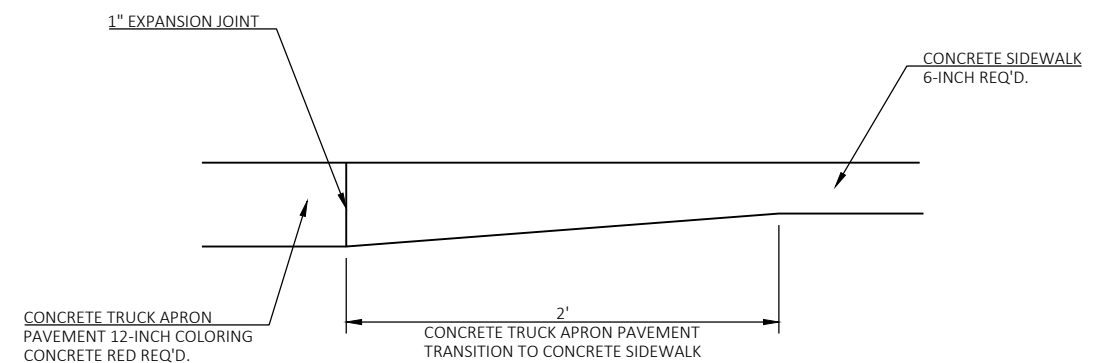


CONCRETE CURB & GUTTER TRANSITION DETAIL

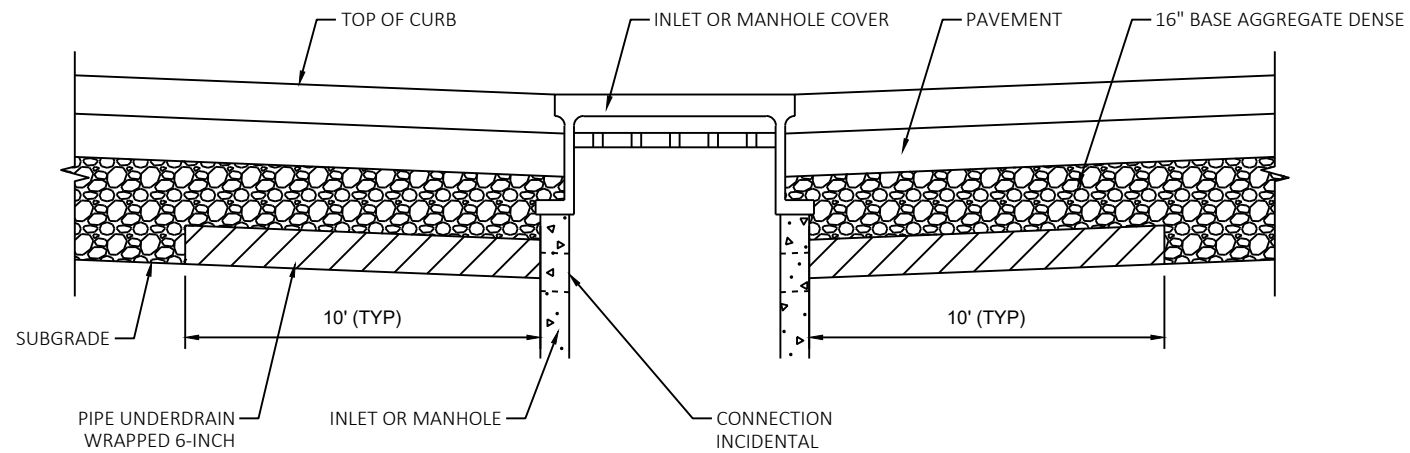
CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D
TRANSITION TO CONCRETE
CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D



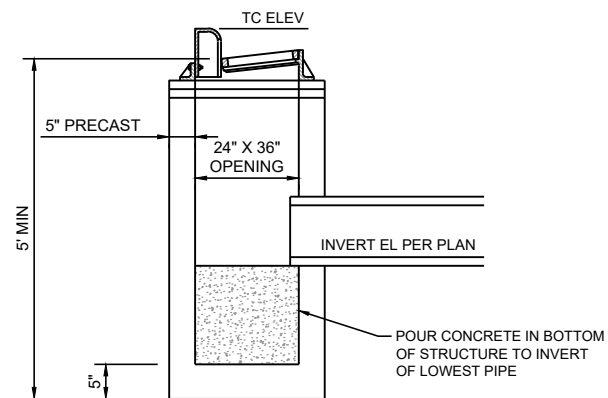
TYPICAL SECTION AT OUTSIDE TRUCK APRON



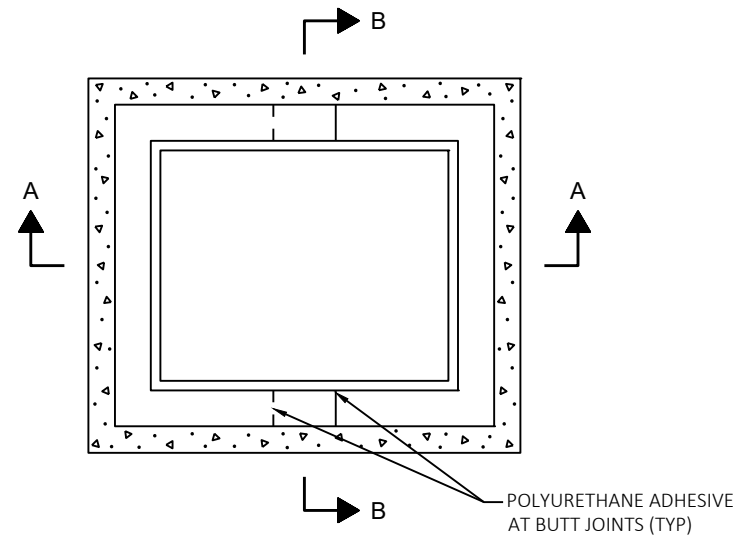
DETAIL FOR CONCRETE TRUCK APRON PAVEMENT
TRANSITION TO CONCRETE SIDEWALK



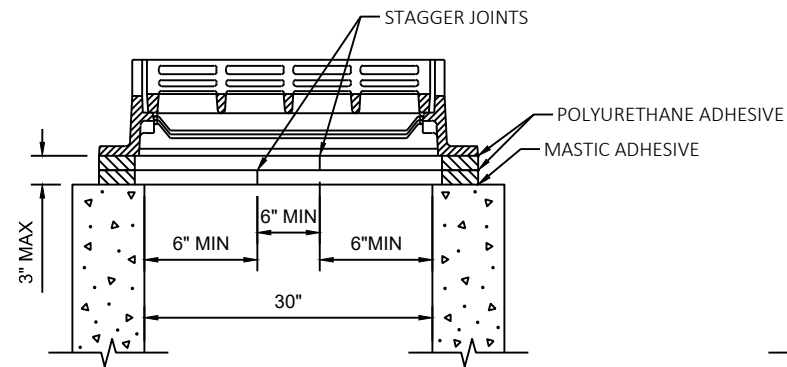
PIPE UNDERDRAIN DETAIL



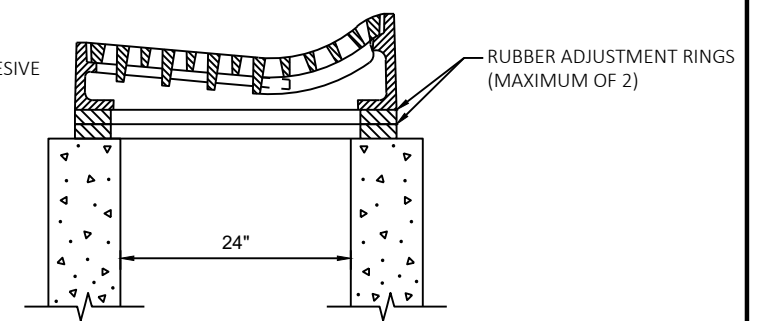
INLETS 2X3-FT SPECIAL



PLAN VIEW



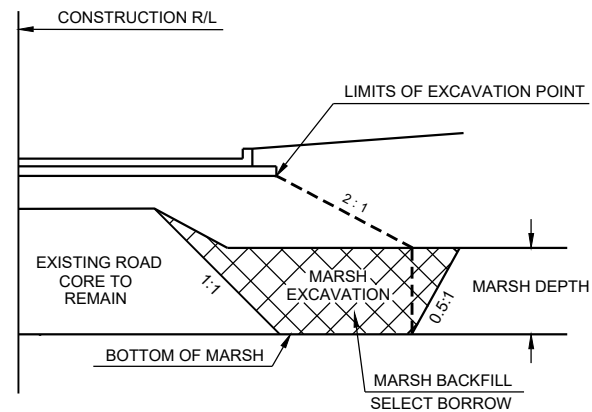
SECTION A-A



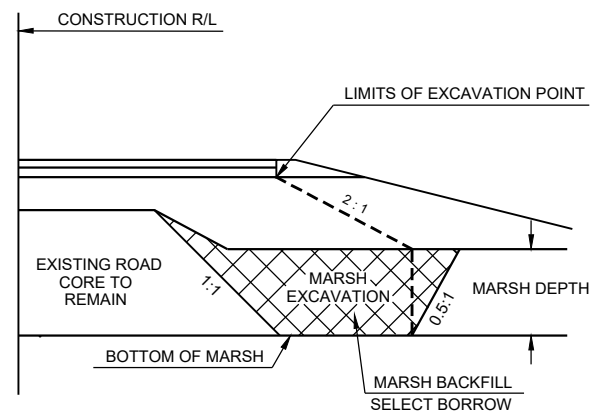
SECTION B-B

NOTE:
ALL CUTS MADE TO RUBBER ADJUSTMENT
RINGS WILL BE PERPENDICULAR AND PROVIDE
A TIGHT JOINT.

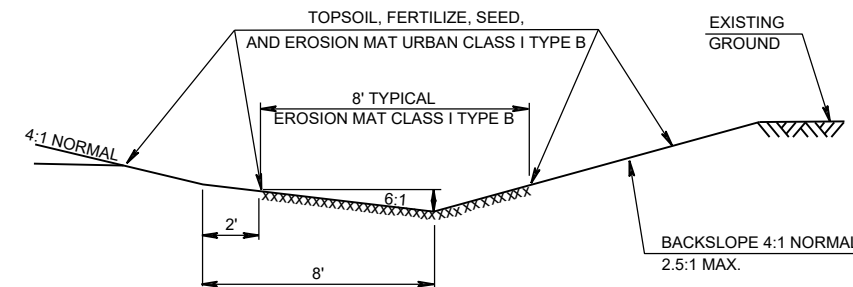
RUBBER RING CUTTING DETAIL FOR INLETS WITH TYPE "T" CASTINGS



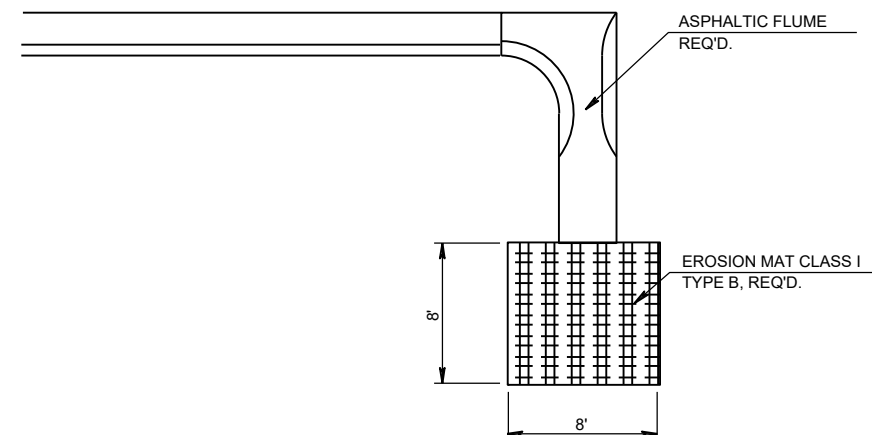
TYPICAL SECTION-MARSH EXCAVATION
URBAN



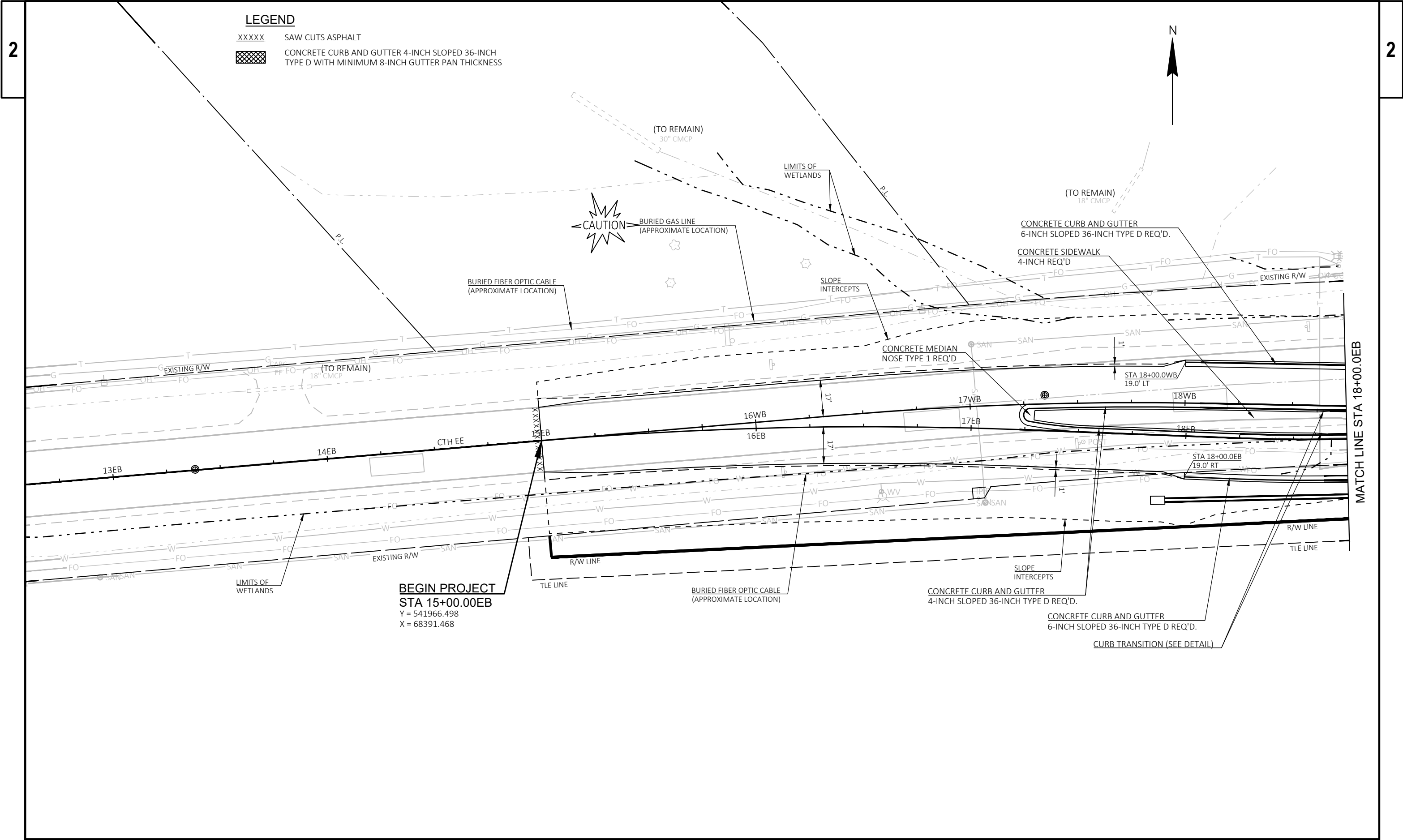
TYPICAL SECTION-MARSH EXCAVATION
RURAL



TYPICAL INSTALLATION FOR EROSION MAT
DITCH LINING
(SEE EROSION CONTROL PLAN FOR LOCATIONS)

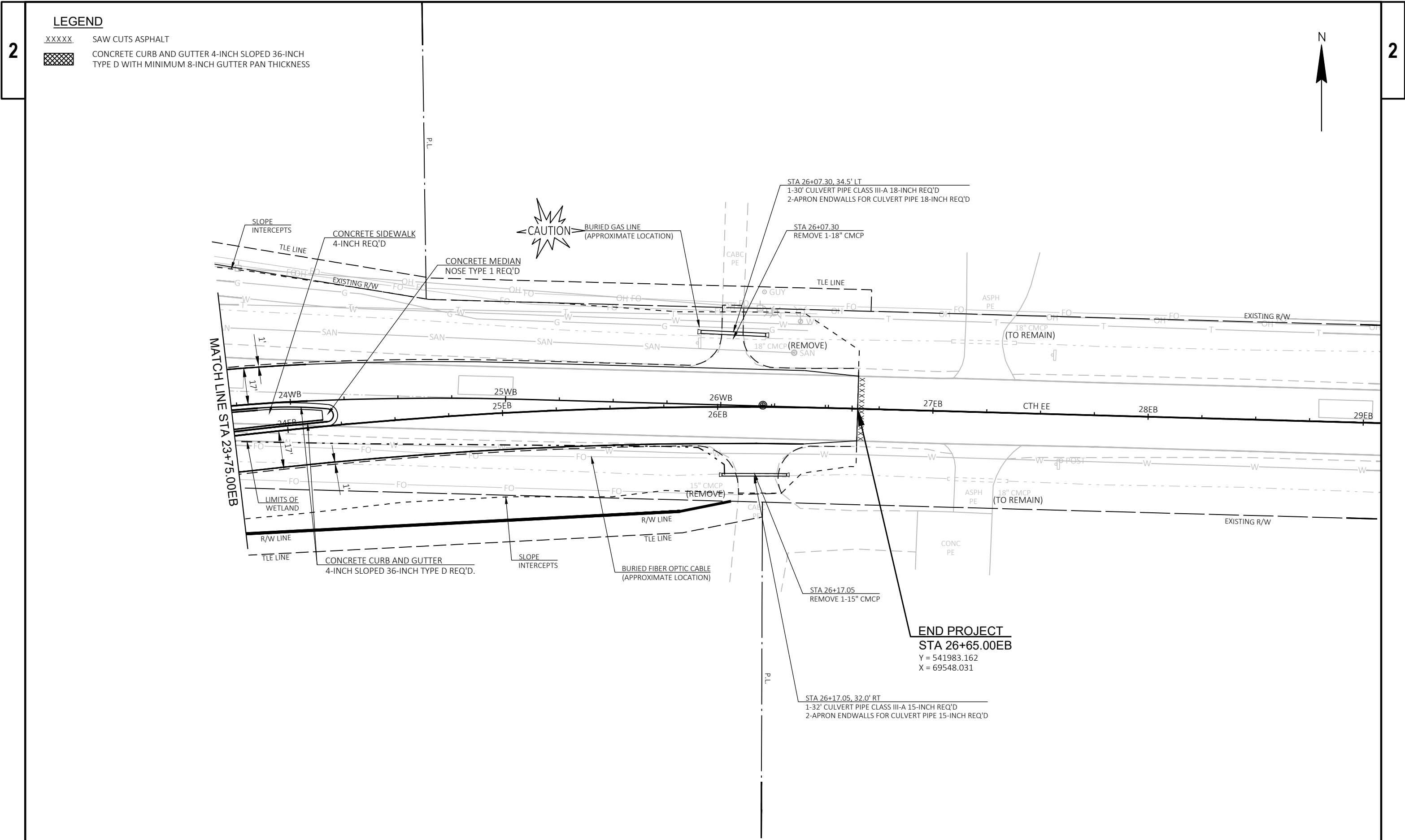


EROSION MAT AT ASPHALTIC FLUME
(SEE MISCELLANEOUS QUANTITIES FOR LOCATION)



XXXXX	SAW CUTS ASPHALT
	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D WITH MINIMUM 8-INCH GUTTER PAN THICKNESS





PROJECT NO: 9277-03-73

HWY: CTH EE

COUNTY: BROWN

PLAN DETAILS

SHEET 19

E

FILE NAME : I:\45\450769_BROWN CTH EB\C3D\SHEETS\021201-PD.DWG

LAYOUT NAME - 021203-pd

PLOT DATE : 1/28/2026 3:45 PM

PLOT BY : WILKE, CASSANDRA

PLOT NAME :

PLOT SCALE : 1 IN=40 FT

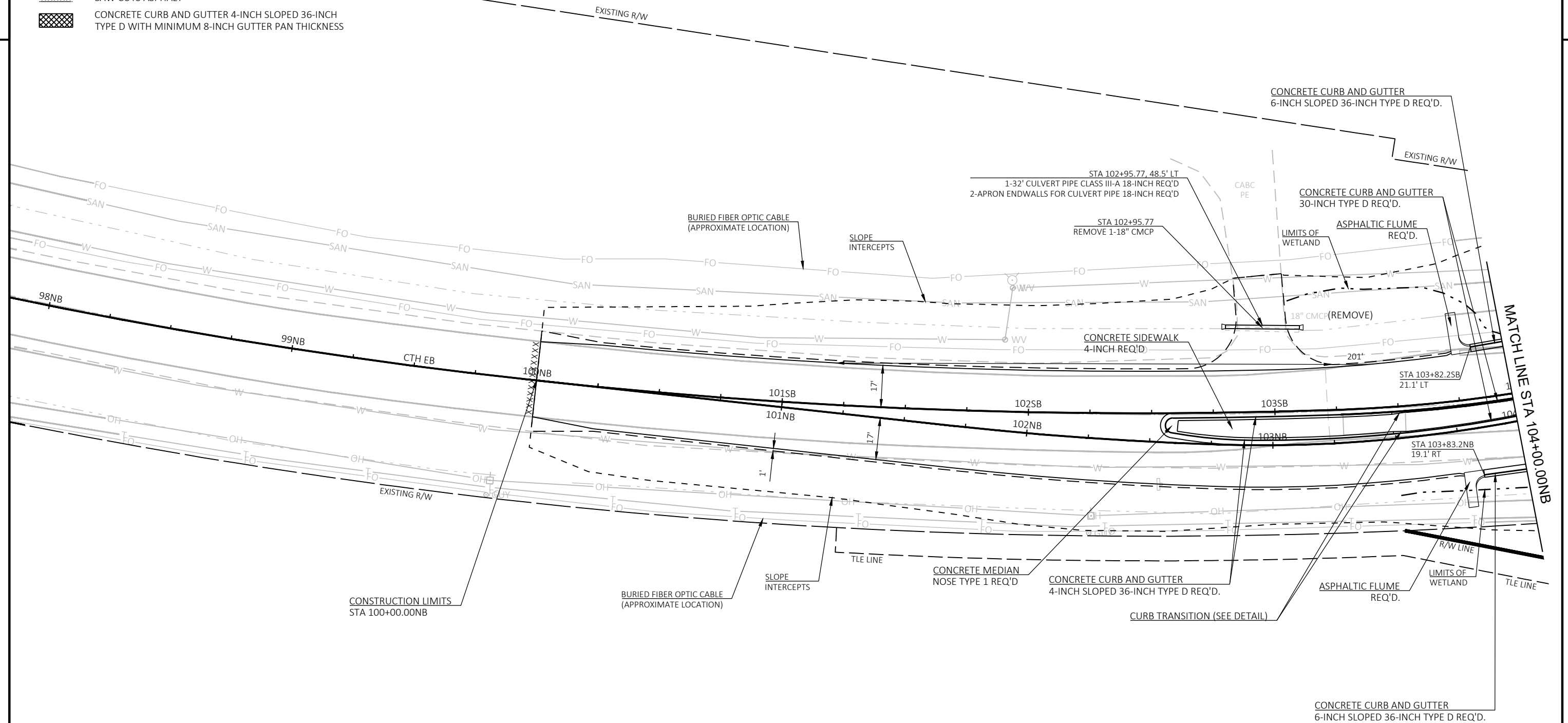
WISDOT/CADDs SHEET 42

2

LEGEND

XXXXX	SAW CUTS ASPHALT
	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D WITH MINIMUM 8-INCH GUTTER PAN THICKNESS

2 |



PROJECT NO:	9277-03-73
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HWY: CTH EE

COUNTY: BROWN

PLAN DETAILS

SHEET

20

1

FILE NAME : I:\45\450769_BROWN CTH EB\C3D\SHEETS\021201-PD.DWG
LAYOUT NAME - 021204-pd

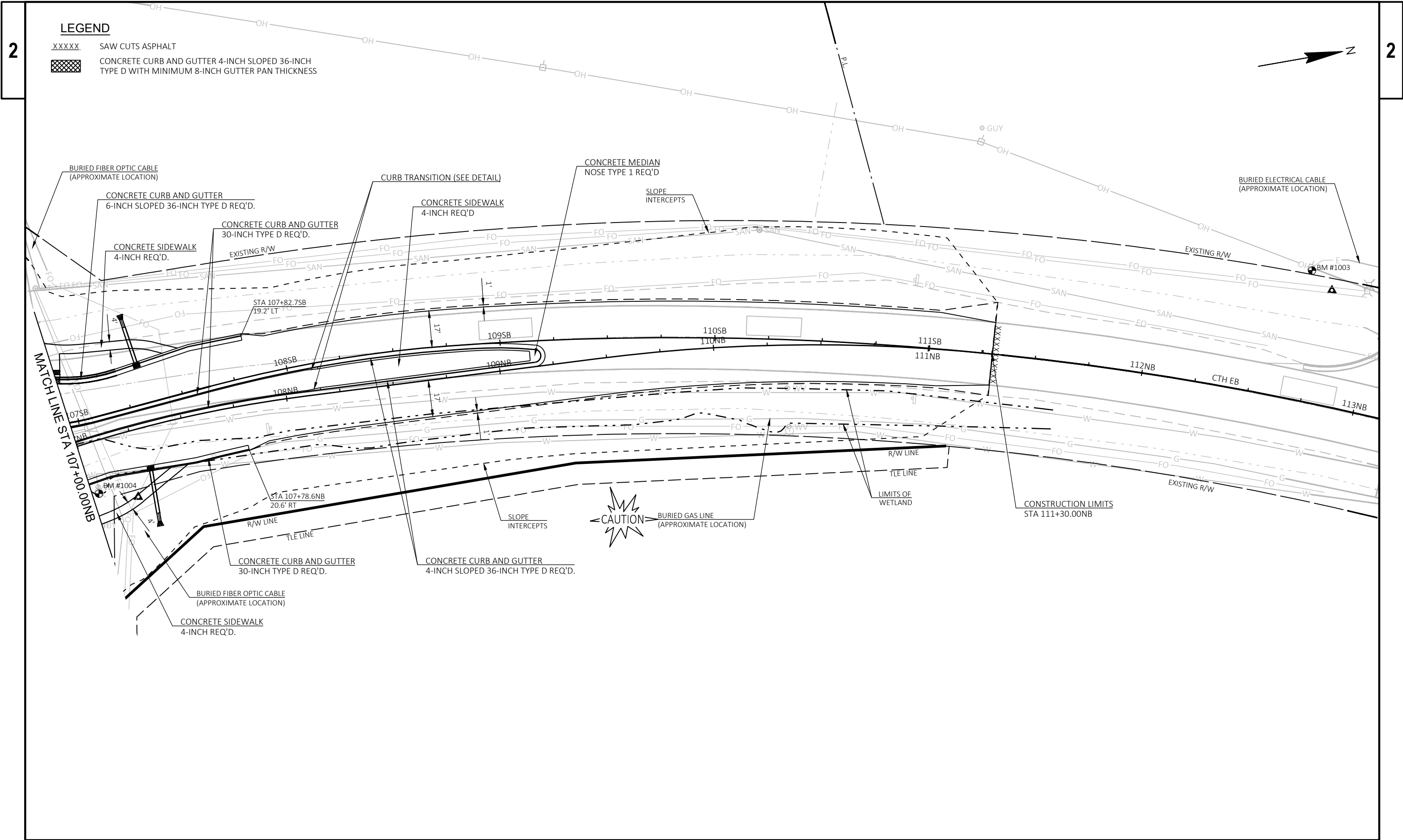
PLOT DATE : 1/28/2026 3:50 PM

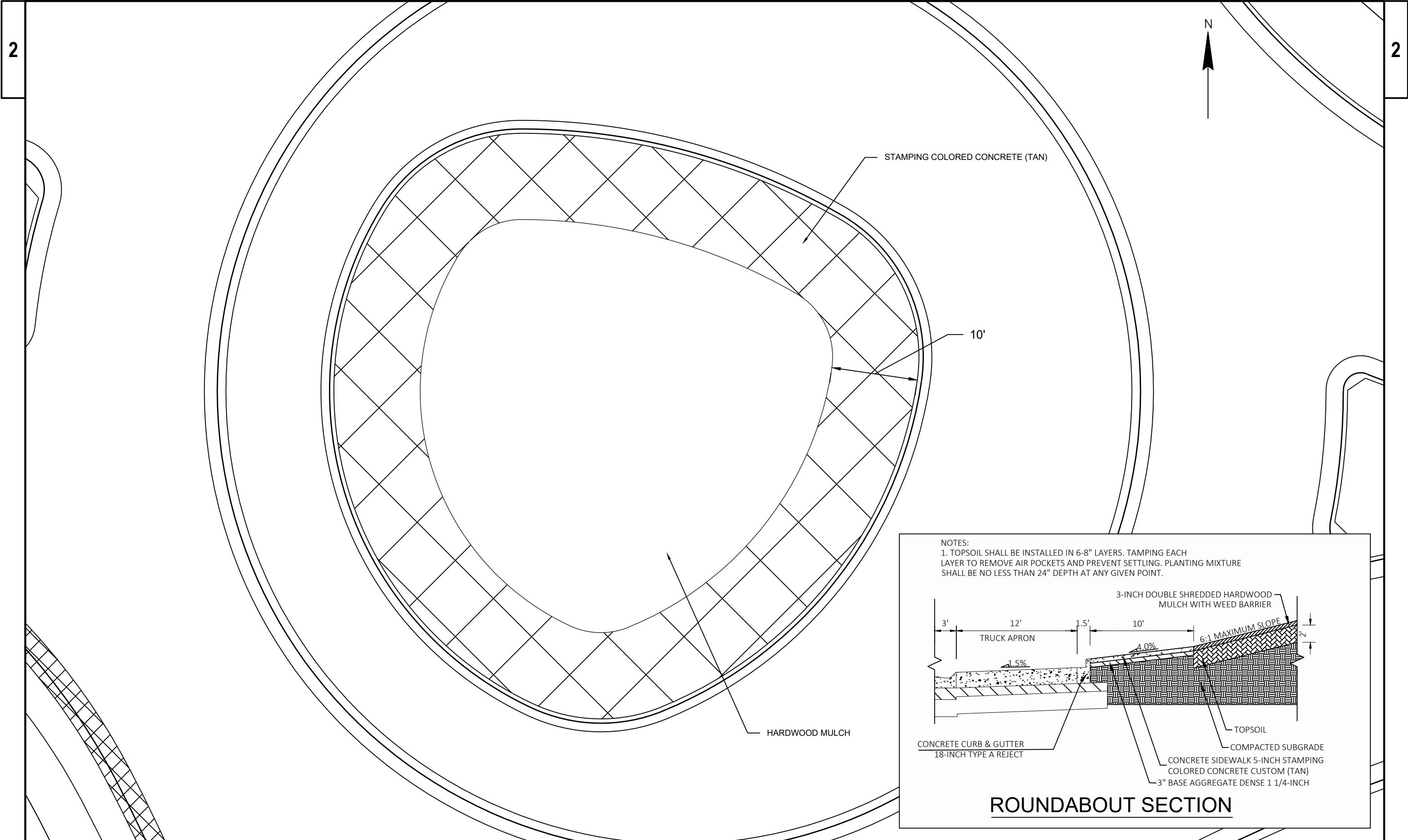
PLOT BY : WILKE, CASSANDRA

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42





NOTES:
1. TOPSOIL SHALL BE INSTALLED IN 6-8" LAYERS. TAMPING EACH LAYER TO REMOVE AIR POCKETS AND PREVENT SETTLING. PLANTING MIXTURE SHALL BE NO LESS THAN 24" DEPTH AT ANY GIVEN POINT.

3-
12'
1.5'
10'

TRUCK APRON

1.5%

4.0%

6:1 MAXIMUM SLOPE

3-INCH DOUBLE SHREDDED HARDWOOD MULCH WITH WEED BARRIER

TOPSOIL

COMPACTED SUBGRADE

CONCRETE SIDEWALK 5-INCH STAMPING COLORED CONCRETE CUSTOM (TAN)

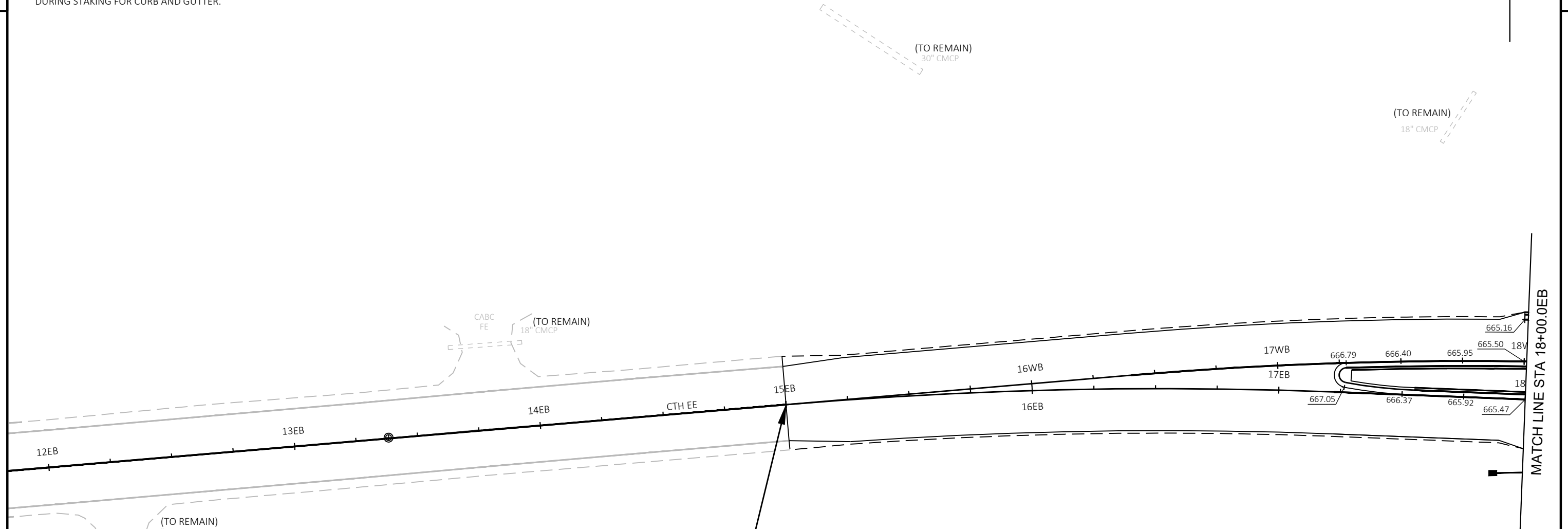
3" BASE AGGREGATE DENSE 1 1/4-INCH

CONCRETE CURB & GUTTER 18-INCH TYPE A REJECT

ROUNDABOUT SECTION

NOTES:
CURB AND GUTTER ELEVATIONS ARE ALONG
THE FLAG LINE UNLESS NOTED.

REVIEW CURB RAMP DETAILS FOR
ADDITIONAL GRADES NEAR CURB RAMPS
DURING STAKING FOR CURB AND GUTTER.



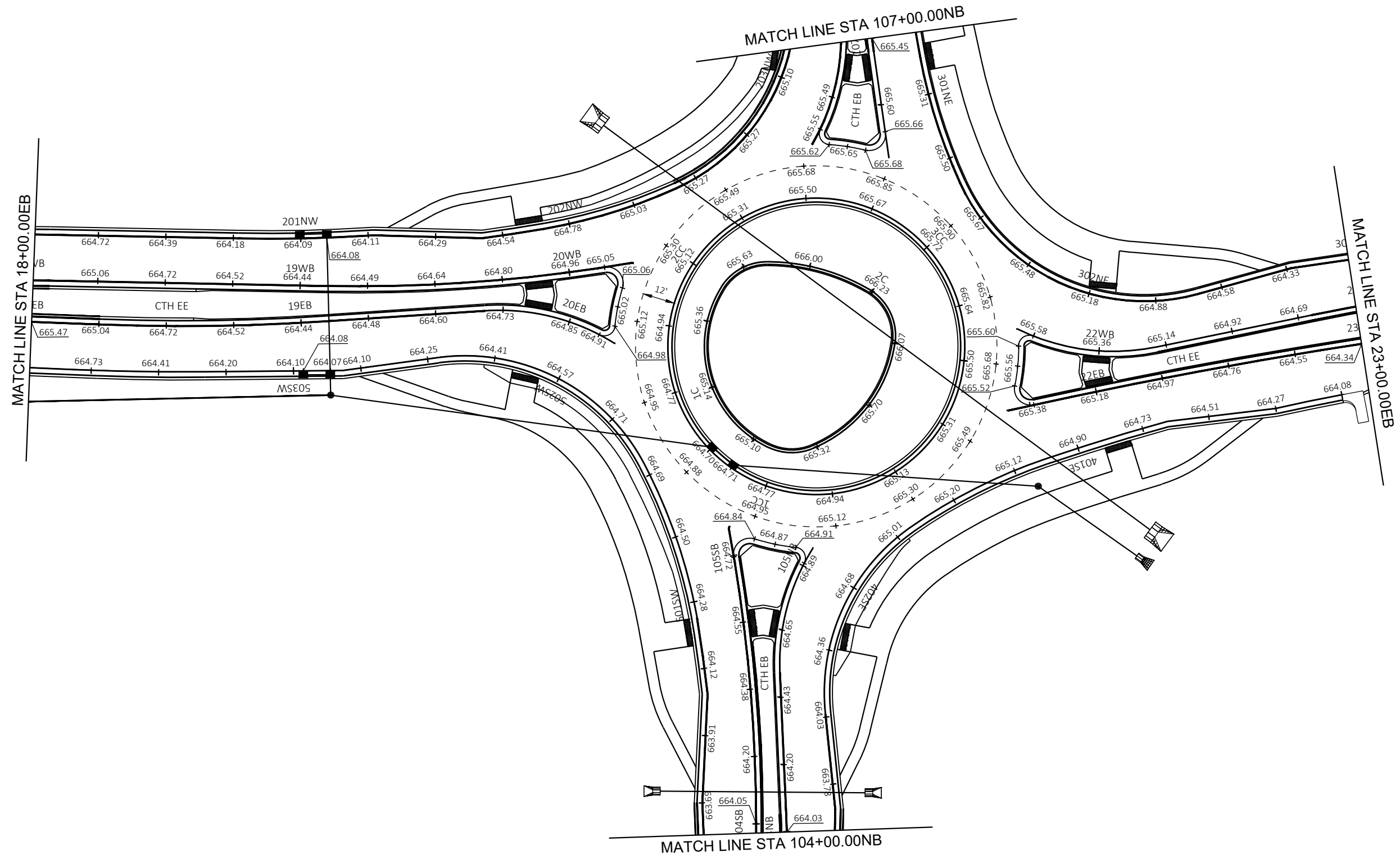
BEGIN PROJECT
STA 15+00.00EB
Y = 541966.498
X = 68391.468

2

NOTES:
CURB AND GUTTER ELEVATIONS ARE ALONG
THE FLAG LINE UNLESS NOTED.

REVIEW CURB RAMP DETAILS FOR
ADDITIONAL GRADES NEAR CURB RAMPS
DURING STAKING FOR CURB AND GUTTER.

2 |



PROJECT NO:	9277-03-73
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HWY: CTH EE

COUNTY: BROWN

PLAN GRADES

SHEET

24

11

FILE NAME : I:\45\450769_BROWN CTH EB\C3D\SHEETS\021206-GR.DWG
LAYOUT NAME - 021207-gr

PLOT DATE : 1/28/2026 3:51 PM

PLOT BY : WILKE, CASSANDRA

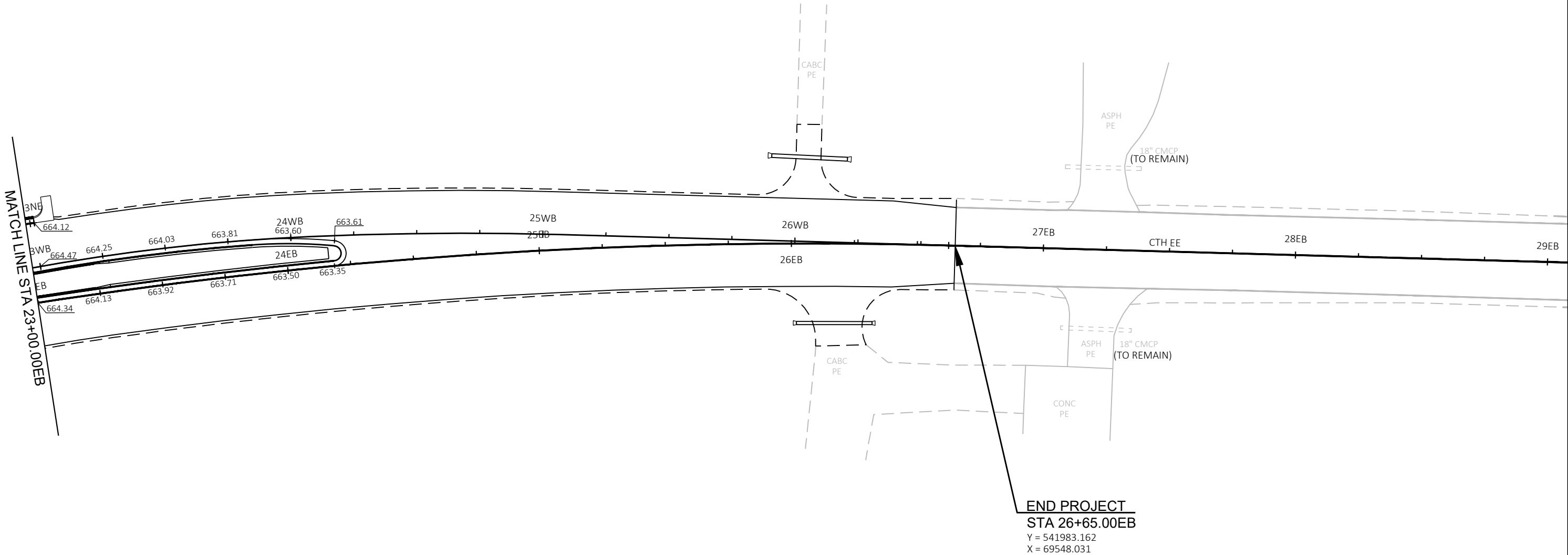
PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

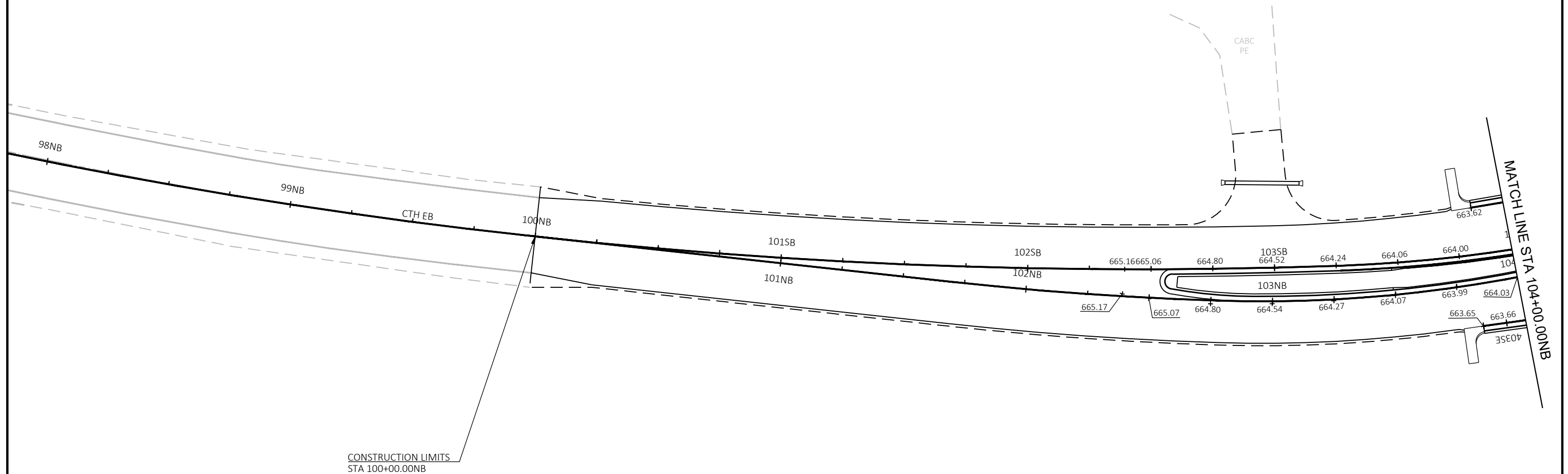
NOTES:
CURB AND GUTTER ELEVATIONS ARE ALONG
THE FLAG LINE UNLESS NOTED.

REVIEW CURB RAMP DETAILS FOR
ADDITIONAL GRADES NEAR CURB RAMPS
DURING STAKING FOR CURB AND GUTTER.



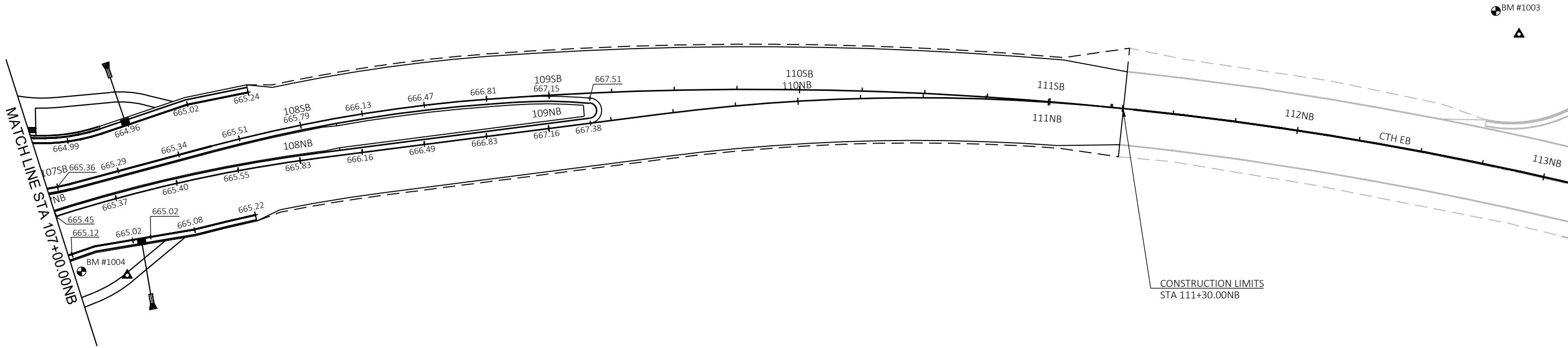
NOTES:
CURB AND GUTTER ELEVATIONS ARE ALONG
THE FLAG LINE UNLESS NOTED.

REVIEW CURB RAMP DETAILS FOR
ADDITIONAL GRADES NEAR CURB RAMPS
DURING STAKING FOR CURB AND GUTTER.



NOTES:
CURB AND GUTTER ELEVATIONS ARE ALONG
THE FLAG LINE UNLESS NOTED.

REVIEW CURB RAMP DETAILS FOR
ADDITIONAL GRADES NEAR CURB RAMP
DURING STAKING FOR CURB AND GUTTER.

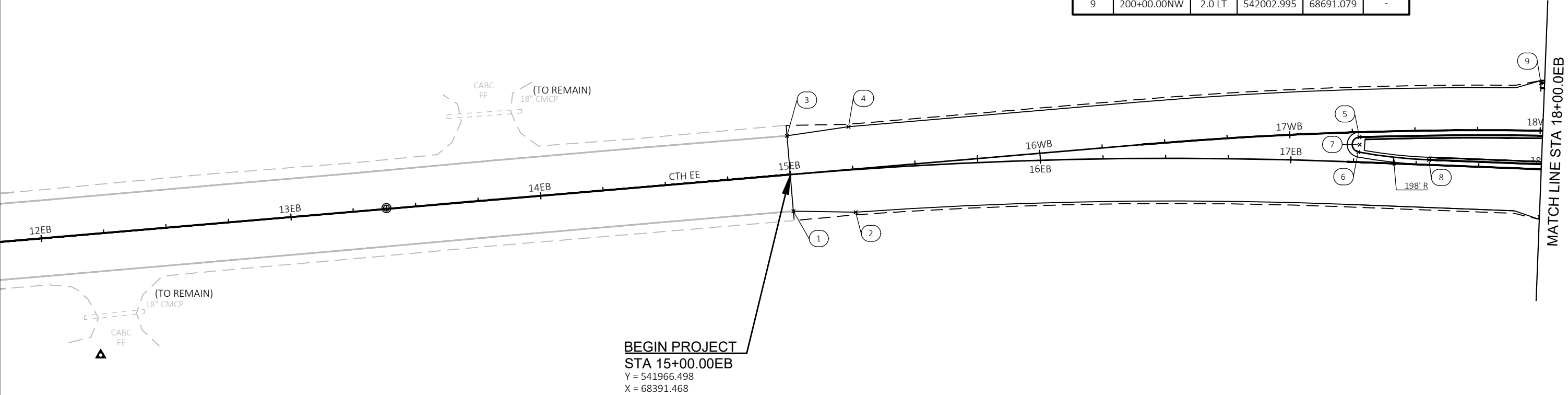


ALL CURB AND GUTTER POINTS ARE TO THE
FACE CURB UNLESS OTHER WISE NOTED AS
BOC - BACK OF CURB
ALL RADIUS DISTANCES ARE TO FACE OF CURB

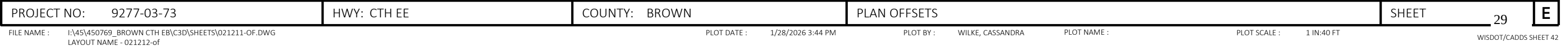


CTH EE STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
3	15+00.00WB	15.5 LT	541981.959	68390.153	-
4	15+24.75WB	17.0 LT	541985.534	68414.687	-
5	17+27.79WB	2.0 RT	541981.435	68618.655	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
9	200+00.00NW	2.0 LT	542002.995	68691.079	-



CTH EE STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
1	15+00.00EB	14.6 RT	541951.909	68392.709	-
2	15+25.00EB	17.0 RT	541951.487	68417.598	-
6	17+26.78EB	4.0 LT	541975.486	68618.203	-
7	17+27.21EB	7.0 LT	541978.437	68618.746	3'
8	17+55.07EB	2.0 LT	541972.360	68646.388	-



CTH EE STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
10	18+60.16EB	3.0 LT	541970.044	68751.331	-
11	18+66.16EB	2.5 LT	541969.595	68757.307	-
14	20+12.08EB	2.0 LT	541965.613	68902.550	-
15	20+13.83EB	4.8 LT	541967.188	68905.464	-
16	20+12.08EB	4.0 LT	541967.387	68903.474	2'
20	21+72.79EB	7.6 LT	541944.460	69057.594	-
21	21+76.44EB	2.0 LT	541939.770	69062.372	-
22	21+76.44EB	6.0 LT	541943.678	69061.517	4'

CTH EE STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
12	18+61.49WB	3.0 RT	541979.832	68752.224	-
13	18+67.49WB	2.5 RT	541980.217	68758.232	-
17	20+13.20WB	2.0 RT	541986.868	68903.922	-
18	20+16.76WB	7.7 RT	541981.760	68908.363	-
19	20+13.20WB	6.0 RT	541982.915	68904.533	4'
23	21+73.17WB	4.8 RT	541959.624	69059.082	-
24	21+74.93WB	2.0 RT	541961.484	69061.822	-
25	21+74.93WB	4.0 RT	541959.626	69061.082	2'

CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
26	105+01.04NB	2.0 LT	541879.999	68975.877	-
27	105+02.79NB	4.8 LT	541882.915	68974.307	-
28	105+01.04NB	4.0 LT	541880.925	68974.105	2'
32	106+60.86NB	7.5 LT	542034.218	69000.774	-
33	106+64.57NB	2.0 LT	542038.663	69005.705	-
34	106+64.57NB	6.0 LT	542038.098	69001.745	4'

CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
29	104+99.41SB	2.0 RT	541881.694	68953.505	-
30	105+02.93SB	7.8 RT	541886.168	68958.666	-
31	104+99.41SB	6.0 RT	541882.357	68957.450	4'
35	106+60.59SB	4.8 RT	542036.361	68987.038	-
36	106+62.34SB	2.0 RT	542039.218	68985.361	-
37	106+62.34SB	4.0 RT	542038.357	68987.167	2'

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
54	201+32.12NW	3.0 LT	542003.543	68823.202	-
55	201+40.08NW	3.0 LT	542003.342	68831.159	-
56	201+46.49NW	11.4 LT	542011.527	68837.775	-
57	201+60.09NW	16.5 LT	542016.311	68851.506	-
58	201+68.58NW	26.9 LT	541972.939	68858.916	44'
59	201+90.51NW	18.0 LT	542020.869	68878.186	-
60	202+41.96NW	18.0 LT	542034.582	68922.844	-
164	201+80.31NW	3.1 LT	542004.531	68870.699	-
165	201+80.29NW	5.0 LT	542006.422	68870.389	-
166	201+90.37NW	5.0 LT	542008.034	68880.258	-
167	202+09.75NW	5.0 LT	542012.104	68898.709	-
168	202+54.90NW	7.9 LT	542031.057	68937.090	-
169	202+94.70NW	5.0 LT	542056.588	68962.558	-
170	203+01.24NW	5.0 LT	542062.216	68964.920	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
38	503+97.73SW	2.0 LT	541949.631	68690.528	-
39	502+75.91SW	3.0 LT	541948.383	68812.780	-
40	502+67.13SW	3.0 LT	541949.556	68821.475	-
41	502+45.88SW	18.3 LT	541937.178	68844.528	-
42	502+36.62SW	20.8 LT	541935.227	68851.523	-
43	502+28.68SW	32.6 RT	541988.099	68862.501	54'
44	502+20.71SW	22.0 LT	541932.906	68862.701	-
45	501+54.33SW	22.0 LT	541905.539	68898.910	-
46	501+54.33SW	75.0 LT	541881.013	68851.926	53'
47	500+94.69SW	22.0 LT	541855.539	68916.148	-
48	503+46.32SW	126.9 LT	541823.167	68741.116	178'
49	500+71.08SW	21.2 LT	541833.634	68920.066	-
50	500+52.32SW	15.9 LT	541818.211	68925.322	-
51	500+73.97SW	32.7 RT	541843.142	68973.222	54'
52	500+38.12SW	3.0 LT	541803.426	68937.526	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
53	500+30.16SW	3.0 LT	541795.475	68937.155	-
151	502+28.68SW	3.0 LT	541952.664	68859.003	-
152	502+28.68SW	4.0 LT	541951.669	68858.905	-
153	502+27.68SW	4.0 LT	541951.551	68859.842	-
154	502+21.83SW	4.6 LT	541950.106	68865.198	-
155	502+28.05SW	24.0 LT	541931.706	68857.359	20'
156	502+01.61SW	6.7 LT	541942.226	68882.201	-
157	501+53.73SW	6.6 LT	541912.139	68912.811	-
158	502+47.42SW	76.2 LT	541879.664	68850.800	70'
159	501+02.68SW	4.2 LT	541866.450	68932.111	-
160	500+99.28SW	4.1 LT	541863.205	68932.882	-
161	501+00.55SW	24.1 LT	541860.217	68913.107	20'
162	500+83.94SW	4.4 LT	541848.294	68935.135	-
163	500+83.95SW	3.0 LT	541848.501	68936.504	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
61	402+79.61SE	3.0 LT	541792.869	68991.629	-
62	402+72.09SE	3.0 LT	541800.350	68990.850	-
63	402+67.23SE	10.8 LT	541805.981	68998.077	-
64	402+56.67SE	15.9 LT	541817.017	69002.081	-
65	402+41.79SE	35.4 RT	541829.809	68949.618	54'
66	402+25.60SE	22.0 LT	541841.805	69008.157	-
67	401+68.78SE	22.0 LT	541874.513	69029.762	-
68	401+68.78SE	75.0 LT	541831.018	69060.048	'
69	401+12.75SE	22.0 LT	541896.942	69074.117	-
70	400+90.41SE	22.0 LT	541903.655	69094.779	-
71	400+73.85SE	21.9 LT	541908.383	69110.169	-
72	400+52.31SE	16.2 LT	541917.177	69127.205	-
73	400+74.82SE	32.1 RT	541960.002	69094.311	54'
74	400+37.91SE	3.0 LT	541931.995	69139.931	-
75	400+30.06SE	3.0 LT	541932.934	69147.719	-
76	400+00.00SE	2.0 LT	541939.590	69177.244	-
171	402+34.21SE	3.0 LT	541837.499	68988.340	-
172	402+34.21SE	4.0 LT	541837.409	68989.336	-
173	402+23.82SE	7.9 LT	541846.224	68994.723	-
174	402+12.79SE	6.8 LT	541856.046	68996.605	-
175	401+79.08SE	4.8 LT	541882.625	69012.395	-
176	401+72.63SE	4.0 LT	541887.087	69016.563	-
177	401+72.44SE	24.0 LT	541871.366	69028.925	20'
178	401+72.10SE	4.0 LT	541887.398	69016.958	-
179	401+72.12SE	3.0 LT	541888.215	69016.316	-

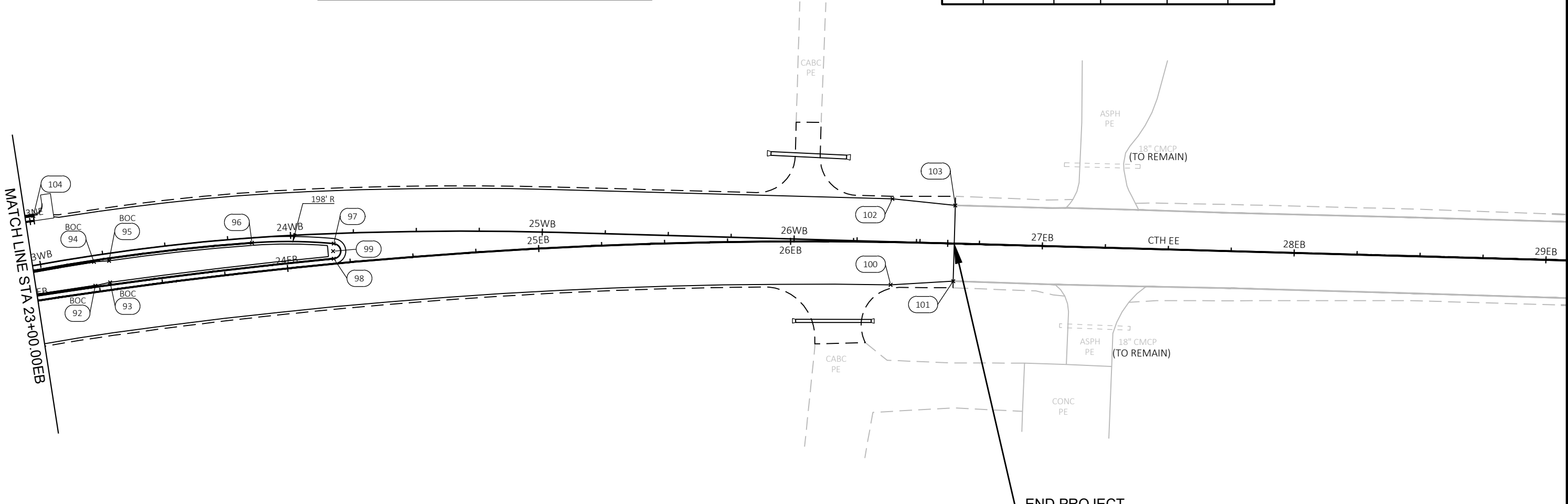
ROUNDBABOUT STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
86	0+00.00CC	55.0 RT	541959.521	68982.082	40.5', 74'
87	1+98.10CC	33.5 RT	541970.905	68963.843	19'
88	1+02.85CC	7.7 RT	541915.905	68963.796	74'
89	3+18.12CC	44.9 RT	541963.476	68991.401	19'
90	1+88.66CC	33.0 RT	541967.808	68961.716	49'
91	1+04.93CC	33.5 RT	541940.022	68973.025	19'

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
77	300+91.72NE	22.0 LT	542065.740	69043.266	-
78	301+35.15NE	22.0 LT	542029.144	69055.461	-
79	302+14.61NE	22.0 LT	541998.424	69099.335	-
80	301+35.15NE	75.0 LT	542051.249	69103.631	53'
81	302+50.89NE	14.8 LT	541995.873	69129.278	-
82	302+60.84NE	9.9 LT	541993.802	69140.172	-
83	302+34.99NE	36.2 RT	541942.067	69124.694	54'
84	302+65.08NE	2.5 LT	541987.813	69146.232	-
85	302+72.60NE	2.5 LT	541989.820	69153.482	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
104	303+01.58NE	2.0 LT	541994.079	69182.431	-

CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
94	23+21.15WB	2.5 RT	541975.864	69206.487	-
95	23+27.18WB	3.0 RT	541976.252	69212.498	-
96	23+84.55WB	2.0 RT	541983.409	69269.243	-
97	24+17.05WB	4.0 RT	541983.087	69301.695	-

ALL CURB AND GUTTER POINTS ARE TO THE
FACE CURB UNLESS OTHER WISE NOTED AS
BOC - BACK OF CURB
ALL RADIUS DISTANCES ARE TO FACE OF CURB



END PROJECT
STA 26+65.00EB
Y = 541983.162
X = 69548.031

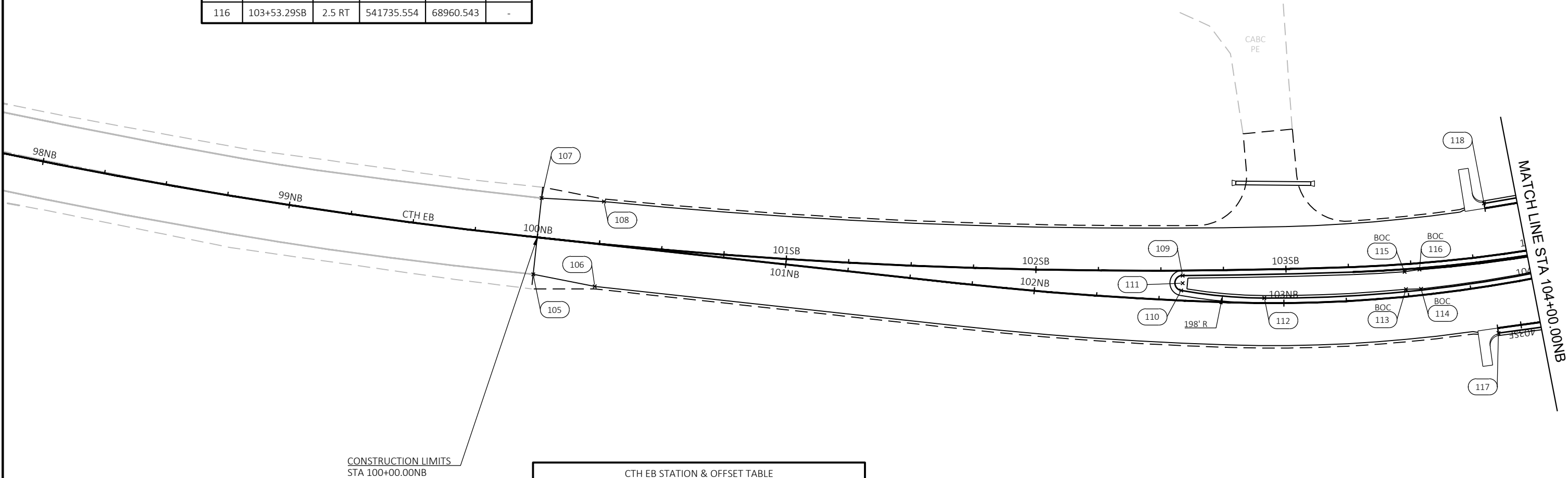
CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
92	23+23.40EB	2.5 LT	541966.389	69207.032	-
93	23+29.39EB	3.0 LT	541967.723	69212.902	-
98	24+18.57EB	2.0 LT	541977.113	69301.702	-
99	24+18.57EB	5.0 LT	541980.080	69301.419	3'
100	26+40.00EB	17.0 RT	541966.730	69522.758	-
101	26+65.00EB	15.0 RT	541968.190	69547.616	-
103	26+65.00EB	15.1 LT	541998.257	69548.449	-



CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
107	100+00.00SB	15.8 LT	541393.113	68877.396	-
108	100+25.19SB	17.0 LT	541417.583	68882.685	-
109	102+58.67SB	2.0 RT	541641.582	68948.165	-
115	103+47.32SB	3.0 RT	541729.536	68960.550	-
116	103+53.29SB	2.5 RT	541735.554	68960.543	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
118	500+00.00SW	2.0 LT	541765.182	68938.476	-

ALL CURB AND GUTTER POINTS ARE TO THE
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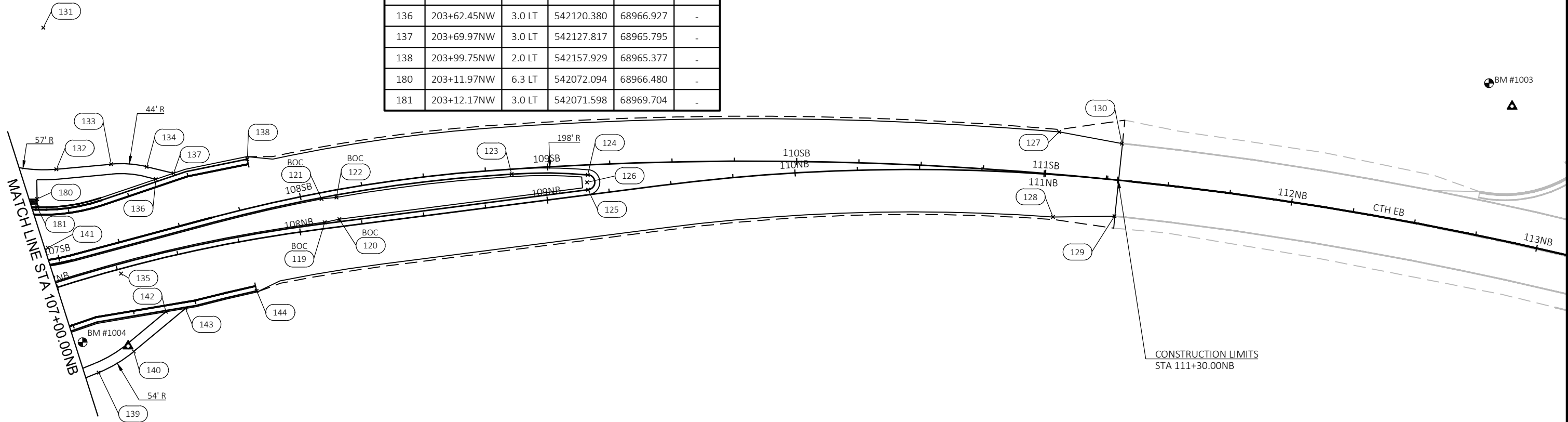
CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
105	100+00.00NB	14.9 RT	541385.059	68907.002	-
106	100+25.00NB	17.0 RT	541408.621	68915.627	-
110	102+58.67NB	4.0 LT	541640.045	68953.933	-
111	102+59.15NB	7.0 LT	541641.105	68951.126	3'
112	102+92.16NB	2.0 LT	541672.459	68962.150	-
113	103+49.22NB	3.0 LT	541728.991	68967.496	-
114	103+55.25NB	2.5 LT	541734.952	68968.322	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
117	403+09.39SE	2.0 LT	541762.770	68990.622	-

CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
131	202+41.96NW	75.0 LT	542086.473	68899.258	73'
132	203+21.57NW	18.0 LT	542081.763	68956.063	-
133	203+47.36NW	14.4 LT	542103.750	68957.886	-
134	203+60.57NW	8.9 LT	542117.640	68961.376	-
135	203+37.70NW	28.4 RT	542100.114	69001.735	44'
136	203+62.45NW	3.0 LT	542120.380	68966.927	-
137	203+69.97NW	3.0 LT	542127.817	68965.795	-
138	203+99.75NW	2.0 LT	542157.929	68965.377	-
180	203+11.97NW	6.3 LT	542072.094	68966.480	-
181	203+12.17NW	3.0 LT	542071.598	68969.704	-

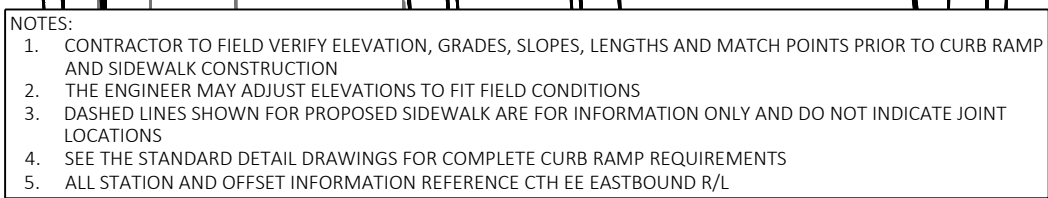
CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
121	108+08.19SB	2.5 RT	542184.498	68986.237	-
122	108+14.22SB	3.0 RT	542190.504	68986.693	-
123	108+85.47SB	2.0 RT	542261.379	68989.699	-
124	109+15.97SB	4.0 RT	542291.370	68995.300	-
127	111+04.03SB	17.0 LT	542480.638	69011.197	-

ALL CURB AND GUTTER POINTS ARE TO THE
FACE CURB UNLESS OTHER WISE NOTED AS
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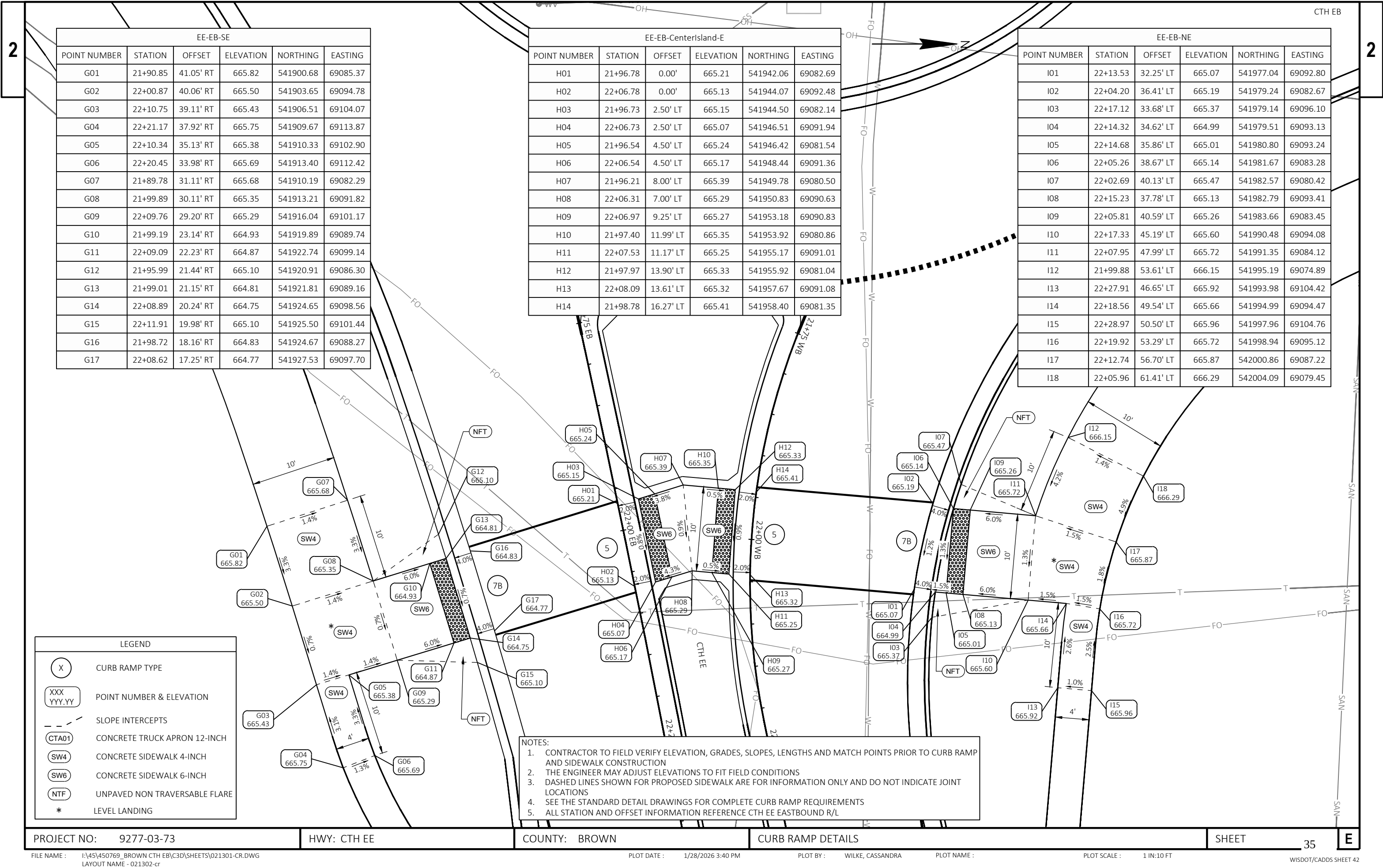


CURB & GUTTER STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
139	300+71.53NE	21.4 LT	542084.350	69039.240	-
140	300+52.58NE	16.0 LT	542099.705	69033.355	-
141	300+74.26NE	32.6 RT	542072.930	68986.461	54'
142	300+37.26NE	2.5 LT	542115.128	69019.944	-
143	300+29.30NE	2.5 LT	542123.088	69020.005	-
144	300+00.00NE	2.0 LT	542152.442	69018.001	-

CTH EB STATION & OFFSET TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	RADIUS
119	108+10.20NB	2.5 LT	542184.101	68995.699	-
120	108+16.20NB	3.0 LT	542190.118	68995.481	-
125	109+16.70NB	2.0 LT	542290.453	69001.194	-
126	109+16.70NB	5.0 LT	542290.594	68998.197	3'
128	111+04.80NB	17.0 RT	542472.296	69044.334	-
129	111+29.80NB	14.5 RT	542496.612	69048.290	-
130	111+29.80NB	14.7 LT	542504.629	69020.158	-



EE-EB-NW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
C01	19+78.45	28.79' LT	664.59	542001.48	68871.18
C02	19+85.49	31.43' LT	664.69	542003.10	68881.08
C03	19+75.88	31.15' LT	664.57	542004.00	68867.75
C04	19+77.99	31.73' LT	664.57	542004.45	68870.71
C05	19+84.84	34.29' LT	664.67	542006.06	68880.58
C06	19+86.81	35.26' LT	664.84	542006.59	68883.53
C07	19+77.69	33.68' LT	664.69	542006.42	68870.39
C08	19+84.43	36.20' LT	664.79	542008.03	68880.26
C09	19+77.26	36.63' LT	664.87	542009.40	68869.91
C10	19+83.84	39.07' LT	664.97	542011.00	68879.78
C11	19+90.04	42.61' LT	665.26	542012.93	68889.59
C12	19+69.98	40.79' LT	664.48	542013.55	68859.11
C13	19+76.47	42.43' LT	664.78	542015.24	68868.97
C14	19+69.66	44.77' LT	664.41	542017.49	68858.44
C15	19+75.96	46.35' LT	664.72	542019.18	68868.29
C16	19+82.03	48.68' LT	664.82	542020.86	68878.11
C17	19+87.53	51.78' LT	665.10	542022.69	68887.40



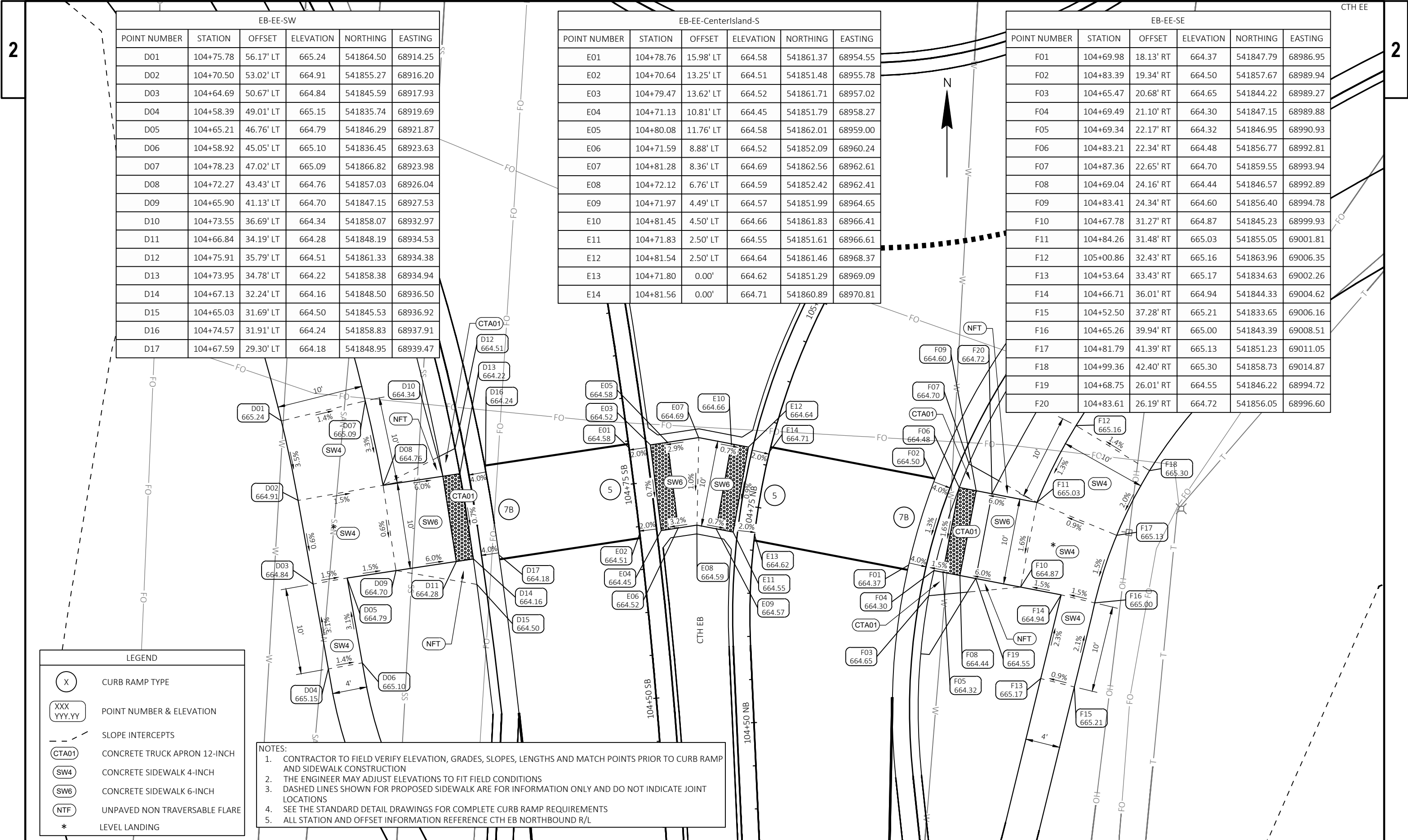
EE-EB-SE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
G01	21+90.85	41.05' RT	665.82	541900.68	69085.37
G02	22+00.87	40.06' RT	665.50	541903.65	69094.78
G03	22+10.75	39.11' RT	665.43	541906.51	69104.07
G04	22+21.17	37.92' RT	665.75	541909.67	69113.87
G05	22+10.34	35.13' RT	665.38	541910.33	69102.90
G06	22+20.45	33.98' RT	665.69	541913.40	69112.42
G07	21+89.78	31.11' RT	665.68	541910.19	69082.29
G08	21+99.89	30.11' RT	665.35	541913.21	69091.82
G09	22+09.76	29.20' RT	665.29	541916.04	69101.17
G10	21+99.19	23.14' RT	664.93	541919.89	69089.74
G11	22+09.09	22.23' RT	664.87	541922.74	69099.14
G12	21+95.99	21.44' RT	665.10	541920.91	69086.30
G13	21+99.01	21.15' RT	664.81	541921.81	69089.16
G14	22+08.89	20.24' RT	664.75	541924.65	69098.56
G15	22+11.91	19.98' RT	665.10	541925.50	69101.44
G16	21+98.72	18.16' RT	664.83	541924.67	69088.27
G17	22+08.62	17.25' RT	664.77	541927.53	69097.70

EE-EB-CenterIsland-E					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
H01	21+96.78	0.00'	665.21	541942.06	69082.69
H02	22+06.78	0.00'	665.13	541944.07	69092.48
H03	21+96.73	2.50' LT	665.15	541944.50	69082.14
H04	22+06.73	2.50' LT	665.07	541946.51	69091.94
H05	21+96.54	4.50' LT	665.24	541946.42	69081.54
H06	22+06.54	4.50' LT	665.17	541948.44	69091.36
H07	21+96.21	8.00' LT	665.39	541949.78	69080.50
H08	22+06.31	7.00' LT	665.29	541950.83	69090.63
H09	22+06.97	9.25' LT	665.27	541953.18	69090.83
H10	21+97.40	11.99' LT	665.35	541953.92	69080.86
H11	22+07.53	11.17' LT	665.25	541955.17	69091.01
H12	21+97.97	13.90' LT	665.33	541955.92	69081.04
H13	22+08.09	13.61' LT	665.32	541957.67	69091.08
H14	21+98.78	16.27' LT	665.41	541958.40	69081.35

EE-EB-NE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
I01	22+13.53	32.25' LT	665.07	541977.04	69092.80
I02	22+04.20	36.41' LT	665.19	541979.24	69082.67
I03	22+17.12	33.68' LT	665.37	541979.14	69096.10
I04	22+14.32	34.62' LT	664.99	541979.51	69093.13
I05	22+14.68	35.86' LT	665.01	541980.80	69093.24
I06	22+05.26	38.67' LT	665.14	541981.67	69083.28
I07	22+02.69	40.13' LT	665.47	541982.57	69080.42
I08	22+15.23	37.78' LT	665.13	541982.79	69093.41
I09	22+05.81	40.59' LT	665.26	541983.66	69083.45
I10	22+17.33	45.19' LT	665.60	541990.48	69094.08
I11	22+07.95	47.99' LT	665.72	541991.35	69084.12
I12	21+99.88	53.61' LT	666.15	541995.19	69074.89
I13	22+27.91	46.65' LT	665.92	541993.98	69104.42
I14	22+18.56	49.54' LT	665.66	541994.99	69094.47
I15	22+28.97	50.50' LT	665.96	541997.96	69104.76
I16	22+19.92	53.29' LT	665.72	541998.94	69095.12
I17	22+12.74	56.70' LT	665.87	542000.86	69087.22
I18	22+05.96	61.41' LT	666.29	542004.09	69079.45

LEGEND	
X	CURB RAMP TYPE
XXX YYY.YY	POINT NUMBER & ELEVATION
- - -	SLOPE INTERCEPTS
CTA01	CONCRETE TRUCK APRON 12-INCH
SW4	CONCRETE SIDEWALK 4-INCH
SW6	CONCRETE SIDEWALK 6-INCH
NFT	UNPAVED NON TRAVERSABLE FLARE
*	LEVEL LANDING

- NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION
 2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
 4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
 5. ALL STATION AND OFFSET INFORMATION REFERENCE CTH EE EASTBOUND R/L



EB-EE-SW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
D01	104+75.78	56.17' LT	665.24	541864.50	68914.25
D02	104+70.50	53.02' LT	664.91	541855.27	68916.20
D03	104+64.69	50.67' LT	664.84	541845.59	68917.93
D04	104+58.39	49.01' LT	665.15	541835.74	68919.69
D05	104+65.21	46.76' LT	664.79	541846.29	68921.87
D06	104+58.92	45.05' LT	665.10	541836.45	68923.63
D07	104+78.23	47.02' LT	665.09	541866.82	68923.98
D08	104+72.27	43.43' LT	664.76	541857.03	68926.04
D09	104+65.90	41.13' LT	664.70	541847.15	68927.53
D10	104+73.55	36.69' LT	664.34	541858.07	68932.97
D11	104+66.84	34.19' LT	664.28	541848.19	68934.53
D12	104+75.91	35.79' LT	664.51	541861.33	68934.38
D13	104+73.95	34.78' LT	664.22	541858.38	68934.94
D14	104+67.13	32.24' LT	664.16	541848.50	68936.50
D15	104+65.03	31.69' LT	664.50	541845.53	68936.92
D16	104+74.57	31.91' LT	664.24	541858.83	68937.91
D17	104+67.59	29.30' LT	664.18	541848.95	68939.47

EB-EE-CenterIsland-S					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
E01	104+78.76	15.98' LT	664.58	541861.37	68954.55
E02	104+70.64	13.25' LT	664.51	541851.48	68955.78
E03	104+79.47	13.62' LT	664.52	541861.71	68957.02
E04	104+71.13	10.81' LT	664.45	541851.79	68958.27
E05	104+80.08	11.76' LT	664.58	541862.01	68959.00
E06	104+71.59	8.88' LT	664.52	541852.09	68960.24
E07	104+81.28	8.36' LT	664.69	541862.56	68962.61
E08	104+72.12	6.76' LT	664.59	541852.42	68962.41
E09	104+71.97	4.49' LT	664.57	541851.99	68964.65
E10	104+81.45	4.50' LT	664.66	541861.83	68966.41
E11	104+71.83	2.50' LT	664.55	541851.61	68966.61
E12	104+81.54	2.50' LT	664.64	541861.46	68968.37
E13	104+71.80	0.00'	664.62	541851.29	68969.09
E14	104+81.56	0.00'	664.71	541860.89	68970.81

EB-EE-SE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
F01	104+69.98	18.13' RT	664.37	541847.79	68986.95
F02	104+83.39	19.34' RT	664.50	541857.67	68989.94
F03	104+65.47	20.68' RT	664.65	541844.22	68989.27
F04	104+69.49	21.10' RT	664.30	541847.15	68989.88
F05	104+69.34	22.17' RT	664.32	541846.95	68990.93
F06	104+83.21	22.34' RT	664.48	541856.77	68992.81
F07	104+87.36	22.65' RT	664.70	541859.55	68993.94
F08	104+69.04	24.16' RT	664.44	541846.57	68992.89
F09	104+83.41	24.34' RT	664.60	541856.40	68994.78
F10	104+67.78	31.27' RT	664.87	541845.23	68999.93
F11	104+84.26	31.48' RT	665.03	541855.05	69001.81
F12	105+00.86	32.43' RT	665.16	541863.96	69006.35
F13	104+53.64	33.43' RT	665.17	541834.63	69002.26
F14	104+66.71	36.01' RT	664.94	541844.33	69004.62
F15	104+52.50	37.28' RT	665.21	541833.65	69006.16
F16	104+65.26	39.94' RT	665.00	541843.39	69008.51
F17	104+81.79	41.39' RT	665.13	541851.23	69011.05
F18	104+99.36	42.40' RT	665.30	541858.73	69014.87
F19	104+68.75	26.01' RT	664.55	541846.22	68994.72
F20	104+83.61	26.19' RT	664.72	541856.05	68996.60

LEGEND

X

CURB RAMP TYPE

XXX
YYY.YY

POINT NUMBER & ELEVATION

- - -

SLOPE INTERCEPTS

CTA01

CONCRETE TRUCK APRON 12-INCH

SW4

CONCRETE SIDEWALK 4-INCH

SW6

CONCRETE SIDEWALK 6-INCH

NFT

UNPAVED NON TRAVERSABLE FLARE

*

LEVEL LANDING

- NOTES:
1.

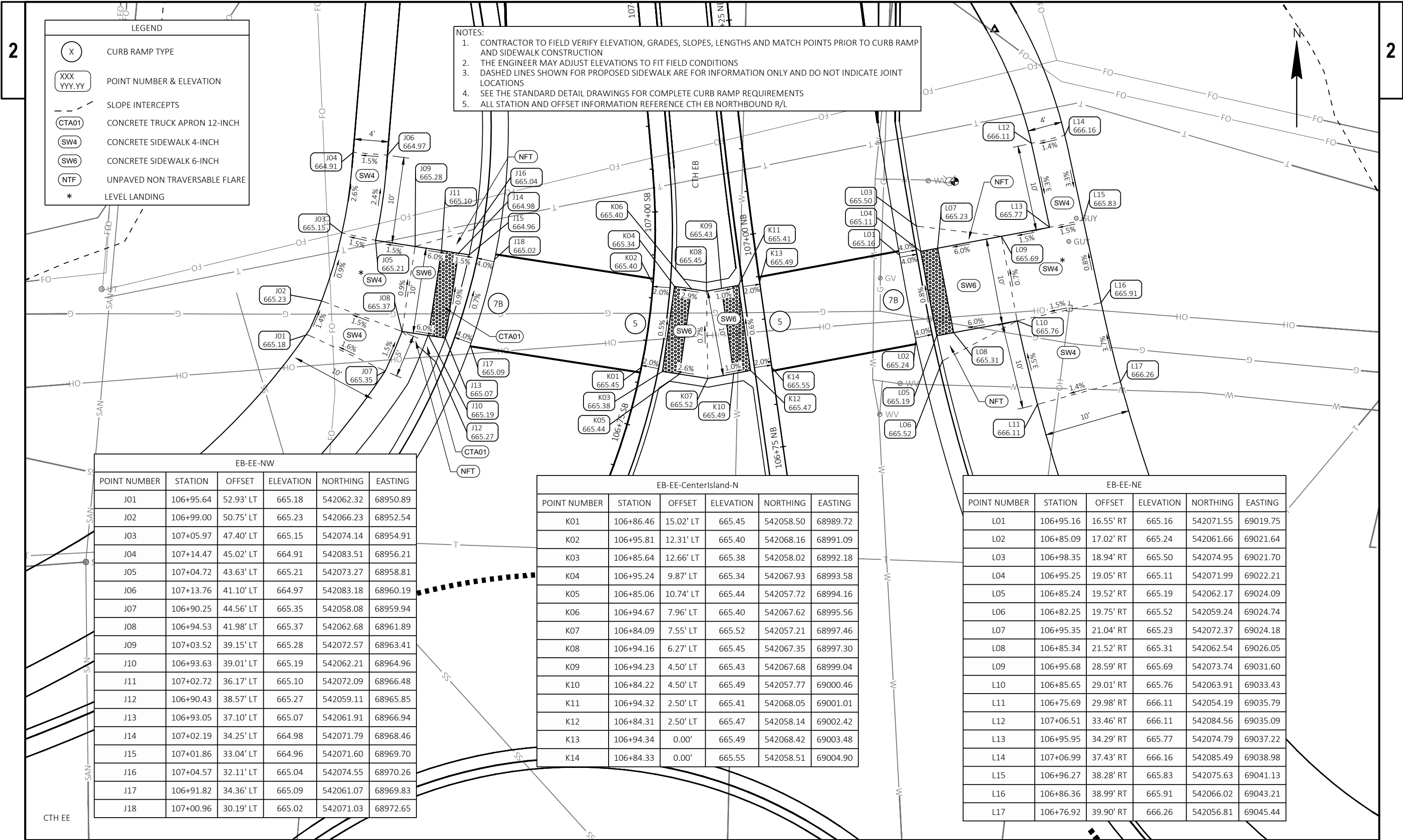
CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION
2.

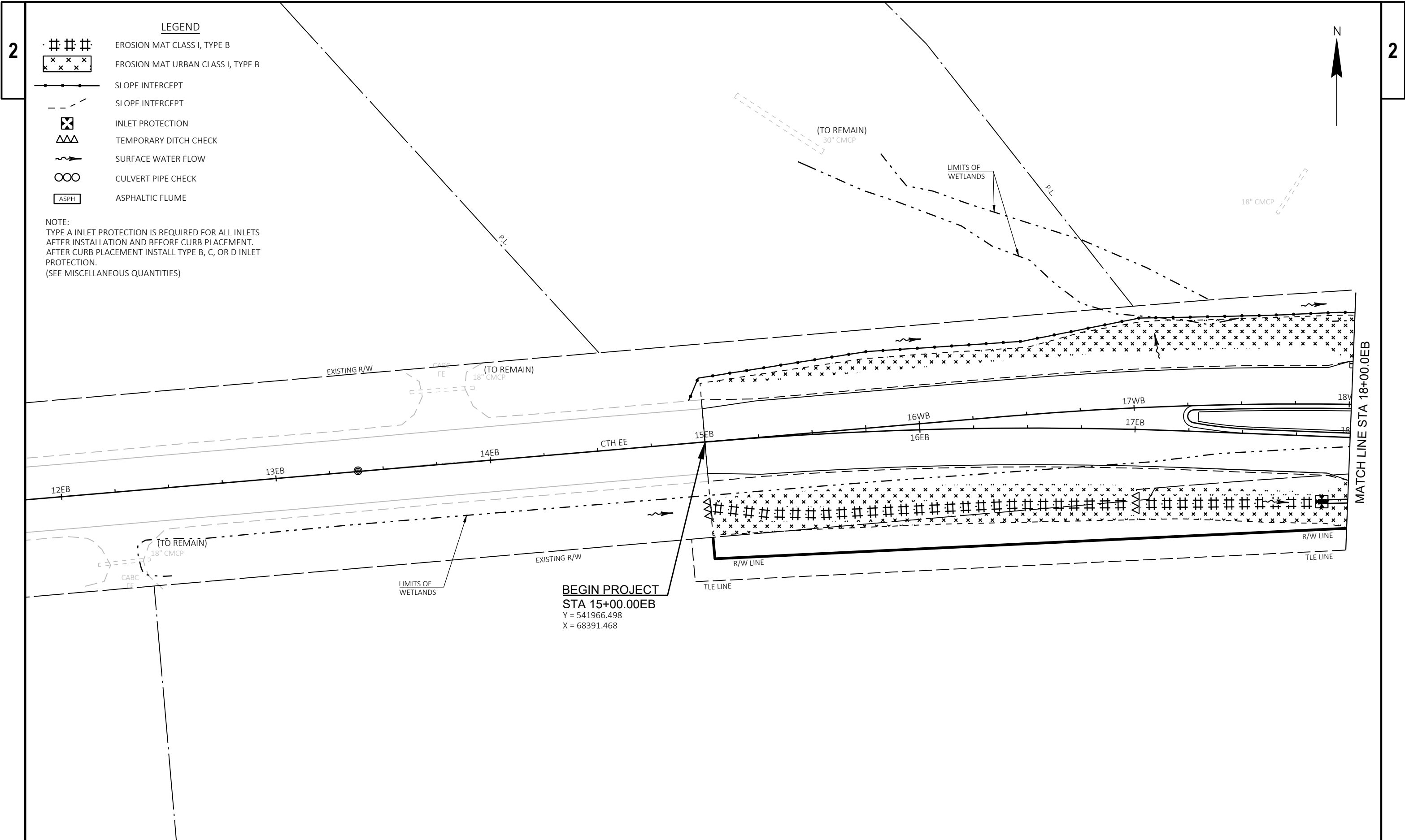
THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS
3.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS
4.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
5.

