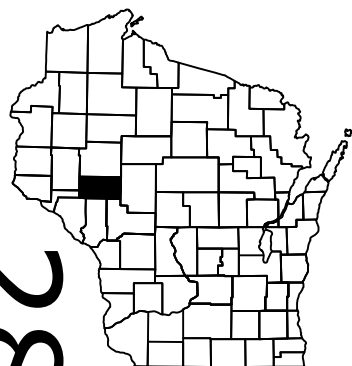


ORDER OF SHEETS

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

TOTAL SHEETS = 194



28

DESIGN DESIGNATION STH 312 JEFFERS RD  
 A.A.D.T. = 20,170 (2022) 4,900 (2017)

CONVENTIONAL SYMBOLS

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

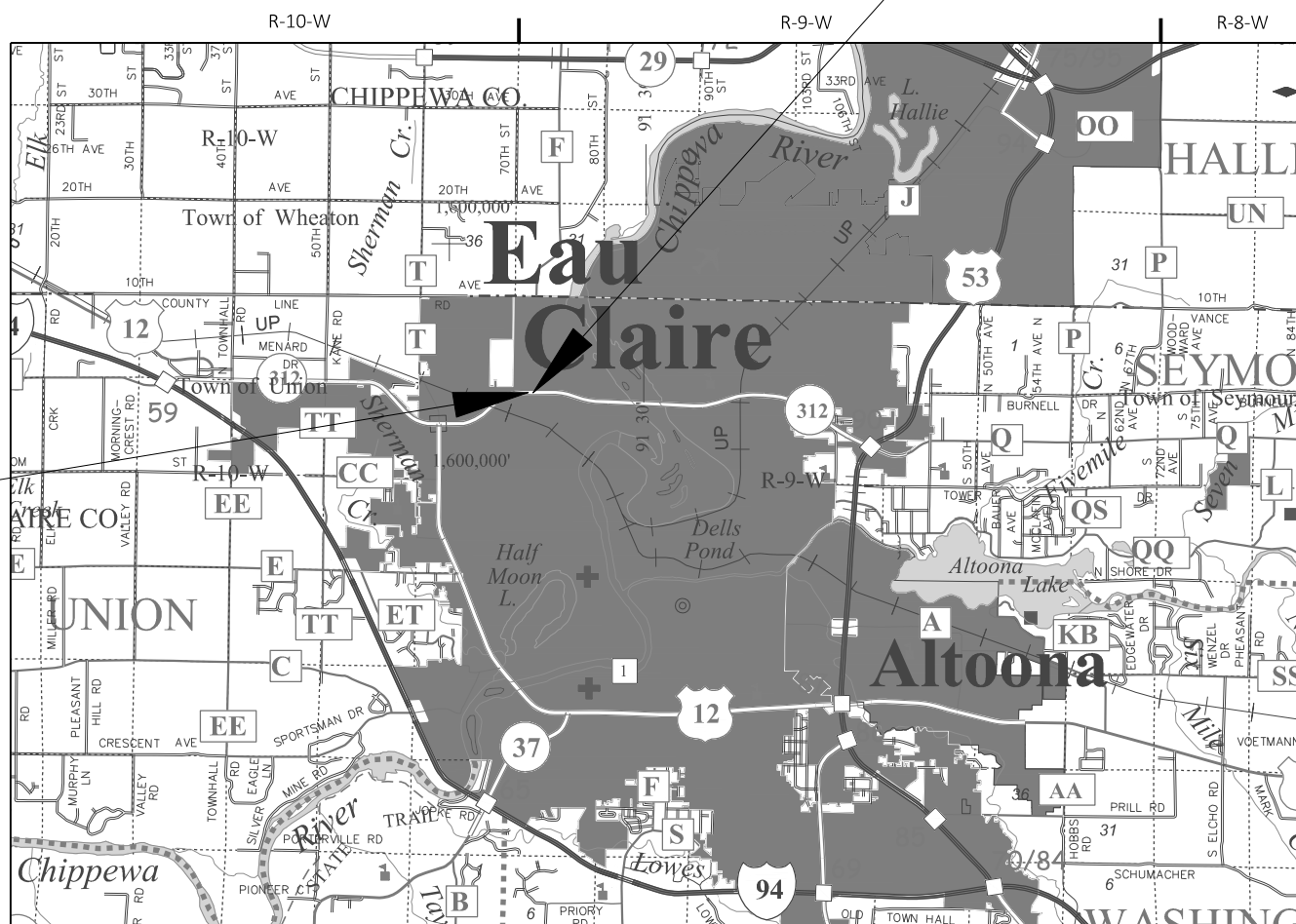
PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PLAN OF PROPOSED IMPROVEMENT  
**C EAU CLAIRE, NORTH CROSSING**  
 JEFFERS ROAD INTERSECTION  
 STH 312  
 EAU CLAIRE COUNTY

STATE PROJECT NUMBER  
**7028-00-73**

END PROJECT  
 STA 369+30.36'EB'

BEGIN PROJECT  
 STA 366+27.09'EB'  
 Y = 289991.344  
 X = 332803.040



TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7028-00-73	WISC 2022022	1

ORIGINAL PLANS PREPARED BY

**AECOM**

WISCONSIN PROFESSIONAL ENGINEER

ANDREW J. CZECH  
 E-45342  
 MADISON WISCONSIN

*Andrew J. Czech*  
 7/30/2021

(Date) (Signature)

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	AECOM
Designer	AECOM
Project Manager	BRETT HOLLISTER
Regional Examiner	TOU YANG
Regional Supervisor	JIM KOENIG

APPROVED FOR THE DEPARTMENT

DATE: 7/22/2021 *Brett Hollister*  
 (Signature)

E

**GENERAL NOTES**

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

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

RADII, ELEVATIONS, AND DIMENSIONS ARE GIVEN AT THE PAVEMENT EDGES, UNLESS OTHERWISE NOTED IN THE PLANS.

THE CONTRACTOR SHALL NOT OPERATE BEYOND THE SLOPE INTERCEPTS AS SHOWN IN THE PLANS WHEN ADJACENT TO WETLANDS OR ENVIRONMENTALLY SENSITIVE AREAS.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDAL JOINTS FROM BEING LOCATED WITHIN A DRIVING OR TURNING LANE.

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

EROSION CONTROL ITEMS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS TO FIT FIELD CONDITIONS.

WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.

THE HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON A UNIT WEIGHT OF 112 LBS/SY/IN OF DEPTH.

STH 312 SHOULDERS (HMA PAVEMENT 3-INCH)

THICKNESS	BID ITEM
3.0-INCHES	4 MT 58-34 S

JEFFERS ROAD MAINLINE (HMA PAVEMENT 5-INCH)

LAYER	THICKNESS	BID ITEM
UPPER	2.25-INCHES	4 MT 58-34 S
LOWER	2.75-INCHES	4 MT 58-34 S

JEFFERS ROAD MULTI-USE PATH

THICKNESS	BID ITEM
2.0-INCHES	4 MT 58-34 S

**ABBREVIATIONS**

A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
AH	AHEAD
AVE	AVENUE
BK	BACK
CL OR CL	CENTERLINE
CTH	COUNTY TRUNK HIGHWAY
CWT	HUNDREDWEIGHT
CY	CUBIC YARD
D	DEGREE OF CURVE
DD	DIRECTIONAL DISTRIBUTION
DHV	DESIGN HOUR VOLUME
DR	DRIVE
EBS	EXCAVATION BELOW SUBGRADE
EL OR ELEV	ELEVATION
EMAT	EROSION CONTROL MAT
ESAL	EQUIVALENT SINGLE AXLE LOAD
FT.	FOOT
GAL	GALLON
HMA	HOT MIX ASPHALT
HWY	HIGHWAY
IN	INCH
INL	INLET
L	LENGTH OF CURVE
LF	LINEAL FOOT
LS	LUMP SUM
LB	POUND
LN	LANE
LT. OR LT	LEFT
MAX.	MAXIMUM
MGAL	THOUSAND GALLON
MI	MILE
MID RAD.	MID RADIUS POINT
MIN.	MINIMUM
NO:	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PRC	POINT OF REVERSE CURVATURE
R	RADIUS
R OR R/L OR RL	REFERENCE LINE
R/W OR RW	RIGHT-OF-WAY
RD.	ROAD
REQ'D	REQUIRED
RT OR RT.	RIGHT
SDD	STANDARD DETAIL DRAWINGS
S.F. OR SQ.FT.	SQUARE FEET
STA.	STATION
STH	STATE TRUNK HIGHWAYS
SY OR SQ.YD.	SQUARE YARD
T	TANGENT
T. %	TRUCKS (PERCENT OF)
TC	TRAFFIC CONTROL
TYP.	TYPICAL
T.	VARIES
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W/	WITH
X	EAST GRID COORDINATE
Y	NORTH GRID COORDINATE

**DETAIL SHEET INDEX**

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- REMOVAL PLANS
- CURB RAMP DETAILS
- EROSION CONTROL
- PERMANENT SIGNING & MARKING
- TRAFFIC SIGNALS
- TRAFFIC CONTROL
- DETOUR PLAN
- ALIGNMENT DATA
- PLAN DETAILS

**UTILITIES**

**COMMUNICATION LINE**

AT&T WISCONSIN  
 RICK PODOLAK  
 4TH FLOOR, 304 S DEWEY ST  
 EAU CLAIRE, WI 54703  
 PHONE: (715) 839-5565  
 EMAIL: rp4514@att.com

CHARTER COMMUNICATIONS  
 SHANE YODER  
 1201 MCCANN DR  
 ALTOONA, WI 54720  
 PHONE: (715) 214-1175  
 EMAIL: shane.yoder@charter.com

CINC  
 DAREN BAUER  
 105 GARFIELD AVE  
 EAU CLAIRE, WI 54701  
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 EMAIL: bauerdp@uwec.edu

**ELECTRICITY**

XCEL ENERGY  
 DAVID MELSNESS  
 1414 W HAMILTON AVE, P.O. BOX 8  
 EAU CLAIRE, WI 54702  
 PHONE: (715) 737-1495  
 EMAIL: david.j.melsness@xcelenergy.com

**SEWER & WATER**

CITY OF EAU CLAIRE  
 LANE BERG  
 910 FOREST ST  
 EAU CLAIRE, WI 54703  
 PHONE: (715) 839-1876  
 EMAIL: lane.berg@eauclairewi.gov

**GAS/PETROLEUM**

XCEL ENERGY  
 BRADY GARDOW  
 1414 W HAMILTON AVE, P.O. BOX 8  
 EAU CLAIRE, WI 54702  
 PHONE: (715) 737-1450  
 EMAIL: brady.p.gardow@xcelenergy.com

**WISDOT**

WisDOT DESIGN PROJECT MANAGER  
 AYRES ASSOCIATES  
 BRETT HOLLISTER  
 3433 OAKWOOD HILLS PARKWAY  
 EAU CLAIRE, WI 54701-7698  
 PHONE: (715) 834-3161  
 EMAIL: hollisterb@ayresassociates.com

**WISDNR**

WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
 EAU CLAIRE COUNTY  
 LEAH NICOL  
 1300 WEST CLAIRMONT AVENUE  
 EAU CLAIRE, WI 54701  
 PHONE: (715) 934-9014  
 EMAIL: leah.nicol@wisconsin.gov

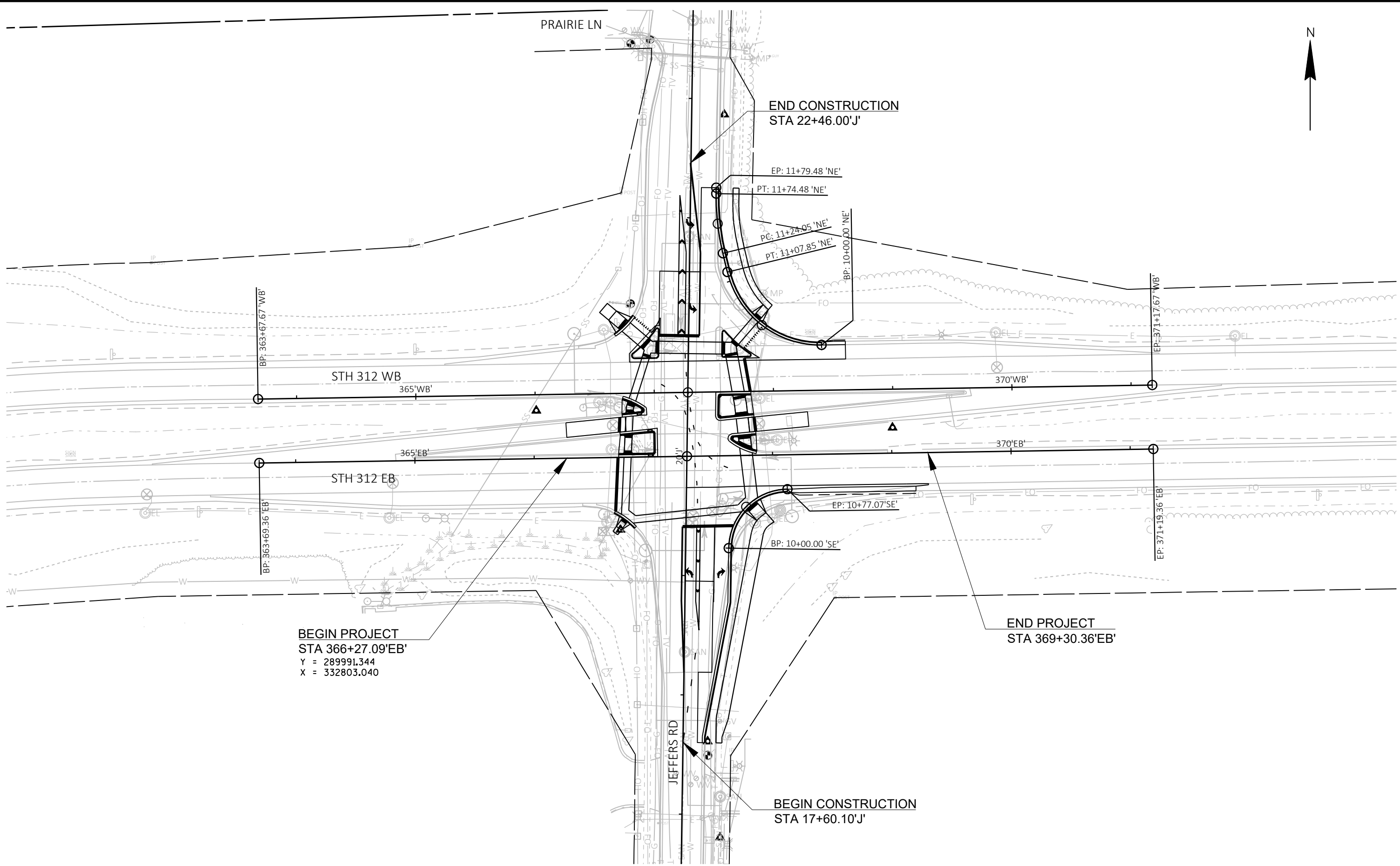
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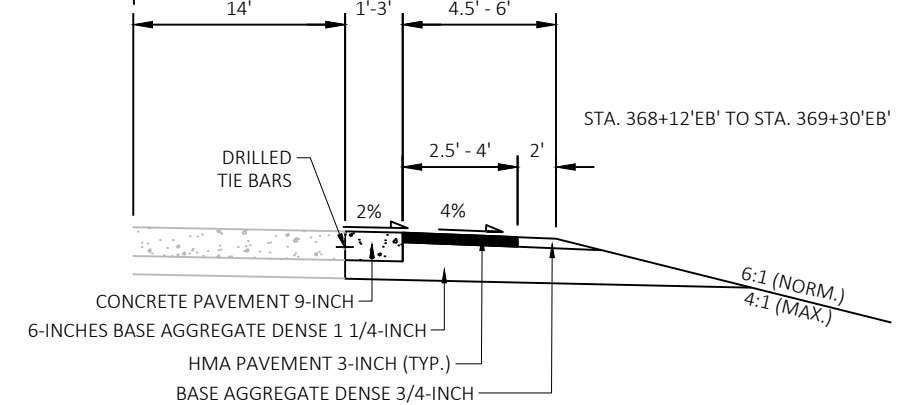
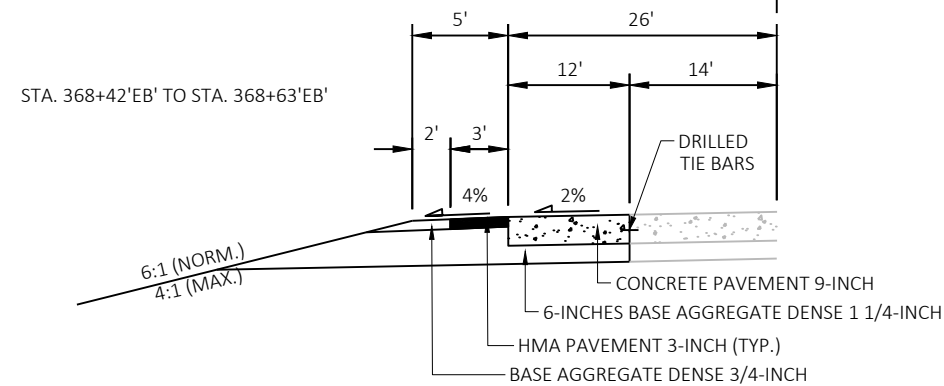
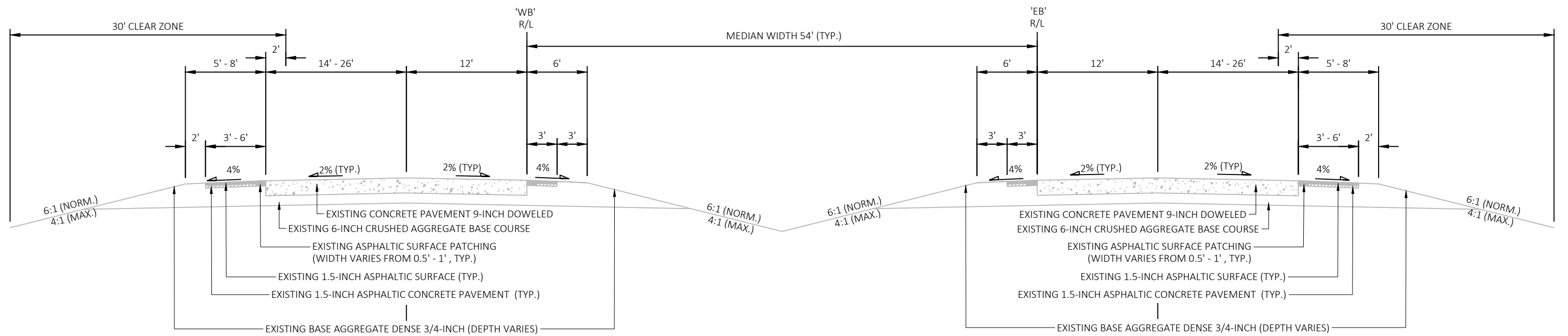
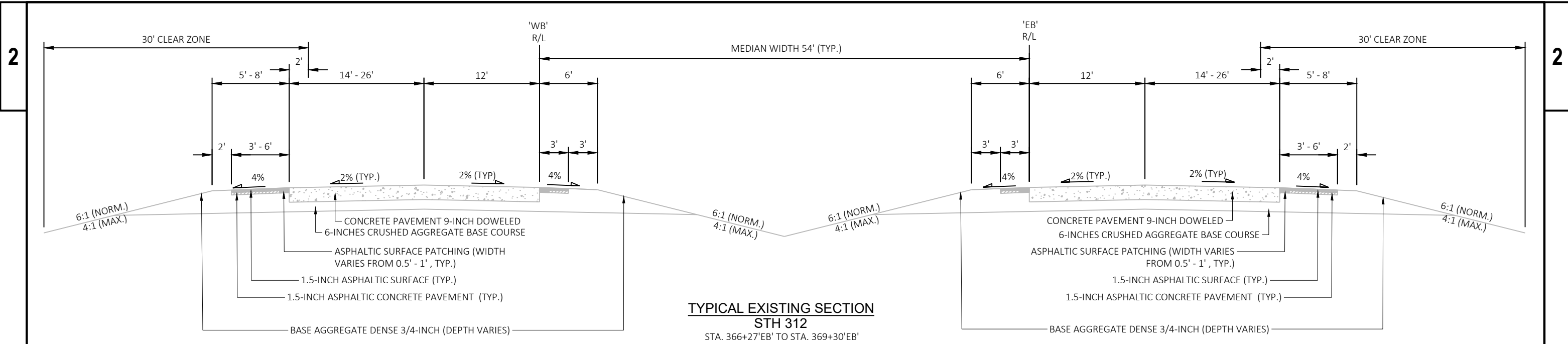
WISCONSIN DEPARTMENT OF TRANSPORTATION  
 DAVID FENSKE  
 718 WEST CLAIRMONT AVENUE  
 EAU CLAIRE, WI 54701  
 PHONE: (715) 836-2800  
 EMAIL: david.fenske@dot.wi.gov

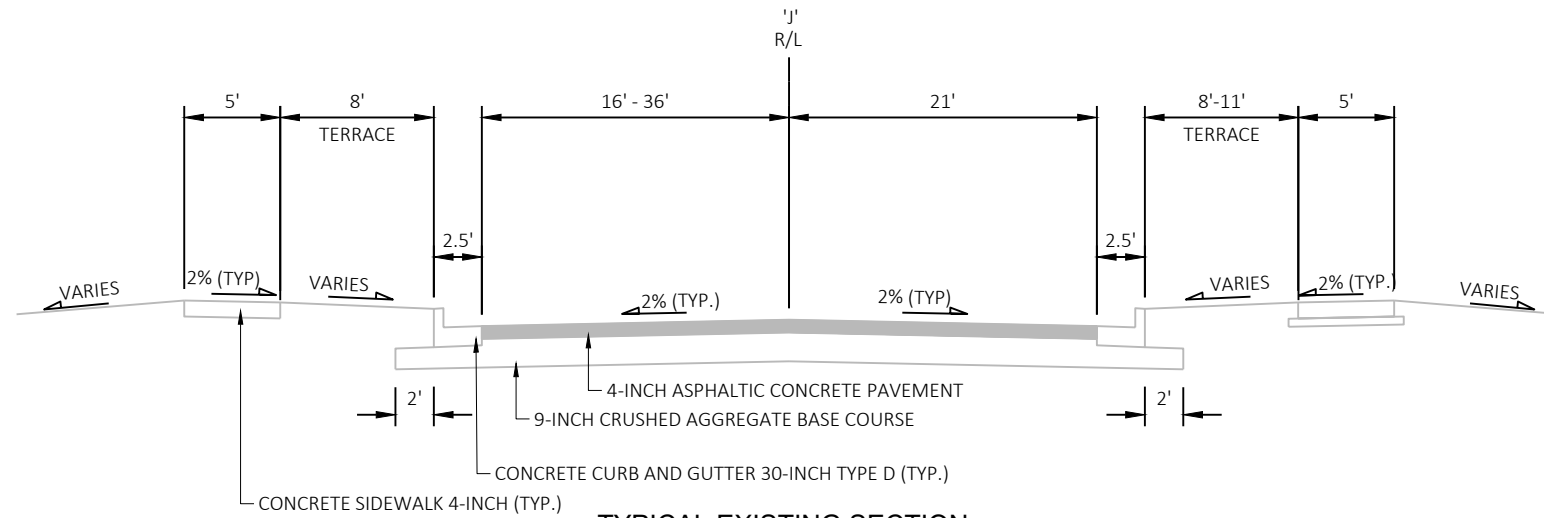
**DESIGN CONTACT (ROADWAY)**

AECOM  
 ANDREW CZECH  
 1350 DEMING WAY, SUITE 100  
 MIDDLETON, WI 53562  
 PHONE: (608) 828-8139  
 EMAIL: andrew.czech@aecom.com



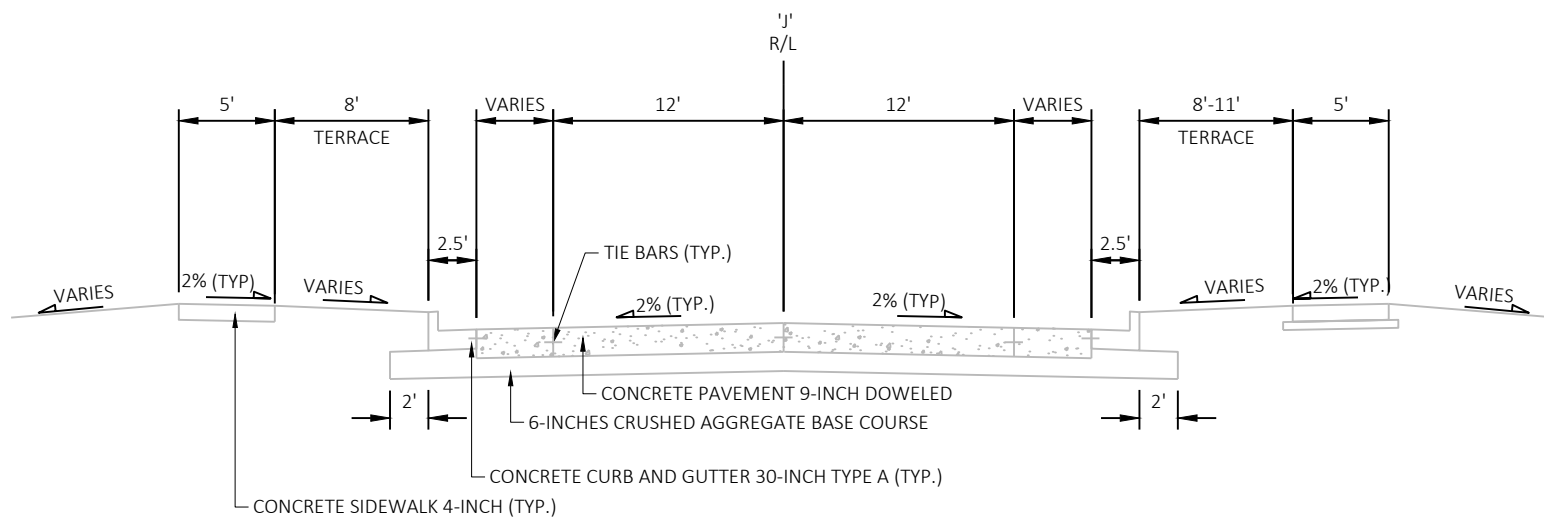






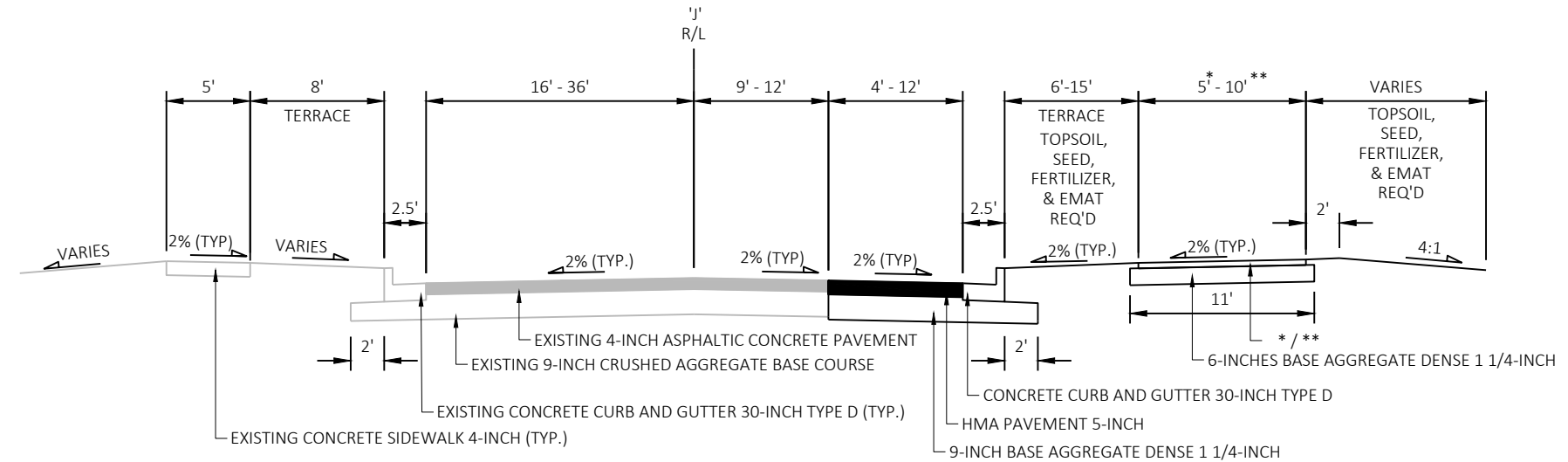
**TYPICAL EXISTING SECTION  
JEFFERS RD**

STA. 17+60'J' TO STA. 18+19'J'  
STA. 21+55'J' TO STA. 22+46'J'



**TYPICAL EXISTING SECTION  
JEFFERS RD**

STA. 18+19'J' TO STA. 21+55'J'

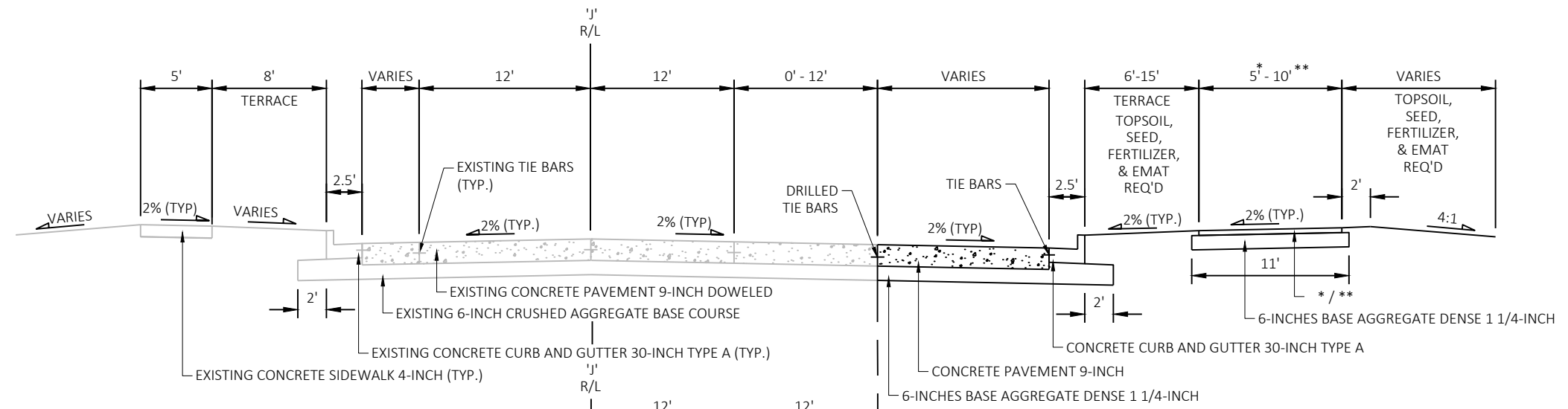


**TYPICAL FINISHED SECTION  
JEFFERS RD**

STA. 17+60'J' TO STA. 18+19'J'  
STA. 21+55'J' TO STA. 22+46'J'

\* = STA. 21+23'J' TO STA. 22+25'J'  
5' WIDE CONCRETE SIDEWALK 4-INCH

\*\* = STA. 17+60'J' TO STA. 19+53'J'  
10' WIDE HMA PAVEMENT 2-INCH

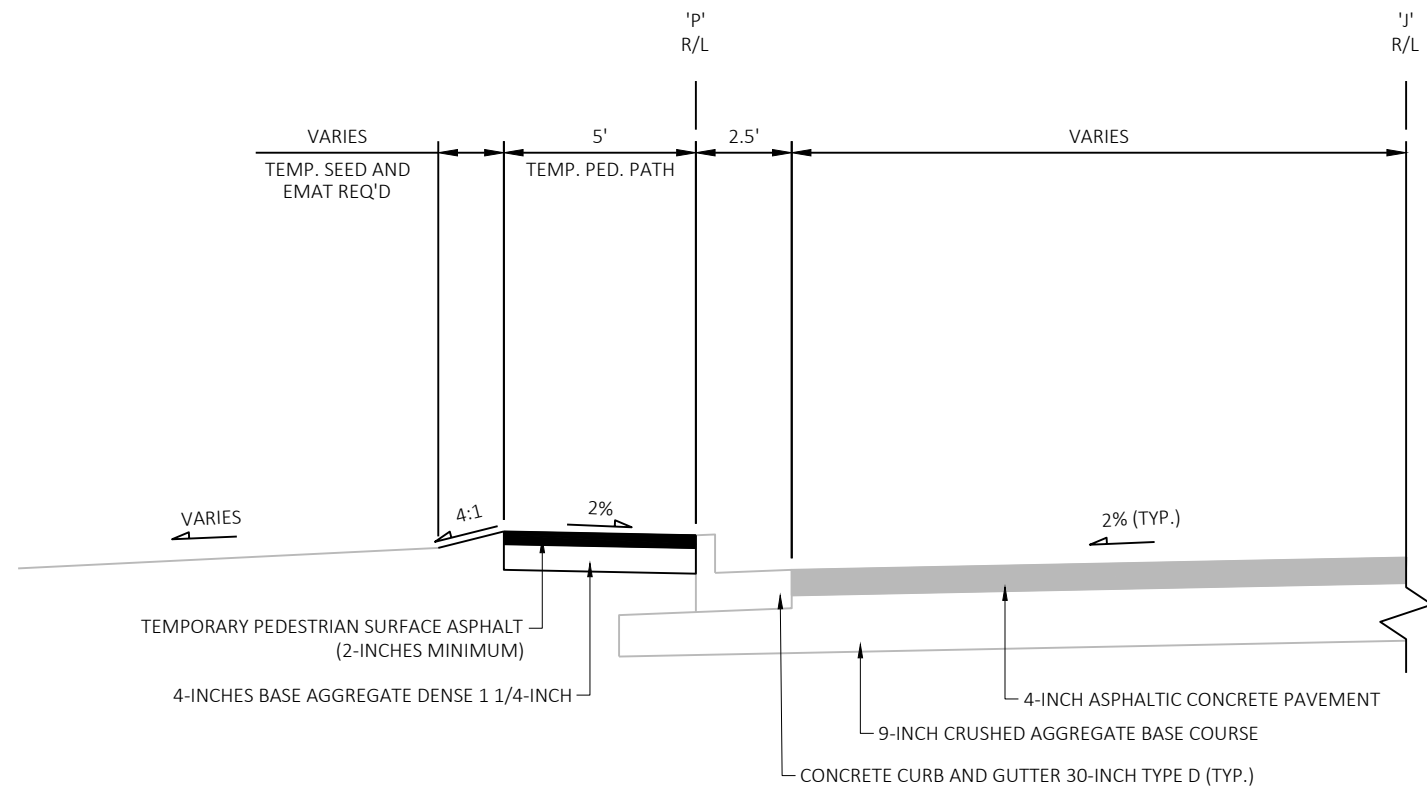


**TYPICAL FINISHED SECTION  
JEFFERS RD**

STA. 18+19'J' TO STA. 21+55'J'

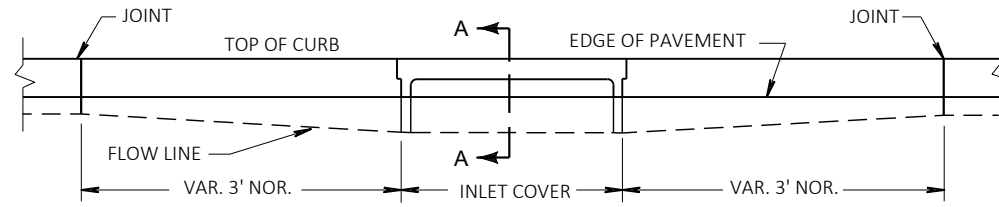
\* = STA. 21+23'J' TO STA. 22+25'J'  
5' WIDE CONCRETE SIDEWALK 4-INCH

\*\* = STA. 17+60'J' TO STA. 19+53'J'  
10' WIDE HMA PAVEMENT 2-INCH

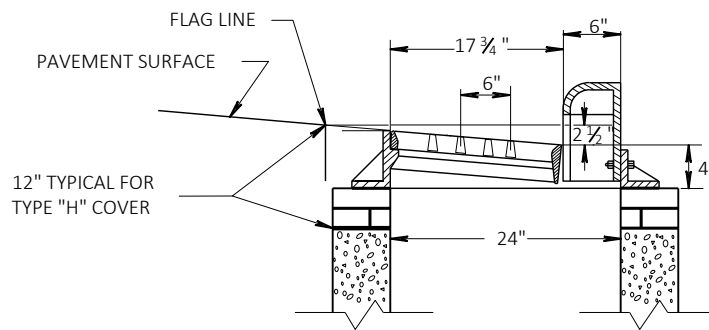
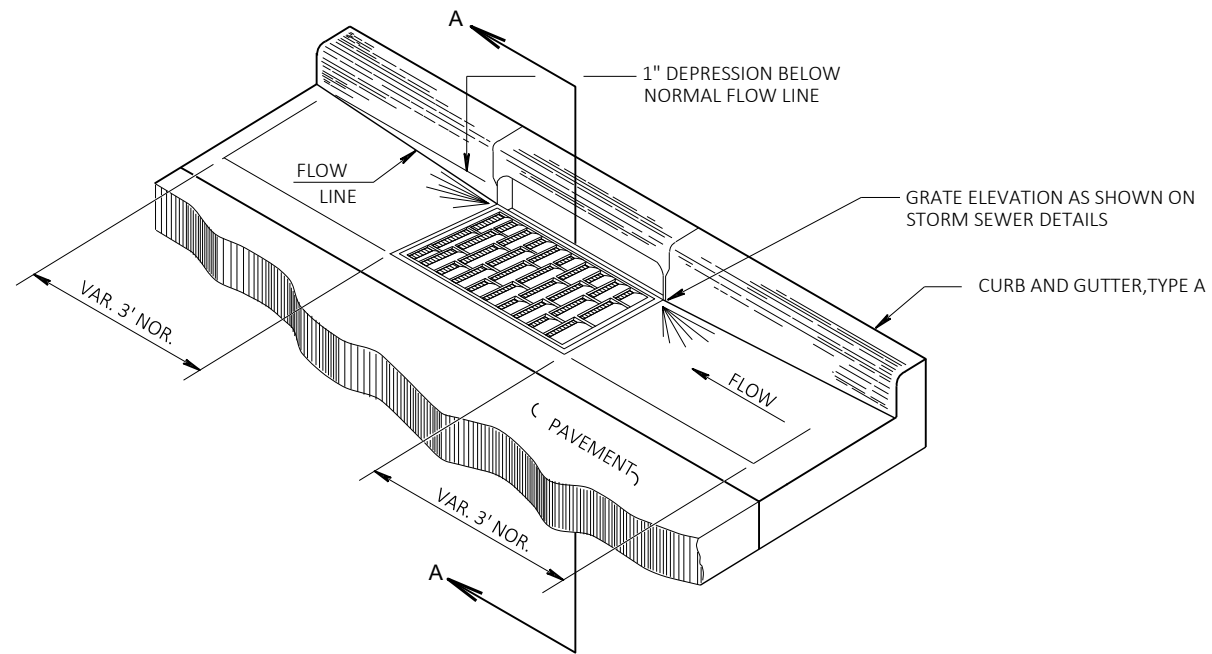


TEMPORARY PEDESTRIAN PATH

STA. 10+00'P' TO STA. 11+40'P'



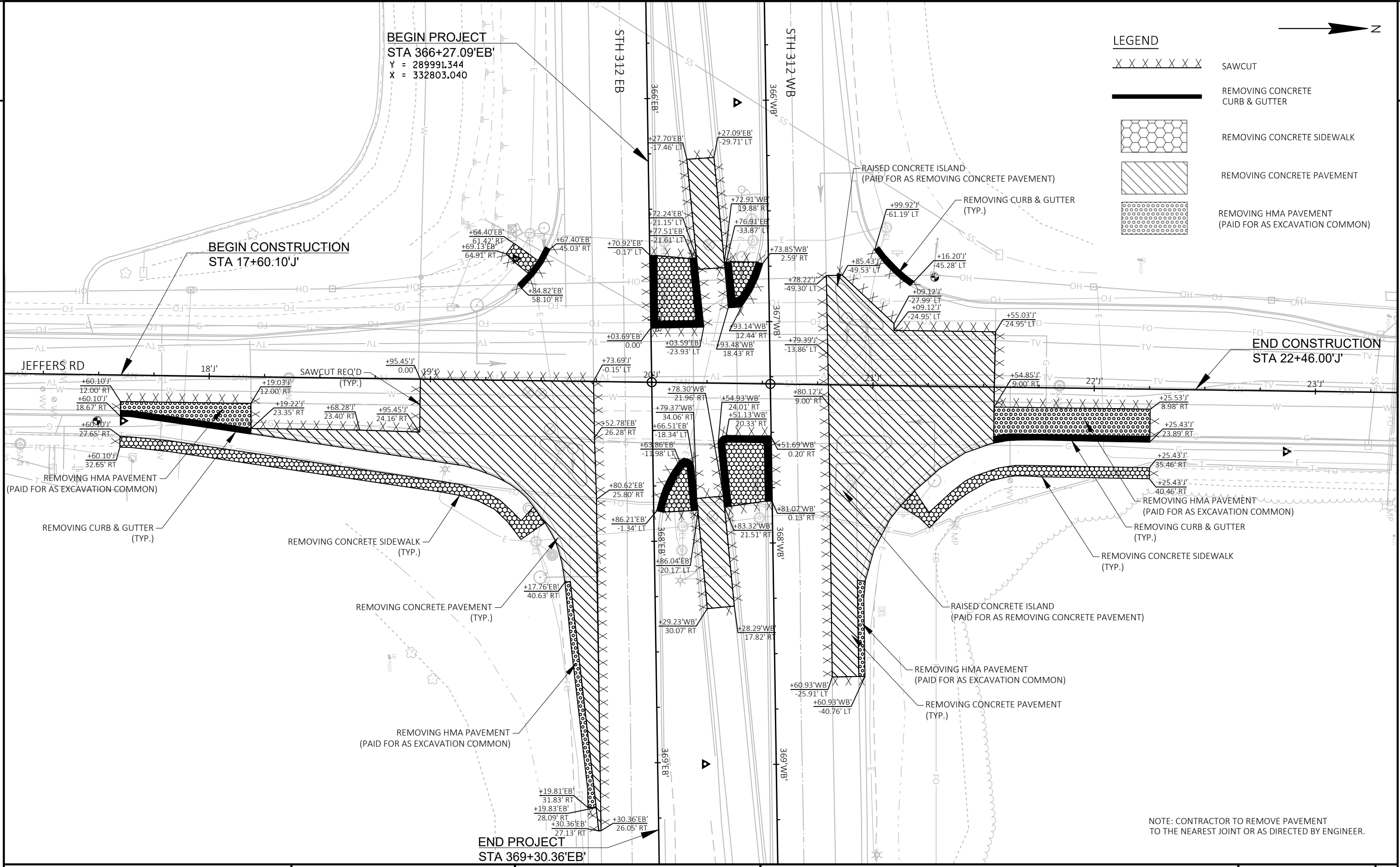
ELEVATION

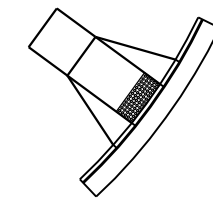
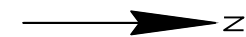


SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS  
(TYPE 3-H INLET SHOWN)







BEGIN CONSTRUCTION  
STA 17+60.10'J'

JEFFERS RD

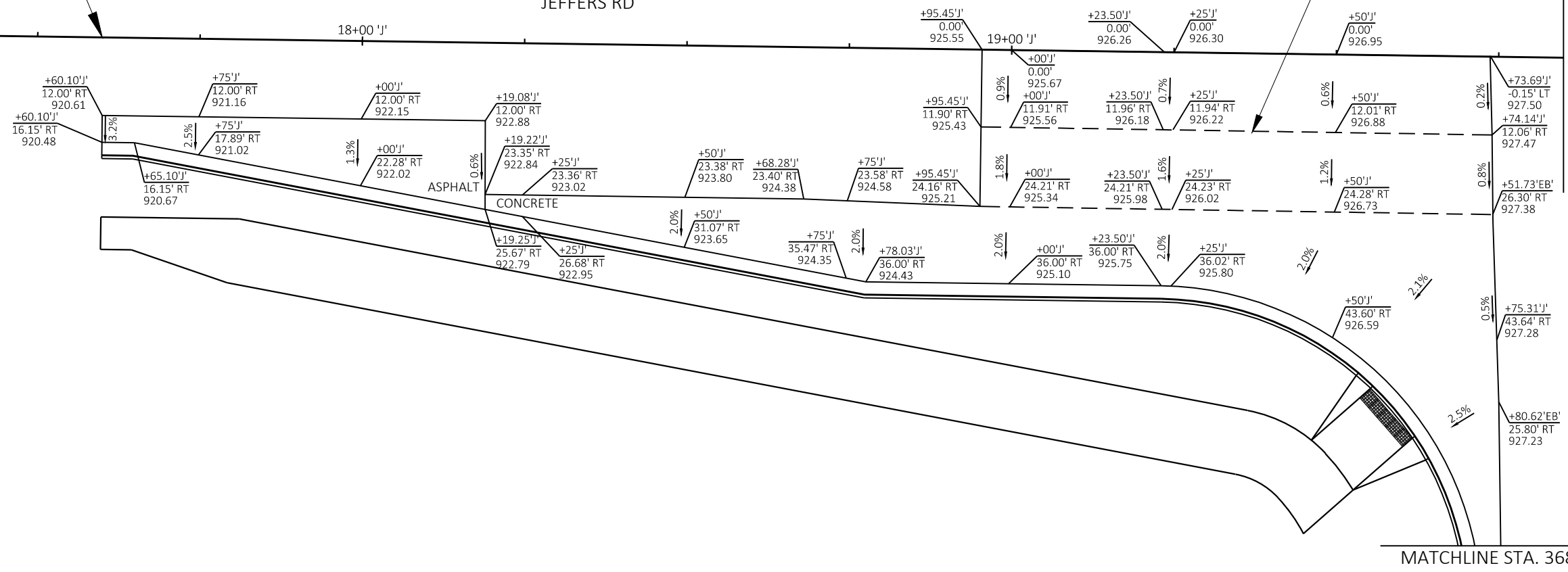
GRADE BREAKLINE (TYP.)

STH 312 EB

MATCHLINE STA. 19+85'J'

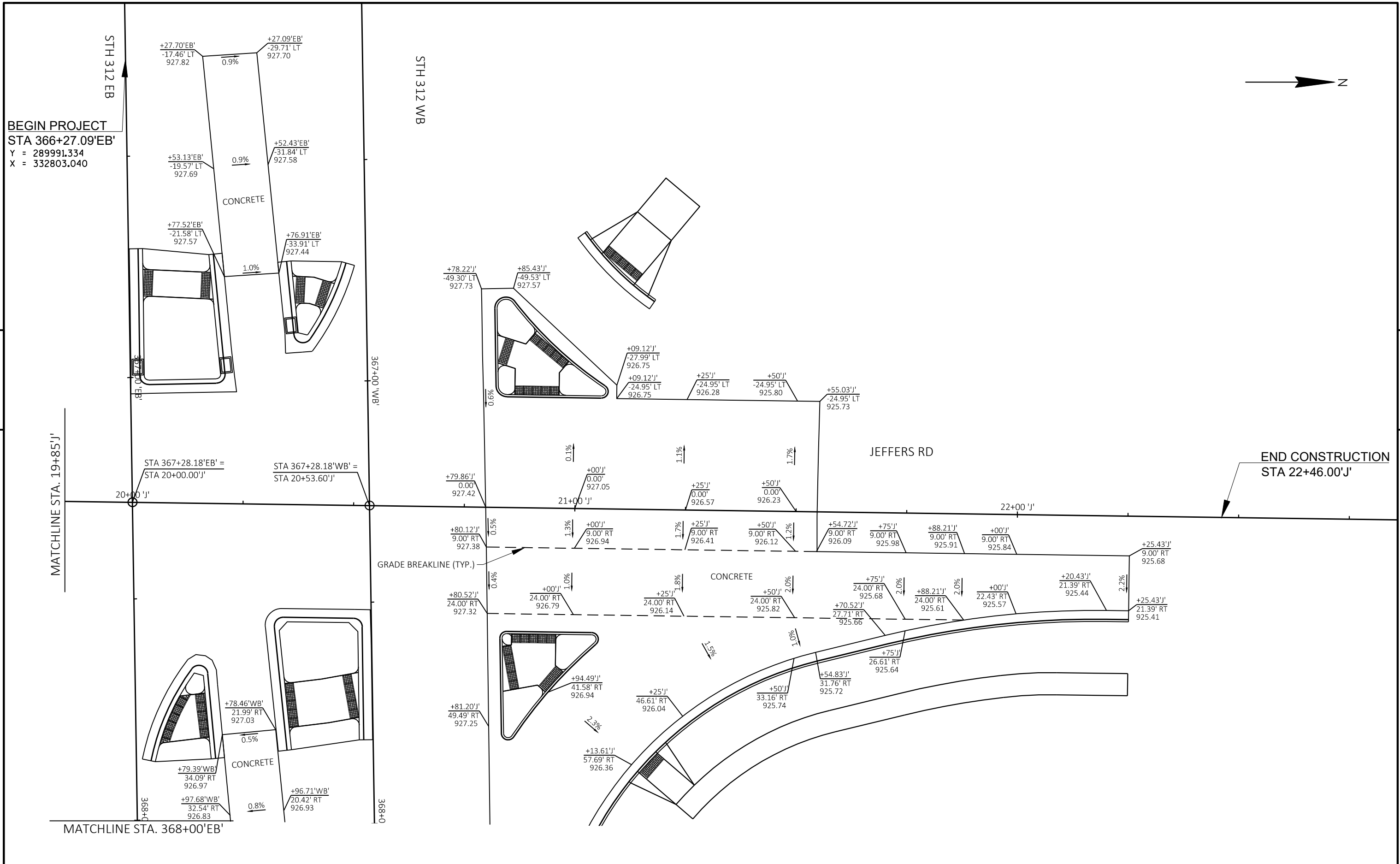
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5



MATCHLINE STA. 368+00'EB'

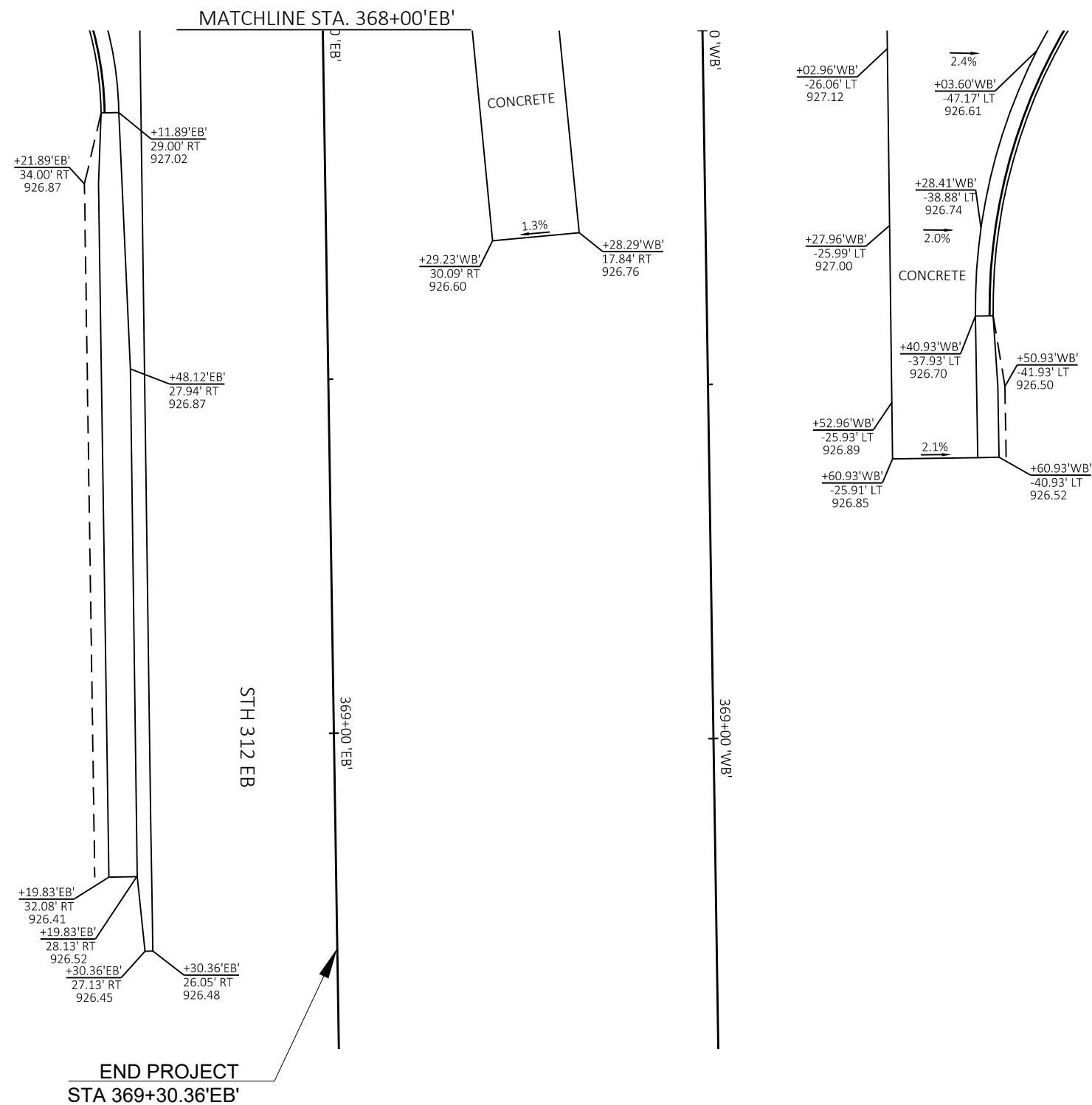
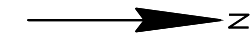
PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	PAVING DETAILS	SHEET	E
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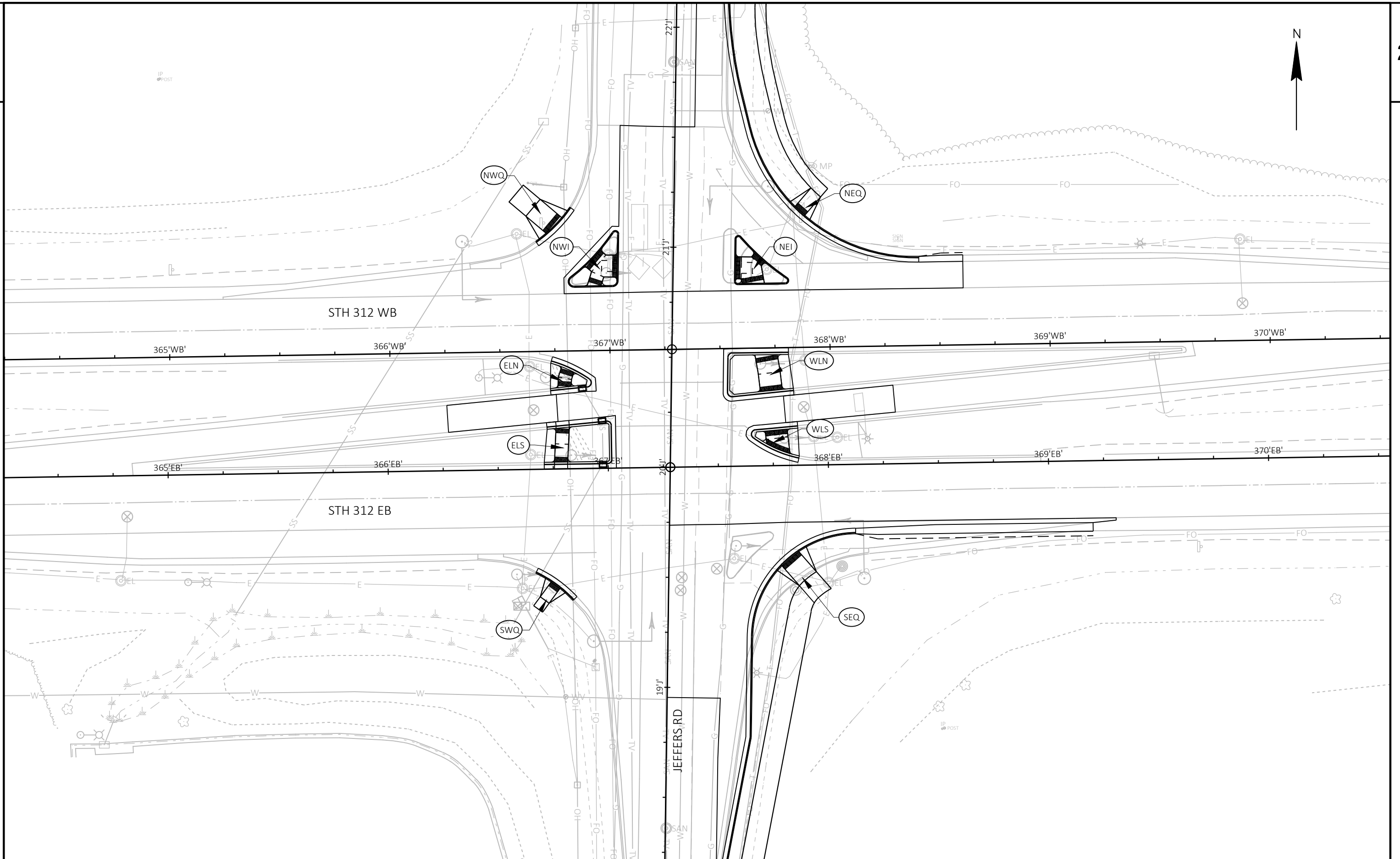
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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	PAVING DETAILS	SHEET	E
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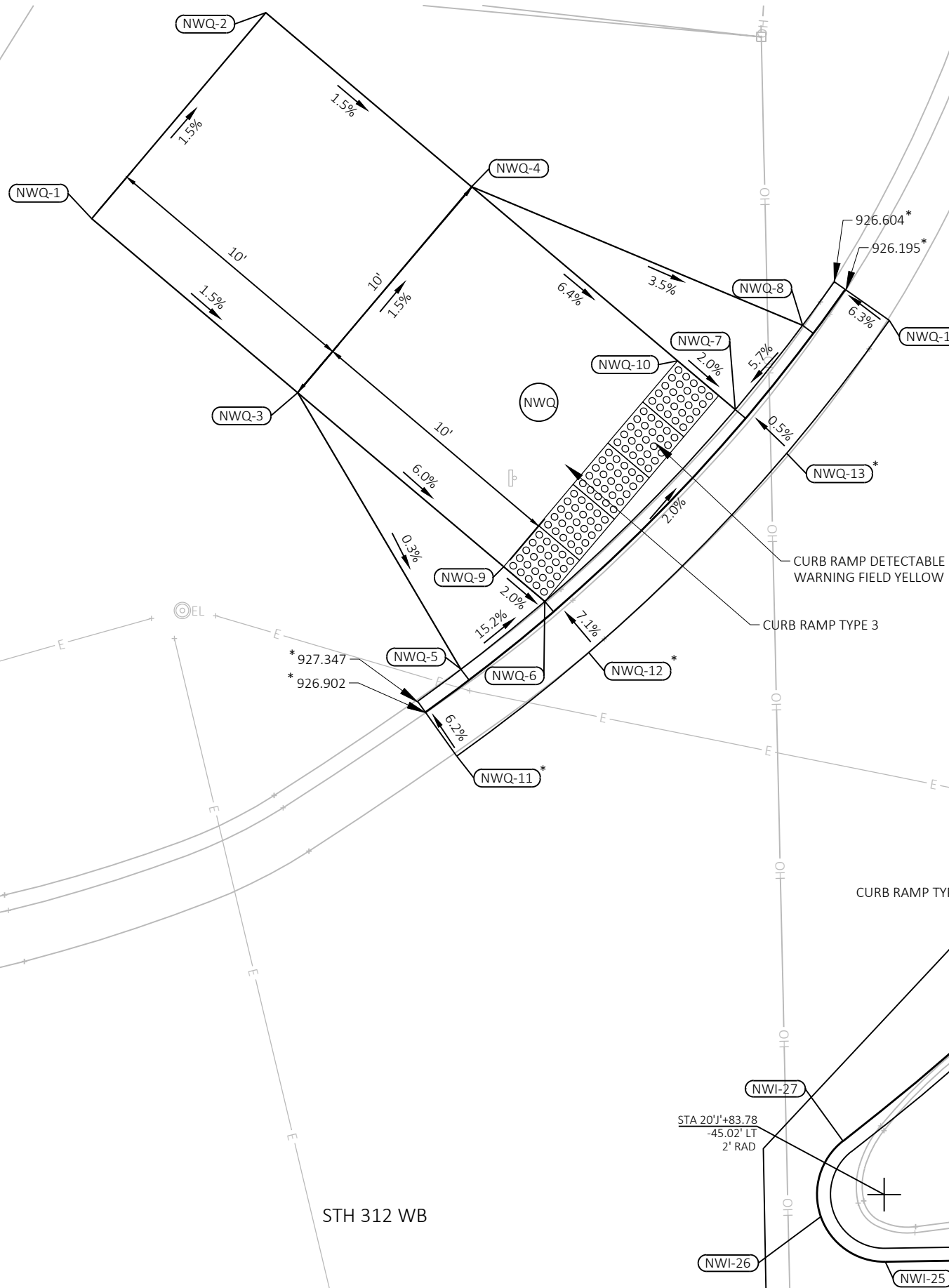


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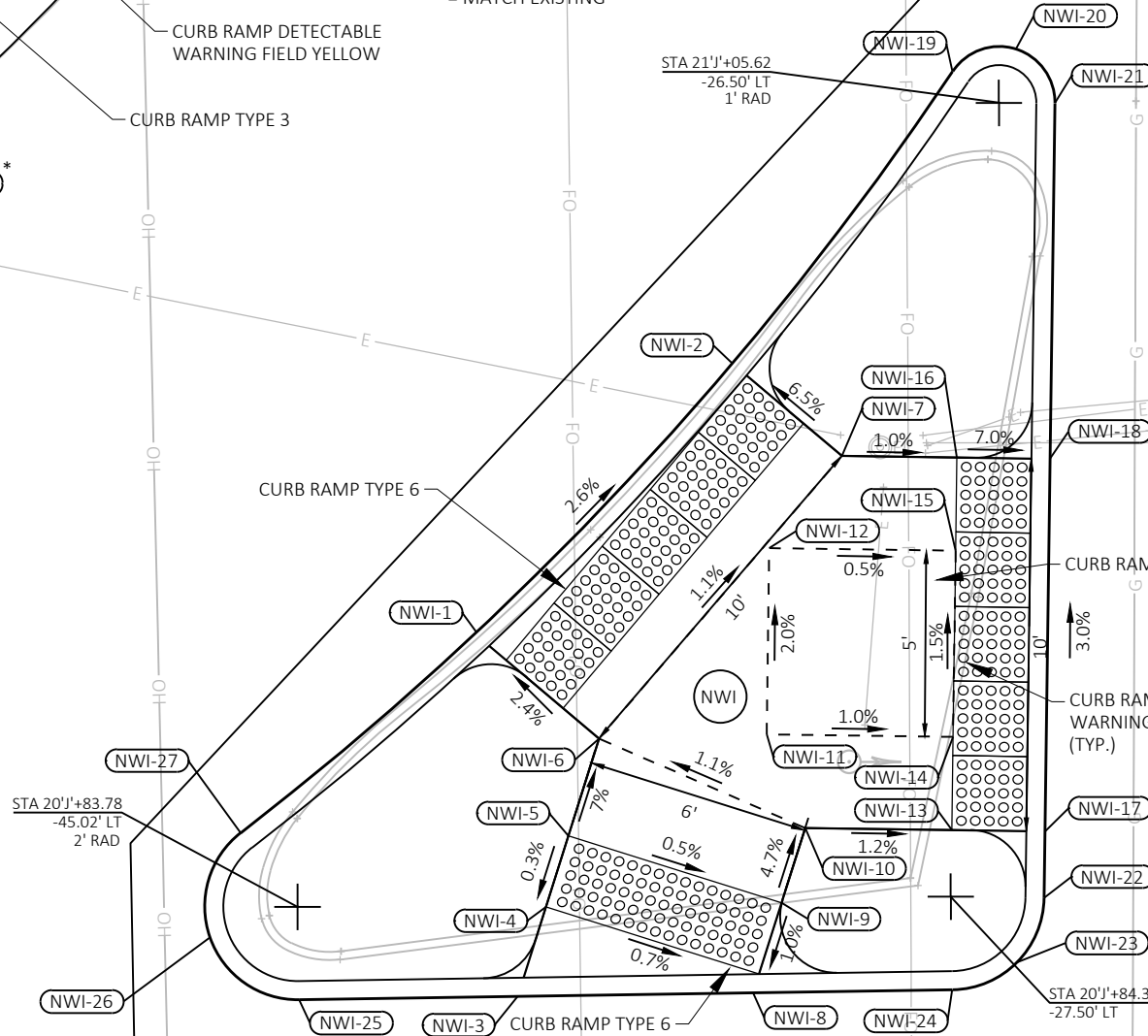
PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CURB RAMP DETAILS: OVERVIEW	SHEET <b>E</b>
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NW Quadrant Curb Ramp (NWQ)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
NWQ-1	21+19.57'J'	74.92' LT	927.49	290113.52	332830.86
NWQ-2	21+27.30'J'	68.57' LT	927.34	290121.16	332837.32
NWQ-3	21+13.22'J'	67.19' LT	927.34	290107.07	332838.50
NWQ-4	21+20.95'J'	60.84' LT	927.19	290114.71	332844.95
NWQ-5	21+03.05'J'	61.00' LT	927.30	290096.81	332844.55
NWQ-6	21+05.60'J'	57.92' LT	926.69	290099.32	332847.67
NWQ-7	21+12.82'J'	50.95' LT	926.49	290106.44	332854.74
NWQ-8	21+15.98'J'	48.50' LT	926.72	290109.56	332857.23
NWQ-9	21+06.87'J'	59.46' LT	926.73	290100.61	332846.14
NWQ-10	21+14.60'J'	53.12' LT	926.55	290108.25	332852.59
NWQ-11	20+99.82'J'	61.11' LT	927.02	290093.58	332844.40
NWQ-12	21+03.74'J'	56.27' LT	926.83	290097.43	332849.30
NWQ-13	21+11.23'J'	49.02' LT	926.49	290104.82	332856.64
NWQ-14	21+16.20'J'	45.28' LT	926.31	290109.75	332860.45

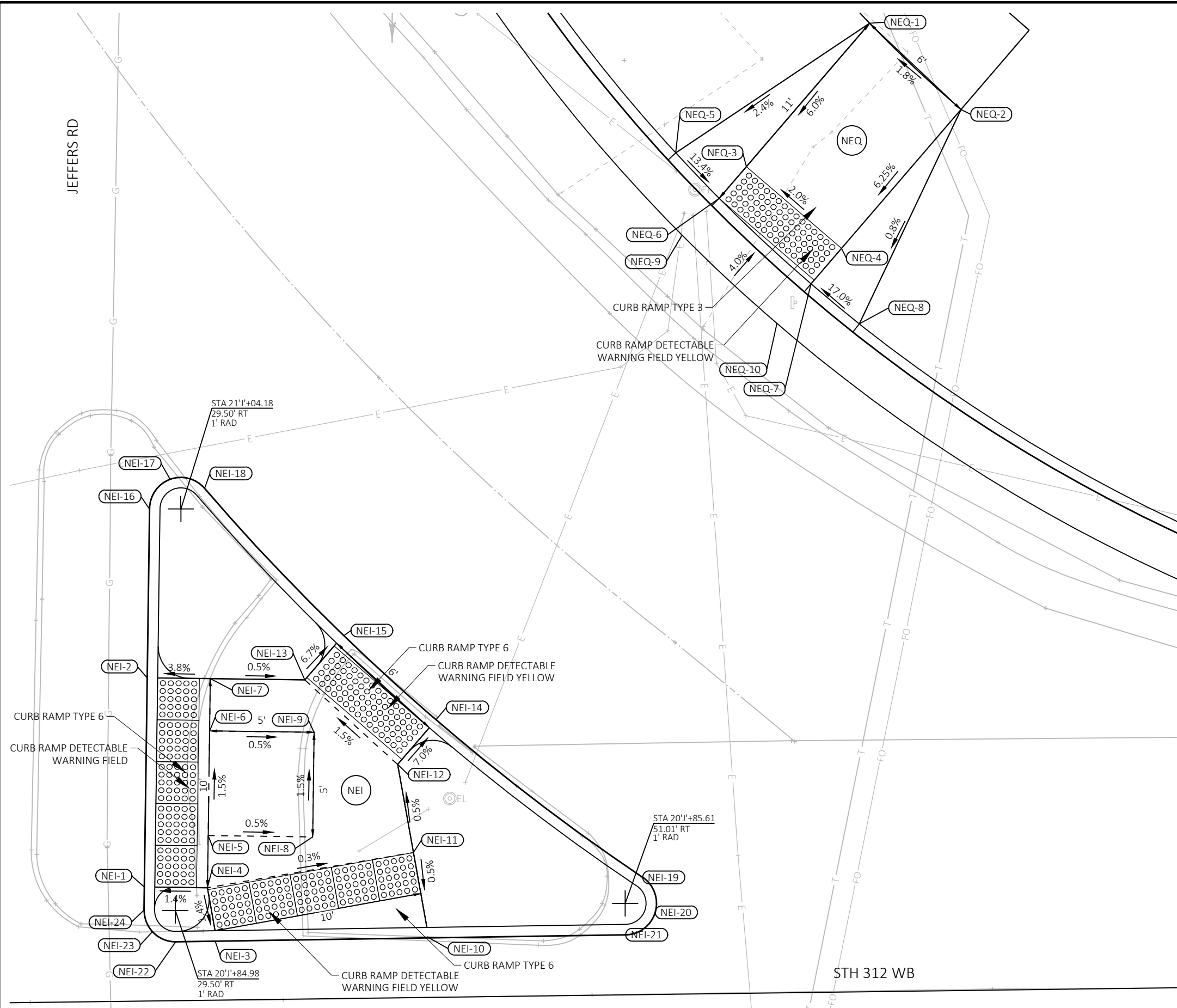
\* = MATCH EXISTING

NW Island Curb Ramps (NWI)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
NWI-1	20+91.22'J'	40.32' LT	927.35	290084.69	332865.06
NWI-2	20+98.53'J'	33.56' LT	927.10	290091.91	332871.93
NWI-3	20+81.46'J'	39.09' LT	927.63	290074.92	332866.17
NWI-4	20+83.87'J'	38.36' LT	927.64	290077.32	332866.92
NWI-5	20+85.79'J'	37.79' LT	927.64	290079.23	332867.52
NWI-6	20+88.41'J'	37.00' LT	927.45	290081.84	332868.35
NWI-7	20+96.08'J'	30.59' LT	927.35	290089.42	332874.86
NWI-8	20+81.64'J'	32.77' LT	927.59	290075.02	332872.49
NWI-9	20+84.07'J'	32.04' LT	927.61	290077.43	332873.25
NWI-10	20+86.08'J'	31.43' LT	927.51	290079.44	332873.88
NWI-11	20+88.58'J'	32.50' LT	927.48	290081.95	332872.85
NWI-12	20+93.58'J'	32.50' LT	927.38	290086.95	332872.92
NWI-13	20+86.08'J'	27.50' LT	927.47	290079.38	332877.82
NWI-14	20+88.58'J'	27.50' LT	927.43	290081.88	332877.85
NWI-15	20+93.58'J'	27.50' LT	927.35	290086.88	332877.92
NWI-16	20+96.08'J'	27.50' LT	927.32	290089.38	332877.95
NWI-17	20+86.08'J'	25.00' LT	927.44	290079.35	332880.31
NWI-18	20+96.08'J'	25.00' LT	927.14	290089.35	332880.45
NWI-19	21+06.44'J'	27.76' LT	926.84	290099.74	332877.84
NWI-20	21+07.06'J'	26.07' LT	926.80	290100.34	332879.53
NWI-21	21+05.64'J'	25.00' LT	926.85	290098.90	332880.58
NWI-22	20+84.30'J'	25.00' LT	927.48	290077.56	332880.29
NWI-23	20+82.56'J'	25.71' LT	927.52	290075.83	332879.56
NWI-24	20+81.80'J'	27.43' LT	927.54	290075.10	332877.83
NWI-25	20+81.28'J'	44.95' LT	927.66	290074.83	332860.30
NWI-26	20+82.93'J'	47.37' LT	927.62	290076.50	332857.90
NWI-27	20+85.74'J'	46.58' LT	927.55	290079.30	332858.73



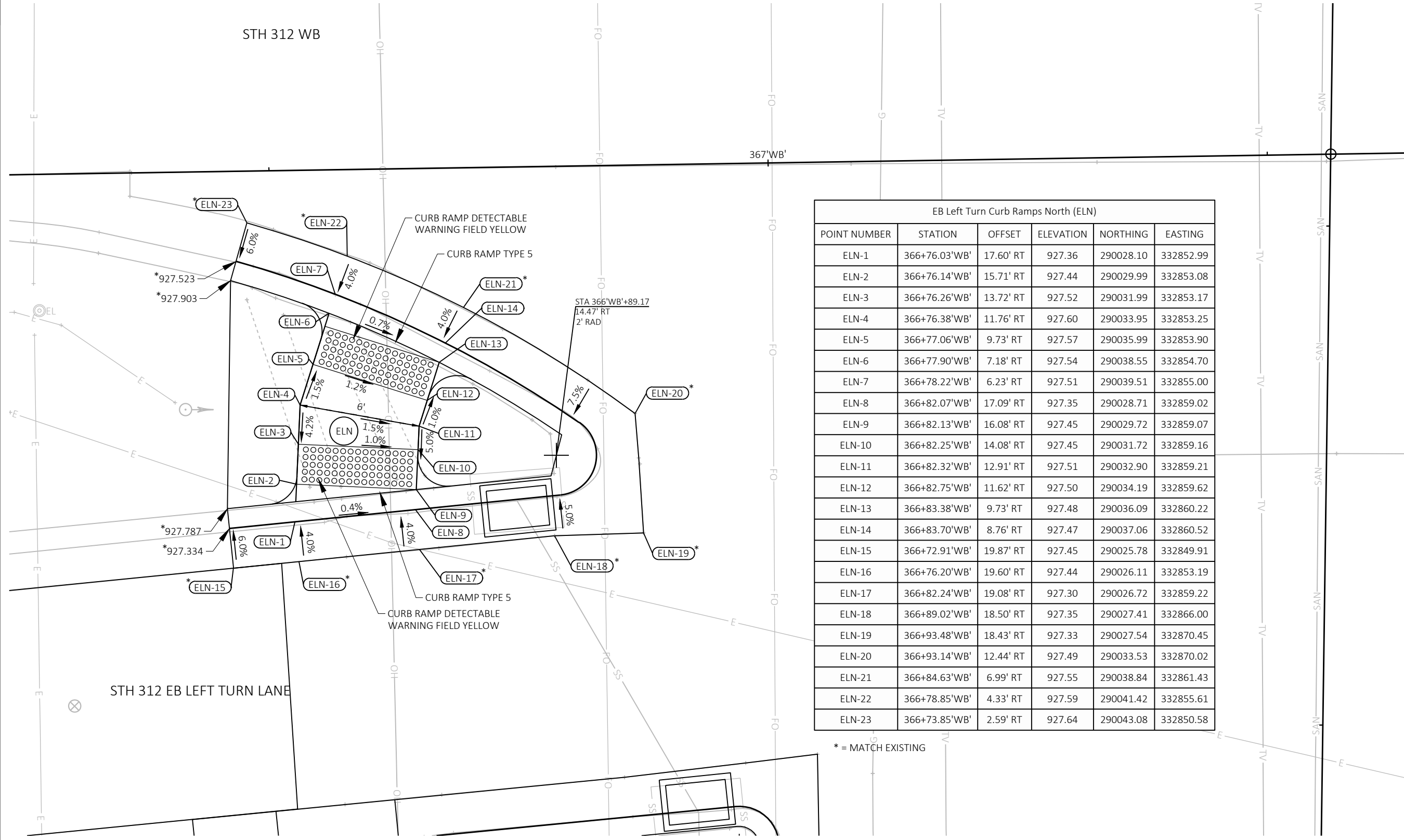
STH 312 WB

JEFFERS RD



NE Quadrant Curb Ramp (NEQ)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
NEQ-1	21+27.85'J'	62.12' RT	926.89	290119.91	332968.01
NEQ-2	21+23.79'J'	66.55' RT	927.00	290115.79	332972.38
NEQ-3	21+20.92'J'	56.32' RT	926.35	290113.05	332962.11
NEQ-4	21+17.07'J'	60.93' RT	926.45	290109.14	332966.66
NEQ-5	21+21.52'J'	52.94' RT	926.63	290113.71	332958.73
NEQ-6	21+19.38'J'	55.04' RT	926.23	290111.54	332960.81
NEQ-7	21+15.36'J'	59.49' RT	926.31	290107.45	332965.20
NEQ-8	21+13.48'J'	61.83' RT	926.91	290105.54	332967.52
NEQ-9	21+17.60'J'	53.29' RT	926.27	290109.78	332959.04
NEQ-10	21+13.44'J'	57.89' RT	926.36	290105.55	332963.57

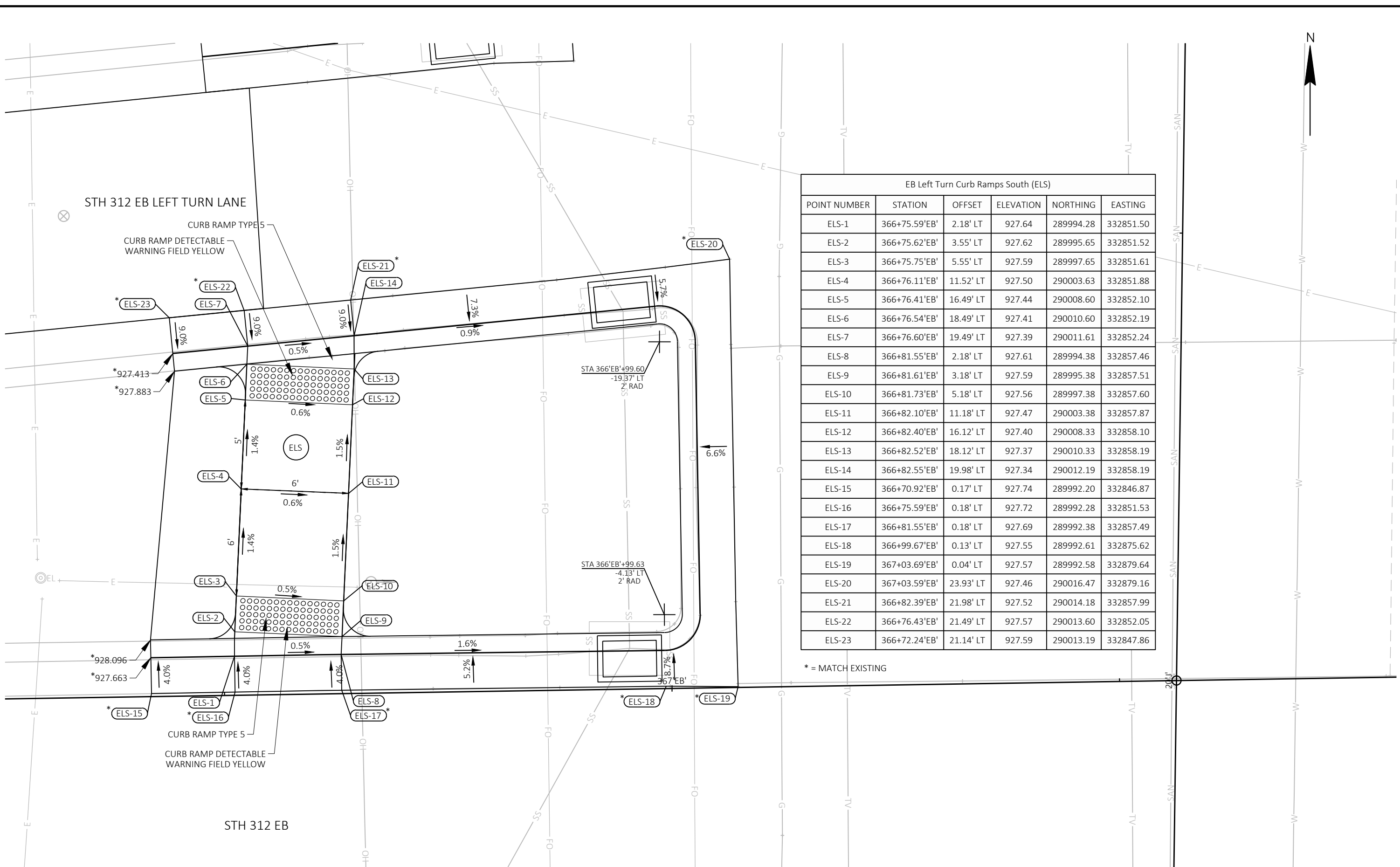
NE Island Curb Ramps (NEI)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
NEI-1	20+86.08'J'	28.00' RT	927.15	290078.62	332933.31
NEI-2	20+96.08'J'	28.00' RT	926.93	290088.61	332933.45
NEI-3	20+83.53'J'	31.44' RT	927.16	290076.02	332936.71
NEI-4	20+86.08'J'	31.02' RT	927.20	290078.57	332936.33
NEI-5	20+88.58'J'	31.02' RT	927.16	290081.07	332936.37
NEI-6	20+93.58'J'	31.02' RT	927.08	290086.07	332936.43
NEI-7	20+96.08'J'	31.02' RT	927.05	290088.57	332936.47
NEI-8	20+88.58'J'	36.02' RT	927.13	290081.00	332941.36
NEI-9	20+93.58'J'	36.02' RT	927.06	290086.00	332941.43
NEI-10	20+83.89'J'	41.56' RT	927.15	290076.23	332946.84
NEI-11	20+87.91'J'	40.85' RT	927.17	290080.26	332946.19
NEI-12	20+92.11'J'	40.04' RT	927.11	290084.47	332945.43
NEI-13	20+96.08'J'	35.54' RT	927.02	290088.51	332940.99
NEI-14	20+94.27'J'	41.85' RT	926.92	290086.60	332947.27
NEI-15	20+98.23'J'	37.38' RT	926.83	290090.63	332942.85
NEI-16	21+04.16'J'	28.00' RT	926.66	290096.69	332933.56
NEI-17	21+05.58'J'	28.97' RT	926.87	290098.10	332934.55
NEI-18	21+05.18'J'	30.62' RT	926.63	290097.67	332936.20
NEI-19	20+86.87'J'	51.83' RT	927.23	290079.07	332957.15
NEI-20	20+85.20'J'	52.46' RT	927.26	290077.40	332957.75
NEI-21	20+84.11'J'	51.06' RT	927.11	290076.32	332956.34
NEI-22	20+83.48'J'	29.54' RT	927.21	290075.99	332934.82
NEI-23	20+83.94'J'	28.41' RT	927.21	290076.47	332933.69
NEI-24	20+84.98'J'	28.00' RT	927.18	290077.51	332933.29



EB Left Turn Curb Ramps North (ELN)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
ELN-1	366+76.03'WB'	17.60' RT	927.36	290028.10	332852.99
ELN-2	366+76.14'WB'	15.71' RT	927.44	290029.99	332853.08
ELN-3	366+76.26'WB'	13.72' RT	927.52	290031.99	332853.17
ELN-4	366+76.38'WB'	11.76' RT	927.60	290033.95	332853.25
ELN-5	366+77.06'WB'	9.73' RT	927.57	290035.99	332853.90
ELN-6	366+77.90'WB'	7.18' RT	927.54	290038.55	332854.70
ELN-7	366+78.22'WB'	6.23' RT	927.51	290039.51	332855.00
ELN-8	366+82.07'WB'	17.09' RT	927.35	290028.71	332859.02
ELN-9	366+82.13'WB'	16.08' RT	927.45	290029.72	332859.07
ELN-10	366+82.25'WB'	14.08' RT	927.45	290031.72	332859.16
ELN-11	366+82.32'WB'	12.91' RT	927.51	290032.90	332859.21
ELN-12	366+82.75'WB'	11.62' RT	927.50	290034.19	332859.62
ELN-13	366+83.38'WB'	9.73' RT	927.48	290036.09	332860.22
ELN-14	366+83.70'WB'	8.76' RT	927.47	290037.06	332860.52
ELN-15	366+72.91'WB'	19.87' RT	927.45	290025.78	332849.91
ELN-16	366+76.20'WB'	19.60' RT	927.44	290026.11	332853.19
ELN-17	366+82.24'WB'	19.08' RT	927.30	290026.72	332859.22
ELN-18	366+89.02'WB'	18.50' RT	927.35	290027.41	332866.00
ELN-19	366+93.48'WB'	18.43' RT	927.33	290027.54	332870.45
ELN-20	366+93.14'WB'	12.44' RT	927.49	290033.53	332870.02
ELN-21	366+84.63'WB'	6.99' RT	927.55	290038.84	332861.43
ELN-22	366+78.85'WB'	4.33' RT	927.59	290041.42	332855.61
ELN-23	366+73.85'WB'	2.59' RT	927.64	290043.08	332850.58

\* = MATCH EXISTING





EB Left Turn Curb Ramps South (ELS)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
ELS-1	366+75.59'EB'	2.18' LT	927.64	289994.28	332851.50
ELS-2	366+75.62'EB'	3.55' LT	927.62	289995.65	332851.52
ELS-3	366+75.75'EB'	5.55' LT	927.59	289997.65	332851.61
ELS-4	366+76.11'EB'	11.52' LT	927.50	290003.63	332851.88
ELS-5	366+76.41'EB'	16.49' LT	927.44	290008.60	332852.10
ELS-6	366+76.54'EB'	18.49' LT	927.41	290010.60	332852.19
ELS-7	366+76.60'EB'	19.49' LT	927.39	290011.61	332852.24
ELS-8	366+81.55'EB'	2.18' LT	927.61	289994.38	332857.46
ELS-9	366+81.61'EB'	3.18' LT	927.59	289995.38	332857.51
ELS-10	366+81.73'EB'	5.18' LT	927.56	289997.38	332857.60
ELS-11	366+82.10'EB'	11.18' LT	927.47	290003.38	332857.87
ELS-12	366+82.40'EB'	16.12' LT	927.40	290008.33	332858.10
ELS-13	366+82.52'EB'	18.12' LT	927.37	290010.33	332858.19
ELS-14	366+82.55'EB'	19.98' LT	927.34	290012.19	332858.19
ELS-15	366+70.92'EB'	0.17' LT	927.74	289992.20	332846.87
ELS-16	366+75.59'EB'	0.18' LT	927.72	289992.28	332851.53
ELS-17	366+81.55'EB'	0.18' LT	927.69	289992.38	332857.49
ELS-18	366+99.67'EB'	0.13' LT	927.55	289992.61	332875.62
ELS-19	367+03.69'EB'	0.04' LT	927.57	289992.58	332879.64
ELS-20	367+03.59'EB'	23.93' LT	927.46	290016.47	332879.16
ELS-21	366+82.39'EB'	21.98' LT	927.52	290014.18	332857.99
ELS-22	366+76.43'EB'	21.49' LT	927.57	290013.60	332852.05
ELS-23	366+72.24'EB'	21.14' LT	927.59	290013.19	332847.86

\* = MATCH EXISTING

STH 312 WB

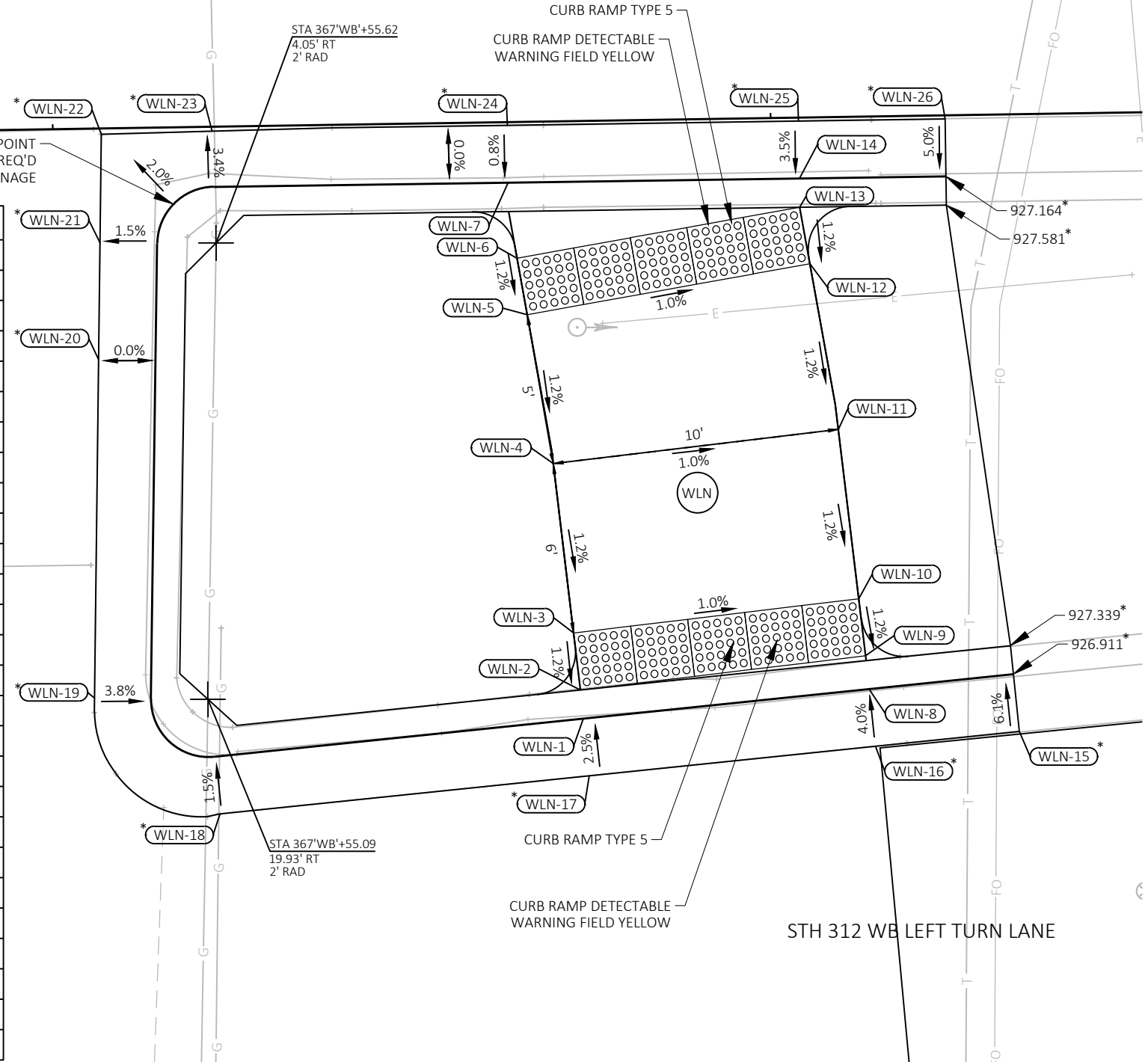


HIGH POINT  
REJECT CURB REQ'D  
TO PROVIDE POSITIVE DRAINAGE

WB Left Turn Curb Ramps North (WLN)

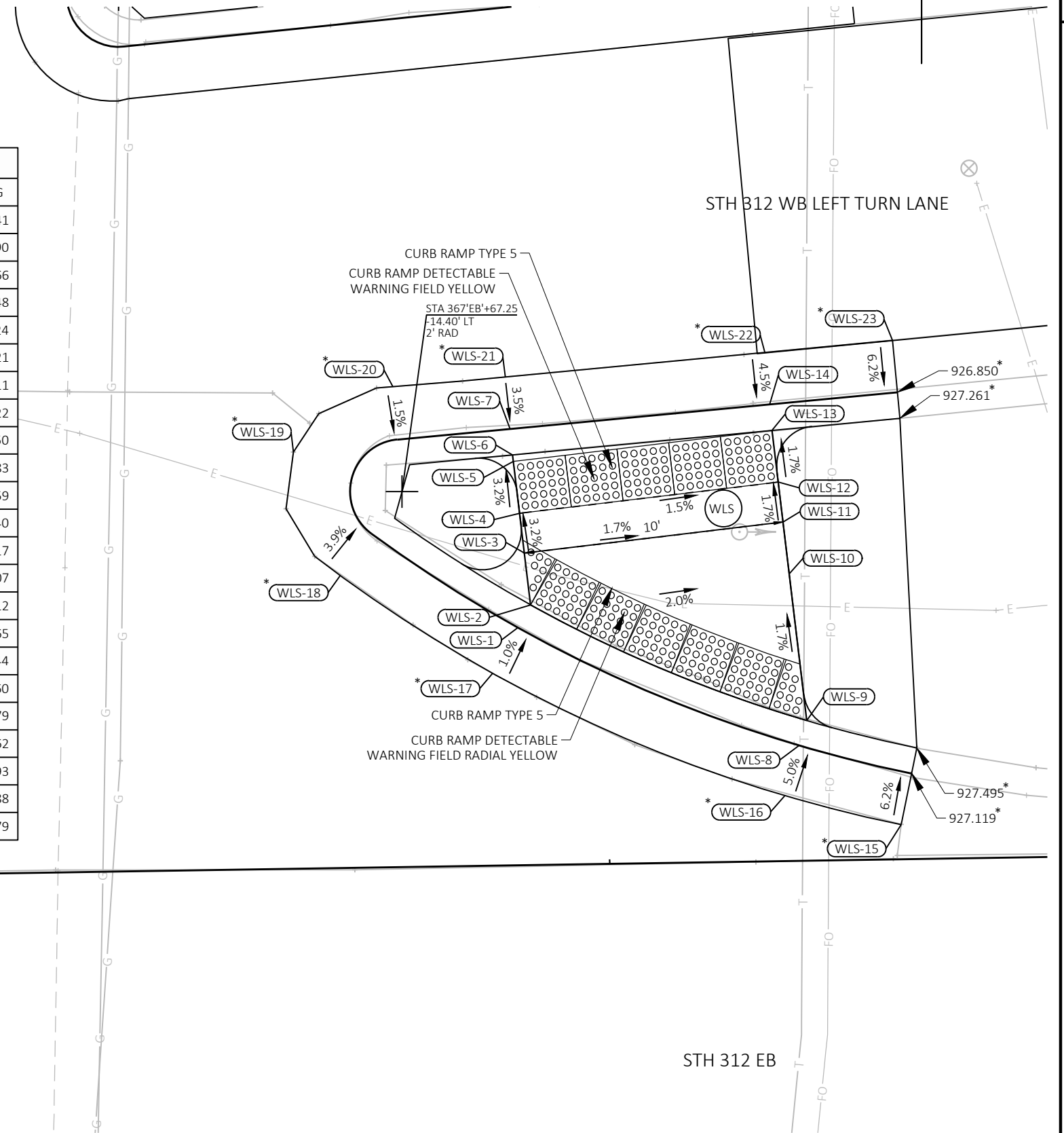
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
WLN-1	367+68.15'WB'	20.81' RT	927.06	290026.34	332945.16
WLN-2	367+68.07'WB'	19.81' RT	927.07	290027.33	332945.05
WLN-3	367+67.86'WB'	17.82' RT	927.09	290029.32	332944.82
WLN-4	367+67.25'WB'	11.91' RT	927.16	290035.21	332944.11
WLN-5	367+66.42'WB'	6.72' RT	927.23	290040.40	332943.20
WLN-6	367+66.10'WB'	4.74' RT	927.24	290042.37	332942.85
WLN-7	367+65.83'WB'	2.11' RT	927.27	290044.99	332942.54
WLN-8	367+78.12'WB'	19.94' RT	926.96	290027.36	332955.10
WLN-9	367+78.01'WB'	18.77' RT	926.97	290028.52	332954.98
WLN-10	367+77.81'WB'	16.78' RT	926.99	290030.51	332954.74
WLN-11	367+77.19'WB'	10.88' RT	927.07	290036.40	332954.04
WLN-12	367+76.29'WB'	5.10' RT	927.14	290042.17	332953.04
WLN-13	367+75.96'WB'	3.12' RT	927.16	290044.14	332952.69
WLN-14	367+75.96'WB'	2.12' RT	927.17	290045.14	332952.67
WLN-15	367+83.32'WB'	21.49' RT	927.00	290025.89	332960.33
WLN-16	367+78.31'WB'	21.93' RT	927.04	290025.37	332955.33
WLN-17	367+68.33'WB'	22.80' RT	927.11	290024.35	332945.36
WLN-18	367+55.45'WB'	23.92' RT	927.22	290023.02	332932.51
WLN-19	367+51.15'WB'	19.83' RT	927.29	290027.05	332928.14
WLN-20	367+51.47'WB'	8.05' RT	927.31	290038.83	332928.28
WLN-21	367+51.58'WB'	3.99' RT	927.31	290042.90	332928.33
WLN-22	367+51.69'WB'	0.20' RT	927.32	290046.68	332928.37
WLN-23	367+55.55'WB'	0.16' RT	927.31	290046.79	332932.23
WLN-24	367+65.83'WB'	0.13' RT	927.29	290046.97	332942.51
WLN-25	367+75.97'WB'	0.12' RT	927.24	290047.14	332952.65
WLN-26	367+81.07'WB'	0.13' RT	927.23	290047.21	332957.75

\* = MATCH EXISTING



WB Left Turn Curb Ramps South (WLS)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
WLS-1	367+71.62'EB'	9.11' LT	927.23	290002.72	332947.41
WLS-2	367+72.12'EB'	9.98' LT	927.19	290003.59	332947.90
WLS-3	367+71.91'EB'	11.97' LT	927.13	290005.58	332947.66
WLS-4	367+71.75'EB'	13.50' LT	927.08	290007.11	332947.48
WLS-5	367+71.54'EB'	15.49' LT	927.02	290009.10	332947.24
WLS-6	367+71.52'EB'	15.74' LT	927.01	290009.34	332947.21
WLS-7	367+71.44'EB'	16.74' LT	926.98	290010.34	332947.11
WLS-8	367+82.36'EB'	4.44' LT	927.11	289998.22	332958.22
WLS-9	367+82.65'EB'	5.38' LT	927.09	289999.15	332958.50
WLS-10	367+82.06'EB'	11.02' LT	926.99	290004.79	332957.83
WLS-11	367+81.86'EB'	13.01' LT	926.96	290006.77	332957.59
WLS-12	367+81.70'EB'	14.54' LT	926.93	290008.30	332957.40
WLS-13	367+81.49'EB'	16.53' LT	926.90	290010.29	332957.17
WLS-14	367+81.41'EB'	17.53' LT	926.88	290011.28	332957.07
WLS-15	367+86.21'EB'	1.33' LT	927.19	289995.17	332962.12
WLS-16	367+81.76'EB'	2.51' LT	927.21	289996.28	332957.65
WLS-17	367+70.62'EB'	7.38' LT	927.25	290000.97	332946.44
WLS-18	367+64.84'EB'	11.22' LT	927.20	290004.72	332940.60
WLS-19	367+63.11'EB'	15.98' LT	927.13	290009.45	332938.79
WLS-20	367+66.97'EB'	18.44' LT	927.08	290011.97	332942.62
WLS-21	367+71.28'EB'	18.74' LT	927.05	290012.33	332946.93
WLS-22	367+81.25'EB'	19.53' LT	926.97	290013.29	332956.88
WLS-23	367+86.17'EB'	19.91' LT	926.93	290013.74	332961.79

\* = MATCH EXISTING

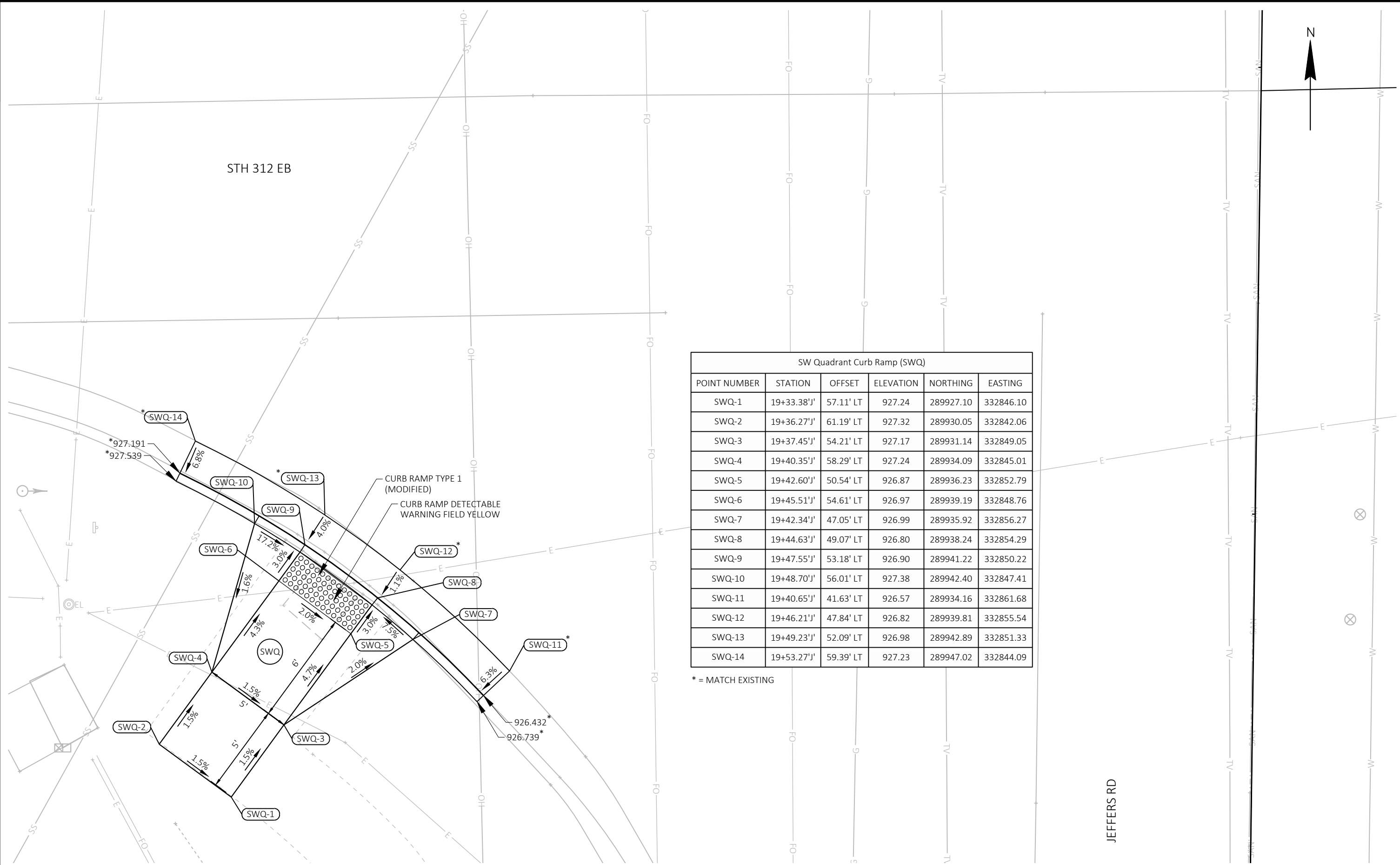


STH 312 EB



SW Quadrant Curb Ramp (SWQ)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
SWQ-1	19+33.38'J'	57.11' LT	927.24	289927.10	332846.10
SWQ-2	19+36.27'J'	61.19' LT	927.32	289930.05	332842.06
SWQ-3	19+37.45'J'	54.21' LT	927.17	289931.14	332849.05
SWQ-4	19+40.35'J'	58.29' LT	927.24	289934.09	332845.01
SWQ-5	19+42.60'J'	50.54' LT	926.87	289936.23	332852.79
SWQ-6	19+45.51'J'	54.61' LT	926.97	289939.19	332848.76
SWQ-7	19+42.34'J'	47.05' LT	926.99	289935.92	332856.27
SWQ-8	19+44.63'J'	49.07' LT	926.80	289938.24	332854.29
SWQ-9	19+47.55'J'	53.18' LT	926.90	289941.22	332850.22
SWQ-10	19+48.70'J'	56.01' LT	927.38	289942.40	332847.41
SWQ-11	19+40.65'J'	41.63' LT	926.57	289934.16	332861.68
SWQ-12	19+46.21'J'	47.84' LT	926.82	289939.81	332855.54
SWQ-13	19+49.23'J'	52.09' LT	926.98	289942.89	332851.33
SWQ-14	19+53.27'J'	59.39' LT	927.23	289947.02	332844.09

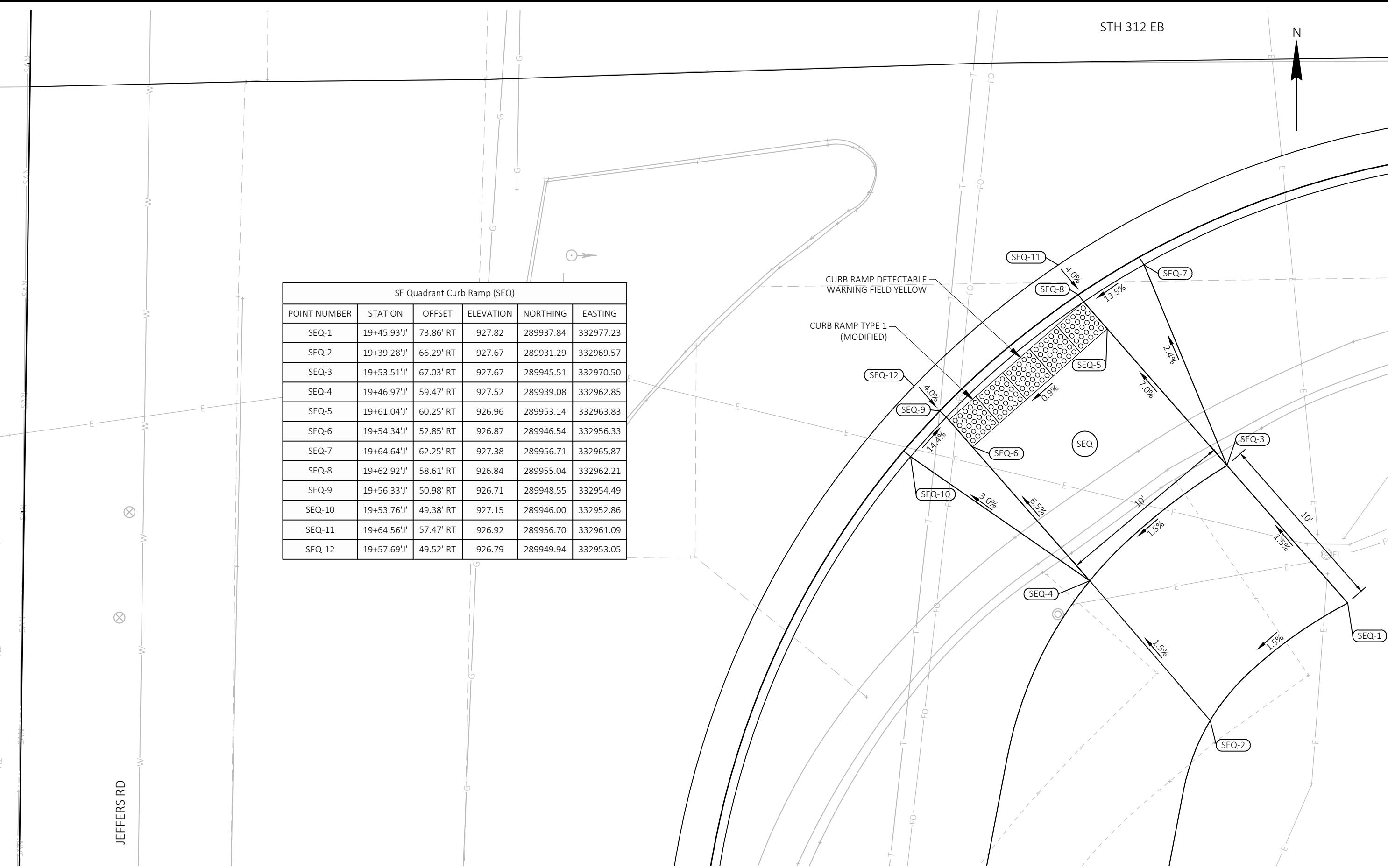
\* = MATCH EXISTING



STH 312 EB






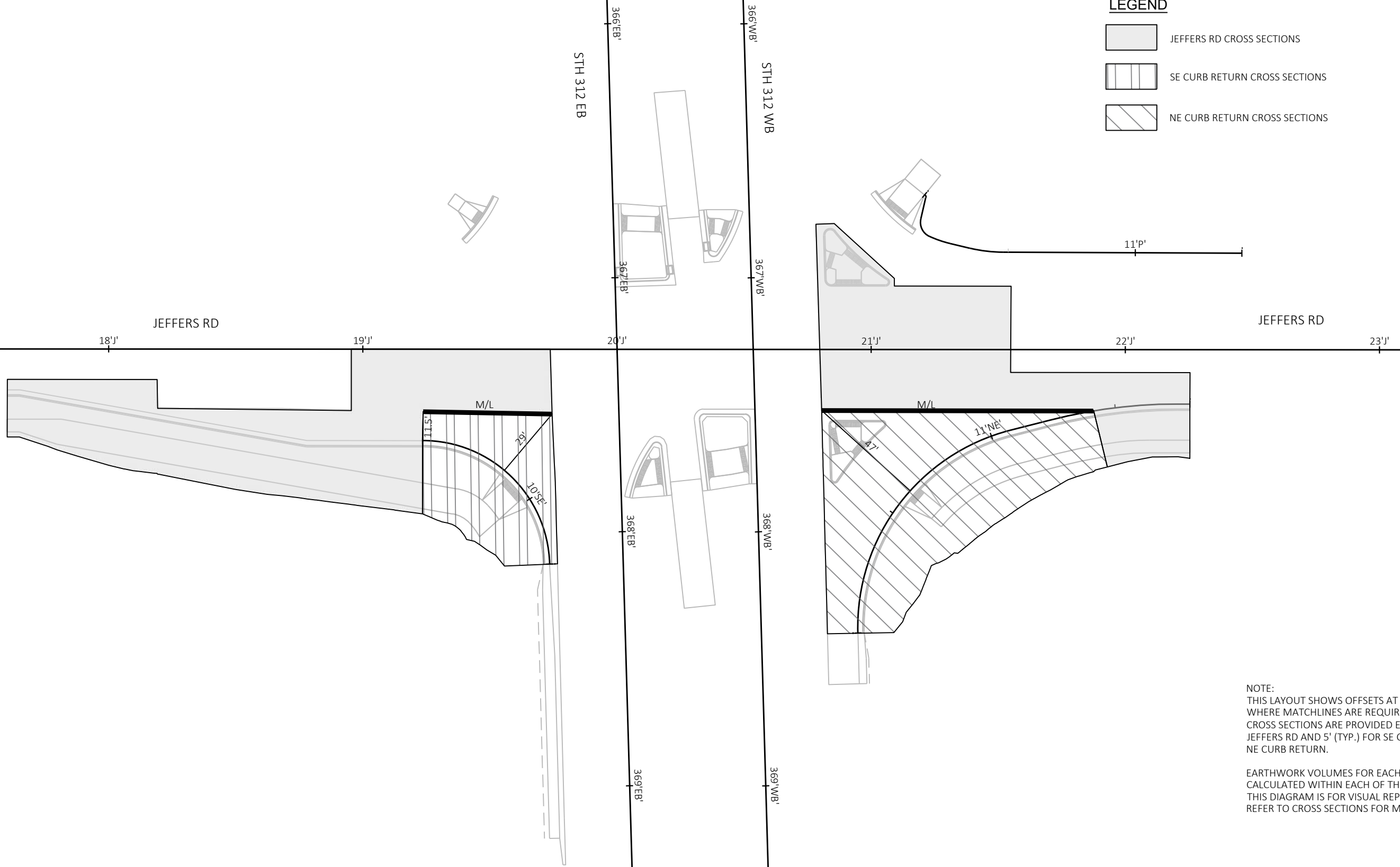
SE Quadrant Curb Ramp (SEQ)					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
SEQ-1	19+45.93'J'	73.86' RT	927.82	289937.84	332977.23
SEQ-2	19+39.28'J'	66.29' RT	927.67	289931.29	332969.57
SEQ-3	19+53.51'J'	67.03' RT	927.67	289945.51	332970.50
SEQ-4	19+46.97'J'	59.47' RT	927.52	289939.08	332962.85
SEQ-5	19+61.04'J'	60.25' RT	926.96	289953.14	332963.83
SEQ-6	19+54.34'J'	52.85' RT	926.87	289946.54	332956.33
SEQ-7	19+64.64'J'	62.25' RT	927.38	289956.71	332965.87
SEQ-8	19+62.92'J'	58.61' RT	926.84	289955.04	332962.21
SEQ-9	19+56.33'J'	50.98' RT	926.71	289948.55	332954.49
SEQ-10	19+53.76'J'	49.38' RT	927.15	289946.00	332952.86
SEQ-11	19+64.56'J'	57.47' RT	926.92	289956.70	332961.09
SEQ-12	19+57.69'J'	49.52' RT	926.79	289949.94	332953.05





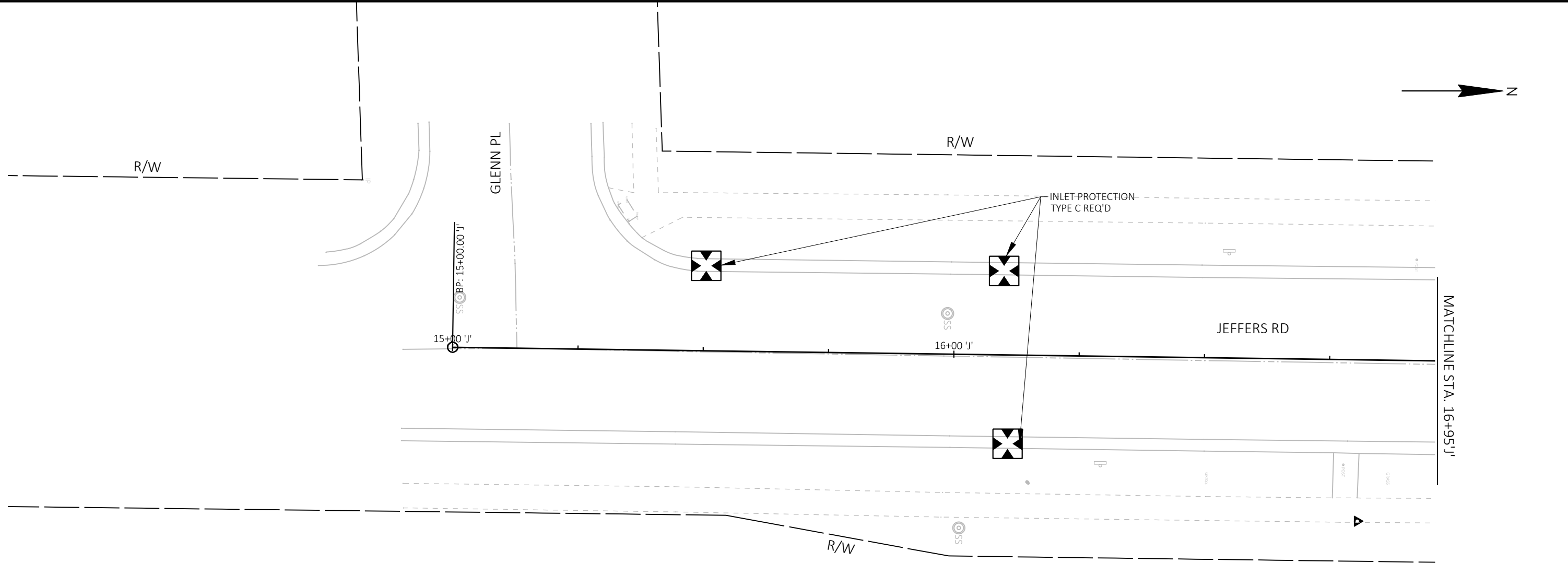
**LEGEND**

-  JEFFERS RD CROSS SECTIONS
-  SE CURB RETURN CROSS SECTIONS
-  NE CURB RETURN CROSS SECTIONS







NOTE:  
 THIS LAYOUT SHOWS OFFSETS AT CROSS SECTIONS WHERE MATCHLINES ARE REQUIRED ONLY.  
 CROSS SECTIONS ARE PROVIDED EVERY 25' (TYP.) FOR JEFFERS RD AND 5' (TYP.) FOR SE CURB RETURN AND NE CURB RETURN.

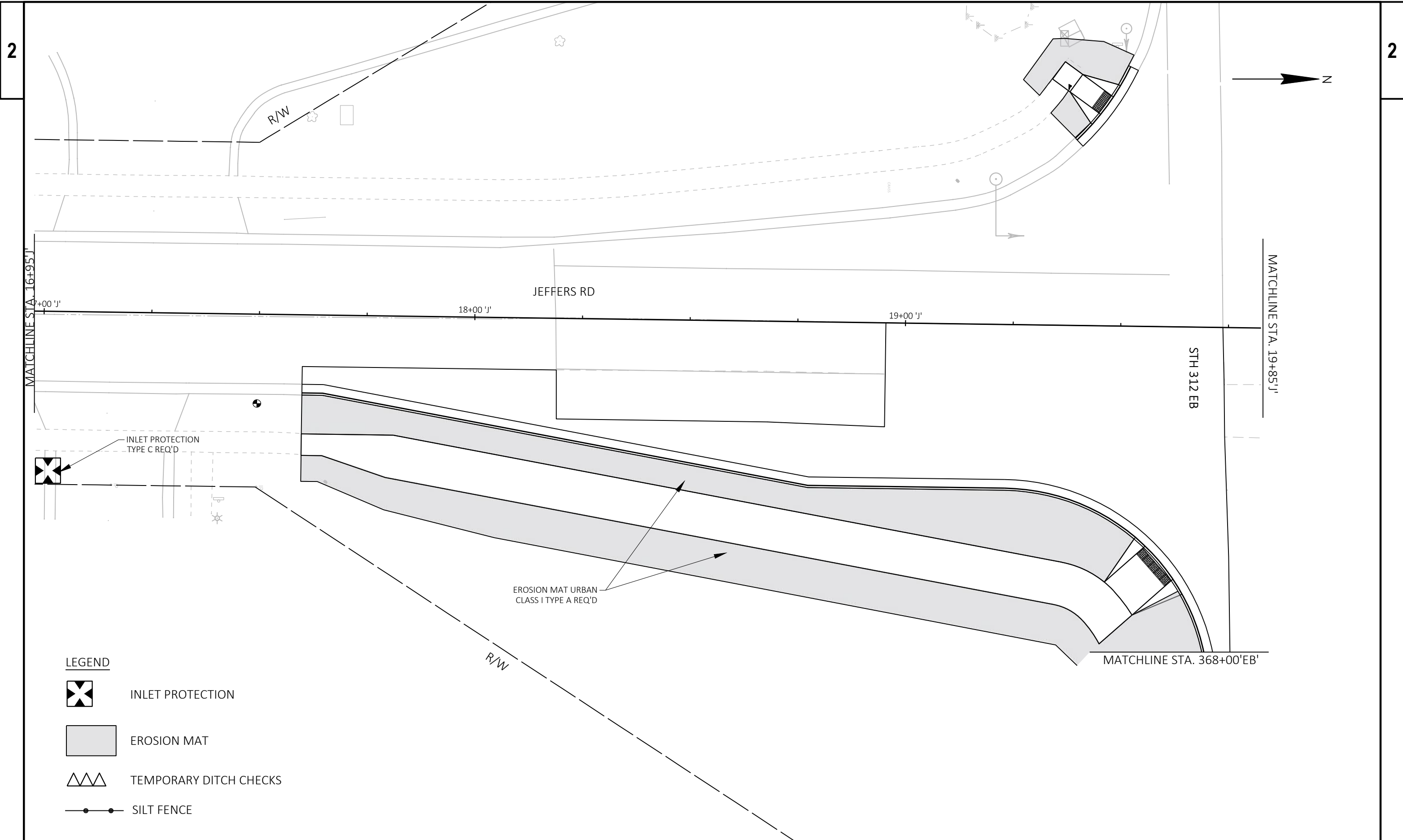
EARTHWORK VOLUMES FOR EACH ALIGNMENT ARE CALCULATED WITHIN EACH OF THE REGIONS SHOWN. THIS DIAGRAM IS FOR VISUAL REPRESENTATION ONLY. REFER TO CROSS SECTIONS FOR MORE INFORMATION.



