

MAD

PROJECT ID:
WITH: NA

1662-00-77/78, 5255-01-74

COUNTY:

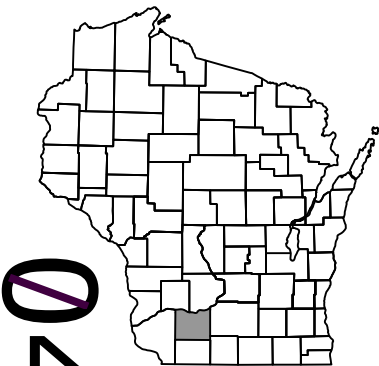
IOWA

DECEMBER 2025

ORDER OF SHEETS

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

TOTAL SHEETS = 254



DESIGN DESIGNATION	USH 18	STH 23
A.A.D.T. (2026)	= 8600	7900
A.A.D.T. (2046)	= 8600	7900
D.H.V. (2046)	= 1006	900
D.D.	= 60/40	59/41
T.	= 20%	18.4%
DESIGN SPEED	= 40 MPH	40 MPH
ESALS	= 3,900,000	3,400,000

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

FENNIMORE - DODGEVILLE MINERAL POINT - SPRING GREEN

STH 23 INTERSECTION JOHNS STREET INTERSECTION 0.04 MI SOUTH OF PINE ST TO ROWE RD

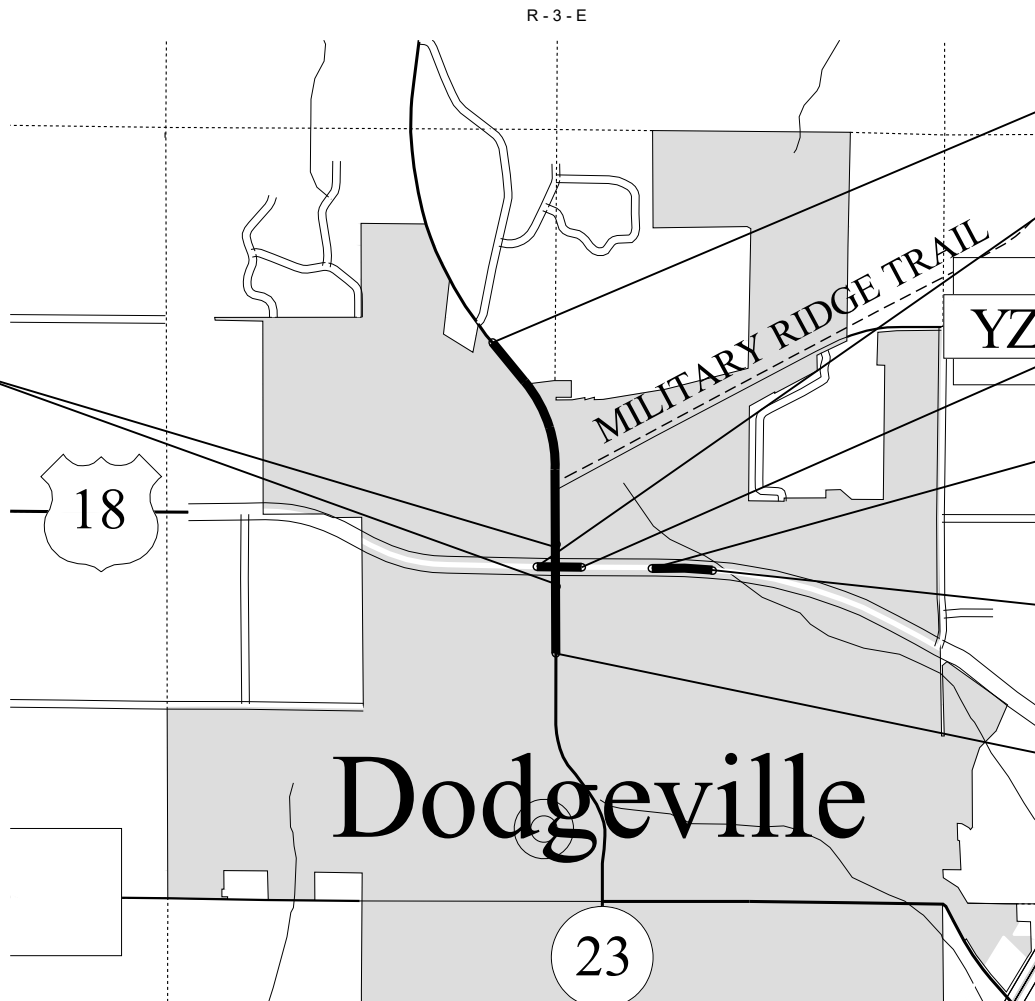
USH 18 USH 18 STH 23

IOWA COUNTY IOWA COUNTY IOWA COUNTY

STATE PROJECT NUMBER
1662-00-77

STATE PROJECT NUMBER
1662-00-78

STATE PROJECT NUMBER
5255-01-74



END PROJECT 5255-01-74
STA 504'NB'+67.53
BEGIN PROJECT 1662-00-77
STA 105'EB'+52.19
Y = 158,084.348
X = 378,320.578

END PROJECT 1622-00-77
STA 111'EB'+69.21
BEGIN PROJECT 1662-00-78
STA 121'EB'+20.33
Y = 158,060.580
X = 379,888.538

END PROJECT 1662-00-78
STA 129'EB'+70.52

BEGIN PROJECT 5255-01-74
STA 456'NB'+50.00
Y = 156,891.864
X = 378,582.157

LAYOUT
SCALE 0 0.5 MI

1662-00-77 TOTAL NET LENGTH OF CENTERLINE = 0.117 MILES
1662-00-78 TOTAL NET LENGTH OF CENTERLINE = 0.161 MILES
5255-01-74 TOTAL NET LENGTH OF CENTERLINE = 0.803 MILES

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

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1662-00-77	WISC 2026097	1
1662-00-78	WISC 2026098	1
5255-01-74	WISC 2026100	1

ORIGINAL PLANS PREPARED BY

Westwood



DATE: 7/1/2025
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	Westwood
Surveyor	Westwood
Designer	Chad Schroeder, PE
Project Manager	REGIONAL EXAMINER
Regional Examiner	Chad Schroeder, PE
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 7/1/25
(Signature)

E

GENERAL NOTES

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

APPLY TACK COAT AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF ASPHALTIC SURFACE.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS.

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- CURB RAMP DETAILS
- STORM SEWER
- PERMANENT SIGNING
- TRAFFIC CONTROL SIGNAL
- SIGNAL PLAN
- PAVEMENT MARKING
- TRAFFIC CONTROL
- DETOUR PLAN

DNR LIAISON

ERIC HEGGELUND
DNR SOUTH REGION HEADQUARTERS
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
608-228-7927
ERIC.HEGGELUND@WISCONSIN.GOV

IOWA COUNTY HIGHWAY COMMISSIONER

CRAIG HARDY
222 N. IOWA ST.
DODGEVILLE, WI 53533
608-935-3381, EXT 605
CRAIG.HARDY@IOWACOUNTY.ORG

SW REGION SURVEY COORDINATOR

JAROD ALVAREZ
2101 WRIGHT ST
MADISON, WI 53704
608-246-7918
JAROD.ALVAREZ@DOT.WI.GOV

SW REGION DESIGN PROJECT MANAGER

CHAD SCHROEDER
2101 WRIGHT ST
MADISON, WI 53704
608-246-7935
CHADA.SCHROEDER@DOT.WI.GOV

SW REGION ELECTRICIAN

DALE ROTH
2101 WRIGHT ST
MADISON, WI 53704
608-245-5355
DALE.ROTH@DOT.WI.GOV

SW REGION TRAFFIC ENGINEER

LINDSEY HEINECK
2101 WRIGHT ST
MADISON, WI 53704
608-246-5362
LINDSEY.HEINECK@DOT.WI.GOV

1662-00-77/1662-00-78

DOUG VOSBERG
ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
(608) 877-7650
DVOSBERG@ATCLLC.COM

LAURA SEALS
ALLIANT ENERGY - COMMUNICATION LINE
200 1ST AVENUE NE
CEDAR RAPIDS, IA 52401
(319) 786-4198
LAURASEALS@ALLIANTENERGY.COM

ZACH CADY
ALLIANT ENERGY - ELECTRICITY
490 SHAKERAG STREET
MINERAL POINT, WI 53565
(608) 963-5271
ZACHCADY@ALLIANTENERGY.COM

ZACH CADY
ALLIANT ENERGY - GAS/PETROLEUM
490 SHAKERAG STREET
MINERAL POINT, WI 53565
(608) 963-5271
ZACHCADY@ALLIANTENERGY.COM

KEVIN LIDDICOAT
CITY OF DODGEVILLE - SEWER
100 E FOUNTAIN ST
DODGEVILLE, WI 53533
(608) 935-5633
SEWER@DODGEVILLE.WI.GOV

BRIAN SCHULTZ
CITY OF DODGEVILLE - WATER
100 E FOUNTAIN ST
DODGEVILLE, WI 53533
(608) 930-3179
WATER@CI.DODGEVILLE.WI.GOV

KEVIN ZAJICEK
DODGEVILLE SANITARY DISTRICT #1 - SEWER
108 E. LEFFLER STREET
DODGEVILLE, WI 53533-2114
(608) 574-2742
TWNCLERK@MHTC.NET

CHRIS POLLACK
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
521 4TH ST
WAUSAU, WI 54403
(715) 847-1240
CHRISTOPHER.POLLACK@FTR.COM

JEFFREY INABNIT
MH TELECOM LLC - COMMUNICATION LINE
200 E. SECOND STREET
P.O. BOX 65
MOUNT HOREB, WI 53572
(608) 437-0632
JEFFREY.INABNIT@MHTCINC.COM

NEIL HUNTAMER
SPECTRUM - COMMUNICATION LINE
315 KING STREET
DODGEVILLE, WI 53556
(608) 219-1321
NEIL.HUNTAMER@CHARTER.COM

LORI KETTER
WINDSTREAM KDL, LLC - COMMUNICATION LINE
969 WAUBE LANE
GREEN BAY, WI 54304
(920) 410-6902
LORI.KETTER@WINDSTREAM.COM

UTILITIES CONTACTS

5255-01-74

DOUG VOSBERG
ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
(608) 877-7650
DVOSBERG@ATCLLC.COM

LAURA SEALS
ALLIANT ENERGY - COMMUNICATION LINE
200 1ST AVENUE NE
CEDAR RAPIDS, IA 52401
(319) 786-4198
LAURASEALS@ALLIANTENERGY.COM

ZACH CADY
ALLIANT ENERGY - ELECTRICITY
490 SHAKERAG STREET
MINERAL POINT, WI 53565
(608) 963-5271
ZACHCADY@ALLIANTENERGY.COM

ZACH CADY
ALLIANT ENERGY - GAS/PETROLEUM
490 SHAKERAG STREET
MINERAL POINT, WI 53565
(608) 963-5271
ZACHCADY@ALLIANTENERGY.COM

DUSTIN TEAFF
BUG TUSSEL WIRELESS, LLC - COMMUNICATION LINE
1261 CAMBER COURT
DEPERE, WI 54115
(920) 254-3539
DUSTIN.TEAFF@BTUSSEL.COM

KEVIN LIDDICOAT
CITY OF DODGEVILLE - SEWER
100 E FOUNTAIN ST
DODGEVILLE, WI 53533
(608) 935-5633
SEWER@DODGEVILLE.WI.GOV

BRIAN SCHULTZ
CITY OF DODGEVILLE - WATER
100 E FOUNTAIN ST
DODGEVILLE, WI 53533
(608) 930-3179
WATER@CI.DODGEVILLE.WI.GOV

KEVIN ZAJICEK
DODGEVILLE SANITARY DISTRICT #1 - SEWER
108 E. LEFFLER STREET
DODGEVILLE, WI 53533-2114
(608) 574-2742
TWNCLERK@MHTC.NET

CHRIS POLLACK
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
521 4TH ST
WAUSAU, WI 54403
(715) 847-1240
CHRISTOPHER.POLLACK@FTR.COM

JEFFREY INABNIT
MH TELECOM LLC - COMMUNICATION LINE
200 E. SECOND STREET
P.O. BOX 65
MOUNT HOREB, WI 53572
(608) 437-0632
JEFFREY.INABNIT@MHTCINC.COM

LORI KETTER
WINDSTREAM KDL, LLC - COMMUNICATION LINE
969 WAUBE LANE
GREEN BAY, WI 54304
(920) 410-6902
LORI.KETTER@WINDSTREAM.COM



Dial 811 or (800)242-8511

www.DiggersHotline.com

ROADWAY SOIL BORING SUMMARY TABLE

Boring #	STA.	Alignment	Offset	Bituminous	Concrete	Layer 1 (Thickness)	Layer 2 (Thickness)	Layer 3 (Thickness)	Layer 4 (Thickness)	Layer 5 (Thickness)
1	14+28.8	JOHNS ST.	21.7' LT	4			12	30		
2	125+05.6	USH 18 WB	62.6' LT			15.5	48	87	111	
3	128+10.8	USH 18 WB	8.5' RT	3			15	4	36	
4	107+15.6	USH 18 WB	30.8' LT			15.5	60	8	60	12
5	466+08.2	STH 23 NB	22.7' RT		8.75		15	36		
Average Depths				3.5	8.8	15.5	30.0	33.0	69.0	12.0

NOTES:
DATE BORINGS TAKEN: May 10, 2023
ALL DEPTHS ARE IN INCHES
FOR REFERENCE PURPOSES ONLY
ALL OFFSETS ARE FROM EXISTING CENTERLINE

2

2



PROJECT NO: 1662-00-77 / 1662-00-78 / 5255-01-74

HWY: STH 23 / USH 18

COUNTY: IOWA

PROJECT OVERVIEW

SHEET

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FILE NAME : N:\0045341.00\CIVIL 3D\SHEETS\16620077-020201-PO.DWG
LAYOUT NAME - 020-01-16620077-020201-po

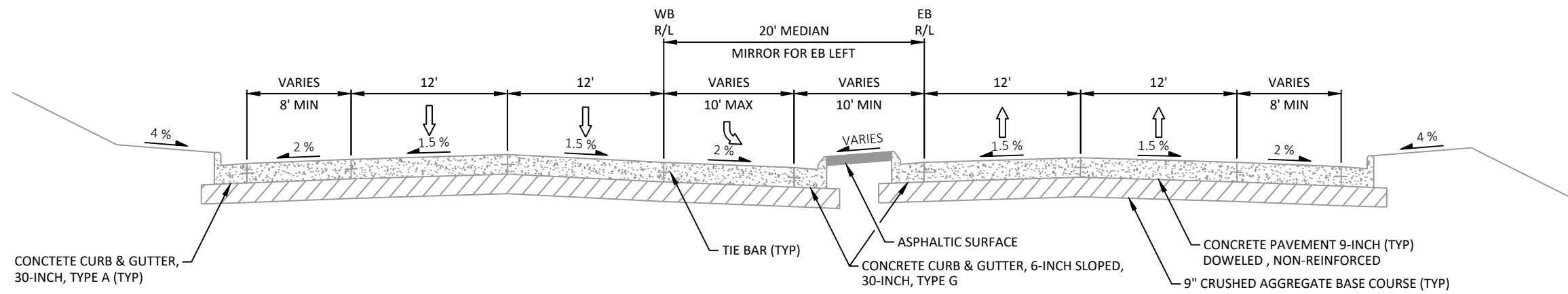
PLOT DATE : 4/29/2025 2:28 PM

PLOT BY : MATT TOMSOVIC

PLOT NAME :

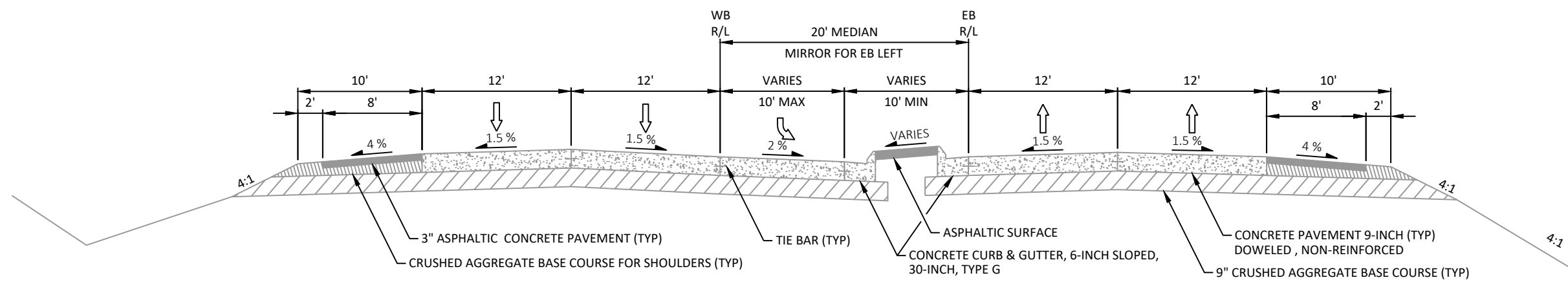
PLOT SCALE : 1 IN:500 FT

WISDOT/CADDS SHEET 42



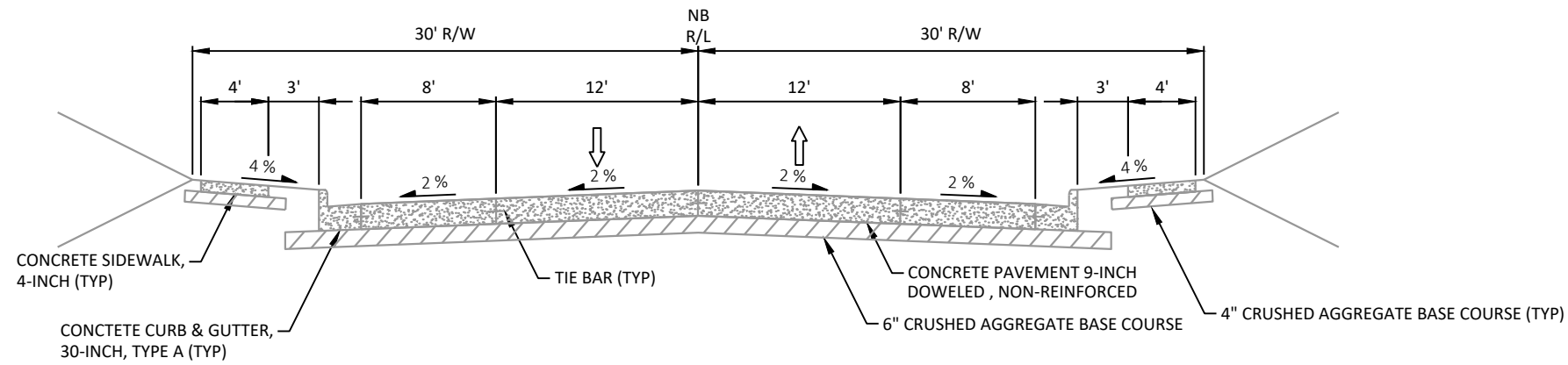
EXISTING TYPICAL SECTION FOR USH 18

STA 105'EB'+52.19 TO STA 111'EB'+69.21
STA 121'EB'+20.33 TO STA 127'EB'+25.00



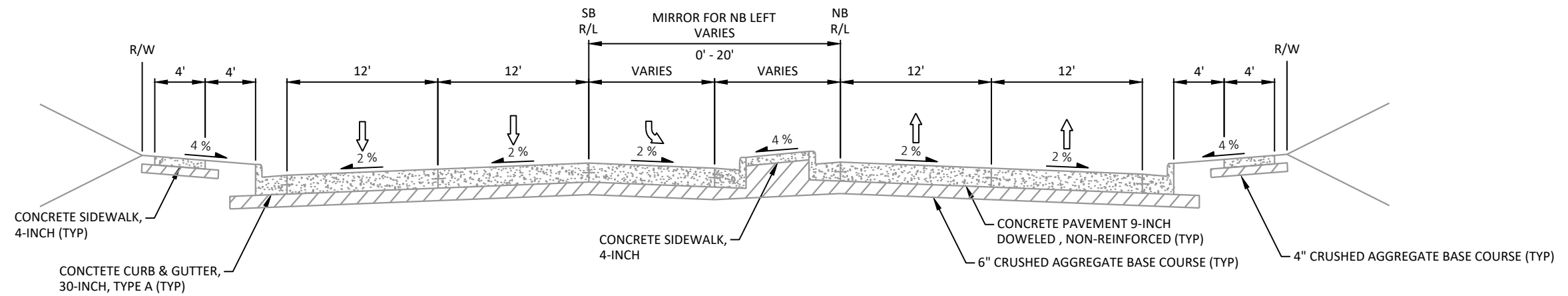
EXISTING TYPICAL SECTION FOR USH 18

STA 127'EB'+25 TO STA 129'EB'+70.52



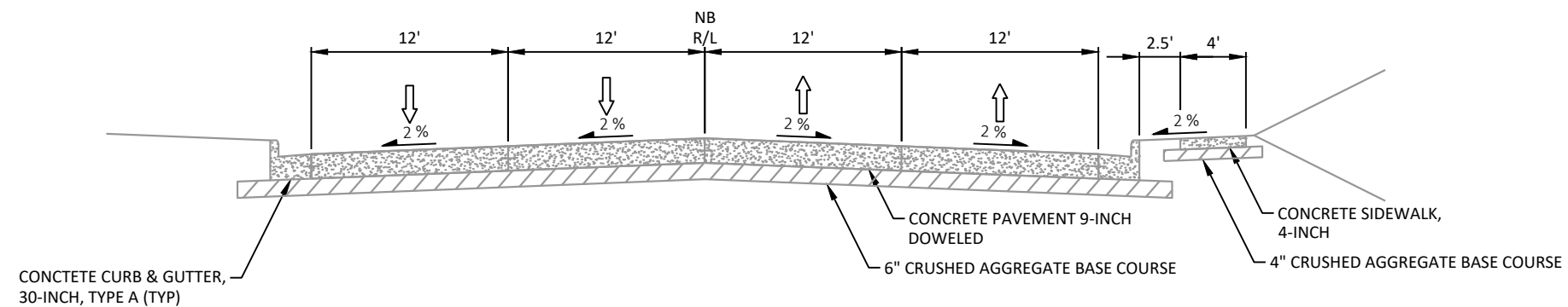
EXISTING TYPICAL SECTION FOR STH 23 (PROJECT 5255-01-74)

STA 456'NB'+50 TO STA 462'NB'+01



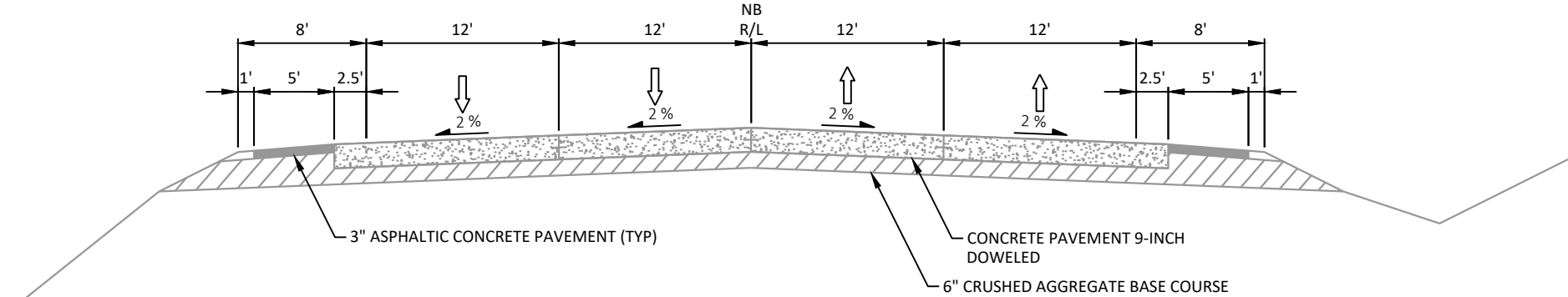
EXISTING TYPICAL SECTION FOR STH 23 (PROJECT 1662-00-77 & 5255-01-74)

STA 463'NB'+01 TO STA 473'NB'+90

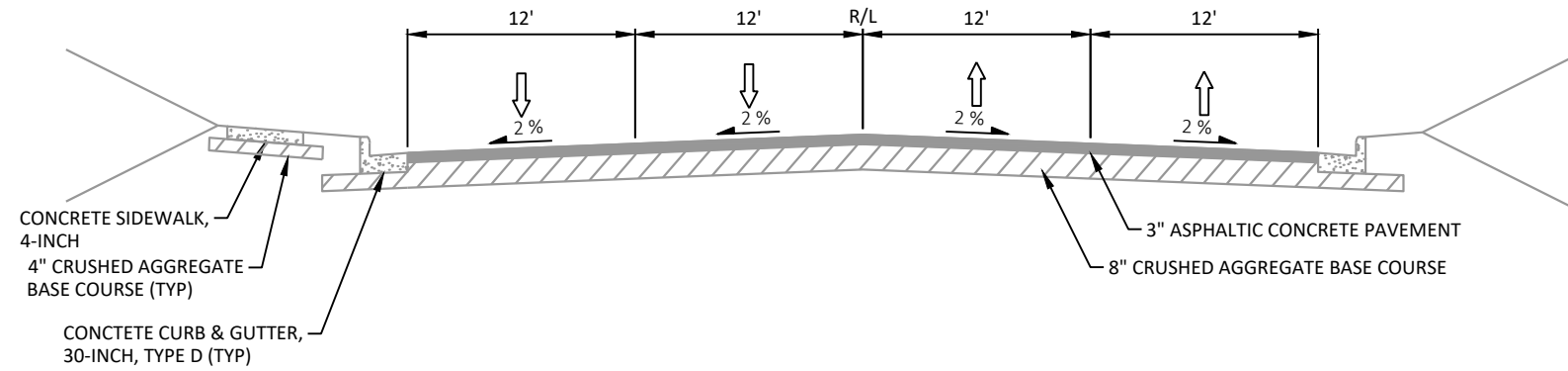


EXISTING TYPICAL SECTION FOR STH 23 (PROJECT 5255-01-74)

STA 473'NB'+90 TO STA 481'NB'+48

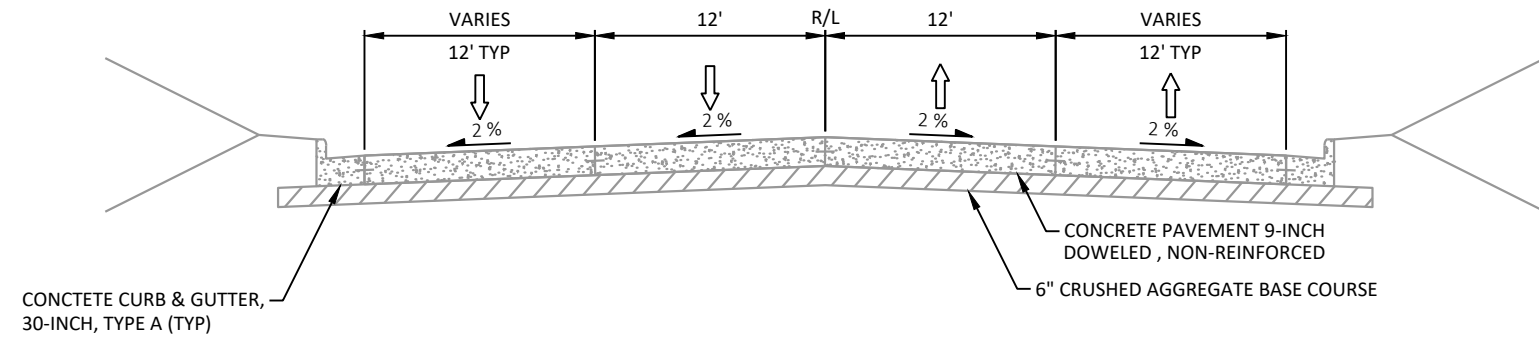


EXISTING TYPICAL SECTION FOR STH 23
STA 481'NB'+48.00 TO STA 504'NB'+67.53



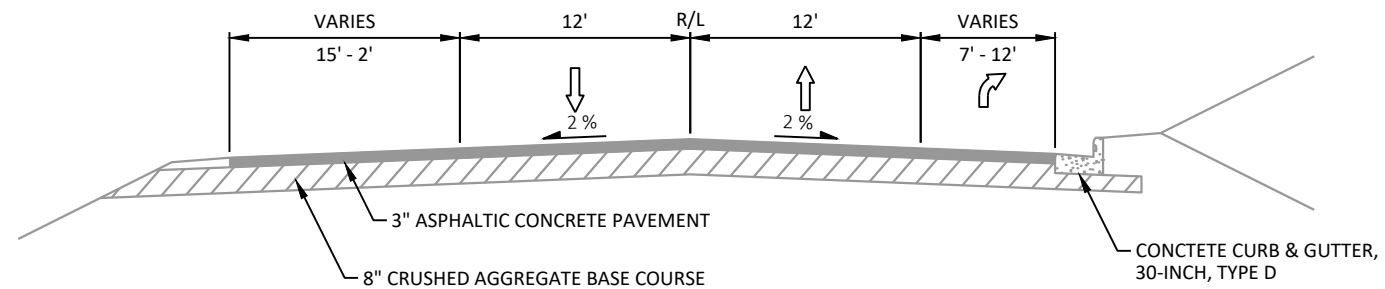
EXISTING TYPICAL SECTION FOR KING ST

STA 165'YZ'+92 TO STA 169'YZ'+19



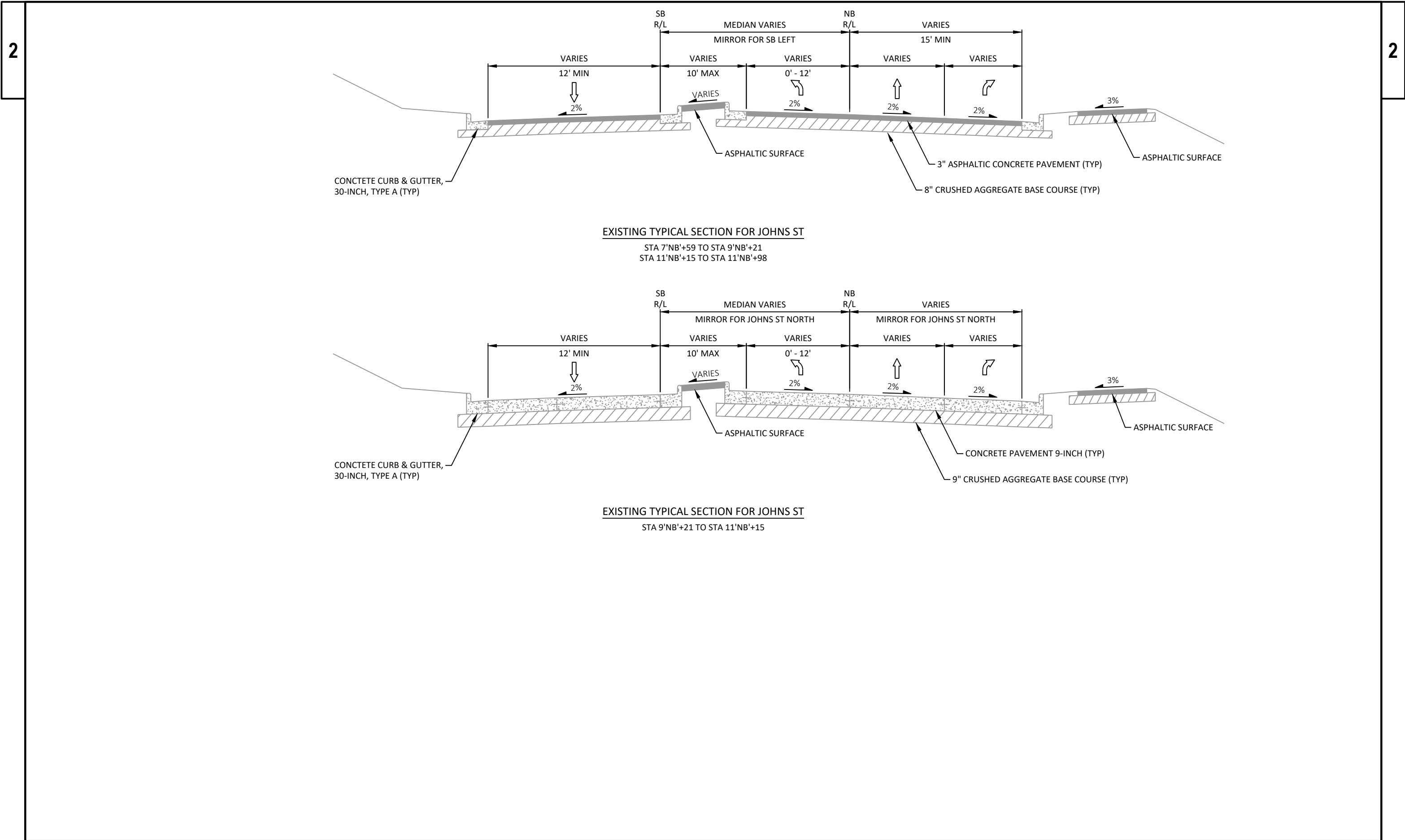
EXISTING TYPICAL SECTION FOR KING ST / CTH YZ

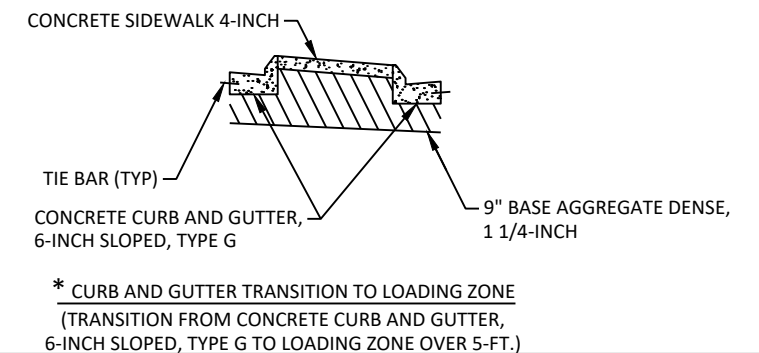
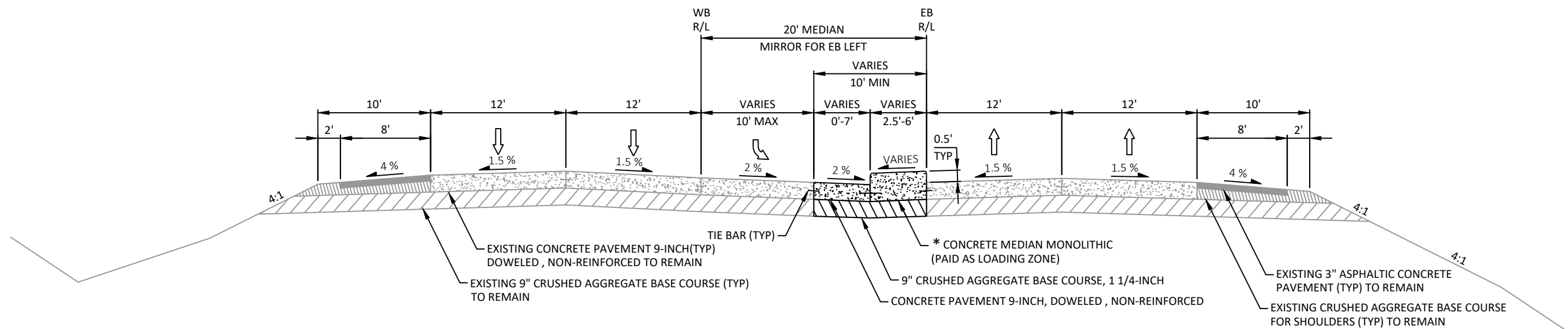
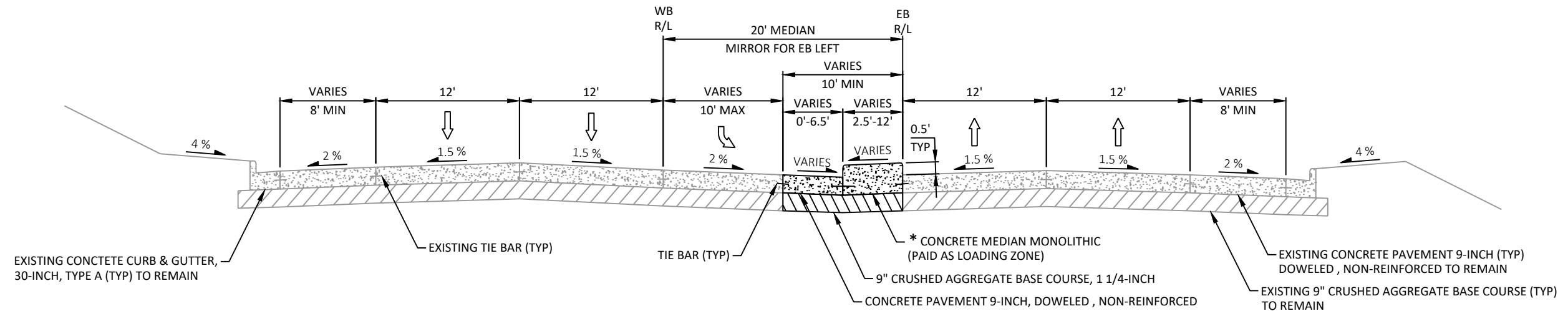
STA 169'YZ'+19 TO STA 173'YZ'+24

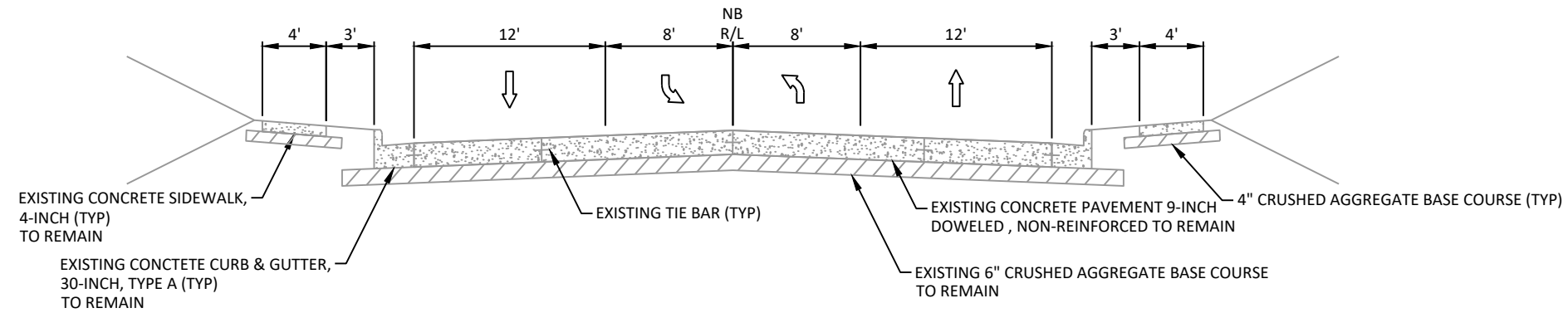


EXISTING TYPICAL SECTION FOR CTH YZ

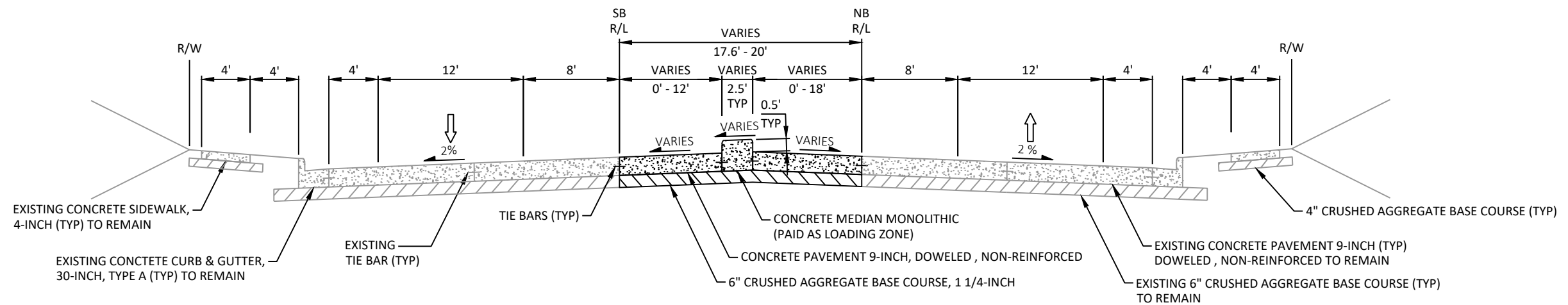
STA 173'YZ'+24 TO STA 174'YZ'+84



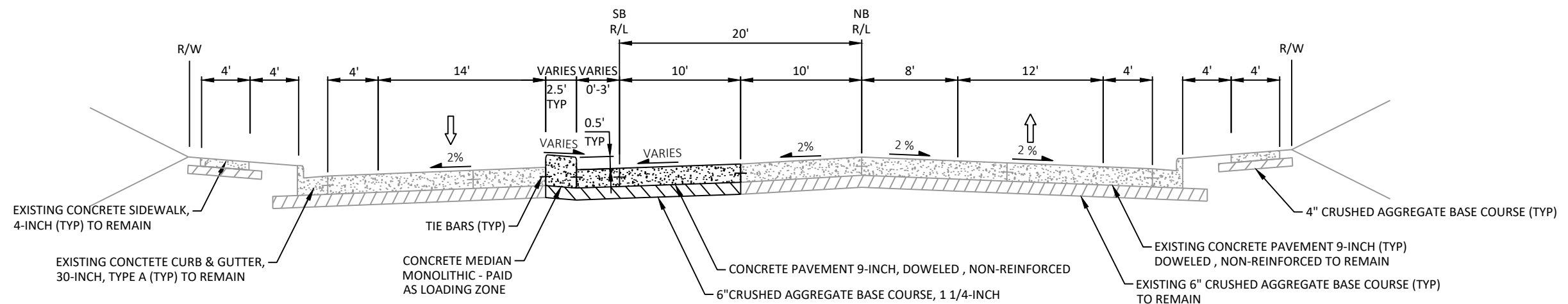




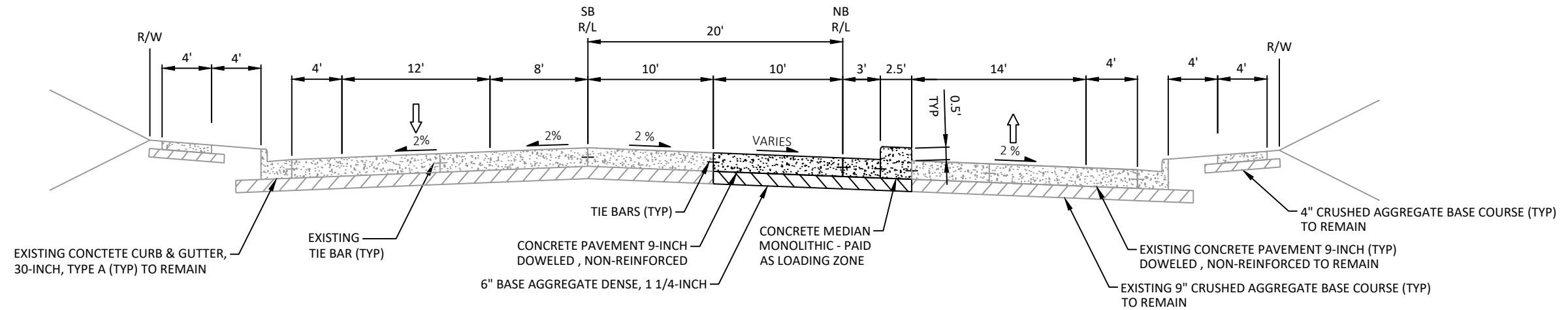
FINISHED TYPICAL SECTION FOR STH 23
PROJECT 5255-01-74
 STA 463'NB'+60.80 TO STA 465'NB'+12.69



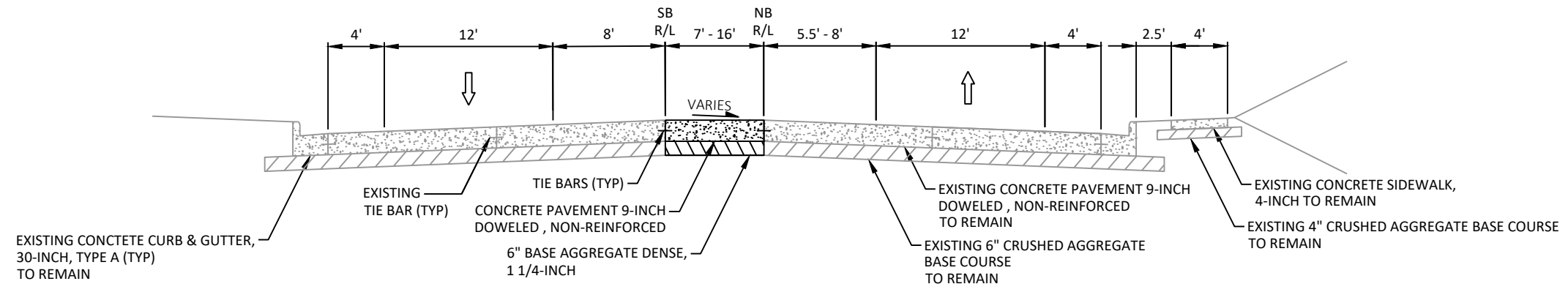
FINISHED TYPICAL SECTION FOR STH 23
PROJECT 1662-00-77
 STA 465'NB'+68.47 TO STA 467'NB'+17.84



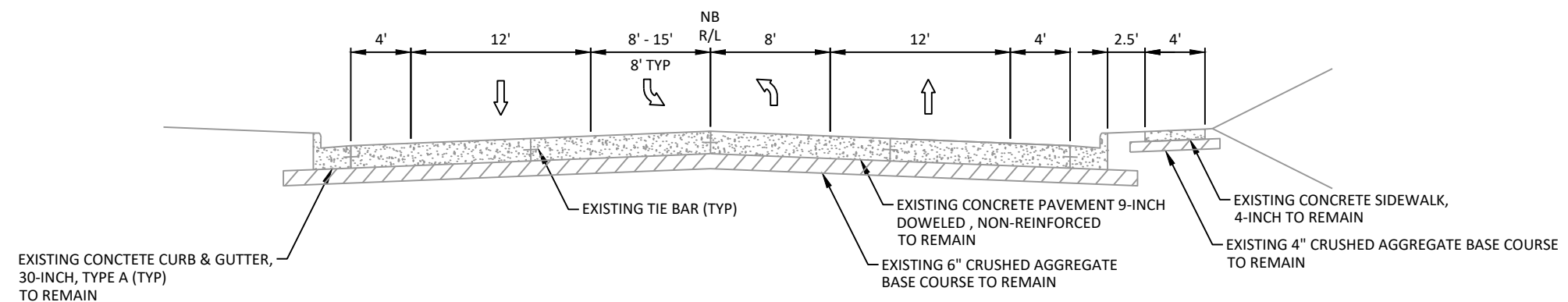
FINISHED TYPICAL SECTION FOR STH 23
PROJECT 1662-00-77
 STA 467'NB'+17.84 TO STA 468'NB'+02.67



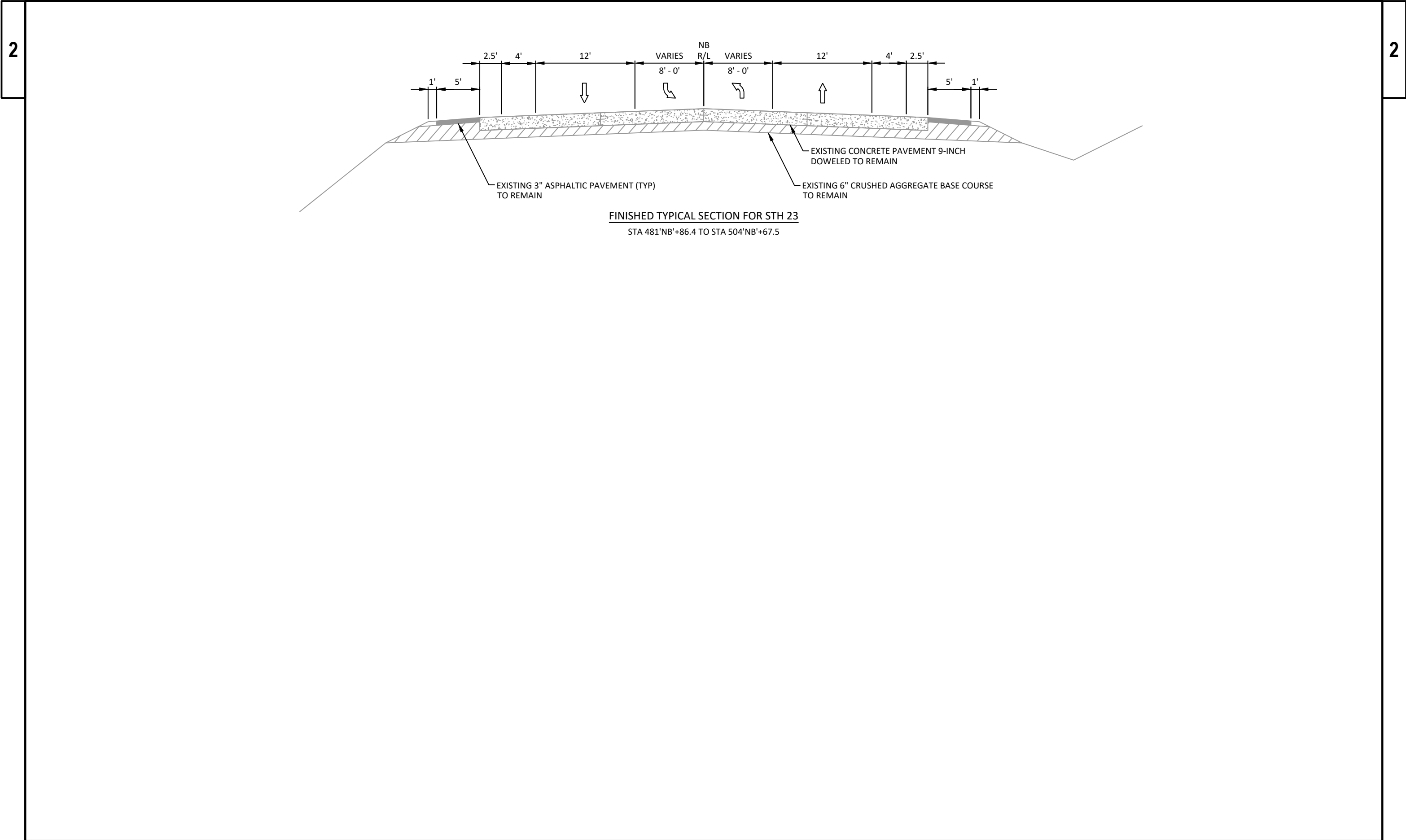
FINISHED TYPICAL SECTION FOR STH 23
PROJECT 1662-00-77
STA 469'NB'+04.77 TO 471'NB'+49.44

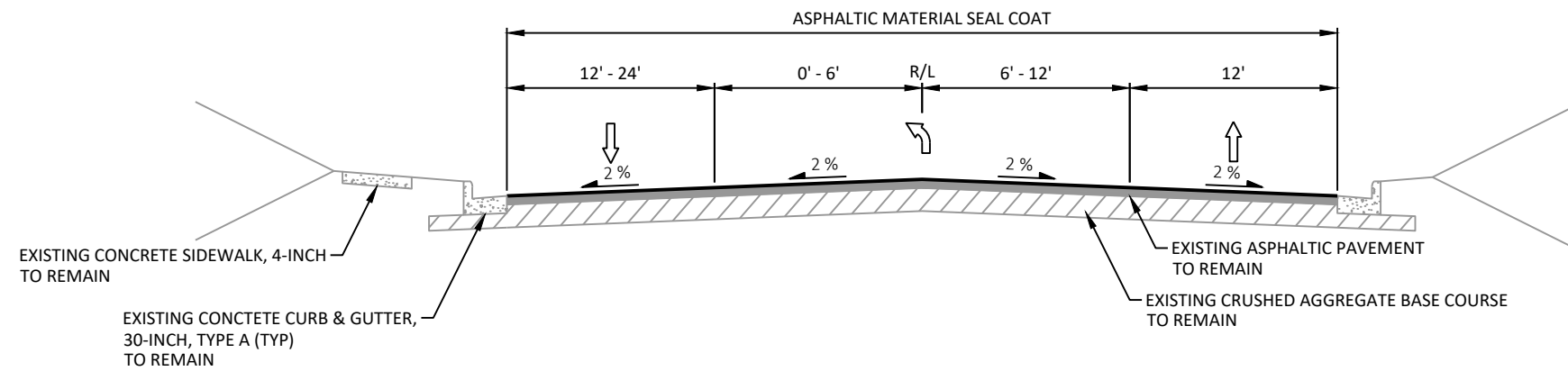


FINISHED TYPICAL SECTION FOR STH 23
PROJECT 1662-00-77 & 5255-01-74
STA 471'NB'+49.44 TO STA 473'NB'+00



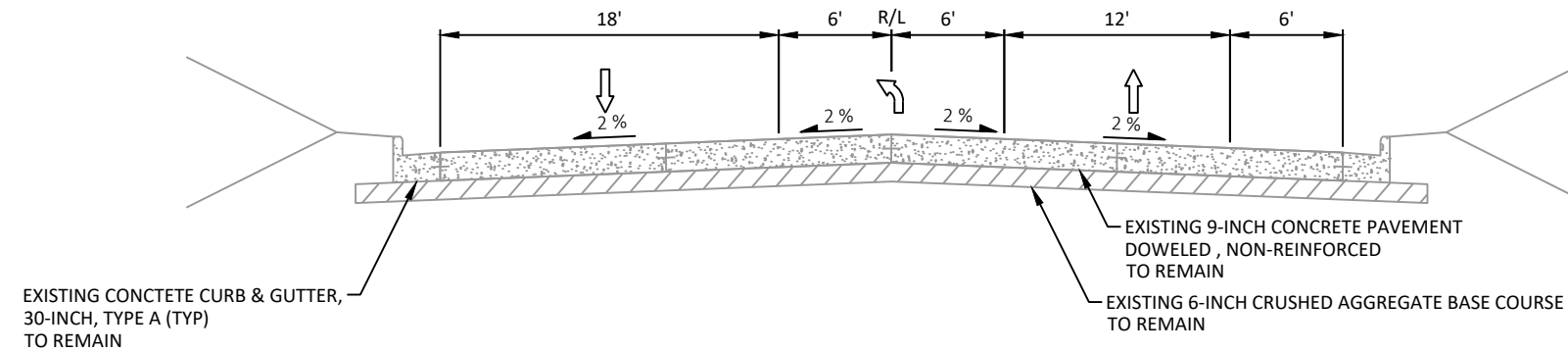
FINISHED TYPICAL SECTION FOR STH 23
PROJECT 1662-00-77
STA 473'NB'+00 TO STA 481'NB'+86.4





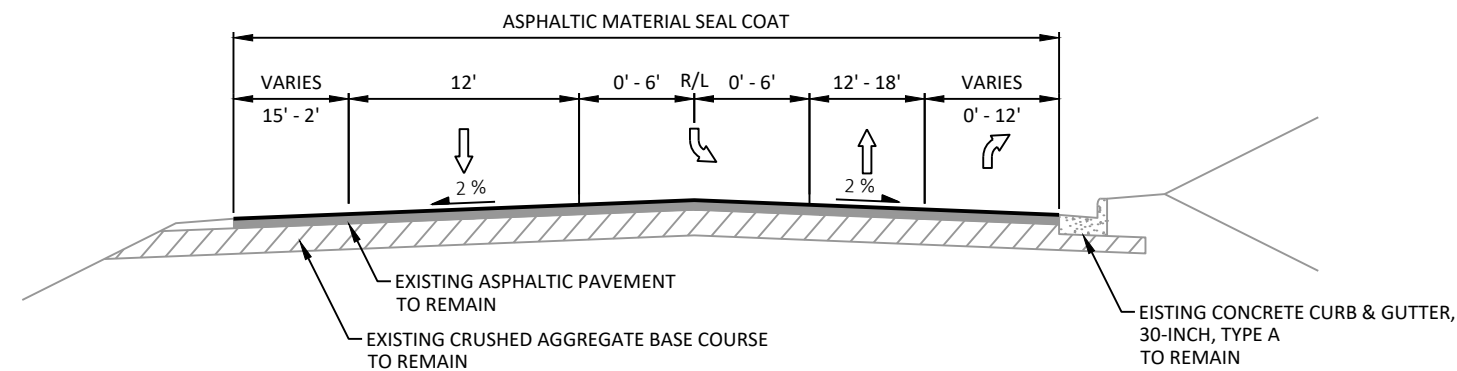
FINISHED TYPICAL SECTION FOR KING ST

STA 165'YZ'+91.78 TO STA 169'YZ'+19



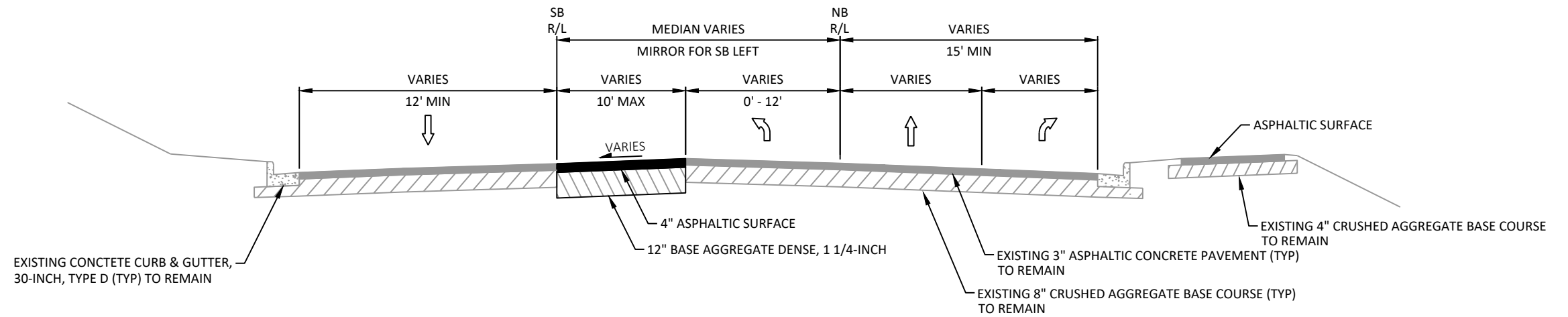
FINISHED TYPICAL SECTION FOR KING ST / CTH YZ

STA 169'YZ'+19 TO STA 173'YZ'+24



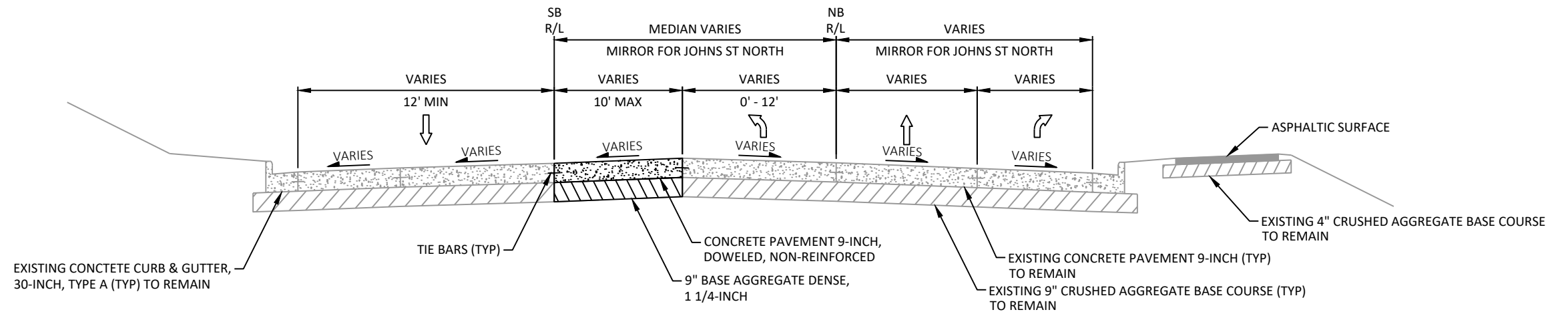
FINISHED TYPICAL SECTION FOR CTH YZ

STA 173'YZ'+24.1 TO STA 174'YZ'+84.18



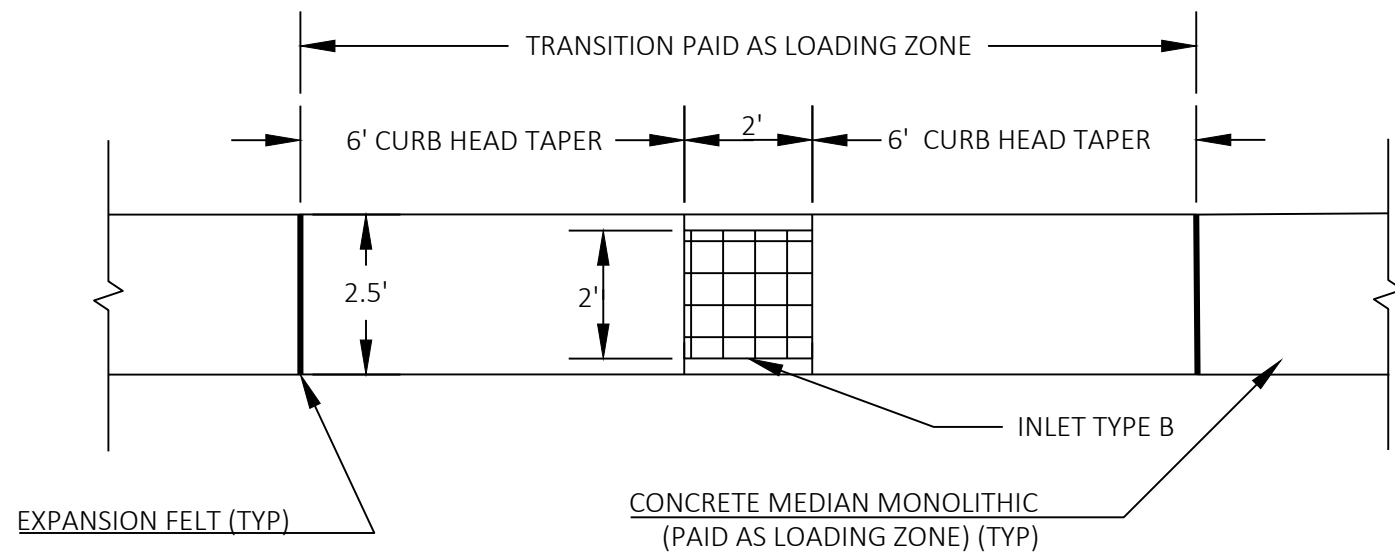
FINISHED TYPICAL SECTION FOR JOHNS ST

STA 7'NB'+57.55 TO STA 9'NB'+55
STA 11'NB'+15 TO STA 11'NB'+98.20

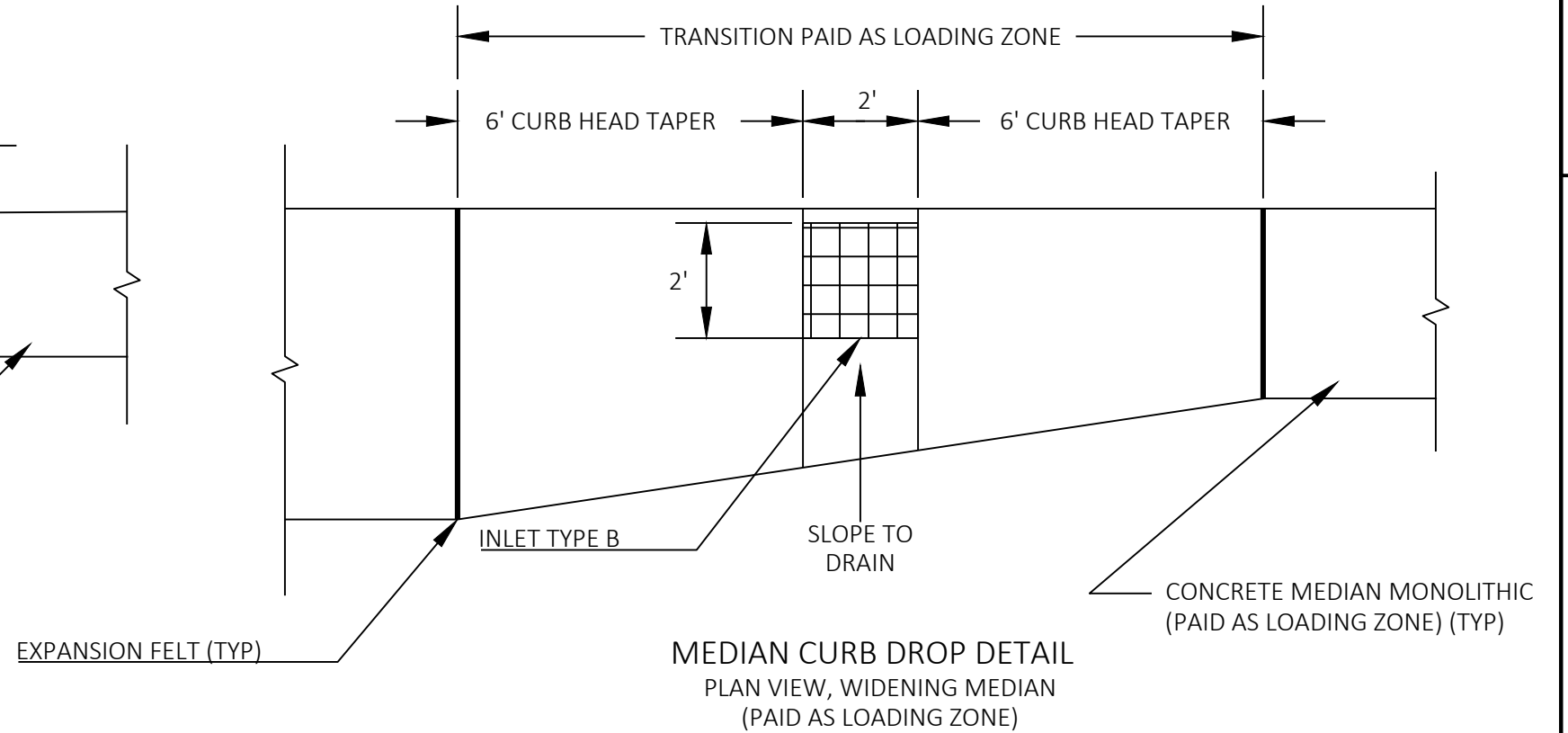


FINISHED TYPICAL SECTION FOR JOHNS ST

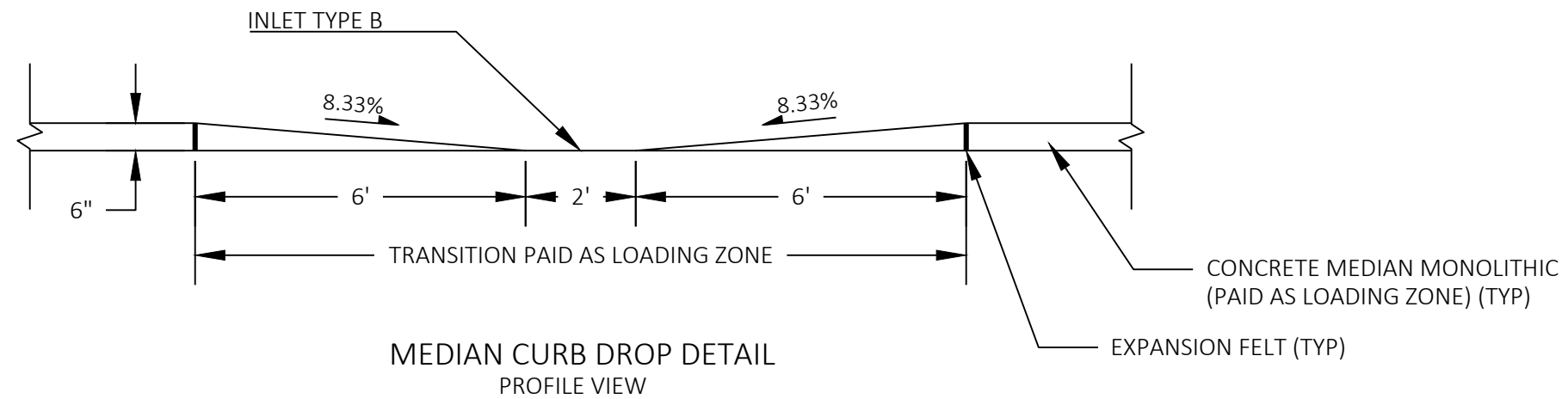
STA 9'NB'+21.55 TO STA 11'NB'+15



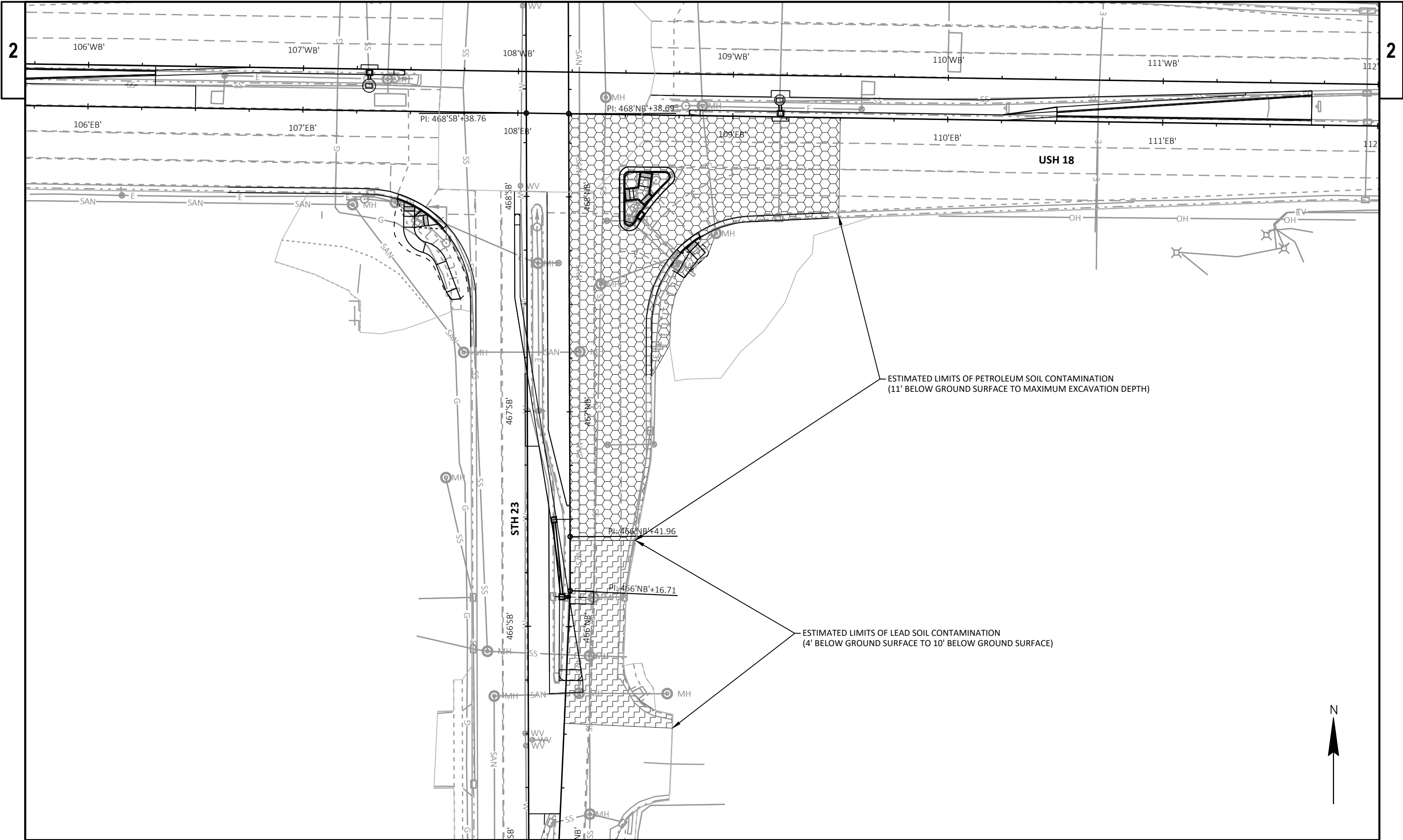
MEDIAN CURB DROP DETAIL
PLAN VIEW, STRAIGHT MEDIAN
(PAID AS LOADING ZONE)

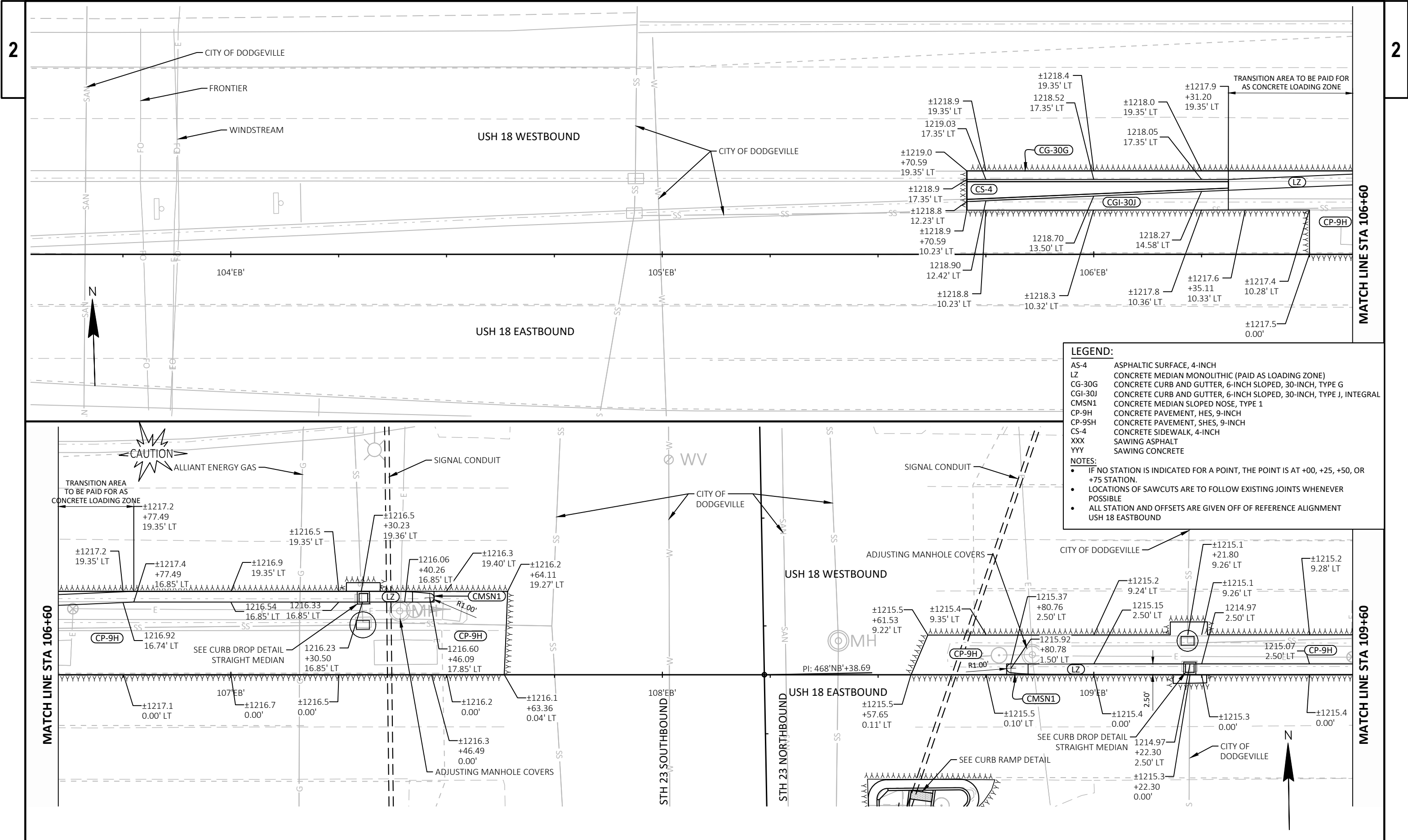


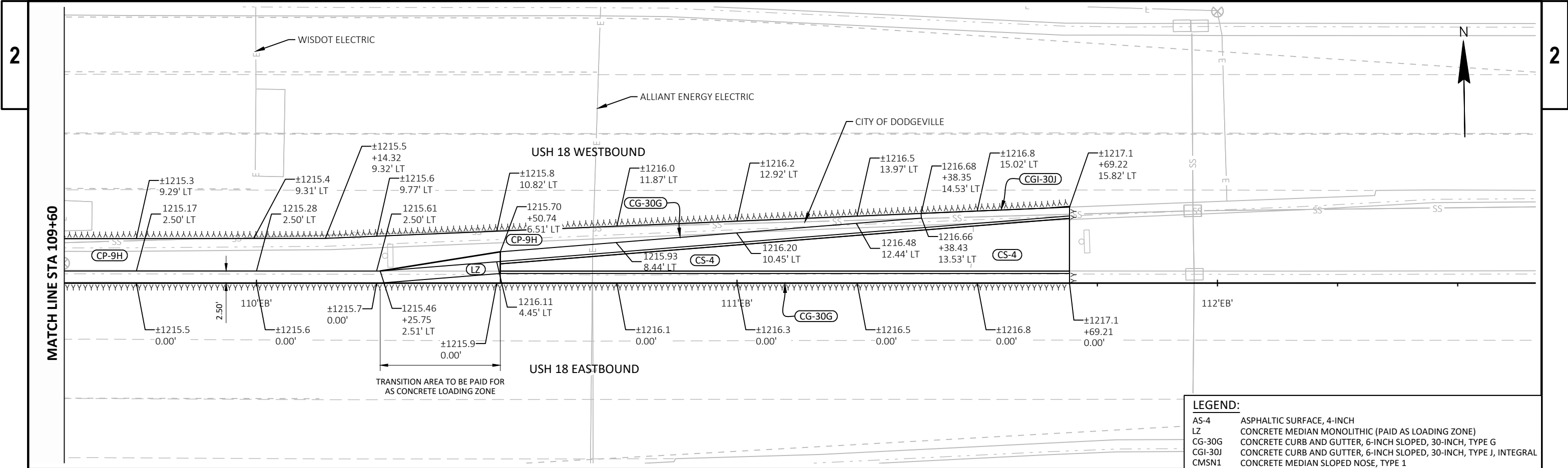
MEDIAN CURB DROP DETAIL
PLAN VIEW, WIDENING MEDIAN
(PAID AS LOADING ZONE)



MEDIAN CURB DROP DETAIL
PROFILE VIEW





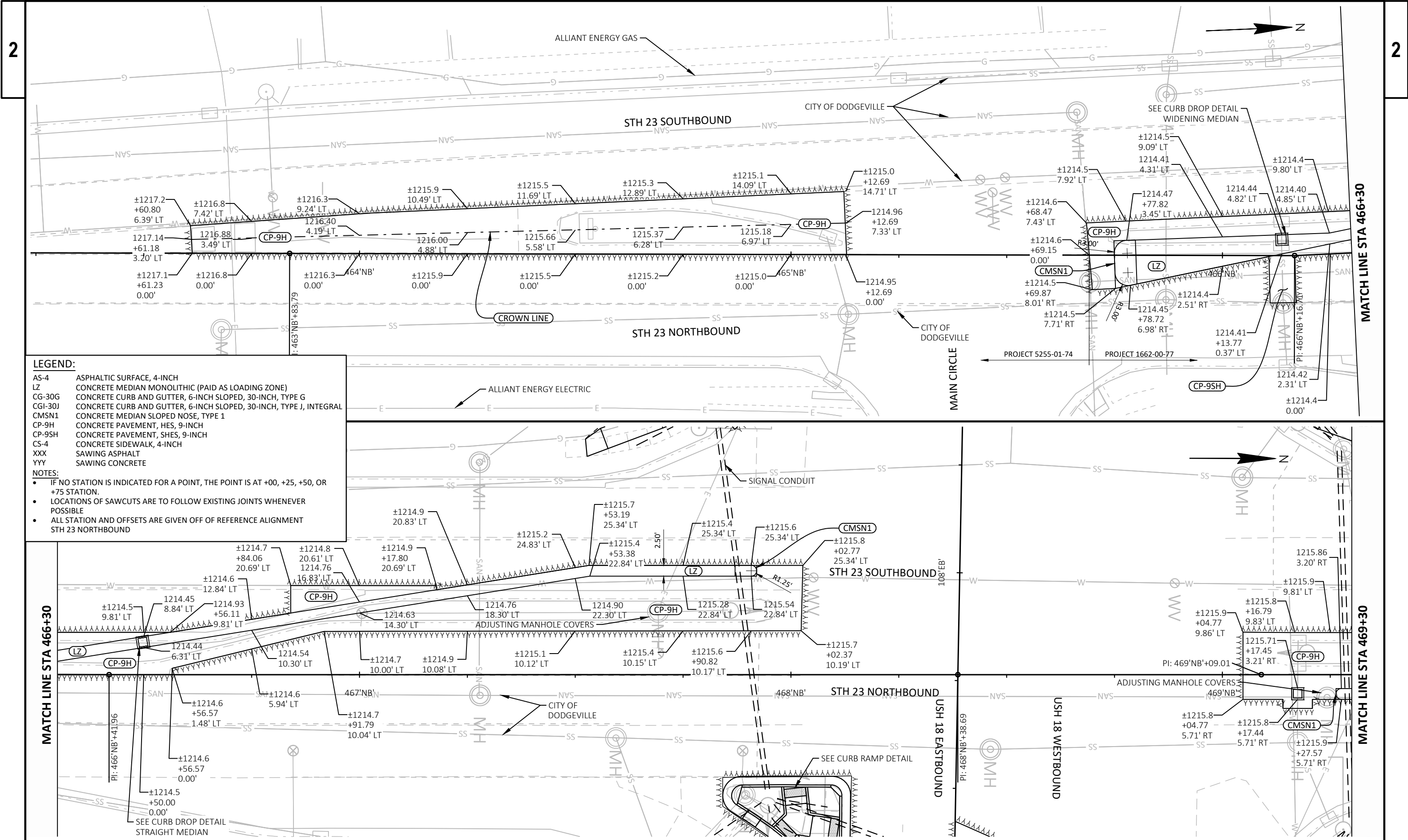


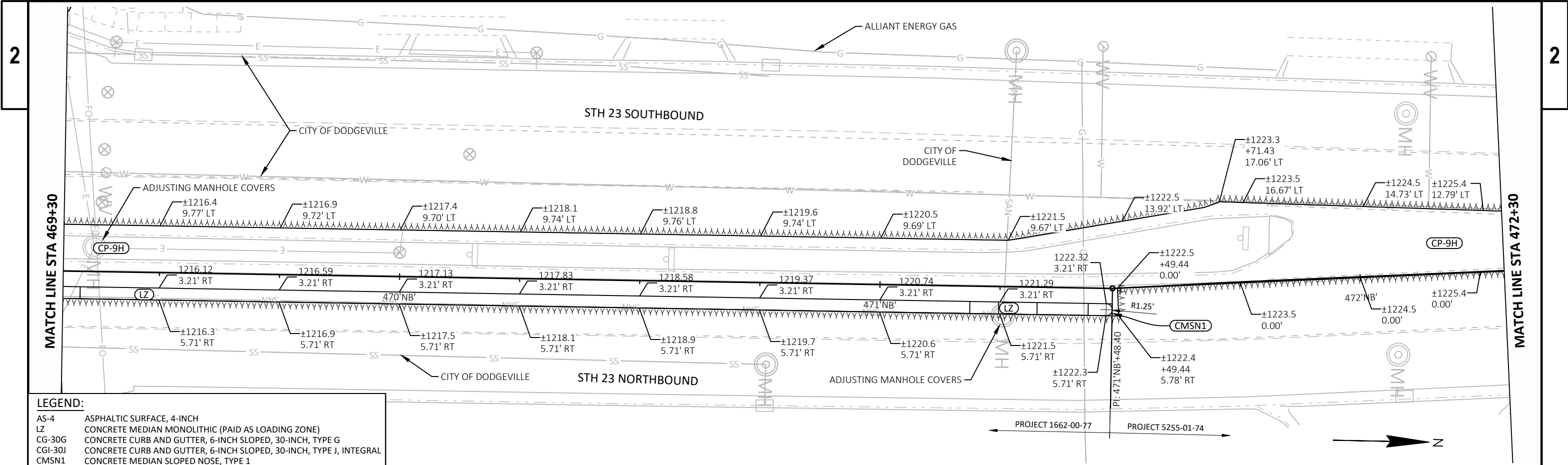
LEGEND:

- AS-4 ASPHALTIC SURFACE, 4-INCH
- LZ CONCRETE MEDIAN MONOLITHIC (PAID AS LOADING ZONE)
- CG-30G CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE G
- CGI-30J CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE J, INTEGRAL
- CMSN1 CONCRETE MEDIAN SLOPED NOSE, TYPE 1
- CP-9H CONCRETE PAVEMENT, HES, 9-INCH
- CP-9SH CONCRETE PAVEMENT, SHES, 9-INCH
- CS-4 CONCRETE SIDEWALK, 4-INCH
- XXX SAWING ASPHALT
- YYY SAWING CONCRETE

NOTES:

- IF NO STATION IS INDICATED FOR A POINT, THE POINT IS AT +00, +25, +50, OR +75 STATION.
- LOCATIONS OF SAWCUTS ARE TO FOLLOW EXISTING JOINTS WHENEVER POSSIBLE
- ALL STATION AND OFFSETS ARE GIVEN OFF OF REFERENCE ALIGNMENT USH 18 EASTBOUND





LEGEND:

AS-4 ASPHALTIC SURFACE, 4-INCH

LZ CONCRETE MEDIAN MONOLITHIC (PAID AS LOADING ZONE)

CG-30G CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE G

CGI-30J CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE J, INTEGRAL

CMSN1 CONCRETE MEDIAN SLOPED NOSE, TYPE 1

CP-9H CONCRETE PAVEMENT, HES, 9-INCH

CP-9SH CONCRETE PAVEMENT, SHES, 9-INCH

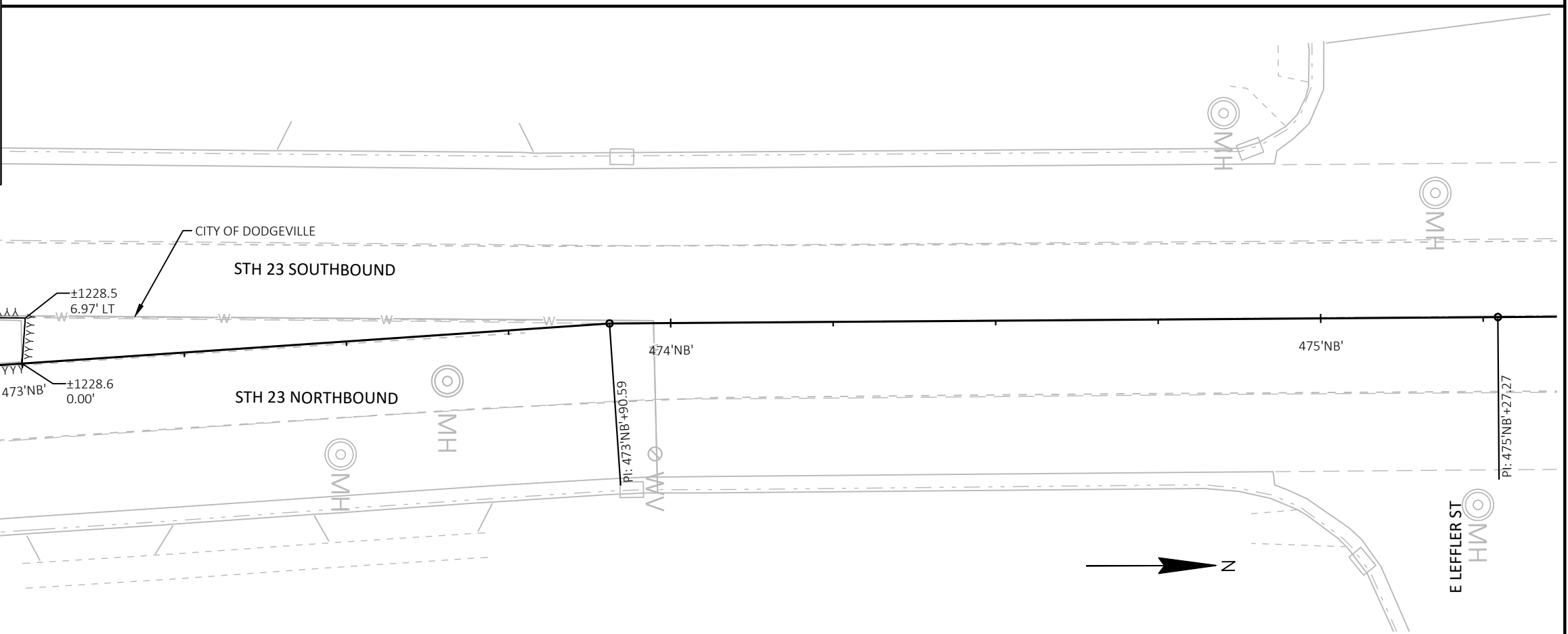
CS-4 CONCRETE SIDEWALK, 4-INCH

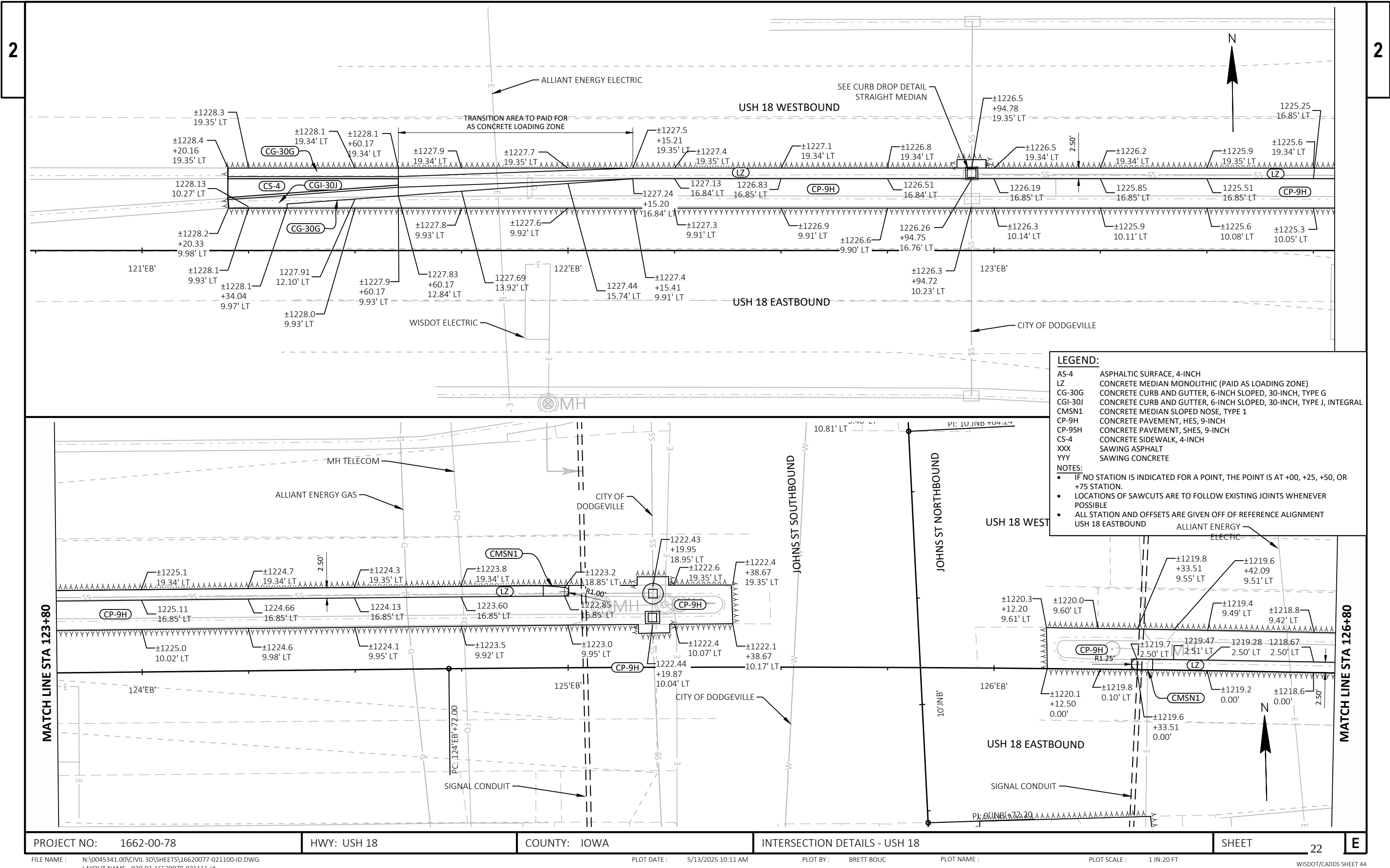
XXX SAWING ASPHALT

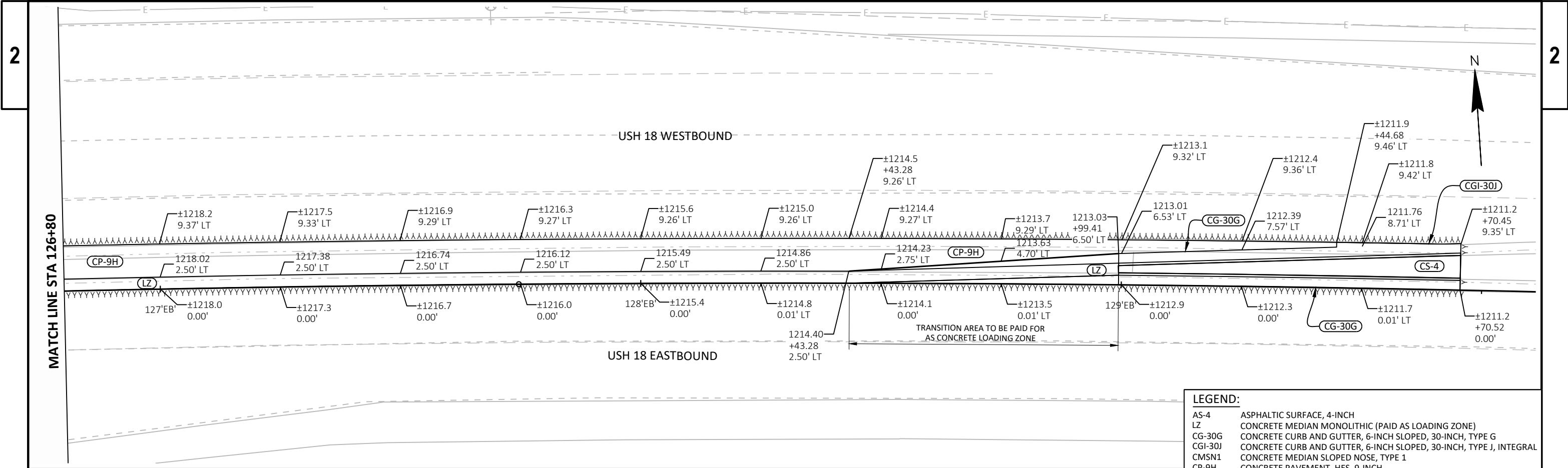
YYY SAWING CONCRETE

NOTES:

- IF NO STATION IS INDICATED FOR A POINT, THE POINT IS AT +00, +25, +50, OR +75 STATION.
- LOCATIONS OF SAWCUTS ARE TO FOLLOW EXISTING JOINTS WHENEVER POSSIBLE
- ALL STATION AND OFFSETS ARE GIVEN OFF OF REFERENCE ALIGNMENT STH 23 NORTHBOUND





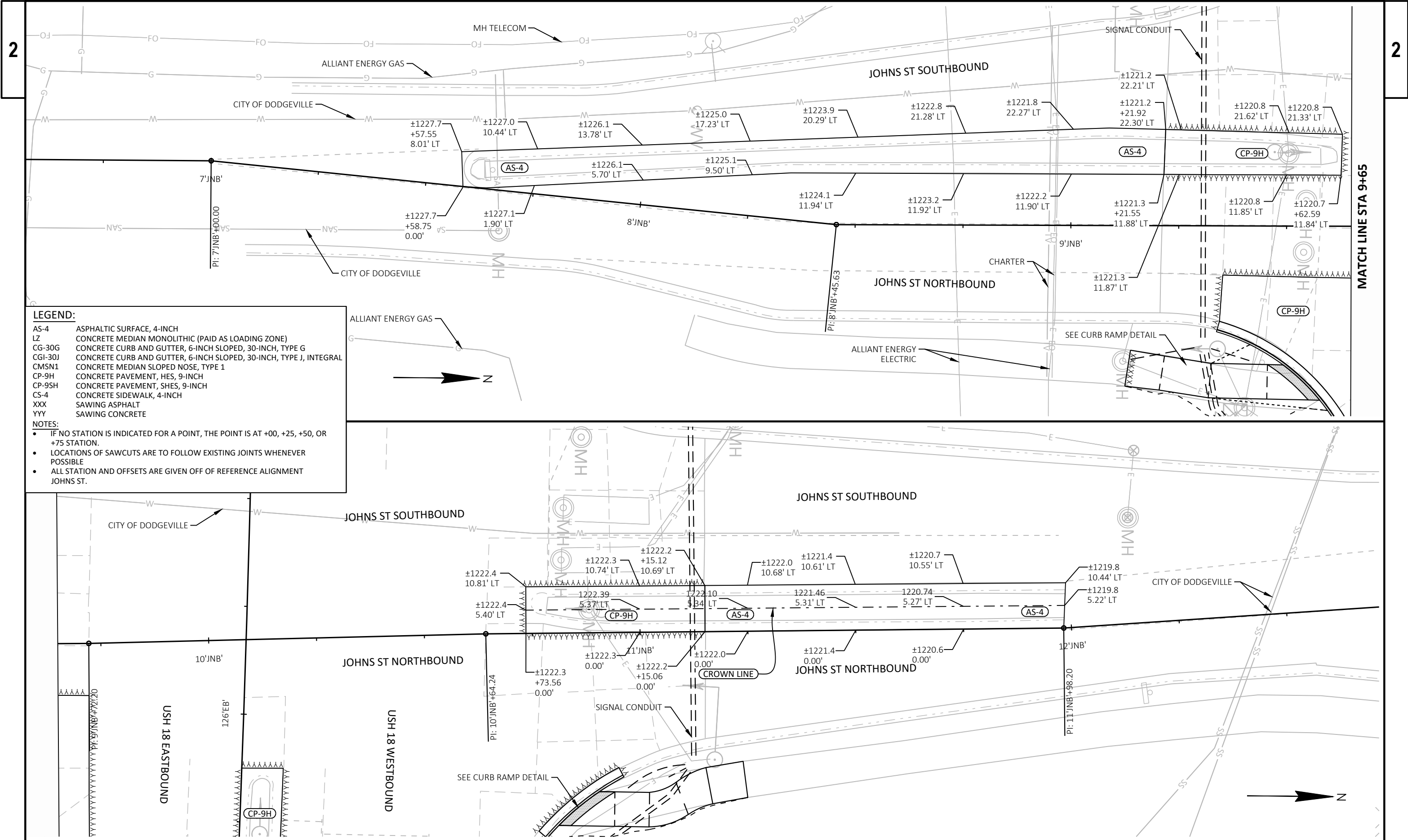


LEGEND:

AS-4 ASPHALTIC SURFACE, 4-INCH
LZ CONCRETE MEDIAN MONOLITHIC (PAID AS LOADING ZONE)
CG-30G CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE G
CGI-30J CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE J, INTEGRAL
CMSN1 CONCRETE MEDIAN SLOPED NOSE, TYPE 1
CP-9H CONCRETE PAVEMENT, HES, 9-INCH
CP-9SH CONCRETE PAVEMENT, SHES, 9-INCH
CS-4 CONCRETE SIDEWALK, 4-INCH
XXX SAWING ASPHALT
YYY SAWING CONCRETE

NOTES:

- IF NO STATION IS INDICATED FOR A POINT, THE POINT IS AT +00, +25, +50, OR +75 STATION.
- LOCATIONS OF SAWCUTS ARE TO FOLLOW EXISTING JOINTS WHENEVER POSSIBLE
- ALL STATION AND OFFSETS ARE GIVEN OFF OF REFERENCE ALIGNMENT USH 18 EASTBOUND

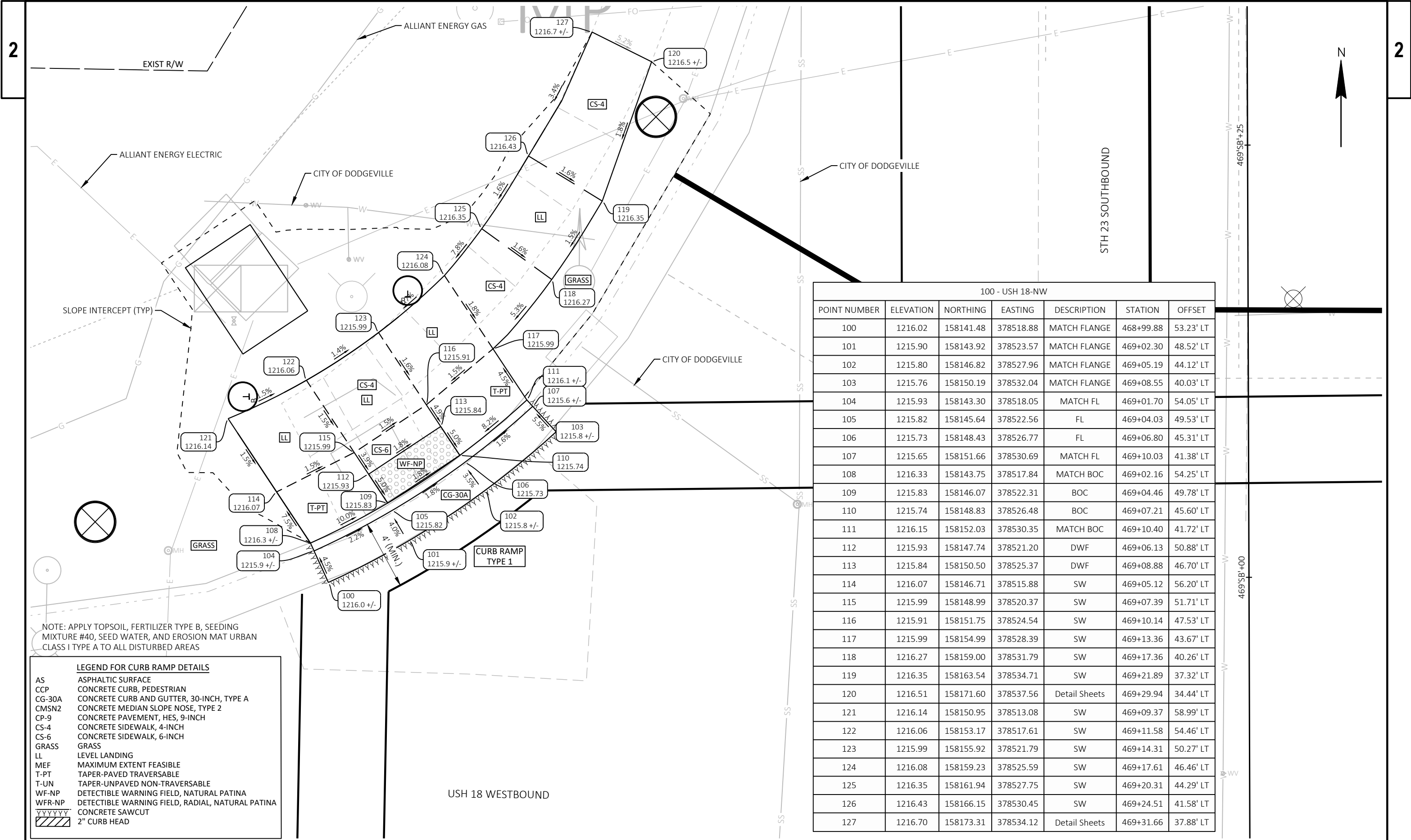


LEGEND:

AS-4 ASPHALTIC SURFACE, 4-INCH
LZ CONCRETE MEDIAN MONOLITHIC (PAID AS LOADING ZONE)
CG-30G CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE G
CGI-30J CONCRETE CURB AND GUTTER, 6-INCH SLOPED, 30-INCH, TYPE J, INTEGRAL
CMSN1 CONCRETE MEDIAN SLOPED NOSE, TYPE 1
CP-9H CONCRETE PAVEMENT, HES, 9-INCH
CP-9SH CONCRETE PAVEMENT, SHES, 9-INCH
CS-4 CONCRETE SIDEWALK, 4-INCH
XXX SAWING ASPHALT
YYY SAWING CONCRETE

NOTES:

- IF NO STATION IS INDICATED FOR A POINT, THE POINT IS AT +00, +25, +50, OR +75 STATION.
- LOCATIONS OF SAWCUTS ARE TO FOLLOW EXISTING JOINTS WHENEVER POSSIBLE
- ALL STATION AND OFFSETS ARE GIVEN OFF OF REFERENCE ALIGNMENT JOHNS ST.