ALL STATION AND OFFSET INFORMATION REFERENCE CTH EB NORTHBOUND R/L

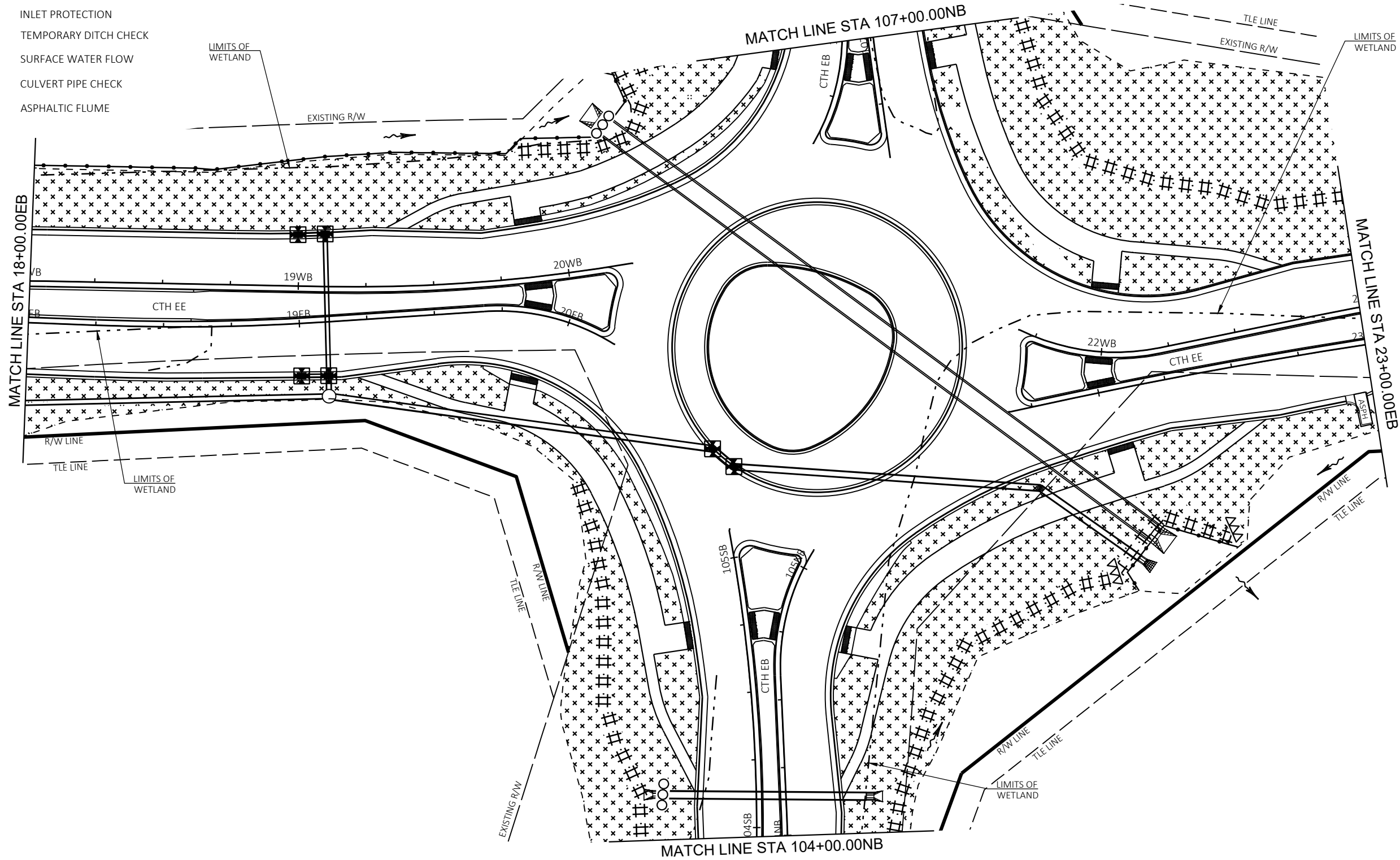


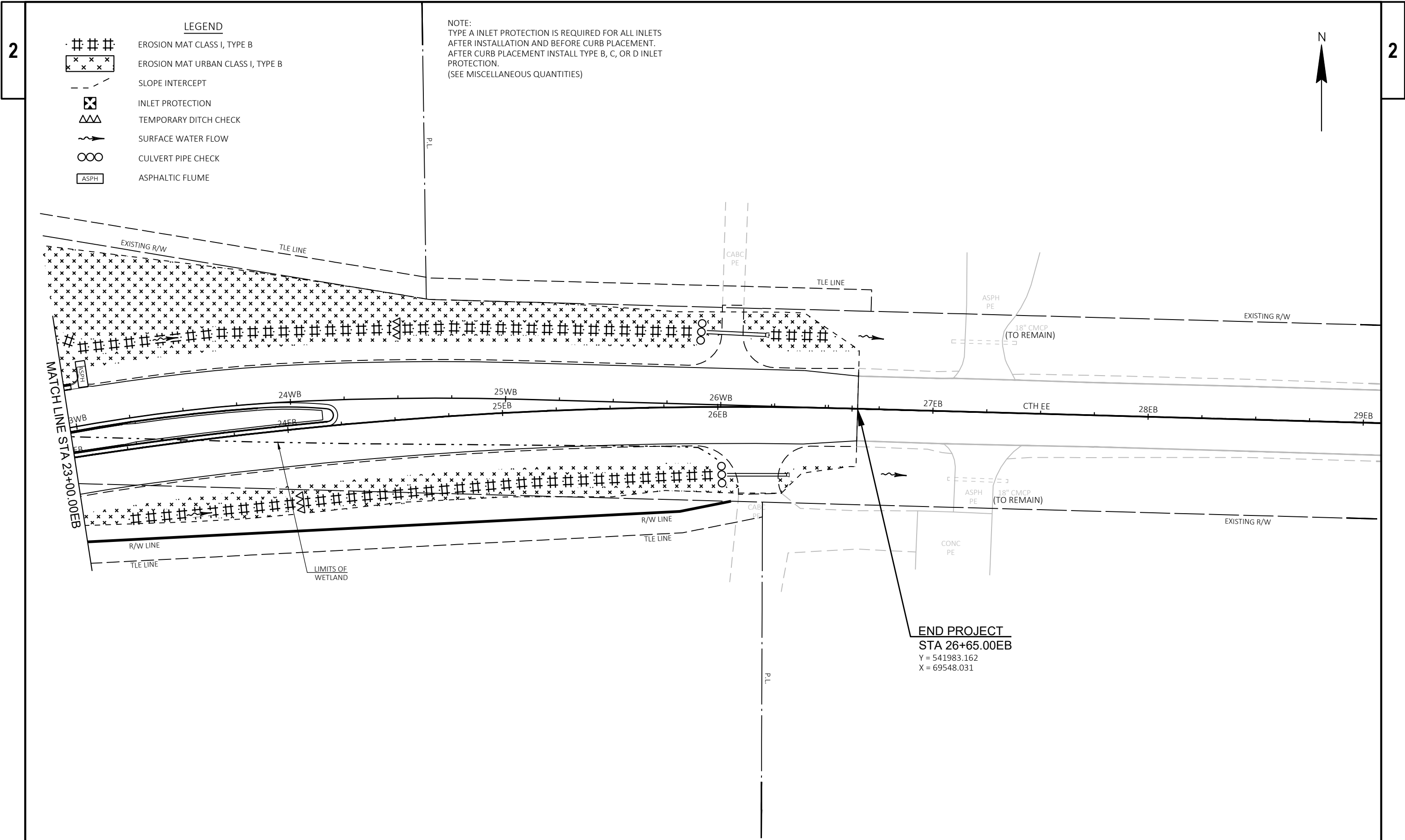


LEGEND

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

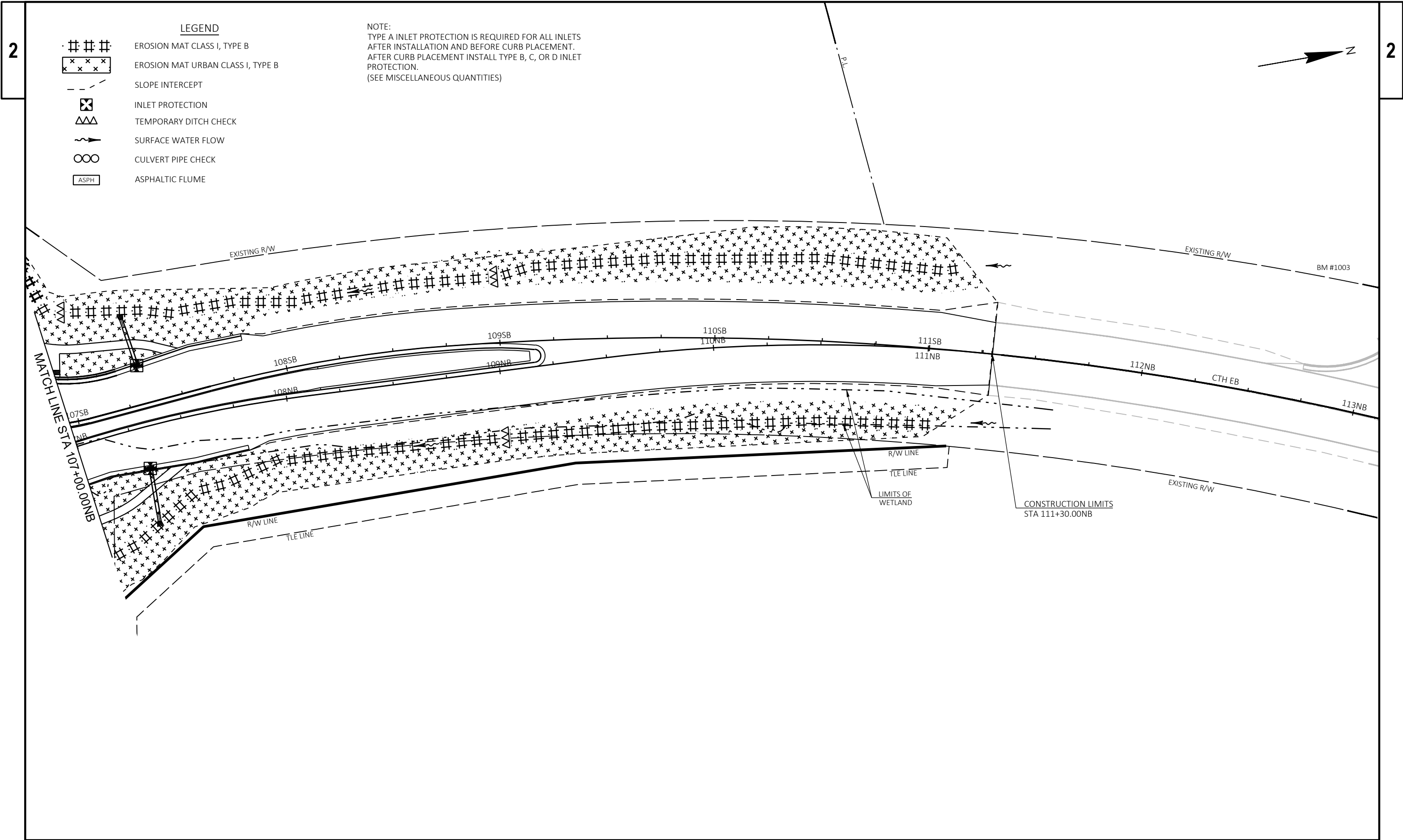
NOTE:
TYPE A INLET PROTECTION IS REQUIRED FOR ALL INLETS
AFTER INSTALLATION AND BEFORE CURB PLACEMENT.
AFTER CURB PLACEMENT INSTALL TYPE B, C, OR D INLET
PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)





2

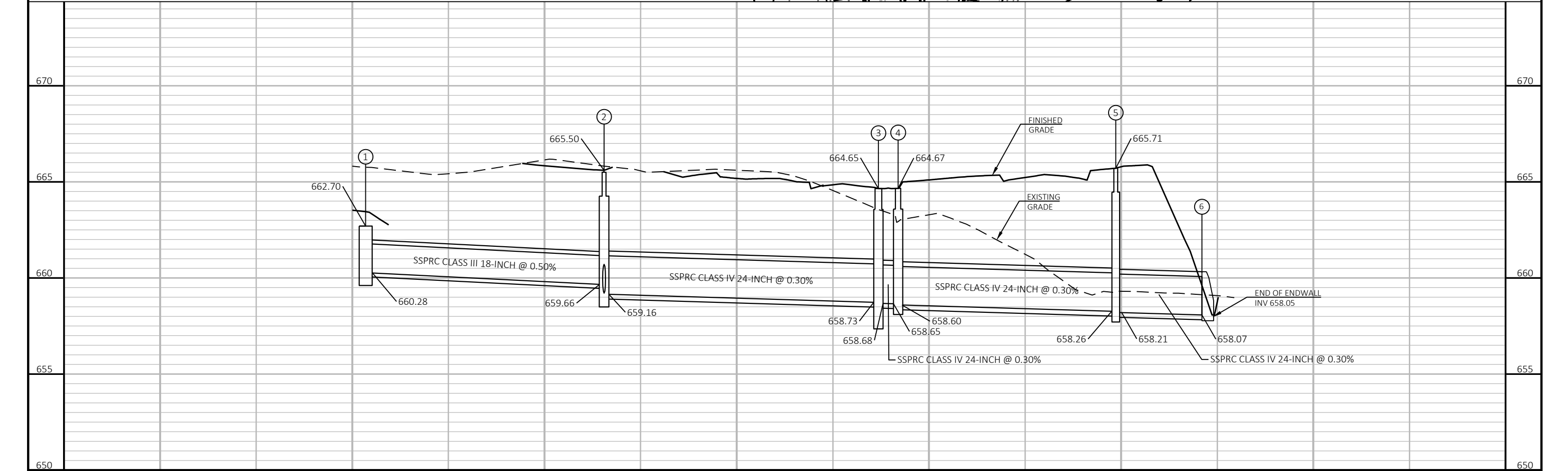
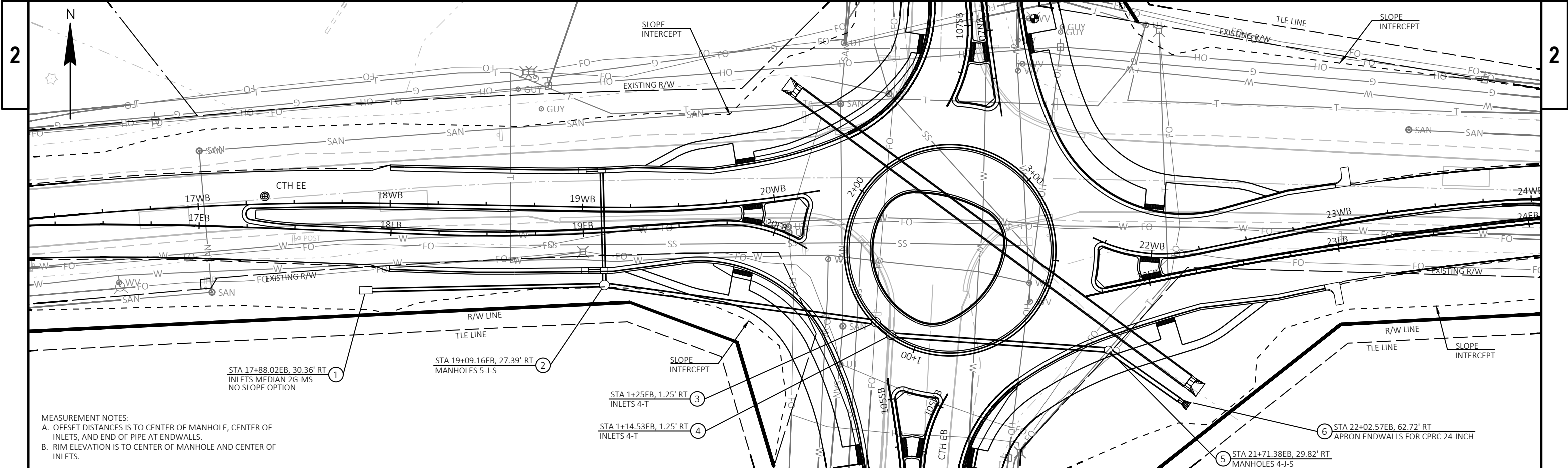


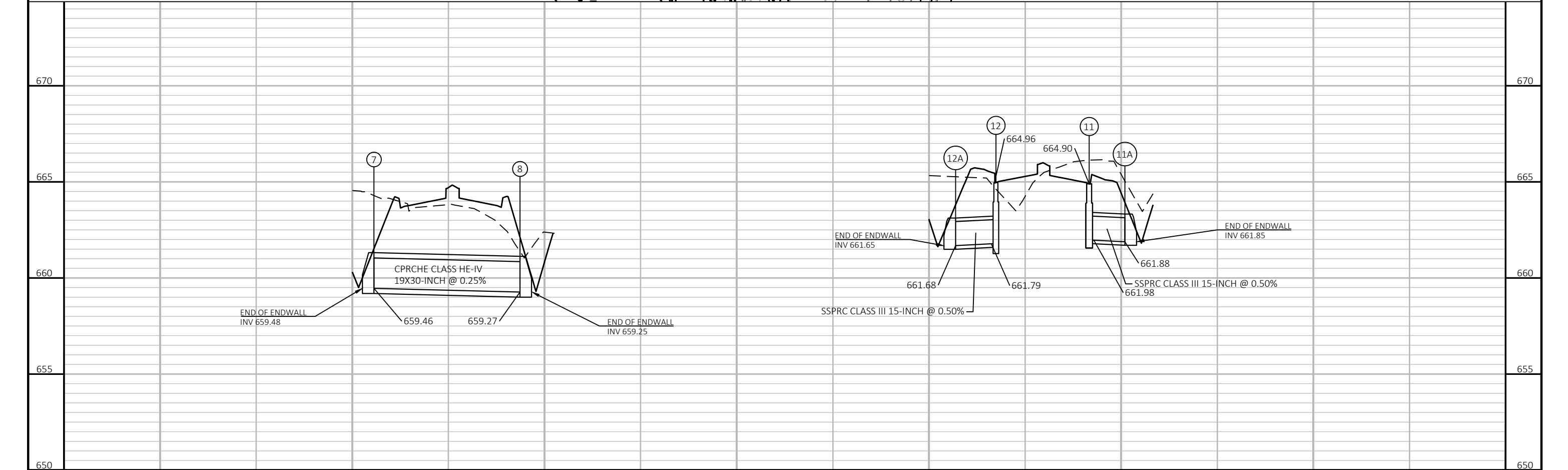
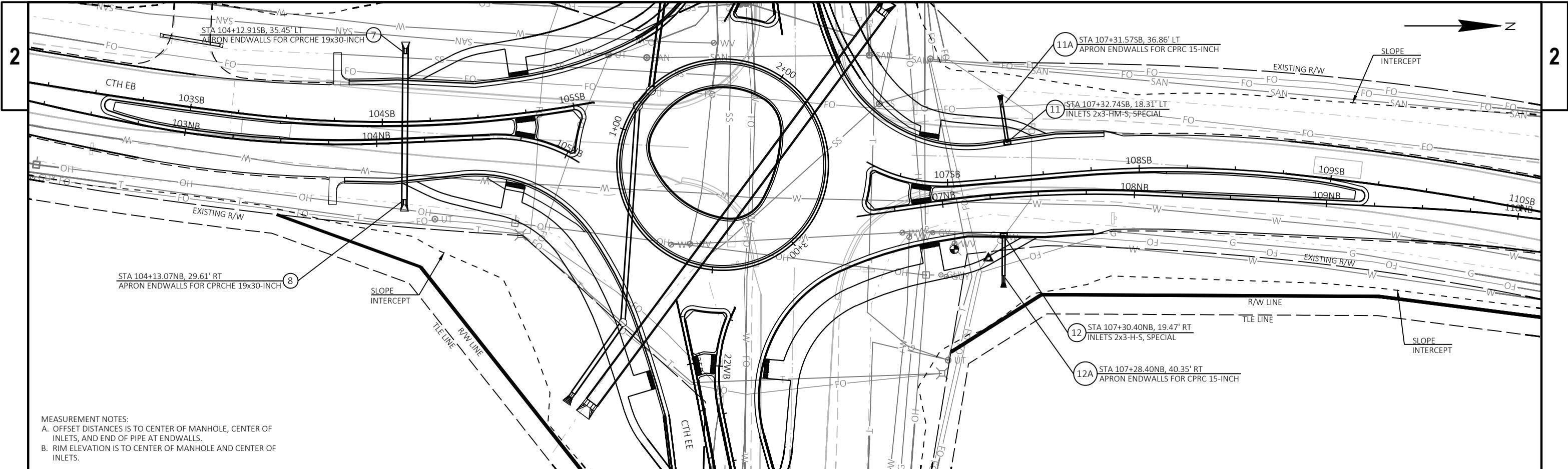


LEGEND

- EROSION MAT CLASS I, TYPE B
- EROSION MAT URBAN CLASS I, TYPE B
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- CULVERT PIPE CHECK
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NOTE:
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PROTECTION.
(SEE MISCELLANEOUS QUANTITIES)





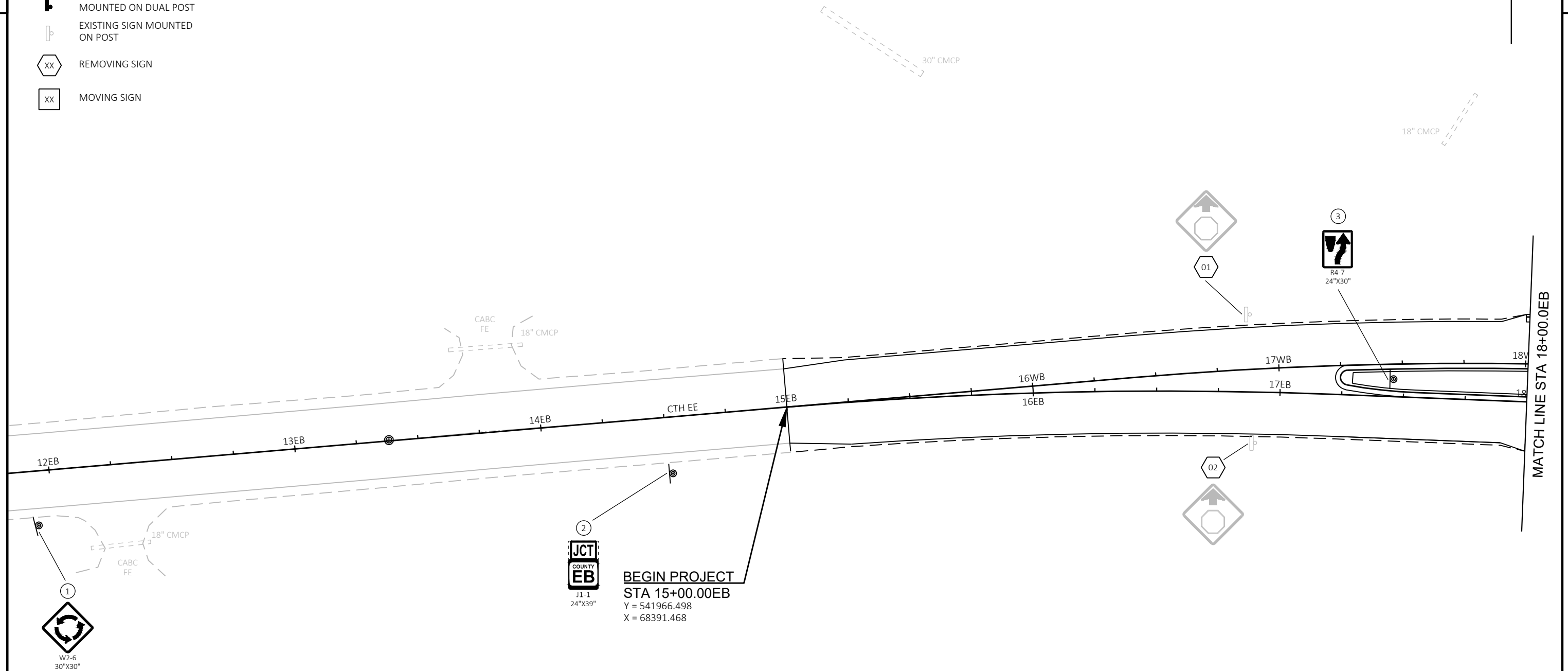
2

LEGEND

- | | |
|---|---------------------------------------|
|  | PROPOSED SIGN
MOUNTED ON POST |
|  | PROPOSED SIGN
MOUNTED ON DUAL POST |
|  | EXISTING SIGN MOUNTED
ON POST |
|  | REMOVING SIGN |
|  | MOVING SIGN |



2



GENERAL NOTES:

WOOD POST SIZES, FOR TYPE II SIGNING ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

MULTIPLE TYPE II SIGNS MOUNTED ON THE SAME SIGN POST ARE PAID AS ONE (1) SIGN REMOVAL.

ALL YIELD SIGNS SHALL HAVE A MOUNTING HEIGHT OF 7'3" TO THE BOTTOM OF THE YIELD SIGN.

INSTALL 18"X18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.

PROJECT NO:	9277-03-73
-------------	------------

HWY: CTH EE

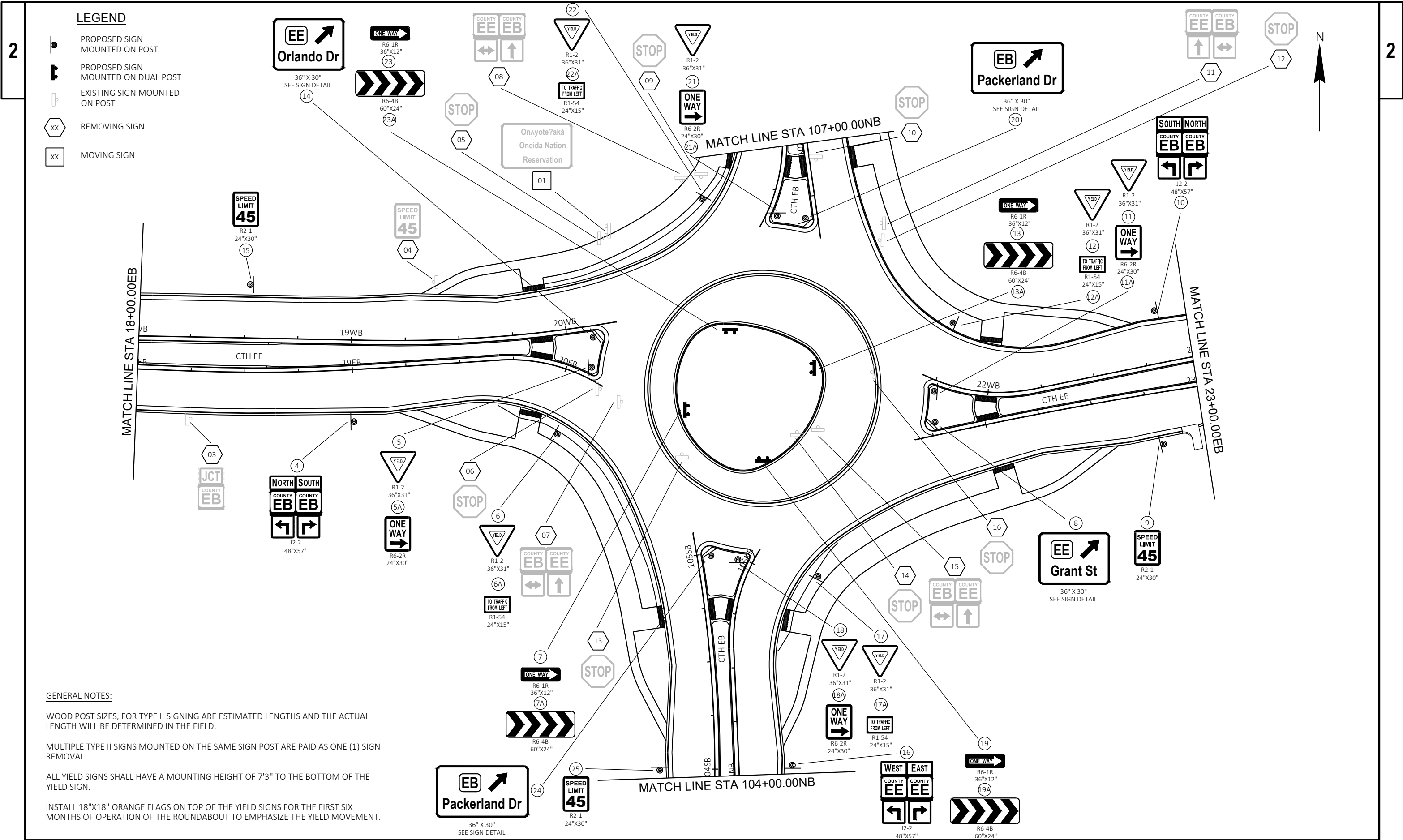
COUNTY: BROWN

PERMANENT SIGNING

SHEET

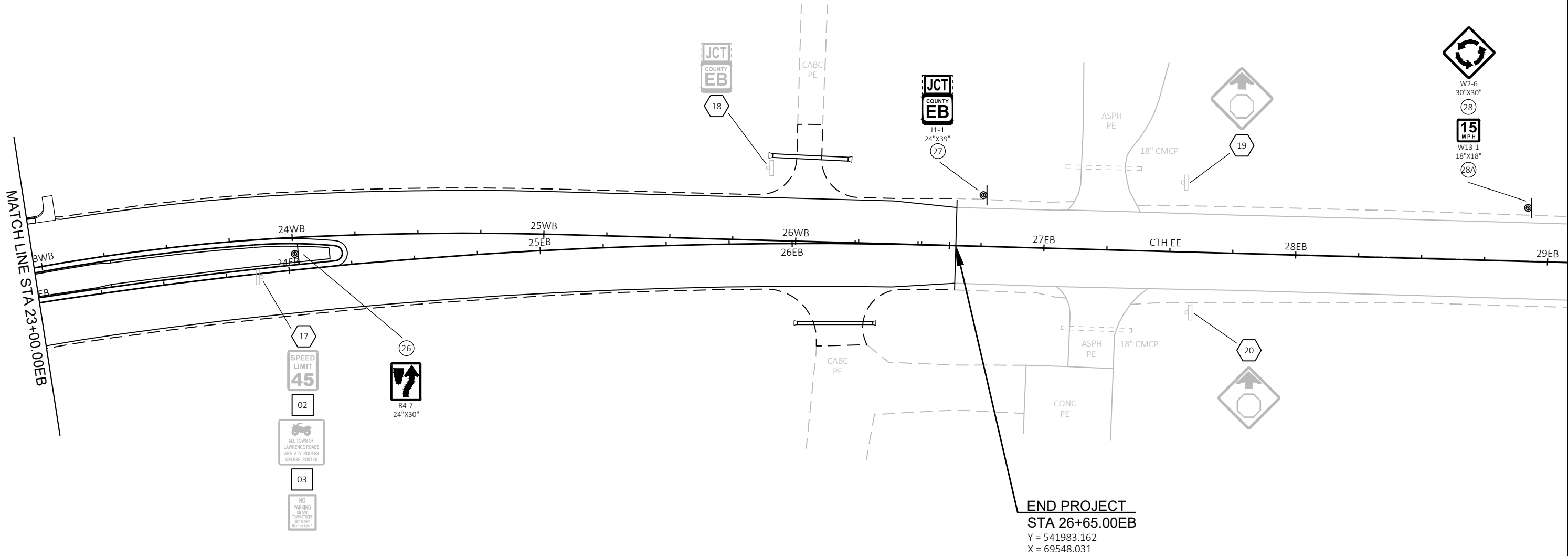
47

11



LEGEND

- PROPOSED SIGN MOUNTED ON POST
- PROPOSED SIGN MOUNTED ON DUAL POST
- EXISTING SIGN MOUNTED ON POST
- REMOVING SIGN
- MOVING SIGN



GENERAL NOTES:

WOOD POST SIZES, FOR TYPE II SIGNING ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

MULTIPLE TYPE II SIGNS MOUNTED ON THE SAME SIGN POST ARE PAID AS ONE (1) SIGN REMOVAL.

ALL YIELD SIGNS SHALL HAVE A MOUNTING HEIGHT OF 7'3" TO THE BOTTOM OF THE YIELD SIGN.

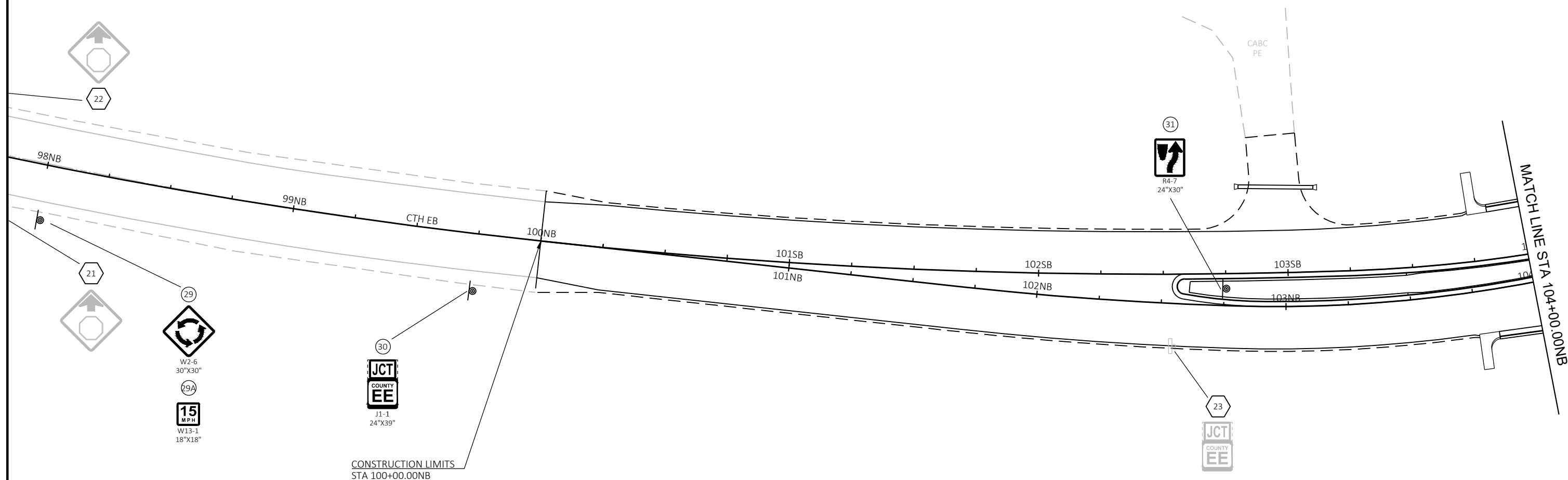
INSTALL 18"X18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.

2

2

LEGEND

- | | |
|---|---------------------------------------|
|  | PROPOSED SIGN
MOUNTED ON POST |
|  | PROPOSED SIGN
MOUNTED ON DUAL POST |
|  | EXISTING SIGN MOUNTED
ON POST |
|  | REMOVING SIGN |
|  | MOVING SIGN |



GENERAL NOTES:

WOOD POST SIZES, FOR TYPE II SIGNING ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

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ALL YIELD SIGNS SHALL HAVE A MOUNTING HEIGHT OF 7'3" TO THE BOTTOM OF THE YIELD SIGN.

INSTALL 18"X18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.

PROJECT NO: 9277-03-73

HWY: CTH EE

COUNTY: BROWN

PERMANENT SIGNING

SHEET

50

	E
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FILE NAME : I:\45\450769_BROWN CTH EB\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 023204-ps

PLOT DATE : 12/15/2025 1:47 PM

PLOT BY : WILKE, CASSANDRA

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

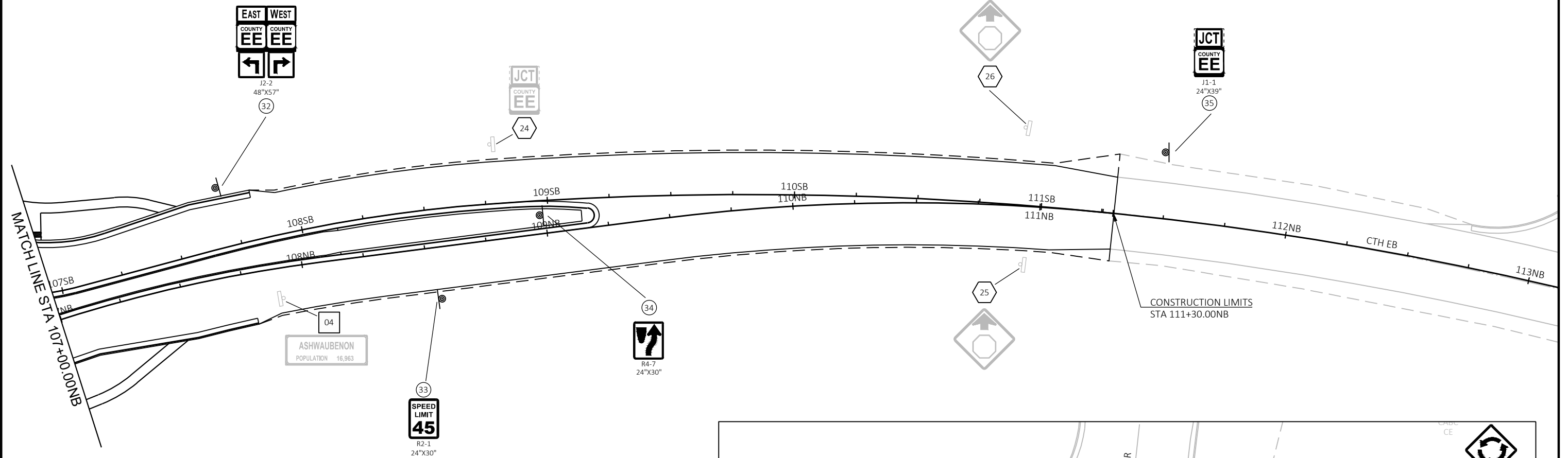
PROPOSED SIGN
MOUNTED ON POST

PROPOSED SIGN
MOUNTED ON DUAL POST

EXISTING SIGN MOUNTED
ON POST

REMOVING SIGN

MOVING SIGN

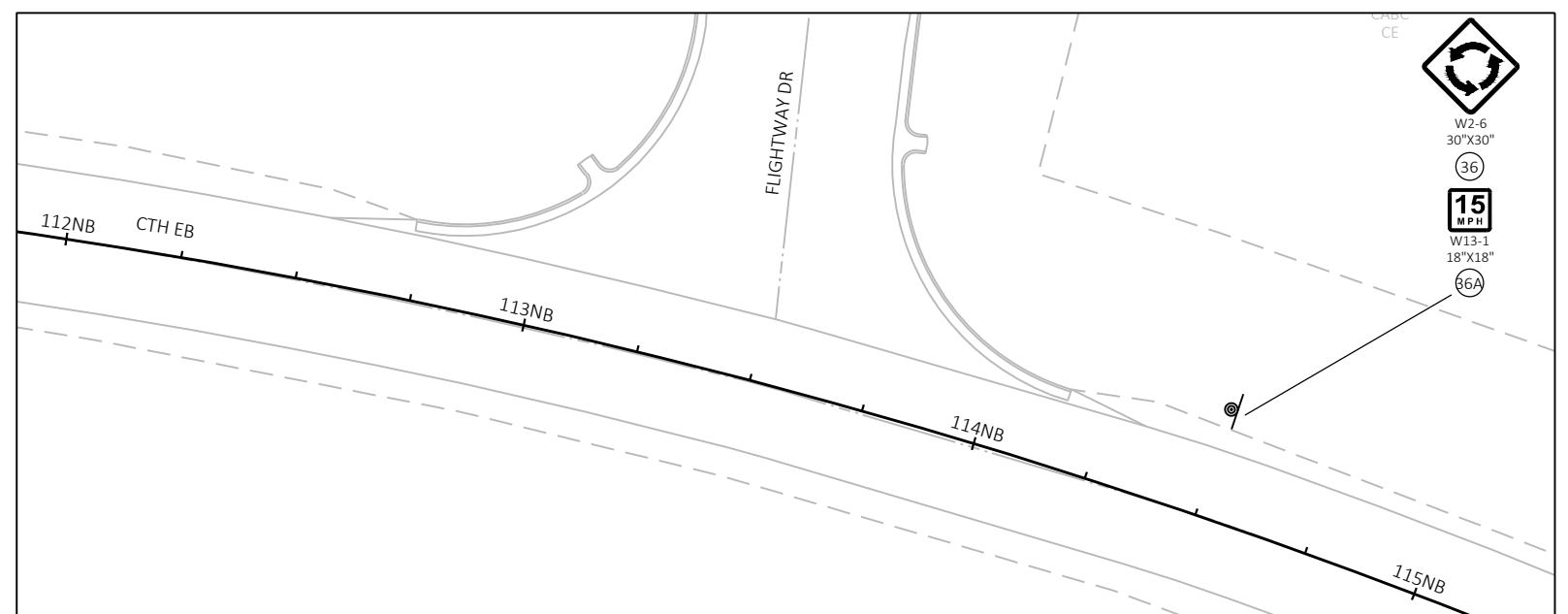


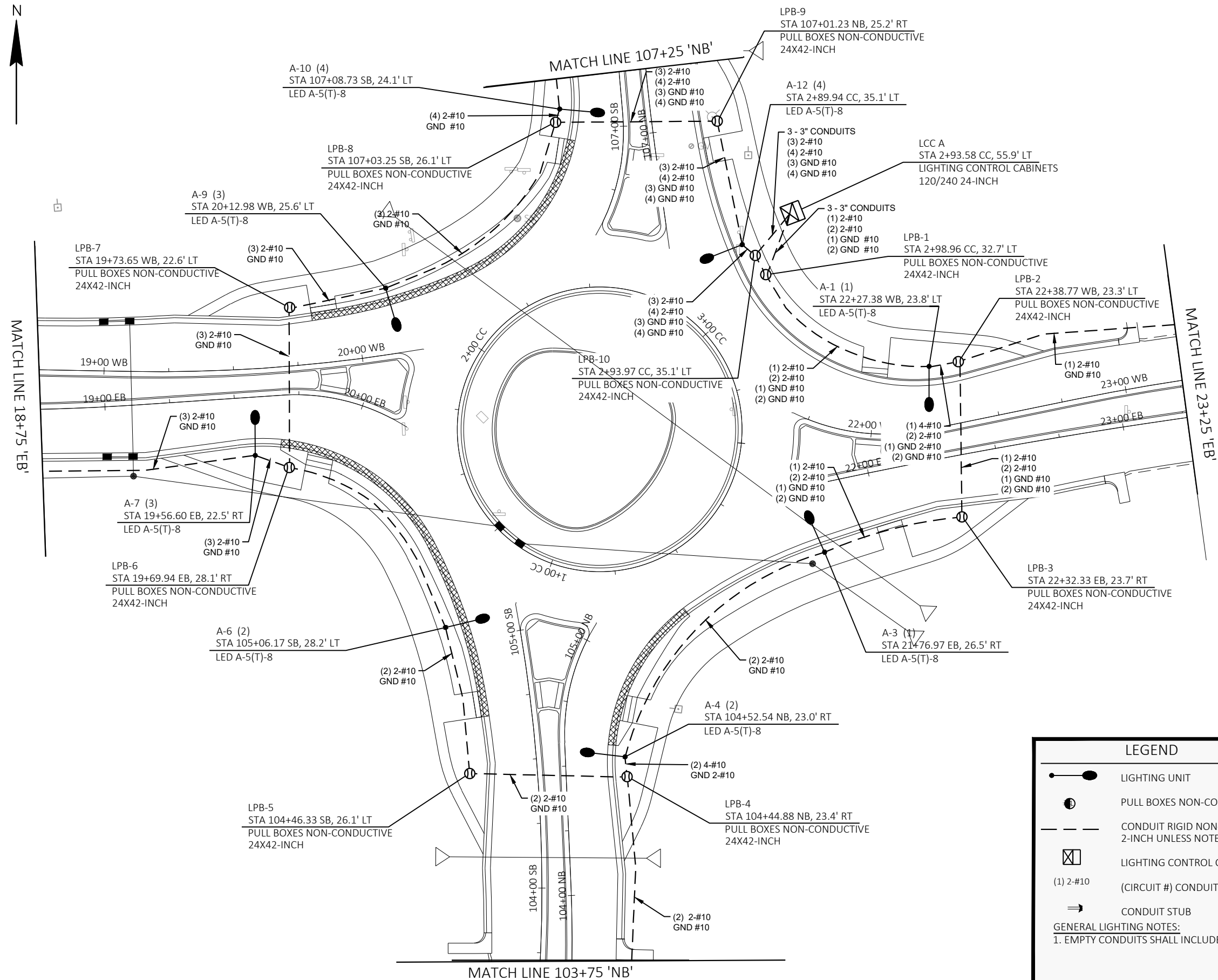
WOOD POST SIZES, FOR TYPE II SIGNING ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

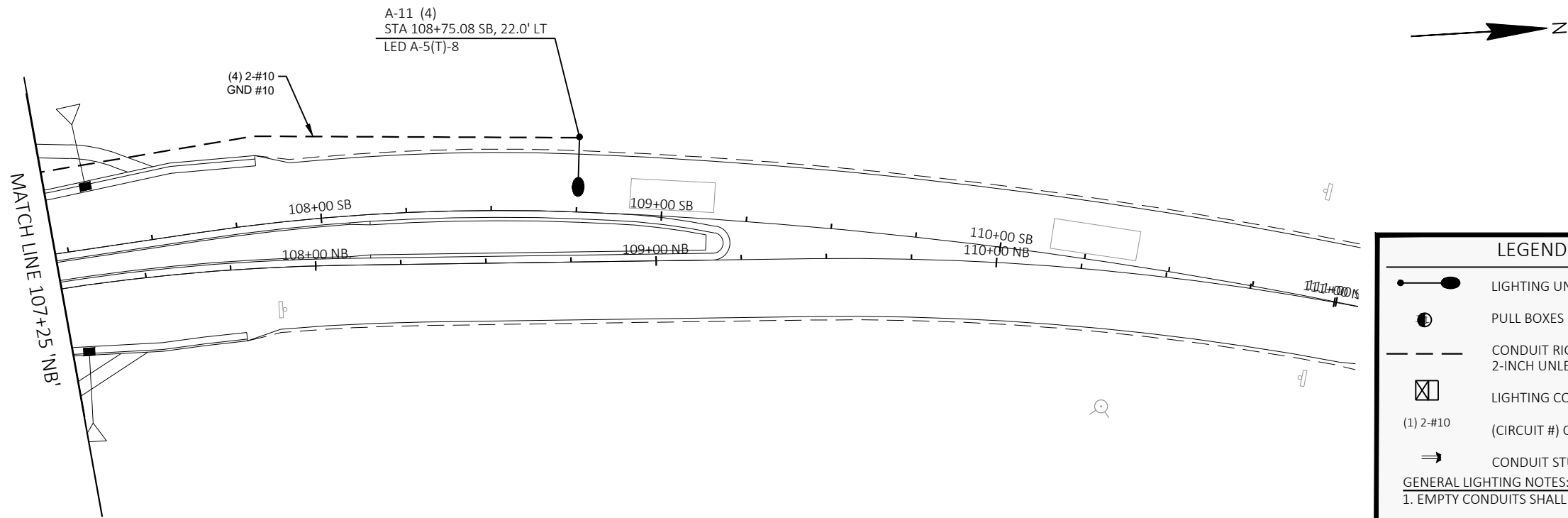
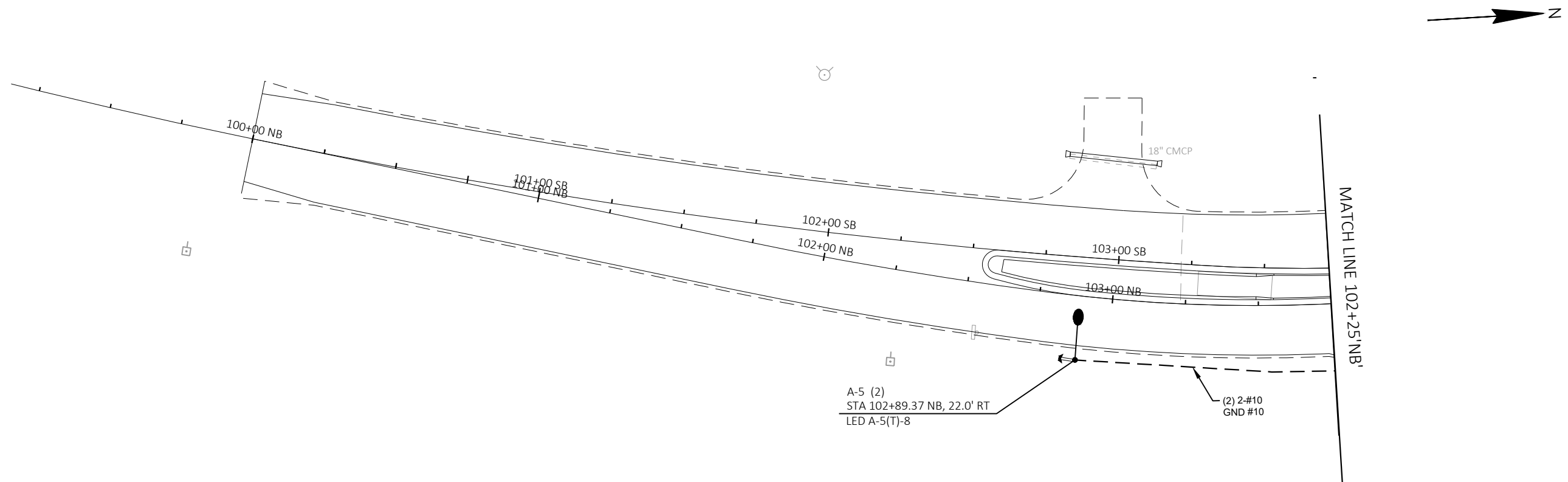
MULTIPLE TYPE II SIGNS MOUNTED ON THE SAME SIGN POST ARE PAID AS ONE (1) SIGN REMOVAL.

ALL YIELD SIGNS SHALL HAVE A MOUNTING HEIGHT OF 7'3" TO THE BOTTOM OF THE YIELD SIGN.

INSTALL 18"x18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.







LEGEND

- LIGHTING UNIT
- PULL BOXES NON-CONDUCTIVE
- CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH UNLESS NOTED
- LIGHTING CONTROL CABINET
- (CIRCUIT #) CONDUIT WIRE CONFIGURATION
- CONDUIT STUB

GENERAL LIGHTING NOTES:
1. EMPTY CONDUITS SHALL INCLUDE PULL STRING.

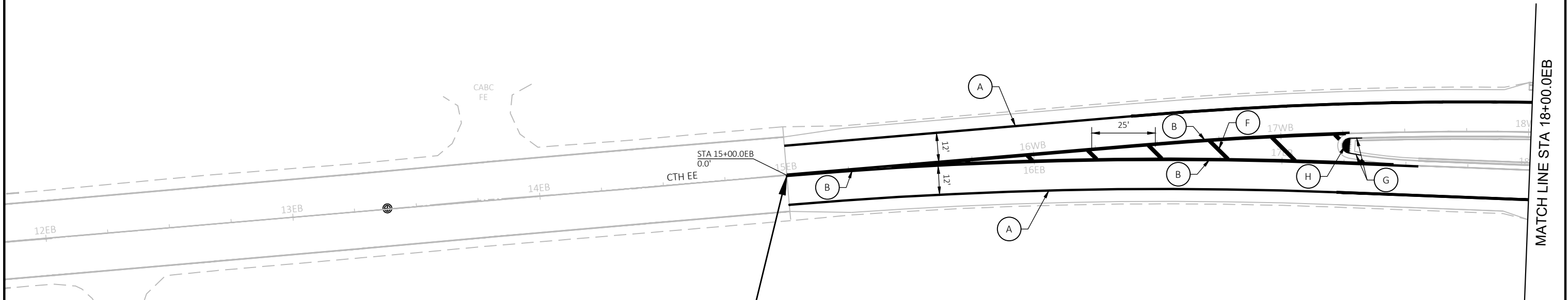
CONTROL CABINET DESIGNATION

POLE NUMBER
CIRCUIT(S)
LIGHTING
LOCATION (TO CENTER OF POLE)
STATION, OFFSET
ARM LENGTH
POLE TYPE
(T) INCLUDES TRANSFORMER BASE
LUMINAIRE DESIGNATION

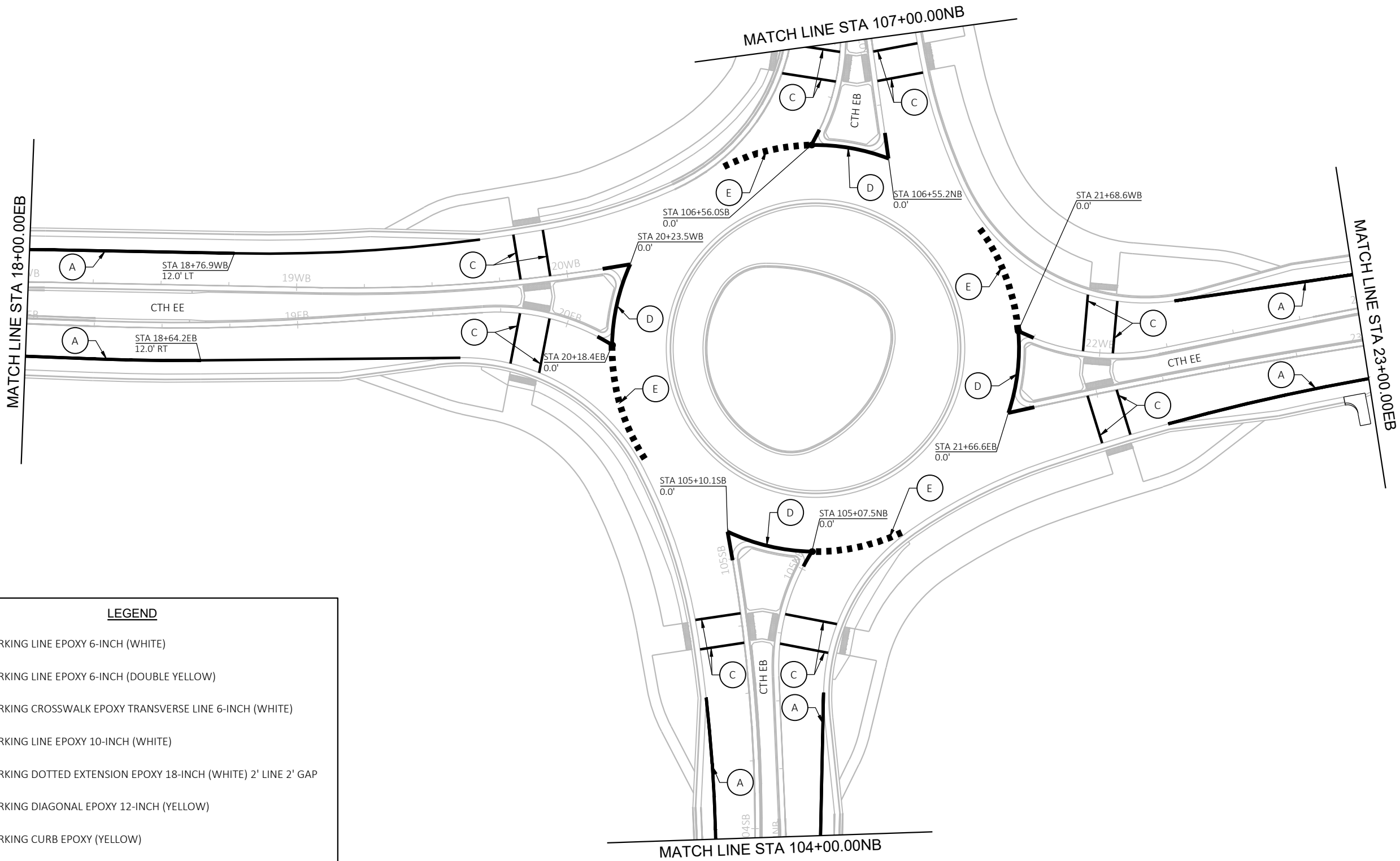
A-7 (1)
LED A-5(T)-8

LEGEND

- A MARKING LINE EPOXY 6-INCH (WHITE)
- B MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- C MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- D MARKING LINE EPOXY 10-INCH (WHITE)
- E MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) 2' LINE 2' GAP
- F MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- G MARKING CURB EPOXY (YELLOW)
- H MARKING ISLAND NOSE (YELLOW)



BEGIN PROJECT
STA 15+00.00EB
Y = 541966.498
X = 68391.468

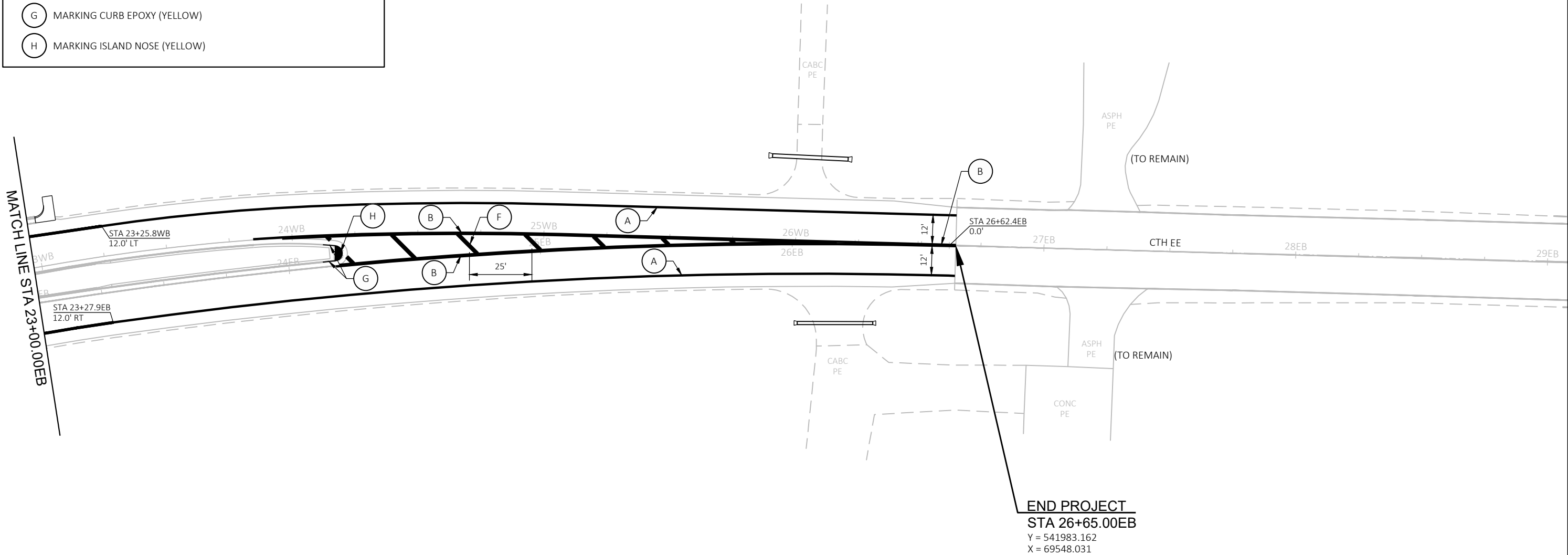


LEGEND

- (A) MARKING LINE EPOXY 6-INCH (WHITE)
- (B) MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- (C) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- (D) MARKING LINE EPOXY 10-INCH (WHITE)
- (E) MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) 2' LINE 2' GAP
- (F) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (G) MARKING CURB EPOXY (YELLOW)
- (H) MARKING ISLAND NOSE (YELLOW)

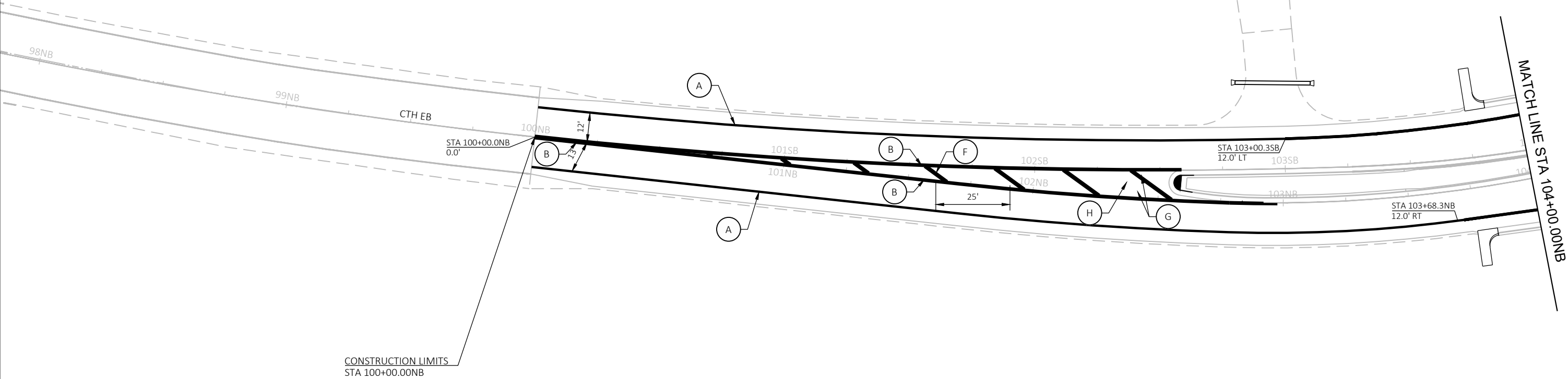
LEGEND

- A MARKING LINE EPOXY 6-INCH (WHITE)
- B MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- C MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- D MARKING LINE EPOXY 10-INCH (WHITE)
- E MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) 2' LINE 2' GAP
- F MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- G MARKING CURB EPOXY (YELLOW)
- H MARKING ISLAND NOSE (YELLOW)



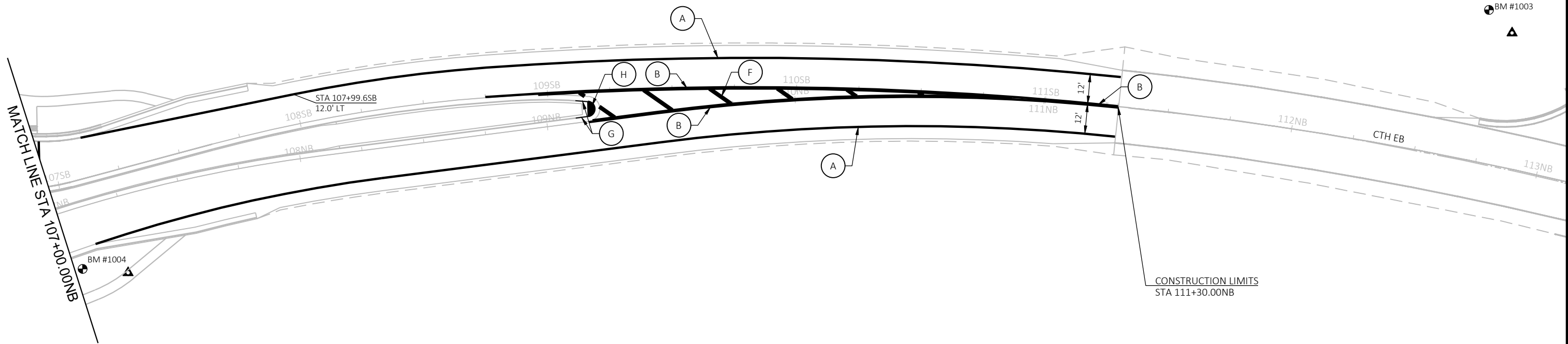
LEGEND

- A MARKING LINE EPOXY 6-INCH (WHITE)
- B MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- C MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- D MARKING LINE EPOXY 10-INCH (WHITE)
- E MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) 2' LINE 2' GAP
- F MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- G MARKING CURB EPOXY (YELLOW)
- H MARKING ISLAND NOSE (YELLOW)



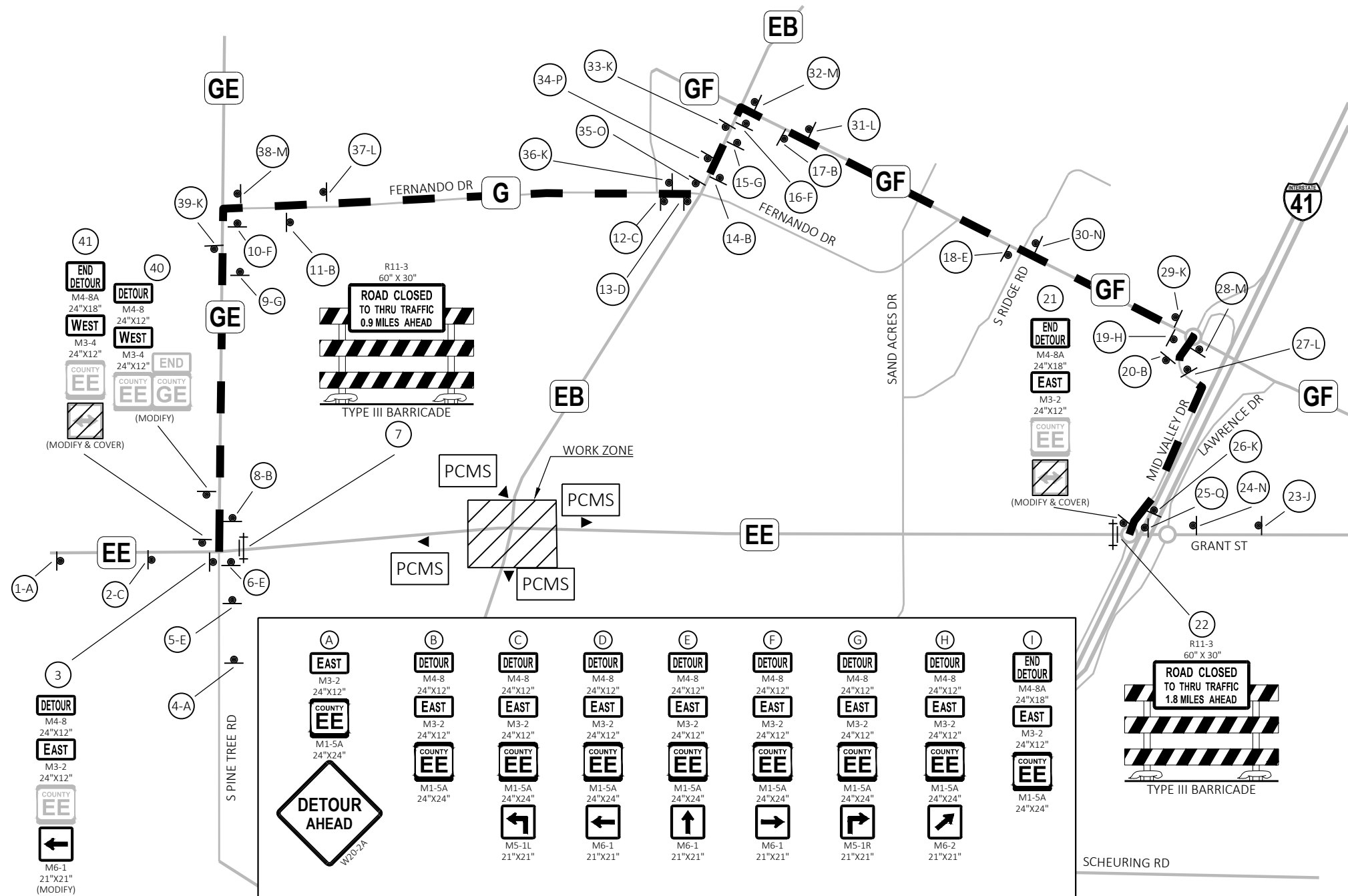
LEGEND

- A MARKING LINE EPOXY 6-INCH (WHITE)
- B MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
- C MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- D MARKING LINE EPOXY 10-INCH (WHITE)
- E MARKING DOTTED EXTENSION EPOXY 18-INCH (WHITE) 2' LINE 2' GAP
- F MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- G MARKING CURB EPOXY (YELLOW)
- H MARKING ISLAND NOSE (YELLOW)

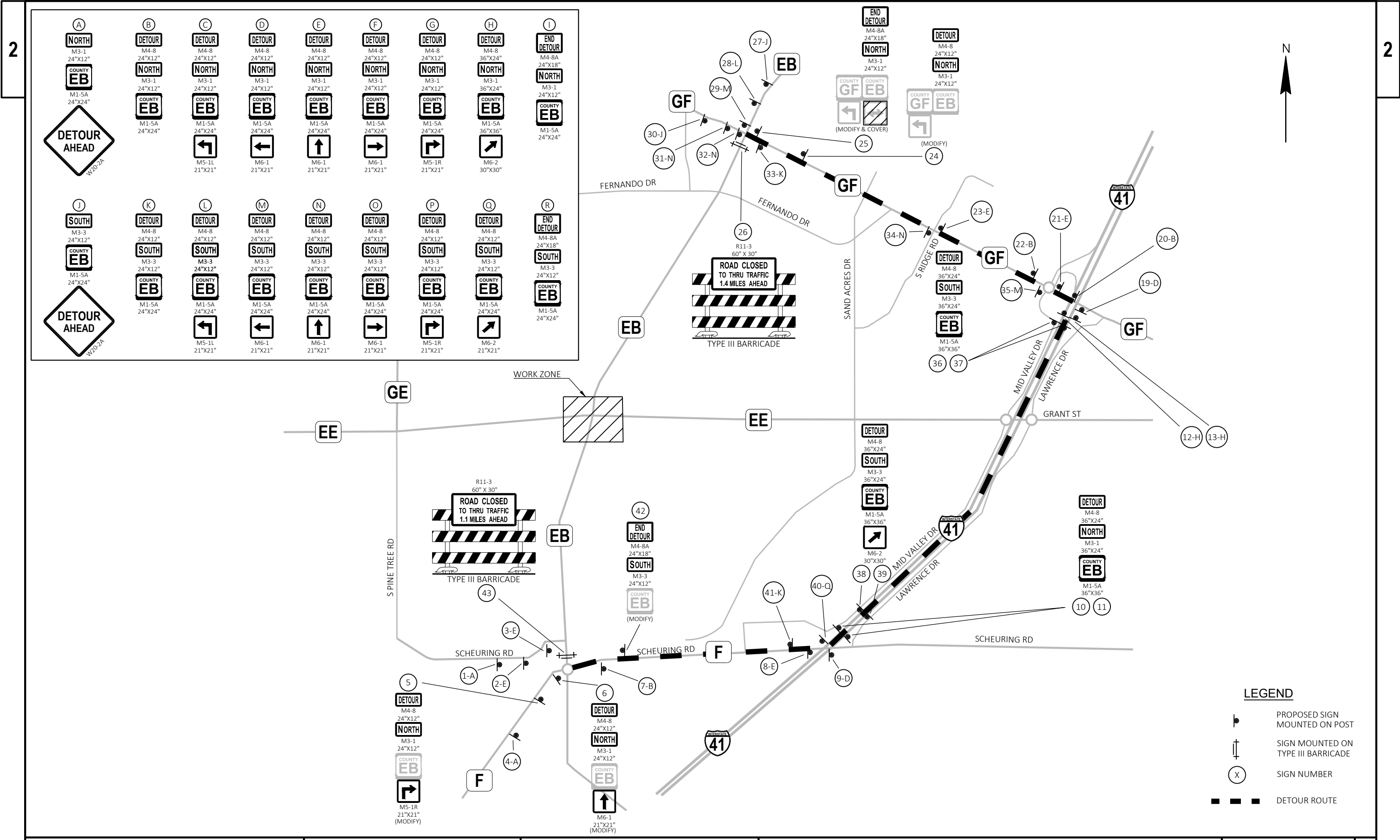


LEGEND

- PROPOSED SIGN MOUNTED ON POST
- SIGN MOUNTED ON TYPE III BARRICADE
- SIGN NUMBER
- DETOUR ROUTE
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN



A	B	C	D	E	F	G	H	I
EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"	END DETOUR M4-8A 24"x18" EAST M3-2 24"x12" COUNTY EE M1-5A 24"x24"
DETOUR AHEAD W202A								
J	K	L	M	N	O	P	Q	R
WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	DETOUR M4-8 24"x12" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"	END DETOUR M4-8A 24"x18" WEST M3-4 24"x12" COUNTY EE M1-5A 24"x24"
DETOUR AHEAD W202A								

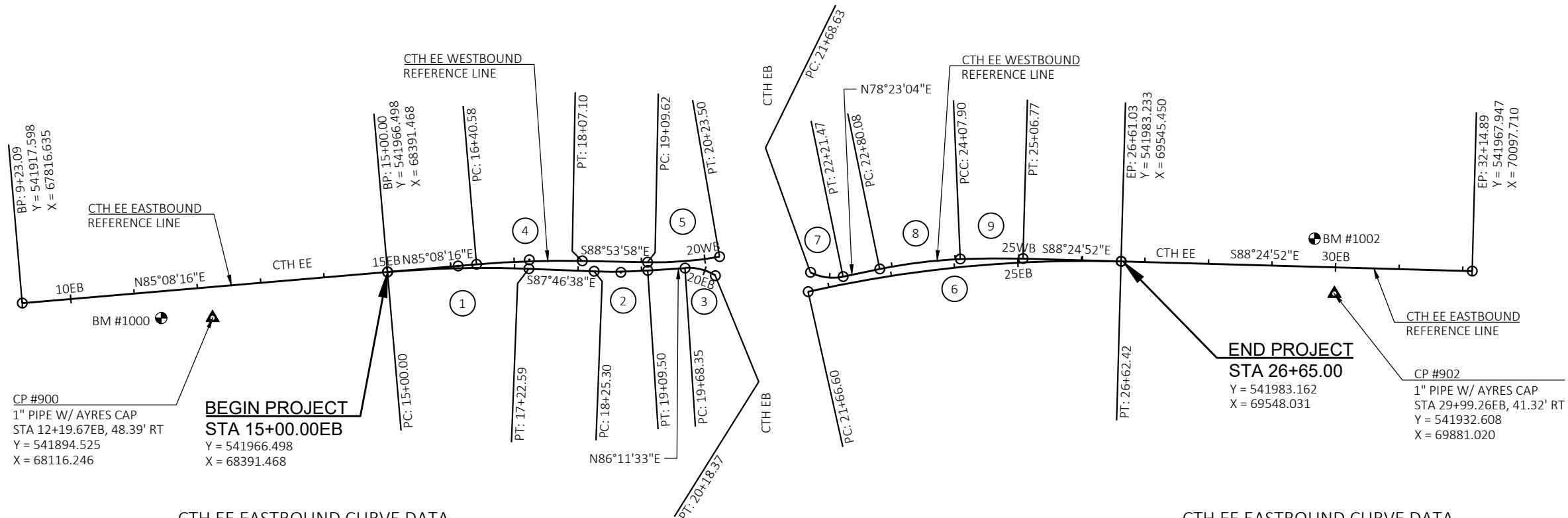


CTH EE WESTBOUND CURVE DATA

④	⑤
PI STA = 17+23.91 WB Y = 541985.477 X = 68614.574 DELTA = 5°57'47" RT D = 3°34'52" T = 83.33' L = 166.52' R = 1600.00' PC STA = 16+40.58 WB Y = 541978.413 X = 68531.540 PT STA = 18+07.10 WB Y = 541983.876 X = 68697.893 DB = N85°08'16"E DA = S88°53'58"E	PI STA = 19+66.73 WB Y = 541980.810 X = 68857.497 DELTA = 10°52'30" LT D = 9°32'57" T = 57.11' L = 113.88' R = 600.00' PC STA = 19+09.62 WB Y = 541981.907 X = 68800.394 PT STA = 20+23.50 WB Y = 541990.506 X = 68913.781 DB = S88°53'58"E DA = N80°13'32"E

CTH EE WESTBOUND CURVE DATA

⑦	⑧	⑨
PI STA = 21+96.05 WB Y = 541953.779 X = 69081.411 DELTA = 37°50'42" LT D = 71°37'11" T = 27.43' L = 52.84' R = 80.00' PC STA = 21+68.63 WB Y = 541965.900 X = 69056.810 PT STA = 22+21.47 WB Y = 541959.301 X = 69108.275 DB = S63°46'13"E DA = N78°23'04"E	PI STA = 23+44.13 WB Y = 541983.997 X = 69228.419 DELTA = 9°09'18" RT D = 7°09'43" T = 64.05' L = 127.83' R = 800.00' PC STA = 22+80.08 WB Y = 541971.101 X = 69165.681 PT STA = 24+07.90 WB Y = 541986.747 X = 69292.410 DB = N78°23'04"E DA = N87°32'22"E	PI STA = 24+57.36 WB Y = 541988.870 X = 69341.816 DELTA = 4°02'46" RT D = 4°05'33" T = 49.45' L = 98.86' R = 1400.00' PC STA = 24+07.90 WB Y = 541986.747 X = 69292.410 PT STA = 25+06.77 WB Y = 541987.501 X = 69391.249 DB = N87°32'22"E DA = S88°24'52"E



CTH EE EASTBOUND CURVE DATA

①	②	③
PI STA = 16+11.44 EB Y = 541975.943 X = 68502.503 DELTA = 7°05'07" RT D = 3°10'59" T = 111.44' L = 222.59' R = 1800.00' PC STA = 15+00.00 EB Y = 541966.498 X = 68391.468 PT STA = 17+22.59 EB Y = 541971.621 X = 68613.856 DB = N85°08'16"E DA = S87°46'38"E	PI STA = 18+67.44 EB Y = 541966.003 X = 68758.599 DELTA = 6°01'49" LT D = 7°09'43" T = 42.14' L = 84.20' R = 800.00' PC STA = 18+25.30 EB Y = 541967.637 X = 68716.492 PT STA = 19+09.50 EB Y = 541968.801 X = 68800.645 DB = S87°46'38"E DA = N86°11'33"E	PI STA = 19+94.21 EB Y = 541974.426 X = 68885.165 DELTA = 35°49'40" RT D = 71°37'11" T = 25.86' L = 50.03' R = 80.00' PC STA = 19+68.35 EB Y = 541972.709 X = 68859.361 PT STA = 20+18.37 EB Y = 541960.714 X = 68907.091 DB = N86°11'33"E DA = S57°58'47"E

CTH EE EASTBOUND CURVE DATA

⑥
PI STA = 24+15.79 EB Y = 541990.128 X = 69296.361 DELTA = 14°12'14" RT D = 2°51'53" T = 249.18' L = 495.81' R = 2000.00' PC STA = 21+66.60 EB Y = 541935.691 X = 69053.195 PT STA = 26+62.42 EB Y = 541983.233 X = 69545.450 DB = N77°22'53"E DA = S88°24'52"E

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
1000	11+39EB	674.67	BURY BOLT ON HYDRANT - 42' RT
1002	29+66EB	658.90	SPIKE IN PPOL - 44' LT

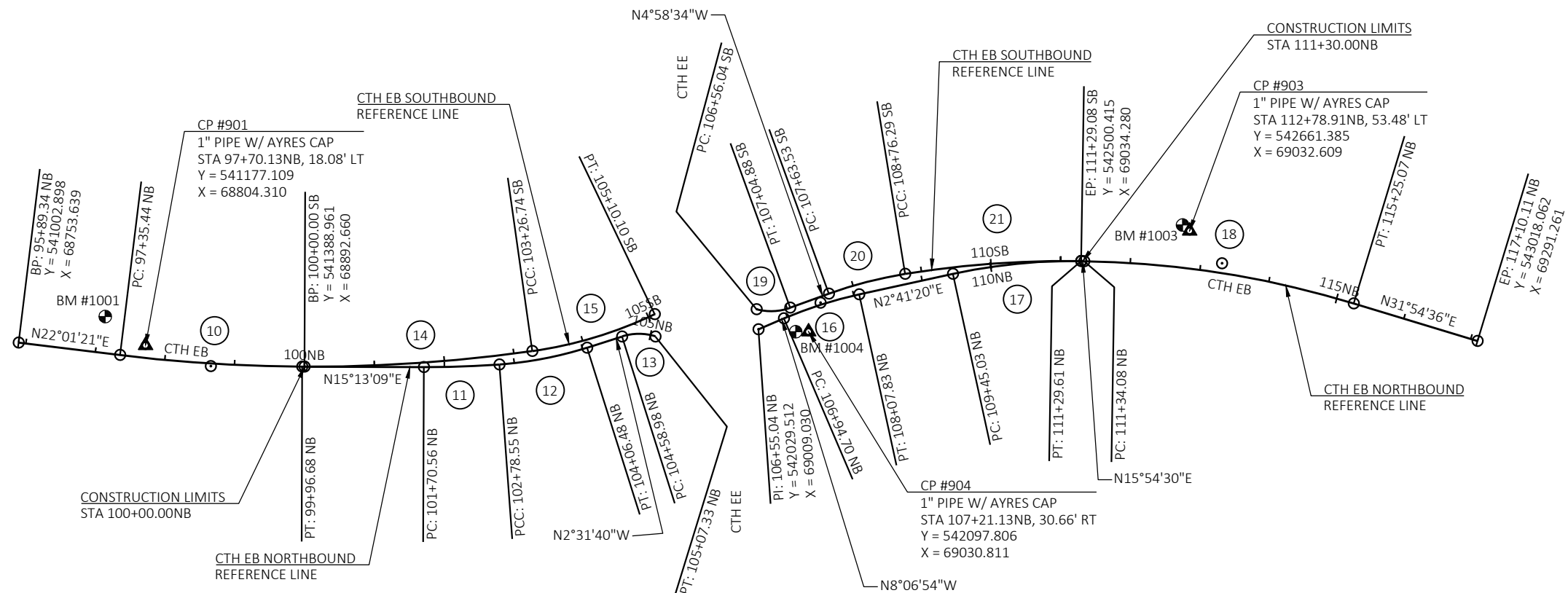
CTH EB SOUTHBOUND CURVE DATA

14	15
PI STA = 101+63.66 SB	PI STA = 104+19.14 SB
Y = 541546.876	Y = 541801.052
X = 68935.622	X = 68966.602
DELTA = 8°16'12" LT	DELTA = 17°30'35" LT
D = 2°31'52"	D = 9°32'57"
T = 163.66'	T = 92.40'
L = 326.74'	L = 183.36'
R = 2263.70'	R = 600.00'
PC STA = 100+00.00 SB	PC STA = 103+26.74 SB
Y = 541388.961	Y = 541709.329
X = 68892.660	X = 68955.423
PT STA = 103+26.74 SB	PT STA = 105+10.10 SB
Y = 541709.329	Y = 541891.887
X = 68955.423	X = 68949.667
DB = N15°13'09"E	DB = N06°56'57"E
DA = N06°56'57"E	DA = N10°33'38"W

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
1001	97+08NB	665.89	BURY BOLT ON HYDRANT - 52' LT
1004	107+03NB	667.39	BURY TAG BOLT ON HYDRANT - 24' RT
1003	112+68NB	672.91	SPIKE IN PPOL - 61' LT

CTH EB SOUTHBOUND CURVE DATA

19	20	21
PI STA = 106+81.25 SB	PI STA = 108+20.08 SB	PI STA = 110+03.02 SB
Y = 542056.334	Y = 542196.209	Y = 542378.546
X = 68993.226	X = 68981.047	X = 68999.545
DELTA = 34°58'22" LT	DELTA = 10°46'07" RT	DELTA = 10°06'57" RT
D = 71°37'11"	D = 9°32'57"	D = 4°00'06"
T = 25.20'	T = 56.55'	T = 126.72'
L = 48.83'	L = 112.77'	L = 252.79'
R = 80.00'	R = 600.00'	R = 1431.78'
PC STA = 106+56.04 SB	PC STA = 107+63.53 SB	PC STA = 108+76.29 SB
Y = 542034.507	Y = 542139.871	Y = 542252.471
X = 68980.626	X = 68985.953	X = 68986.755
PT STA = 107+04.88 SB	PT STA = 108+76.29 SB	PT STA = 111+29.08 SB
Y = 542081.442	Y = 542252.471	Y = 542500.415
X = 68991.040	X = 68986.755	X = 69034.280
DB = N29°59'48"E	DB = N04°58'34"W	DB = N05°47'33"E
DA = N04°58'34"W	DA = N05°47'34"E	DA = N15°54'30"E



CTH EB NORTHBOUND CURVE DATA

10	11	12	13
PI STA = 98+66.21 NB	PI STA = 102+24.58 NB	PI STA = 103+42.81 NB	PI STA = 104+83.92 NB
Y = 541259.569	Y = 541605.666	Y = 541721.849	Y = 541863.406
X = 68857.459	X = 68951.616	X = 68973.779	X = 68967.530
DELTA = 6°48'12" LT	DELTA = 4°25'10" LT	DELTA = 13°19'40" LT	DELTA = 34°37'44" RT
D = 2°36'16"	D = 4°05'33"	D = 10°25'03"	D = 71°37'11"
T = 130.77'	T = 54.02'	T = 64.26'	T = 24.94'
L = 261.23'	L = 107.98'	L = 127.94'	L = 48.35'
R = 2200.00'	R = 1400.00'	R = 550.00'	R = 80.00'
PC STA = 97+35.44 NB	PC STA = 101+70.56 NB	PC STA = 102+78.55 NB	PC STA = 104+58.98 NB
Y = 541138.341	Y = 541553.542	Y = 541658.729	Y = 541838.491
X = 68808.424	X = 68937.435	X = 68961.738	X = 68968.630
PT STA = 99+96.68 NB	PT STA = 102+78.55 NB	PT STA = 104+06.48 NB	PT STA = 105+07.33 NB
Y = 541385.753	Y = 541658.729	Y = 541786.045	Y = 541884.532
X = 68891.788	X = 68961.738	X = 68970.945	X = 68980.783
DB = N22°01'21"E	DB = N15°13'09"E	DB = N10°48'00"E	DB = N02°31'40"W
DA = N15°13'09"E	DA = N10°48'00"E	DA = N02°31'40"W	DA = N32°06'04"E

CTH EB NORTHBOUND CURVE DATA

16	17	18
PI STA = 107+51.43 NB	PI STA = 110+37.73 NB	PI STA = 113+30.85 NB
Y = 542124.942	Y = 542411.264	Y = 542693.949
X = 68995.423	X = 69008.870	X = 69089.440
DELTA = 10°48'14" RT	DELTA = 13°13'10" RT	DELTA = 16°00'06" RT
D = 9°32'57"	D = 7°09'43"	D = 4°05'33"
T = 56.74'	T = 92.70'	T = 196.78'
L = 113.14'	L = 184.58'	L = 390.99'
R = 600.00'	R = 800.00'	R = 1400.00'
PC STA = 106+94.70 NB	PC STA = 109+45.03 NB	PC STA = 111+34.08 NB
Y = 542068.773	Y = 542318.665	Y = 542504.709
X = 69003.432	X = 69004.521	X = 69035.503
PT STA = 108+07.83 NB	PT STA = 111+29.61 NB	PT STA = 115+25.07 NB
Y = 542181.616	Y = 542500.415	Y = 542860.989
X = 68998.085	X = 69034.280	X = 69193.454
DB = N08°06'54"W	DB = N02°41'20"E	DB = N15°54'30"E
DA = N02°41'20"E	DA = N15°54'30"E	DA = N31°54'36"E

NORTHWEST CURB AND GUTTER CURVE DATA

22	23	24	25	26
PI STA = 200+03.58 NW Y = 542000.942 X = 68694.634 DELTA = 0°15'15" RT D = 3°32'36" T = 3.58' L = 7.17' R = 1617.00' PC STA = 200+00.00 NW Y = 542000.995 X = 68691.050 PT STA = 200+07.17 NW Y = 542000.873 X = 68698.218 DB = S89°09'12"E DA = S88°53'58"E	PI STA = 201+01.96 NW Y = 541999.052 X = 68792.991 DELTA = 4°49'02" LT D = 9°37'46" T = 25.03' L = 50.03' R = 595.00' PC STA = 200+76.93 NW Y = 541999.533 X = 68767.968 PT STA = 201+26.96 NW Y = 542000.675 X = 68817.966 DB = S88°53'58"E DA = N86°17'00"E	PI STA = 201+79.16 NW Y = 542001.196 X = 68870.051 DELTA = 2°14'19" LT D = 9°32'57" T = 11.72' L = 23.44' R = 600.00' PC STA = 201+67.44 NW Y = 541999.651 X = 68858.431 PT STA = 201+90.88 NW Y = 542003.192 X = 68881.602 DB = N82°25'51"E DA = N80°11'32"E	PI STA = 202+16.56 NW Y = 542007.567 X = 68906.910 DELTA = 14°38'08" LT D = 28°38'52" T = 25.68' L = 51.09' R = 200.00' PC STA = 201+90.88 NW Y = 542003.192 X = 68881.602 PT STA = 202+41.96 NW Y = 542018.195 X = 68930.292 DB = N65°33'25"E DA = N65°33'25"E	PI STA = 202+98.70 NW Y = 542041.670 X = 68981.938 DELTA = 74°12'31" LT D = 76°23'40" T = 56.73' L = 97.14' R = 75.00' PC STA = 202+41.96 NW Y = 542018.195 X = 68930.292 PT STA = 203+39.10 NW Y = 542097.755 X = 68973.404 DB = N65°33'25"E DA = N08°39'06"W

CTH EE

SOUTHWEST CURB AND GUTTER CURVE DATA

27	28	29	30	31
PI STA = 503+65.34 SW Y = 541949.915 X = 68723.002 DELTA = 3°18'30" RT D = 5°05'30" T = 32.50' L = 64.98' R = 1125.27' PC STA = 503+32.84 SW Y = 541950.074 X = 68755.500 PT STA = 503+97.82 SW Y = 541951.631 X = 68690.550 DB = S89°43'09"W DA = N86°58'20"W	PI STA = 502+06.97 SW Y = 541962.377 X = 68894.056 DELTA = 70°07'08" LT D = 76°23'40" T = 52.63' L = 91.79' R = 75.00' PC STA = 501+54.33 SW Y = 541915.720 X = 68918.412 PT STA = 502+46.12 SW Y = 541955.339 X = 68841.897 DB = N27°33'56"W DA = S82°18'56"W	PI STA = 501+24.38 SW Y = 541888.756 X = 68932.488 DELTA = 17°17'41" LT D = 28°38'52" T = 30.42' L = 60.37' R = 200.00' PC STA = 500+93.96 SW Y = 541858.827 X = 68937.911 PT STA = 501+54.33 SW Y = 541915.720 X = 68918.412 DB = N10°16'15"W DA = N27°33'56"W	PI STA = 500+79.73 SW Y = 541844.773 X = 68940.243 DELTA = 3°09'19" LT D = 11°04'37" T = 14.25' L = 28.48' R = 517.25' PC STA = 500+65.48 SW Y = 541830.613 X = 68941.797 PT STA = 500+93.96 SW Y = 541858.827 X = 68937.911 DB = N06°15'50"W DA = N09°25'08"W	PI STA = 500+12.50 SW Y = 541777.688 X = 68940.456 DELTA = 2°24'27" LT D = 9°37'46" T = 12.50' L = 25.00' R = 595.00' PC STA = 500+00.00 SW Y = 541765.185 X = 68940.476 PT STA = 500+25.00 SW Y = 541790.179 X = 68939.912 DB = N00°05'18"W DA = N02°29'46"W

CTH EB

NORTHEAST CURB AND GUTTER CURVE DATA

32	33	34	35
PI STA = 300+12.50 NE Y = 542139.868 X = 69016.508 DELTA = 2°24'27" LT D = 9°37'46" T = 12.50' L = 25.00' R = 595.00' PC STA = 300+00.00 NE Y = 542152.361 X = 69016.002 PT STA = 300+25.00 NE Y = 542127.408 X = 69017.538 DB = S02°19'04"E DA = S04°43'31"E	PI STA = 300+75.66 NE Y = 542076.869 X = 69018.745 DELTA = 1°56'36" LT D = 9°32'57" T = 10.18' L = 20.35' R = 600.00' PC STA = 300+65.48 NE Y = 542086.932 X = 69017.227 PT STA = 300+85.83 NE Y = 542066.863 X = 69020.603 DB = S08°34'40"E DA = S10°31'16"E	PI STA = 301+10.62 NE Y = 542042.495 X = 69025.129 DELTA = 14°07'43" LT D = 28°38'52" T = 24.78' L = 49.32' R = 200.00' PC STA = 300+85.83 NE Y = 542066.863 X = 69020.603 PT STA = 301+35.15 NE Y = 542019.969 X = 69035.466 DB = S10°31'16"E DA = S24°39'00"E	PI STA = 301+99.00 NE Y = 541961.936 X = 69062.096 DELTA = 80°49'08" LT D = 76°23'40" T = 63.85' L = 105.79' R = 75.00' PC STA = 301+35.15 NE Y = 542019.969 X = 69035.466 PT STA = 302+40.94 NE Y = 541978.966 X = 69123.635 DB = S24°39'00"E DA = N74°31'53"E

NORTHEAST CURB AND
GUTTER REFERENCE LINECENTER CIRCLE CURB AND GUTTER
CURVE DATA

40
PI STA = -0+00.04 CC Y = 541954.187 X = 69036.822 DELTA = 359°55'11" RT D = 104°10'27" T = 0.04' L = 345.50' R = 55.00' PC STA = 0+00.00 CC Y = 541954.149 X = 69036.819 PT STA = 3+45.50 CC Y = 541954.225 X = 69036.826 DB = S05°36'20"W DA = S05°31'32"W

CTH EE

SOUTHEAST CURB AND GUTTER CURVE DATA

36	37	38	39
PI STA = 402+13.12 SE Y = 541867.231 X = 68980.804 DELTA = 61°10'52" LT D = 76°23'40" T = 44.34' L = 80.09' R = 75.00' PC STA = 401+68.78 SE Y = 541892.567 X = 69017.191 PT STA = 402+48.86 SE Y = 541823.138 X = 68985.463 DB = S55°08'59"W DA = S06°01'53"E	PI STA = 401+40.95 SE Y = 541908.681 X = 69040.332 DELTA = 16°03'04" LT D = 28°38'52" T = 28.20' L = 56.03' R = 200.00' PC STA = 401+12.75 SE Y = 541917.768 X = 69067.027 PT STA = 401+68.78 SE Y = 541892.567 X = 69017.191 DB = S71°12'03"W DA = S55°08'59"W	PI STA = 400+89.10 SE Y = 541925.394 X = 69089.427 DELTA = 3°23'18" LT D = 7°09'43" T = 23.66' L = 47.31' R = 800.00' PC STA = 400+65.44 SE Y = 541931.682 X = 69112.239 PT STA = 401+12.75 SE Y = 541917.768 X = 69067.027 DB = S74°35'22"W DA = S71°12'03"W	PI STA = 400+12.50 SE Y = 541939.229 X = 69164.589 DELTA = 1°48'07" LT D = 7°12'25" T = 12.50' L = 25.00' R = 795.00' PC STA = 400+00.00 SE Y = 541941.556 X = 69176.872 PT STA = 400+25.00 SE Y = 541936.517 X = 69152.385 DB = S79°16'27"W DA = S77°28'21"W

SOUTHEAST CURB AND
GUTTER REFERENCE LINE

CTH EB SUPERELEVATION				
CURVE	STATION	REMARKS	LEFT LANE	RIGHT LANE
1	100+00.00'	END FULL SUPER (MATCH EXISTING)	-3.50%	3.50%
	100+75.00'	REVERSE CROWN	-2.00%	2.00%
	102+75.00'	BEGIN NORMAL CROWN	-2.00%	-2.00%
2	108+54.80'	END NORMAL CROWN	-2.00%	-2.00%
	100+54.80'	REVERSE CROWN	2.00%	-2.00%
	111+29.80'	BEGIN FULL SUPER (MATCH EXISTING)	3.50%	-3.70%

Estimate Of Quantities

9277-03-73

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	3.000	3.000
0004	204.0150	Removing Curb & Gutter	LF	600.000	600.000
0006	204.0210	Removing Manholes	EACH	2.000	2.000
0008	204.0220	Removing Inlets	EACH	1.000	1.000
0010	204.0245	Removing Storm Sewer (size) 01. 18-Inch	LF	495.000	495.000
0012	204.0245	Removing Storm Sewer (size) 02. 54X40-Inch	LF	165.000	165.000
0014	205.0100	Excavation Common	CY	9,460.000	9,460.000
0016	205.0400	Excavation Marsh	CY	1,542.000	1,542.000
0018	208.1100	Select Borrow	CY	2,313.000	2,313.000
0020	213.0100	Finishing Roadway (project) 01. 9277-03-73	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	300.000	300.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	12,500.000	12,500.000
0026	310.0115	Base Aggregate Open-Graded	CY	22.000	22.000
0028	311.0110	Breaker Run	TON	2,280.000	2,280.000
0030	405.0100	Coloring Concrete WisDOT Red	CY	220.000	220.000
0032	405.0200	Coloring Concrete Custom	CY	25.000	25.000
0034	405.1000	Stamping Colored Concrete	CY	25.000	25.000
0036	415.2010	Concrete Truck Apron 12-Inch	SY	652.000	652.000
0038	455.0605	Tack Coat	GAL	1,300.000	1,300.000
0040	460.2000	Incentive Density HMA Pavement	DOL	2,140.000	2,140.000
0042	460.6223	HMA Pavement 3 MT 58-28 S	TON	2,390.000	2,390.000
0044	460.6424	HMA Pavement 4 MT 58-28 H	TON	940.000	940.000
0046	465.0315	Asphaltic Flumes	SY	24.000	24.000
0048	520.1015	Apron Endwalls for Culvert Pipe 15-Inch	EACH	2.000	2.000
0050	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0052	520.3315	Culvert Pipe Class III-A 15-Inch	LF	32.000	32.000
0054	520.3318	Culvert Pipe Class III-A 18-Inch	LF	62.000	62.000
0056	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2.000	2.000
0058	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000
0060	522.2419	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	76.000	76.000
0062	522.2619	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	2.000	2.000
0064	522.2648	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 48x76-Inch	EACH	2.000	2.000
0066	601.0405	Concrete Curb & Gutter 18-Inch Type A	LF	224.000	224.000
0068	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,610.000	1,610.000
0070	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	1,259.000	1,259.000
0072	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	791.000	791.000
0074	601.0581	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type R	LF	346.000	346.000
0076	601.0600	Concrete Curb Pedestrian	LF	80.000	80.000
0078	602.0405	Concrete Sidewalk 4-Inch	SF	16,040.000	16,040.000
0080	602.0415	Concrete Sidewalk 6-Inch	SF	910.000	910.000
0082	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	320.000	320.000
0084	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	40.000	40.000
0086	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	132.000	132.000
0088	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	20.000	20.000
0090	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	52.000	52.000
0092	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	312.000	312.000
0094	611.0535	Manhole Covers Type J-Special	EACH	2.000	2.000
0096	611.0636	Inlet Covers Type HM-S	EACH	5.000	5.000
0098	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000

Estimate Of Quantities

9277-03-73

Line	Item	Item Description	Unit	Total	Qty
0100	611.0642	Inlet Covers Type MS	EACH	2.000	2.000
0102	611.0652	Inlet Covers Type T	EACH	2.000	2.000
0104	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0106	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0108	611.3004	Inlets 4-FT Diameter	EACH	2.000	2.000
0110	611.3230	Inlets 2x3-FT	EACH	4.000	4.000
0112	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0114	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	436.000	436.000
0116	619.1000	Mobilization	EACH	1.000	1.000
0118	620.0300	Concrete Median Sloped Nose	SF	432.000	432.000
0120	624.0100	Water	MGAL	190.000	190.000
0122	625.0100	Topsoil	SY	10,700.000	10,700.000
0124	625.0105	Topsoil	CY	40.000	40.000
0126	628.1504	Silt Fence	LF	810.000	810.000
0128	628.1520	Silt Fence Maintenance	LF	1,620.000	1,620.000
0130	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0132	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0134	628.2004	Erosion Mat Class I Type B	SY	8,500.000	8,500.000
0136	628.2008	Erosion Mat Urban Class I Type B	SY	2,160.000	2,160.000
0138	628.7005	Inlet Protection Type A	EACH	12.000	12.000
0140	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0142	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0144	628.7020	Inlet Protection Type D	EACH	8.000	8.000
0146	628.7504	Temporary Ditch Checks	LF	170.000	170.000
0148	628.7555	Culvert Pipe Checks	EACH	33.000	33.000
0150	629.0210	Fertilizer Type B	CWT	7.000	7.000
0152	630.0120	Seeding Mixture No. 20	LB	480.000	480.000
0154	630.0500	Seed Water	MGAL	250.000	250.000
0156	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	35.000	35.000
0158	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	4.000	4.000
0160	637.2210	Signs Type II Reflective H	SF	323.750	323.750
0162	637.2230	Signs Type II Reflective F	SF	34.000	34.000
0164	638.2102	Moving Signs Type II	EACH	4.000	4.000
0166	638.2602	Removing Signs Type II	EACH	26.000	26.000
0168	638.3000	Removing Small Sign Supports	EACH	26.000	26.000
0170	642.5001	Field Office Type B	EACH	1.000	1.000
0172	643.0420	Traffic Control Barricades Type III	DAY	2,944.000	2,944.000
0174	643.0705	Traffic Control Warning Lights Type A	DAY	4,416.000	4,416.000
0176	643.0900	Traffic Control Signs	DAY	24,932.000	24,932.000
0178	643.0920	Traffic Control Covering Signs Type II	EACH	3.000	3.000
0180	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0182	643.5000	Traffic Control	EACH	1.000	1.000
0184	645.0111	Geotextile Type DF Schedule A	SY	316.000	316.000
0186	646.2020	Marking Line Epoxy 6-Inch	LF	7,260.000	7,260.000
0188	646.4020	Marking Line Epoxy 10-Inch	LF	190.000	190.000
0190	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	170.000	170.000
0192	646.7120	Marking Diagonal Epoxy 12-Inch	LF	180.000	180.000
0194	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	300.000	300.000
0196	646.8120	Marking Curb Epoxy	LF	40.000	40.000

Estimate Of Quantities

9277-03-73

Line	Item	Item Description	Unit	Total	Qty
0198	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0200	650.4000	Construction Staking Storm Sewer	EACH	18.000	18.000
0202	650.4500	Construction Staking Subgrade	LF	1,860.000	1,860.000
0204	650.5000	Construction Staking Base	LF	1,860.000	1,860.000
0206	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	4,310.000	4,310.000
0208	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
0210	650.8501	Construction Staking Electrical Installations (project) 01. 9277-03-73	EACH	1.000	1.000
0212	650.9000	Construction Staking Curb Ramps	EACH	12.000	12.000
0214	650.9500	Construction Staking Sidewalk (project) 01. 9277-03-73	EACH	1.000	1.000
0216	650.9911	Construction Staking Supplemental Control (project) 01. 9277-03-73	EACH	1.000	1.000
0218	650.9920	Construction Staking Slope Stakes	LF	1,860.000	1,860.000
0220	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	138.000	138.000
0222	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,582.000	1,582.000
0224	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	10.000	10.000
0226	654.0105	Concrete Bases Type 5	EACH	12.000	12.000
0228	654.0224	Concrete Control Cabinet Bases Type L24	EACH	1.000	1.000
0230	655.0610	Electrical Wire Lighting 12 AWG	LF	2,304.000	2,304.000
0232	655.0615	Electrical Wire Lighting 10 AWG	LF	6,802.000	6,802.000
0234	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. LCC A	EACH	1.000	1.000
0236	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	12.000	12.000
0238	657.0322	Poles Type 5-Aluminum	EACH	12.000	12.000
0240	657.0615	Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	EACH	12.000	12.000
0242	659.1115	Luminaires Utility LED A	EACH	12.000	12.000
0244	659.2124	Lighting Control Cabinets 120/240 24-Inch	EACH	1.000	1.000
0246	680.0100	Public Land Reference Monument Verify and Reset	EACH	3.000	3.000
0248	690.0150	Sawing Asphalt	LF	123.000	123.000
0250	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0252	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0254	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0256	SPV.0060	Special 01. Inlets 2x3-FT Special	EACH	2.000	2.000
0258	SPV.0060	Special 02. Temporary Water Diversion - Station 21+00	EACH	1.000	1.000
0260	SPV.0060	Special 03. Adjusting Water Valve Boxes	EACH	4.000	4.000
0262	SPV.0060	Special 04. Temporary Lighting System, CTH EE/CTH EB Roundabout	EACH	1.000	1.000
0264	SPV.0090	Special 01. Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 48x76	LF	252.000	252.000
0266	SPV.0165	Special 01. Weed Barrier	SF	1,720.000	1,720.000
0268	SPV.0180	Special 01. Double Shredded Hardwood Mulch	SY	200.000	200.000

REMOVING SMALL PIPE CULVERTS

203.0100			
STATION	LOCATION	EACH	REMARKS
24+07	CTH EE EB	1	30 LF, 18" CMCP
26+17	CTH EE EB	1	30 LF, 15" CMCP
102+95	CTH EB NB	1	30 LF, 18" CMCP
TOTAL 0010		3	

REMOVING MANHOLES AND INLETS

204.0210 204.0220			
REMOVING REMOVING			
MANHOLES INLETS			
STATION	LOCATION	EACH	EACH
20+45	CTH EE EB, RT	-	1
20+47	CTH EE EB, LT	1	-
21+30	CTH EE EB, RT	1	-
TOTAL 0010		2	1

REMOVING CURB & GUTTER

204.0150				
STATION	TO	STATION	LOCATION	LF
18+88	-	20+54	CTH EE EB	172
20+07	-	20+57	CTH EE EB	65
20+83	-	21+82	CTH EE EB	68
21+02	-	21+42	CTH EE EB	94
103+80	-	105+72	CTH EB NB	201
TOTAL 0010				600

REMOVING STORM SEWER

				204.0245.01	204.0245.02
				REMOVING STORM	REMOVING STORM
				SEWER 18-INCH	SEWER 54X40-INCH
STATION	TO	STATION	LOCATION	LF	LF
18+70	-	21+30	CTH EE EB, RT	260	-
19+95	-	21+40	CTH EE EB	-	165
103+75	-	105+75	CTH EB NB, LT	207	-
106+75	-	107+00	CTH EB NB, LT	28	-
TOTAL 0010				495	165

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	205.0400 EXCAVATION MARSH (6)	EXPANDED MARSH BACKFILL (10)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	COMMENT
			CUT (2)	EBS EXCAVATION (3)				FACTOR 1.50		FACTOR 1.33			
1	15+00 - 26+65	CTH EE EB	3,037	-	427	2,610	946	1,419	1,098	1,460	3,092	1,373	EBS
	19+75 - 23+75	CTH EE WB	314	-	144	170	180	270	500	665	-175	324	
	100+00 - 111+30	CTH EB NB	4,273	-	473	3,800	286	429	387	515	3,863	759	
	104+50 - 107+50	CTH EB SB	357	-	51	306	0	0	27	36	266	51	
	0+00 - 3+42	RAB CIRCLE	247	-	247	-	130	195	1,040	1,383	-1,268	377	
		UNDISTRIBUTED	-	1,232	-	-	-	-	-	-	-	1,232	
GRAND TOTAL			8,228	1,232	1,342	6,886	1,542	2,313	3,052	4,059	5,778	4,116	
TOTAL COMMON EXC			9,460										

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
- (2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) EXCAVATION MARSH - TO BE BACKFILLED WITH SELECT BORROW MATERIAL. ITEM NUMBER 208.1100.
- (10) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL. MARSH BACKFILL FACTOR = 1.50. ITEM NUMBER 208.1100
- (13) EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR. EXPANDED FILL FACTOR = 1.33
- (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.