LEGEND

-  INLET PROTECTION
-  EROSION MAT
-  TEMPORARY DITCH CHECKS
-  SILT FENCE

PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	EROSION CONTROL	SHEET	<b>E</b>
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PROJECT NO: 7028-00-73

HWY: STH 312

COUNTY: EAU CLAIRE

EROSION CONTROL

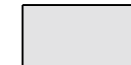
SHEET

E

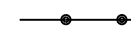



LEGEND

 INLET PROTECTION

 EROSION MAT

 TEMPORARY DITCH CHECKS

 SILT FENCE

 INLET PROTECTION TYPE A REQ'D



MATCHLINE STA. 19+85'J'

MATCHLINE STA. 22+75'J'

MATCHLINE STA. 368+00'EB'

STH 312 EB

STH 312 WB

367+00'WB'

368+00'

20+00'J'

21+00'J'

22+00'J'

JEFFERS RD

R/W

+28.15'J'  
-78.82'LT

+46.48'J'  
-51.94'LT

+43.94'J'  
-52.96'LT

EROSION MAT URBAN CLASS I TYPE A REQ'D

EROSION MAT URBAN CLASS I TYPE A REQ'D

LEGEND



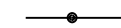
INLET PROTECTION



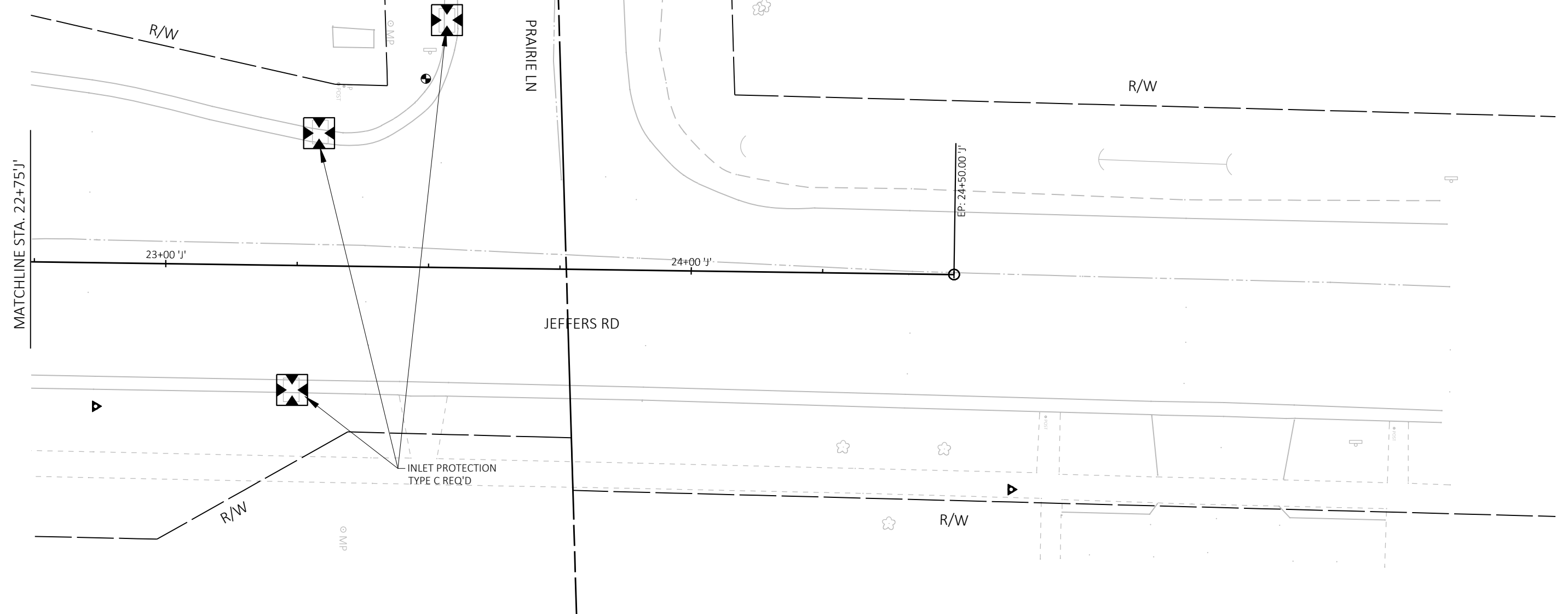
EROSION MAT



TEMPORARY DITCH CHECKS

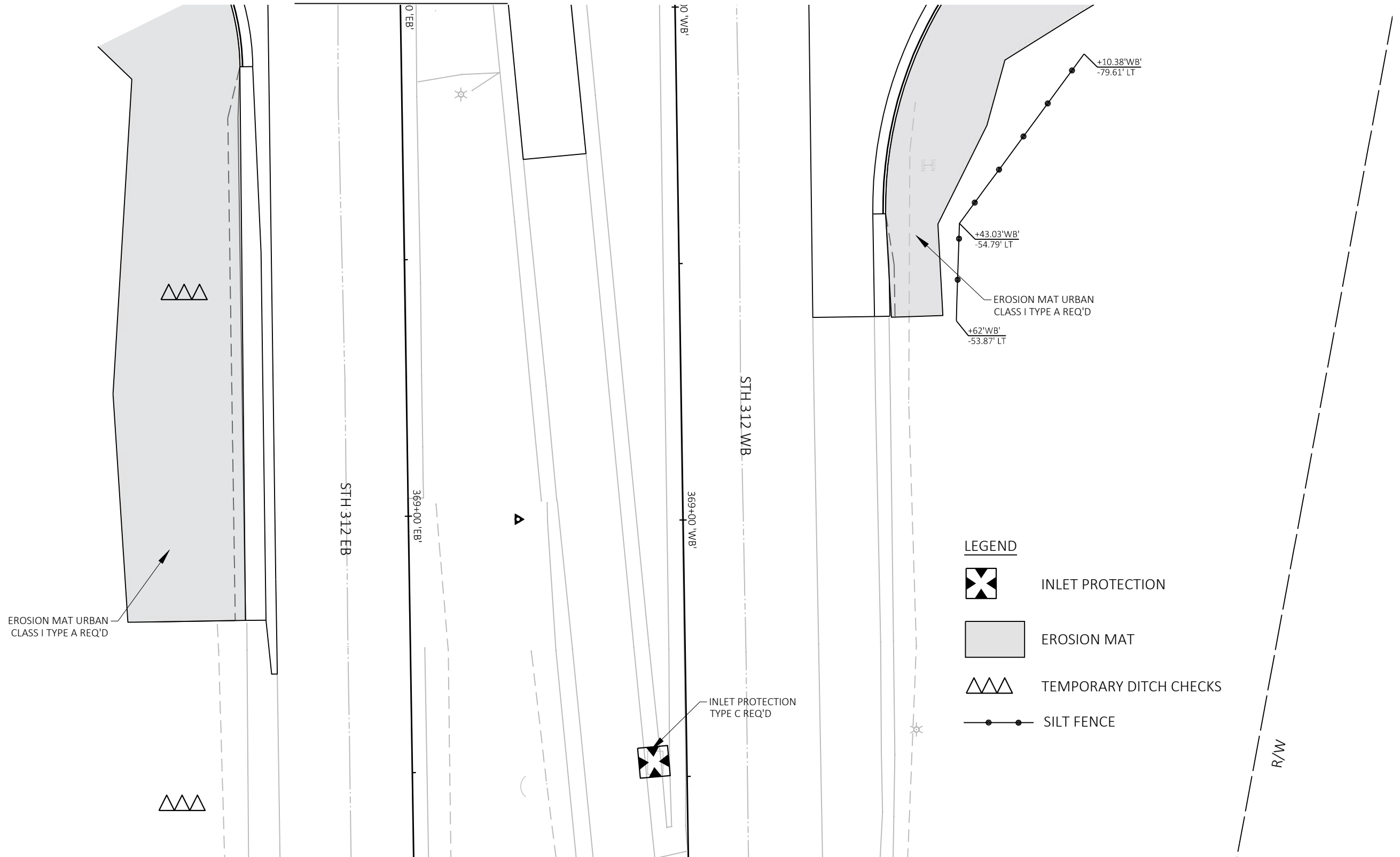


SILT FENCE


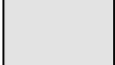




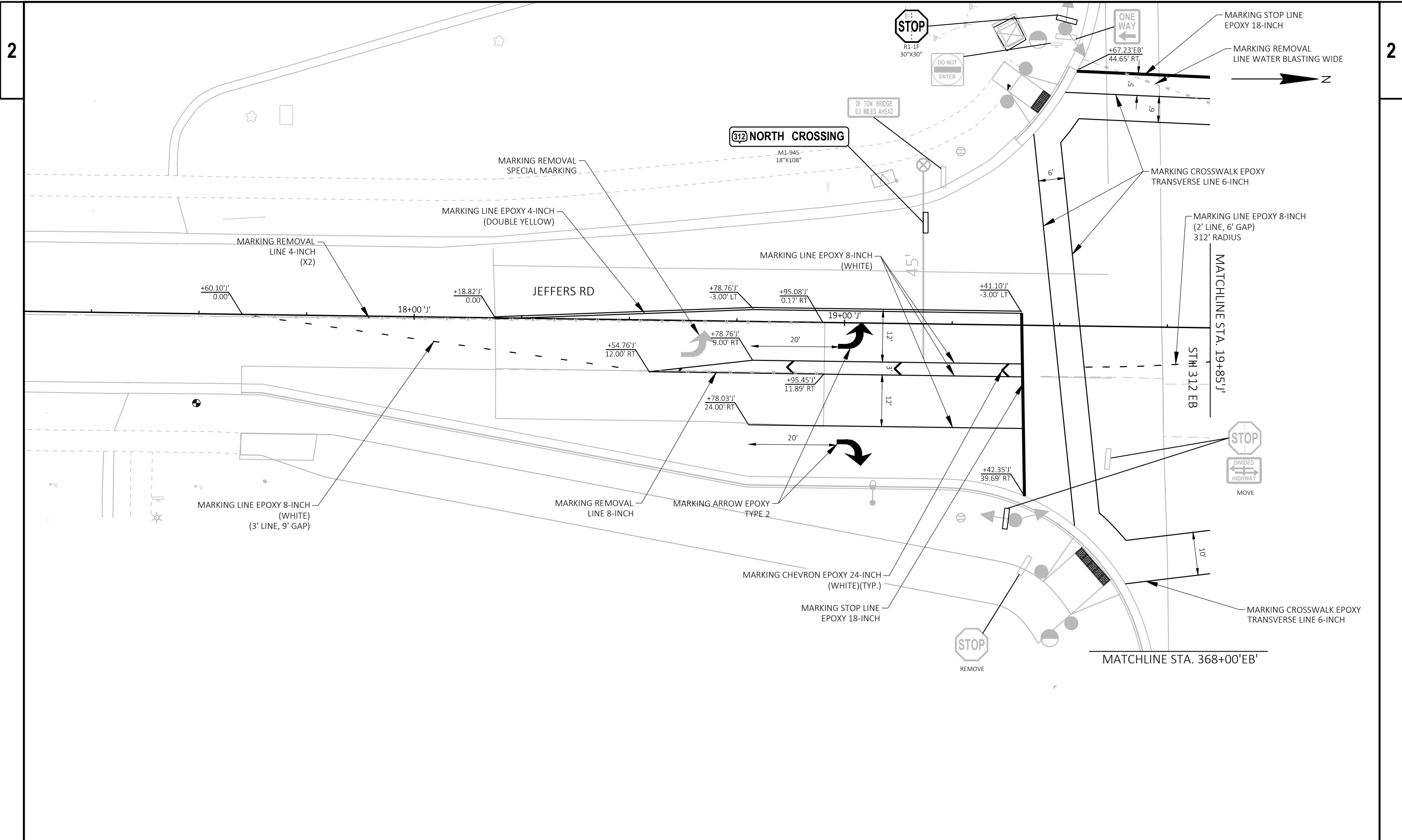


MATCHLINE STA. 368+00'EB'



LEGEND

-  INLET PROTECTION
-  EROSION MAT
-  TEMPORARY DITCH CHECKS
-  SILT FENCE

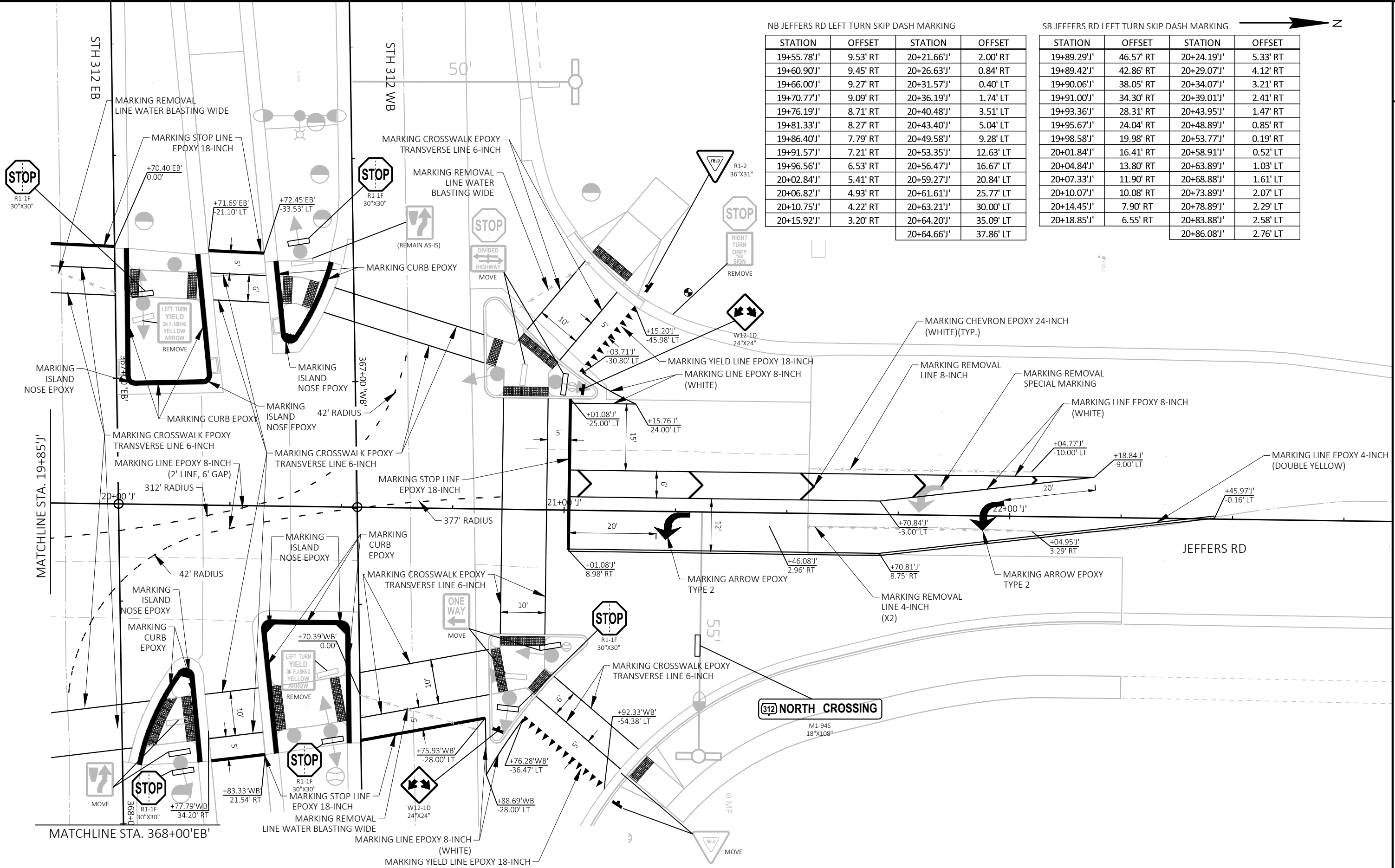


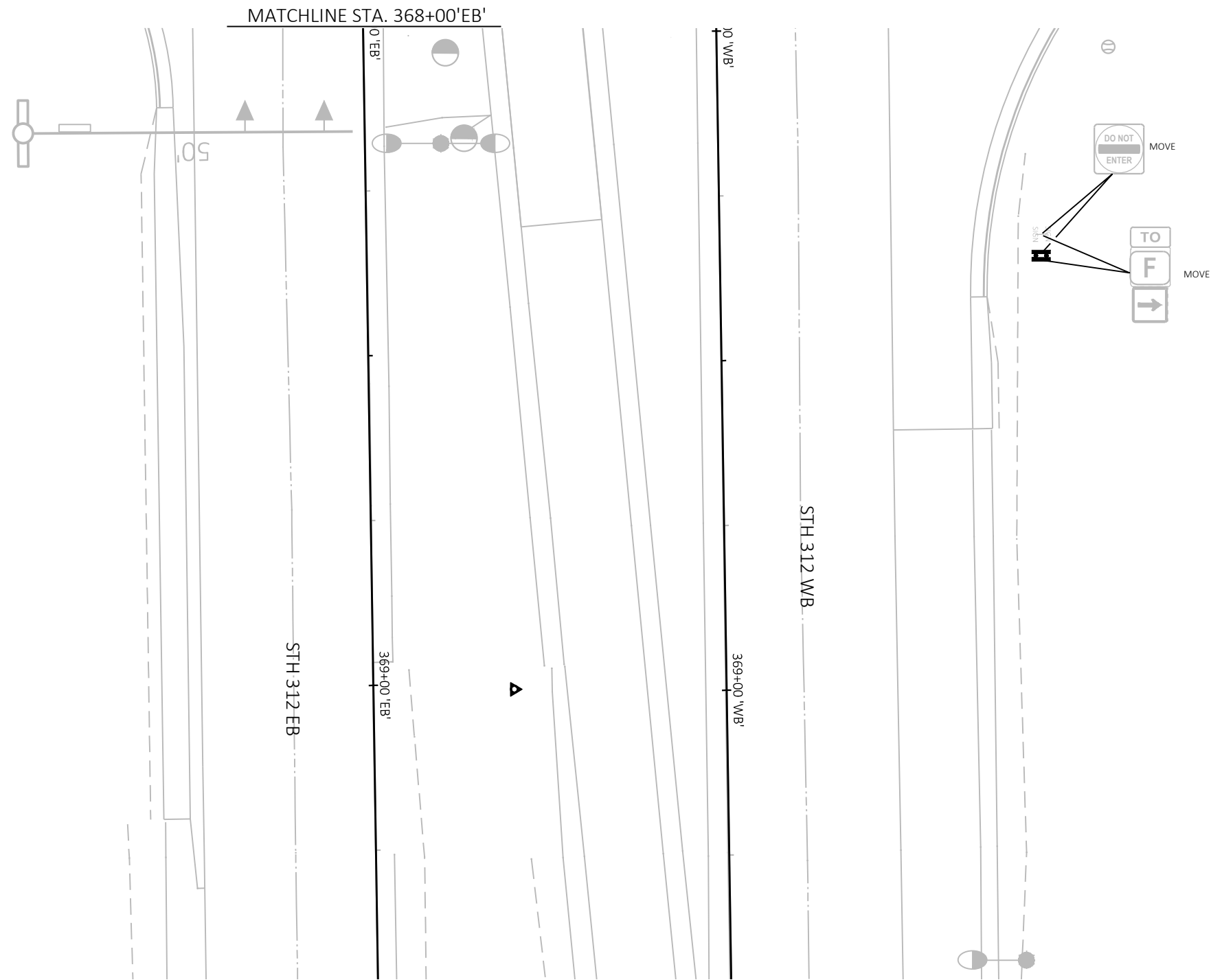
NB JEFFERS RD LEFT TURN SKIP DASH MARKING

STATION	OFFSET	STATION	OFFSET
19+55.78'J'	9.53' RT	20+21.66'J'	2.00' RT
19+60.90'J'	9.45' RT	20+26.63'J'	0.84' RT
19+66.00'J'	9.27' RT	20+31.57'J'	0.40' LT
19+70.77'J'	9.09' RT	20+36.19'J'	1.74' LT
19+76.19'J'	8.71' RT	20+40.48'J'	3.51' LT
19+81.33'J'	8.27' RT	20+43.40'J'	5.04' LT
19+86.40'J'	7.79' RT	20+49.58'J'	9.28' LT
19+91.57'J'	7.21' RT	20+53.35'J'	12.63' LT
19+96.56'J'	6.53' RT	20+56.47'J'	16.67' LT
20+02.84'J'	5.41' RT	20+59.27'J'	20.84' LT
20+06.82'J'	4.93' RT	20+61.61'J'	25.77' LT
20+10.75'J'	4.22' RT	20+63.21'J'	30.00' LT
20+15.92'J'	3.20' RT	20+64.20'J'	35.09' LT
		20+64.66'J'	37.86' LT

SB JEFFERS RD LEFT TURN SKIP DASH MARKING

STATION	OFFSET	STATION	OFFSET
19+89.29'J'	46.57' RT	20+24.19'J'	5.33' RT
19+89.42'J'	42.86' RT	20+29.07'J'	4.12' RT
19+90.06'J'	38.05' RT	20+34.07'J'	3.21' RT
19+91.00'J'	34.30' RT	20+39.01'J'	2.41' RT
19+93.36'J'	28.31' RT	20+43.95'J'	1.47' RT
19+95.67'J'	24.04' RT	20+48.89'J'	0.85' RT
19+98.58'J'	19.98' RT	20+53.77'J'	0.19' RT
20+01.84'J'	16.41' RT	20+58.91'J'	0.52' LT
20+04.84'J'	13.80' RT	20+63.89'J'	1.03' LT
20+07.33'J'	11.90' RT	20+68.88'J'	1.61' LT
20+10.07'J'	10.08' RT	20+73.89'J'	2.07' LT
20+14.45'J'	7.90' RT	20+78.89'J'	2.29' LT
20+18.85'J'	6.55' RT	20+83.88'J'	2.58' LT
		20+86.08'J'	2.76' LT



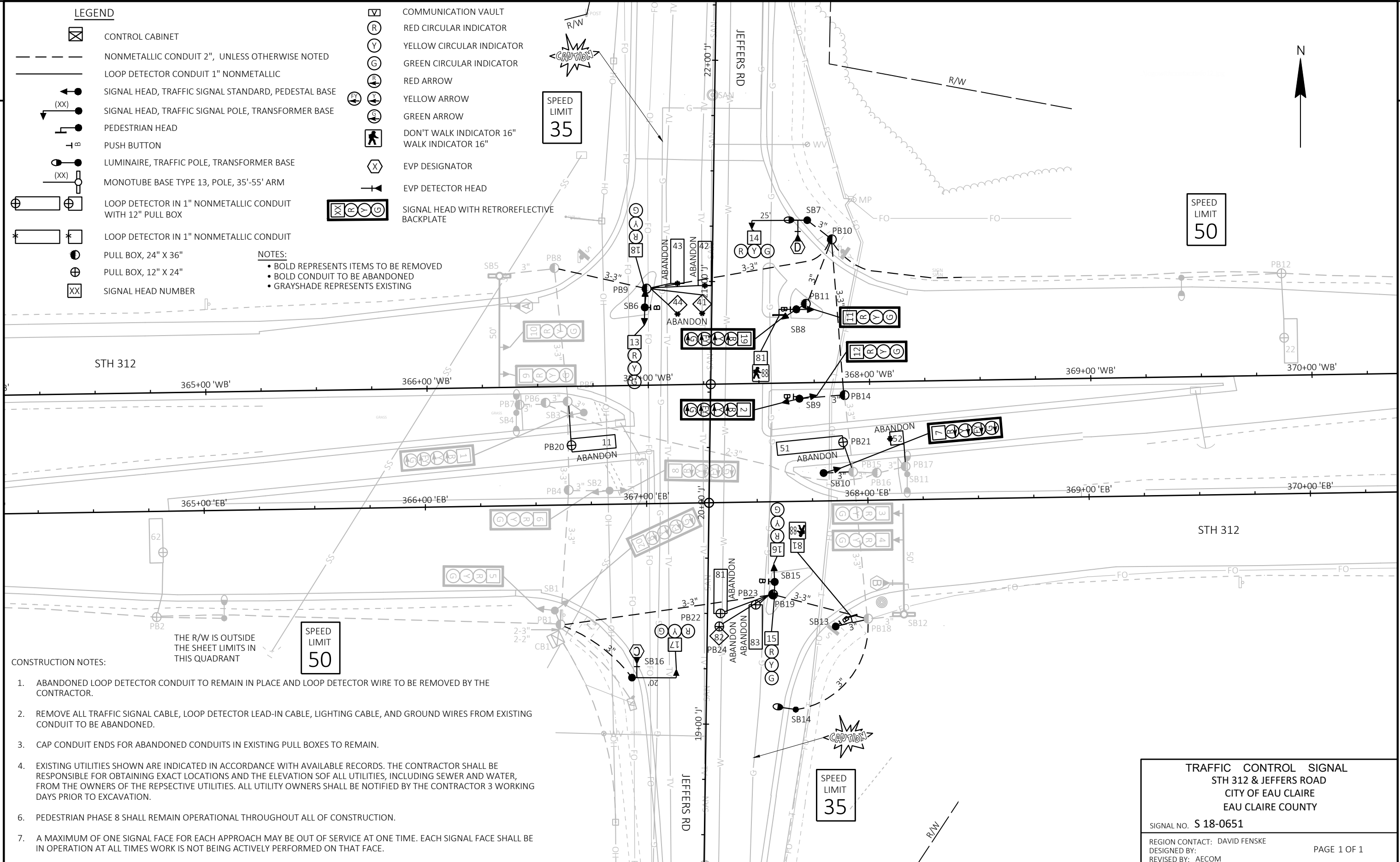


LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- MONOTUBE BASE TYPE 13, POLE, 35'-55' ARM
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 12" X 24"
- SIGNAL HEAD NUMBER

- COMMUNICATION VAULT
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- DON'T WALK INDICATOR 16"  
WALK INDICATOR 16"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE

NOTES:  
 • BOLD REPRESENTS ITEMS TO BE REMOVED  
 • BOLD CONDUIT TO BE ABANDONED  
 • GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

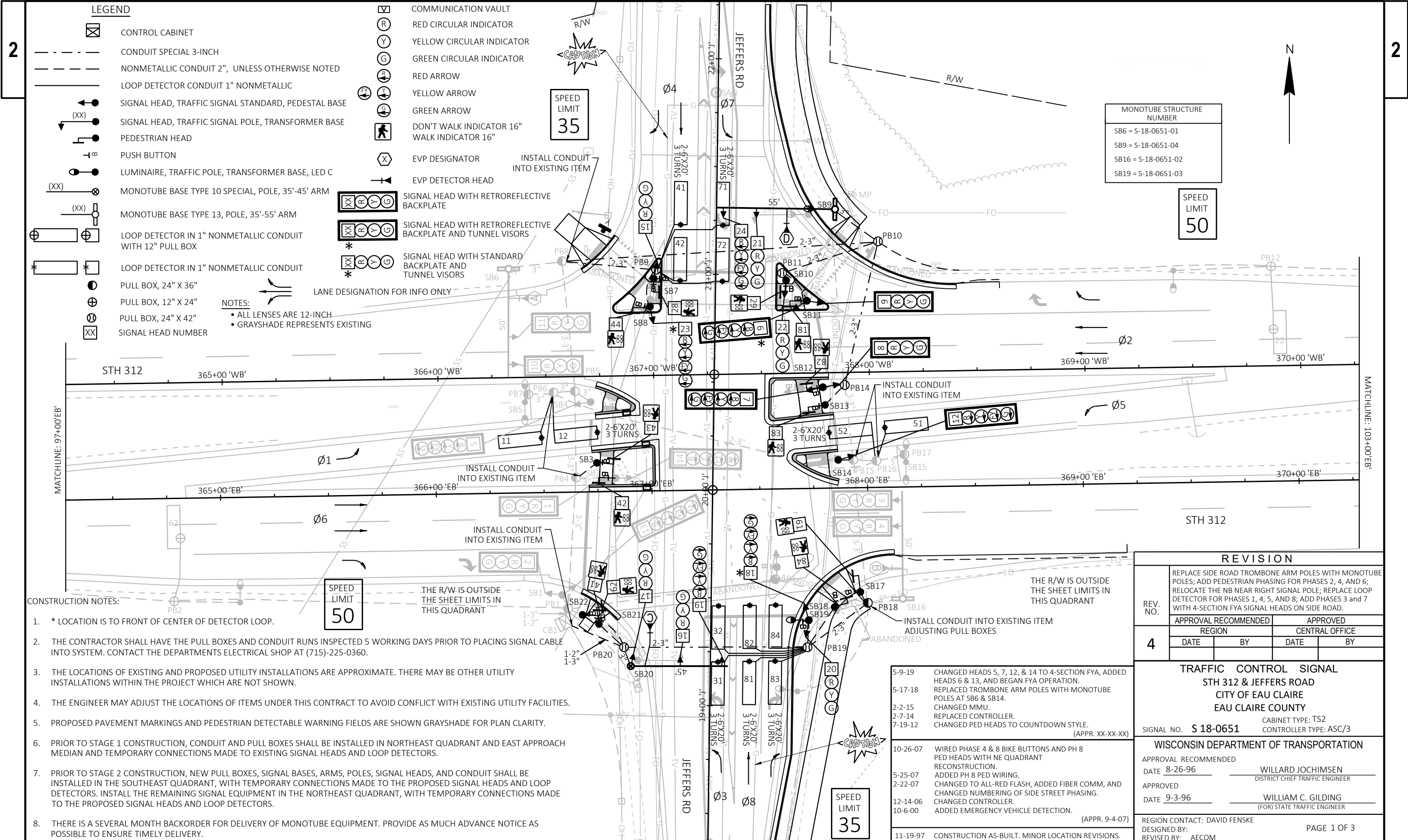
1. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE AND LOOP DETECTOR WIRE TO BE REMOVED BY THE CONTRACTOR.
2. REMOVE ALL TRAFFIC SIGNAL CABLE, LOOP DETECTOR LEAD-IN CABLE, LIGHTING CABLE, AND GROUND WIRES FROM EXISTING CONDUIT TO BE ABANDONED.
3. CAP CONDUIT ENDS FOR ABANDONED CONDUITS IN EXISTING PULL BOXES TO REMAIN.
4. EXISTING UTILITIES SHOWN ARE INDICATED IN ACCORDANCE WITH AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING EXACT LOCATIONS AND THE ELEVATION SOF ALL UTILITIES, INCLUDING SEWER AND WATER, FROM THE OWNERS OF THE REPECTIVE UTILITIES. ALL UTILITY OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR 3 WORKING DAYS PRIOR TO EXCAVATION.
6. PEDESTRIAN PHASE 8 SHALL REMAIN OPERATIONAL THROUGHOUT ALL OF CONSTRUCTION.
7. A MAXIMUM OF ONE SIGNAL FACE FOR EACH APPROACH MAY BE OUT OF SERVICE AT ONE TIME. EACH SIGNAL FACE SHALL BE IN OPERATION AT ALL TIMES WORK IS NOT BEING ACTIVELY PERFORMED ON THAT FACE.

**TRAFFIC CONTROL SIGNAL**  
 STH 312 & JEFFERS ROAD  
 CITY OF EAU CLAIRE  
 EAU CLAIRE COUNTY

SIGNAL NO. **S 18-0651**

REGION CONTACT: DAVID FENSKE  
 DESIGNED BY:  
 REVISED BY: AECOM

PAGE 1 OF 1



**LEGEND**

- CONTROL CABINET
- CONDUIT SPECIAL 3-INCH
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE, LED C
- MONOTUBE BASE TYPE 10 SPECIAL, POLE, 35'-45' ARM
- MONOTUBE BASE TYPE 13, POLE, 35'-55' ARM
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 12" X 24"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- COMMUNICATION VAULT
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE
- SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE AND TUNNEL VISORS
- SIGNAL HEAD WITH STANDARD BACKPLATE AND TUNNEL VISORS

**NOTES:**  
 • ALL LENSES ARE 12-INCH  
 • GRAYSHADE REPRESENTS EXISTING

LANE DESIGNATION FOR INFO ONLY

- CONSTRUCTION NOTES:**
- \* LOCATION IS TO FRONT OF CENTER OF DETECTOR LOOP.
  - THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE DEPARTMENTS ELECTRICAL SHOP AT (715)-225-0360.
  - THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
  - THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
  - PROPOSED PAVEMENT MARKINGS AND PEDESTRIAN DETECTABLE WARNING FIELDS ARE SHOWN GRAYSHADE FOR PLAN CLARITY.
  - PRIOR TO STAGE 1 CONSTRUCTION, CONDUIT AND PULL BOXES SHALL BE INSTALLED IN NORTHEAST QUADRANT AND EAST APPROACH MEDIAN AND TEMPORARY CONNECTIONS MADE TO EXISTING SIGNAL HEADS AND LOOP DETECTORS.
  - PRIOR TO STAGE 2 CONSTRUCTION, NEW PULL BOXES, SIGNAL BASES, ARMS, POLES, SIGNAL HEADS, AND CONDUIT SHALL BE INSTALLED IN THE SOUTHEAST QUADRANT, WITH TEMPORARY CONNECTIONS MADE TO THE PROPOSED SIGNAL HEADS AND LOOP DETECTORS. INSTALL THE REMAINING SIGNAL EQUIPMENT IN THE NORTHEAST QUADRANT, WITH TEMPORARY CONNECTIONS MADE TO THE PROPOSED SIGNAL HEADS AND LOOP DETECTORS.
  - THERE IS A SEVERAL MONTH BACKORDER FOR DELIVERY OF MONOTUBE EQUIPMENT. PROVIDE AS MUCH ADVANCE NOTICE AS POSSIBLE TO ENSURE TIMELY DELIVERY.

MONOTUBE STRUCTURE NUMBER	
SB6	= S-18-0651-01
SB9	= S-18-0651-04
SB16	= S-18-0651-02
SB19	= S-18-0651-03

**SPEED LIMIT 50**

**SPEED LIMIT 35**

**SPEED LIMIT 35**

**REVISION**

REV. NO.	DESCRIPTION
4	REPLACE SIDE ROAD TROMBONE ARM POLES WITH MONOTUBE POLES; ADD PEDESTRIAN PHASING FOR PHASES 2, 4, AND 6; RELOCATE THE NB NEAR RIGHT SIGNAL POLE; REPLACE LOOP DETECTOR FOR PHASES 1, 4, 5, AND 8; ADD PHASES 3 and 7 WITH 4-SECTION FYA SIGNAL HEADS ON SIDE ROAD.

**TRAFFIC CONTROL SIGNAL**  
**STH 312 & JEFFERS ROAD**  
**CITY OF EAU CLAIRE**  
**EAU CLAIRE COUNTY**

SIGNAL NO. **S 18-0651** CABINET TYPE: TS2  
 CONTROLLER TYPE: ASC/3

**WISCONSIN DEPARTMENT OF TRANSPORTATION**

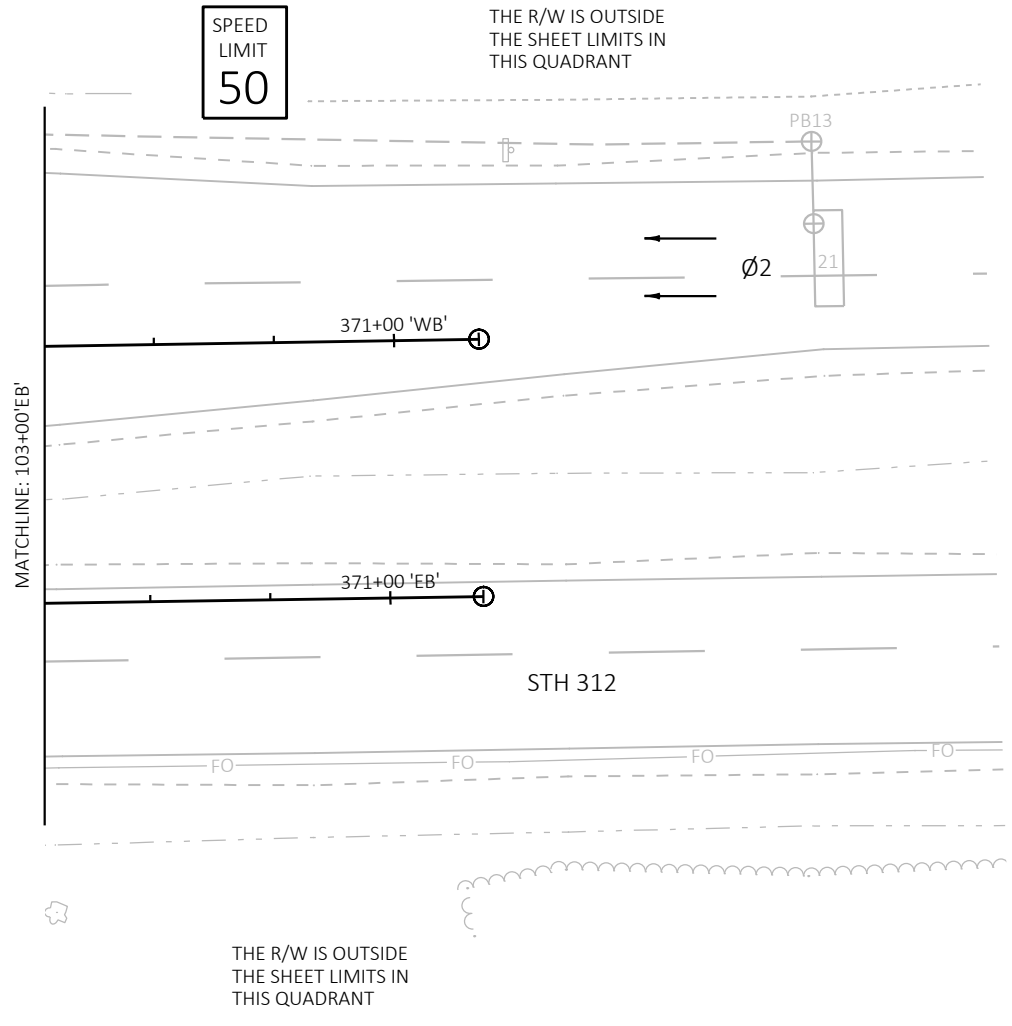
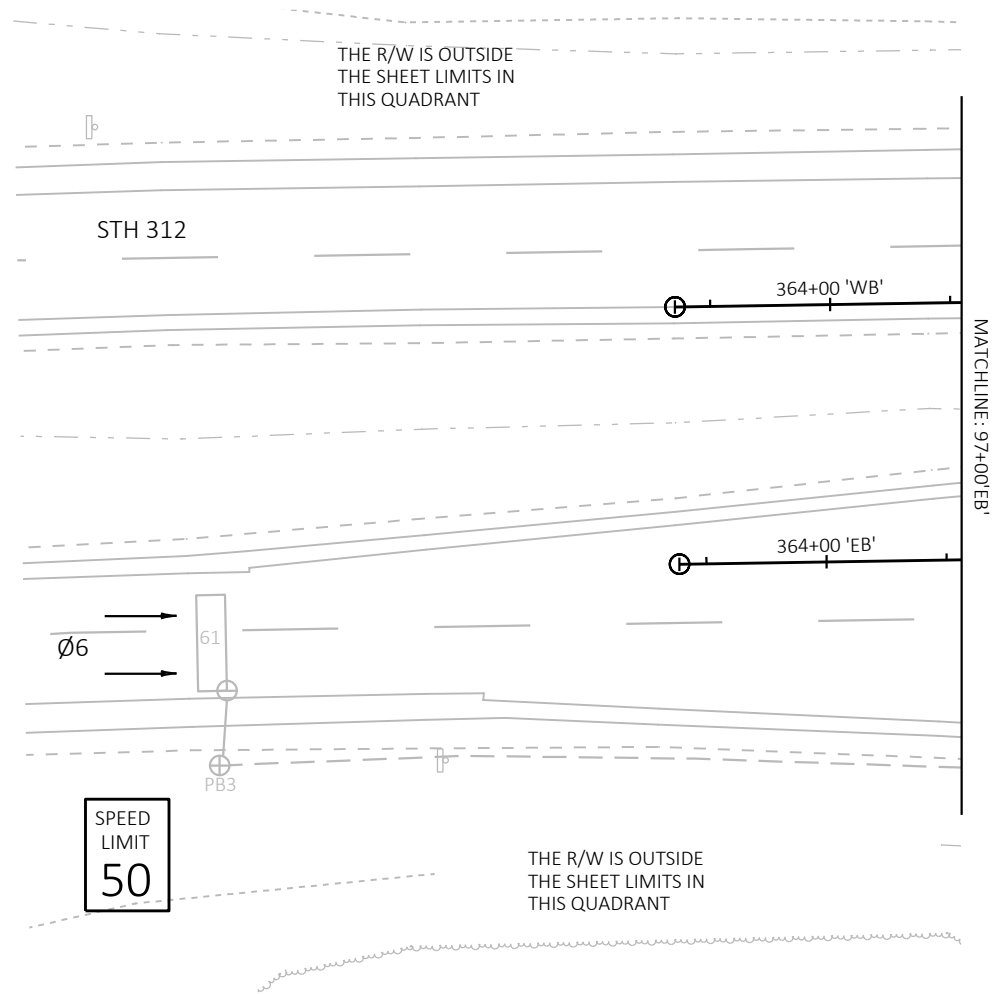
APPROVAL RECOMMENDED  
 DATE 8-26-96 WILLARD JOCHIMSEN  
 DISTRICT CHIEF TRAFFIC ENGINEER

APPROVED  
 DATE 9-3-96 WILLIAM C. GILDING  
 (FOR) STATE TRAFFIC ENGINEER

REGION CONTACT: DAVID FENSKÉ  
 DESIGNED BY: AECOM  
 REVISED BY: AECOM

PAGE 1 OF 3





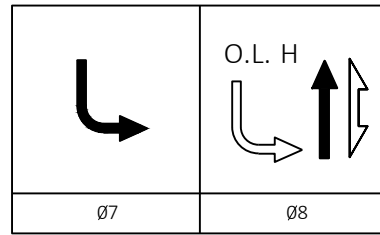
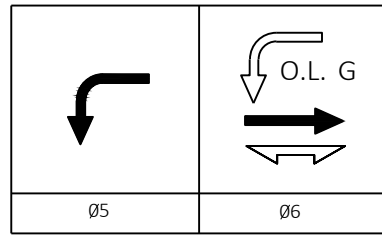
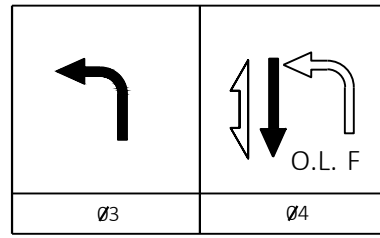
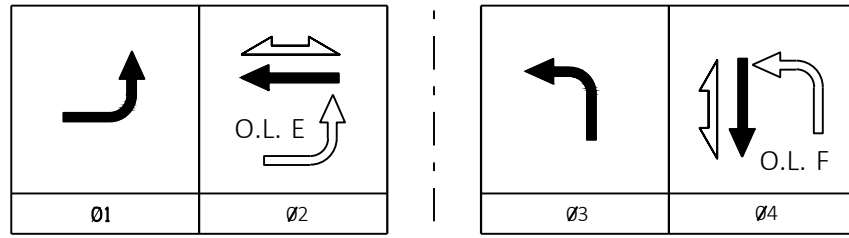
TRAFFIC CONTROL SIGNAL  
 STH 312 & JEFFERS ROAD  
 CITY OF EAU CLAIRE  
 EAU CLAIRE COUNTY

SIGNAL NO. S 18-0651

REGION CONTACT: DAVID FENSKE  
 DESIGNED BY: AECOM  
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PAGE 2 OF 3

	HEAD NUMBERS	F A S H	
Ø1	5,6,7	-	
Ø2	8,9,10,11	R	
Ø3	23,24	-	
Ø4	15,16,17	R	
Ø5	12,13,14	-	
Ø6	1,2,3,4	R	
Ø7	18,19	-	
Ø8	20,21,22	R	
Ø2P	28,29	-	
Ø4P	41,42,43,44	-	
Ø6P	61,62	-	
Ø8P	81,82,83,84	-	OL ASSIGNMENTS
OLE	5,6,7	R	1 + 2
OLF	23,24	R	3 + 4
OLG	12,13,14	R	5 + 6
OLH	18,19	R	7 + 8



BARRIER

CONTROLLER LOGIC

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

OVERLAPS

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

SPECIAL OVERLAPS

	PROTECTED	PERMISSIVE
O.L. "E" =	1	2
O.L. "F" =	3	4
O.L. "G" =	5	6
O.L. "H" =	7	8

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
CLOSED LOOP TWISTED PAIR	
FIBER OPTIC NETWORK	X
INTERSECTION ONLY (CELL MODEM)*	
*LOCATION OF CELL MODEM	
CONTROLLER NO: S-	
SIGNAL SYSTEM: SS-18-0132	

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

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

GENERAL NOTES

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. PHASE 4 BIKE BUTTON WIRED TO SPECIAL DETECTOR 4 (DETECTOR 12) AND CALLS PHASE 4 BIKE MINIMUM GREEN. PHASE 8 BIKE BUTTON WIRED TO SPECIAL DETECTOR 8 (DETECTOR 16) AND CALLS PHASE 8 BIKE MINIMUM GREEN.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	11	21	31	41	51	61	71	81
PHASE CALLED	1	2	3	4	5	6	7	8
PHASE EXTENDED	1	2	3	4	5	6	7	8
DISCONNECT TIME								
CALLING DELAY				3"				
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	19	17	23	21	27	25	31	29
DETECTOR #(S)	83							
PHASE CALLED	8							
PHASE EXTENDED	8							
DISCONNECT TIME								
CALLING DELAY	3"							
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)	12	22	32	42	52	62	72	82
PHASE CALLED	1	2	3	4	5	6	7	8
PHASE EXTENDED	1	2	3	4	5	6	7	8
DISCONNECT TIME								
CALLING DELAY			3"			3"		
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	20	18	24	22	28	26	32	30
DETECTOR #(S)	84							
PHASE CALLED	8							
PHASE EXTENDED	8							
DISCONNECT TIME								
CALLING DELAY	3"							
EXTENSION STRETCH								
LOOP FUNCTION								

EMERGENCY VEHICLE PREEMPTION ASSIGNMENT

EMERGENCY VEHICLE DETECTOR	A	B	C	D
PREEMPTION CHANNEL	1	2	3	4
MOVEMENT				
DIRECTION	WB	EB	SB	NB
PHASES	2+5	1+6	4+7	3+8

NOTES:  
FULL CLEARANCE AND MINIMUM GREEN INTERVALS SHALL ALWAYS BE PROVIDED.

**TRAFFIC CONTROL SIGNAL**  
**STH 312 & JEFFERS ROAD**  
**CITY OF EAU CLAIRE**  
**EAU CLAIRE COUNTY**

SIGNAL NO. **S 18-0651**

REGION CONTACT: DAVID FENSKE  
 DESIGNED BY:  
 REVISED BY: AECOM

PAGE 3 OF 3

PROJECT ID: 7028-00-73  
 INTERSECTION: STH 312 & JEFFERS RD

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

DATE: Jul-21

CB1 TO	AWG 14 # OF COND.	HEAD NO.	SIGNAL INDICATION WIRE COLOR								D/WALK	WALK	PED	OTHER
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<FLASH YEL>	<GREEN>					
SB1	12	2	RED	ORG	GRN									
		13				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
SB2	12	1	RED	ORG	GRN									
		14				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
SB3	5	43								BLK	BLU			
		42								RED	GRN			
SB4	12	5				RED	ORG	WHT/BLK	GRN					
SB6	5	10	RED	ORG	GRN									
		11	RED	ORG	GRN									
SB7	12	15	RED	ORG	GRN									
		28								BLK	BLU			
SB8	12	23				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
		44								BLK	BLU			
SB9	12	21	RED	ORG	GRN									
		24				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
SB10	12	22	RED	ORG	GRN									
		29								BLK	BLU			
SB11	12	6				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
		9	RED	ORG	GRN									
SB12	12	81								BLK	BLU			
		7				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
SB12	12	8	RED	ORG	GRN									
		82								BLK	BLU			
SB13	5	83								RED	GRN			
SB14	12	12				RED	ORG	WHT/BLK	GRN					
SB16	5	3	RED	ORG	GRN									
		4	RED	ORG	GRN									
SB17	5	61								RED	GRN			
SB18	5	84								RED	GRN			
SB19	12	18				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
		20	RED	ORG	GRN									
SB20	12	16	RED	ORG	GRN									
		17	RED	ORG	GRN									
SB20	12	19				RED/BLK	ORG/BLK	WHT/BLK	GRN/BLK					
SB21	5	62							RED	GRN				
SB22	5	41							RED	GRN				

EQUIPMENT GROUNDING CONDUCTORS 10 AWG GRN	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB16
SB16	SB17
SB17	SB18
SB18	SB19
SB19	SB20
SB20	SB21
SB21	SB22
SB22	CB1

LOOP LEAD-IN CABLE FOR PED PUSH BUTTONS	
FROM	TO
CB1	SB2
CB1	SB3
CB1	SB7 (X2)
CB1	SB8
CB1	SB10
CB1	SB11
CB1	SB12
CB1	SB13
CB1	SB17
CB1	SB18
CB1	SB19
CB1	SB21
CB1	SB22

PULL BOX GROUNDING 10 AWG	
FROM	TO
PB1	SB1
PB4	SB3
PB5	SB4
PB6	SB4
PB8	SB6
PB9	SB7
PB10	SB9
PB11	SB10
PB14	SB12
PB15	SB14
PB16	SB14
PB18	SB17
PB19	SB19
PB20	SB20

LIGHTING UF 12 AWG W/GROUND	
FROM	TO
CB1	SB5
SB5	SB9
CB1	SB19
SB19	SB15

EMERGENCY VEHICLE PREEMPTION		
HEAD	FROM	TO
A	CB1	SB6
B	CB1	SB16
C	CB1	SB20
D	CB1	SB9

CAT-5E CABLE VIDEO CAMERA	
FROM	TO
CB1	SB14

STH 312 & JEFFERS ROAD  
 CITY OF EAU CLAIRE  
 EAU CLAIRE COUNTY

- USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
- ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.

CONTROLLER TYPE: ECONOLITE  
 SIGNAL NO: S 18-0651 CABINET TYPE: TS2  
 DATE: JULY 2021 PAGE NO. 1 OF 1

CONSTRUCTION ACTIVITIES

- CONSTRUCT SB PAVEMENT, MEDIAN ISLAND, AND CURB RAMP IN NW QUADRANT
- CONSTRUCT CURB RAMP IN SW QUADRANT
- CONSTRUCT TEMPORARY PEDESTRIAN SURFACE FOR USE IN STAGE 2

TRAFFIC DURING STAGE

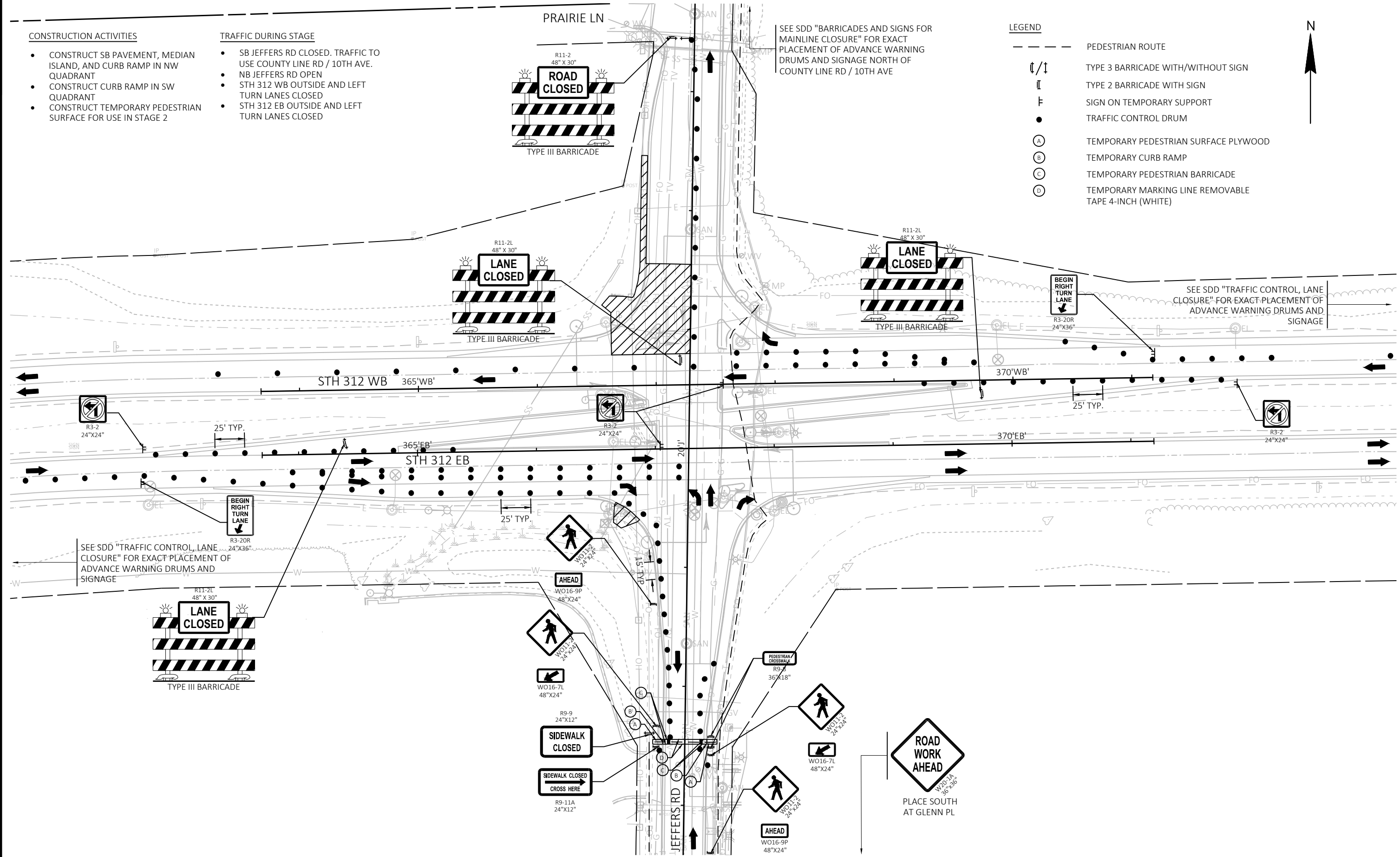
- SB JEFFERS RD CLOSED. TRAFFIC TO USE COUNTY LINE RD / 10TH AVE.
- NB JEFFERS RD OPEN
- STH 312 WB OUTSIDE AND LEFT TURN LANES CLOSED
- STH 312 EB OUTSIDE AND LEFT TURN LANES CLOSED

PRAIRIE LN

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR EXACT PLACEMENT OF ADVANCE WARNING DRUMS AND SIGNAGE NORTH OF COUNTY LINE RD / 10TH AVE

LEGEND

- PEDESTRIAN ROUTE
- ⊥/⊥ TYPE 3 BARRICADE WITH/WITHOUT SIGN
- ⊥ TYPE 2 BARRICADE WITH SIGN
- F SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- (A) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (B) TEMPORARY CURB RAMP
- (C) TEMPORARY PEDESTRIAN BARRICADE
- (D) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)



CONSTRUCTION ACTIVITIES

- CONSTRUCT WEST MEDIAN NOSES AND CURB RAMPS
- CONSTRUCT STH 312 EB LEFT TURN LANE LOOP DETECTOR

TRAFFIC DURING STAGE

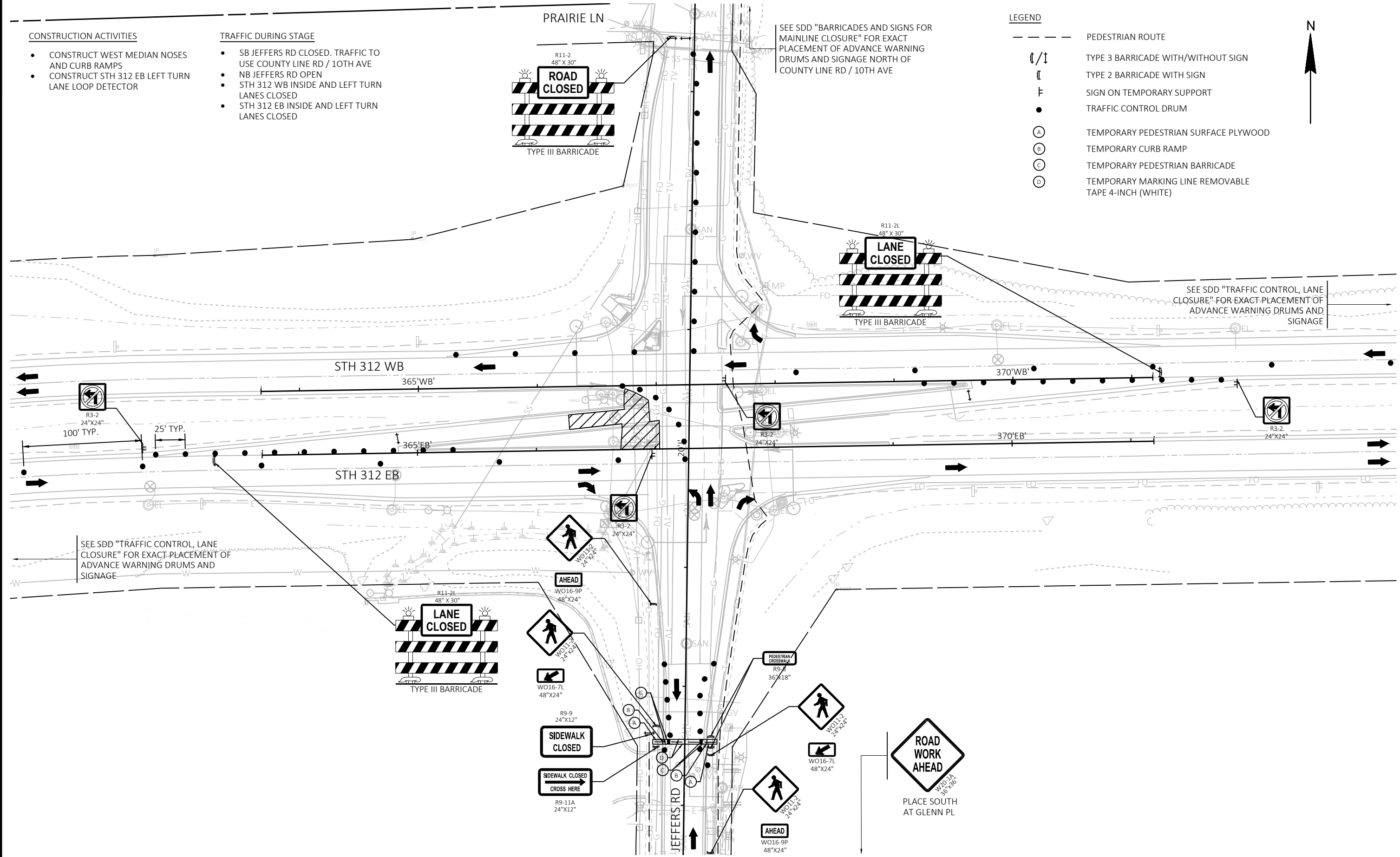
- SB JEFFERS RD CLOSED. TRAFFIC TO USE COUNTY LINE RD / 10TH AVE
- NB JEFFERS RD OPEN
- STH 312 WB INSIDE AND LEFT TURN LANES CLOSED
- STH 312 EB INSIDE AND LEFT TURN LANES CLOSED

PRAIRIE LN

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURE" FOR EXACT PLACEMENT OF ADVANCE WARNING DRUMS AND SIGNAGE NORTH OF COUNTY LINE RD / 10TH AVE

LEGEND

- PEDESTRIAN ROUTE
- ⊥/⊥ TYPE 3 BARRICADE WITH/WITHOUT SIGN
- ⊥ TYPE 2 BARRICADE WITH SIGN
- F SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- (A) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (B) TEMPORARY CURB RAMP
- (C) TEMPORARY PEDESTRIAN BARRICADE
- (D) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)



CONSTRUCTION ACTIVITIES

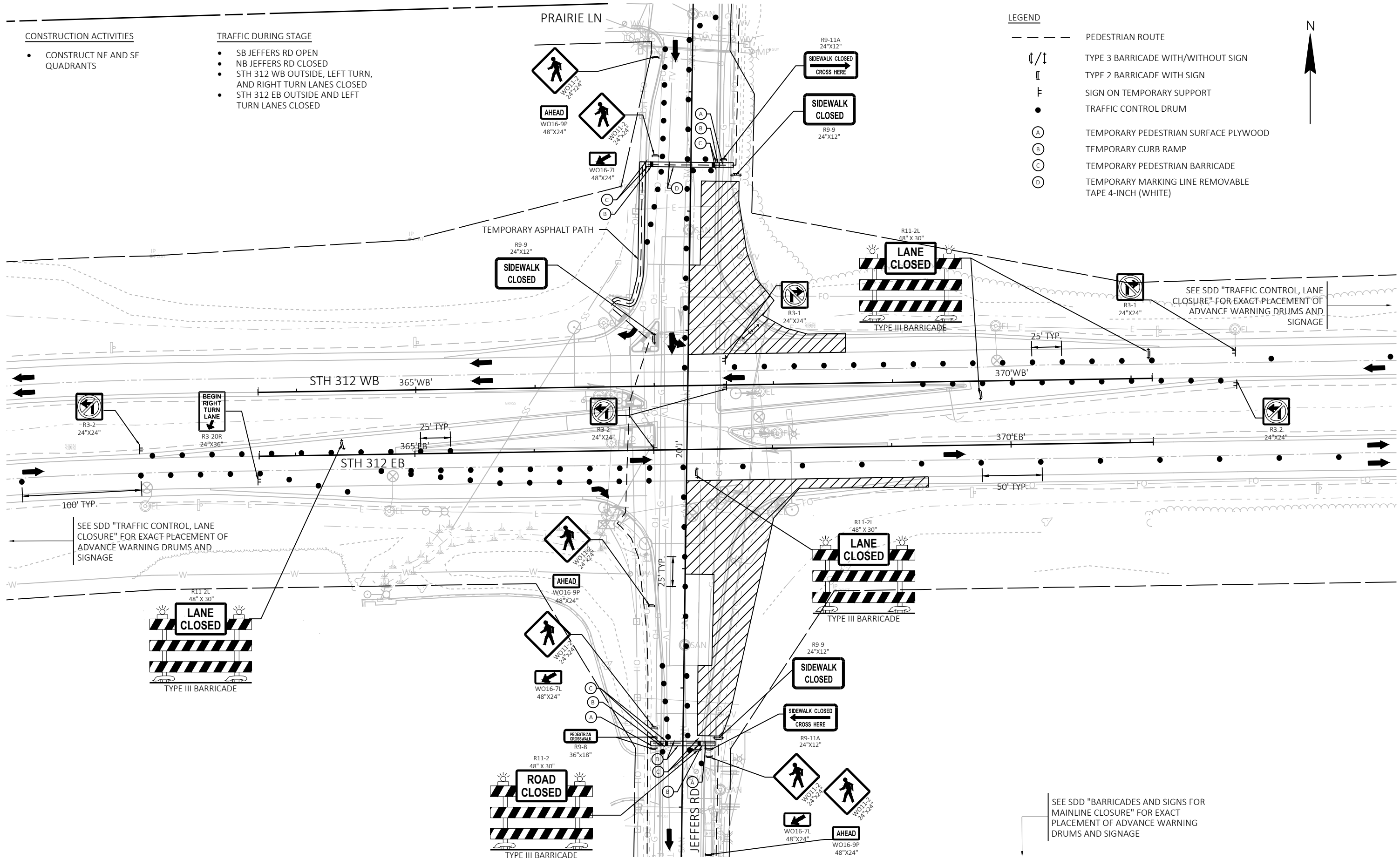
- CONSTRUCT NE AND SE QUADRANTS

TRAFFIC DURING STAGE

- SB JEFFERS RD OPEN
- NB JEFFERS RD CLOSED
- STH 312 WB OUTSIDE, LEFT TURN, AND RIGHT TURN LANES CLOSED
- STH 312 EB OUTSIDE AND LEFT TURN LANES CLOSED

LEGEND

- PEDESTRIAN ROUTE
- ||/|| TYPE 3 BARRICADE WITH/WITHOUT SIGN
- || TYPE 2 BARRICADE WITH SIGN
- F SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- (A) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (B) TEMPORARY CURB RAMP
- (C) TEMPORARY PEDESTRIAN BARRICADE
- (D) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)



CONSTRUCTION ACTIVITIES

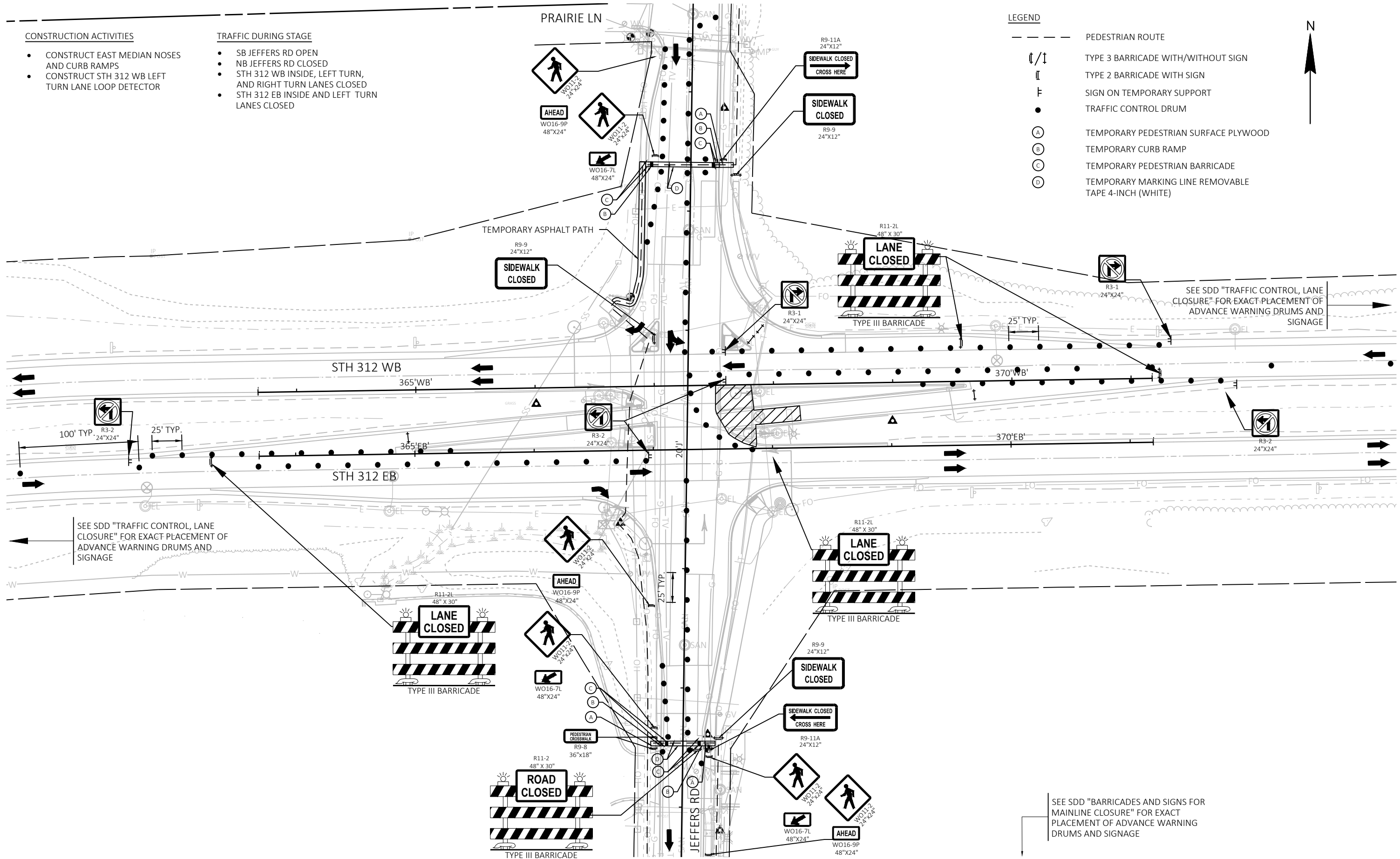
- CONSTRUCT EAST MEDIAN NOSES AND CURB RAMP
- CONSTRUCT STH 312 WB LEFT TURN LANE LOOP DETECTOR

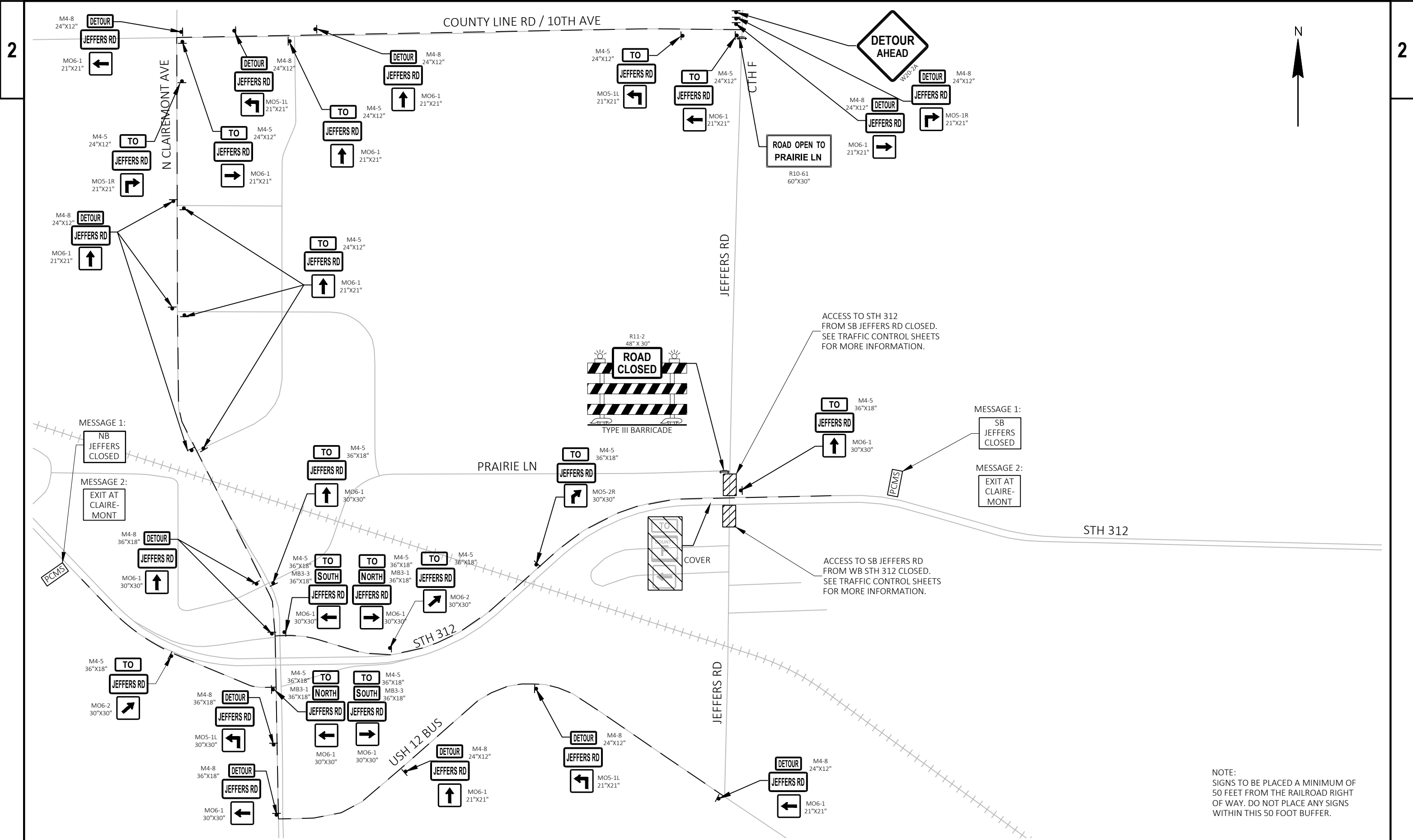
TRAFFIC DURING STAGE

- SB JEFFERS RD OPEN
- NB JEFFERS RD CLOSED
- STH 312 WB INSIDE, LEFT TURN, AND RIGHT TURN LANES CLOSED
- STH 312 EB INSIDE AND LEFT TURN LANES CLOSED

LEGEND

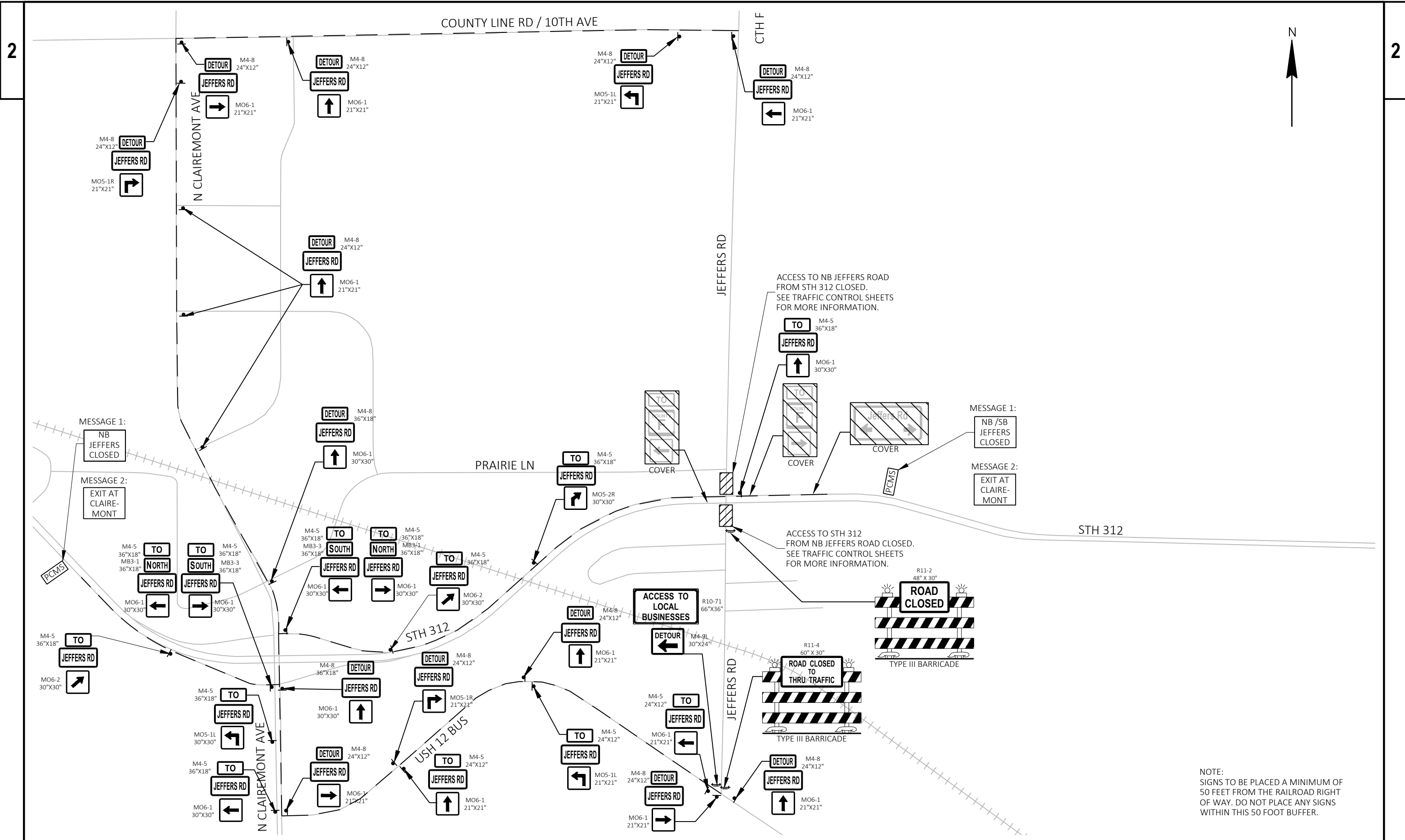
- PEDESTRIAN ROUTE
- ||/|| TYPE 3 BARRICADE WITH/WITHOUT SIGN
- || TYPE 2 BARRICADE WITH SIGN
- F SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- (A) TEMPORARY PEDESTRIAN SURFACE PLYWOOD
- (B) TEMPORARY CURB RAMP
- (C) TEMPORARY PEDESTRIAN BARRICADE
- (D) TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)





NOTE:  
SIGNS TO BE PLACED A MINIMUM OF  
50 FEET FROM THE RAILROAD RIGHT  
OF WAY. DO NOT PLACE ANY SIGNS  
WITHIN THIS 50 FOOT BUFFER.





NOTE:  
SIGNS TO BE PLACED A MINIMUM OF 50 FEET FROM THE RAILROAD RIGHT OF WAY. DO NOT PLACE ANY SIGNS WITHIN THIS 50 FOOT BUFFER.

### BENCH MARKS

NO.	STA/OFFSET	DESCRIPTION	ELEV.
1000	21+27.15'J', 49.20' LT	SPIKE	928.19
1001	23+48.98'J', 35.80' LT	SPIKE	924.39
1002	17+49.67'J', 20.76' RT	ARROWHEAD ON HYD	922.62
1006	23+45.09'J', 51.87' LT	BM/TOP HYD	925.86

### CURVE 2

PI STA = 10+63.91'NE'  
 Y = 290085.206  
 X = 332953.103  
 DELTA = 77°14'19"  
 D = 71°37'11"  
 T = 63.91'  
 L = 107.85'  
 R = 80.00'  
 PC STA = 10+00.00'NE'  
 Y = 290086.203  
 X = 333017.003  
 PT STA = 11+07.85'NE'  
 Y = 290147.307  
 X = 332938.015  
 BK = S89°06'20.3"W  
 AH = N13°39'20.8"W

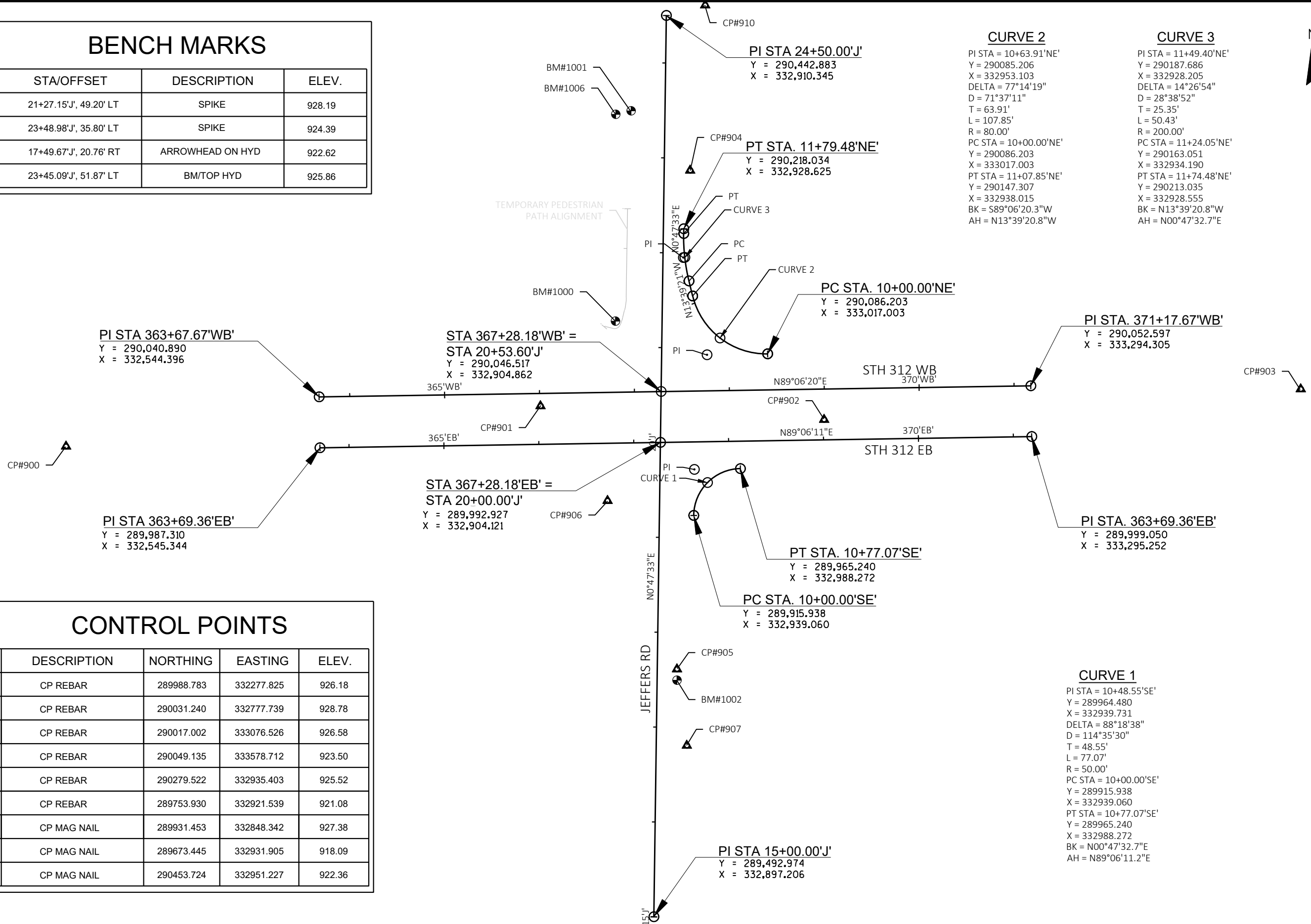
### CURVE 3

PI STA = 11+49.40'NE'  
 Y = 290187.686  
 X = 332928.205  
 DELTA = 14°26'54"  
 D = 28°38'52"  
 T = 25.35'  
 L = 50.43'  
 R = 200.00'  
 PC STA = 11+24.05'NE'  
 Y = 290163.051  
 X = 332934.190  
 PT STA = 11+74.48'NE'  
 Y = 290213.035  
 X = 332928.555  
 BK = N13°39'20.8"W  
 AH = N00°47'32.7"E



### CONTROL POINTS

NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
900	CP REBAR	289988.783	332277.825	926.18
901	CP REBAR	290031.240	332777.739	928.78
902	CP REBAR	290017.002	333076.526	926.58
903	CP REBAR	290049.135	333578.712	923.50
904	CP REBAR	290279.522	332935.403	925.52
905	CP REBAR	289753.930	332921.539	921.08
906	CP MAG NAIL	289931.453	332848.342	927.38
907	CP MAG NAIL	289673.445	332931.905	918.09
910	CP MAG NAIL	290453.724	332951.227	922.36





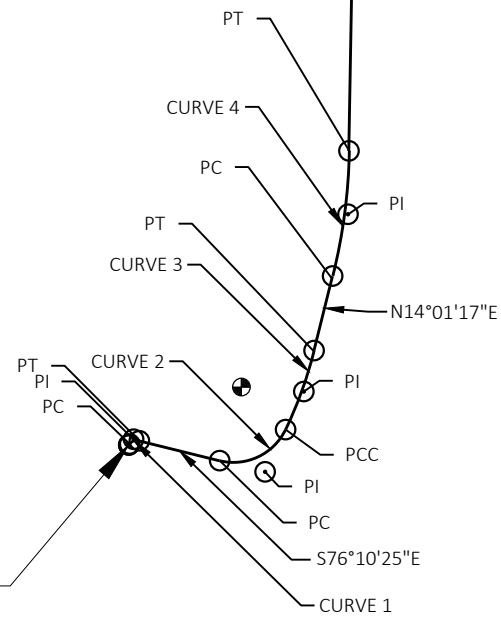
PC STA. 11+41.92'P'  
 Y = 290,239.233  
 X = 332,869.543

TEMPORARY PEDESTRIAN  
 PATH ALIGNMENT

JEFFERS RD

CURVE 1	CURVE 2	CURVE 3	CURVE 4
PI STA = 10+00.78'P'	PI STA = 10+14.77'P'	PI STA = 10+22.47'P'	PI STA = 10+41.47'P'
Y = 290115.302	Y = 290111.929	Y = 290120.275	Y = 290138.739
X = 332845.460	X = 332859.168	X = 332863.180	X = 332867.791
DELTA = 63°30'09"	DELTA = 78°08'56"	DELTA = 11°39'23"	DELTA = 13°01'21"
D = 5729°34'41"	D = 954°55'47"	D = 133°14'46"	D = 98°47'09"
T = 0.62'	T = 4.87'	T = 4.39'	T = 6.62'
L = 1.11'	L = 8.18'	L = 8.75'	L = 13.18'
R = 1.00'	R = 6.00'	R = 43.00'	R = 58.00'
PC STA = 10+00.16'P'	PC STA = 10+09.90'P'	PC STA = 10+18.08'P'	PC STA = 10+34.85'P'
Y = 290114.831	Y = 290113.093	Y = 290116.319	Y = 290132.316
X = 332845.060	X = 332854.437	X = 332861.279	X = 332866.187
PT STA = 10+01.27'P'	PT STA = 10+18.08'P'	PT STA = 10+26.83'P'	PT STA = 10+48.03'P'
Y = 290115.154	Y = 290116.319	Y = 290124.533	Y = 290145.357
X = 332846.061	X = 332861.279	X = 332864.244	X = 332867.907
BK = N40°19'26.2"E	BK = S76°10'24.5"E	BK = N25°40'39.7"E	BK = N14°01'16.5"E
AH = S76°10'24.5"E	AH = N25°40'39.7"E	AH = N14°01'16.5"E	AH = N00°59'55.9"E

PI STA. 10+00.00'P'  
 Y = 290,114.707  
 X = 332,844.955



STH 312 WB

## Estimate Of Quantities

7028-00-73

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	1,550.000	1,550.000
0004	204.0150	Removing Curb & Gutter	LF	414.000	414.000
0006	204.0155	Removing Concrete Sidewalk	SY	322.000	322.000
0008	204.0195	Removing Concrete Bases	EACH	9.000	9.000
0010	204.9060.S	Removing (item description) 01. Removing Traffic Signals STH 312 & Jeffers Rd	EACH	1.000	1.000
0012	205.0100	Excavation Common	CY	1,146.000	1,146.000
0014	213.0100	Finishing Roadway (project) 01. 7028-00-73	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	19.000	19.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	914.000	914.000
0020	415.0090	Concrete Pavement 9-Inch	SY	1,358.000	1,358.000
0022	415.4100	Concrete Pavement Joint Filling	SY	1,448.000	1,448.000
0024	416.0610	Drilled Tie Bars	EACH	366.000	366.000
0026	416.0620	Drilled Dowel Bars	EACH	40.000	40.000
0028	455.0605	Tack Coat	GAL	9.000	9.000
0030	460.2000	Incentive Density HMA Pavement	DOL	70.000	70.000
0032	460.6244	HMA Pavement 4 MT 58-34 S	TON	91.000	91.000
0034	601.0105	Concrete Curb Type A	LF	153.000	153.000
0036	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	329.000	329.000
0038	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	131.000	131.000
0040	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	220.000	220.000
0042	602.0405	Concrete Sidewalk 4-Inch	SF	2,914.000	2,914.000
0044	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	268.000	268.000
0046	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	24.000	24.000
0048	611.8115	Adjusting Inlet Covers	EACH	3.000	3.000
0050	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7028-00-73	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	620.0200	Concrete Median Blunt Nose	SF	97.000	97.000
0056	624.0100	Water	MGAL	17.000	17.000
0058	625.0100	Topsoil	SY	1,158.000	1,158.000
0060	628.1504	Silt Fence	LF	240.000	240.000
0062	628.1520	Silt Fence Maintenance	LF	240.000	240.000
0064	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0068	628.2006	Erosion Mat Urban Class I Type A	SY	1,273.000	1,273.000
0070	628.7005	Inlet Protection Type A	EACH	1.000	1.000
0072	628.7015	Inlet Protection Type C	EACH	14.000	14.000
0074	628.7504	Temporary Ditch Checks	LF	28.000	28.000
0076	629.0210	Fertilizer Type B	CWT	0.800	0.800
0078	630.0130	Seeding Mixture No. 30	LB	21.000	21.000
0080	630.0200	Seeding Temporary	LB	2.000	2.000
0082	630.0500	Seed Water	MGAL	29.000	29.000
0084	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	1.000	1.000
0086	634.0805	Posts Tubular Steel 2x2-Inch X 5-FT	EACH	2.000	2.000
0088	637.2210	Signs Type II Reflective H	SF	54.880	54.880
0090	637.2230	Signs Type II Reflective F	SF	8.000	8.000
0092	638.2102	Moving Signs Type II	EACH	10.000	10.000
0094	638.2602	Removing Signs Type II	EACH	5.000	5.000
0096	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0098	638.4000	Moving Small Sign Supports	EACH	3.000	3.000

Estimate Of Quantities

7028-00-73

Line	Item	Item Description	Unit	Total	Qty
0100	642.5001	Field Office Type B	EACH	1.000	1.000
0102	643.0300	Traffic Control Drums	DAY	13,445.000	13,445.000
0104	643.0410	Traffic Control Barricades Type II	DAY	594.000	594.000
0106	643.0420	Traffic Control Barricades Type III	DAY	890.000	890.000
0108	643.0705	Traffic Control Warning Lights Type A	DAY	1,780.000	1,780.000
0110	643.0715	Traffic Control Warning Lights Type C	DAY	1,950.000	1,950.000
0112	643.0800	Traffic Control Arrow Boards	DAY	300.000	300.000
0114	643.0900	Traffic Control Signs	DAY	10,554.000	10,554.000
0116	643.0920	Traffic Control Covering Signs Type II	EACH	7.000	7.000
0118	643.1050	Traffic Control Signs PCMS	DAY	150.000	150.000
0120	643.5000	Traffic Control	EACH	1.000	1.000
0122	644.1410	Temporary Pedestrian Surface Asphalt	SF	700.000	700.000
0124	644.1420	Temporary Pedestrian Surface Plywood	SF	122.000	122.000
0126	644.1601	Temporary Pedestrian Curb Ramp	DAY	236.000	236.000
0128	644.1810	Temporary Pedestrian Barricade	LF	40.000	40.000
0130	646.1020	Marking Line Epoxy 4-Inch	LF	538.000	538.000
0132	646.3020	Marking Line Epoxy 8-Inch	LF	617.000	617.000
0134	646.5020	Marking Arrow Epoxy	EACH	4.000	4.000
0136	646.6120	Marking Stop Line Epoxy 18-Inch	LF	175.000	175.000
0138	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	22.000	22.000
0140	646.7220	Marking Chevron Epoxy 24-Inch	LF	50.000	50.000
0142	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	743.000	743.000
0144	646.8120	Marking Curb Epoxy	LF	220.000	220.000
0146	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0148	646.9000	Marking Removal Line 4-Inch	LF	219.000	219.000
0150	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	151.000	151.000
0152	646.9100	Marking Removal Line 8-Inch	LF	50.000	50.000
0154	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	38.000	38.000
0156	646.9210	Marking Removal Line Water Blasting Wide	LF	94.000	94.000
0158	646.9300	Marking Removal Special Marking	EACH	1.000	1.000
0160	646.9310	Marking Removal Special Marking Water Blasting	EACH	1.000	1.000
0162	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	150.000	150.000
0164	650.5000	Construction Staking Base	LF	393.000	393.000
0166	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	131.000	131.000
0168	650.7000	Construction Staking Concrete Pavement	LF	335.000	335.000
0170	650.8500	Construction Staking Electrical Installations (project) 01. 7028-00-73	LS	1.000	1.000
0172	650.9000	Construction Staking Curb Ramps	EACH	18.000	18.000
0174	650.9910	Construction Staking Supplemental Control (project) 01. 7028-00-73	LS	1.000	1.000
0176	650.9920	Construction Staking Slope Stakes	LF	480.000	480.000
0178	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	231.000	231.000
0180	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	229.000	229.000
0182	652.0615	Conduit Special 3-Inch	LF	688.000	688.000
0184	652.0700.S	Install Conduit into Existing Item	EACH	7.000	7.000
0186	652.0800	Conduit Loop Detector	LF	1,372.000	1,372.000
0188	653.0140	Pull Boxes Steel 24x42-Inch	EACH	6.000	6.000
0190	653.0900	Adjusting Pull Boxes	EACH	1.000	1.000
0192	653.0905	Removing Pull Boxes	EACH	10.000	10.000
0194	654.0101	Concrete Bases Type 1	EACH	12.000	12.000
0196	654.0102	Concrete Bases Type 2	EACH	1.000	1.000

Estimate Of Quantities

7028-00-73

Line	Item	Item Description	Unit	Total	Qty
0198	654.0113	Concrete Bases Type 13	EACH	1.000	1.000
0200	654.0120	Concrete Bases Type 10-Special	EACH	1.000	1.000
0202	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,835.000	1,835.000
0204	655.0260	Cable Traffic Signal 12-14 AWG	LF	3,582.000	3,582.000
0206	655.0305	Cable Type UF 2-12 AWG Grounded	LF	961.000	961.000
0208	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,520.000	2,520.000
0210	655.0610	Electrical Wire Lighting 12 AWG	LF	246.000	246.000
0212	655.0700	Loop Detector Lead In Cable	LF	7,787.000	7,787.000
0214	655.0800	Loop Detector Wire	LF	4,228.000	4,228.000
0216	655.0900	Traffic Signal EVP Detector Cable	LF	1,062.000	1,062.000
0218	657.0100	Pedestal Bases	EACH	12.000	12.000
0220	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	1.000	1.000
0222	657.0310	Poles Type 3	EACH	1.000	1.000
0224	657.0347	Poles Type 9-Special	EACH	1.000	1.000
0226	657.0360	Poles Type 13	EACH	1.000	1.000
0228	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	6.000	6.000
0230	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	6.000	6.000
0232	657.0546	Monotube Arms 45-FT-Special	EACH	1.000	1.000
0234	657.0555	Monotube Arms 55-FT	EACH	1.000	1.000
0236	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	1.000	1.000
0238	657.0810	Luminaire Arms Steel 10-FT	EACH	1.000	1.000
0240	658.0173	Traffic Signal Face 3S 12-Inch	EACH	8.000	8.000
0242	658.0174	Traffic Signal Face 4S 12-Inch	EACH	7.000	7.000
0244	658.0416	Pedestrian Signal Face 16-Inch	EACH	12.000	12.000
0246	658.0500	Pedestrian Push Buttons	EACH	14.000	14.000
0248	658.5069	Signal Mounting Hardware (location) 01. 1003-10-73	LS	1.000	1.000
0250	659.1125	Luminaires Utility LED C	EACH	2.000	2.000
0252	690.0150	Sawing Asphalt	LF	158.000	158.000
0254	690.0250	Sawing Concrete	LF	1,336.000	1,336.000
0256	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0258	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0260	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0262	SPV.0060	Special 01. Install State Furnished EVP Detector Heads STH 312 & Jeffers Rd	EACH	2.000	2.000
0264	SPV.0090	Special 01. Install State Furnished CAT-5E Cable	LF	337.000	337.000

**REMOVING CONCRETE PAVEMENT**

STATION - STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT (SY)	204.0155 REMOVING CONCRETE SIDEWALK (SY)
17+60'J' - 19+23'J'	JEFFERS RD SOUTH LEG	182	88
19+28'J' - 19+77'J'	SE QUADRANT	362	22
19+28'J' - 19+56'J'	SW QUADRANT	--	10
368+12'EB' - 369+31'EB'	EB SHOULDER	91	--
366+27'EB' - 367+04'EB'	WEST MEDIANS & TURN BAY	68	65
367+52'EB' - 368+29'EB'	EAST MEDIANS & TURN BAY	68	69
20+78'J' - 22+25'J'	JEFFERS RD NORTH LEG	398	--
366+56'WB' - 367+04'WB'	NW QUADRANT	56	--
367+52'WB' - 368+41'WB'	NE QUADRANT	298	68
368+41'WB' - 368+61'WB'	WB SHOULDER	27	--
<b>PROJECT TOTALS</b>		<b>1,550</b>	<b>322</b>

**REMOVING CURB & GUTTER**

STATION - STATION	LOCATION	204.0150 REMOVING CURB & GUTTER (LF)
17+60'J' - 19+23'J'	JEFFERS RD SOUTH LEG	60
19+28'J' - 19+77'J'	SE QUADRANT	--
19+28'J' - 19+56'J'	SW QUADRANT	21
368+12'EB' - 369+31'EB'	EB SHOULDER	--
366+27'EB' - 367+04'EB'	WEST MEDIANS & TURN BAY	117
367+52'EB' - 368+29'EB'	EAST MEDIANS & TURN BAY	123
20+78'J' - 22+25'J'	JEFFERS RD NORTH LEG	--
366+56'WB' - 367+04'WB'	NW QUADRANT	22
367+52'WB' - 368+41'WB'	NE QUADRANT	71
368+41'WB' - 368+61'WB'	WB SHOULDER	--
<b>PROJECT TOTALS</b>		<b>414</b>

**BASE AGGREGATE & HMA PAVEMENT**

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	455.0605 TACK COAT (GAL)	460.6244 HMA PAVEMENT 4 MT 58-34S (TON)	624.0100 WATER (MGAL)
17+60'J' - 19+23'J'	JEFFERS RD SOUTH LEG	--	190	3	36	3
19+28'J' - 19+77'J'	SE QUADRANT	--	122	--	4	2
19+28'J' - 19+56'J'	SW QUADRANT	--	6	--	--	1
368+12'EB' - 369+31'EB'	EB SHOULDER	17	41	--	8	1
366+27'EB' - 367+04'EB'	WEST MEDIANS & TURN BAY	--	59	--	--	1
367+52'EB' - 368+29'EB'	EAST MEDIANS & TURN BAY	--	60	--	--	1
20+78'J' - 22+25'J'	JEFFERS RD NORTH LEG	--	184	5	28	3
366+56'WB' - 367+04'WB'	NW QUADRANT	--	56	--	8	1
367+52'WB' - 368+41'WB'	NE QUADRANT	--	183	1	6	3
368+41'WB' - 368+61'WB'	WB SHOULDER	2	14	--	1	1
<b>PROJECT TOTALS</b>		<b>19</b>	<b>914</b>	<b>9</b>	<b>91</b>	<b>17</b>

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

**EARTHWORK SUMMARY**

Stages	From/To Station	Location	205.0100	Salvaged/ Unusable Pavement Material	(1) Available Material	Unexpanded Fill	Expanded Fill	(2) Mass Ordinate +/-
			Excavation Common CY				CY	
Stage 1 Phase 1	20+81'J' to 21+55'J'	Jeffers Rd North	86	60	26	0	0	86
	20+81'J' to 21+07'J'	NW Quadrant Pork Chop Island 'NW'	25	5	20	0	0	25
	21+00'J' to 21+20'J'	NW Quadrant Curb Ramp 'NWQ'	10	2	8	0	0	10
	19+33'J' to 19+54'J'	SW Quadrant Curb Ramp 'SWQ'	10	3	7	0	0	10
	10+00'P' to 11+37'P'	Temporary Pedestrian Path 'P'	14	0	14	0	0	14
Stage 1 Phase 1 Subtotal			146	70	76	0	0	145
Stage 1 Phase 2	366+27'EB' to 367+77'EB'	EB Left Turn Lane	30	20	10	0	0	30
	366+72'WB" to 366+94'WB'	EB Left Turn Lane Curb Ramps North 'ELN'	15	5	10	0	0	15
	366+70'EB' to 367+04'EB'	EB Left Turn Lane Curb Ramps South 'ELS'	35	20	15	0	0	35
Stage 1 Phase 2 Subtotal			80	45	35	0	0	80
Stage 2 Phase 1	17+60'J' to 19+74'J'	Jeffers Rd South	272	85	187	0	0	272
	20+81'J' to 22+25'J'	Jeffers Rd North	145	75	70	1	1	144
	368+12'EB' to 369+30'EB'	STH 312 Eastbound	93	10	83	0	0	93
	368+41'WB' to 368+61'WB'	STH 312 Westbound	19	10	9	0	0	19
	10+00'NE' to 11+37'NE'	NE Quadrant	225	60	165	17	22	203
	10+00'SE' to 10+77'SE'	SE Quadrant	73	70	3	25	32	41
Stage 2 Phase 1 Subtotal			828	310	518	43	56	772
Stage 2 Phase 2	367+78'WB' to 368+29'WB'	WB Left Turn Lane	30	20	10	0	0	30
	367+51'WB' to 367+84'WB'	WB Left Turn Lane Curb Ramps North 'WLN'	35	20	15	0	0	35
	367+63'EB' to 367+86'EB'	WB Left Turn Lane Curb Ramps South 'WLS'	15	5	10	0	0	15
Stage 2 Phase 2 Subtotal			80	45	35	0	0	80
Stage 3	10+00'P' to 11+37'P'	Temporary Pedestrian Path 'P'	13	0	13	13	16	-4
Stage 3 Subtotal			13	0	13	13	16	-4
Project Totals			1,146	470	676	56	73	1,073
Total Excavation Common			1,146					

1) Available Material = Cut - Salvaged/Unusable Pavement Material.

2) 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. Mass Ordinate = Cut - Fill. The Mass Ordinate is for information purposes only.

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.



**CONCRETE PAVEMENT**

STATION	STATION	LOCATION	415.0090 CONCRETE PAVEMENT 9-INCH (SY)	415.4100 CONCRETE PAVEMENT JOINT FILLING (SY)	602.0405 CONCRETE SIDEWALK 4-INCH (SF)	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW (SF)	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW (SF)
17+60'J'	19+23'J'	JEFFERS RD SOUTH LEG	183	212	--	--	--
19+28'J'	19+77'J'	SE QUADRANT	277	297	156	20	--
19+28'J'	19+56'J'	SW QUADRANT	--	--	92	10	--
368+12'EB'	369+31'EB'	EB SHOULDER	28	28	--	--	--
366+27'EB'	367+04'EB'	WEST MEDIANS & TURN BAY	68	71	589	48	--
367+52'EB'	368+29'EB'	EAST MEDIANS & TURN BAY	68	76	622	60	24
20+78'J'	22+25'J'	JEFFERS RD NORTH LEG	398	398	--	--	--
366+56'WB'	367+04'WB'	NW QUADRANT	20	20	558	66	--
367+52'WB'	368+41'WB'	NE QUADRANT	289	319	897	64	--
368+41'WB'	368+61'WB'	WB SHOULDER	27	27	--	--	--
<b>PROJECT TOTALS</b>			<b>1,358</b>	<b>1,448</b>	<b>2,914</b>	<b>268</b>	<b>24</b>

**DRILLED TIE BARS AND DOWEL BARS**

STATION	STATION	LOCATION	416.0610 DRILLED TIE BARS (EACH)	416.0620 DRILLED DOWEL BARS (EACH)
17+60'J'	19+80'J'	SOUTH JEFFERS	132	--
366+27'EB'	368+29'EB'	MEDIANS AND TURN BAYS	140	40
20+78'J'	22+25'J'	NORTH JEFFERS	94	--
<b>PROJECT TOTALS</b>			<b>366</b>	<b>40</b>

**CONCRETE CURB & GUTTER**

STATION	STATION	LOCATION	601.0105 CONCRETE CURB TYPE A (LF)	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A (LF)	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D (LF)	601.0555 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A (LF)	620.0200 CONCRETE MEDIAN BLUNT NOSE (SF)
17+60'J'	19+23'J'	JEFFERS RD SOUTH LEG	--	106	60	--	--
19+28'J'	19+77'J'	SE QUADRANT	--	74	--	--	--
19+28'J'	19+56'J'	SW QUADRANT	--	22	--	--	--
366+27'EB'	367+04'EB'	WEST MEDIANS & TURN BAY	--	--	--	110	30
367+52'EB'	368+29'EB'	EAST MEDIANS & TURN BAY	--	--	--	110	67
20+78'J'	22+25'J'	JEFFERS RD NORTH LEG	--	--	--	--	--
366+56'WB'	367+04'WB'	NW QUADRANT	78	22	--	--	--
367+52'WB'	368+41'WB'	NE QUADRANT	76	105	71	--	--
<b>PROJECT TOTALS</b>			<b>153</b>	<b>329</b>	<b>131</b>	<b>220</b>	<b>97</b>

**MAINTENANCE AND REPAIR OF HAUL ROADS**

PROJECT	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (EACH)
7028-00-73	1
<b>PROJECT TOTALS</b>	
	<b>1</b>

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

**EROSION CONTROL & STORM SEWER ITEMS**

STATION - STATION	LOCATION	611.8115 ADJUSTING INLET COVERS (EACH)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2006 EROSION MAT URBAN CLASS I TYPE A (SY)	628.7005 INLET PROTECTION TYPE A (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
17+60'J' - 19+23'J'	JEFFERS RD SOUTH LEG	--	--	--	295	--	4	--	--	--
19+28'J' - 19+77'J'	SE QUADRANT	--	--	--	116	--	--	--	--	--
19+28'J' - 19+56'J'	SW QUADRANT	--	--	--	25	--	--	--	--	--
368+12'EB' - 369+31'EB'	EB SHOULDER	--	--	--	284	--	--	22	--	--
366+27'EB' - 367+04'EB'	WEST MEDIANS & TURN BAY	3	--	--	--	--	3	--	--	--
367+52'EB' - 368+29'EB'	EAST MEDIANS & TURN BAY	--	--	--	--	--	1	--	--	--
20+78'J' - 22+25'J'	JEFFERS RD NORTH LEG	--	--	--	--	--	3	--	--	--
366+56'WB' - 367+04'WB'	NW QUADRANT	--	130	130	97	1	--	--	--	--
367+52'WB' - 368+41'WB'	NE QUADRANT	--	37	37	308	--	--	--	--	--
368+41'WB' - 368+61'WB'	WB SHOULDER	--	23	23	32	--	--	--	--	--
UNDISTRIBUTED		--	50	50	116	--	3	6	4	2
<b>PROJECT TOTALS</b>		<b>3</b>	<b>240</b>	<b>240</b>	<b>1,273</b>	<b>1</b>	<b>14</b>	<b>28</b>	<b>4</b>	<b>2</b>

**REMOVING SIGNS, MOVING SIGNS, AND PERMANENT SIGNING**

LOCATION	STATION	SIGN CODE	SIGN TYPE	SIGN SIZE INCHES	637.2210		637.2230		634.0614		634.0805		638.2102		638.4000		638.2602		638.3000		REMARKS
					SIGNS TYPE II REFLECTIVE	SIGNS TYPE II REFLECTIVE	POSTS WOOD 4X6-INCH 14-FT (EACH)	POSTS TUBULAR STEEL 2x2-INCH 5-FT (EACH)	MOVING SIGN SUPPORTS (EACH)	MOVING SMALL SIGN SUPPORTS (EACH)	MOVING SMALL SIGN SUPPORTS (EACH)	MOVING SMALL SIGN SUPPORTS (EACH)	MOVING SMALL SIGN SUPPORTS (EACH)	MOVING SMALL SIGN SUPPORTS (EACH)							
JEFFERS RD, SB LANE	19+20'J'	M1-94S	II	18"X108"	13.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312 NORTH CROSSING
JEFFERS RD, RT	19+45'J'	-	II	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	STOP
JEFFERS RD, RT	19+60'J'	-	II	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	FOLDING STOP, DIVIDED HIGHWAY
NE QUADRANT ISLAND	20+90'J'	W12-1D	II	24"X24"	-	4.00	-	1	-	-	-	-	-	-	-	-	-	-	-	-	DOUBLE DIAGONAL ARROW
NE QUADRANT ISLAND	20+80'J'	R1-1F	II	30"X30"	6.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FOLDING STOP
NE QUADRANT ISLAND	20+90'J'	-	II	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	ONE WAY
NE QUADRANT CURB	20+95'J'	-	II	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	YIELD
NW QUADRANT ISLAND	20+90'J'	-	II	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	FOLDING STOP, DIVIDED HIGHWAY
NW QUADRANT ISLAND	21+05'J'	W12-1D	II	24"X24"	-	4.00	-	1	-	-	-	-	-	-	-	-	-	-	-	-	DOUBLE DIAGONAL ARROW
NW QUADRANT CURB	21+15'J'	R1-2	II	36"X31"	3.88	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	YIELD
NW QUADRANT CURB	21+25'J'	-	II	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	STOP, RIGHT TURN OBEY THIS SIGN
JEFFERS RD, NB LANE	21+30'J'	M1-94S	II	18"X108"	13.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	312 NORTH CROSSING
STH 312 EB, RT	366+55'EB'	R1-1F	II	30"X30"	6.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FOLDING STOP
STH 312 WB MEDIAN	366+60'WB'	R1-1F	II	30"X30"	6.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FOLDING STOP
STH 312 EB MEDIAN	366+70'EB'	R1-1F	II	30"X30"	6.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FOLDING STOP
STH 312 EB MEDIAN	366+75'EB'	-	II	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	LEFT TURN YIELD ON FLASHING YELLOW ARROW
STH 312 WB MEDIAN	367+70'WB'	-	II	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	LEFT TURN YIELD ON FLASHING YELLOW ARROW
STH 312 EB MEDIAN	367+75'EB'	-	II	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	KEEP RIGHT SYMBOL
STH 312 WB MEDIAN	367+80'WB'	R1-1F	II	30"X30"	6.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FOLDING STOP
STH 312 EB MEDIAN	367+85'EB'	R1-1F	II	30"X30"	6.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	FOLDING STOP
STH 312 WB, LT	368+30'WB'	-	II	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-	TO CTH F, RIGHT TURN ARROW, DO NOT ENTER
<b>PROJECT TOTALS</b>					<b>54.88</b>	<b>8.00</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.</b>								

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**TRAFFIC CONTROL**

STAGE	ROADWAY	ANTICIPATED DAYS IN SERVICE	643.0300		643.0410		643.0420		643.0705		643.0715		643.0800		643.0900		643.0920		643.1050		643.5000		644.1410		644.1420		644.1601		644.1810		649.0150		
			TRAFFIC CONTROL DRUMS NO. (DAYS)	TRAFFIC CONTROL BARRICADES TYPE II NO. (DAYS)	TRAFFIC CONTROL BARRICADES TYPE III NO. (DAYS)	TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. (DAYS)	TRAFFIC CONTROL WARNING LIGHTS TYPE C NO. (DAYS)	TRAFFIC CONTROL ARROW BOARDS NO. (DAYS)	TRAFFIC CONTROL SIGNS NO. (DAYS)	TRAFFIC CONTROL COVERING SIGNS TYPE II (EACH)	TRAFFIC CONTROL SIGNS PCMS NO. (DAYS)	TRAFFIC CONTROL (EACH)	TEMPORARY PEDESTRIAN SURFACE ASPHALT (SF)	TEMPORARY PEDESTRIAN SURFACE PLYWOOD (SF)	TEMPORARY PEDESTRIAN CURB RAMP NO. (DAYS)	TEMPORARY PEDESTRIAN BARRICADES (SF)	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE) (LF)																
<u>STAGE 1 P1</u>																																	
	STH 312	18	150	2700	-	-	4	72	8	144	26	468	4	72	29	522	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	JEFFERS RD	18	36	648	6	108	3	54	6	108	-	-	-	-	14	252	-	-	-	-	-	-	-	-	74	2	36	20	-	-	-	50	
	DETOUR	18	-	-	-	-	1	18	2	36	-	-	-	-	102	1836	3	2	36	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>STAGE 1 P2</u>																																	
	STH 312	14	110	1540	-	-	5	70	10	140	26	364	4	56	24	336	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	JEFFERS RD	14	23	322	4	56	3	42	6	84	-	-	-	-	14	196	-	-	-	-	-	-	-	-	-	2	28	-	-	-	-	-	
	DETOUR	14	-	-	-	-	1	14	2	28	-	-	-	-	102	1428	-	2	28	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>STAGE 2 P1</u>																																	
	STH 312	25	143	3575	-	-	6	150	12	300	26	650	4	100	29	725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	JEFFERS RD	25	46	1150	10	250	6	150	12	300	-	-	-	-	20	500	-	-	-	-	-	700	48	4	100	20	-	-	-	-	-	100	
	DETOUR	25	-	-	-	-	2	50	4	100	-	-	-	-	91	2275	4	2	50	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>STAGE 2 P2</u>																																	
	STH 312	18	149	2682	-	-	7	126	14	252	26	468	4	72	27	486	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	JEFFERS RD	18	46	828	10	180	6	108	12	216	-	-	-	-	20	360	-	-	-	-	-	-	-	-	4	72	-	-	-	-	-	-	
	DETOUR	18	-	-	-	-	2	36	4	72	-	-	-	-	91	1638	-	2	36	-	-	-	-	-	-	-	-	-	-	-	-	-	
<u>UNDISTRIBUTED</u>																																	
<b>PROJECT TOTALS</b>				<b>13,445</b>		<b>594</b>		<b>890</b>		<b>1,780</b>		<b>1,950</b>		<b>300</b>		<b>10,554</b>		<b>7</b>		<b>150</b>		<b>1</b>		<b>700</b>		<b>122</b>		<b>236</b>		<b>40</b>		<b>150</b>	

\* COVERING SIGNS OCCUR FOR ONE COMPLETE CYCLE.

\*\* TEMPORARY PEDESTRIAN SURFACE ASPHALT TO BE INSTALLED IN STAGE 1 PHASE 1 TO BE READY AT BEGINNING OF STAGE 2 PHASE 1 FOR PEDESTRIAN USE.

**PAVEMENT MARKING**

STATION - STATION	LOCATION	646.1020		646.3020		646.5020		646.6120		646.6220		646.7220		646.7420		646.8120		646.8220	
		MARKING LINE EPOXY 4-INCH YELLOW (LF)	MARKING LINE EPOXY 8-INCH WHITE (LF)	MARKING ARROW EPOXY TYPE 2 WHITE (EACH)	MARKING STOP LINE EPOXY 18-INCH WHITE (LF)	MARKING YIELD LINE EPOXY 18-INCH WHITE (EACH)	MARKING CHEVRON EPOXY 24-INCH WHITE (LF)	MARKING CROSSWALK EPOXY LINE 6-INCH WHITE (LF)	MARKING CURB EPOXY YELLOW (LF)	MARKING ISLAND NOSE EPOXY YELLOW (EACH)									
17+60'J' - 19+80'J'	SOUTH JEFFERS	244	261	2	43	--	15	178	--	--									
366+27'EB' - 368+29'EB'	MEDIANS AND TURN BAYS	--	64	--	98	--	--	369	220	4									
20+78'J' - 22+25'J'	NORTH JEFFERS	294	292	2	34	22	35	196	--	--									
<b>PROJECT TOTALS</b>		<b>538</b>	<b>617</b>	<b>4</b>	<b>175</b>	<b>22</b>	<b>50</b>	<b>743</b>	<b>220</b>	<b>4</b>									

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

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**PAVEMENT MARKING REMOVALS**

STATION - STATION	LOCATION	646.9000 MARKING REMOVAL LINE 4-NCH (LF)	646.9010 MARKING REMOVAL LINE WATER BLASTING 4-INCH (LF)	646.9100 MARKING REMOVAL LINE 8-INCH (LF)	646.9110 MARKING REMOVAL LINE WATER BLASTING 8-INCH (LF)	646.9210 MARKING REMOVAL LINE WATER BLASTING WIDE (LF)	646.9300 MARKING REMOVAL SPECIAL MARKING (EACH)	646.9310 MARKING REMOVAL SPECIAL WATER BLASTING (EACH)
17+60'J' - 19+80'J'	SOUTH JEFFERS	119	151	--	38	--	--	1
366+27'EB' - 368+29'EB'	MEDIANS AND TURN BAYS	--	--	--	--	74	--	--
20+78'J' - 22+25'J'	NORTH JEFFERS	100	--	50	--	20	1	--
<b>PROJECT TOTALS</b>		<b>219</b>	<b>151</b>	<b>50</b>	<b>38</b>	<b>94</b>	<b>1</b>	<b>1</b>

**CONSTRUCTION STAKING**

STATION - STATION	LOCATION	650.5000 CONSTRUCTION STAKING BASE (LF)	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER (LF)	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT (LF)	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) (EACH)	650.9000 CONSTRUCTION STAKING CURB RAMPS (EACH)	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (LS)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
17+60'J' - 19+80'J'	SOUTH JEFFERS	322	60	155	--	2	--	215
366+27'EB' - 368+29'EB'	MEDIANS AND TURN BAYS	--	--	105	--	8	--	120
20+78'J' - 22+25'J'	NORTH JEFFERS	71	71	75	--	8	--	145
	UNDISTRIBUTED	--	--	--	1	--	1	--
<b>PROJECT TOTALS</b>		<b>393</b>	<b>131</b>	<b>335</b>	<b>1</b>	<b>18</b>	<b>1</b>	<b>480</b>

**FINISHING**

LOCATION	625.0100 TOPSOIL (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
JEFFERS RD SOUTH LEG	290	0.2	5	--	7
SE QUADRANT	120	0.1	2	--	3
SW QUADRANT	30	0.0	0	--	1
EB SHOULDER	280	0.2	5	--	6
NW QUADRANT	100	0.1	2	2	4
NE QUADRANT	308	0.2	6	--	7
WB SHOULDER	30	0.0	1	--	1
<b>PROJECT TOTALS</b>	<b>1,158</b>	<b>0.8</b>	<b>21</b>	<b>2</b>	<b>29</b>

**SAWING PAVEMENT**

STATION - STATION	LOCATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
17+60'J' - 19+80'J'	SOUTH JEFFERS	70	421
366+27'EB' - 368+29'EB'	MEDIANS AND TURN BAYS	--	569
20+78'J' - 22+25'J'	NORTH JEFFERS	88	346
<b>PROJECT TOTALS</b>		<b>158</b>	<b>1,336</b>

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

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**REMOVING CONCRETE BASES**

SIGNAL BASE NO.	STATION	204.0195 REMOVING CONCRETE BASES EACH
SB6	366+99 'WB', 35' LT	1
SB7	367+73 'WB', 73' LT	1
SB8	367+67 'WB', 33' LT	1
SB9	367+68 'WB', 07' RT	1
SB10	367+80 'EB', 13' LT	1
SB13	367+85 'EB', 57' RT	1
SB14	367+66 'EB', 94' RT	1
SB15	367+57 'EB', 36' RT	1
SB16	366+92 'EB', 78' RT	1
<b>TOTAL</b>		<b>9</b>

**REMOVING PULL BOXES**

PULL BOX NO.	STATION	653.0905 REMOVING PULL BOXES EACH
PB9	367+00 'WB', 44' LT	1
PB10	367+84 'WB', 65' LT	1
PB11	367+72 'WB', 36' LT	1
PB14	367+89 'WB', 6' RT	1
PB19	367+56 'EB', 42' RT	1
PB20	366+66 'EB', 27' LT	1
PB21	367+89 'EB', 26' LT	1
PB22	367+33 'EB', 50' RT	1
PB23	367+49 'EB', 46' RT	1
PB24	367+32 'EB', 56' RT	1
<b>TOTAL</b>		<b>10</b>

**REMOVE TRAFFIC SIGNALS**

LOCATION	204.9060.S.01 REMOVING TRAFFIC SIGNALS EACH
STH 312 & JEFFERS RD	1
<b>TOTAL</b>	<b>1</b>

**PULL BOXES AND COMMUNICATION VAULTS**

NO.	** STATION	653.0140 PULL BOXES STEEL 24x42-INCH EACH	653.0900 ADJUSTING PULL BOXES EACH
PB9	367+02 'WB', 49' LT	1	--
PB10	368+05 'WB', 60' LT	1	--
PB11	367+60 'WB', 46' LT	1	--
PB14	367+89 'WB', 6' RT	1	--
PB18	367+99 'EB', 53' RT	1	--
PB19	367+71 'EB', 74' RT	--	1
PB20	366+86 'EB', 72' RT	1	--
<b>TOTAL</b>		<b>6</b>	<b>1</b>

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**TRAFFIC SIGNAL EQUIPMENT**

SIG. BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0347 POLES TYPE 9-SPECIAL EACH	657.0360 POLES TYPE 13 EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0546 MONOTUBE ARMS 45-FT-SPECIAL EACH	657.0555 MONOTUBE ARMS 55-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0810 LUMINAIRE ARMS STEEL 10-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED-C EACH
SB2	--	--	--	--	--	--	--	--	--	--	--	1	--
SB3	1	--	--	--	--	--	1	--	--	--	--	1	--
SB7	1	--	--	--	--	1	--	--	--	--	--	2	--
SB8	1	--	--	--	--	1	--	--	--	--	--	1	--
SB9	--	--	--	--	1	--	--	--	1	--	1	--	1
SB10	1	--	--	--	--	1	--	--	--	--	--	1	--
SB11	1	--	--	--	--	1	--	--	--	--	--	1	--
SB12	1	--	--	--	--	1	--	--	--	--	--	1	--
SB13	1	--	--	--	--	--	1	--	--	--	--	1	--
SB14	1	--	--	--	--	1	--	--	--	--	--	--	--
SB17	1	--	--	--	--	--	1	--	--	--	--	1	--
SB18	1	--	--	--	--	--	1	--	--	--	--	1	--
SB19	--	1	1	--	--	--	--	--	--	1	--	1	1
SB20	--	--	--	1	--	--	--	1	--	--	--	--	--
SB21	1	--	--	--	--	--	1	--	--	--	--	1	--
SB22	1	--	--	--	--	--	1	--	--	--	--	1	--
<b>TOTAL</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>14</b>	<b>2</b>

**INSTALL CONDUIT INTO EXISTING ITEM**

LOC.	STATION	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
CB1	366+59 'EB', 61' RT	1
PB4	366+65 'EB', 07' LT	1
PB6	366+53 'WB', 07' RT	1
PB8	366+58 'WB', 65' LT	1
PB15	367+94 'EB', 13' LT	1
PB16	368+04 'EB', 12' LT	1
PB18	367+99 'EB', 53' RT	1
<b>TOTAL</b>		<b>7</b>

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

**LEGEND**

\*\* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

TRAFFIC SIGNALS  
STH 312 & JEFFERS RD

**TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE**

LOC.	TO	LOC.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	* 655.0700 LOOP DETECTOR LEAD IN CABLE	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE	SPV.0090.01 INSTALL STATE FURNISHED CAT-5E CABLE
LOC.	TO	LOC.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.
CB1	SB1	SB1	--	41	--	41	--	--	--	--
CB1	SB2	SB2	--	129	--	--	--	129	--	--
CB1	SB3	SB3	122	--	--	--	--	122	--	--
CB1	SB4	SB4	--	174	--	--	--	--	--	--
CB1	SB6	SB6	266	--	--	--	--	--	266	--
CB1	SB7	SB7	--	305	--	--	--	434	--	--
CB1	SB8	SB8	--	319	--	--	--	319	--	--
CB1	SB9	SB9	--	428	--	--	--	--	475	--
CB1	SB10	SB10	--	469	--	--	--	469	--	--
CB1	SB11	SB11	--	483	--	--	--	483	--	--
CB1	SB12	SB12	--	349	--	--	--	349	--	--
CB1	SB13	SB13	--	353	--	--	--	353	--	--
CB1	SB14	SB14	--	296	--	--	--	--	--	337
CB1	SB16	SB16	223	--	--	--	--	--	223	--
CB1	SB17	SB17	213	--	--	--	--	213	--	--
CB1	SB18	SB18	180	--	--	--	--	180	--	--
CB1	SB19	SB19	--	170	170	--	--	170	--	--
CB1	SB20	SB20	--	66	--	--	--	--	98	--
CB1	SB21	SB21	73	--	--	--	--	73	--	--
CB1	SB22	SB22	99	--	--	99	--	99	--	--
SB1	SB2	SB2	--	--	--	126	--	--	--	--
SB2	SB3	SB3	--	--	--	56	--	--	--	--
SB3	SB4	SB4	--	--	--	101	--	--	--	--
SB4	SB6	SB6	--	--	--	136	--	--	--	--
SB6	SB7	SB7	--	--	--	114	--	--	--	--
SB7	SB8	SB8	--	--	--	49	--	--	--	--
SB8	SB9	SB9	--	--	--	289	--	--	--	--
SB9	SB10	SB10	--	--	--	117	--	--	--	--
SB10	SB11	SB11	--	--	--	47	--	--	--	--
SB11	SB12	SB12	--	--	--	199	--	--	--	--
SB12	SB13	SB13	--	--	--	48	--	--	--	--
SB13	SB14	SB14	--	--	--	95	--	--	--	--
SB14	SB16	SB16	--	--	--	131	--	--	--	--
SB16	SB17	SB17	--	--	--	47	--	--	--	--
SB17	SB18	SB18	--	--	--	103	--	--	--	--
SB18	SB19	SB19	--	--	--	60	--	--	--	--
SB19	SB20	SB20	--	--	--	147	--	--	--	--
SB20	SB21	SB21	--	--	--	50	--	--	--	--
SB21	SB22	SB22	--	--	--	67	--	--	--	--
PB1	SB1	SB1	--	--	--	23	--	--	--	--

(CONTINUED ON NEXT PAGE)

**TRAFFIC SIGNAL FACES**

SIG. HEAD NO.	SIG. BASE NO.	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH
6	SB11	--	1***	--
7	SB12	--	1*	--
8	SB12	1*	--	--
9	SB11	1*	--	--
12	SB14	--	1*	--
15	SB7	1	--	--
16	SB20	1	--	--
17	SB20	1	--	--
18	SB19	--	1**	--
19	SB20	--	1	--
20	SB19	1	--	--
21	SB9	1	--	--
22	SB10	1	--	--
23	SB8	--	1**	--
24	SB9	--	1	--
28	SB7	--	--	1
29	SB10	--	--	1
41	SB22	--	--	1
42	SB2	--	--	1
43	SB3	--	--	1
44	SB8	--	--	1
61	SB17	--	--	1
62	SB21	--	--	1
81	SB11	--	--	1
82	SB12	--	--	1
83	SB13	--	--	1
84	SB18	--	--	1
<b>TOTAL</b>		<b>8</b>	<b>7</b>	<b>12</b>

\*RETROREFLECTIVE BACKPLATE REQUIRED.  
 \*\*TUNNEL VISOR REQUIRED.  
 \*\*\*RETROFEFLECTIVE BACKPLATE & TUNNEL VISOR REQUIRED.