NOTE: APPLY TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE #40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE A TO ALL DISTURBED AREAS

LEGEND FOR CURB RAMP DETAILS

AS

CCP

CG-30A

CMSN2

CP-9

CS-4

CS-6

GRASS

LL

MEF

T-PT

T-UN

WF-NP

WFR-NP

YYYYYY

ASPHALTIC SURFACE

CONCRETE CURB, PEDESTRIAN

CONCRETE CURB AND GUTTER, 30-INCH, TYPE A

CONCRETE MEDIAN SLOPE NOSE, TYPE 2

CONCRETE PAVEMENT, HES, 9-INCH

CONCRETE SIDEWALK, 4-INCH

CONCRETE SIDEWALK, 6-INCH

GRASS

LEVEL LANDING

MAXIMUM EXTENT FEASIBLE

TAPER-PAVED TRAVERSABLE

TAPER-UNPAVED NON-TRAVERSABLE

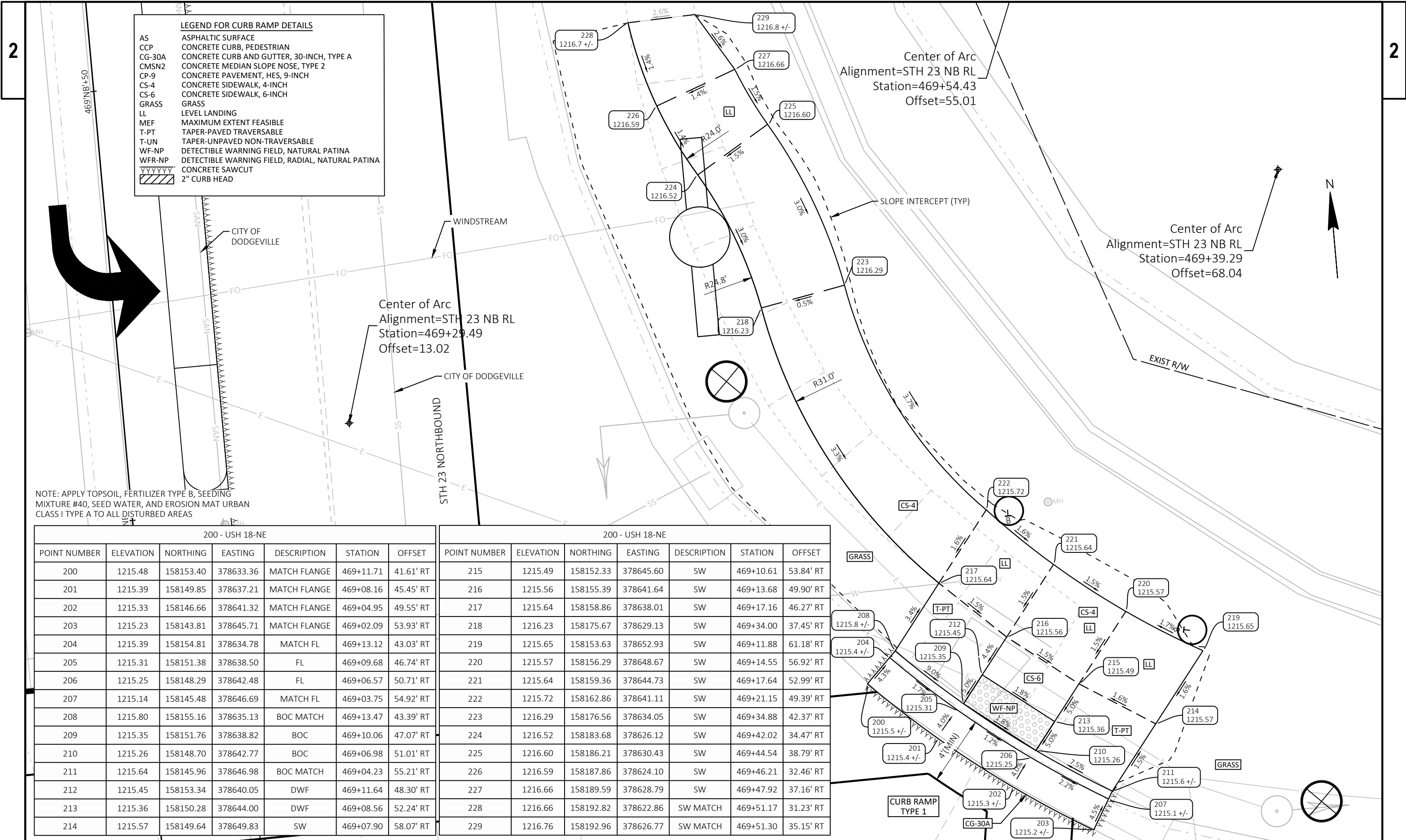
DETECTIBLE WARNING FIELD, NATURAL PATINA

DETECTIBLE WARNING FIELD, RADIAL, NATURAL PATINA

CONCRETE SAWCUT

2" CURB HEAD

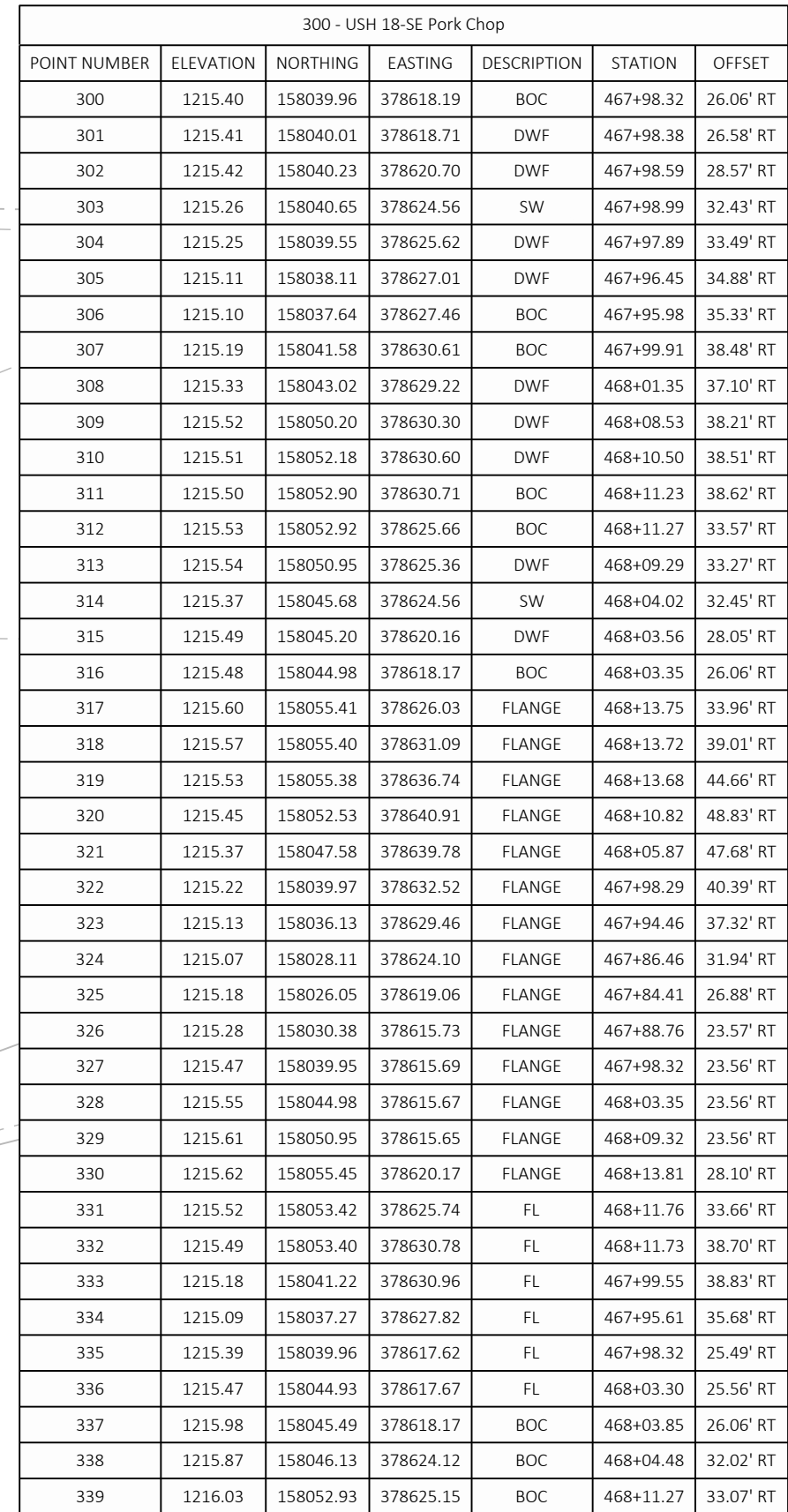
100 - USH 18-NW						
POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
100	1216.02	158141.48	378518.88	MATCH FLANGE	468+99.88	53.23' LT
101	1215.90	158143.92	378523.57	MATCH FLANGE	469+02.30	48.52' LT
102	1215.80	158146.82	378527.96	MATCH FLANGE	469+05.19	44.12' LT
103	1215.76	158150.19	378532.04	MATCH FLANGE	469+08.55	40.03' LT
104	1215.93	158143.30	378518.05	MATCH FL	469+01.70	54.05' LT
105	1215.82	158145.64	378522.56	FL	469+04.03	49.53' LT
106	1215.73	158148.43	378526.77	FL	469+06.80	45.31' LT
107	1215.65	158151.66	378530.69	MATCH FL	469+10.03	41.38' LT
108	1216.33	158143.75	378517.84	MATCH BOC	469+02.16	54.25' LT
109	1215.83	158146.07	378522.31	BOC	469+04.46	49.78' LT
110	1215.74	158148.83	378526.48	BOC	469+07.21	45.60' LT
111	1216.15	158152.03	378530.35	MATCH BOC	469+10.40	41.72' LT
112	1215.93	158147.74	378521.20	DWF	469+06.13	50.88' LT
113	1215.84	158150.50	378525.37	DWF	469+08.88	46.70' LT
114	1216.07	158146.71	378515.88	SW	469+05.12	56.20' LT
115	1215.99	158148.99	378520.37	SW	469+07.39	51.71' LT
116	1215.91	158151.75	378524.54	SW	469+10.14	47.53' LT
117	1215.99	158154.99	378528.39	SW	469+13.36	43.67' LT
118	1216.27	158159.00	378531.79	SW	469+17.36	40.26' LT
119	1216.35	158163.54	378534.71	SW	469+21.89	37.32' LT
120	1216.51	158171.60	378537.56	Detail Sheets	469+29.94	34.44' LT
121	1216.14	158150.95	378513.08	SW	469+09.37	58.99' LT
122	1216.06	158153.17	378517.61	SW	469+11.58	54.46' LT
123	1215.99	158155.92	378521.79	SW	469+14.31	50.27' LT
124	1216.08	158159.23	378525.59	SW	469+17.61	46.46' LT
125	1216.35	158161.94	378527.75	SW	469+20.31	44.29' LT
126	1216.43	158166.15	378530.45	SW	469+24.51	41.58' LT
127	1216.70	158173.31	378534.12	Detail Sheets	469+31.66	37.88' LT

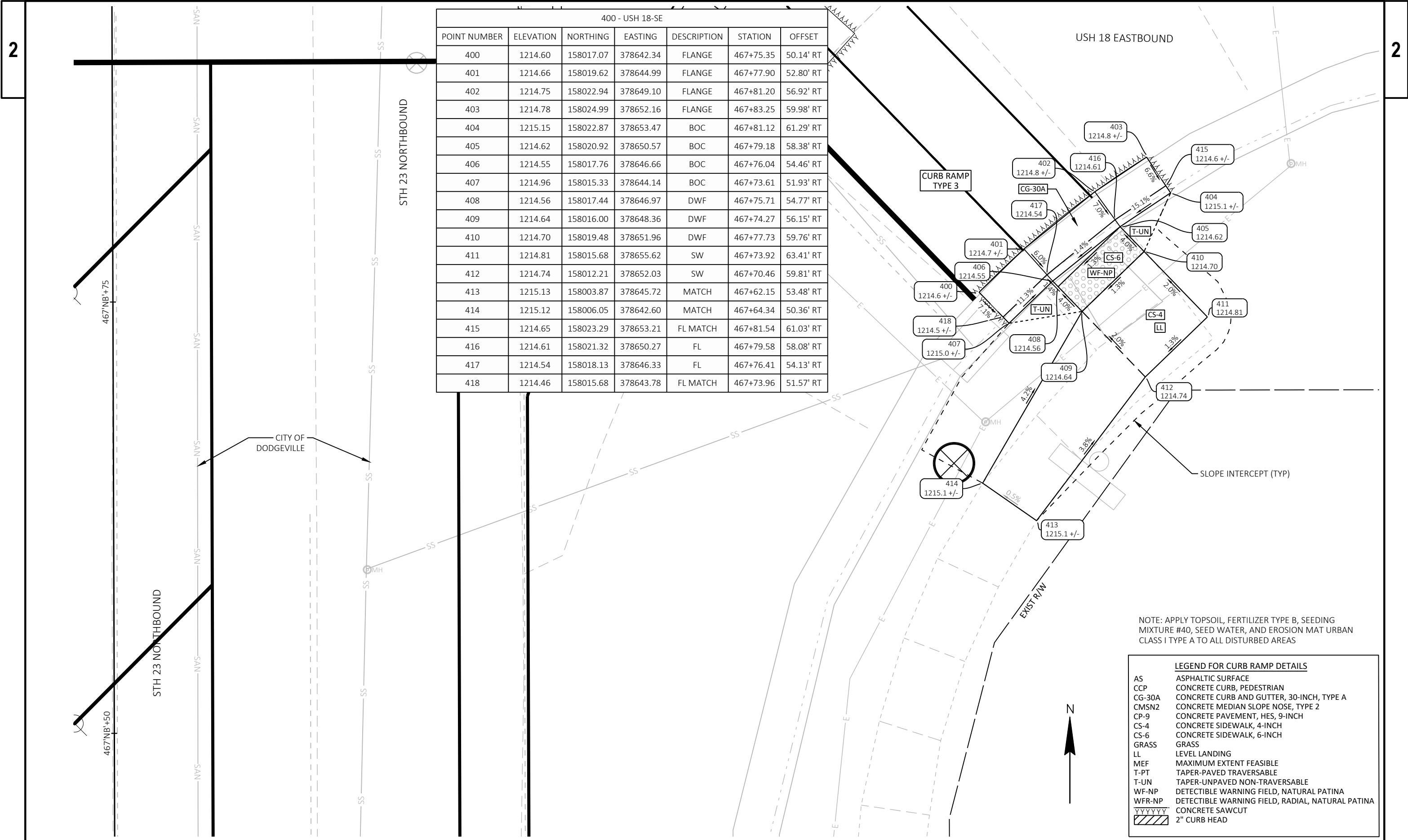


NOTE: APPLY TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE #40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE A TO ALL DISTURBED AREAS

200 - USH 18-NE						
POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
200	1215.48	158153.40	378633.36	MATCH FLANGE	469+11.71	41.61' RT
201	1215.39	158149.85	378637.21	MATCH FLANGE	469+08.16	45.45' RT
202	1215.33	158146.66	378641.32	MATCH FLANGE	469+04.95	49.55' RT
203	1215.23	158143.81	378645.71	MATCH FLANGE	469+02.09	53.93' RT
204	1215.39	158154.81	378634.78	MATCH FL	469+13.12	43.03' RT
205	1215.31	158151.38	378638.50	FL	469+09.68	46.74' RT
206	1215.25	158148.29	378642.48	FL	469+06.57	50.71' RT
207	1215.14	158145.48	378646.69	MATCH FL	469+03.75	54.92' RT
208	1215.80	158155.16	378635.13	BOC MATCH	469+13.47	43.39' RT
209	1215.35	158151.76	378638.82	BOC	469+10.06	47.07' RT
210	1215.26	158148.70	378642.77	BOC	469+06.98	51.01' RT
211	1215.64	158145.96	378646.98	BOC MATCH	469+04.23	55.21' RT
212	1215.45	158153.34	378640.05	DWF	469+11.64	48.30' RT
213	1215.36	158150.28	378644.00	DWF	469+08.56	52.24' RT
214	1215.57	158149.64	378649.83	SW	469+07.90	58.07' RT

200 - USH 18-NE						
POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
215	1215.49	158152.33	378645.60	SW	469+10.61	53.84' RT
216	1215.56	158155.39	378641.64	SW	469+13.68	49.90' RT
217	1215.64	158158.86	378638.01	SW	469+17.16	46.27' RT
218	1216.23	158175.67	378629.13	SW	469+34.00	37.45' RT
219	1215.65	158153.63	378652.93	SW	469+11.88	61.18' RT
220	1215.57	158156.29	378648.67	SW	469+14.55	56.92' RT
221	1215.64	158159.36	378644.73	SW	469+17.64	52.99' RT
222	1215.72	158162.86	378641.11	SW	469+21.15	49.39' RT
223	1216.29	158176.56	378634.05	SW	469+34.88	42.37' RT
224	1216.52	158183.68	378626.12	SW	469+42.02	34.47' RT
225	1216.60	158186.21	378630.43	SW	469+44.54	38.79' RT
226	1216.59	158187.86	378624.10	SW	469+46.21	32.46' RT
227	1216.66	158189.59	378628.79	SW	469+47.92	37.16' RT
228	1216.66	158192.82	378622.86	SW MATCH	469+51.17	31.23' RT
229	1216.76	158192.96	378626.77	SW MATCH	469+51.30	35.15' RT





400 - USH 18-SE						
POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
400	1214.60	158017.07	378642.34	FLANGE	467+75.35	50.14' RT
401	1214.66	158019.62	378644.99	FLANGE	467+77.90	52.80' RT
402	1214.75	158022.94	378649.10	FLANGE	467+81.20	56.92' RT
403	1214.78	158024.99	378652.16	FLANGE	467+83.25	59.98' RT
404	1215.15	158022.87	378653.47	BOC	467+81.12	61.29' RT
405	1214.62	158020.92	378650.57	BOC	467+79.18	58.38' RT
406	1214.55	158017.76	378646.66	BOC	467+76.04	54.46' RT
407	1214.96	158015.33	378644.14	BOC	467+73.61	51.93' RT
408	1214.56	158017.44	378646.97	DWF	467+75.71	54.77' RT
409	1214.64	158016.00	378648.36	DWF	467+74.27	56.15' RT
410	1214.70	158019.48	378651.96	DWF	467+77.73	59.76' RT
411	1214.81	158015.68	378655.62	SW	467+73.92	63.41' RT
412	1214.74	158012.21	378652.03	SW	467+70.46	59.81' RT
413	1215.13	158003.87	378645.72	MATCH	467+62.15	53.48' RT
414	1215.12	158006.05	378642.60	MATCH	467+64.34	50.36' RT
415	1214.65	158023.29	378653.21	FL MATCH	467+81.54	61.03' RT
416	1214.61	158021.32	378650.27	FL	467+79.58	58.08' RT
417	1214.54	158018.13	378646.33	FL	467+76.41	54.13' RT
418	1214.46	158015.68	378643.78	FL MATCH	467+73.96	51.57' RT

NOTE: APPLY TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE #40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE A TO ALL DISTURBED AREAS

LEGEND FOR CURB RAMP DETAILS

AS

CCP

CG-30A

CMSN2

CP-9

CS-4

CS-6

GRASS

LL

MEF

T-PT

T-UN

WF-NP

WFR-NP

YYYYYY

ASPHALTIC SURFACE

CONCRETE CURB, PEDESTRIAN

CONCRETE CURB AND GUTTER, 30-INCH, TYPE A

CONCRETE MEDIAN SLOPE NOSE, TYPE 2

CONCRETE PAVEMENT, HES, 9-INCH

CONCRETE SIDEWALK, 4-INCH

CONCRETE SIDEWALK, 6-INCH

GRASS

LEVEL LANDING

MAXIMUM EXTENT FEASIBLE

TAPER-PAVED TRAVERSABLE

TAPER-UNPAVED NON-TRAVERSABLE

DETECTIBLE WARNING FIELD, NATURAL PATINA

DETECTIBLE WARNING FIELD, RADIAL, NATURAL PATINA

CONCRETE SAWCUT

2" CURB HEAD

The figure is a detailed engineering plan view of a road intersection. It shows the layout of curbs, ramps, and various pavement types. Key features include:

- JOHNS ST**: A street running vertically through the center.
- USH 18 WESTBOUND**: A road running horizontally at the bottom.
- CURB RAMP TYPE 4B1 RADIAL DWF**: A label pointing to a specific ramp area.
- Stationing**: Numerous points are labeled with station numbers and elevations, such as 600 (1221.1 +/-), 601 (1221.2 +/-), up to 621 (1222.19).
- Pavement Types**: Indicated by different hatching patterns like WFR-NP, CG-30A, CS-6, LL, AS, CCP, etc.
- Slopes**: Various slope percentages are shown along the curb lines, ranging from 0.2% to 7.5%.
- Radii**: Curved sections are defined by radii like R20' and R16'.

POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
600	1221.08	158120.55	380395.25	FLANGE	10+76.12	45.87' RT
601	1221.20	158123.32	380392.22	FLANGE	10+78.93	42.87' RT
602	1221.52	158133.27	380383.93	FLANGE	10+88.96	34.68' RT
603	1221.60	158139.05	380380.47	FLANGE	10+94.77	31.27' RT
604	1221.47	158122.43	380396.89	BOC	10+77.99	47.53' RT
605	1221.17	158125.15	380393.93	BOC	10+80.74	44.60' RT
606	1221.45	158134.55	380386.08	BOC	10+90.23	36.84' RT
607	1221.99	158140.22	380382.68	BOC	10+95.92	33.49' RT
608	1221.36	158138.04	380394.14	SW	10+93.63	44.93' RT
609	1221.50	158138.17	380386.14	SW	10+93.84	36.93' RT
610	1221.48	158146.04	380394.26	SW	11+01.63	45.14' RT
611	1221.62	158146.17	380386.27	SW	11+01.84	37.14' RT
612	1221.81	158155.14	380391.38	SW	11+10.76	42.35' RT
613	1221.83	158152.28	380383.94	SW	11+07.97	34.88' RT
614	1221.49	158139.98	380382.23	FL MATCH	10+95.69	33.05' RT
615	1221.44	158134.27	380385.67	FL	10+89.95	36.42' RT
616	1221.16	158124.79	380393.58	FL	10+80.38	44.24' RT
617	1220.97	158122.05	380396.56	FL MATCH	10+77.62	47.20' RT
618	1222.03	158160.81	380388.90	SW	11+16.45	39.92' RT
619	1222.07	158159.23	380380.50	SW	11+14.96	31.51' RT
620	1222.15	158168.93	380387.44	MATCH	11+24.59	38.55' RT
621	1222.19	158167.86	380379.05	MATCH	11+23.60	30.15' RT

LEGEND FOR CURB RAMP DETAILS

AS ASPHALTIC SURFACE
CCP CONCRETE CURB, PEDESTRIAN
CG-30A CONCRETE CURB AND GUTTER, 30-INCH, TYPE A
CMSN2 CONCRETE MEDIAN SLOPE NOSE, TYPE 2
CP-9 CONCRETE PAVEMENT, HES, 9-INCH
CS-4 CONCRETE SIDEWALK, 4-INCH
CS-6 CONCRETE SIDEWALK, 6-INCH
GRASS GRASS
LL LEVEL LANDING
MEF MAXIMUM EXTENT FEASIBLE
T-PT TAPER-PAVED TRAVERSABLE
T-UN TAPER-UNPAVED NON-TRAVERSABLE
WF-NP DETECTIBLE WARNING FIELD, NATURAL PATINA
WFR-NP DETECTIBLE WARNING FIELD, RADIAL, NATURAL PATINA
YYYYYY CONCRETE SAWCUT
2" CURB HEAD

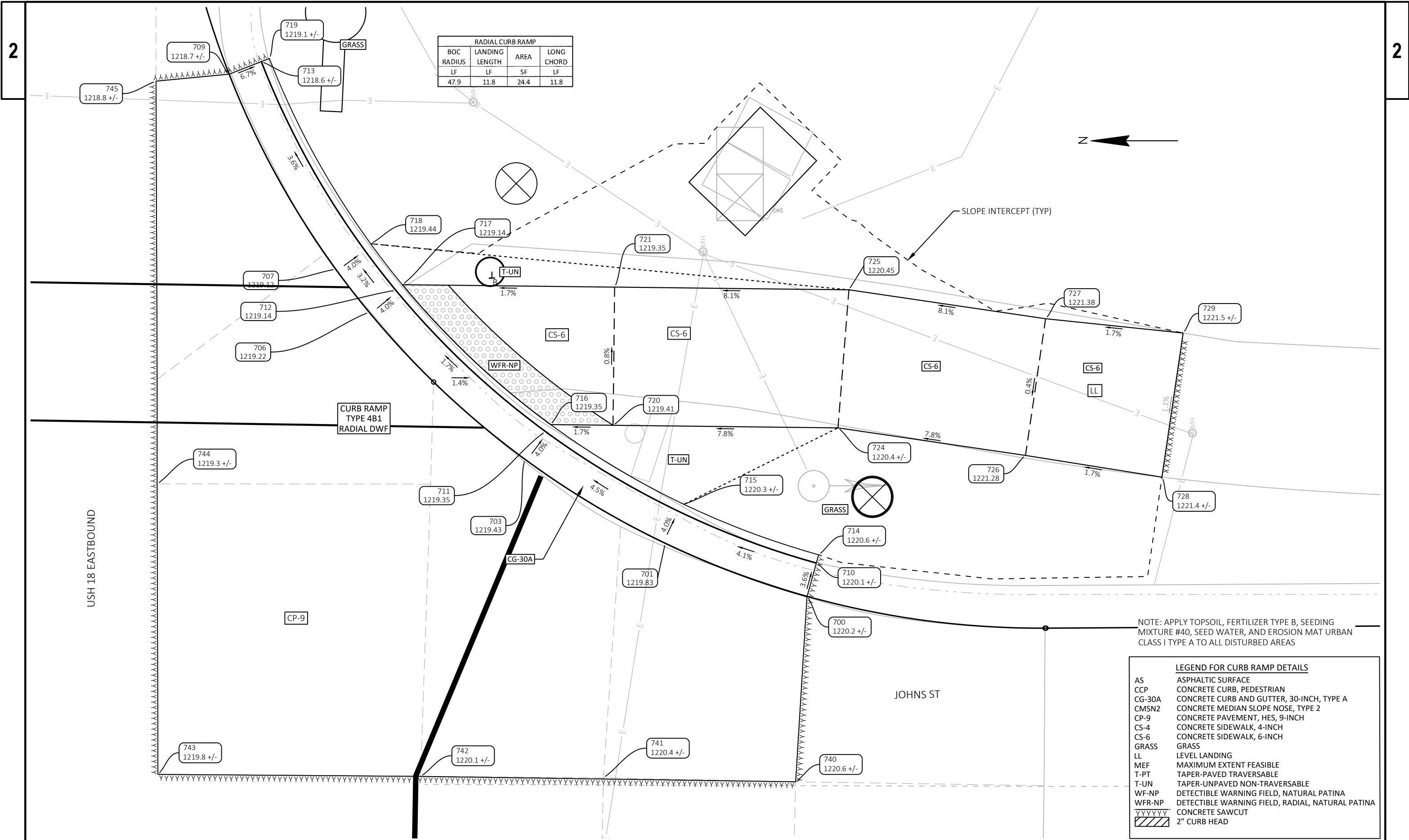
BOC RADIUS	LANDING LENGTH	AREA	LONG CHORD
LF	LF	SF	LF
61.3	12.3	25.2	12.3

NOTE: APPLY TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE #40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE A TO ALL DISTURBED AREAS

2

<u>LEGEND FOR CURB RAMP DETAILS</u>	
AS	ASPHALTIC SURFACE
CCP	CONCRETE CURB, PEDESTRIAN
CG-30A	CONCRETE CURB AND GUTTER, 30-INCH, TYPE A
CMSN2	CONCRETE MEDIAN SLOPE NOSE, TYPE 2
CP-9	CONCRETE PAVEMENT, HES, 9-INCH
CS-4	CONCRETE SIDEWALK, 4-INCH
CS-6	CONCRETE SIDEWALK, 6-INCH
GRASS	GRASS
LL	LEVEL LANDING
MEF	MAXIMUM EXTENT FEASIBLE
T-PT	TAPER-PAVED TRAVERSABLE
T-UN	TAPER-UNPAVED NON-TRAVERSABLE
WF-NP	DETECTABLE WARNING FIELD, NATURAL PATINA
WFR-NP	DETECTABLE WARNING FIELD, RADIAL, NATURAL PATINA
*****	CONCRETE SAWCUT
	2" CURB HEAD

NOTE: APPLY TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE #40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE A TO ALL DISTURBED AREAS



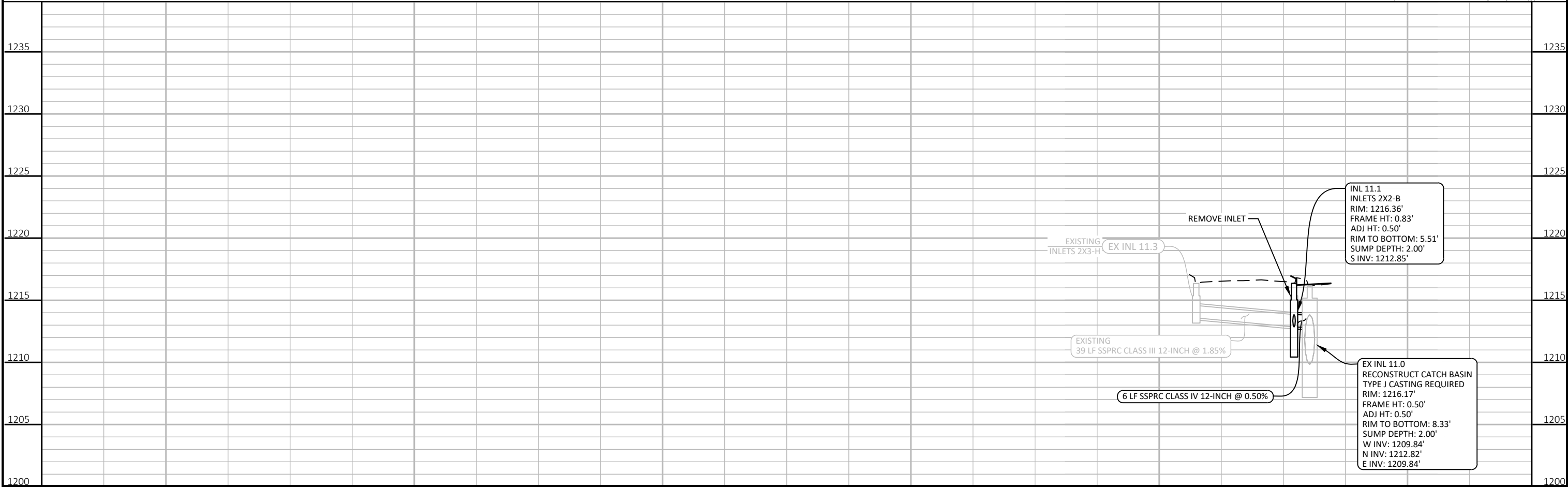
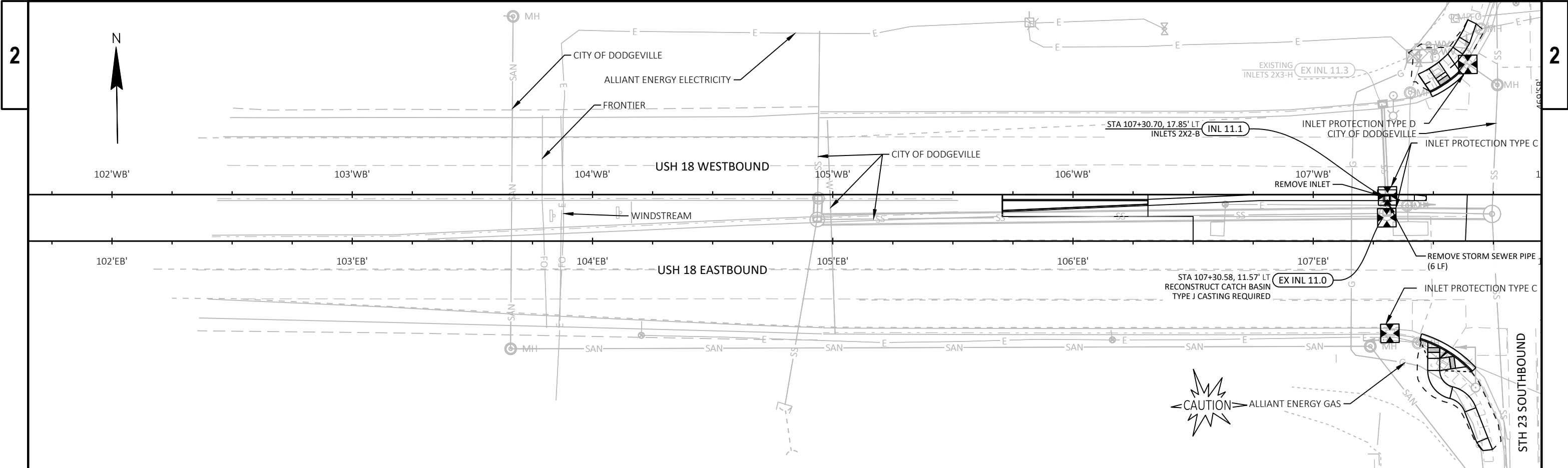
RADIAL CURB RAMP			
BOC RADIUS	LANDING LENGTH	AREA	LONG CHORD
LF	LF	SF	LF
47.9	11.8	24.4	11.8

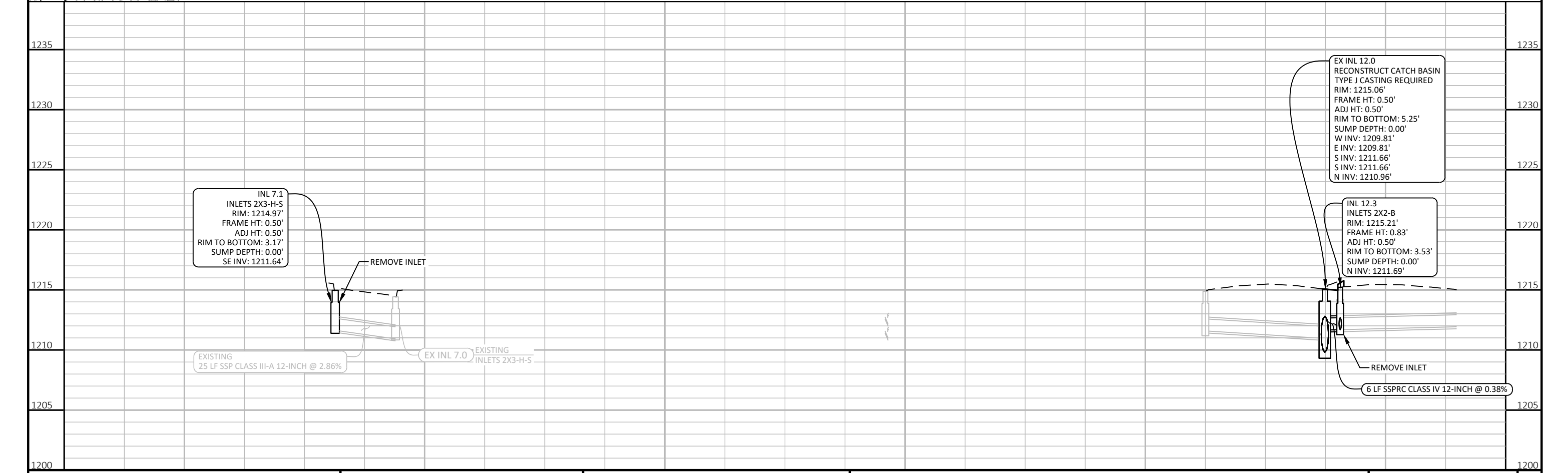
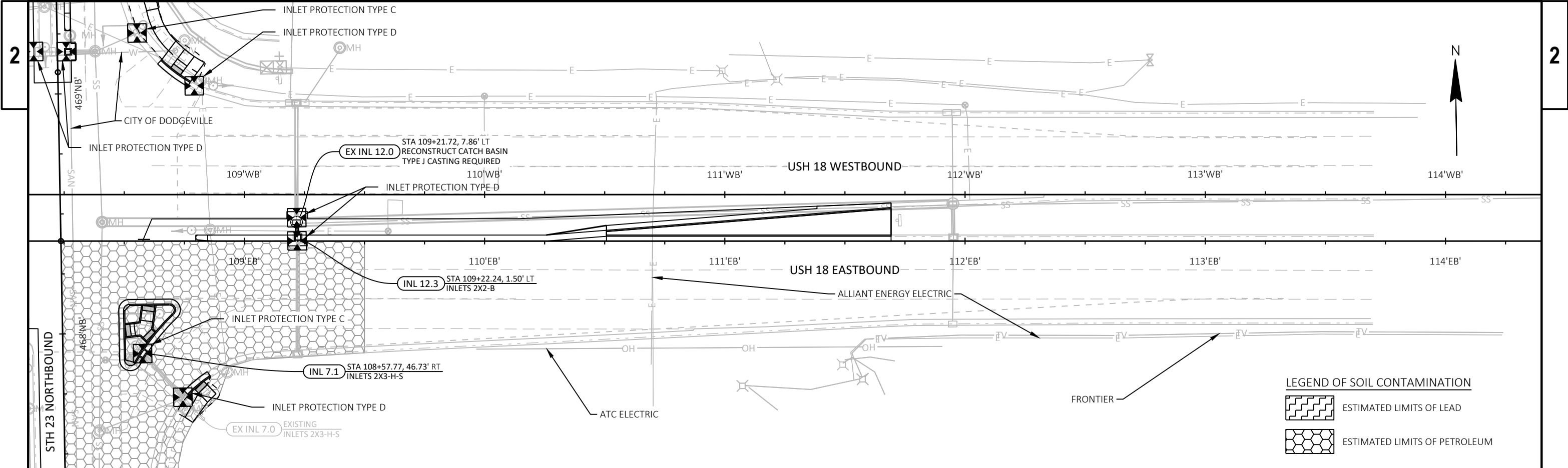
NOTE: APPLY TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE #40, SEED WATER, AND EROSION MAT URBAN CLASS I TYPE A TO ALL DISTURBED AREAS

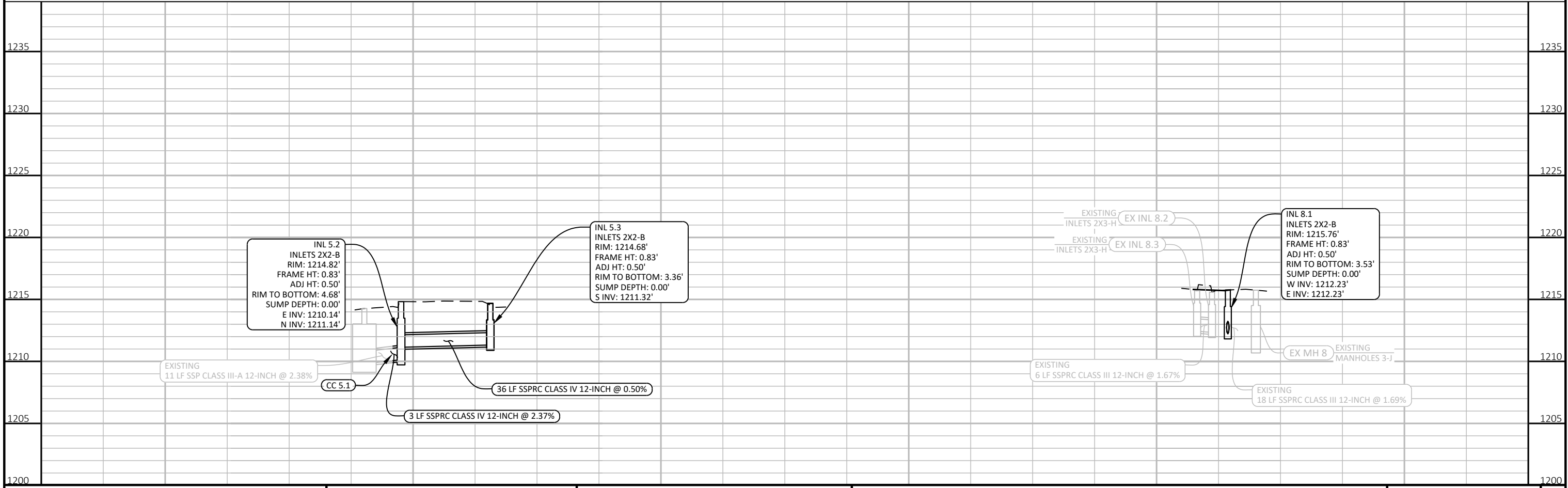
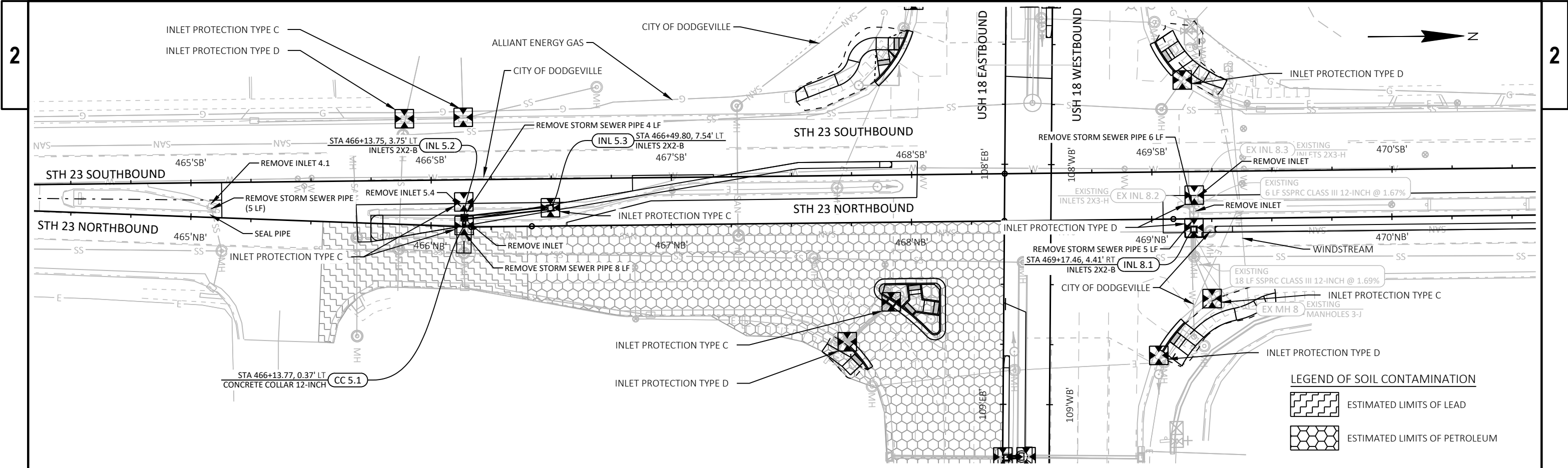
LEGEND FOR CURB RAMP DETAILS	
AS	ASPHALTIC SURFACE
CCP	CONCRETE CURB, PEDESTRIAN
CG-30A	CONCRETE CURB AND GUTTER, 30-INCH, TYPE A
CMSN2	CONCRETE MEDIAN SLOPE NOSE, TYPE 2
CP-9	CONCRETE PAVEMENT, HES, 9-INCH
CS-4	CONCRETE SIDEWALK, 4-INCH
CS-6	CONCRETE SIDEWALK, 6-INCH
GRASS	GRASS
LL	LEVEL LANDING
MEF	MAXIMUM EXTENT FEASIBLE
T-PT	TAPER-PAVED TRAVERSABLE
T-UN	TAPER-UNPAVED NON-TRAVERSABLE
WF-NP	DETECTIBLE WARNING FIELD, NATURAL PATINA
WFR-NP	DETECTIBLE WARNING FIELD, RADIAL, NATURAL PATINA
YYYYYY	CONCRETE SAWCUT
	2" CURB HEAD

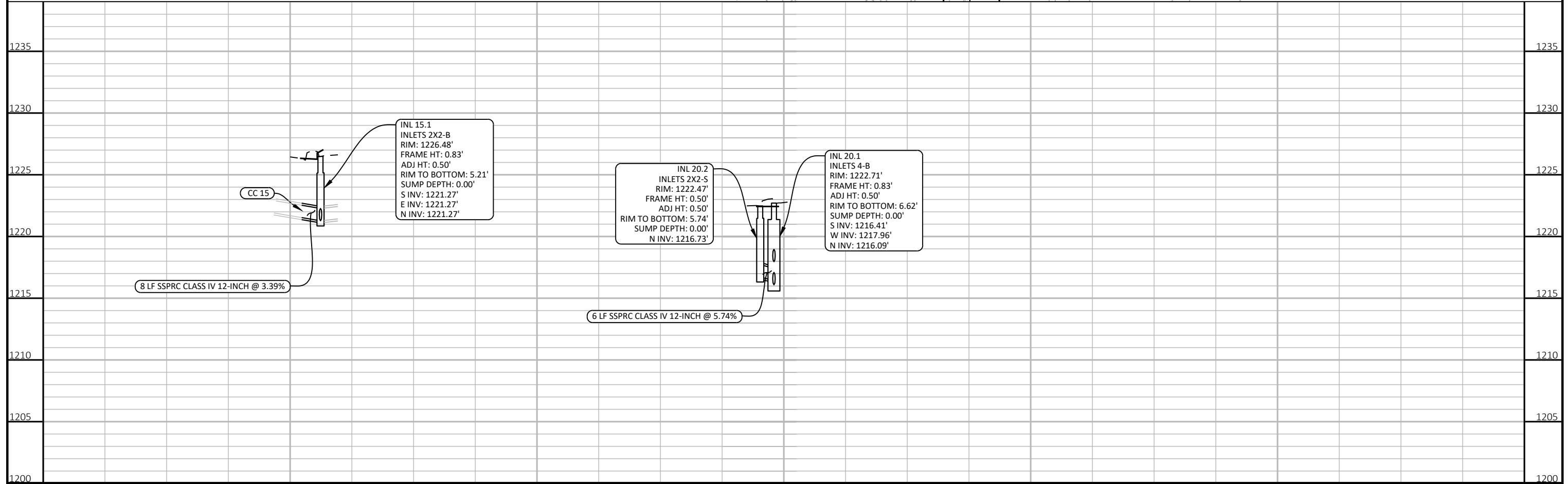
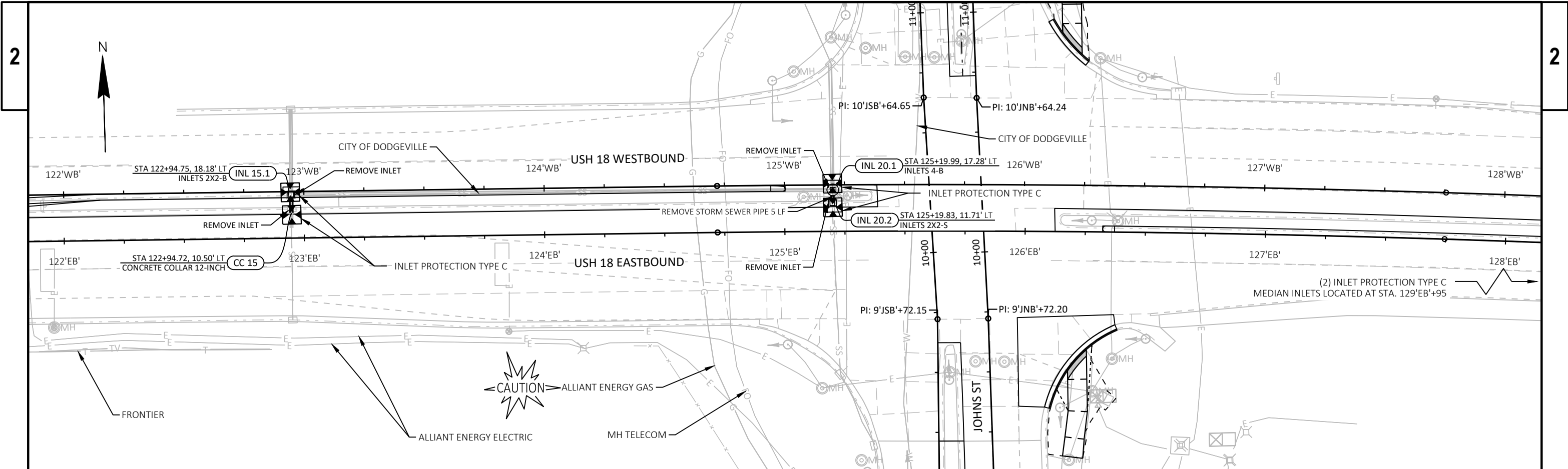
700 - Johns St SE						
POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
700	1220.20	157978.65	380374.12	FLAG	9+34.50	22.14' RT
701	1219.83	157986.86	380377.20	FLAG	9+42.70	25.27' RT
703	1219.43	157994.98	380382.06	FLAG	9+50.78	30.19' RT
704	1219.38	157997.55	380384.08	FLAG	9+53.34	32.23' RT
706	1219.22	158004.01	380390.58	FLAG	9+59.75	38.77' RT
707	1219.12	158005.94	380393.07	FLAG	9+61.67	41.28' RT
709	1218.67	158012.11	380404.36	FLAG	9+67.76	52.61' RT
710	1220.12	157978.11	380376.05	FL	9+33.96	24.07' RT
711	1219.35	157993.80	380383.67	FL	9+49.59	31.79' RT
712	1219.14	158002.47	380391.85	FL	9+58.20	40.04' RT
713	1218.59	158010.25	380405.09	FL	9+65.89	53.32' RT
714	1220.62	157977.98	380376.53	BOC	9+33.82	24.55' RT
715	1220.31	157985.78	380379.45	BOC	9+41.60	27.52' RT
716	1219.35	157993.50	380384.07	BOC	9+49.29	32.19' RT
717	1219.14	158002.08	380392.17	BOC	9+57.81	40.35' RT
718	1219.44	158003.92	380394.54	BOC	9+59.64	42.74' RT

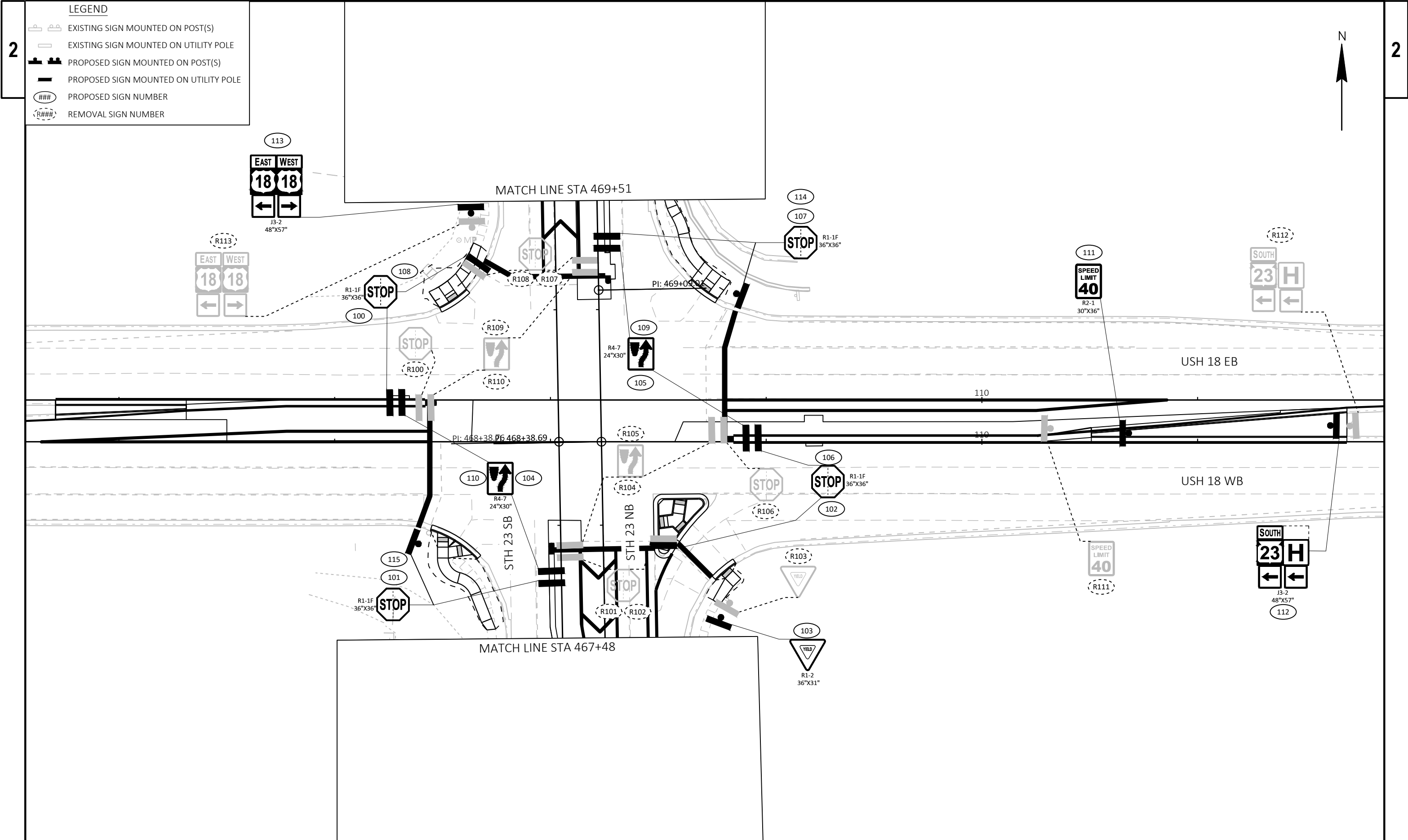
700 - Johns St SE						
POINT NUMBER	ELEVATION	NORTHING	EASTING	DESCRIPTION	STATION	OFFSET
719	1219.09	158009.78	380405.27	BOC	9+65.42	53.50' RT
720	1219.41	157989.88	380384.03	BOC	9+45.67	32.13' RT
721	1219.35	157989.79	380392.03	SW	9+45.52	40.13' RT
724	1220.43	157976.86	380383.88	SW	9+32.65	31.89' RT
725	1220.45	157976.23	380391.87	SW	9+31.96	39.88' RT
726	1221.28	157966.00	380382.28	SW	9+21.80	30.22' RT
727	1221.38	157964.84	380390.20	SW	9+20.58	38.12' RT
728	1221.42	157958.10	380381.02	SW	9+13.91	28.90' RT
729	1221.52	157956.87	380389.37	SW	9+12.62	37.24' RT
740	1220.59	157979.31	380363.38	MATCH	9+35.24	11.41' RT
741	1220.36	157990.44	380363.62	MATCH	9+46.37	11.72' RT
742	1220.11	158001.03	380363.70	MATCH	9+56.96	11.87' RT
743	1219.76	158016.23	380363.81	MATCH	9+72.16	12.09' RT
744	1219.32	158016.28	380380.64	MATCH	9+72.09	28.92' RT
745	1218.83	158016.34	380403.96	MATCH	9+71.99	52.24' RT

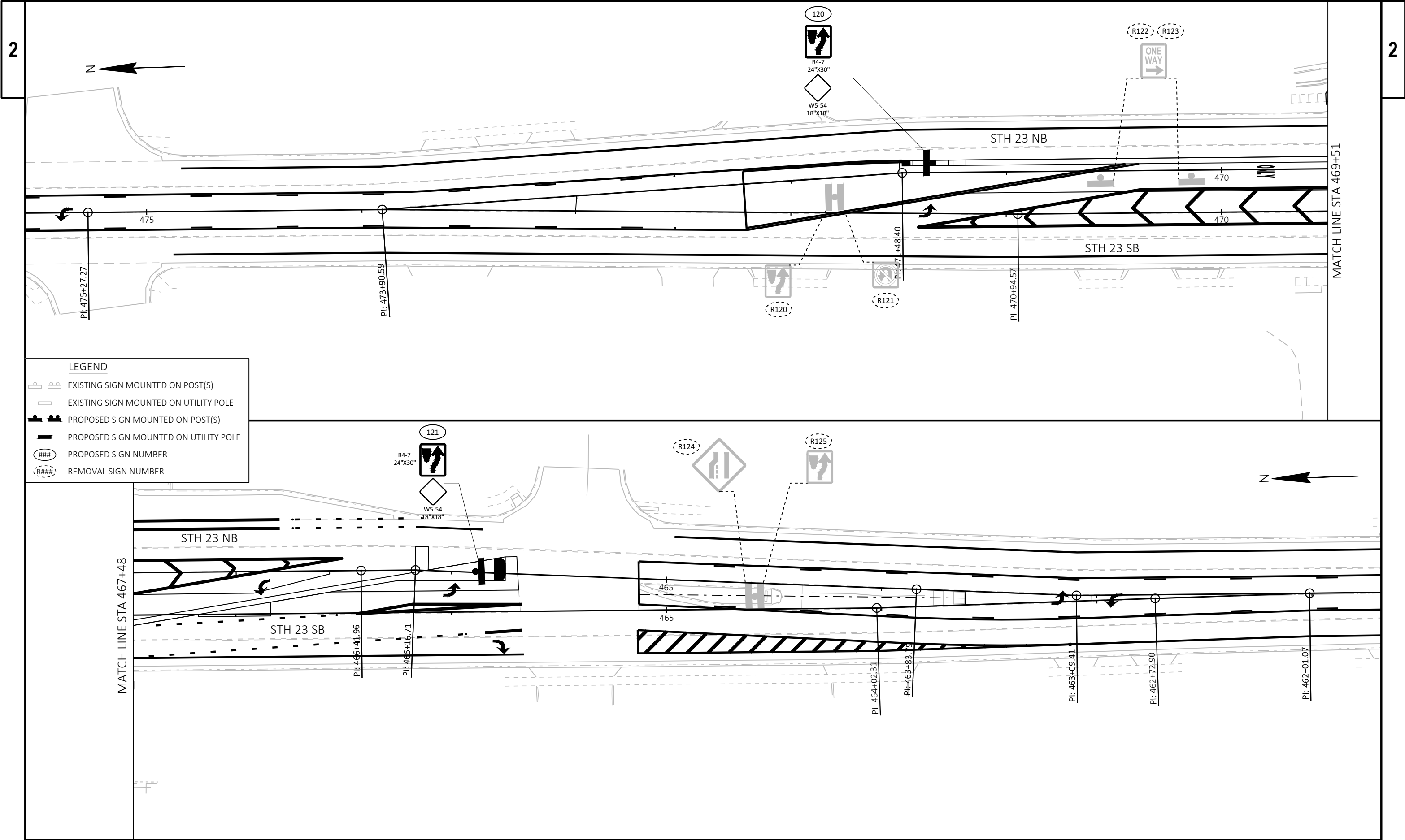


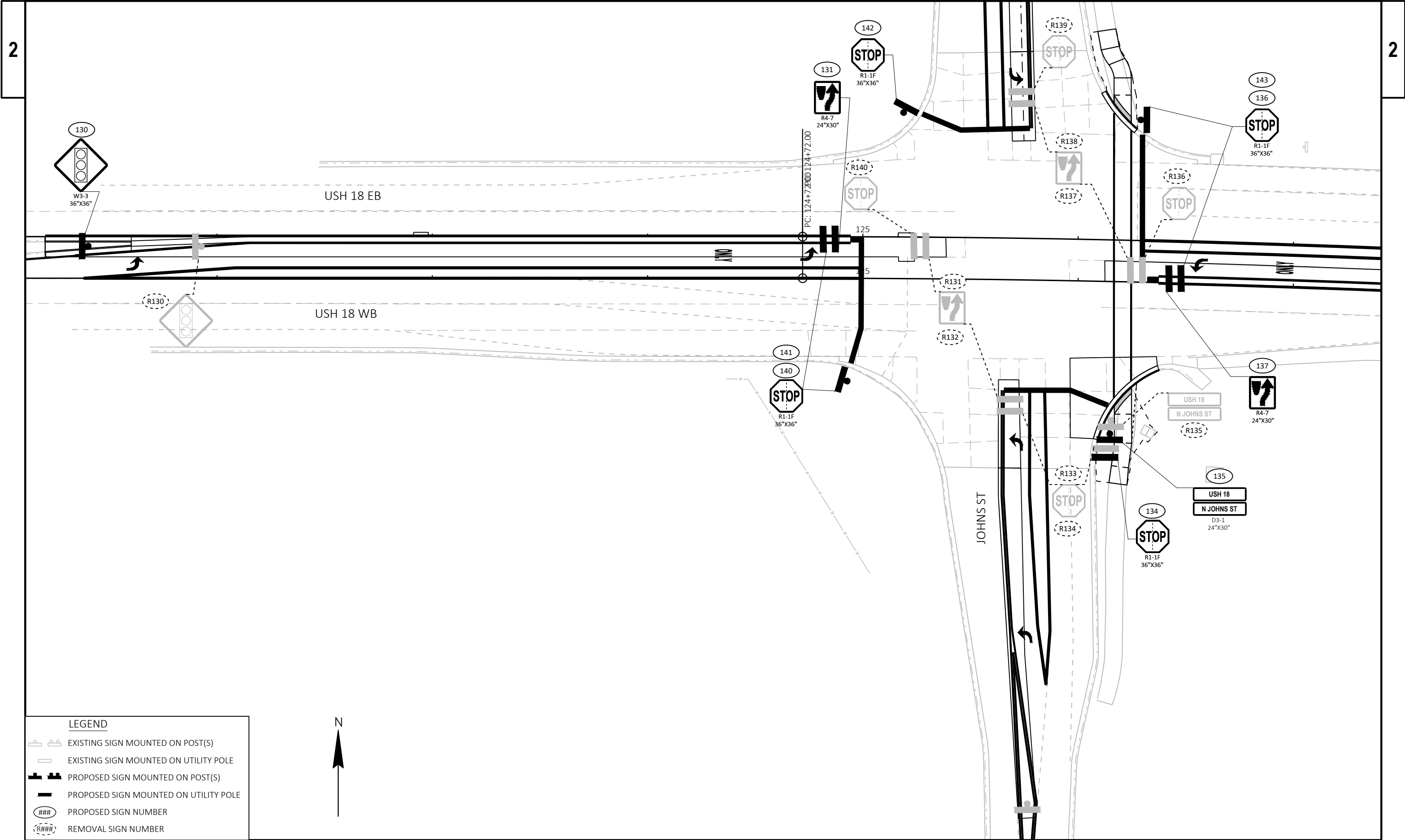












LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON UTILITY POLE

PROPOSED SIGN MOUNTED ON POST(S)

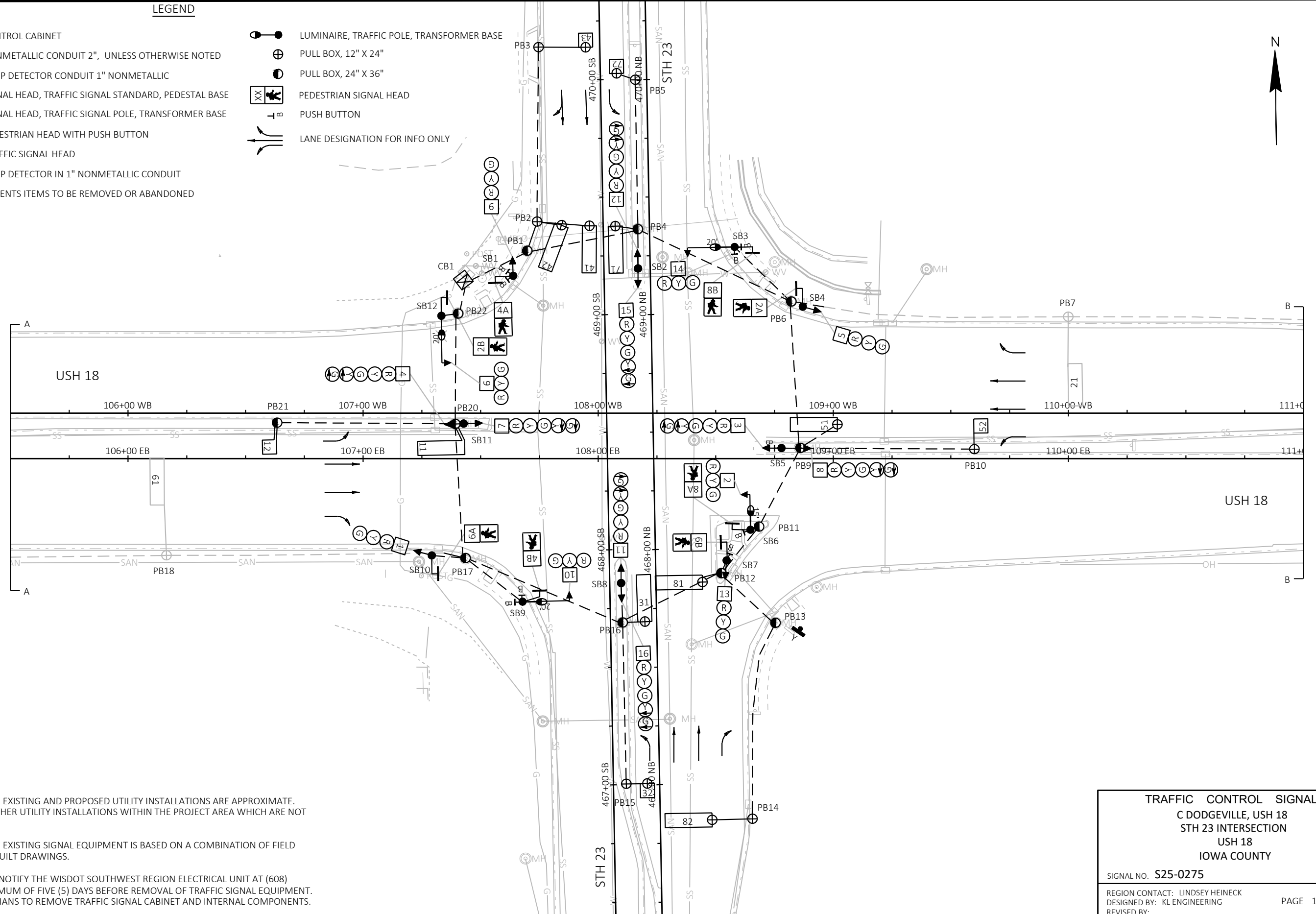
PROPOSED SIGN MOUNTED ON UTILITY POLE

PROPOSED SIGN NUMBER

REMOVAL SIGN NUMBER

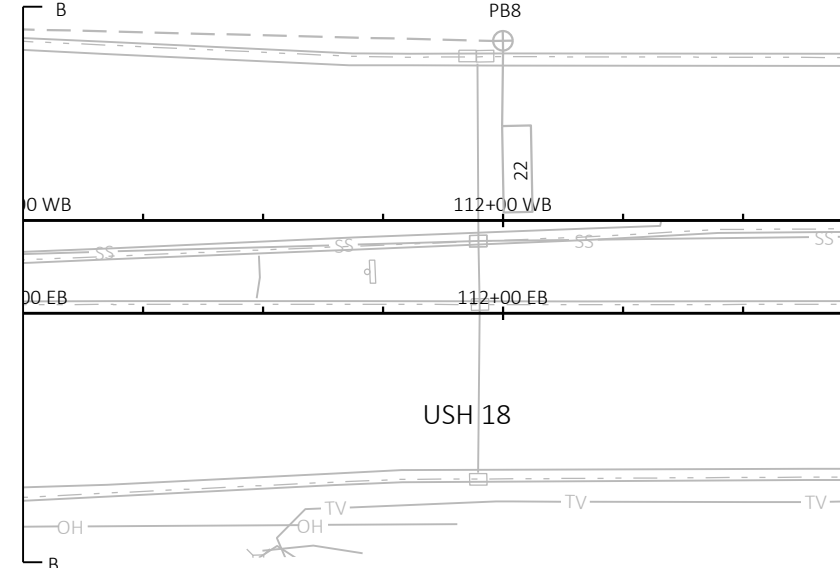
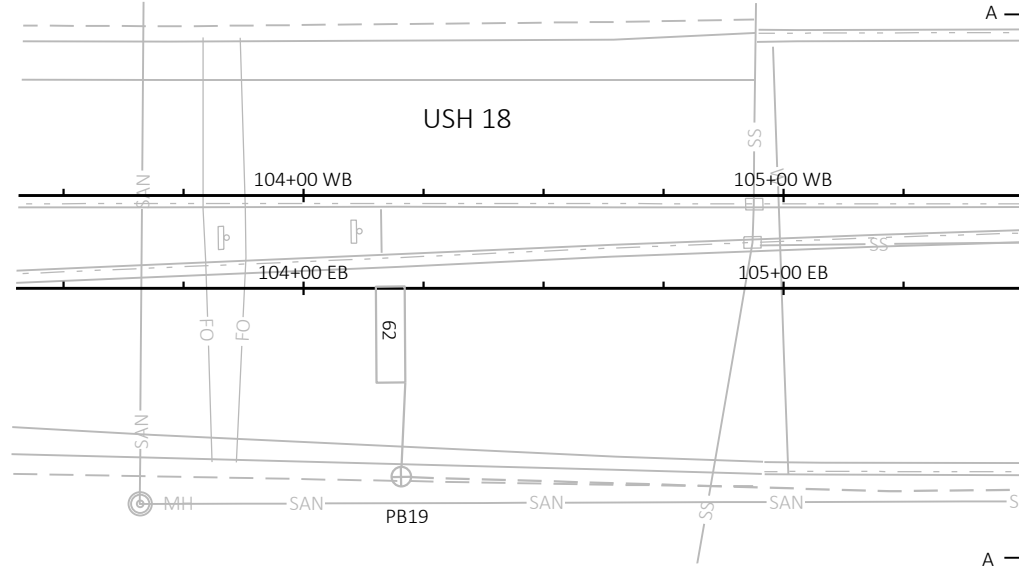
	LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
	PULL BOX, 12" X 24"
	PULL BOX, 24" X 36"
	PEDESTRIAN SIGNAL HEAD
	PUSH BUTTON
	LANE DESIGNATION FOR INFO ONLY

- NOTE: BOLD REPRESENTS ITEMS TO BE REMOVED OR ABANDONED



- 1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 2) THE LOCATION OF EXISTING SIGNAL EQUIPMENT IS BASED ON A COMBINATION OF FIELD SURVEY AND AS-BUILT DRAWINGS.
- 3) CONTRACTOR TO NOTIFY THE WISDOT SOUTHWEST REGION ELECTRICAL UNIT AT (608) 245-5355 A MINIMUM OF FIVE (5) DAYS BEFORE REMOVAL OF TRAFFIC SIGNAL EQUIPMENT. WISDOT ELECTRICIANS TO REMOVE TRAFFIC SIGNAL CABINET AND INTERNAL COMPONENTS.

REGION CONTACT: LINDSEY HEINECK	PAGE 1 OF 2
DESIGNED BY: KL ENGINEERING	
REVISED BY:	



TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0275

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1662-00-77

HWY: USH 18

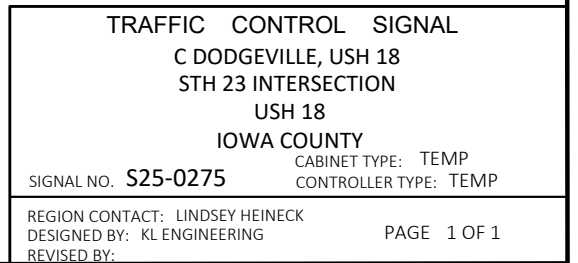
COUNTY: IOWA

TRAFFIC SIGNAL REMOVAL PLAN

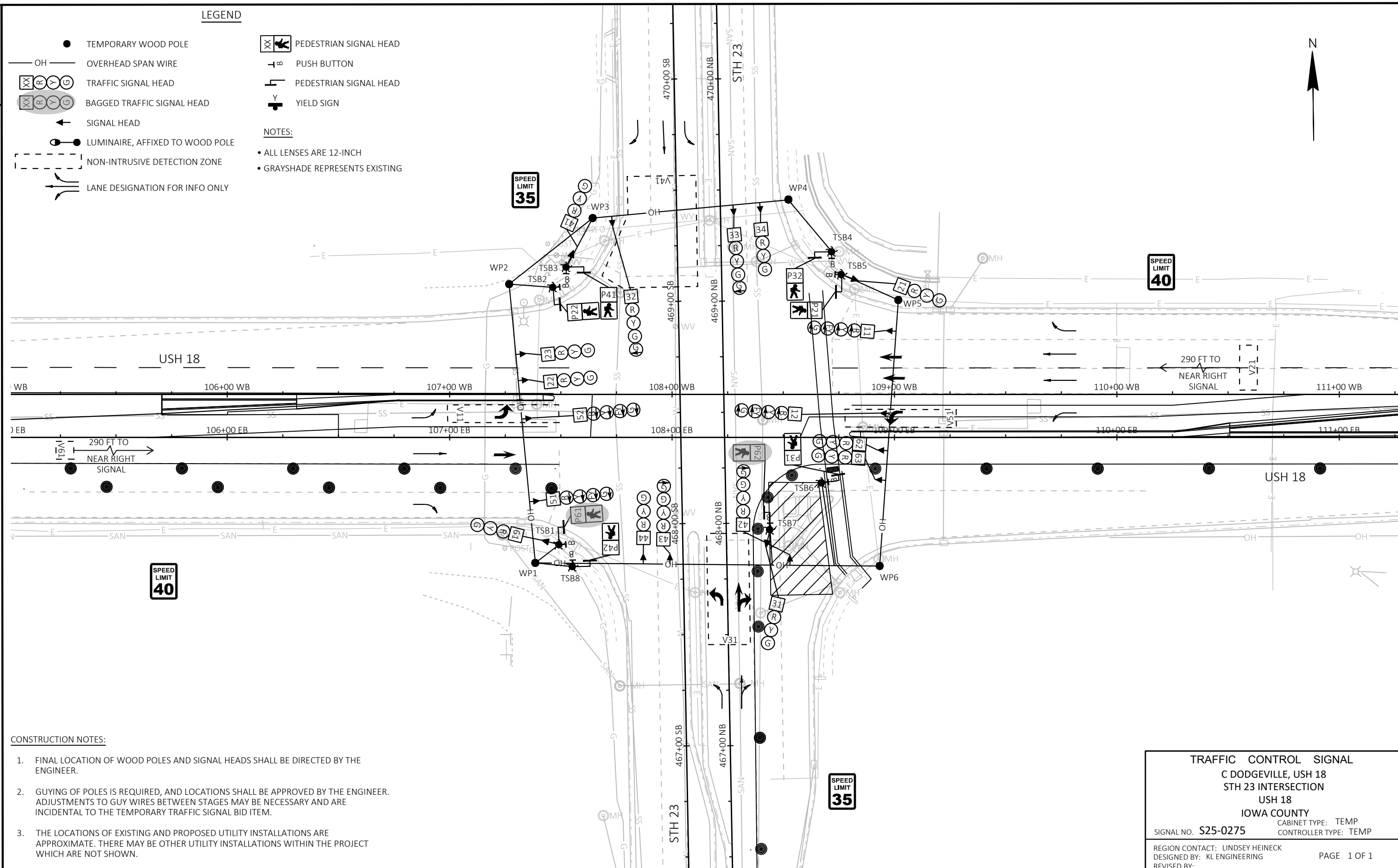
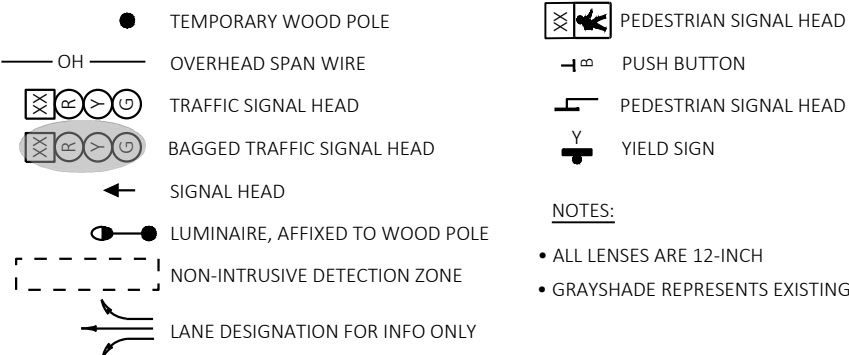
SHEET

41

E



LEGEND



CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

PROJECT NO: 1662-00-77

HWY: USH 18

COUNTY: IOWA

TEMPORARY SIGNAL PLAN - STAGE 3A

SHEET

43

E

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING



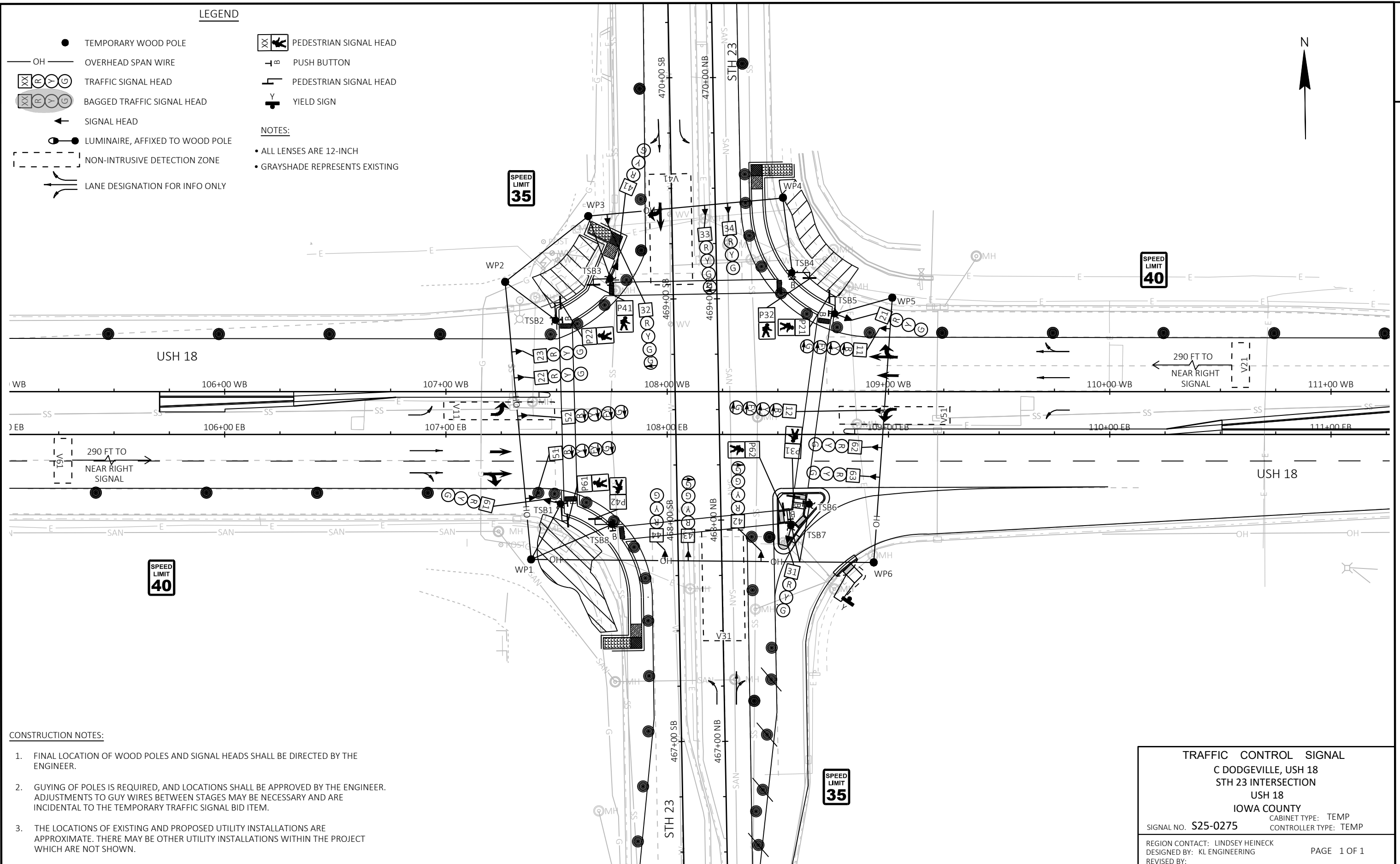
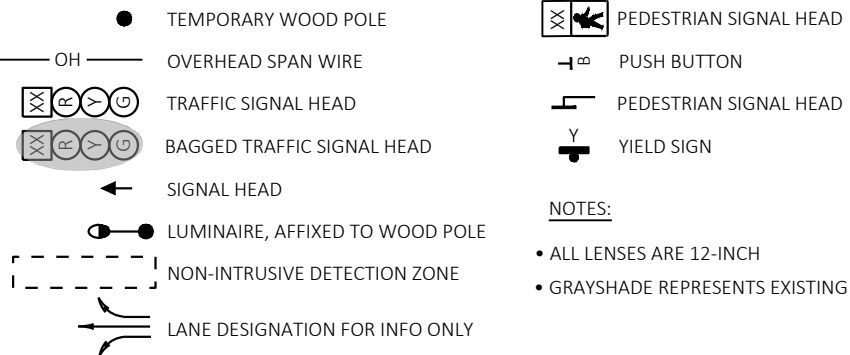
SPEED
LIMIT
35

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL	
C DODGEVILLE, USH 18	
STH 23 INTERSECTION	
USH 18	
IOWA COUNTY	
SIGNAL NO. S25-0275	CABINET TYPE: TEMP CONTROLLER TYPE: TEMP
REGION CONTACT: LINDSEY HEINECK	
DESIGNED BY: KL ENGINEERING	
REVISED BY:	PAGE 1 OF 1

14

LEGEND



CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTYSIGNAL NO. S25-0275
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMPREGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY: PAGE 1 OF 1

PROJECT NO: 1662-00-77

HWY: USH 18

COUNTY: IOWA

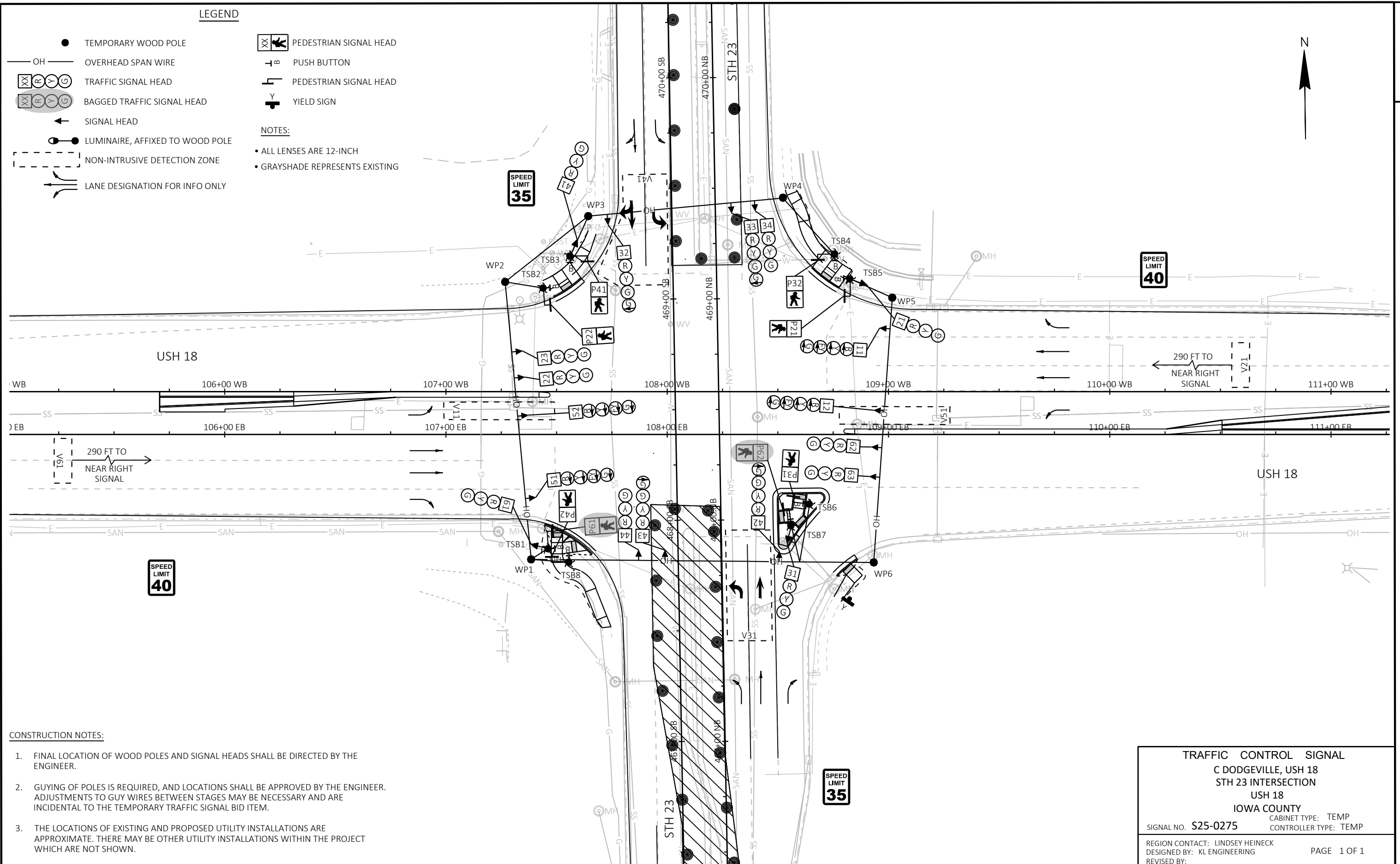
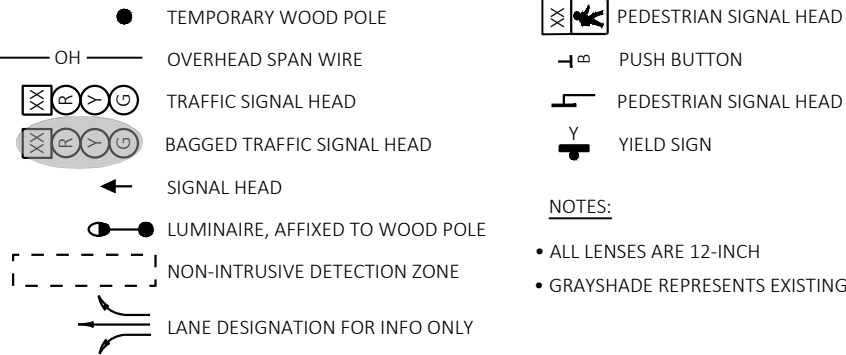
TEMPORARY SIGNAL PLAN - STAGE 4

SHEET

45

E

LEGEND



CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0275
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY: PAGE 1 OF 1

PROJECT NO: 1662-00-77

HWY: USH 18

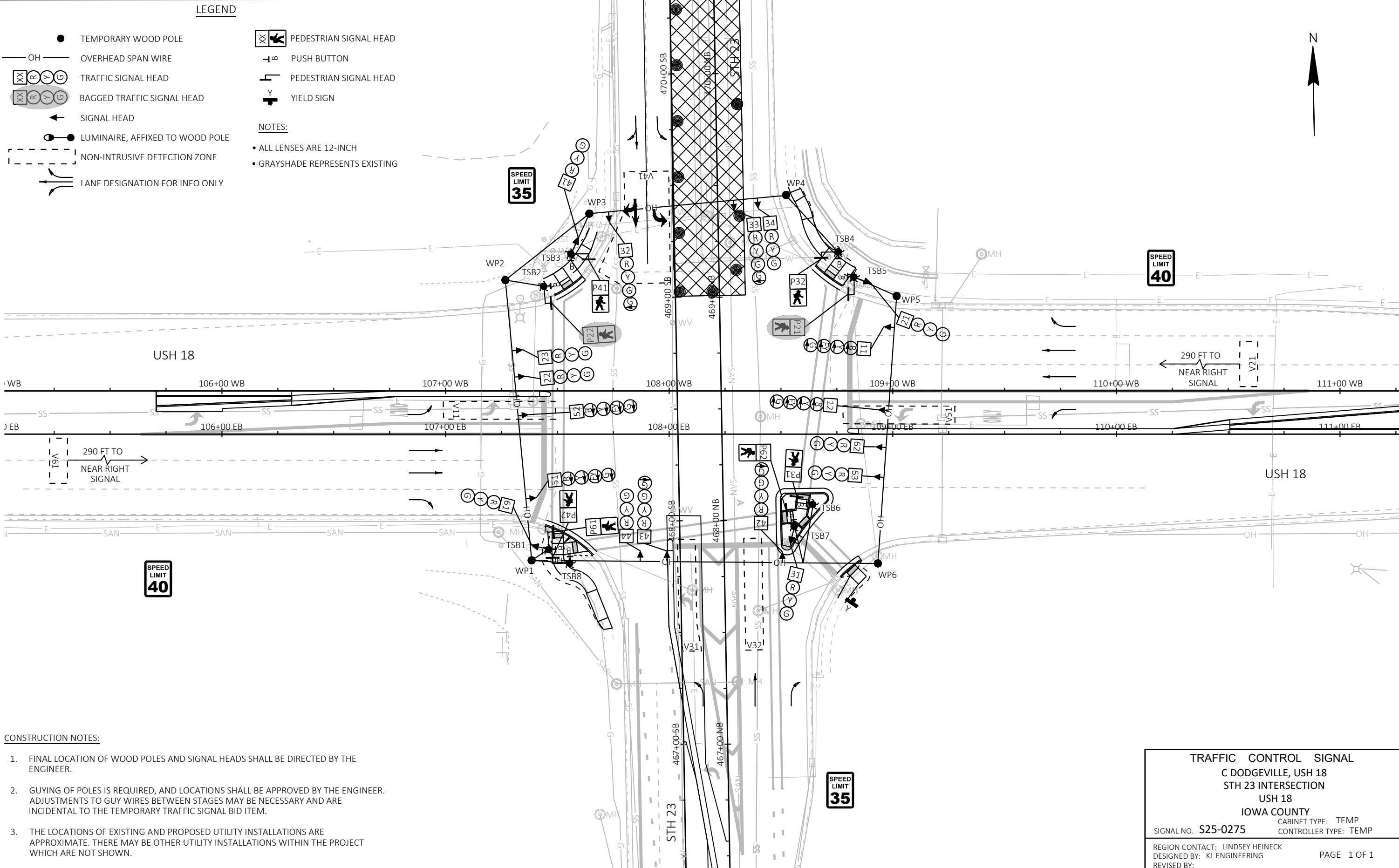
COUNTY: IOWA

TEMPORARY SIGNAL PLAN - STAGE 5A

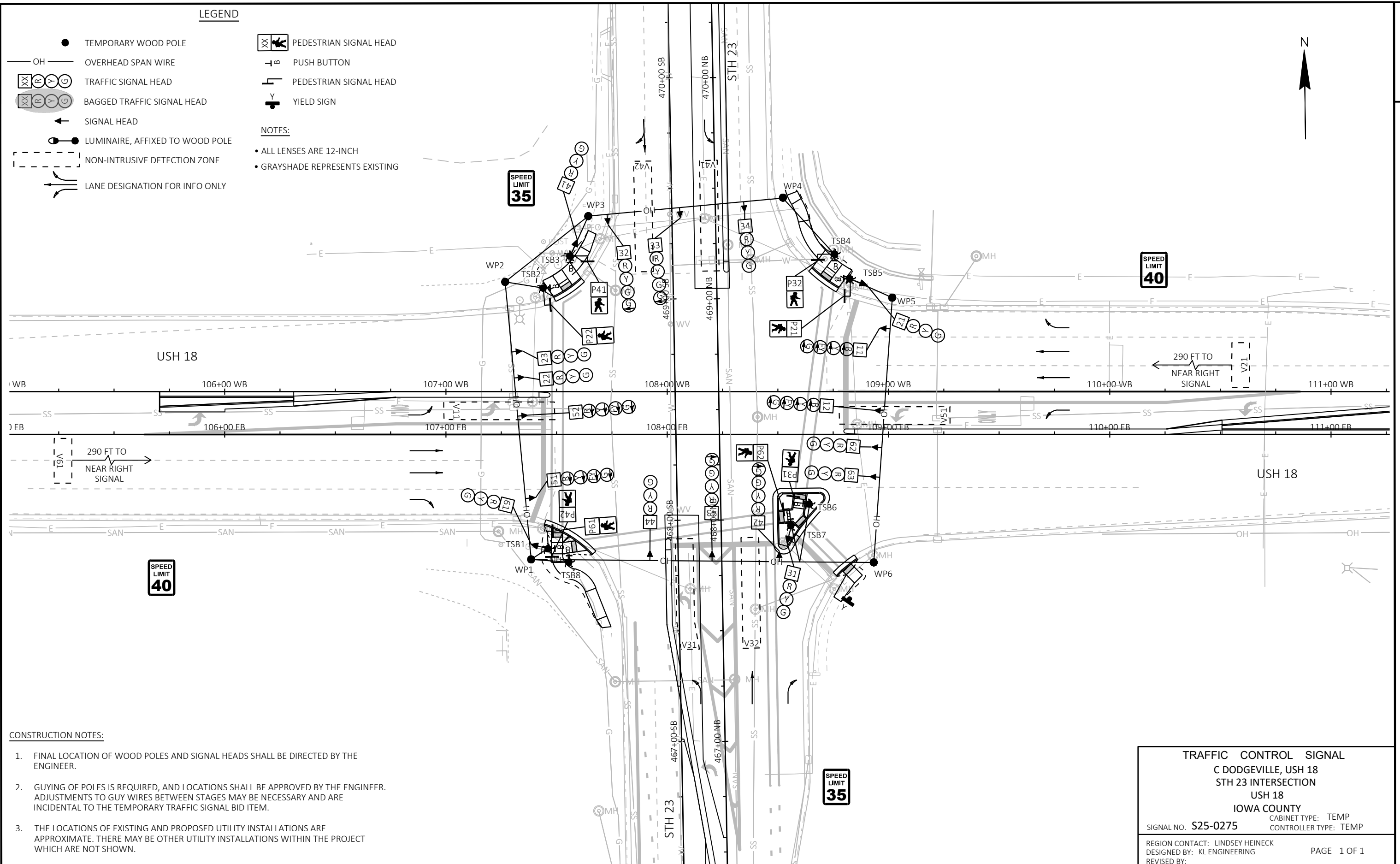
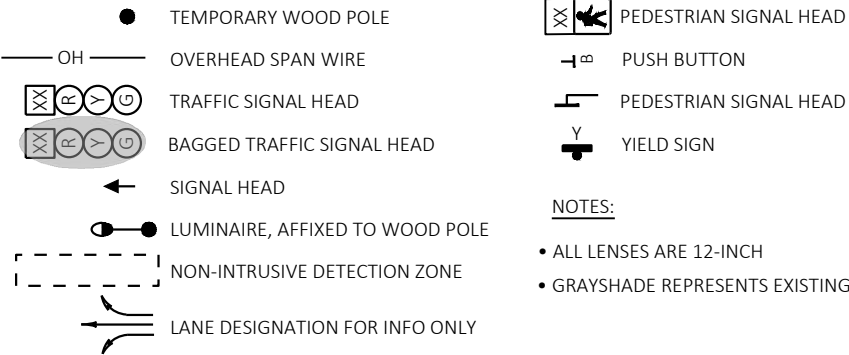
SHEET

46

E



LEGEND



CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0275
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY: PAGE 1 OF 1

PROJECT NO: 1662-00-77

HWY: USH 18

COUNTY: IOWA

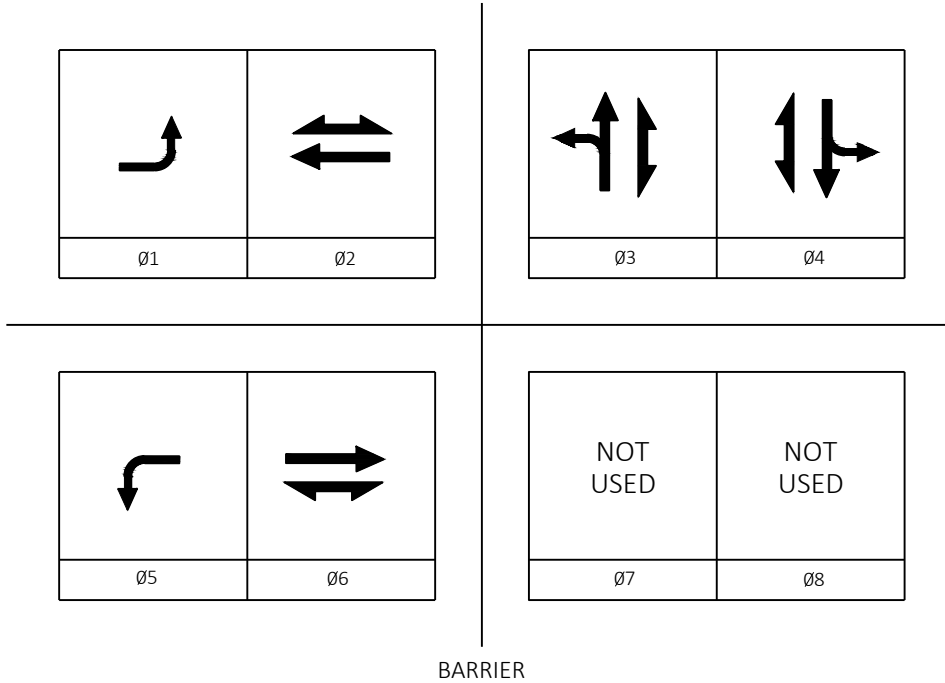
TEMPORARY SIGNAL PLAN - POST STAGE

SHEET

48

E

	HEAD NUMBERS	FLASH
Ø1	11,12	-
Ø2	21,22,23	R
Ø3	31,32,33,34	R
Ø4	41,42,43,44	R
Ø5	51,52	-
Ø6	61,62,63	R
Ø7		
Ø8		
Ø2 PED	P21,P22	
Ø3 PED	P31,P32	
Ø4 PED	P41,P42	
Ø6 PED	P61,P62	



PHASING NOTES:

- 1) PHASE 3 AND 4 SHALL BE SPLIT PHASED DURING CONSTRUCTION.
- 2) PHASES 1 AND 5 SHALL BE LEAD-LAG AND SHALL NOT TIME CONCURRENTLY DURING CONSTRUCTION STAGE 1. PERMITTED LEFT TURN OVERLAPS SHALL BE OMITTED.
- 3) PEDESTRIAN SIGNAL HEADS P61 AND P62 TO BE BAGGED, AND PUSH BUTTONS FOR PEDESTRIAN PHASE 6 TO BE DEACTIVATED DURING CONSTRUCTION STAGE 5A.
- 4) PEDESTRIAN SIGNAL HEADS P21 AND P22 TO BE BAGGED, AND PUSH BUTTONS FOR PEDESTRIAN PHASE 2 TO BE DEACTIVATED DURING CONSTRUCTION STAGE 1 AND 5B.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	V11	V21	V31	V41	V51	V61		
PHASE CALLED	1	2	3	4	5	6		
PHASE EXTENDED	1	2	3	4	5	6		
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)			V32	V42				
PHASE CALLED			3	4				
PHASE EXTENDED			3	4				
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

19	17	23	21	27	25	31	29

20	18	24	22	28	26	32	30

LEGEND



CONTROLLER LOGIC

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



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

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

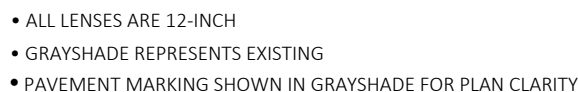
TYPE OF INTERCONNECT	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF REMOTE COMMUNICATION	
NONE	X
FIBER	
CELL MODEM	
PHONE	

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTY
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
SIGNAL NO. TEMP

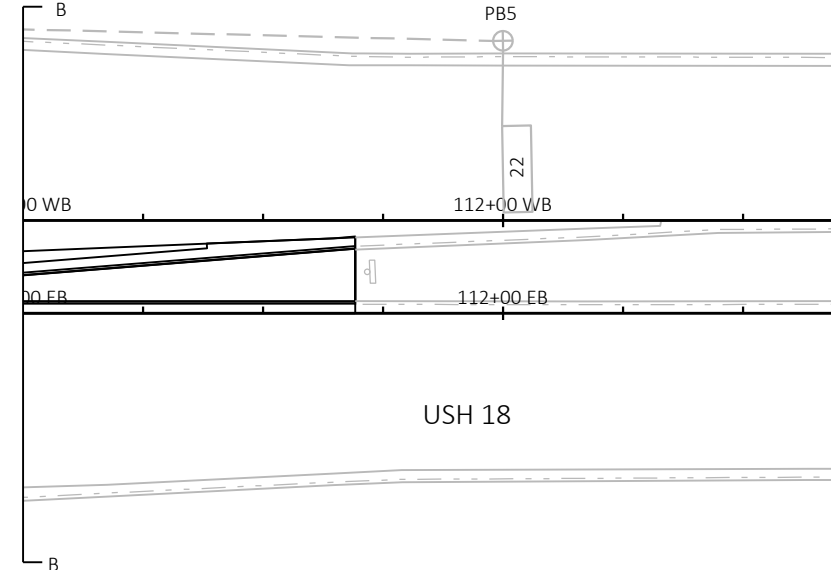
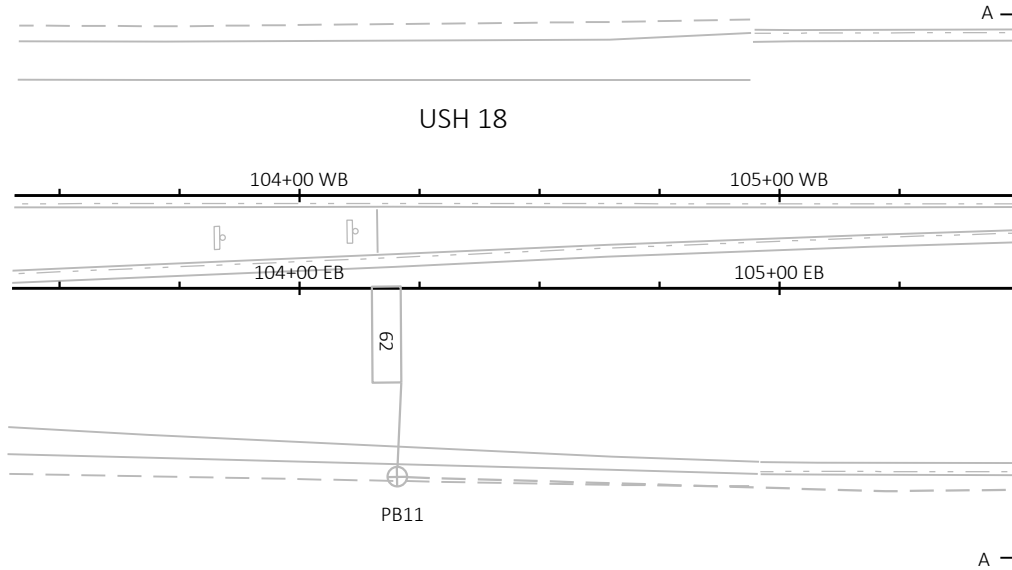
REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 1 OF 1



- 1) THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 DAYS PRIOR TO PLACING SIGNAL CABLE INTO THE SYSTEM. CONTACT WISDOT ELECTRICAL FIELD UNIT AT (608) 245-5355.
- 2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 3) PROPOSED PAVEMENT MARKING ARE SHOWN IN GRAYSHADE FOR PLAN CLARITY.
- 4) FINAL LOCATION AND ORIENTATION OF PEDESTRIAN PUSH BUTTONS MUST ADHERE TO THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT.
- 5) THE ENGINEER MAY APPROVE ADJUSTMENT TO THE LOCATIONS OF ELECTRICAL ITEMS TO AVOID CONFLICT WITH UTILITY FACILITIES.

TRAFFIC CONTROL SIGNAL	
C DODGEVILLE, USH 18	
STH 23 INTERSECTION	
USH 18	
IOWA COUNTY	
SIGNAL NO. S25-0275	CABINET TYPE: TS2 CONTROLLER TYPE: COBALT
WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVAL RECOMMENDED	
DATE <u>DATE</u>	<u>TRAFFIC ENGINEER</u> REGION TRAFFIC ENGINEER
APPROVED	
DATE <u>DATE</u>	<u>STATE ENGINEER</u> STATE TRAFFIC ENGINEER
REGION CONTACT: LINDSEY HEINECK DESIGNED BY: KL ENGINEERING REVISED BY:	
PAGE 1 OF 4	



TRAFFIC CONTROL SIGNAL C DODGEVILLE, USH 18 STH 23 INTERSECTION USH 18 IOWA COUNTY	
SIGNAL NO. S25-0275	CABINET TYPE: TS2 CONTROLLER TYPE: COBALT
REGION CONTACT: LINDSEY HEINECK DESIGNED BY: KL ENGINEERING REVISED BY:	PAGE 2 OF 4

PROJECT NO: 1662-00-77

HWY: USH 18

COUNTY: IOWA

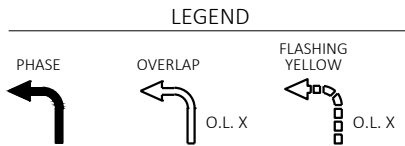
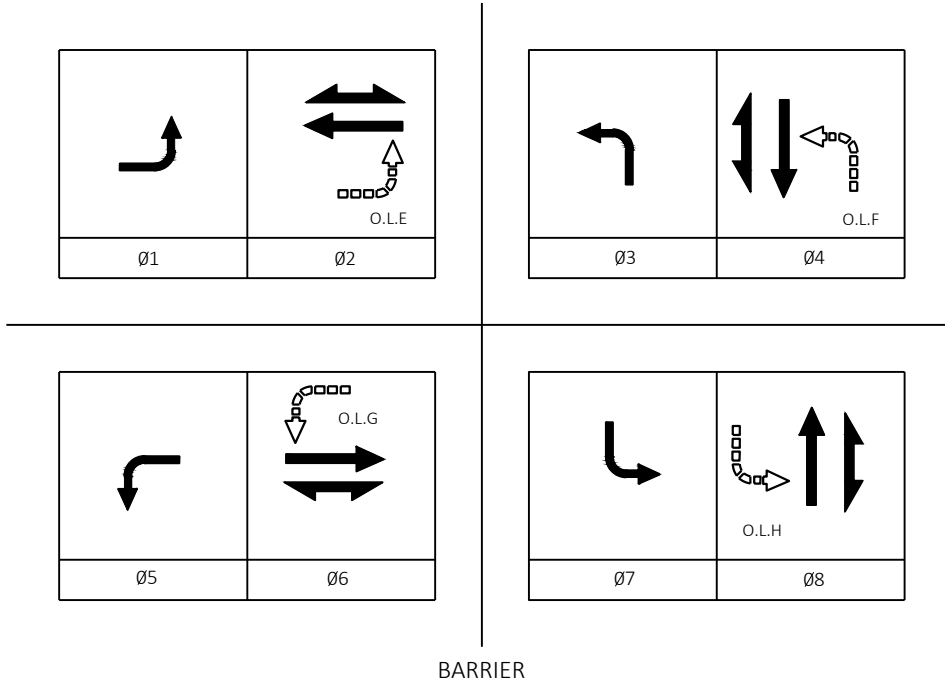
TRAFFIC SIGNAL PLAN

SHEET

51

E

	HEAD NUMBERS	FLASH	
Ø1	11,12	-	
Ø2	21,22,23	R	
Ø3	31,32	-	
Ø4	41,42,43	R	
Ø5	51,52	-	
Ø6	61,62,63	R	
Ø7	71,72	-	
Ø8	81,82,83	R	
Ø2 PED	P21,P22		
Ø4 PED	P41,P42		
Ø6 PED	P61,P62		
Ø8 PED	P81,P82		O.L. ASSIGNMENT
O.L.E	11,12		Ø2
O.L.F	31,32		Ø4
O.L.G	51,52		Ø6
O.L.H	71,72		Ø8



DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	V11	21	V31	V41	V51	61	V71	V81
PHASE CALLED	1	2	3	4	5	6	7	8
PHASE EXTENDED	1	2	3	4	5	6	7	8
DISCONNECT TIME		16				16		
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION		DIS		DIS		DIS		DIS

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)		22		V42		62		V82
PHASE CALLED		2		4		6		8
PHASE EXTENDED		2		4		6		8
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

19	17	23	21	27	25	31	29

20	18	24	22	28	26	32	30

DETECTOR INPUT
DETECTOR #(S)
PHASE CALLED
PHASE EXTENDED
DISCONNECT TIME
CALLING DELAY
EXTENSION STRETCH
LOOP FUNCTION

DETECTOR INPUT
DETECTOR #(S)
PHASE CALLED
PHASE EXTENDED
DISCONNECT TIME
CALLING DELAY
EXTENSION STRETCH
LOOP FUNCTION

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	
CELL MODEM	X
PHONE	

CONTROLLER LOGIC

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

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

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

TYPE OF INTERCONNECT	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	X

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTY
CABINET TYPE: TS2
CONTROLLER TYPE: COBALT

SIGNAL NO. S25-0275

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 3 OF 4

USH 18 & STH 23 TRAFFIC SIGNAL CABLING CHART NO. 14 CABLE													
HOME RUN	CABLE	INDICATION/WIRE COLOR											
		BLACK	WHITE	RED	GREEN	ORANGE	BLUE	WHITE/BLK	RED/BLK	GREEN/BLK	ORANGE/BLK	BLUE/BLK	BLK/WHITE
CB1 - SB1	12/C	4-DW	NEUTRAL	4-RED	4-GRN	4-YEL	4-WALK		3-R-ARROW	3-G-ARROW	3-Y-ARROW	O.L.F-FY-ARROW	
CB1 - SB2	12/C		NEUTRAL	8-RED	8-GRN	8-YEL			3-R-ARROW	3-G-ARROW	3-Y-ARROW	O.L.F-FY-ARROW	
CB1 - SB3	12/C	8-DW	NEUTRAL		8-WALK								
CB1 - SB4	12/C	2-DW	NEUTRAL	2-RED	2-GRN	2-YEL	2-WALK		1-R-ARROW	1-G-ARROW	1-Y-ARROW	O.L.E-FY-ARROW	
CB1 - SB5	12/C		NEUTRAL	6-RED	6-GRN	6-YEL			1-R-ARROW	1-G-ARROW	1-Y-ARROW	O.L.E-FY-ARROW	
CB1 - SB6	12/C	6-DW	NEUTRAL	8-DW	8-WALK		6-WALK		7-R-ARROW	7-G-ARROW	7-Y-ARROW	O.L.H-FY-ARROW	
CB1 - SB7	12/C		NEUTRAL	8-RED	8-GRN	8-YEL							
CB1 - SB8	12/C		NEUTRAL	4-RED	4-GRN	4-YEL			7-R-ARROW	7-G-ARROW	7-Y-ARROW	O.L.H-FY-ARROW	
CB1 - SB9	12/C	4-DW	NEUTRAL		4-WALK								
CB1 - SB10	12/C	6-DW	NEUTRAL	6-RED	6-GRN	6-YEL	6-WALK		5-R-ARROW	5-G-ARROW	5-Y-ARROW	O.L.G-FY-ARROW	
CB1 - SB11	12/C		NEUTRAL	2-RED	2-GRN	2-YEL			5-R-ARROW	5-G-ARROW	5-Y-ARROW	O.L.G-FY-ARROW	
CB1 - SB12	12/C	2-DW	NEUTRAL		2-WALK								

USH 18 & STH 23 LIGHTING CABLING CHART NO. 12 UF W/GROUND		
CABLE	CABLE RUN	LUMINAIRE LOCATION
2C W/GROUND	CB1 TO SB2	NE QUADRANT
	SB2 TO SB5	SE QUADRANT
	CB1 TO SB11	NW QUADRANT
	SB11 TO SB8	SW QUADRANT

PEDESTRIAN BUTTONS LOOP DETECTOR LEAD IN CABLE	
FROM	TO
CB1	SB1 BUTTON
CB1	SB3 BUTTON
CB1	SB4 BUTTON
CB1	SB6 BUTTON
CB1	SB7 BUTTON
CB1	SB9 BUTTON
CB1	SB10 BUTTON
CB1	SB12 BUTTON

NON-INTRUSIVE LOOP DETECTION CAT-53 CABLE	
FROM	TO
CB1	SB2
CB1	SB5
CB1	SB8
CB1	SB11

NOTE: ALL RUNS SHALL BE COMPLETED WITH ONE CONTINUOUS CABLE FROM CABINET TO BUTTON. NO CABLE TO CABLE SPLICING IS PERMITTED.

NOTE: ALL RUNS SHALL BE COMPLETED WITH ONE CONTINUOUS CABLE FROM CABINET TO BUTTON. NO CABLE TO CABLE SPLICING IS PERMITTED.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
STH 23 INTERSECTION
USH 18
IOWA COUNTY
CABINET TYPE: TS2
CONTROLLER TYPE: COBALT

SIGNAL NO. S25-0275

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 4 OF 4



- 1) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 2) THE LOCATION OF EXISTING SIGNAL EQUIPMENT IS BASED ON A COMBINATION OF FIELD SURVEY AND AS-BUILT DRAWINGS.
- 3) CONTRACTOR TO NOTIFY THE WISDOT SOUTHWEST REGION ELECTRICAL UNIT AT (608) 245-5355 A MINIMUM OF FIVE (5) DAYS BEFORE REMOVAL OF TRAFFIC SIGNAL EQUIPMENT. WISDOT ELECTRICIANS TO REMOVE TRAFFIC SIGNAL CABINET AND INTERNAL COMPONENTS.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0798

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 1662-00-78

HWY: USH 18

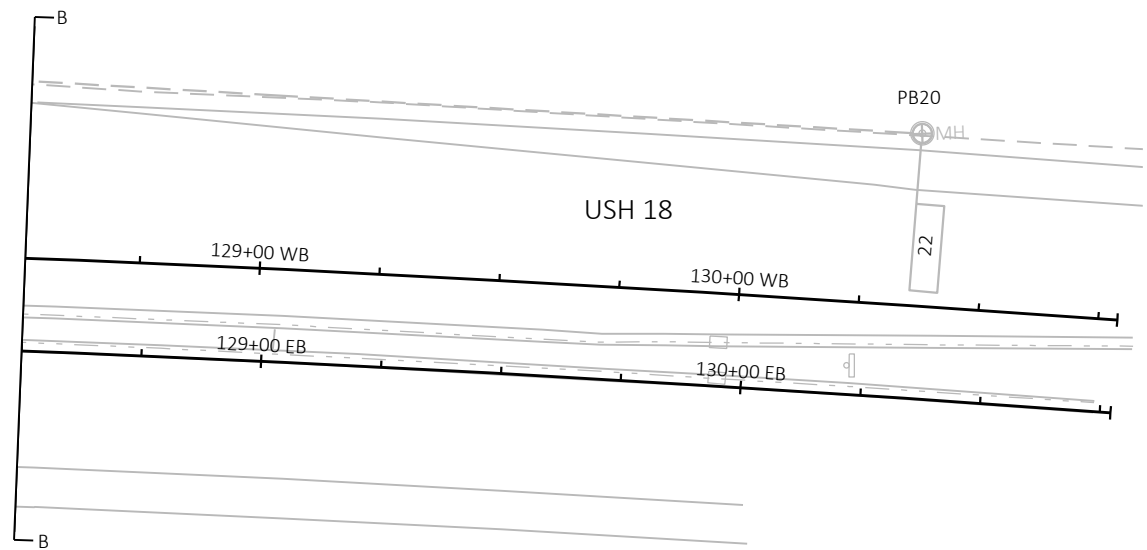
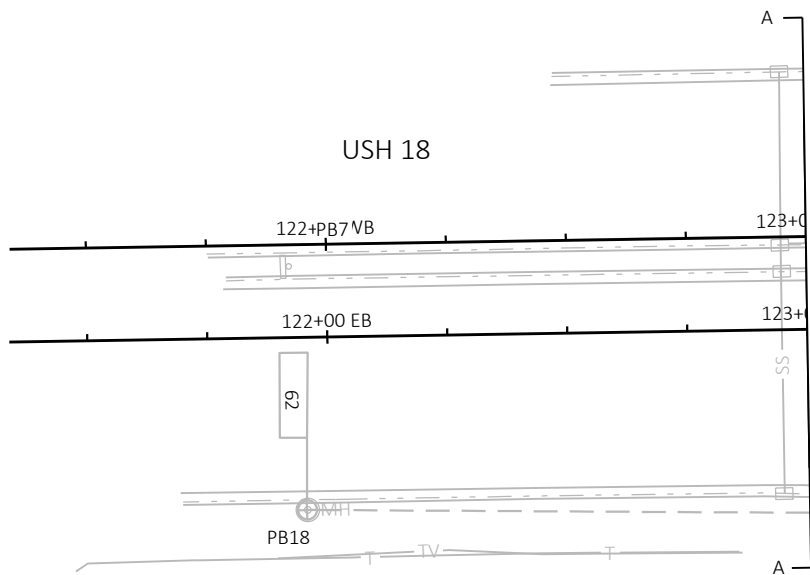
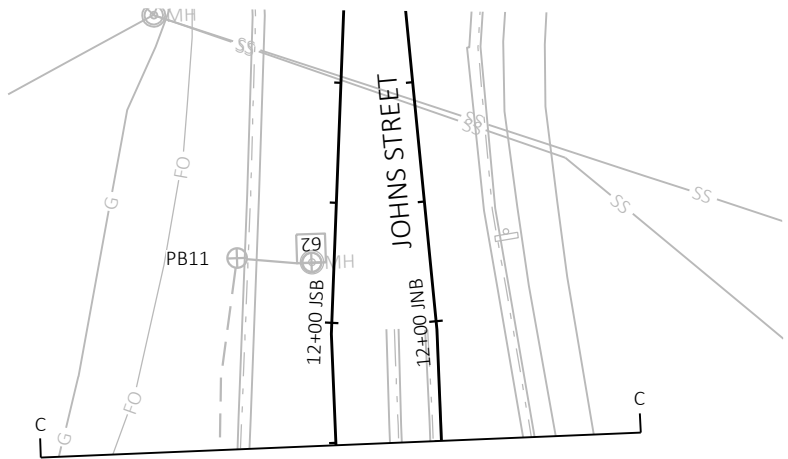
COUNTY: IOWA

TRAFFIC SIGNAL REMOVAL PLAN

SHEET

54

E



TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0798

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 2 OF 2

PROJECT NO: 1662-00-78

HWY: USH 18

COUNTY: IOWA

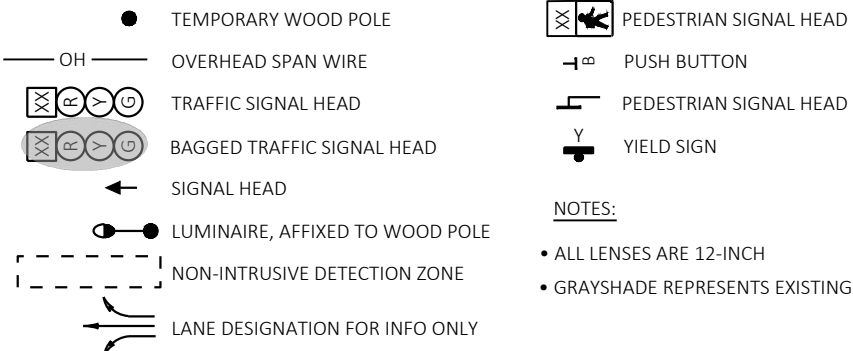
TRAFFIC SIGNAL REMOVAL PLAN

SHEET

55

E

LEGEND

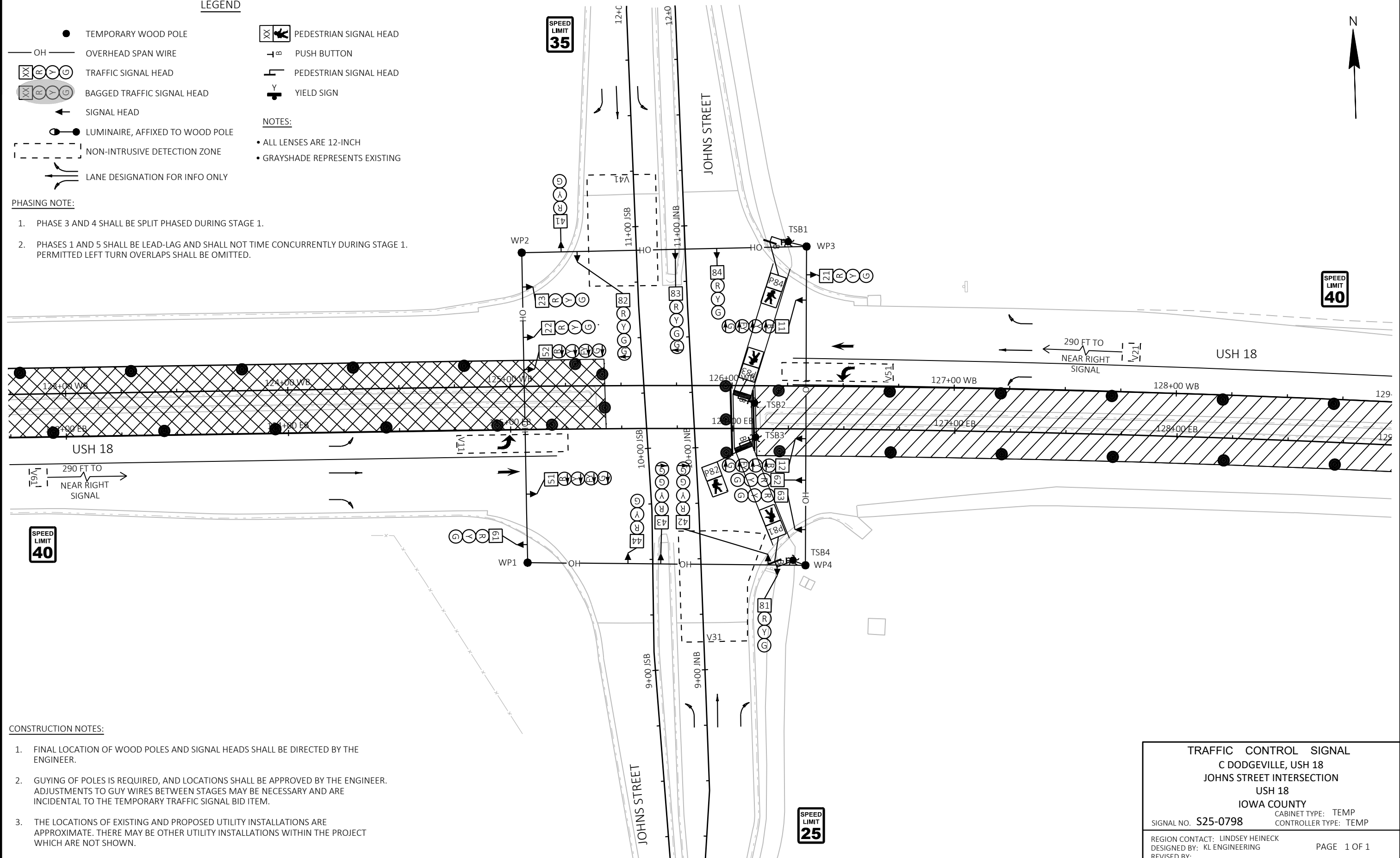


NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

PHASING NOTE:

1. PHASE 3 AND 4 SHALL BE SPLIT PHASED DURING STAGE 1.
2. PHASES 1 AND 5 SHALL BE LEAD-LAG AND SHALL NOT TIME CONCURRENTLY DURING STAGE 1. PERMITTED LEFT TURN OVERLAPS SHALL BE OMITTED.



CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0798

CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1662-00-78

HWY: USH 18

COUNTY: IOWA

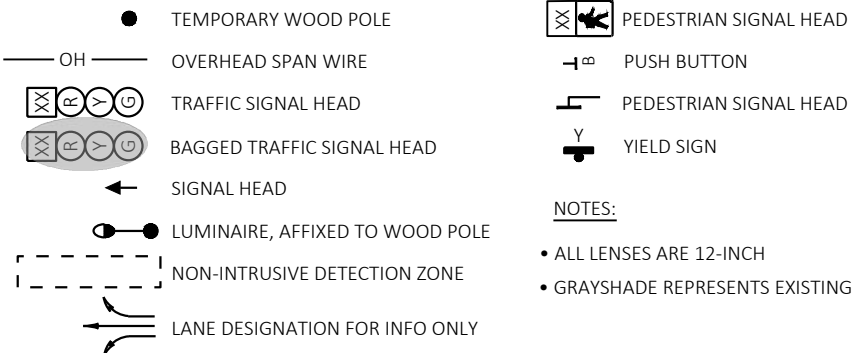
TEMPORARY SIGNAL PLAN - STAGE 1

SHEET

56

E

LEGEND

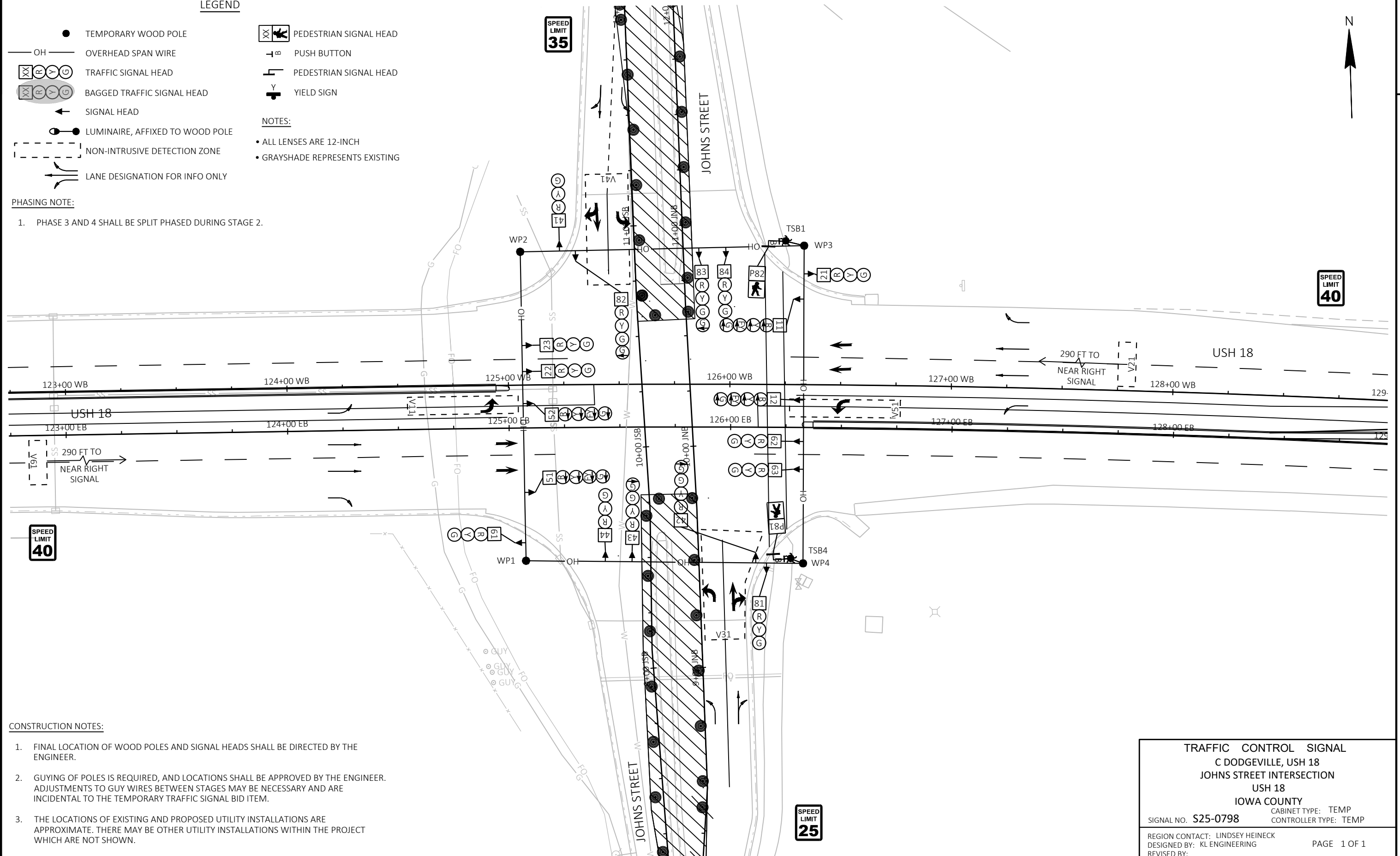


NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

PHASING NOTE:

1. PHASE 3 AND 4 SHALL BE SPLIT PHASED DURING STAGE 2.



CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0798
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY: PAGE 1 OF 1

PROJECT NO: 1662-00-78

HWY: USH 18

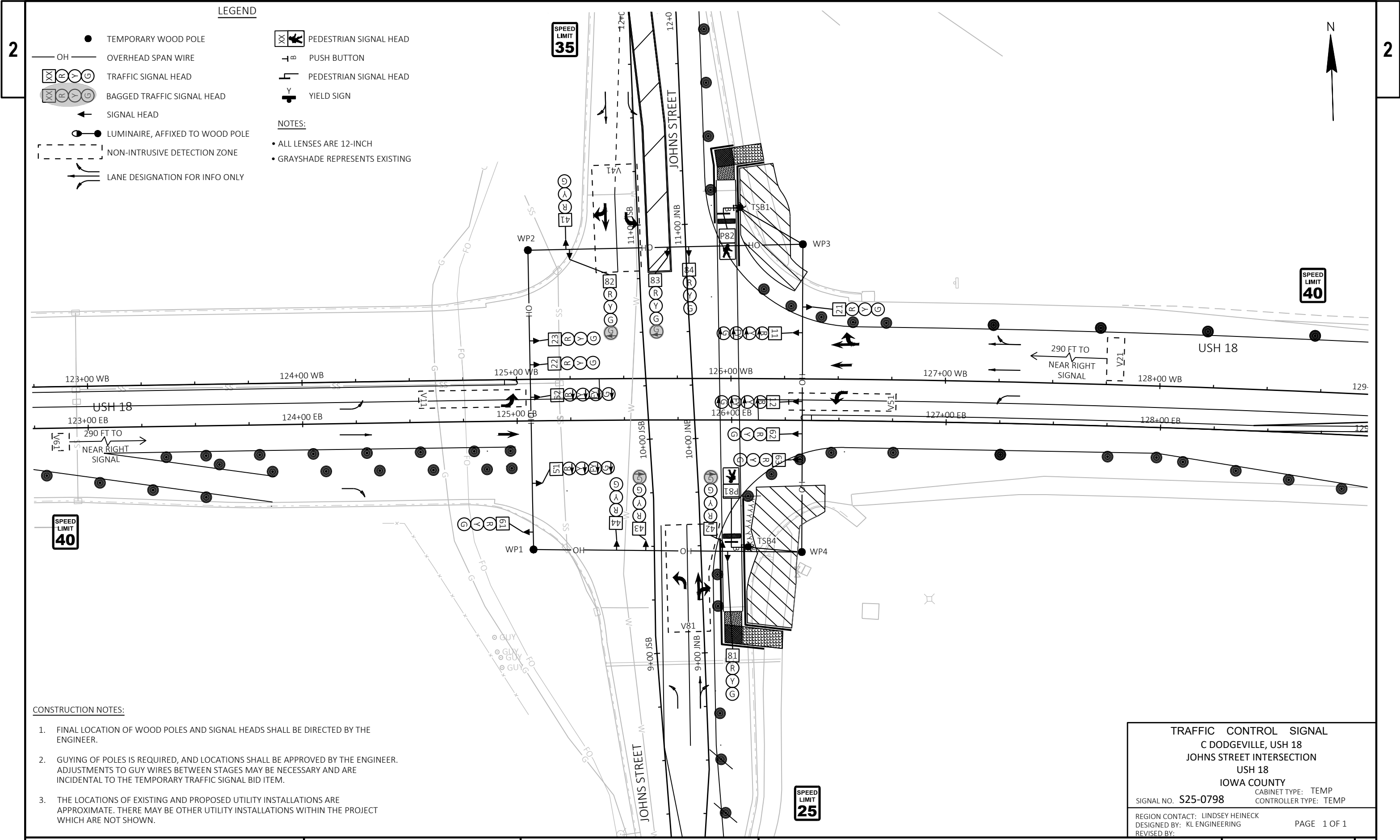
COUNTY: IOWA

TEMPORARY SIGNAL PLAN - STAGE 2

SHEET

57

E



LEGEND

- TEMPORARY WOOD POLE
- OH — OVERHEAD SPAN WIRE
- TRAFFIC SIGNAL HEAD
- BAGGED TRAFFIC SIGNAL HEAD
- ← SIGNAL HEAD
- LUMINAIRE, AFFIXED TO WOOD POLE
- NON-INTRUSIVE DETECTION ZONE
- LANE DESIGNATION FOR INFO ONLY
- PEDESTRIAN SIGNAL HEAD
- PUSH BUTTON
- PEDESTRIAN SIGNAL HEAD
- YIELD SIGN

NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

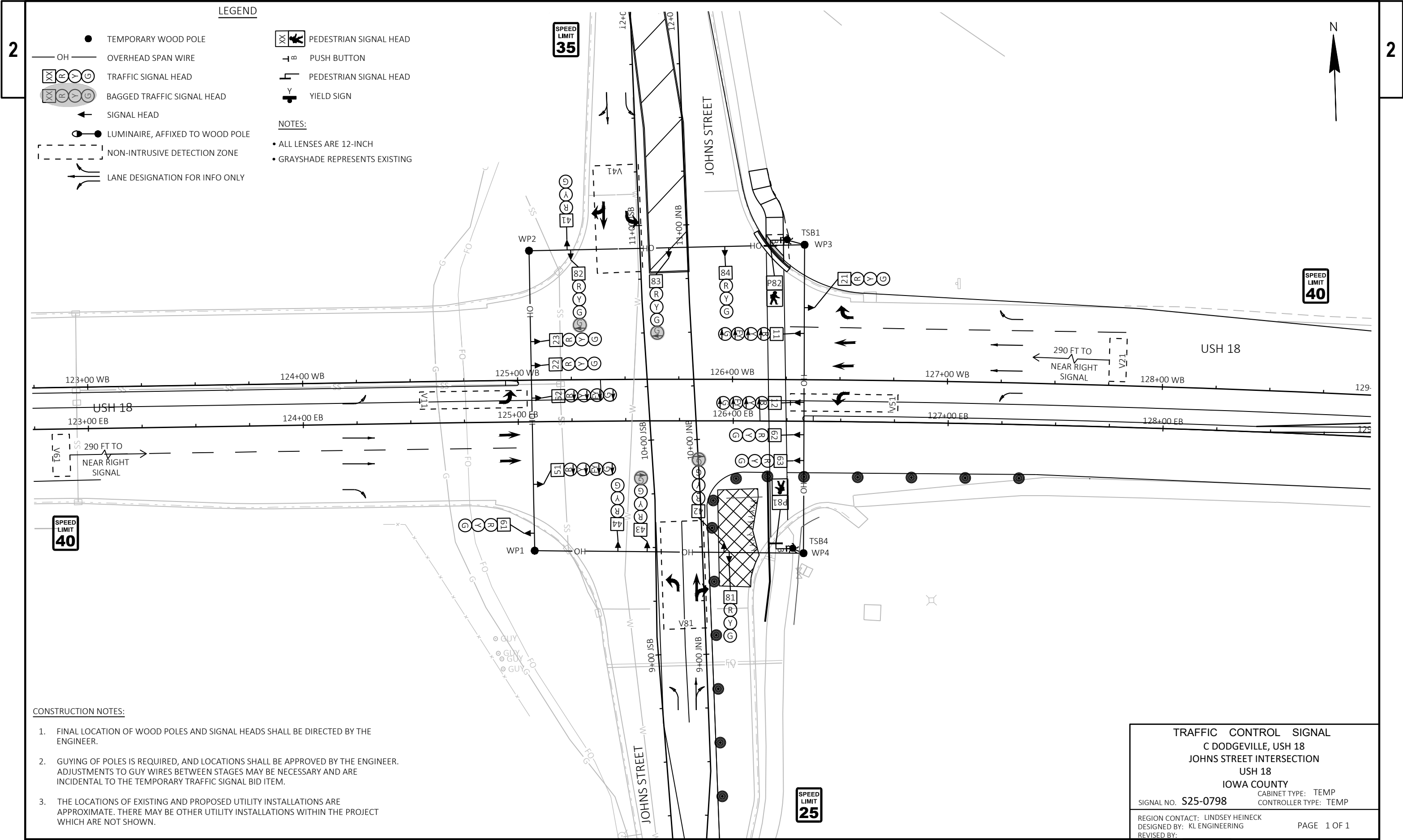
TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY

SIGNAL NO. S25-0798

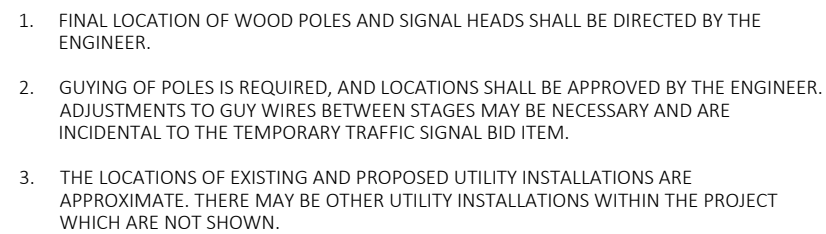
REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP

PAGE 1 OF 1



- CONSTRUCTION NOTES:
1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
 2. GUYING OF POLES IS REQUIRED, AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER. ADJUSTMENTS TO GUY WIRES BETWEEN STAGES MAY BE NECESSARY AND ARE INCIDENTAL TO THE TEMPORARY TRAFFIC SIGNAL BID ITEM.
 3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.

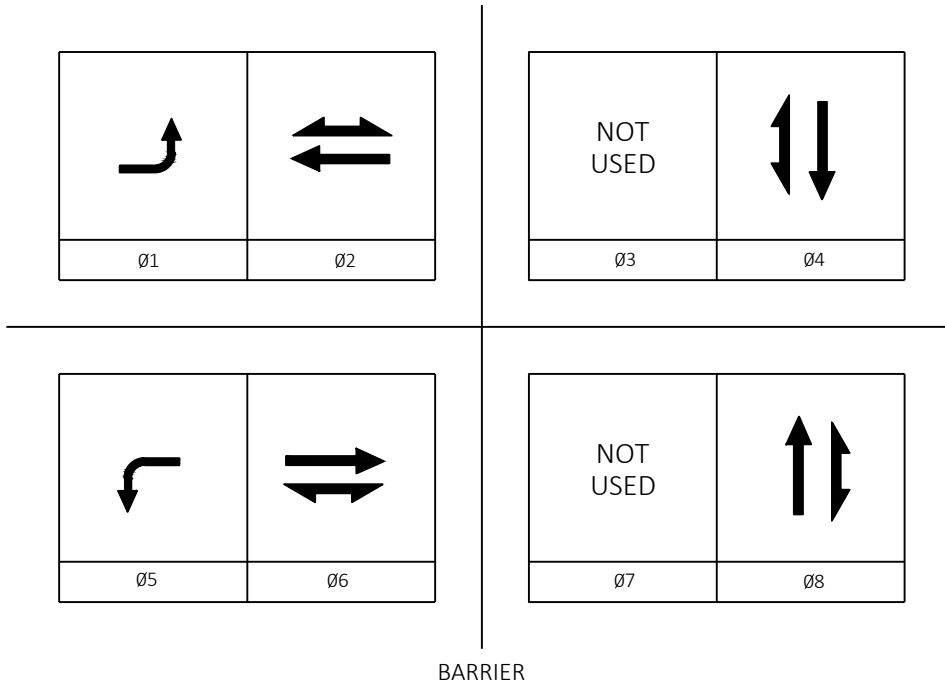


PROJECT NO: 1662-00-78	HWY: USH 18	COUNTY: IOWA	TEMPORARY SIGNAL PLAN - POST STAGE	SHEET 60	E
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	HEAD NUMBERS	FLASH
Ø1	11,12	-
Ø2	21,22,23	R
Ø3		
Ø4	41,42,43,44	R
Ø5	51,52	-
Ø6	61,62,63	R
Ø7		
Ø8	81,82,83,84	R
Ø8 PED	P81,P82	

PHASING NOTES:

- 1) GREEN ARROWS ON SIGNAL HEADS 42, 43, 82 AND 83 SHALL BE BAGGED DURING CONSTRUCTION STAGE 6A AND 6B.



LEGEND



DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	V11	V21	V41	V51	V61	V81		
PHASE CALLED	1	2	4	5	6	8		
PHASE EXTENDED	1	2	4	5	6	8		
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)								
PHASE CALLED								
PHASE EXTENDED								
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

19	17	23	21	27	25	31	29

20	18	24	22	28	26	32	30

DETECTOR INPUT

DETECTOR #(S)

PHASE CALLED

PHASE EXTENDED

DISCONNECT TIME

CALLING DELAY

EXTENSION STRETCH

LOOP FUNCTION

DETECTOR INPUT

DETECTOR #(S)

PHASE CALLED

PHASE EXTENDED

DISCONNECT TIME

CALLING DELAY

EXTENSION STRETCH

LOOP FUNCTION

CONTROLLER LOGIC

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



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

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

TYPE OF INTERCONNECT	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

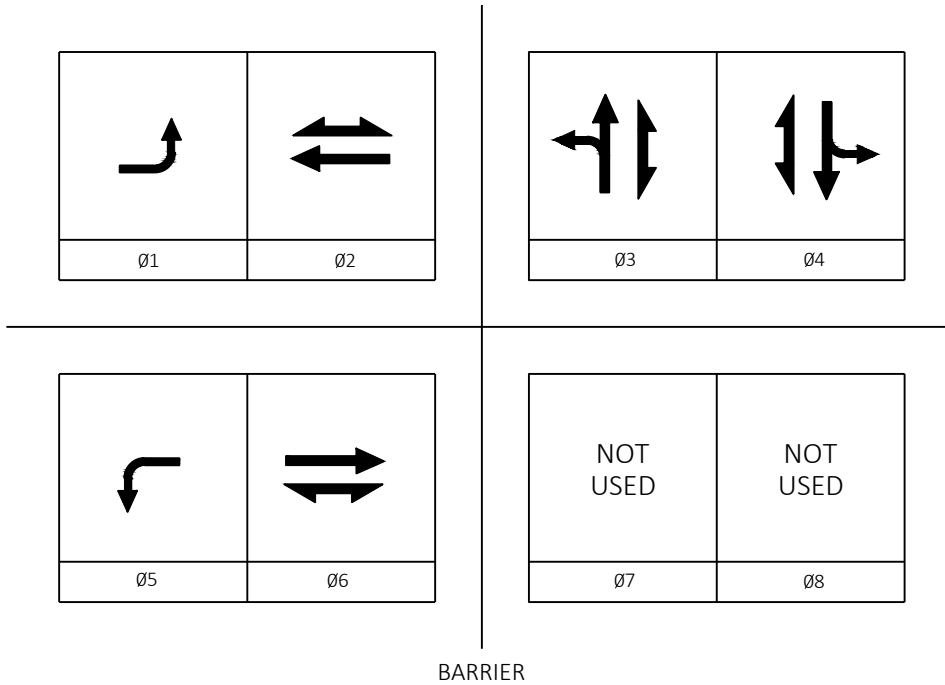
TYPE OF REMOTE COMMUNICATION	
NONE	X
FIBER	
CELL MODEM	
PHONE	

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
SIGNAL NO. TEMP

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 1 OF 2

	HEAD NUMBERS	FLASH
Ø1	11,12	-
Ø2	21,22,23	R
Ø3	81,82,83,84	R
Ø4	41,42,43,44	R
Ø5	51,52	-
Ø6	61,62,63	R
Ø7		
Ø8		
Ø8 PED	P81,P82,P83,P84	
Ø3 PED	P81,P82	
Ø4 PED	P41,P42	
Ø6 PED	P61,P62	



PHASING NOTES:

- 1) PHASE 3 AND 4 SHALL BE SPLIT PHASED DURING CONSTRUCTION STAGE 1 AND 2.
- 2) PHASES 1 AND 5 SHALL BE LEAD-LAG AND SHALL NOT TIME CONCURRENTLY DURING CONSTRUCTION STAGE 1.
- 3) PHASE 1 AND 5 SHALL TIME CONCURRENTLY DURING CONSTRUCTION STAGE 2.

LEGEND



DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	V11	V21	V31	V41	V51	V61		
PHASE CALLED	1	2	3	4	5	6		
PHASE EXTENDED	1	2	3	4	5	6		
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)								
PHASE CALLED								
PHASE EXTENDED								
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

19	17	23	21	27	25	31	29

20	18	24	22	28	26	32	30

DETECTOR INPUT

DETECTOR #(S)

PHASE CALLED

PHASE EXTENDED

DISCONNECT TIME

CALLING DELAY

EXTENSION STRETCH

LOOP FUNCTION

DETECTOR INPUT

DETECTOR #(S)

PHASE CALLED

PHASE EXTENDED

DISCONNECT TIME

CALLING DELAY

EXTENSION STRETCH

LOOP FUNCTION

CONTROLLER LOGIC

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



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

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

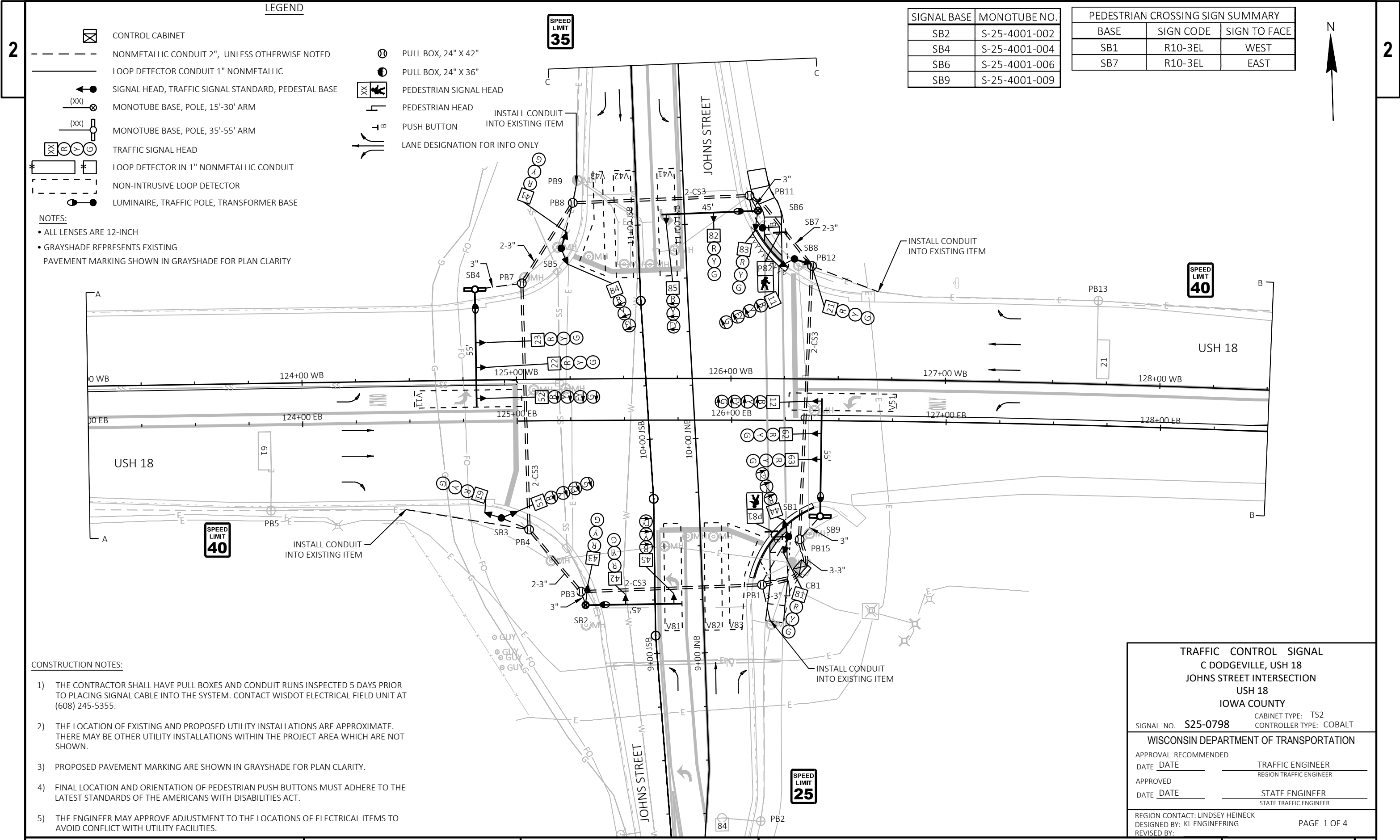
TYPE OF INTERCONNECT	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	

TYPE OF REMOTE COMMUNICATION	
NONE	X
FIBER	
CELL MODEM	
PHONE	

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY
CABINET TYPE: TEMP
CONTROLLER TYPE: TEMP
SIGNAL NO. TEMP

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 2 OF 2



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM
- TRAFFIC SIGNAL HEAD
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- NON-INTRUSIVE LOOP DETECTOR
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE

- PULL BOX, 24" X 42"
- PULL BOX, 24" X 36"
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN HEAD
- PUSH BUTTON
- LANE DESIGNATION FOR INFO ONLY

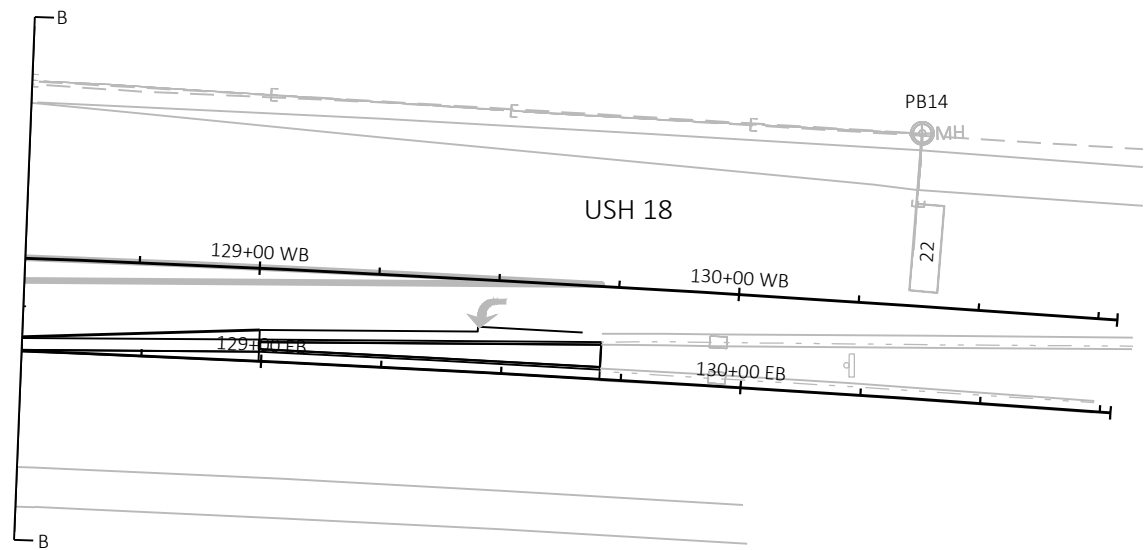
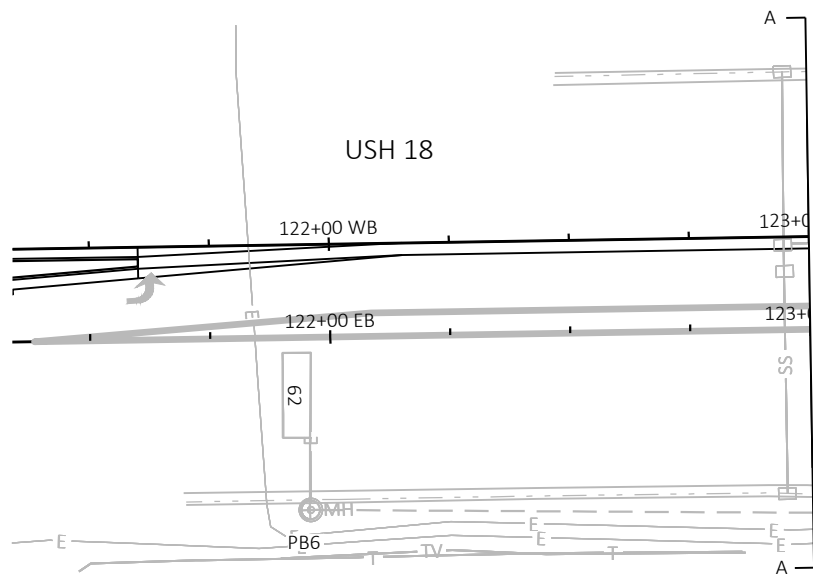
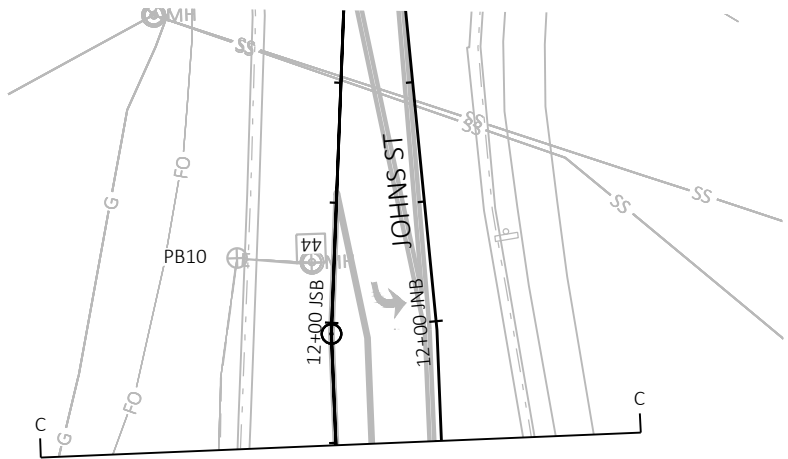
NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING PAVEMENT MARKING SHOWN IN GRAYSHADE FOR PLAN CLARITY

- CONSTRUCTION NOTES:
- THE CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 DAYS PRIOR TO PLACING SIGNAL CABLE INTO THE SYSTEM. CONTACT WISDOT ELECTRICAL FIELD UNIT AT (608) 245-5355.
 - THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
 - PROPOSED PAVEMENT MARKING ARE SHOWN IN GRAYSHADE FOR PLAN CLARITY.
 - FINAL LOCATION AND ORIENTATION OF PEDESTRIAN PUSH BUTTONS MUST ADHERE TO THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT.
 - THE ENGINEER MAY APPROVE ADJUSTMENT TO THE LOCATIONS OF ELECTRICAL ITEMS TO AVOID CONFLICT WITH UTILITY FACILITIES.

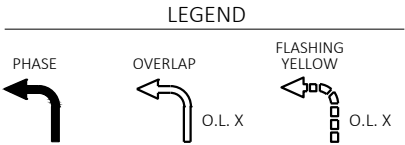
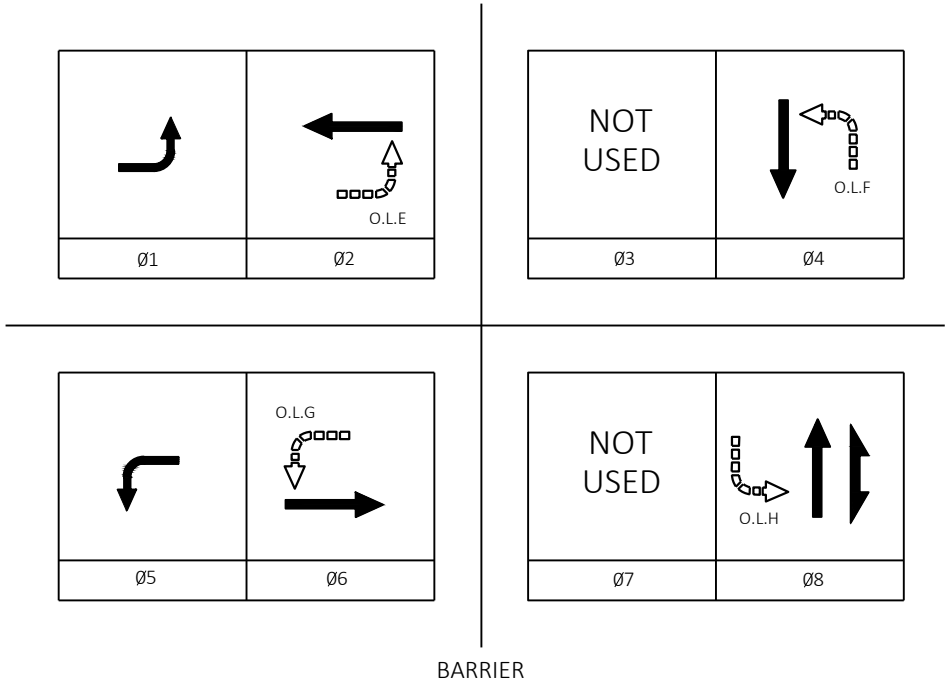
SIGNAL BASE	MONOTUBE NO.
SB2	S-25-4001-002
SB4	S-25-4001-004
SB6	S-25-4001-006
SB9	S-25-4001-009

PEDESTRIAN CROSSING SIGN SUMMARY		
BASE	SIGN CODE	SIGN TO FACE
SB1	R10-3EL	WEST
SB7	R10-3EL	EAST



TRAFFIC CONTROL SIGNAL C DODGEVILLE, USH 18 JOHNS STREET INTERSECTION USH 18 IOWA COUNTY	
SIGNAL NO. S25-0798	CABINET TYPE: TS2 CONTROLLER TYPE: COBALT
REGION CONTACT: LINDSEY HEINECK DESIGNED BY: KL ENGINEERING REVISED BY:	
PAGE 2 OF 4	

	HEAD NUMBERS	FLASH	
Ø1	11,12	-	
Ø2	21,22,23	R	
Ø3			
Ø4	41,42,43,44,45	R	
Ø5	51,52	-	
Ø6	61,62,63	R	
Ø7			
Ø8	81,82,83,84,85	R	
Ø8 PED	P81,P82		O.I. ASSIGNMENT
O.L.E	11,12		Ø2
O.L.F	84,85		Ø4
O.L.G	51,52		Ø6
O.L.H	44,45		Ø8



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



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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	V11	21	V41	V43	V51	61	V81	V83
PHASE CALLED	1	2	4	4	5	6	8	8
PHASE EXTENDED	1	2	4	4	5	6	8	8
DISCONNECT TIME		37				32		
CALLING DELAY				15				15
EXTENSION STRETCH								
LOOP FUNCTION		DIS				DIS		

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)		22	V42	44		62	V82	84
PHASE CALLED		2	4			6	8	
PHASE EXTENDED		2	4	4		6	8	8
DISCONNECT TIME								
CALLING DELAY				2				3
EXTENSION STRETCH								
LOOP FUNCTION								

19	17	23	21	27	25	31	29

20	18	24	22	28	26	32	30

DETECTOR INPUT
DETECTOR #(S)
PHASE CALLED
PHASE EXTENDED
DISCONNECT TIME
CALLING DELAY
EXTENSION STRETCH
LOOP FUNCTION

DETECTOR INPUT
DETECTOR #(S)
PHASE CALLED
PHASE EXTENDED
DISCONNECT TIME
CALLING DELAY
EXTENSION STRETCH
LOOP FUNCTION

TYPE OF REMOTE COMMUNICATION	
NONE	X
FIBER	
CELL MODEM	
PHONE	

TYPE OF INTERCONNECT	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR	
CLOSED LOOP FIBER OPTIC	
RADIO	X

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, USH 18
JOHNS STREET INTERSECTION
USH 18
IOWA COUNTY
CABINET TYPE: TS2
CONTROLLER TYPE: COBALT
SIGNAL NO. S25-0798
REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 3 OF 4

USH 18 & JOHNS STREET TRAFFIC SIGNAL CABLING CHART NO. 14 CABLE													
HOME RUN	CABLE	INDICATION/WIRE COLOR											
		BLACK	WHITE	RED	GREEN	ORANGE	BLUE	WHITE/BLK	RED/BLK	GREEN/BLK	ORANGE/BLK	BLUE/BLK	BLK/WHITE
CB1 - SB1	12/C	8-DW	NEUTRAL	8-RED	8-GRN	8-YEL	8-WALK		O.L.H-R-ARROW		O.L.H-Y-ARROW O.L.H-FY-ARROW		
CB1 - SB2	12/C		NEUTRAL	4-RED	4-GRN	4-YEL			O.L.H-R-ARROW		O.L.H-Y-ARROW O.L.H-FY-ARROW		
CB1 - SB3	12/C		NEUTRAL	6-RED	6-GRN	6-YEL			5-R-ARROW	5-G-ARROW	5-Y-ARROW	O.L.G-FY-ARROW	
CB1 - SB4	12/C		NEUTRAL	2-RED	2-GRN	2-YEL			5-R-ARROW	5-G-ARROW	5-Y-ARROW	O.L.G-FY-ARROW	
CB1 - SB5	12/C		NEUTRAL	4-RED	4-GRN	4-YEL			O.L.F-R-ARROW		O.L.F-Y-ARROW O.L.F-FY-ARROW		
CB1 - SB6	12/C		NEUTRAL	8-RED	8-GRN	8-YEL			O.L.F-R-ARROW		O.L.F-Y-ARROW O.L.F-FY-ARROW		
CB1 - SB7	9/C	8-DW	NEUTRAL				8-WALK						
CB1 - SB8	12/C		NEUTRAL	2-RED	2-GRN	2-YEL			1-R-ARROW	1-G-ARROW	1-Y-ARROW	O.L.E-FY-ARROW	
CB1 - SB9	12/C		NEUTRAL	6-RED	6-GRN	6-YEL			1-R-ARROW	1-G-ARROW	1-Y-ARROW	O.L.E-FY-ARROW	

USH 18 & JOHNS STREET LIGHTING CABLING CHART NO. 12 UF W/GROUND		
CABLE	CABLE RUN	LUMINAIRE LOCATION
2C W/GROUND	CB1 TO SB2	SW QUADRANT
	SB2 TO SB4	NW QUADRANT
	CB1 TO SB9	SE QUADRANT
	SB9 TO SB6	NE QUADRANT

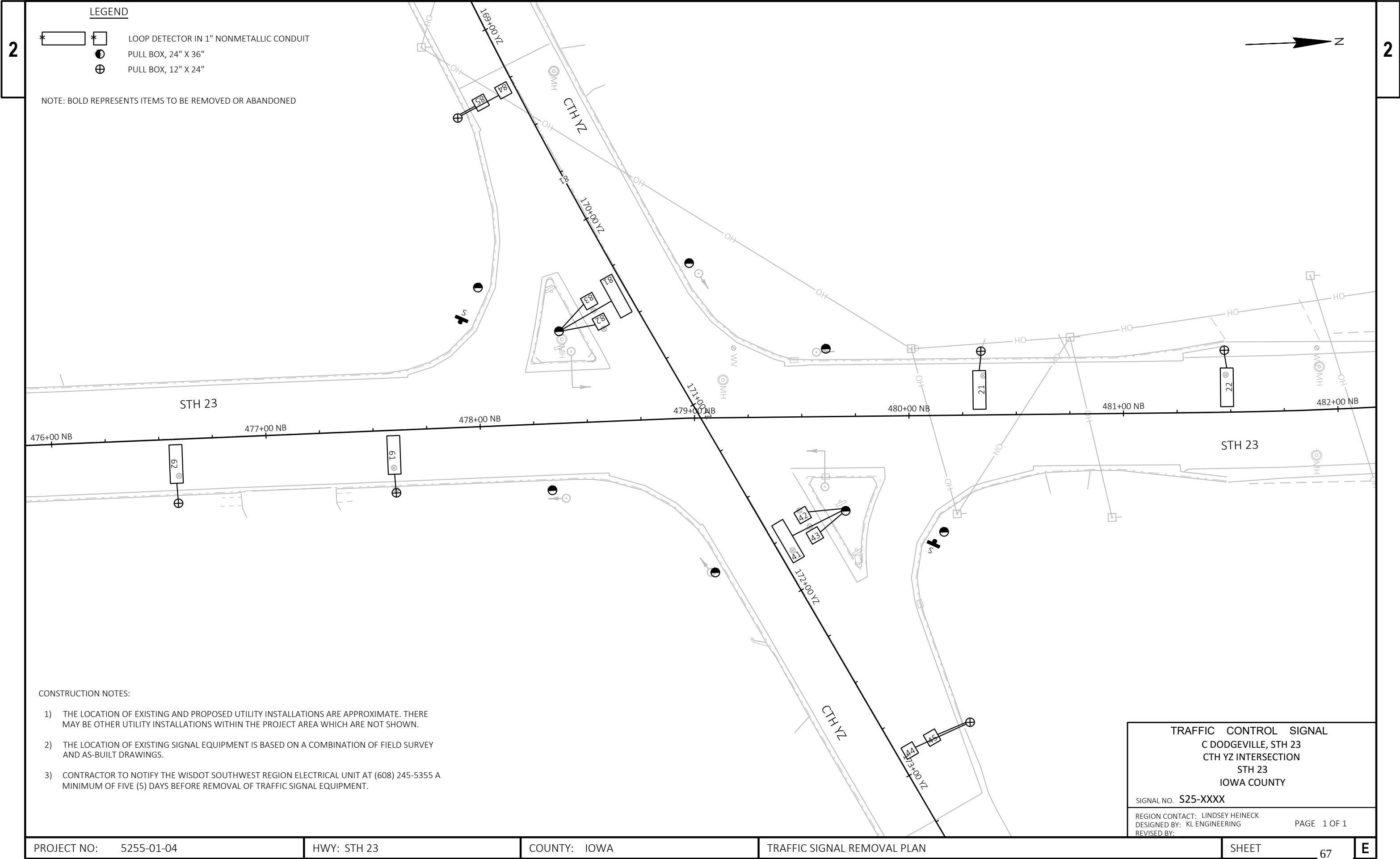
PEDESTRIAN BUTTONS LOOP DETECTOR LEAD IN CABLE	
FROM	TO
CB1	SB1 BUTTON
CB1	SB7 BUTTON

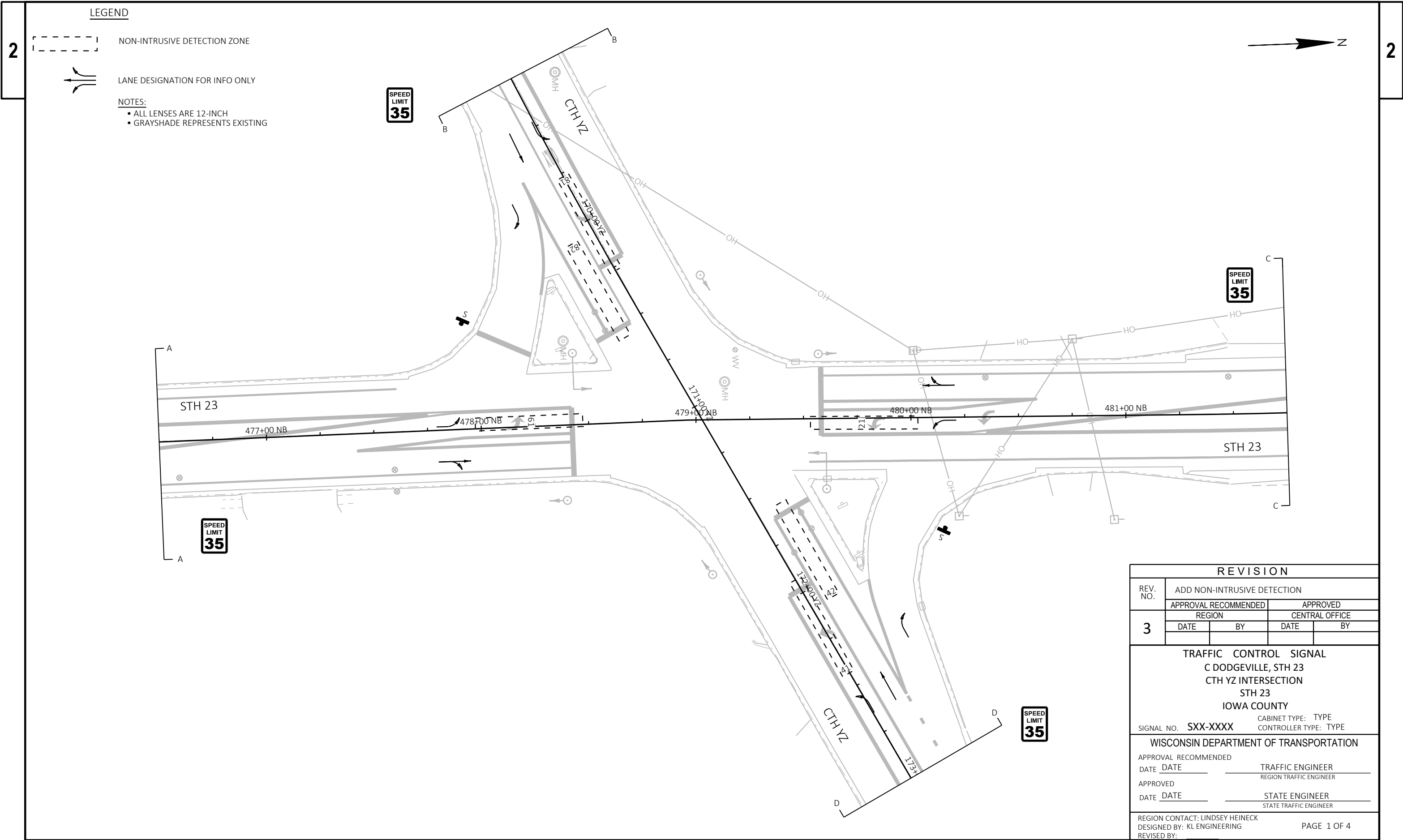
NOTE: ALL RUNS SHALL BE COMPLETED WITH ONE CONTINUOUS CABLE FROM CABINET TO BUTTON. NO CABLE TO CABLE SPLICING IS PERMITTED.

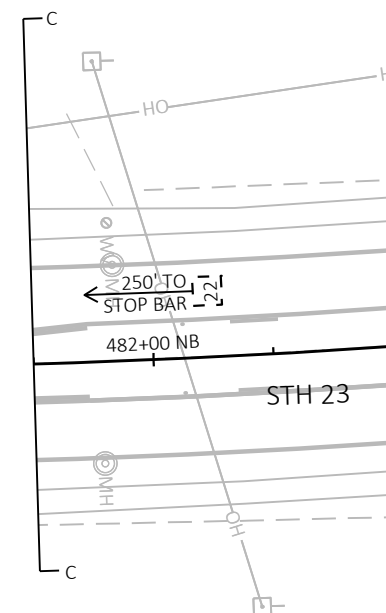
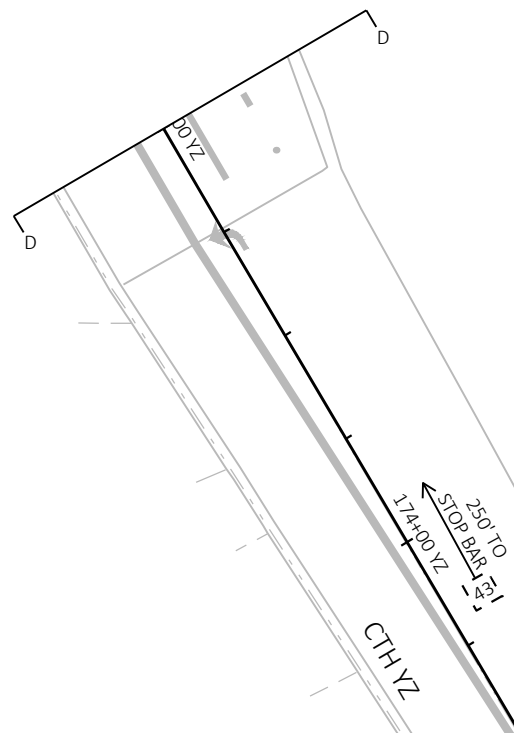
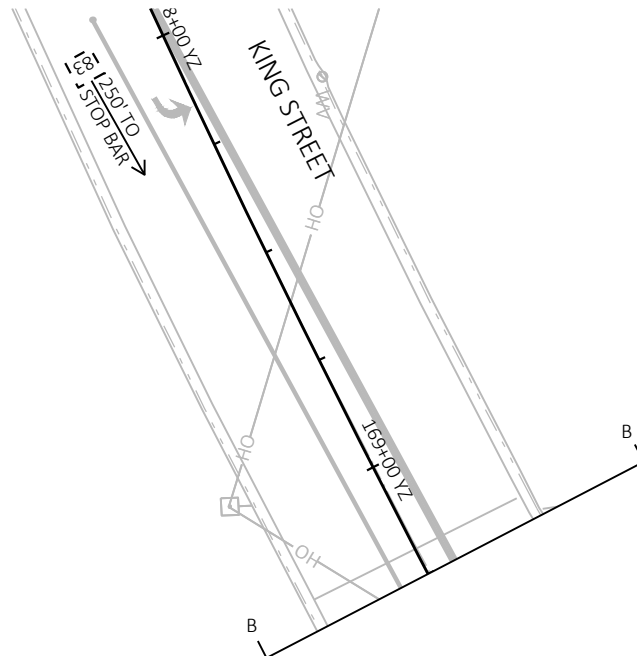
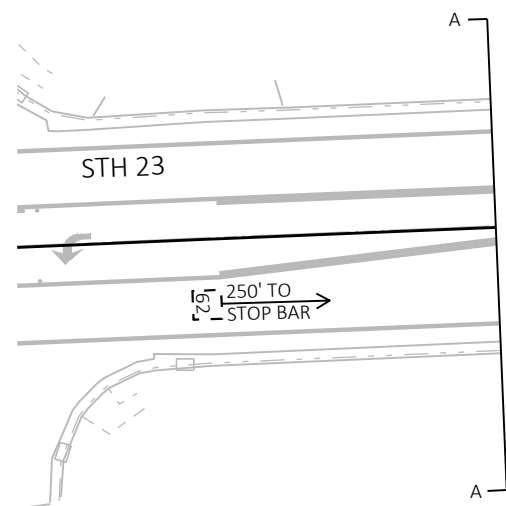
NON-INTRUSIVE LOOP DETECTION CAT-53 CABLE	
FROM	TO
CB1	SB2
CB1	SB4
CB1	SB6
CB1	SB9

NOTE: ALL RUNS SHALL BE COMPLETED WITH ONE CONTINUOUS CABLE FROM CABINET TO BUTTON. NO CABLE TO CABLE SPLICING IS PERMITTED.

TRAFFIC CONTROL SIGNAL C DODGEVILLE, USH 18 JOHNS STREET INTERSECTION USH 18 IOWA COUNTY	
SIGNAL NO. S25-0798	CABINET TYPE: TS2 CONTROLLER TYPE: COBALT
REGION CONTACT: LINDSEY HEINECK DESIGNED BY: KL ENGINEERING REVISED BY:	
PAGE 4 OF 4	

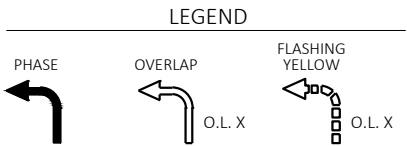
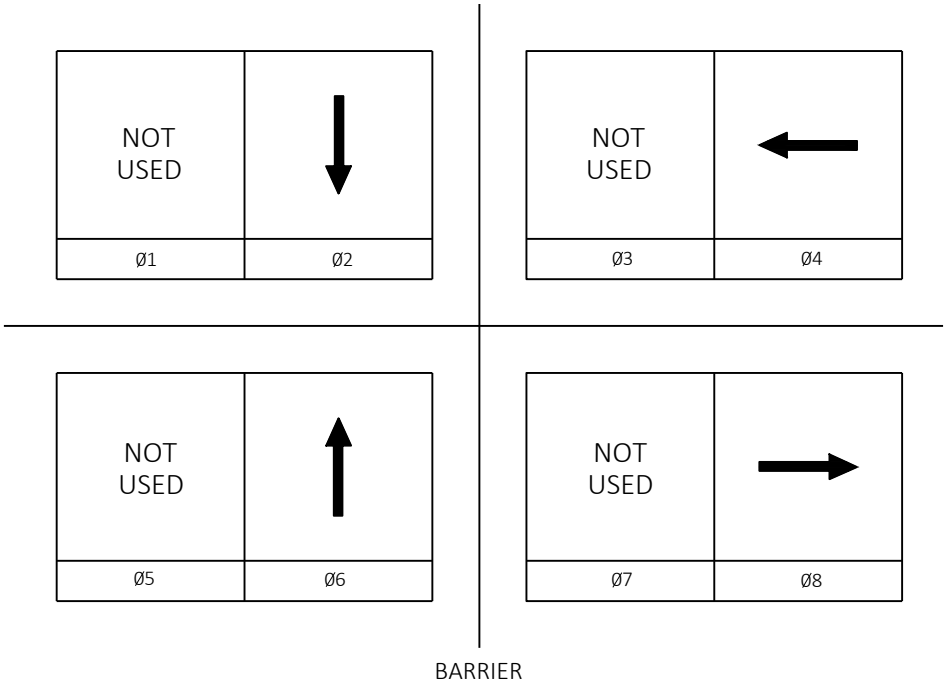






TRAFFIC CONTROL SIGNAL C DODGEVILLE, STH 23 CTH YZ INTERSECTION STH 23 IOWA COUNTY	
SIGNAL NO. S25-XXXX	
REGION CONTACT: LINDSEY HEINECK DESIGNED BY: KL ENGINEERING REVISED BY:	PAGE 2 OF 4

	HEAD NUMBERS	F L A S H
Ø1		
Ø2	4,5,6	R
Ø3		
Ø4	7,8,9	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	10,11,12	R



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

TYPE OF REMOTE COMMUNICATION	
NONE	
FIBER	
CELL MODEM	
PHONE	
RADIO	X

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO: S-XXXX	
SIGNAL SYSTEM #: SS14-0201	

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
DETECTOR #(S)	21	41	43	61	81	83		
PHASE CALLED	2	4	4	6	8	8		
PHASE EXTENDED	2	4	4	6	8	8		
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION								

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

DETECTOR INPUT	4	2	8	6	12	10	16	14
DETECTOR #(S)	22	42		62	82			
PHASE CALLED	2	4		6	8			
PHASE EXTENDED	2	4		6	8			
DISCONNECT TIME								
CALLING DELAY								
EXTENSION STRETCH								
LOOP FUNCTION		DIS			DIS			

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

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, STH 23
CTH YZ INTERSECTION
STH 23
IOWA COUNTY

SIGNAL NO. S25-XXXX

REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 3 OF 4



NON-INTRUSIVE LOOP DETECTION CAT-53 CABLE	
FROM	TO
CB1	SB2
CB1	SB3
CB1	SB5
CB1	SB6

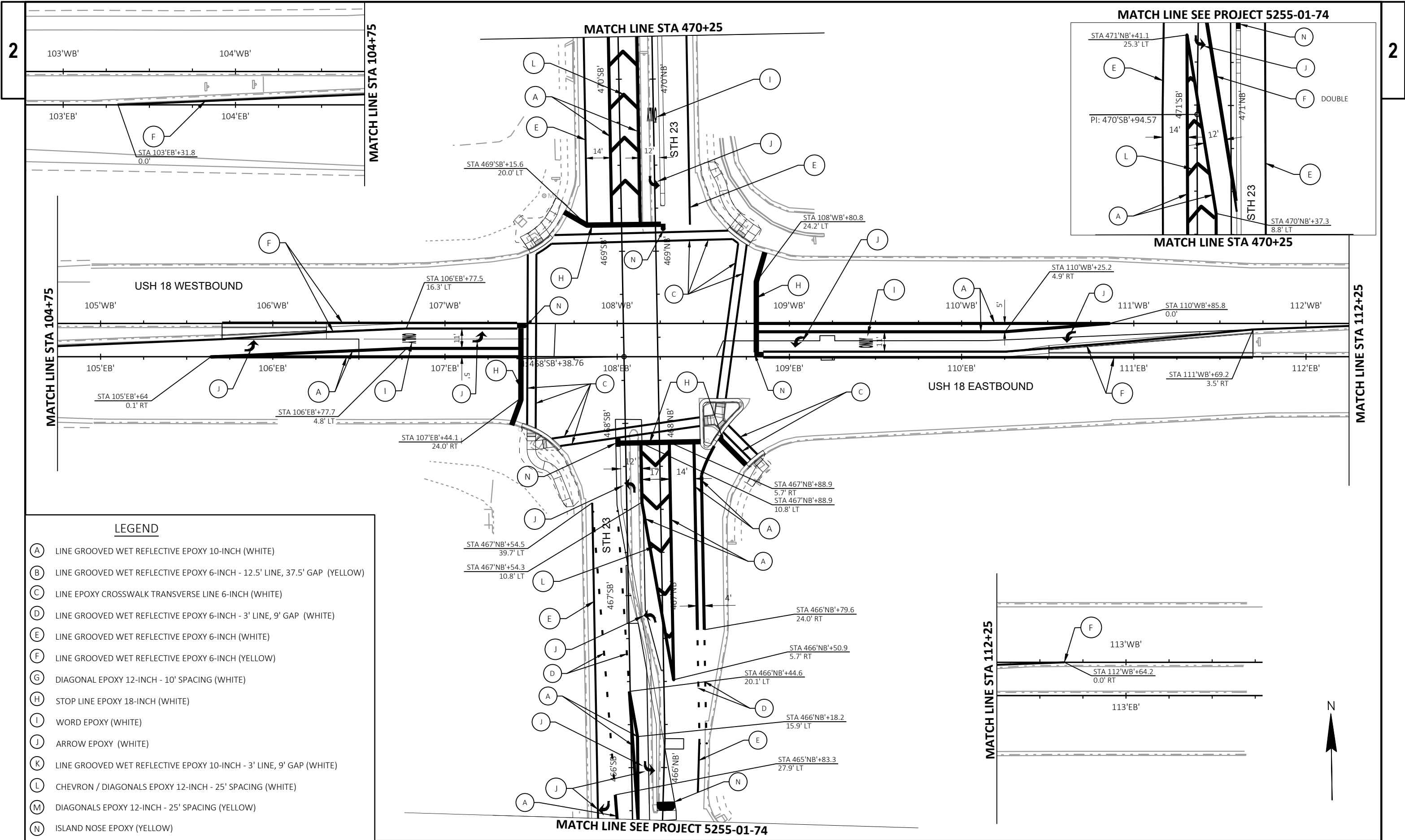
NOTE: ALL RUNS SHALL BE COMPLETED WITH ONE CONTINUOUS CABLE FROM CABINET TO BUTTON. NO CABLE TO CABLE SPLICING IS PERMITTED.

TRAFFIC CONTROL SIGNAL
C DODGEVILLE, STH 23
CTH YZ INTERSECTION
STH 23
IOWA COUNTY

SIGNAL NO. S25-XXXX

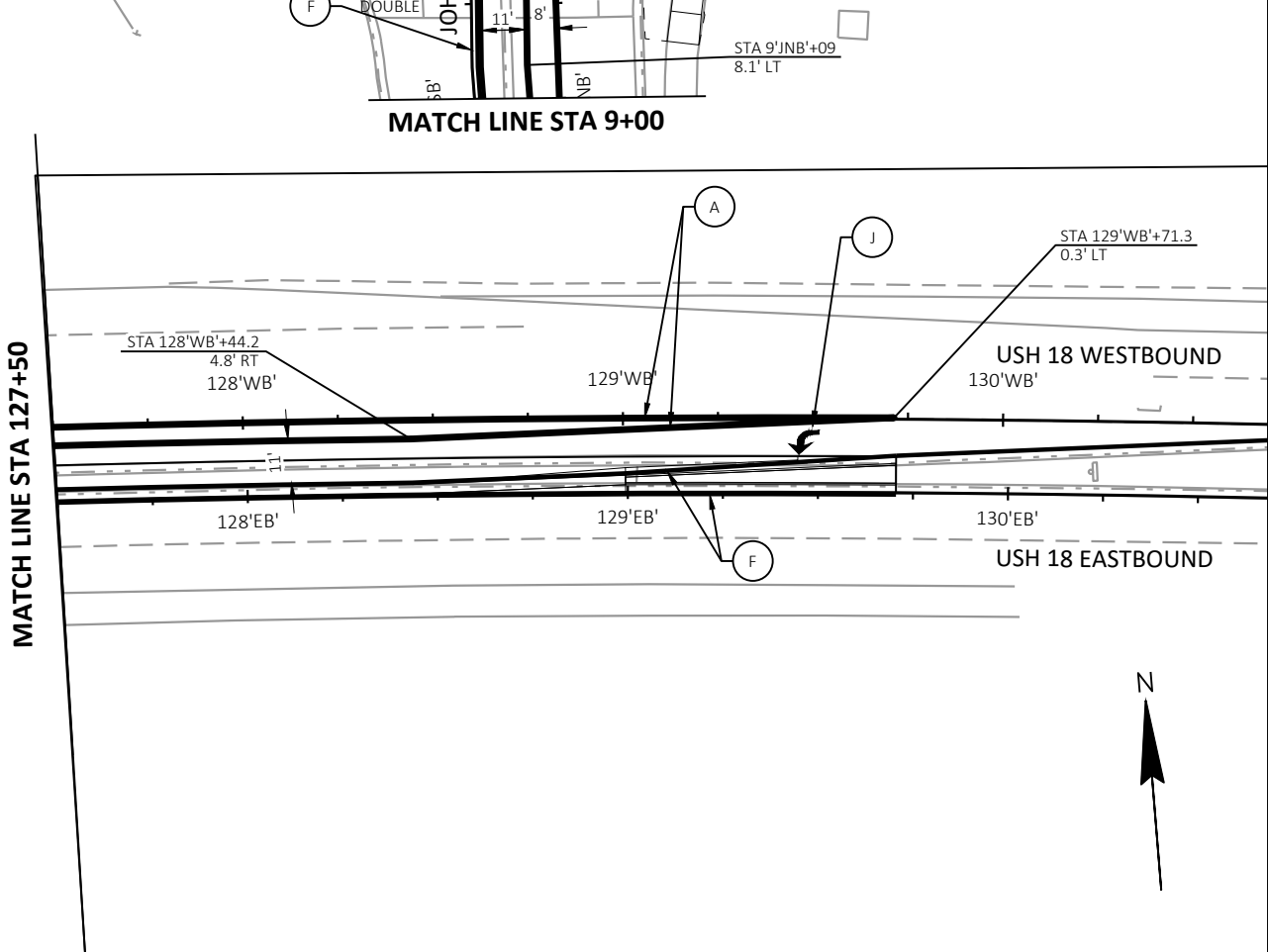
REGION CONTACT: LINDSEY HEINECK
DESIGNED BY: KL ENGINEERING
REVISED BY:

PAGE 4 OF 4



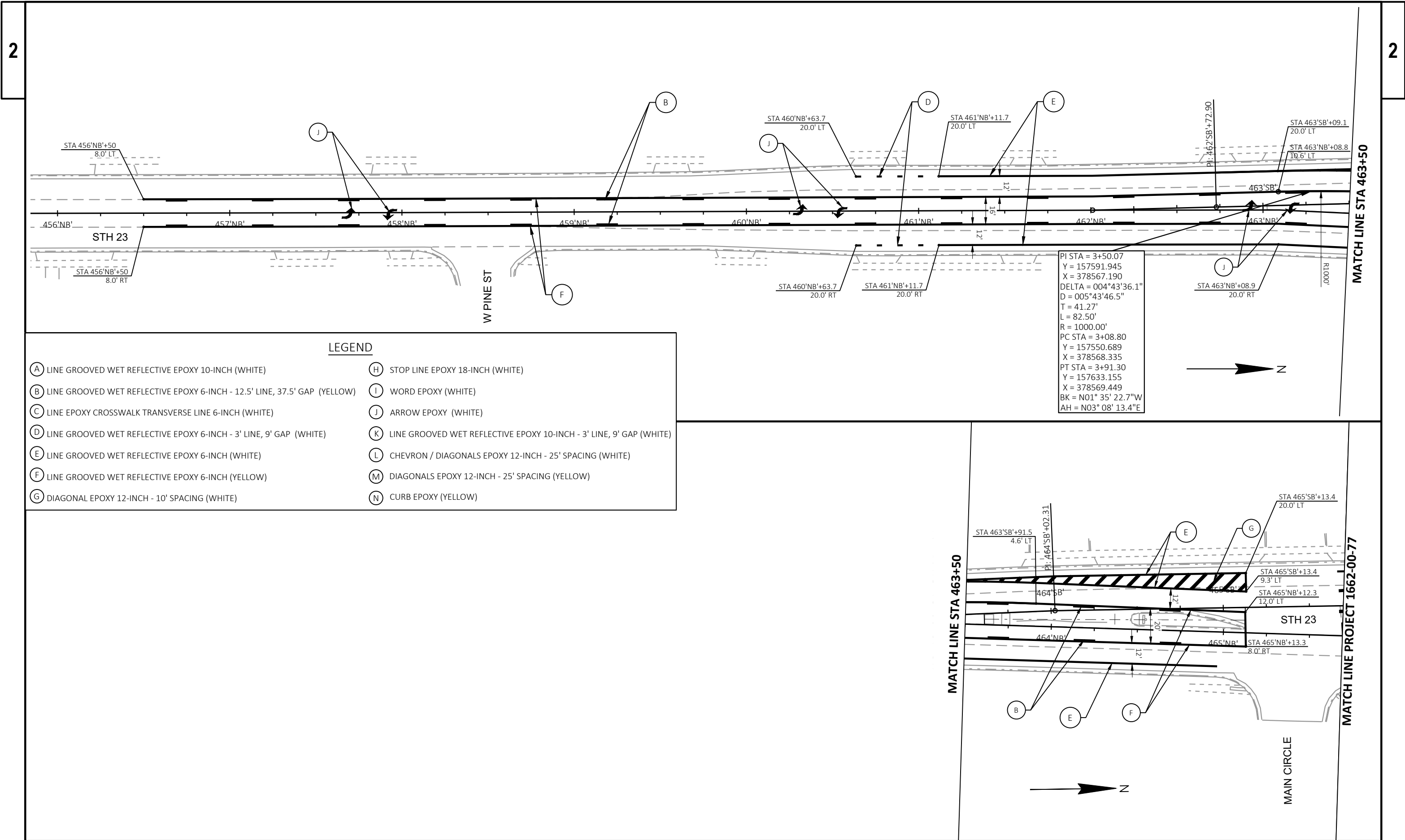
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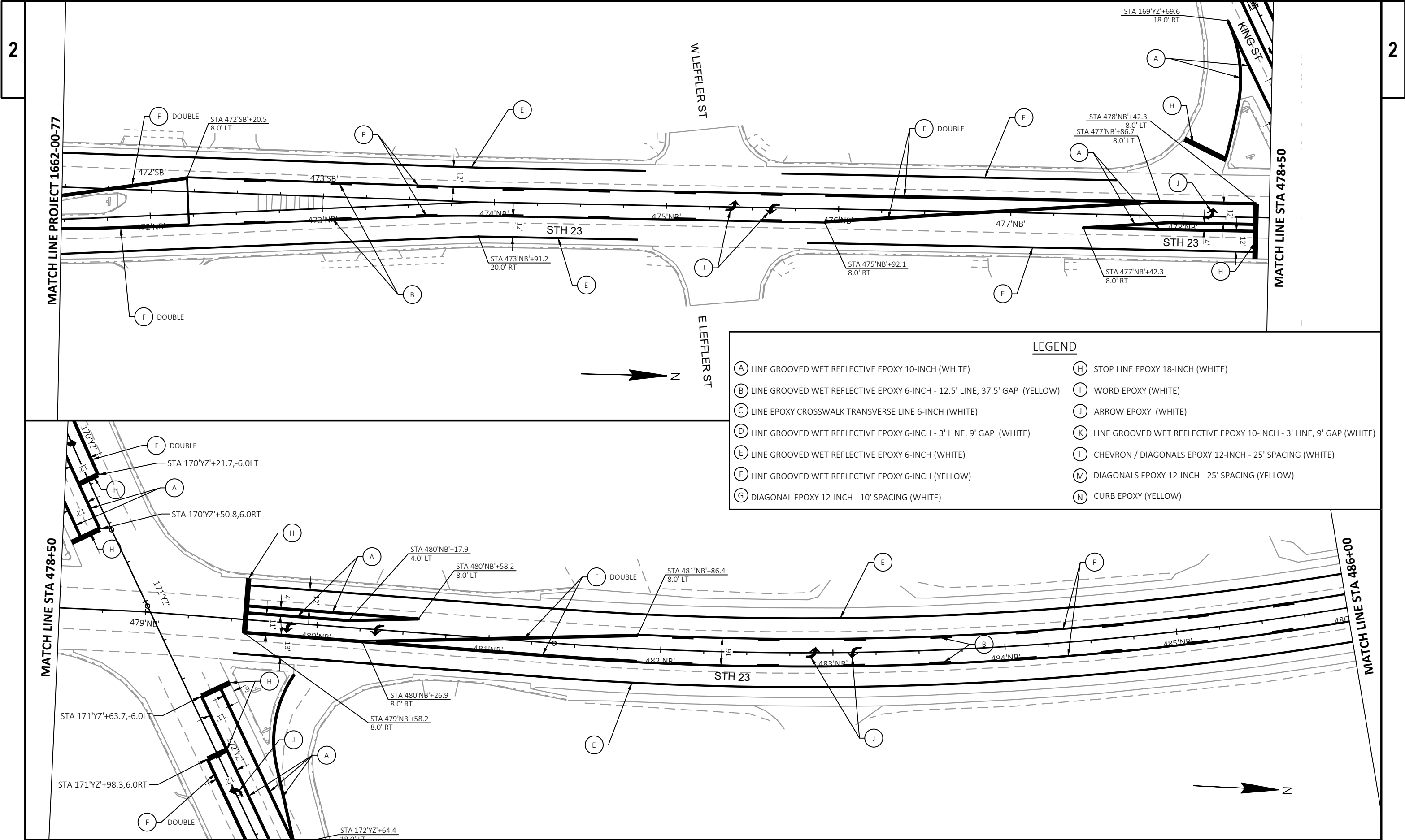
(A) LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE)	(H) STOP LINE EPOXY 18-INCH (WHITE)
(B) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH - 12.5' LINE, 37.5' GAP (YELLOW)	(I) WORD EPOXY (WHITE)
(C) LINE EPOXY CROSSWALK TRANSVERSE LINE 6-INCH (WHITE)	(J) ARROW EPOXY (WHITE)
(D) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH - 3' LINE, 9' GAP (WHITE)	(K) LINE GROOVED WET REFLECTIVE EPOXY 10-INCH - 3' LINE, 9' GAP (WHITE)
(E) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE)	(L) CHEVRON / DIAGONALS EPOXY 12-INCH - 25' SPACING (WHITE)
(F) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (YELLOW)	(M) DIAGONALS EPOXY 12-INCH - 25' SPACING (YELLOW)
(G) DIAGONAL EPOXY 12-INCH - 10' SPACING (WHITE)	(N) CURB EPOXY (YELLOW)

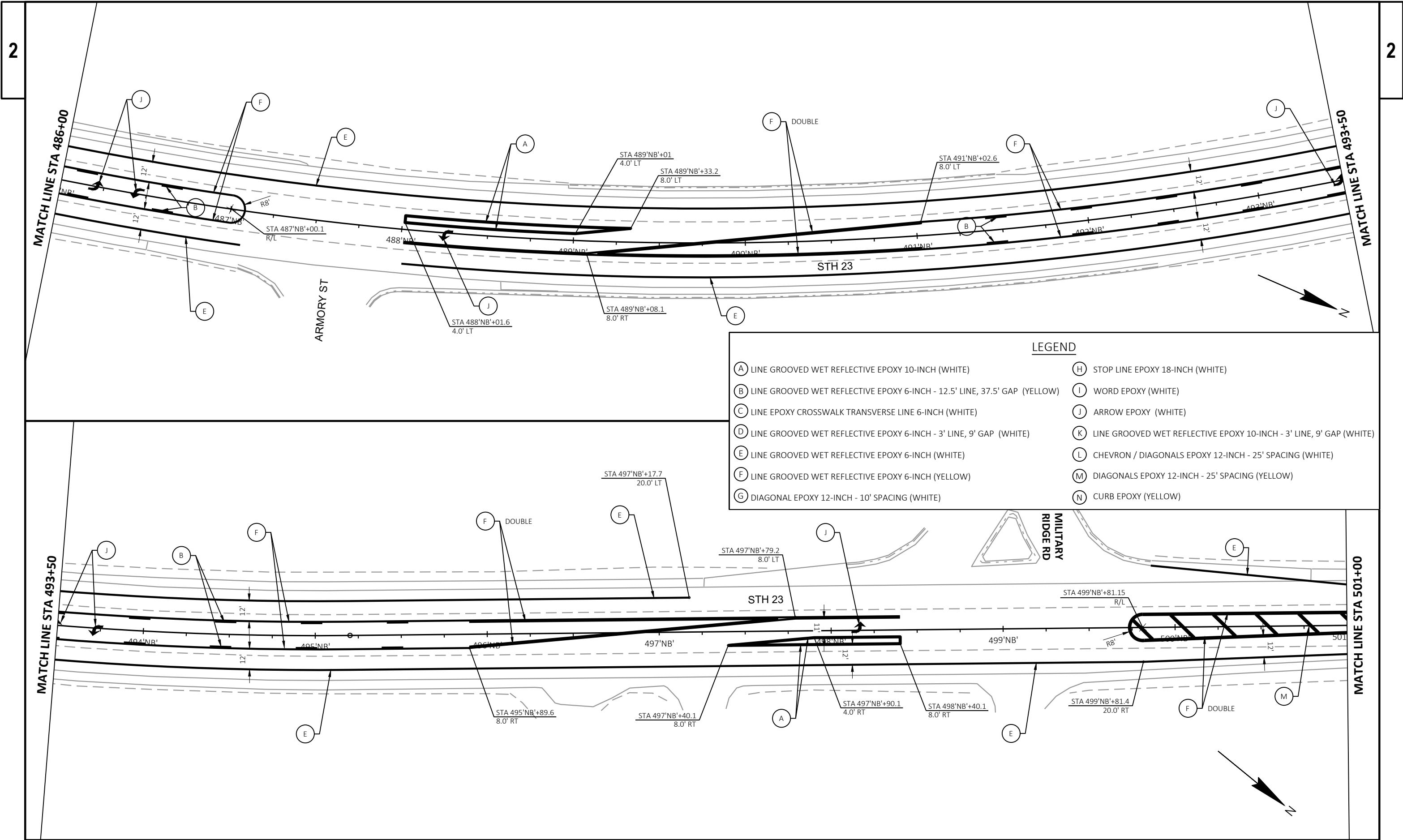


E

WISDOT/CADDS SHEET 42

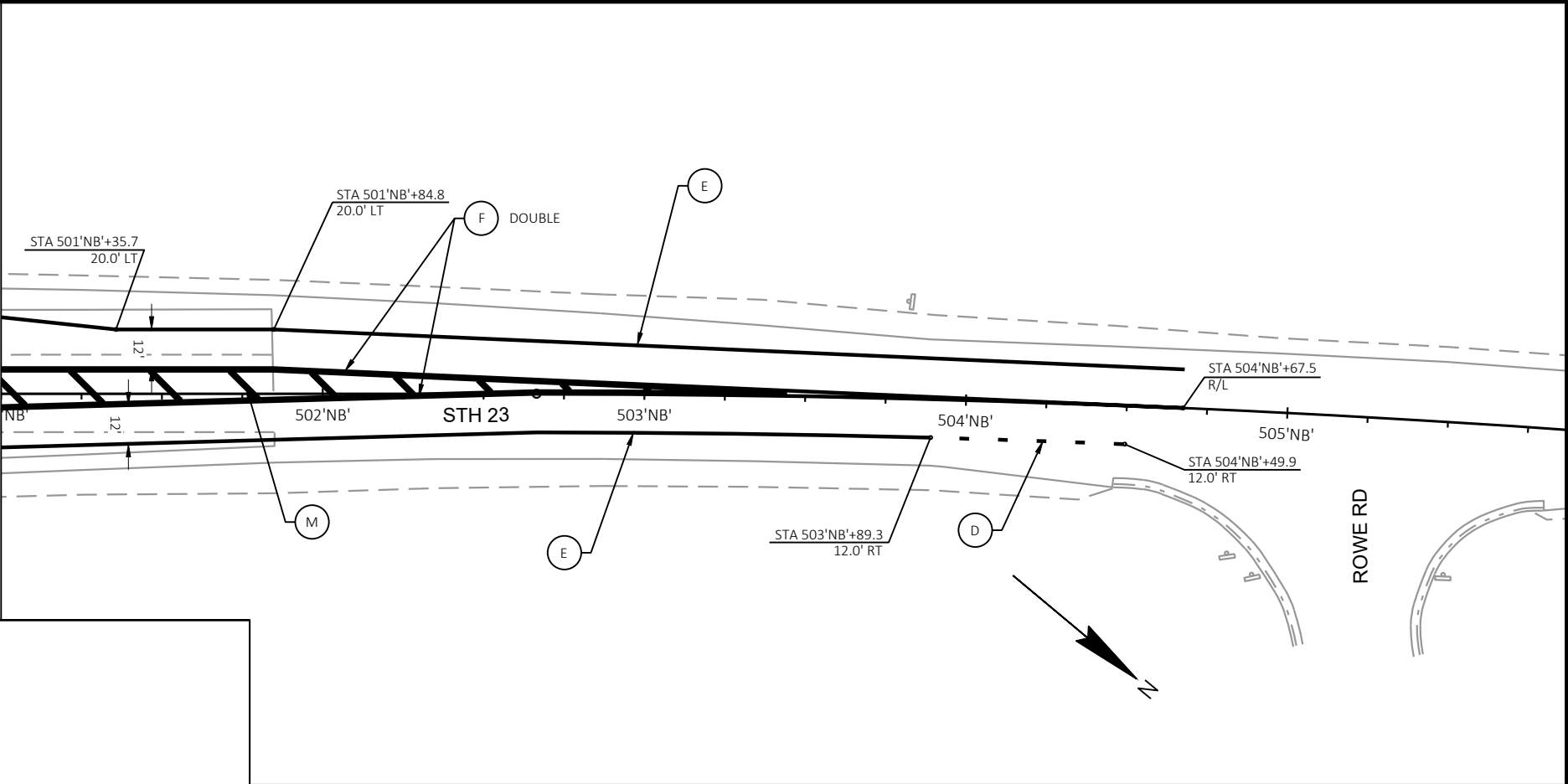






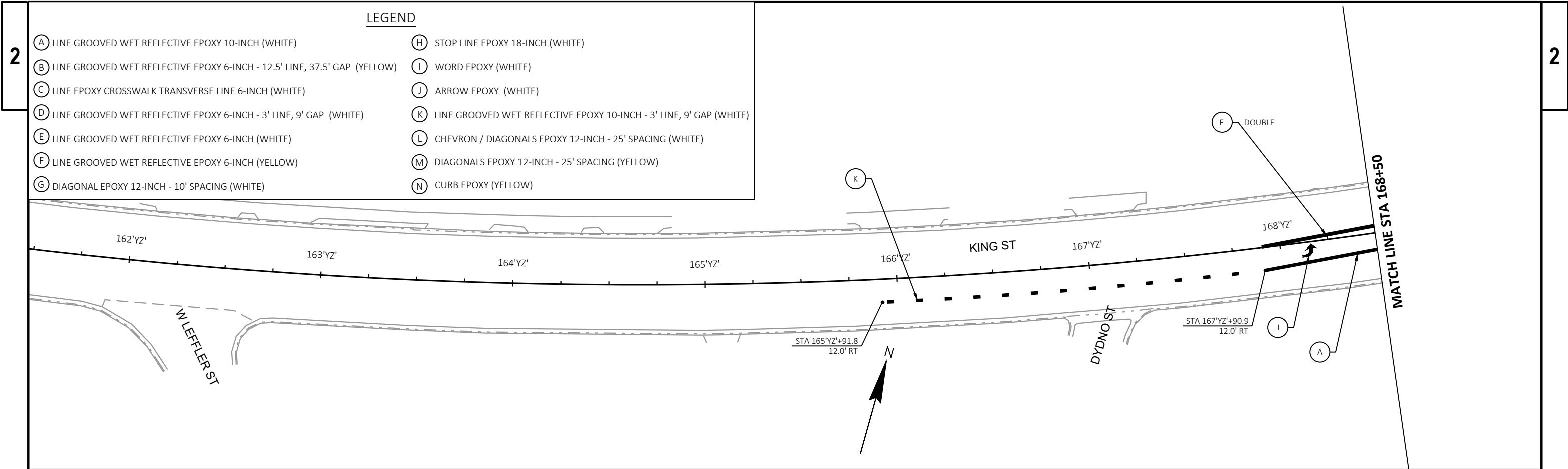
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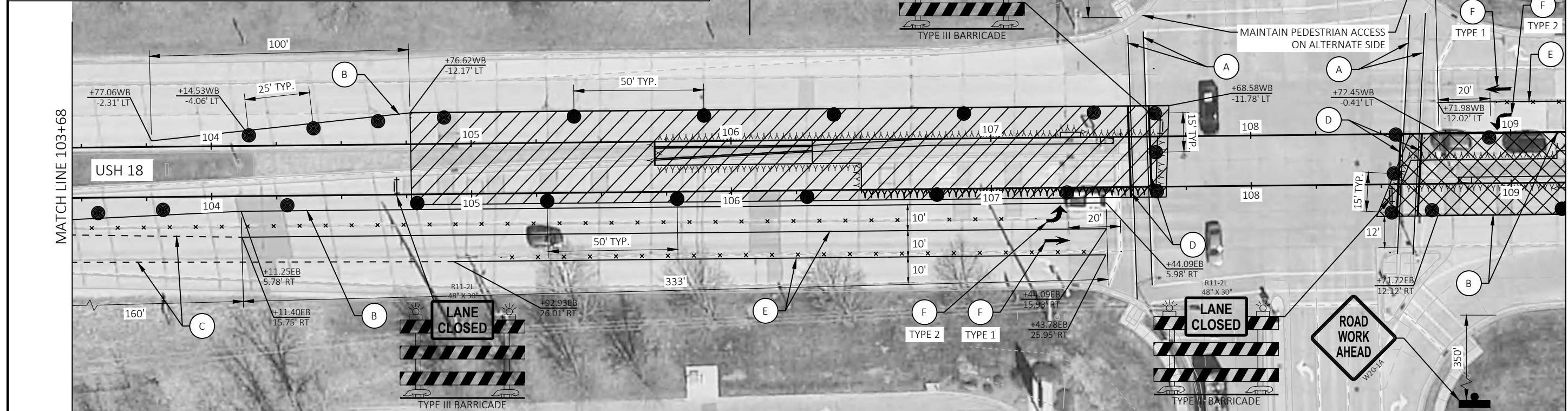
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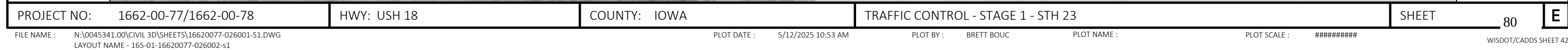


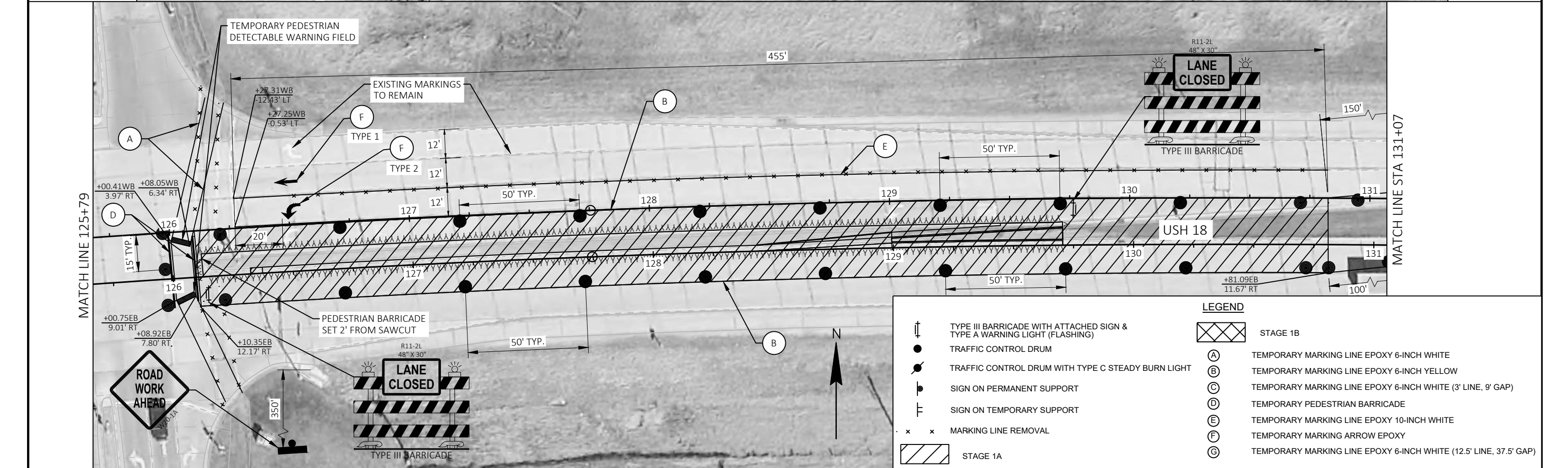
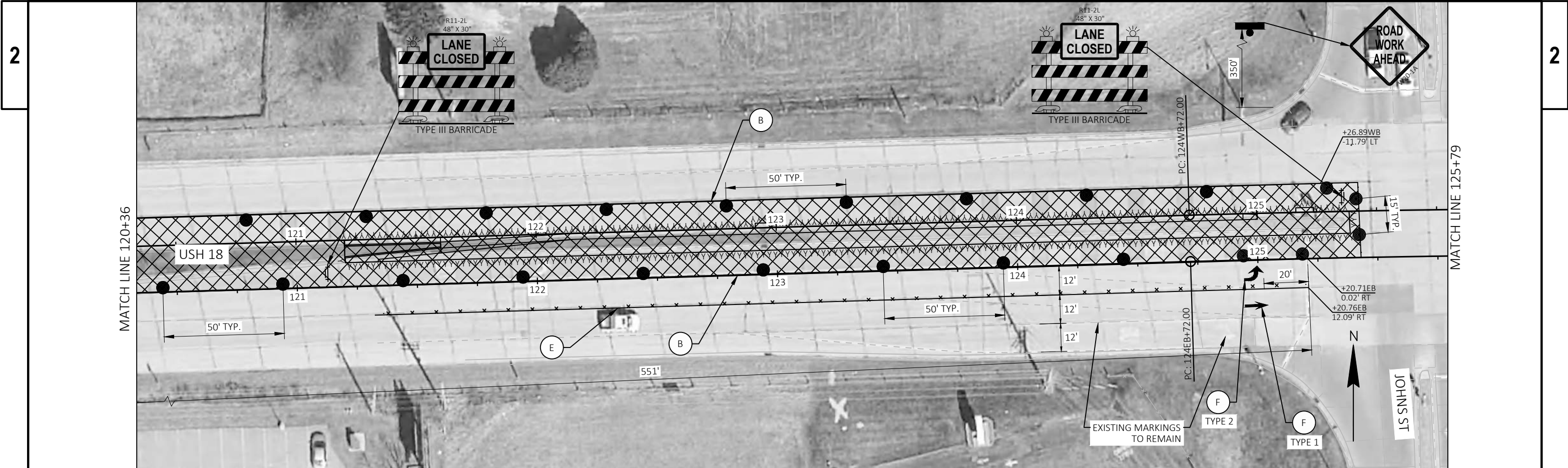
LEGEND

- | | |
|---|---|
| (A) LINE GROOVED WET REFLECTIVE EPOXY 10-INCH (WHITE) | (H) STOP LINE EPOXY 18-INCH (WHITE) |
| (B) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH - 12.5' LINE, 37.5' GAP (YELLOW) | (I) WORD EPOXY (WHITE) |
| (C) LINE EPOXY CROSSWALK TRANSVERSE LINE 6-INCH (WHITE) | (J) ARROW EPOXY (WHITE) |
| (D) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH - 3' LINE, 9' GAP (WHITE) | (K) LINE GROOVED WET REFLECTIVE EPOXY 10-INCH - 3' LINE, 9' GAP (WHITE) |
| (E) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (WHITE) | (L) CHEVRON / DIAGONALS EPOXY 12-INCH - 25' SPACING (WHITE) |
| (F) LINE GROOVED WET REFLECTIVE EPOXY 6-INCH (YELLOW) | (M) DIAGONALS EPOXY 12-INCH - 25' SPACING (YELLOW) |
| (G) DIAGONAL EPOXY 12-INCH - 10' SPACING (WHITE) | (N) CURB EPOXY (YELLOW) |

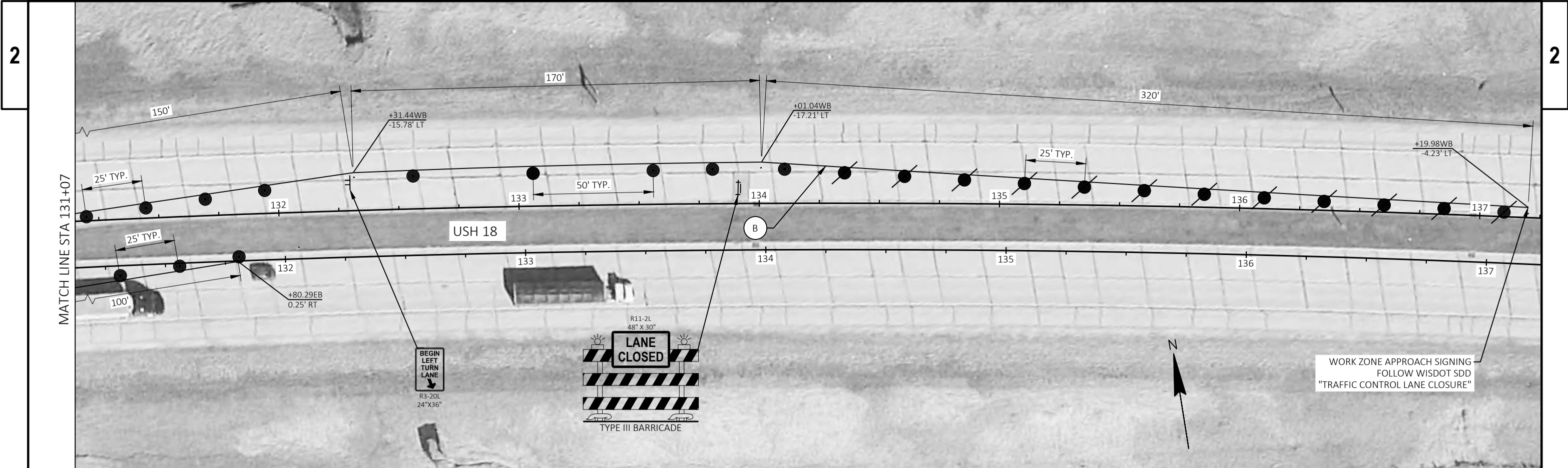




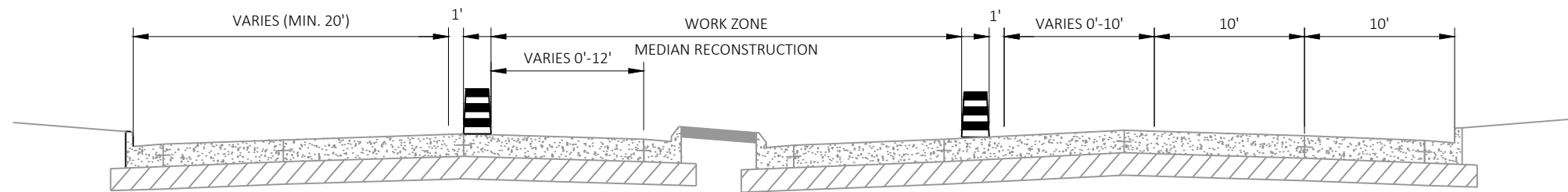




LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 1A
	STAGE 1B
(A)	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
(B)	TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
(C)	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
(D)	TEMPORARY PEDESTRIAN BARRICADE
(E)	TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
(F)	TEMPORARY MARKING ARROW EPOXY
(G)	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)

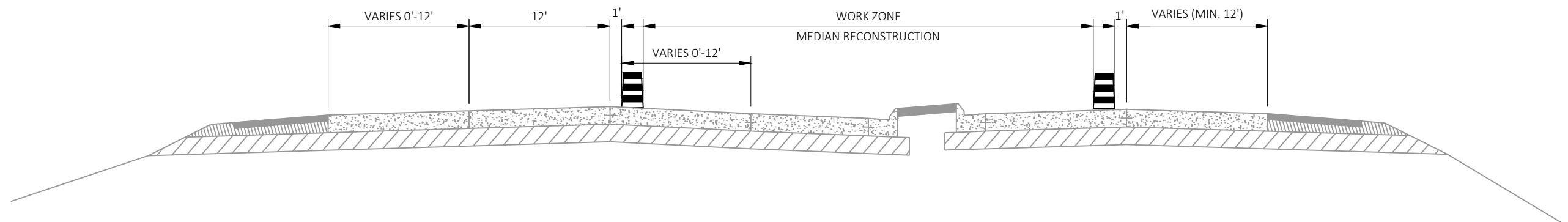


LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 1A
	STAGE 1B
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
	TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
	TEMPORARY PEDESTRIAN BARRICADE
	TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
	TEMPORARY MARKING ARROW EPOXY
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)



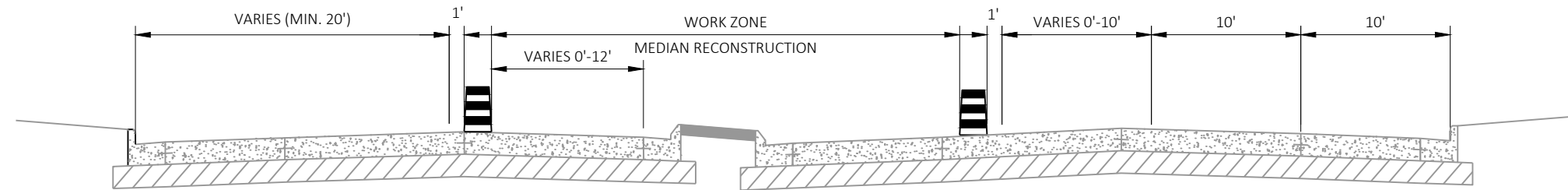
USH 18 STAGE 1 TYPICAL SECTION - INSIDE LANE CLOSURE

STA 118'EB'+20 - STA 125'EB'+44

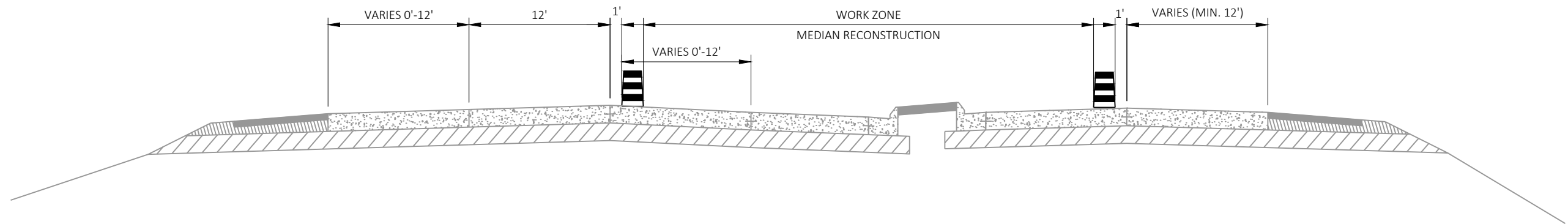


USH 18 STAGE 1 TYPICAL SECTION - INSIDE LANE CLOSURE

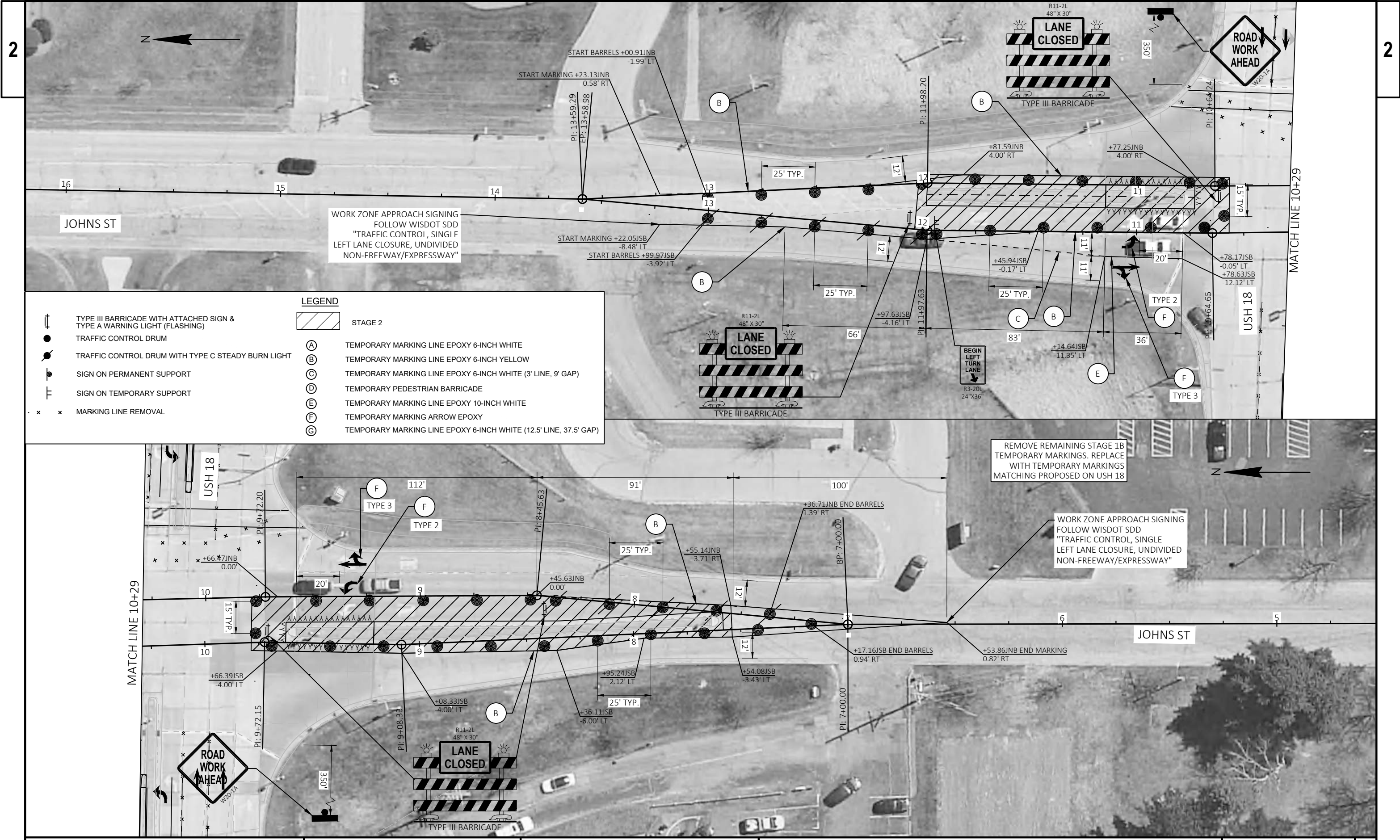
STA 126'EB'+11 - STA 137'EB'+17



USH 18 STAGE 1 TYPICAL SECTION - INSIDE LANE CLOSURE
STA 118'EB'+20 - STA 125'EB'+44

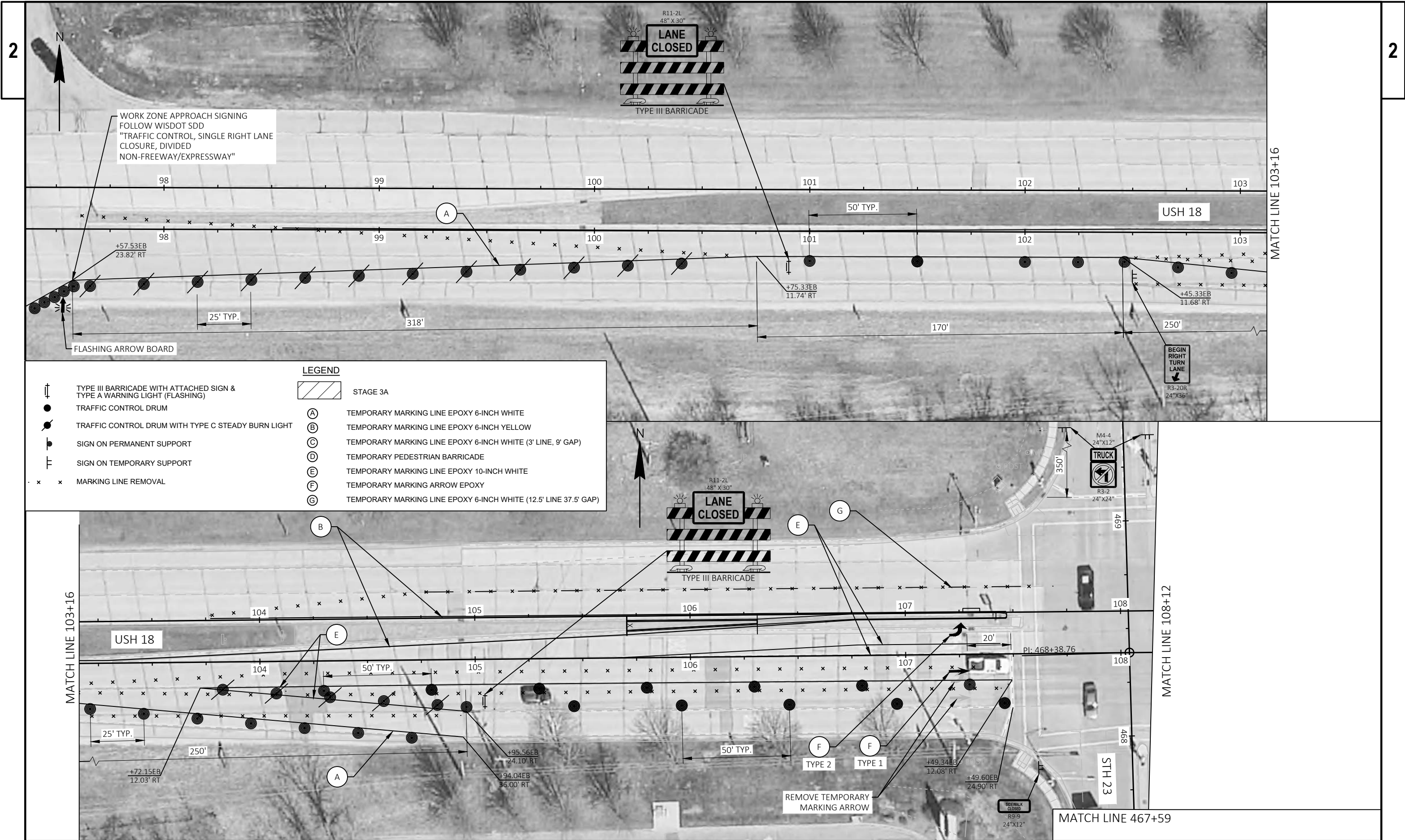


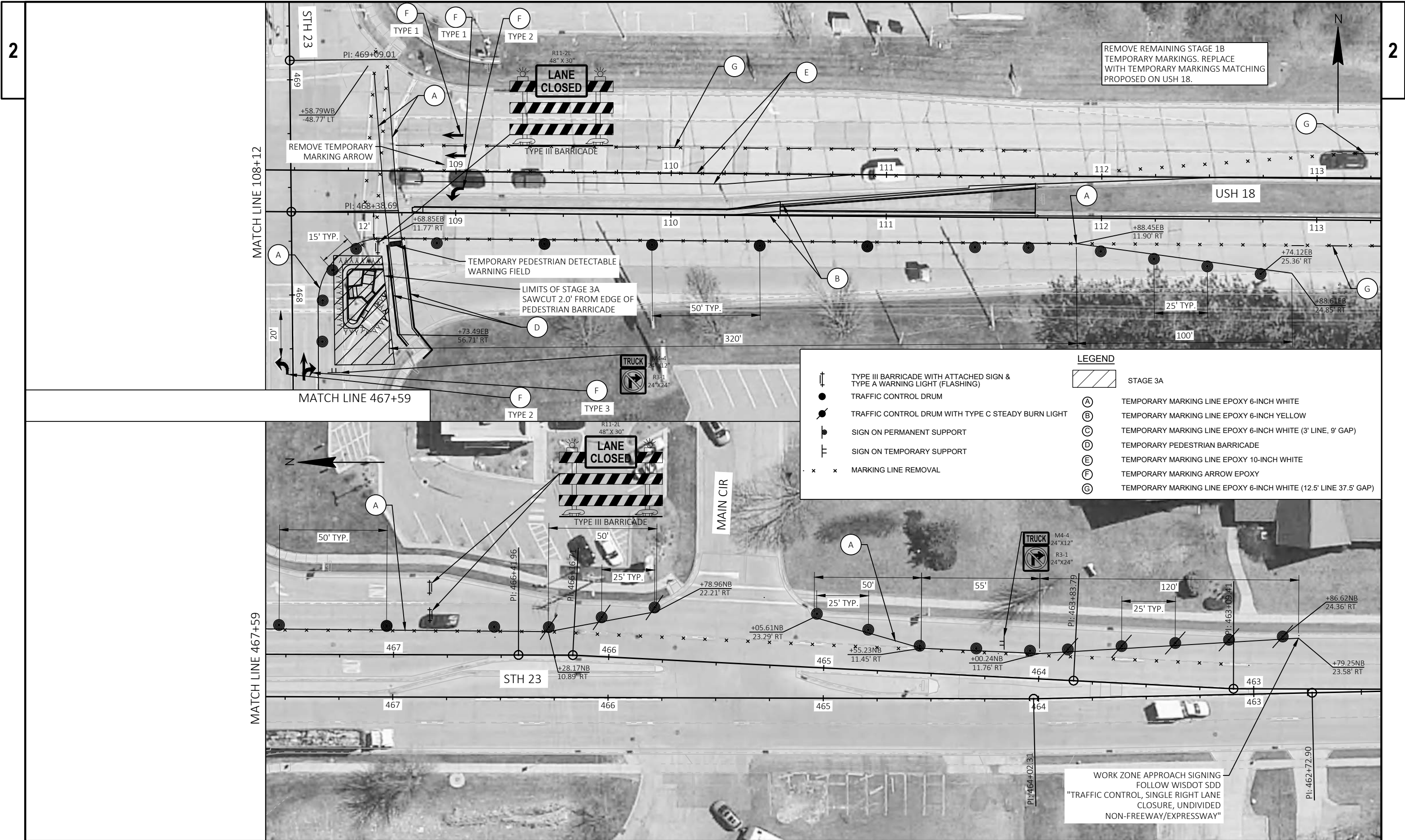
USH 18 STAGE 1 TYPICAL SECTION - INSIDE LANE CLOSURE
STA 126'EB'+11 - STA 137'EB'+17

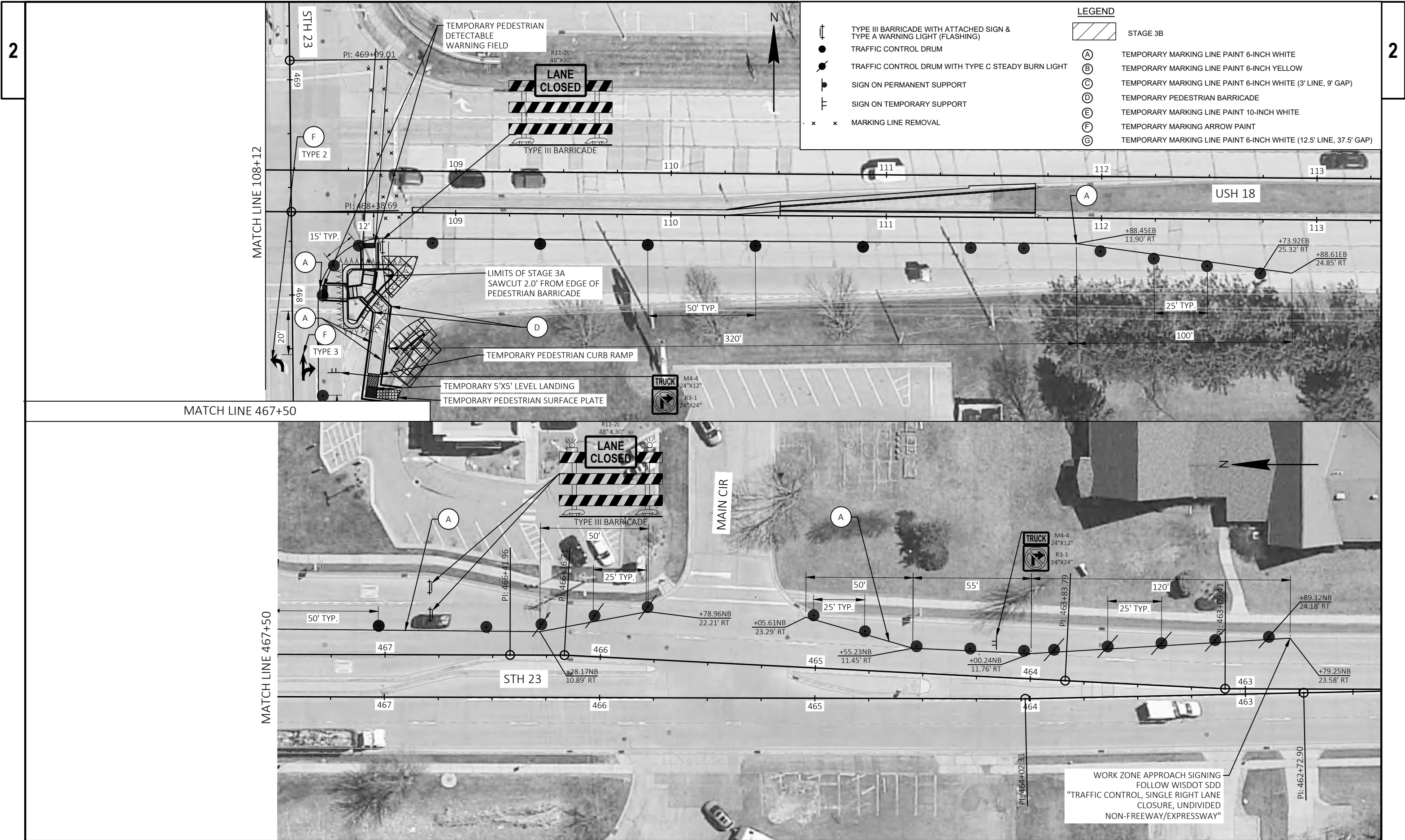


LEGEND

	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)		STAGE 2
	TRAFFIC CONTROL DRUM	(A)	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	(B)	TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
	SIGN ON PERMANENT SUPPORT	(C)	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
	SIGN ON TEMPORARY SUPPORT	(D)	TEMPORARY PEDESTRIAN BARRICADE
	MARKING LINE REMOVAL	(E)	TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
		(F)	TEMPORARY MARKING ARROW EPOXY
		(G)	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)

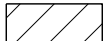






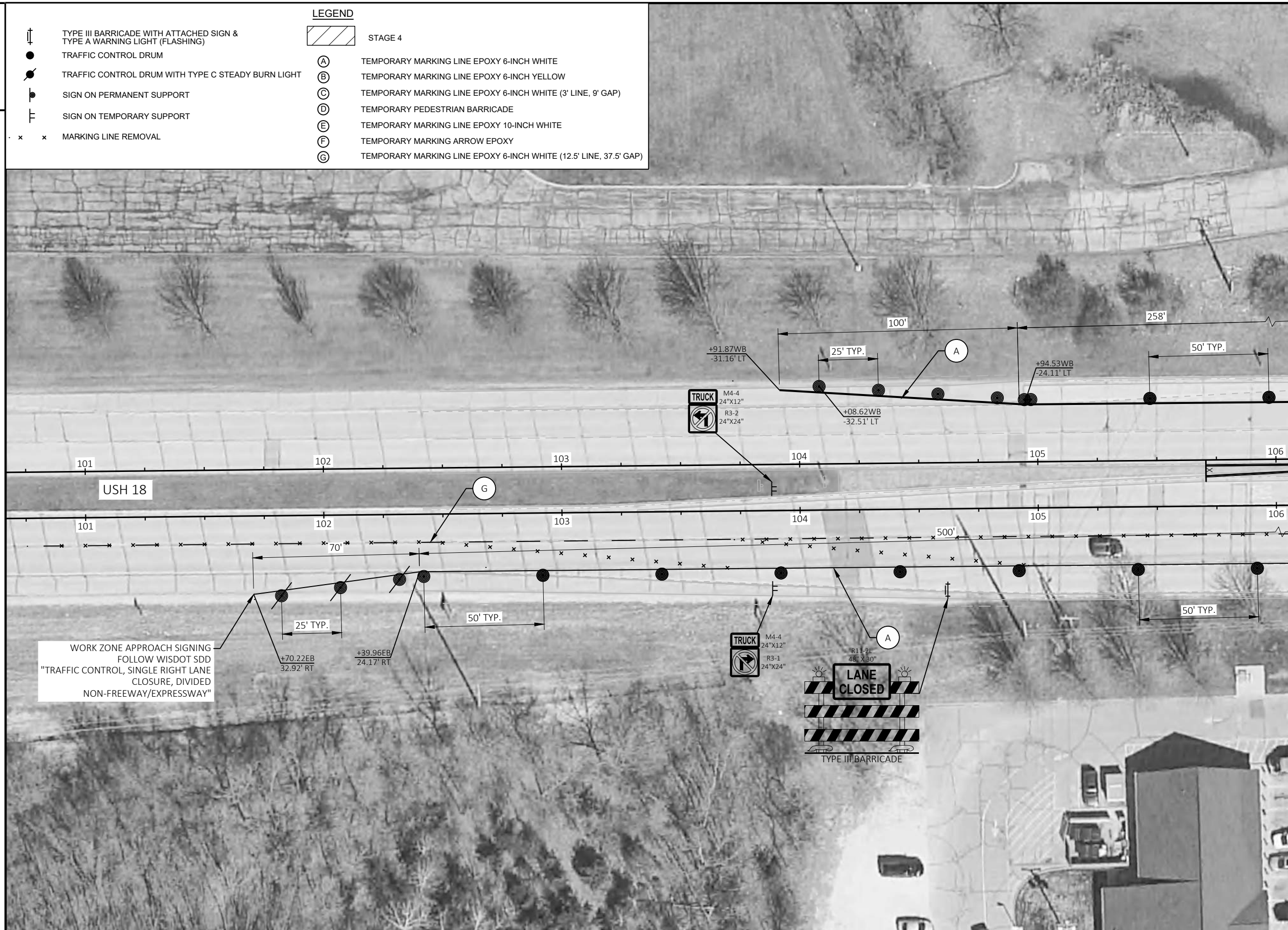
-  TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  MARKING LINE REMOVAL

LEGEND



STAGE 4

- (A) TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
- (B) TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
- (C) TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
- (D) TEMPORARY PEDESTRIAN BARRICADE
- (E) TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
- (F) TEMPORARY MARKING ARROW EPOXY
- (G) TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)