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

BASE AGGREGATE DENSE								
305.0110 305.0120 311.0110 624.0100								
BASE AGGREGATE BASE AGGREGATE BREAKER								
DENSE 3/4-INCH DENSE 1 1/4-INCH RUN WATER								
STATION	TO	STATION	LOCATION	TON	TON	TON	MGAL	REMARKS
15+00	-	20+18	CTH EE EB	50	2,880	-	43	WEST LEG
21+66	-	26+65	CTH EE EB	95	2,790	-	42	EAST LEG
100+00	-	105+07	CTH EB NB	95	2,830	-	45	SOUTH LEG
106+55	-	111+30	CTH EB NB	60	2,660	-	40	NORTH LEG
0+00	-	3+46	RAB CIRCLE	-	1,340	-	20	ROUNDAABOUT
UNDISTRIBUTED				-	-	2,280	-	EBS
TOTAL 0010				300	12,500	2,280	190	

CONCRETE TRUCK APRON						
405.0100 415.2010						
COLORING CONCRETE						
CONCRETE TRUCK APRON						
WISDOT RED 12-INCH						
STATION	TO	STATION	LOCATION	CY	SY	REMARKS
19+67	-	20+66	CTHE EE EB	18	50	SOUTHWEST QUADRANT
19+84	-	20+60	CTHE EE EB	16	45	NORTHWEST QUADRANT
21+19	-	21+39	CTHE EE EB	8	23	SOUTHEAST QUADRANT
0+00	-	3+46	RAB CIRCLE	178	534	ROUNDAABOUT
TOTAL 0010				220	652	

HMA PAVEMENT							
455.0605 460.6223 460.6424							
HMA PAVEMENT HMA PAVEMENT							
TACK COAT 3 MT 58-28 S 4 MT 58-28 H							
STATION	TO	STATION	LOCATION	GAL	TON	TON	REMARKS
15+00	-	20+18	CTH EE EB	305	558	220	WEST LEG
21+66	-	26+65	CTH EE EB	294	540	210	EAST LEG
100+00	-	105+07	CTH EB NB	298	550	215	SOUTH LEG
106+55	-	111+30	CTH EB NB	275	507	200	NORTH LEG
0+00	-	3+46	RAB CIRCLE	128	235	95	ROUNDAABOUT
TOTAL 0010				1,300	2,390	940	

CONCRETE CURB & GUTTER										
601.0405 601.0411 601.0553 601.0557 601.0581 601.0600 620.0300										
CONCRETE CURB & CONCRETE CURB & CONCRETE CURB & CONCRETE CURB & CONCRETE CURB & CONCRETE CONCRETE										
GUTTER 18-INCH GUTTER 30-INCH GUTTER 4-INCH SLOPED GUTTER 6-INCH SLOPED GUTTER 4-INCH SLOPED CURB MEDIAN SLOPED										
TYPE A TYPE D 36-INCH TYPE D 36-INCH TYPE D 30-INCH TYPE R PEDESTRIAN NOSE										
STATION	TO	STATION	LOCATION	LF	LF	LF	LF	LF	LF	SF
17+22	-	20+18	CTH EE EB	-	327	295	-	-	19	108
18+00	-	20+84	CTH EE EB	-	-	146	253	-	-	-
18+00	-	20+64	CTH EE EB	-	-	112	289	-	-	-
20+93	-	23+03	CTH EE EB	-	302	-	-	-	-	-
21+16	-	22+90	CTH EE EB	-	-	62	249	-	-	-
21+66	-	24+23	CTH EE EB	-	328	207	-	-	21	108
102+54	-	105+07	CTH EB NB	-	328	207	-	-	21	108
106+55	-	109+21	CTH EB NB	-	325	230	-	-	19	108
0+00	-	3+46	RAB CIRCLE	224	-	-	-	346	-	-
TOTAL 0010				224	1,610	1,259	791	346	80	432

CULVERT PIPES										
520.1015 520.1018 520.3315 520.3318 522.2419 522.2619 522.2648 SPV.0090.01										
APRON ENDWALLS APRON ENDWALLS CULVERT PIPE CLASS CULVERT PIPE CLASS STEEL CULVERT PIPE REINFORCED APRON ENDWALLS FOR CULVERT PIPE APRON ENDWALLS FOR CULVERT PIPE APRON ENDWALLS FOR CULVERT PIPE CULVERT PIPE REINFORCED										
FOR CULVERT PIPE FOR CULVERT PIPE CULVERT PIPE CLASS CULVERT PIPE CLASS THICKNESS CONCRETE HORIZONTAL ELLIPTICAL REINFORCED CONCRETE HORIZONTAL REINFORCED CONCRETE HORIZONTAL REINFORCED CONCRETE HORIZONTAL CONCRETE HORIZONTAL ELLIPTICAL										
15-INCH 18-INCH III-A 15-INCH III-A 18-INCH INCHES CLASS HE-IV 19X30-INCH ELLIPTICAL 19X30-INCH ELLIPTICAL 48X76-INCH ELLIPTICAL 48X76-INCH CLASS HE-IV 48X76-INCH										
STATION	LOCATION	EACH	EACH	LF	LF	INCHES	LF	EACH	EACH	LF
26+07	CTH EE EB	-	2	-	30	0.064	-	-	-	-
26+17	CTH EE EB	2	-	32	-	0.064	-	-	-	-
20+21	CTH EE WB	-	-	-	-	-	-	-	2	252
102+95	CTH EB NB	-	2	-	32	0.064	-	-	-	-
104+13	CTH EB NB	-	-	-	-	-	76	2	-	-
TOTAL 0010		2	4	32	62		76	2	2	252

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

CONCRETE SIDEWALK									
		405.0200	405.1000	602.0405	602.0415	602.0515			
		COLORING	STAMPING			CURB RAMP DETECTABLE			
		CONCRETE	COLORED	CONCRETE	CONCRETE	WARNING FIELD NATURAL			
		CUSTOM (TAN)	CONCRETE	SIDEWALK 4-INCH	SIDEWALK 6-INCH	PATINA			
STATION	TO	STATION	LOCATION	CY	CY	SF	SF	SF	REMARKS
17+29	-	20+13	CTH EE EB	-	-	2,320	92	40	WEST MEDIAN
19+18	-	20+76	CTH EE EB	-	-	1,524	125	40	SOUTHWEST QUADRANT
19+34	-	20+61	CTH EE EB	-	-	1,520	62	40	NORTHWEST QUADRANT
21+02	-	22+75	CTH EE EB	-	-	1,634	140	40	SOUTHEAST QUADRANT
21+19	-	22+59	CTH EE EB	-	-	1,475	201	40	NORTHEAST QUADRANT
21+74	-	24+16	CTH EE EB	-	-	2,000	102	40	EAST MEDIAN
102+61	-	105+02	CTH EB NB	-	-	1,775	99	40	SOUTH MEDIAN
106+61	-	109+15	CTH EB NB	-	-	1,976	89	40	NORTH MEDIAN
0+00	-	3+46	RAB CIRCLE	25	25	1,816	-	-	RAB CIRCLE
TOTAL 0010				25	25	16,040	910	320	

ASPHALTIC FLUMES		
		465.0315
		ASPHALTIC
		FLUMES
STATION	LOCATION	SY
22+90	CTH EE EB	6
23+05	CTH EE WB	6
103+80	CTH EB NB	6
103+80	CTH EB SB	6
TOTAL 0010		24

STORM SEWER PIPE									
		608.0315	608.0318	608.0412	608.0415	608.0424			
		STORM SEWER PIPE	STORM SEWER PIPE	STORM SEWER PIPE	STORM SEWER PIPE	STORM SEWER PIPE			
		REINFORCED CONCRETE	REINFORCED CONCRETE	REINFORCED CONCRETE	REINFORCED CONCRETE	REINFORCED CONCRETE			
		CLASS III 15-INCH	CLASS III 18-INCH	CLASS IV 12-INCH	CLASS IV 15-INCH	CLASS IV 24-INCH			
STRUCTURE	TO	STRUCTURE	LOCATION	LF	LF	LF	LF	LF	
1	-	2	CTH EE AND CTH EB INTERSECTION	-	124	-	-	-	
2	-	3	CTH EE AND CTH EB INTERSECTION	-	-	-	-	143	
2A	-	2B	CTH EE AND CTH EB INTERSECTION	-	-	10	-	-	
2	-	2B	CTH EE AND CTH EB INTERSECTION	-	8	-	-	-	
2B	-	2C	CTH EE AND CTH EB INTERSECTION	-	-	-	52	-	
2D	-	2C	CTH EE AND CTH EB INTERSECTION	-	-	10	-	-	
3	-	4	CTH EE AND CTH EB INTERSECTION	-	-	-	-	10	
4	-	5	CTH EE AND CTH EB INTERSECTION	-	-	-	-	114	
5	-	6	CTH EE AND CTH EB INTERSECTION	-	-	-	-	45	
11	-	11A	CTH EE AND CTH EB INTERSECTION	19	-	-	-	-	
12	-	12A	CTH EE AND CTH EB INTERSECTION	21	-	-	-	-	
TOTAL 0010				40	132	20	52	312	

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

STORM SEWER STRUCTURES AND COVERS

			522.1015	522.1024	611.0535	611.0636	611.0639	611.0642	611.0652	611.2004	611.2005	611.3004	611.3230	611.3902	SPV.0060.01
			APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	MANHOLE COVERS TYPE J-SPECIAL	INLET COVERS TYPE HM-S	INLET COVERS TYPE H-S	INLET COVERS TYPE MS	INLET COVERS TYPE T	MANHOLES 4-FT DIAMETER	MANHOLES 5-FT DIAMETER	INLETS 4-FT DIAMETER	INLETS 2X3-FT	INLETS MEDIAN 2 GRATE	INLETS 2X3-FT SPECIAL
STRUCTURE	STATION	LOCATION	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1	17+88	CTH EE EB	-	-	-	-	-	2	-	-	-	-	-	1	-
2A	18+99	CTH EE EB	-	-	-	1	-	-	-	-	-	-	1	-	-
2	19+09	CTH EE EB	-	-	1	-	-	-	-	-	1	-	-	-	-
2B	19+09	CTH EE EB	-	-	-	1	-	-	-	-	-	-	1	-	-
5	21+71	CTH EE EB	-	-	1	-	-	-	-	1	-	-	-	-	-
6	22+02	CTH EE EB	-	1	-	-	-	-	-	-	-	-	-	-	-
2D	18+99	CTH EE WB	-	-	-	1	-	-	-	-	-	-	1	-	-
2C	19+09	CTH EE WB	-	-	-	1	-	-	-	-	-	-	1	-	-
12A	107+24	CTH EB NB	1	-	-	-	-	-	-	-	-	-	-	-	-
12	107+30	CTH EB NB	-	-	-	-	1	-	-	-	-	-	-	-	1
11A	107+31	CTH EB SB	1	-	-	-	-	-	-	-	-	-	-	-	-
11	107+32	CTH EB SB	-	-	-	1	-	-	-	-	-	-	-	-	1
4	1+14	RAB CIRCLE	-	-	-	-	-	-	1	-	-	1	-	-	-
3	1+25	RAB CIRCLE	-	-	-	-	-	-	1	-	-	1	-	-	-
TOTAL 0010			2	1	2	5	1	2	2	1	1	2	4	1	2

PIPE UNDERDRAIN ITEMS

		310.0115	612.0406	645.0111	STRUCTURE
		BASE AGGREGATE	PIPE UNDERDRAIN	GEOTEXTILE TYPE	
STATION	TO STATION	OPEN-GRADED	WRAPPED 6-INCH	DF SCHEDULE A	
LOCATION		CY	LF	SY	
18+99		1	15	11	2A
19+09		1	15	11	2B
18+99		1	15	11	2D
19+09		1	15	11	2C
107+30		1	15	11	8A
107+32		1	15	11	8B
1+14	- 1+24	16	346	250	4-3
TOTAL 0010		22	436	316	

ROUNDBOUT LANDSCAPING

		625.0105	SPV.0165.01	SPV.0180.01
		TOPSOIL	WEED BARRIER	DOUBLE SHREDDED
LOCATION		CY	SF	HARDWOOD MULCH
				SY
RAB CIRCLE		40	1,720	200
TOTAL 0010		40	1,720	200

MOBILIZATIONS EROSION CONTROL

		628.1905	628.1910
		MOBILIZATIONS	MOBILIZATIONS
		EROSION	EMERGENCY
		CONTROL	EROSION CONTROL
LOCATION		EACH	EACH
PROJECT		5	3
TOTAL 0010		5	3

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

SILT FENCE

				628.1504	628.1520
				SILT FENCE	SILT FENCE
				LF	MAINTENANCE
				LF	LF
STATION	TO	STATION	LOCATION		
15+00	-	20+30	CTH EE EB, LT	560	1,120
21+95	-	22+40	CTH EE EB, RT	60	120
	-		UNDISTRIBUTED	190	380
TOTAL 0010				810	1,620

INLET PROTECTION

			628.7005	628.7010	628.7015	628.7020
			INLET	INLET	INLET	INLET
			PROTECTION	PROTECTION	PROTECTION	PROTECTION
			TYPE A	TYPE B	TYPE C	TYPE D
			EACH	EACH	EACH	EACH
STRUCTURE	STATION	LOCATION				
1	17+88	CTH EE EB, RT	1	1	-	-
2A	18+99	CTH EE EB, RT	1	-	1	-
2B	19+09	CTH EE EB, RT	1	-	-	1
2D	18+99	CTH EE WB, LT	1	-	1	-
2C	19+09	CTH EE WB, LT	1	-	-	1
12	107+30	CTH EB NB, RT	1	-	-	1
11	107+32	CTH EB SB, LT	1	-	-	1
4	1+14	RAB CIRCLE	1	-	-	1
3	1+25	RAB CIRCLE	1	-	-	1
		UNDISTRIBUTED	3	1	1	2
TOTAL 0010			12	2	3	8

TEMPORARY DITCH CHECKS

		628.7504
		LF
STATION	LOCATION	
15+00	CTH EE EB, RT	15
17+00	CTH EE EB, RT	15
24+00	CTH EE EB, RT	15
24+50	CTH EE EB, LT	15
102+00	CTH EB NB, LT	15
103+00	CTH EB NB, RT	15
107+00	CTH EB NB, LT	15
109+00	CTH EB NB, RT	15
109+00	CTH EB NB, LT	15
	UNDISTRIBUTED	35
TOTAL 0010		170

CULVERT PIPE CHECKS

			628.7555
			EACH
STRUCTURE	STATION	LOCATION	
9	20+21	CTH EE EB, LT	15
	25+90	CTH EE EB, LT	2
	26+00	CTH EE EB, RT	2
	102+85	CTH EB NB, LT	2
7	104+12	CTH EB SB, LT	5
		UNDISTRIBUTED	7
TOTAL 0010			33

LANDSCAPING ITEMS

				625.0100	628.2004	628.2008	629.0210	630.0120	630.0500	REMARKS
				TOPSOIL	EROSION MAT	EROSION MAT URBAN	FERTILIZER	SEEDING MIXTURE	SEED	
				SY	CLASS I TYPE B	CLASS I TYPE B	TYPE B	NO. 20	WATER	
							CWT	LB	MGAL	
STATION	TO	STATION	LOCATION							
15+00	-	21+00	CTH EE EB	1,769	1,315	454	1.2	80	40	SOUTHWEST QUADRANT
15+00	-	21+00	CTH EE EB	1,917	1,617	300	1.3	87	44	NORTHWEST QUADRANT
21+00	-	26+65	CTH EB NB	1,888	1,428	460	1.2	85	43	SOUTHEAST QUADRANT
21+00	-	26+65	CTH EB NB	2,933	2,427	507	1.9	132	66	NORTHEAST QUADRANT
		UNDISTRIBUTED		2,193	1,713	439	1.4	96	57	
TOTAL 0010				10,700	8,500	2,160	7	480	250	

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

ERECTION OF TYPE II SIGNS AND SUPPORTS

*

SIGN NO.	LOCATION	STATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	REMARKS
1	CTH EE	11+95	W2-6	30" X 30"	---	6.25	1	---	
1A	CTH EE	11+95	W13-1	18" X 18"	---	2.25	---	---	15 MPH
2	CTH EE	14+50	J1-1	24" X 39"	6.50	---	1	---	
3	CTH EE	17+45	R4-7	24" X 30"	5.00	---	1	---	
4	CTH EE	19+00	J2-2	48" X 57"	19.00	---	---	1	
5	CTH EE	20+10	R1-2	36" X 31"	3.88	---	1	---	YIELD
5A	CTH EE	20+10	R6-2R	24" X 30"	5.00	---	---	---	
6	CTH EE	20+00	R1-2	36" X 31"	3.88	---	1	---	YIELD
6A	CTH EE	20+00	R1-54	24" X 15"	2.50	---	---	---	
7	CTH EE	20+75	R6-1R	36" X 12"	3.00	---	1	---	
7A	CTH EE	20+75	R6-4B	60" X 24"	10.00	---	---	---	
8	CTH EE	21+75	D1-68	72" X 30"	15.00	---	1	---	
9	CTH EE	22+75	R2-1	24" X 30"	5.00	---	1	---	
10	CTH EE	22+85	J2-2	48" X 57"	19.00	---	---	1	
11	CTH EE	21+75	R1-2	36" X 31"	3.88	---	1	---	YIELD
11A	CTH EE	21+75	R6-2R	24" X 30"	5.00	---	---	---	
12	CTH EE	21+75	R1-2	36" X 31"	3.88	---	1	---	YIELD
12A	CTH EE	21+75	R1-54	24" X 15"	2.50	---	---	---	
13	CTH EE	21+00	R6-1R	36" X 12"	3.00	---	1	---	
13A	CTH EE	21+00	R6-4B	60" X 24"	10.00	---	---	---	
14	CTH EE	20+15	D1-68	78" X 30"	16.25	---	1	---	
15	CTH EE	18+50	R2-1	24" X 30"	5.00	---	1	---	
16	CTH EB	104+00	J2-2	48" X 57"	19.00	---	---	1	
17	CTH EB	105+00	R1-2	36" X 31"	3.88	---	1	---	YIELD
17A	CTH EB	105+00	R1-54	24" X 15"	2.50	---	---	---	
18	CTH EB	105+00	R1-2	36" X 31"	3.88	---	1	---	YIELD
18A	CTH EB	105+00	R6-2R	24" X 30"	5.00	---	---	---	
19	CTH EB	105+50	R6-1R	36" X 12"	3.00	---	1	---	
19A	CTH EB	105+50	R6-4B	60" X 24"	10.00	---	---	---	
20	CTH EB	106+65	D1-68	90" X 30"	18.75	---	1	---	
21	CTH EB	106+65	R1-2	36" X 31"	3.88	---	1	---	YIELD
21A	CTH EB	106+65	R6-2R	24" X 30"	5.00	---	---	---	
22	CTH EB	106+65	R1-2	36" X 31"	3.88	---	1	---	YIELD
22A	CTH EB	106+65	R1-54	24" X 15"	2.50	---	---	---	
23	CTH EB	106+25	R6-1R	36" X 12"	3.00	---	1	---	
23A	CTH EB	106+25	R6-4B	60" X 24"	10.00	---	---	---	

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*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

ERECTION OF TYPE II SIGNS AND SUPPORTS

*

SIGN NO.	LOCATION	STATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	REMARKS
24	CTH EB	105+00	D1-68	90" X 30"	18.75	---	1	---	
25	CTH EB	104+00	R2-1	24" X 30"	5.00	---	1	---	
26	CTH EE	24+00	R4-7	24" X 30"	5.00	---	1	---	
27	CTH EE	26+75	J1-1	24" X 39"	6.50	---	1	---	
28	CTH EE	28+95	W2-6	30" X 30"	---	6.25	1	---	
28A	CTH EE	28+95	W13-1	18" X 18"	---	2.25	---	---	
29	CTH EB	98+00	W2-6	30" X 30"	---	6.25	1	---	
29A	CTH EB	98+00	W13-1	18" X 18"	---	2.25	---	---	
30	CTH EB	99+75	J1-1	24" X 39"	6.50	---	1	---	
31	CTH EB	102+75	R4-7	24" X 30"	5.00	---	1	---	
32	CTH EB	107+75	J2-2	48" X 57"	19.00	---	---	1	
33	CTH EB	108+50	R2-1	24" X 30"	5.00	---	1	---	
34	CTH EB	109+00	R4-7	24" X 30"	5.00	---	---	---	
35	CTH EB	111+50	J1-1	24" X 39"	6.50	---	1	---	
36	CTH EB	114+00	W2-6	30" X 30"	---	6.25	1	---	
36A	CTH EB	114+00	W13-1	18" X 18"	---	2.25	---	---	

PAGE SUBTOTALS 82.25 25.50 11 1

PROJECT TOTALS 323.75 34.00 31 4

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

REMOVAL OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	STATION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
01	CTH EE	16+85	1	1	
02	CTH EE	16+85	1	1	
03	CTH EE	18+25	1	1	
04	CTH EE	19+35	1	1	
05	CTH EE	20+25	1	1	
06	CTH EE	20+25	1	1	
07	CTH EE	20+30	1	1	
08	CTH EB	106+75	1	1	
09	CTH EB	106+75	1	1	
10	CTH EB	106+75	1	1	
11	CTH EE	21+50	1	1	
12	CTH EE	21+50	1	1	
13	CTH EB	105+50	1	1	
14	CTH EB	105+50	1	1	
15	CTH EB	105+50	1	1	
16	CTH EE	21+50	1	1	
17	CTH EE	23+90	1	1	
18	CTH EE	25+95	1	1	
19	CTH EE	27+55	1	1	
20	CTH EE	27+55	1	1	
21	CTH EB	97+00	1	1	
22	CTH EB	97+00	1	1	
23	CTH EB	102+50	1	1	
25	CTH EB	108+80	1	1	
26	CTH EB	110+95	1	1	
27	CTH EB	110+95	1	1	
TOTALS			26	26	

MOVING SIGNS TYPE II

*

SIGN NO.	LOCATION	STATION	638.2102 MOVING SIGNS TYPE II EACH	634.0614 POSTS WOOD 4x6x14 EACH	REMARKS
01	CTH EE	20+25	1	2	MOVE SIGN FOR CONSTRUCTION
02	CTH EE	23+90	1	1	"
03	CTH EE	23+90	1	---	"
04	CTH EB	107+85	1	1	"
TOTALS			4	4	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS (CTH EE)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	* 643.0900 TRAFFIC CONTROL SIGNS DAY	* 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III		* 643.0420 TRAFFIC CONTROL WARNING LIGHTS TYPE A	
						NO. OF CYCLES	EACH	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	
1-A	CTH EE, PLACE 1500' W OF CTH GE	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
2-C	CTH EE, PLACE 500' W OF CTH GE	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M5-1L	21" X 21"	1	92	92						
3	CTH EE, W OF CTH GE, MODIFY EXISTING SIGN	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
4-A	CTH GE, PLACE 1500' S OF CTH EE	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
5-E	CTH GE, PLACE 500' S OF CTH EE	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
6-E	CTH GE, PLACE S OF CTH EE	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
7	CTH EE, PLACE E OF CTH GE	R11-3	60" X 30"	1	92	92			1	92	2	184
8-B	CTH GE, PLACE N OF CTH EE	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
9-G	CTH GE, PLACE 500' S OF CTH G	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M5-1R	21" X 21"	1	92	92						
10-F	CTH GE, PLACE S OF CTH G	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
11-B	CTH G, PLACE E OF CTH GE	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
12-C	CTH G, PLACE 500' W OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M5-1L	21" X 21"	1	92	92						
13-D	CTH G, PLACE W OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
14-B	CTH EB, PLACE N OF CTH G	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
PAGE SUBTOTALS						4,324	0		92		184	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS - CONTINUED (CTH EE)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	* 643.0900 TRAFFIC CONTROL SIGNS DAY	* 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III		* 643.0420 TRAFFIC CONTROL WARNING LIGHTS TYPE A	
						NO. OF CYCLES	EACH	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	
15-G	CTH EB, PLACE 500' S OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M5-1R	21" X 21"	1	92	92						
16-F	CTH EB, PLACE S OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
17-B	CTH GF, PLACE E OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
18-E	CTH GF, PLACE W OF S RIDGE RD	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
19-H	CTH GF, PLACE W OF MID VALLEY DR	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-2	21" X 21"	1	92	92						
20-B	MID VALLEY DR, PLACE S OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-2	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
21	MID VALLEY DR, MODIFY/COVER EXISTING SIGN	M4-8A	24" X 18"	1	92	92	1	1				
	"	M3-2	24" X 12"	1	92	92						
22	CTH EE, PLACE W OF MID VALLEY DR	R11-3	60" X 30"	1	92	92			1	92	2	184
23-J	CTH EE, PLACE 1500' E OF MID VALLEY DR	M3-4	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
24-N	CTH EE, PLACE E OF LAWRENCE DR	M4-8	24" X 12"	1	92	92						
	"	M3-4	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
25-Q	CTH EE, PLACE E OF MID VALLEY DR	M4-8	24" X 12"	1	92	92						
	"	M3-4	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-2	21" X 21"	1	92	92						
26-K	MID VALLEY DR, PLACE N OF CTH EE	M4-8	24" X 12"	1	92	92						
	"	M3-4	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
27-L	MID VALLEY DR, PLACE 500' S OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-4	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M5-1L	21" X 21"	1	92	92						
28-M	MID VALLEY DR, PLACE S OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-4	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
PAGE SUBTOTALS						4,324	1		92		184	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS - CONTINUED (CTH EE)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	* 643.0900 TRAFFIC CONTROL SIGNS DAY		* 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II NO. OF CYCLES EACH		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. IN SERVICE DAY		* 643.0420 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. IN SERVICE DAY	
29-K	CTH GF, PLACE W OF MID VALLEY DR	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
30-N	CTH GF, PLACE E OF S RIDGE RD	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M6-1	21" X 21"	1	92	92							
31-L	CTH GF, PLACE 500' E OF CTH EB	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M5-1L	21" X 21"	1	92	92							
32-M	CTH GF, PLACE E OF CTH EB	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M6-1	21" X 21"	1	92	92							
33-K	CTH EB, PLACE S OF CTH GF	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
34-P	CTH EB, PLACE 500' N OF CTH G	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M5-1R	21" X 21"	1	92	92							
35-O	CTH EB, PLACE N OF CTH G	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M6-1	21" X 21"	1	92	92							
36-K	CTH G, PLACE W OF CTH EB	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
37-L	CTH G, PLACE 500' E OF CTH GE	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M5-1L	21" X 21"	1	92	92							
38-M	CTH G, PLACE E OF CTH GE	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
	"	M6-1	21" X 21"	1	92	92							
39-K	CTH GE, PLACE S OF CTH G	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
	"	M1-5A	24" X 24"	1	92	92							
40	CTH GE, MODIFY EXISTING SIGN	M4-8	24" X 12"	1	92	92							
	"	M3-4	24" X 12"	1	92	92							
41	CTH GE, MODIFY/COVER EXISTING SIGN	M4-8A	24" X 18"	1	92	92	1	1					
	"	M3-4	24" X 12"	1	92	92							

PAGE SUBTOTALS	4,048	1	0	0
PROJECT TOTALS	12,696	2	184	368

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS (CTH EB)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	* 643.0900 TRAFFIC CONTROL SIGNS DAY	* 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III		* 643.0420 TRAFFIC CONTROL WARNING LIGHTS TYPE A	
						NO. OF CYCLES	EACH	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	
1-A	SCHEURING RD, PLACE 1500' W OF CTH EB	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
2-E	SCHEURING RD, PLACE 500' W OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
3-E	SCHEURING RD, PLACE W OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
4-A	CTH F, PLACE 1500' S OF SCHEURING RD/CTH F	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
5	CTH F, MODIFY EXISTING SIGN	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M5-1R	21" X 21"	1	92	92						
6	CTH F, MODIFY EXISTING SIGN	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M5-1R	21" X 21"	1	92	92						
7-B	CTH F, PLACE E OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
8-E	CTH F, PLACE E OF I-41	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
9-D	CTH F, PLACE E OF I-41 NORTH RAMP	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
10	I-41, PLACE N OF CTH F INTERCHANGE	M4-8	36" X 24"	1	92	92						
	"	M3-1	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
11	I-41, PLACE N OF CTH F INTERCHANGE	M4-8	36" X 24"	1	92	92						
	"	M3-1	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
12-H	I-41, PLACE S OF CTH GF EXIT	M4-8	36" X 24"	1	92	92						
	"	M3-1	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
	"	M6-2	30" X 30"	1	92	92						
13-H	I-41, PLACE S OF CTH GF EXIT	M4-8	36" X 24"	1	92	92						
	"	M3-1	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
	"	M6-2	30" X 30"	1	92	92						

PAGE SUBTOTALS 4,140 0 0 0

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS - CONTINUED (CTH EB)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	* 643.0900 TRAFFIC CONTROL SIGNS DAY	* 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III		* 643.0420 TRAFFIC CONTROL WARNING LIGHTS TYPE A	
							NO. OF CYCLES	EACH	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY
19-D	I-41, PLACE ON EXIT S OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
20-B	CTH GF, PLACE W OF I-41 EXIT	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
21-E	CTH GF, PLACE E OF MID VALLEY DR	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
22-B	CTH GF, PLACE W OF MID VALLEY DR	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
23-E	CTH GF, PLACE E OF S RIDGE RD	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
24	CTH GF, MODIFY EXISTING SIGN	M4-8	24" X 12"	1	92	92						
	"	M3-1	24" X 12"	1	92	92						
25	CTH GF, MODIFY/COVER EXISTING SIGN	M4-8A	24" X 18"	1	92	92	1	1				
	"	M3-1	24" X 12"	1	92	92						
26	CTH EB, PLACE S OF CTH GF	R11-3	60" X 30"	1	92	92			1	92	2	184
27-J	CTH EB, PLACE 1500' N OF CTH GF	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
28-L	CTH EB, PLACE 500' N OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M5-1L	21" X 21"	1	92	92						
29-M	CTH EB, PLACE N OF CTH GF	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
30-J	CTH GF, PLACE 1500' W OF CTH EB	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	W20-2A	48" X 48"	1	92	92						
31-N	CTH GF, PLACE 500' W OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
32-N	CTH GF, PLACE W OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						

PAGE SUBTOTALS 4,140 1 92 184

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL DETOUR SIGNS AND COVERING SIGNS - CONTINUED (CTH EB)

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	* 643.0900 TRAFFIC CONTROL SIGNS DAY	* 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III		* 643.0420 TRAFFIC CONTROL WARNING LIGHTS TYPE A	
						NO. OF CYCLES	EACH	NO. IN SERVICE	DAY	NO. IN SERVICE	DAY	
33-K	CTH GF, PLACE E OF CTH EB	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
34-N	CTH GF, PLACE W OF S RIDGE RD	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
35-M	CTH GF, PLACE W OF MID VALLEY DR	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-1	21" X 21"	1	92	92						
36	I-41, PLACE S OF CTH GF INTERCHANGE	M4-8	36" X 24"	1	92	92						
	"	M3-3	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
37	I-41, PLACE S OF CTH GF INTERCHANGE	M4-8	36" X 24"	1	92	92						
	"	M3-3	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
38	I-41, PLACE N OF CTH F EXIT	M4-8	36" X 24"	1	92	92						
	"	M3-3	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
	"	M6-2	30" X 30"	1	92	92						
39	I-41, PLACE N OF CTH F EXIT	M4-8	36" X 24"	1	92	92						
	"	M3-3	36" X 24"	1	92	92						
	"	M1-5A	36" X 36"	1	92	92						
	"	M6-2	30" X 30"	1	92	92						
40-Q	I-41, PLACE ON EXIT N OF CTH F	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
	"	M6-2	21" X 21"	1	92	92						
41-K	CTH F, PLACE W OF I-41	M4-8	24" X 12"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
	"	M1-5A	24" X 24"	1	92	92						
42	CTH F, MODIFY EXISTING SIGN	M4-8A	24" X 18"	1	92	92						
	"	M3-3	24" X 12"	1	92	92						
43	CTH EB, PLACE N OF CTH F	R11-3	60" X 30"	1	92	92			1	92	2	184
PAGE SUBTOTALS						3,220		0		92		184
PROJECT TOTALS						11,500		1		184		368

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRAFFIC CONTROL SUMMARY										
		* 643.0420 TRAFFIC CONTROL BARRICADES TYPE III		* 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		* 643.0900 TRAFFIC CONTROL SIGNS		643.1050 TRAFFIC CONTROL SIGNS PCMS		REMARKS
LOCATION	APPROXIMATE SERVICE DAYS	IN	DAY	IN	DAY	IN	DAY	IN	DAY	
		SERVICE		SERVICE		SERVICE		SERVICE		
FOUR LEGS OF INTERSECTION	7	-	-	-	-	-	-	4	28	ONE WEEK BEFORE ROAD CLOSED: ROAD TO CLOSE; DATE
CTH EE - WEST OF INTERSECTION	92	7	644	10	920	2	184	-	-	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
CTH EE - EAST OF INTERSECTION	92	7	644	10	920	2	184	-	-	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
CTH EB - SOUTH OF INTERSECTION	92	7	644	10	920	2	184	-	-	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
CTH EB - NORTH OF INTERSECTION	92	7	644	10	920	2	184	-	-	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
TOTAL 0010			2,576		3,680		736		28	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING												
				646.2020		646.4020	646.6320	646.7120	646.7420	646.8120	646.8220	
				MARKING LINE	MARKING LINE		MARKING DOTTED	MARKING	MARKING CROSSWALK		MARKING	
				EPOXY 6-INCH	EPOXY 6-INCH	MARKING LINE	EXTENSION EPOXY	DIAGONAL	EPOXY TRANSVERSE LINE	MARKING	ISLAND NOSE	
				YELLOW	WHITE	EPOXY 10-INCH	18-INCH	EPOXY 12-INCH	6-INCH	CURB EPOXY	EPOXY	
STATION	TO	STATION	LOCATION	LF	LF	LF	LF	LF	LF	LF	EACH	REMARKS
15+00	-	20+18	CTH EE EB	874	928	48	48	45	75	10	1	WEST LEG
21+66	-	26+65	CTH EE EB	943	872	47	46	45	77	10	1	EAST LEG
100+00	-	105+07	CTH EB NB	1,076	903	50	38	45	73	10	1	SOUTH LEG
106+55	-	111+30	CTH EB NB	829	835	45	38	45	75	10	1	NORTH LEG
TOTAL 0010				7,260		190	170	180	300	40	4	

SAWING ASPHALT			
		690.0150	
STATION	LOCATION	LF	REMARKS
15+00	CTH EE EB	31	WEST LEG
26+65	CTH EE EB	31	EAST LEG
100+00	CTH EB NB	31	SOUTH LEG
111+30	CTH EB NB	30	NORTH LEG
TOTAL 0010		123	

PUBLIC LAND REFERENCE MONUMENT VERIFY AND RESET		
		680.0100
STATION	LOCATION	EACH
13+38	CTH EE EB	1
17+33	CTH EE EB	1
26+21	CTH EE EB	1
TOTAL 0010		3

CONSTRUCTION STAKING											
				650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
STATION	TO	STATION	LOCATION								
15+00	-	20+18	CTH EE EB	-	420	420	1,441	-	3	420	WEST LEG
21+66	-	26+65	CTH EE EB	-	400	400	1,169	-	3	400	EAST LEG
100+00	-	105+07	CTH EB NB	-	410	410	556	-	3	410	SOUTH LEG
106+55	-	111+30	CTH EB NB	-	380	380	574	-	3	380	NORTH LEG
0+00	-	3+46	RAB CIRCLE	-	250	250	570	-	-	250	ROUNDAABOUT
PROJECT				18	-	-	-	3	-	-	
TOTAL 0010				18	1,860	1,860	4,310	3	12	1,860	

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

3

3

CONDUIT						
			652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	
FROM	TO	LOCATION	LF	LF	LF	
LCC A	-	LPB-1 CTH EE/EB INTERSECTION	78	-	246	
LPB-1	-	A-1 CTH EE/EB INTERSECTION	-	77	510	
A-1	-	LPB-2 CTH EE/EB INTERSECTION	-	12	160	
LPB-2	-	A-2 CTH EE/EB INTERSECTION	-	159	522	
LPB-2	-	LPB-3 CTH EE/EB INTERSECTION	-	63	450	
LPB-3	-	A-3 CTH EE/EB INTERSECTION	-	46	378	
A-3	-	A-4 CTH EE/EB INTERSECTION	-	116	372	
A-4	-	LPB-4 CTH EE/EB INTERSECTION	-	9	102	
LPB-4	-	A-5 CTH EE/EB INTERSECTION	-	161	528	
LPB-4	-	LPB-5 CTH EE/EB INTERSECTION	-	61	228	
LPB-5	-	A-6 CTH EE/EB INTERSECTION	-	58	198	
A-6	-	LPB-6 CTH EE/EB INTERSECTION	-	92	0	
LPB-6	-	A-7 CTH EE/EB INTERSECTION	-	15	90	
A-7	-	A-8 CTH EE/EB INTERSECTION	-	193	624	
LPB-6	-	LPB-7 CTH EE/EB INTERSECTION	-	63	213	
LPB-7	-	A-9 CTH EE/EB INTERSECTION	-	38	138	
A-9	-	LPB-8 CTH EE/EB INTERSECTION	-	97	315	
LPB-8	-	A-10 CTH EE/EB INTERSECTION	-	6	63	
A-10	-	A-11 CTH EE/EB INTERSECTION	-	172	561	
LPB-8	-	LPB-9 CTH EE/EB INTERSECTION	-	63	468	
LPB-9	-	A-12 CTH EE/EB INTERSECTION	-	34	294	
A-12	-	LPB-10 CTH EE/EB INTERSECTION	-	7	132	
LPB-10	-	LCC A CTH EE/EB INTERSECTION	60	-	210	
CONDUIT STUBS			-	40	-	
TOTAL 0010			138	1,582	6,802	

LIGHTING CONTROL CABINET AND BASES

			654.0224 CONCRETE CONTROL CABINET BASES TYPE L24	656.0201.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LCC A)	659.2124 LIGHTING CONTROL CABINETS 120/240 24-INCH	
STATION	OFFSET	LOCATION	EACH	EACH	EACH	REMARKS
2+94	55.9 LT	RAB CIRCLE	1	1	1	LCC A
TOTAL 0010			1	1	1	

TEMPORARY WATER DIVERSION - STATION 21+00

			SPV.0060.02	
STATION	LOCATION	EACH	REMARKS	
21+00	CTH EE EB	1	STRUCTURE 9 - STRUCTURE 10	
TOTAL 0010		1		

PULL BOXES NON-CONDUCTIVE 24X42-INCH

			653.0164 PULL BOXES NON- CONDUCTIVE 24X42-INCH	
STATION	OFFSET	LOCATION	EACH	REMARKS
2+99	32.7 LT	RAB CIRCLE	1	LPB-1
22+39	23.3 LT	CTH EE WB	1	LPB-2
22+32	23.7 RT	CTH EE EB	1	LPB-3
104+45	23.4 RT	CTH EB NB	1	LPB-4
104+46	26.1 LT	CTH EB SB	1	LPB-5
19+70	28.1 RT	CTH EE EB	1	LPB-6
19+74	22.6 LT	CTH EE WB	1	LPB-7
107+03	26.1 LT	CTH EB SB	1	LPB-8
107+01	25.2 RT	CTH EB NB	1	LPB-9
2+94	35.1 LT	RAB CIRCLE	1	LPB-10
TOTAL 0010			10	

CONCRETE BASES TYPE 5

			654.0105 CONCRETE BASES TYPE 5	
STATION	OFFSET	LOCATION	EACH	REMARKS
22+27	23.8 LT	CTH EE WB	1	A1
23+94	22.0 LT	CTH EE WB	1	A2
21+77	26.5 RT	CTH EE EB	1	A3
104+53	23.0 RT	CTH EB NB	1	A4
102+89	22.0 RT	CTH EB NB	1	A5
105+06	28.2 LT	CTH EB SB	1	A6
19+57	22.5 RT	CTH EE EB	1	A7
17+67	22.0 RT	CTH EE EB	1	A8
20+13	25.6 LT	CTH EE WB	1	A9
107+09	24.1 LT	CTH EB SB	1	A10
108+75	22.0 LT	CTH EB SB	1	A11
2+94	35.1 LT	RAB CIRCLE	1	A12
TOTAL 0010			12	

LIGHTING UNITS AND ELECTRICAL WIRE LIGHTING

			655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	657.0322 POLES TYPE 5- ALUMINUM	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	659.1115 LUMINAIRES UTILITY LED A	
STATION	OFFSET	LOCATION	LF	EACH	EACH	EACH	EACH	REMARKS
22+27	23.8 LT	CTH EE WB	192	1	1	1	1	A-1
23+94	22.0 LT	CTH EE WB	192	1	1	1	1	A-2
21+77	26.5 RT	CTH EE EB	192	1	1	1	1	A-3
104+53	23.0 RT	CTH EB NB	192	1	1	1	1	A-4
102+89	22.0 RT	CTH EB NB	192	1	1	1	1	A-5
105+06	28.2 LT	CTH EB SB	192	1	1	1	1	A-6
19+57	22.5 RT	CTH EE EB	192	1	1	1	1	A-7
17+67	22.0 RT	CTH EE EB	192	1	1	1	1	A-8
20+13	25.6 LT	CTH EE WB	192	1	1	1	1	A-9
107+09	24.1 LT	CTH EB SB	192	1	1	1	1	A-10
108+75	22.0 LT	CTH EB SB	192	1	1	1	1	A-11
2+94	35.1 LT	RAB CIRCLE	192	1	1	1	1	A-12
TOTAL 0010			2,304	12	12	12	12	

ADJUSTING WATER VALVE BOXES

			SPV.0060.03	
CATEGORY	STATION	LOCATION	EACH	
0020	106+77	CTH EB NB, RT	1	
0020	106+80	CTH EB NB, RT	1	
0020	0+16	RAB CIRCLE	1	
0020	0+26	RAB CIRCLE	1	
TOTAL 0010			4	

TEMPORARY LIGHTING SYSTEM, CTH EE/CTH EB ROUNDABOUT

			SPV.0060.04	
LOCATION		EACH		
CTH EE/CTH EB ROUNDABOUT		1		
TOTAL 0010		1		

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

TRANSPORTATION PROJECT PLAT NO: 9277-03-72-4.01 AMENDMENT NO: 2

REMOVES UTILITY NUMBER 52 OF TRANSPORTATION PROJECT PLAT NO: 9277-03-72-4.01 AMENDMENT NO. 1, RECORDED AS DOCUMENT NUMBER 3119324 AND ADDS UTILITY NUMBER 58.

THAT PART OF LANDS IN THE FRACTIONAL SECTION 24, TOWNSHIP 23 NORTH, RANGE 19 EAST, AND THAT PART OF LANDS IN GOVERNMENT LOT 5 IN SECTION 19, IN TOWNSHIP 23 NORTH, RANGE 20 EAST, VILLAGE OF ASHWAUBENON, AND THAT PART OF LOT 1 OF CERTIFIED SURVEY MAP 8143 RECORDED IN VOLUME 56 ON PAGE 323 AS DOCUMENT NUMBER 2532997 LOCATED IN AND PART OF GOVERNMENT LOT 1 OF SECTION 25, TOWNSHIP 23 NORTH, RANGE 19 EAST, VILLAGE OF HOBART, AND PART OF GOVERNMENT LOT 1 IN SECTION 25, TOWNSHIP 23 NORTH, RANGE 19 EAST, TOWN OF LAWRENCE, ALL IN BROWN COUNTY, WISCONSIN.

RELOCATION ORDER - BROWN CO, CTH EE, NAVIGATOR WAY TO QUARRY PARK DRIVE, BROWN COUNTY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, BROWN COUNTY HEREBY ORDERS THAT:

- THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
- THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF BROWN COUNTY, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

NOTES:

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

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" X 18" IRON REBAR), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

ALL FOUND MONUMENT INFORMATION SHOWN REPRESENTS TYPE AND LOCATION OF EXISTING MONUMENTS WITHOUT OPINION AS TO THEIR VALIDITY AND USE AS A PROPERTY CORNER.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE

CTH EE: RIGHT OF WAY PROJECT 61-EE-4, CSM 3853, CSM 7236, CSM 8143

CTH EB: RIGHT OF WAY PROJECT 61-EB-6, RIGHT OF WAY PROJECT 61-EB-7, CSM 4099, CSM 7236

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 3.

3122605

CHERYL BERKEN
BROWN COUNTY
REGISTER OF DEEDS
GREEN BAY, WI
RECORDED ON
03/26/2026 10:16 AM
REC FEE: 25.00
PAGES: 3

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 9277-03-72-4.01
SHEET 1 OF 3
AMENDMENT NO. 2

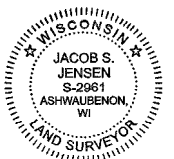
UTILITY NUMBER	UTILITY OWNER	INTEREST(S) REQUIRED
50	AT&T	RELEASE OF RIGHTS
51	WPSC - ELECTRIC	RELEASE OF RIGHTS
53	VILLAGE OF HOBART - WATERMAIN	RELEASE OF RIGHTS
54	VILLAGE OF HOBART - SANITARY SEWER	RELEASE OF RIGHTS
55	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS
56	WISCONSIN INDEPENDENT NETWORK	RELEASE OF RIGHTS
57	WEST DE PERE SCHOOL DISTRICT	RELEASE OF RIGHTS
58	TC ENERGY	RELEASE OF RIGHTS

ASHWAUBENON

- AT&T
DOC 1550475 - PARCELS 1 & 2
VOL 32, PG 56, DOC 270302 - PARCEL 2
VOL 32, PG 58, DOC 270303 - PARCEL 3
- WPSC - ELECTRIC
NO EASEMENT OF RECORD - PARCEL 2
DOC 2768105 - PARCEL 4
- VILLAGE OF HOBART - WATERMAIN
DOC 2367693 - PARCEL 4
- VILLAGE OF HOBART - SANITARY SEWER
DOC 2367693 - PARCELS 4 & 5
- CHARTER COMMUNICATIONS
NO EASEMENT OF RECORD - PARCELS 1 & 2
- WISCONSIN INDEPENDENT NETWORK
VOL 32, PG 60, DOC 270304 - PARCEL 4
- WEST DE PERE SCHOOL DISTRICT
NO EASEMENT OF RECORD - PARCEL 4
- TC ENERGY
VOL 815, PG 500, DOC 678022 - PARCEL 3

AVRES

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



SIGNATURE: *[Signature]* DATE: 03/18/2026
PRINT NAME: JACOB S. JENSEN
REGISTRATION NUMBER: S-2961
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE COUNTY OF BROWN.
SIGNATURE: *[Signature]* DATE: 03/18/2026
PRINT NAME: CHRIS HARDY 85

PARCEL NO.	OWNER(S)	INTEREST(S) REQUIRED	R/W (ACRES)			
			NEW	EXISTING	TOTAL	TLE
1	MOOREN TRUST ETAL	FEE & TLE	0.154	---	0.154	0.153
2	PAUL D. AND KATHLEEN J. ROFFERS	TLE	---	---	---	0.048
3	AMBROSIOUS FAMILY LP	FEE & TLE	0.391	---	0.391	0.186
4	PKD INVESTMENTS LLC	FEE & TLE	0.299	---	0.299	0.131
5	BROWN COUNTY	FEE	0.001	---	0.001	---

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.
PURPOSE OF ALL TLE'S ARE FOR GRADING UNLESS NOTED.



STATE OF WISCONSIN BROWN COUNTY TRANSPORTATION PROJECT PLAT TITLE SHEET 9277-03-72 BROWN CO, CTH EE NAVIGATOR WAY TO QUARRY PARK DRIVE CTH EE BROWN COUNTY

THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 9277-03-72

NOTES:

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

ALL NEW RIGHT-OF-WAY AND PERMANENT EASEMENT MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" X 18" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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

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 THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE BROWN COUNTY HIGHWAY DEPARTMENT.

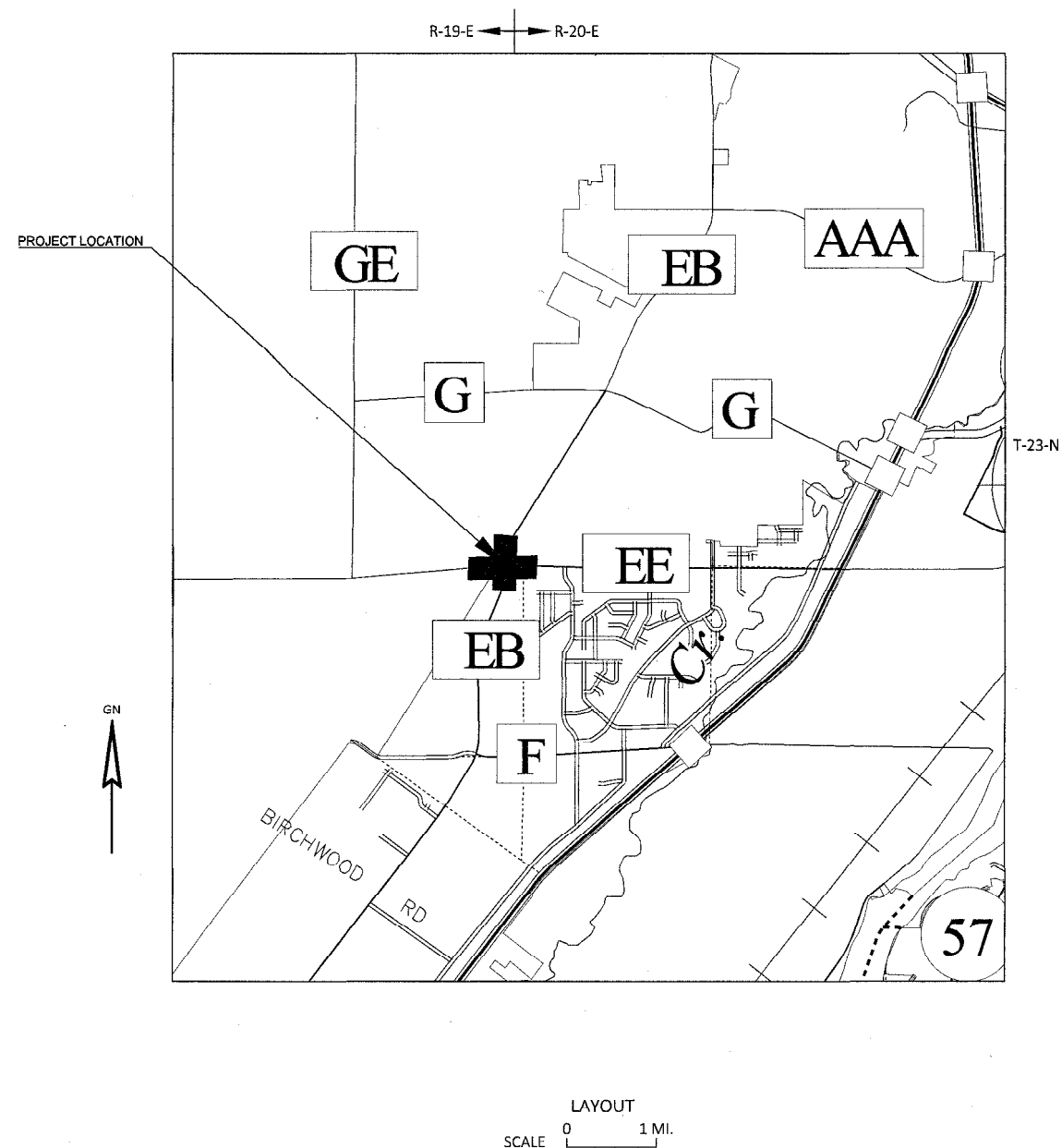
PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE TPP DETAIL PAGES.

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

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD TRANSMISSION LINES	—OH—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—
COMBINED SEWER	—SSS—
ELECTRIC TOWER	⊠
TRANSMISSION STRUCTURES	⊠

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



CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL	⊕	R/W MONUMENT (TO BE SET)	•
QUARTER LINE	---	NON-MONUMENTED R/W POINT	○		
SIXTEENTH LINE	---	SECTION CORNER MONUMENT	⊕	FOUND SURVEY MONUMENT (SEE FOUND MONUMENT TABLE)	IP
NEW REFERENCE LINE	---	GEODETIC SURVEY MONUMENT	⊕		
NEW R/W LINE	---	SIGN	⊕	PERMITTED SIGN	⊕
EXISTING R/W OR HE LINE	---				
PROPERTY LINE	---				
LOT, TIE & OTHER MINOR LINES	---				
EXISTING CENTERLINE	---				
CORPORATE LIMITS	---				
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
BUILDING	---	TO BE REMOVED	---	PARALLEL OFFSETS	---
BRIDGE	---	CULVERT	---		

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC	REEL / IMAGE	R/I
ALUMINUM	ALUM	REFERENCE LINE	R/L
AND OTHERS	ET AL	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT	RDE
CENTERLINE	C/L	EASEMENT	
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT OF WAY	R/W
COUNTY TRUNK HIGHWAY	CTH	SECTION	SEC
CORNER	COR	SEPTIC VENT	SEPV
DOCUMENT NUMBER	DOC	SQUARE FEET	SF
EASEMENT	EASE	STATE TRUNK HIGHWAY	STH
EXISTING	EX	STATION	STA
GAS VALVE	GV	TELEPHONE PEDESTAL	TP
GRID NORTH	GN	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LEFT	LT	VOLUME	V
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		
POINT OF INTERSECTION	PI		
PROPERTY LINE	PL		

CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
DELTA ANGLE	Δ / DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

TRANSPORTATION PROJECT PLAT NO: 9277-03-72-4.01 AMENDMENT NO: 2 - EXTENSION SHEET

RELOCATION ORDER - BROWN CO, CTH EE, NAVIGATOR WAY TO QUARRY PARK DRIVE, BROWN COUNTY

4

R/W STATION & OFFSET TABLE		
POINT	STATION	OFFSET
100	14+90.00 'EE'	0.57' LT
101	14+90.00 'EE'	45.57' LT
102	16+69.81 'EE'	54.20' LT
103	16+92.71 'EE'	56.63' LT
104	17+63.47 'EE'	64.84' LT
105	19+69.09 'EE'	72.46' LT
106	107+30.28 'EB'	71.02' LT
107	107+80.90 'EB'	67.92' LT
108	110+77.20 'EB'	56.66' LT
109	111+13.41 'EB'	56.59' LT
110	111+13.41 'EB'	0.00'
111	111+13.41 'EB'	44.60' RT
112	111+11.95 'EB'	44.59' RT
113	109+29.60 'EB'	46.89' RT
114	107+48.96 'EB'	51.58' RT
115	22+20.00 'EE'	134.18' LT
116	24+69.46 'EE'	69.46' LT
117	26+20.37 'EE'	45.82' LT
118	26+69.99 'EE'	92.13' LT
119	26+69.99 'EE'	0.39' LT
120	26+29.99 'EE'	0.00'

R/W STATION & OFFSET TABLE		
POINT	STATION	OFFSET
121	26+69.99 'EE'	44.62' RT
122	26+21.08 'EE'	44.22' RT
123	26+06.12 'EE'	43.87' RT
124	25+81.83 'EE'	48.43' RT
125	22+95.05 'EE'	39.20' RT
126	104+30.09 'EB'	62.07' RT
127	103+50.00 'EB'	37.51' RT
128	101+27.49 'EB'	46.15' RT
129	101+27.49 'EB'	0.00'
130	101+27.49 'EB'	144.08' LT
131	103+64.84 'EB'	193.30' LT
132	103+62.00 'EB'	113.02' LT
133	104+67.79 'EB'	86.97' LT
134	19+91.42 'EE'	57.61' RT
135	19+21.92 'EE'	37.22' RT
136	15+00.00 'EE'	54.45' RT
137	14+99.98 'EE'	44.45' RT
138	14+90.00 'EE'	44.47' RT
139	14+90.00 'EE'	0.00'

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
100-101	N04°51'44"W	45.00'
101-102	N85°01'02"E	184.67'
102-103	N85°01'06"E	23.72'
103-104	SEE CURVE TABLE	
104-105	SEE CURVE TABLE	
105-106	N45°16'55"E	77.50'
106-107	N00°50'42"E	56.54'
107-108	SEE CURVE TABLE	
108-109	SEE CURVE TABLE	
109-110	S75°42'58"E	56.59'
110-111	S75°15'00"E	44.59'
111-112	SEE CURVE TABLE	
112-113	S07°22'21"W	172.48'
113-114	S00°17'48"W	175.65'
114-115	S32°26'39"E	55.77'
115-116	S80°37'49"E	272.84'
116-117	S88°28'08"E	154.92'
117-118	S88°26'05"E	50.59'
118-119	S01°35'08"W	45.00'
119-120	S01°35'08"W	0.39'
120-121	S01°35'08"W	44.62'
121-122	N88°26'05"W	47.99'
122-123	N88°26'52"W	14.64'

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
123-124	S78°44'13"W	24.16'
124-125	S87°03'05"W	280.41'
125-126	S51°42'01"W	191.32'
126-127	S20°00'48"W	79.85'
127-128	SEE CURVE TABLE	
128-129	N74°46'51"W	46.15'
129-130	N74°46'51"W	144.08'
130-131	N17°39'58"E	208.25'
131-132	S72°20'02"E	8.25'
132-133	N17°39'58"E	106.23'
133-134	N16°32'08"W	67.67'
134-135	N69°38'41"W	59.41'
135-136	S87°14'14"W	419.84'
136-137	N04°51'44"W	10.00'
137-138	S85°01'09"W	10.00'
138-139	N04°51'44"W	44.47'
139-100	N04°51'44"W	0.57'

TLE STATION & OFFSET TABLE		
POINT	STATION	OFFSET
T150	111+13.30 'EB'	54.51' RT
T151	109+29.40 'EB'	56.91' RT
T152	107+51.60 'EB'	61.73' RT
T153	22+27.17 'EE'	142.00' LT
T154	24+71.04 'EE'	64.67' LT
T155	26+20.56 'EE'	55.82' LT
T156	26+69.99 'EE'	55.39' LT
T157	26+21.11 'EE'	51.11' RT
T158	25+82.98 'EE'	58.40' RT
T159	22+97.23 'EE'	49.47' RT
T160	104+25.01 'EB'	71.14' RT
T161	103+48.41 'EB'	47.43' RT
T162	101+28.02 'EB'	56.14' RT
T163	104+40.33 'EB'	90.40' LT
T164	19+84.83 'EE'	66.64' RT
T165	19+19.65 'EE'	47.26' RT
T166	14+90.00 'EE'	64.28' RT

FOUND MONUMENTS TABLE			
POINT	Y	X	DESCRIPTION
6000	541899.808	68135.790	1" PIPE W/ CAP
6001	542008.025	68342.379	1" PIPE
6002	541939.667	68594.645	1" PIPE W/ CAP
6003	541939.839	68597.791	1" PIPE W/ CAP
6004	541945.216	68600.840	1" PIPE
6005	541862.829	68895.737	1" PIPE
6006	541916.234	68912.576	1" PIPE
6007	541958.724	68892.798	1" PIPE
6008	542043.928	68873.951	1" PIPE
6009	542098.341	68928.925	1" PIPE
6010	542087.519	69028.766	1" PIPE
6011	541950.685	69105.604	1" PIPE W/ CAP
6012	541940.519	69504.521	1" PIPE

CURVE TABLE				
CURVE #	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
103-104	72.20'	3887.70'	N85°29'43"E	72.20'
104-105	216.60'	3864.72'	N87°38'04"E	216.57'
107-108	309.43'	1482.00'	N06°49'09"E	308.87'
108-109	38.77'	1481.99'	N13°33'00"E	38.77'
111-112	1.38'	1387.39'	S15°15'37"W	1.38'
127-128	230.67'	2341.83'	S09°18'55"W	230.57'

CURVE 1
PI STA = 16+11.44
Y = 541975.943
X = 68502.503
DELTA = 7°05'07" RT
D = 3°10'59"
T = 111.44'
L = 222.59'
R = 1800.00'
PC STA = 15+00.00
Y = 541966.498
X = 68391.468
PT STA = 17+22.59
Y = 541971.621
X = 68613.856
DA = S87°46'38"E

CURVE 2
PI STA = 24+15.78
Y = 541990.128
X = 69296.361
DELTA = 14°12'14" RT
D = 2°51'53"
T = 249.18'
L = 495.81'
R = 2000.00'
PC STA = 21+66.60
Y = 541935.691
X = 69053.195
PT STA = 26+62.41
Y = 541983.233
X = 69545.450
DB = N77°22'53"E

CURVE 3
PI STA = 102+24.58
Y = 541605.666
X = 68951.616
DELTA = 4°25'10" LT
D = 4°05'33"
T = 54.02'
L = 107.98'
R = 1400.00'
PC STA = 101+70.56
Y = 541553.542
X = 68937.435
PT STA = 102+78.55
Y = 541658.729
X = 68961.738
DB = N15°13'09"E

CURVE 4
PI STA = 103+42.81
Y = 541721.849
X = 68973.779
DELTA = 13°19'40" LT
D = 10°25'03"
T = 64.26'
L = 127.94'
R = 550.00'
PC STA = 102+78.55
Y = 541658.729
X = 68961.738
PT STA = 104+06.48
Y = 541786.045
X = 68970.945
DB = N10°48'00"E

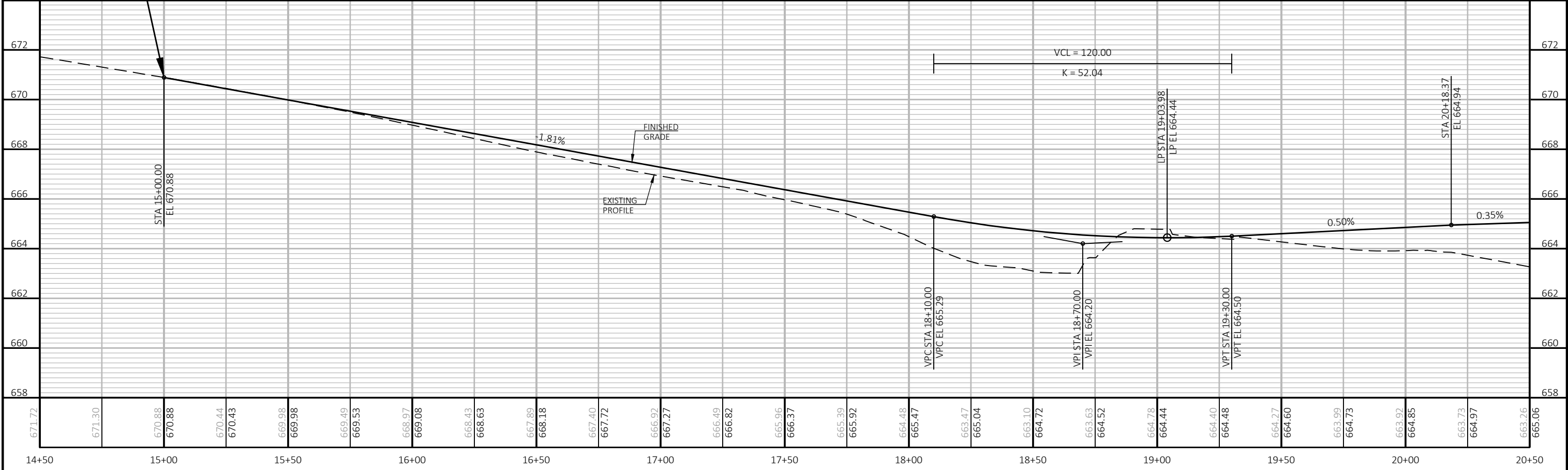
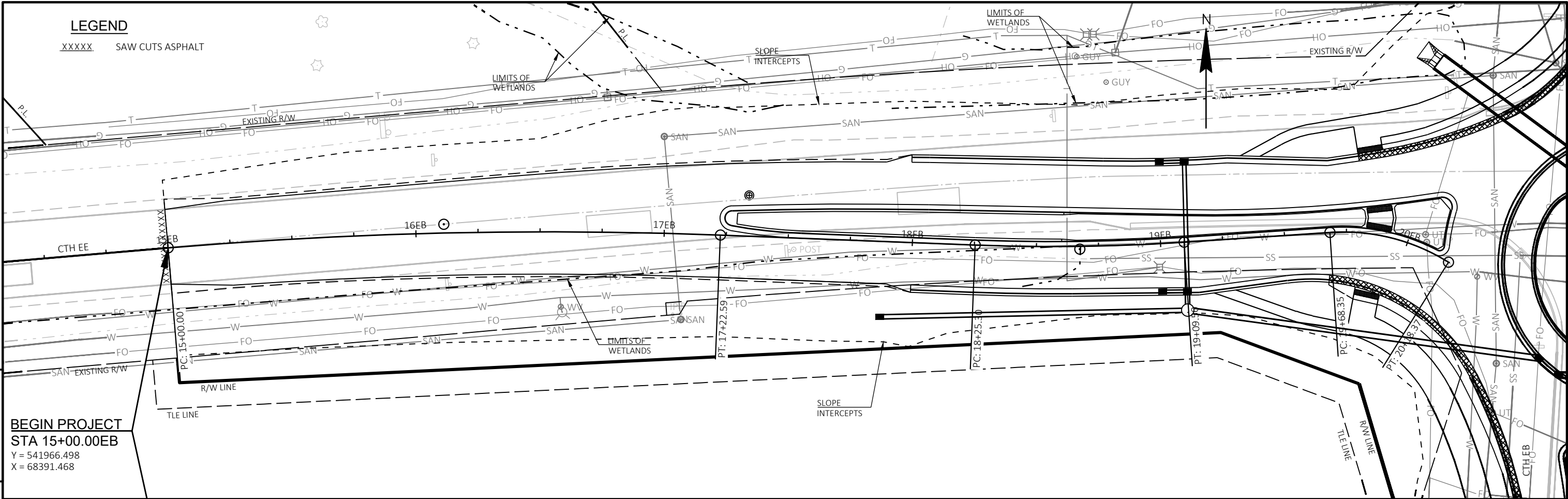
CURVE 5
PI STA = 107+51.44
Y = 542124.942
X = 68995.423
DELTA = 10°48'14" RT
D = 9°32'57"
T = 56.74'
L = 113.14'
R = 600.00'
PC STA = 106+94.70
Y = 542068.773
X = 69003.432
PT STA = 108+07.84
Y = 542181.616
X = 68998.085
DB = N08°06'54"W

CURVE 6
PI STA = 110+37.74
Y = 542411.264
X = 69008.870
DELTA = 13°13'10" RT
D = 7°09'43"
T = 92.70'
L = 184.58'
R = 800.00'
PC STA = 109+45.04
Y = 542318.665
X = 69004.521
PT STA = 111+29.62
Y = 542500.415
X = 69034.280
DB = N02°41'20"E

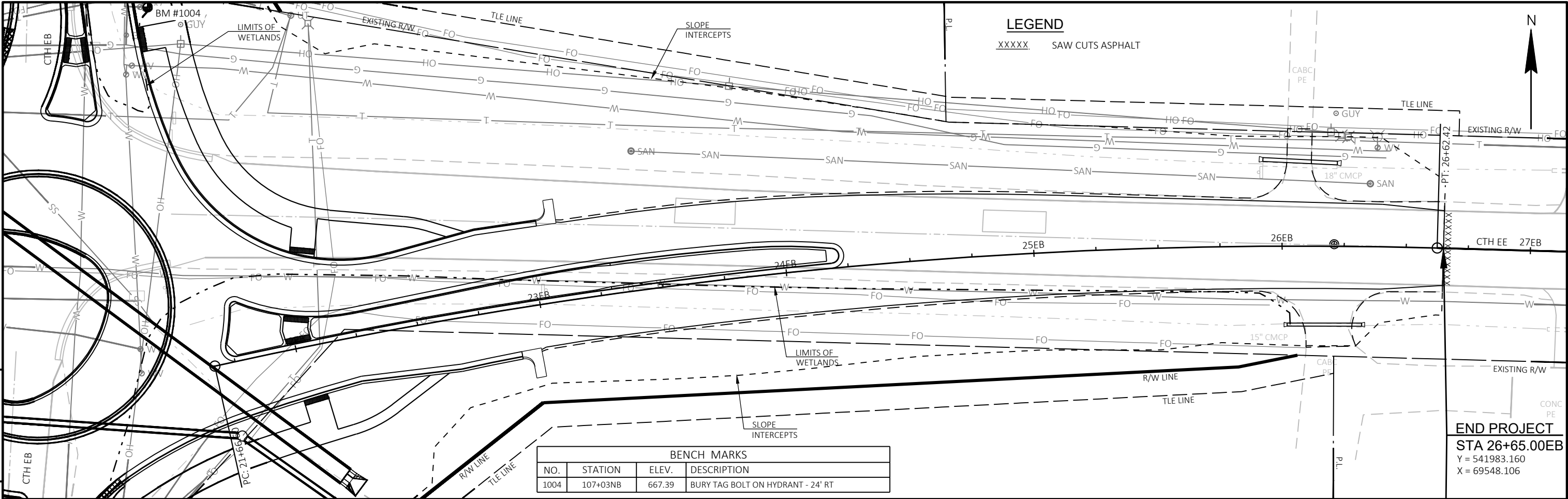
NOTES:

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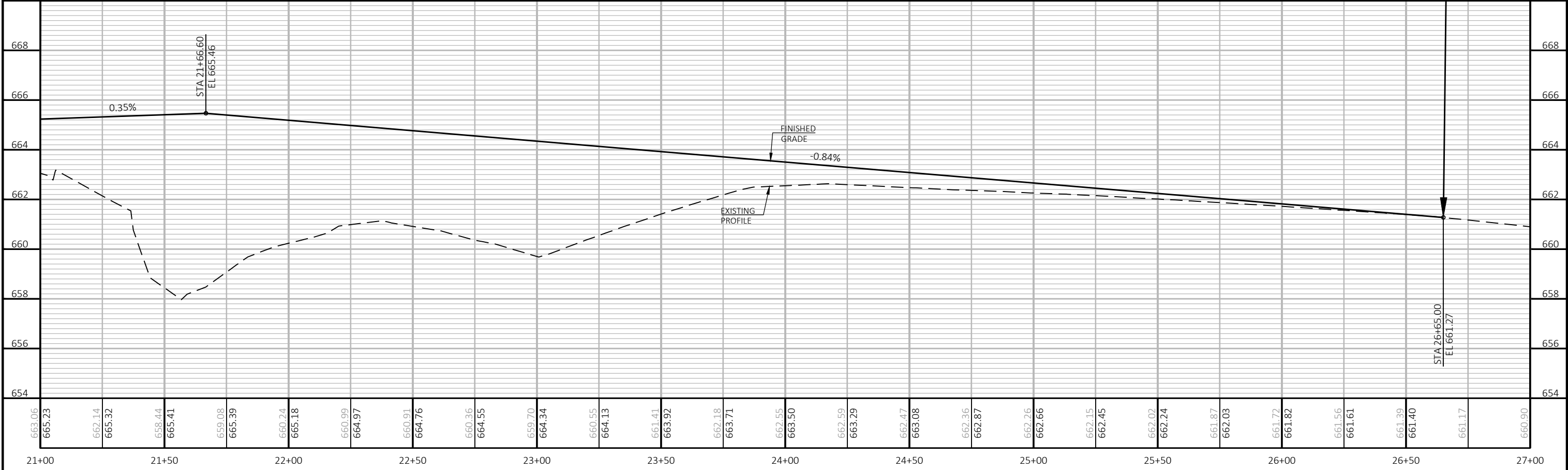
TPP NUMBER 9277-03-72-4.01
AMENDMENT NO: 2
SHEET 3 OF 87



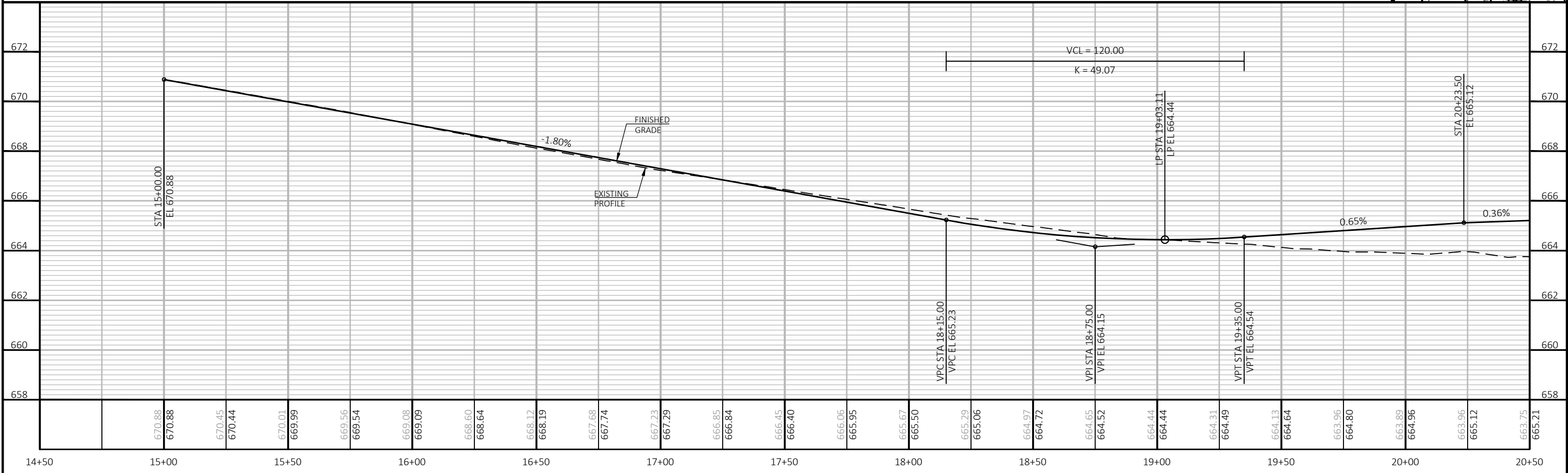
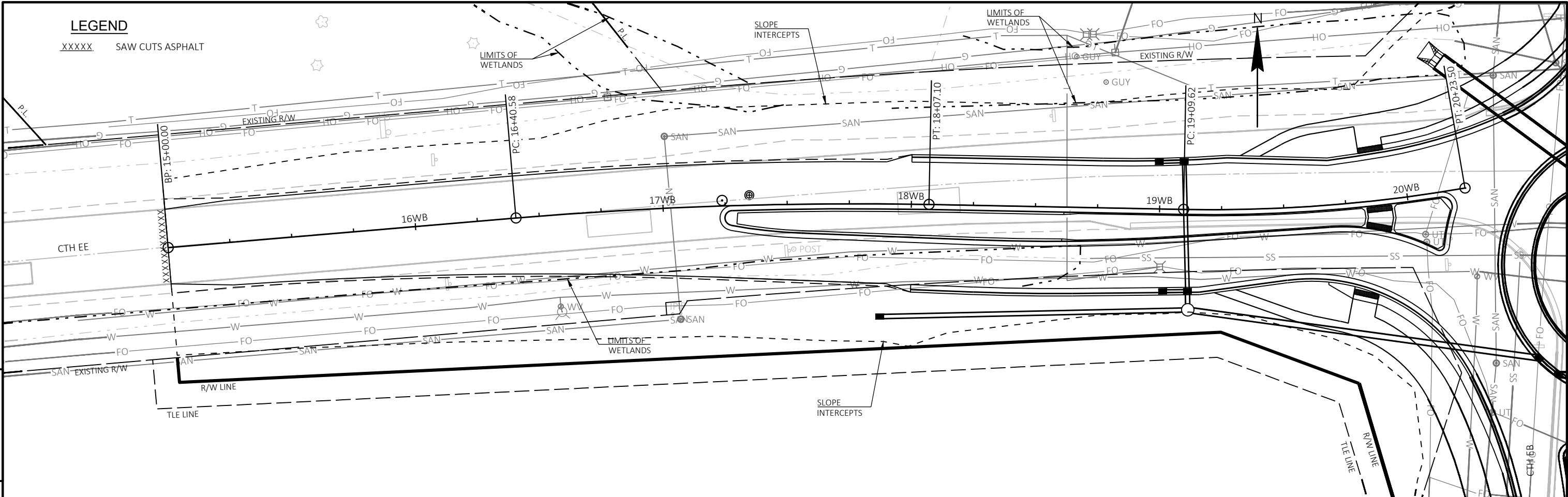
PROJECT NO: 9277-03-73	HWY: CTH EE	COUNTY: BROWN	PLAN AND PROFILE: CTH EE EASTBOUND	SHEET 88	E
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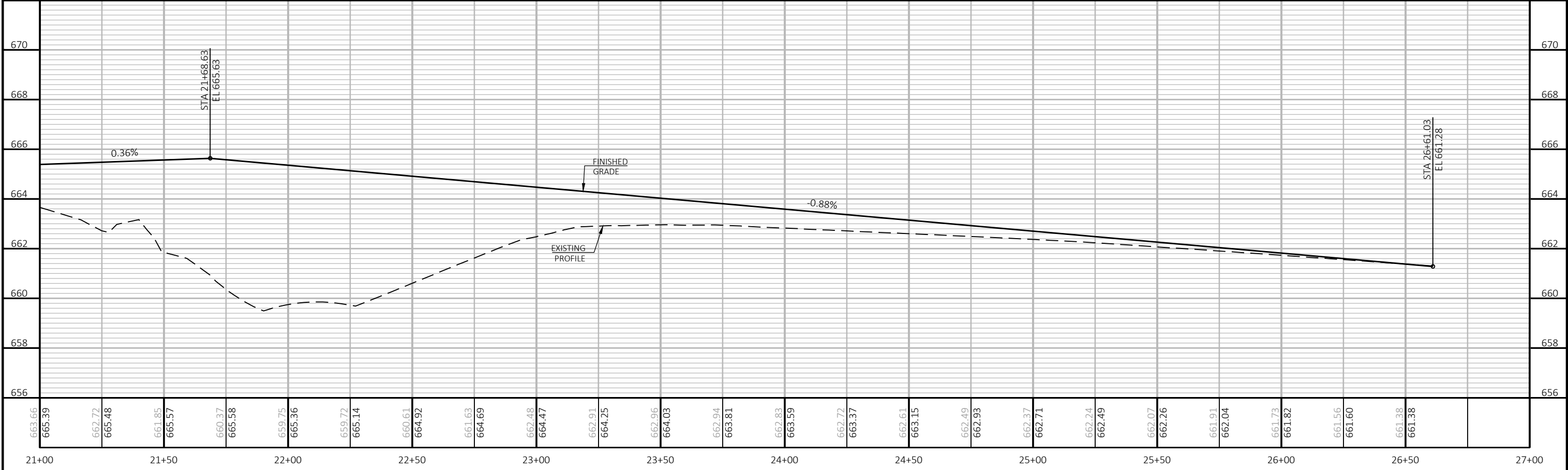
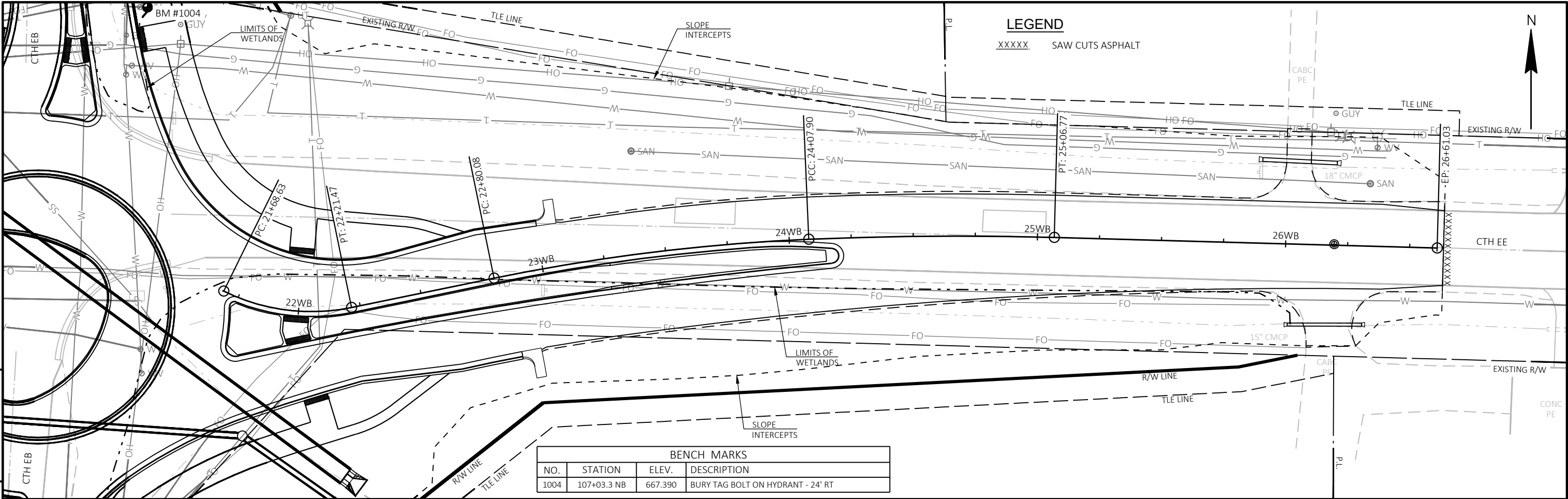
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
1004	107+03NB	667.39	BURY TAG BOLT ON HYDRANT - 24' RT

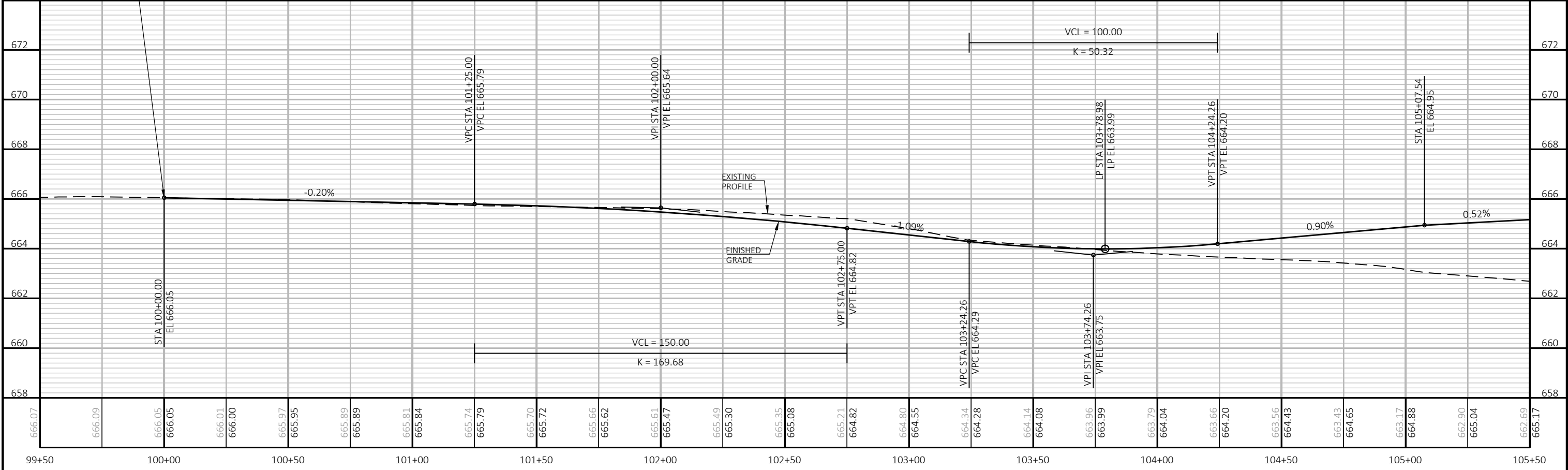
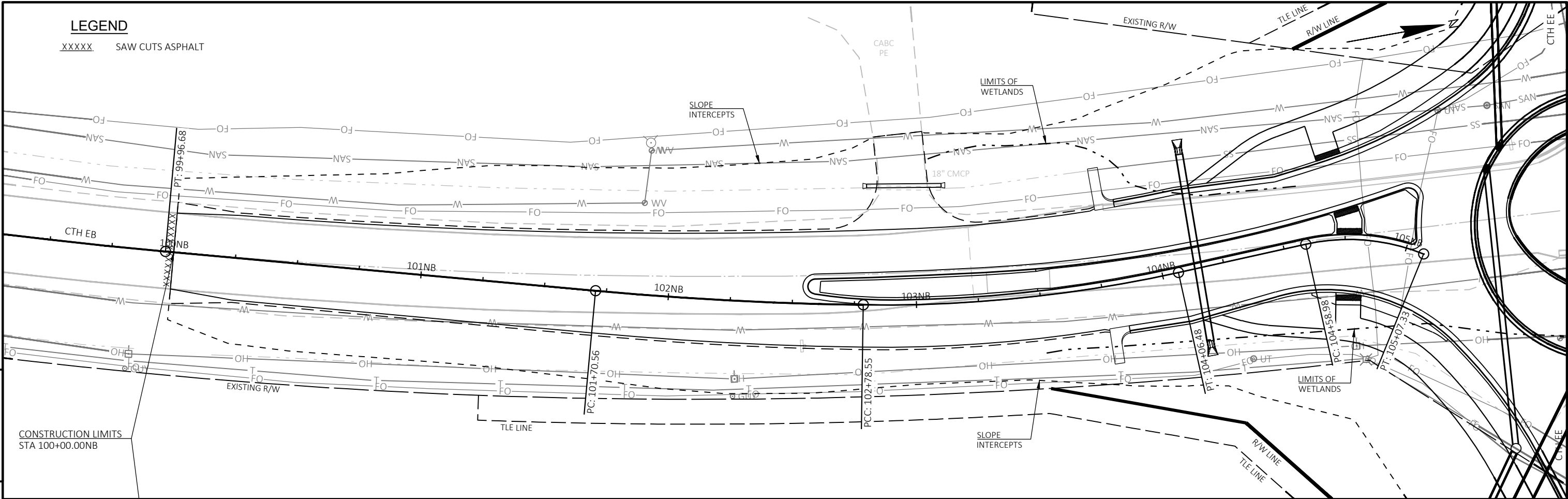


PROJECT NO:	9277-03-73	HWY:	CTH EE	COUNTY:	BROWN	PLAN AND PROFILE:	CTH EE EASTBOUND	SHEET	89	E
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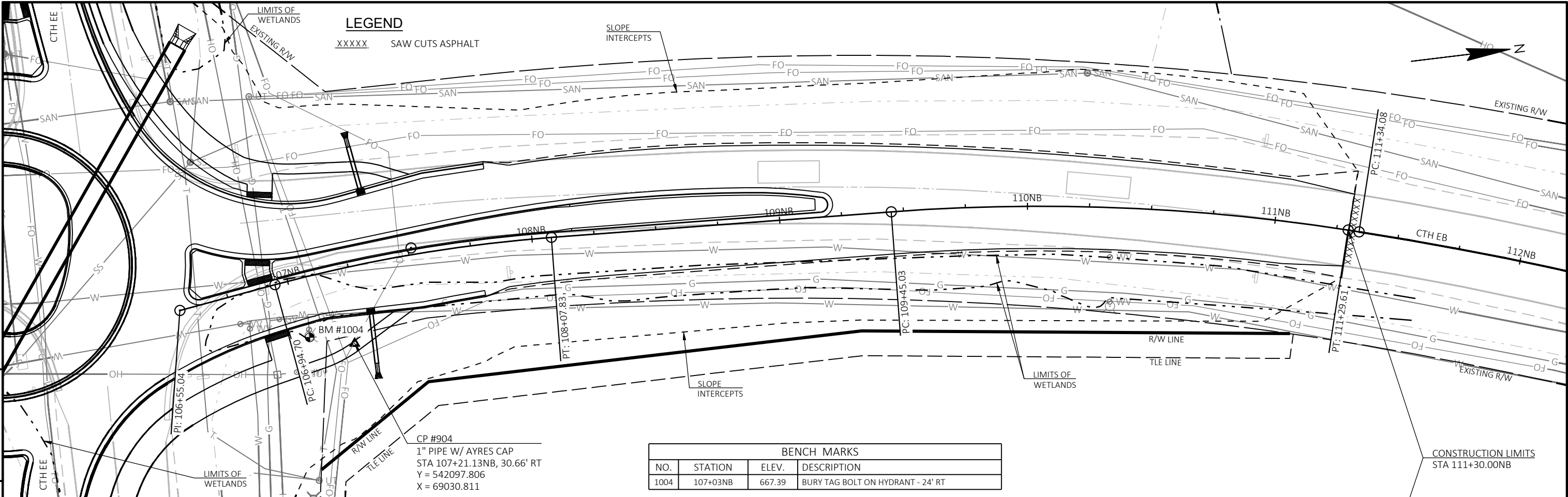


PROJECT NO:	9277-03-73	HWY: CTH EE	COUNTY: BROWN	PLAN AND PROFILE:	CTH EE WESTBOUND	SHEET	90	E
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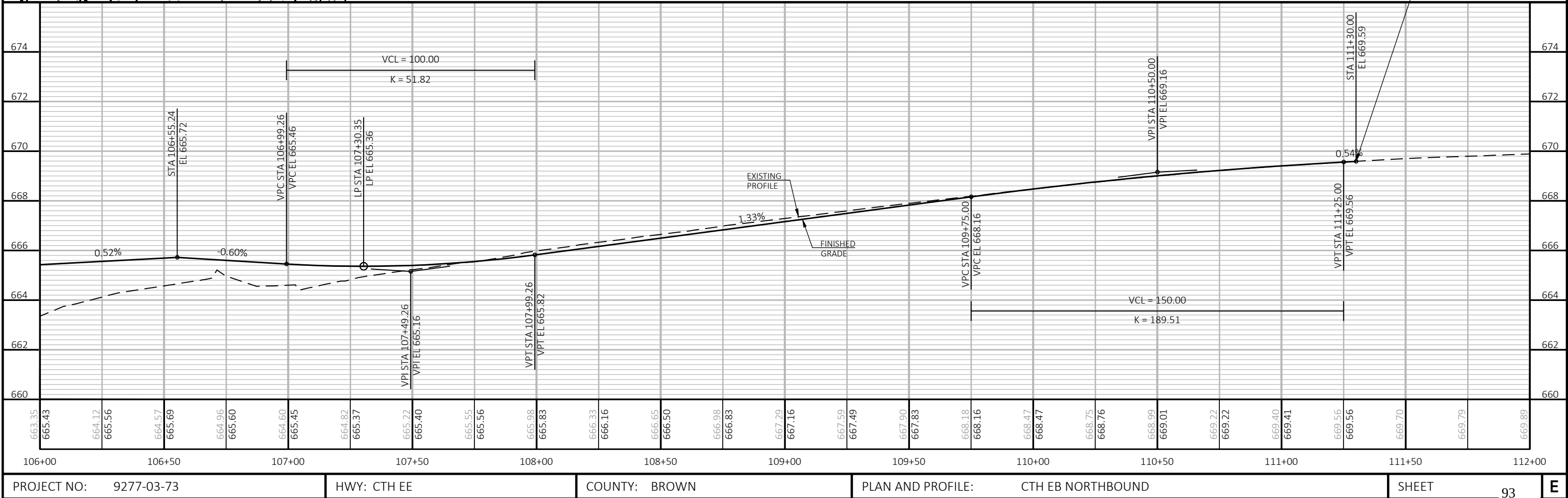


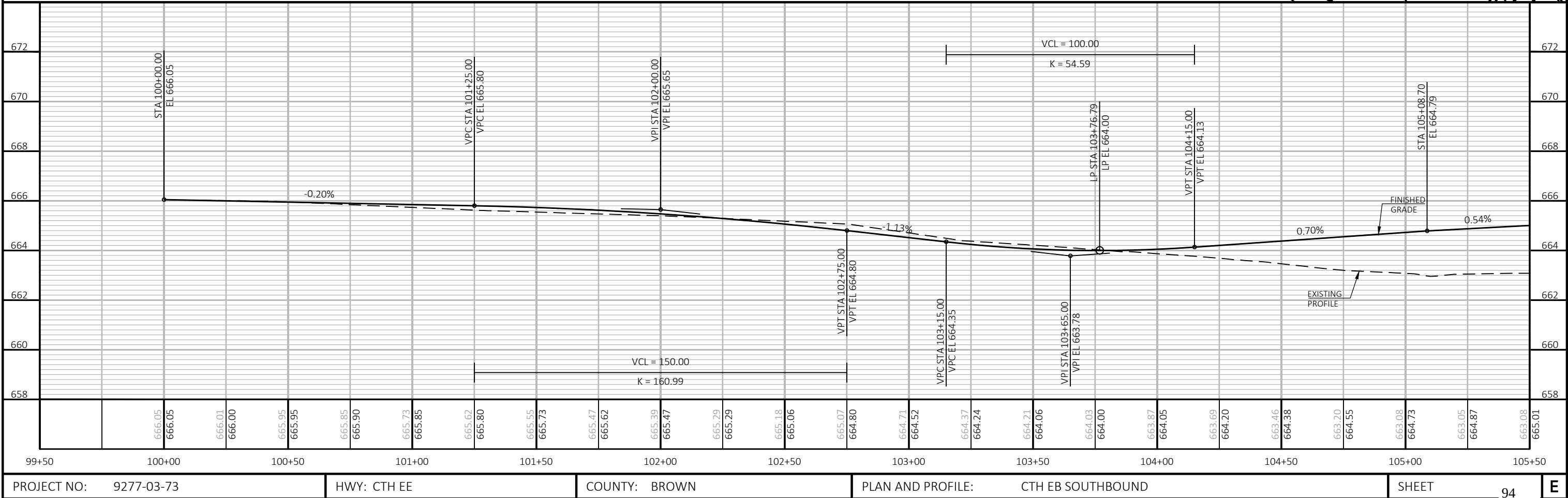
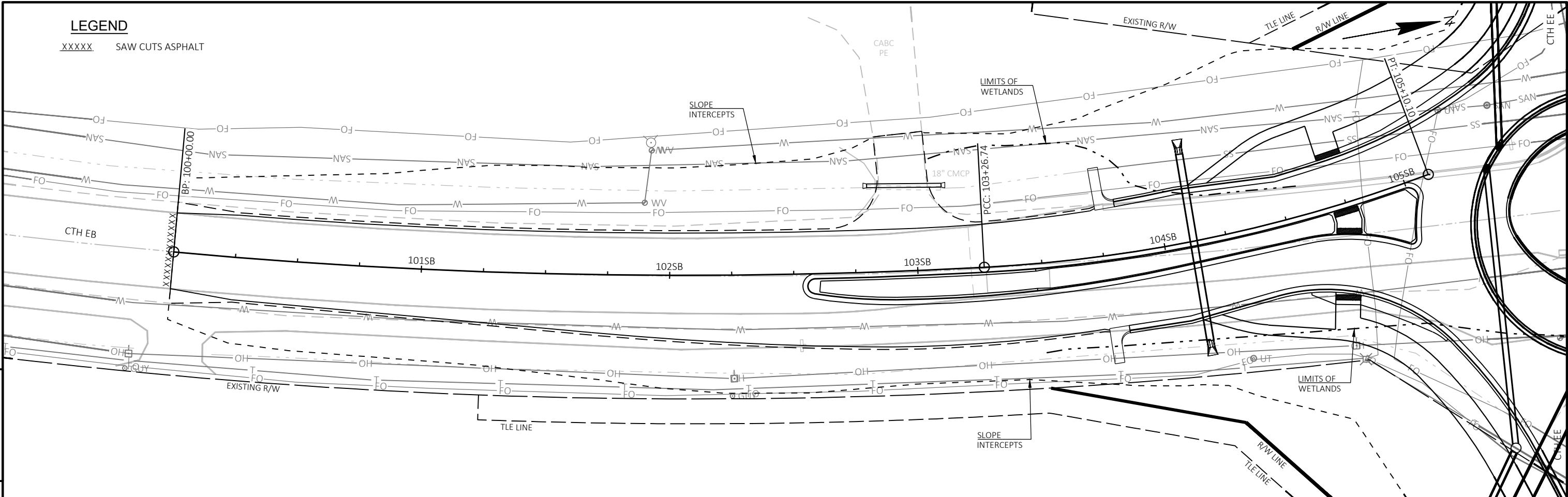


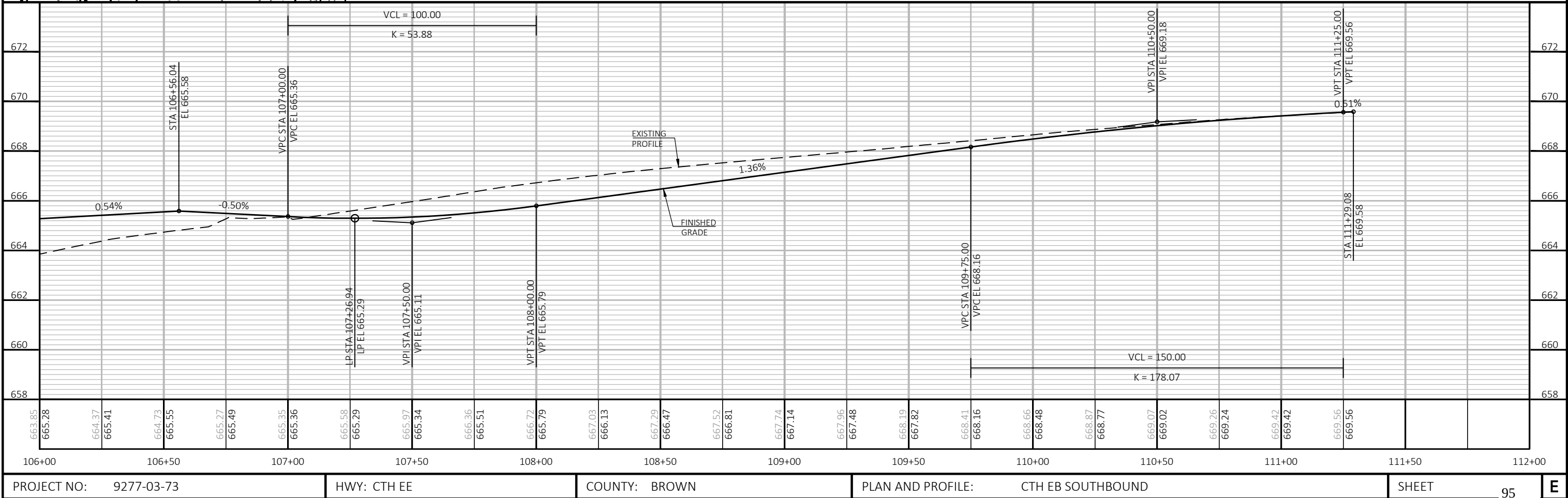
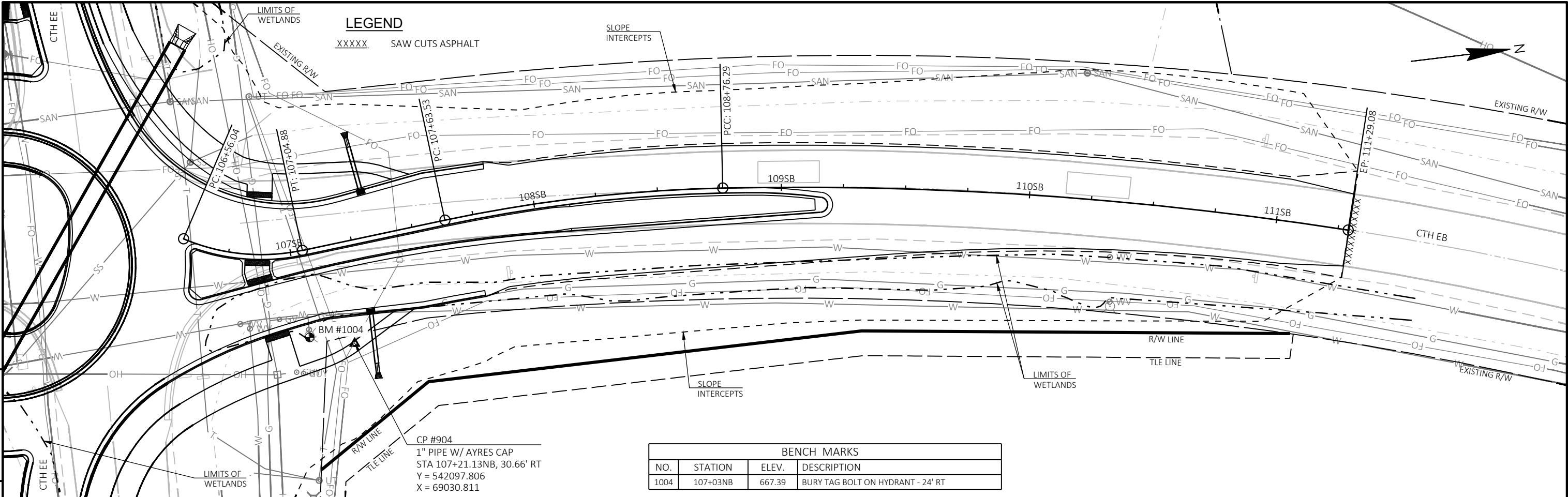
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BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
1004	107+03NB	667.39	BURY TAG BOLT ON HYDRANT - 24' RT

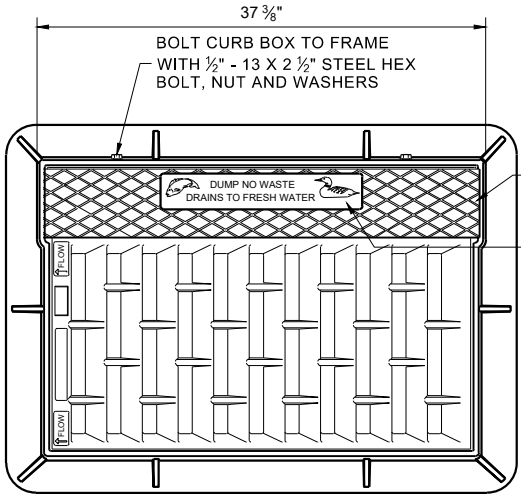






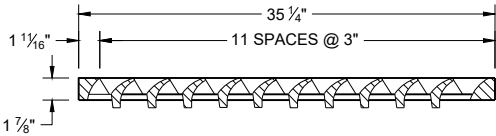
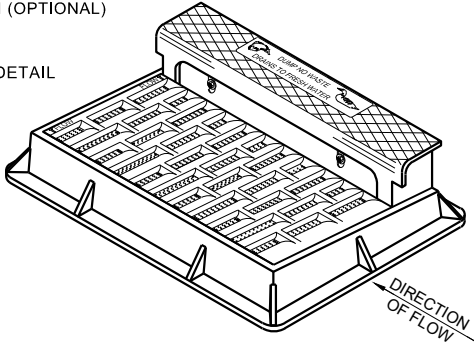
Standard Detail Drawing List

08A05-22A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-22B	INLET COVERS TYPE B, B-A, C, MS, MS-A, DW & WM
08A05-22C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08A05-22E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
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
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-03	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C14-03	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D04-03	LIGHTING CONTROL CABINET 120/240 VOLT
09E01-16D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-16G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
13C19-03	HMA LONGITUDINAL JOINTS
15C02-10A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-10B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-10C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-09A	MEDIAN ISLAND PAVEMENT MARKINGS
15C18-09B	PAVEMENT MARKINGS, MEDIAN ISLAND NOSE
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING

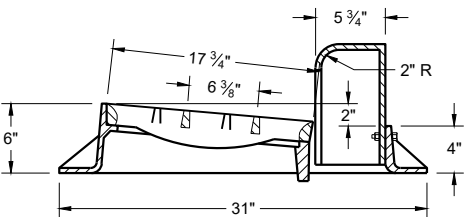
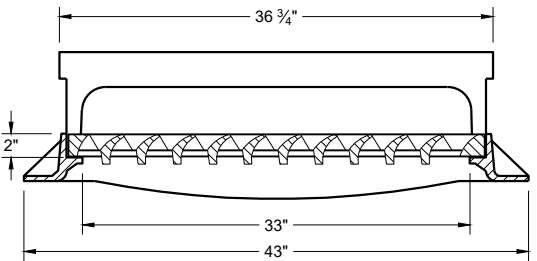
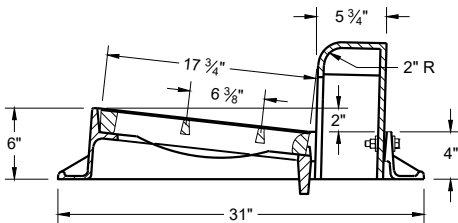
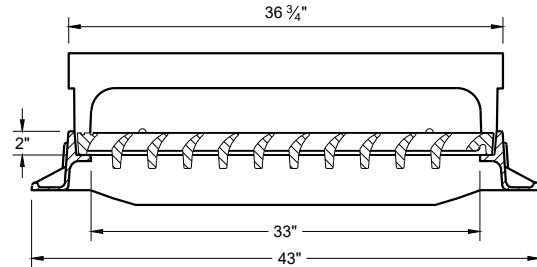


NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "C" CHECKERED TOP DESIGN (OPTIONAL)
SEE LOGO DETAIL



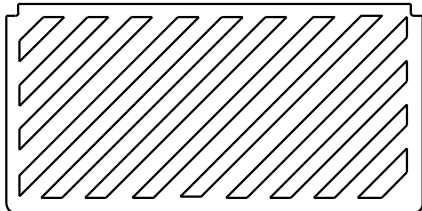
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



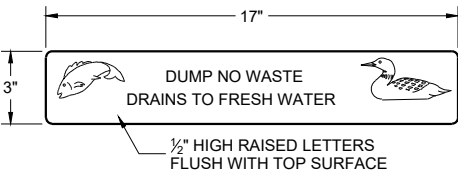
TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

1 1/8" DIAGONAL BARS WITH 1 5/8" OPENINGS



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



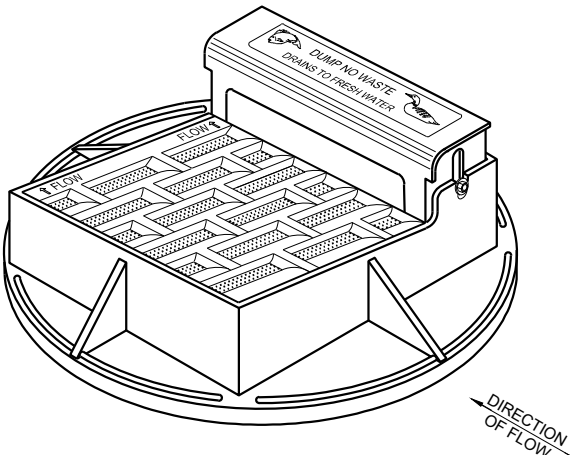
LOGO DETAIL

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.

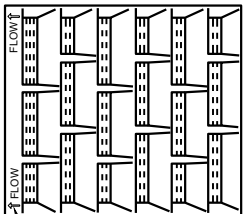
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

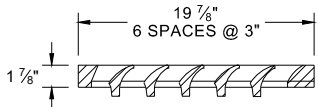


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

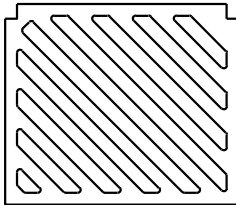
NOTE: EITHER CASTING IS ACCEPTABLE



DIRECTION OF FLOW ARROWS

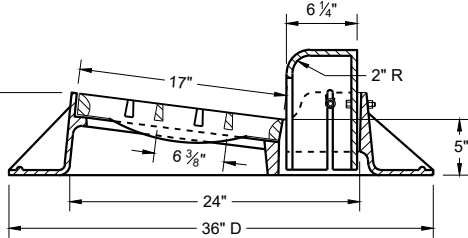
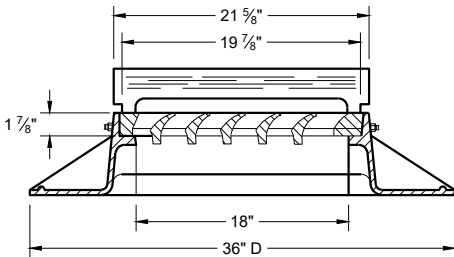


1" DIAGONAL BARS WITH 1 1/2" OPENINGS

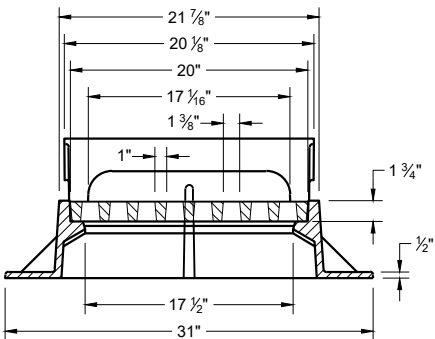
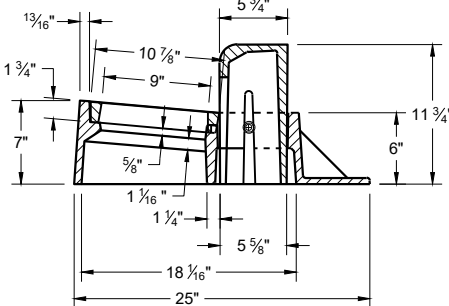


SPECIAL GRATE FOR TYPE "A" COVER

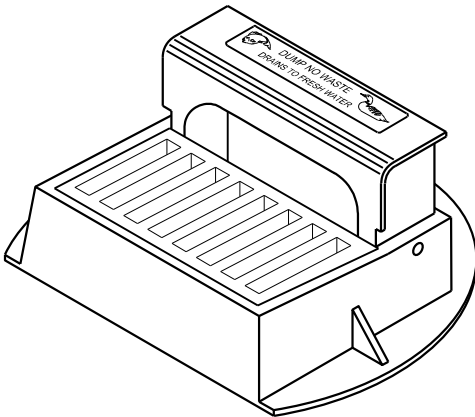
(MEASURES 19 3/4" X 17" X 1 7/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



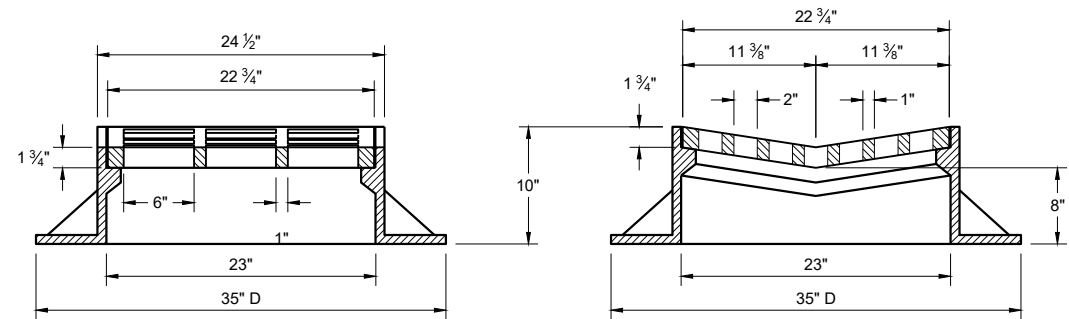
TYPE "Z"



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

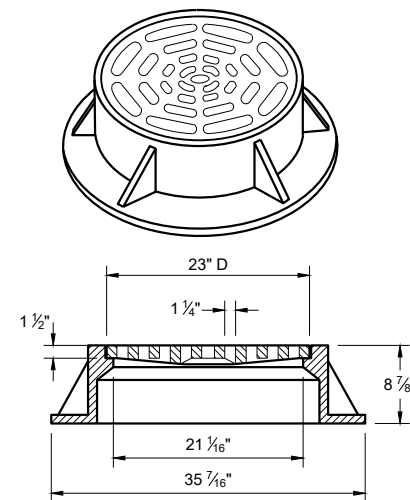
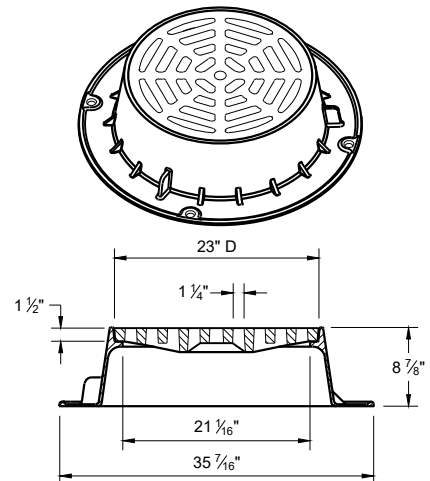
APPROVED
February 2025
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



TYPE "B"

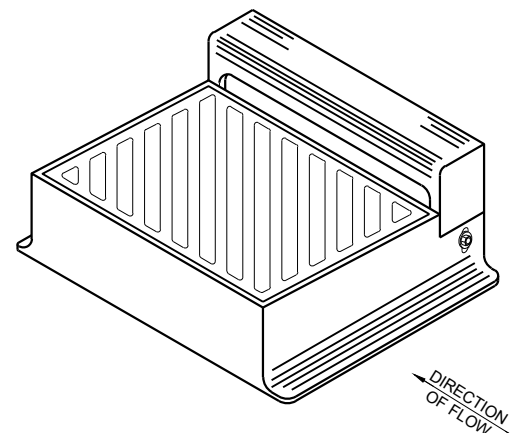
**ALTERNATIVE GRATE FOR
TYPE "B" COVER**

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

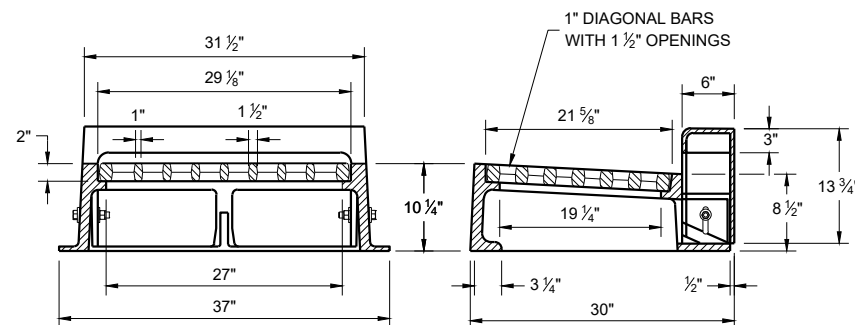


TYPE "C"

NOTE: EITHER CASTING IS ACCEPTABLE



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



TYPE "WM"

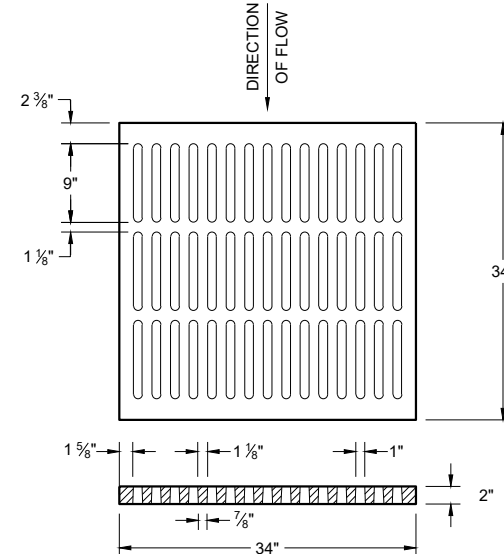
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

GENERAL NOTES

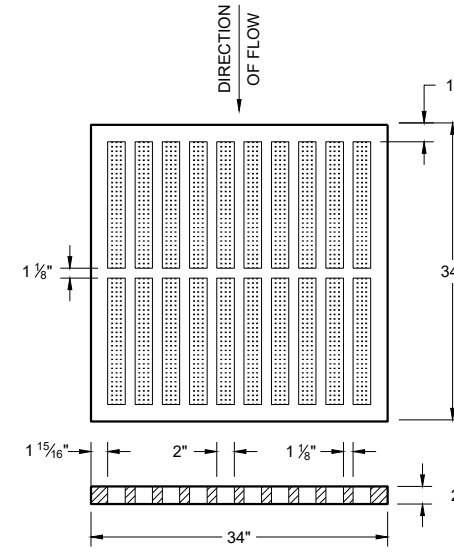
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

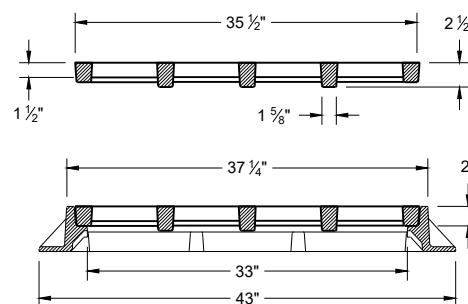
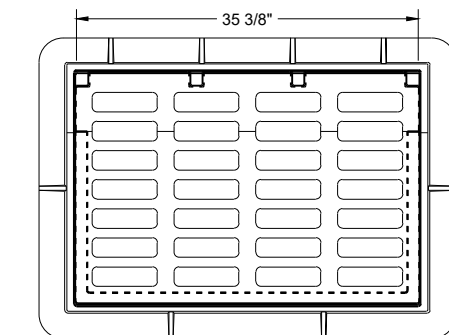
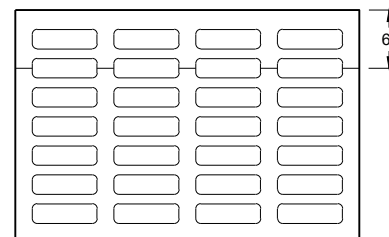
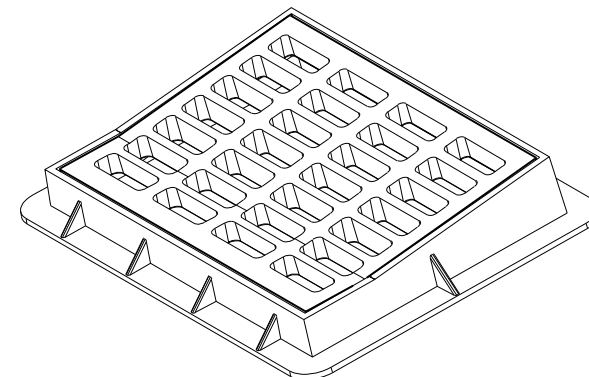
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"
USE WHERE PEDESTRIAN OF BICYCLE
TRAFFIC IS PERMITTED
**NOTED AS TYPE MS-A ON THE
DRAINAGE TABLE**



TYPE "MS"
USE ON FREEWAYS AND EXPRESSWAYS
**NOTED AS TYPE MS ON THE
DRAINAGE TABLE**



TYPE "DW"

NOTES: FOR USE IN A SUMP CONDITION. THIS OPTION IS
ONLY TO BE USED IF NO OTHER INLETS ARE APPLICABLE.