**LEGEND**

\* QUANTITIES LISTED ELSEWHERE  
 \*\* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TRAFFIC SIGNALS  
 STH 312 & JEFFERS RD

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE (CONTINUED)

LOC. TO	LOC.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED L.F.	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG L.F.	* 655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.	SPV.0090.01 INSTALL STATE FURNISHED CAT-5E CABLE L.F.
PB4	SB3	--	--	--	28	--	--	--	--
PB5	SB4	--	--	--	25	--	--	--	--
PB6	SB4	--	--	--	37	--	--	--	--
PB8	SB6	--	--	--	41	--	--	--	--
PB9	SB7	--	--	--	21	--	--	--	--
PB10	SB9	--	--	--	41	--	--	--	--
PB11	SB10	--	--	--	20	--	--	--	--
PB14	SB12	--	--	--	27	--	--	--	--
PB15	SB14	--	--	--	23	--	--	--	--
PB16	SB14	--	--	--	36	--	--	--	--
PB18	SB17	--	--	--	22	--	--	--	--
PB19	SB19	--	--	--	29	--	--	--	--
PB20	SB20	--	--	--	25	--	--	--	--
CB1	SB5	--	--	221	--	--	--	--	--
SB5	SB9	--	--	343	--	--	--	--	--
SB19	SB15	--	--	227	--	--	--	--	--
SB2	HEAD 42	15	--	--	--	--	--	--	--
SB3	HEAD 43	15	--	--	--	--	--	--	--
SB7	HEAD 15	19	--	--	--	--	--	--	--
SB7	HEAD 28	15	--	--	--	--	--	--	--
SB8	HEAD 23	22	--	--	--	--	--	--	--
SB8	HEAD 44	15	--	--	--	--	--	--	--
SB9	HEAD 21	61	--	--	--	--	--	--	--
SB9	HEAD 24	78	--	--	--	--	--	--	--
SB9	LUMINAIRE	--	--	--	--	129	--	--	--
SB10	HEAD 22	19	--	--	--	--	--	--	--
SB10	HEAD 29	15	--	--	--	--	--	--	--
SB11	HEAD 6	22	--	--	--	--	--	--	--
SB11	HEAD 9	19	--	--	--	--	--	--	--
SB11	HEAD 81	15	--	--	--	--	--	--	--
SB12	HEAD 7	22	--	--	--	--	--	--	--
SB12	HEAD 8	19	--	--	--	--	--	--	--
SB12	HEAD 82	15	--	--	--	--	--	--	--
SB13	HEAD 83	15	--	--	--	--	--	--	--
SB14	HEAD 12	22	--	--	--	--	--	--	--
SB17	HEAD 61	15	--	--	--	--	--	--	--
SB18	HEAD 84	15	--	--	--	--	--	--	--
SB19	HEAD 18	22	--	--	--	--	--	--	--
SB19	HEAD 20	19	--	--	--	--	--	--	--
SB19	LUMINAIRE	--	--	--	--	117	--	--	--
SB20	HEAD 16	48	--	--	--	--	--	--	--
SB20	HEAD 17	19	--	--	--	--	--	--	--
SB20	HEAD 19	68	--	--	--	--	--	--	--
SB21	HEAD 62	15	--	--	--	--	--	--	--
SB22	HEAD 41	15	--	--	--	--	--	--	--
<b>TOTAL</b>		<b>1835</b>	<b>3582</b>	<b>961</b>	<b>2520</b>	<b>246</b>	<b>3393</b>	<b>1062</b>	<b>337</b>

CONDUIT

LOC. TO	LOC.	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH L.F.	652.0615 CONDUIT SPECIAL 3-INCH L.F.
PB4	SB3	12	--	--
PB8	PB9	--	--	88
PB9	SB7	5	--	--
PB9	SB8	19	--	--
PB8	PB10	--	--	294
PB10	SB9	--	25	--
PB10	PB11	--	94	--
PB11	SB10	4	--	--
PB11	SB11	18	--	--
PB10	PB12	41	--	--
PB10	PB14	--	--	136
PB14	SB12	10	--	--
PB14	SB13	13	--	--
PB15	SB14	7	--	--
PB18	PB19	--	70	--
PB18	SB17	6	--	--
PB19	SB18	23	--	--
PB19	SB19	13	--	--
PB19	PB20	--	--	170
PB20	SB20	--	10	--
PB20	SB21	16	--	--
PB20	SB22	26	--	--
PB20	CB1	30	30	--
<b>TOTAL</b>		<b>231</b>	<b>229</b>	<b>688</b>

LEGEND

\* QUANTITIES LISTED ELSEWHERE

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TRAFFIC SIGNALS  
STH 312 & JEFFERS RD

**TRAFFIC DETECTOR LOOPS**

LOOP NO.	HOME RUN PB	** LOCATION	SIZE		NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	*	655.0800
			(FT)	X (FT)				CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
11	PB6	366+49 'EB', 25' LT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	90	133	278
12	PB6	366+75 'EB', 28' LT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	86	133	266
21	PB12						EXISTING	--	732	--
22	PB13						EXISTING	--	531	--
31	PB19	19+20 'J', 04' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	134	141	410
32	PB19	19+46 'J', 03' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	132	141	404
41	PB9	21+23 'J', 17' LT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	98	227	302
42	PB9	20+97 'J', 16' LT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	72	227	224
51	PB15	368+08 'EB', 28' LT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	78	243	242
52	PB15	367+82 'EB', 26' LT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	243	236
61	PB3						EXISTING	--	415	--
62	PB2						EXISTING	--	210	--
71	PB9	21+23 'J', 03' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	134	227	410
72	PB9	20+97 'J', 03' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	112	227	344
81	PB19	19+21 'J', 18' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	104	141	320
82	PB19	19+47 'J', 18' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	100	141	308
83	PB19	19+21 'J', 30' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	80	141	248
84	PB19	19+47 'J', 30' RT	6	X 20	3	CONCRETE	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	141	236
<b>TOTAL</b>								<b>1372</b>	<b>4394</b>	<b>4228</b>

3

3

**CONCRETE BASES**

SIGNAL BASE NO.	** STATION	654.0101	654.0102	654.0113	654.0120
		CONCRETE BASES TYPE 1 EACH	CONCRETE BASES TYPE 2 EACH	CONCRETE BASES TYPE 13 EACH	CONCRETE BASES TYPE 10-SPECIAL EACH
SB3	366+75 'EB', 13' LT	1	--	--	--
SB7	367+01 'WB', 45' LT	1	--	--	--
SB8	366+98 'WB', 33' LT	1	--	--	--
SB9	367+85 'WB', 76' LT	--	--	1	--
SB10	367+63 'WB', 43' LT	1	--	--	--
SB11	367+71 'WB', 33' LT	1	--	--	--
SB12	367+78 'WB', 07' RT	1	--	--	--
SB13	367+79 'WB', 15' RT	1	--	--	--
SB14	367+87 'EB', 13' LT	1	--	--	--
SB17	367+96 'EB', 48' RT	1	--	--	--
SB18	367+84 'EB', 55' RT	1	--	--	--
SB19	367+72 'EB', 61' RT	--	1	--	--
SB20	366+89 'EB', 81' RT	--	--	--	1
SB21	366+74 'EB', 61' RT	1	--	--	--
SB22	366+67, 'EB', 57' RT	1	--	--	--
<b>TOTAL</b>		<b>12</b>	<b>1</b>	<b>1</b>	<b>1</b>

**EMERGENCY VEHICLE PREEMPTION**

LOCATION	SPV.0060.01 INSTALL STATE FURNISHED EVP DETECTOR HEADS	
	SIGNAL BASE NO.	EACH
STH 312 & JEFFERS RD	SB9	1
	SB20	1
<b>TOTAL</b>		<b>2</b>

**SIGNAL MOUNTING HARDWARE**

LOCATION	658.5069.01 SIGNAL MOUNTING HARDWARE L.S.
STH 312 & JEFFERS RD	1
<b>TOTAL</b>	<b>1</b>

**LEGEND**

- \* QUANTITIES LISTED ELSEWHERE
- \*\* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010

TRAFFIC SIGNALS  
STH 312 & JEFFERS RD

PROJECT NO: 7028-00-03

HWY: STH 312

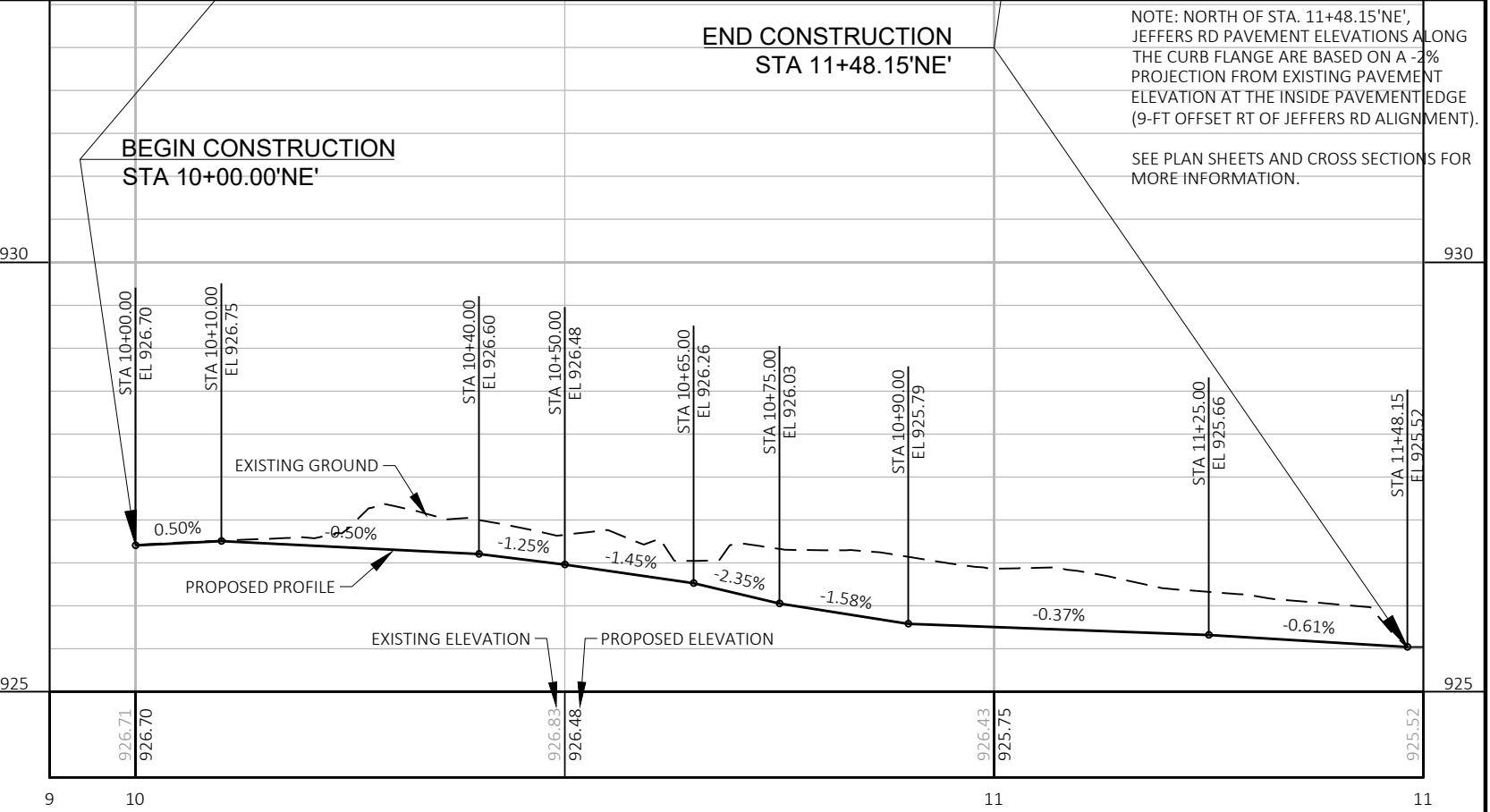
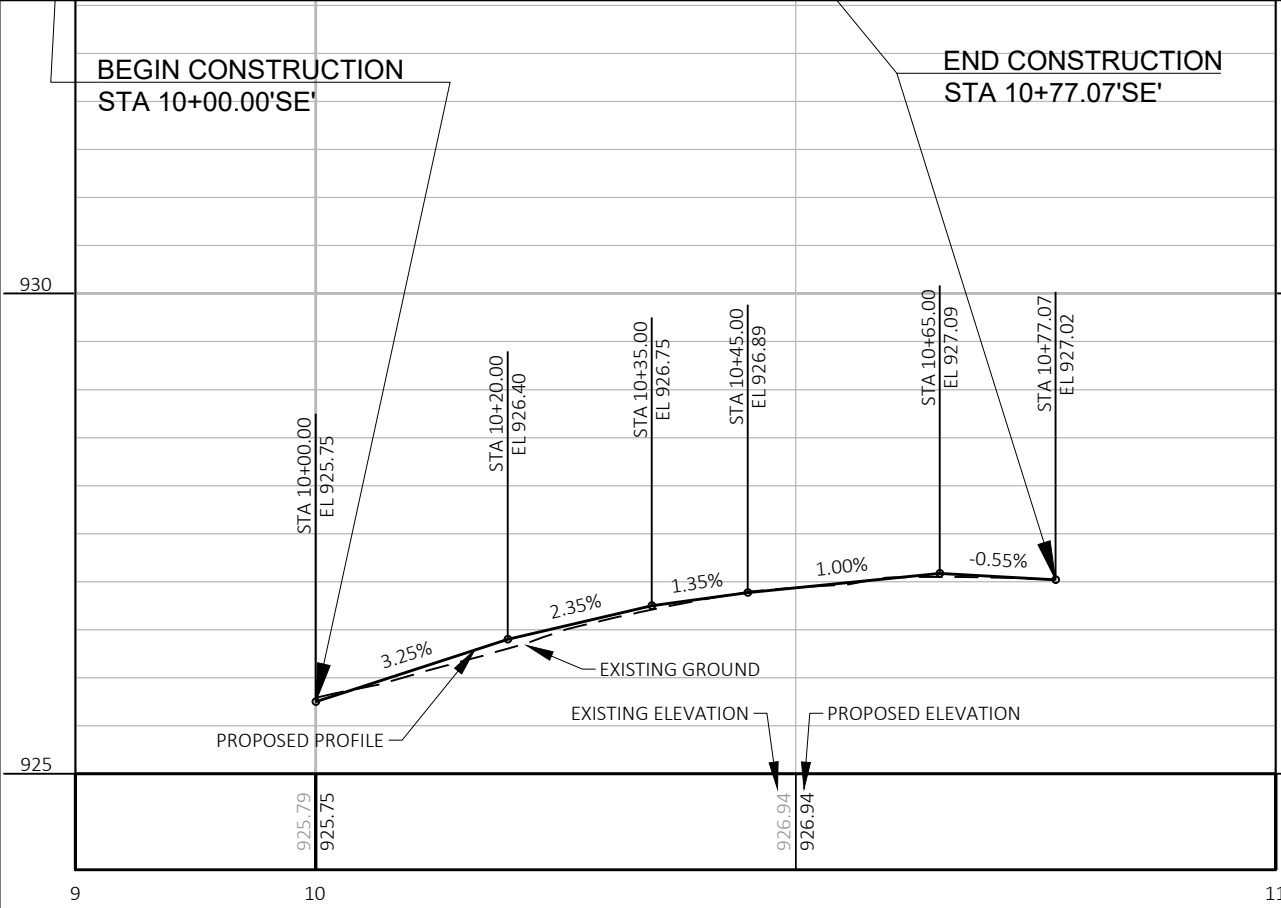
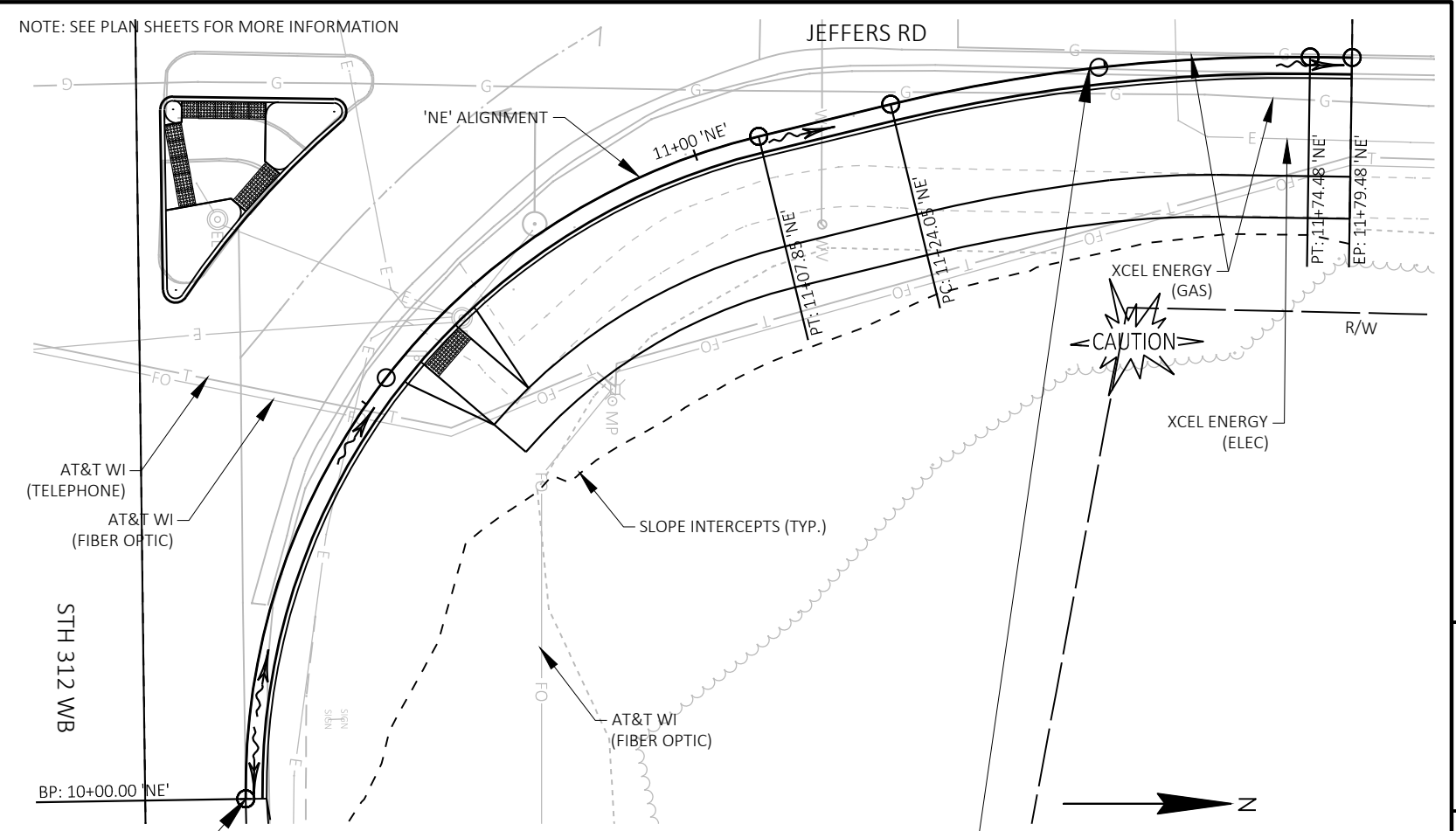
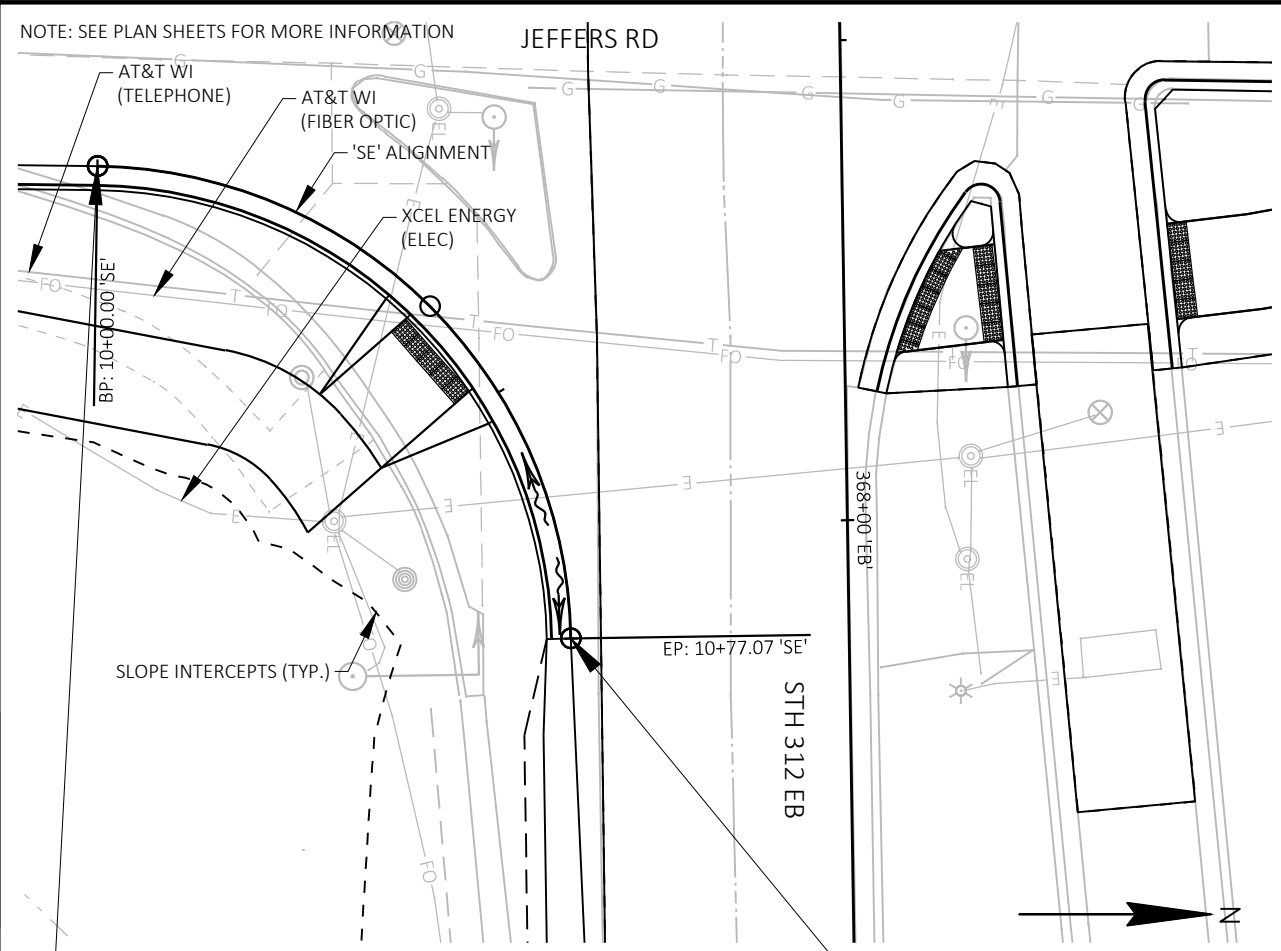
COUNTY: EAU CLAIRE

MISCELLANEOUS QUANTITIES

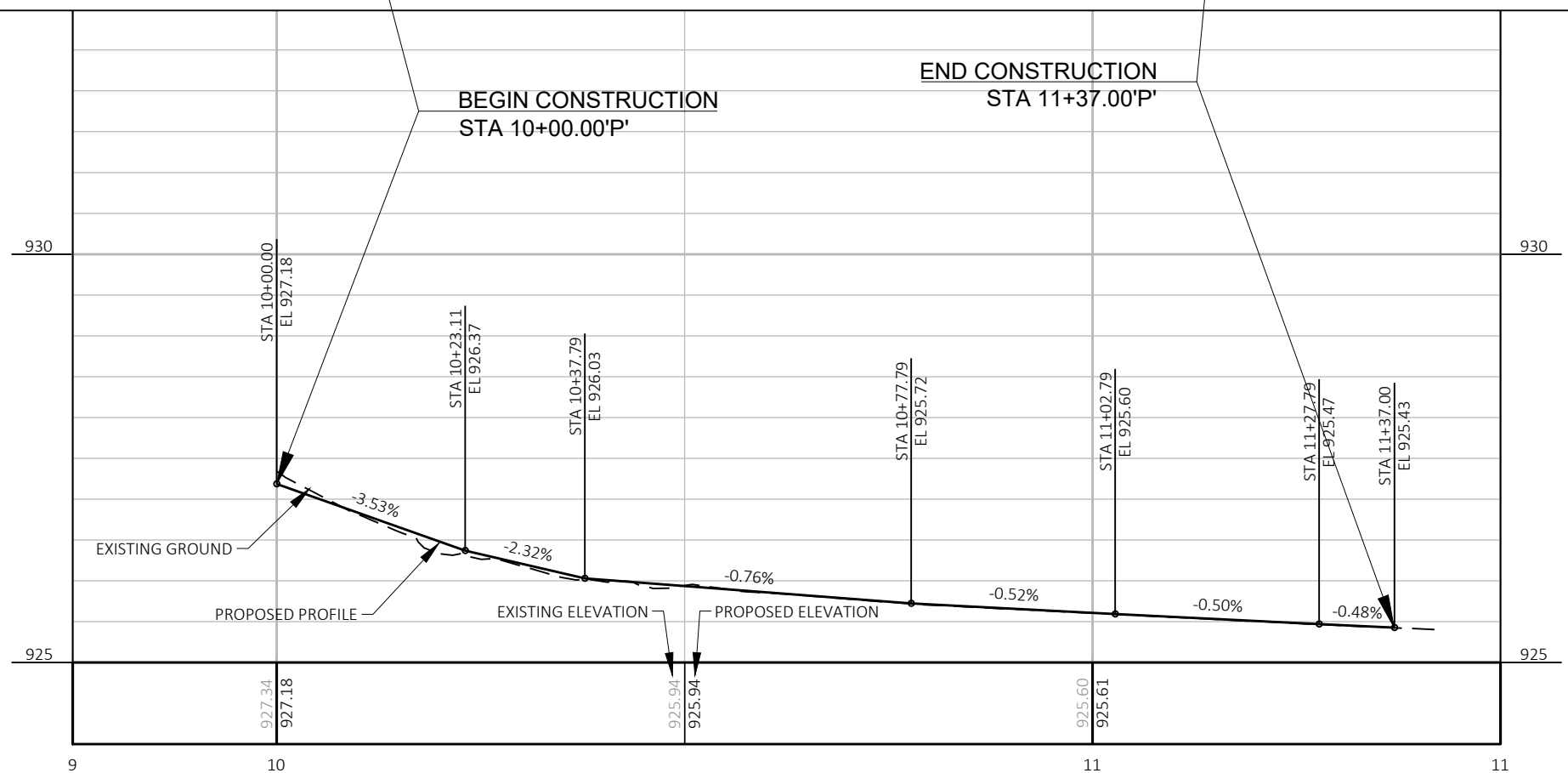
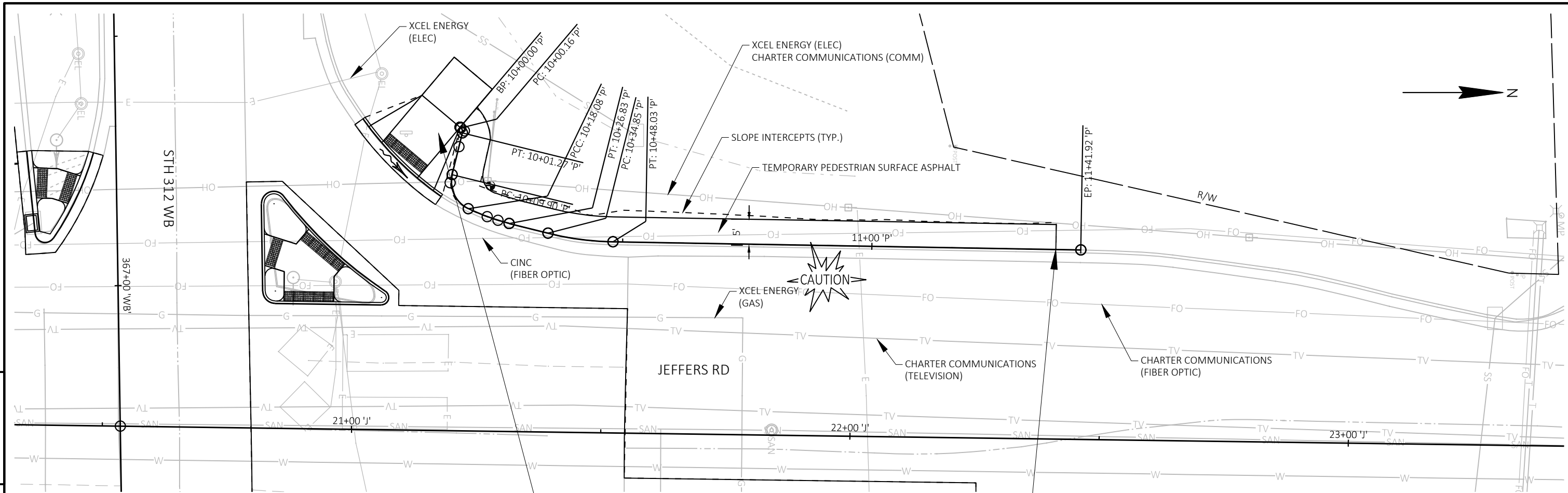
SHEET NO:

E

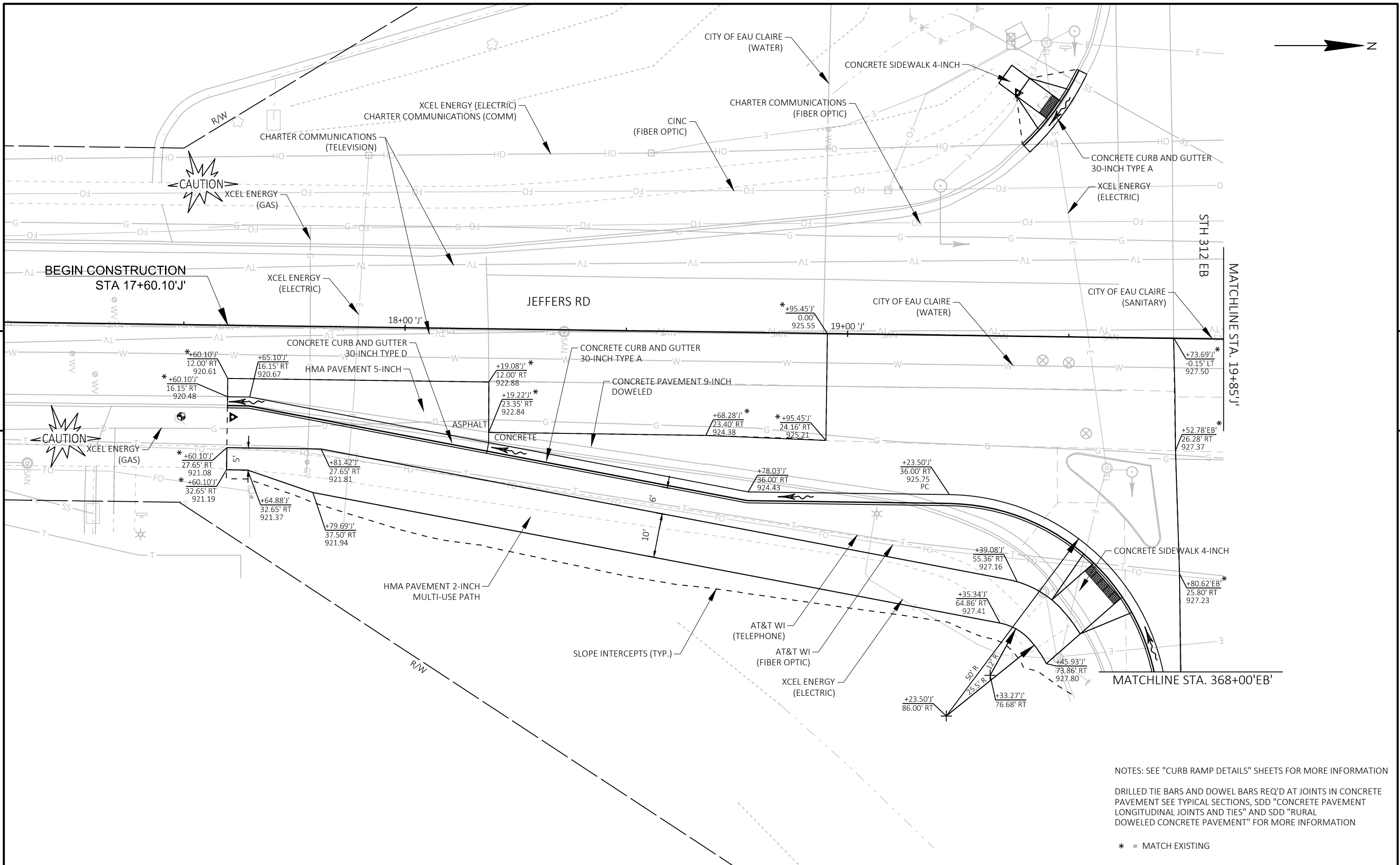




NOTE: NORTH OF STA. 11+48.15'NE', JEFFERS RD PAVEMENT ELEVATIONS ALONG THE CURB FLANGE ARE BASED ON A -2% PROJECTION FROM EXISTING PAVEMENT ELEVATION AT THE INSIDE PAVEMENT EDGE (9-FT OFFSET RT OF JEFFERS RD ALIGNMENT).  
SEE PLAN SHEETS AND CROSS SECTIONS FOR MORE INFORMATION.



PROJECT NO: 7028-00-73 | HWY: STH 312 | COUNTY: EAU CLAIRE | PLAN AND PROFILE - TEMPORARY PEDESTRIAN PATH | SHEET 5



NOTES: SEE "CURB RAMP DETAILS" SHEETS FOR MORE INFORMATION  
 DRILLED TIE BARS AND DOWEL BARS REQ'D AT JOINTS IN CONCRETE PAVEMENT SEE TYPICAL SECTIONS, SDD "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" AND SDD "RURAL DOWELED CONCRETE PAVEMENT" FOR MORE INFORMATION  
 \* = MATCH EXISTING

PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET	E
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NOTES: SEE "CURB RAMP DETAILS" SHEETS FOR MORE INFORMATION

DRILLED TIE BARS AND DOWEL BARS REQ'D AT JOINTS IN CONCRETE PAVEMENT SEE TYPICAL SECTIONS, SDD "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" AND SDD "RURAL DOWELED CONCRETE PAVEMENT" FOR MORE INFORMATION

\* = MATCH EXISTING

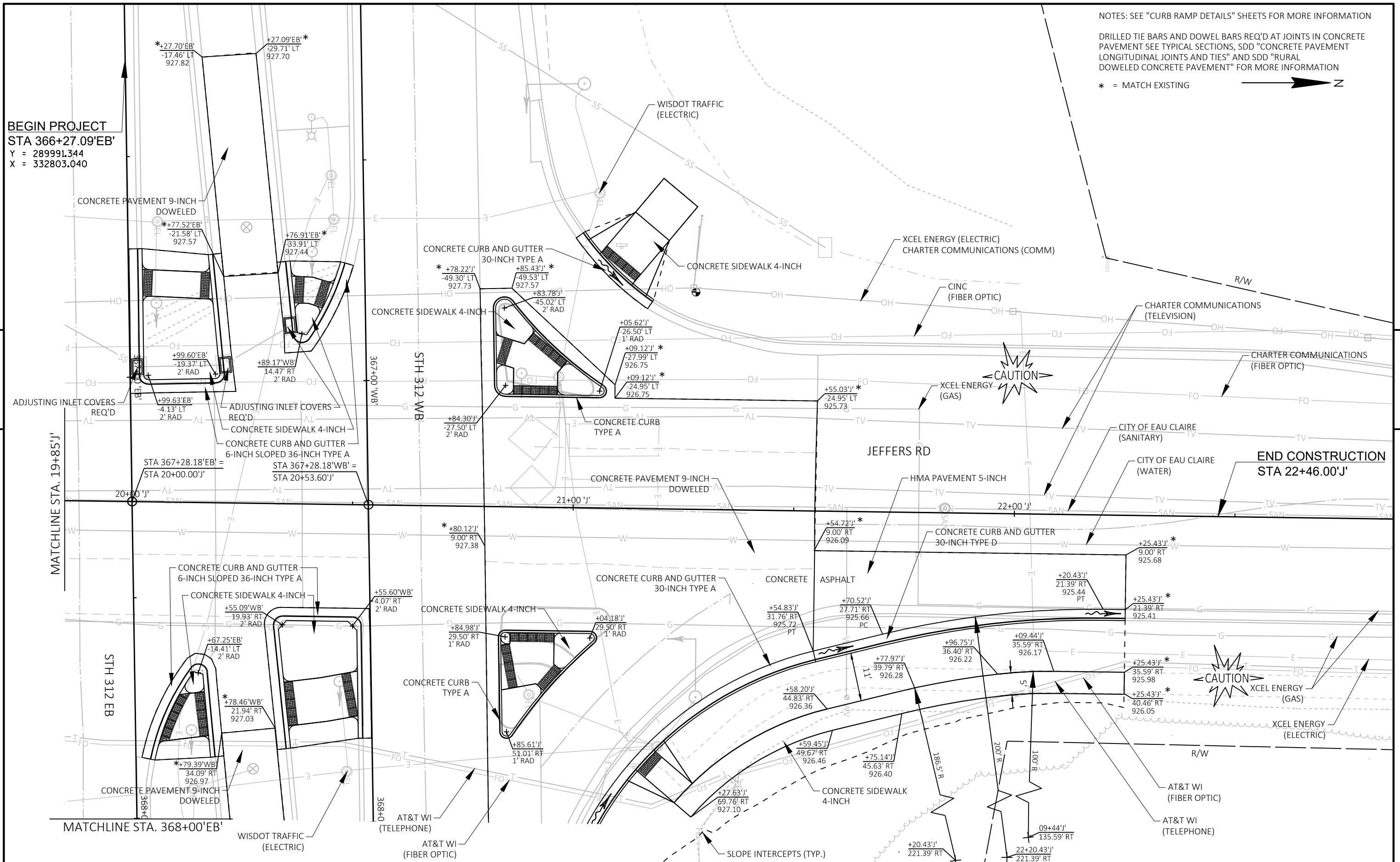


BEGIN PROJECT  
STA 366+27.09'EB'  
Y = 289991.344  
X = 332803.040

END CONSTRUCTION  
STA 22+46.00'J'

5

5

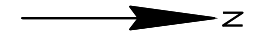


PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	PLAN SHEETS	SHEET	E
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NOTES: SEE "CURB RAMP DETAILS" SHEETS FOR MORE INFORMATION

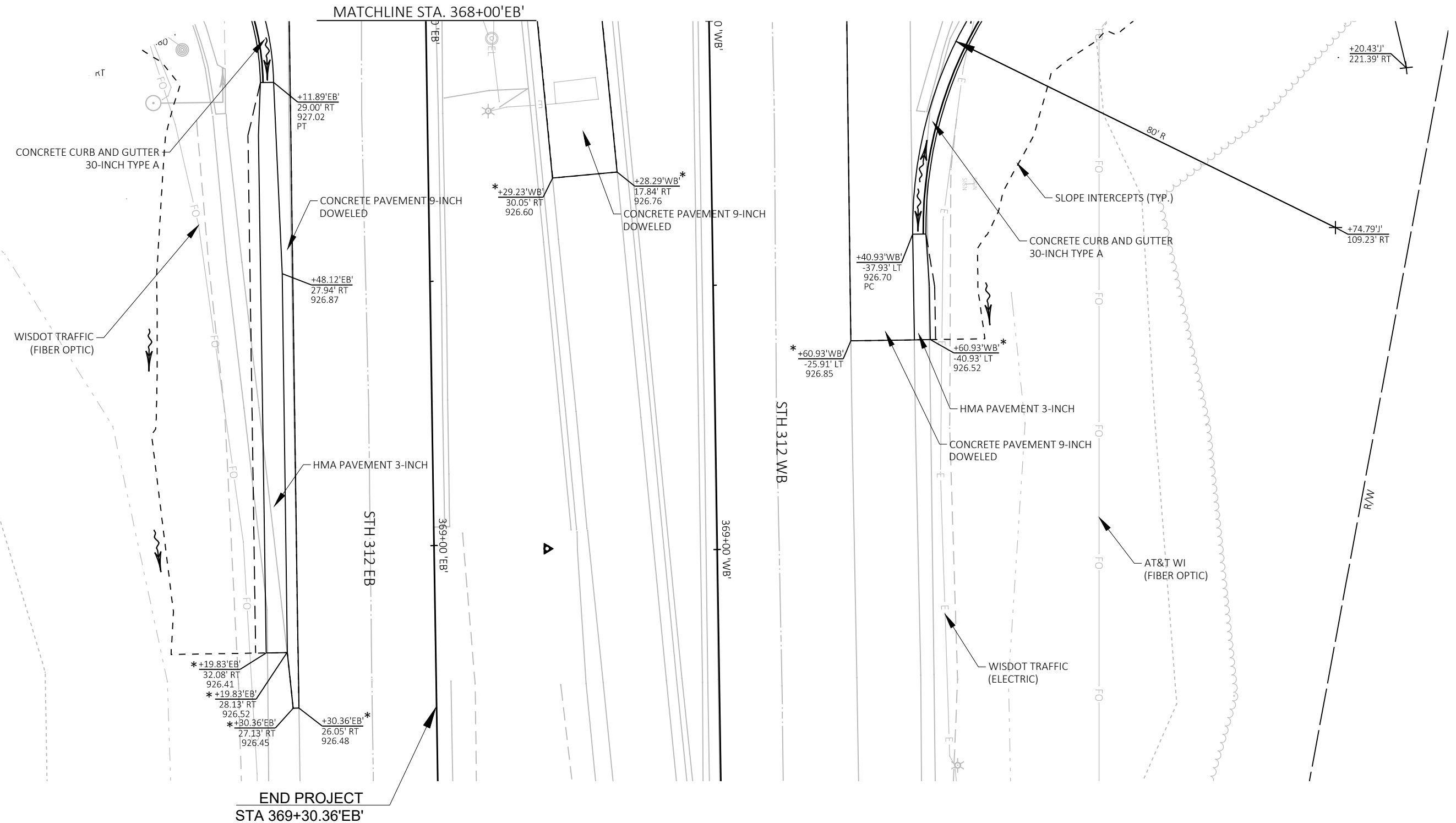
DRILLED TIE BARS AND DOWEL BARS REQ'D AT JOINTS IN CONCRETE PAVEMENT SEE TYPICAL SECTIONS, SDD "CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES" AND SDD "RURAL DOWELED CONCRETE PAVEMENT" FOR MORE INFORMATION

\* = MATCH EXISTING



5

5



PROJECT NO: 7028-00-73

HWY: STH 312

COUNTY: EAU CLAIRE

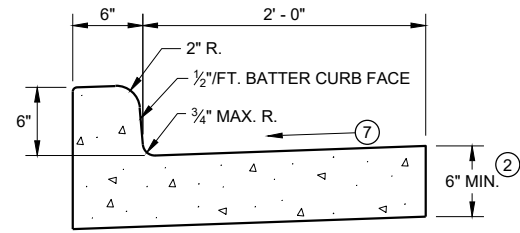
PLAN SHEETS

SHEET

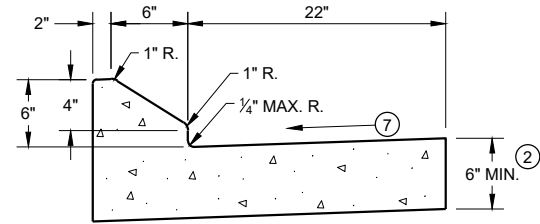
E

## Standard Detail Drawing List

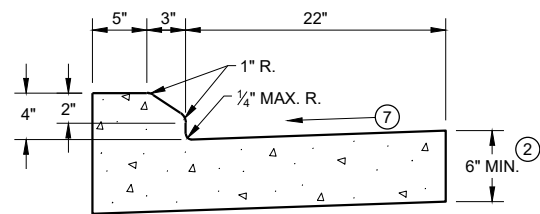
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR 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
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C12-09B	CONCRETE BASE TYPE 13
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35' -55' MONOTUBE ARM
09E08-09K	GENERAL NOTES, HARDWARE DETAILS FOR TYPE 9/10, 9/10 SPECIAL, 12 & 13 POLES W/MONOTUBE ARMS
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-05	MEDIAN ISLAND MARKING
15C20-02	YIELD MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-09A	TRAFFIC CONTROL, LANE CLOSURE
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-06A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-06B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-06C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



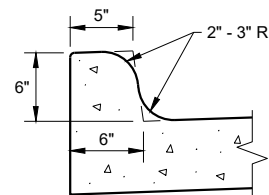
TYPES A<sup>①</sup> & D



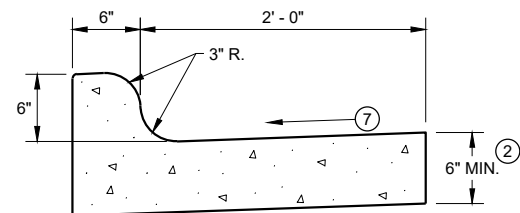
6" SLOPED CURB TYPES G<sup>①</sup> & J



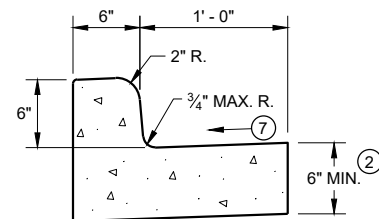
4" SLOPED CURB TYPES G<sup>①</sup> & J



TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)

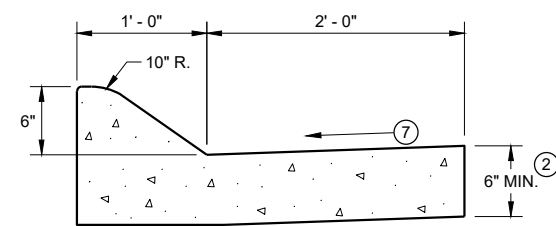


TYPES K<sup>①</sup> & L  
CONCRETE CURB AND GUTTER 30"

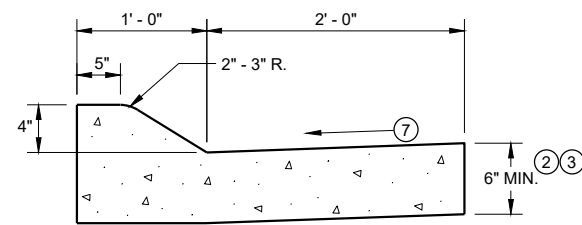


TYPES A<sup>①</sup> & D

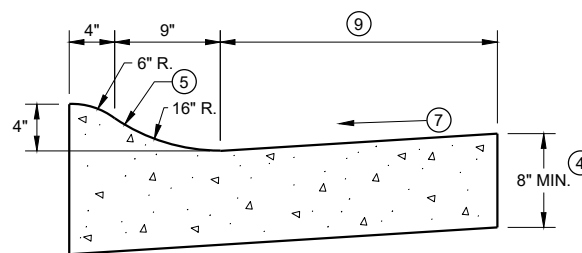
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A<sup>①</sup> & D

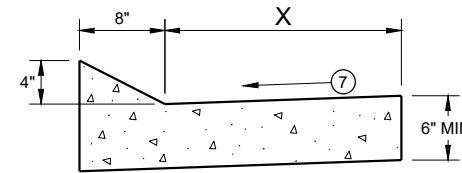


4" SLOPED CURB TYPES A<sup>①</sup> & D  
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R<sup>①</sup> & T

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

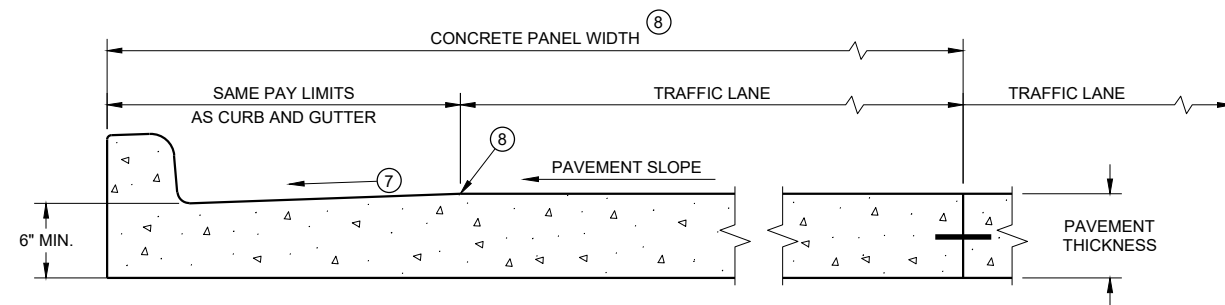


TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB AND GUTTER

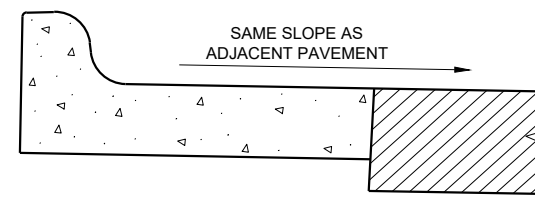
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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<sup>⑥</sup>  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

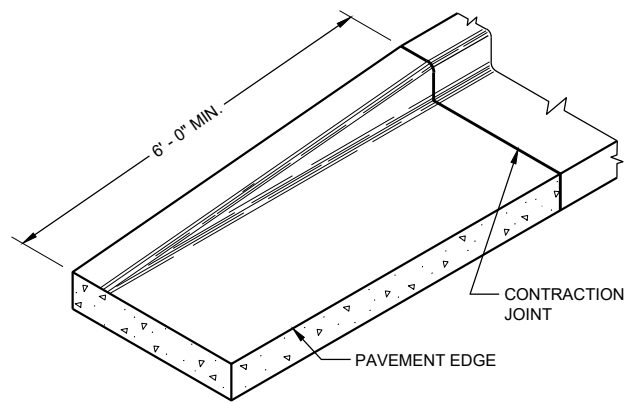
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

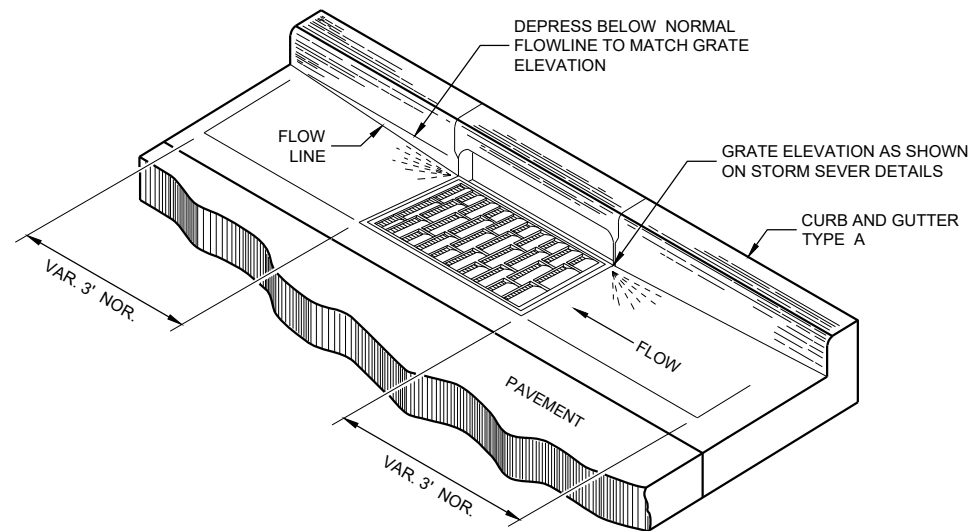
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



**END SECTION CURB AND GUTTER**



**DETAIL OF CURB AND GUTTER AT INLETS**  
(TYPICAL H INLET COVER SHOWN)

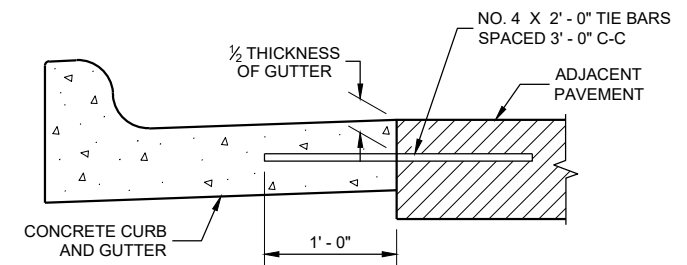
**GENERAL NOTES**

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

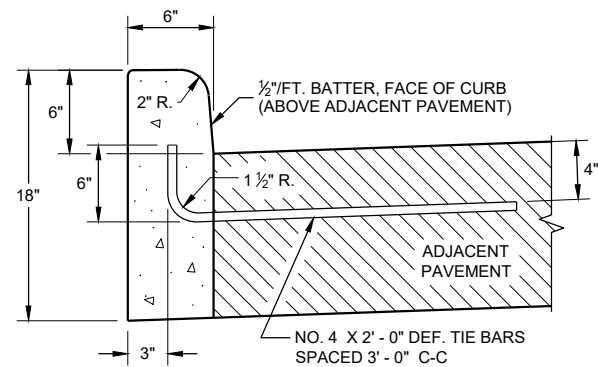
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

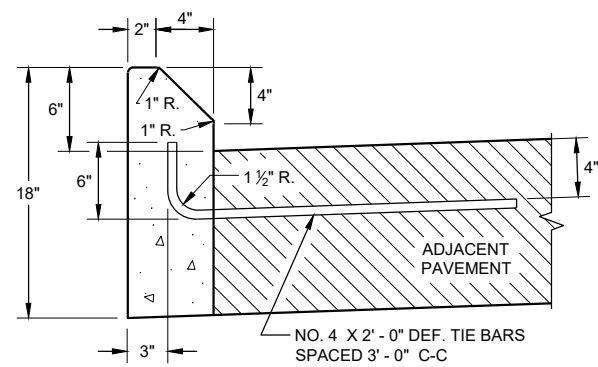
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



**TYPICAL TIE BAR LOCATION** ①

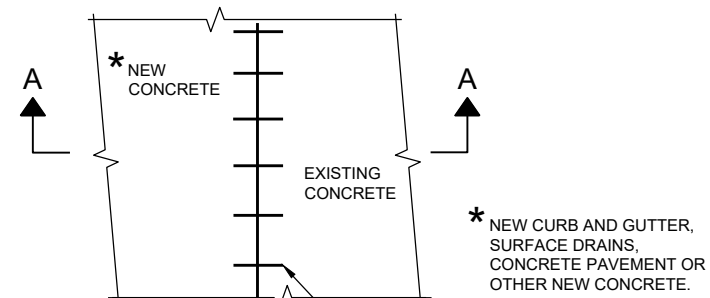


**TYPES A ① & D**

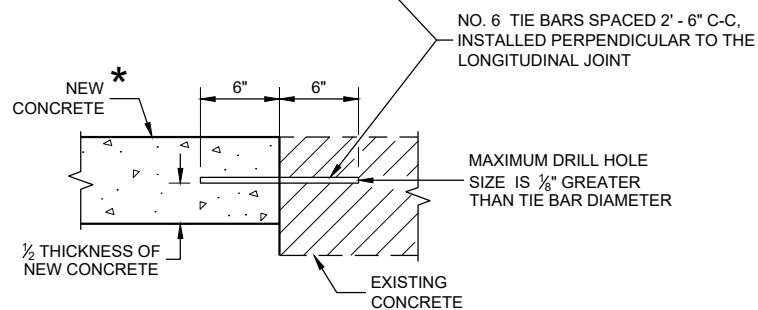


**TYPES G ① & J**

**CONCRETE CURB**

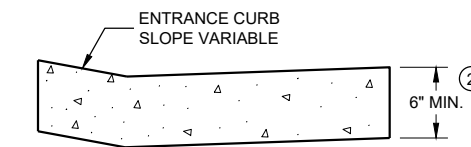


**PLAN VIEW**



**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**



**DRIVEWAY ENTRANCE CURB** ⑨  
(WHEN DIRECTED BY THE ENGINEER)

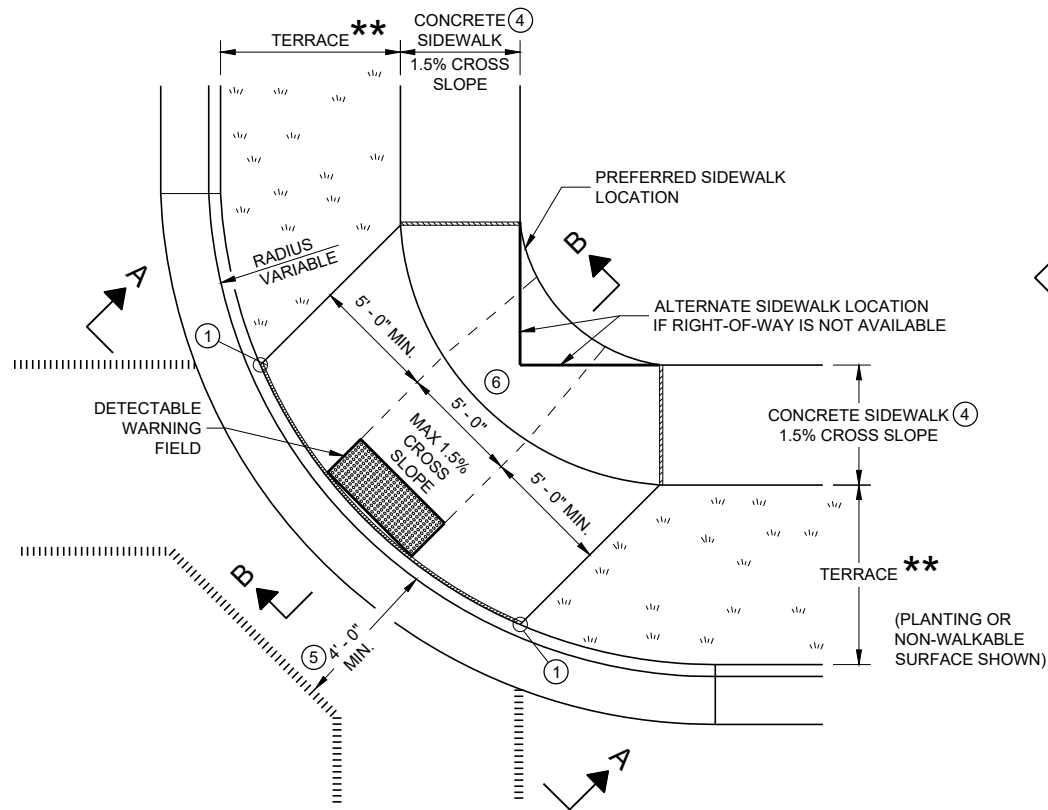
**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

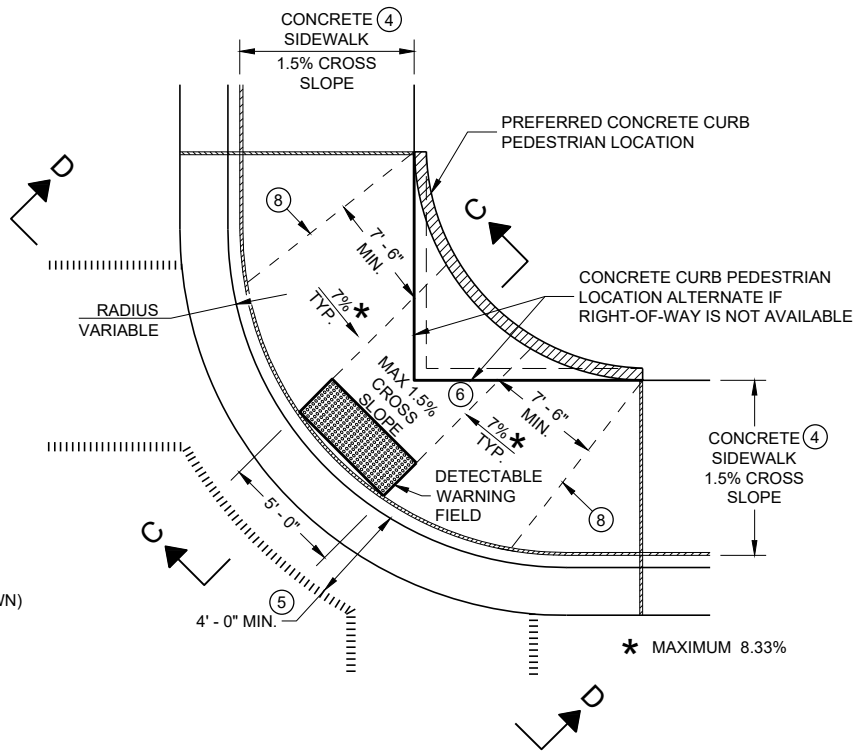
APPROVED  
February 2021 DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

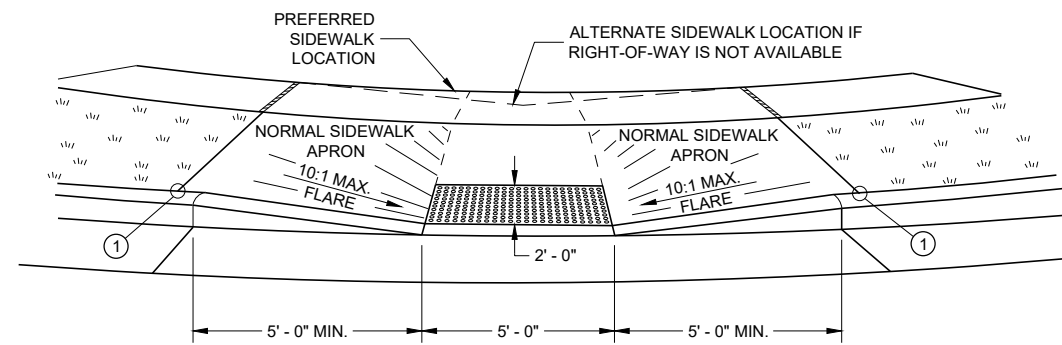




**PLAN VIEW  
CURB RAMP TYPE 1  
(CENTER OF CORNER RADIUS)**

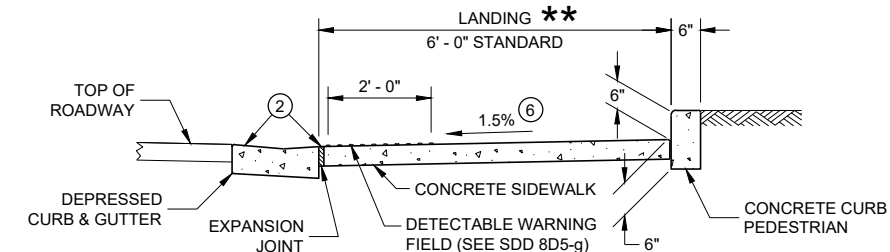


**PLAN VIEW  
CURB RAMP TYPE 1 - A  
(NO TERRACE)**

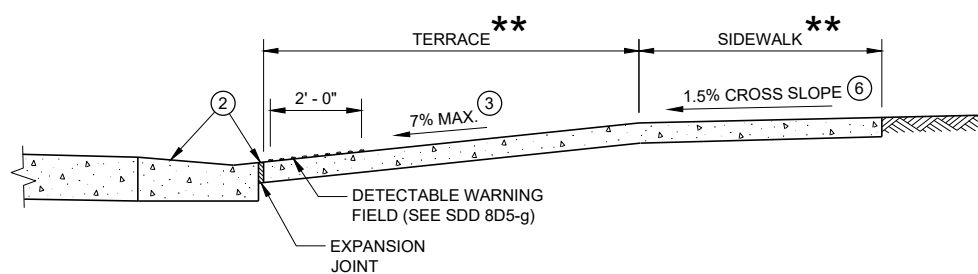


**VIEW A - A FOR TYPE 1**

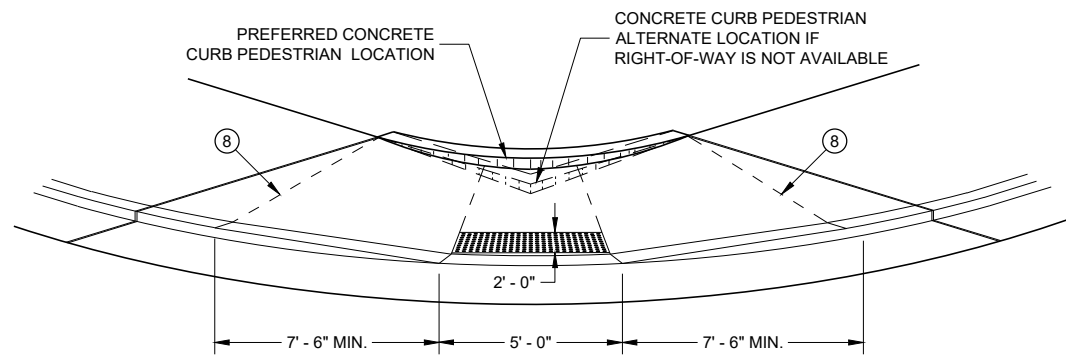
\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



**SECTION C - C FOR TYPE 1 - A**



**SECTION B - B FOR TYPE 1**



**VIEW D - D FOR TYPE 1 - A**

**GENERAL NOTES**

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.  
 TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE 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 RAMP.

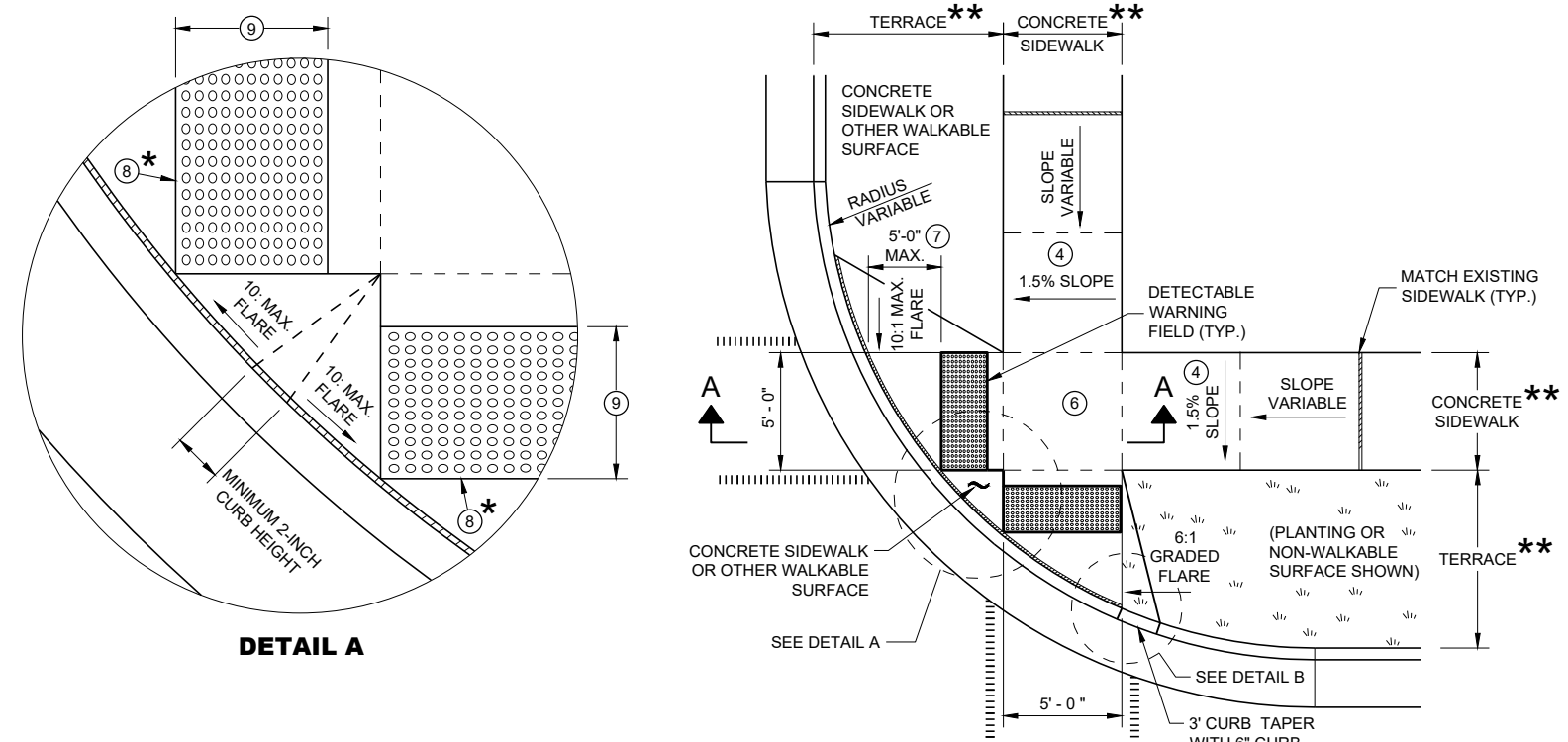
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

**LEGEND**

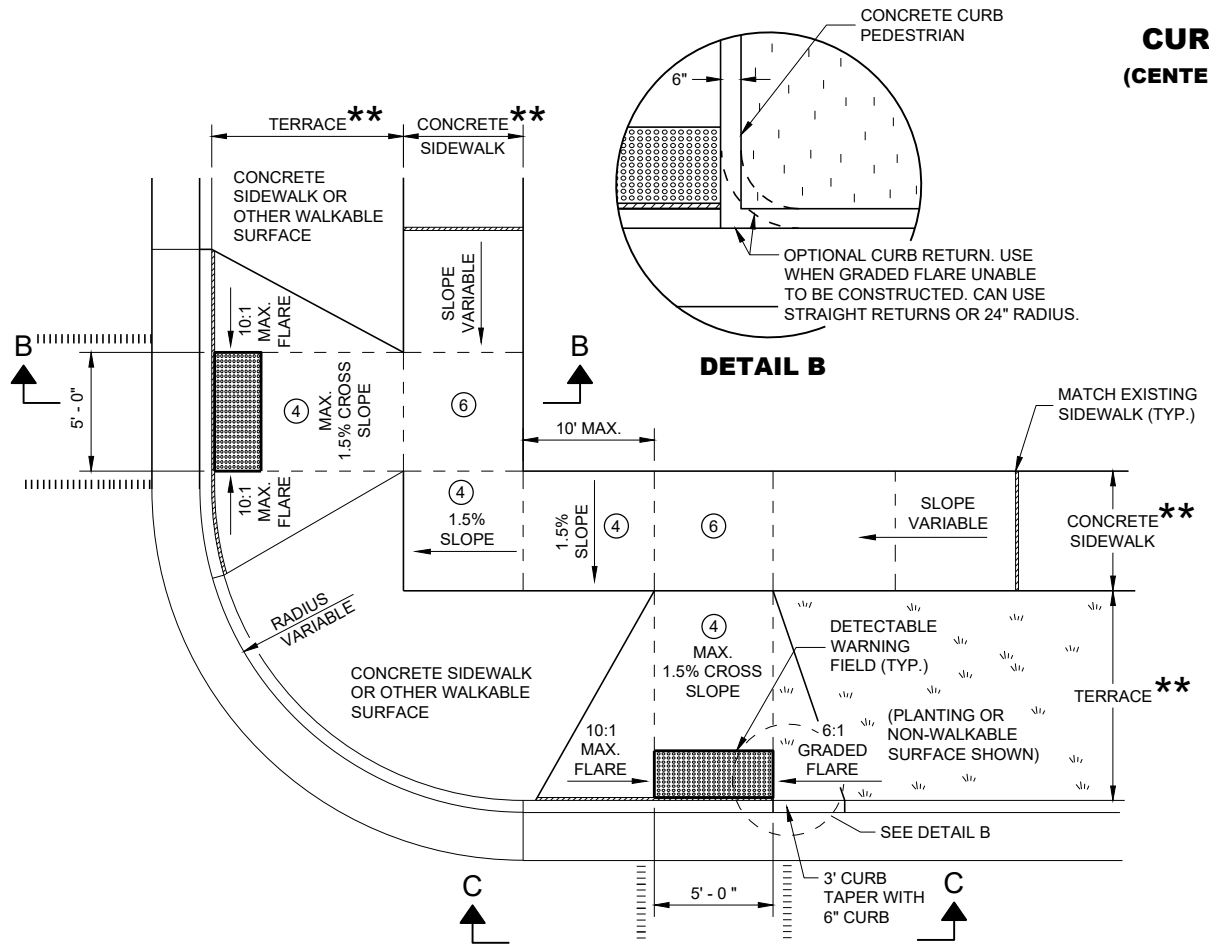
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS  
TYPE 1 AND 1-A**

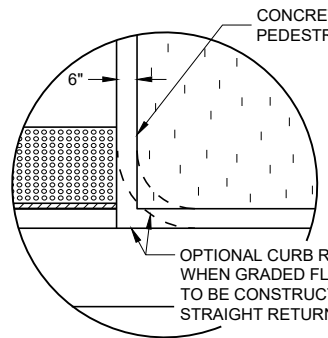
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**PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)**



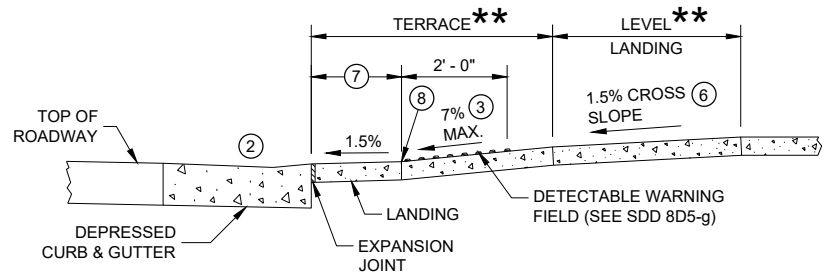
**PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)**



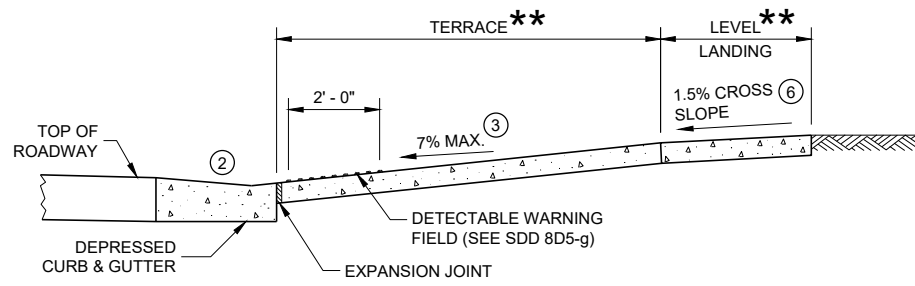
**DETAIL B**

**GENERAL NOTES**

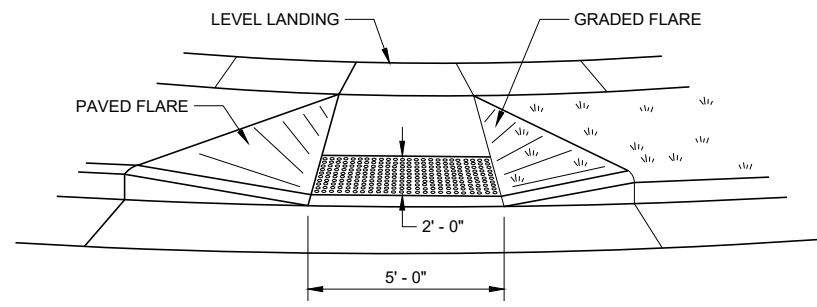
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



**SECTION A - A FOR TYPE 2**



**SECTION B - B FOR TYPE 3**



**VIEW C - C FOR TYPE 3**

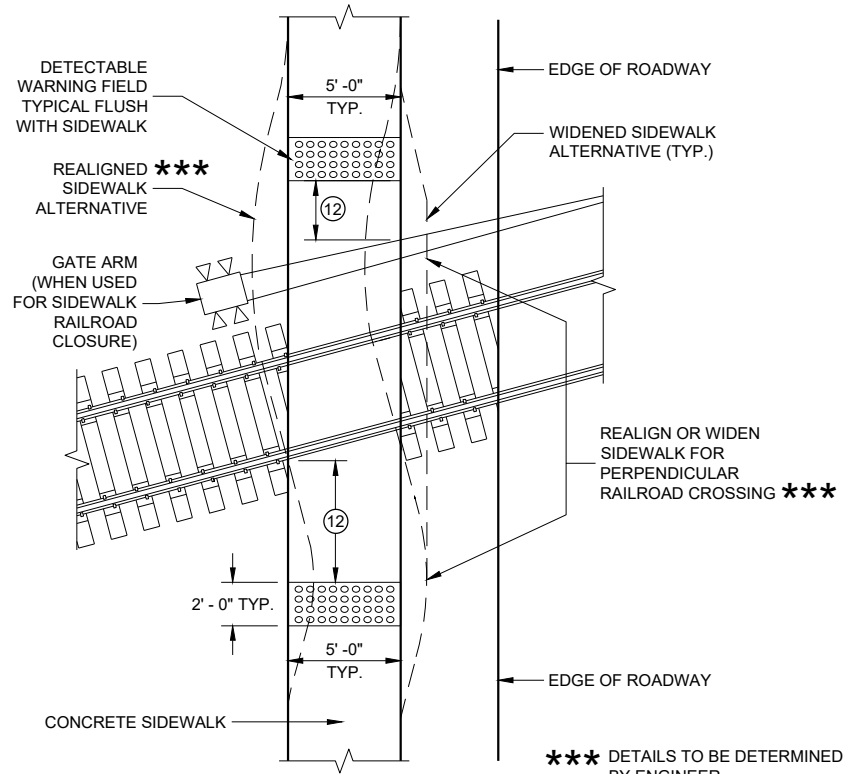
- \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

**LEGEND**

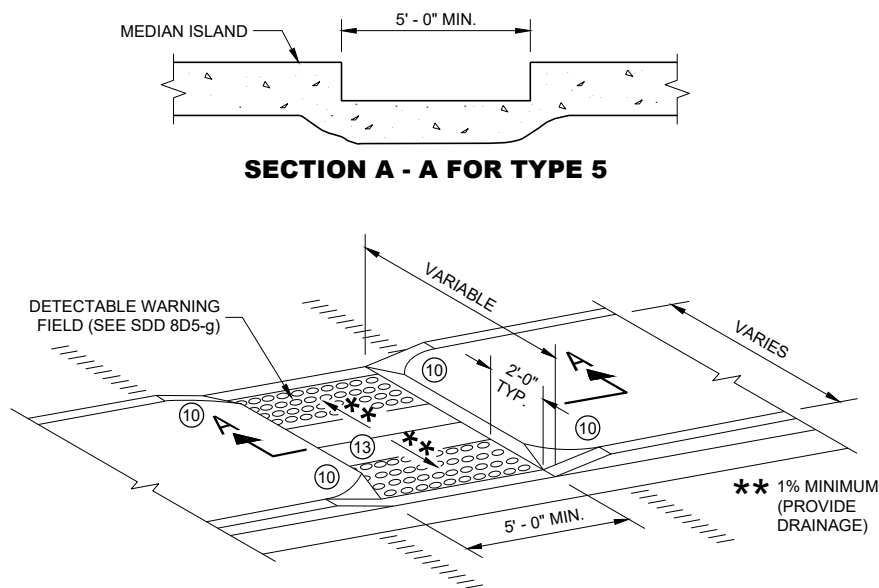
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS TYPE 2 AND 3**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 8**  
DETECTABLE WARNINGS AT RAILROAD CROSSING



**CURB RAMP TYPE 5**  
MEDIAN ISLAND  
NON-ELEVATED PEDESTRIAN CROSSING

**GENERAL NOTES**

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

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

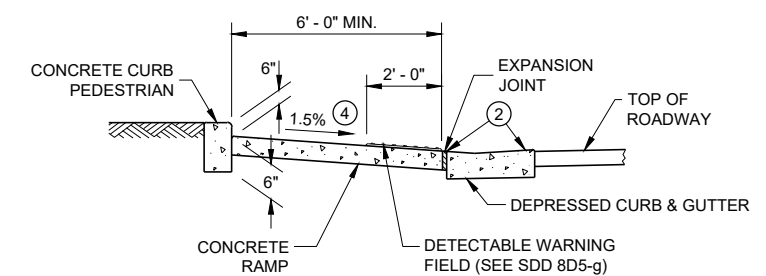
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

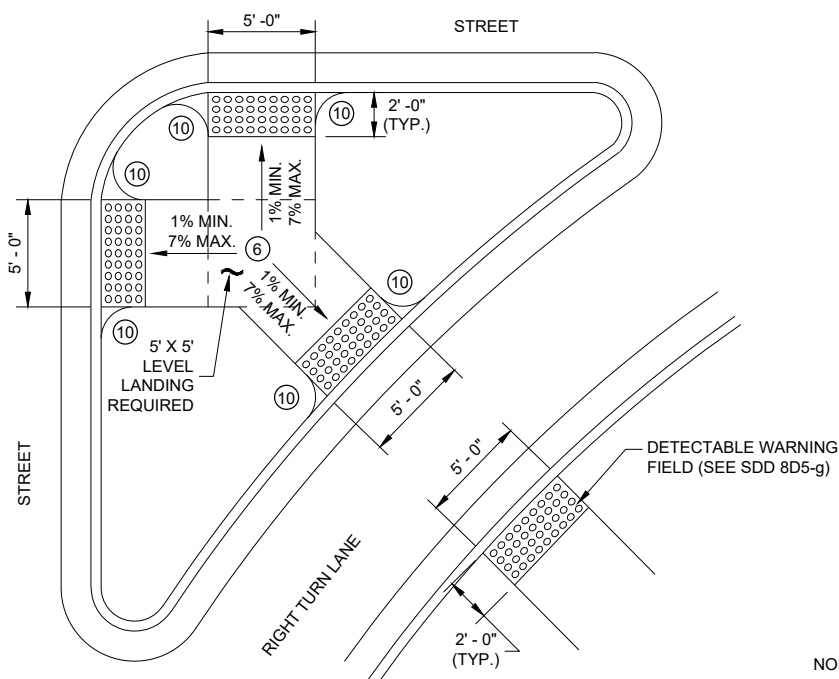
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- (13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

**LEGEND**

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

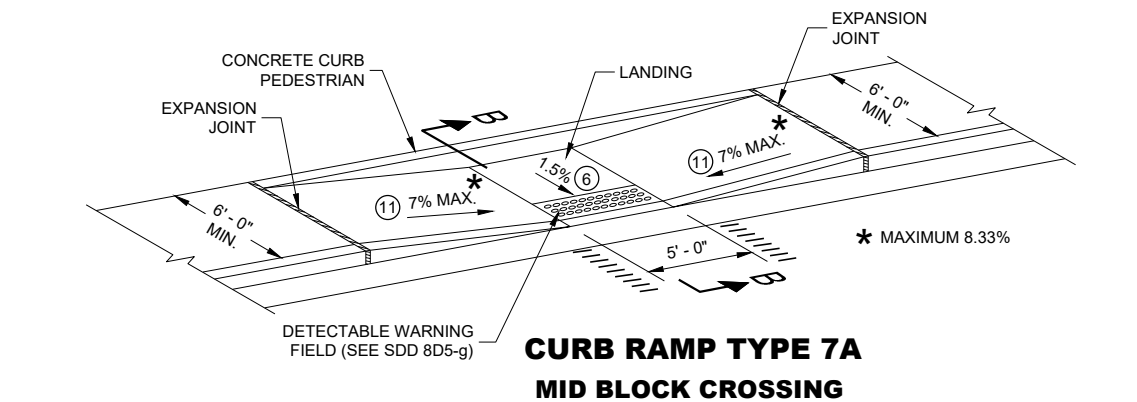


**SECTION B - B FOR TYPE 7A**

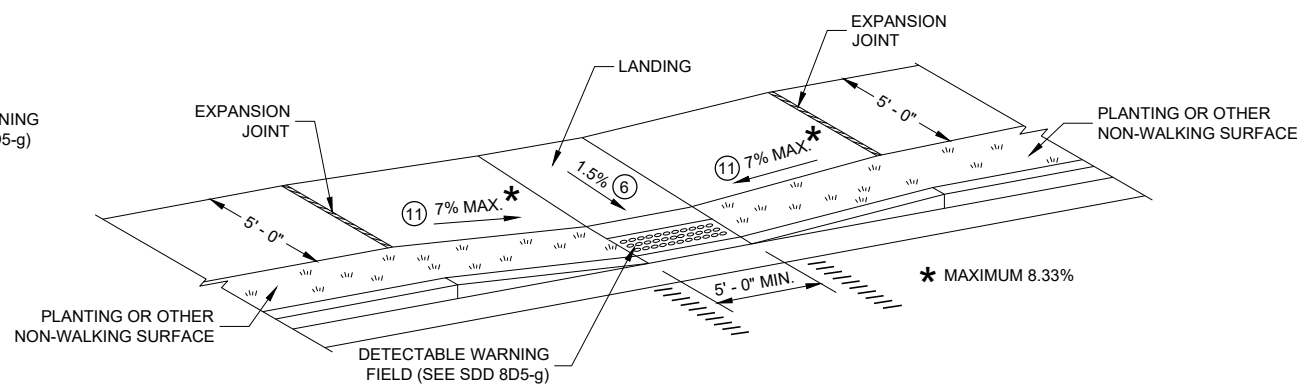


**CURB RAMP TYPE 6**  
DETECTABLE WARNING AT ISLANDS

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



**CURB RAMP TYPE 7A**  
MID BLOCK CROSSING



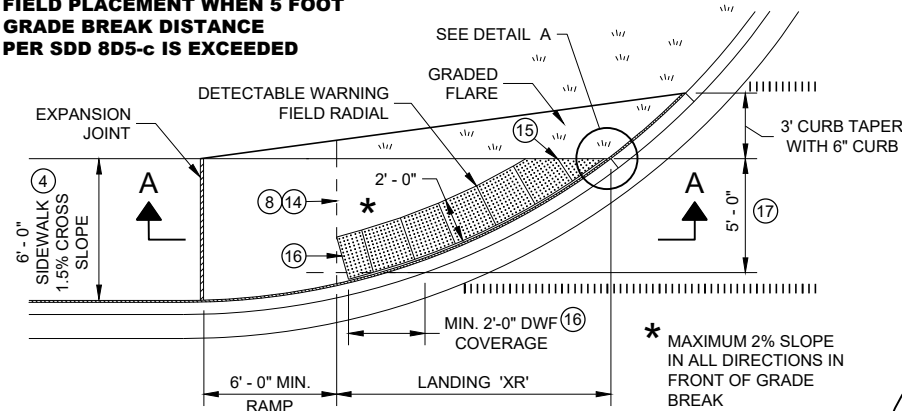
**CURB RAMP TYPE 7B**  
MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

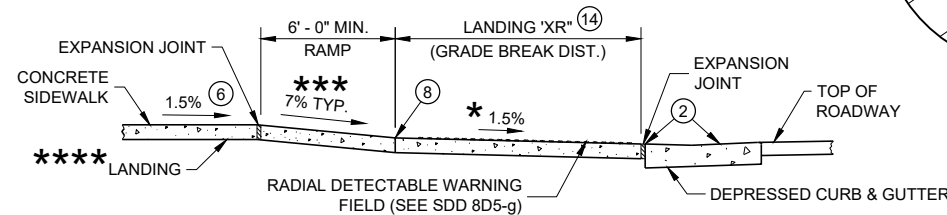
**CURB RAMPS**  
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**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)**

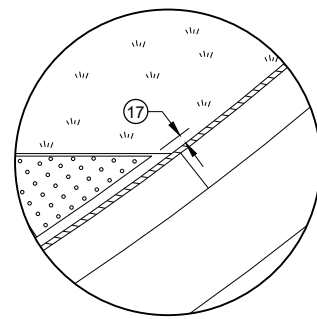


**SECTION A - A FOR TYPE 4A1**

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

\*\*\* MAXIMUM 8.33%

- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
  - - - - - CONTRACTION JOINT SIDEWALK
  - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

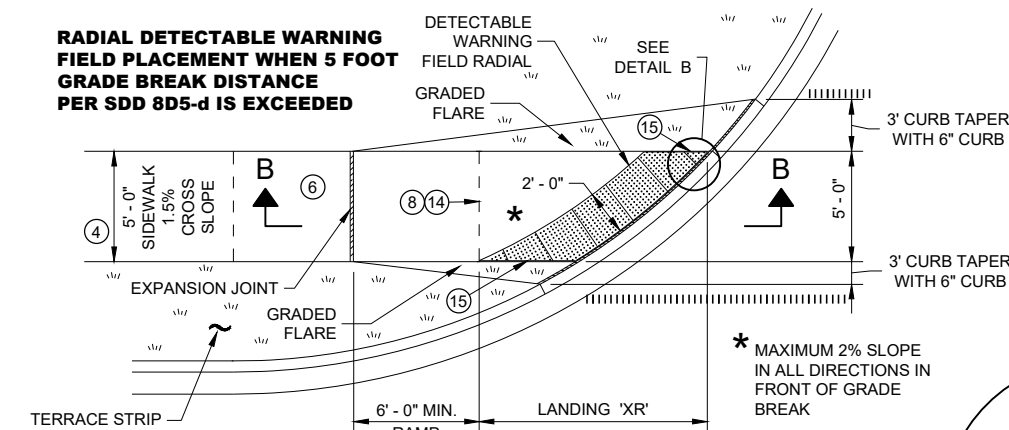


**DETAIL A**

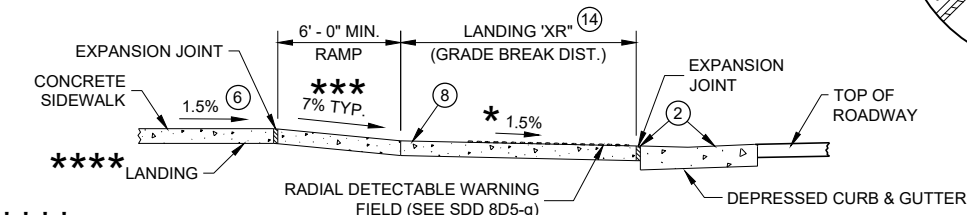
**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- 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 RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- 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.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
  - 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
  - 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
  - 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
  - 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
  - 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
  - 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
  - 17 A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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



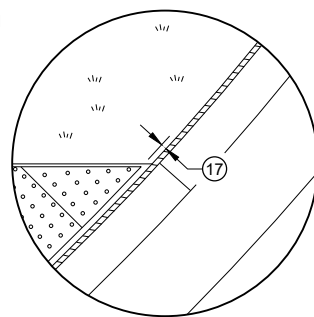
**PLAN VIEW CURB RAMP TYPE 4B1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION B - B FOR TYPE 4B1**

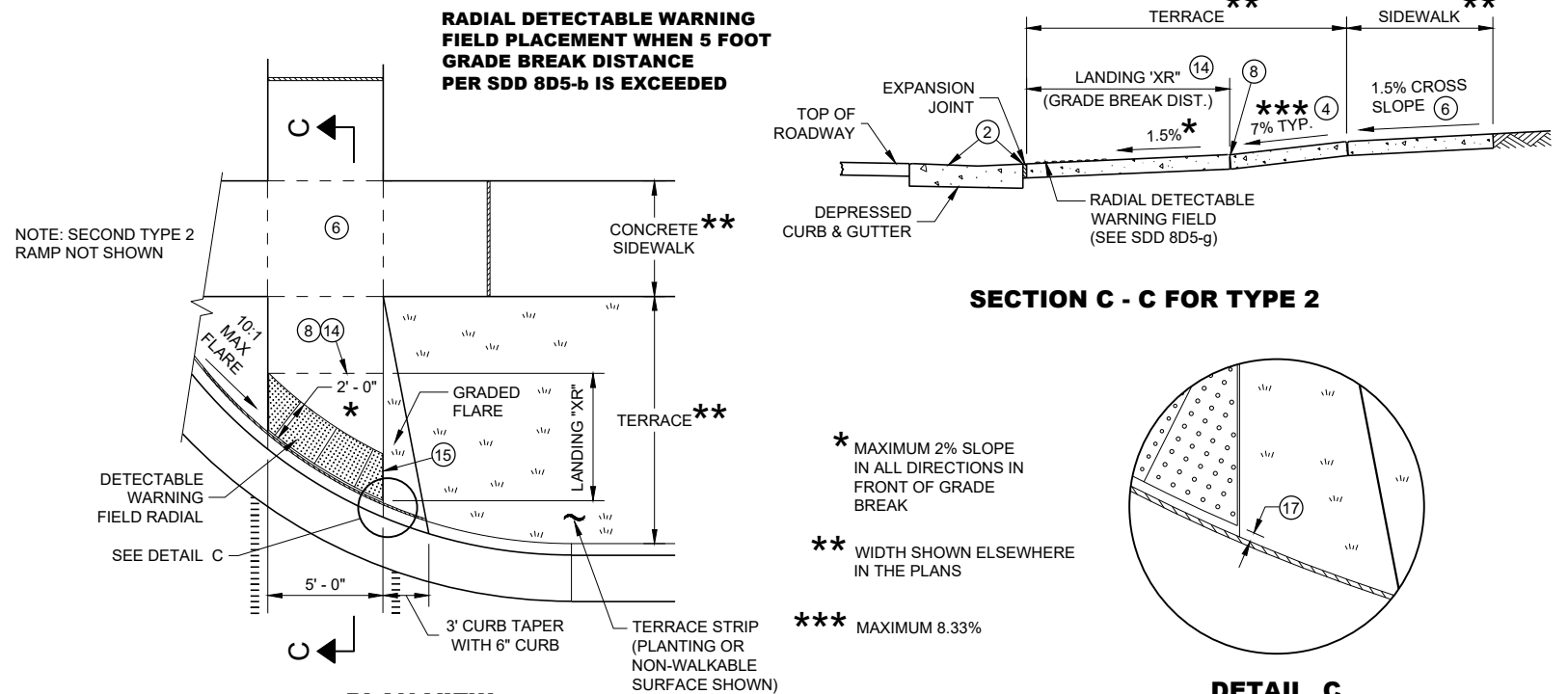
\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%



**DETAIL B**

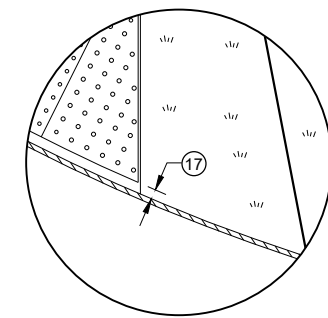
**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED**



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

NOTE: SECOND TYPE 2 RAMP NOT SHOWN

- \* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS
- \*\*\* MAXIMUM 8.33%



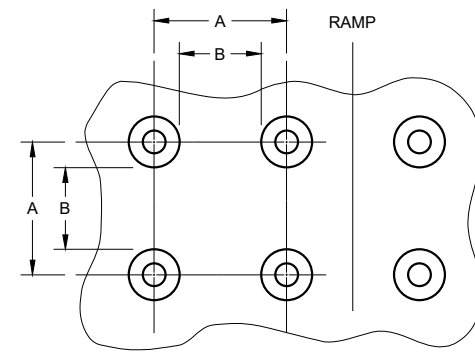
**DETAIL C**

**CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS**

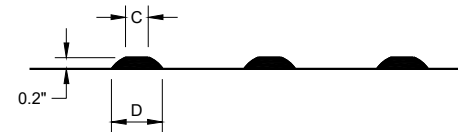
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

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

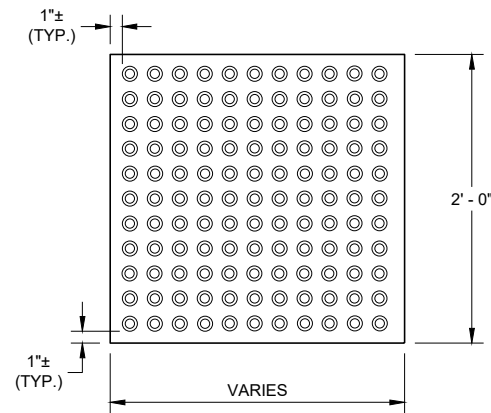


PLAN VIEW

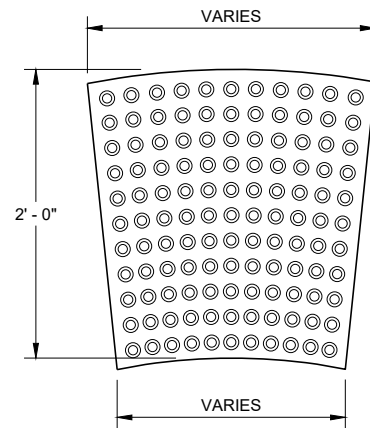


ELEVATION VIEW

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**

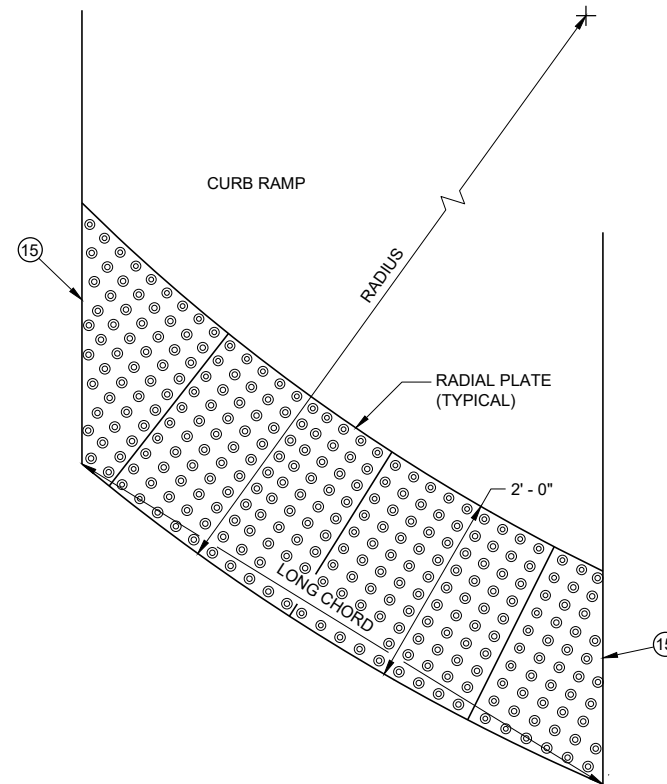


RECTANGULAR  
PLATES

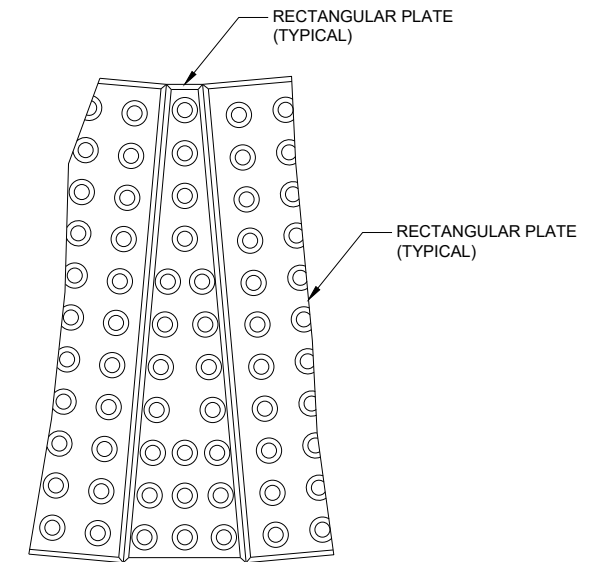


RADIAL  
PLATES

PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES



PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL

**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 FIELD ARE PROHIBITED.

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

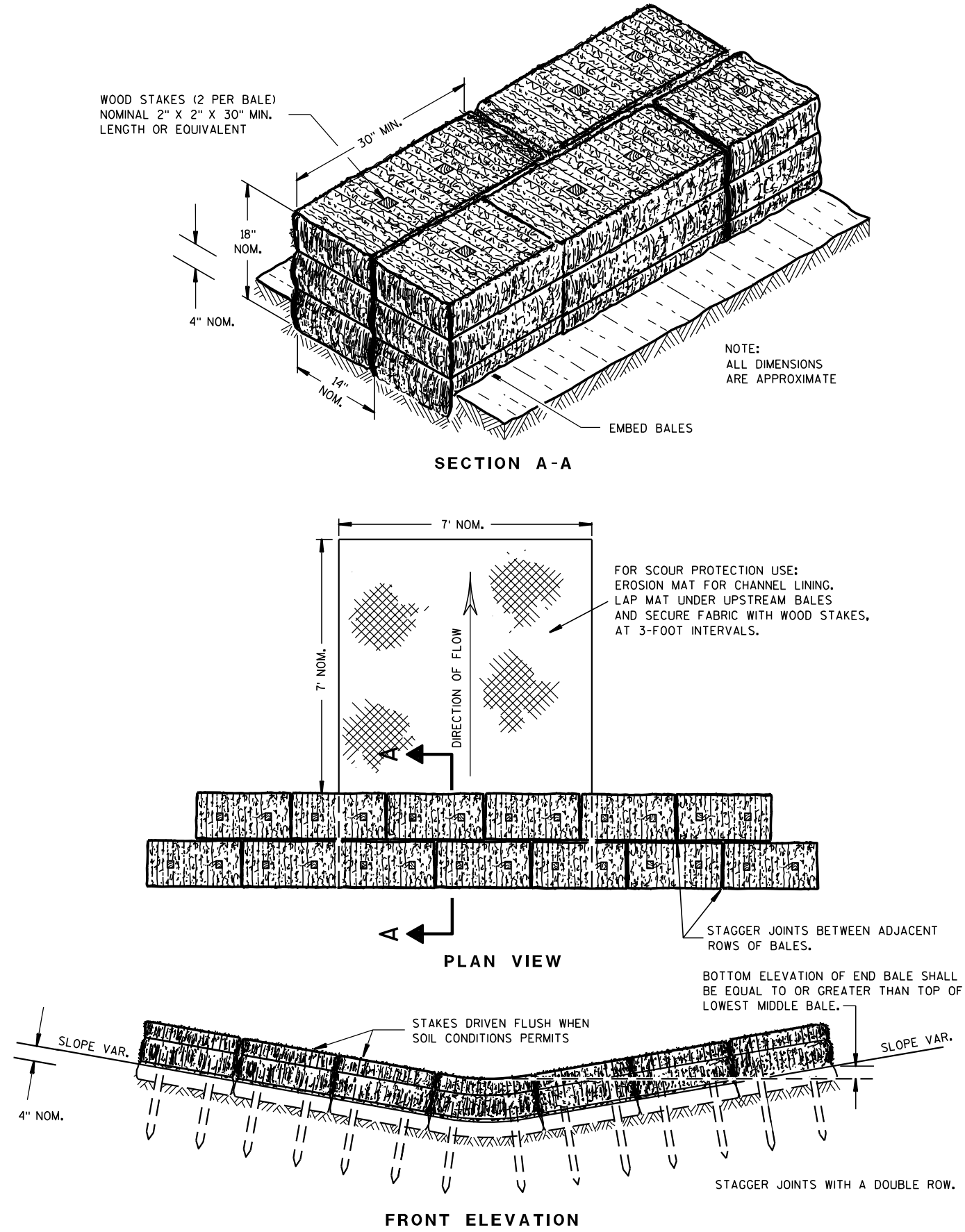
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE.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

<b>CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

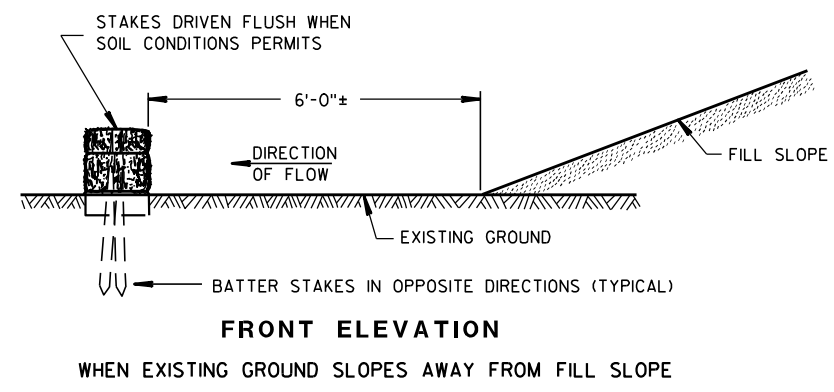
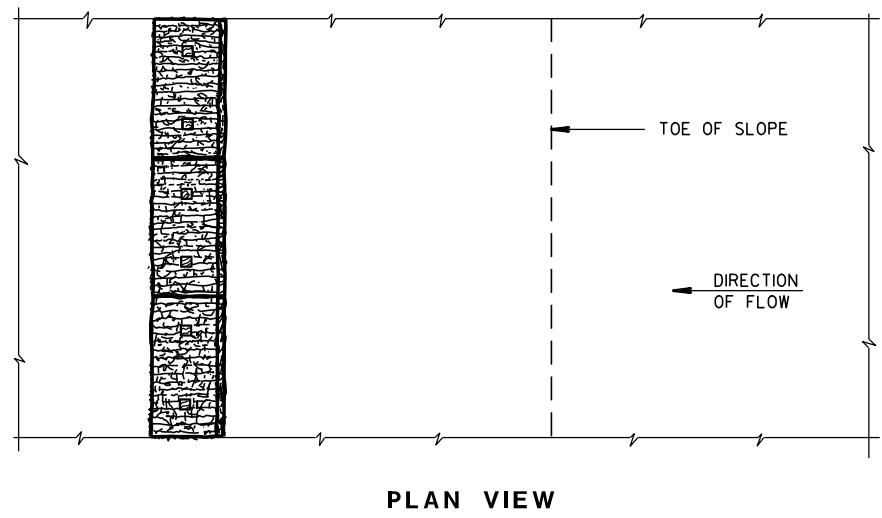
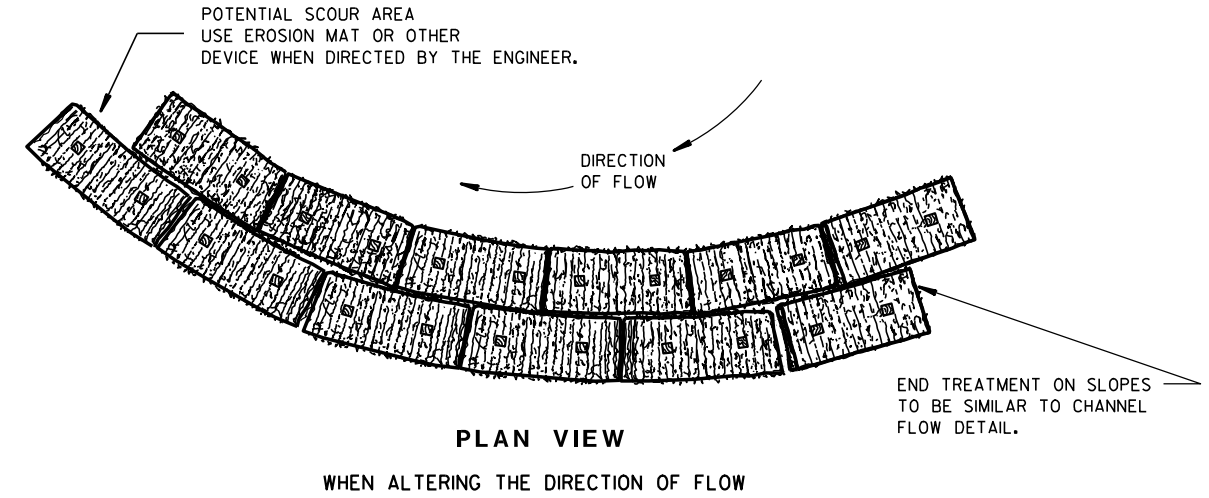


TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

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

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

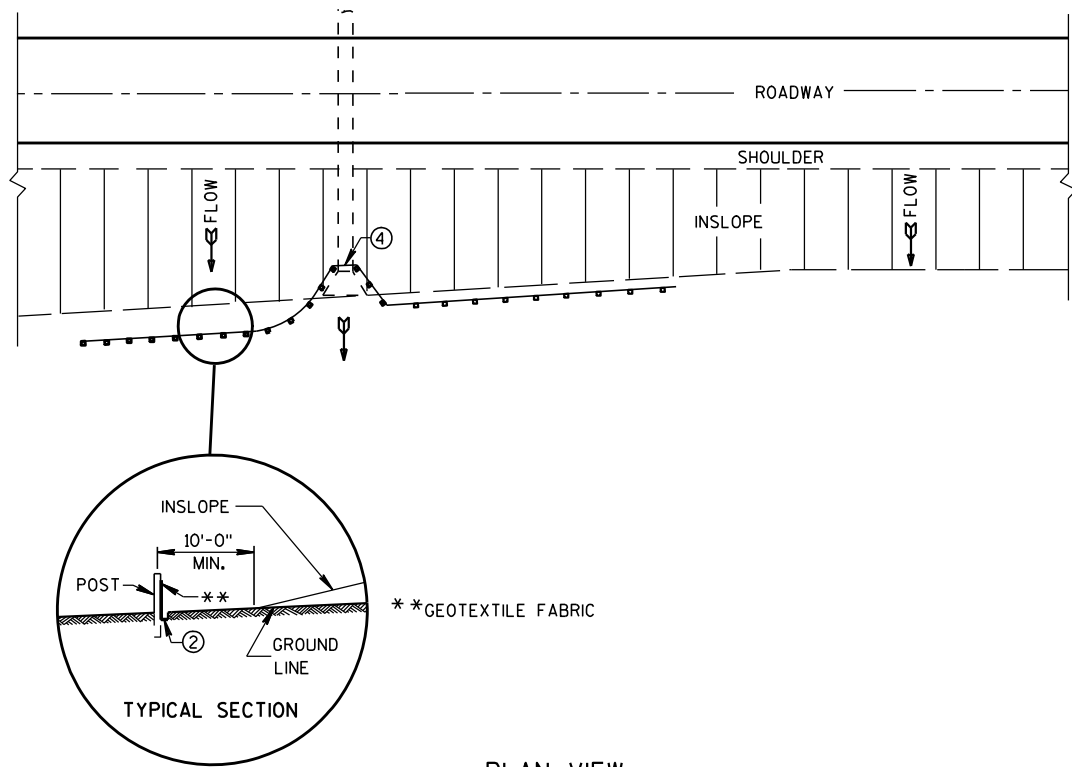


EROSION BALES FOR SHEET FLOW

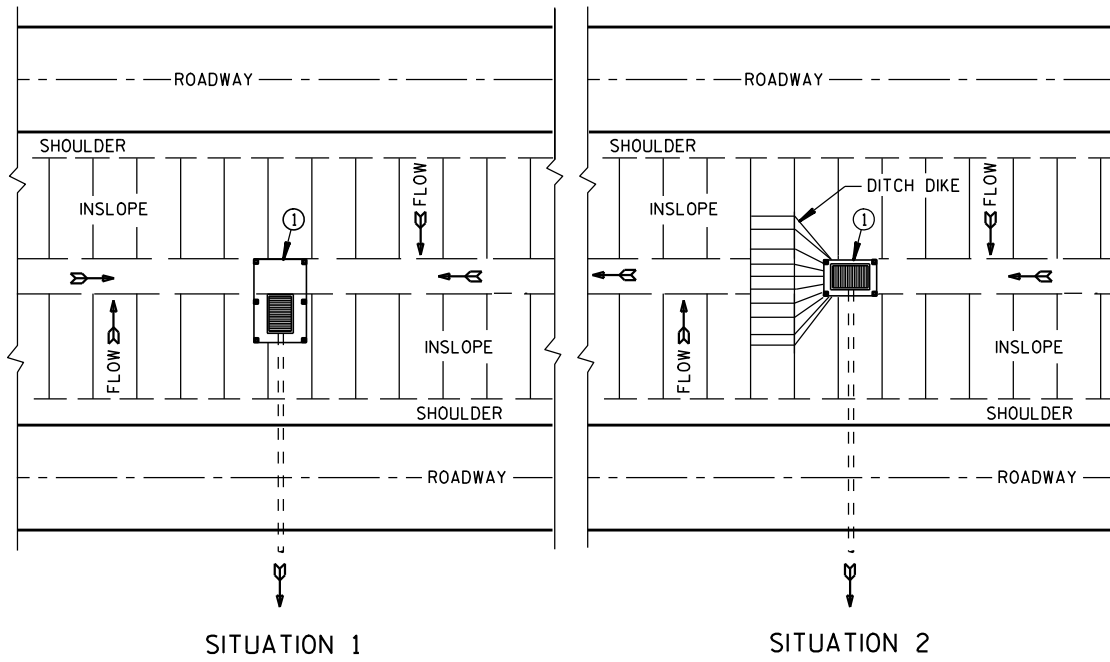
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 6/04/02 /S/ Beth Canestra  
 DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
 FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

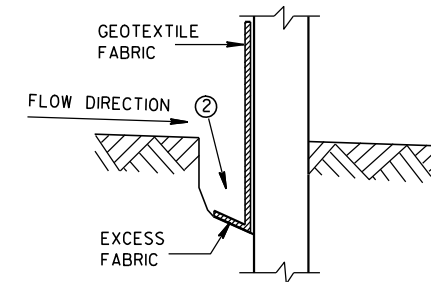


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

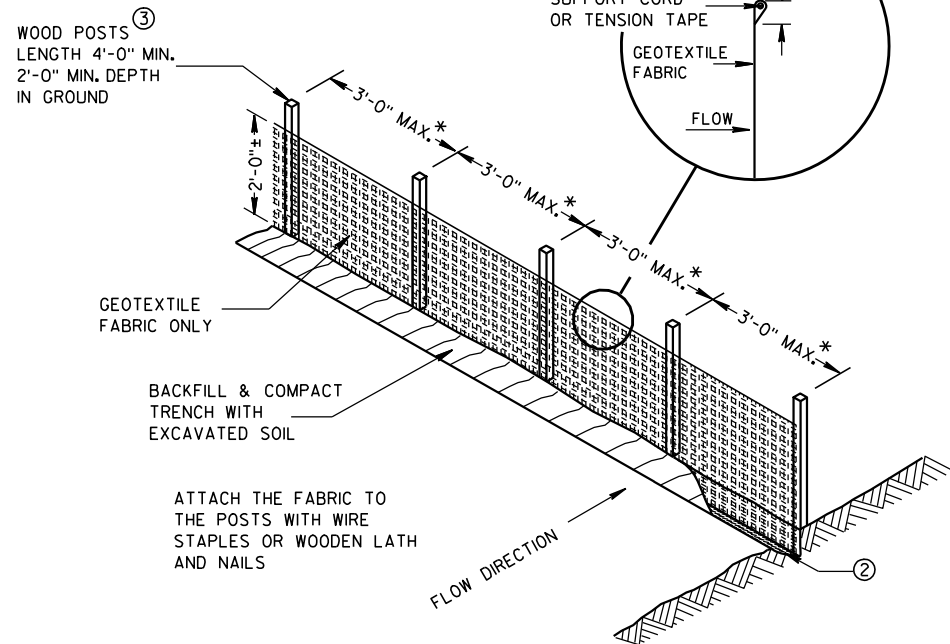
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



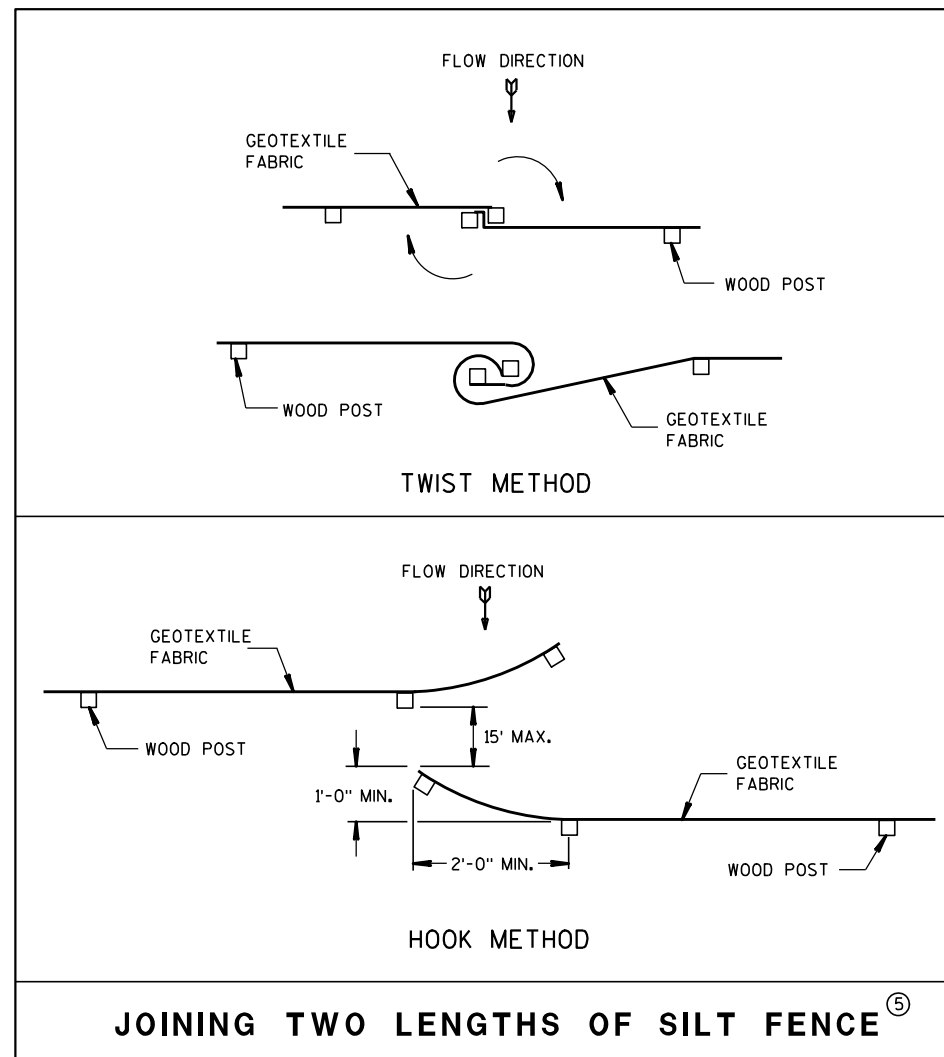
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

