

EAU

Dec 13, 2022

PROJECT ID:  
WITH: N/A

3700-50-61

COUNTY:

TAYLOR

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 Plat</del>
<del>Section No.</del>	<del>5</del>	<del>Plan and Profile</del>
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
<del>Section No.</del>	<del>8</del>	<del>Structure Plans</del>
<del>Section No.</del>	<del>9</del>	<del>Computer Earthwork Data</del>
<del>Section No.</del>	<del>9</del>	<del>Cross Sections</del>

TOTAL SHEETS = 146



35

DESIGN DESIGNATION 3700-50-60

A.A.D.T.	2023	=	9620
A.A.D.T.	2043	=	9620
D.H.V.		=	962
D.D.		=	50/50
T.		=	13.8%
DESIGN SPEED		=	30 MPH
ESALS		=	3,090,000

CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

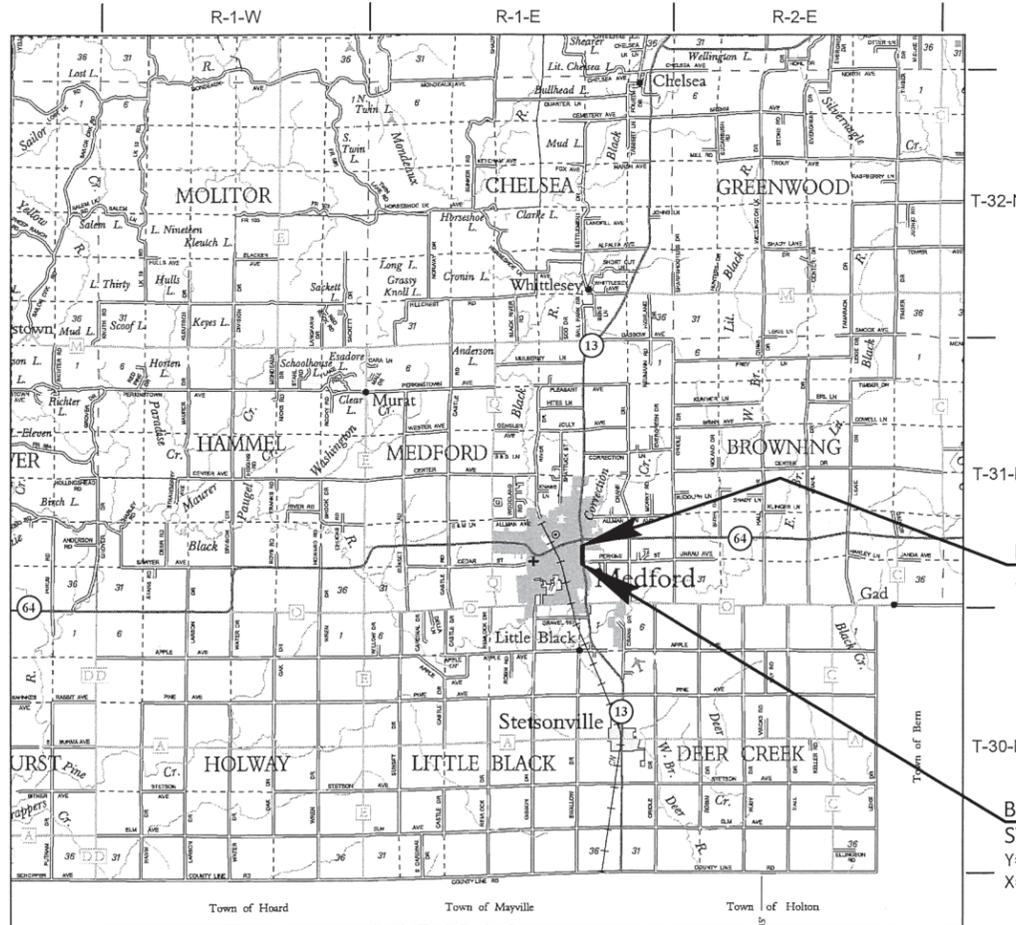
C MEDFORD, STH 13

PERKINS STREET TO CLARK STREET

STH 13

TAYLOR COUNTY

STATE PROJECT NUMBER  
3700-50-61



LAYOUT  
SCALE 0 4 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3700-50-61		

ORIGINAL PLANS PREPARED BY

Short Elliott Hendrickson Inc.  
10 North Bridge Street  
Chippewa Falls, WI 54729-2550  
715.720.6200 main | 888.908.8166 fax  
800.472.5881 toll free | www.sehinc.com



7/29/2022 (Date) (Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY  
Surveyor \_\_\_\_\_  
Designer \_\_\_\_\_ SEH  
Project Manager \_\_\_\_\_ NICHOLAS PITCH  
Regional Examiner \_\_\_\_\_ NW REGION  
Regional Supervisor \_\_\_\_\_

APPROVED FOR THE DEPARTMENT  
DATE: Dave Koepp (Signature)

E

**STANDARD ABBREVIATIONS**

ABUT	ABUTMENT	ID	INSIDE DIAMETER
AC	ACRE	INV	INVERT
AGG	AGGREGATE	IP	IRON PIPE ON PIN
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	LHF	LEFT-HAND FORWARD
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL	L	LENGTH OF CURVE
ASPH	ASPHALTIC	LF	LINEAR FOOT
AVG	AVERAGE	LC	LONG CHORD OF CURVE
ADT	AVERAGE DAILY TRAFFIC	LS	LUMP SUM
BF	BACK FACE	MH	MANHOLE
BM	BENCH MARK	MOR	MID POINT OF RADIUS
BR	BRIDGE	NC	NORMAL CROWN
CE	COMMERCIAL ENTRANCE	NO	NUMBER
C/L	CENTER LINE	OBLIT	OBLITERATE
Δ	CENTRAL ANGLE OR DELTA	PAVT	PAVEMENT
COB	CENTER OF BARRIER	PE	PRIVATE ENTRANCE
CONC	CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
CPRC	CULVERT PIPE REINFORCED CONCRETE	QOR	QUARTER POINT OF RADIUS
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	R	RADIUS
CR	CREEK	REQ'D	REQUIRED
CY	CUBIC YARD	RES	RESIDENCE OR RESIDENTIAL
C&G	CURB AND GUTTER	RHF	RIGHT-HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT-OF-WAY
DHV	DESIGN HOUR VOLUME	R	RIVER
DISCH	DISCHARGE	RDWY	ROADWAY
DG	DITCH GRADE	R/L	REFERENCE LINE
DWY	DRIVEWAY	SALV	SALVAGED
X	EAST GRID COORDINATE	SAN	SANITARY SEWER
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD
HYD	HYDRANT		

**RUNOFF COEFFICIENT TABLE**

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

TOTAL PROJECT AREA = 0.79ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.03ACRES

**DNR AREA LIAISON:**

WI DEPT OF NATURAL RESOURCES  
DNR NORTHERN REGION HEADQUARTERS  
107 SUTLIFF  
RHINELANDER, WI 54501  
TELEPHONE: 715.365.8916  
ATTENTION: WENDY HENNIGES  
EMAIL: WENDY.HENNIGES@WISCONSIN.GOV

**WISDOT CONTACT:**

WISCONSIN DEPARTMENT OF TRANSPORTATION  
NORTHWEST REGION, EAU CLAIRE OFFICE  
718 W. CLAIREMONT AVE.  
EAU CLAIRE, WI 54701  
TELEPHONE: 715.225.1271  
ATTENTION: NICHOLAS PITTSCH  
PROJECT MANAGER  
EMAIL: NICHOLAS.PITTSCH@DOT.WI.GOV

**DESIGN CONTACT:**

SHORT ELLIOTT HENDRICKSON INC.  
10 NORTH BRIDGE STREET  
CHIPPEWA FALLS, WI 54729-2550  
TELEPHONE: 715.720.6291  
ATTENTION: TARA KRISTA  
EMAIL: TKRISTA@SEHINC.COM

**UTILITY CONTACT LIST:**

JESSE GRUNY  
SPECTRUM - COMMUNICATION LINE  
N5143 CTH E  
MEDFORD, WI 54451  
(715) 651-5605  
JESSE.GRUNY@CHARTER.COM

JEFF SHAW  
TDS TELECOM - COMMUNICATION LINE  
PO BOX 240  
202 E OGDEN STREET  
MEDFORD, WI 54451  
(715) 323-8464  
JEFF.SHAW@TDS TELECOM.COM

JOE HARRIS  
CITY OF MEDFORD - SEWER  
639 S SECOND STREET  
MEDFORD, WI 54451  
(715) 748-1187  
JHARRIS@MEDFORDWI.US

STEVEN CHAVERS  
WE ENERGIES - GAS/PETROLEUM  
104 W SOUTH STREET  
RICE LAKE, WI 54868  
(715) 213-4327  
STEVEN.CHAVERS@WE-ENERGIES.COM  
24 HOUR GAS DISPATCH 1-800-261-5325

JON VISSERS  
MEDFORD ELECTRIC UTILITY - ELECTRICITY  
639 S SECOND ST  
MEDFORD, WI 54451  
(715) 965-2167  
JVISSERS@MEDFORDWI.GOV

JOE HARRIS  
CITY OF MEDFORD - WATER  
639 S SECOND STREET  
MEDFORD, WI 54451  
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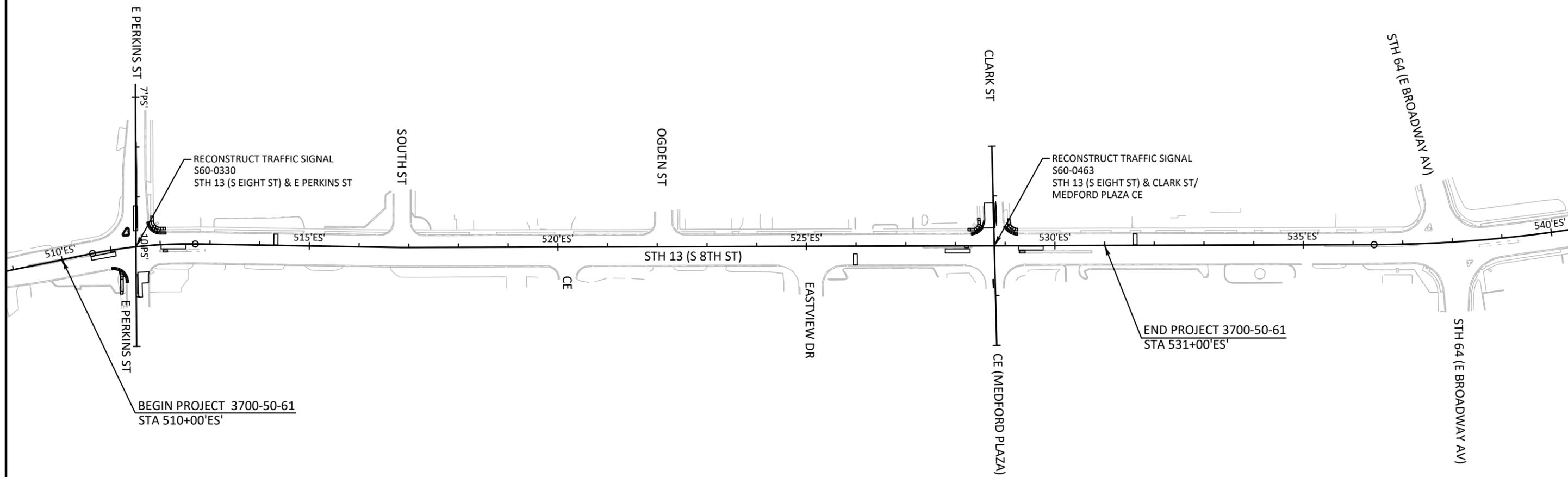
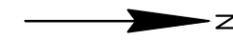
Dial **811** or (800)242-8511  
www.DiggersHotline.com

**ORDER OF SHEETS - SECTION 2:**

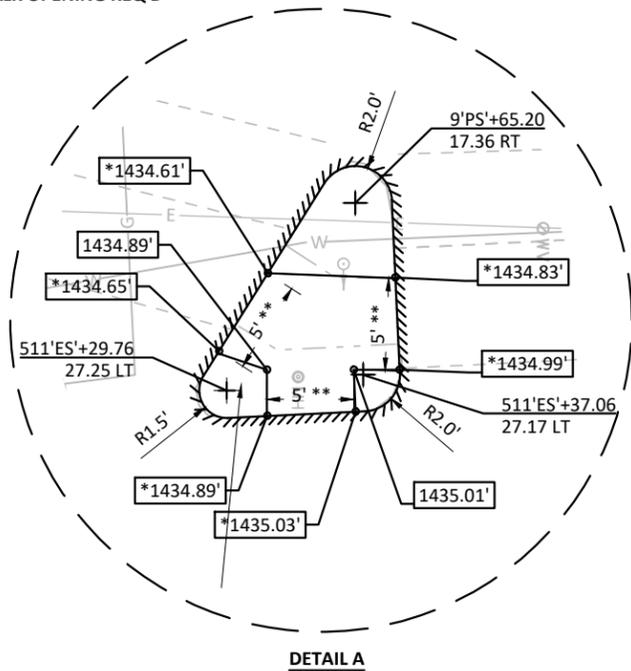
- GENERAL NOTES
- PROJECT OVERVIEW
- CONSTRUCTION DETAILS
- TRAFFIC SIGNALS
- PERMANENT SIGNING & PAVEMENT MARKING
- TRAFFIC CONTROL AND CONSTRUCTION STAGING

**GENERAL NOTES:**

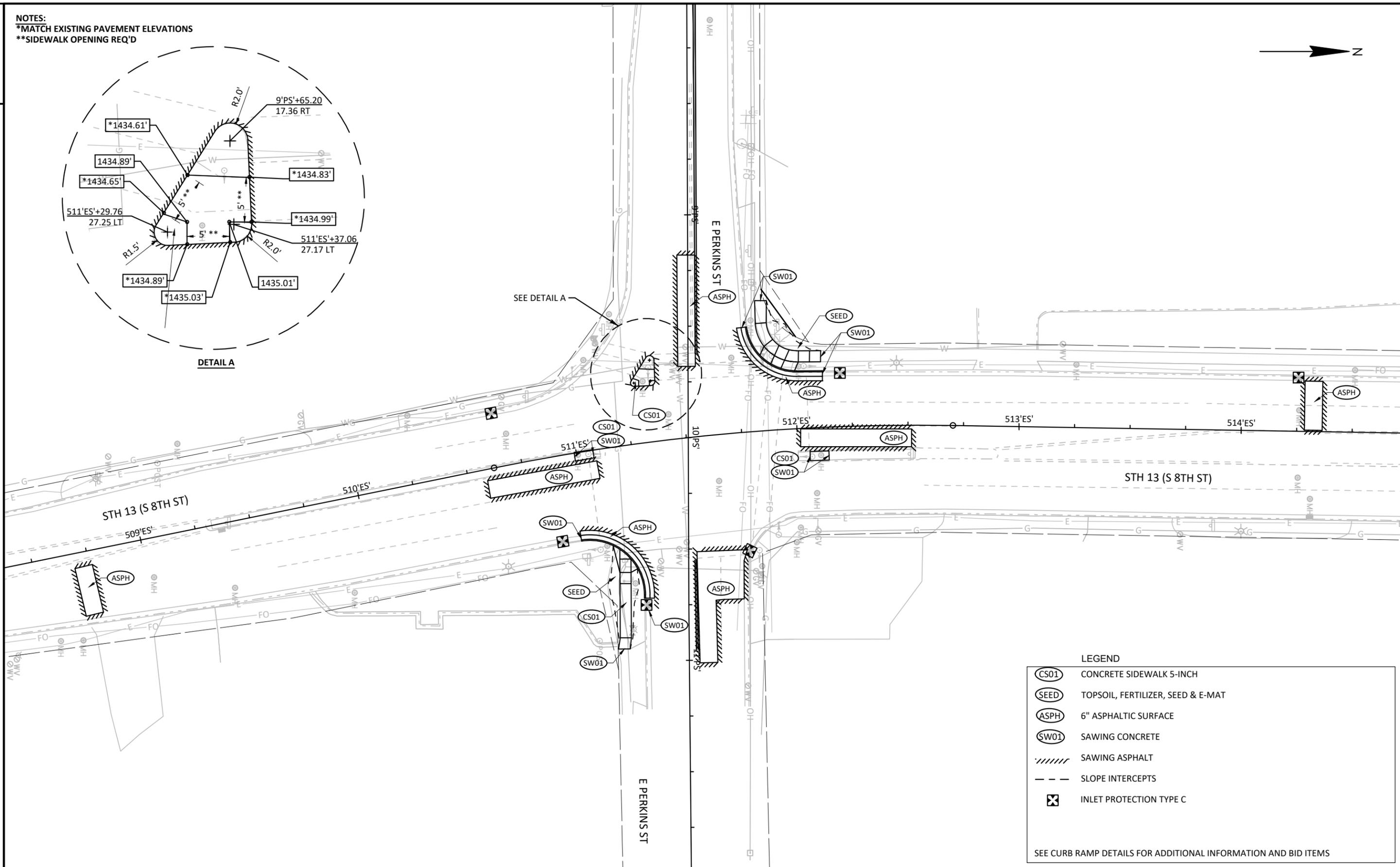
- NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
- 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.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.
- THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED, FERTILIZED AND SODDED.
- FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.
- A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.
- APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACE AND 0.05 GA/SY BETWEEN LAYERS OF HMA PAVEMENT.



**NOTES:**  
 \*MATCH EXISTING PAVEMENT ELEVATIONS  
 \*\*SIDEWALK OPENING REQ'D



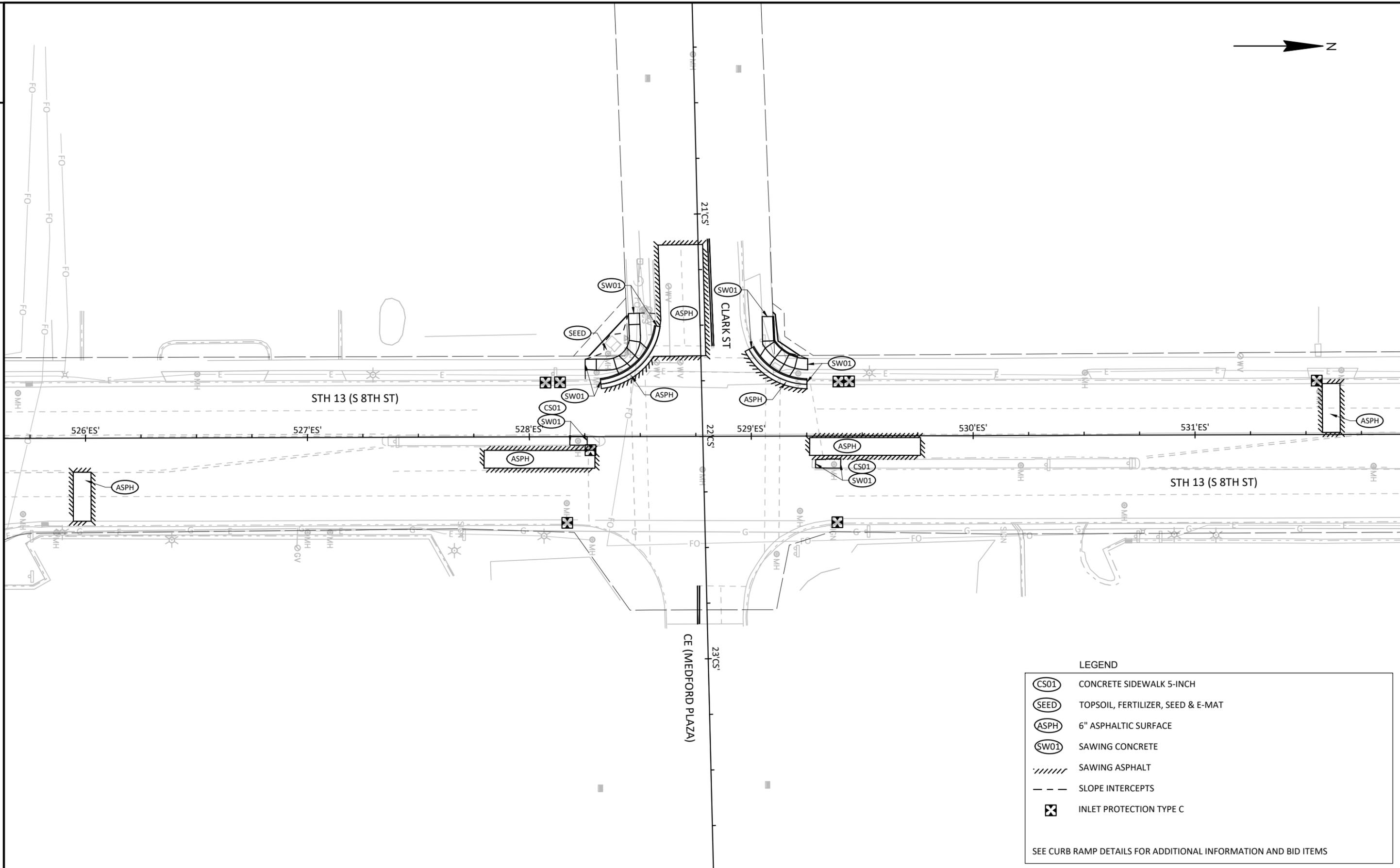
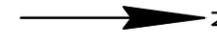
SEE DETAIL A



**LEGEND**

	CONCRETE SIDEWALK 5-INCH
	TOPSOIL, FERTILIZER, SEED & E-MAT
	6" ASPHALTIC SURFACE
	SAWING CONCRETE
	SAWING ASPHALT
	SLOPE INTERCEPTS
	INLET PROTECTION TYPE C

SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION AND BID ITEMS



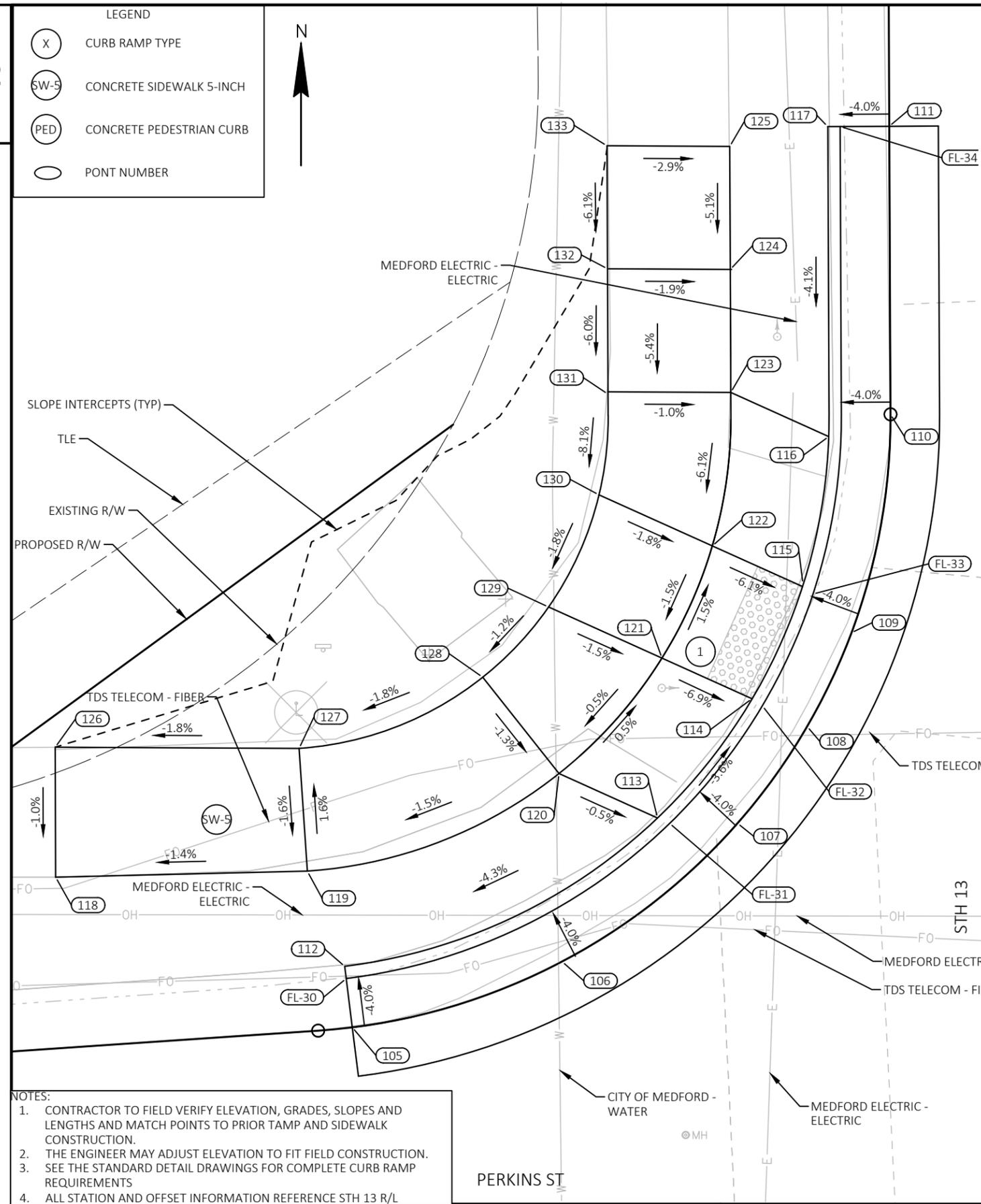
**LEGEND**

- CONCRETE SIDEWALK 5-INCH
- TOPSOIL, FERTILIZER, SEED & E-MAT
- 6" ASPHALTIC SURFACE
- SAWING CONCRETE
- SAWING ASPHALT
- SLOPE INTERCEPTS
- INLET PROTECTION TYPE C

SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION AND BID ITEMS

**LEGEND**

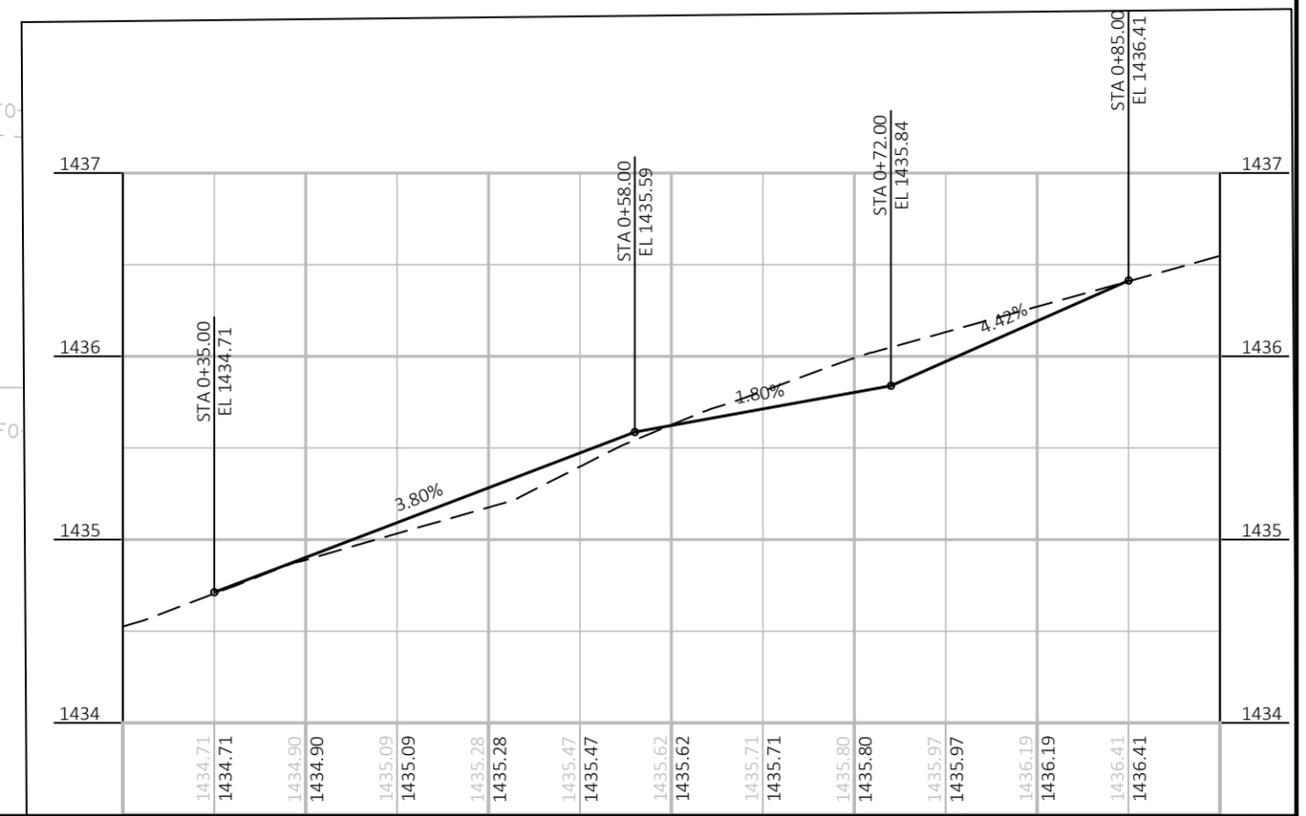
- (X) CURB RAMP TYPE
- (SW-5) CONCRETE SIDEWALK 5-INCH
- (PED) CONCRETE PEDESTRIAN CURB
- (O) PONT NUMBER



NW PERKINS						NW PERKINS					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
105	511+78.45	46.96' LT	1434.71	337829.687	652657.178	120	511+87.71	37.80' LT	1435.76	337840.005	652665.597
106	511+80.37	38.24' LT	1435.06	337832.363	652665.721	121	511+91.95	33.30' LT	1435.79	337844.698	652669.789
107	511+85.27	30.69' LT	1435.40	337837.986	652672.867	122	511+96.23	30.97' LT	1435.87	337849.258	652671.841
108	511+88.88	27.59' LT	1435.59	337841.918	652675.703	123	512+02.22	29.86' LT	1436.25	337855.498	652672.593
109	511+92.46	25.54' LT	1435.66	337845.725	652677.505	124	512+07.07	29.62' LT	1436.51	337860.498	652672.572
110	512+01.01	23.41' LT	1435.83	337854.605	652679.098	125	512+11.91	29.41' LT	1436.76	337865.498	652672.551
111	512+12.43	22.88' LT	1436.32	337866.315	652679.047	126	511+90.06	58.20' LT	1435.50	337841.078	652645.078
112	511+80.83	47.08' LT	1435.13	337832.168	652656.870	127	511+89.38	48.29' LT	1435.68	337841.028	652655.010
113	511+85.70	33.93' LT	1435.74	337838.199	652669.610	128	511+91.66	40.64' LT	1435.83	337843.921	652662.489
114	511+90.12	29.76' LT	1435.51	337843.049	652673.454	129	511+94.23	37.78' LT	1435.87	337846.775	652665.171
115	511+94.51	27.38' LT	1435.63	337847.710	652675.535	130	511+98.50	35.46' LT	1435.96	337851.335	652667.222
116	512+00.27	25.98' LT	1436.23	337853.703	652676.584	131	512+02.42	34.86' LT	1436.29	337855.428	652667.594
117	512+12.53	25.39' LT	1436.75	337866.304	652676.537	132	512+07.33	34.62' LT	1436.60	337860.523	652667.572
118	511+85.09	58.55' LT	1435.45	337835.795	652645.094	133	512+12.15	34.41' LT	1436.91	337865.524	652667.550
119	511+84.62	48.31' LT	1435.60	337836.039	652655.347						

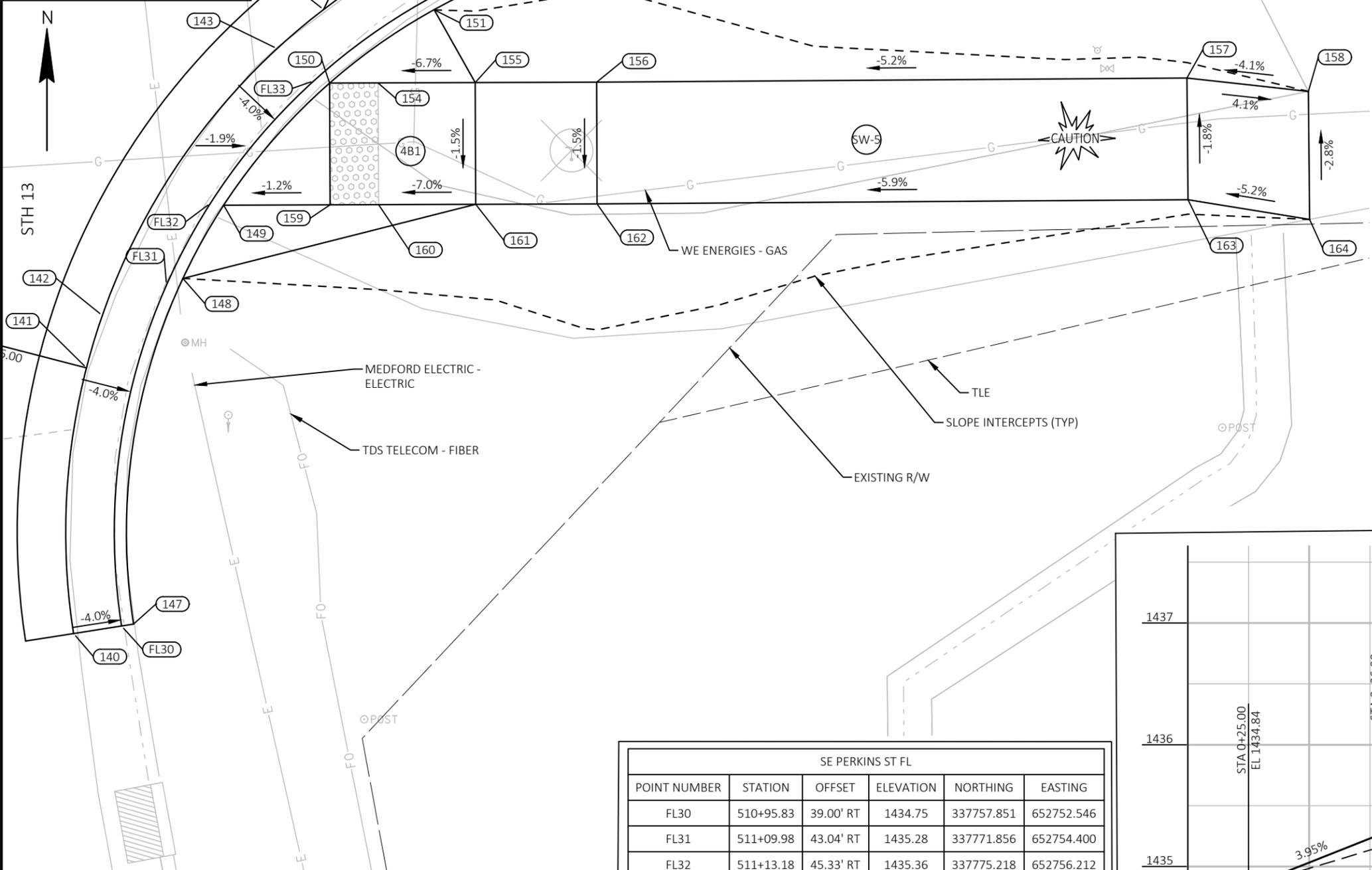
NW PERKINS FL					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
FL-30	511+80.36	47.05' LT	1434.63	337831.672	652656.932
FL-31	511+85.45	33.45' LT	1435.25	337837.978	652670.102
FL-32	511+89.82	29.35' LT	1435.50	337842.761	652673.878
FL-33	511+94.09	27.00' LT	1435.60	337847.303	652675.944
FL-34	512+12.51	24.88' LT	1436.24	337866.307	652677.047

- NOTES:**
- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR TAMP AND SIDEWALK CONSTRUCTION.
  - THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
  - SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
  - ALL STATION AND OFFSET INFORMATION REFERENCE STH 13 R/L



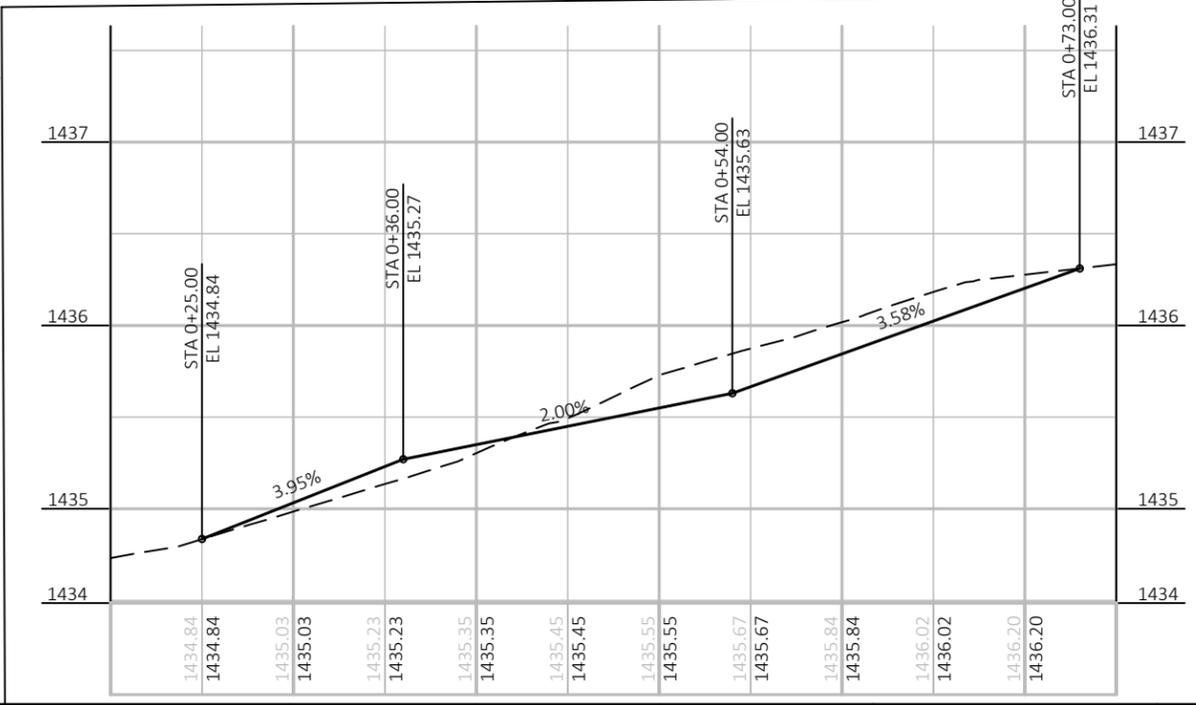
LEGEND

- (X) CURB RAMP TYPE
- (SW-5) CONCRETE SIDEWALK 5-INCH
- (PED) CONCRETE PEDESTRIAN CURB
- (O) PONT NUMBER



PERKINS ST SE					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
140	510+95.85	37.00' RT	1434.84	337757.542	652750.570
141	511+06.98	39.26' RT	1435.27	337768.453	652751.103
142	511+09.10	40.24' RT	1434.84	337770.606	652751.756
143	511+19.38	48.96' RT	1434.84	337781.569	652758.958
144	511+20.77	51.08' RT	1435.63	337783.175	652760.873
145	511+24.28	61.24' RT	1436.11	337787.840	652770.478
146	511+24.23	67.97' RT	1436.26	337788.706	652777.152
147	510+95.82	39.50' RT	1435.26	337757.928	652753.040
148	511+10.15	43.75' RT	1435.79	337772.129	652755.075
149	511+13.01	45.85' RT	1435.38	337775.135	652756.755
150	511+17.57	50.90' RT	1435.53	337780.150	652761.120
151	511+20.08	55.59' RT	1436.23	337783.158	652765.432
152	511+24.02	69.45' RT	1436.31	337788.712	652778.654
153	511+21.35	69.12' RT	1436.73	337786.212	652778.663
154	511+17.28	52.88' RT	1435.66	337780.157	652763.120
155	511+16.68	56.84' RT	1435.93	337780.171	652767.120
156	511+15.94	61.79' RT	1436.01	337780.189	652772.120
157	511+12.27	85.88' RT	1437.27	337780.360	652796.439
158	511+10.86	90.74' RT	1437.48	337779.811	652801.444
159	511+12.34	50.19' RT	1435.44	337775.150	652761.137
160	511+12.04	52.17' RT	1435.58	337775.157	652763.137
161	511+11.42	56.13' RT	1435.86	337775.171	652767.137
162	511+10.65	61.08' RT	1435.93	337775.189	652772.137
163	511+06.84	85.17' RT	1437.36	337775.360	652796.484
164	511+05.11	89.99' RT	1437.62	337774.553	652801.492

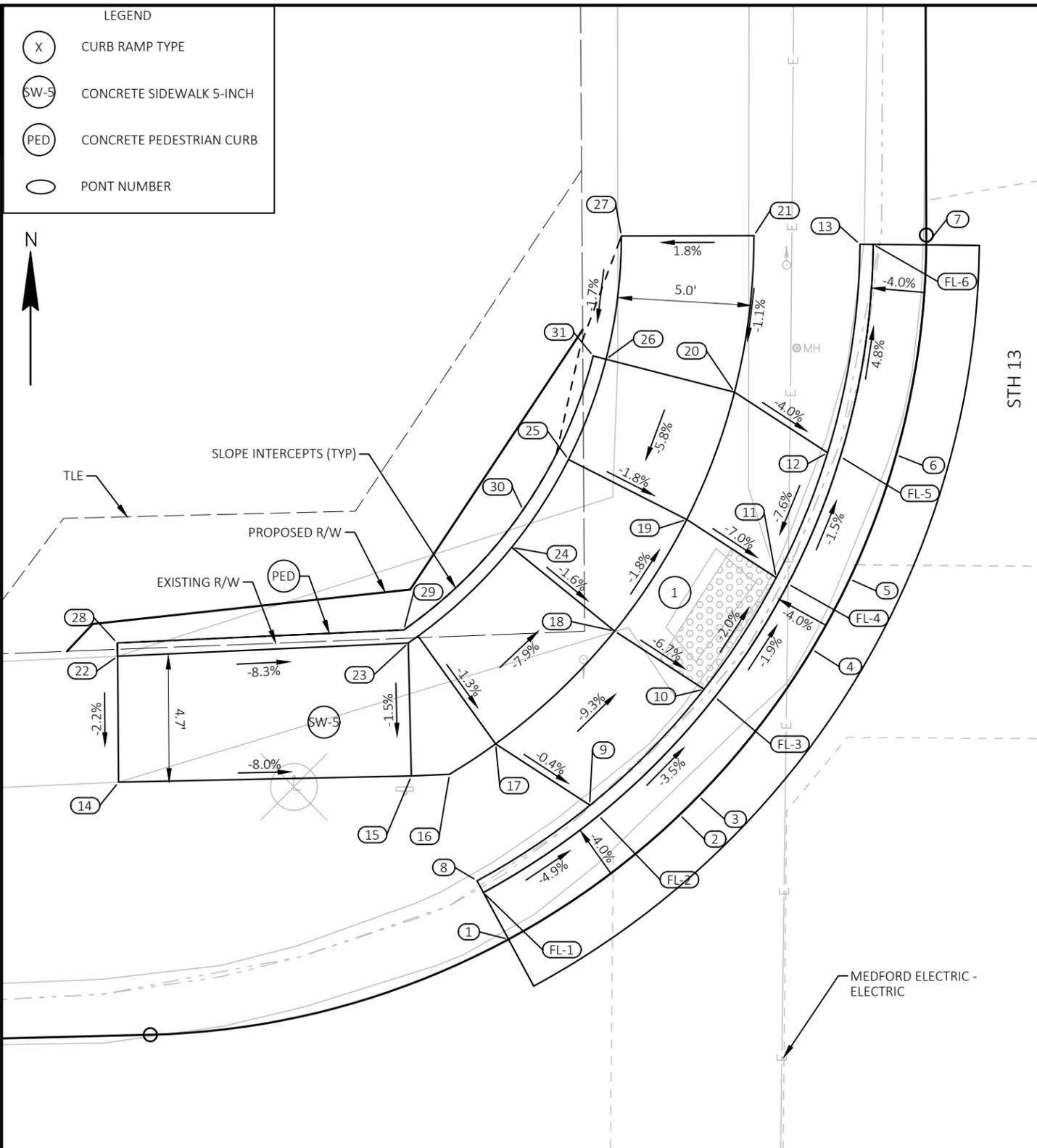
SE PERKINS ST FL					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
FL30	510+95.83	39.00' RT	1434.75	337757.851	652752.546
FL31	511+09.98	43.04' RT	1435.28	337771.856	652754.400
FL32	511+13.18	45.33' RT	1435.36	337775.218	652756.212
FL33	511+17.77	50.27' RT	1435.50	337780.244	652760.472
FL34	511+20.63	55.52' RT	1435.73	337783.660	652765.287
FL35	511+21.88	69.19' RT	1436.23	337786.712	652778.661



- NOTES:
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  - THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
  - SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
  - ALL STATION AND OFFSET INFORMATION REFERENCE STH 13 R/L

**LEGEND**

(X)	CURB RAMP TYPE
(SW-5)	CONCRETE SIDEWALK 5-INCH
(PED)	CONCRETE PEDESTRIAN CURB
(O)	PONT NUMBER



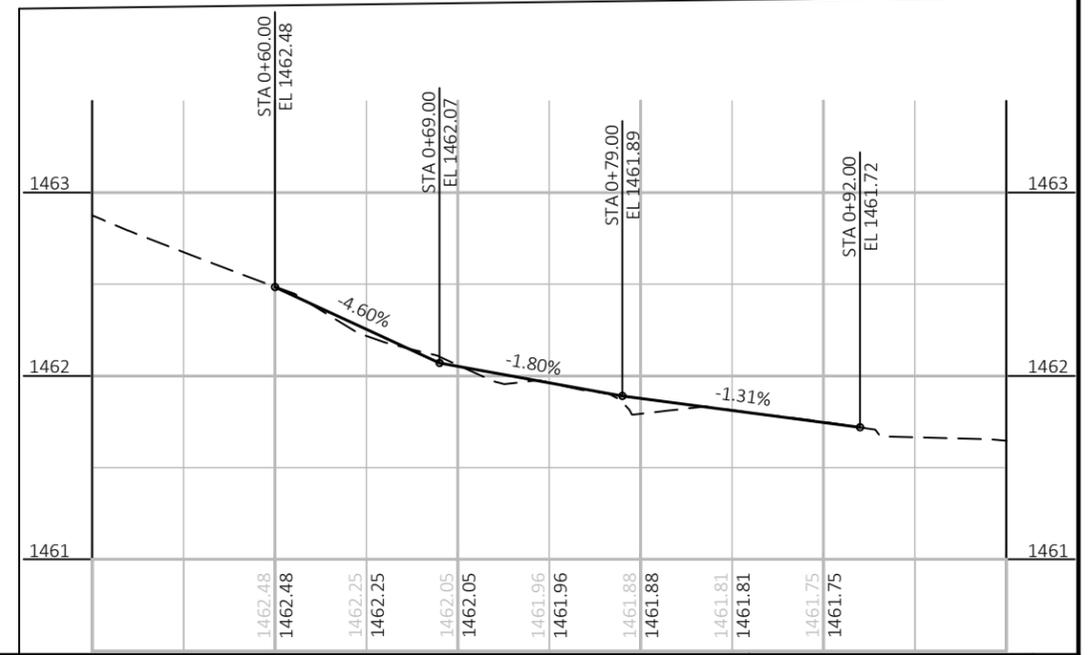
CLARK ST NW						CLARK ST NW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1	528+99.07	39.08' LT	1462.48	339553.764	652665.494	15	529+05.23	42.73' LT	1462.68	339559.909	652661.830
2	529+03.74	32.61' LT	1462.12	339558.451	652671.948	16	529+05.29	41.29' LT	1462.68	339559.974	652663.271
3	529+04.44	31.90' LT	1462.07	339559.153	652672.660	17	529+06.43	39.55' LT	1462.66	339561.116	652665.009
4	529+09.95	27.61' LT	1461.94	339564.673	652676.938	18	529+10.66	35.05' LT	1462.22	339565.358	652669.496
5	529+12.59	26.18' LT	1461.89	339567.315	652678.357	19	529+14.84	32.31' LT	1462.13	339569.553	652672.216
6	529+17.26	24.41' LT	1461.82	339571.990	652680.113	20	529+19.63	30.50' LT	1462.40	339574.345	652674.016
7	529+25.15	23.25' LT	1461.72	339579.886	652681.247	21	529+25.52	29.75' LT	1462.47	339580.235	652674.748
8	529+01.29	40.27' LT	1462.91	339555.973	652664.302	22	529+09.77	53.79' LT	1463.67	339564.412	652650.754
9	529+04.11	36.01' LT	1462.65	339558.808	652668.550	23	529+10.23	42.83' LT	1462.76	339564.908	652661.711
10	529+08.46	31.68' LT	1462.23	339563.171	652672.869	24	529+13.82	38.92' LT	1462.30	339568.508	652665.613
11	529+12.65	28.95' LT	1461.85	339567.367	652675.588	25	529+17.12	36.77' LT	1462.22	339571.811	652667.754
12	529+17.34	26.99' LT	1462.24	339572.068	652677.529	26	529+20.88	35.34' LT	1462.48	339575.583	652669.172
13	529+25.18	25.75' LT	1461.72	339579.909	652678.747	27	529+25.52	34.75' LT	1462.56	339580.220	652669.748
14	529+05.03	53.77' LT	1463.57	339559.675	652650.788						

CLARK ST NW FL					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
FL-1	529+00.84	40.03' LT	1462.40	339555.524	652664.544
FL-2	529+03.72	35.68' LT	1462.15	339558.419	652668.886
FL-3	529+08.17	31.28' LT	1461.93	339562.878	652673.274
FL-4	529+12.41	28.51' LT	1461.83	339567.134	652676.031
FL-5	529+17.19	26.52' LT	1461.75	339571.921	652678.007
FL-6	529+25.17	25.25' LT	1461.64	339579.904	652679.247

CLARK ST NW PED CURB					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
28	529+10.27	53.81' LT	1463.67	339564.911	652650.732
29	529+10.72	43.00' LT	1463.26	339565.401	652661.545
30	529+15.22	38.49' LT	1462.77	339569.912	652666.042
31	529+21.01	35.82' LT	1462.48	339575.707	652668.687

**NOTES:**

- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR TAMP AND SIDEWALK CONSTRUCTION.
- THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
- SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
- ALL STATION AND OFFSET INFORMATION REFERENCE STH 13 R/L

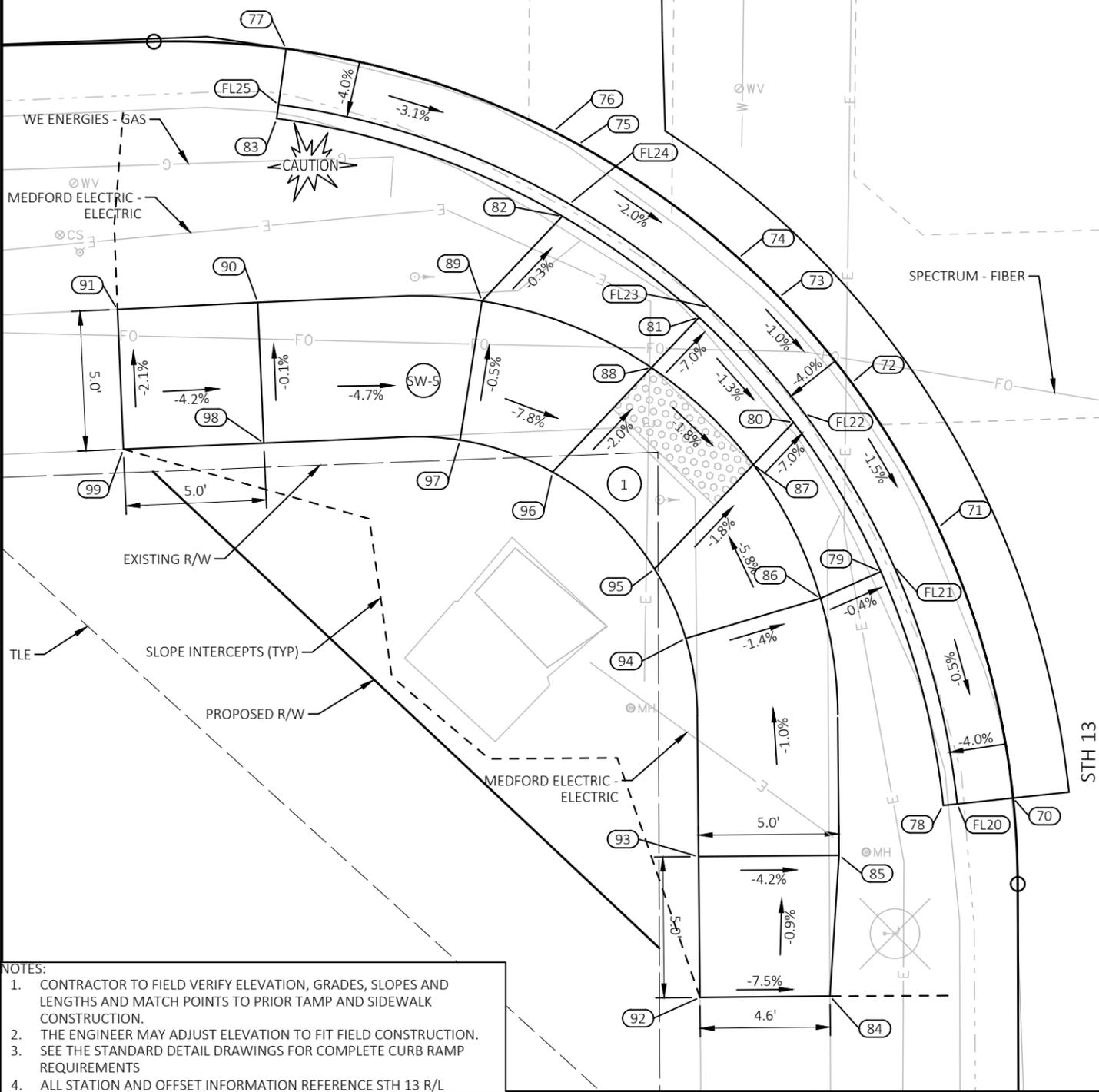


**LEGEND**

(X)	CURB RAMP TYPE
(SW-5)	CONCRETE SIDEWALK 5-INCH
(PED)	CONCRETE PEDESTRIAN CURB
(O)	PONT NUMBER



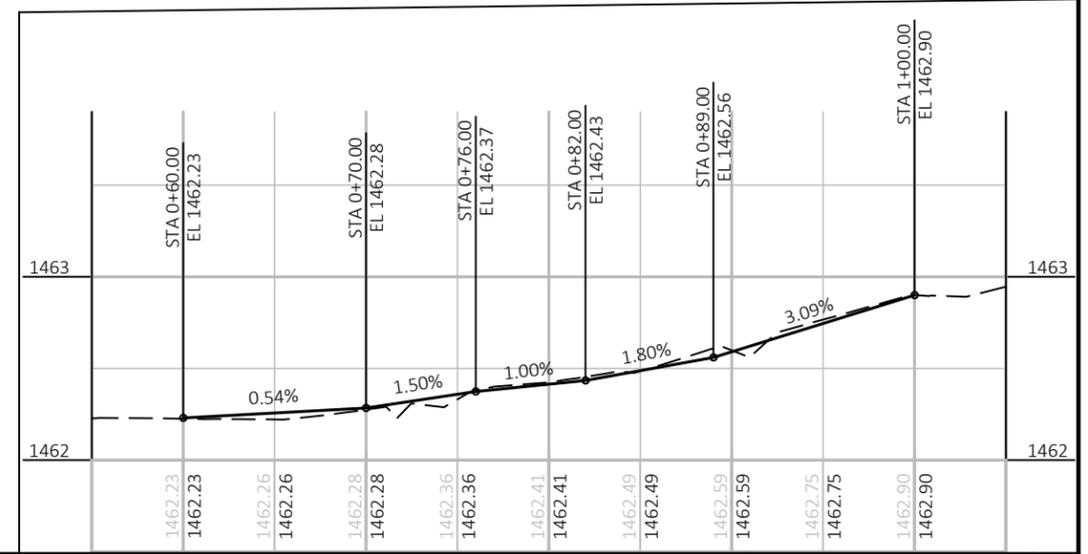
CLARK ST



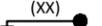
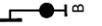
CLARK ST SW						CLARK ST SW					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
70	528+32.29	23.66' LT	1462.23	339487.029	652681.116	85	528+30.28	29.85' LT	1462.71	339484.997	652674.925
71	528+41.89	26.30' LT	1462.28	339496.618	652678.446	86	528+39.40	30.49' LT	1462.69	339494.113	652674.260
72	528+47.04	29.35' LT	1462.37	339501.761	652675.375	87	528+44.15	32.87' LT	1462.45	339498.861	652671.872
73	528+50.10	31.93' LT	1462.41	339504.806	652672.785	88	528+47.61	36.48' LT	1462.54	339502.302	652668.244
74	528+51.49	33.37' LT	1462.43	339506.192	652671.344	89	528+49.99	42.50' LT	1462.97	339504.669	652662.219
75	528+55.54	39.06' LT	1462.56	339510.226	652665.643	90	528+49.97	50.48' LT	1463.33	339504.623	652654.240
76	528+56.00	39.95' LT	1462.59	339510.690	652664.757	91	528+49.73	55.48' LT	1463.49	339504.372	652649.246
77	528+58.97	49.45' LT	1462.90	339513.624	652655.246	92	528+25.25	34.82' LT	1463.03	339479.949	652669.973
78	528+32.04	26.15' LT	1462.65	339486.766	652678.620	93	528+30.25	34.85' LT	1462.92	339484.949	652669.925
79	528+40.35	28.34' LT	1462.68	339495.068	652676.405	94	528+37.99	35.29' LT	1462.76	339492.693	652669.466
80	528+45.65	31.43' LT	1462.30	339500.364	652673.298	95	528+40.46	36.39' LT	1462.54	339495.155	652668.356
81	528+49.39	34.78' LT	1462.37	339504.089	652669.940	96	528+43.91	40.01' LT	1462.64	339498.597	652664.729
82	528+52.99	39.66' LT	1462.95	339507.674	652665.055	97	528+45.05	43.30' LT	1462.99	339499.730	652661.438
83	528+56.48	49.79' LT	1463.32	339511.136	652654.914	98	528+44.97	50.28' LT	1463.33	339499.627	652654.455
84	528+25.28	30.19' LT	1462.68	339479.995	652674.600	99	528+44.77	55.28' LT	1463.59	339499.411	652649.460

CLARK ST SW FL					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
FL20	528+32.09	25.65' LT	1462.15	339486.820	652679.127
FL21	528+40.54	27.88' LT	1462.20	339495.267	652676.864
FL22	528+45.95	31.03' LT	1462.30	339500.664	652673.699
FL23	528+49.75	34.44' LT	1462.35	339504.456	652670.279
FL24	528+53.42	39.39' LT	1462.47	339508.111	652665.325
FL25	528+56.98	49.72' LT	1463.07	339511.634	652654.980

- NOTES:**
- CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES AND LENGTHS AND MATCH POINTS TO PRIOR TAMP AND SIDEWALK CONSTRUCTION.
  - THE ENGINEER MAY ADJUST ELEVATION TO FIT FIELD CONSTRUCTION.
  - SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS
  - ALL STATION AND OFFSET INFORMATION REFERENCE STH 13 R/L

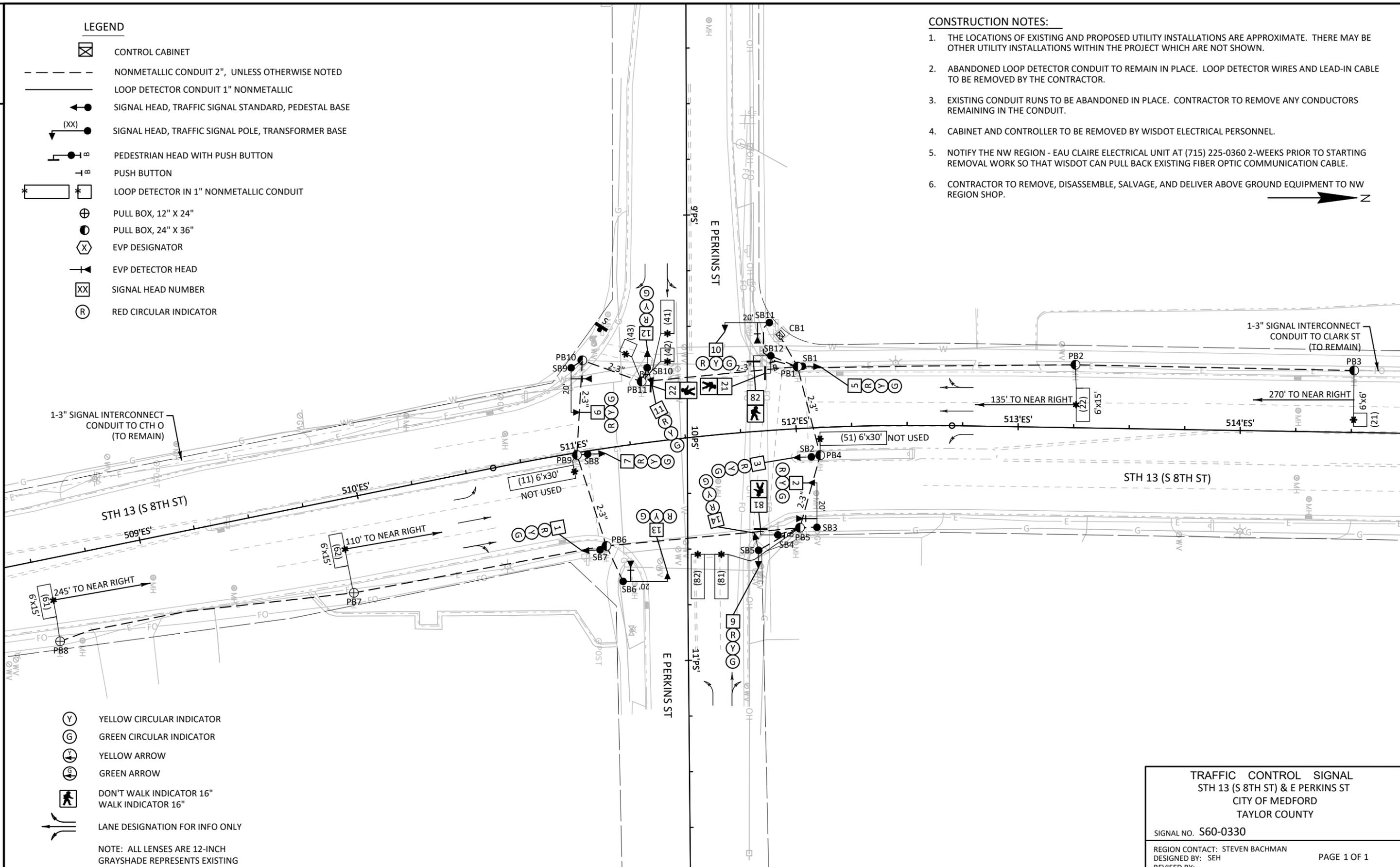
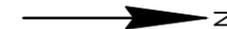


LEGEND

-  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 WITH PUSH BUTTON
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  PULL BOX, 12" X 24"
-  PULL BOX, 24" X 36"
-  EVP DESIGNATOR
-  EVP DETECTOR HEAD
-  SIGNAL HEAD NUMBER
-  RED CIRCULAR INDICATOR

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
4. CABINET AND CONTROLLER TO BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
5. NOTIFY THE NW REGION - EAU CLAIRE ELECTRICAL UNIT AT (715) 225-0360 2-WEEKS PRIOR TO STARTING REMOVAL WORK SO THAT WISDOT CAN PULL BACK EXISTING FIBER OPTIC COMMUNICATION CABLE.
6. CONTRACTOR TO REMOVE, DISASSEMBLE, SALVAGE, AND DELIVER ABOVE GROUND EQUIPMENT TO NW REGION SHOP.



-  YELLOW CIRCULAR INDICATOR
-  GREEN CIRCULAR INDICATOR
-  YELLOW ARROW
-  GREEN ARROW
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"
-  LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

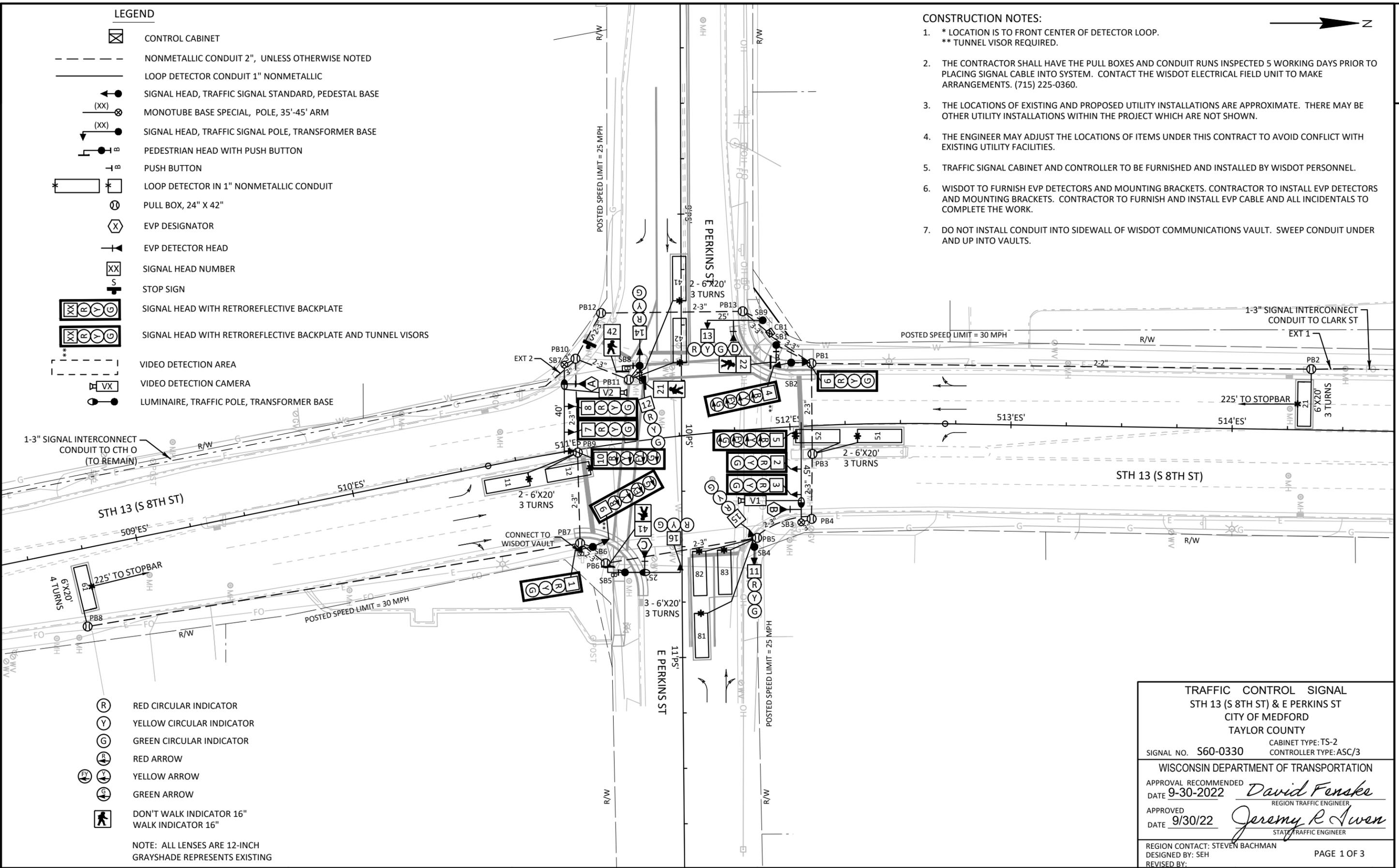
<b>TRAFFIC CONTROL SIGNAL</b>	
STH 13 (S 8TH ST) & E PERKINS ST	
CITY OF MEDFORD	
TAYLOR COUNTY	
SIGNAL NO. S60-0330	
REGION CONTACT: STEVEN BACHMAN	PAGE 1 OF 1
DESIGNED BY: SEH	
REVISED BY:	

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE SPECIAL, POLE, 35'-45' ARM
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 42"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- STOP SIGN
- SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE
- SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE AND TUNNEL VISORS
- VIDEO DETECTION AREA
- VIDEO DETECTION CAMERA
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

CONSTRUCTION NOTES:

1. \* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.  
\*\* TUNNEL VISOR REQUIRED.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (715) 225-0360.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. TRAFFIC SIGNAL CABINET AND CONTROLLER TO BE FURNISHED AND INSTALLED BY WISDOT PERSONNEL.
6. WISDOT TO FURNISH EVP DETECTORS AND MOUNTING BRACKETS. CONTRACTOR TO INSTALL EVP DETECTORS AND MOUNTING BRACKETS. CONTRACTOR TO FURNISH AND INSTALL EVP CABLE AND ALL INCIDENTALS TO COMPLETE THE WORK.
7. DO NOT INSTALL CONDUIT INTO SIDEWALL OF WISDOT COMMUNICATIONS VAULT. SWEEP CONDUIT UNDER AND UP INTO VAULTS.



- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

**TRAFFIC CONTROL SIGNAL**  
**STH 13 (S 8TH ST) & E PERKINS ST**  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. **S60-0330** CABINET TYPE: TS-2  
 CONTROLLER TYPE: ASC/3

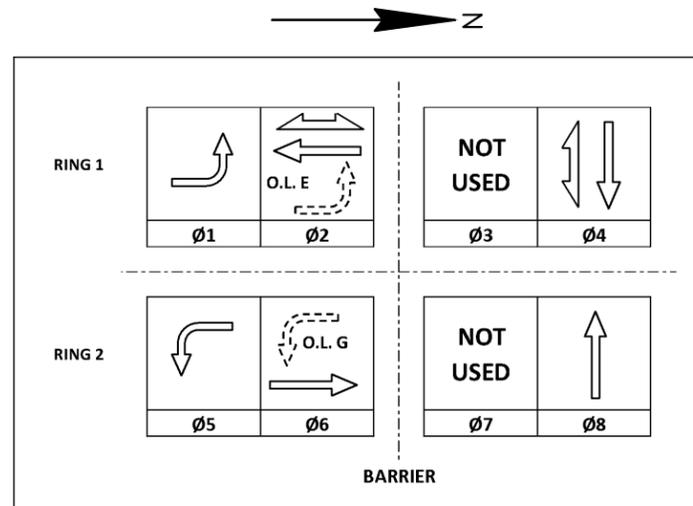
WISCONSIN DEPARTMENT OF TRANSPORTATION  
 APPROVAL RECOMMENDED  
 DATE **9-30-2022** *David Fenske*  
 REGION TRAFFIC ENGINEER

APPROVED  
 DATE **9/30/22** *Jeremy R. Swan*  
 STATE TRAFFIC ENGINEER

REGION CONTACT: STEVEN BACHMAN  
 DESIGNED BY: SEH  
 REVISED BY: \_\_\_\_\_

PAGE 1 OF 3

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



**GENERAL NOTES:**

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY. SEE CHART 1.

**CONTROLLER LOGIC**

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

**CHART 1**

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,4,8
2	5 OR 6	1,4,8
3	NOT USED	
4	8	1,2,5,6
5	1 OR 2	4,6,8
6	1 OR 2	4,5,8
7	NOT USED	
8	4	1,2,5,6

**DETECTOR LOGIC**

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	42	52	81	83		
CALLED PHASE	1	2	4	5	8	8		
CALL OPTION	X	X	X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X	X	X		
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	41	51	61	82			
CALLED PHASE	1	4	5	6	8			
CALL OPTION	X	X	X	X	X			
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X			
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X	X			
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

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

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

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

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

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

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

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

STH 13 (S. 8TH STREET) & E. PERKINS STREET	
CITY OF MEDFORD	
TAYLOR COUNTY	
SIGNAL NO: S60-0330	CABINET TYPE: TS2
CONTROLLER TYPE: ASC/3 - 1000	
DATE: 06/2022	PAGE NO. 2 OF 2

2

**PROJECT ID:** 3700-50-61  
**INTERSECTION:** STH 13 (S. 8TH STREET) & E. PERKINS STREET

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

2

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

EQUIPMENT GROUNDING	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	CB1

CAT 5E CABLE	
FROM	TO
CB1	SB3
CB1	SB7

LIGHTING UF 2-12	
FROM	TO
CB1	SB3
CB1	SB5
CB1	SB7

EVP CABLE	
FROM	TO
CB1	SB7 (HEAD A)
CB1	SB3 (HEAD B)
CB1	SB5 (HEAD C)
CB1	SB9 (HEAD D)

PED BUTTON (LOOP LEAD-IN)	
FROM	TO
CB1	SB1
CB1	SB5
CB1	SB8
CB1	SB8

\*USE THE WHITE CONDUCTOR IN THE CABLE ASSEMBLY AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS  
 \*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.  
 \*AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRAIN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.  
 CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.  
 "OTHER" COLUMN MAY INCLUDE SHADOW BOX SIGN  
 \*ALL CABLES SHALL BE LABELED WITH SIGNAL BASE NUMBER AT BOTH ENDS OF CABLE.

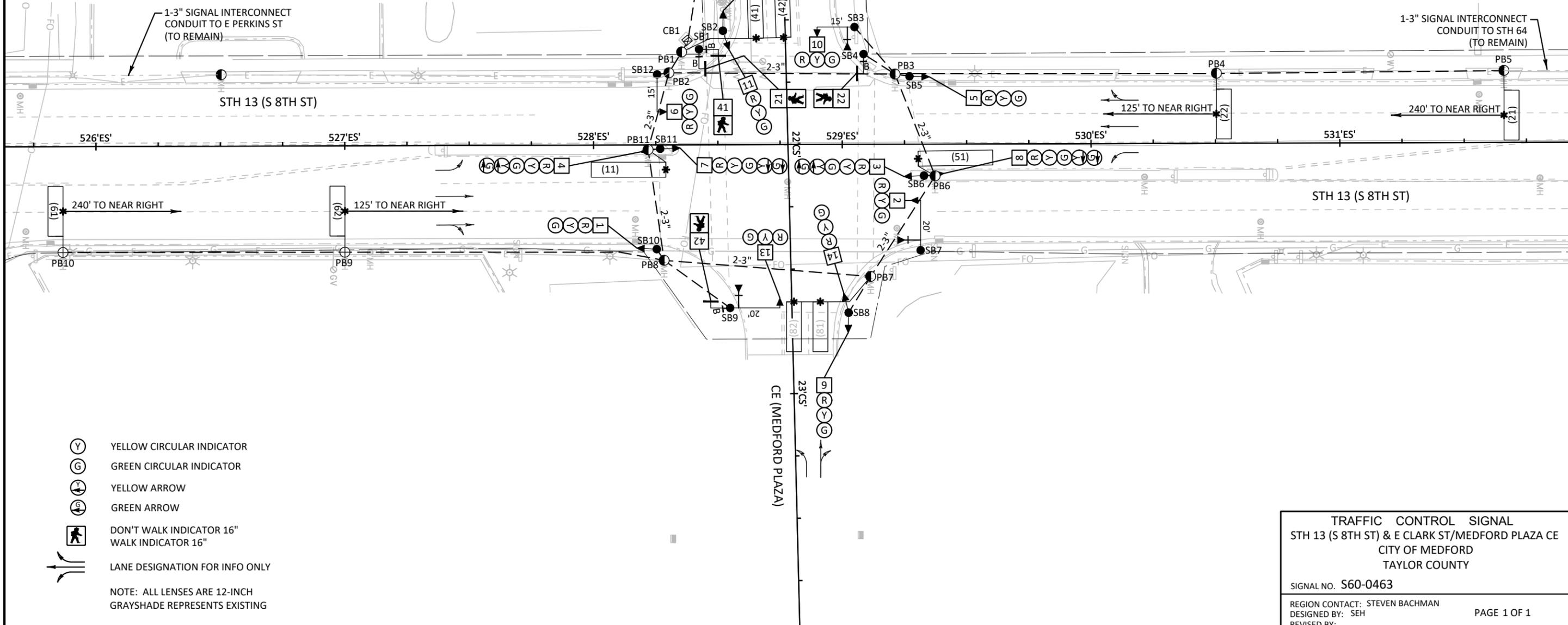
TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E PERKINS ST  
 CITY OF MEDFORD  
 TAYLOR COUNTY  
 SIGNAL NO. S60-0330  
 REGION CONTACT: STEVEN BACHMAN  
 DESIGNED BY: \_\_\_\_\_  
 REVISED BY: \_\_\_\_\_

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 WITH PUSH BUTTON
-  PUSH BUTTON
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  PULL BOX, 12" X 24"
-  PULL BOX, 24" X 36"
-  EVP DESIGNATOR
-  EVP DETECTOR HEAD
-  SIGNAL HEAD NUMBER
-  RED CIRCULAR INDICATOR

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRES AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
4. CABINET AND CONTROLLER TO BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
5. NOTIFY THE NW REGION - EAU CLAIRE ELECTRICAL UNIT AT (715) 225-0360 2-WEEKS PRIOR TO STARTING REMOVAL WORK SO THAT WISDOT CAN PULL BACK EXISTING FIBER OPTIC COMMUNICATION CABLE.
6. CONTRACTOR TO REMOVE, DISASSEMBLE, SALVAGE, AND DELIVER ABOVE GROUND EQUIPMENT TO NW REGION SHOP.



-  YELLOW CIRCULAR INDICATOR
-  GREEN CIRCULAR INDICATOR
-  YELLOW ARROW
-  GREEN ARROW
-  DON'T WALK INDICATOR 16"
-  WALK INDICATOR 16"
-  LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA CE  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT: STEVEN BACHMAN  
 DESIGNED BY: SEH  
 REVISED BY:

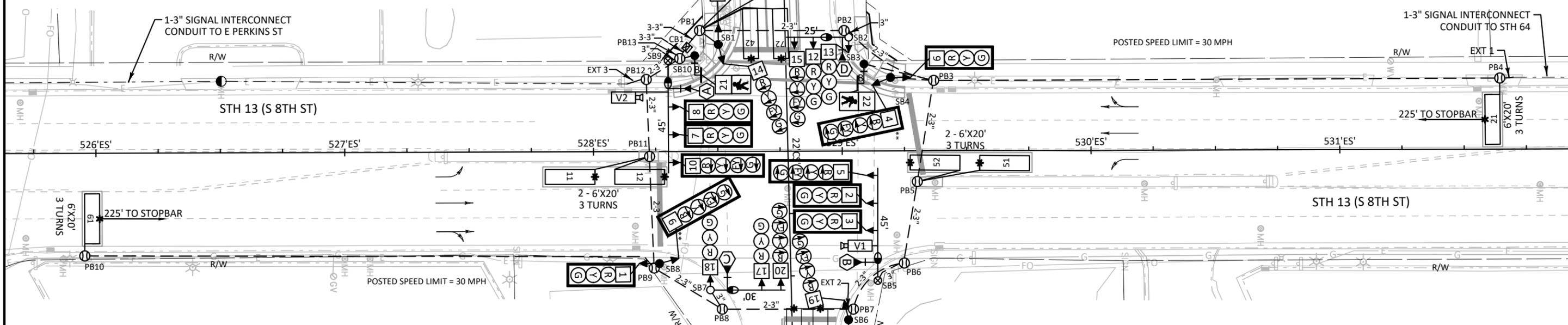
PAGE 1 OF 1

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE SPECIAL, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 15'-30' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- EVP DESIGNATOR
- EVP DETECTOR HEAD

CONSTRUCTION NOTES:

1. \* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.  
\*\* TUNNEL VISOR REQUIRED.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (715) 225-0360.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
5. TRAFFIC SIGNAL CABINET AND CONTROLLER TO BE FURNISHED AND INSTALLED BY WISDOT PERSONNEL.
6. WISDOT TO FURNISH EVP DETECTORS AND MOUNTING BRACKETS. CONTRACTOR TO INSTALL EVP DETECTORS AND MOUNTING BRACKETS. CONTRACTOR TO FURNISH AND INSTALL EVP CABLE AND ALL INCIDENTALS TO COMPLETE THE WORK.



- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
  - SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE
  - SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE AND TUNNEL VISORS
  - SIGNAL HEAD NUMBER
  - RED CIRCULAR INDICATOR
  - YELLOW CIRCULAR INDICATOR
  - GREEN CIRCULAR INDICATOR
  - RED ARROW
  - YELLOW ARROW
  - GREEN ARROW
  - DON'T WALK INDICATOR 16"  
WALK INDICATOR 16"
- NOTE: ALL LENSES ARE 12-INCH  
GRAYSHADE REPRESENTS EXISTING

**TRAFFIC CONTROL SIGNAL**  
**STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA CE**  
**CITY OF MEDFORD**  
**TAYLOR COUNTY**

SIGNAL NO. **S60-0463** CABINET TYPE: TS-2  
CONTROLLER TYPE: ASC/3

WISCONSIN DEPARTMENT OF TRANSPORTATION

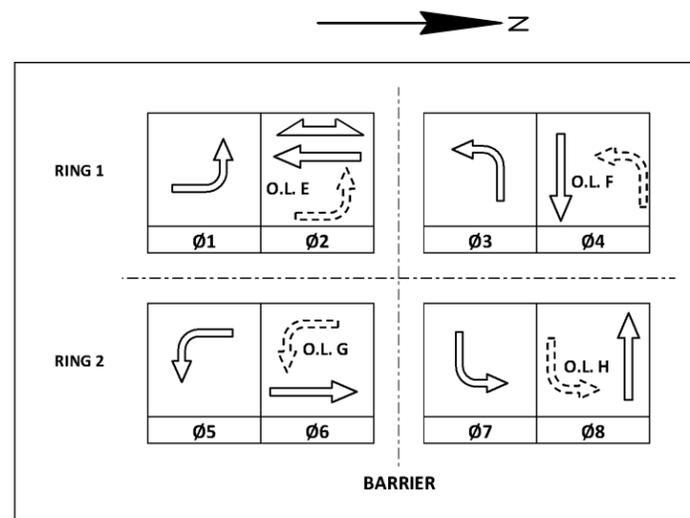
APPROVAL RECOMMENDED DATE 9-30-2022 *David Fenske*  
REGION TRAFFIC ENGINEER

APPROVED DATE 9/30/22 *Jeremy R. Swan*  
STATE TRAFFIC ENGINEER

REGION CONTACT: STEVEN BACHMAN  
DESIGNED BY: SEH  
REVISED BY:

PAGE 1 OF 2

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø3	14,15	R
Ø4	16,17,18	R
Ø5	9,10	R
Ø6	1,2,3	R
Ø7	19,20	R
Ø8	11,12,13	R
Ø2P	21,22	
OLE	4,5	-
OLF	14,15	-
OLG	9,10	-
OLH	19,20	-



**GENERAL NOTES:**

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY. SEE CHART 1.

**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

**CHART 1**

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,3,4,7,8
2	5 OR 6	1,3,4,7,8
3	7 OR 8	1,2,4,5,6
4	7 OR 8	1,2,3,5,6
5	1 OR 2	3,4,6,7,8
6	1 OR 2	3,4,5,7,8
7	3 OR 4	1,2,5,6,8
8	3 OR 4	1,2,5,6,7

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

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

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

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

**DETECTOR LOGIC**

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	41	51	61	72		
CALLED PHASE	1	2	4	5	6	7		
CALL OPTION	X	X	X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X	X	X		
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	31	42	52	71	81		
CALLED PHASE	1	3	4	5	7	8		
CALL OPTION	X	X	X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X	X	X		
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

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

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

STH 13 (S. 8TH STREET) & E. CLARK STREET	
CITY OF MEDFORD	
TAYLOR COUNTY	
SIGNAL NO: S60-0463	CABINET TYPE: TS2
CONTROLLER TYPE: ASC/3 - 1000	
DATE: 06/2022	PAGE NO. 2 OF 2

PROJECT ID: 3700-50-61  
 INTERSECTION: STH 13 (S. 8TH STREET) & E. CLARK ST/MEDFORD PLAZA

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

CB TO	JUMPER	AWG 14 # OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								D/WALK	WALK	PED BUTTON	OTHER
					RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>					
SB1		12	14	3				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
			16	4	RED	ORG	GRN									
SB2		12	12	8	RED	ORG	GRN									
			13	8	RED	ORG	GRN									
			15	3				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
SB3		7	22	2 PED							BLK	BLU				
SB4		12	4	1				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
			6	2	RED	ORG	GRN									
SB5		12	2	6	RED	ORG	GRN									
			3	6	RED	ORG	GRN									
			5	1				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
SB6		12	11	8	RED	ORG	GRN									
			19	3				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
SB7		12	17	4	RED	ORG	GRN									
			18	4	RED	ORG	GRN									
			20	7				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
SB8		12	1	6	RED	ORG	GRN									
			9	5				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
SB9		12	7	2	RED	ORG	GRN									
			8	2	RED	ORG	GRN									
			10	5				RED/BLK	ORG/BLK	GRN/BLK	WHT/BLK					
SB10		7	21	2 PED							BLK	BLU				

EQUIPMENT GROUNDING	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	CB1

CAT 5E CABLE	
FROM	TO
CB1	SB5
CB1	SB9

LIGHTING UF 2-12	
FROM	TO
CB1	SB2
CB1	SB5
CB1	SB7
CB1	SB9

EVP CABLE	
FROM	TO
CB1	SB10 (HEAD A)
CB1	SB5 (HEAD B)
CB1	SB7 (HEAD C)
CB1	SB2 (HEAD D)

PED BUTTON (LOOP LEAD-IN CABLE)	
FROM	TO
CB1	SB3
CB1	SB10

\*USE THE WHITE CONDUCTOR IN THE CABLE ASSEMBLY AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS  
 \*ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.  
 \*AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRAIN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.  
 CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.  
 "OTHER" COLUMN MAY INCLUDE SHADOW BOX SIGN  
 \*ALL CABLES SHALL BE LABELED WITH SIGNAL BASE NUMBER AT BOTH ENDS OF CABLE.

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 DESIGNED BY: REVISOR: PAGE 3 OF 3

LEGEND

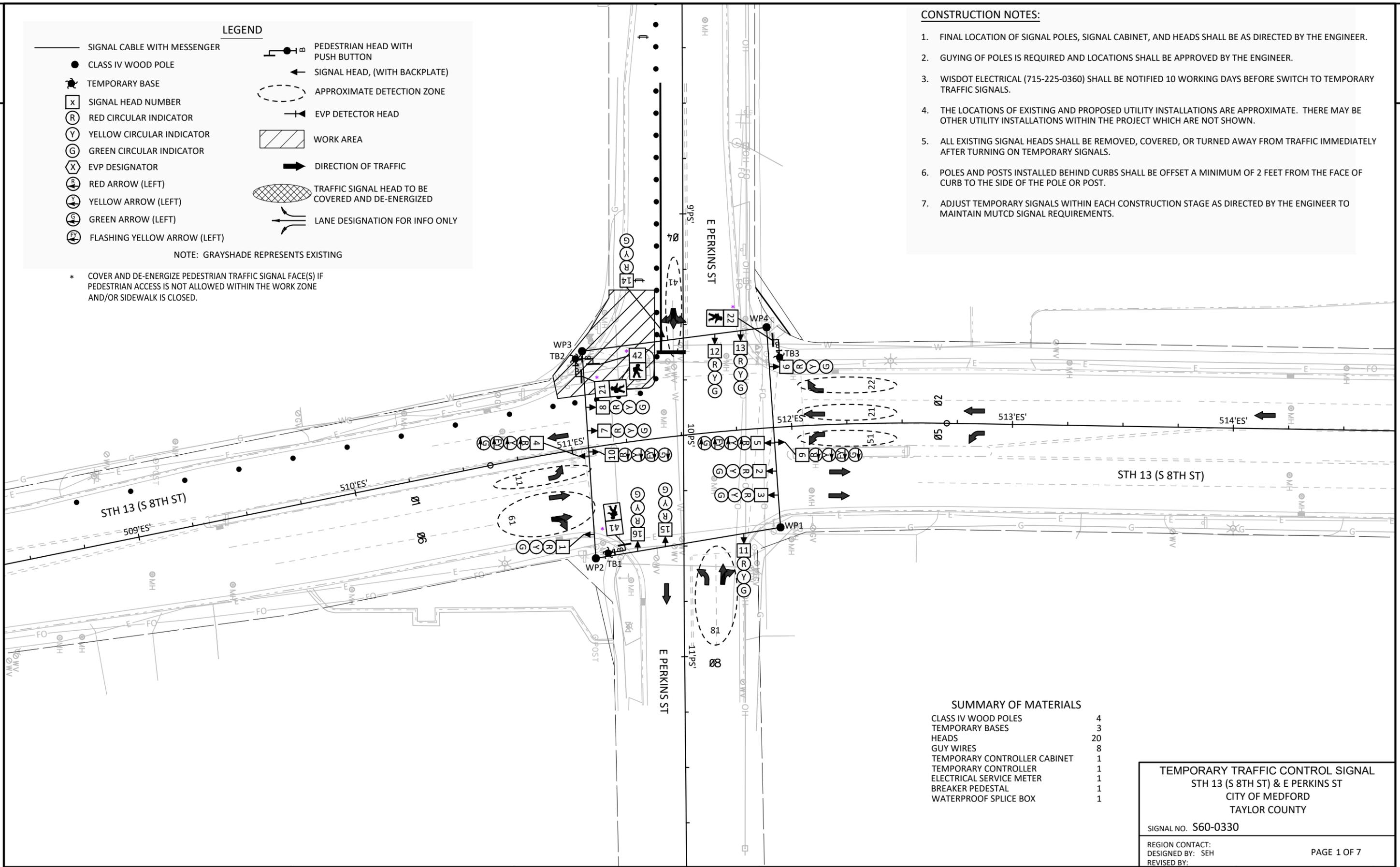
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- CLASS IV WOOD POLE
- ⊙ TEMPORARY BASE
- ⊠ SIGNAL HEAD NUMBER
- ⊙ RED CIRCULAR INDICATOR
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- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC
- ▨ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ➔ LANE DESIGNATION FOR INFO ONLY

NOTE: GRAYSHADE REPRESENTS EXISTING

\* COVER AND DE-ENERGIZE PEDESTRIAN TRAFFIC SIGNAL FACE(S) IF PEDESTRIAN ACCESS IS NOT ALLOWED WITHIN THE WORK ZONE AND/OR SIDEWALK IS CLOSED.