**INLET COVERS
TYPES B, B-A, C,
MS, MS-A ,DW AND WM**

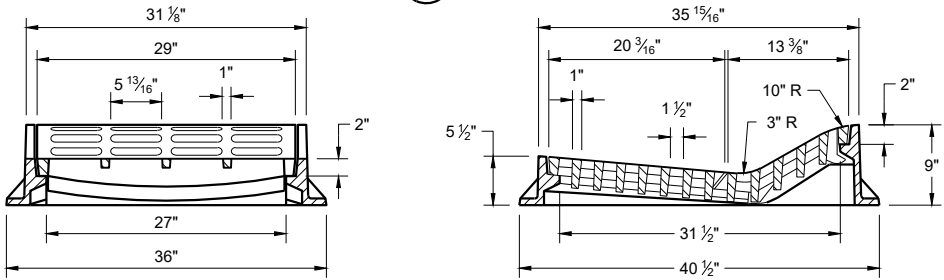
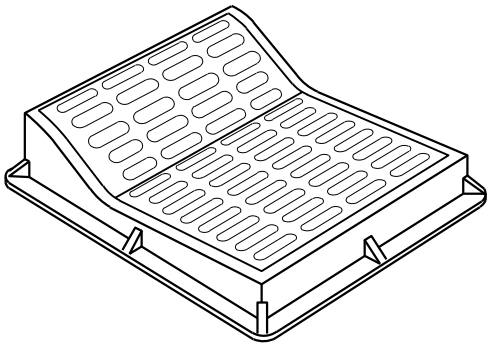
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

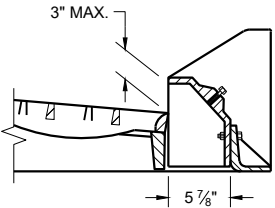
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

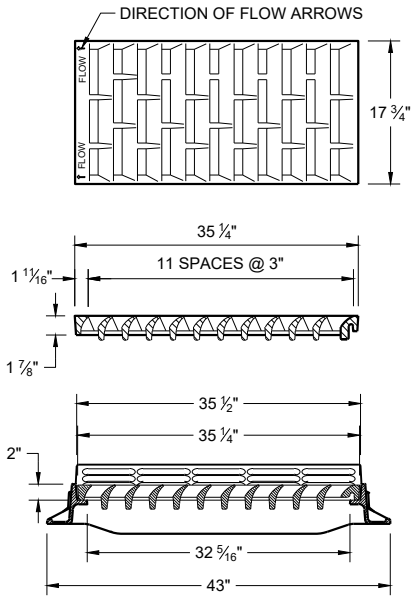


ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

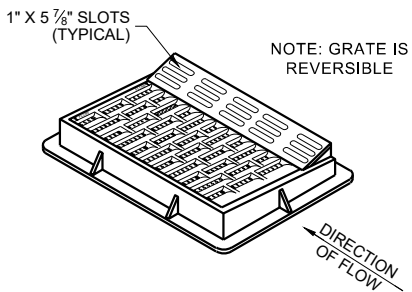
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.

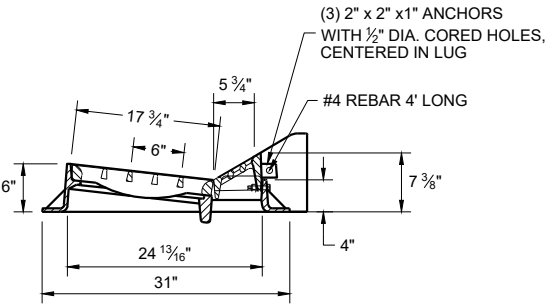


TYPE "HM"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

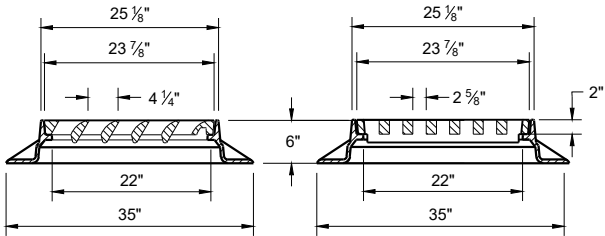
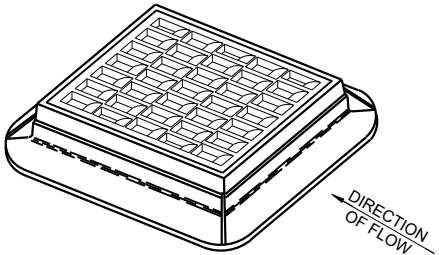


NOTE: GRATE IS REVERSIBLE

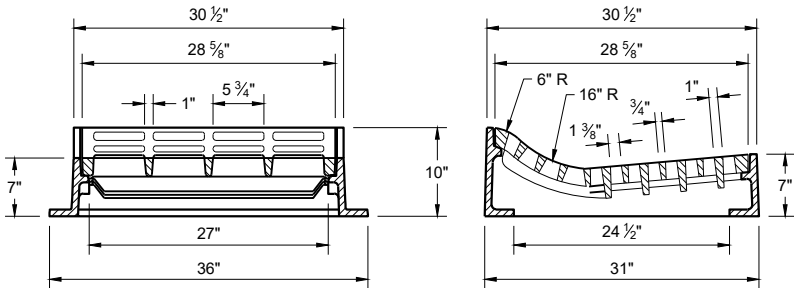
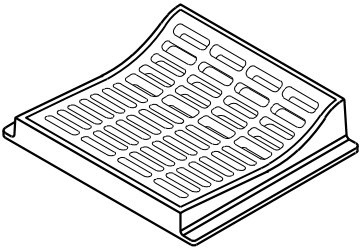


NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



TYPE "S"



TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

INLET COVERS
TYPES F, HM, HM-S, S, T,
HM-GJ AND HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2025
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

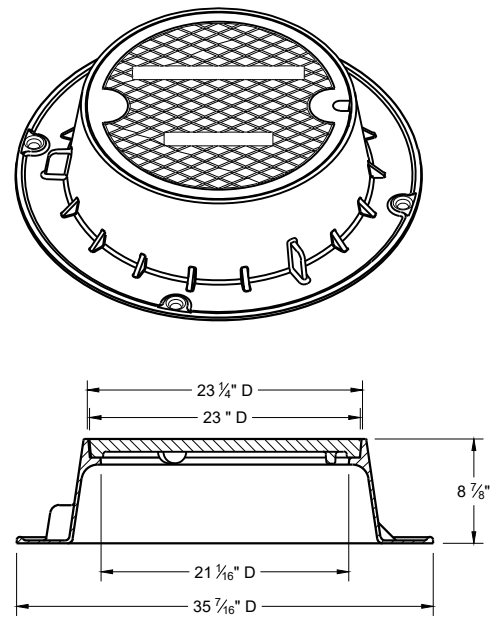
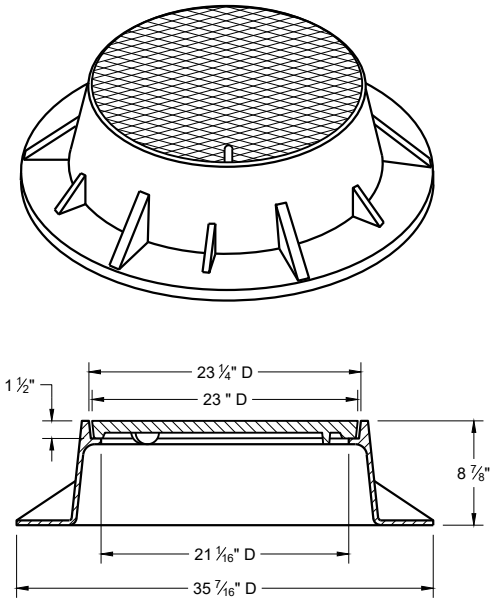
FHWA

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.

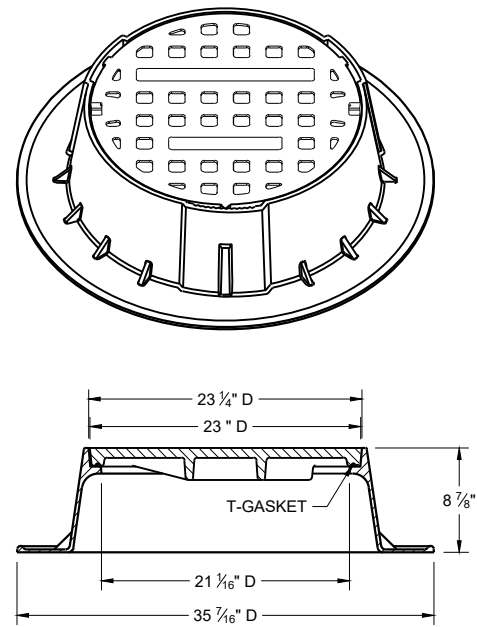
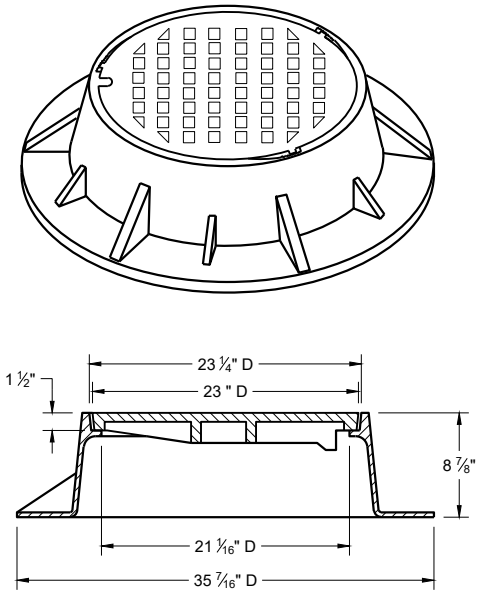
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



TYPE "J"

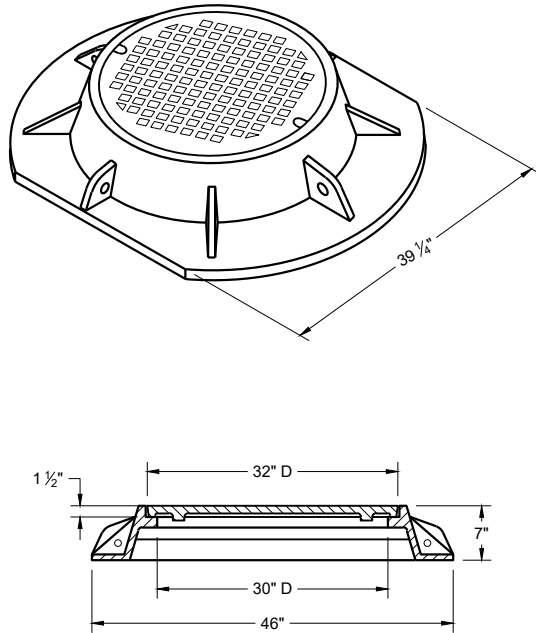
NOTE: EITHER CASTING IS ACCEPTABLE



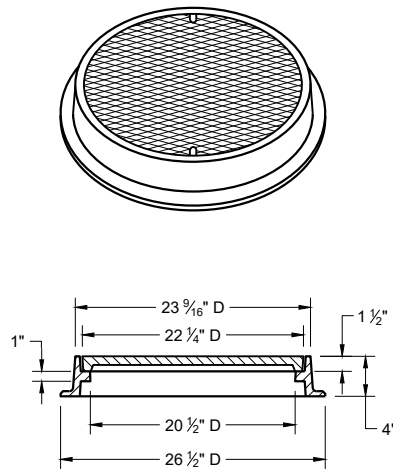
TYPE "J" SPECIAL

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

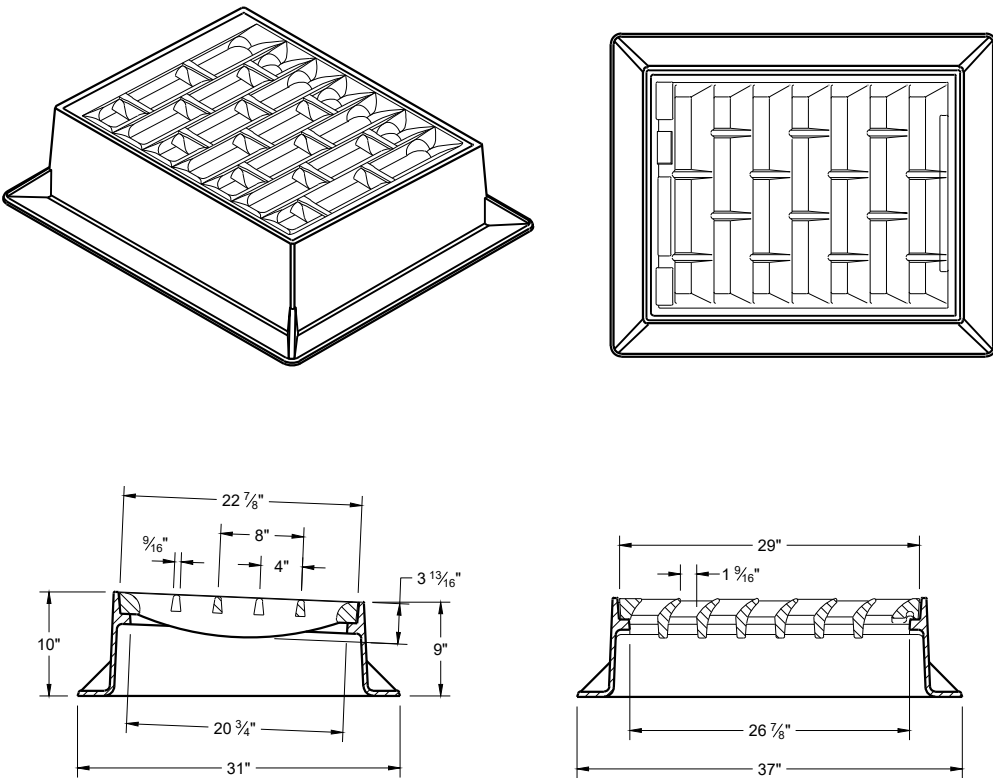
NOTE: EITHER CASTING IS ACCEPTABLE



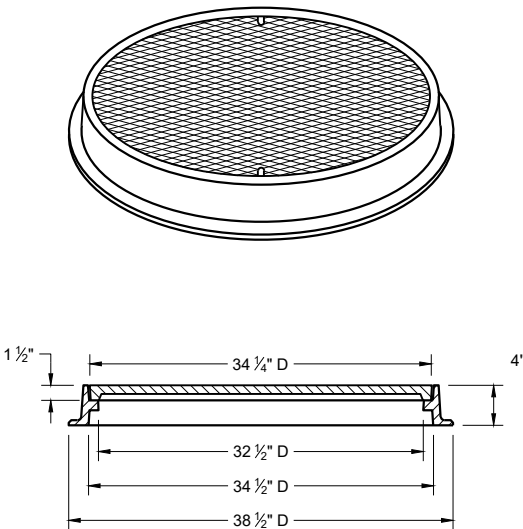
TYPE "K"



TYPE "L"



INLET COVER TYPE "BW"

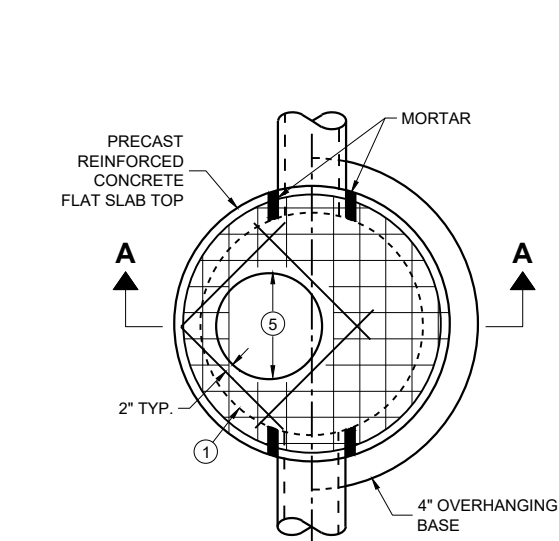


TYPE "M"

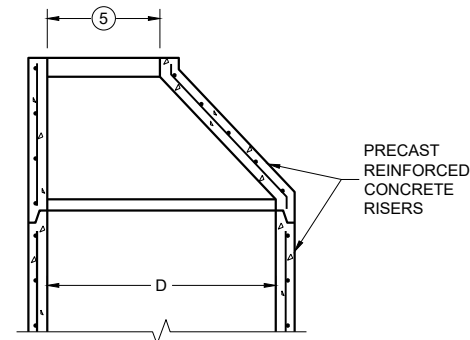
INLET COVERS TYPES BW
MANHOLE COVERS TYPES K,
J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

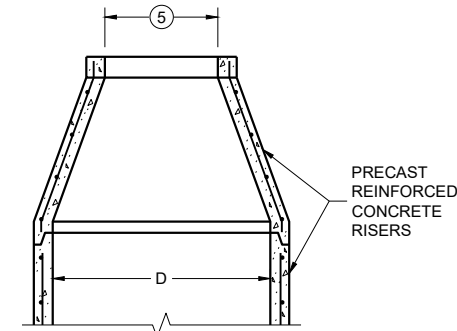
APPROVED
February 2025 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



PLAN VIEW
CIRCULAR OPENING



OPTIONAL PRECAST
REINFORCED CONCRETE
ECCENTRIC TOP



OPTIONAL PRECAST
REINFORCED CONCRETE
CONCENTRIC TOP

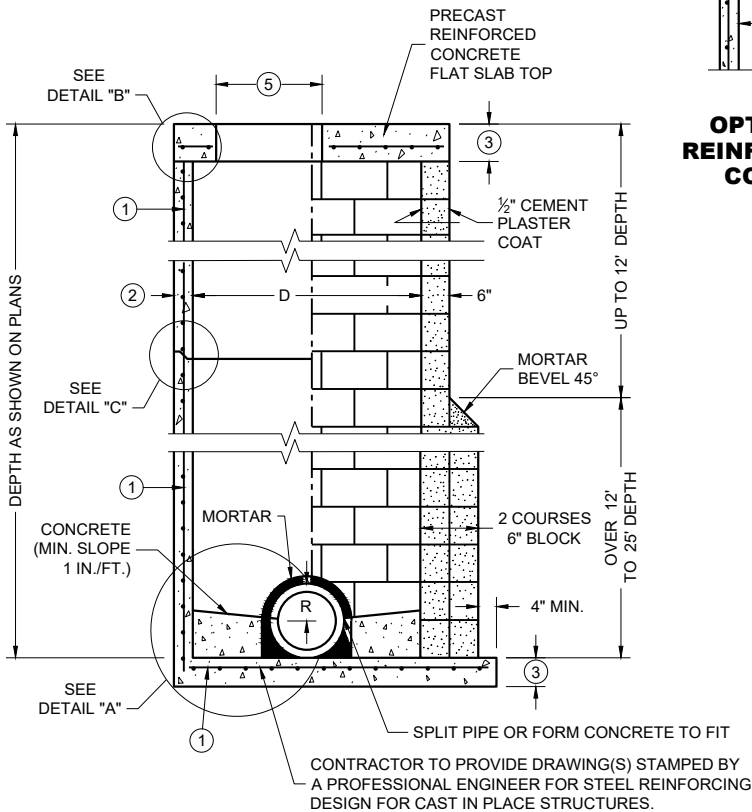
MANHOLE COVER OPENING MATRIX

MANHOLE COVER OPENING SIZE (FT.)	MANHOLE COVER TYPE	C	ALL JS	K	L	M
2 DIA.	5	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.

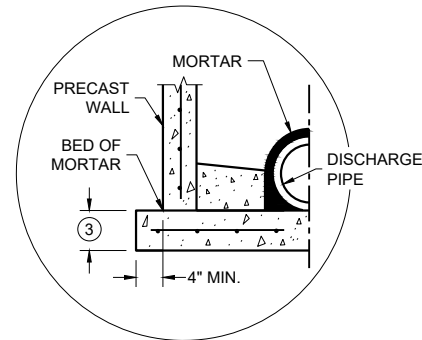


SECTION A - A

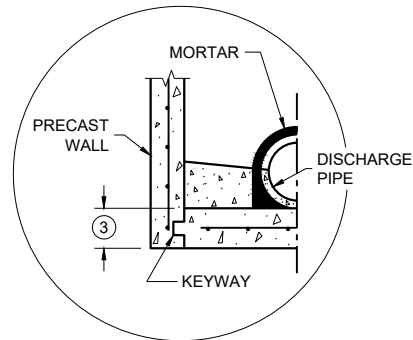
PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE

1

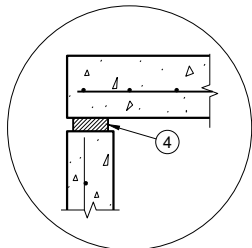


SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

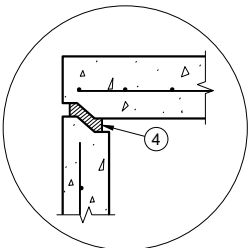


PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION

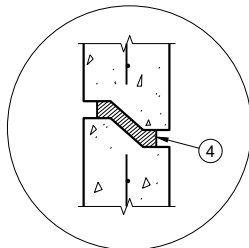
DETAIL "A"



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" 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.

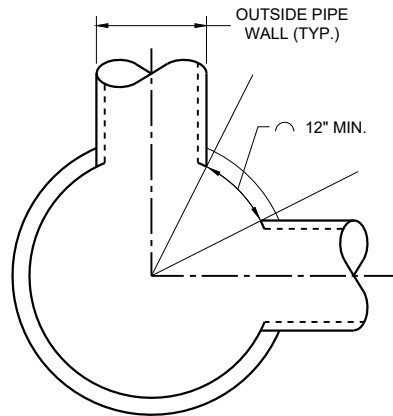
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

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.



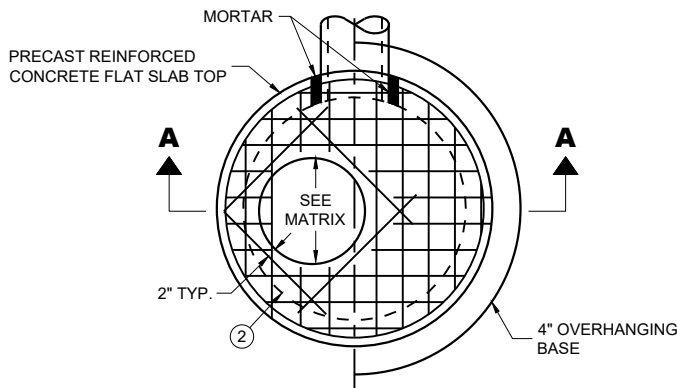
MINIMUM HORIZONTAL
PIPE SEPARATION

DETAIL "D"

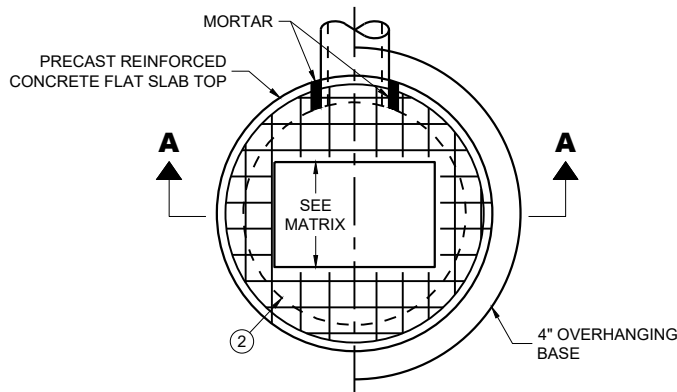
MANHOLES, 3-FT, 4-FT
5-FT, 6-FT, 7-FT, 8-FT, 9-FT
AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

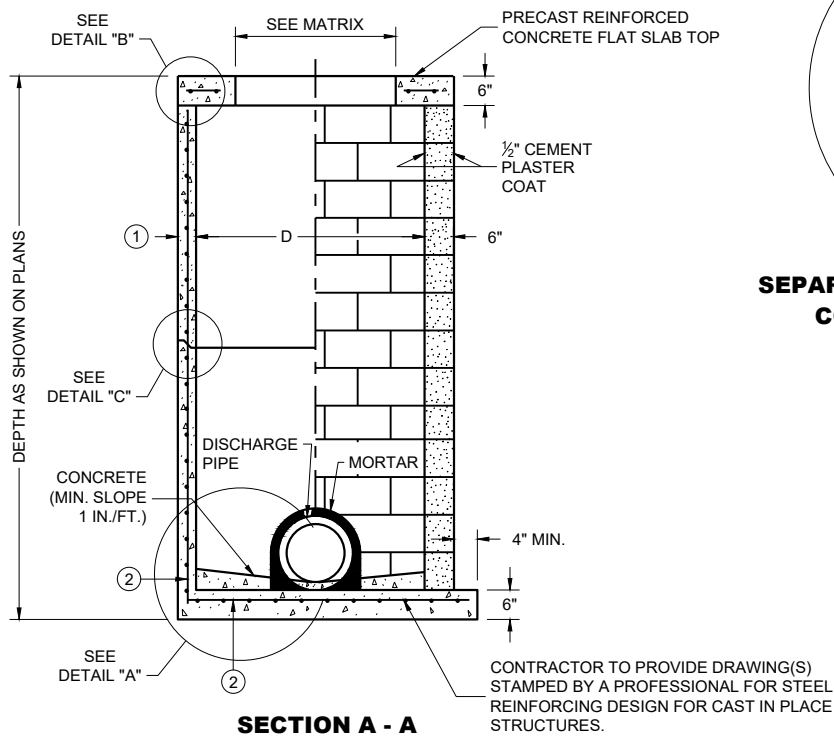
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

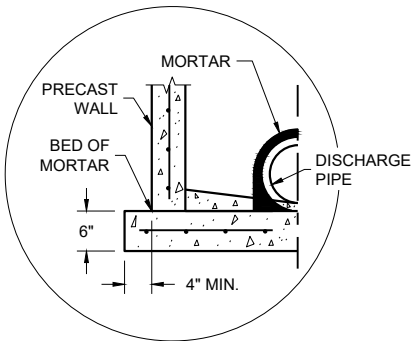
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

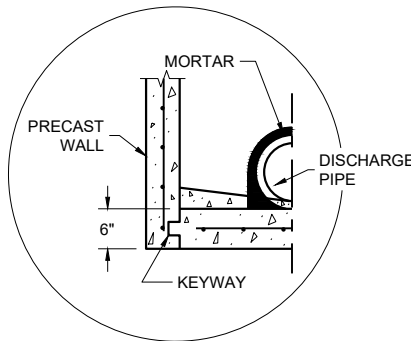
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V V-B	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

PIPE MATRIX

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

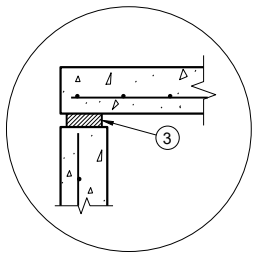


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

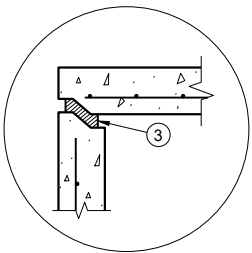


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

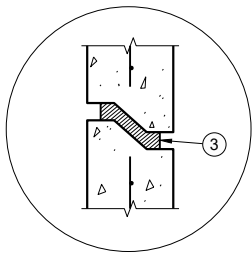
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

INLETS 3-FT AND 4-FT DIAMETER

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 INLET 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.

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

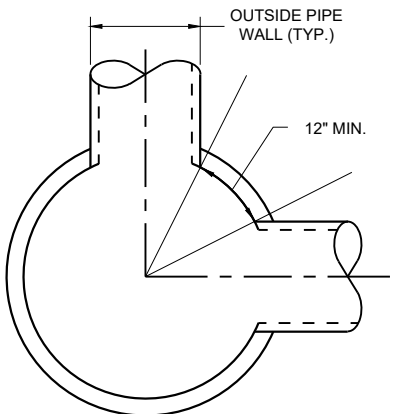
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

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

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ 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.

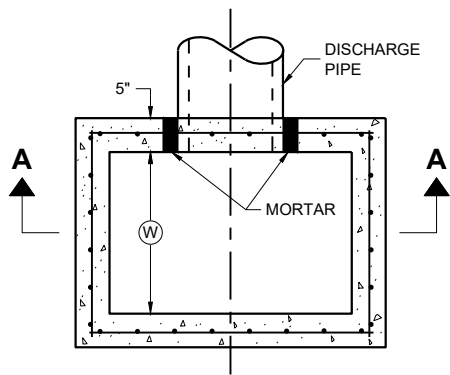


MINIMUM HORIZONTAL PIPE SEPARATION
DETAIL "D"

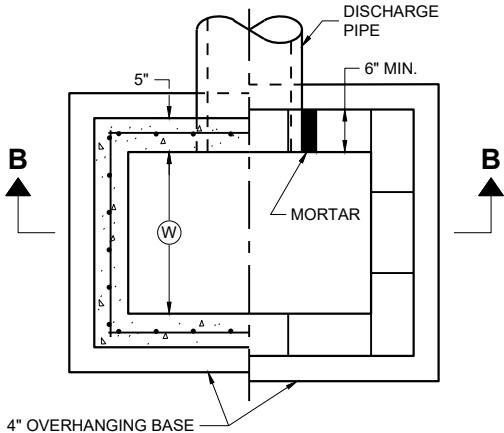
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

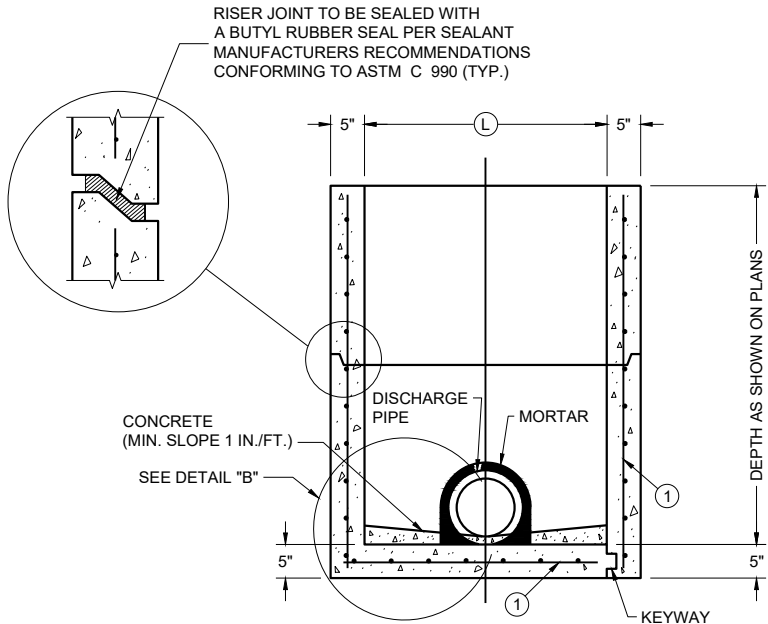
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December 2023 /S/ Rodney Taylor
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PLAN VIEW



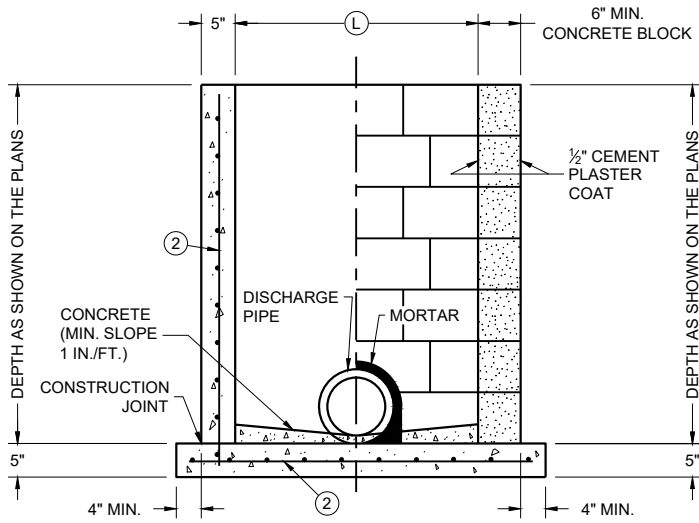
PLAN VIEW



PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

PRECAST REINFORCED
CONCRETE WITH
INTEGRAL BASE

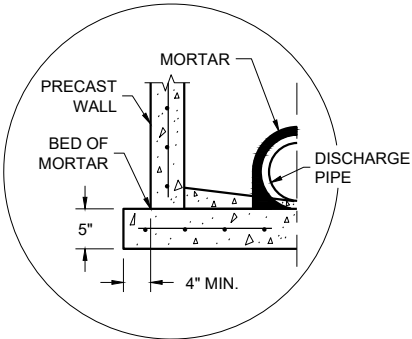
SECTION A - A



CAST IN PLACE
REINFORCED
CONCRETE

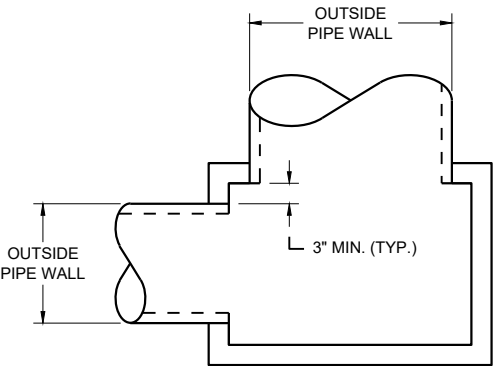
CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE ①

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

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

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

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

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

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

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

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" 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

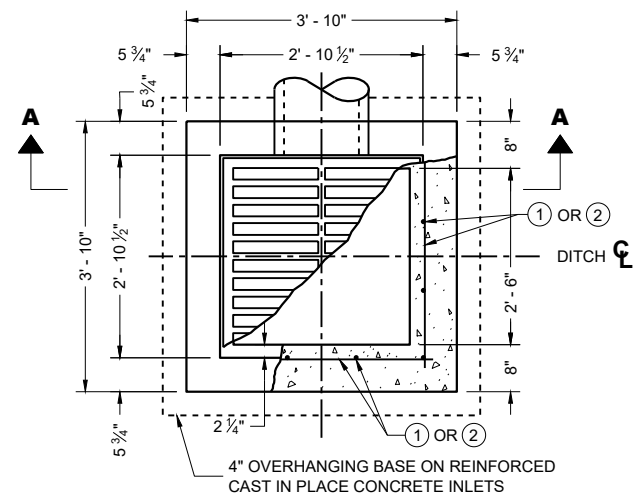
PIPE MATRIX

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

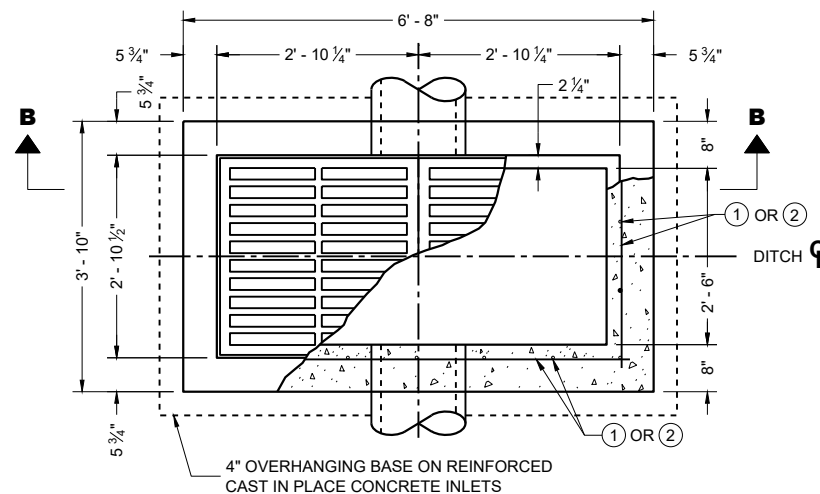
INLETS 2 X 2-FT, 2 X 2.5-FT,
2 X 3-FT, 2.5 X 3-FT
AND 2 X 3.5-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

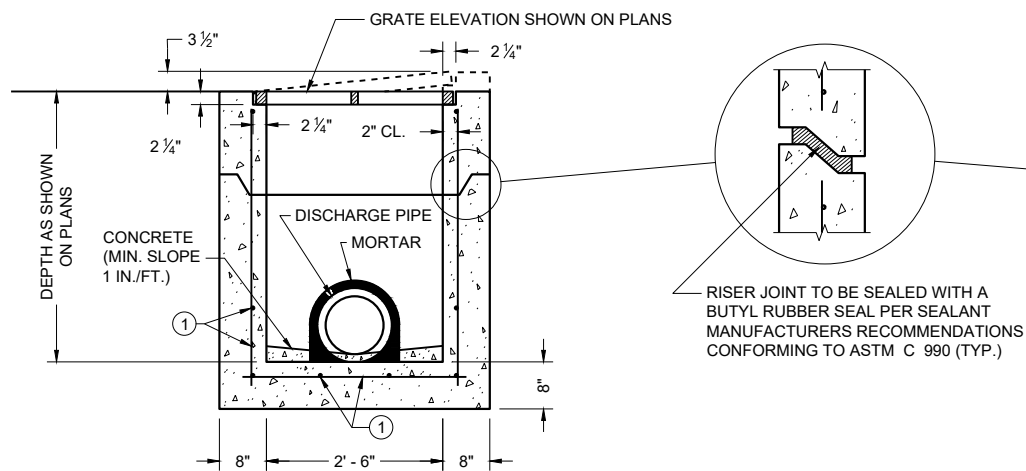
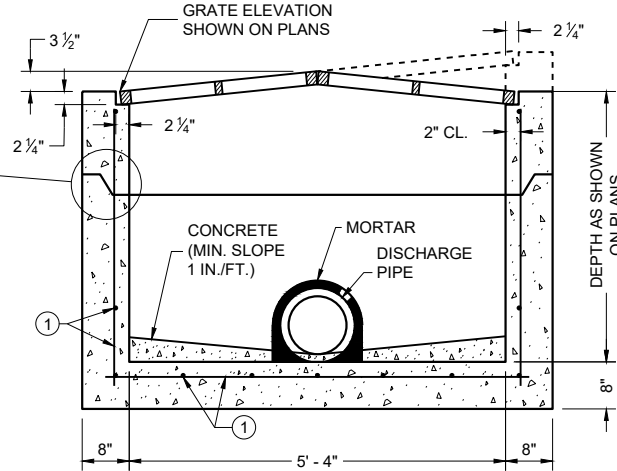
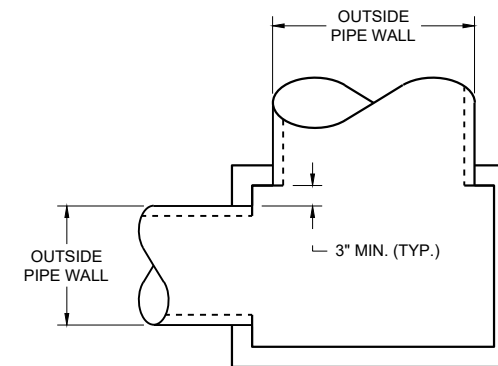
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FHWA UNIT SUPERVISOR



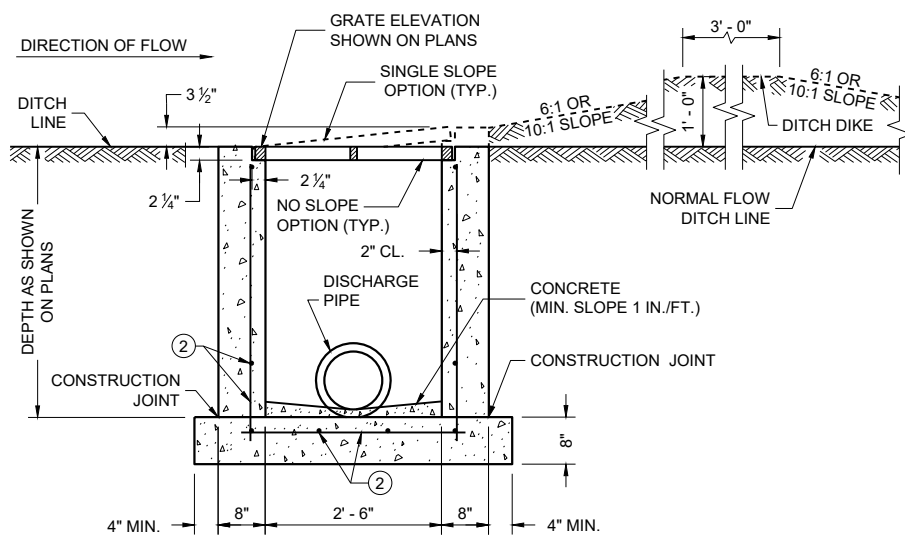
PLAN VIEW



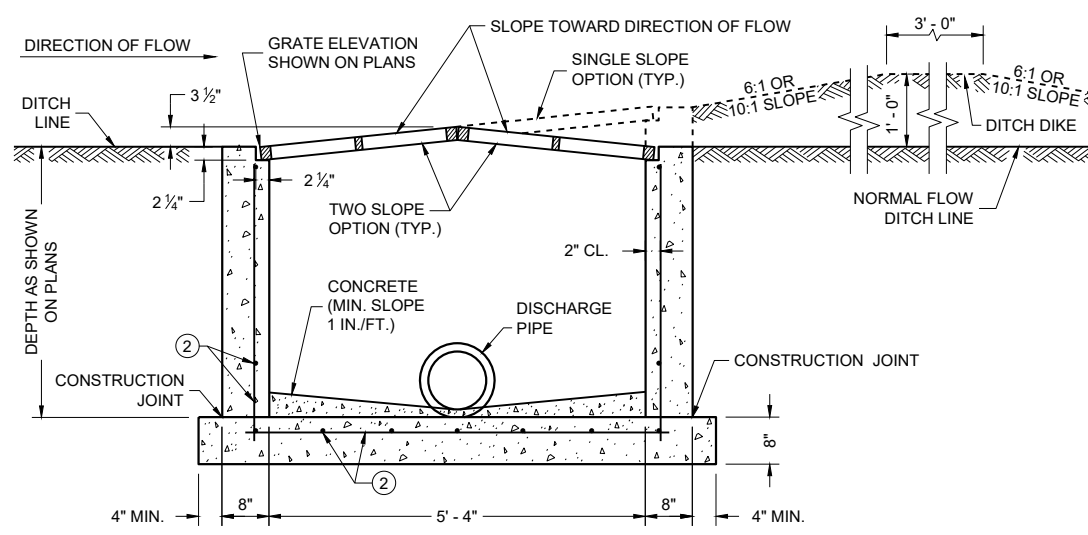
PLAN VIEW

PRECAST REINFORCED CONCRETE
SECTION A - APRECAST REINFORCED CONCRETE
SECTION B - B

DETAIL "A"

REINFORCED CAST IN PLACE CONCRETE
SECTION A - A

INLETS MEDIAN 1 GRATE

REINFORCED CAST IN PLACE CONCRETE
SECTION B - B

INLETS MEDIAN 2 GRATE

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 INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE 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 PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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.

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.

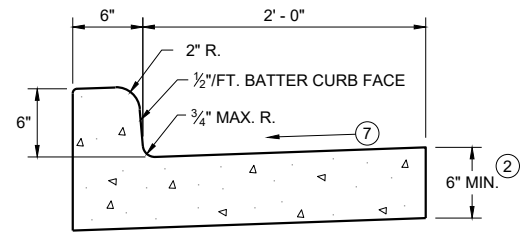
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

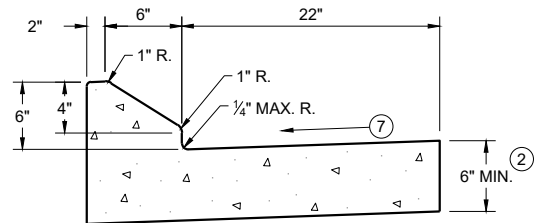
INLETS
MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

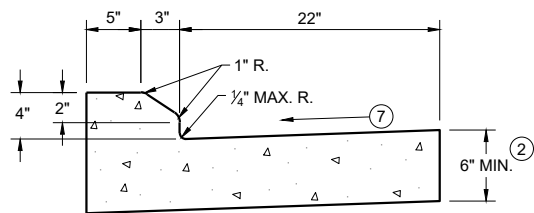
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



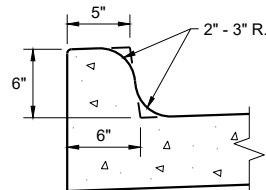
TYPES A^① & D



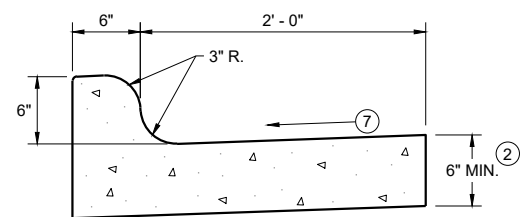
6" SLOPED CURB TYPES G^① & J



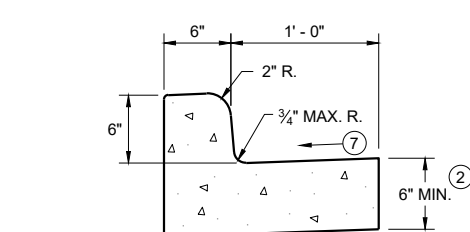
4" SLOPED CURB TYPES G^① & J



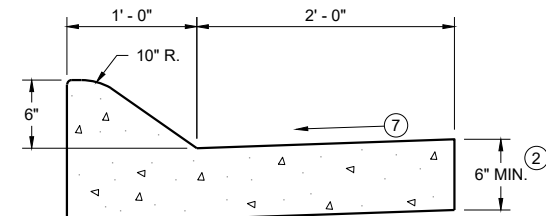
TYPES K^① & L
(OPTIONAL CURB SHAPE)



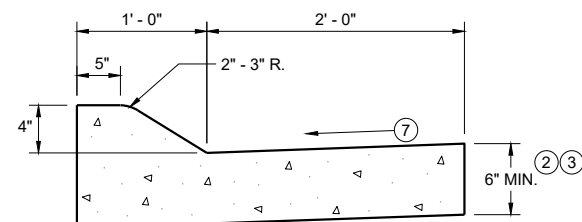
TYPES K^① & L
CONCRETE CURB AND GUTTER 30"



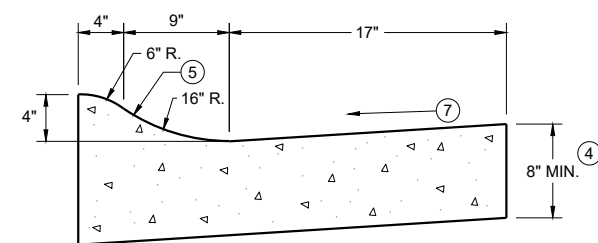
TYPES A^① & D
CONCRETE CURB AND GUTTER 18"



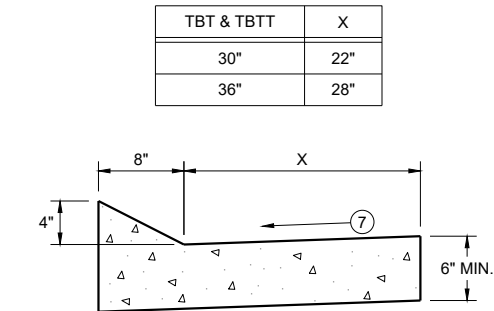
6" SLOPED CURB TYPES A^① & D



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



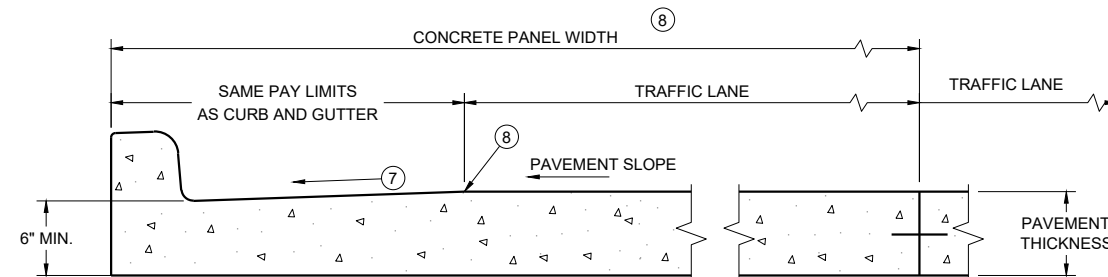
4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"



TYPES TBT & TBTT^①
CONCRETE CURB AND GUTTER

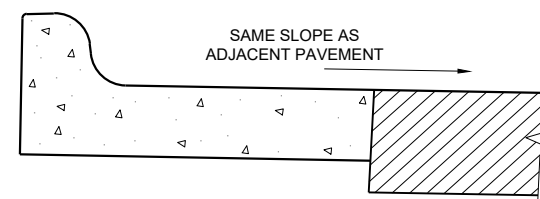
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

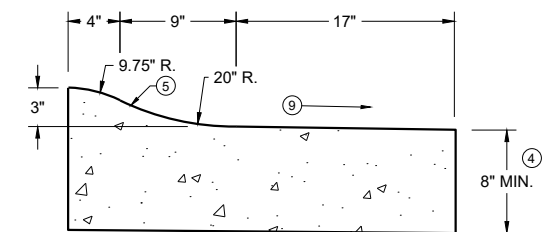


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* 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

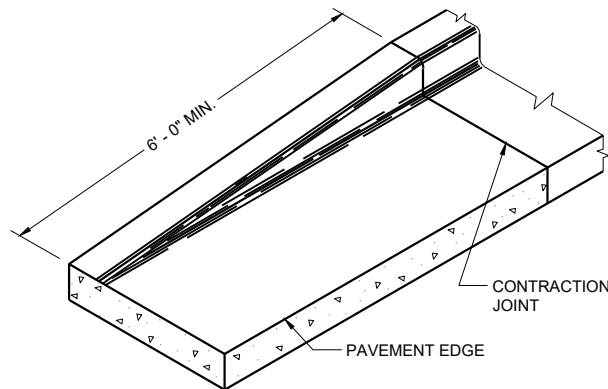
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

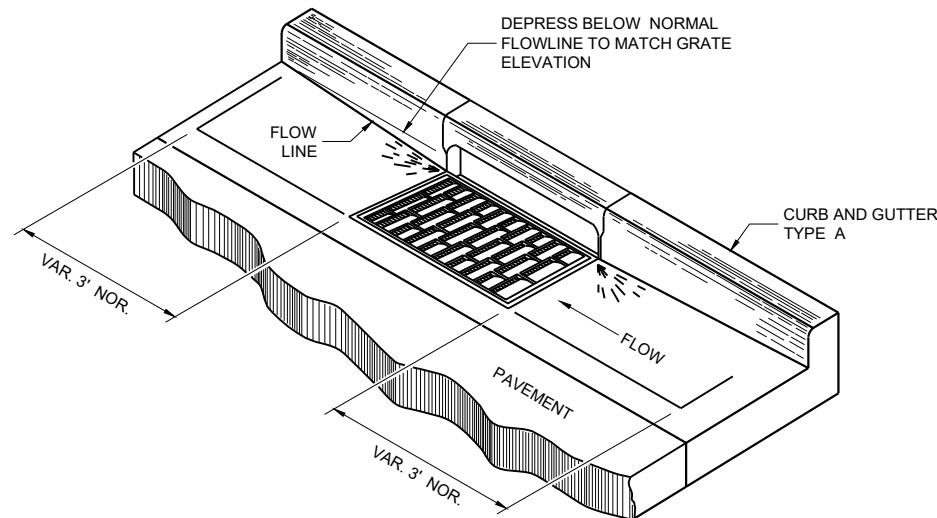
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

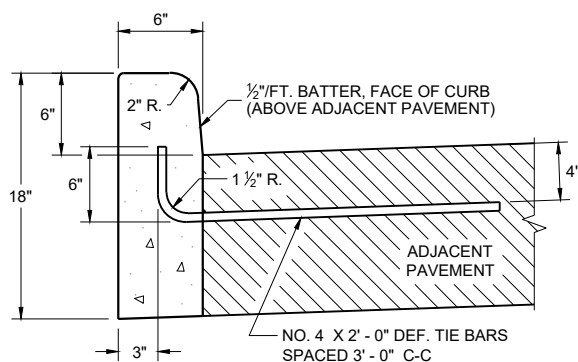


END SECTION CURB AND GUTTER

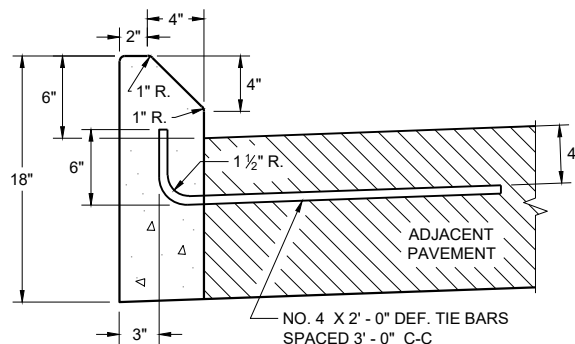


DETAIL OF CURB AND GUTTER AT INLETS

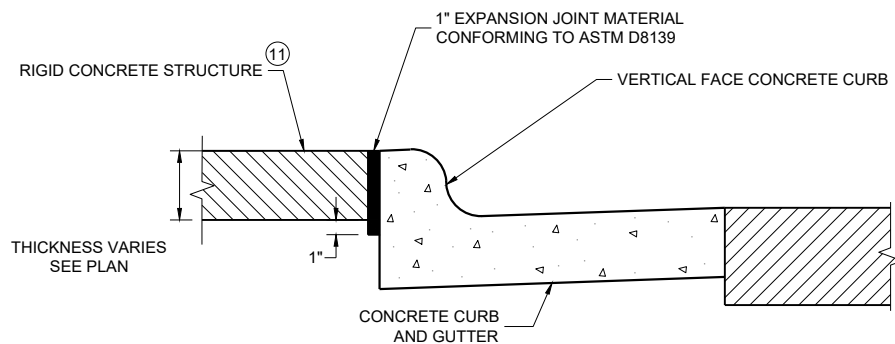
(TYPICAL H INLET COVER SHOWN)



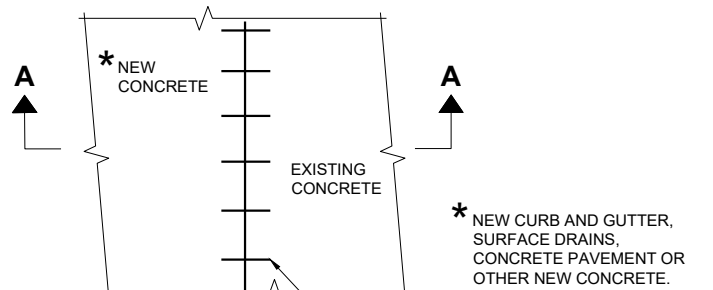
TYPES A^① & D



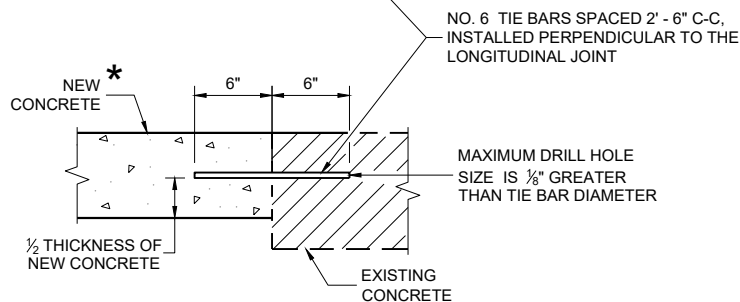
**TYPES G^① & J
CONCRETE CURB**



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



PLAN VIEW



**SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT**

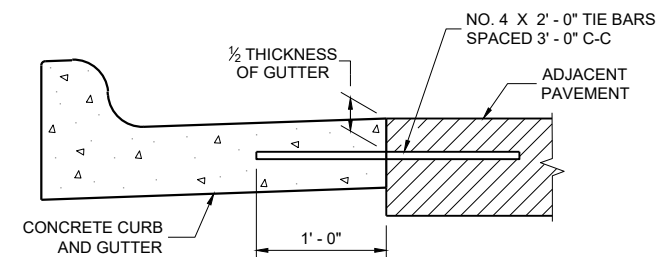
GENERAL NOTES

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

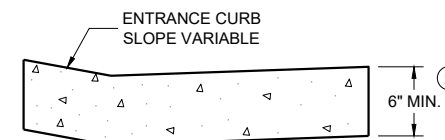
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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)**

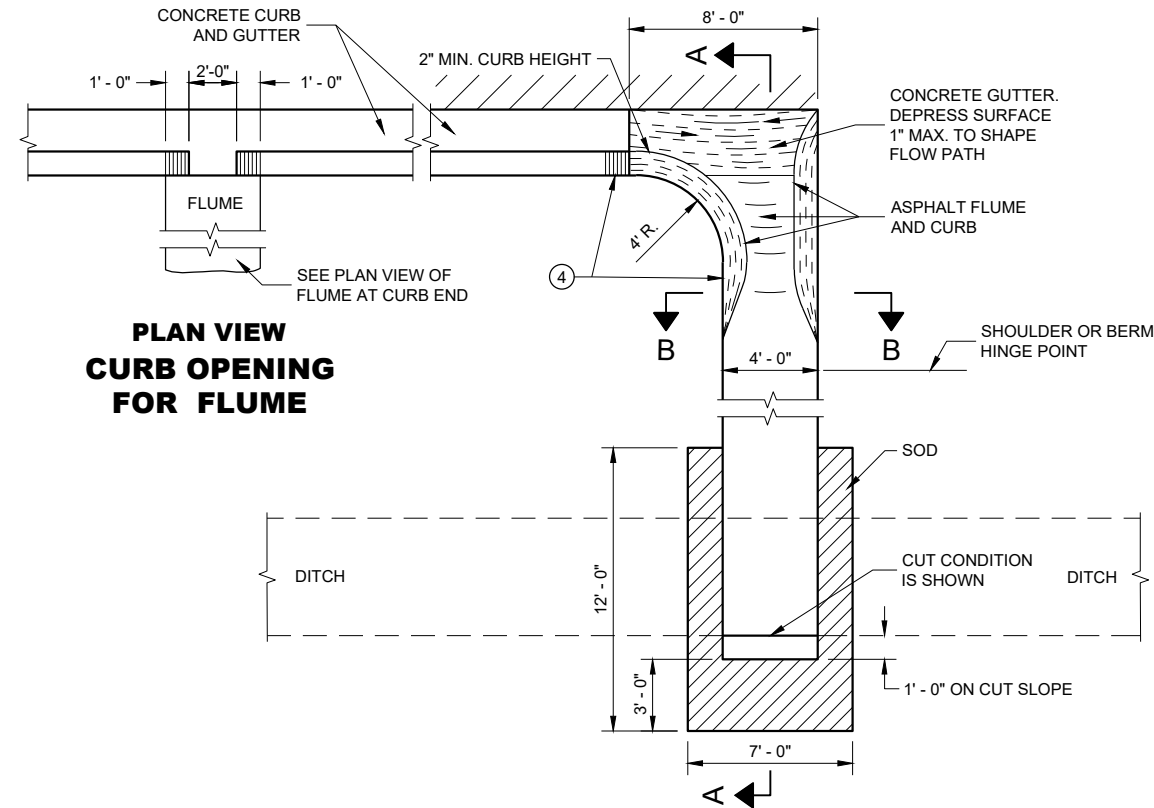
**CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

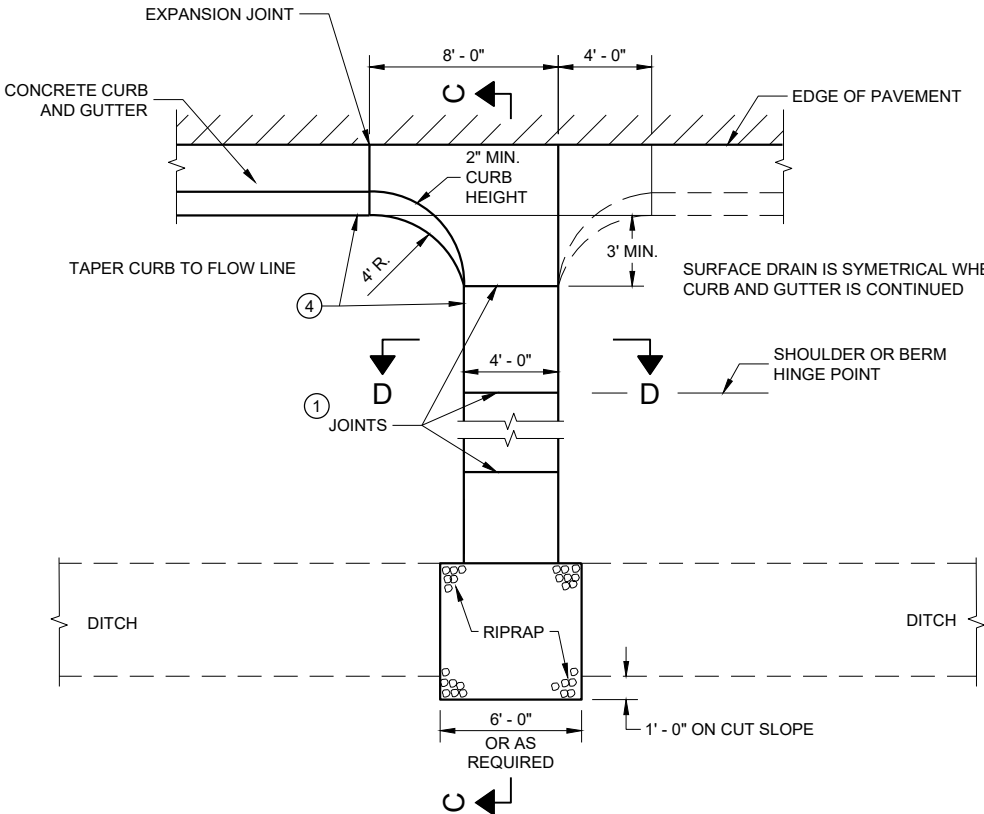
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



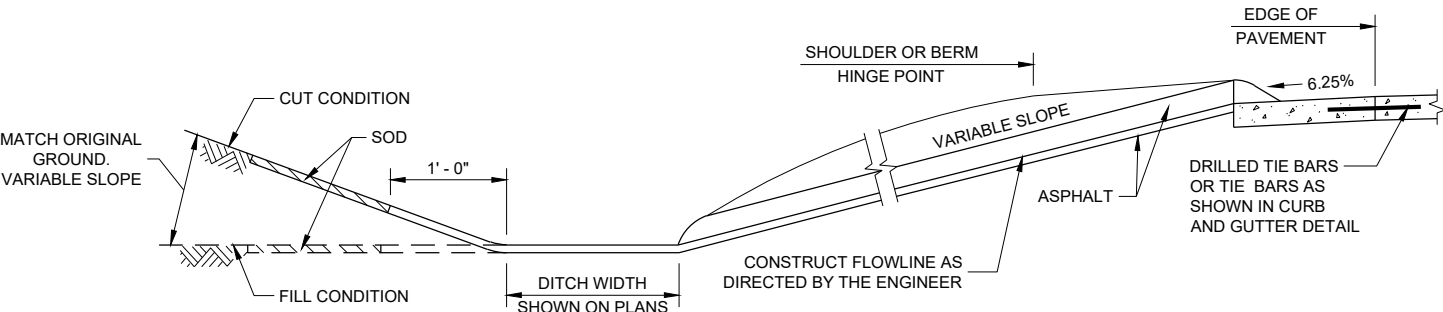
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

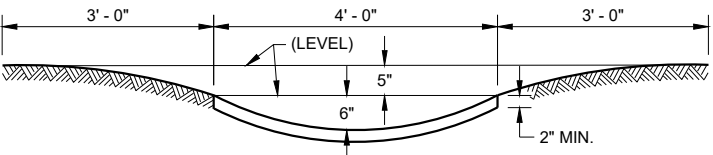
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

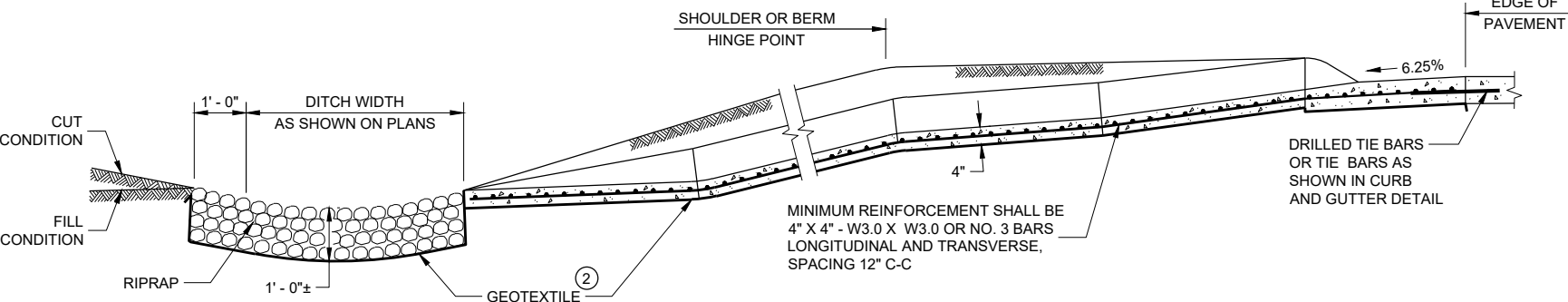
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



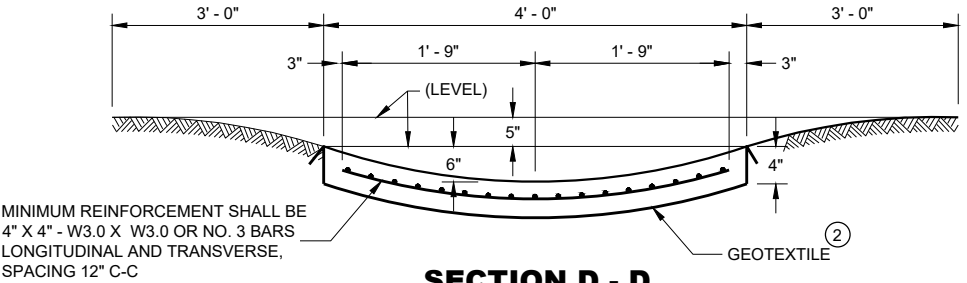
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023

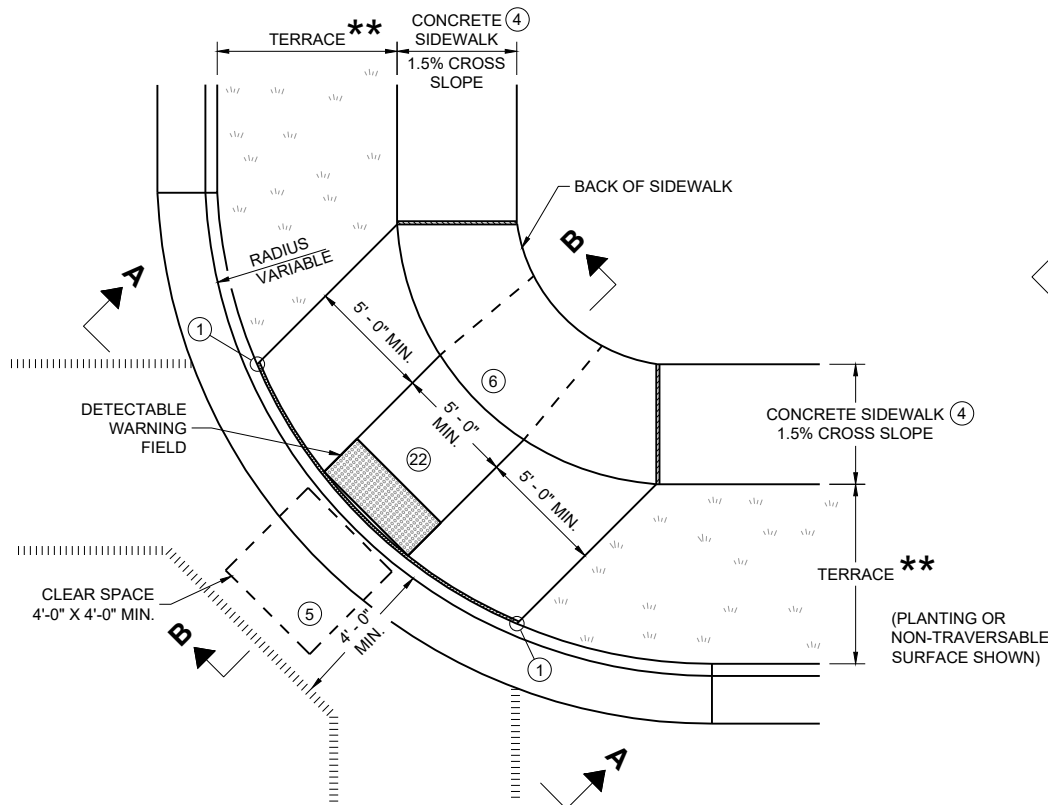
DATE

FHWA

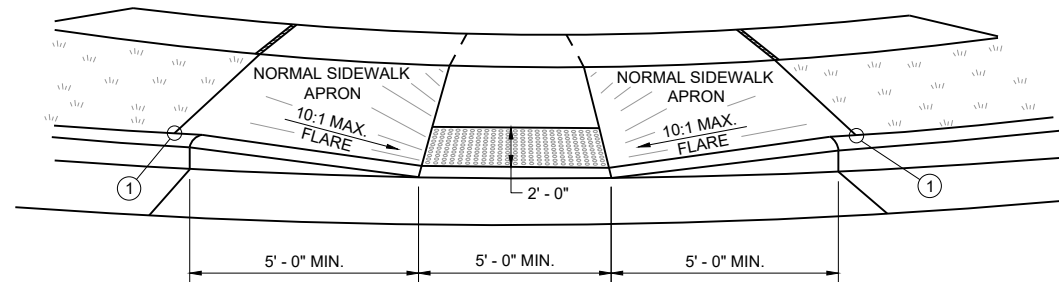
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT ENGINEER

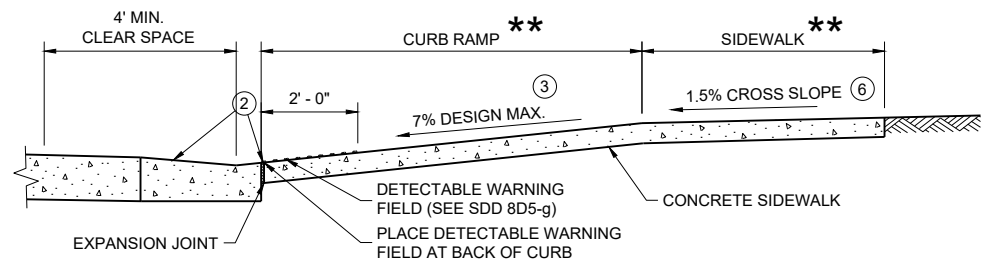
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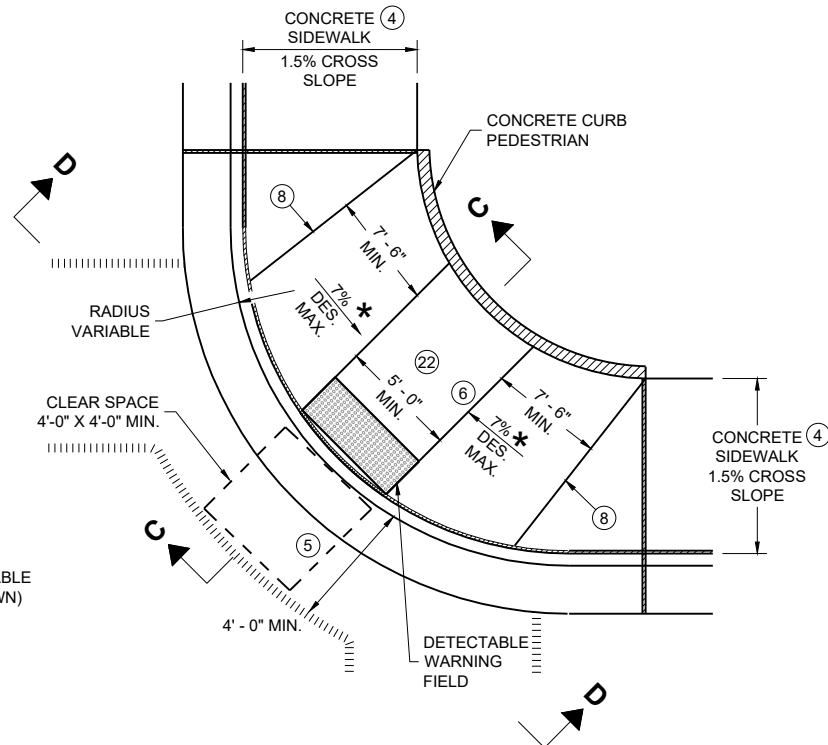
PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)



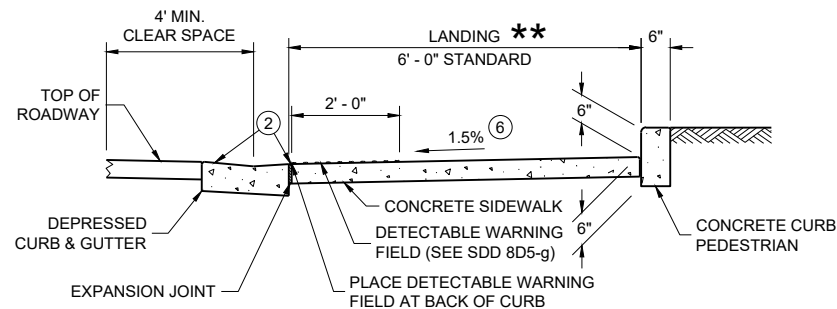
VIEW A - A FOR TYPE 1



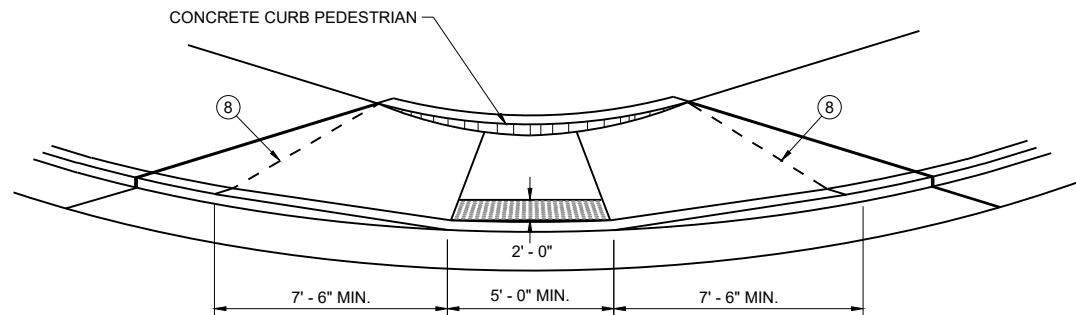
SECTION B - B FOR TYPE 1



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.

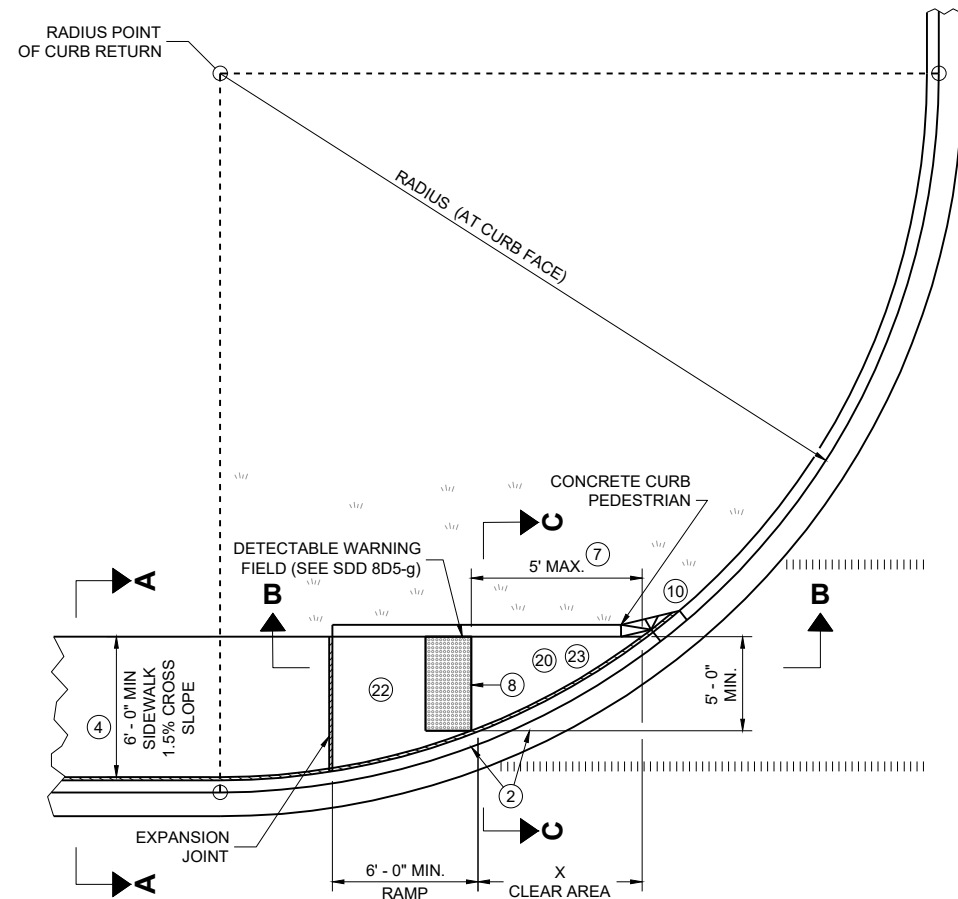
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% 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

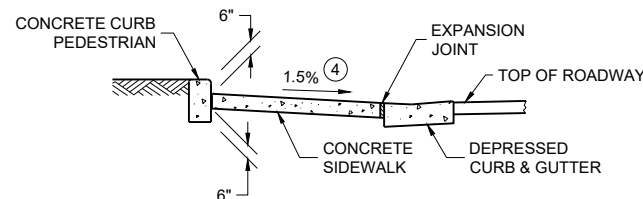
- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS
TYPE 1 AND 1-A

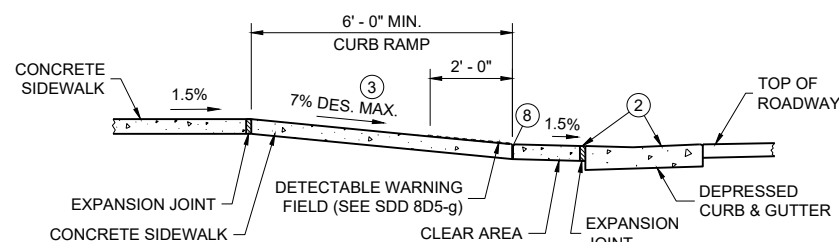
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A

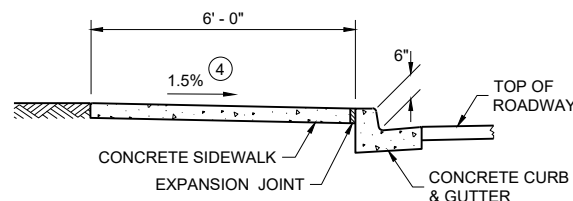


SECTION B - B FOR
TYPE 4A AND TYPE 4A1

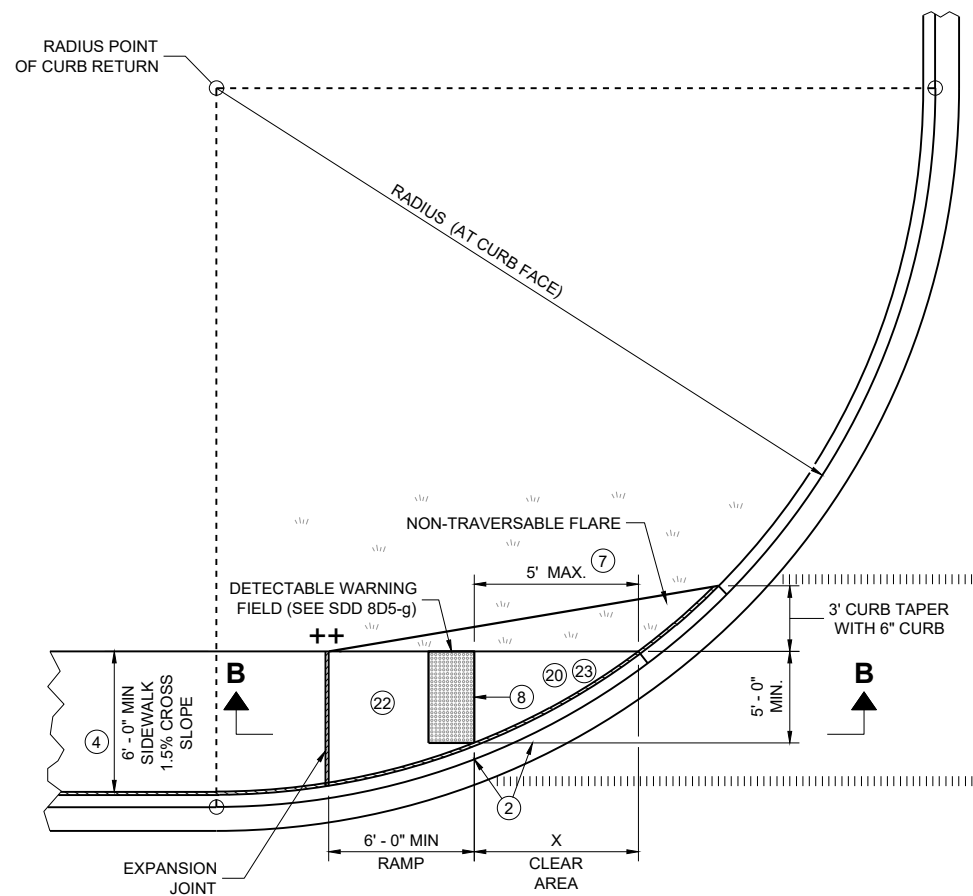
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED



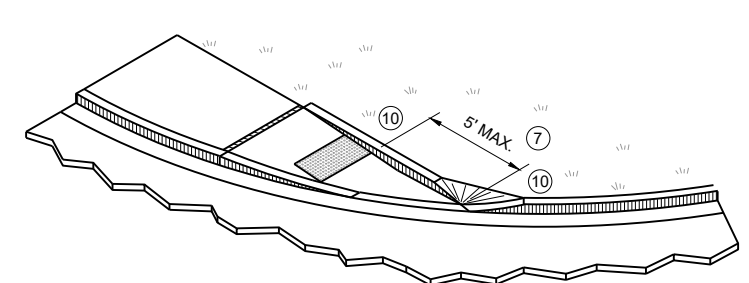
SECTION A - A FOR TYPE 4A



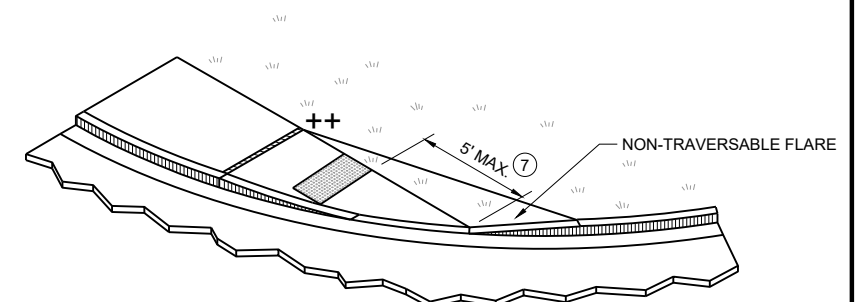
PLAN VIEW
CURB RAMP TYPE 4A1

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.



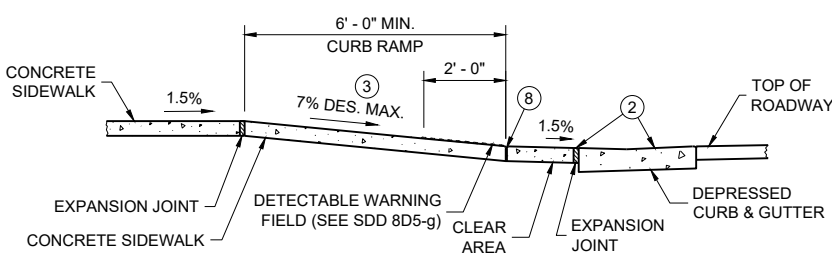
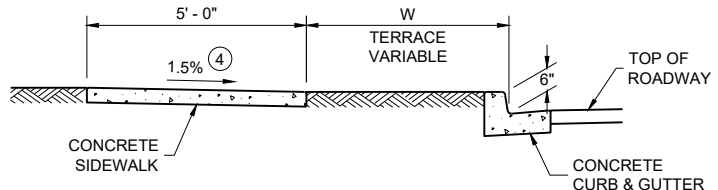
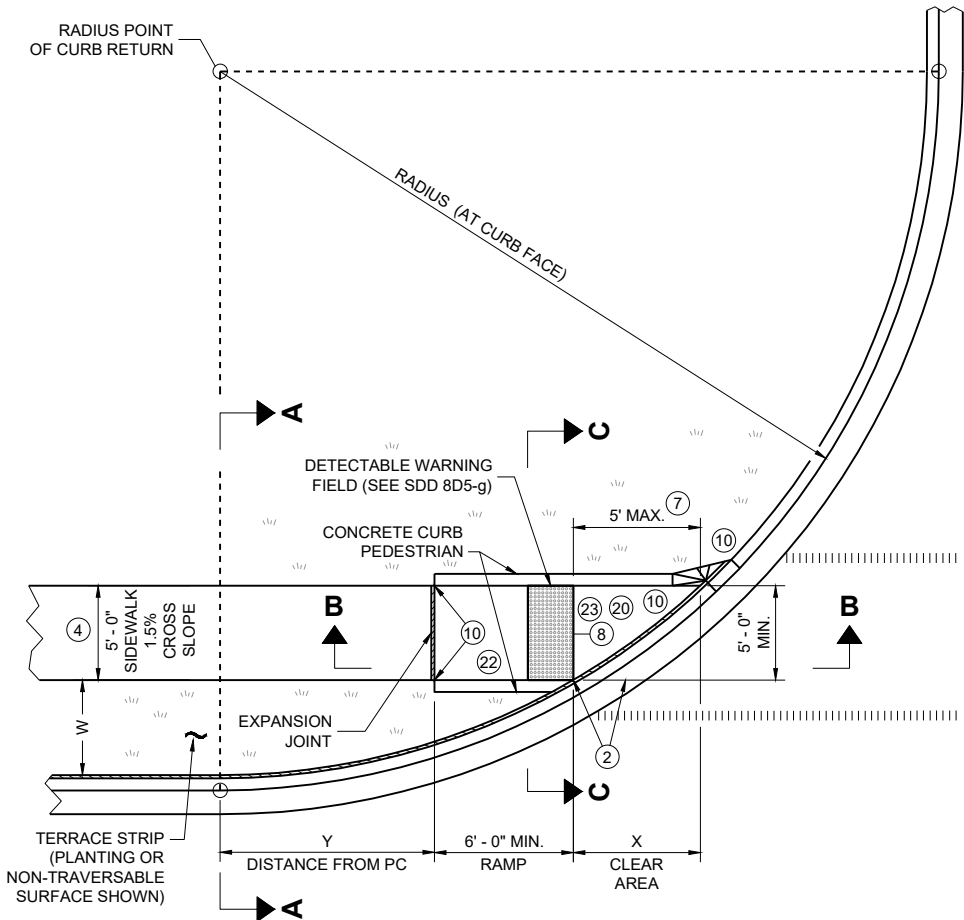
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

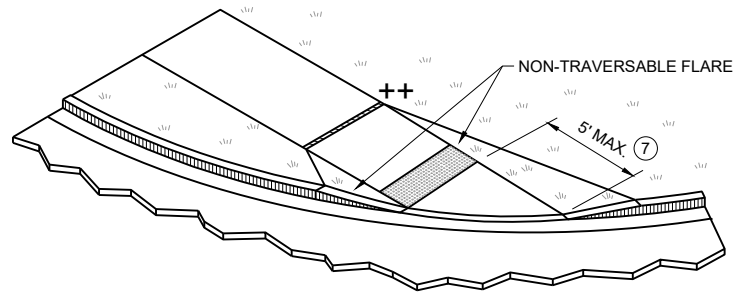
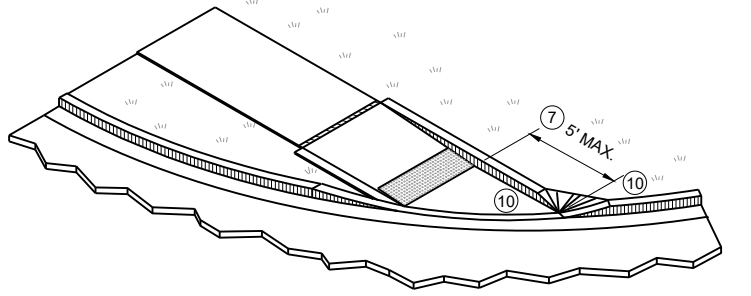
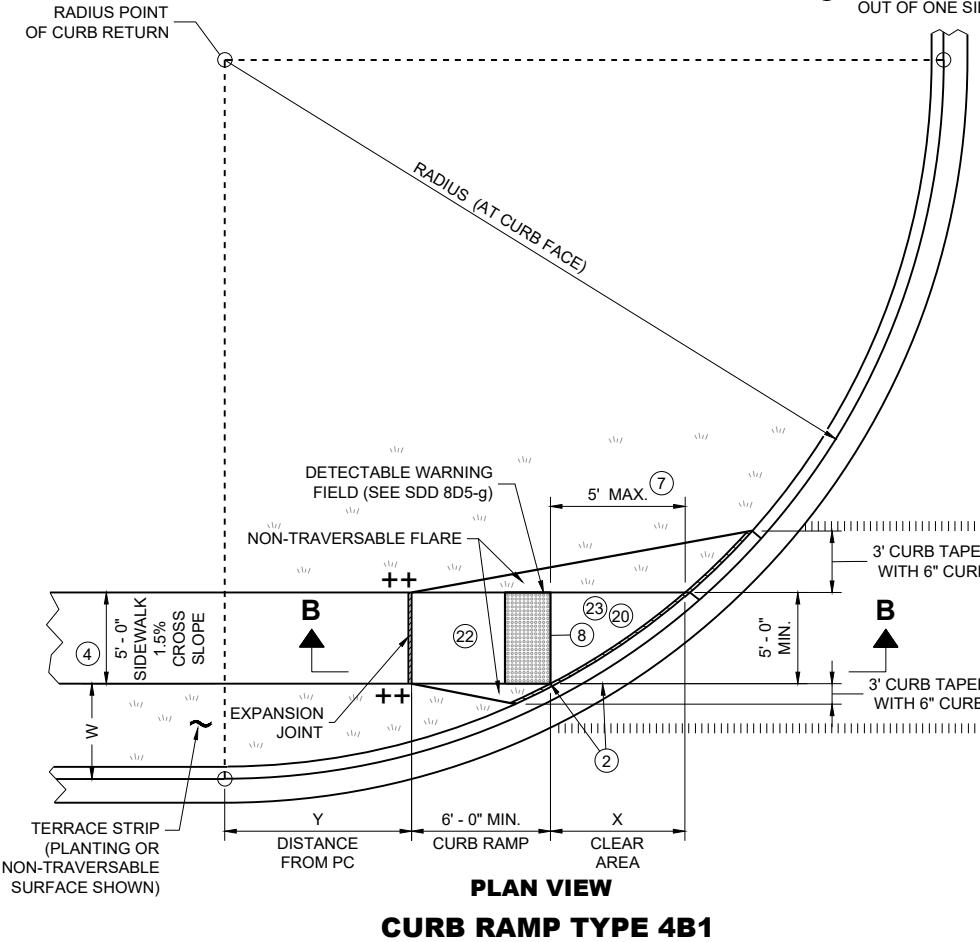
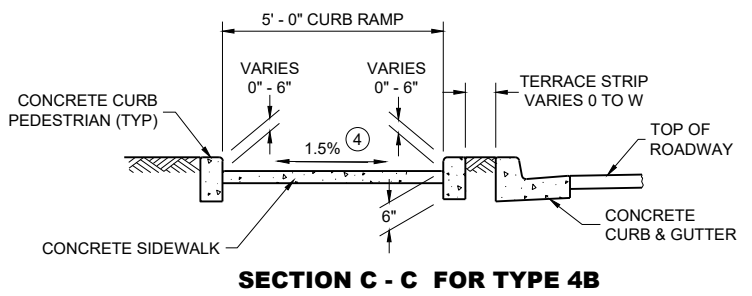
**CURB RAMPS
TYPE 4A AND 4A1**

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 1/4"	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



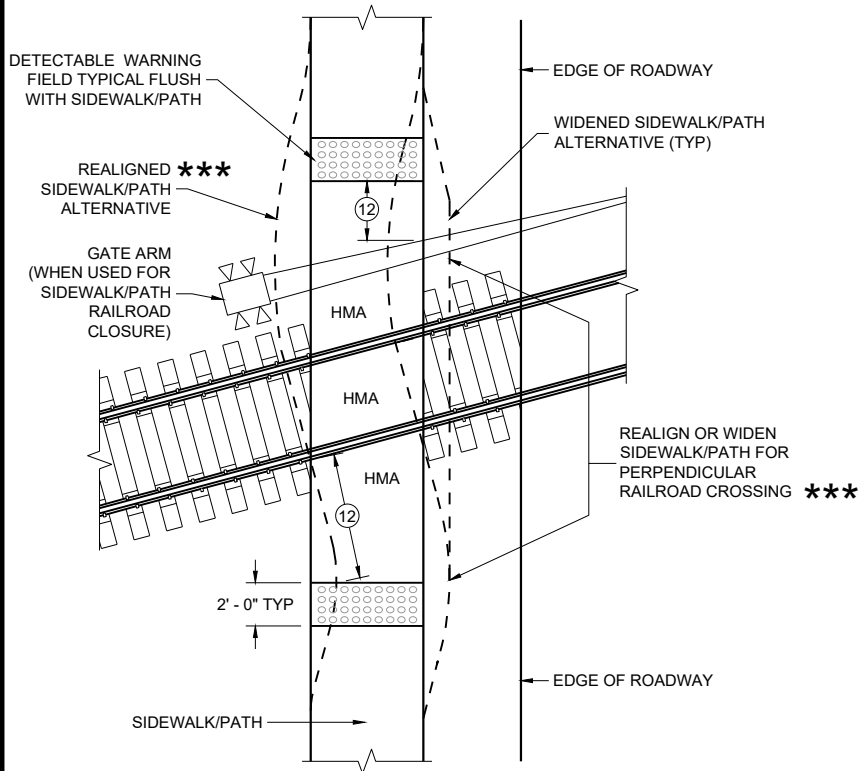
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

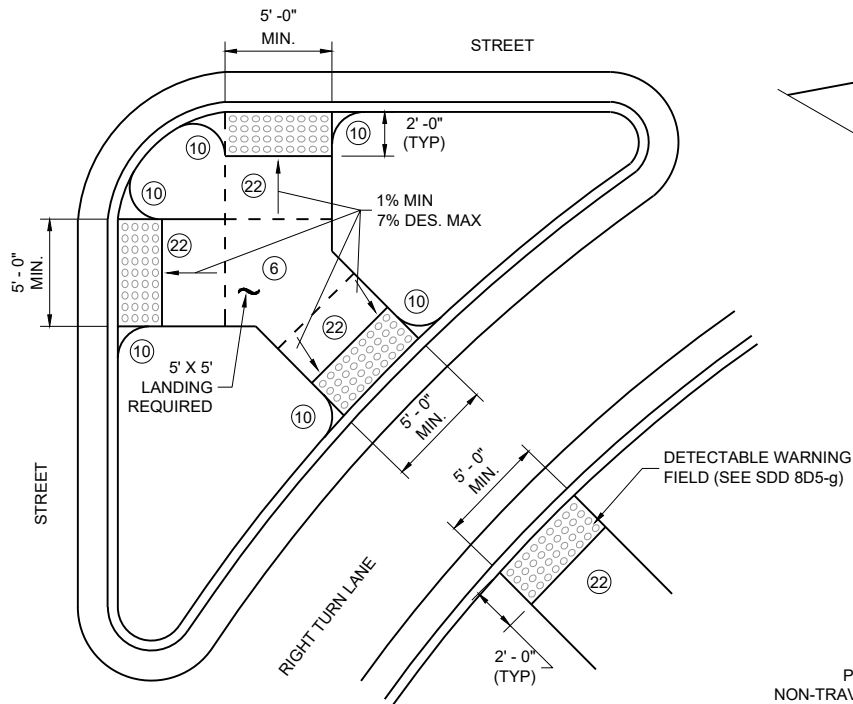
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- 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**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

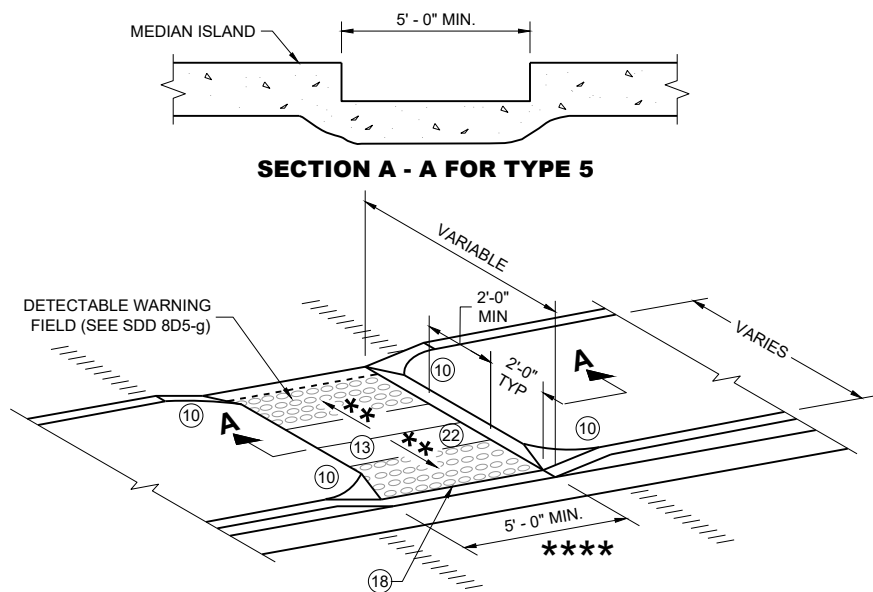


CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS

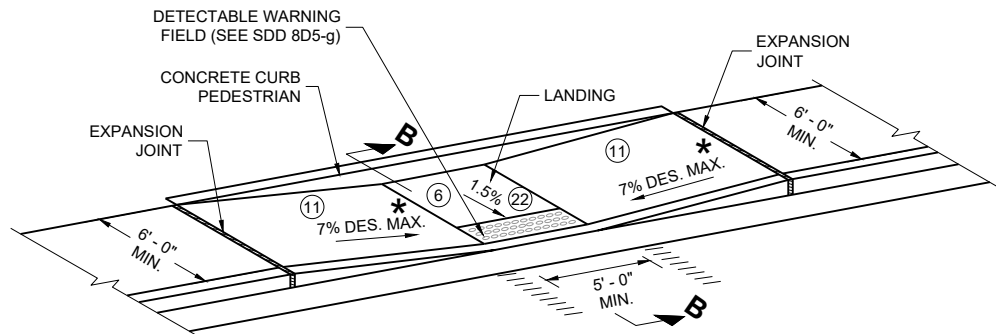


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

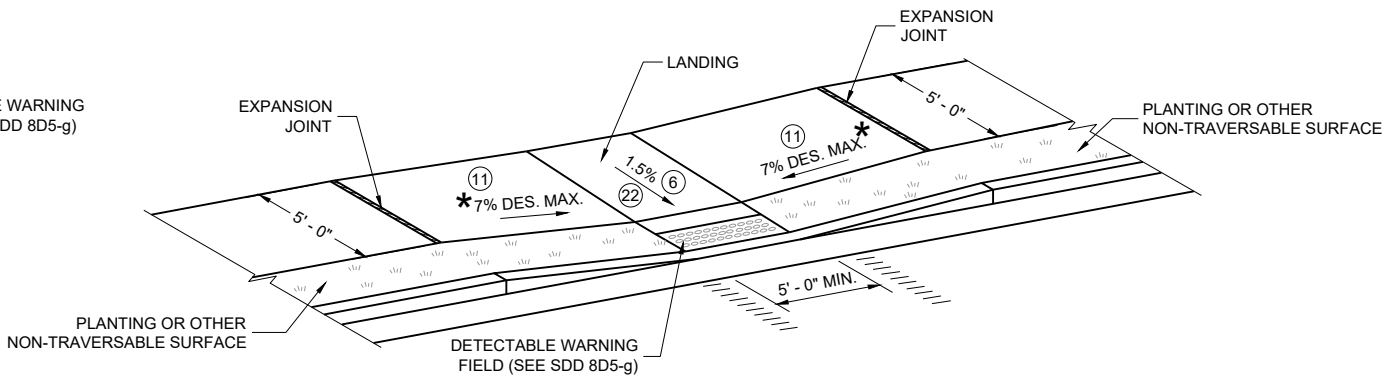
REFER TO GENERAL NOTES (2) AND (3)
FOR ALL ISLAND CURB RAMPS



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.

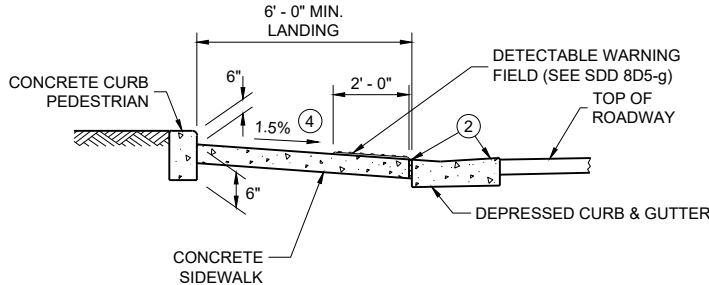
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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.
- (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.

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

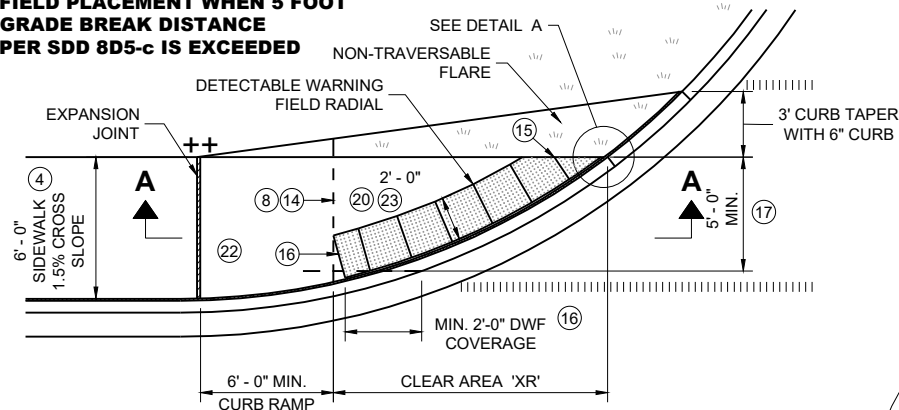


SECTION B - B FOR TYPE 7A

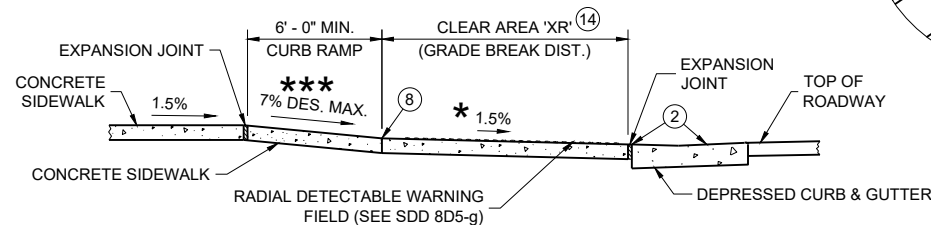
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

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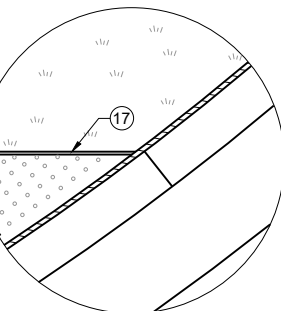
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-c IS EXCEEDED**



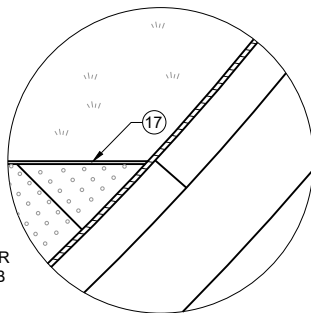
**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



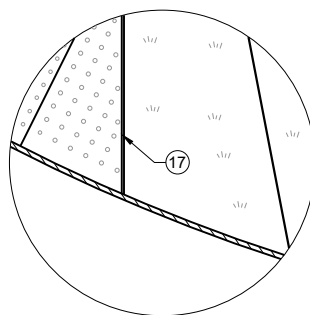
SECTION A - A FOR TYPE 4A1



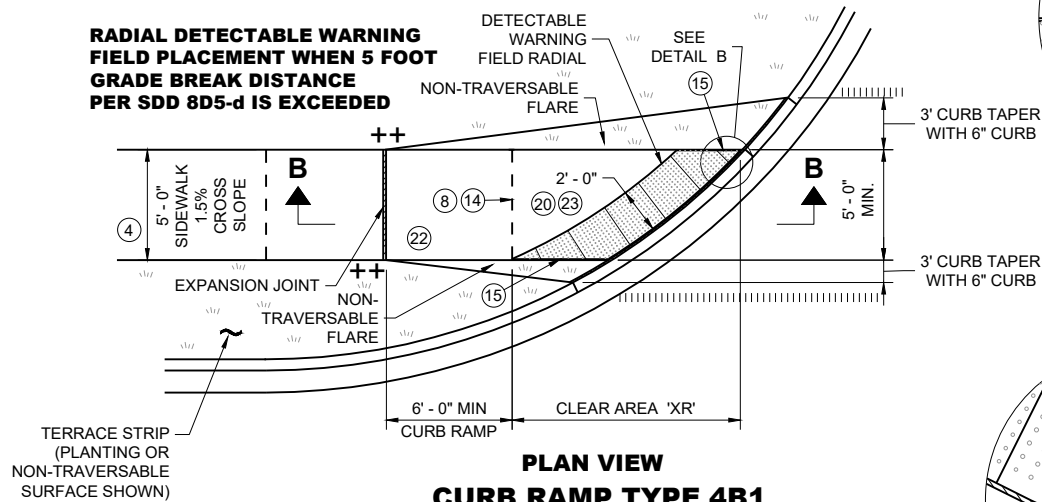
DETAIL A



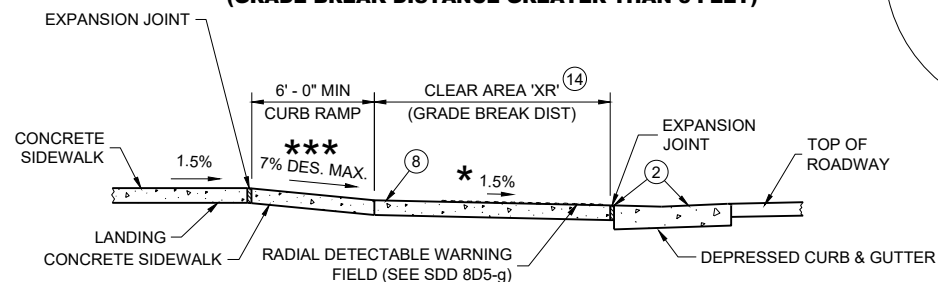
DETAIL B



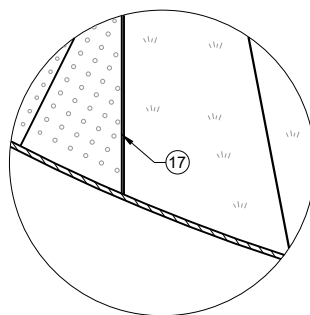
DETAIL C



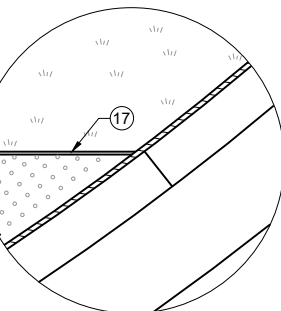
**PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



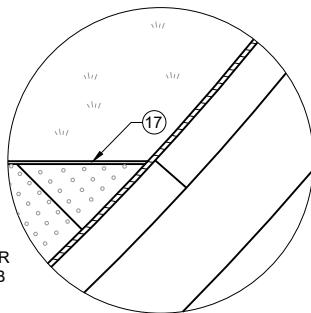
SECTION B - B FOR TYPE 4B1



DETAIL C



DETAIL A



DETAIL B

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.