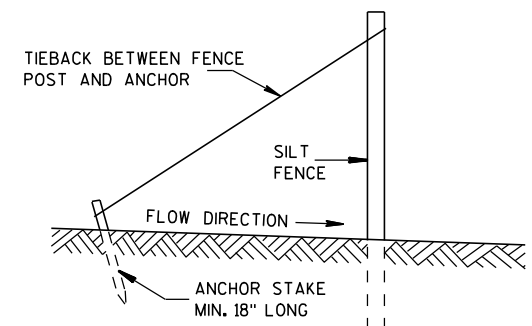


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

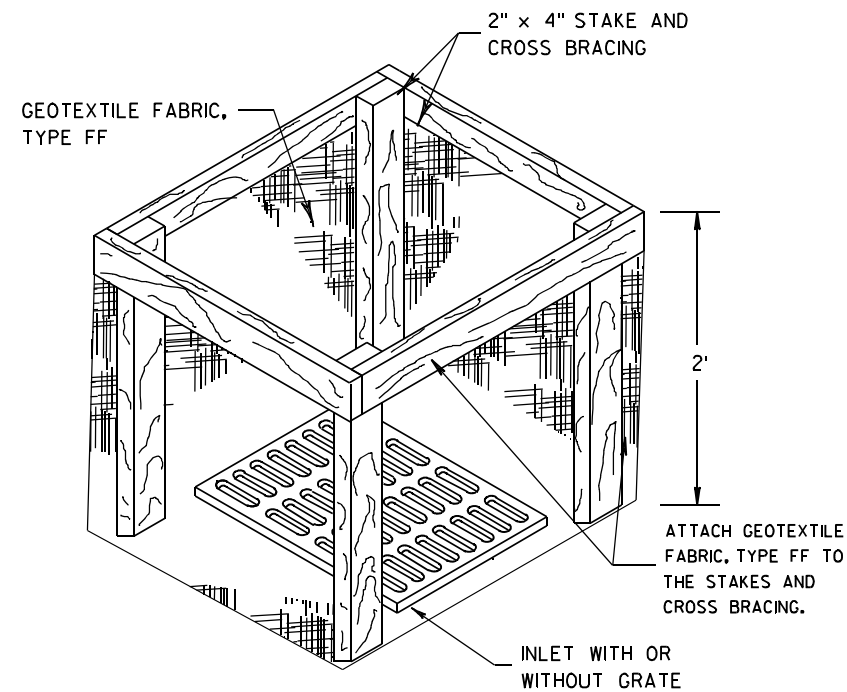
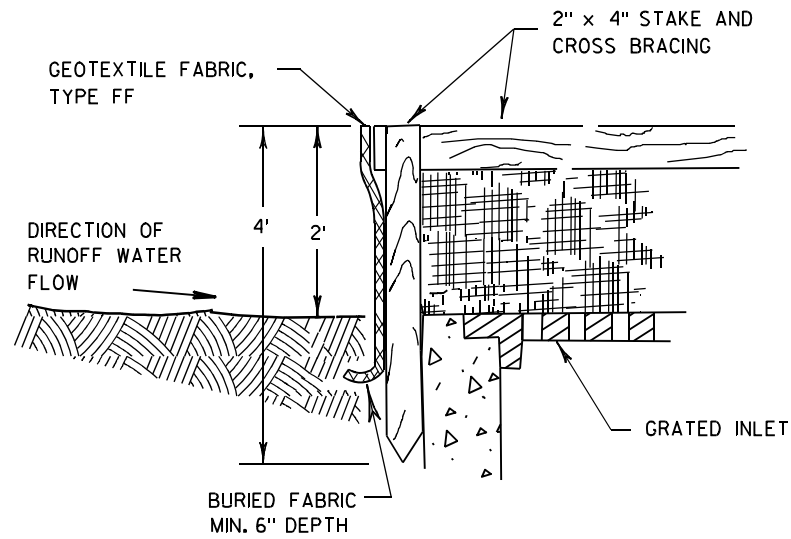


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**INLET PROTECTION, TYPE A**

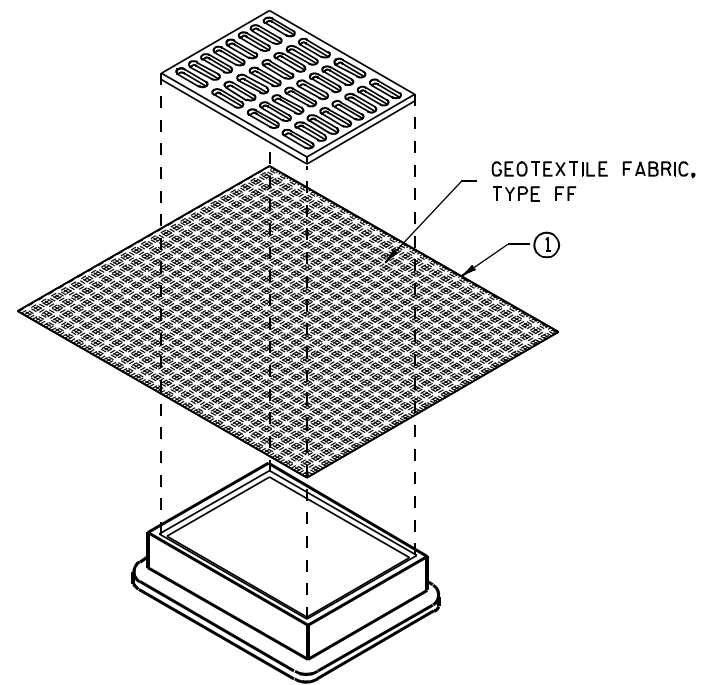
**GENERAL NOTES**

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

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

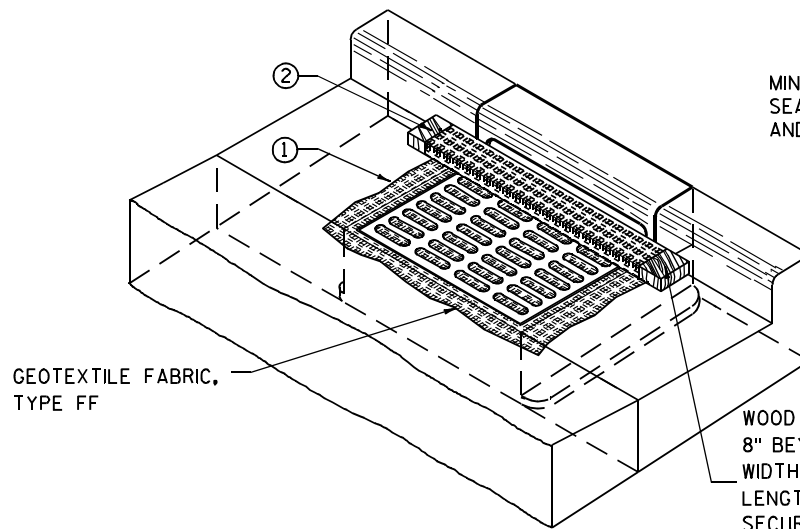
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



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

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



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

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

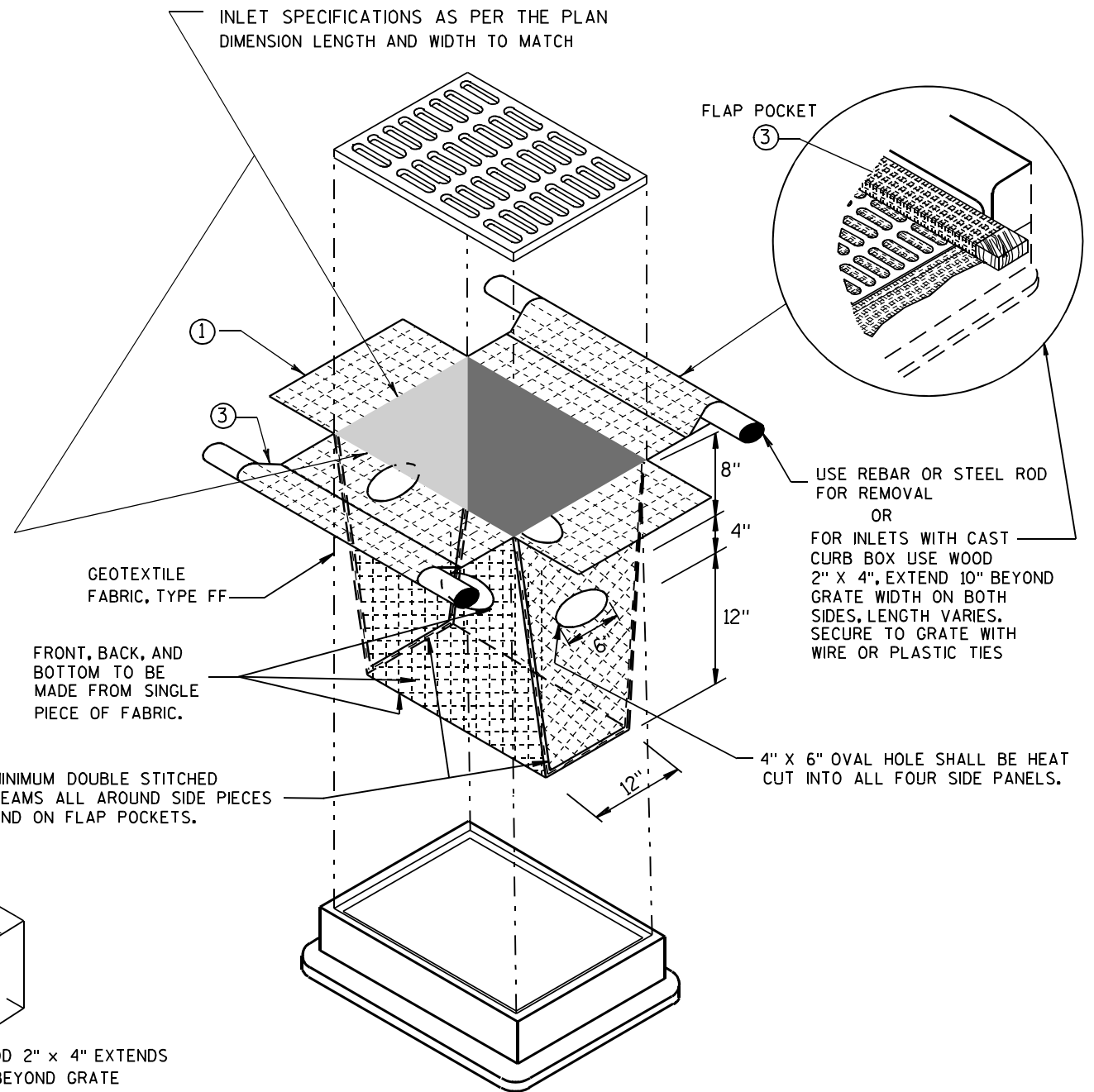
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

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

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

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



**INLET PROTECTION, TYPE D**

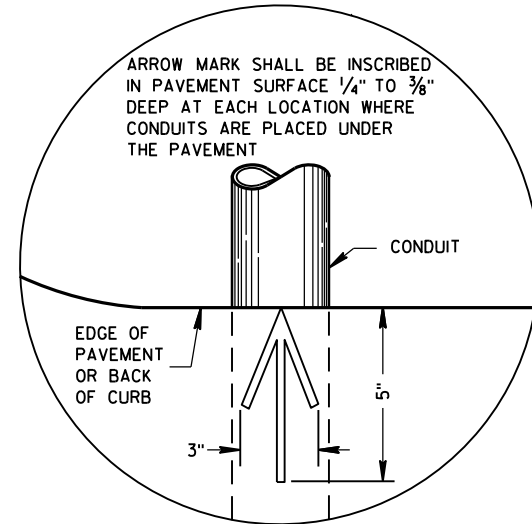
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

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

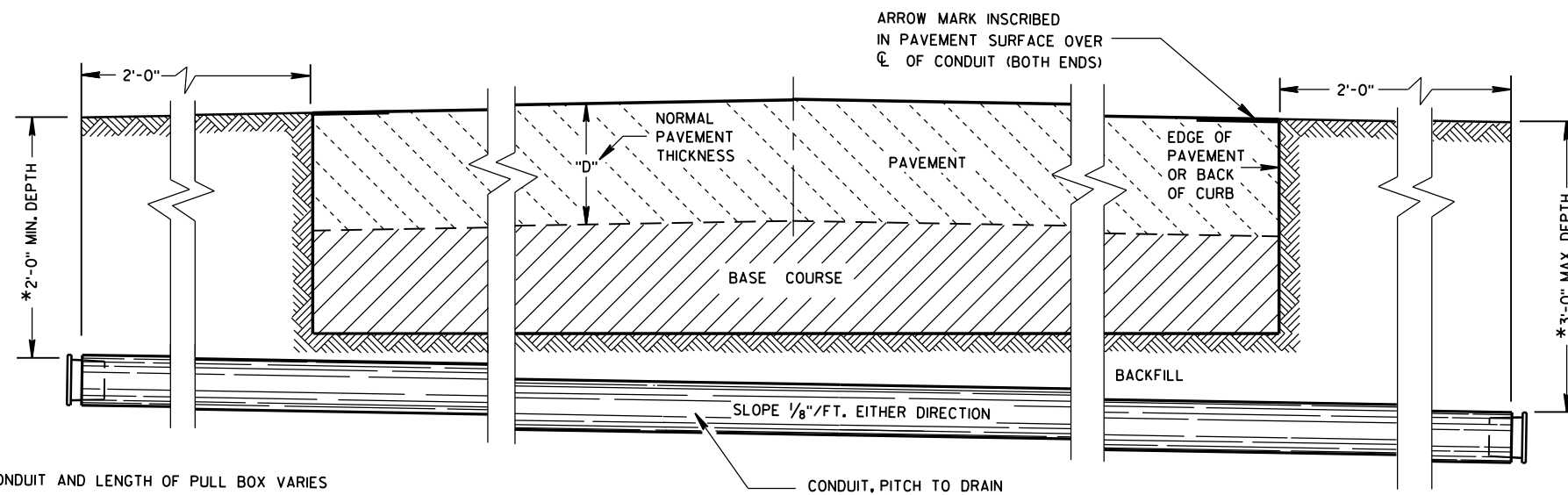
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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





**PLAN VIEW  
ARROW MARK**



**SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

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

**GENERAL NOTES**

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

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

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

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

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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

**CONDUIT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

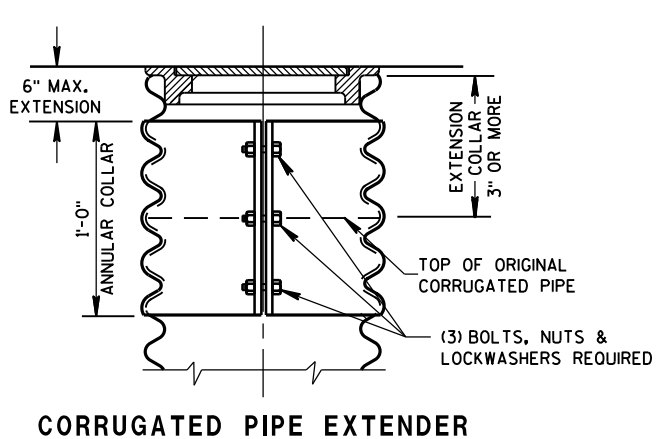
APPROVED  
March, 2017 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

**TABLE OF NOMINAL DIMENSIONS AND WEIGHTS**

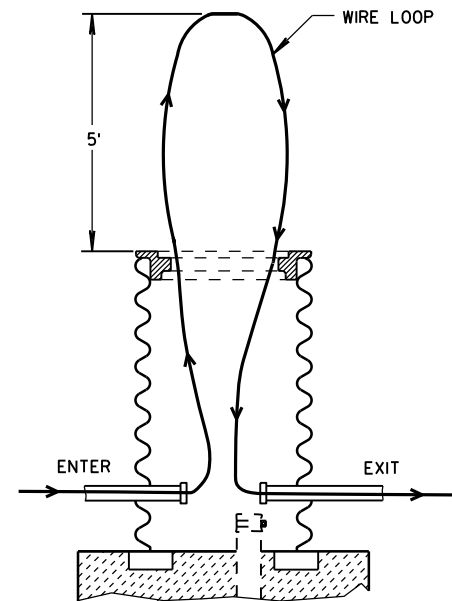
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

\* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

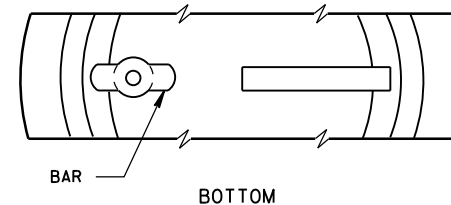
\*\* NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



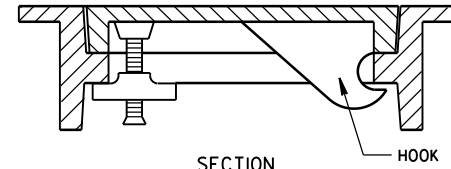
**CORRUGATED PIPE EXTENDER**



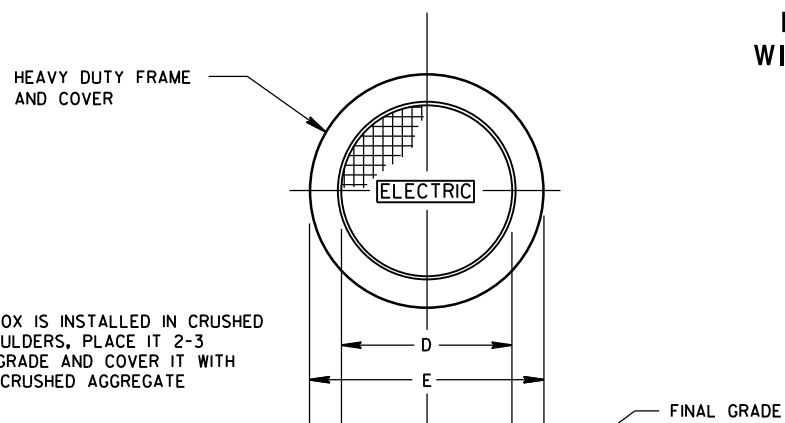
**MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX**



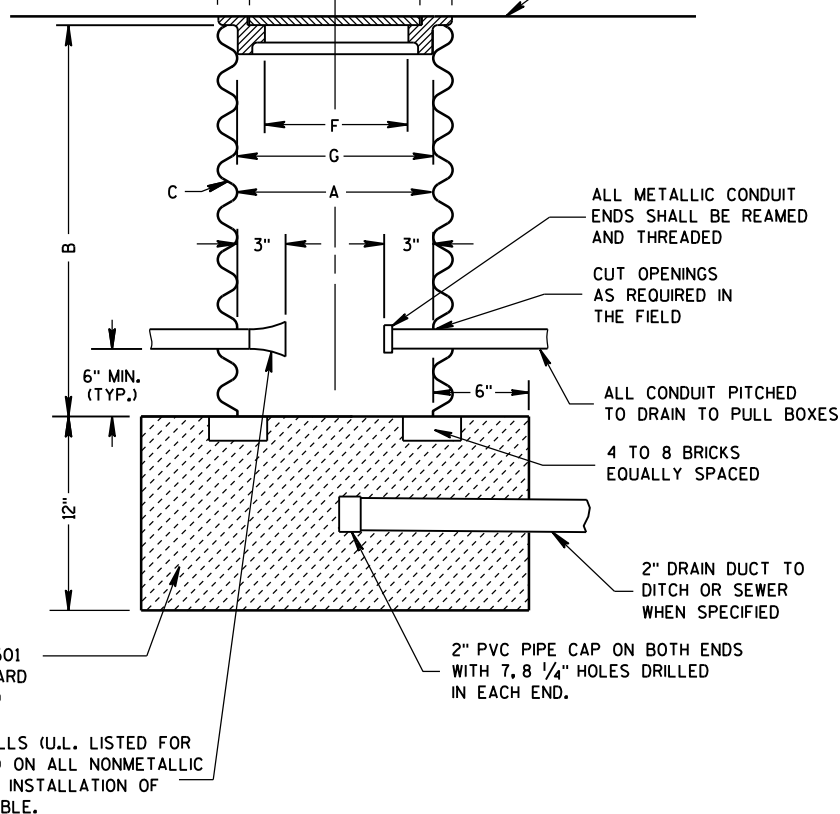
**ALTERNATE COVER (LOCKING)**



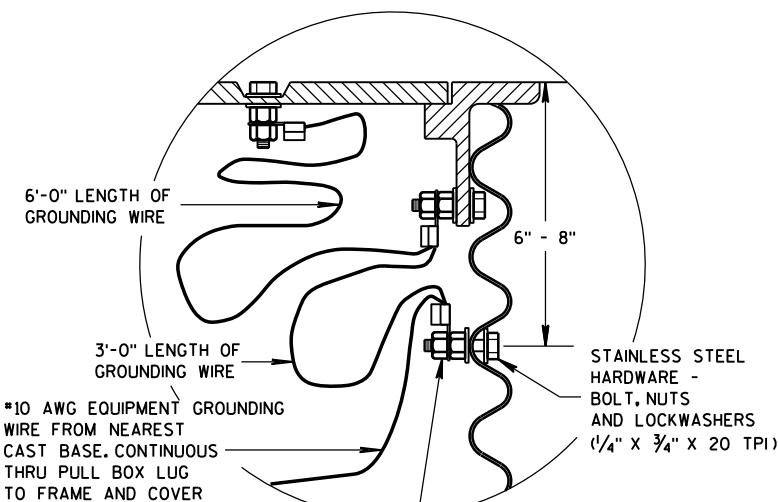
**TIGHTENING BAR TYPE**



WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

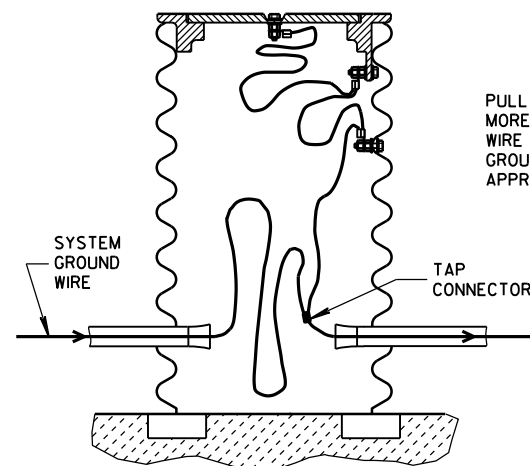


**PULL BOX**



NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE.

**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**

**GENERAL NOTES**

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

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

INSTALL END BELLS (U.L. LISTED FOR ELECTRICAL USE) ON ALL NONMETALLIC CONDUIT BEFORE INSTALLATION OF WIRE AND/OR CABLE.

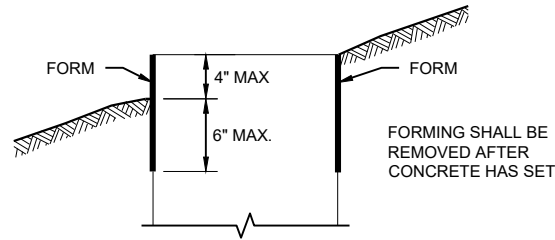
PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

**PULL BOX**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE: Sept. 2014 /S/ Ahmet Demireblek  
STATE ELECTRICAL ENGINEER  
FHWA

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



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

**GENERAL NOTES**

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

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

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

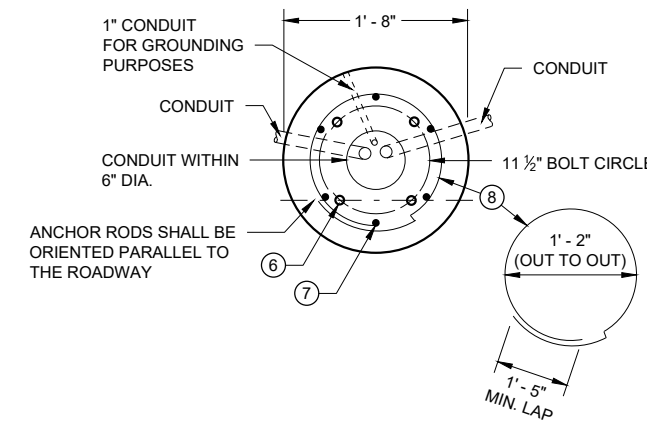
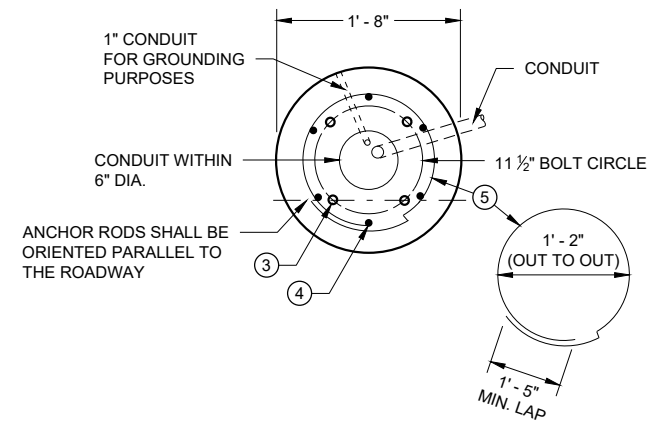
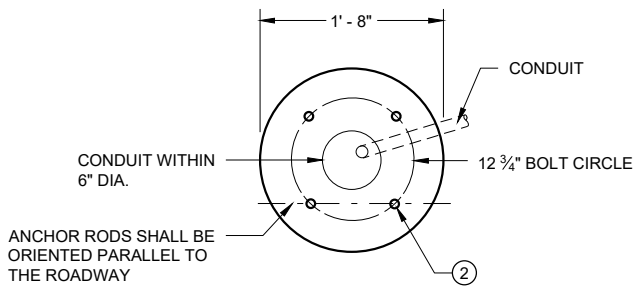
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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

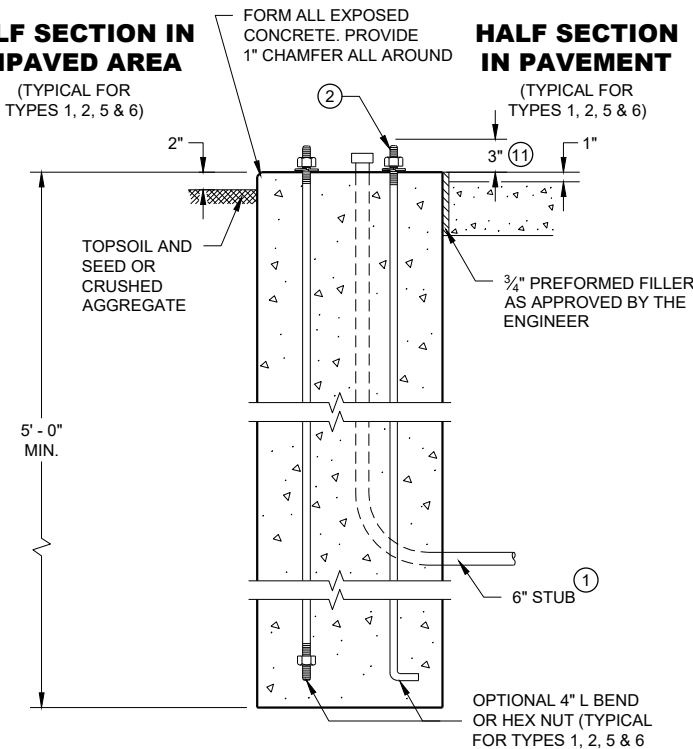
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" 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.

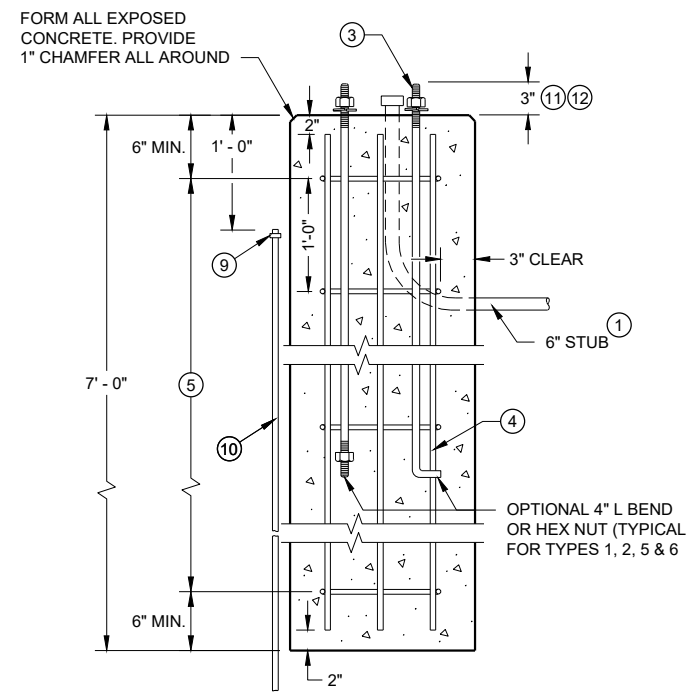


**HALF SECTION IN UNPAVED AREA**

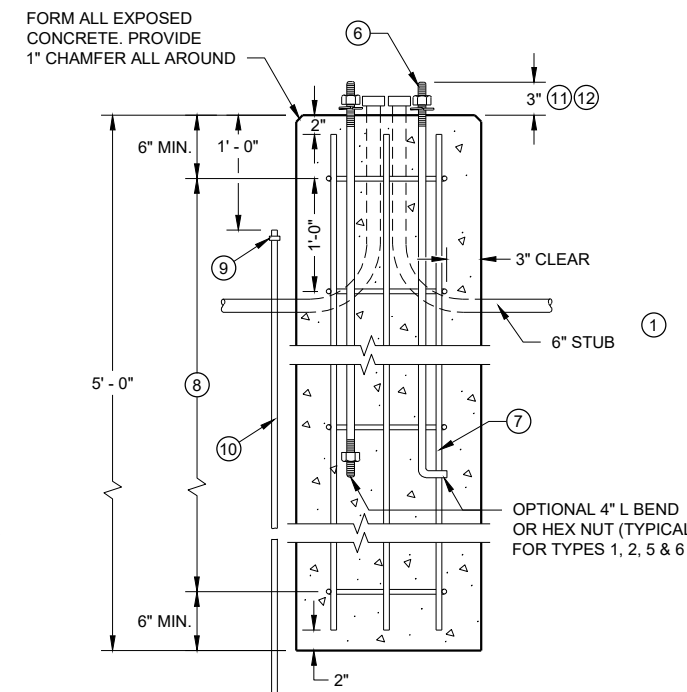


**TYPE 1**

**HALF SECTION IN PAVEMENT**



**TYPE 2**



**TYPE 5 & 6**

**CONCRETE BASES**

**CONCRETE BASES  
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA

**GENERAL NOTES**

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

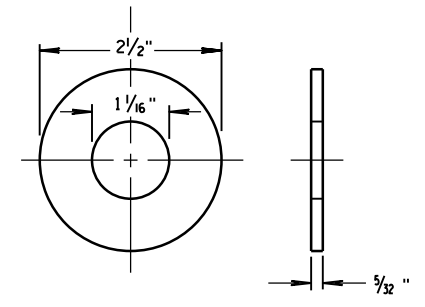
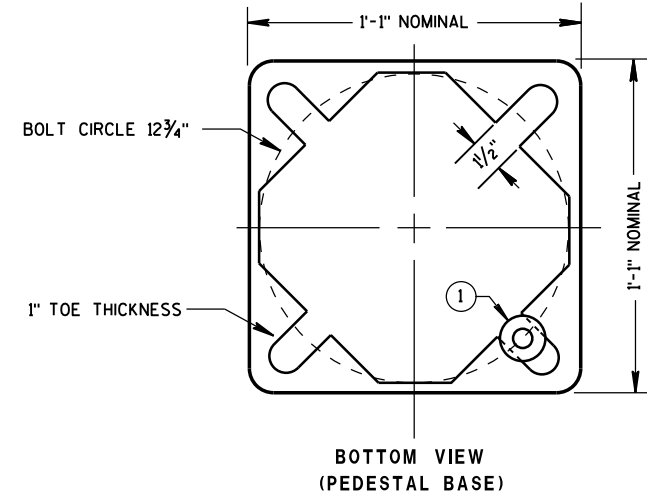
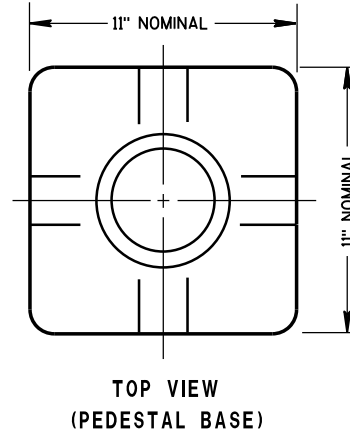
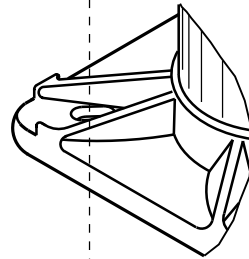
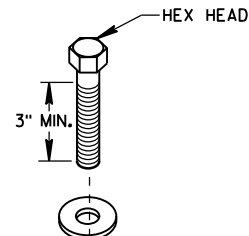
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

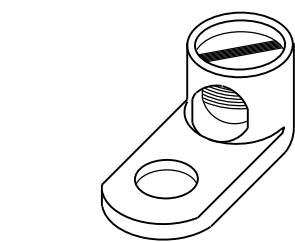
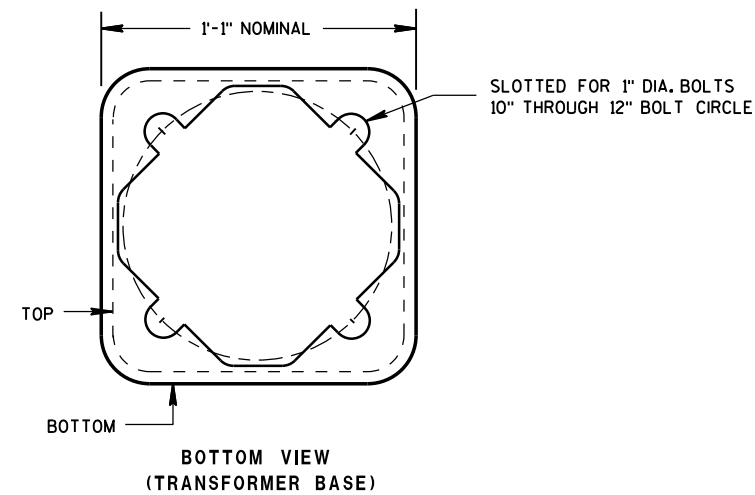
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

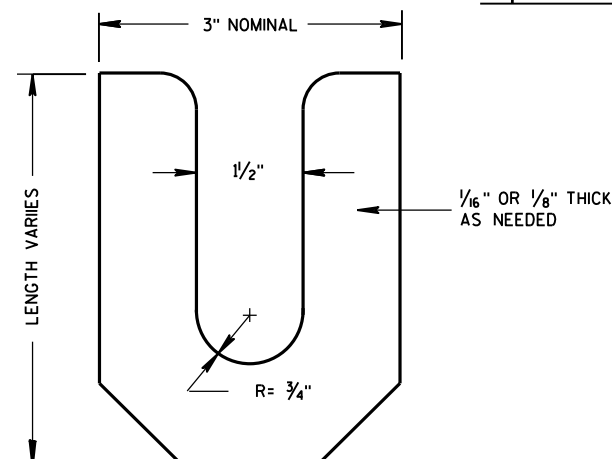
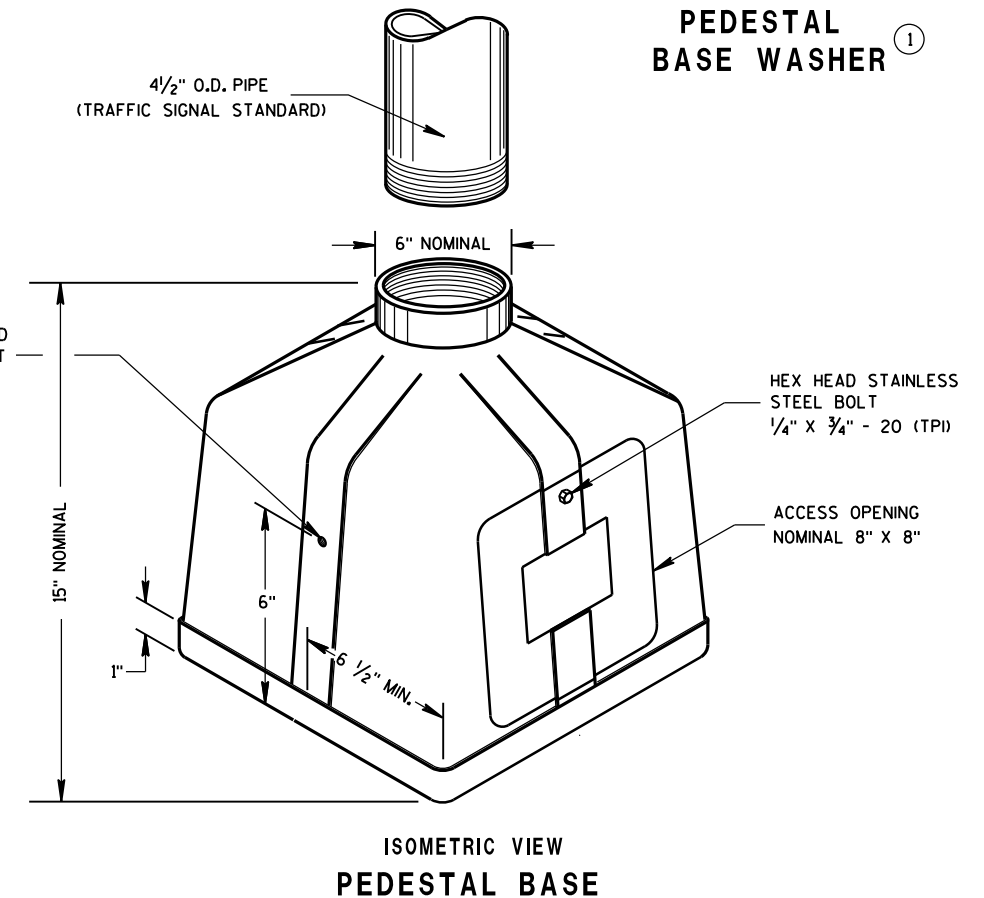
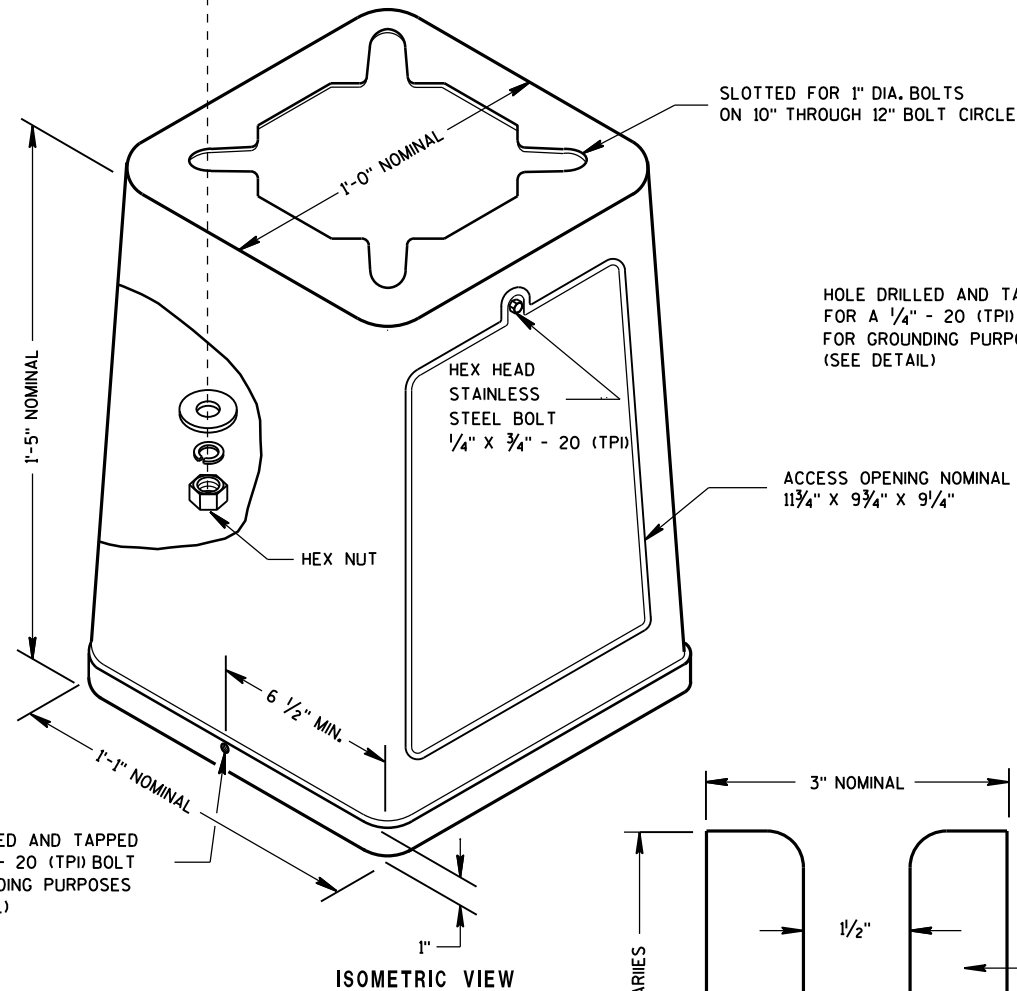


ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR  
**PEDESTAL BASE WASHER** ①



**TYPICAL MECHANICAL CONNECTOR LUG**  
TO BE FURNISHED WITH EACH BASE

**TRANSFORMER BASE**  
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



**LEVELING SHIM**

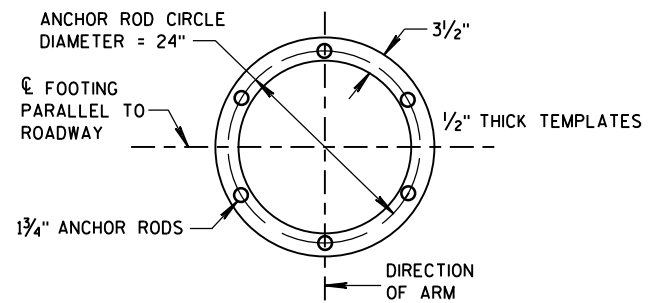
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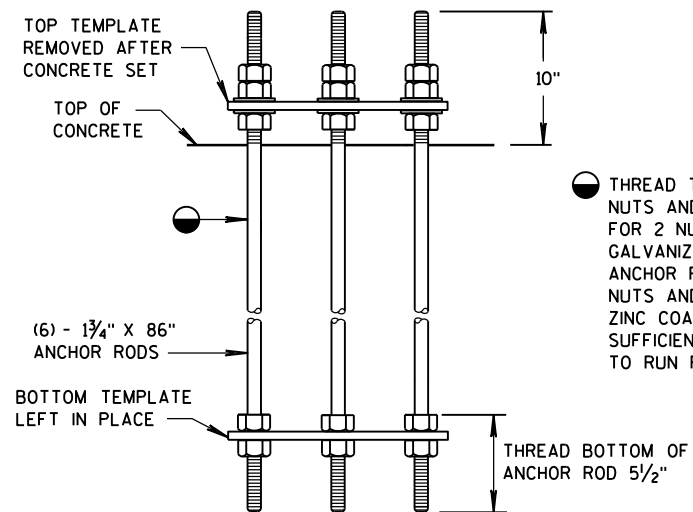
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S.D.D. 9 C 3-4

<b>TRANSFORMER/PEDESTAL BASES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

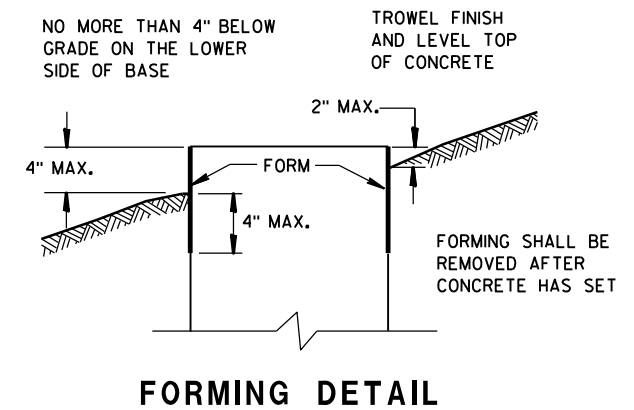


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



6

6

CONCRETE BASE TYPE 13	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE May 2017	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

**GENERAL NOTES**

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

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

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

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

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

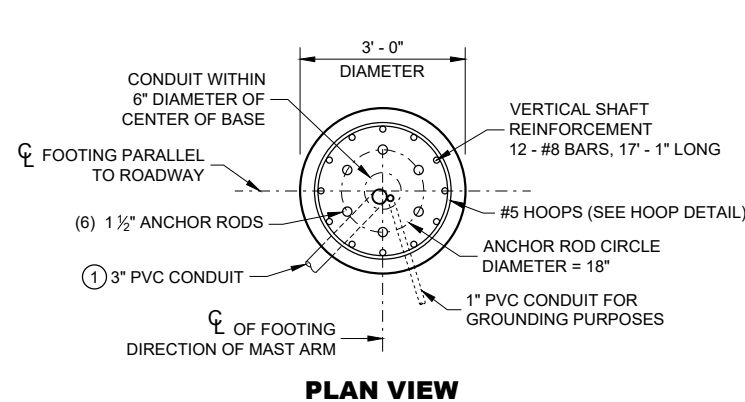
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

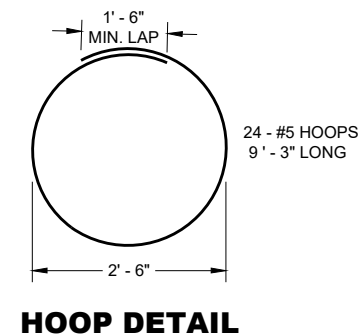
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

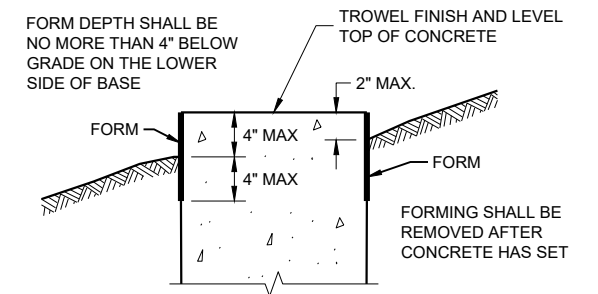
CONCRETE MASONRY.....fc = 3,500 p.s.i.  
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.  
 ANCHOR RODS, ASTM F1554 GRADE 55 ( IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.  
 TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



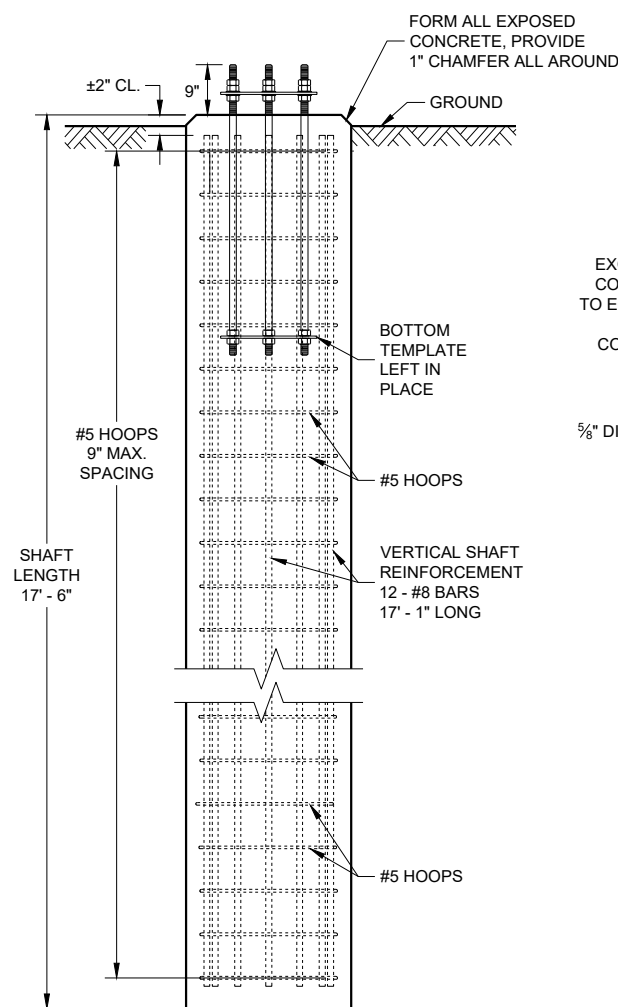
**PLAN VIEW**



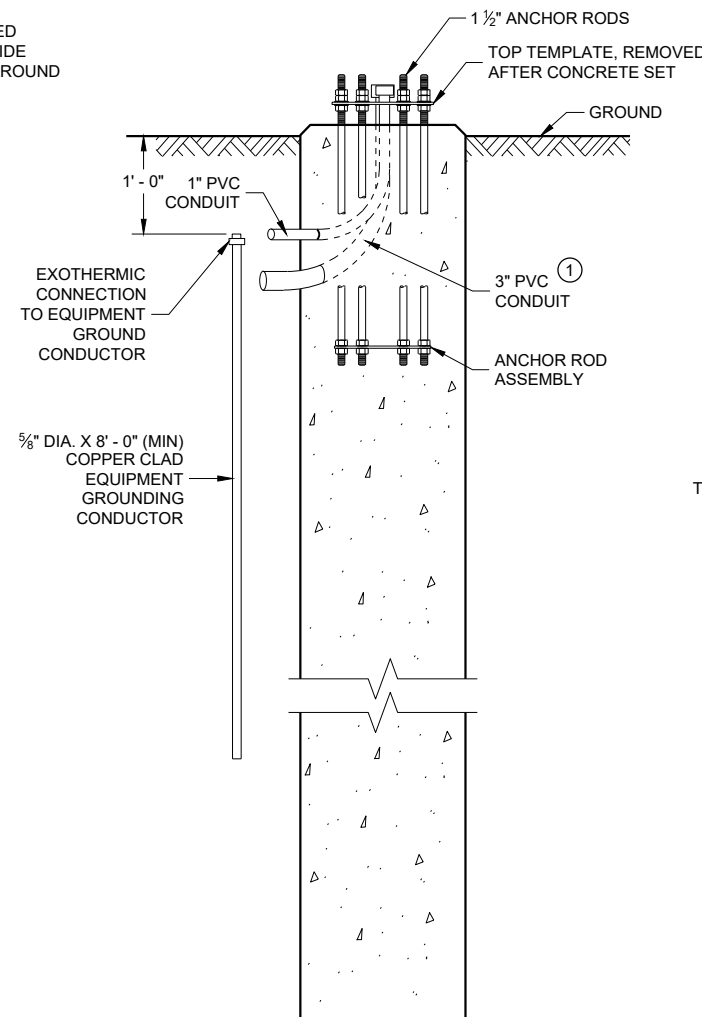
**HOOP DETAIL**



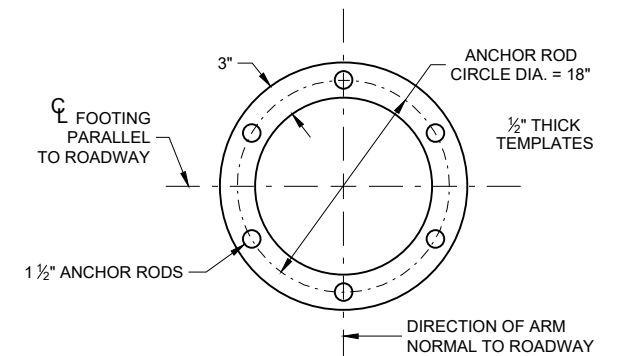
**FORMING DETAIL**



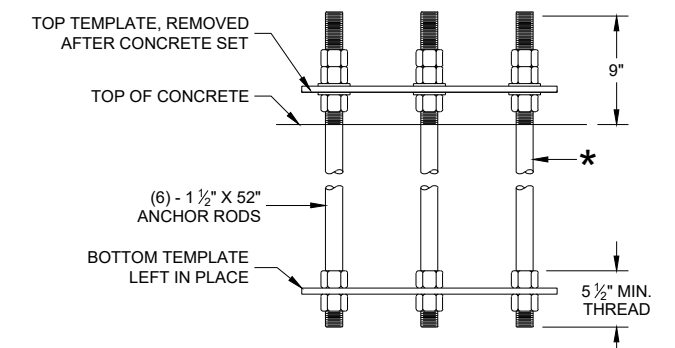
**ELEVATION VIEW**  
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



**SIDE VIEW**  
(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)



**TOP AND BOTTOM TEMPLATE**



**ANCHOR ROD ASSEMBLY DETAILS**

\* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

**CONCRETE BASE, TYPE 10 SPECIAL  
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)**

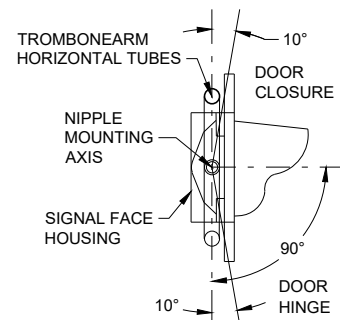
CONCRETE = 4.6 CUBIC YARD  
 H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

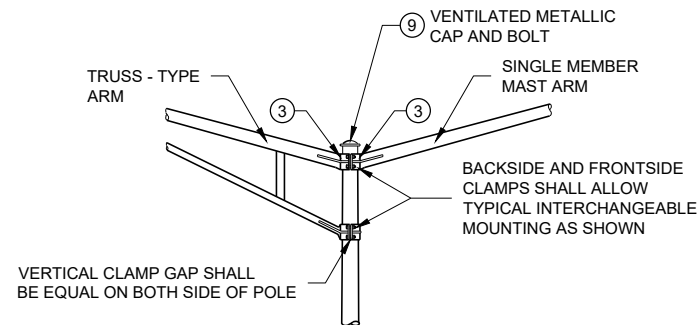
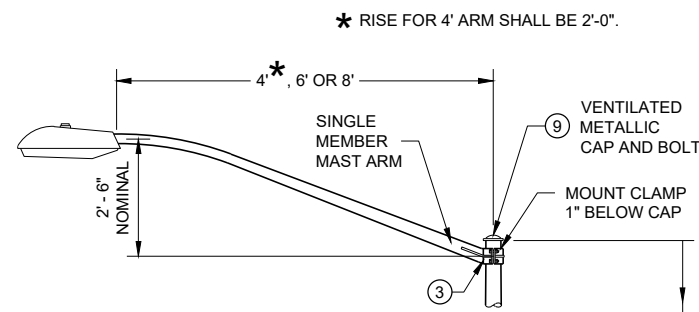
**CONCRETE BASE  
TYPE 10 SPECIAL**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

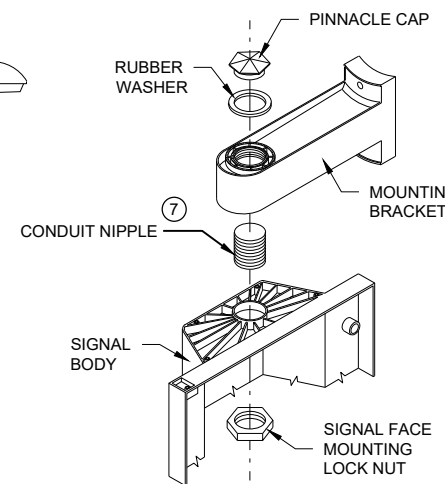
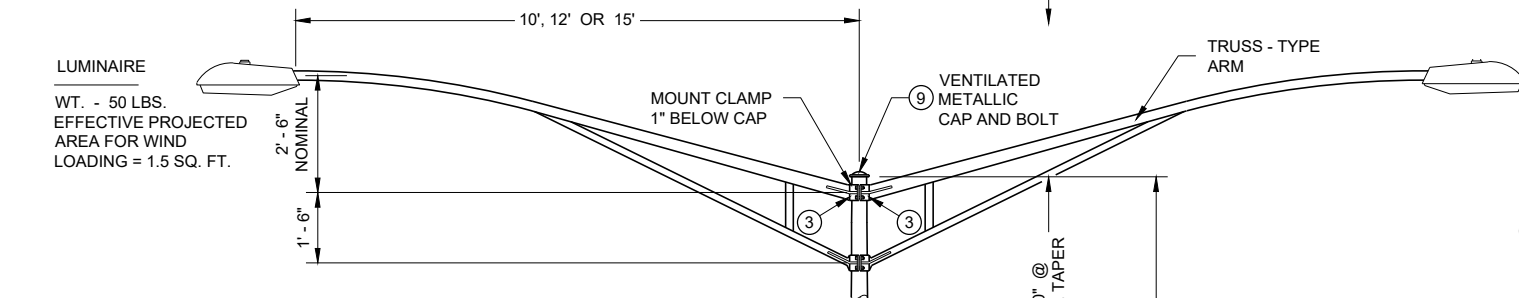
APPROVED  
 August 2020 /S/ Alex Crabtree  
 DATE WIND LOADED STRUCTURES PROGRAM LEADER  
 FHWA



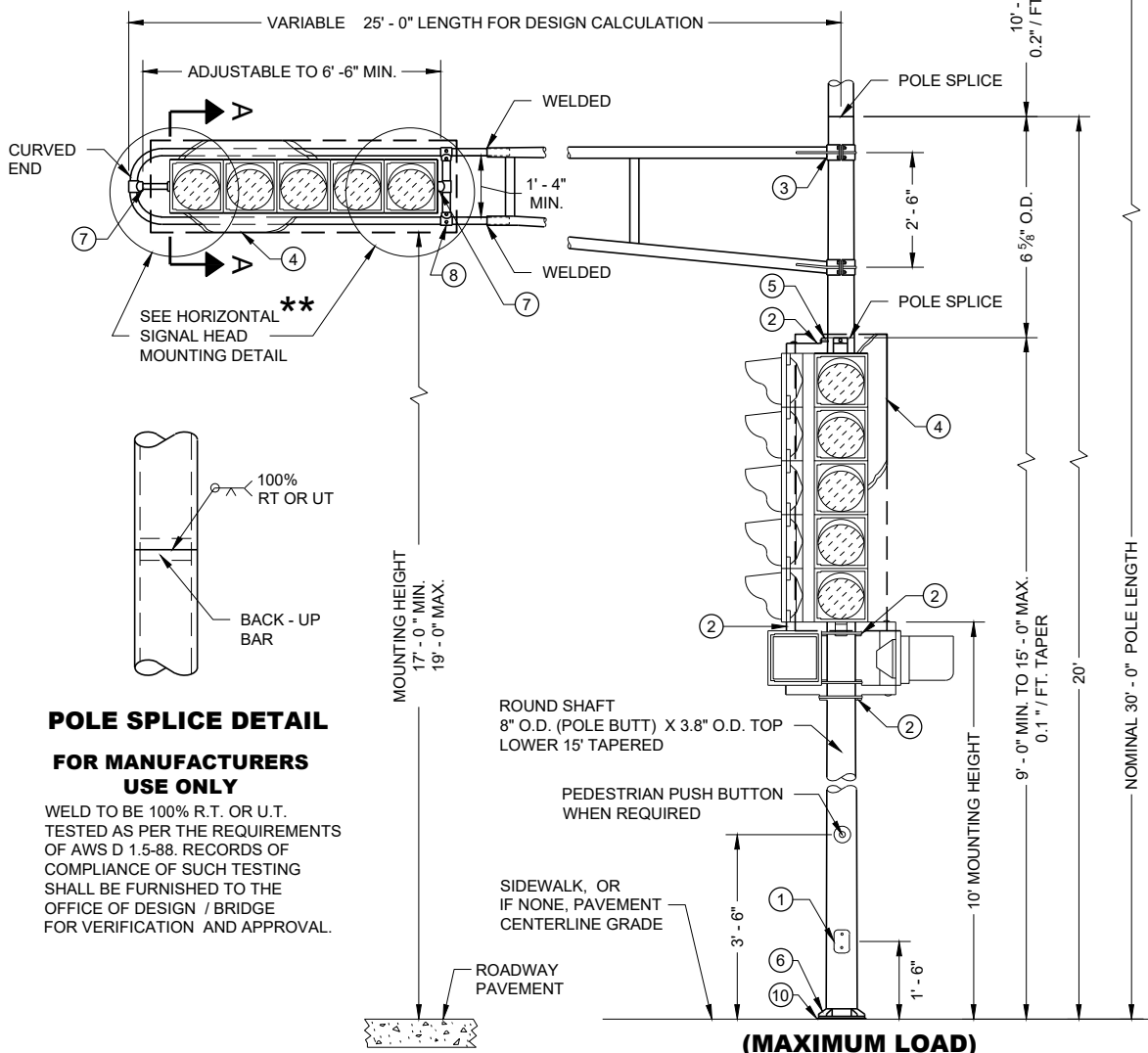
**SECTION A-A**



**INTERCHANGEABLE MOUNTING DETAIL**

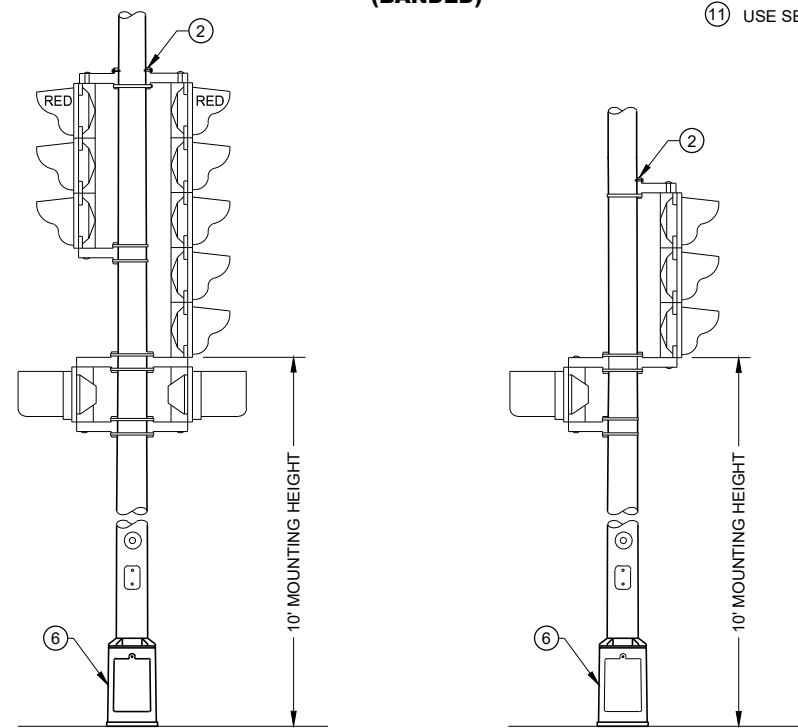


**SIGNAL FACE MOUNTING DETAIL (BANDED)**

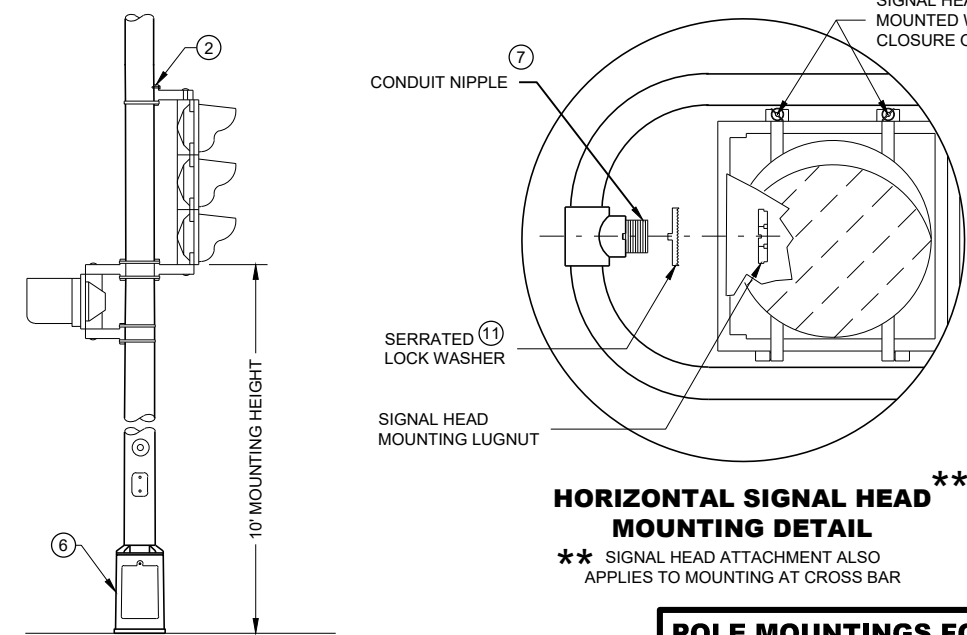


**POLE SPLICE DETAIL FOR MANUFACTURERS USE ONLY**

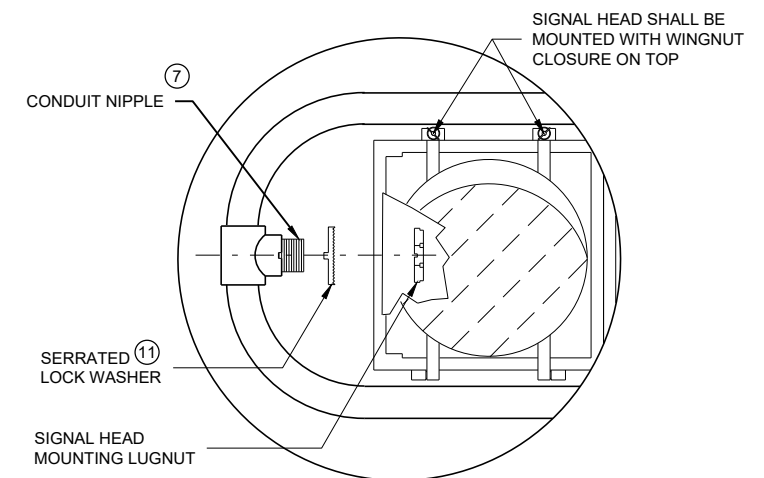
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



**TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES**



**TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE**



**HORIZONTAL SIGNAL HEAD MOUNTING DETAIL**

\*\* SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

**GENERAL NOTES**

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

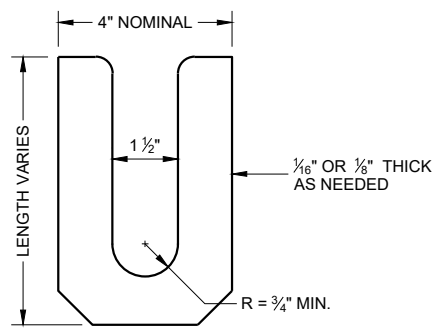
THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

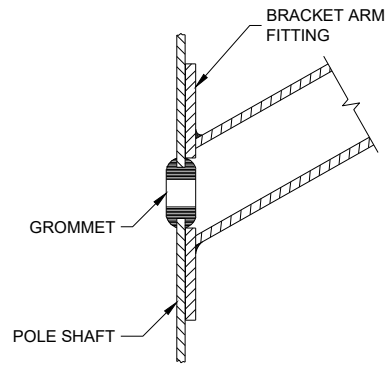
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/2" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 1/2" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.
- ⑦ USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.
- ⑧ VERTICAL STRUT (ADJUSTABLE), ONE (1) SET SCREW (1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

**POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)**

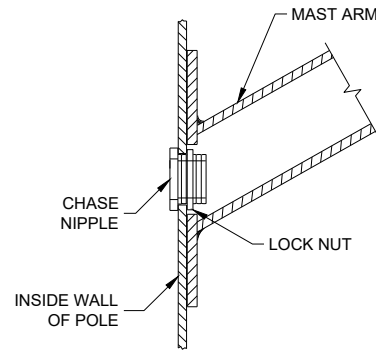
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**LEVELING SHIM**  
SHALL BE ALUMINUM



**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



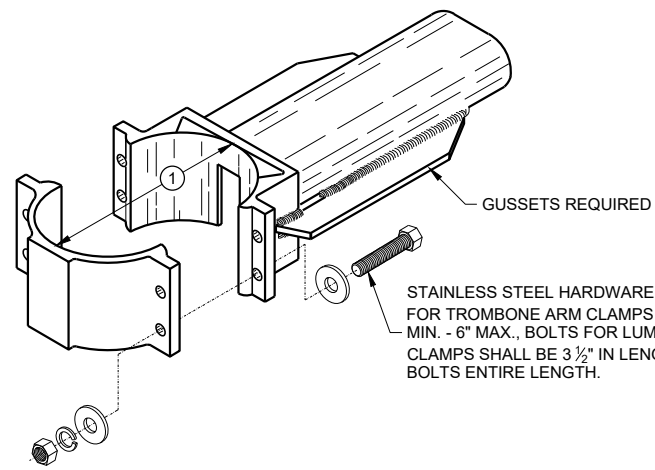
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

**GENERAL NOTES**

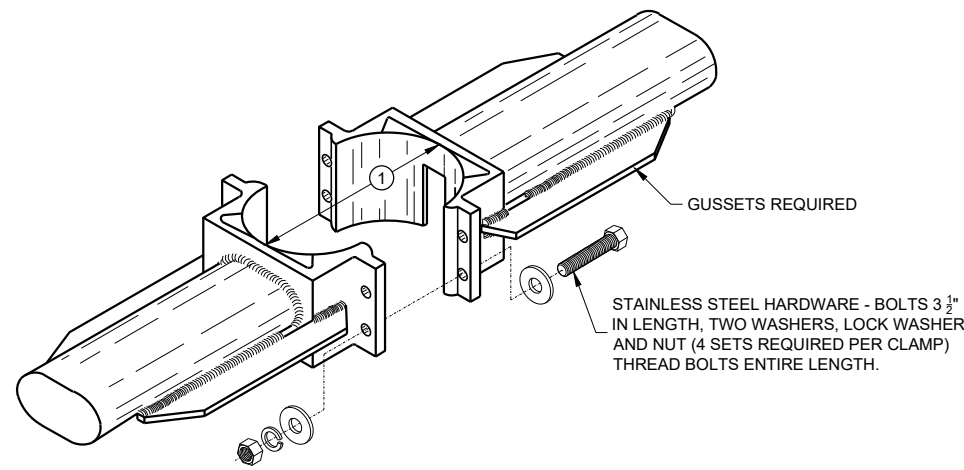
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- 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.

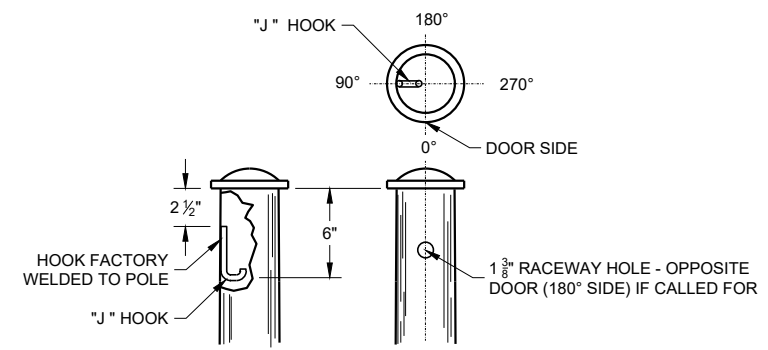
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



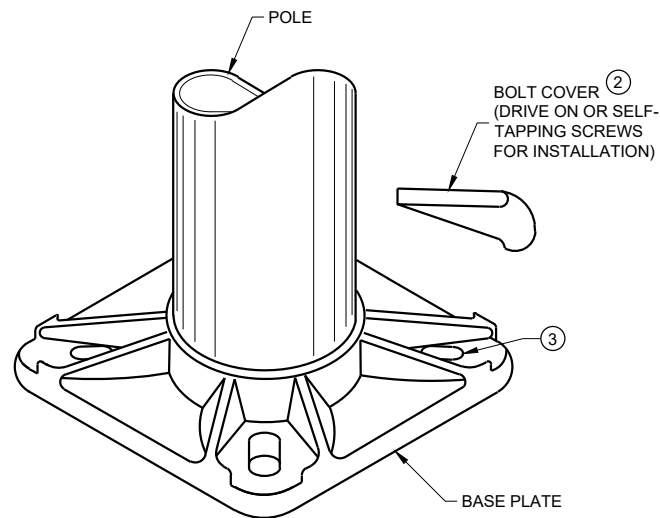
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



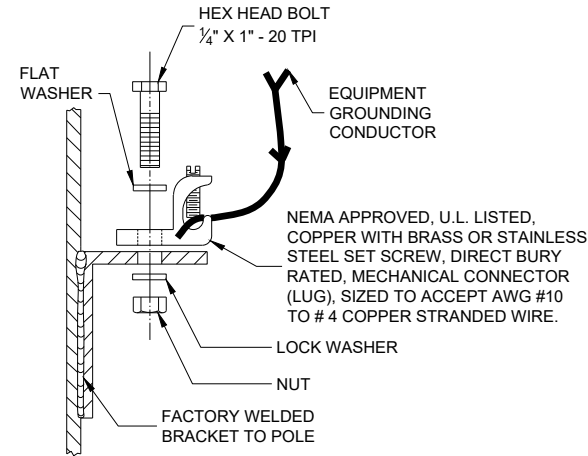
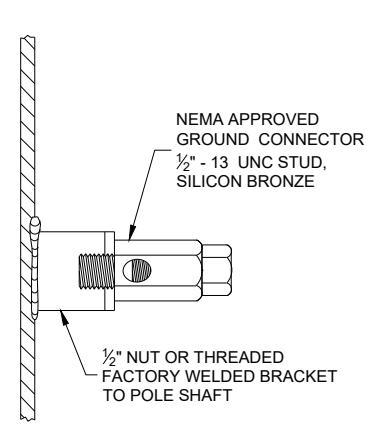
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



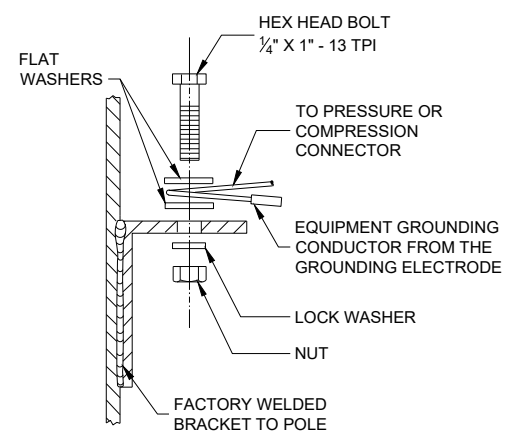
**TYPICAL "J" HOOK LOCATION**



**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 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

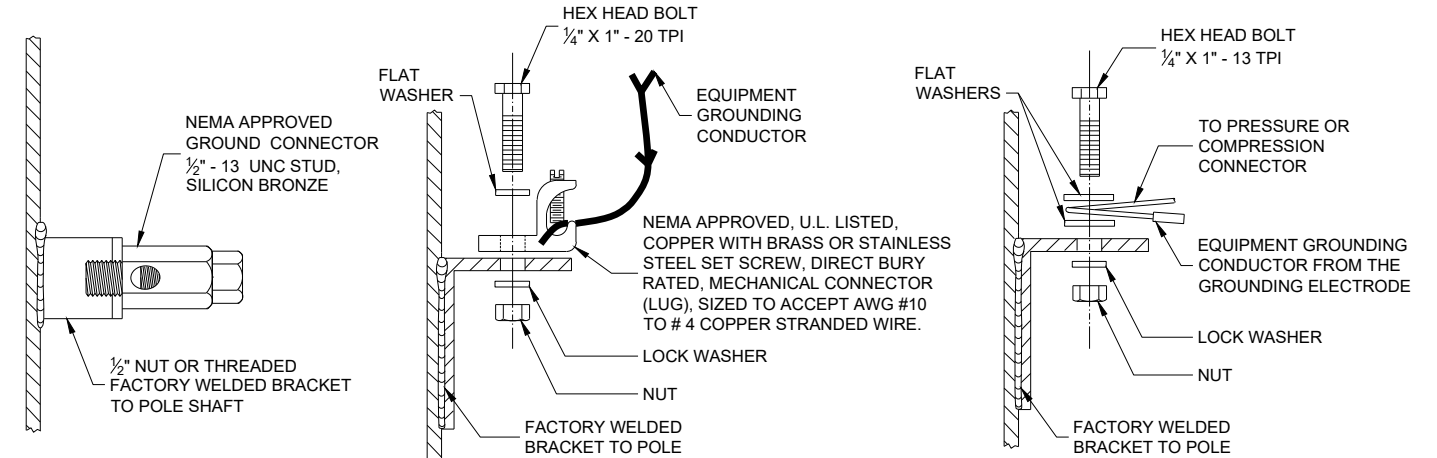
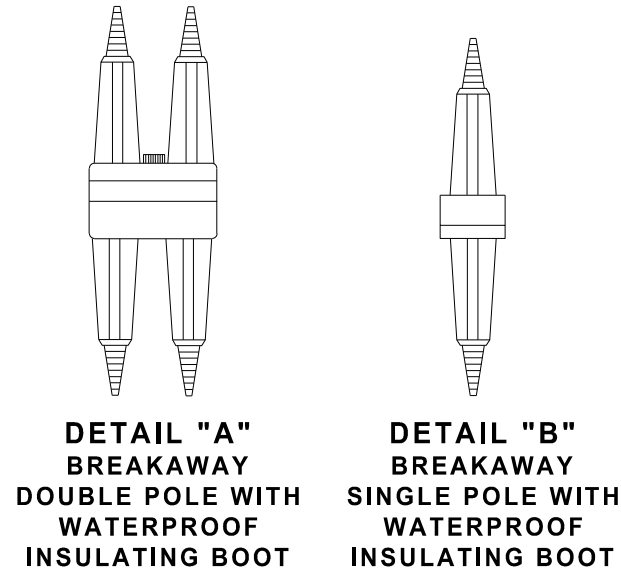
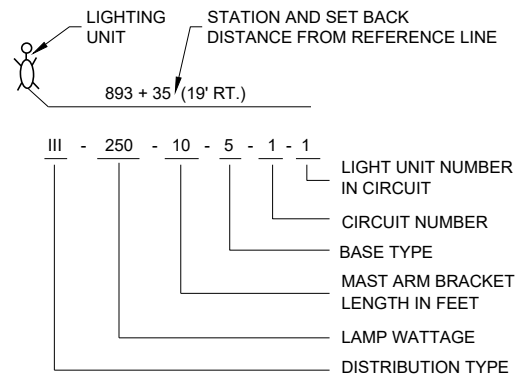


**GENERAL NOTES**

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

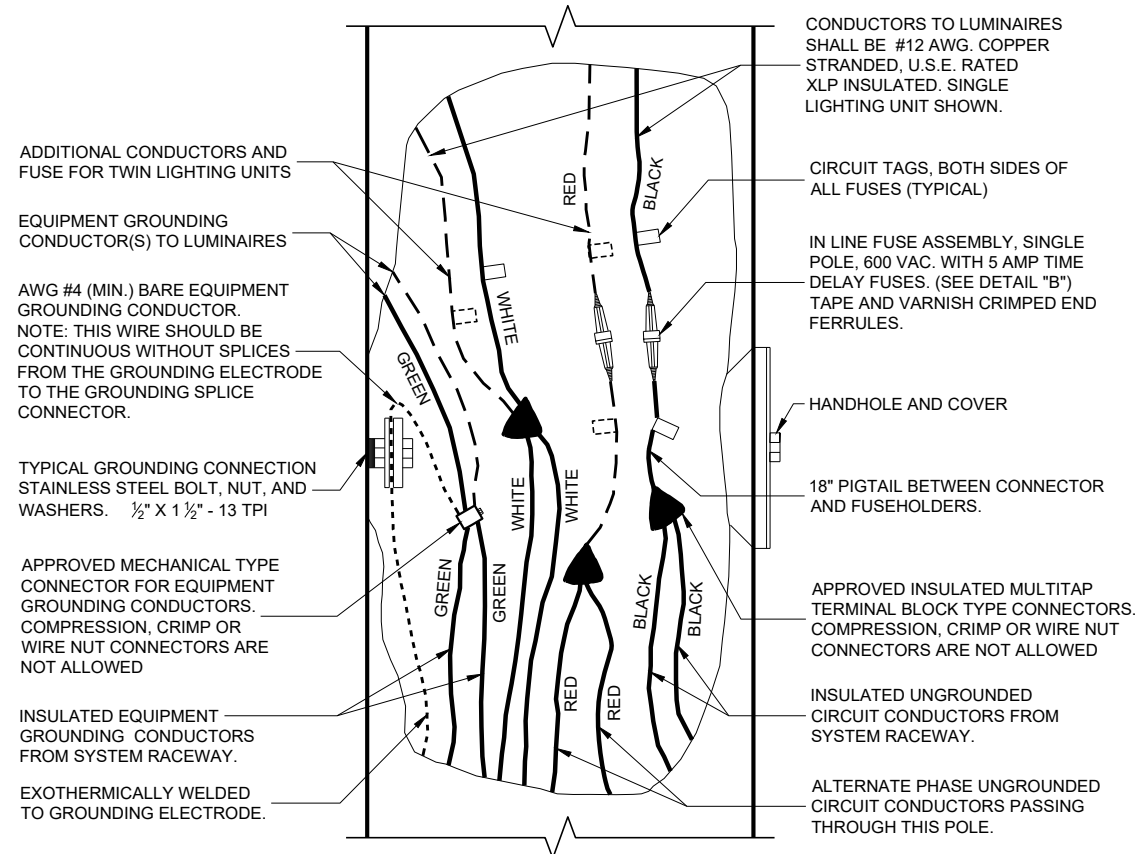
THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

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

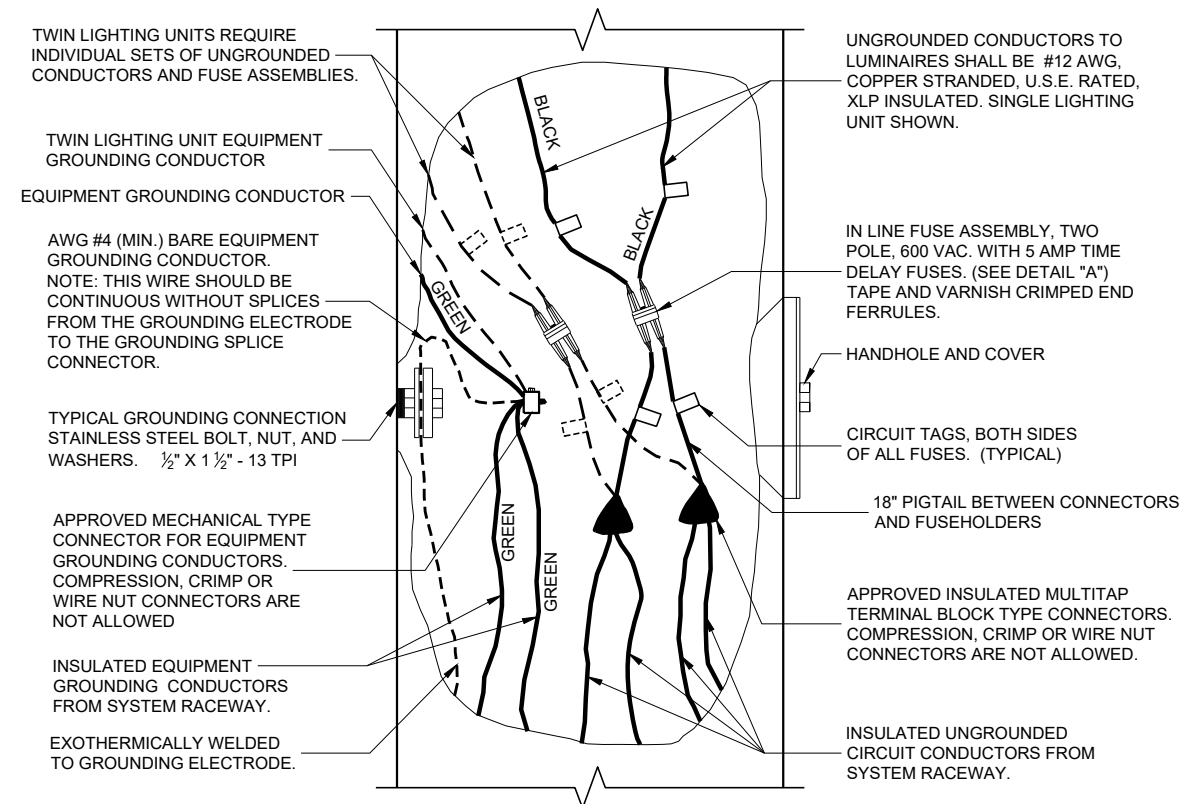


**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**LIGHTING UNIT CODE (TYPICAL)**



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



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

**NON - FREEWAY LIGHTING UNIT POLE WIRING**

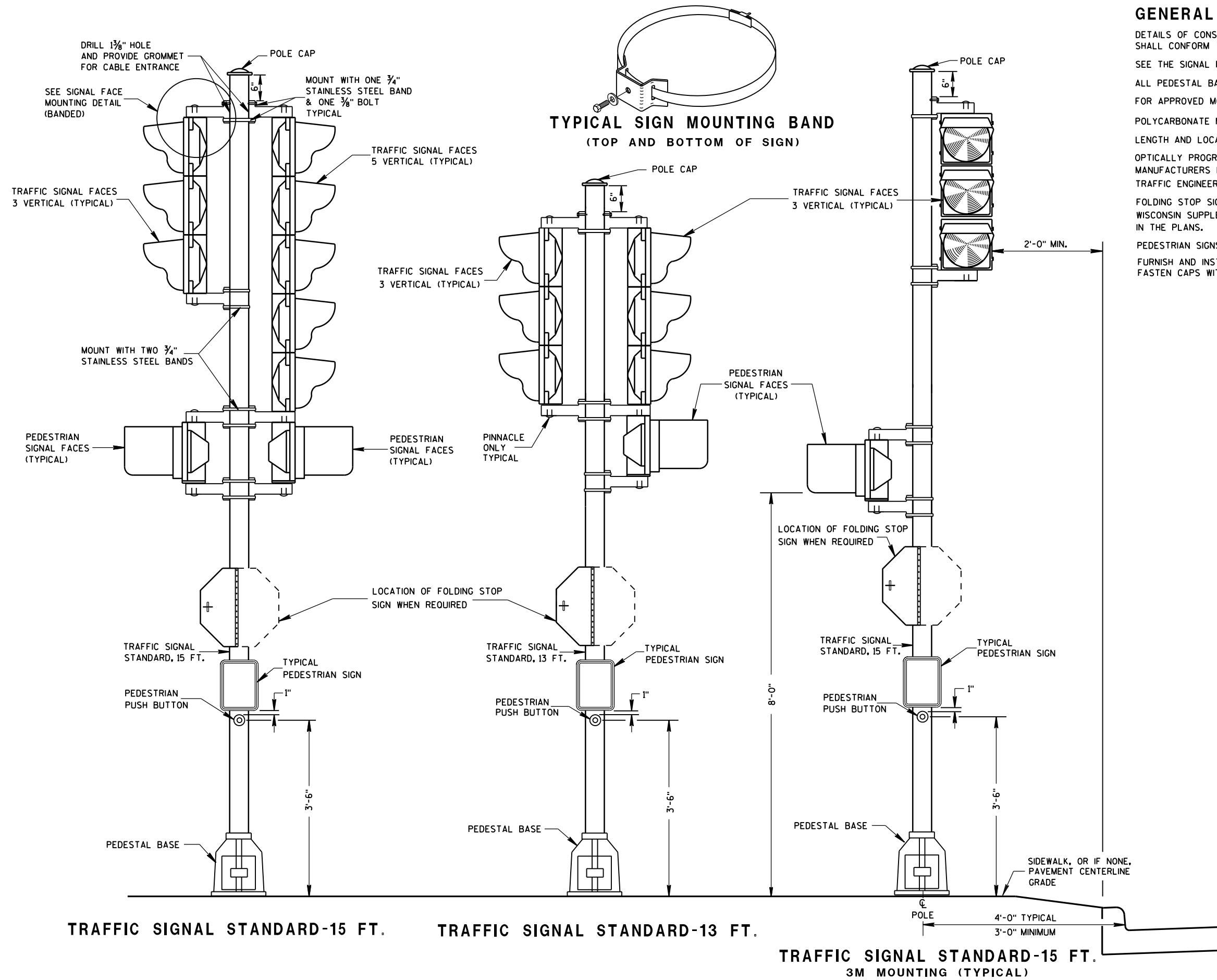
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

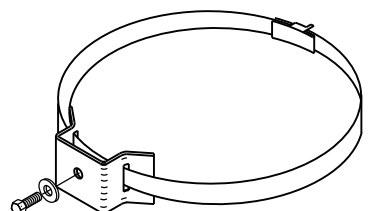
FHWA

6

6



**TYPICAL SIGN MOUNTING BAND  
(TOP AND BOTTOM OF SIGN)**



**GENERAL NOTES**

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

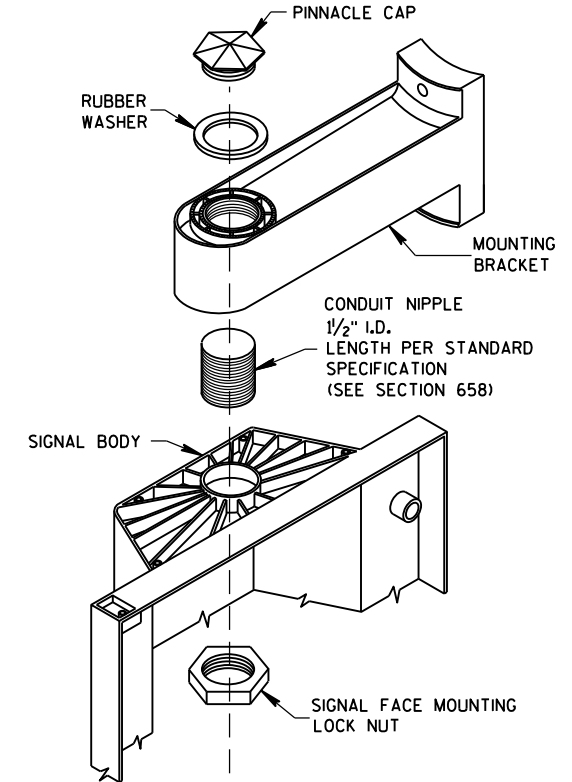
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



**SIGNAL FACE MOUNTING DETAIL  
(BANDED)**

**TRAFFIC SIGNAL STANDARD  
POLY BRACKET MOUNTINGS  
(TYPICAL) 13 FT. OR 15 FT.**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
2/28/2013 DATE /S/ Ahmet Demirbilek  
STATE ELECTRICAL ENGINEER  
FHWA

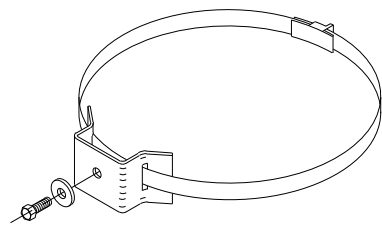
S.D.D. 9 E 6-5

S.D.D. 9 E 6-5

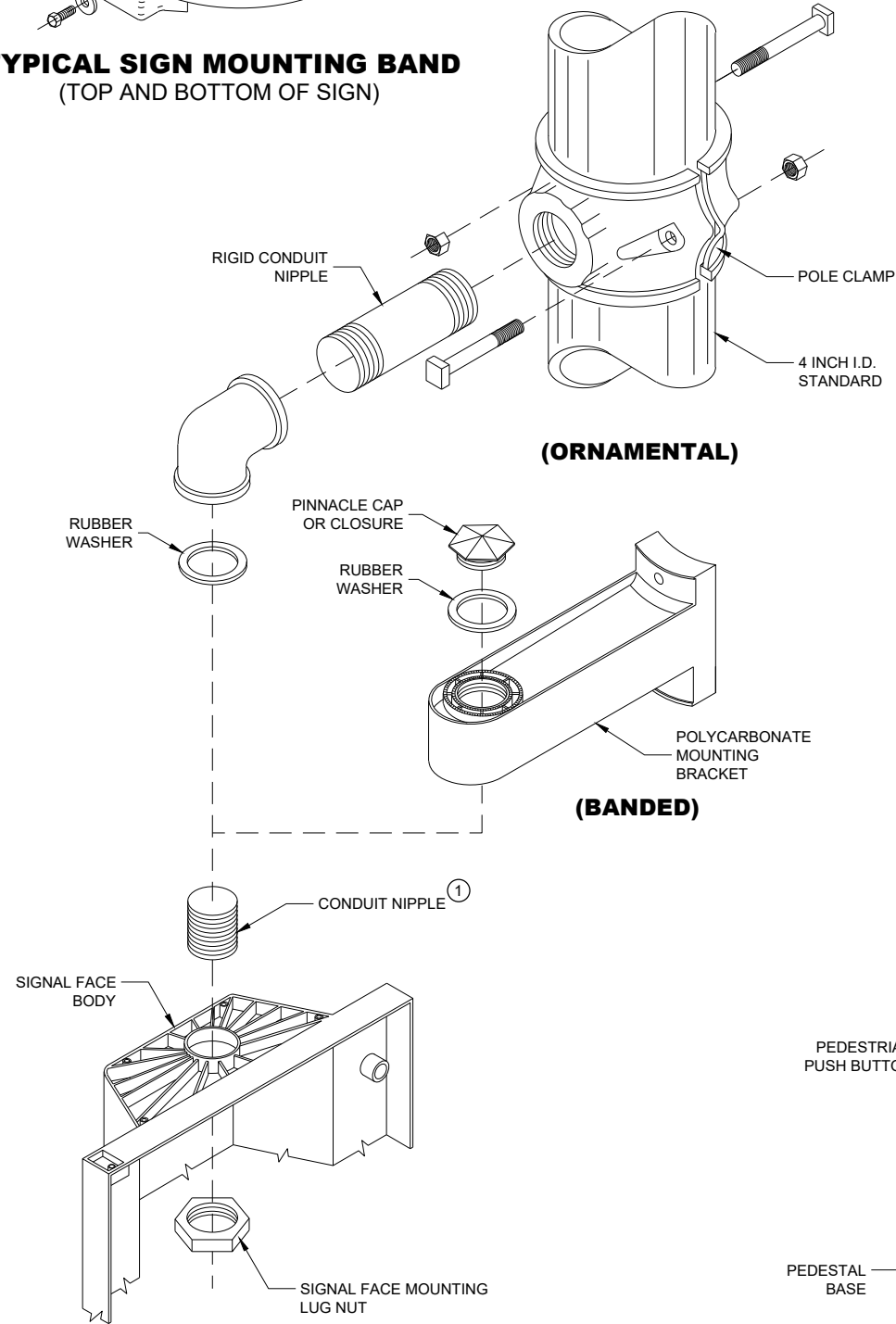
**TRAFFIC SIGNAL STANDARD-15 FT.**

**TRAFFIC SIGNAL STANDARD-13 FT.**

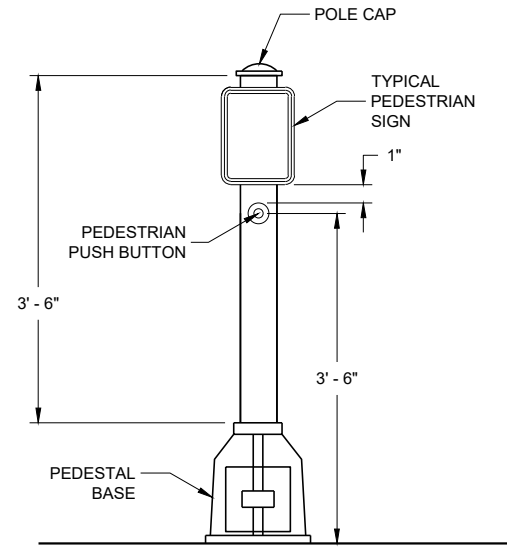
**TRAFFIC SIGNAL STANDARD-15 FT.  
3M MOUNTING (TYPICAL)**



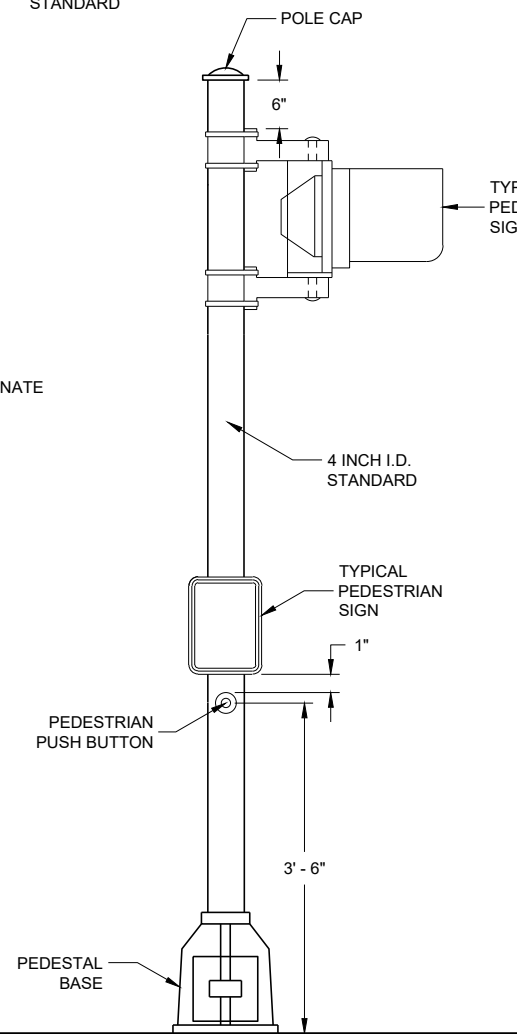
**TYPICAL SIGN MOUNTING BAND**  
(TOP AND BOTTOM OF SIGN)



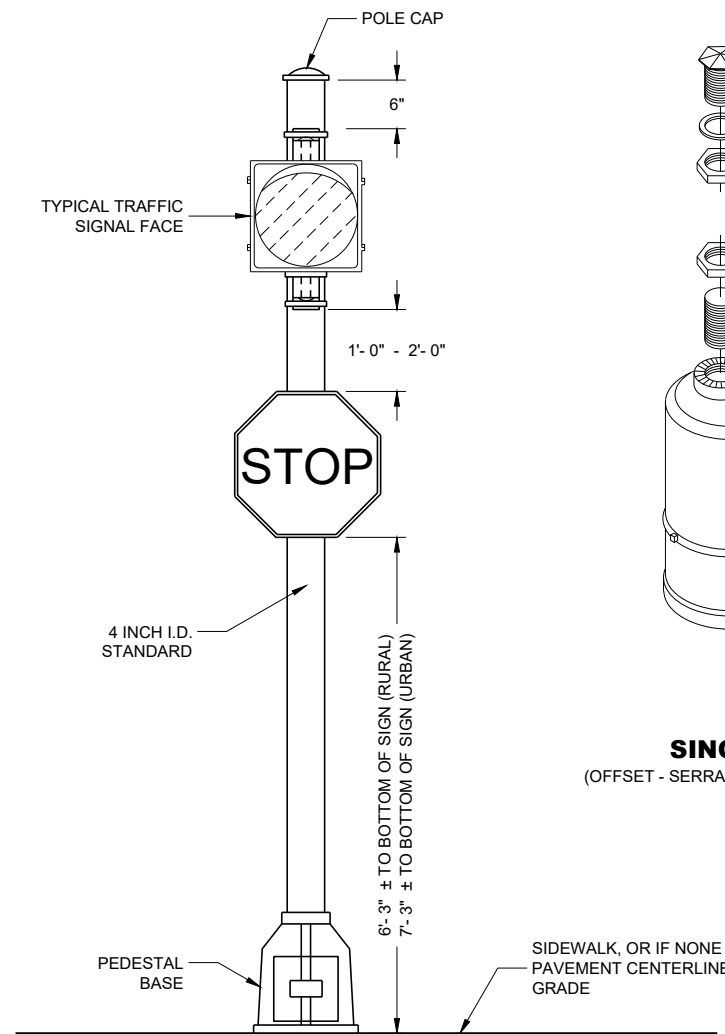
**SIGNAL FACE MOUNTING DETAILS**



**PEDESTRIAN PUSH BUTTON**  
**TYPICAL MOUNTING**



**PEDESTRIAN FACE STANDARD - 10 FT.**  
(WALK - DON'T WALK)



**STANDARD FLASHER**  
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

**GENERAL NOTES**

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

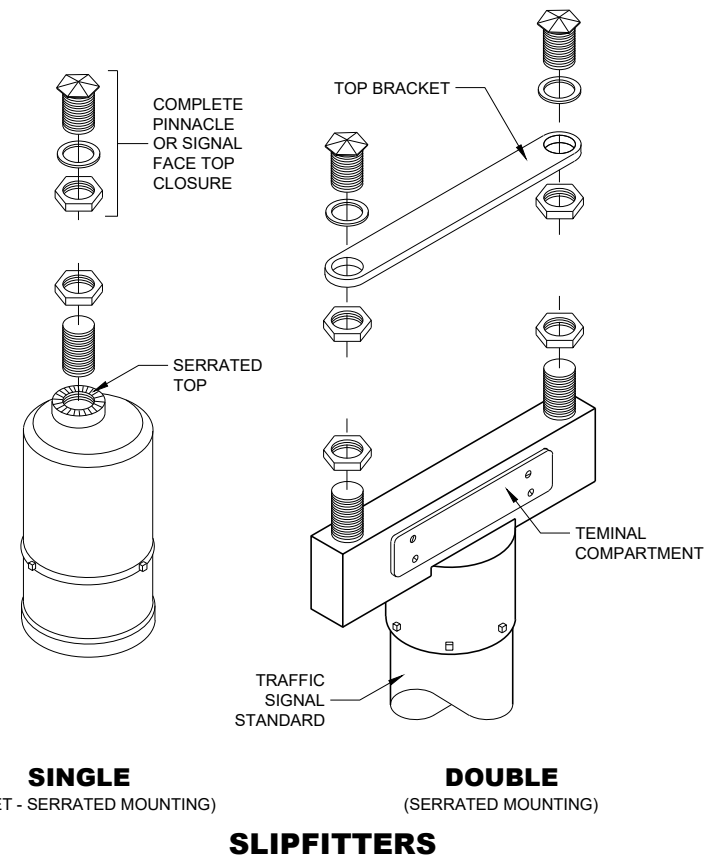
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

① USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.



**SINGLE**  
(OFFSET - SERRATED MOUNTING)

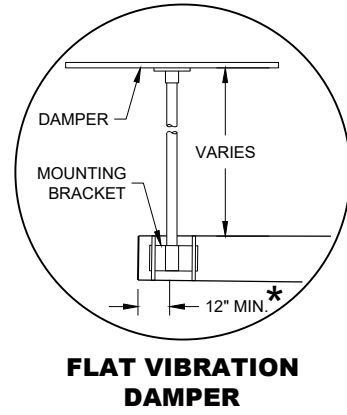
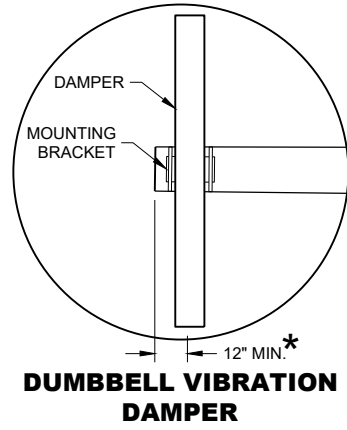
**DOUBLE**  
(SERRATED MOUNTING)

**SLIPFITTERS**

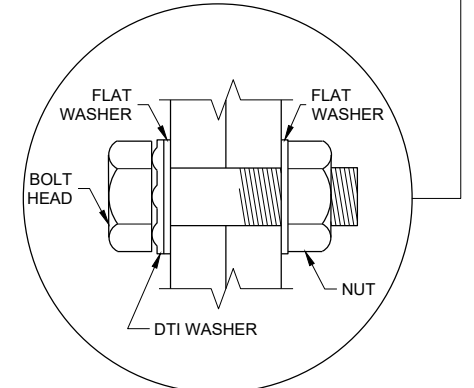
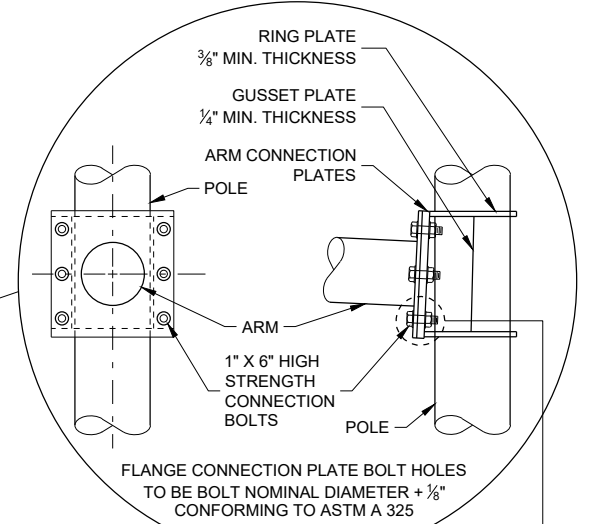
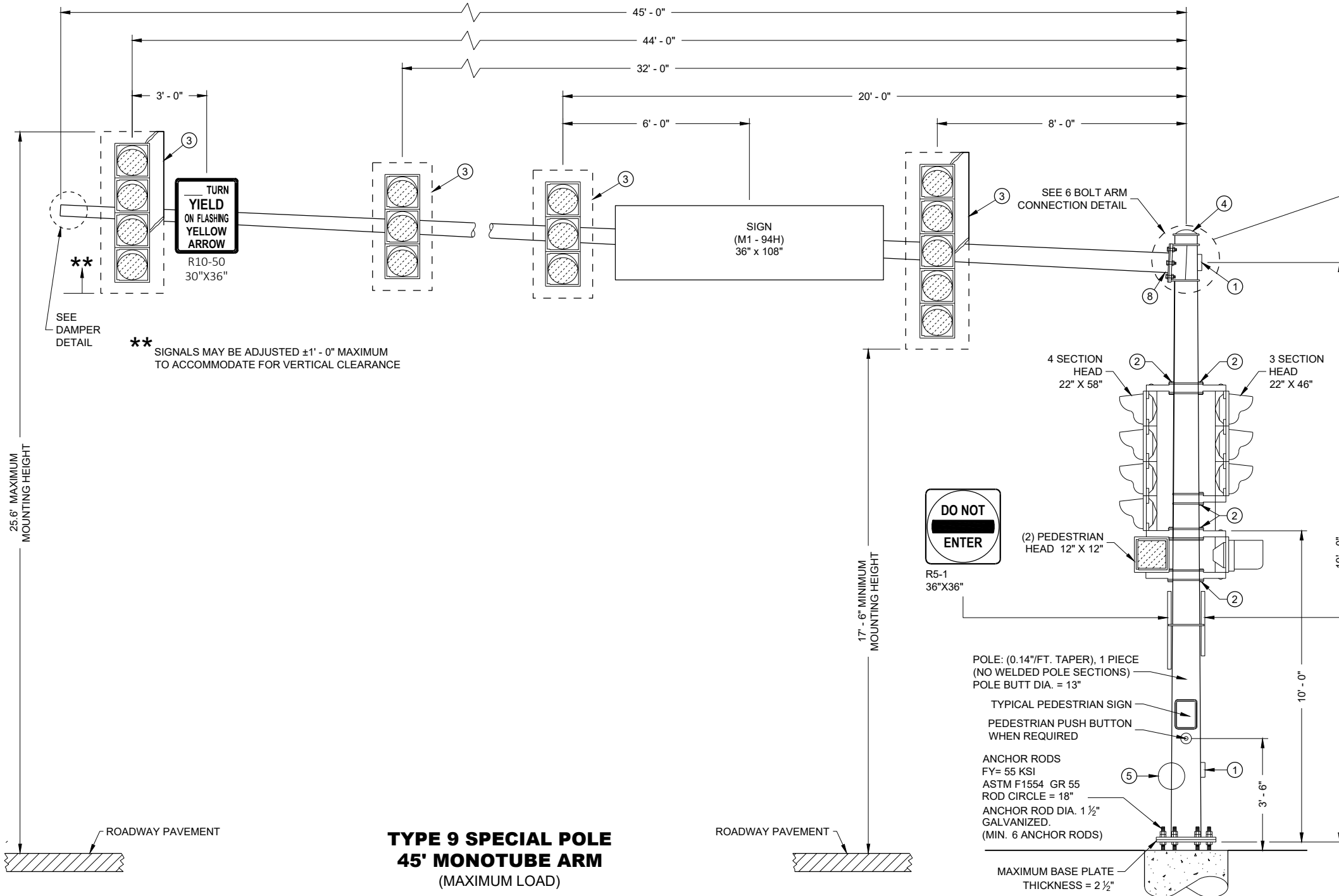
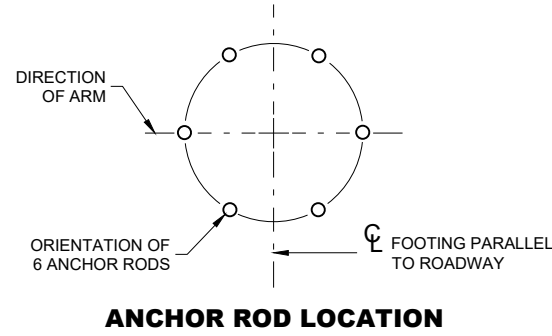
**TRAFFIC SIGNAL STANDARD**  
**PEDESTRIAN AND FLASHER**  
**TYPICAL MOUNTING DETAILS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER  
FHWA



\* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



**TYPE 9 SPECIAL POLE  
45' MONOTUBE ARM  
(MAXIMUM LOAD)**

POLE: (0.14"/FT. TAPER), 1 PIECE (NO WELDED POLE SECTIONS)  
POLE BUTT DIA. = 13"

TYPICAL PEDESTRIAN SIGN  
PEDESTRIAN PUSH BUTTON WHEN REQUIRED

ANCHOR RODS  
FY= 55 KSI  
ASTM F1554 GR 55  
ROD CIRCLE = 18"  
ANCHOR ROD DIA. 1 1/2"  
GALVANIZED.  
(MIN. 6 ANCHOR RODS)

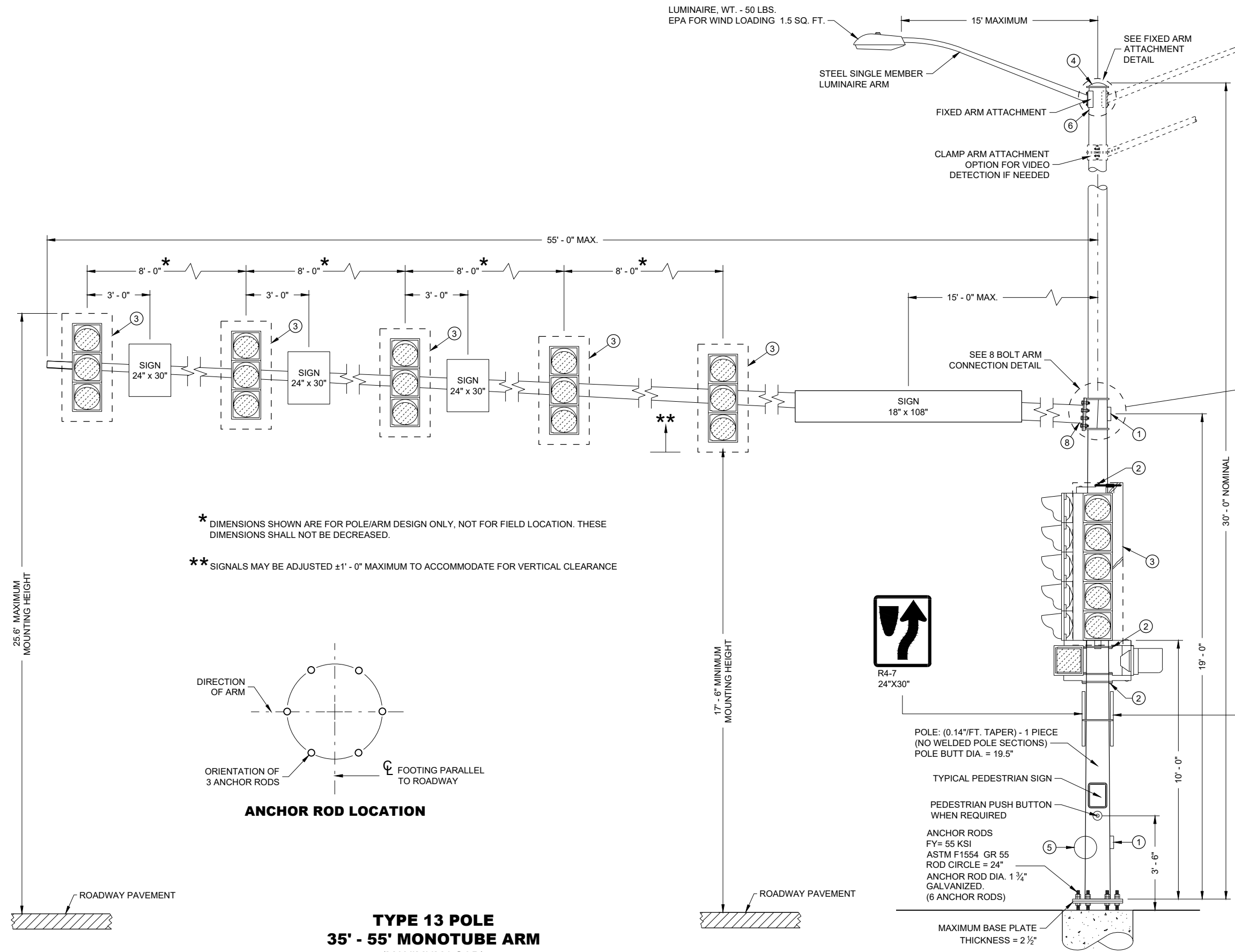
MAXIMUM BASE PLATE THICKNESS = 2 1/2"

<b>TYPE 9 SPECIAL POLE 45' MONOTUBE ARM</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/s/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

SDD 09E08 - 09d

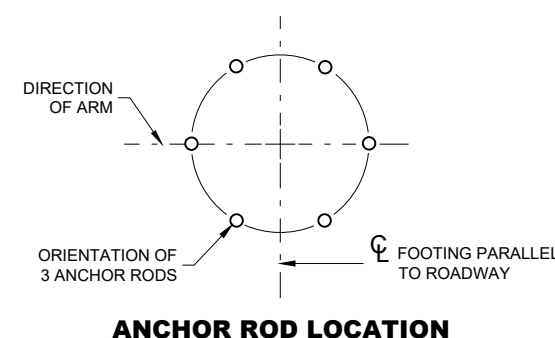
SDD 09E08 - 09d

LUMINAIRE, WT. - 50 LBS.  
EPA FOR WIND LOADING 1.5 SQ. FT.