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, AND HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
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SUMMARY OF MATERIALS

CLASS IV WOOD POLES	4
TEMPORARY BASES	3
HEADS	20
GUY WIRES	8
TEMPORARY CONTROLLER CABINET	1
TEMPORARY CONTROLLER	1
ELECTRICAL SERVICE METER	1
BREAKER PEDESTAL	1
WATERPROOF SPLICE BOX	1

TEMPORARY TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E PERKINS ST  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0330

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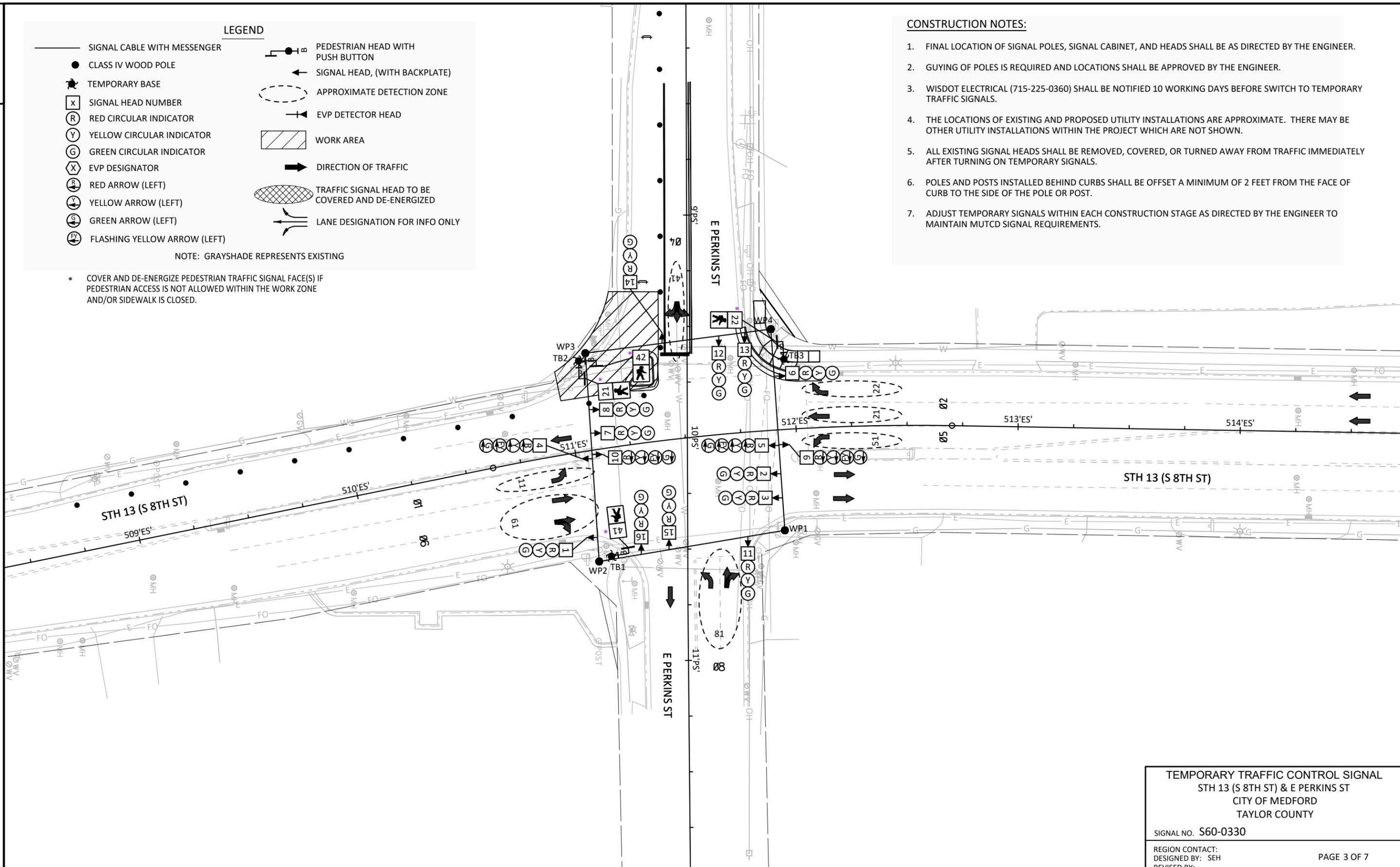
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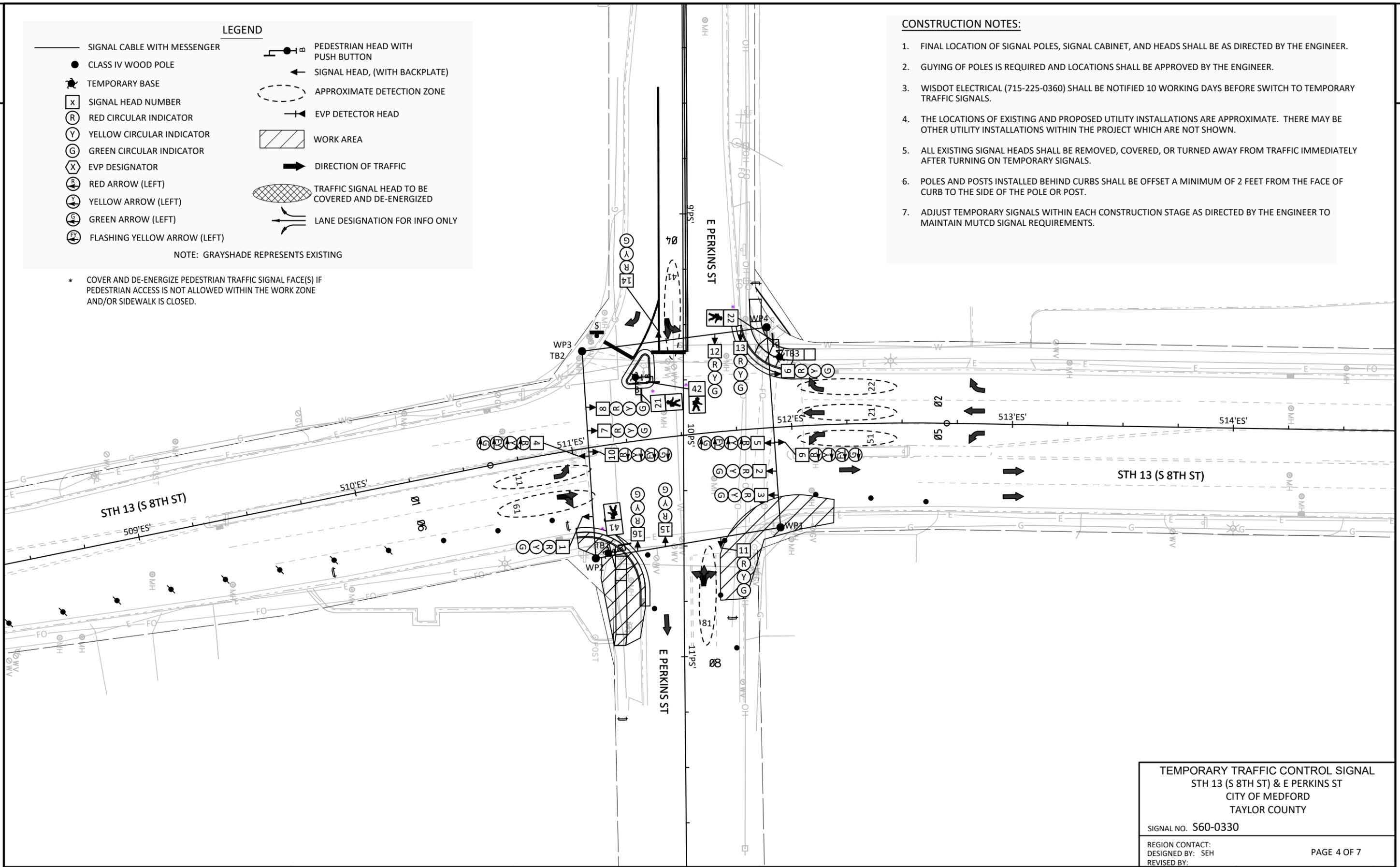
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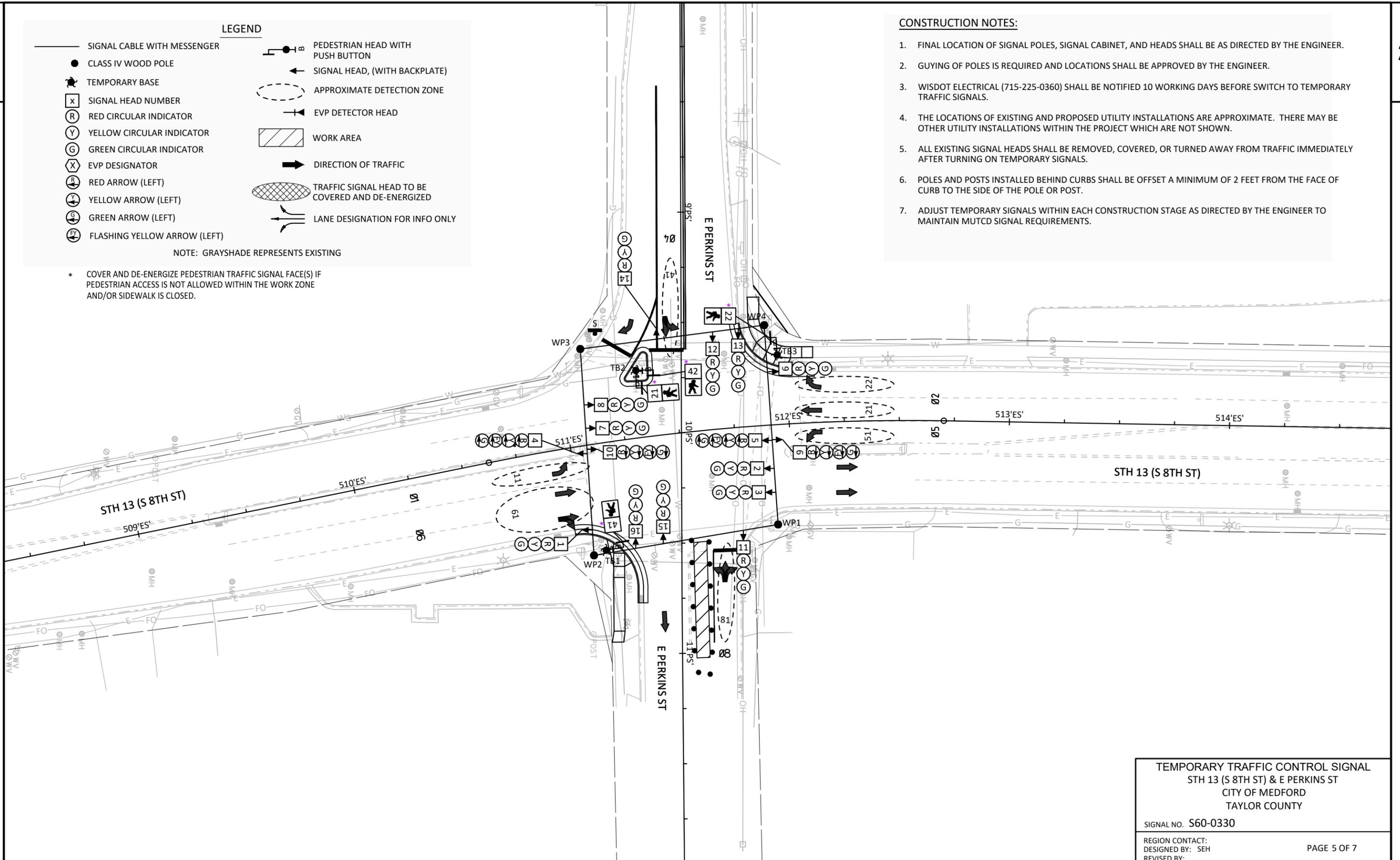
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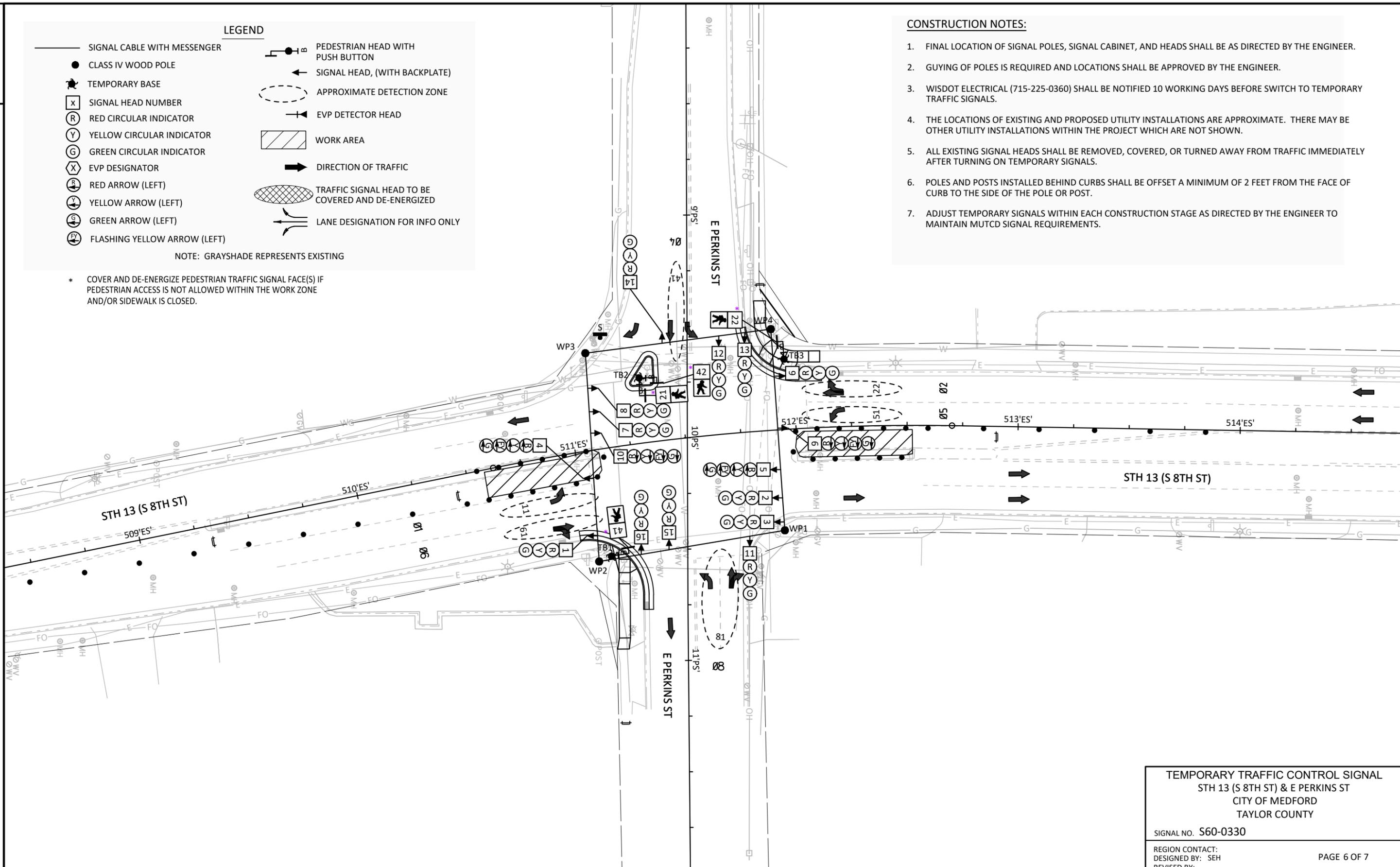
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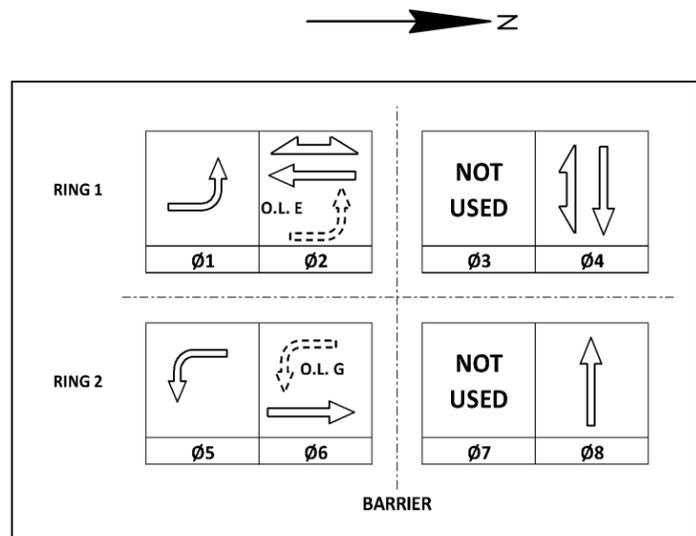
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Ø5	9,10	R
Ø6	1,2,3	R
Ø8	11,12,13	R
Ø2P	21,22	
Ø4P	41,42	
OLE	4,5	-
OLG	9,10	-



- GENERAL NOTES:**
1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
  2. WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY. SEE CHART 1.

**CONTROLLER LOGIC**

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

**CHART 1**

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,4,8
2	5 OR 6	1,4,8
3		
4	8	1,2,5,6
5	1 OR 2	4,6,8
6	1 OR 2	4,5,8
7		
8	4	1,2,5,6

**DETECTOR LOGIC**

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	41	61	81				
CALLED PHASE	1	4	6	8				
CALL OPTION	X	X	X	X				
DELAY TIME								
EXTENTION OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X				
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21	51	62					
CALLED PHASE	2	5	6					
CALL OPTION	X	X	X					
DELAY TIME			X					
EXTENTION OPTION	X	X	X					
EXTEND TIME								
USE ADDED INITIAL	X	X	X					
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

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

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

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

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

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

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

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

STH 13 (S. 8TH STREET) & E. PERKINS STREET	
CITY OF MEDFORD	
TAYLOR COUNTY	
SIGNAL NO: S60-0330	CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP	
DATE: 06/2022	PAGE NO. 7 OF 7

LEGEND

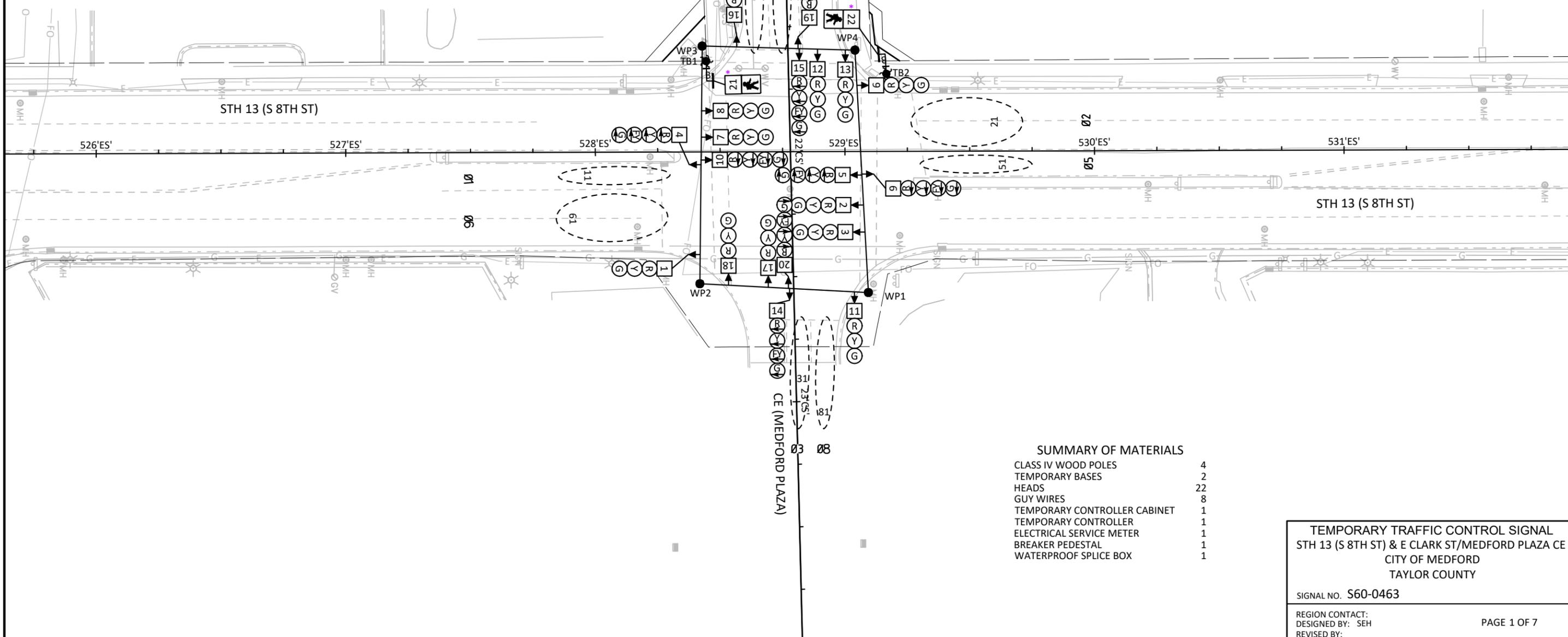
- SIGNAL CABLE WITH MESSENGER
- CLASS IV WOOD POLE
- ⊙ TEMPORARY BASE
- ⊠ SIGNAL HEAD NUMBER
- ⊙ RED CIRCULAR INDICATOR
- ⊙ YELLOW CIRCULAR INDICATOR
- ⊙ GREEN CIRCULAR INDICATOR
- ⊙ EVP DESIGNATOR
- ⊙ RED ARROW (LEFT)
- ⊙ YELLOW ARROW (LEFT)
- ⊙ GREEN ARROW (LEFT)
- ⊙ FLASHING YELLOW ARROW (LEFT)
- ⊙ PEDESTRIAN HEAD WITH PUSH BUTTON
- ← SIGNAL HEAD, (WITH BACKPLATE)
- ⊙ APPROXIMATE DETECTION ZONE
- ⊙ EVP DETECTOR HEAD
- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC
- ⊙ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ➔ LANE DESIGNATION FOR INFO ONLY

NOTE: GRAYSHADE REPRESENTS EXISTING

\* COVER AND DE-ENERGIZE PEDESTRIAN TRAFFIC SIGNAL FACE(S) IF PEDESTRIAN ACCESS IS NOT ALLOWED WITHIN THE WORK ZONE AND/OR SIDEWALK IS CLOSED.

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, AND HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. WISDOT ELECTRICAL (715-225-0360) SHALL BE NOTIFIED 10 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
6. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POLE OR POST.
7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.



SUMMARY OF MATERIALS

CLASS IV WOOD POLES	4
TEMPORARY BASES	2
HEADS	22
GUY WIRES	8
TEMPORARY CONTROLLER CABINET	1
TEMPORARY CONTROLLER	1
ELECTRICAL SERVICE METER	1
BREAKER PEDESTAL	1
WATERPROOF SPLICE BOX	1

TEMPORARY TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT:  
 DESIGNED BY: SEH  
 REVISED BY:

PAGE 1 OF 7

LEGEND

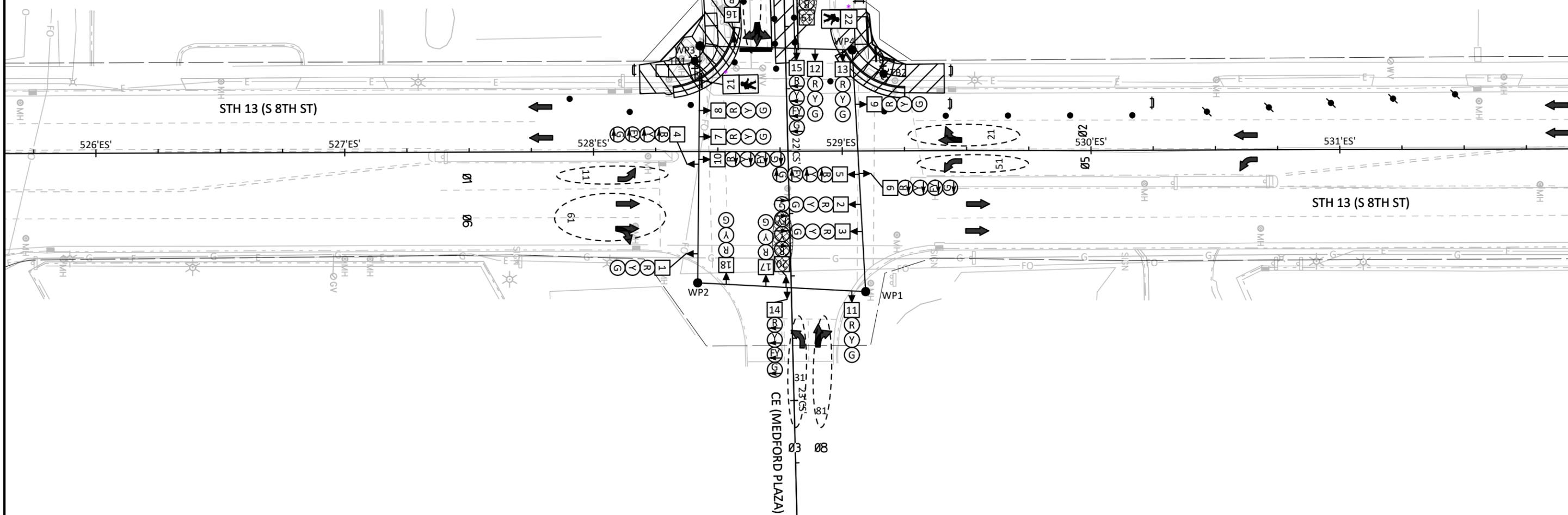
- SIGNAL CABLE WITH MESSENGER
- CLASS IV WOOD POLE
- ⊗ TEMPORARY BASE
- ⓧ SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- Ⓧ EVP DESIGNATOR
- Ⓡ RED ARROW (LEFT)
- Ⓢ YELLOW ARROW (LEFT)
- Ⓣ GREEN ARROW (LEFT)
- Ⓧ FLASHING YELLOW ARROW (LEFT)
- Ⓡ PEDESTRIAN HEAD WITH PUSH BUTTON
- ← SIGNAL HEAD, (WITH BACKPLATE)
- Ⓧ APPROXIMATE DETECTION ZONE
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TEMPORARY TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA CE  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT:  
 DESIGNED BY: SEH  
 REVISED BY:

PAGE 2 OF 7

LEGEND

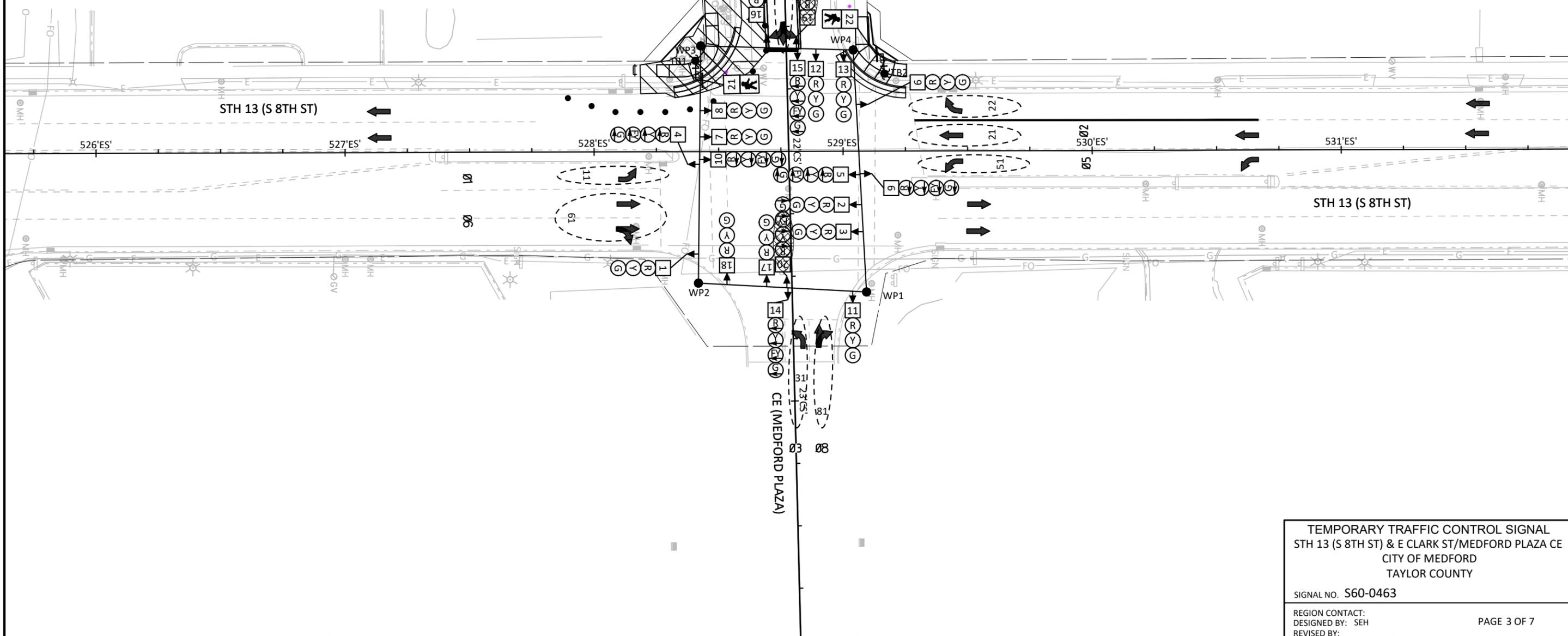
- SIGNAL CABLE WITH MESSENGER
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 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT:  
 DESIGNED BY: SEH  
 REVISED BY:

PAGE 3 OF 7

LEGEND

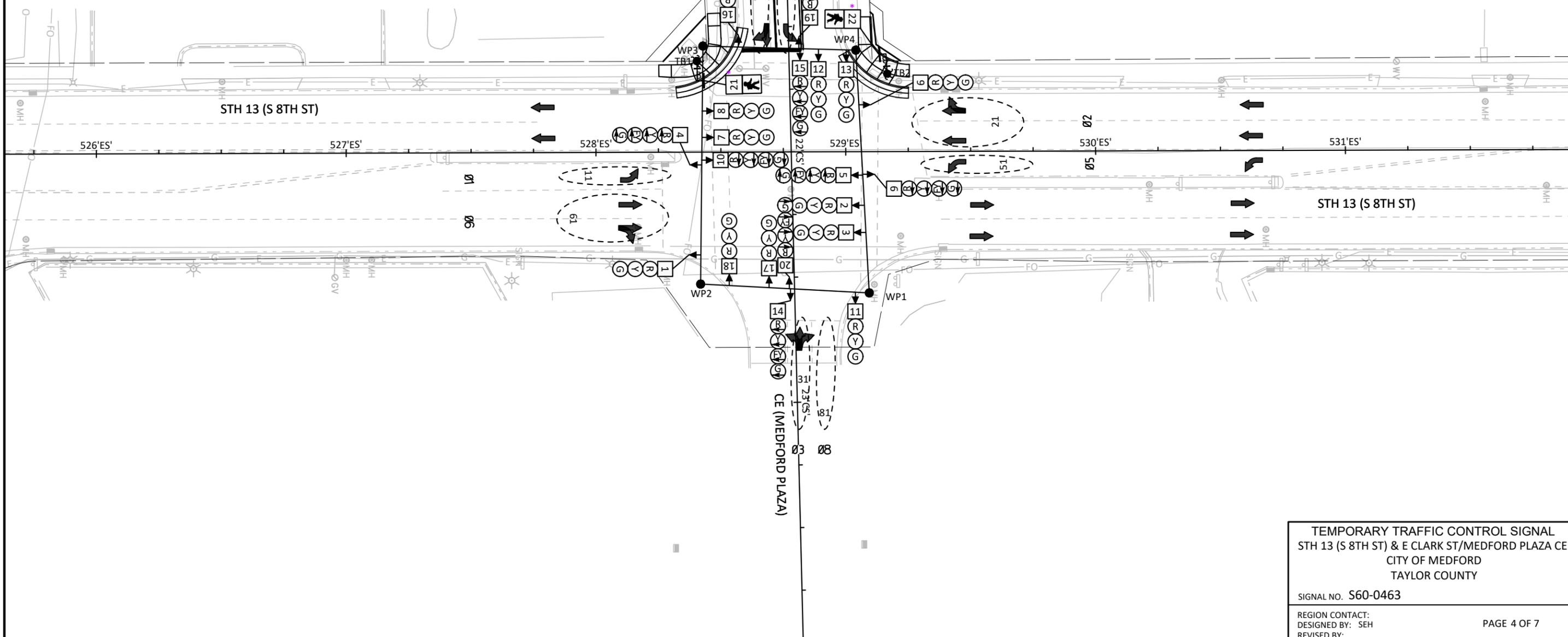
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- ⊗ TEMPORARY BASE
- ⓧ SIGNAL HEAD NUMBER
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TEMPORARY TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA CE  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT:  
 DESIGNED BY: SEH  
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PAGE 4 OF 7

LEGEND

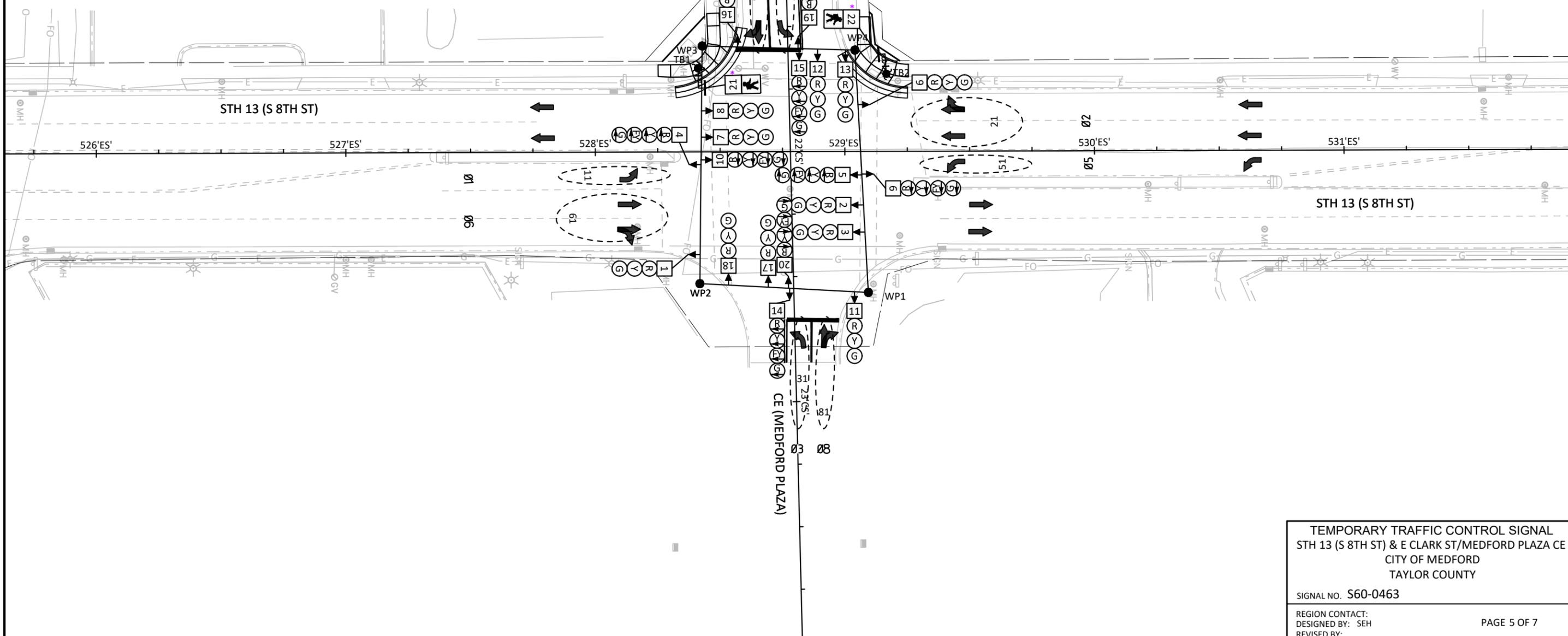
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TEMPORARY TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA CE  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT:  
 DESIGNED BY: SEH  
 REVISED BY:

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LEGEND

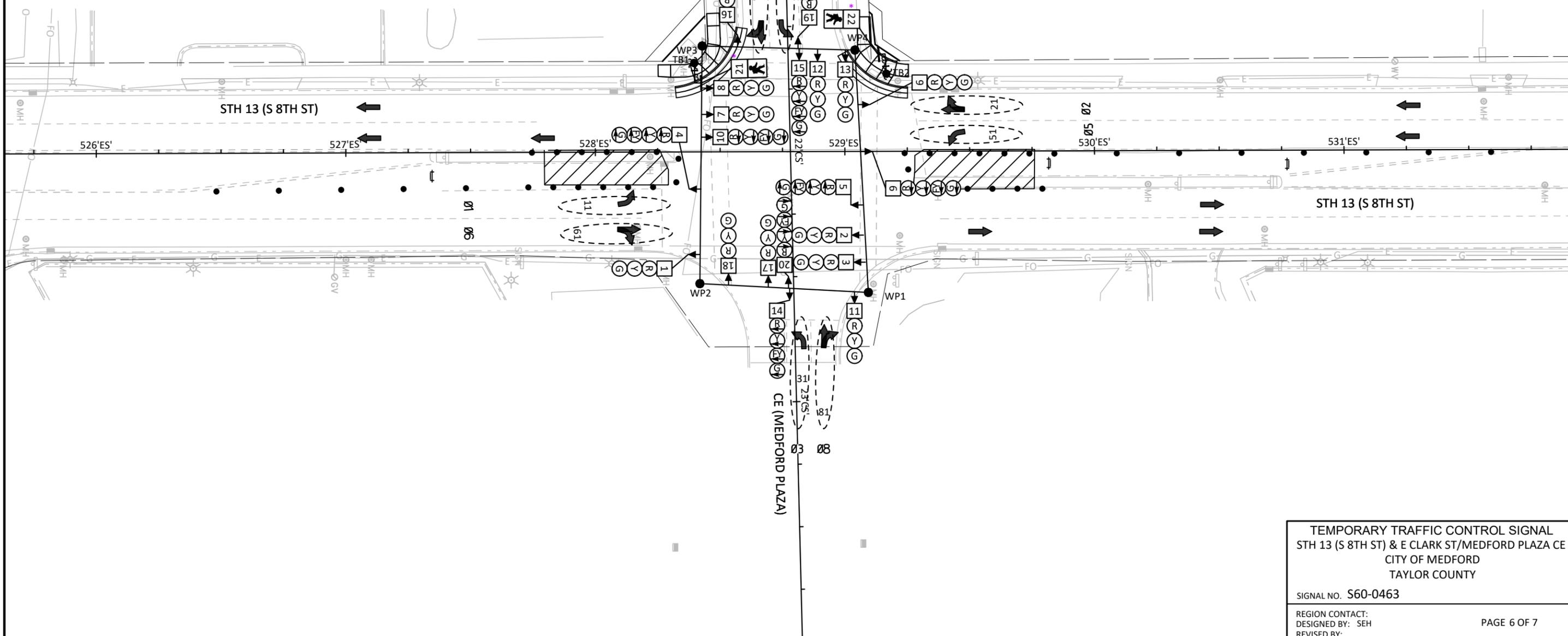
- SIGNAL CABLE WITH MESSENGER
- CLASS IV WOOD POLE
- ⊗ TEMPORARY BASE
- ⓧ SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
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- Ⓧ EVP DESIGNATOR
- Ⓡ RED ARROW (LEFT)
- Ⓢ YELLOW ARROW (LEFT)
- Ⓣ GREEN ARROW (LEFT)
- Ⓧ FLASHING YELLOW ARROW (LEFT)
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- Ⓢ SIGNAL HEAD, (WITH BACKPLATE)
- Ⓣ APPROXIMATE DETECTION ZONE
- Ⓧ EVP DETECTOR HEAD
- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC
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7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.



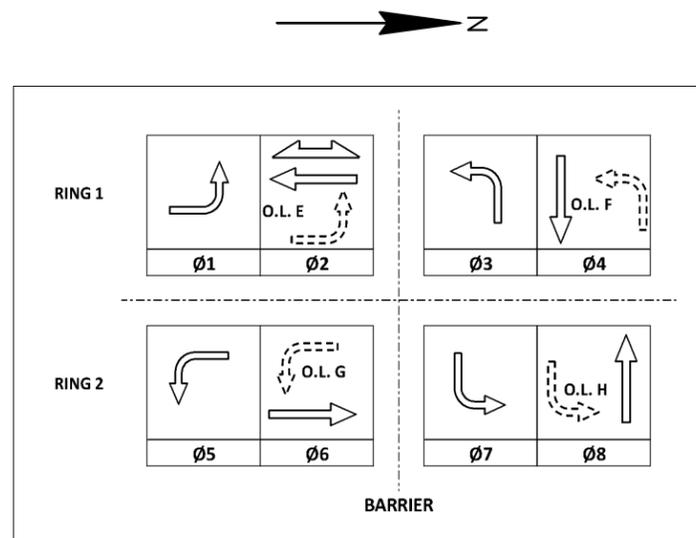
TEMPORARY TRAFFIC CONTROL SIGNAL  
 STH 13 (S 8TH ST) & E CLARK ST/MEDFORD PLAZA CE  
 CITY OF MEDFORD  
 TAYLOR COUNTY

SIGNAL NO. S60-0463

REGION CONTACT:  
 DESIGNED BY: SEH  
 REVISED BY:

PAGE 6 OF 7

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø3	14,15	R
Ø4	16,17,18	R
Ø5	9,10	R
Ø6	1,2,3	R
Ø7	19,20	R
Ø8	11,12,13	R
Ø2P	21,22	
OLE	4,5	-
OLF	14,15	-
OLG	9,10	-
OLH	19,20	-



- GENERAL NOTES:**
1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
  2. WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY. SEE CHART 1.

**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

**CHART 1**

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,3,4,7,8
2	5 OR 6	1,3,4,7,8
3	7 OR 8	1,2,4,5,6
4	7 OR 8	1,2,3,5,6
5	1 OR 2	3,4,6,7,8
6	1 OR 2	3,4,5,7,8
7	3 OR 4	1,2,5,6,8
8	3 OR 4	1,2,5,6,7

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

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

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

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

**DETECTOR LOGIC**

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	22	41	61	81			
CALLED PHASE	1	2	4	6	8			
CALL OPTION	X	X	X	X	X			
DELAY TIME		X						
EXTENTION OPTION	X	X	X	X	X			
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X	X			
CROSS SWITCH PHASE								

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21	31	51	71				
CALLED PHASE	2	3	5	7				
CALL OPTION	X	X	X	X				
DELAY TIME								
EXTENTION OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL	X	X	X	X				
CROSS SWITCH PHASE								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

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

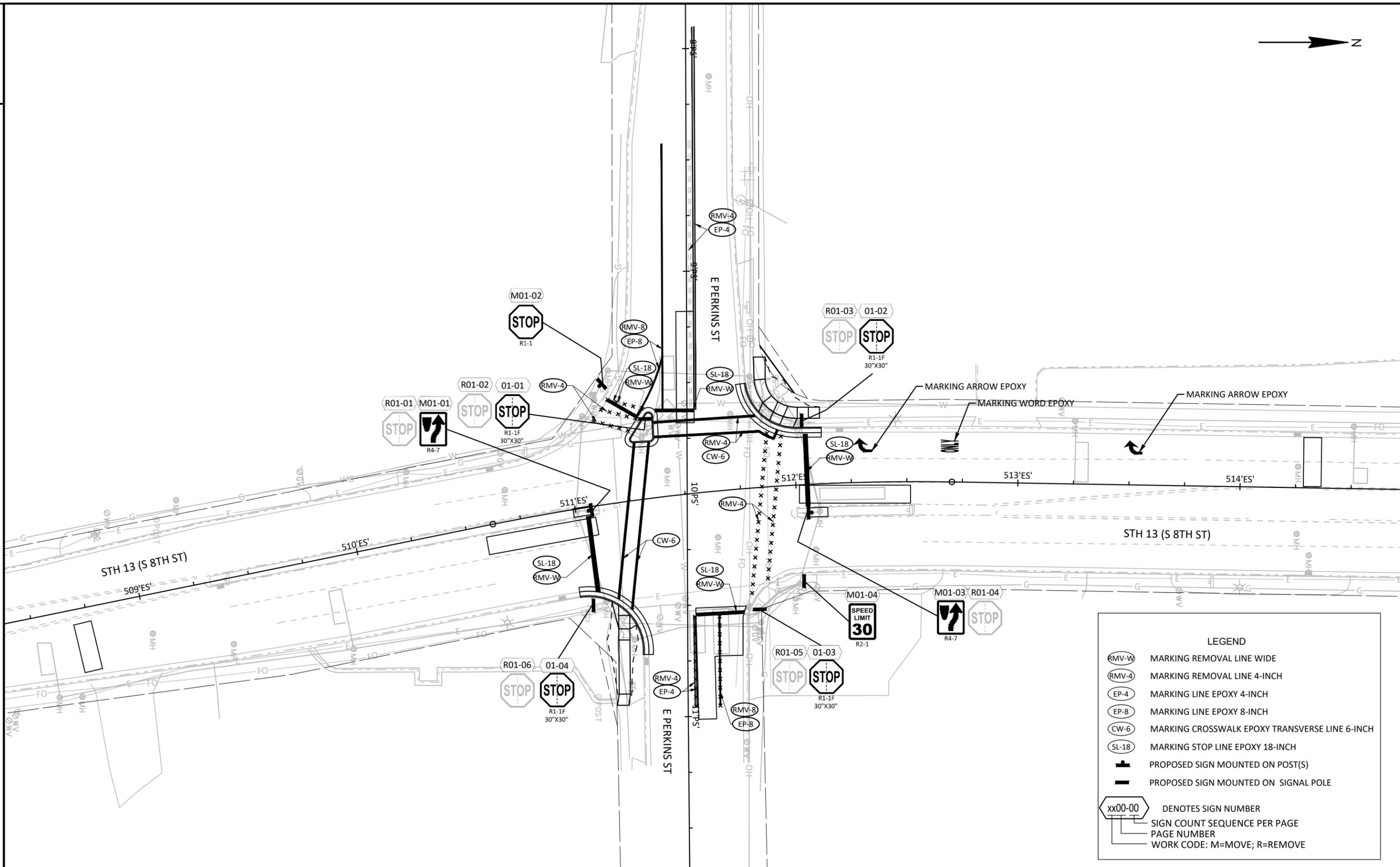
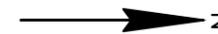
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STH 13 (S. 8TH STREET) & E. CLARK STREET	
CITY OF MEDFORD	
TAYLOR COUNTY	
SIGNAL NO: 560-0463	CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP	
DATE: 06/2022	PAGE NO. 7 OF 7

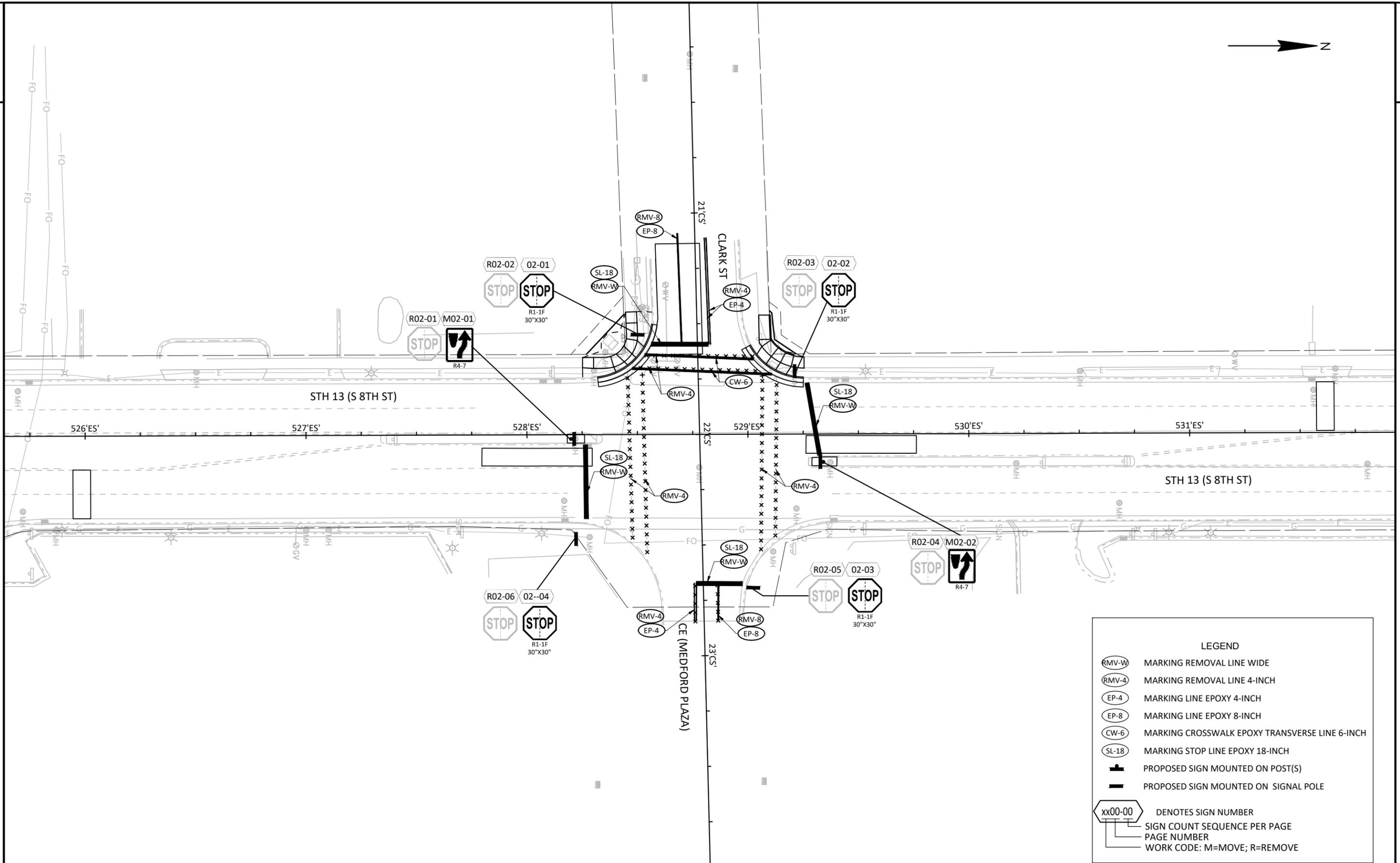
TEMPORARY SIGNAL TIMING INFORMATION

STH 13 & Perkins Street								
PHASE	Φ1	Φ2	Φ3	Φ4	Φ5	Φ6	Φ7	Φ8
DIRECTION	NBL	SBT	WBL	EBT	SBL	NBT	EBL	WBT
MIN GREEN	7.0	15.0	-	10.0	7.0	15.0	-	10.0
WALK	-	7.0	-	7.0	-	-	-	-
PED CLEAR	-	26.0	-	26.0	-	-	-	-
VEHICLE EXT	2.0	5.0	-	2.0	2.0	5.0	-	2.0
MAX1	25.0	45.0	-	30.0	25.0	45.0	-	30.0
MAX2	25.0	45.0	-	30.0	25.0	45.0	-	30.0
YELLOW	3.2	3.2	-	2.8	3.2	3.2	-	2.8
RED CLEAR	2.6	2.6	-	3.2	2.6	2.6	-	3.2
MIN GAP	2.0	3.0	-	2.0	2.0	3.0	-	2.0

STH 13 & Clark Street								
PHASE	Φ1	Φ2	Φ3	Φ4	Φ5	Φ6	Φ7	Φ8
DIRECTION	NBL	SBT	WBL	EBT	SBL	NBT	EBL	WBT
MIN GREEN	7.0	15.0	7.0	10.0	7.0	15.0	7.0	10.0
WALK	-	7.0	-	-	-	-	-	-
PED CLEAR	-	18.0	-	-	-	-	-	-
VEHICLE EXT	2.0	5.0	2.0	2.0	2.0	5.0	2.0	2.0
MAX1	25.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0
MAX2	25.0	45.0	25.0	30.0	25.0	45.0	25.0	30.0
YELLOW	3.2	3.2	2.8	2.8	3.2	3.2	2.8	2.8
RED CLEAR	2.6	2.6	3.0	3.4	2.6	2.6	3.0	3.4
MIN GAP	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0

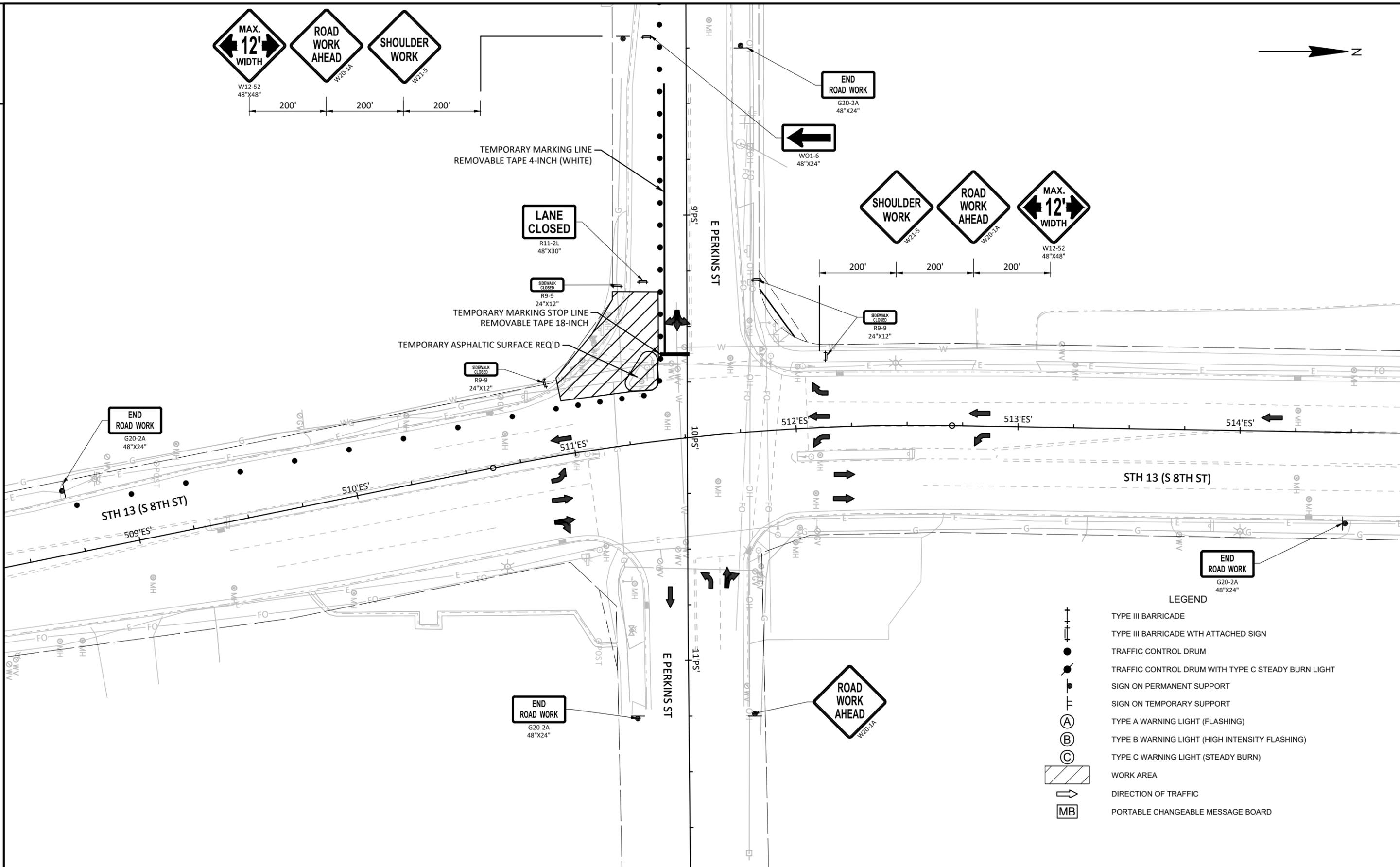


LEGEND	
	MARKING REMOVAL LINE WIDE
	MARKING REMOVAL LINE 4-INCH
	MARKING LINE EPOXY 4-INCH
	MARKING LINE EPOXY 8-INCH
	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
	MARKING STOP LINE EPOXY 18-INCH
	PROPOSED SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON SIGNAL POLE
	DENOTES SIGN NUMBER
	SIGN COUNT SEQUENCE PER PAGE
	PAGE NUMBER
	WORK CODE: M=MOVE; R=REMOVE



**LEGEND**

- MARKING REMOVAL LINE WIDE
- MARKING REMOVAL LINE 4-INCH
- MARKING LINE EPOXY 4-INCH
- MARKING LINE EPOXY 8-INCH
- MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
- MARKING STOP LINE EPOXY 18-INCH
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON SIGNAL POLE
- DENOTES SIGN NUMBER
- SIGN COUNT SEQUENCE PER PAGE
- PAGE NUMBER
- WORK CODE: M=MOVE; R=REMOVE



TEMPORARY MARKING LINE  
REMOVABLE TAPE 4-INCH (WHITE)

LANE  
CLOSED

SIDEWALK  
CLOSED

TEMPORARY MARKING STOP LINE  
REMOVABLE TAPE 18-INCH

TEMPORARY ASPHALTIC SURFACE REQ'D

SIDEWALK  
CLOSED

END  
ROAD WORK



SIDEWALK  
CLOSED

END  
ROAD WORK

STH 13 (S 8TH ST)

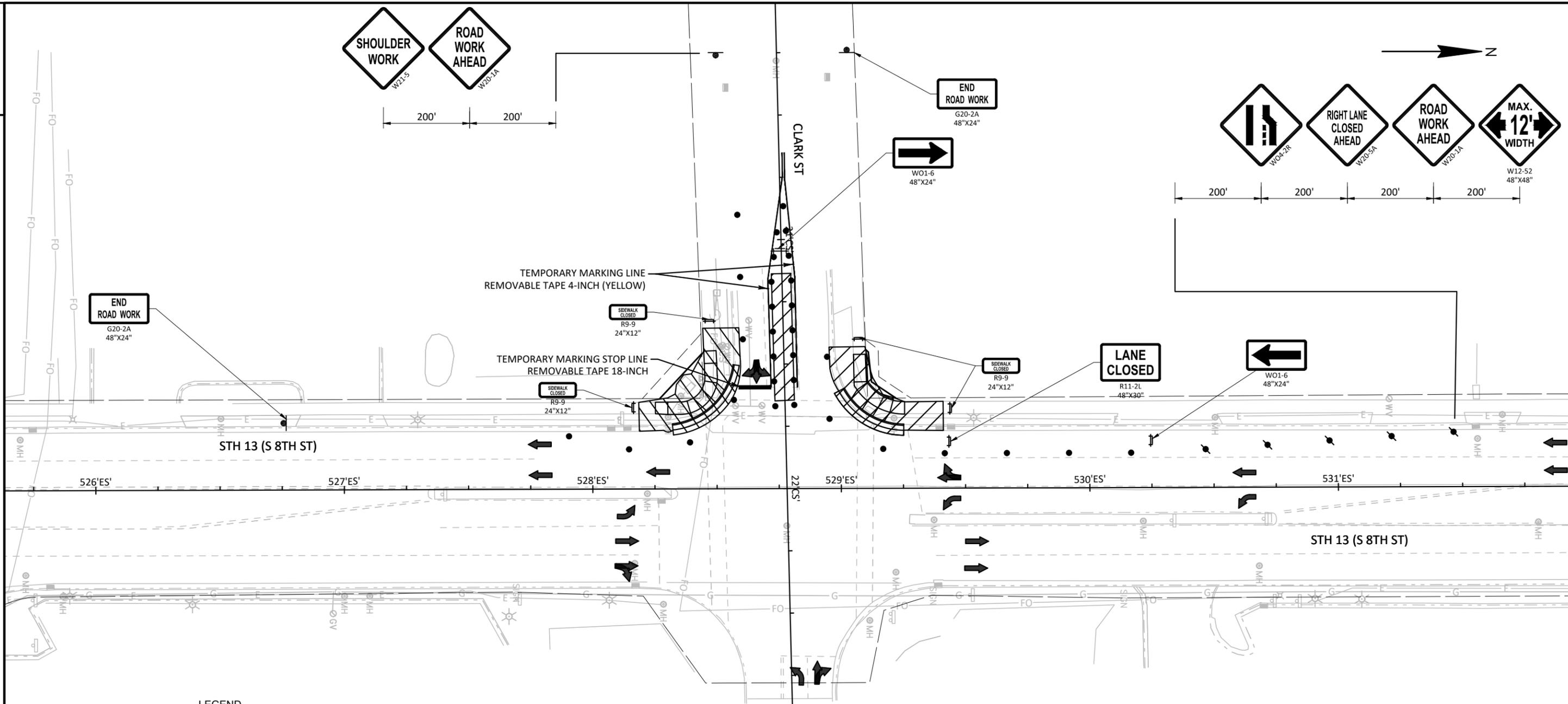
END  
ROAD WORK

END  
ROAD WORK



- LEGEND
- TYPE III BARRICADE
  - TYPE III BARRICADE WITH ATTACHED SIGN
  - TRAFFIC CONTROL DRUM
  - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
  - SIGN ON PERMANENT SUPPORT
  - SIGN ON TEMPORARY SUPPORT
  - TYPE A WARNING LIGHT (FLASHING)
  - TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
  - TYPE C WARNING LIGHT (STEADY BURN)
  - WORK AREA
  - DIRECTION OF TRAFFIC
  - PORTABLE CHANGEABLE MESSAGE BOARD





LEGEND

- ⊕ TYPE III BARRICADE
- ⊕ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- Ⓑ TYPE B WARNING LIGHT (HIGH INTENSITY FLASHING)
- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



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

TEMPORARY MARKING LINE  
REMOVABLE TAPE 4-INCH (WHITE)

LANE  
CLOSED

SIDEWALK  
CLOSED

TEMPORARY MARKING STOP LINE  
REMOVABLE TAPE 18-INCH

SIDEWALK  
CLOSED

END  
ROAD WORK



END  
ROAD WORK

STH 13 (S 8TH ST)

STH 13 (S 8TH ST)

E PERKINS ST

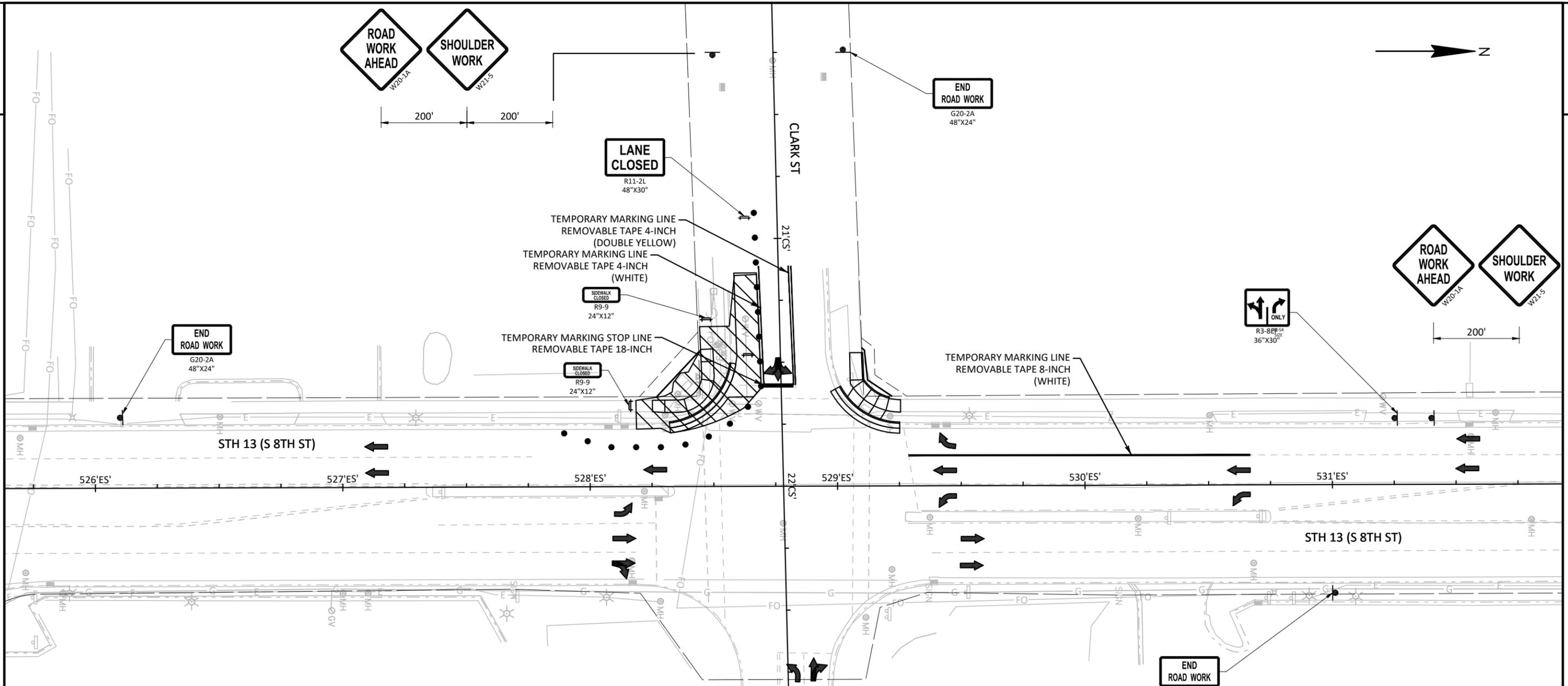
E PERKINS ST

END  
ROAD WORK



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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- WORK AREA
- DIRECTION OF TRAFFIC
- PORTABLE CHANGEABLE MESSAGE BOARD

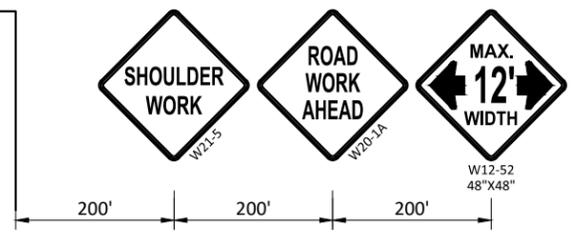
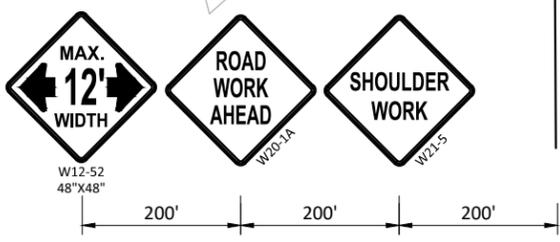
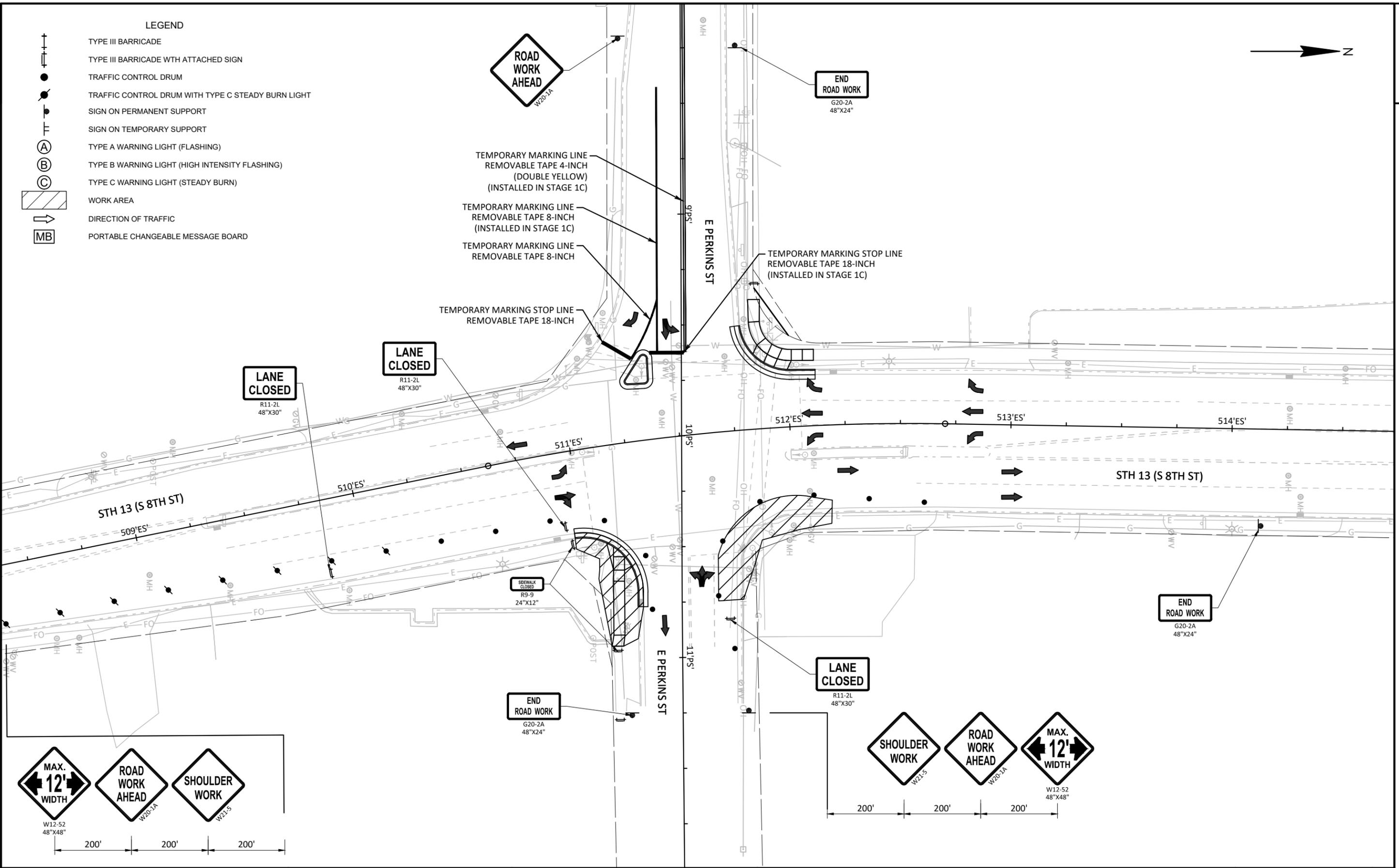


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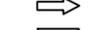
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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-  TYPE C WARNING LIGHT (STEADY BURN)
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD

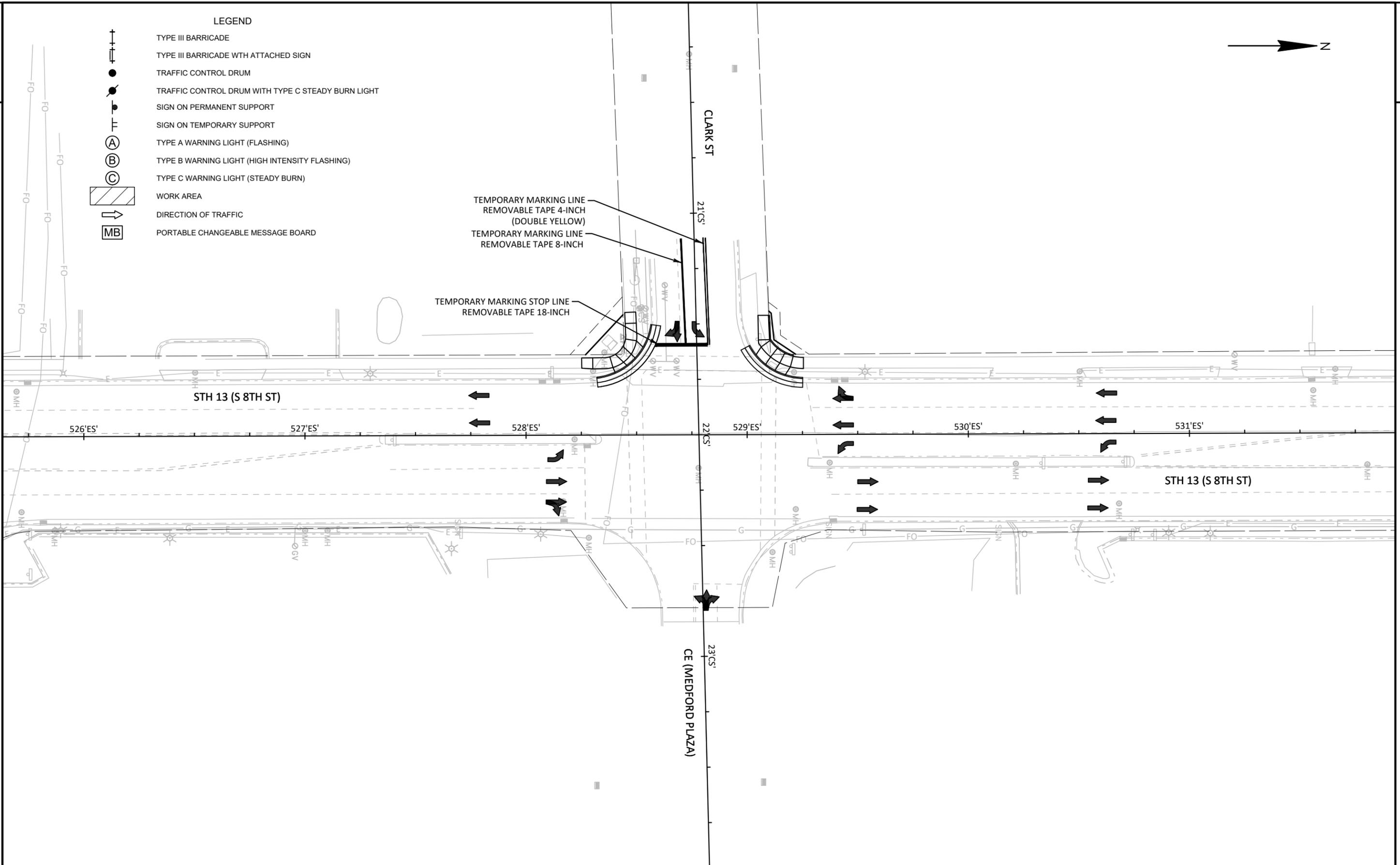
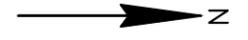
LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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-  SIGN ON TEMPORARY SUPPORT
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-  TYPE C WARNING LIGHT (STEADY BURN)
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD



LEGEND

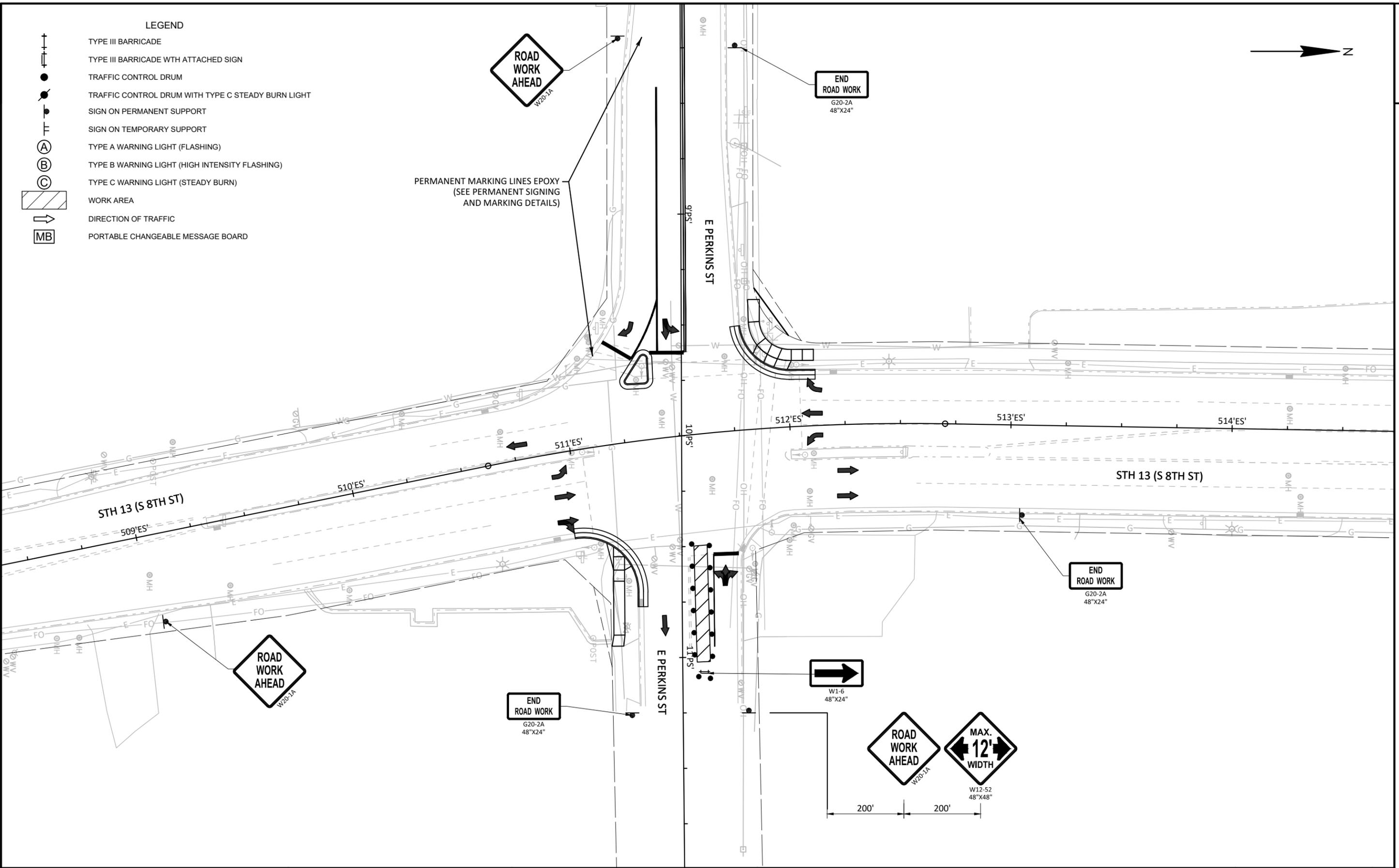
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
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-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
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-  TYPE C WARNING LIGHT (STEADY BURN)
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 3700-50-61	HWY: STH 13	COUNTY: TAYLOR	TRAFFIC CONTROL - STAGE 2A
SHEET			E

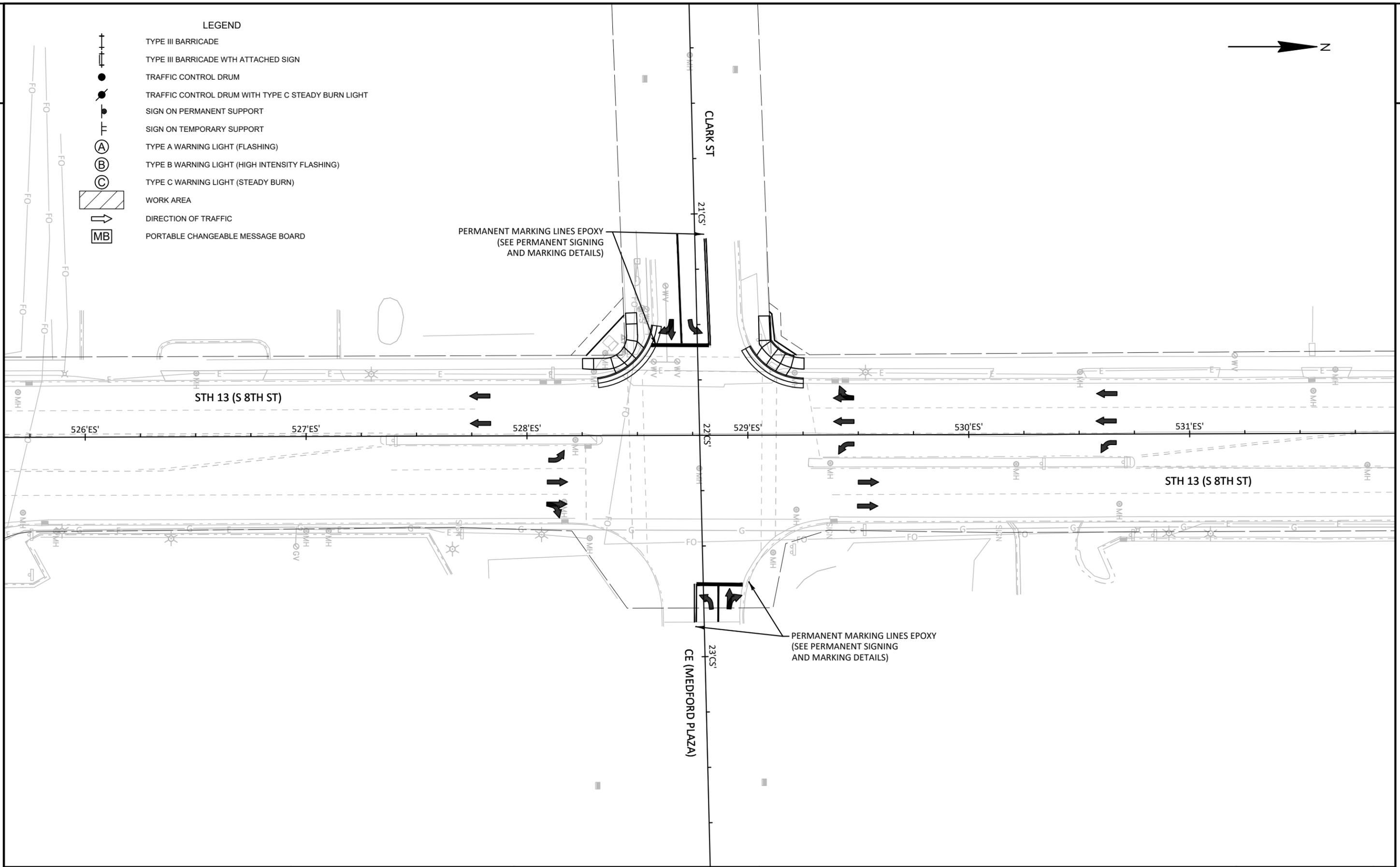
LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
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-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD



LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
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-  TYPE C WARNING LIGHT (STEADY BURN)
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD

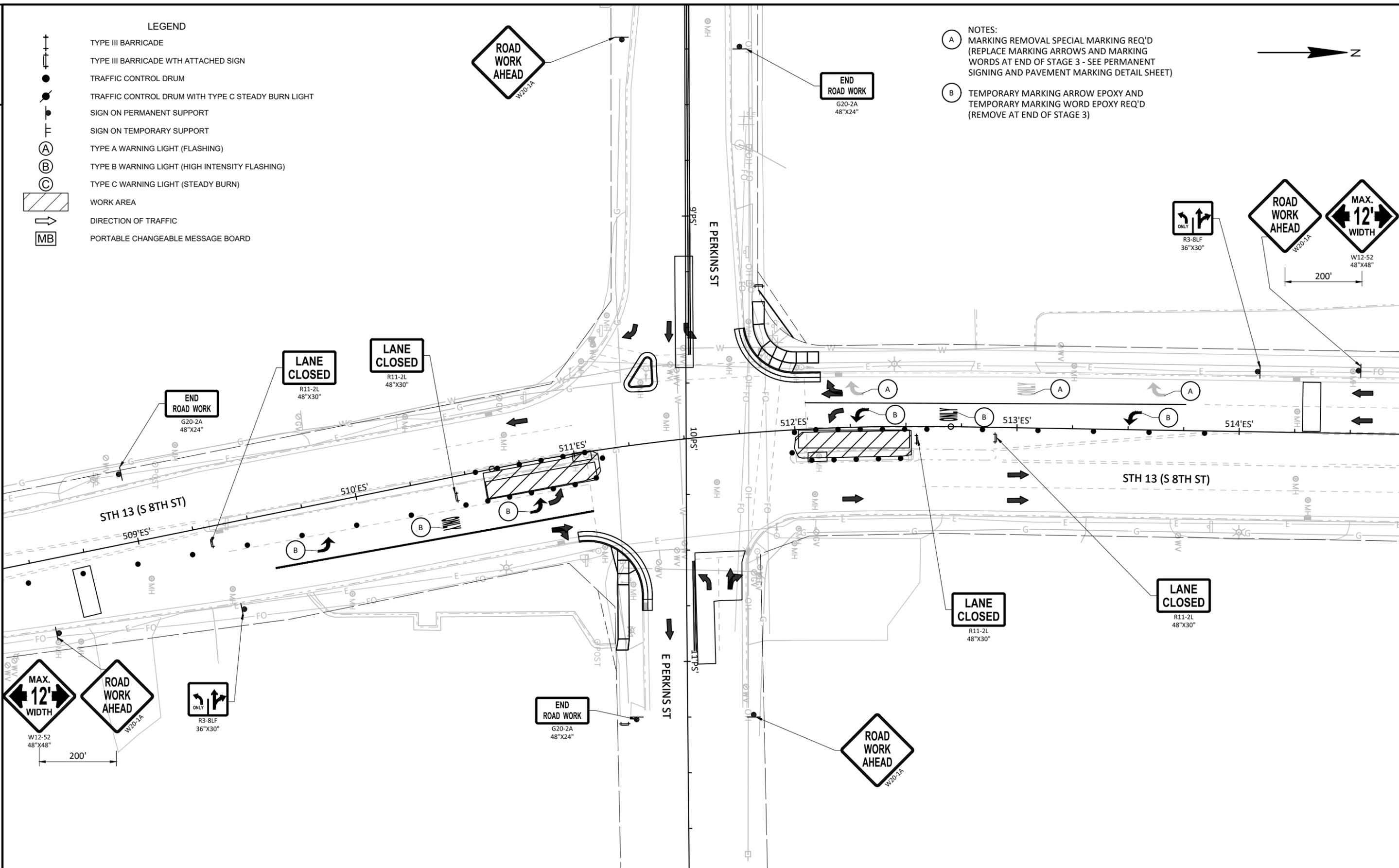


PROJECT NO: 3700-50-61	HWY: STH 13	COUNTY: TAYLOR	TRAFFIC CONTROL - STAGE 2B
SHEET			E

LEGEND

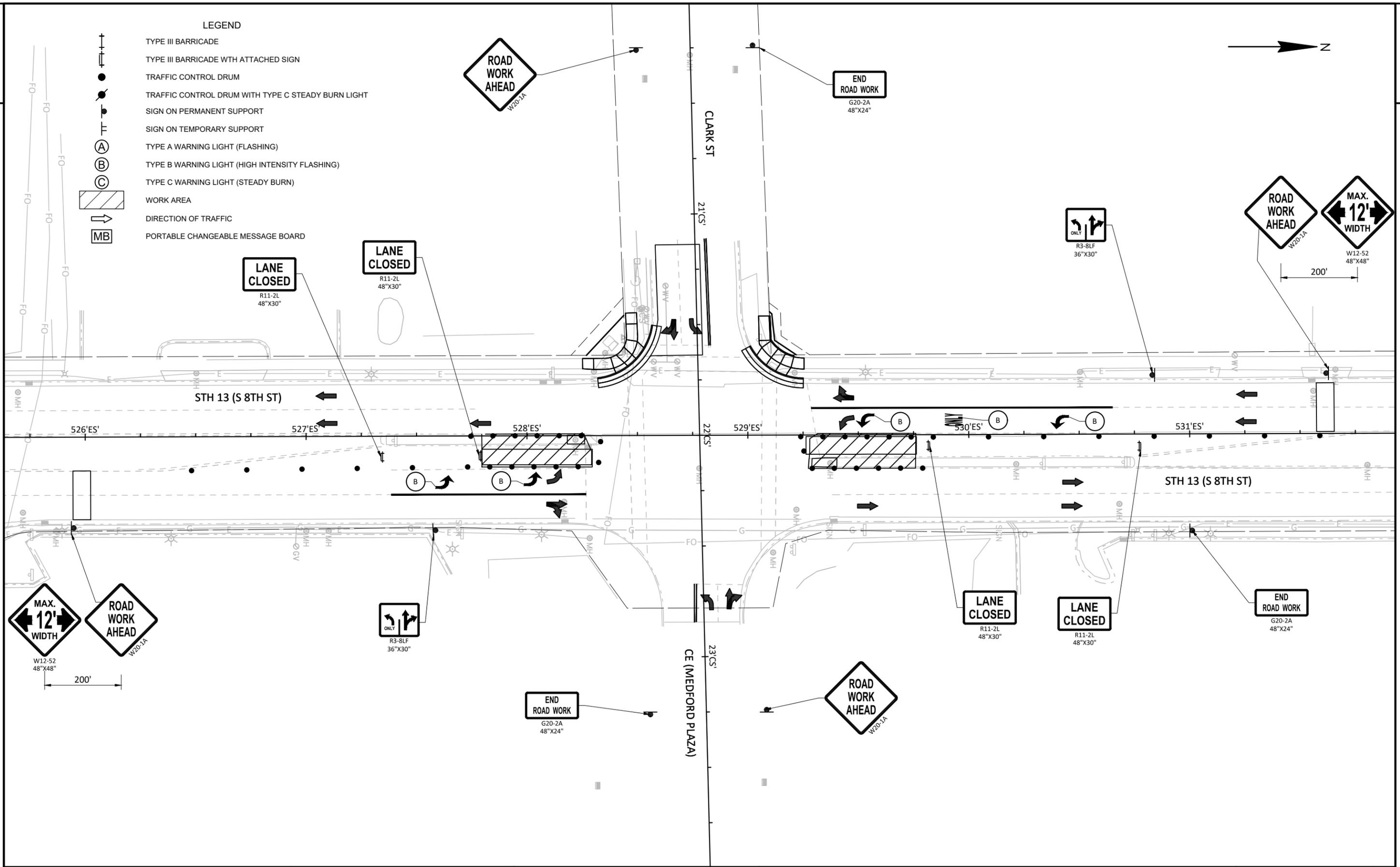
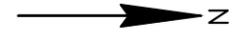
- † TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⊥ SIGN ON PERMANENT SUPPORT
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- Ⓒ TYPE C WARNING LIGHT (STEADY BURN)
- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD

- NOTES:
- Ⓐ MARKING REMOVAL SPECIAL MARKING REQ'D (REPLACE MARKING ARROWS AND MARKING WORDS AT END OF STAGE 3 - SEE PERMANENT SIGNING AND PAVEMENT MARKING DETAIL SHEET)
  - Ⓑ TEMPORARY MARKING ARROW EPOXY AND TEMPORARY MARKING WORD EPOXY REQ'D (REMOVE AT END OF STAGE 3)



LEGEND

- † TYPE III BARRICADE
- † TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ⊥ SIGN ON PERMANENT SUPPORT
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- ▨ WORK AREA
- ➔ DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD



Estimate Of Quantities

3700-50-61

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	538.000	538.000
0004	204.0150	Removing Curb & Gutter	LF	158.000	158.000
0006	204.0155	Removing Concrete Sidewalk	SY	128.000	128.000
0008	204.0195	Removing Concrete Bases	EACH	26.000	26.000
0010	213.0100	Finishing Roadway (project) 01. 3700-50-61	EACH	1.000	1.000
0012	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	68.000	68.000
0014	465.0105	Asphaltic Surface	TON	181.000	181.000
0016	465.0125	Asphaltic Surface Temporary	TON	7.000	7.000
0018	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	163.000	163.000
0020	601.0600	Concrete Curb Pedestrian	LF	24.000	24.000
0022	602.0410	Concrete Sidewalk 5-Inch	SF	1,081.000	1,081.000
0024	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	40.000	40.000
0026	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3700-50-61	EACH	1.000	1.000
0028	619.1000	Mobilization	EACH	1.000	1.000
0030	625.0100	Topsoil	SY	117.000	117.000
0032	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0034	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0036	628.2006	Erosion Mat Urban Class I Type A	SY	117.000	117.000
0038	628.7015	Inlet Protection Type C	EACH	18.000	18.000
0040	629.0210	Fertilizer Type B	CWT	0.150	0.150
0042	630.0130	Seeding Mixture No. 30	LB	2.100	2.100
0044	630.0200	Seeding Temporary	LB	4.200	4.200
0046	630.0500	Seed Water	MGAL	2.600	2.600
0048	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	4.000	4.000
0050	637.2215	Signs Type II Reflective H Folding	SF	41.440	41.440
0052	638.2102	Moving Signs Type II	EACH	6.000	6.000
0054	638.2602	Removing Signs Type II	EACH	12.000	12.000
0056	642.5001	Field Office Type B	EACH	1.000	1.000
0058	643.0300	Traffic Control Drums	DAY	2,680.000	2,680.000
0060	643.0410	Traffic Control Barricades Type II	DAY	130.000	130.000
0062	643.0420	Traffic Control Barricades Type III	DAY	240.000	240.000
0064	643.0705	Traffic Control Warning Lights Type A	DAY	215.000	215.000
0066	643.0715	Traffic Control Warning Lights Type C	DAY	110.000	110.000
0068	643.0900	Traffic Control Signs	DAY	1,120.000	1,120.000
0070	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0072	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	1,330.000	1,330.000
0074	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	1,225.000	1,225.000
0076	643.3520	Temporary Marking Arrow Epoxy	EACH	8.000	8.000
0078	643.3620	Temporary Marking Word Epoxy	EACH	3.000	3.000
0080	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	112.000	112.000
0082	643.5000	Traffic Control	EACH	1.000	1.000
0084	646.1020	Marking Line Epoxy 4-Inch	LF	507.000	507.000
0086	646.3020	Marking Line Epoxy 8-Inch	LF	256.000	256.000
0088	646.5020	Marking Arrow Epoxy	EACH	4.000	4.000
0090	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0092	646.6120	Marking Stop Line Epoxy 18-Inch	LF	235.000	235.000
0094	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	363.000	363.000
0096	646.9000	Marking Removal Line 4-Inch	LF	817.000	817.000
0098	646.9200	Marking Removal Line Wide	LF	226.000	226.000

Estimate Of Quantities

3700-50-61

Line	Item	Item Description	Unit	Total	Qty
0100	646.9300	Marking Removal Special Marking	EACH	9.000	9.000
0102	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	163.000	163.000
0104	650.8501	Construction Staking Electrical Installations (project) 01. 3700-50-61	EACH	1.000	1.000
0106	650.9000	Construction Staking Curb Ramps	EACH	4.000	4.000
0108	650.9500	Construction Staking Sidewalk (project) 01. 3700-50-61	EACH	1.000	1.000
0110	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	369.000	369.000
0112	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	589.000	589.000
0114	652.0605	Conduit Special 2-Inch	LF	905.000	905.000
0116	652.0615	Conduit Special 3-Inch	LF	1,210.000	1,210.000
0118	652.0800	Conduit Loop Detector	LF	1,992.000	1,992.000
0120	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	26.000	26.000
0122	653.0905	Removing Pull Boxes	EACH	22.000	22.000
0124	654.0101	Concrete Bases Type 1	EACH	11.000	11.000
0126	654.0102	Concrete Bases Type 2	EACH	2.000	2.000
0128	654.0110	Concrete Bases Type 10	EACH	2.000	2.000
0130	654.0120	Concrete Bases Type 10-Special	EACH	4.000	4.000
0132	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	2.000	2.000
0134	655.0230	Cable Traffic Signal 5-14 AWG	LF	813.000	813.000
0136	655.0240	Cable Traffic Signal 7-14 AWG	LF	854.000	854.000
0138	655.0260	Cable Traffic Signal 12-14 AWG	LF	2,553.000	2,553.000
0140	655.0270	Cable Traffic Signal 15-14 AWG	LF	212.000	212.000
0142	655.0305	Cable Type UF 2-12 AWG Grounded	LF	1,696.000	1,696.000
0144	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,064.000	2,064.000
0146	655.0610	Electrical Wire Lighting 12 AWG	LF	966.000	966.000
0148	655.0700	Loop Detector Lead In Cable	LF	4,812.000	4,812.000
0150	655.0800	Loop Detector Wire	LF	6,486.000	6,486.000
0152	655.0900	Traffic Signal EVP Detector Cable	LF	1,824.000	1,824.000
0154	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. STH 13 & Perkins Street	EACH	1.000	1.000
0156	656.0201	Electrical Service Meter Breaker Pedestal (location) 02. STH 13 & Clark Street	EACH	1.000	1.000
0158	657.0100	Pedestal Bases	EACH	11.000	11.000
0160	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000
0162	657.0305	Poles Type 2	EACH	1.000	1.000
0164	657.0310	Poles Type 3	EACH	1.000	1.000
0166	657.0350	Poles Type 10	EACH	2.000	2.000
0168	657.0352	Poles Type 10-Special	EACH	4.000	4.000
0170	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	8.000	8.000
0172	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	4.000	4.000
0174	657.0525	Monotube Arms 25-FT	EACH	1.000	1.000
0176	657.0530	Monotube Arms 30-FT	EACH	1.000	1.000
0178	657.0541	Monotube Arms 40-FT-Special	EACH	1.000	1.000
0180	657.0546	Monotube Arms 45-FT-Special	EACH	4.000	4.000
0182	657.0595	Trombone Arms 25-FT	EACH	2.000	2.000
0184	657.0714	Luminaire Arms Truss Type 4-Inch Clamp 15-FT	EACH	1.000	1.000
0186	657.0808	Luminaire Arms Steel 8-FT	EACH	2.000	2.000
0188	657.0815	Luminaire Arms Steel 15-FT	EACH	4.000	4.000
0190	658.0173	Traffic Signal Face 3S 12-Inch	EACH	24.000	24.000
0192	658.0174	Traffic Signal Face 4S 12-Inch	EACH	12.000	12.000
0194	658.0416	Pedestrian Signal Face 16-Inch	EACH	6.000	6.000
0196	658.0500	Pedestrian Push Buttons	EACH	6.000	6.000

Estimate Of Quantities

3700-50-61

Line	Item	Item Description	Unit	Total	Qty
0198	658.5070	Signal Mounting Hardware (location) 01. STH 13 & Perkins Street	EACH	1.000	1.000
0200	658.5070	Signal Mounting Hardware (location) 02. STH 13 & Clark Street	EACH	1.000	1.000
0202	659.1115	Luminaires Utility LED A	EACH	7.000	7.000
0204	661.0201	Temporary Traffic Signals for Intersections (location) 01. STH 13 & Perkins Street	EACH	1.000	1.000
0206	661.0201	Temporary Traffic Signals for Intersections (location) 02. STH 13 & Clark Street	EACH	1.000	1.000
0208	661.0300	Generators	DAY	4.000	4.000
0210	678.0006	Install Fiber Optic Cable Outdoor Plant 6-CT	LF	2,135.000	2,135.000
0212	690.0150	Sawing Asphalt	LF	1,398.000	1,398.000
0214	690.0250	Sawing Concrete	LF	184.000	184.000
0216	SPV.0060	Special 01. Remove, Disassemble, and Salvage Traffic Signals (STH 13 & Perkins Street)	EACH	1.000	1.000
0218	SPV.0060	Special 02. Remove, Disassemble, and Salvage Traffic Signals (STH 13 & Clark Street)	EACH	1.000	1.000
0220	SPV.0060	Special 03. Install State Furnished EVP Detector Heads (STH 13 & Perkins Street)	EACH	1.000	1.000
0222	SPV.0060	Special 04. Install State Furnished EVP Detector Heads (STH 13 & Clark Street)	EACH	1.000	1.000
0224	SPV.0060	Special 05. Temporary Vehicle Detection (STH 13 & Perkins Street)	EACH	1.000	1.000
0226	SPV.0060	Special 06. Temporary Vehicle Detection (STH 13 & Clark Street)	EACH	1.000	1.000
0228	SPV.0060	Special 07. Install Conduit Into Existing WisDOT Vault	EACH	1.000	1.000
0230	SPV.0090	Special 01. Install State Furnished CAT-5E Cable	LF	1,014.000	1,014.000
0232	SPV.0195	Special 01. Excavation Hauling & Disposal Of Contaminated Soil	TON	50.000	50.000

3

REMOVAL ITEMS

STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	REMARKS
STH 13 & PERKINS	NW QUAD	45	31	CURB RAMPS
	SE QUAD	45	25	CURB RAMPS
	MEDIAN	-	4	
	MEDIAN	-	4	
	RT TURN ISLAND	-	12	
STH 13 & CLARK	NW QUAD	30	20	CURB RAMPS
	SW QUAD	38	24	CURB RAMPS
	MEDIAN	-	4	
	MEDIAN	-	4	
TOTAL		158	128	

ASPHALTIC SURFACE

STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	465.0105 ASPHALTIC SURFACE TON
STH 13 & PERKINS ST	STH 13	128	43
	PERKINS	131	44
	NW QUAD	11	4
	SE QUAD	12	4
STH 13 & CLARK ST	STH 13	128	43
	CLARK	111	37
	NW QUAD	7	2
	SW QUAD	9	3
TOTAL		538	181

FINISHING ROADWAY

LOCATION	213.0100 EACH
PROJECT (3700-50-61)	1
ITEM TOTALS	1

ASPHALTIC SURFACE TEMPORARY

STATION	LOCATION	STAGE	465.0125 TON	REMARKS
STH 13 & PERKINS ST	SW QUAD	1A	7	RT TURN ISLAND
TOTAL			7	

3

SIDEWALK ITEMS

INTERSECTION	LOCATION	305.0120 BASE AGGREGATES 1 1/4-INCH TON	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	REMARKS
STH 13 & PERKINS ST	NW QUAD	19	45	298	-	10	45	1	
	SE QUAD	17	50	214	-	10	50	1	
	SW QUAD			100					RT TURN ISLAND
STH 13 & CLARK ST	NW QUAD	16	30	228	24	10	30	1	
	SW QUAD	16	38	241	-	10	38	1	
TOTALS		68	163	1081	24	40	163	4	

3

3

MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	618.0100 (3700-50-61) EACH
PROJECT	1
<b>PROJECT TOTALS</b>	<b>1</b>

MOBILIZATION

LOCATION	619.1000 EACH
PROJECT (3700-50-61)	1
<b>ITEM TOTALS</b>	<b>1</b>

EROSION CONTROL MOBILIZATIONS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT (3700-50-61)	2	2
<b>ITEM TOTALS</b>	<b>2</b>	<b>2</b>

INLET PROTECTION

INTERSECTION	LOCATION	628.7015 INLET PROTECTION TYPE C EACH
STH 13 & PERKINS ST	510+65, LT	1
	510+87, RT	1
	10+50'PS', LT	1
	10+75'PS', RT	1
	512+20, LT	1
STH 13 & CLARK ST	514+25, LT	1
	528+10, LT	2
	528+17, RT	1
	528+27, RT	1
	529+39, RT	1
UNDISTRIBUTED	529+42, LT	2
	531+55, LT	1
<b>ITEM TOTALS</b>		<b>18</b>

REMOVING SIGNS

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	REMARKS
R01-01	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R01-02	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R01-03	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R01-04	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R01-05	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R01-06	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R02-01	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R02-02	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R02-03	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R02-04	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R02-05	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
R02-06	R1-1	STOP (FOLDING)	1	ON SIGNAL POLE
<b>ITEM TOTAL</b>			<b>12</b>	

RESTORATION ITEMS

INTERSECTION	LOCATION	AREA SF	625.0100 TOPSOIL SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
STH 13 & PERKINS ST	NW QUAD	280	31	31	0.04	0.6	1.1	0.7
	SE QUAD	197	22	22	0.03	0.4	0.8	0.5
STH 13 & CLARK ST	NW QUAD	97	11	11	0.01	0.2	0.4	0.2
	SW QUAD	265	29	29	0.04	0.5	1.1	0.7
UNDISTRIBUTED			23	23	0.03	0.4	0.8	0.5
<b>ITEM TOTALS</b>			<b>117</b>	<b>117</b>	<b>0.15</b>	<b>2.1</b>	<b>4.2</b>	<b>2.6</b>

PERMANENT SIGNING

SIGN GROUP NUMBER	SIGN CODE	SIGN MESSAGE	SIGN SIZE W X H (INCHES)	634.0812 POST TUBULAR STEEL 2X2-INCH X 12-FT EACH	637.2215 SIGNS TYPE II REFLECTIVE TYPE H FOLDING SF	638.2102 MOVING SIGNS TYPE II EACH	REMARKS
M01-01	R4-7	KEEP RIGHT	24 X 30	1	-	1	MOVE TO POST
M01-02	R1-1	STOP	30 X 30	-	-	1	
M01-03	R4-7	KEEP RIGHT	24 X 30	1	-	1	MOVE TO POST
M01-04	R2-1	SPEED LIMIT (30)	24 X 30	-	-	1	MOVE TO PROPOSED SIGNAL POLE
01-01	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
01-02	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
01-03	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
01-04	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
M02-01	R4-7	KEEP RIGHT	24 X 30	1	-	1	MOVE TO POST
M02-02	R4-7	KEEP RIGHT	24 X 30	1	-	1	MOVE TO POST
01-01	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
01-02	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
01-03	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
01-04	R1-1	STOP (FOLDING)	30 X 30	-	5.18	-	PROPOSED SIGNAL POLE
<b>ITEM TOTAL</b>				<b>4</b>	<b>41.44</b>	<b>6</b>	

3

**TRAFFIC CONTROL**

STATION - STATION	STAGE	DAYS	643.0300		643.0410		643.0420		643.0705		643.0715		643.0900		643.0920	
			DRUMS	BARRICADES	BARRICADES	BARRICADES	WARNING	WARNING	LIGHTS	LIGHTS	SIGNS	SIGNS	# OF SIGNS	# OF CYCLES		
STH 13 NB/SB	STAGE 1A	7	15	105	-	14	-	-	-	7	49	-	-	-	-	-
	STAGE 1B	5	52	260	4	20	20	20	50	18	90	1	-	-	-	1
	STAGE 1C	5	14	70	-	20	-	-	-	10	50	-	-	-	-	-
	STAGE 2A	5	18	90	2	-	10	10	40	7	35	-	-	-	-	-
	STAGE 2B	5	-	-	-	-	-	-	-	2	10	-	-	-	-	-
	STAGE 3	13	83	1079	8	-	104	104	-	22	286	-	-	-	-	-
PERKINS ST	STAGE 1A	7	24	168	2	14	14	14	-	9	63	-	-	-	-	-
	STAGE 1B	5	57	285	2	10	10	10	-	10	50	-	-	-	-	-
	STAGE 1C	5	10	50	2	10	10	-	-	9	45	-	-	-	-	-
	STAGE 2A	5	-	-	2	-	10	-	-	8	40	-	-	-	-	-
	STAGE 2B	5	-	-	1	-	5	10	-	6	30	-	-	-	-	-
	STAGE 3	13	-	-	-	-	-	-	-	4	52	-	-	-	-	-
CLARK ST	STAGE 1B	5	21	105	1	10	5	-	-	8	40	-	-	-	-	-
	STAGE 1C	5	3	15	2	10	10	10	-	7	35	-	-	-	-	-
	STAGE 3	13	-	-	-	-	-	-	-	4	52	-	-	-	-	-
UNDISTRIBUTED				453		22	42	37	20		193	4				
TOTALS				2680		130	240	215	110		1120	5				

**TEMPORARY PAVEMENT MARKING**

LOCATION	STAGE	643.3850		643.3150		643.3250		643.3520		643.3620	
		TEMPORARY MARKING STOP LINE REMOVABLE TAPE	18-INCH LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW) LF	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE) LF	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	TEMPORARY MARKING ARROW EPOXY EACH	TEMPORARY MARKING WORD EPOXY EACH			
STH 13	1C	-	-	-	-	138	-	-	-	-	-
	3	-	-	-	-	541	-	-	8	3	
PERKINS ST	1A	12	-	-	-	122	-	-	-	-	
	1B	12	-	370	122	-	-	-	-	-	
	1C	12	-	244	122	122	-	-	-	-	
	2A	15	-	-	-	30	-	-	-	-	
	2B	12	-	42	-	-	-	-	-	-	
CLARK ST	1B	13	-	190	-	-	-	-	-	-	
	1C	12	-	96	48	-	-	-	-	-	
	2A	24	-	96	-	48	-	-	-	-	
	3	-	-	-	-	224	-	-	-	-	
ITEM TOTALS		112	1,038	292	1,225	8	3				

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**TRAFFIC CONTROL**

LOCATION	643.5000 EACH
PROJECT (3700-50-61)	1
ITEM TOTALS	1

**PAVEMENT MARKING**

LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF		646.3020 MARKING LINE EPOXY 8-INCH LF		646.5020 MARKING ARROW EPOXY EACH		646.5120 MARKING WORD EPOXY EACH		646.6120 MARKING STOP LINE EPOXY 18-INCH LF		646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF		646.9000 MARKING REMOVAL LINE 4-INCH LF		646.9200 MARKING REMOVAL LINE WIDE LF		646.9300 MARKING REMOVAL SPECIAL MARKING EACH		
	<b>STH 13 &amp; PERKINS ST</b>																		
STH 13	-	-	2	1	67	146	139	57	3										
PERKINS ST	425	190	1	-	54	105	130	55	2										
<b>STH 13 &amp; CLARK ST</b>																			
STH 13	-	-	-	-	67	-	308	67	-										
CLARK ST	82	66	1	-	47	112	240	47	4										
ITEM TOTALS		507	256	4	1	235	363	817	226	9									

**SAWING ITEMS**

INTERSECTION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF	REMARKS
<b>STH 13 &amp; PERKINS ST</b>				
	NW QUAD	47	15	CURB RAMP/SIDEWALK
	SE QUAD	54	10	CURB RAMP/SIDEWALK
	STH 13	352	50	
	PERKINS	313	-	
<b>STH 13 &amp; CLARK ST</b>				
	NW QUAD	38	40	CURB RAMP/SIDEWALK
	SW QUAD	42	15	CURB RAMP/SIDEWALK
	STH 13	352	54	
	CLARK	200	-	
ITEM TOTAL		1398	184	

PROJECT NO: 3700-50-61

HWY: STH 13

COUNTY: TAYLOR

MISCELLANEOUS QUANTITIES

SHEET

E



**LOOP DETECTOR SCHEDULE**

LOOP NUMBER	HOME RUN PB	STATION	LOCATION	SIZE (FT)X(FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	*655.0700	655.0800
								CONDUIT LOOP DETECTOR LF	LOOP DETECTOR LEAD IN CABLE LF	LOOP DETECTOR WIRE LF
<b>STH 13 &amp; PERKINS STREET</b>										
11	PB9	510+79.4 'ES'	9.4' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	100	172	300
12	PB9	511+07.7 'ES'	9.0' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	86	172	258
21	PB2	514+29.4 'ES'	11.6' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	64	276	192
41	PB11	9+39 'PS'	0.8' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	132	155	396
42	PB11	9+67 'PS'	0.7' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	96	155	288
51	PB3	512+30.5 'ES'	5.4' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	91	282
52	PB3	512+02.4 'ES'	4.3' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	78	91	234
61	PB8	508+75.8 'ES'	17.5' RT	6X20	4	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	437	264
81	PB5	10+80.2 'PS'	8.4' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	138	148	414
82	PB5	10+52.1 'PS'	7.8' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	100	148	300
83	PB5	10+51.6 'PS'	19.0' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	78	148	234
<b>INTERSECTION TOTAL</b>								<b>1032</b>	<b>1993</b>	<b>3162</b>
<b>STH 13 &amp; CLARK STREET</b>										
11	PB11	528+00.6 'ES'	10.1' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	102	79	306
12	PB11	528+28.6 'ES'	10.1' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	79	246
21	PB4	531+58.4 'ES'	11.9' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	367	198
31	PB7 (EXT 2)	EXISTING		6X20	3	ASPHALT	EXISTING	10	209	282
41	PB1	21+34.6 'CS'	14.0' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	100	35	300
42	PB1	21+62.6 'CS'	13.9' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	94	35	282
51	PB5	529+55.3 'ES'	4.9' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	102	182	306
52	PB5	529+27.3 'ES'	4.7' LT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	88	182	264
61	PB10	526+01.4 'ES'	26.3' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	354	186
71	PB1	21+34.8 'CS'	1.9' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	124	35	372
72	PB1	21+62.8 'CS'	1.8' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	120	35	360
81	PB7 (EXT 2)	EXISTING		6X20	3	ASPHALT	EXISTING	10	209	222
<b>INTERSECTION TOTAL</b>								<b>960</b>	<b>1801</b>	<b>3324</b>
<b>* ITEMS SHOWN ELSEWHERE IN THE PLANS</b>								<b>1992</b>	<b>3794</b>	<b>6486</b>

**CONCRETE BASES**

BASE NUMBER	STATION	LOCATION	654.0101	654.0102	654.0110	654.0120	654.0217
			CONCRETE BASES TYPE 1 EACH	CONCRETE BASES TYPE 2 EACH	CONCRETE BASES TYPE 10 EACH	CONCRETE BASES TYPE 10-SPECIAL EACH	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
<b>STH 13 &amp; PERKINS STREET</b>							
SB1	511+96.1 'ES'	37.4' LT	1	--	--	--	--
SB2	512+02.2 'ES'	28.9' LT	1	--	--	--	--
SB3	512+02.8 'ES'	43.3' RT	--	--	--	1	--
SB4	511+79.8 'ES'	52.9' RT	1	--	--	--	--
SB5	511+16.7 'ES'	57.9' RT	--	1	--	--	--
SB6	511+03.3 'ES'	44.4' RT	1	--	--	--	--
SB7	511+03.5 'ES'	38.8' LT	--	--	--	1	--
SB8	511+35.9 'ES'	33.6' LT	1	--	--	--	--
SB9	511+90.9 'ES'	48.7' LT	--	1	--	--	--
CB1	511+93.8 'ES'	42.9' LT	--	--	--	--	1
<b>INTERSECTION TOTAL</b>			<b>5</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>
<b>STH 13 &amp; CLARK STREET</b>							
SB1	528+50.3 'ES'	43.0' LT	1	--	--	--	--
SB2	529+02.7 'ES'	45.6' LT	--	--	1	--	--
SB3	529+08.8 'ES'	34.9' LT	1	--	--	--	--
SB4	529+19.4 'ES'	29.4' LT	1	--	--	--	--
SB5	529+14.2 'ES'	52.0' RT	--	--	--	1	--
SB6	529+02.3 'ES'	67.7' RT	1	--	--	--	--
SB7	528+46.8 'ES'	55.6' RT	--	--	1	--	--
SB8	528+26.4 'ES'	44.9' RT	1	--	--	--	--
SB9	528+30.1 'ES'	36.4' LT	--	--	--	1	--
SB10	528+40.8 'ES'	38.4' LT	1	--	--	--	--
CB1	528+37.7 'ES'	41.6' LT	--	--	--	--	1
<b>INTERSECTION TOTAL</b>			<b>6</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>
<b>ITEM TOTALS</b>			<b>11</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>2</b>

**LIGHTING WIRE**

FROM	TO	655.0305	655.0610
		CABLE TYPE UF 2 - 12 AWG GROUNDED	ELECTRICAL WIRE LIGHTING 12 AWG
<b>STH 13 &amp; PERKINS STREET</b>			
CB1	SB3	158	--
SB3	LUMIN	--	123
CB1	SB5	292	--
SB6	LUMIN	--	144
CB1	SB7	169	--
SB7	LUMIN	--	144
<b>INTERSECTION TOTAL</b>		<b>619</b>	<b>411</b>
<b>STH 13 &amp; CLARK STREET</b>			
CB1	SB2	195	--
LB1	LUMIN	--	123
CB1	SB5	268	--
SB1	LUMIN	--	144
CB1	SB7	319	--
LB2	LUMIN	--	144
CB1	SB9	295	--
SB4	LUMIN	--	144
<b>INTERSECTION TOTAL</b>		<b>1077</b>	<b>555</b>
<b>ITEM TOTALS</b>		<b>1696</b>	<b>966</b>

**TRAFFIC SIGNAL EVP DETECTOR CABLE**

FROM	TO	655.0900
		TRAFFIC SIGNAL EVP DETECTOR CABLE LF
<b>STH 13 &amp; PERKINS STREET</b>		
CB1	SB7 (HEAD A)	228
CB1	SB3 (HEAD B)	234
CB1	SB5 (HEAD C)	103
CB1	SB9 (HEAD D)	332
<b>INTERSECTION TOTAL</b>		<b>897</b>
<b>STH 13 &amp; CLARK STREET</b>		
CB1	SB9 (HEAD A)	364
CB1	SB5 (HEAD B)	108
CB1	SB7 (HEAD C)	169
CB1	SB2 (HEAD D)	286
<b>INTERSECTION TOTAL</b>		<b>927</b>
<b>ITEM TOTALS</b>		<b>1824</b>

**ELECTRIC WIRE TRAFFIC SIGNALS**

FROM	TO	655.0515
		ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
<b>STH 13 &amp; PERKINS STREET</b>		
CB1	SB1	69
SB1	SB2	52
SB2	SB3	138
SB3	SB4	78
SB4	SB5	124
SB5	SB6	71
SB6	SB7	150
SB7	SB8	79
SB8	SB9	203
SB9	CB1	50
<b>INTERSECTION TOTAL</b>		<b>1014</b>
<b>STH 13 &amp; CLARK STREET</b>		
CB1	SB1	45
SB1	SB2	116
SB2	SB3	118
SB3	SB4	72
SB4	SB5	163
SB5	SB6	94
SB6	SB7	110
SB7	SB8	87
SB8	SB9	174
SB9	SB10	35
SB10	CB1	36
<b>INTERSECTION TOTAL</b>		<b>1050</b>
<b>ITEM TOTALS</b>		<b>2064</b>

**ELECTRICAL SERVICE METER BREAKER PEDESTAL**

LOCATION	656.0201.01	656.0201.02
	ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH	ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
STH 13 & PERKINS STREET	1	--
STH 13 & CLARK STREET	--	1
<b>ITEM TOTALS</b>	<b>1</b>	<b>1</b>

**TRAFFIC SIGNAL CABLE NO. 14 (ABOVE GROUND)**

FROM	TO	655.0230	*655.0240
		TRAFFIC SIGNAL 5 - 14 AWG	TRAFFIC SIGNAL 7 - 14 AWG
STH 13 & PERKINS STREET			
SB1	HEAD 21	15	--
SB2	HEAD 4	--	22
SB2	HEAD 6	21	--
SB3	HEAD 2	48	--
SB3	HEAD 3	37	--
SB3	HEAD 5	--	65
SB4	HEAD 11	19	--
SB4	HEAD 15	19	--
SB5	HEAD 16	39	--
SB5	HEAD 41	15	--
SB6	HEAD 1	21	--
SB6	HEAD 9	--	22
SB7	HEAD 7	54	--
SB7	HEAD 8	43	--
SB7	HEAD 10	--	64
SB8	HEAD 12	19	--
SB8	HEAD 14	19	--
SB8	HEAD 21	15	--
SB8	HEAD 42	15	--
SB9	HEAD 13	59	--
INTERSECTION TOTAL		384	173

FROM	TO	655.0230	*655.0240
		TRAFFIC SIGNAL 5 - 14 AWG	TRAFFIC SIGNAL 7 - 14 AWG
STH 13 & CLARK STREET			
SB1	HEAD 14	--	22
SB1	HEAD 16	21	--
SB2	HEAD 12	38	--
SB2	HEAD 13	21	--
SB2	HEAD 15	--	47
SB3	HEAD 22	15	--
SB4	HEAD 4	--	22
SB4	HEAD 6	21	--
SB5	HEAD 2	55	--
SB5	HEAD 3	44	--
SB5	HEAD 5	--	67
SB6	HEAD 11	21	--
SB6	HEAD 19	--	22
SB7	HEAD 17	45	--
SB7	HEAD 18	21	--
SB7	HEAD 20	--	53
SB8	HEAD 1	21	--
SB8	HEAD 9	--	22
SB9	HEAD 7	51	--
SB9	HEAD 8	40	--
SB9	HEAD 10	--	62
SB10	HEAD 21	15	--
INTERSECTION TOTAL		429	317

**ITEM TOTALS 813 490**

\* ITEMS SHOWN ELSEWHERE IN THE PLANS

**TRAFFIC SIGNAL CABLE NO. 14 (BELOW GROUND)**

FROM	TO	*655.0240	655.0260	655.0270	*655.0700
		TRAFFIC SIGNAL 7 - 14 AWG	TRAFFIC SIGNAL 12 - 14 AWG	TRAFFIC SIGNAL 15 - 14 AWG	LOOP DETECTOR LEAD IN CABLE
STH 13 & PERKINS STREET					
CB1	SB1	69	--	--	69
CB1	SB2	--	58	--	--
CB1	SB3	--	158	--	--
CB1	SB4	--	202	--	--
CB1	SB5	--	292	--	--
CB1	SB6	--	283	--	283
CB1	SB7	--	169	--	--
CB1	SB8	--	--	212	424
CB1	SB9	53	--	--	--
INTERSECTION TOTAL		122	1162	212	776
STH 13 & CLARK STREET					
CB1	SB1	--	45	--	--
CB1	SB2	--	119	--	--
CB1	SB3	203	--	--	203
CB1	SB4	--	189	--	--
CB1	SB5	--	294	--	--
CB1	SB6	--	297	--	--
CB1	SB7	--	231	--	--
CB1	SB8	--	178	--	--
CB1	SB9	--	38	--	--
CB1	SB10	39	--	--	39
INTERSECTION TOTAL		242	1391	0	242
<b>ITEM TOTALS</b>		<b>364</b>	<b>2553</b>	<b>212</b>	<b>1018</b>

\* ITEMS SHOWN ELSEWHERE IN THE PLANS

CAST BASES, POLES, MONOTUBE ARMS, LUMINAIRES, AND PUSH BUTTONS

SIGNAL BASE NUMBER	657.0255 TRANSFORMER						657.0425	657.0430	657.0525	657.0530	657.0541	657.0546	657.0595	657.0714		657.0808	657.0815	658.0500	659.1115
	657.0100	BASES BREAKAWAY	657.0305	657.0310	657.0350	657.0352	TRAFFIC SIGNAL STANDARDS	TRAFFIC SIGNAL STANDARDS						LUMINAIRE ARMS	LUMINAIRE ARMS	LUMINAIRE ARMS	LUMINAIRE ARMS		LUMINAIRE ARMS
	PEDESTAL BASES EACH	11 1/2 INCH BOLT CIRCLE EACH	POLES TYPE 2 EACH	POLES TYPE 3 EACH	POLES TYPE 10 EACH	POLES TYPE 10-SPECIAL EACH	ALUMINUM 15 - FT EACH	ALUMINUM 10 - FT EACH	MONOTUBE ARMS 25-FT EACH	MONOTUBE ARMS 30-FT EACH	MONOTUBE ARMS 40-FT-SPECIAL EACH	MONOTUBE ARMS 45-FT-SPECIAL EACH	TROMBONE ARMS 25-FT EACH	4-INCH CLAMP 15-FT EACH	STEEL 8-FT EACH	STEEL 15-FT EACH			
<b>STH 13 &amp; PERKINS STREET</b>																			
SB1	1	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1	--
SB2	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB3	--	--	--	--	--	1	--	--	--	--	1	--	--	--	1	--	--	--	1
SB4	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB5	--	1	--	1	--	--	--	1	--	--	--	--	1	1	--	--	--	1	1
SB6	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB7	--	--	--	--	--	1	--	--	--	1	--	--	--	--	--	1	--	--	1
SB8	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	2	--
SB9	--	1	1	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--
<b>INTERSECTION TOTAL</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>3</b>	
<b>STH 13 &amp; CLARK STREET</b>																			
SB1	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB2	--	--	--	--	1	--	--	--	1	--	--	--	--	--	1	--	--	--	1
SB3	1	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1	--
SB4	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB5	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	1	--	--	1
SB6	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB7	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	1	--	--	1
SB8	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
SB9	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	1	--	--	1
SB10	1	--	--	--	--	--	--	1	--	--	1	--	--	--	--	--	--	1	--
<b>INTERSECTION TOTAL</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>4</b>	
<b>ITEM TOTALS</b>	<b>11</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>7</b>	

**TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES**

SIGNAL HEAD NUMBER	SIGNAL BASE NUMBER	658.0173			658.0416	
		TRAFFIC SIGNAL FACE 3S-12 INCH EACH	TRAFFIC SIGNAL FACE 4S-12 INCH EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH	TRAFFIC SIGNAL FACE 3S-12 INCH EACH	TRAFFIC SIGNAL FACE 4S-12 INCH EACH
STH 13 & PERKINS STREET						
1**	6	1	--	--		
2**	3	1	--	--		
3**	3	1	--	--		
4***	2	--	1	--		
5**	3	--	1	--		
6**	2	1	--	--		
7**	7	1	--	--		
8**	7	1	--	--		
9***	6	--	1	--		
10**	7	--	1	--		
11	4	1	--	--		
12	8	1	--	--		
13	9	1	--	--		
14	8	1	--	--		
15	4	1	--	--		
16	5	1	--	--		
21	8	--	--	1		
22	1	--	--	1		
41	5	--	--	1		
42	8	--	--	1		
INTERSECTION TOTAL		12	4	4		

\*\*RETROREFLECTIVE BACKPLATE  
 \*\*\*RETROREFLECTIVE BACKPLATE AND TUNNEL VISORS

SIGNAL HEAD NUMBER	SIGNAL BASE NUMBER	658.0173			658.0416	
		TRAFFIC SIGNAL FACE 3S-12 INCH EACH	TRAFFIC SIGNAL FACE 4S-12 INCH EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH	TRAFFIC SIGNAL FACE 3S-12 INCH EACH	TRAFFIC SIGNAL FACE 4S-12 INCH EACH
STH 13 & CLARK STREET						
1**	8	1	--	--		
2**	5	1	--	--		
3**	5	1	--	--		
4***	4	--	1	--		
5**	5	--	1	--		
6**	4	1	--	--		
7**	9	1	--	--		
8**	9	1	--	--		
9***	8	--	1	--		
10**	9	--	1	--		
11	6	1	--	--		
12	2	1	--	--		
13	2	1	--	--		
14	1	--	1	--		
15	2	--	1	--		
16	1	1	--	--		
17	7	1	--	--		
18	7	1	--	--		
19	6	--	1	--		
20	7	--	1	--		
21	10	--	--	1		
22	3	--	--	1		
INTERSECTION TOTAL		12	8	2		
<b>ITEM TOTALS</b>		<b>24</b>	<b>12</b>	<b>6</b>		

**SIGNAL MOUNTING HARDWARE**

LOCATION	658.5070.01		658.5070.02	
	SIGNAL MOUNTING HARDWARE EACH			
STH 13 & PERKINS STREET	1	--		
STH 13 & CLARK STREET	--		1	
<b>ITEM TOTALS</b>	<b>1</b>		<b>1</b>	

**TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS**

LOCATION	661.0201.01		661.0201.02		661.0300 GENERATORS DAY
	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH				
STH 13 & PERKINS STREET	1	--			2
STH 13 & CLARK STREET	--		1		2
<b>ITEM TOTALS</b>	<b>1</b>		<b>1</b>		<b>4</b>

**INSTALL FIBER OPTIC CABLE**

		678.0006****	
		INSTALL FIBER OPTIC CABLE OUTDOOR PLANT	
		6-CT	
FROM	TO	LF	
INTERCONNECT			
WISDOT VAULT	CB1 (\$60-0330)	285	
WISDOT VAULT	CB1 (\$60-0463)	1850	
<b>ITEM TOTALS</b>		<b>2135</b>	

\*\*\*\*REPULL EXISTING CABLE

3

**REMOVE, DISASSEMBLE, AND SALVAGE TRAFFIC SIGNALS**

LOCATION	SPV.0060.01 REMOVE, DISASSEMBLE, AND SALVAGETRAFFIC SIGNALS EACH	SPV.0060.02 REMOVE, DISASSEMBLE, AND SALVAGETRAFFIC SIGNALS EACH
STH 13 & PERKINS STREET	1	--
STH 13 & CLARK STREET	--	1
<b>ITEM TOTALS</b>	<b>1</b>	<b>1</b>

**INSTALL STATE FURNISHED EVP DETECTOR HEADS**

LOCATION	SPV.0060.03 INSTALL STATE FURNISHED EVP DETECTOR HEADS EACH	SPV.0060.04 INSTALL STATE FURNISHED EVP DETECTOR HEADS EACH
STH 13 & PERKINS STREET	1	--
STH 13 & CLARK STREET	--	1
<b>ITEM TOTALS</b>	<b>1</b>	<b>1</b>

3

**TEMPORARY VEHICLE DETECTION**

LOCATION	SPV.0060.05 TEMPORARY VEHICLE DETECTION EACH	SPV.0060.06 TEMPORARY VEHICLE DETECTION EACH
STH 13 & PERKINS STREET	1	--
STH 13 & CLARK STREET	--	1
<b>ITEM TOTALS</b>	<b>1</b>	<b>1</b>

**INSTALL STATE FURNISHED CAT-5E CABLE**

FROM	TO	SPV.0090.01 INSTALL STATE FURNISHED CAT-5E CABLE LF
STH 13 & PERKINS STREET		
CB1	SB3	248
CB1	SB7	254
INTERSECTION TOTAL		502
STH 13 & CLARK STREET		
CB1	SB5	384
CB1	SB9	128
INTERSECTION TOTAL		512
<b>ITEM TOTALS</b>		<b>1014</b>

**INSTALL INTO EXISTING ITEM**

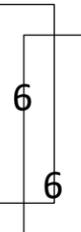
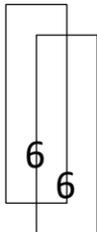
PULL BOX NUMBER	SPV.0060.07 INSTALL CONDUIT INTO EXISTING WISDOT VAULT EACH
INTERCONNECT WISDOT VAULT	1
<b>ITEM TOTAL</b>	<b>1</b>
<b>ITEM TOTALS</b>	<b>1</b>

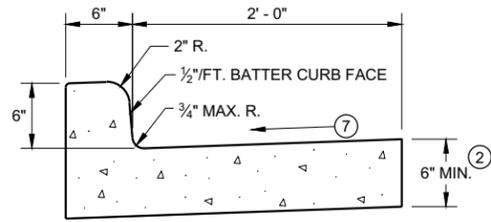
**EXCAVATING, HAULING AND DISPOSING OF  
CONTAMINATED SOIL**

LOCATION	SPV.0195.01 TON
PROJECT	50
<b>TOTALS</b>	<b>50</b>

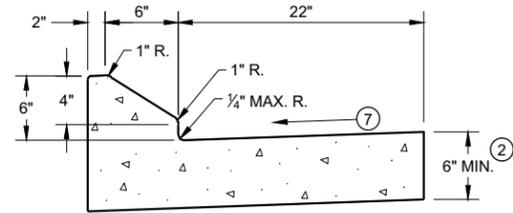
## Standard Detail Drawing List

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
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
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
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B16-01	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
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
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09G	TYPE 10 SPECIAL POLE 40' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09K	GENERAL NOTES, HARDWARE DETAILS FOR TYPE 9/10, 9/10 SPECIAL, 12 & 13 POLES W/MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-05C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-05A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

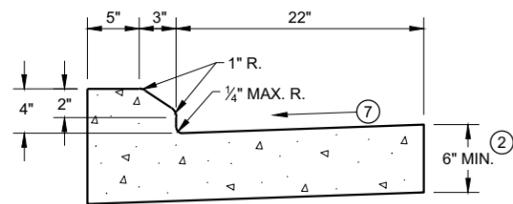




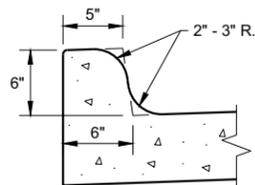
TYPES A<sup>1</sup> & D



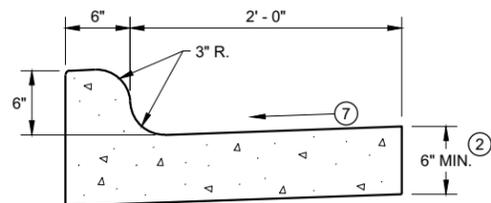
6" SLOPED CURB TYPES G<sup>1</sup> & J



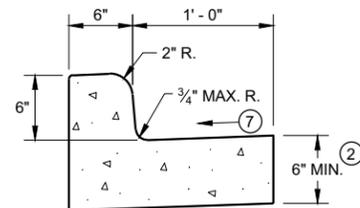
4" SLOPED CURB TYPES G<sup>1</sup> & J



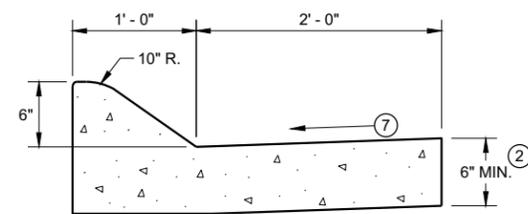
TYPES K<sup>1</sup> & L  
(OPTIONAL CURB SHAPE)



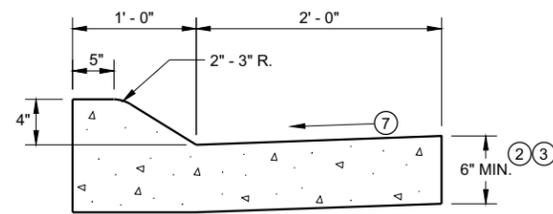
TYPES K<sup>1</sup> & L  
CONCRETE CURB AND GUTTER 30"



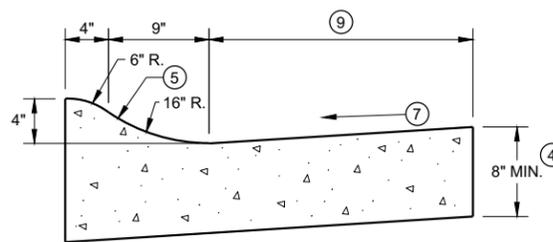
TYPES A<sup>1</sup> & D  
CONCRETE CURB AND GUTTER 18"



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

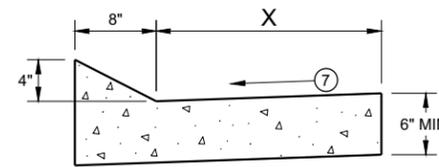


4" SLOPED CURB TYPES A<sup>1</sup> & D  
CONCRETE CURB AND GUTTER 36"



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

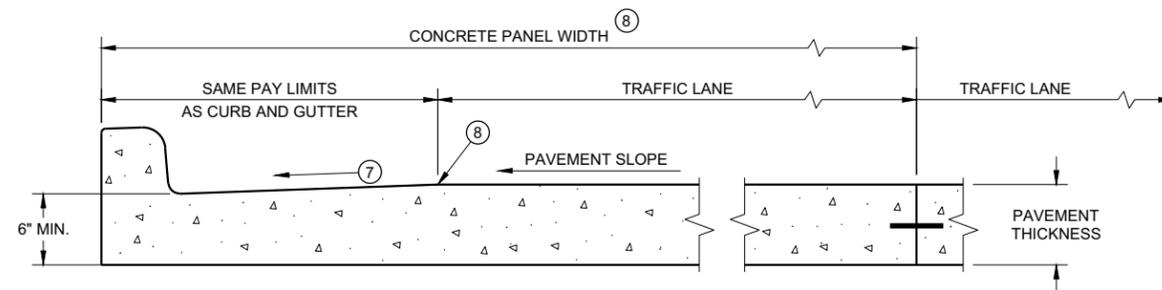
TBT & TBTT	X
30"	22"
36"	28"



TYPES TBT & TBTT<sup>1</sup>  
CONCRETE CURB AND GUTTER

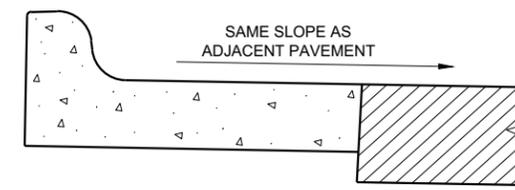
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

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

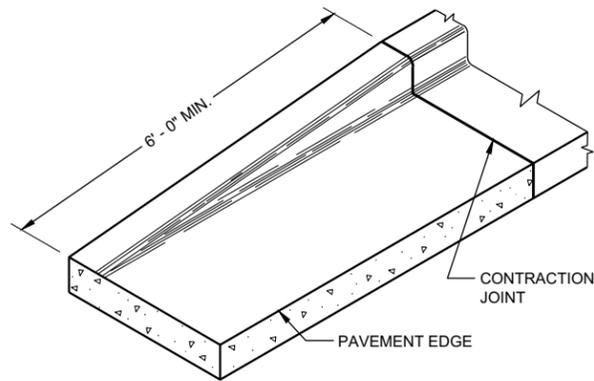
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

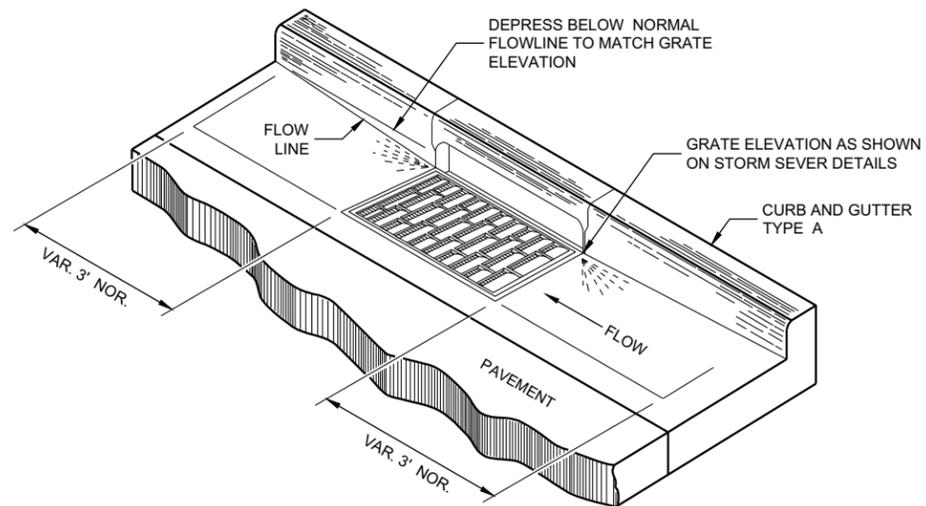
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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)

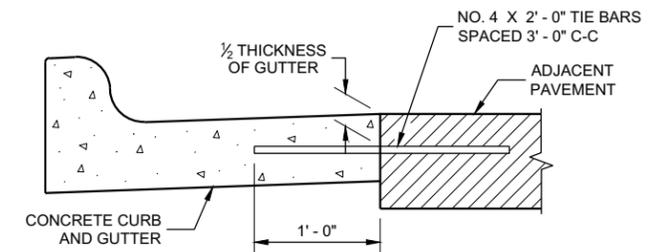
**GENERAL NOTES**

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

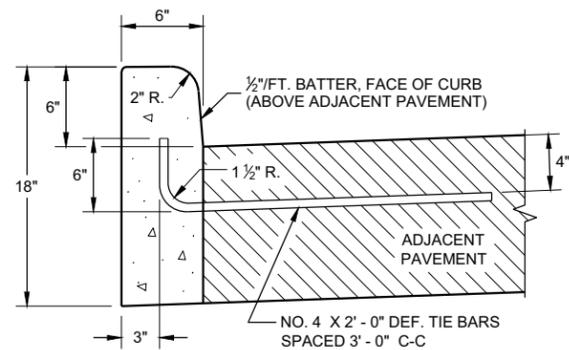
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

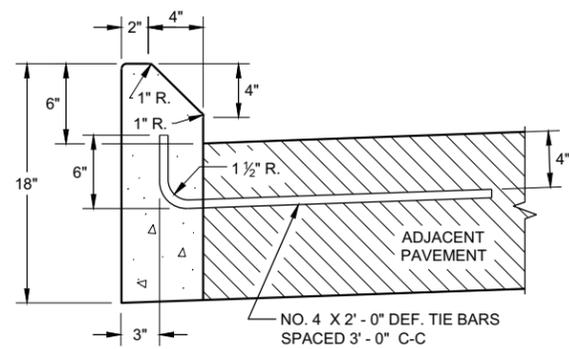
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL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



**TYPICAL TIE BAR LOCATION** ①

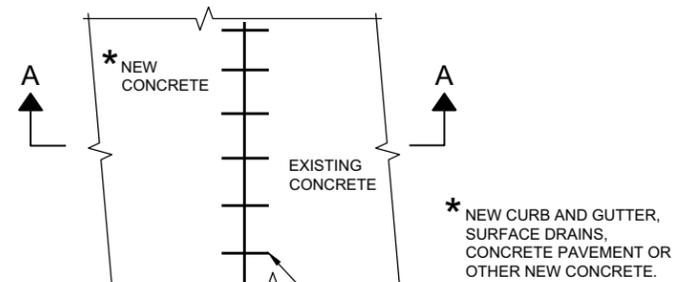


**TYPES A ① & D**

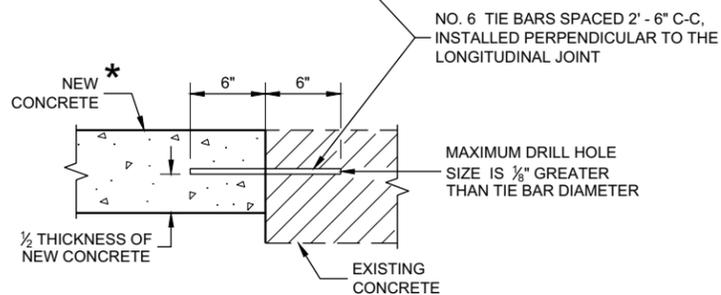


**TYPES G ① & J**

**CONCRETE CURB**

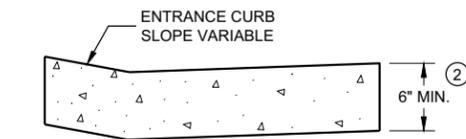


**PLAN VIEW**



**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**



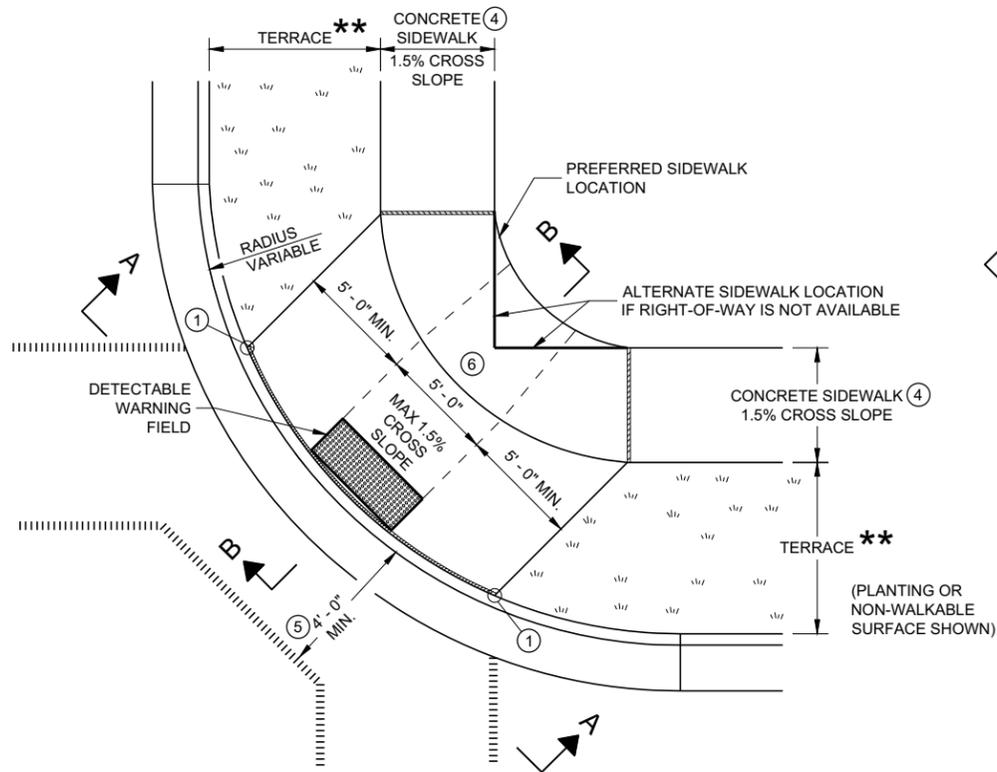
**DRIVEWAY ENTRANCE CURB** ⑨  
(WHEN DIRECTED BY THE ENGINEER)

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

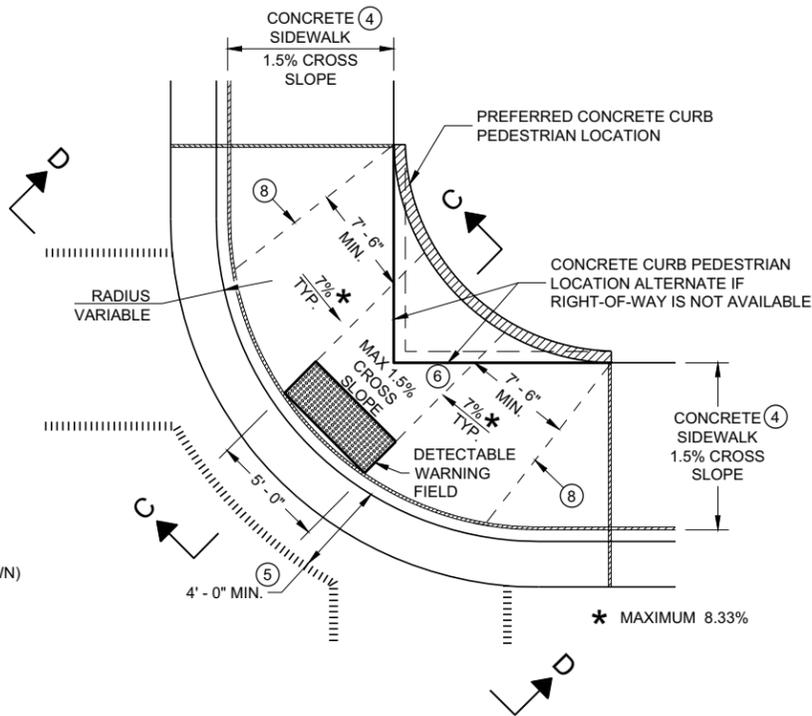
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

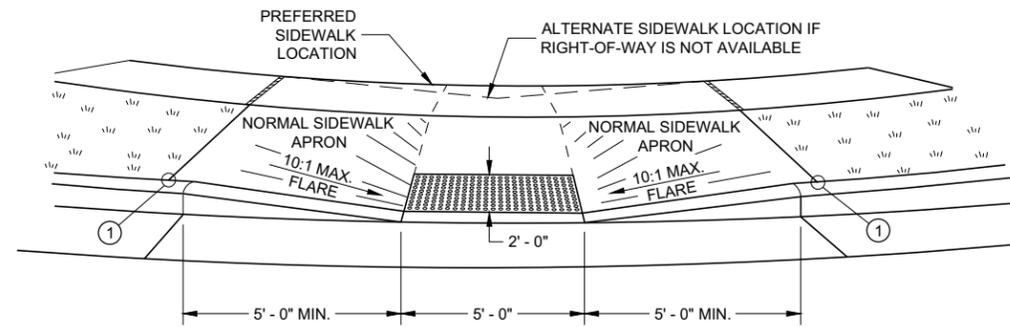
FHWA



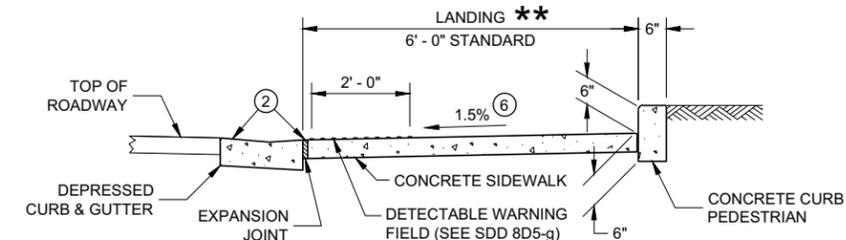
**PLAN VIEW  
CURB RAMP TYPE 1  
(CENTER OF CORNER RADIUS)**



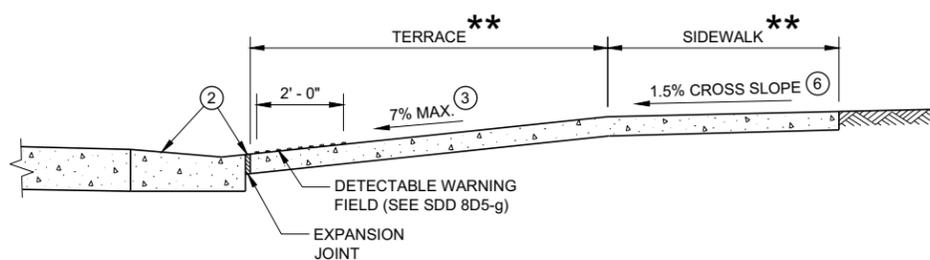
**PLAN VIEW  
CURB RAMP TYPE 1 - A  
(NO TERRACE)**



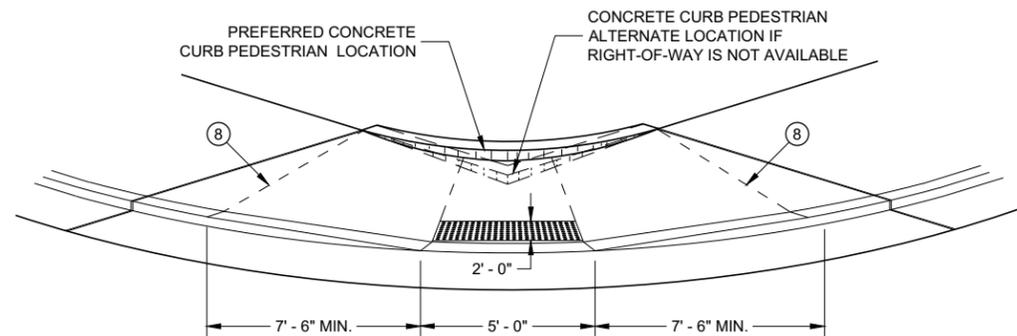
**VIEW A - A FOR TYPE 1**



**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.

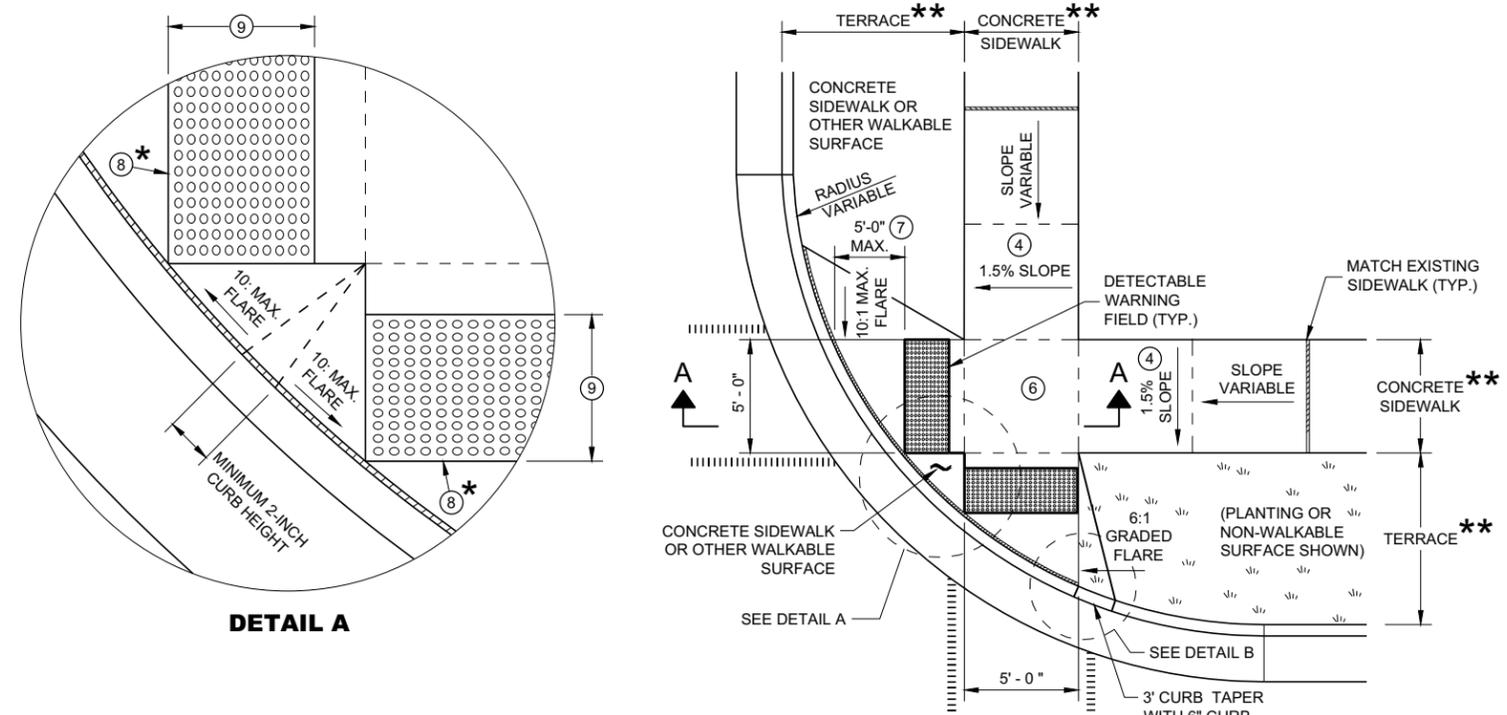
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. 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**

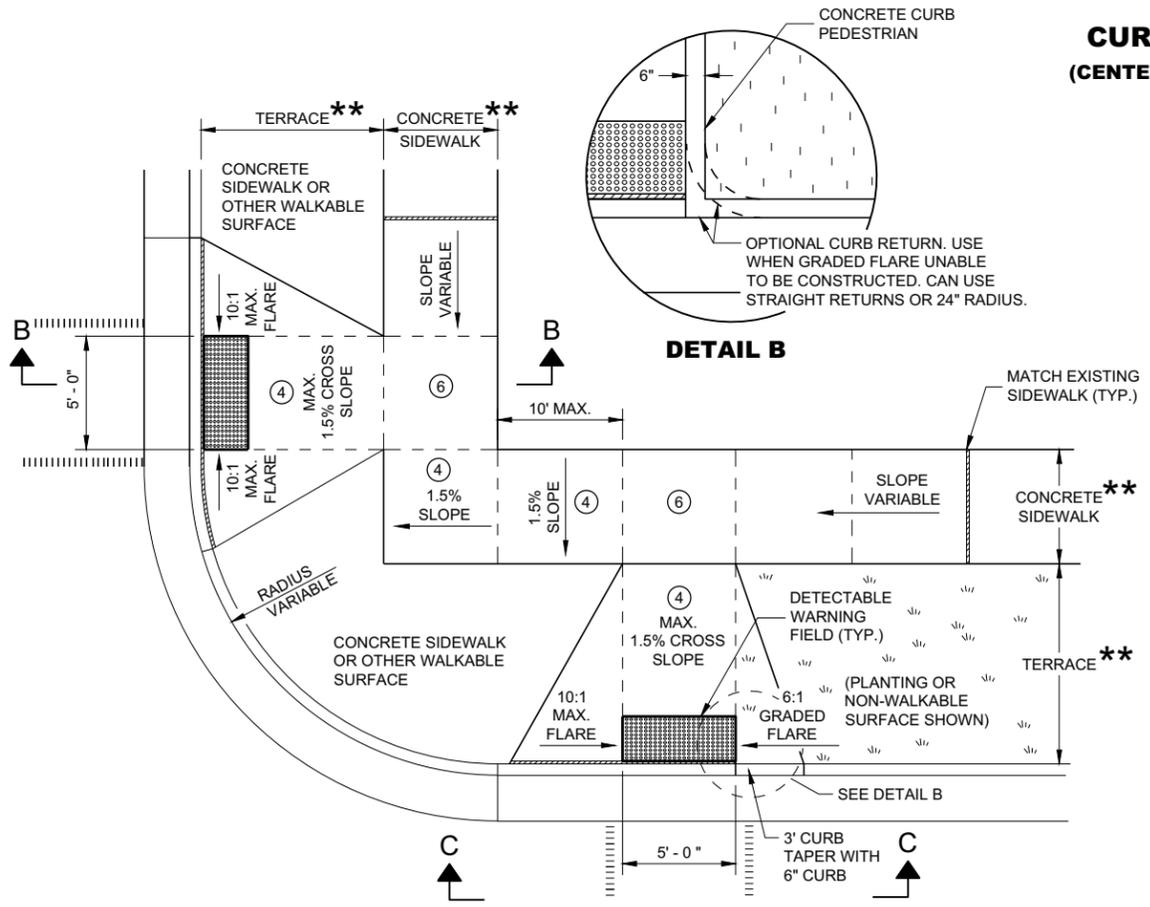
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

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

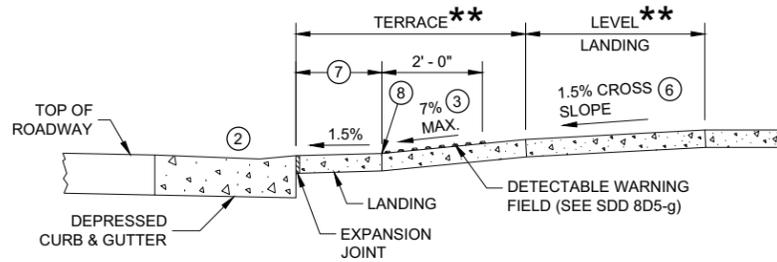
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



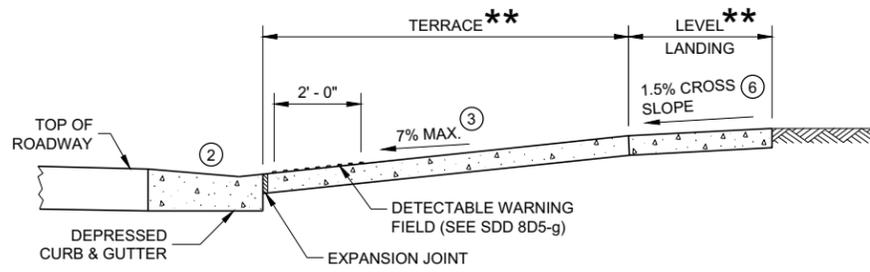
**PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)**



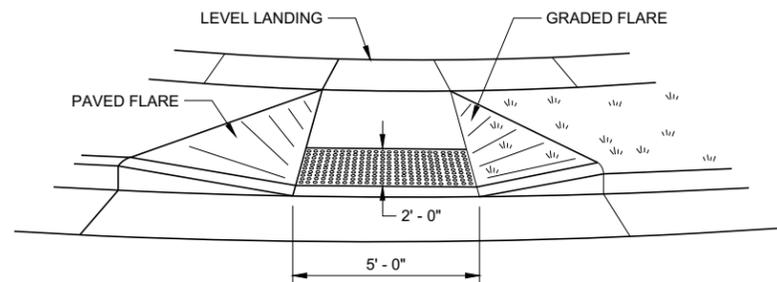
**PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)**



**SECTION A - A FOR TYPE 2**



**SECTION B - B FOR TYPE 3**



**VIEW C - C FOR TYPE 3**

**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.

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

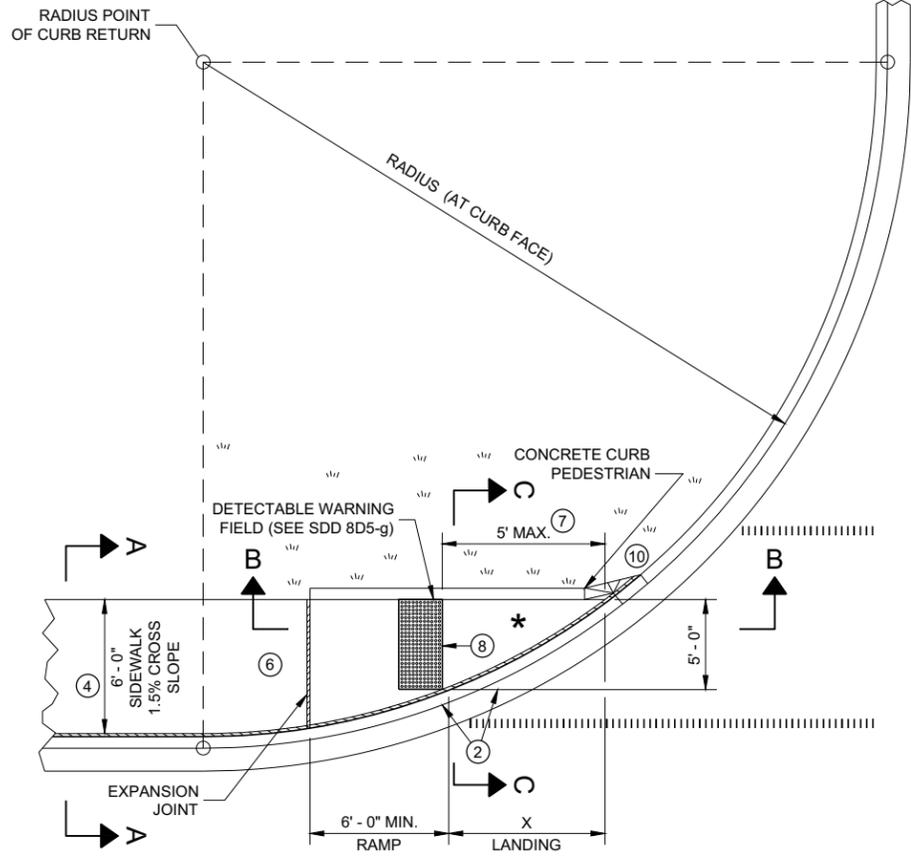
\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

**LEGEND**

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

**CURB RAMPS  
TYPE 2 AND 3**

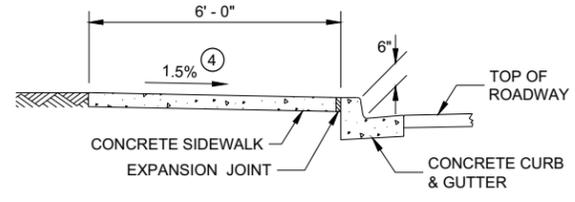
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW  
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



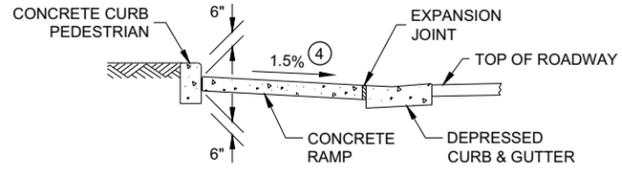
**SECTION A - A FOR TYPE 4A**

**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 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.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

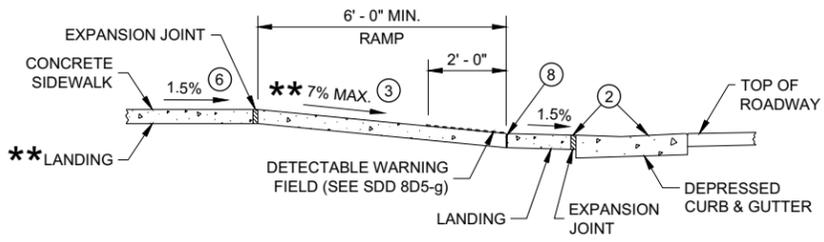
**LEGEND**

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



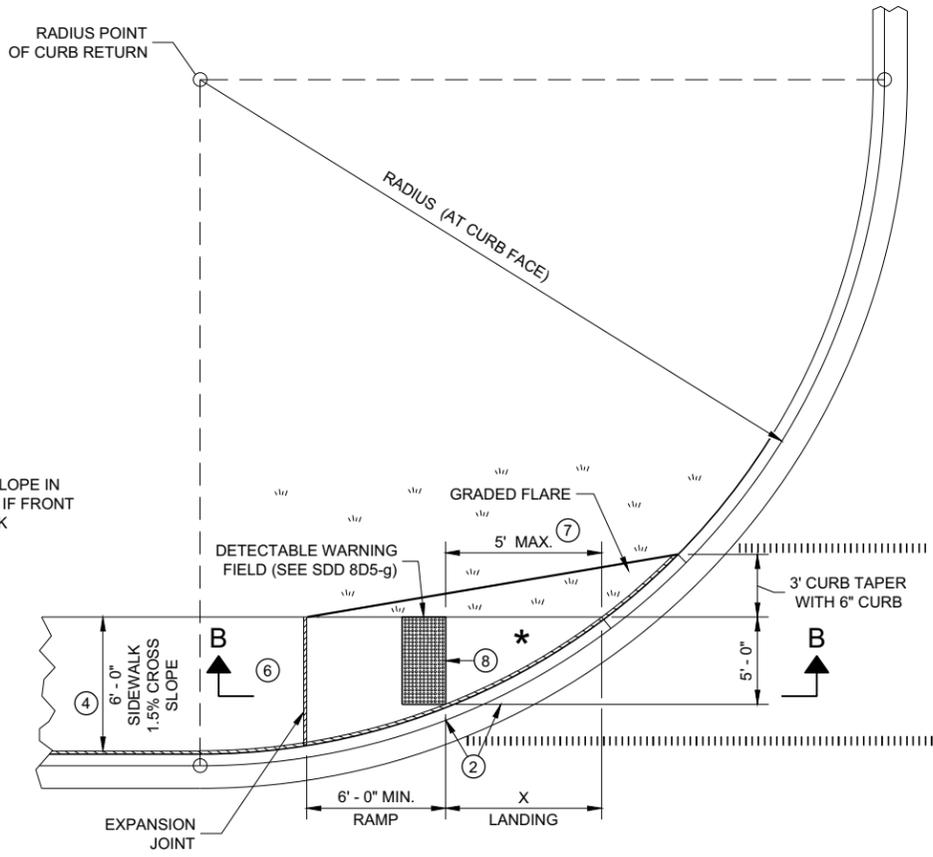
**SECTION C - C FOR TYPE 4A**

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

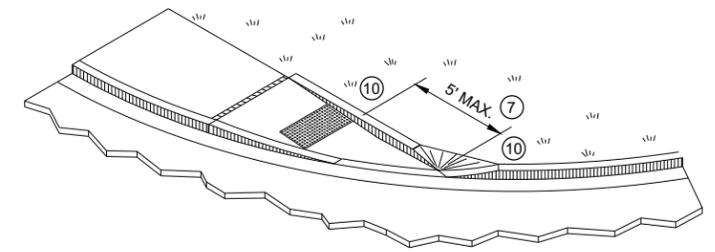


**SECTION B - B FOR  
TYPE 4A AND TYPE 4A1**

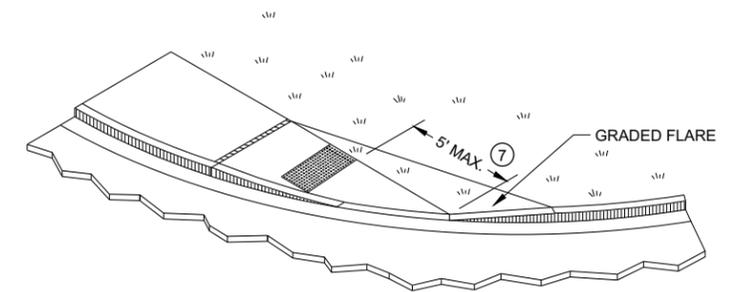
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW  
CURB RAMP TYPE 4A1**



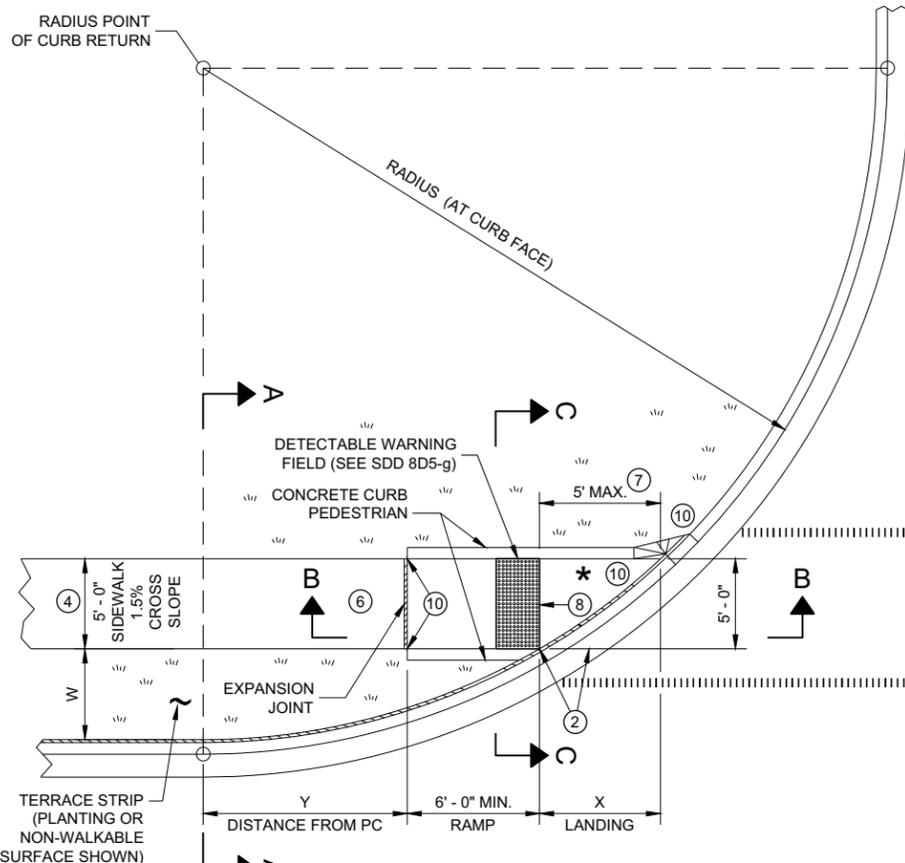
**ISOMETRIC VIEW FOR TYPE 4A**



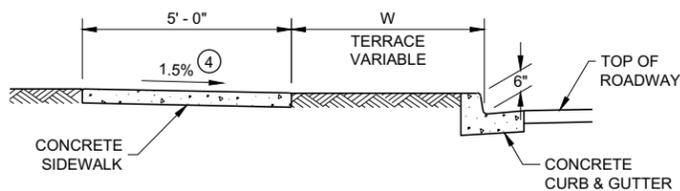
**ISOMETRIC VIEW FOR TYPE 4A1**

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

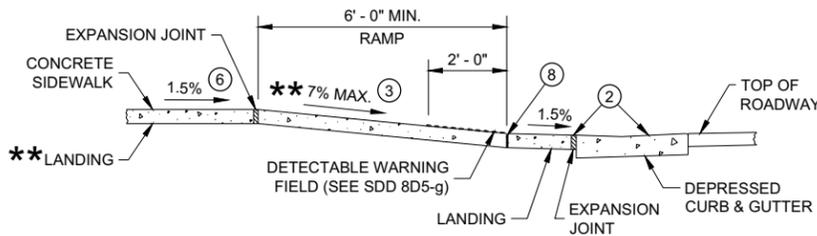
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**PLAN VIEW  
CURB RAMP TYPE 4B**



**SECTION A - A FOR TYPE 4B**



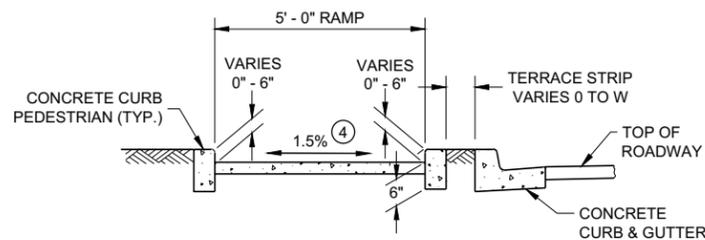
**SECTION B - B FOR  
TYPE 4B AND TYPE 4B1**

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

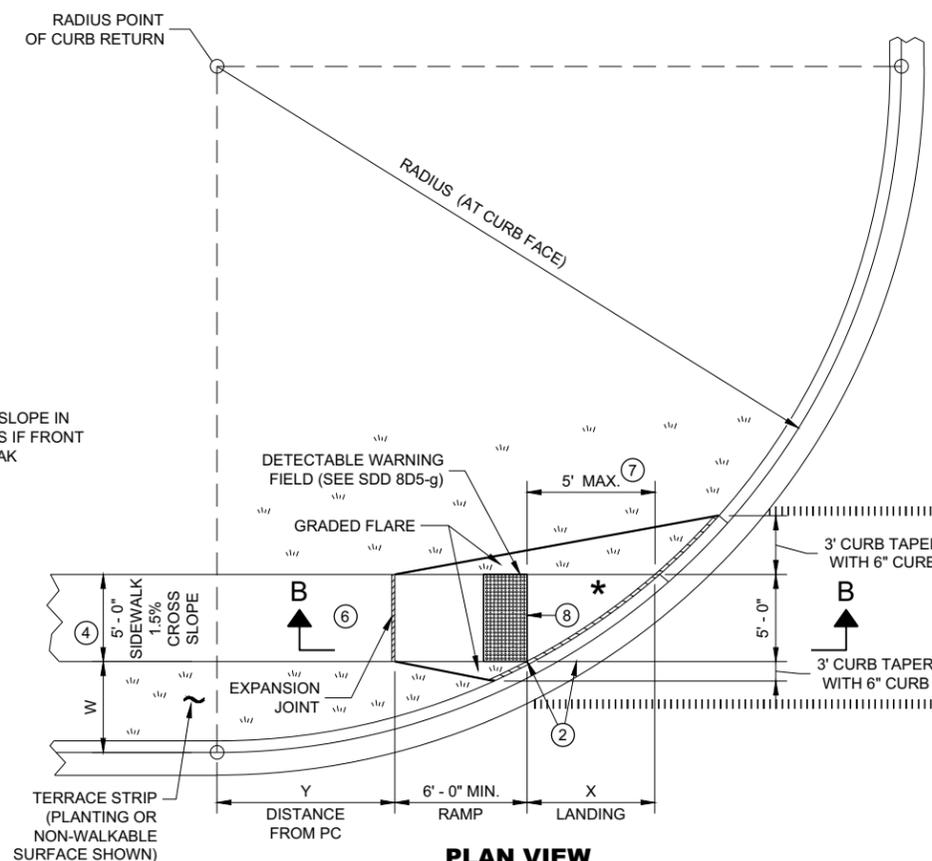
\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

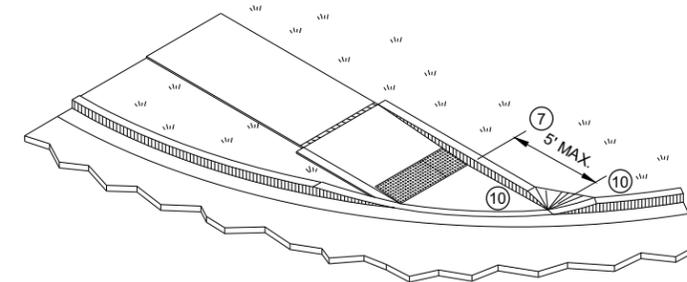
INTERMEDIATE RADII CAN BE INTERPOLATED  
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



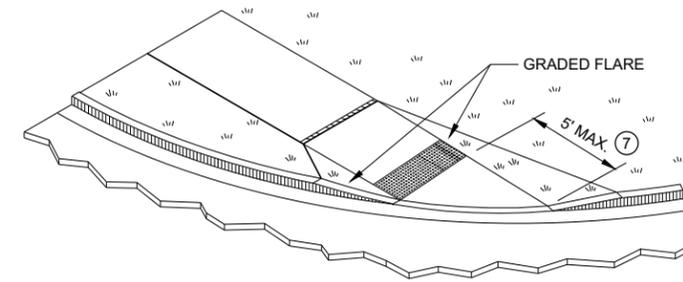
**SECTION C - C FOR TYPE 4B**



**PLAN VIEW  
CURB RAMP TYPE 4B1**



**ISOMETRIC VIEW FOR TYPE 4B**



**ISOMETRIC VIEW FOR TYPE 4B1**

**LEGEND**

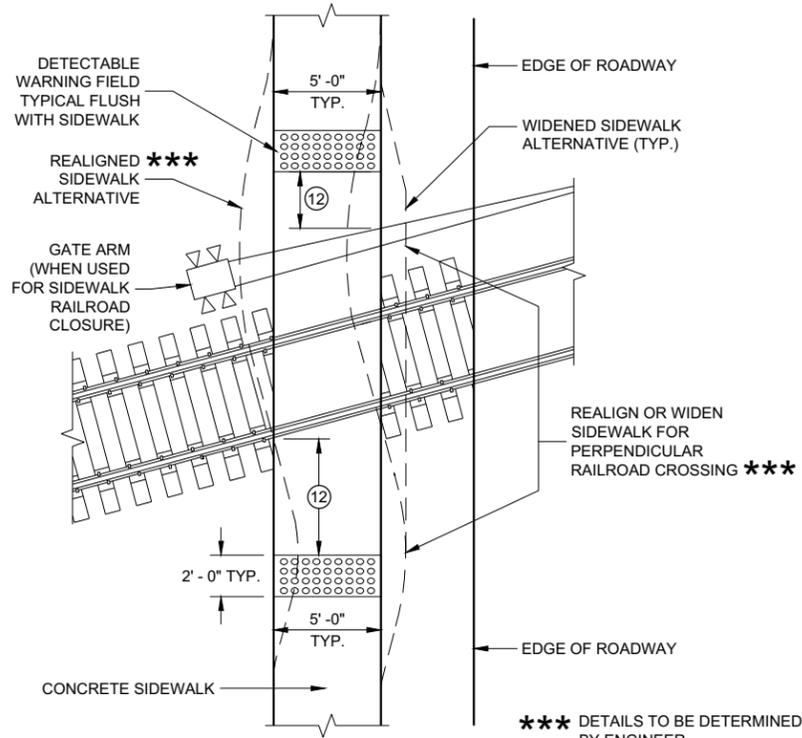
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