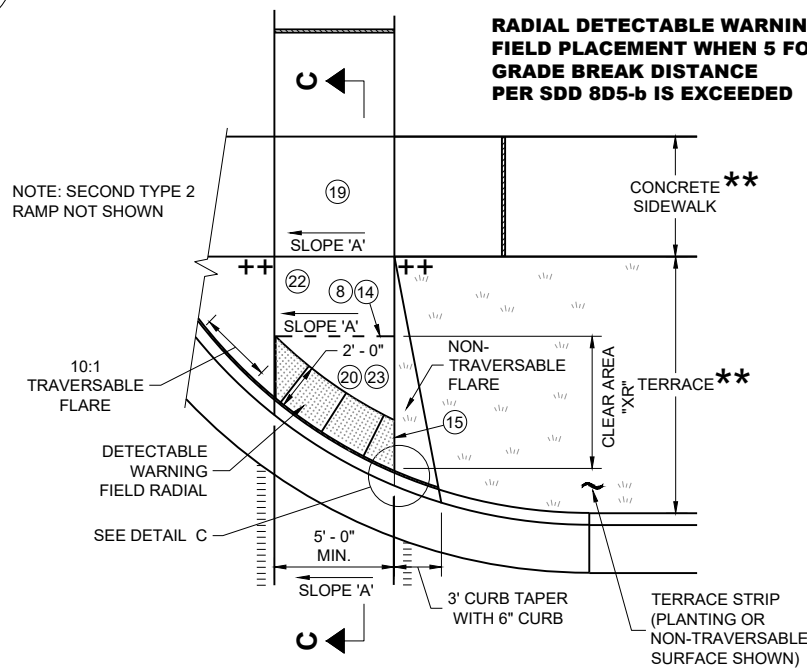
APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

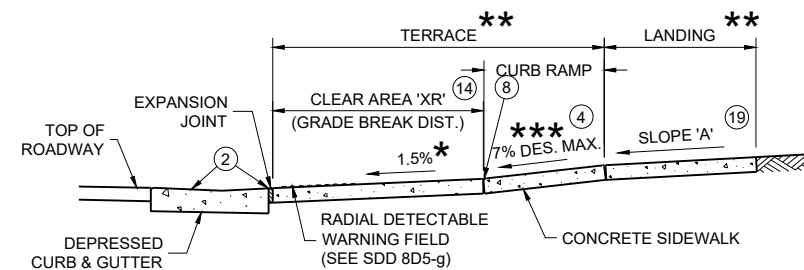
FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

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

- ② GRADE CHANGE BETWEEN GUTTER 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.
- ⑯ USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑲ 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.



**PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)**



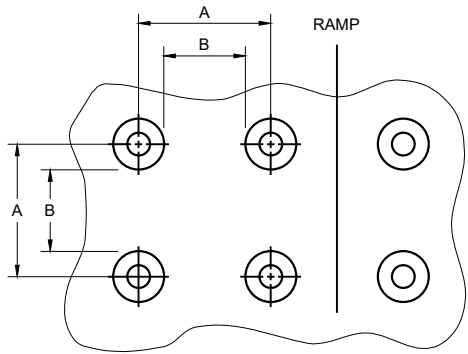
SECTION C - C FOR TYPE 2

**CURB RAMPS
RADIAL DETECTABLE WARNING**

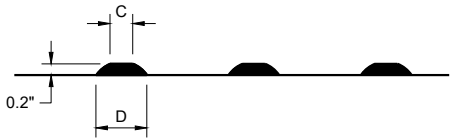
STATE OF WISCONSIN
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	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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

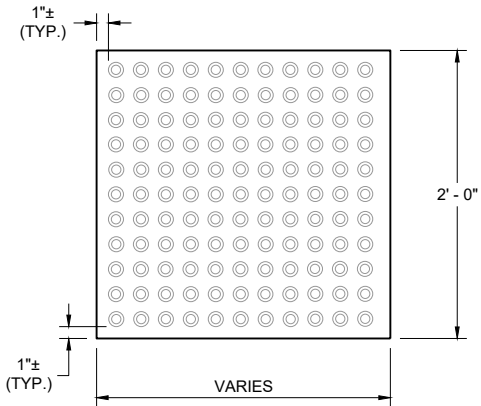


PLAN VIEW

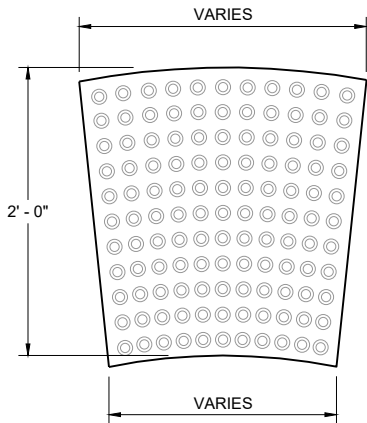


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

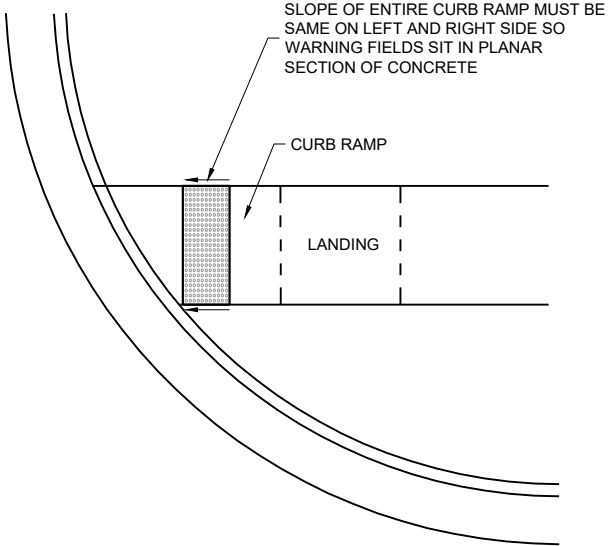


RECTANGULAR
PLATES

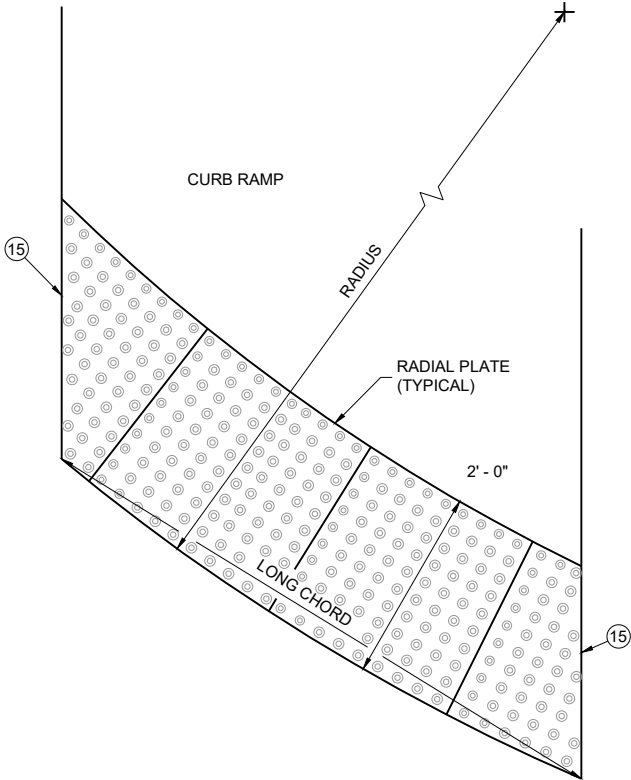


RADIAL
PLATES

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.

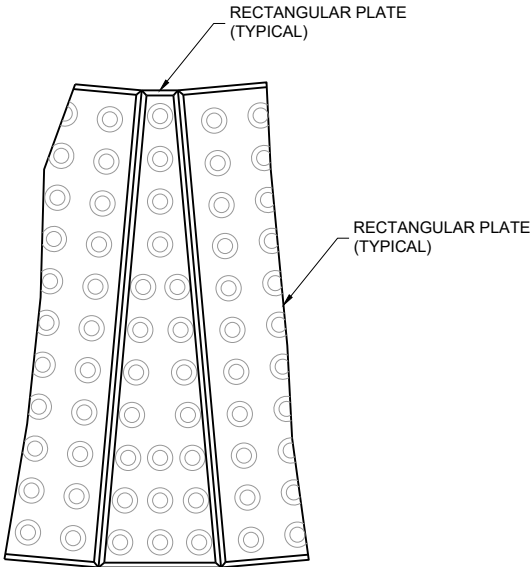
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



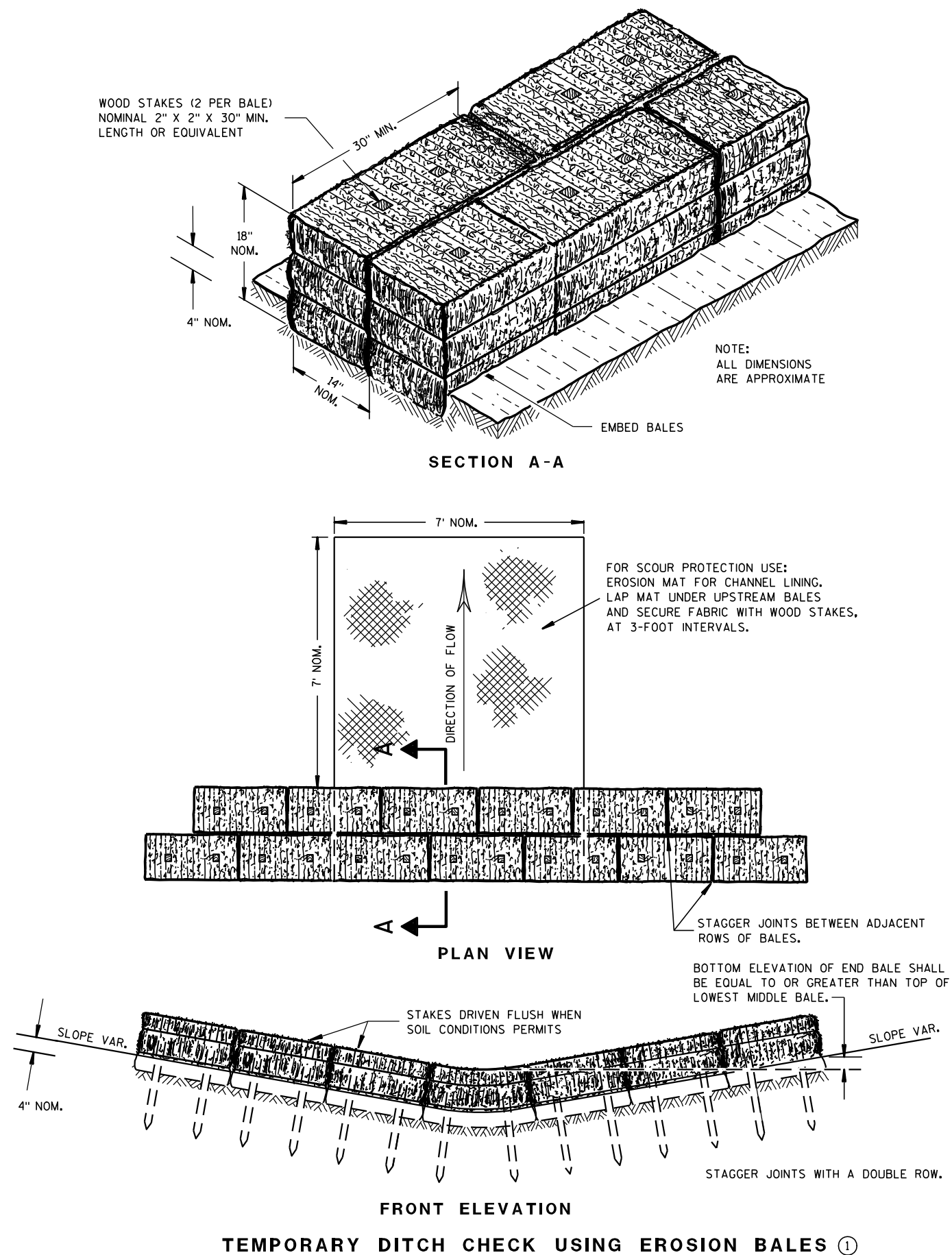
PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

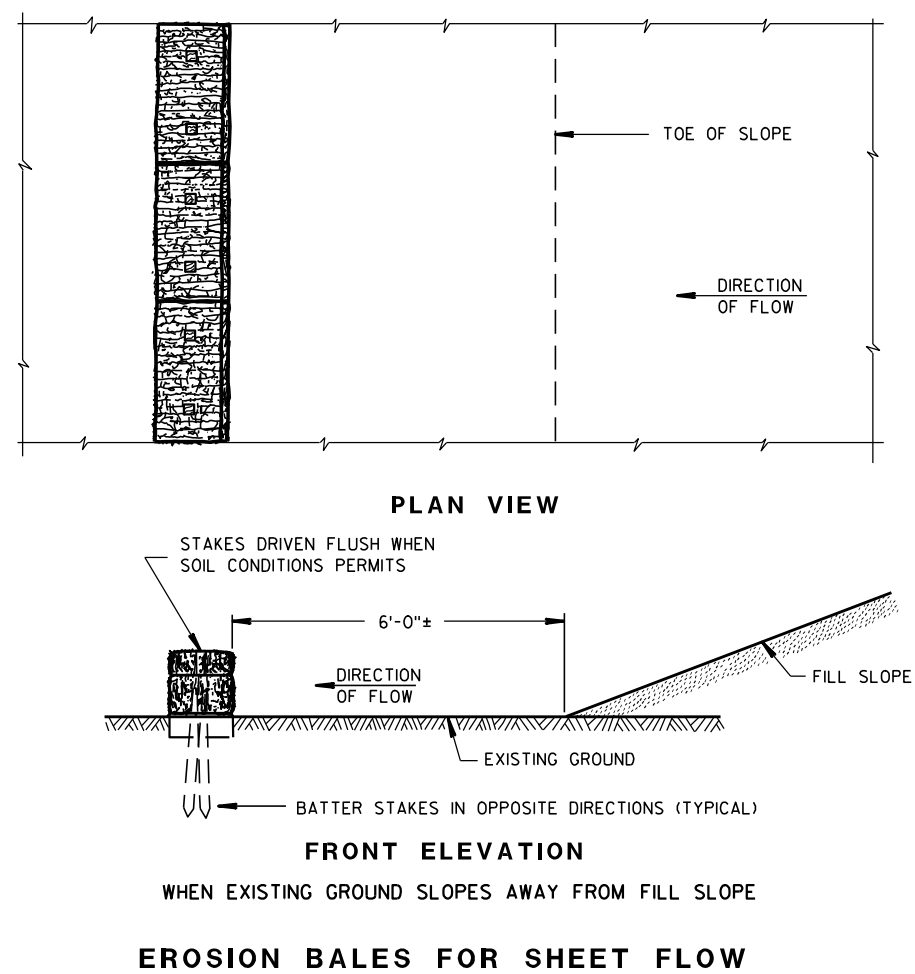
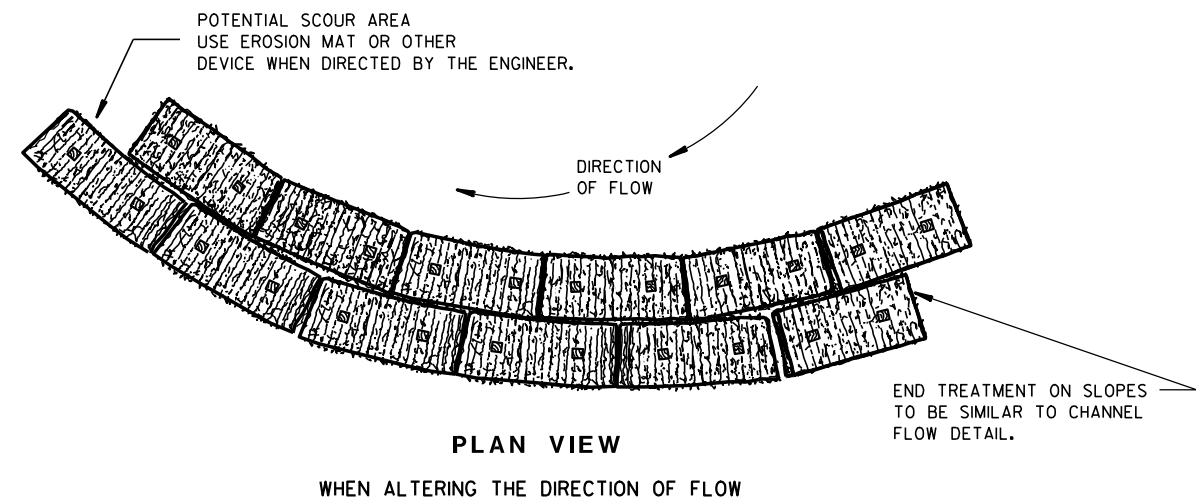
FHWA



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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

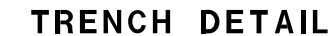
APPROVED

6/04/02
DATE/S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



- 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.

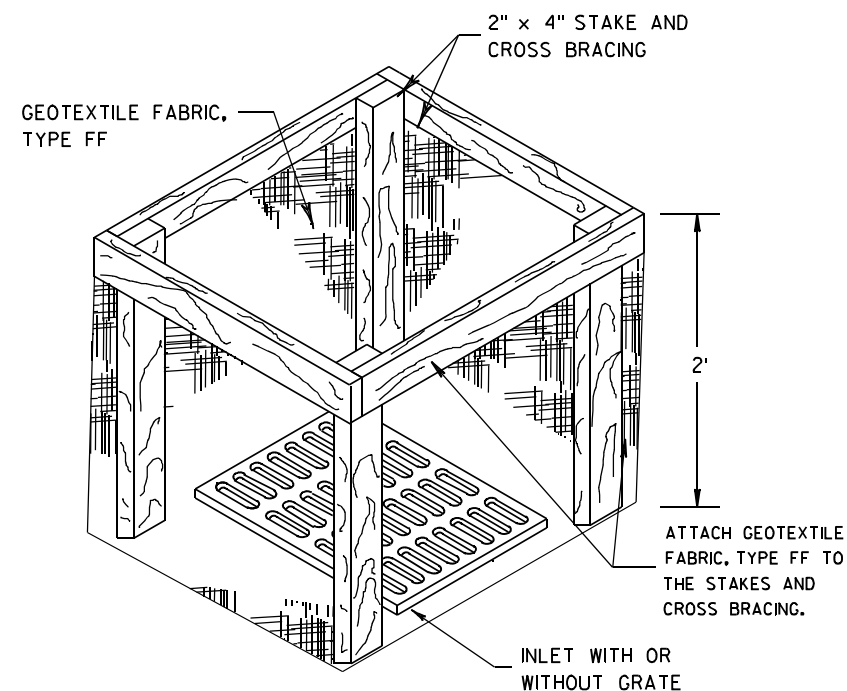
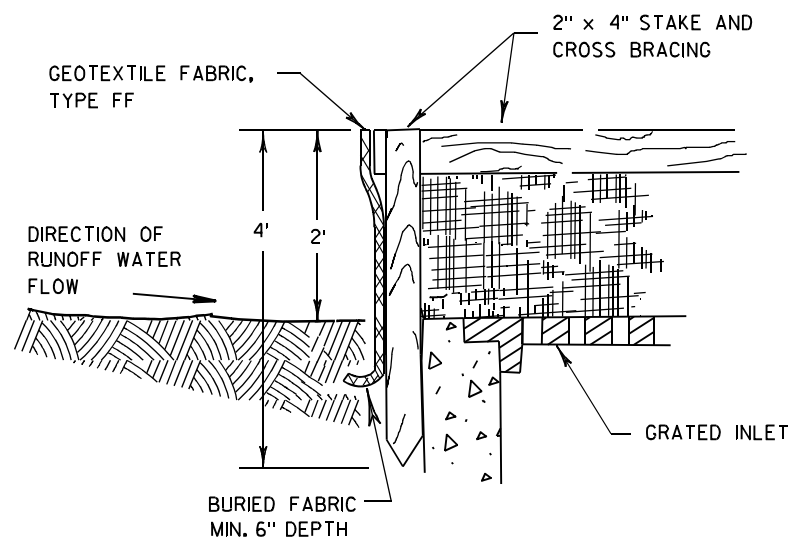


SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Connolly
DATE CHIEF ROADWAY DEVELOPMENT 117 JINEER

FHWA



INLET PROTECTION, TYPE A

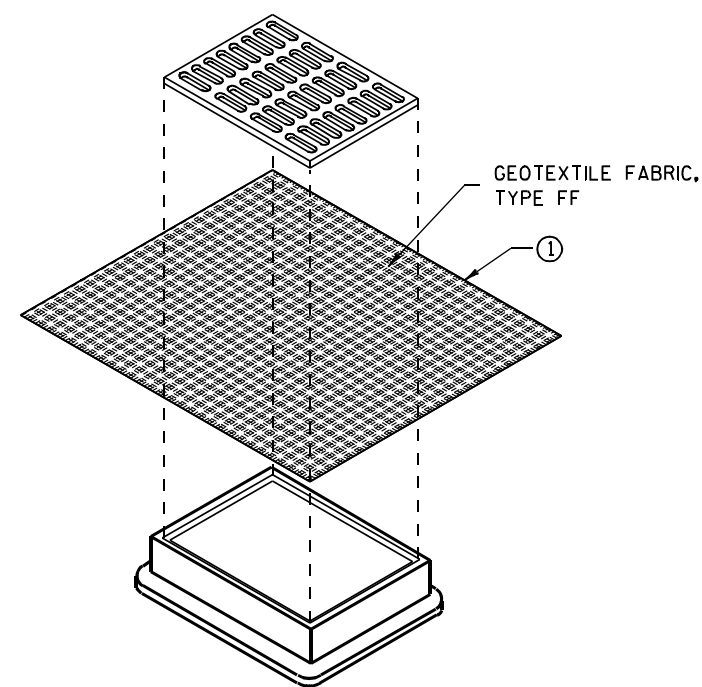
GENERAL NOTES

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.

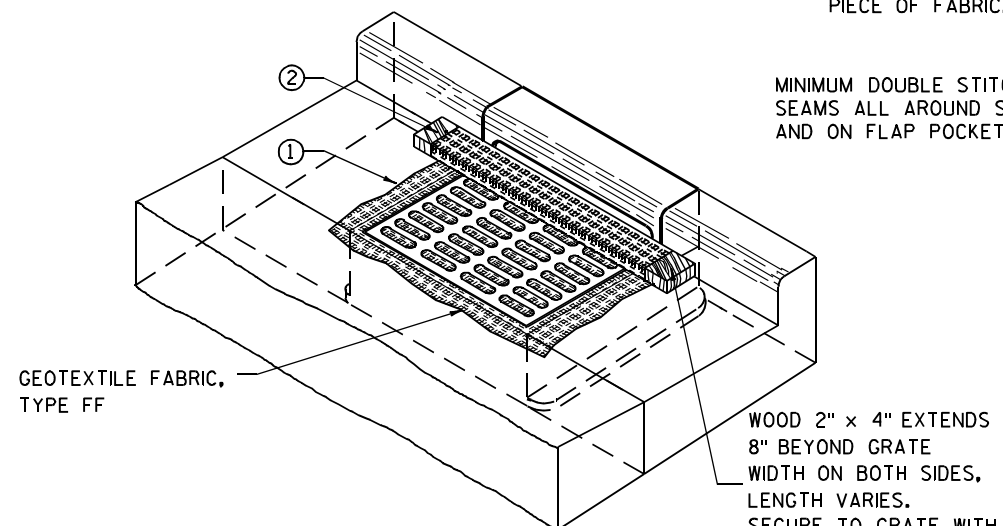
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

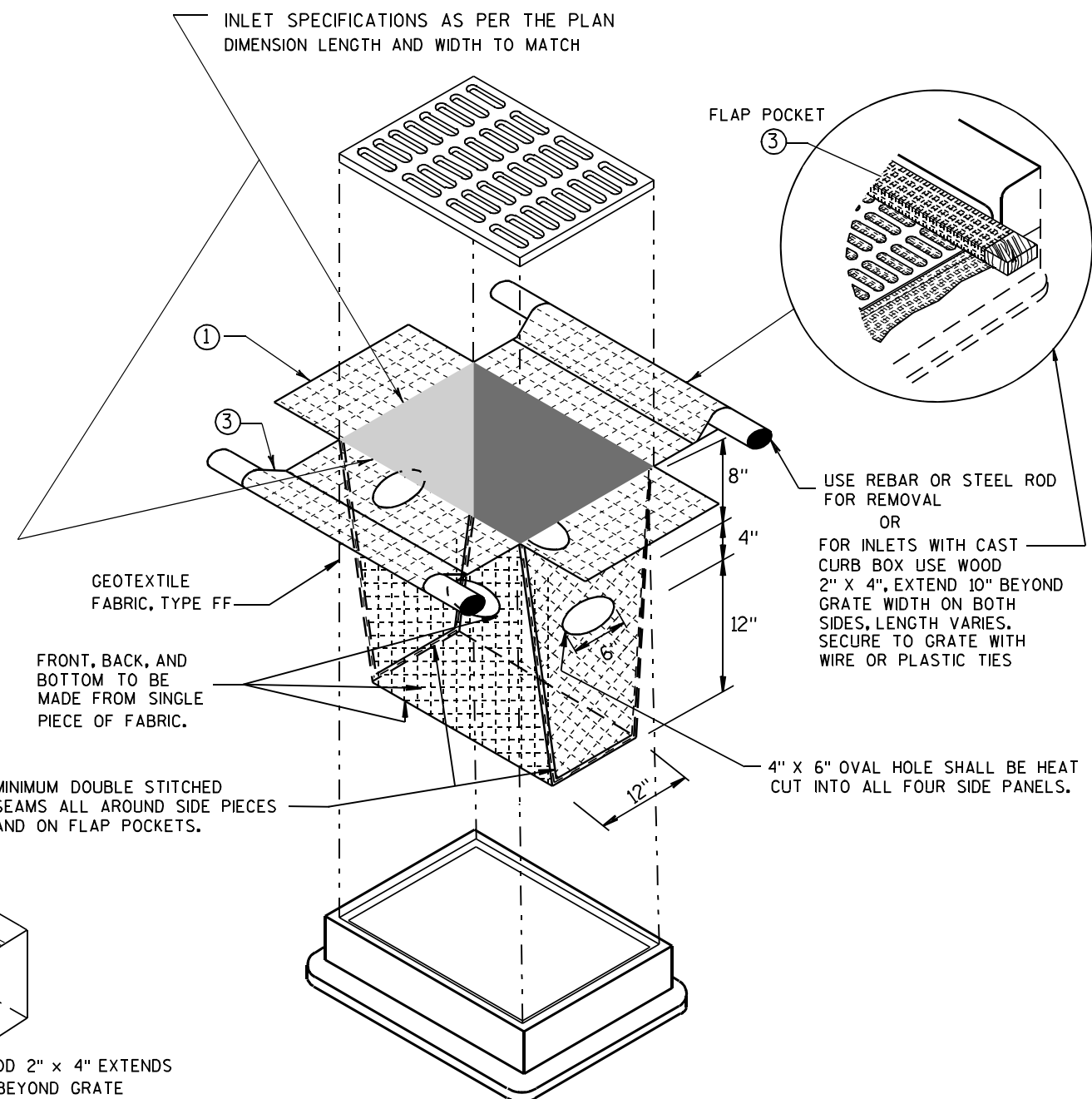
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.

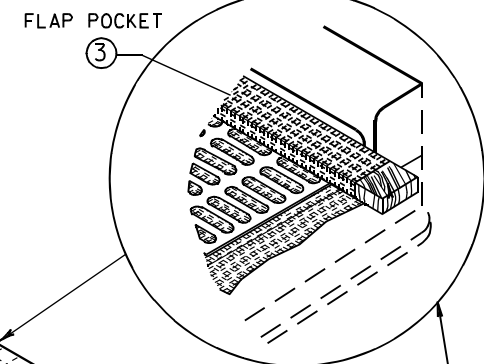
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

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)



USE REBAR OR STEEL ROD FOR REMOVAL OR
FOR INLETS WITH CAST CURB BOX USE WOOD 2" X 4", EXTEND 10" BEYOND GRATE WIDTH ON BOTH SIDES, LENGTH VARIES. SECURE TO GRATE WITH WIRE OR PLASTIC TIES

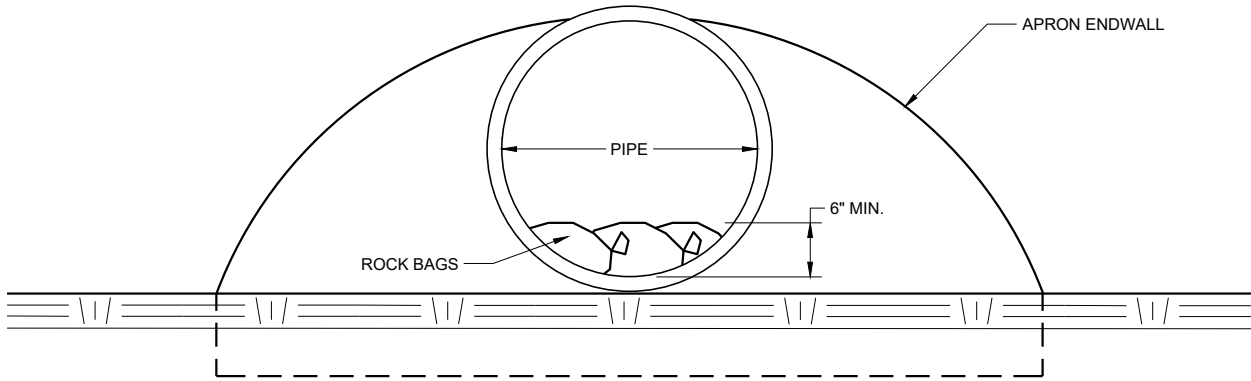
MINIMUM DOUBLE STITCHED SEAMS ALL AROUND SIDE PIECES AND ON FLAP POCKETS.

4" X 6" OVAL HOLE SHALL BE HEAT CUT INTO ALL FOUR SIDE PANELS.

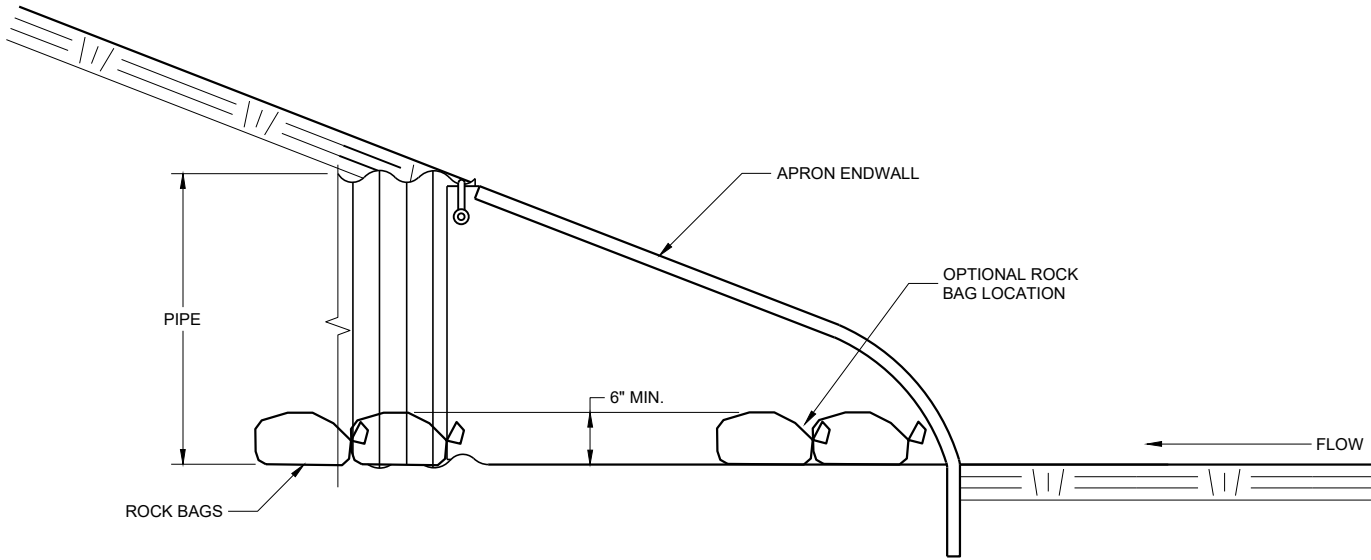
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 118
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



END VIEW



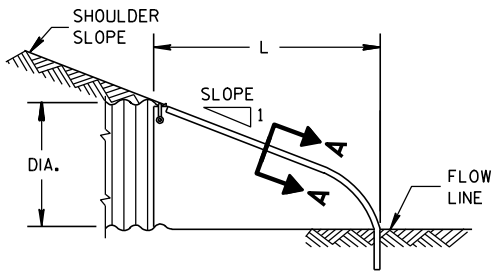
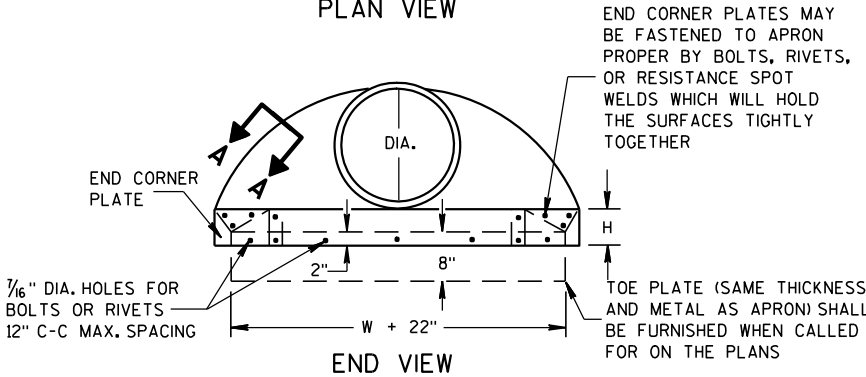
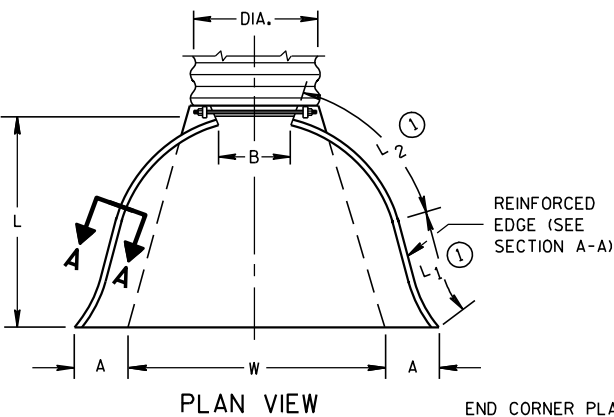
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 119
FHWA	

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

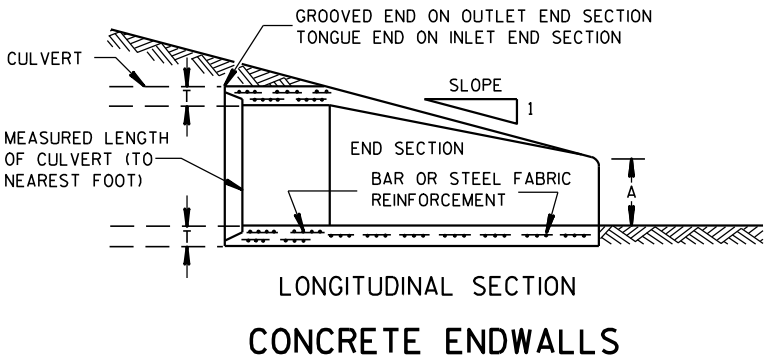
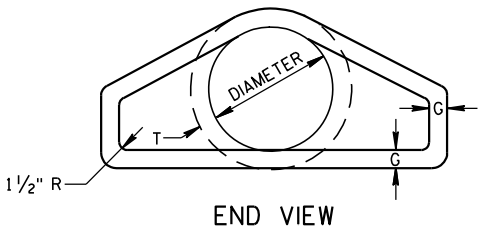
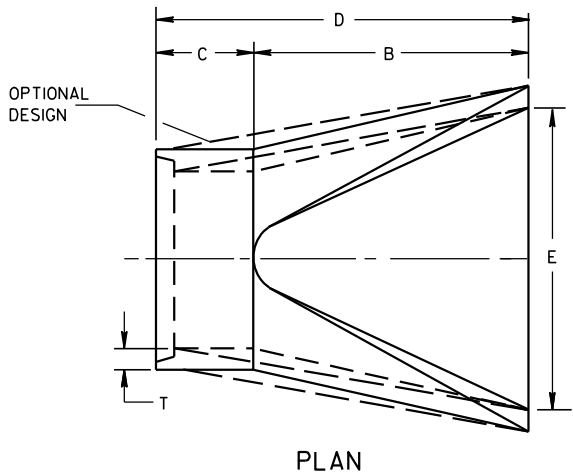
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

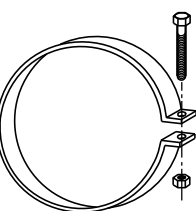
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1	1	1	1	1 Pc.
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	1	1	1	1 Pc.
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	1	1	1	1 Pc.
21	2 3/4	9	36	37 1/2	73 1/2	42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

* MINIMUM
** MAXIMUM

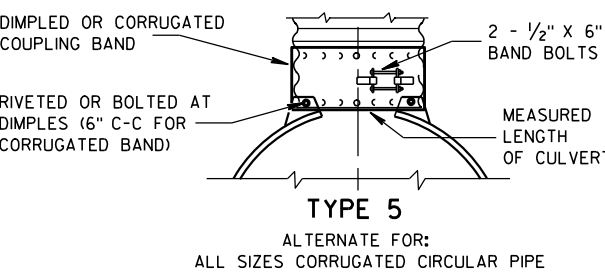
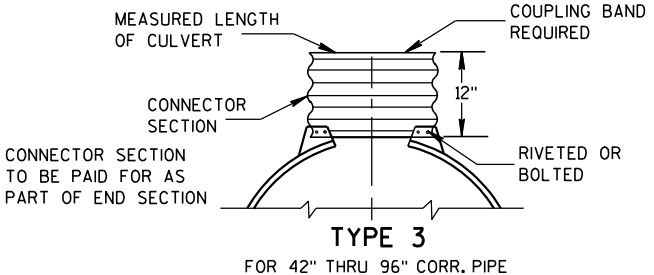
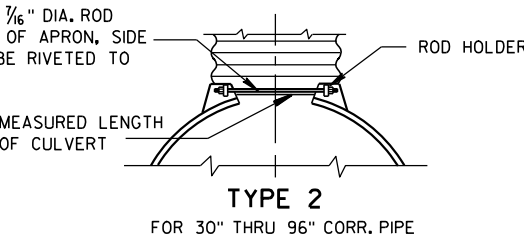
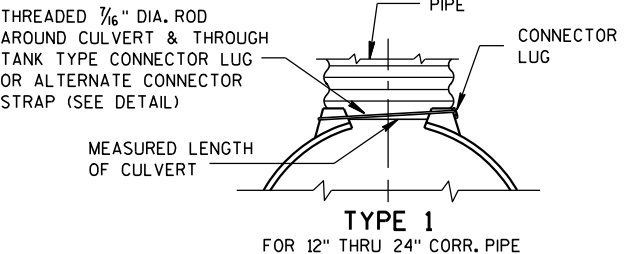


CONCRETE ENDWALLS

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



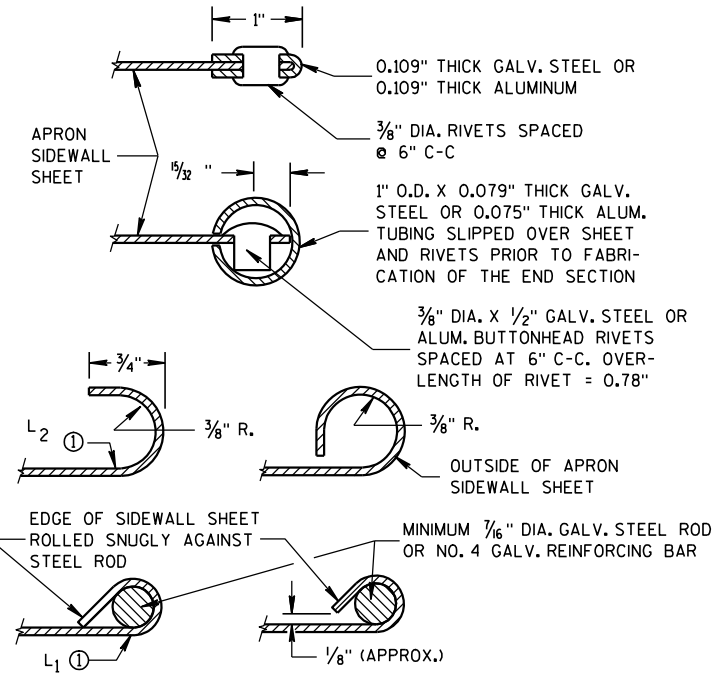
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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



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.

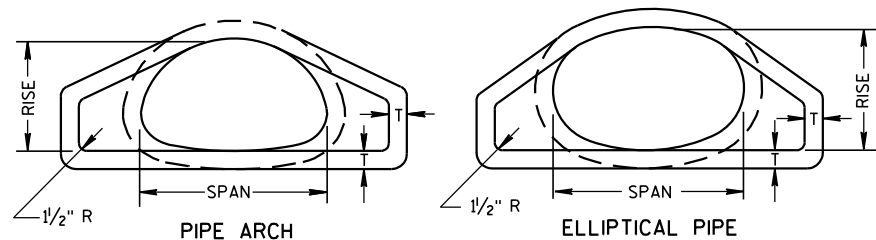
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

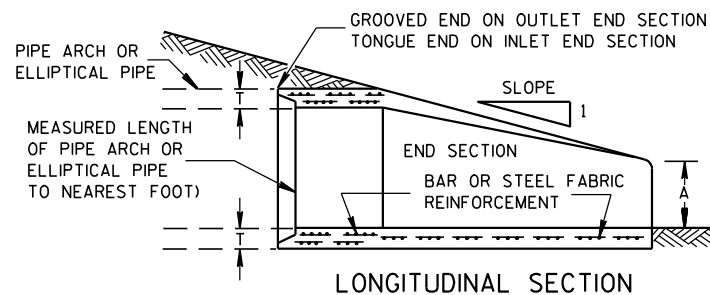
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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	/S/ Rory L. Rhinehart	NEER
	DATE	CHIEF ROADWAY DEVELOP	
FHWA			

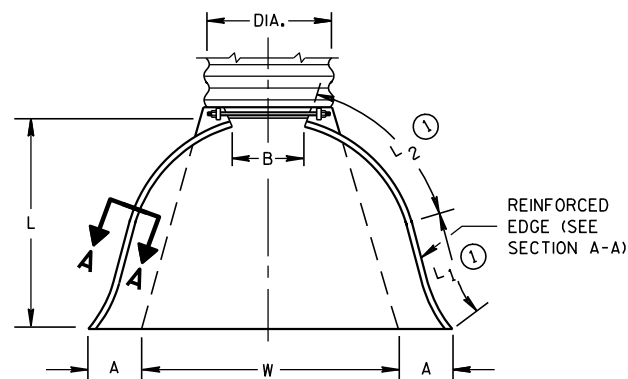


END VIEW



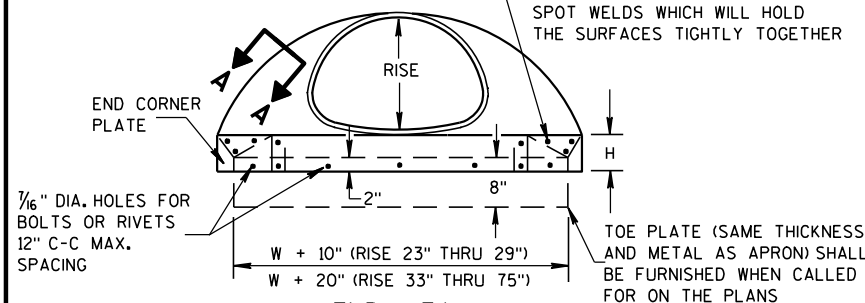
LONGITUDINAL SECTION

CONCRETE ENDWALLS

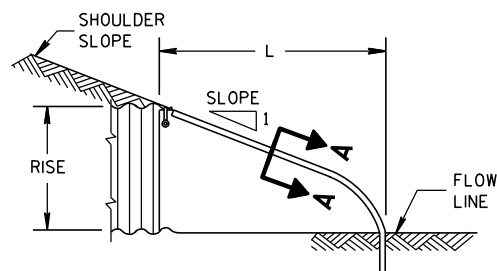
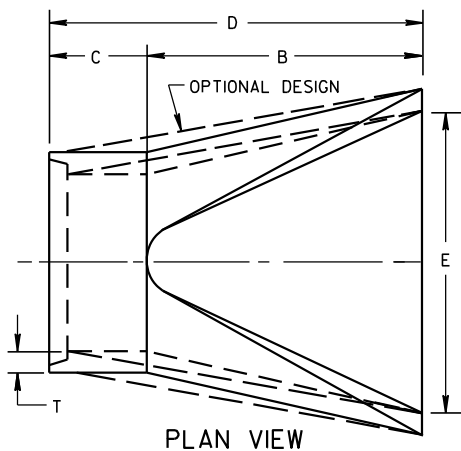


PLAN VIEW

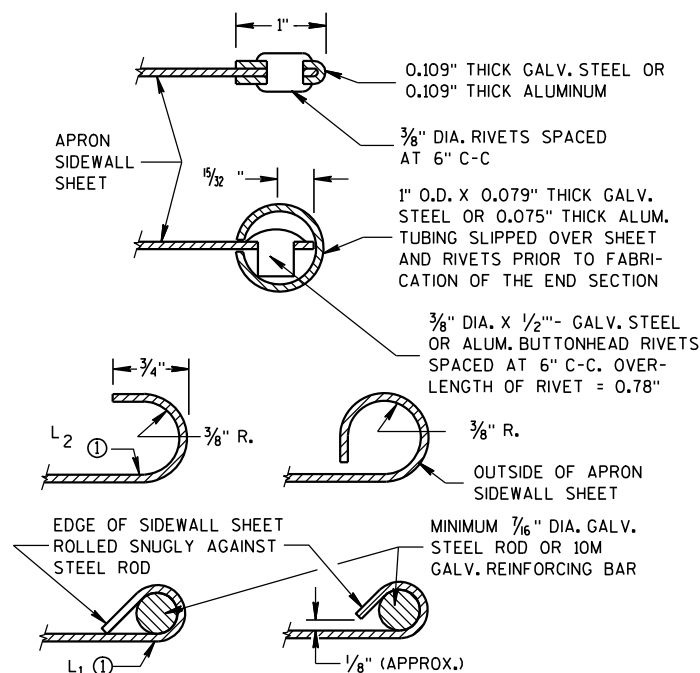
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW

SIDE ELEVATION
METAL ENDWALLS

PLAN VIEW



SECTION A-A

2- 2 ² / ₃ " x 1 ¹ / ₂ " CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 ¹ / ₂ ")	L ₁ ①	L ₂ ①	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 ¹ / ₂ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 ³ / ₈	36	2 ¹ / ₂ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 ³ / ₄	42	2 ¹ / ₂ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 ¹ / ₂	48	2 ¹ / ₂ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 ⁵ / ₈	60	2 ¹ / ₂ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 ³ / ₈	75	2 ¹ / ₂ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 ³ / ₄	85	2 ¹ / ₂ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 ¹ / ₂ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 ³ / ₄	102	2 ¹ / ₄ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 ¹ / ₄	114	2 ¹ / ₄ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

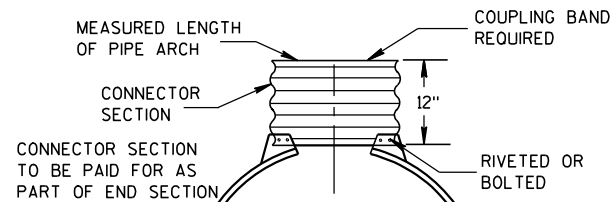
3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ⓪	L ₂ ⓪	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

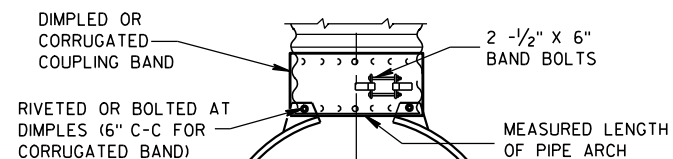
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:
ALL SIZES CORRUGATED PIPE ARCHESNOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 1/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 1/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPESTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94

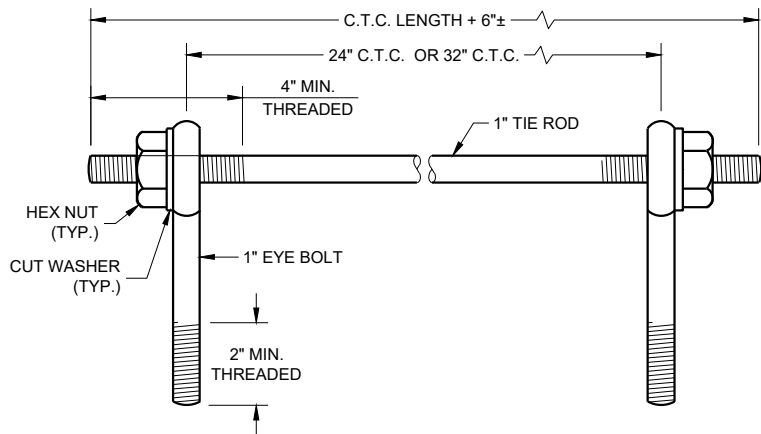
DATE

/S/ Rory L. Rhinehart

CHIEF ROADWAY DEVELOPER

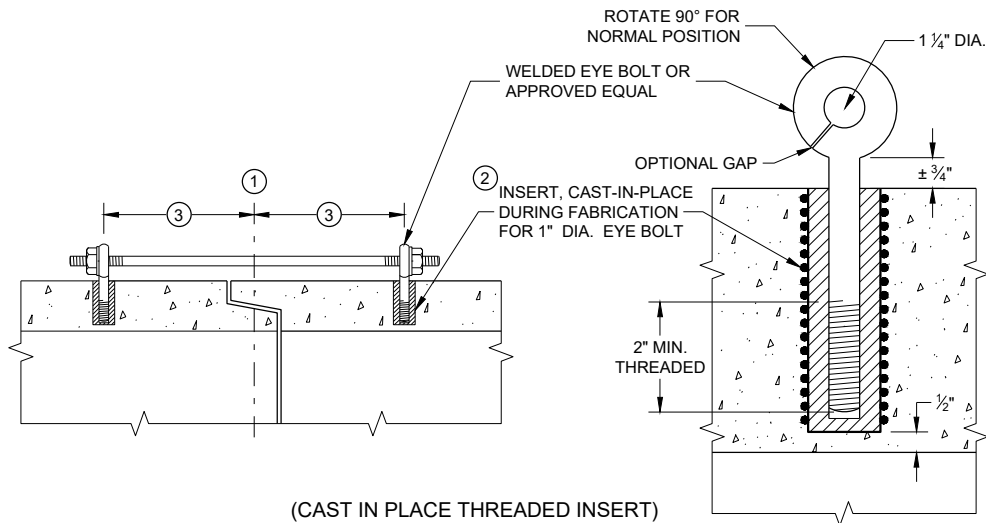
FHWA

ENGINEER



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

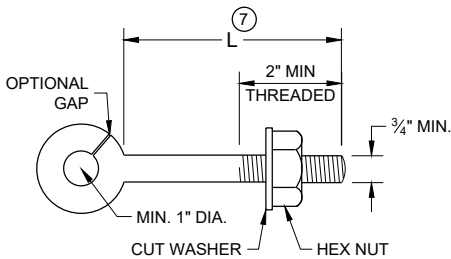
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

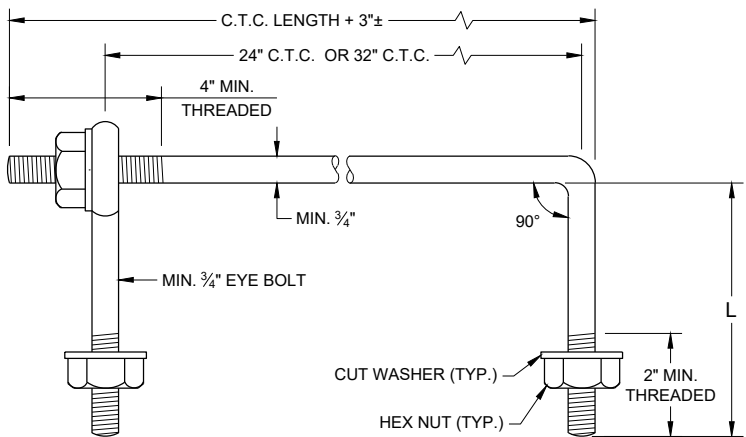
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 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.

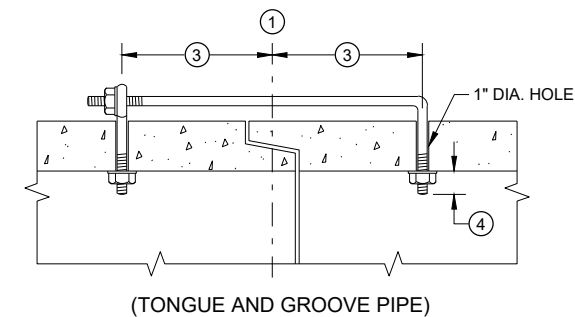


EYE BOLT 7

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

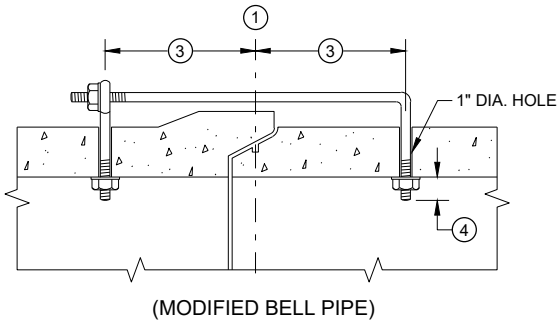


(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION

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

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

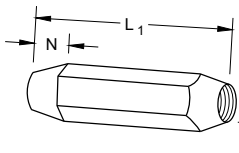


(MODIFIED BELL PIPE)

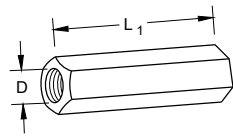
ADJUSTABLE TIE ROD TABLE

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

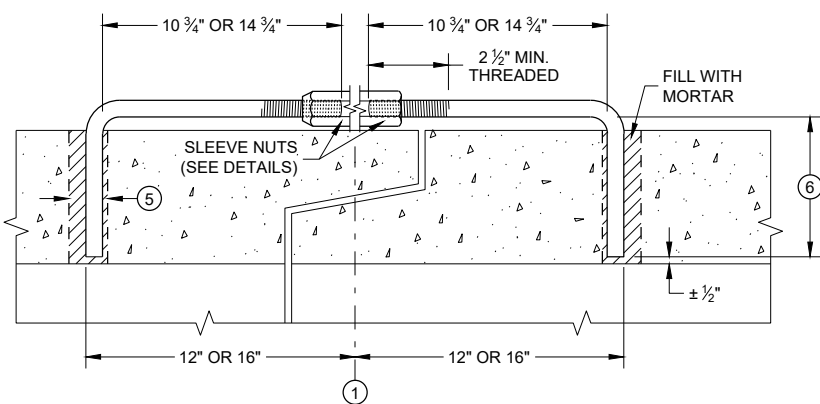


TAPERED



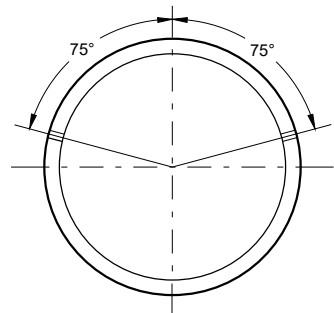
PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS



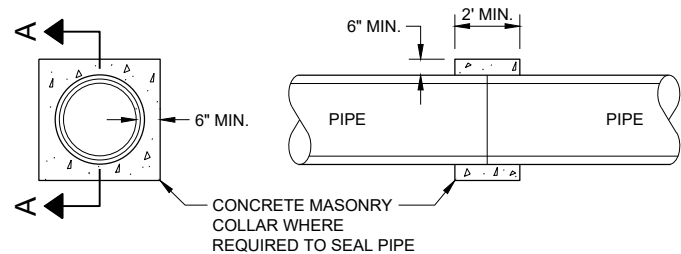
LONGITUDINAL SECTION

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



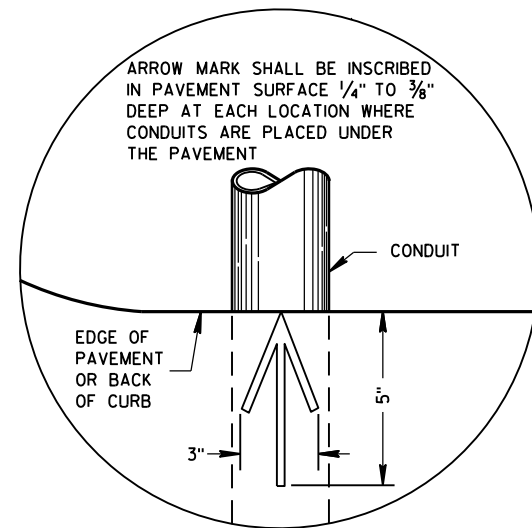
SECTION A - A

CONCRETE COLLAR DETAIL

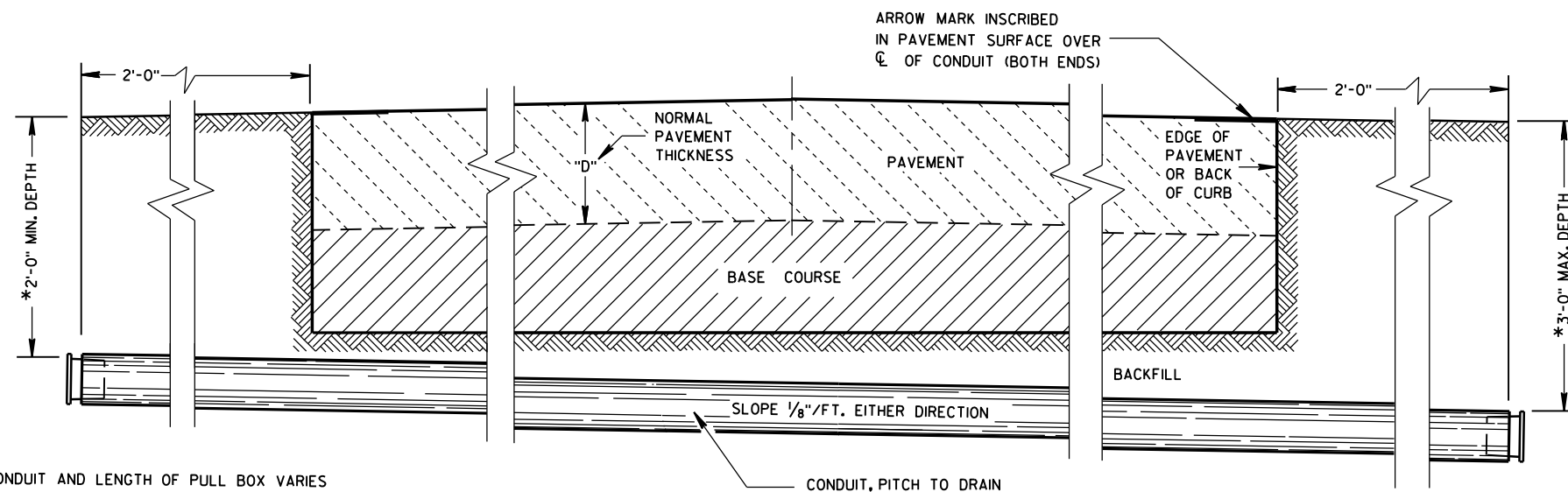
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA 122



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.

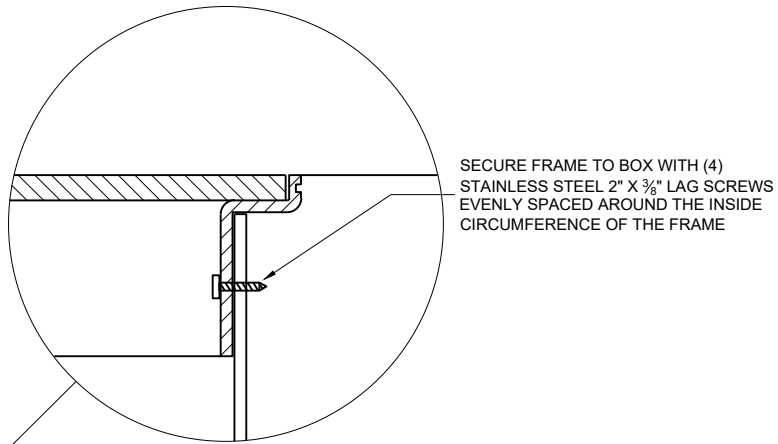
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 123
FHWA

DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

DIAMETER VARIES FROM TOP TO BOTTOM WITH THE
DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST
HEAVE.



NOTCH FOR PAVEMENT ADHESION

DO NOT SECURE FRAME TO BOX.
ALLOW FRAME ADHESION TO SIDEWALK
FOR UNIFORM COVER/PAVEMENT
VERTICAL MOVEMENT.

NON-CONDUCTIVE FRAME AND COVER

ELECTRIC

B

FINAL GRADE

D

A

3"

6" MIN. (TYP.)

6"

2" PVC PIPE CAP ON BOTH ENDS WITH 7 OR 8 1/4" HOLES DRILLED IN EACH END. INSTALL BELOW ALL OTHER PIPES.

INSTALL ELECTRICAL END BELLS ON ALL NON-METALLIC CONDUIT BEFORE INSTALLATION OF WIRE AND/OR CABLE. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CUT OPENINGS AS REQUIRED IN THE FIELD

ALL CONDUIT PITCHED TO DRAIN TO PULL BOXES

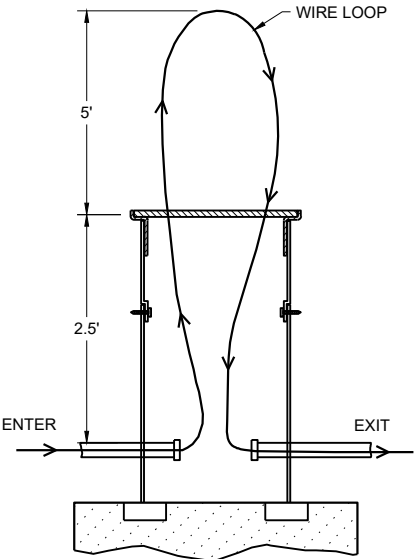
12"

2" DRAIN DUCT TO DITCH OR SEWER WHEN SPECIFIED

NO. 2 COARSE AGGREGATE (SEE SECTION 501 OF THE STANDARD SPECIFICATIONS)

NO. 2 COARSE AGGREGATE
(SEE SECTION 501 OF THE
STANDARD SPECIFICATIONS)

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS,
"WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



PULL BOXES NON-CONDUCTIVE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>November 2024</u> DATE	<u>/S/ Ahmet Demirbilek</u> STATE ELECTRICAL ENGINEER

FORM

4" MAX

6" MAX.

FORM

FORMING SHALL BE REMOVED AFTER CONCRETE HAS SET

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

Diagram illustrating the cross-section of a circular structure, likely a manhole or vault, showing the following dimensions and components:

- Overall diameter: 1' - 8"
- Conduit within: 6" DIA.
- Bolt circle: 12 3/4" BOLT CIRCLE
- Anchor rods shall be oriented parallel to the roadway.

1" CONDUIT FOR GROUNDING PURPOSES

CONDUIT

CONDUIT WITHIN 6" DIA.

11 1/2" BOLT CIRCLE

5

1' - 8"

1' - 2" (OUT TO OUT)

1' - 5" MIN. LAP

ANCHOR RODS SHALL BE ORIENTED PARALLEL TO THE ROADWAY

3

4

1" CONDUIT FOR GROUNDING PURPOSES

CONDUIT

CONDUIT WITHIN 6" DIA.

1' - 8"

11 1/2" BOLT CIRCLE

8

6

7

ANCHOR RODS SHALL BE ORIENTED PARALLEL TO THE ROADWAY

1' - 2" (OUT TO OUT)

1' - 5" MIN. LAP

(TYPICAL FOR TYPES 1, 2, 5 & 6)

2"

TOPSOIL AND SEED OR CRUSHED AGGREGATE

5' - 0" MIN.

3"

1"

3/4" PREFORMED FILLER AS APPROVED BY THE ENGINEER

6" STUB

OPTIONAL 4" L BEND OR HEX NUT (TYPICAL FOR TYPES 1, 2, 5 & 6)

TYPE 1

FORM ALL EXPOSED
CONCRETE. PROVIDE
1" CHAMFER ALL AROUND

6" MIN.

1'-0"

2"

3"

3" (11) (12)

3" CLEAR

6" STUB (1)

7'-0" (5)

10"

4"

OPTIONAL 4" L BEND
OR HEX NUT (TYPICAL
FOR TYPES 1, 2, 5 & 6)

6" MIN.

2"

TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

6" MIN.

1'-0"

2"

3"

3" CLEAR

6" STUB

5'-0"

6" MIN.

2"

OPTIONAL 4" L BEND OR HEX NUT (TYPICAL FOR TYPES 1, 2, 5 & 6)

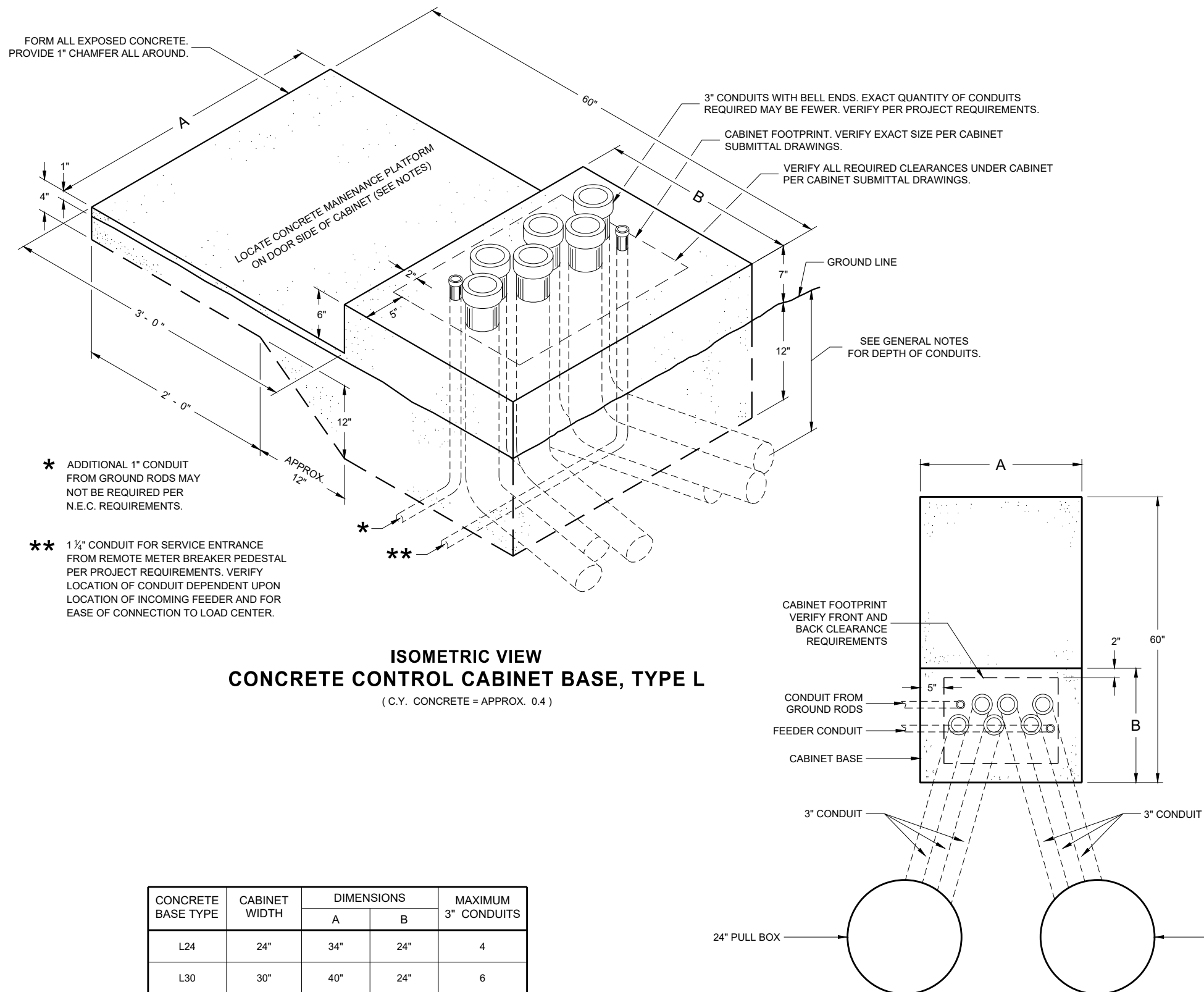
TYPE 5 & 6

- 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 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

APPROVED
May 2019
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 125

FHWA



**PLAN VIEW
CONCRETE CONTROL CABINET BASE, TYPE L**

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NON - METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U. L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS UNLESS DETERMINED BY THE ENGINEER IN THE FIELD.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NON - METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON - METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

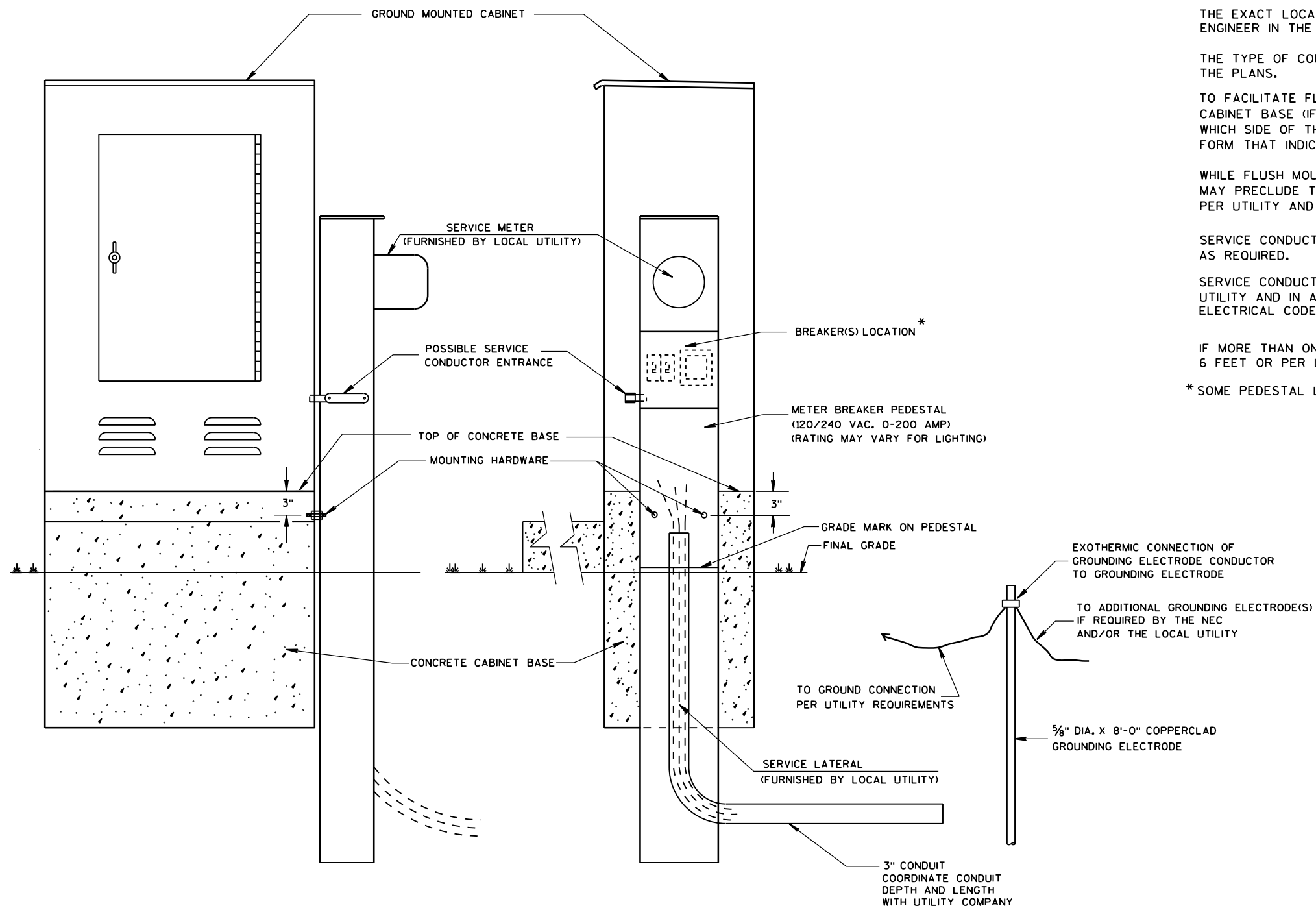
CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE L

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGI 127
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014

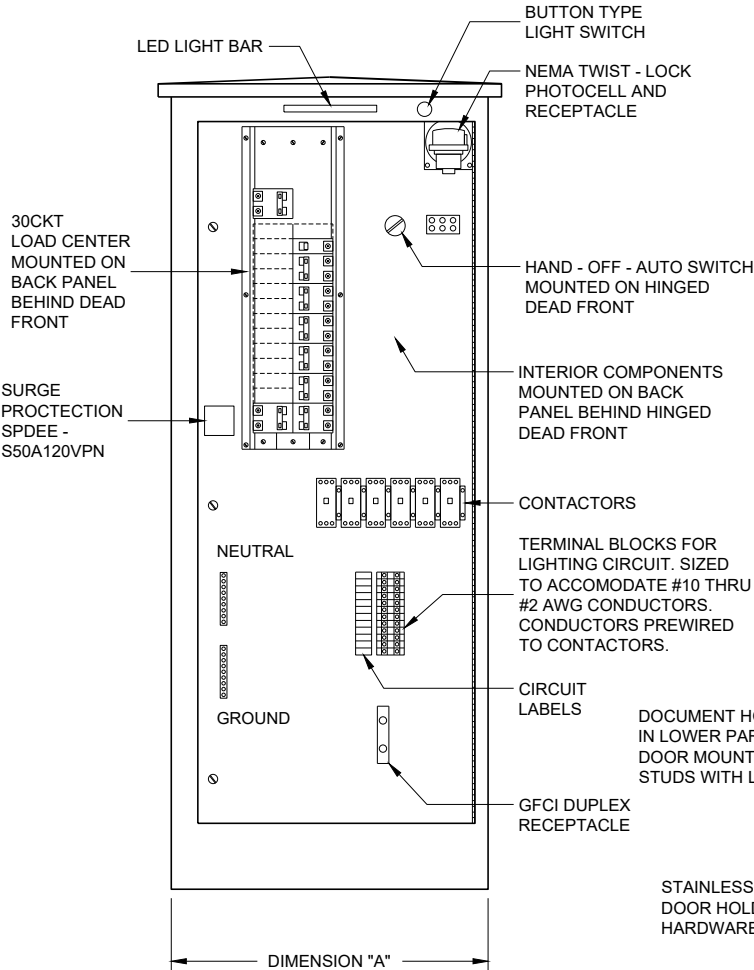
DATE

FHWA

/S/ Ahmet Demirbilek

STATE ELECTRICAL 128

FRONT INTERIOR
ELEVATION



LIGHTING CONTROL CABINET

SIDE VIEW

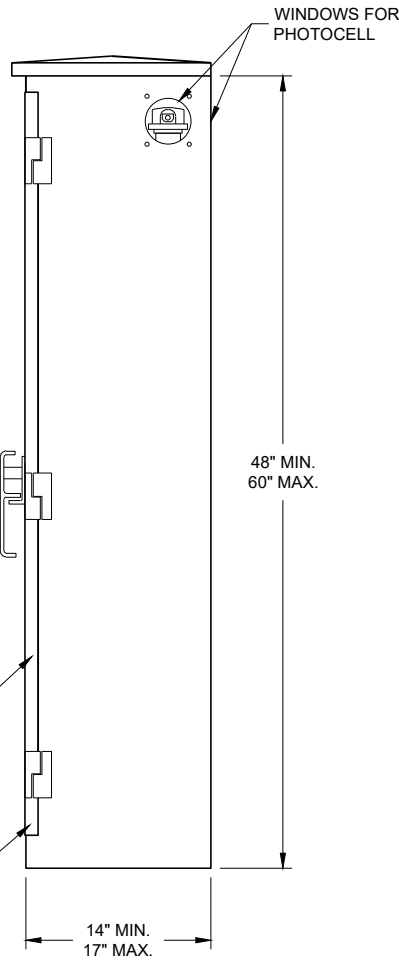
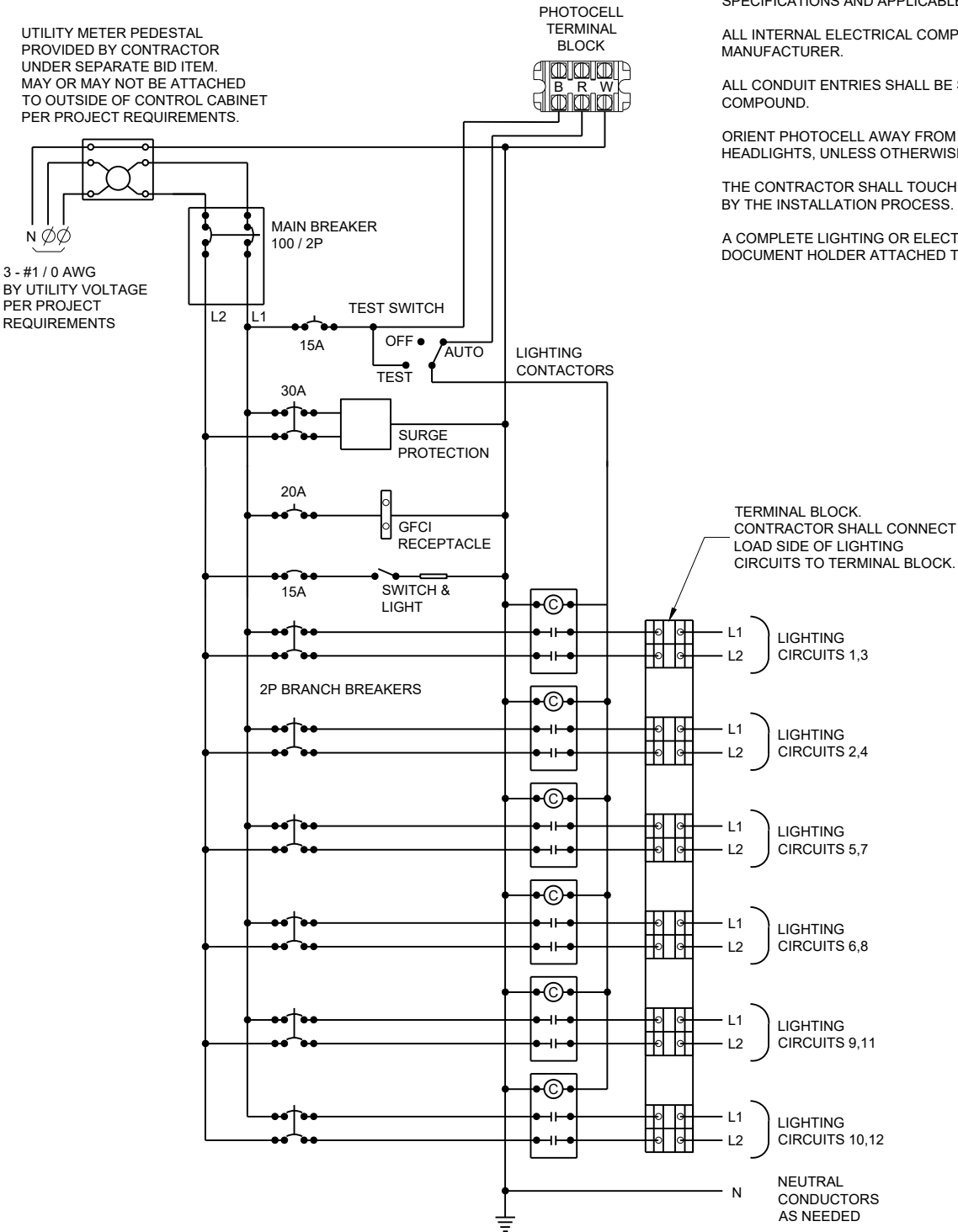


TABLE OF DIMENSIONS (INCHES)		
CONCRETE BASE TYPE	CABINET WIDTH	DIMENSION "A"
L24	24"	24"
L30	30"	30"

UTILITY METER PEDESTAL
PROVIDED BY CONTRACTOR
UNDER SEPARATE BID ITEM.
MAY OR MAY NOT BE ATTACHED
TO OUTSIDE OF CONTROL CABINET
PER PROJECT REQUIREMENTS.



CONTROL CABINET SCHEMATIC

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.

ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE - WIRED BY THE CABINET MANUFACTURER.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS, UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISION.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

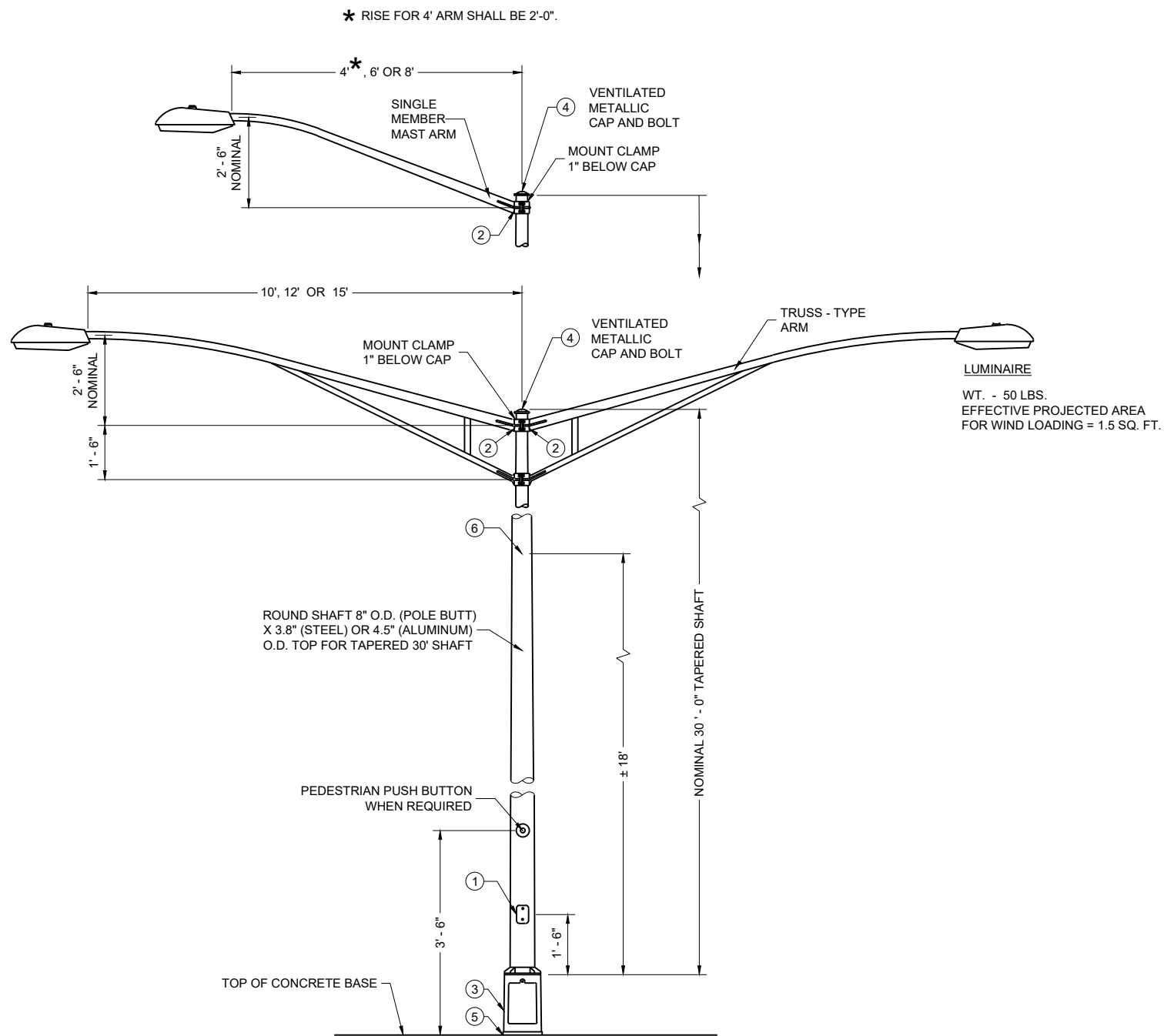
A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.

LIGHTING CONTROL CABINET
120 / 240 VOLT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGI 129

FHWA



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

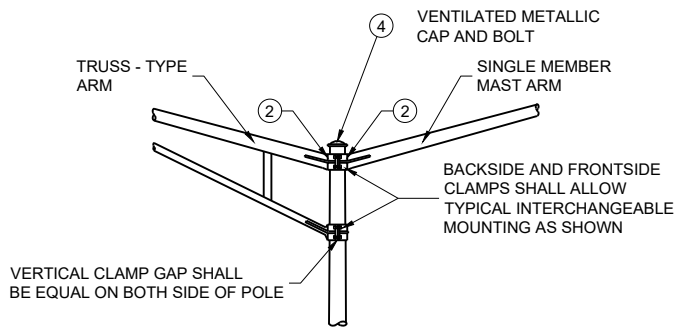
TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8" INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

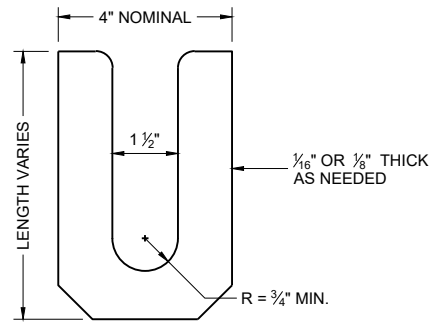
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4"x3/4" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH 1/4"x3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT. ONE (1)
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



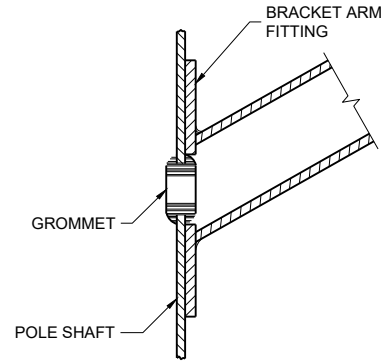
INTERCHANGEABLE MOUNTING DETAIL

**POLE MOUNTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)**

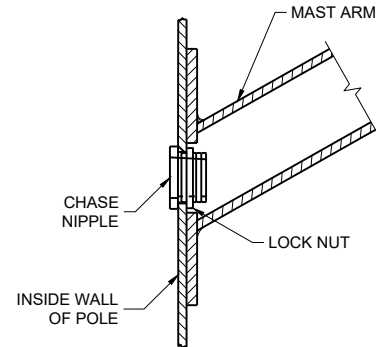
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



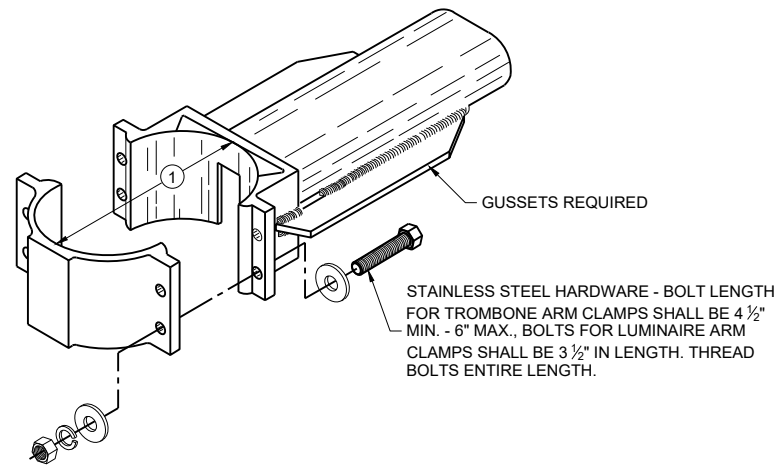
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

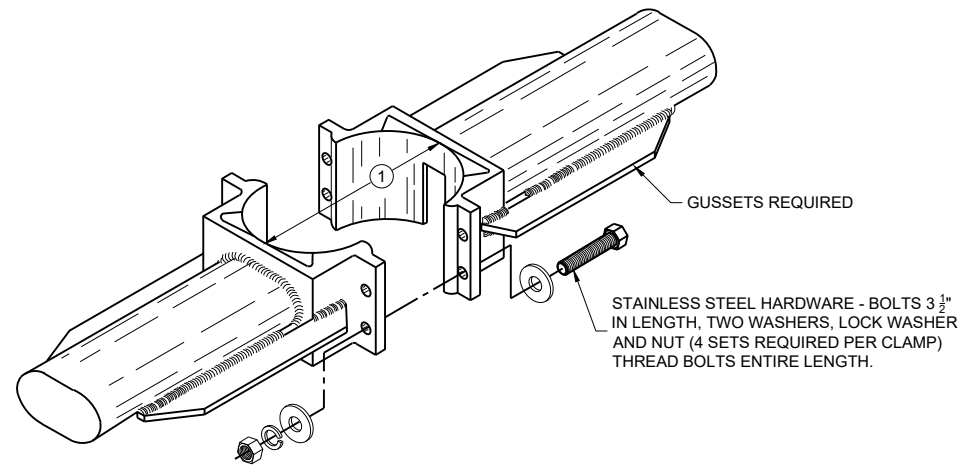
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

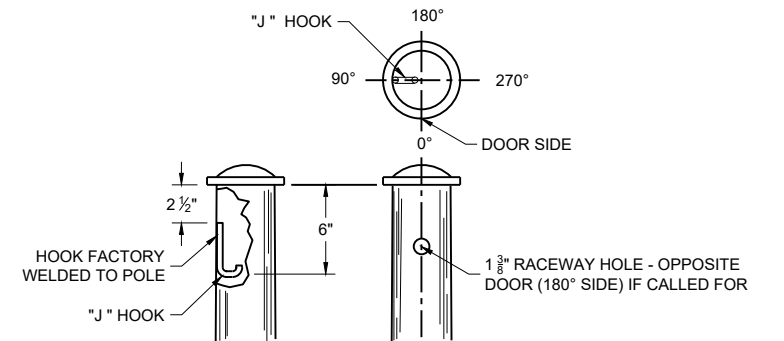
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



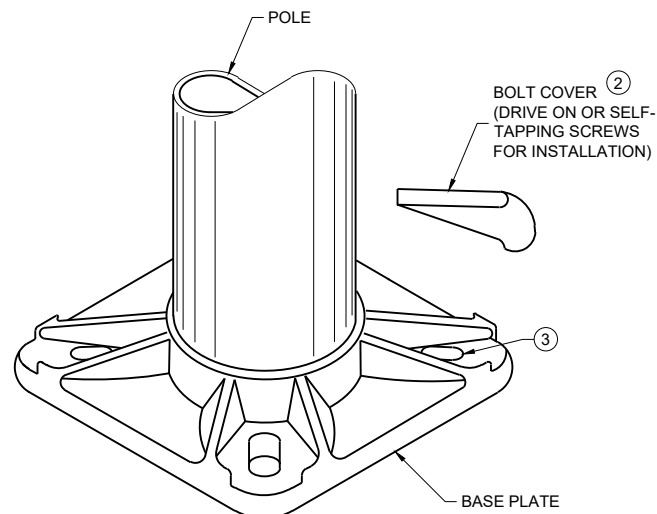
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



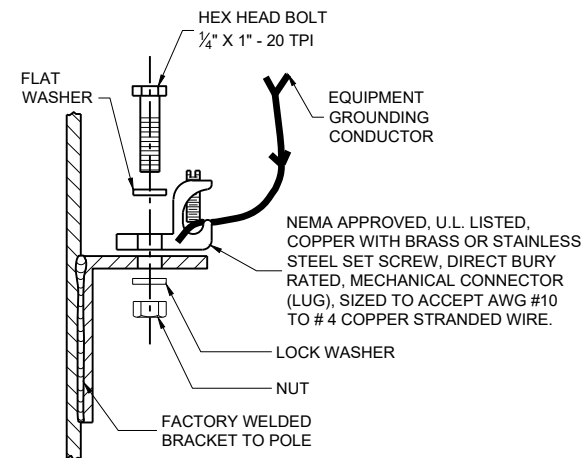
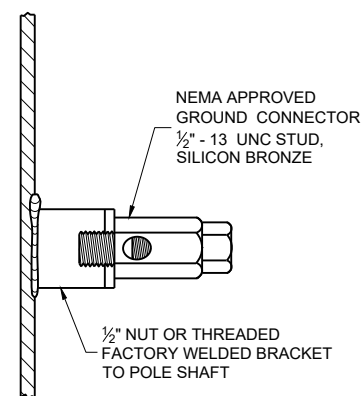
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



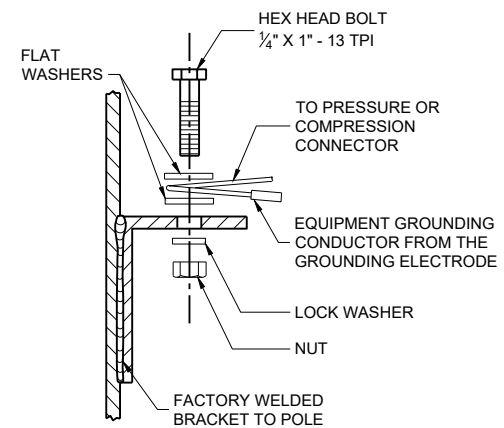
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

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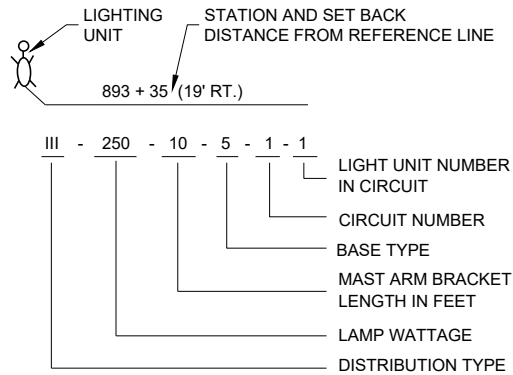
131

GENERAL NOTES

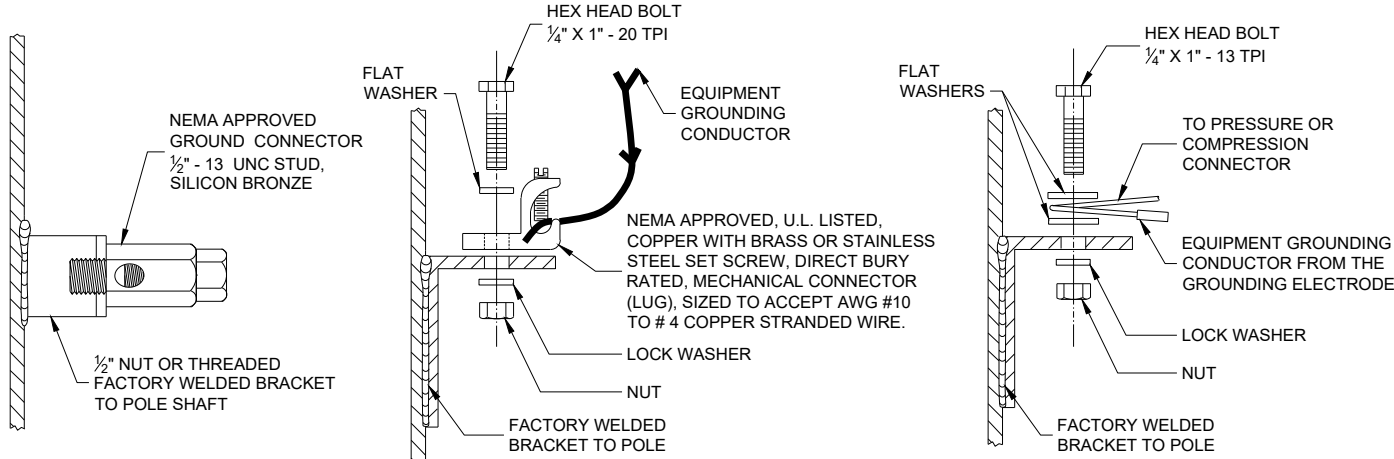
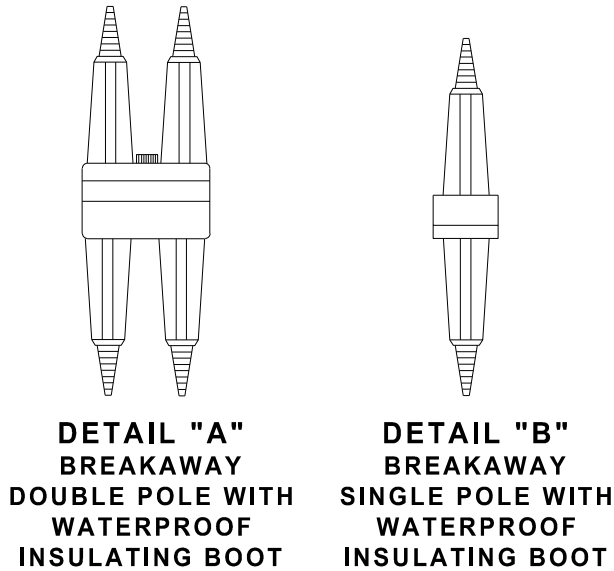
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

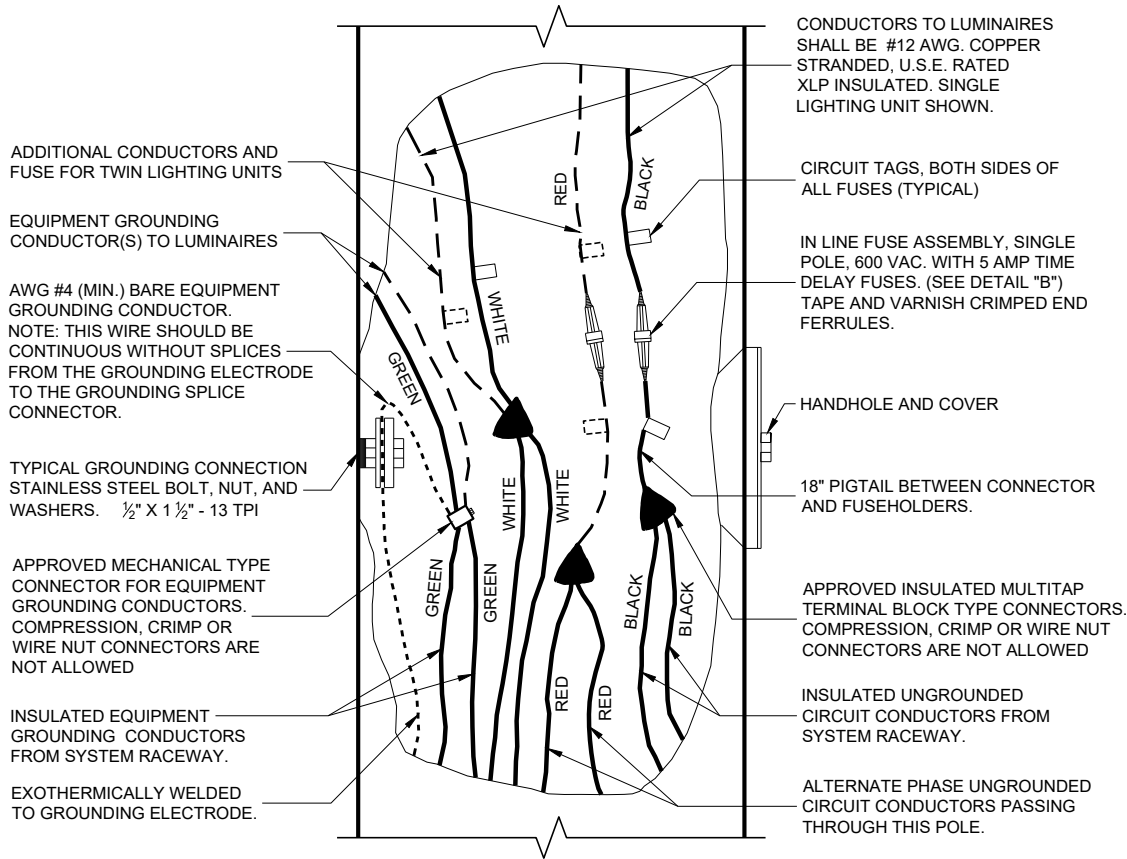


LIGHTING UNIT CODE (TYPICAL)



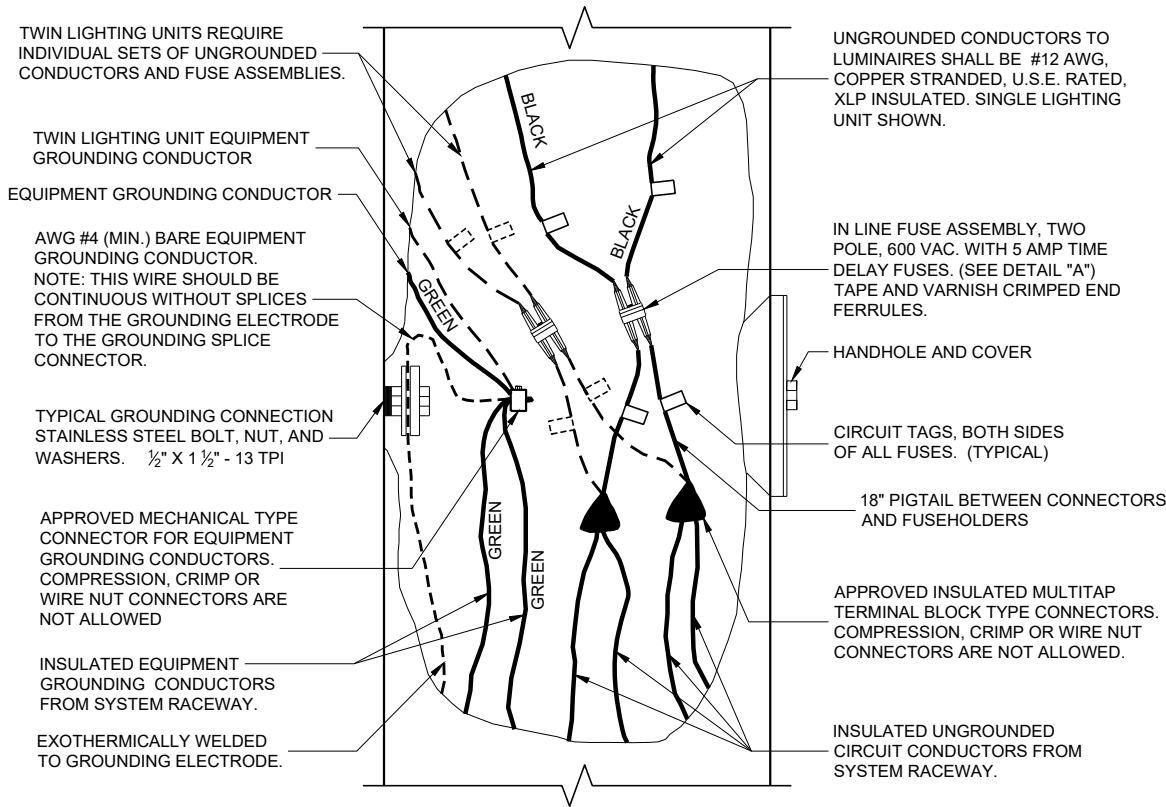
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

6



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS)
WITH GROUNDING CONDUCTOR AND
EQUIPMENT GROUNDING CONDUCTOR

6



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS)
WITH EQUIPMENT GROUNDING CONDUCTOR

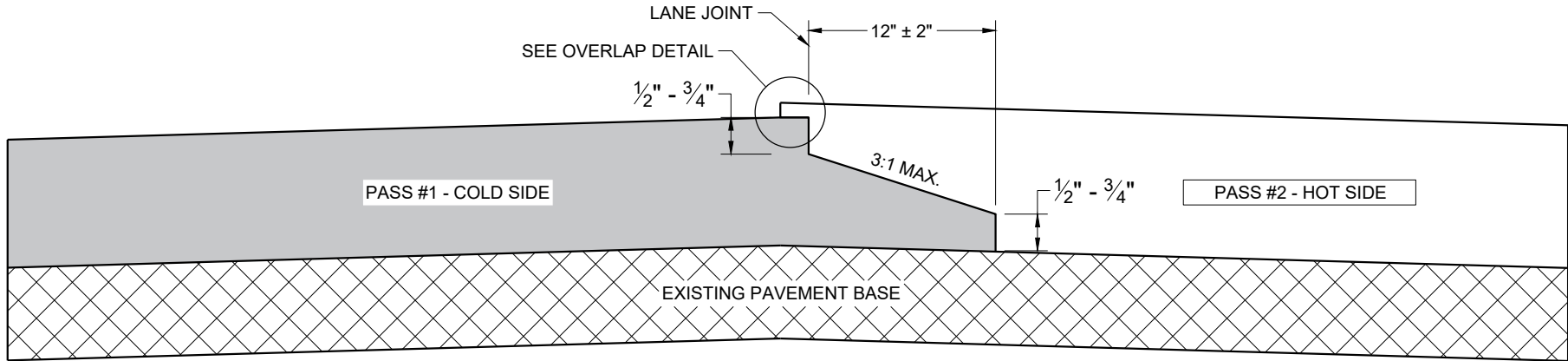
NON - FREEWAY LIGHTING UNIT
POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