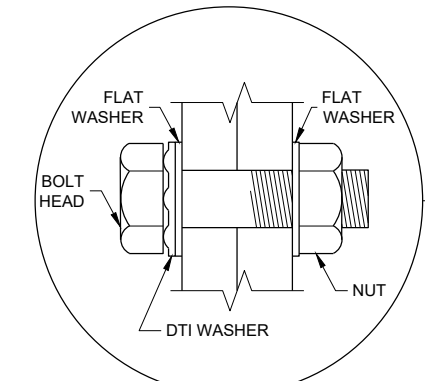
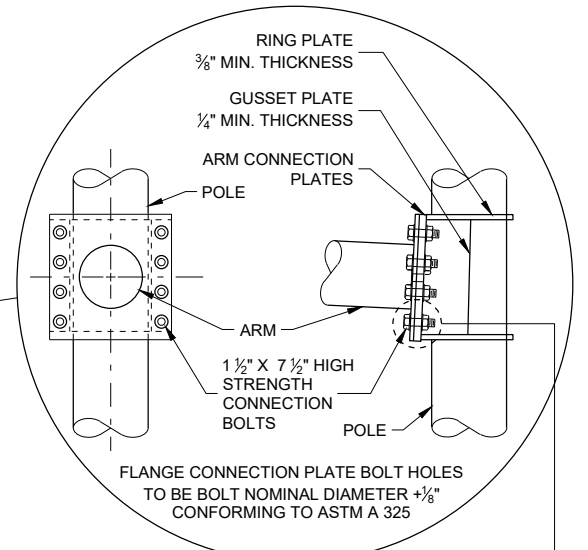
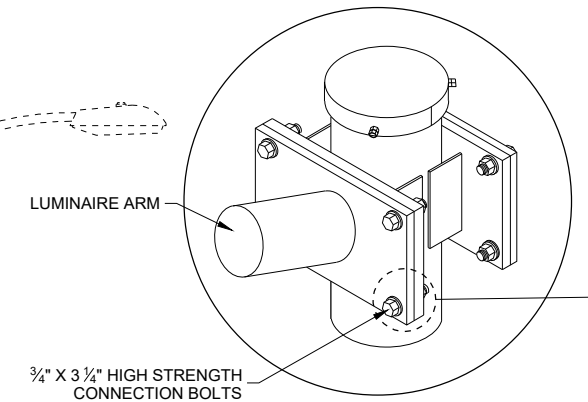


\* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

\*\* SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



**TYPE 13 POLE  
35' - 55' MONOTUBE ARM  
(MAXIMUM LOAD)**



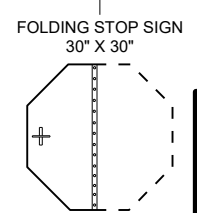
POLE: (0.14"/FT. TAPER) - 1 PIECE  
(NO WELDED POLE SECTIONS)  
POLE BUTT DIA. = 19.5"

TYPICAL PEDESTRIAN SIGN

PEDESTRIAN PUSH BUTTON  
WHEN REQUIRED

ANCHOR RODS  
FY= 55 KSI  
ASTM F1554 GR 55  
ROD CIRCLE = 24"  
ANCHOR ROD DIA. 1 3/4"  
GALVANIZED.  
(6 ANCHOR RODS)

MAXIMUM BASE PLATE  
THICKNESS = 2 1/2"



<b>TYPE 13 POLE 35' - 55' MONOTUBE ARM</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

## GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH 3/4" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL 1/2" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

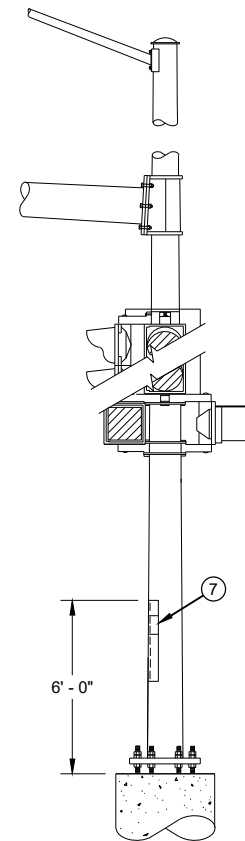
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- ① DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- ② SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).
- ③ SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- ④ THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- ⑤ FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥ FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

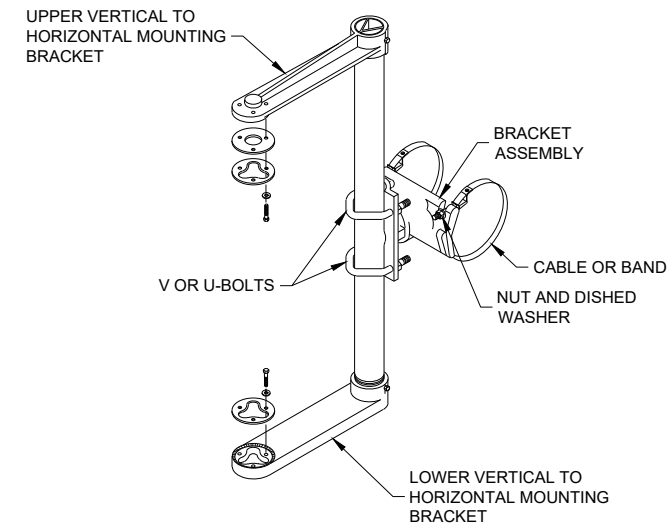
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

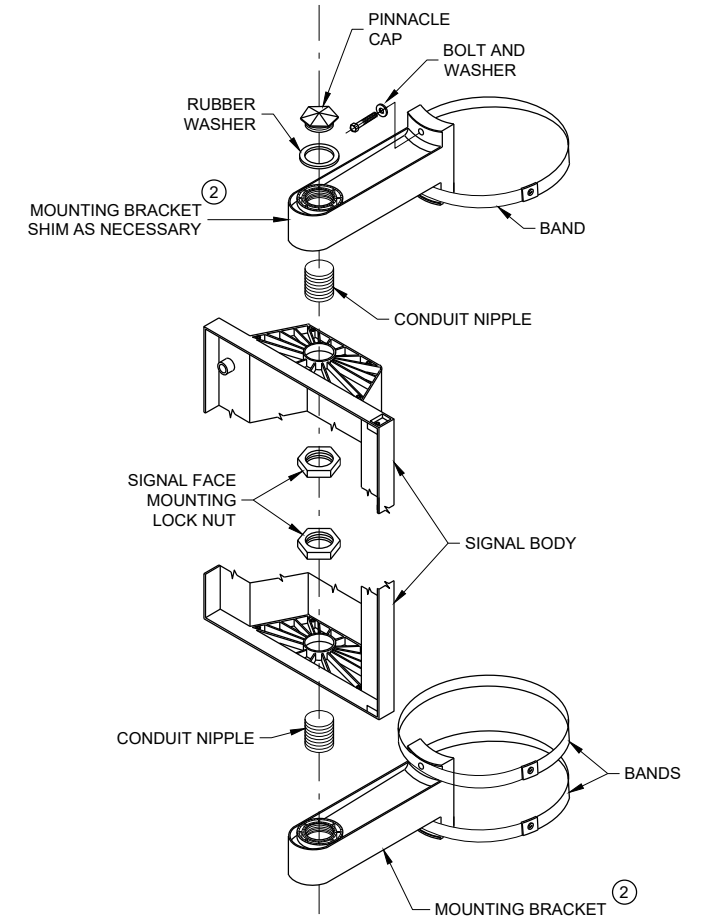
- ⑧ FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



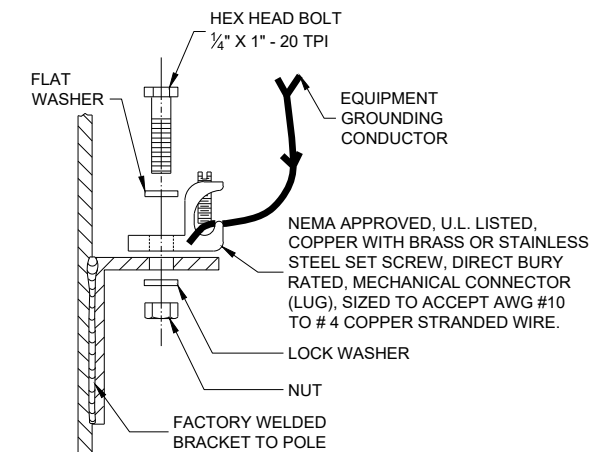
**STRUCTURAL IDENTIFICATION  
PLAQUE PLACEMENT**



**SIGNAL FACE MOUNTING BRACKET  
DETAIL FOR MONOTUBE ARM**  
(MOUNT PER MANUFACTURER'S RECOMMENDATION)

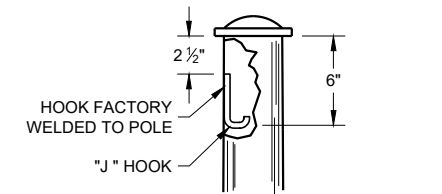


**SIGNAL FACE VERTICAL  
MOUNTING DETAIL**



**TYPICAL GROUNDING  
CONNECTIONS**

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



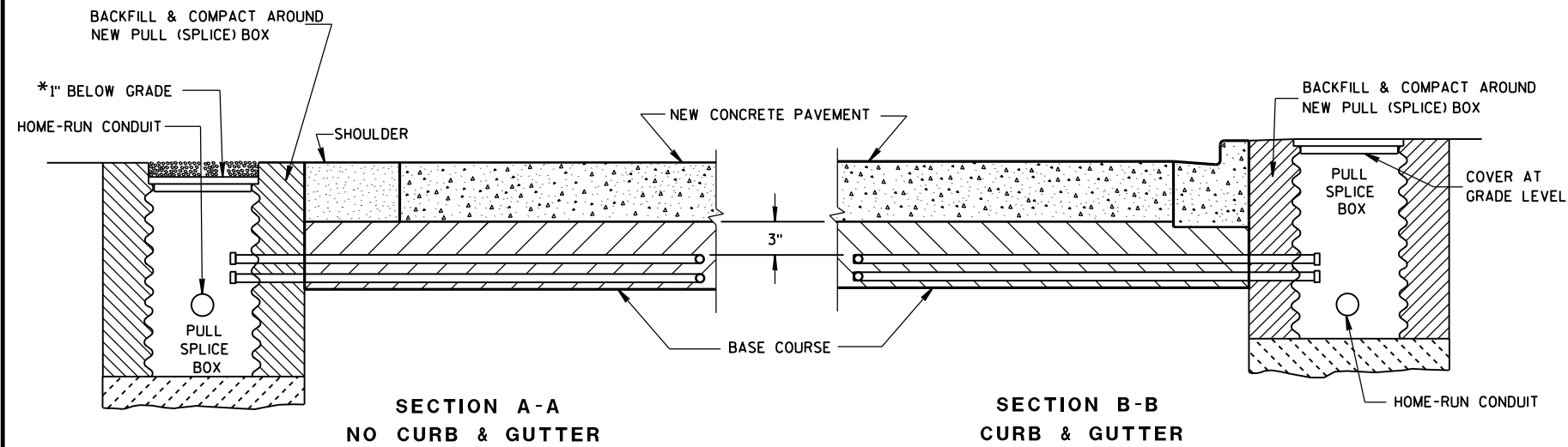
**TYPICAL "J" HOOK  
WIRE SUPPORT**

**GENERAL NOTES AND  
HARDWARE FOR TYPES 9,10,  
9/10 SPECIAL, 12 AND 13  
POLES WITH MONOTUBE ARMS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2020 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL  
ENGINEER

FHWA



\*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

**LOOP DETECTOR INSTALLATION DETAIL**

**GENERAL NOTES**

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

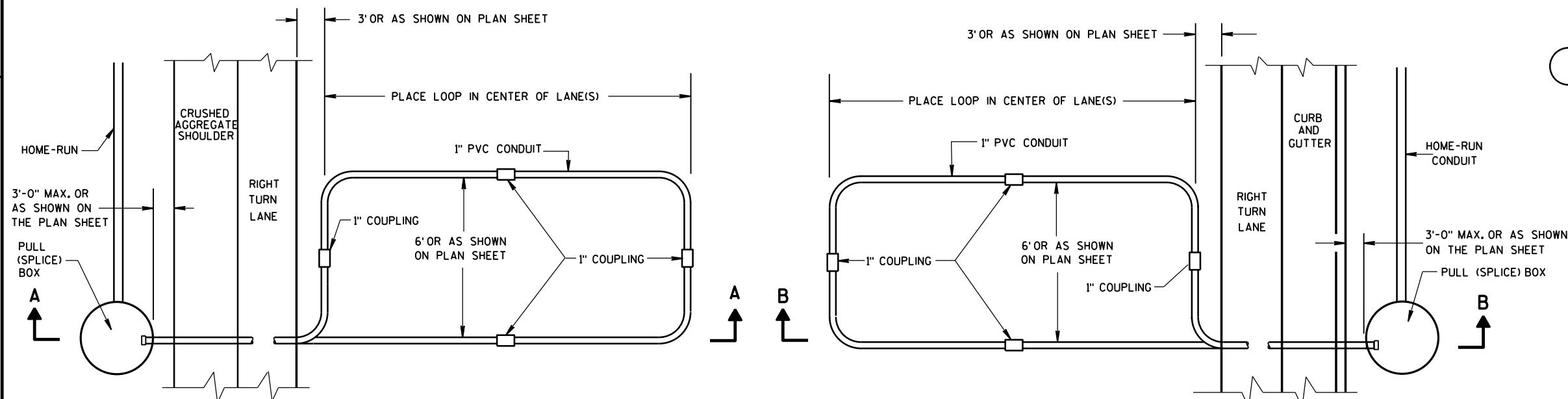
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

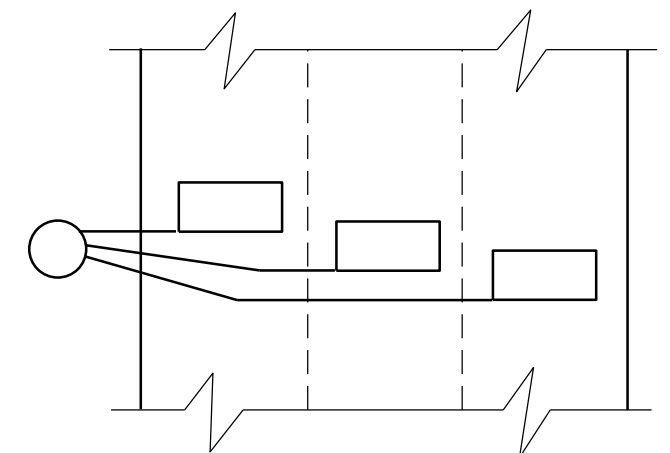
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

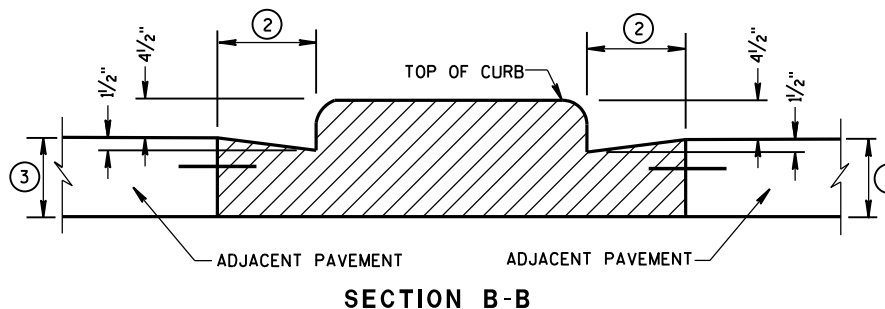
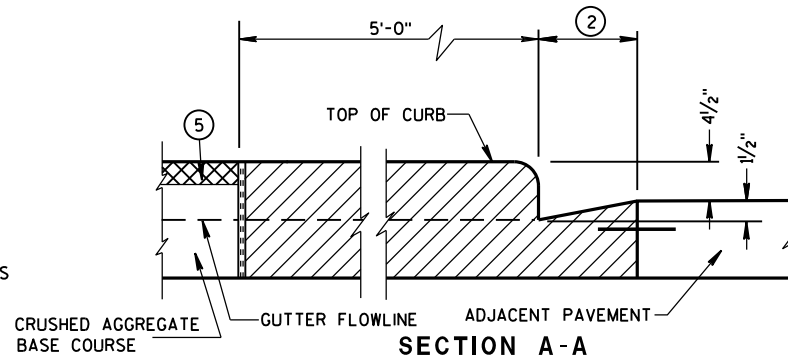
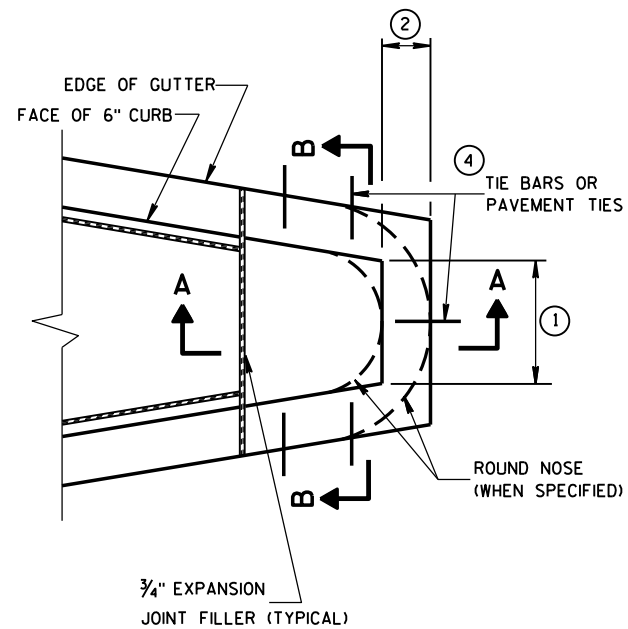
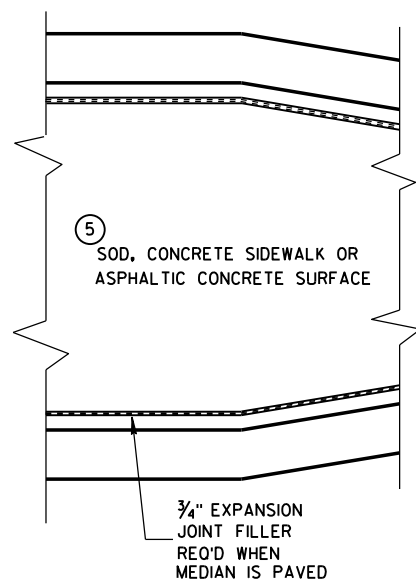


**TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX**

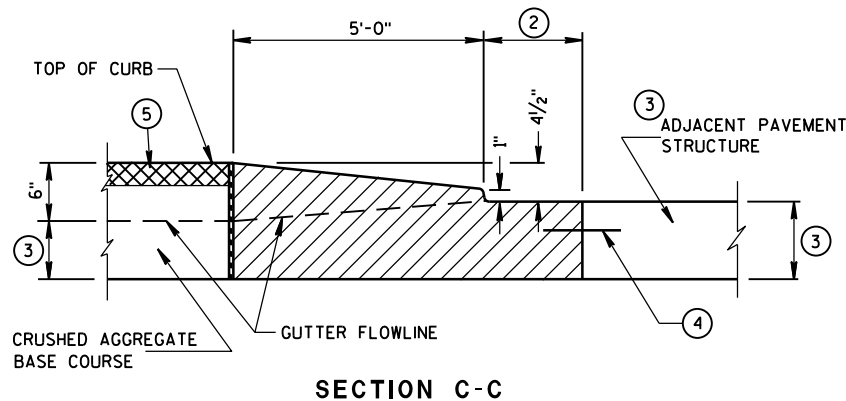
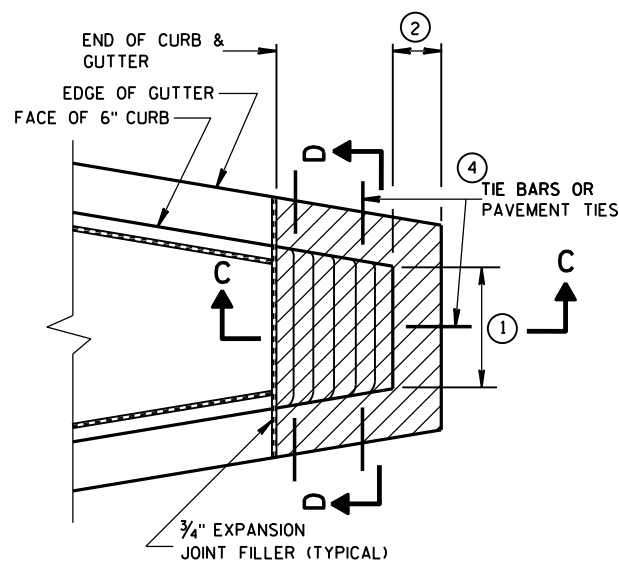
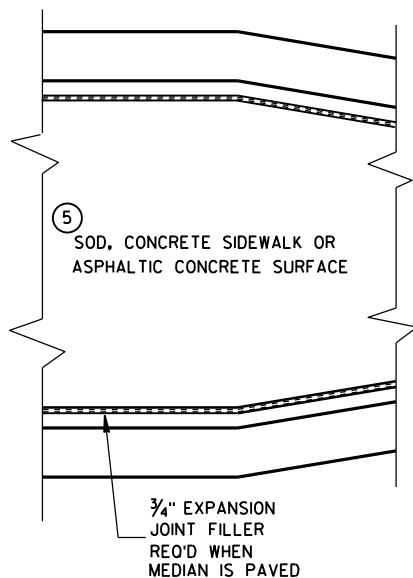


**MULTI-LANE INSTALLATION**

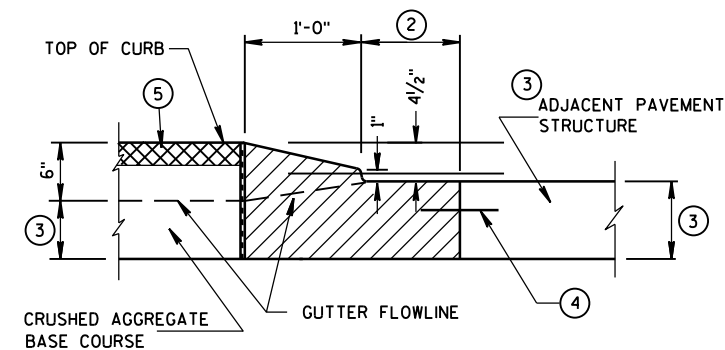
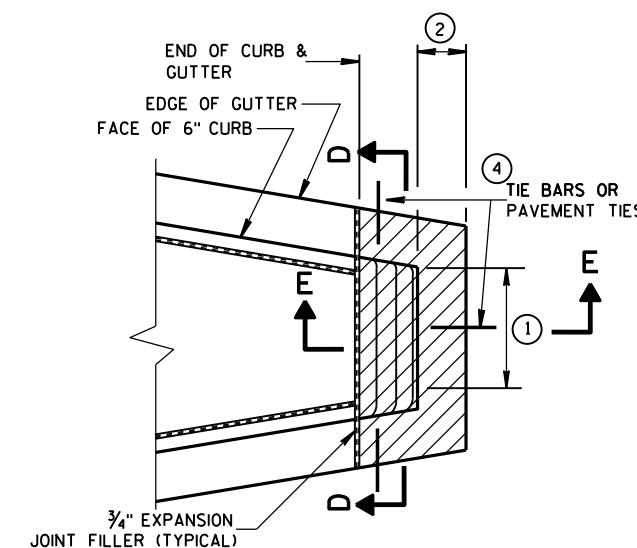
<b>LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE: <u>Sept. 2014</u>	/S/ <u>Ahmet Demirelek</u> STATE ELECTRICAL ENGINEER
FHWA	



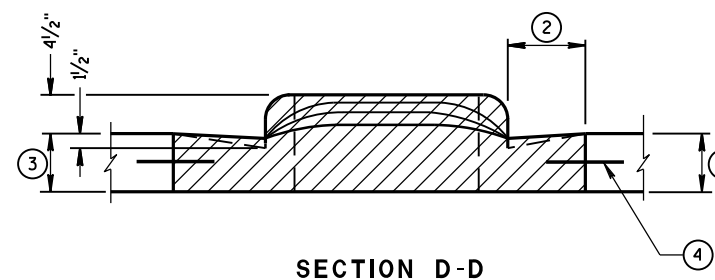
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



SECTION D-D

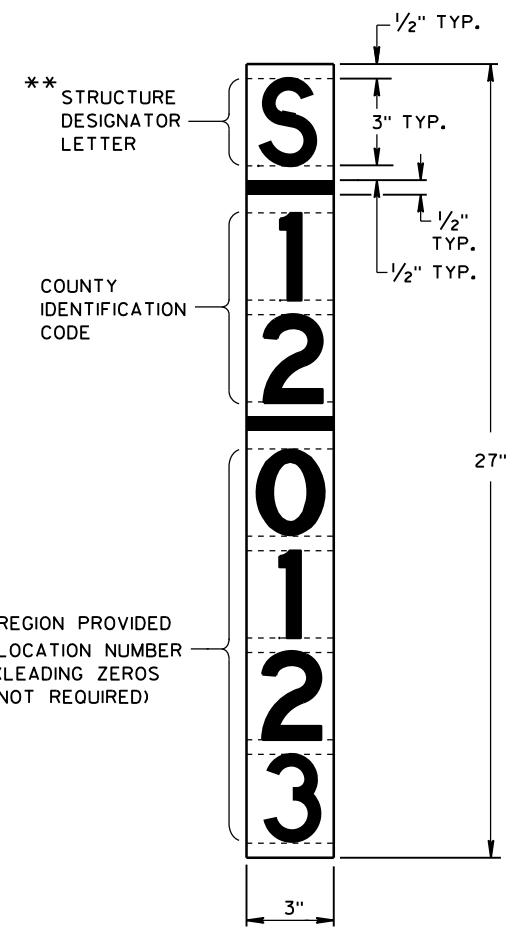
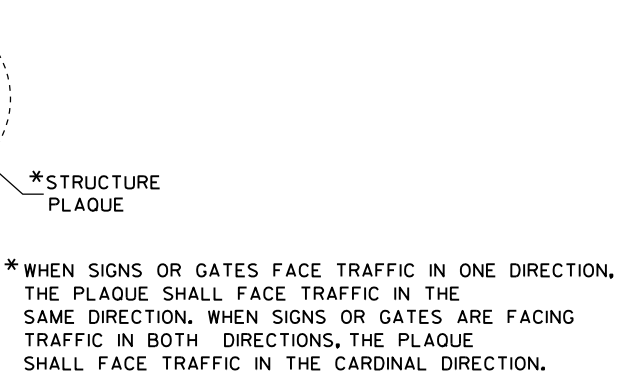
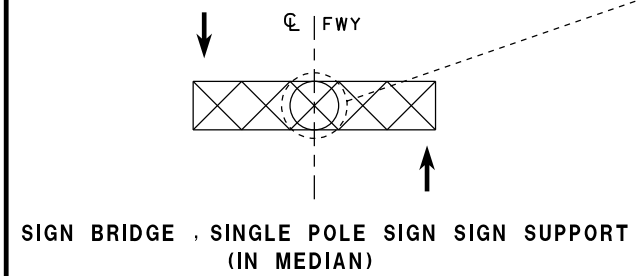
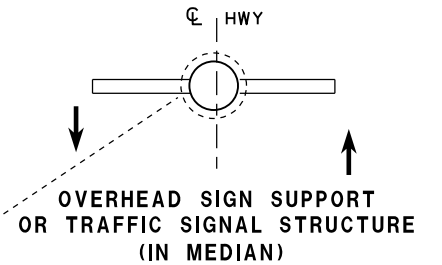
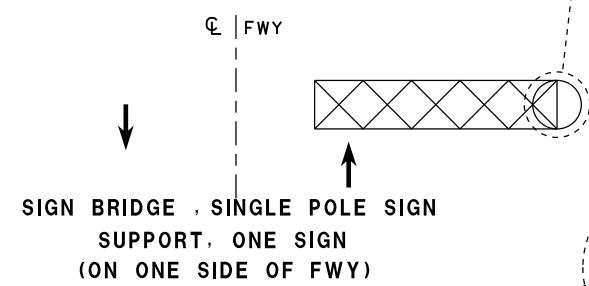
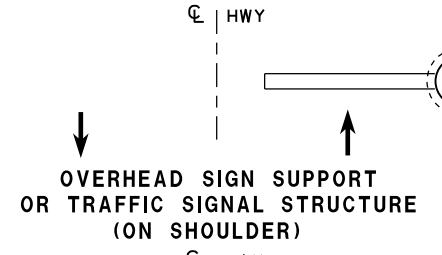
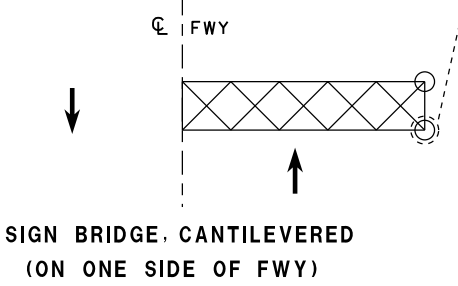
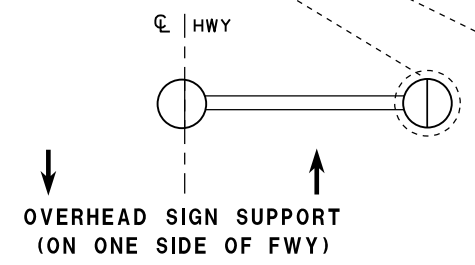
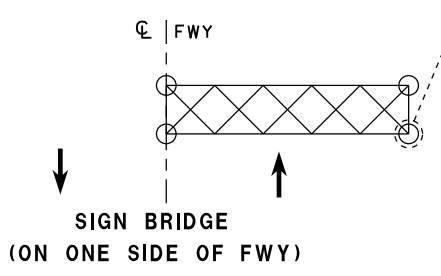
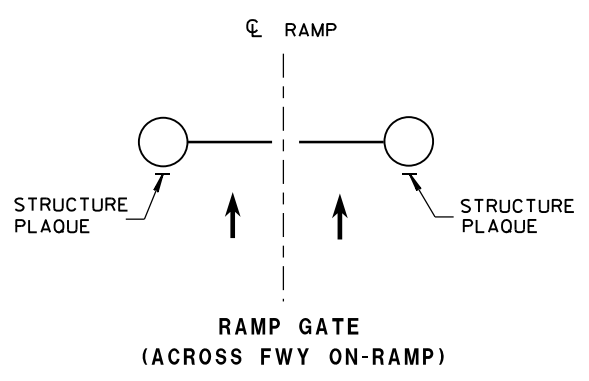
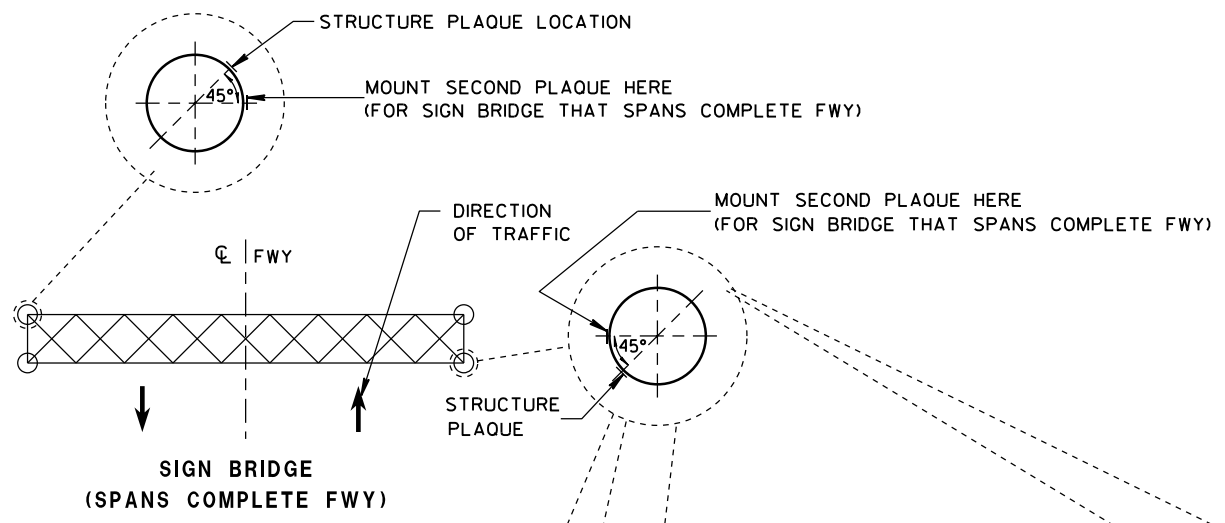
**GENERAL NOTES**

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

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
  - (1) NEW OR EXISTING CONCRETE PAVEMENT.
  - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
  - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.
- PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

<b>CONCRETE MEDIAN NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	





**GENERAL NOTES**

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

- GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS
- A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS
- ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

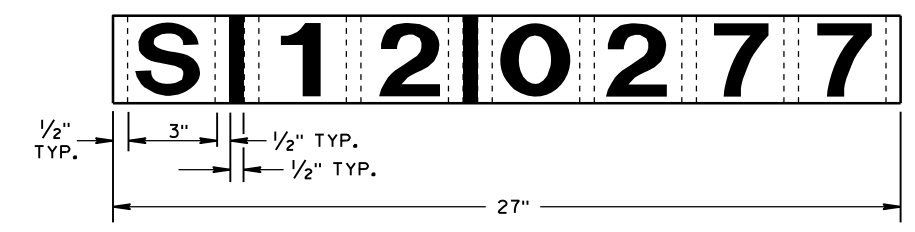
MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

**PLAQUE MATERIALS:**

- BASE - SHEET ALUMINUM, 0.060" THICK.
- FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE
- LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE
- CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



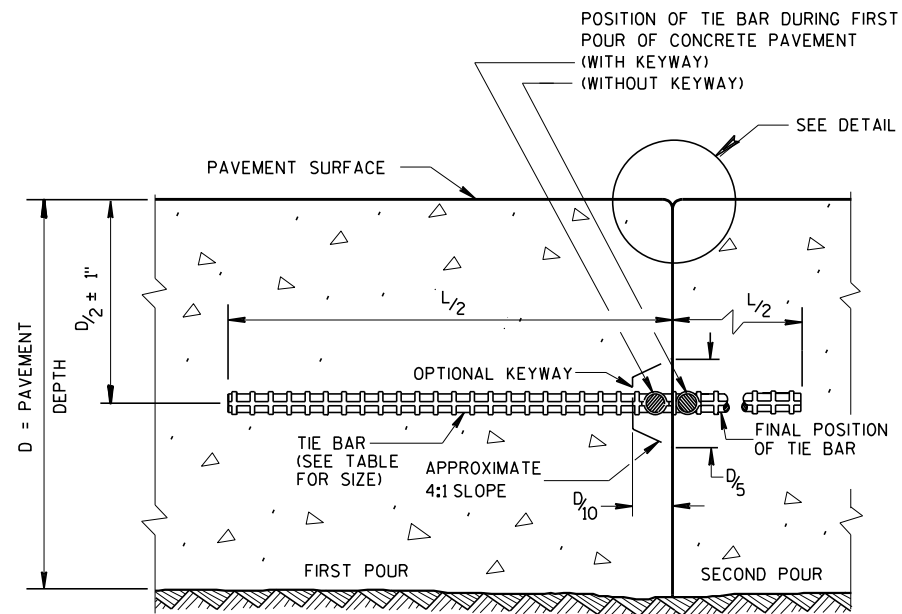
**IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED**

\*\* LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

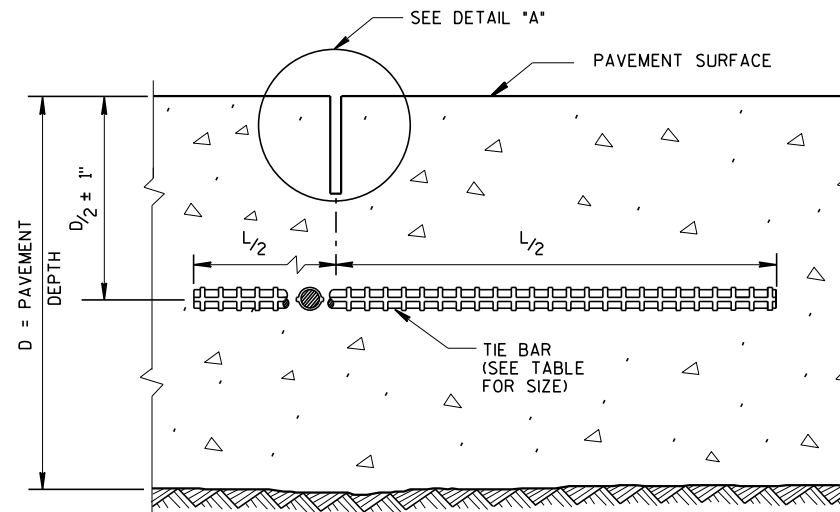
**LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES**

**RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED**

<b>STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, &amp; TRAFFIC SIGNALS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/4/2012 DATE	/s/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



**CONSTRUCTION JOINT**



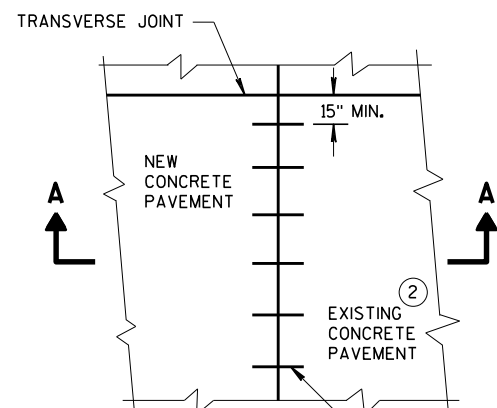
**SAWED JOINT**

**GENERAL NOTES**

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

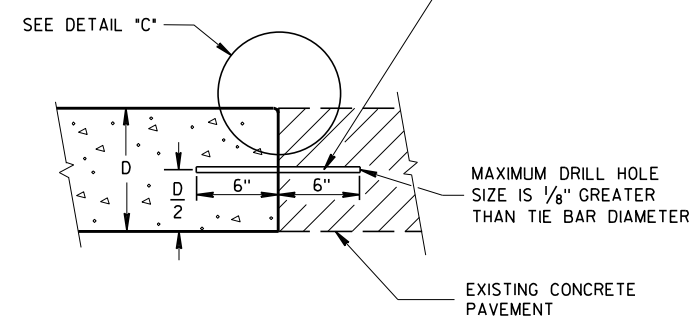
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

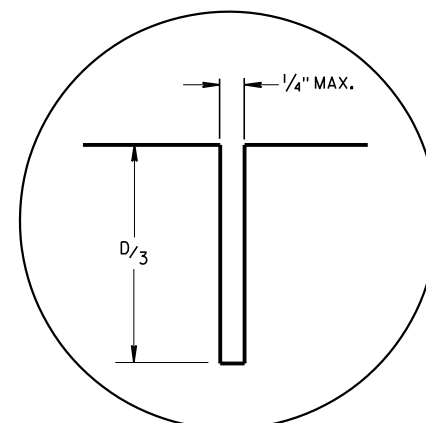


**PLAN VIEW**

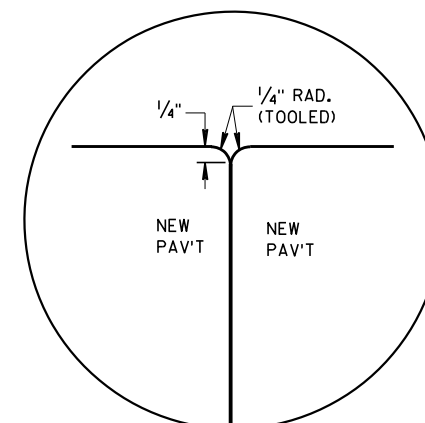
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



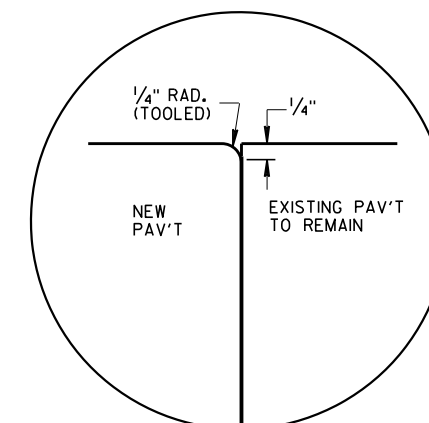
**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**



**DETAIL "A"**



**DETAIL "B"**



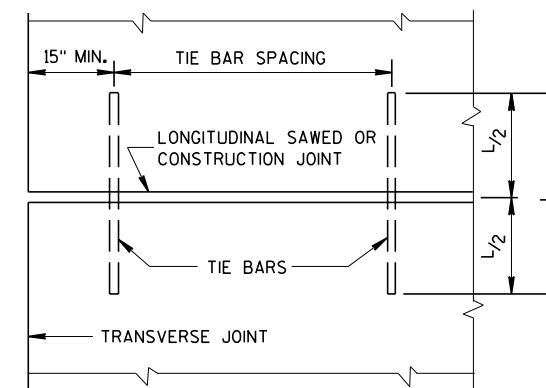
**DETAIL "C"**

**TIE BAR TABLE**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

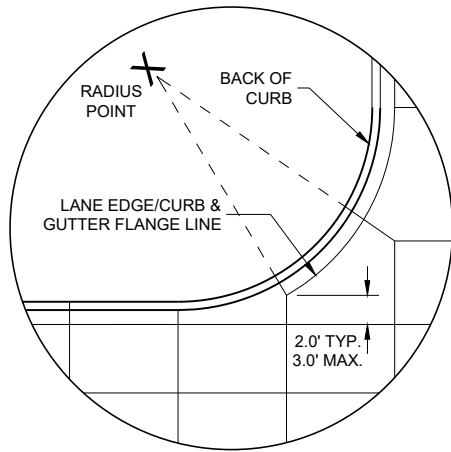


**PLAN VIEW  
SHOWING LOCATION OF TIE BARS**

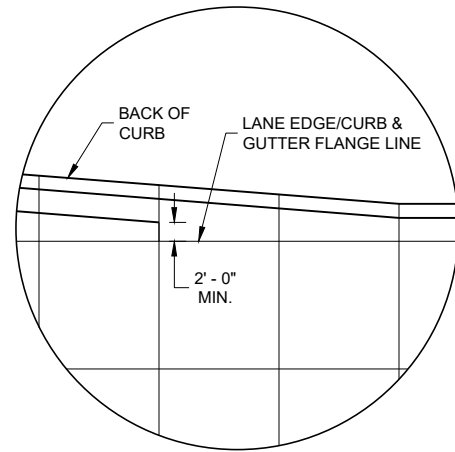
**CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

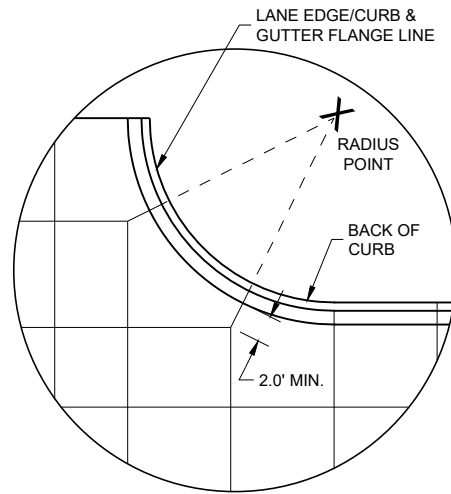
APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR  
FHWA



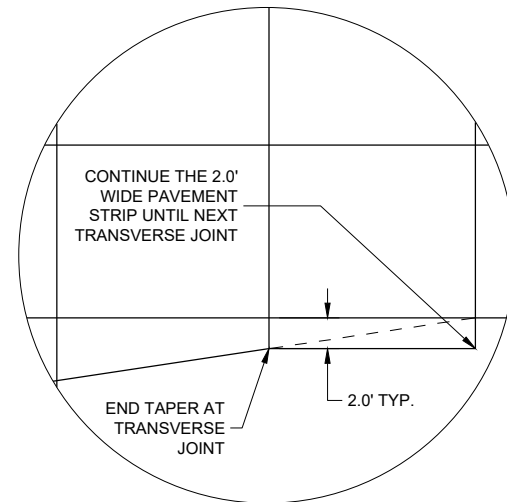
DETAIL "A"



DETAIL "B"



DETAIL "C"

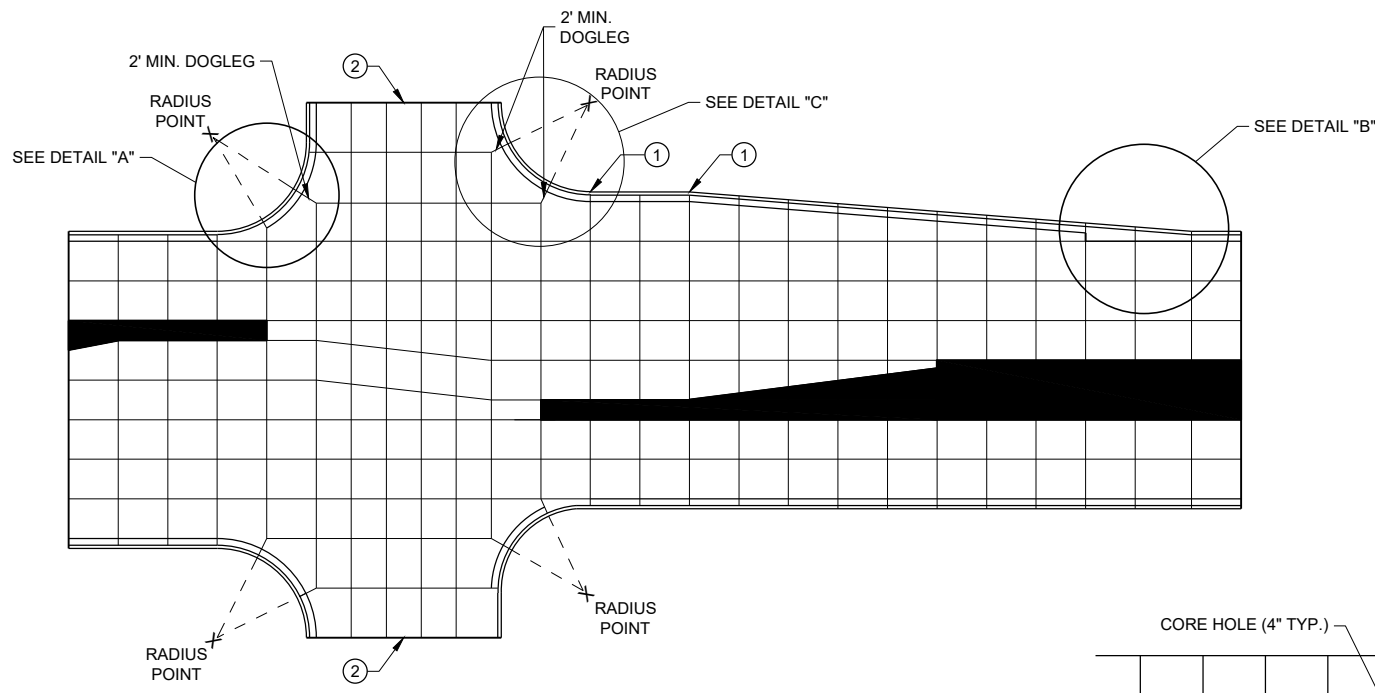


DETAIL "D"

**GENERAL NOTES**

- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

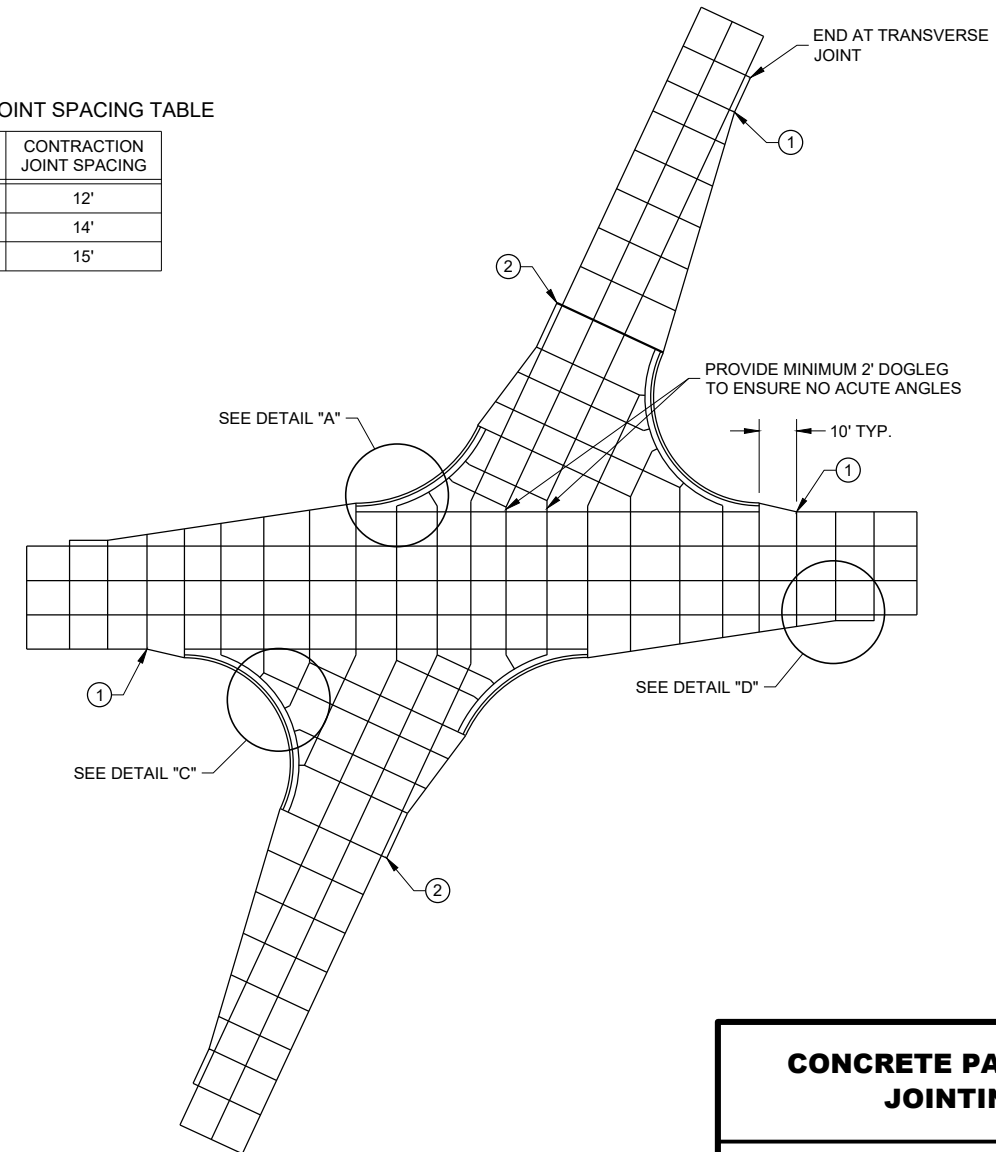
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



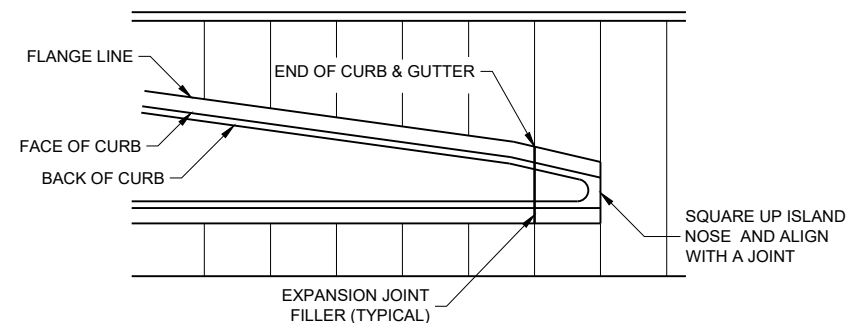
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

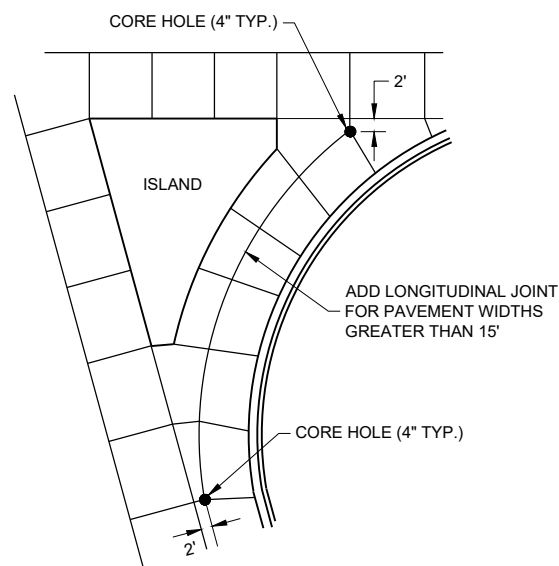
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



SKewed INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

**CONCRETE PAVEMENT JOINTING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

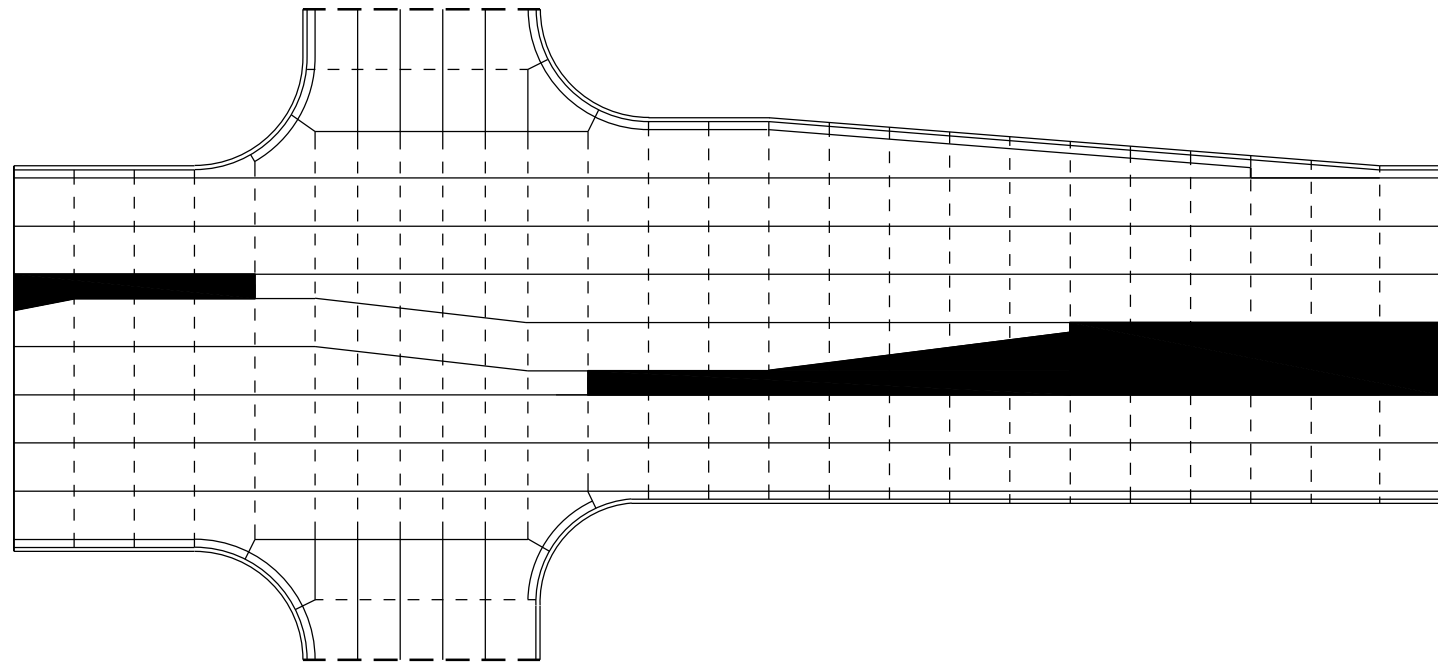
**LEGEND**

- - - - - POTENTIAL DOWELED EXPANSION JOINT
- - - - - DOWELED JOINT
- TIED JOINT

**GENERAL NOTES**

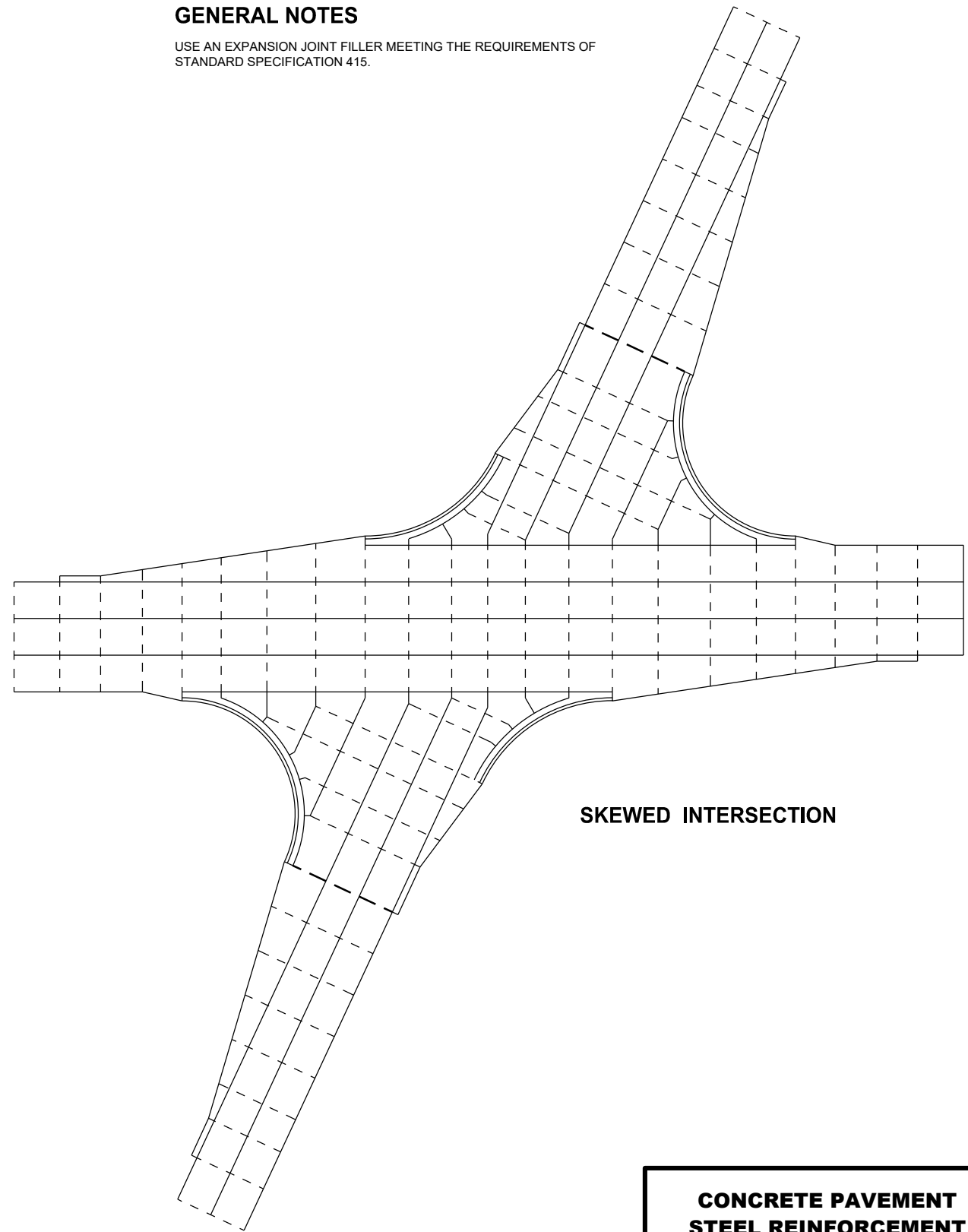
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

6



**STANDARD INTERSECTION**

6



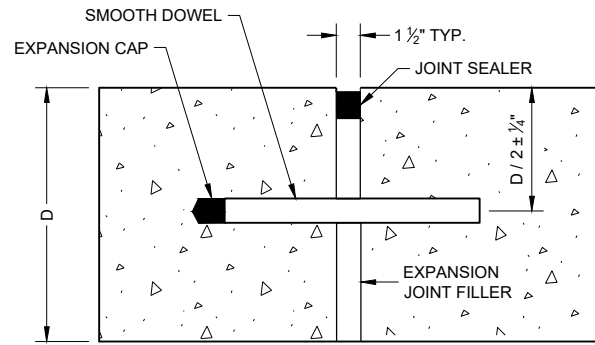
**SKewed INTERSECTION**

**SDD 13C18 - 07b**

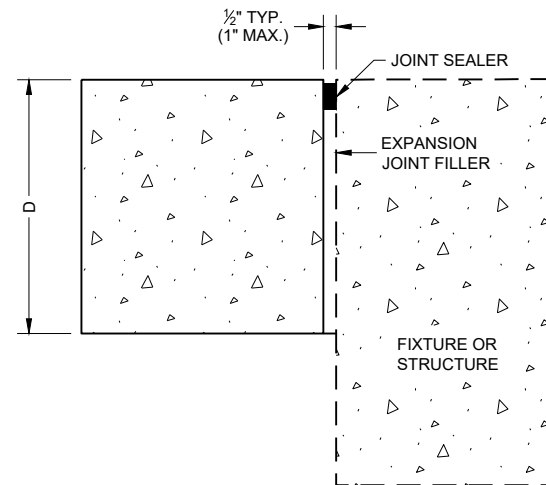
**SDD 13C18 - 07b**

**CONCRETE PAVEMENT  
STEEL REINFORCEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**DOWELED TRANSVERSE** ①



**UNTIED - LONGITUDINAL**

**EXPANSION JOINTS**

**TIE BAR TABLE**

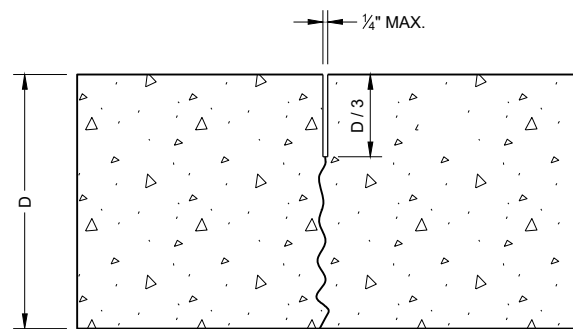
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

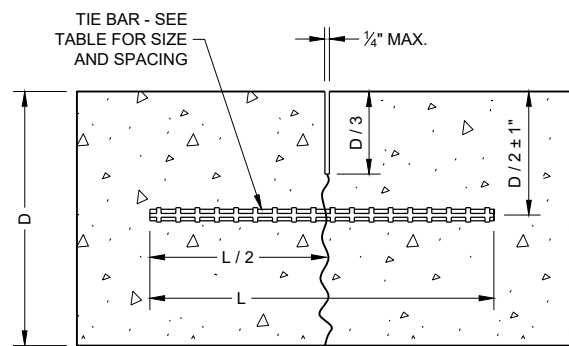
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

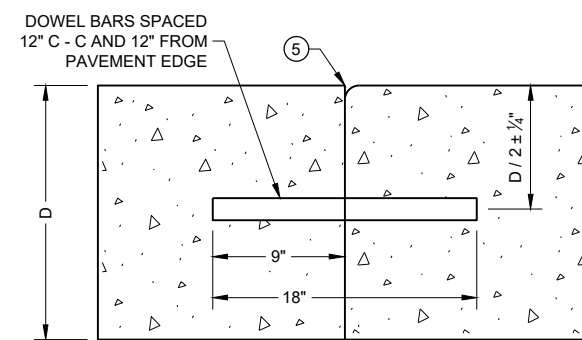
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
- ④ CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
- ⑤ IF JOINT IS FORMED, PROVIDE A 1/4" RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



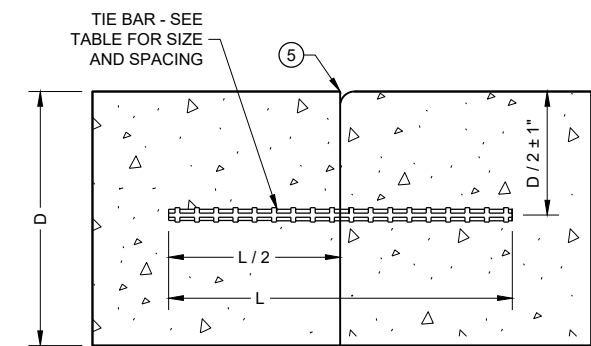
**UNDOWELED TRANSVERSE**



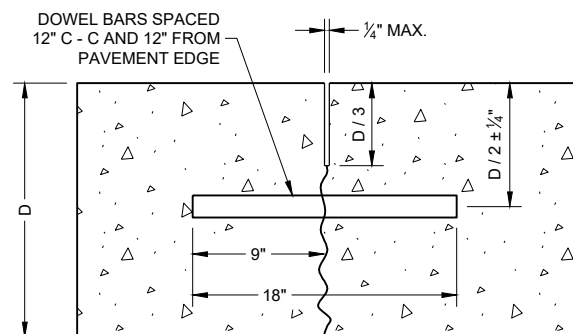
**TIED LONGITUDINAL**



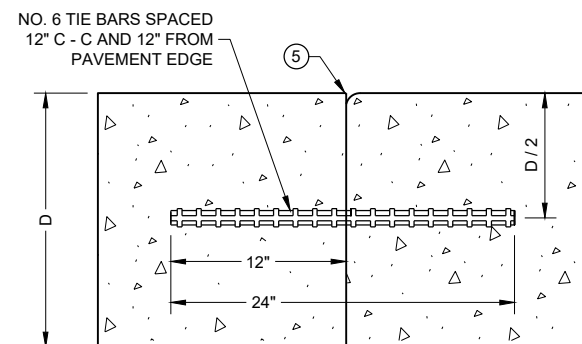
**DOWELED TRANSVERSE** ③



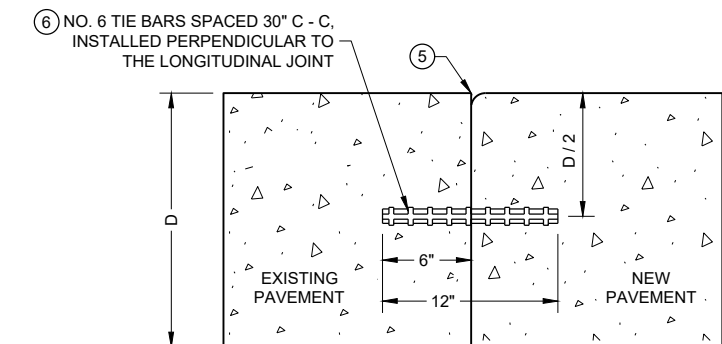
**TIED LONGITUDINAL**



**DOWELED TRANSVERSE**



**TIED TRANSVERSE** ③  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



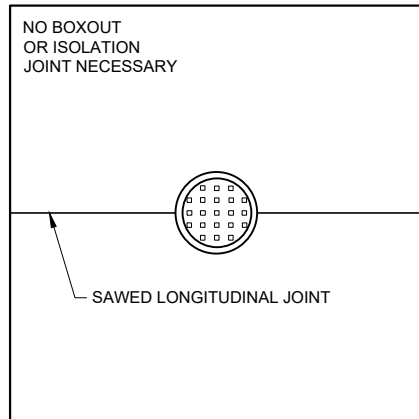
**TIED LONGITUDINAL TO EXISTING**

**CONTRACTION JOINTS** ②

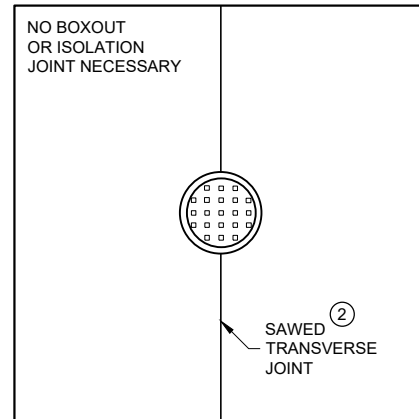
**CONSTRUCTION JOINTS** ④

**CONCRETE PAVEMENT JOINT TYPES**

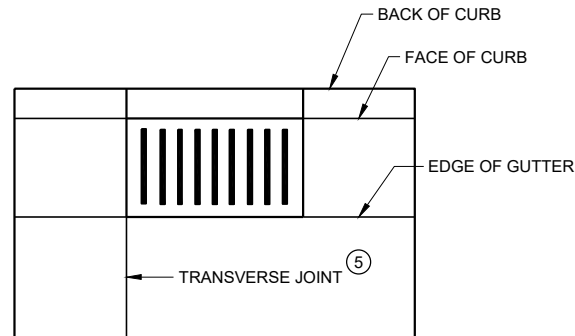
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



MANHOLE WITH LONGITUDINAL JOINT



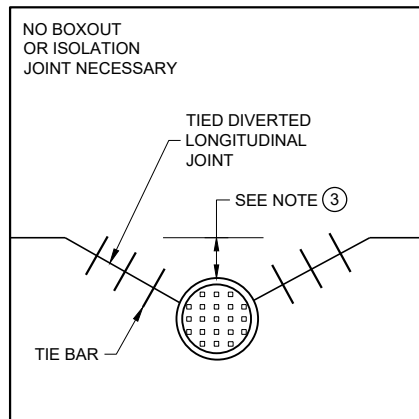
MANHOLE WITH TRANSVERSE JOINT



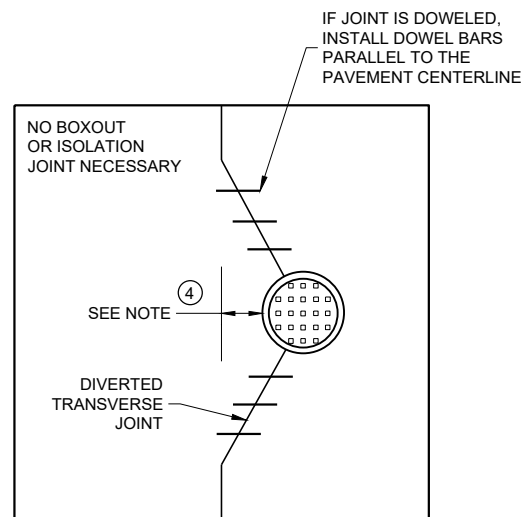
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

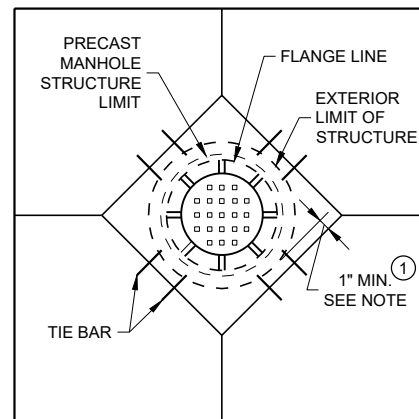
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT

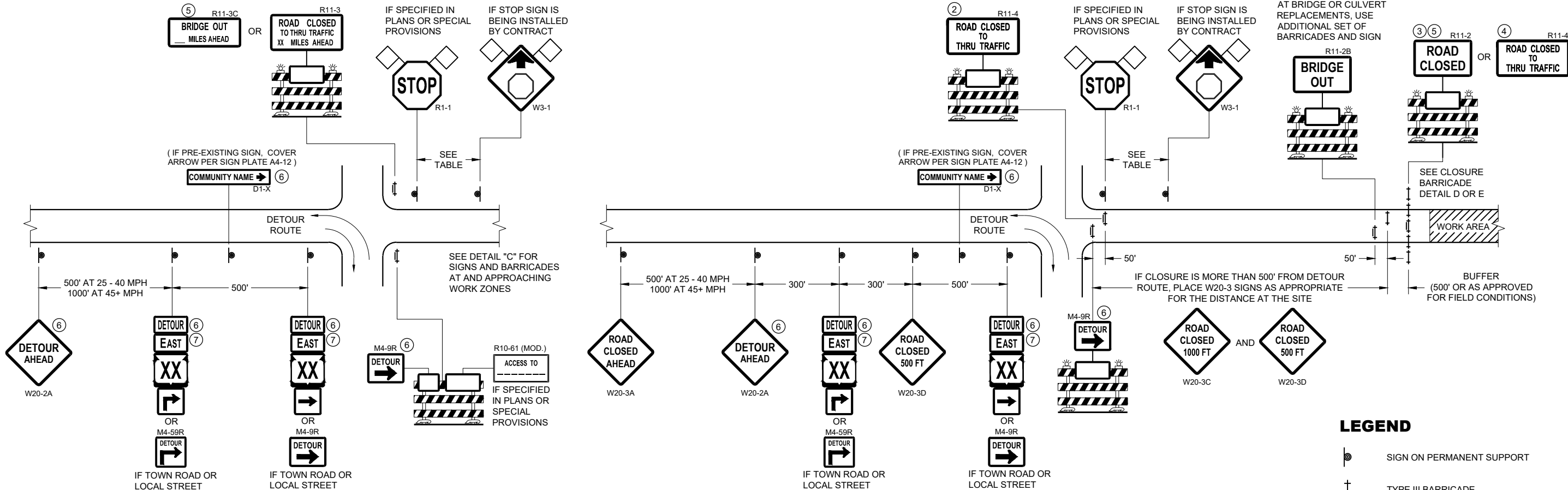


MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

<b>CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2018 DATE	/S/ Peter Kemp P.E. PAVEMENT SUPERVISOR
<small>FHWA</small>	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

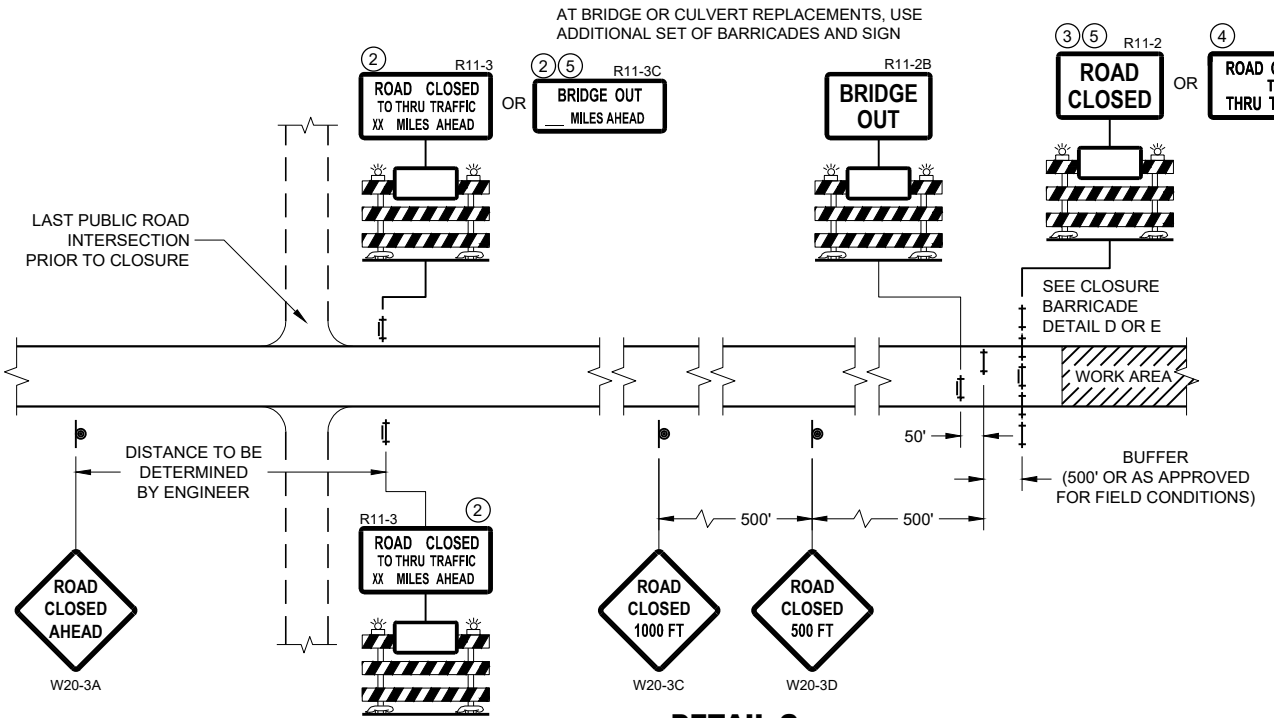
**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**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)
- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- M05 - 1 OR M06 - 1

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



**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

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

**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER

FHWA

**GENERAL NOTES**

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

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




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

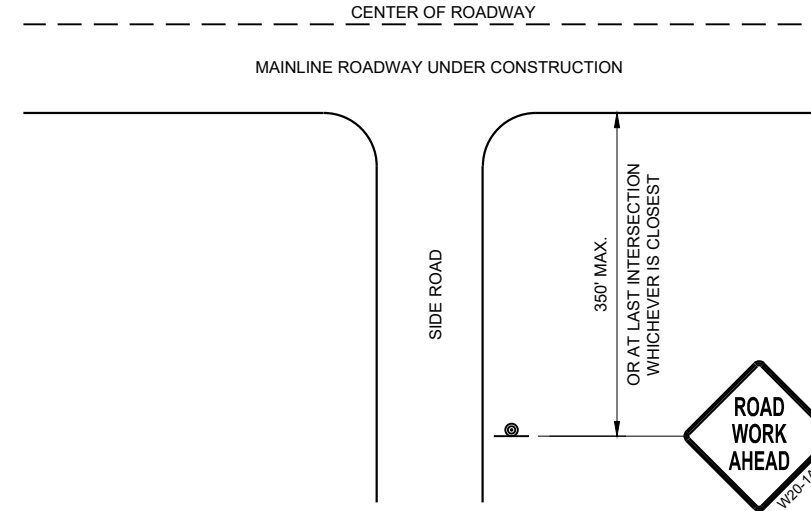
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

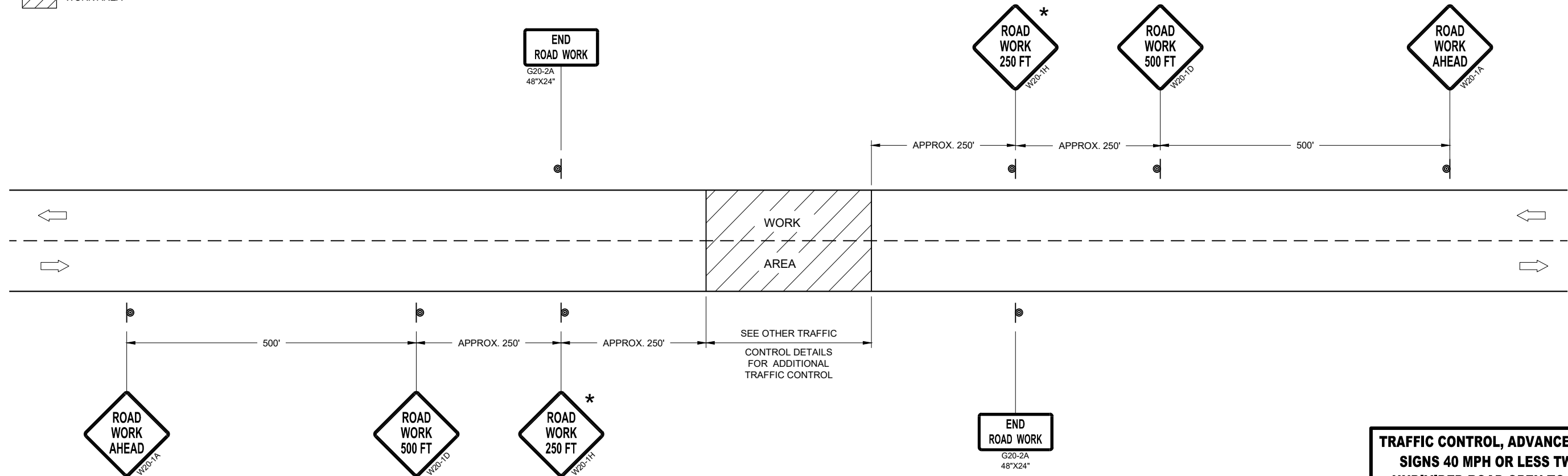
\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

**LEGEND**

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



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS**

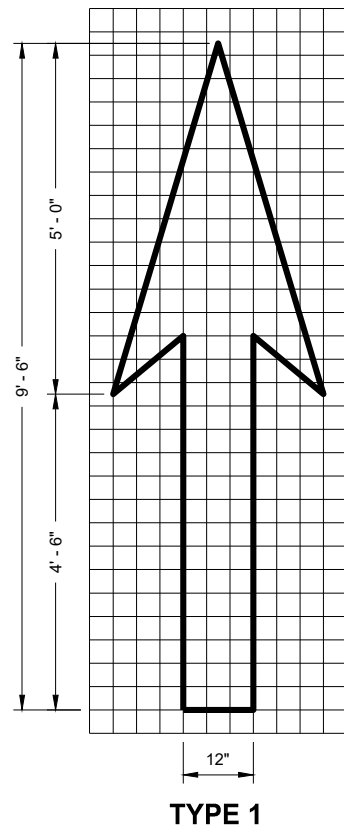
**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 40 MPH OR LESS TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

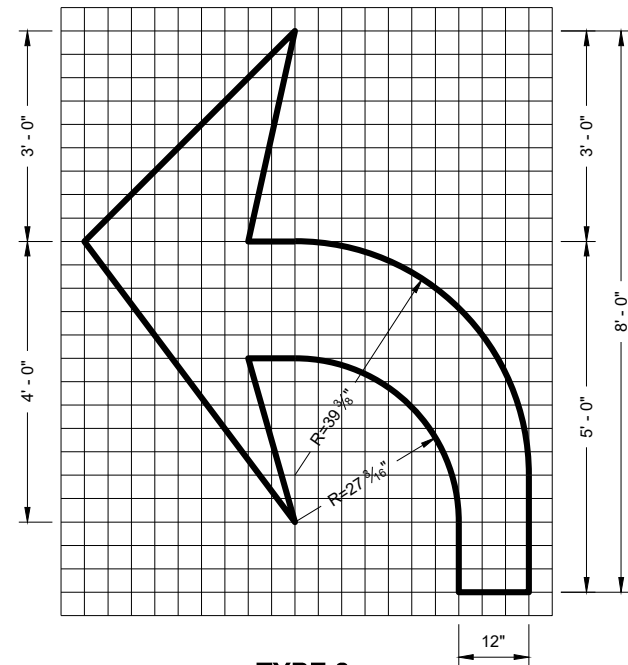
APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

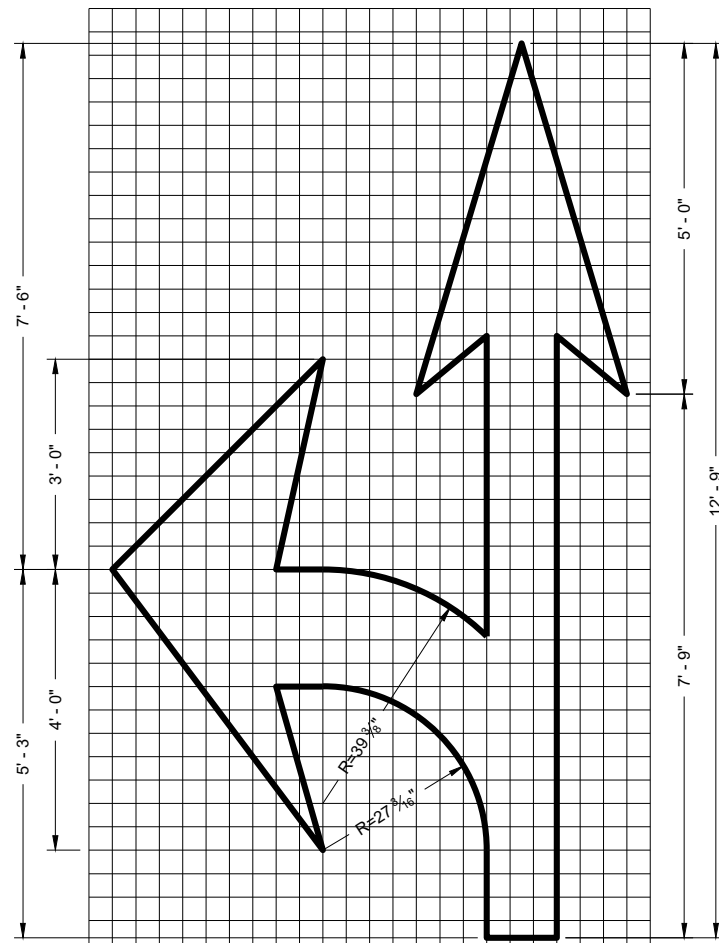




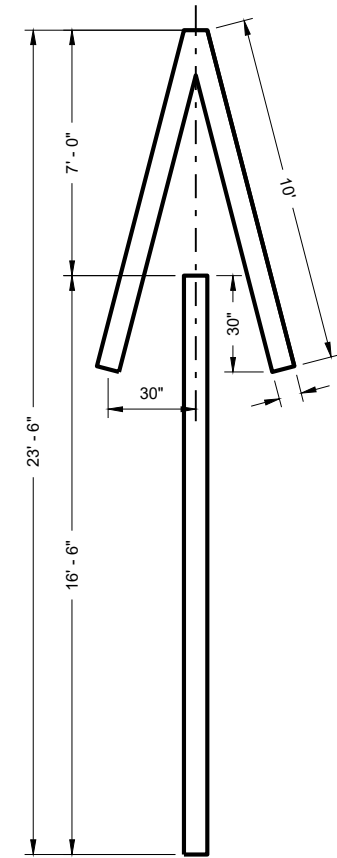
TYPE 1



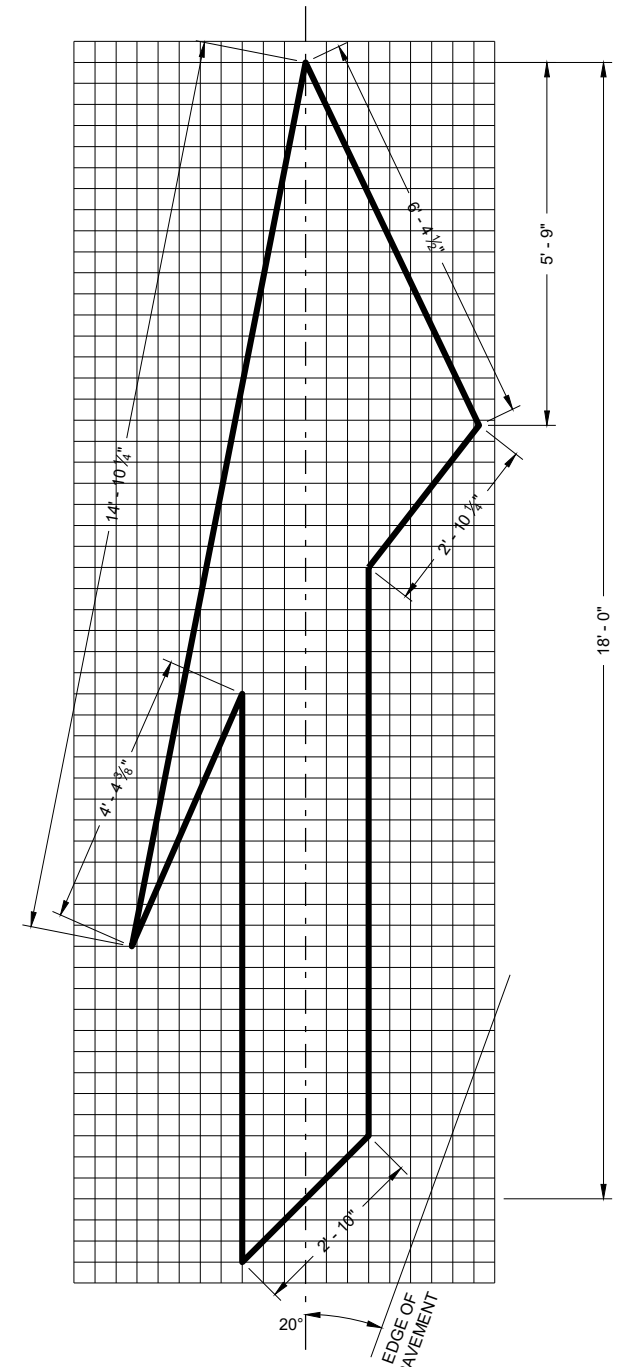
TYPE 2



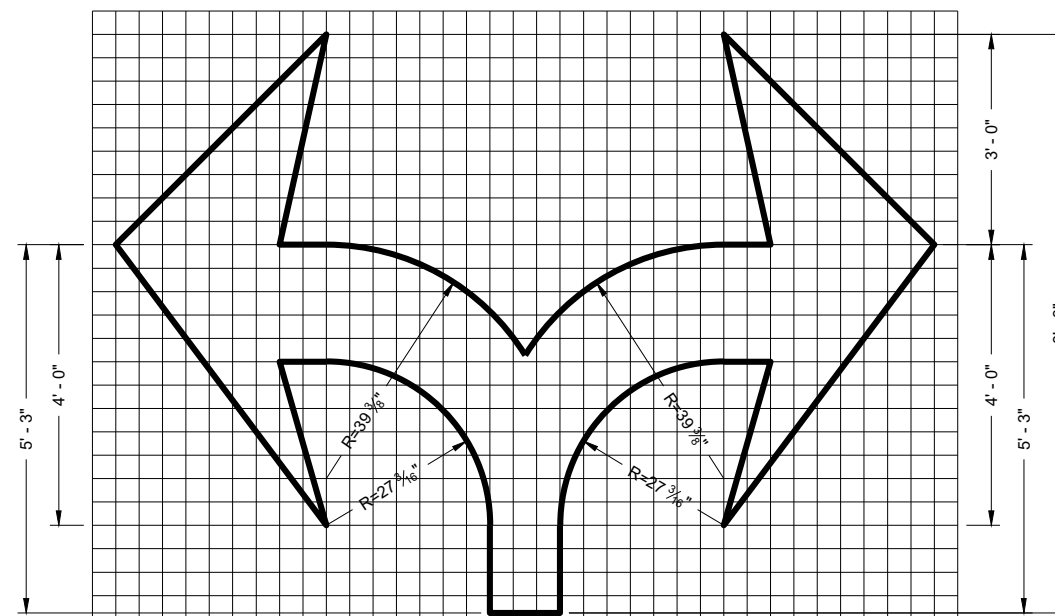
TYPE 3



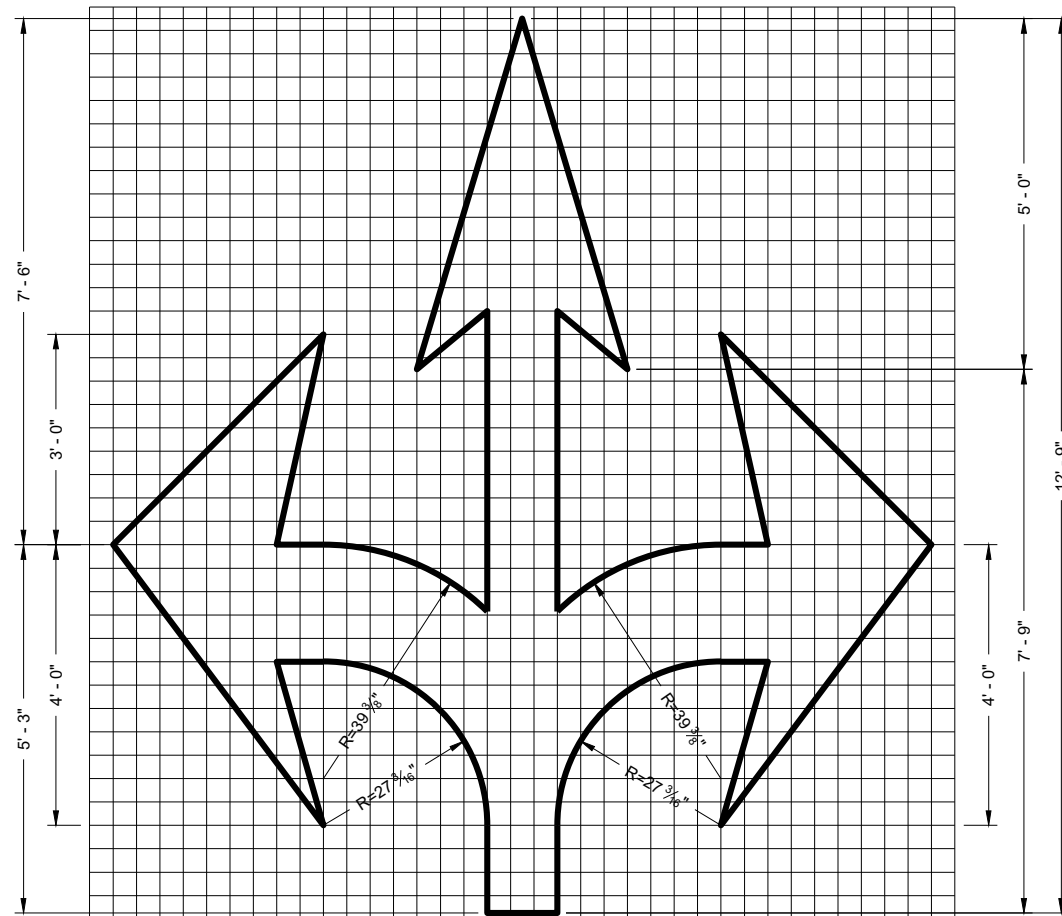
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 7



TYPE 6

GENERAL NOTES

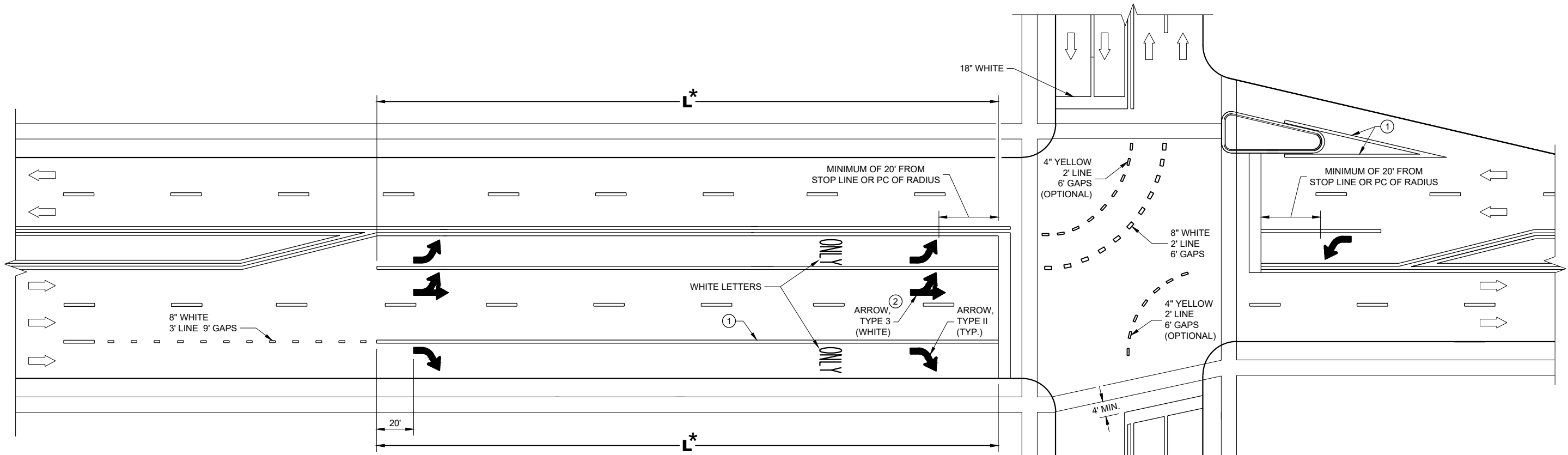
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

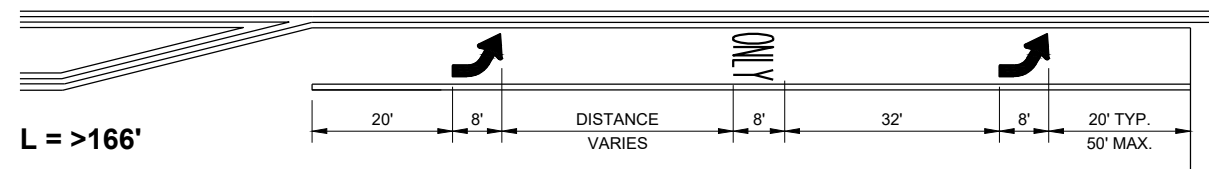
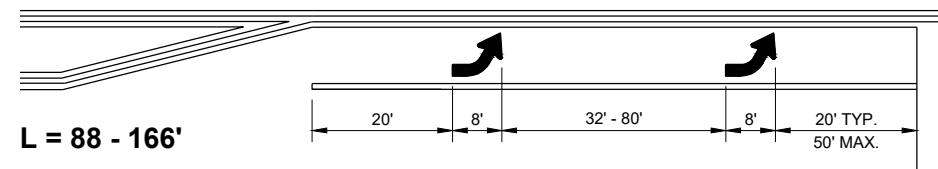
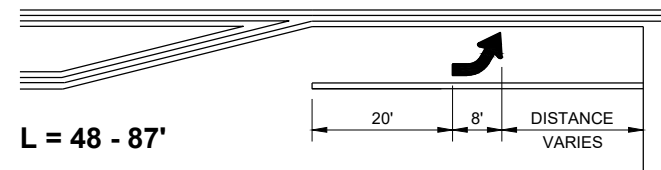
APPROVED	/s/ Matthew Rauch
November 2019	STATE SIGNING AND MARKING ENGINEER
DATE	

FHWA



**TURN LANE OPTIONS**

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



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

**GENERAL NOTES**

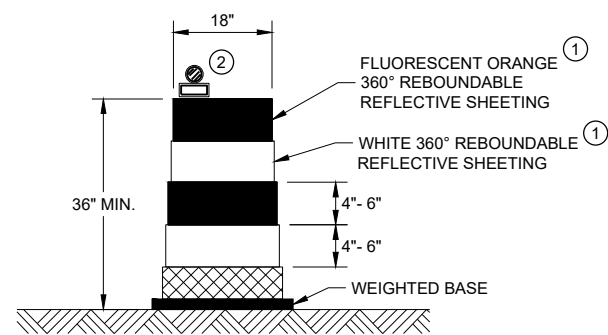
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

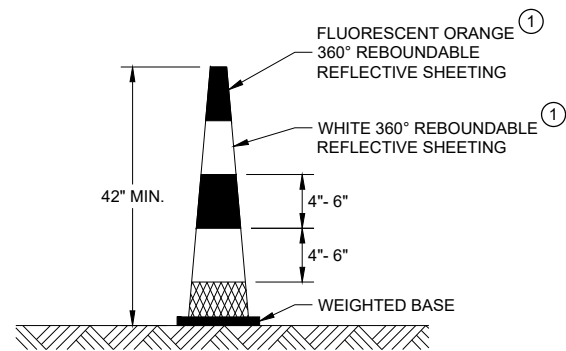
$L$  = LENGTH OF TURN BAY

**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

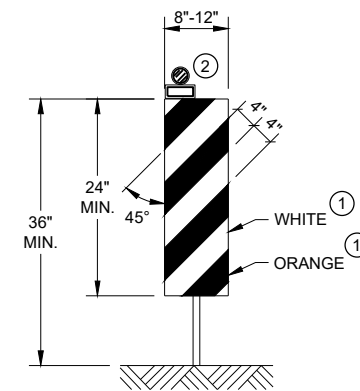


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
 1/2 SPACING OF DRUMS

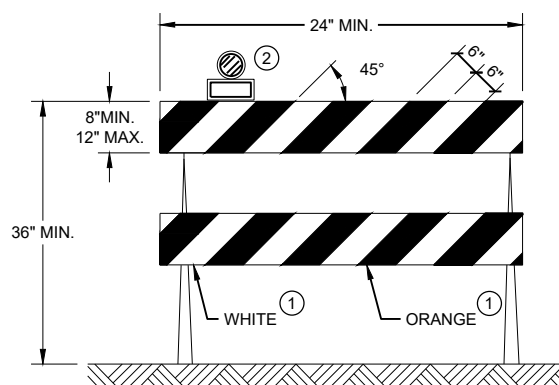


**VERTICAL PANEL**

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

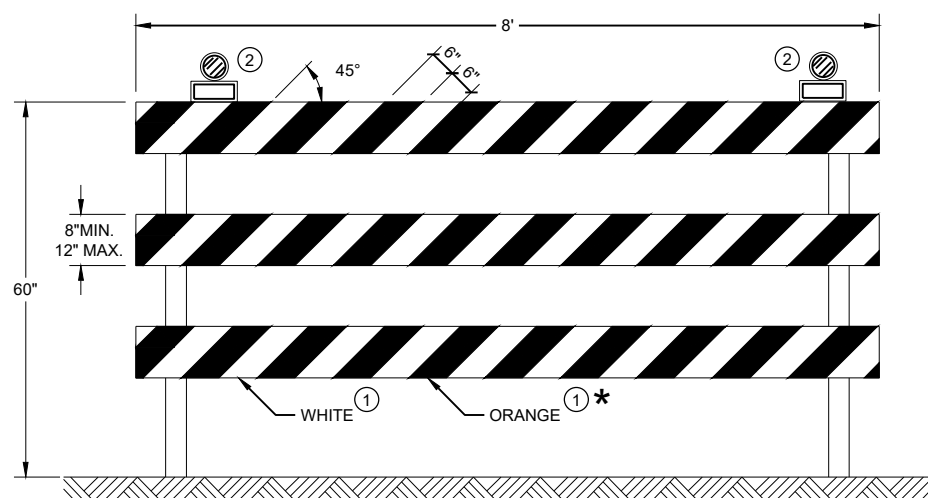
**GENERAL NOTES**

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



**TYPE 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.

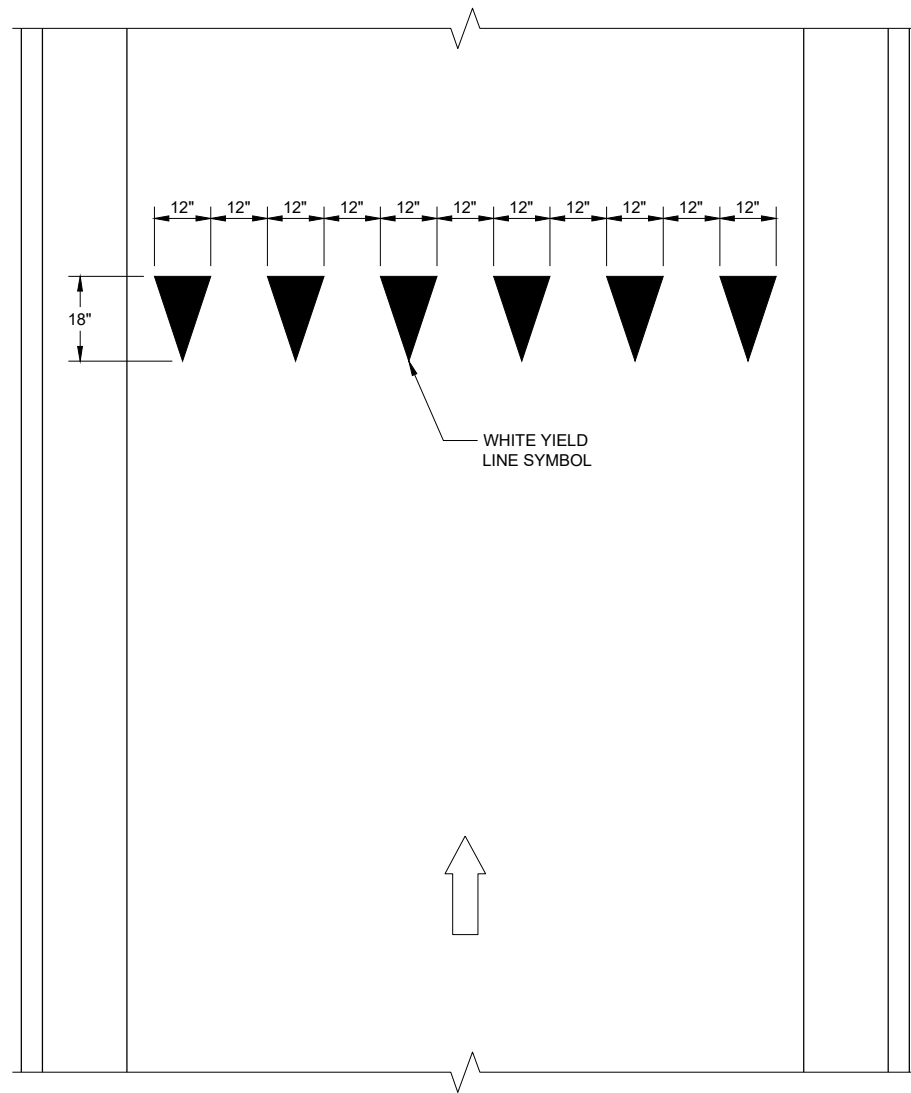


**TYPE III BARRICADE**



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.

<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	



**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAVEL

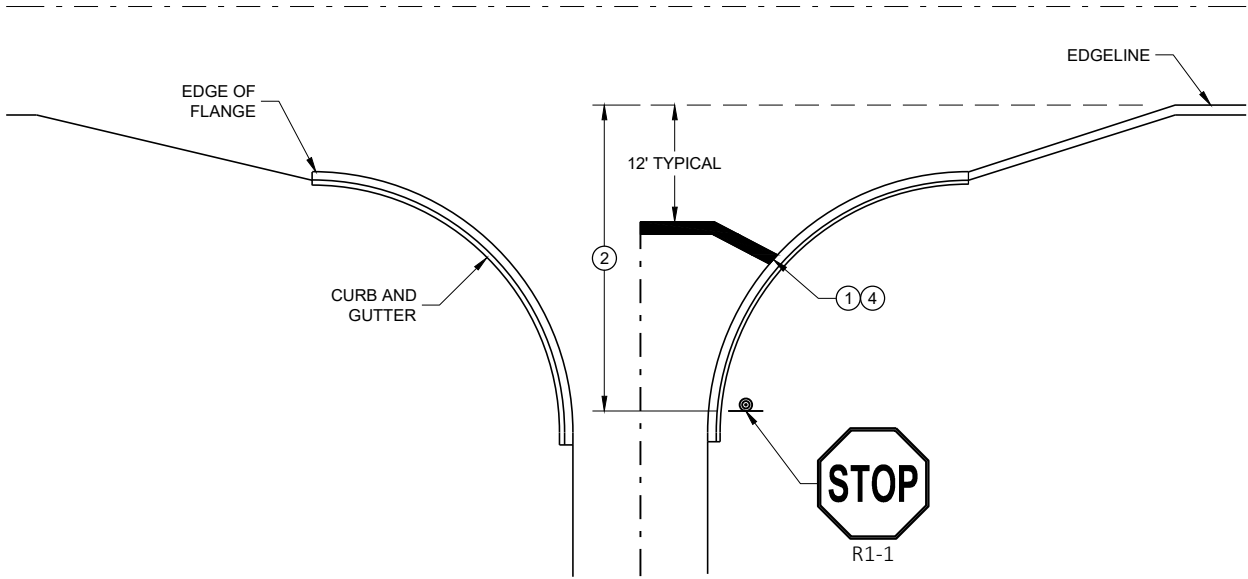
**YIELD LINE**

<b>YIELD MARKINGS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-81-2016 DATE	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	

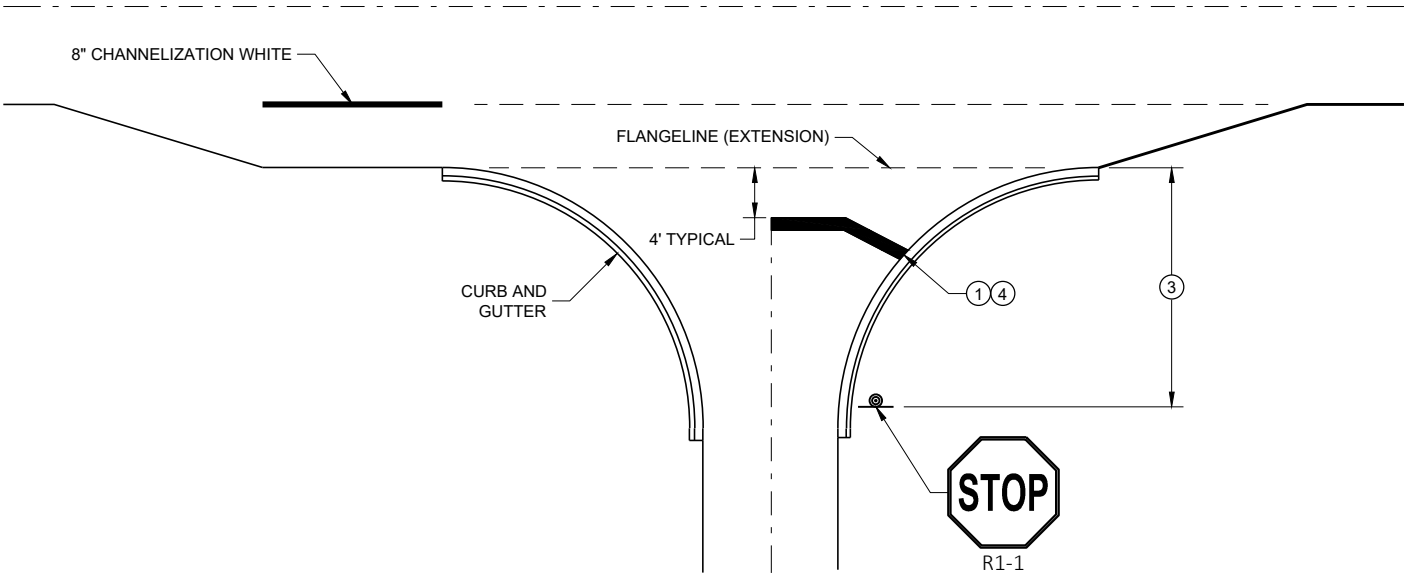
**GENERAL NOTES**

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

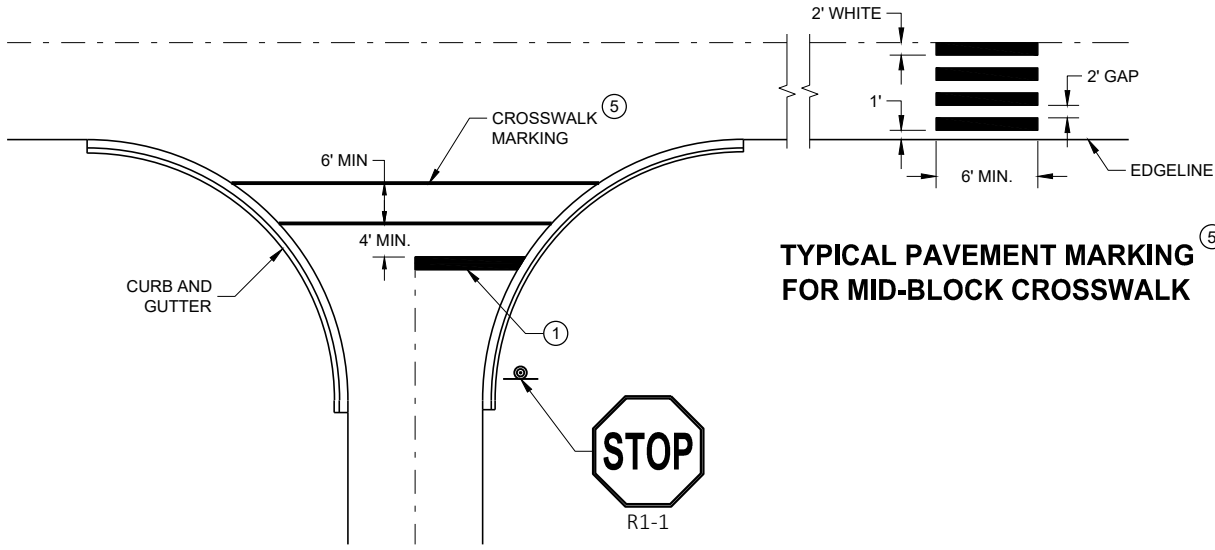
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

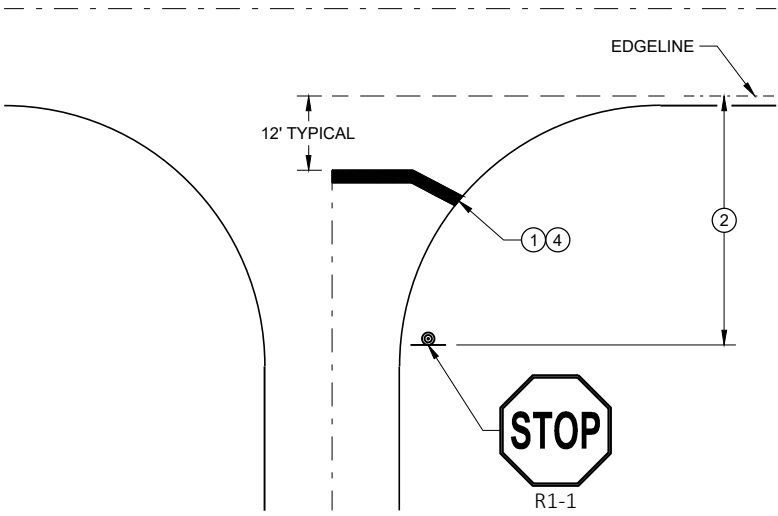


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**



**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

## GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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

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

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.










WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

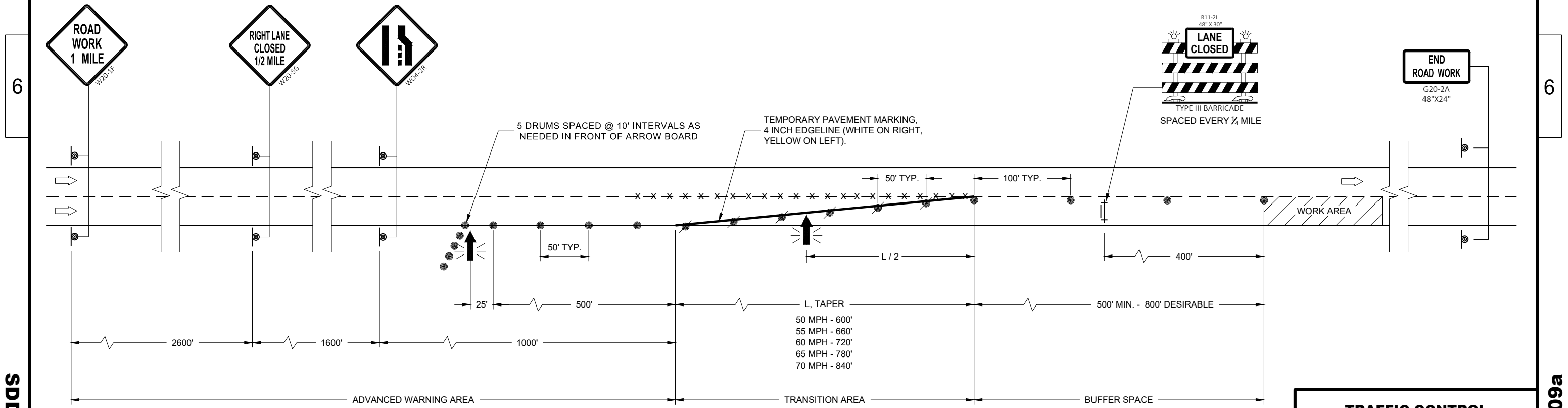
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

## LEGEND

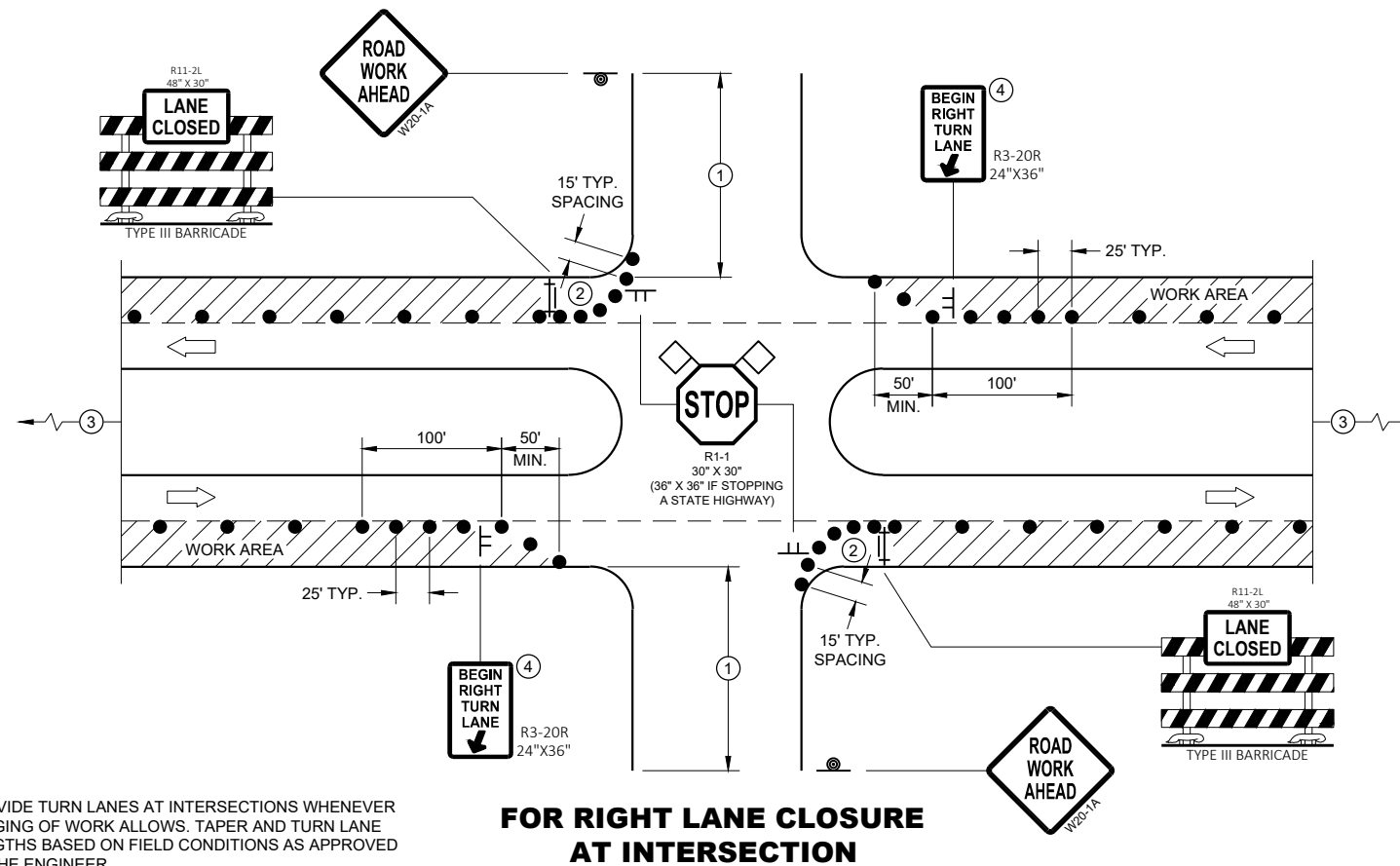
-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  REMOVING PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

SDD 15D12 - 09a

SDD 15D12 - 09a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

**GENERAL NOTES**

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

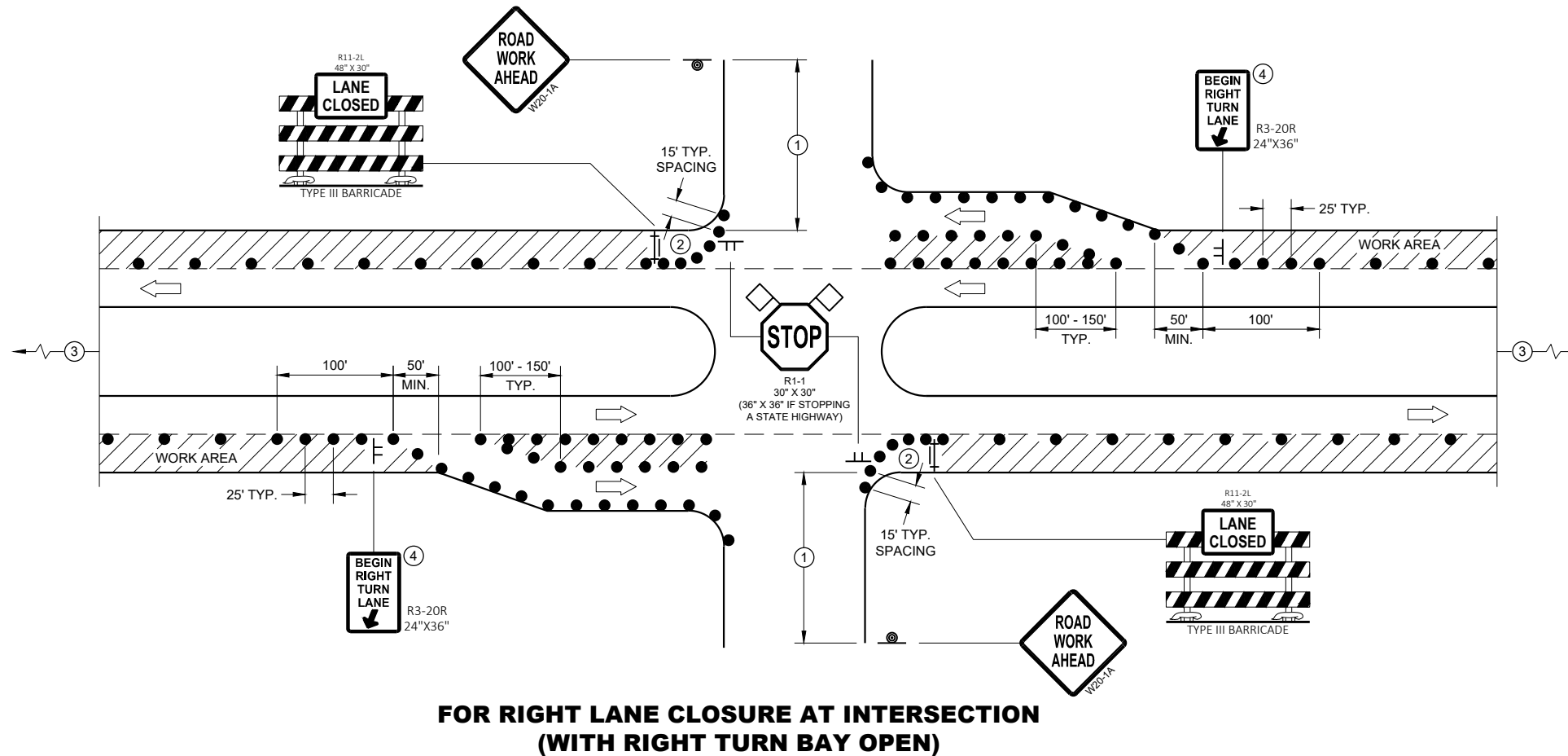
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

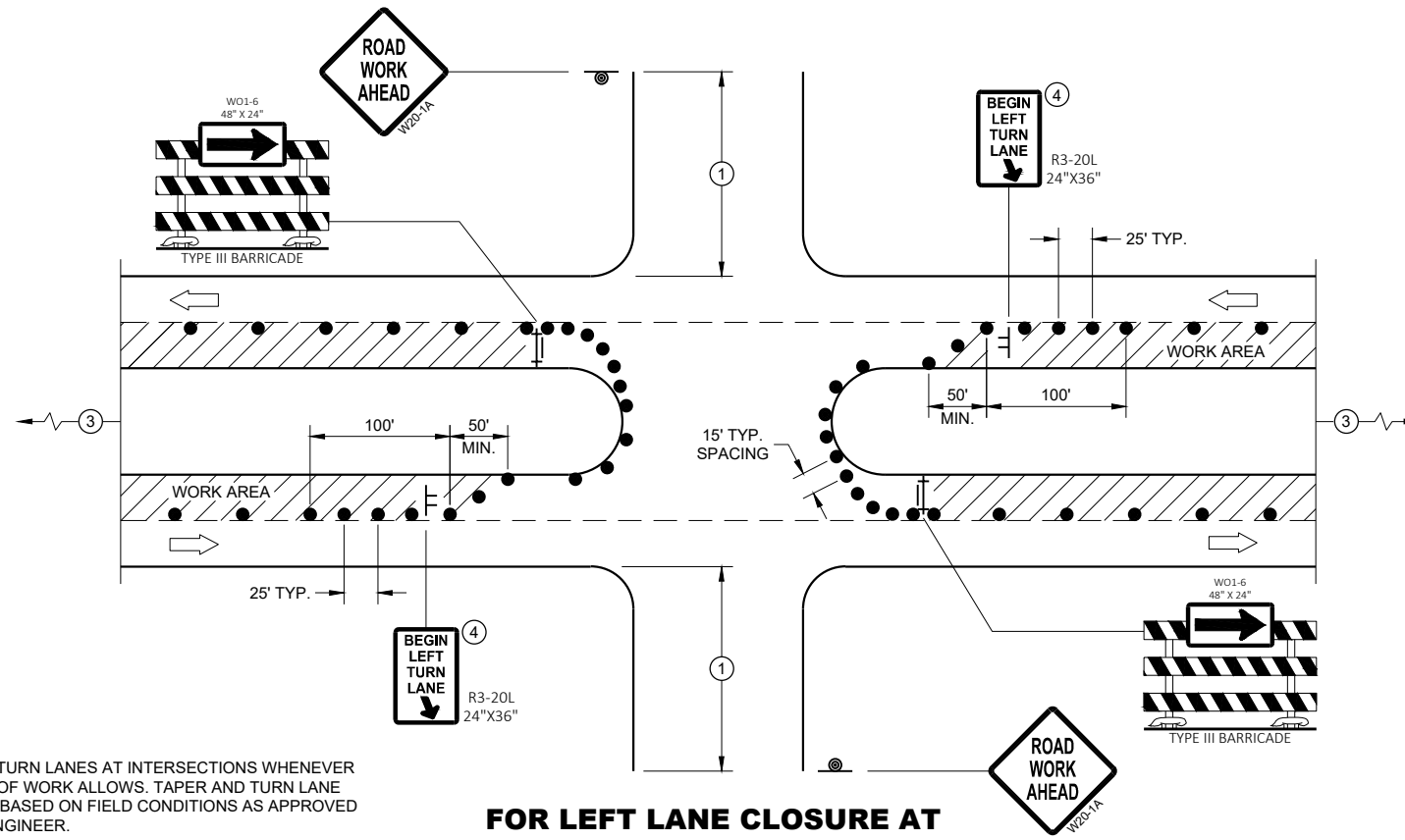


**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN SINGLE  
RIGHT LANE CLOSURE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

**FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING**

**GENERAL NOTES**

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

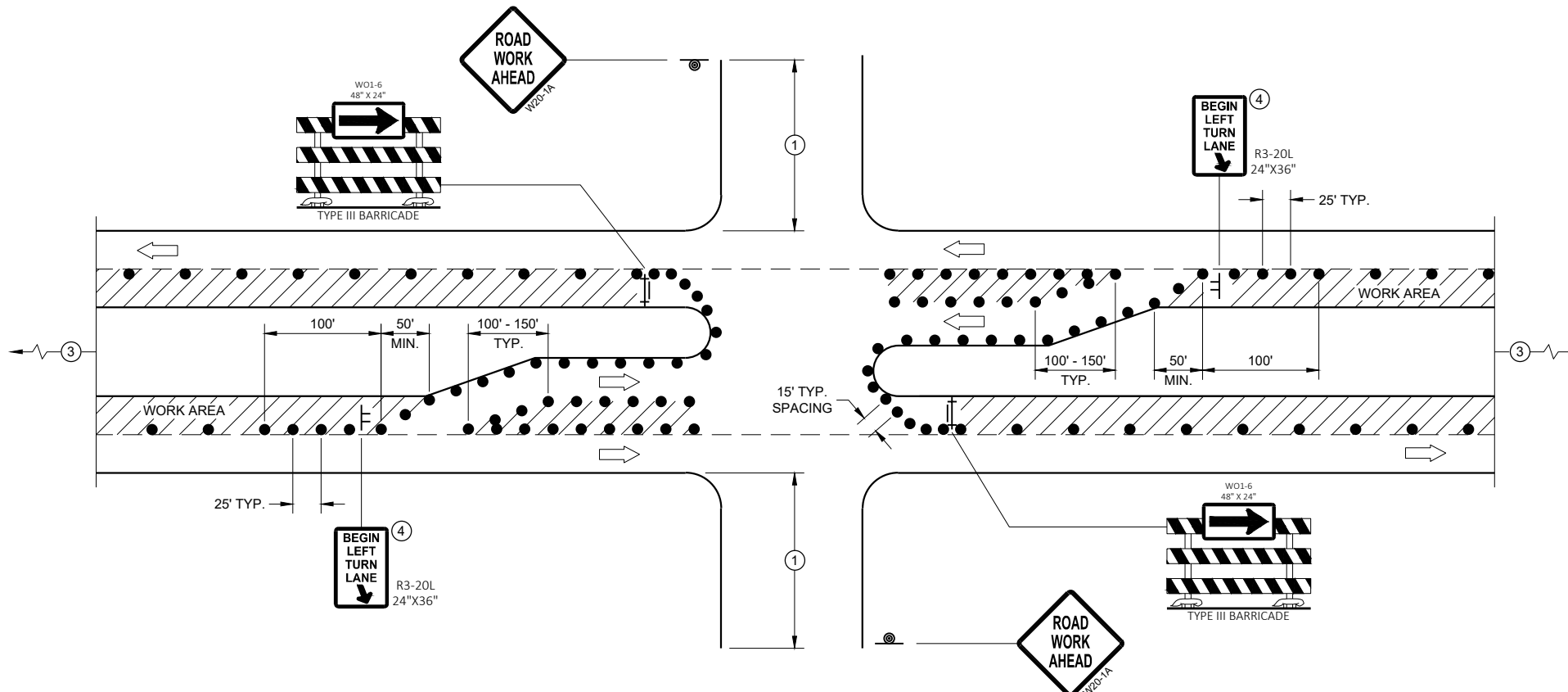
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.  
350' IF 35 - 40 MPH.  
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



**FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)**

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL,  
INTERSECTION WITHIN SINGLE  
LEFT LANE CLOSURE**

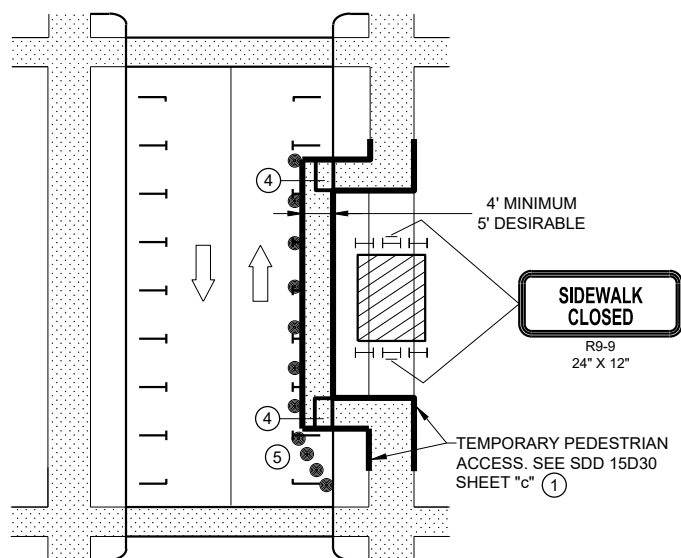
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

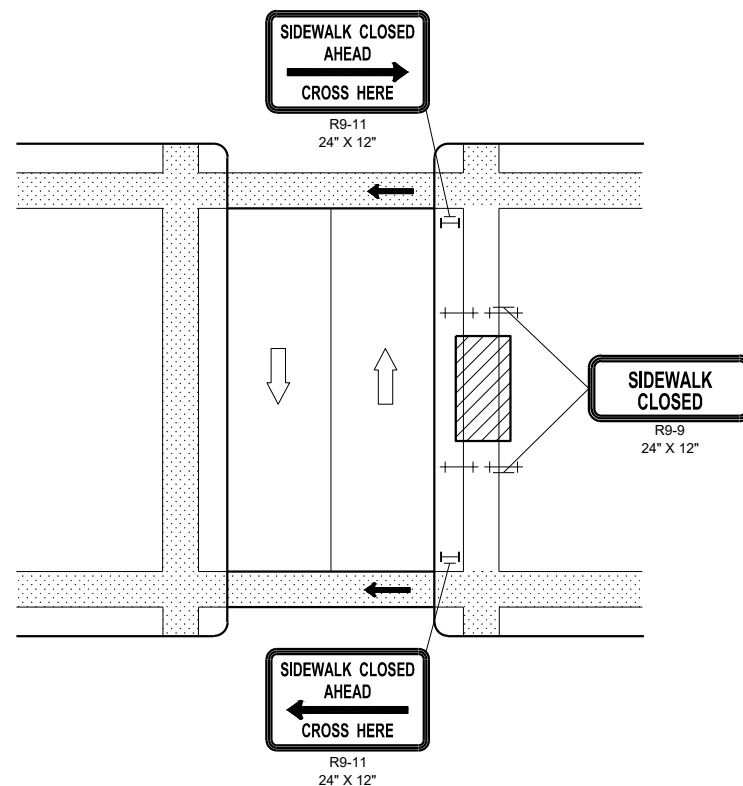
FHWA



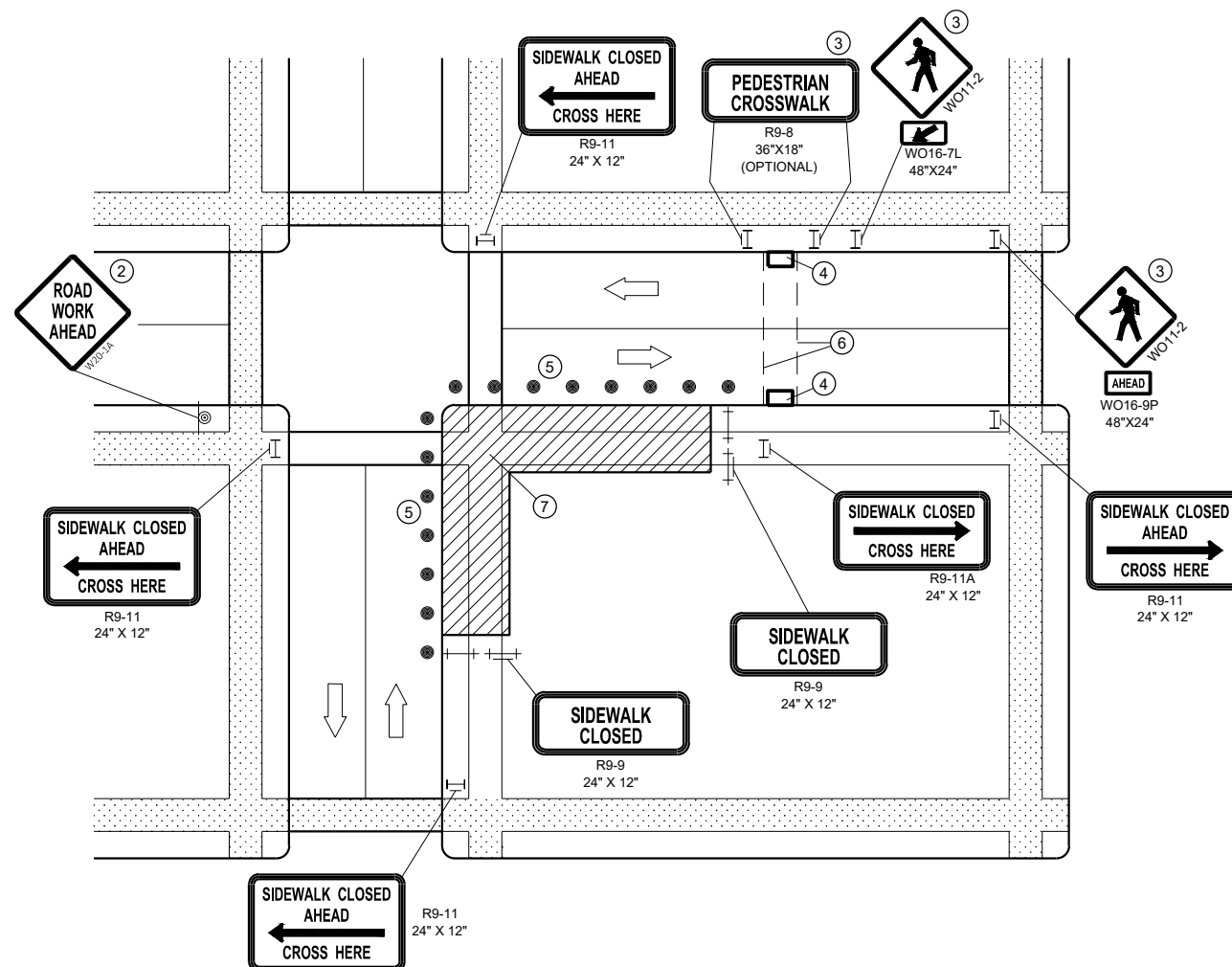
NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.



**MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE**

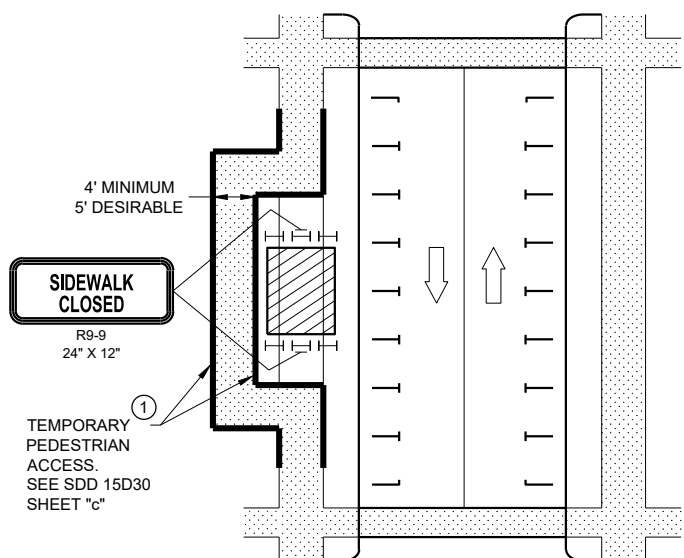


**MID-BLOCK SIDEWALK CLOSURE**



**CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK**

NOTE: LAYOUT SAME AS ABOVE.



**SIDEWALK DIVERSION**

**GENERAL NOTES**

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

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

- ① IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
- ② "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- ③ IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- ④ TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b".
- ⑤ DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- ⑥ TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- ⑦ LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

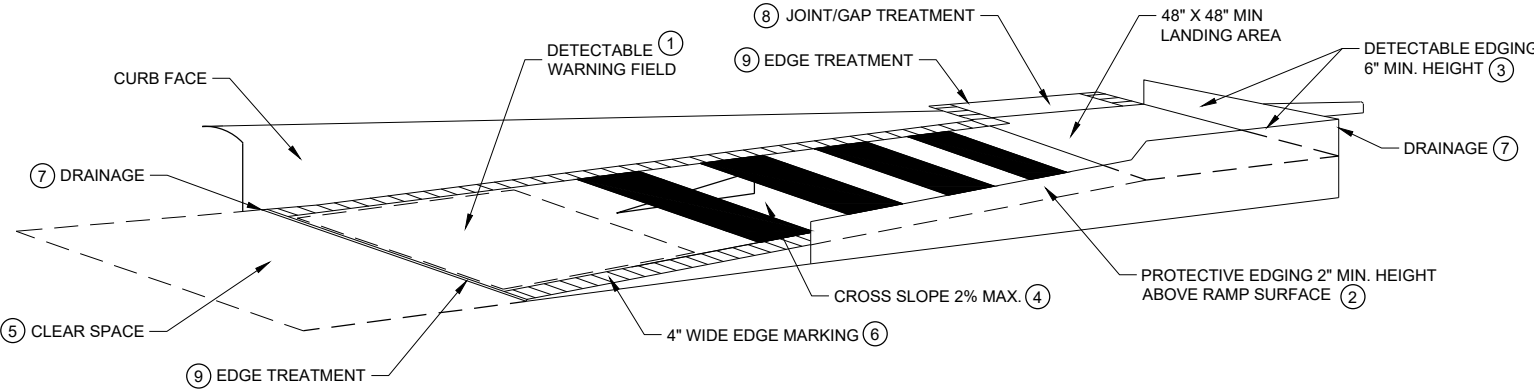
**TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

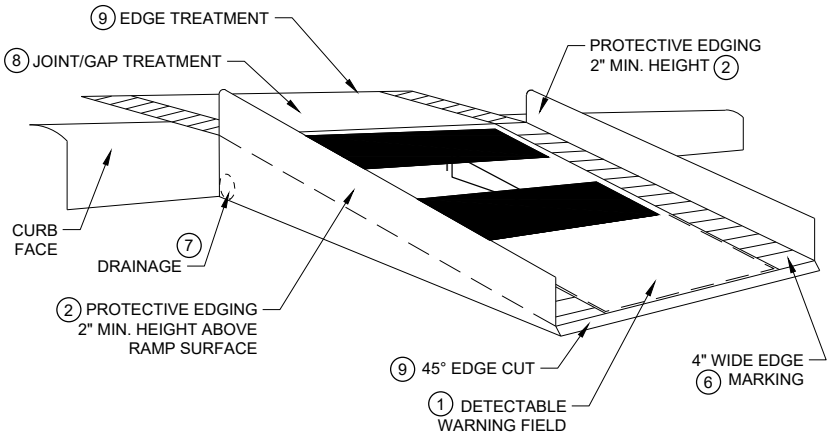
**GENERAL NOTES**

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.  
 ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

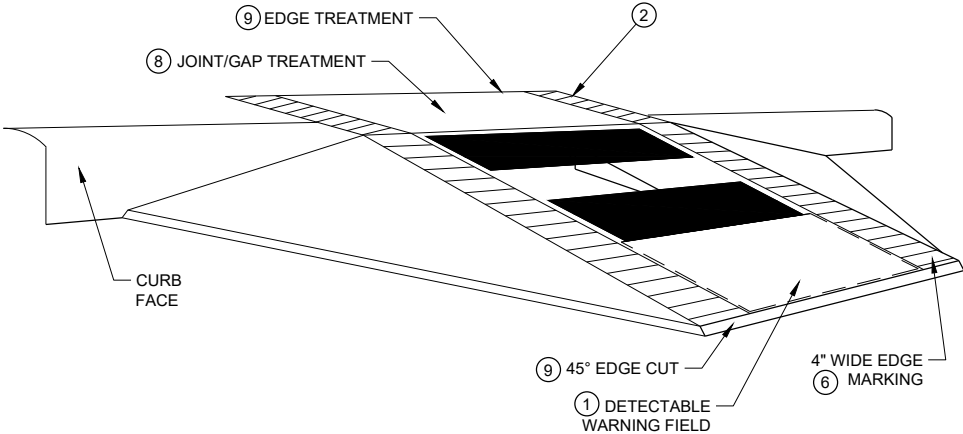
- ① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 08D05, SHEET "e".
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
- ⑤ CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- ⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
- ⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- ⑩ 5" WIDE MIN. WITH PEDESTRIAN SAFETY BARRICADE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY BARRICADE.



**TEMPORARY CURB RAMP PARALLEL TO CURB**

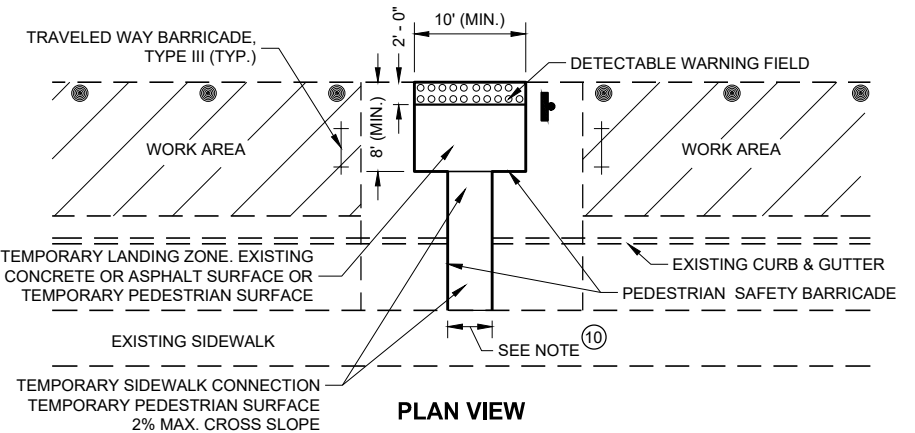


**WITH PROTECTIVE EDGE**

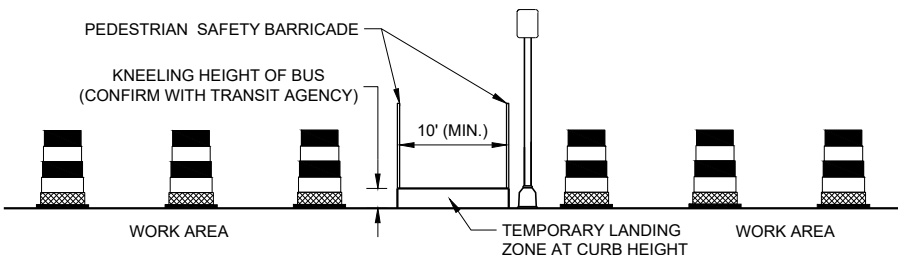


**WITH SIDE APRON**

**TEMPORARY CURB RAMP PERPENDICULAR TO CURB**



**PLAN VIEW**



**PROFILE VIEW**

**TEMPORARY BUS STOP PAD**

- LEGEND**
- TRAFFIC CONTROL DRUM
  - ⊥ TYPE III BARRICADE
  - ▨ WORK AREA

**TRAFFIC CONTROL,  
 PEDESTRIAN ACCOMMODATION**

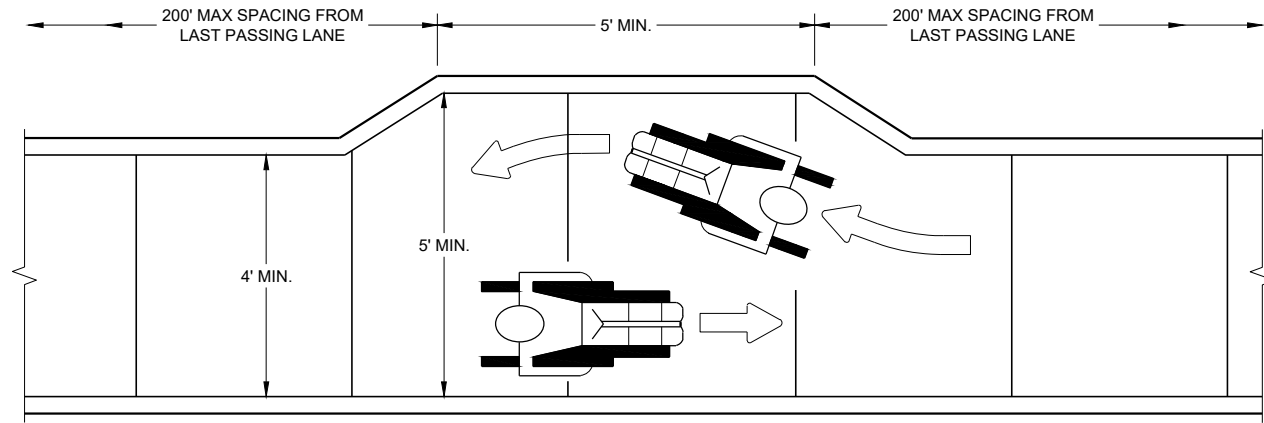
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

6

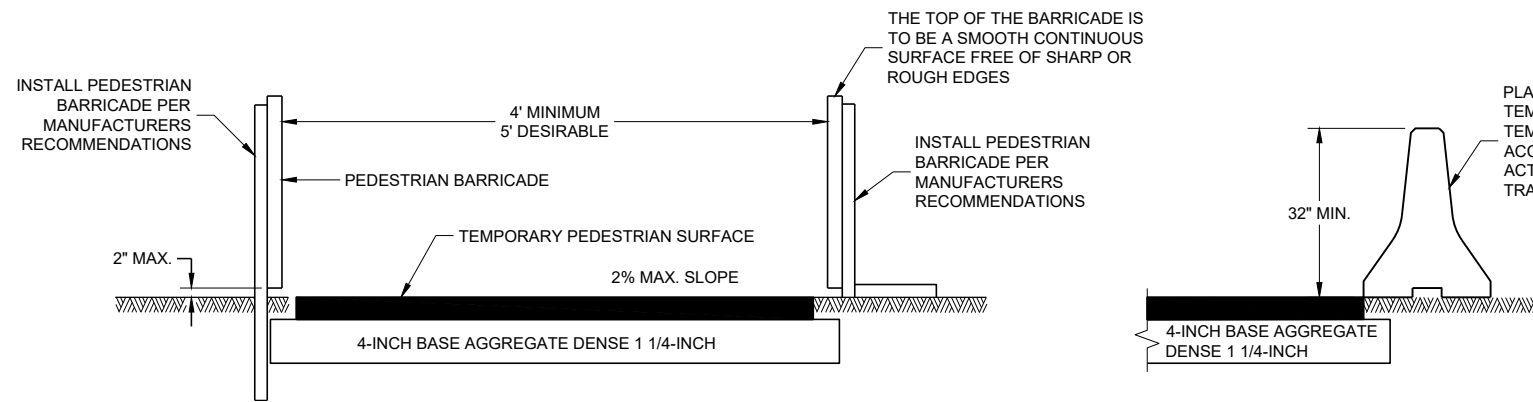
6

SDD 15D30 - 06b

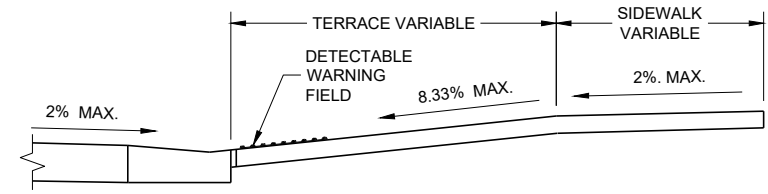
SDD 15D30 - 06b



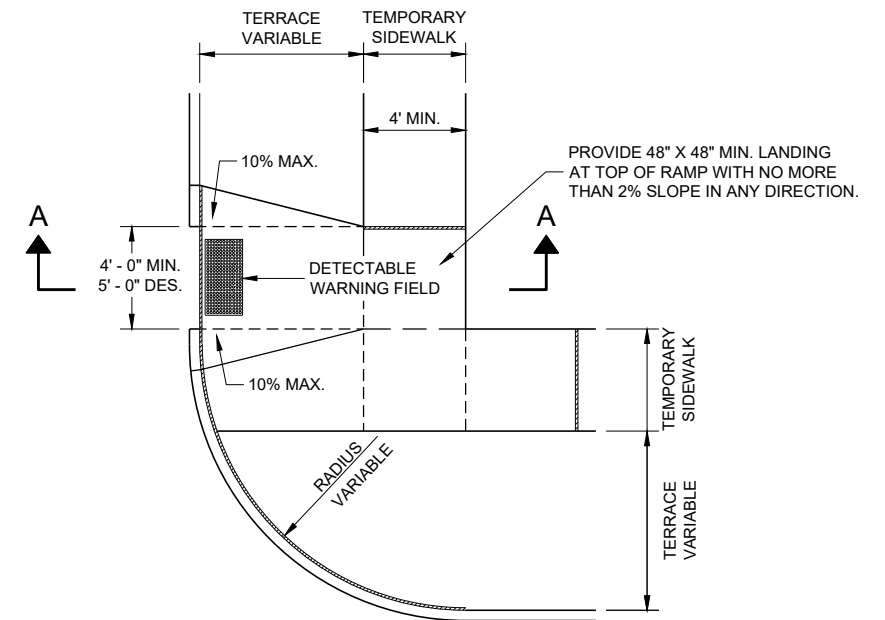
**NARROW SIDEWALK PASSING DETAIL**



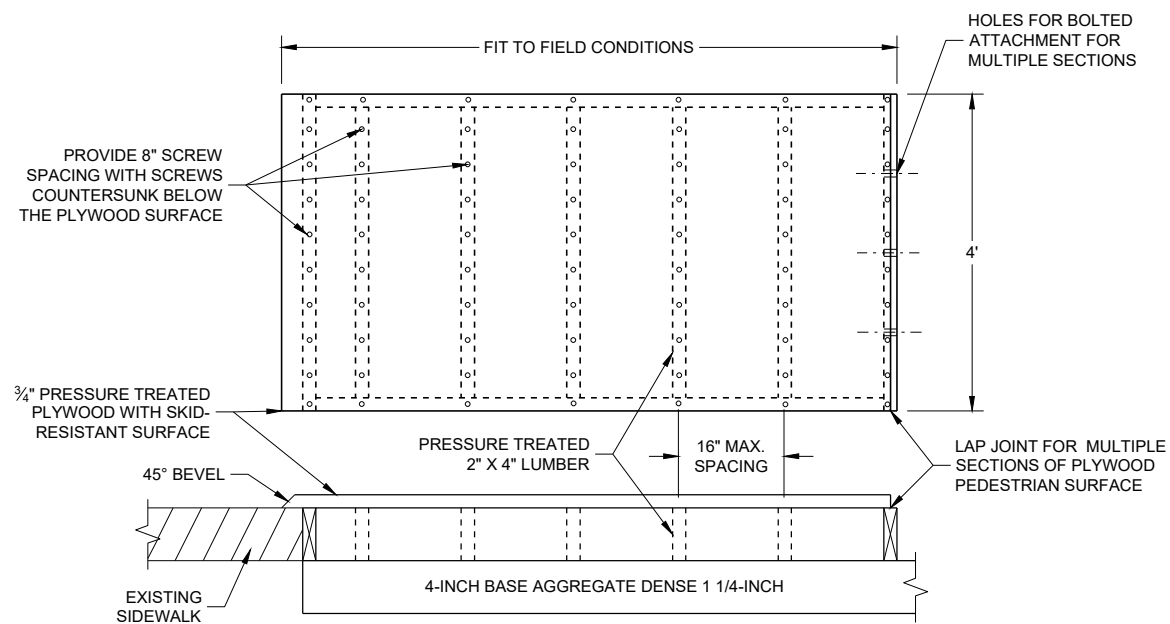
**TEMPORARY PEDESTRIAN ACCESS**



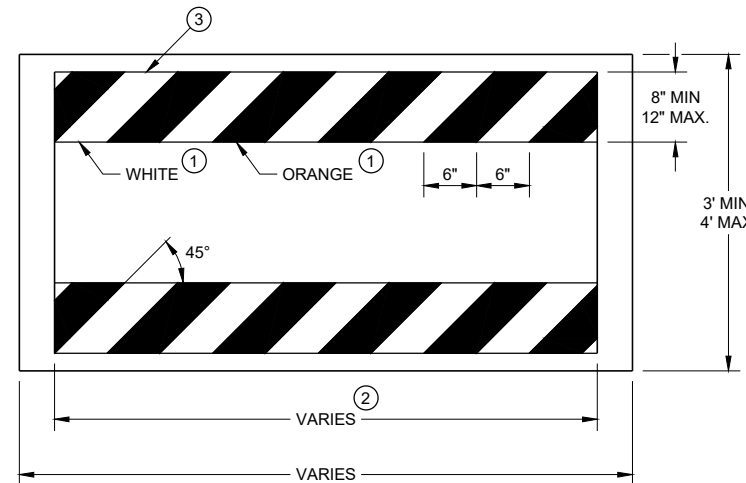
**SECTION A - A**



**PLAN VIEW  
TEMPORARY TYPE 3 RAMP  
(OUTSIDE OF CROSSWALK AREA)**



**TEMPORARY PEDESTRIAN SURFACE PLYWOOD**



**TEMPORARY PEDESTRIAN BARRICADE \***

**GENERAL NOTES**

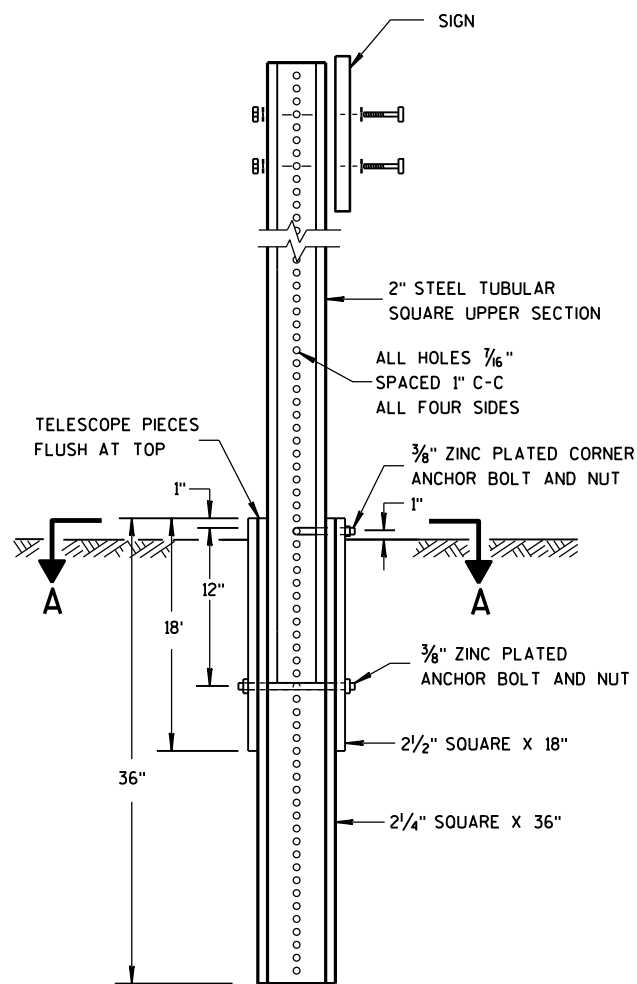
- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- \* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

**TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



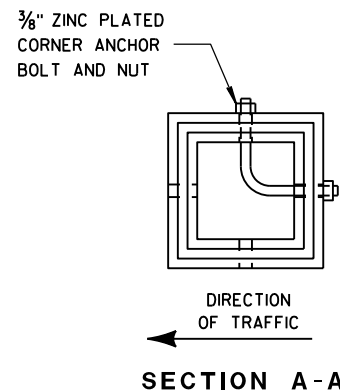
**DETAIL OF TUBULAR STEEL SIGN POST**

**TUBULAR STEEL POSTS**

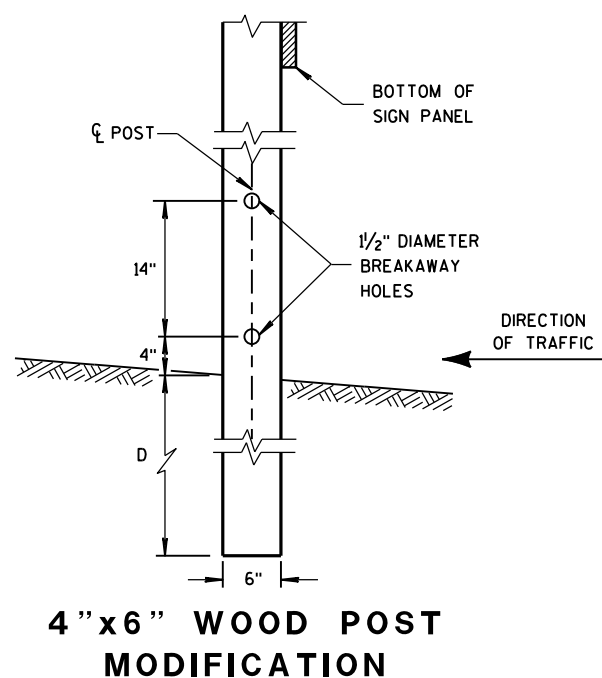
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

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

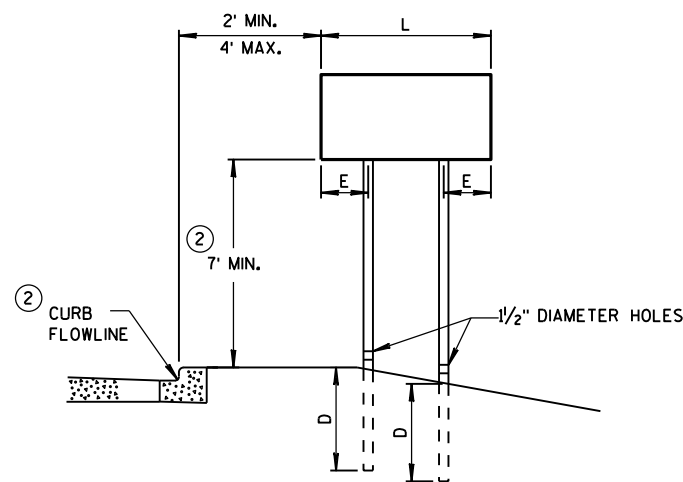
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



**SECTION A-A**



**4" X 6" WOOD POST MODIFICATION**

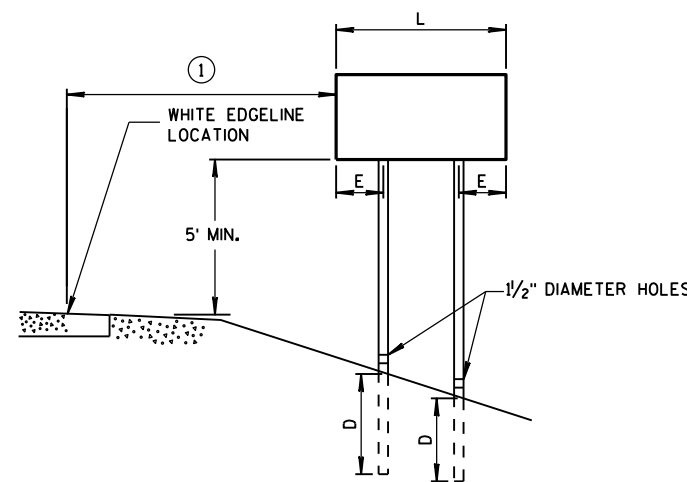


**URBAN AREA**

**POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS**

**WOOD POST EMBEDMENT DEPTH**

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



**RURAL AREA**

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

SEE NOTE ③

**GENERAL NOTES**

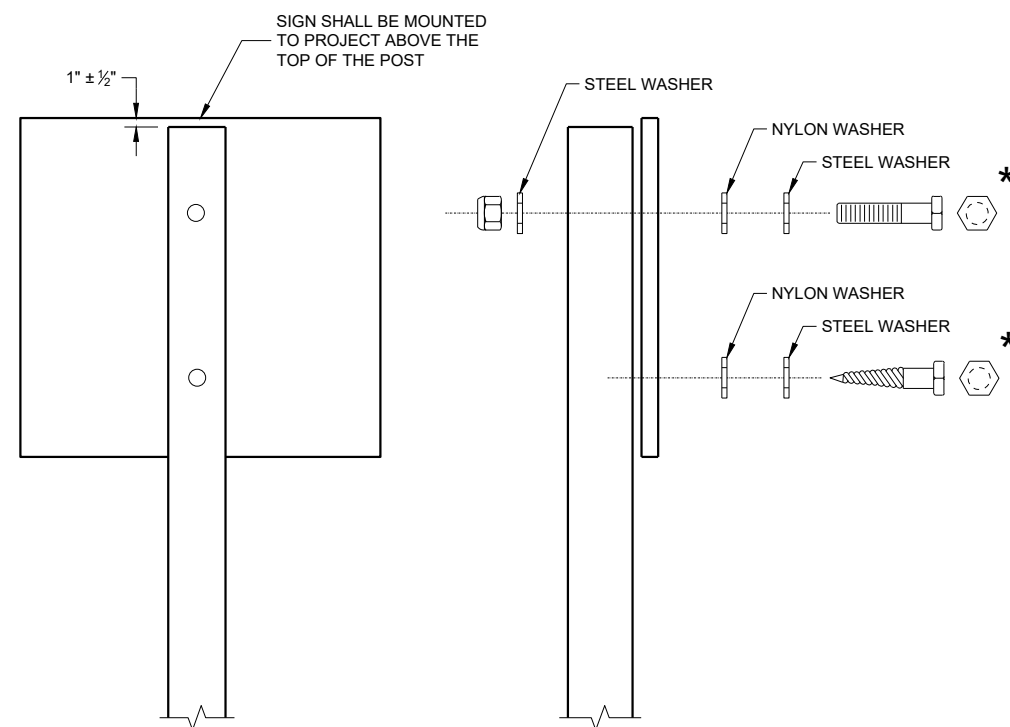
- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

6

6

**TEMPORARY TRAFFIC CONTROL SIGN MOUNTING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



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

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

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

WOOD POST (4" x 6")

- LAG SCREWS - 3/8" x 3"
- MACHINE BOLTS - 5/16" x 6 1/2" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")

- MACHINE BOLTS - 3/8" x 3 1/4" LENGTH W/NUTS
- RIVETS - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -

- 1 1/4" O.D. x 3/8" I.D. x 1/16" STEEL
- 1 1/4" O.D. x 3/8" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

**ATTACHMENT OF SIGNS TO POSTS**

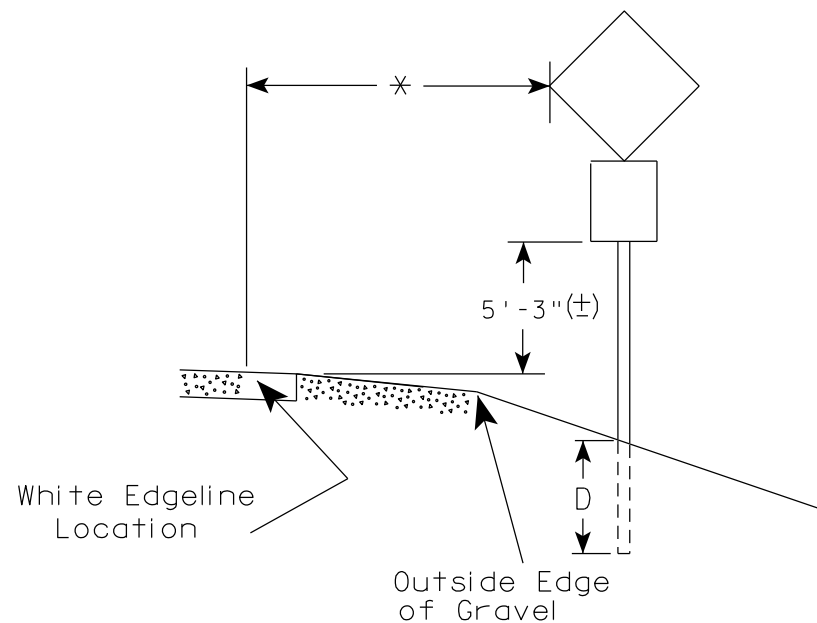
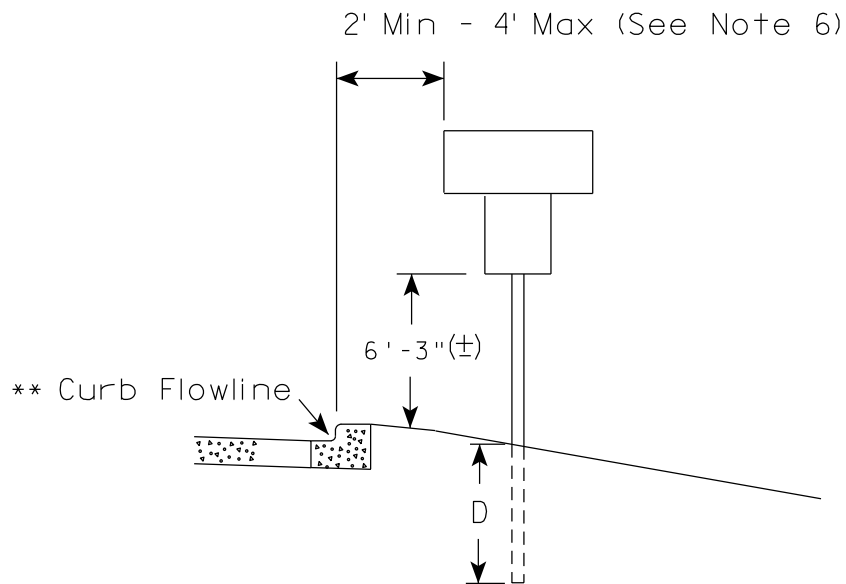
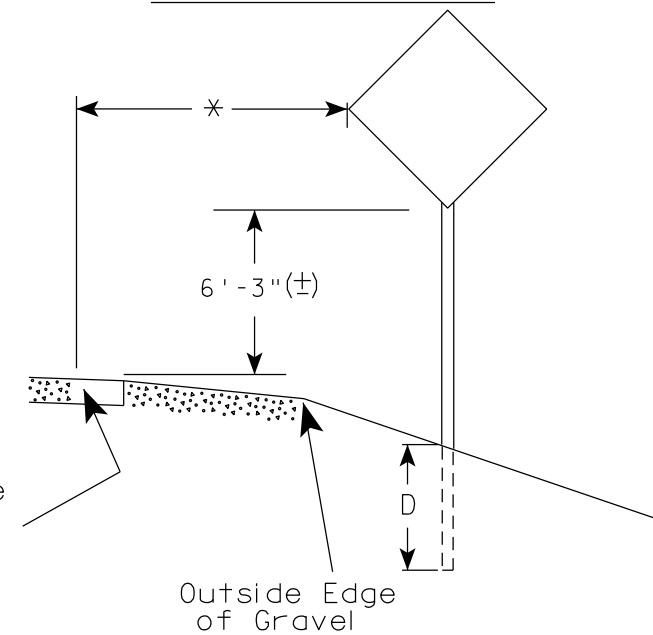
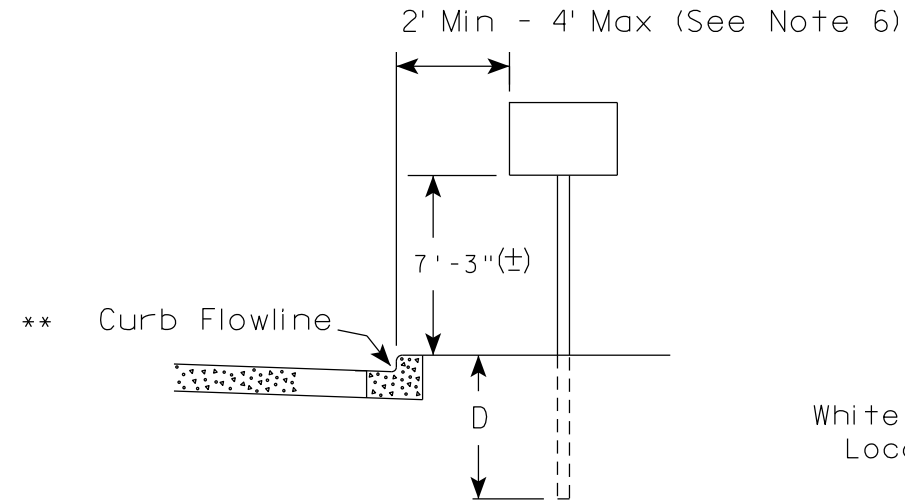
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

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" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as 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

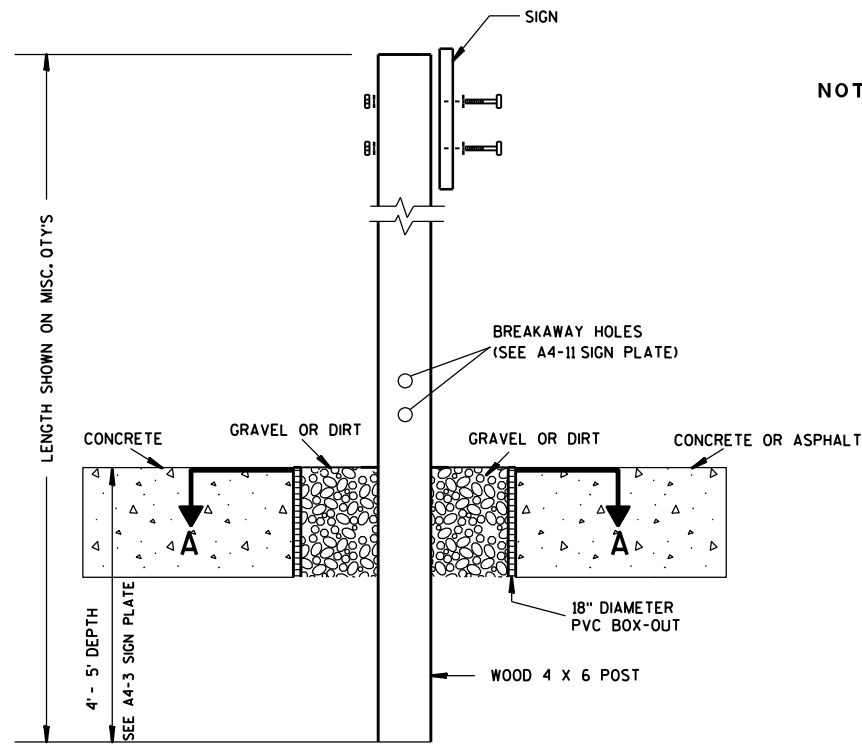
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

7

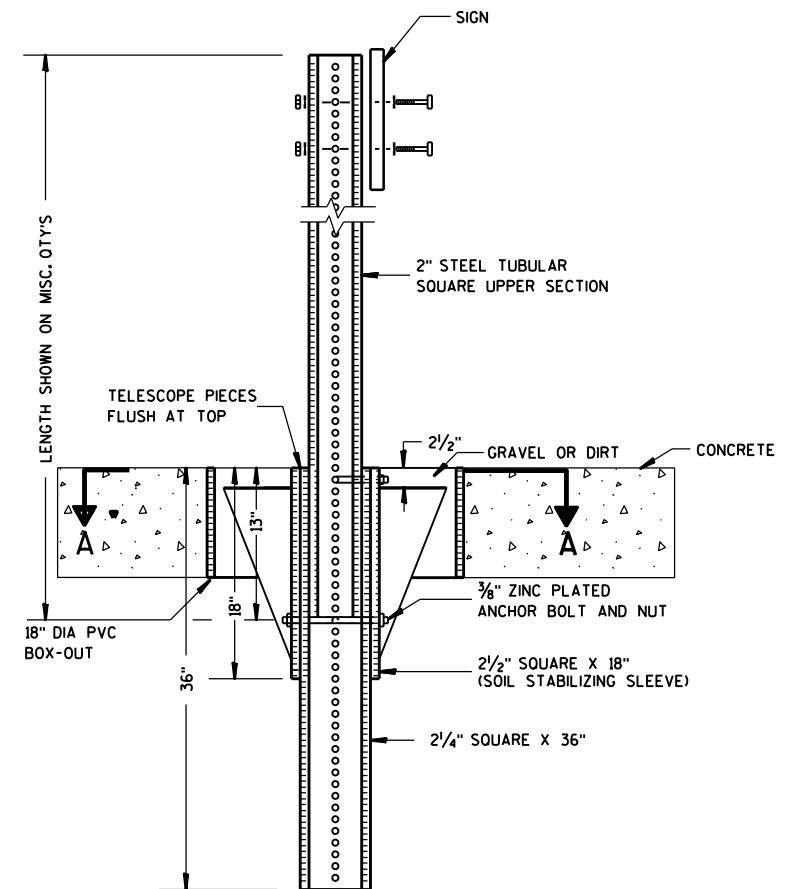
7



**ELEVATION VIEW**

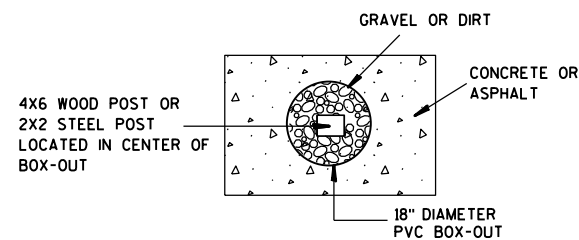
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

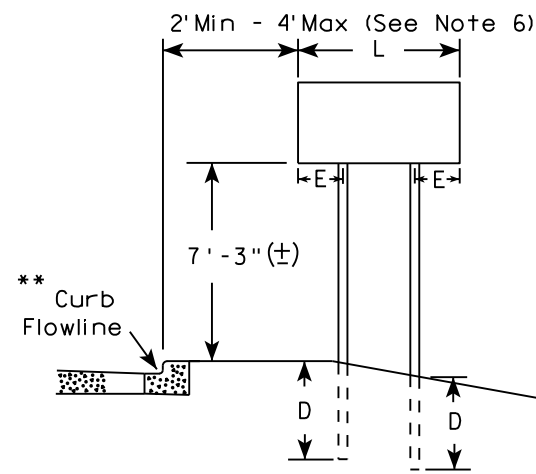
**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

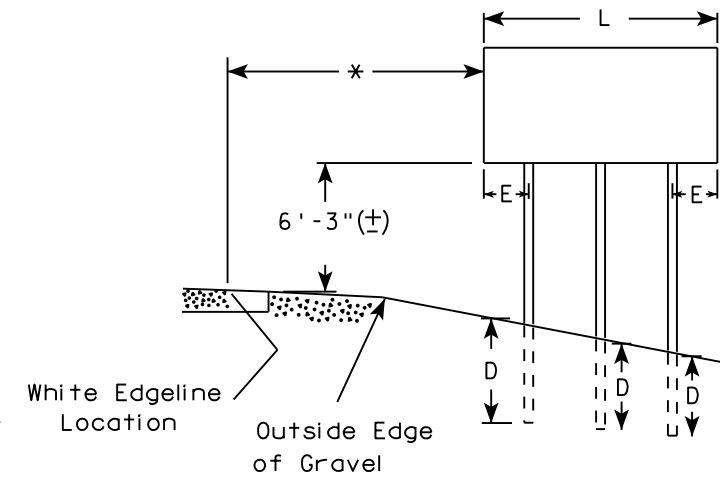
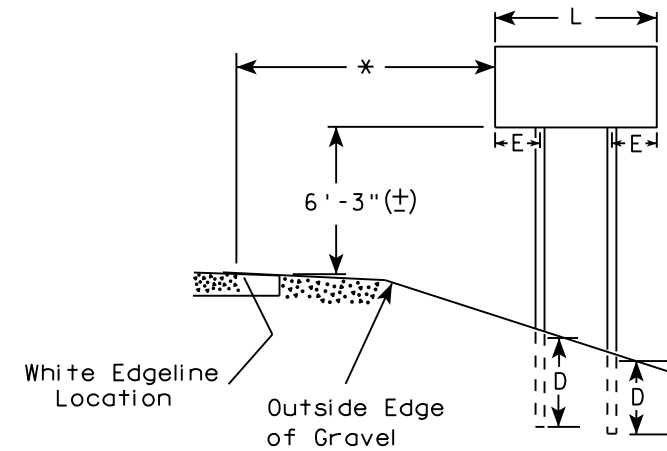
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

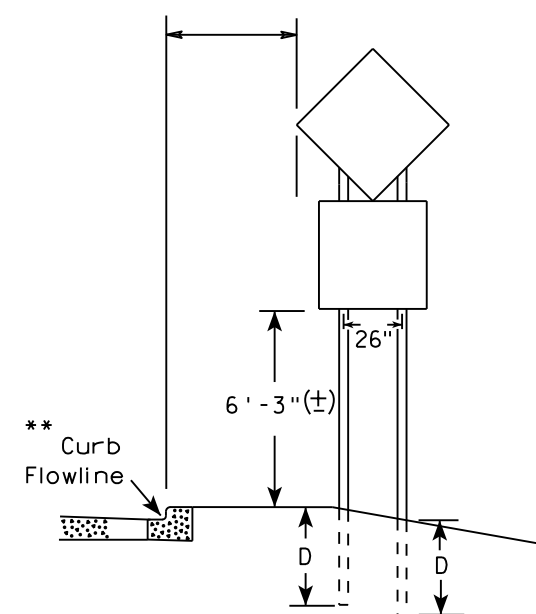
URBAN AREA



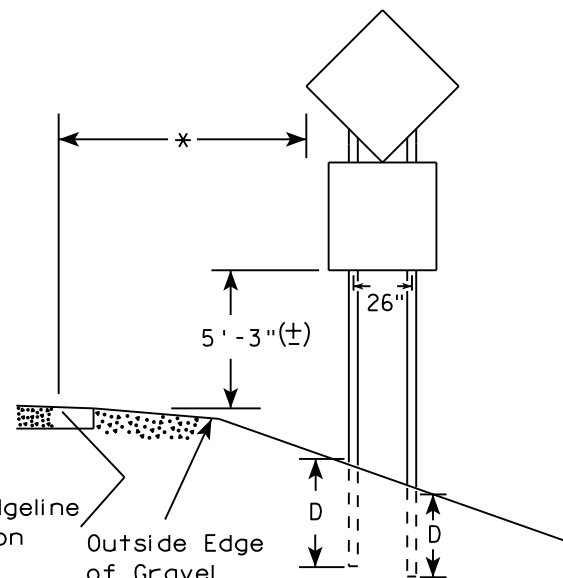
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

\*\*\*

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

POST EMBEDMENT DEPTH

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

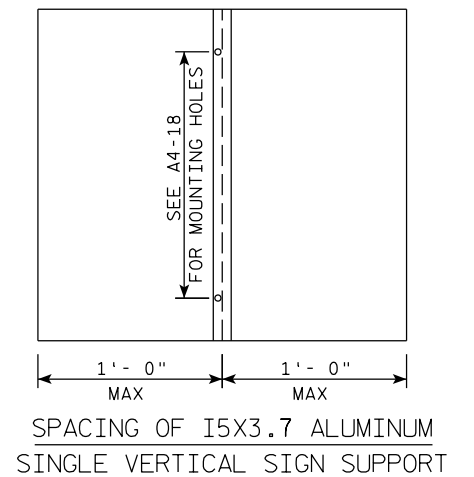
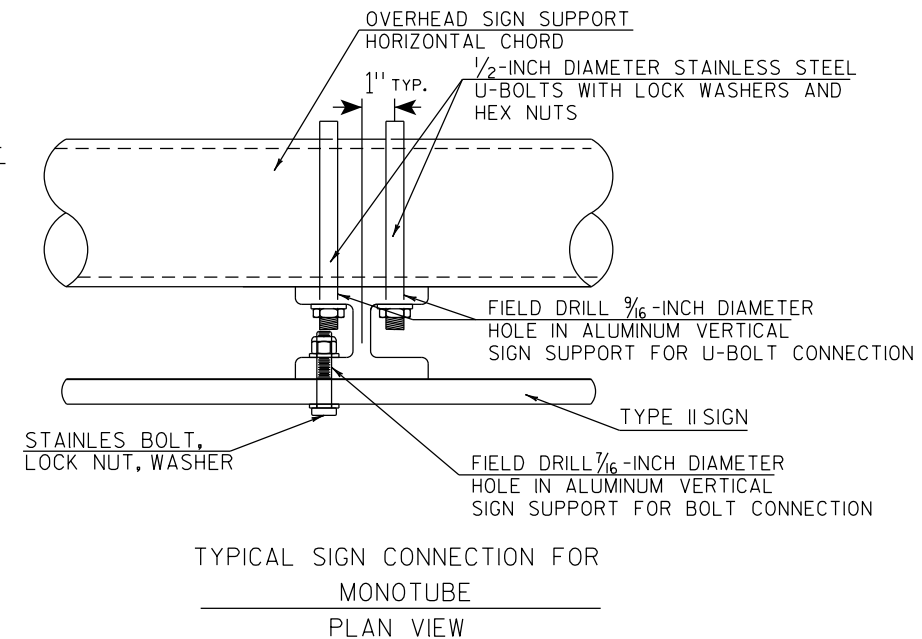
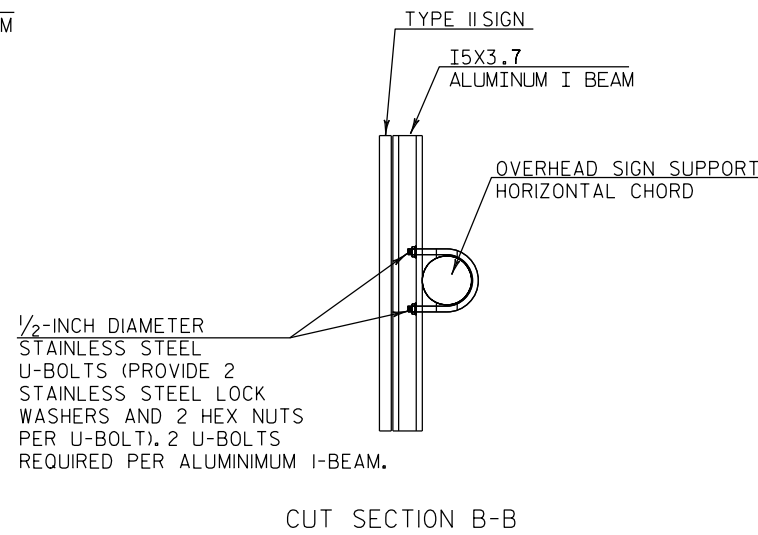
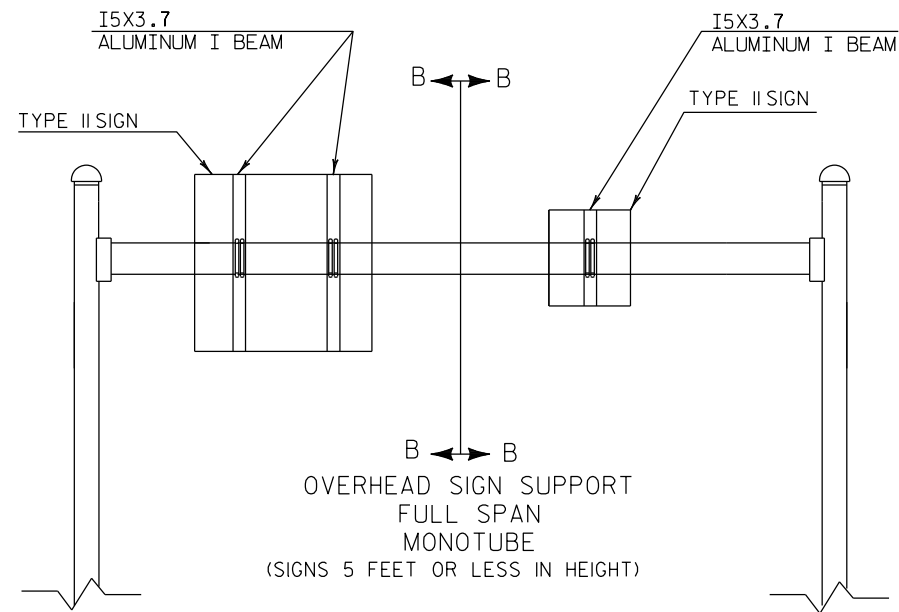
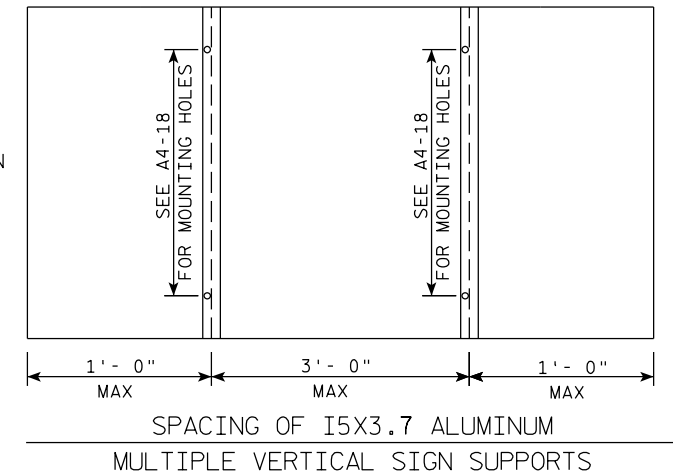
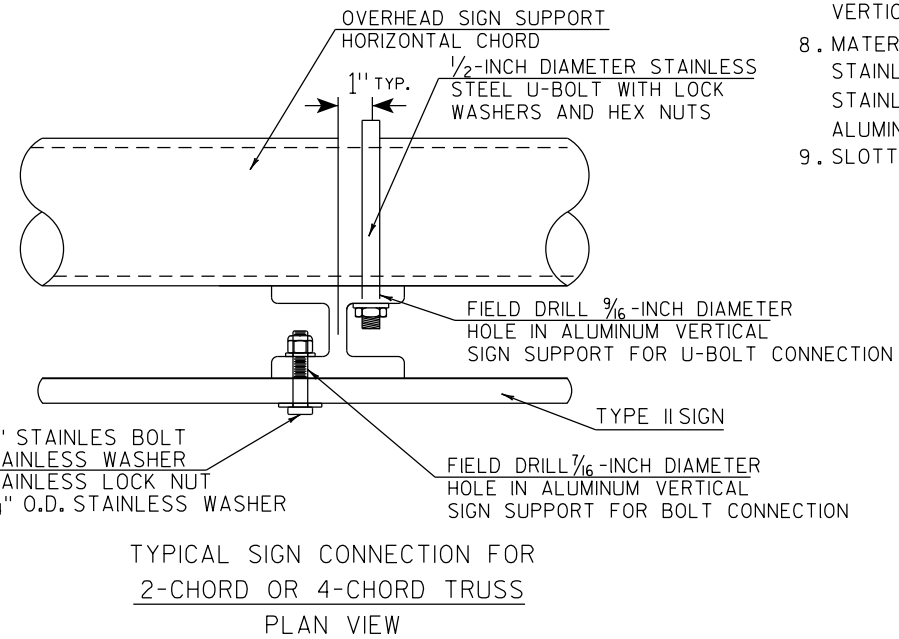
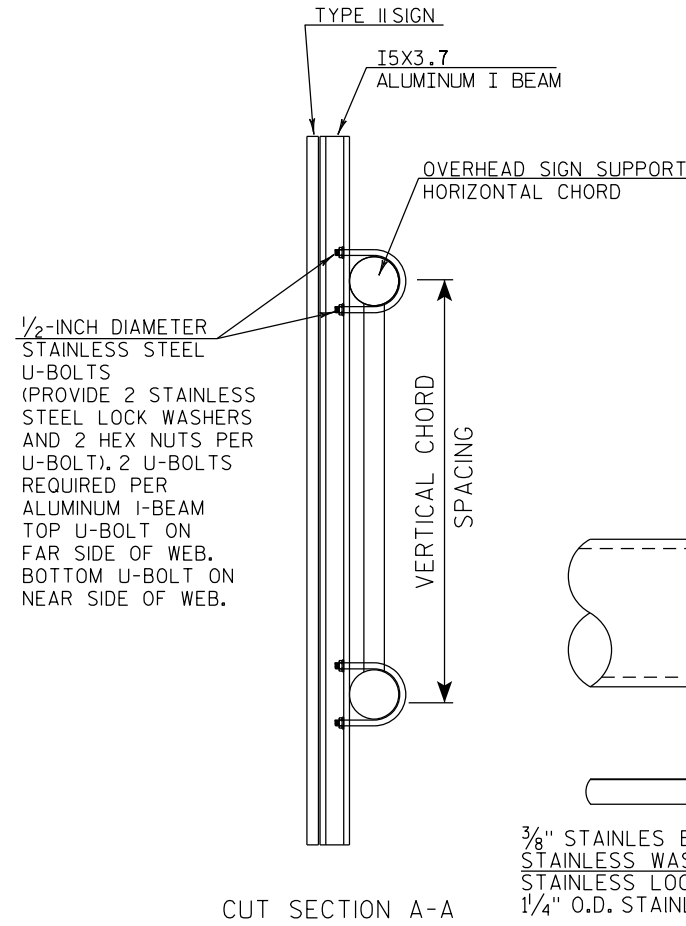
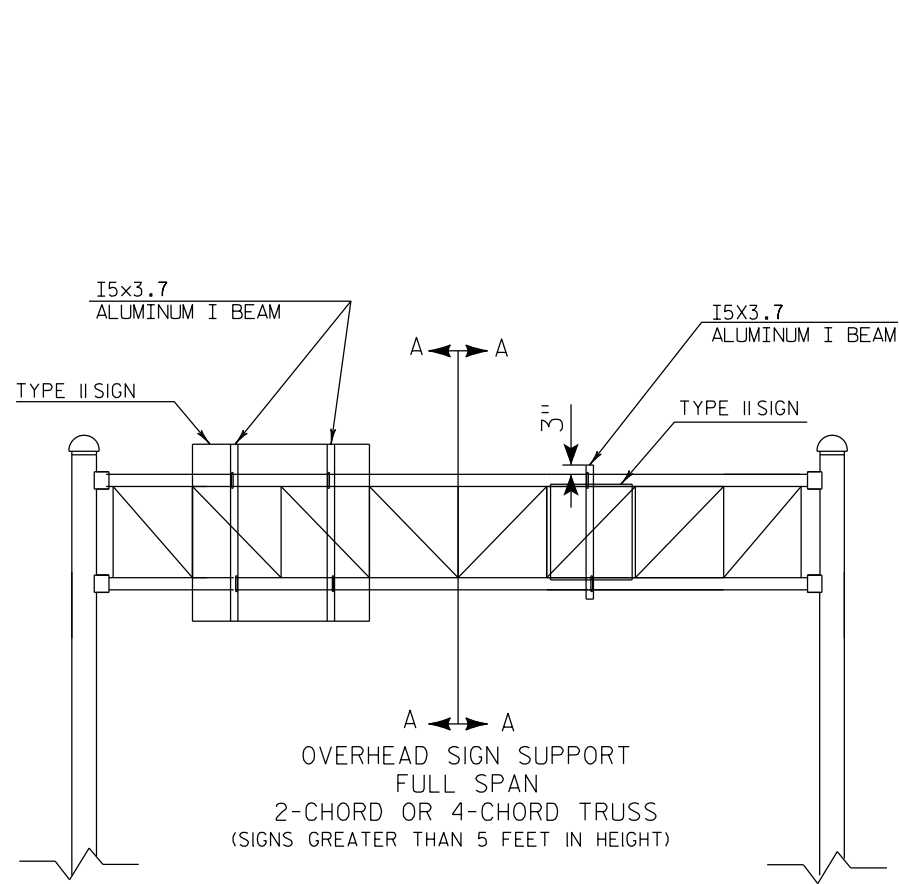
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 8/21/17 PLATE NO. A4-4.15



GENERAL NOTES

1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:  
STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.  
STAINLESS STEEL HEX NUTS ASTM A276.  
ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED

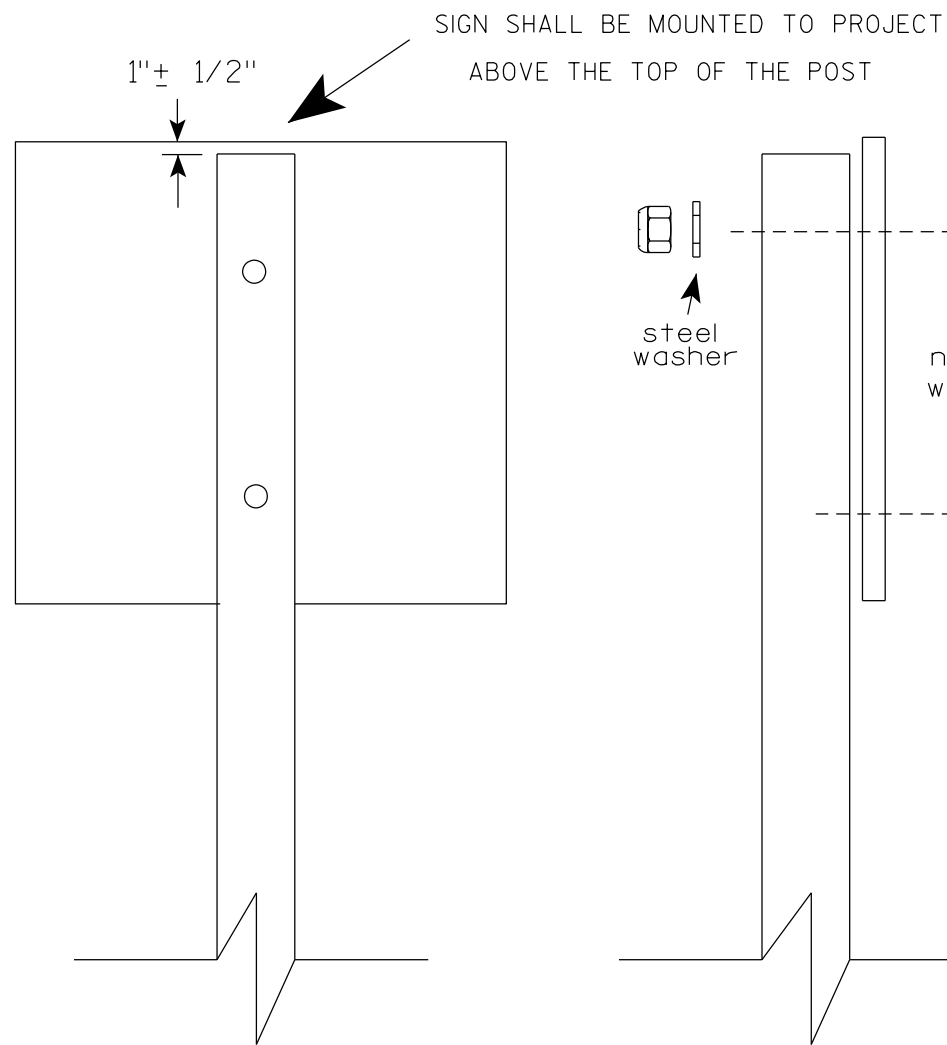


TYPE II SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-7B.1



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)  
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

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

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS  
TO POSTS

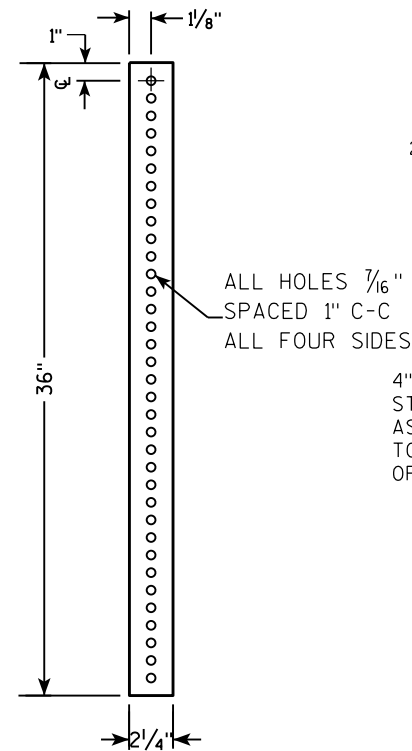
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

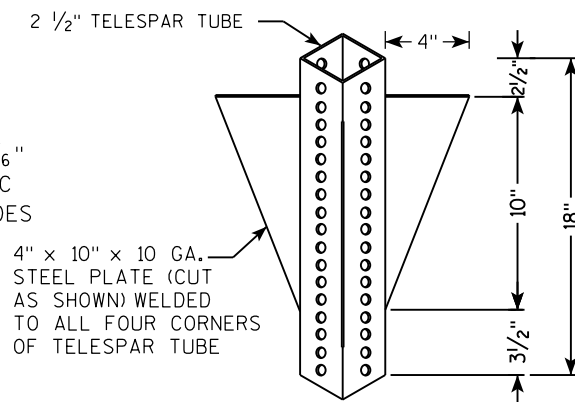
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

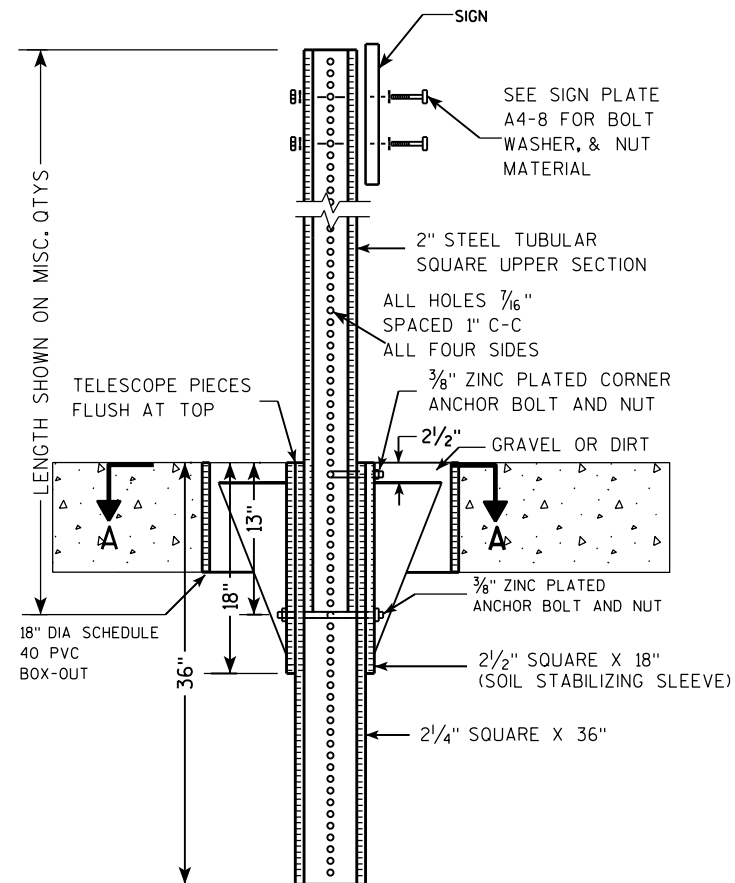
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



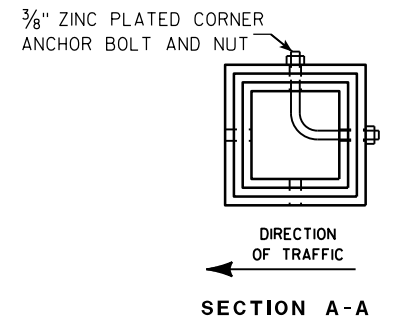
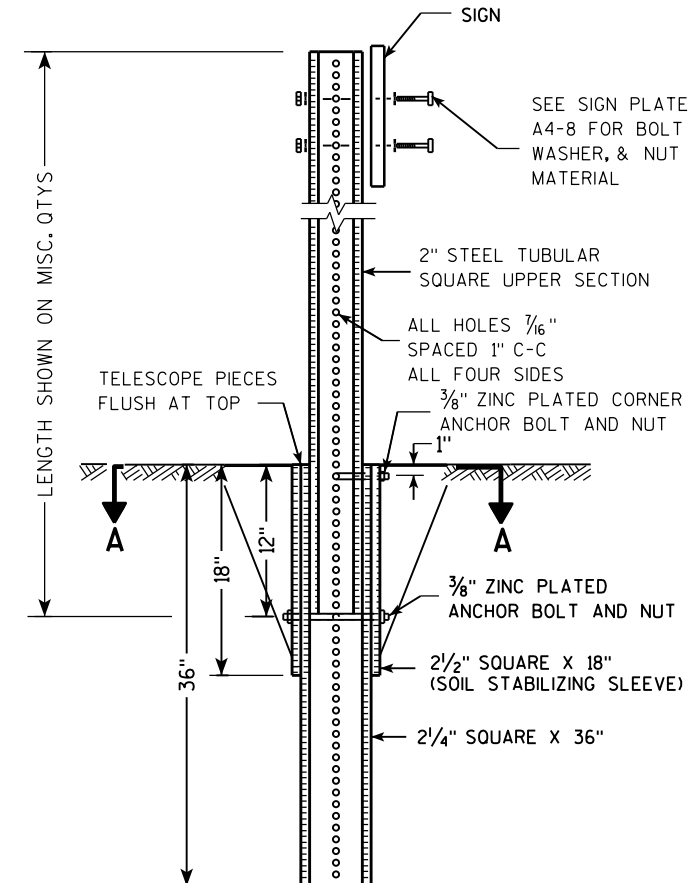
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



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



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

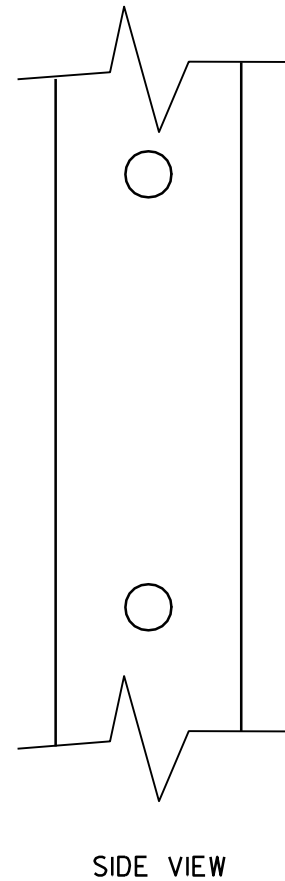
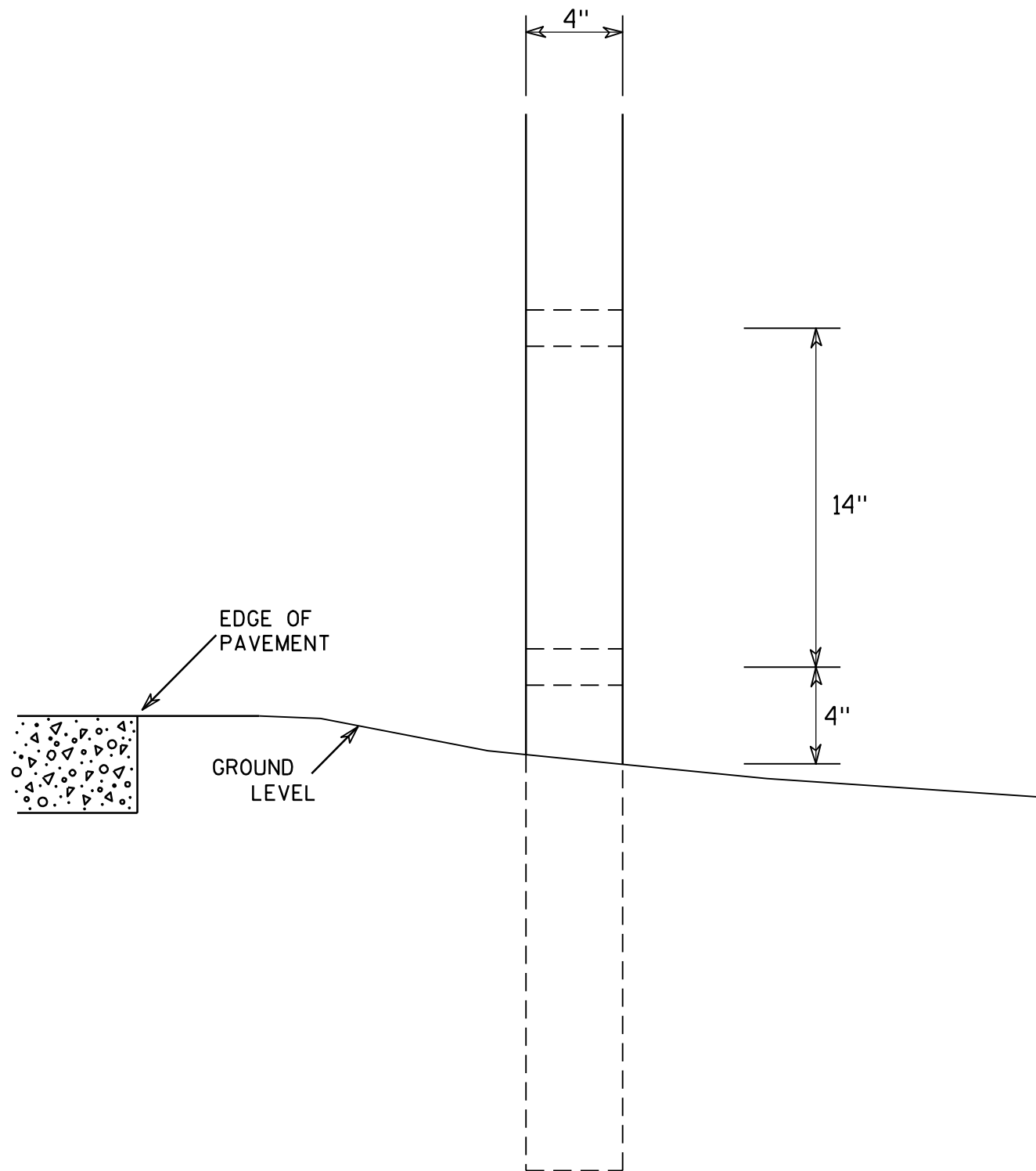
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E




GENERAL NOTES

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

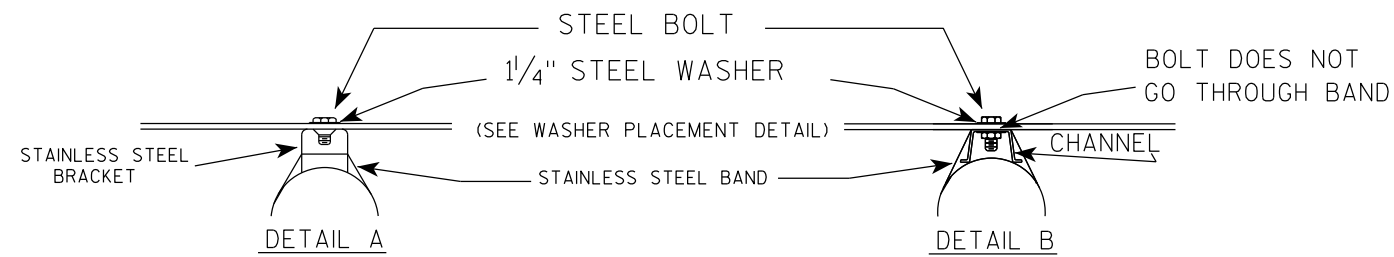
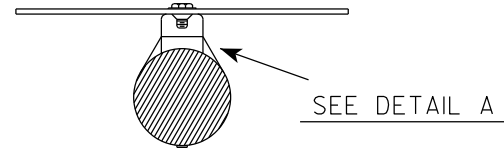
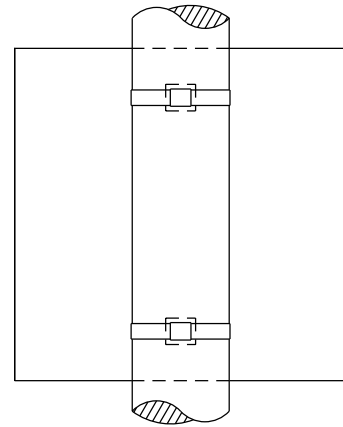
7

7

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

# BANDING

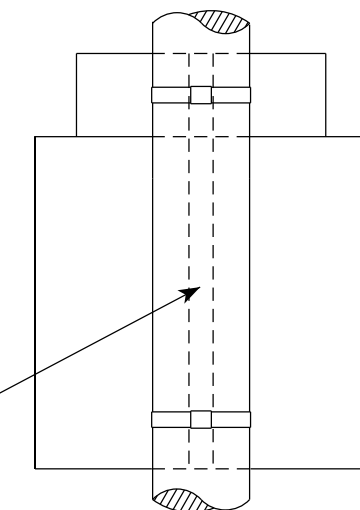
SINGLE SIGN



## GENERAL NOTES

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

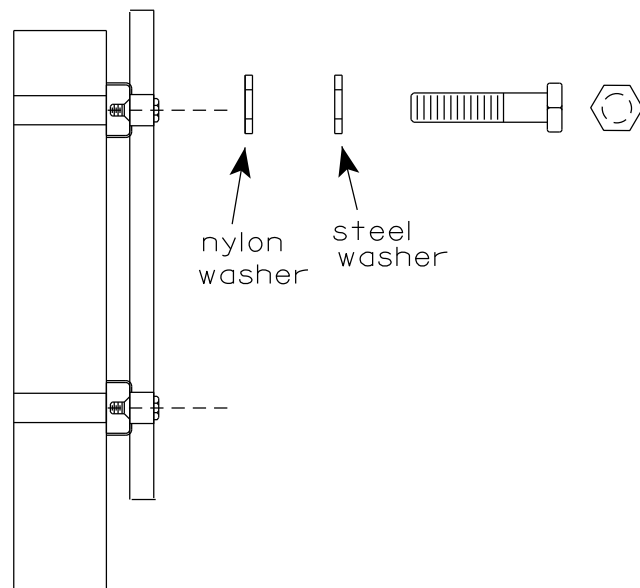
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET

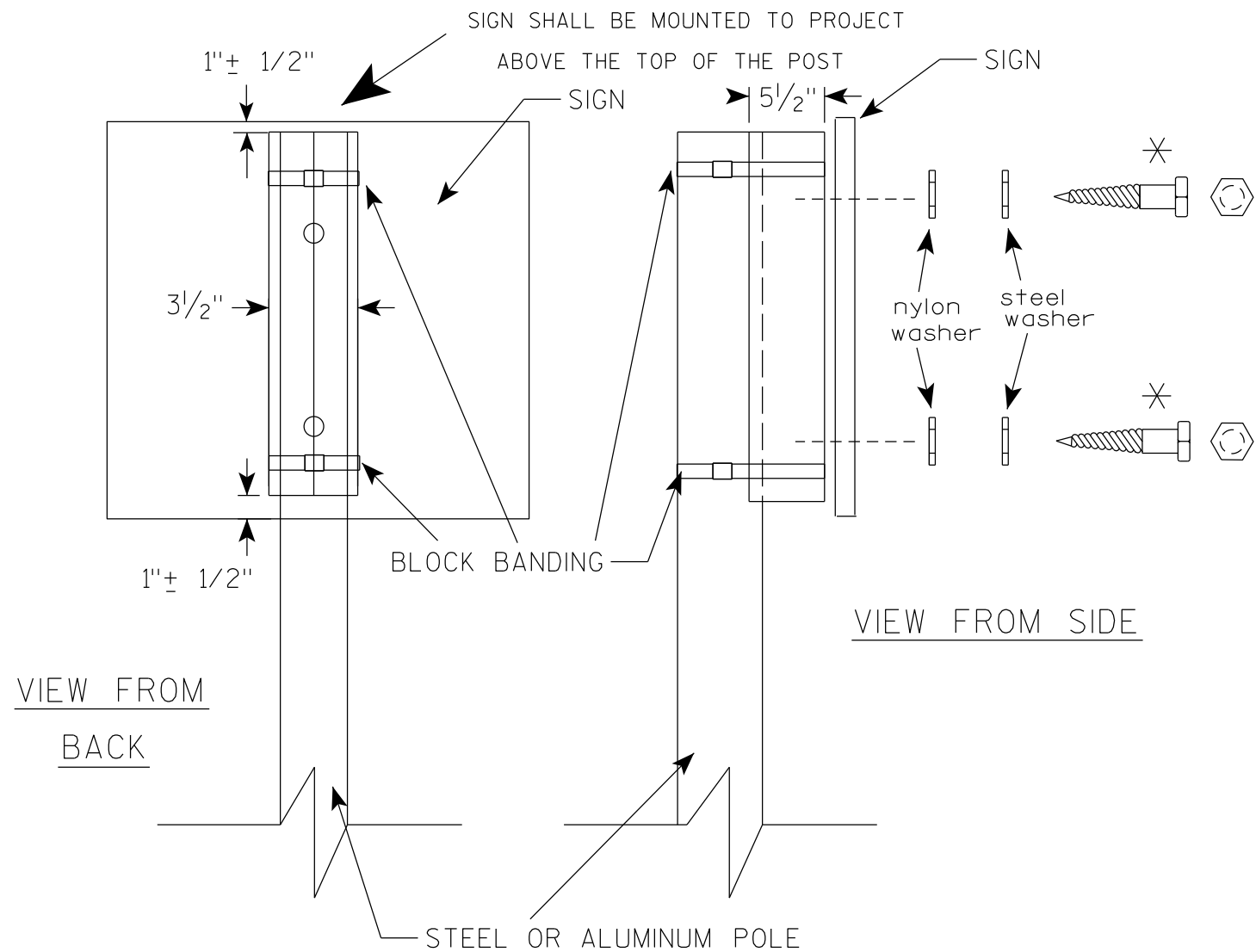


WASHER PLACEMENT



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

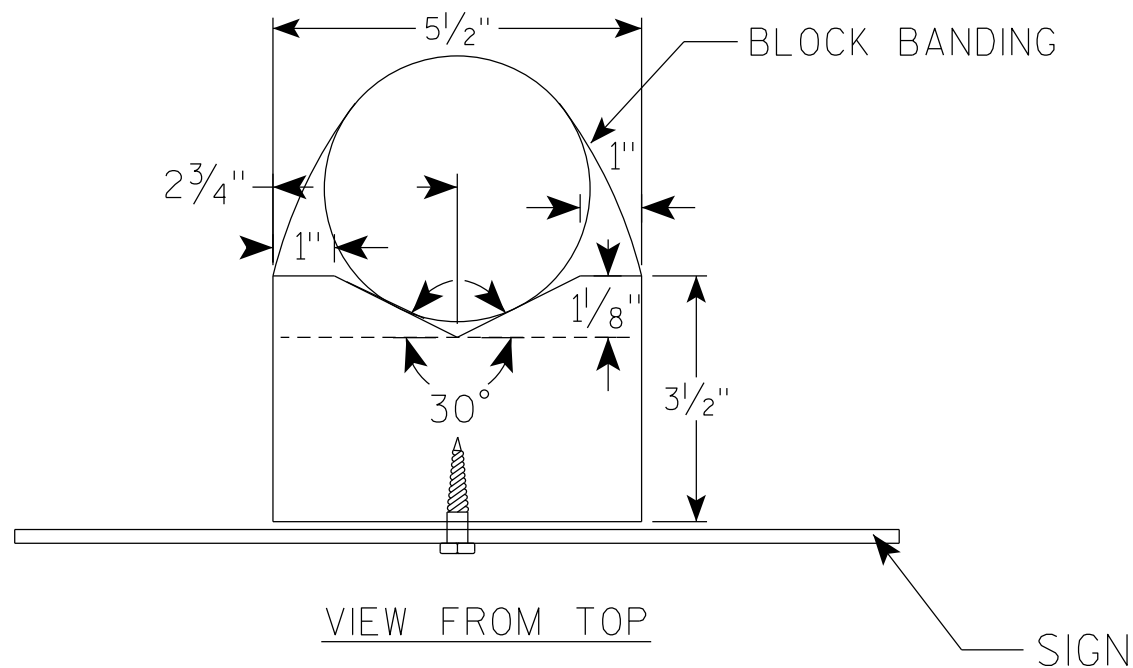
STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-9.4



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, 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 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

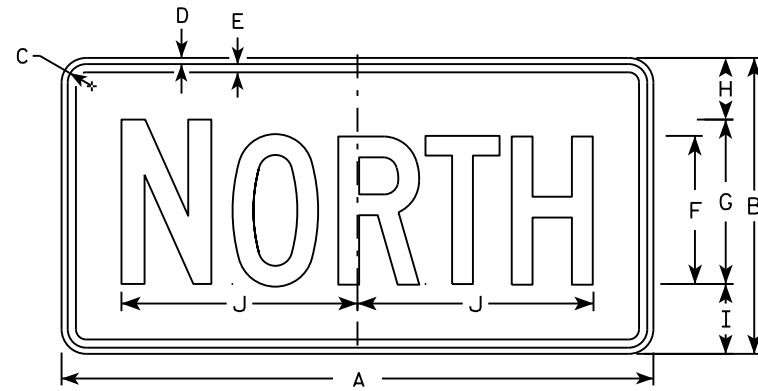
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



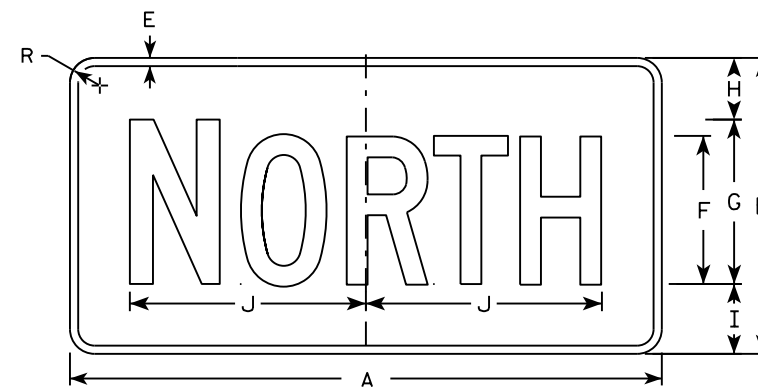
BLOCK BANDING DETAIL ( V-BLOCK OPTION )	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2

NOTES

- All Signs Type II - Type H
- 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.



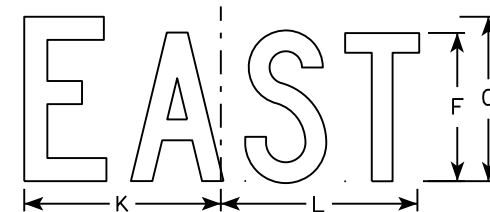
M3-1  
MM3-1  
MP3-1



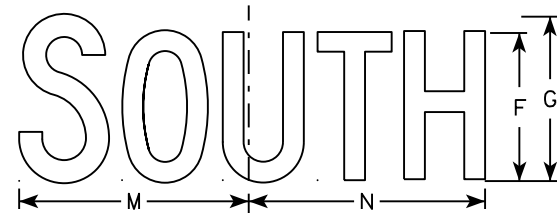
MB3-1  
MK3-1  
MN3-1



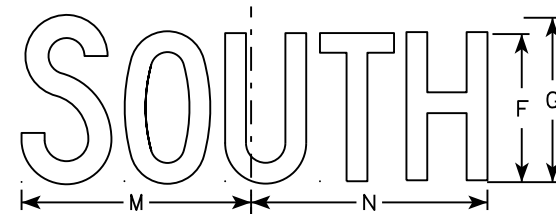
M3-2  
MM3-2  
MP3-2



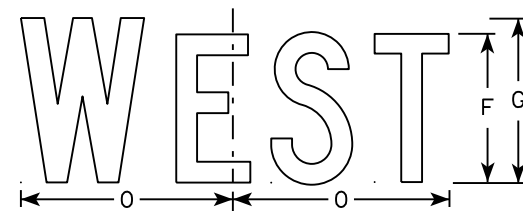
MB3-2  
MK3-2  
MN3-2



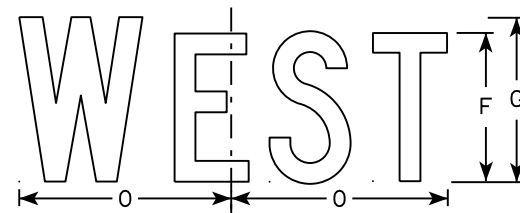
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

7

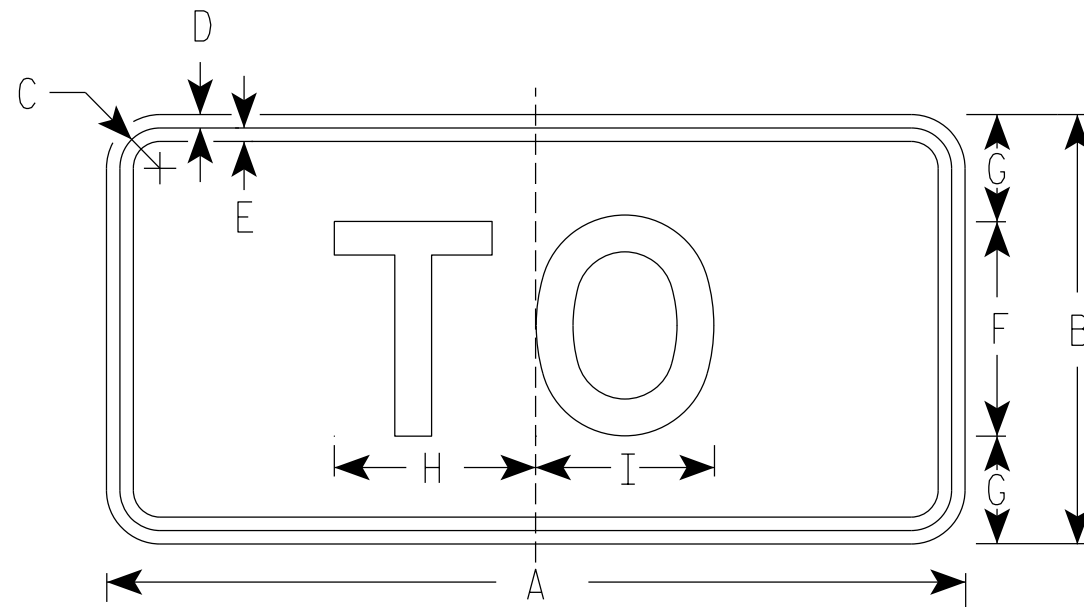
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

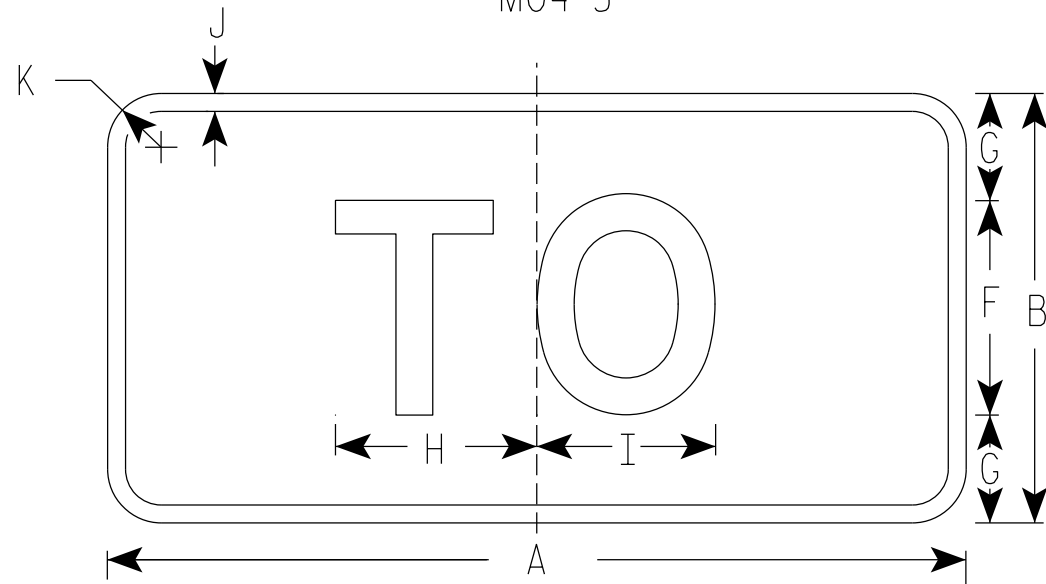
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14



M4-5  
MM4-5  
MP4-5  
M04-5



MB4-5  
MK4-5  
MN4-5

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White  
Message - Black  
MB4-5 Background - Blue  
Message - White  
MK4-5 Background - Green  
Message - White  
MM4-5 Background - White  
Message - Green  
MN4-5 Background - Brown  
Message - White  
MP4-5 Background - White  
Message - Blue  
M04-5 Background - Orange Type F Reflective  
Message - Black

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																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN  
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
State Traffic Engineer

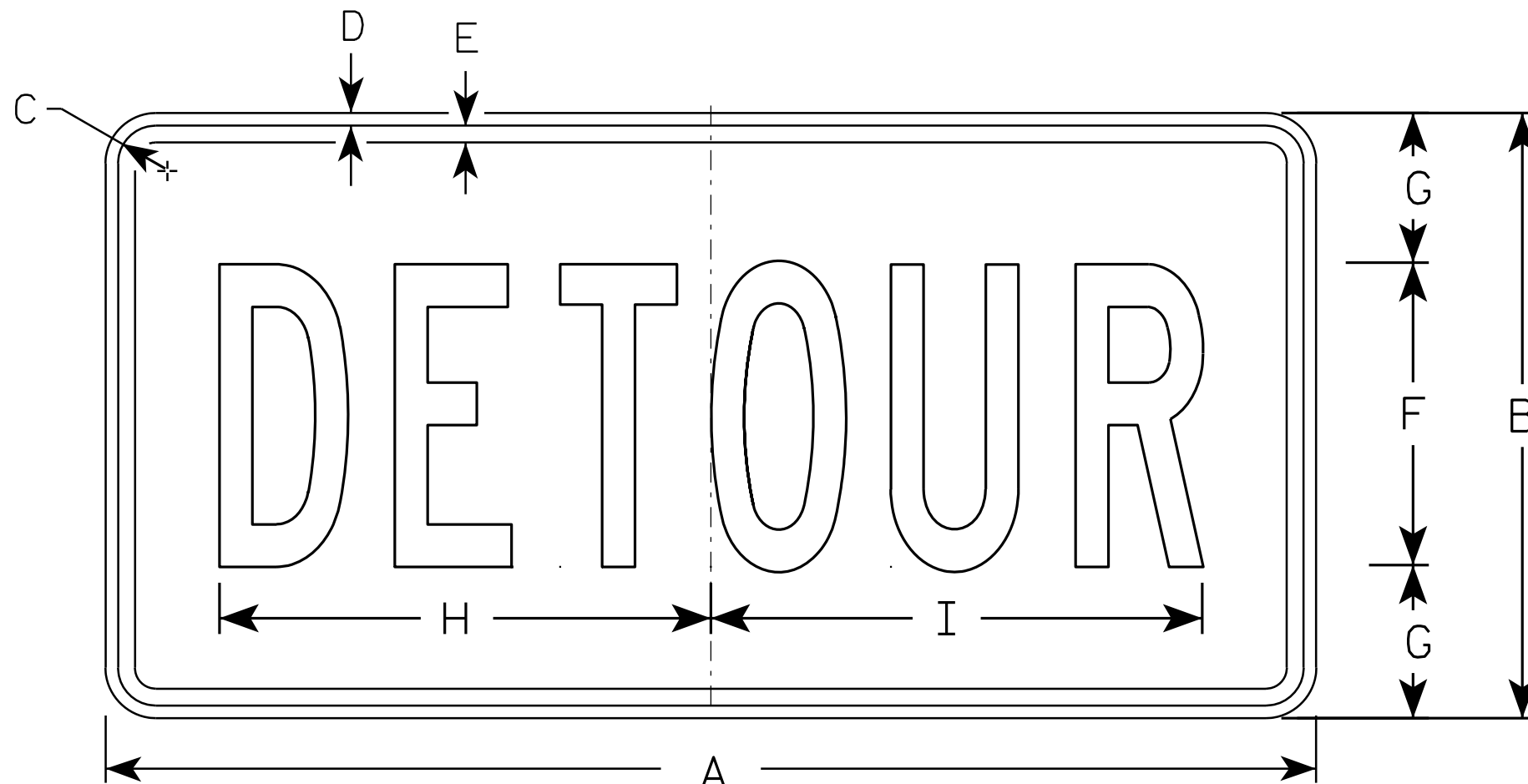
DATE 03/7/19 PLATE NO. M4-5.9

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - 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.



M4-8

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																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

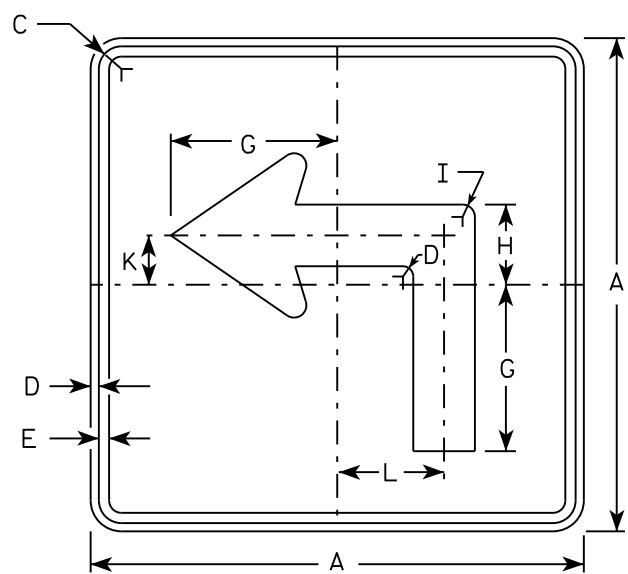
**STANDARD SIGN**  
**M4-8**

WISCONSIN DEPT OF TRANSPORTATION

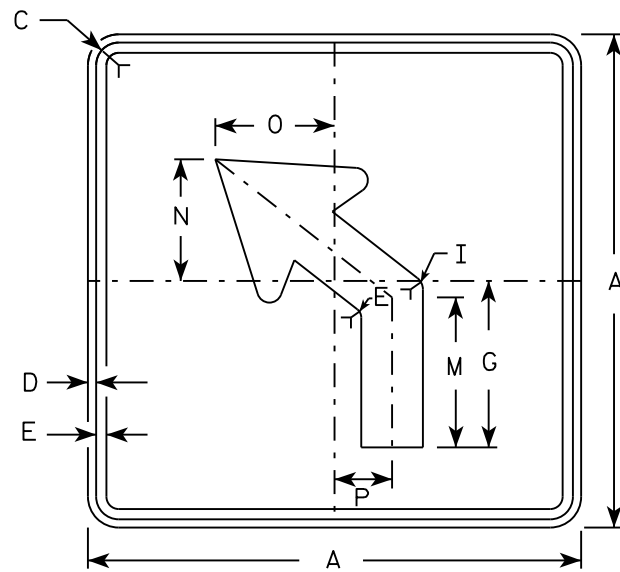
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

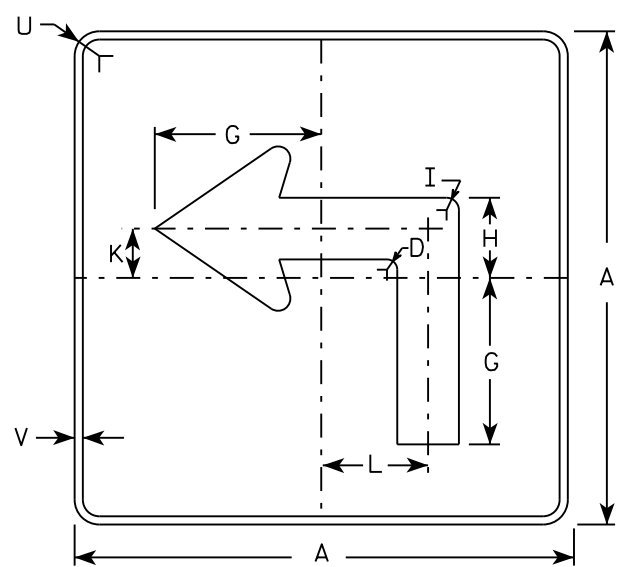
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



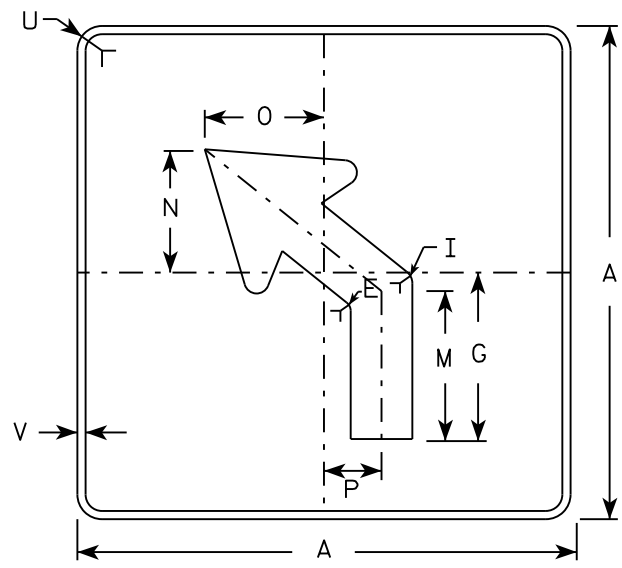
M5-1L  
MM5-1L  
M05-1L  
MP5-1L



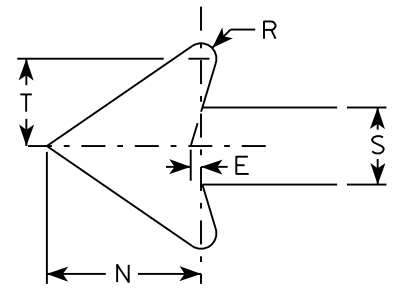
M5-2L  
MM5-2L  
M05-2L  
MP5-2L



MB5-1L  
MK5-1L  
MN5-1L  
MR5-1L



MB5-2L  
MK5-2L  
MN5-2L  
MR5-2L



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 - Type H Reflective  
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.

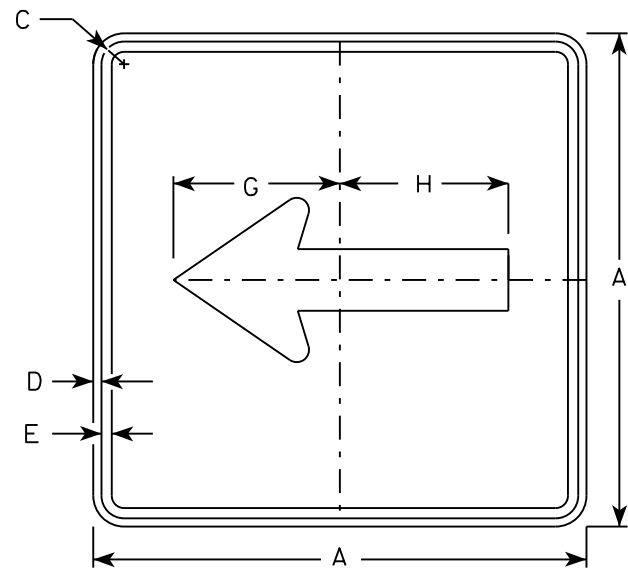
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

STANDARD SIGN  
M5-1 & M5-2

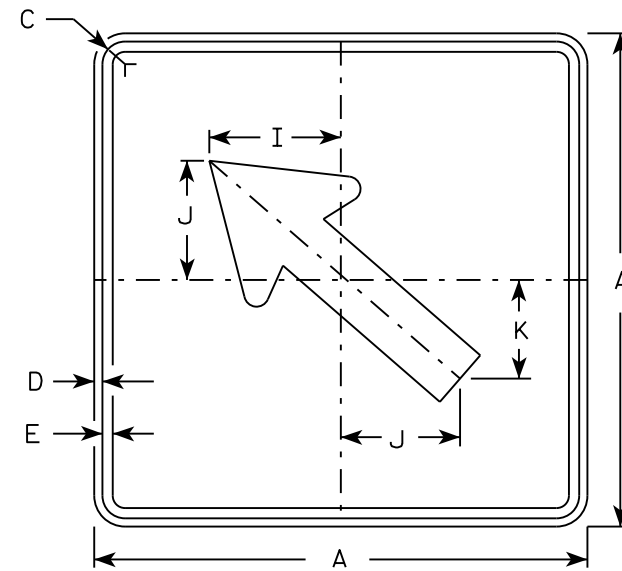
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

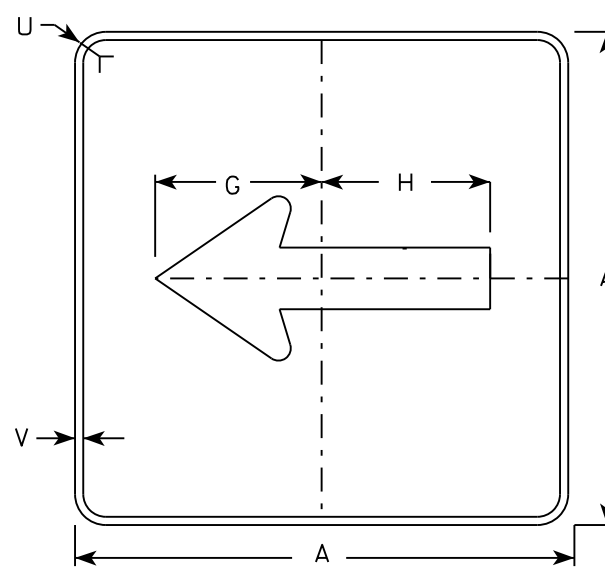
DATE 10/15/15 PLATE NO. M5-1.13



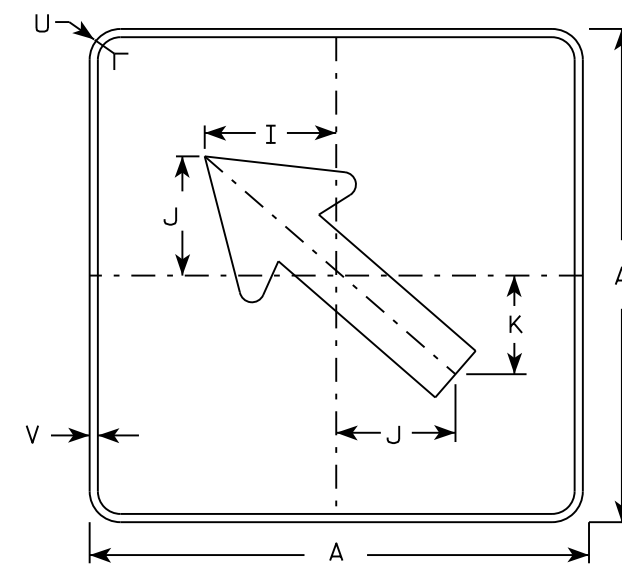
M6-1  
MM6-1  
M06-1  
MP6-1



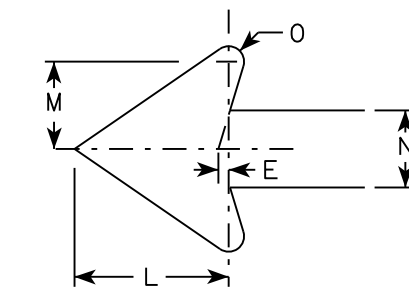
M6-2  
MM6-2  
M06-2  
MP6-2



MB6-1  
MK6-1  
MN6-1  
MR6-1



MB6-2  
MK6-2  
MN6-2  
MR6-2



NOTES

- Signs are Type II - Type H 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

7

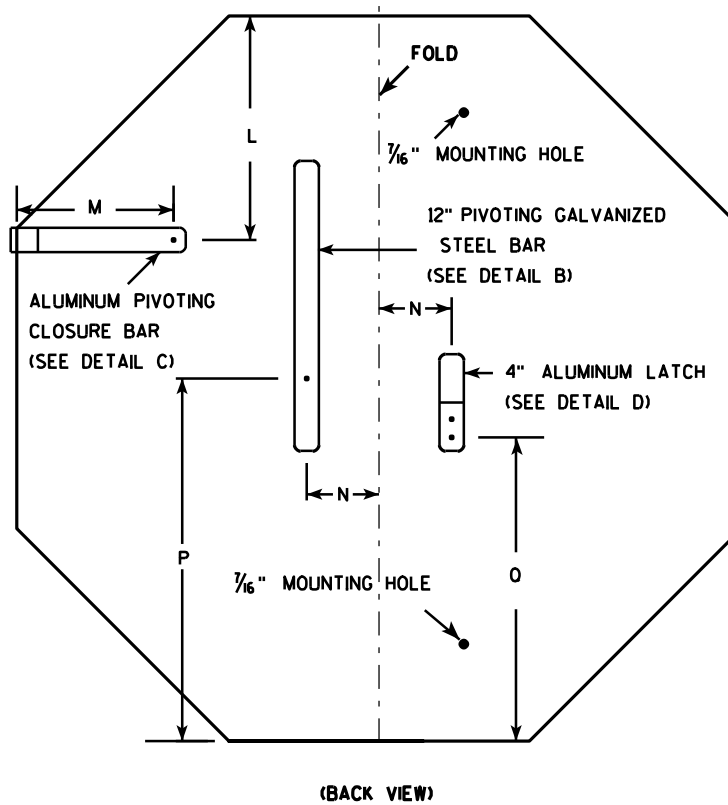
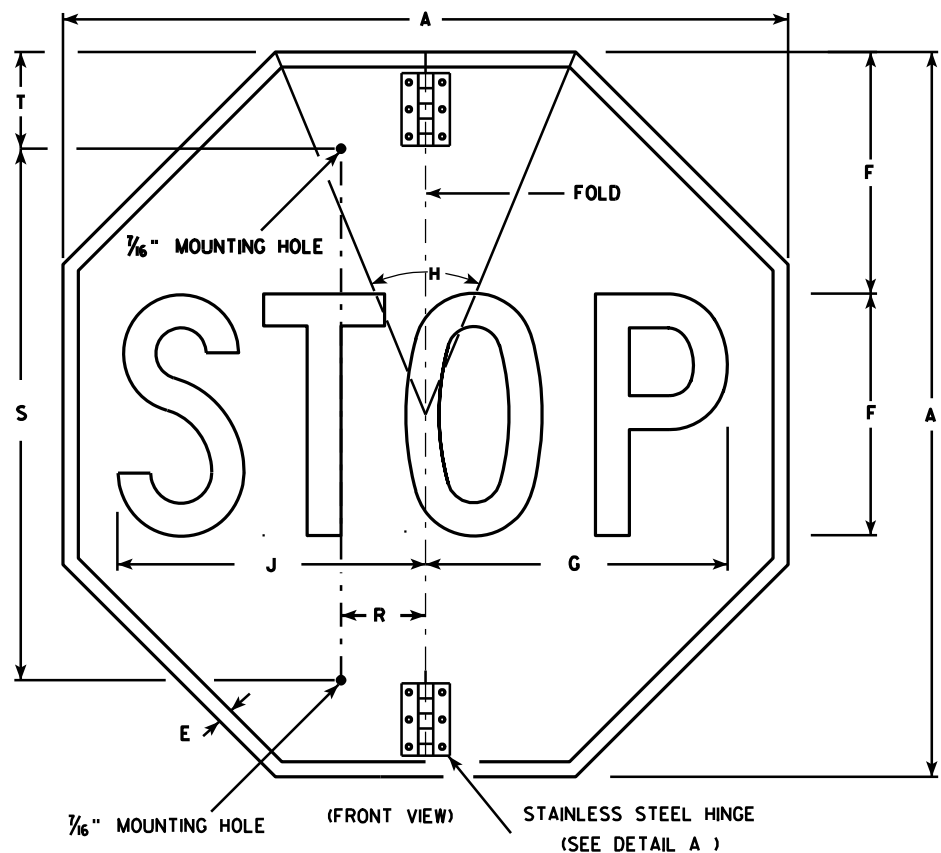
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN  
M6-1 & M6-2  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

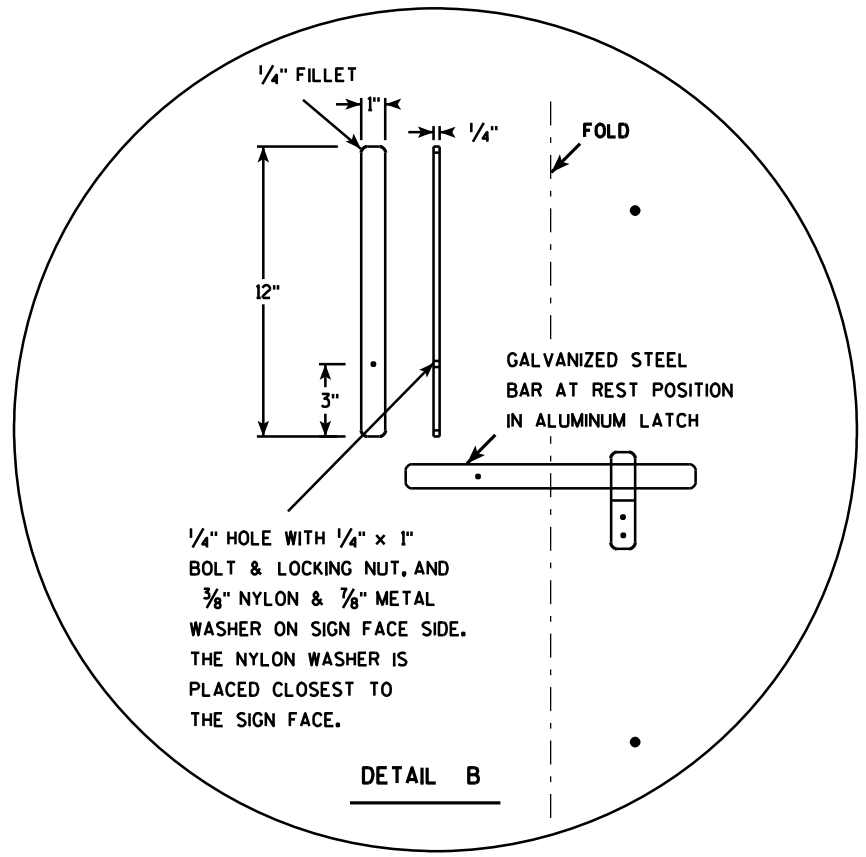
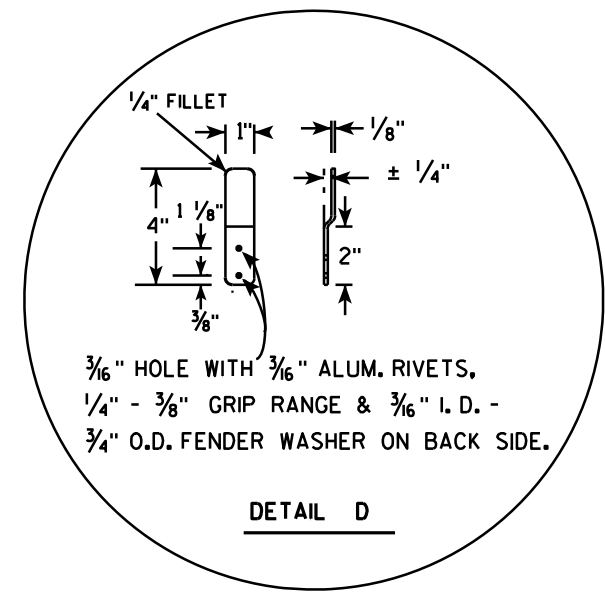
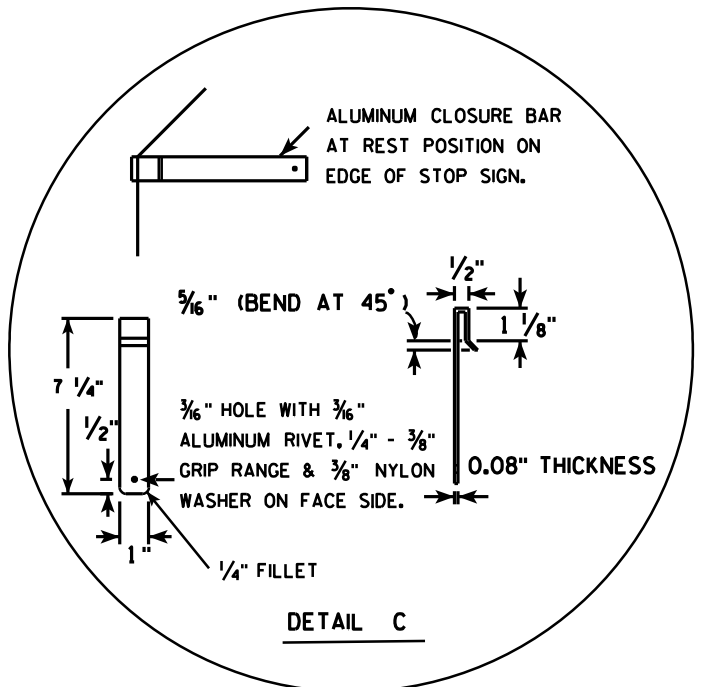
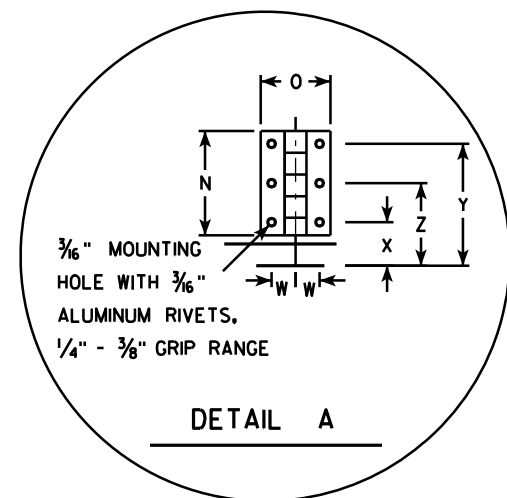
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Red  
Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



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	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			1 1/8	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			1 1/8	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			1 1/8	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

STANDARD SIGN  
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

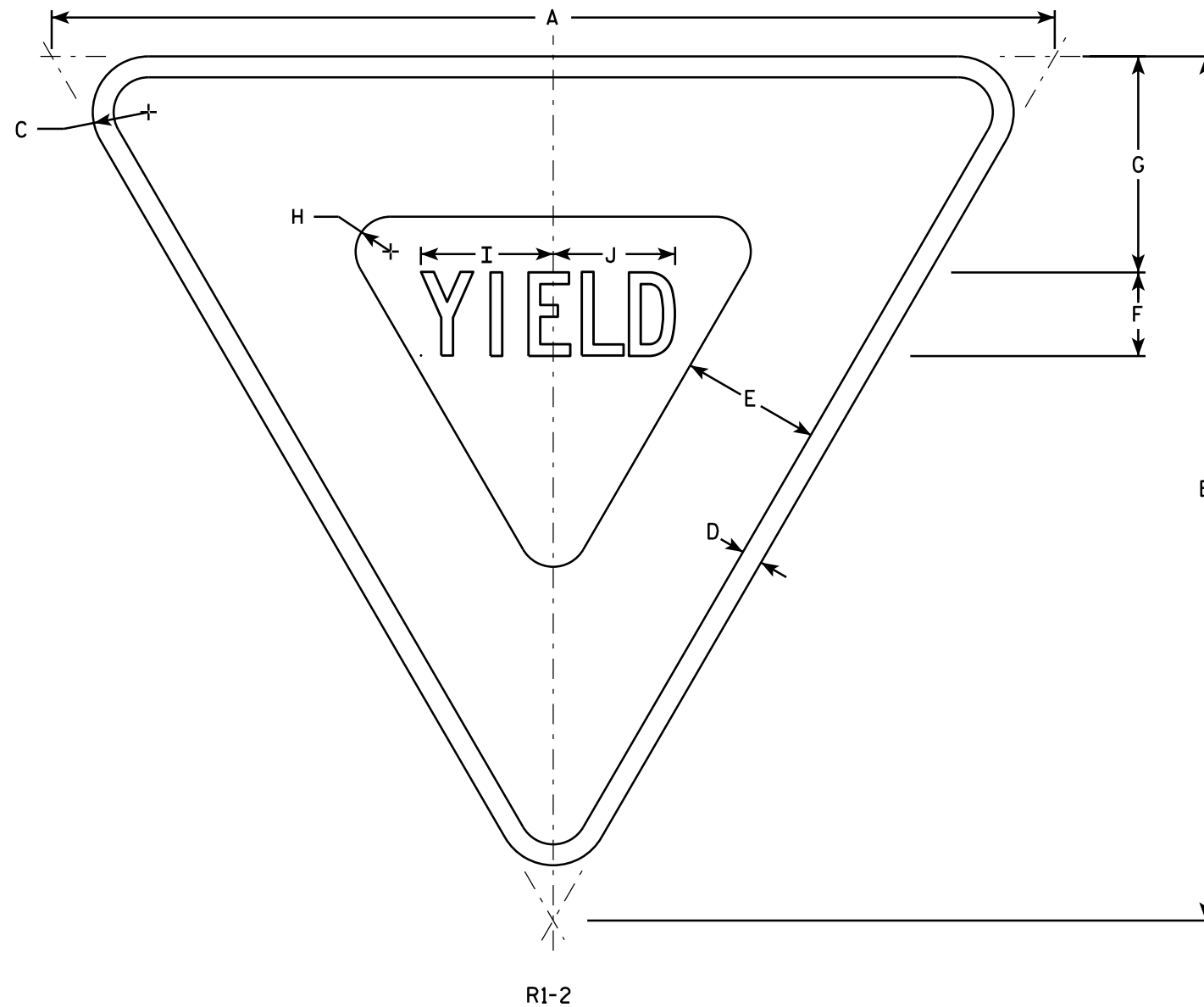
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.