MATCH LINE 106+05

PROJECT NO: 1662-00-77

HWY: USH 18

COUNTY: IOWA

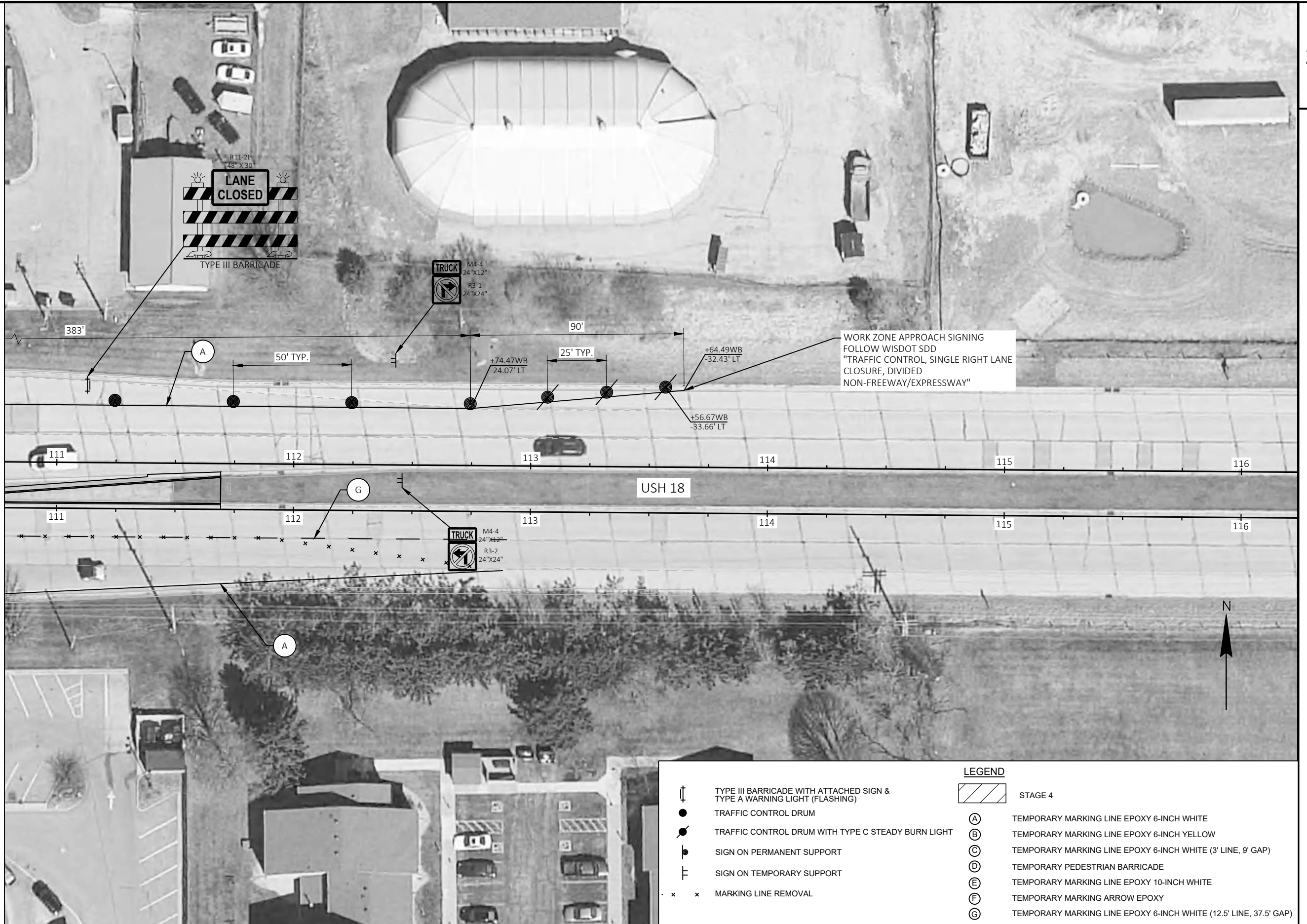
TRAFFIC CONTROL - STAGE 4 - STH 23

SHEET

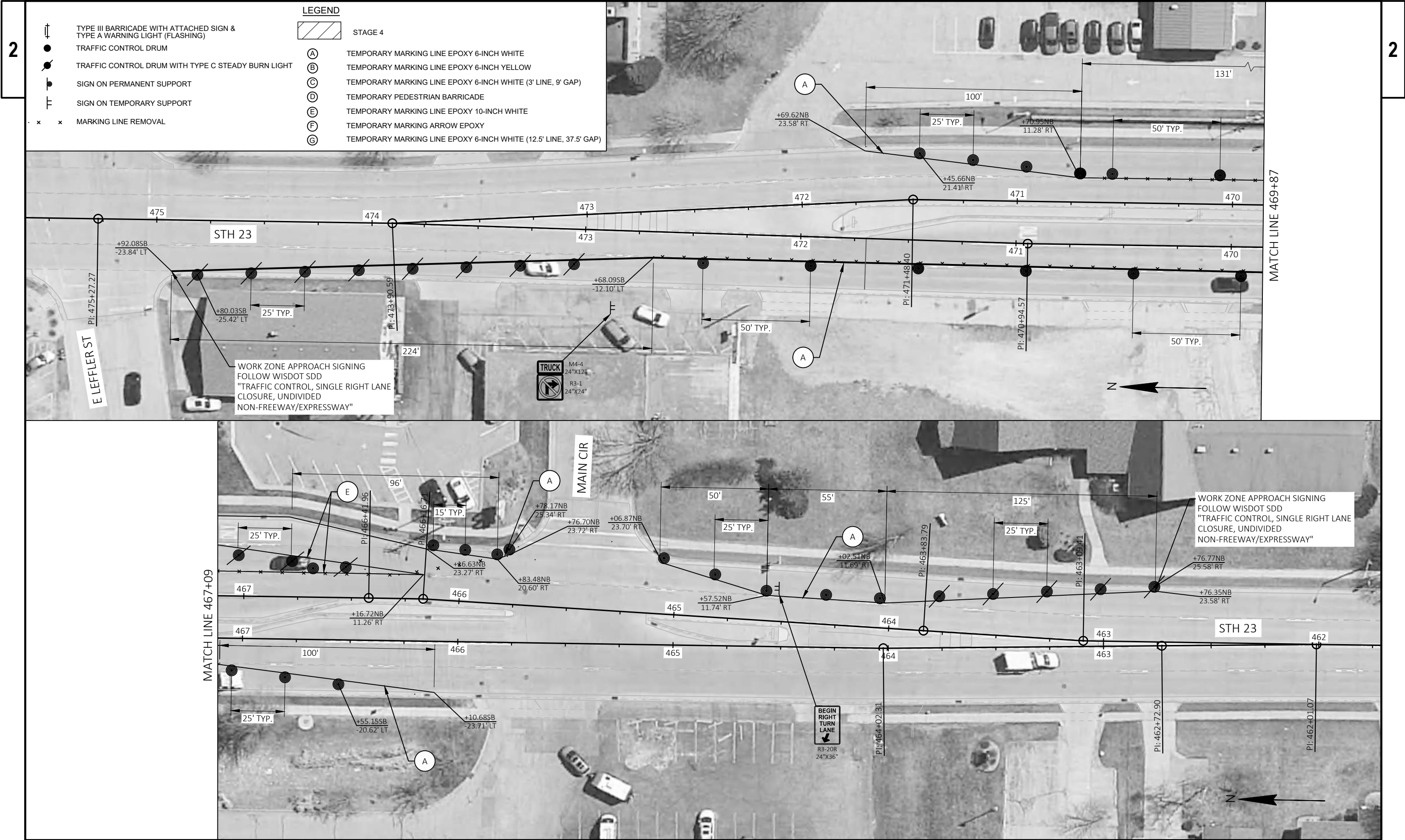
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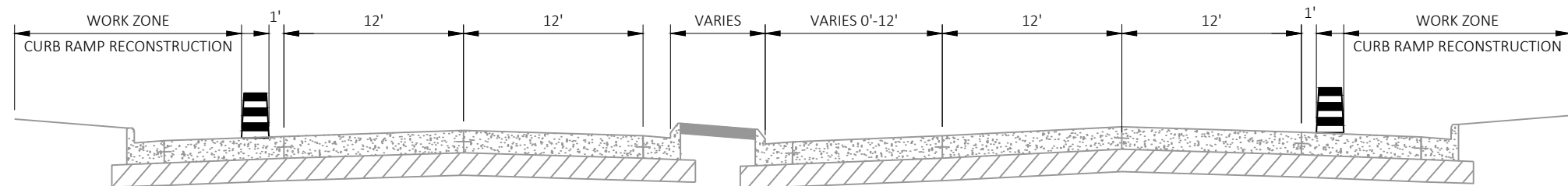
E

MATCH LINE 111+23



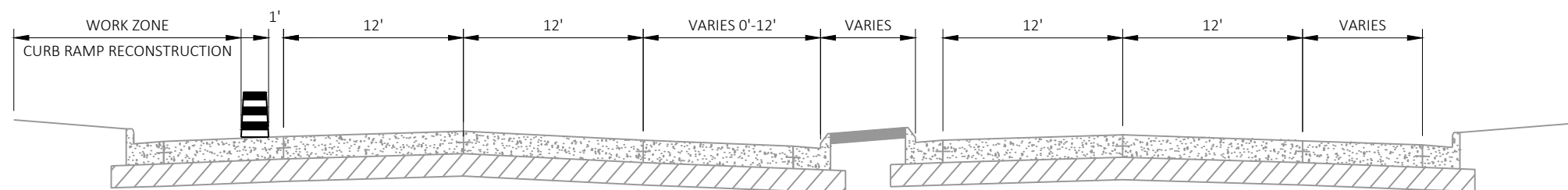
LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 4
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
	TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
	TEMPORARY PEDESTRIAN BARRICADE
	TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
	TEMPORARY MARKING ARROW EPOXY
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)





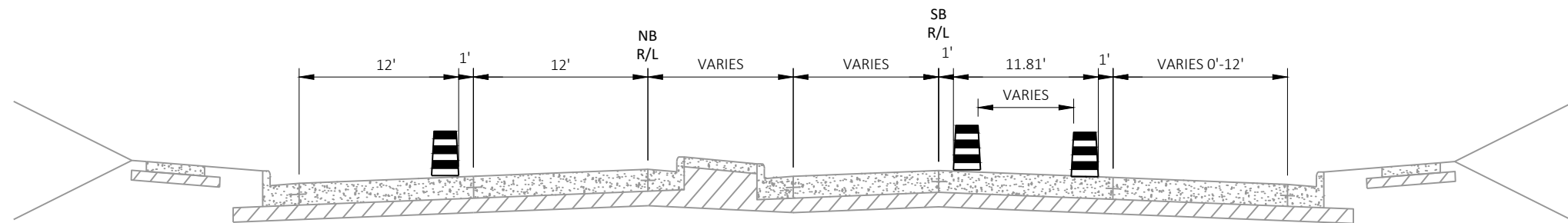
USH 18 STAGE 4 TYPICAL SECTION - OUTSIDE LANE CLOSURE

STA 101'EB'+70 - STA 107'EB'+50



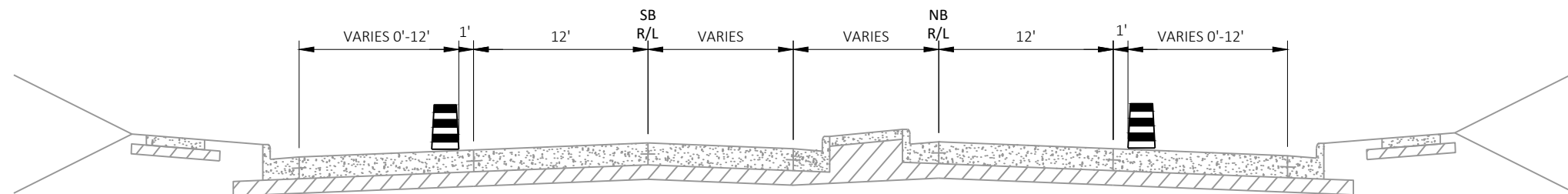
USH 18 STAGE 4 TYPICAL SECTION - OUTSIDE LANE CLOSURE

STA 108'EB'+70 - STA 113'EB'+65



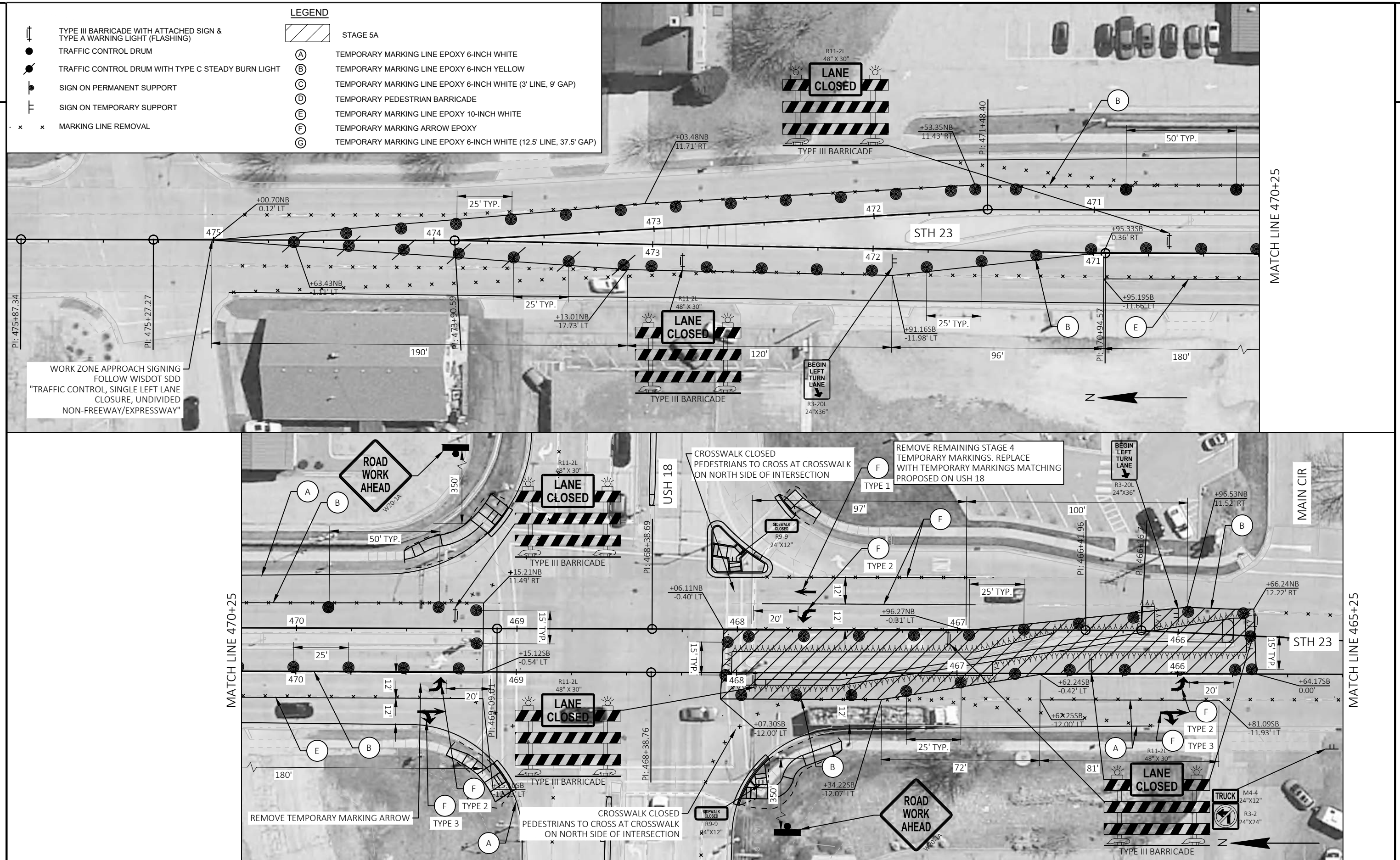
STH 23 STAGE 4 TYPICAL SECTION - OUTSIDE LANE CLOSURE

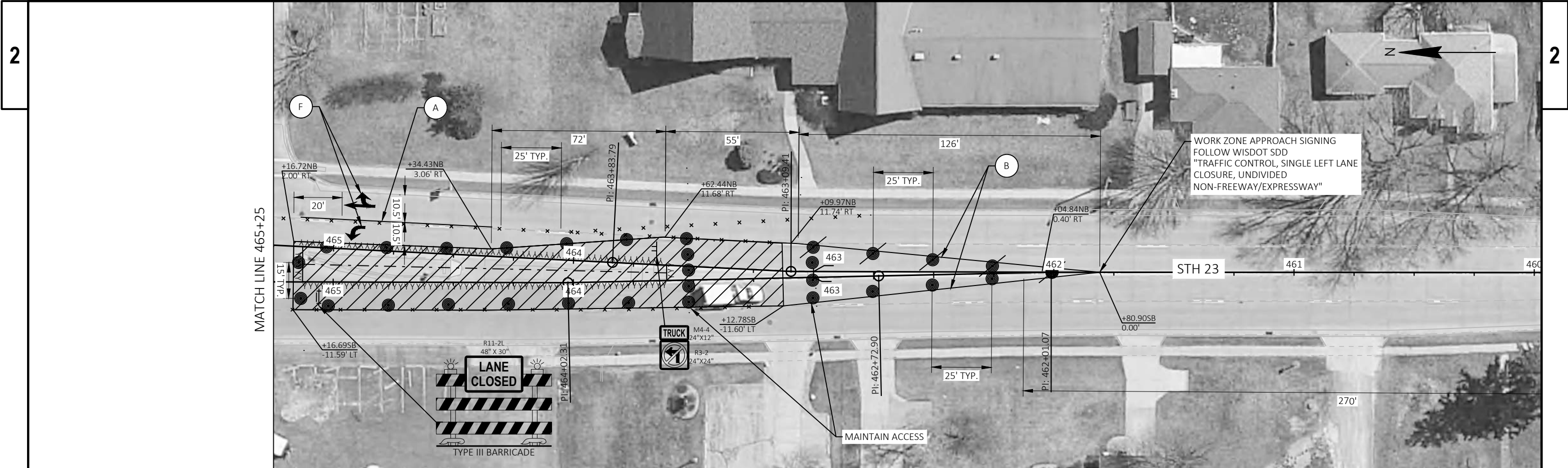
STA 462'NB'+76 - STA 468'NB'+00



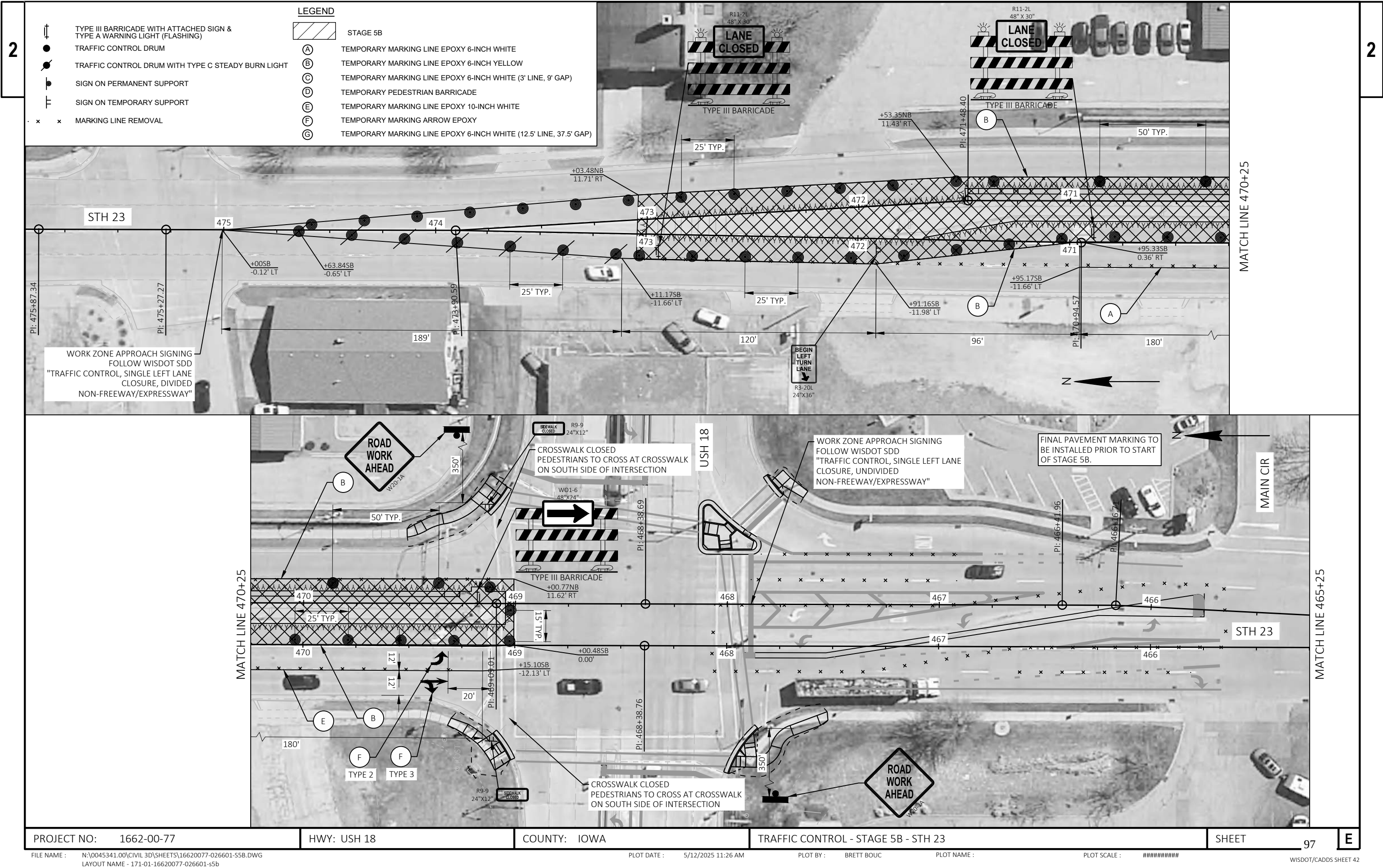
STH 23 STAGE 4 TYPICAL SECTION - OUTSIDE LANE CLOSURE

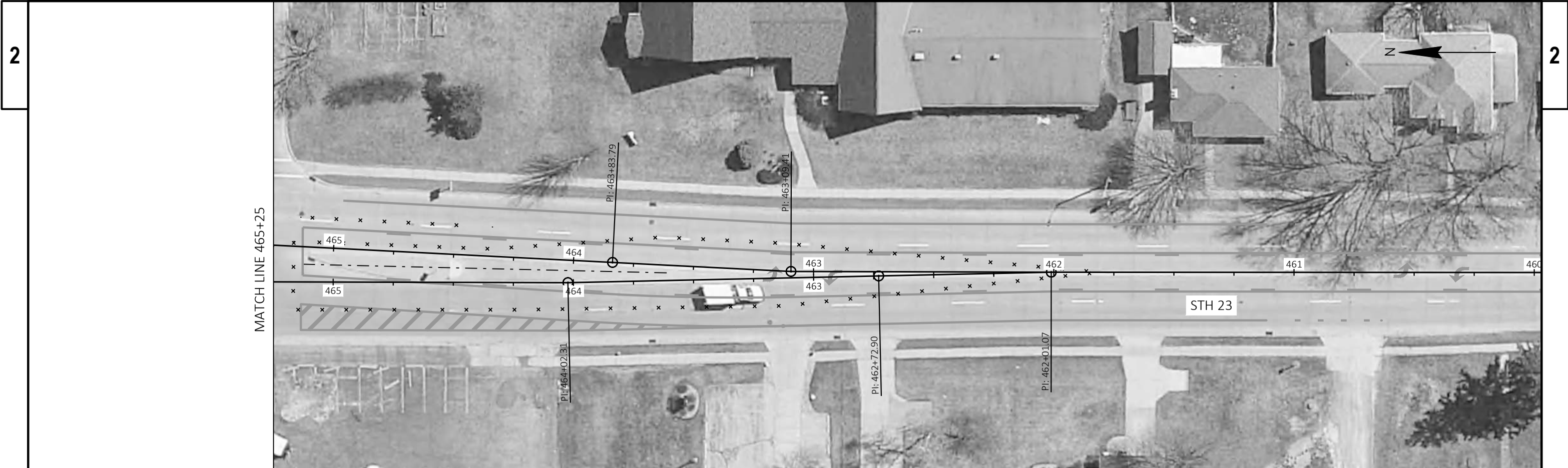
STA 469'NB'+00 - STA 474'NB'+93



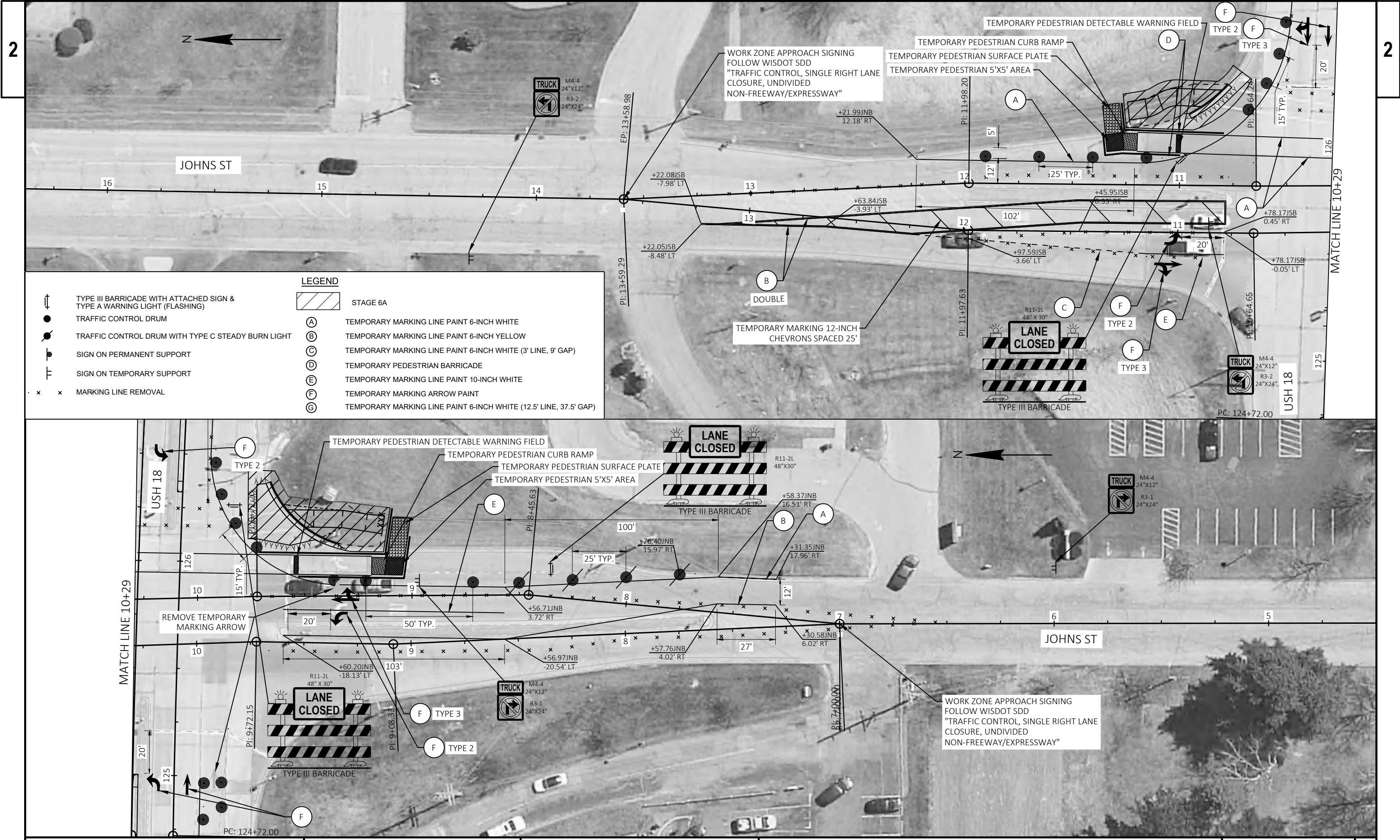


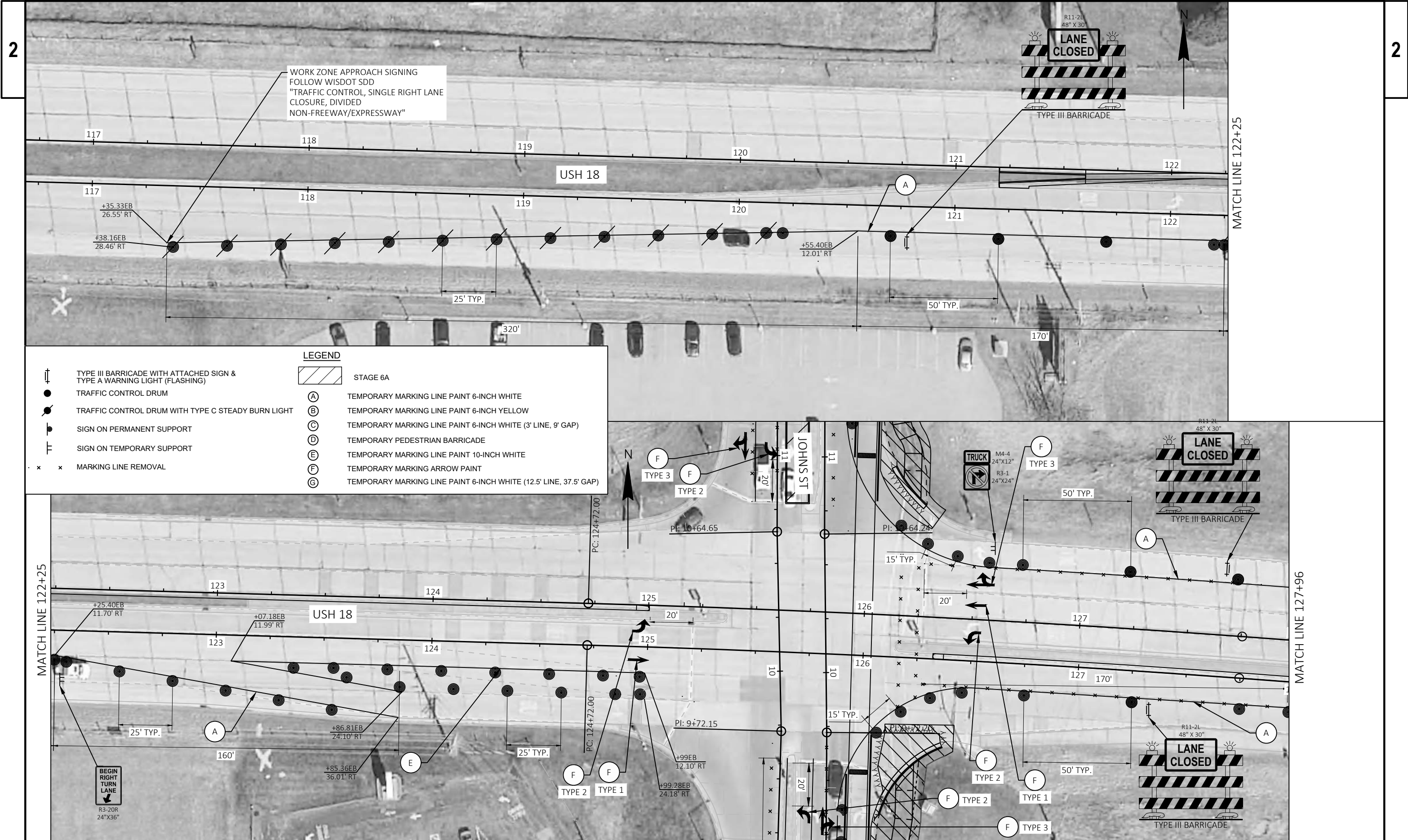
LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 5A
	(A) TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
	(B) TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
	(C) TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
	(D) TEMPORARY PEDESTRIAN BARRICADE
	(E) TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
	(F) TEMPORARY MARKING ARROW EPOXY
	(G) TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)





LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 5B
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE
	TEMPORARY MARKING LINE EPOXY 6-INCH YELLOW
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (3' LINE, 9' GAP)
	TEMPORARY PEDESTRIAN BARRICADE
	TEMPORARY MARKING LINE EPOXY 10-INCH WHITE
	TEMPORARY MARKING ARROW EPOXY
	TEMPORARY MARKING LINE EPOXY 6-INCH WHITE (12.5' LINE, 37.5' GAP)



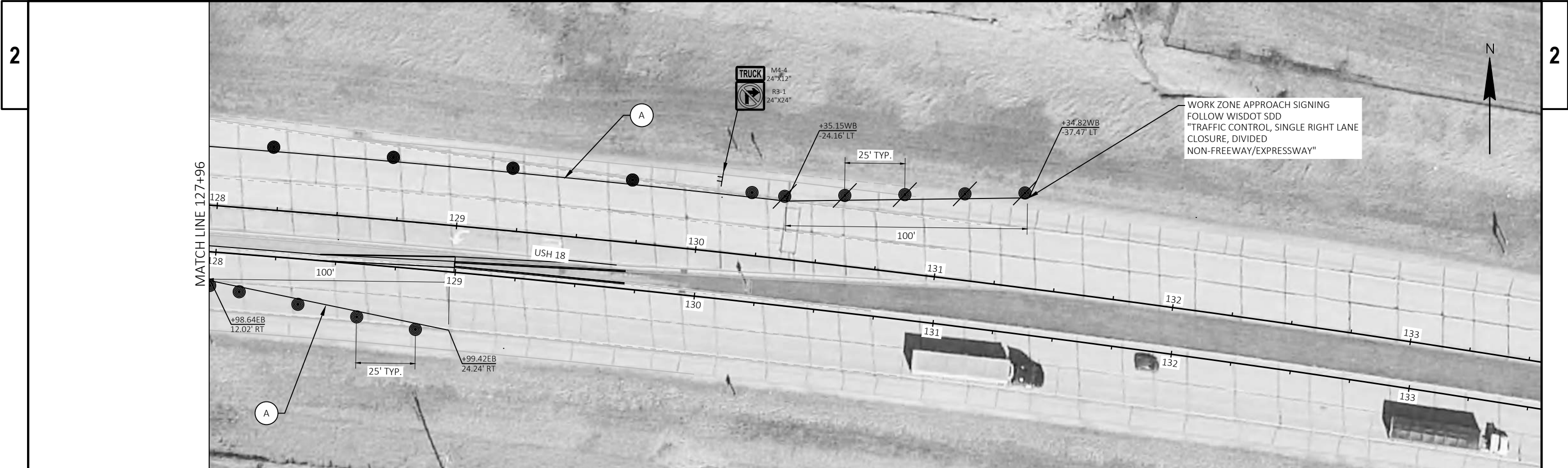


WORK ZONE APPROACH SIGNING
FOLLOW WISDOT SDD
"TRAFFIC CONTROL, SINGLE RIGHT LANE
CLOSURE, DIVIDED
NON-FREEWAY/EXPRESSWAY"

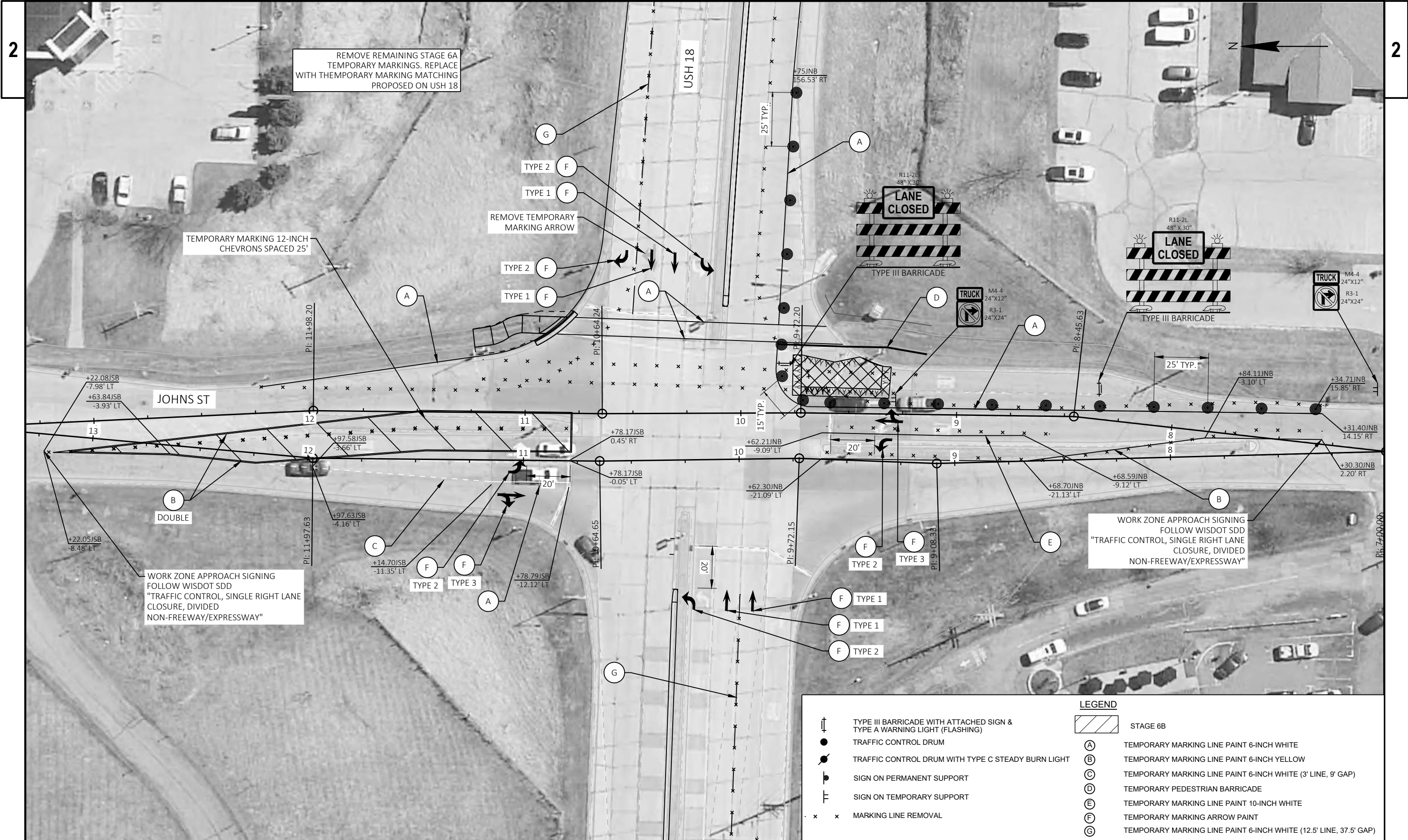
LEGEND

	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL

	STAGE 6A
(A)	TEMPORARY MARKING LINE PAINT 6-INCH WHITE
(B)	TEMPORARY MARKING LINE PAINT 6-INCH YELLOW
(C)	TEMPORARY MARKING LINE PAINT 6-INCH WHITE (3' LINE, 9' GAP)
(D)	TEMPORARY PEDESTRIAN BARRICADE
(E)	TEMPORARY MARKING LINE PAINT 10-INCH WHITE
(F)	TEMPORARY MARKING ARROW PAINT
(G)	TEMPORARY MARKING LINE PAINT 6-INCH WHITE (12.5' LINE, 37.5' GAP)



LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 6A
	TEMPORARY MARKING LINE PAINT 6-INCH WHITE
	TEMPORARY MARKING LINE PAINT 6-INCH YELLOW
	TEMPORARY MARKING LINE PAINT 6-INCH WHITE (3' LINE, 9' GAP)
	TEMPORARY PEDESTRIAN BARRICADE
	TEMPORARY MARKING LINE PAINT 10-INCH WHITE
	TEMPORARY MARKING ARROW PAINT
	TEMPORARY MARKING LINE PAINT 6-INCH WHITE (12.5' LINE, 37.5' GAP)



REMOVE REMAINING STAGE 6A
TEMPORARY MARKINGS. REPLACE
WITH TEMPORARY MARKING MATCHING
PROPOSED ON USH 18

TEMPORARY MARKING 12-INCH
CHEVRONS SPACED 25'

JOHNS ST

DOUBLE

WORK ZONE APPROACH SIGNING
FOLLOW WISDOT SDD
"TRAFFIC CONTROL, SINGLE RIGHT LANE
CLOSURE, DIVIDED
NON-FREEWAY/EXPRESSWAY"

REMOVE TEMPORARY
MARKING ARROW

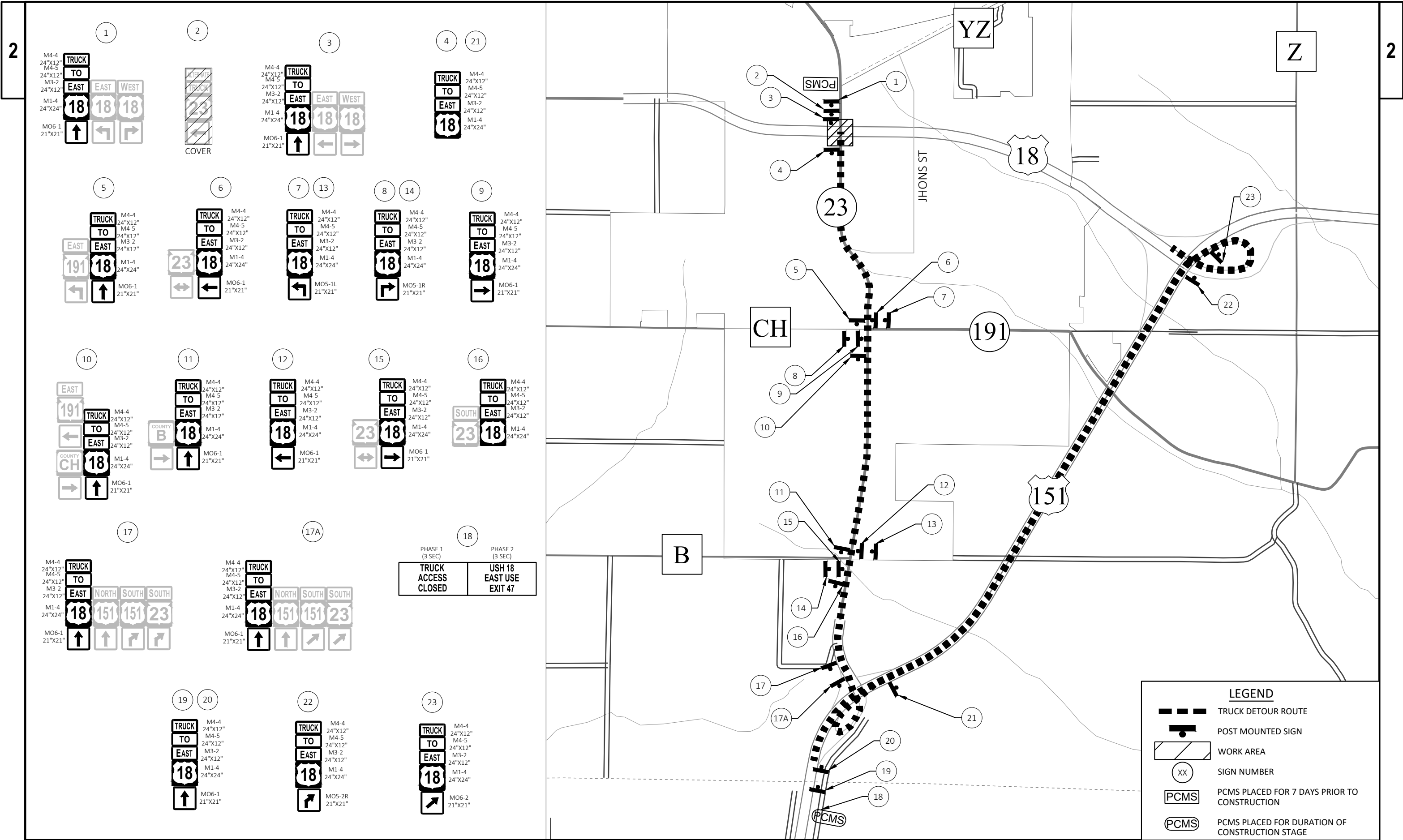
LANE
CLOSED

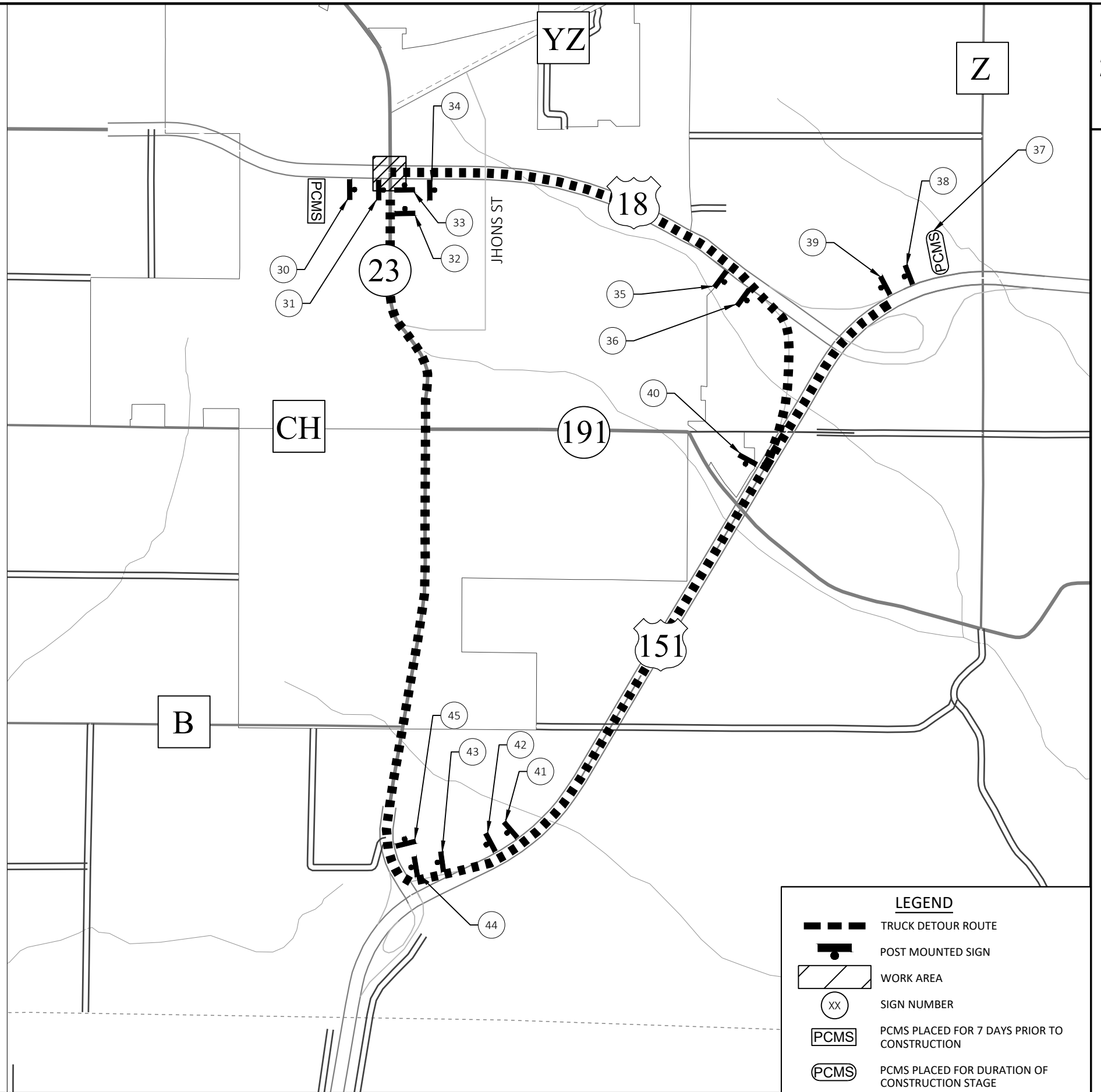
LANE
CLOSED

TRUCK
M4-4
24"x12"
R3-1
24"x24"

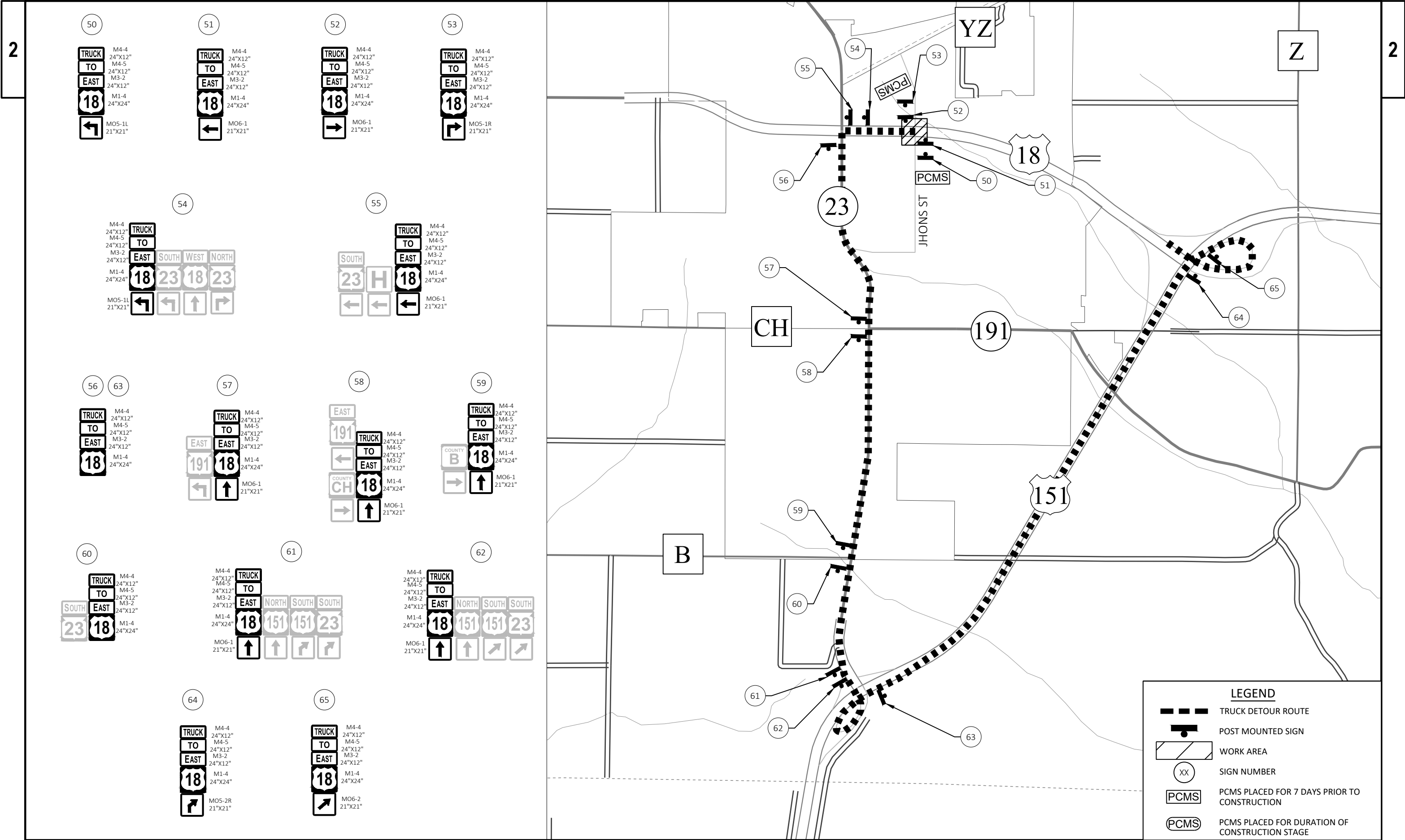
WORK ZONE APPROACH SIGNING
FOLLOW WISDOT SDD
"TRAFFIC CONTROL, SINGLE RIGHT LANE
CLOSURE, DIVIDED
NON-FREEWAY/EXPRESSWAY"

LEGEND	
	TYPE III BARRICADE WITH ATTACHED SIGN & TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	MARKING LINE REMOVAL
	STAGE 6B
(A)	TEMPORARY MARKING LINE PAINT 6-INCH WHITE
(B)	TEMPORARY MARKING LINE PAINT 6-INCH YELLOW
(C)	TEMPORARY MARKING LINE PAINT 6-INCH WHITE (3' LINE, 9' GAP)
(D)	TEMPORARY PEDESTRIAN BARRICADE
(E)	TEMPORARY MARKING LINE PAINT 10-INCH WHITE
(F)	TEMPORARY MARKING ARROW PAINT
(G)	TEMPORARY MARKING LINE PAINT 6-INCH WHITE (12.5' LINE, 37.5' GAP)





04



Estimate Of Quantities

					1662-00-77	1662-00-78	5255-01-74
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0002	204.0100	Removing Concrete Pavement	SY	910.000	795.000	115.000	
0004	204.0110	Removing Asphaltic Surface	SY	70.000		70.000	
0006	204.0150	Removing Curb & Gutter	LF	3,862.000	1,650.000	2,212.000	
0008	204.0155	Removing Concrete Sidewalk	SY	395.000	395.000		
0010	204.0195	Removing Concrete Bases	EACH	25.000	13.000	12.000	
0012	204.0220	Removing Inlets	EACH	12.000	8.000	4.000	
0014	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	39.000	34.000	5.000	
0016	204.0280	Sealing Pipes	EACH	1.000	1.000		
0018	204.9060.S	Removing (item description) 01. Remove Traffic Signals USH 18 & STH 23	EACH	1.000	1.000		
0020	204.9060.S	Removing (item description) 02. Remove Traffic Signals USH 18 & N Johns St)	EACH	1.000		1.000	
0022	205.0100	Excavation Common	CY	1,172.000	605.000	567.000	
0024	213.0100	Finishing Roadway (project) 01. 1662-00-77	EACH	1.000	1.000		
0026	213.0100	Finishing Roadway (project) 02. 1662-00-78	EACH	1.000		1.000	
0028	213.0100	Finishing Roadway (project) 03. 5525-01-74	EACH	1.000			1.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,589.000	803.000	786.000	
0032	415.1090	Concrete Pavement HES 9-Inch	SY	2,085.000	1,370.000	715.000	
0034	416.0610	Drilled Tie Bars	EACH	1,904.000	1,188.000	716.000	
0036	416.0620	Drilled Dowel Bars	EACH	193.000	143.000	50.000	
0038	455.0505	Asphaltic Material Seal Coat	GAL	180.000			180.000
0040	455.0605	Tack Coat	GAL	18.000		18.000	
0042	465.0105	Asphaltic Surface	TON	60.000		60.000	
0044	475.0100	Seal Coat	CY	36.000			36.000
0046	520.8000	Concrete Collars for Pipe	EACH	2.000	1.000	1.000	
0048	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	216.000	147.000	69.000	
0050	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	449.000	267.000	182.000	
0052	601.0454	Concrete Curb & Gutter Integral 30-Inch Type J	LF	132.000	92.000	40.000	
0054	601.0600	Concrete Curb Pedestrian	LF	37.000	37.000		
0056	602.0405	Concrete Sidewalk 4-Inch	SF	2,145.000	1,805.000	340.000	
0058	602.0415	Concrete Sidewalk 6-Inch	SF	980.000	320.000	660.000	
0060	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	80.000	80.000		
0062	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	49.000		49.000	
0064	602.1000	Concrete Loading Zone	SF	3,890.000	2,155.000	1,735.000	
0066	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	65.000	51.000	14.000	
0068	611.0410	Reconstructing Catch Basins	EACH	2.000	2.000		
0070	611.0530	Manhole Covers Type J	EACH	2.000	2.000		
0072	611.0606	Inlet Covers Type B	EACH	7.000	5.000	2.000	
0074	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000		
0076	611.0651	Inlet Covers Type S	EACH	1.000		1.000	
0078	611.3004	Inlets 4-FT Diameter	EACH	1.000		1.000	
0080	611.3220	Inlets 2x2-FT	EACH	7.000	5.000	2.000	
0082	611.3230	Inlets 2x3-FT	EACH	1.000	1.000		
0084	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1662-00-77	EACH	1.000	1.000		
0086	618.0100	Maintenance and Repair of Haul Roads (project) 02. 1662-00-78	EACH	1.000		1.000	
0088	618.0100	Maintenance and Repair of Haul Roads (project) 03. 5255-01-74	EACH	1.000			1.000
0090	619.1000	Mobilization	EACH	1.000	0.350	0.350	0.300
0092	620.0300	Concrete Median Sloped Nose	SF	139.000	114.000	25.000	
0094	624.0100	Water	MGAL	15.900	8.000	7.900	
0096	625.0100	Topsoil	SY	155.000	95.000	60.000	
0098	628.1504	Silt Fence	LF	177.000	104.000	73.000	

Estimate Of Quantities

					1662-00-77	1662-00-78	5255-01-74
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0100	628.1520	Silt Fence Maintenance	LF	177.000	104.000	73.000	
0102	628.1905	Mobilizations Erosion Control	EACH	4.000	2.000	2.000	
0104	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	1.000	1.000	
0106	628.2006	Erosion Mat Urban Class I Type A	SY	155.000	95.000	60.000	
0108	628.7015	Inlet Protection Type C	EACH	15.000	9.000	6.000	
0110	628.7020	Inlet Protection Type D	EACH	8.000	8.000		
0112	629.0210	Fertilizer Type B	CWT	0.100	0.070	0.030	
0114	630.0140	Seeding Mixture No. 40	LB	2.900	1.800	1.100	
0116	630.0500	Seed Water	MGAL	4.000	3.000	1.000	
0118	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	5.000	4.000	1.000	
0120	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	2.000	2.000		
0122	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	1.000		1.000	
0124	637.2210	Signs Type II Reflective H	SF	177.510	127.010	50.500	
0126	638.2602	Removing Signs Type II	EACH	31.000	20.000	11.000	
0128	638.3000	Removing Small Sign Supports	EACH	10.000	8.000	2.000	
0130	642.5201	Field Office Type C	EACH	1.000	0.330	0.330	0.340
0132	643.0300	Traffic Control Drums	DAY	9,975.000	6,728.000	3,247.000	
0134	643.0420	Traffic Control Barricades Type III	DAY	704.000	441.000	263.000	
0136	643.0705	Traffic Control Warning Lights Type A	DAY	1,384.000	858.000	526.000	
0138	643.0715	Traffic Control Warning Lights Type C	DAY	1,930.000	1,355.000	575.000	
0140	643.0810	Traffic Control Connected Arrow Boards	DAY	263.000	185.000	78.000	
0142	643.0900	Traffic Control Signs	DAY	9,399.000	6,700.000	2,699.000	
0144	643.0920	Traffic Control Covering Signs Type II	EACH	8.000	8.000		
0146	643.1050	Traffic Control Signs PCMS	DAY	188.000	118.000	70.000	
0148	643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY	263.000	185.000	78.000	
0150	643.3165	Temporary Marking Line Paint 6-Inch	LF	30,500.000	16,290.000	14,210.000	
0152	643.3265	Temporary Marking Line Paint 10-Inch	LF	5,580.000	2,680.000	2,900.000	
0154	643.3305	Temporary Marking Crosswalk Paint 6-inch	LF	2,490.000	1,330.000	1,160.000	
0156	643.3505	Temporary Marking Arrow Paint	EACH	34.000	22.000	12.000	
0158	643.3905	Temporary Marking Diagonal Paint 12-Inch	LF	270.000		270.000	
0160	643.5000	Traffic Control	EACH	1.000	0.530	0.410	0.060
0162	644.1430	Temporary Pedestrian Surface Plate	SF	499.000	234.000	265.000	
0164	644.1601	Temporary Pedestrian Curb Ramp	DAY	90.000	68.000	22.000	
0166	644.1605	Temporary Pedestrian Detectable Warning Field	SF	170.000	90.000	80.000	
0168	644.1810	Temporary Pedestrian Barricade	LF	1,314.000	924.000	390.000	
0170	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	24,250.000	2,120.000	3,040.000	19,090.000
0172	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	5,460.000	1,900.000	1,970.000	1,590.000
0174	646.5020	Marking Arrow Epoxy	EACH	41.000	10.000	8.000	23.000
0176	646.5120	Marking Word Epoxy	EACH	6.000	3.000	2.000	1.000
0178	646.6120	Marking Stop Line Epoxy 18-Inch	LF	622.000	243.000	228.000	151.000
0180	646.7120	Marking Diagonal Epoxy 12-Inch	LF	540.000	233.000		307.000
0182	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	1,066.000	817.000	249.000	
0184	646.8120	Marking Curb Epoxy	LF	213.000	147.000	66.000	
0186	646.8205	Marking Island Nose Paint	EACH	8.000	6.000	2.000	
0188	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	16,060.000	1,310.000	1,000.000	13,750.000
0190	646.9012	Marking Removal Line Water Blasting 6-Inch	LF	17,180.000	8,640.000	8,540.000	
0192	646.9110	Marking Removal Line Water Blasting 8-Inch	LF	1,750.000	650.000	1,000.000	100.000
0194	646.9112	Marking Removal Line Water Blasting 10-Inch	LF	2,730.000	1,570.000	1,160.000	
0196	646.9210	Marking Removal Line Water Blasting Wide	LF	100.000		100.000	

Estimate Of Quantities

					1662-00-77	1662-00-78	5255-01-74
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0198	646.9310	Marking Removal Special Marking Water Blasting	EACH	8.000	3.000	5.000	
0200	650.4000	Construction Staking Storm Sewer	EACH	9.000	6.000	3.000	
0202	650.4500	Construction Staking Subgrade	LF	1,745.000	960.000	785.000	
0204	650.7000	Construction Staking Concrete Pavement	LF	1,745.000	960.000	785.000	
0206	650.8501	Construction Staking Electrical Installations (project) 01. 1662-00-77	EACH	1.000	1.000		
0208	650.8501	Construction Staking Electrical Installations (project) 02. 1662-00-78	EACH	1.000		1.000	
0210	650.9000	Construction Staking Curb Ramps	EACH	10.000	8.000	2.000	
0212	650.9500	Construction Staking Sidewalk (project) 01. 1662-00-77	EACH	1.000	1.000		
0214	650.9500	Construction Staking Sidewalk (project) 02. 1662-00-78	EACH	1.000		1.000	
0216	650.9911	Construction Staking Supplemental Control (project) 01. 1662-00-77	EACH	1.000	1.000		
0218	650.9911	Construction Staking Supplemental Control (project) 02. 1662-00-78	EACH	1.000		1.000	
0220	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	325.000	113.000	212.000	
0222	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	796.000	377.000	419.000	
0224	652.0615	Conduit Special 3-Inch	LF	1,662.000	844.000	818.000	
0226	652.0700.S	Install Conduit into Existing Item	EACH	6.000	2.000	4.000	
0228	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	16.000	8.000	8.000	
0230	653.0905	Removing Pull Boxes	EACH	31.000	18.000	13.000	
0232	654.0101	Concrete Bases Type 1	EACH	13.000	8.000	5.000	
0234	654.0113	Concrete Bases Type 13	EACH	6.000	4.000	2.000	
0236	654.0120	Concrete Bases Type 10-Special	EACH	2.000		2.000	
0238	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	2.000	1.000	1.000	
0240	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,984.000	1,041.000	943.000	
0242	655.0250	Cable Traffic Signal 9-14 AWG	LF	271.000		271.000	
0244	655.0260	Cable Traffic Signal 12-14 AWG	LF	4,284.000	2,541.000	1,743.000	
0246	655.0305	Cable Type UF 2-12 AWG Grounded	LF	1,267.000	767.000	500.000	
0248	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2,666.000	1,389.000	1,277.000	
0250	655.0610	Electrical Wire Lighting 12 AWG	LF	1,200.000	600.000	600.000	
0252	655.0700	Loop Detector Lead In Cable	LF	5,715.000	3,244.000	2,471.000	
0254	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. (USH 18 & STH 23)	EACH	1.000	1.000		
0256	656.0201	Electrical Service Meter Breaker Pedestal (location) 02. (USH 18 & Johns St)	EACH	1.000		1.000	
0258	657.0100	Pedestal Bases	EACH	13.000	8.000	5.000	
0260	657.0352	Poles Type 10-Special	EACH	2.000		2.000	
0262	657.0360	Poles Type 13	EACH	4.000	2.000	2.000	
0264	657.0361	Poles Type 13-Over Height	EACH	2.000	2.000		
0266	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	3.000	1.000	2.000	
0268	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	7.000	5.000	2.000	
0270	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	3.000	2.000	1.000	
0272	657.0545	Monotube Arms 45-FT	EACH	1.000	1.000		
0274	657.0546	Monotube Arms 45-FT-Special	EACH	2.000		2.000	
0276	657.0550	Monotube Arms 50-FT	EACH	2.000	2.000		
0278	657.0555	Monotube Arms 55-FT	EACH	3.000	1.000	2.000	
0280	657.0820	Luminaire Arms Steel Type 10 Pole Clamp 15-FT	EACH	2.000		2.000	
0282	657.0825	Luminaire Arms Steel Type 13 Pole Clamp 15-FT	EACH	6.000	4.000	2.000	
0284	658.0173	Traffic Signal Face 3S 12-Inch	EACH	28.000	12.000	16.000	
0286	658.0174	Traffic Signal Face 4S 12-Inch	EACH	12.000	8.000	4.000	
0288	658.0416	Pedestrian Signal Face 16-Inch	EACH	10.000	8.000	2.000	
0290	658.5070	Signal Mounting Hardware (location) 01. (USH 18 & STH 23)	EACH	1.000	1.000		
0292	658.5070	Signal Mounting Hardware (location) 02. (USH 18 & Johns St)	EACH	1.000		1.000	
0294	659.1115	Luminaires Utility LED A	EACH	8.000	4.000	4.000	

Estimate Of Quantities

					1662-00-77	1662-00-78	5255-01-74
Line	Item	Item Description	Unit	Total	Qty	Qty	Qty
0296	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	8.000	4.000	4.000	
0298	661.0201	Temporary Traffic Signals for Intersections (location) 01. USH 18 & STH 23	EACH	1.000	1.000		
0300	661.0201	Temporary Traffic Signals for Intersections (location) 02. USH 18 and Johns St	EACH	1.000		1.000	
0302	690.0150	Sawing Asphalt	LF	16.000		16.000	
0304	690.0250	Sawing Concrete	LF	4,860.000	2,955.000	1,905.000	
0306	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000		
0308	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000		
0310	SPV.0060	Special 01. Install State Furnished APS Push Buttons	EACH	10.000	8.000	2.000	
0312	SPV.0060	Special 02. Salvage Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	8.000	4.000	4.000	
0314	SPV.0060	Special 03. Salvage & Reinstall Traffic Signal Comm. Equipment (USH 18 & STH 23)	EACH	1.000	1.000		
0316	SPV.0060	Special 04. Salvage & Reinstall Traffic Signal Comm. Equipment (USH 18 & Johns St)	EACH	1.000		1.000	
0318	SPV.0060	Special 05. Transport & Install St Furn Traffic Signal Cab. & Cont (USH 18 & STH 23)	EACH	1.000	1.000		
0320	SPV.0060	Special 06. Transport & Install St Furn Traffic Signal Cab. & Cont (USH 18 & Johns St)	EACH	1.000		1.000	
0322	SPV.0060	Special 07. Install St Furn Non-Intrusive Video Detection System (USH 18 & STH 23)	EACH	1.000	1.000		
0324	SPV.0060	Special 08. Install St Furn Non-Intrusive Video Detection System (USH 18 & John St)	EACH	1.000		1.000	
0326	SPV.0060	Special 09. Install St Furn Non-Intrusive Video Detection System (STH 23 & CTH YZ)	EACH	1.000			1.000
0328	SPV.0090	Special 01. Install State Furnished Cat-5e Cable	LF	3,510.000	1,096.000	1,095.000	1,319.000
0330	SPV.0090	Special 02. Foundation Drilling 42-Inch Diameter	LF	37.000	8.000	29.000	
0332	SPV.0090	Special 03. Foundation Drilling 36-Inch Diameter	LF	35.000		35.000	
0334	SPV.0125	Special 01. Prepare Existing Pavement for Asphaltic Seal Coat	MI	0.090			0.090
0336	SPV.0180	Special 01. Concrete Pavement SHES 9-Inch	SY	7.000	7.000		
0338	SPV.0195	Special 01. Excavation, Hauling, Dewatering, and Disposal of Petroleum Contaminated Soil	TON	2.200	2.200		
0340	SPV.0195	Special 02. Excavation, Hauling, Dewatering, and Disposal of Lead Contaminated Soil	TON	5.100	5.100		

REMOVING CONCRETE PAVEMENT

STATION TO STATION			ROADWAY	204.0100 REMOVING CONCRETE PAVEMENT SY	COMMENT
PROJECT 1662-00-77					
106+50	-	107+65	USH 18 EB	165	W MEDIAN
109+18	-	109+26	USH 18 EB	5	E MEDIAN AT INLET REMOVAL
107+26	-	107+35	USH 18 WB	5	W MEDIAN AT INLET REMOVAL
109+18	-	109+26	USH 18 WB	5	E MEDIAN AT INLET REMOVAL
463+61	-	464+46	STH 23 NB	85	MEDIAN
465+69	-	466+17	STH 23 NB	45	NB LT TURN LANE MEDIAN
469+05	-	471+50	STH 23 NB	235	N MEDIAN
471+85	-	473+00	STH 23 NB	145	N CORRUGATED RUMBLE STRIPS
464+82	-	465+13	STH 23 SB	20	MEDIAN
466+84	-	468+03	STH 23 SB	85	MEDAIN
PROJECT TOTAL				795	
PROJECT 1662-00-78					
125+15	-	125+25	USH 18 EB	10	W MEDIAN AT INLET REMOVALS
125+90	-	126+35	USH 18 EB	105	SE QUAD
PROJECT TOTAL				115	

CONTRACT TOTAL 910

REMOVING CONCRETE SIDEWALK

STATION TO STATION			ROADWAY	204.0155 REMOVING CONCRETE SIDEWALK SY	COMMENT
PROJECT 1662-00-77					
464+50	-	465+10	STH 23 NB	40	MEDIAN
465+75	-	468+00	STH 23 NB	90	MEDIAN
469+15	-	471+50	STH 23 NB	120	MEDIAN
471+50	-	471+90	STH 23 NB	35	MEDIAN
107+50		107+75	USH 18 WB	15	NW QUAD
108+60	-	108+80	USH 18 WB	25	NE QUAD
108+50	-	109+00	USH 18 EB	35	SE ISLAND
108+50	-	109+00	USH 18 EB	10	SE QUAD
107+50	-	107+75	USH 18 EB	25	SW QUAD
PROJECT TOTAL				395	

CONTRACT TOTAL 395

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

REMOVING ASPHALTIC SURFACE

STATION TO STATION			ROADWAY	204.0110 REMOVING ASPHALTIC SURFACE SY	COMMENT
PROJECT 1662-00-78					
126+10	-	126+30	USH 18 WB	30	NE QUAD
126+10	-	126+30	USH 18 EB	40	SE QUAD
PROJECT TOTALS				70	

CONTRACT TOTAL 70

REMOVING CURB AND GUTTER

STATION TO STATION			DIR	ROADWAY	204.0150 REMOVING CURB AND GUTTER LF	COMMENT
PROJECT 1662-00-77						
105+70	-	106+50	LT	USH 18 EB	80	
108+71	-	109+18	LT	USH 18 EB	47	
109+26	-	111+69	LT	USH 18 EB	243	
105+70	-	107+26	RT	USH 18 WB	156	
107+35	-	107+54	RT	USH 18 WB	19	
108+71	-	109+17	RT	USH 18 WB	46	
109+26	-	111+69	RT	USH 18 WB	243	
464+46	-	465+11	LT	STH 23 NB	65	
466+16	-	467+98	LT	STH 23 NB	182	
471+50	-	471+81	LT	STH 23 NB	31	
464+46	-	464+82	RT	STH 23 SB	36	
465+74	-	466+84	RT	STH 23 SB	110	
469+15	-	471+81	RT	STH 23 SB	266	
107+50		107+75	LT	USH 18 WB	15	NW QUAD CURB
108+60	-	108+80	LT	USH 18 WB	15	NE QUAD CURB
108+50	-	109+00	RT	USH 18 EB	58	SE QUAD ISLAND
108+50	-	109+00	RT	USH 18 EB	12	SE QUAD CURB
107+50	-	107+75	RT	USH 18 EB	26	SW QUAD CURB
PROJECT TOTAL					1,650	
PROJECT 1662-00-78						
121+10	-	125+35	LT & RT	USH 18 EB	819	RDWY MEDIAN CURB
126+10	-	129+70	LT & RT	USH 18 EB	714	RDWY MEDIAN CURB
7+60	-	9+60	LT & RT	Johns St NB	407	RDWY MEDIAN CURB
10+75	-	12+00	LT & RT	Johns St NB	249	RDWY MEDIAN CURB
126+10	-	126+30	RT	USH 18 WB	23	NE QUAD CURB
PROJECT TOTAL					2,212	

CONTRACT TOTALS 3,862

REMOVING STORM SEWER STRUCTURES

STATION TO STATION			ROADWAY	204.0220 REMOVING INLETS EA	204.0280 SEALING PIPES EA	COMMENT
PROJECT 1662-00-77						
107+25	-	109+25	USH 18	3	--	MEDIAN AND ISLAND
465+00	-	465+25	STH 23	1	1	MEDIAN
466+00	-	471+25	STH 23	4	--	MEDIAN
PROJECT TOTAL				8	1	
PROJECT 1662-00-78						
122+90	-	126+50	USH 18	4	--	MEDIAN
PROJECT TOTAL				4	0	
CONTRACT TOTALS				12	1	

REMOVING STORM SEWER

STATION TO STATION			ROADWAY	204.0245.01 12-INCH LF	COMMENT
PROJECT 1662-00-77					
107+25	-	107+35	USH 18 EB	6	MEDIAN INLETS
465+00	-	469+25	STH 23 NB	28	MEDIAN AND RT INLETS
PROJECT TOTAL				34	
CONTRACT 1662-00-78					
122+90	-	125+30	USH 18 EB	5	MEDIAN INLETS
PROJECT TOTAL				5	
CONTRACT TOTALS				39	

EARTHWORK QUANTITIES

STATION TO STATION			ROADWAY	ROADWAY PAVEMENT SECTION	205.0100 EXCAVATION COMMON CY
PROJECT 1662-00-77					
105+50	-	107+50	USH 18 EB	RDWY MEDIAN	120
108+70	-	111+70	USH 18 EB	RDWY MEDIAN	180
463+60	-	464+45	STH 23 NB	RDWY MEDIAN	40
465+65	-	468+00	STH 23 NB	RDWY MEDIAN	80
469+15	-	471+50	STH 23 NB	RDWY MEDIAN	130
471+50	-	473+00	STH 23 NB	RDWY MEDIAN	25
107+50		107+75	USH 18 WB	NW QUAD	4
108+60	-	108+80	USH 18 WB	NE QUAD	6
108+50	-	109+00	USH 18 EB	SE QUAD ISLAND	10
108+50	-	109+00	USH 18 EB	SE QUAD	2
107+50	-	107+75	USH 18 EB	SW QUAD	7
PROJECT TOTAL					605
PROJECT 1662-00-78					
121+10	-	125+35	USH 18 EB	RDWY MEDIAN	200
126+10	-	129+70	USH 18 EB	RDWY MEDIAN	180
126+10	-	126+30	USH 18 WB	NE QUAD	7
126+10	-	126+30	USH 18 EB	SE QUAD	30
7+60	-	9+20	Johns St NB	RDWY MEDIAN	65
9+20	-	9+65	Johns St NB	RDWY MEDIAN	20
10+70	-	11+15	Johns St NB	RDWY MEDIAN	20
11+15	-	12+00	Johns St NB	RDWY MEDIAN	45
PROJECT TOTAL					567
CONTRACT TOTAL					1,172

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

BASE AGGREGATE DENSE

STATION TO STATION			ROADWAY	ROADWAY PAVEMENT SECTION	305.0120			624.0100
					BASE AGGREGATE DENSE			WATER
					1 1/4-INCH			
					ROADWAY TON	SIDEWALK TON	C&G TON	MGAL
PROJECT 1662-00-77								
105+50	-	107+50	USH 18 EB	RDWY MEDIAN	166	7	---	1.7
108+70	-	111+70	USH 18 EB	RDWY MEDIAN	154	19	---	1.7
463+60	-	464+45	STH 23 NB	RDWY MEDIAN CURB	64	---	---	0.6
465+75	-	468+00	STH 23 NB	RDWY MEDIAN	103	---	---	1.0
469+15	-	471+50	STH 23 NB	RDWY MEDIAN	149	---	---	1.5
471+50	-	473+00	STH 23 NB	RDWY MEDIAN CURB	72	---	---	0.7
107+50		107+75	USH 18 WB	NW QUAD	---	7	4	0.1
108+60	-	108+80	USH 18 WB	NE QUAD	---	11	4	0.2
108+50	-	109+00	USH 18 EB	SE QUAD ISLAND	---	7	12	0.2
108+50	-	109+00	USH 18 EB	SE QUAD	---	3	3	0.1
107+50	-	107+75	USH 18 EB	SW QUAD	---	11	7	0.2
PROJECT TOTAL					708	65	30	8.0
PROJECT 1662-00-78								
121+10	-	125+35	USH 18 EB	RDWY MEDIAN CURB	232	---	---	2.3
126+10	-	129+70	USH 18 EB	RDWY MEDIAN CURB	196	---	---	2.0
126+10	-	126+30	USH 18 WB	NE QUAD	---	16	6	0.2
126+10	-	126+30	USH 18 EB	SE QUAD	50	16	39	1.1
7+60	-	9+20	Johns St NB	RDWY MEDIAN CURB	112	---	---	1.1
9+20	-	9+65	Johns St NB	RDWY MEDIAN CURB	24	---	---	0.2
10+70	-	11+15	Johns St NB	RDWY MEDIAN CURB	26	---	---	0.3
11+15	-	12+00	Johns St NB	RDWY MEDIAN CURB	69	---	---	0.7
PROJECT TOTAL					709	32	45	7.9

CONTRACT TOTALS	1,417	97	75	
CONTRACT TOTAL		1,589		15.9

ASPHALTIC SURFACE

STATION TO STATION				ROADWAY	ROADWAY PAVEMENT SECTION	455.0505	455.0605	465.0105	475.0105	SPV.0125.01
						ASPHALTIC MATERIAL SEAL COAT	TACK COAT	ASPHALTIC SURFACE	SEAL COAT	PREPARE EXISTING PAVEMENT FOR ASPHALTIC SEAL COAT
						GAL	GAL	TON	TON	MI
PROJECT 1662-00-78										
7+60	-	9+20	Johns St NB	RDWY MEDIAN	---	11	35	---	---	
11+15	-	11+98	Johns St NB	RDWY MEDIAN	---	7	25	---	---	
PROJECT TOTAL						0	18	60	0	0
PROJECT 5255-01-74										
165+92	-	169+19	CTH YZ	RDWY	123	---	---	24	0.06	
173+24	-	174+84	CTH YZ	RDWY	57	---	---	11	0.03	
PROJECT TOTAL						180	0	0	36	0.09
CONTRACT TOTALS						180	18	60	36	0.09

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

CONCRETE PAVEMENT

STATION TO STATION			ROADWAY	415.1090 CONCRETE PAVEMENT HES 9-INCH SY	SPV.0180.01 CONCRETE PAVEMENT SHES 9-INCH SY	416.0610 DRILLED TIE BARS* EA	416.0620 DRILLED DOWEL BARS EA	COMMENT
PROJECT 1662-00-77								
105+70	-	107+65	USH 18 EB	240	---	153	29	RDWY MEDIAN
108+50	-	109+00	USH 18 EB	10	---	---	---	SE ISLAND/QUAD
108+57	-	111+70	USH 18 EB	180	---	246	13	RDWY MEDIAN
463+60	-	464+45	STH 23 NB	185	---	120	19	RDWY MEDIAN
465+70	-	468+02	STH 23 NB	190	7	224	54	RDWY MEDIAN
469+04	-	471+85	STH 23 NB	425	---	315	22	RDWY MEDIAN
471+85	-	473+00	STH 23 NB	140	---	90	6	RDWY MEDIAN
PROJECT TOTAL				1,370	7	1,148	143	
PROJECT 1662-00-78								
121+10	-	125+40	USH 18 EB	300	---	332	12	RDWY MEDIAN
126+10	-	126+30	USH 18 EB	95	---	29	13	SE QUAD
126+12	-	129+71	USH 18 EB	225	---	284	7	RDWY MEDIAN
9+20	-	9+60	Johns St NB	45	---	31	8	RDWY MEDIAN
10+74	-	11+15	Johns St NB	50	---	32	10	RDWY MEDIAN
PROJECT TOTAL				715	0	708	50	

CONTRACT TOTALS 2,085 7 1,856 193

*ADDITIONAL QUANTITY IN CONCRETE CURB AND GUTTER TABLE

STORM SEWER STRUCTURES

STRUCTURE ID	STATION	OFFSET	ROADWAY ALIGNMENT	611.0410	611.0530	611.0606	611.0639	611.0651	611.3004	611.3220	611.3230	650.4000
				RECONSTRUCTING CATCH BASINS EACH	MANHOLE COVERS TYPE J EACH	INLET COVERS			INLETS			CONSTRUCTION STAKING STORM SEWER EACH
						TYPE B EACH	TYPE H-S EACH	TYPE S EACH	4-FT DIAMETER EACH	2x2-FT EACH	2x3-FT EACH	
PROJECT 1662-00-77												
EX INL 11.0	107+30.58	11.57' LT	USH 18 EB	1	1	---	---	---	---	---	---	---
INL 11.1	107+30.70	17.85' LT	USH 18 EB	---	---	1	---	---	---	1	---	1
INL 7.1	108+57.77	46.73' RT	STH 23 NB	---	---	---	1	---	---	---	1	1
EX INL 12.0	109+21.72	7.86' LT	USH 18 EB	1	1	---	---	---	---	---	---	---
INL 12.3	109+22.24	1.50' LT	USH 18 EB	---	---	1	---	---	---	1	---	1
INL 5.2	466+13.75	3.75' LT	STH 23 NB	---	---	1	---	---	---	1	---	1
INL 5.3	466+49.80	7.54' LT	STH 23 NB	---	---	1	---	---	---	1	---	1
INL 8.1	469+17.46	4.41' RT	STH 23 NB	---	---	1	---	---	---	1	---	1
PROJECT TOTALS				2	2	5	1	---	---	5	1	6
PROJECT 1662-00-78												
INL 15.1	122+94.75	18.18' LT	USH 18 EB	---	---	1	---	---	---	1	---	1
INL 20.1	125.19.99	17.28' LT	USH 18 EB	---	---	1	---	---	1	---	---	1
INL 20.2	125+19.83	11.71' LT	USH 18 EB	---	---	---	---	1	---	1	---	1
PROJECT TOTALS				---	---	2	---	1	1	2	---	3
CONTRACT TOTALS				2	2	7	1	1	1	7	1	9

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

CONCRETE SIDEWALK AND MEDIAN

STATION TO STATION			ROADWAY	602.0405	602.0415	602.0515	602.0615	602.1000	620.0300		650.9000	COMMENT
				CONCRETE SIDEWALK		CURB RAMP DETECTABLE WARNING FIELD		CONCRETE LOADING ZONE	CONCRETE MEDIAN		CONSTRUCTION STAKING	
				4-INCH	6-INCH	NATURAL PATINA	RADIAL NATURAL PATINA		SLOPED NOSE TYPE 1	SLOPED NOSE TYPE 2	CURB RAMPS	
				SF	SF	SF	SF	SF	SF	SF	EA	
PROJECT 1662-00-77												
105+50	-	107+50	USH 18 EB	170	---	---	---	335	10	---	---	RDWY MEDIAN
108+70	-	111+70	USH 18 EB	740	---	---	---	475	10	---	---	RDWY MEDIAN
465+75	-	468+00	STH 23 NB	---	---	---	---	755	60	---	---	RDWY MEDIAN
469+15	-	471+50	STH 23 NB	---	---			590	24	---	---	RDWY MEDIAN
107+50		107+75	USH 18 WB	160	55	10	---	---	---	---	1	NW QUAD
108+60	-	108+80	USH 18 WB	250	70	10	---	---	---	---	1	NE QUAD
108+50	-	109+00	USH 18 EB	175	105	30	---	---	---	10	3	SE QUAD ISLAND
108+50	-	109+00	USH 18 EB	65	20	10	---	---	---	---	1	SE QUAD
107+50	-	107+75	USH 18 EB	245	70	20	---	---	---	---	2	SW QUAD
PROJECT TOTAL				1,805	320	80	0	2,155	104	10	8	
PROJECT 1662-00-78												
121+10	-	125+35	USH 18 EB	120	---	---	---	955	13	---	---	RDWY MEDIAN CURB
126+10	-	129+70	USH 18 EB	220	---	---	---	780	12	---	---	RDWY MEDIAN CURB
126+10	-	126+30	USH 18 WB	---	330	---	25	---	---	---	1	NE QUAD
126+10	-	126+30	USH 18 EB	---	330	---	24	---	---	---	1	SE QUAD
PROJECT TOTAL				340	660	0	49	1,735	25	0	2	
CONTRACT TOTAL				2,145	980	80	49	3,890	129	10	10	
139												

NOTE: QUANTITIES ON SIDEROADS INCLUDED IN MAINLINE QUANTITIES

CURB AND GUTTER

STATION TO STATION			DIR	ROADWAY	601.0409 30-INCH TYPE A LF	601.0600 CONCRETE CURB PEDESTRIAN LF	416.0610 *DRILLED TIE BARS EA	601.0413 6-INCH SLOPED 30-INCH TYPE G LF	601.0454 INTEGRAL 30-INCH TYPE J LF	COMMENT
PROJECT 1662-00-77										
105+52		106+32	MEDIAN	USH 18 EB	---	---	---	61	61	TIE BARS COVERED IN CONCRETE PAVEMENT
107+50		107+75	LT	USH 18 WB	15	---	3	---	---	NW QUAD CURB
108+60	-	108+80	LT	USH 18 WB	15	---	3	---	---	NE QUAD CURB
108+50	-	109+00	RT	USH 18 EB	79	37	25	---	---	SE QUAD ISLAND
108+50	-	109+00	RT	USH 18 EB	12	---	2	---	---	SE QUAD CURB
107+50	-	107+75	RT	USH 18 EB	26	---	7	---	---	SW QUAD CURB
110+51	-	111+69	MEDIAN	USH 18 EB	---	---	---	206	31	TIE BARS COVERED IN CONCRETE PAVEMENT
PROJECT TOTAL					147	37	40	267	92	
PROJECT 1662-00-78										
121+07	-	121+10	MEDIAN	USH 18 EB	---	---	---	66	14	TIE BARS COVERED IN CONCRETE PAVEMENT
126+10	-	126+30	LT	USH 18 WB	24	---	6	---	---	NE QUAD CURB
126+10	-	126+30	RT	USH 18 EB	45	---	2	---	---	SE QUAD CURB
128+99	-	129+79	MEDIAN	USH 18 EB	---	---	---	116	26	TIE BARS COVERED IN CONCRETE PAVEMENT
PROJECT TOTAL					69	0	8	182	40	
PROJECT TOTALS					216	37	48	449	132	

* ADDITIONAL QUANTITY IN CONCRETE PAVEMENT TABLE

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

RESTORATION

STATION TO STATION			ROADWAY	TOPSOIL DEPTH	625.0100 TOPSOIL	628.2006 EROSION MAT URBAN CLASS I TYPE A	629.0210 FERTILIZER TYPE B	630.0140 SEEDING MIXTURE #40	630.0500 SEED WATER	COMMENT
				IN	SY	SY	CWT	LB	MGAL	
PROJECT 1662-00-77										
107+50		107+75	USH 18 EB	4	25	25	0.02	0.4	1	NW QUADRANT
108+60	-	108+80	USH 18 EB	4	25	25	0.02	0.5	1	NE QUADRANT
108+50	-	109+00	USH 18 EB	4	5	5	0.00	0.1	0	SE QUADRANT
107+50	-	107+75	USH 18 EB	4	40	40	0.03	0.8	1	SW QUADRANT
PROJECT TOTAL					95	95	0.07	1.8	3	
PROJECT 1662-00-78										
126+10	-	126+30	USH 18 EB	4	20	20	0.01	0.4	0	NE QUADRANT
126+10	-	126+30	USH 18 EB	4	40	40	0.02	0.7	1	SE QUADRANT
PROJECT TOTAL					4	60	0.03	1.1	1	
CONTRACT TOTALS					155	155	0.10	2.9	4	

NOTE: QUANTITIES ON SIDEROADS INCLUDED IN MAINLINE QUANTITIES

EROSION CONTROL

STATION TO STATION			ROADWAY	628.1504	628.1520	628.1905	628.1910	628.7015	628.7020	COMMENT
				SILT FENCE	SILT FENCE MAINTENANCE	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL	INLET PROTECTION TYPE C	INLET PROTECTION TYPE D	
				LF	LF	EA	EA	EA	EA	
PROJECT 1662-00-77										
105+50	-	107+50	USH 18 EB	---	---	---	---	2	---	RDWY MEDIAN CURB
108+70	-	111+70	USH 18 EB	---	---	---	---	---	2	RDWY MEDIAN CURB
465+75	-	468+00	STH 23 NB	---	---	---	---	3	---	RDWY MEDIAN CURB
469+15	-	471+50	STH 23 NB	---	---	---	---	---	2	RDWY MEDIAN CURB
107+50		107+75	USH 18 WB	---	---	---	---	---	1	NW QUAD CURB
108+60	-	108+80	USH 18 WB	14	14	---	---	1	1	NE QUAD CURB
108+50	-	109+00	USH 18 EB	---	---	---	---	1	---	SE QUAD ISLAND
108+50	-	109+00	USH 18 EB	32	32	---	---	---	1	SE QUAD CURB
107+50	-	107+75	USH 18 EB	58	58	---	---	2	1	SW QUAD CURB
UNDISTRIBUTED				---	---	2	1	---	---	
PROJECT TOTAL				104	104	2	1	9	8	
CONTRACT 1662-00-78										
121+10	-	125+35	USH 18 EB	---	---	---	---	4	---	RDWY MEDIAN CURB
126+10	-	129+70	USH 18 EB	---	---	---	---	2	---	RDWY MEDIAN CURB
126+10	-	126+30	USH 18 WB	48	48	---	---	---	---	NE QUAD CURB
126+10	-	126+30	USH 18 EB	25	25	---	---	---	---	SE QUAD CURB
UNDISTRIBUTED				---	---	2	1	---	---	
PROJECT TOTAL				73	73	2	1	6	0	
CONTRACT TOTALS				177	177	4	2	15	8	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

PERMANENT SIGNS TYPE II AND SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	DESCRIPTION	SIGN NUMBER	ASSEMBLY			634.0612		634.0614	634.0812	637.2210	REMARKS
					WIDTH	HEIGHT		POSTS WOOD 4 X 6-INCH		POST TUBULAR	POST TUBULAR	SIGNS TYPE II	
								12-FT	14 FT	STEEL 2X2-INCH	STEEL 2X2-INCH	REFLECTIVE	
					IN	IN		EACH	EACH			TYPE H	
												SF	
PROJECT 1662-00-77													
100	107+26	USH 18	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	7.46	POSTED ON SIGNAL POLE
101	467+73	STH 23	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	7.46	POSTED ON SIGNAL POLE
102	467+90	STH 23	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	7.46	POSTED ON SIGNAL POLE
103	467+54	STH 23	YIELD	R1-2	36	X	31	1	---	---	---	3.88	
104	467+80	STH 23	KEEP RIGHT	R4-7	24	X	30	---	---	---	---	5.00	POSTED ON SIGNAL POLE
105	108+90	USH 18	KEEP RIGHT	R4-7	24	X	30	---	---	---	---	5.00	POSTED ON SIGNAL POLE
106	108+96	USH 18	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	9.00	POSTED ON SIGNAL POLE
107	469+34	STH 23	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	9.00	POSTED ON SIGNAL POLE
108	469+23	STH 23	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	9.00	POSTED ON SIGNAL POLE
109	469+28	STH 23	KEEP RIGHT	R4-7	24	X	30	---	---	---	---	5.00	POSTED ON SIGNAL POLE
110	107+31	USH 18	KEEP RIGHT	R4-7	24	X	30	---	---	---	---	5.00	POSTED ON SIGNAL POLE
111	110+65	USH 18	SPEED LIMIT 40	R2-1	24	X	30	1	---	---	---	5.00	
112	111+64	USH 18	SOUTH	M3-3	24	X	12	---	1	---	---	2.00	
			STH 23	M1-6	24	X	24	---	---	---	---	4.00	
			LEFT	M6-1	21	X	21	---	---	---	---	3.06	
			HOSPITAL	D9-2	24	X	24	---	---	---	---	4.00	
			LEFT	M6-1	21	X	21	---	---	---	---	3.06	
113	107+63	STH 23	EAST	M3-2	24	X	12	---	1	---	---	2.00	
			USH 18	M1-4	24	X	24	---	---	---	---	4.00	
			RIGHT	M6-1	21	X	21	---	---	---	---	3.06	
			WEST	M3-4	24	X	12	---	---	---	---	2.00	
			USH 18	M1-4	24	X	24	---	---	---	---	4.00	
120	471+37	STH 23	KEEP RIGHT	R4-7	24	X	30	1	---	---	---	5.00	
	471+37	STH 23	OBJECT MARKER	W5-54	18	X	18	---	---	---	---	2.25	
121	465+86	STH 23	KEEP RIGHT	R4-7	24	X	30	1	---	---	---	5.00	
	465+86	STH 23	OBJECT MARKER	W5-54	18	X	18	---	---	---	---	2.25	
PROJECT TOTALS								4	2	0		127.01	
PROJECT 1662-00-78													
130	121+37	USH 18	SIGNAL AHEAD	W3-3	36	X	36	1	---	---	---	9.00	
131	124+87	USH 18	KEEP RIGHT	R4-7	24	X	30	---	---	---	---	5.00	POSTED ON SIGNAL POLE
134	9+26	JOHNS ST	FOLDING STOP	R1-1F	36	X	36	---	---	---	---	9.00	POSTED ON SIGNAL POLE
135	9+33	JOHNS ST	STREET SIGN	D3-1	24	X	30	---	---	---	1	5.00	
135	9+33	JOHNS ST	STREET SIGN	D3-2	24	X	30	---	---	---	---	5.00	
136	126+48	USH 18	FOLDING STOP	R1-1F	30	X	30	---	---	---	---	6.25	POSTED ON SIGNAL POLE
137	126+42	USH 18	KEEP RIGHT	R4-7	24	X	30	---	---	---	---	5.00	POSTED ON SIGNAL POLE
140	124+81	USH 18	FOLDING STOP	R1-1F	30	X	30	---	---	---	---	6.25	POSTED ON SIGNAL POLE
PROJECT TOTALS								1	0	1		50.50	
CONTRACT TOTALS								5	2	1		177.51	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

REMOVING SIGNS TYPE II AND REMOVING SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
PROJECT 1662-00-77						
R100	107+38	USH 18	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R101	467+86	STH 23	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R102	467+93	STH 23	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R103	467+63	STH 23	YIELD	1	1	
R104	467+91	STH 23	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R105	108+75	USH 18	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R106	108+80	USH 18	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R107	469+23	STH 23	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R108	469+19	STH 23	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R109	469+18	STH 23	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R110	107+44	USH 18	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R111	110+29	USH 18	SPEED LIMIT 40	1	1	
R112	111+74	USH 18	SOUTH/STH 23/RIGHT/HOSPITAL/RIGHT	1	1	
R113	469+41	STH 23	EAST/USH 18/RIGHT/WEST/USH 18/LEFT	1	1	
R120	471+83	STH 23	KEEP RIGHT	1	1	
R121	471+83	STH 23	NO U TURN	1	---	ON PREVIOUS POST
R122	470+56	STH 23	ONE WAY	1	1	
R123	470+15	STH 23	ONE WAY	1	1	
R124	464+59	STH 23	LEFT LANE MERGE	1	1	
R125	464+59	STH 23	KEEP RIGHT	1	---	ON PREVIOUS POST
PROJECT TOTALS				20	8	
PROJECT 1662-00-78						
R130	121+90	USH 18	SIGNAL AHEAD	1	1	
R131	125+29	USH 18	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R132	9+54	JOHNS ST	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R133	9+48	JOHNS ST	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R134	9+29	JOHNS ST	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R135	9+40	JOHNS ST	STREET SIGN	1	1	
R136	126+29	USH 18	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R137	126+24	USH 18	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R138	10+91	JOHNS ST	KEEP RIGHT	1	---	POSTED ON EXISTING SIGNAL POST
R139	10+97	JOHNS ST	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
R140	125+23	USH 18	FOLDING STOP	1	---	POSTED ON EXISTING SIGNAL POST
PROJECT TOTALS				11	2	
CONTRACT TOTAL				31	10	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

TRAFFIC CONTROL																					
STAGE	LOCATION	STA	T0	STA	APPROX. SERVICE PERIOD DAYS	643.0300		643.0420		643.0705		643.0715		643.0900		643.0810		643.1220		643.1050	
						DRUMS		BARRICADES TYPE III		WARNING LIGHTS TYPE A		WARNING LIGHTS TYPE C		SIGNS*		CONNECTED ARROW BOARD		CONNECTED WORK ZONE START AND END LOCATION MARKERS		SIGNS PCMS*	
						NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS
PROJECT 1662-00-77																					
1A	USH 18	97+50	-	108+00	17	41	697	3	51	6	102	12	204	8	136	1	17	1	17	2	14
1B	USH 18	108+00	-	116+00	17	37	629	2	34	4	68	0	--	6	102	0	--	0	--	0	--
3A	USH 18/STH 23	463+00	-	469+00	11	80	880	5	55	10	110	25	275	24	264	2	22	2	22	2	14
3B	USH 18/STH 23	463+00	-	469+00	11	80	880	5	55	10	110	25	275	23	253	2	22	2	22	0	--
4	USH 18/STH 23	102+41	-	114+00	19	102	1,938	6	114	12	228	19	361	43	817	4	76	4	76	2	14
5A	STH 23	462+00	-	475+00	12	98	1,176	8	96	16	192	12	144	22	264	2	24	2	24	2	14
5B	STH 23	462+00	-	475+00	12	44	528	3	36	4	48	8	96	16	192	2	24	2	24	0	--
PROJECT TOTALS						482	6,728	32	441	62	858	101	1,355	142	2,028	13	185	13	185	8	56
PROJECT 1662-00-78																					
1A	USH 18	125+50	-	130+79	17	48	816	3	51	6	102	12	204	8	136	1	17	1	17	2	14
1B	USH 18	116+00	-	125+50	17	43	731	4	68	8	136	0	--	8	136	0	--	0	--	0	--
2	JOHNS ST	7+00	-	13+59	14	46	644	4	56	8	112	10	140	17	238	2	28	2	28	2	14
6A	USH 18/JOHNS ST	7+00	-	13+59	11	78	858	6	66	12	132	21	231	31	341	3	33	3	33	2	14
6B	USH 18/JOHNS ST	7+00	-	13+59	11	18	198	2	22	4	44	0	--	14	154	0	--	0	--	0	--
PROJECT TOTALS						233	3,247	19	263	38	526	43	575	78	1,005	6	78	6	78	6	42
CONTRACT TOTALS						715	9,975	51	704	100	1,384	144	1,930	220	3,033	19	263	19	263	14	98

* SEE DETOUR TABLE FOR ADDITIONAL QUANTITY

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

DETOUR TRAFFIC CONTROL								
STAGE	LOCATION	APPROX. SERVICE PERIOD DAYS	643.0900		643.0920		643.1050	
			SIGNS*		COVERING SIGNS TYPE II		SIGNS PCMS*	
			NO.	DAYS	CYCLES	EACH	NO.	DAYS
PROJECT 1662-00-77								
3A	USH 18/STH 23	11	14	154	1	4	1	7
	STH 23/STH 191/CTH CH	11	30	330	--	--	0	--
	STH 23/CTH B	11	29	319	--	--	0	--
	STH 23/USH 151	11	24	264	--	--	1	11
	USH 151/USH 18	11	10	110	--	--	0	--
3B	USH 18/STH 23	11	14	154	1	4	1	7
	STH 23/STH 191/CTH CH	11	30	330	--	--	0	--
	STH 23/CTH B	11	29	319	--	--	0	--
	STH 23/USH 151	11	24	264	--	--	1	11
	USH 151/USH 18	11	10	110	--	--	0	--
4	USH 18/STH 23	19	38	722	--	--	1	7
	USH 18/USH 151	19	36	684	--	--	1	19
	USH 151/STH 23	19	48	912	--	--	0	--
PROJECT TOTALS			336	4,672	--	8	6	62
PROJECT 1662-00-78								
6A	USH 18/JOHNS ST	11	20	220	--	--	2	14
	USH 18/STH 23	11	14	154	--	--	0	--
	STH 23/STH 191/CTH CH	11	10	110	--	--	0	--
	STH 23/CTH B	11	9	99	--	--	0	--
	STH 23/USH 151	11	14	154	--	--	0	--
	USH 151/USH 18	11	10	110	--	--	0	--
6B	USH 18/JOHNS ST	11	20	220	--	--	2	14
	USH 18/STH 23	11	14	154	--	--	0	--
	STH 23/STH 191/CTH CH	11	10	110	--	--	0	--
	STH 23/CTH B	11	9	99	--	--	0	--
	STH 23/USH 151	11	14	154	--	--	0	--
	USH 151/USH 18	11	10	110	--	--	0	--
PROJECT TOTALS			154	1,694	0	0	4	28
CONTRACT TOTALS			490	6,366	--	8	10	90

* SEE TRAFFIC CONTROL TABLE FOR ADDITIONAL QUANTITY

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

TEMPORARY PAVEMENT MARKING														
STAGE	LOCATION	STA	T0	STA	643.3165		643.3265	643.3305	643.3505	643.3905	646.9012	646.9112	646.9210	646.9310
					TEMPORARY MARKING LINE PAINT 6-INCH		TEMPORARY MARKING LINE PAINT 10-INCH	TEMPORARY MARKING CROSSWALK PAINT 6-INCH	TEMPORARY MARKING ARROW PAINT	TEMPORARY MARKING DIAGONAL PAINT 12-INCH	MARKING REMOVAL LINE WATER BLASTING 6-INCH	MARKING REMOVAL LINE WATER BLASTING 10-INCH	MARKING REMOVAL LINE WATER BLASTING WIDE	MARKING REMOVAL SPECIAL MARKING WATER BLASTING
					YELLOW	WHITE	WHITE	WHITE	WHITE	YELLOW				
					LF	LF	LF	LF	EACH	LF	LF	LF	LF	LF
PROJECT 1662-00-77														
1A	USH 18	102+41	-	108+00	1,380	100	580	230	2	---	350	---	---	---
1B	USH 18	108+00	-	116+00	1,390	---	300	200	2	---	70	---	---	---
3A	USH 18/STH 23	463+00	-	469+00	2,640	1,920	770	260	6	---	2,700	630	---	3
3B	USH 18/STH 23	463+00	-	469+00	---	170	---	---	---	---	170	---	---	---
4	USH 18/STH 23	102+41	-	114+00	---	3,510	660	640	2	---	1,430	460	---	---
5A	STH 23	462+00	-	475+00	2,450	2,670	370	---	8	---	2,590	110	---	---
5B	STH 23	462+00	-	475+00	60	---	---	---	2	---	1,330	370	---	---
PROJECT TOTALS					7,920	8,370	2,680	1,330	22	0	8,640	1,570	0	3
PROJECT 1662-00-78														
1A	USH 18	125+50	-	130+79	1,670	---	460	260	2	---	320	---	---	---
1B	USH 18	116+00	-	125+50	1,910	---	390	---	2	---	100	---	---	---
2	JOHNS ST	7+00	-	13+59	4,590	650	1,550	250	4	---	3,860	850	---	2
6A	USH 18/JOHNS ST	7+00	-	13+59	990	1,940	410	400	2	100	1,250	40	---	2
6B	USH 18/JOHNS ST	7+00	-	13+59	730	1,730	90	250	2	170	3,010	270	100	1
PROJECT TOTALS					9,890	4,320	2,900	1,160	12	270	8,540	1,160	100	5
CONTRACT TOTALS					17,810	12,690	5,580	2,490	34	270	17,180	2,730	100	8
					30,500									

TEMPORARY PEDESTRIAN										
STAGE	LOCATION	STA	T0	STA	DAYS	644.1430	644.1601		644.1605	644.1810
						SURFACE	CURB	RAMP	DETECTABLE WARNING FIELD	BARRICADE
						PLATE SF				
PROJECT 1662-00-77										
1A	USH 18	102+41	-	108+00	17	--	0	--	0	72
1B	USH 18	108+00	-	116+00	17	--	0	--	0	66
3A	USH 18/STH 23	463+00	-	469+00	11	--	0	--	10	108
3B	USH 18/STH 23	463+00	-	469+00	11	51	1	11	20	174
4	USH 18/STH 23	102+41	-	114+00	19	183	3	57	60	504
5A	STH 23	462+00	-	475+00	12	--	0	--	0	--
5B	STH 23	462+00	-	475+00	12	--	0	--	0	--
PROJECT TOTALS						234	4	68	90	924
PROJECT 1662-00-78										
1A	USH 18	125+50	-	130+79	17	--	0	--	40	60
1B	USH 18	116+00	-	125+50	17	--	0	--	0	--
2	JOHNS ST	7+00	-	13+59	14	--	0	--	0	--
6A	USH 18/JOHNS ST	7+00	-	13+59	11	265	2	22	40	258
6B	USH 18/JOHNS ST	7+00	-	13+59	11	--	0	--	0	72
PROJECT TOTALS						265	2	22	80	390
CONTRACT TOTALS						499	6	90	170	1,314

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

PAVEMENT MARKING

STATION TO STATION			ROADWAY	646.2040		646.4040	646.5020	646.5120	646.6120	646.7120		646.7420	646.8120	646.8205	646.9010	646.9110	
				MARKING LINE GROOVED WET REF EPOXY			MARKING ARROW EPOXY	MARKING WORD EPOXY	MARKING STOP LINE EPOXY 18-INCH	MARKING DIAGONAL EPOXY 12-INCH		MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	MARKING CURB EPOXY	MARKING ISLAND NOSE PAINT	MARKING REMOVAL WATER BLASTING		
				6-INCH		10-INCH	TURN LANE	TURN LANE								4-INCH	8-INCH
				(YELLOW)	(WHITE)	(WHITE)	(WHITE)	(WHITE)	(WHITE)	(WHITE)	(YELLOW)	(WHITE)	(WHITE)	(YELLOW)	(YELLOW)		
LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF		
PROJECT 1662-00-77																	
105+65	-	108+00	USH 18 EB	340	---	360	2	1	57	---	---	211	---	1	320	200	
108+00	-	111+00	USH 18 EB	570	---	410	2	1	59	---	---	185	---	1	350	250	
465+70	-	468+00	STH 23 NB	210	310	670	4	---	69	---	82	216	---	2	315	100	
469+00	-	471+50	STH 23 NB	220	470	460	2	1	58	---	151	205	---	2	325	100	
107+50		107+75	USH 18 WB	---	---	---	---	---	---	---	---	---	15	---	---	---	
108+60	-	108+80	USH 18 WB	---	---	---	---	---	---	---	---	---	15	---	---	---	
108+50	-	109+00	USH 18 EB	---	---	---	---	---	---	---	---	---	79	---	---	---	
108+50	-	109+00	USH 18 EB	---	---	---	---	---	---	---	---	---	12	---	---	---	
107+50	-	107+75	USH 18 EB	---	---	---	---	---	---	---	---	---	26	---	---	---	
PROJECT TOTAL				1,340	780	1,900	10	3	243	---	233	817	147	6	1,310	650	
PROJECT 1662-00-78																	
121+00	-	126+00	USH 18 EB	750	---	720	2	1	57	---	---	---	---	1	250	350	
126+00	-	130+00	USH 18 EB	670	---	680	2	1	67	---	---	249	---	1	450	450	
7+00	-	10+00	Johns St NB	760	---	270	2	---	50	---	---	---	---	---	150	100	
10+00	-	13+00	Johns St NB	860	---	300	2	---	54	---	---	---	---	---	150	100	
126+10	-	126+30	USH 18 WB	---	---	---	---	---	---	---	---	---	23	---	---	---	
126+10	-	126+30	USH 18 EB	---	---	---	---	---	---	---	---	---	43	---	---	---	
PROJECT TOTAL				3,040	---	1,970	8	2	228	---	---	249	66	2	1,000	1,000	
PROJECT 5255-01-74																	
456+50	-	465+70	STH 23 NB	2,170	1,040	---	6	---	---	---	140	---	---	---	2,300	---	
471+50	-	478+50	STH 23 NB	2,100	1,300	70	3	---	32	---	---	---	---	---	1,750	---	
479+50	-	505+00	STH 23 NB	6,850	4,600	670	10	---	32	167	---	---	---	---	6,375	---	
160+80	-	170+80	CTH YZ EB	460	---	480	2	1	57	---	---	---	---	---	2,500	50	
171+50	-	174+80	CTH YZ EB	570	---	370	2	---	30	---	---	---	---	---	825	50	
PROJECT TOTAL				12,150	6,940	1,590	23	1	151	167	140	---	---	---	13,750	100	
CONTRACT TOTALS				24,250		5,460	41	6	622	540		1,066	213	8	16,060	1,750	

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

SAWING

STATION TO STATION			ROADWAY	690.0150 ASPHALT LF	690.0250 CONCRETE LF	COMMENT
PROJECT 1662-00-77						
105+50	-	107+50	USH 18 EB	---	425	RDWY MEDIAN CURB
108+70	-	111+70	USH 18 EB	---	645	RDWY MEDIAN CURB
464+50	-	465+10	STH 23 NB	---	325	RDWY MEDIAN CURB
465+75	-	468+00	STH 23 NB	---	530	RDWY MEDIAN CURB
469+15	-	471+50	STH 23 NB	---	515	RDWY MEDIAN CURB
471+50	-	471+90	STH 23 NB	---	310	RDWY MEDIAN CURB
107+50		107+75	USH 18 WB	---	20	NW QUAD CURB
108+60	-	108+80	USH 18 WB	---	20	NE QUAD CURB
108+50	-	109+00	USH 18 EB	---	115	SE QUAD ISLAND
108+50	-	109+00	USH 18 EB	---	20	SE QUAD CURB
107+50	-	107+75	USH 18 EB	---	30	SW QUAD CURB
PROJECT TOTAL				0	2,955	
PROJECT 1662-00-78						
121+10	-	125+35	USH 18 EB	---	865	RDWY MEDIAN CURB
126+10	-	129+70	USH 18 EB	---	730	RDWY MEDIAN CURB
7+60	-	9+60	Johns St NB	---	90	RDWY MEDIAN CURB
10+75	-	12+00	Johns St NB	---	95	RDWY MEDIAN CURB
126+10	-	126+30	USH 18 WB	8	30	NE QUAD CURB
126+10	-	126+30	USH 18 EB	8	95	SE QUAD CURB
PROJECT TOTAL				16	1,905	

CONTRACT TOTALS 16 4,860

NOTE: QUANTITIES ON SIDEROADS INCLUDED IN MAINLINE QUANTITIES

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

CONSTRUCTION STAKING

STATION TO STATION				ROADWAY	PAVEMENT SECTION	650.4500 SUBGRADE LF	650.7000 CONCRETE PAVEMENT LF
PROJECT 1662-00-77							
105+50	-	107+50		USH 18 EB	RDWY MEDIAN	200	200
108+70	-	111+70		USH 18 EB	RDWY MEDIAN	300	300
465+75	-	468+00		STH 23 NB	RDWY MEDIAN	225	225
469+15	-	471+50		STH 23 NB	RDWY MEDIAN	235	235
UNDISTRIBUTED							
PROJECT TOTAL						960	960
PROJECT 1662-00-78							
121+10	-	125+35		USH 18 EB	RDWY MEDIAN	425	425
126+10	-	129+70		USH 18 EB	RDWY MEDIAN	360	360
UNDISTRIBUTED							
PROJECT TOTAL						785	785

CONTRACT TOTALS 1,745 1,745

NOTE: CONSTRUCTION STAKING STORM SEWER, CURB AND GUTTER, CURB RAMPS, AND SIDEWALK

EXCAVATING, HAULING, DEWATERING, AND DISPOSAL OF CONTAMINATED SOIL

STATION TO STATION				ROADWAY	SPV.0195.01 EXCAVATING, HAULING, DEWATERING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON	SPV.0195.02 EXCAVATING, HAULING, DEWATERING AND DISPOSAL OF LEAD CONTAMINATED SOIL TON
PROJECT 1662-00-77						
465+55	-	466+40		STH 23 NB	2.2	---
466+40	-	468+39		STH 23 NB	---	5.1

PROJECT TOTAL 2.2 5.1

CONTRACT TOTALS 2.2 5.1

NOTE: ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

3

TRAFFIC SIGNAL REMOVALS		
	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH
LOCATION / ITEM NUMBER		
USH 18 & STH 23		
CB1	1	--
SB1	1	--
SB2	1	--
SB3	1	--
SB4	1	--
SB5	1	--
SB6	1	--
SB7	1	--
SB8	1	--
SB9	1	--
SB10	1	--
SB11	1	--
SB12	1	--
PB1	--	1
PB2	--	1
PB3	--	1
PB4	--	1
PB5	--	1
PB6	--	1
PB9	--	1
PB10	--	1
PB11	--	1
PB12	--	1
PB13	--	1
PB14	--	1
PB15	--	1
PB16	--	1
PB17	--	1
PB20	--	1
PB21	--	1
PB22	--	1
INTERSECTION TOTAL	13	18
PROJECT TOTAL	13	18

REMOVE TRAFFIC SIGNALS		
	204.9060.S.01 REMOVING (ITEM DESCRIPTION) 01. REMOVE TRAFFIC SIGNALS USH 18 & STH 23 EACH	SPV.0060.02 SALVAGE TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH
LOCATION		
USH 18 & STH 23	1	4
PROJECT TOTAL	1	4

CONSTRUCTION STAKING	
	650.8501.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (1662-00-77) EACH
LOCATION	
USH 18 & STH 23	1
PROJECT TOTAL	1

3

TRAFFIC SIGNAL CONTROL			
	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	656.0201.001 ELECTRICAL SERVICE METER BREAKER PEDESTAL (USH 18 & STH 23) EACH	SPV.0060.05 TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET AND CONTROLLER (USH 18 & STH 23) EACH
LOCATION			
USH 18 & STH 23	1	1	1
PROJECT TOTAL	1	1	1

TRAFFIC SIGNAL MOUNTING HARDWARE	
	658.5070.01 SIGNAL MOUNTING HARDWARE 01. (USH 18 & STH 23) EACH
LOCATION	
USH 18 & STH 23	1
PROJECT TOTAL	1

TRAFFIC SIGNALS	
	659.5000.S.01 LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR 01.
LOCATION	
USH 18 & STH 23	4
PROJECT TOTAL	4

TEMPORARY TRAFFIC SIGNALS	
	661.0201.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (USH 18 & STH 23) EACH
LOCATION	
USH 18 & STH 23	1
PROJECT TOTAL	1

TRAFFIC SIGNAL COMMUNICATION EQUIPMENT	
	SPV.0060.03 SALVAGE AND REINSTALL TRAFFIC SIGNAL COMMUNICATION EQUIPMENT (USH 18 & STH 23) EACH
LOCATION	
USH 18 & STH 23	1
PROJECT TOTAL	1

TRAFFIC SIGNAL STRUCTURES

				654.0101		657.0100	657.0430	657.0420	657.0425
				CONCRETE BASES		PEDESTAL	TRAFFIC SIGNAL STANDARDS		
LOCATION / BASE				TYPE 1			ALUMINUM		
NUMBER	STATION	OFFSET	L/R	EACH		BASES	10-FT	13-FT	15-FT
						EACH	EACH	EACH	
USH 18 & STH 23									
SB1	469+16.7 'SB'	48.6	L	1		1	--	--	1
SB3	469+20.9 'NB'	50.7	R	1		1	--	--	1
SB4	108+82.9 'WB'	56.2	L	1		1	--	--	1
SB6	468+08.5 'NB'	30.7	R	1		1	--	--	1
SB7	467+97.5 'NB'	31.9	R	1		1	--	1	--
SB9	467+85.3 'SB'	49.5	L	1		1	1	--	--
SB10	107+46.8 'EB'	48.6	R	1		1	--	--	1
SB12	107+44.5 'WB'	51.4	L	1		1	1	--	--
INTERSECTION TOTAL				8		8	2	1	5
PROJECT TOTAL				8		8	2	1	5

DETECTION SYSTEM

SPV.0060.07 INSTALL STATE FURNISHED NON-INTRUSIVE DETECTION SYSTEM (USH 18 & STH 23)	
LOCATION	EACH
USH 18 & STH 23	1
PROJECT TOTAL	1

TRAFFIC SIGNAL CONDUIT

LOCATION	FROM	-	TO	652.0225	652.0235	652.0615	652.0700.S
				CONDUIT RIGID NONMETALLIC	CONDUIT RIGID NONMETALLIC	CONDUIT	INSTALL CONDUIT
				SCHEDULE 40	SCHEDULE 40	SPECIAL	INTO EXISTING ITEM
				2-INCH	3-INCH	3-INCH	
				LF	LF	LF	EACH
USH 18 & STH 23							
	CB1	-	PB1	--	99	--	--
	PB1	-	SB1	18	--	--	--
	PB1	-	PB2	--	--	178	--
	PB2	-	SB2	--	9	--	--
	PB2	-	SB3	19	--	--	--
	PB2	-	PB3	--	88	--	--
	PB3	-	SB4	14	--	--	--
	PB3	-	EXIST	7	--	--	1
	PB3	-	PB6	--	--	230	--
	PB6	-	SB5	--	19	--	--
	PB6	-	SB6	14	--	--	--
	PB6	-	SB7	5	--	--	--
	PB6	-	PB7	--	--	36	--
	PB6	-	PB8	--	--	184	--
	PB8	-	SB8	--	22	--	--
	PB8	-	SB9	8	--	--	--
	PB8	-	PB9	--	62	--	--
	PB9	-	SB10	11	--	--	--
	PB9	-	EXIST	5	--	--	1
	PB9	-	PB12	--	--	216	--
	PB12	-	SB11	--	30	--	--
	PB12	-	SB12	12	--	--	--
	PB12	-	CB1	--	48	--	--
INTERSECTION TOTAL				113	377	844	2
PROJECT TOTAL				113	377	844	2

TRAFFIC SIGNAL STRUCTURES

				654.0113	657.0360	657.0361	657.0545	657.0550	657.0555	657.0825	659.1115	SPV.0090.02*
				CONCRETE BASES	POLES		MONOTUBE ARMS			LUMINAIRE ARMS	LUMINAIRES	FOUNDATION DRILLING
LOCATION / BASE				TYPE 13	TYPE 13	TYPE 13 - OVERHEIGHT	ARMS 45-FT	ARMS 50-FT	ARMS 55-FT	STEEL TYPE 13	UTILITY	
NUMBER	STATION	OFFSET	L/R	EACH	EACH	EACH	EACH	EACH	EACH	POLE CLAMP 15-FT	LED A	42-INCH DIAMETER
										EACH	EACH	LF
USH 18 & STH 23												
SB2	469+38.4 'NB'	34.2	R	1	--	1	--	1	--	1	1	--
SB5	108+64.5 'EB'	30.5	R	1	1	--	1	--	--	1	1	6
SB8	467+62.4 'SB'	32.7	L	1	1	--	--	1	--	1	1	--
SB11	107+06.3 'WB'	41.4	L	1	--	1	--	--	1	1	1	2
INTERSECTION TOTAL				4	2	2	1	2	1	4	4	8
PROJECT TOTAL				4	2	2	1	2	1	4	4	8

* FOUNDATION DRILLING INTENDED FOR ROCK CORING INTO SHALLOW BEDROCK. SEE SPECIAL PROVISIONS FOR MORE DETAIL.