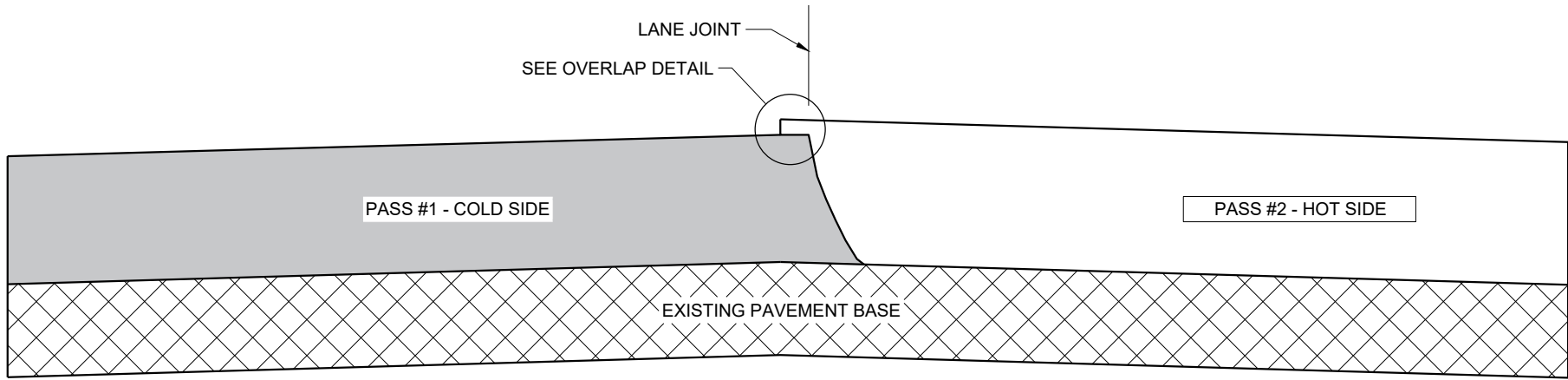
APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGI 132
FHWA

SDD 09E03 - 06

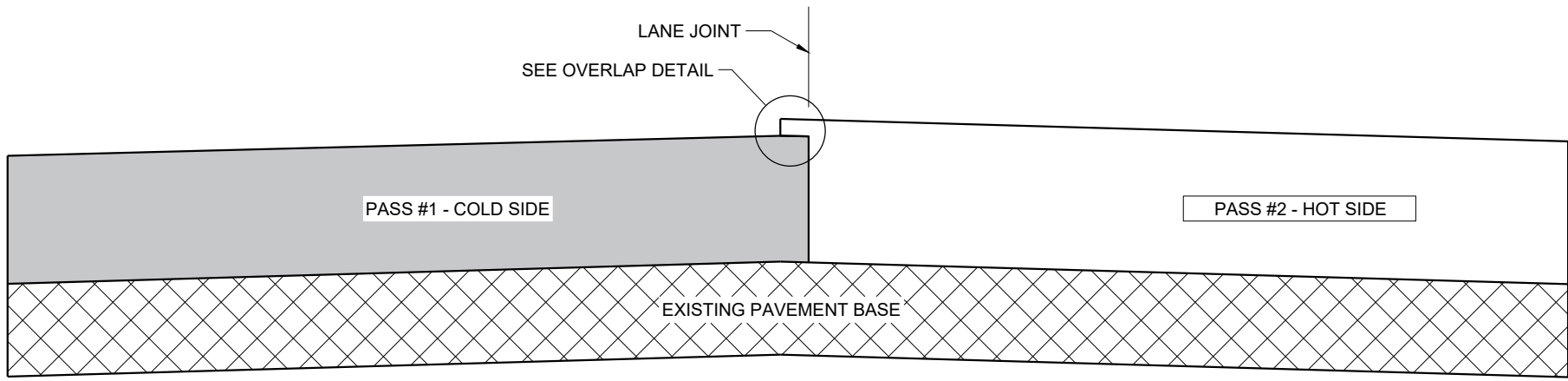
SDD 09E03 - 06



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

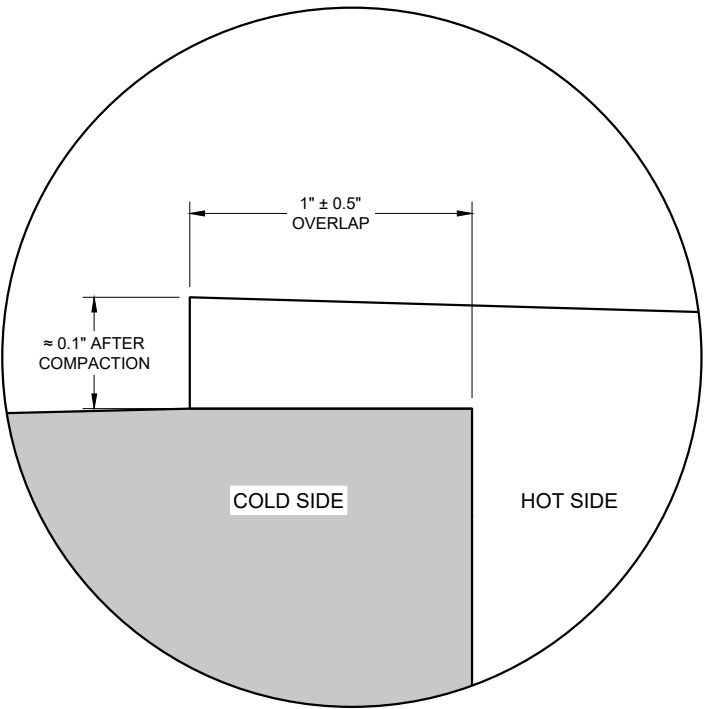
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



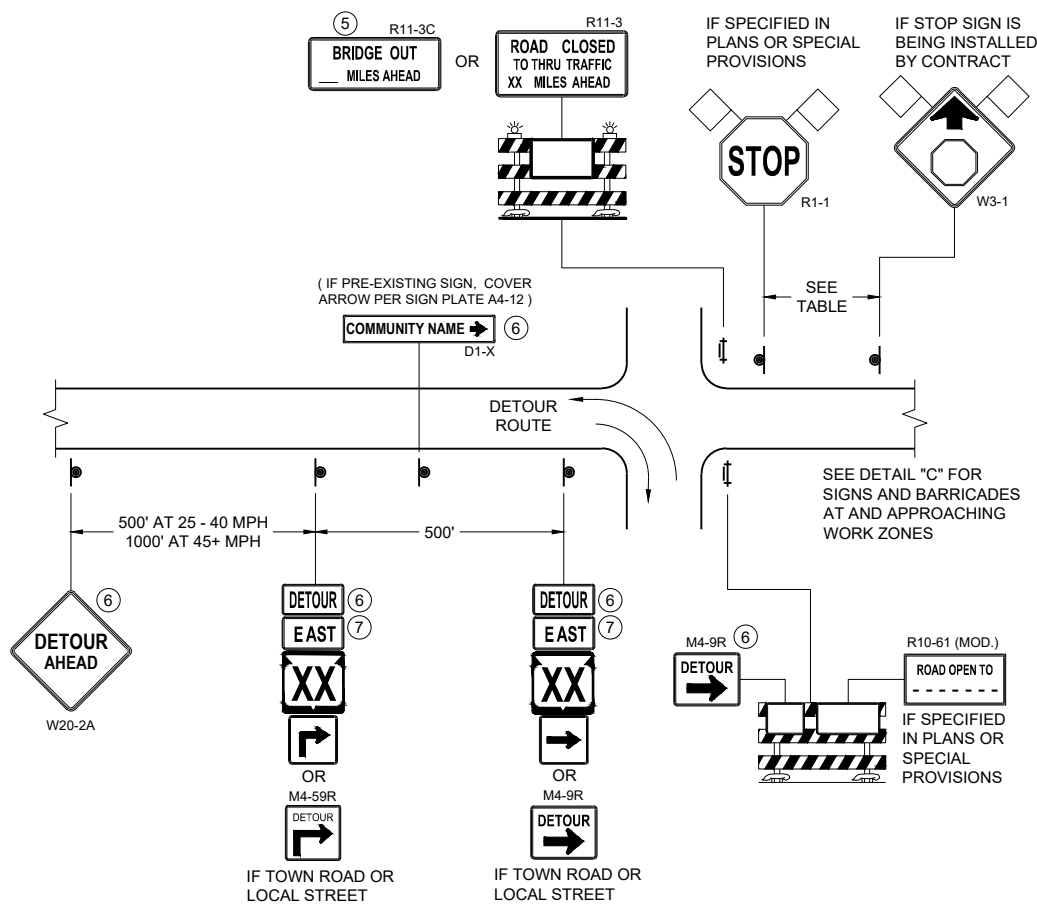
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

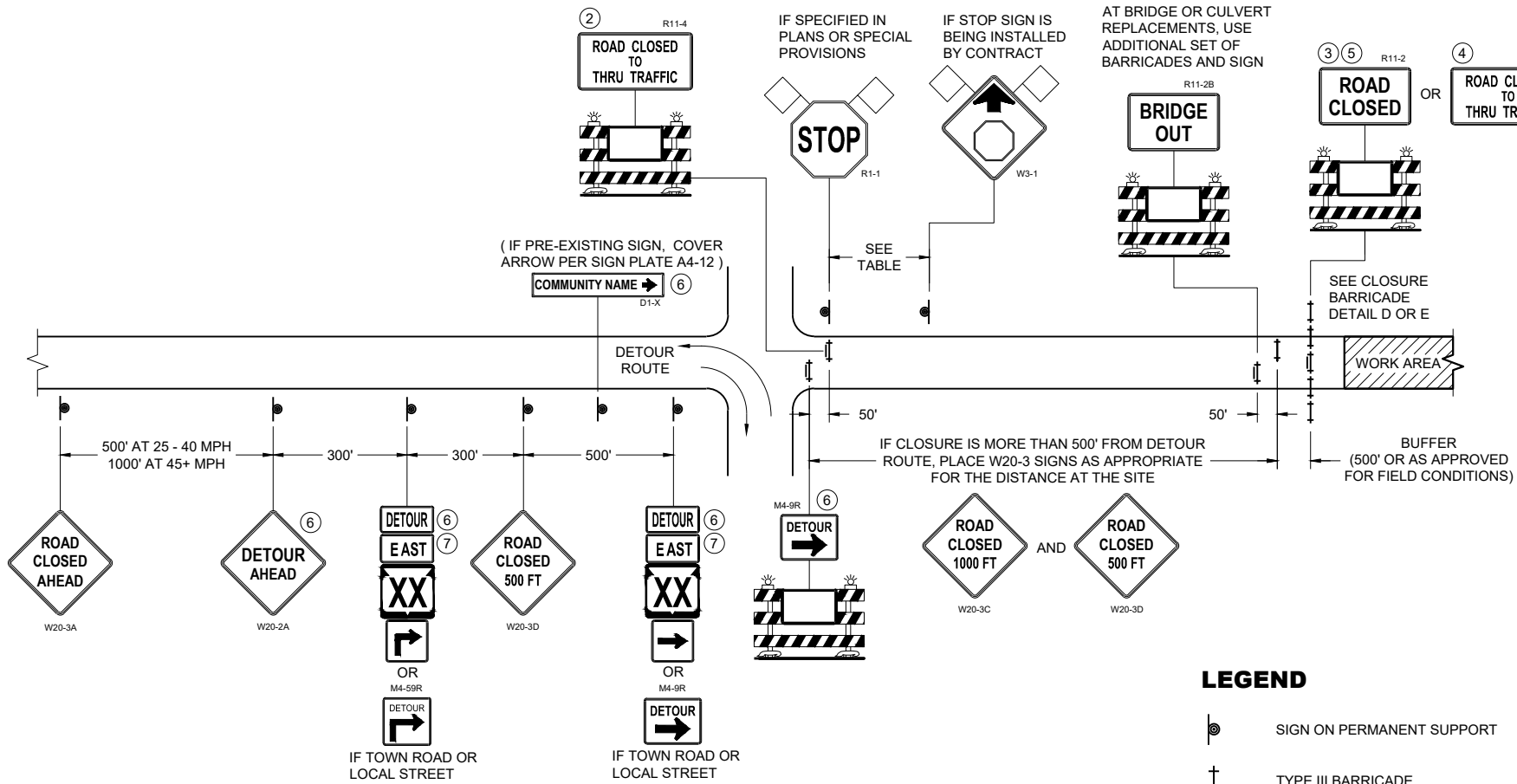
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 133

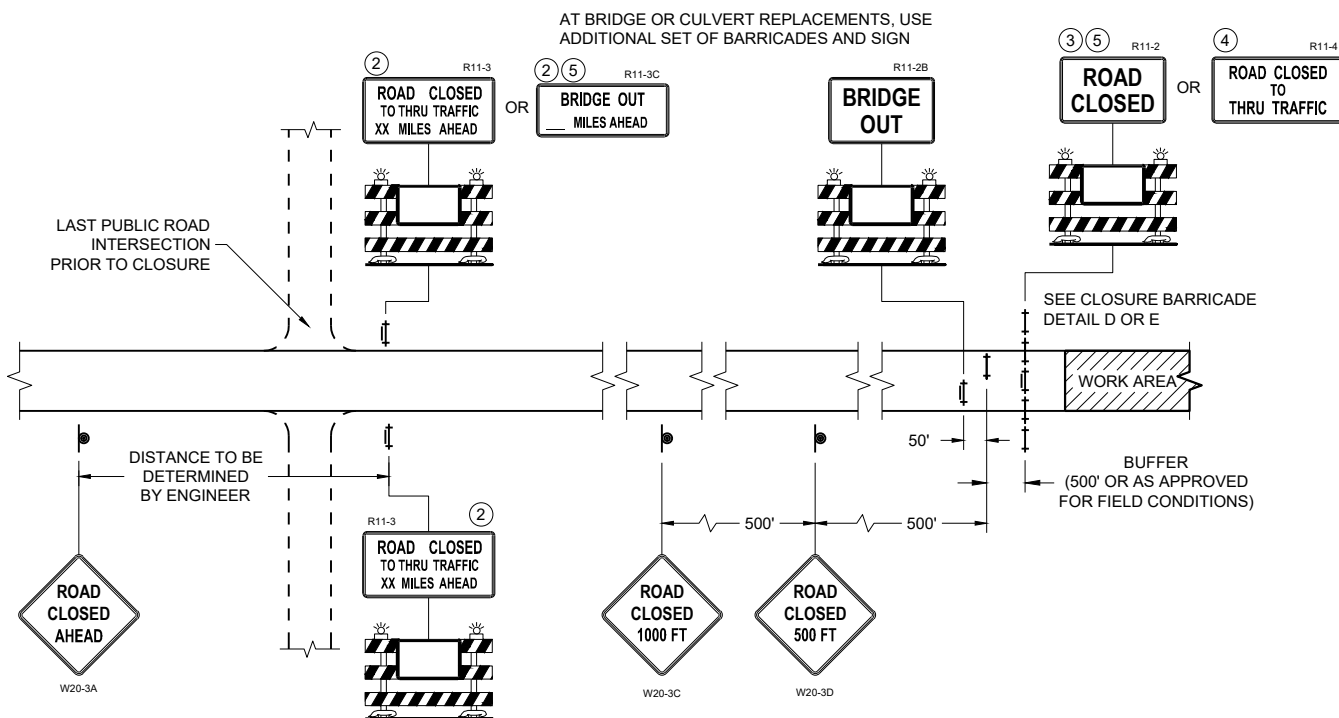
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

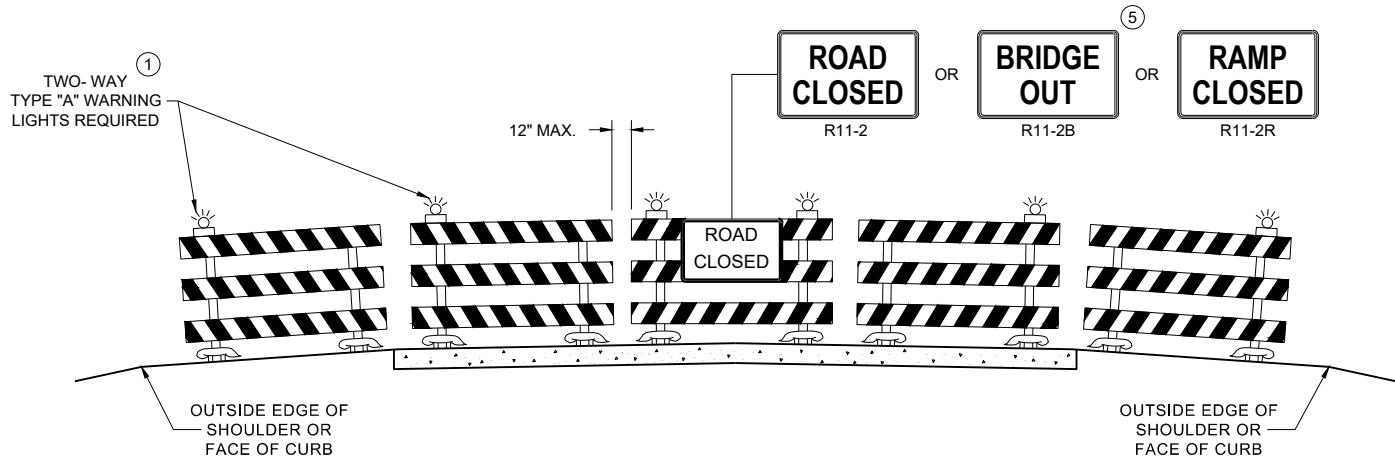
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- M05 - 1 OR M06 - 1

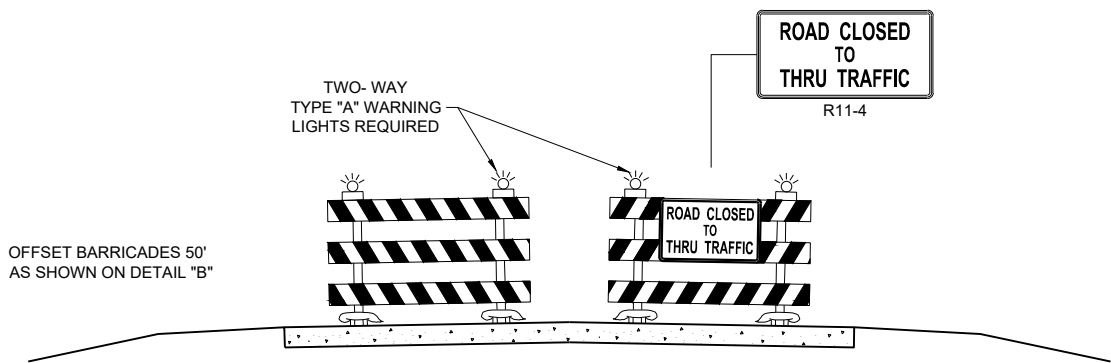
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
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.

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

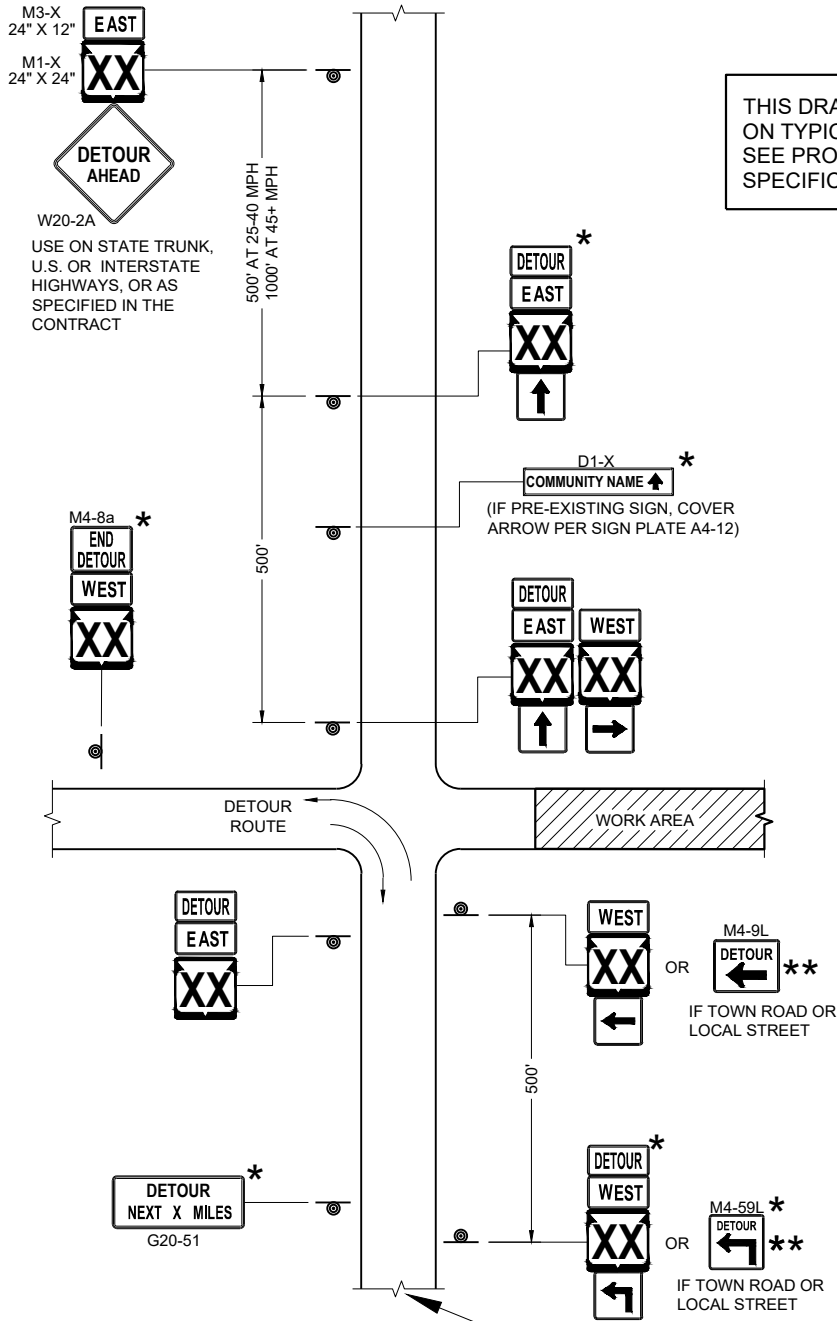
"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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"

SIGNS PLACED ON TYPE III BARRICADES THAT ARE SIZES OTHER THAN 48"X30" SHALL HAVE A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE.

- 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.

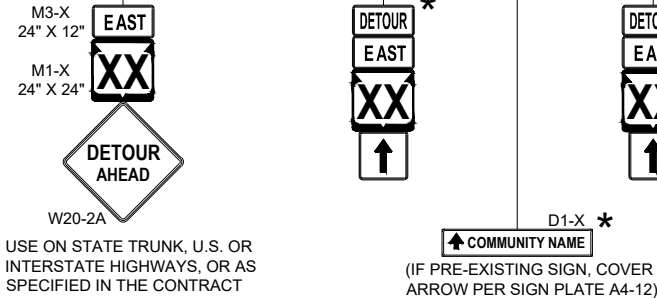
BARRICADES AND SIGNS FOR VARIOUS CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2025 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



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

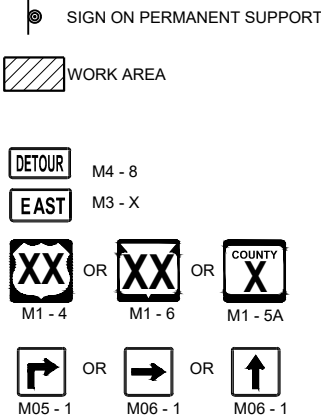
THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



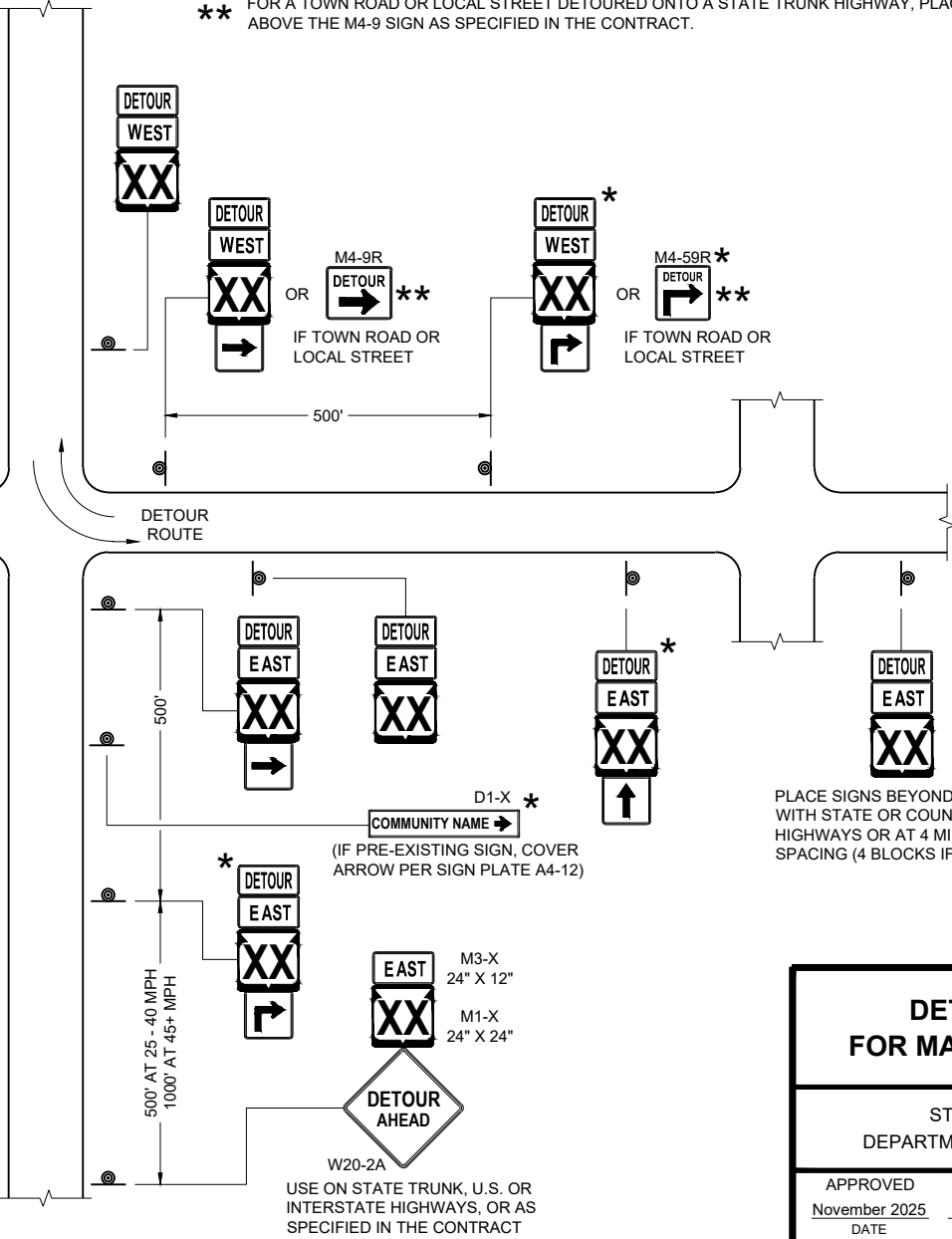
DETAIL F
DETOUR SIGNING

LEGEND



GENERAL NOTES

- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.
- THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- SIGN SIZES SHALL BE AS FOLLOWS:
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
 - M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
 - M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
 - M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
 - M4-9 AND M4-59 SHALL BE 30" X 24"
 - M4-8a SHALL BE 24" X 18"
 - G20-51 SHALL BE 60" X 24"
 - W20-2A SHALL BE 48" X 48"
 - D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



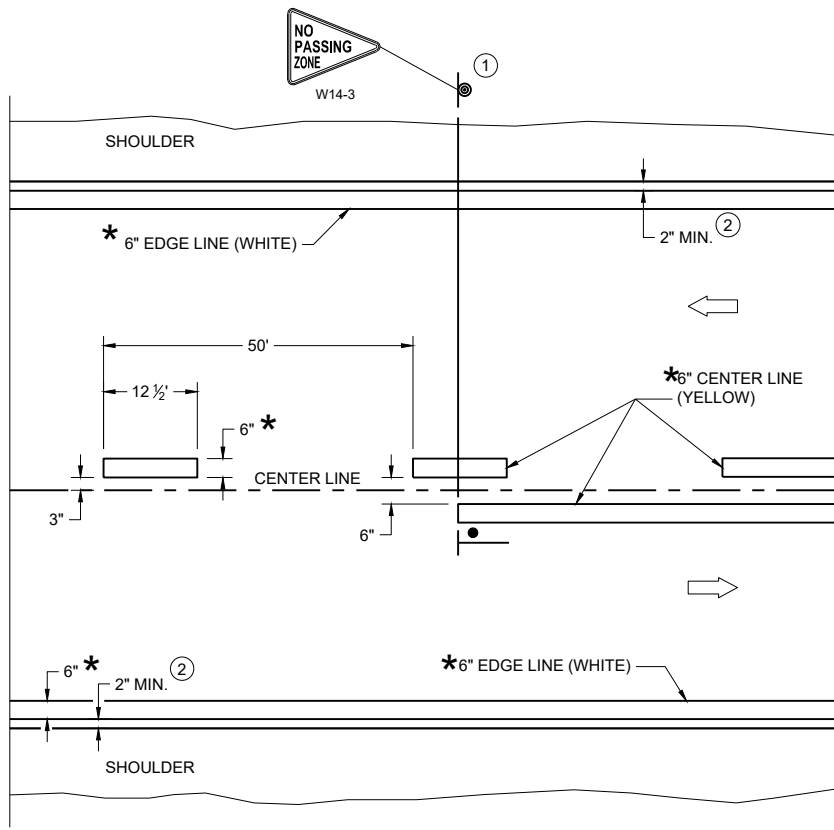
DETOUR SIGNING
FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

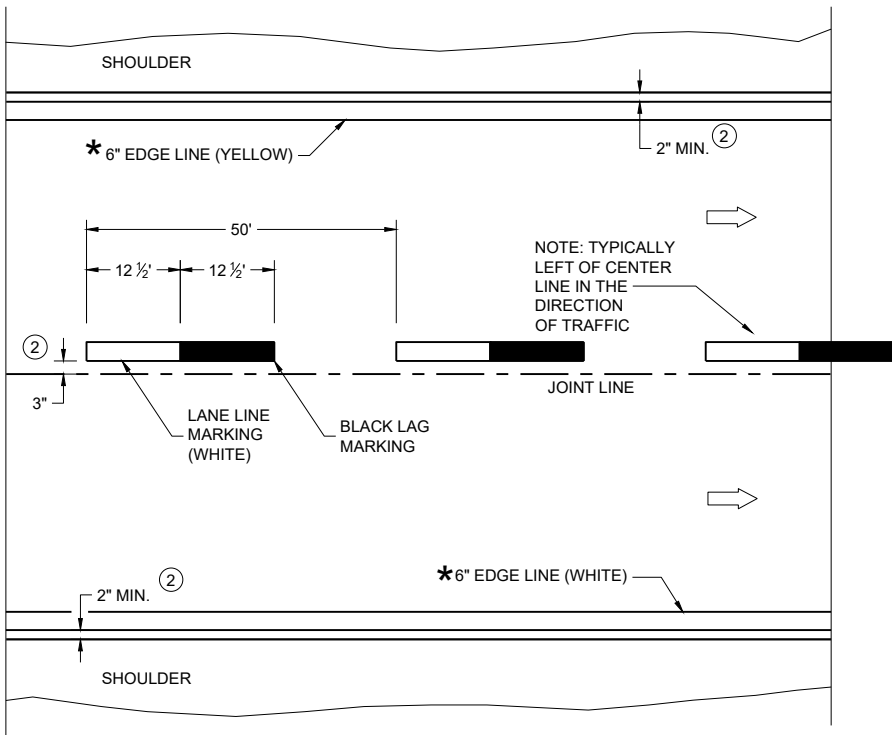
APPROVED
November 2025
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

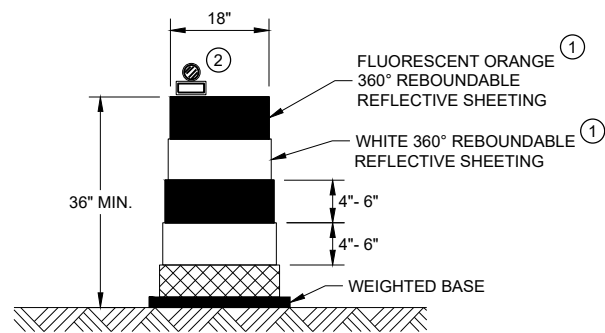
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

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

LEGEND

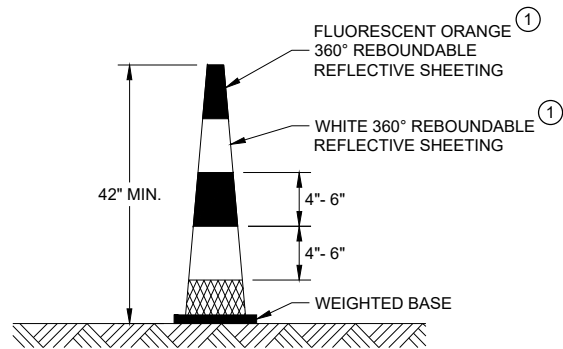
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA 137	



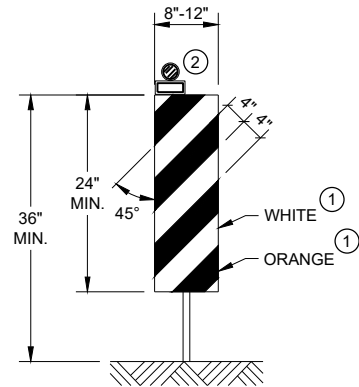
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



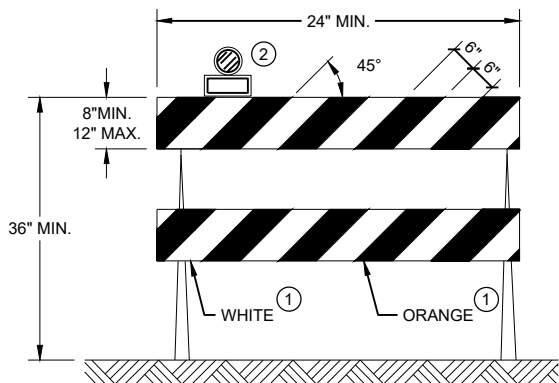
42" CONE

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



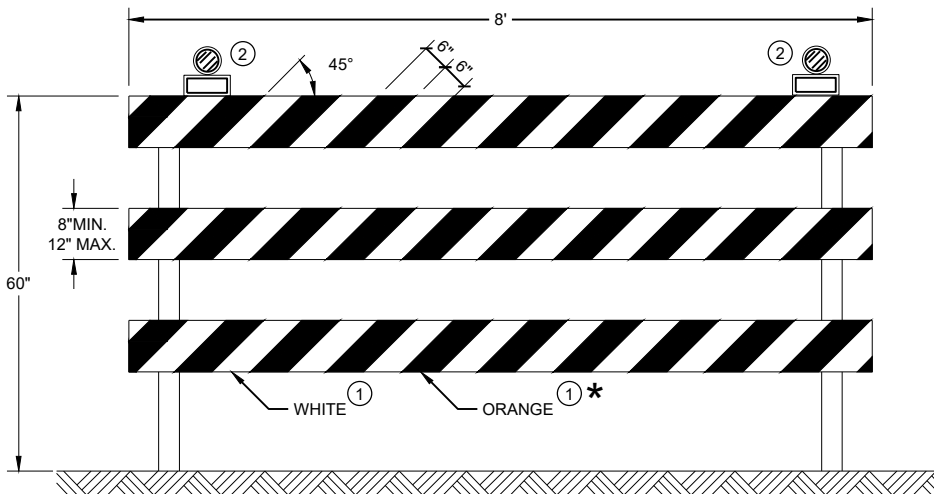
VERTICAL PANEL

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.

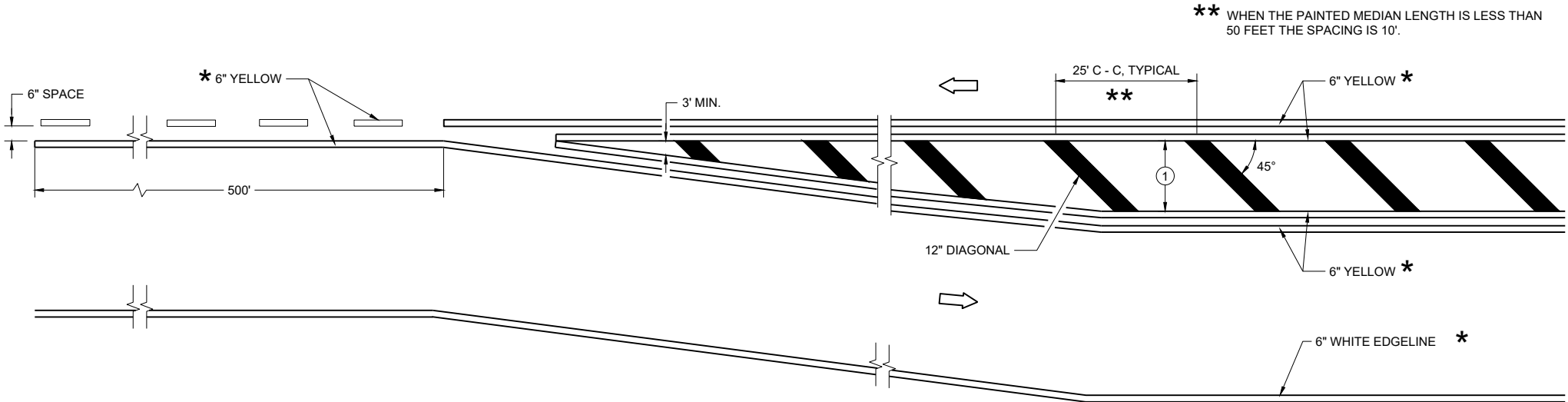
GENERAL NOTES

- 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.

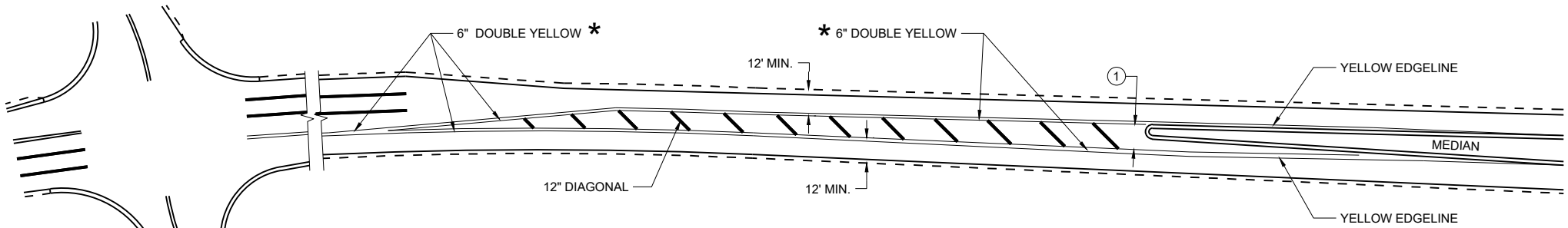
**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

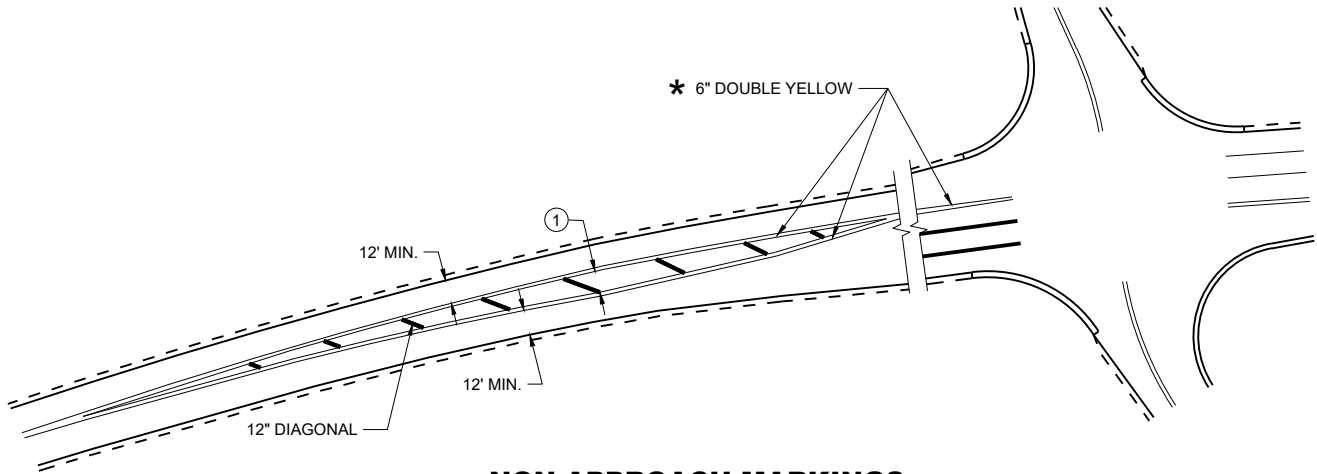
APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 138
FHWA



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL

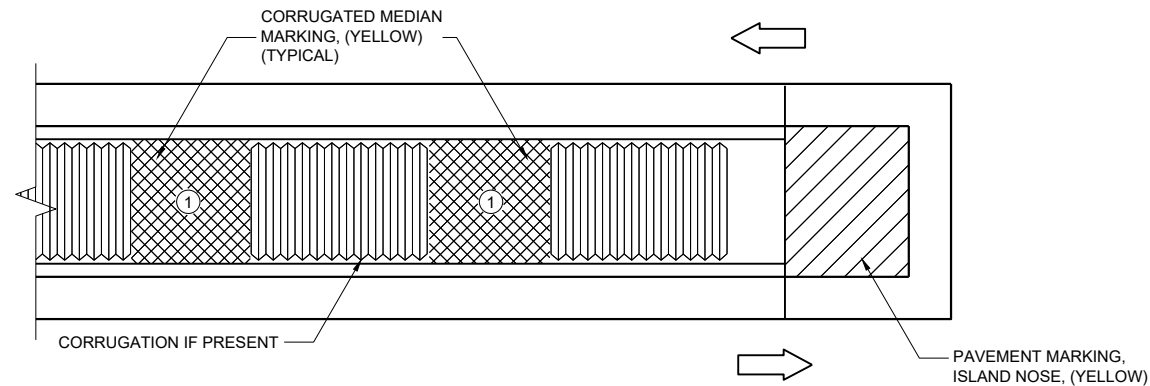
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

MEDIAN ISLAND
PAVEMENT MARKINGS

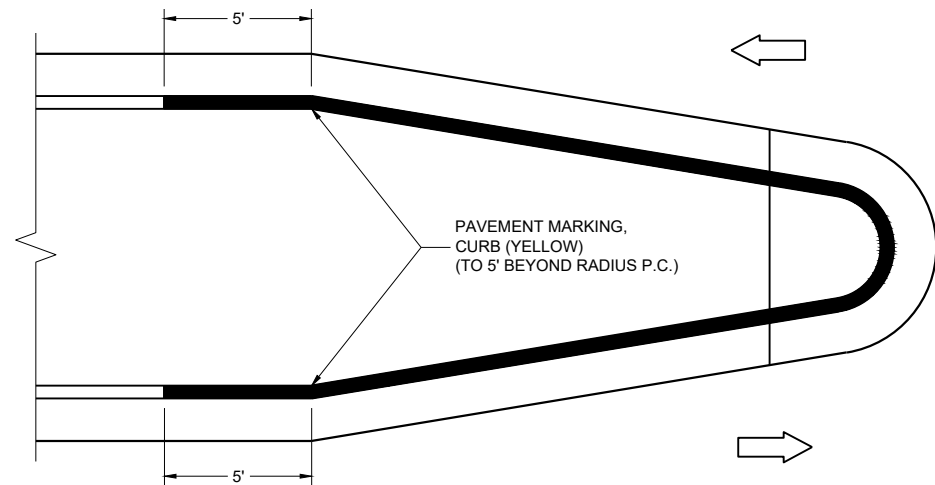
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer

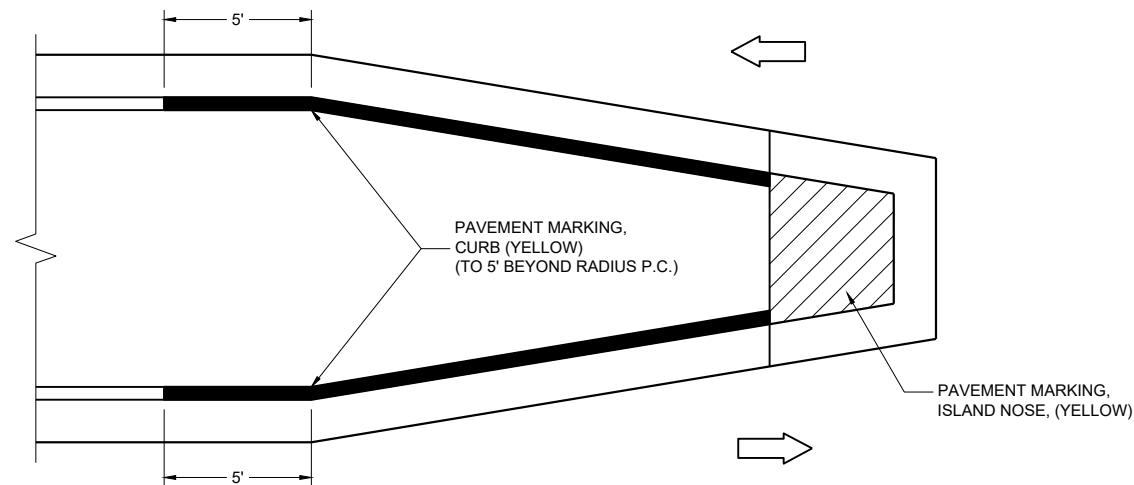
FHWA 139



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

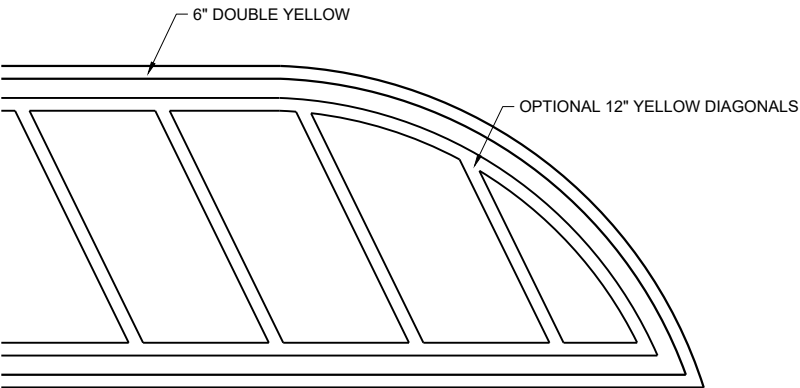
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

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

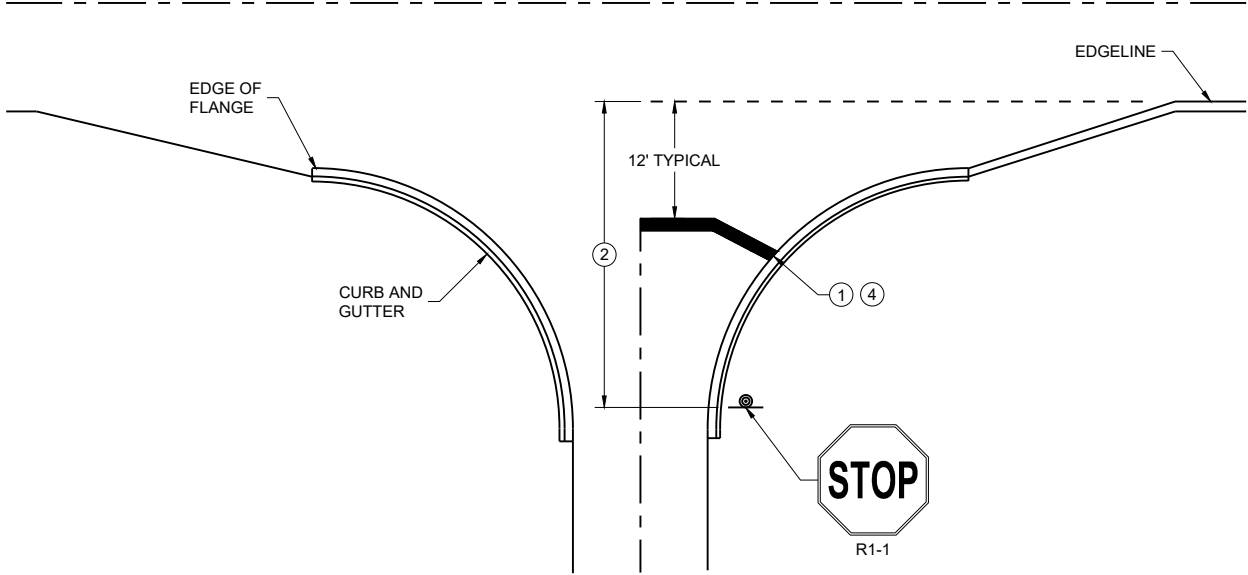
① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

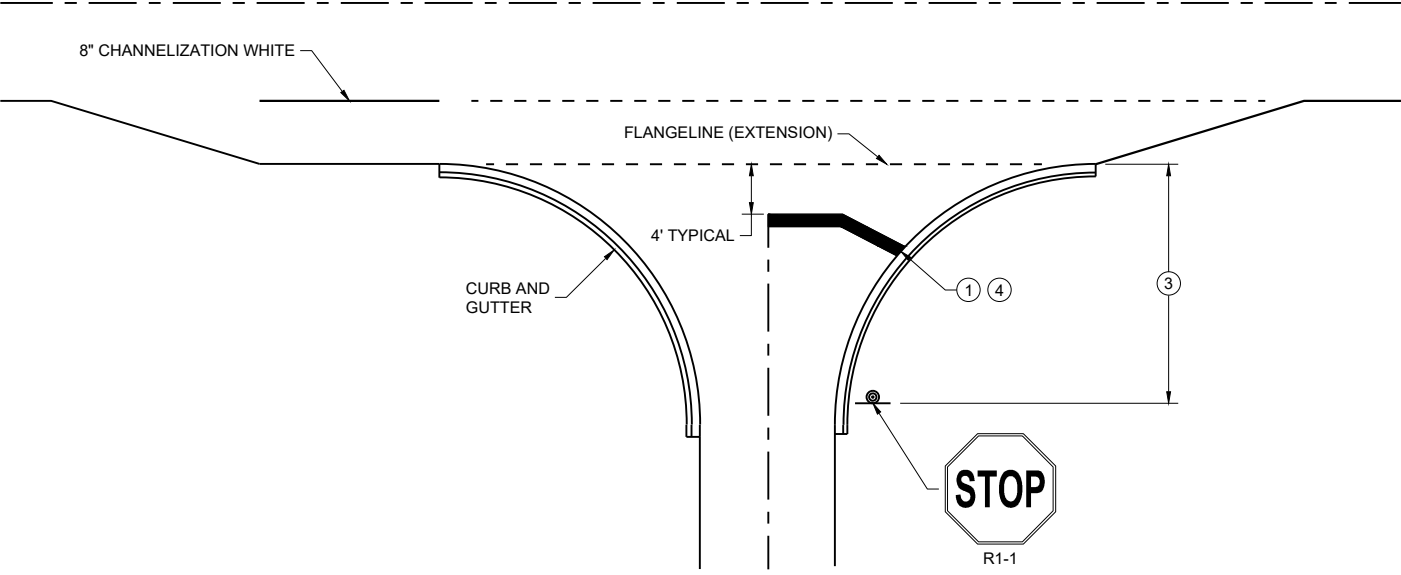


FLUSH MEDIAN ISLAND NOSE

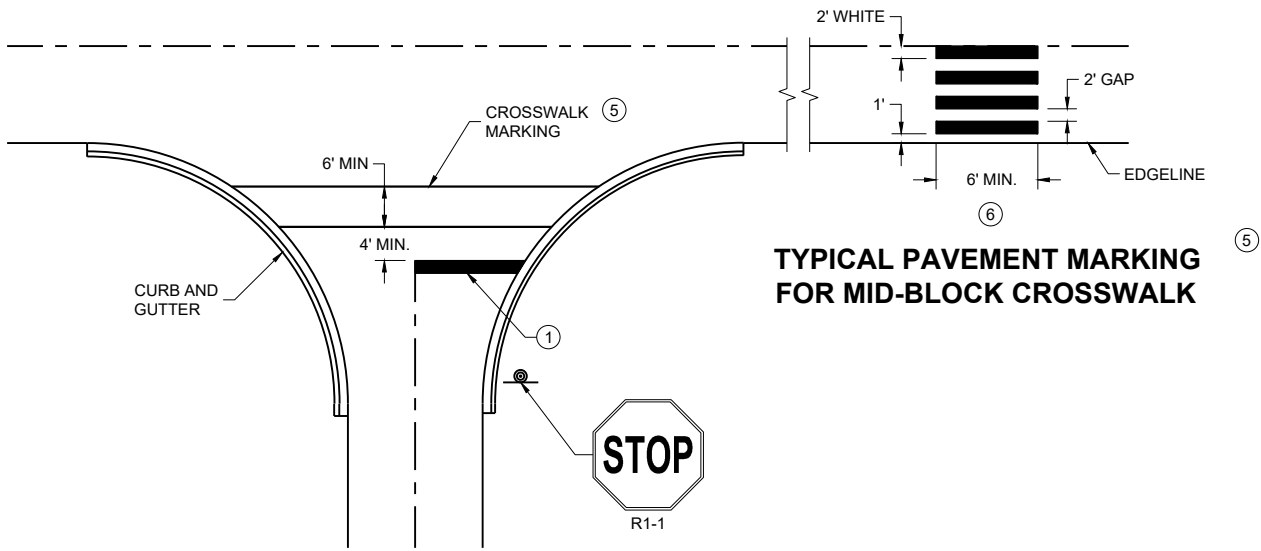
PAVEMENT MARKINGS, MEDIAN ISLAND NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	140



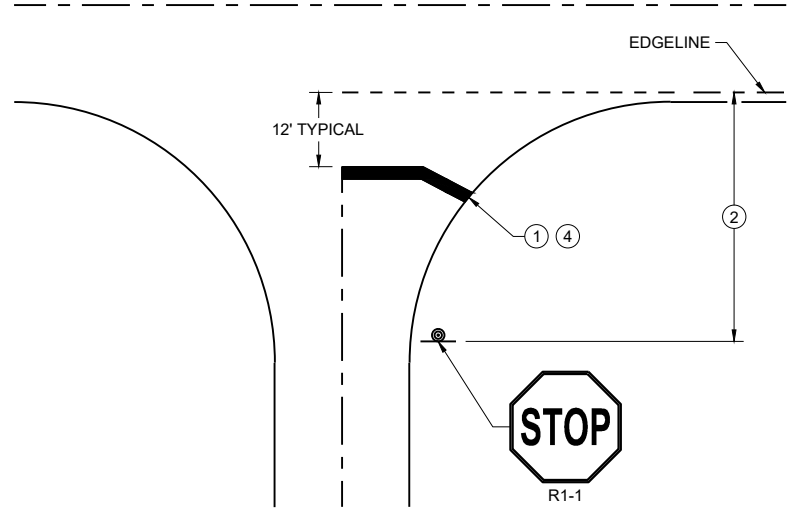
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

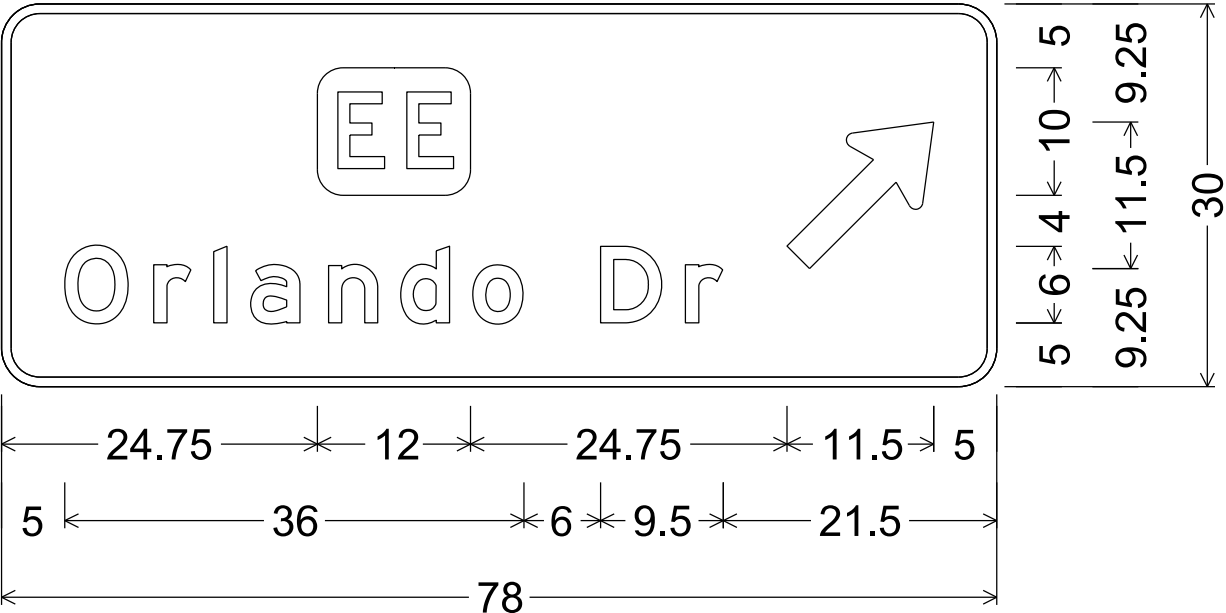
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

- 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

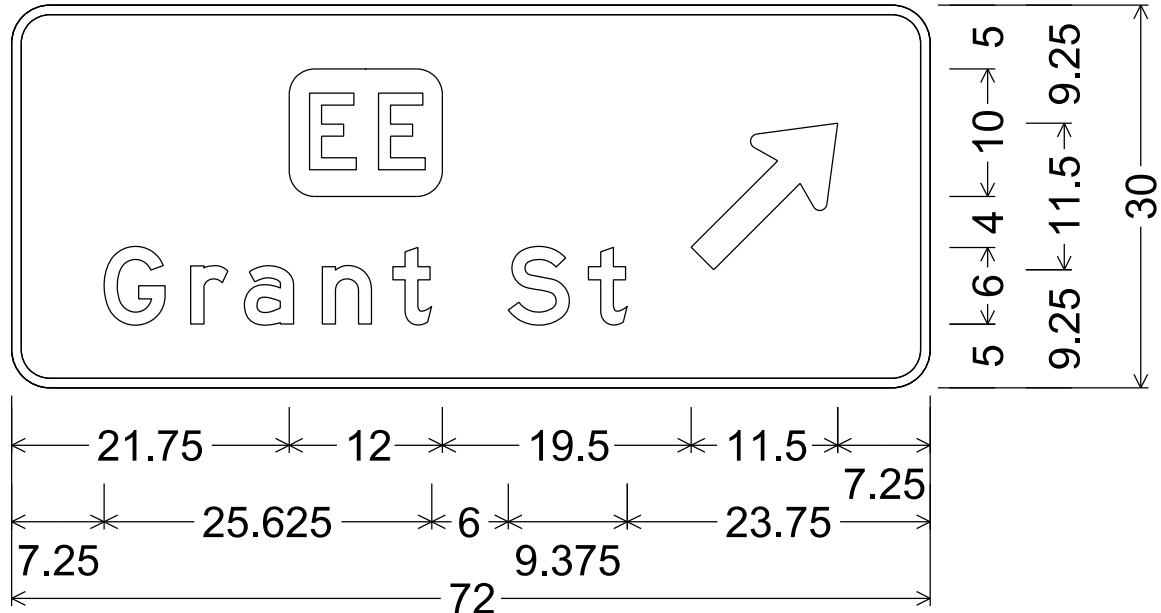
STOP LINE AND CROSSWALK PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2024 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER

FHWA

7



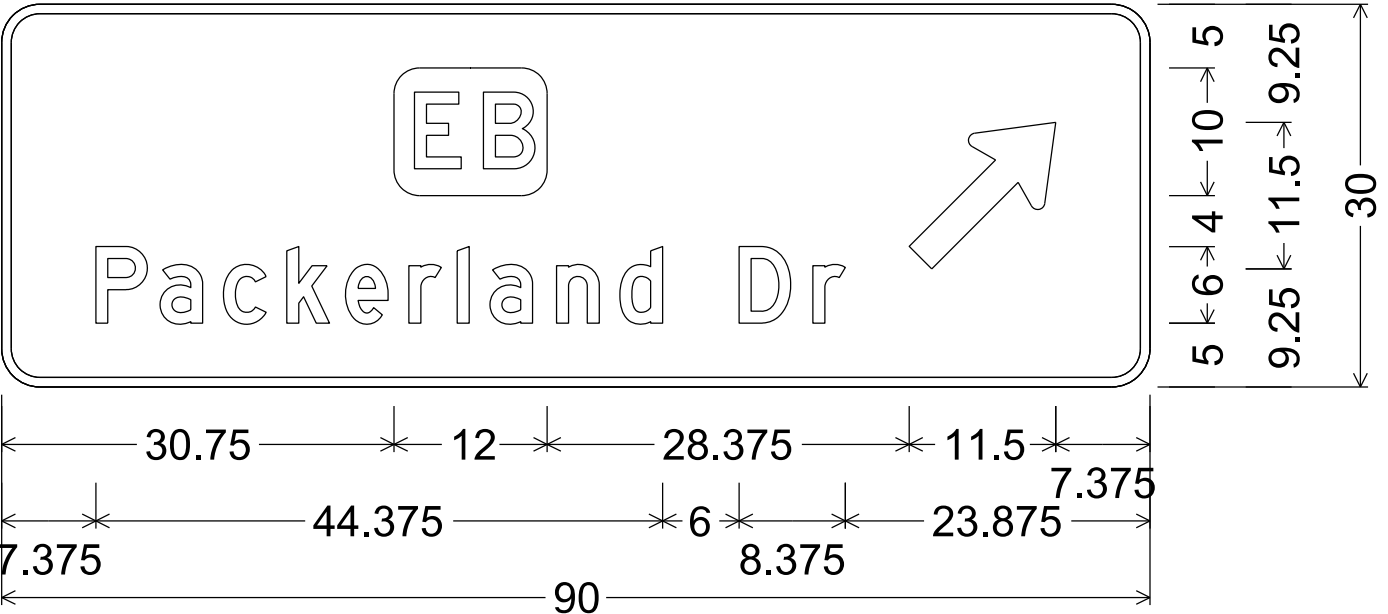
D1-68; 3.000" Radius, 0.750" Border



D1-68; 3.000" Radius, 0.750" Border

NOTES

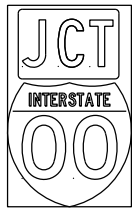
1. Signs are Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - E or as noted



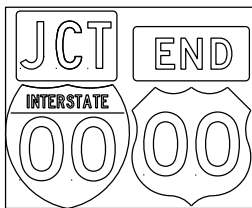
D1-68; 3.000" Radius, 0.750" Border
"Packerland", D; "Dr", D

7

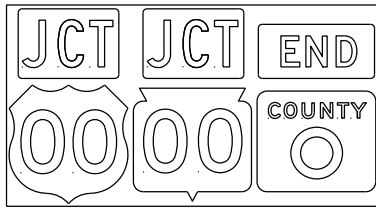
TYPICAL ASSEMBLIES



J1-1



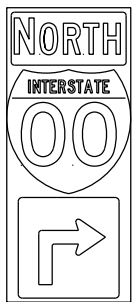
J1-2



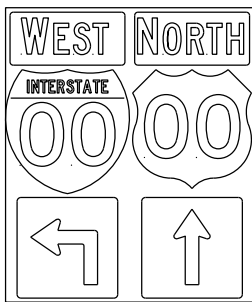
J1-3



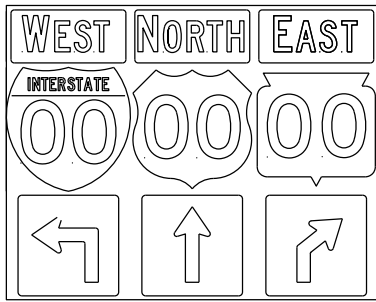
JR1-1



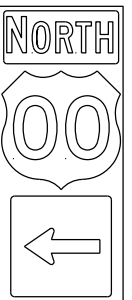
J2-1



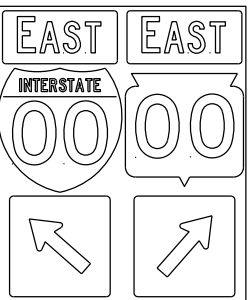
J2-2



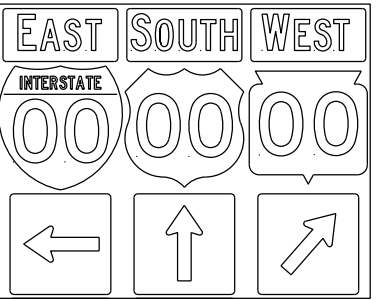
J2-3



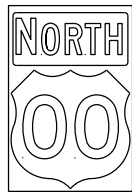
J3-1



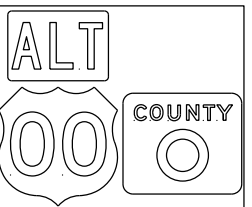
J3-2



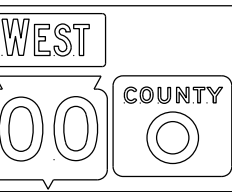
J3-3



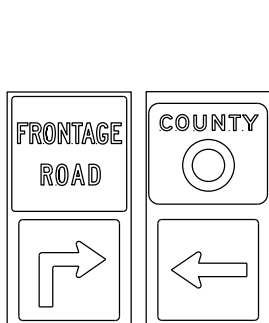
J4-1



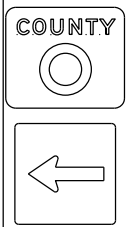
J4-2



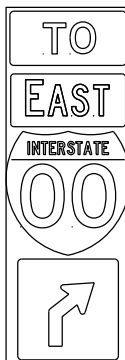
J4-2



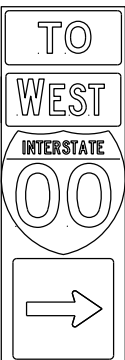
J12-1



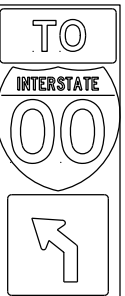
J13-1



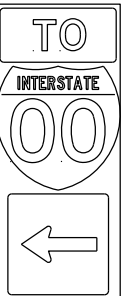
J32-1



J33-1



J22-1



J23-1



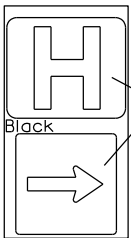
JR13-1



JR23-1



JR99-1

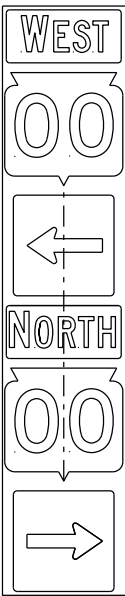
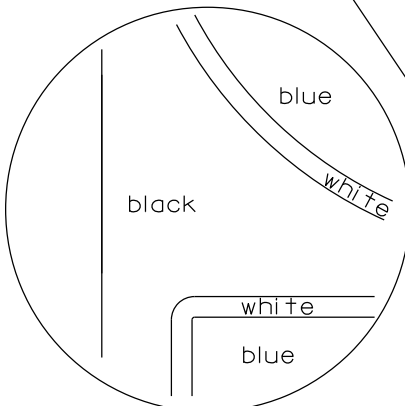


JH-1

Blue Background

Black

blue background with interstate

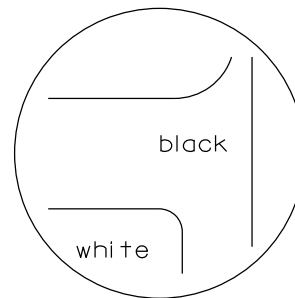
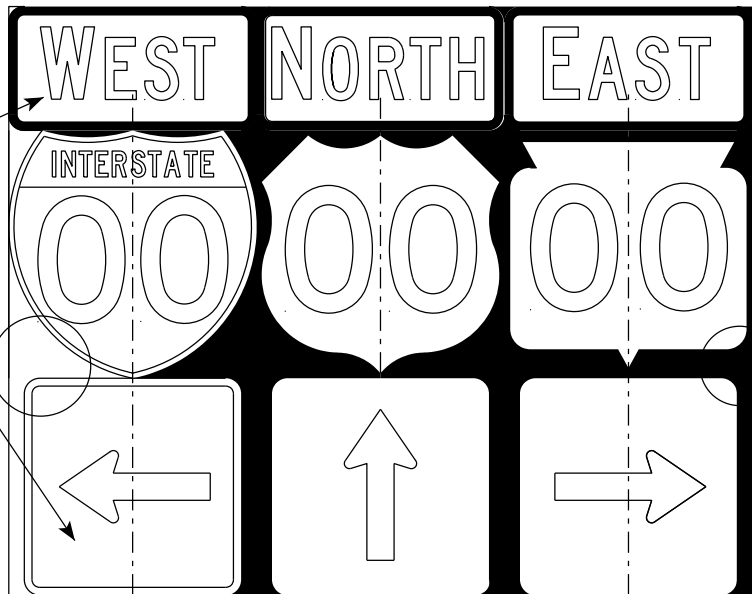


JV

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

NOTES

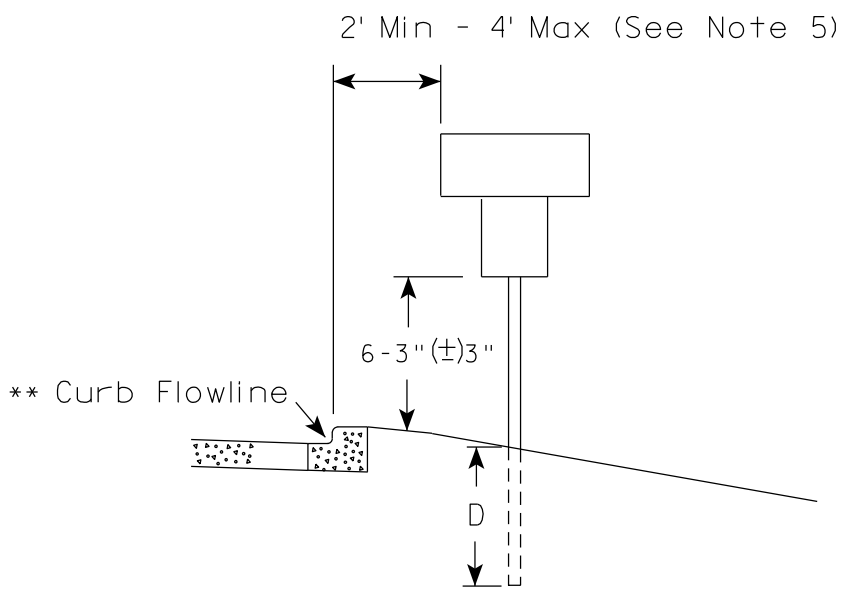
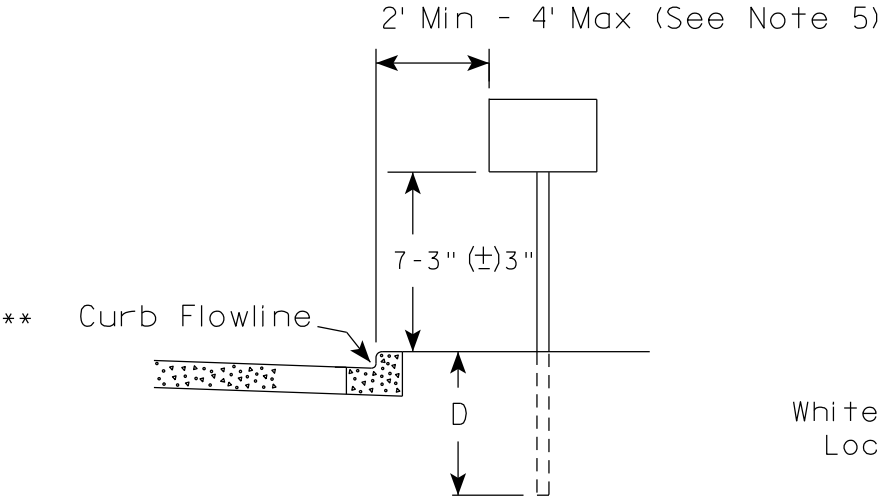
1. Signs are Type II - Type H Reflective
2. Color:
Background - Black Non-reflective
Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. Certain marker heads require the component 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.



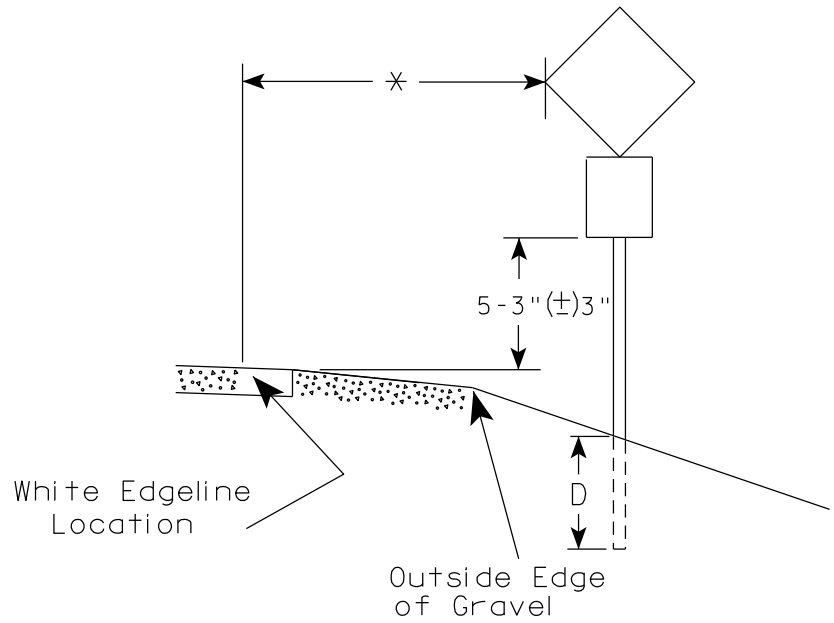
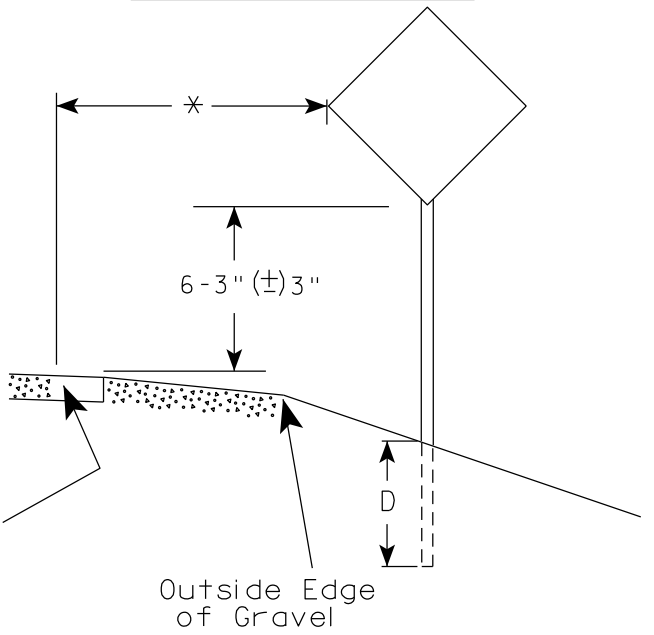
black background

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/7/23	PLATE NO. A2-1S.10

URBAN AREA



RURAL AREA (See Note 2)



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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 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.

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

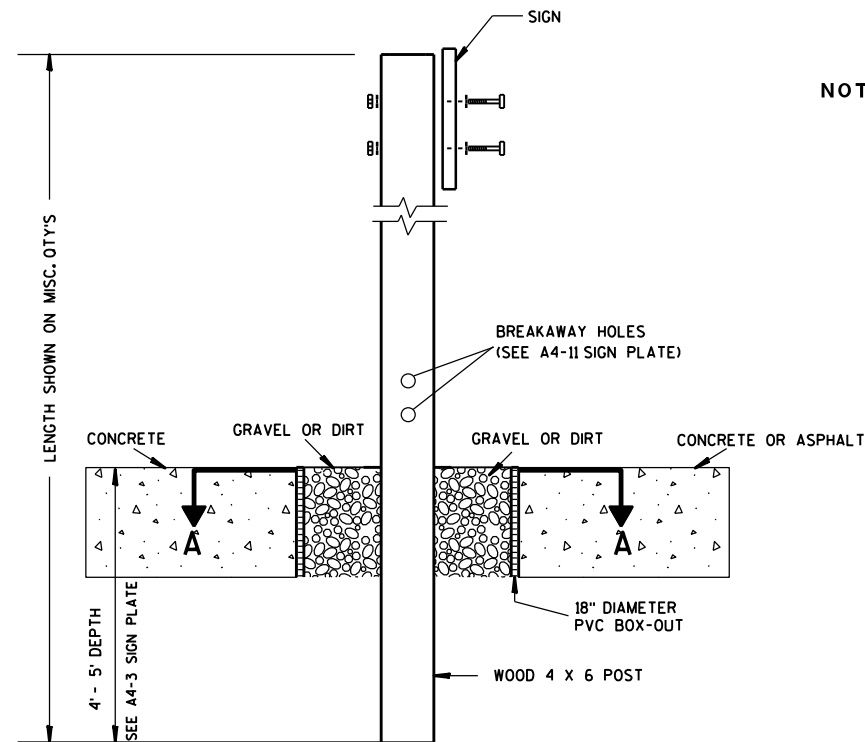
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

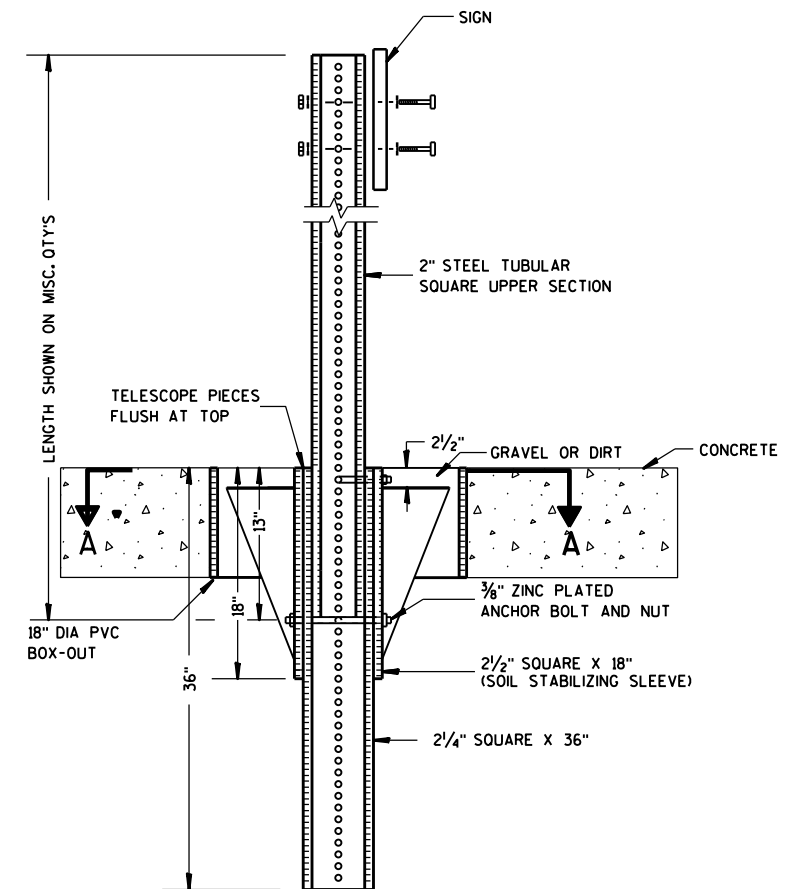
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

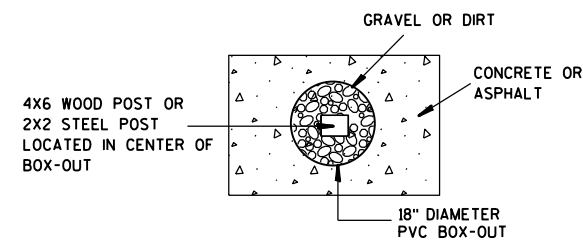
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 145 A4-3B.1

PROJECT NO:

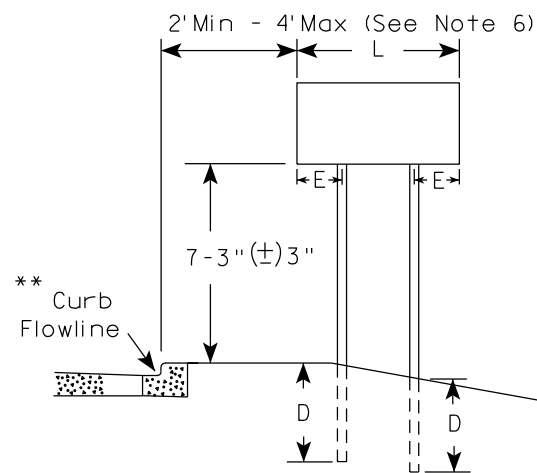
HWY:

COUNTY:

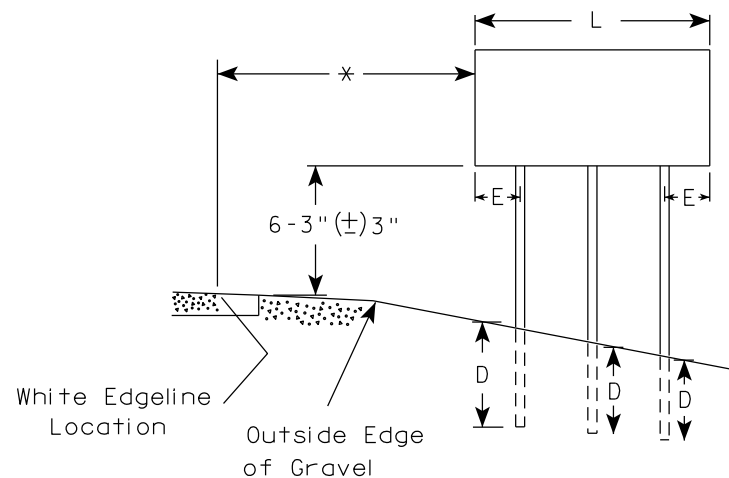
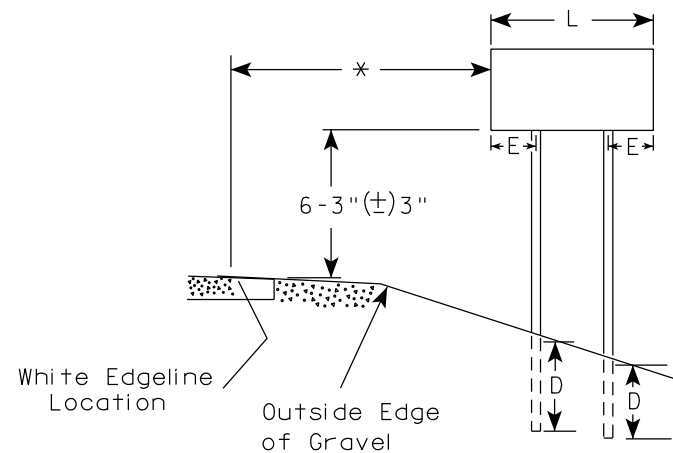
SHEET NO:

E

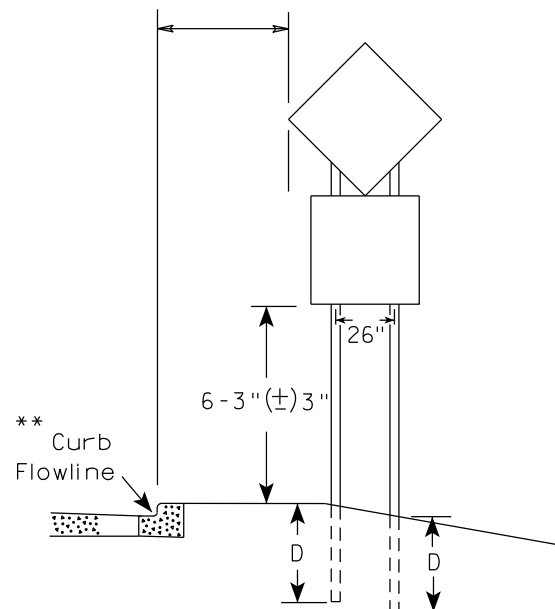
URBAN AREA



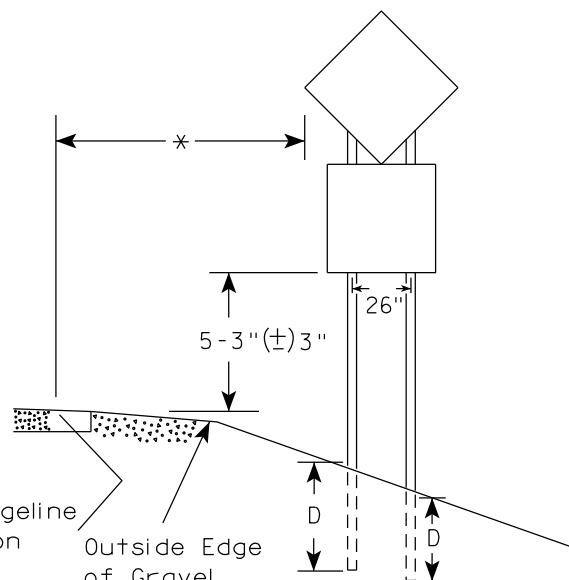
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

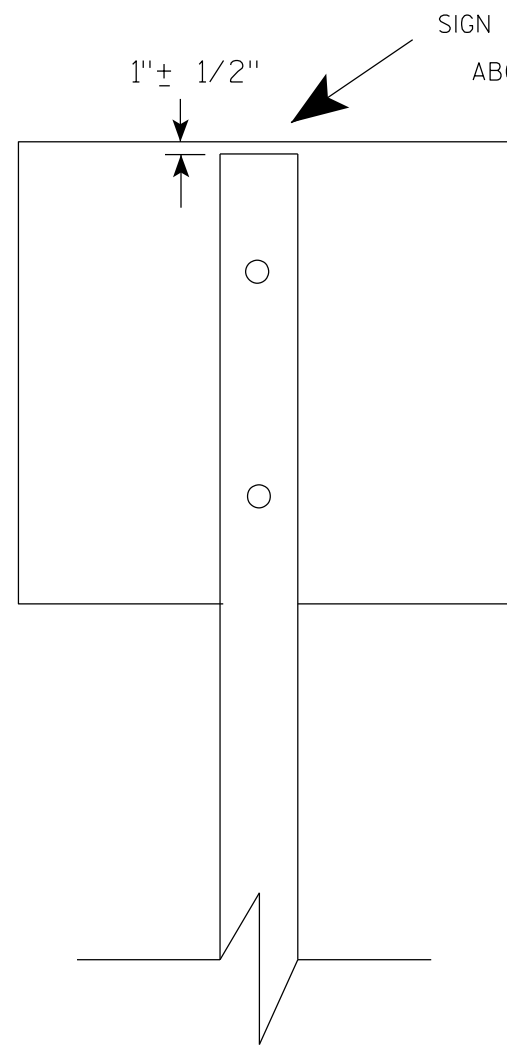
GENERAL NOTES

- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- J-Assemblies are considered to be one sign for mounting height.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
- 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".

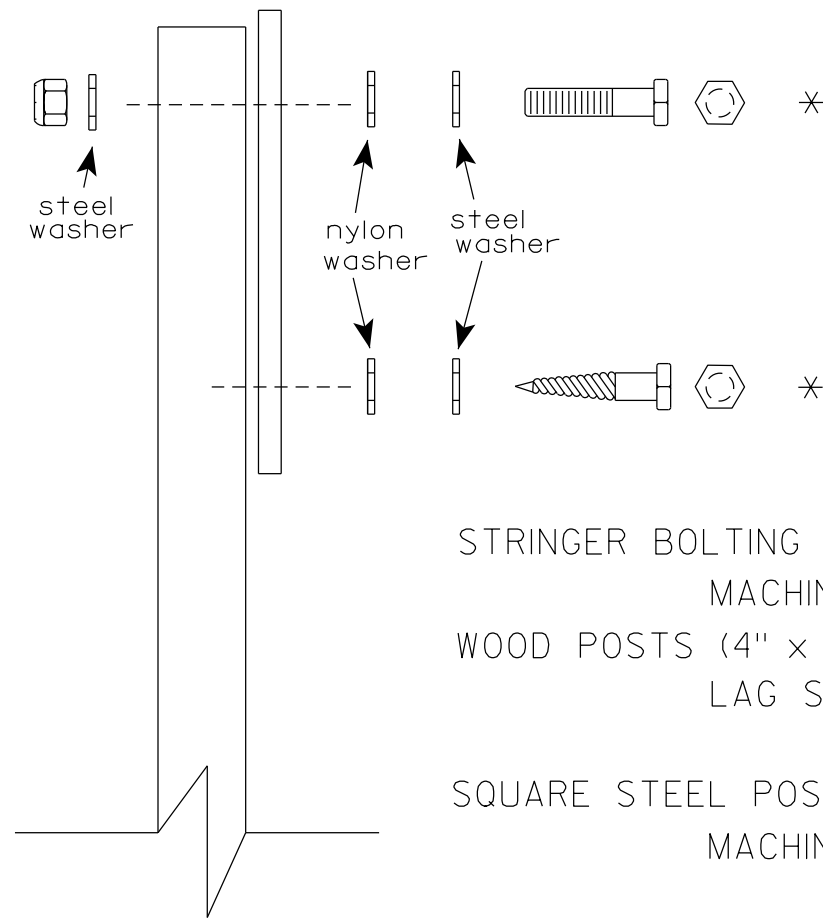
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** 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 SHALL BE MOUNTED TO PROJECT
ABOVE THE TOP OF THE POST



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.

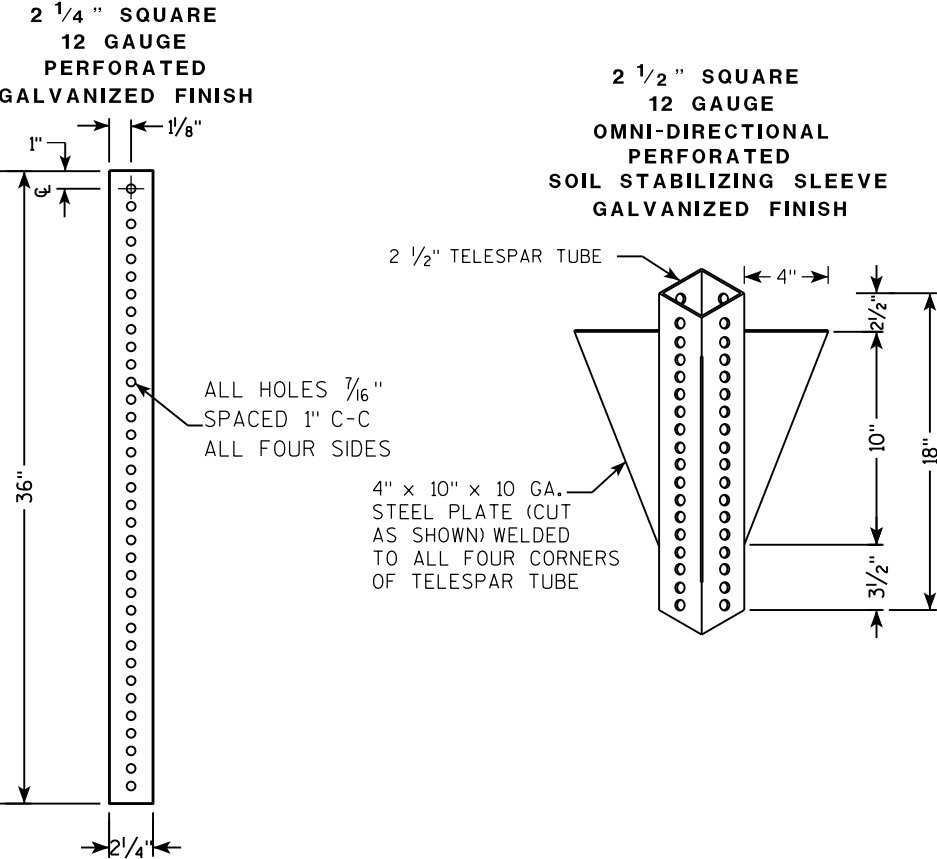
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

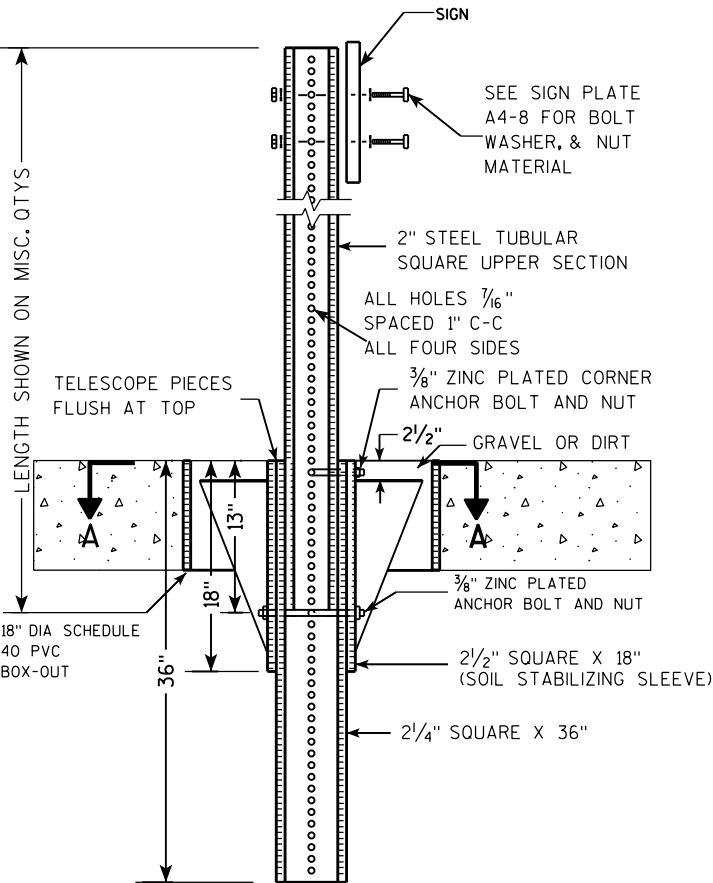
APPROVED Matthew R. Rauch
For State Traffic Engineer

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

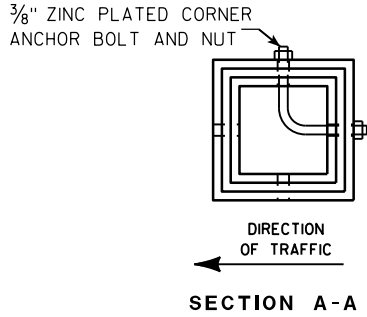
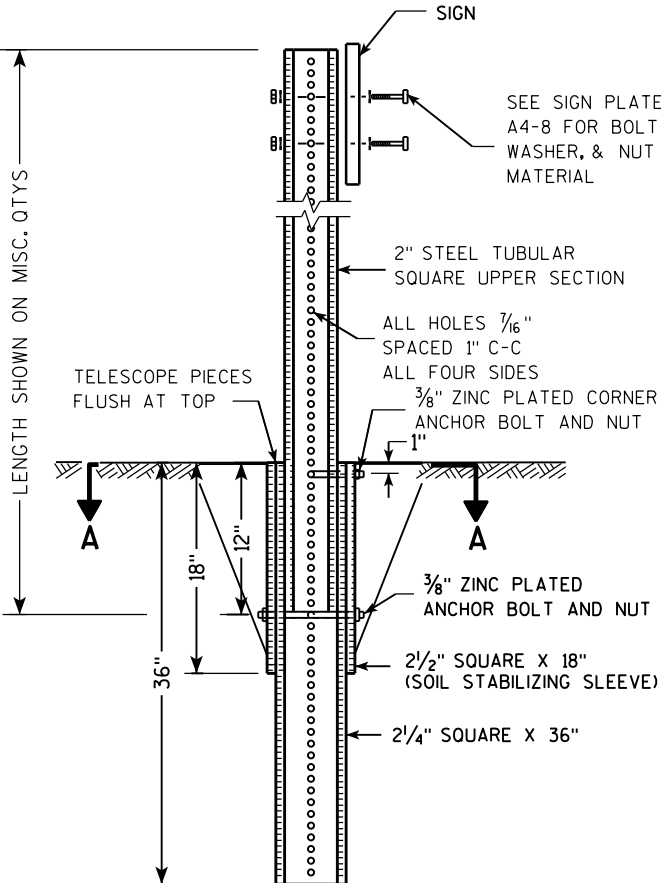
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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).