**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 1/2 - 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.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

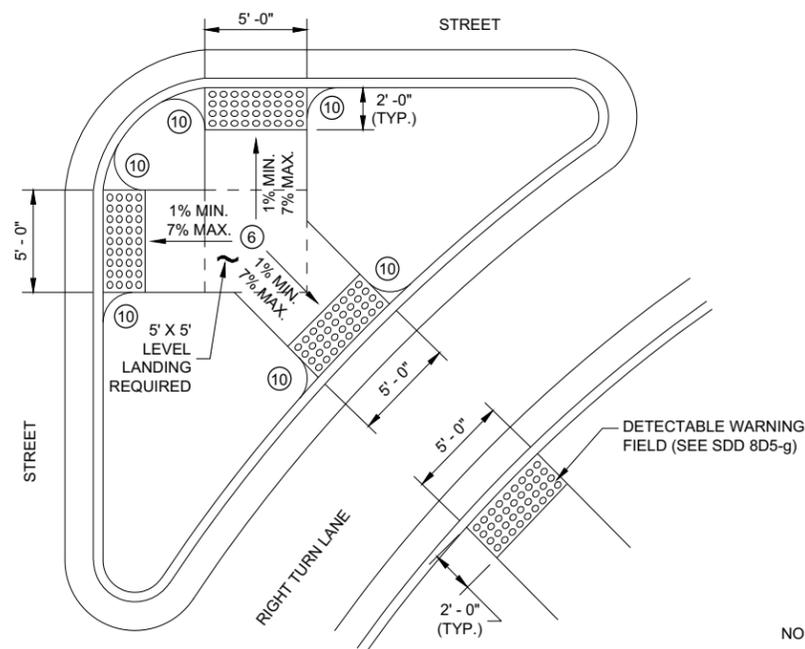
**CURB RAMPS  
TYPE 4B AND 4B1**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 8**

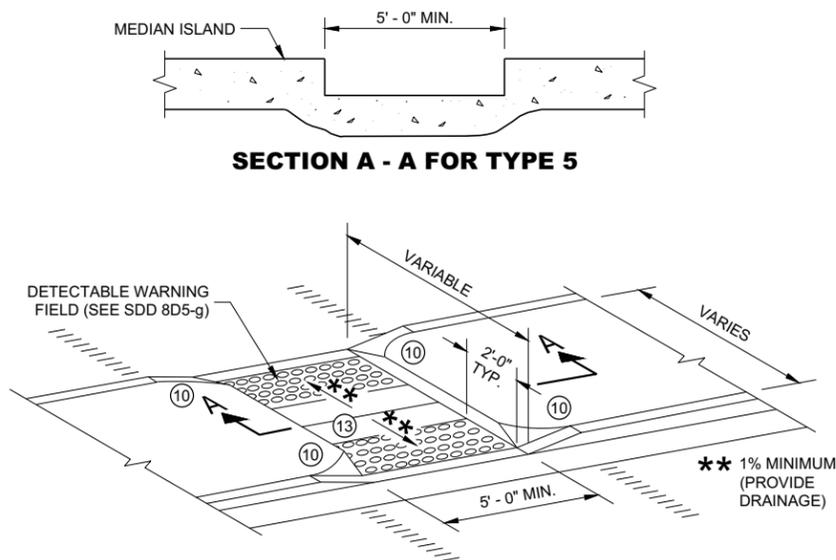
**DETECTABLE WARNINGS AT RAILROAD CROSSING**



**CURB RAMP TYPE 6**

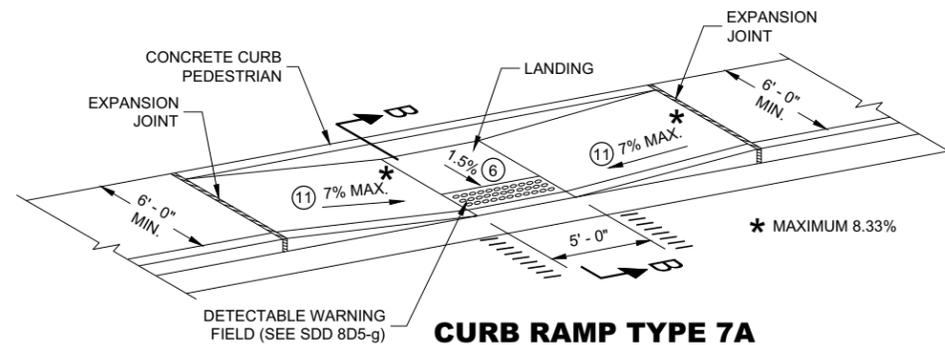
**DETECTABLE WARNING AT ISLANDS**

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



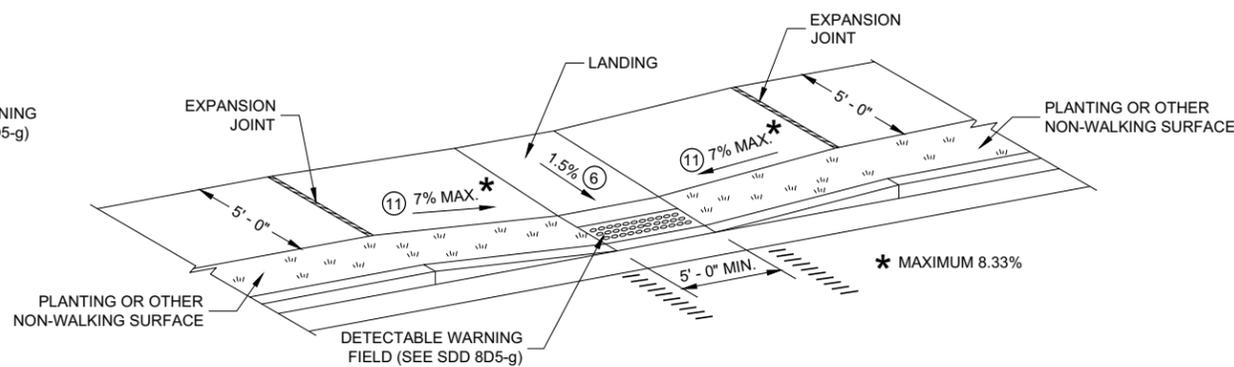
**CURB RAMP TYPE 5**

**MEDIAN ISLAND  
NON-ELEVATED PEDESTRIAN CROSSING**



**CURB RAMP TYPE 7A**

**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.

**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.

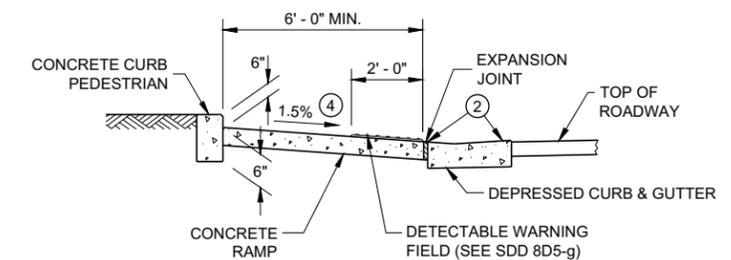
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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)

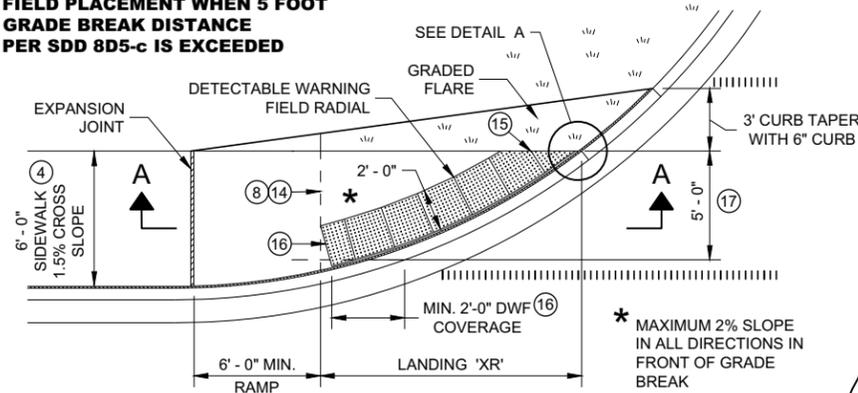


**SECTION B - B FOR TYPE 7A**

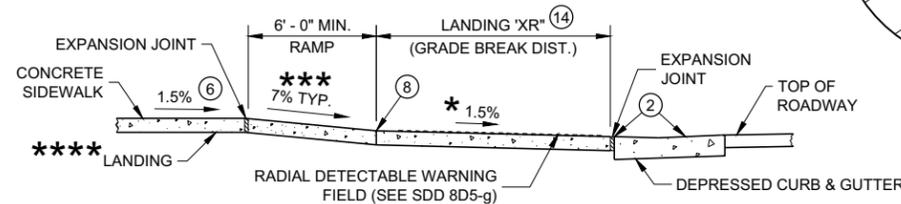
**CURB RAMPS  
TYPE 5, 6, 7A, 7B & 8**

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)**

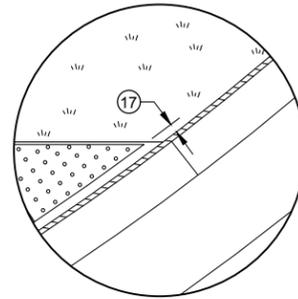


**SECTION A - A FOR TYPE 4A1**

\*\*\*\* 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)

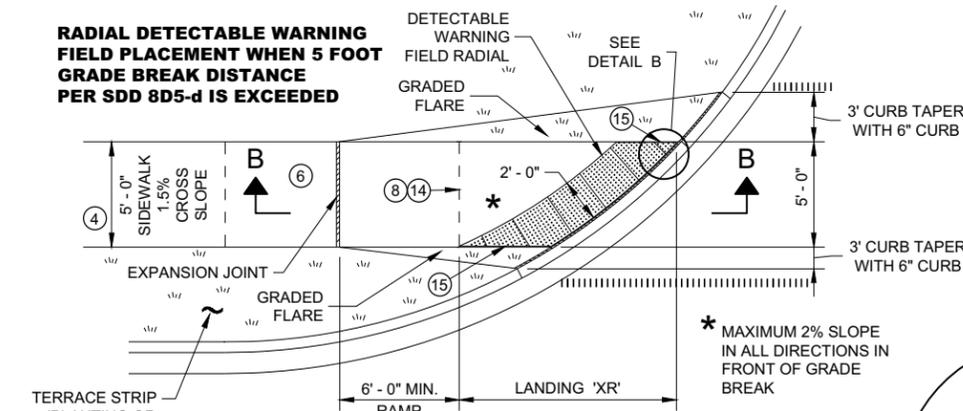


**DETAIL A**

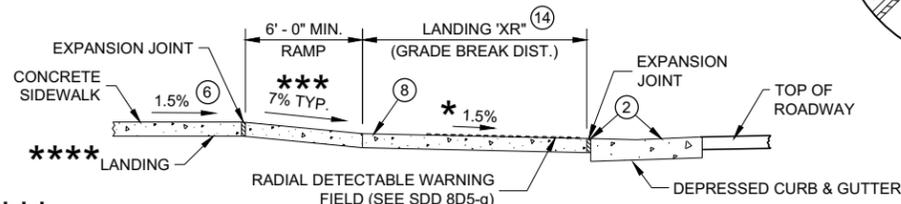
**GENERAL NOTES**

- 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 CURB RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING 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**



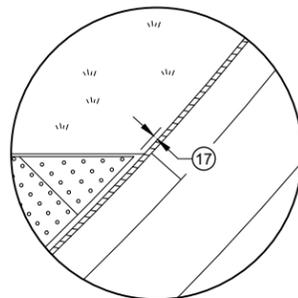
**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



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

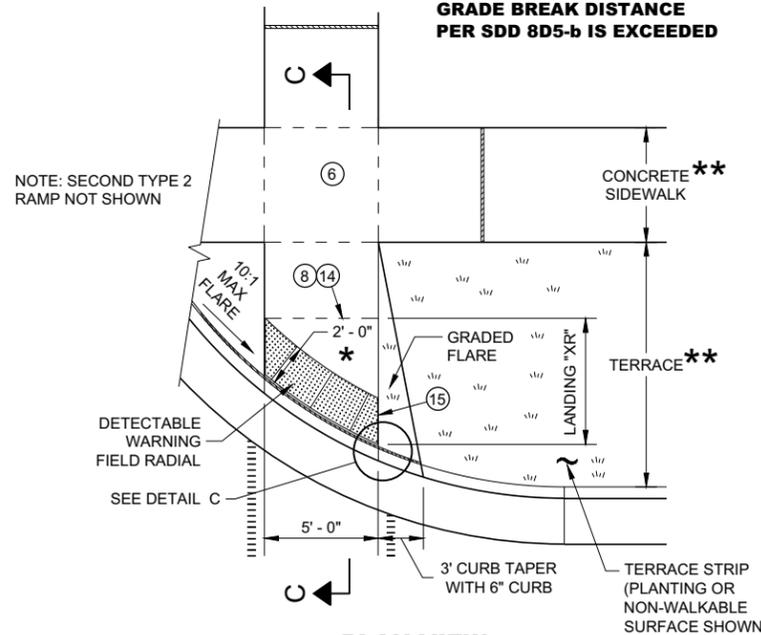
\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%



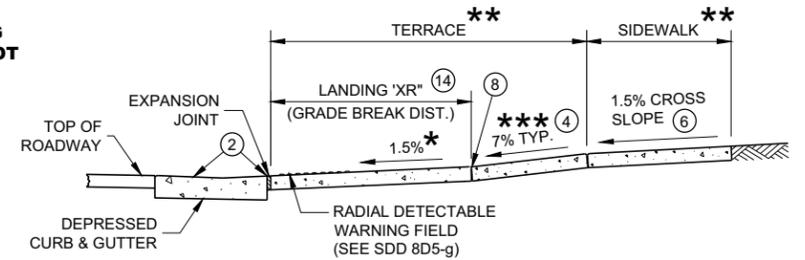
**DETAIL B**

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



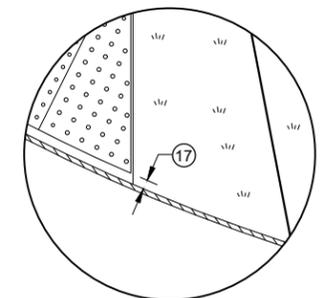
**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**

NOTE: SECOND TYPE 2 RAMP NOT SHOWN



**SECTION C - C FOR TYPE 2**

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



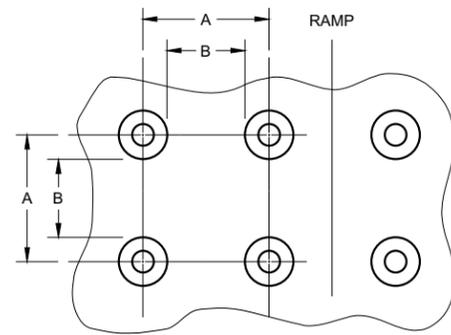
**DETAIL C**

**CURB RAMPS  
RADIAL DETECTABLE WARNING  
FIELD APPLICATIONS**

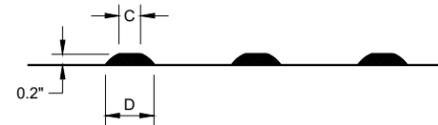
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

	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.

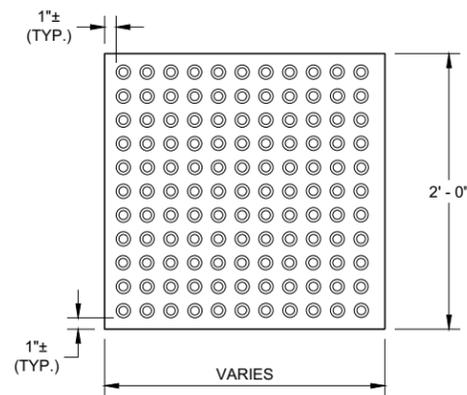


PLAN VIEW

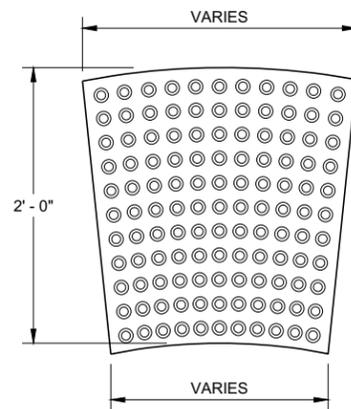


ELEVATION VIEW

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**

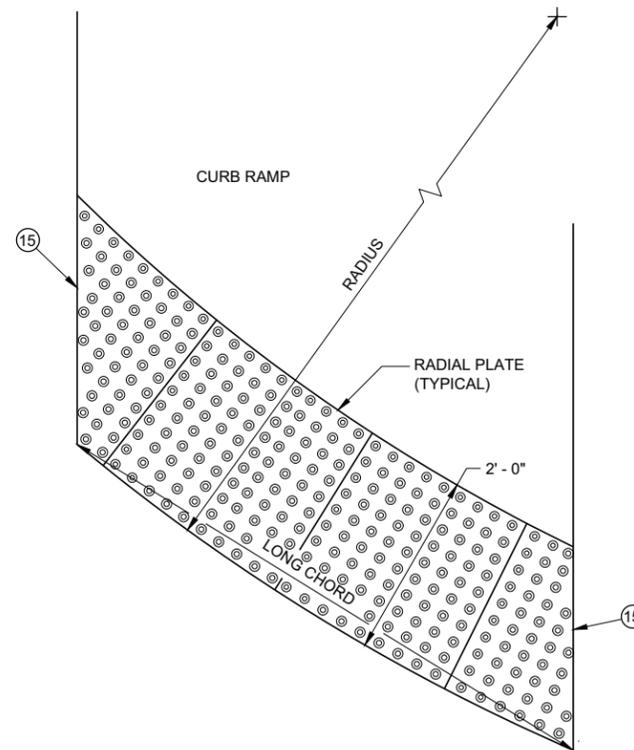


RECTANGULAR  
PLATES

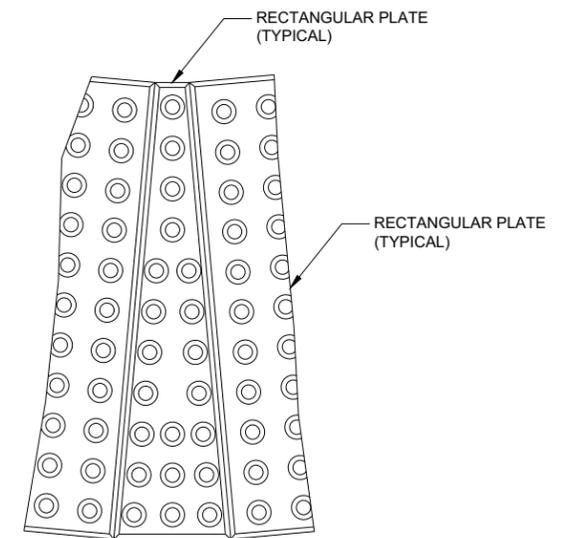


RADIAL  
PLATES

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.

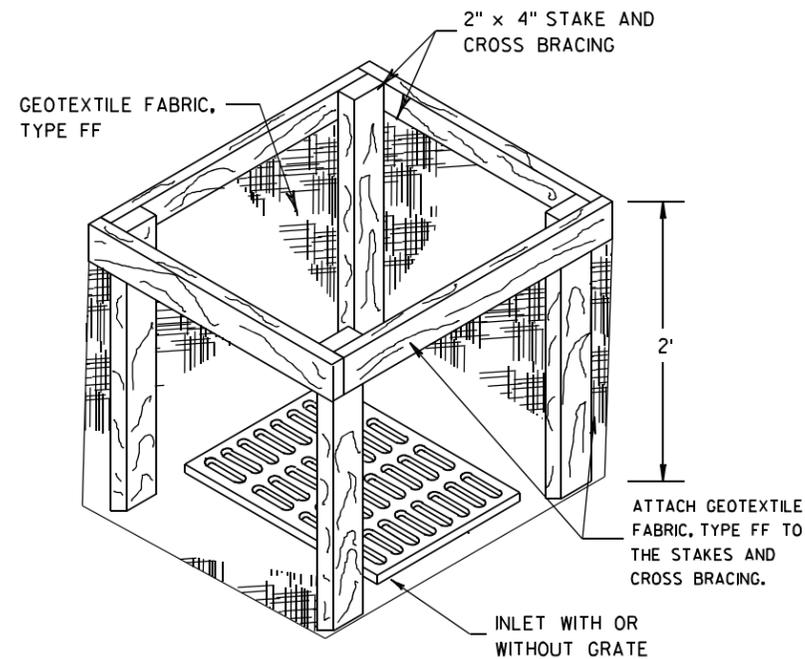
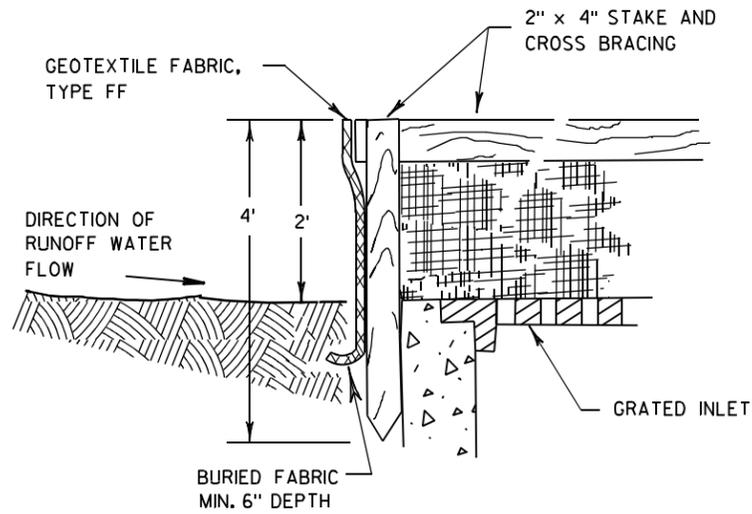
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(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.

**CURB RAMPS  
RECTANGULAR AND RADIAL  
DETECTABLE WARNING PLATES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR



**INLET PROTECTION, TYPE A**

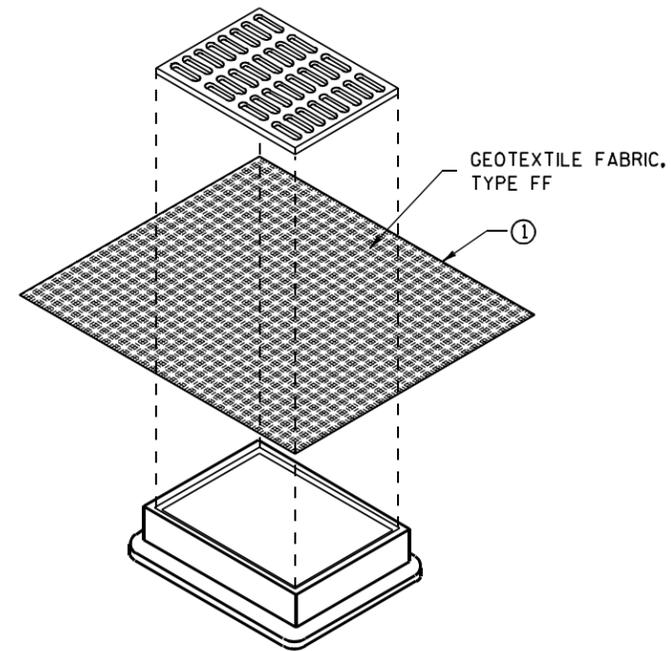
**GENERAL NOTES**

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.

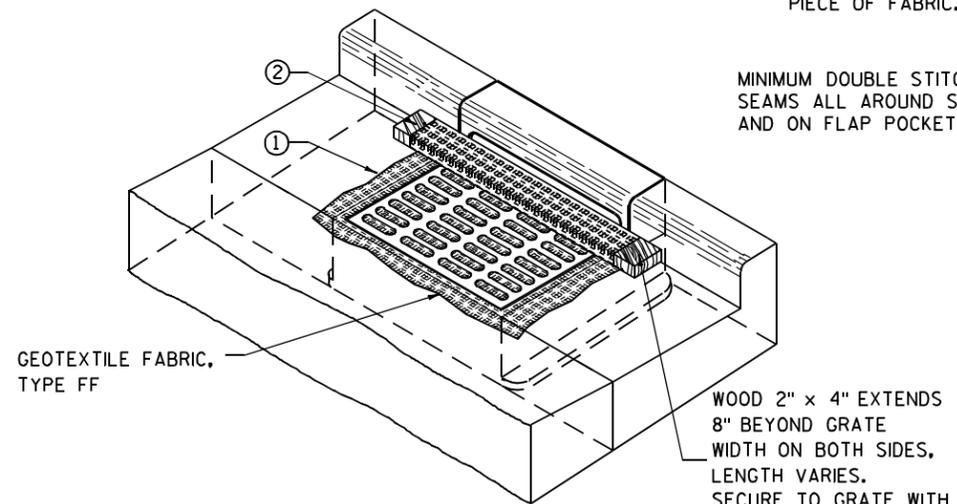
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

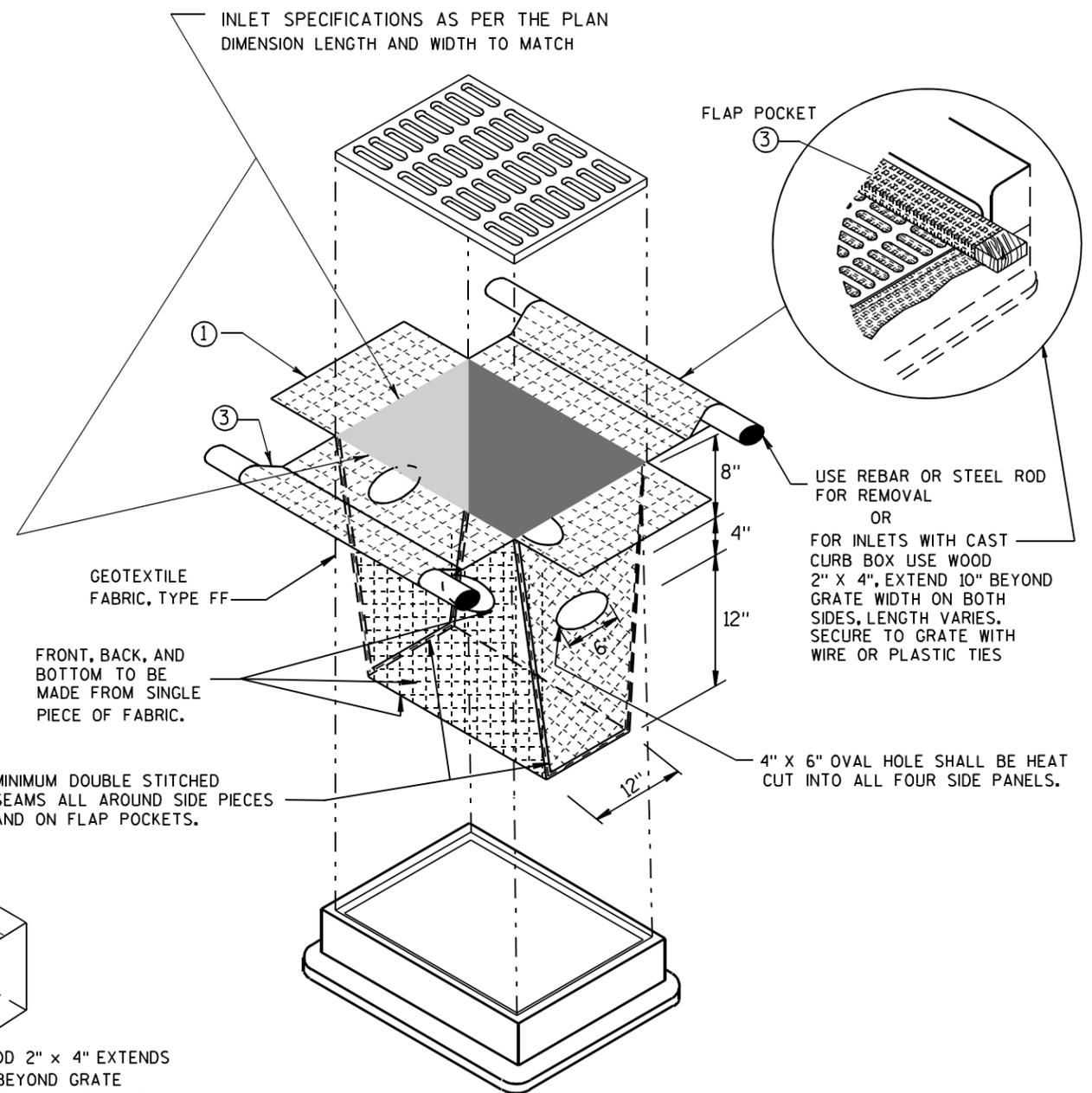
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**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.

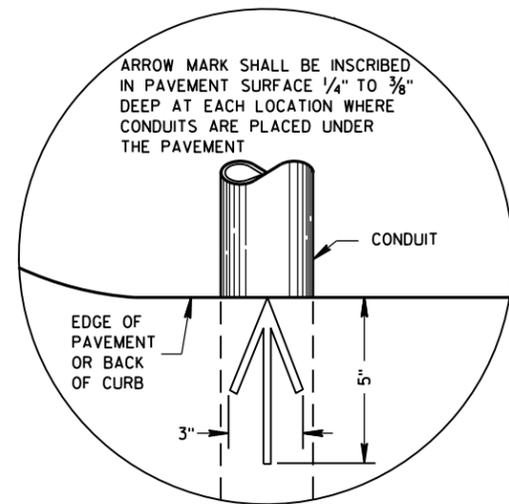
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



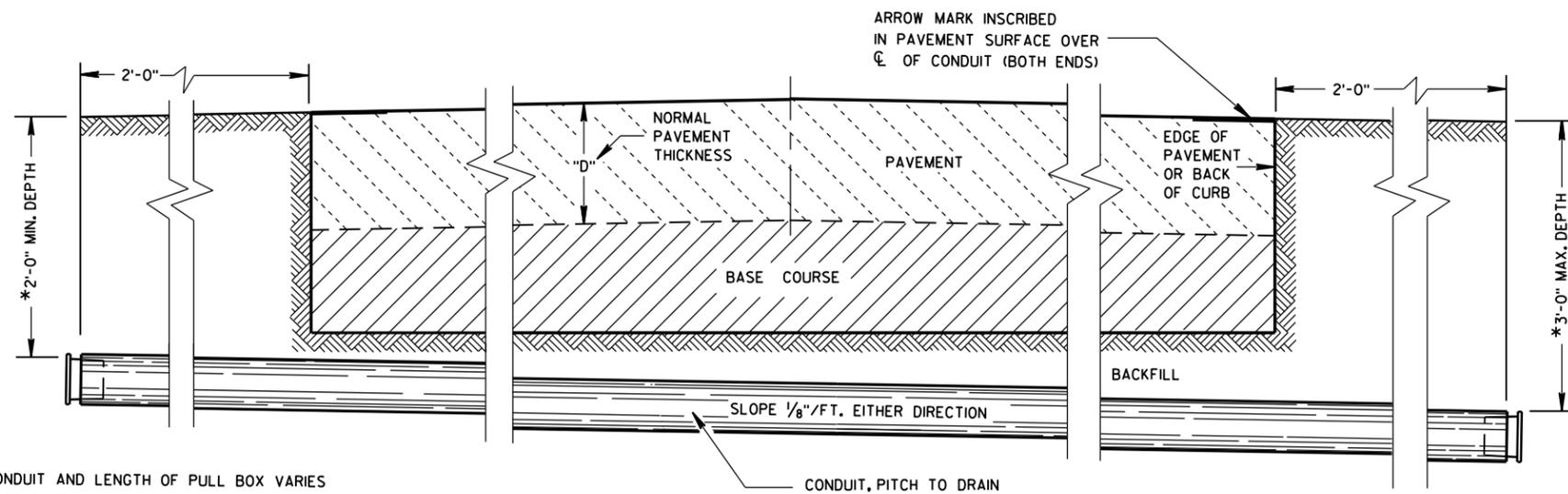
**INLET PROTECTION, TYPE D**

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

<b>INLET PROTECTION TYPE A, B, C, AND D</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Conestra 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 EMERSON 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.

6

6

S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

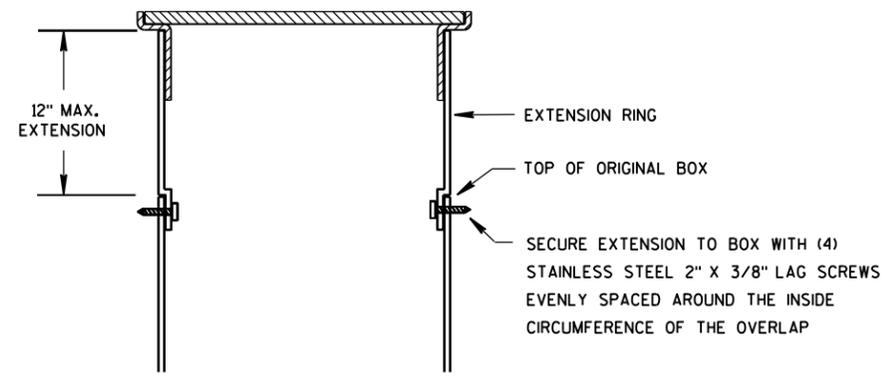
<b>CONDUIT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

**TABLE OF NOMINAL DIMENSIONS AND WEIGHTS**

DIMENSION IN INCHES		NON-CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
<b>WEIGHT IN POUNDS *</b>			
COVER		50	50
BOX ONLY		75	85

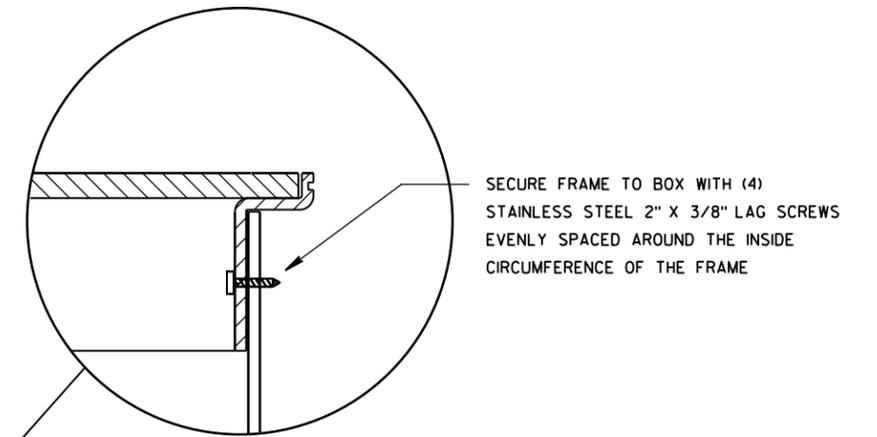
\* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

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

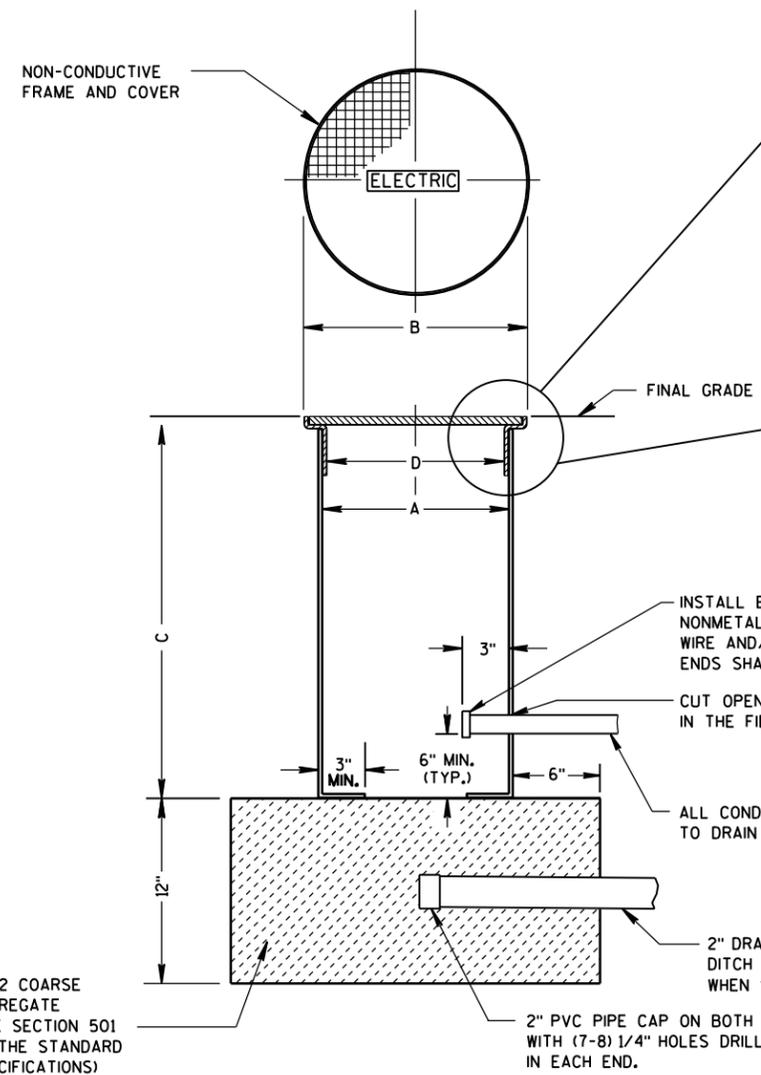


**BOX EXTENSION**

**INSTALLED IN SOD OR CRUSHED AGGREGATE**

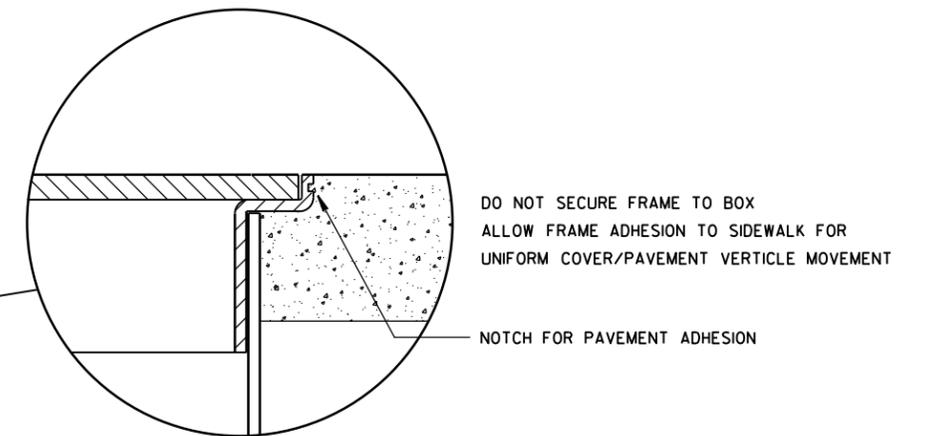


SECURE FRAME TO BOX WITH (4) STAINLESS STEEL 2" X 3/8" LAG SCREWS EVENLY SPACED AROUND THE INSIDE CIRCUMFERENCE OF THE FRAME



**NON-CONDUCTIVE PULL BOX**

**INSTALLED IN SIDEWALK**



**GENERAL NOTES**

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

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.

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

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

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

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

<b>PULL BOX NON-CONDUCTIVE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER

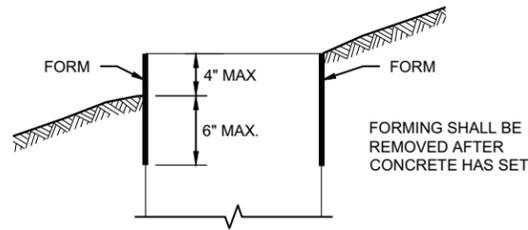
6

6

S.D.D. 9 B 16-1

S.D.D. 9 B 16-1

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.

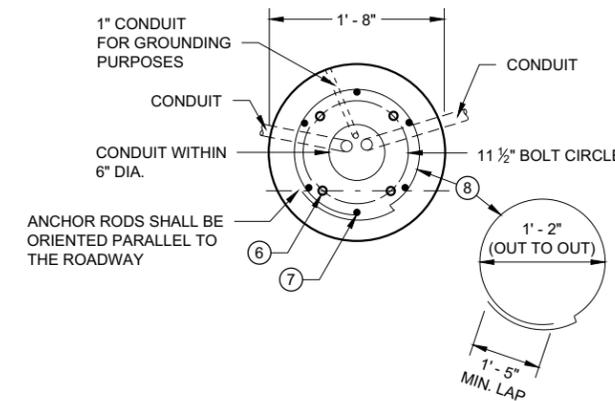
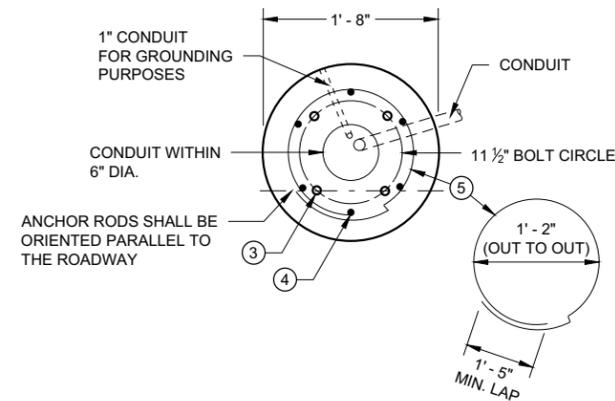
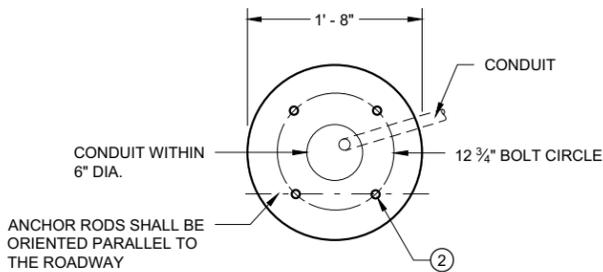
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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

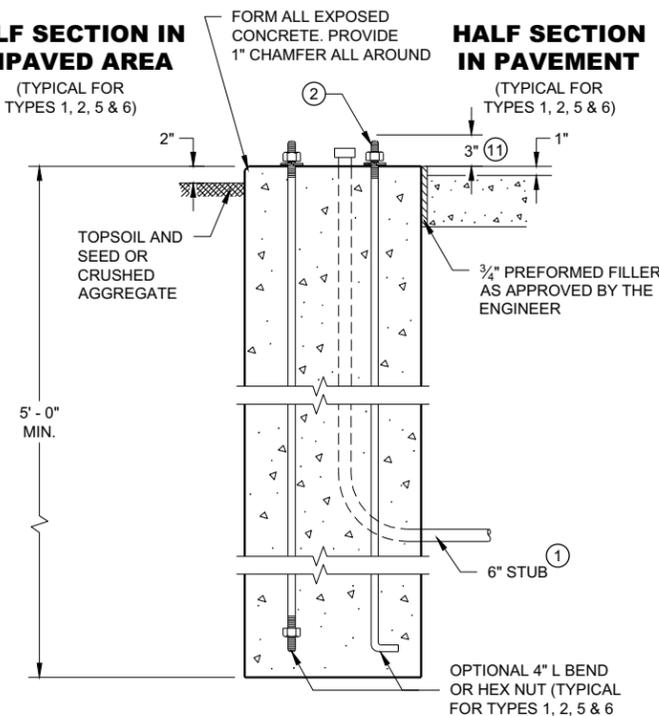
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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

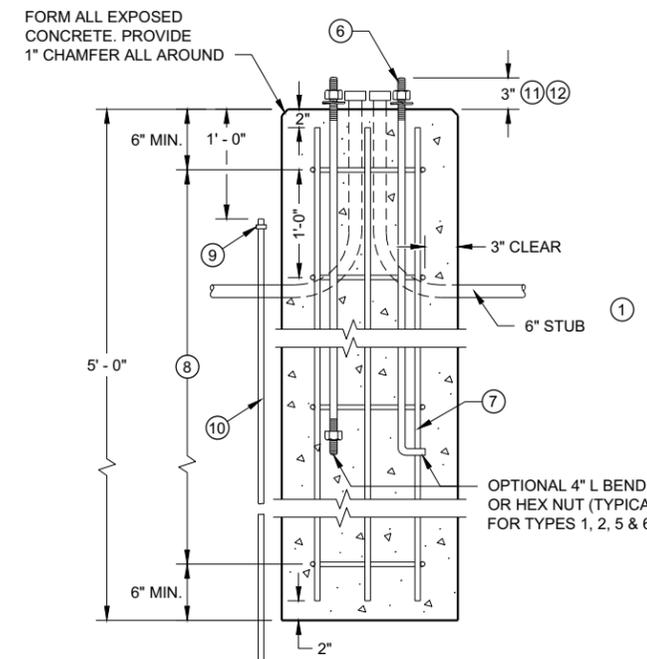
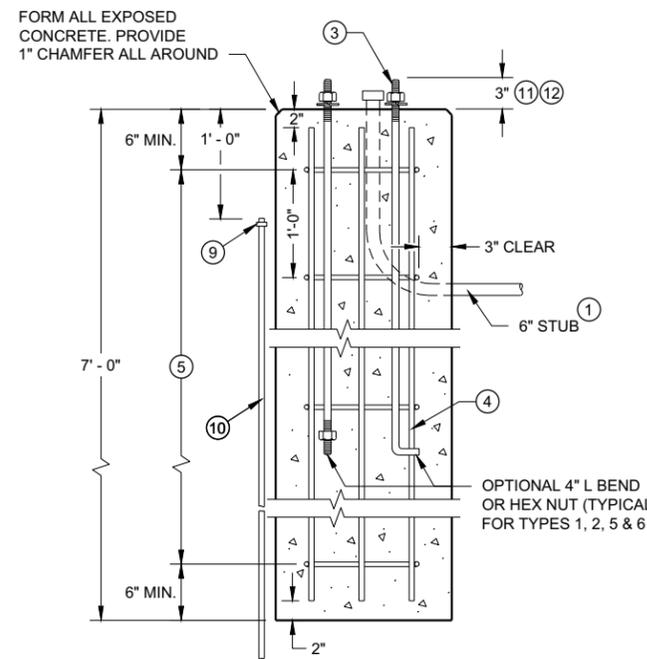
- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN 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**



**HALF SECTION IN PAVEMENT**



**TYPE 1**

**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.

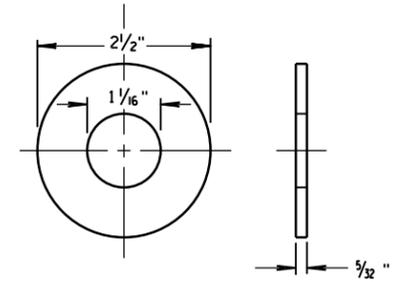
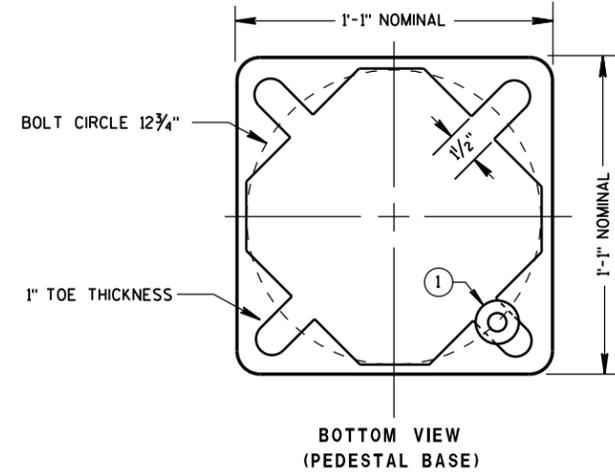
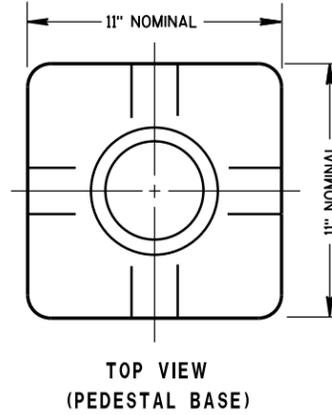
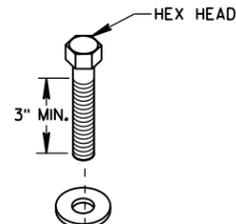
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.

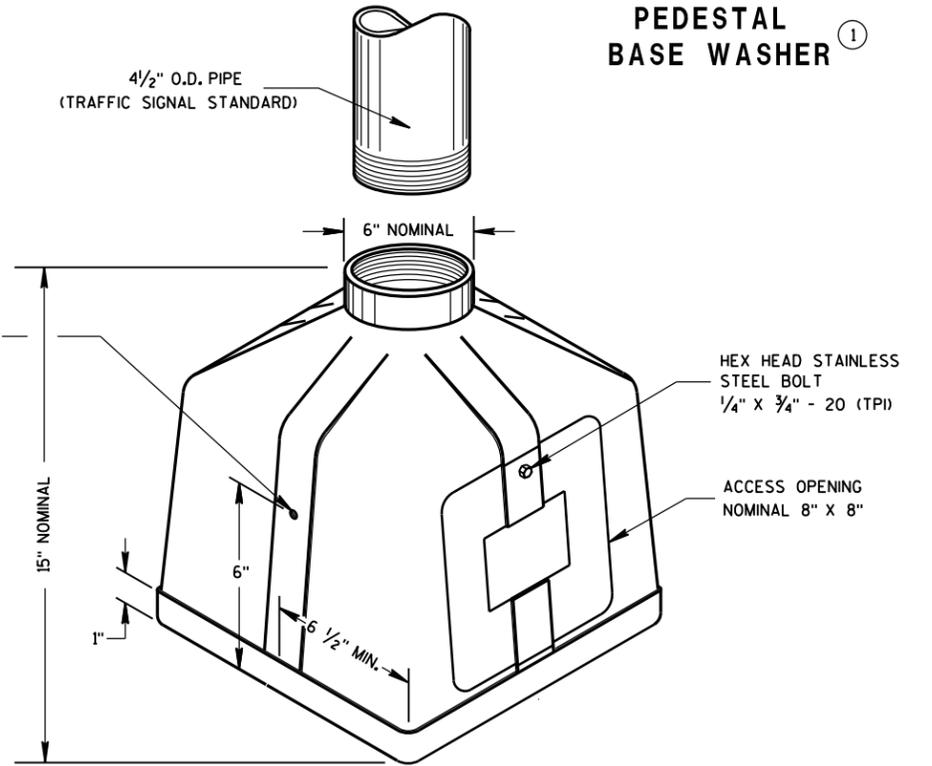
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

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.

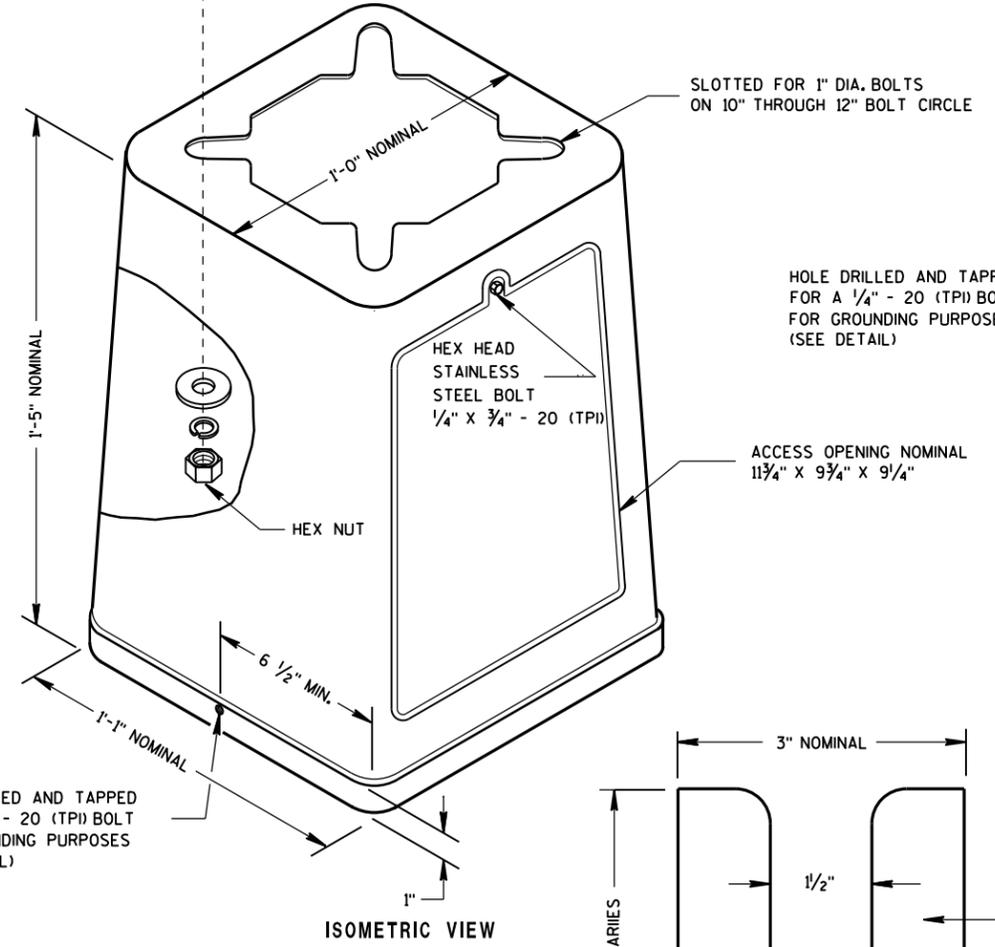
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



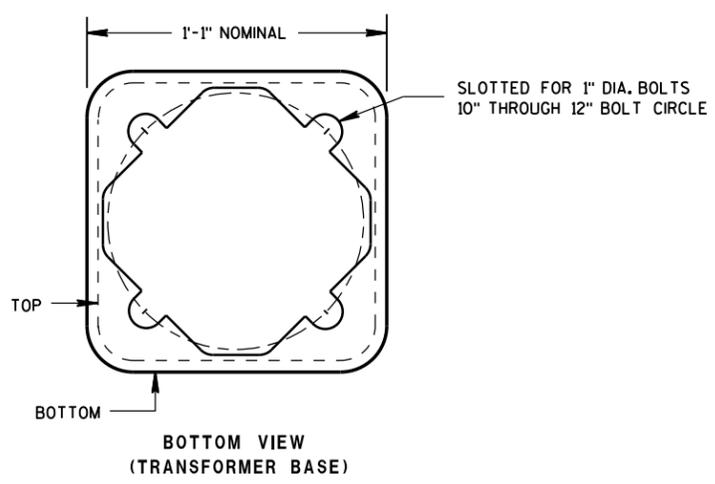
ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR  
**PEDESTAL BASE WASHER** ①



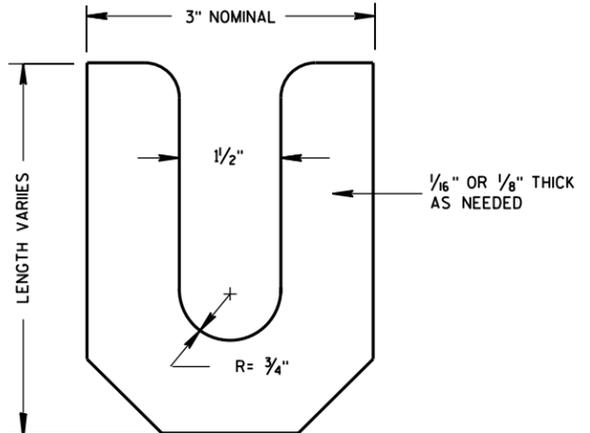
**ISOMETRIC VIEW PEDESTAL BASE**



**ISOMETRIC VIEW**

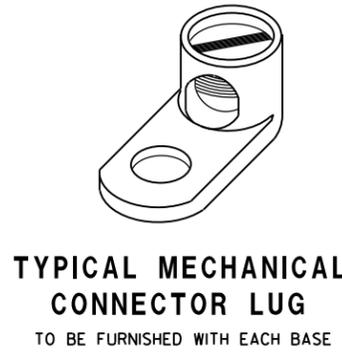


**BOTTOM VIEW (TRANSFORMER BASE)**



**LEVELING SHIM**

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



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

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

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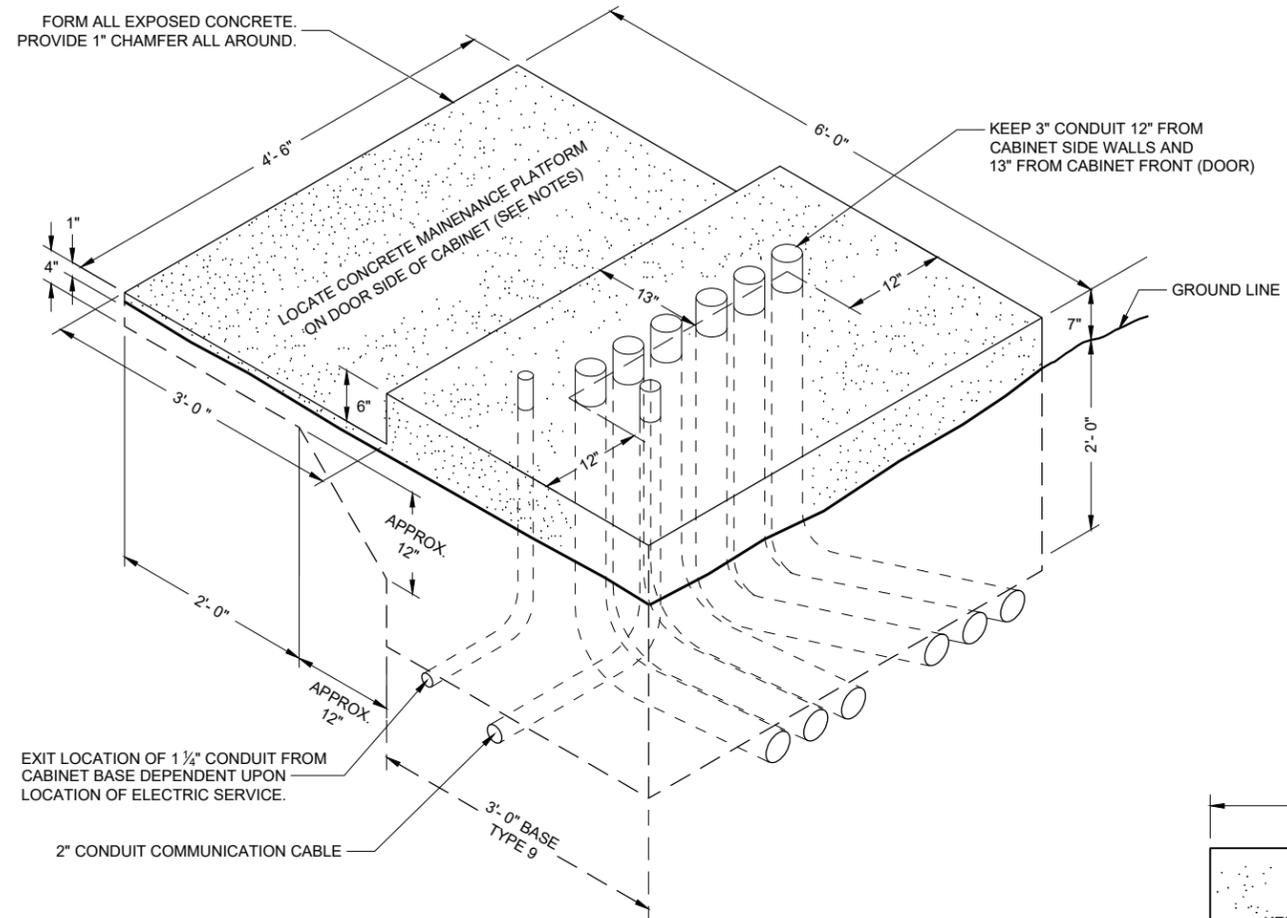
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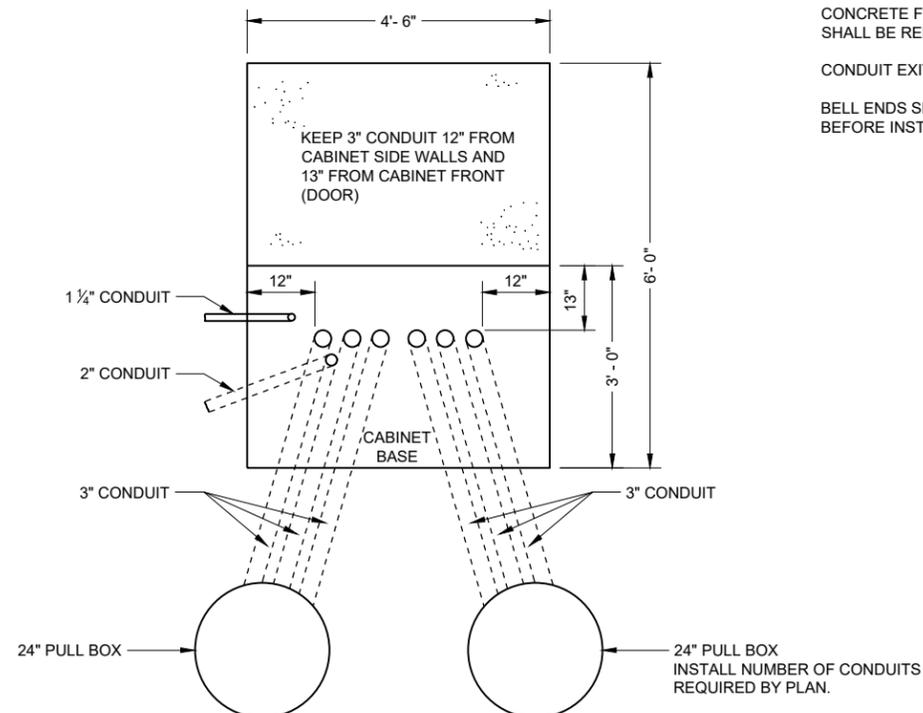


# SDD 09C06 Concrete Control Cabinet Base, Type 9, Special



## ISOMETRIC VIEW TYPE 9 SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



## PLAN VIEW CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL

### GENERAL NOTES

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

INSTALL FOUR INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

CONDUIT EXITING THE CONCRETE BASE (SIX 3") SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

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

6

6

SDD 09C06 - 07

SDD 09C06 - 07

### CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demerbilek  
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.

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.

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).

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

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" 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.

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

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.

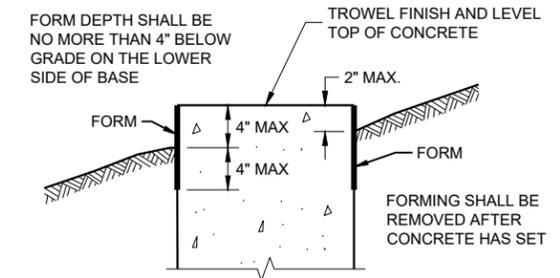
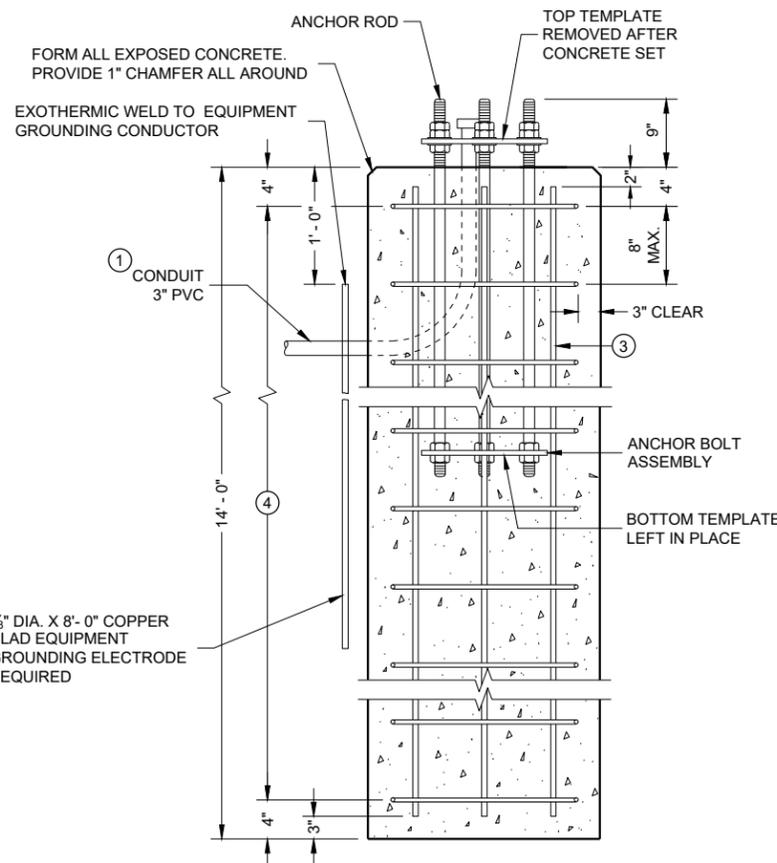
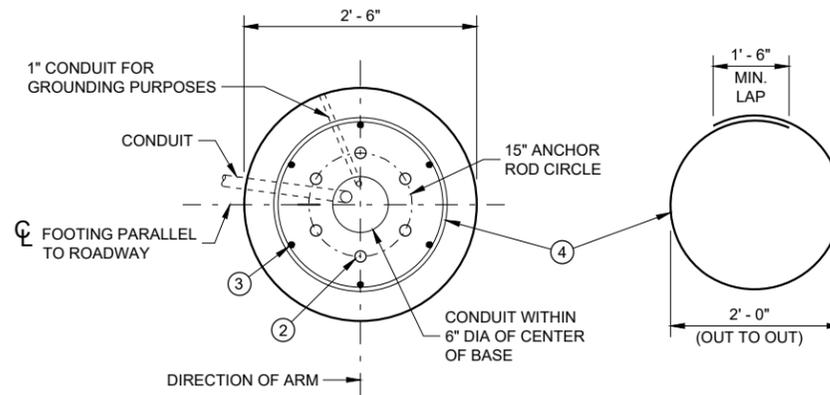
② (6) 1 1/2" DIA. X 4' - 4" ANCHOR RODS

③ (6) NO. 6 X 13' - 7" BAR STEEL REINFORCEMENT.

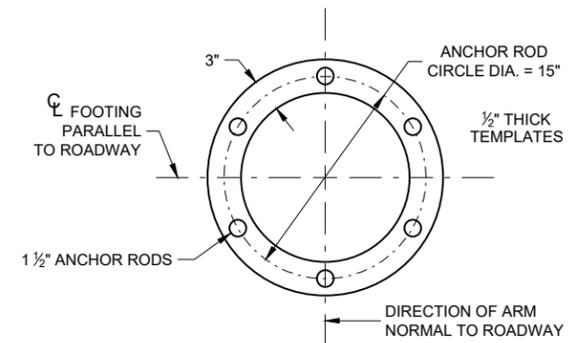
④ (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

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

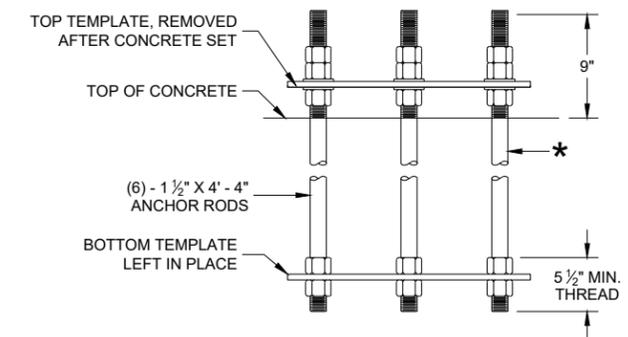
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122



## FORMING DETAIL



## 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 (FOR TYPE 9, TYPE 10 AND OVER HEIGHT (OH) POLES)

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE SDD 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

## CONCRETE BASE TYPE 10

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2017 /S/ Ahmet Demerbilek  
DATE WIND LOADED STRUCTURES PROGRAM LEADER

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.

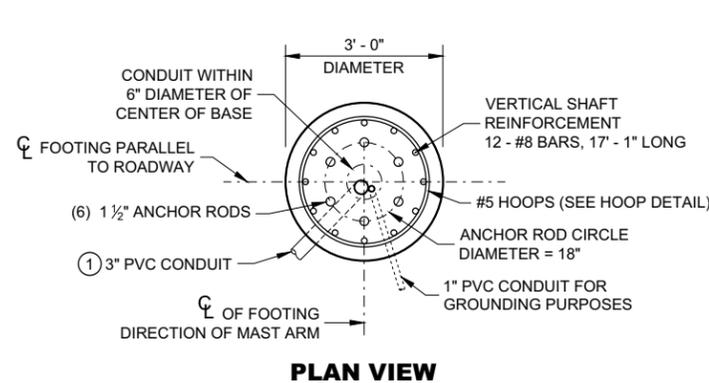
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

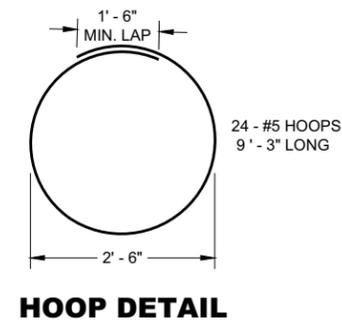
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

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.

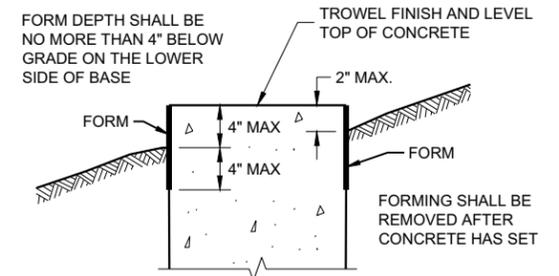
CONCRETE MASONRY.....fc = 3,500 p.s.i.  
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.  
 ANCHOR RODS, ASTM F1554 GRADE 55 ( IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.  
 TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



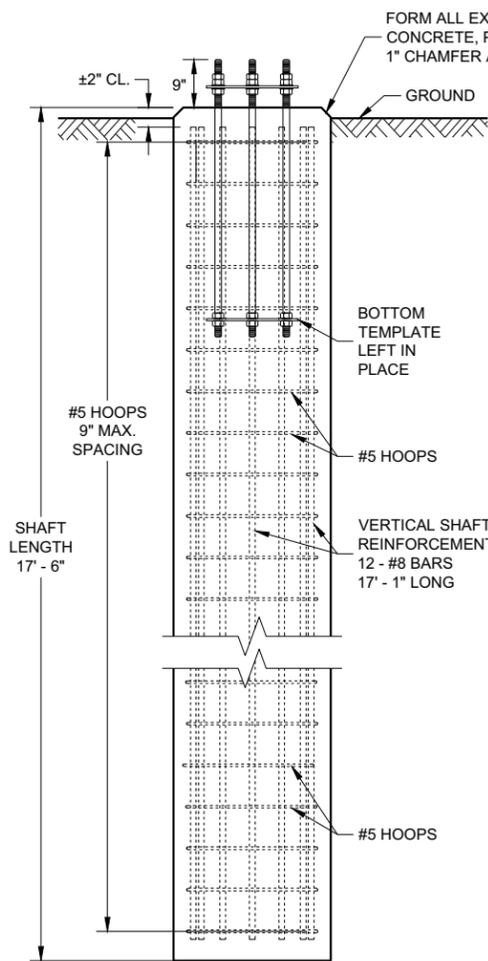
**PLAN VIEW**



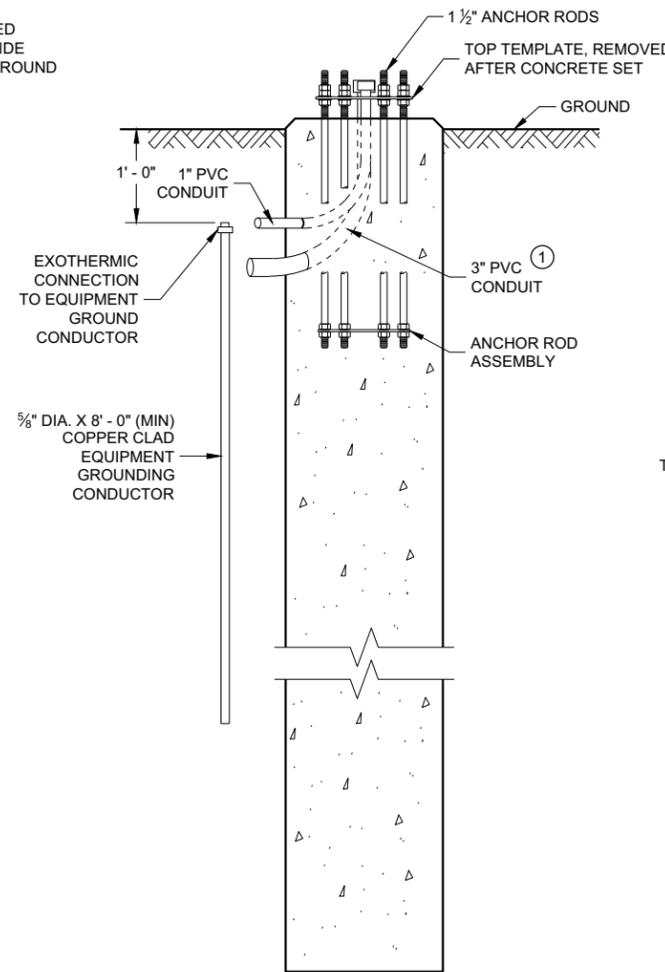
**HOOP DETAIL**



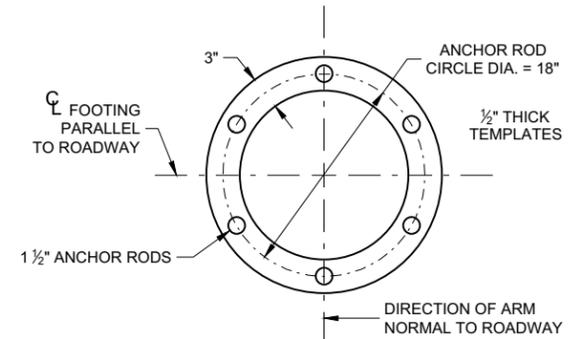
**FORMING DETAIL**



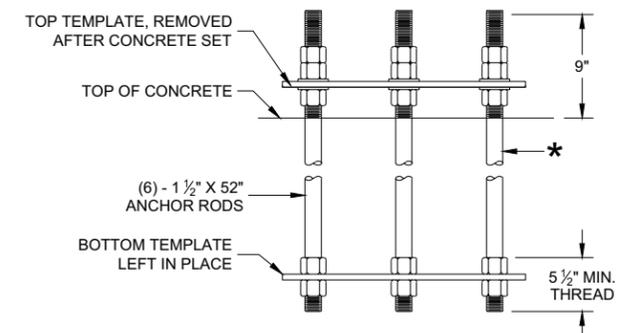
**ELEVATION VIEW**  
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



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



**TOP AND BOTTOM TEMPLATE**



**ANCHOR ROD ASSEMBLY DETAILS**

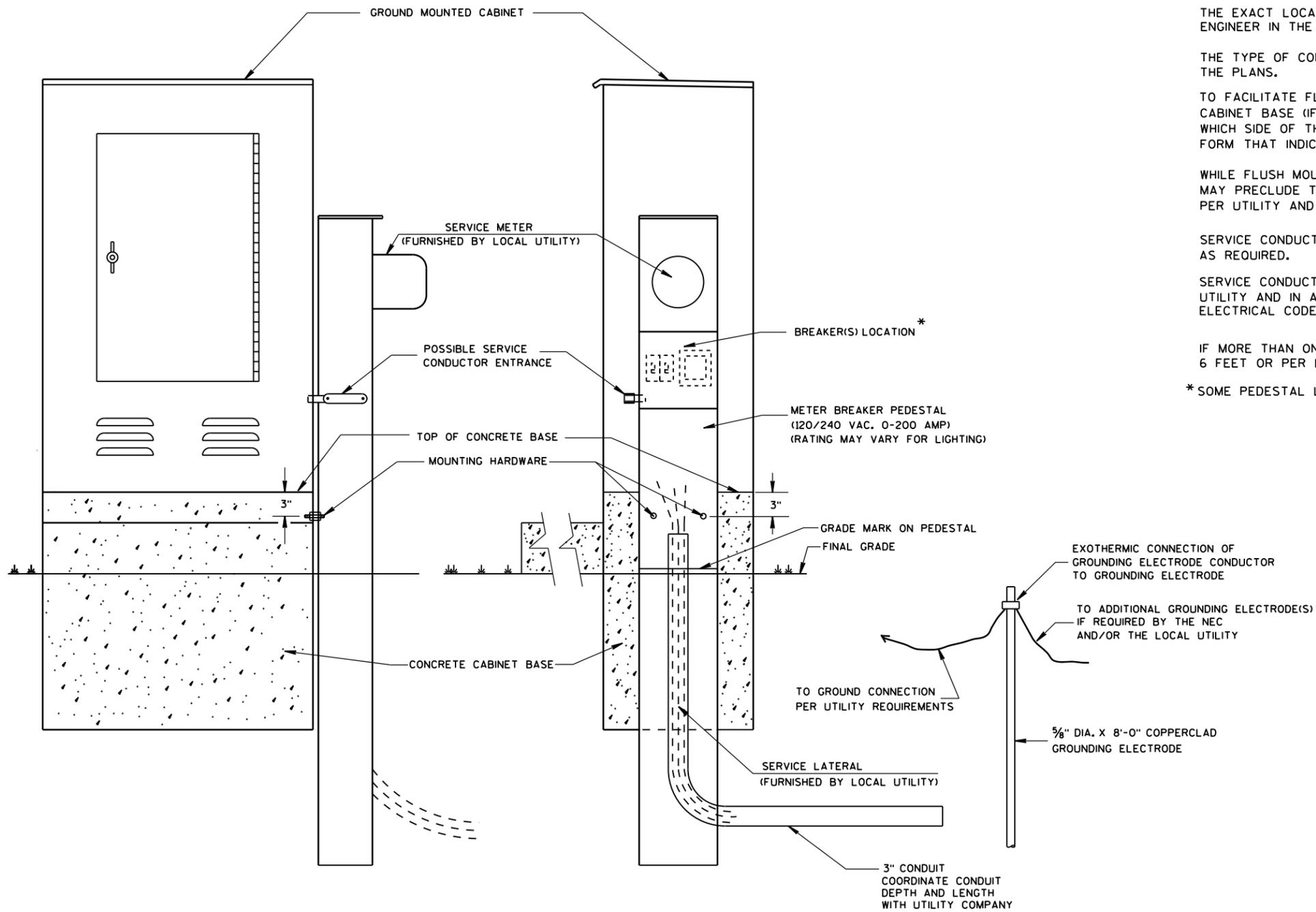
\* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE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

<b>CONCRETE BASE TYPE 10 SPECIAL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Alex Crabtree WIND LOADED STRUCTURES PROGRAM LEADER
FHWA	



TYPICAL CABINET SERVICE INSTALLATION

**GENERAL NOTES**

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

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

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

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

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

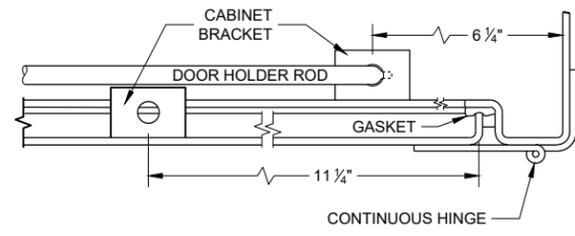
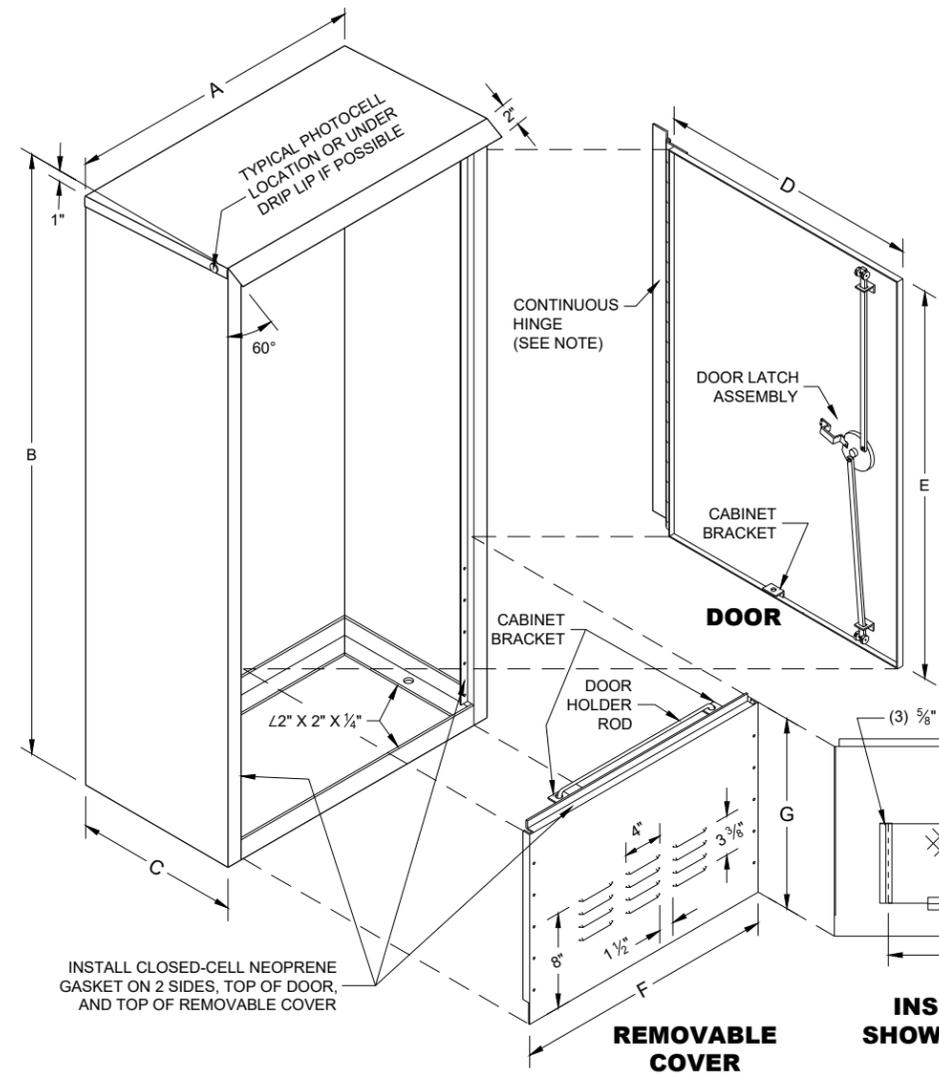
SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

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

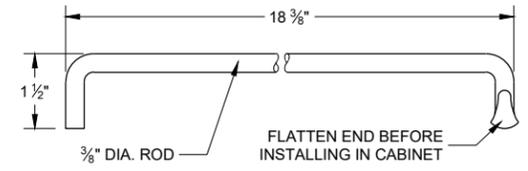
IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

\* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

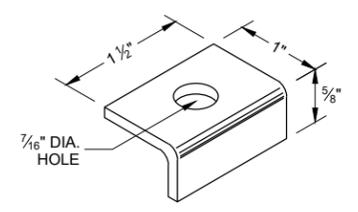
<b>CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



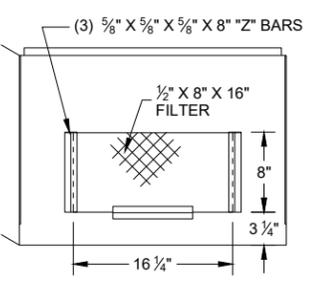
**HINGE AND DOOR HOLDER**



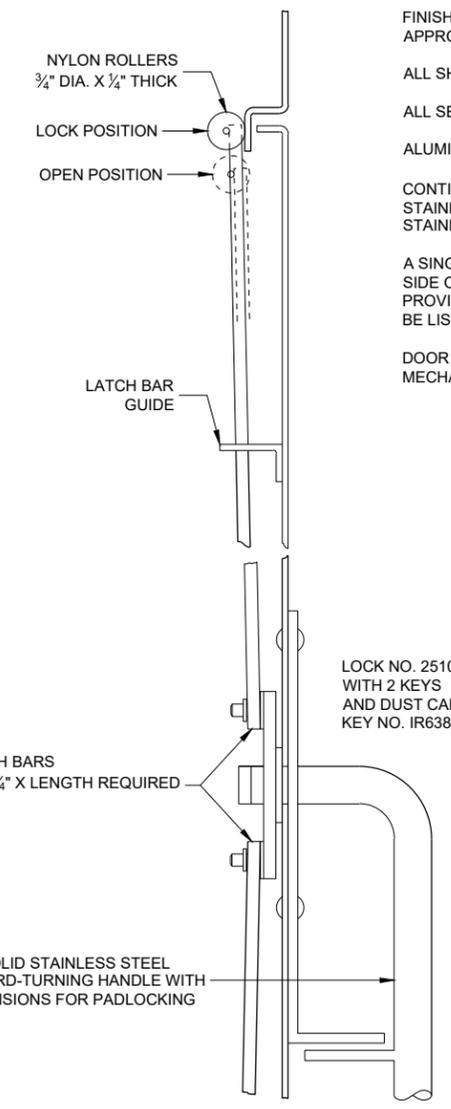
**HOLDER ROD**



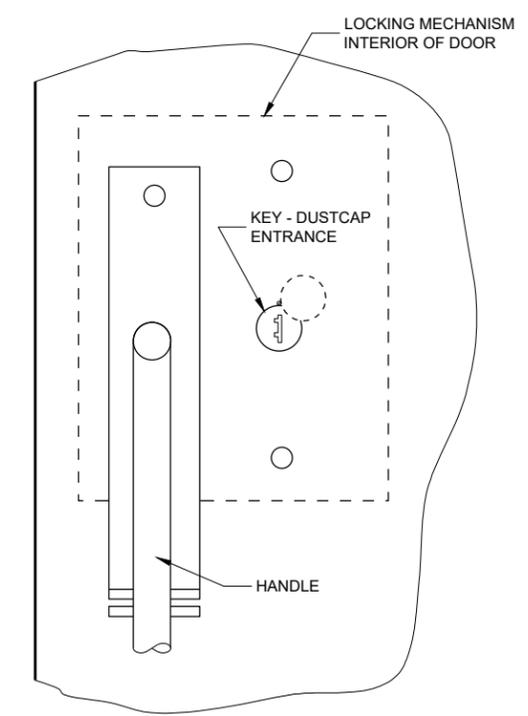
**CABINET BRACKET**



**INSIDE VIEW SHOWING FILTER**

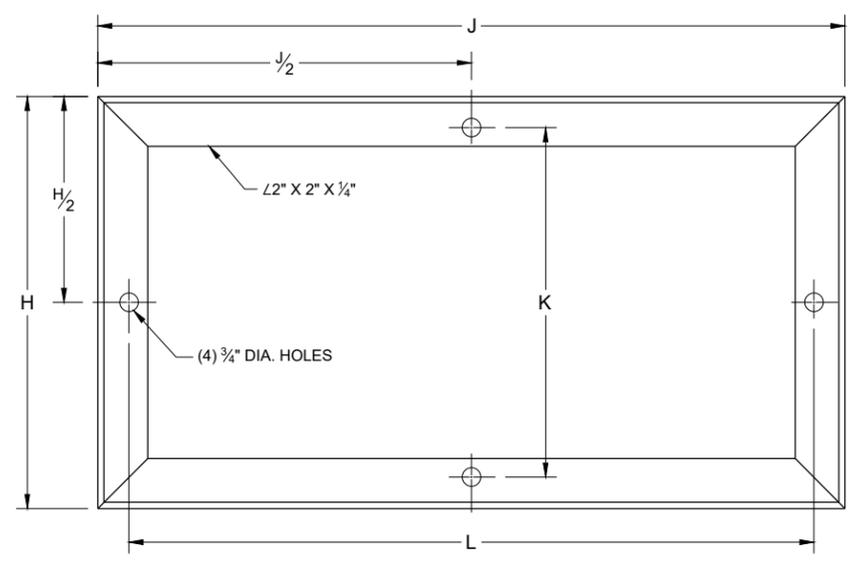


**SIDE VIEW**



**FRONT VIEW**

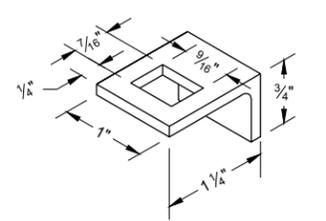
**LATCH ASSEMBLY**



**MOUNTING BASE**

**TABLE OF DIMENSIONS (INCHES)**

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 3/4	8 3/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



**LATCH BAR GUIDE**

**GENERAL NOTES**

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/2\"/>

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH - NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