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

LOCATION	FROM - TO	655.0260	655.0305	655.0515	655.0700*	SPV.0090.01*
		CABLE	CABLE TYPE	ELECTRICAL WIRE	LOOP DETECTOR	INSTALL STATE FURNISHED
		TRAFFIC SIGNAL 12-14 AWG	UF 2-12 AWG GROUNDED	TRAFFIC SIGNALS 10 AWG	LEAD IN CABLE	CAT-5E CABLE
USH 18 & STH 23		LF	LF	LF	LF	LF
	CB1 - SB1	89	--	89	89	--
	CB1 - SB2	183	183	--	--	183
	CB1 - SB3	193	--	--	193	--
	CB1 - SB4	246	--	--	246	--
	CB1 - SB5	347	--	--	--	347
	CB1 - SB6	343	--	--	343	--
	CB1 - SB7	332	--	--	332	--
	CB1 - SB8	243	--	--	--	243
	CB1 - SB9	229	--	--	229	--
	CB1 - SB10	187	--	--	187	--
	CB1 - SB11	84	84	--	--	84
	CB1 - SB12	65	--	65	65	--
	SB1 - SB2	--	--	163	--	--
	SB2 - SB3	--	--	58	--	--
	SB3 - SB4	--	--	121	--	--
	SB4 - SB5	--	--	192	--	--
	SB5 - SB6	--	--	64	--	--
	SB6 - SB7	--	--	50	--	--
	SB7 - SB8	--	--	165	--	--
	SB8 - SB9	--	--	61	--	--
	SB9 - SB10	--	--	94	--	--
	SB10 - SB11	--	--	194	--	--
	SB11 - SB12	--	--	73	--	--
	SB2 - SB5	--	249	--	--	--
	SB8 - SB11	--	251	--	--	--
INTERSECTION TOTAL		2,541	767	1,389	1,684	857
PROJECT TOTAL		2,541	767	1,389	1,684	857

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

LOCATION	FROM SIGNAL BASE -	TO SIGNAL HEAD	655.0230	655.0610	655.0700*	SPV.0090.01*
			CABLE TRAFFIC SIGNAL 5-14 AWG	ELECTRICAL WIRE LIGHTING 12 AWG	LOOP DETECTOR LEAD IN CABLE	INSTALL STATE FURNISHED CAT-5E CABLE
			LF	LF	LF	LF
USH 18 & STH 23	SB1	- 41	24	--	--	--
	SB1	- 31	27	--	--	--
	SB1	- P41	20	--	--	--
	SB1	- BUTTON	--	--	11	--
	SB2	- 32	78	--	--	--
	SB2	- 82	52	--	--	--
	SB2	- 83	24	--	--	--
	SB2	- LUMINAIRE	--	150	--	--
	SB2	- DETECTION	--	--	--	60
	SB3	- P82	20	--	--	--
	SB3	- BUTTON	--	--	11	--
	SB4	- 21	24	--	--	--
	SB4	- 11	27	--	--	--
	SB4	- P21	20	--	--	--
	SB4	- BUTTON	--	--	11	--
	SB5	- 12	72	--	--	--
	SB5	- 62	55	--	--	--
	SB5	- 63	43	--	--	--
	SB5	- LUMINAIRE	--	150	--	--
	SB5	- DETECTION	--	--	--	57
	SB6	- 71	27	--	--	--
	SB6	- P81	20	--	--	--
	SB6	- BUTTON	--	--	11	--
	SB7	- 81	24	--	--	--
	SB7	- P62	20	--	--	--
	SB7	- BUTTON	--	--	11	--
	SB8	- 72	78	--	--	--
	SB8	- 42	50	--	--	--
	SB8	- 43	24	--	--	--
	SB8	- LUMINAIRE	--	150	--	--
	SB8	- DETECTION	--	--	--	60
	SB9	- P42	20	--	--	--
	SB9	- BUTTON	--	--	11	--
	SB10	- 51	27	--	--	--
	SB10	- 61	24	--	--	--
	SB10	- P61	20	--	--	--
	SB10	- BUTTON	--	--	11	--
	SB11	- 22	65	--	--	--
	SB11	- 23	54	--	--	--
	SB11	- 52	82	--	--	--
	SB11	- LUMINAIRE	--	150	--	--
	SB11	- DETECTION	--	--	--	62
	SB12	- P22	20	--	--	--
	SB12	- BUTTON	--	--	11	--
INTERSECTION TOTAL			1,041	600	88	239
PROJECT TOTAL			1,041	600	88	239

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL PULL BOXES					
653.0164					
LOCATION / PULL BOX NUMBER		STATION	OFFSET	L/R	PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
USH 18 & STH 23					
PB1		469+26.8 'SB'	34.2	L	1
PB2		469+29.9 'NB'	35.0	R	1
PB3		108+89.7 'WB'	45.7	L	1
PB6		467+94.8 'NB'	28.5	R	1
PB7		467+65.5 'NB'	48.7	R	1
PB8		467+82.1 'SB'	42.8	L	1
PB9		107+37.3 'EB'	43.6	R	1
PB12		107+36.1 'WB'	44.1	L	1
INTERSECTION TOTAL					8
PROJECT TOTAL					8

TRAFFIC SIGNAL LOOP DETECTORS		
655.0700*		
LOCATION / LOOP NO.	INSTALLATION METHOD	LOOP DETECTOR LEAD IN CABLE LF
USH 18 & STH 23		
21	EXISITNG LOOP	284
22	EXISITNG LOOP	484
61	EXISITNG LOOP	254
62	EXISITNG LOOP	450
INTERSECTION TOTAL		1,472
PROJECT TOTAL		1,472
*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.		

<u>PEDESTRIAN PUSH BUTTONS</u>	
SPV.0060.01 INSTALL STATE FURNISHED APS PUSH BUTTONS	
LOCATION / BASE NUMBER	EACH
USH 18 & STH 23	
SB1	1
SB3	1
SB4	1
SB6	1
SB7	1
SB9	1
SB10	1
SB12	1
INTERSECTION TOTAL	8
PROJECT TOTAL	8

TRAFFIC SIGNAL HEADS					
658.0173 658.0174 658.0416					
		TRAFFIC SIGNAL FACE		PEDESTRIAN	
		3S	4S	SIGNAL FACE	
LOCATION	SIGNAL BASE NO.	HEAD NO.	12-INCH EACH	12-INCH EACH	16-INCH EACH
USH 18 & STH 23					
		SB1	41	1	--
			31	--	1
			P41	--	1
		SB2	32	--	1
			82	1	--
			83	1	--
		SB3	P82	--	1
		SB4	21	1	--
			11	--	1
			P21	--	1
		SB5	12	--	1
			62	1	--
			63	1	--
		SB6	71	--	1
			P81	--	1
		SB7	81	1	--
			P62	--	1
		SB8	72	--	1
			42	1	--
			43	1	--
		SB9	P42	--	1
		SB10	51	--	1
			61	1	--
			P61	--	1
		SB11	22	1	--
			23	1	--
			52	--	1
		SB12	P22	--	1
INTERSECTION TOTAL			12	8	8
PROJECT TOTAL			12	8	8

TRAFFIC SIGNAL REMOVALS		
LOCATION / ITEM NUMBER	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH
USH 18 & JOHNS ST		
SB1	1	--
SB2	1	--
SB3	1	--
SB4	1	--
SB5	1	--
SB6	1	--
SB7	1	--
SB8	1	--
SB9	1	--
SB10	1	--
SB11	1	--
SB12	1	--
PB1	--	1
PB2	--	1
PB3	--	1
PB4	--	1
PB5	--	1
PB6	--	1
PB7	--	1
PB8	--	1
PB9	--	1
PB10	--	1
PB11	--	1
PB12	--	1
PB13	--	1
INTERSECTION TOTAL	12	13
PROJECT TOTAL	12	13

TRAFFIC SIGNAL PULL BOXES				
				653.0164
LOCATION / PULL BOX NUMBER	STATION	OFFSET	L/R	PULL BOXES NON-CONDUCTIVE
				24X42-INCH EACH
USH 18 & JOHNS ST				
PB1	9+30.7 'JNB'	27.9	RT	1
PB3	9+29.4 'JSB'	34.5	LT	1
PB4	125+05.0 'EB'	50.7	RT	1
PB7	125+03.0 'WB'	44.8	LT	1
PB8	11+11.6 'JSB'	29.8	LT	1
PB11	11+12.2 'JNB'	30.7	RT	1
PB12	126+37.3 'WB'	52.7	LT	1
PB15	9+51.2 'JNB'	46.2	RT	1
INTERSECTION TOTAL				8
PROJECT TOTAL				8

TRAFFIC SIGNAL LOOP DETECTORS		
		655.0700*
		LOOP DETECTOR
		LEAD IN CABLE
LOCATION / LOOP NO.	INSTALLATION METHOD	LF
USH 18 & JOHNS ST		
21	EXISTING LOOP	286
22	EXISTING LOOP	554
44	EXISTING LOOP	380
61	EXISTING LOOP	272
62	EXISTING LOOP	461
84	EXISTING LOOP	141
INTERSECTION TOTAL		2094
PROJECT TOTAL		2,094

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL CONDUIT

LOCATION	FROM	-	TO	652.0225	652.0235	652.0615	652.0700.S
				CONDUIT RIGID NONMETALLIC	SCHEDULE 40	CONDUIT SPECIAL	INSTALL CONDUIT INTO EXISTING ITEM
				2-INCH LF	3-INCH LF	3-INCH LF	EACH
USH 18 & JOHNS ST	CB1	-	PB1	--	63	--	--
	PB1	-	PB3	--	--	168	--
	PB1	-	SB1	26	--	--	--
	PB1	-	EXISTING	19	--	--	1
	PB3	-	SB2	--	8	--	--
	PB3	-	PB4	--	76	--	--
	PB4	-	EXISTING	58	--	--	1
	PB5	-	SB3	15	--	--	--
	PB5	-	PB7	--	--	230	--
	PB7	-	SB4	--	23	--	--
	PB7	-	PB8	--	90	--	--
	PB8	-	SB5	22	--	--	--
	PB8	-	PB9	12	--	--	1
	PB8	-	PB11	--	--	166	--
	PB11	-	SB6	--	9	--	--
	PB11	-	SB7	17	--	--	--
	PB11	-	PB12	--	90	--	--
	PB12	-	EXISTING	33	--	--	1
	PB12	-	SB8	10	--	--	--
	PB12	-	PB15	--	--	254	--
	PB15	-	SB9	--	15	--	--
	PB15	-	CB1	--	45	--	--
INTERSECTION TOTAL				212	419	818	4
PROJECT TOTAL				212	419	818	4

TRAFFIC SIGNAL STRUCTURES

LOCATION / BASE NUMBER	STATION	OFFSET	L/R	654.0101	657.0100	657.0430	657.0420	657.0425
				TRAFFIC SIGNAL STANDARDS				
				CONCRETE BASES	PEDESTAL	ALUMINUM		
				TYPE 1 EACH	BASES EACH	10-FT EACH	13-FT EACH	15-FT EACH
USH 18 & JOHNS ST								
SB1	9+52.6 'JNB'	41.1	RT	1	1	—	1	—
SB3	124+92.0 'EB'	45.1	RT	1	1	—	—	1
SB5	10+90.5 'JSB'	36.0	LT	1	1	—	1	—
SB7	10+96.8 'JNB'	36.1	RT	1	1	1	—	—
SB8	126+29.2 'WB'	55.9	LT	1	1	—	—	1
INTERSECTION TOTAL				5	5	1	2	2
PROJECT TOTAL				5	5	1	2	2

TRAFFIC SIGNAL STRUCTURES

				654.0120	654.0113	657.0352	657.0360	657.0546	657.0555	657.0820	657.0825	659.1115	659.1120	659.1125	659.1130	SPV.0090.02*	SPV.0090.03*
LOCATION / BASE NUMBER				CONCRETE BASES		POLES		MONOTUBE ARMS		LUMINAIRE ARMS		LUMINAIRES	LUMINAIRES	LUMINAIRES	LUMINAIRES	FOUNDATION DRILLING	FOUNDATION DRILLING
				TYPE 10-SPECIAL	TYPE 13	TYPE 10-SPECIAL	TYPE 13	ARMS 45-FT-SPECIAL	ARMS 55-FT	POLE CLAMP 15-FT	POLE CLAMP 15-FT	UTILITY	UTILITY	UTILITY	UTILITY	42-INCH DIAMETER	36-INCH DIAMETER
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LF	EACH
USH 18 & JOHNS ST																	
SB2	9+23.0 'JSB'	32.5	LT	1	--	1	--	1	--	1	--	1	--	--	--	--	18
SB4	124+81.2 'WB'	42.2	LT	--	1	--	1	--	1	--	1	1	--	--	--	15	--
SB6	11+05.0 'JNB'	34.3	RT	1	--	1	--	1	--	1	--	1	--	--	--	--	18
SB9	126+41.7 'EB'	44.6	RT	--	1	--	1	--	1	--	1	1	--	--	--	15	--
INTERSECTION TOTAL				2	2	2	2	2	2	2	2	4	0	0	0	30	36
PROJECT TOTAL				2	2	2	2	2	2	2	2	4	0	0	0	30	36

* FOUNDATION DRILLING INTENDED FOR ROCK CORING INTO SHALLOW BEDROCK. SEE SPECIAL PROVISIONS FOR MORE DETAIL.

TRAFFIC SIGNAL HEADS					
LOCATION	SIGNAL BASE NO.	HEAD NO.	658.0173	658.0174	658.0416
			TRAFFIC SIGNAL FACE		PEDESTRIAN
			3S 12-INCH EACH	4S 12-INCH EACH	SIGNAL FACE 16-INCH EACH
USH 18 & JOHNS ST	SB1	44	1	--	--
		81	1	--	--
		P81	--	--	1
	SB2	42	1	--	--
		43	1	--	--
	SB3	45	1	--	--
		51	--	1	--
		61	1	--	--
	SB4	22	1	--	--
		23	1	--	--
	SB5	52	--	1	--
		41	1	--	--
		84	1	--	--
	SB6	82	1	--	--
		83	1	--	--
	SB7	85	1	--	--
		P82	--	--	1
		11	--	1	--
	SB9	21	1	--	--
		12	--	1	--
		62	1	--	--
		63	1	--	--
	INTERSECTION TOTAL			16	4
PROJECT TOTAL			16	4	2

PEDESTRIAN PUSH BUTTONS	
SPV.0060.01 INSTALL STATE FURNISHED APS PUSH BUTTONS	
LOCATION / BASE NUMBER	EACH
USH 18 & JOHNS ST	
SB1	1
SB7	1
INTERSECTION TOTAL	2
PROJECT TOTAL	2

DETECTION SYSTEM	
SPV.0060.08 INSTALL STATE FURNISHED NON-INTRUSIVE DETECTION SYSTEM (USH 18 & JOHNS ST)	
LOCATION	EACH
CATEGORY 0010	
USH 18 & JOHNS ST	1
PROJECT TOTAL	1

TRAFFIC SIGNAL COMMUNICATION EQUIPMENT	
SPV.0060.04 SALVAGE AND REINSTALL TRAFFIC SIGNAL COMMUNICATION EQUIPMENT (USH 18 & JOHNS ST)	
LOCATION	EACH
CATEGORY 0010	
USH 18 & JOHNS ST	1
PROJECT TOTAL	1

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

LOCATION	FROM	- TO	655.0250	655.0260	655.0305	655.0515	655.0700*	SPV.0090.01*
			CABLE		CABLE TYPE	ELECTRICAL WIRE		INSTALL STATE FURNISHED
			TRAFFIC SIGNAL		UF 2-12 AWG	TRAFFIC SIGNALS	LOOP DETECTOR	
			9-14 AWG	12-14 AWG	GROUND	10 AWG	LEAD IN CABLE	
			LF	LF	LF	LF	LF	LF
USH 18 & JOHNS ST								
	CB1	- SB1	--	84	--	84	84	--
	CB1	- SB2	--	165	--	--	--	165
	CB1	- SB3	--	225	--	--	--	--
	CB1	- SB4	--	364	--	--	--	364
	CB1	- SB5	--	373	--	--	--	--
	CB1	- SB6	--	263	--	--	--	263
	CB1	- SB7	271	--	--	--	271	--
	CB1	- SB8	--	204	--	--	--	--
	CB1	- SB9	--	65	--	65	--	65
	SB1	- SB2	--	--	--	163	--	--
	SB2	- SB3	--	--	--	105	--	--
	SB3	- SB4	--	--	--	198	--	--
	SB4	- SB5	--	--	--	135	--	--
	SB5	- SB6	--	--	--	159	--	--
	SB6	- SB7	--	--	--	56	--	--
	SB7	- SB8	--	--	--	115	--	--
	SB8	- SB9	--	--	--	197	--	--
	SB2	- SB4	--	--	243	--	--	--
	SB6	- SB9	--	--	257	--	--	--
INTERSECTION TOTAL			271	1743	500	1277	355	857
PROJECT TOTAL			271	1,743	500	1,277	355	857

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

				655.0230	655.0610	655.0700*	SPV.0090.01*
				CABLE TRAFFIC	ELECTRICAL WIRE	LOOP DETECTOR	INSTALL STATE FURNISHED
LOCATION	FROM SIGNAL BASE	- TO SIGNAL HEAD	SIGNAL 5-14 AWG	LIGHTING 12 AWG	LEAD IN CABLE	CAT-5E CABLE	
			LF	LF	LF	LF	
USH 18 & JOHNS ST							
	SB1	- 44	24	--	--	--	
	SB1	- 81	24	--	--	--	
	SB1	- P81	20	--	--	--	
	SB1	- BUTTON	--	--	11	--	
	SB2	- 42	49	--	--	--	
	SB2	- 43	24	--	--	--	
	SB2	- 45	71	--	--	--	
	SB2	- LUMINAIRE	--	150	--	--	
	SB2	- DETECTION	--	--	--	57	
	SB3	- 51	27	--	--	--	
	SB3	- 61	24	--	--	--	
	SB4	- 22	67	--	--	--	
	SB4	- 23	55	--	--	--	
	SB4	- 52	81	--	--	--	
	SB4	- LUMINAIRE	--	150	--	--	
	SB4	- DETECTION	--	--	--	62	
	SB5	- 41	24	--	--	--	
	SB5	- 84	24	--	--	--	
	SB6	- 82	51	--	--	--	
	SB6	- 83	24	--	--	--	
	SB6	- 85	73	--	--	--	
	SB6	- LUMINAIRE	--	150	--	--	
	SB6	- DETECTION	--	--	--	57	
	SB7	- P82	20	--	--	--	
	SB7	- BUTTON	--	--	11	--	
	SB8	- 11	27	--	--	--	
	SB8	- 21	24	--	--	--	
	SB9	- 12	84	--	--	--	
	SB9	- 62	69	--	--	--	
	SB9	- 63	57	--	--	--	
	SB9	- LUMINAIRE	--	150	--	--	
	SB9	- DETECTION	--	--	--	62	
INTERSECTION TOTAL			943	600	22	238	
PROJECT TOTAL			943	600	22	238	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.

3

TRAFFIC SIGNAL CONTROL

	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	656.0201.002 ELECTRICAL SERVICE METER BREAKER PEDESTAL (USH 18 & JOHNS ST)	SPV.0060.06 TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET AND CONTROLLER (USH 18 & JOHNS ST)
LOCATION	EACH	EACH	EACH
CATEGORY 0010			
USH 18 & JOHNS ST	1	1	1
PROJECT TOTAL	1	1	1

TRAFFIC SIGNAL MOUNTING HARDWARE

	658.5070.02 SIGNAL MOUNTING HARDWARE 02. (USH 18 & JOHNS ST)
LOCATION	EACH
USH 18 & JOHNS ST	1
PROJECT TOTAL	1

3

CONSTRUCTION STAKING

	650.8501.02 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (1662-00-78)
LOCATION	EACH
USH 18 & JOHNS ST	1
PROJECT TOTAL	1

TRAFFIC SIGNALS

	659.5000.S.02 LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR 02.
LOCATION	EACH
CATEGORY 0010	
USH 18 & JOHNS ST	4
PROJECT TOTAL	4

REMOVE TRAFFIC SIGNALS

	204.9060.S.02 REMOVING (ITEM DESCRIPTION) 02. REMOVE TRAFFIC SIGNALS USH 18 & JOHNS ST	SPV.0060.02 SALVAGE TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
LOCATION	EACH	EACH
CATEGORY 0010		
USH 18 & JOHNS ST	1	4
PROJECT TOTAL	1	4

TEMPORARY TRAFFIC SIGNALS

	661.0201.02 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (USH 18 & JOHNS ST)
LOCATION	EACH
CATEGORY 0010	
USH 18 & JOHNS ST	1
PROJECT TOTAL	1

TRAFFIC SIGNAL CABLE AND WIRE - BELOW GROUND

SPV.0090.01*			
INSTALL STATE FURNISHED			
CAT-5E CABLE			
LOCATION	FROM	- TO	LF
STH 23 & CTH YZ	CABINET BASE - SB3		128
	CABINET BASE - SB2		286
	CABINET BASE - SB6		346
	CABINET BASE - SB5		215
INTERSECTION TOTAL			975
PROJECT TOTAL			975
*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.			

TRAFFIC SIGNAL CABLE AND WIRE - ABOVE GROUND

SPV.0090.01*			
INSTALL STATE FURNISHED			
CAT-5E CABLE			
LOCATION	FROM SIGNAL BASE	- TO SIGNAL HEAD	LF
STH 23 & CTH YZ	SB3	- DETECTION	50
	SB2	- DETECTION	122
	SB6	- DETECTION	50
	SB5	- DETECTION	122
	INTERSECTION TOTAL		
PROJECT TOTAL			344
*ADDITIONAL QUANTITIES SHOWN ELSEWHERE.			

DETECTION SYSTEM

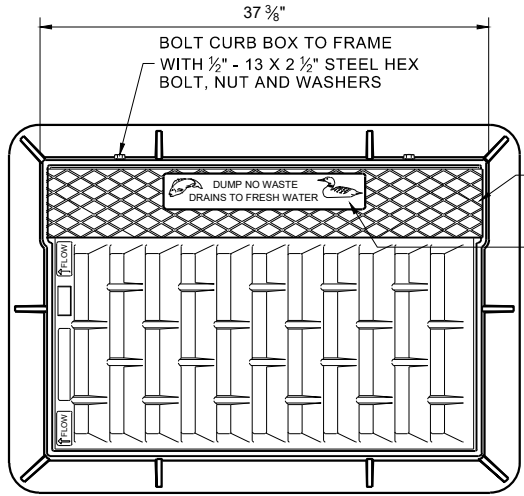
SPV.0060.09	
INSTALL STATE FURNISHED	
NON-INTRUSIVE DETECTION SYSTEM	
(STH 23 & CTH YZ)	
LOCATION	EACH
CATEGORY 0100	
STH 23 & CTH YZ	1
PROJECT TOTAL	1

Standard Detail Drawing List

08A05-22A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-22B	INLET COVERS TYPE B, B-A, C, MS, MS-A, DW & WM
08A05-22C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPES 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09C15-02	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35'-55' MONOTUBE ARM
09E08-09K	GENERAL NOTES, HARDWARE DETAILS FOR TYPE 9, 10, 9/10 SPECIAL,12 & 13 POLES W/ MONOTUBE ARMS
09E12-02K	GENERAL NOTES AND HARDWARE FOR OVER HEIGHT TYPE 9, 10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIAN NOSE
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-24C	PAVEMENT MARKING (TURN LANES)
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-09A	MEDIAN ISLAND PAVEMENT MARKINGS
15C19-10B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-15A	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D20-10A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D20-10B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-10C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

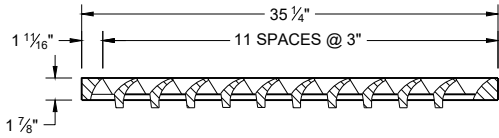
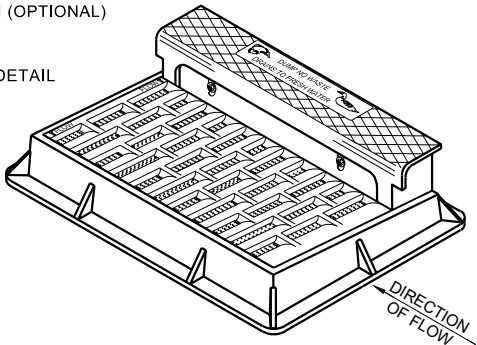
Standard Detail Drawing List

15D30-11G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

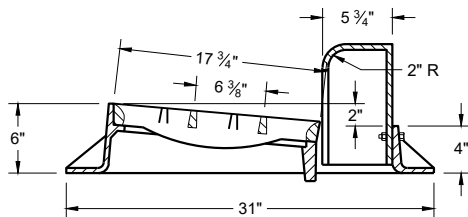
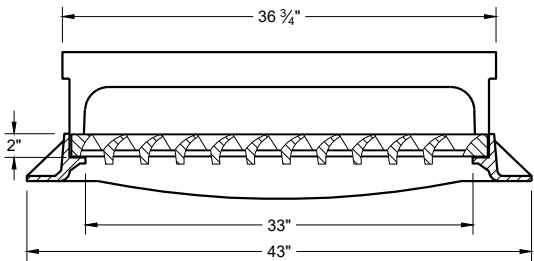
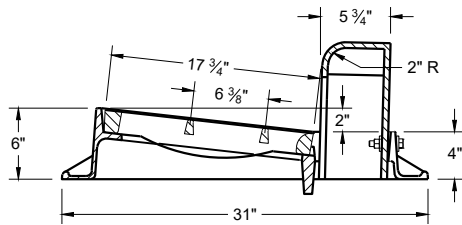
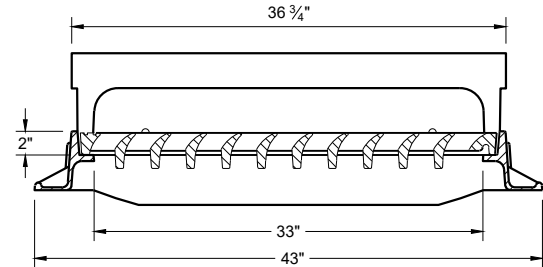


NOTE: EITHER CASTING IS ACCEPTABLE

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

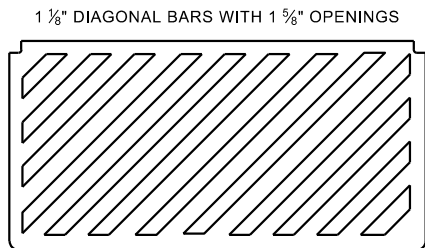


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



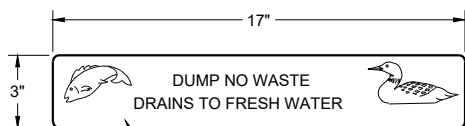
TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

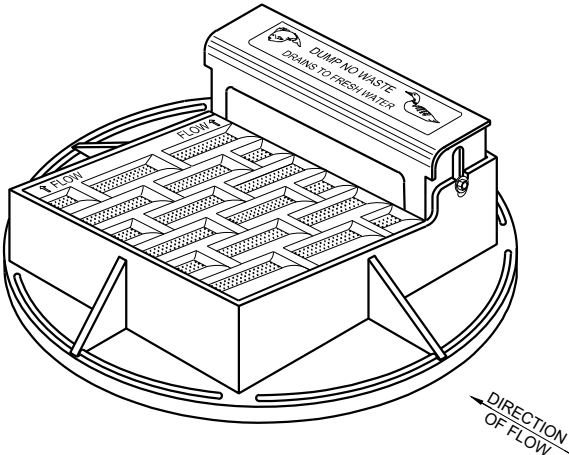


SPECIAL GRATE FOR TYPE "H" COVER

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

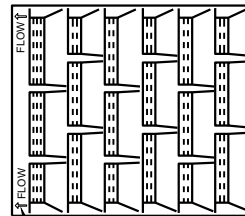


LOGO DETAIL

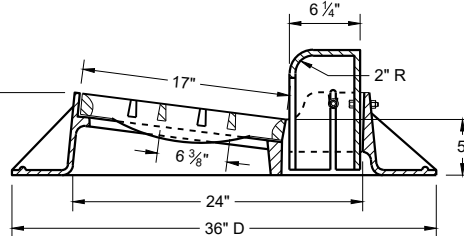
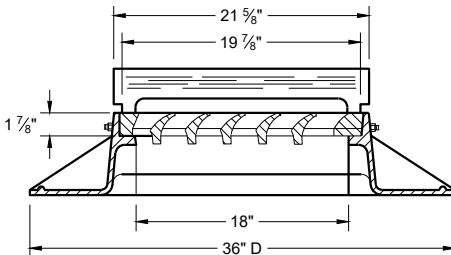
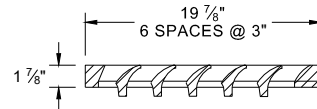


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

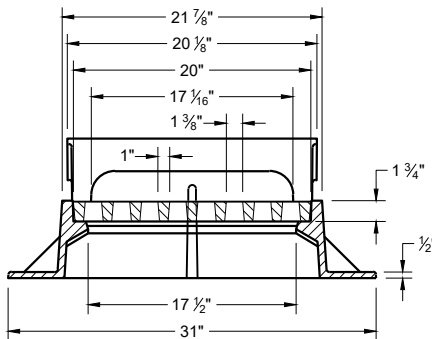
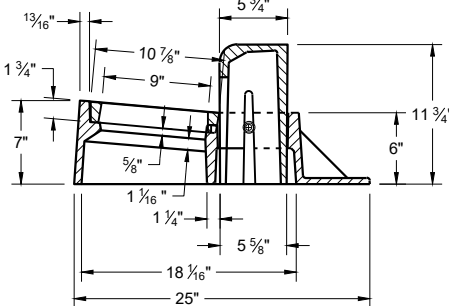
NOTE: EITHER CASTING IS ACCEPTABLE



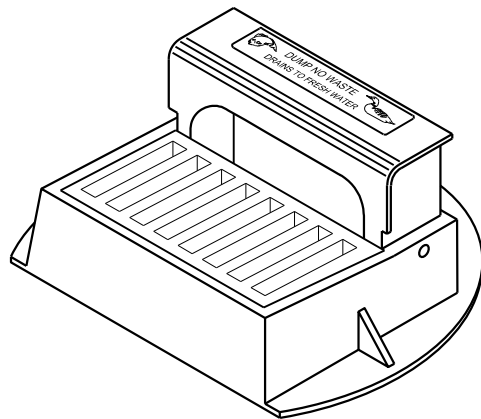
DIRECTION OF FLOW ARROWS



TYPE "A"



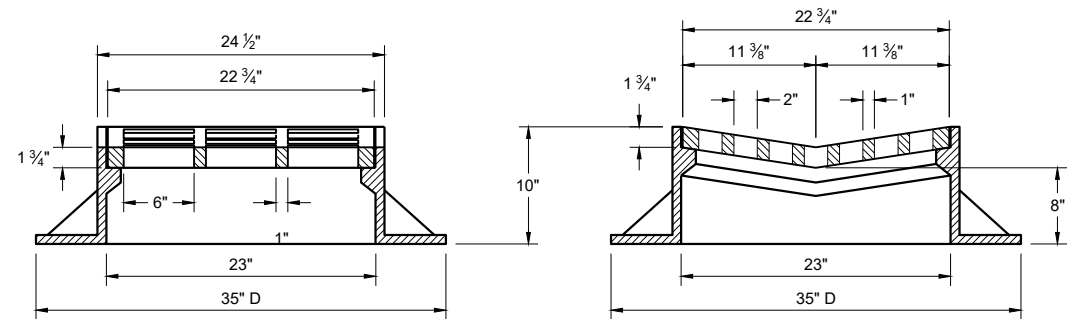
TYPE "Z"



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

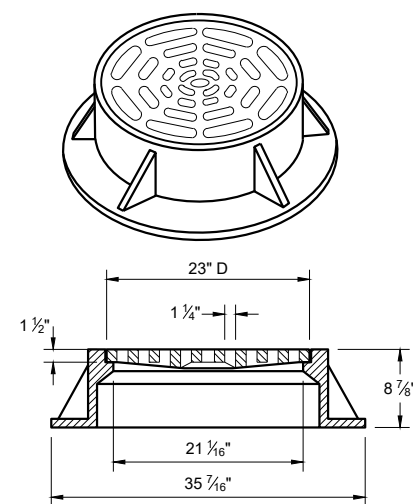
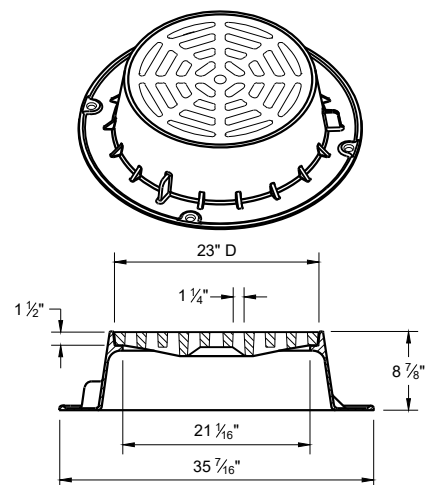
APPROVED
February 2025
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



TYPE "B"

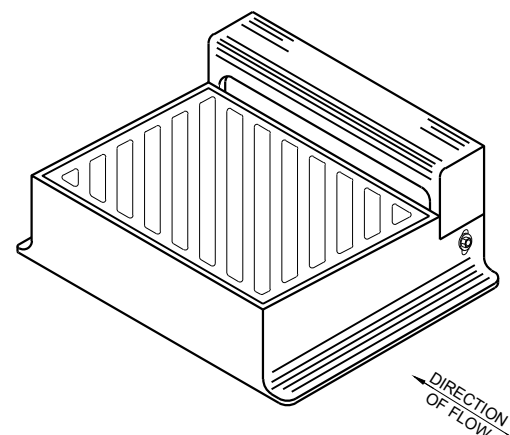
**ALTERNATIVE GRATE FOR
TYPE "B" COVER**

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

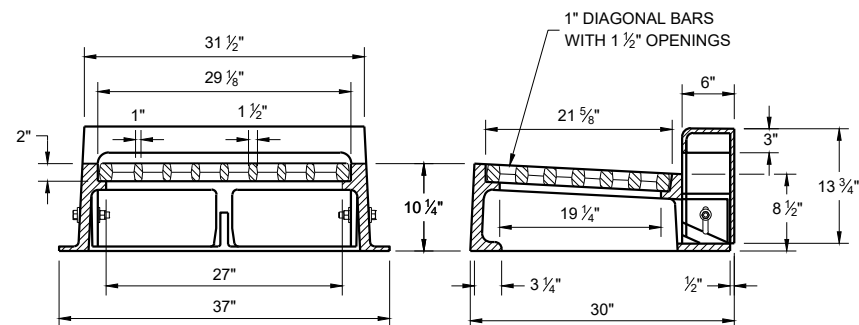


TYPE "C"

NOTE: EITHER CASTING IS ACCEPTABLE



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



TYPE "WM"

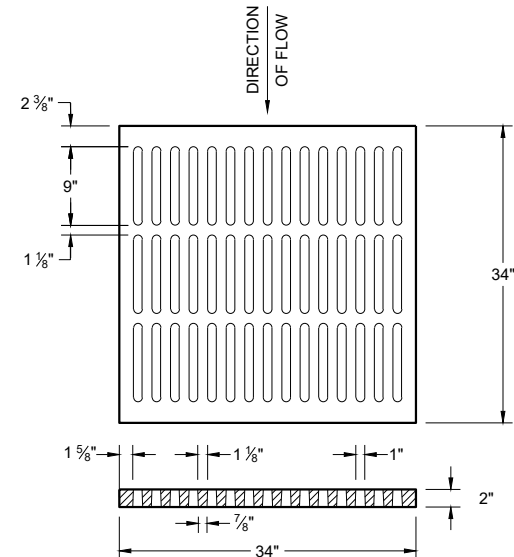
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

GENERAL NOTES

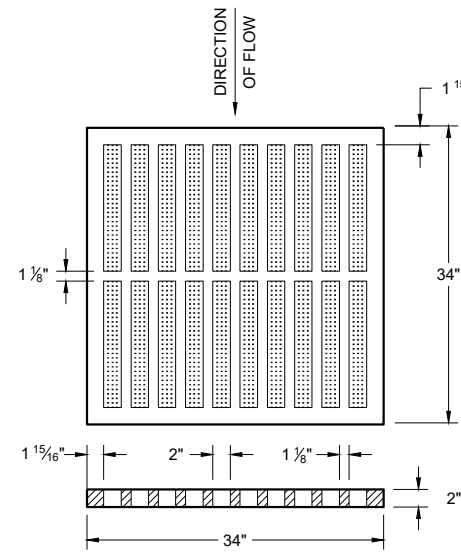
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

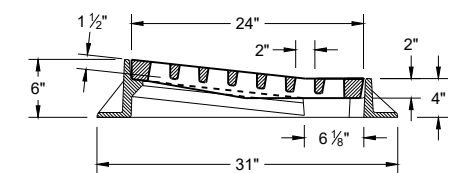
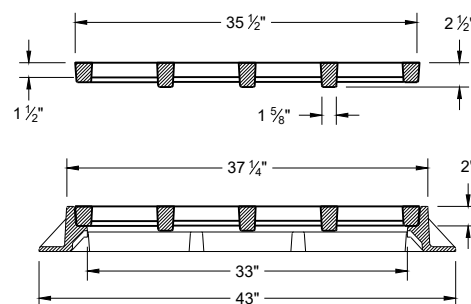
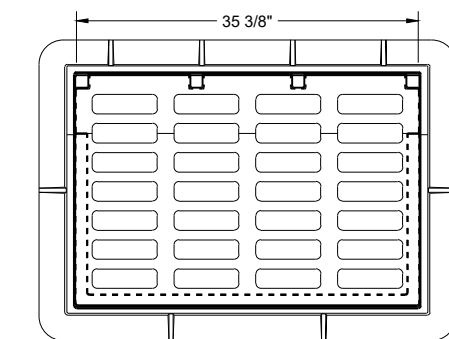
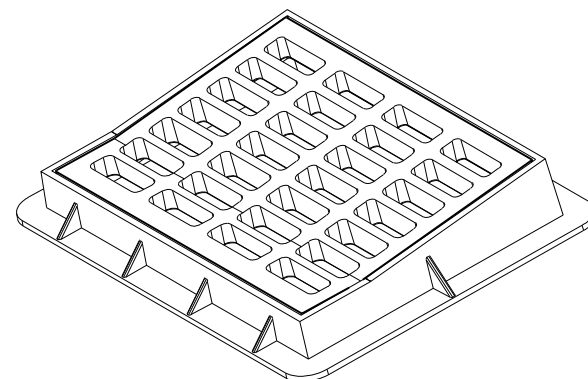
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



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



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



TYPE "DW"

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

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

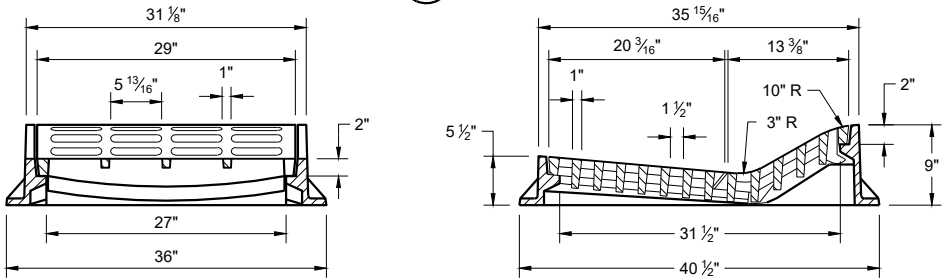
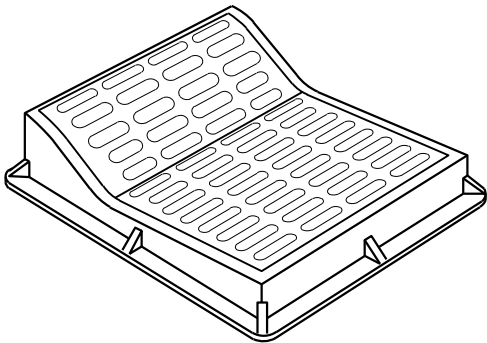
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

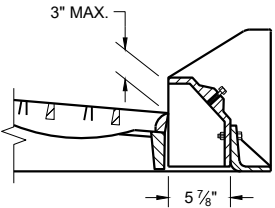
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



TYPE "F"

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

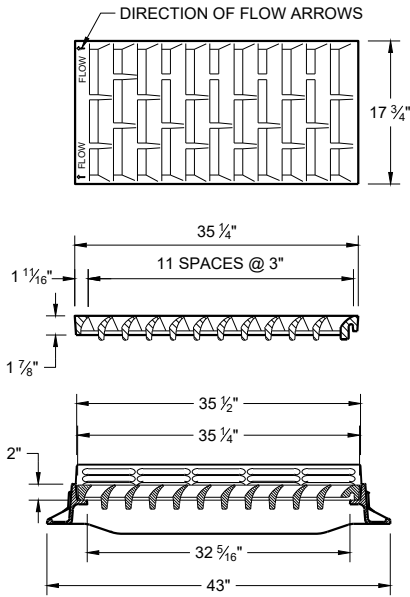


ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER

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

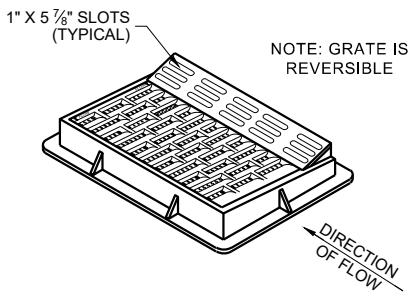
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

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

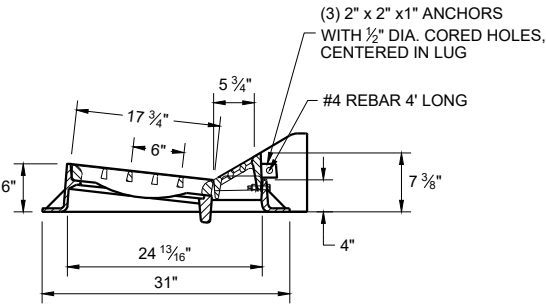


TYPE "HM"

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

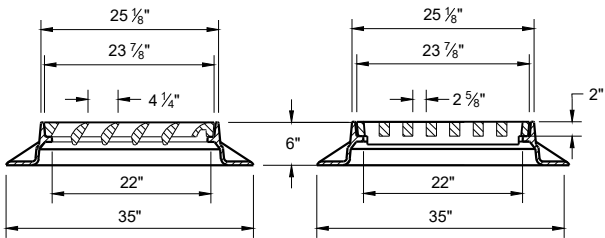
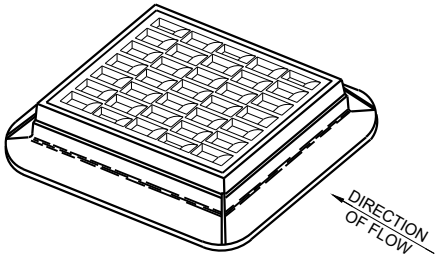


NOTE: GRATE IS REVERSIBLE

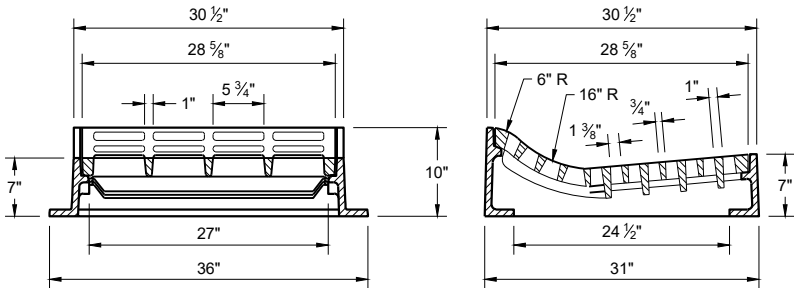
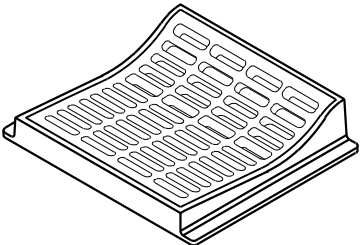


NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

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



TYPE "S"



TYPE "T"

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2025

DATE

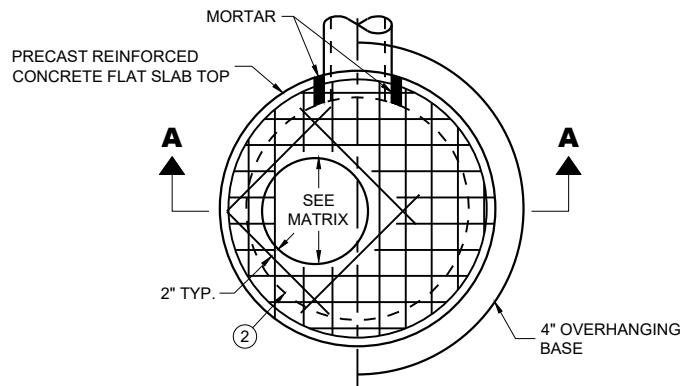
FHWA

/S/ Rodney Taylor

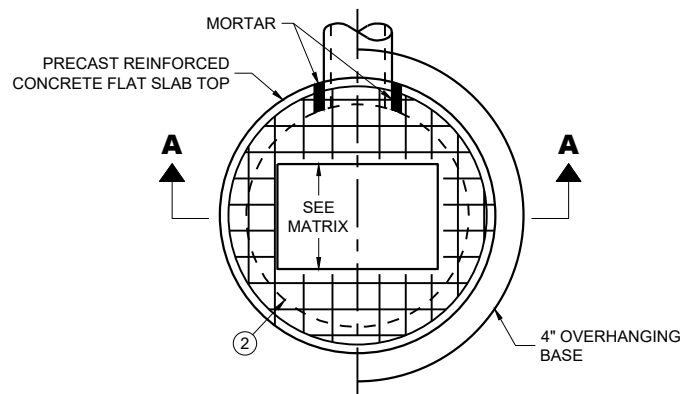
ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

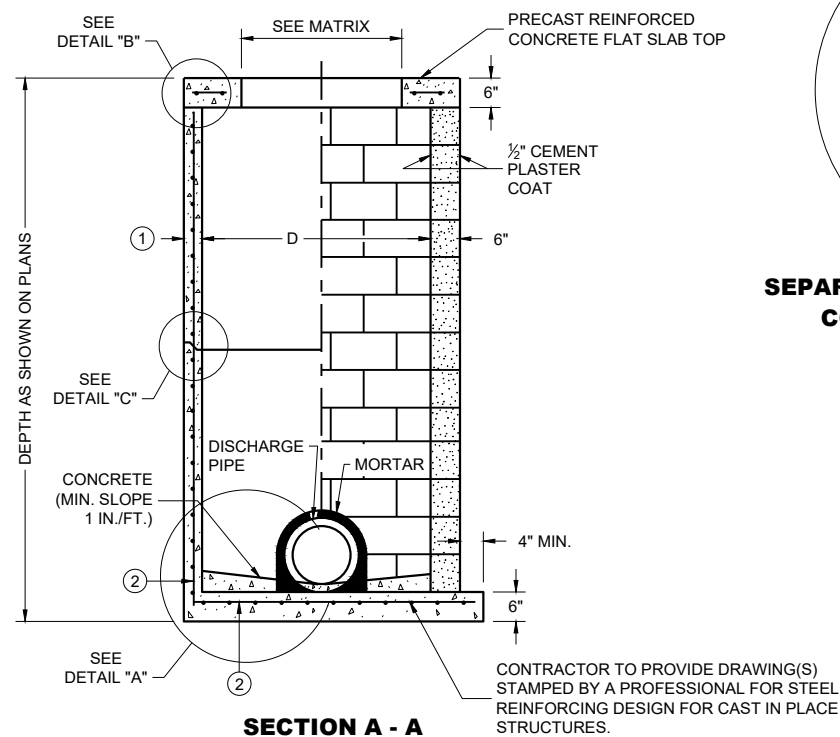
138



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

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

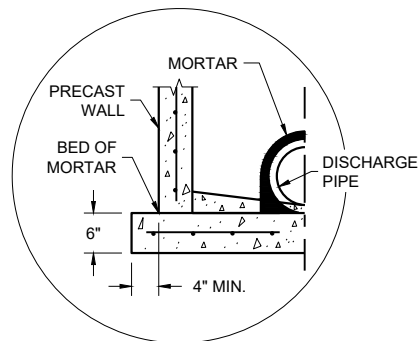
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

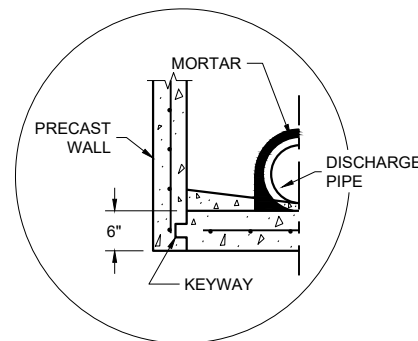
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

PIPE MATRIX

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

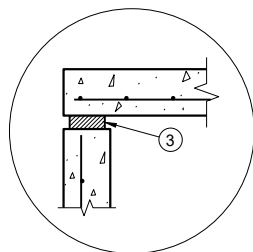


SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

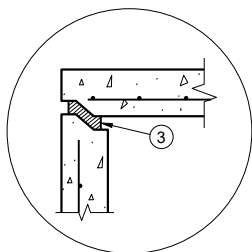


PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION

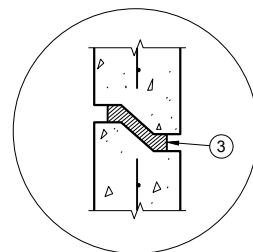
DETAIL "A"



TOP WITH PLAIN
END JOINT



TOP WITH TONGUE
AND GROOVE JOINT



RISER WITH TONGUE
AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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

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

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

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

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

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

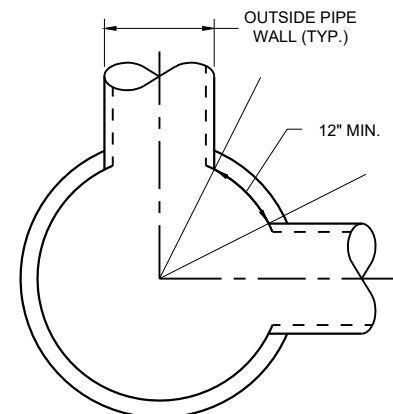
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

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

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

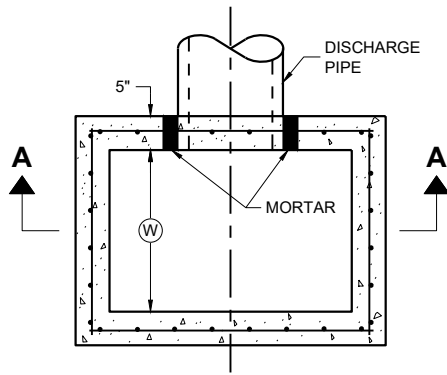


MINIMUM HORIZONTAL PIPE
SEPARATION
DETAIL "D"

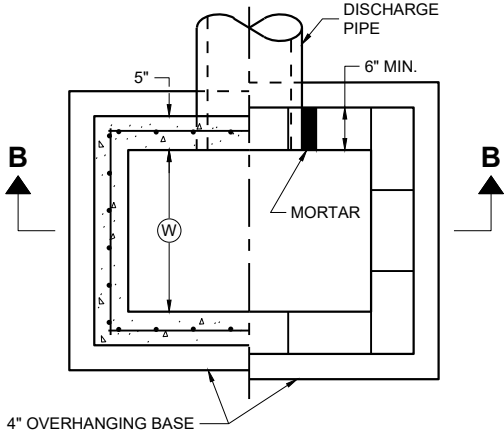
INLETS 3-FT
AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

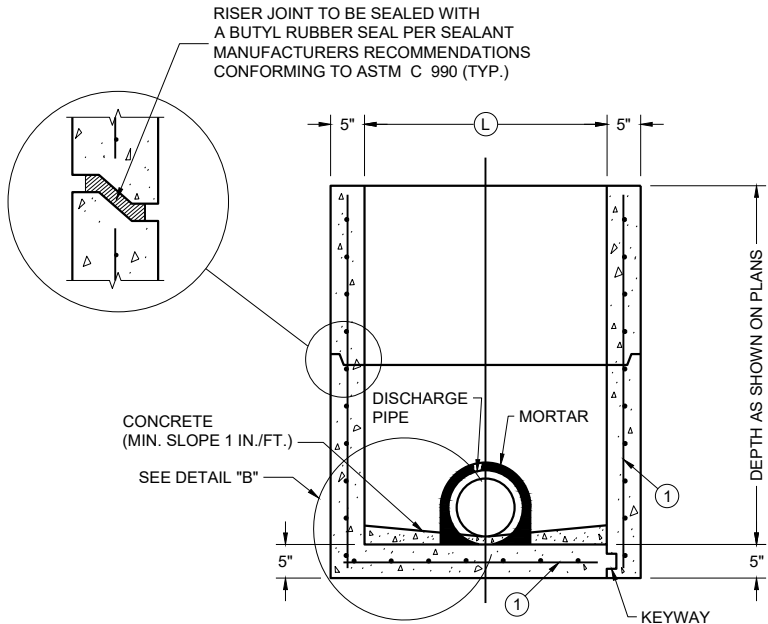
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



PLAN VIEW



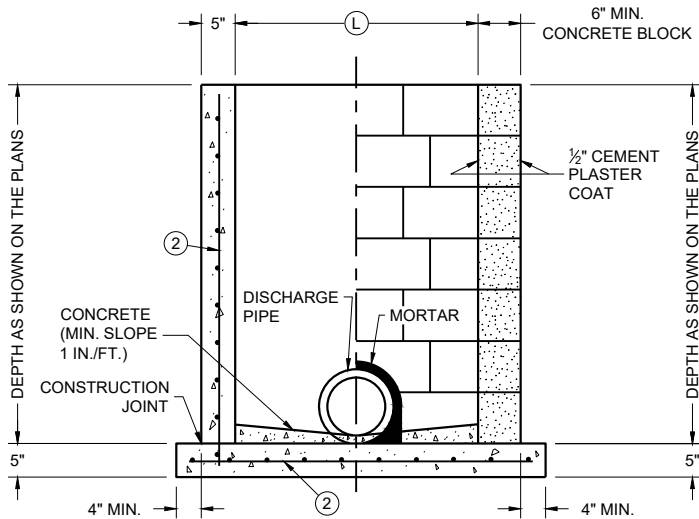
PLAN VIEW



PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

PRECAST REINFORCED
CONCRETE WITH
INTEGRAL BASE

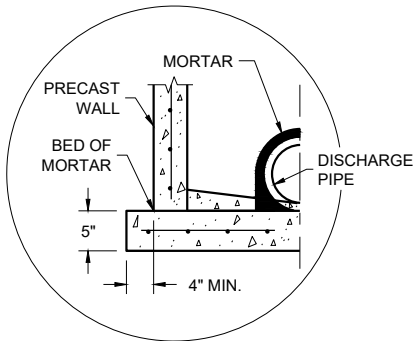
SECTION A - A



CAST IN PLACE
REINFORCED
CONCRETE

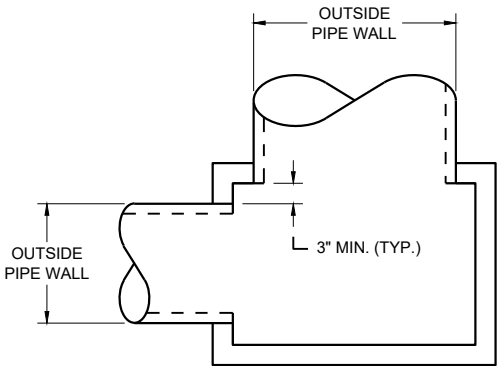
CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE ①

SECTION B - B



SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

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

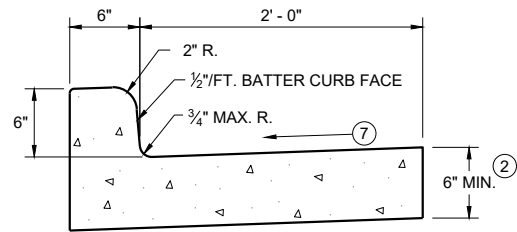
PIPE MATRIX

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

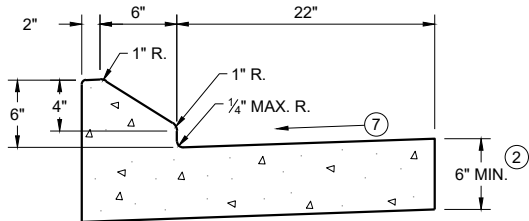
INLETS 2 X 2-FT, 2 X 2.5-FT,
2 X 3-FT, 2.5 X 3-FT
AND 2 X 3.5-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

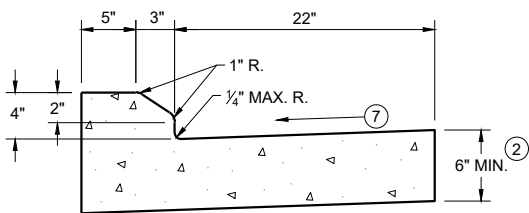
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



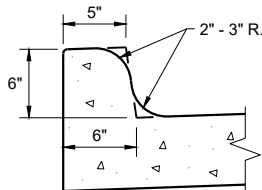
TYPES A^① & D



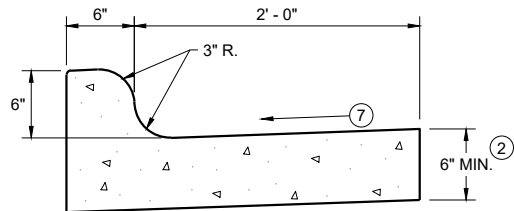
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

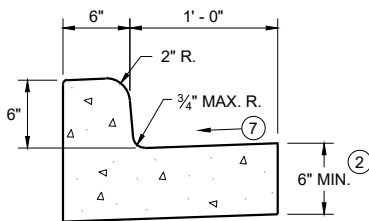


TYPES K^① & L
(OPTIONAL CURB SHAPE)



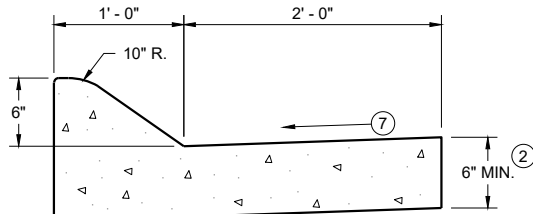
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

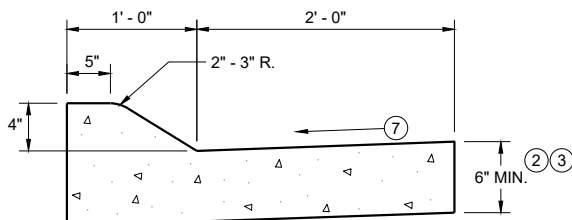


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

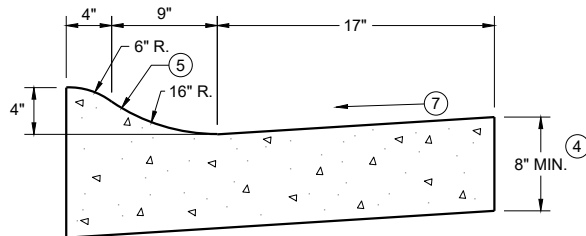


6" SLOPED CURB TYPES A^① & D



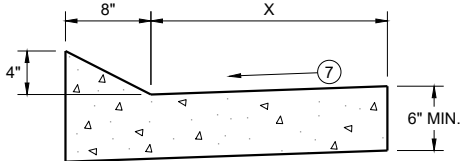
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



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

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

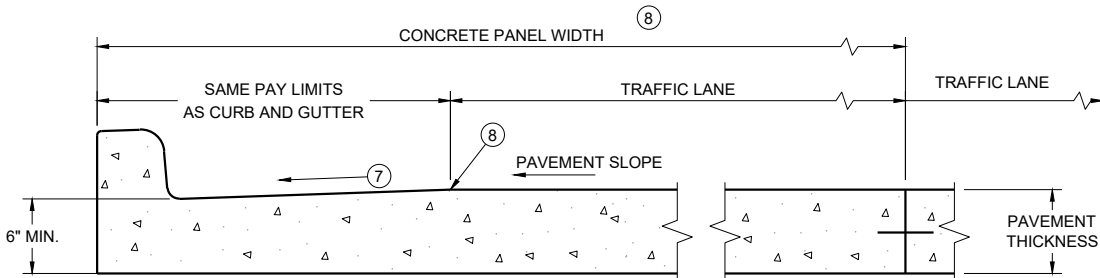


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

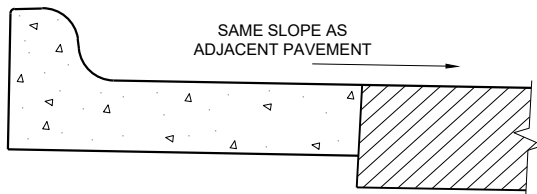
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

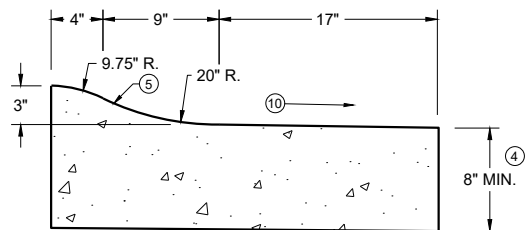


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

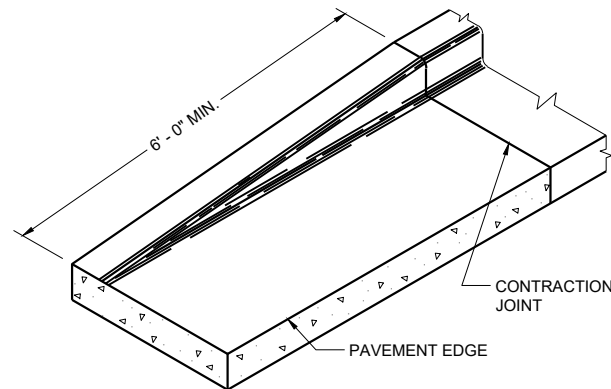
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

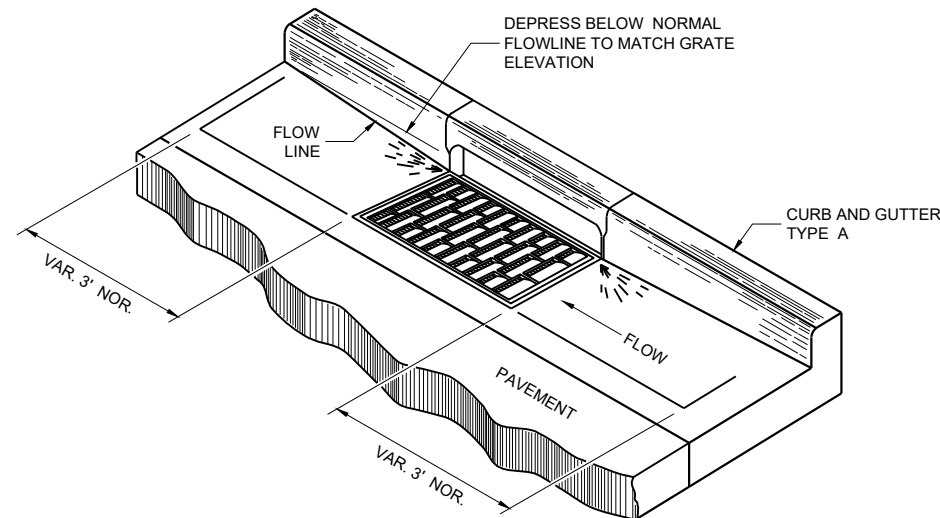
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- 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.
- USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- 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.
- UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- 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.
- SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY

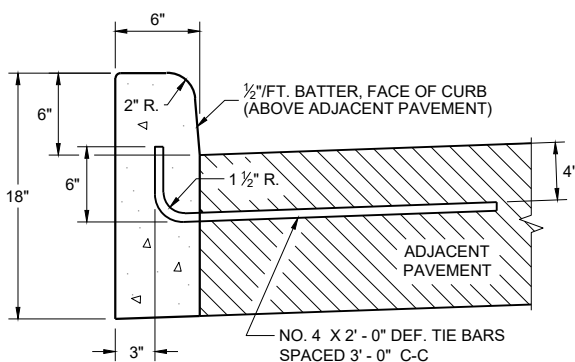


END SECTION CURB AND GUTTER

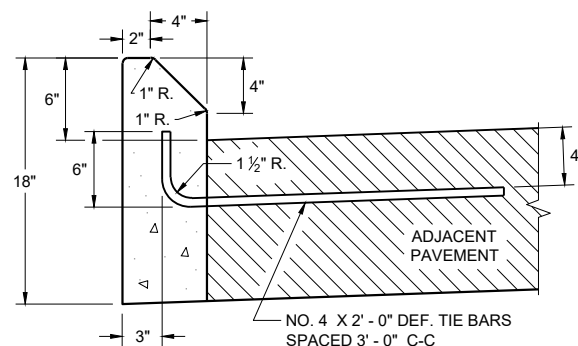


DETAIL OF CURB AND GUTTER AT INLETS

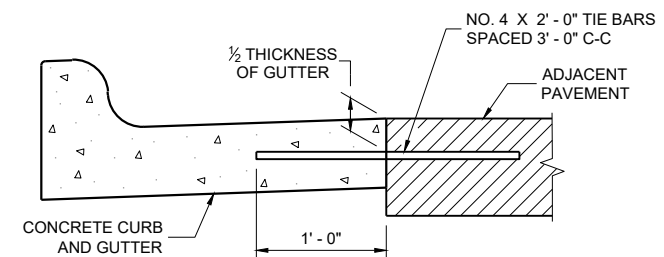
(TYPICAL H INLET COVER SHOWN)



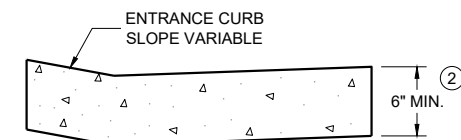
TYPES A ^① & D



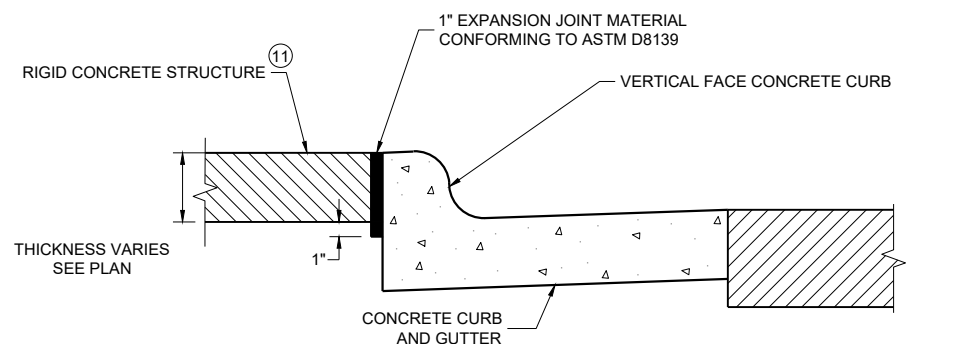
**TYPES G ^① & J
CONCRETE CURB**



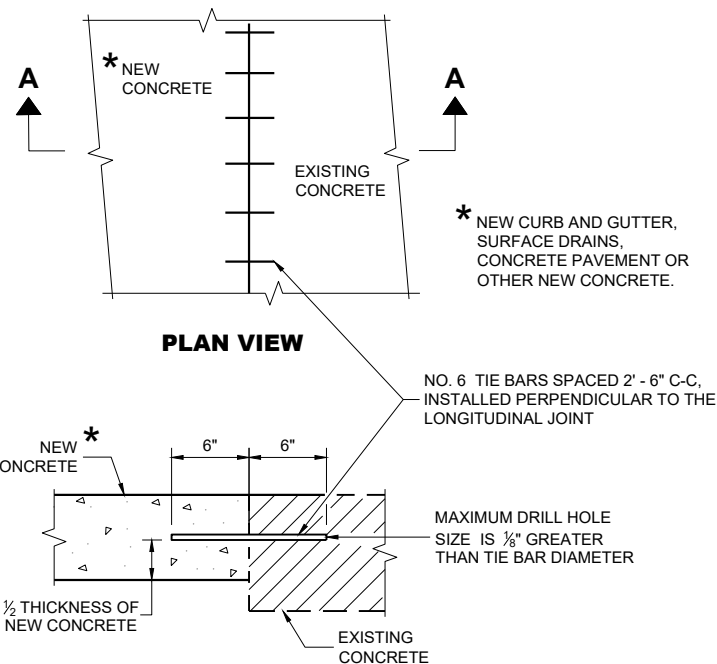
TYPICAL TIE BAR LOCATION ^①



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



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



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

GENERAL NOTES

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

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

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

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

6

SDD 08D01-24b

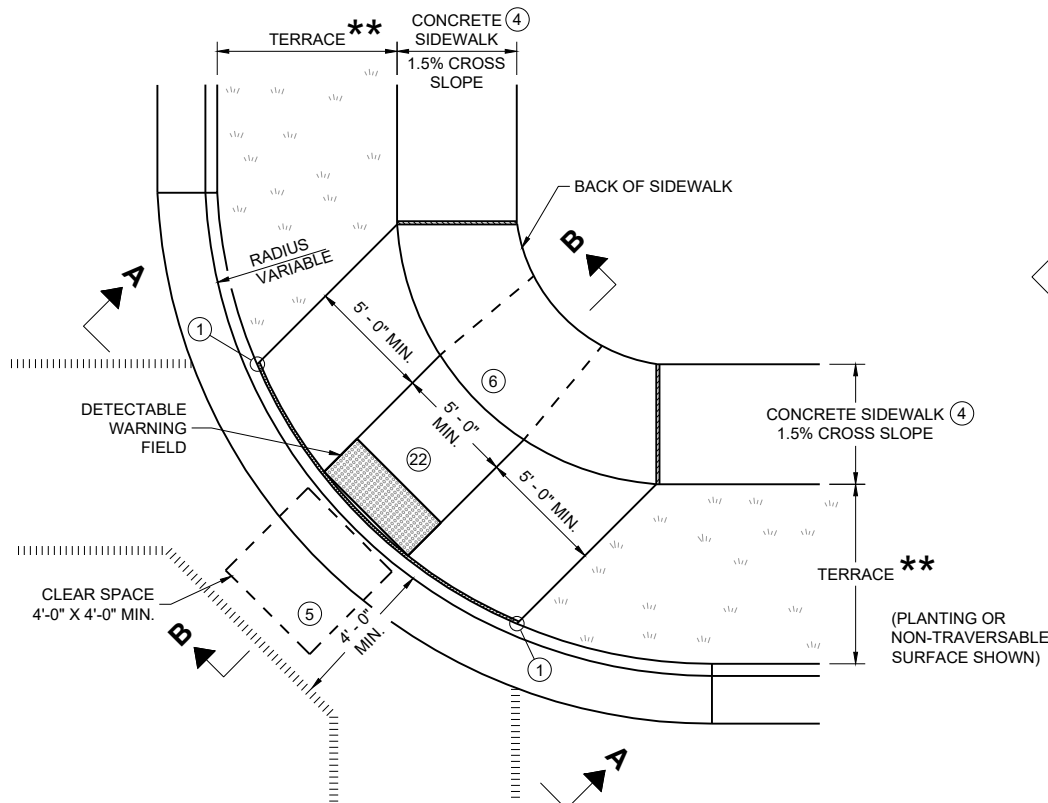
6

SDD 08D01-24b

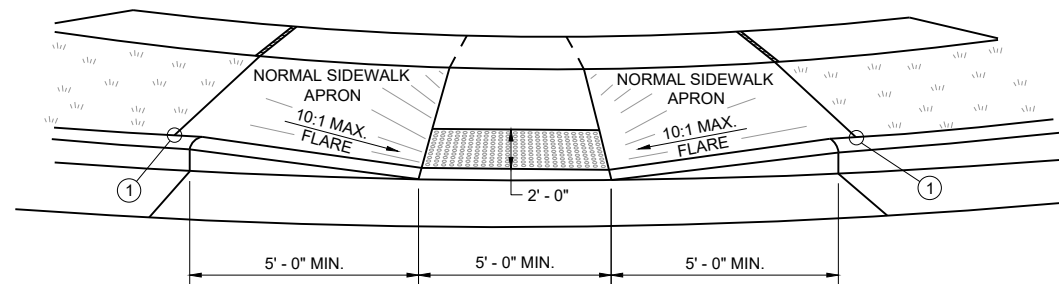
**CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

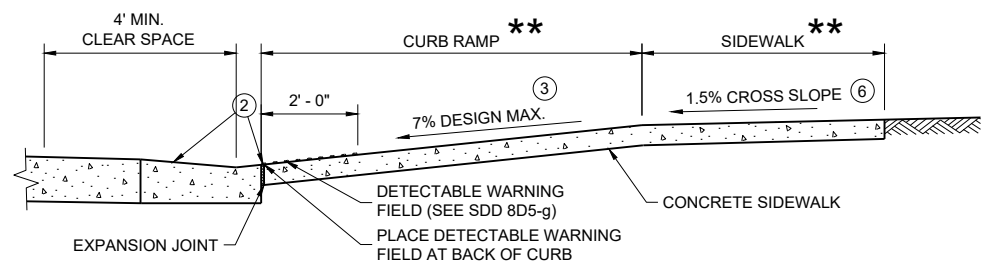
APPROVED
February 2025 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



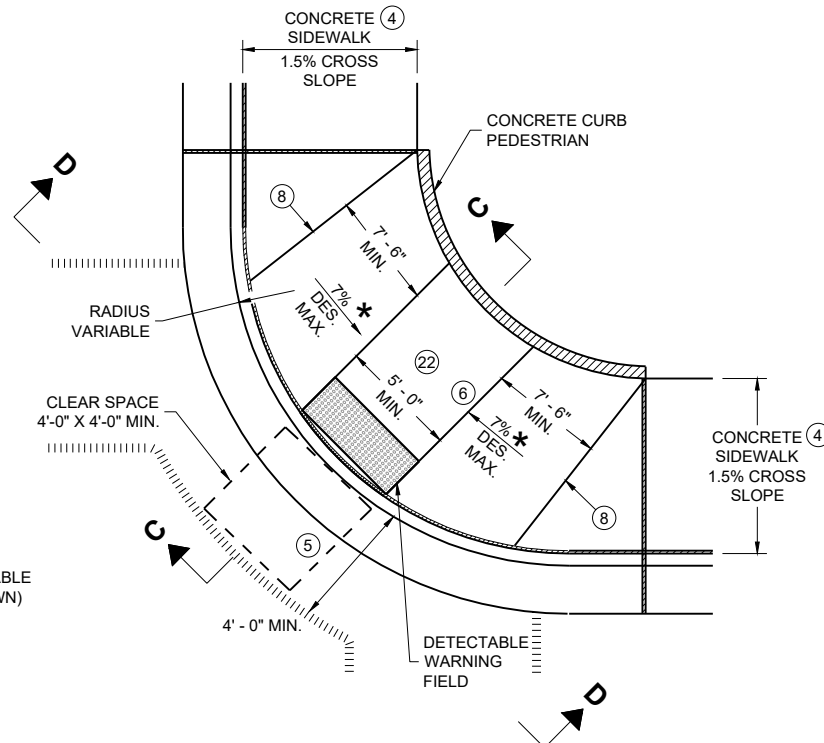
PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)



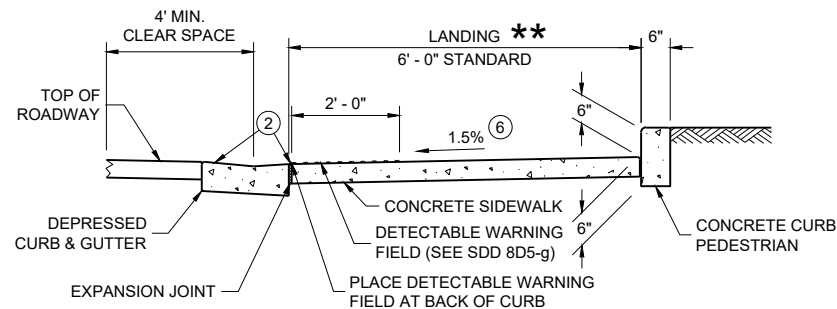
VIEW A - A FOR TYPE 1



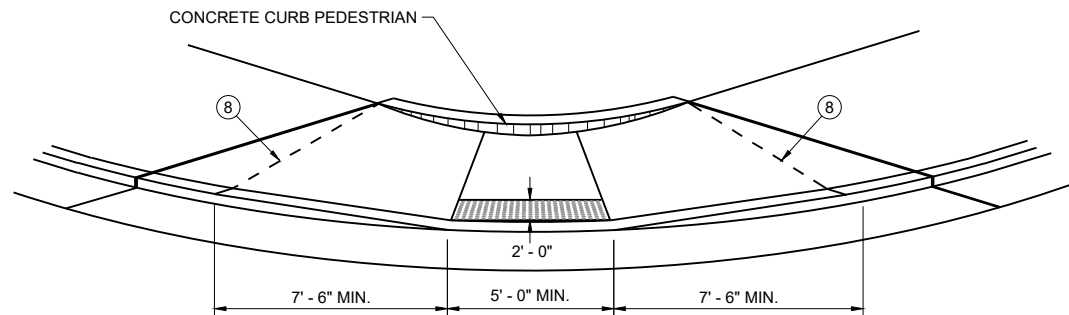
SECTION B - B FOR TYPE 1



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



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

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

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

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

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

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

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

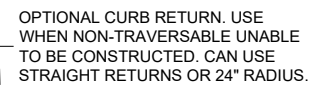
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11%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

LEGEND

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

CURB RAMPS
TYPE 1 AND 1-A

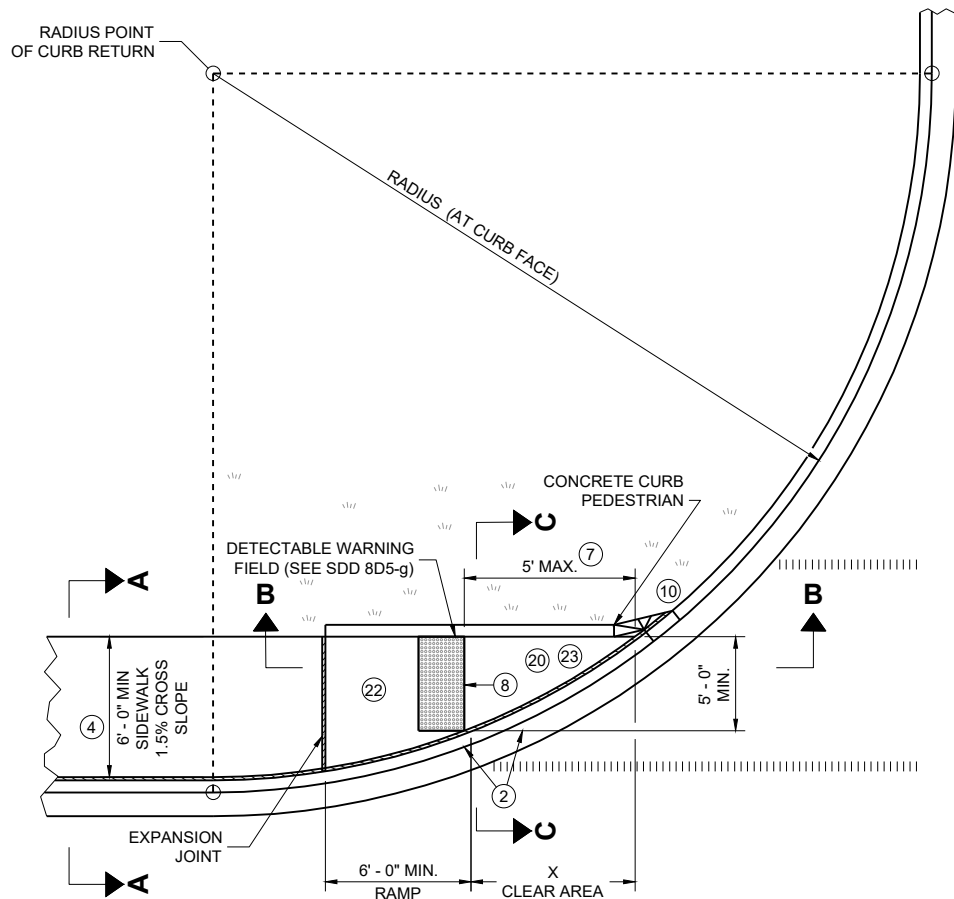
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



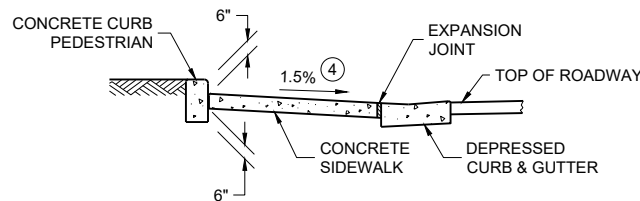
	1/2" EXPANSION JOINT SIDEWALK
	CONTRACTION JOINT SIDEWALK
	PAVEMENT MARKING CROSSWALK (WHITE)
	MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
	WIDTH SHOWN ELSEWHERE IN THE PLANS
	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

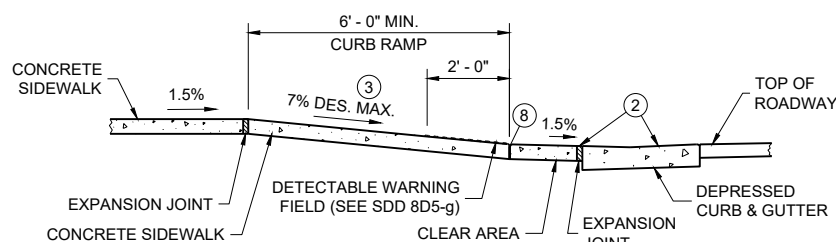
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 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% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑲ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑳ PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- ㉒ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ㉔ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A

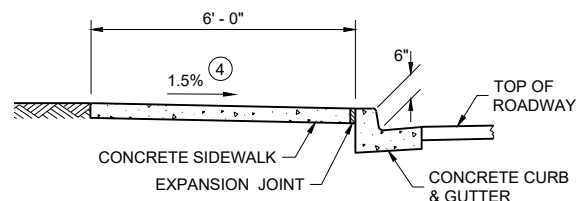


SECTION B - B FOR
TYPE 4A AND TYPE 4A1

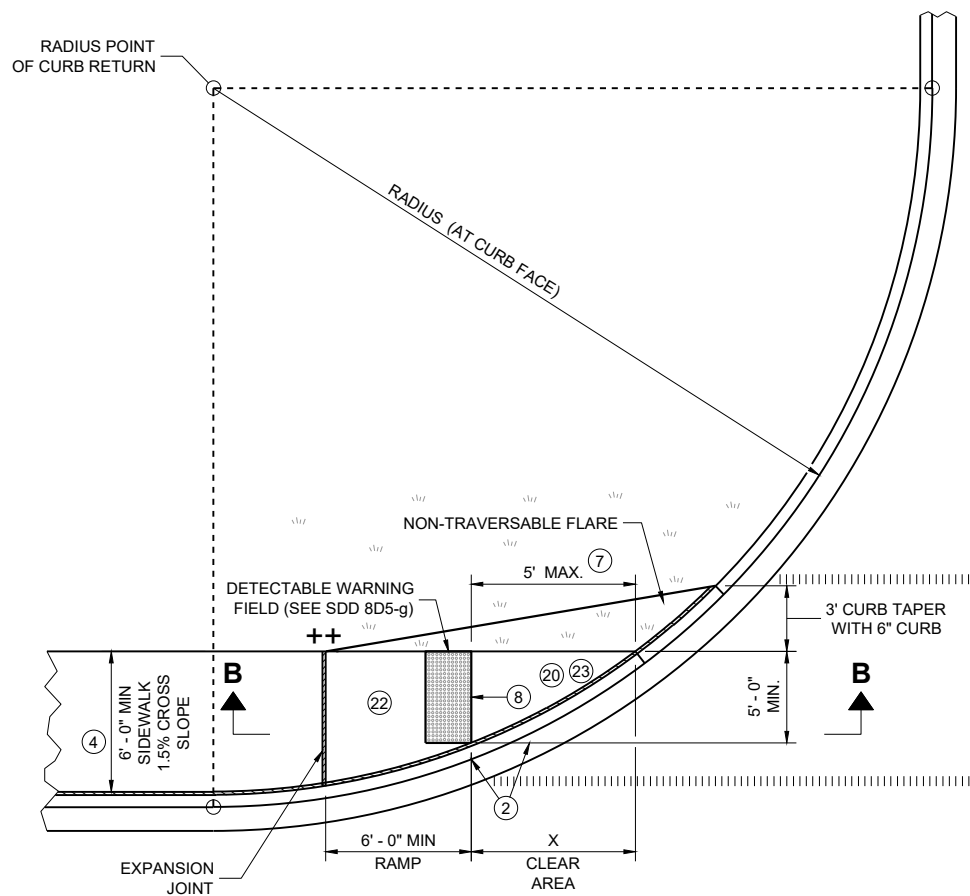
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



PLAN VIEW
CURB RAMP TYPE 4A1

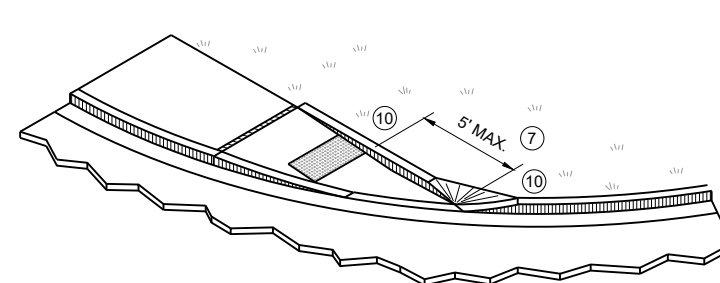
GENERAL NOTES

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

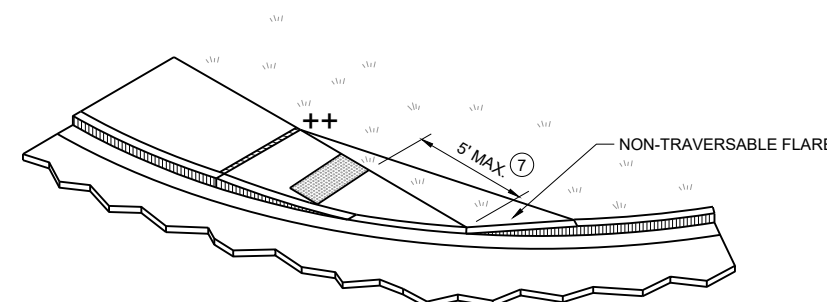
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ½"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¾"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ½"
20 FEET			4' - 11 ½"	5' - 1 ¾"	4' - 3 ¾"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ½"	10' - 9"
30 FEET									4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ½"
40 FEET															4' - 10 ¾"	19' - 8 ½"

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



GENERAL NOTES

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

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

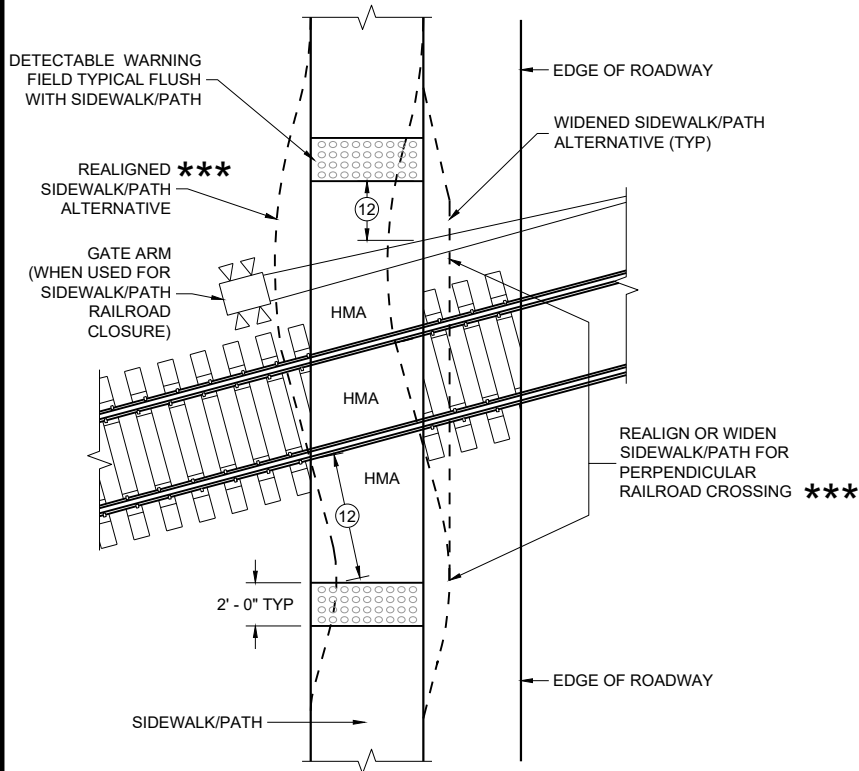
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLE 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 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.
- ⑪ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑫ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ⑫ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ⑫ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

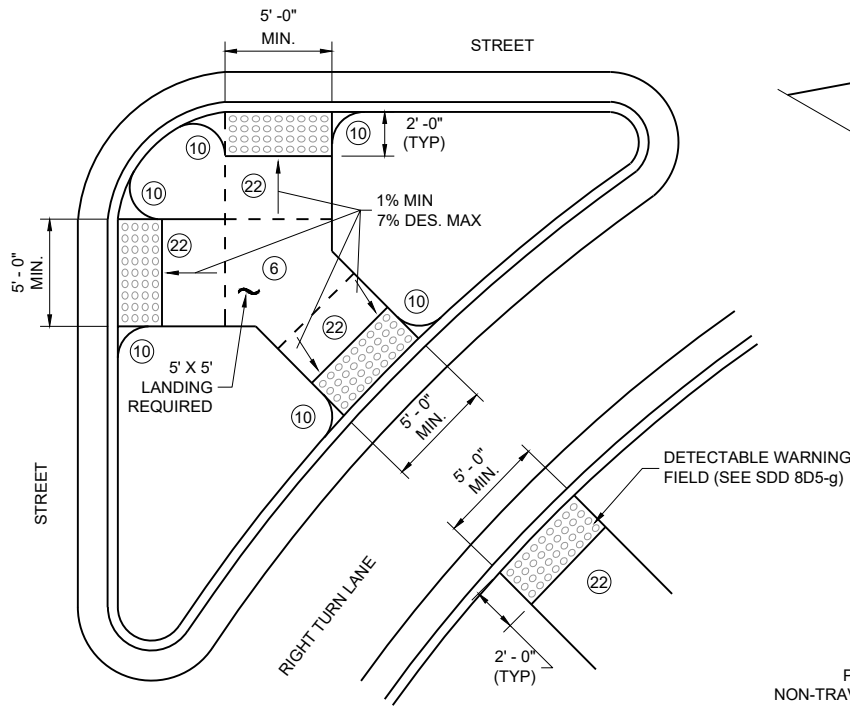


CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

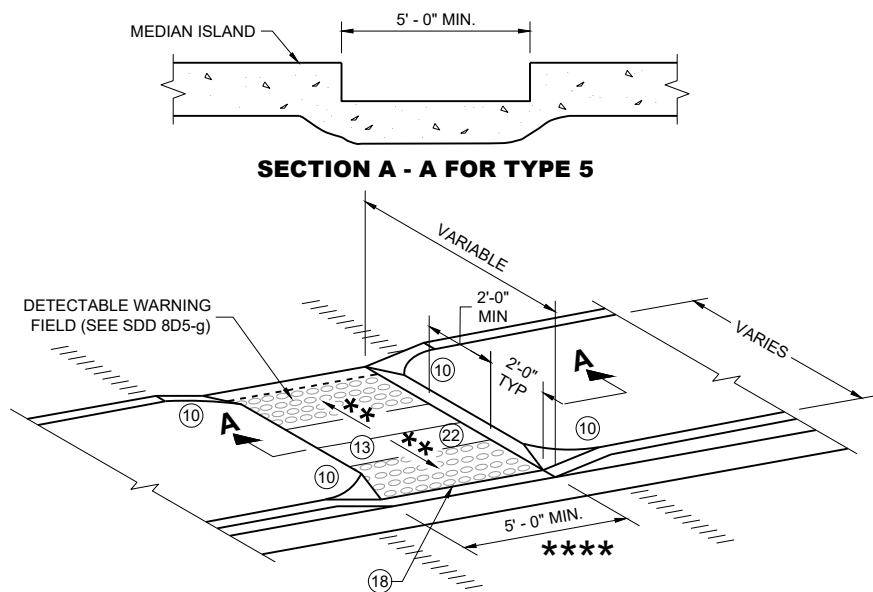


CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS

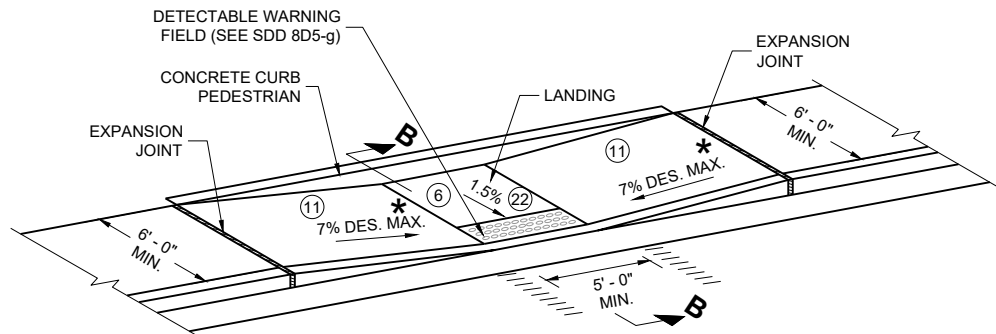


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

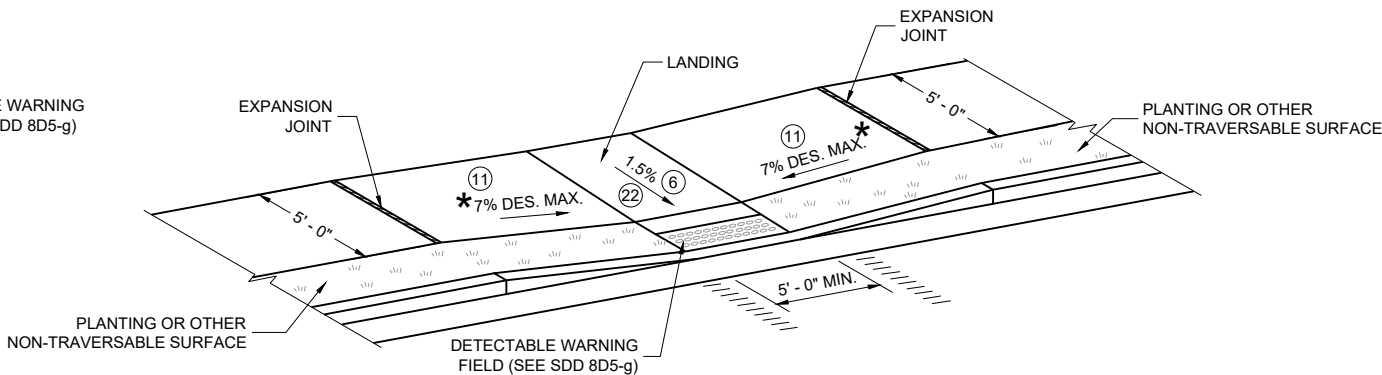
REFER TO GENERAL NOTES (2) AND (3)
FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS



CURB RAMP TYPE 7B
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS

GENERAL NOTES

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

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

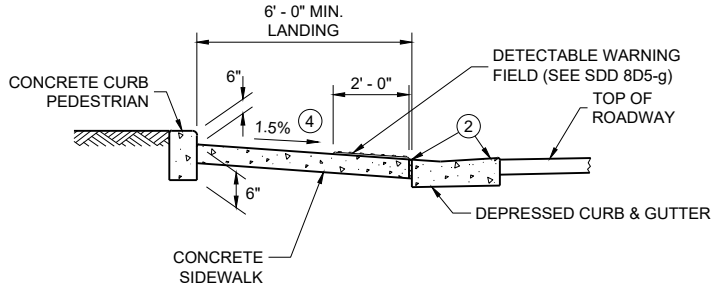
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

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

LEGEND

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

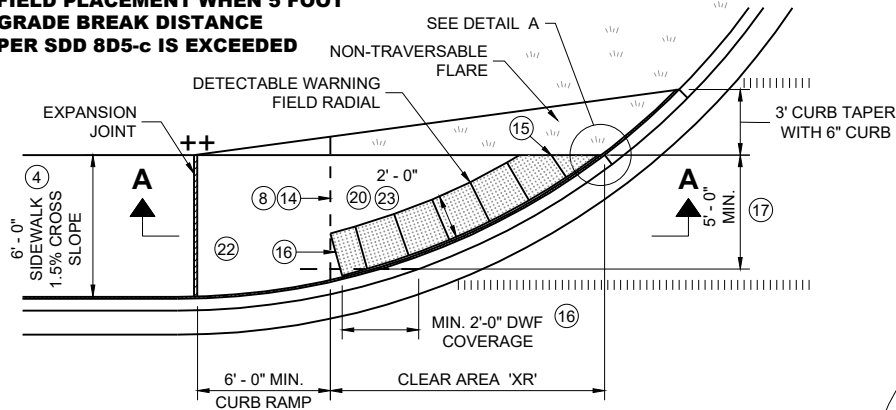


SECTION B - B FOR TYPE 7A

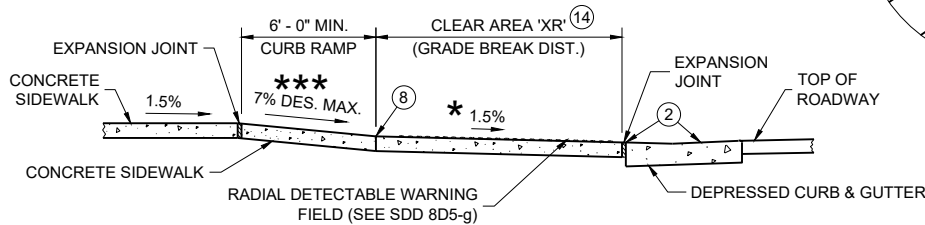
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

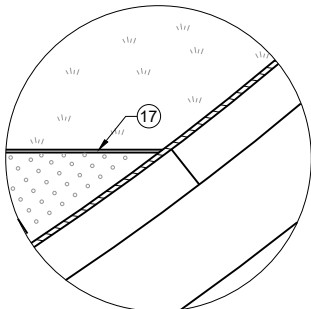


**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

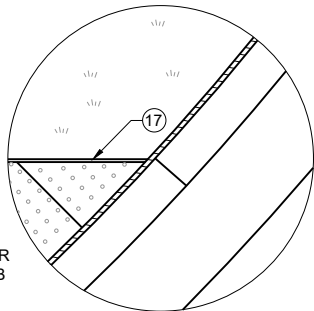


SECTION A - A FOR TYPE 4A1

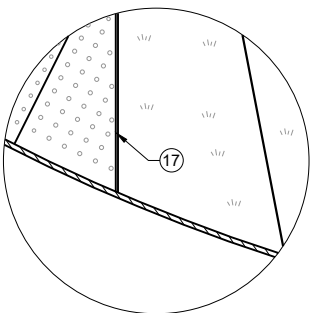
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)
 - ** WIDTH SHOWN ELSEWHERE IN THE PLANS
 - *** MAXIMUM 8.3%
 - ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



DETAIL A

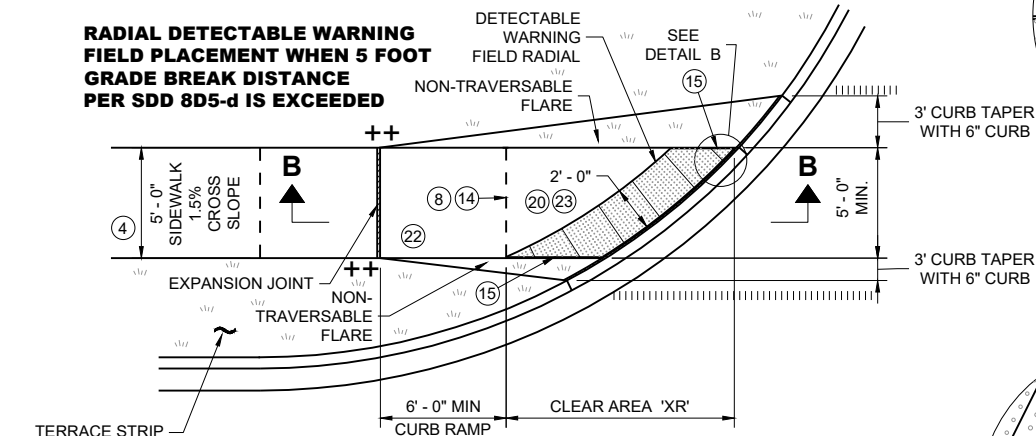


DETAIL B

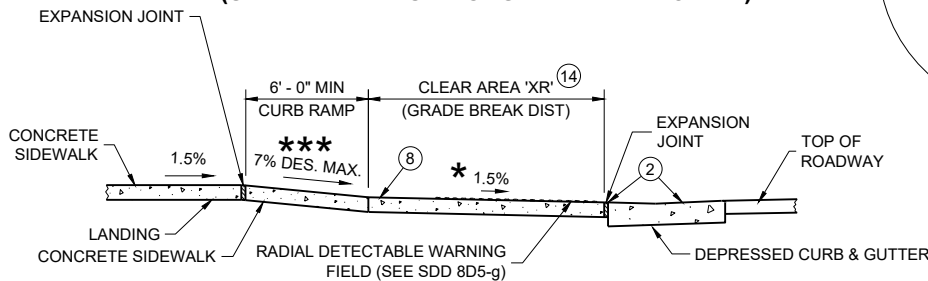


DETAIL C

**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

GENERAL NOTES

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

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

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

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

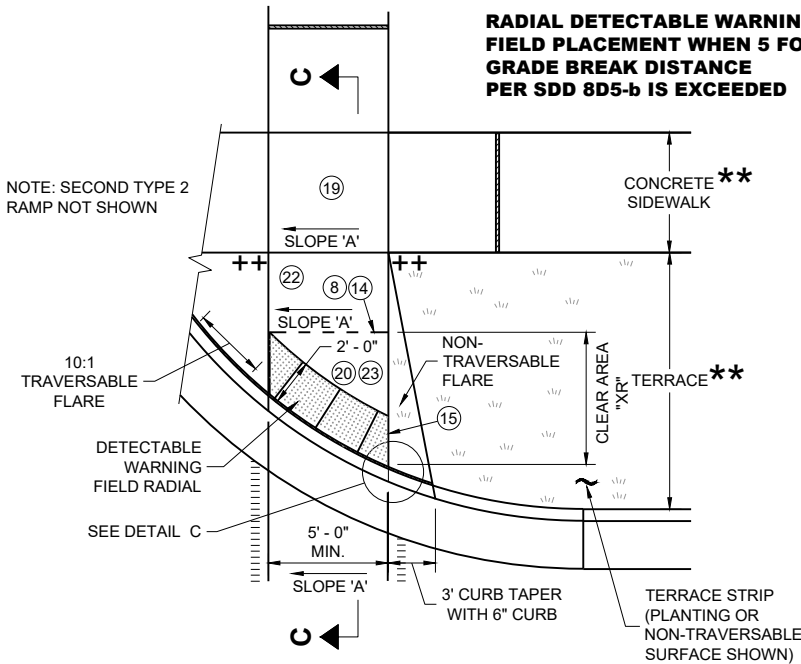
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

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

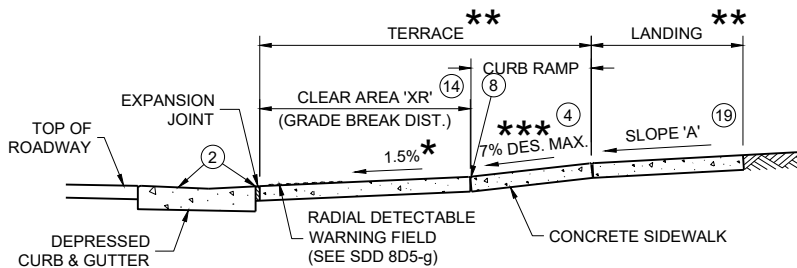
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- 2 GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- 19 WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- 20 MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- 22 THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- 23 THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

**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)**



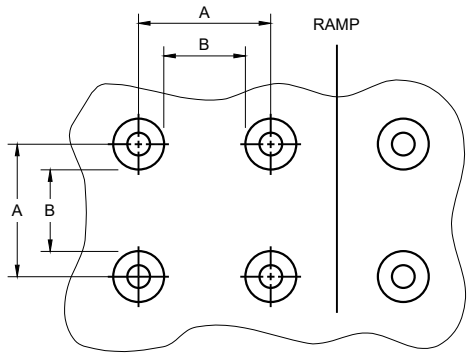
SECTION C - C FOR TYPE 2

**CURB RAMPS
RADIAL DETECTABLE WARNING**

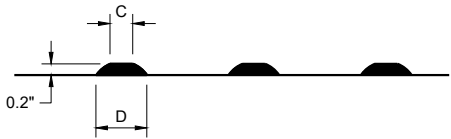
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

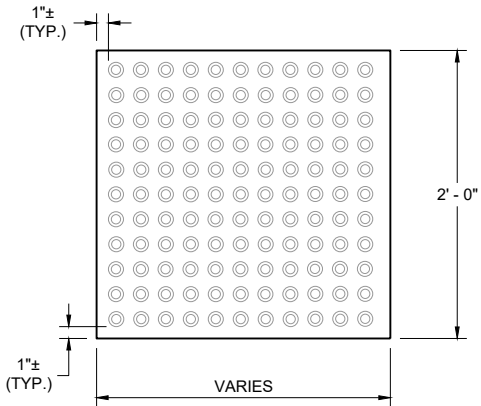


PLAN VIEW

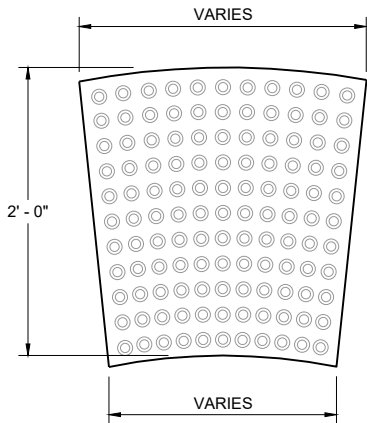


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

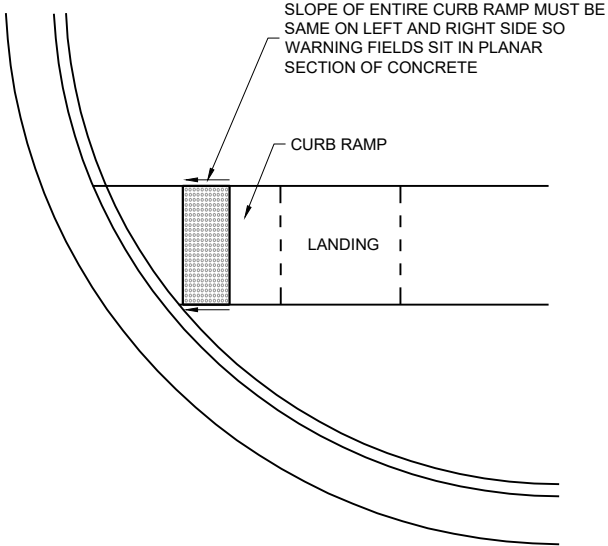


RECTANGULAR
PLATES

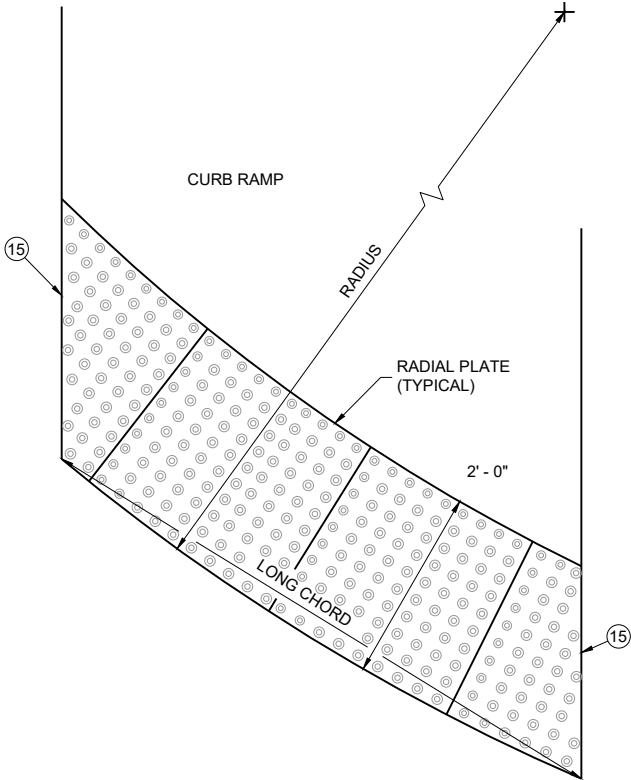


RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD
PLANAR INSTALLATION



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

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

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

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

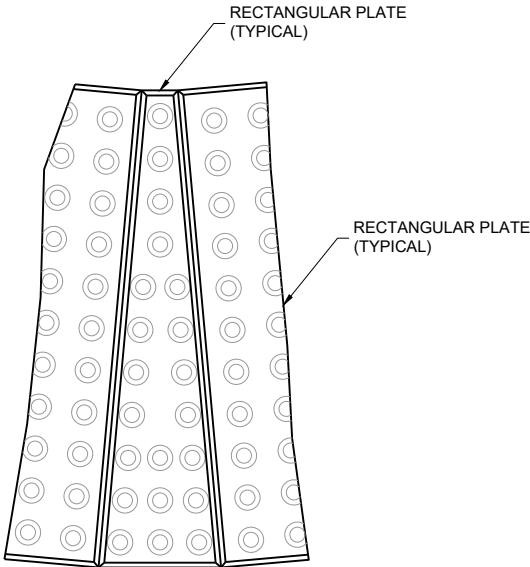
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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\"/>