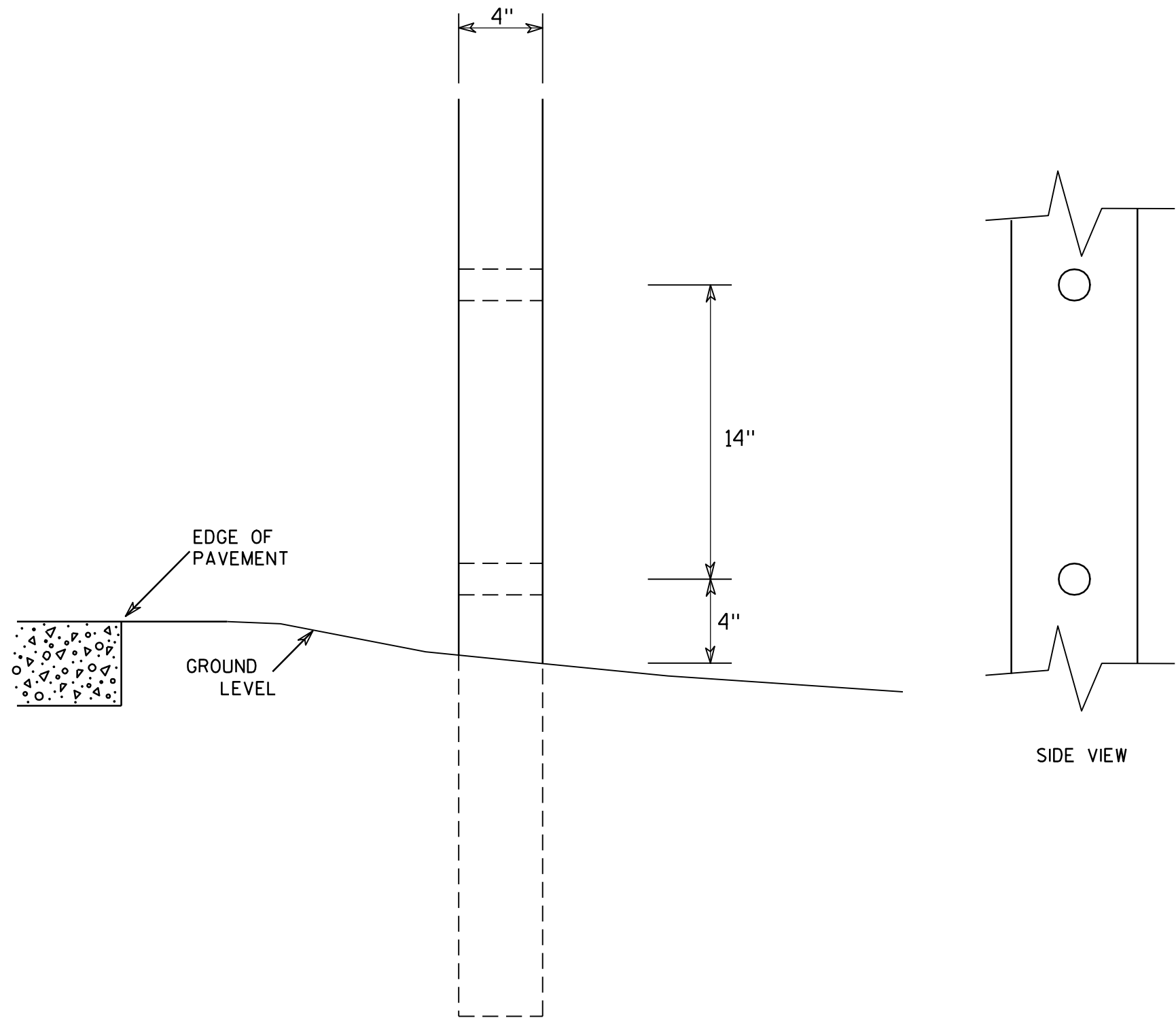
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 148 14-9.9

7

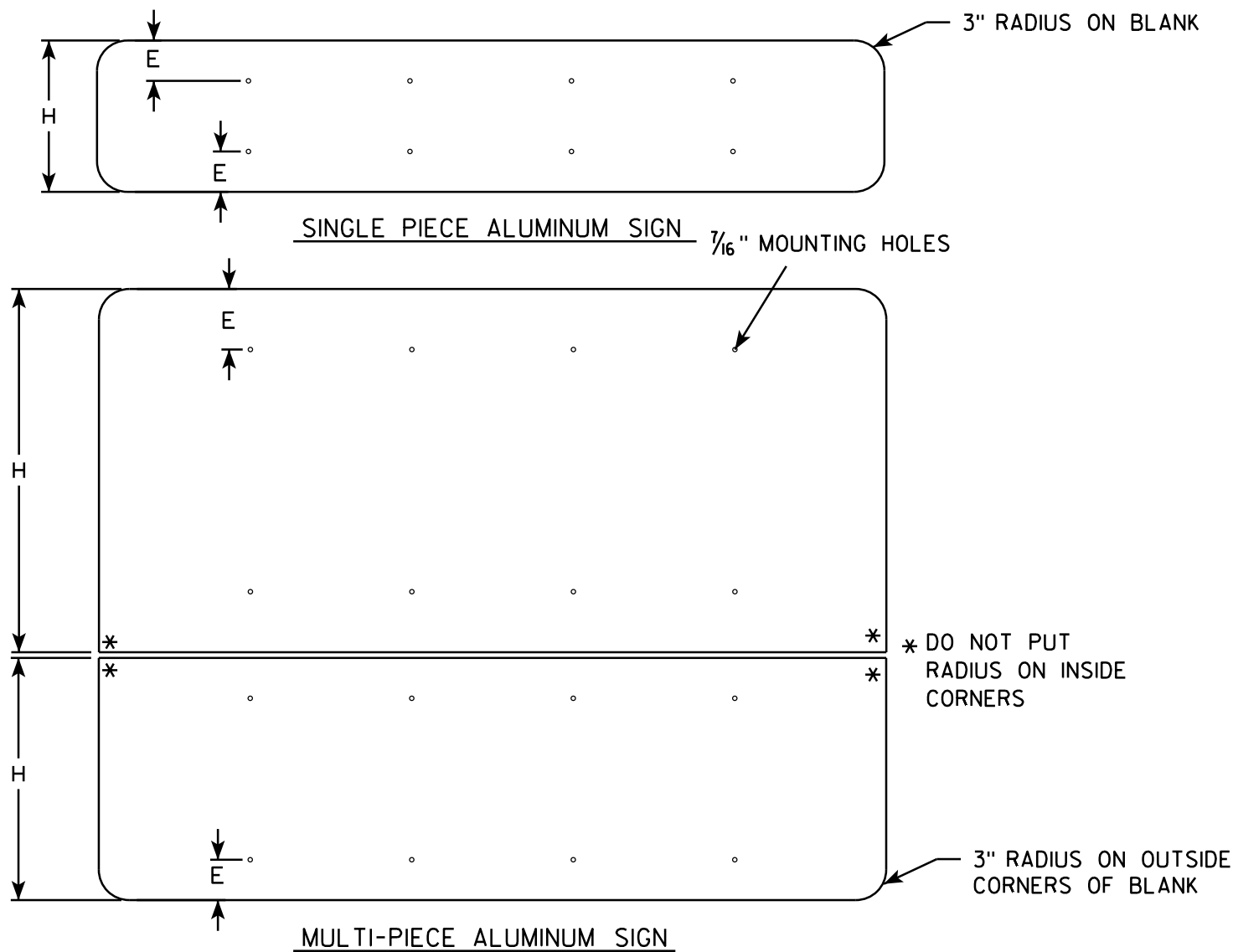


GENERAL NOTES

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

7

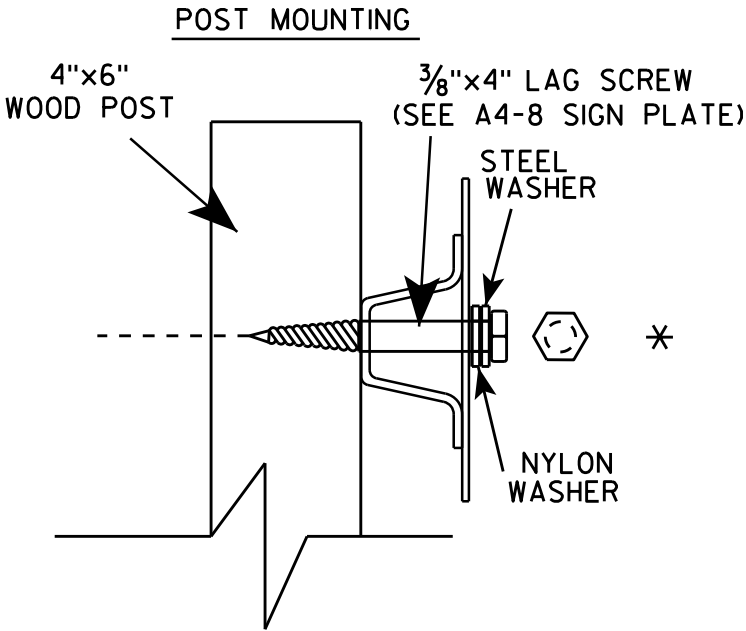
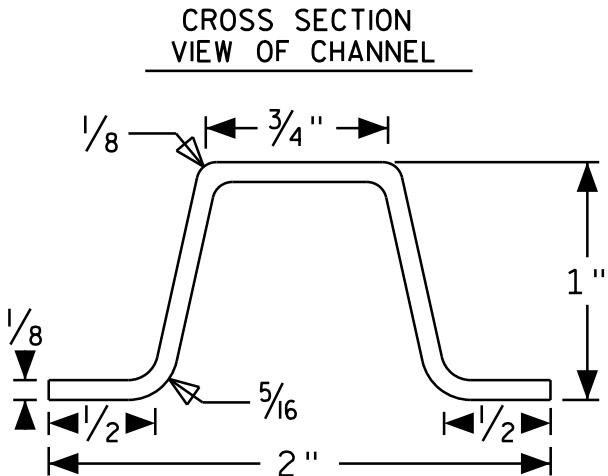
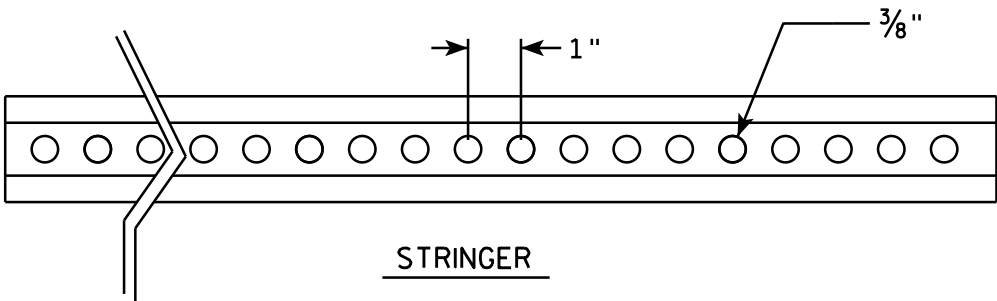
4 X 6 WOOD POST MODIFICATIONS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Chester J. Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2



GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE $\frac{7}{16}$ " DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

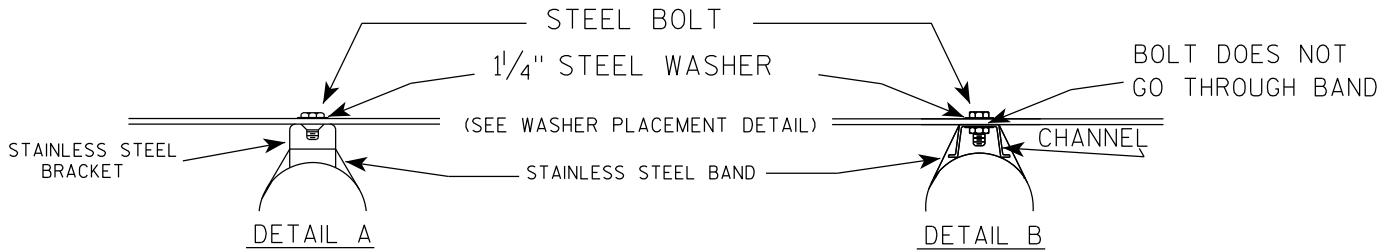
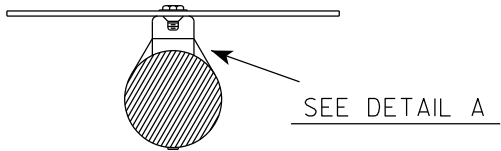
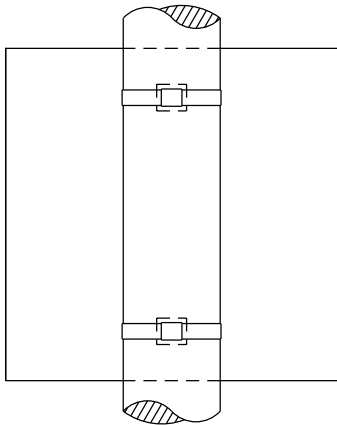
SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 $\frac{1}{2}$ "	33 $\frac{1}{2}$ "	50 $\frac{1}{2}$ "	67 $\frac{1}{2}$ "
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 $\frac{1}{2}$ "	38 $\frac{1}{2}$ "	57 $\frac{1}{2}$ "	76 $\frac{1}{2}$ "
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 $\frac{1}{2}$ "	43 $\frac{1}{2}$ "	64 $\frac{1}{2}$ "	85 $\frac{1}{2}$ "
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



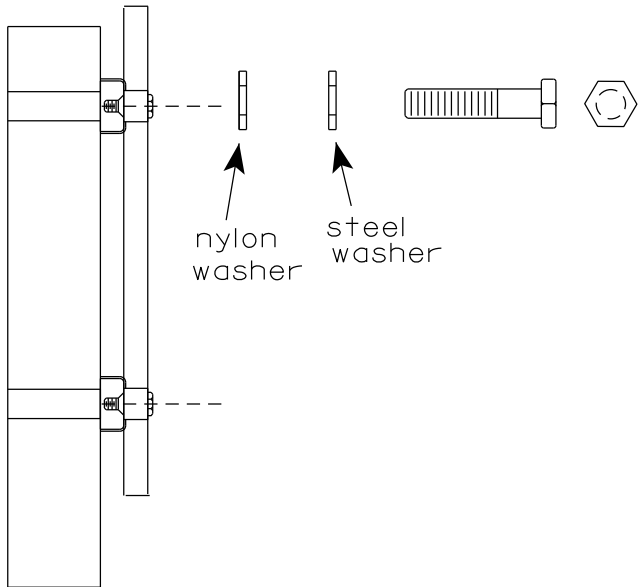
SIGN STRINGER MOUNTING REQUIREMENTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/26/16	PLATE No A4-18.1 150

BANDING

SINGLE SIGN



WASHER PLACEMENT

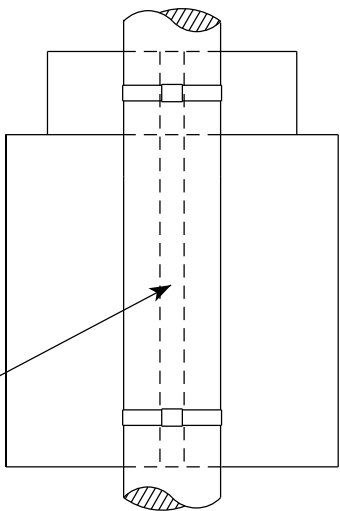


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

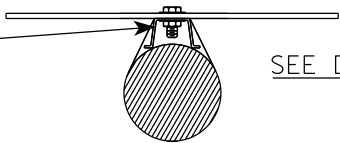
GENERAL NOTES

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

"J" ASSEMBLY



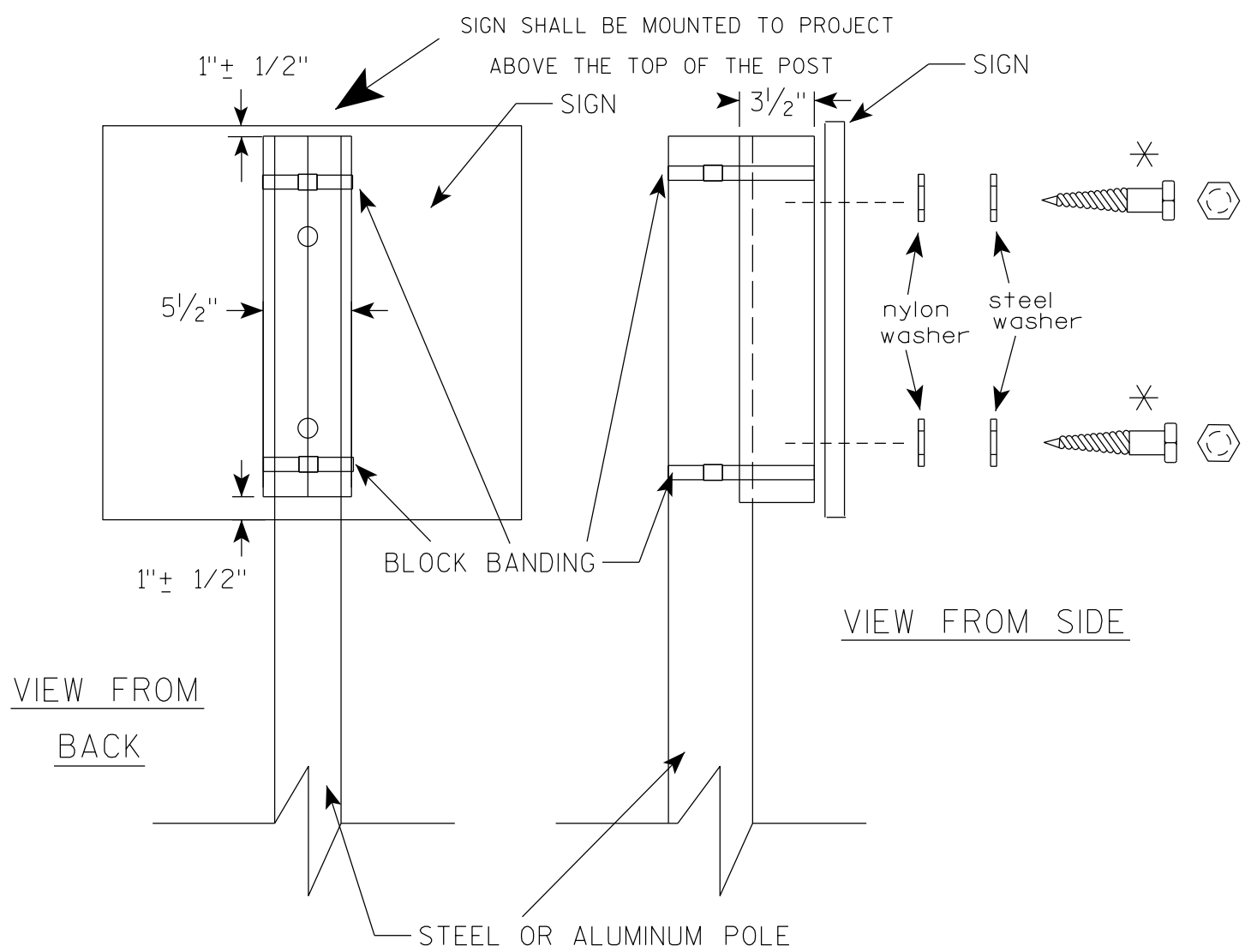
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

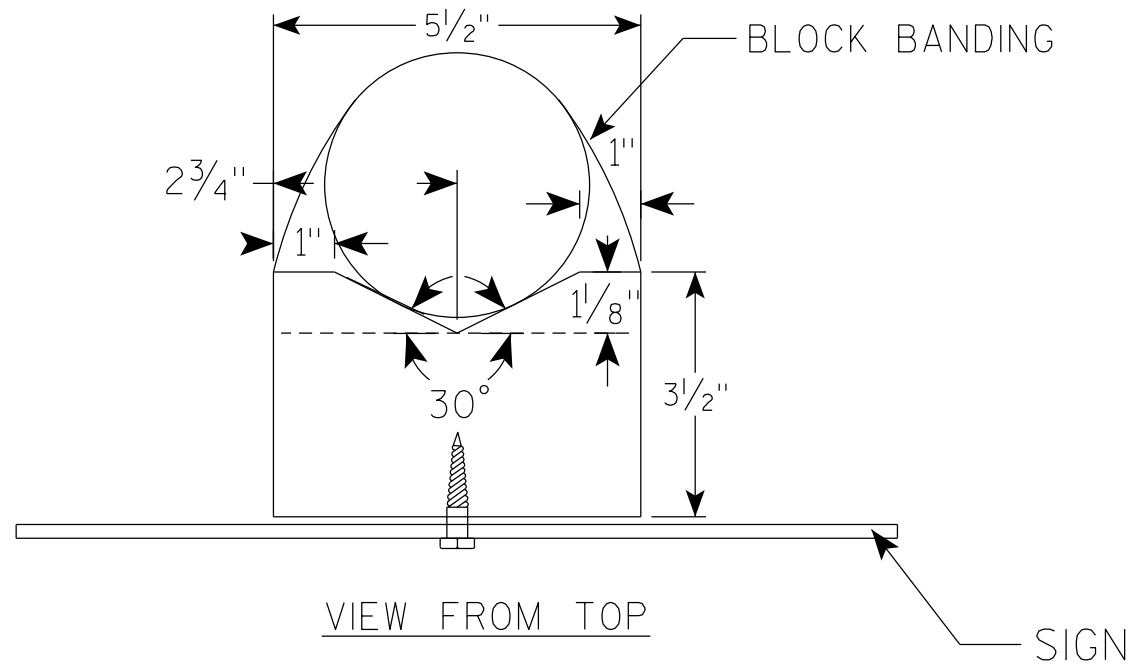
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

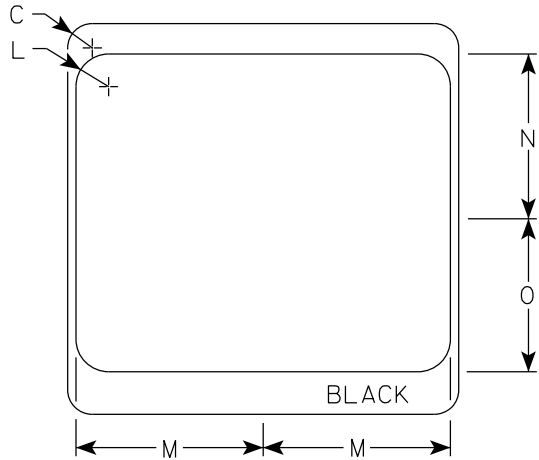
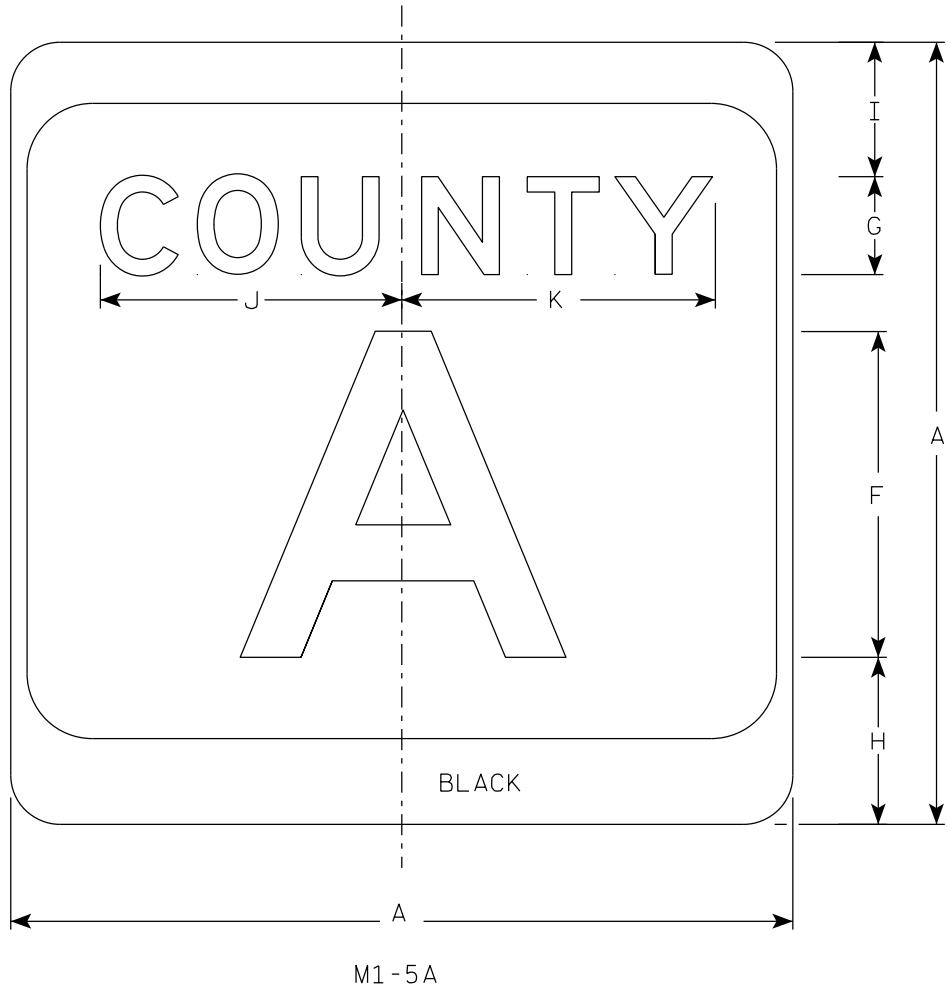
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

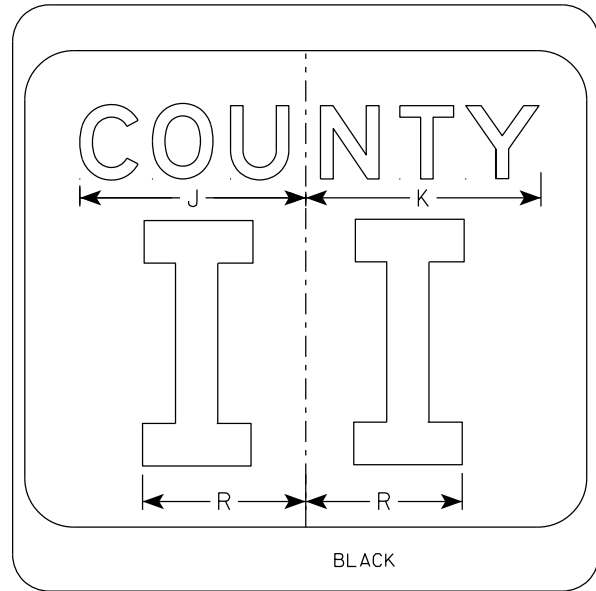
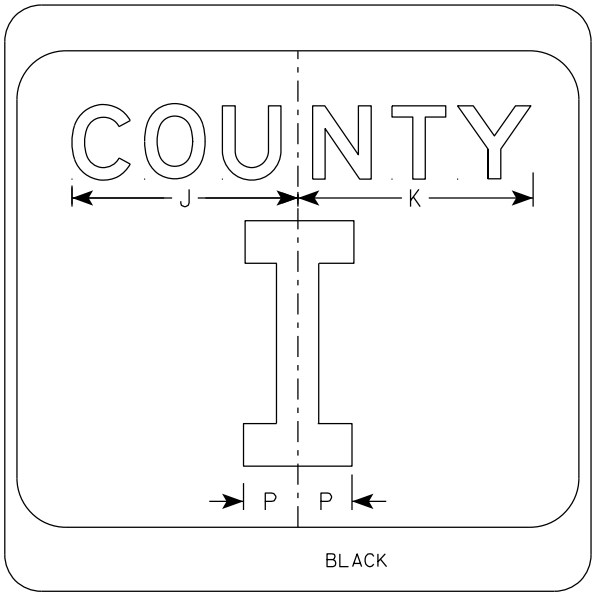
SHEET NO: 152

E

7



- 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.



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

CTH MARKER

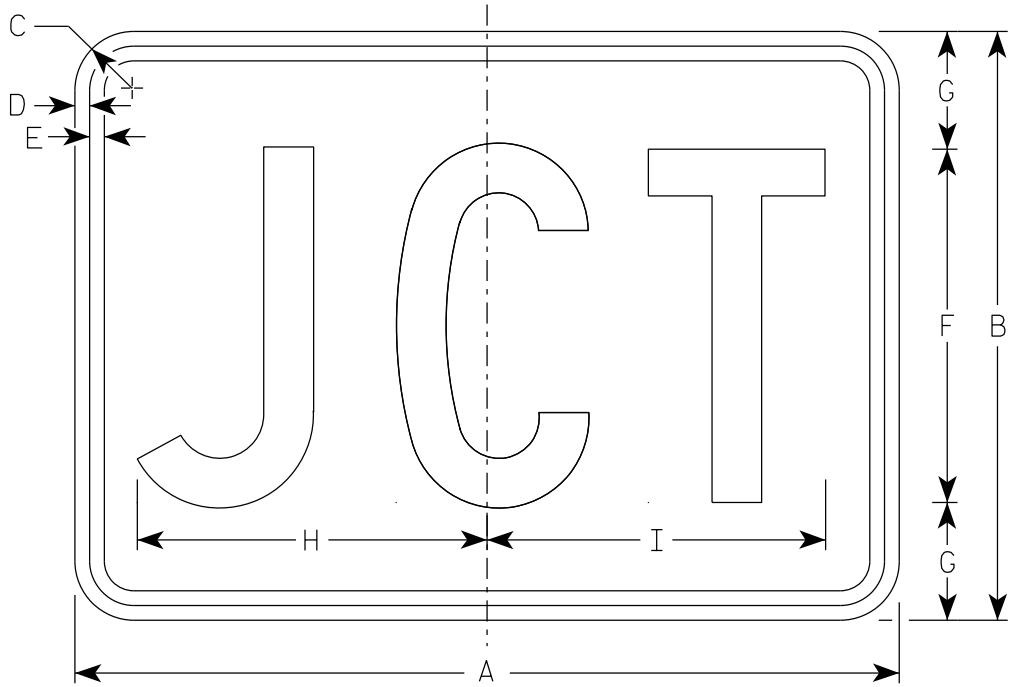
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

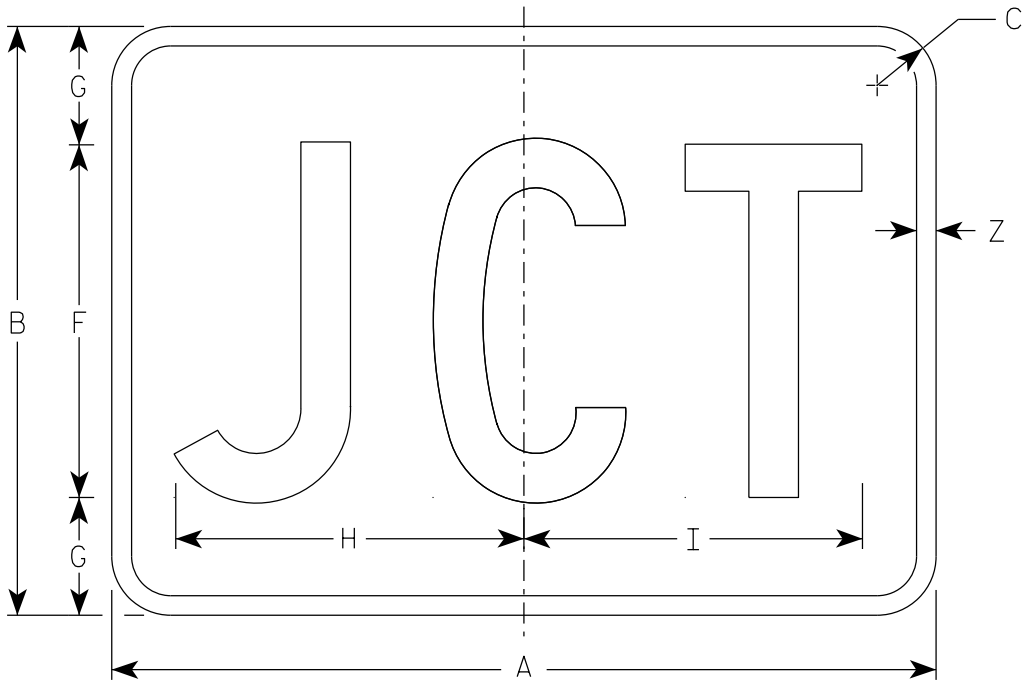
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

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

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	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

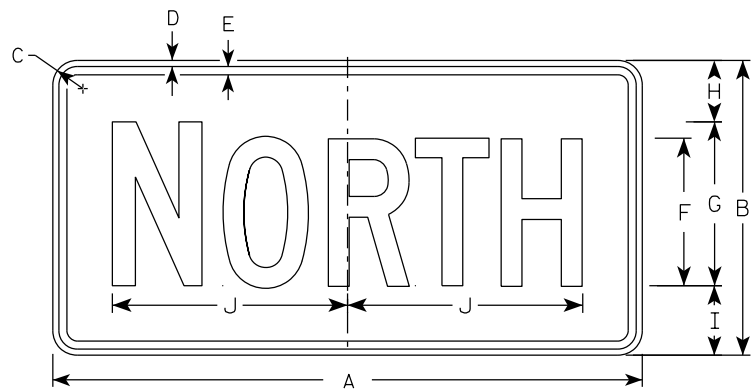
PROJECT NO:

HWY:

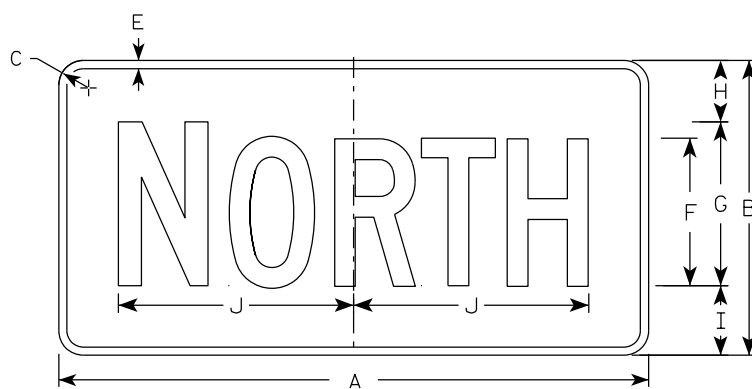
COUNTY:

SHEET NO: 154

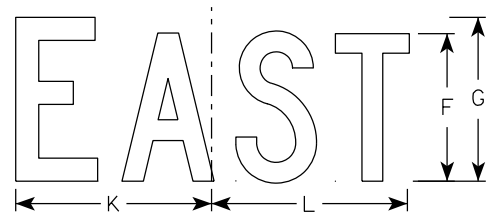
E



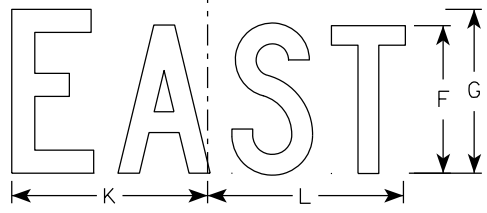
M3-1
MM3-1
MP3-1



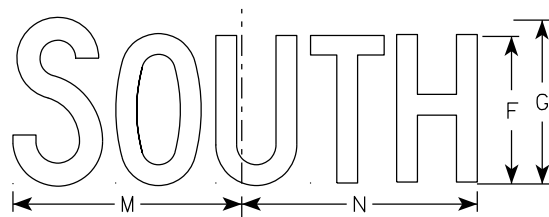
MB3-1
MK3-1
MN3-1



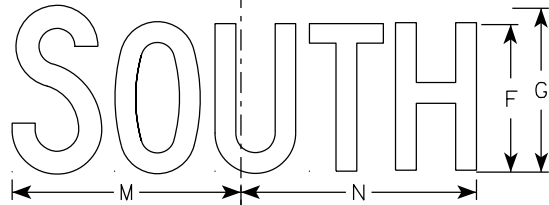
M3-2
MM3-2
MP3-2



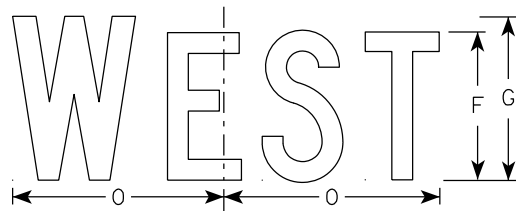
MB3-2
MK3-2
MN3-2



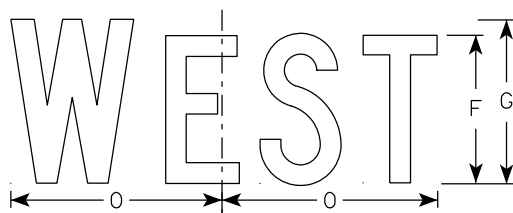
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- 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.
- 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
- Note the first letter of each direction is larger than the remainder of the message.

7

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	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

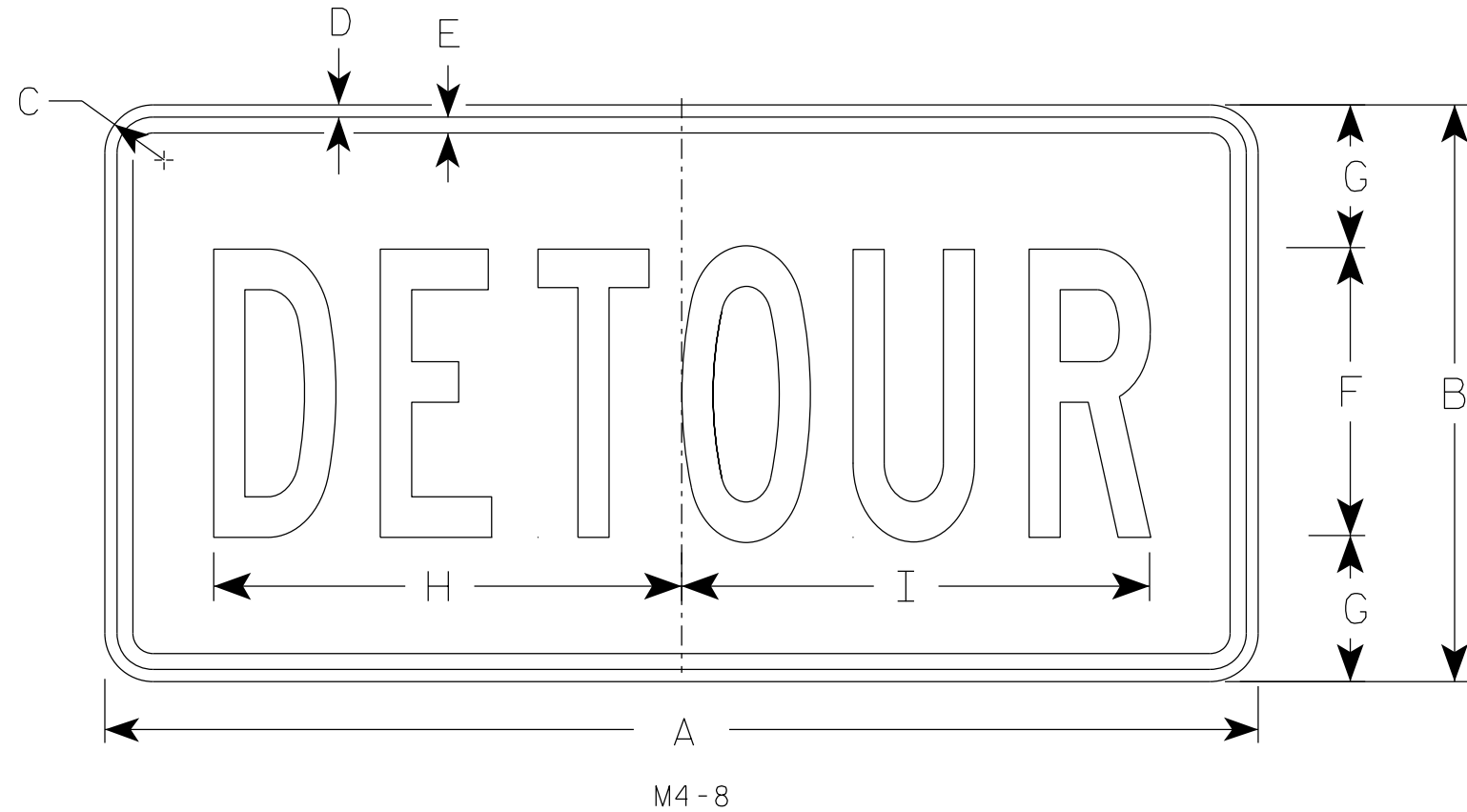
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 155	E
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7

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

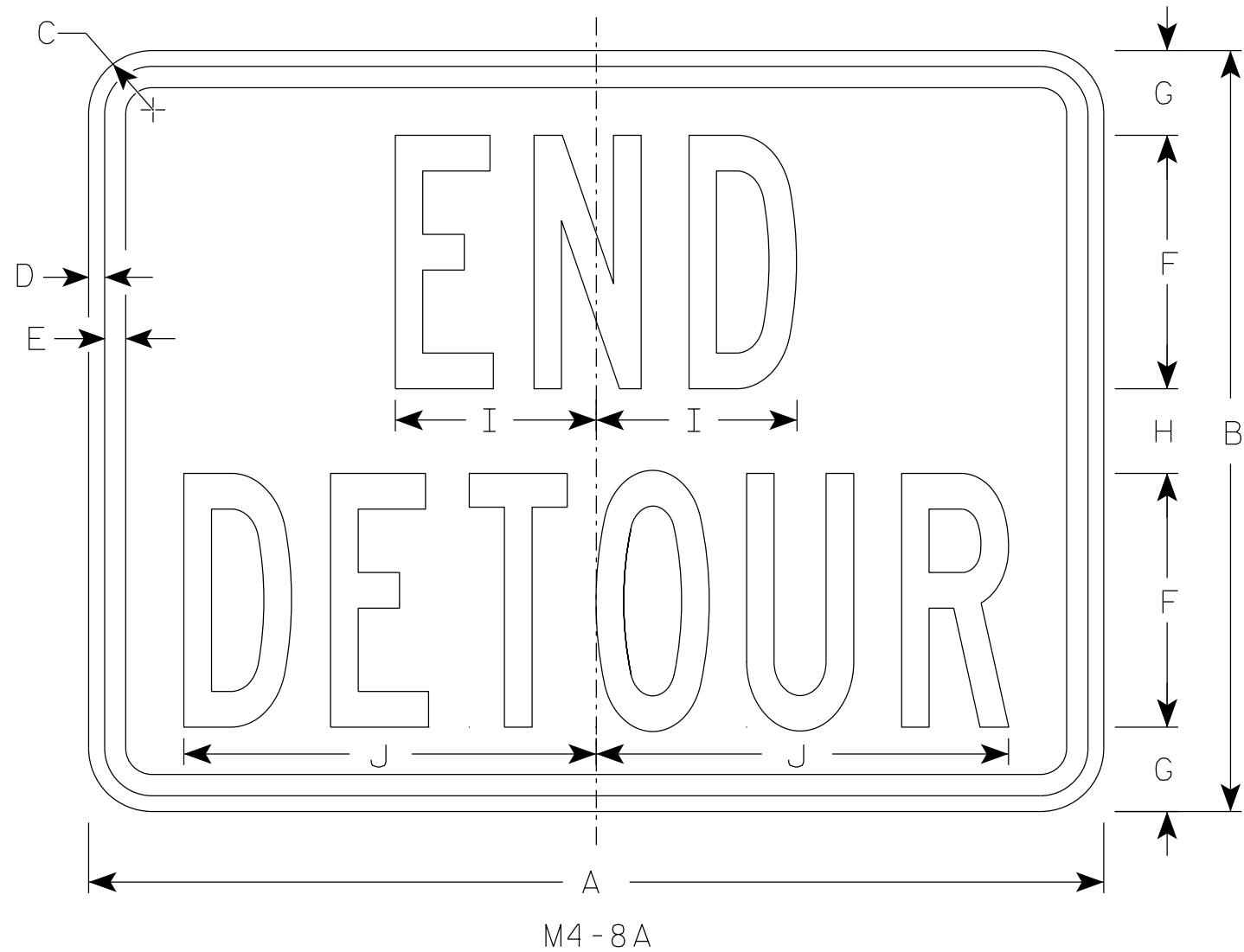
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



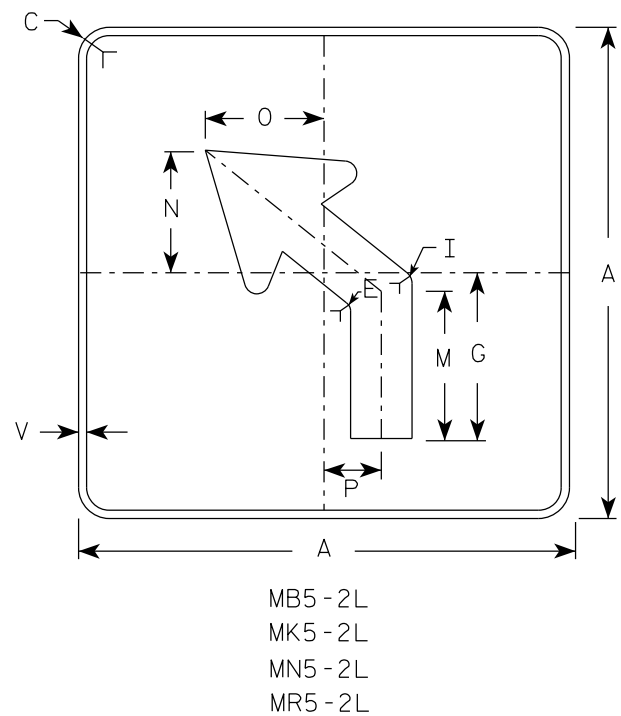
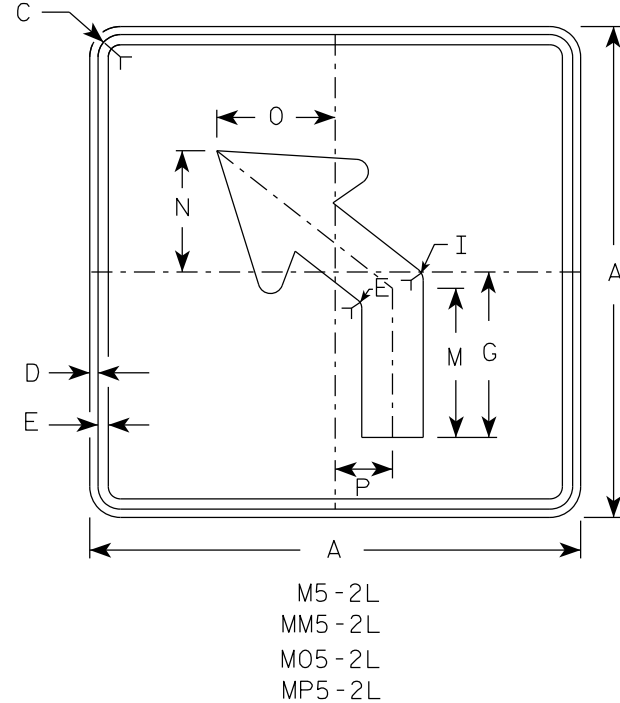
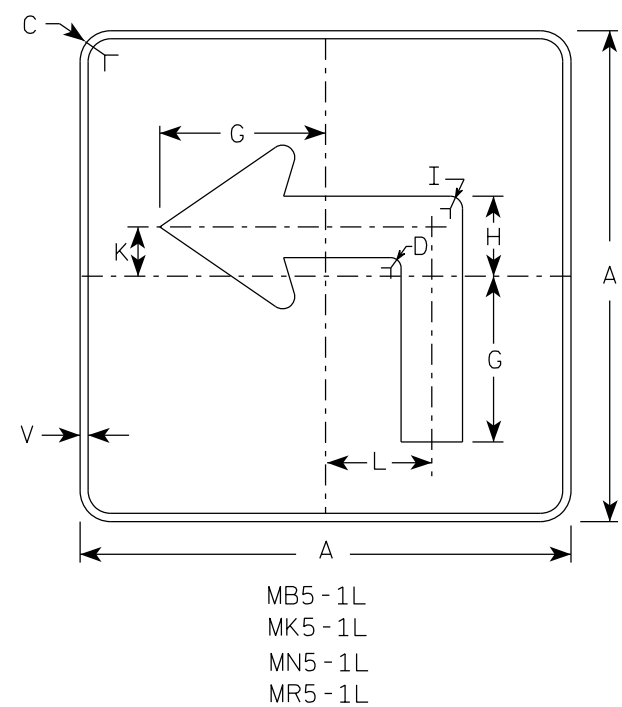
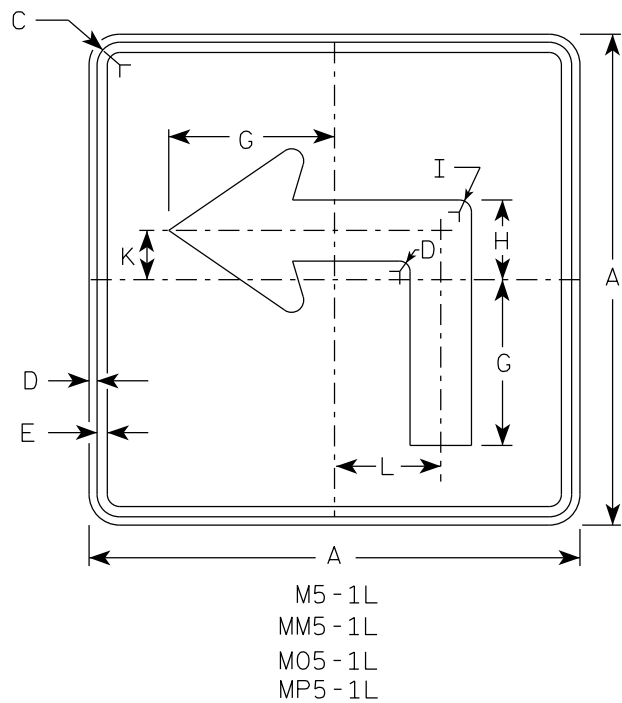
NOTES

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

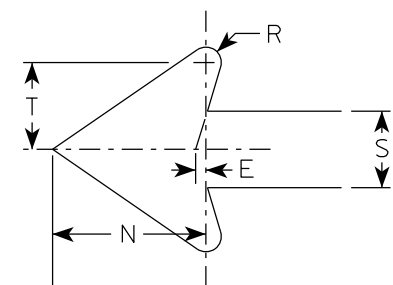
STANDARD SIGN	
M4-8A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/9/2023	PLATE NO. M4-8A.4



NOTES

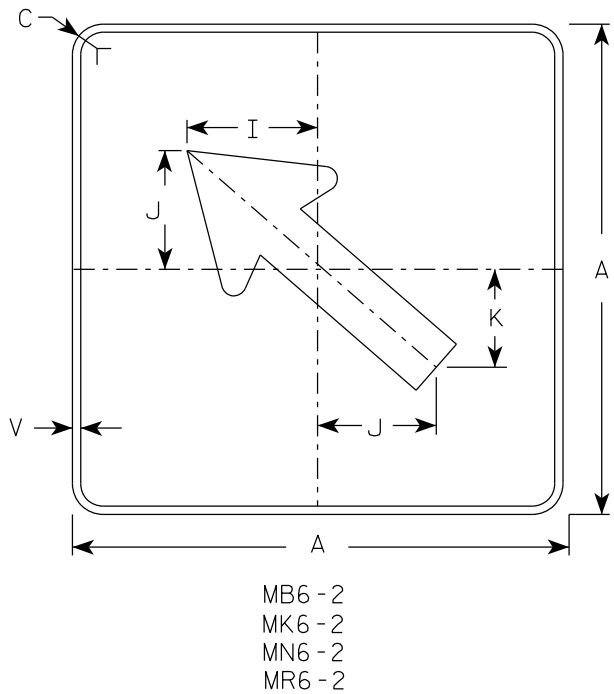
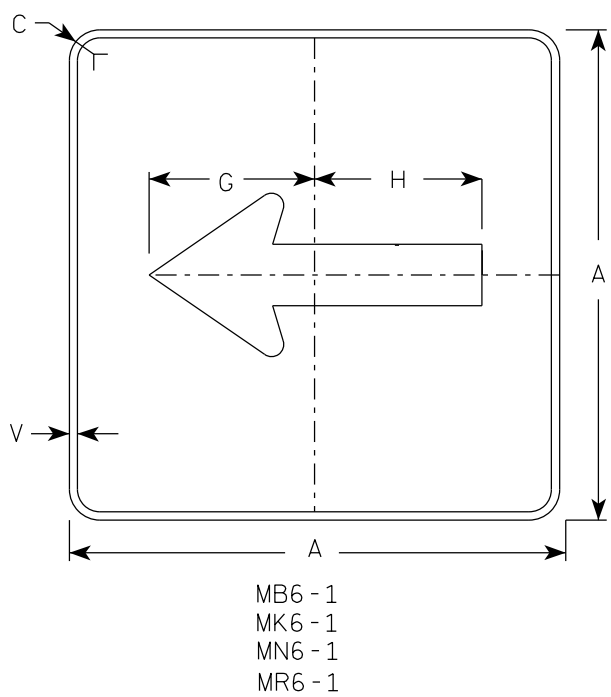
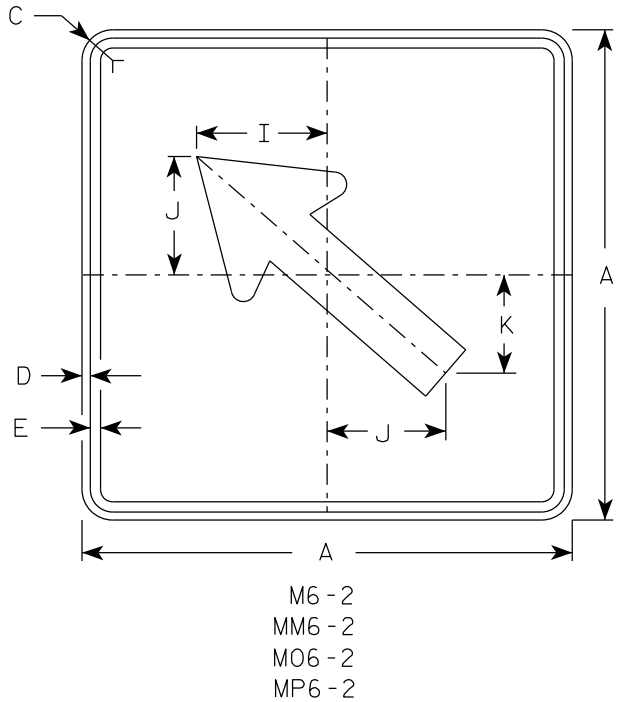
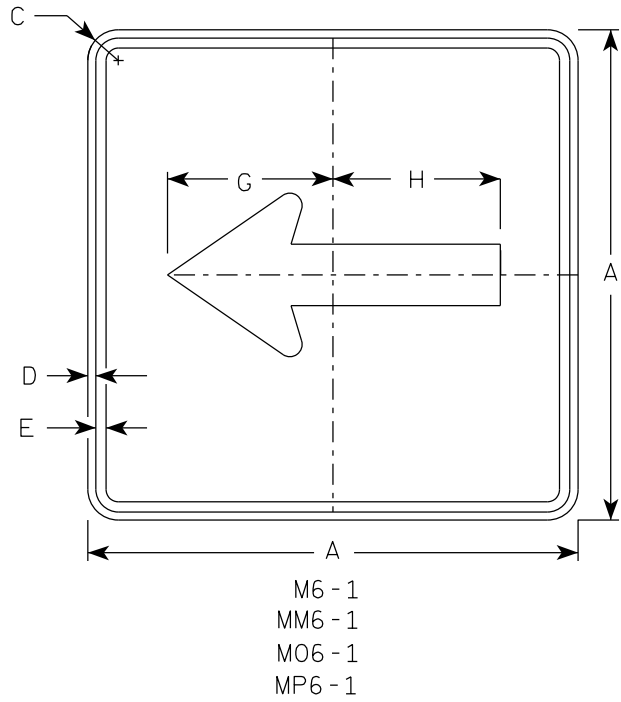
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|
| 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

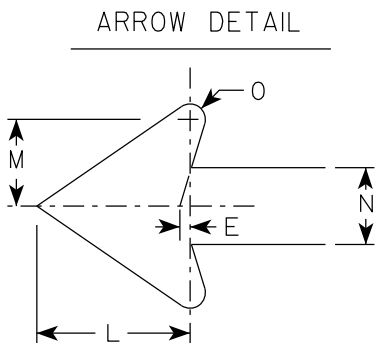


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	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: 158		E
-------------	--	------	--	---------	--	---------------	--	---



- 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

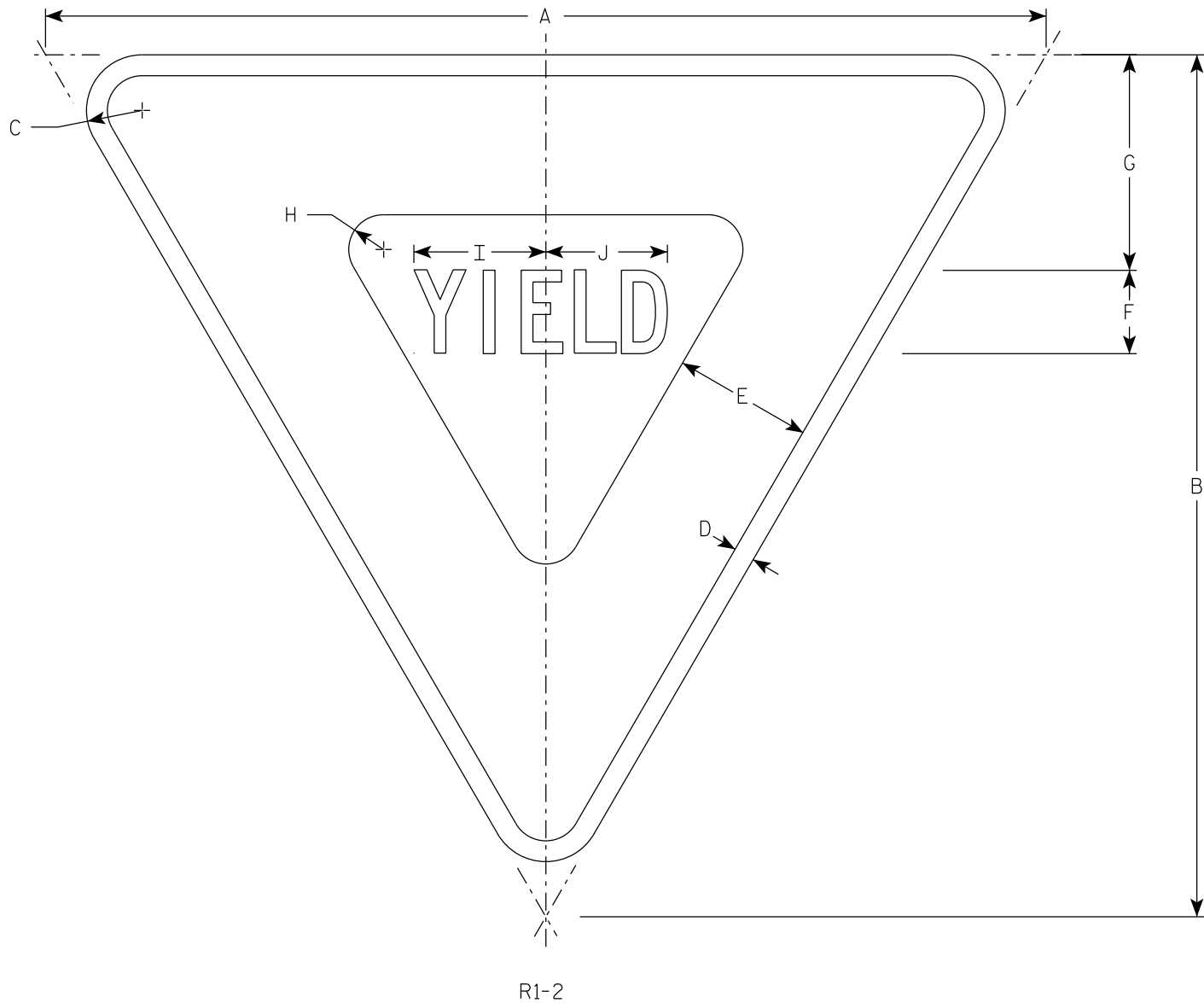
STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - See note 4
- 3. Message Series - C
- 4. The border strip and word message are reflectorized red.

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	30	26	2	5⁄8	4	2 1⁄2	6 3⁄8	7⁄8	4	3 5⁄8																	2.71
2S	36	31	2	3⁄4	5	3	7 3⁄4	1 1⁄4	4 3⁄4	4 3⁄8																	3.88
2M	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
3	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
4	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
5	60	52	3	1 1⁄2	8	5	13	2 1⁄2	7 7⁄8	7 1⁄4																	10.83
6																											
7	18	15 1⁄2	1	3⁄8	2 1⁄2	1 1⁄2	3 7⁄8	5⁄8	2 3⁄8	2 1⁄4																	0.97

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 160

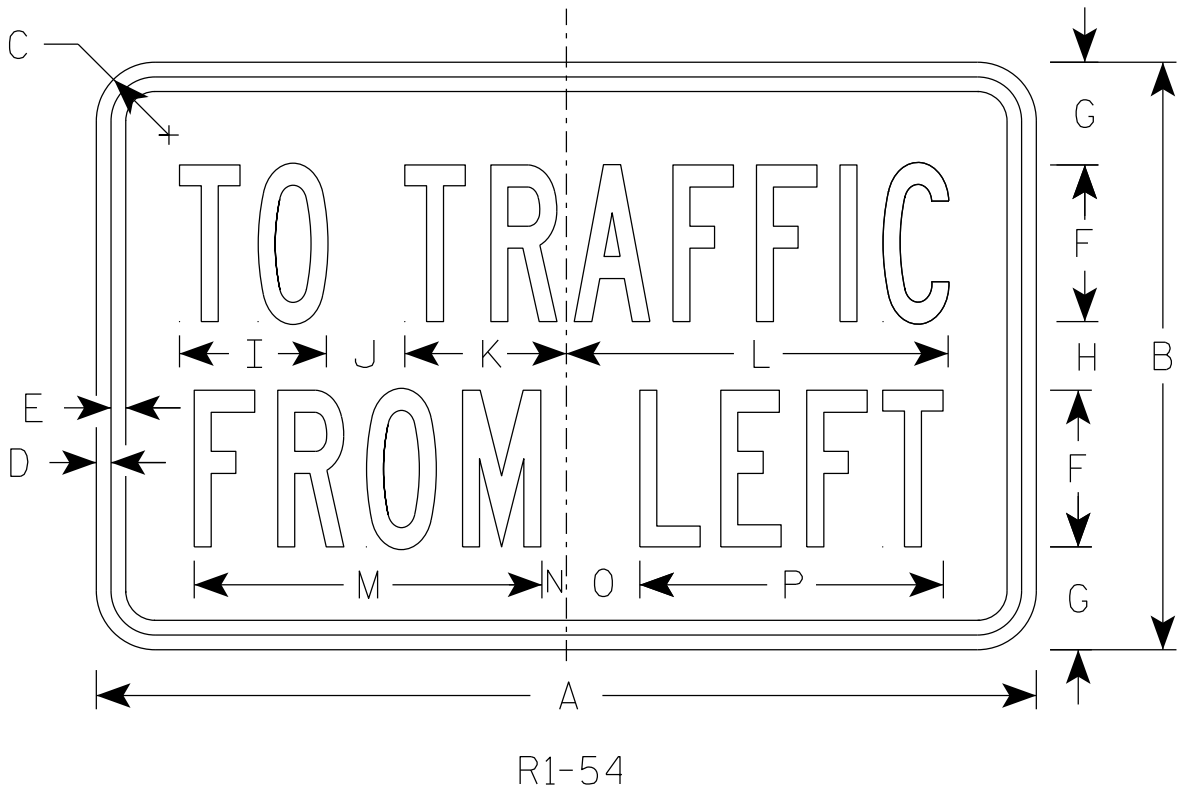
E

7

7

NOTES

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



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	Areq sq. ft.
1																											
2S	24	15	1 1/2	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/2	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

PROJECT NO:

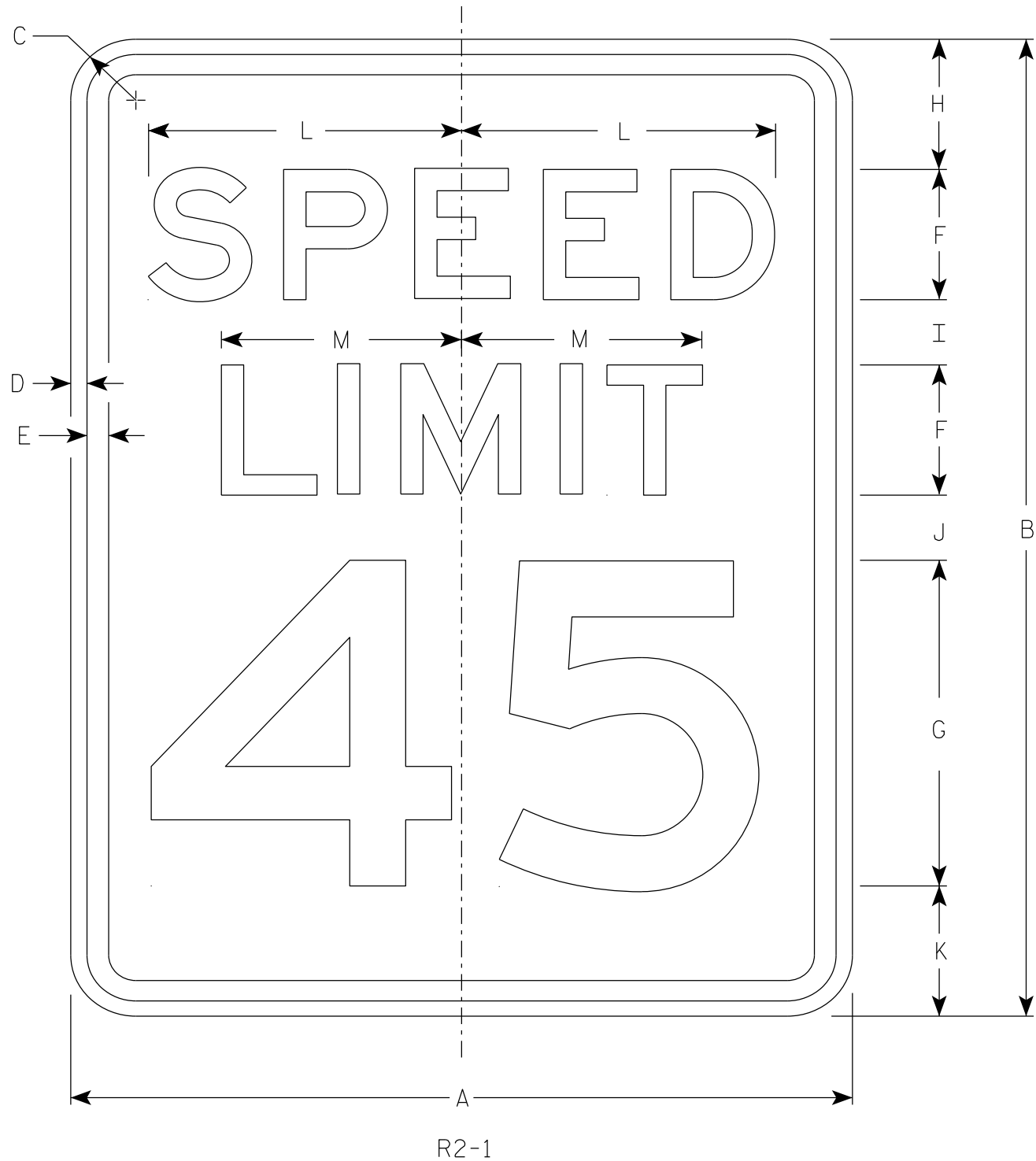
HWY:

COUNTY:

SHEET NO: 161

E

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

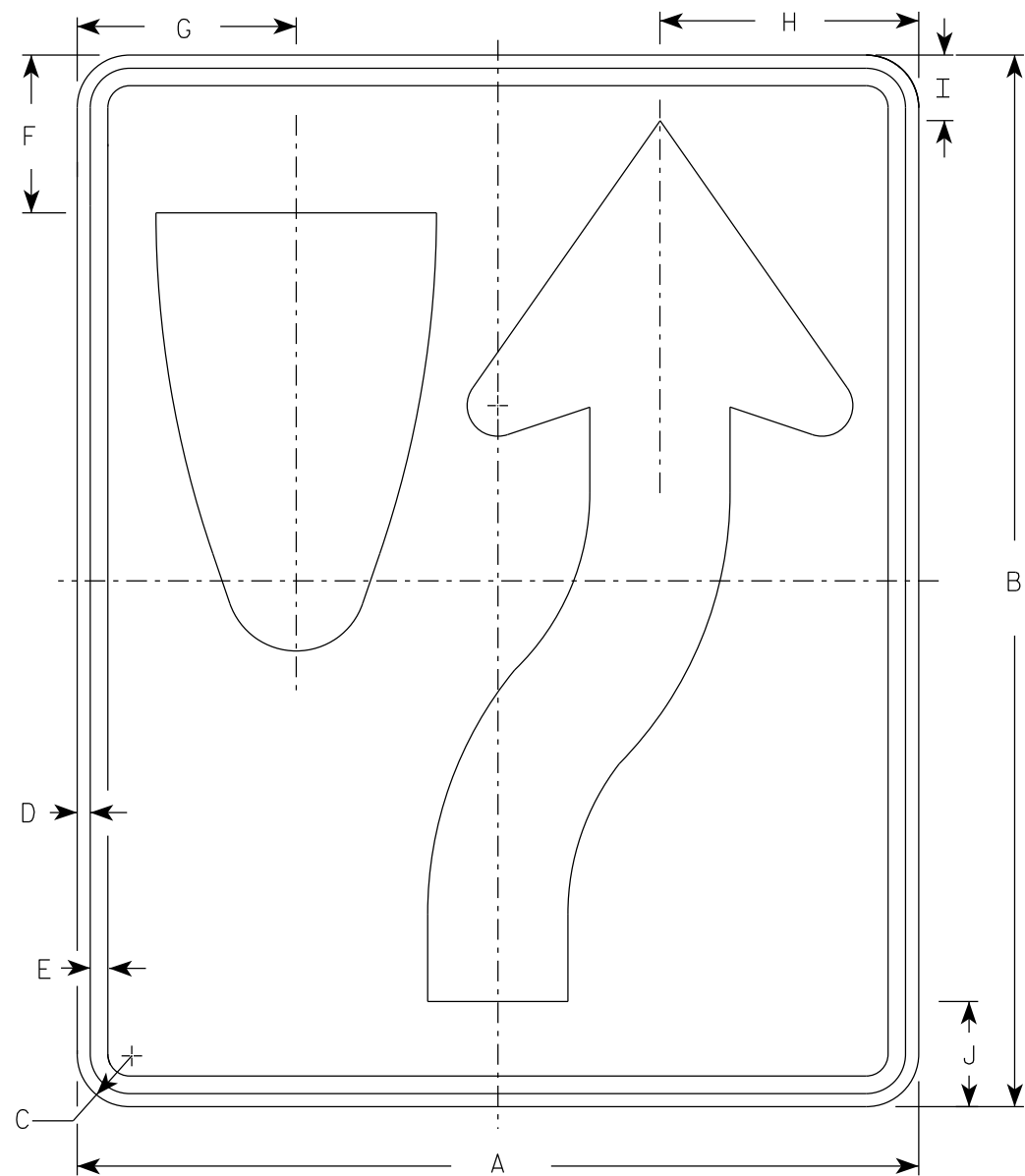
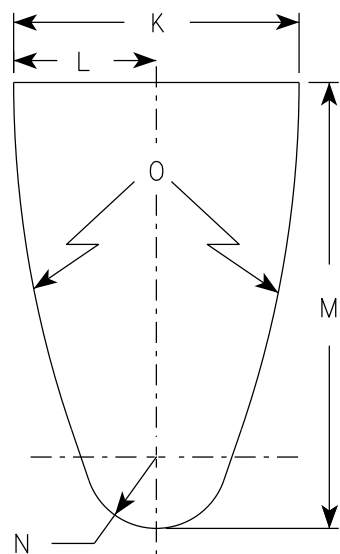
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

DIVIDER DETAIL

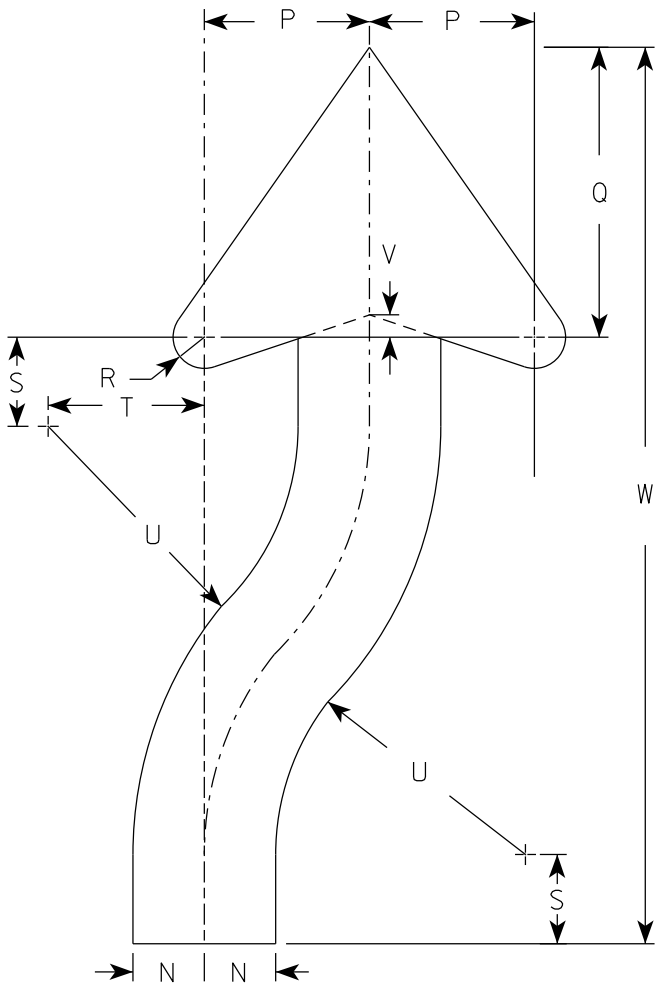


R4-7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. R4-8 is the same as R4-7 except Legend is reversed.

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/2	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/2	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 7/8	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 7/8	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	3	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

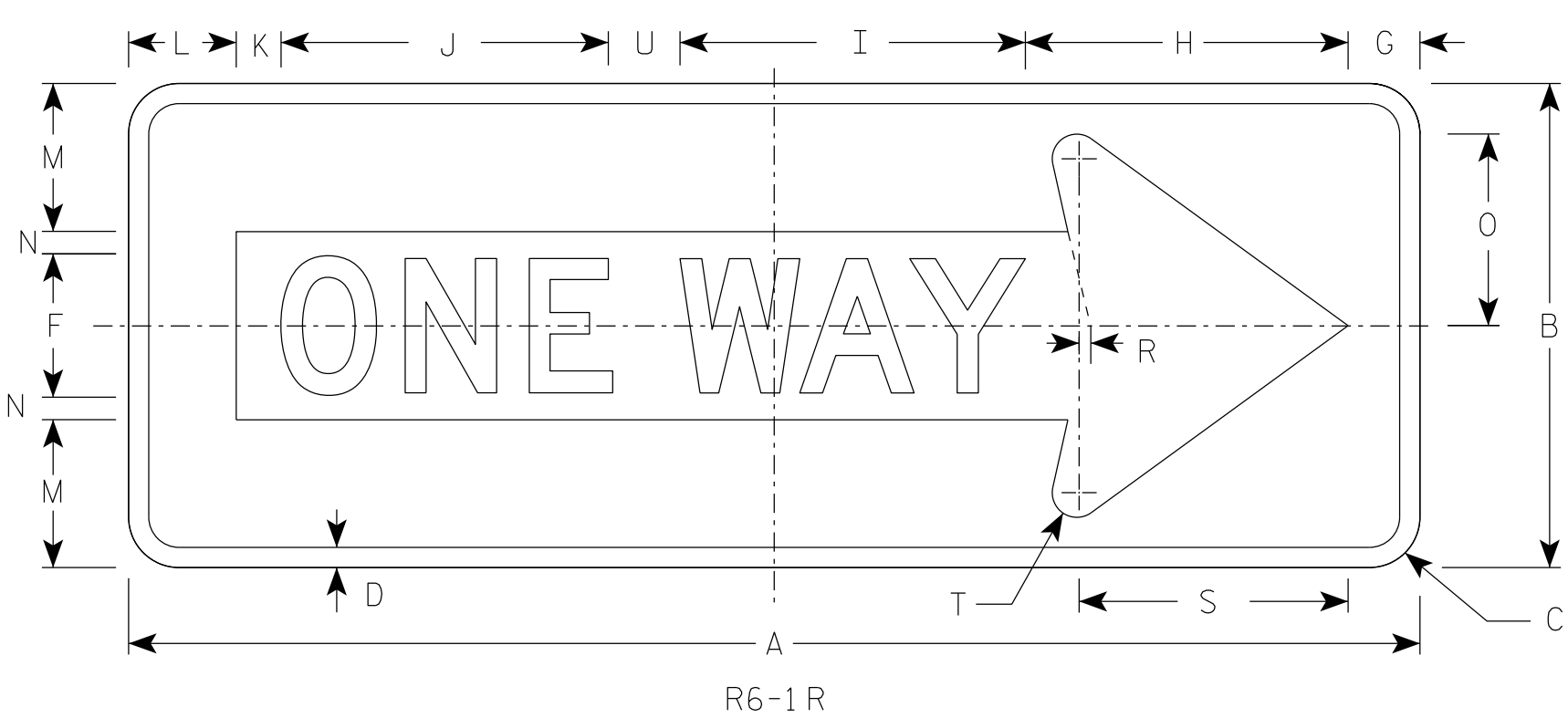
PROJECT NO:

HWY:

COUNTY:

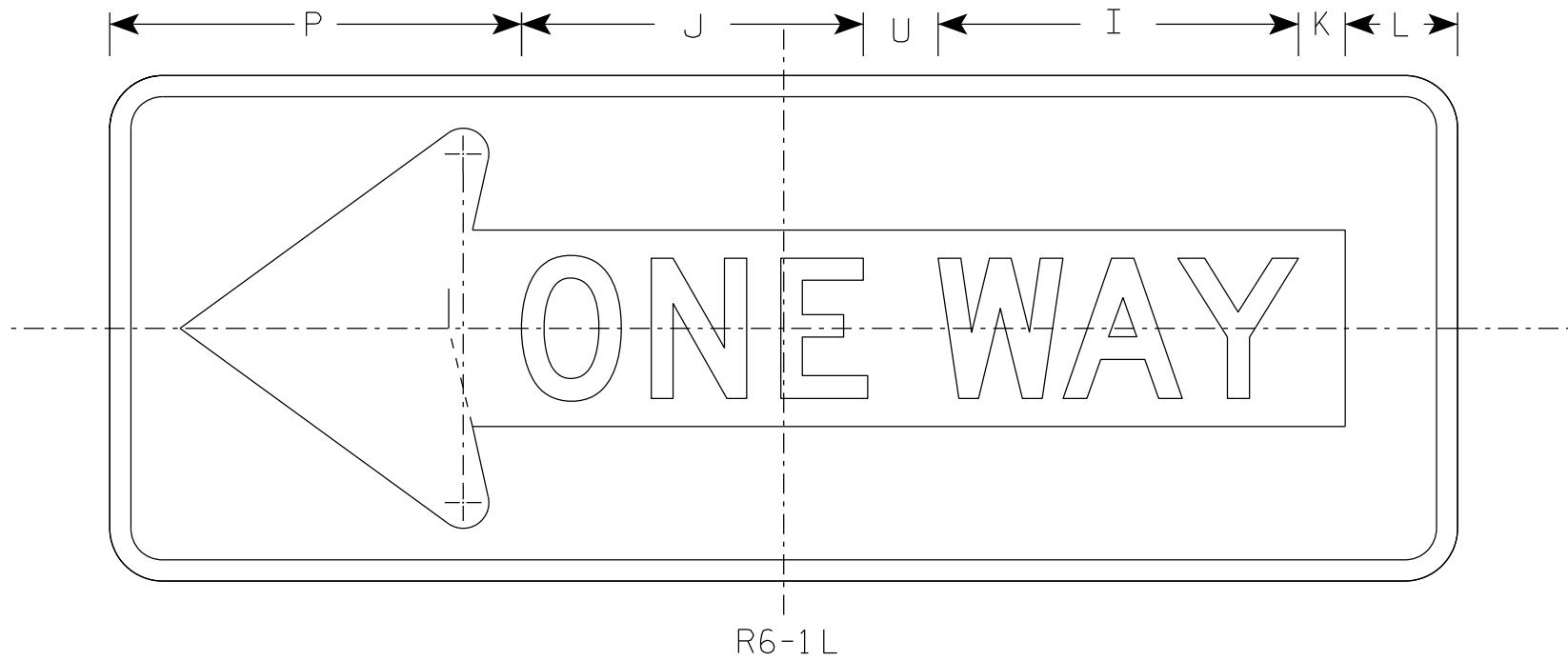
SHEET NO: 163

E



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - Black
Message - Black Legend & White Arrow & Border
- 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	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2	3/4	2						3.0
2M	48	18	1 7/8	3/4		5	2 1/2	11	13	12 1/4	2 3/4	3 1/2	5 1/2	1	7 1/8	13 1/2		1/2	10 1/8	7/8	3						6.0
3	48	18	1 7/8	3/4		5	2 1/2	11	13	12 1/4	2 3/4	3 1/2	5 1/2	1	7 1/8	13 1/2		1/2	10 1/8	7/8	3						6.0
4	48	18	1 7/8	3/4		5	2 1/2	11	13	12 1/4	2 3/4	3 1/2	5 1/2	1	7 1/8	13 1/2		1/2	10 1/8	7/8	3						6.0
5																											

STANDARD SIGN
R6-1 L&R

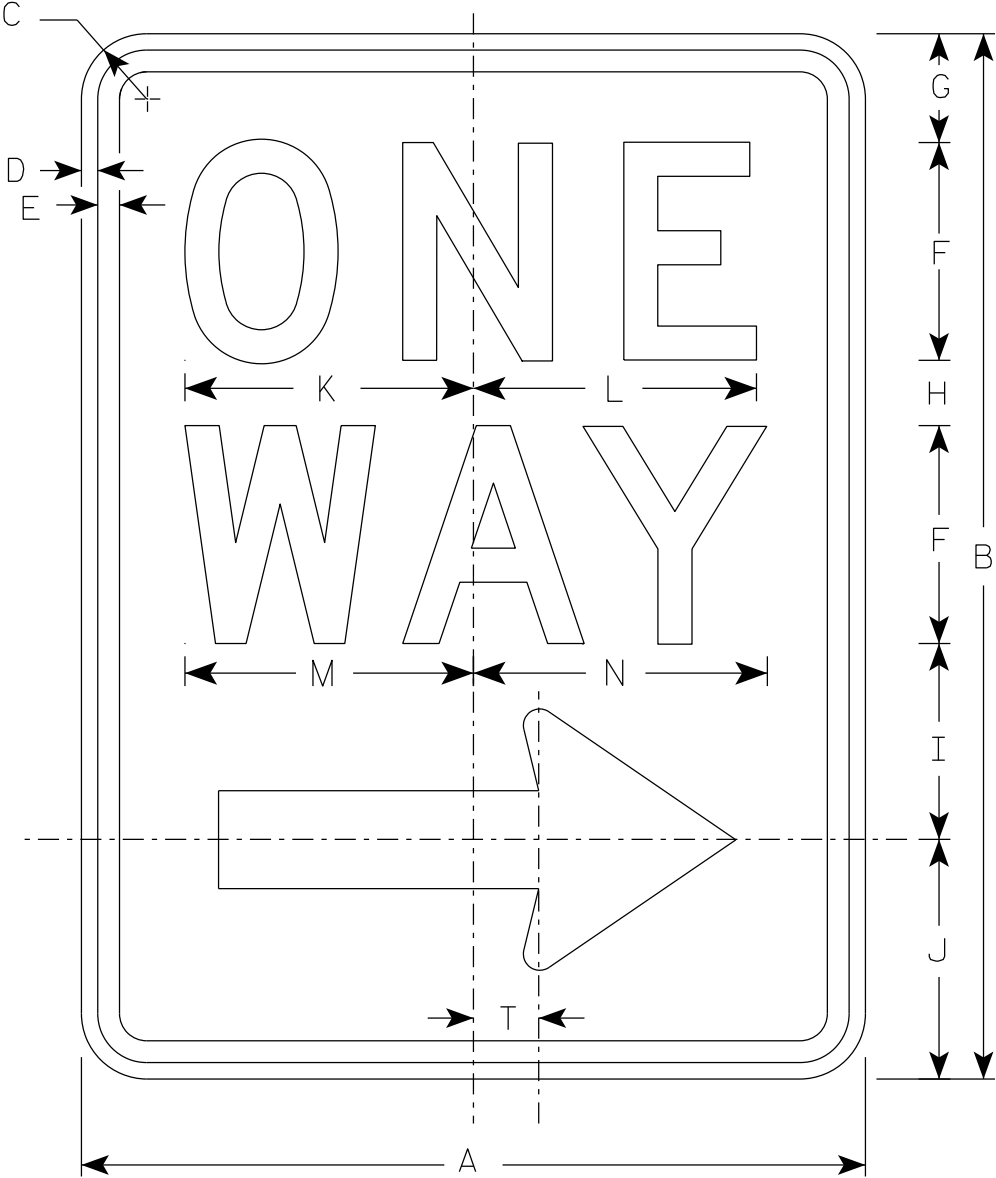
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/7/2025 PLATE NO. R6-1.5

SHEET NO: 164

7

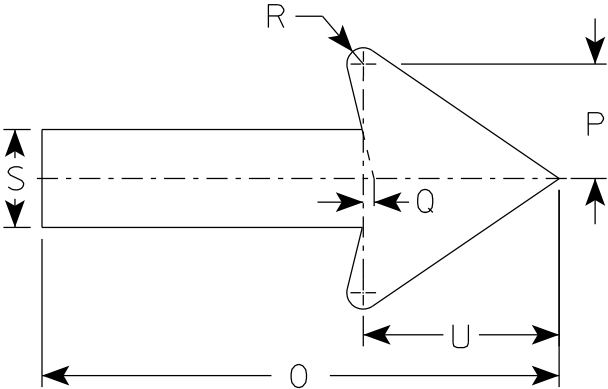


R6 - 2R

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - D
- 4. R6-2L same as R6-2R except arrow points to the left.

Arrow Detail



7

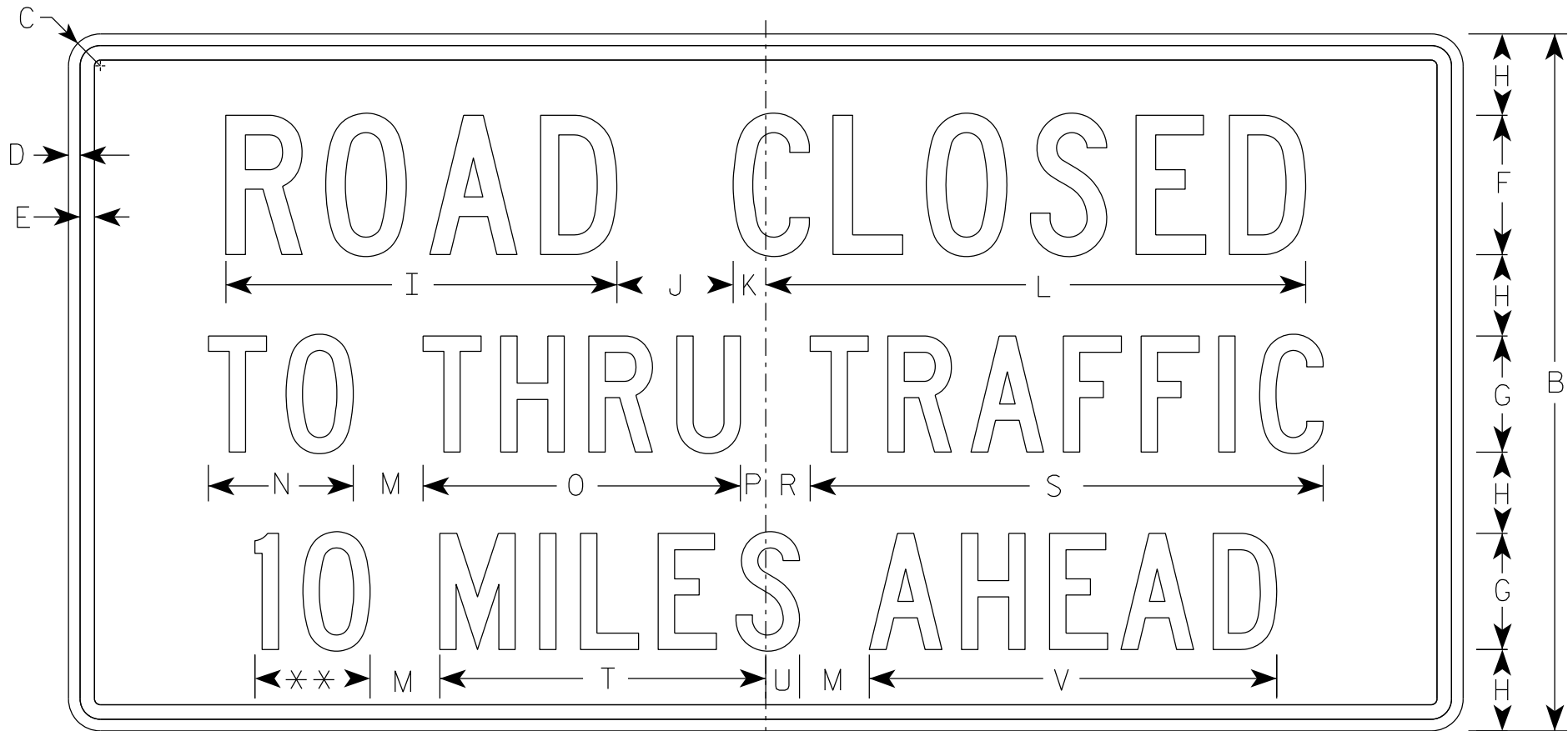
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/2	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	36	1 1/2	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 7/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

NOTES

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

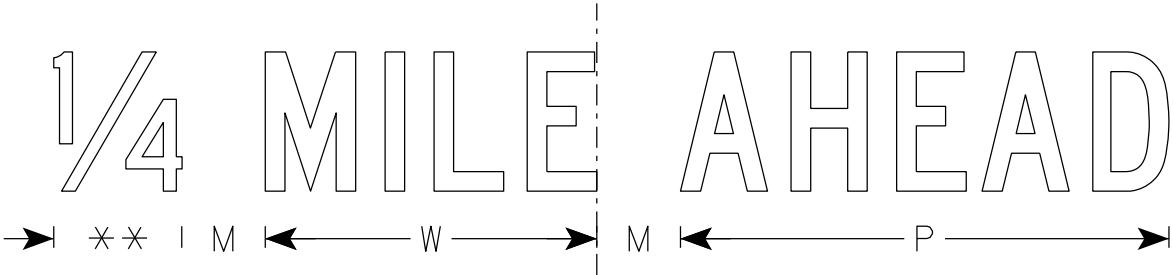
Background - White

Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



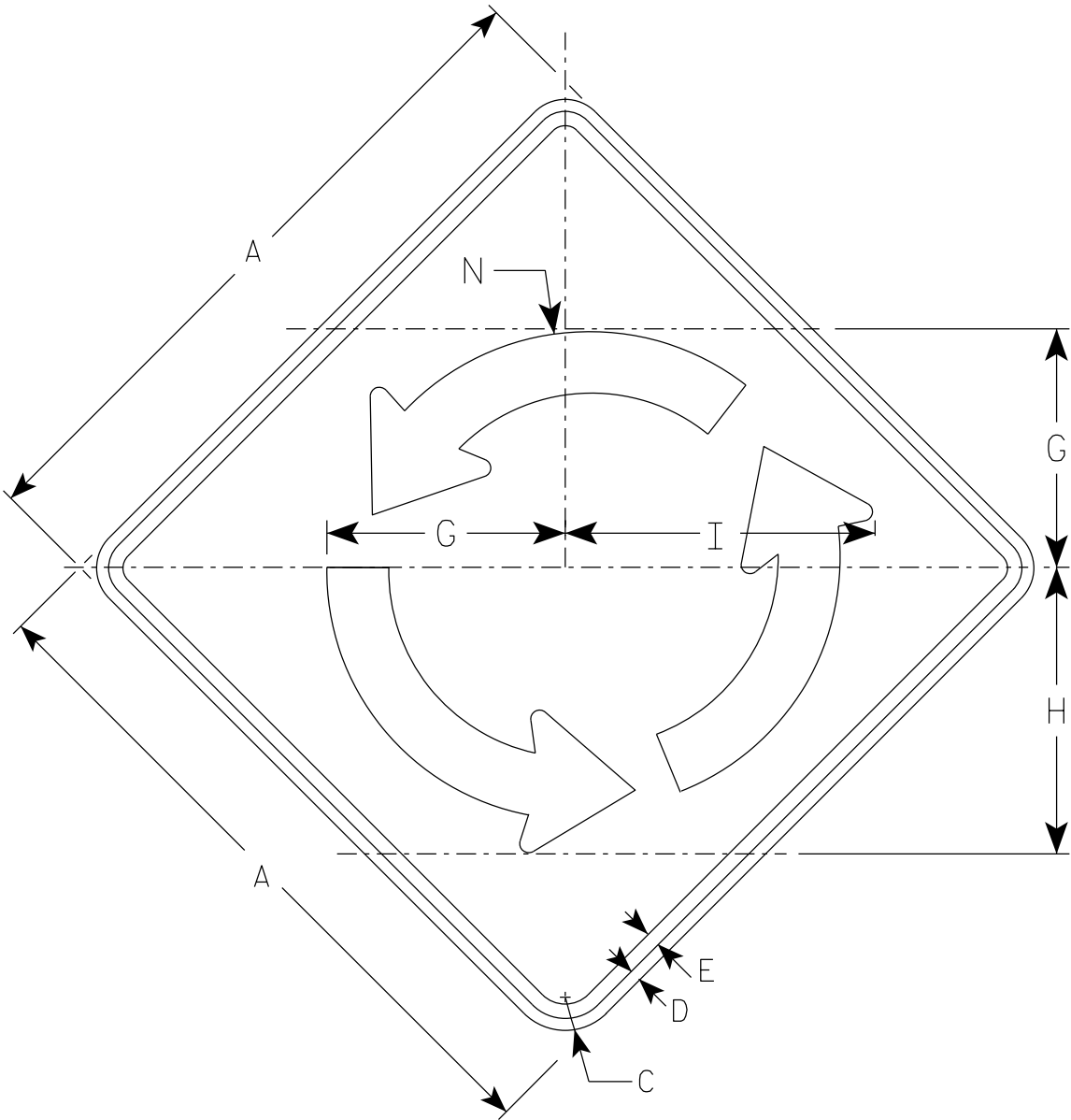
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3.10

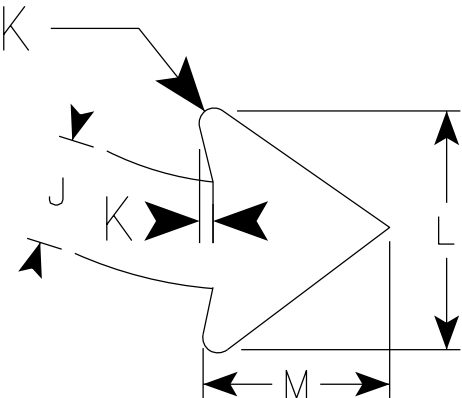


W2-6

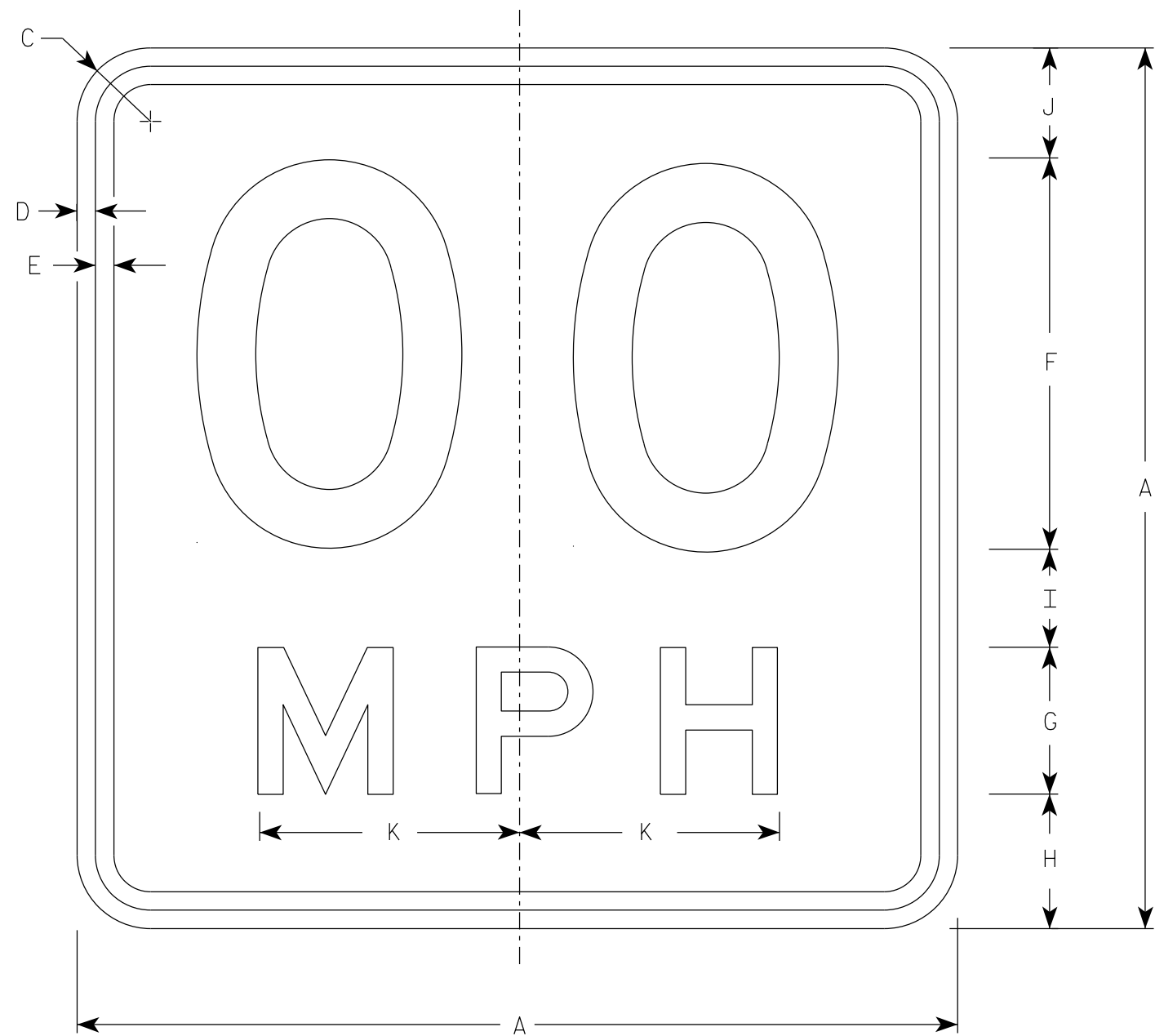
NOTES

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

Arrow Detail



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Area sq. ft.
1																									
2S	30		1 7/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
2M	30		1 7/8	1/2	5/8		10 3/8	12 1/2	13 1/2	2 3/4	3/8	6	4 3/4	11 1/8											6.25
3	36		2 1/4	5/8	3/4		12 1/2	15	16 1/4	3 1/4	1/2	7 3/8	5 3/4	13 3/8											9.00
4	48		3	3/4	1		16 5/8	20	16 1/4	4 3/8	5/8	9 3/4	7 5/8	17 7/8											16.0
5																									



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 5
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
5. Line 1 is Series D
Line 2 is Series E

W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 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.
✱ 2S	1	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	2	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
✱ 2M	3	18		1 1/2	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8															2.25
	4	24		1 1/2	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8															4.00
	5	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00
	6	36		2 1/4	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8															9.00

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W13-1.17

PROJECT NO:

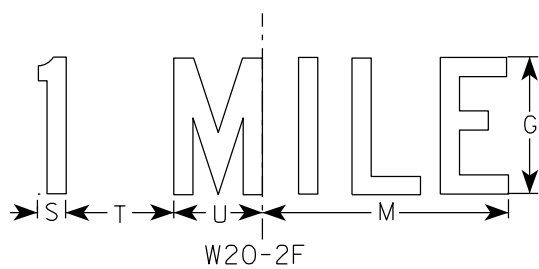
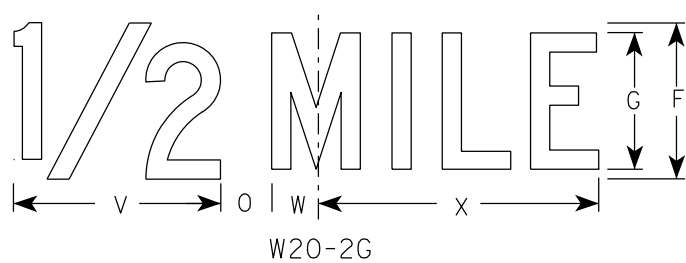
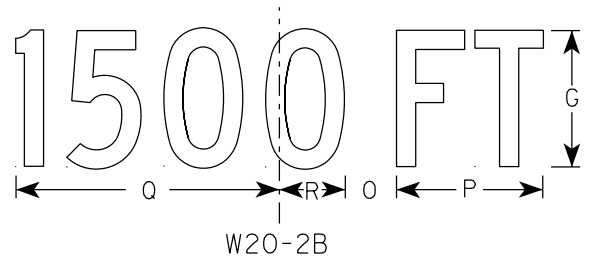
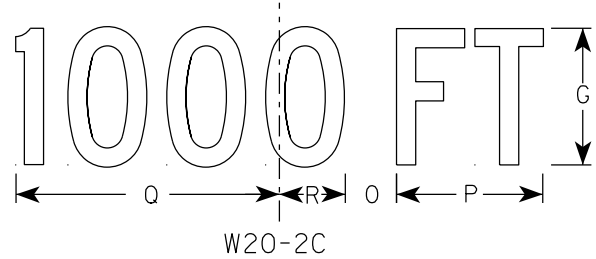
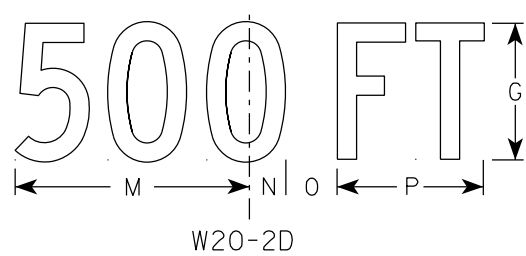
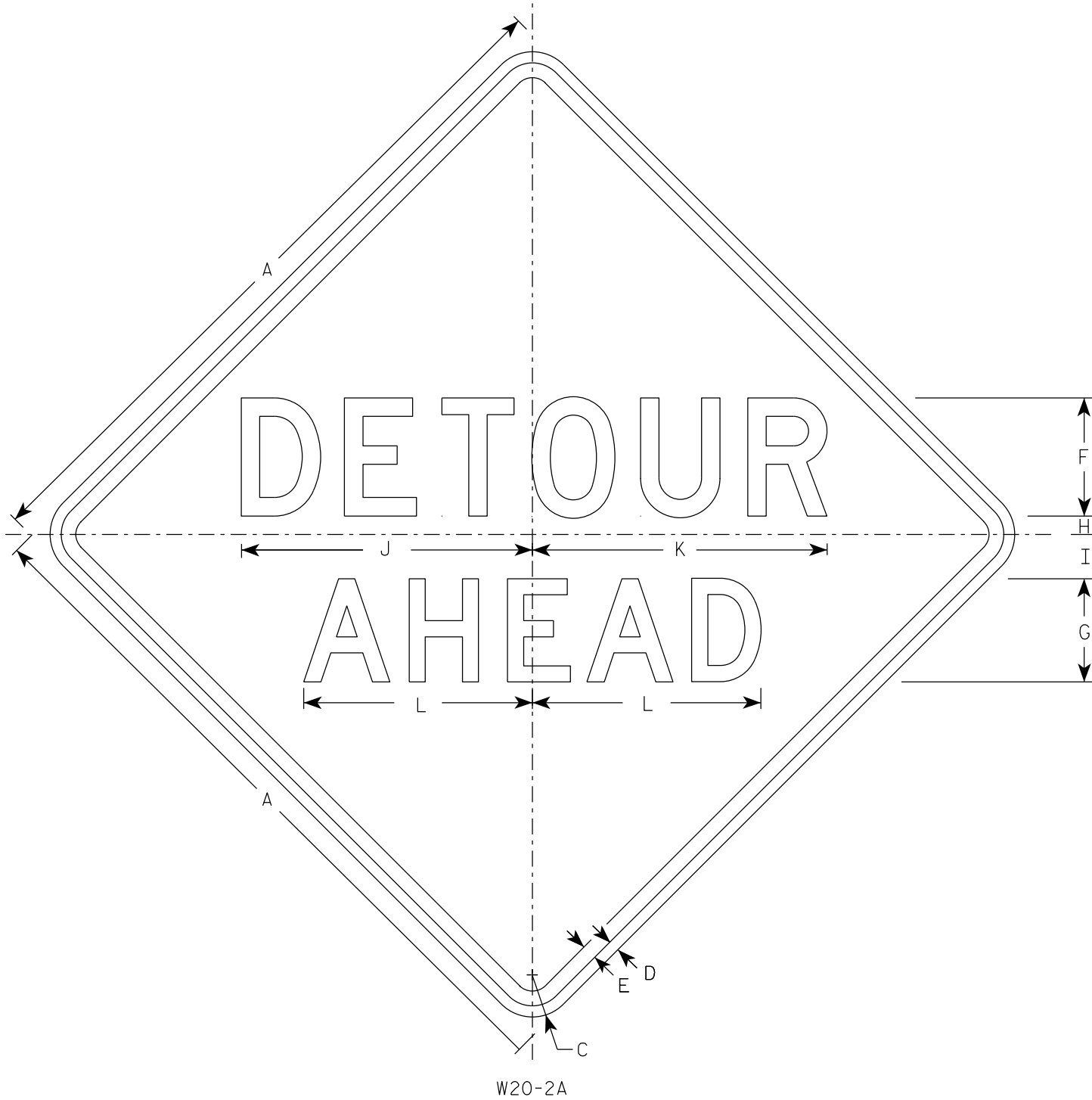
HWY:

COUNTY:

SHEET NO:

168

E



NOTES

- Sign is Type II - Type F Reflective
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- 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.
- 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	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 1/10/2024	PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 169	E
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DIVISION - CTY-EE-EB												
STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	MASS ORDINATE
	NOTE 1	NOTE 2	NOTE 3		NOTE 1	NOTE 2	NOTE 3		NOTE 1	1.33	NOTE 4	NOTE 8
15+00.00	82	15	0	0	0	0	0	0	0	0	0	0
15+25.00	89	15	5	0	79	14	2	0	79	3	0	62
15+50.00	91	15	7	0	83	14	6	0	162	11	0	123
15+75.00	93	15	8	0	85	14	7	0	247	20	0	185
16+00.00	93	15	9	0	86	14	8	0	333	31	0	246
16+25.00	92	15	10	0	86	14	9	0	419	43	0	306
16+50.00	91	15	12	14	85	14	10	6	504	56	9	364
16+75.00	97	15	12	11	87	14	11	12	591	70	27	423
17+00.00	98	15	13	16	90	14	12	13	681	86	47	483
17+25.00	114	15	10	25	98	14	11	19	779	101	75	552
17+50.00	131	15	7	32	113	14	8	26	892	112	114	640
17+75.00	146	15	5	34	128	14	5	31	1020	118	161	748
18+00.00	136	16	3	21	131	14	4	25	1151	124	198	859
18+25.00	113	16	2	11	115	15	2	15	1266	126	221	957
18+50.00	130	17	1	16	112	15	1	13	1378	128	240	1052
18+75.00	156	17	0	0	133	16	1	7	1511	129	251	1168
19+00.00	176	18	0	0	154	16	0	0	1665	129	251	1306
19+25.00	160	18	0	0	156	16	0	0	1821	129	251	1446
19+50.00	133	19	0	0	136	17	0	0	1957	129	251	1565
19+75.00	59	0	0	0	89	9	0	0	2046	129	251	1645
20+00.00	63	0	0	0	57	0	0	0	2103	129	251	1702
21+80.00	13	0	321	143	0	0	0	0	2103	129	251	1702
22+00.00	8	0	312	157	8	0	234	111	2111	440	417	1399
22+25.00	0	0	240	157	4	0	255	145	2115	779	635	1064
22+50.00	0	0	108	17	0	0	161	81	2115	994	756	849
22+75.00	0	0	72	31	0	0	83	22	2115	1104	789	739
23+00.00	1	0	39	41	0	0	51	33	2115	1172	839	671
23+25.00	4	0	29	55	2	0	31	44	2117	1213	905	632
23+50.00	15	0	23	72	9	0	24	59	2126	1245	993	609
23+75.00	24	0	16	55	18	0	18	59	2144	1269	1082	603
24+00.00	81	15	38	46	49	7	25	47	2193	1302	1152	612
24+25.00	79	15	32	42	74	14	32	41	2267	1345	1214	629
24+50.00	76	15	27	40	72	14	27	38	2339	1381	1271	651
24+75.00	77	15	20	39	71	14	22	37	2410	1410	1326	679
25+00.00	81	15	15	25	73	14	16	30	2483	1431	1371	717
25+25.00	84	15	10	16	76	14	11	19	2559	1446	1400	764
25+50.00	84	15	5	6	78	14	7	10	2637	1455	1415	819
25+75.00	85	15	2	0	78	14	3	3	2715	1459	1419	879
26+00.00	115	15	0	0	93	14	1	0	2808	1460	1419	957
26+25.00	101	15	0	0	100	14	0	0	2908	1460	1419	1043
26+50.00	81	15	0	0	84	14	0	0	2992	1460	1419	1113
26+64.99	80	15	0	0	45	8	0	0	3037	1460	1419	1150

3,037 427 1,098 946

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
8 - MASS ORDINATE	CUT - SALVAGED PAVT - (FILL * FILL FACTOR)

DIVISION - CTY-EE-WB												
STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3		1.00	1.33	1.50	NOTE 8
									NOTE 1		NOTE 4	
19+75.00	49	19	0	0	0	0	0	0	0	0	0	0
20+00.00	40	18	2	0	41	17	1	0	41	1	0	23
21+75.00	0	20	93	47	0	0	0	0	41	1	0	23
22+00.00	0	18	104	61	0	18	91	50	41	122	75	-116
22+25.00	0	18	90	53	0	17	90	53	41	242	155	-253
22+50.00	42	18	95	40	19	17	85	43	60	355	219	-364
22+75.00	54	17	63	17	44	16	73	26	104	452	258	-433
23+00.00	58	17	48	0	52	16	52	8	156	521	270	-466
23+25.00	58	16	43	0	54	15	42	0	210	577	270	-483
23+50.00	56	16	36	0	53	15	36	0	263	625	270	-493
23+75.00	53	14	28	0	51	13	30	0	314	665	270	-495

314144500180

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
8 - MASS ORDINATE	CUT - SALVAGED PAVT - (FILL * FILL FACTOR)

DIVISION - CTY-EB-NB												
STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	MASS ORDNATE
					NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.33	1.50 NOTE 4	NOTE 8
100+00.00	83	15	0	0	0	0	0	0	0	0	0	0
100+25.00	86	15	0	0	78	14	0	0	78	0	0	64
100+50.00	88	15	0	0	81	14	0	0	159	0	0	131
100+75.00	87	15	0	0	81	14	0	0	240	0	0	198
101+00.00	87	15	1	0	81	14	0	0	321	0	0	265
101+25.00	89	15	1	0	82	14	1	0	403	1	0	332
101+50.00	89	15	1	0	82	14	1	0	485	3	0	398
101+75.00	90	15	2	0	83	14	2	0	568	5	0	465
102+00.00	96	15	3	0	86	14	3	0	654	9	0	533
102+25.00	103	15	3	0	92	14	3	0	746	13	0	607
102+50.00	112	15	3	0	100	14	3	0	846	17	0	689
102+75.00	132	15	3	0	113	14	3	0	959	21	0	784
103+00.00	177	15	4	0	143	14	3	0	1102	25	0	909
103+25.00	129	15	4	0	141	14	4	0	1243	31	0	1030
103+50.00	132	16	2	0	121	14	3	0	1364	35	0	1133
103+75.00	142	17	1	0	127	15	1	0	1491	36	0	1244
104+00.00	192	16	13	0	155	15	6	0	1646	44	0	1376
104+25.00	192	16	35	12	178	15	22	6	1824	73	9	1510
104+50.00	45	8	80	24	110	11	53	17	1934	144	35	1538
104+75.00	33	8	86	30	36	8	77	25	1970	246	72	1464
105+00.00	24	6	106	42	26	7	89	33	1996	364	122	1365
106+75.00	39	0	61	53	0	0	0	0	1996	364	122	1365
107+00.00	57	0	28	62	44	0	41	53	2040	419	201	1354
107+25.00	75	0	5	28	61	0	15	42	2101	439	264	1395
107+50.00	77	0	0	24	70	0	2	24	2171	442	300	1462
107+75.00	199	15	1	20	128	7	1	20	2299	443	330	1582
108+00.00	201	15	1	11	185	14	1	14	2484	444	351	1752
108+25.00	194	15	1	11	183	14	1	10	2667	446	366	1919
108+50.00	187	15	0	11	177	14	1	10	2844	447	381	2081
108+75.00	181	15	0	12	170	14	0	11	3014	447	398	2237
109+00.00	169	15	1	11	162	14	1	11	3176	448	414	2384
109+50.00	150	15	2	0	295	28	3	10	3471	452	429	2647
109+75.00	138	15	4	0	134	14	3	0	3605	456	429	2763
110+00.00	131	15	7	0	124	14	5	0	3729	463	429	2866
110+25.00	124	15	11	0	118	14	8	0	3847	473	429	2960
110+50.00	118	15	8	0	112	14	9	0	3959	485	429	3046
110+75.00	113	15	9	0	107	14	8	0	4066	496	429	3128
111+00.00	104	15	9	0	101	14	8	0	4167	507	429	3204
111+25.00	91	15	4	0	90	14	6	0	4257	515	429	3272
111+29.90	89	15	0	0	16	3	0	0	4273	515	429	3285

4,273 473 387 286

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
8 - MASS ORDNATE	CUT - SALVAGED PAVT - (FILL * FILL FACTOR)