6

6

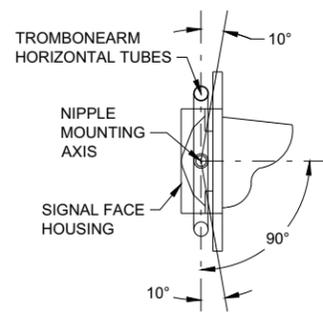
SDD 09D02 - 03

SDD 09D02 - 03

**SIGNAL CONTROL CABINET**

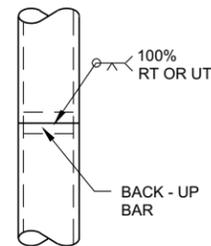
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

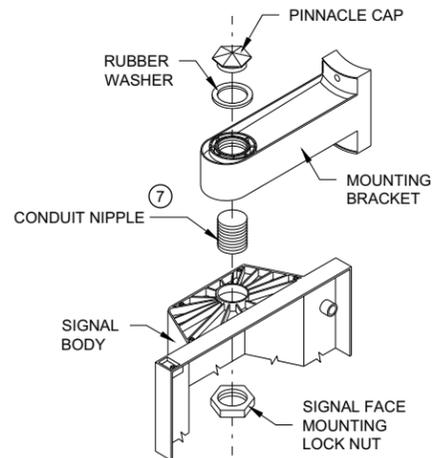


**SECTION A-A**  
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

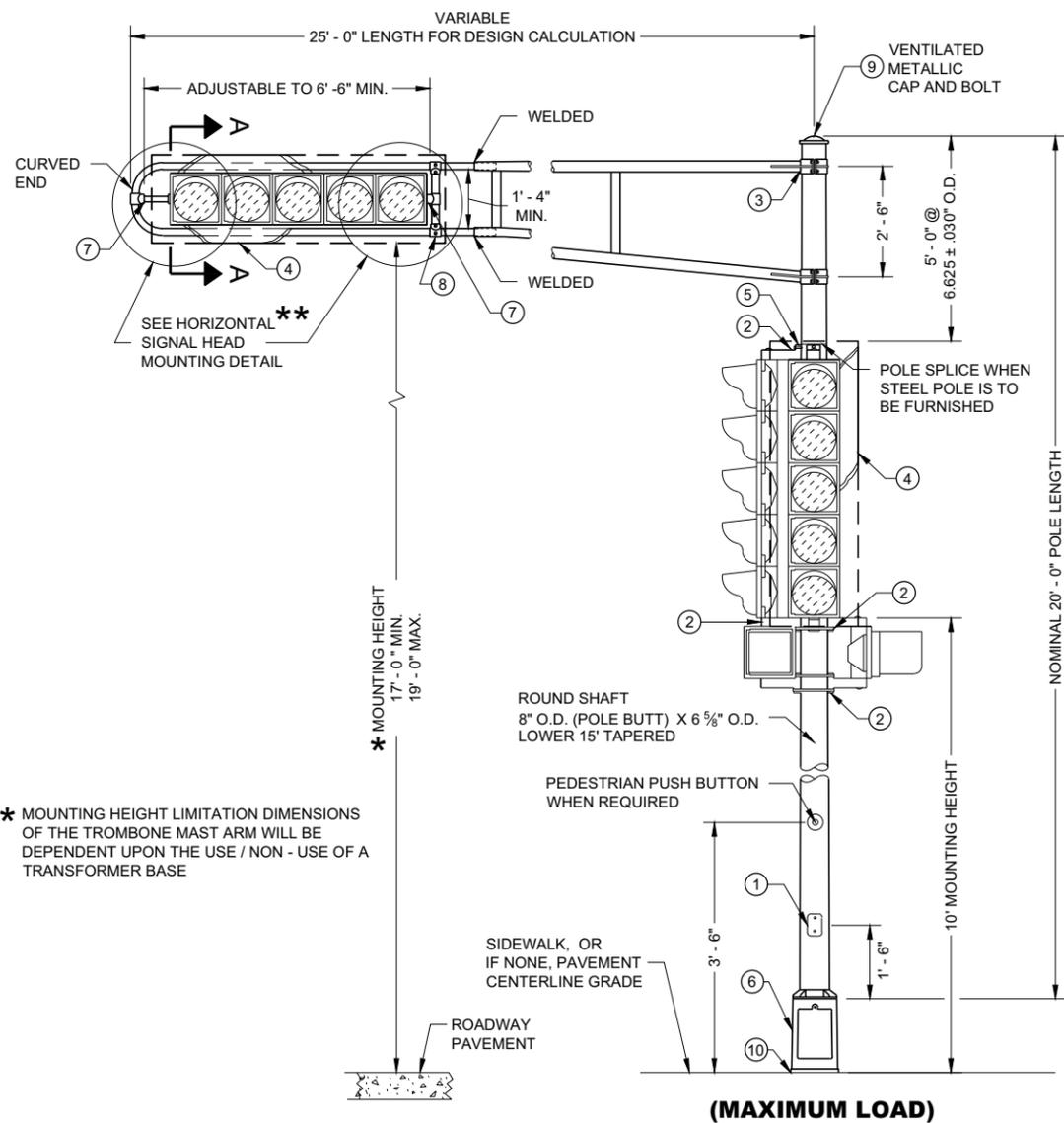
**FOR MANUFACTURERS USE ONLY**  
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



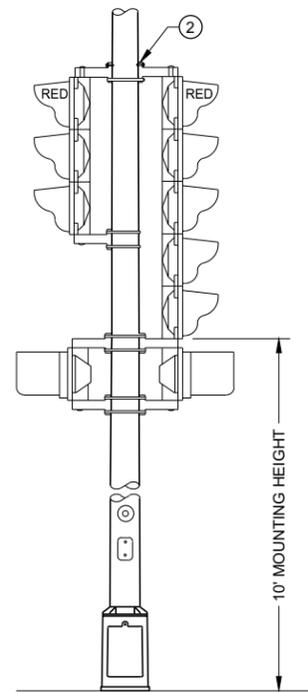
**POLE SPLICE DETAIL**



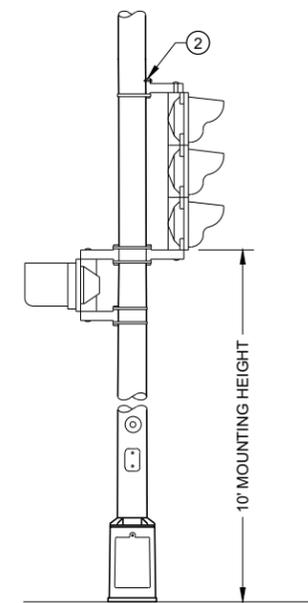
**SIGNAL FACE MOUNTING DETAIL (BANDED)**



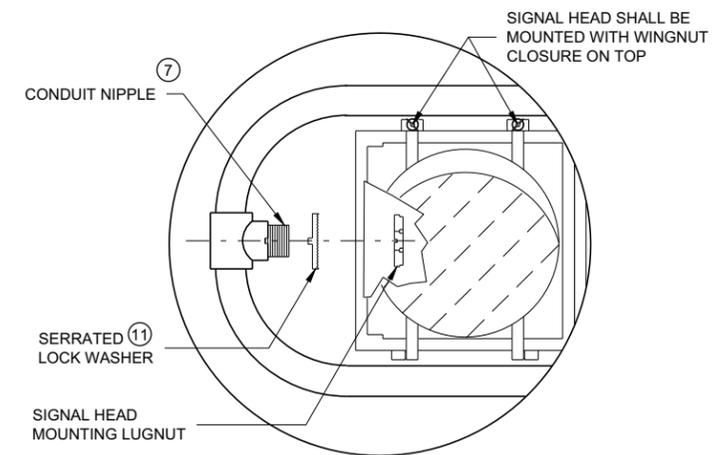
**(MAXIMUM LOAD)**



**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.

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

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

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

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

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

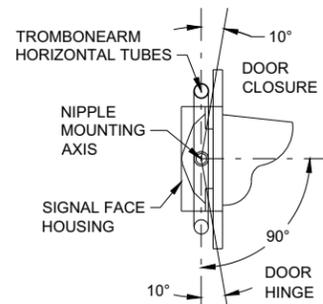
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE 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 FACES.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- 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 (1/4" 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) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

\* MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE / NON - USE OF A TRANSFORMER BASE

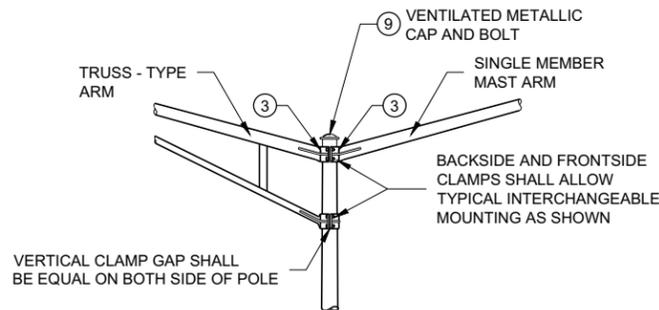
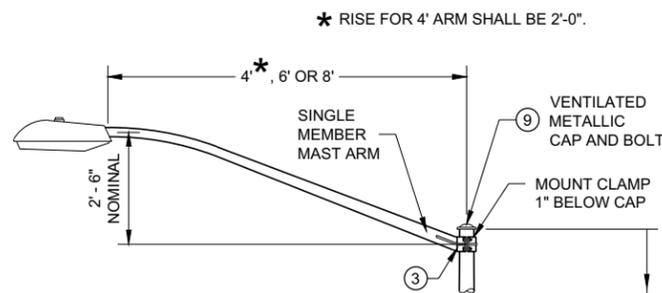
**TYPE 2 POLE MOUNTING CONFIGURATION**

**POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2**

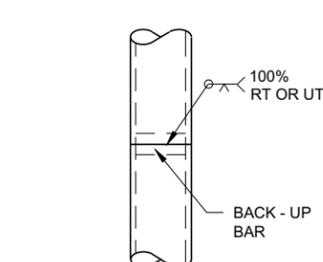
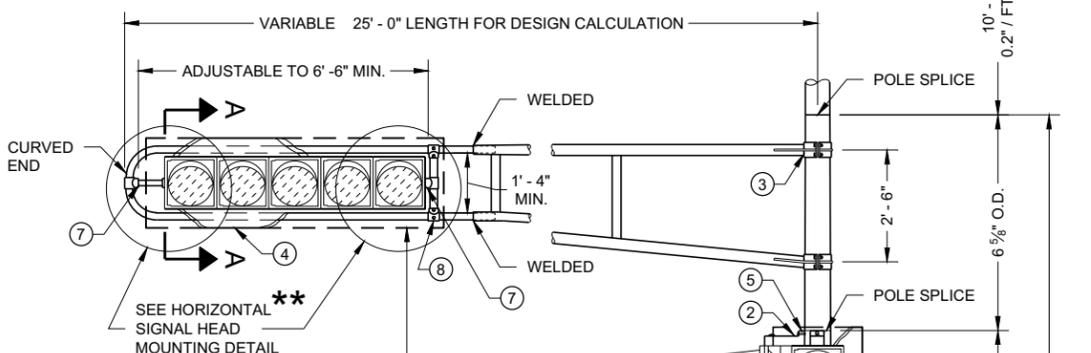
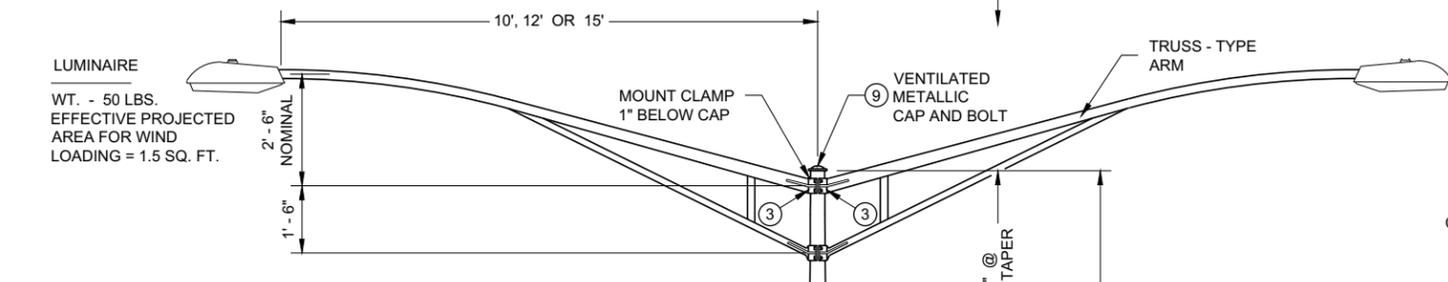
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**SECTION A-A**



**INTERCHANGEABLE MOUNTING DETAIL**



**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.

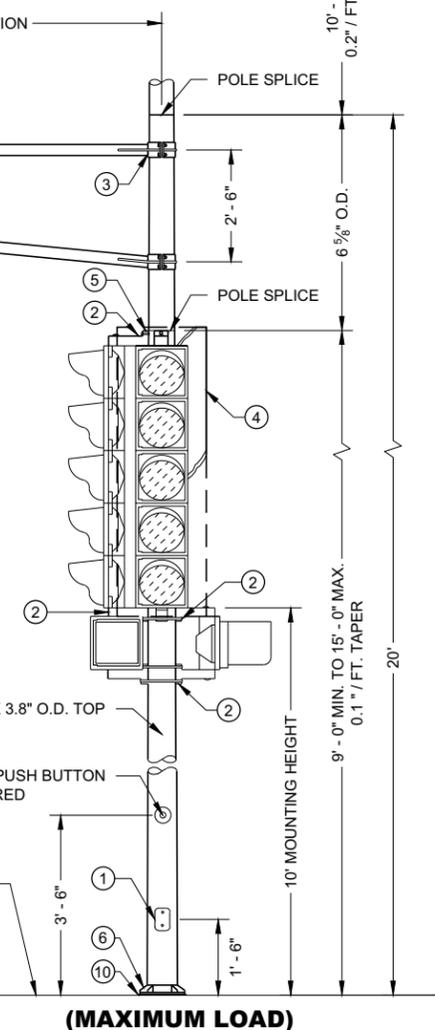
MOUNTING HEIGHT  
17'-0" MIN.  
19'-0" MAX.

ROUND SHAFT  
8" O.D. (POLE BUTT) X 3.8" O.D. TOP  
LOWER 15' TAPERED

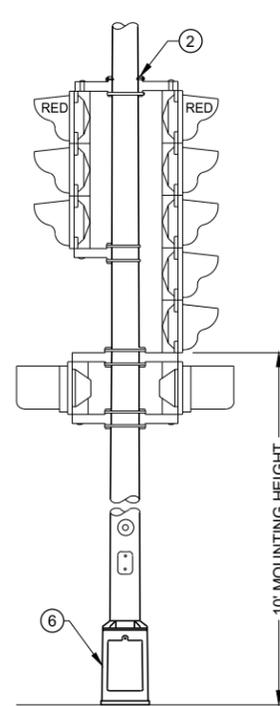
PEDESTRIAN PUSH BUTTON  
WHEN REQUIRED

SIWALK, OR  
IF NONE, PAVEMENT  
CENTERLINE GRADE

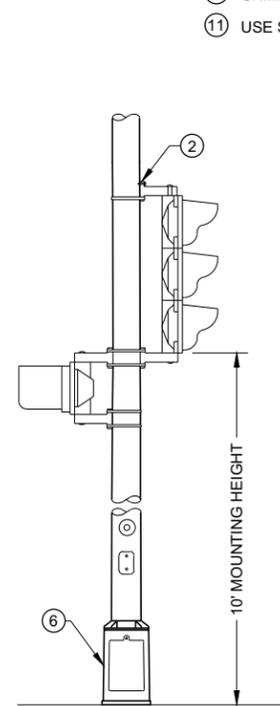
ROADWAY  
PAVEMENT



**(MAXIMUM LOAD)**

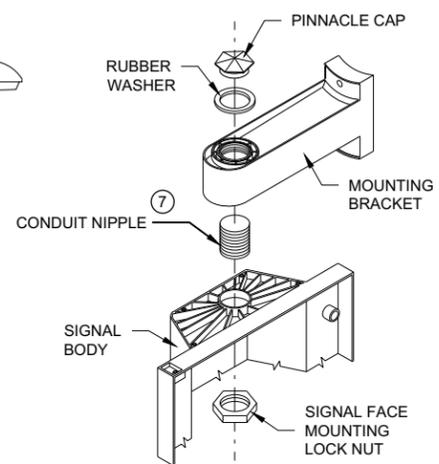


**TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES**

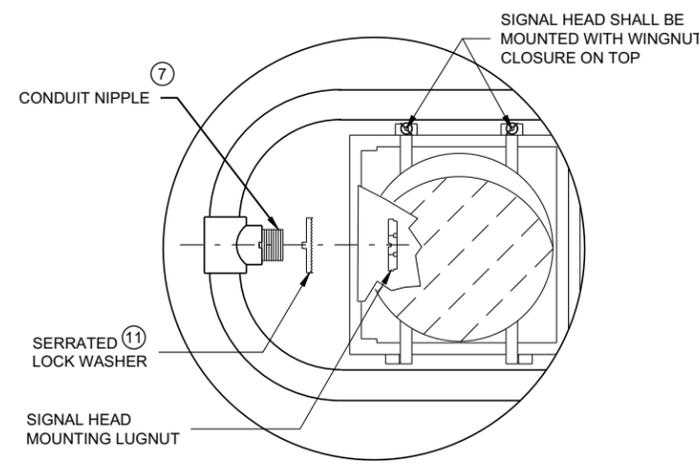


**TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE**

**TYPE 3 POLE MOUNTING CONFIGURATION**



**SIGNAL FACE MOUNTING DETAIL (BANDED)**



**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.

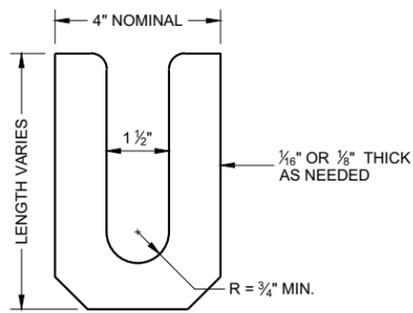
THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

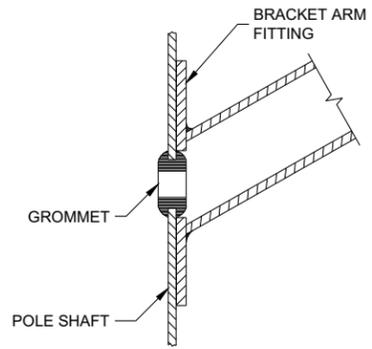
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/2" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 1/2" HOLE IN POLE 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)**

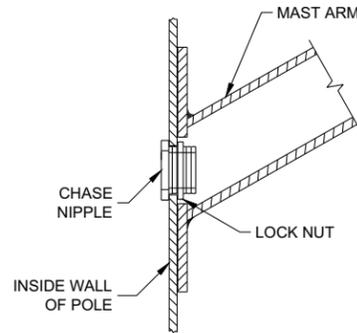
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**LEVELING SHIM**  
SHALL BE ALUMINUM



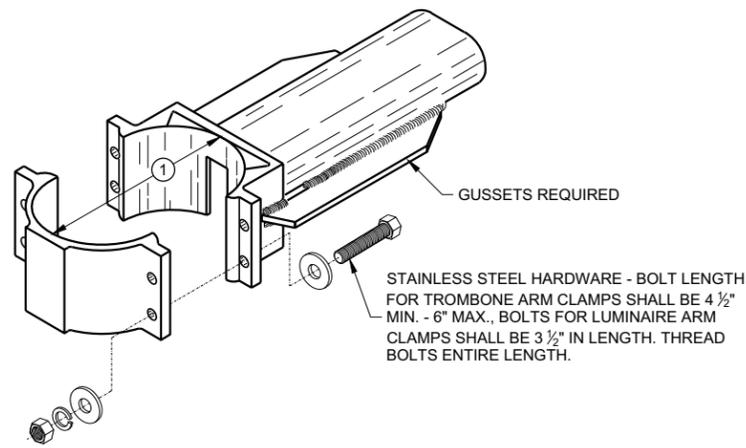
**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



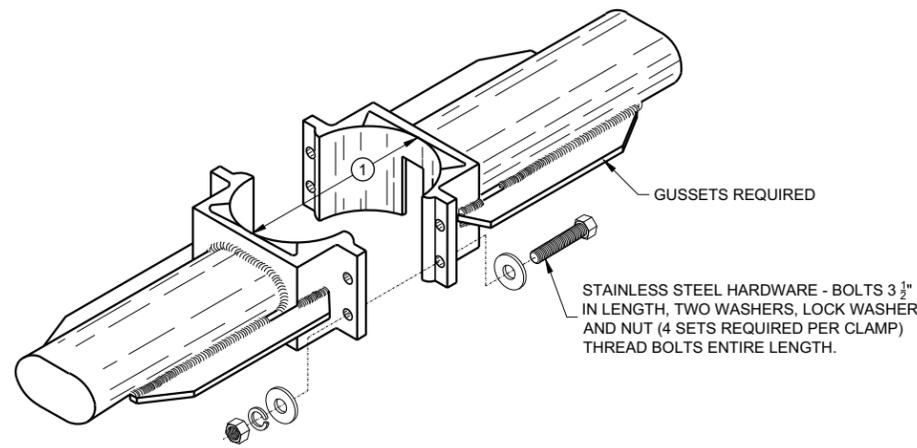
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

**GENERAL NOTES**

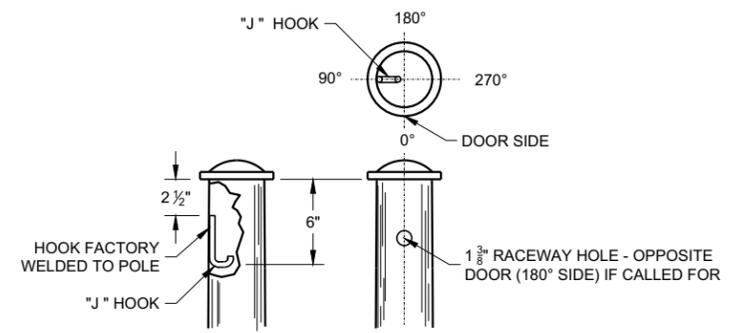
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
  - ② INDIVIDUAL BASE PLATE 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.



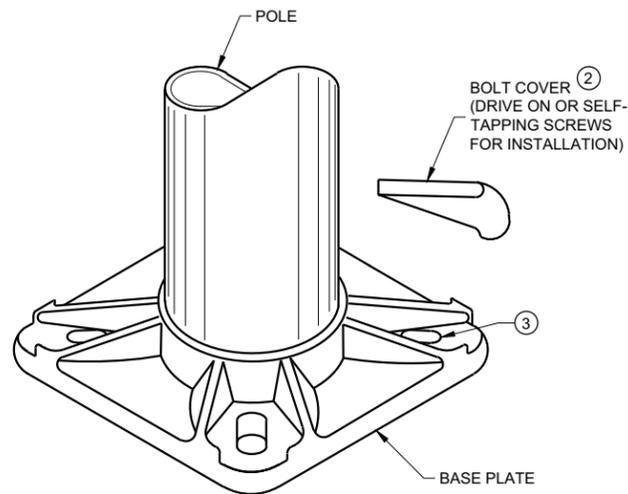
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



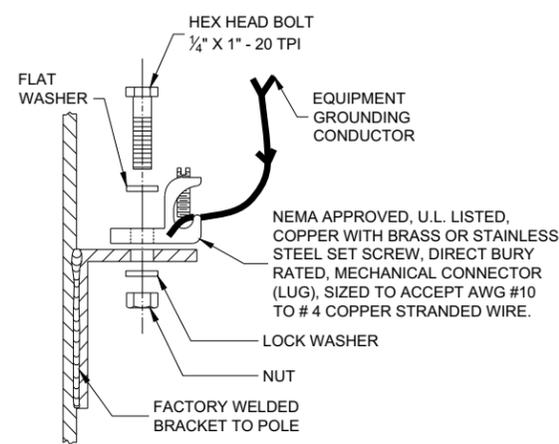
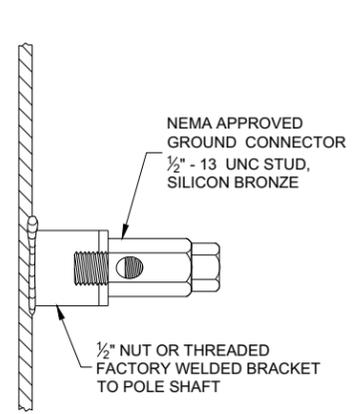
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



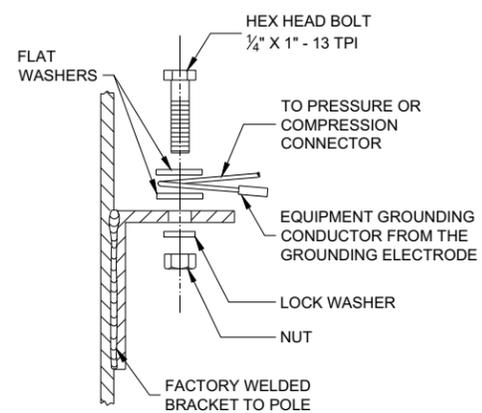
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



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



**HARDWARE DETAILS FOR POLE MOUNTING**

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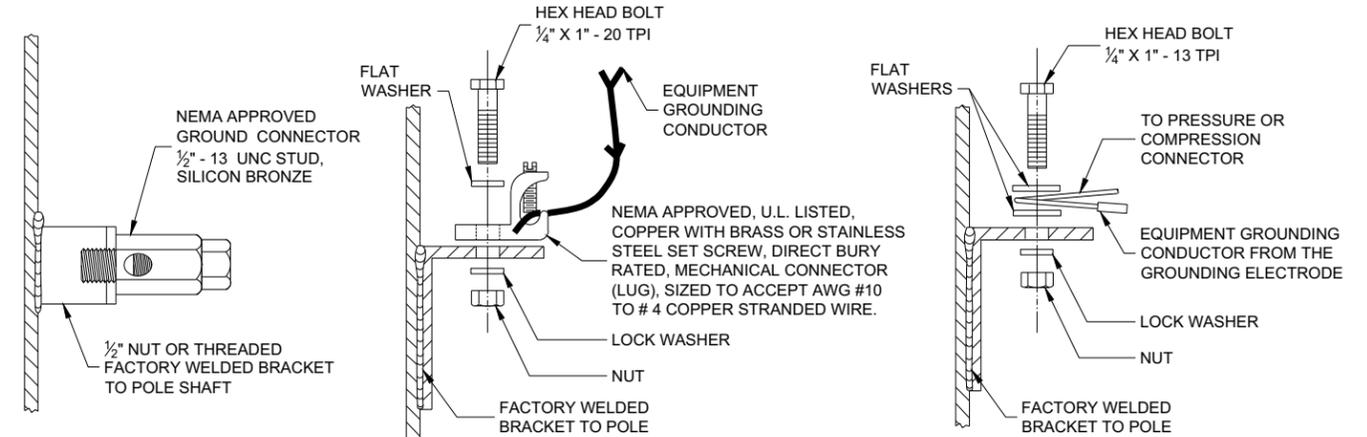
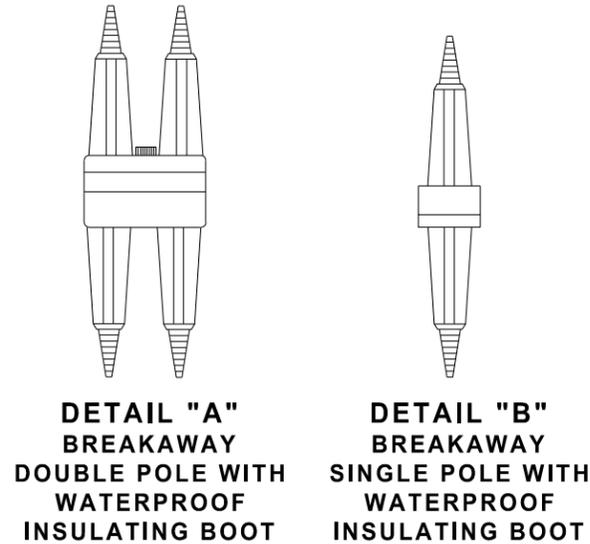
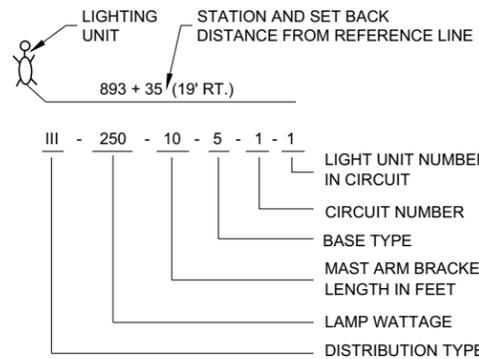
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November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

**GENERAL NOTES**

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

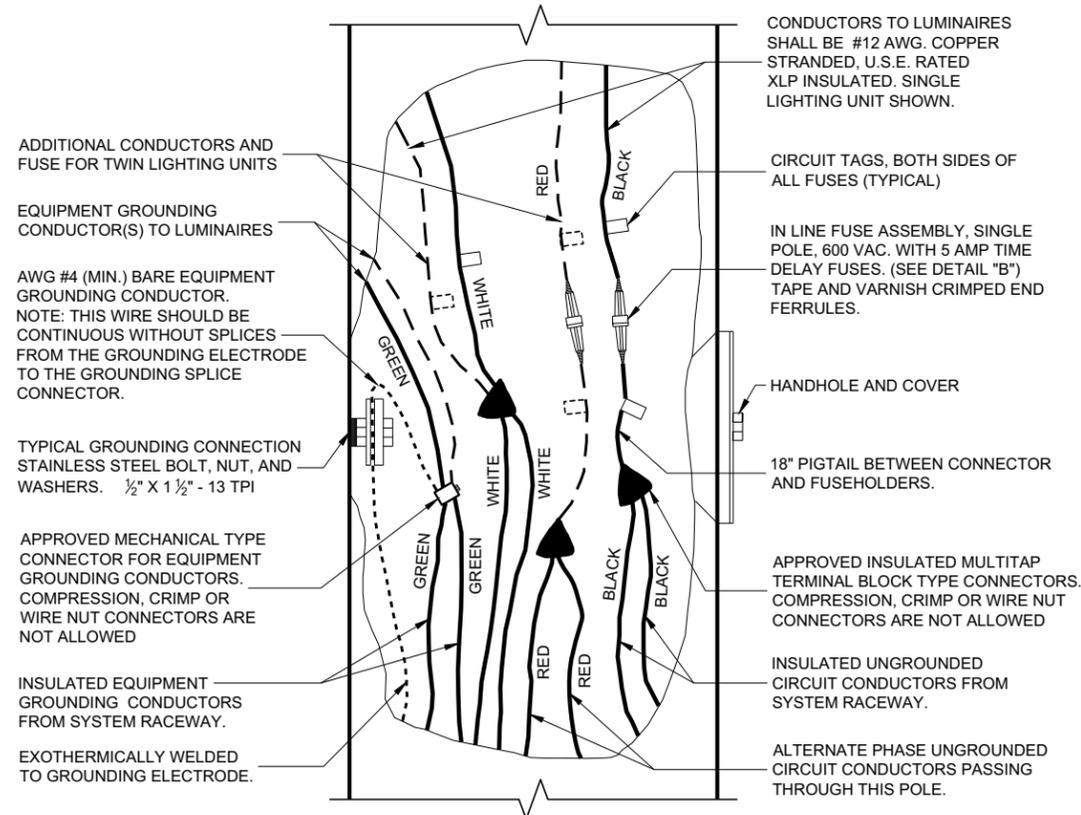
THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

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

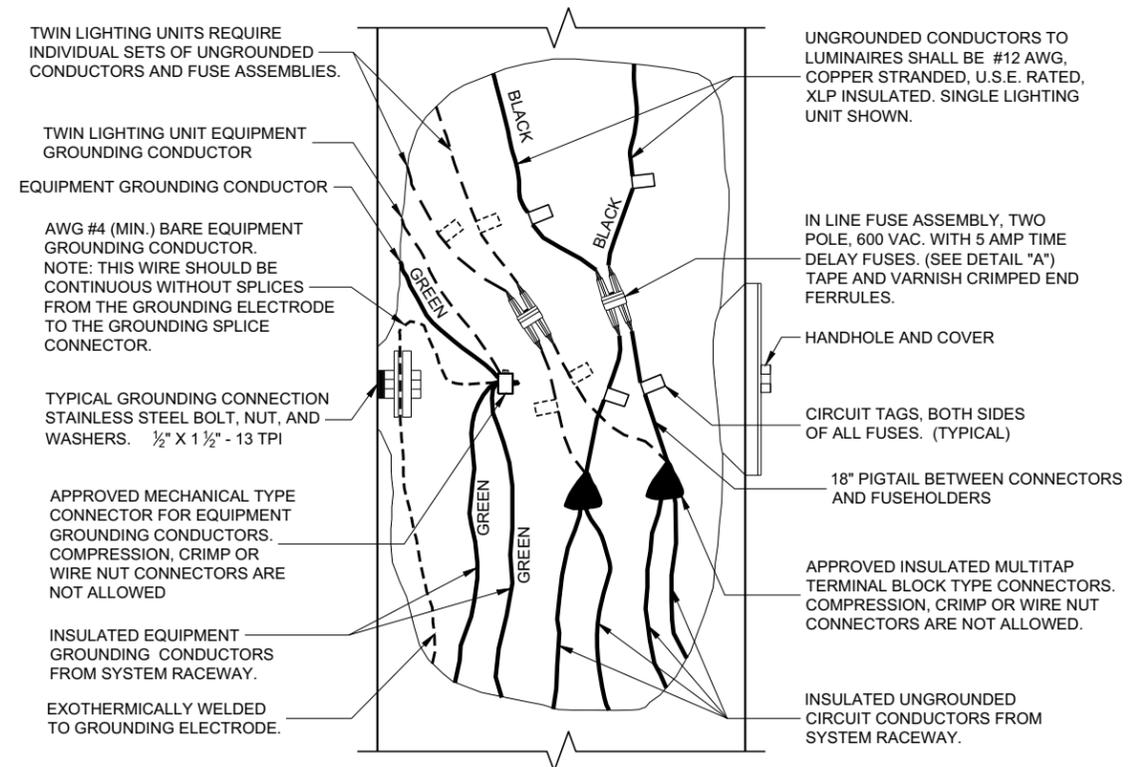


**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**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**

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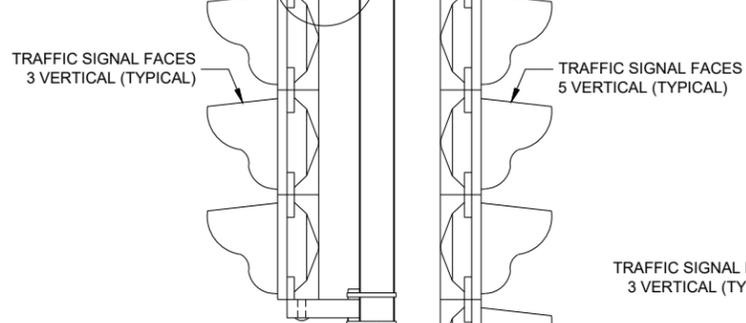
DRILL 1 3/8" HOLE AND PROVIDE GROMMET FOR CABLE ENTRANCE

POLE CAP

6"

SEE SIGNAL FACE MOUNTING DETAIL (BANDED)

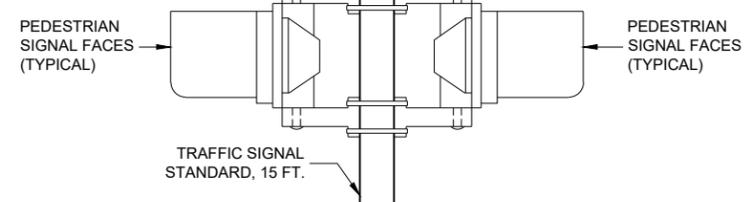
MOUNT WITH ONE 3/4" STAINLESS STEEL BAND AND ONE 3/8" BOLT (TYP.)



MOUNT WITH TWO 3/4" STAINLESS STEEL BANDS

PEDESTRIAN SIGNAL FACES (TYPICAL)

PEDESTRIAN SIGNAL FACES (TYPICAL)



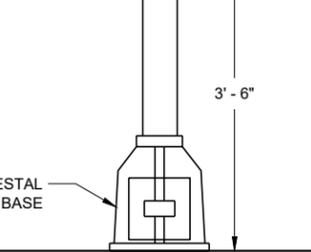
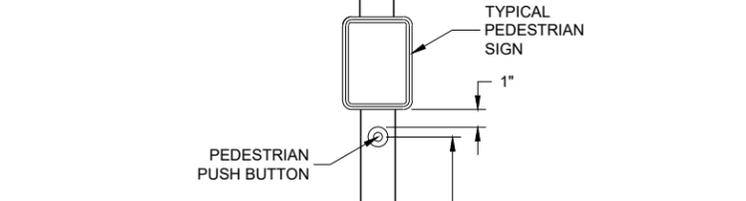
LOCATION OF FOLDING STOP SIGN WHEN REQUIRED

TYPICAL PEDESTRIAN SIGN

1"

PEDESTRIAN PUSH BUTTON

3' - 6"



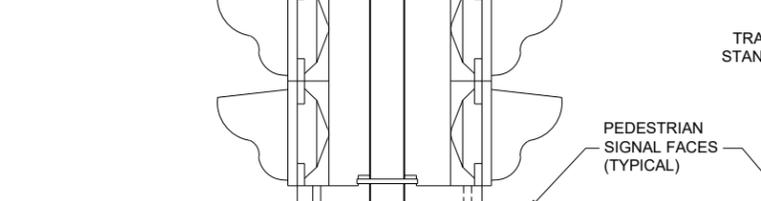
**TRAFFIC SIGNAL STANDARD - 15 FT.**

POLE CAP

6"

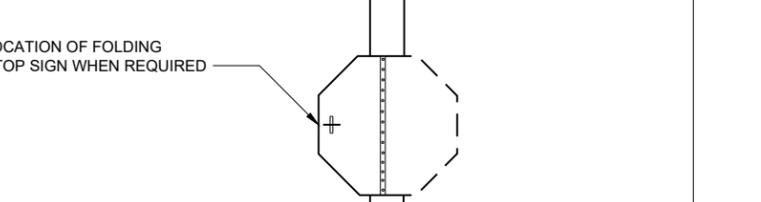
TRAFFIC SIGNAL FACES 3 VERTICAL (TYPICAL)

TRAFFIC SIGNAL FACES 3 VERTICAL (TYPICAL)



TRAFFIC SIGNAL STANDARD, 13 FT.

PEDESTRIAN SIGNAL FACES (TYPICAL)



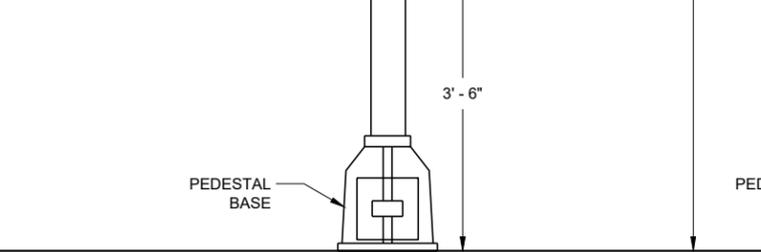
LOCATION OF FOLDING STOP SIGN WHEN REQUIRED

TYPICAL PEDESTRIAN SIGN

1"

PEDESTRIAN PUSH BUTTON

3' - 6"



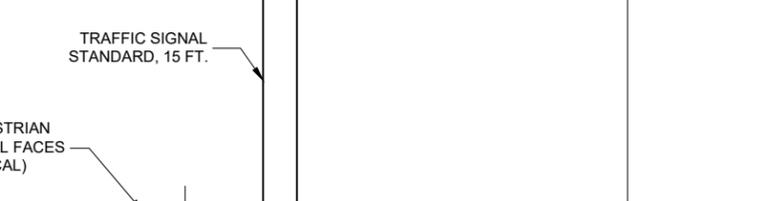
**TRAFFIC SIGNAL STANDARD - 13 FT.**

POLE CAP

6"

TRAFFIC SIGNAL FACES 3 VERTICAL (TYPICAL)

2' - 0" MIN.



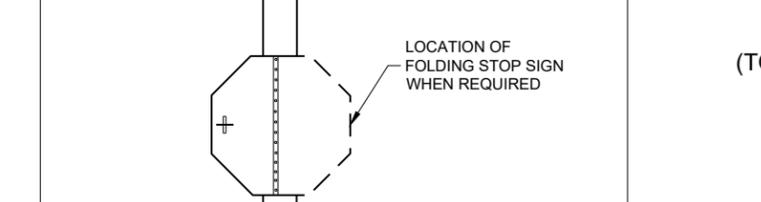
LOCATION OF FOLDING STOP SIGN WHEN REQUIRED

TYPICAL PEDESTRIAN SIGN

1"

PEDESTRIAN PUSH BUTTON

3' - 6"

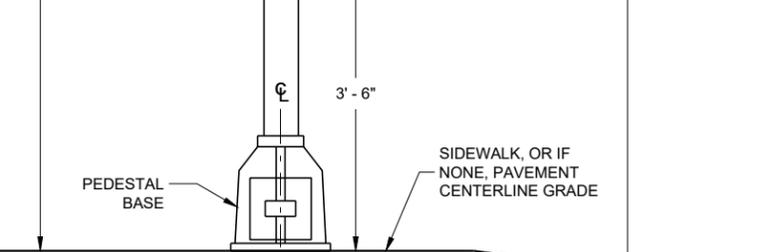


8' - 0"

PEDESTAL BASE

4' - 0" TYPICAL  
3' - 0" MINIMUM

SIDEWALK, OR IF NONE, PAVEMENT CENTERLINE GRADE



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

**GENERAL NOTES**

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

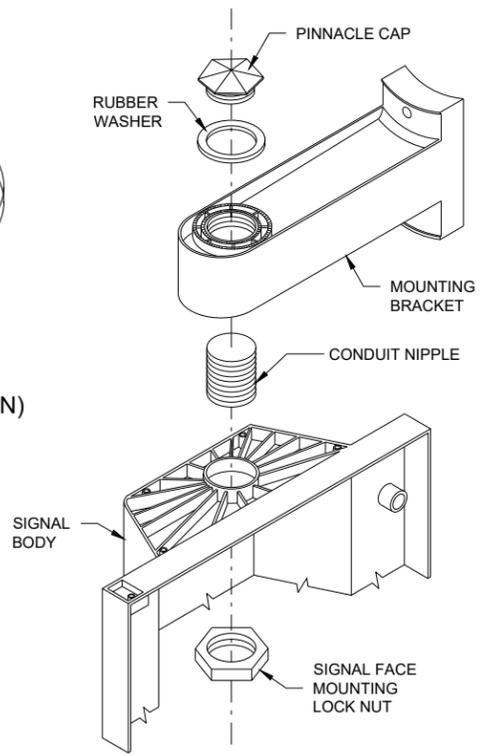
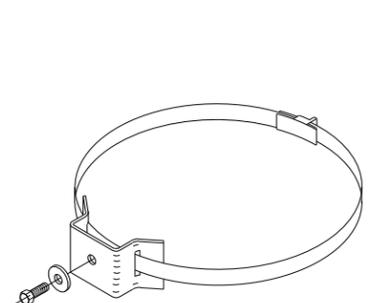
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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  
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APPROVED  
2/28/2013 DATE /S/ Ahmet Demirelek  
STATE ELECTRICAL ENGINEER

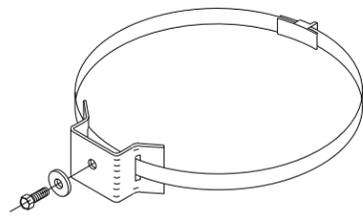
FHWA

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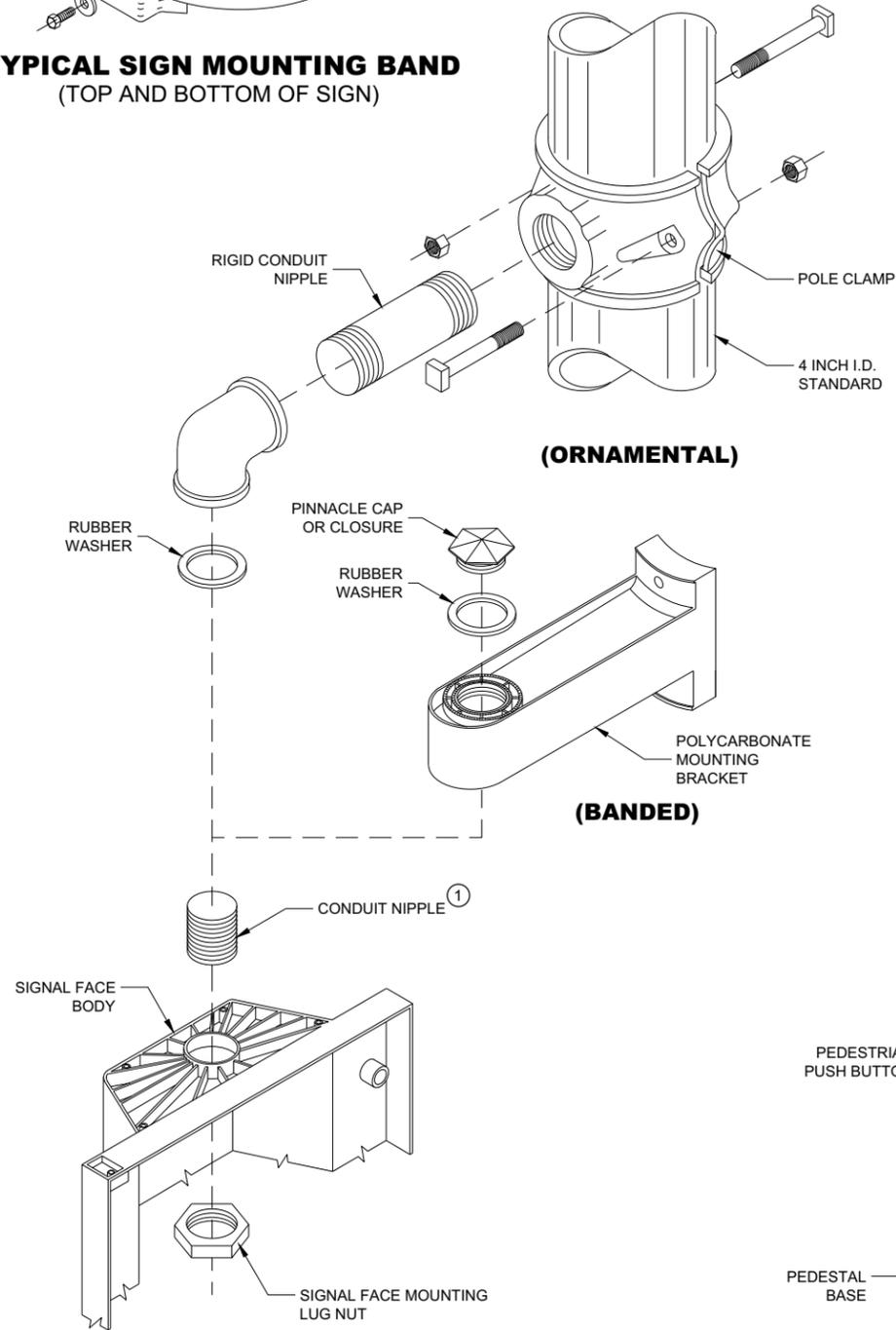
SDD 09E06 - 05

6

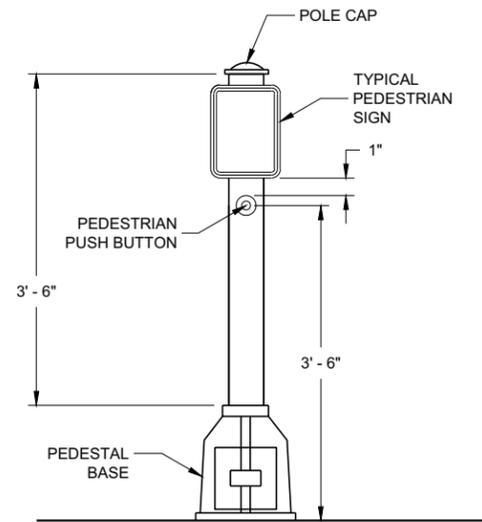
SDD 09E06 - 05



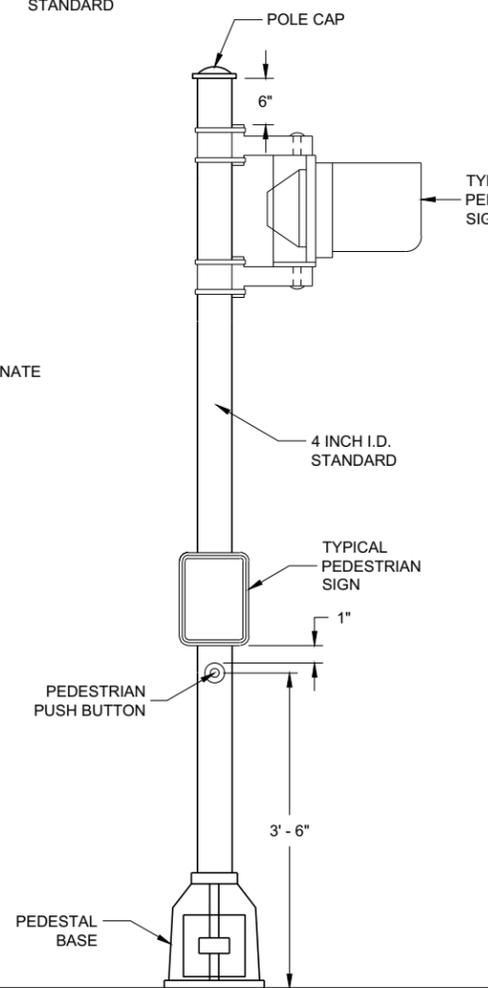
**TYPICAL SIGN MOUNTING BAND**  
(TOP AND BOTTOM OF SIGN)



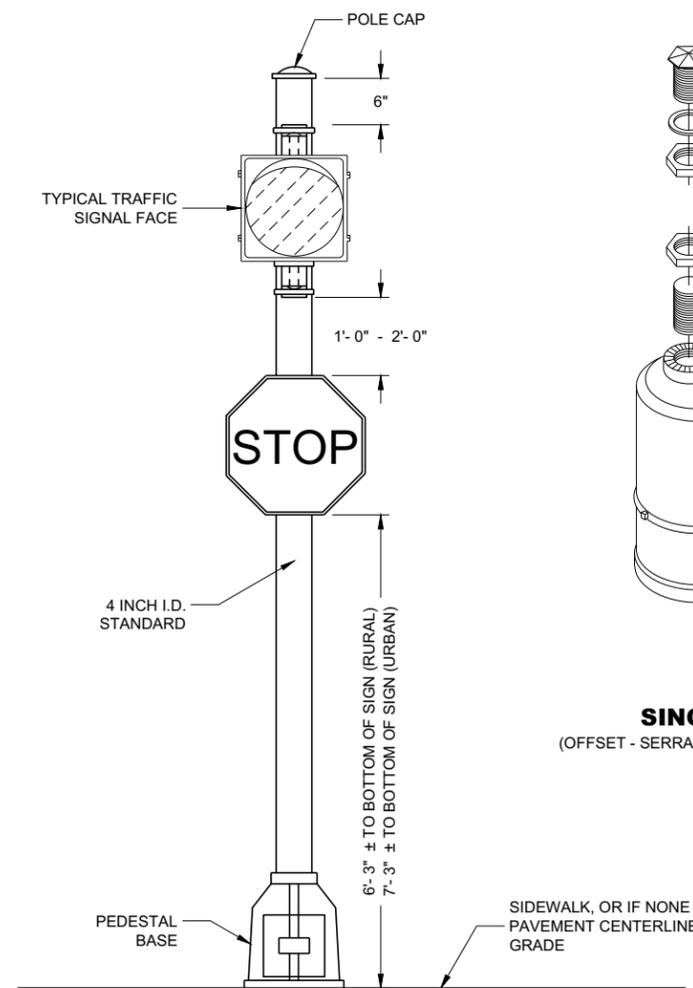
**SIGNAL FACE MOUNTING DETAILS**



**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.

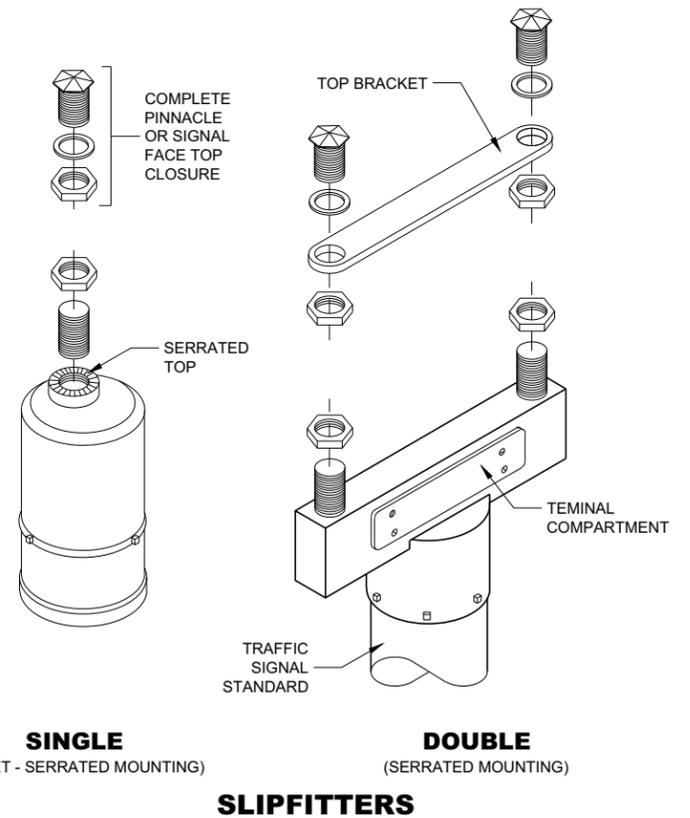
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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.

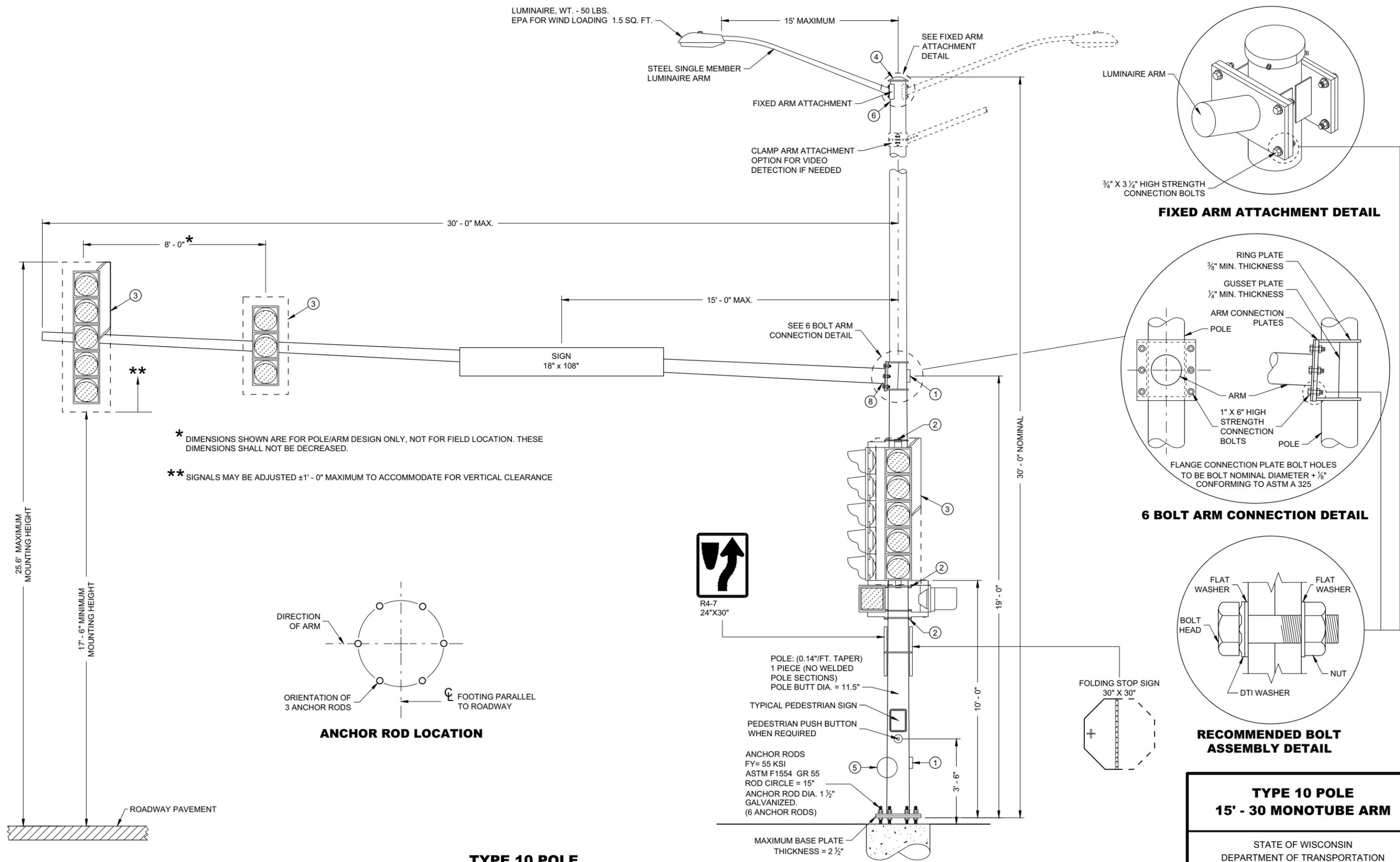


**SLIPFITTERS**

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

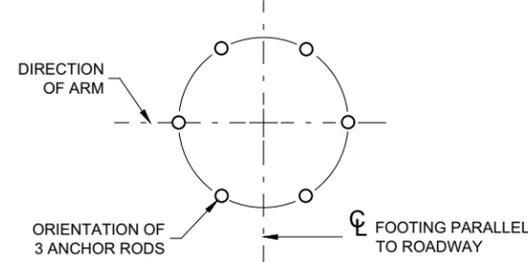
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



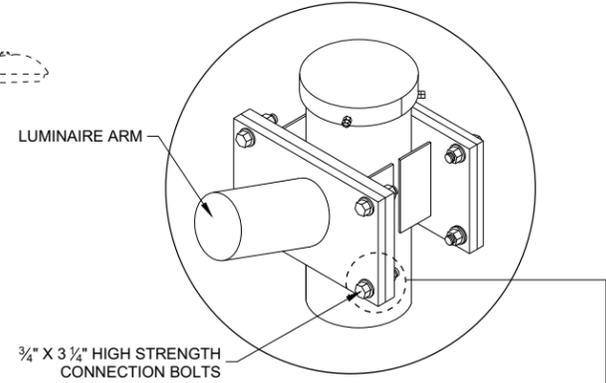
\* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

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

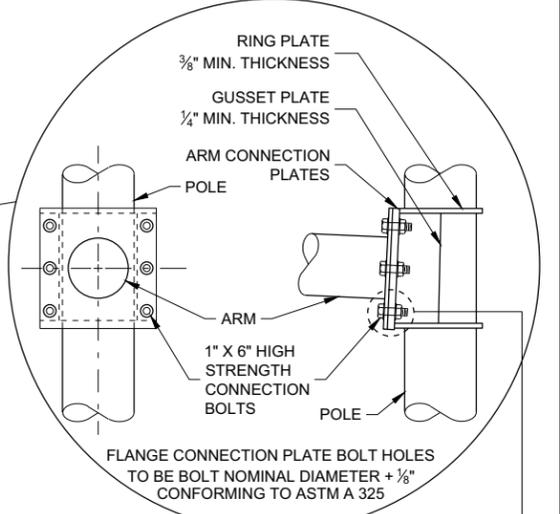


**ANCHOR ROD LOCATION**

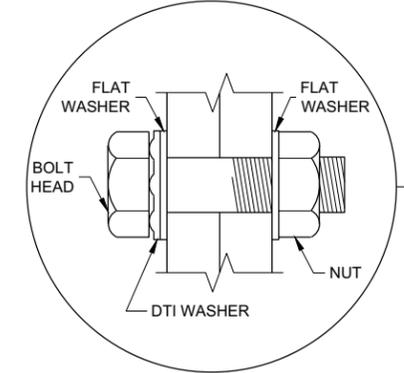
**TYPE 10 POLE  
15' - 30' MONOTUBE ARM  
(MAXIMUM LOAD)**



**FIXED ARM ATTACHMENT DETAIL**

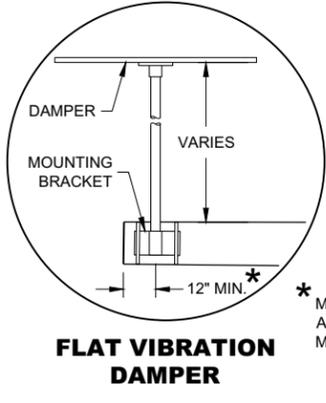
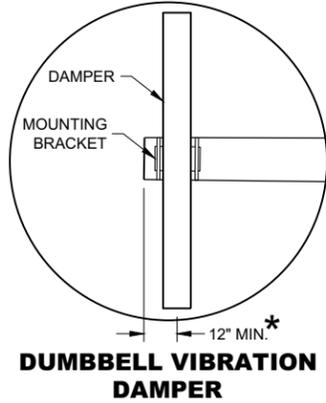


**6 BOLT ARM CONNECTION DETAIL**



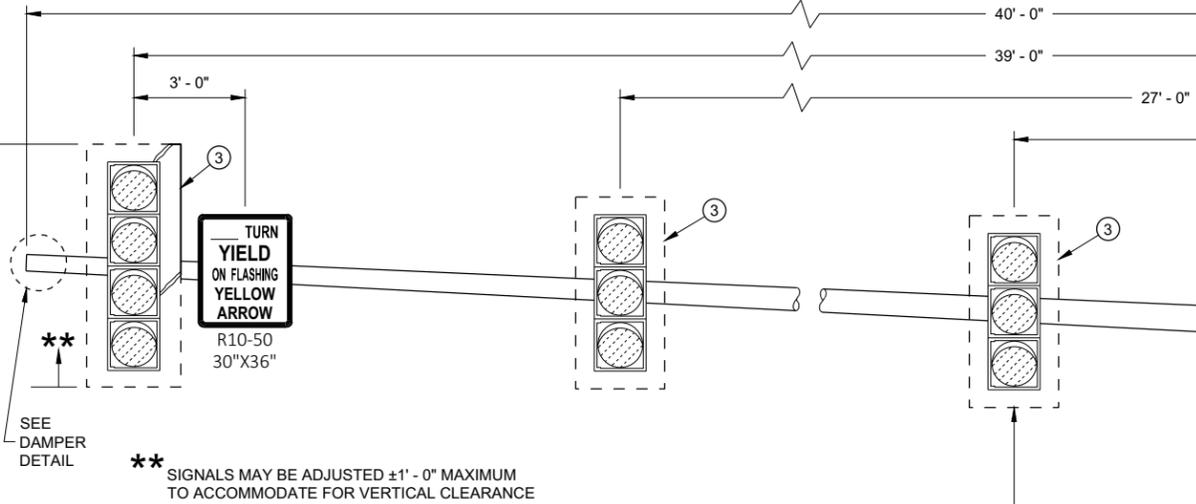
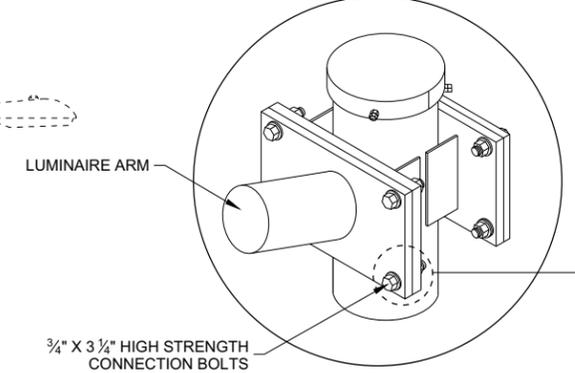
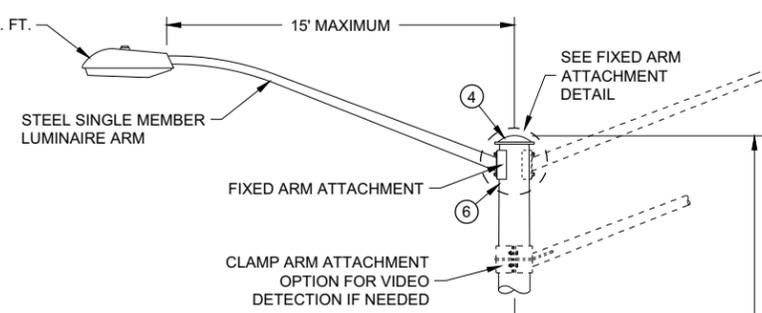
**RECOMMENDED BOLT ASSEMBLY DETAIL**

<b>TYPE 10 POLE 15' - 30' MONOTUBE ARM</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	



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

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

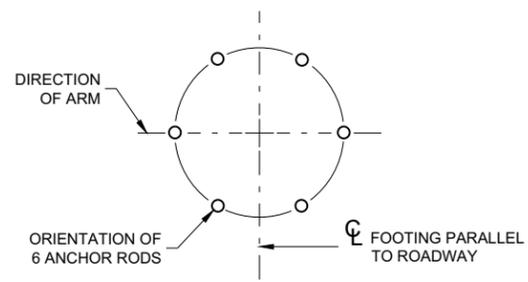
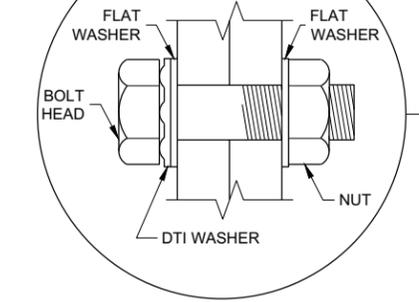
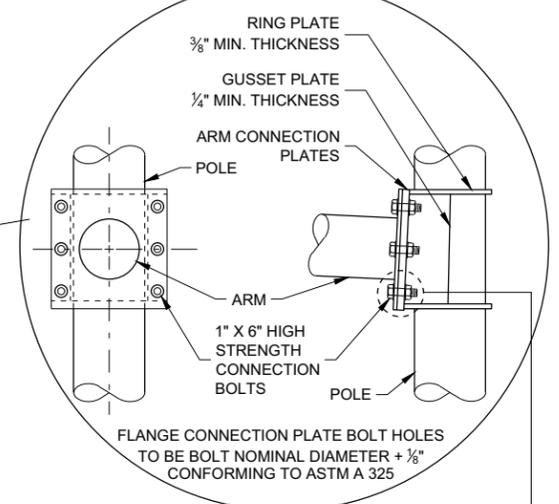
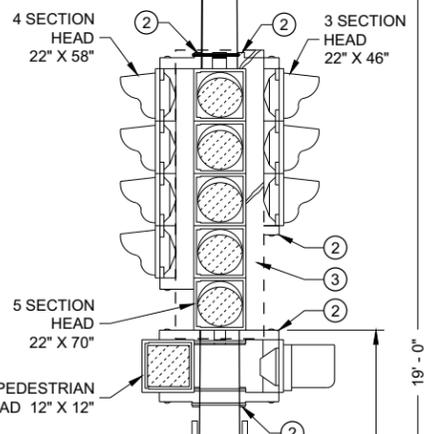


\*\* SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

SEE DAMPER DETAIL

SEE 6 BOLT ARM CONNECTION DETAIL

SIGN (M1 - 94H)  
36" x 108"



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)

FOLDING STOP SIGN  
30" x 30"

MAXIMUM BASE PLATE THICKNESS = 2 1/2"

**TYPE 10 SPECIAL POLE  
40' MONOTUBE ARM  
(MAXIMUM LOAD)**

**TYPE 10 SPECIAL POLE  
40' MONOTUBE ARM**

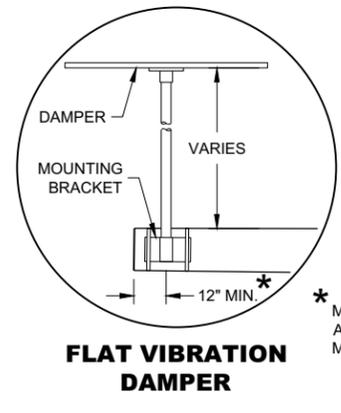
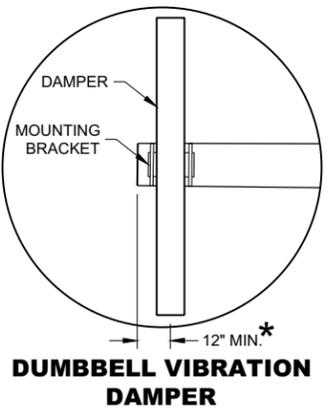
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

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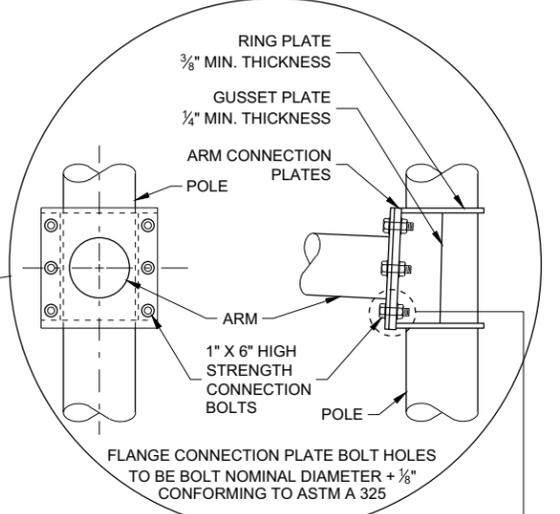
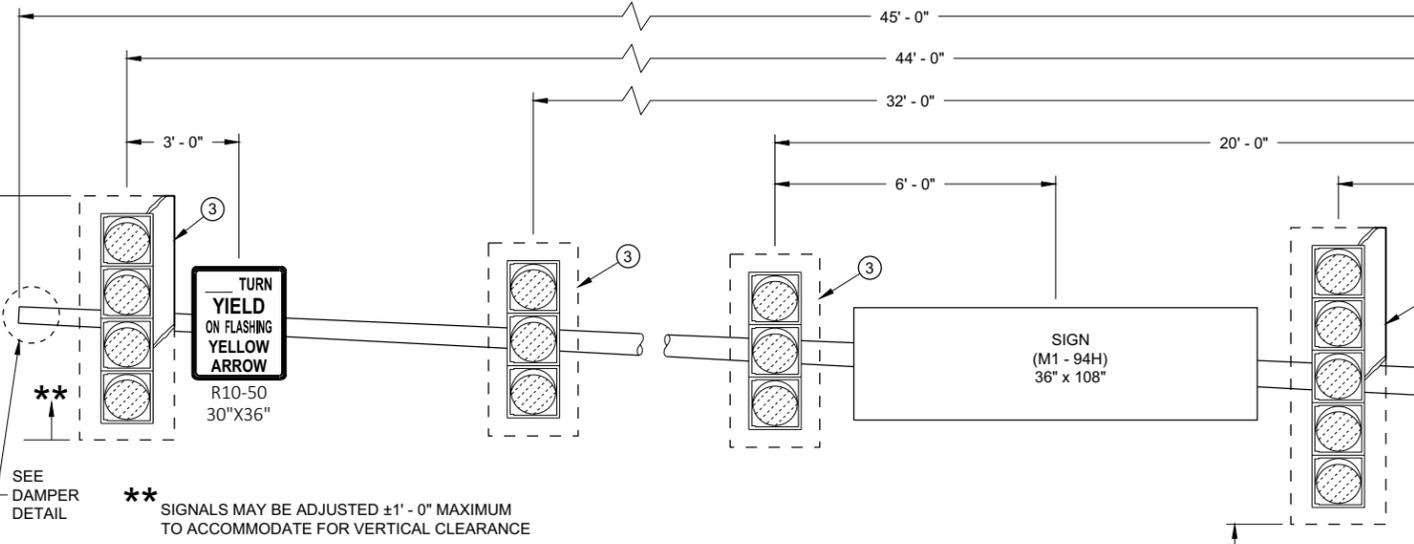
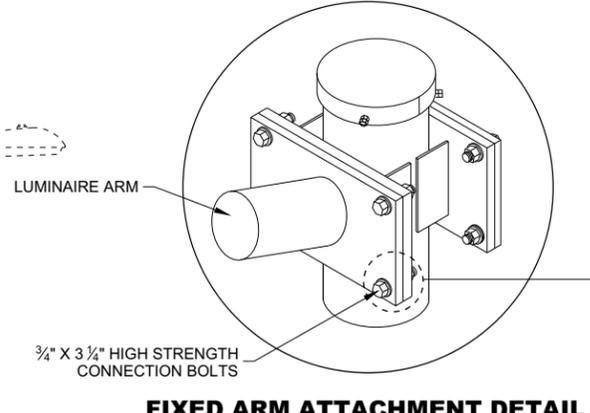
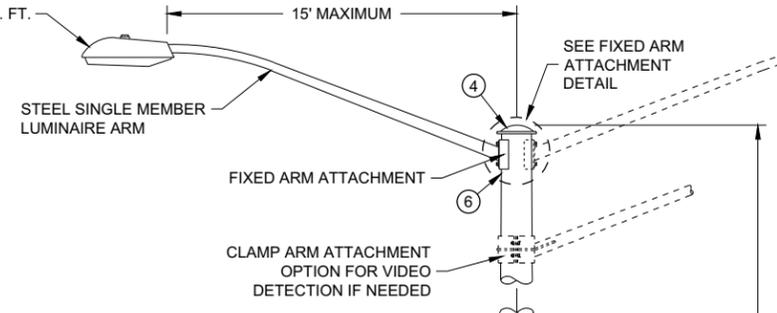
SDD 09E08 - 09g

SDD 09E08 - 09g



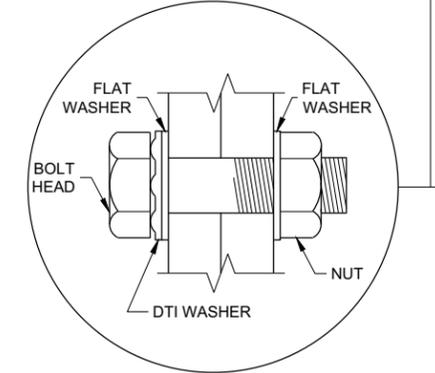
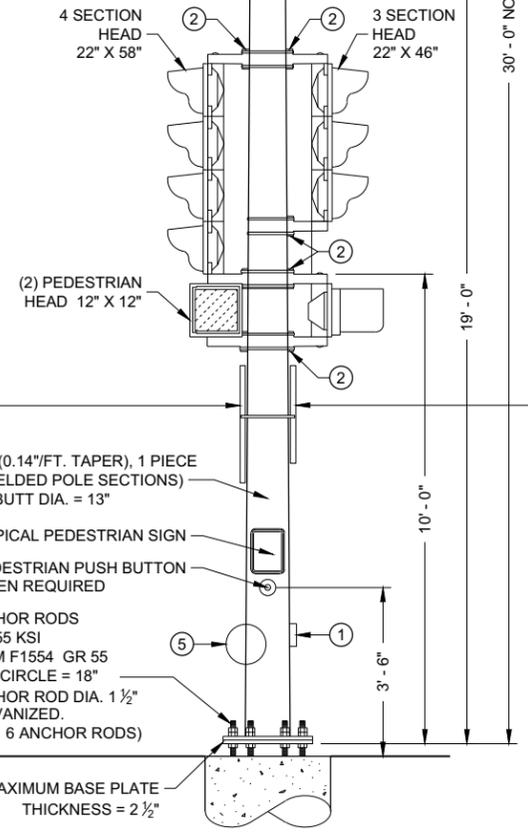
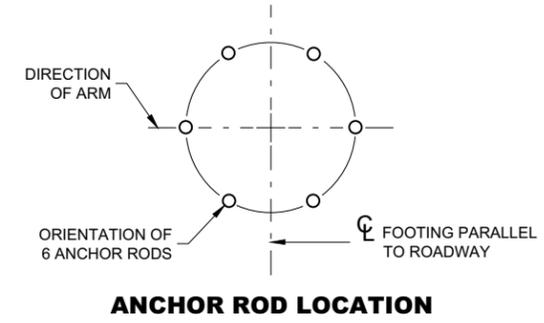
\* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

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



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**TYPE 10 SPECIAL POLE  
45' MONOTUBE ARM  
(MAXIMUM LOAD)**

<b>TYPE 10 SPECIAL POLE 45' MONTUBE ARM</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

SDD 09E08 - 08h

SDD 09E08 - 08h

## 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.

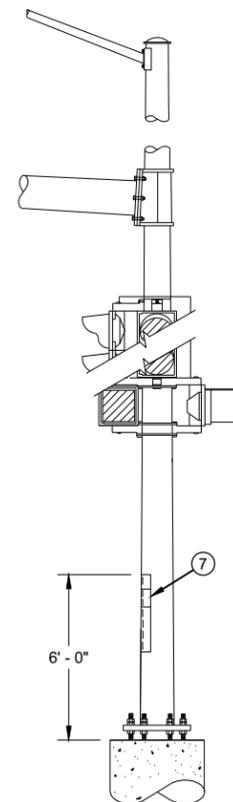
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- 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.

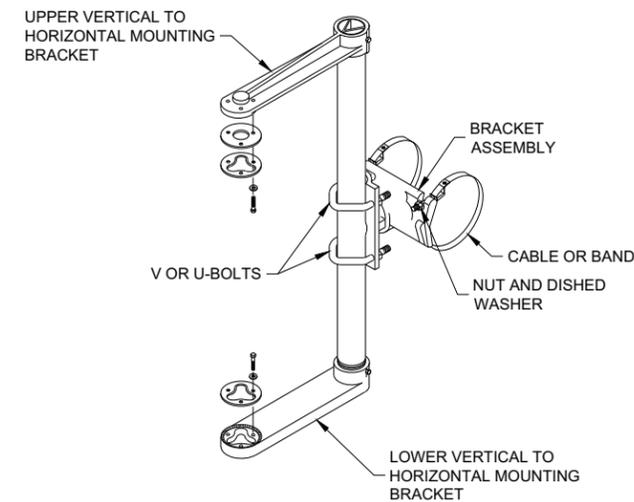
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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

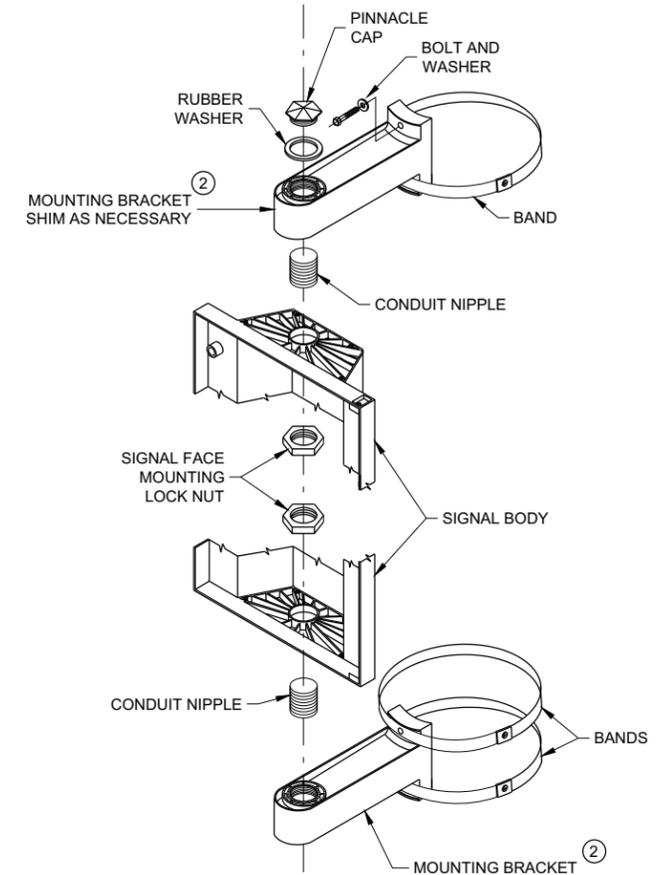
- ⑧ FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



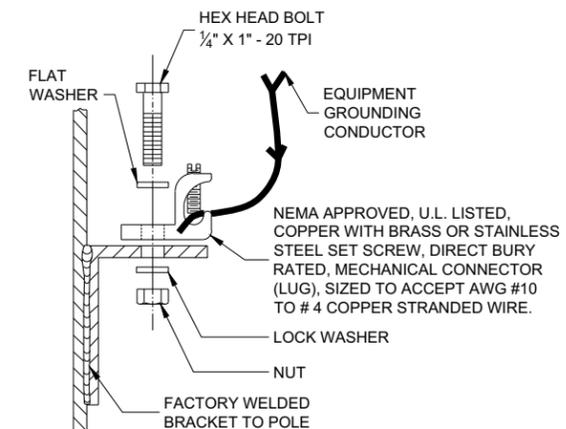
**STRUCTURAL IDENTIFICATION  
PLAQUE PLACEMENT**



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

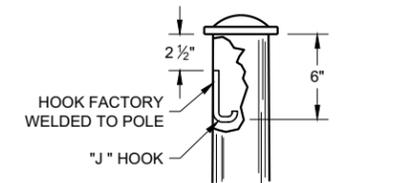


**SIGNAL FACE VERTICAL  
MOUNTING DETAIL**



**TYPICAL GROUNDING  
CONNECTIONS**

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



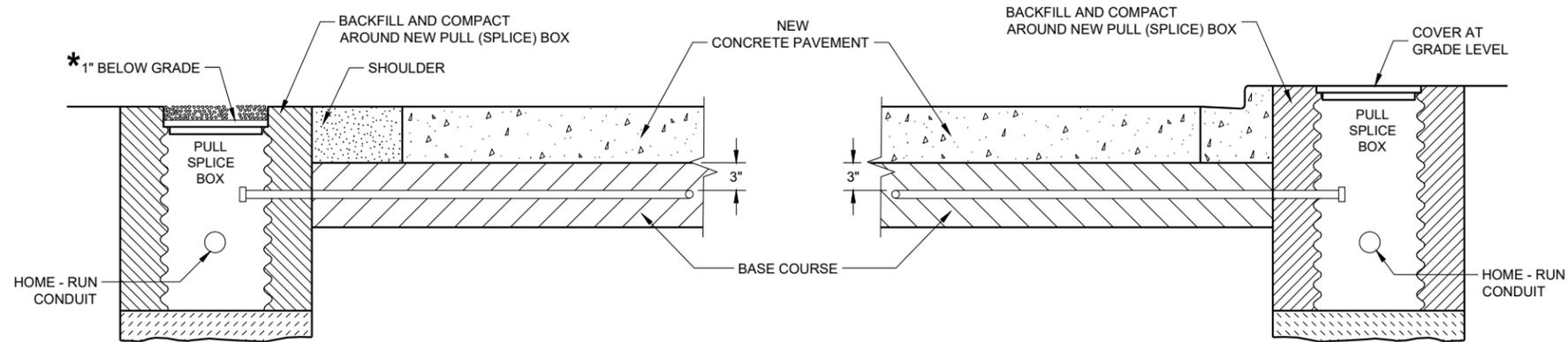
**TYPICAL "J" HOOK  
WIRE SUPPORT**

**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



**SECTION A - A  
NO CURB AND GUTTER**

**SECTION B - B  
CURB AND GUTTER**

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

**LOOP DETECTOR INSTALLATION DETAIL**

**GENERAL NOTES**

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

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

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

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 READING 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.

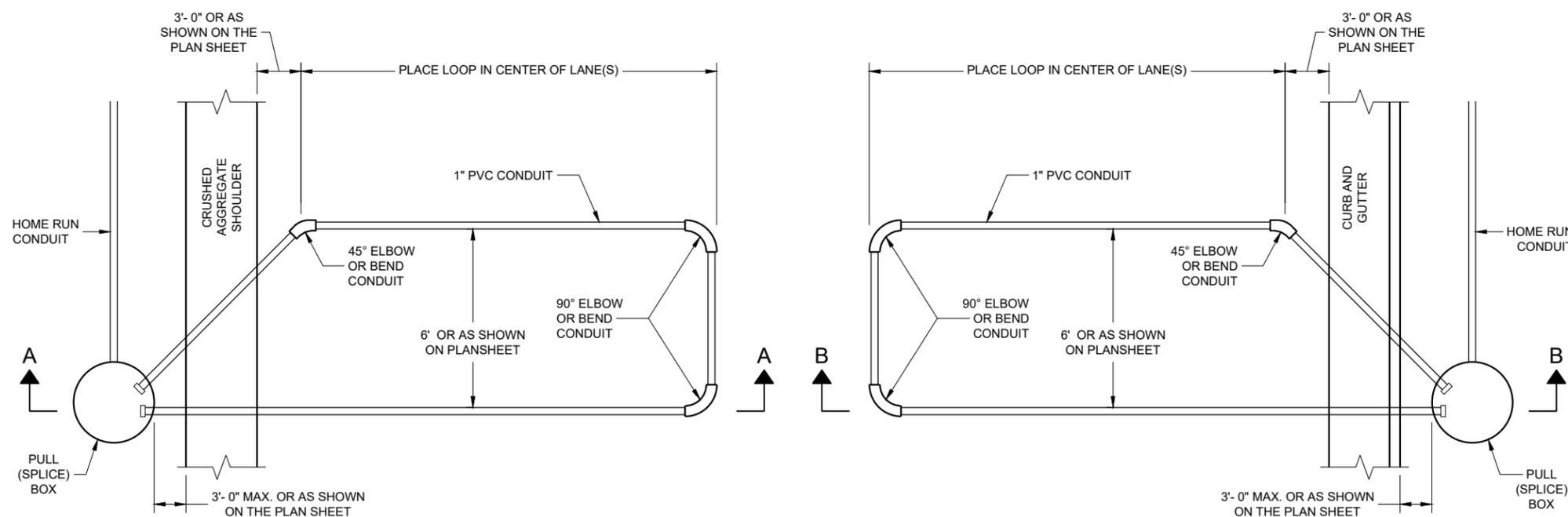
THE #12 AWG LOOP WIRE IN THE ROADSIDE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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 CONDUIT 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.



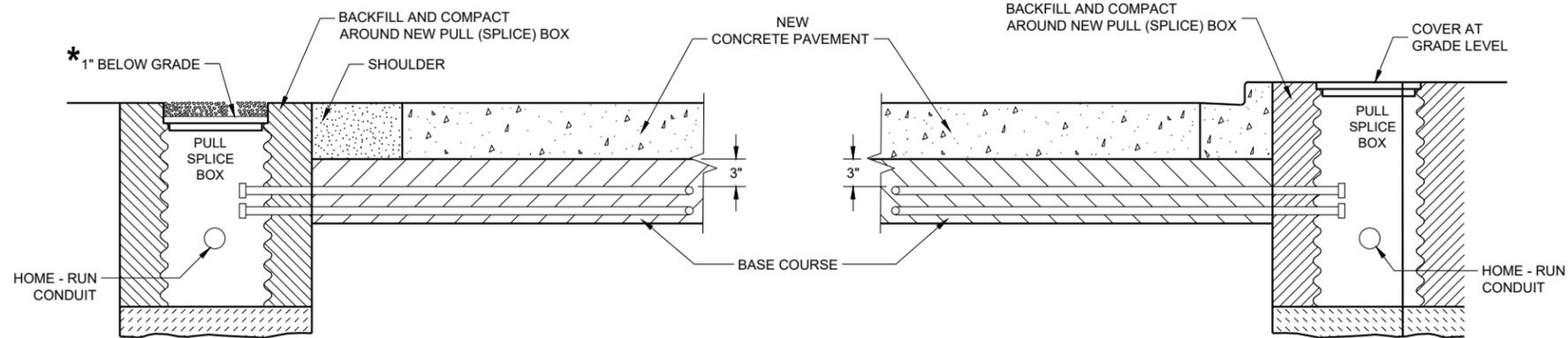
**TYPICAL PLAN LOOP DETECTOR  
WITH 18" OR 24" PULL (SPLICE) BOX**

**LOOP DETECTOR INSTALLED  
IN BASE COURSE WITH  
PULL (SPLICE) BOX OFF  
ROADWAY (OPTION 1)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

FHWA



**SECTION A - A  
NO CURB AND GUTTER**

**SECTION B - B  
CURB AND GUTTER**

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

**LOOP DETECTOR INSTALLATION DETAIL**

**GENERAL NOTES**

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

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

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

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 READING 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.