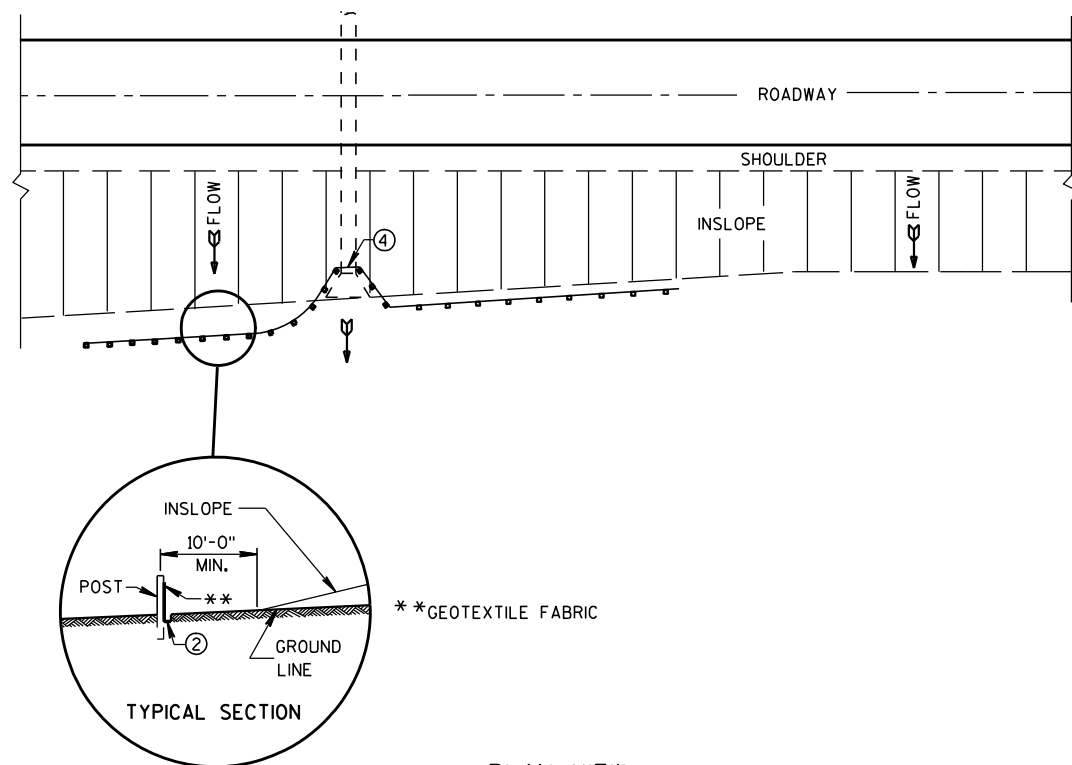
PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

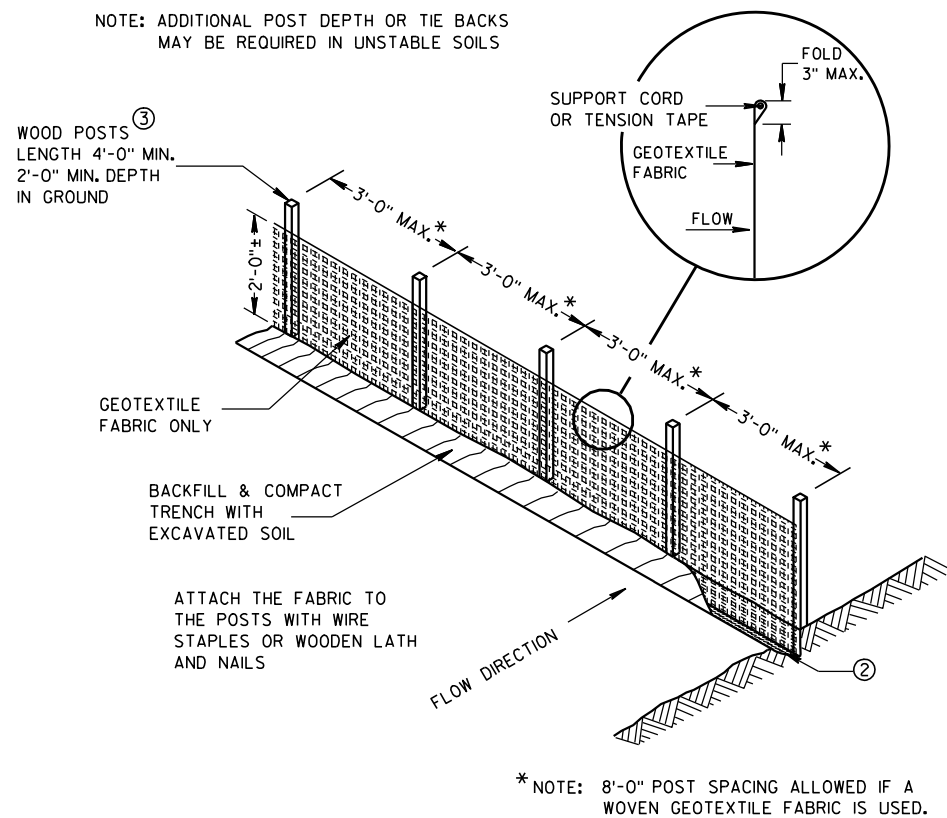
APPROVED
February 2025 /S/ Rodney Taylor
DATE <position>

FHWA

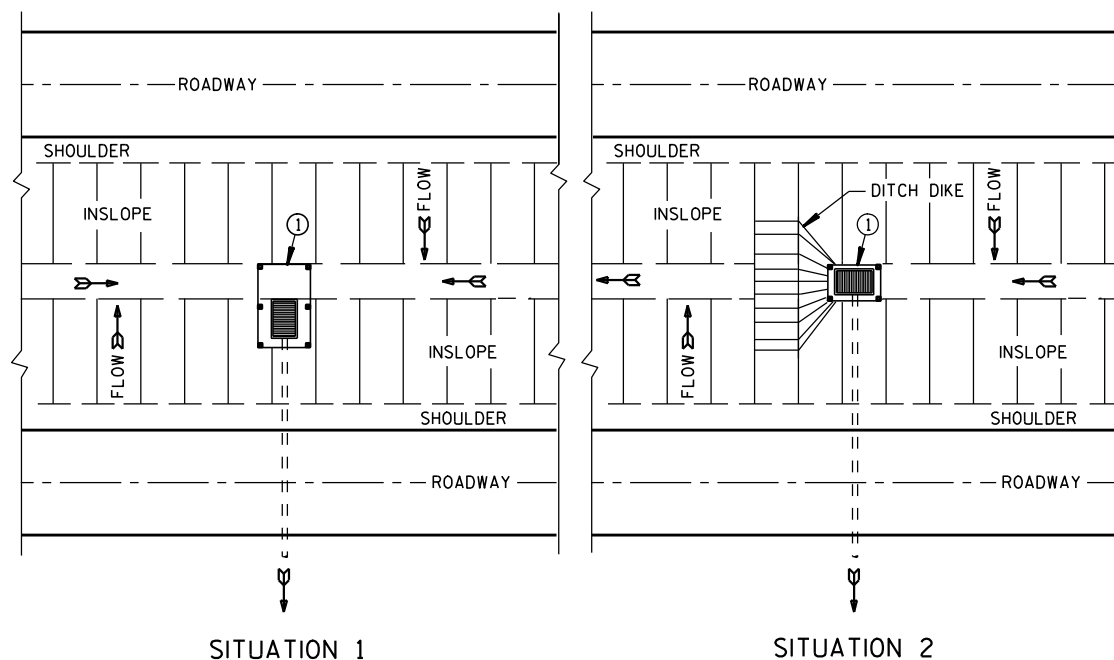


TYPICAL APPLICATION OF SILT FENCE

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

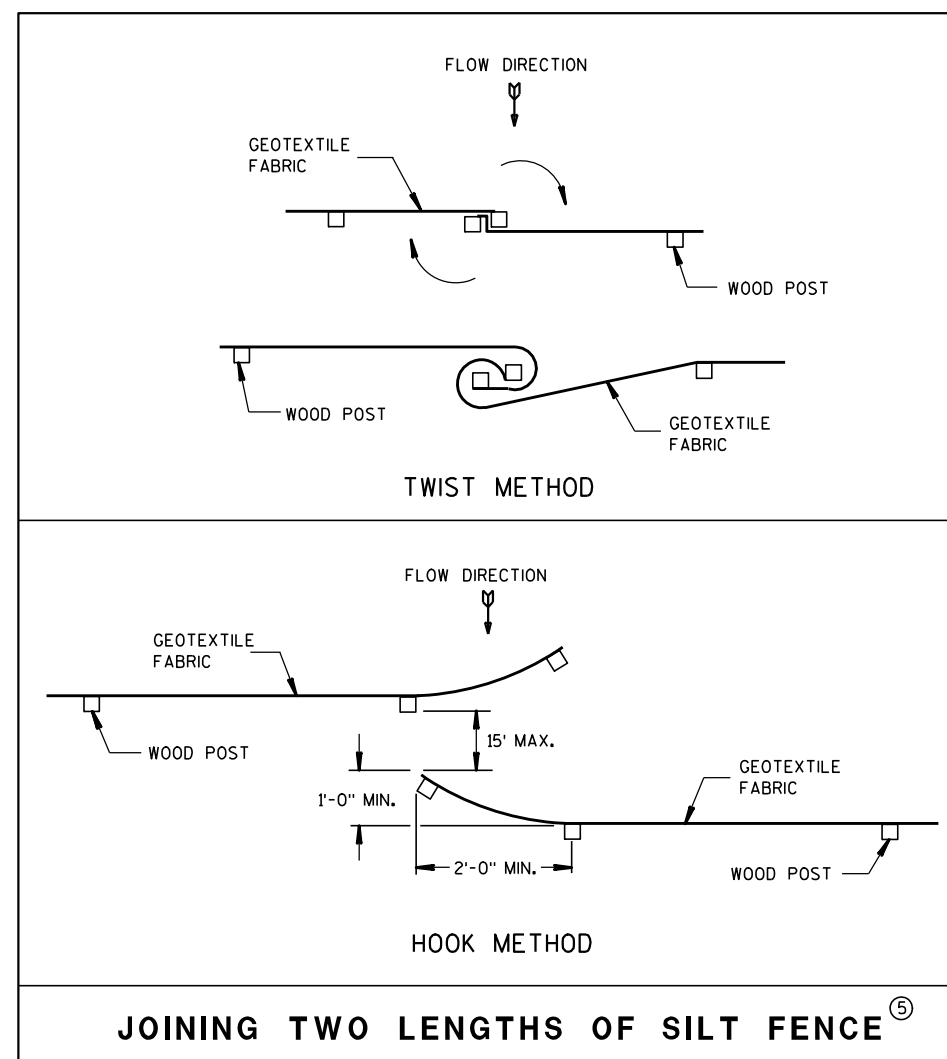


SILT FENCE



PLAN VIEW

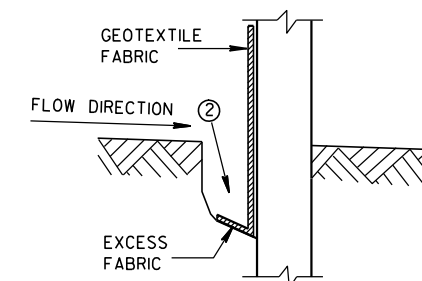
SILT FENCE AT MEDIAN SURFACE DRAINS



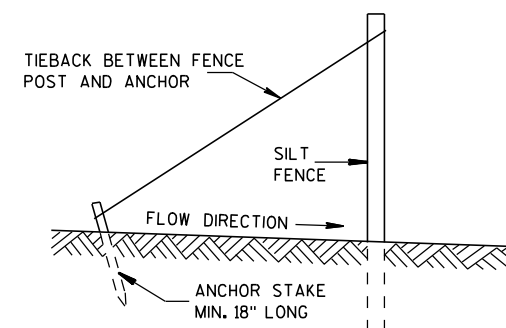
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05

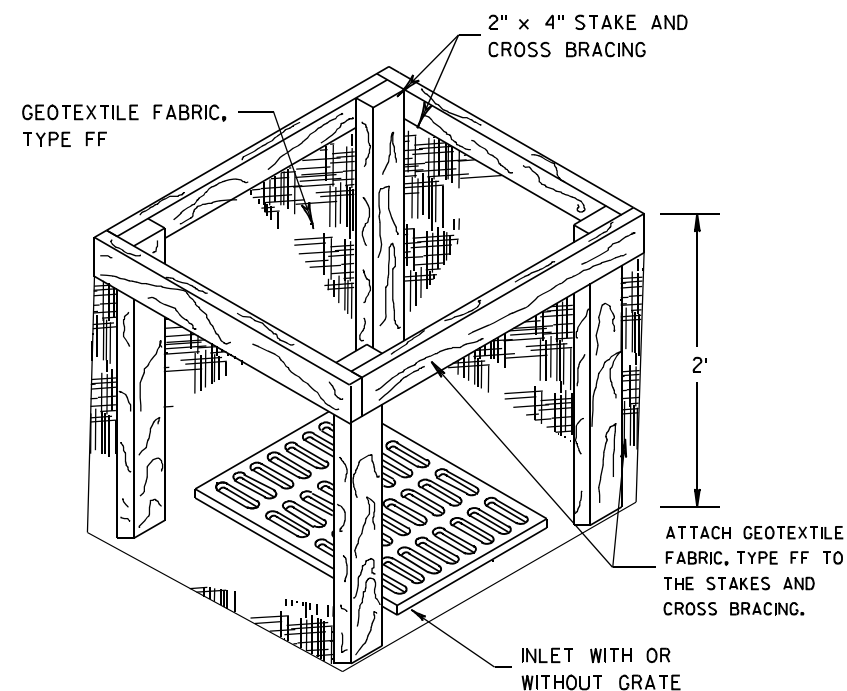
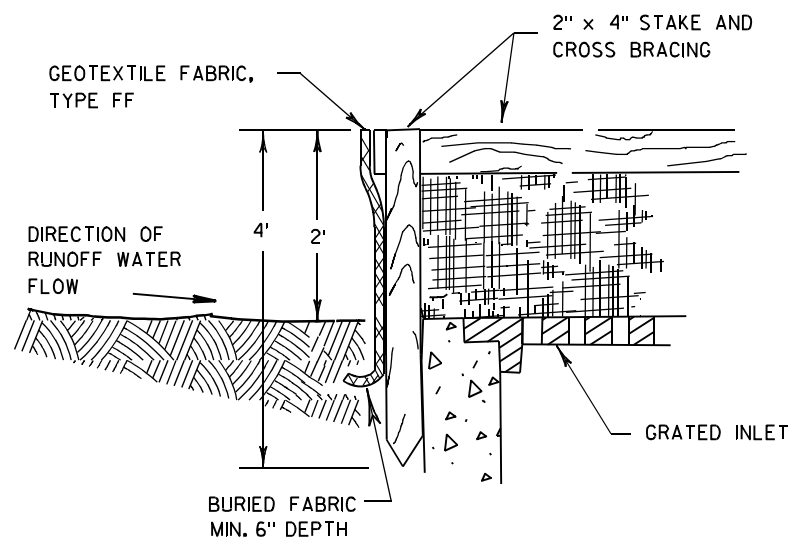
DATE

/S/ Beth Conn

CHIEF ROADWAY DEVELOPER

FHWA

ENGINEER



INLET PROTECTION, TYPE A

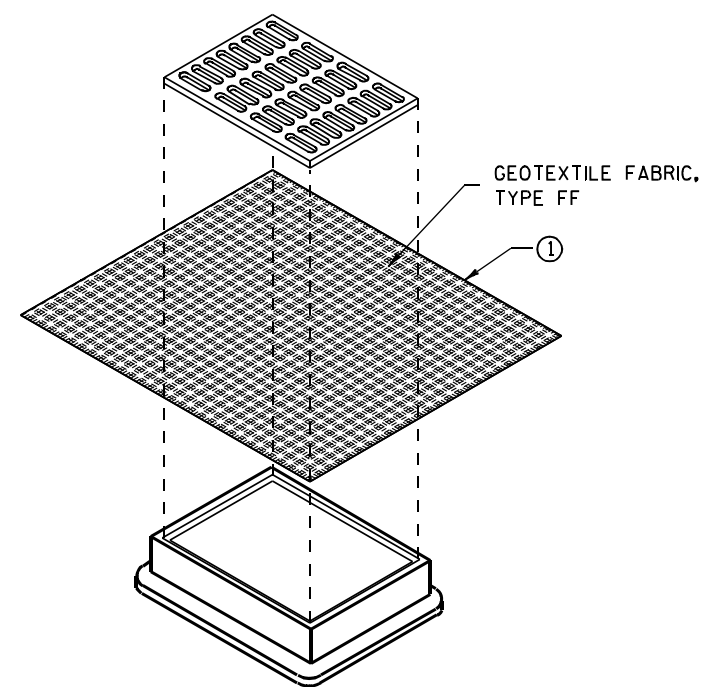
GENERAL NOTES

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

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

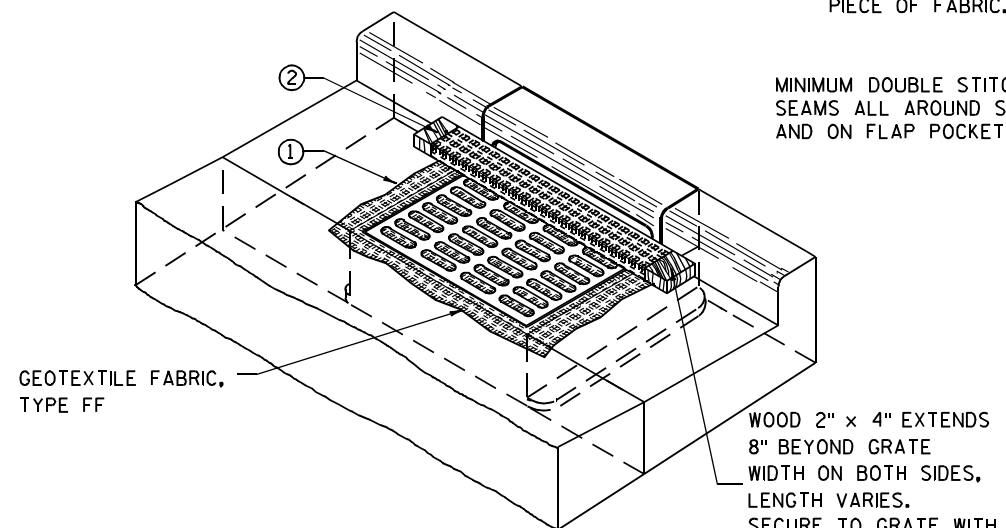
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

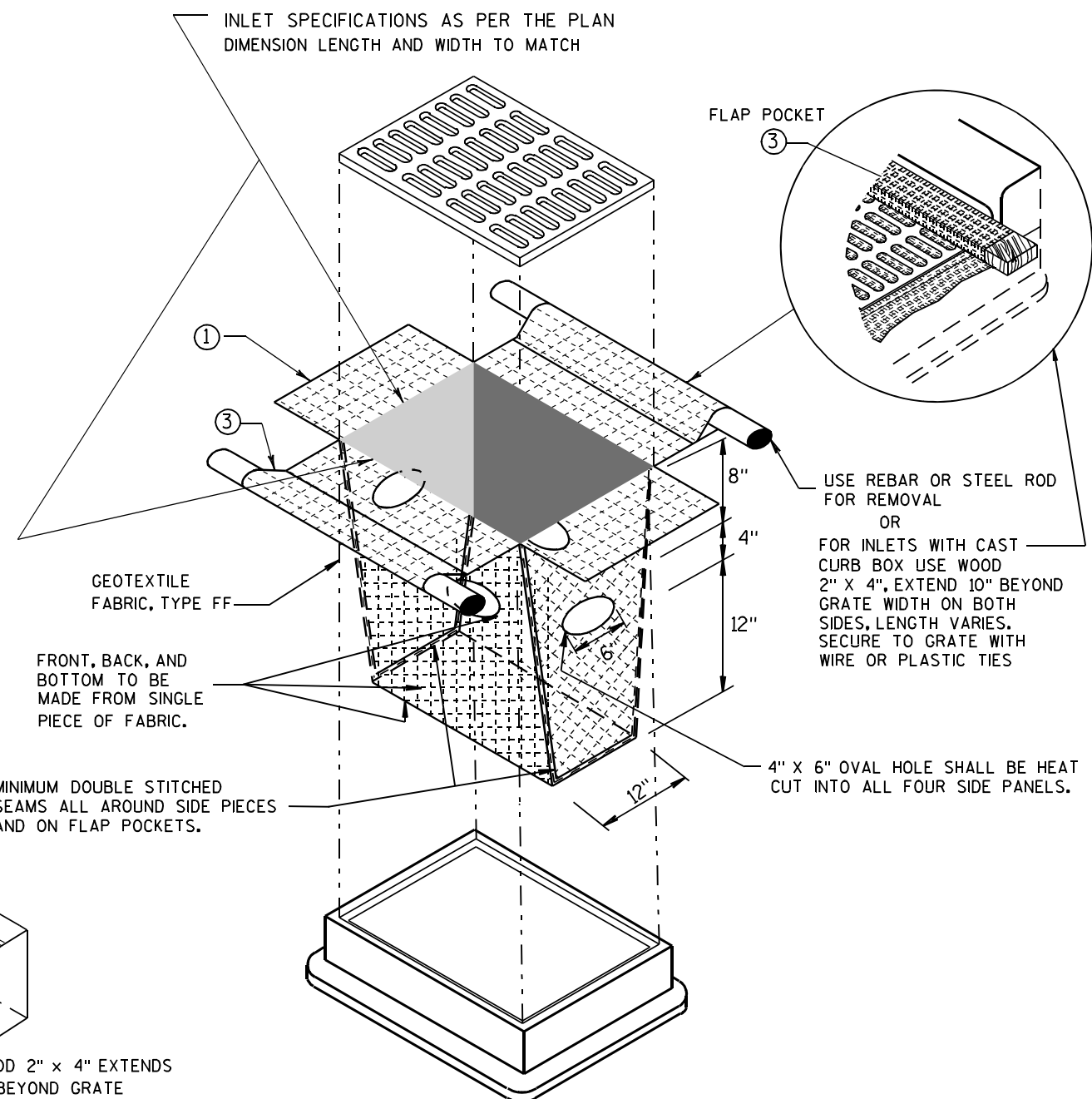
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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

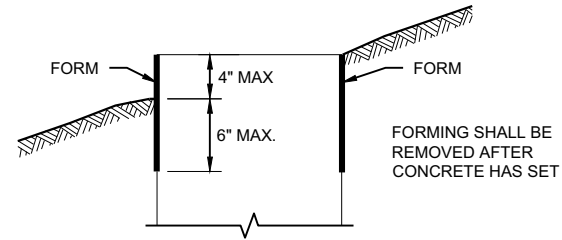


INLET PROTECTION, TYPE D

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

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/S/ Beth Connolly 151 CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

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



FORMING DETAIL

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

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

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

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

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

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

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

GENERAL NOTES

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

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

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

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

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

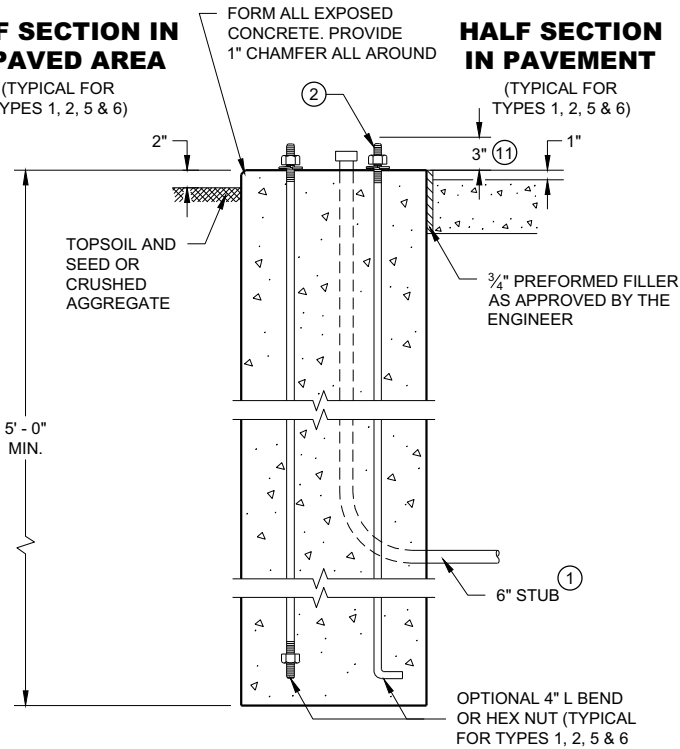
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

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

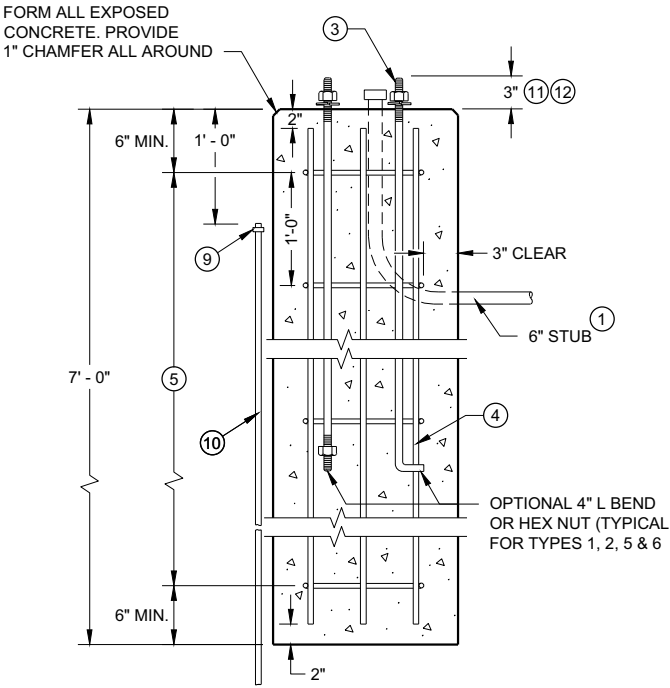
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



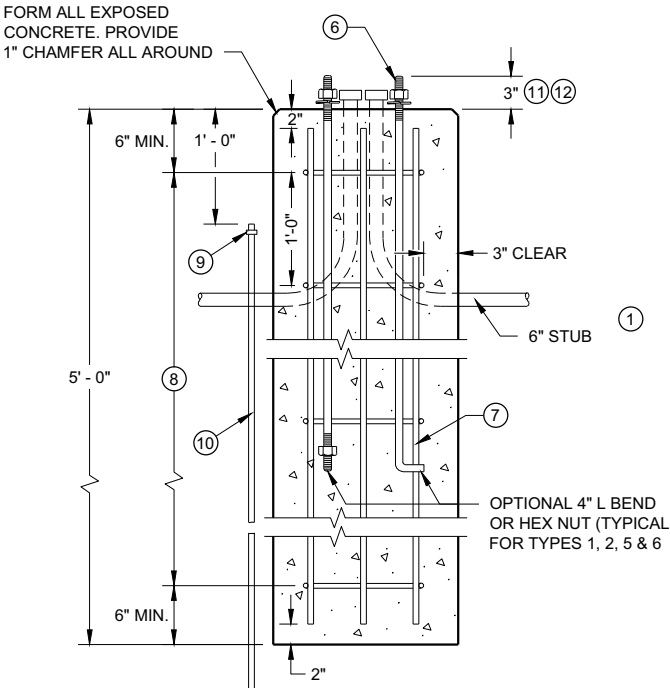
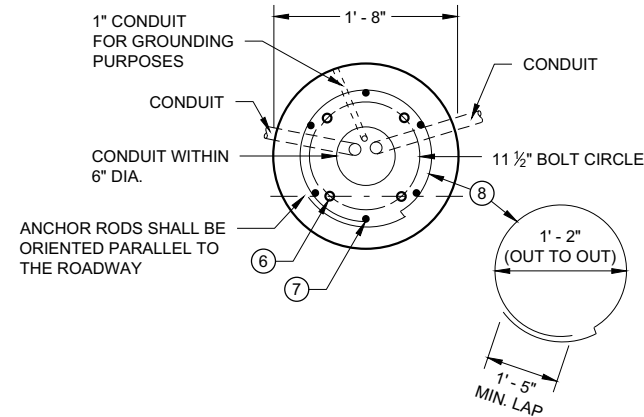
TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2

CONCRETE BASES



TYPE 5 & 6

GENERAL NOTES

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

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

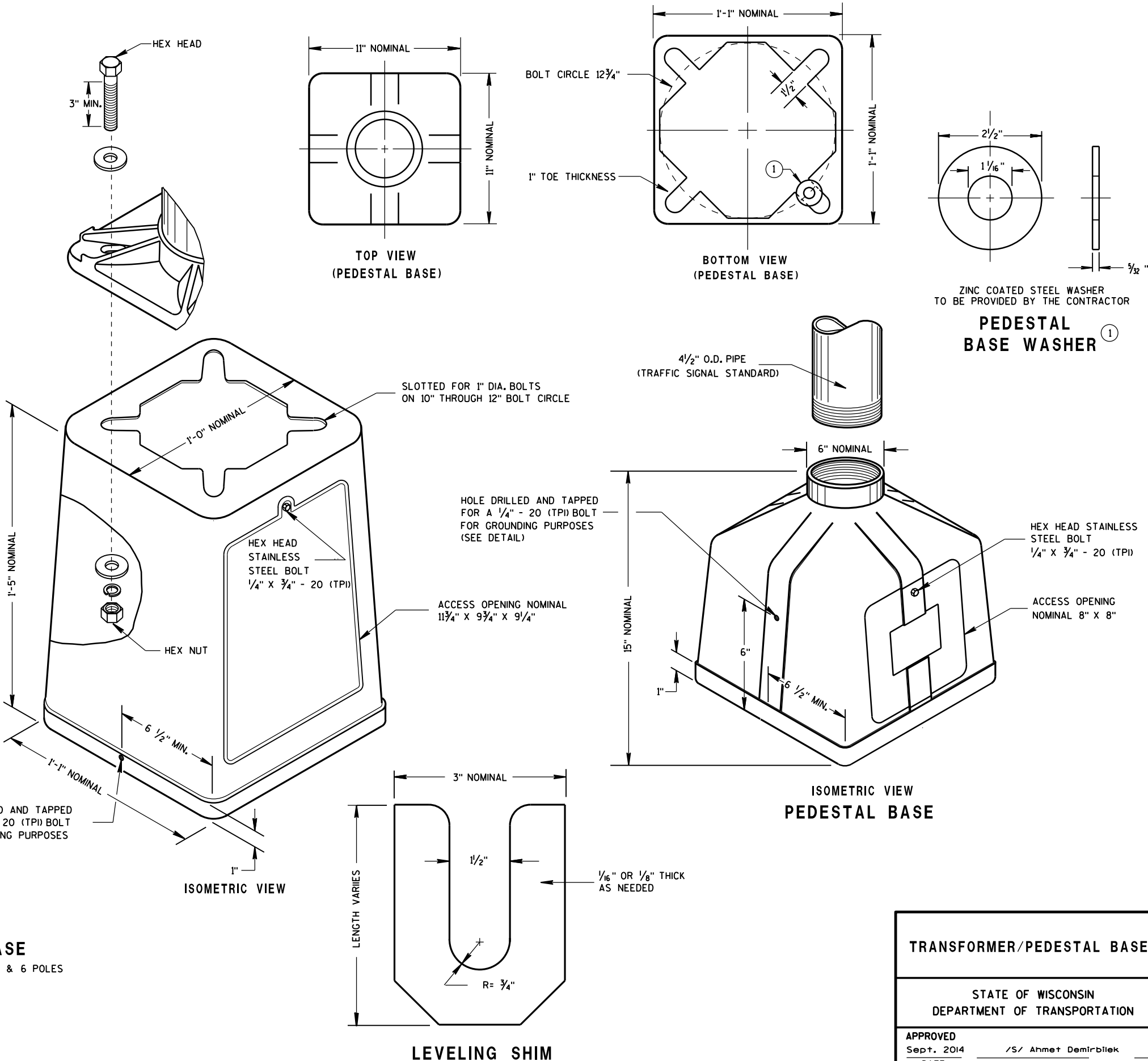
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

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

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

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



6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

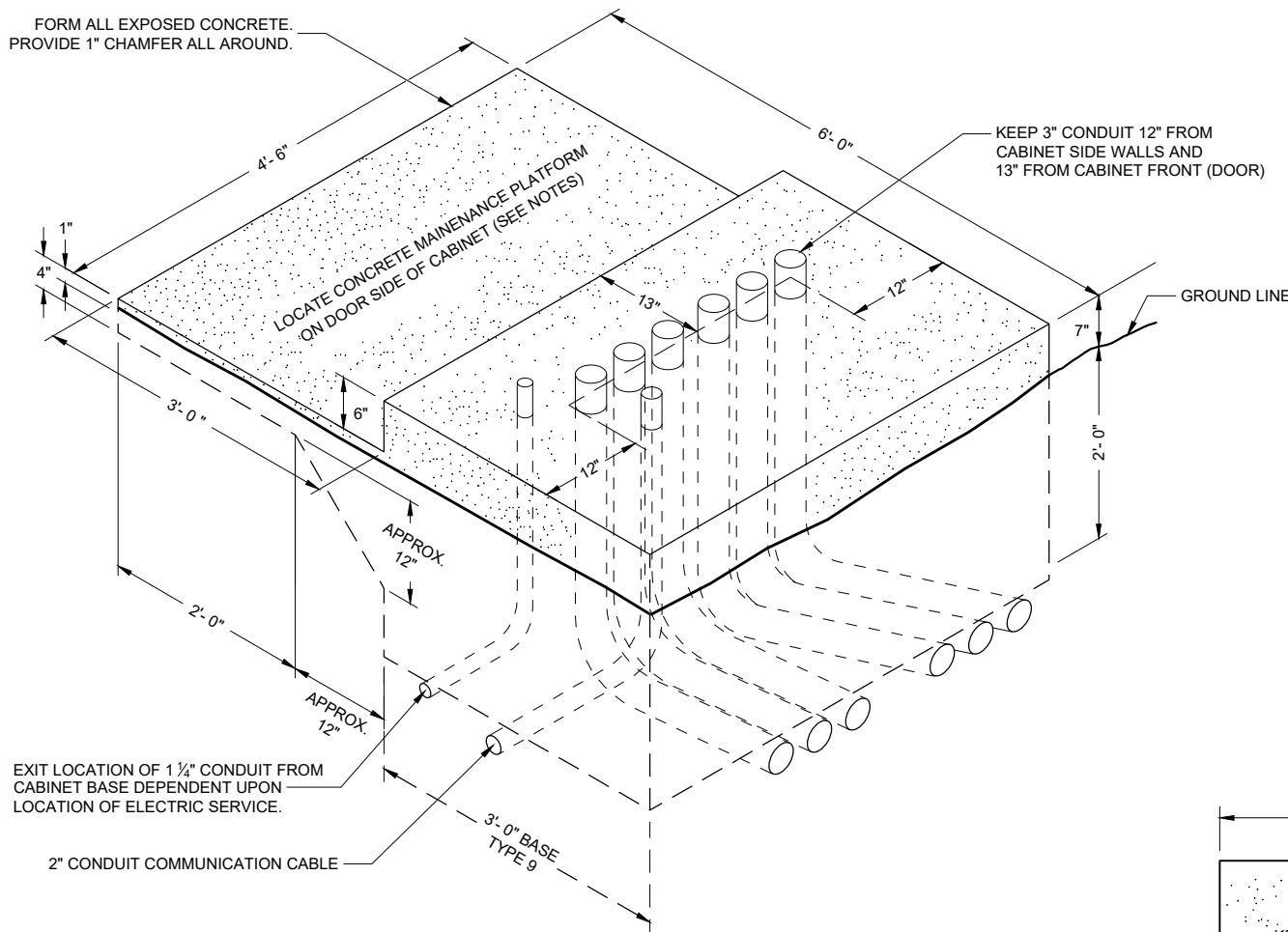
TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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

TRANSFORMER/PEDESTAL BASES

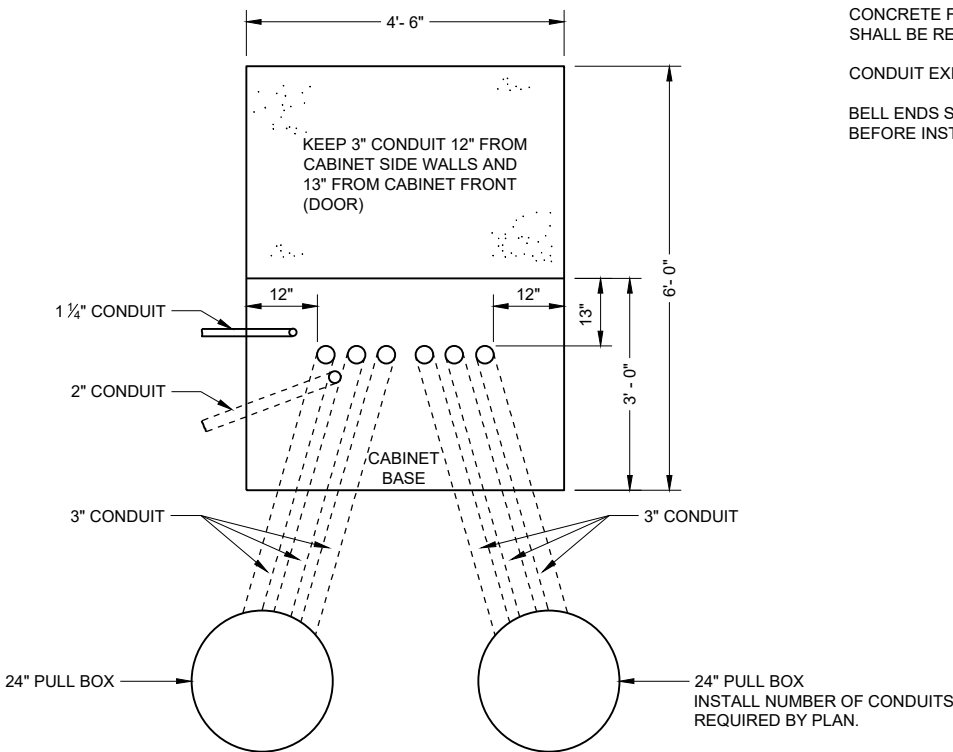
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 153
FHWA



**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.

**CONCRETE CONTROL
CABINET BASE
TYPE 9, SPECIAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGI 154
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), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

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

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

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

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

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

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

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

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

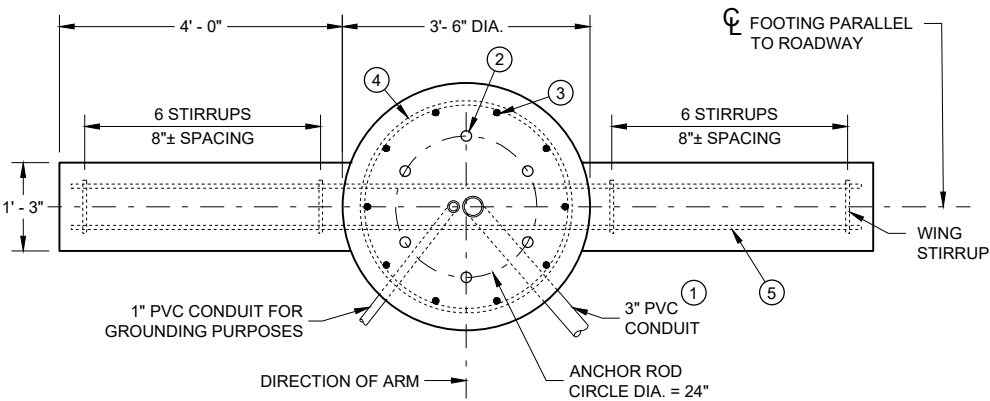
A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

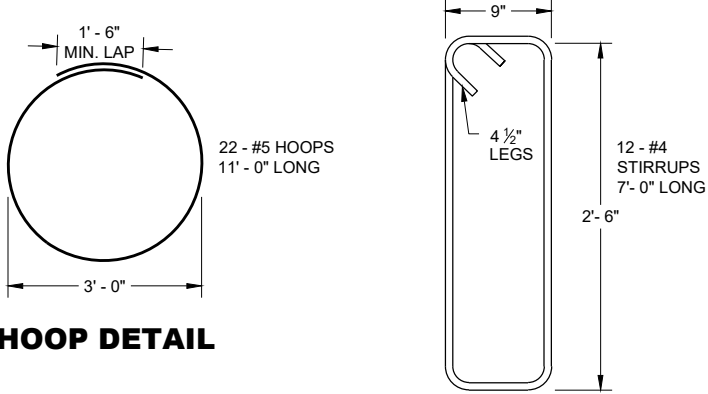
THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

- 1
- THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.
- 2
- (6) 1 3/4" DIA. X 7' - 2" ANCHOR RODS
- 3
- (10) NO. 6 X 14' - 1" BAR STEEL VERTICAL REINFORCEMENT.
- 4
- (22) NO. 5 X 11' - 0" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.
- 5
- (10) NO. 5 X 11' - 0" BAR STEEL HORIZONTAL REINFORCEMENT

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.

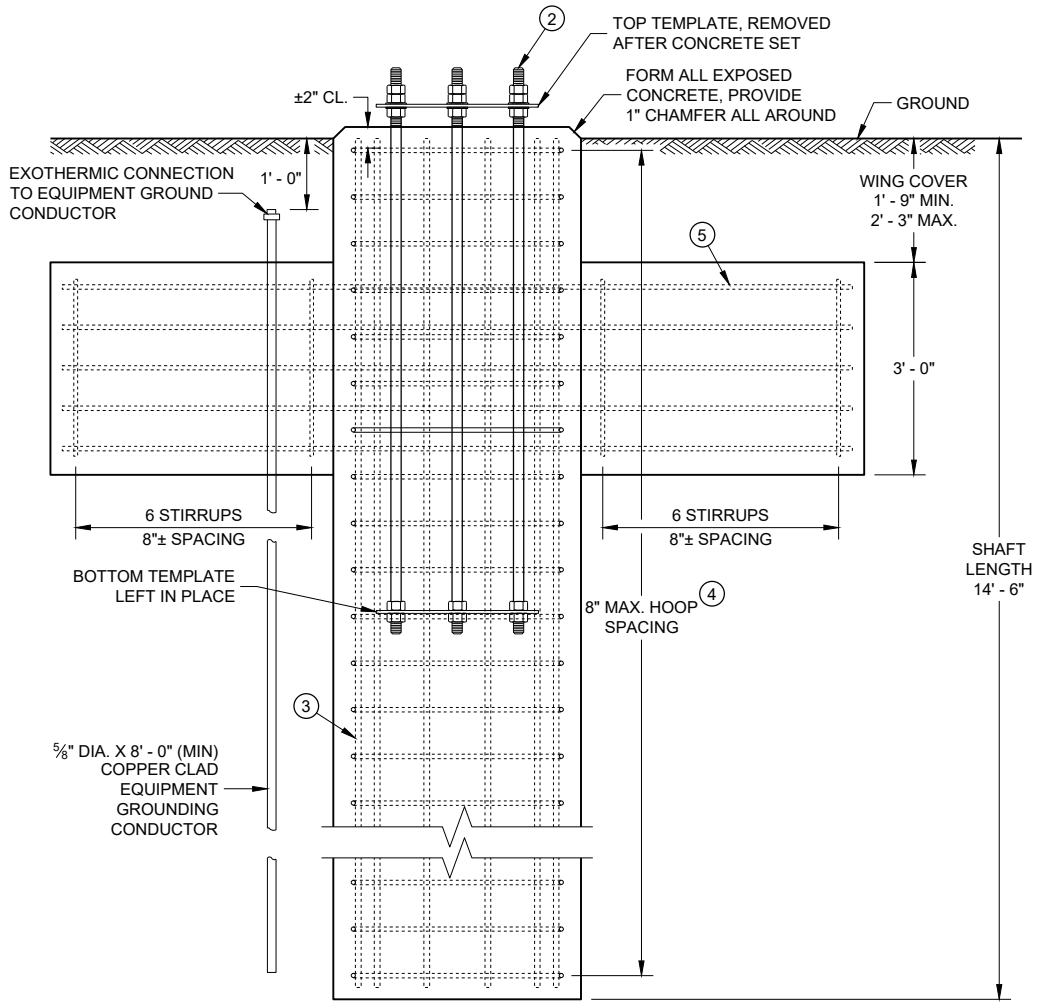


PLAN VIEW

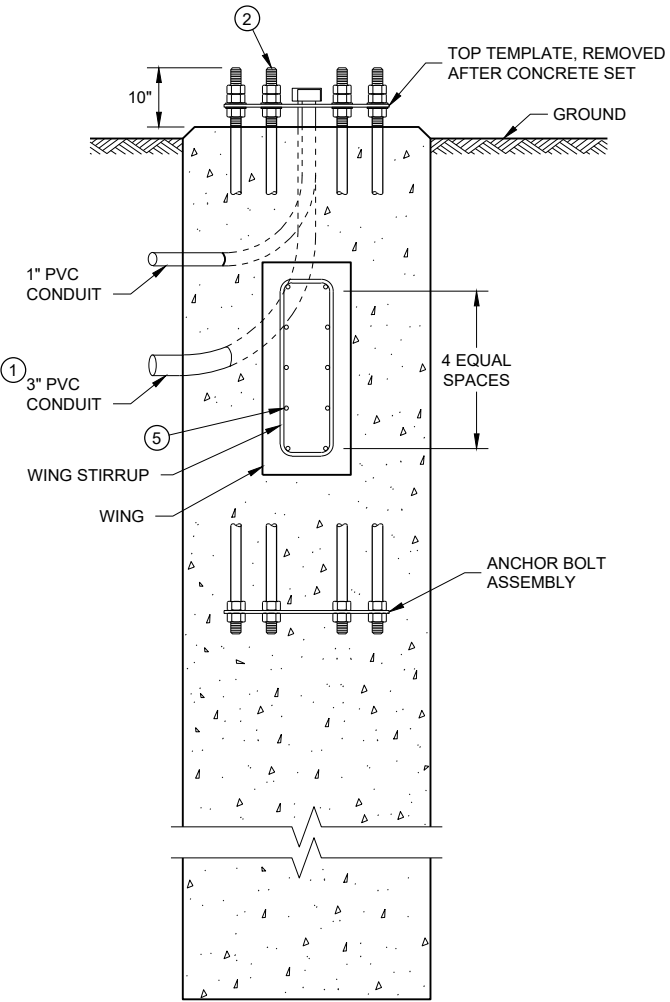


HOOP DETAIL

WING STIRRUP
DETAIL



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



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

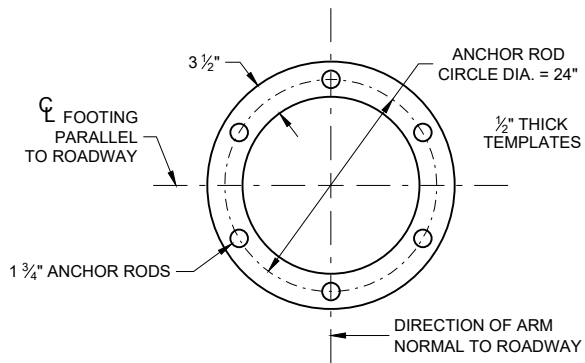
CONCRETE BASE, TYPE 13
(FOR TYPE 12, TYPE 13 AND OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 CUBIC YARD
H.S. REINFORCEMENT = 635 LBS.

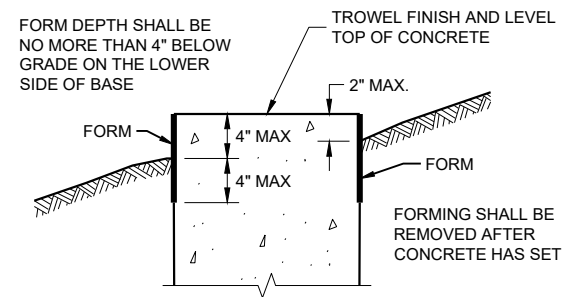
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN
HIGH POINT OF ROADWAY ELEVATION. SEE 9C13 WHEN GROUND ELEVATION AT
BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION

CONCRETE BASE TYPE 13

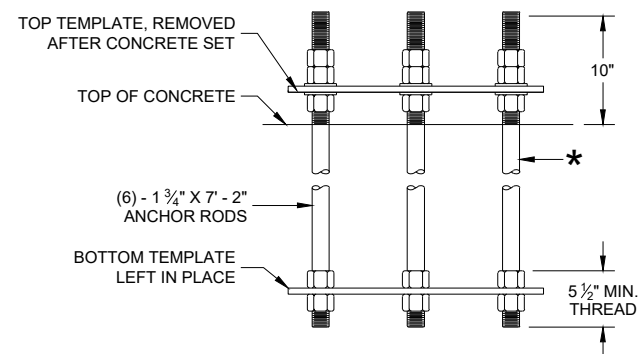
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 155



TOP AND BOTTOM TEMPLATE



FORMING DETAIL



ANCHOR ROD ASSEMBLY DETAILS

★ THREAD TOP 11" 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 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 DATE /S/ Ahmet Demirbilek
WIND LOADED STRUCTL PROGRAM LEADER 156
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.

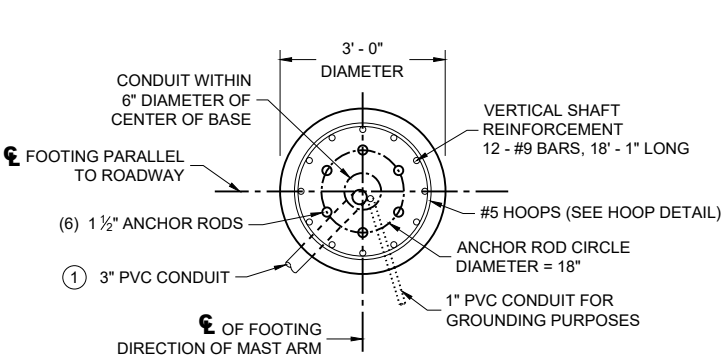
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

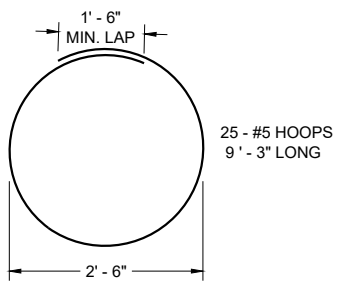
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

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.

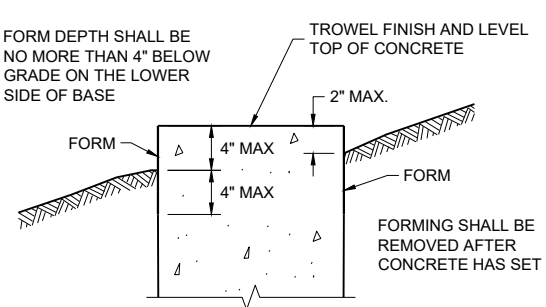
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55.....fy = 55,000 p.s.i.
(IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



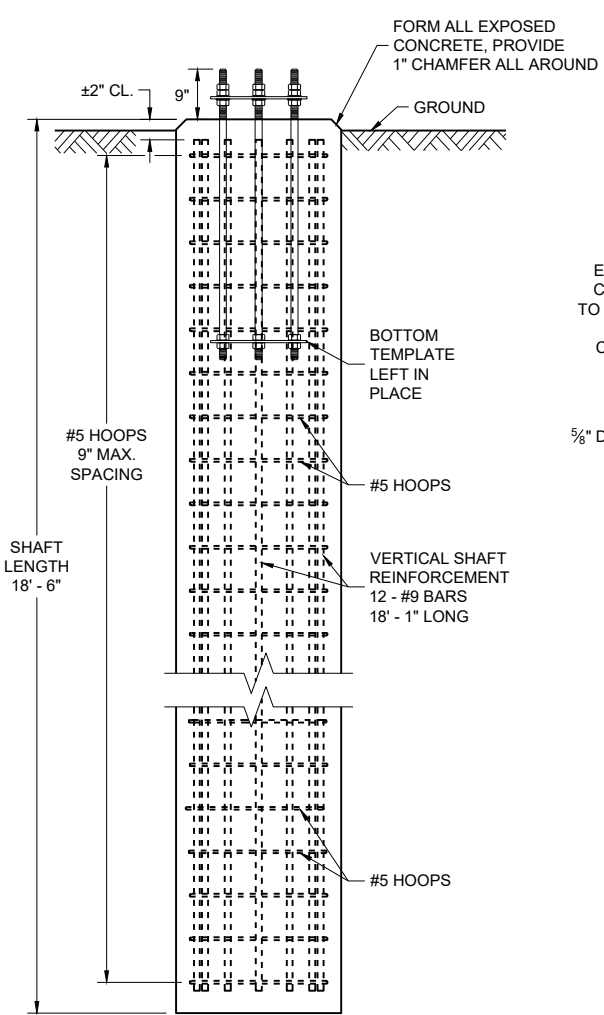
PLAN VIEW



HOOP DETAIL

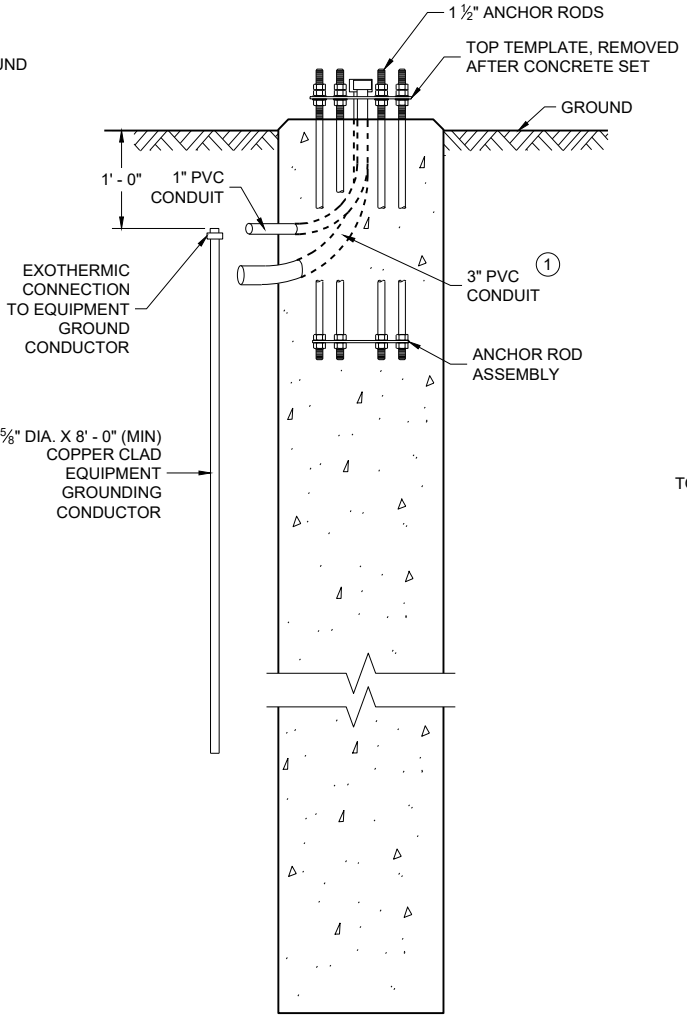


FORMING DETAIL



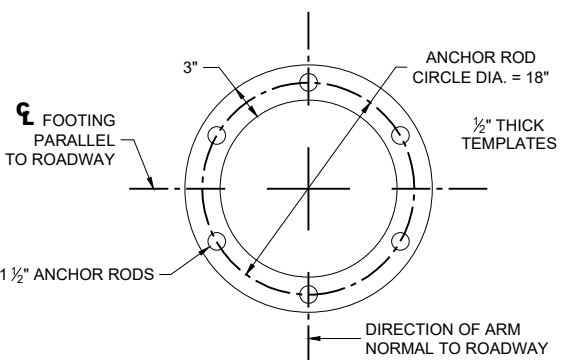
ELEVATION VIEW

(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)

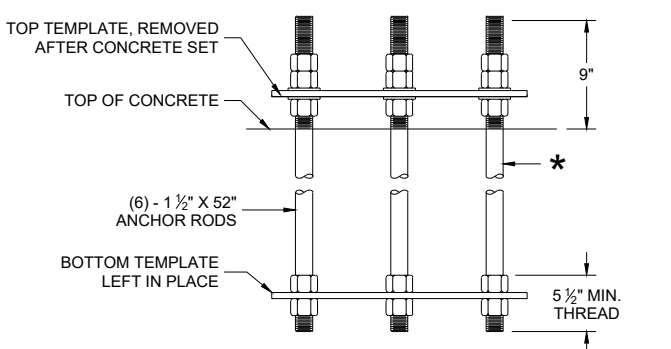


SIDE VIEW

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



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

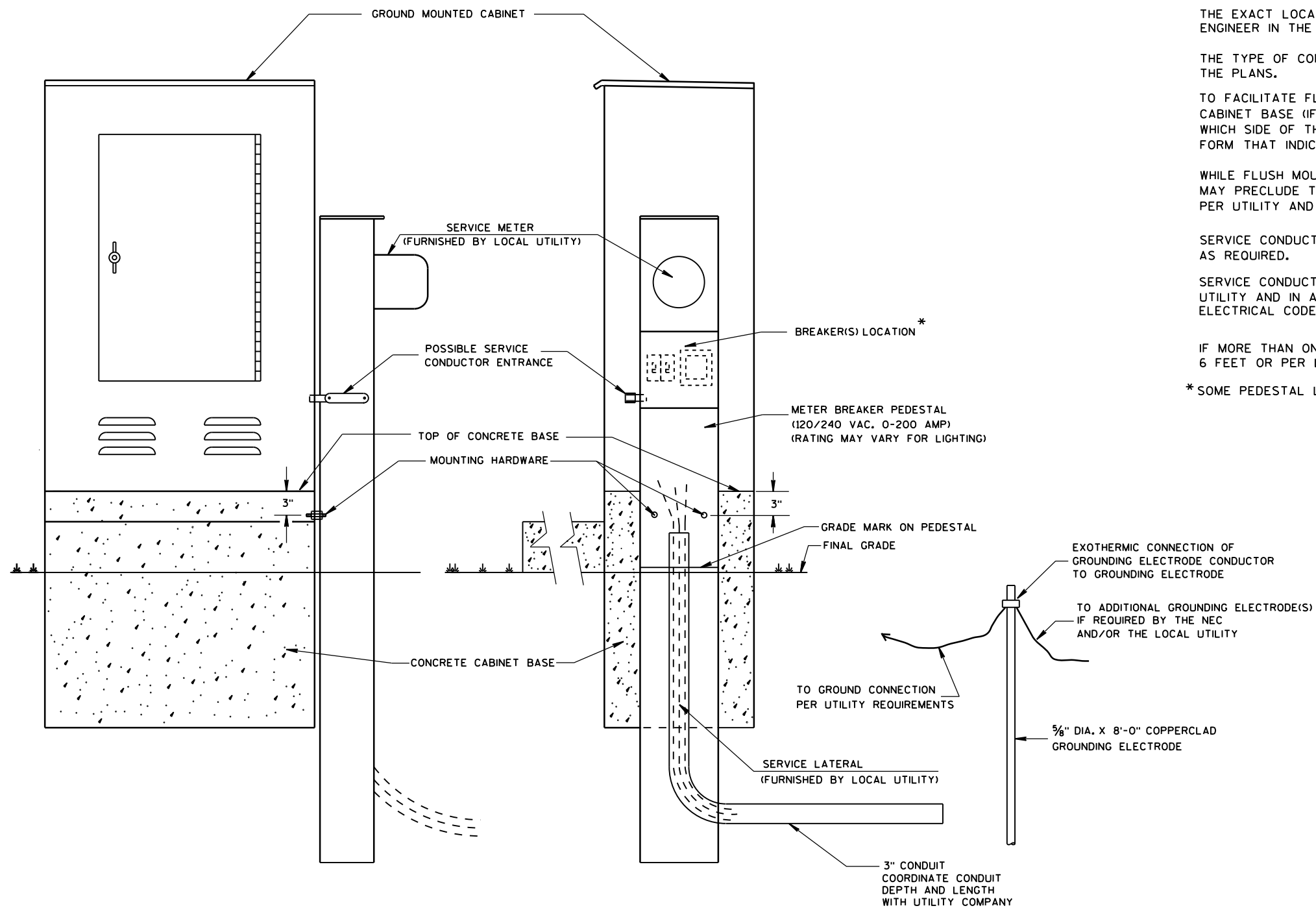
* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE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

CONCRETE BASE, TYPE 10 SPECIAL
(FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES AND OVER HEIGHT (OH) POLES)

CONCRETE = 4.8 CUBIC YARD
H.S. REINFORCEMENT = 979 LBS.

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

CONCRETE BASE TYPE 10 SPECIAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED December 2024 /S/ Alex Crabtree DATE 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.

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

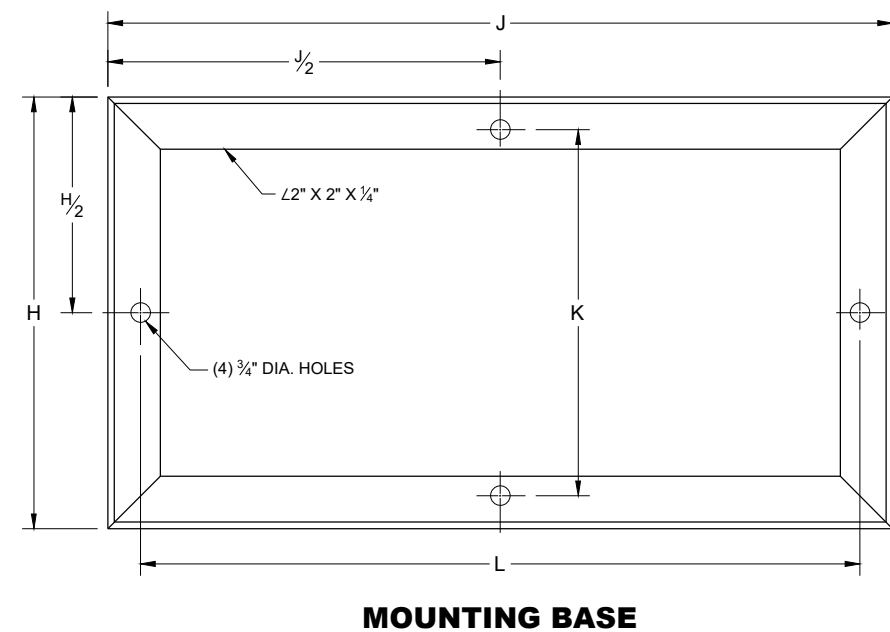
Sept. 2014

DATE

FHWA

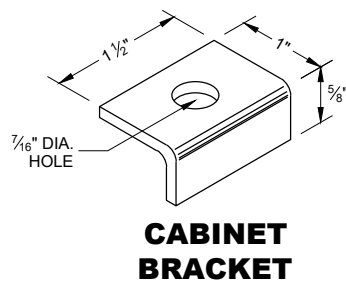
/S/ Ahmet Demirbilek

STATE ELECTRICAL 158



INSIDE VIEW SHOWING FILTER

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 ½	16 ½	24
D	26 ½	34 ¾	33 ¾
E	38 ¾	38 ¾	38 ¾
F	26 ½	34 ¾	33 ¾
G	19	19	25
H	16 ½	16 ½	24
H½	8 ¼	8 ¼	12
J	30	38	38
J½	15	19	19
K	13 ¾	13 ¾	21 ¼
L	27 ½	35 ½	35 ½



LATCH ASSEMBLY



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 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

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.

LOCK NO. 2510
WITH 2 KEYS
AND DUST CAP.
KEY NO. IR6380

LOCKING MECHANISM INTERIOR OF DOOR

KEY - DUSTCAP
ENTRANCE

- HANDLE

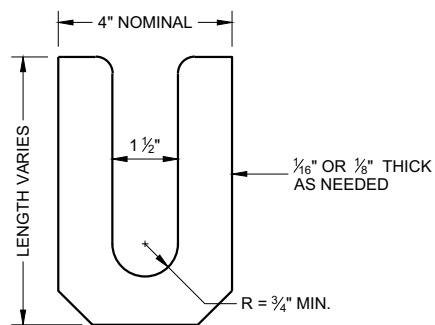
SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

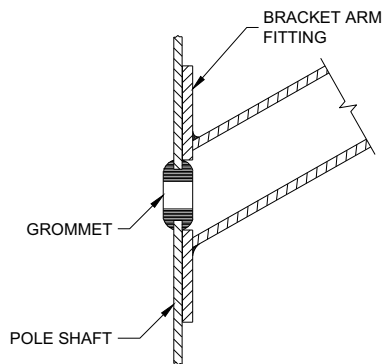
APPROVED
September 2014
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 159

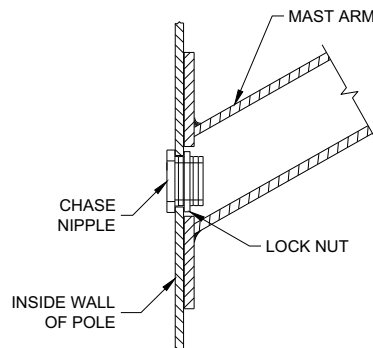
FHWA



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



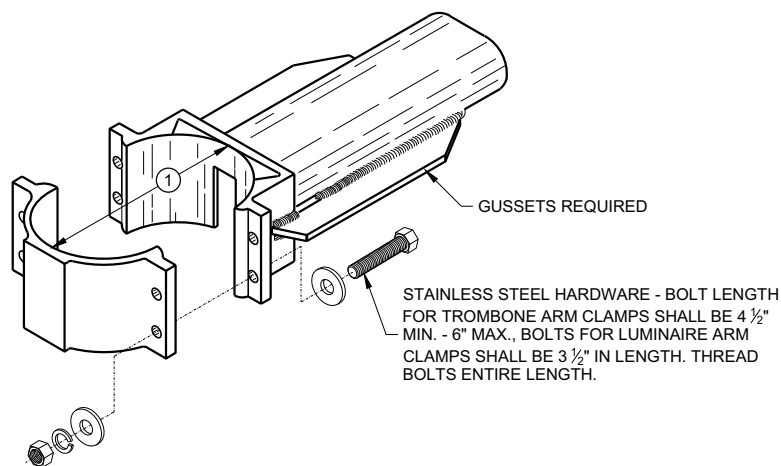
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

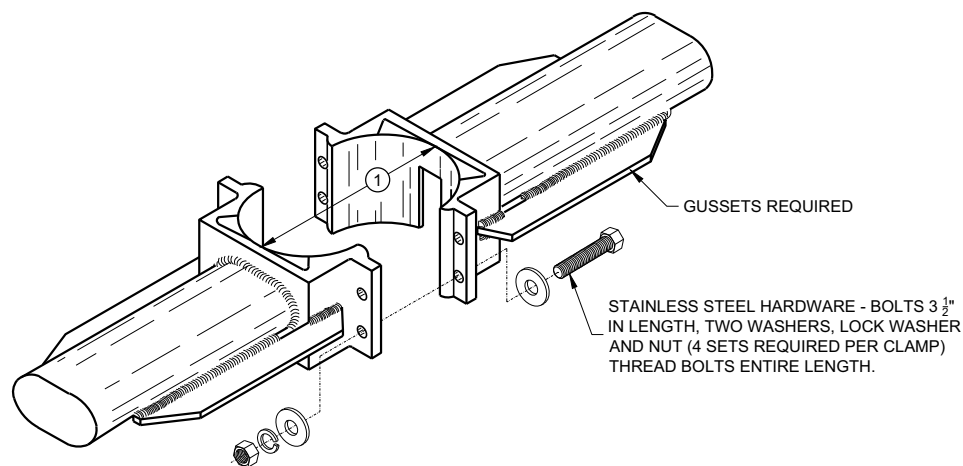
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

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

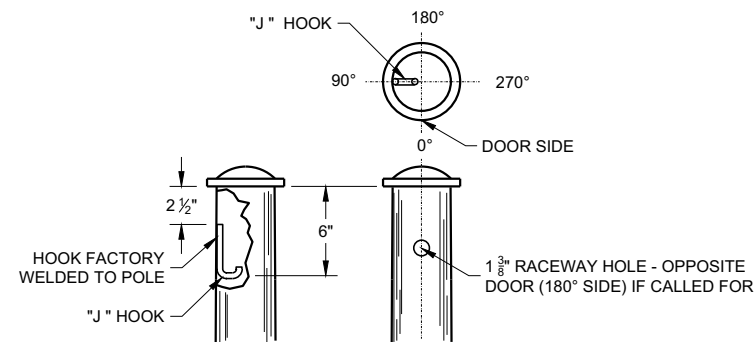
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



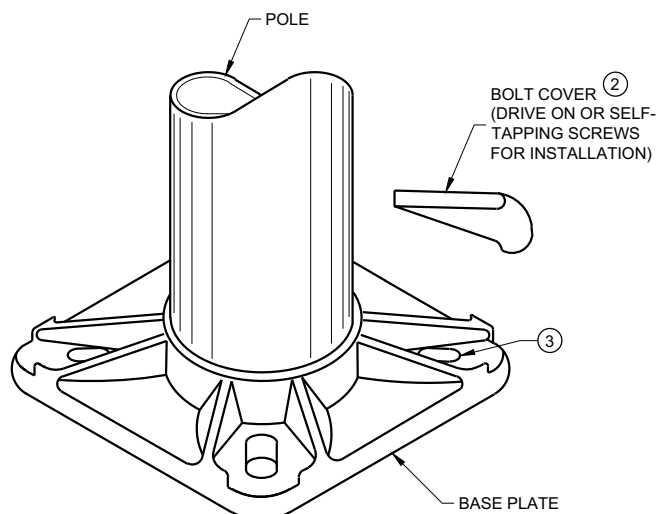
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



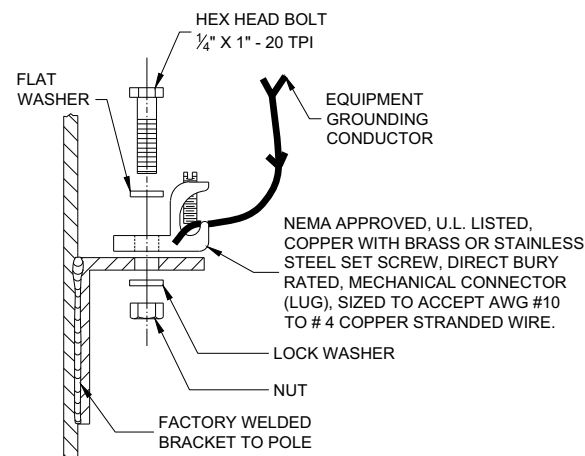
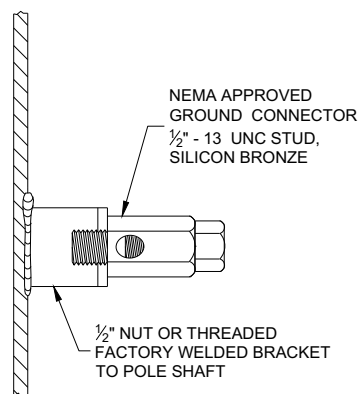
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



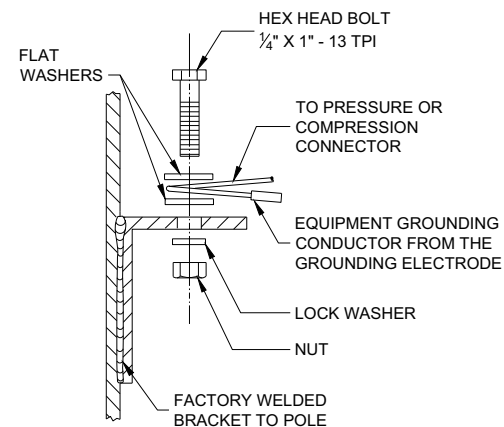
TYPICAL "J" HOOK LOCATION



BASE PLATE



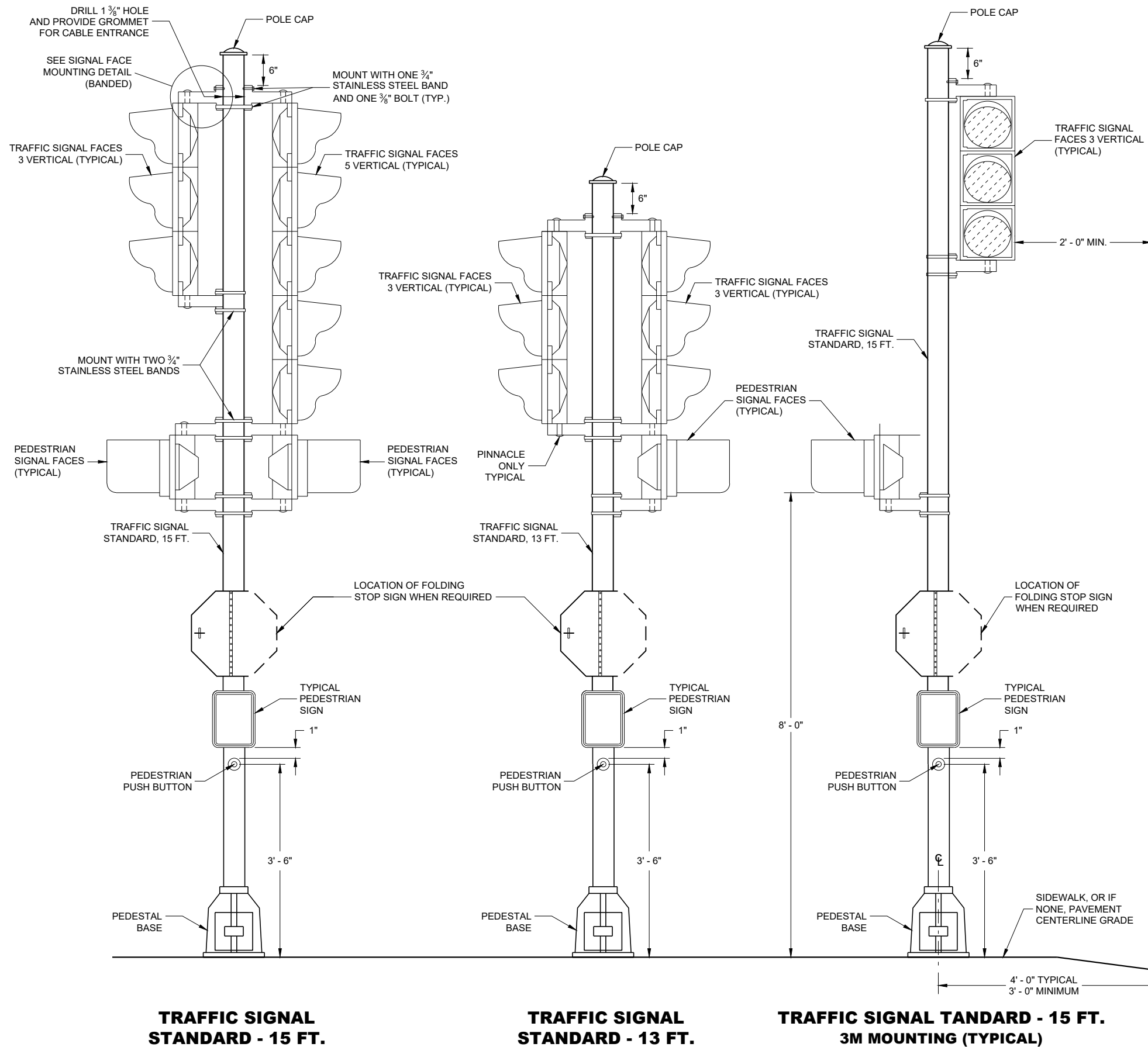
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGI 160
FHWA



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.

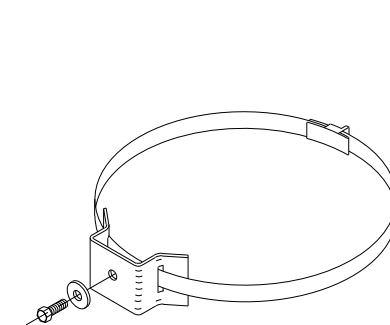
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

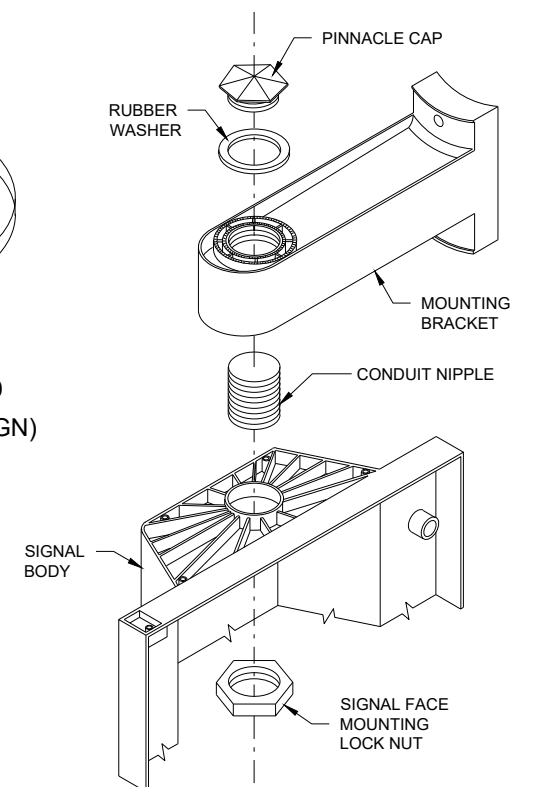
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

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.



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)

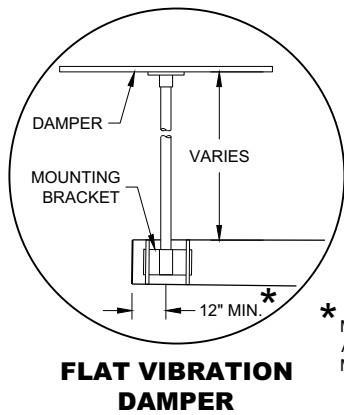
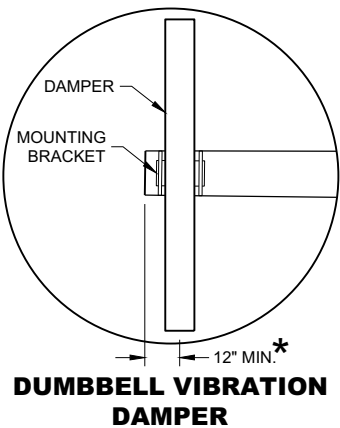
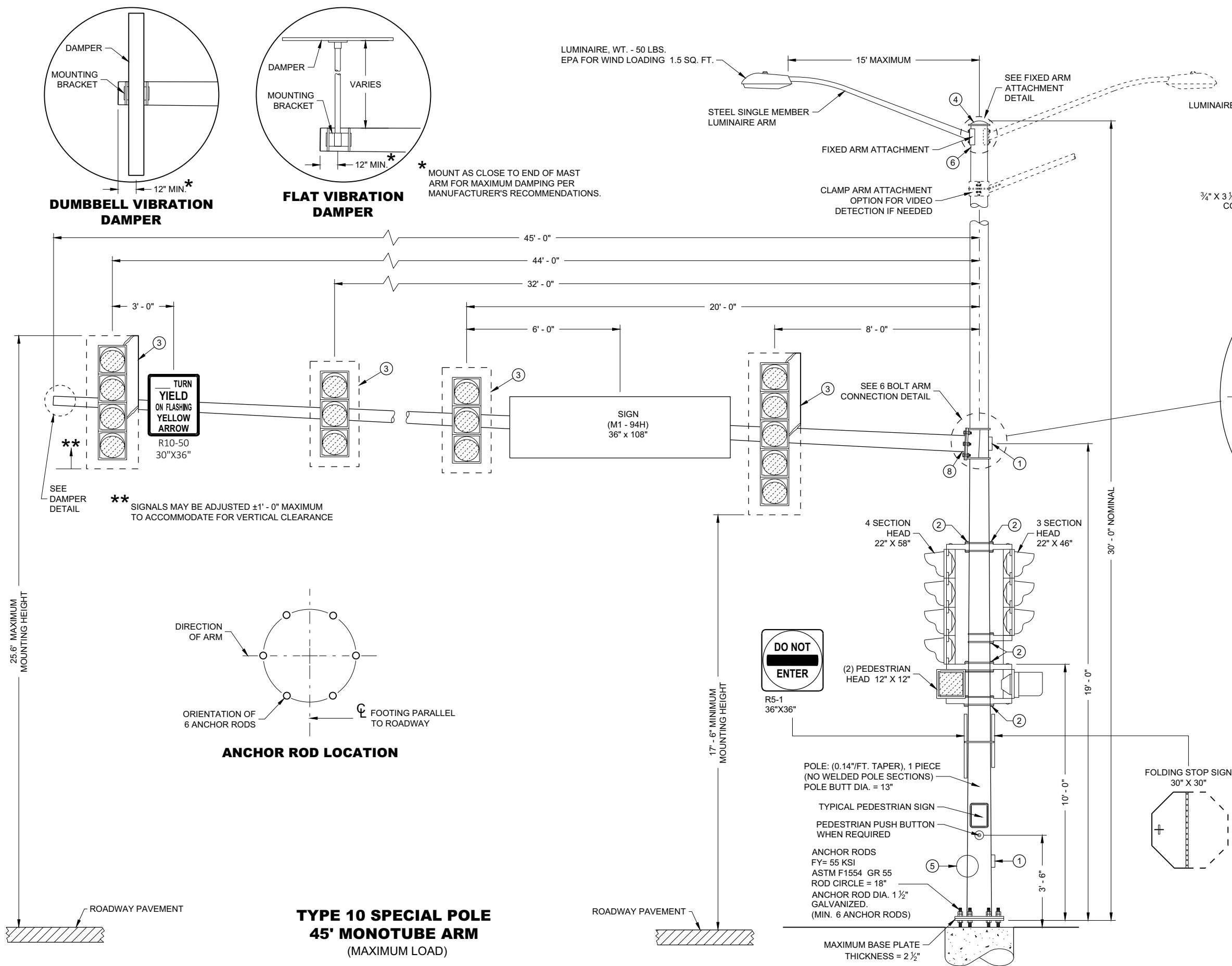


SIGNAL FACE MOUNTING DETAIL (BANDED)

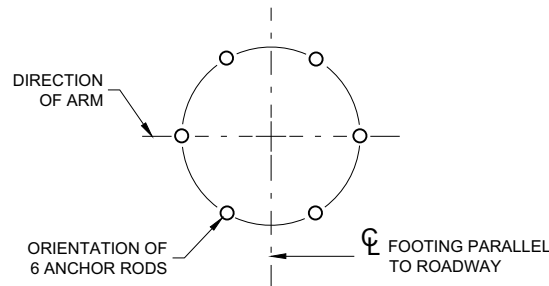
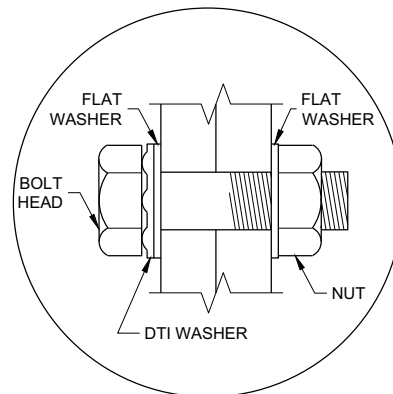
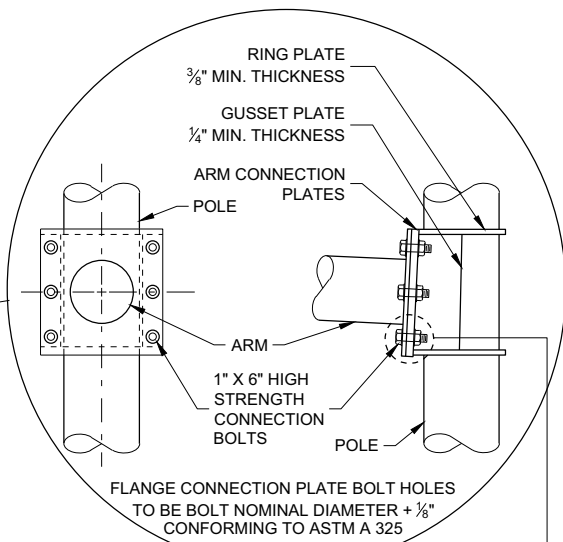
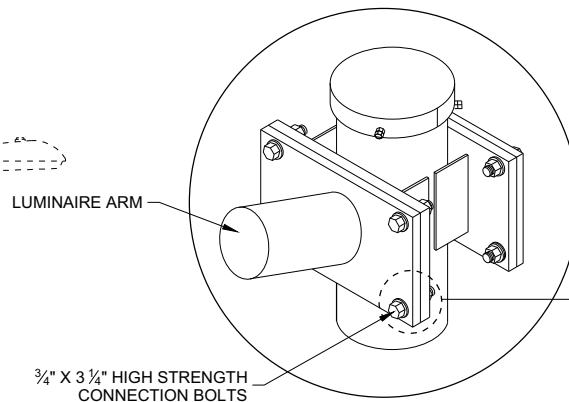
**TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013 DATE /S/ Ahmet Demirelek
STATE ELECTRICAL ENGI 161
FHWA



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



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

**TYPE 10 SPECIAL POLE
45' MONTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGI 162
FHWA



GENERAL NOTES

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

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

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

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

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

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

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

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

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

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

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

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

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 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 ¾" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

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

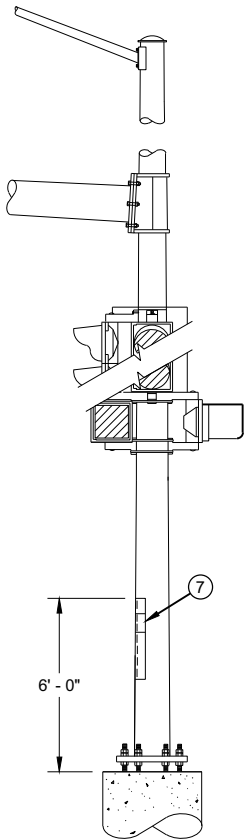
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- ① DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 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 ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥ FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

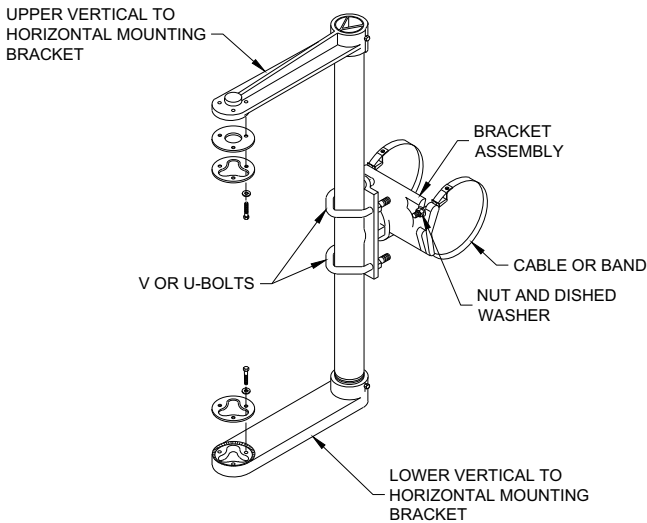
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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

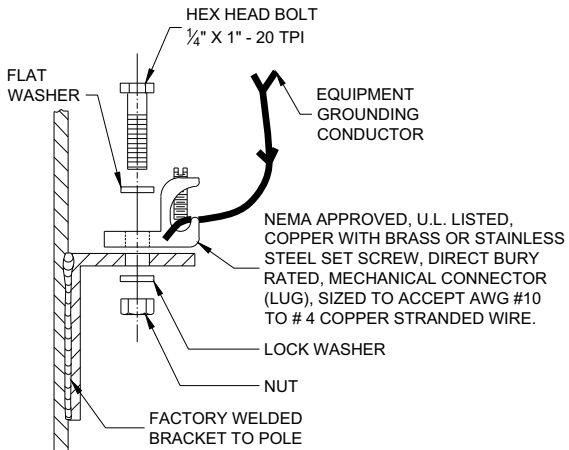
- ⑧ FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT

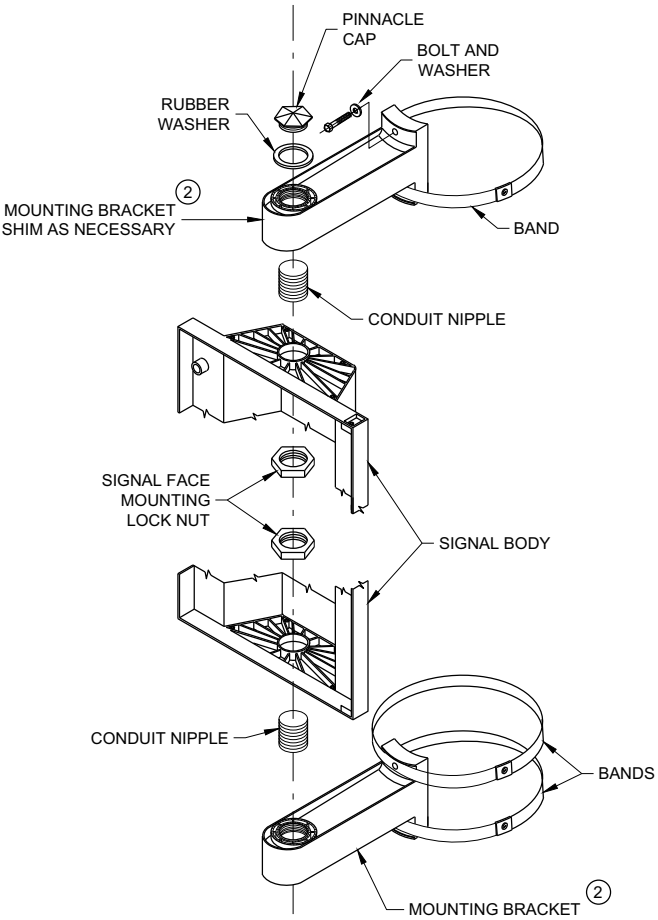


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM
(MOUNT PER MANFACTURER'S RECOMMENDATION)

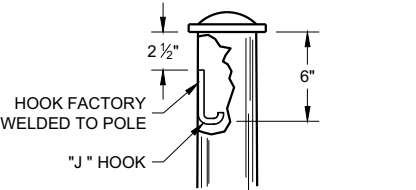


TYPICAL GROUNDING
CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL
MOUNTING DETAIL



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 164
FHWA

GENERAL NOTES

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

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

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

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

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ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

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

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CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF OVER HEIGHT 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 HEADS AT SAME ELEVATION.

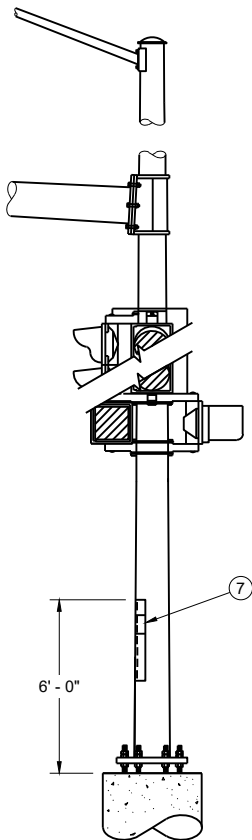
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- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

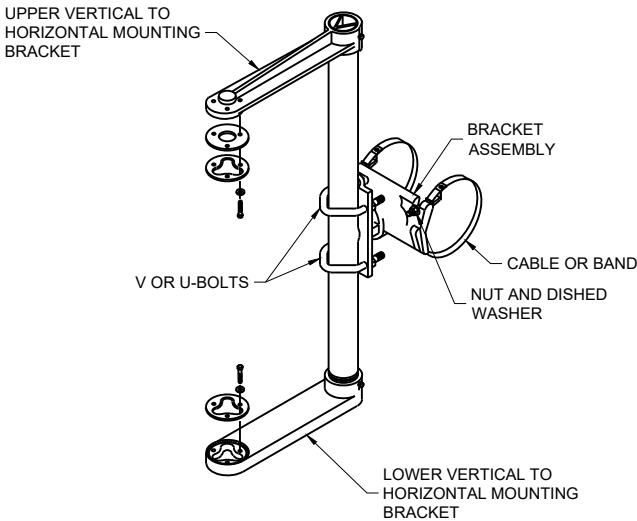
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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.

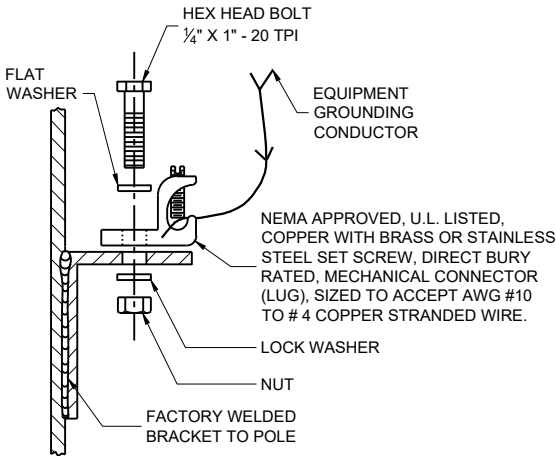


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



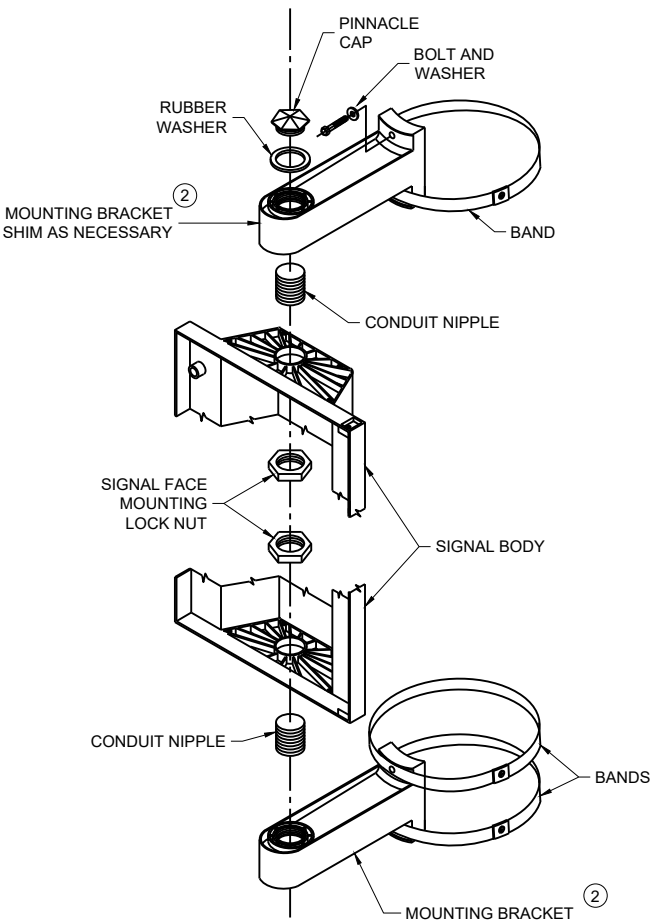
SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

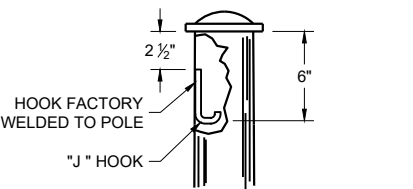


TYPICAL GROUNDING
CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL
MOUNTING DETAIL



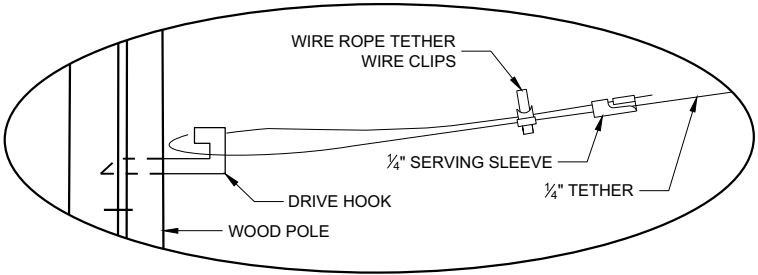
TYPICAL "J" HOOK
WIRE SUPPORT

GENERAL NOTES AND
HARDWARE FOR OVER HEIGHT
TYPE 9, 10, 9/10 SPECIAL,
12 AND 13 POLES WITH
MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
AUGUST 2024 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

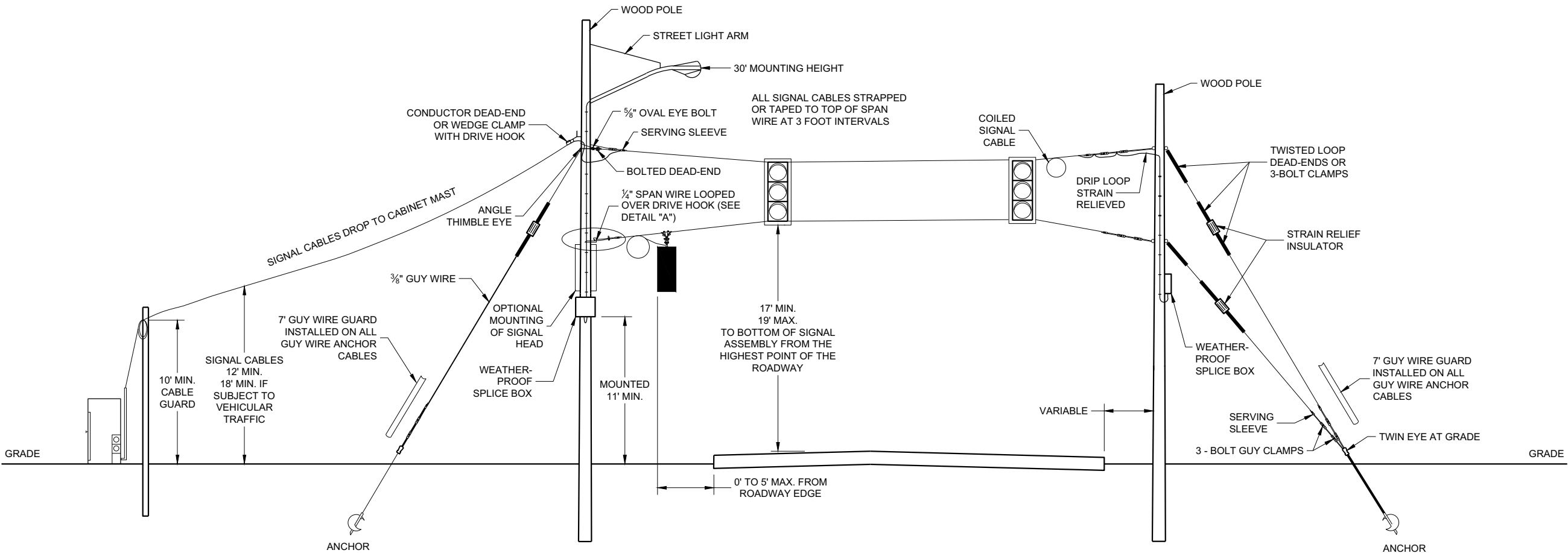
MINIMUM POLE LENGTHS	POLE BURIAL DEPTHS
25'	5'
30'	6'
35'	7'
40'	8'
45'	9'



DETAIL "A"

GENERAL NOTES

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

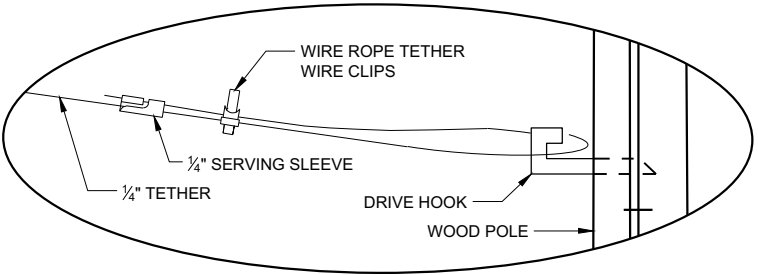
SPAN WIRE TEMPORARY
TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGI 166

FHWA

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

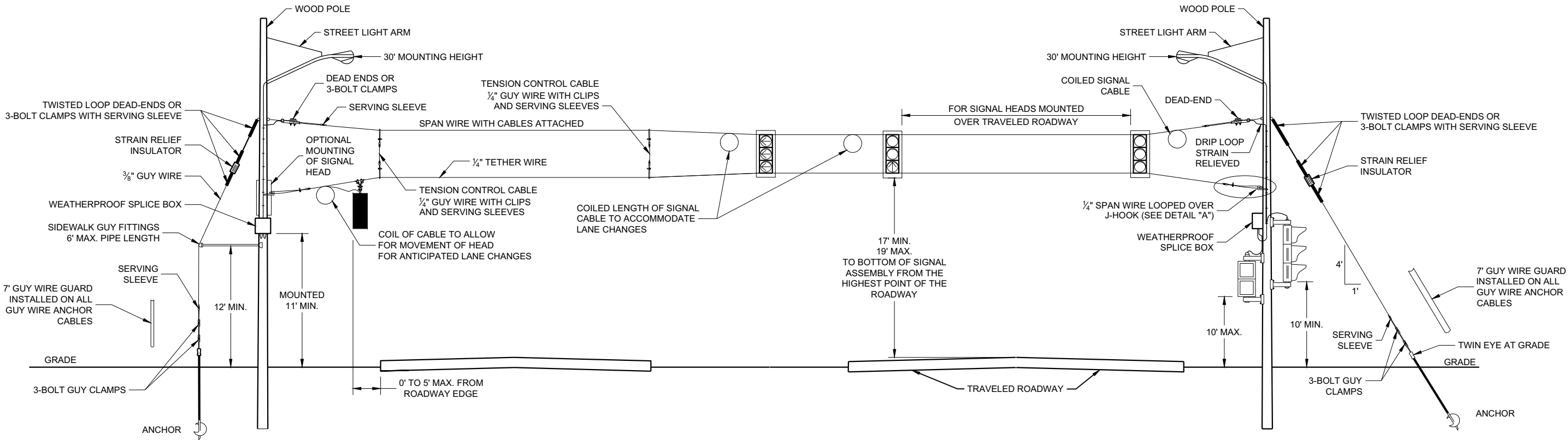


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 - NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
 - FAR INDICATION SHALL BE MAINTAINED OVER 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

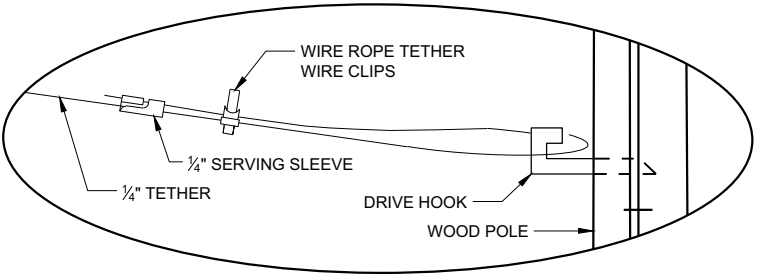
SPAN WIRE TEMPORARY
TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGI 167

FHWA

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

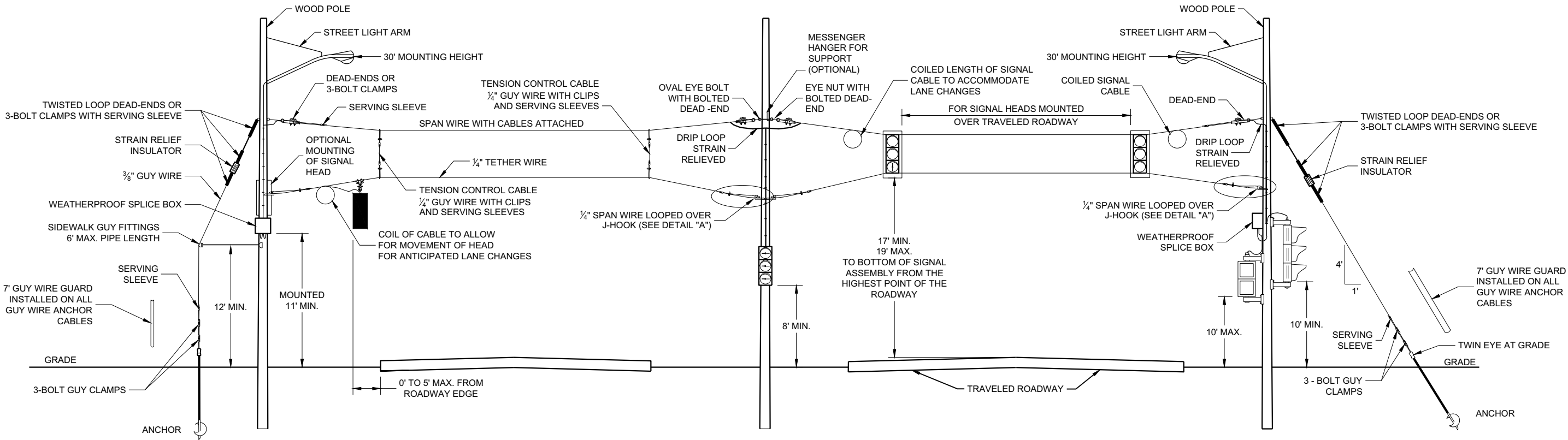


DETAIL "A"

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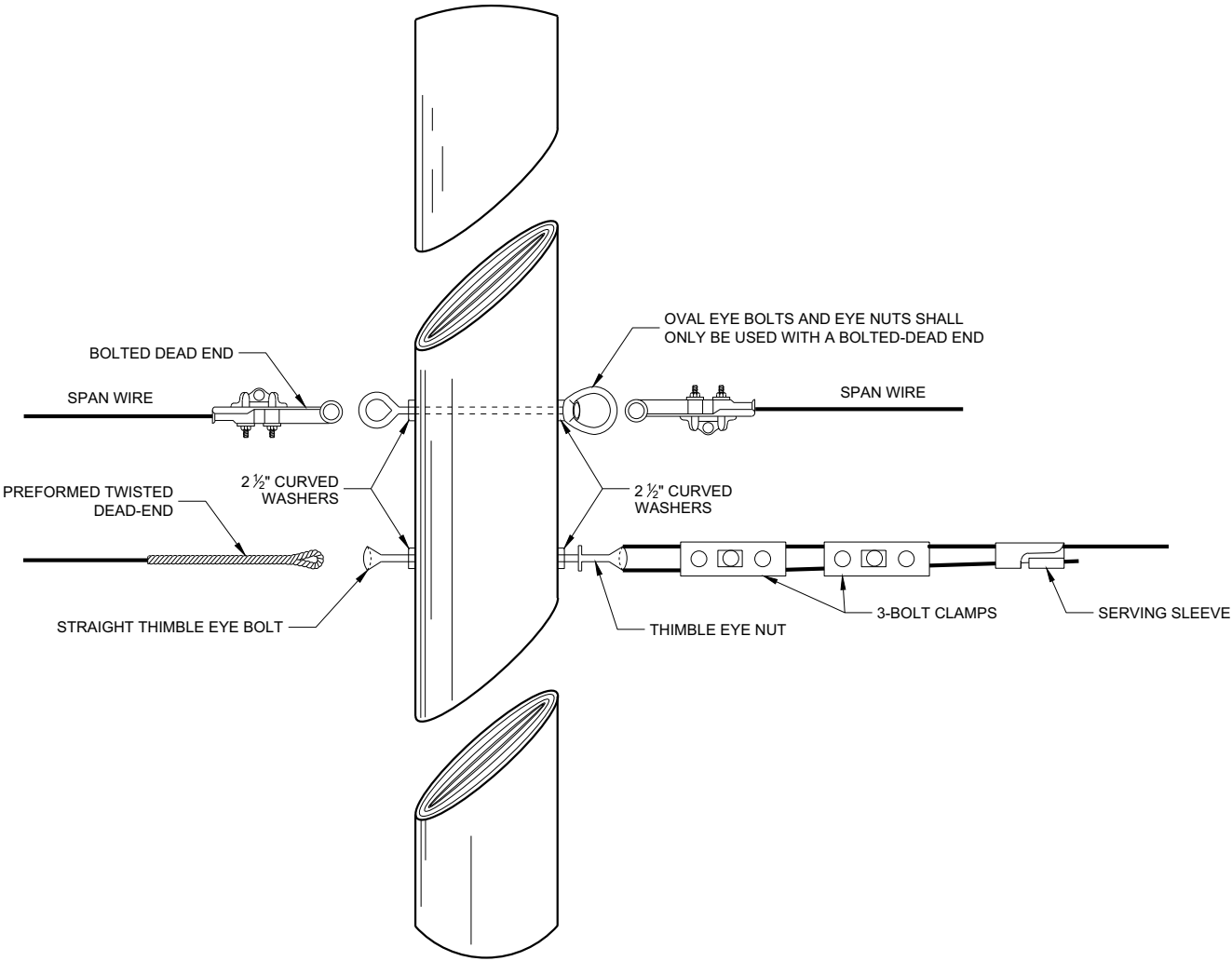
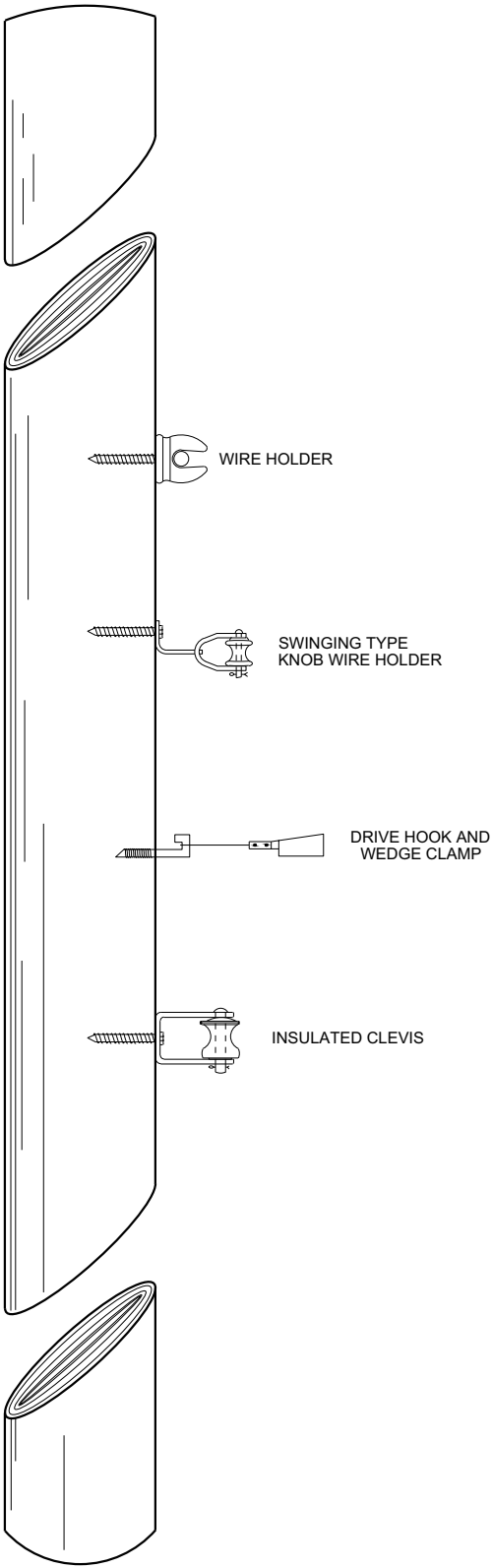
SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY
TRAFFIC SIGNAL

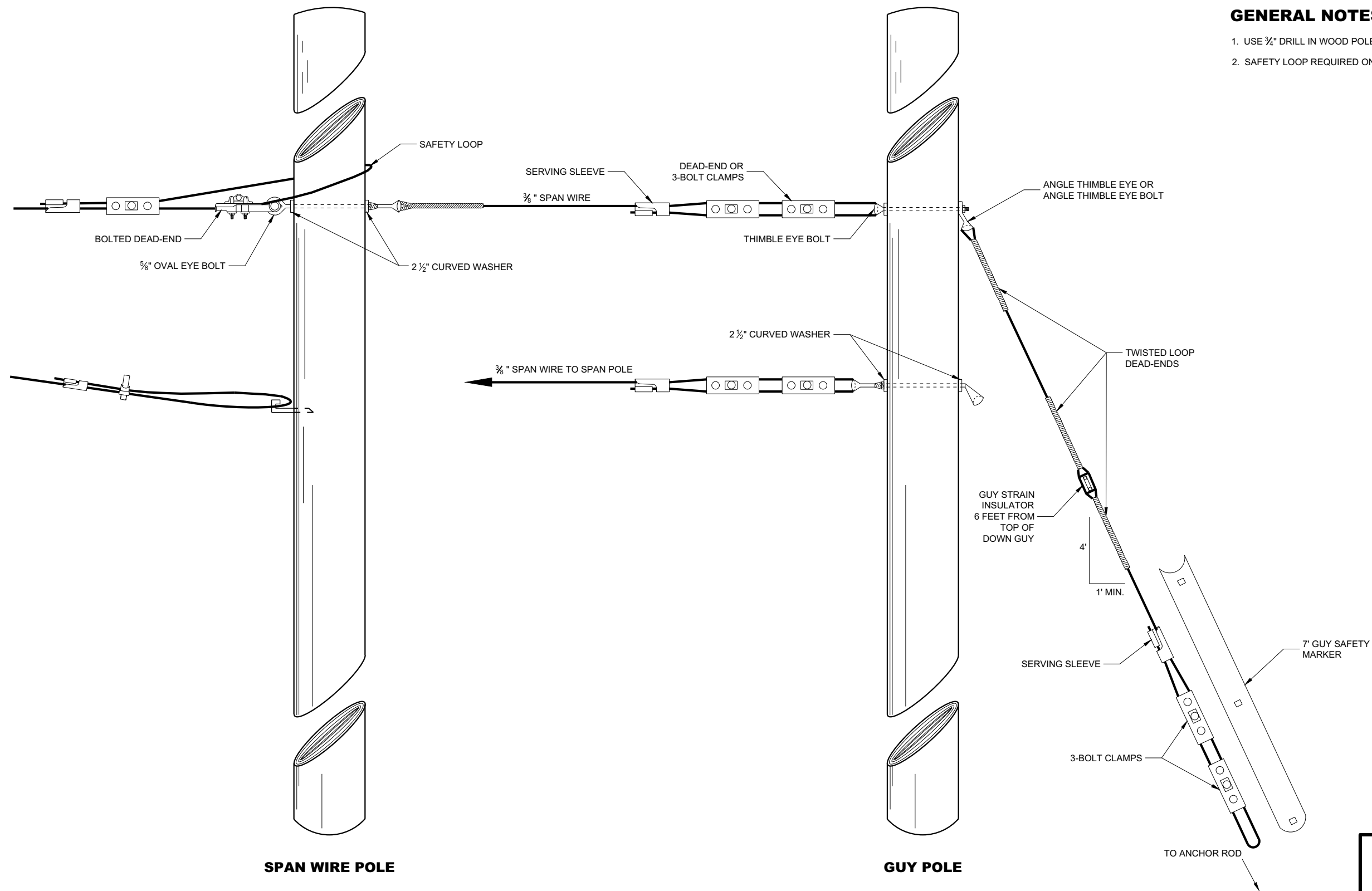
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGI 168