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

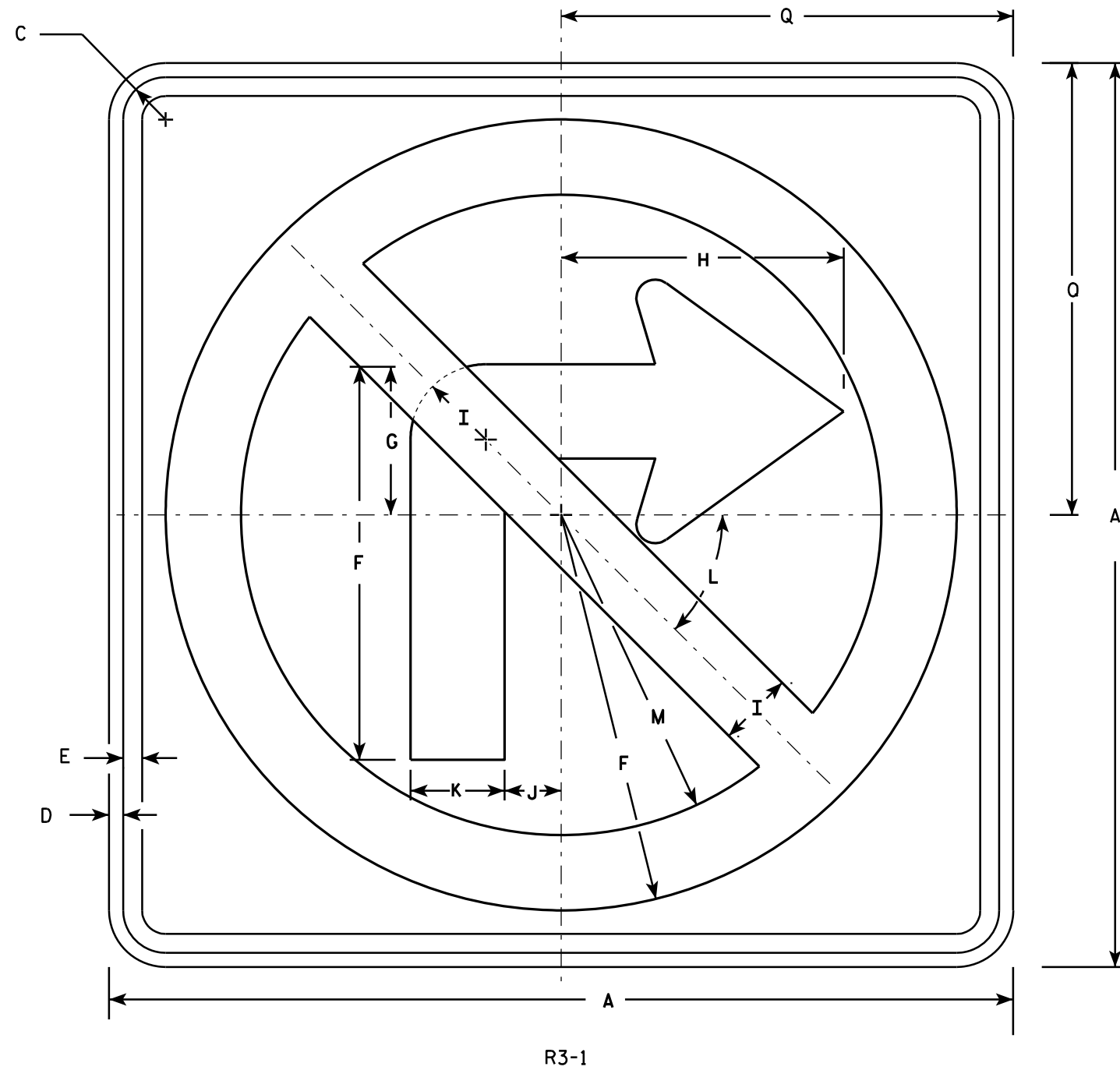
**STANDARD SIGN**  
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

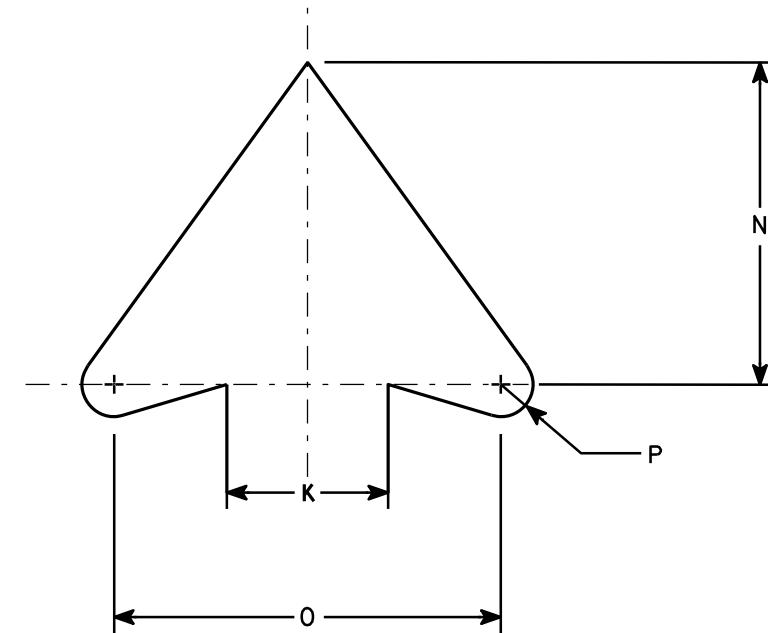
DATE 10/13/14 PLATE NO. R1-2.12

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

R3-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

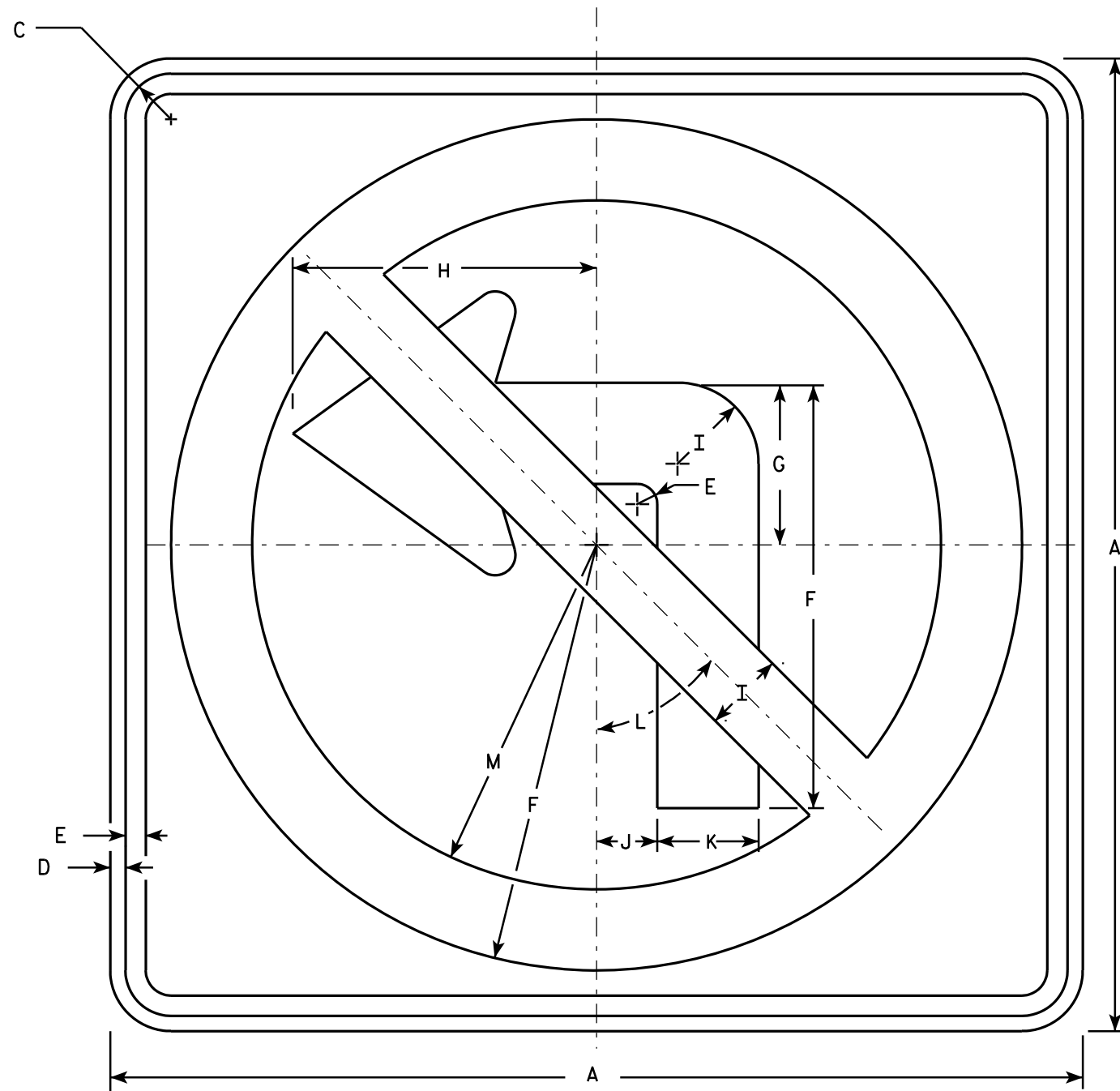
**STANDARD SIGN**  
**R3-1**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

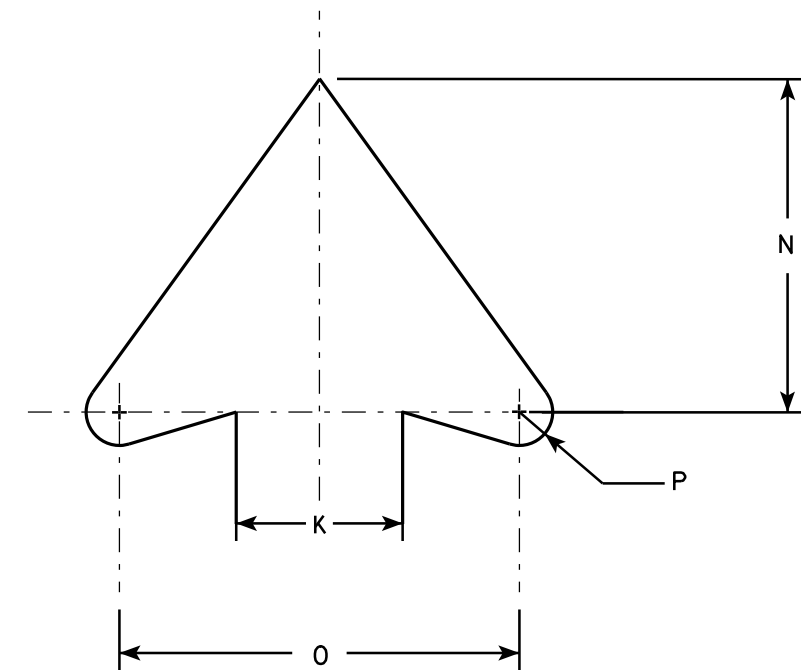
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. Ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

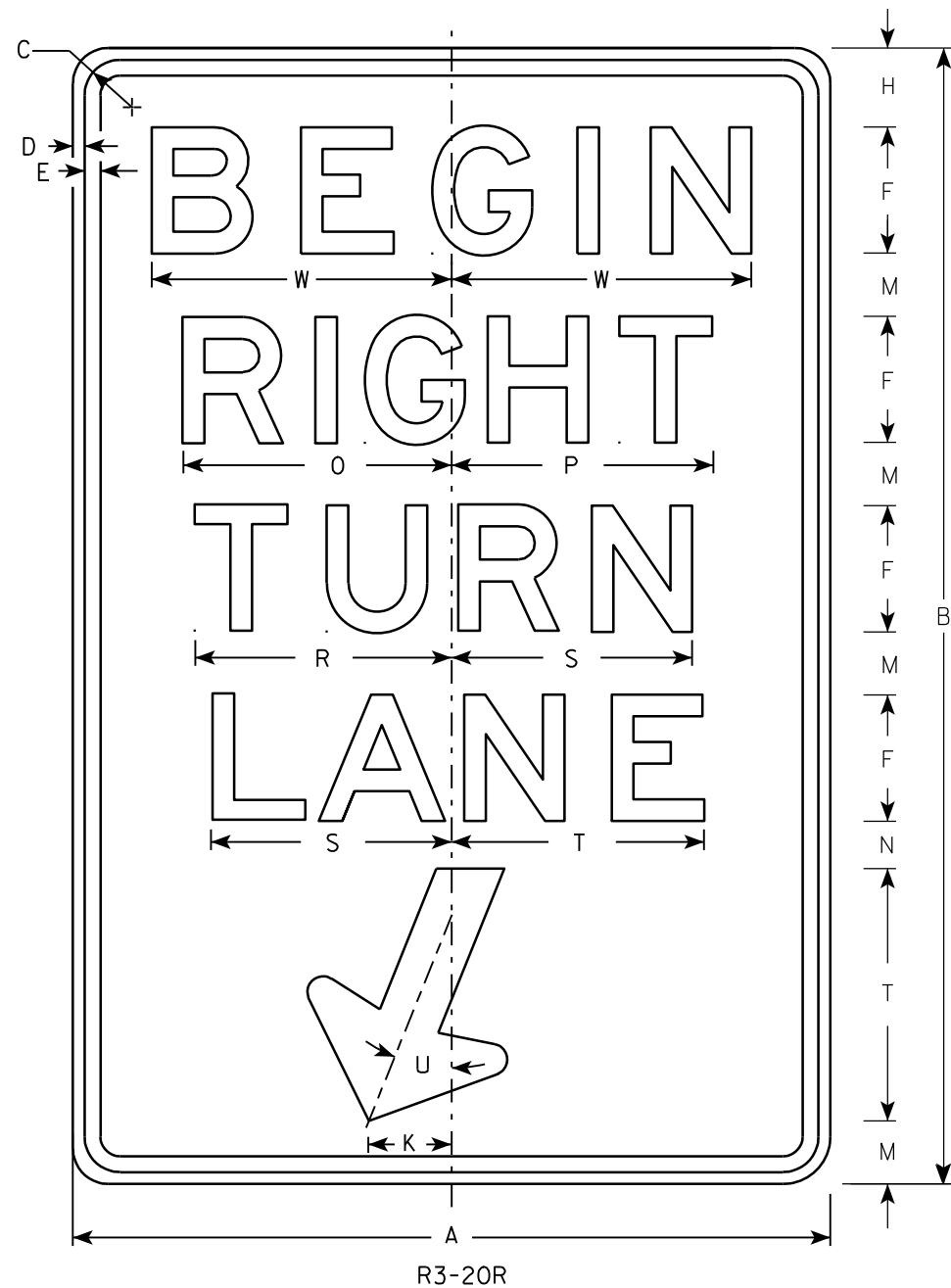
**STANDARD SIGN**  
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

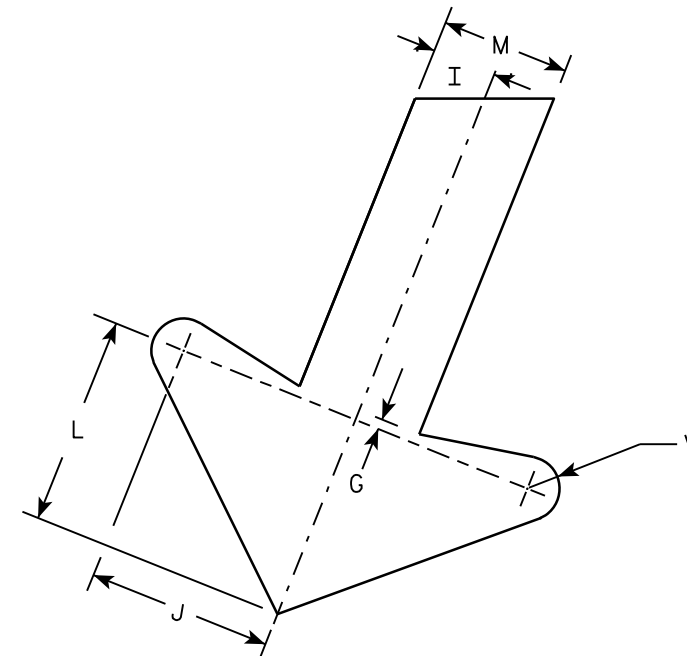
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



R3-20R

NOTES

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



ARROW DETAIL

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	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN  
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

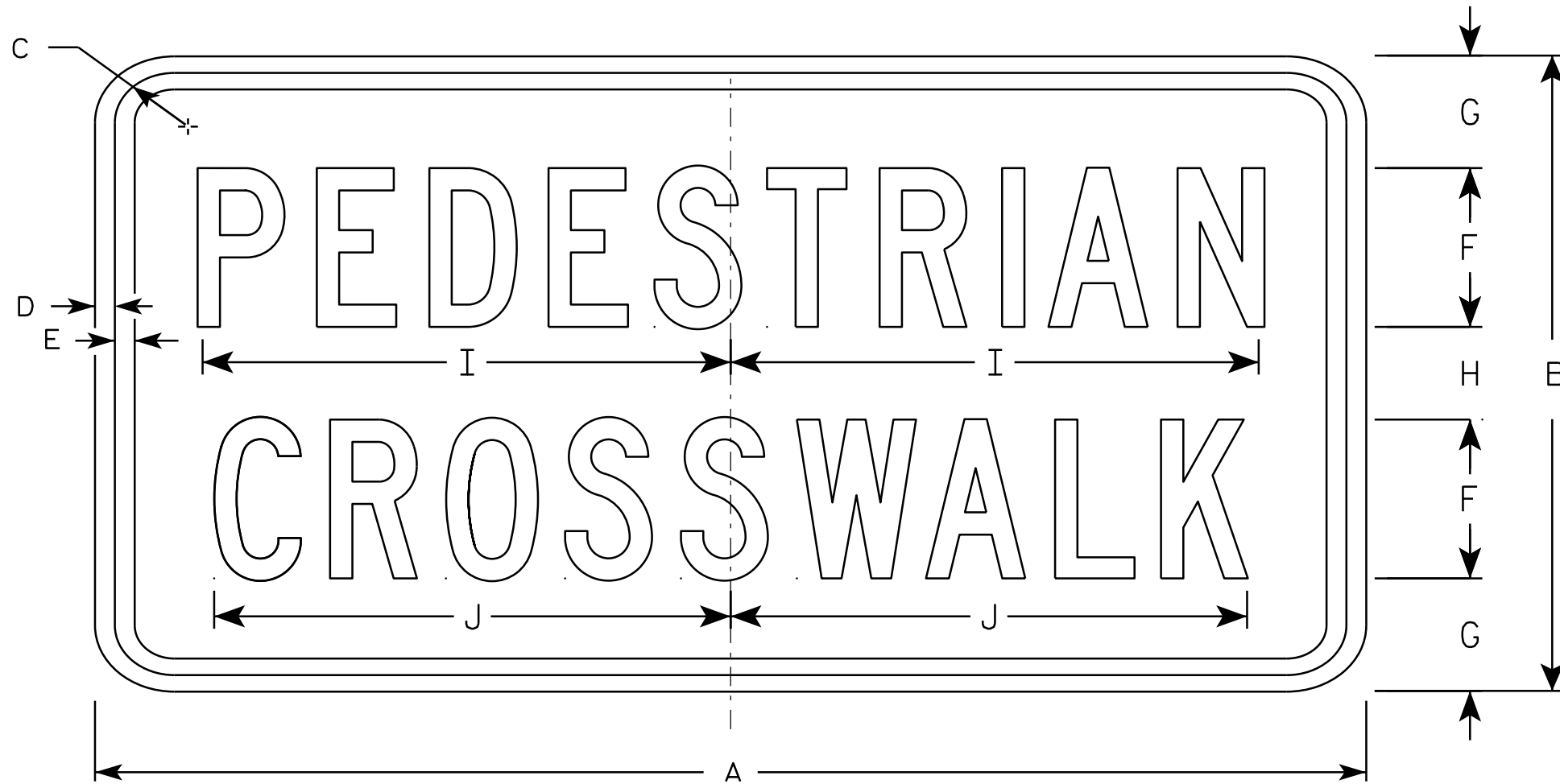
DATE 10/18/10 PLATE NO. R3-20R.6

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



**NOTES**

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



R9-8

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 3/4	1/2	1/2	3	2 1/8	1 3/4	10	9 3/4																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	9 3/4																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	13	13																	3.75
4																											
5																											

**STANDARD SIGN**  
R9-8

WISCONSIN DEPT OF TRANSPORTATION

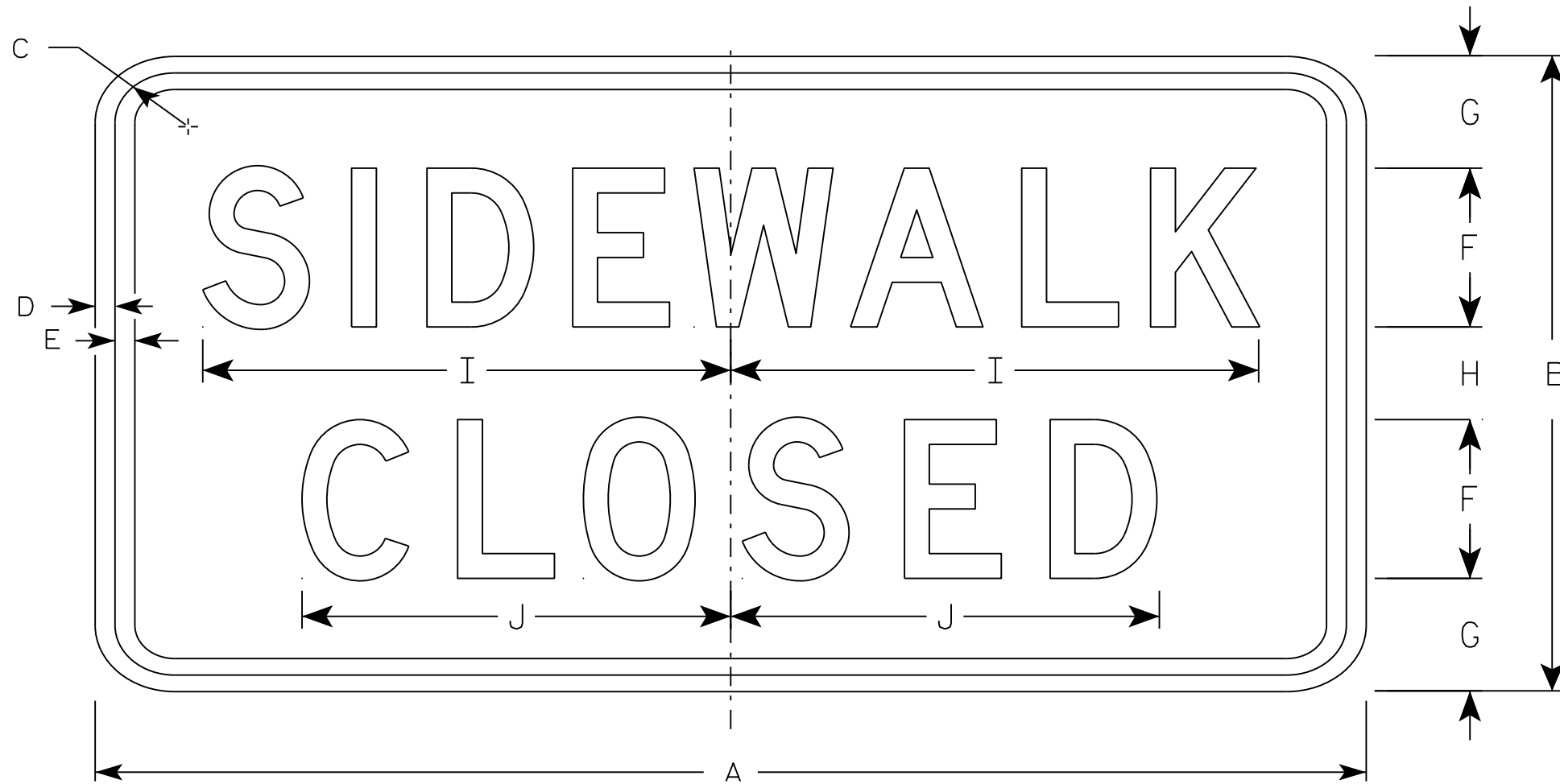
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/17/16 PLATE NO. R9-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

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



R9-9

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 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN  
R9-9

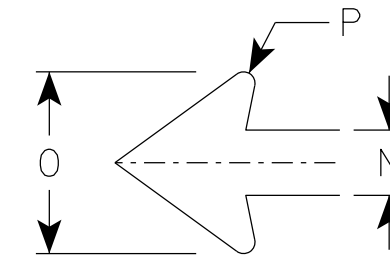
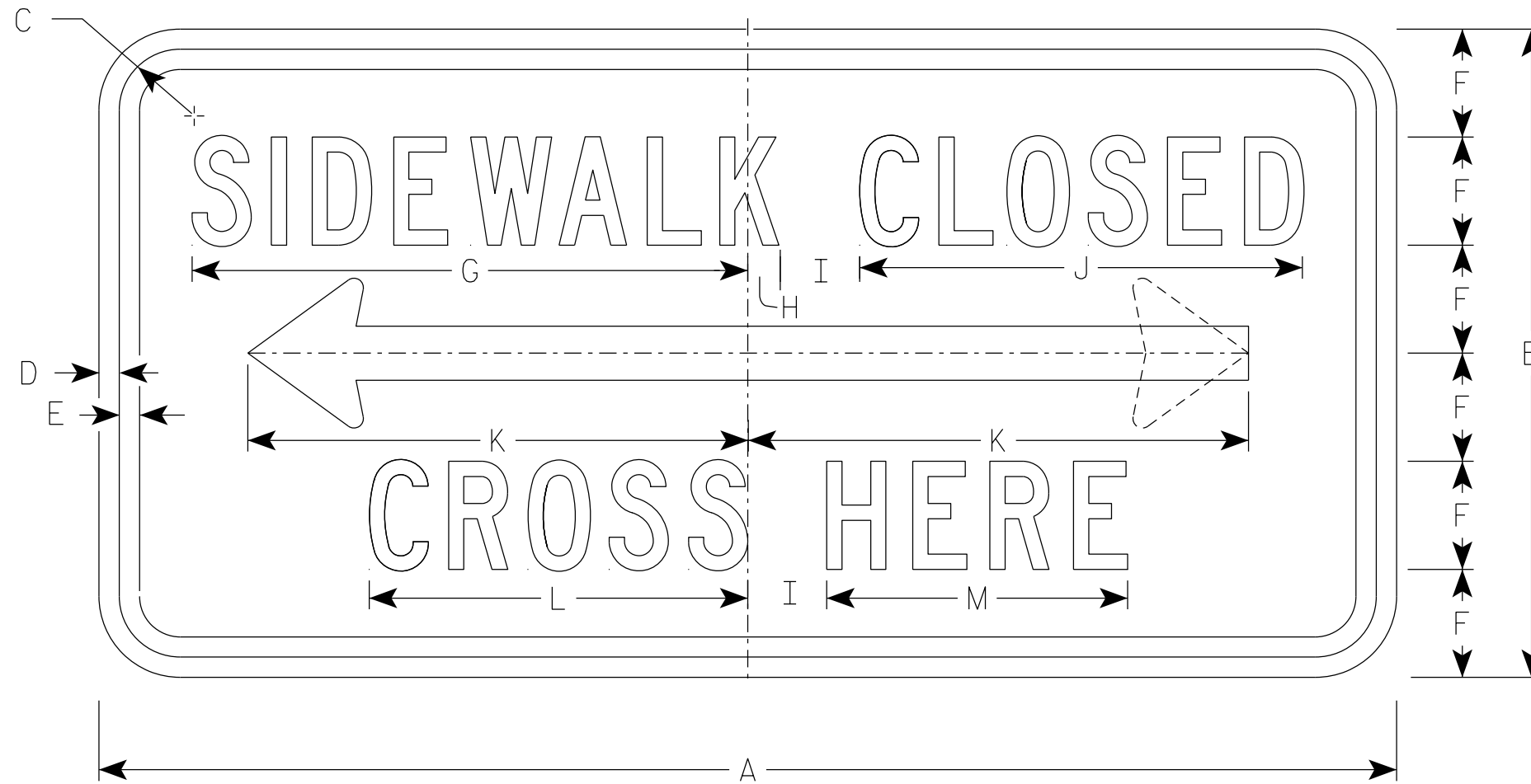
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 8/11/16 PLATE NO. R9-9.6

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. Use Size 2 for Sidewalks. Use Size 3 for paths and Trails.
6. R9-11AD (double arrow)  
R9-11AL (left arrow)  
R9-11AR (right arrow)



ARROW DETAIL

R9-11A

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 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
2M	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
3	30	15	1 1/8	3/8	1/2	2 1/2	12 3/4	1/2	2	10 1/4	12 3/8	8 5/8	6 3/4	1 1/4	3 5/8	1/4											3.125
4																											
5																											

STANDARD SIGN  
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R9-11A.5

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



R10-71

**NOTES**

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



R10-71L



R10-71R

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	R10-71L&R	R10-71
																											Area sq. ft.	Area sq. ft.
1																												
2S	72	36	2 1/4	3/4	1	18	5	4	6	20 5/8	11 3/4	9 1/8	8 1/2	12 7/8	9 7/8	16 1/8	23 7/8	30	5 5/8	26 3/4	66	23 5/8	8 3/4	13	26 7/8	27	18.0	16.5
2M	72	36	2 1/4	3/4	1	18	5	4	6	20 5/8	11 3/4	9 1/8	8 1/2	12 7/8	9 7/8	16 1/8	23 7/8	30	5 5/8	26 3/4	66	23 5/8	8 3/4	13	26 7/8	27	18.0	16.5
3																												
4																												
5																												

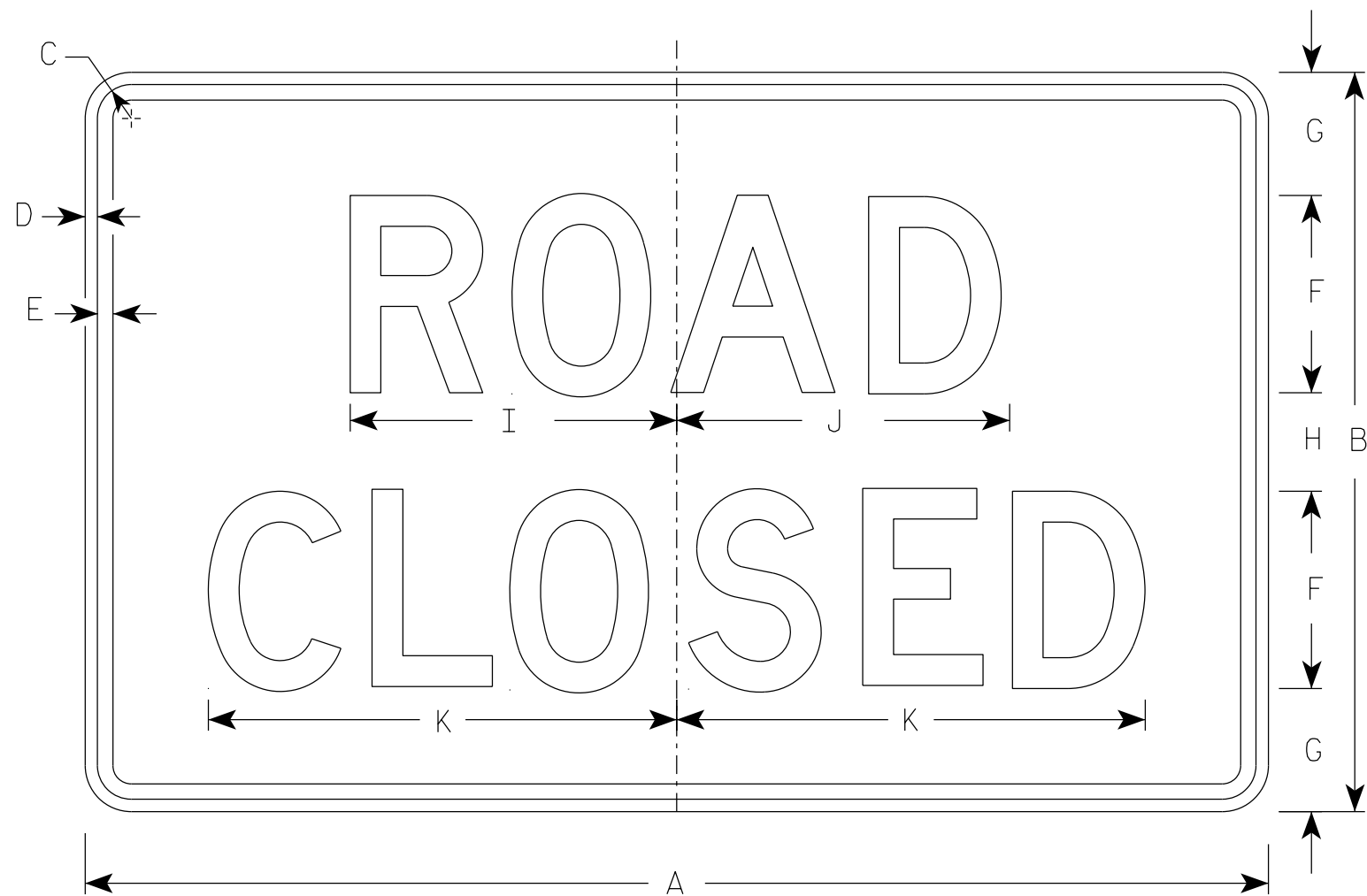
**STANDARD SIGN**  
R10-71

WISCONSIN DEPT OF TRANSPORTATION

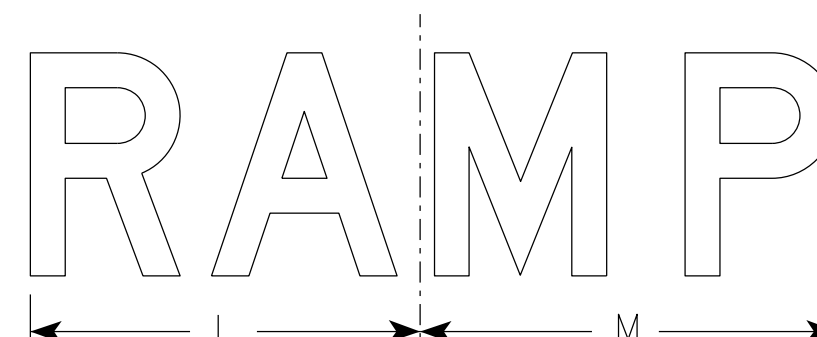
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-71.3

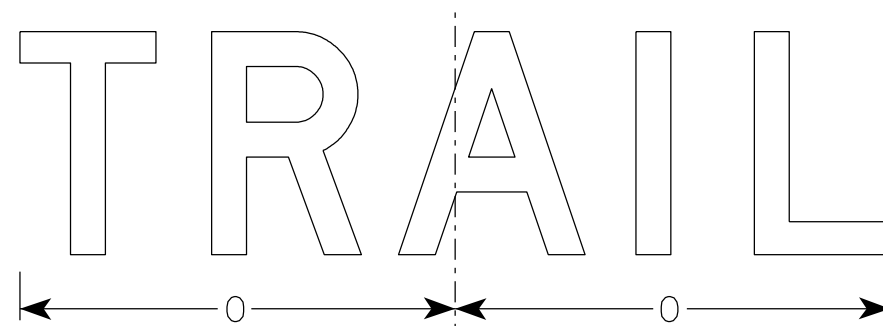
PROJECT NO: \_\_\_\_\_ SHEET NO: **E**



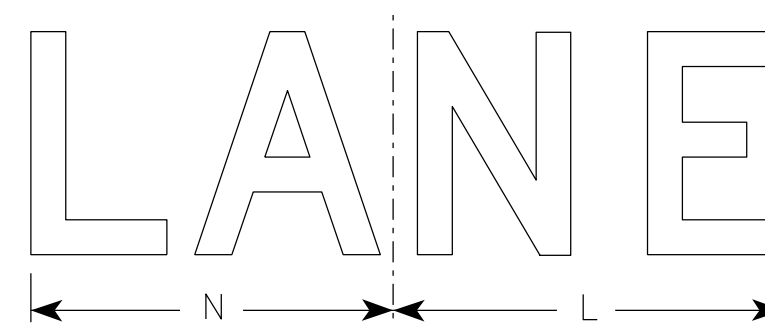
R11-2



R11-2R



R11-2T



R11-2L

NOTES

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

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	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN  
R11-2

WISCONSIN DEPT OF TRANSPORTATION

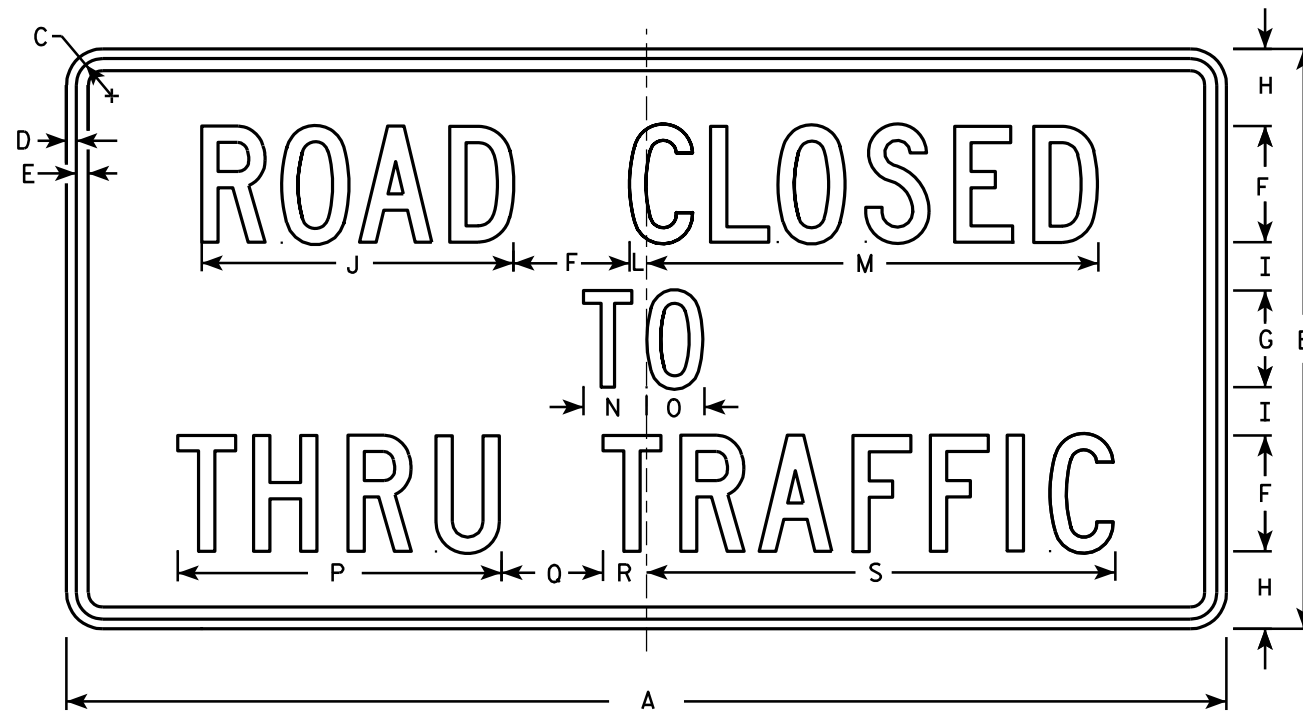
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

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



R11-4

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

**STANDARD SIGN**  
R11 - 4

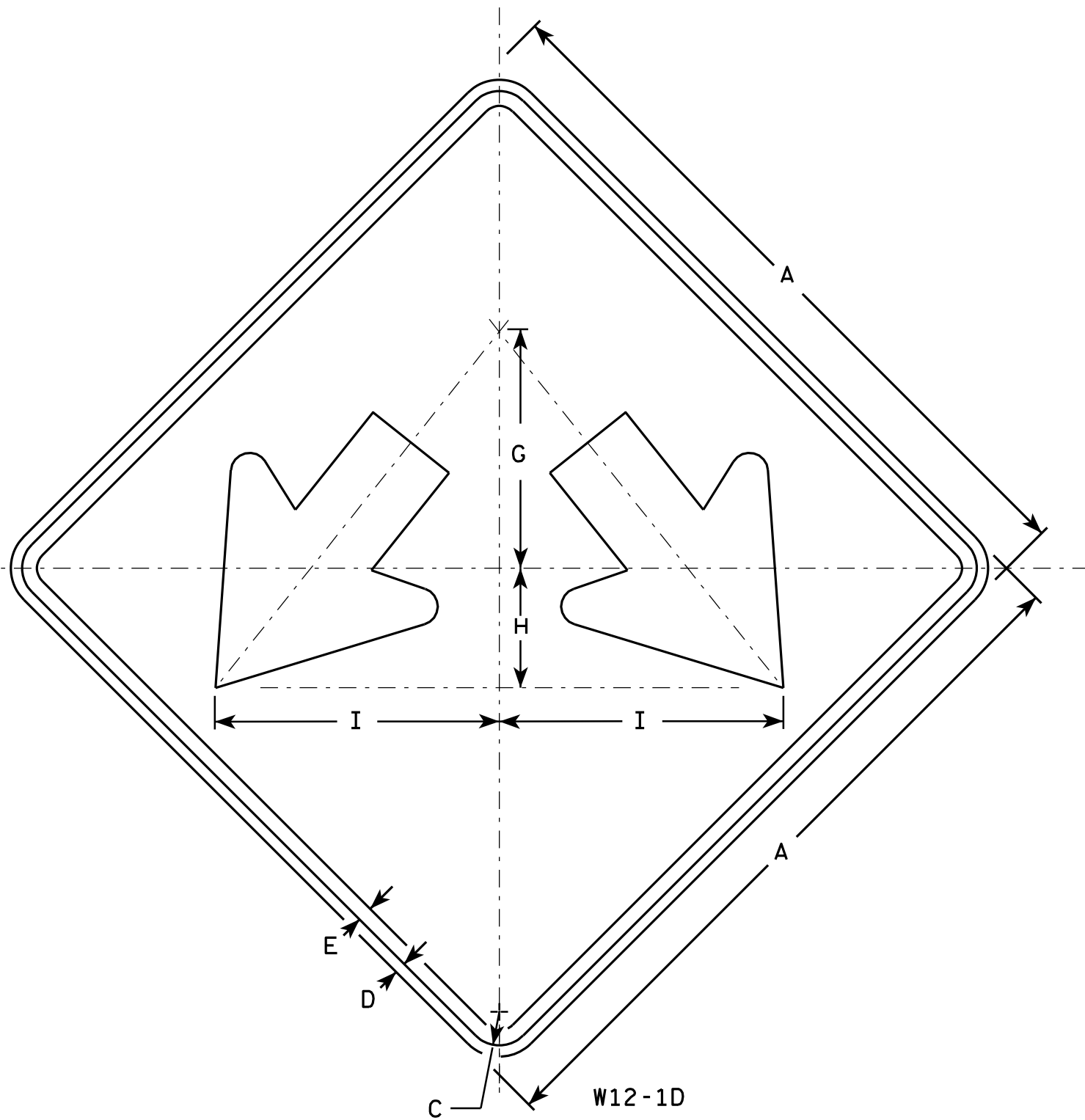
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*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED *Matthew R. Raush*  
for State Traffic Engineer

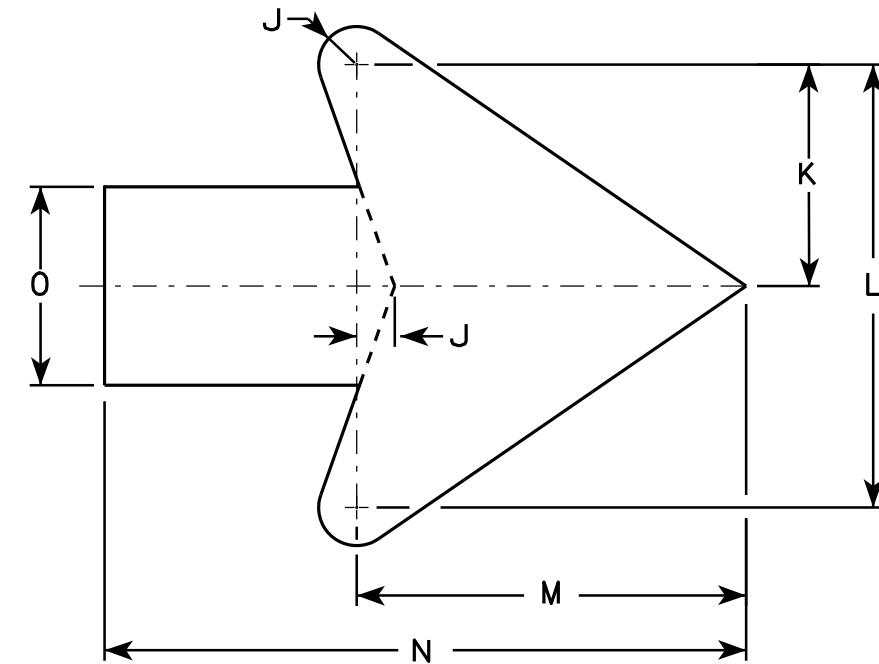
DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. Ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

**STANDARD SIGN**  
**W12-1D**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

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



W16-9P

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 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN  
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch  
State Traffic Engineer

DATE 3/7/19 PLATE NO. W16-9P.7

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

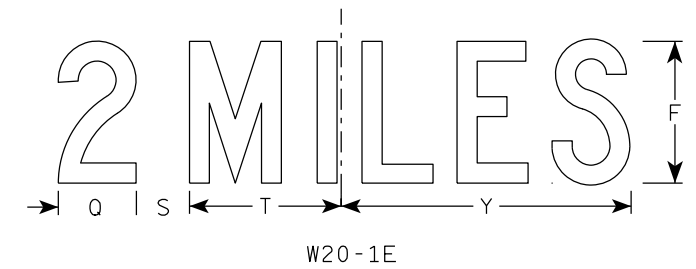
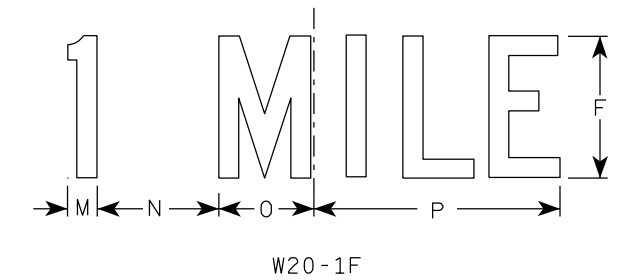
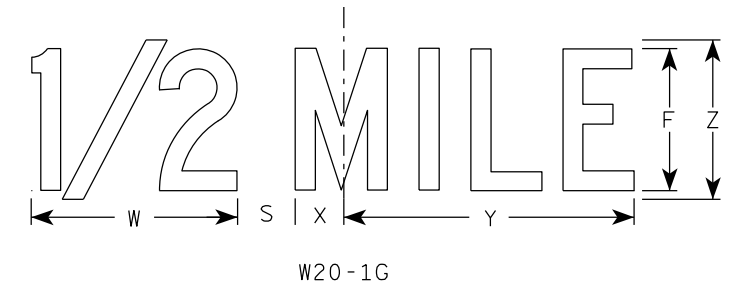
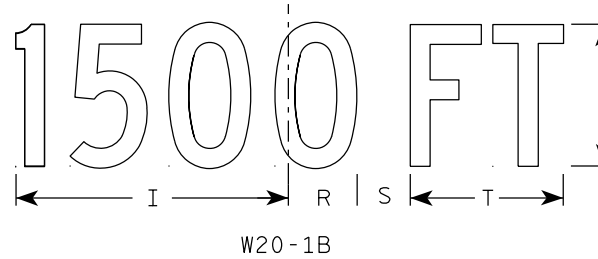
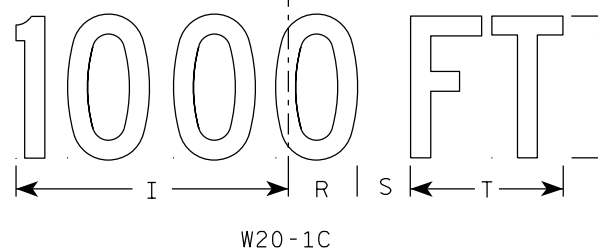
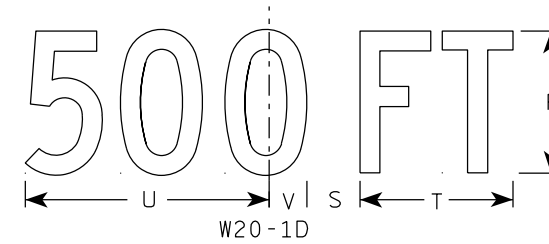
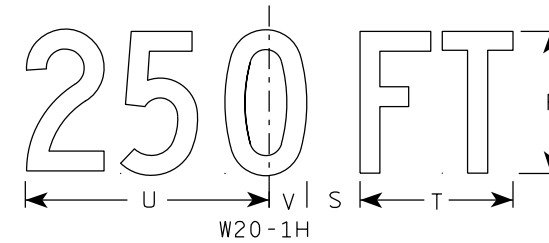
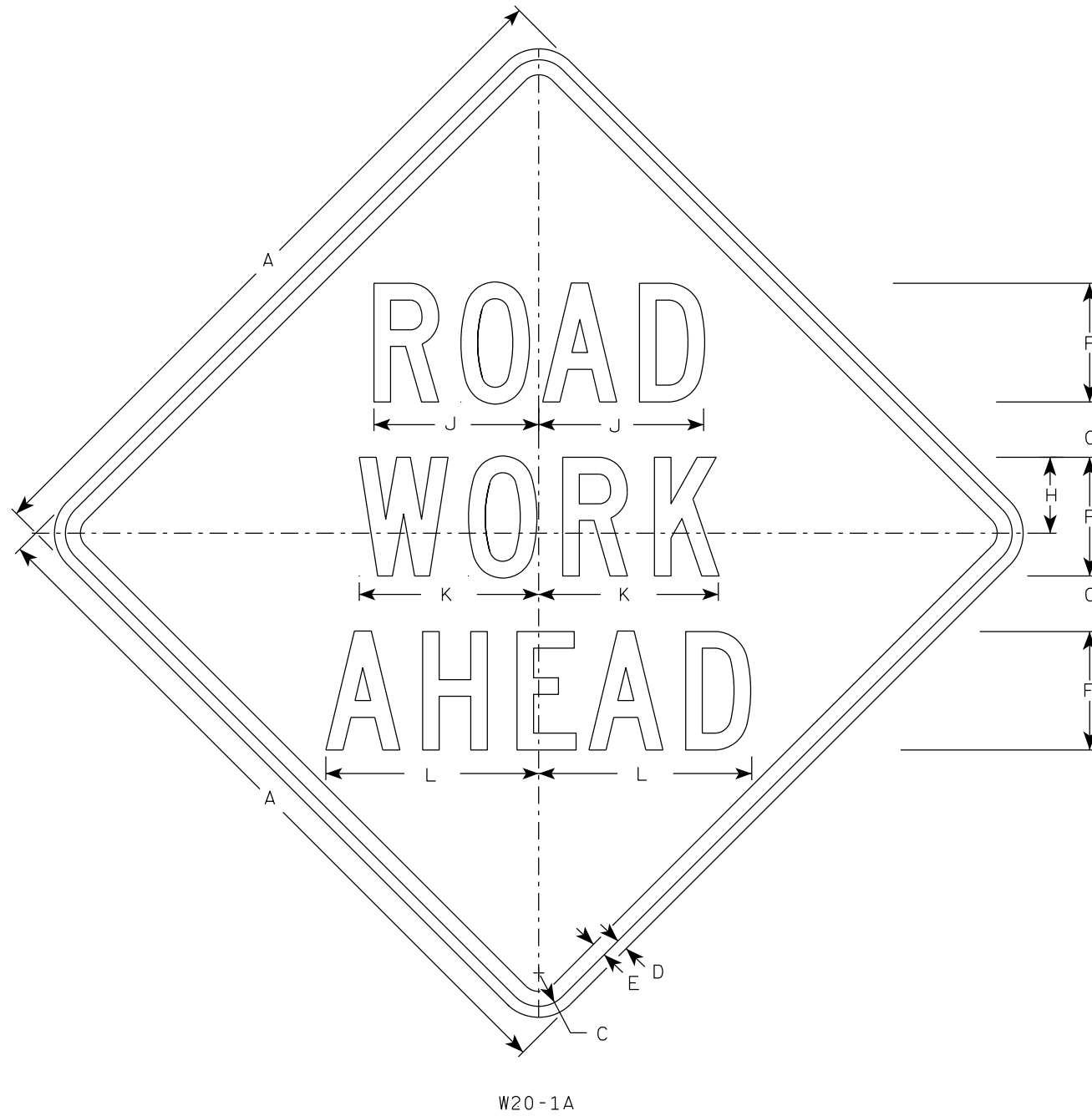
7

7



**NOTES**

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



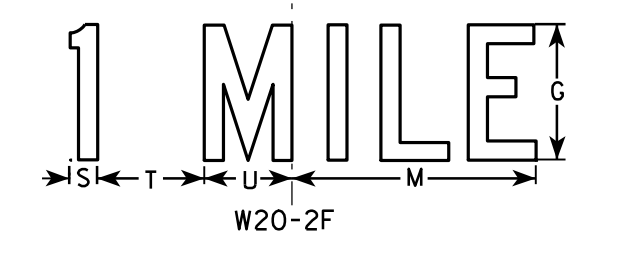
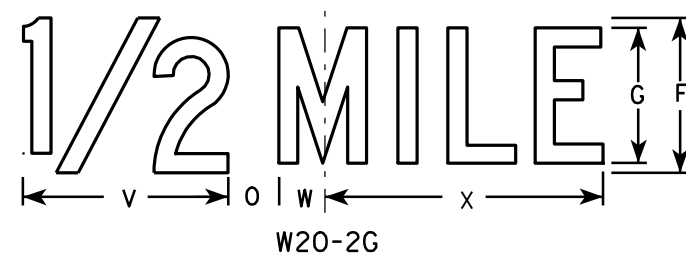
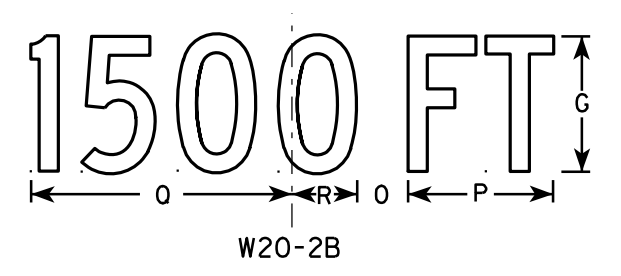
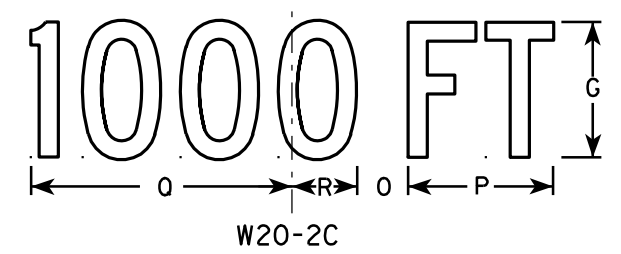
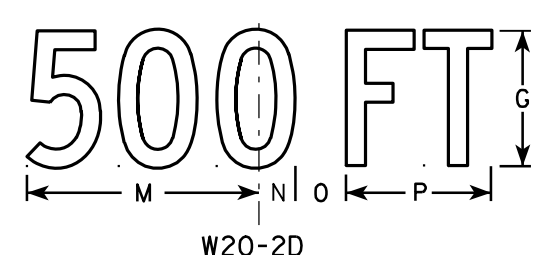
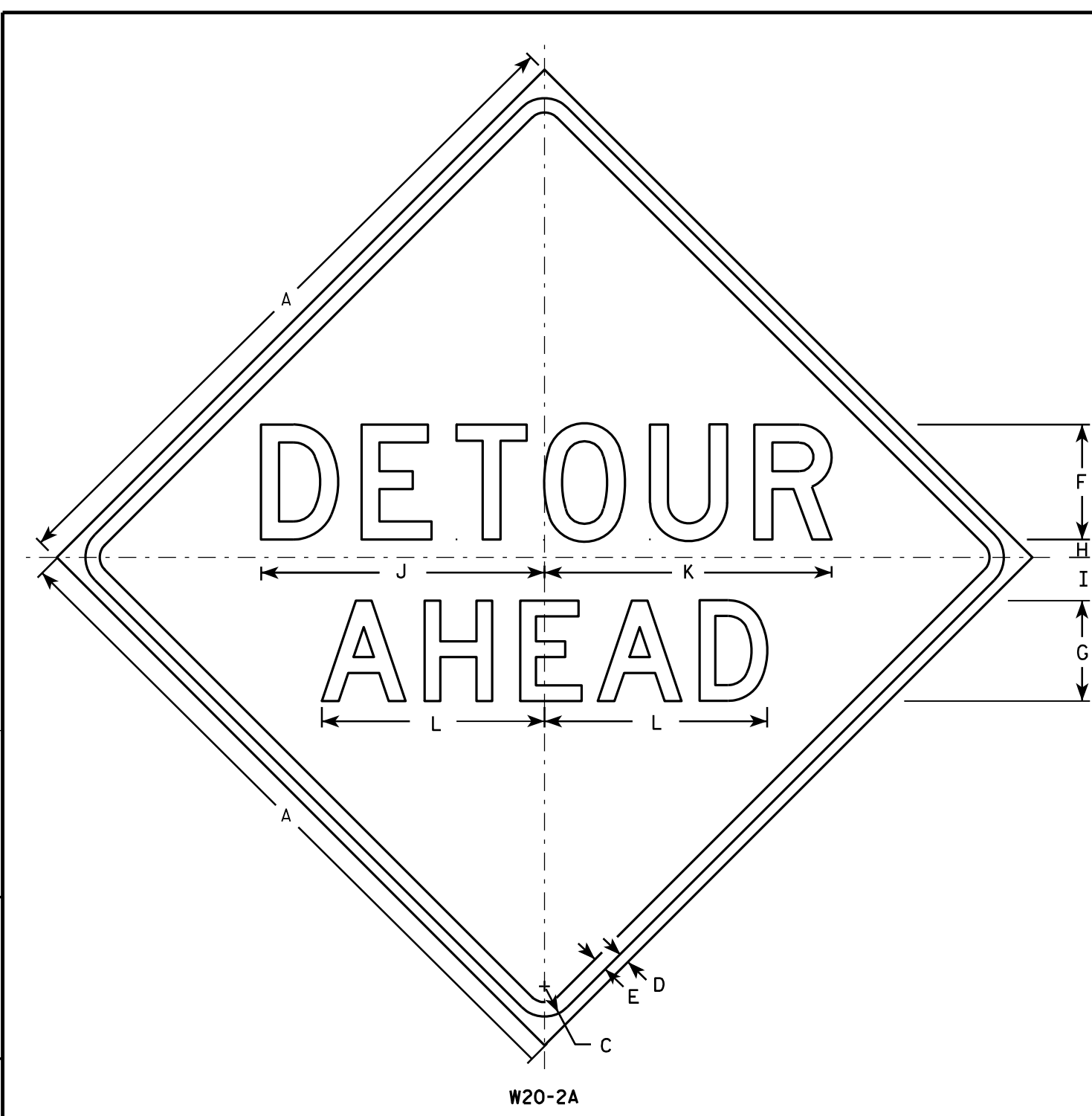
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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



**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.  
Line 2 is Series D for AHEAD and Series C for all other distances.

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	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

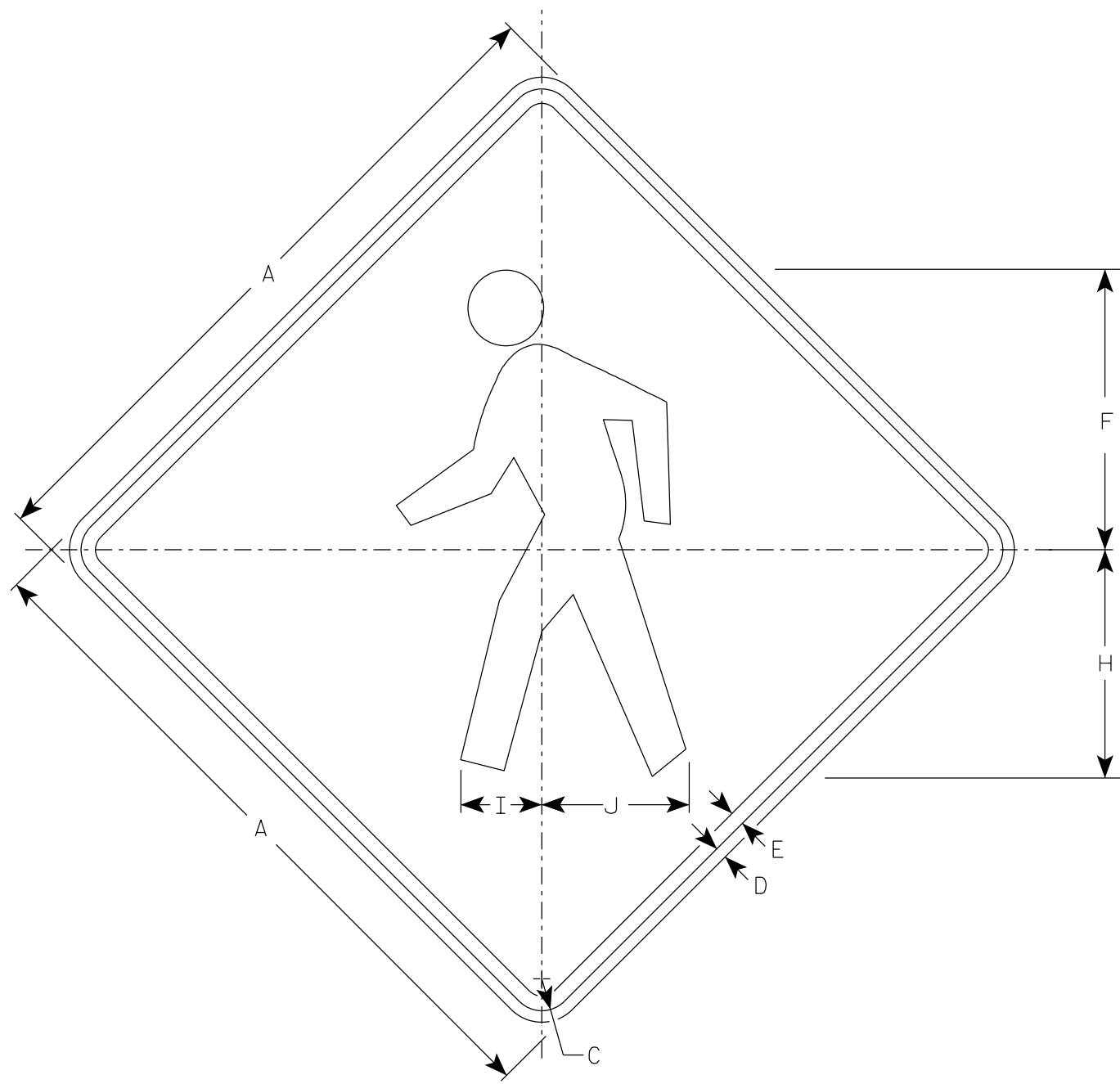
STANDARD SIGN  
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raub*  
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E



W011-2

NOTES

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

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	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
2S	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
2M	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
3	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN  
W011-2

WISCONSIN DEPT OF TRANSPORTATION

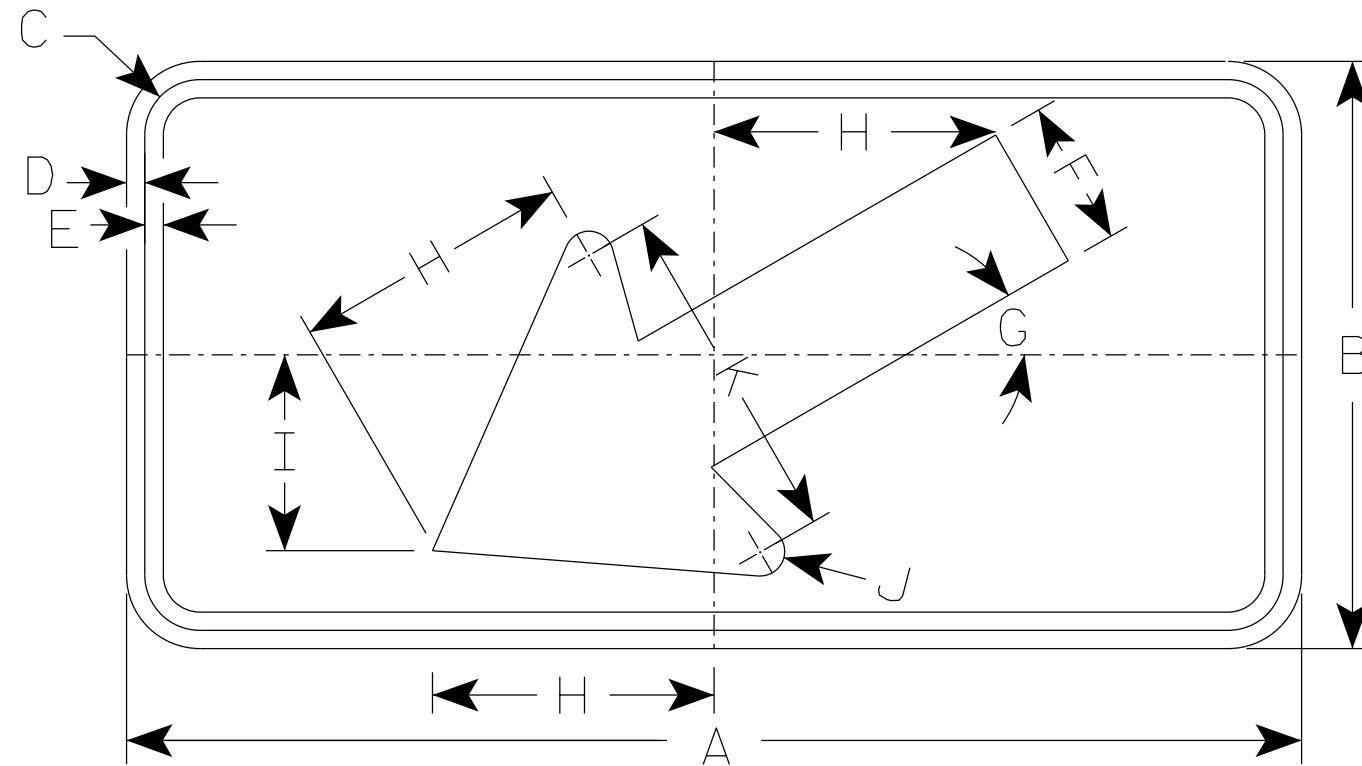
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/8/2020 PLATE NO. W011-2.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded but corners shall be rounded when base material is metal.
4. W016-7R is the same as W016-L except the arrow is reversed along the vertical centerline.



W016-7L

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	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2S	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
2M	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
3	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
4	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
5	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0

STANDARD SIGN  
W016-7

WISCONSIN DEPT OF TRANSPORTATION

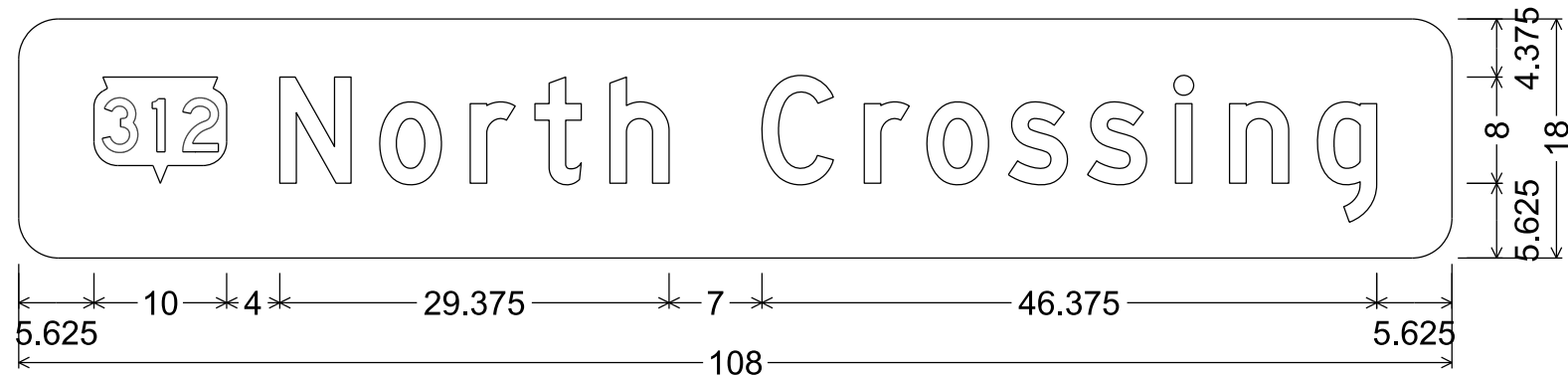
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 3/16/2021 PLATE NO. W016-7.2

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	<b>E</b>
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NOTES

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



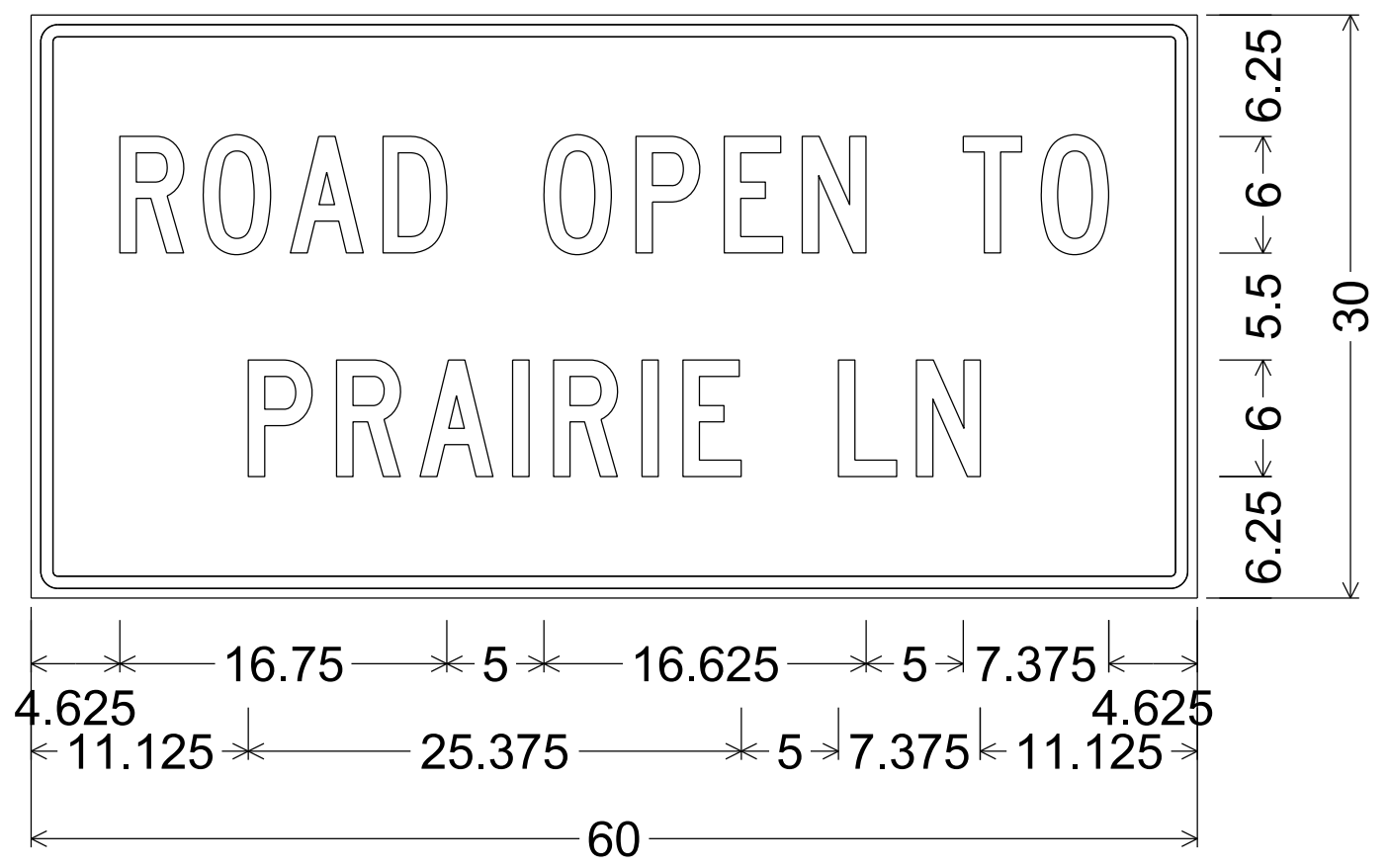
M1-94S; 3.000" Radius, No border

7

7

NOTES

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



1.375" Radius, 0.625" Border, 0.500" Indent

7

7

NOTES

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



1.125" Radius, 0.500" Border, 0.375" Indent

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STAGE 1 PHASE 1 - JEFFERS RD - STA. 20+81'J' TO STA. 21+55'J'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
20+81'J'		31	0	0	0	0	0	0
20+95'J'	14	31	0	16	0	16	0	16
20+96'J'	1	31	0	1	0	17	0	17
21+00'J'	4	32	0	5	0	22	0	22
21+05'J'	5	32	0	6	0	28	0	28
21+09'J'	4	32	0	5	0	33	0	33
21+25'J'	16	31	0	19	0	51	0	51
21+50'J'	25	32	0	29	0	80	0	80
21+55'J'	5	31	0	6	0	86	0	86
				86	0			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.



STAGE 1 PHASE 1 - TEMPORARY PEDESTRIAN PATH - STA. 10+00'P' TO STA. 11+37'P'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
10+00'P'		3	0	0	0	0	0	0
10+04'P'	4	3	0	0	0	0	0	0
10+10'P'	7	10	1	2	0	2	0	2
10+15'P'	5	2	0	1	0	3	0	3
10+20'P'	5	3	0	0	0	4	0	3
10+25'P'	5	3	0	0	0	4	0	4
10+30'P'	5	3	0	1	0	5	0	4
10+40'P'	10	3	0	1	0	6	0	6
10+50'P'	10	2	0	1	0	7	0	7
10+60'P'	10	2	0	1	0	7	0	7
10+70'P'	10	2	0	1	0	8	0	8
10+80'P'	10	2	0	1	0	9	0	9
10+90'P'	10	3	0	1	0	10	0	9
11+00'P'	10	3	0	1	0	11	0	11
11+10'P'	10	3	0	1	0	12	0	12
11+20'P'	10	3	0	1	0	13	0	13
11+30'P'	10	3	0	1	0	14	0	13
11+37'P'	7	2	0	1	0	14	0	14
				14	0			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

STAGE 2 PHASE 1 - JEFFERS RD - STA. 17+60'J' TO STA. 19+74'J'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
17+60'J'		15	0	0	0	0	0	0
17+65'J'	5	15	0	3	0	3	0	3
17+75'J'	10	21	0	7	0	9	0	9
17+81'J'	6	24	0	5	0	14	0	14
18+00'J'	19	30	0	19	0	33	0	33
18+19'J'	19	34	0	22	0	56	0	56
18+20'J'	1	21	0	1	0	57	0	57
18+25'J'	5	23	0	4	0	61	0	61
18+50'J'	25	32	0	26	0	86	0	86
18+75'J'	25	39	0	33	0	119	0	119
18+94'J'	19	36	0	26	0	146	0	146
18+95'J'	1	65	0	2	0	147	0	147
19+00'J'	5	64	0	12	0	159	0	159
19+24'J'	24	59	1	55	0	214	0	214
19+25'J'	1	30	0	2	0	216	0	216
19+50'J'	25	31	0	29	0	244	0	244
19+74'J'	24	32	0	28	0	272	0	272
				272	0			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

STAGE 2 PHASE 1 - JEFFERS RD - STA. 20+81'J' TO STA. 22+25'J'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	Note 1
20+81'J'		30	0	0	0	0	0	0
20+95'J'	14	31	0	16	0	16	0	16
20+96'J'	1	31	0	1	0	17	0	17
21+00'J'	4	31	0	5	0	22	0	22
21+05'J'	5	31	0	6	0	27	0	27
21+09'J'	4	31	0	5	0	32	0	32
21+25'J'	16	31	0	18	0	50	0	50
21+50'J'	25	31	0	29	0	79	0	79
21+55'J'	5	31	0	6	0	85	0	85
21+56'J'	1	19	0	1	0	86	0	86
21+75'J'	19	18	0	13	0	99	0	99
21+87'J'	12	18	0	8	0	107	0	107
21+88'J'	1	32	0	1	0	108	0	108
22+00'J'	12	27	0	13	0	121	0	120
22+25'J'	25	25	1	25	1	145	1	144
				145	1			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

STAGE 2 PHASE 1 - STH 312 EB - STA. 368+12'EB' TO STA. 369+30'EB'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
368+12'EB'		24	0	0	0	0	0	0
368+22'EB'	10	28	0	10	0	10	0	10
368+25'EB'	3	28	0	3	0	13	0	13
368+50'EB'	25	28	0	26	0	39	0	39
368+75'EB'	25	22	0	23	0	62	0	62
368+77'EB'	2	22	0	2	0	63	0	63
368+78'EB'	1	22	0	1	0	64	0	64
369+00'EB'	22	17	0	16	0	80	0	80
369+20'EB'	20	16	0	12	0	92	0	92
369+21'EB'	1	2	0	0	0	93	0	93
369+25'EB'	4	2	0	0	0	93	0	93
369+30'EB'	5	1	0	0	0	93	0	93
				93	0			

STAGE 2 PHASE 1 - STH 312 WB - STA. 368+41'WB' TO STA. 368+61'WB'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
368+41'WB'		26	0	0	0	0	0	0
368+50'WB'	9	25	0	8	0	8	0	8
368+61'WB'	11	25	0	10	0	19	0	19
				19	0			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

STAGE 2 PHASE 1 - NE CURB RETURN - STA. 10+00'NE' TO STA. 11+37'NE'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
10+00'NE'		16	3	0	0	0	0	0
10+05'NE'	5	21	9	3	1	3	1	2
10+10'NE'	5	21	12	4	2	7	3	4
10+15'NE'	5	23	13	4	2	11	5	6
10+20'NE'	5	25	14	4	3	16	8	8
10+25'NE'	5	28	14	5	3	21	10	10
10+30'NE'	5	31	13	5	2	26	13	13
10+35'NE'	5	35	9	6	2	32	15	18
10+40'NE'	5	39	5	7	1	39	16	23
10+45'NE'	5	45	1	8	1	47	17	30
10+50'NE'	5	56	0	9	0	56	17	39
10+55'NE'	5	69	0	12	0	68	17	51
10+60'NE'	5	85	0	14	0	82	17	65
10+61'NE'	1	89	0	3	0	85	17	68
10+65'NE'	4	80	0	12	0	98	17	81
10+70'NE'	5	76	0	14	0	112	17	95
10+75'NE'	5	68	0	13	0	125	17	109
10+80'NE'	5	65	0	12	0	138	17	121
10+85'NE'	5	62	0	12	0	150	17	133
10+90'NE'	5	58	0	11	0	161	17	144
10+95'NE'	5	54	0	10	0	171	17	154
11+00'NE'	5	49	0	10	0	181	17	164
11+05'NE'	5	46	0	9	0	189	17	173
11+10'NE'	5	41	0	8	0	197	17	181
11+15'NE'	5	35	0	7	0	205	17	188
11+20'NE'	5	29	0	6	0	211	17	194
11+25'NE'	5	25	0	5	0	216	17	199
11+30'NE'	5	22	0	4	0	220	17	203
11+35'NE'	5	18	0	4	0	224	17	207
11+37'NE'	2	17	0	1	0	225	17	208
				225	17			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

STAGE 2 PHASE 1 - SE CURB RETURN - STA. 10+00'SE' TO STA. 10+77'SE'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
10+00'SE'		29	1	0	0	0	0	0
10+05'SE'	5	27	2	5	0	5	0	5
10+10'SE'	5	27	4	5	1	10	1	9
10+15'SE'	5	28	6	5	1	15	2	13
10+20'SE'	5	29	7	5	1	21	3	17
10+25'SE'	5	35	8	6	1	26	4	22
10+30'SE'	5	42	8	7	1	34	6	28
10+35'SE'	5	49	8	8	2	42	7	35
10+40'SE'	5	37	10	8	2	50	9	41
10+45'SE'	5	27	9	6	2	56	11	45
10+50'SE'	5	21	10	4	2	60	13	48
10+55'SE'	5	17	16	3	2	64	15	49
10+60'SE'	5	14	15	3	3	67	18	49
10+65'SE'	5	11	14	2	3	69	20	48
10+70'SE'	5	10	11	2	2	71	23	48
10+75'SE'	5	10	7	2	2	73	24	48
10+77'SE'	2	10	5	1	0	73	25	49
				73	25			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

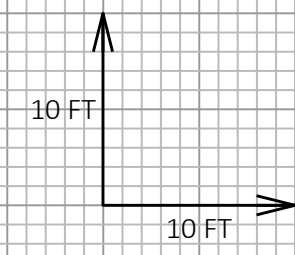
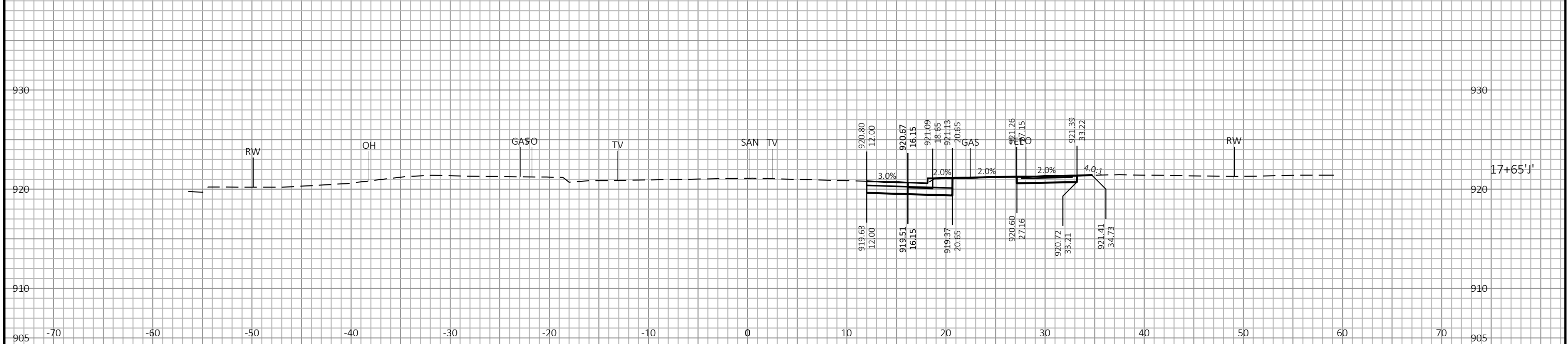
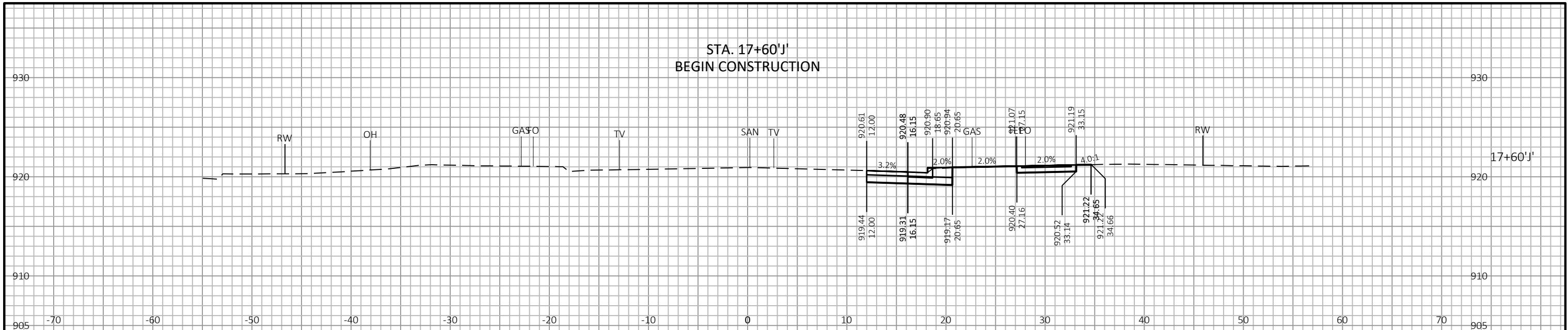
STAGE 3 - TEMPORARY PEDESTRIAN PATH REMOVAL GRADING - STA. 10+00'P' TO STA. 11+37'P'

STATION	Distance	AREA (SF)		Incremental Vol (CY)		Cumulative Vol (CY)		Mass Ordinate Note 1
		Cut	Fill	Cut	Fill	Cut 1.00	Fill 1.00	
10+00'P'		3	3	0	0	0	0	0
10+04'P'	4	3	3	0	0	0	0	0
10+10'P'	7	3	3	1	1	1	1	0
10+15'P'	5	3	3	0	0	1	1	0
10+20'P'	5	3	3	0	0	2	2	0
10+25'P'	5	3	3	0	0	2	2	0
10+30'P'	5	3	3	0	0	3	3	0
10+40'P'	10	3	3	1	1	4	4	0
10+50'P'	10	3	3	1	1	5	5	0
10+60'P'	10	3	3	1	1	6	6	0
10+70'P'	10	3	3	1	1	6	6	0
10+80'P'	10	3	3	1	1	7	7	0
10+90'P'	10	3	3	1	1	8	8	0
11+00'P'	10	3	3	1	1	9	9	0
11+10'P'	10	3	3	1	1	10	10	0
11+20'P'	10	3	3	1	1	11	11	0
11+30'P'	10	3	3	1	1	12	12	0
11+37'P'	7	3	3	1	1	13	13	0
				13	13			

Notes: 1 - MASS ORDINATE = CUT - FILL

\*\*\*ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

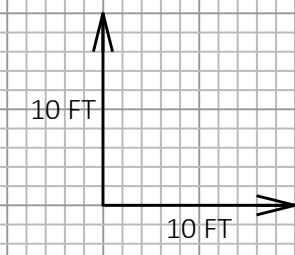
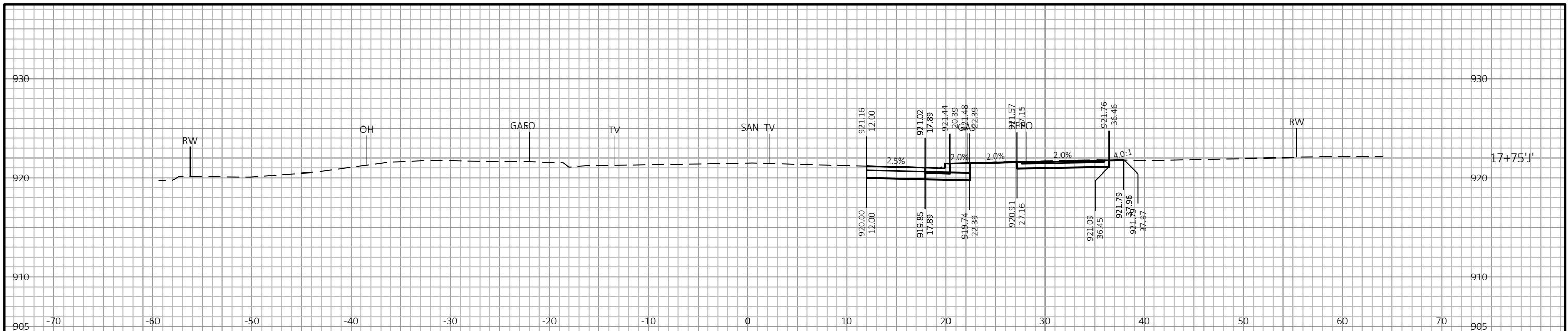
STA. 17+60'J'  
BEGIN CONSTRUCTION



9

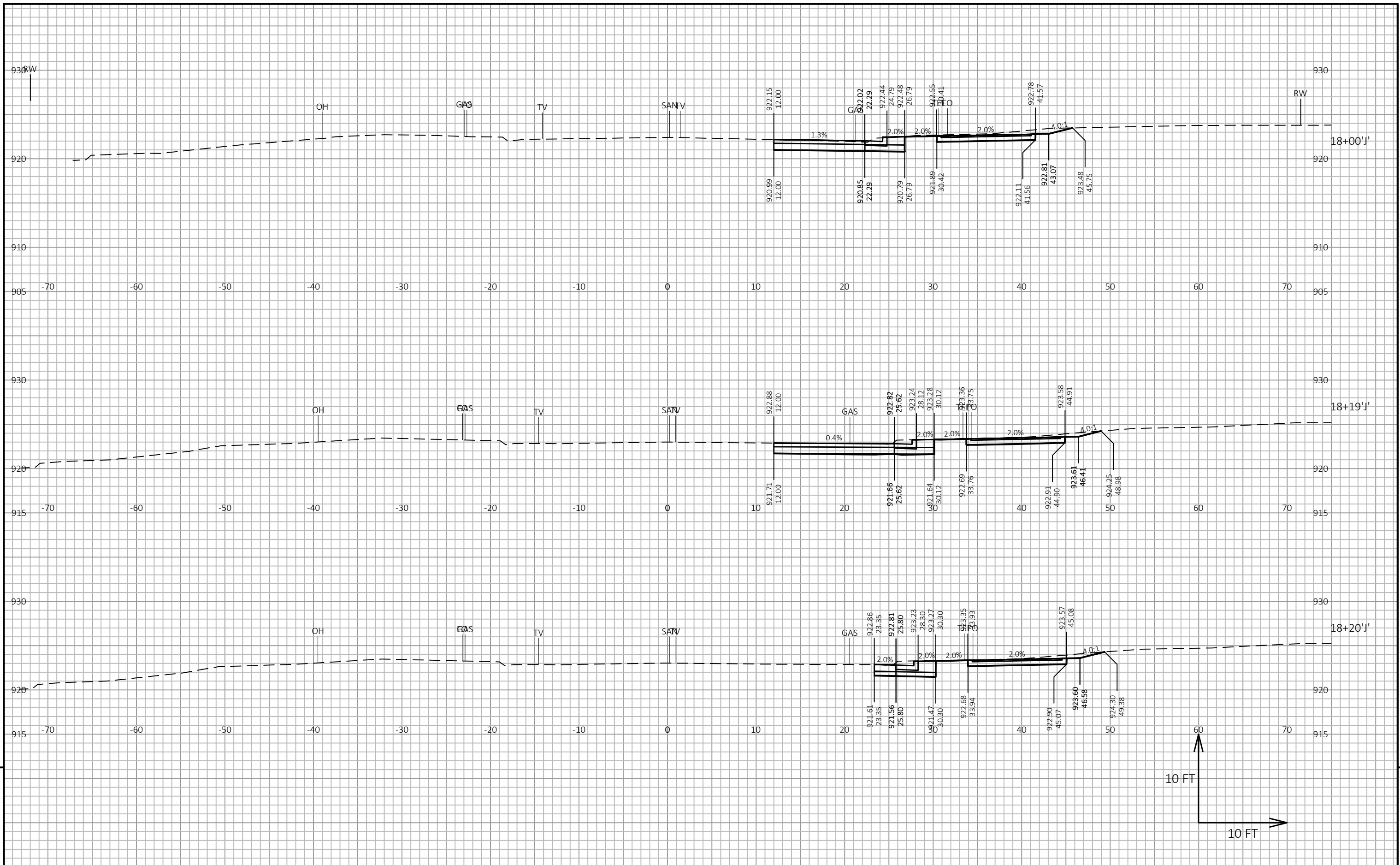
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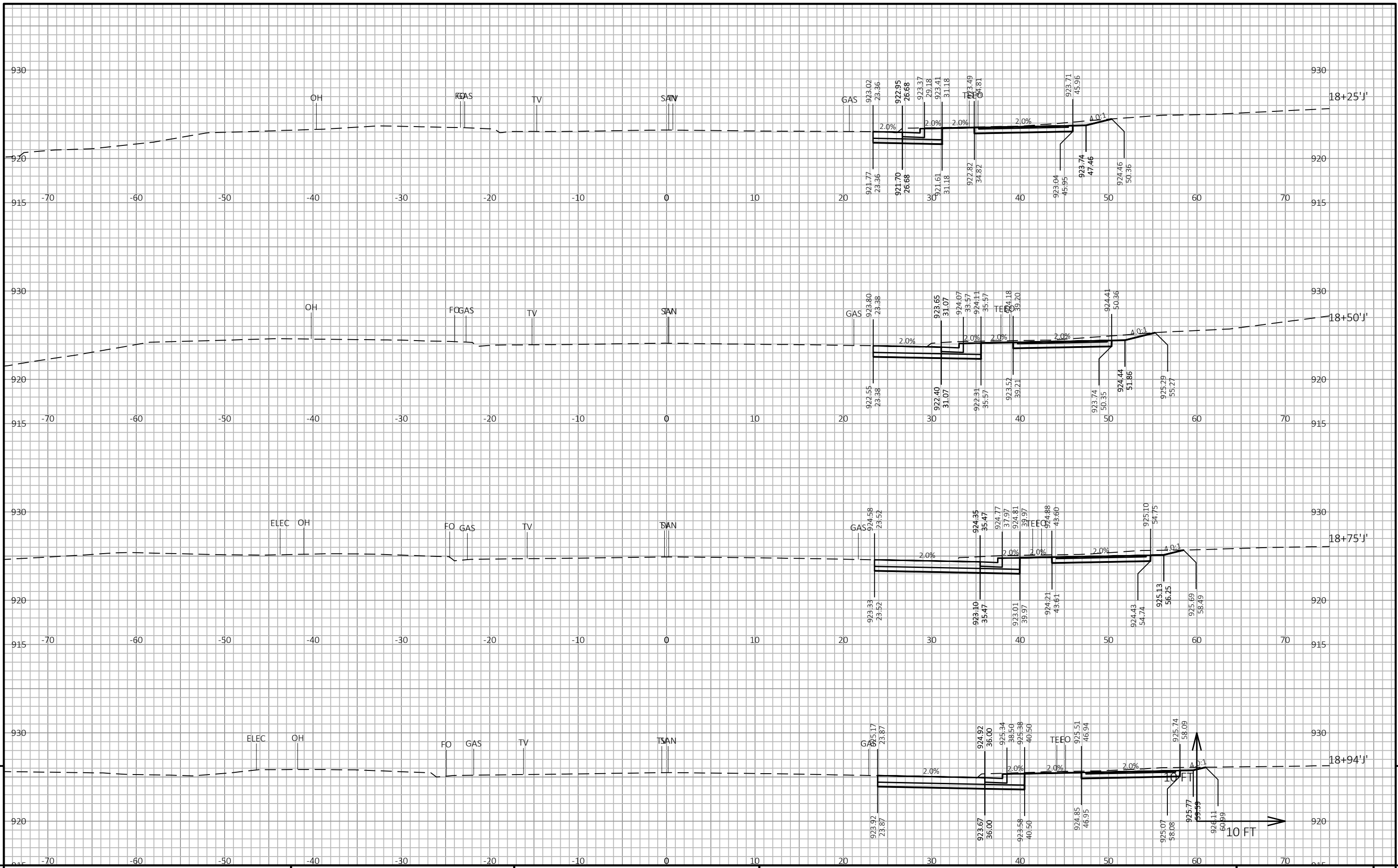




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PROJECT NO: 7028-00-73

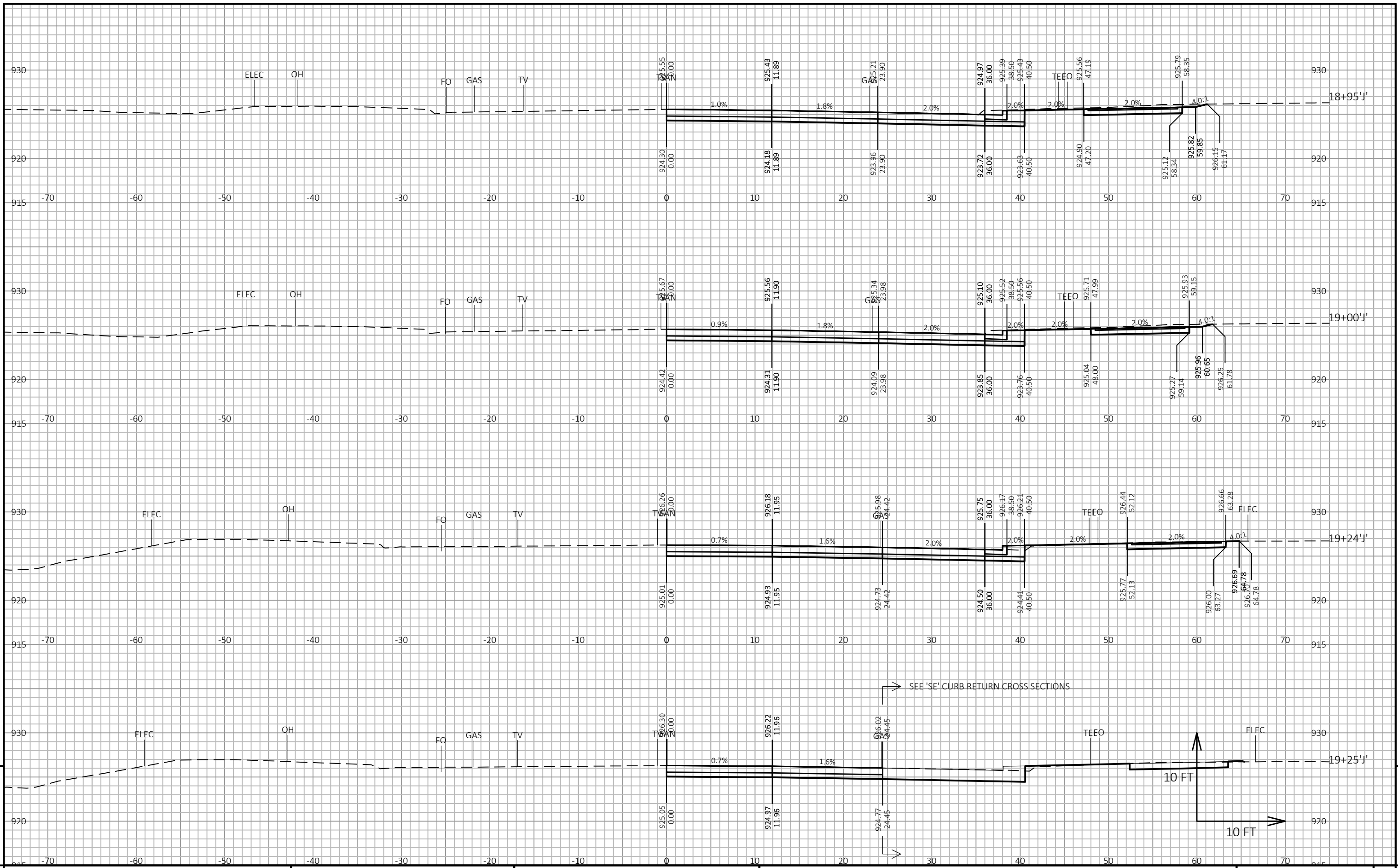
HWY: STH 312

COUNTY: EAU CLAIRE

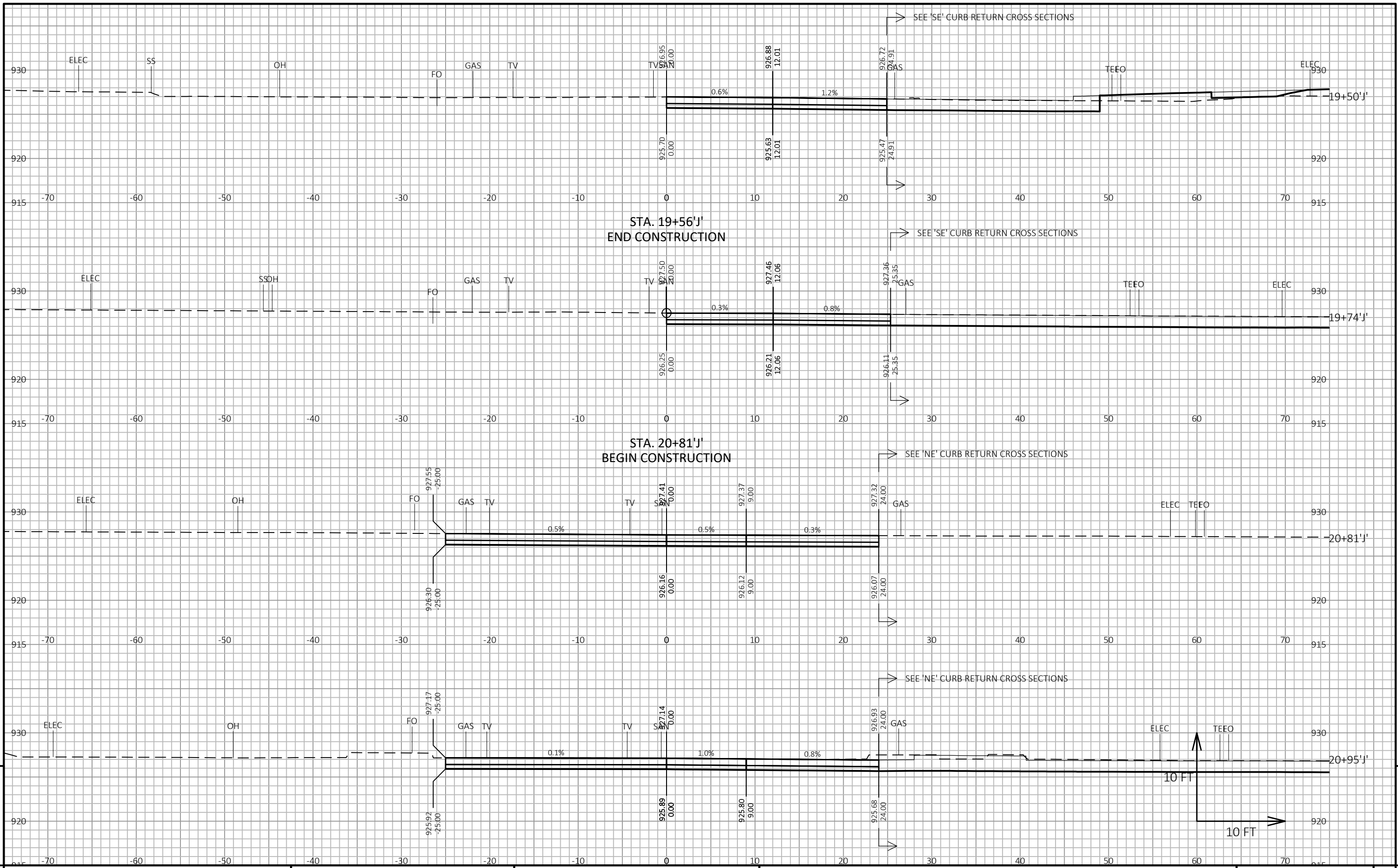
CROSS SECTIONS: JEFFERS ROAD

SHEET

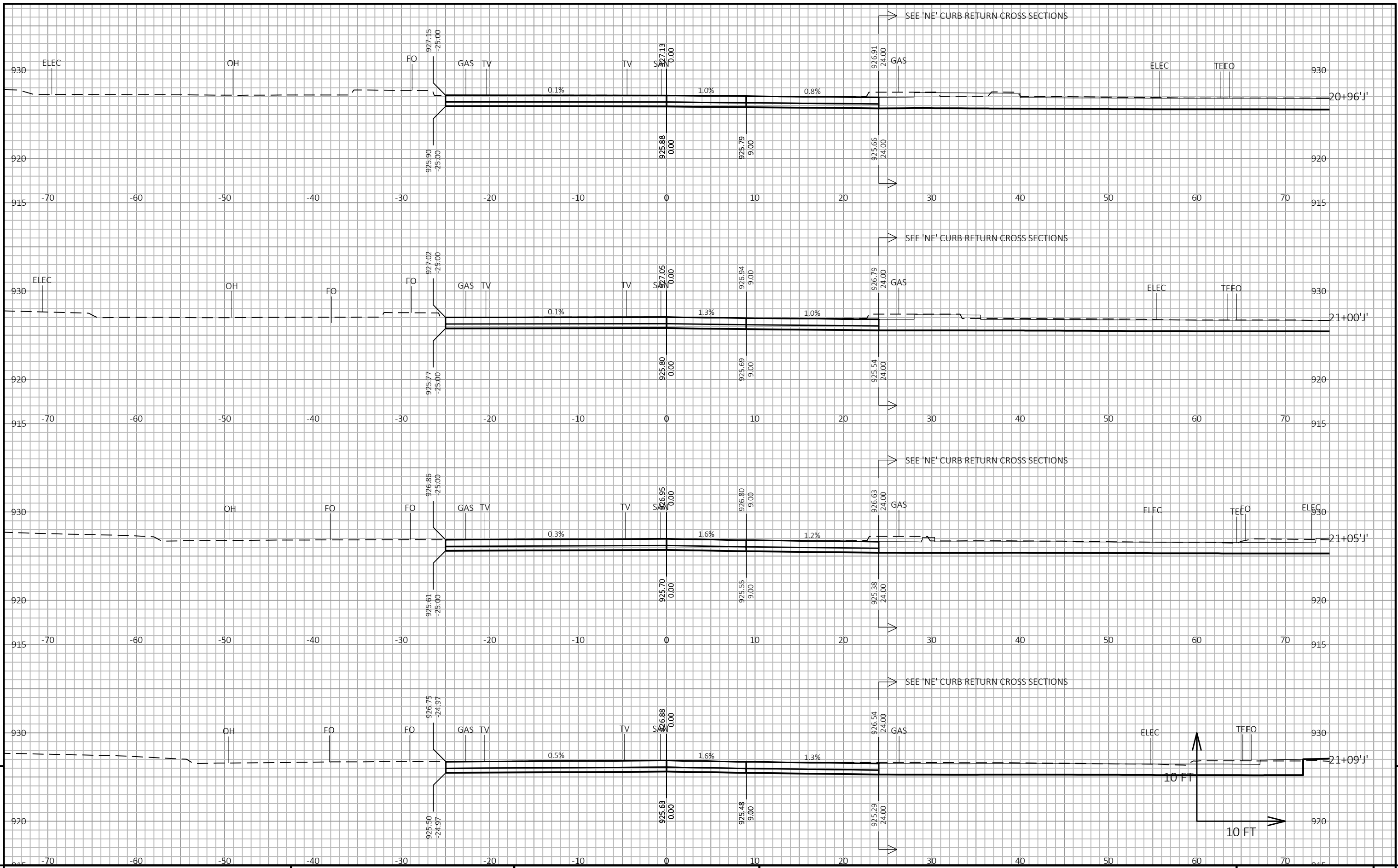
E



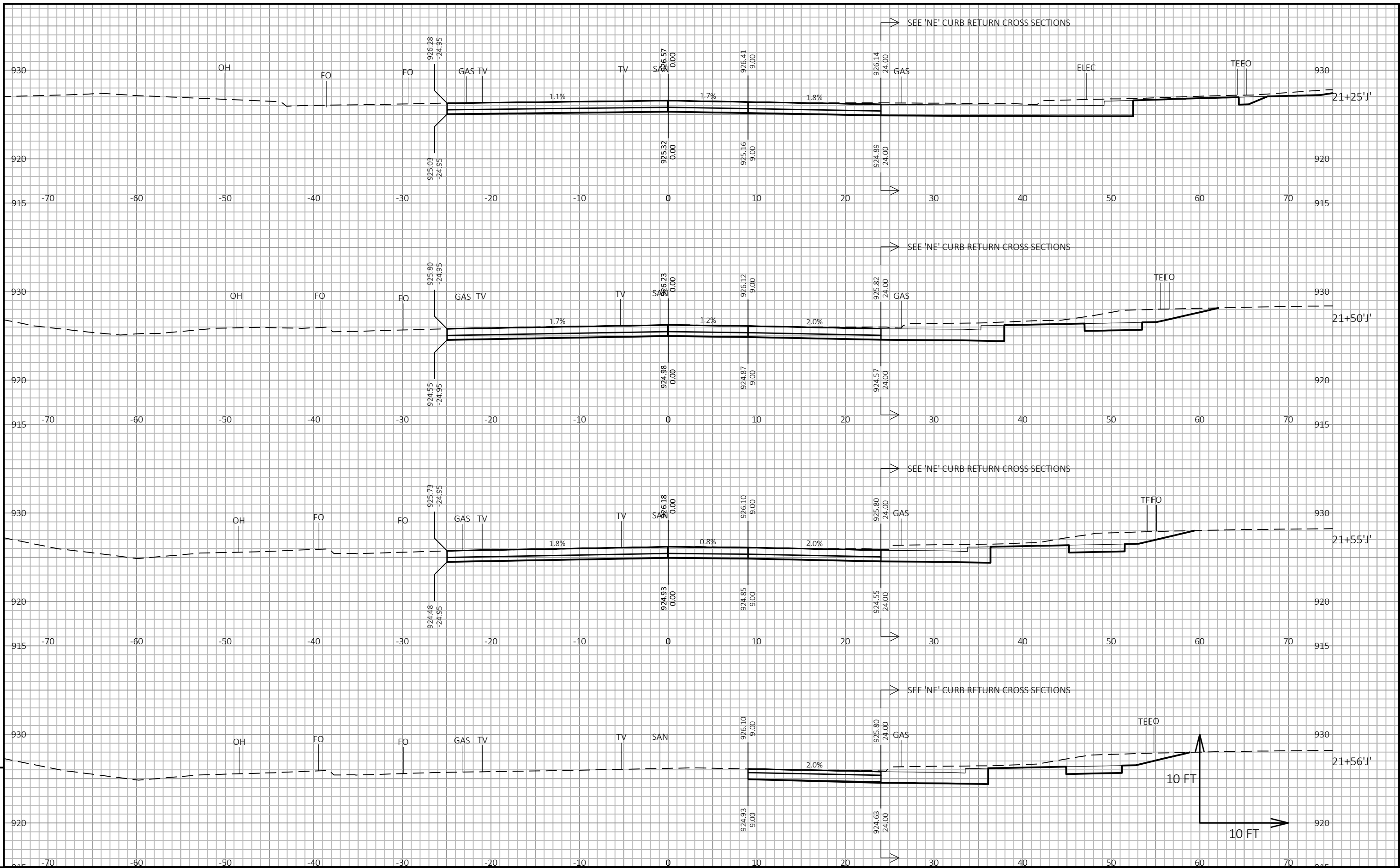
PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: JEFFERS ROAD      SHEET 9



PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: JEFFERS ROAD      SHEET      9



PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: JEFFERS ROAD      SHEET      E



PROJECT NO: 7028-00-73

HWY: STH 312

COUNTY: EAU CLAIRE

CROSS SECTIONS: JEFFERS ROAD

SHEET

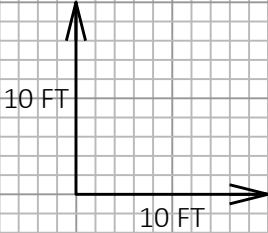
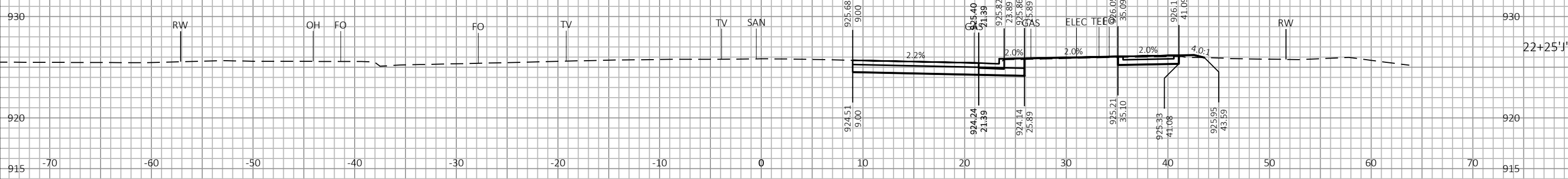
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PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: JEFFERS ROAD      SHEET      E