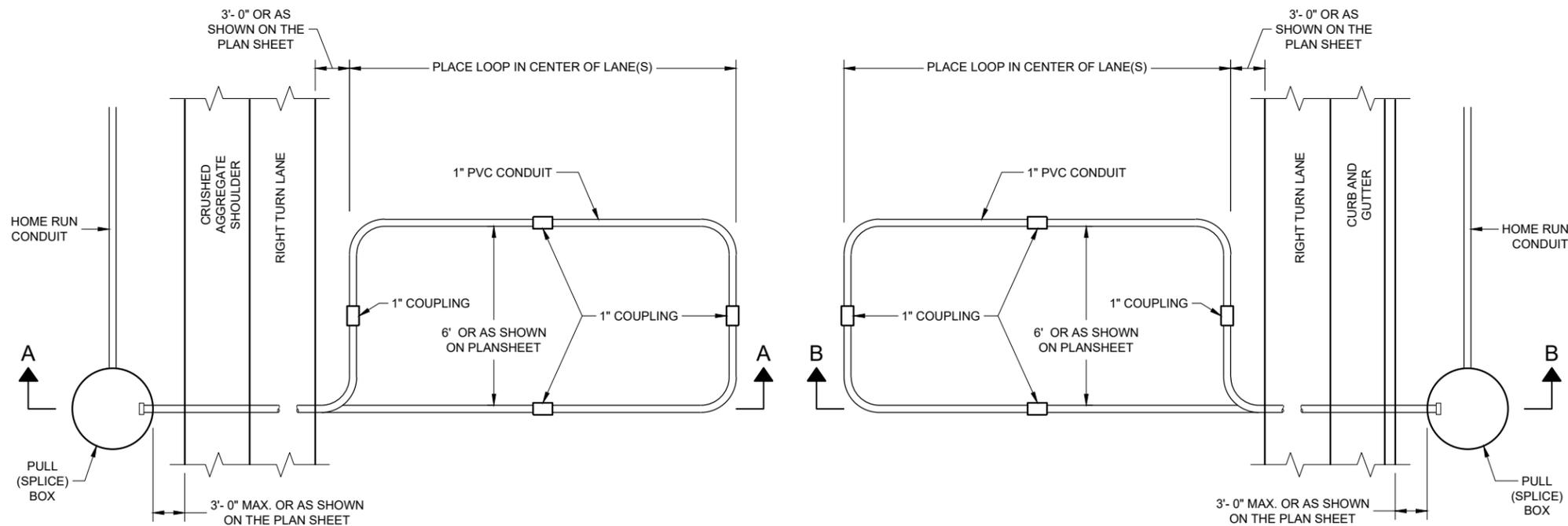
THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

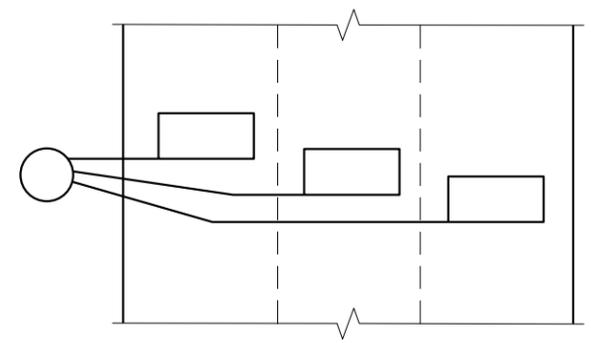
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT 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 LOOP DETECTOR  
WITH 24" PULL (SPLICE) BOX**



**MULTI-LANE  
INSTALLATION**

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SDD 09F15 - 04b

SDD 09F15 - 04b

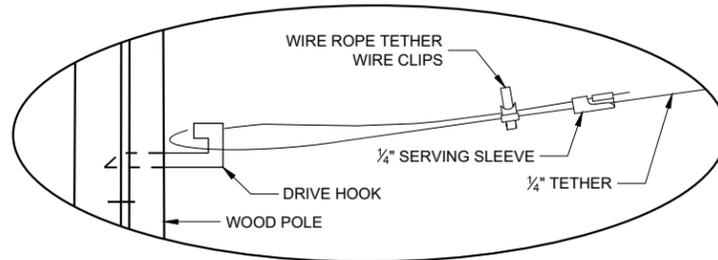
**LOOP DETECTOR INSTALLED  
IN BASE COURSE WITH  
PULL (SPLICE) BOX OFF  
ROADWAY (OPTION 2)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
September 2014 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA

MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'

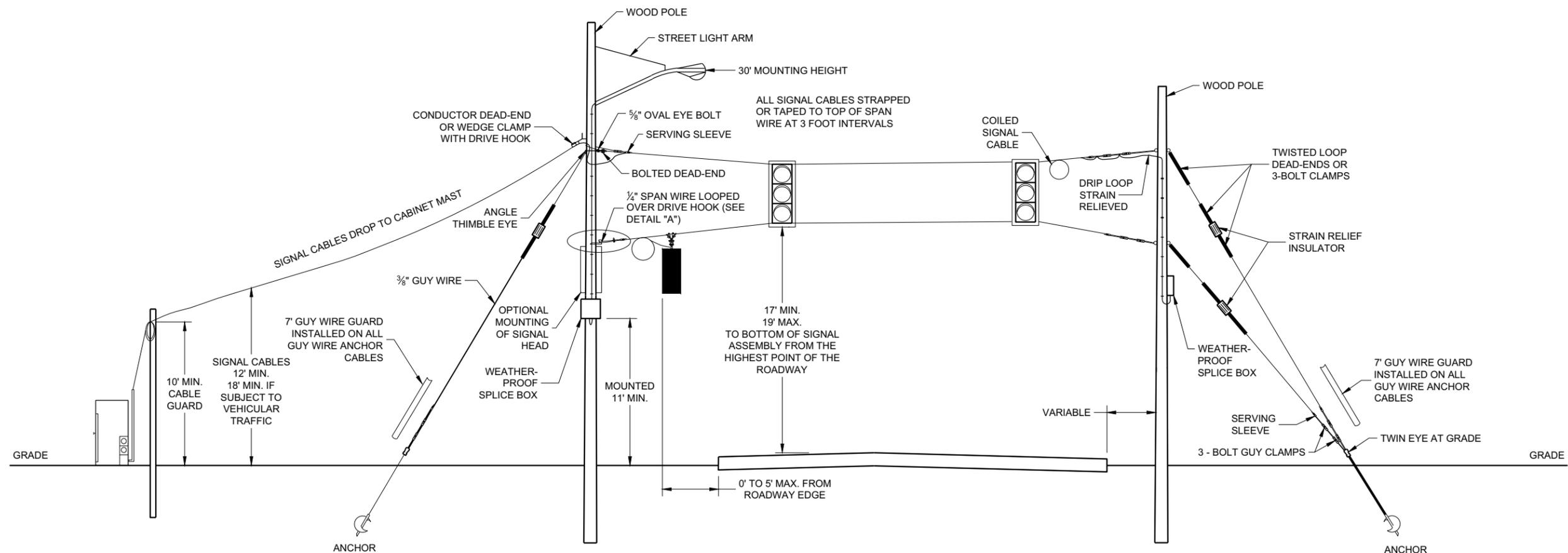


**DETAIL "A"**

**GENERAL NOTES**

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
  - A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
  - B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
  - C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
  - D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
3. SPAN WIRE:
  - A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
  - B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
  - C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



**SPAN WIRE TEMPORARY SIGNALS**

<b>SPAN WIRE TEMPORARY TRAFFIC SIGNAL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2015 DATE	/s/ Ahmet Demerbilek STATE ELECTRICAL ENGINEER
FHWA	

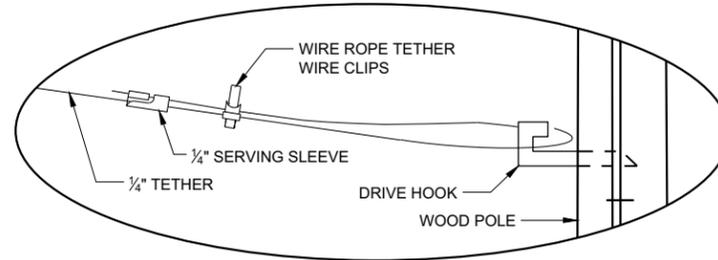
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SDD09G01 - 04a

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

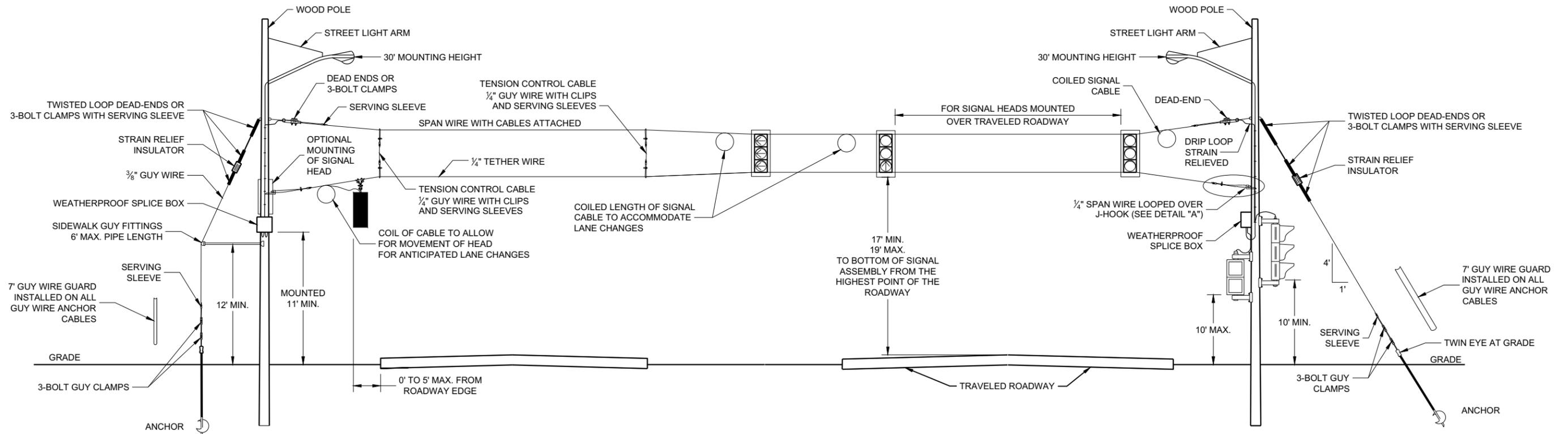


**DETAIL "A"**

**GENERAL NOTES**

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
  - A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
  - B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
  - C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
  - D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
  - E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
3. SPAN WIRE:
  - A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
  - B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
  - C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



**SPAN WIRE  
TEMPORARY SIGNALS  
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY  
TRAFFIC SIGNAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

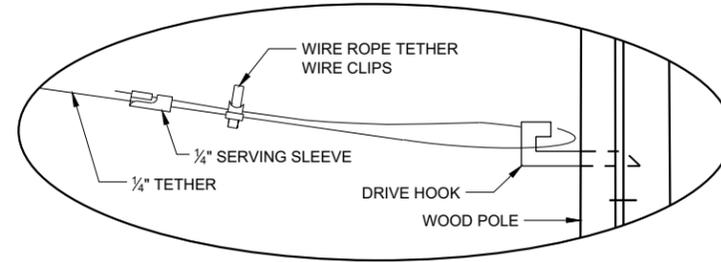
APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGINEER

FHWA

SDD09G01 - 04b

SDD09G01 - 04b

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

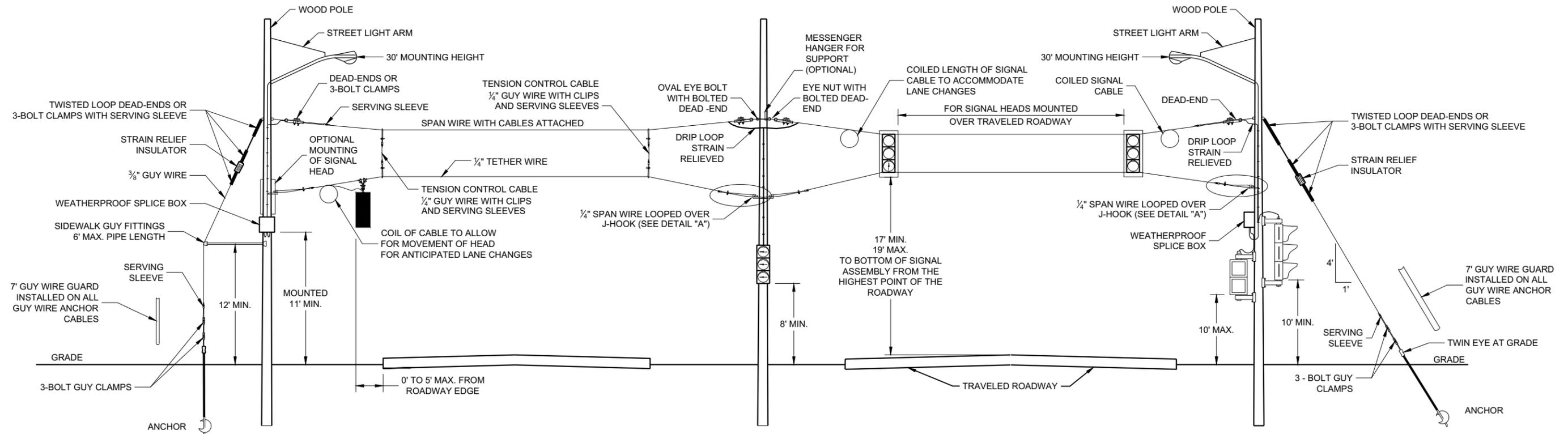


**DETAIL "A"**

**GENERAL NOTES**

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

- WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
- SIGNAL FACES:
  - ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
  - EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
  - EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
  - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
  - FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
- SPAN WIRE:
  - EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
  - SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
  - THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



**SPAN WIRE  
TEMPORARY SIGNALS  
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY  
TRAFFIC SIGNAL**

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STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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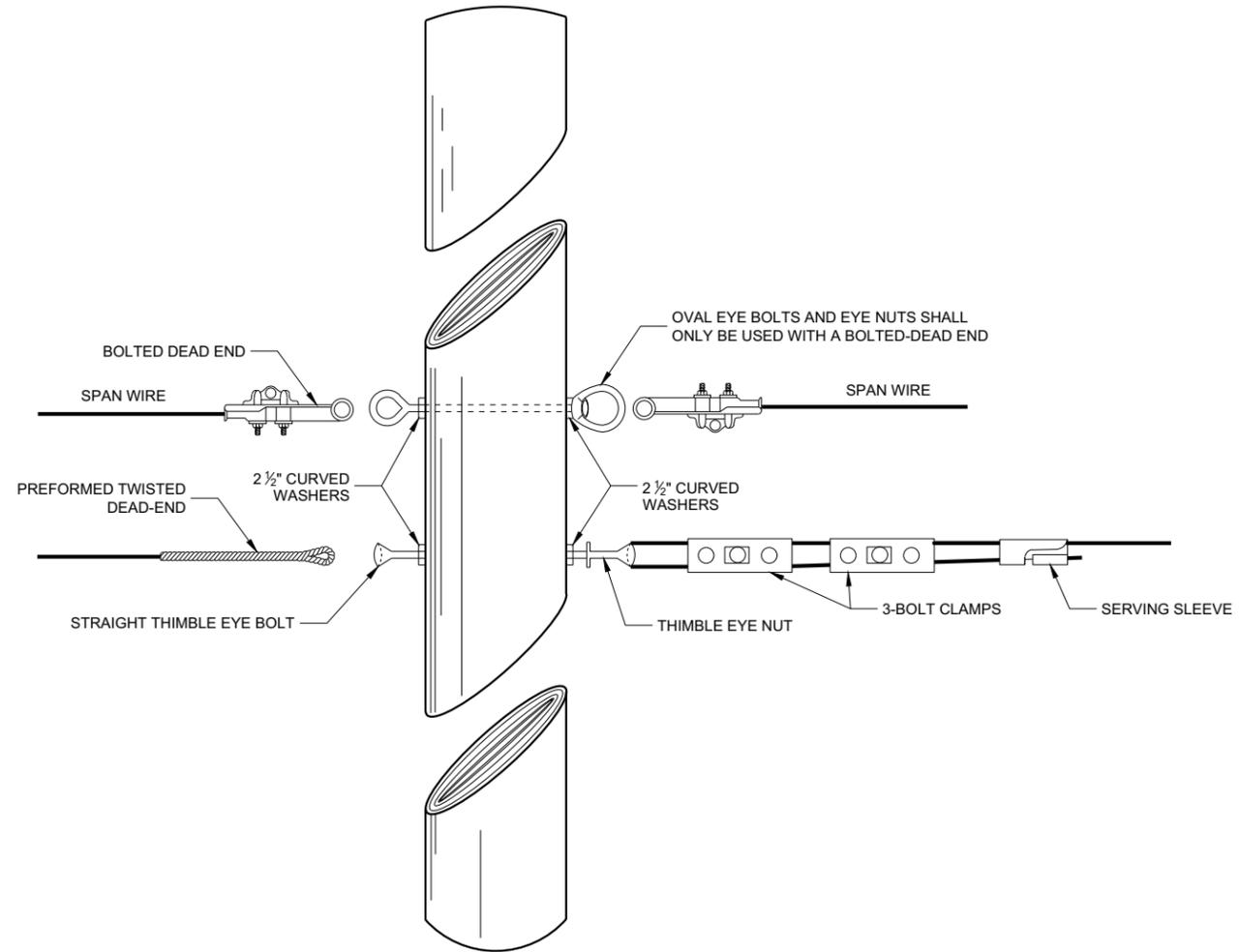
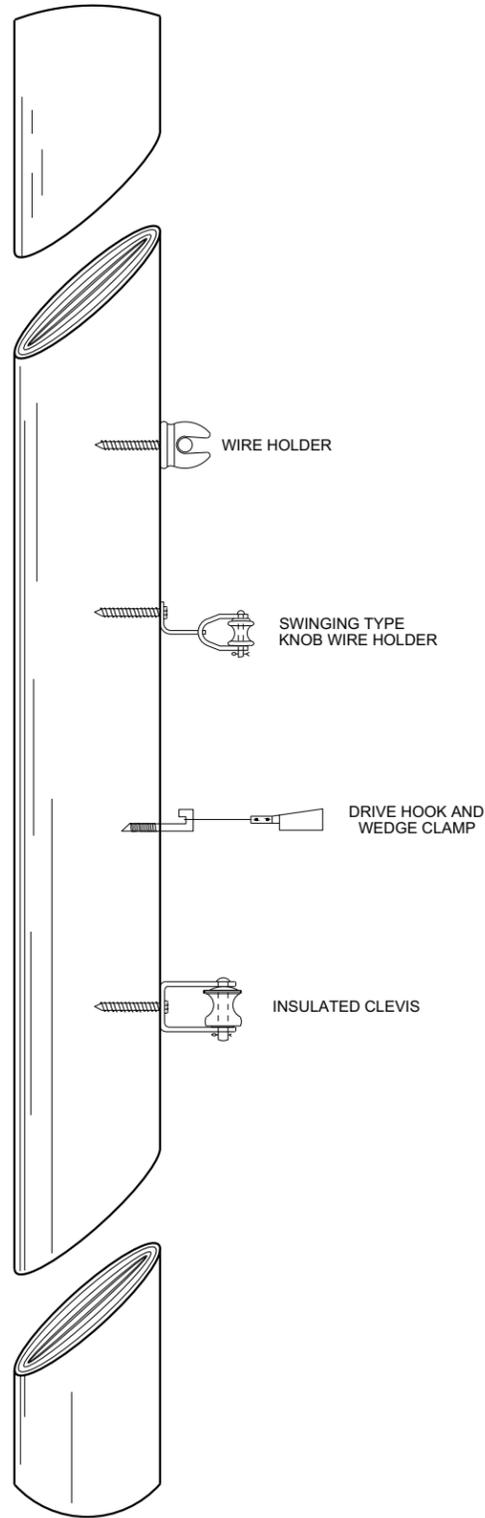
APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE STATE ELECTRICAL ENGINEER

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FHWA

SDD09G01 - 04c

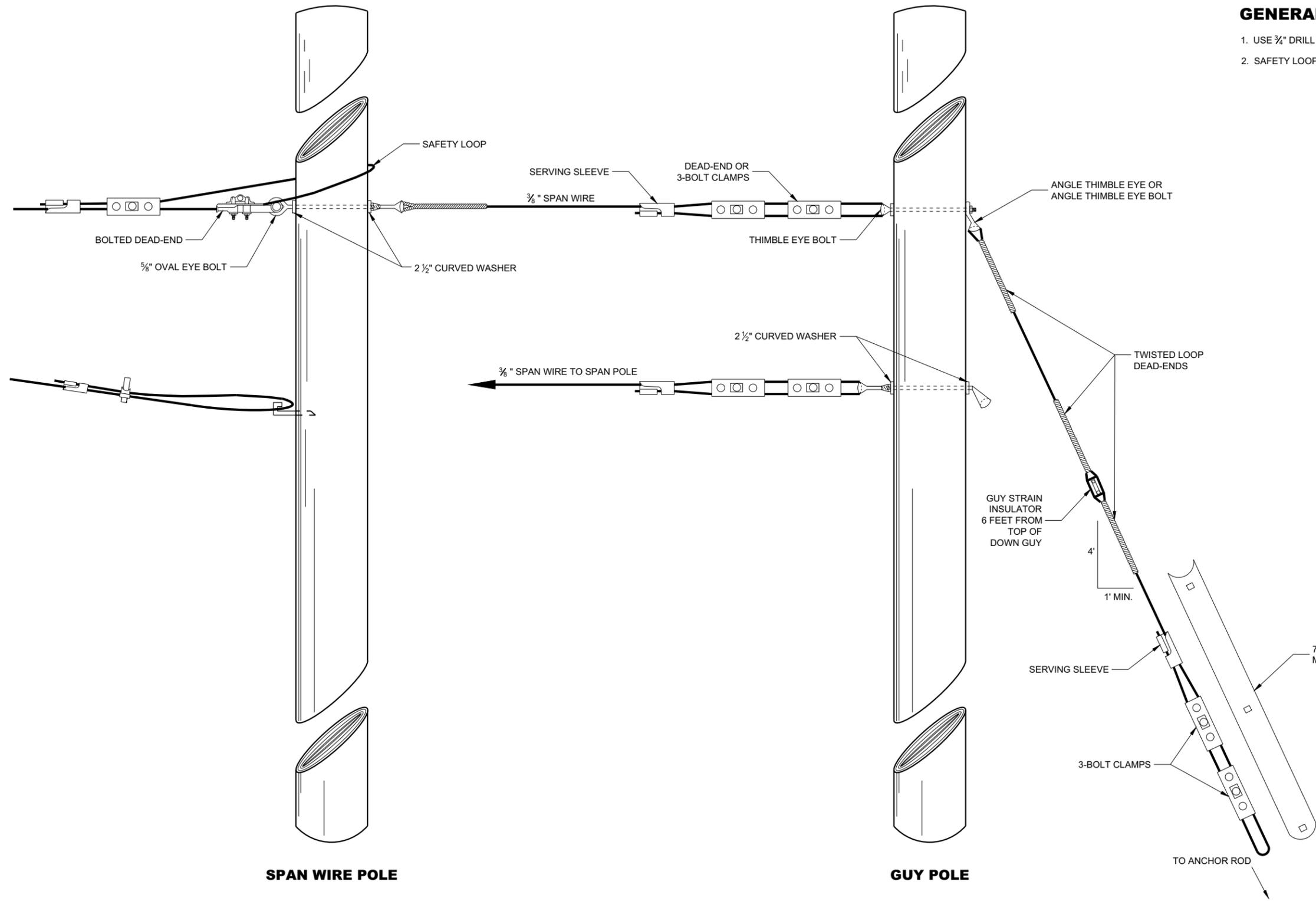
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**SPAN WIRE TEMPORARY  
TRAFFIC SIGNAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



**GENERAL NOTES**

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE FOR 5/8" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.

SPAN WIRE POLE

GUY POLE

**TYPICAL DEAD-ENDINGS OR GUYING**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

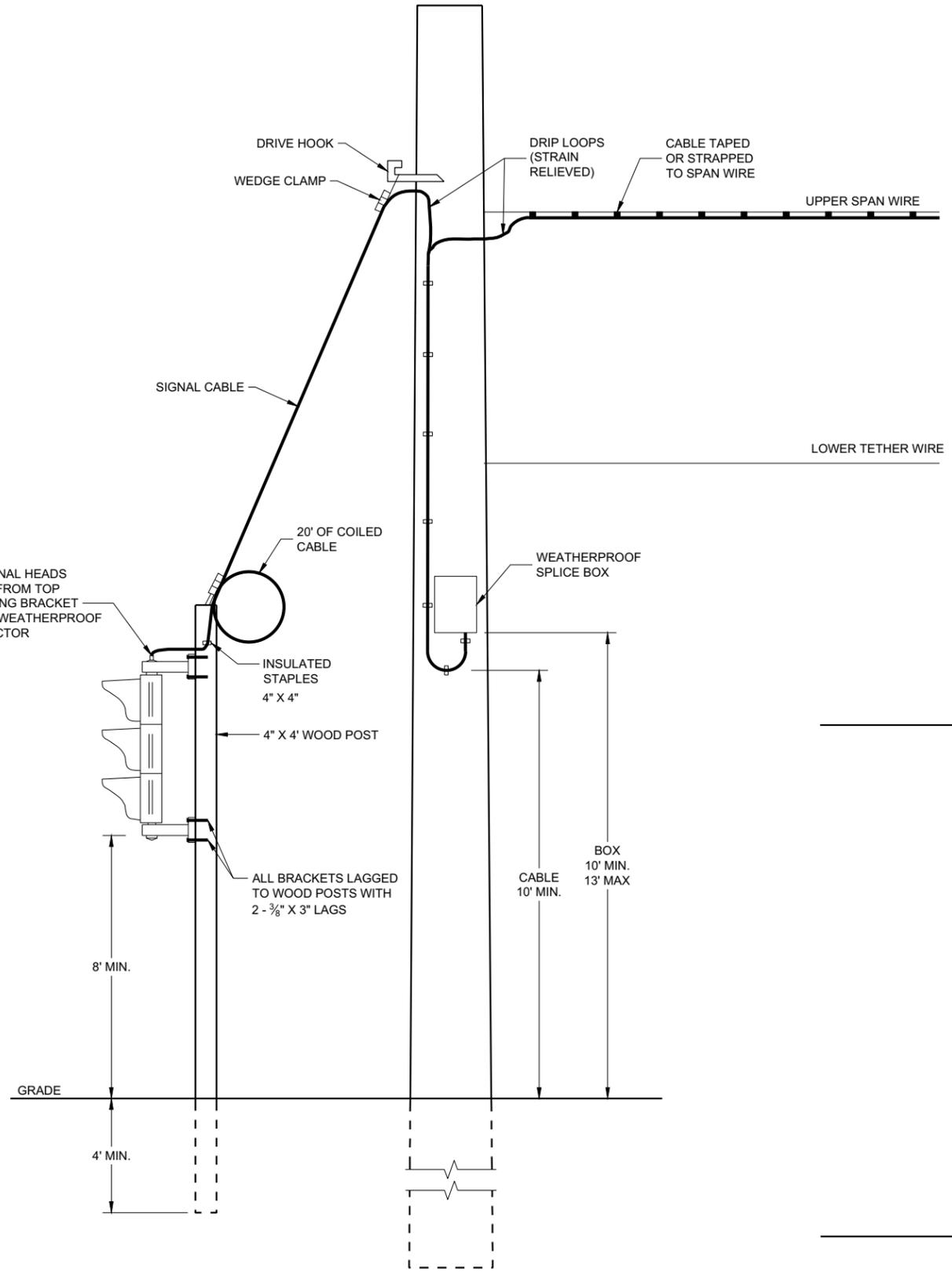
FHWA

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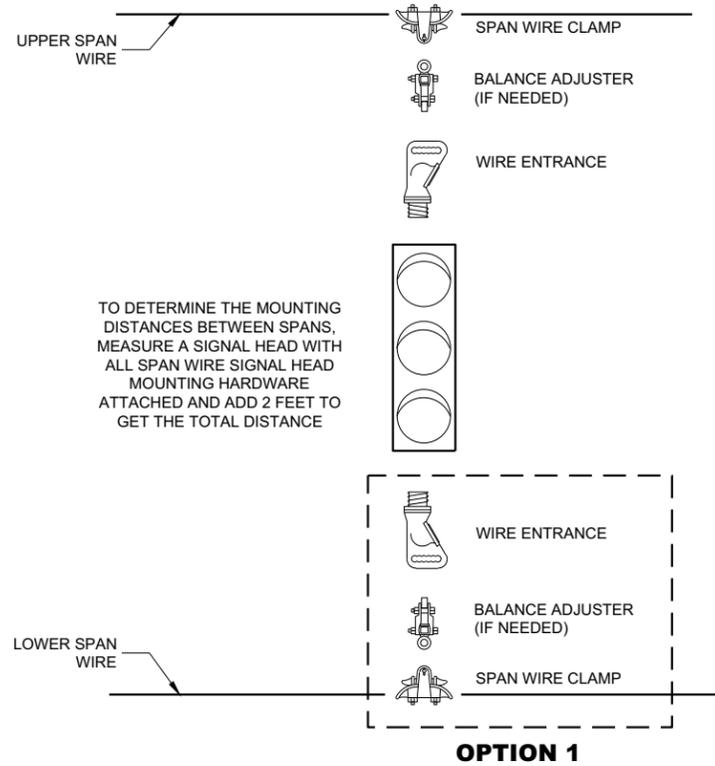
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SDD 09G01 - 4e

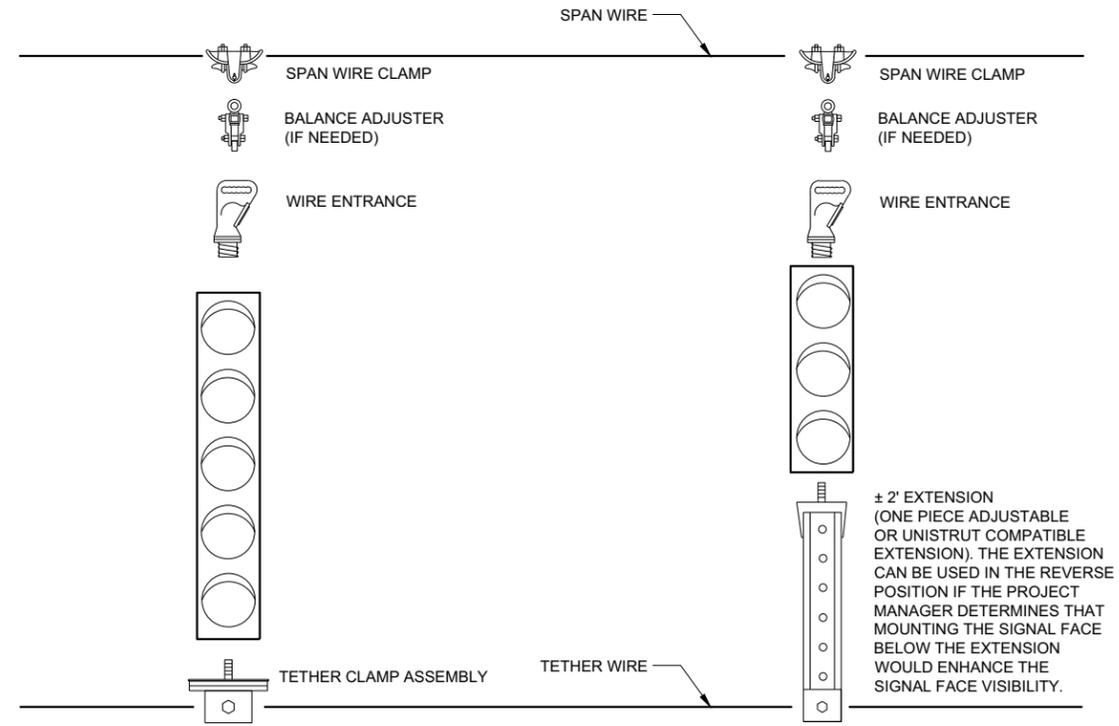
SDD 09G01 - 4e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

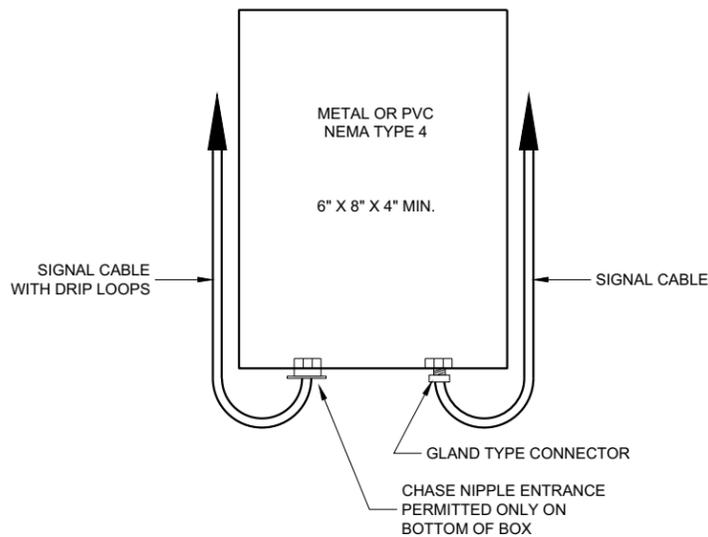
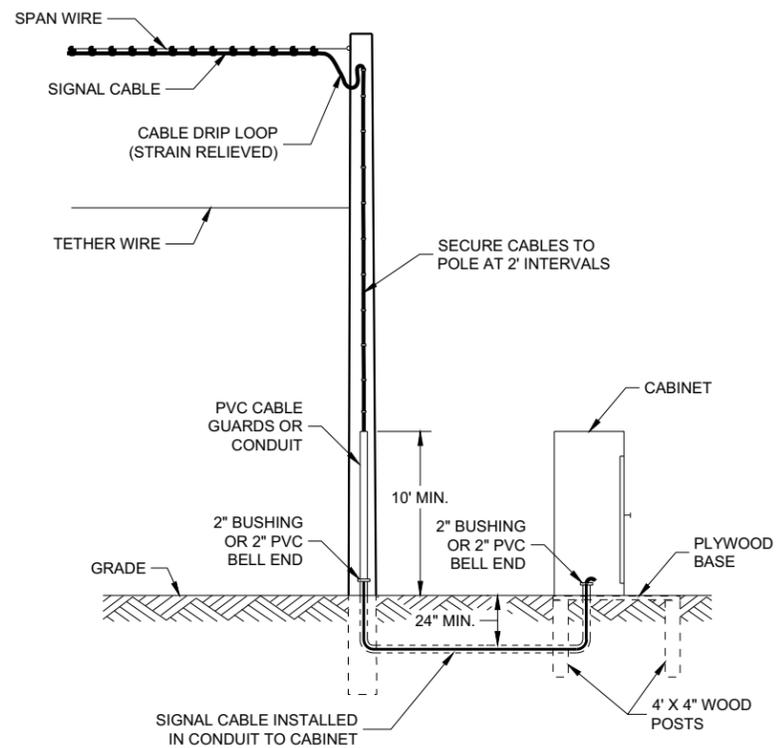


TYPICAL SPAN WIRE MOUNTING HARDWARE

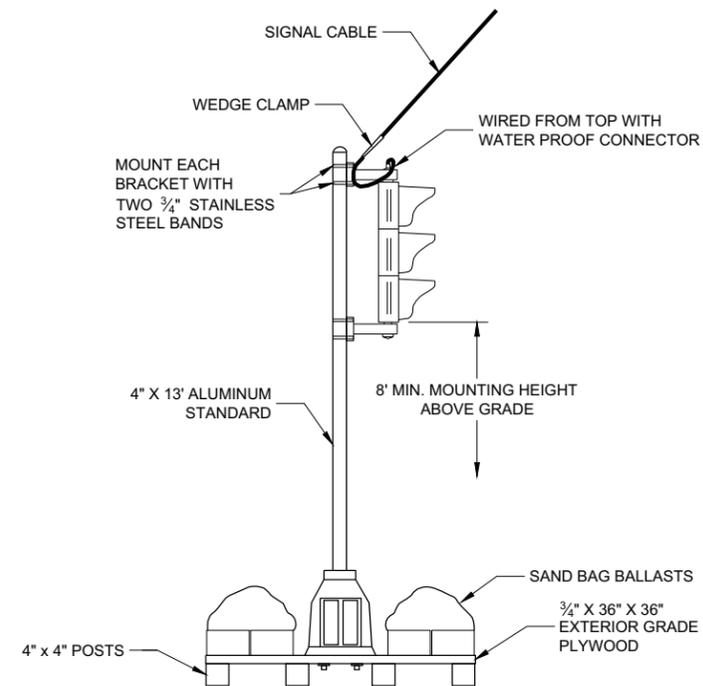


5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

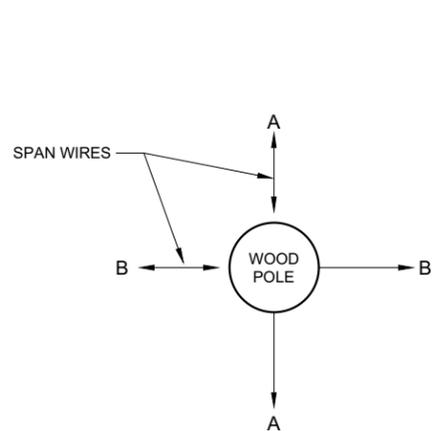
<b>SPAN WIRE TEMPORARY TRAFFIC SIGNAL</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2015 DATE	/s/ Ahmet Demerbilek ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



**SPLICE BOX**

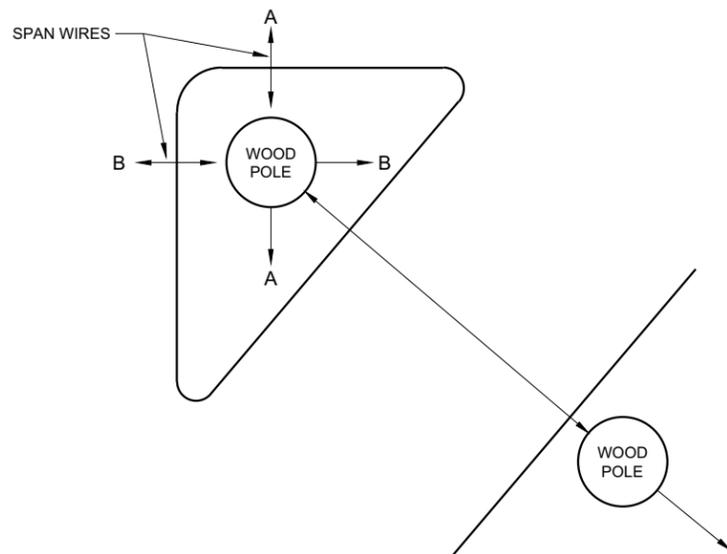


**TYPICAL SKID TYPE TEMPORARY**

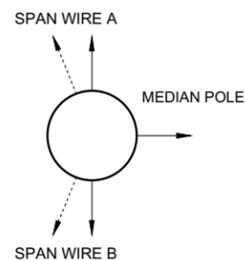


**CORNER POLES**

ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE



**ISLAND POLES**



**MEDIAN POLES**

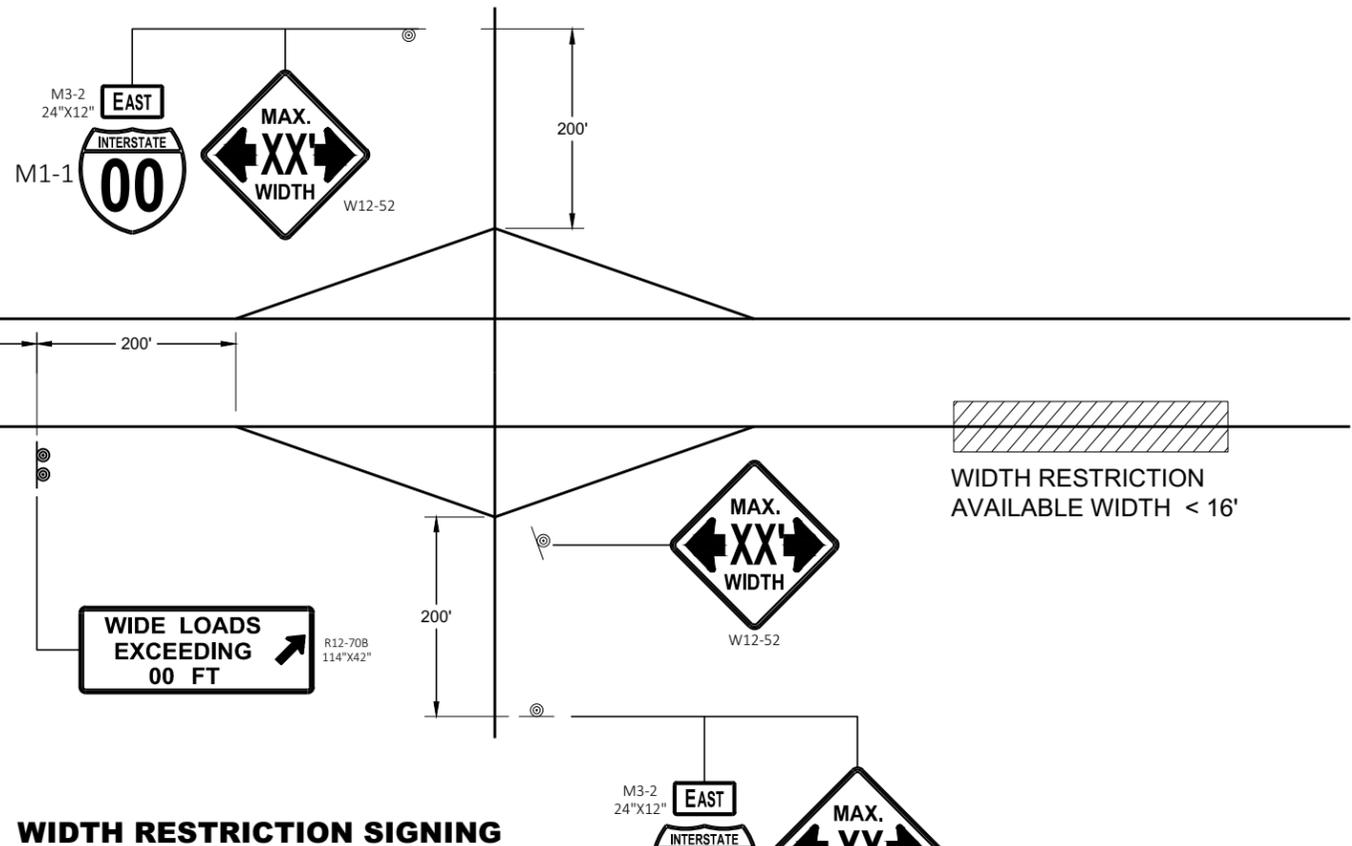
GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

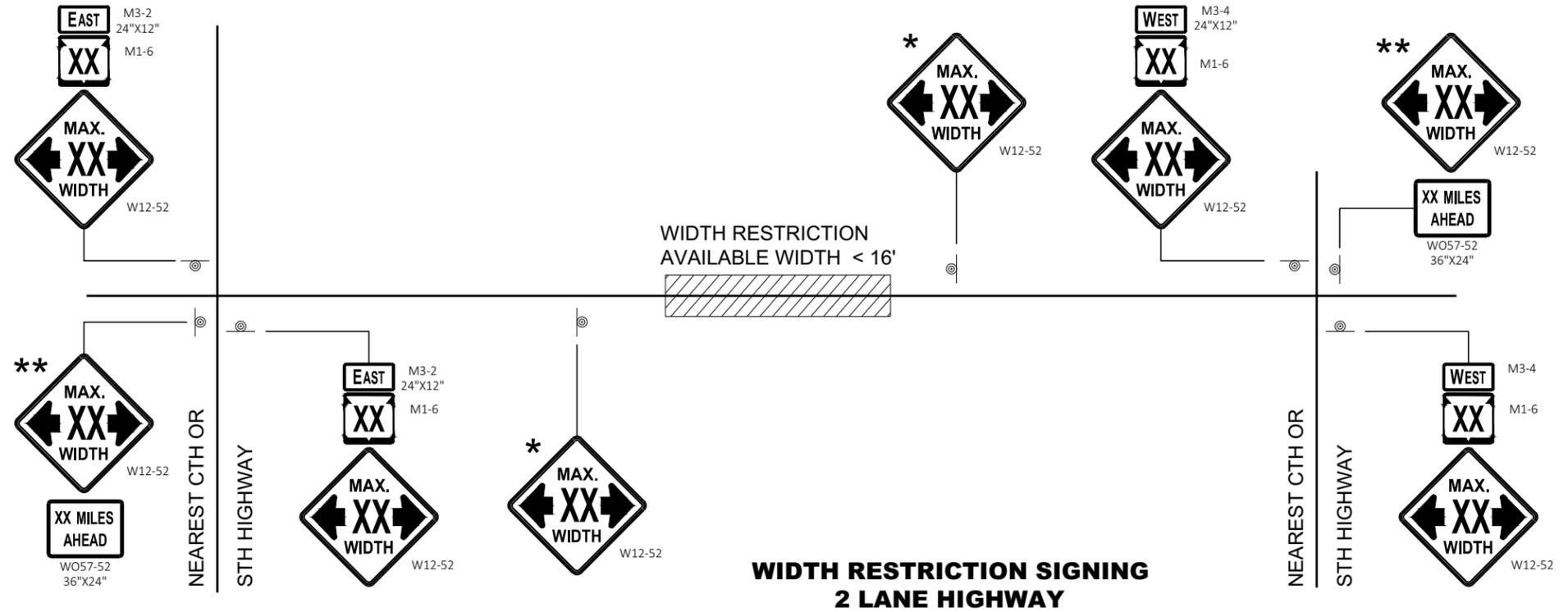
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2015 /S/ Ahmet Demerbilek  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA



**WIDTH RESTRICTION SIGNING**



**WIDTH RESTRICTION SIGNING  
2 LANE HIGHWAY**

**LEGEND**

⊙ SIGN ON PERMANENT SUPPORT

**GENERAL NOTES**

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

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

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

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

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

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

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

\*\* SIGN SHALL BE VISIBLE FROM ROADWAY.

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

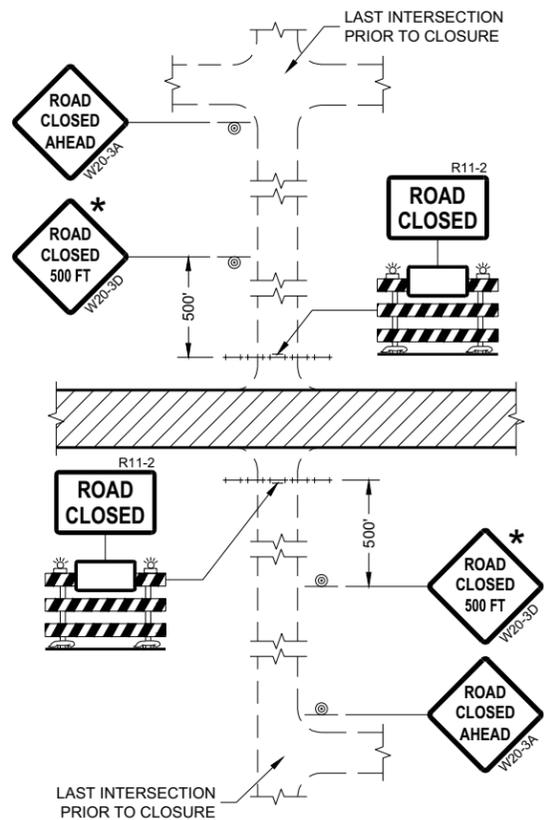


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

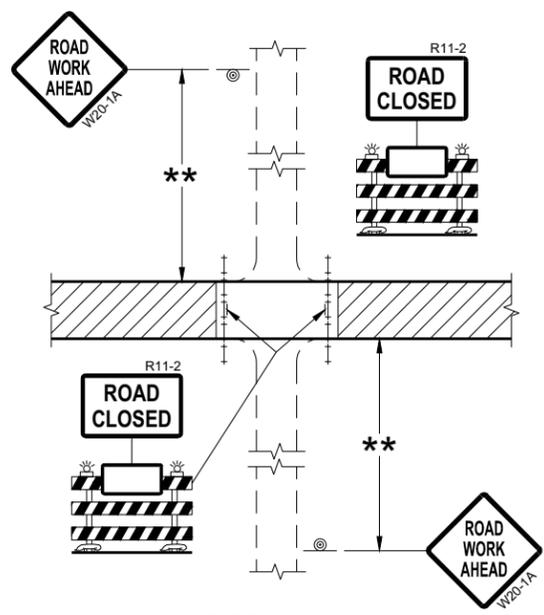
**ADVANCED WIDTH RESTRICTION SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

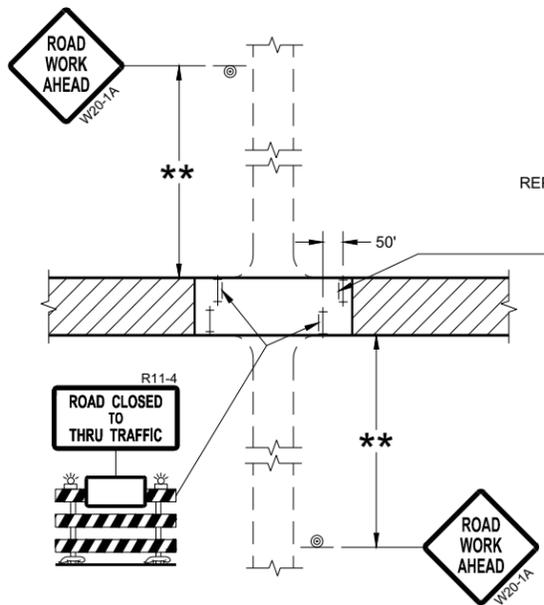
APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



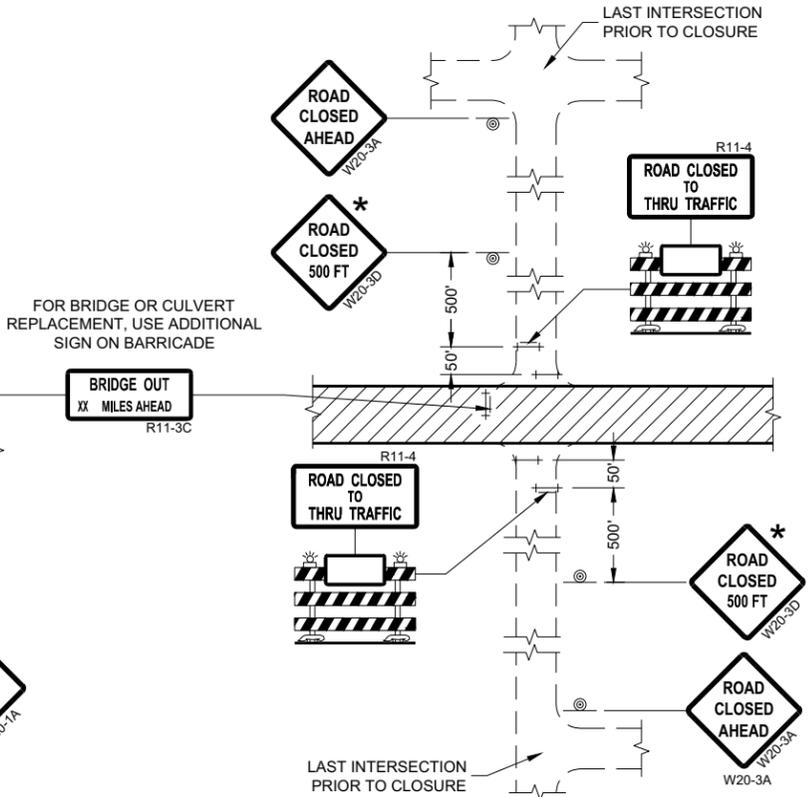
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



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



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

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

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

**LEGEND**

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

<b>BARRICADES AND SIGNS FOR SIDEROAD CLOSURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 2018 DATE	/S/ Andrew Heidtke 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.

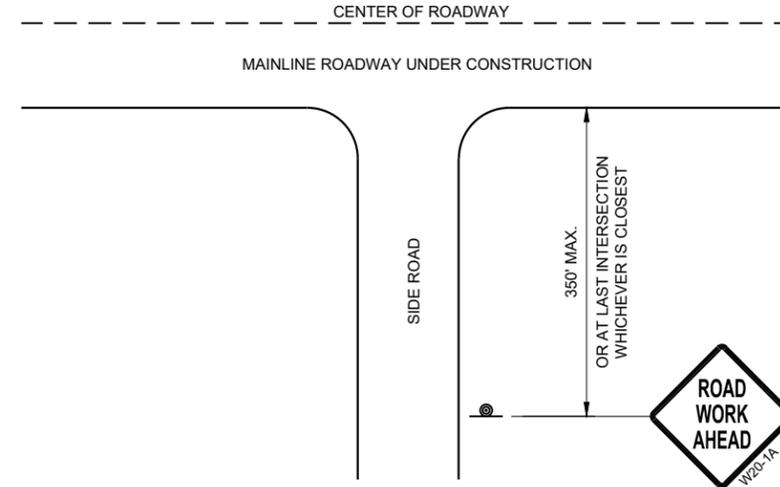
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

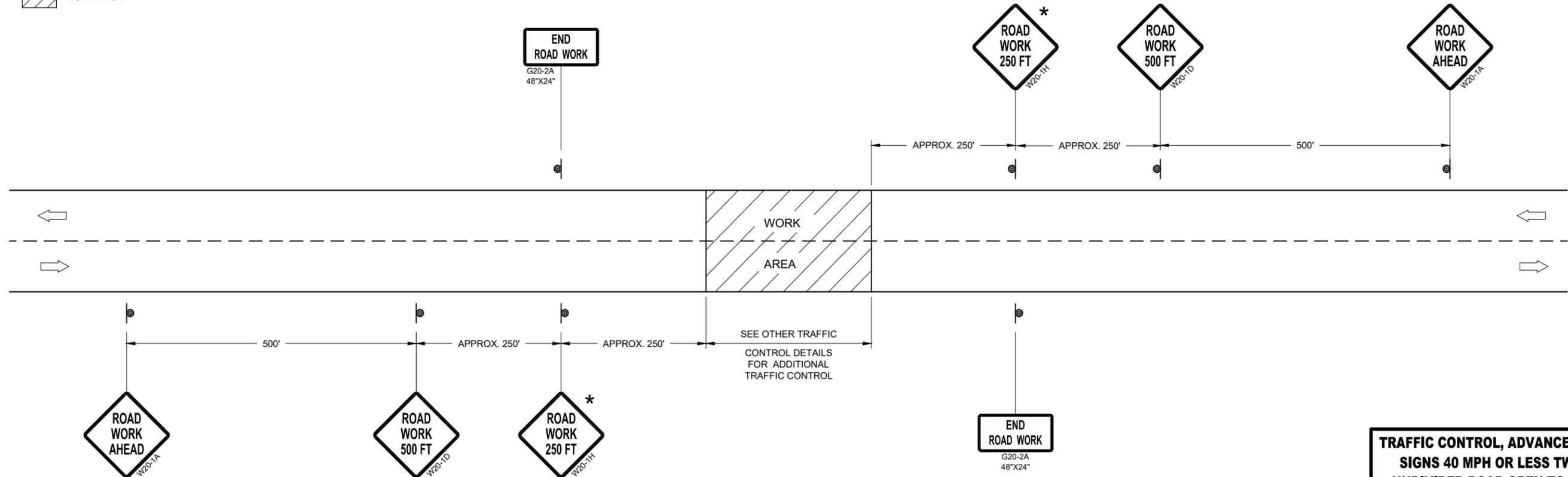
\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

**LEGEND**

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



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**



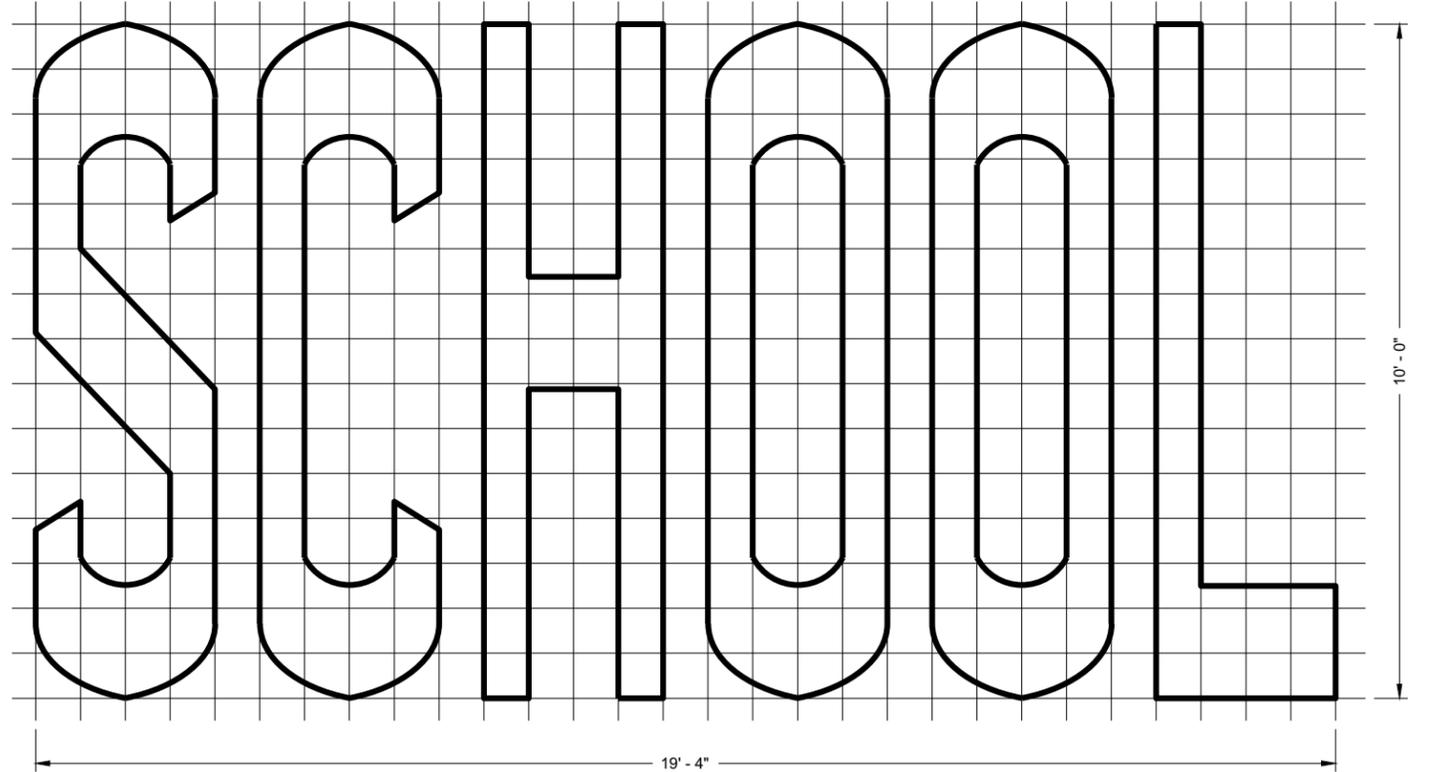
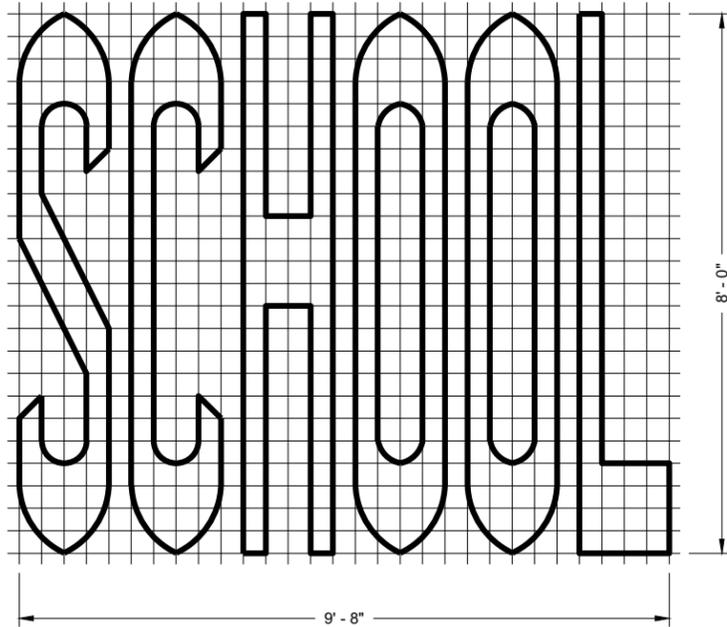
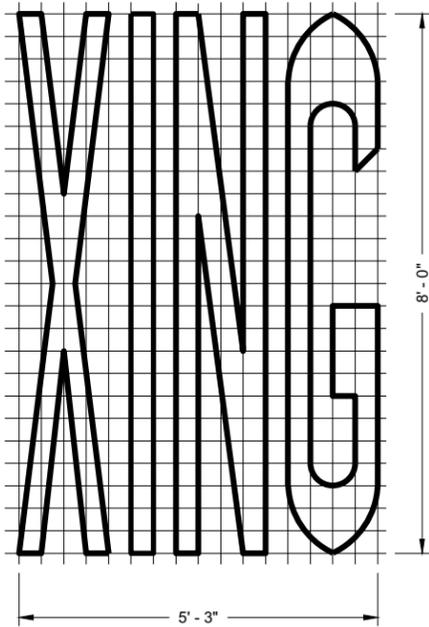
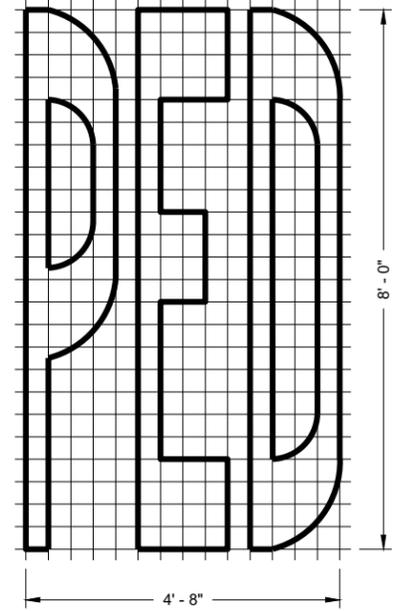
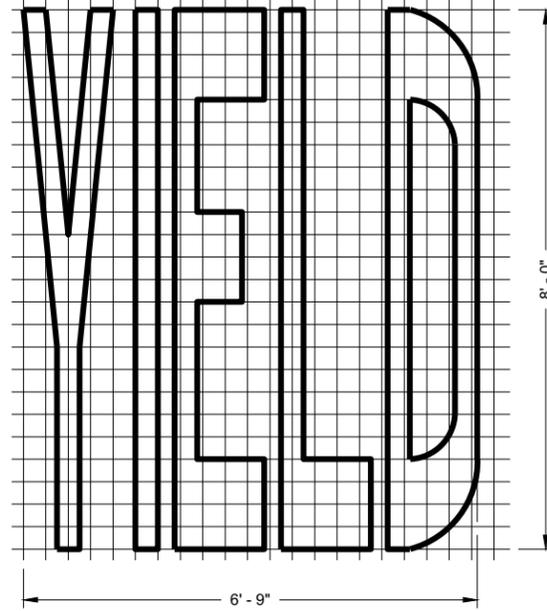
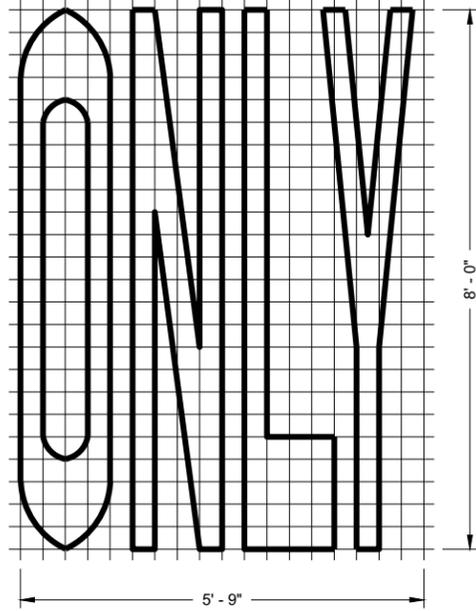
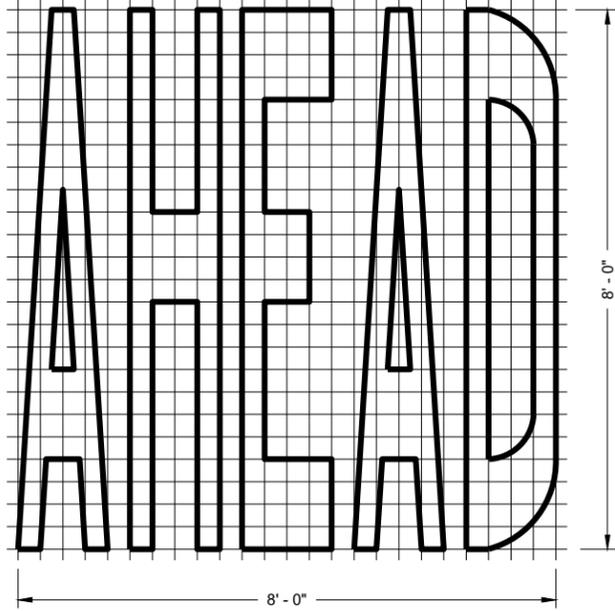
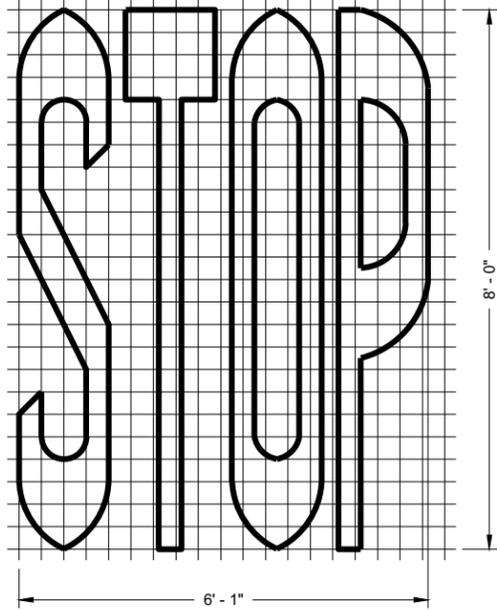
**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS**

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



SINGLE LANE

TWO - LANE

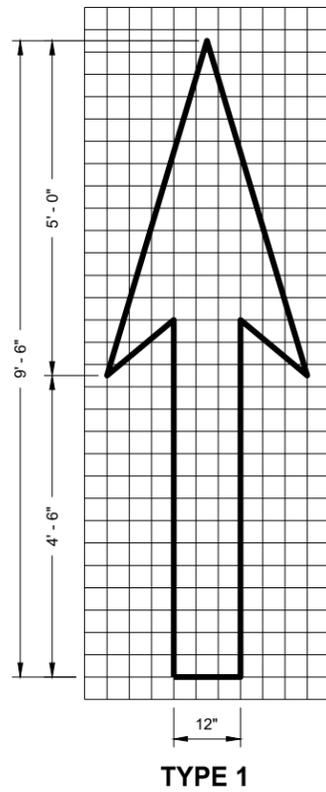
**GENERAL NOTES**

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.

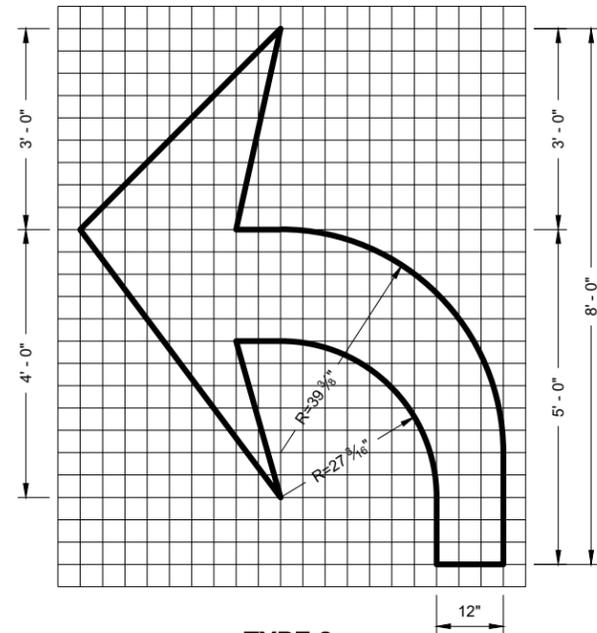
**PAVEMENT MARKING WORDS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

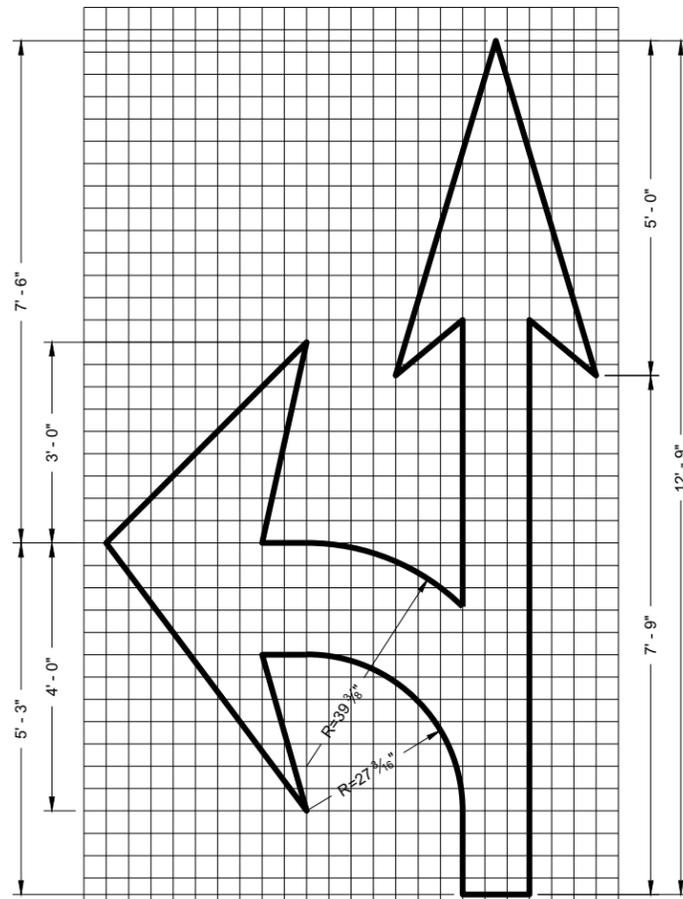
APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING  
ENGINEER



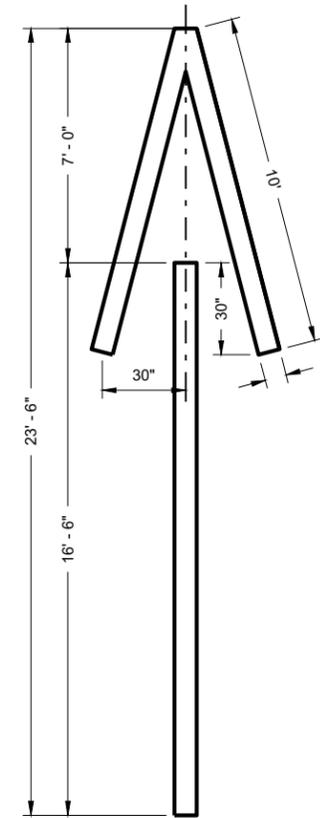
TYPE 1



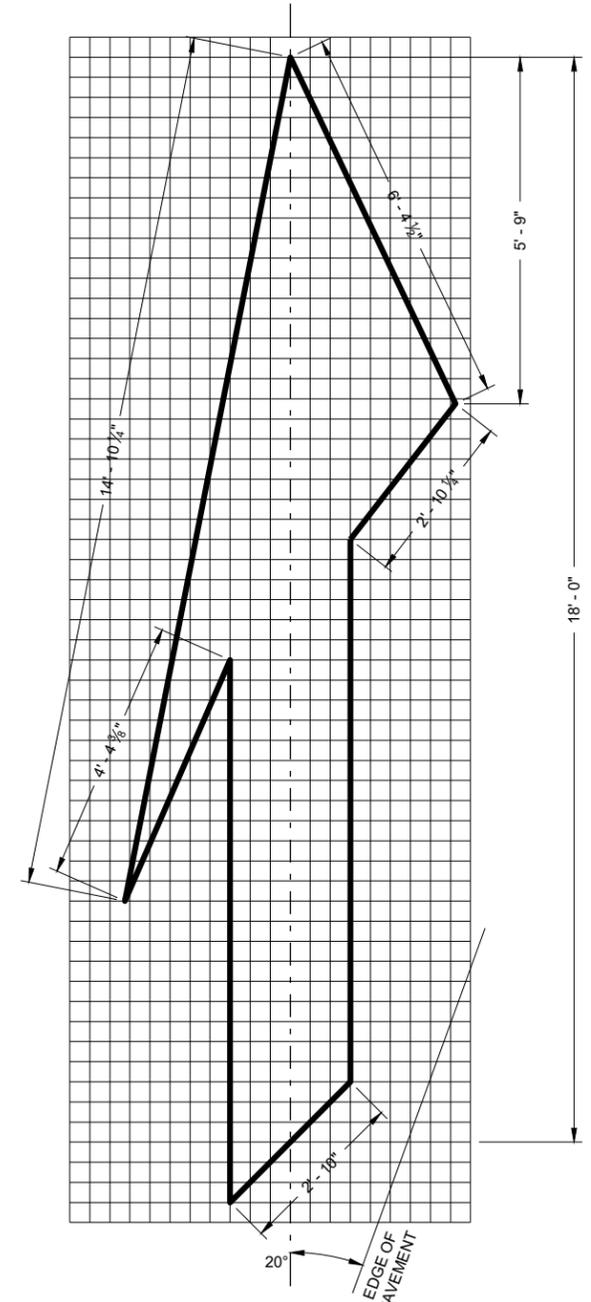
TYPE 2



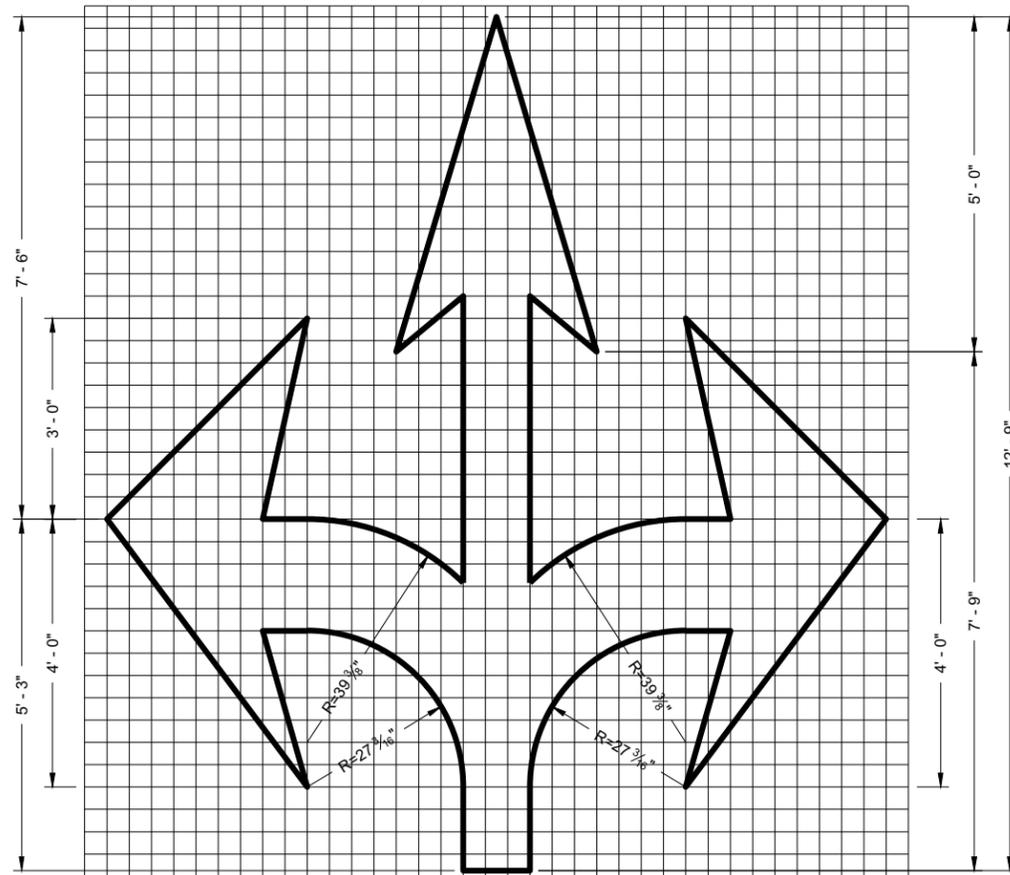
TYPE 3



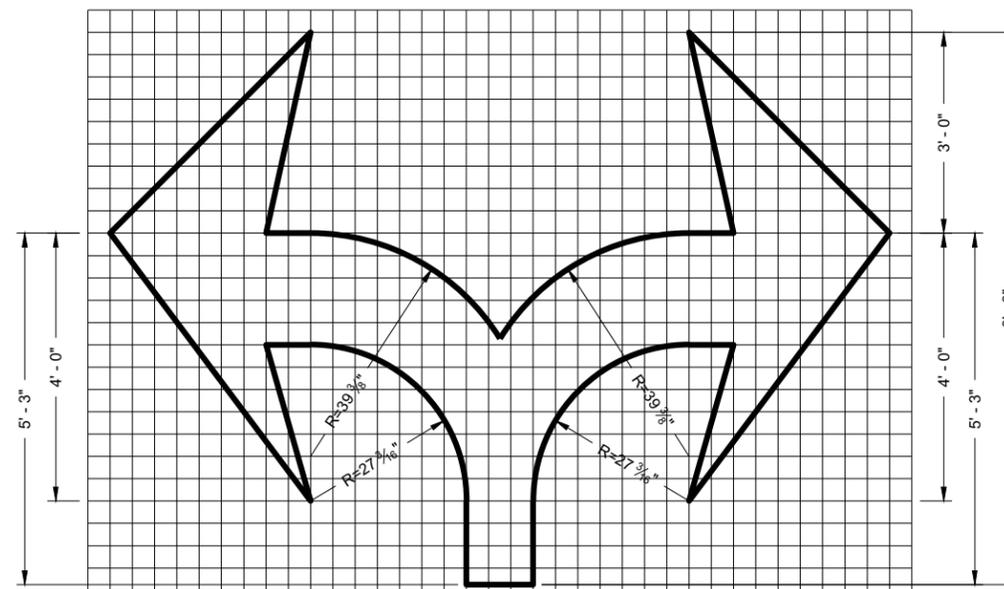
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

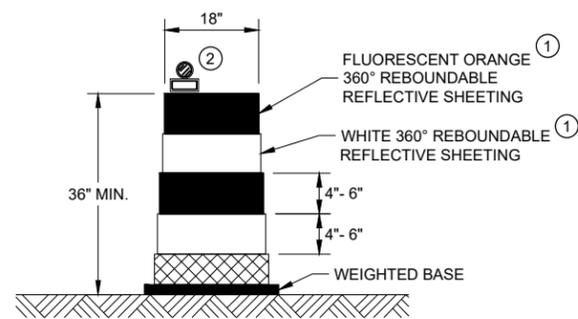
APPROVED

November 2019

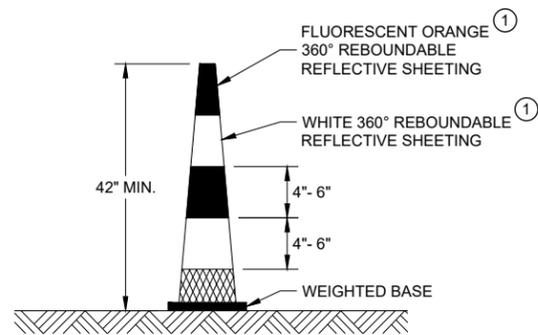
DATE

FHWA

/s/ Matthew Rauch  
STATE SIGNING AND MARKING  
ENGINEER



**DRUM**

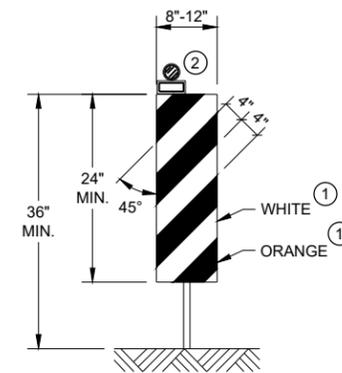


**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS

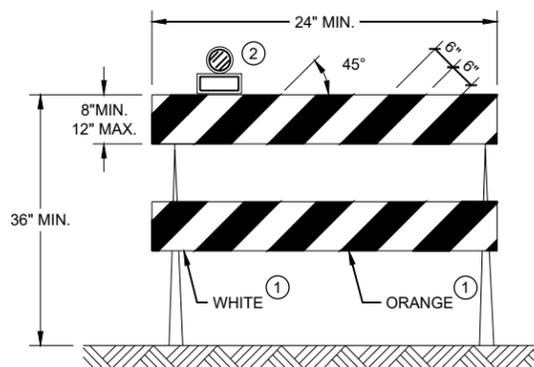
**GENERAL NOTES**

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



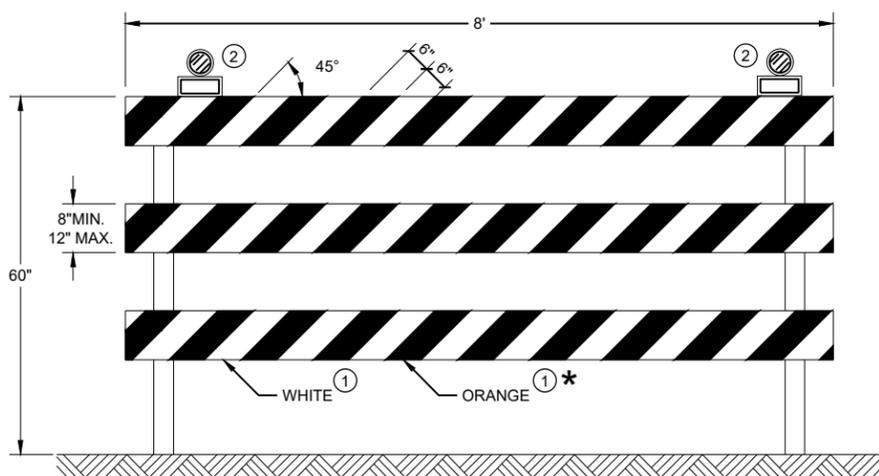
**VERTICAL PANEL**

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



**TYPE II BARRICADE**

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



**TYPE III BARRICADE**

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

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

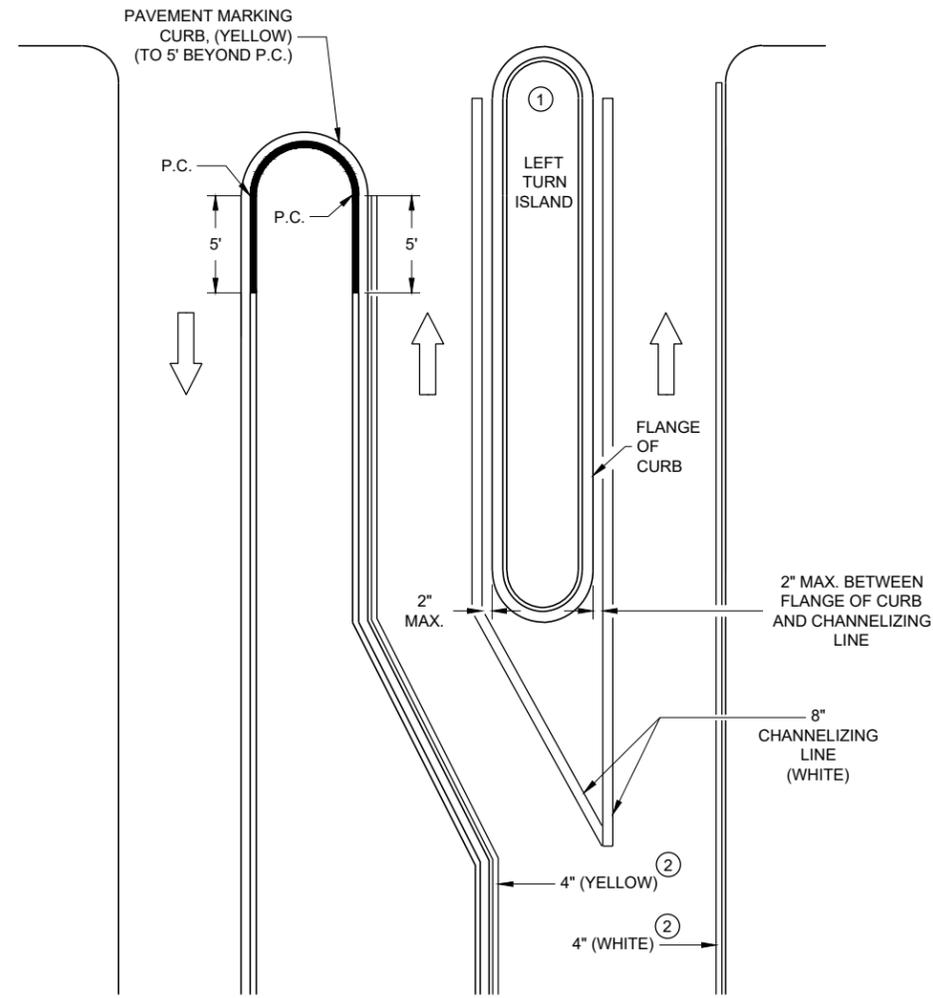
APPROVED  
May 2021 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED

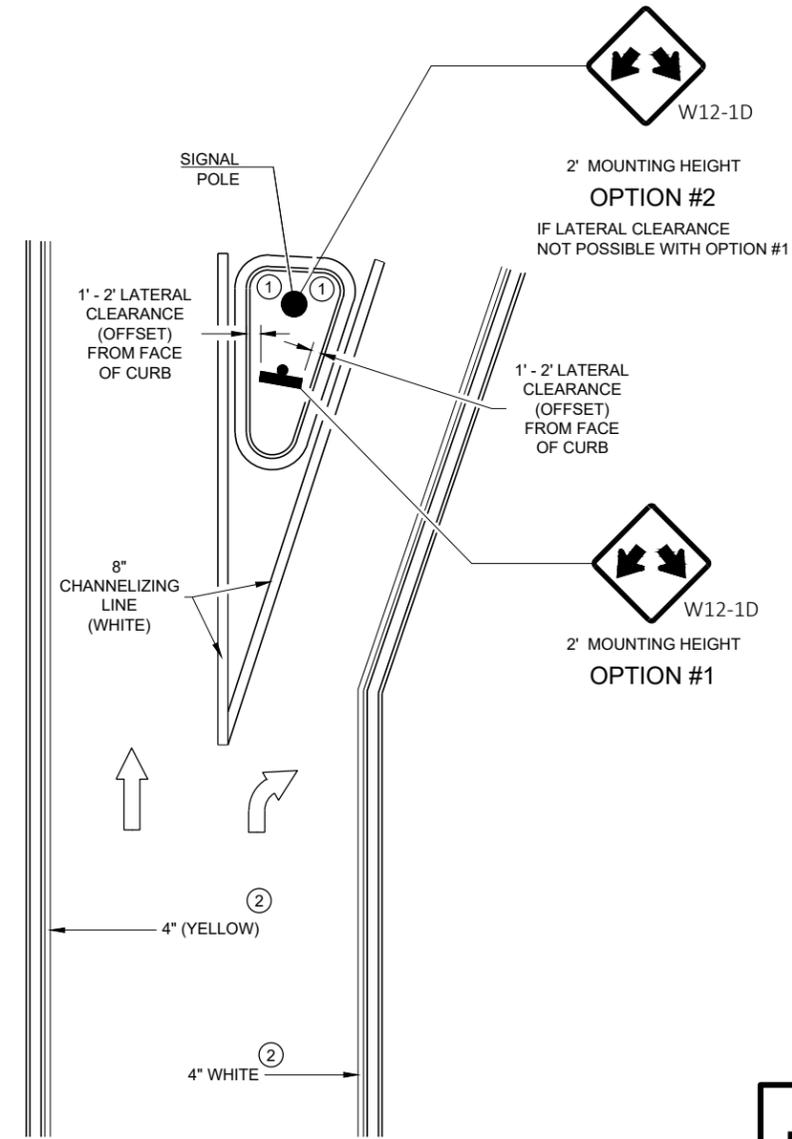
**GENERAL NOTES**

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.  
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.