FHWA

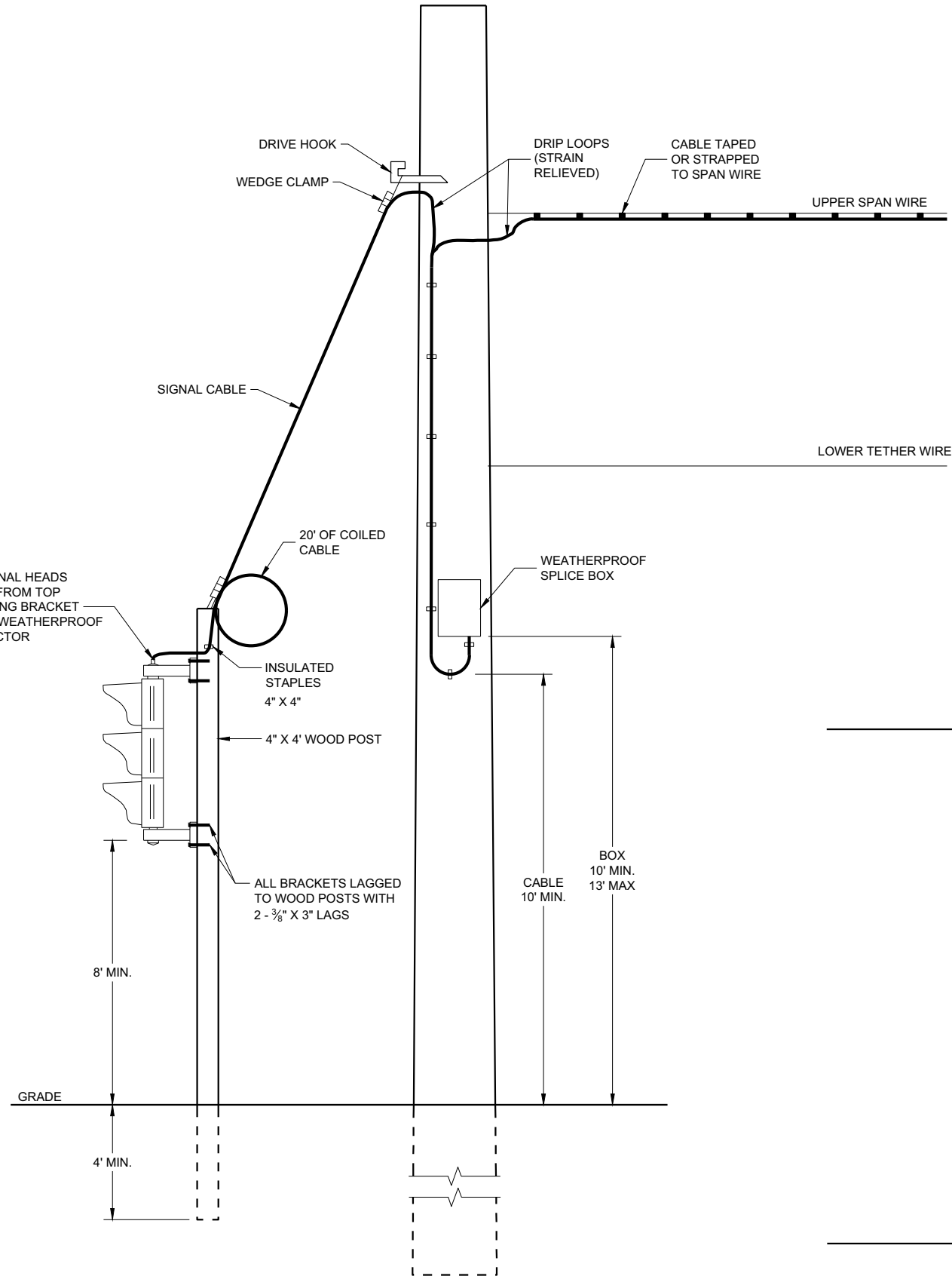


SPAN WIRE TEMPORARY TRAFFIC SIGNAL		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED June 2015 DATE	/S/ Ahmet Demerbilek ROADWAY STANDARDS DEVELOPMENT ENGINEER	169
FHWA		

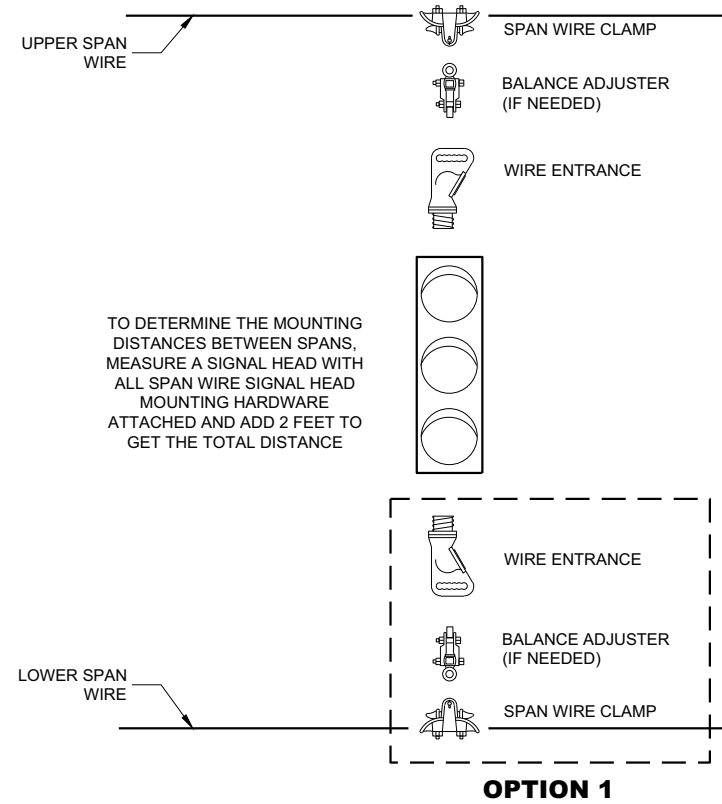


TYPICAL DEAD-ENDINGS OR GUYING

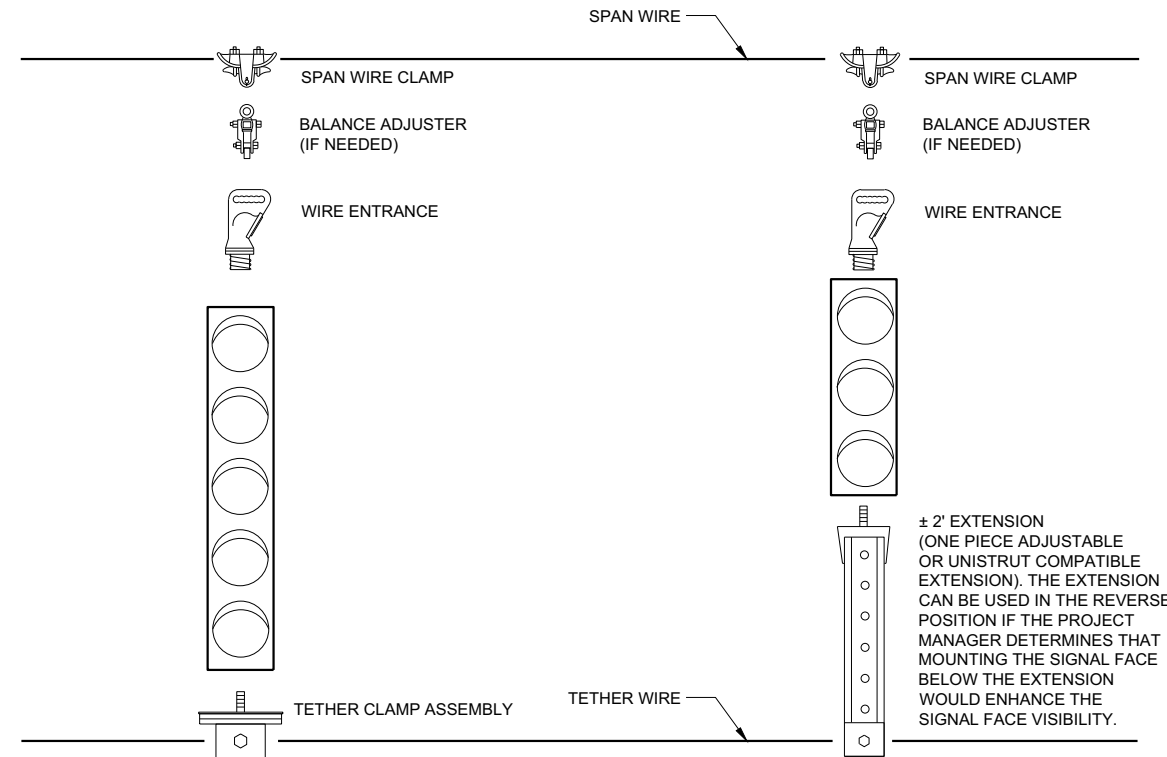
SPAN WIRE TEMPORARY TRAFFIC SIGNAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2015 DATE	/S/ Ahmet Demerbilek ROADWAY STANDARDS DEVELOPMENT ENGINEER 170
FHWA	



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

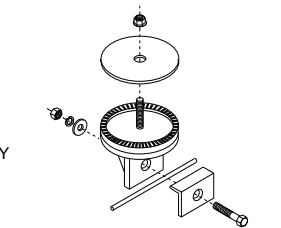


TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

USE OPTION 1 OR TETHER CLAMP ASSEMBLY

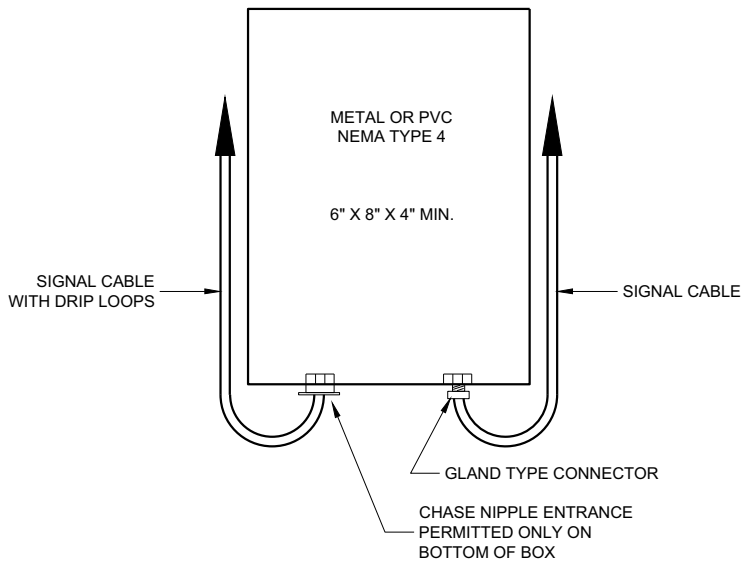
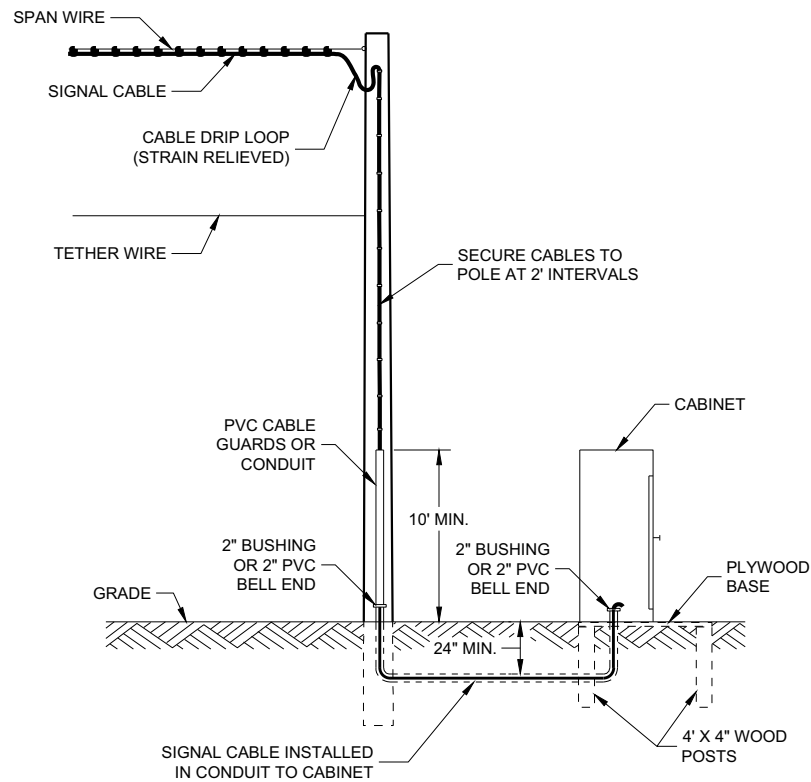


TETHER CLAMP ASSEMBLY OPTION

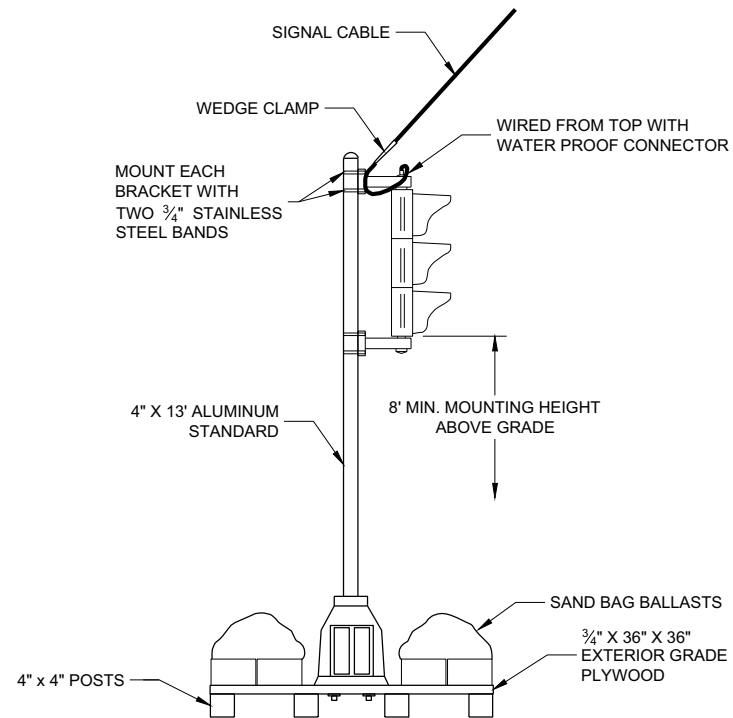
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

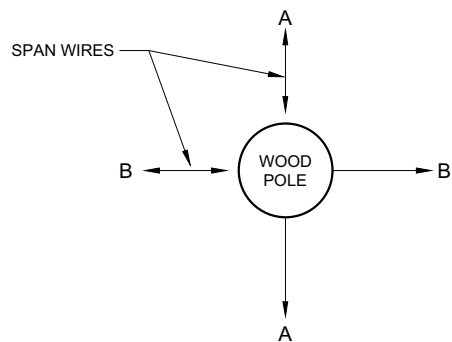
APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 171
FHWA



SPLICE BOX

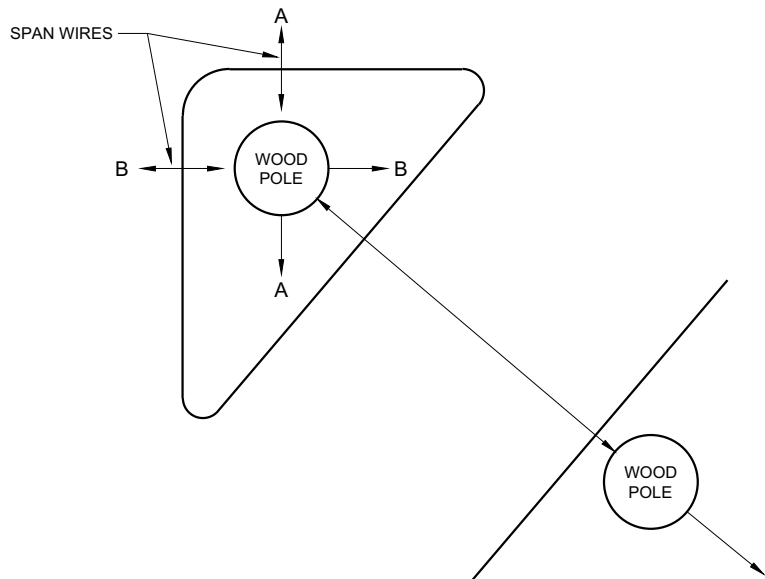


TYPICAL SKID TYPE TEMPORARY

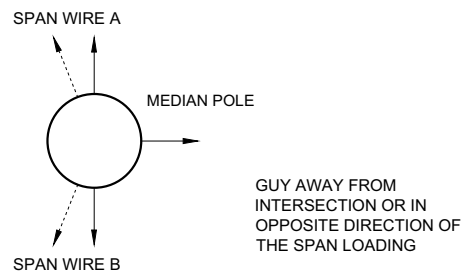


CORNER POLES

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



ISLAND POLES



MEDIAN POLES

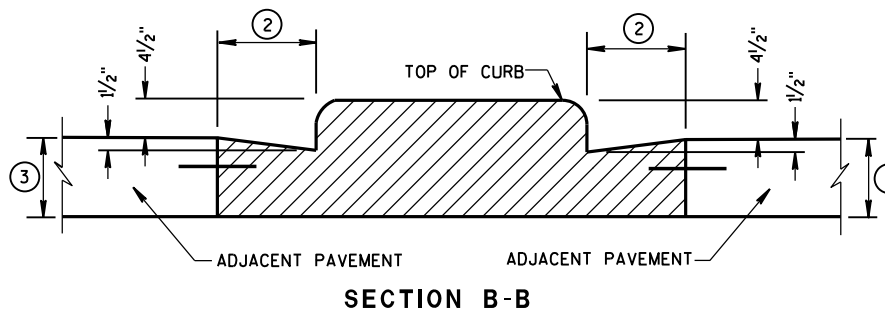
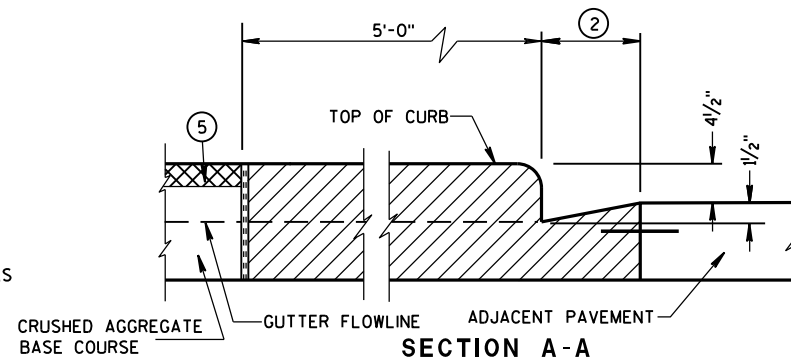
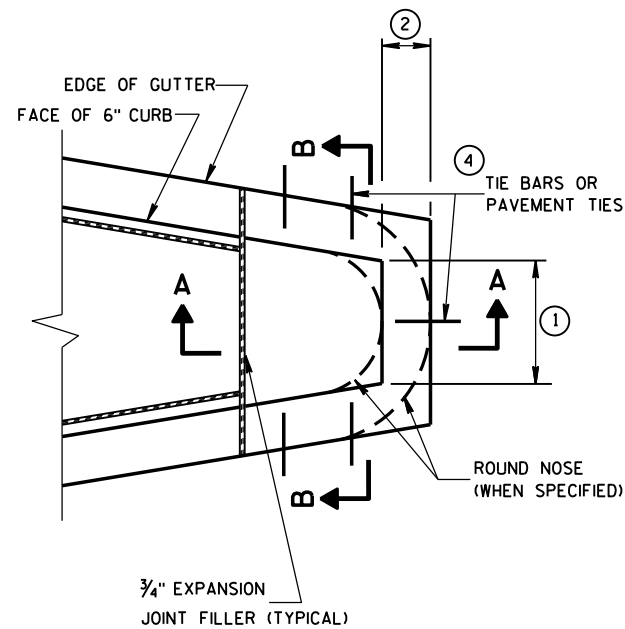
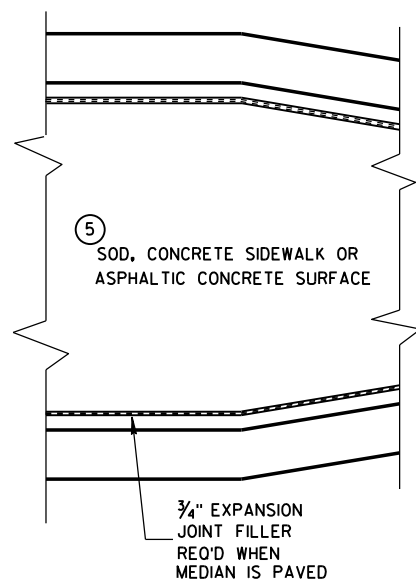
GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

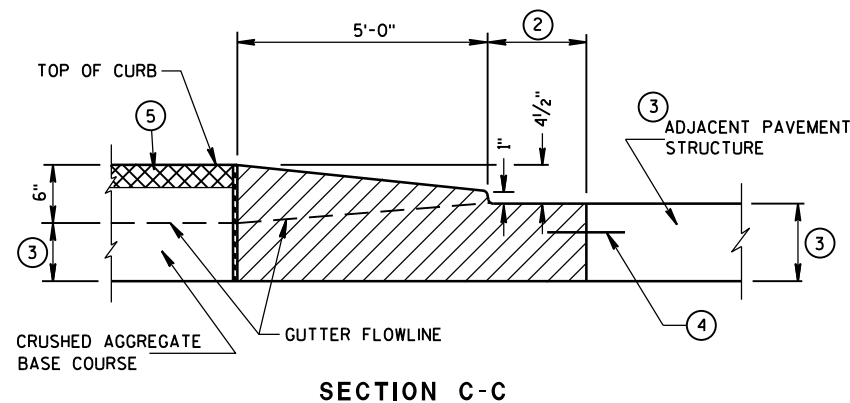
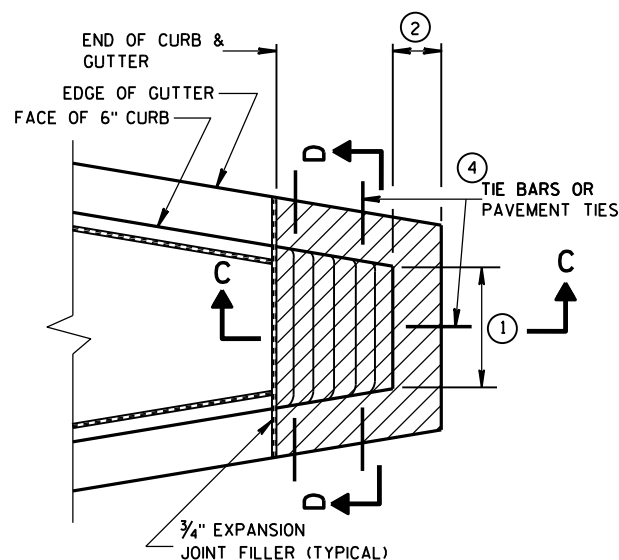
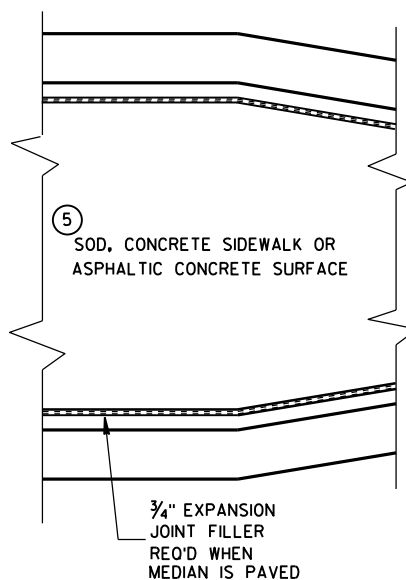
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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June 2015 /S/ Ahmet Demerbilek
DATE ROADWAY STANDARDS DEVE 172
ENGINEER

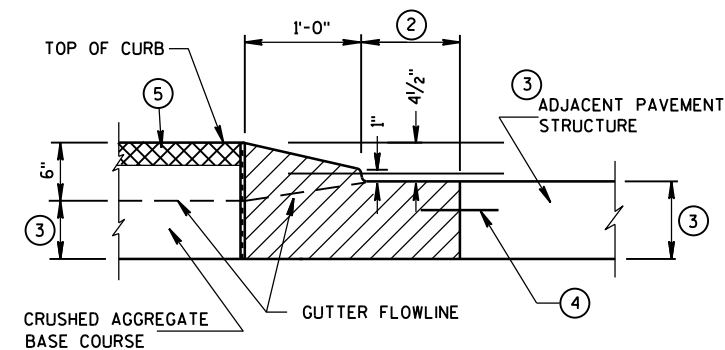
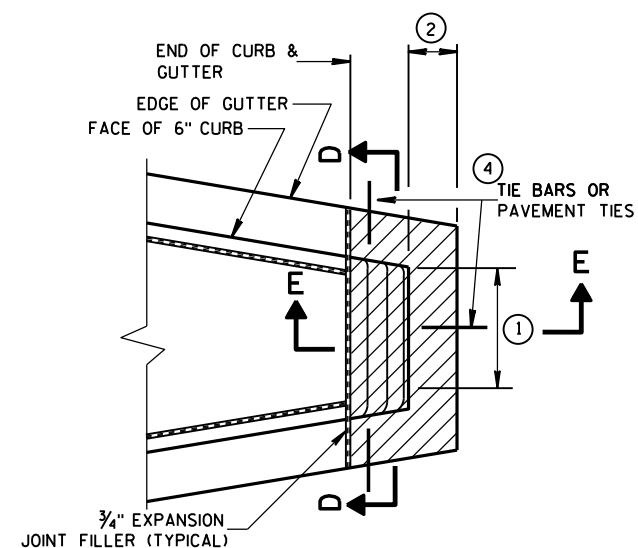
FHWA



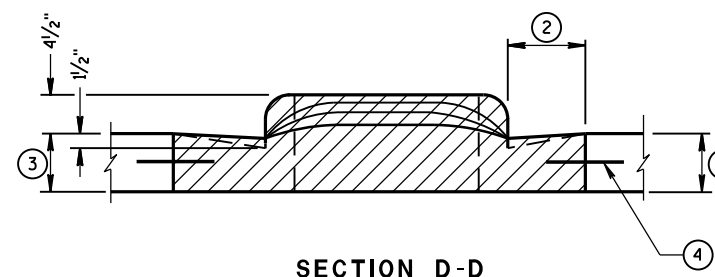
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



GENERAL NOTES

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

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

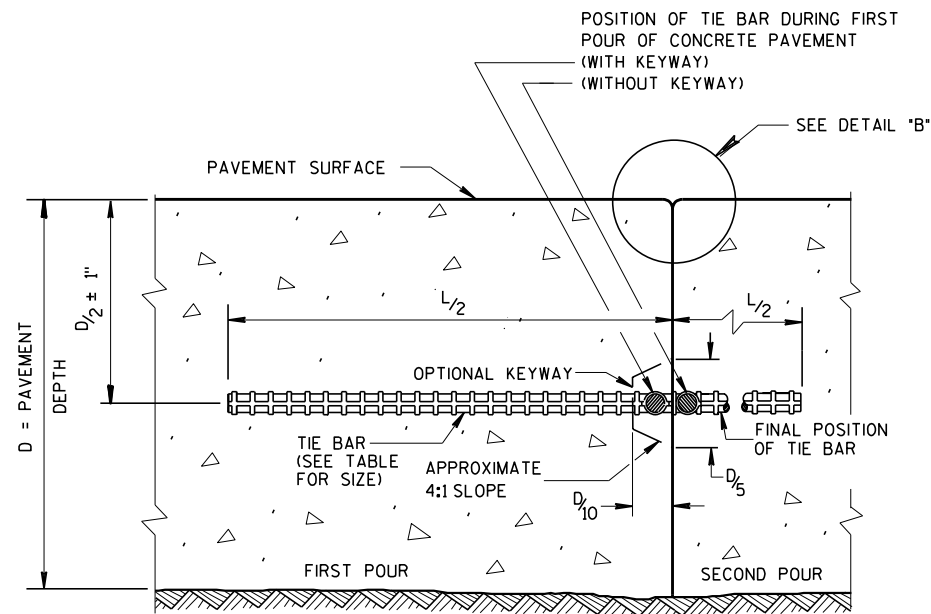
6/8/2006

DATE

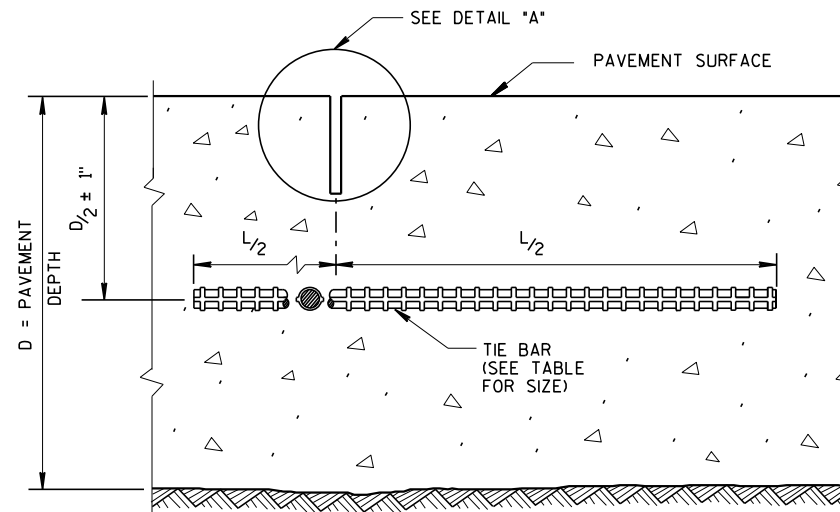
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS & 173
ENGINEER

4T



CONSTRUCTION JOINT



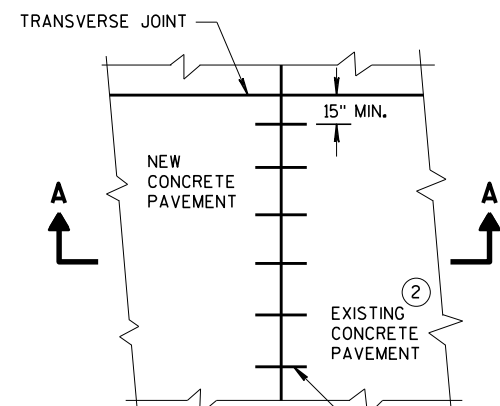
SAWED JOINT

GENERAL NOTES

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

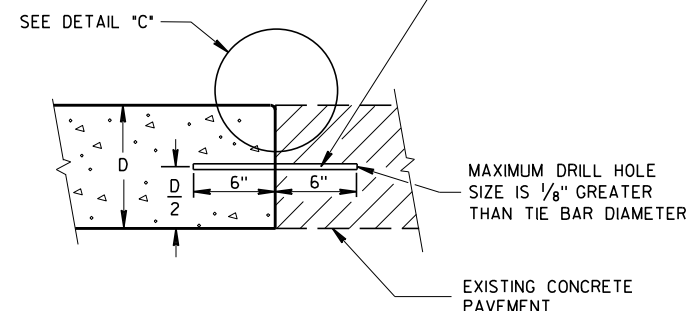
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

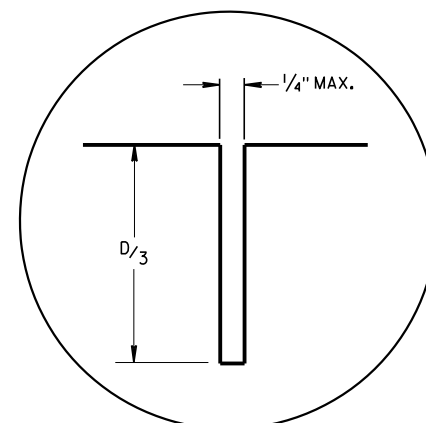


PLAN VIEW

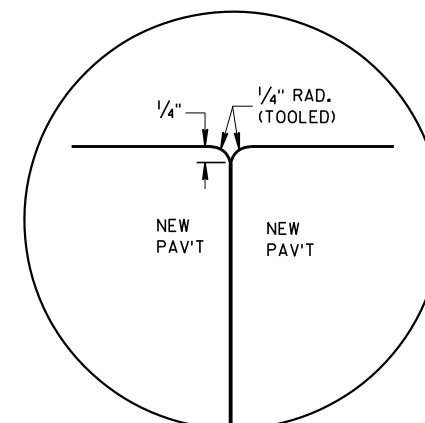
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



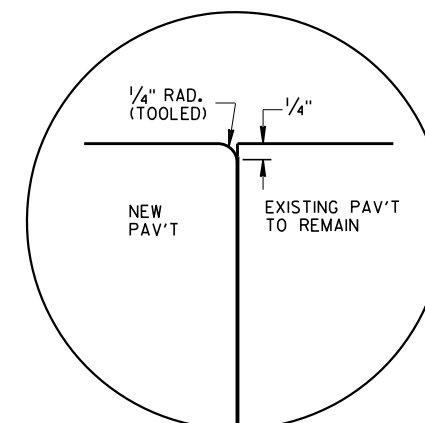
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



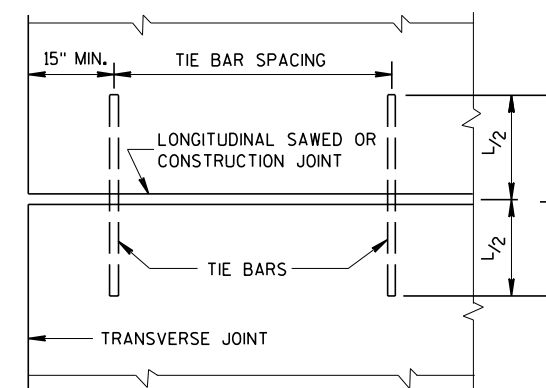
DETAIL "C"

TIE BAR TABLE

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

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

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

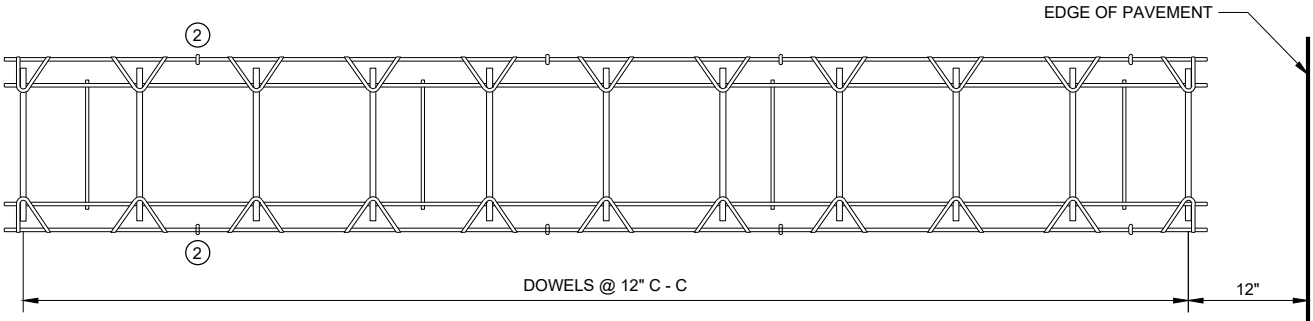


PLAN VIEW
SHOWING LOCATION OF TIE BARS

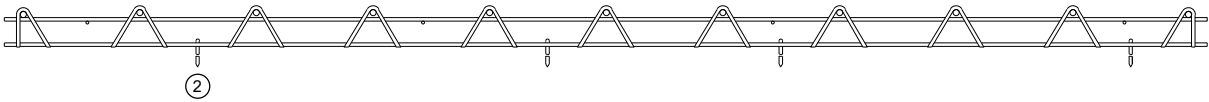
CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kern
DATE PAVEMENT SUPE 174
FHWA

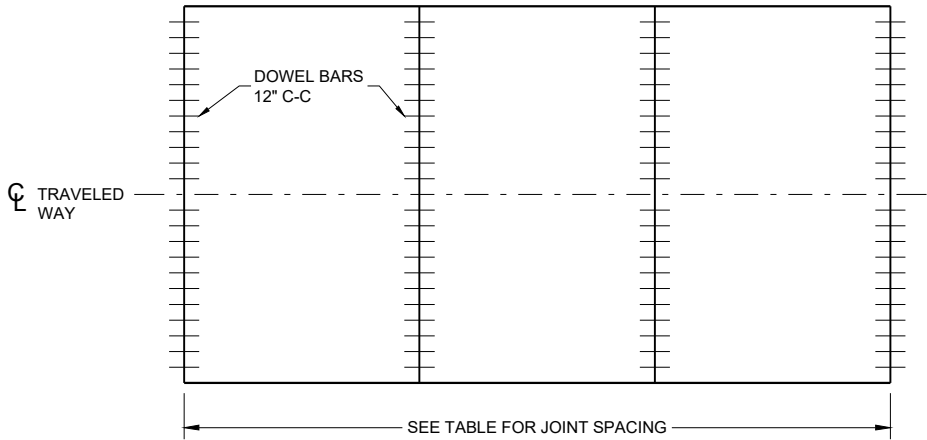


PLAN VIEW

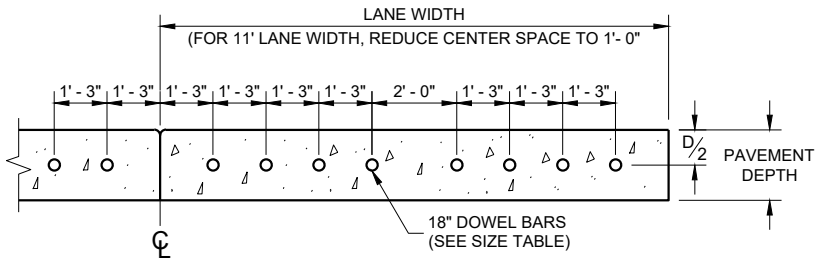


SIDE VIEW

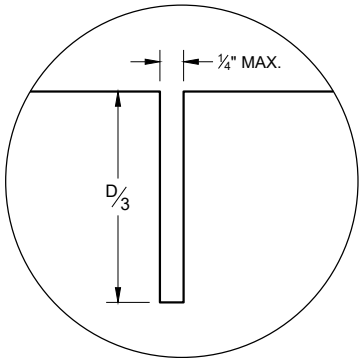
CONTRACTION JOINT DOWEL ASSEMBLY 1



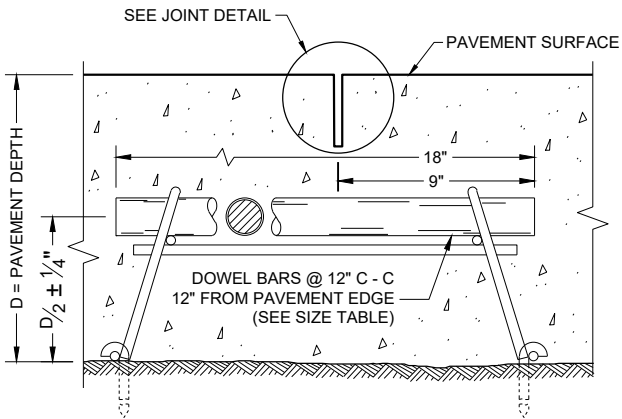
CONTRACTION JOINT LOCATIONS



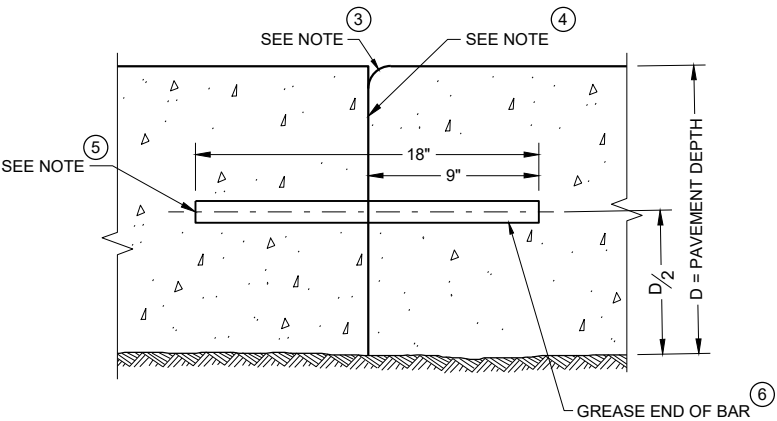
DRILLED DOWEL BAR CONSTRUCTION JOINT 7



JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

- 1 OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
- 2 SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- 3 FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4" RADIUS AT FORMED JOINTS.
- 4 PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- 5 INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
- 6 APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- 7 ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.

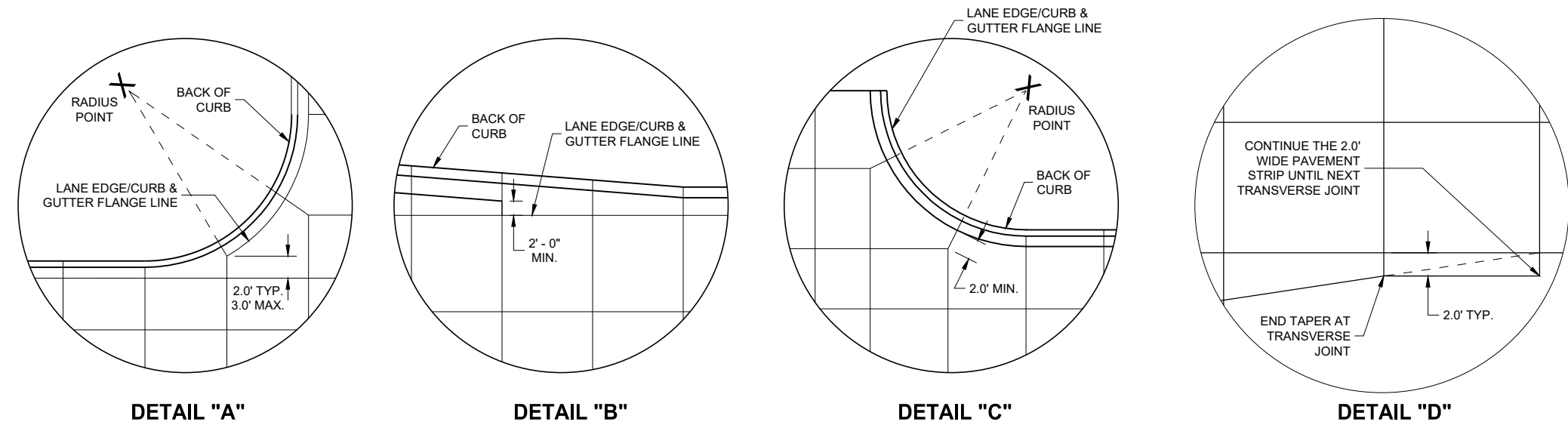
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8" & ABOVE	1 1/4"	15'

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR 175
FHWA



GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

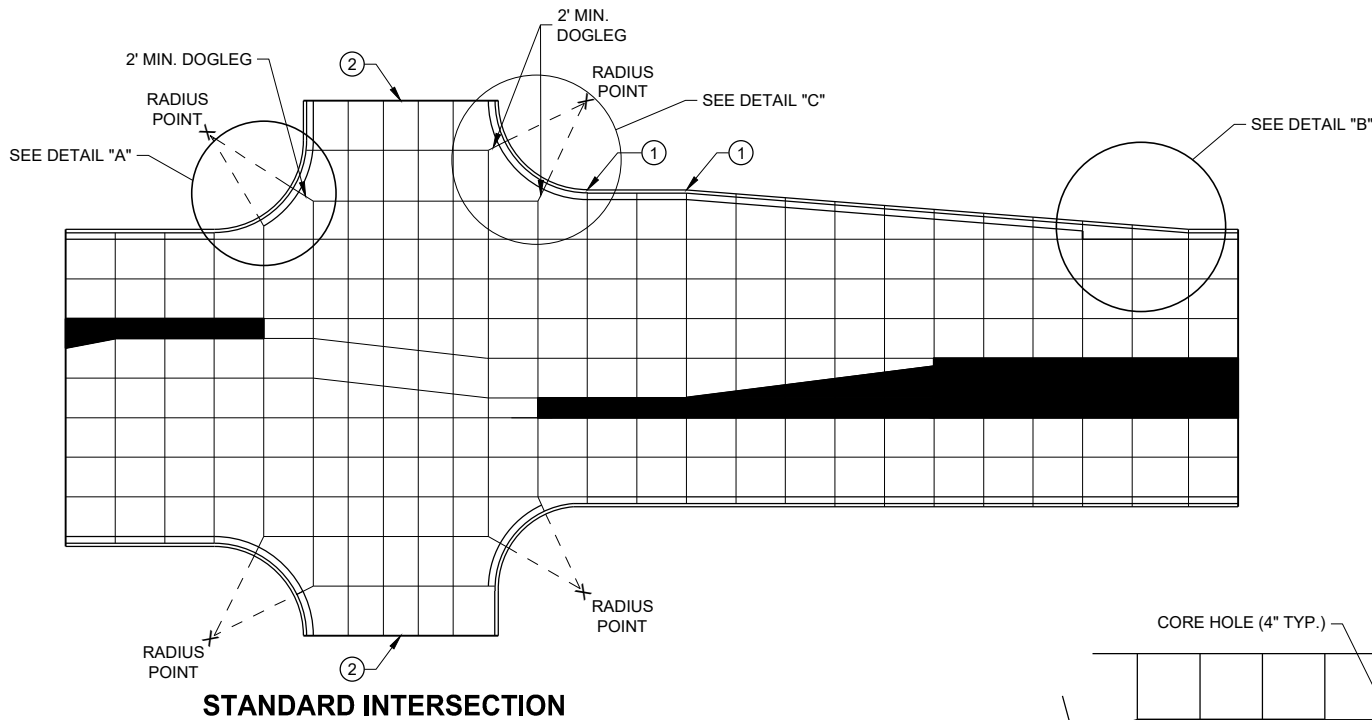
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

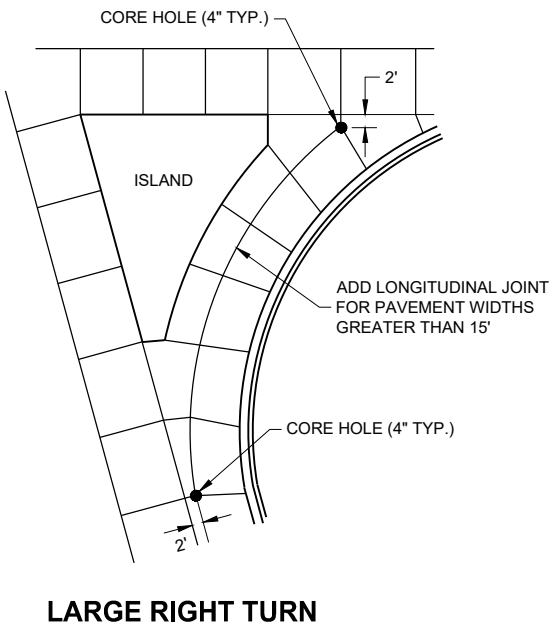
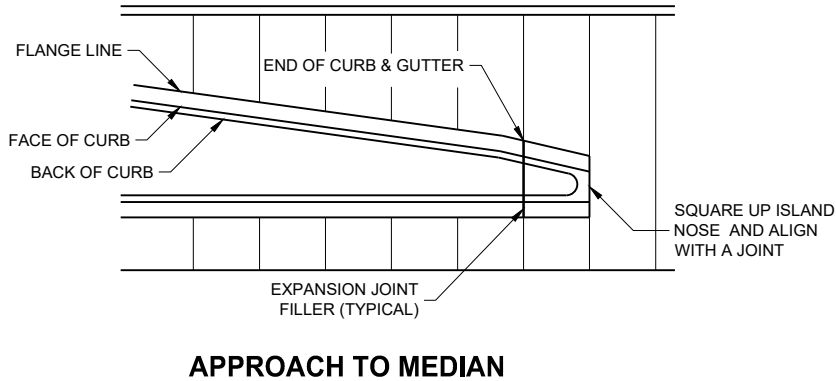
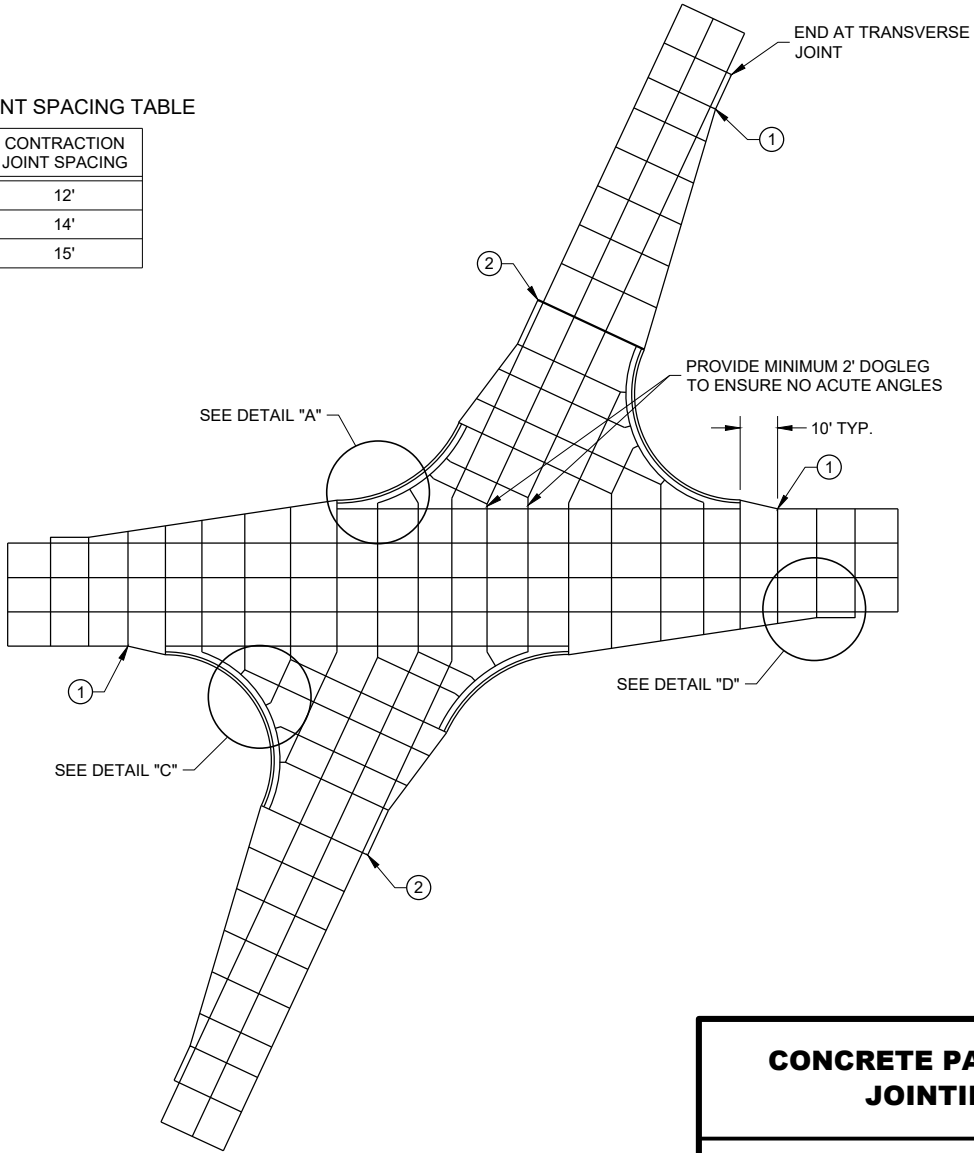
② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



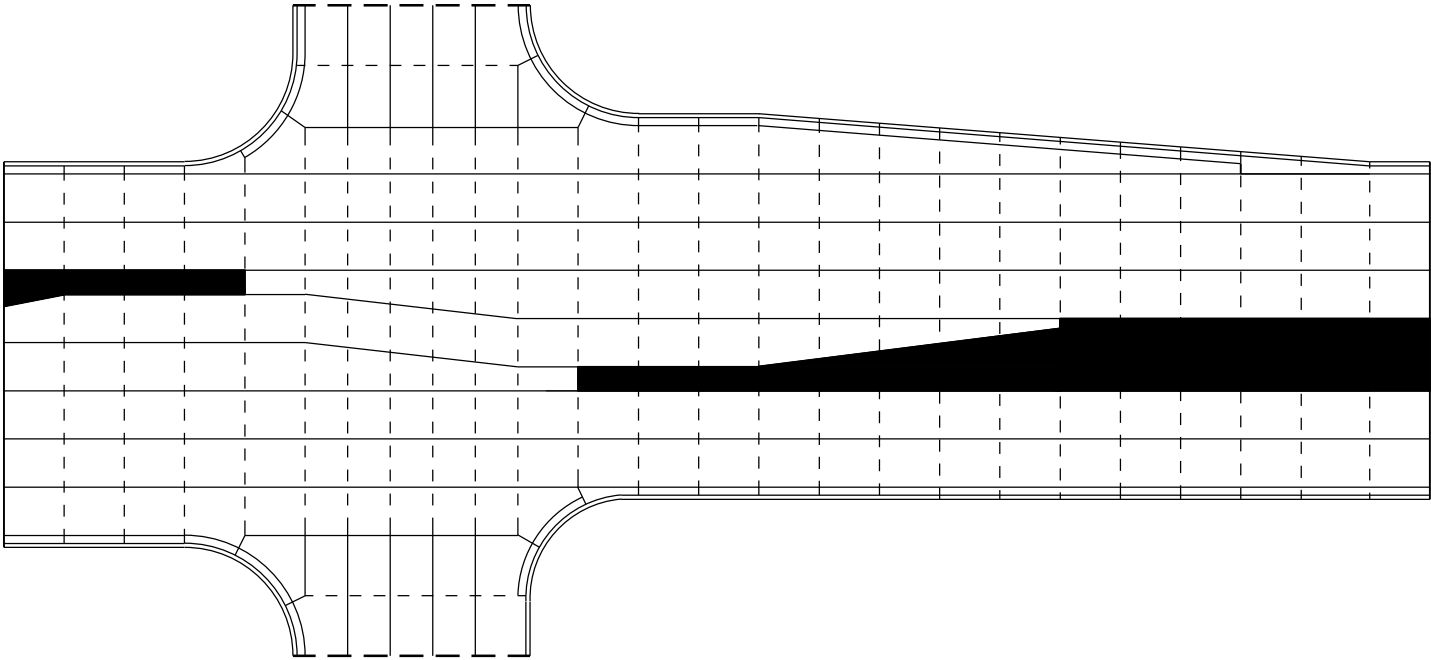
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



LEGEND

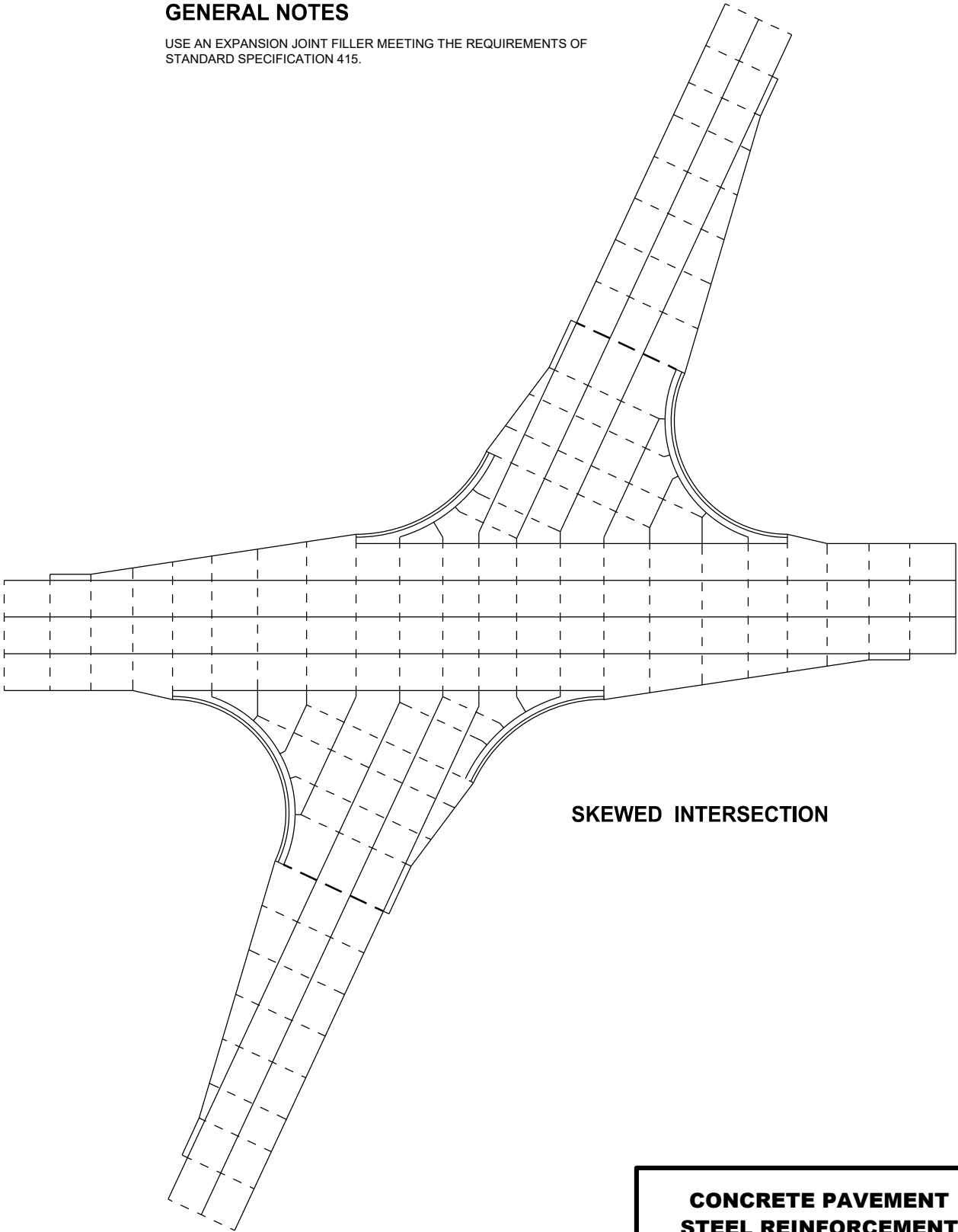
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

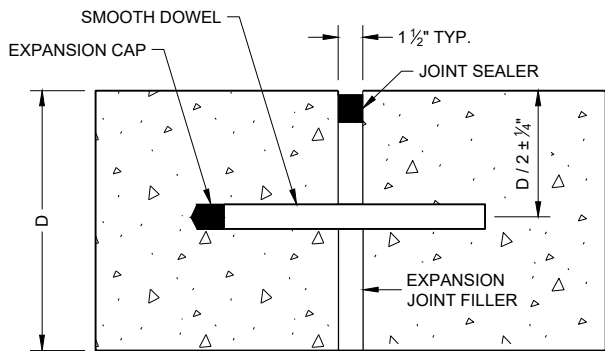
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



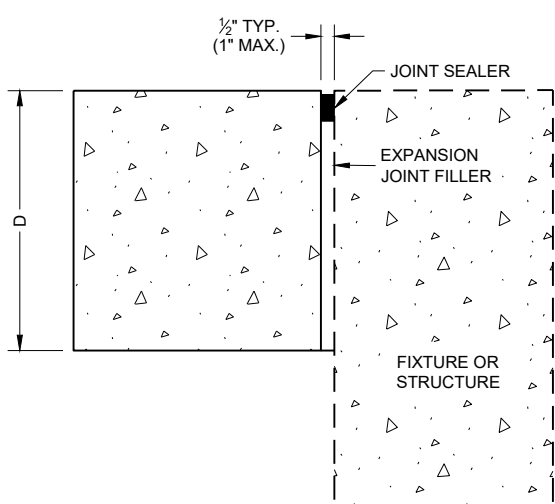
SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 177

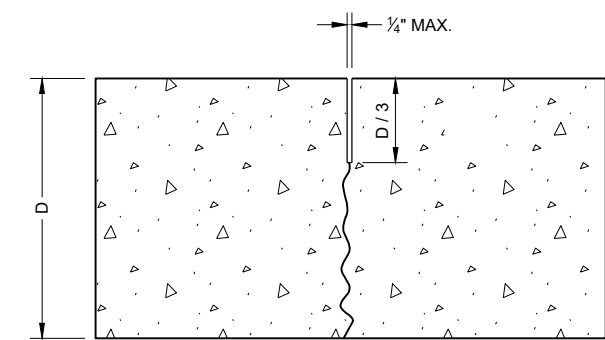


DOWELED TRANSVERSE ①

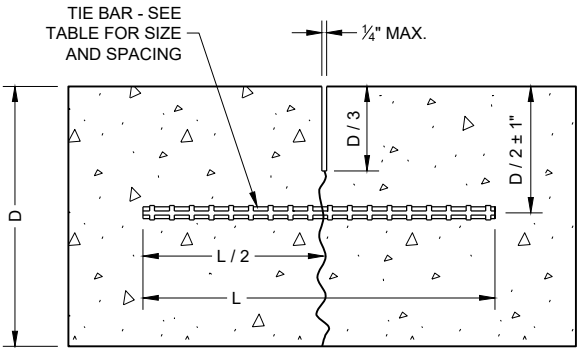


UNTIED - LONGITUDINAL

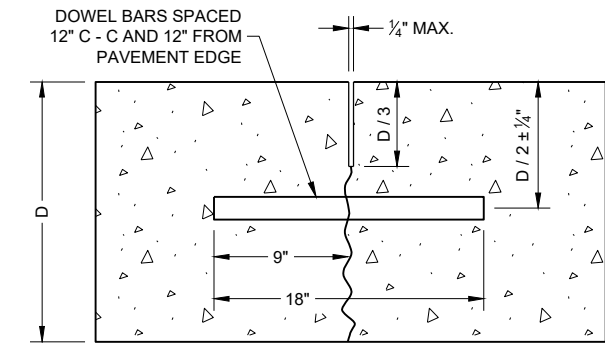
EXPANSION JOINTS



UNDOWELED TRANSVERSE



TIED LONGITUDINAL



DOWELED TRANSVERSE

CONTRACTION JOINTS ②

TIE BAR TABLE

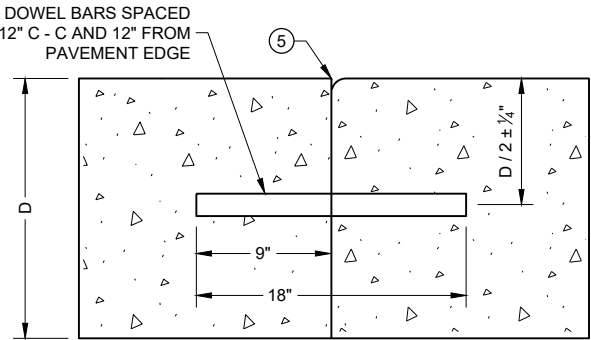
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

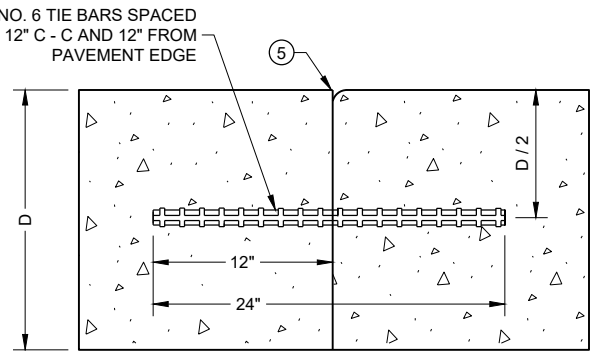
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

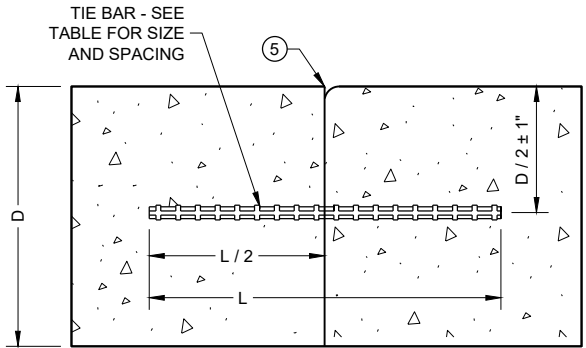
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM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



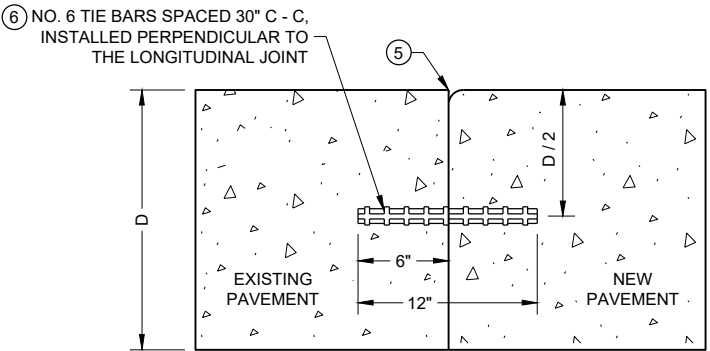
DOWELED TRANSVERSE ③



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



TIED LONGITUDINAL

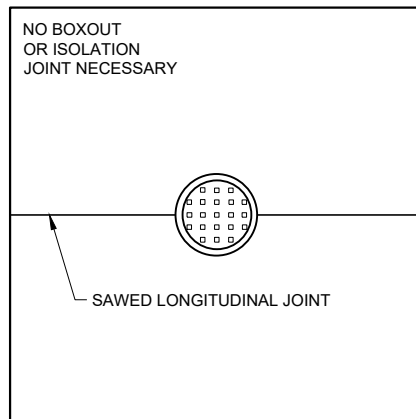


TIED LONGITUDINAL TO EXISTING

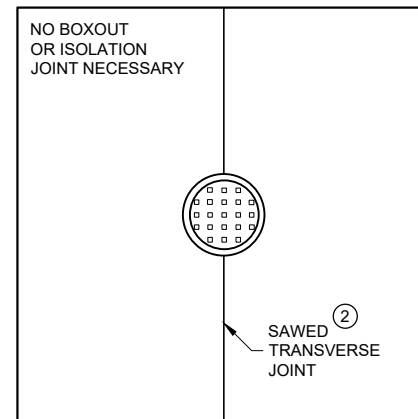
CONSTRUCTION JOINTS ④

**CONCRETE PAVEMENT
JOINT TYPES**

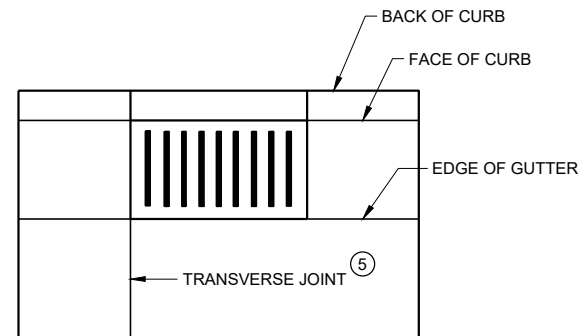
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 178



**MANHOLE WITH
LONGITUDINAL JOINT**



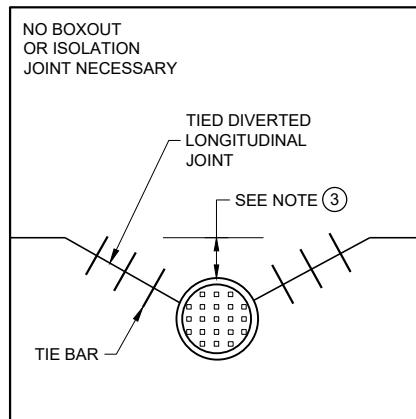
**MANHOLE WITH
TRANSVERSE JOINT**



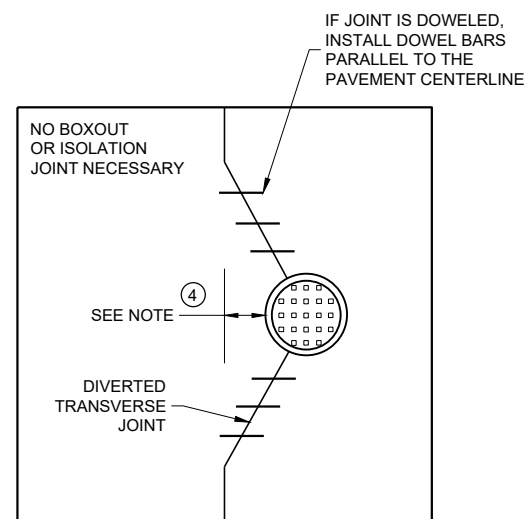
**INLET WITH
TRANSVERSE JOINT**

GENERAL NOTES

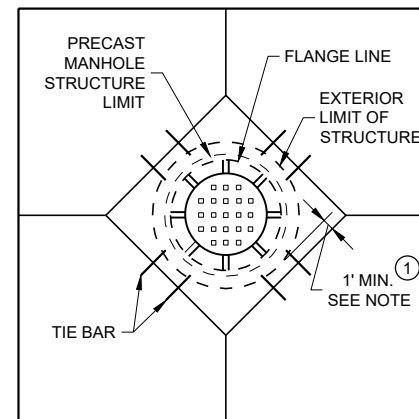
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE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



**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**



**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**

**CONCRETE PAVEMENT
JOINTING AT UTILITY
FIXTURES**

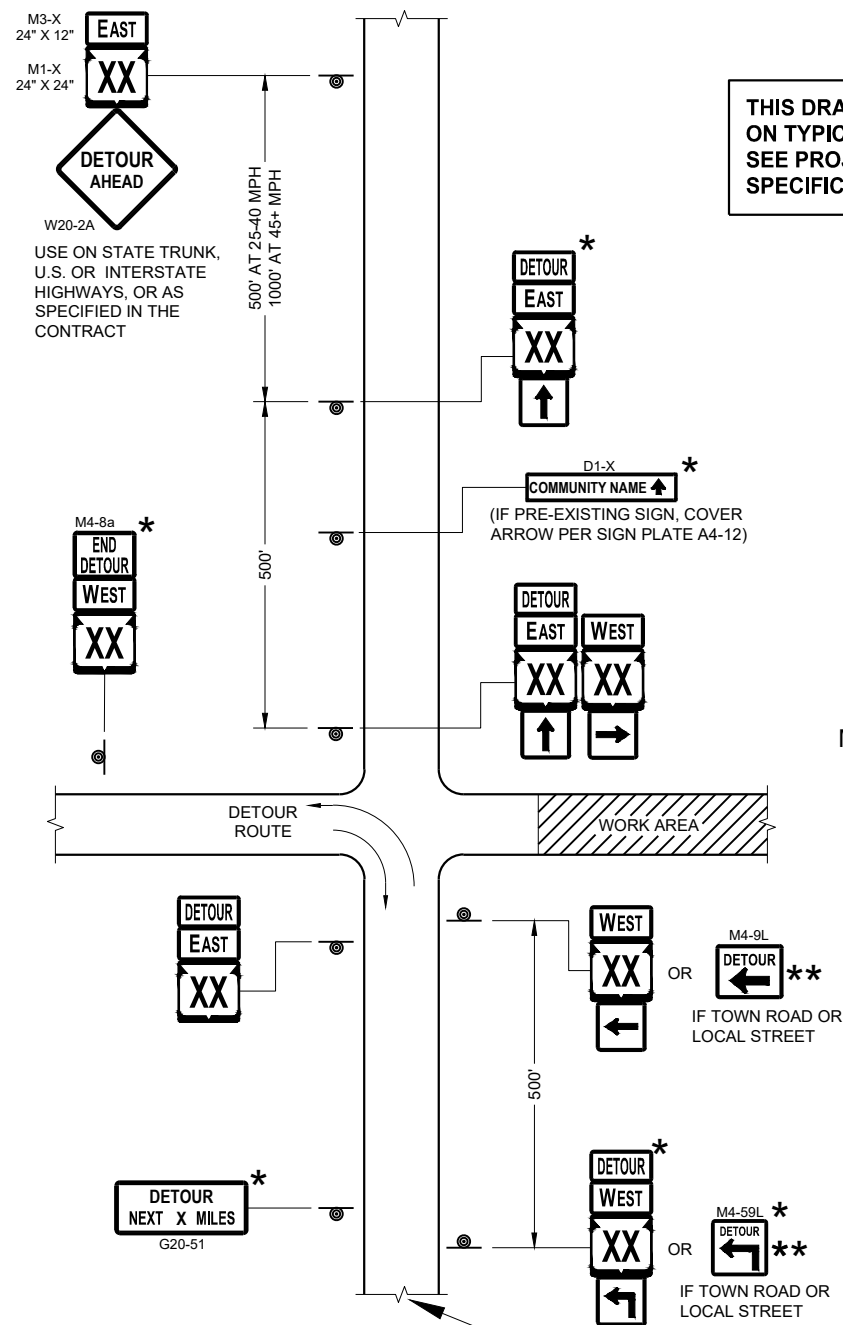
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR 179

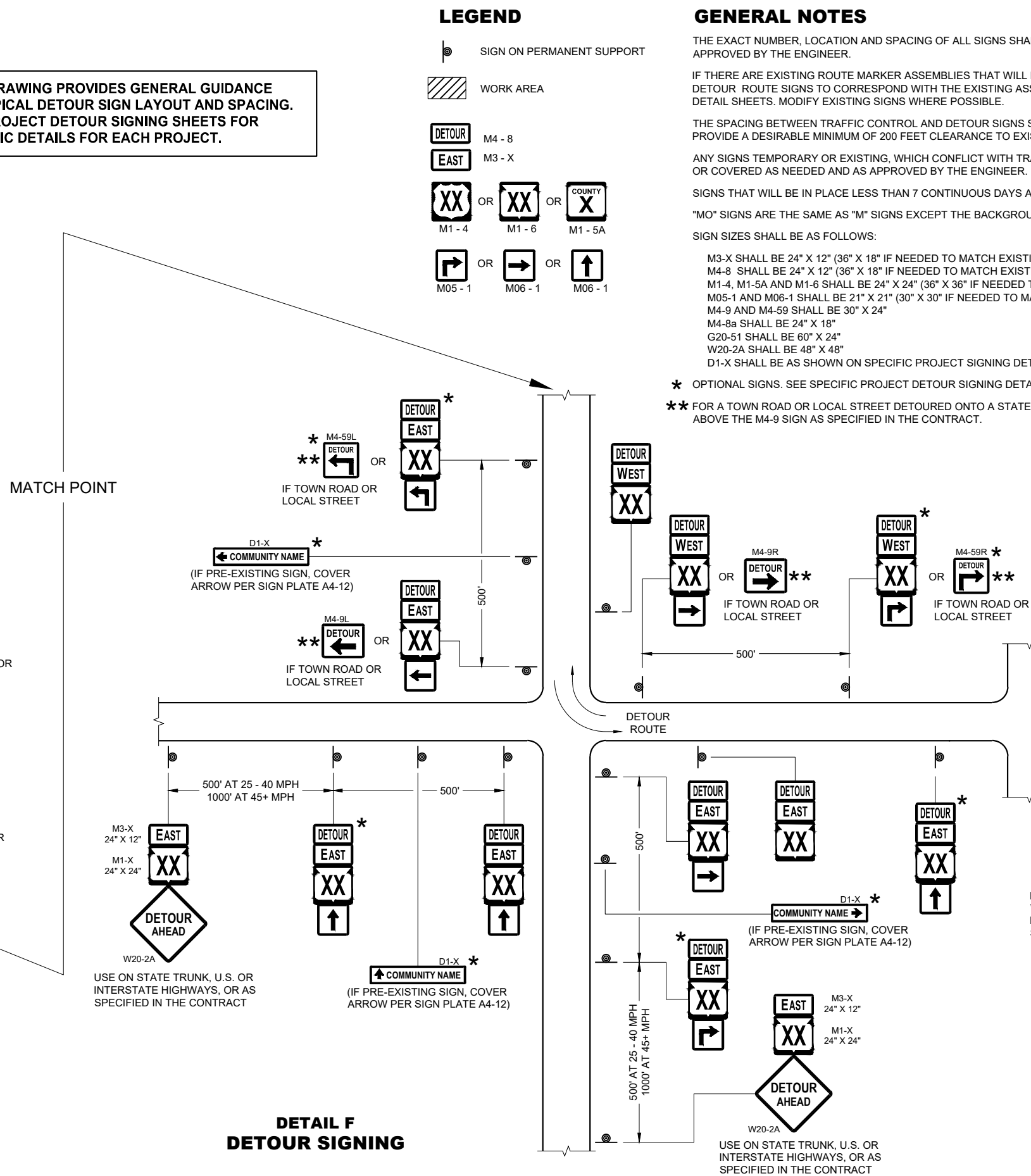
FHWA



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

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

SDD 15C02 - 09c



DETAIL F DETOUR SIGNING

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
M4-9 AND M4-59 SHALL BE 30" X 24"
M4-8a SHALL BE 24" X 18"
G20-51 SHALL BE 60" X 24"
W20-2A SHALL BE 48" X 48"
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

**** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.**

PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING FOR MAINLINE CLOSURES

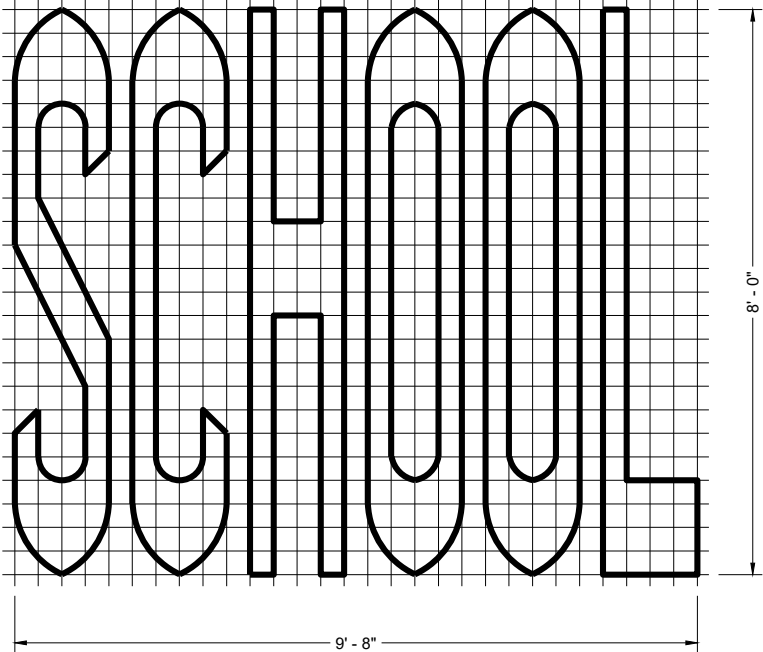
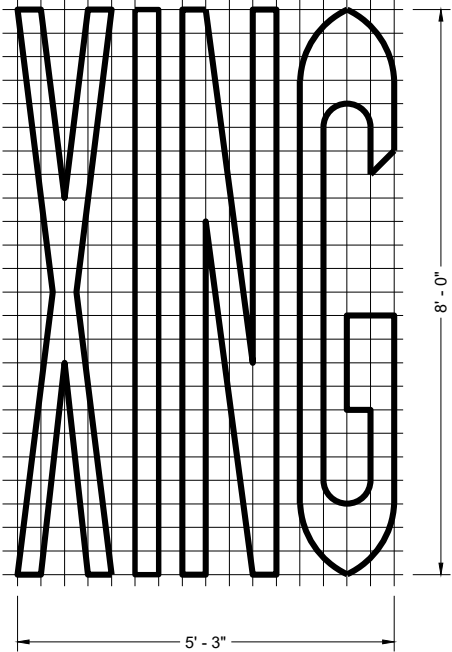
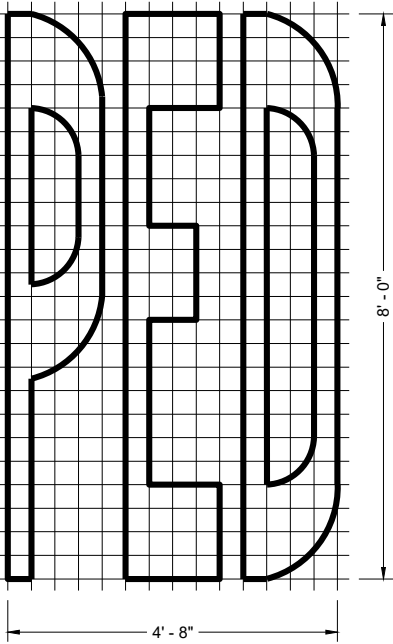
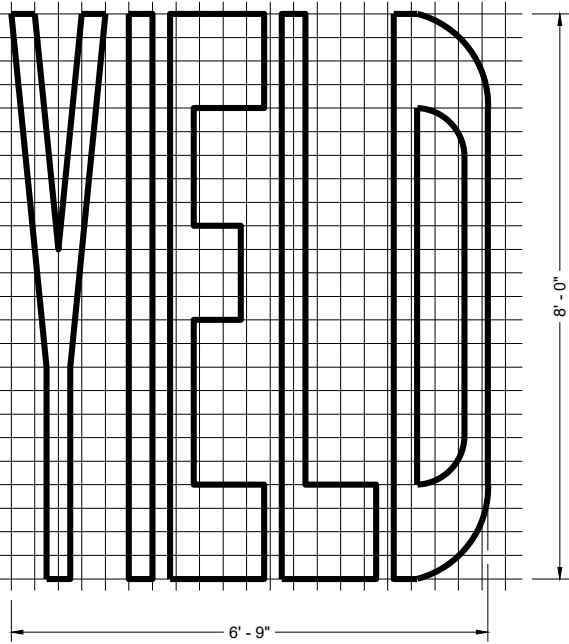
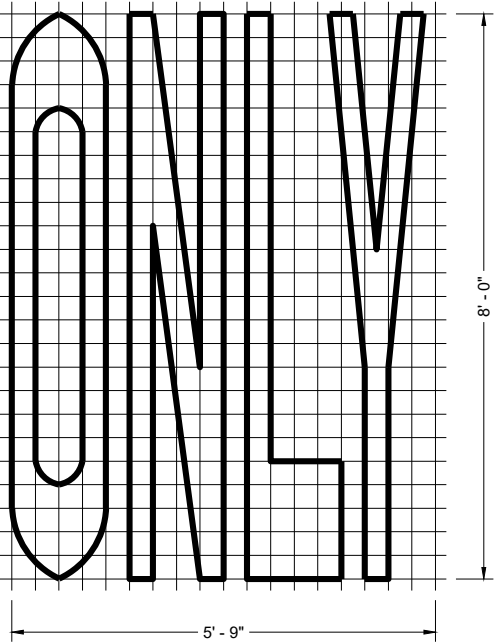
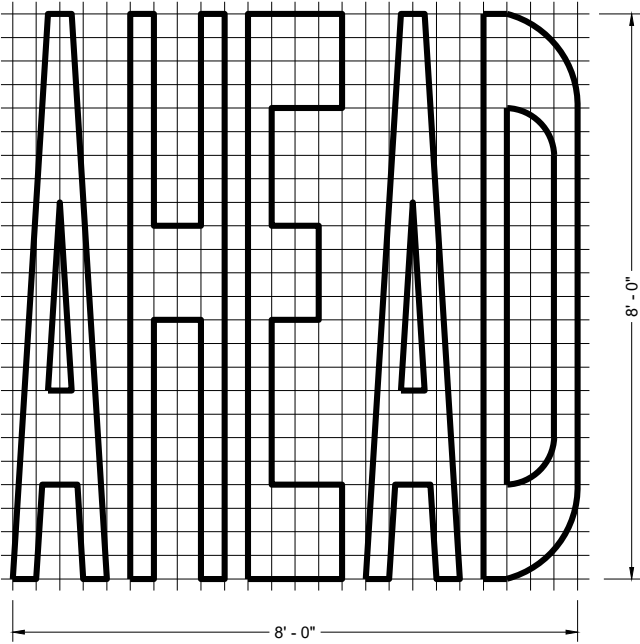
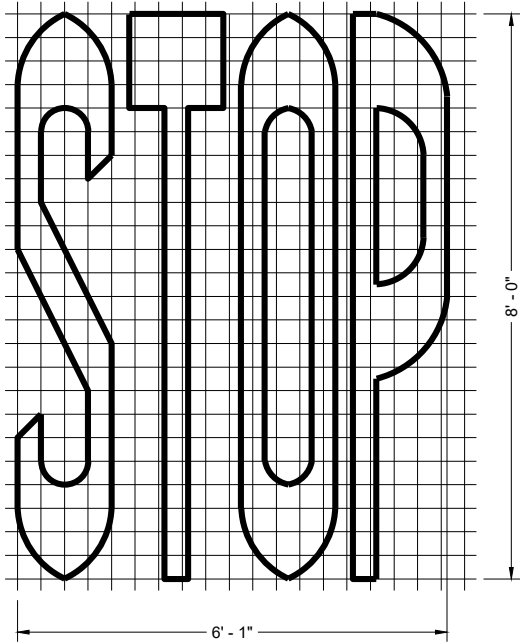
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

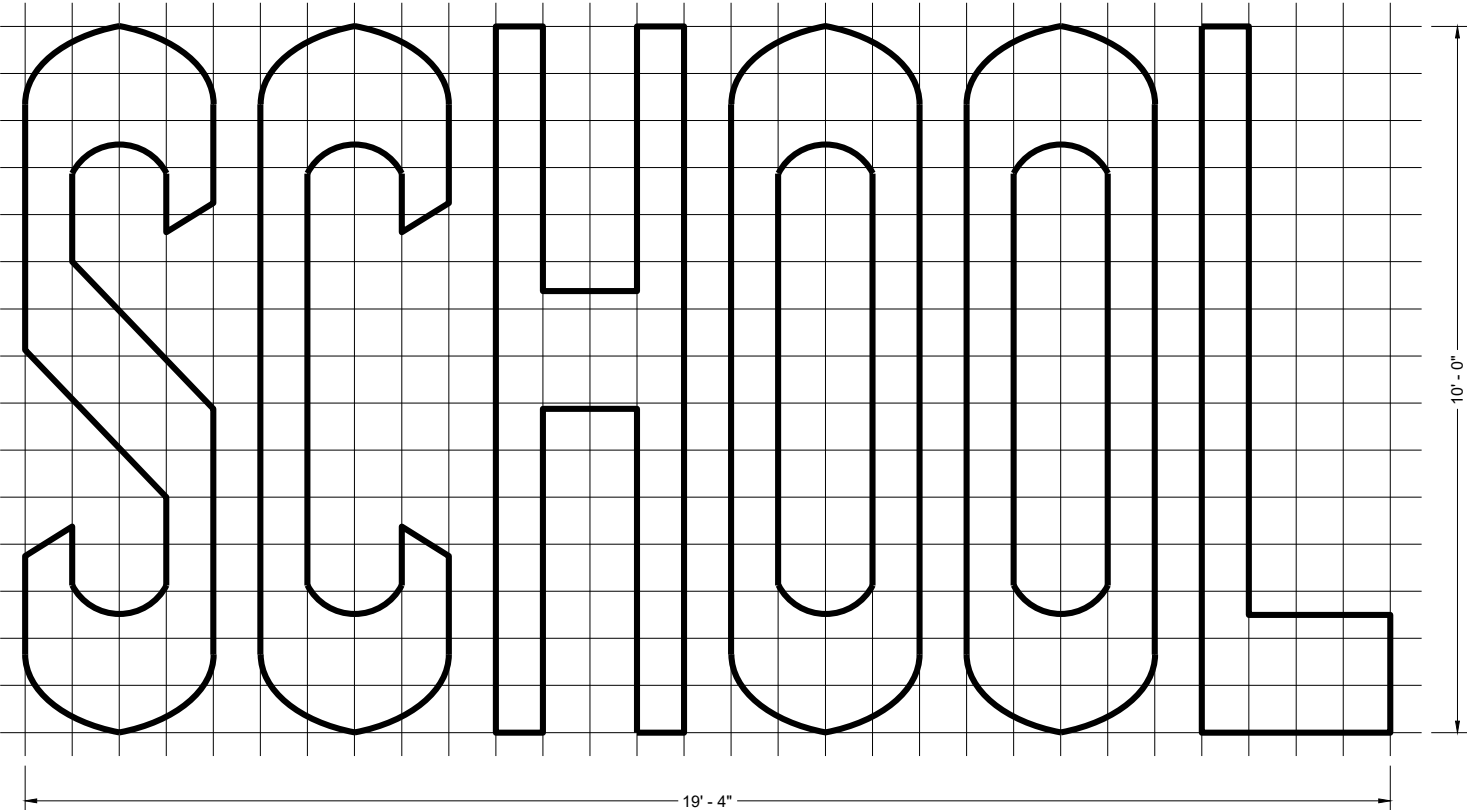
/S/ Andrew Heidtke
WORK ZONE ENGINEER 180

FHWA

SDD15C02 - 09c



SINGLE LANE

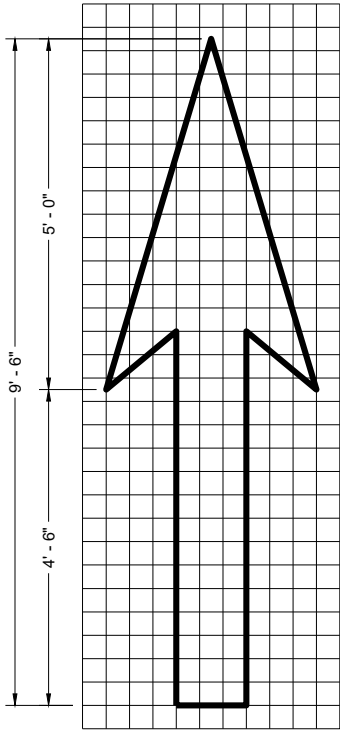


TWO - LANE

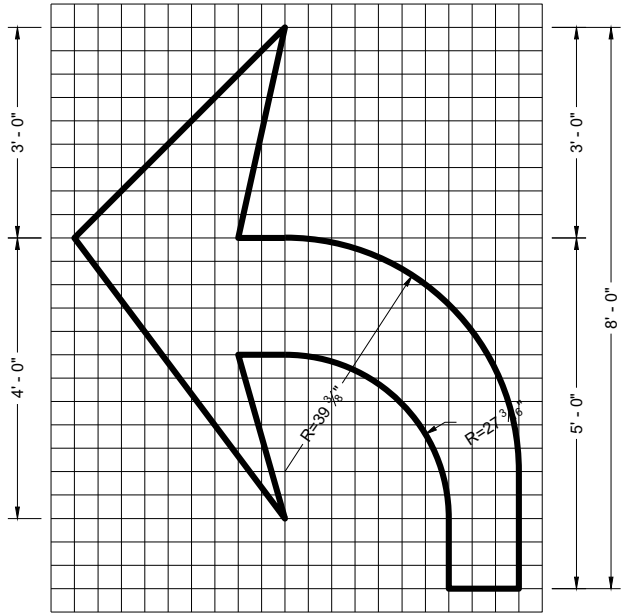
GENERAL NOTES

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.

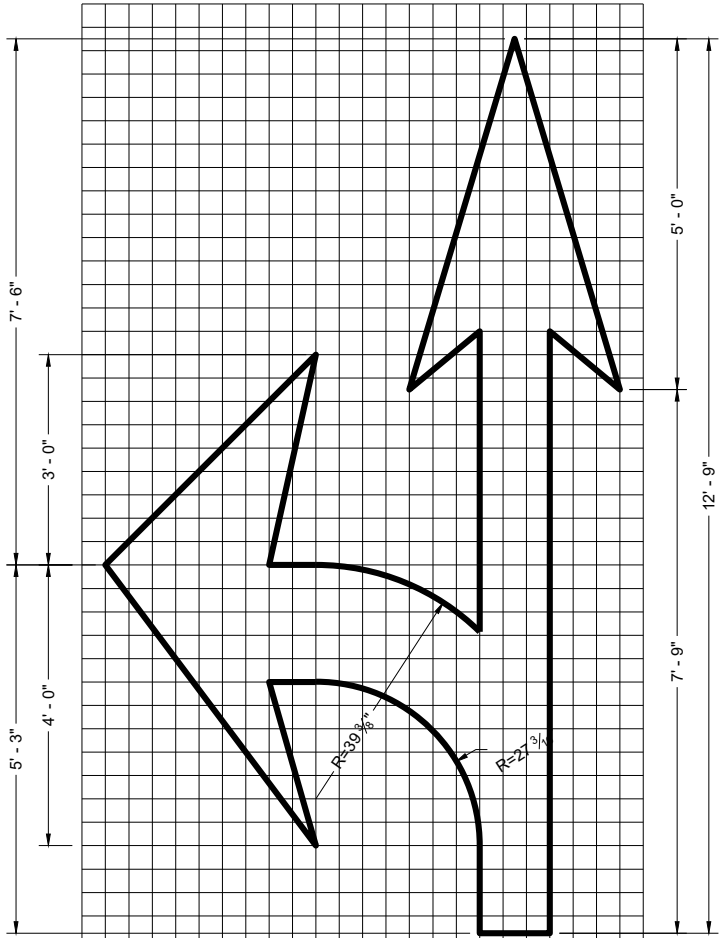
PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2024 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	181



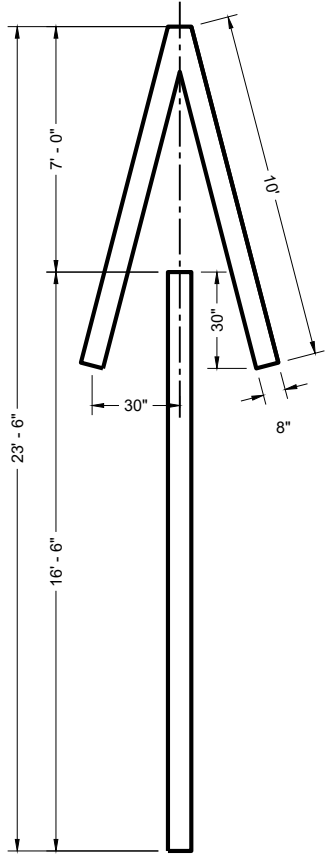
TYPE 1



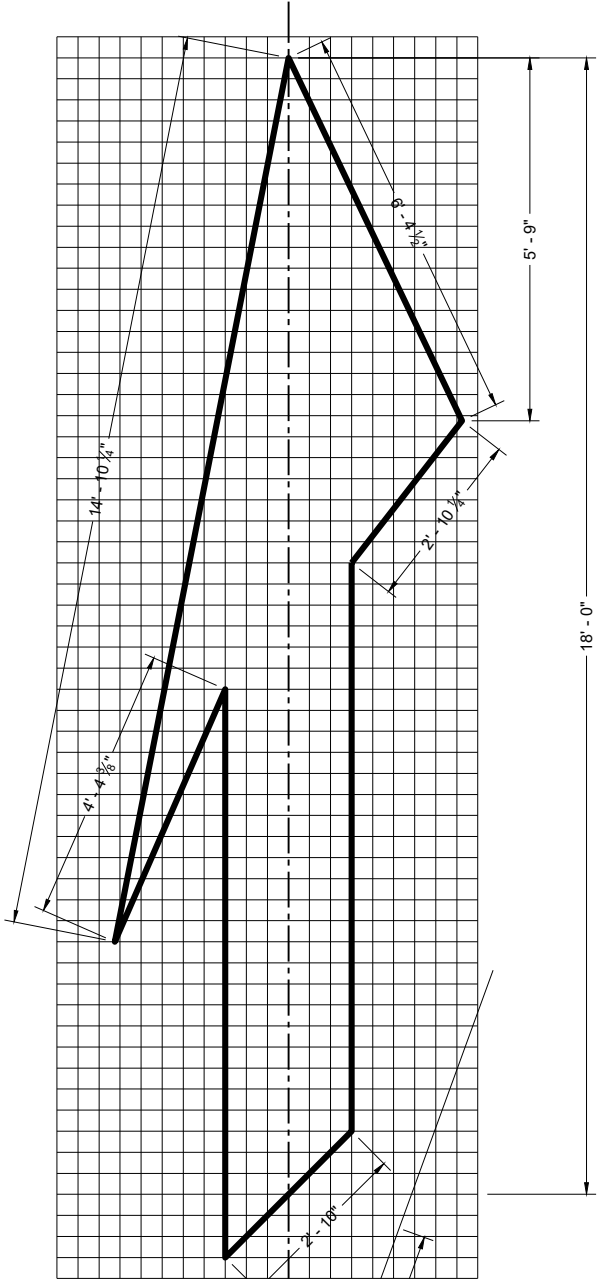
TYPE 2



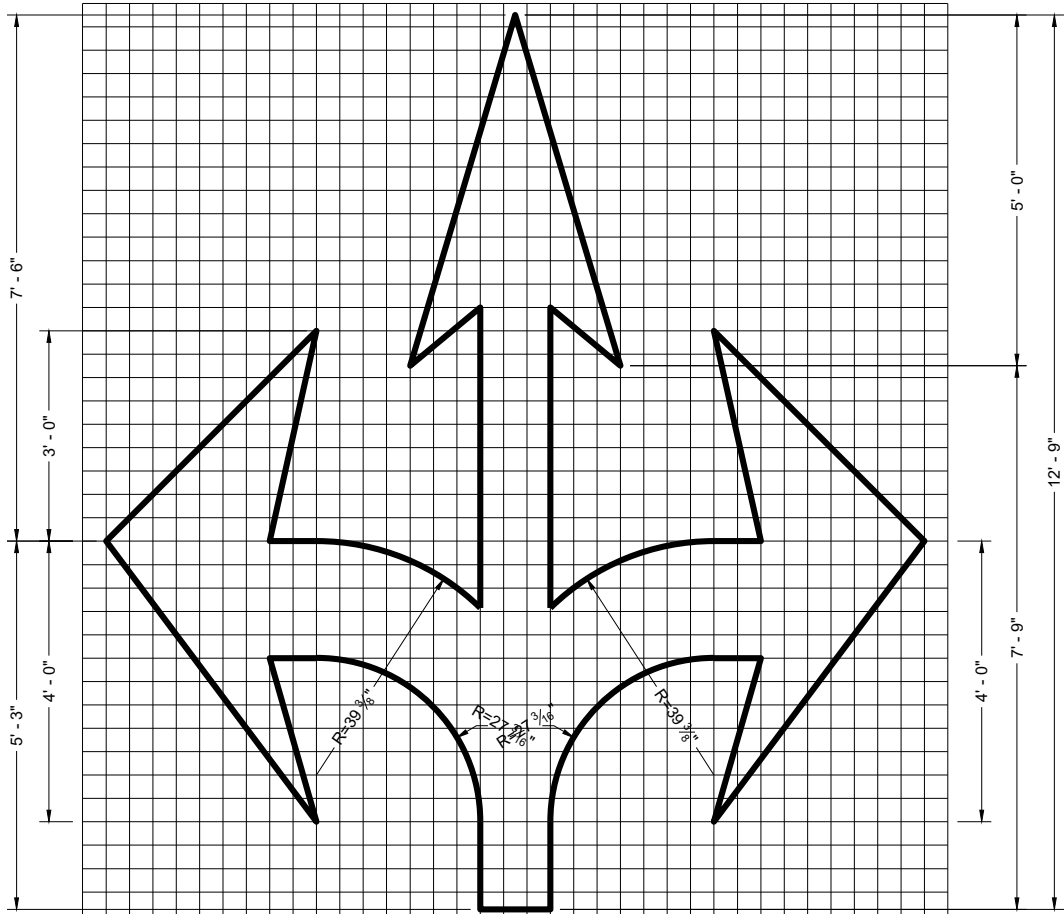
TYPE 3



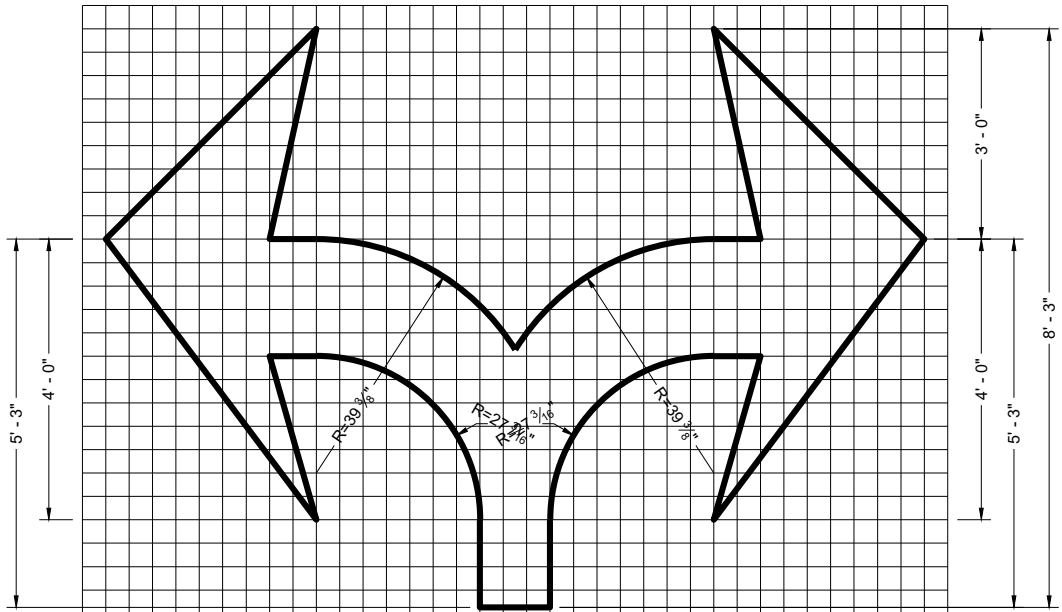
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

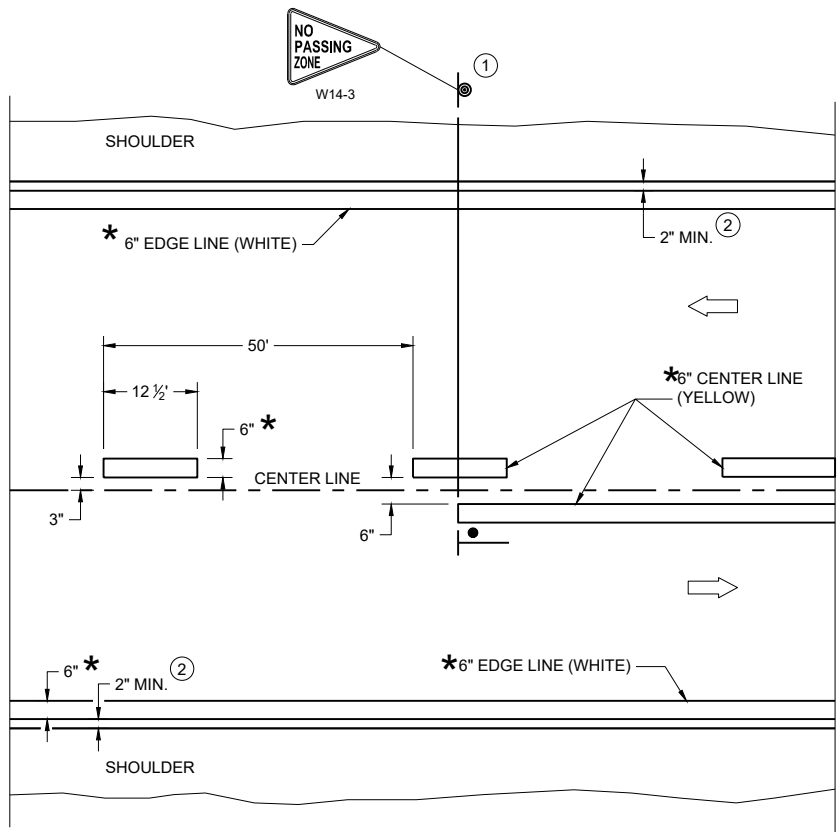
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

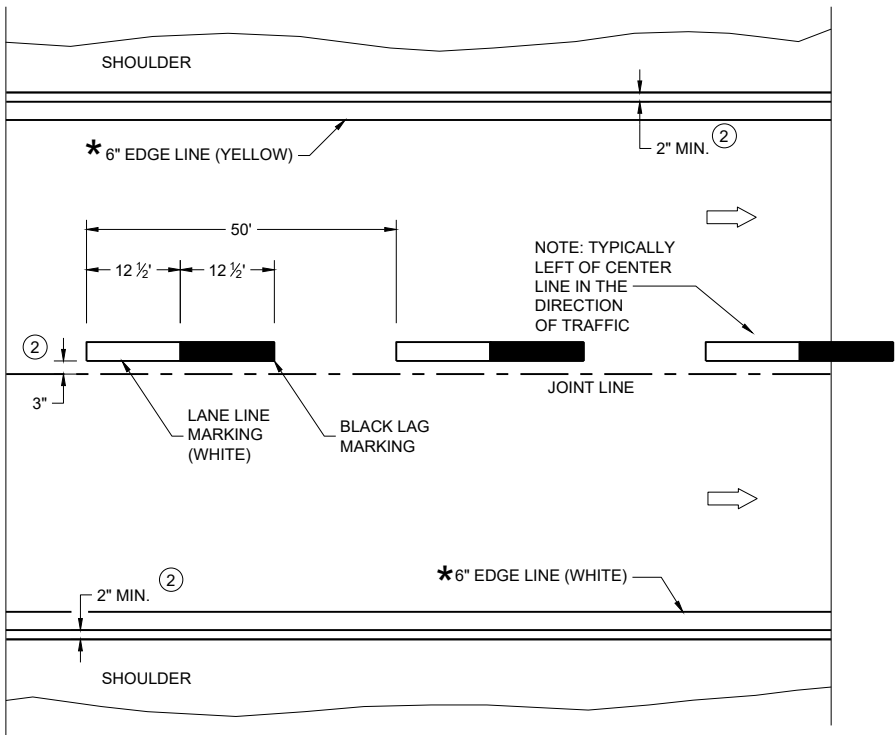
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

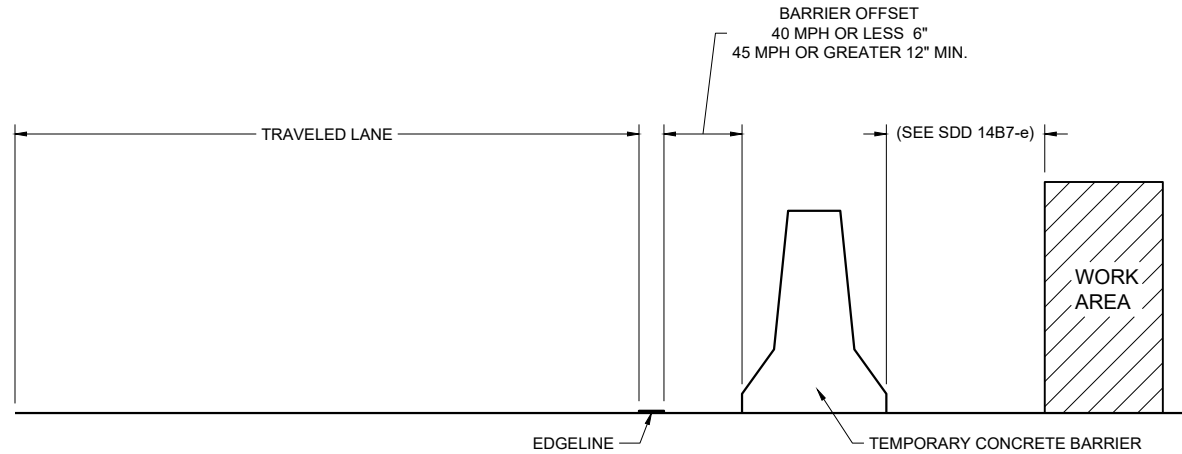
LEGEND

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

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer
FHWA



TEMPORARY BARRIER OFFSET FROM EDGE LINE

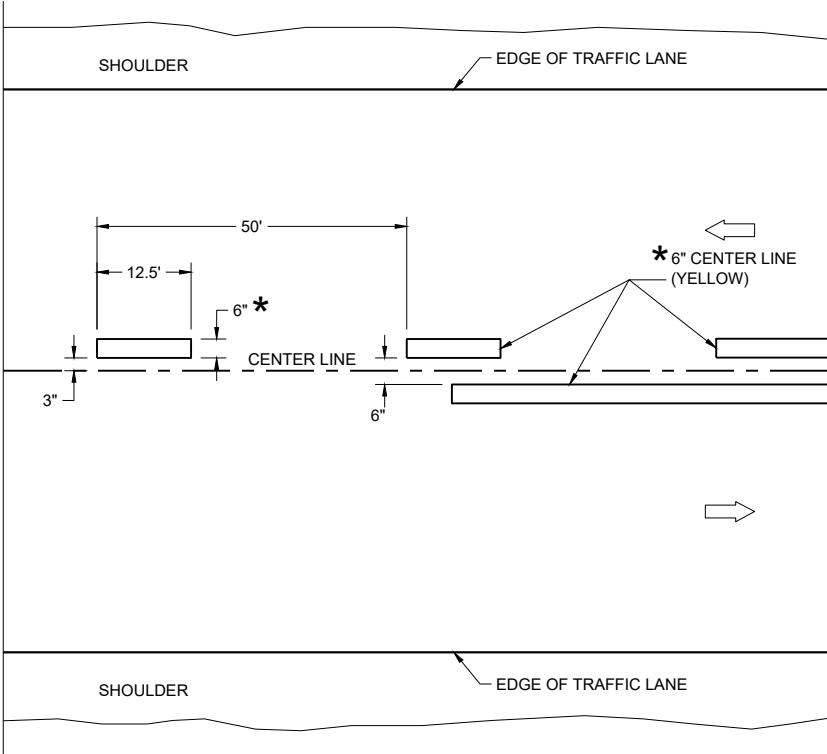
GENERAL NOTES

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

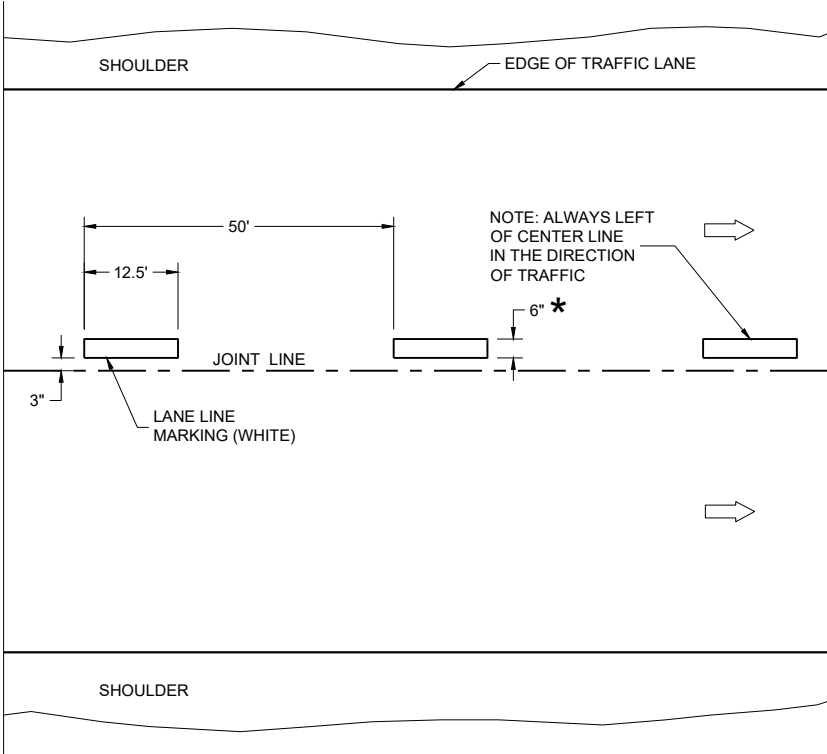
LEGEND

DIRECTION OF TRAFFIC

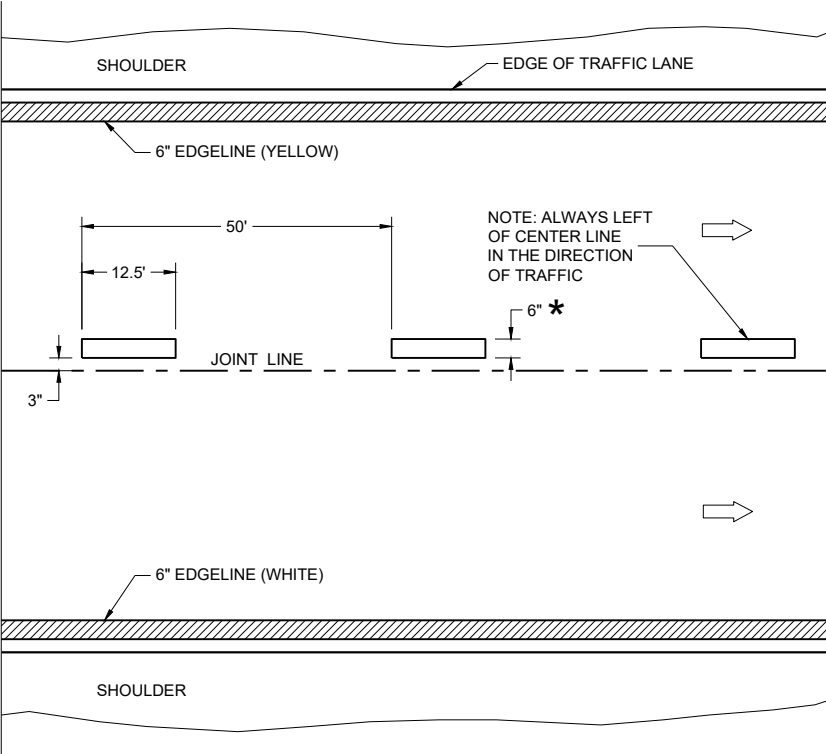
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



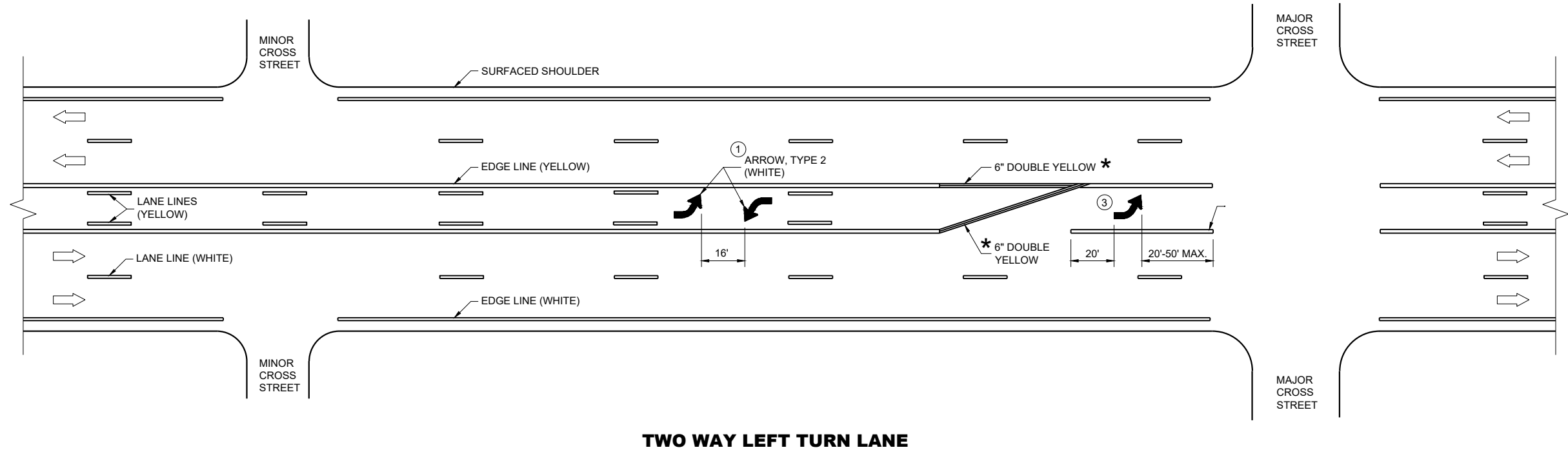
ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

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



GENERAL NOTES

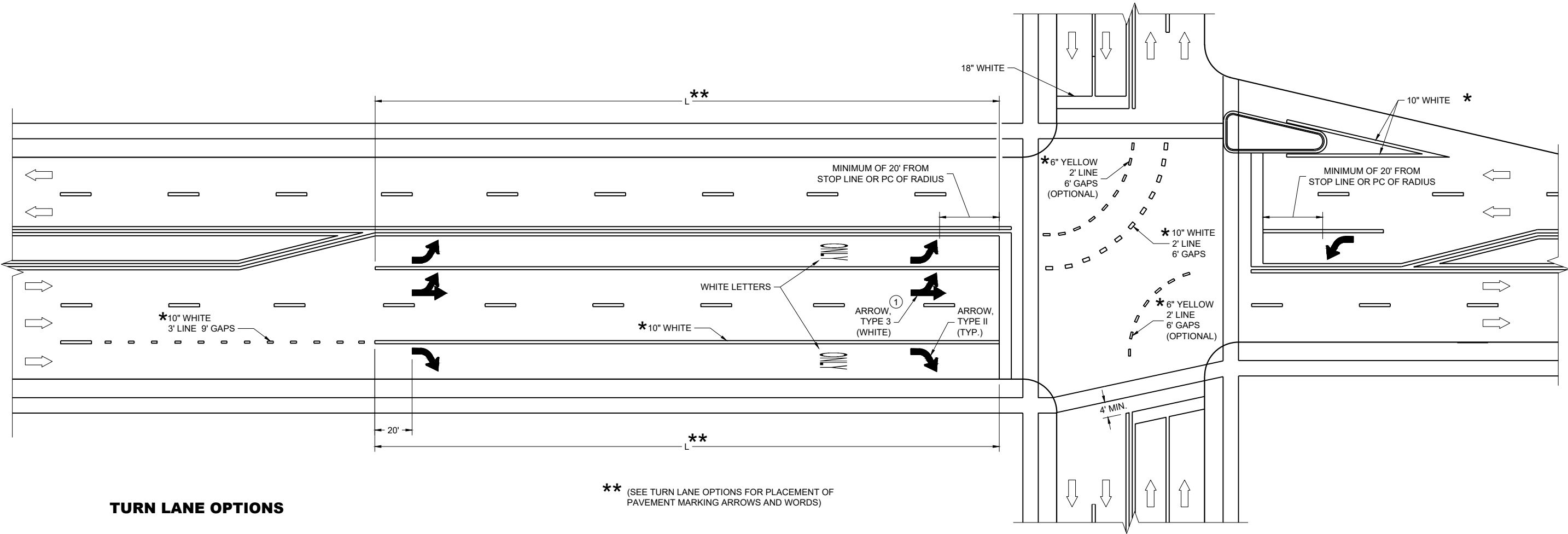
- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

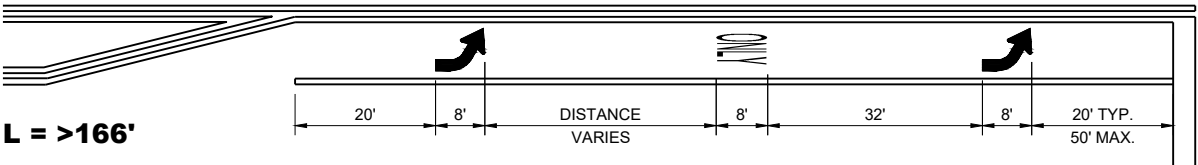
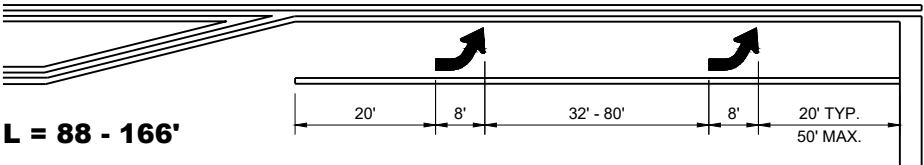
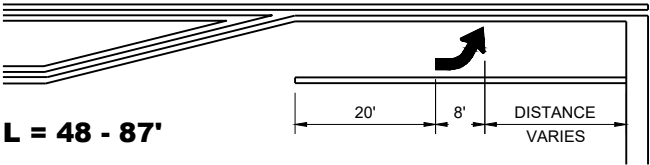
**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TURN LANE OPTIONS

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



GENERAL NOTES

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

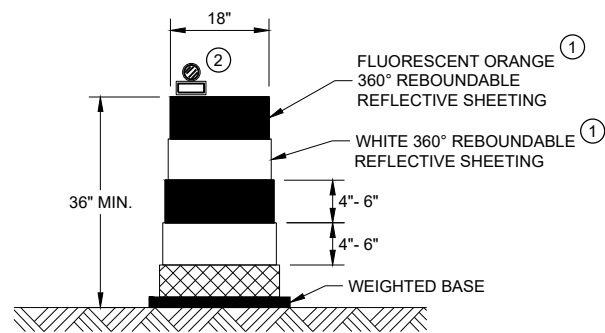
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

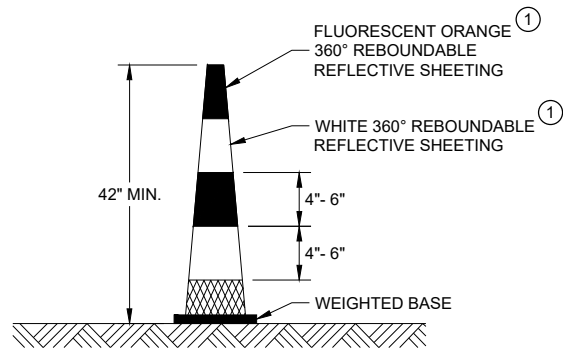
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING
(TURN LANES)

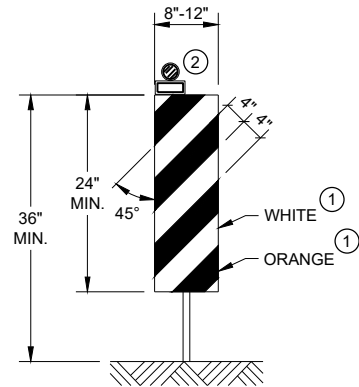
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



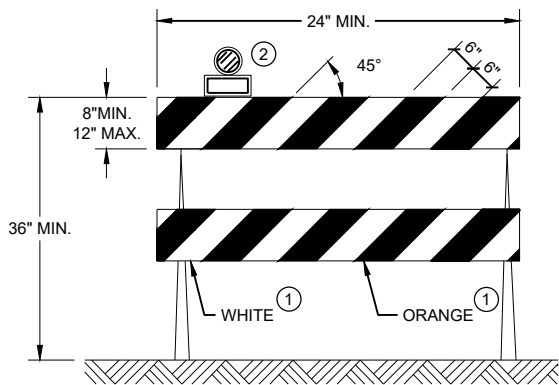
DRUM
BALLAST WIDTHS
RANGE FROM 24"-36"



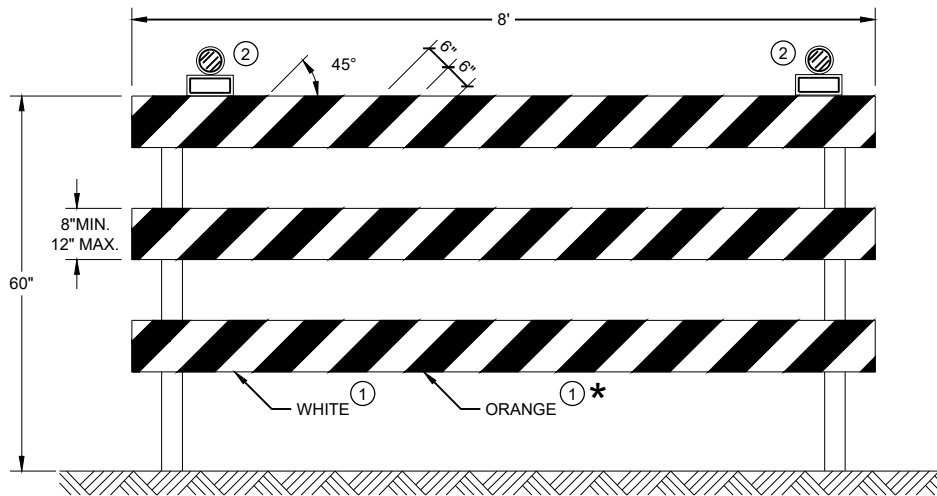
42" CONE
DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



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



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



TYPE III BARRICADE
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 187
FHWA	

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

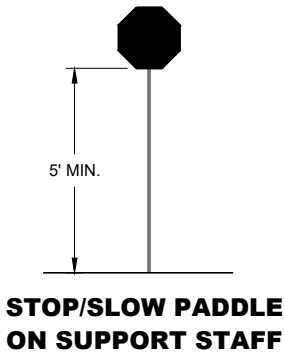
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

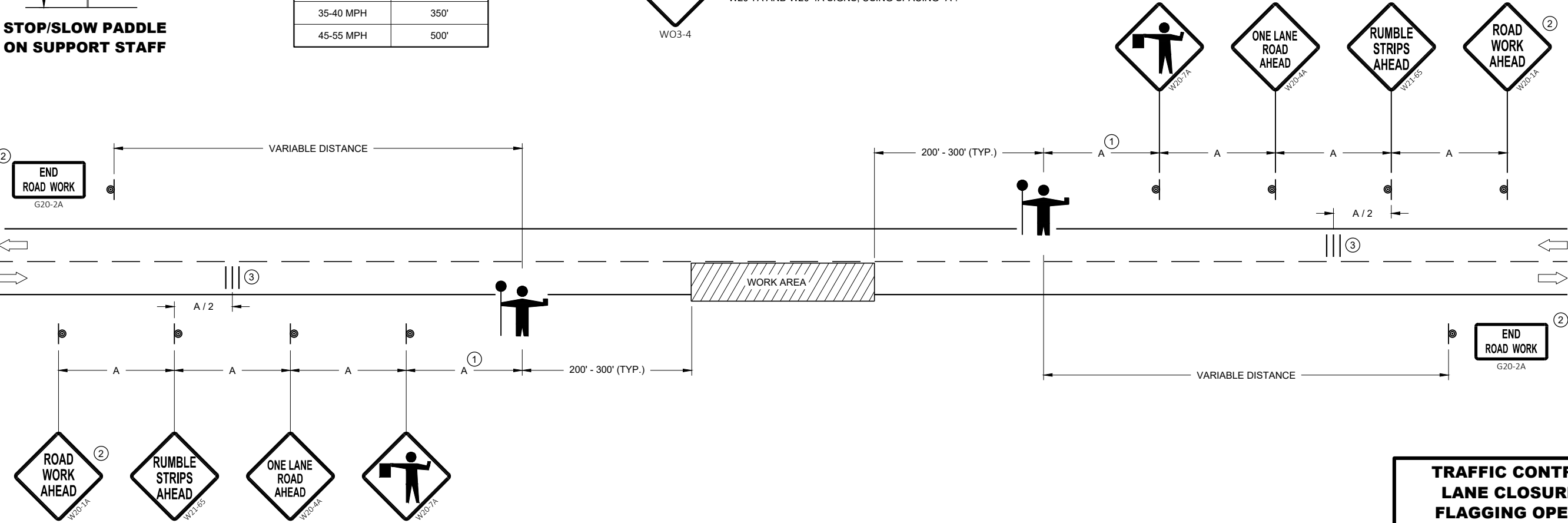


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".