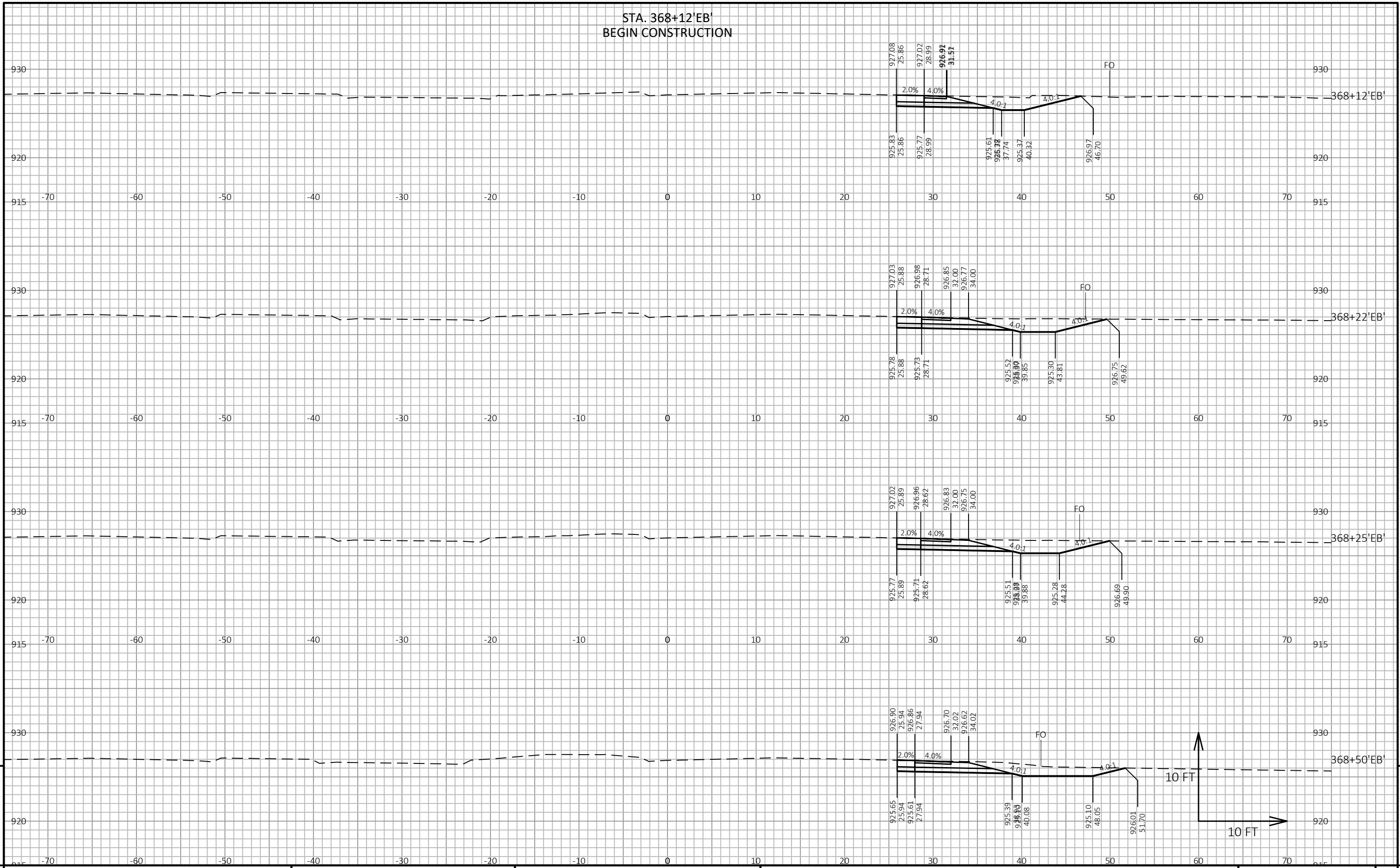
STA. 22+25'J'  
END CONSTRUCTION



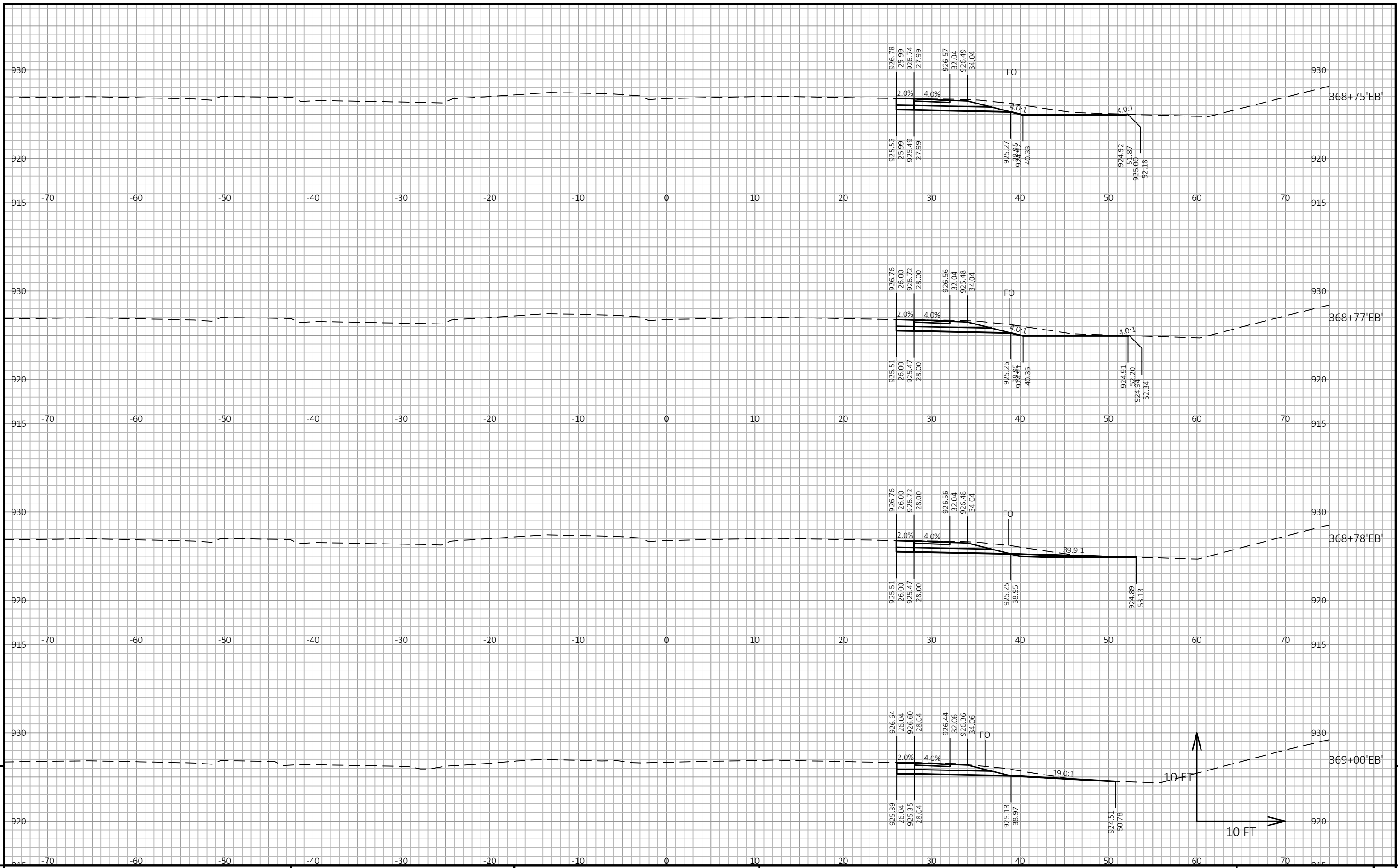
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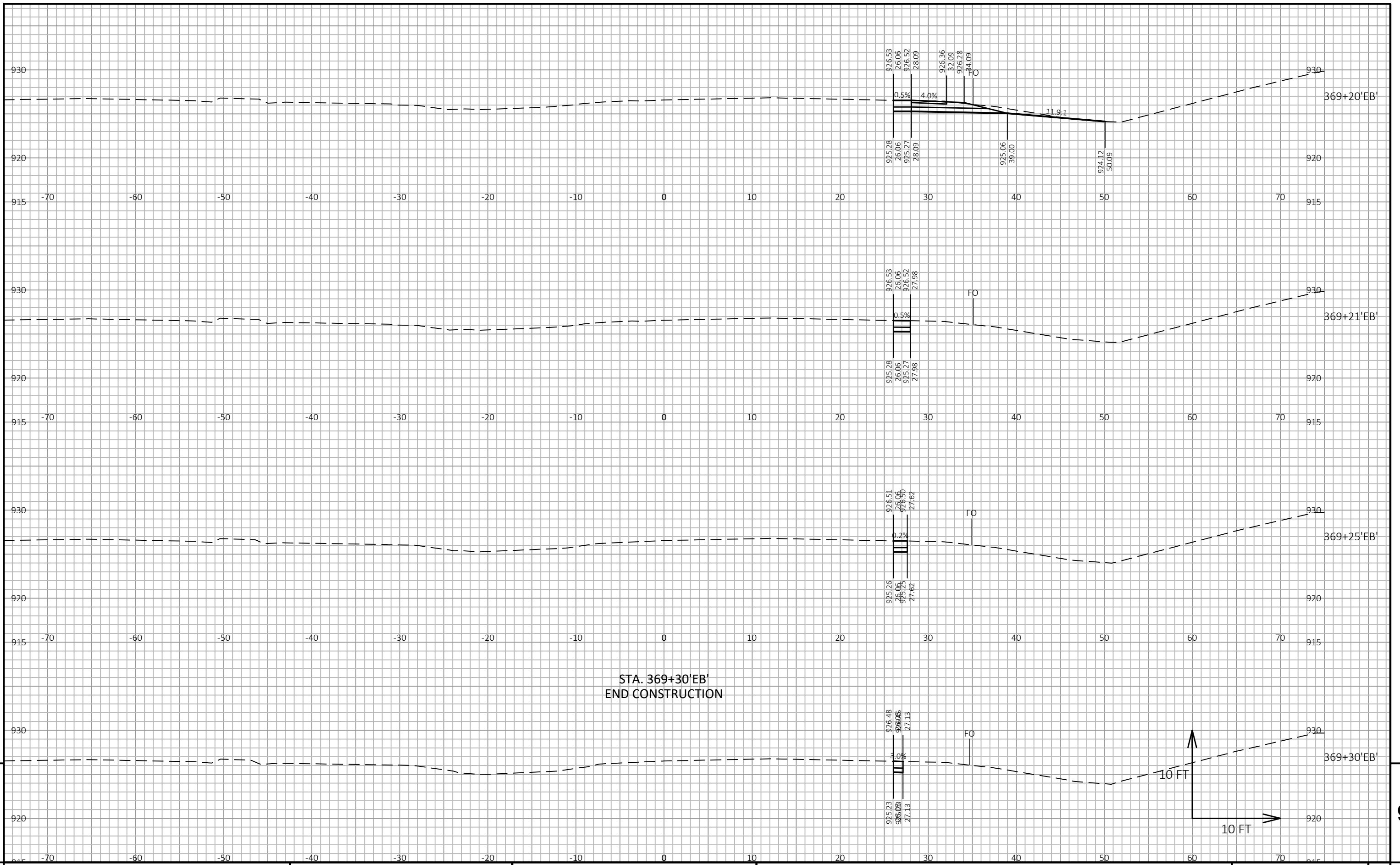
STA. 368+12'EB  
BEGIN CONSTRUCTION



PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: STH 312 EASTBOUND      SHEET      E



PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: STH 312 EASTBOUND      SHEET 9



9

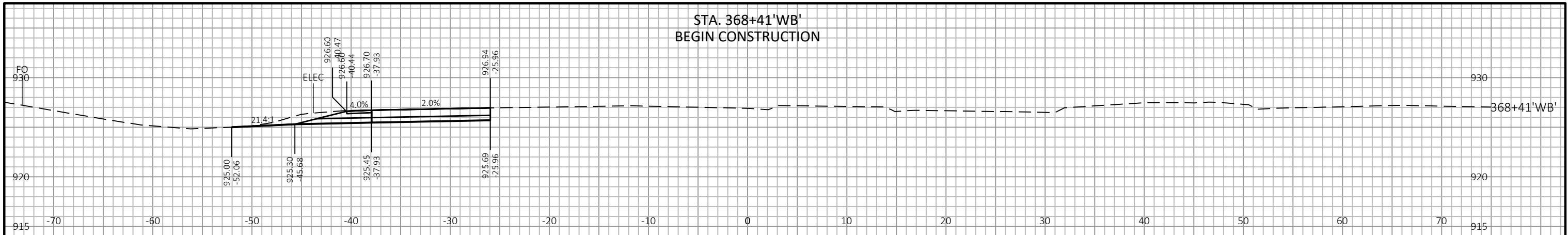
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PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: STH 312 EASTBOUND      SHEET      E

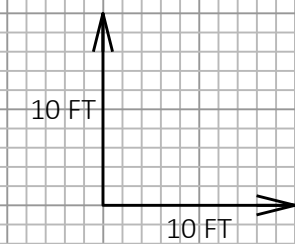
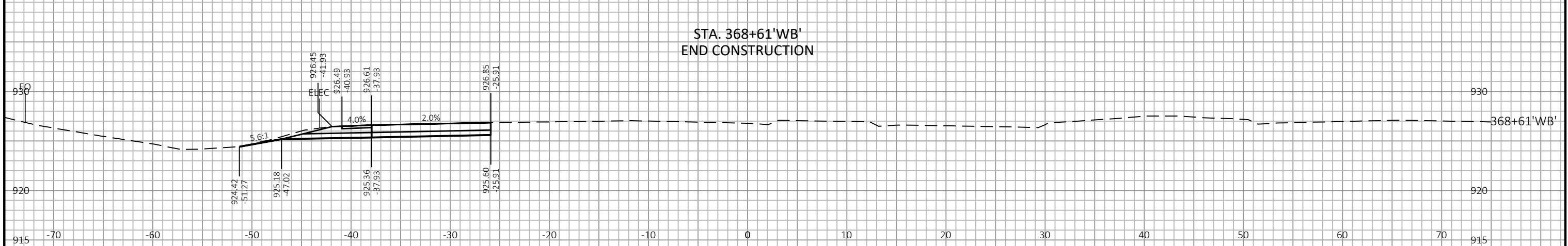
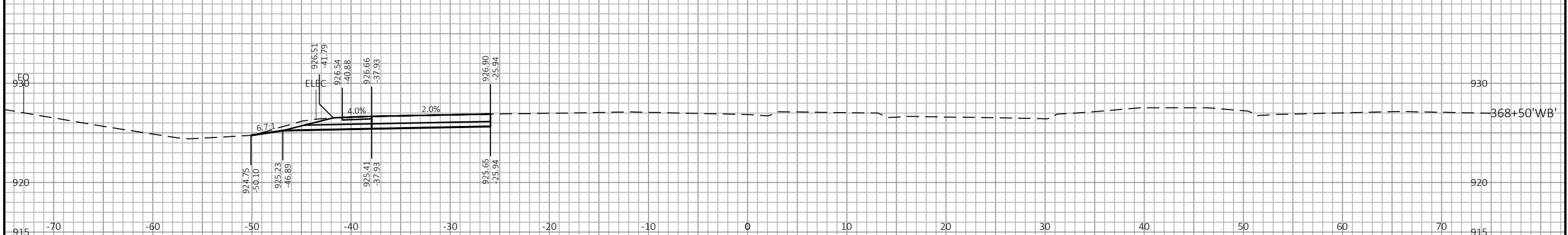
FILE NAME : C:\USERS\JOSHUA.OLSON\AECOM\60637676\_STH312-JEFFERSRD-INTERSECTION - 0\_RECORDS\900\_CAD\_GIS\910\_CAD\912\_PLAN\_SHEETS\090201-XS.DWG      PLOT DATE : 9/3/2021 11:21 AM      PLOT BY : OLSON, JOSHUA      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - EB-3

STA. 368+41'WB'  
BEGIN CONSTRUCTION



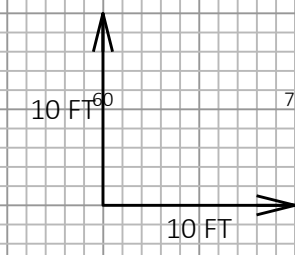
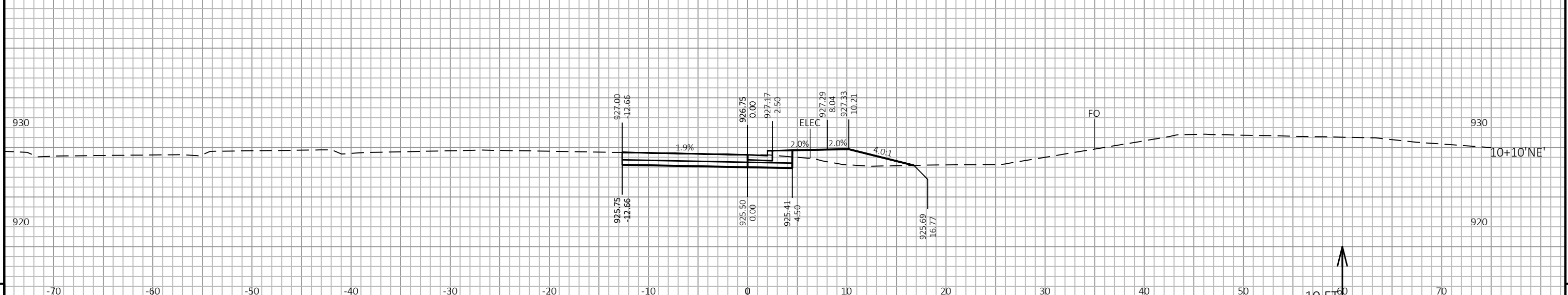
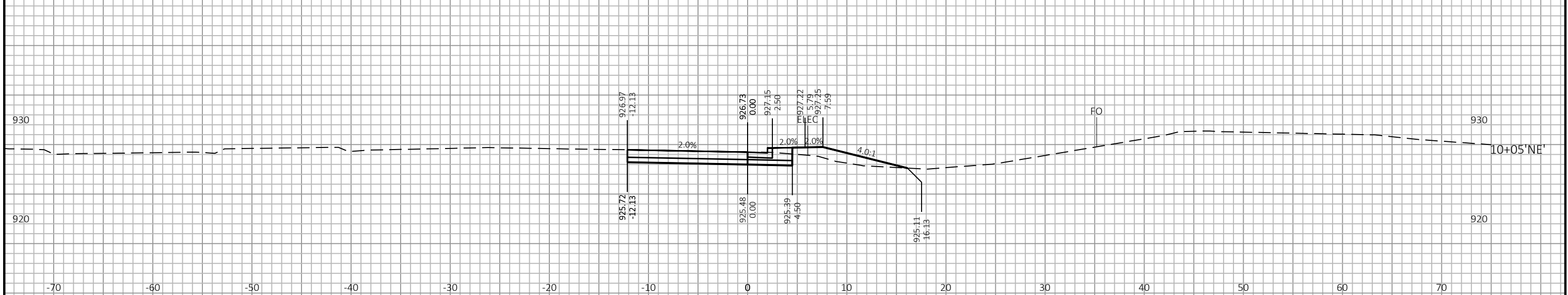
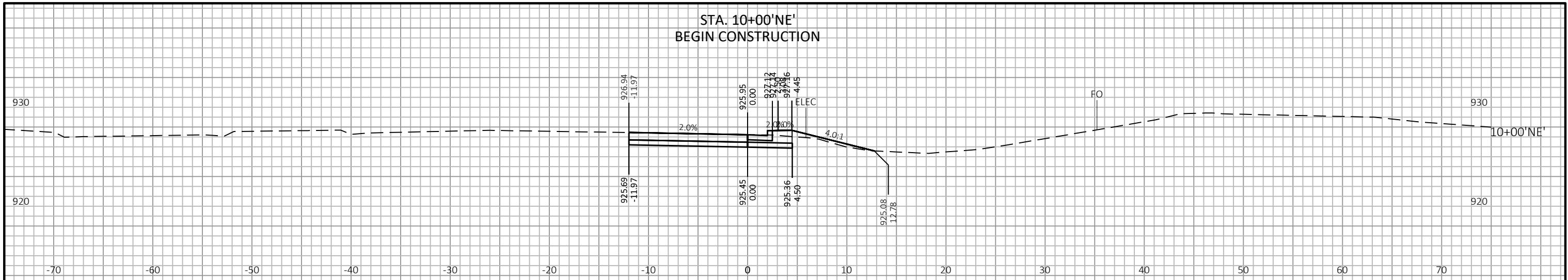
STA. 368+61'WB'  
END CONSTRUCTION



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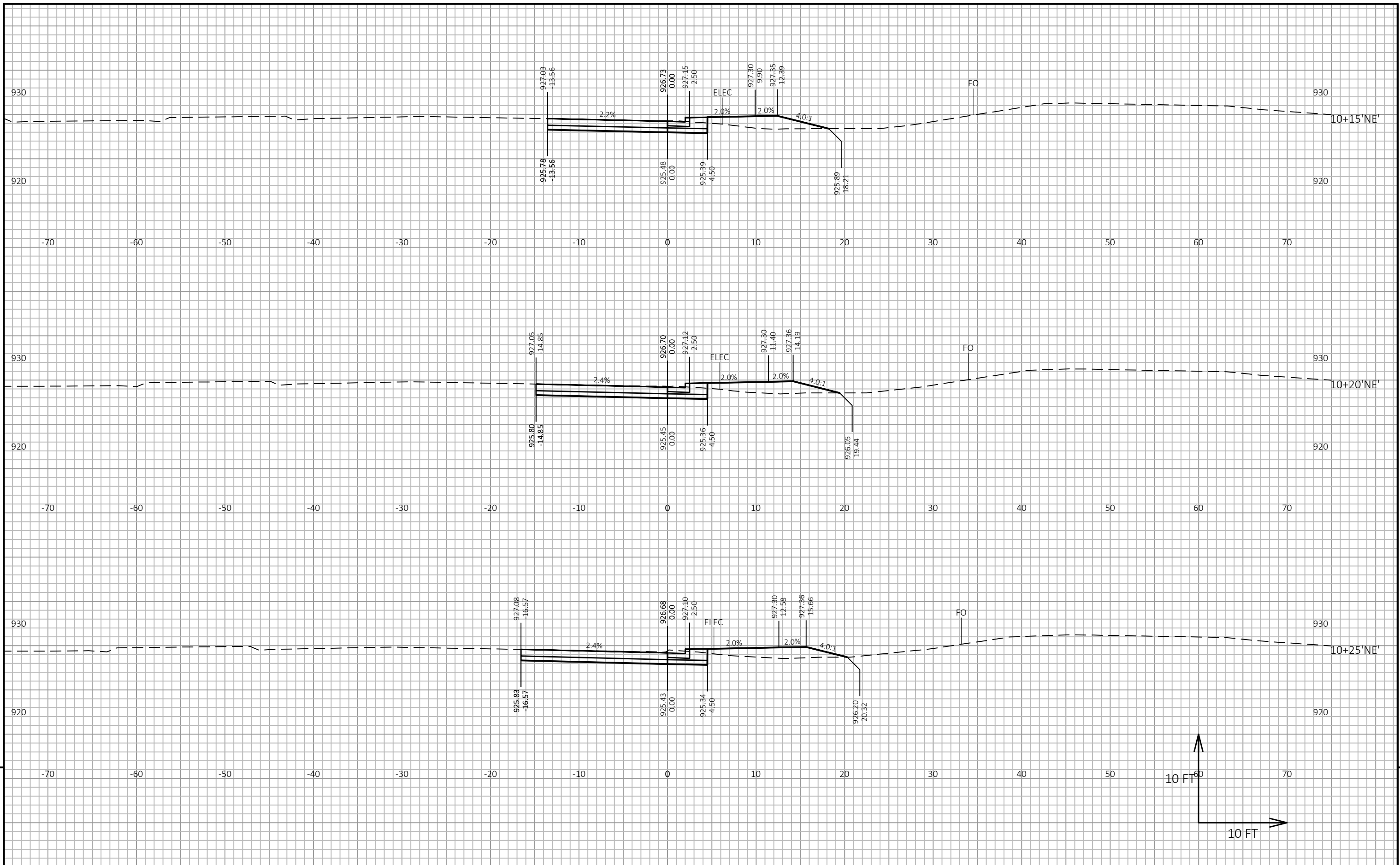
STA. 10+00'NE'  
BEGIN CONSTRUCTION



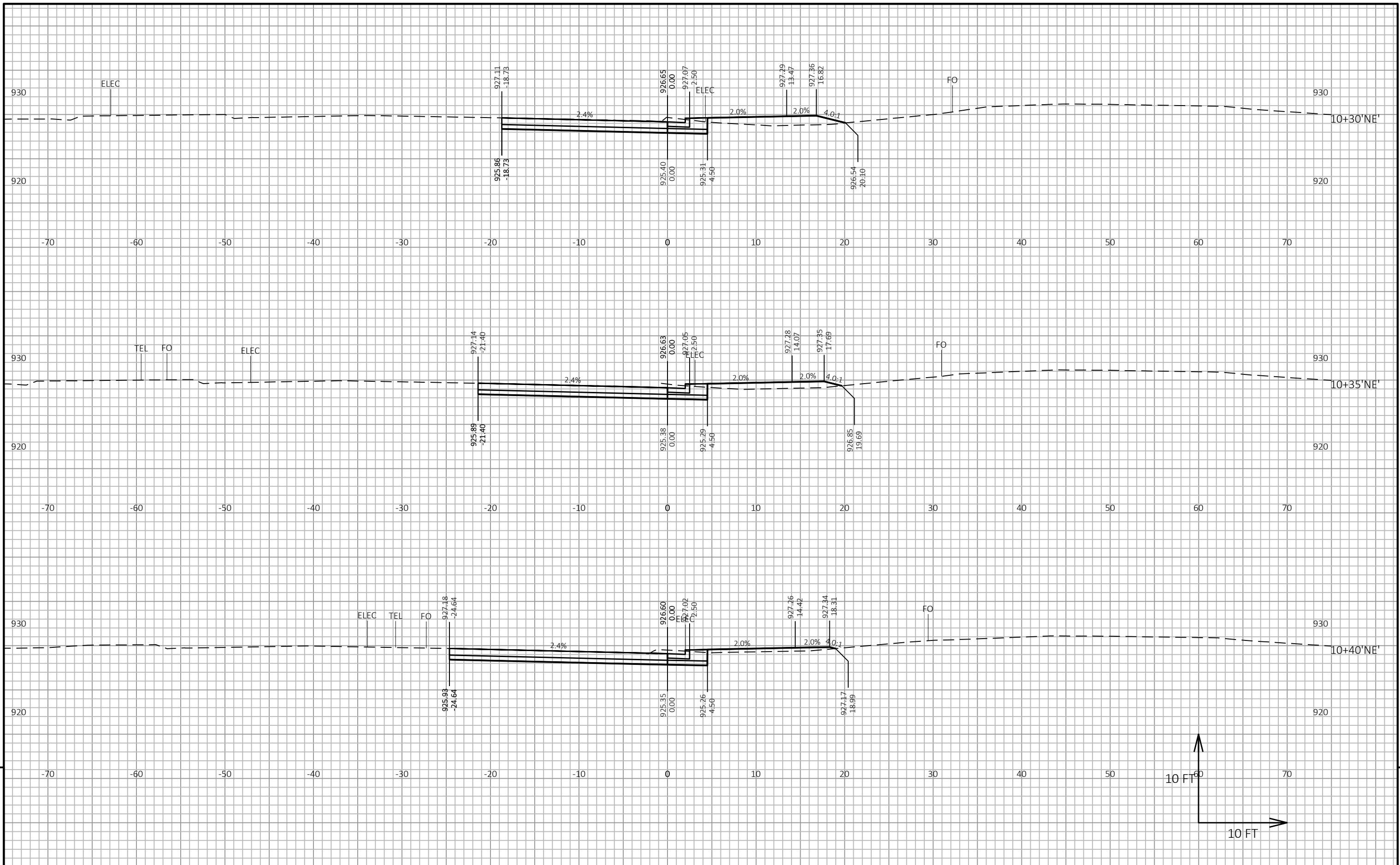
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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: NE CURB RETURN	SHEET	E
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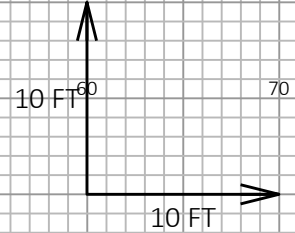


PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: NE CURB RETURN      SHEET      9



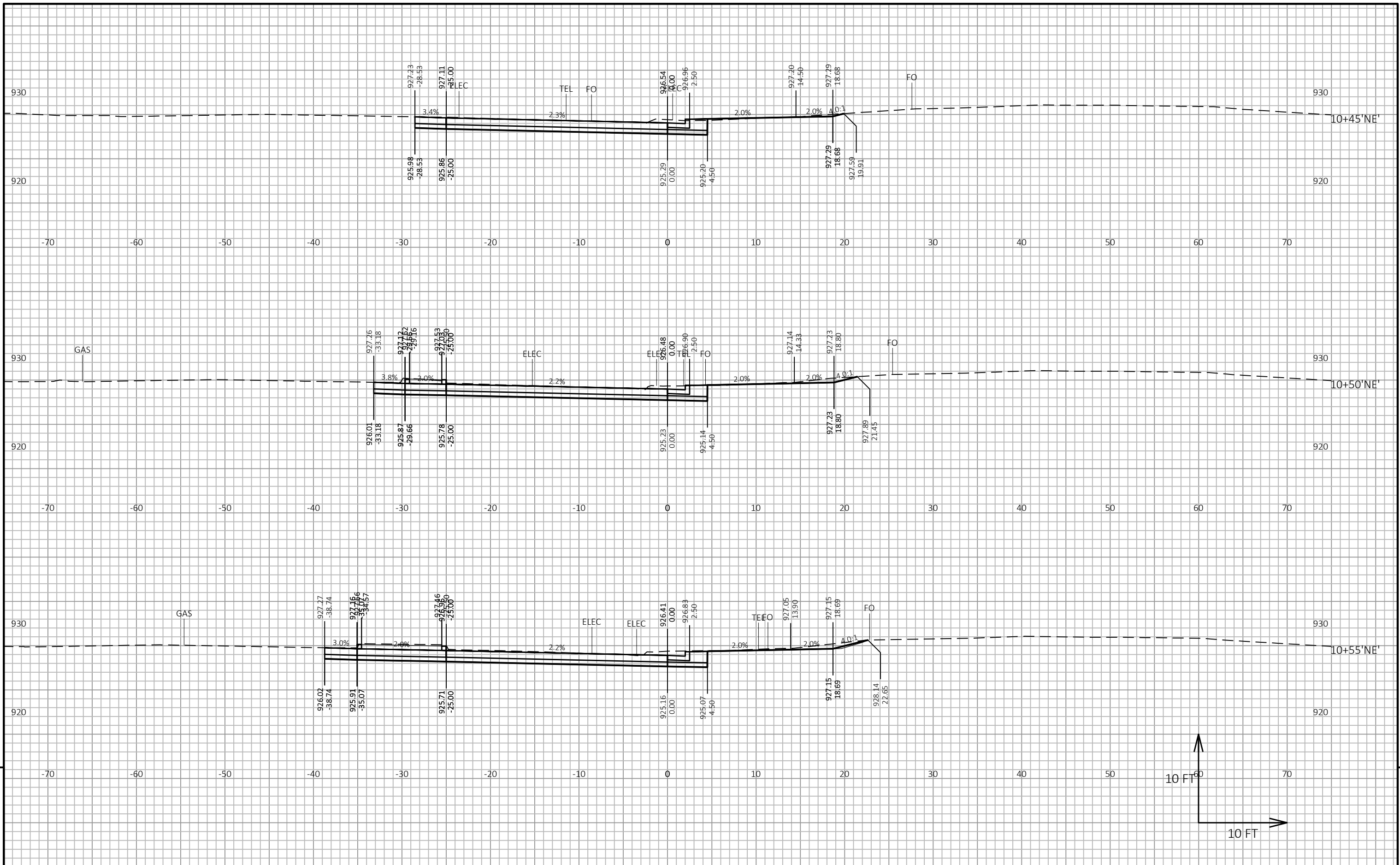
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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: NE CURB RETURN	SHEET	E
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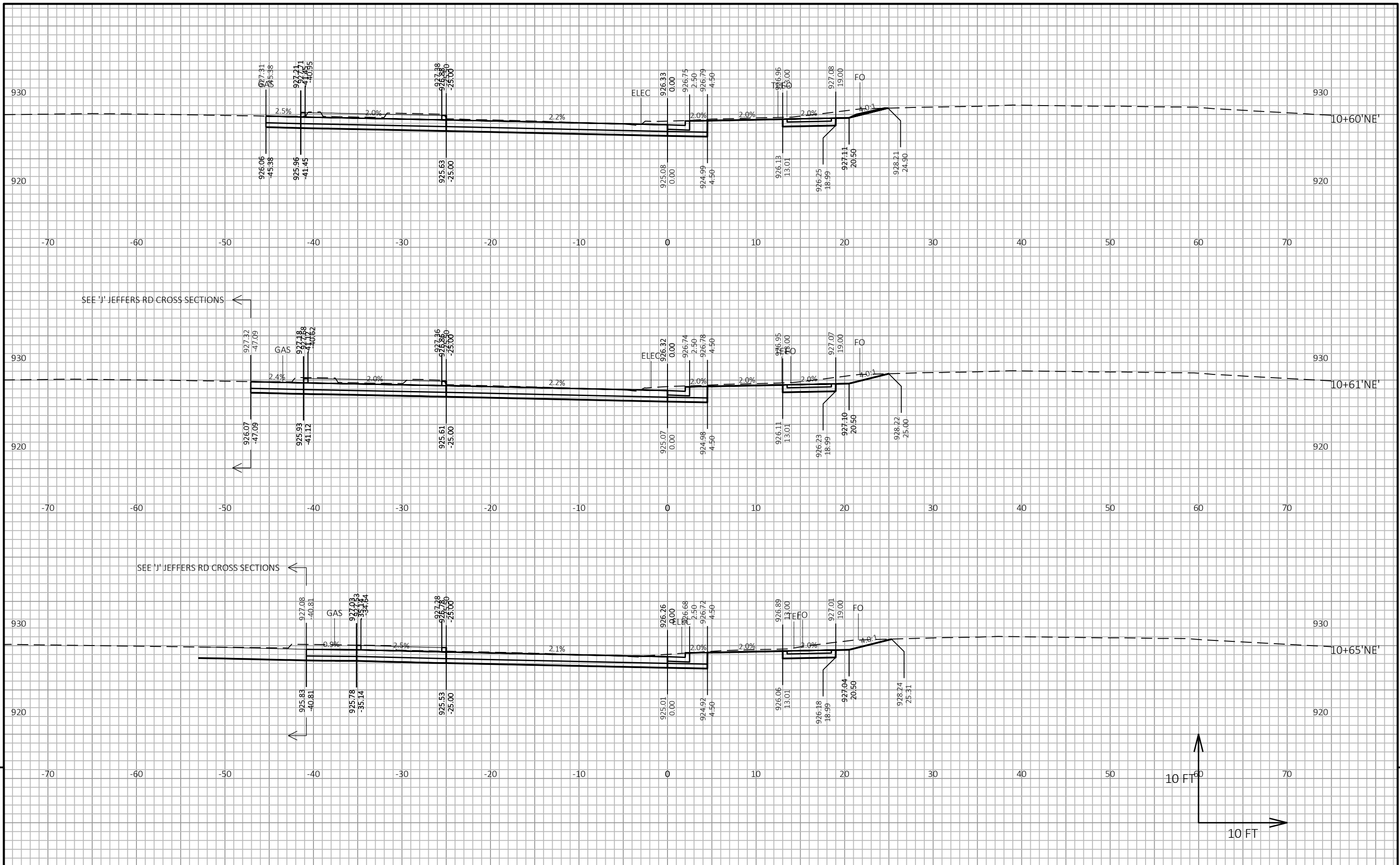




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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: NE CURB RETURN	SHEET	E
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PROJECT NO: 7028-00-73

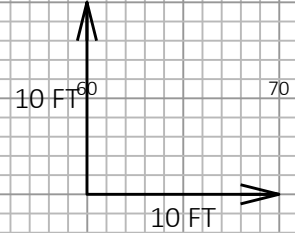
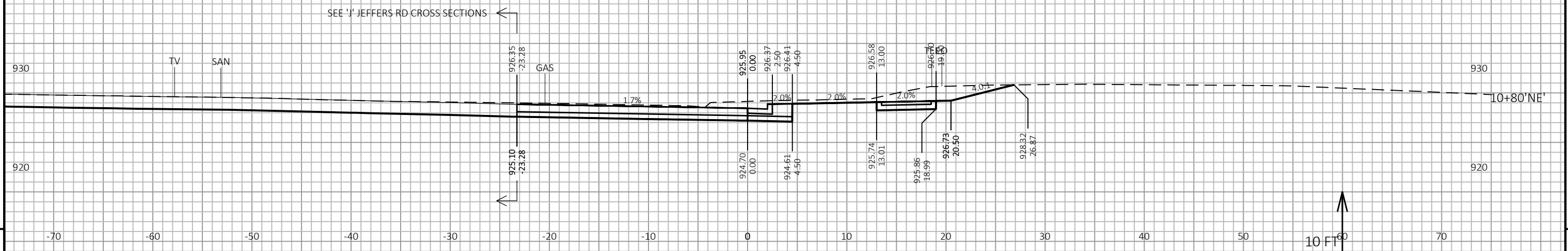
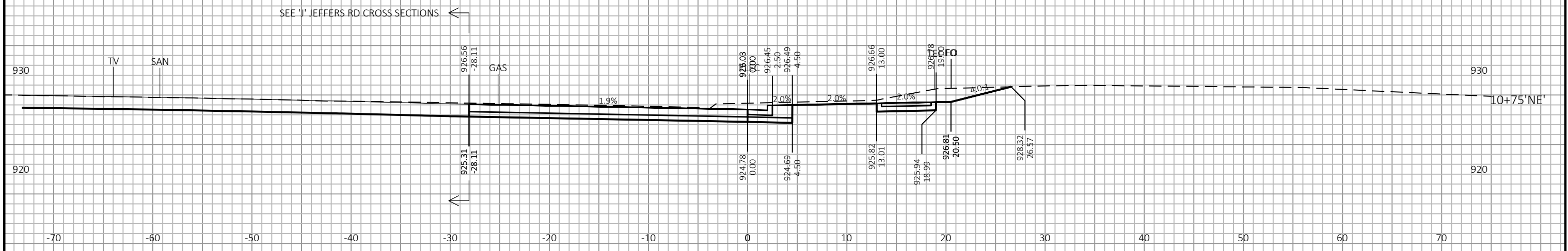
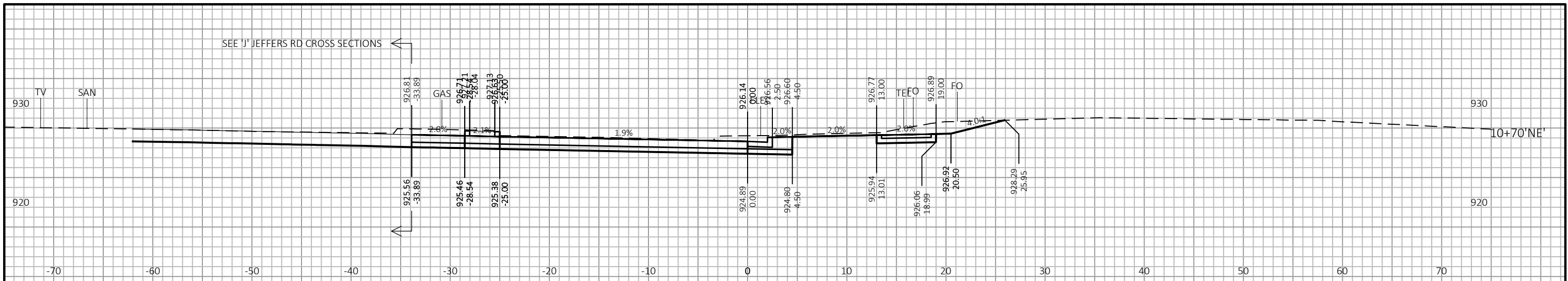
HWY: STH 312

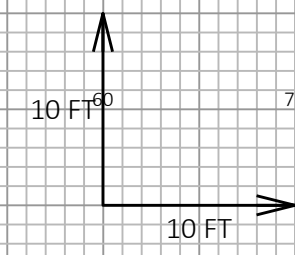
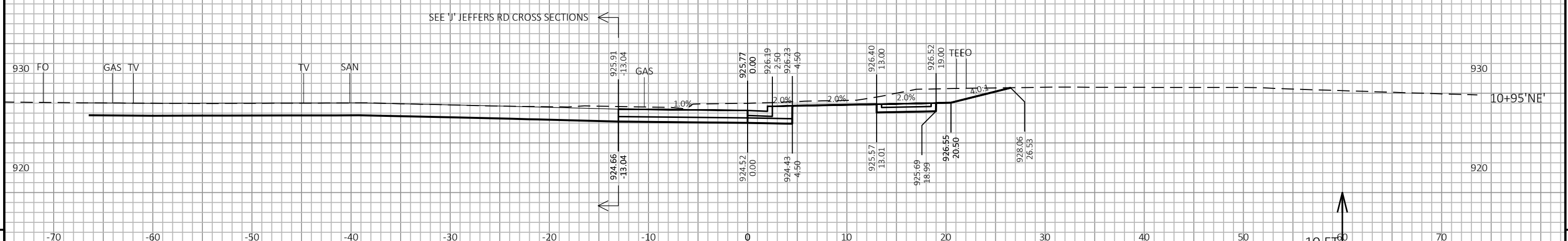
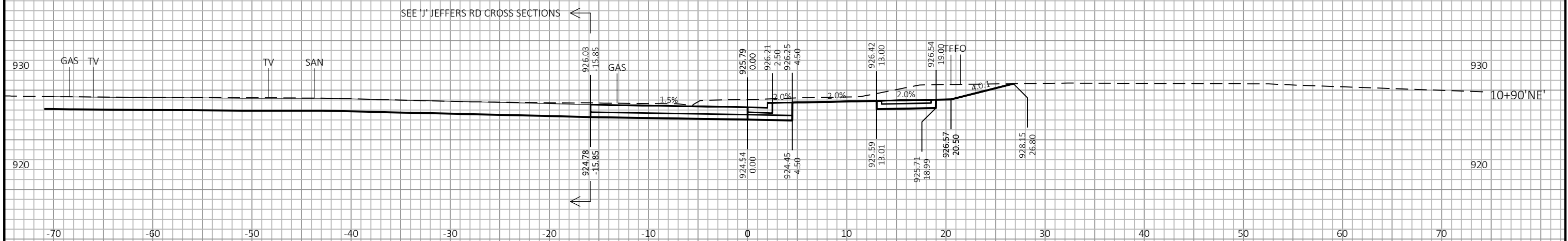
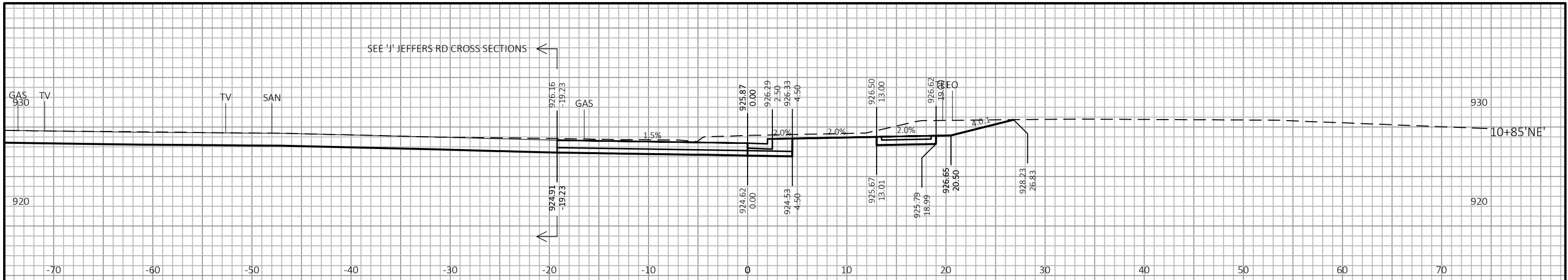
COUNTY: EAU CLAIRE

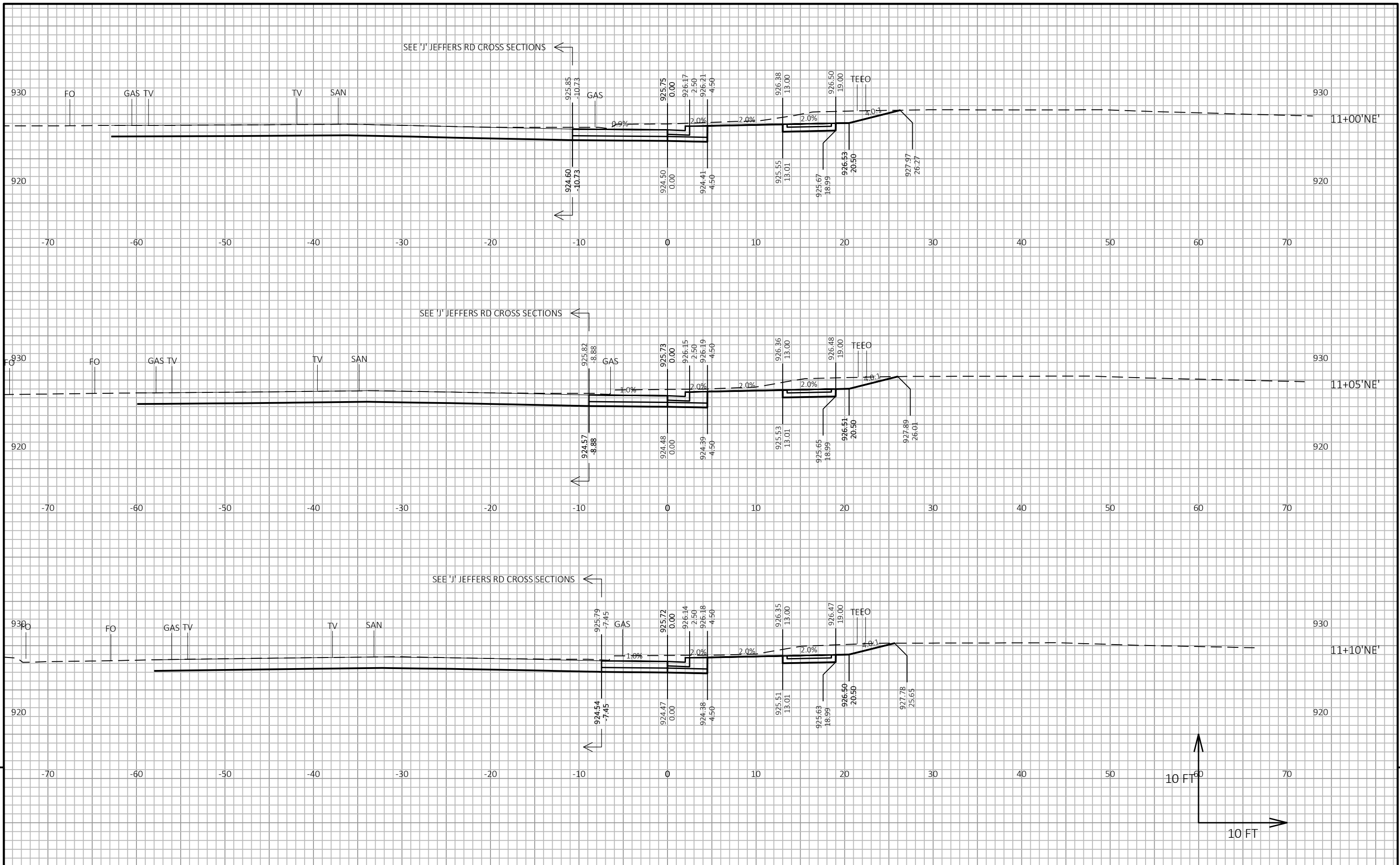
CROSS SECTIONS: NE CURB RETURN

SHEET

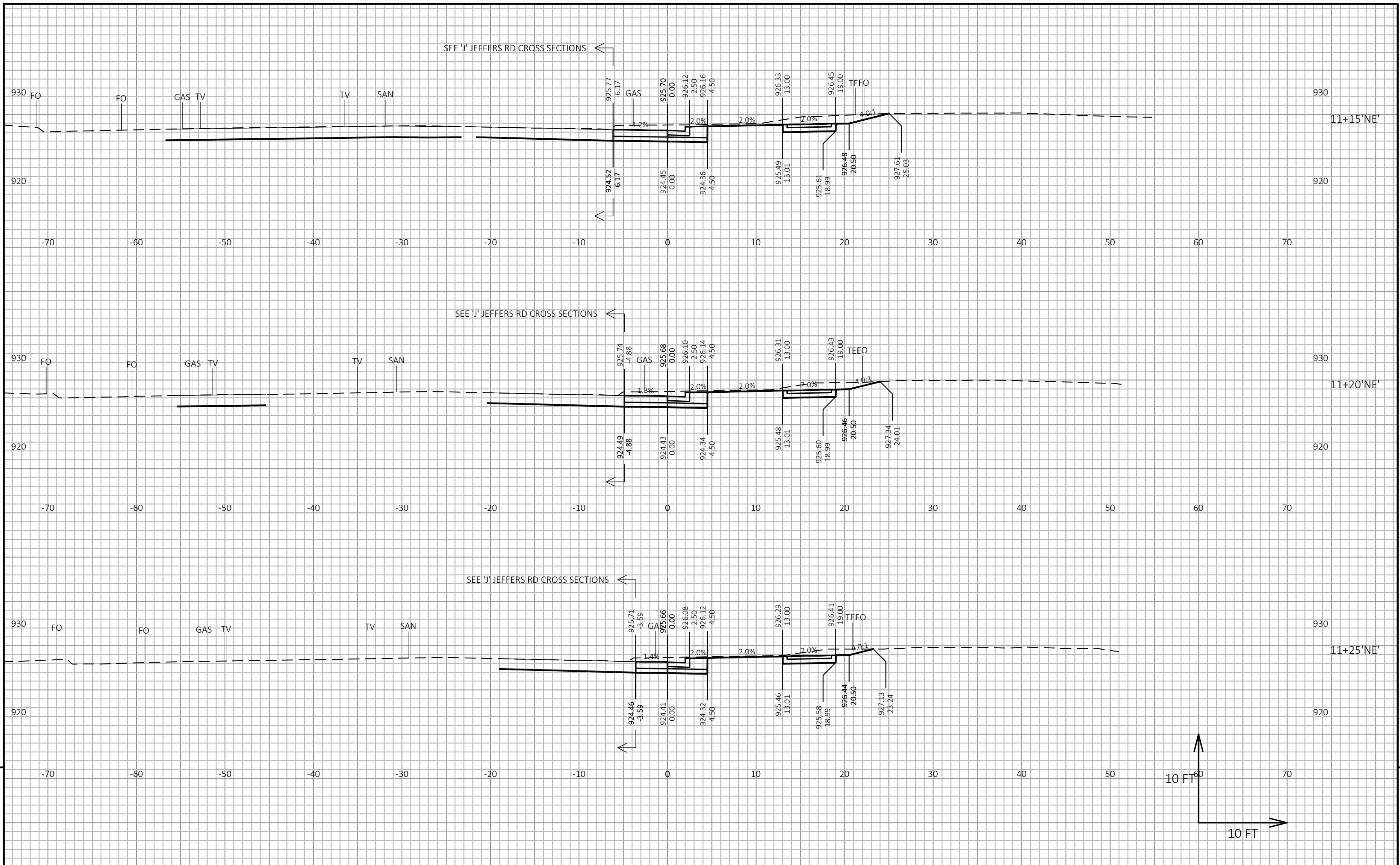
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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: NE CURB RETURN	SHEET	E
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PROJECT NO: 7028-00-73

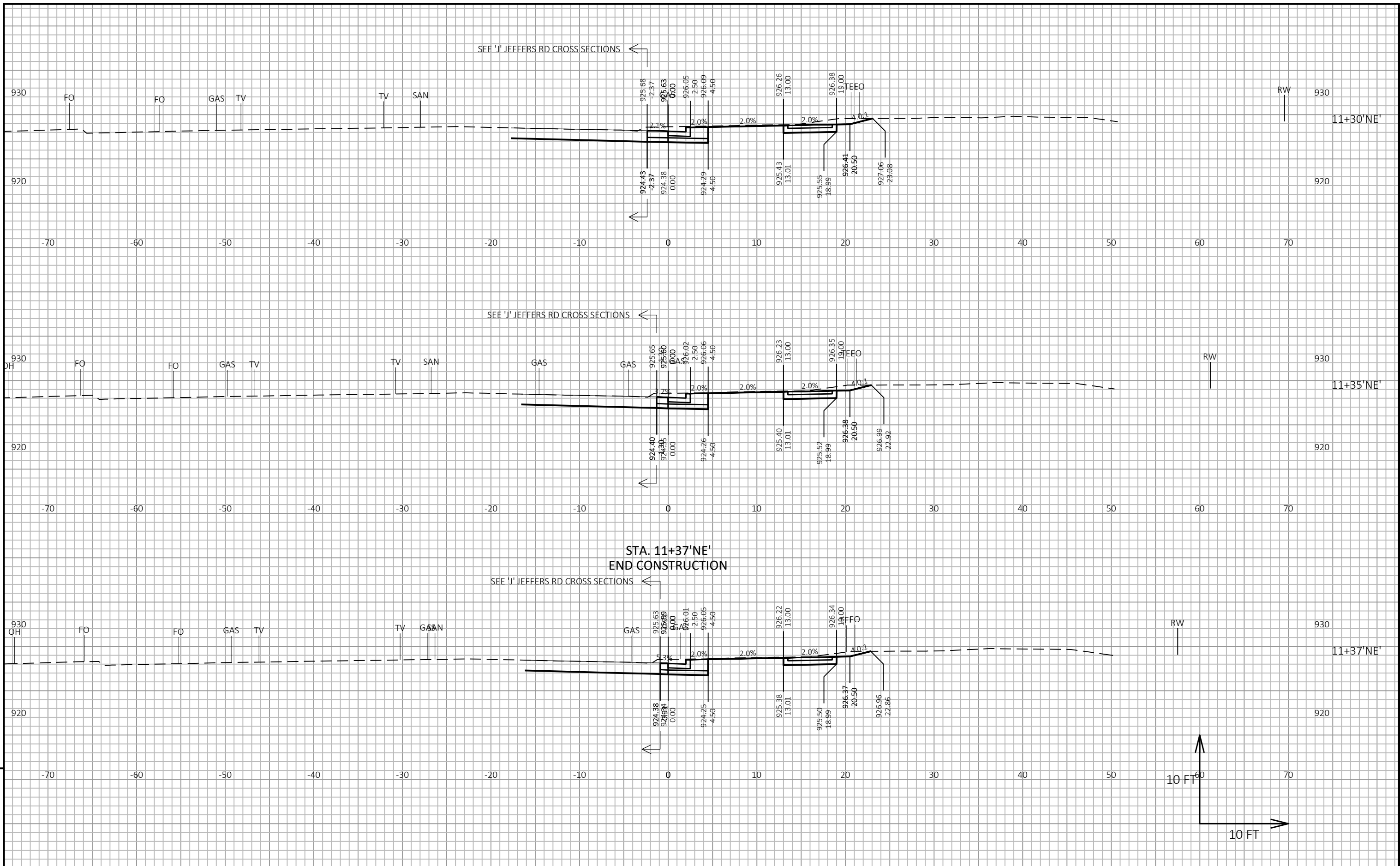
HWY: STH 312

COUNTY: EAU CLAIRE

CROSS SECTIONS: NE CURB RETURN

SHEET

9



PROJECT NO: 7028-00-73

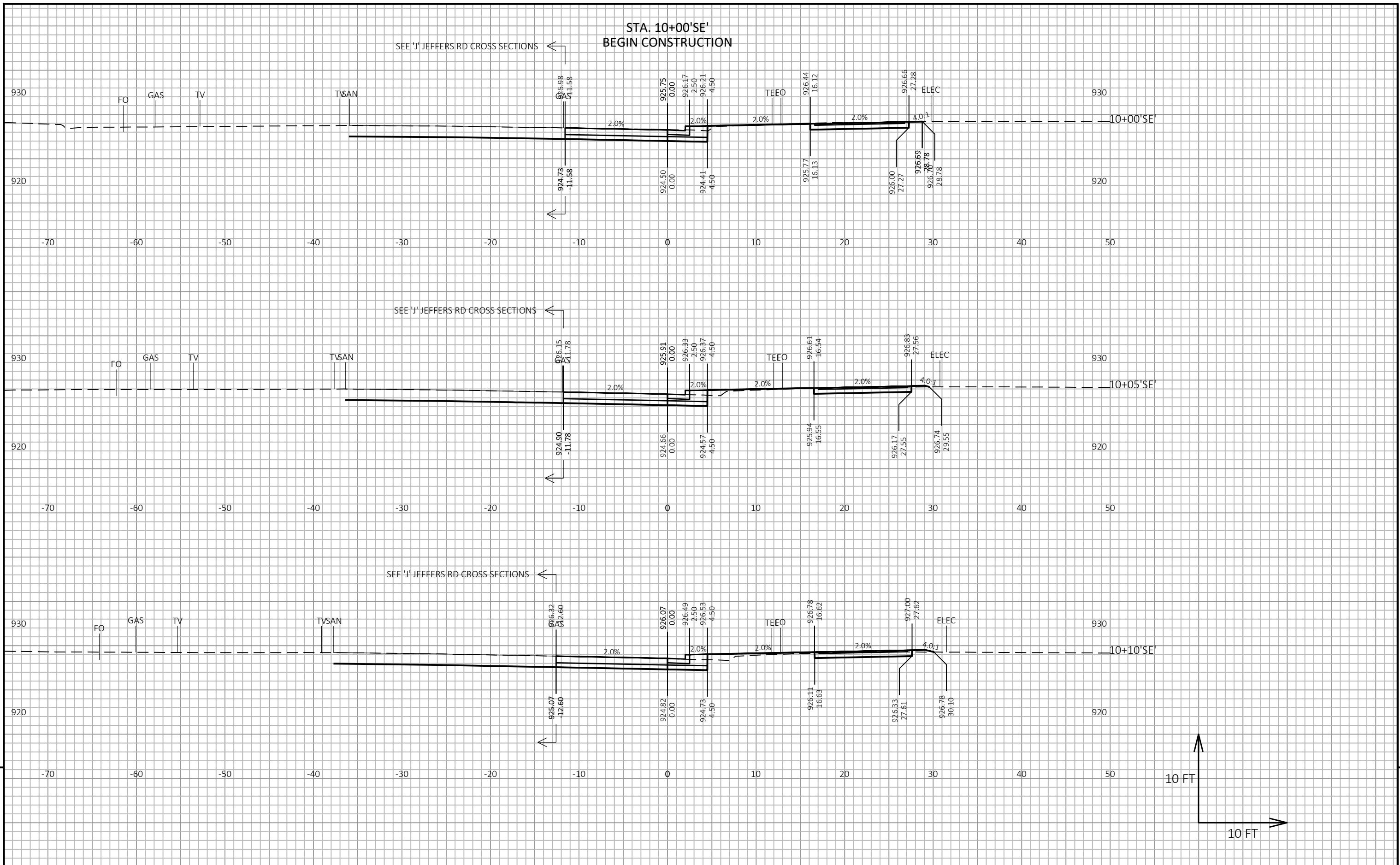
HWY: STH 312

COUNTY: EAU CLAIRE

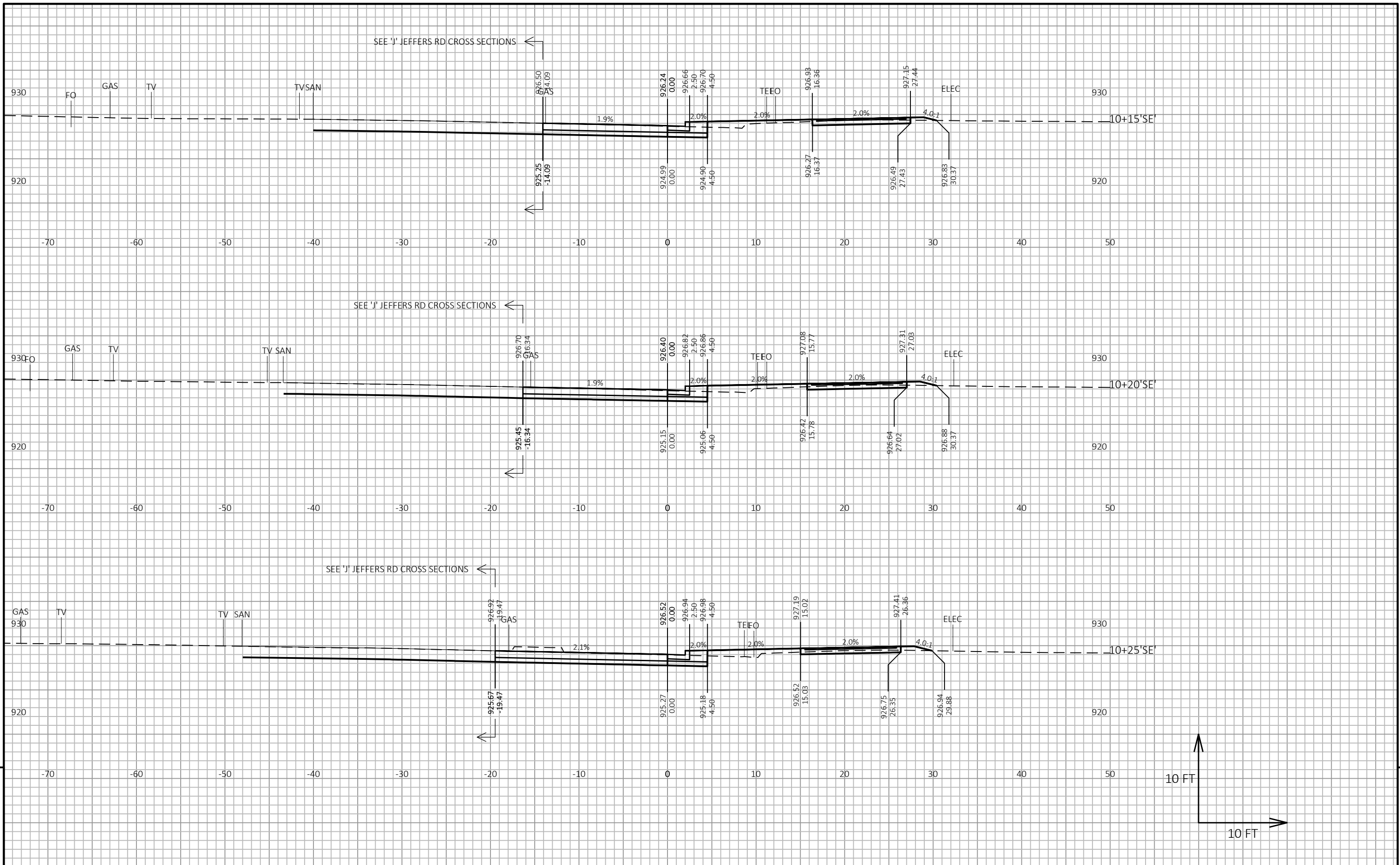
CROSS SECTIONS: NE CURB RETURN

SHEET

9







PROJECT NO: 7028-00-73

HWY: STH 312

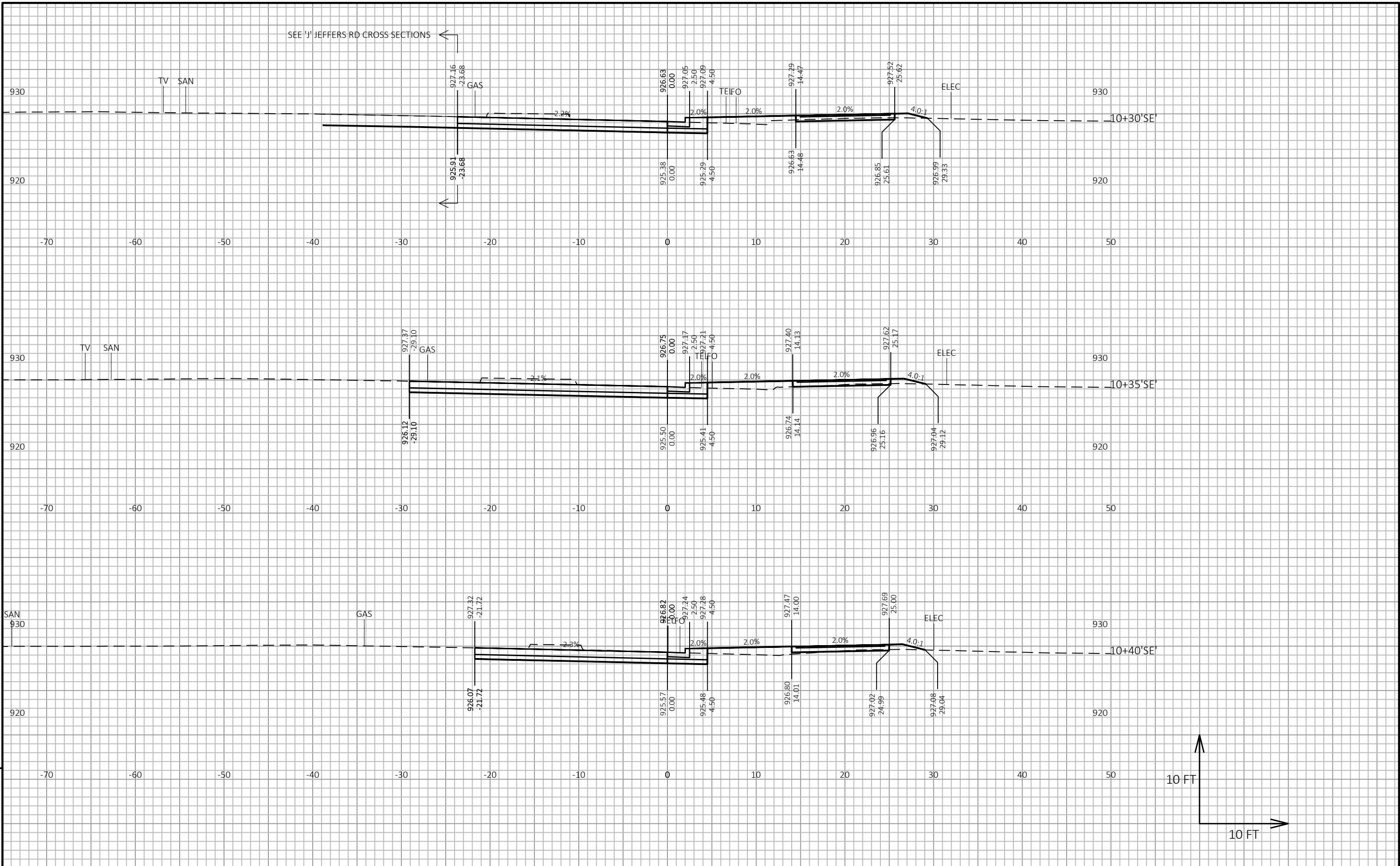
COUNTY: EAU CLAIRE

CROSS SECTIONS: SE CURB RETURN

SHEET

E

SEE 'J' JEFFERS RD CROSS SECTIONS



9

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PROJECT NO: 7028-00-73

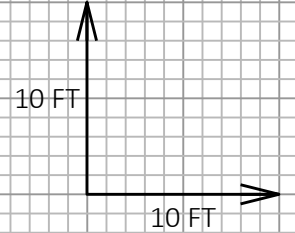
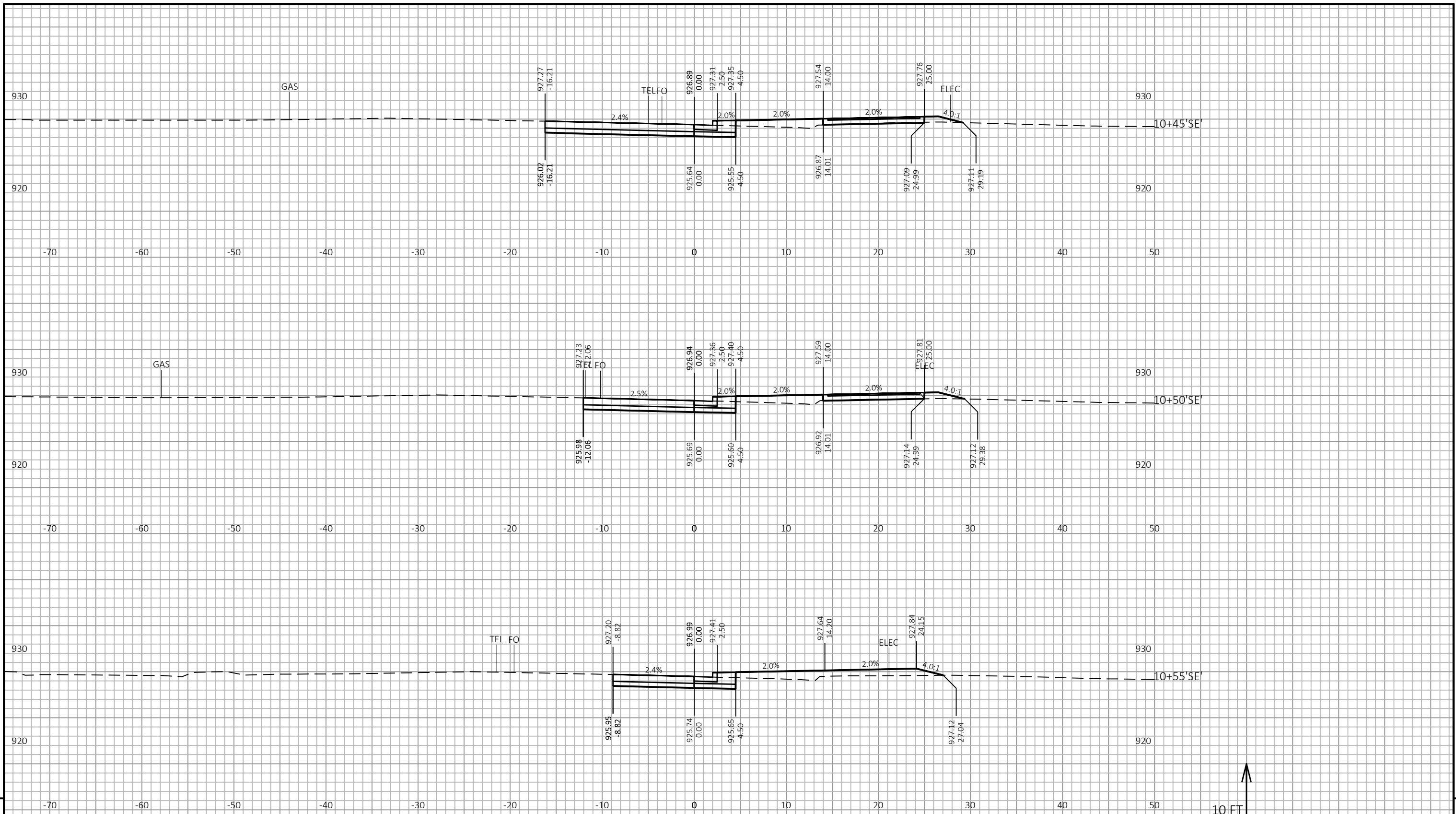
HWY: STH 312

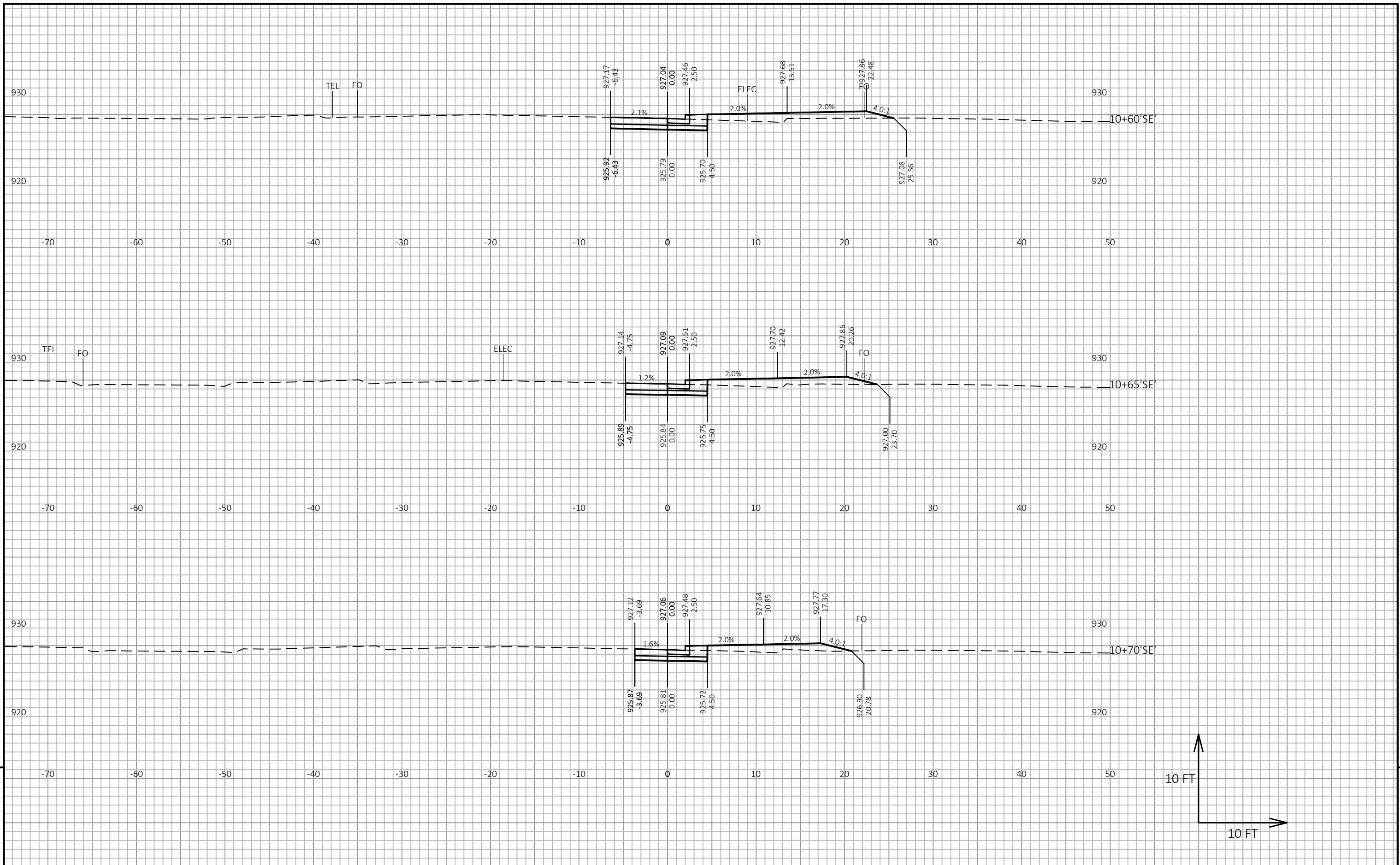
COUNTY: EAU CLAIRE

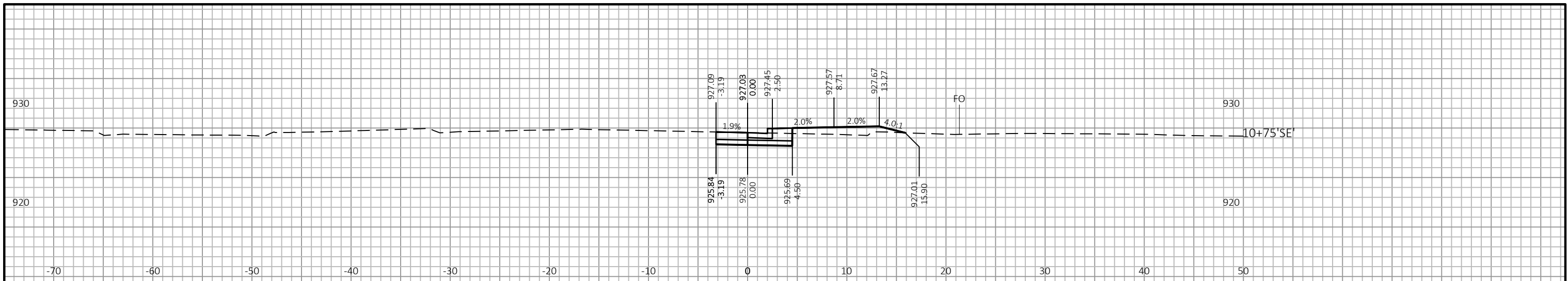
CROSS SECTIONS: SE CURB RETURN

SHEET

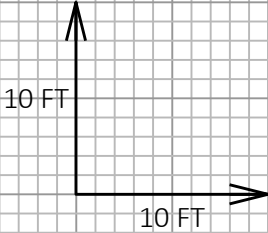
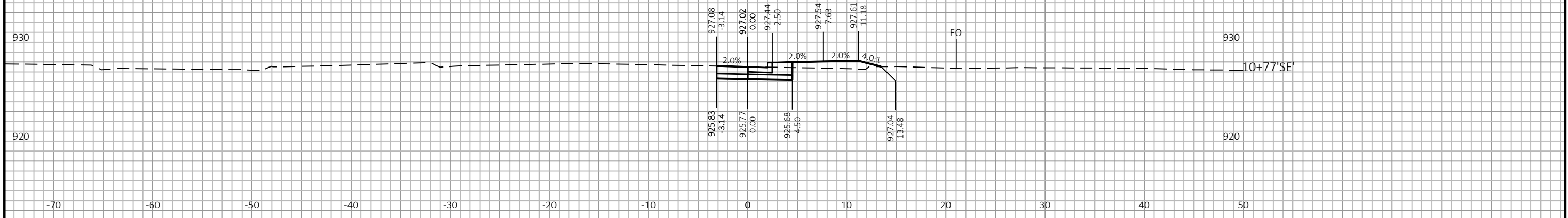
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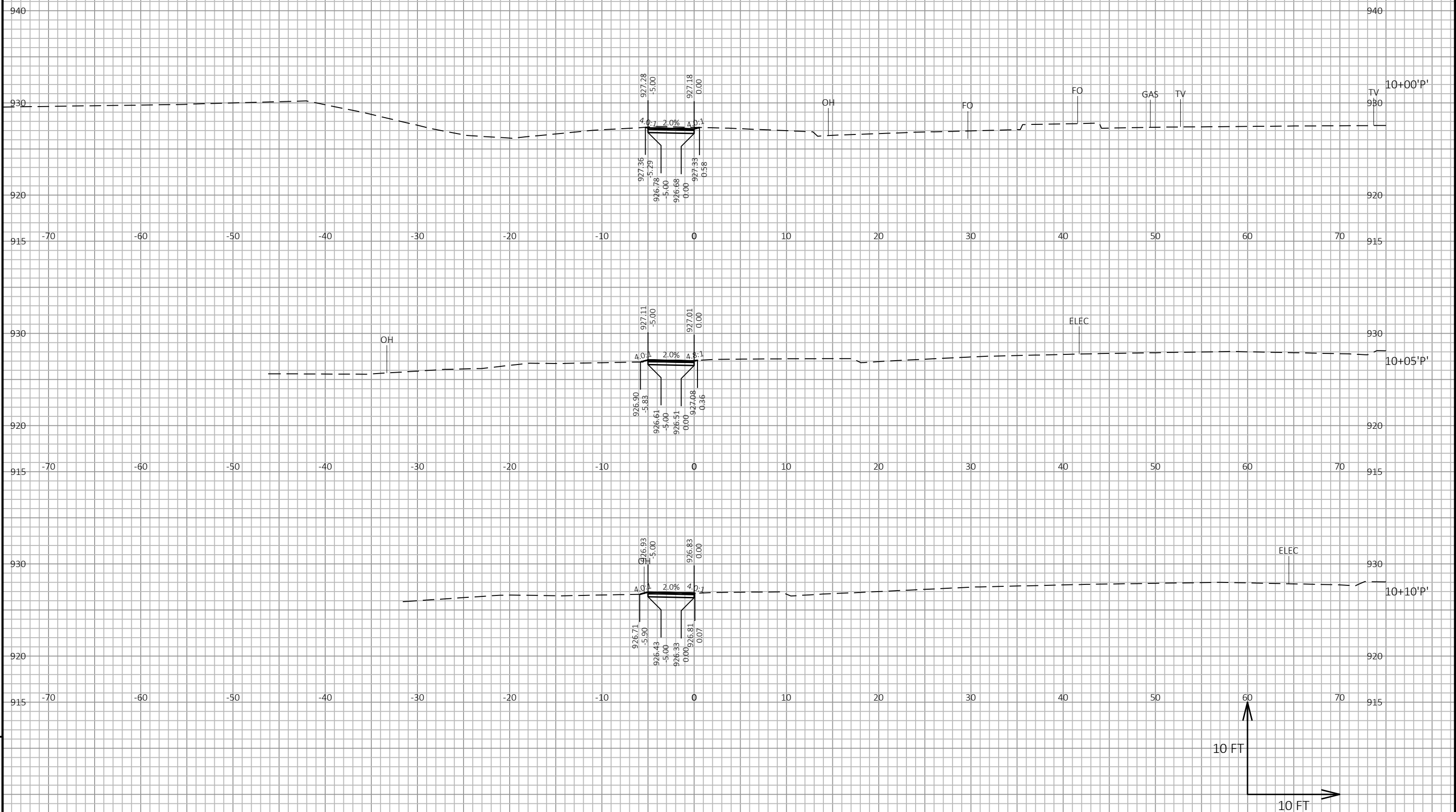
STA. 10+77'SE'  
END CONSTRUCTION



9

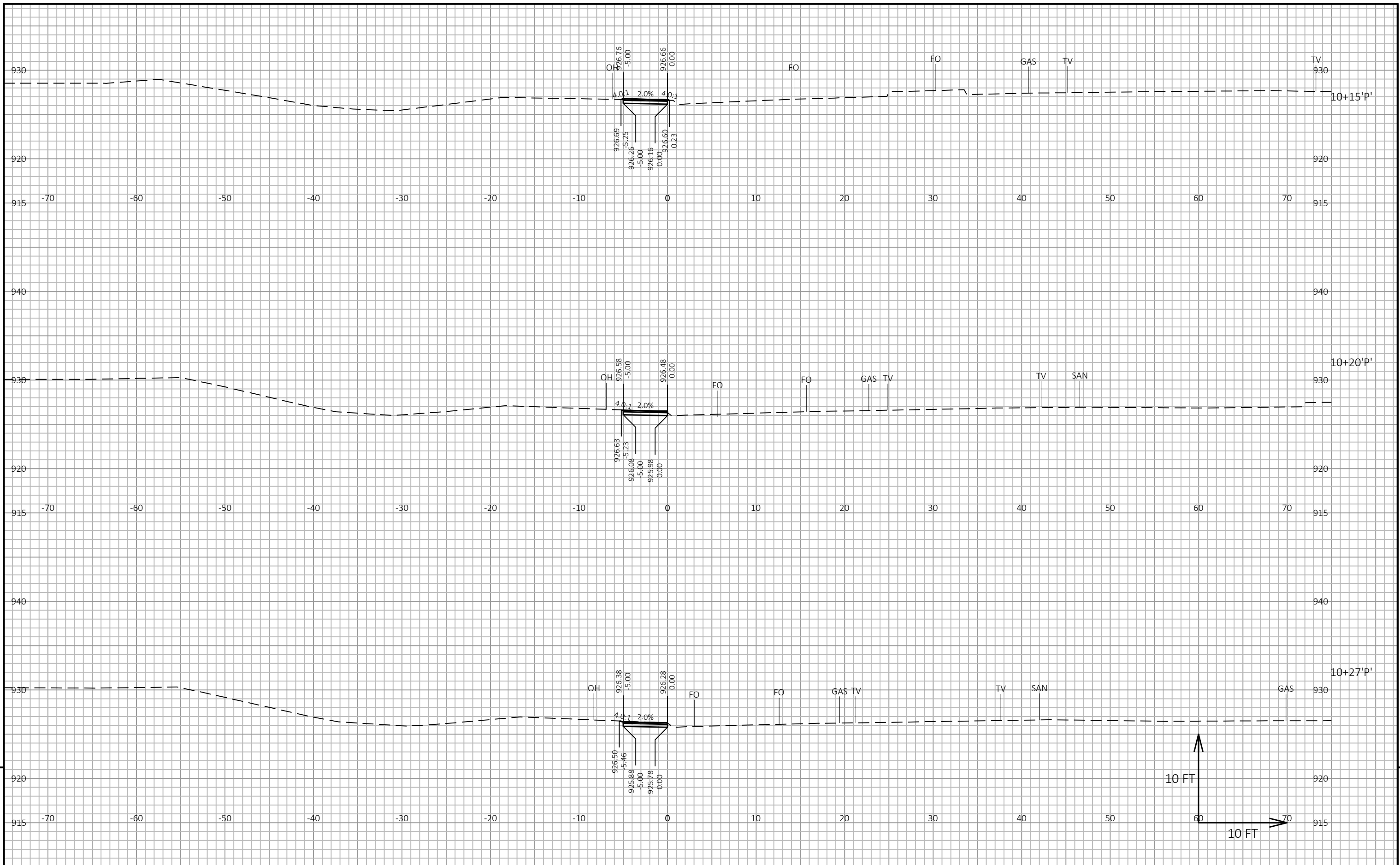
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STA. 10+00'P'  
 BEGIN CONSTRUCTION  
 TEMPORARY PEDESTRIAN PATH



9

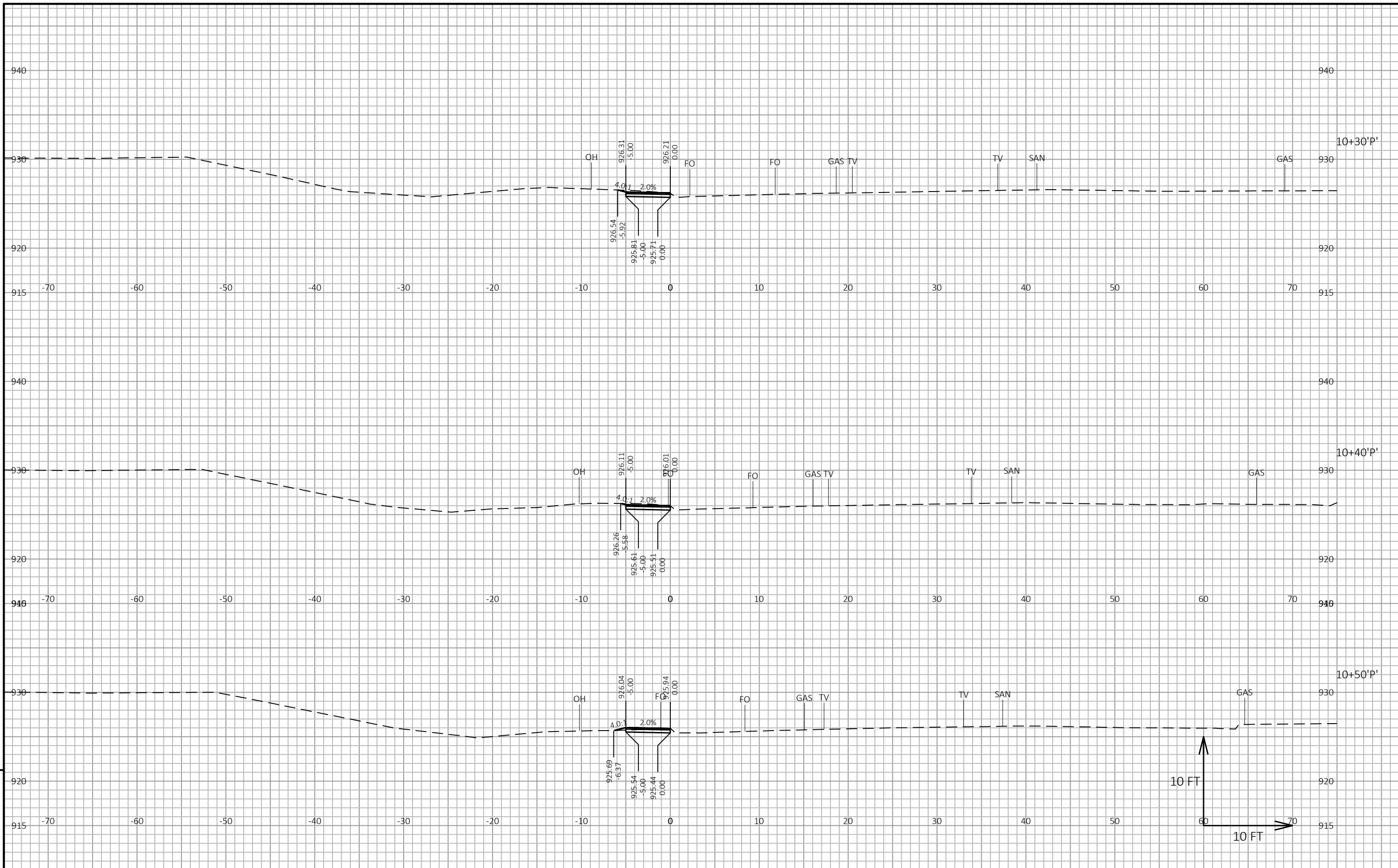
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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH	SHEET	E
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PROJECT NO: 7028-00-73

HWY: STH 312

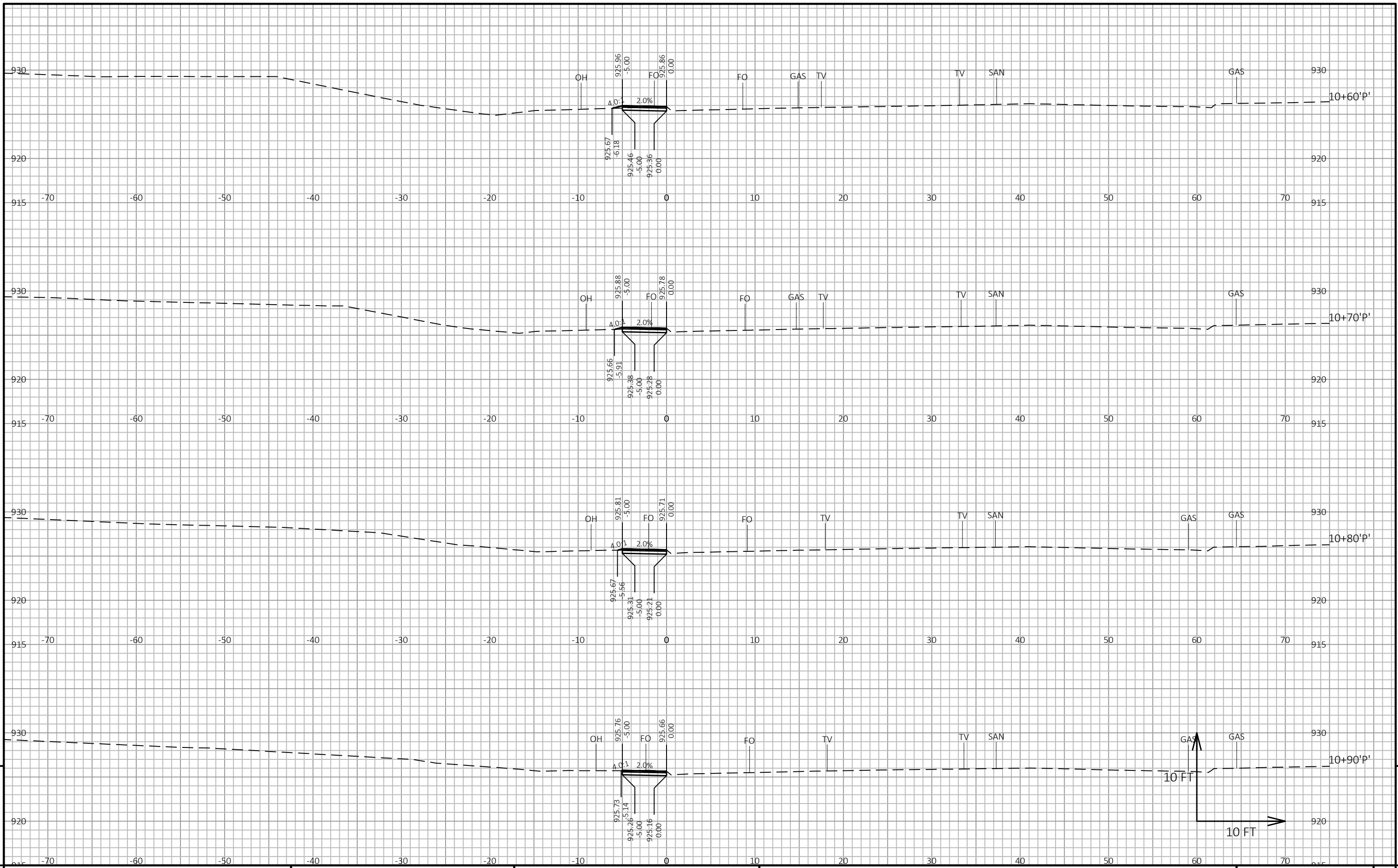
COUNTY: EAU CLAIRE

CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH

SHEET

E





PROJECT NO: 7028-00-73

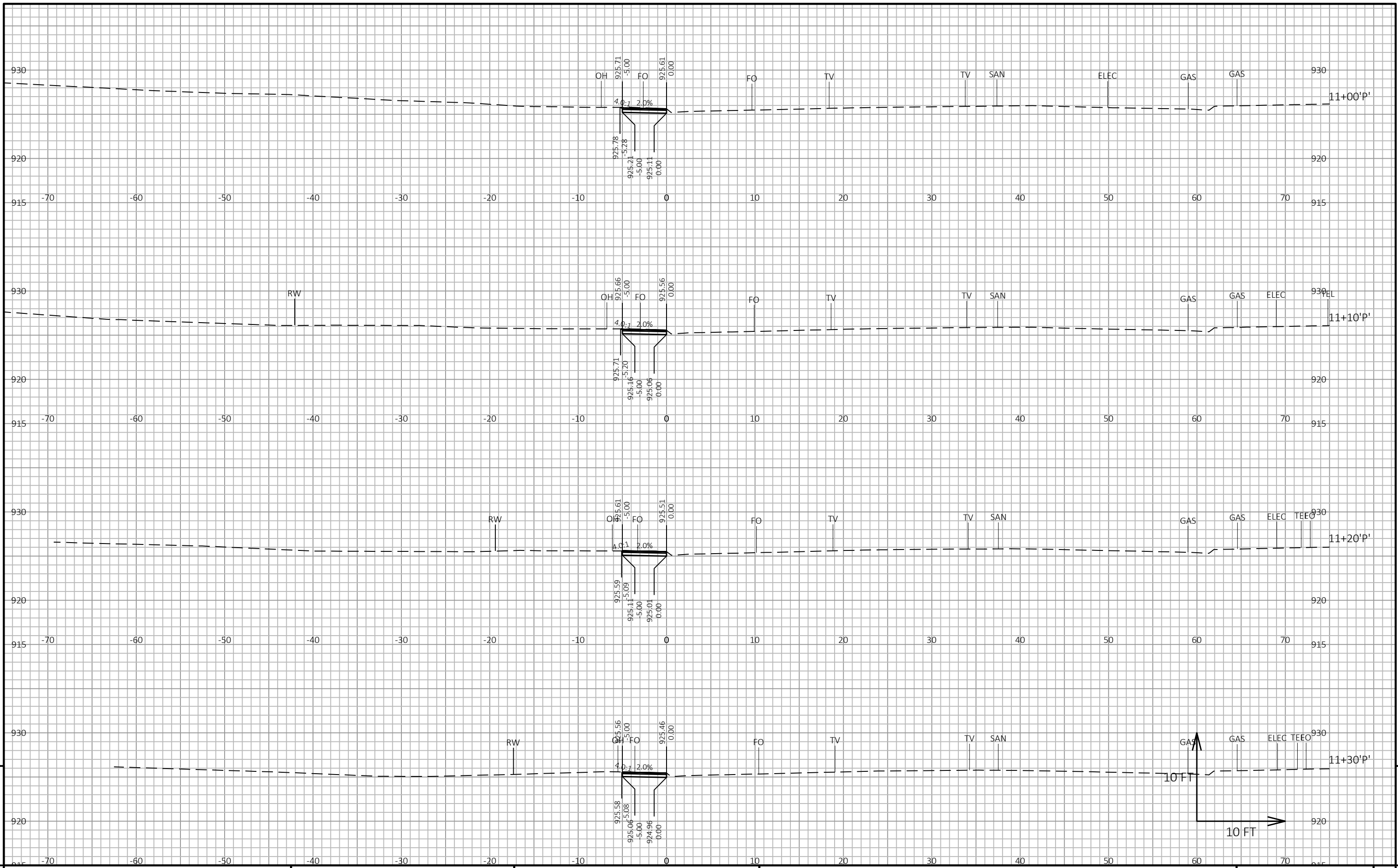
HWY: STH 312

COUNTY: EAU CLAIRE

CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH

SHEET

E



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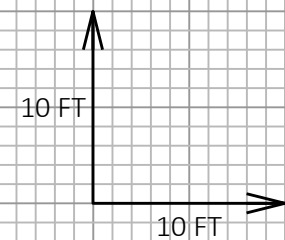
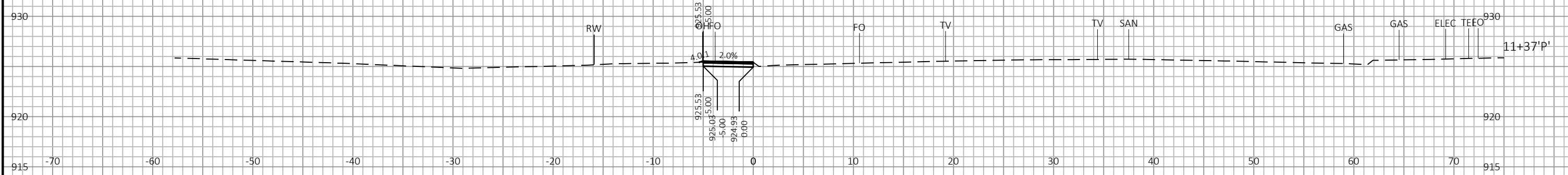
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PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH      SHEET      E

FILE NAME : C:\USERS\JOSHUA.OLSON\AECOM\60637676\_STH312-JEFFERSRD-INTERSECTION - 0\_RECORDS\900\_CAD\_GIS\910\_CAD\912\_PLAN\_SHEETS\090201-XS.DWG      PLOT DATE : 9/3/2021 11:25 AM      PLOT BY : OLSON, JOSHUA      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - P-05

STA. 11+40'P'  
 END CONSTRUCTION  
 TEMPORARY PEDESTRIAN PATH

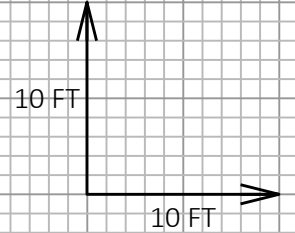
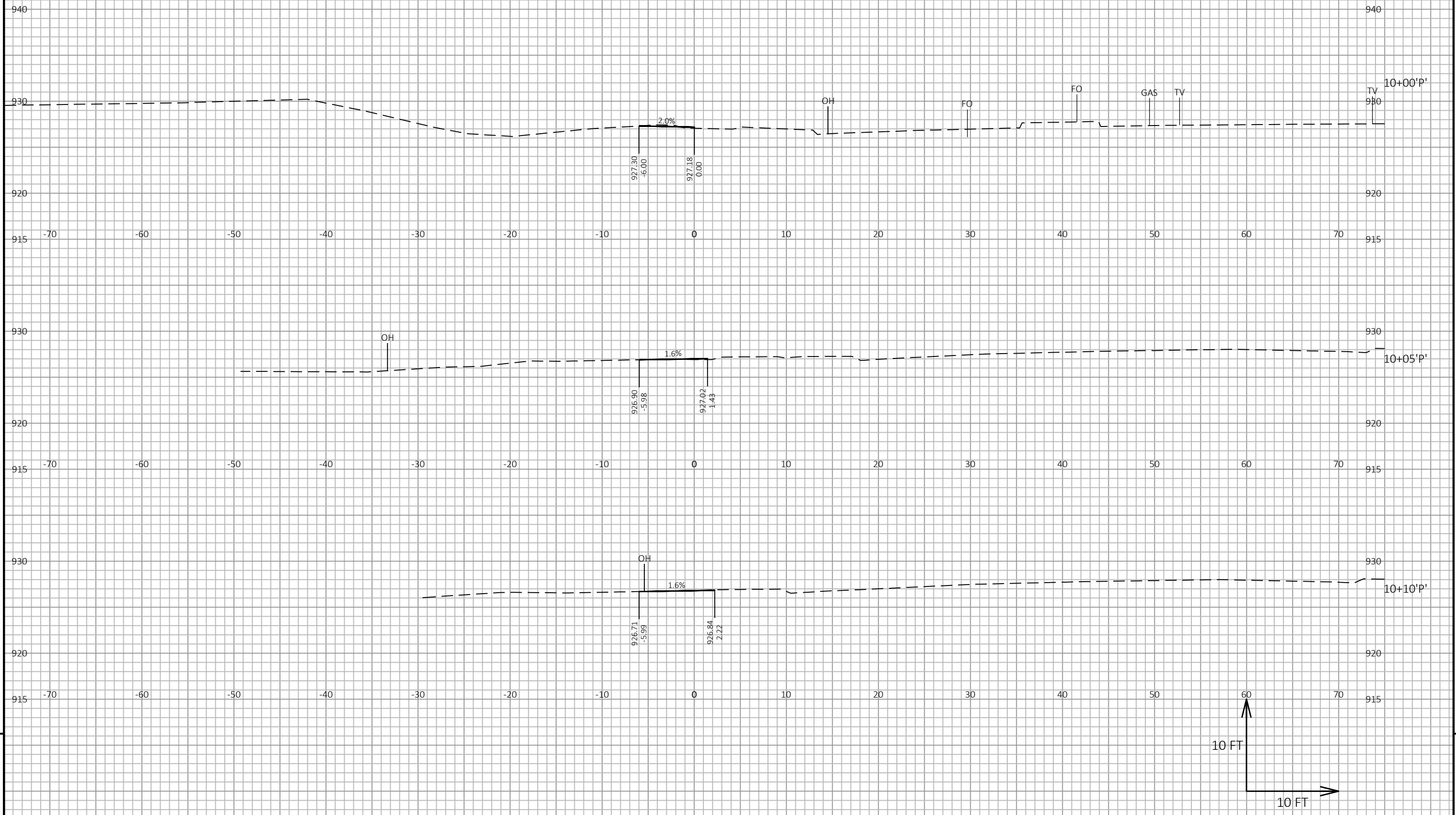


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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH	SHEET	E
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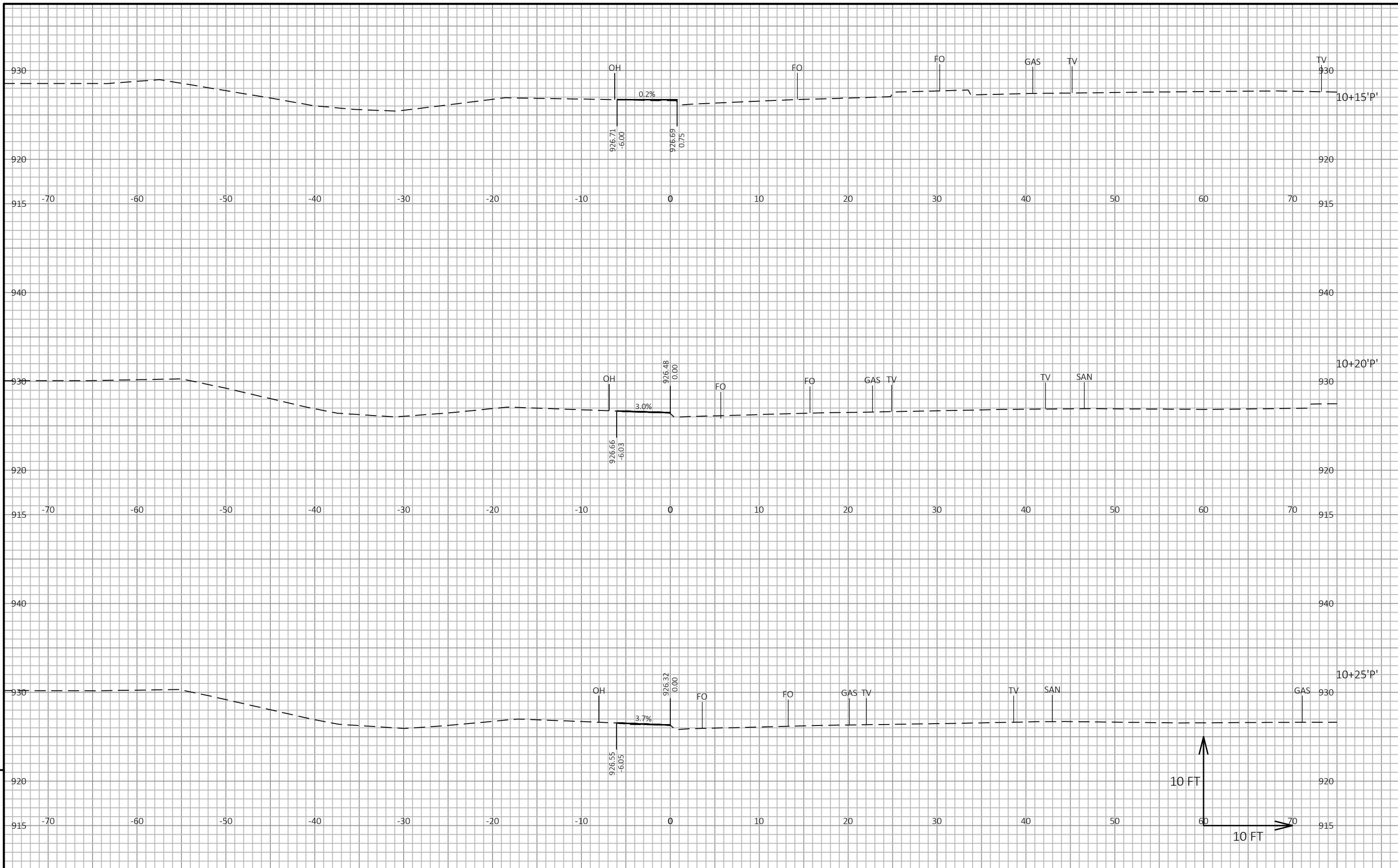
STA. 10+00'P'  
 BEGIN CONSTRUCTION  
 TEMPORARY PEDESTRIAN PATH REMOVAL GRADING



9

9

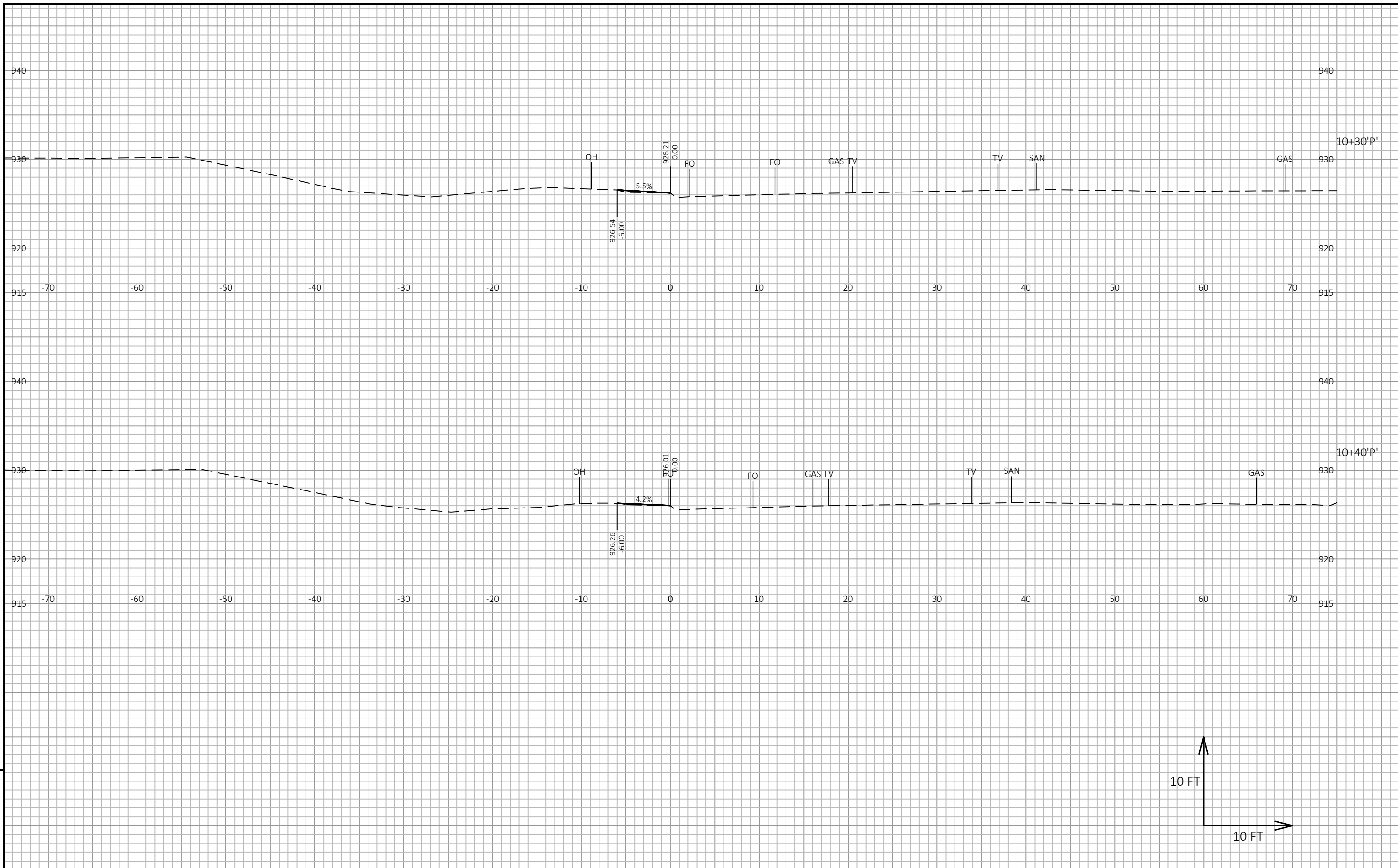
PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH REMOVAL GRADING	SHEET	E
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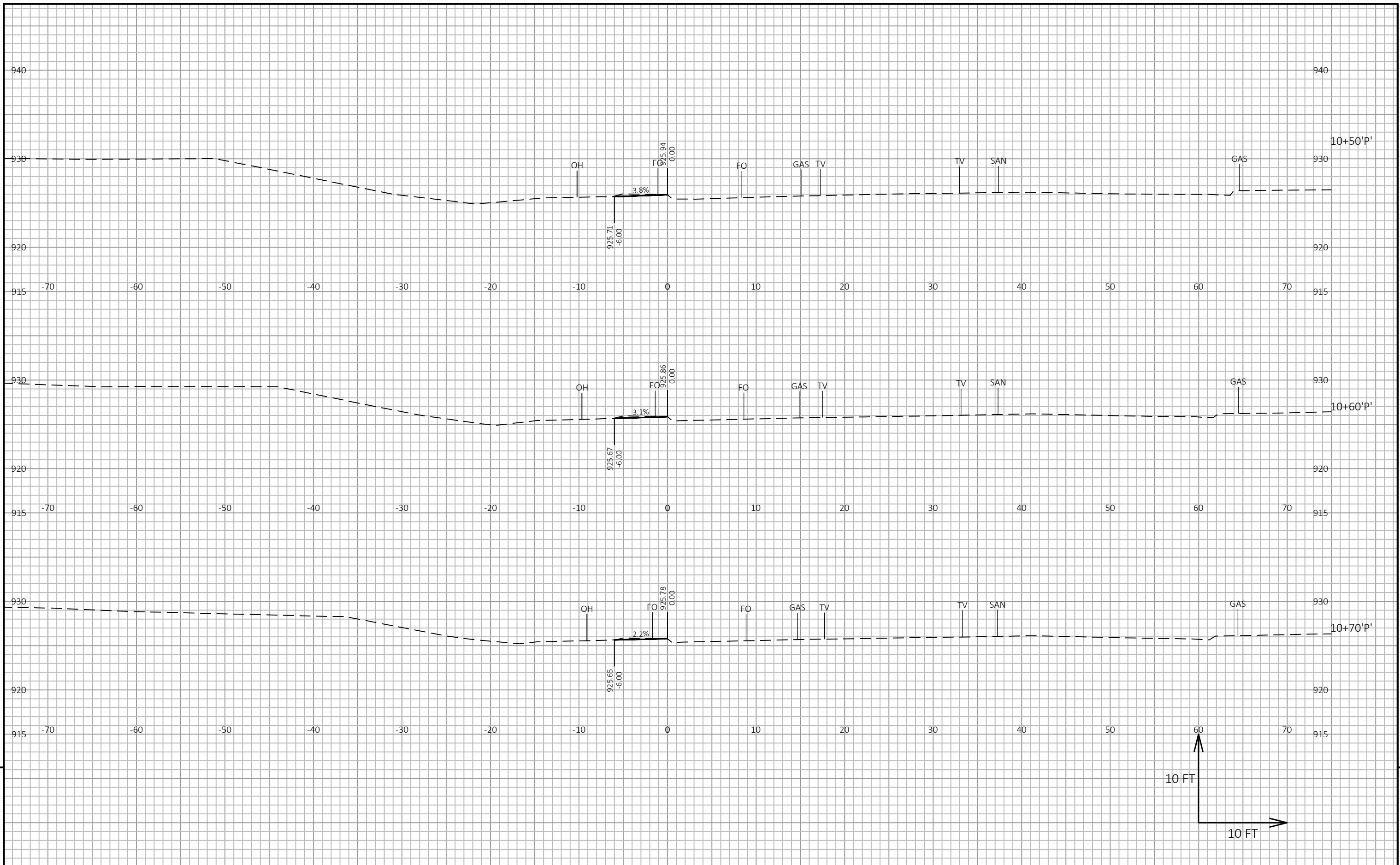
PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH REMOVAL GRADING	SHEET	E
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9

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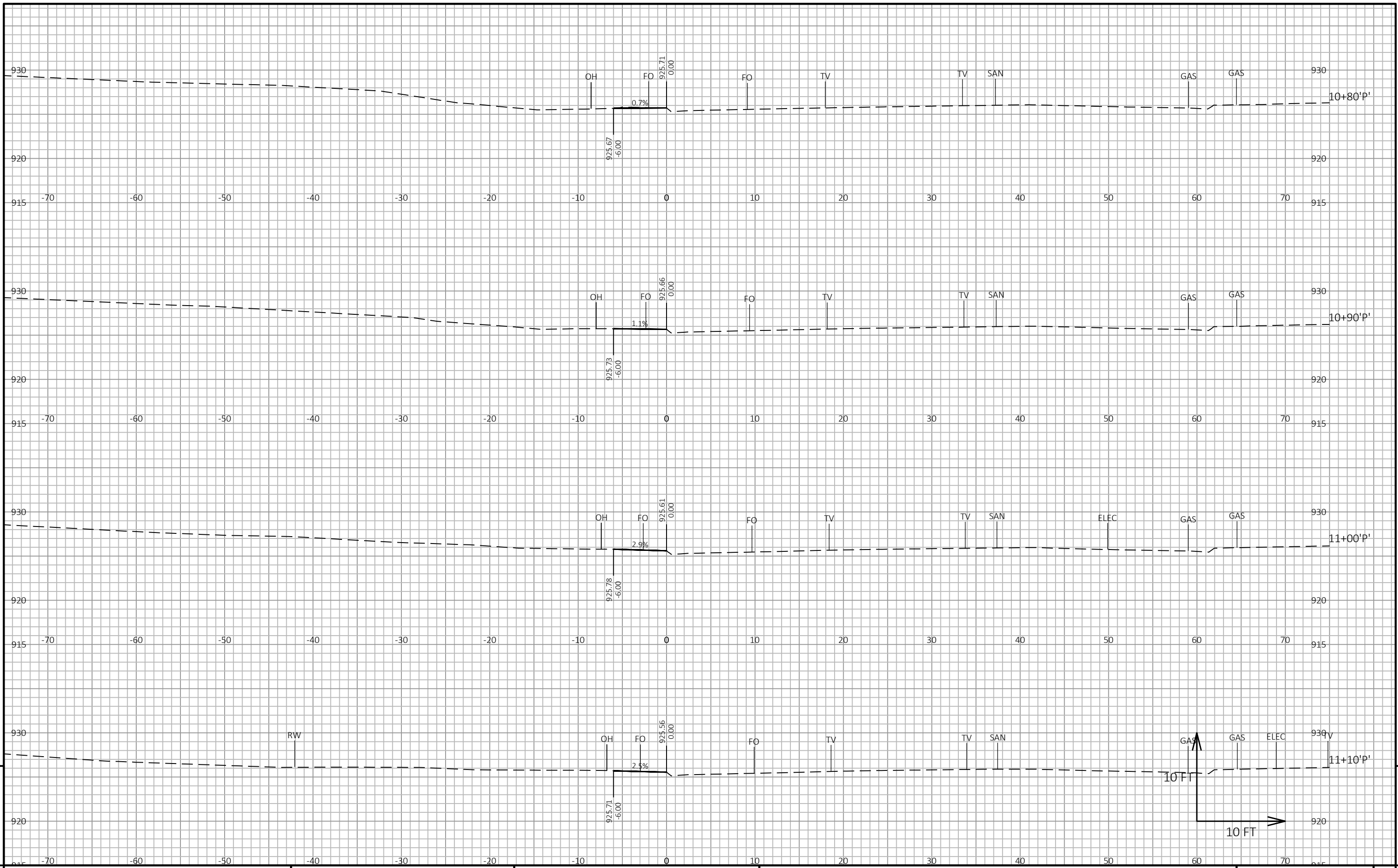
PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH REMOVAL GRADING	SHEET	E
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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH REMOVAL GRADING	SHEET	E
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9

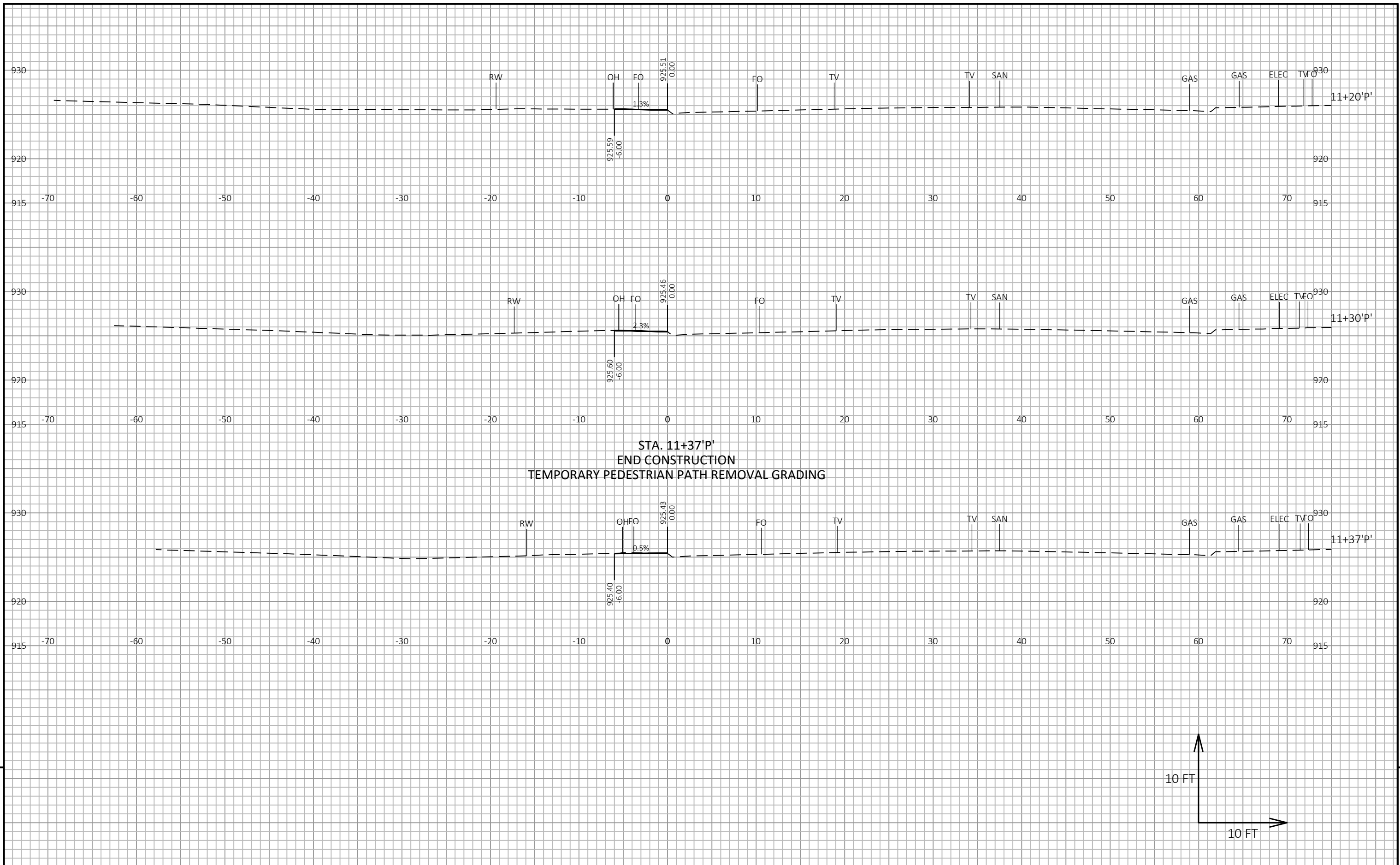
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PROJECT NO: 7028-00-73      HWY: STH 312      COUNTY: EAU CLAIRE      CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH REMOVAL GRADING      SHEET      E

FILE NAME : C:\USERS\JOSHUA.OLSON\AECOM\60637676\_STH312-JEFFERSRD-INTERSECTION - 0\_RECORDS\900\_CAD\_GIS\910\_CAD\912\_PLAN\_SHEETS\090202-XS.DWG      PLOT DATE : 9/3/2021 10:15 AM      PLOT BY : OLSON, JOSHUA      PLOT NAME :      PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.      WISDOT/CADD SHEET 49

LAYOUT NAME - P-05





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PROJECT NO: 7028-00-73	HWY: STH 312	COUNTY: EAU CLAIRE	CROSS SECTIONS: TEMPORARY PEDESTRIAN PATH REMOVAL GRADING	SHEET	E
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## *Wisconsin Department of Transportation*

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