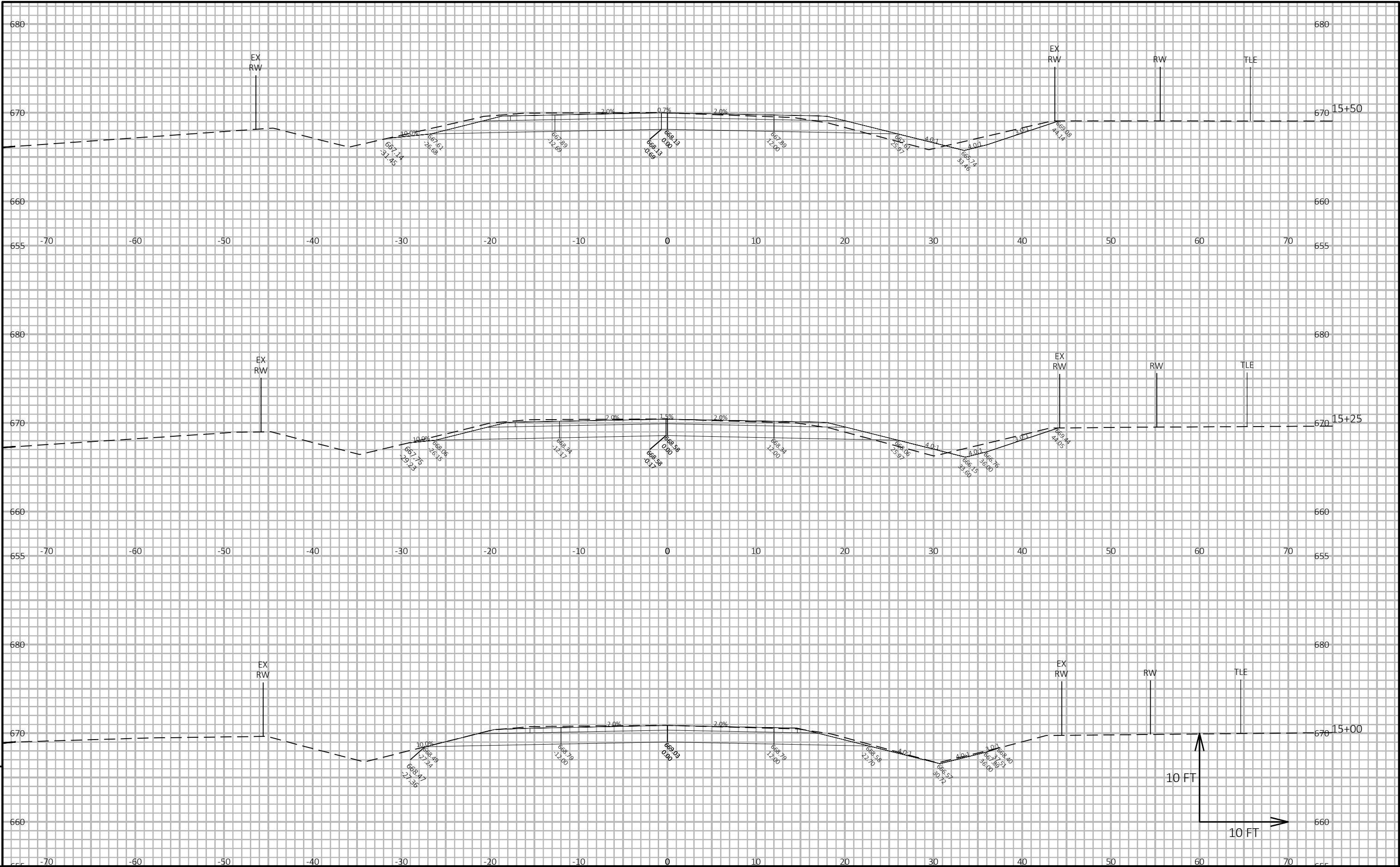
DIVISION - CTY-EB-SB												
STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	MASS ORDNATE
					NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.33	1.50 NOTE 4	NOTE 8
104+50.00	86	8	12	0	0	0	0	0	0	0	0	0
104+75.00	50	6	12	0	63	6	11	0	63	15	0	42
104+95.00	34	4	11	0	31	3	9	0	94	27	0	58
106+75.00	82	15	7	0	0	0	0	0	94	27	0	58
107+00.00	83	16	1	0	77	14	4	0	171	32	0	116
107+25.00	103	15	1	0	86	14	1	0	257	33	0	187
107+50.00	114	14	2	0	100	14	2	0	357	36	0	270

35751270

DIVISION - RDBT-EE-EB-CENTRAL												
STATION	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)			
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	MARSH EXC	CUT	EXPANDED FILL	EXPANDED MARSH BACKFILL	MASS ORDNATE
					NOTE 1	NOTE 2	NOTE 3		1.00 NOTE 1	1.33	1.50 NOTE 4	NOTE 8
0+50.00	22	0	288	110	0	0	0	0	0	0	0	0
0+90.00	12	30	70	0	25	22	265	81	25	352	122	-349
1+25.00	51	10	78	0	41	26	96	0	66	480	122	-462
1+80.00	0	20	84	0	52	30	165	0	118	700	122	-660
2+15.00	47	33	80	0	30	34	106	0	148	841	122	-805
2+63.14	33	35	33	0	71	60	101	0	219	975	122	-928
3+00.00	4	35	101	0	25	48	91	0	244	1096	122	-1072
3+42.00	0	0	177	63	3	27	216	49	247	1383	195	-1383

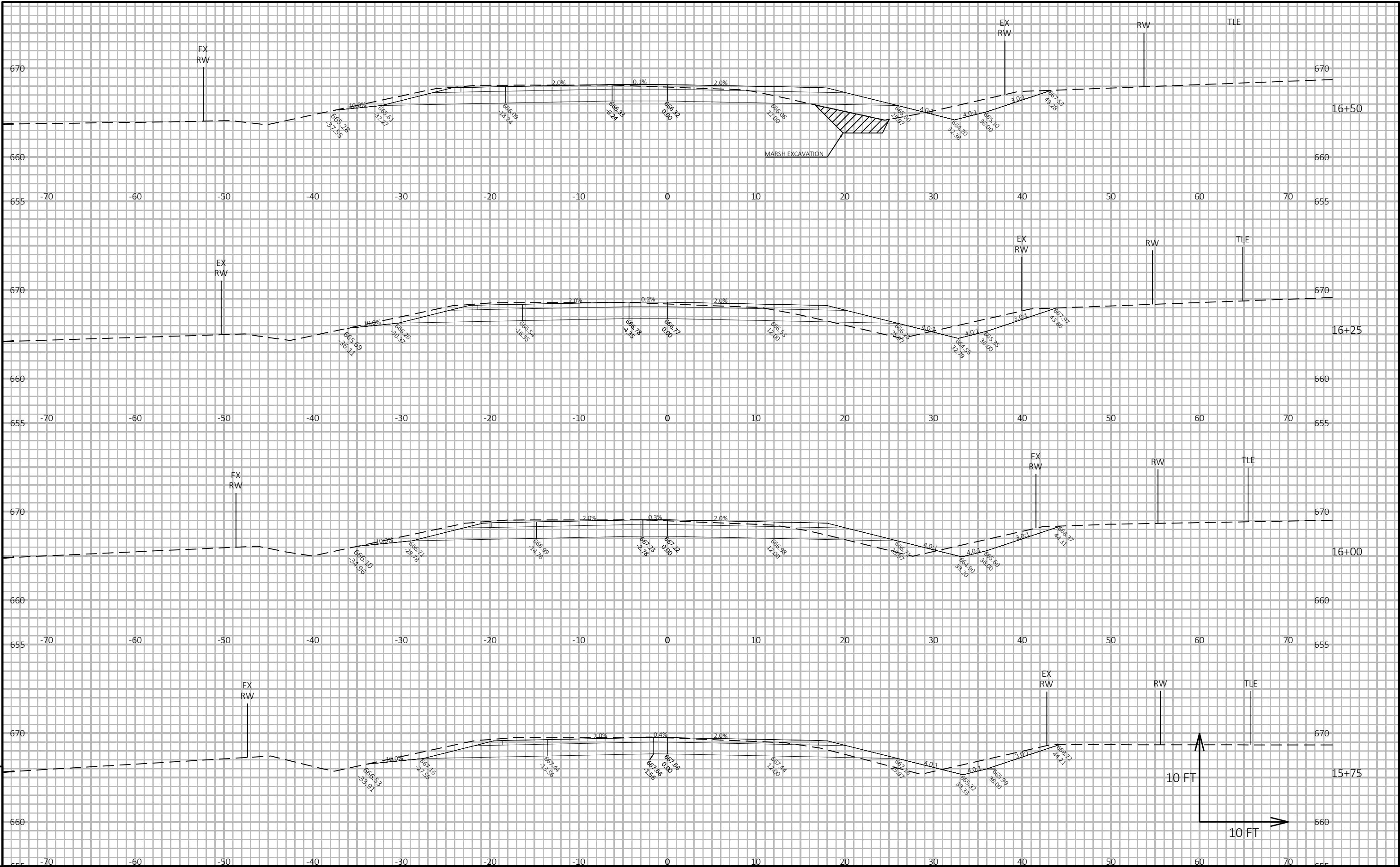
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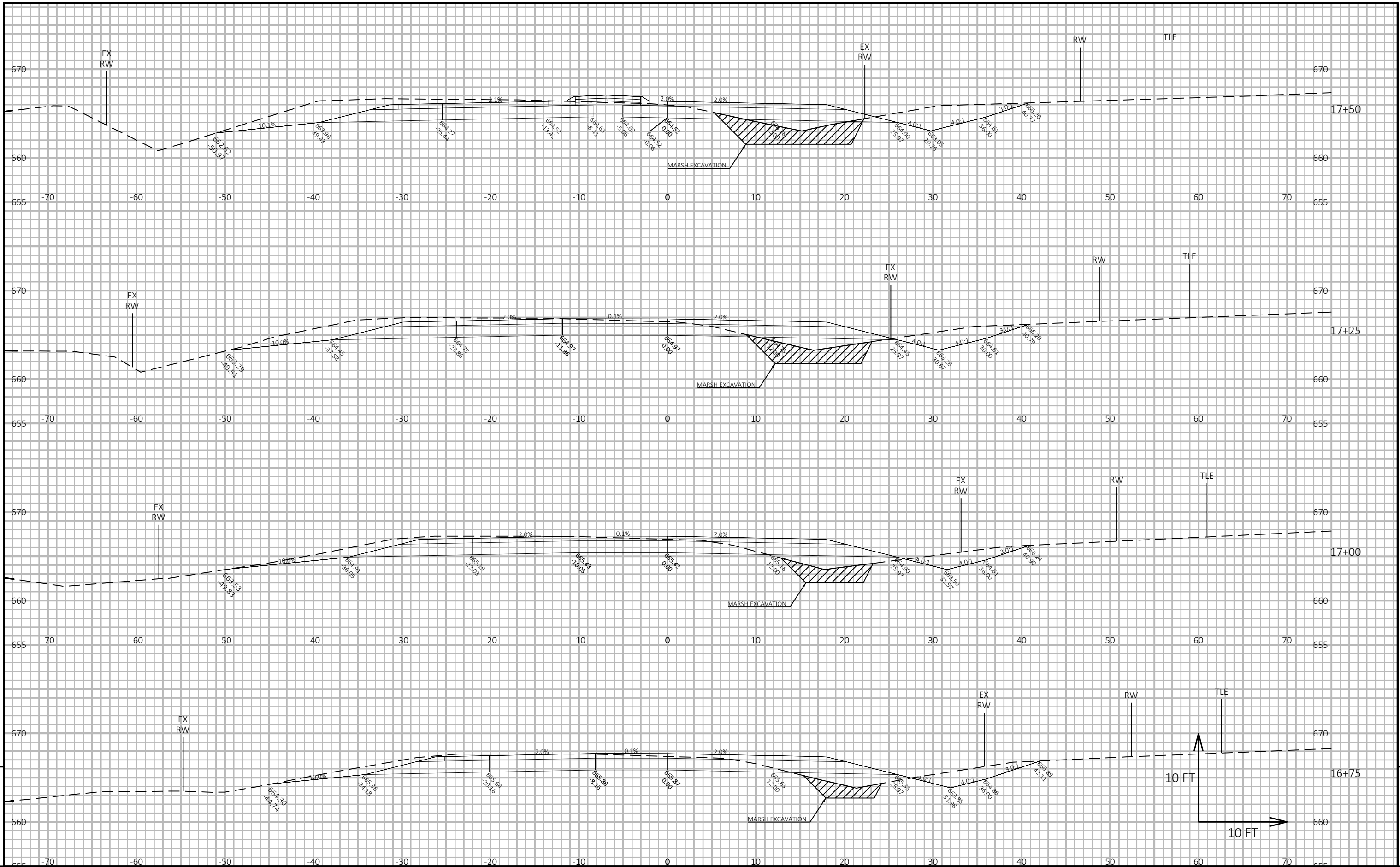
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
8 - MASS ORDNATE	CUT - SALVAGED PAVT - (FILL * FILL FACTOR)

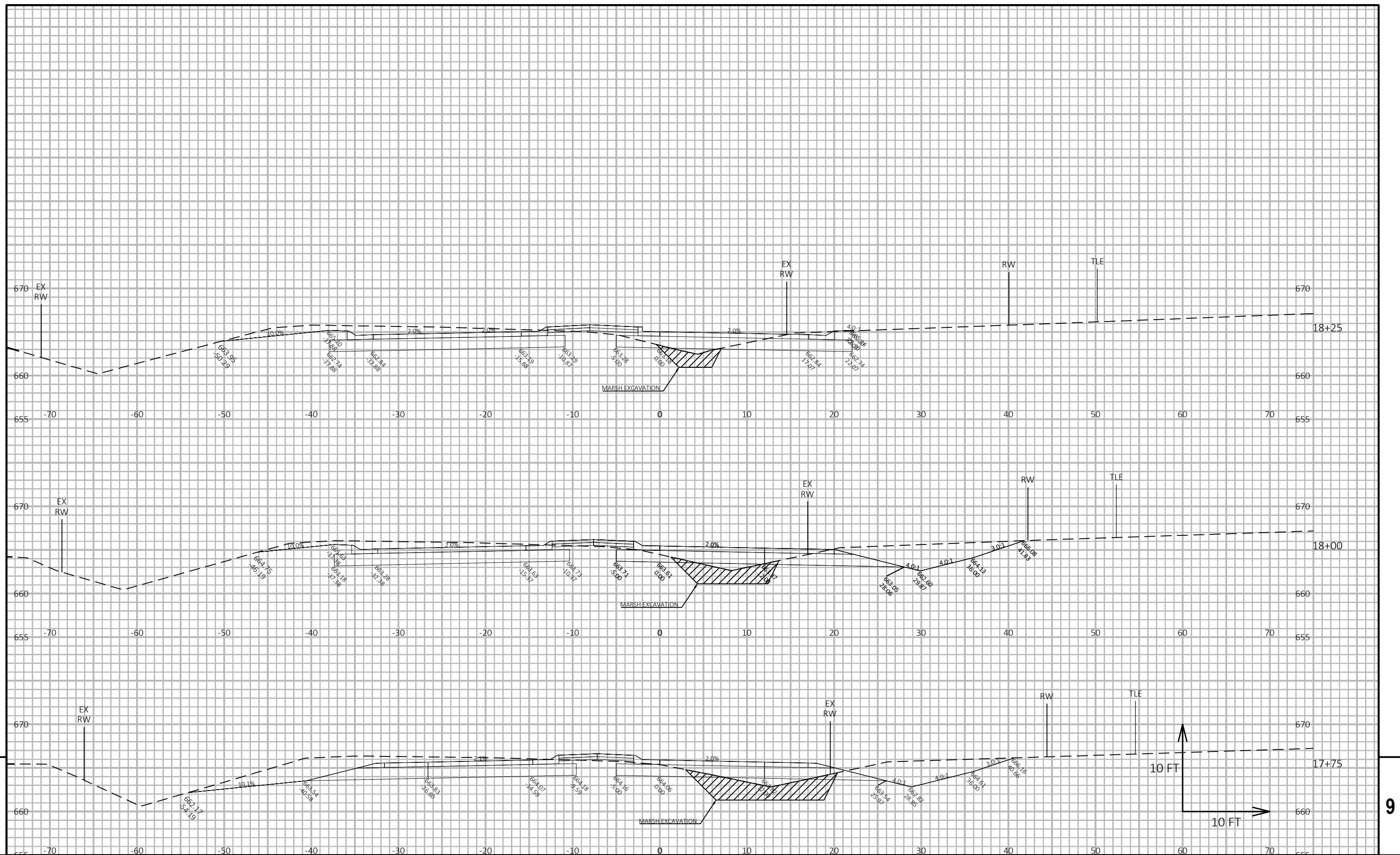


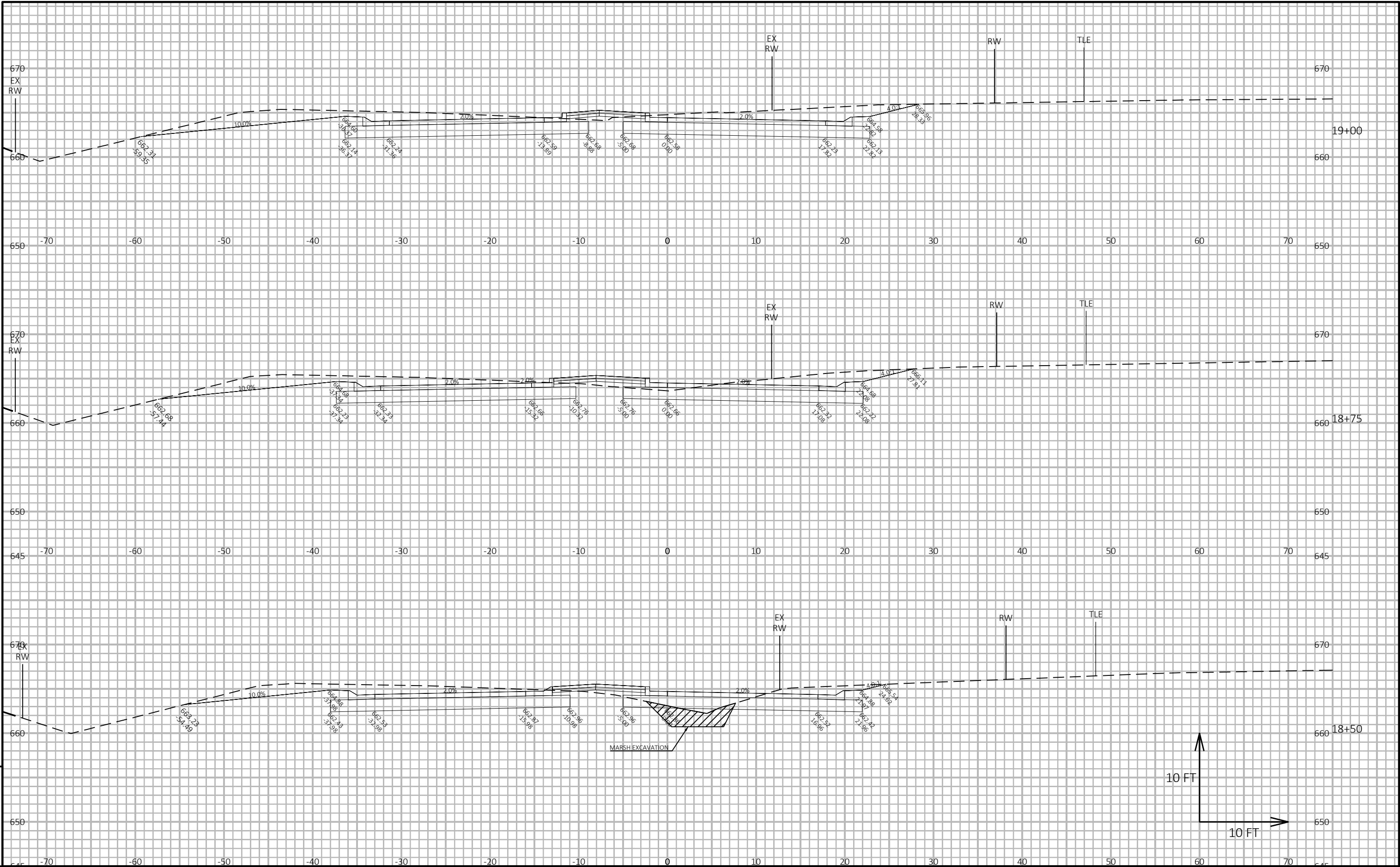
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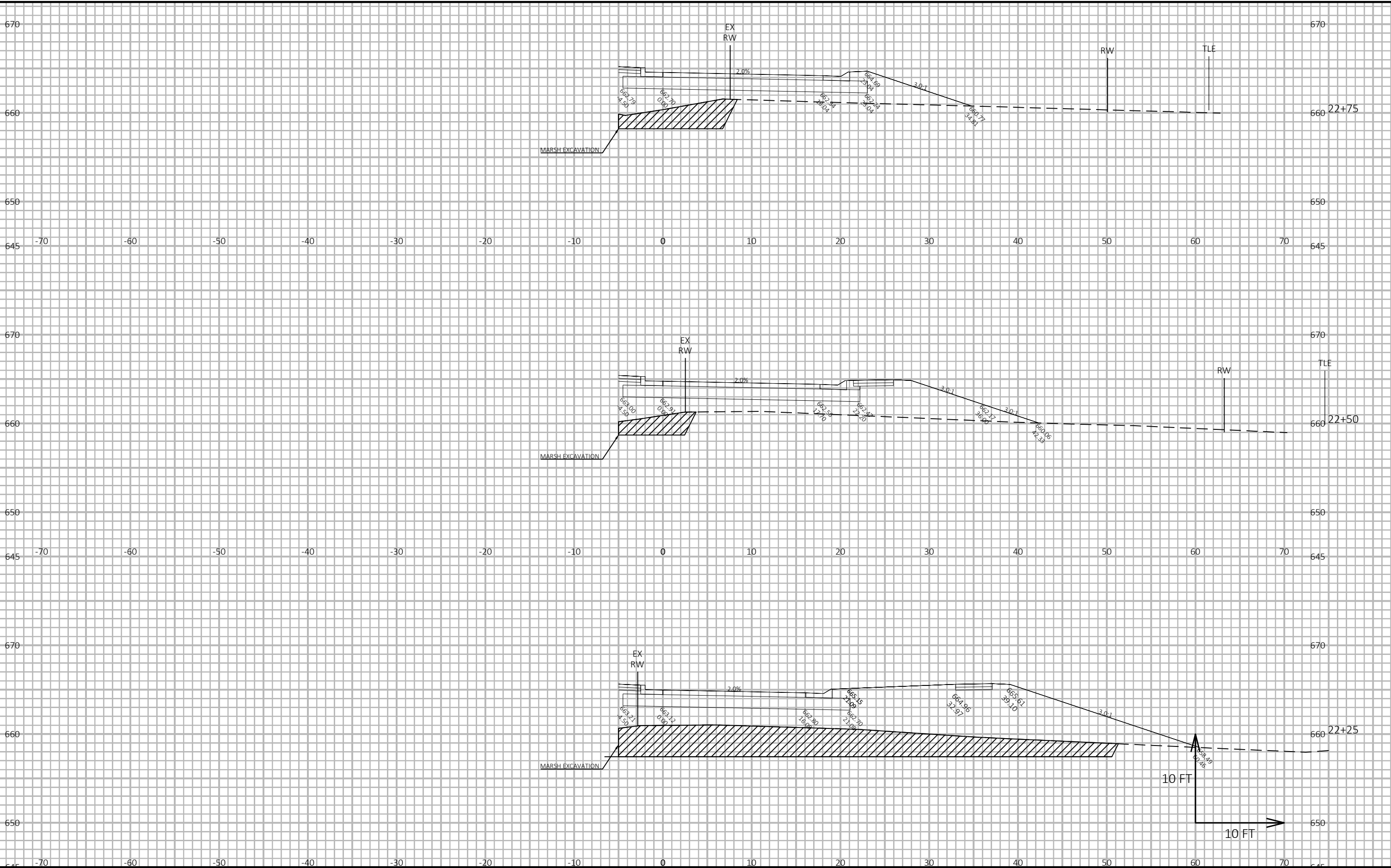
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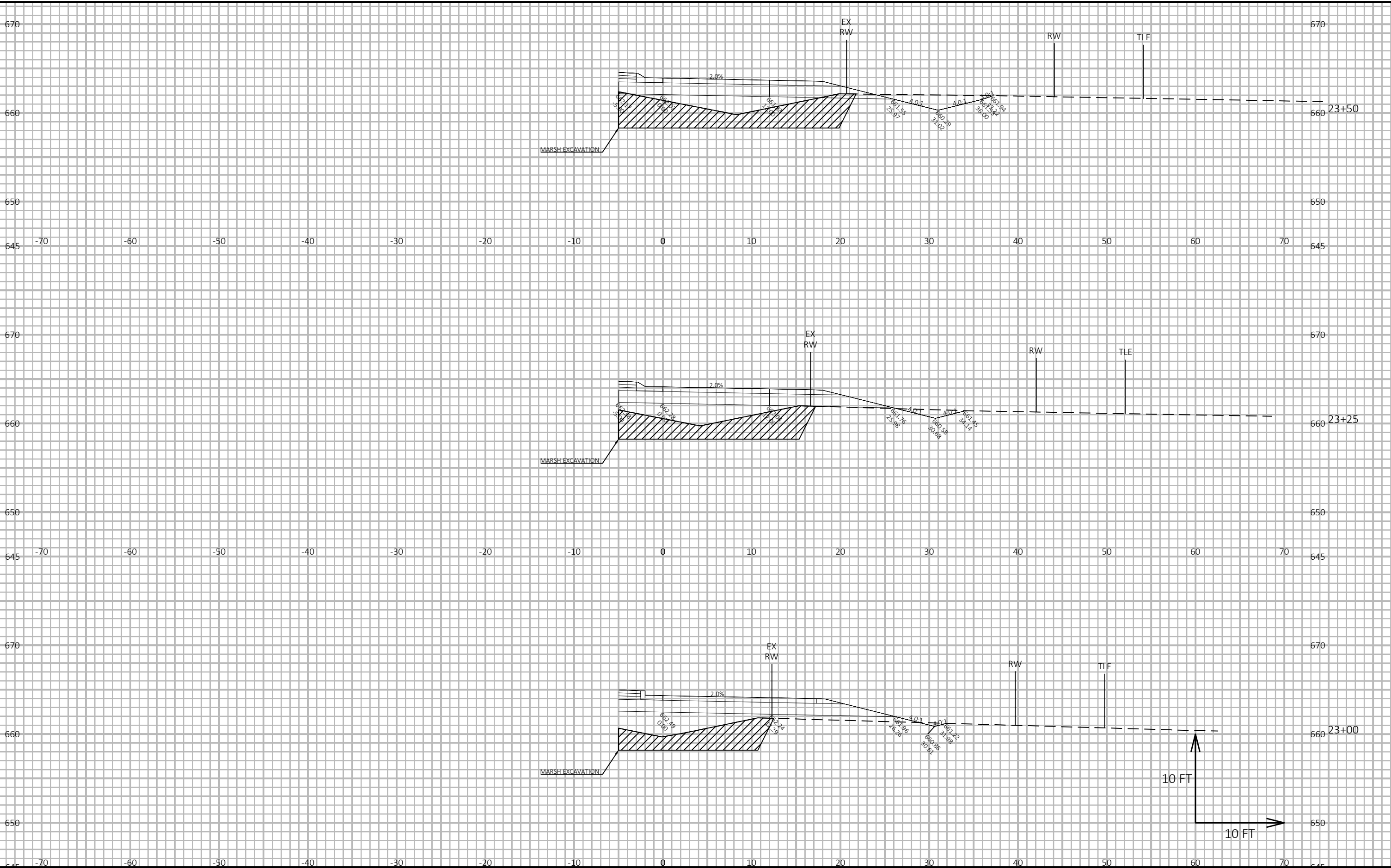


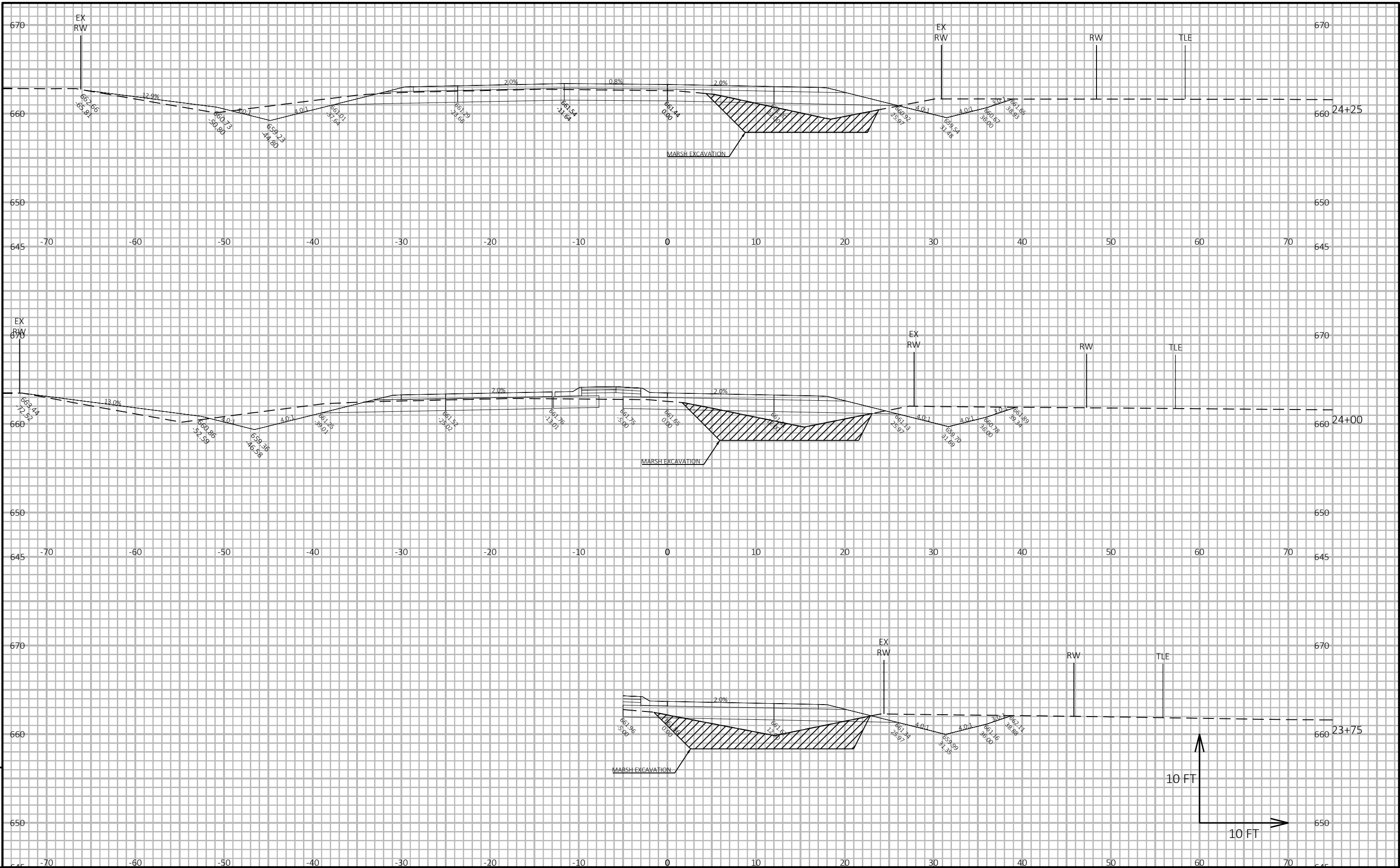


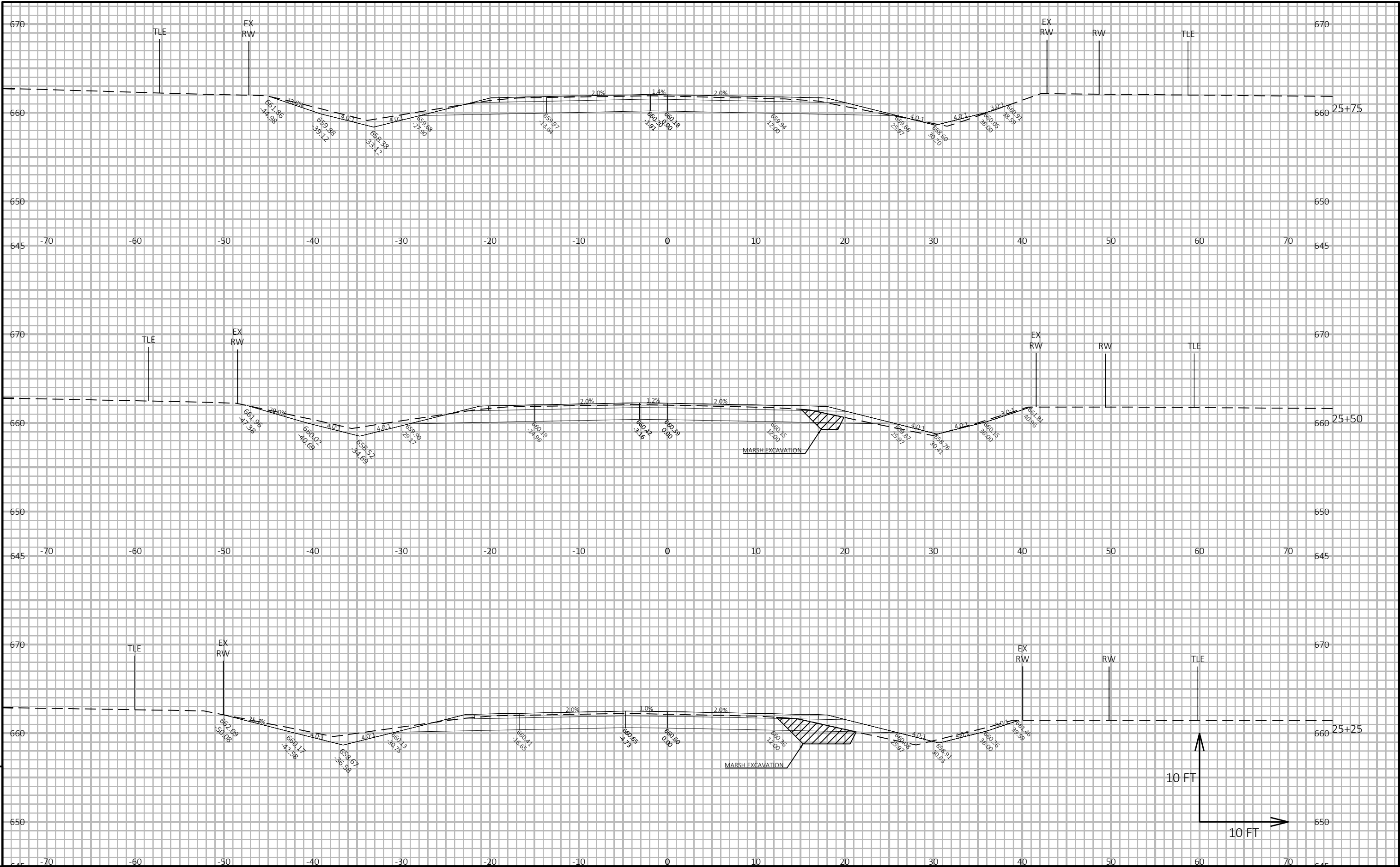




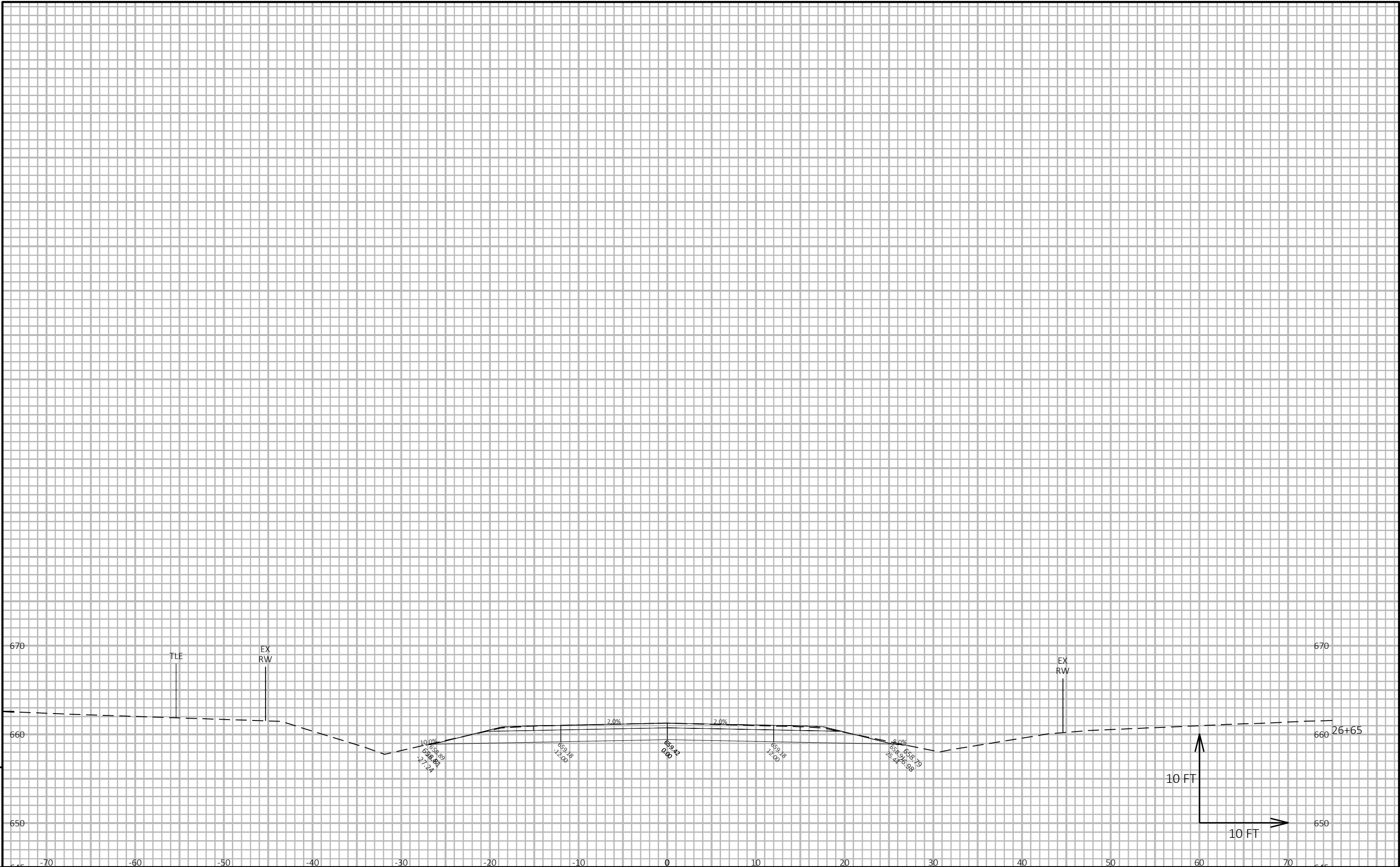




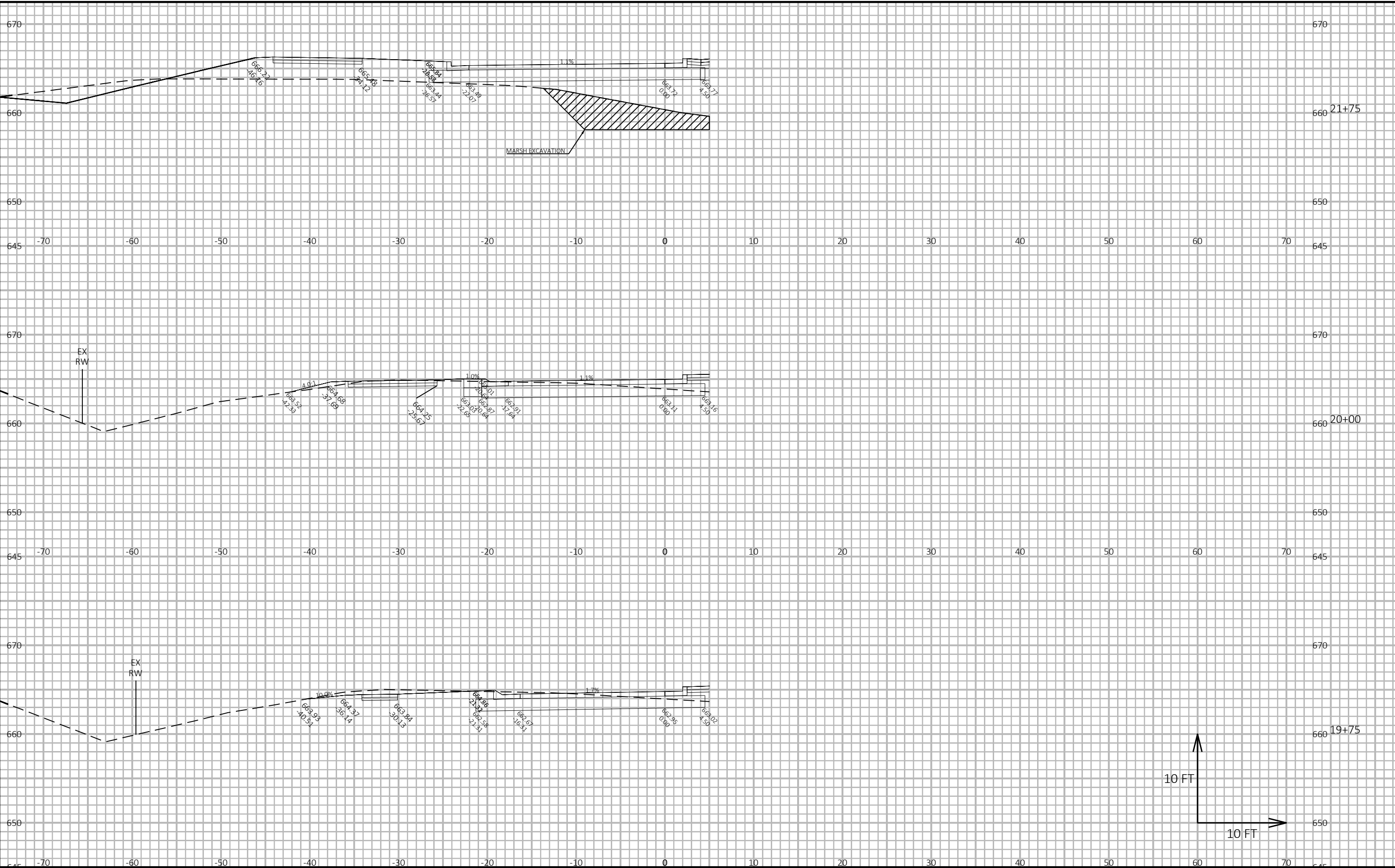


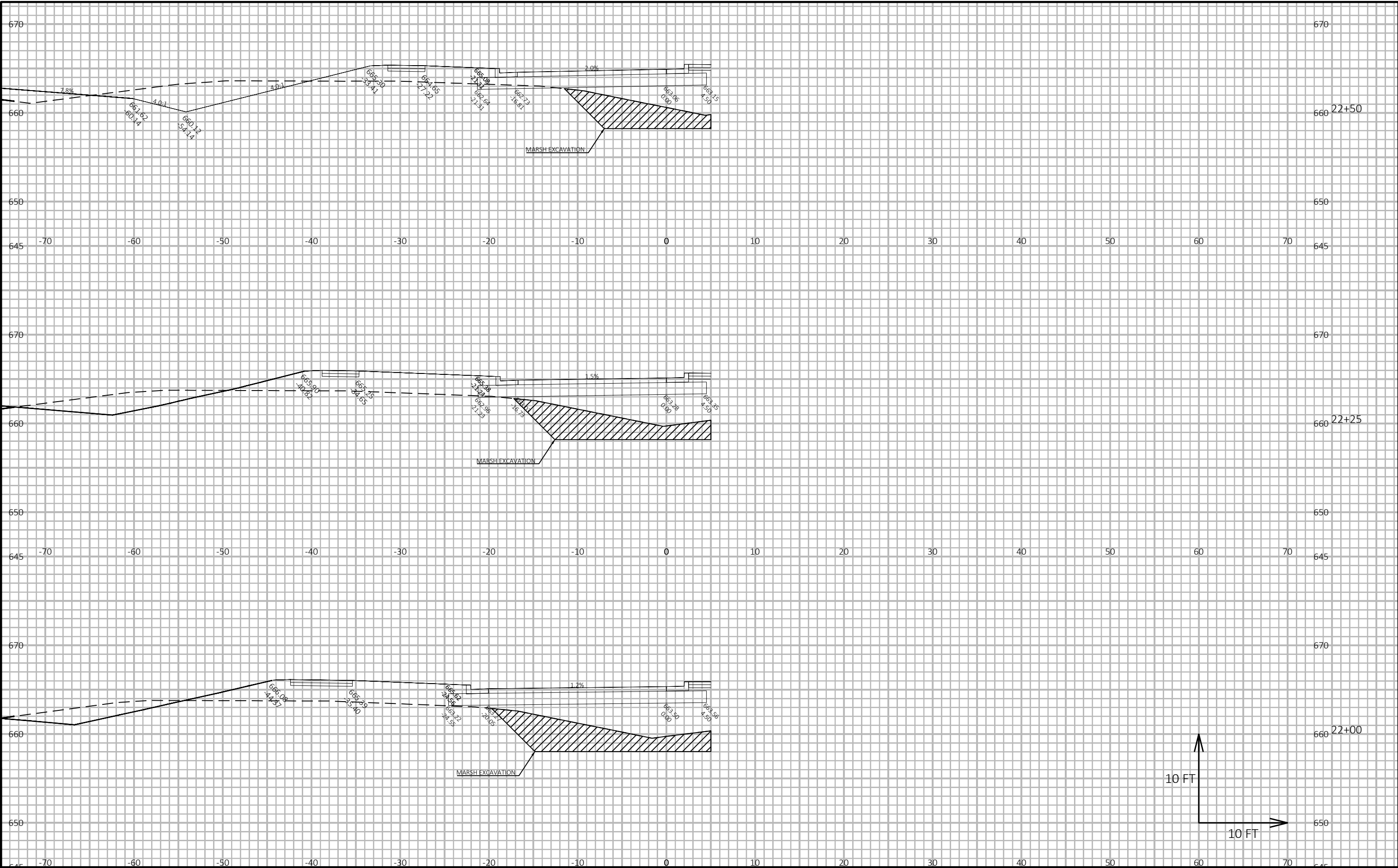


9



9

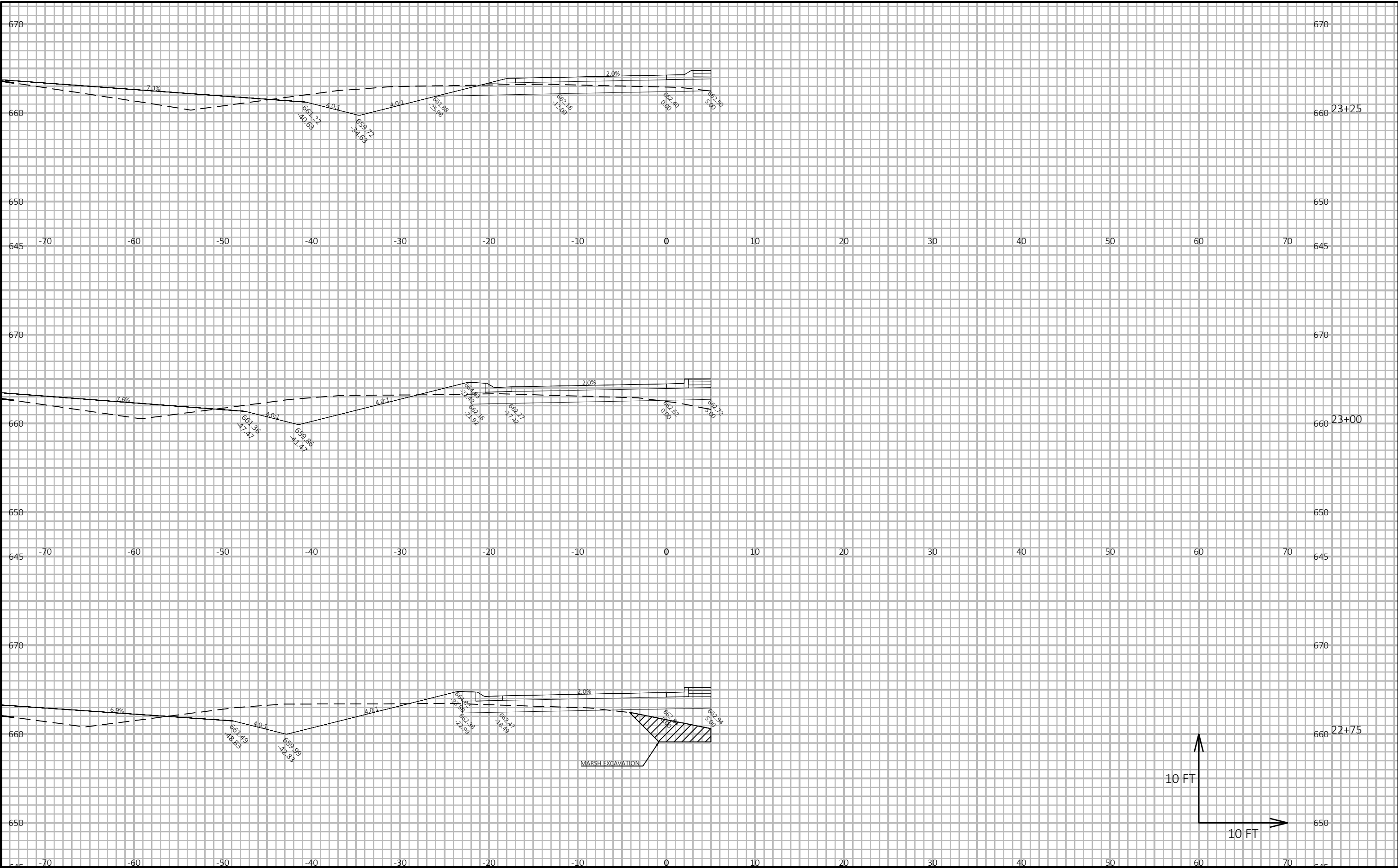




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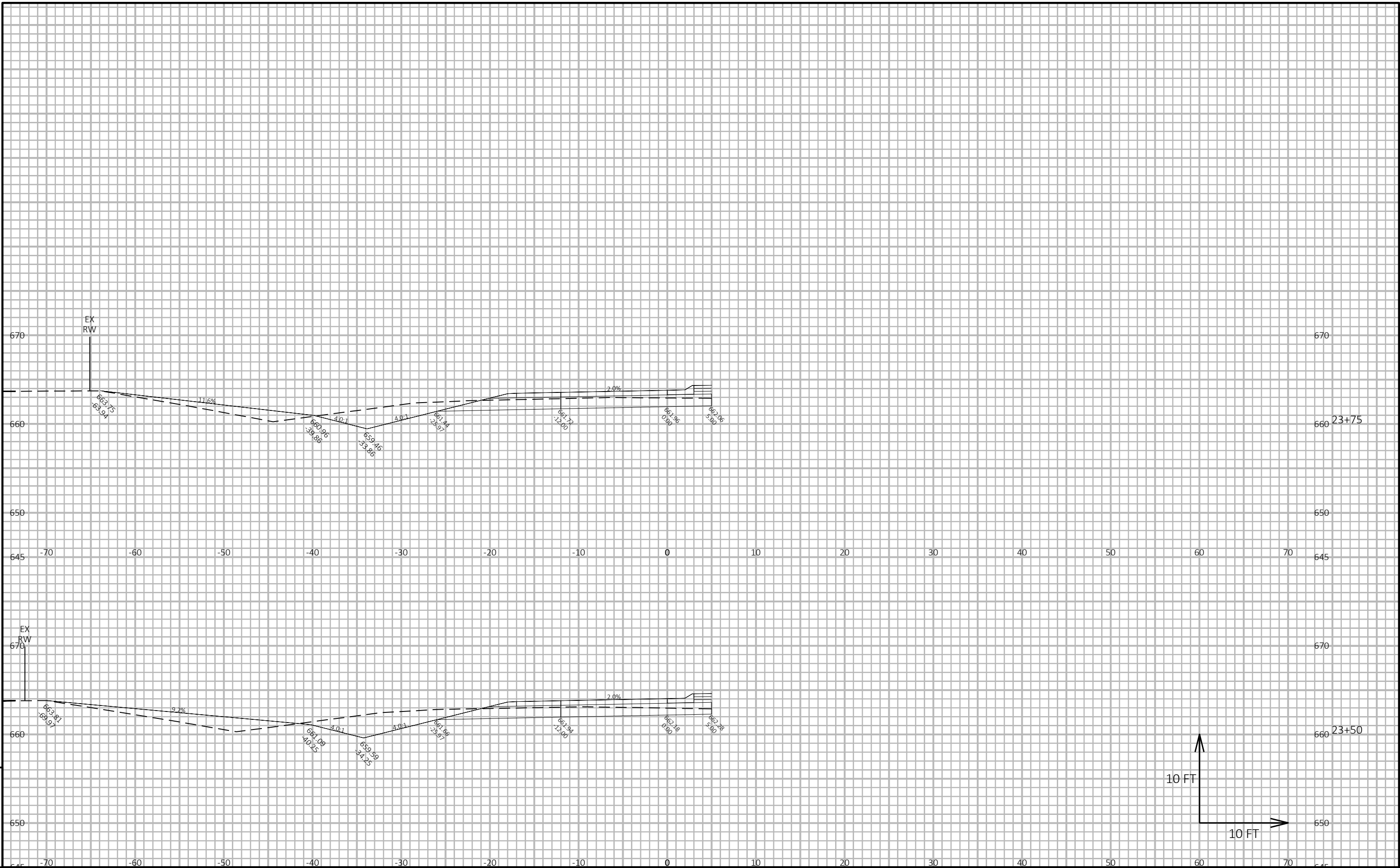
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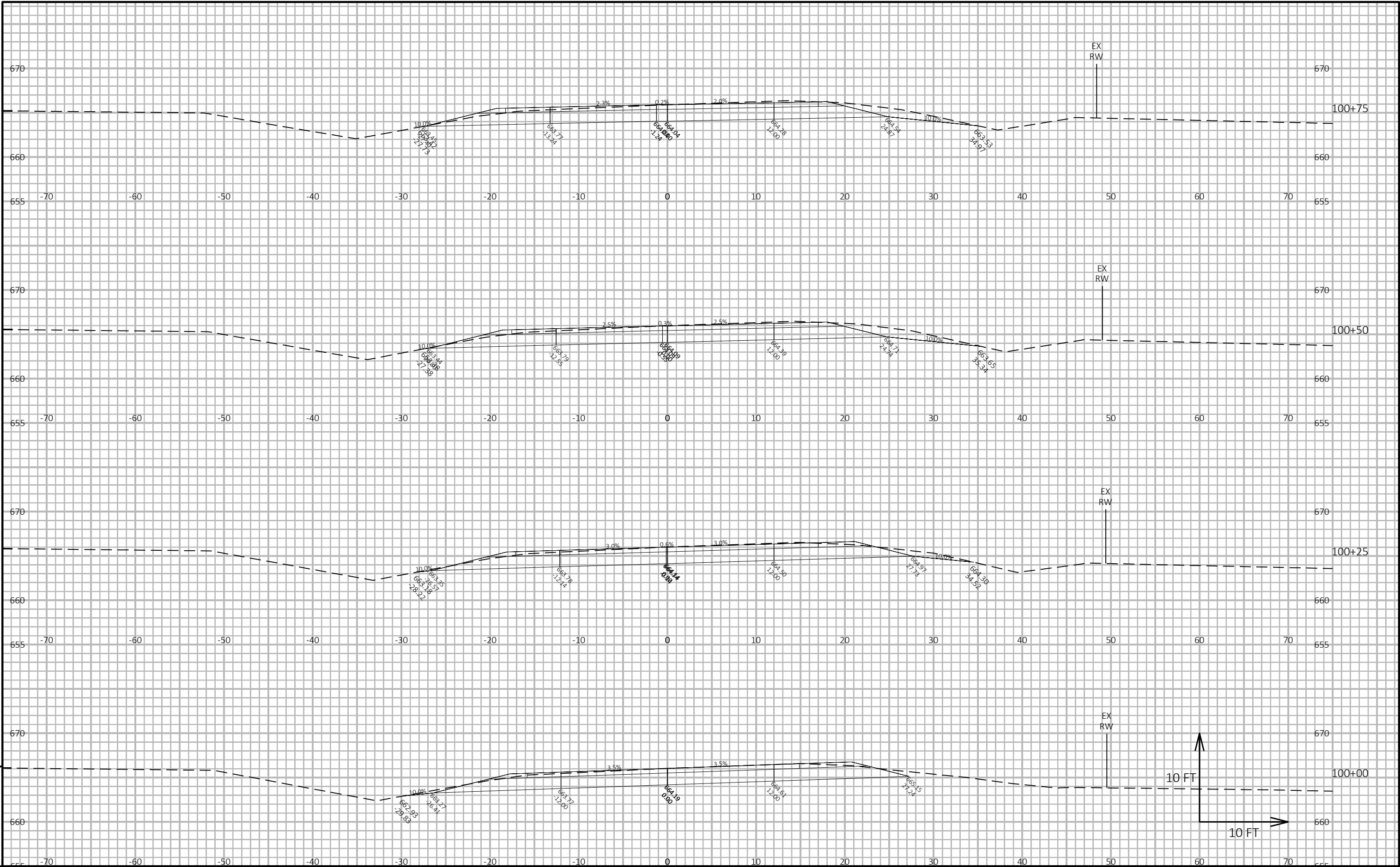
PROJECT NO: 9277-03-73	HWY: CTH EE	COUNTY: BROWN	CROSS SECTIONS: CTH EE WESTBOUND	SHEET 189	E
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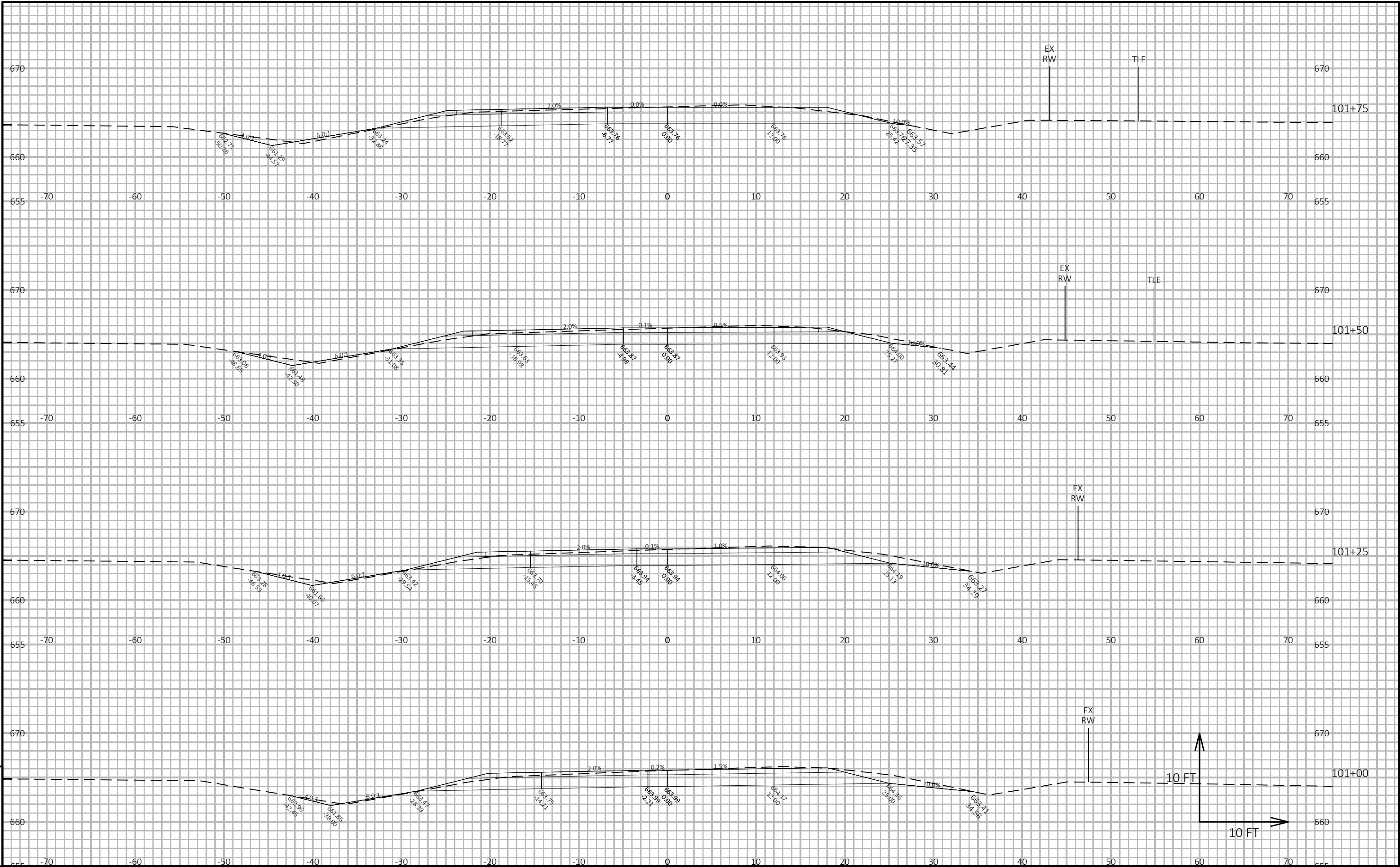


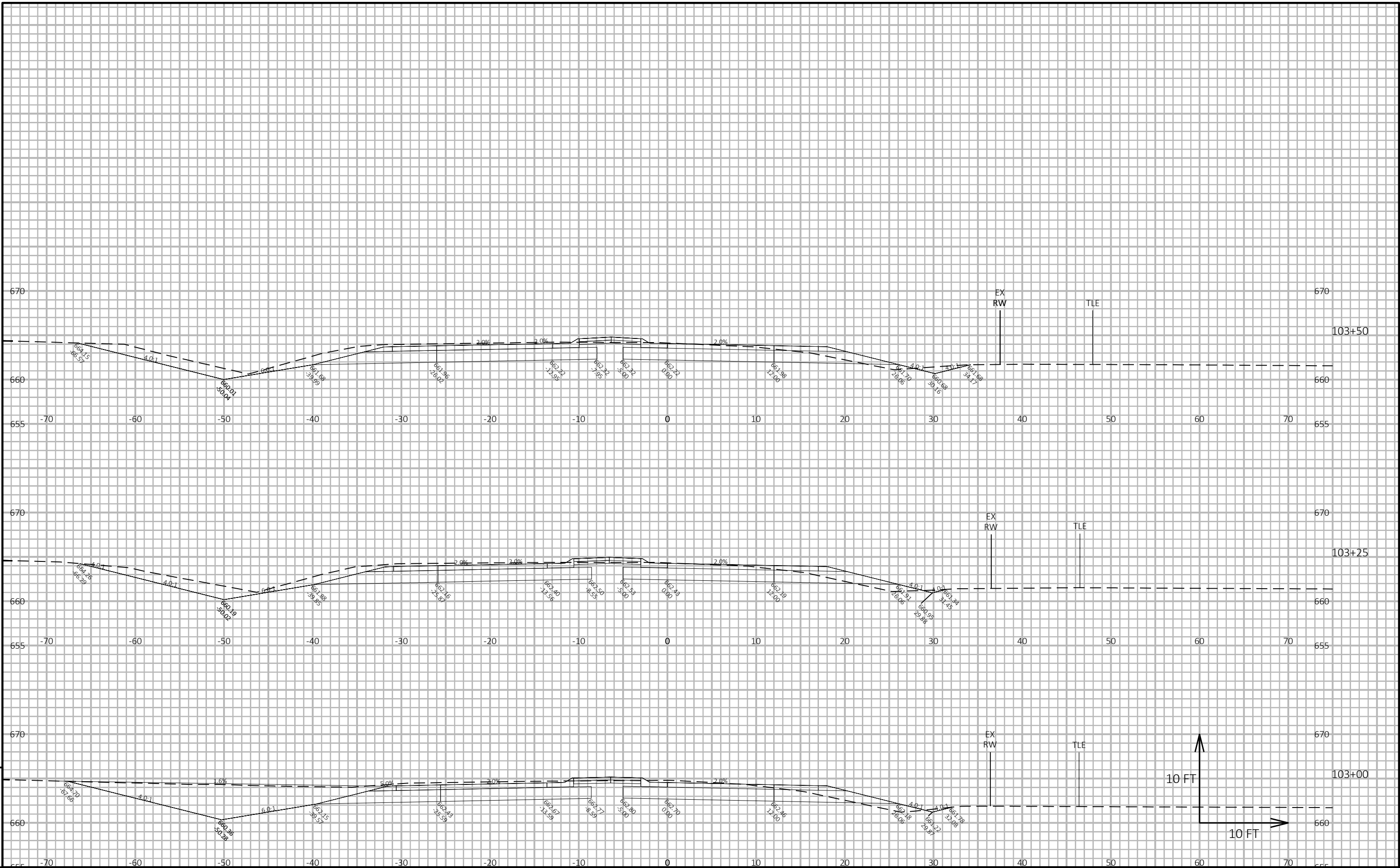
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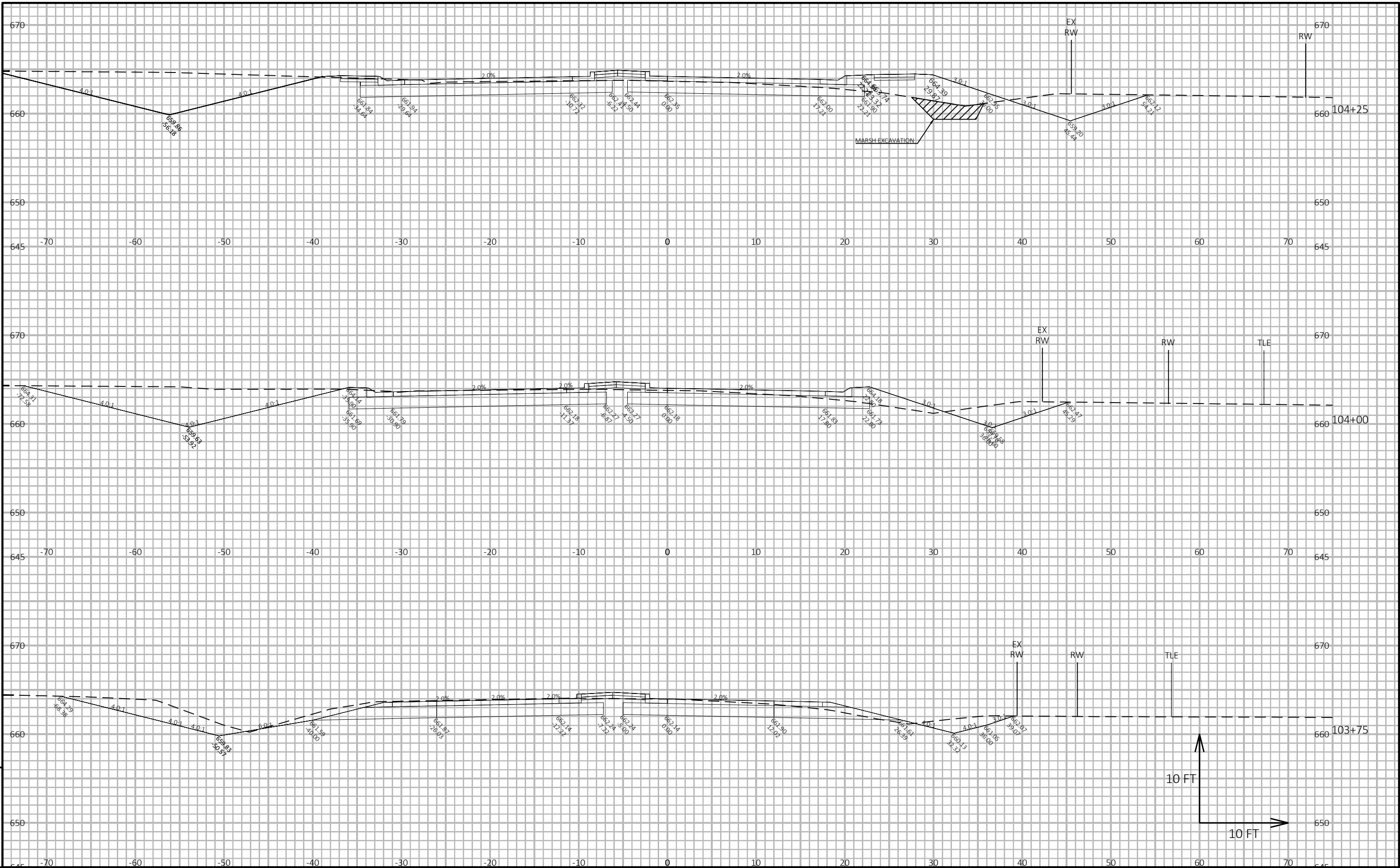
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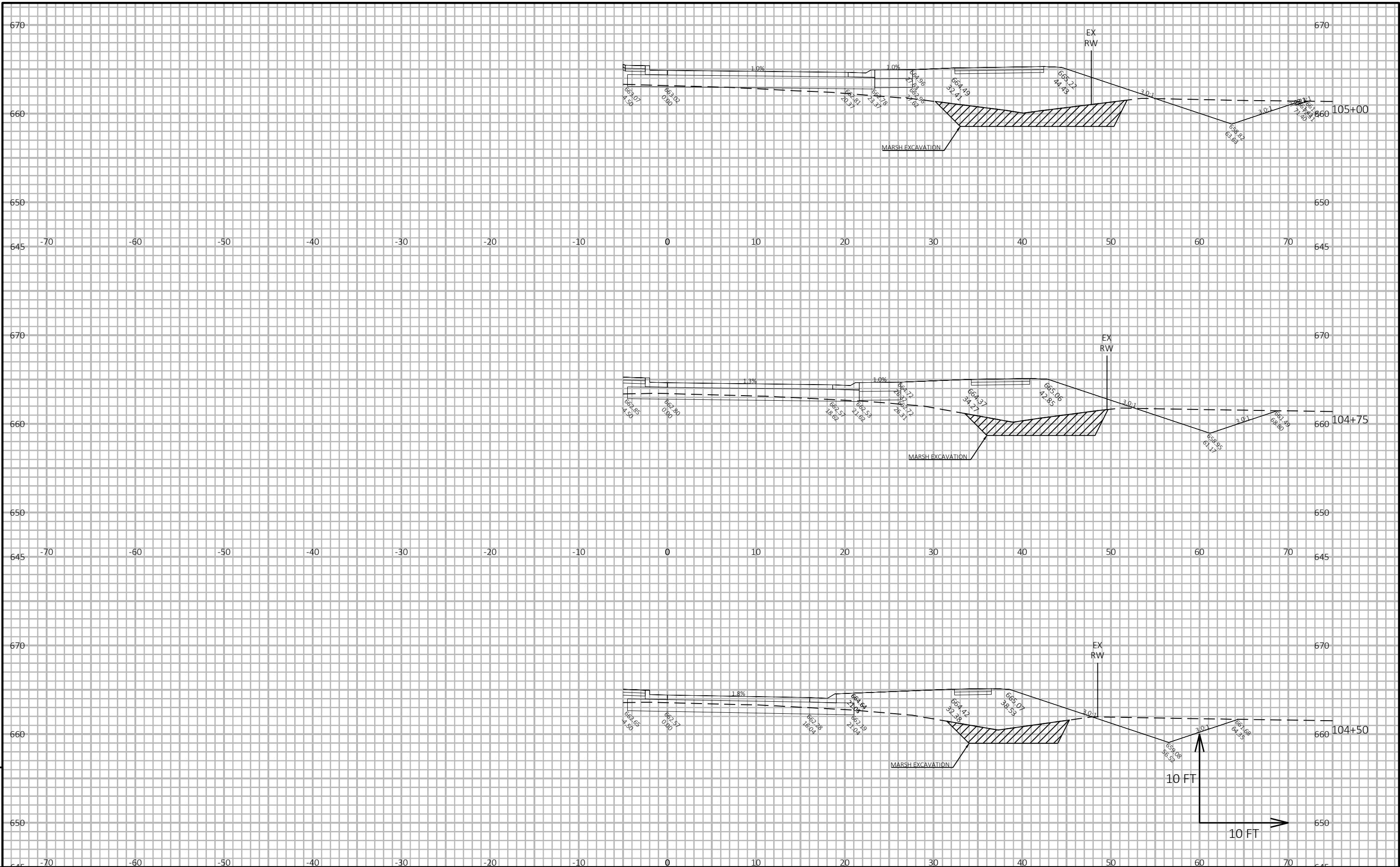


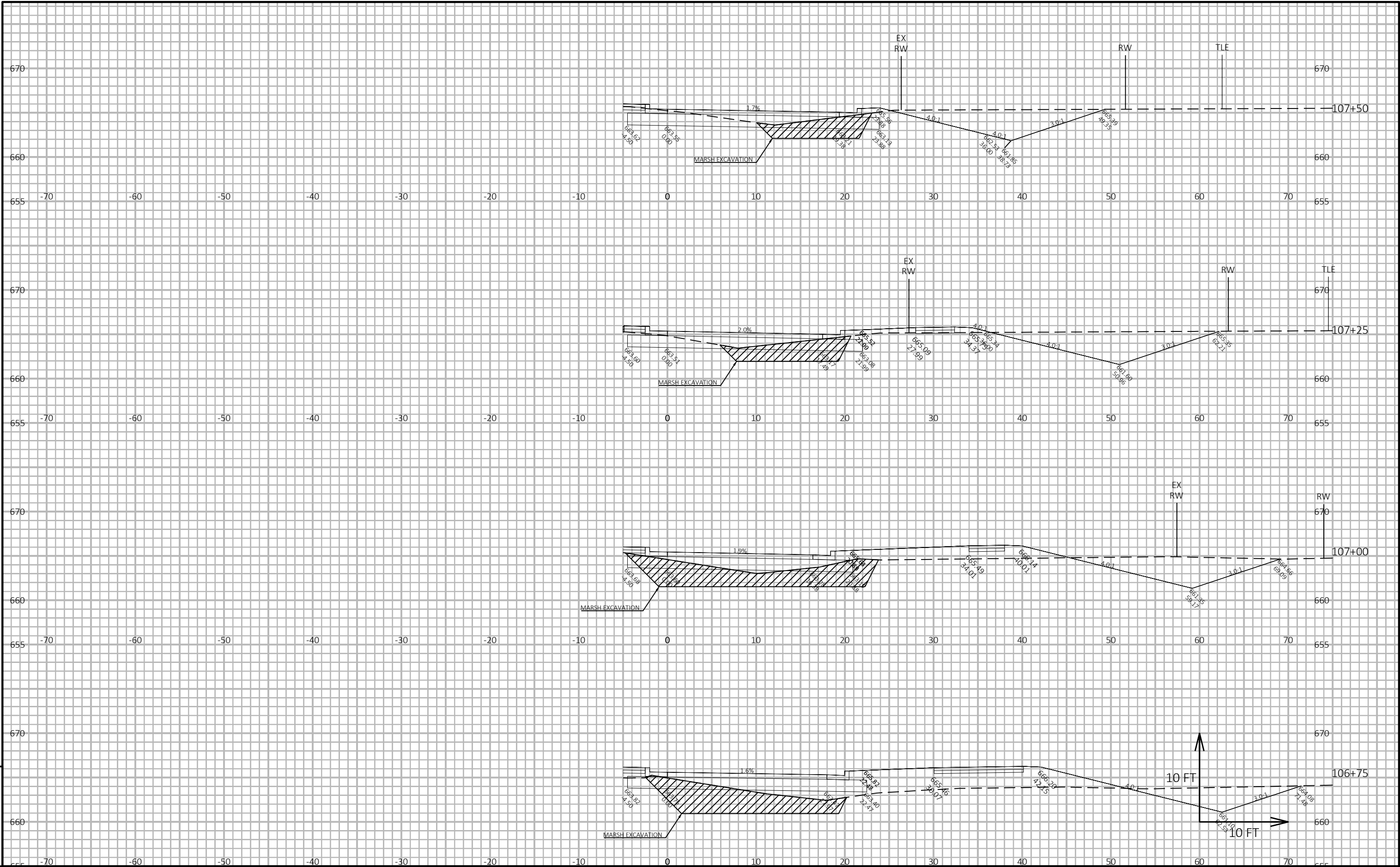


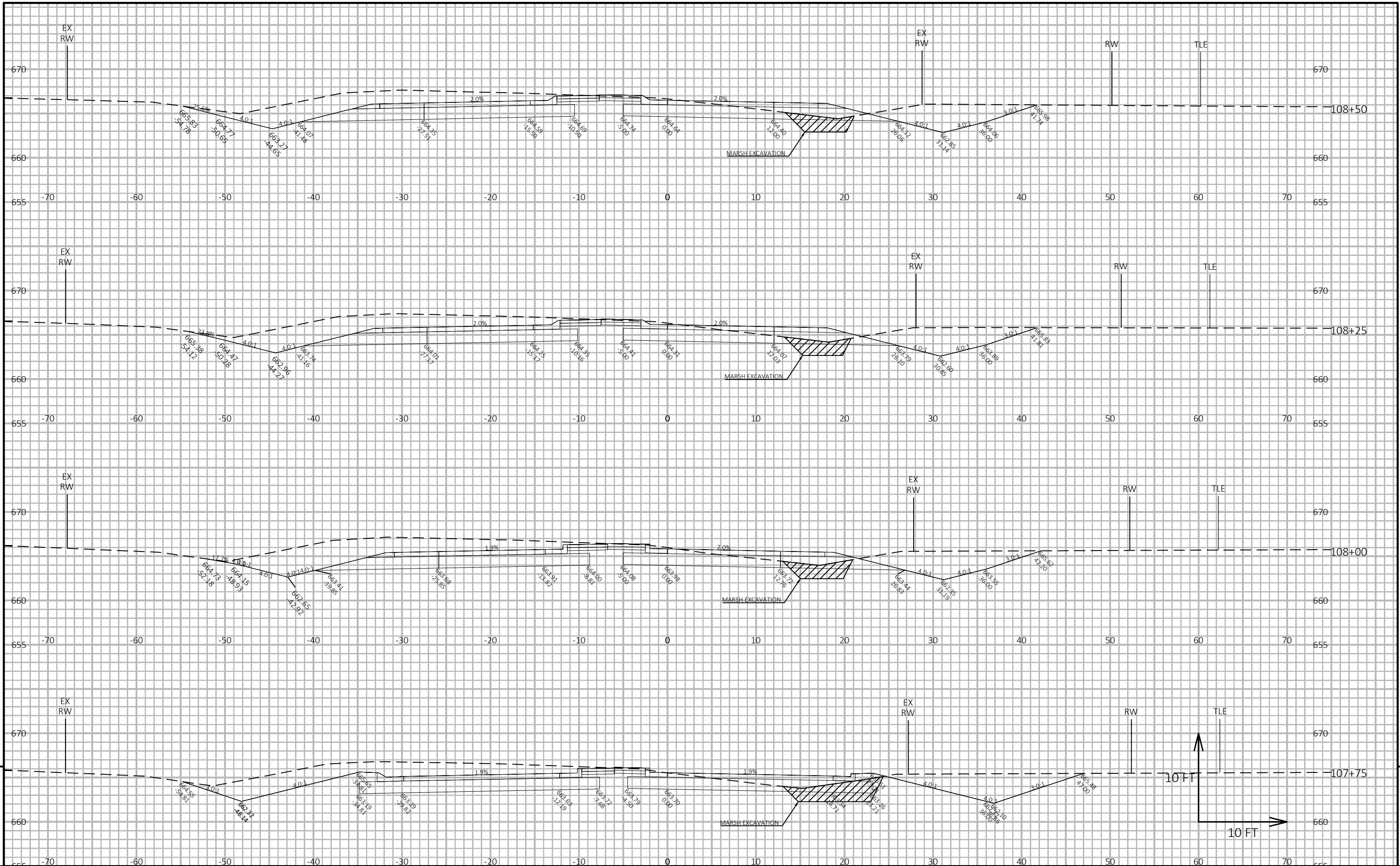


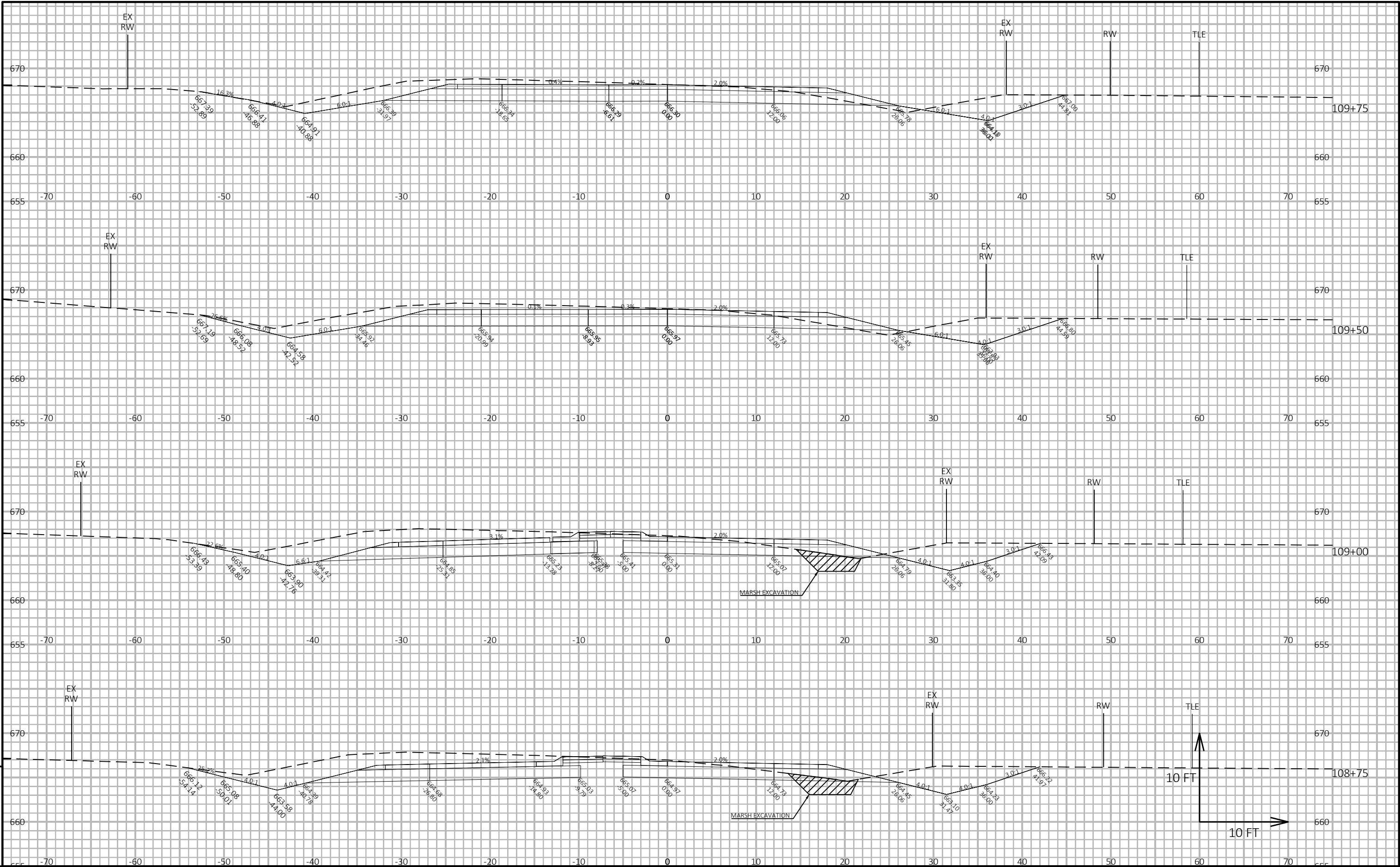


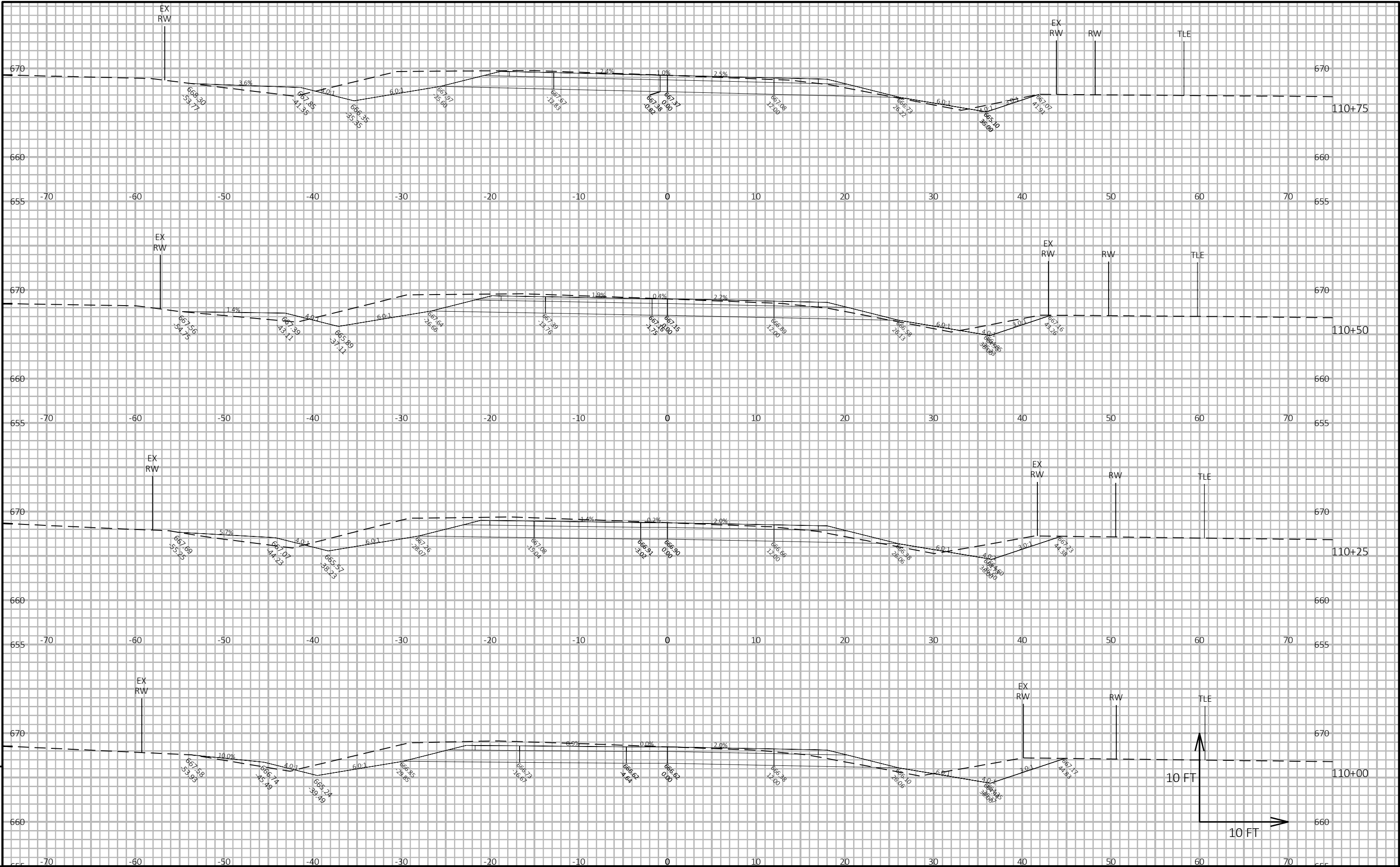


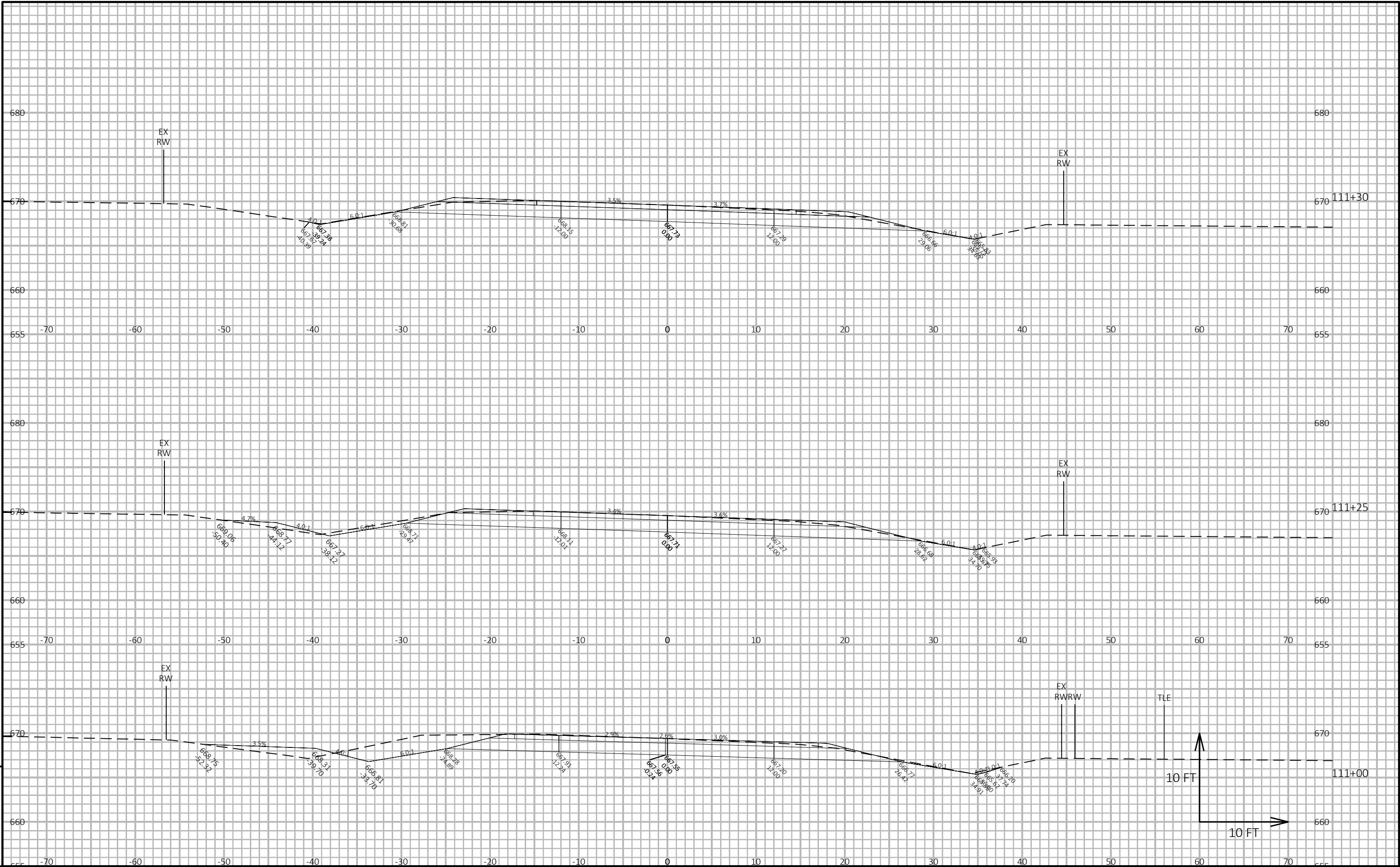




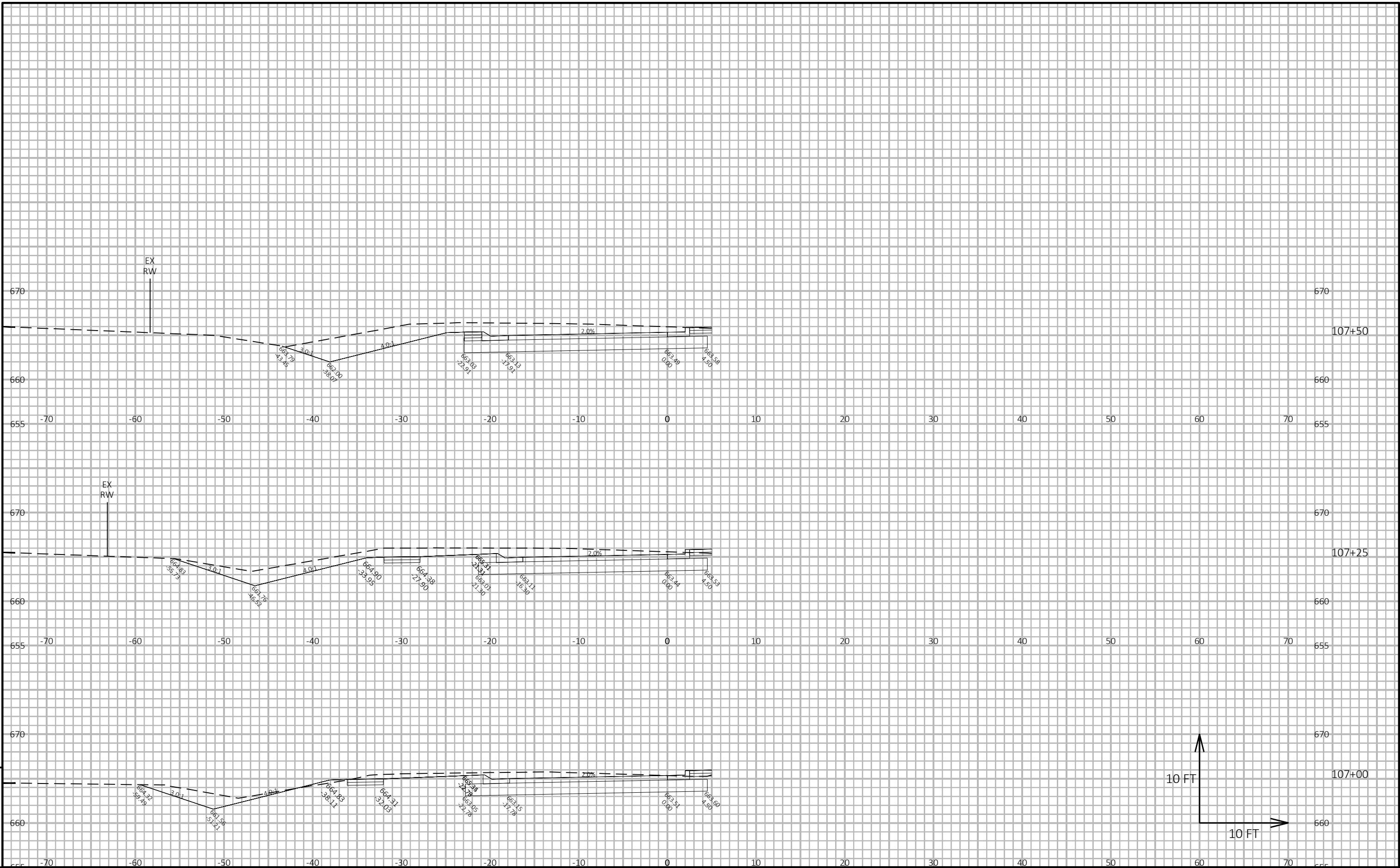


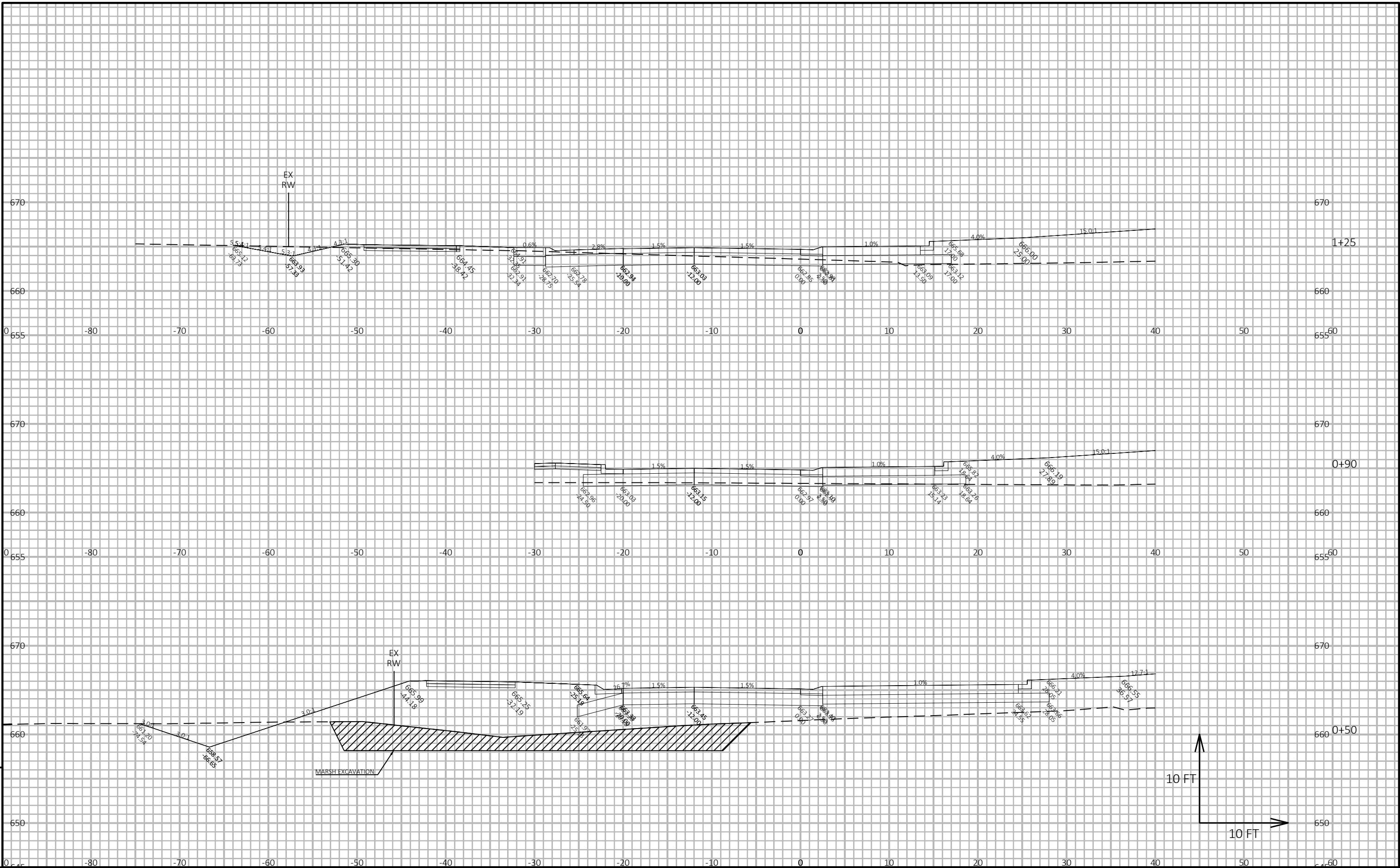


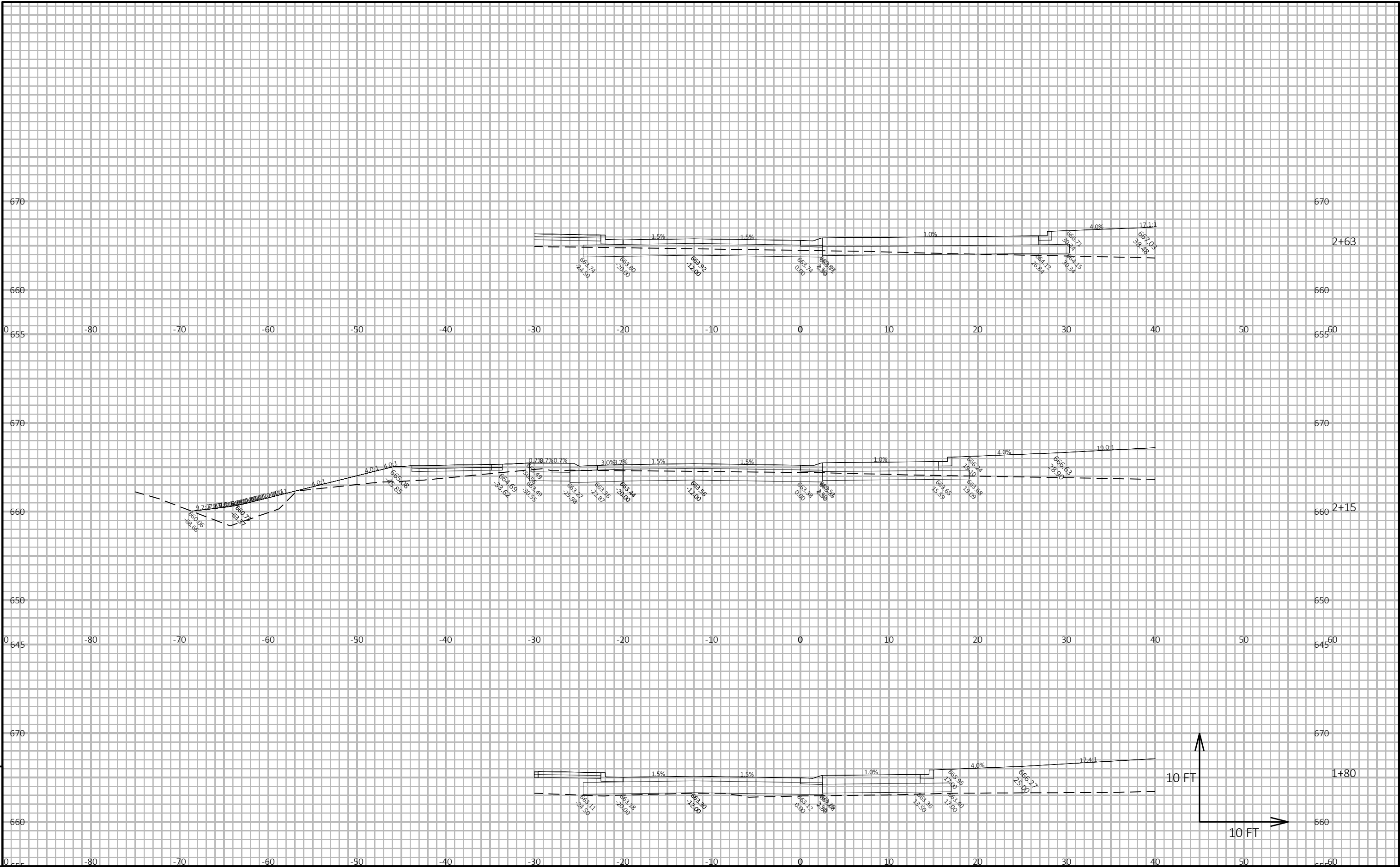






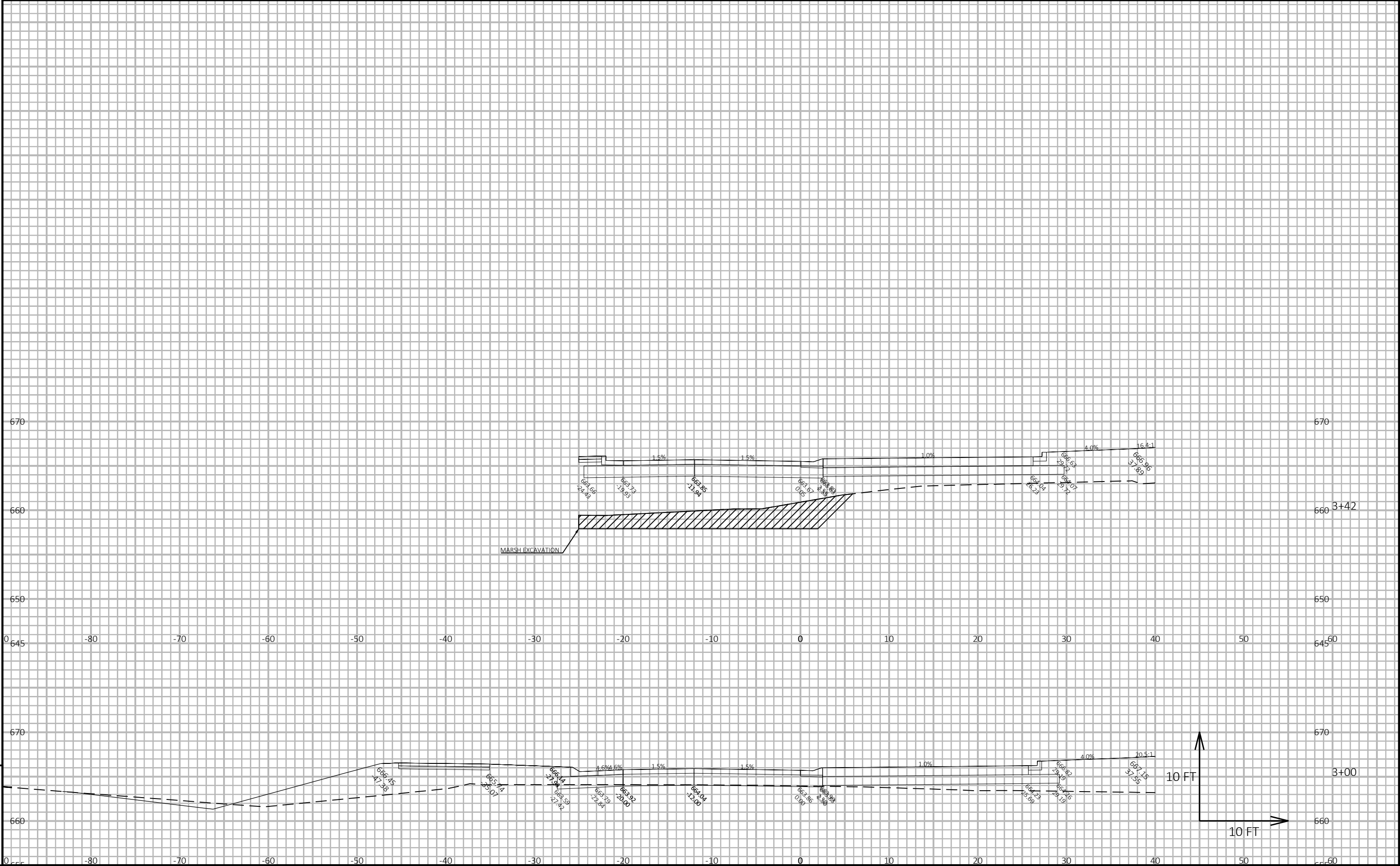


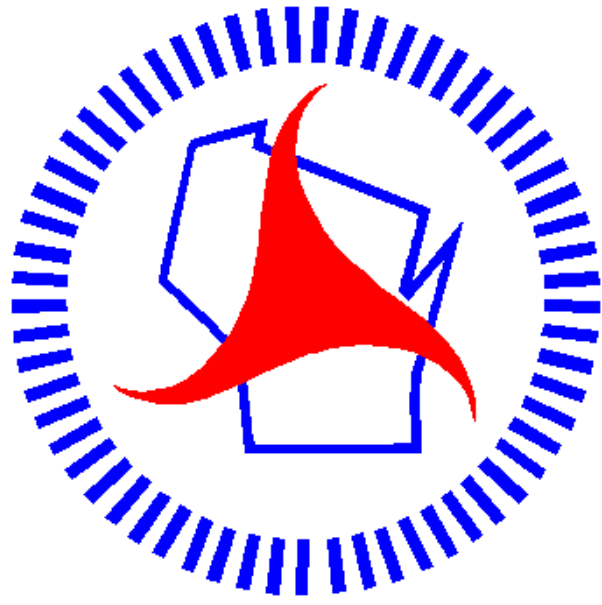




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