**LEFT TURN & MEDIAN ISLAND**



**RIGHT TURN ISLAND**

6

6

SDD 15C18 - 06C

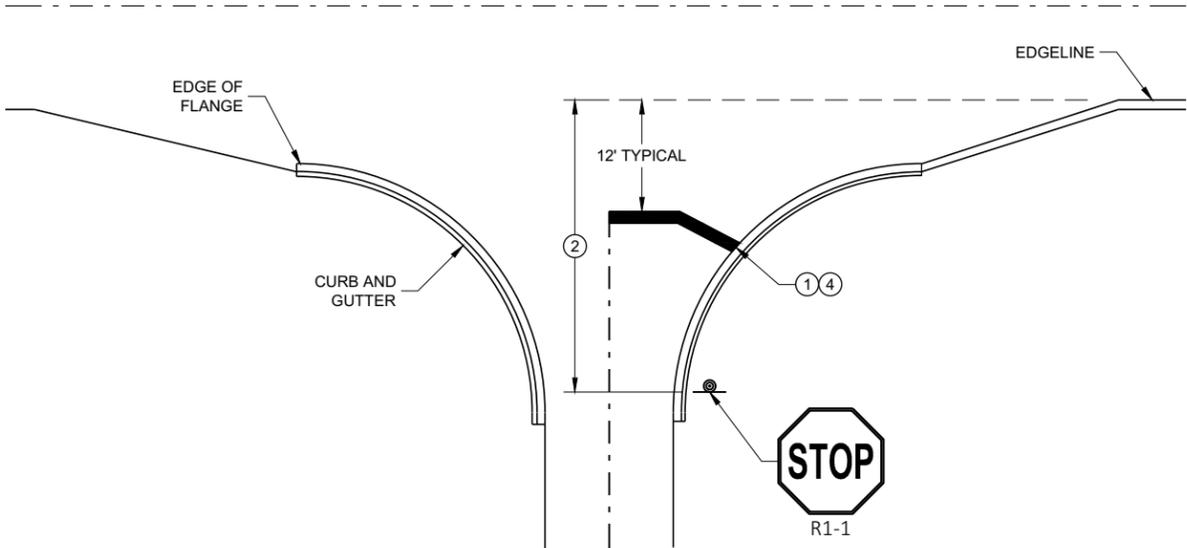
SDD 15C18 - 06C

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
FHWA	

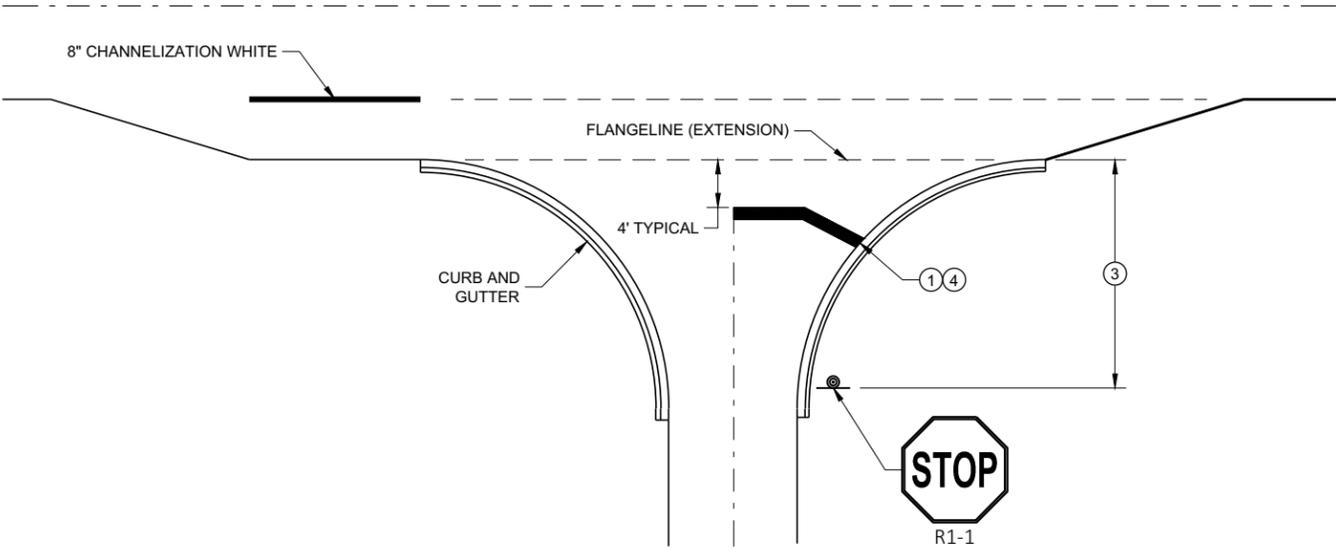
**GENERAL NOTES**

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

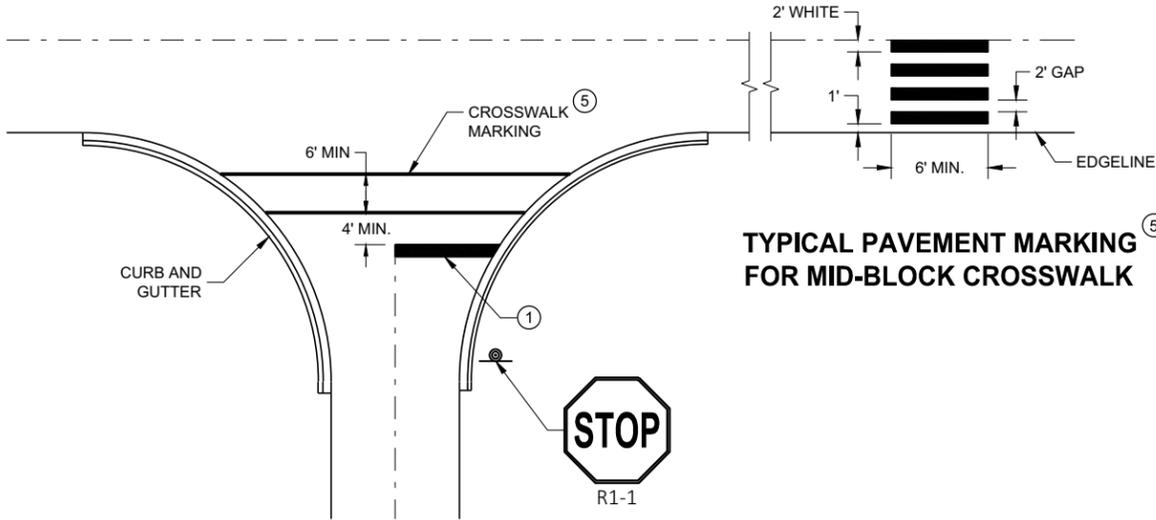
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE 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**

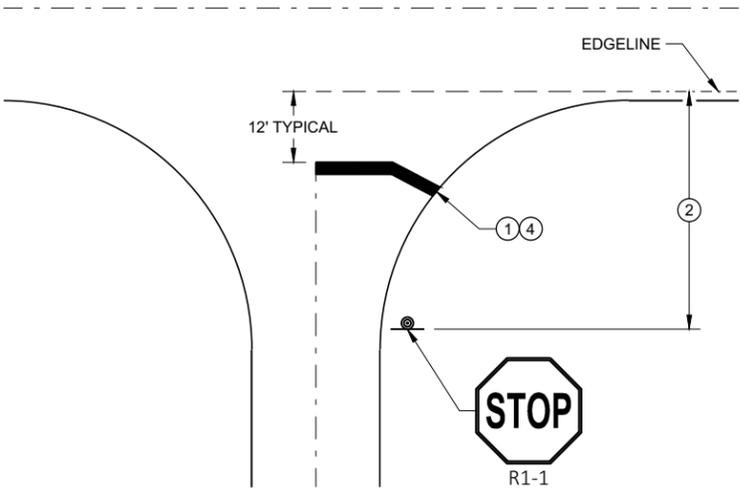


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**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

**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)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

**GENERAL NOTES**

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

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

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

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

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

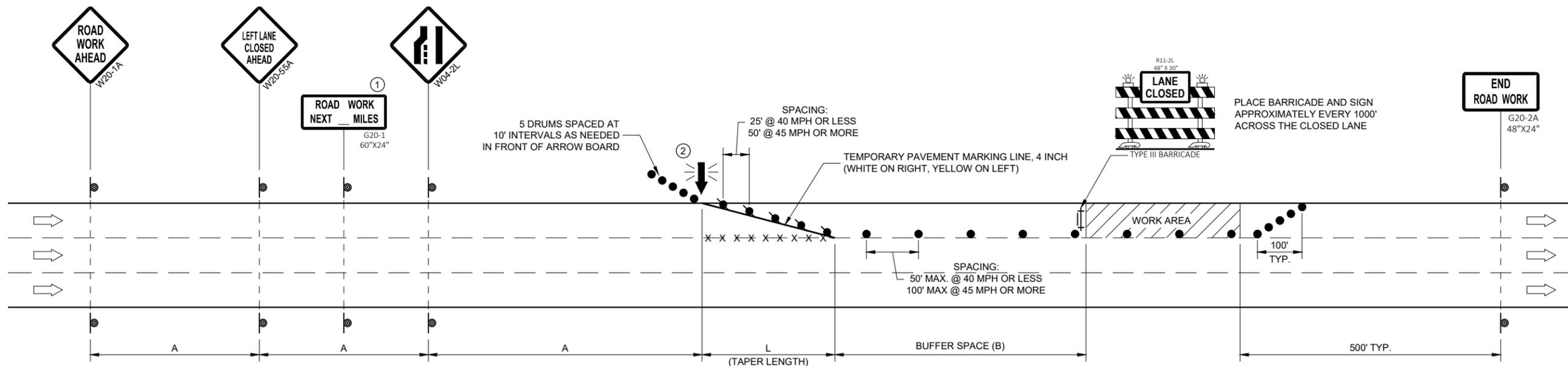
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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.

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



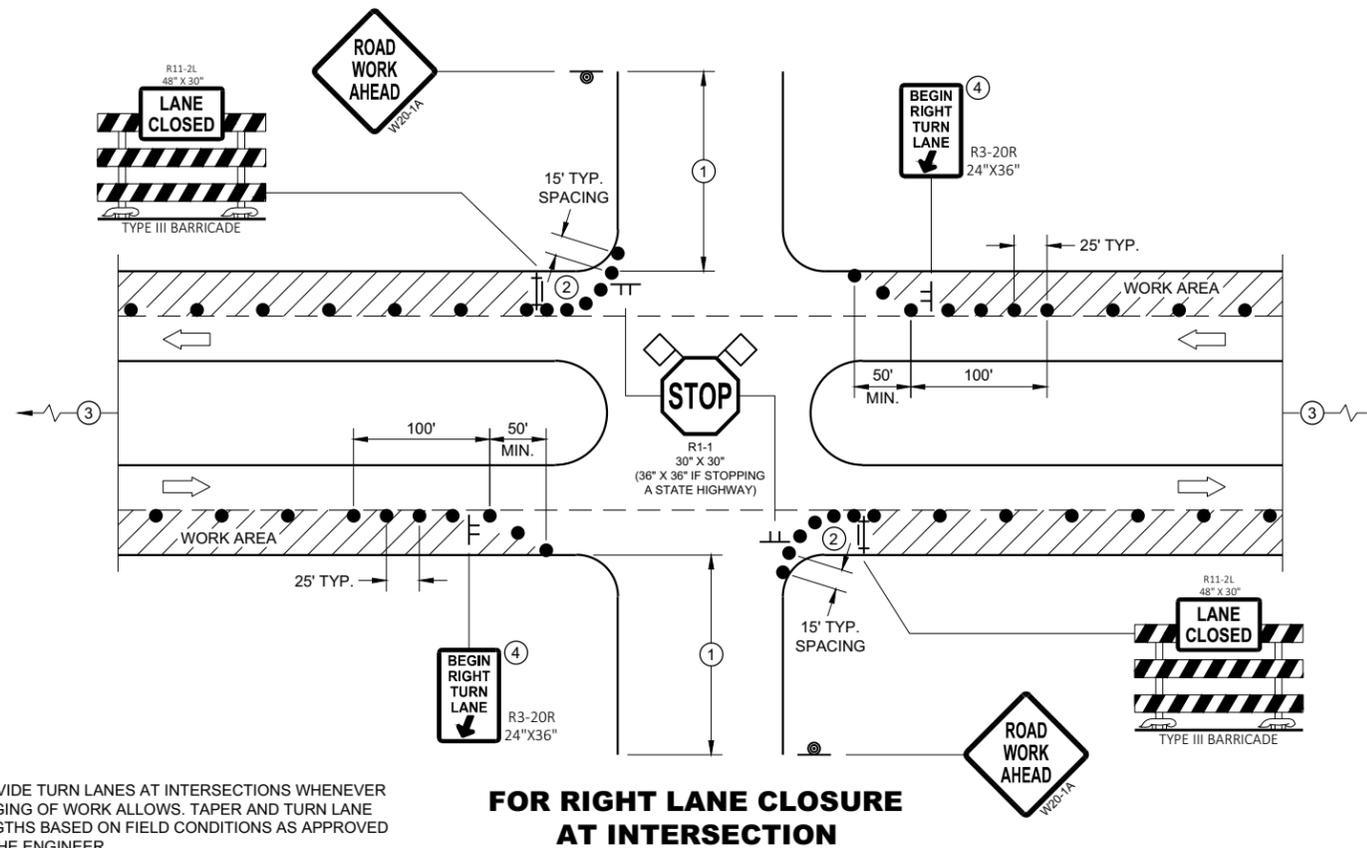
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

**TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



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

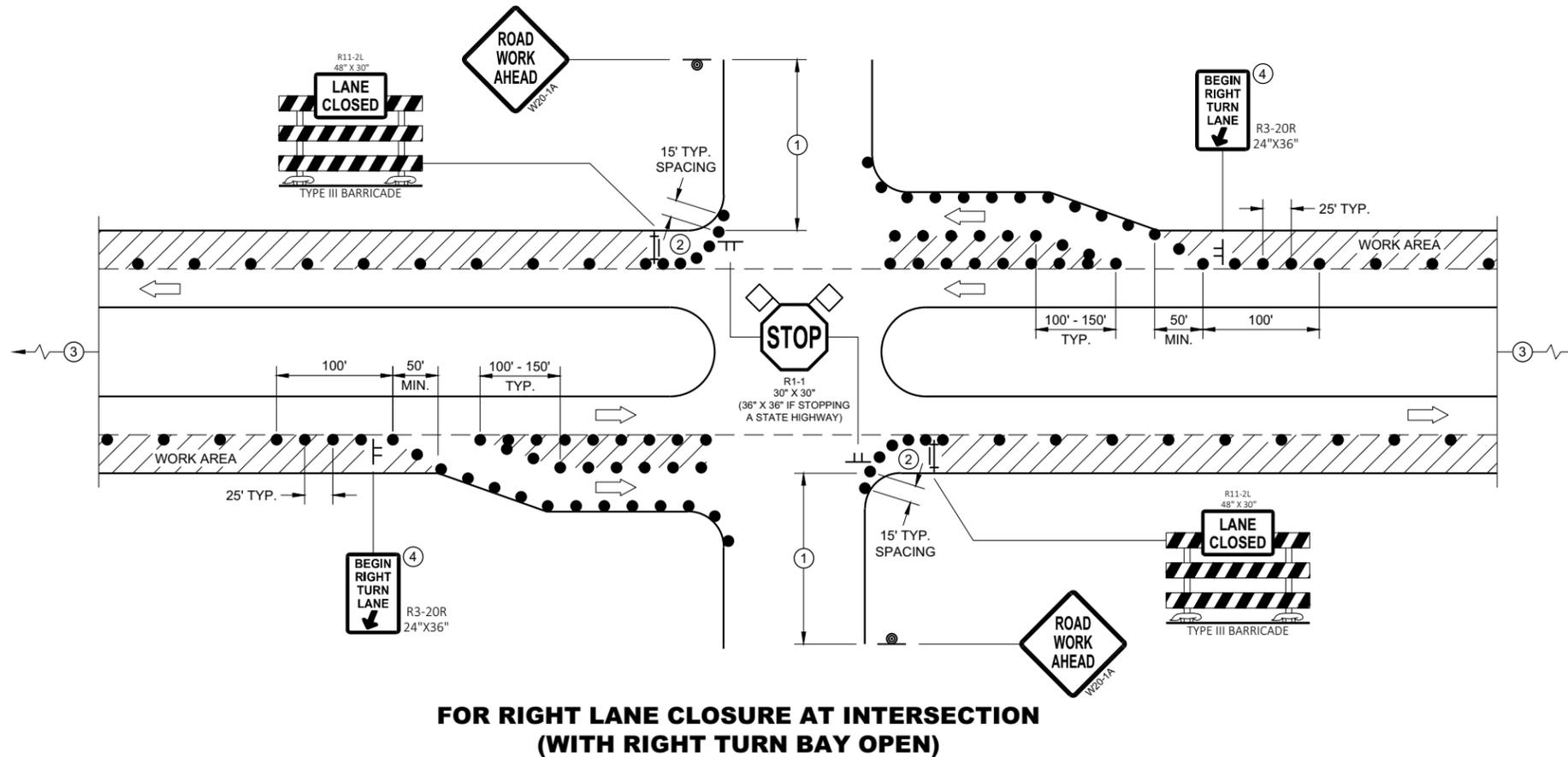
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.

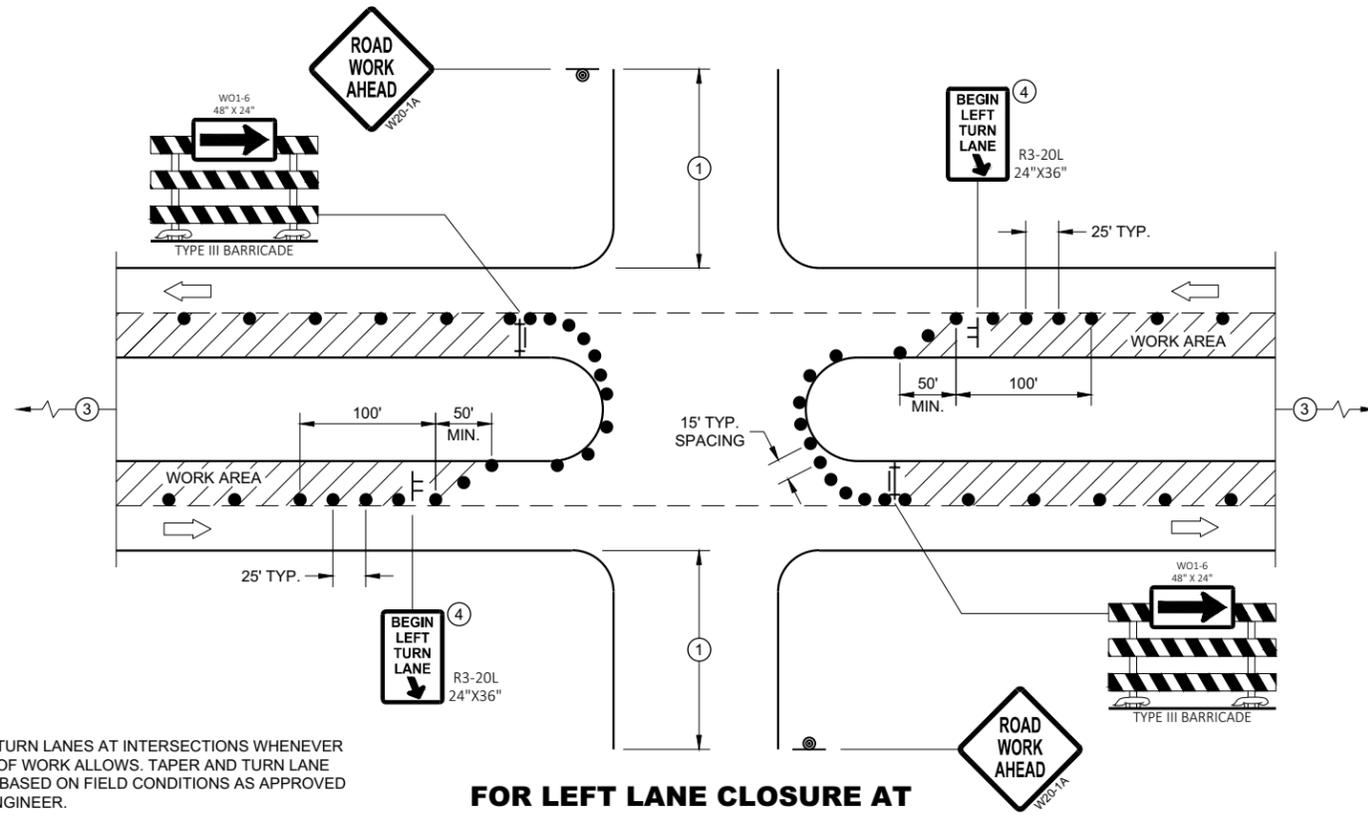


### LEGEND

- 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

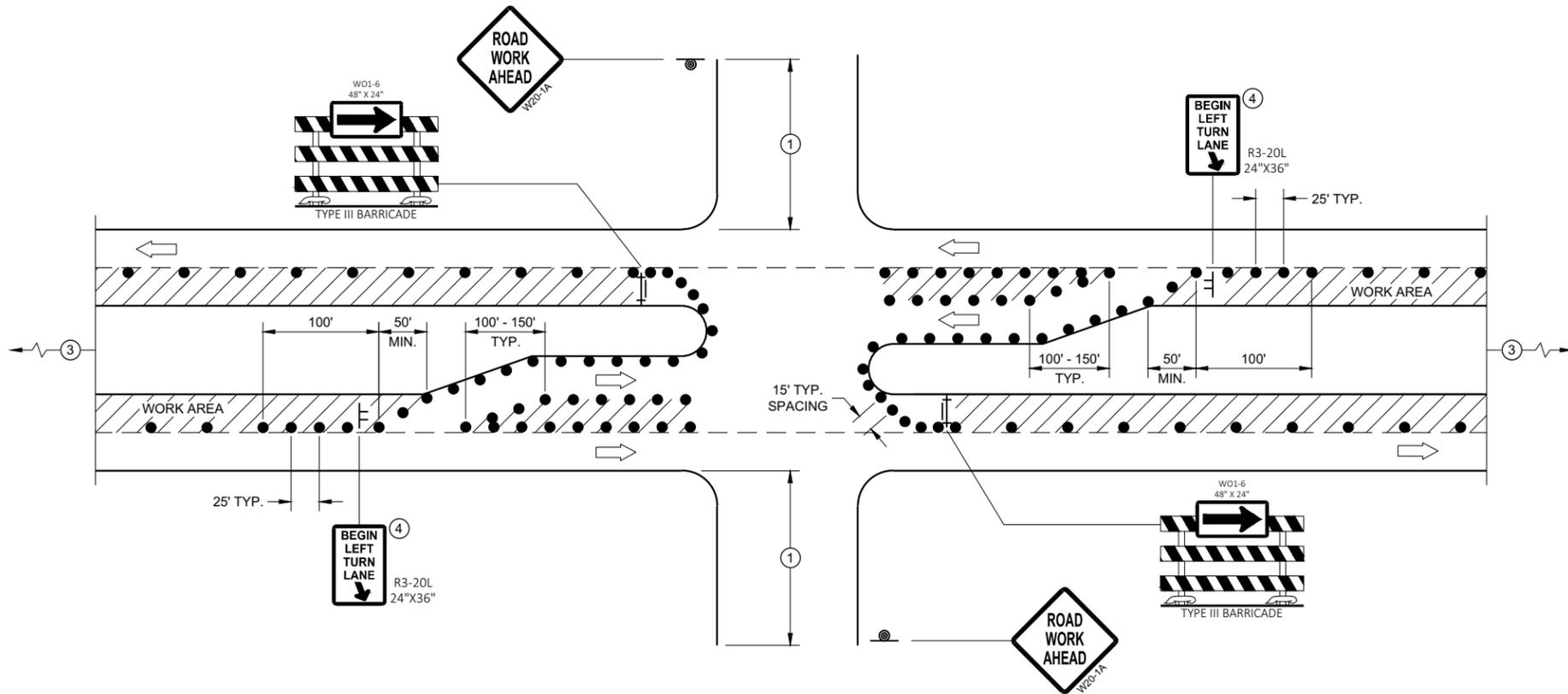
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

**LEGEND**

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

**GENERAL NOTES**

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

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

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

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

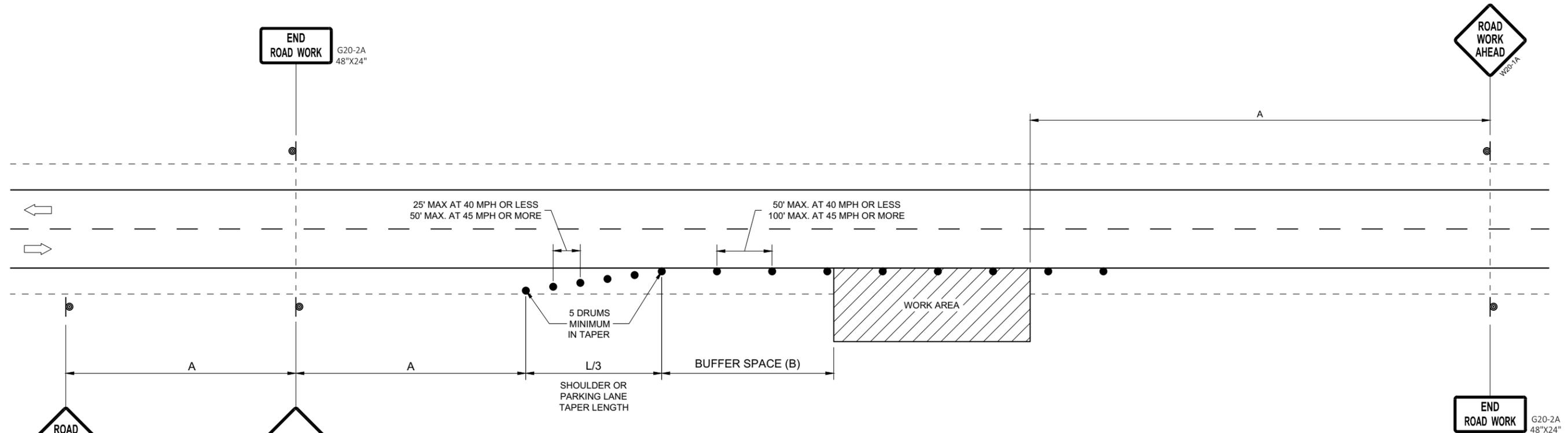
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



OR  
IF TRAFFIC CONTROL DEVICES  
ENCROACH ONTO TRAVELED WAY, USE

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

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

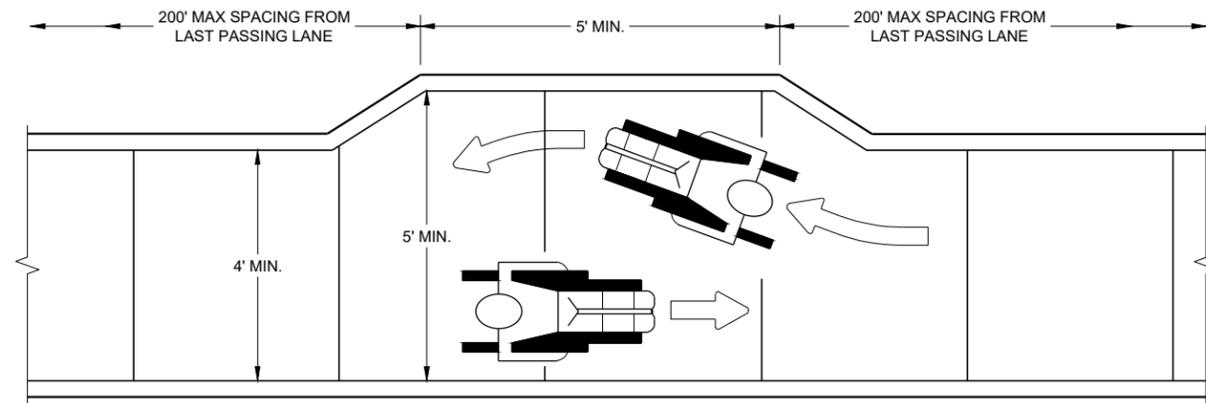
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER

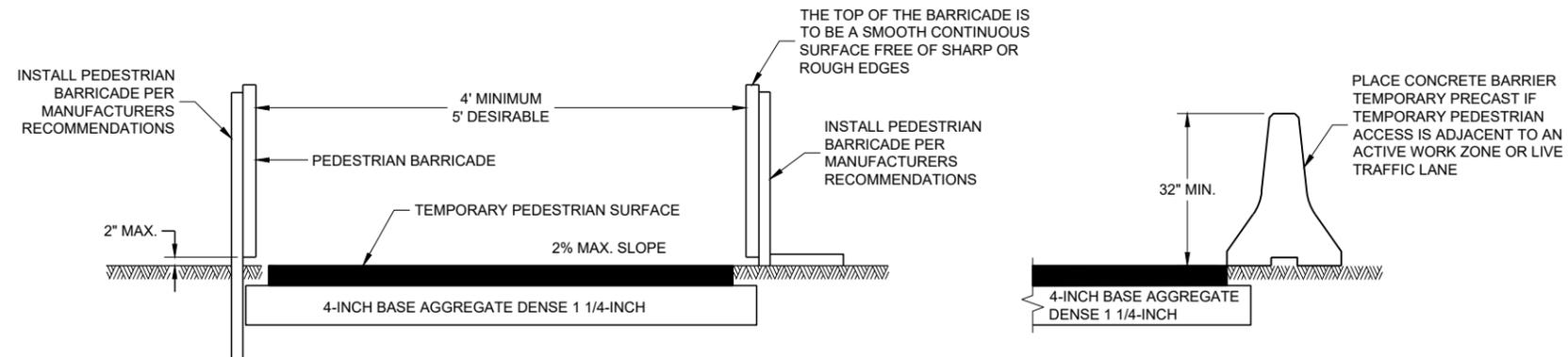
FHWA

SDD 15D28 - 04

SDD 15D28 - 04



**NARROW SIDEWALK PASSING DETAIL**



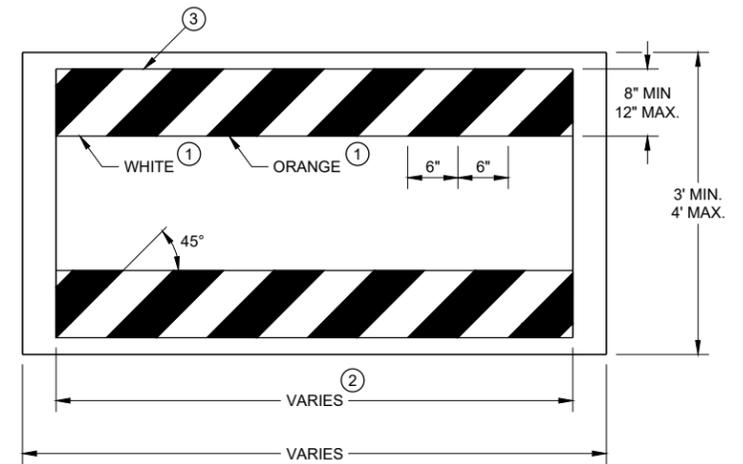
**TEMPORARY PEDESTRIAN ACCESS**

**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.



**TEMPORARY PEDESTRIAN BARRICADE\***

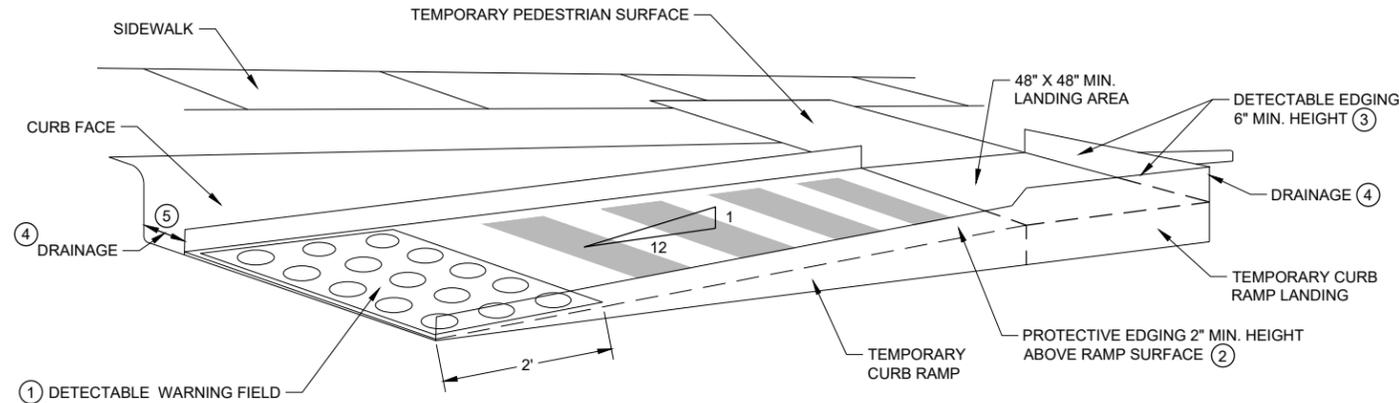
**TRAFFIC CONTROL,  
PEDESTRIAN  
ACCOMMODATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

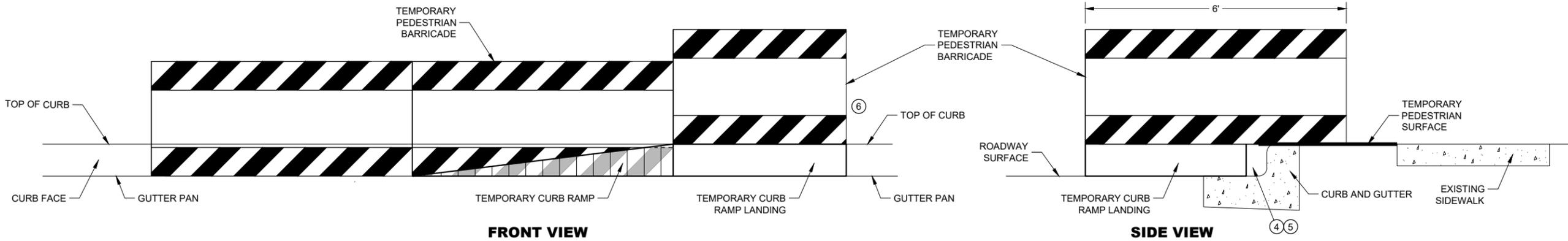
**GENERAL NOTES**

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.  
 CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.  
 CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.  
 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.  
 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

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



**PERSPECTIVE VIEW**

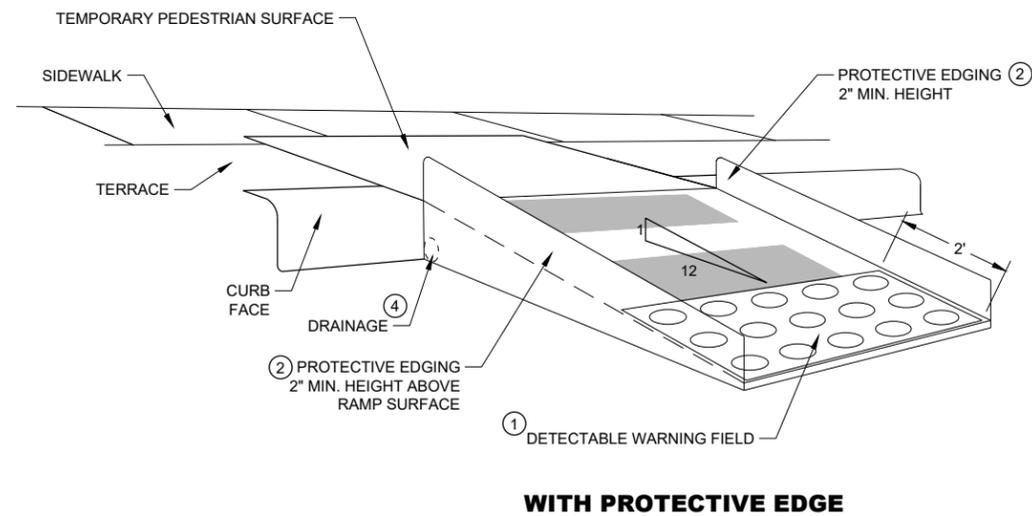
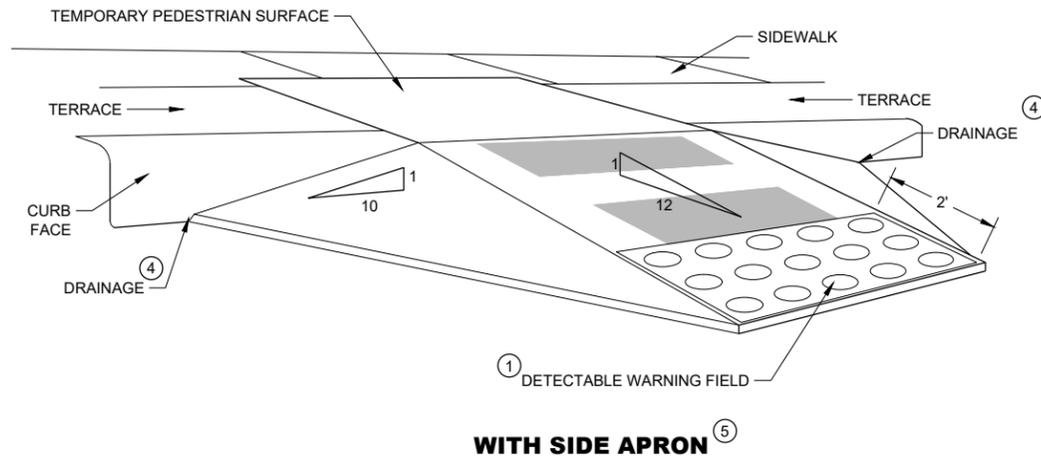


**FRONT VIEW**

**SIDE VIEW**

**TEMPORARY CURB RAMP PARALLEL TO CURB**

<p><b>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</b></p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



**TEMPORARY CURB RAMP PERPENDICULAR TO CURB**

**GENERAL NOTES**

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

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

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

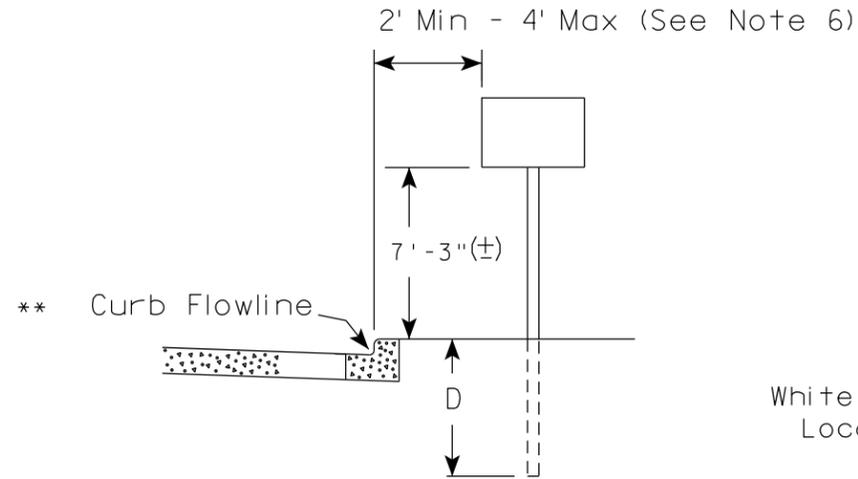
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

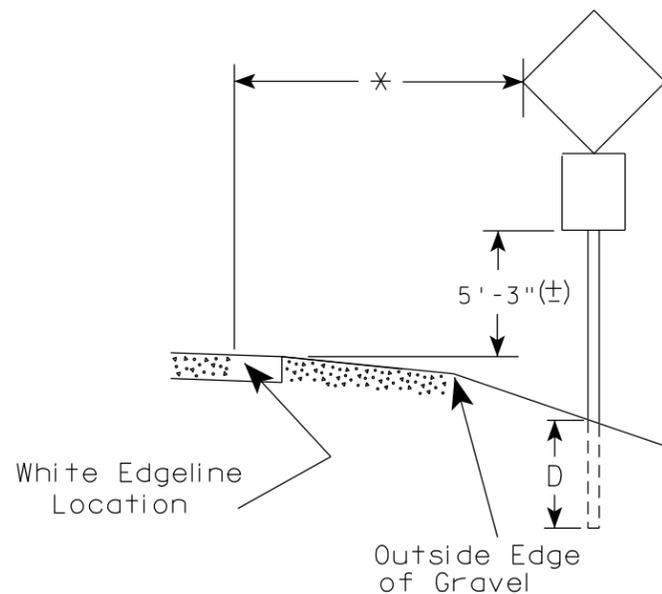
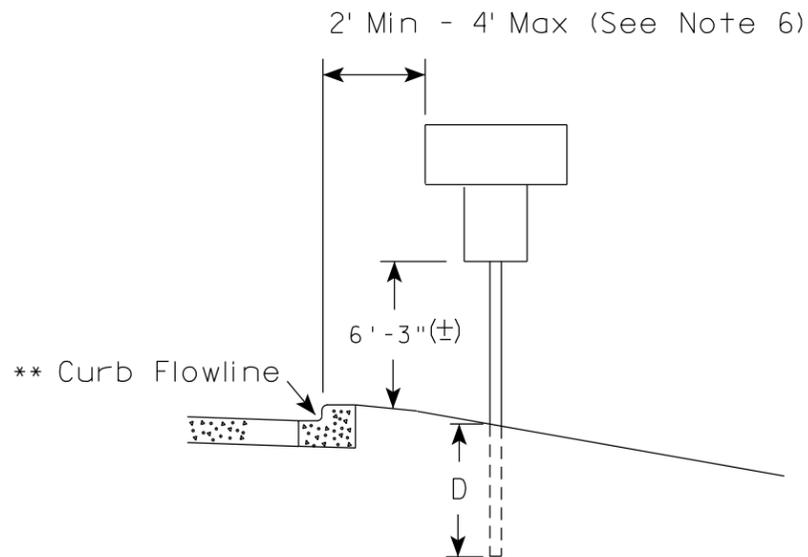
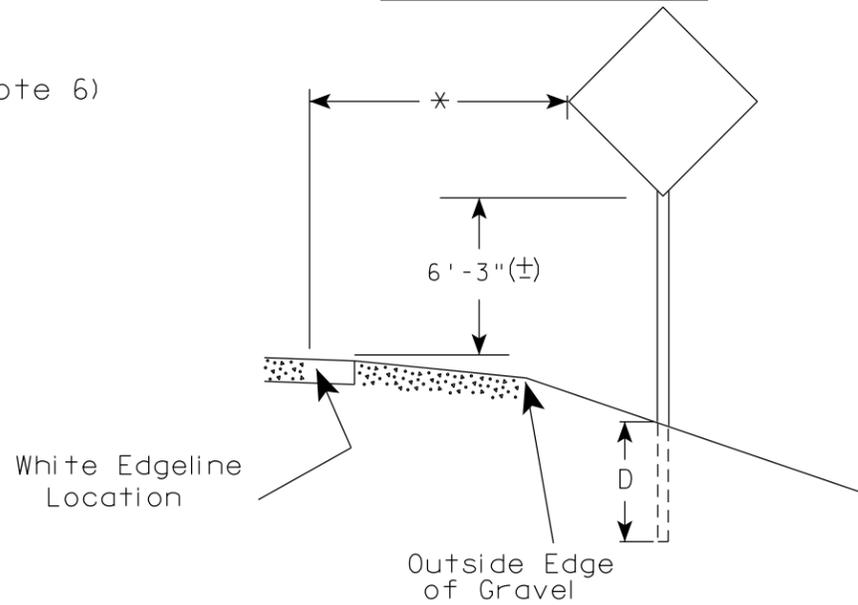
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

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

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on 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.

POST EMBEDMENT DEPTH

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

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

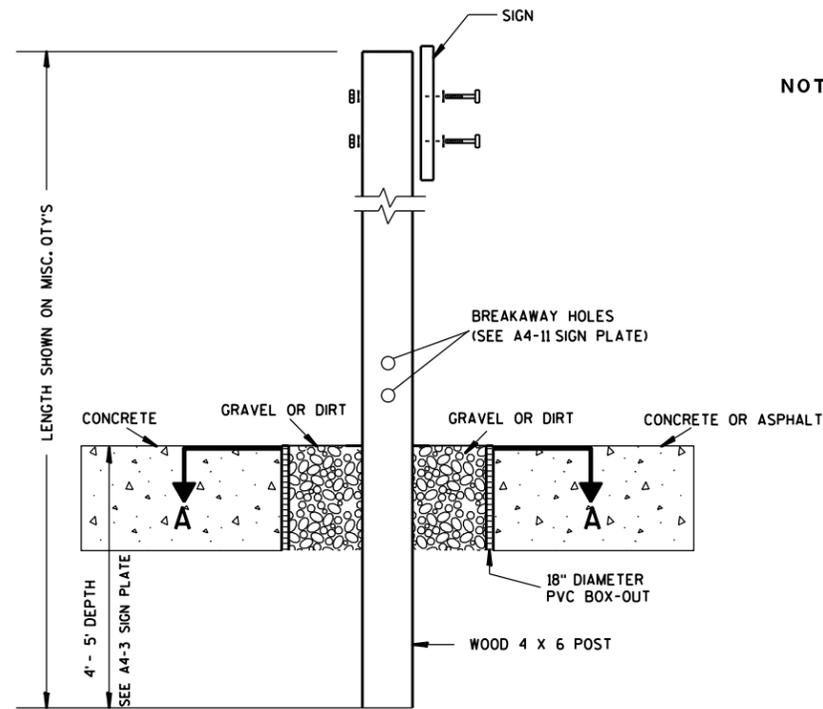
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

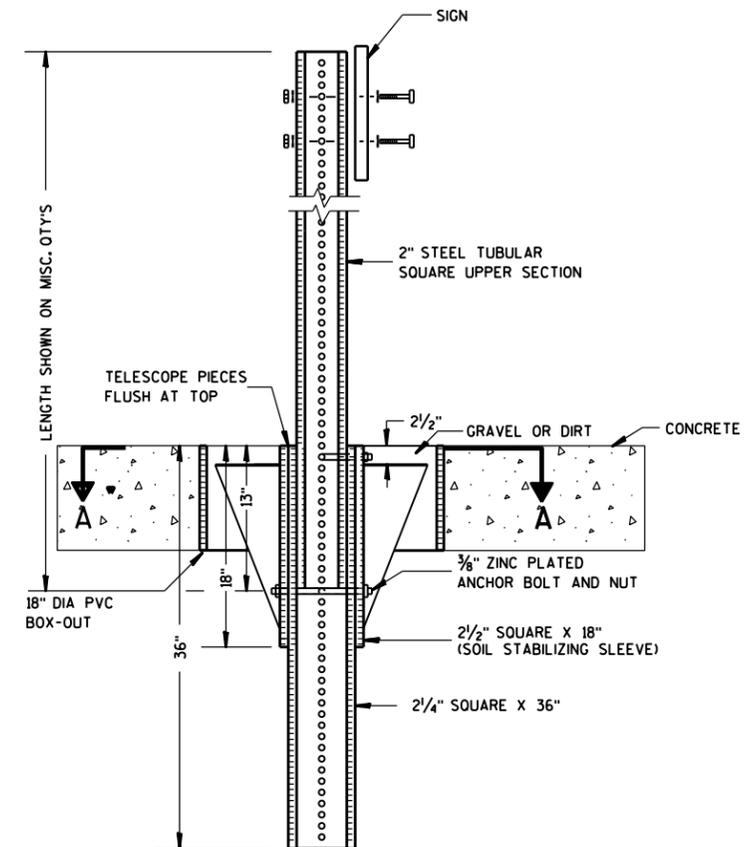
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

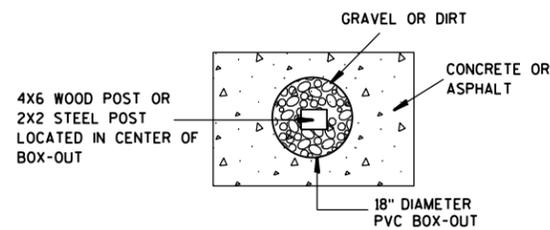
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

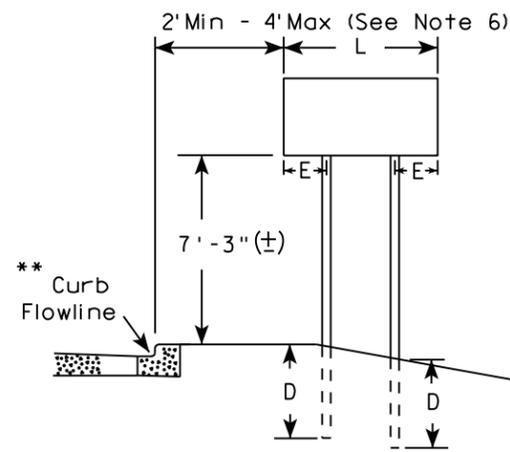
**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

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

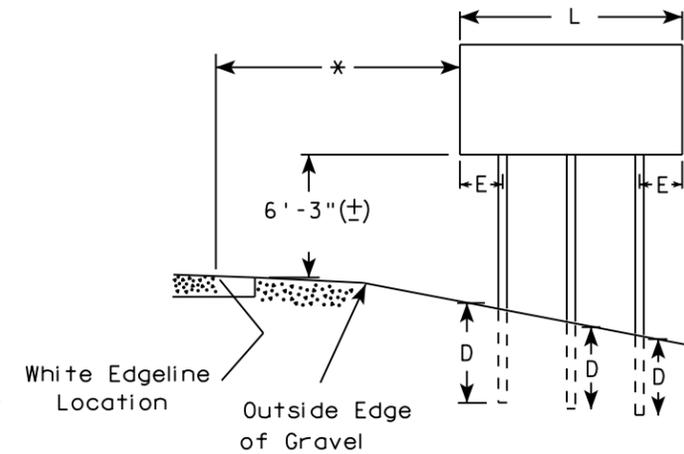
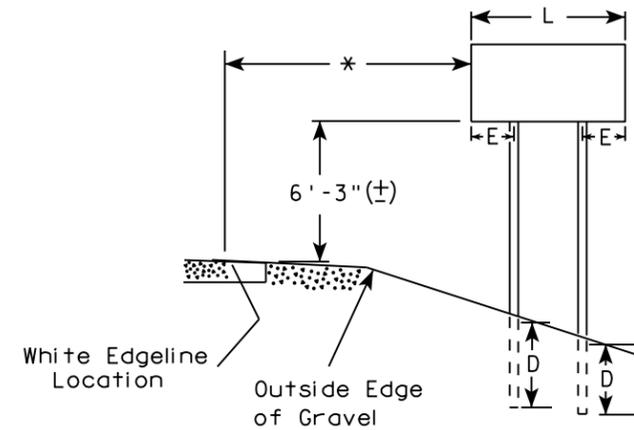
GENERAL NOTES

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" (±).

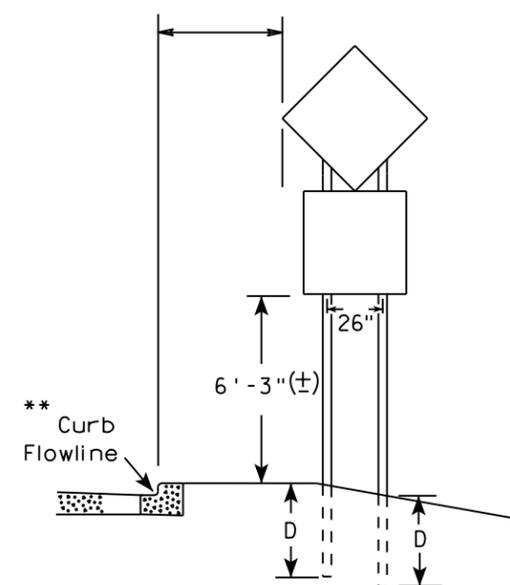
URBAN AREA



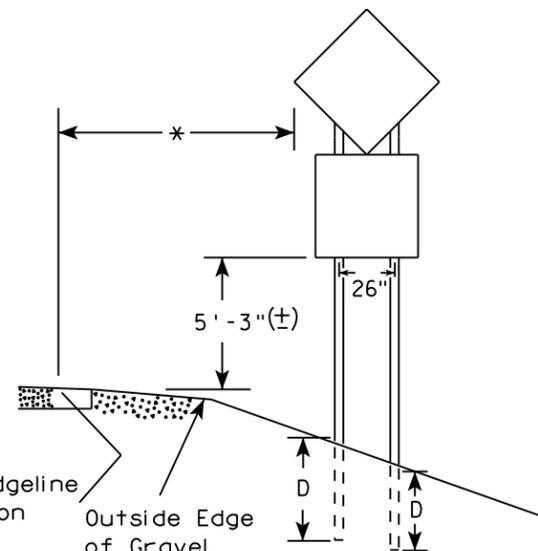
RURAL AREA (See Note 3)



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

\*\*\*

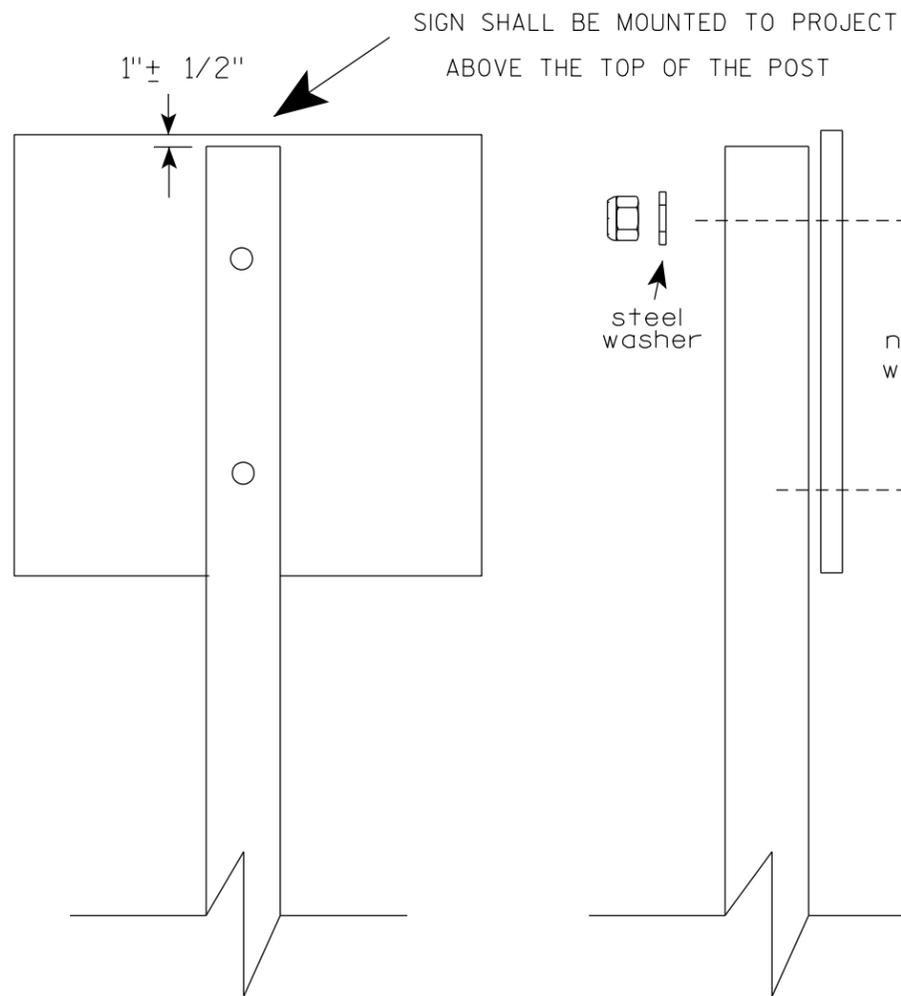
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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

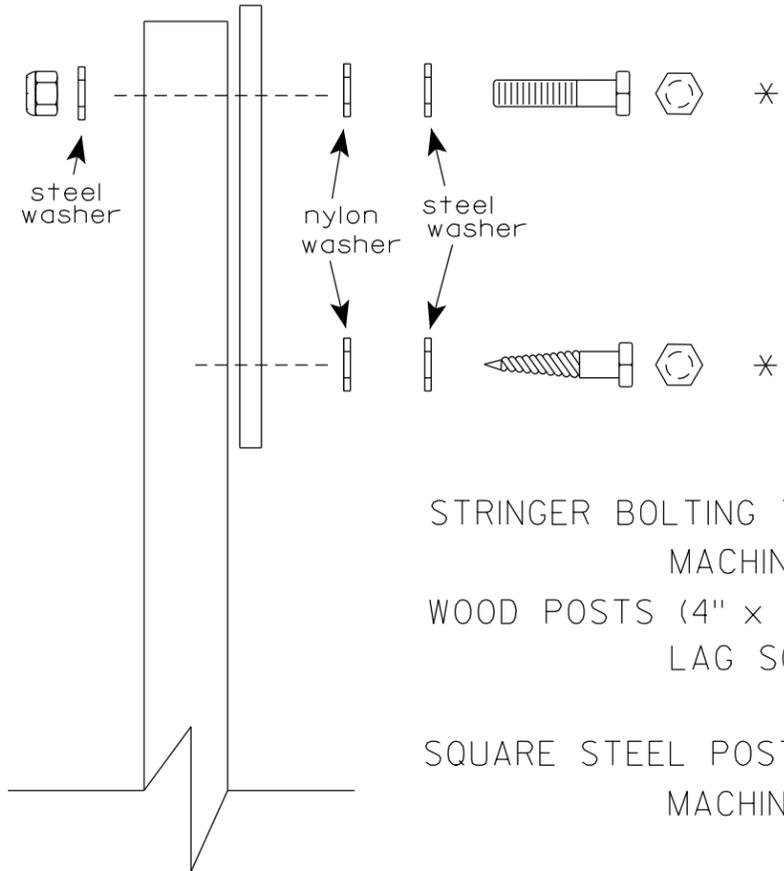
WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 8/21/17 PLATE NO. A4-4.15



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) -

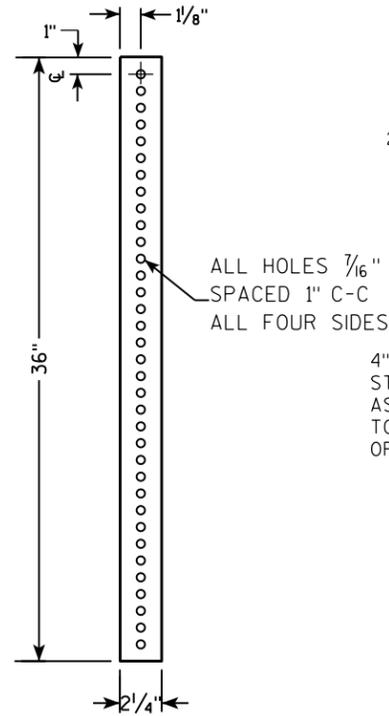
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

\* 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.

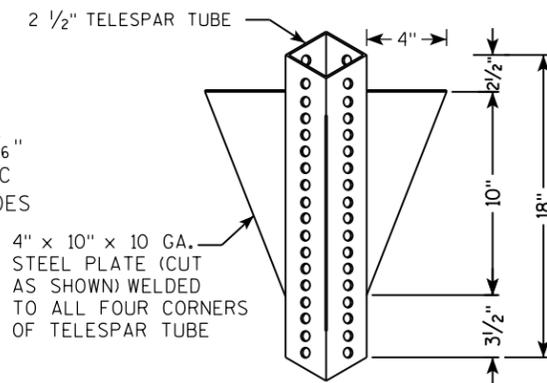
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

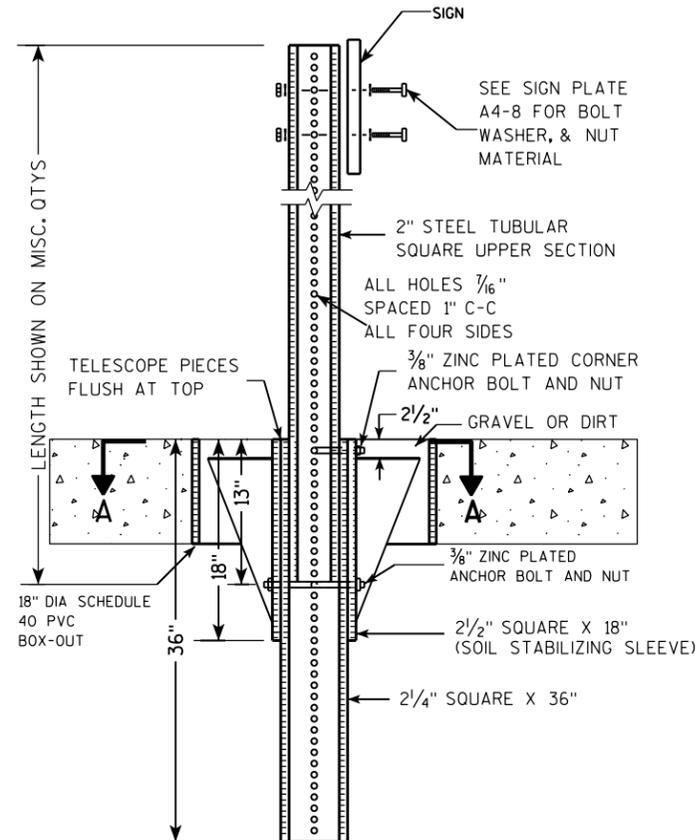
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



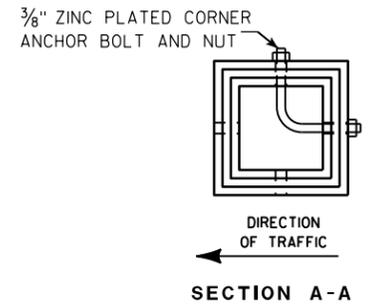
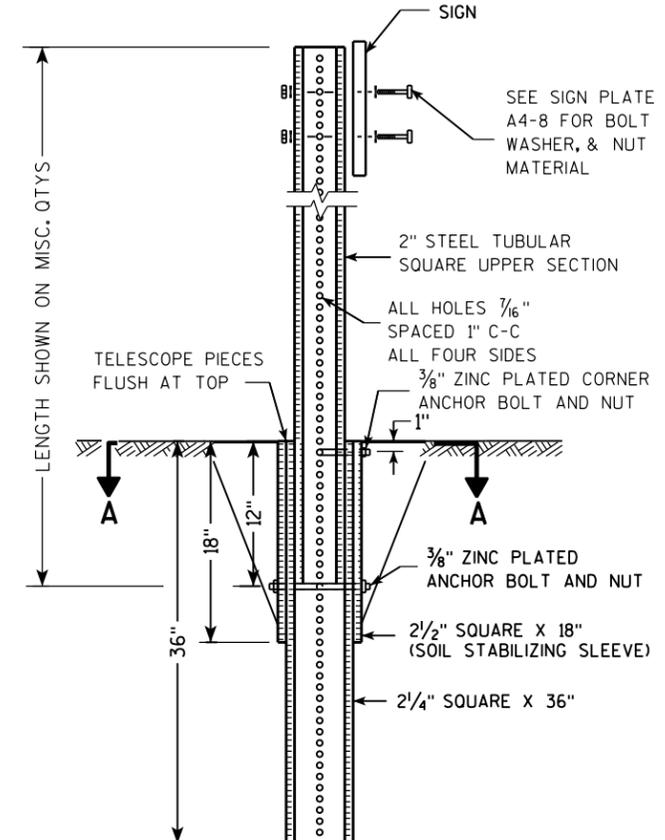
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**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

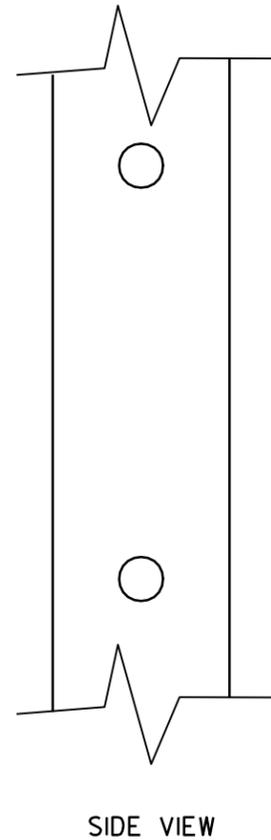
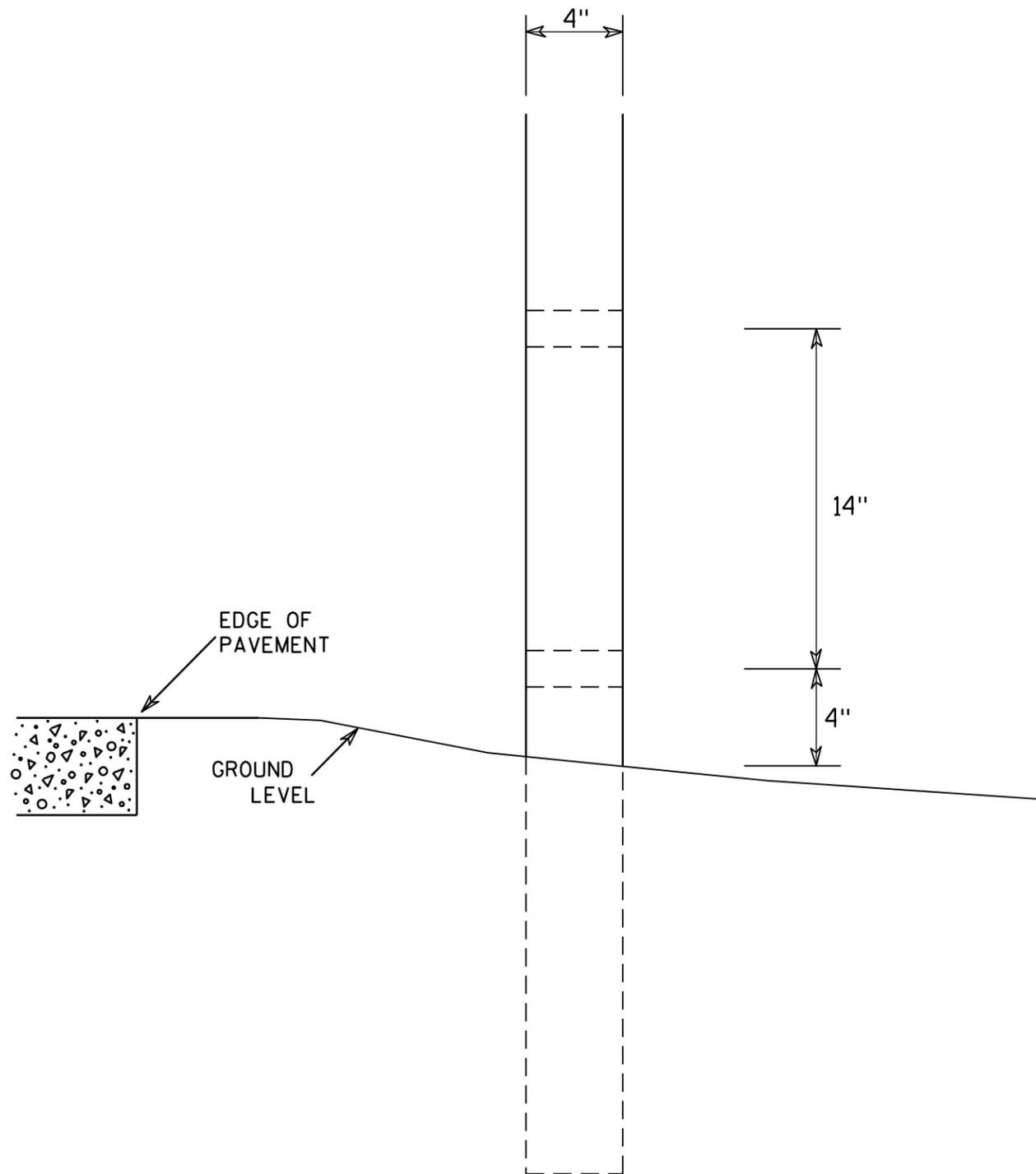
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**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



GENERAL NOTES

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

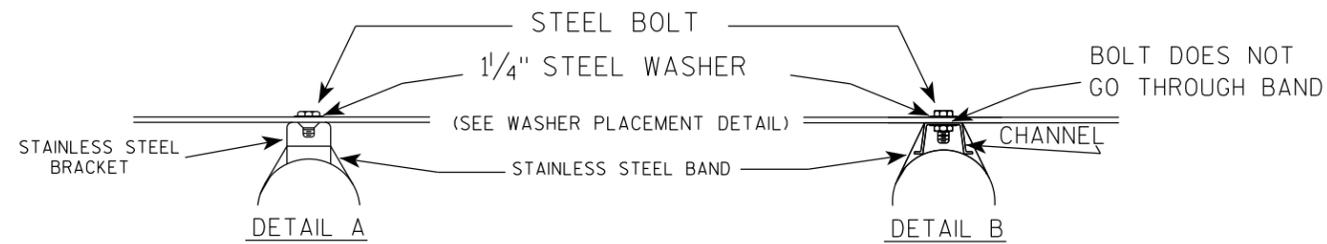
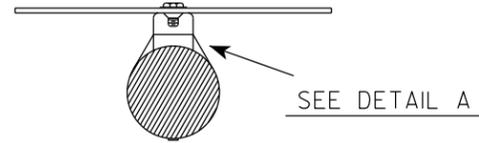
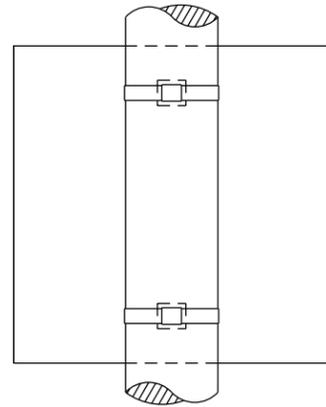
7

7

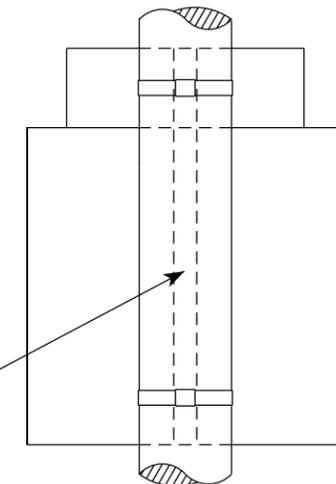
<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# BANDING

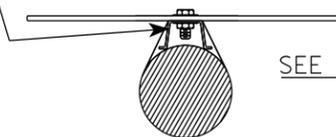
SINGLE SIGN



"J" ASSEMBLY

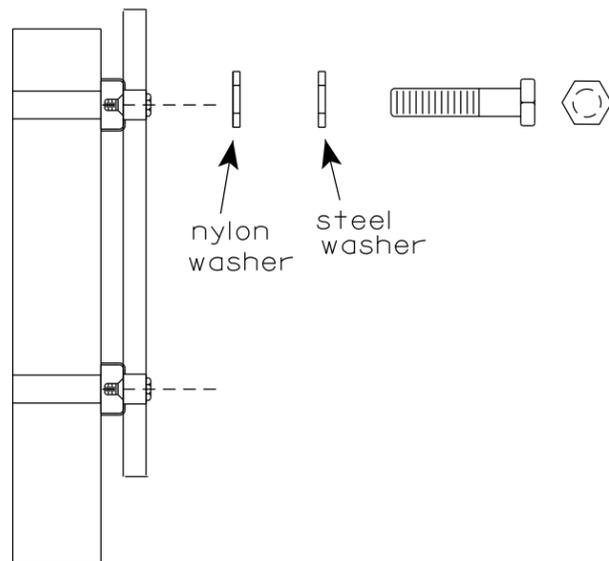


CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



- 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  $\frac{3}{4}$ " 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

WASHER PLACEMENT



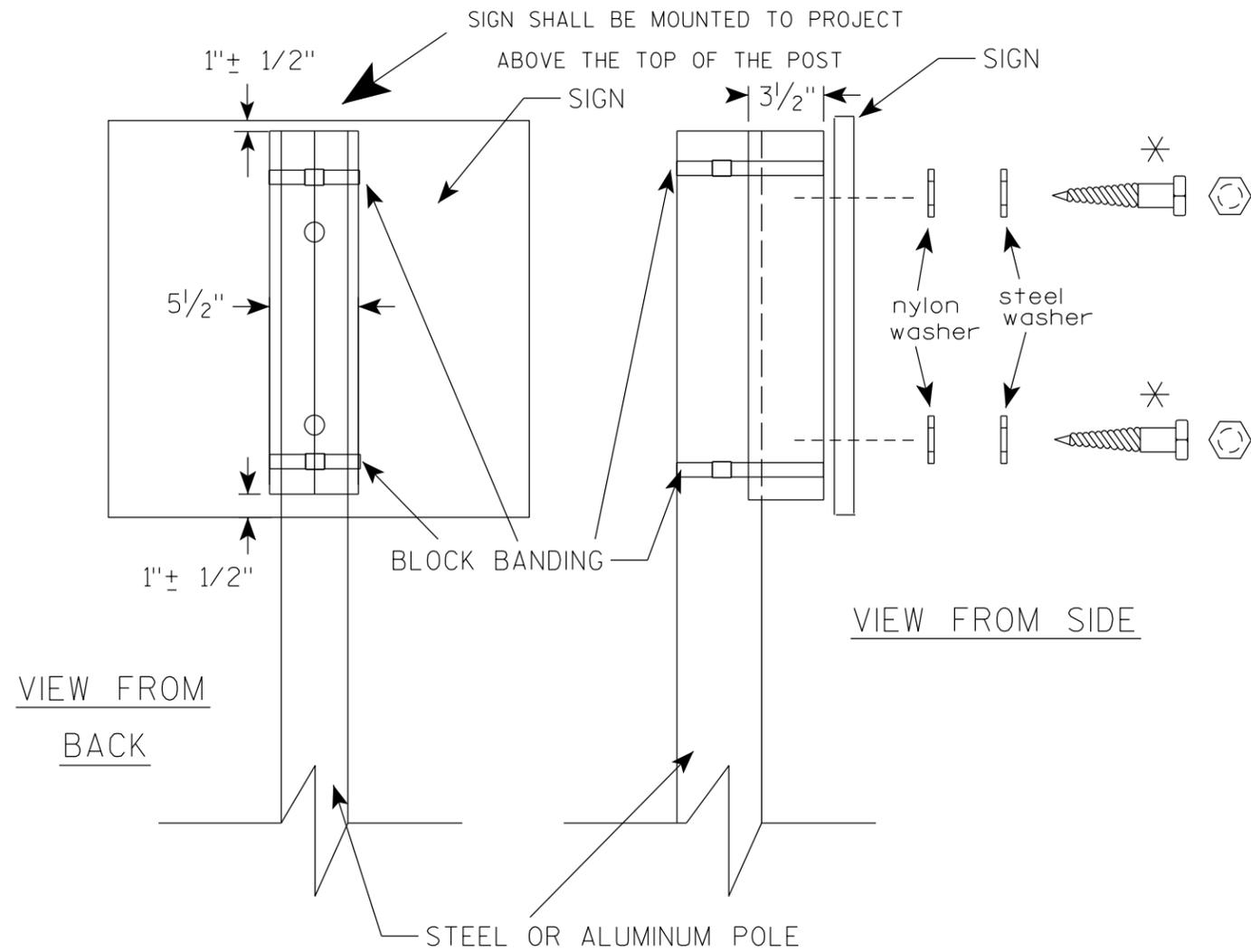
WASHERS (ALL POSTS) -  
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
 FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

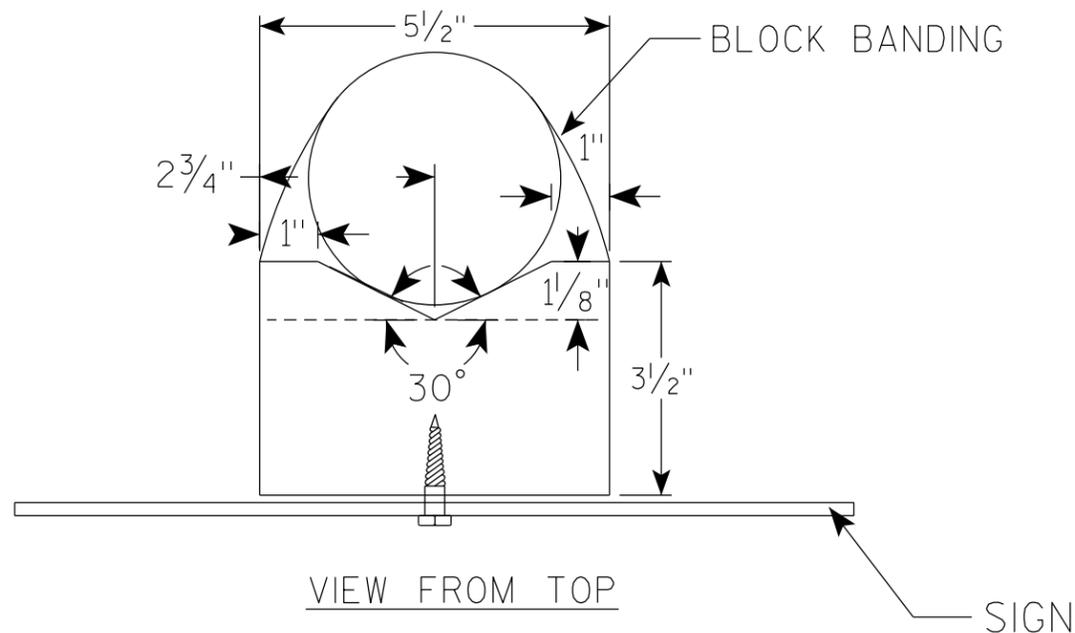
DATE 6/10/19 PLATE NO. A5-9.4



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

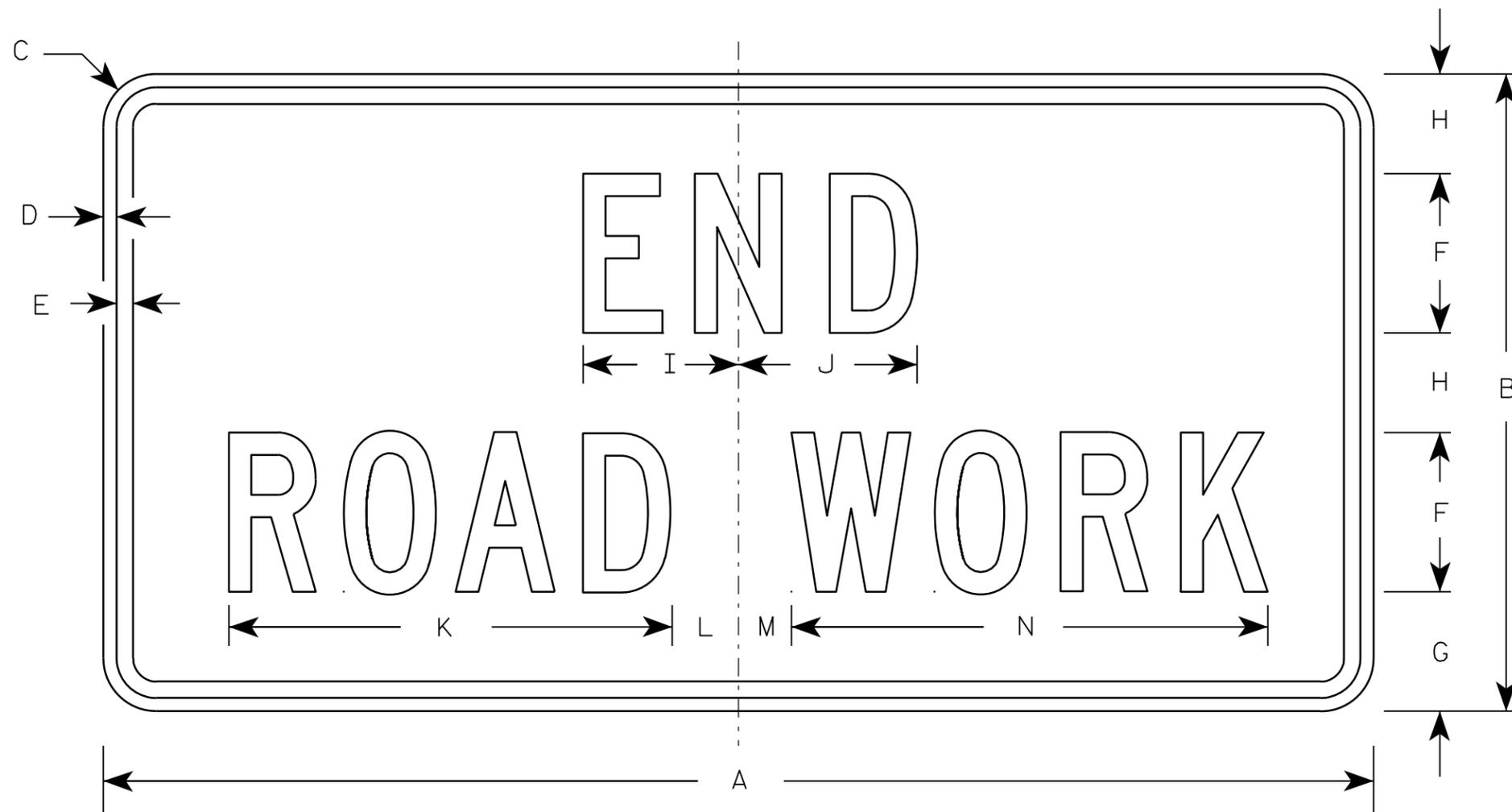
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL ( V-BLOCK OPTION )	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	 for State Traffic Engineer
DATE 4/19/2022	PLATE NO. A5-10.3

NOTES

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



G20-2A

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Metric equivalent for this sign is:

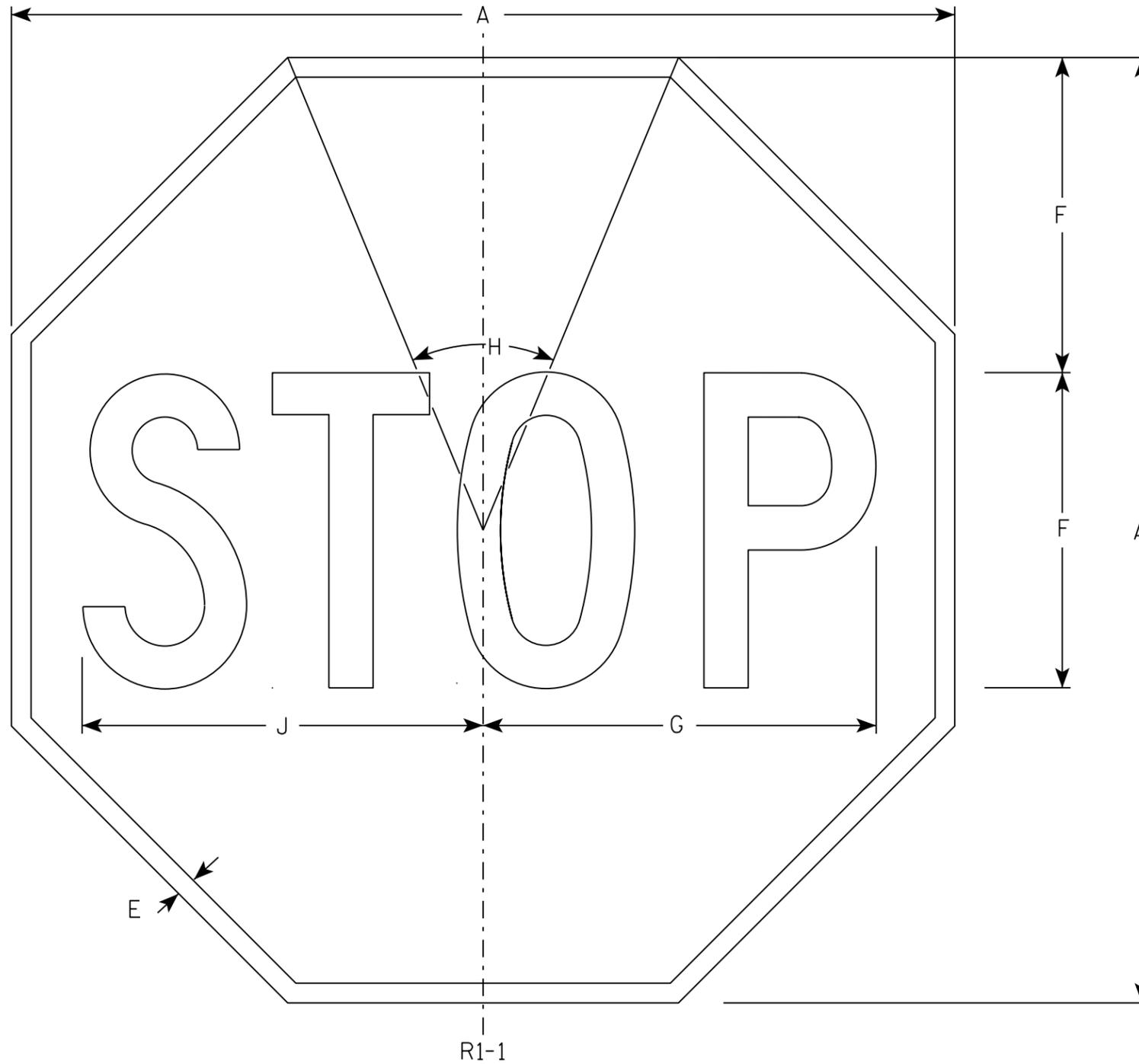
SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

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



R1-1

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

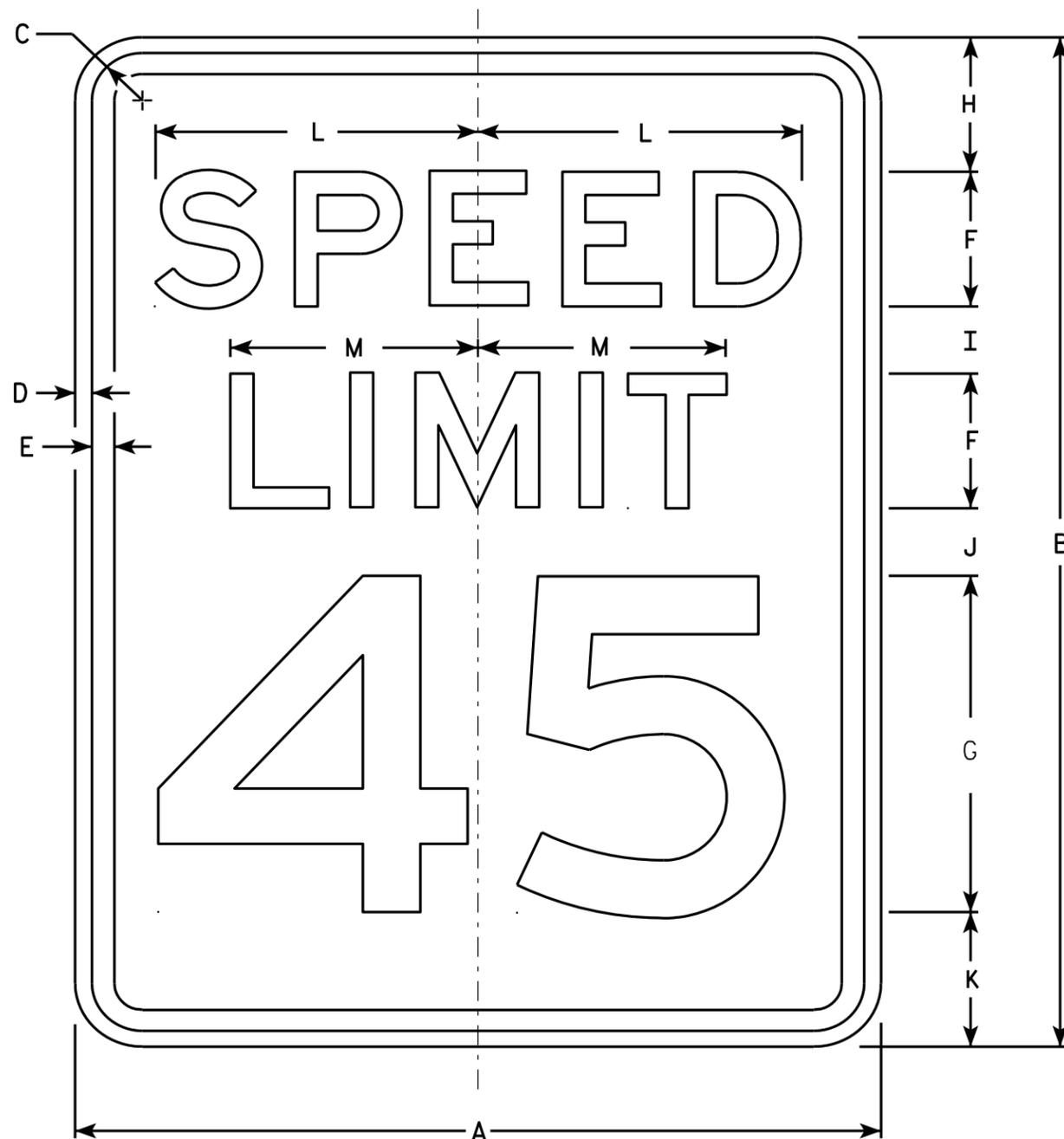
STANDARD SIGN  
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

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



R2-1

NOTES

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

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN  
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

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

NOTES

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

1 Letter = 3.75 sq ft for Size 2  
6.0 sq ft for Size 3  
10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2  
12.0 sq ft for Size 3  
20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2  
18.0 sq ft for Size 3  
30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2  
24.0 sq ft for Size 3  
40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2  
30.0 sq ft for Size 3  
50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2  
36.0 sq ft for Size 3  
60.0 sq ft for Size 4 or 5

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

Add the amounts when these letters are used:

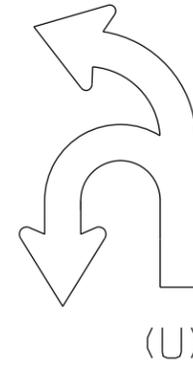
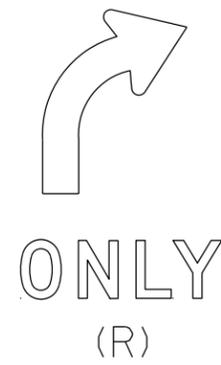
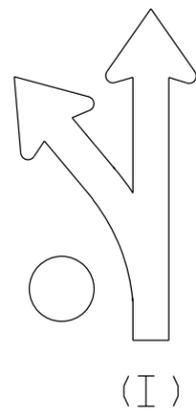
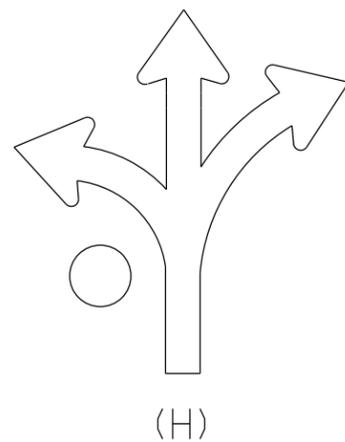
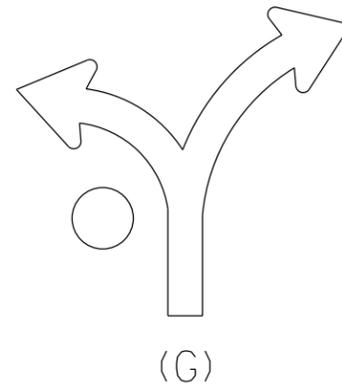
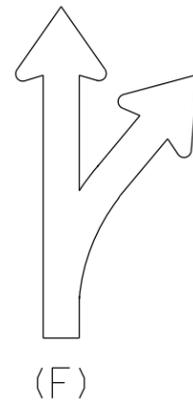
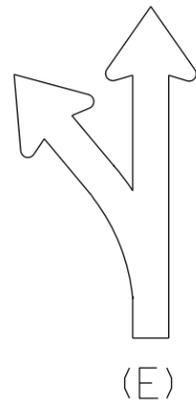
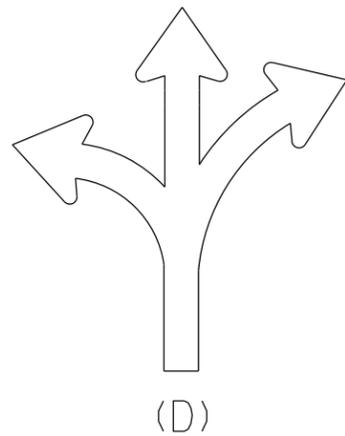
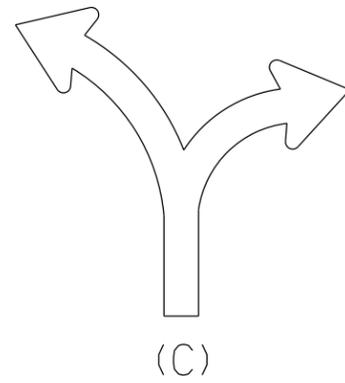
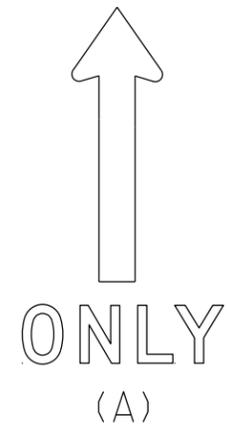
1.25 sq ft for Size 2  
1.5 sq ft for Size 3  
2.0 sq ft for Size 4 or 5

STANDARD SIGN  
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

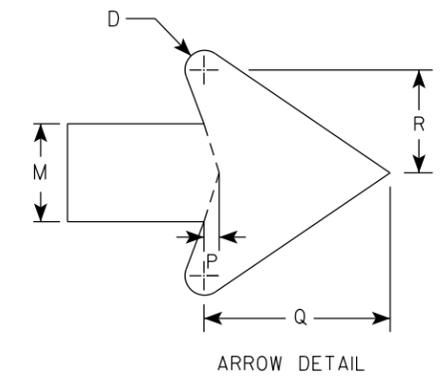
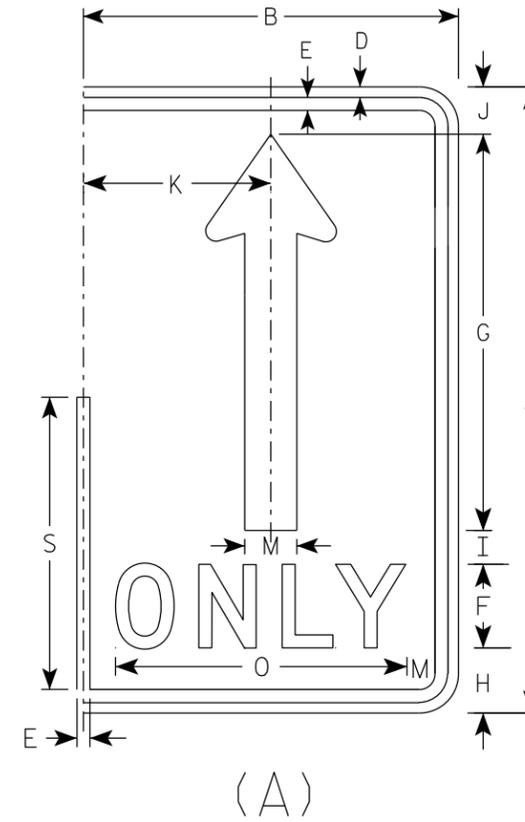
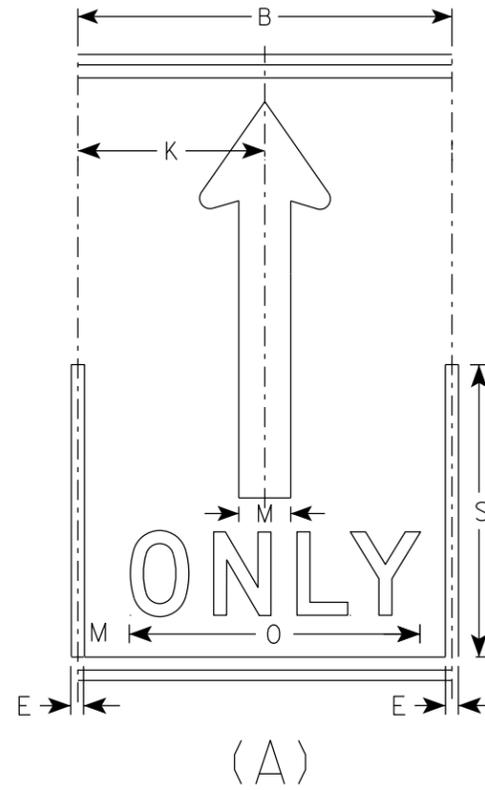
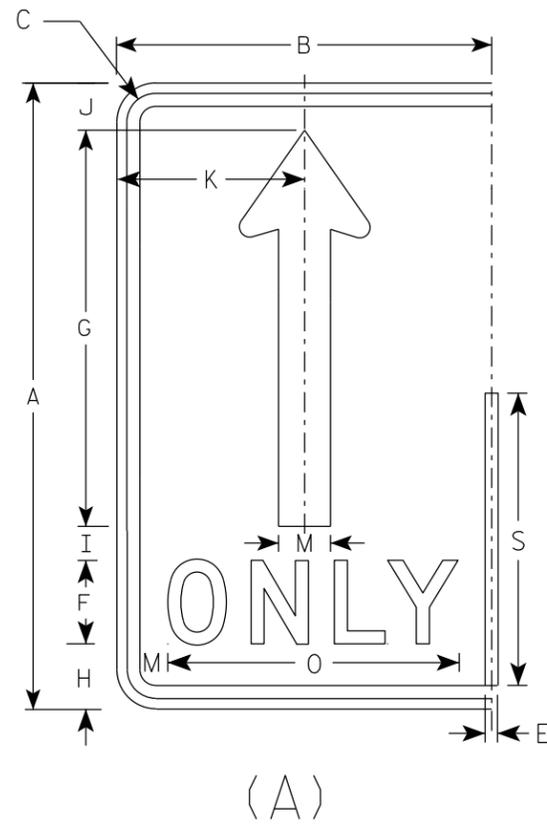


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NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN  
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

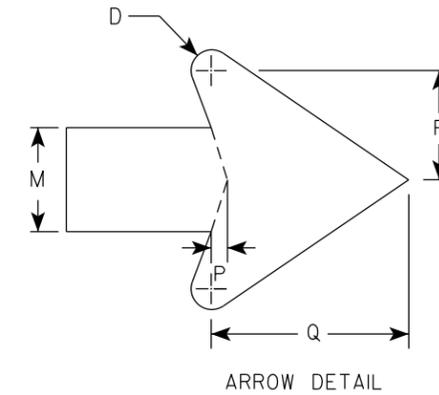
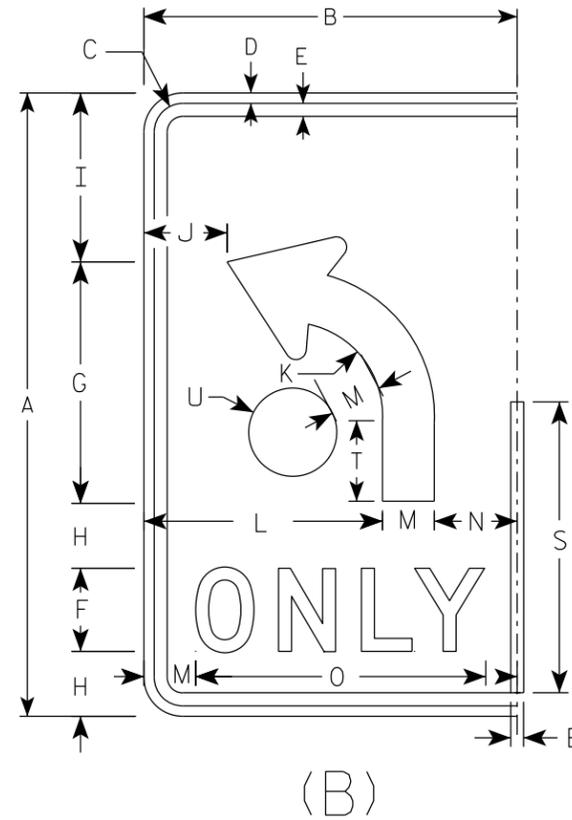
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

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

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN  
R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

SHEET NO:

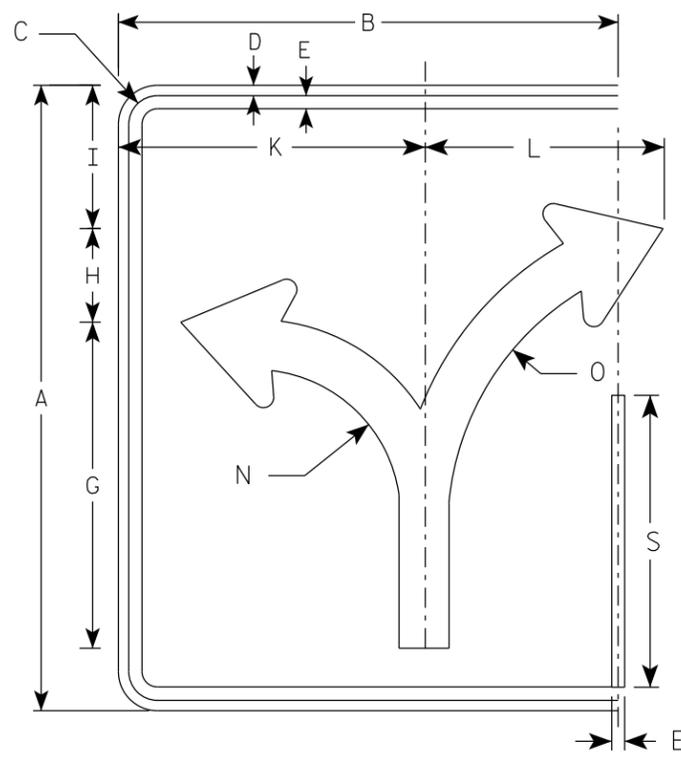
E

7

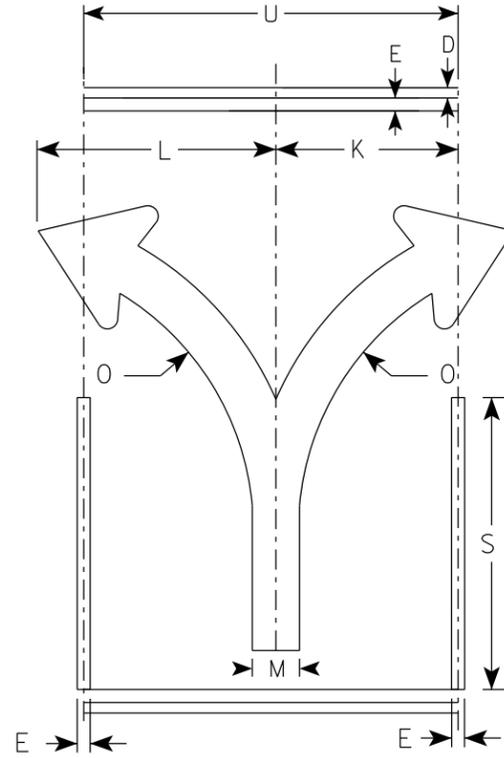
7

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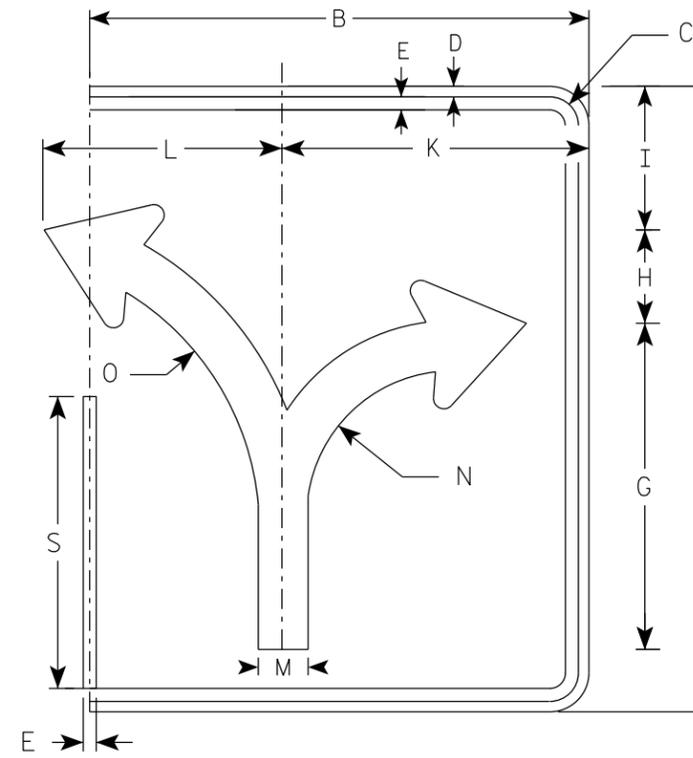
1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



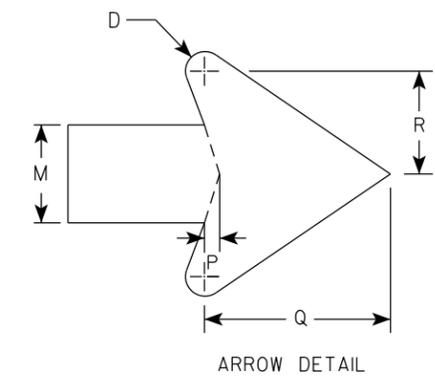
(C)



(C)



(C)



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

STANDARD SIGN  
R3-8 (C) Arrow

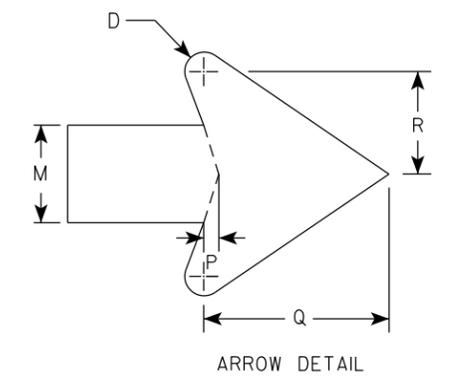
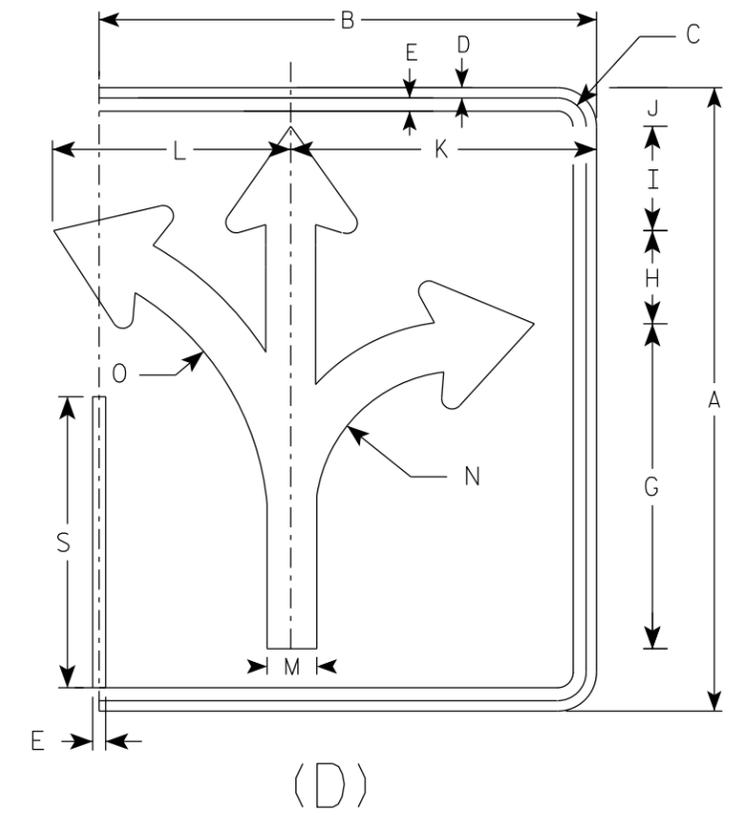
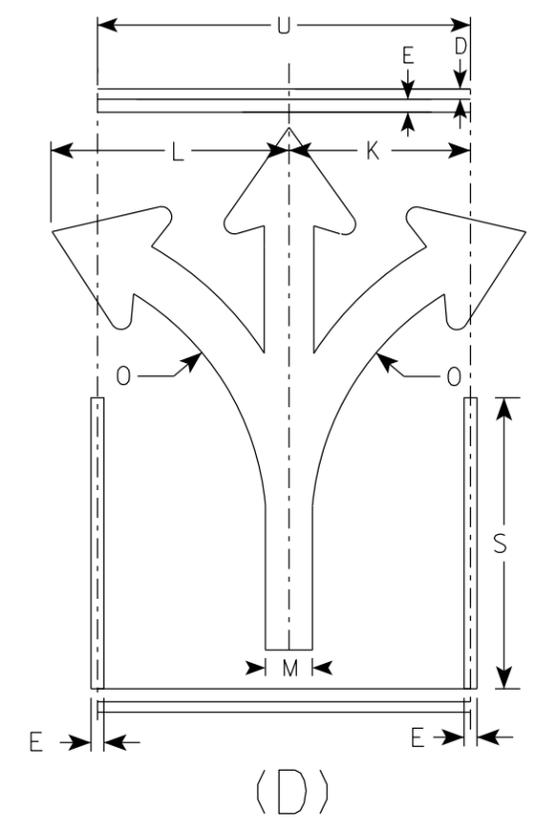
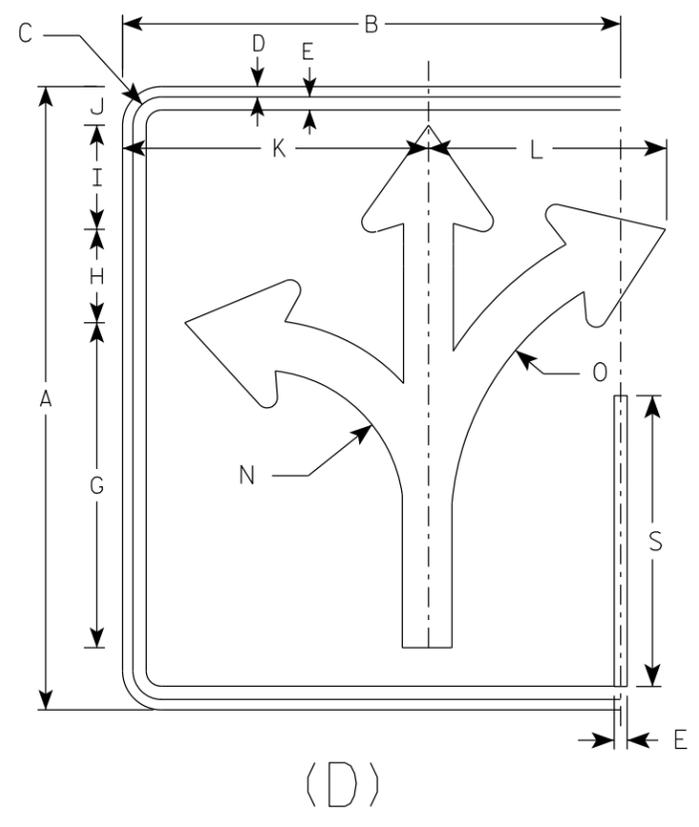
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

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



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

STANDARD SIGN  
R3-8 (D) Arrow

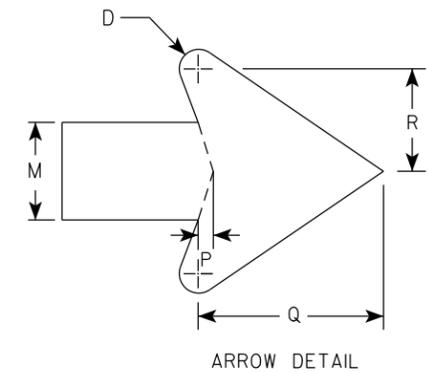
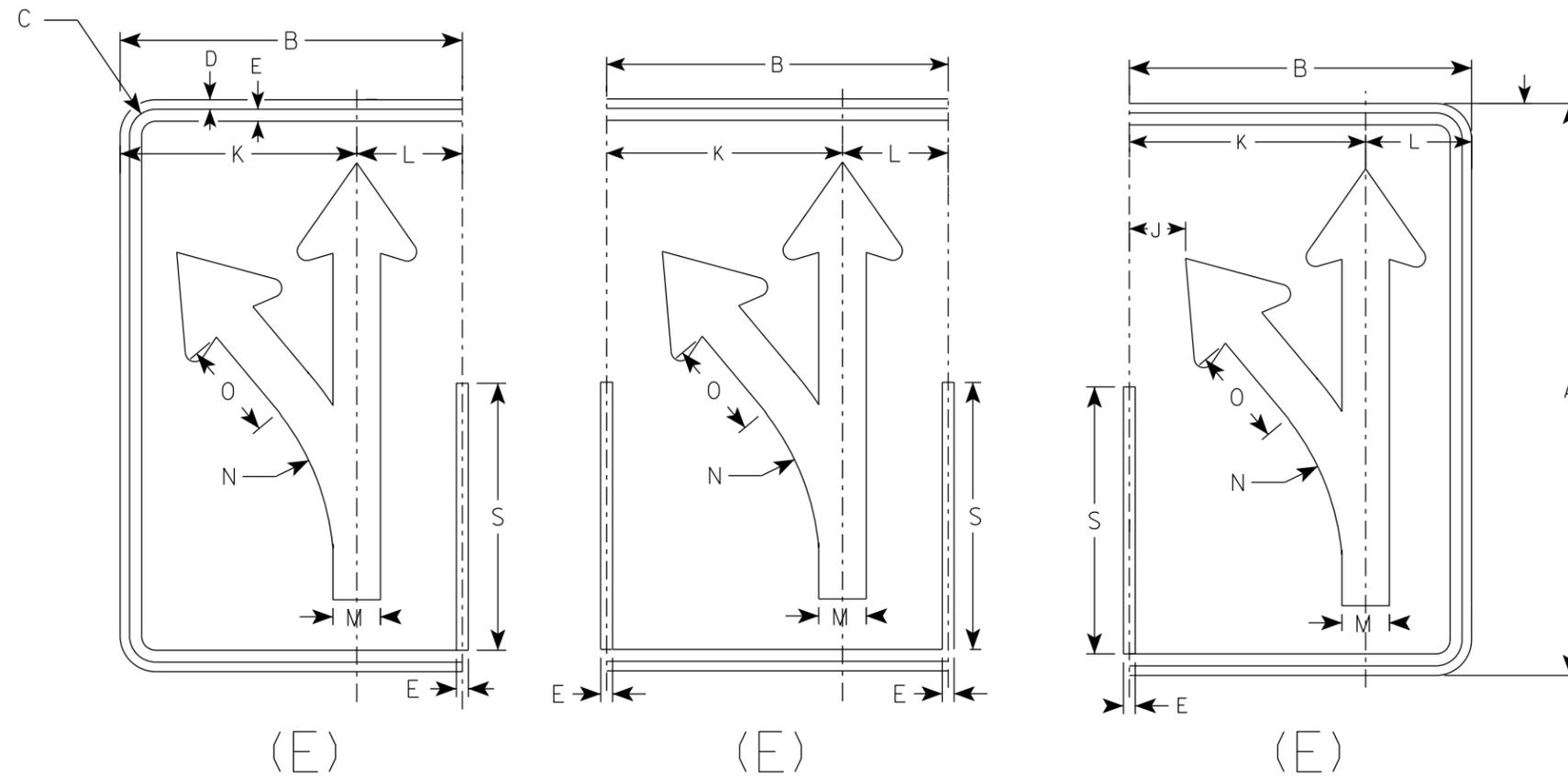
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

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



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

STANDARD SIGN  
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

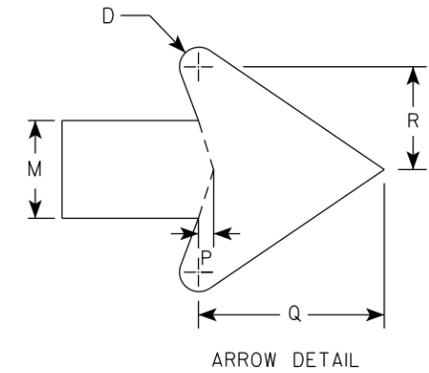
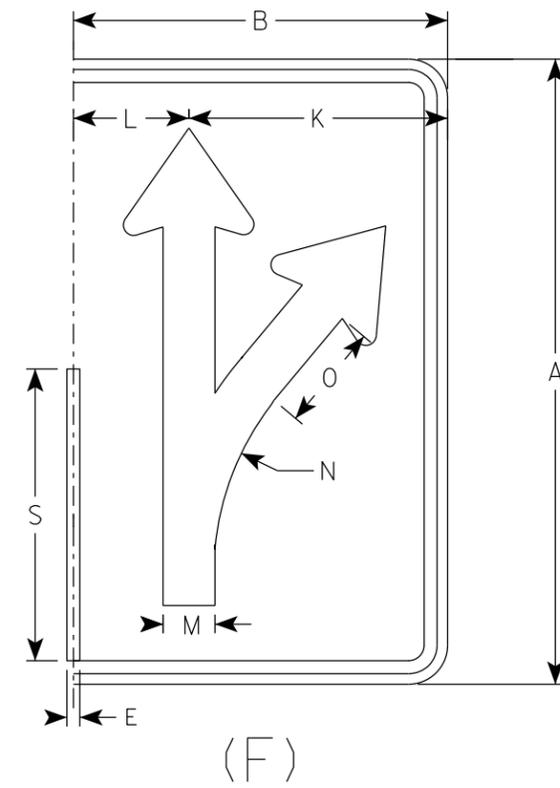
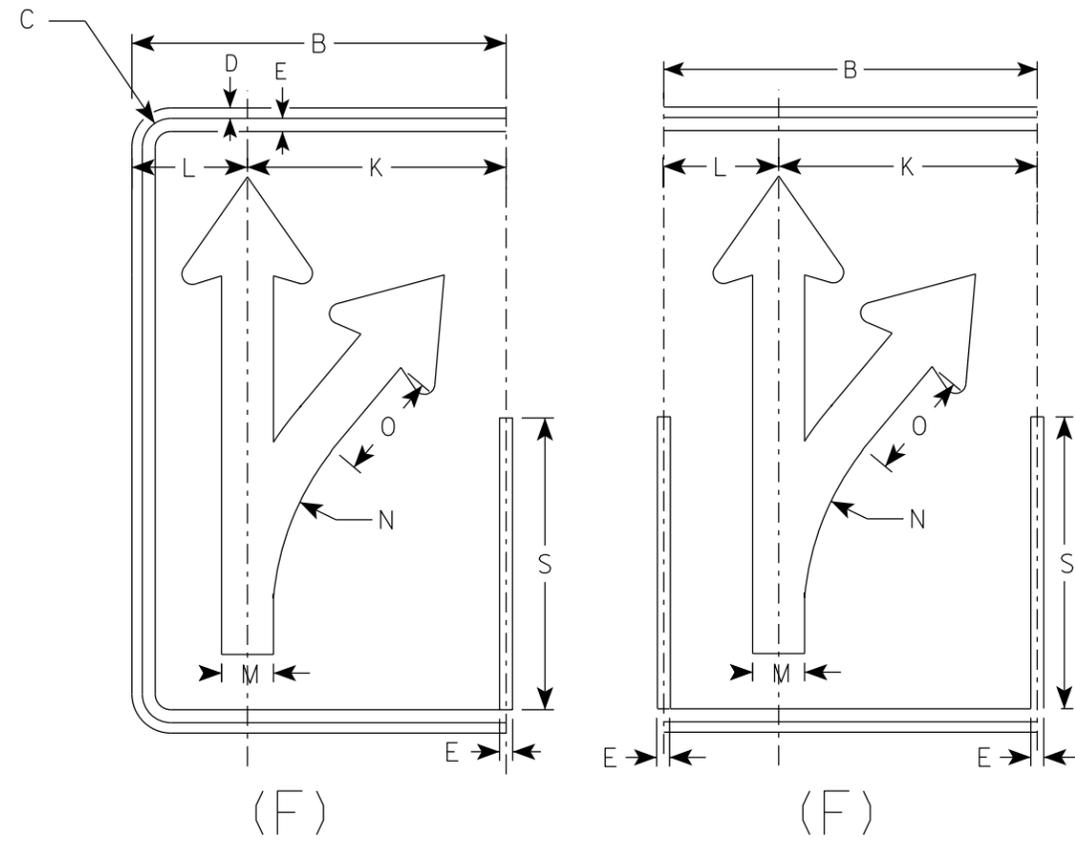
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

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

NOTES

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



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

STANDARD SIGN  
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

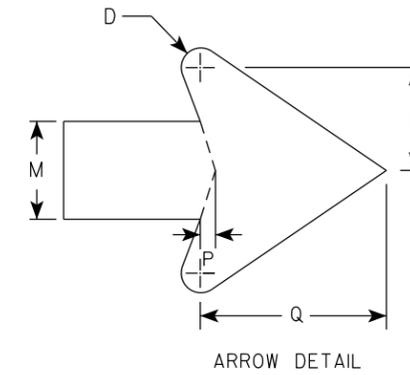
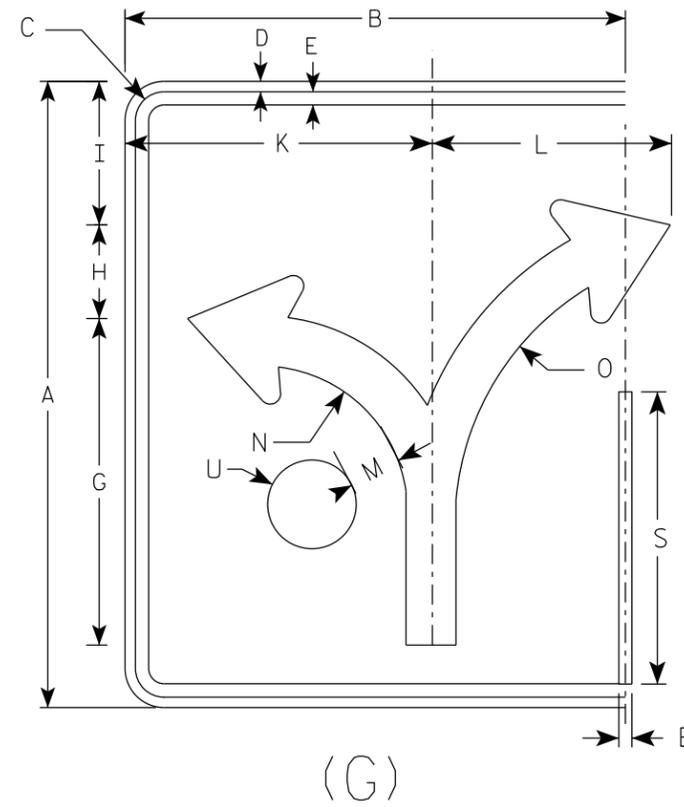
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

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

NOTES

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



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

STANDARD SIGN  
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

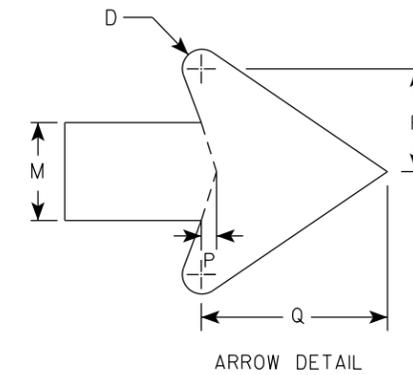
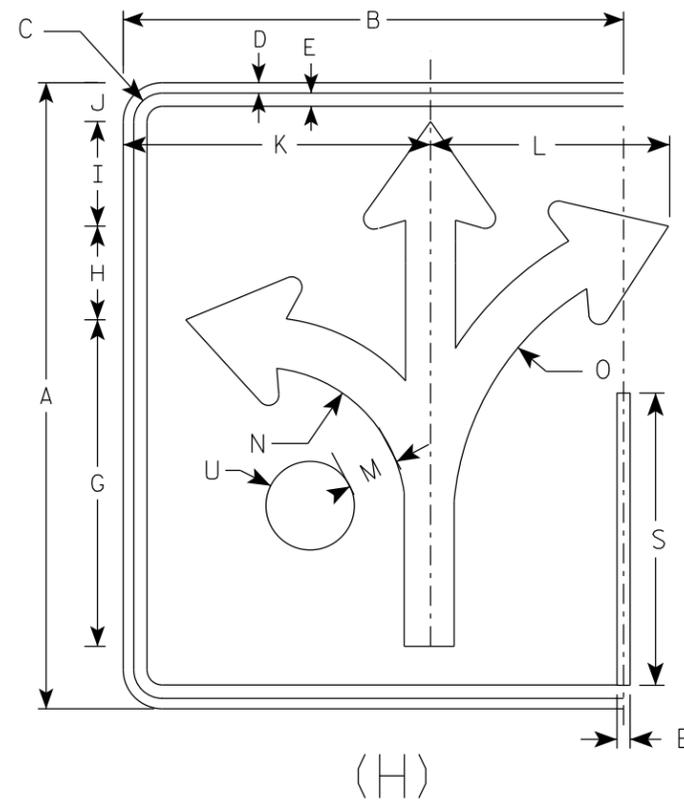
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

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

NOTES

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



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

STANDARD SIGN  
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

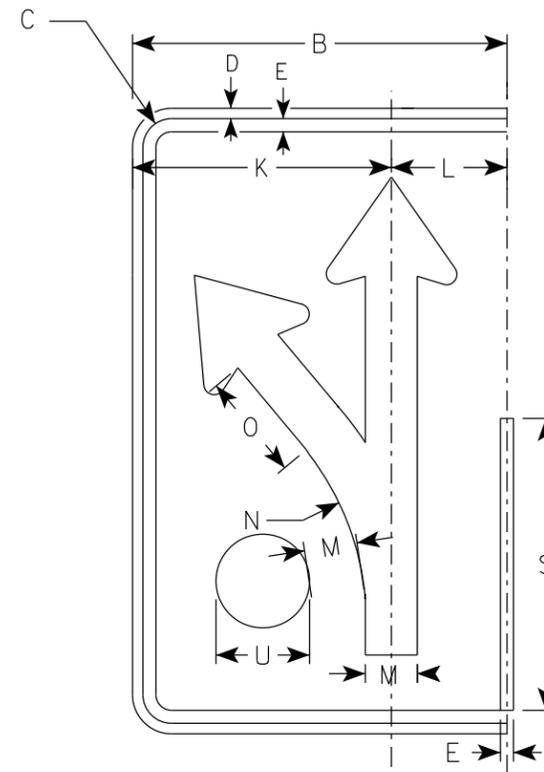
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

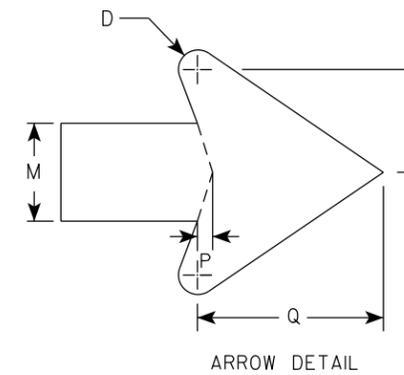
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

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



( I )



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

STANDARD SIGN  
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

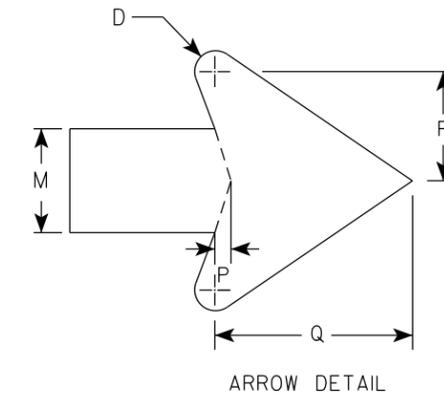
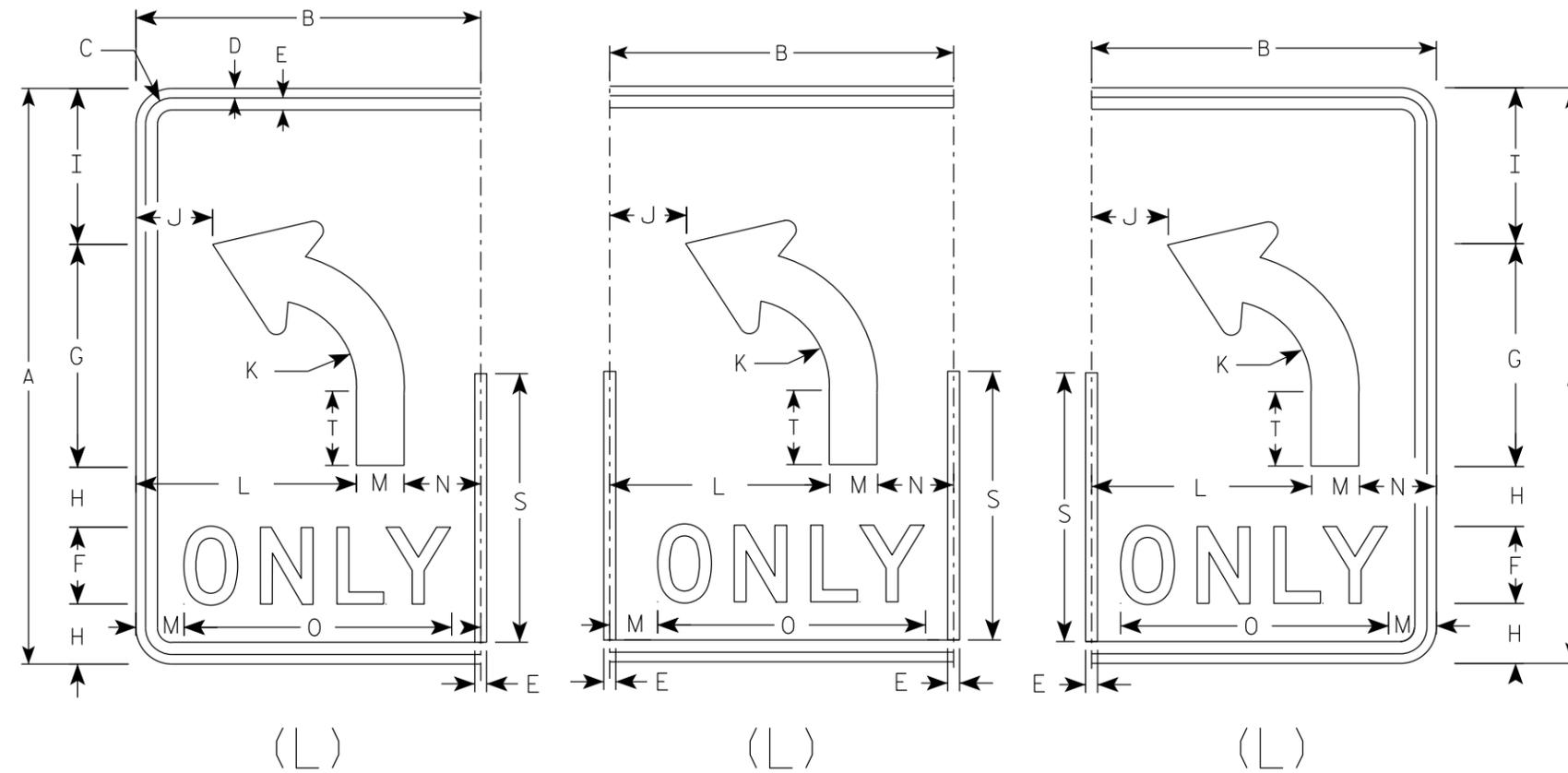
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

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

NOTES

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



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

STANDARD SIGN  
R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

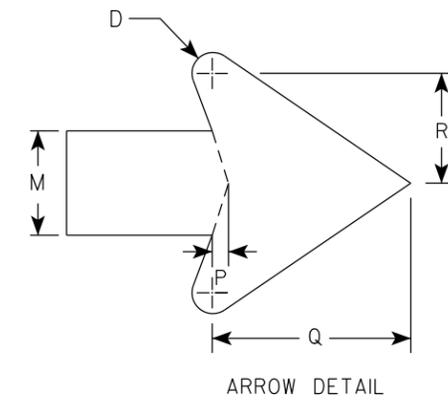
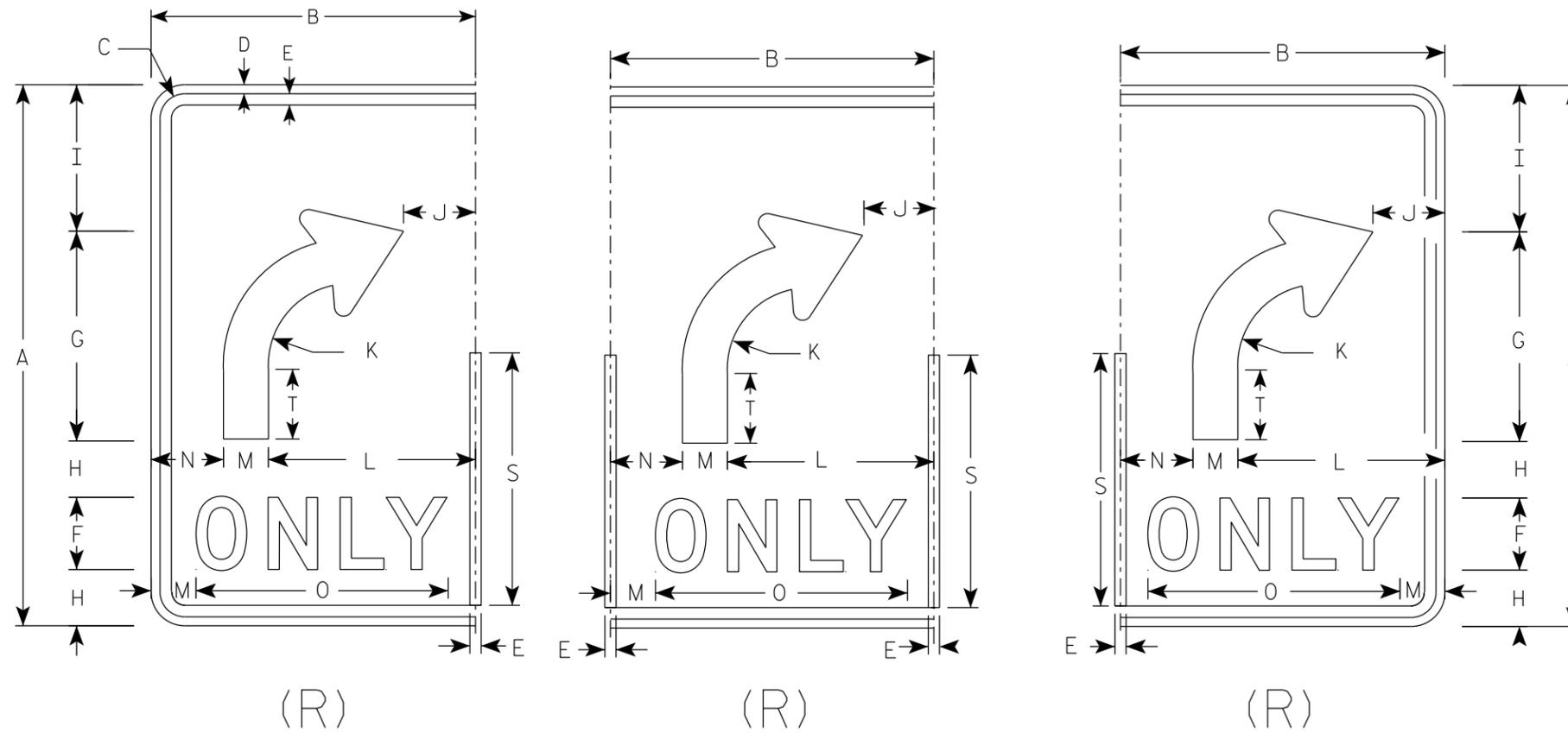
PROJECT NO:

SHEET NO:

E

NOTES

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



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

STANDARD SIGN  
R3-8 (R) Arrow

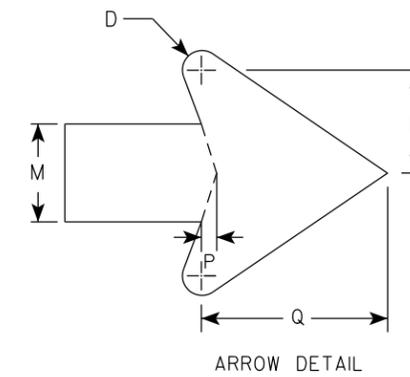
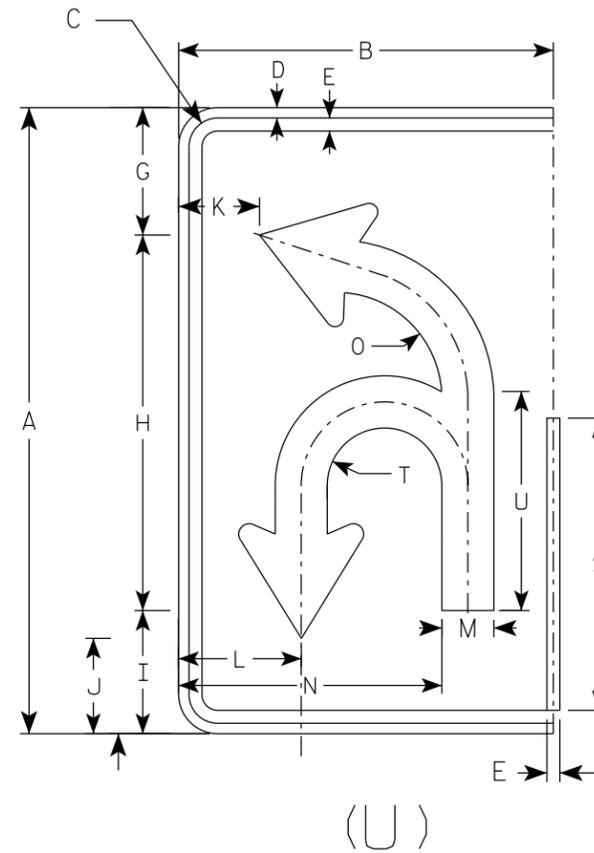
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN  
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

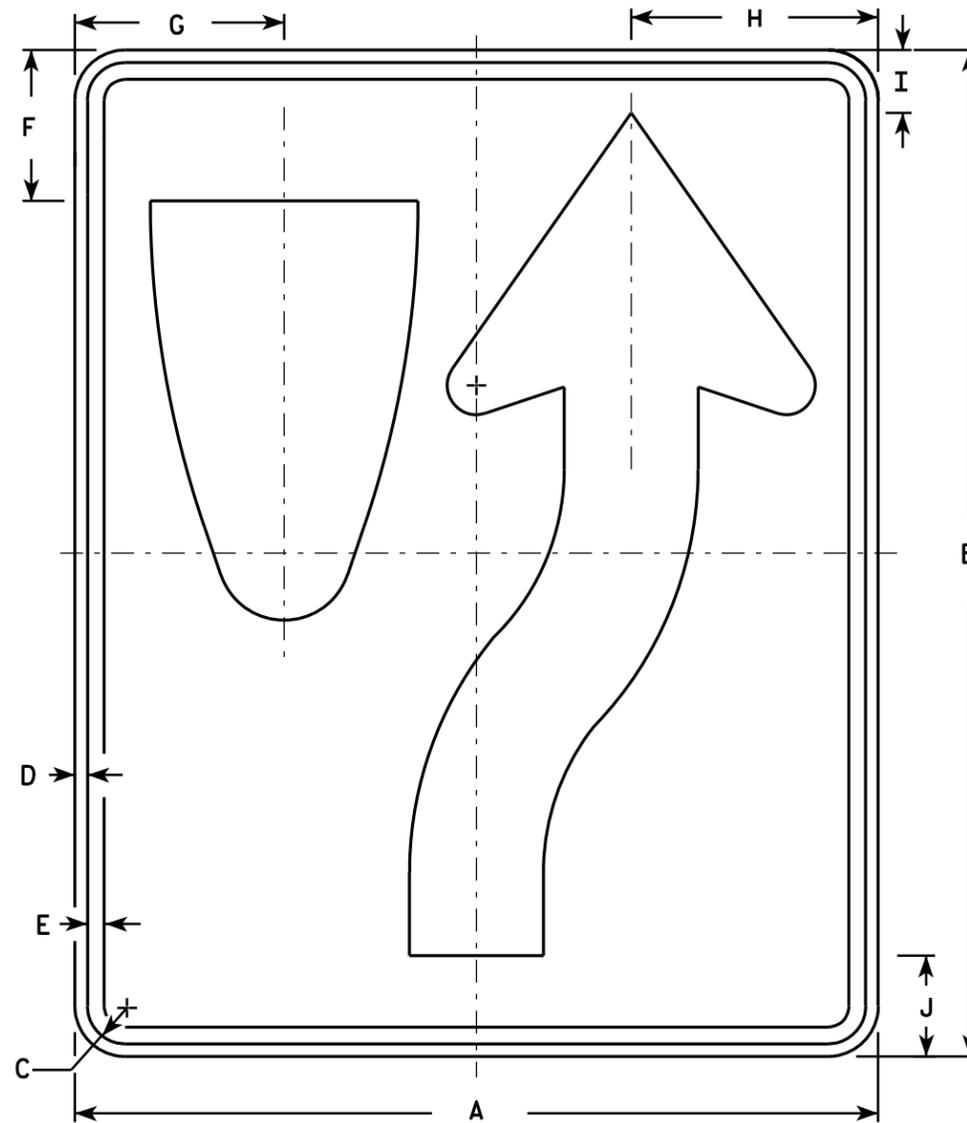
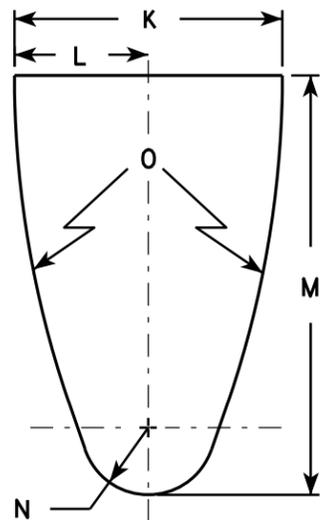
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

7

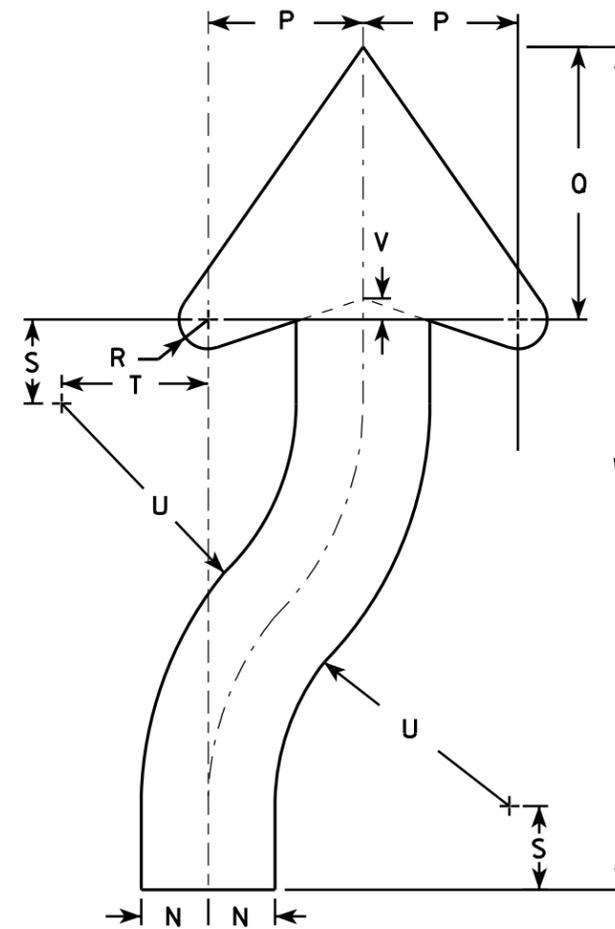
7

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:  
Background - White  
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



ARROW DETAIL

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

**STANDARD SIGN**  
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

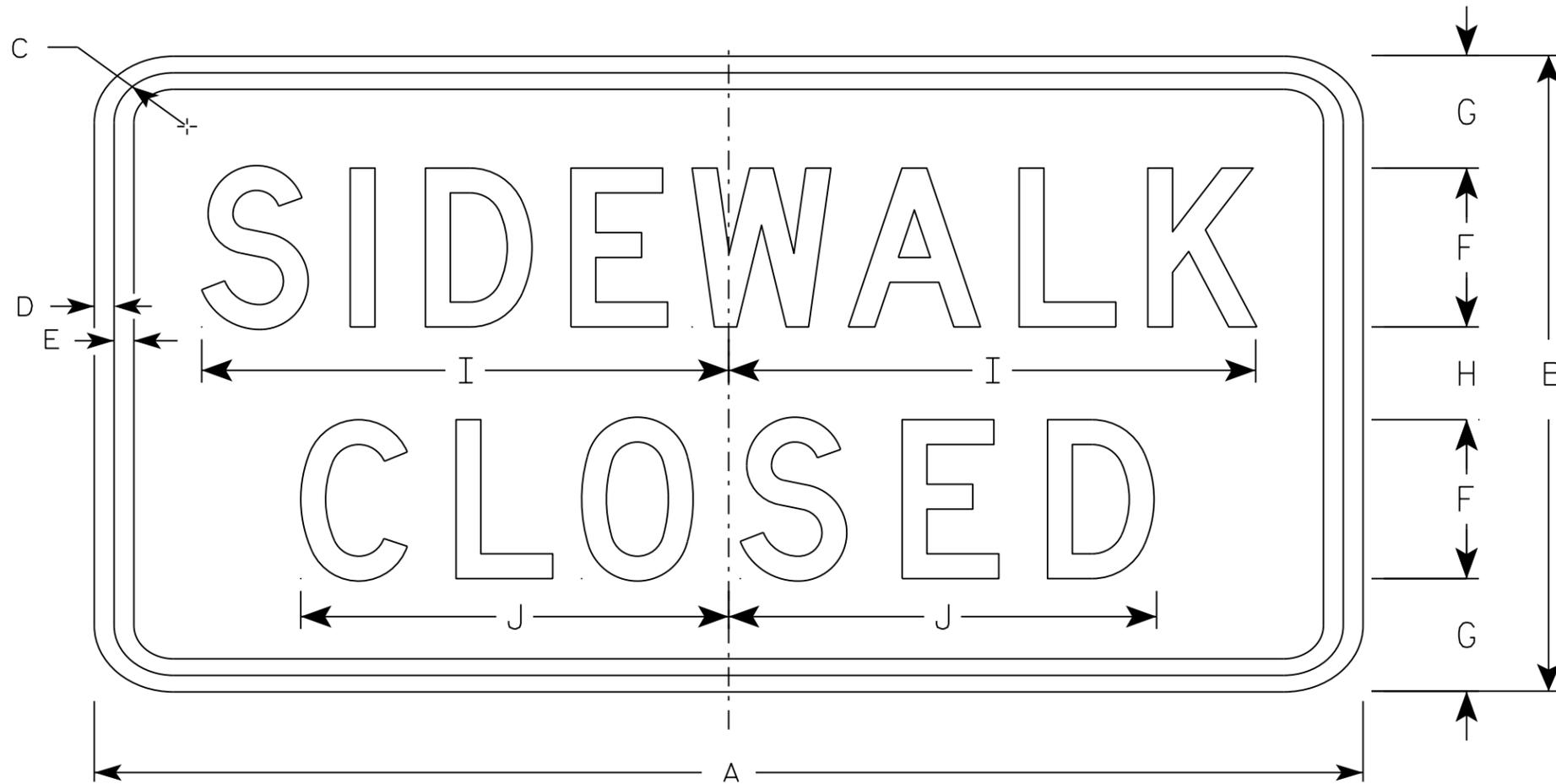
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

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

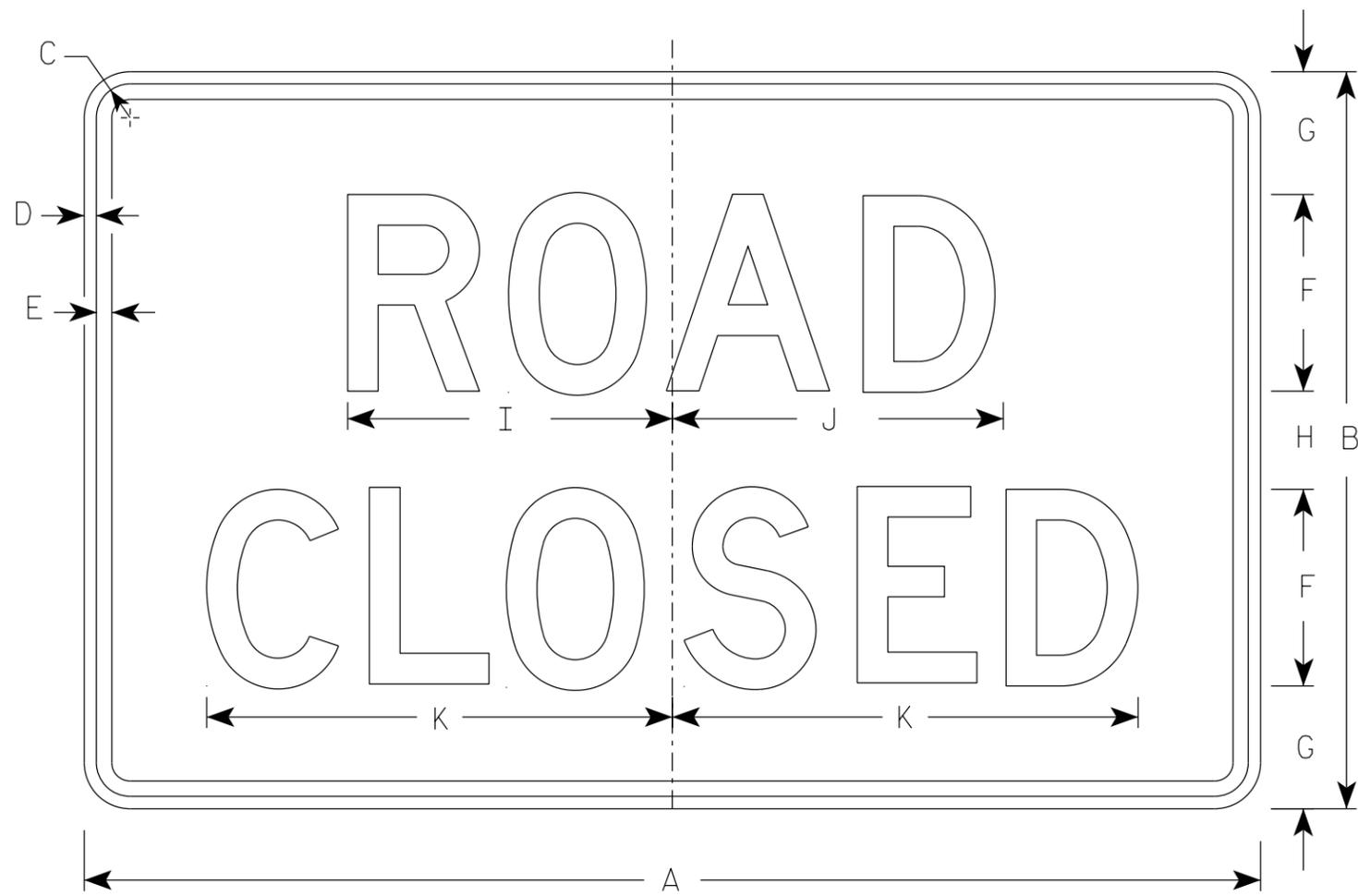
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4	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

STANDARD SIGN  
R9-9

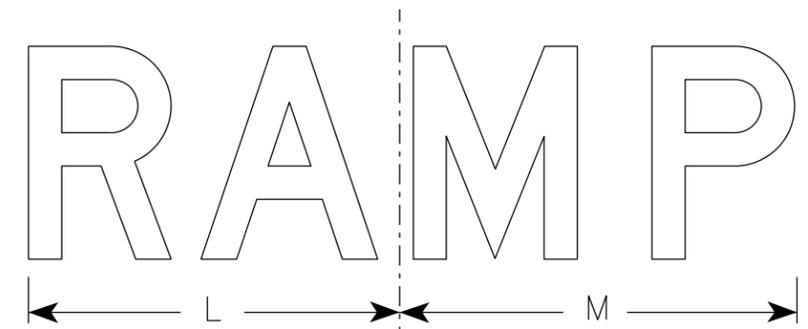
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

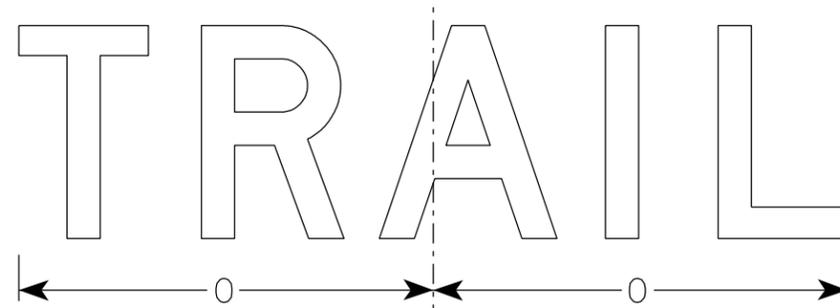
DATE 8/11/16 PLATE NO. R9-9.6



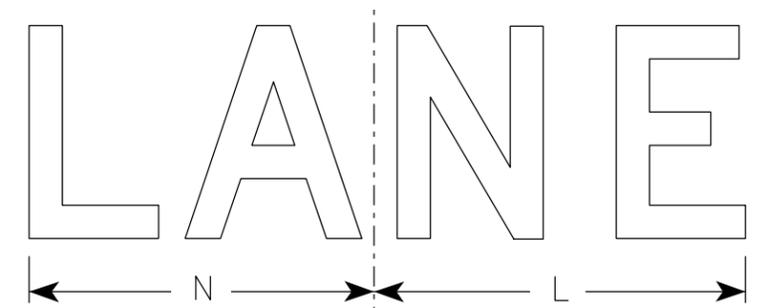
R11-2



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

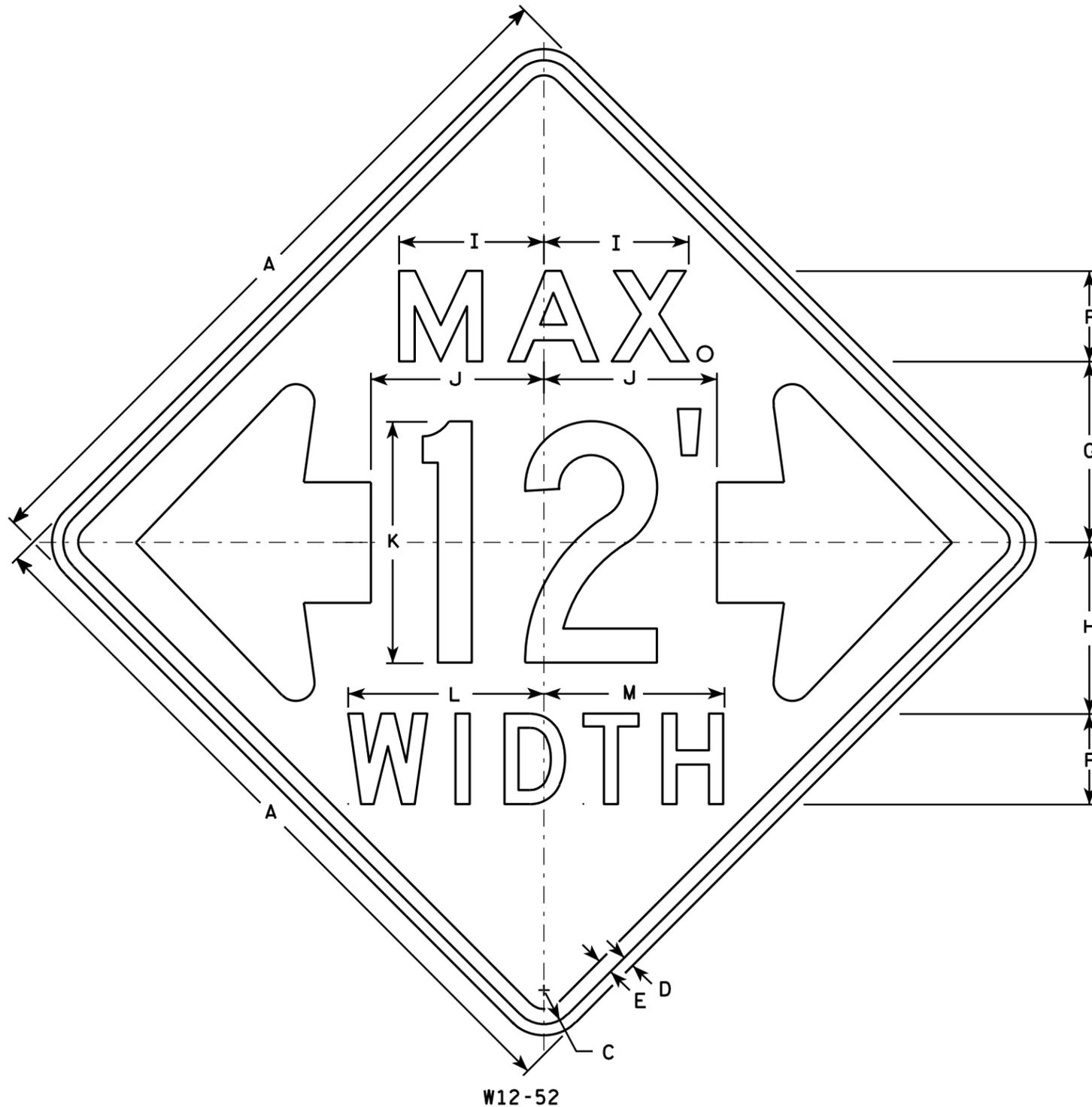
STANDARD SIGN  
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

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

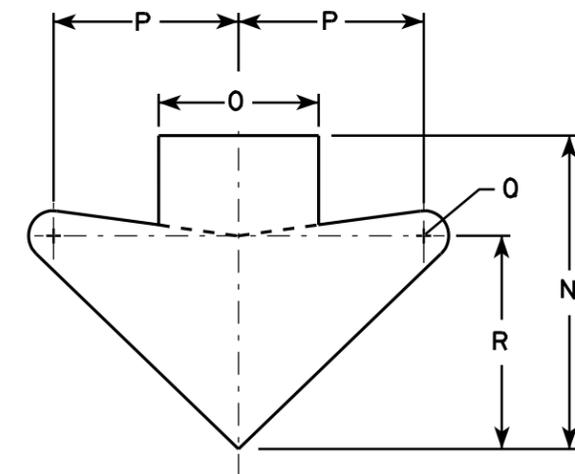
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



W12-52

**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



**ARROW DETAIL**

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

**STANDARD SIGN**  
W12-52

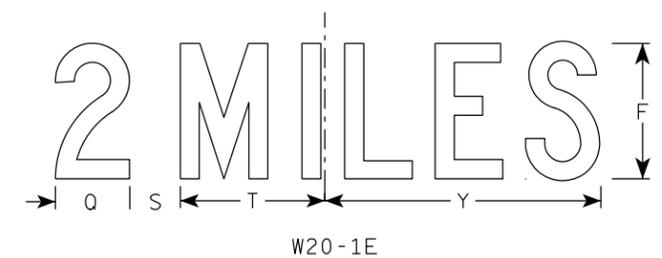
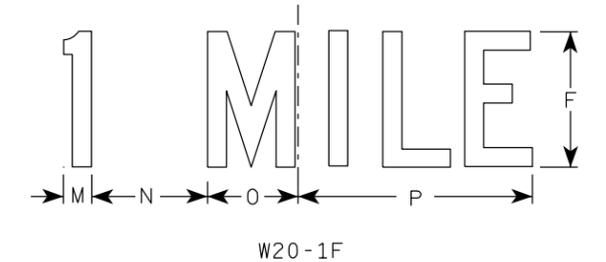
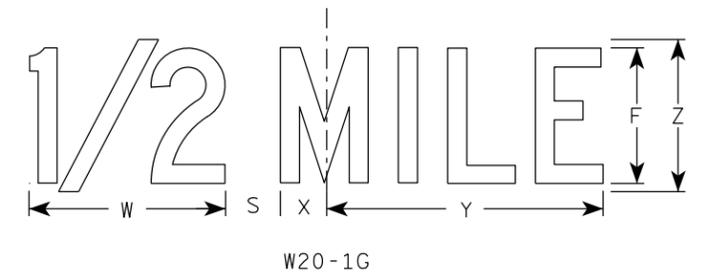
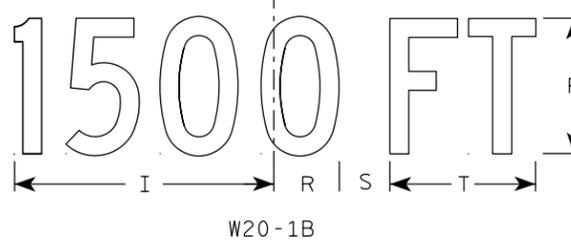
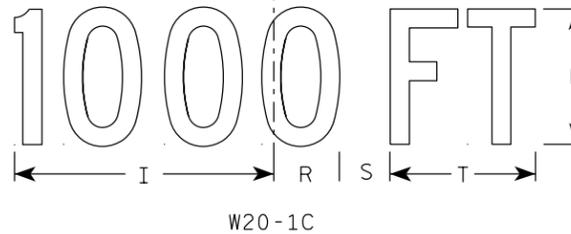
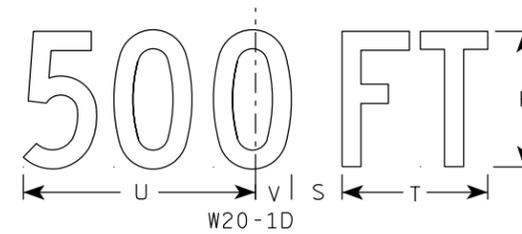
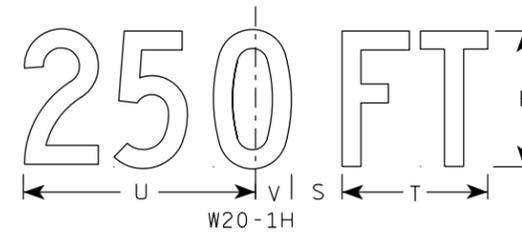
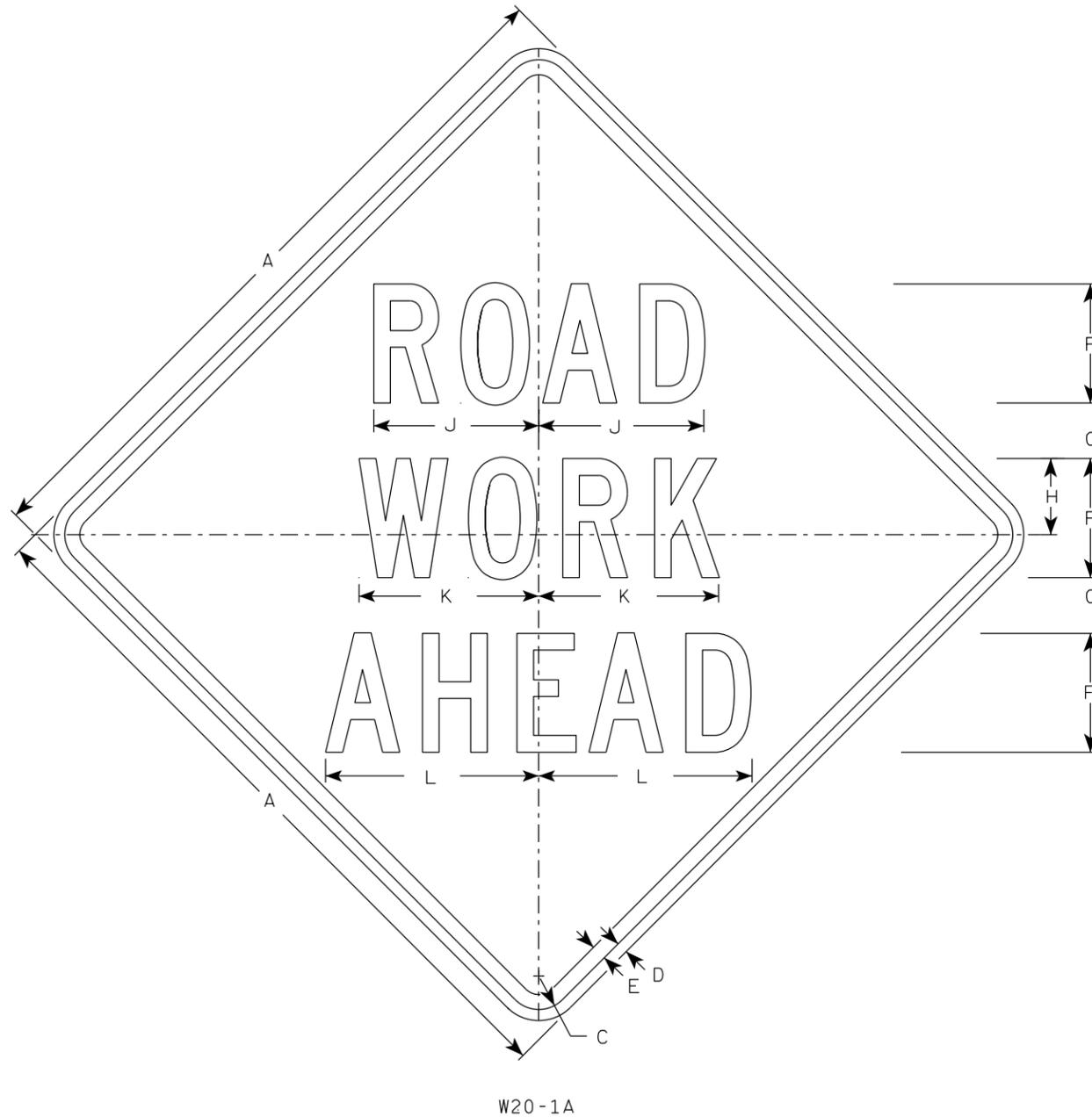
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

**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

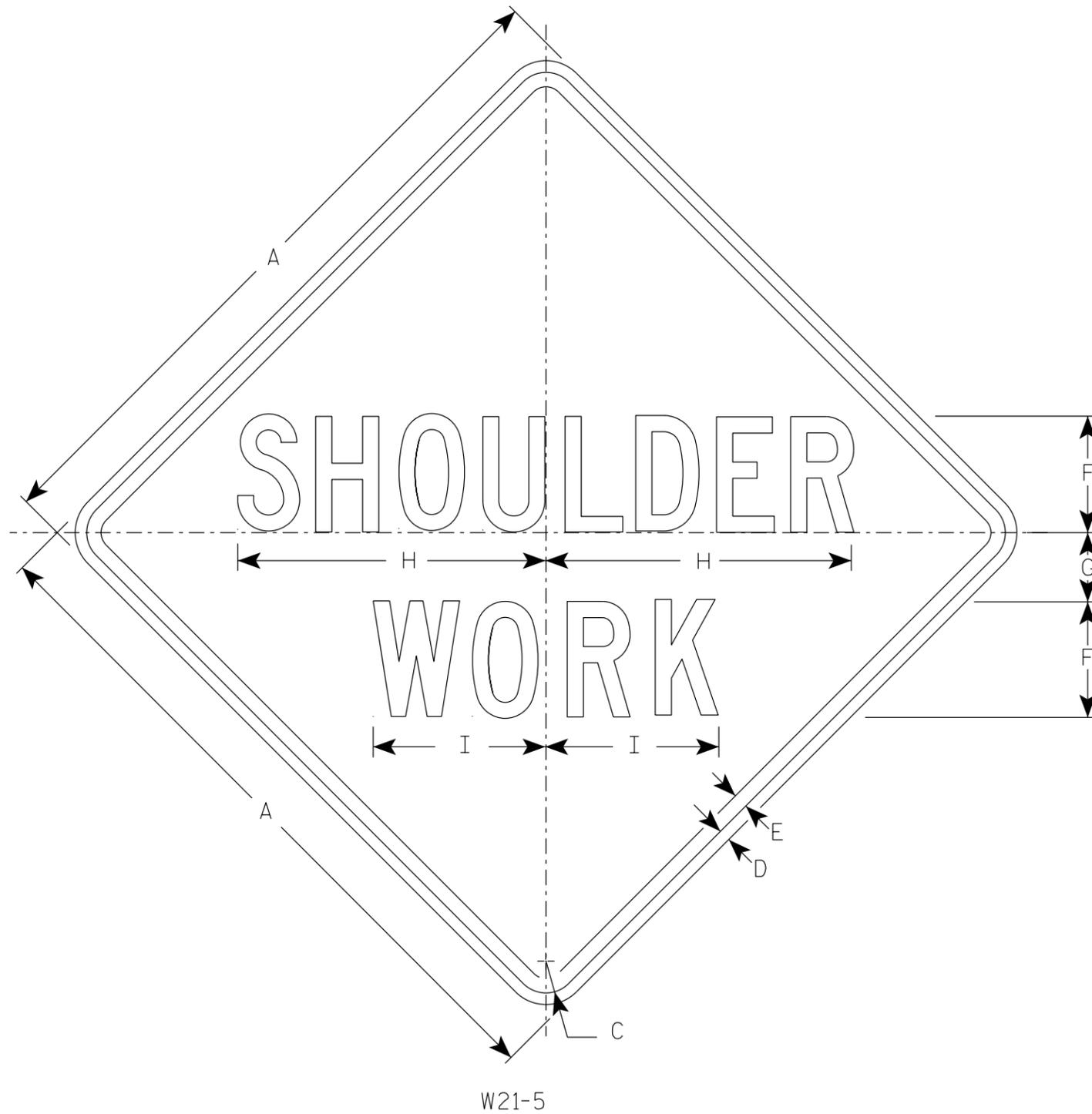
WISCONSIN DEPT OF TRANSPORTATION

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

STANDARD SIGN  
W21-5

WISCONSIN DEPT OF TRANSPORTATION

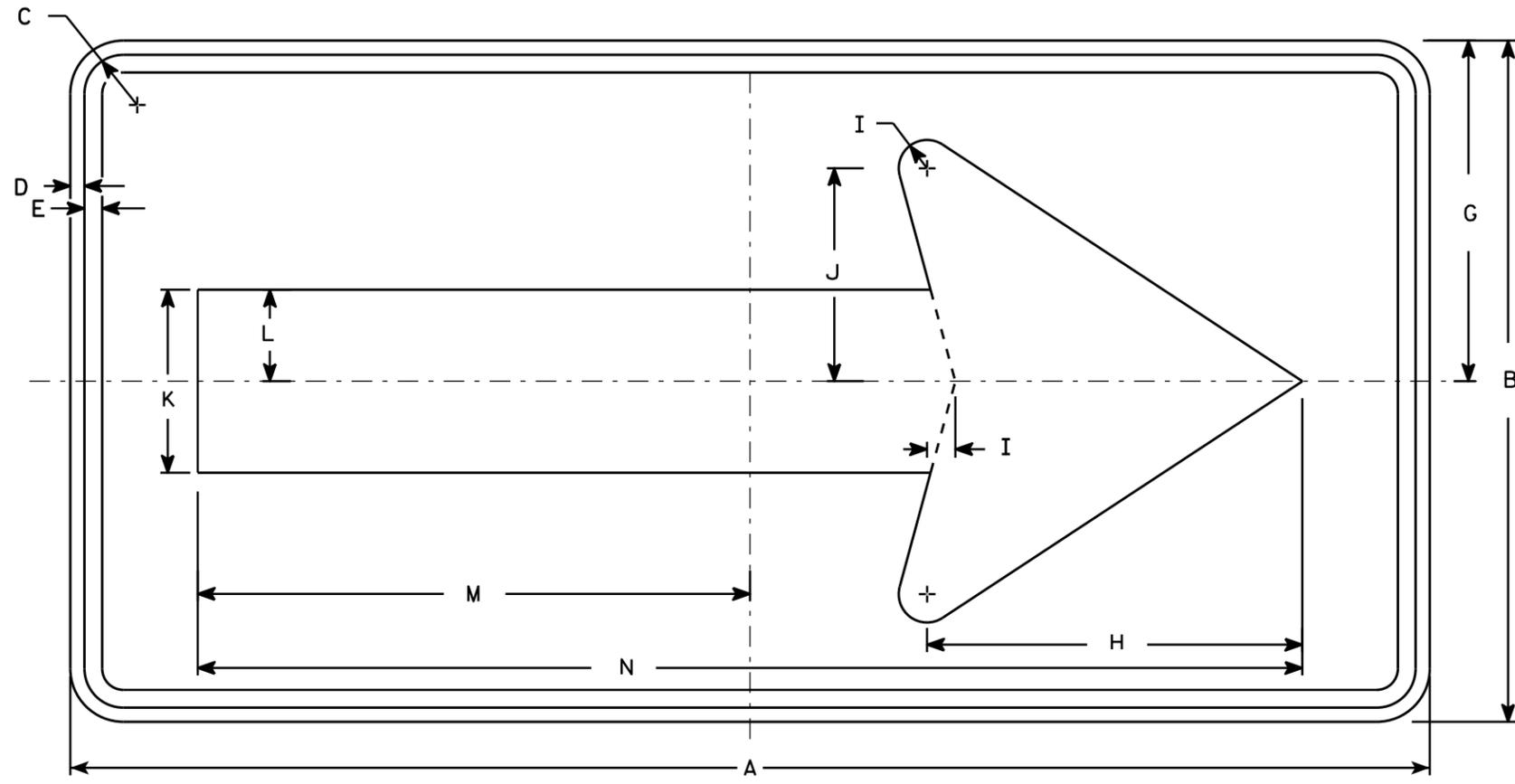
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 4/30/2020 PLATE NO. W21-5.6

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. 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.



W01-6

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	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

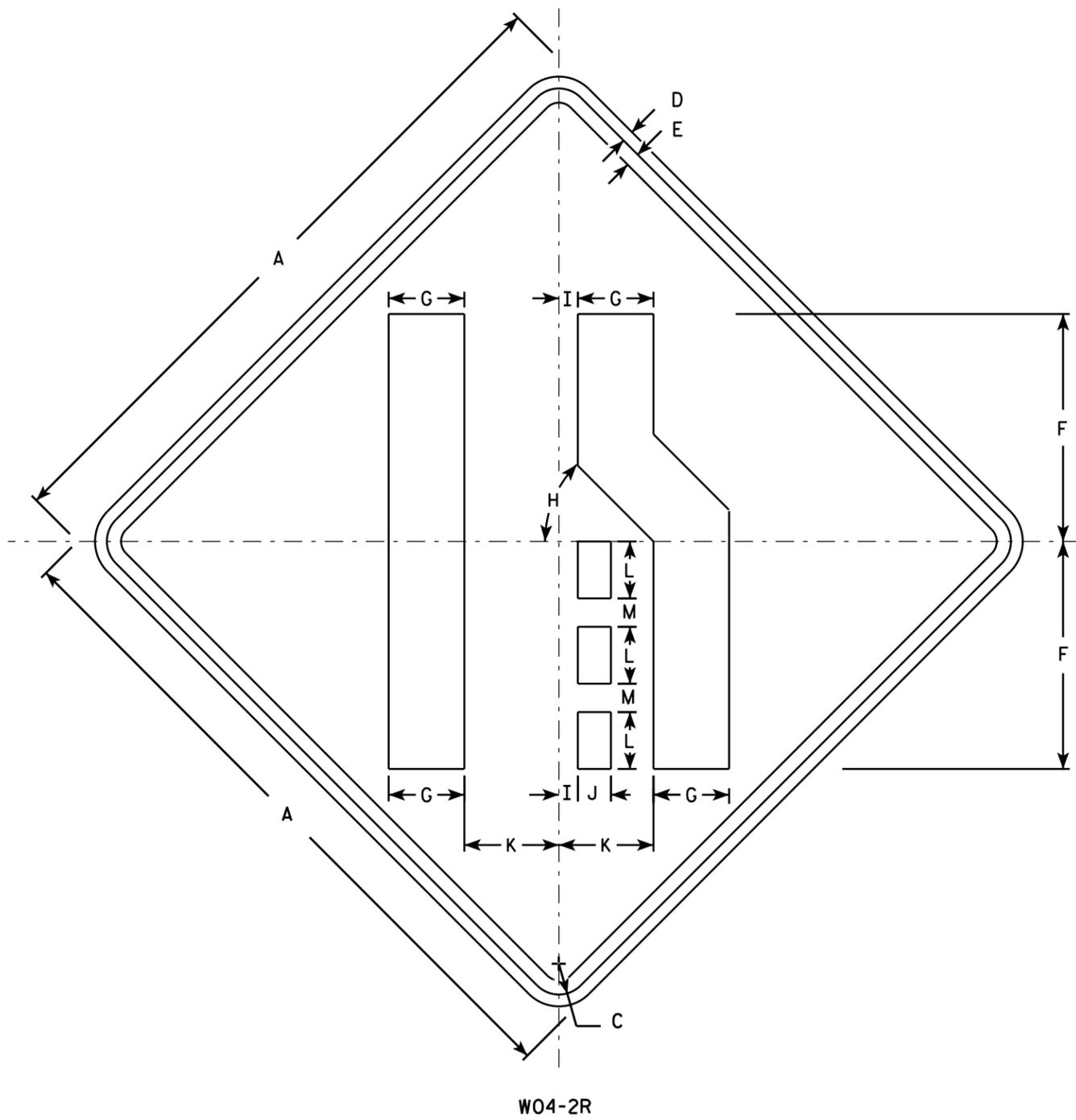
**STANDARD SIGN**  
**W01-6**

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

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



**NOTES**

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

W04-2R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

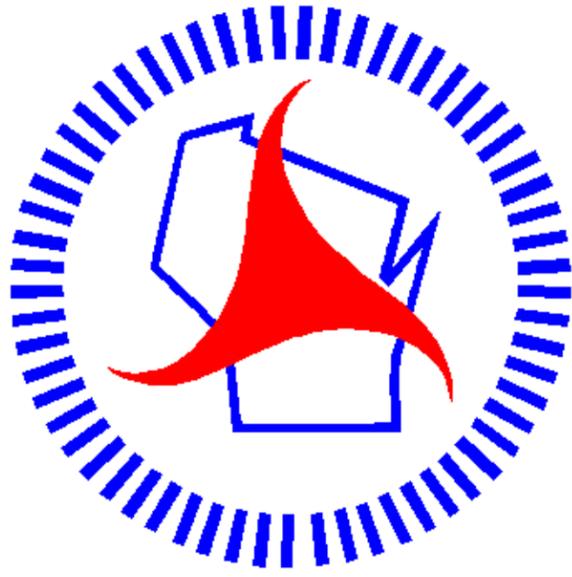
**STANDARD SIGN**  
**W04-2**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/20/13 PLATE NO. W04-2.1

# Notes



## ***Wisconsin Department of Transportation***

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<http://www.dot.wisconsin.gov>