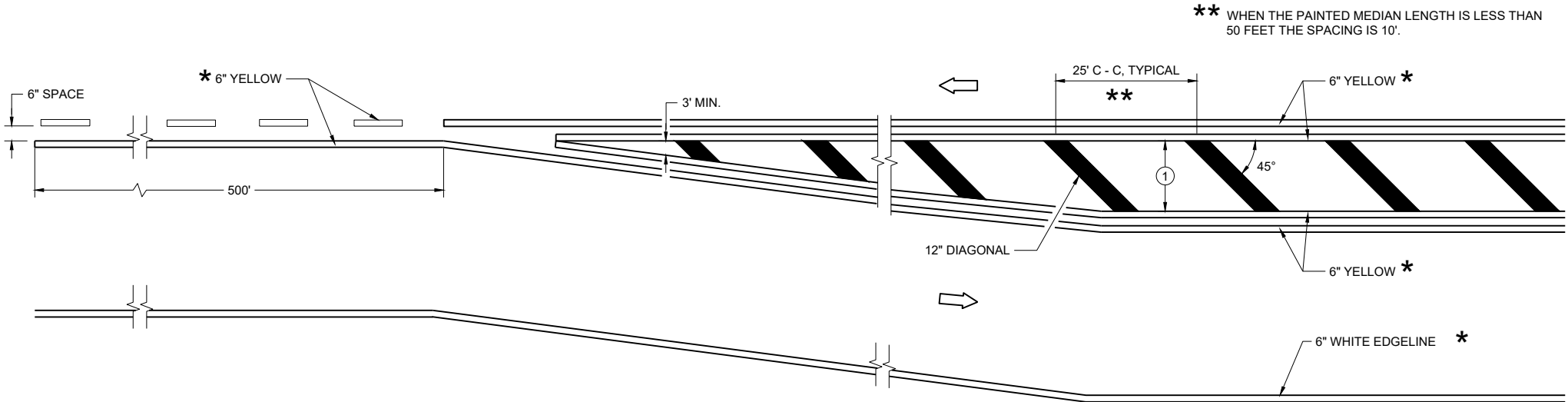


TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 188

FHWA



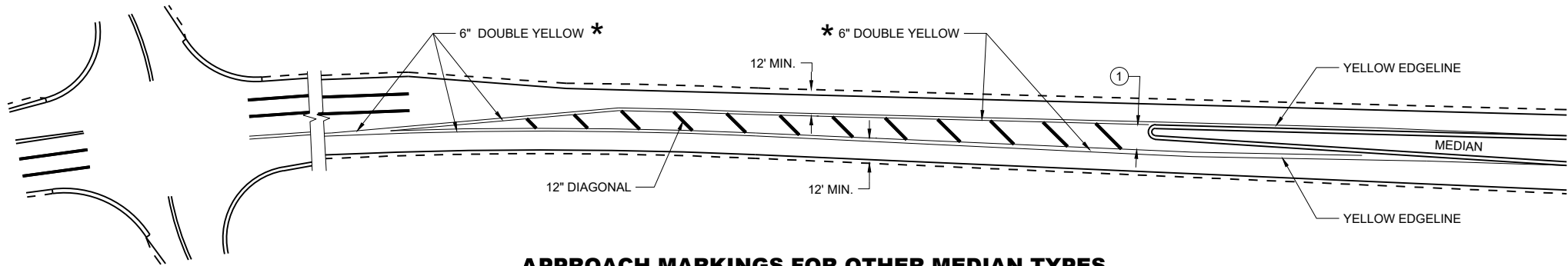
MEDIAN ISLAND DETAIL

GENERAL NOTES

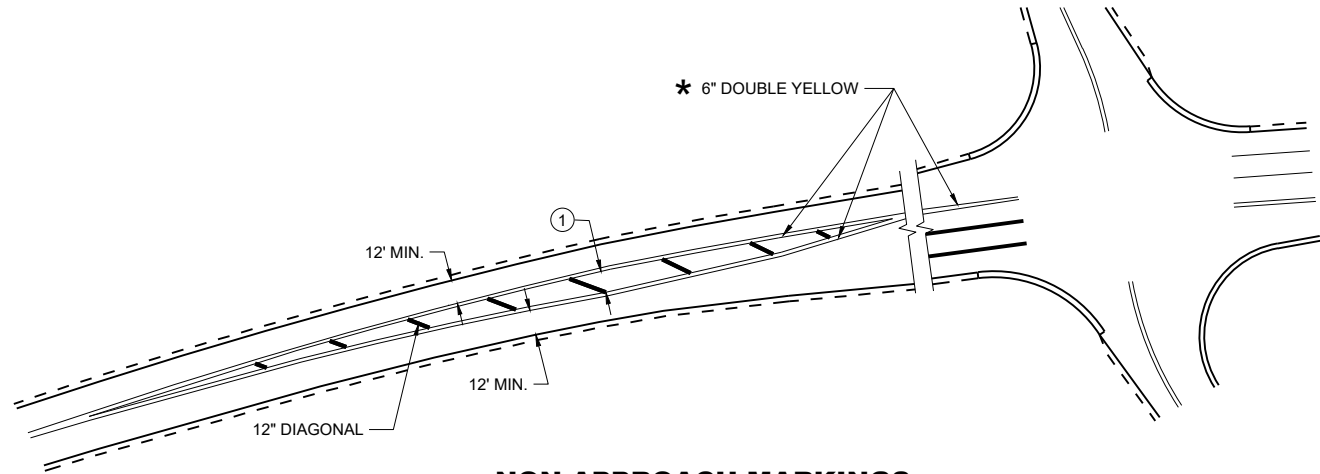
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➡ DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

MEDIAN ISLAND PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	189

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

SIGN ON TEMPORARY SUPPORT
- 

DIRECTION OF TRAFFIC
- 

ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

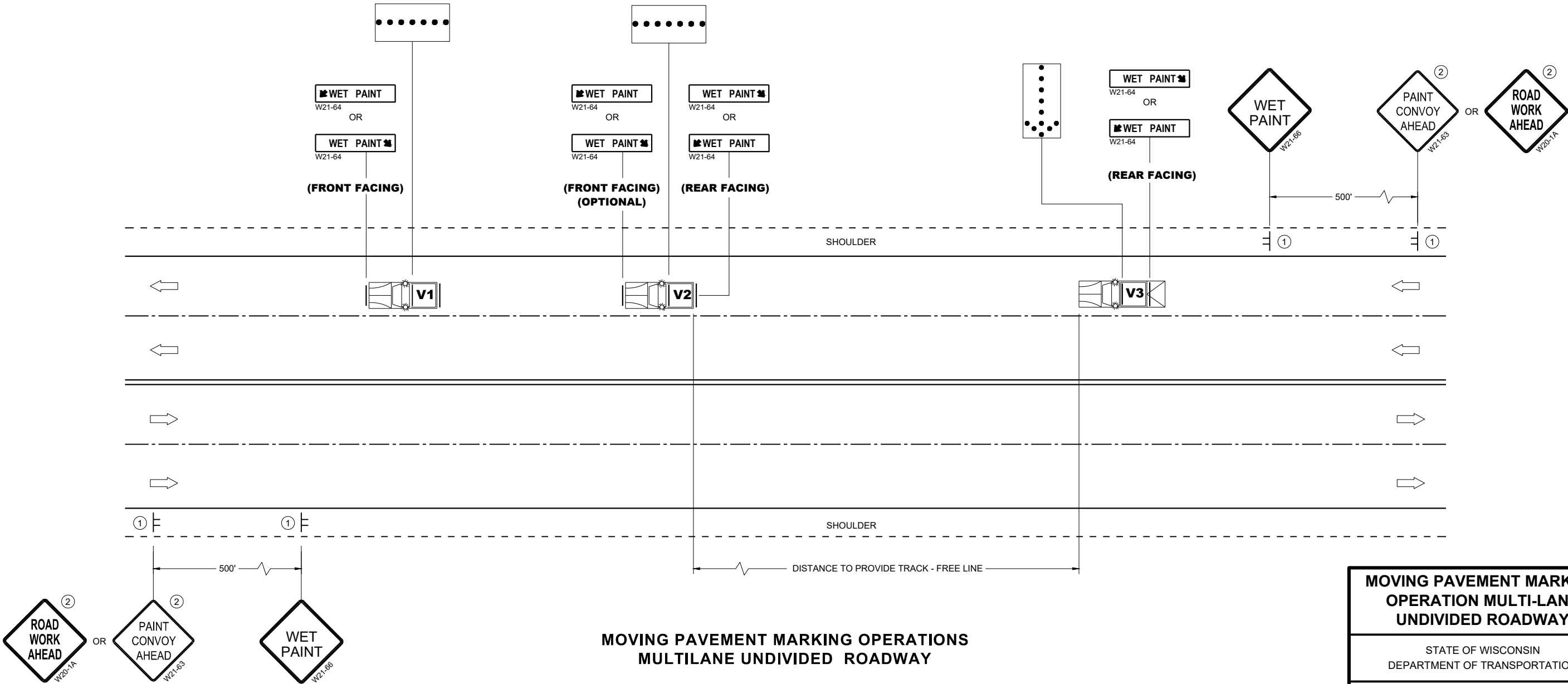
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

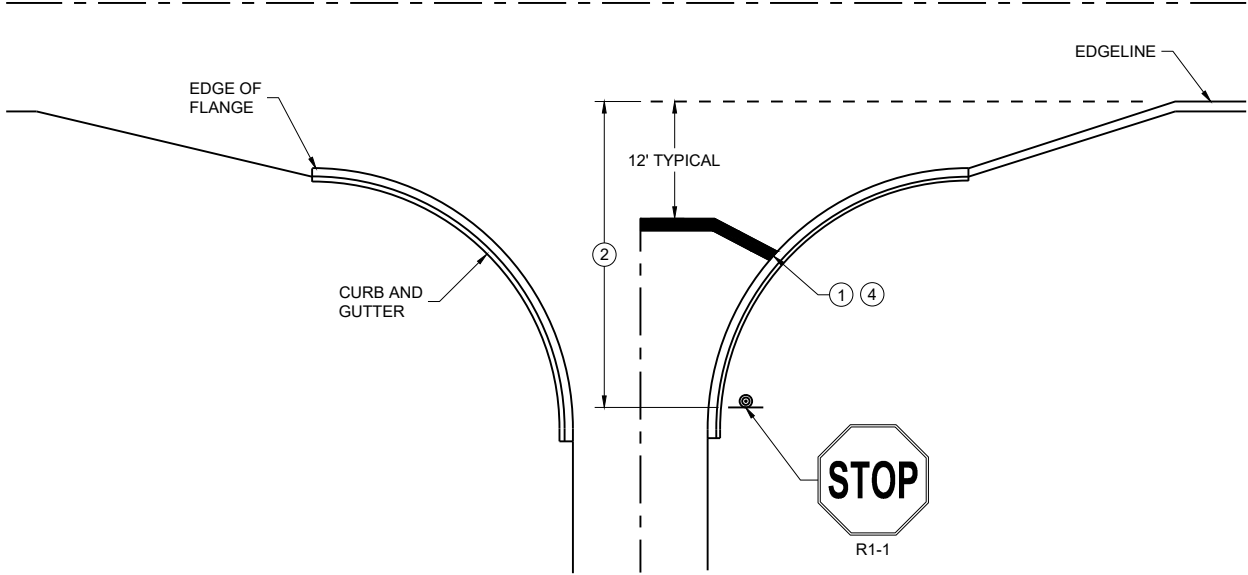
- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



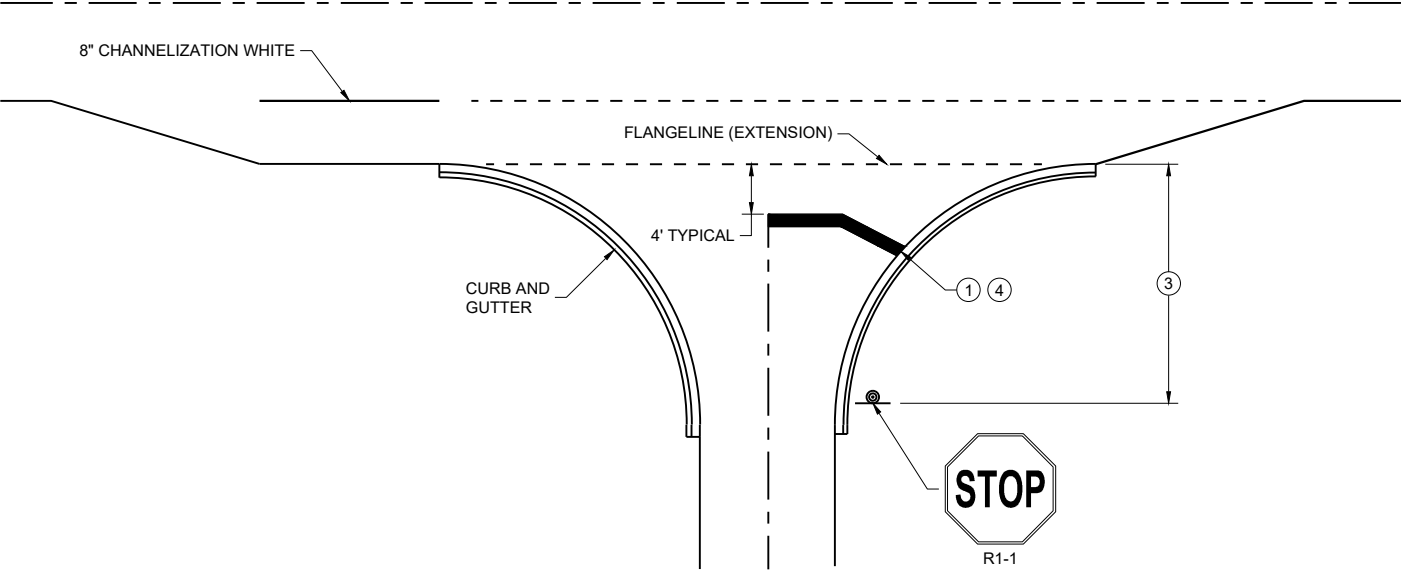
MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

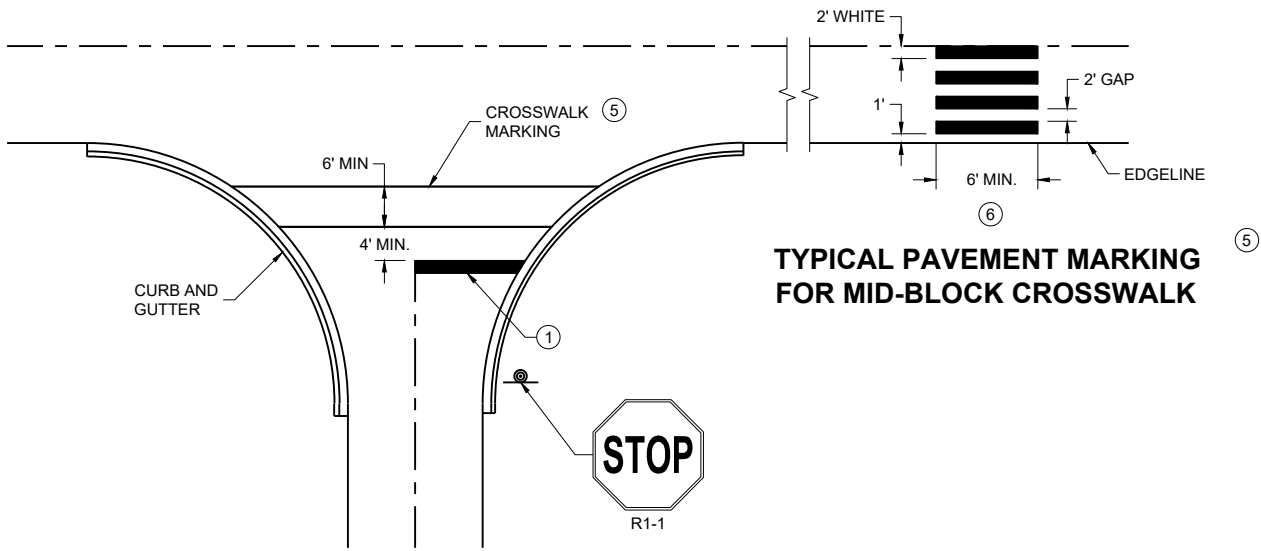
APPROVED
FEBRUARY 2025 /S/ Andrew Heidtke
DATE STATE ELECTRICAL ENGINEER
FHWA



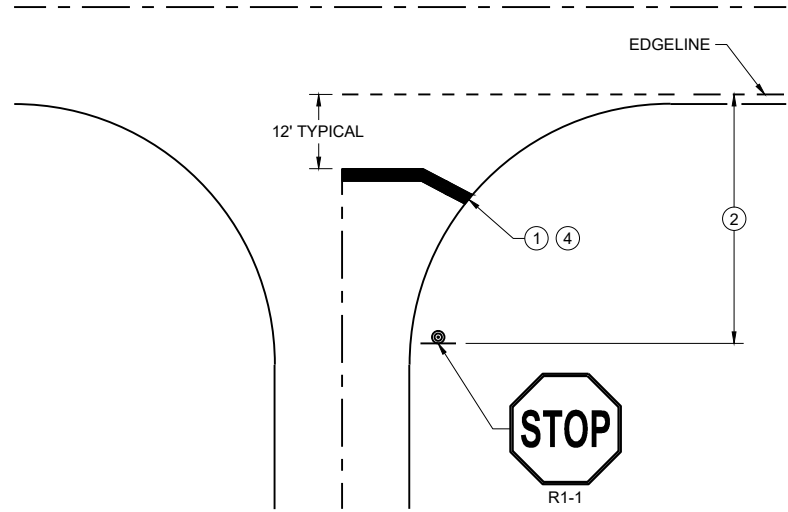
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



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



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

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

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

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

FHWA

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

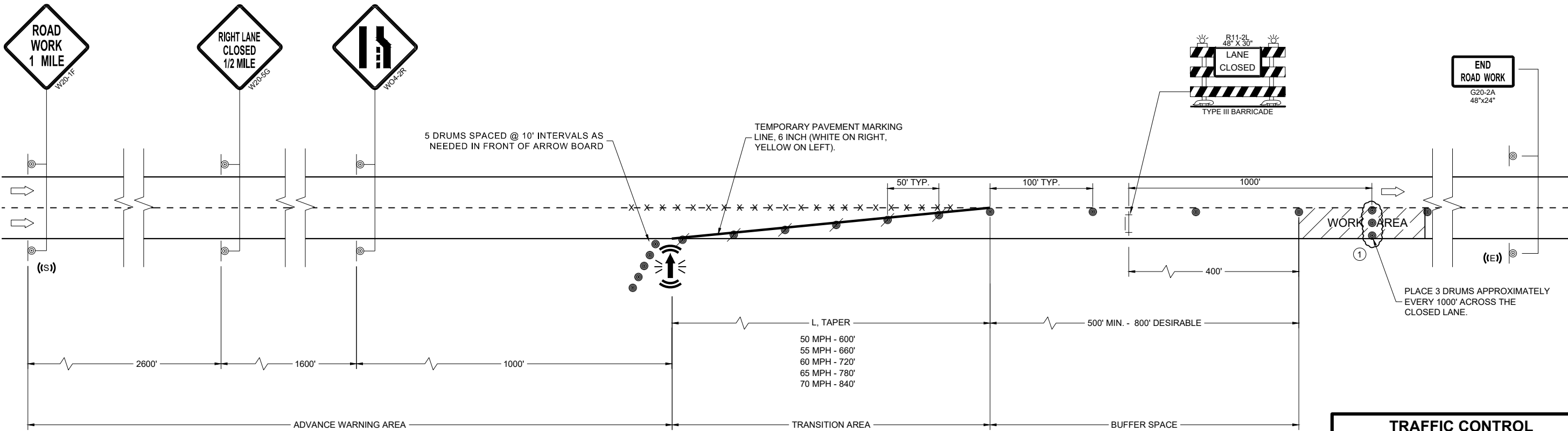
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE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

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

① DRUMS 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.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊙ TRAFFIC CONTROL DRUM
- ⊙ TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ⊙ TYPE III BARRICADE WITH ATTACHED SIGN
- ⊙ TYPE "A" WARNING LIGHT (FLASHING)
- ✕ ✕ ✕ REMOVING PAVEMENT MARKINGS
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- ⊙ CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER



TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2025 DATE	/S/ Andrew Heidtke ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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

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"X 36" 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.

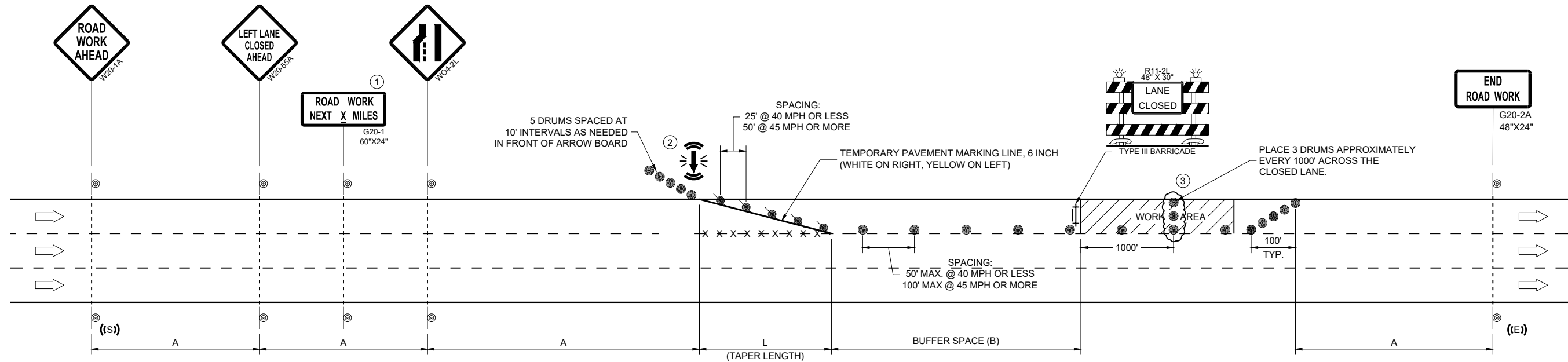
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

- 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.
- ③ DRUMS 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.



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'	155'
30	200'	180'	200'
35	350'	245'	250'
40	350'	320'	305'
45	500'	540'	360'

APPROVED
February 2025
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

LEGEND

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

GENERAL NOTES

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

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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.

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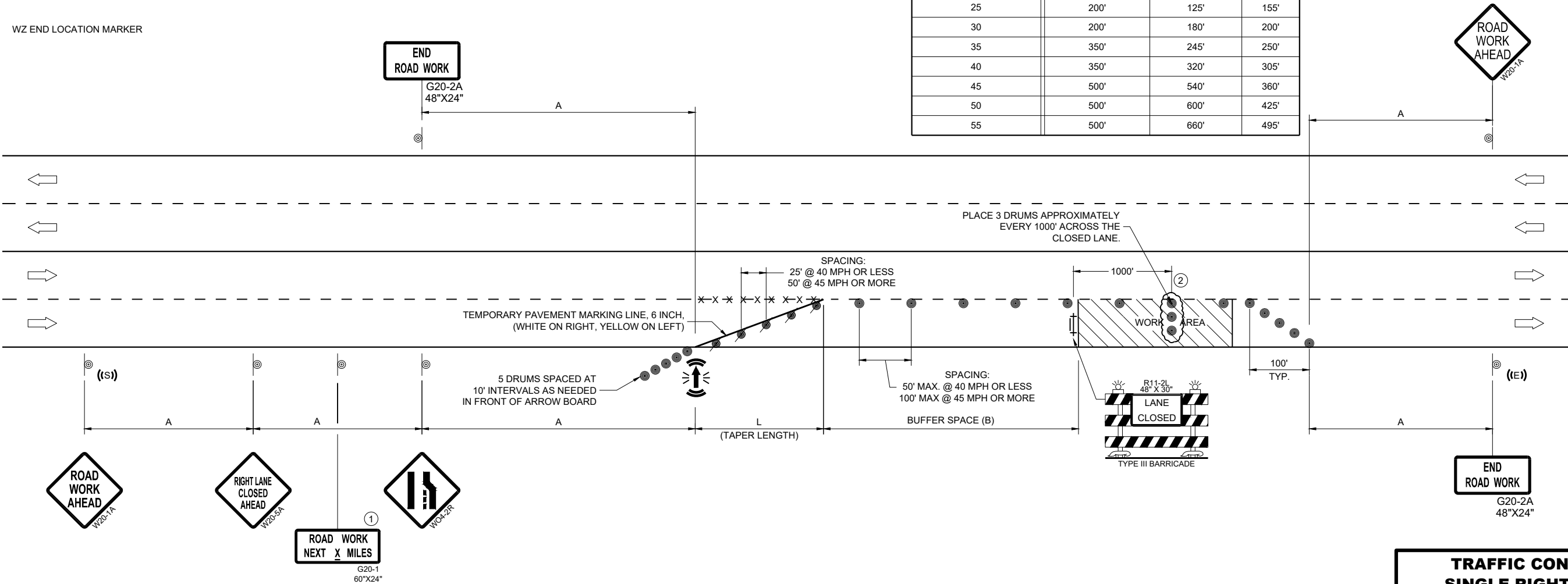
IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

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.

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30	200'	180'	200'
35	350'	245'	250'
40	350'	320'	305'
45	500'	540'	360'
50	500'	600'	425'
55	500'	660'	495'



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA 194

LEGEND

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

GENERAL NOTES

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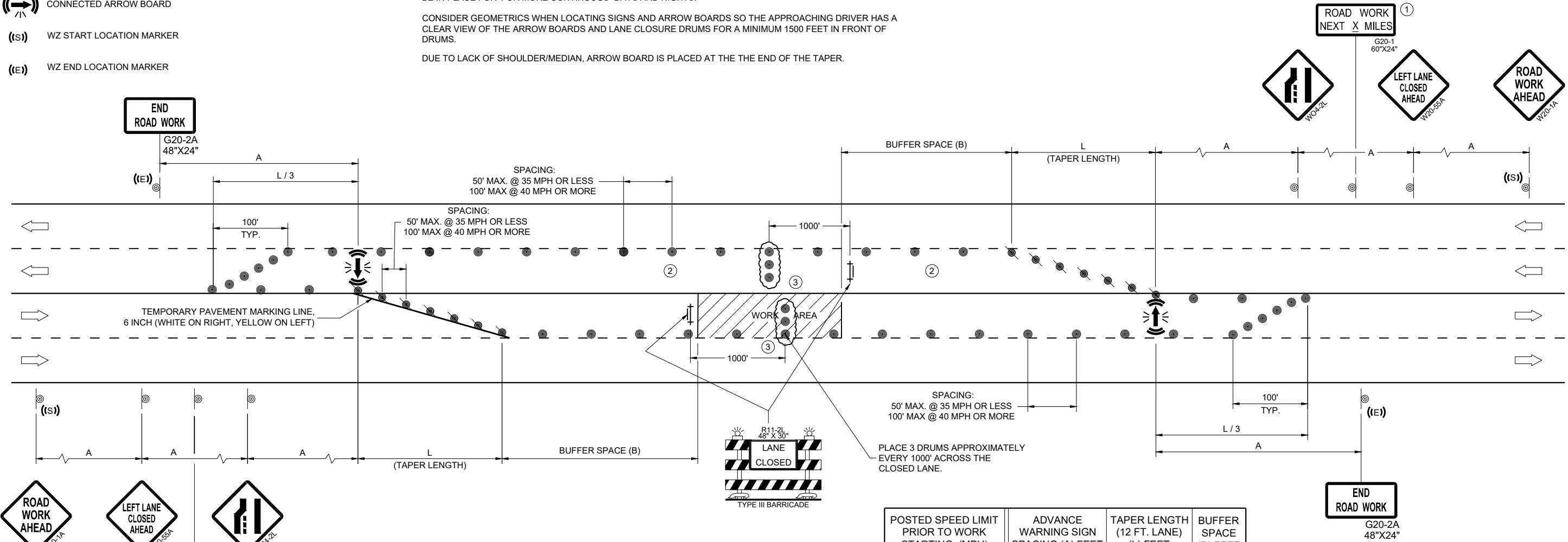
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

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 LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.

DRUMS 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.



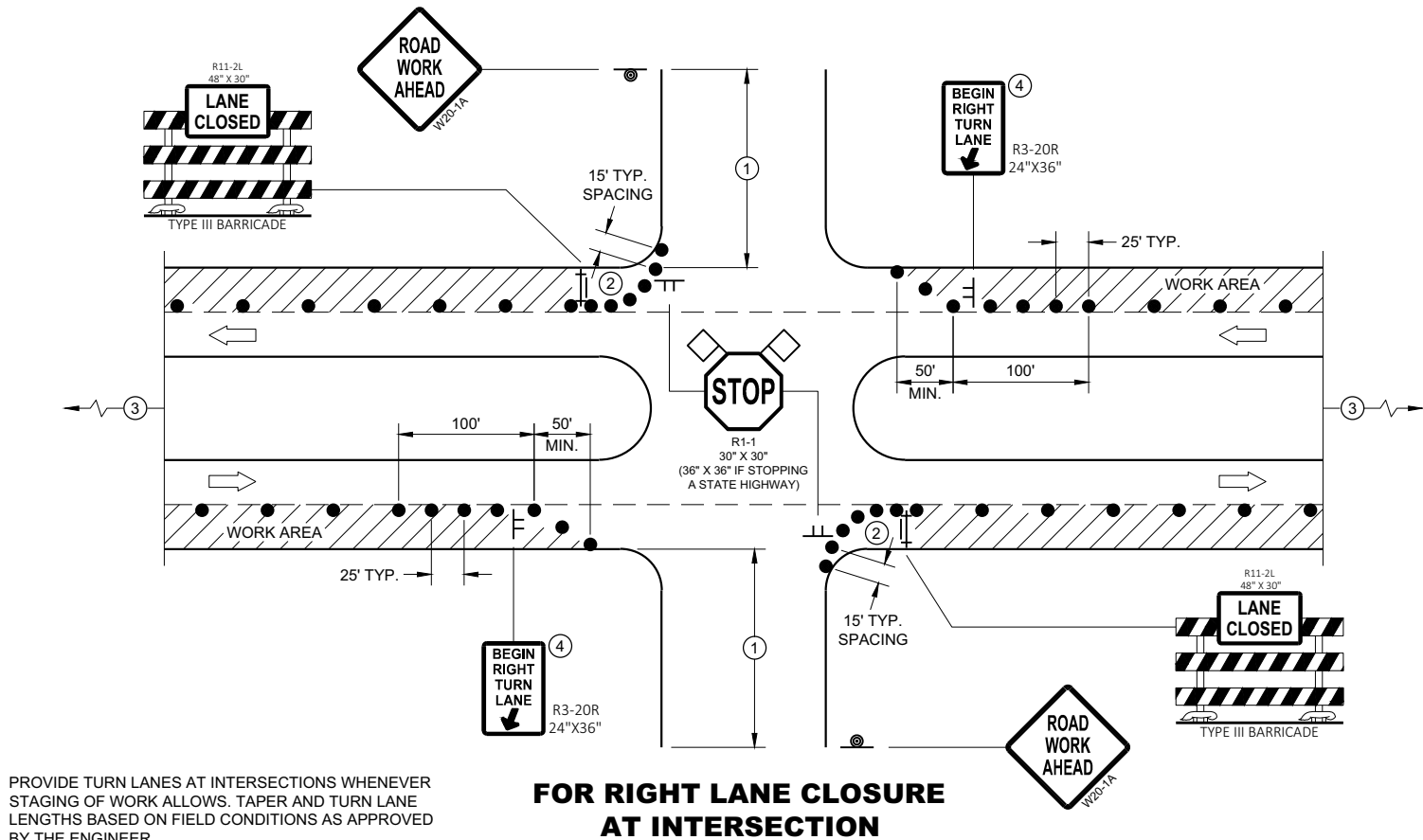
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40	350'	320'	305'
45	500'	540'	360'
50	500'	600'	425'
55	500'	660'	495'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /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.

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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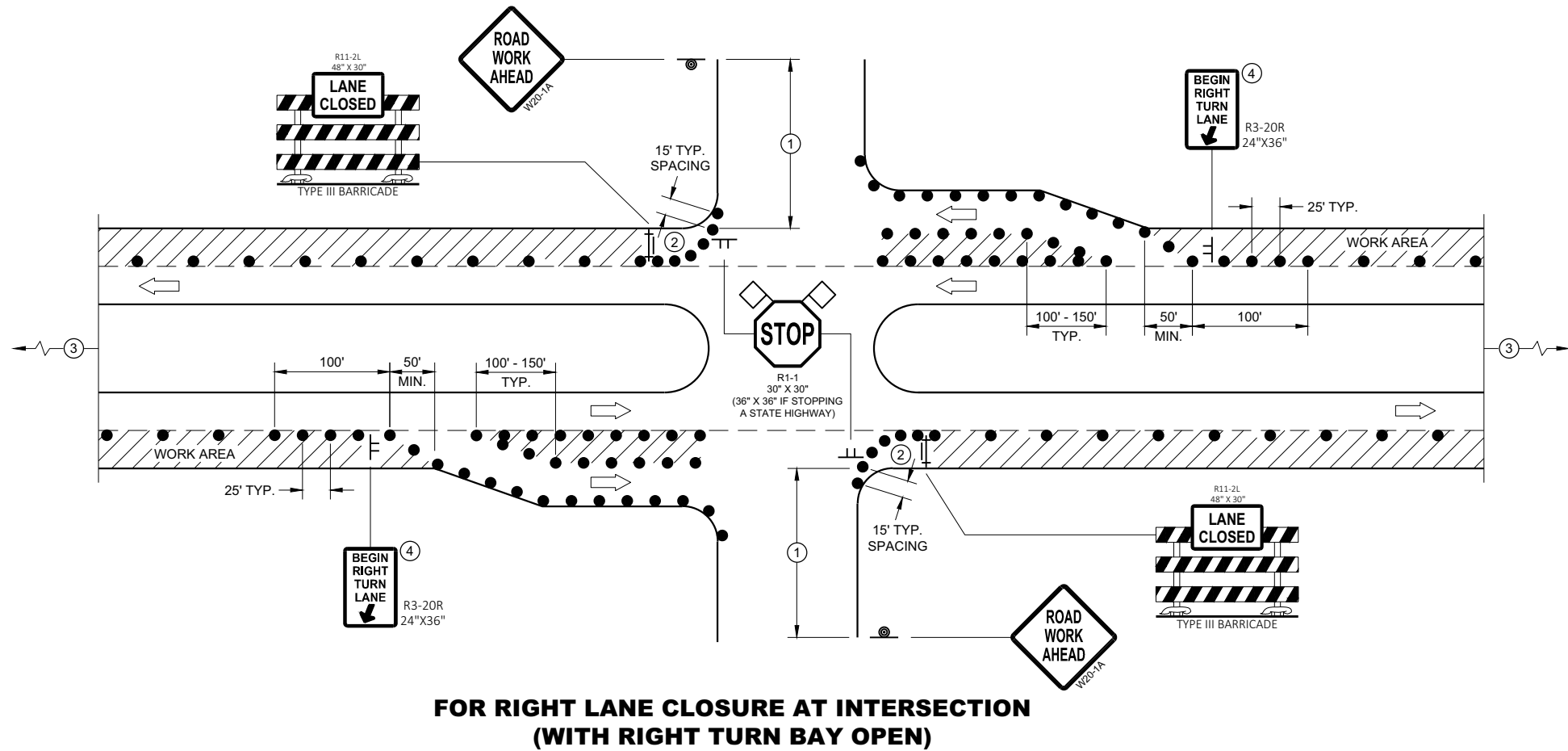
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.



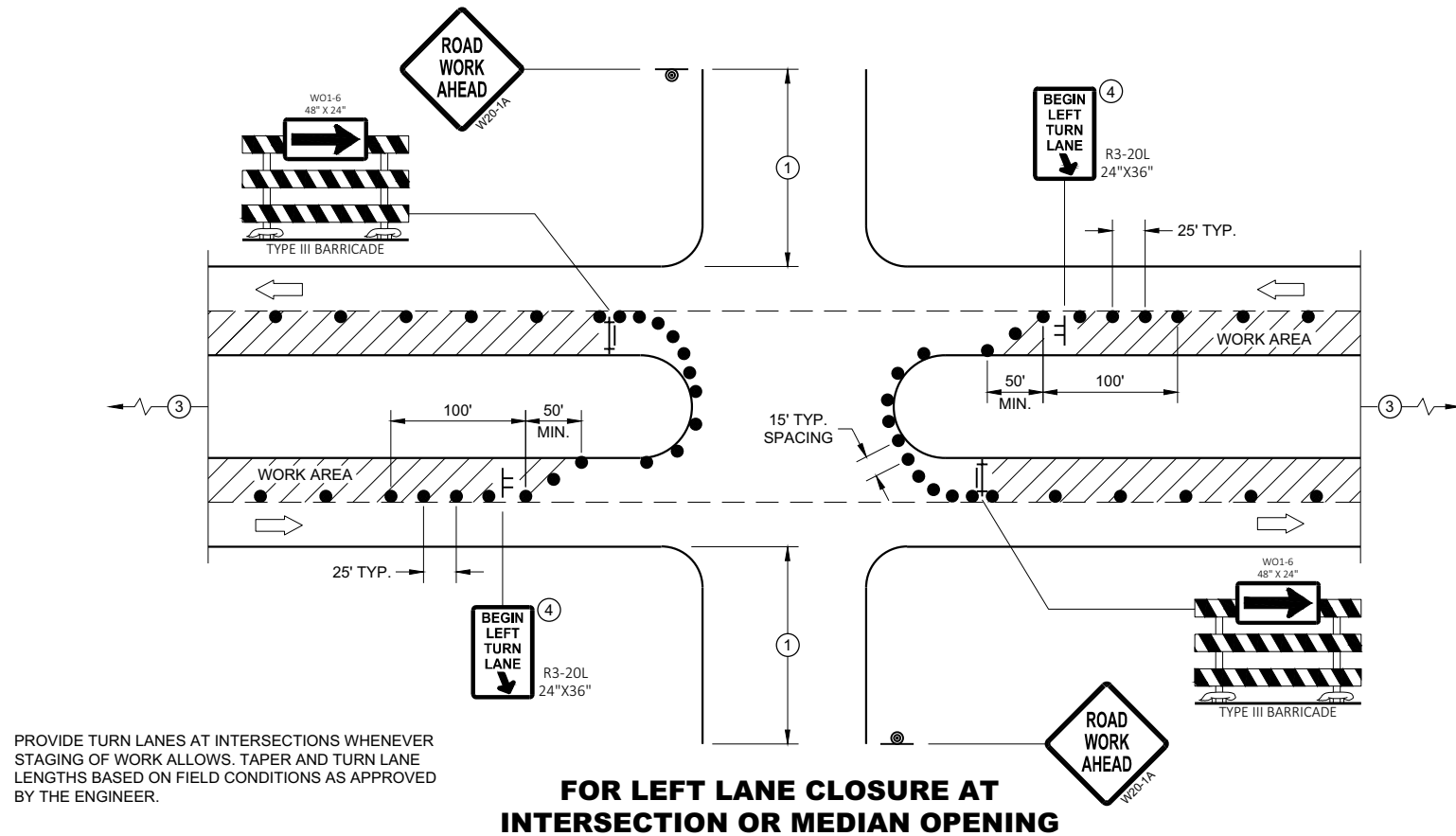
FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

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 RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 196

**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.

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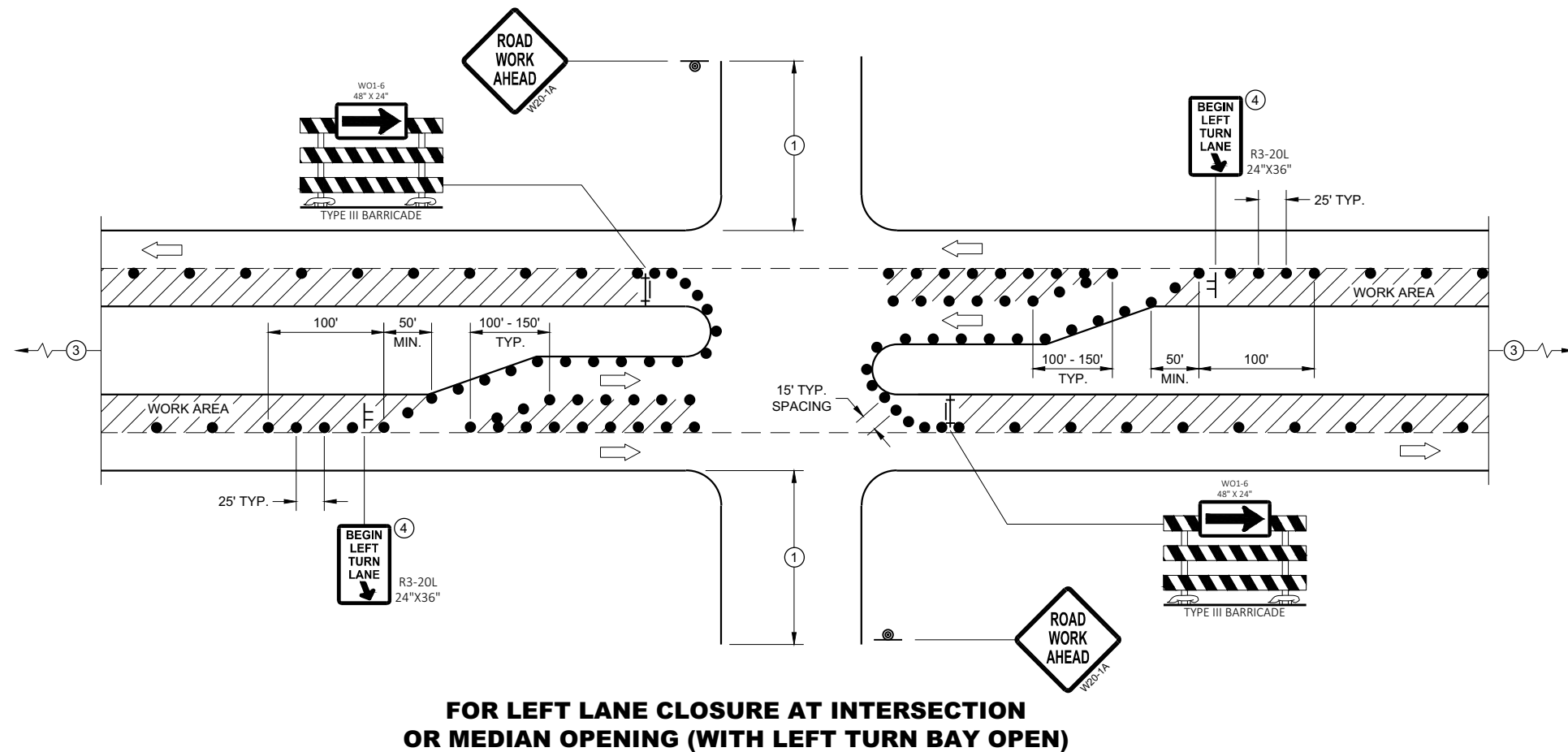
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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.

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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.

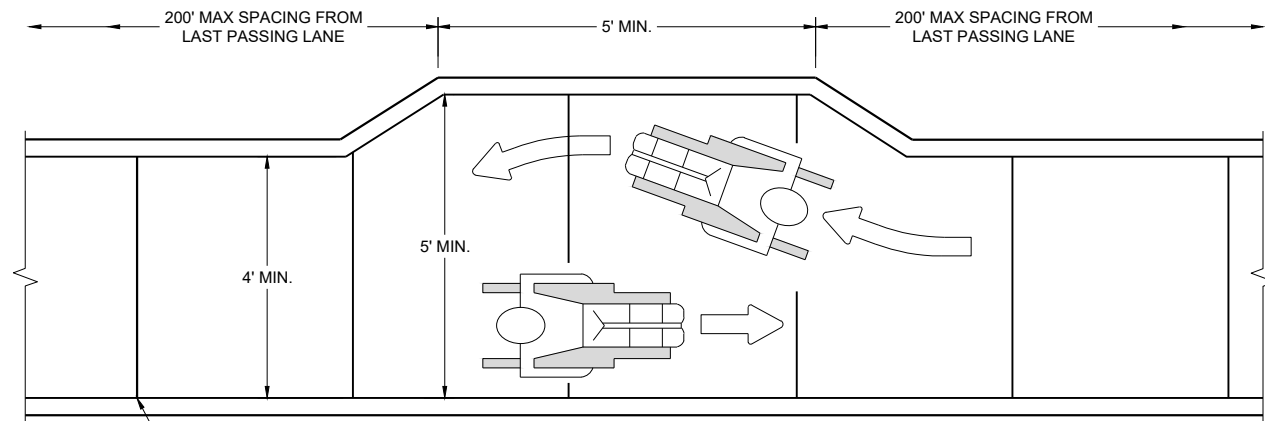
**LEGEND**

- 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

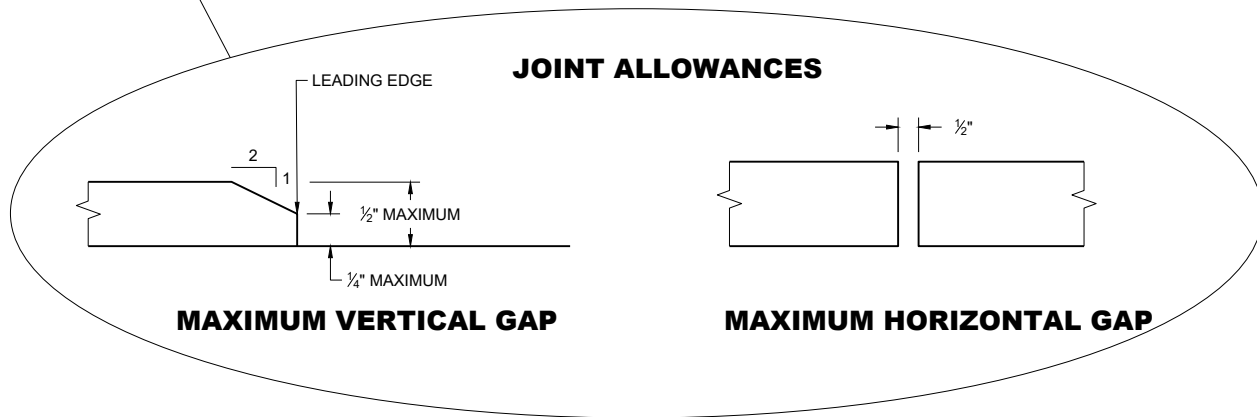
**TRAFFIC CONTROL,
INTERSECTION WITHIN SINGLE
LEFT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 197
FHWA



NARROW SIDEWALK PASSING DETAIL

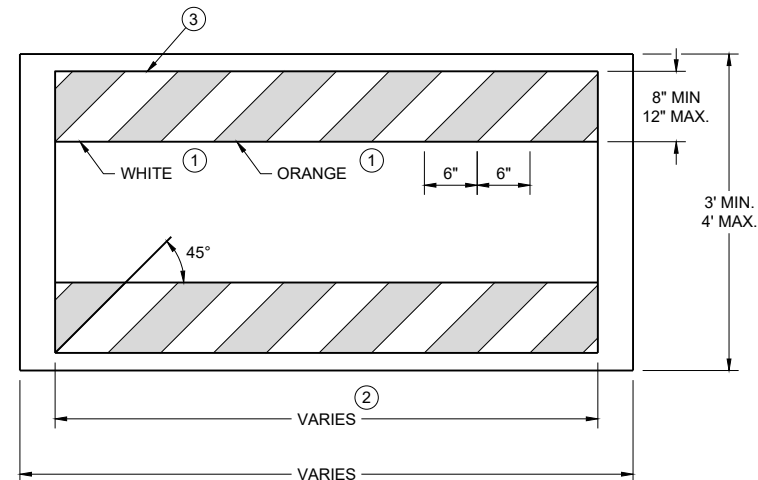


MAXIMUM VERTICAL GAP

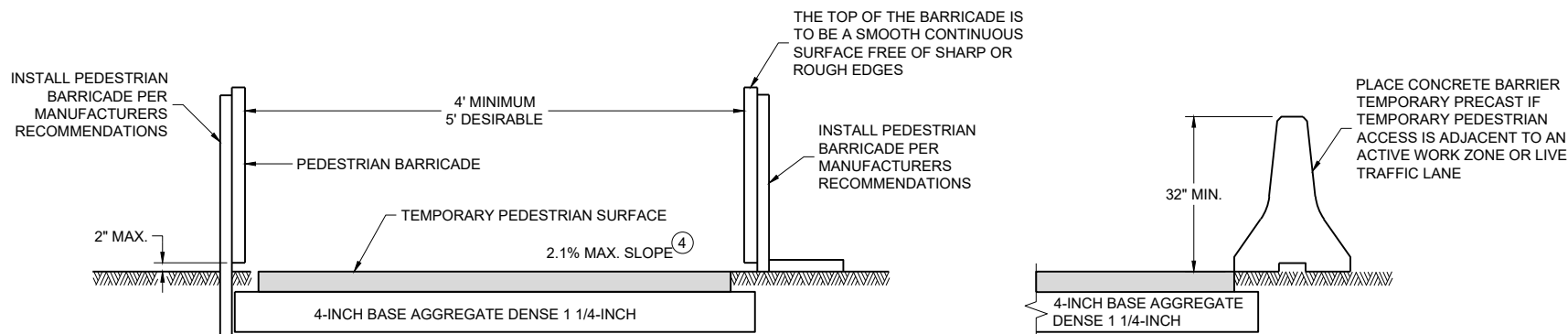
MAXIMUM HORIZONTAL GAP

JOINT ALLOWANCES

- GENERAL NOTES**
- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
 - REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
 - SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
 - PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
 - USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.
 - WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



TEMPORARY PEDESTRIAN BARRICADE *



TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL,
PEDESTRIAN
ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

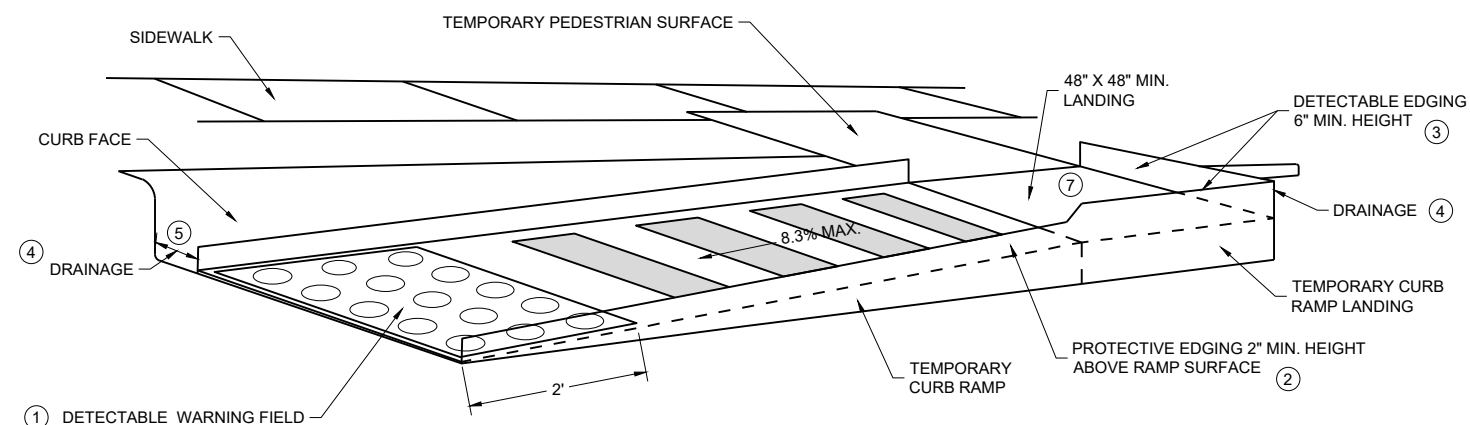
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

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

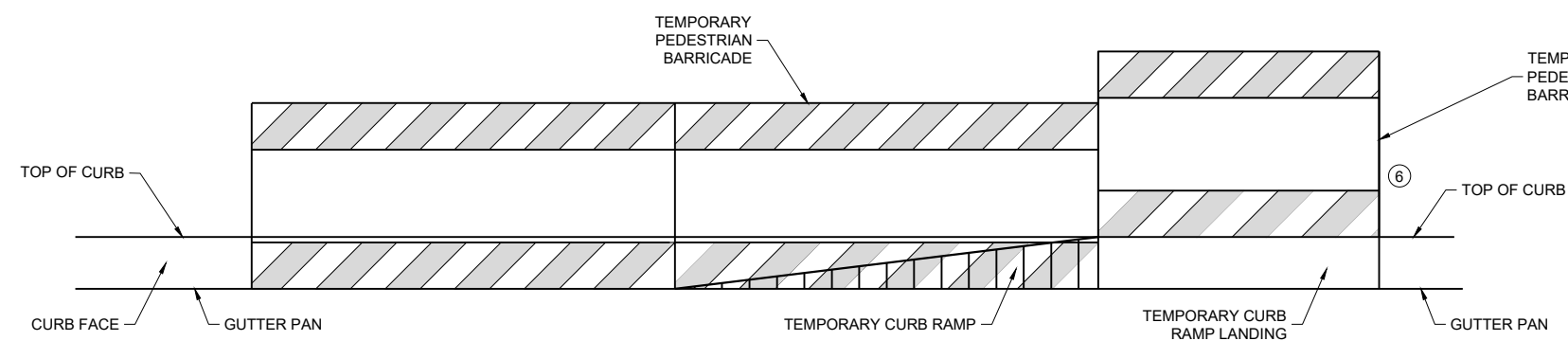
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

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

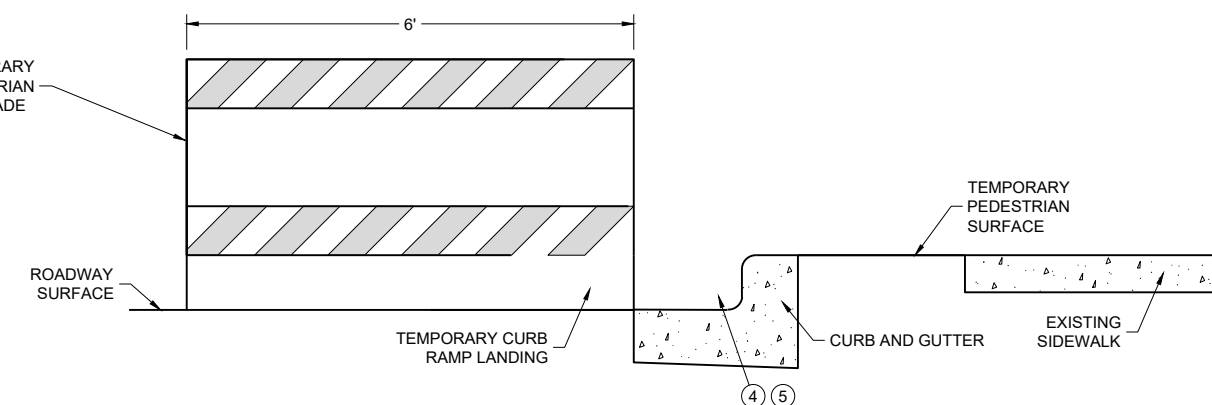
- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%).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



PERSPECTIVE VIEW



FRONT VIEW

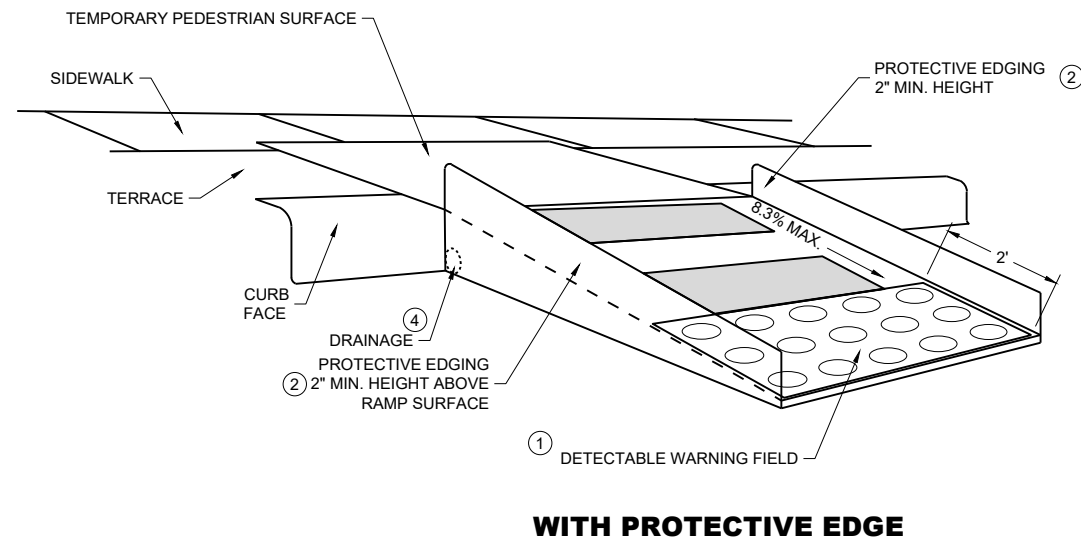
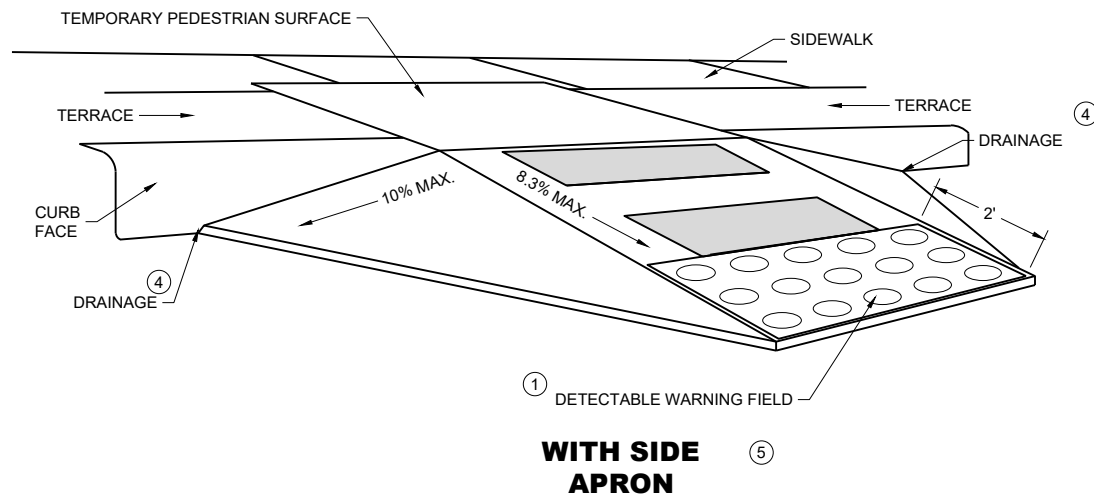


SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

**TRAFFIC CONTROL,
PEDESTRIAN
ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

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

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

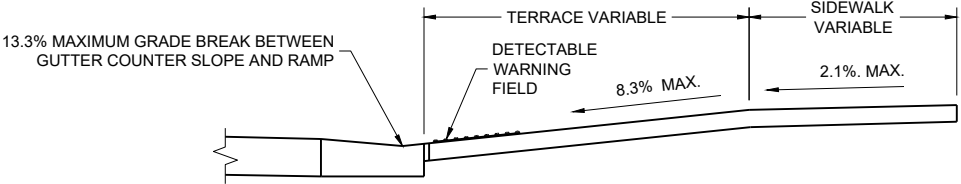
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

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

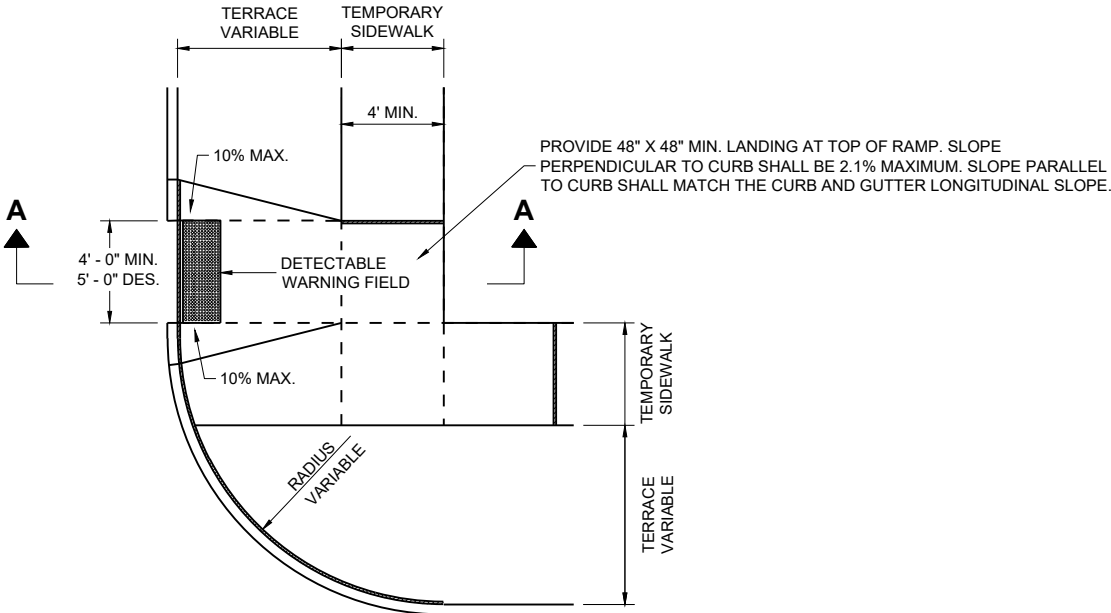
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

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

GENERAL NOTES



SECTION A - A



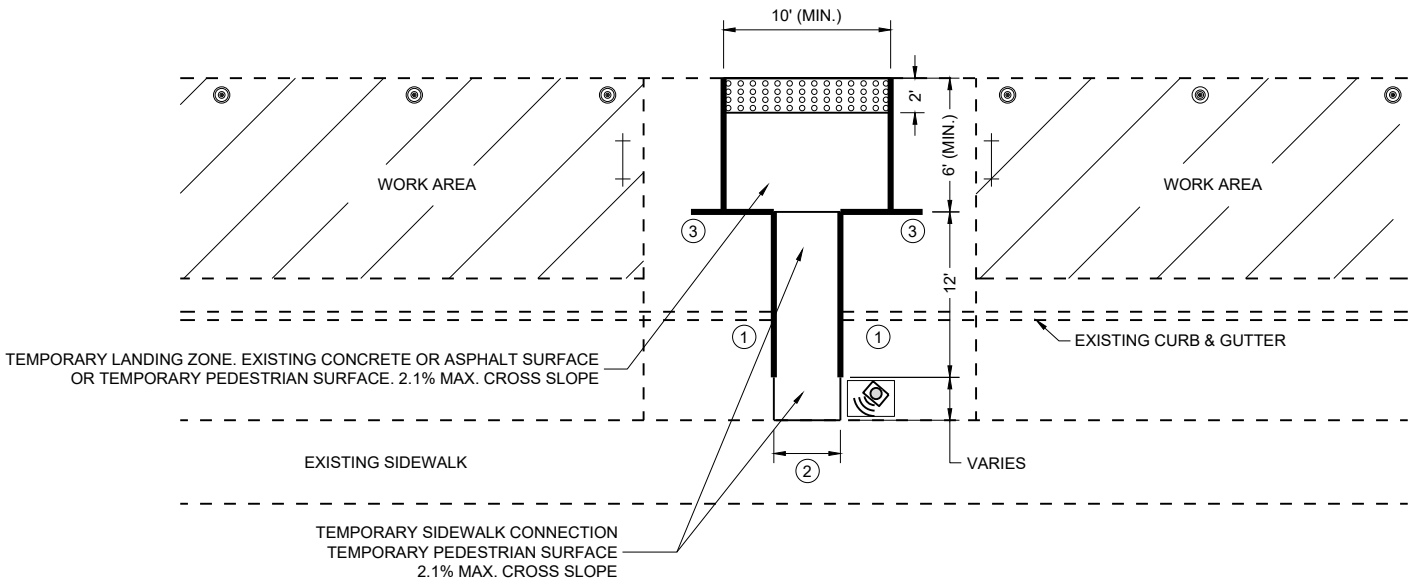
PLAN VIEW
TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

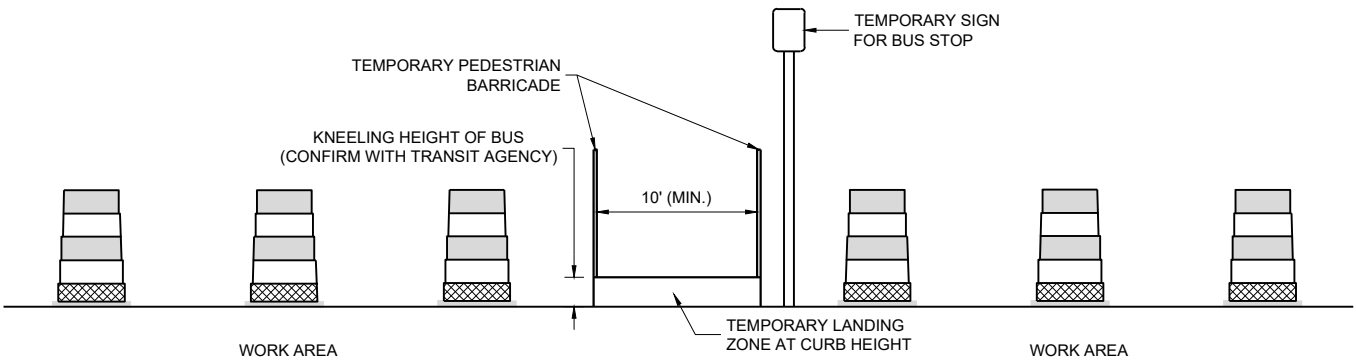
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 DATE /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



PLAN VIEW



PROFILE VIEW
TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

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".

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

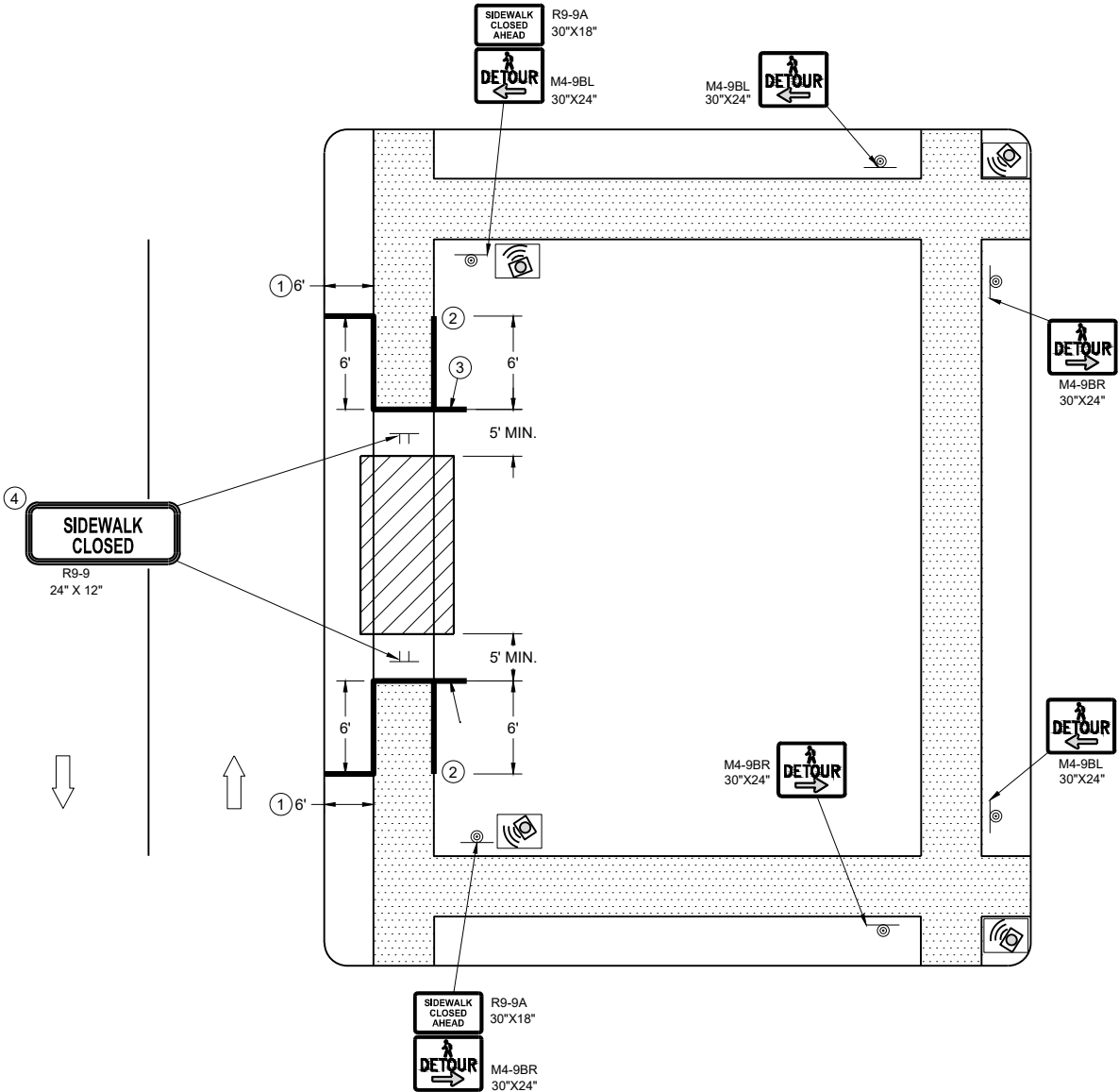
- ① DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ② 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.
- ③ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- ⊙ TRAFFIC CONTROL DRUM
- ⊢ TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- ⊞ TEMPORARY DETECTABLE WARNING FIELD
- ▨ WORK AREA
- ⊞ TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

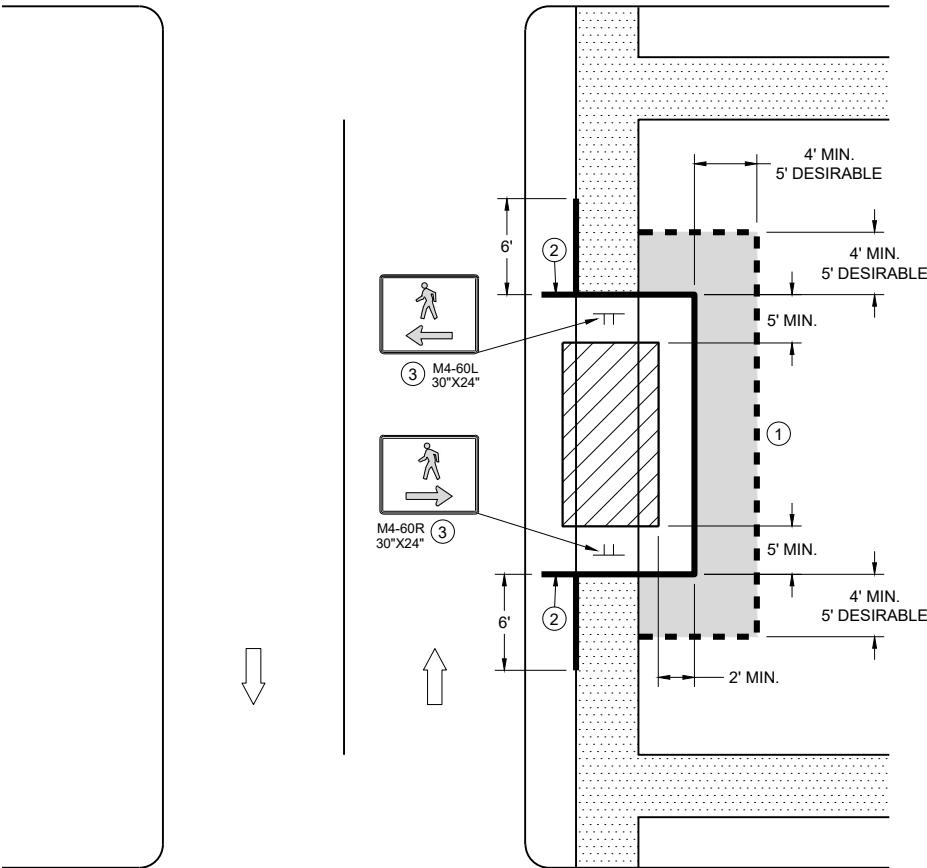
GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

- ① USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ② IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



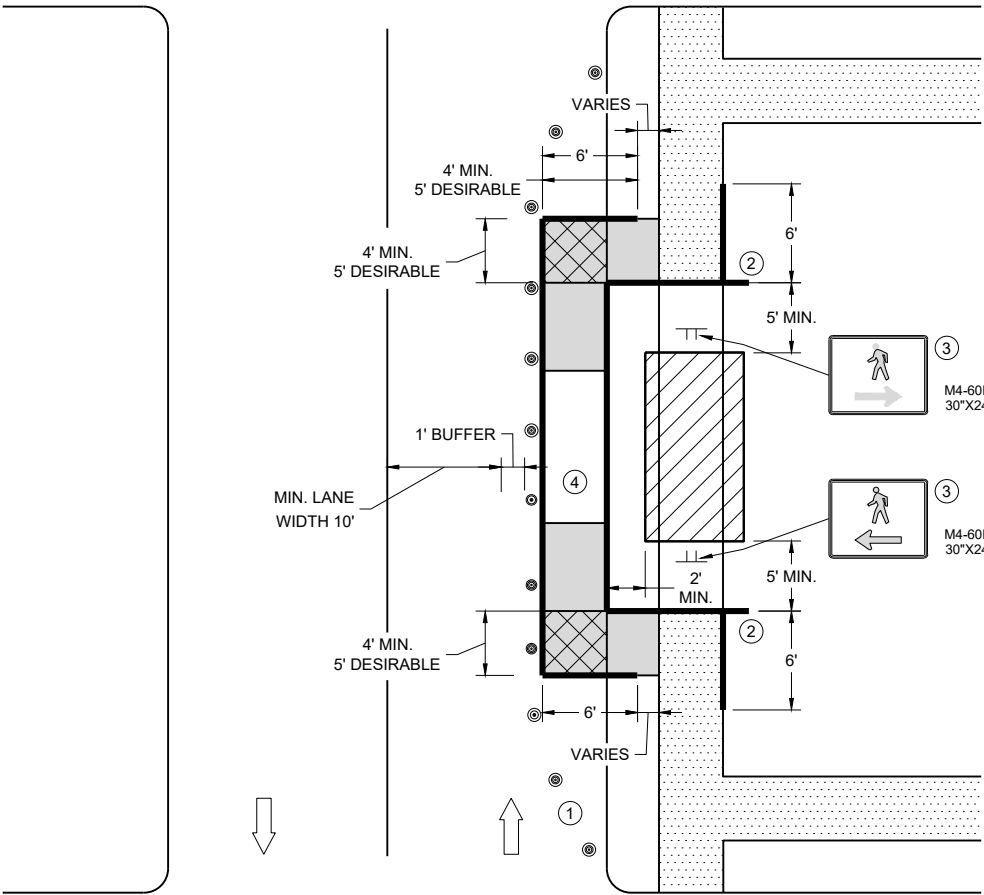
SIDEWALK BYPASS
SINGLE SIDE

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

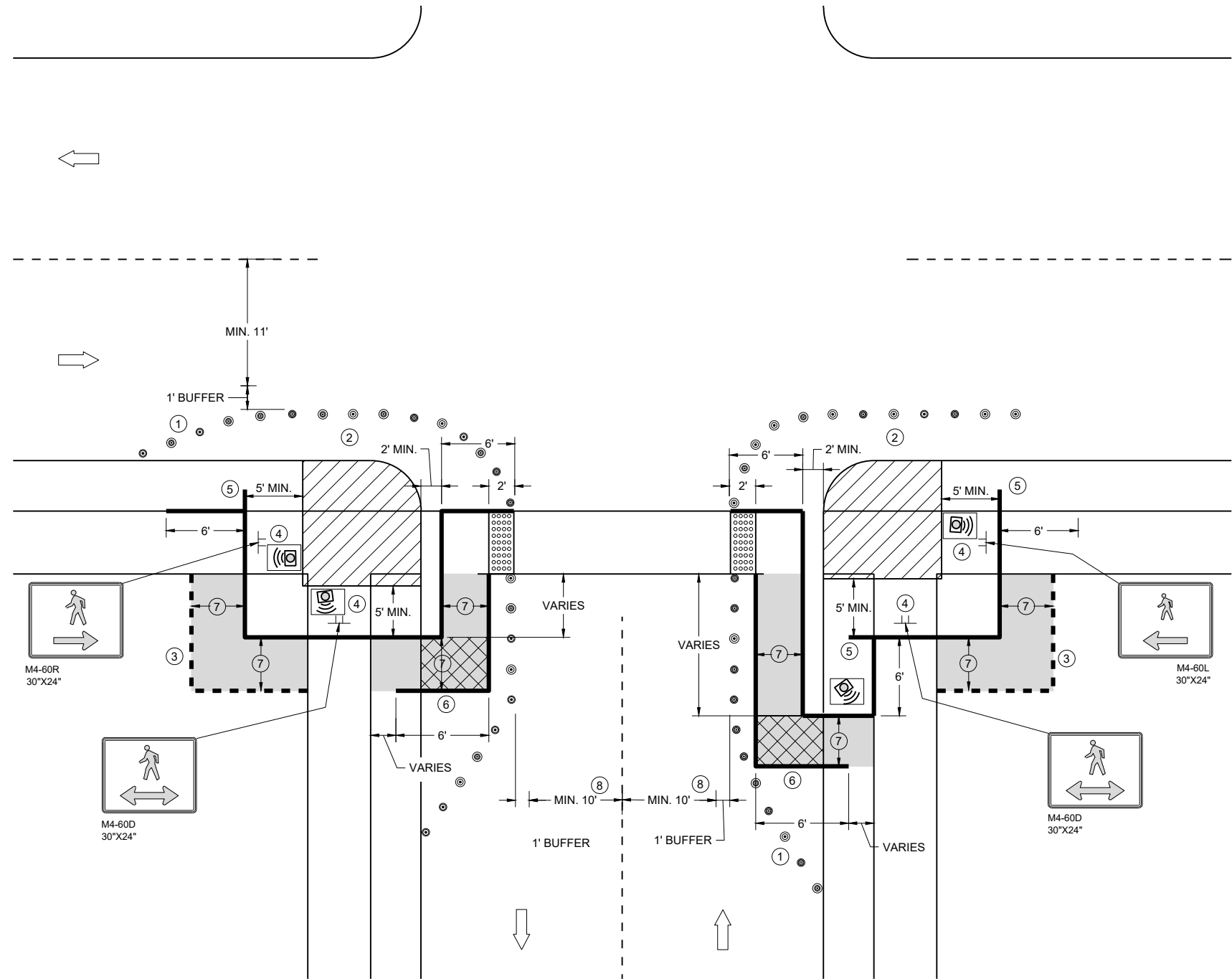
- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
 - ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
 - ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
 - ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



SIDEWALK BYPASS, SINGLE SIDE

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



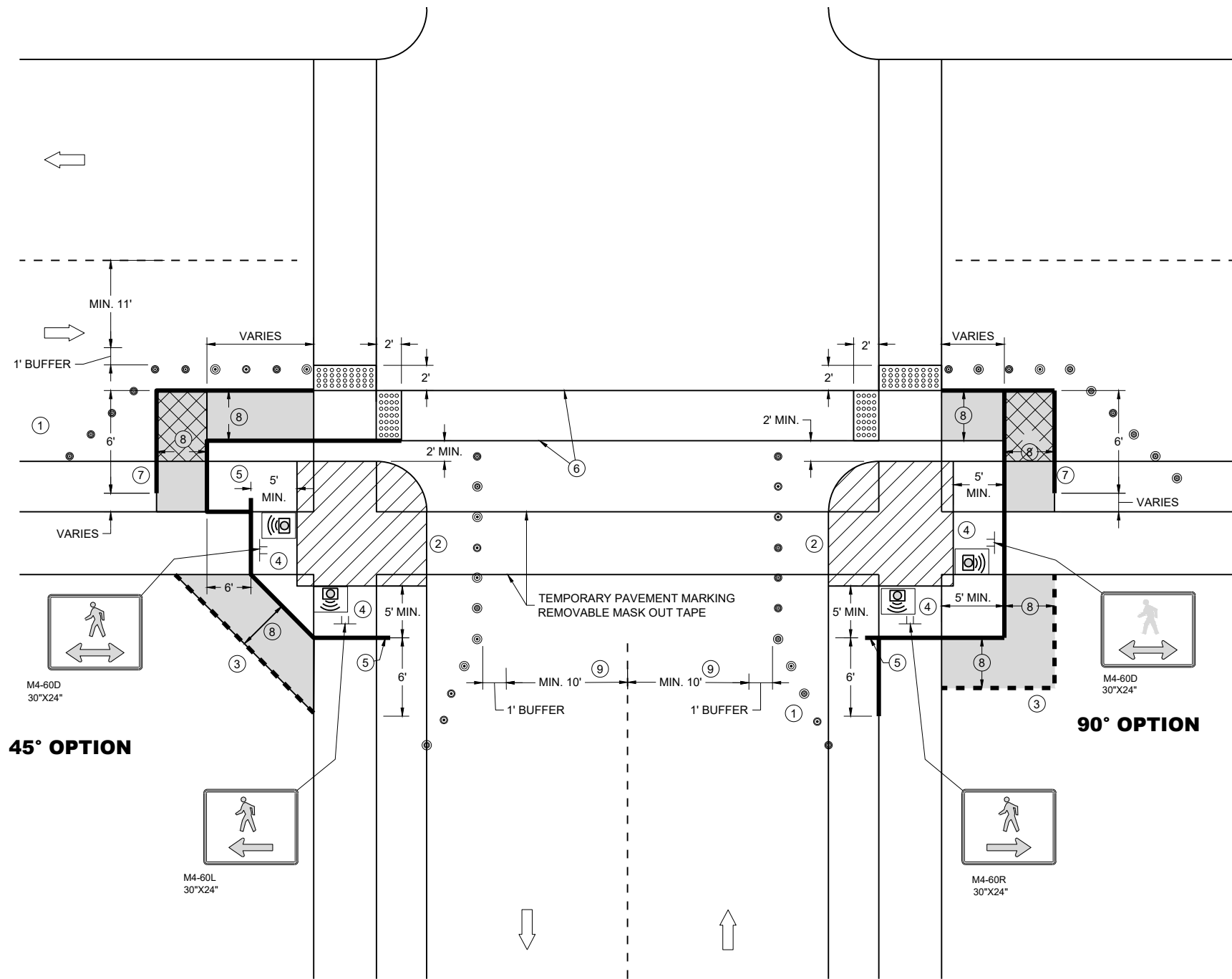
**CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE**

GENERAL NOTES

- IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.
- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG
- WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
 - ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
 - ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
 - ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
 - ⑥ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
 - ⑦ 4 FEET MINIMUM, 5 FEET DESIRABLE
 - ⑧ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

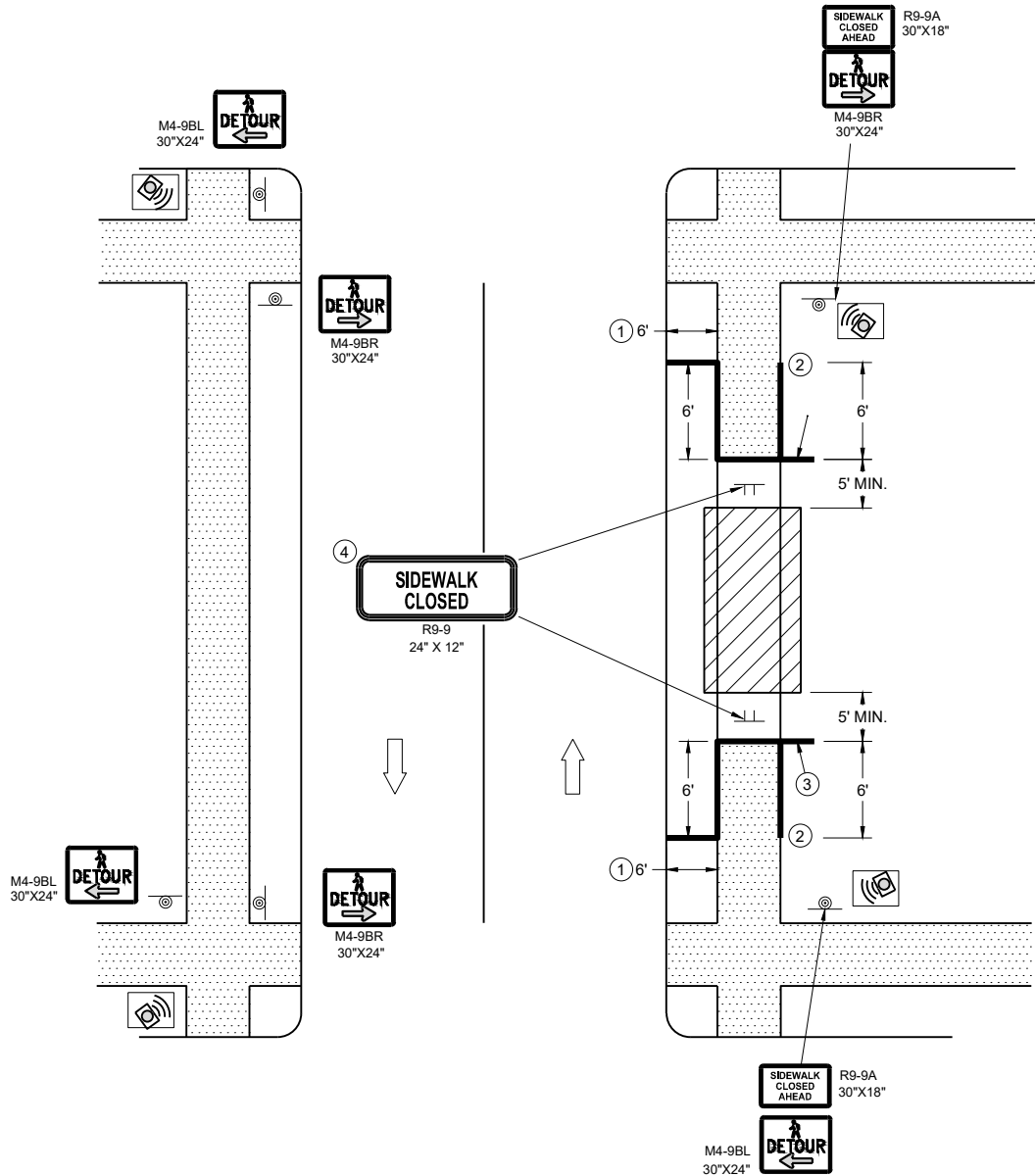
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ WHITE 6" TEMPORARY PAVEMENT MARKING
- ⑦ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑧ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑨ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

LEGEND

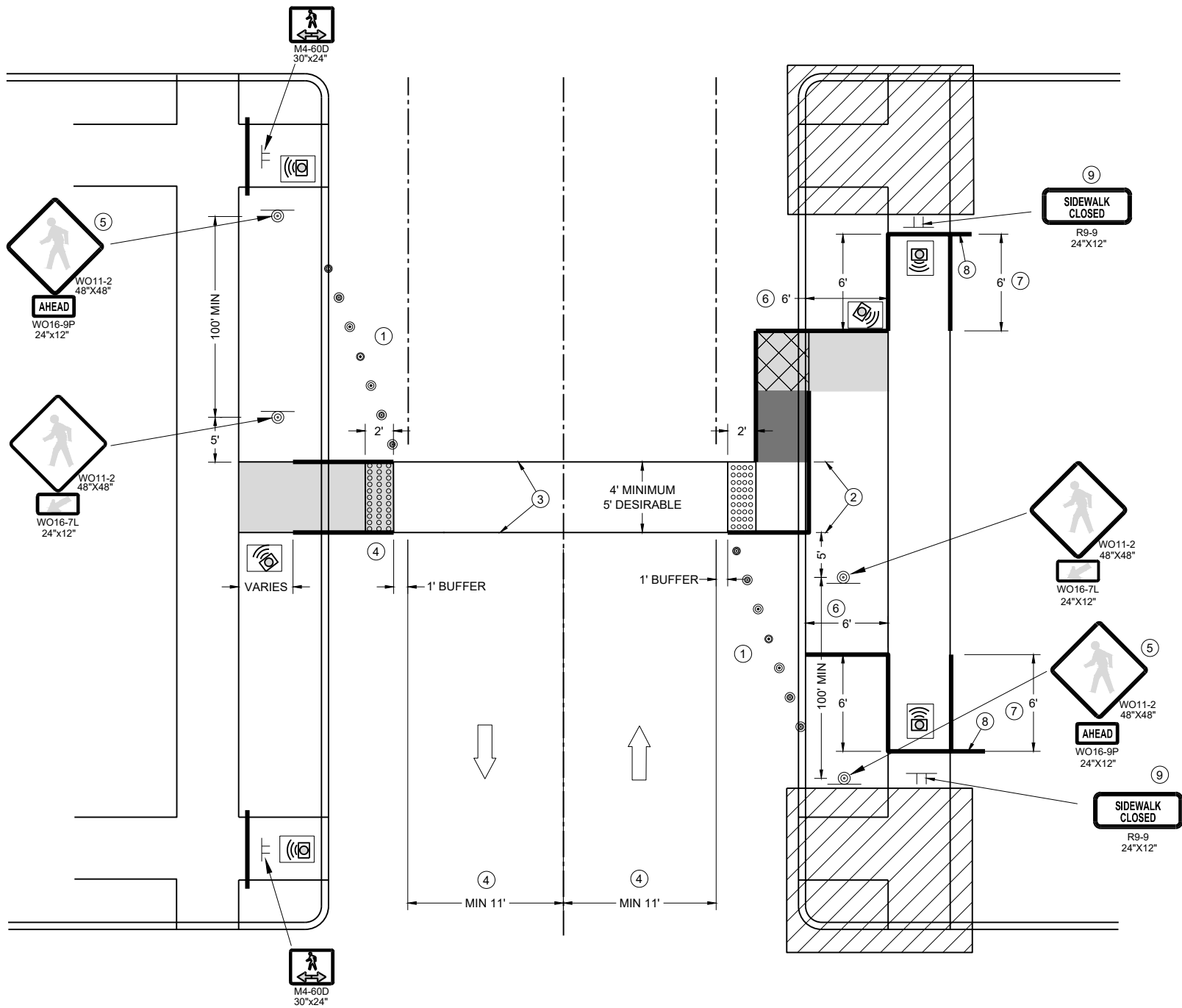
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

GENERAL NOTES

- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
 - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
 - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT
PEDESTRIAN FACILITIES CLOSURES.

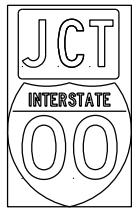
WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE
MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

- ① SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② 4 FEET MINIMUM, 5 FEET DESIRABLE.
- ③ WHITE 6" TEMPORARY PAVEMENT MARKING.
- ④ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMP MAY NEED TO BE UTILIZED.
- ⑤ IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
- ⑥ IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ⑦ PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ⑧ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ⑨ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

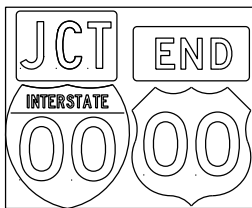
LEGEND

- ⦿ TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- ▬ TEMPORARY CURB RAMP
- ▬ TEMPORARY DETECTABLE WARNING FIELD
- ▬ TEMPORARY PEDESTRIAN SURFACE "A"
- ▬ TEMPORARY PEDESTRIAN SURFACE "B"
- ▬ WORK AREA
- ▬ TEMPORARY PEDESTRIAN BARRICADE
- ➡ DIRECTION OF TRAFFIC
- 🔊 TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

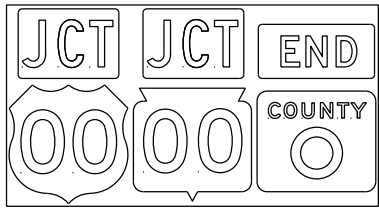
TYPICAL ASSEMBLIES



J1-1



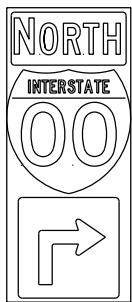
J1-2



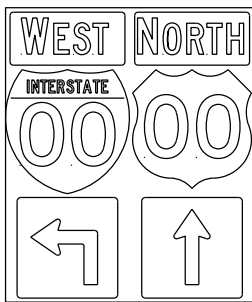
J1-3



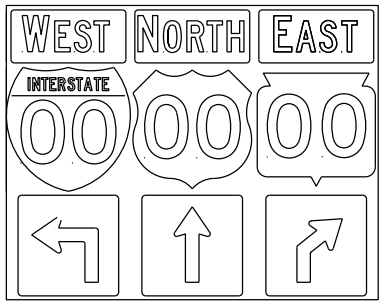
JR1-1



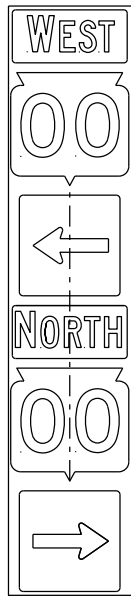
J2-1



J2-2

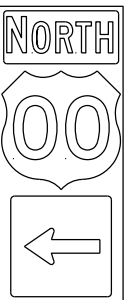


J2-3

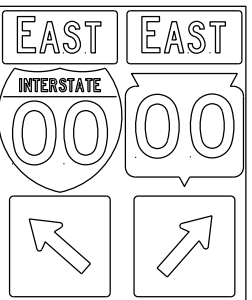


JV

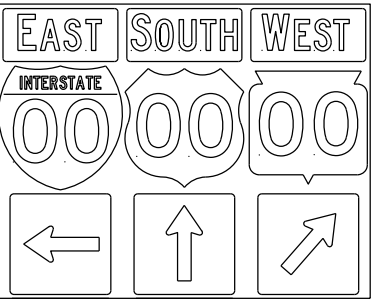
(Typical Vertical J-Assembly
See Note 10 and 11)



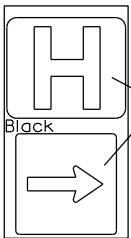
J3-1



J3-2



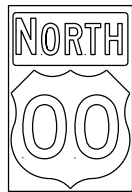
J3-3



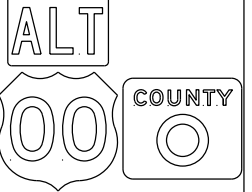
JH-1

Blue Background

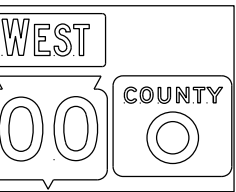
Black



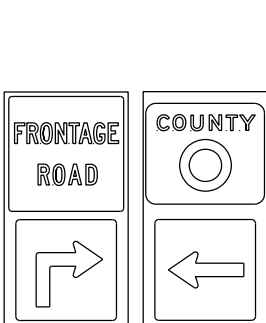
J4-1



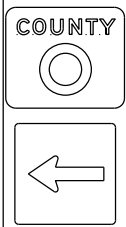
J4-2



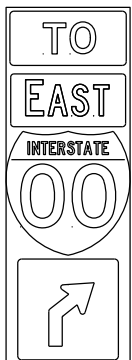
J4-2



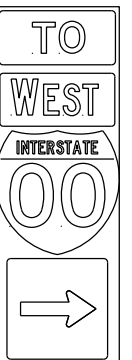
J12-1



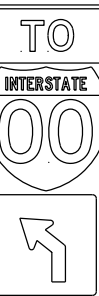
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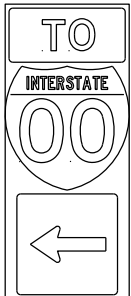
J32-1



J33-1



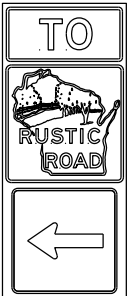
J22-1



J23-1



JR13-1

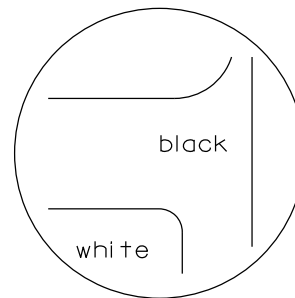
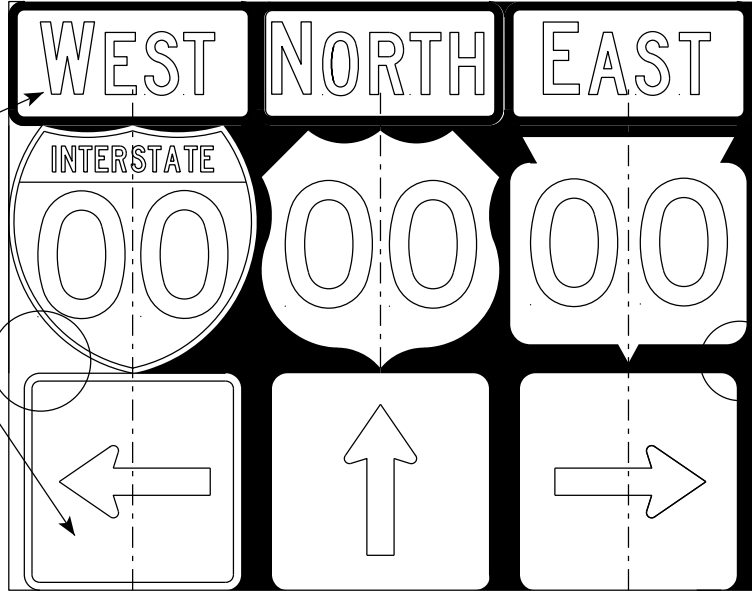
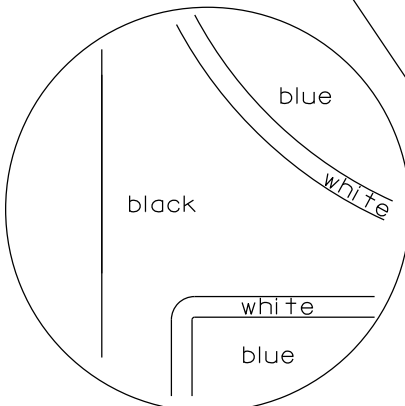


JR23-1



JR99-1

blue background
with interstate



black background

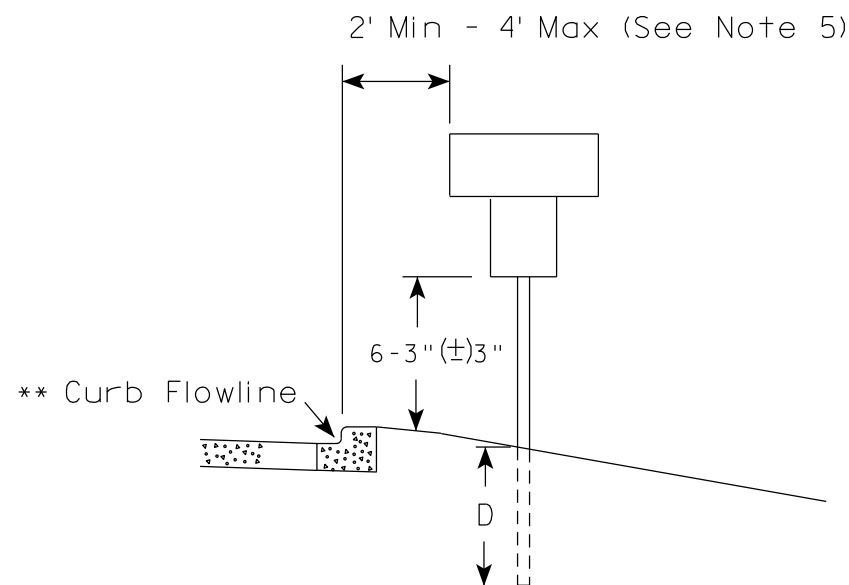
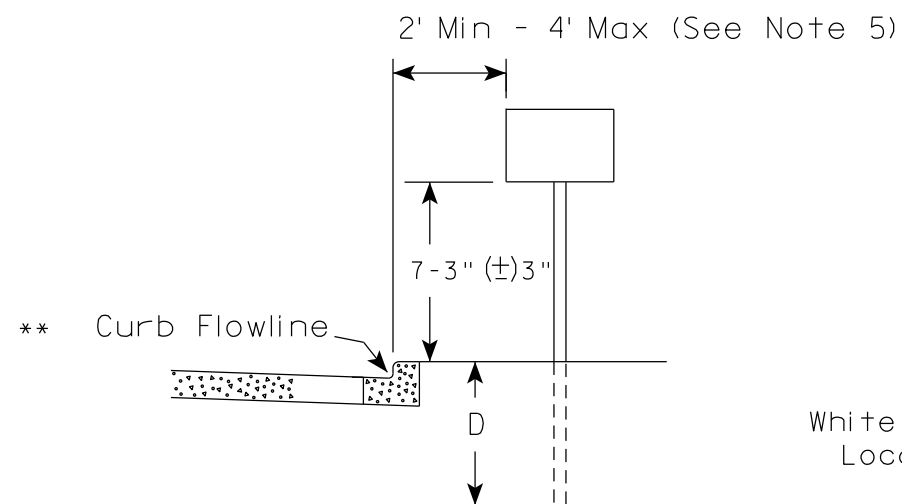
ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

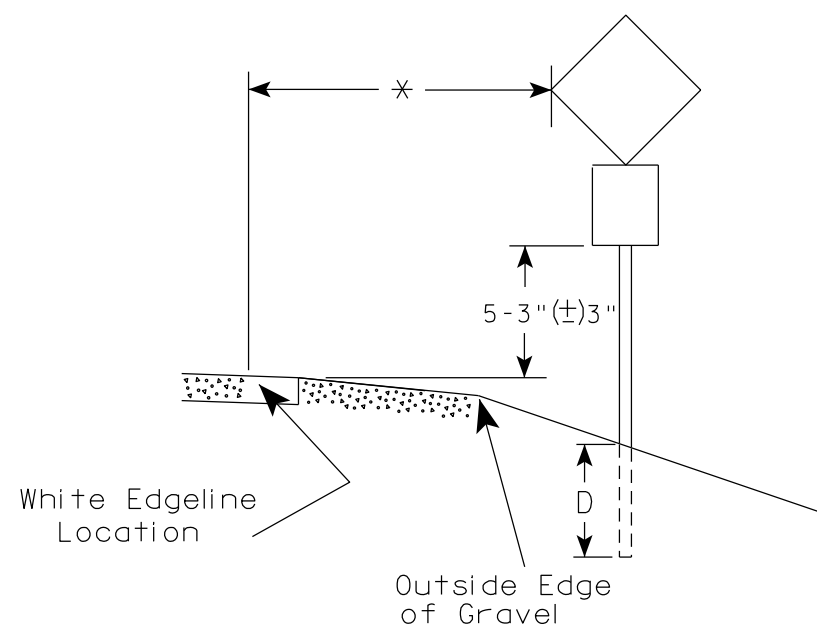
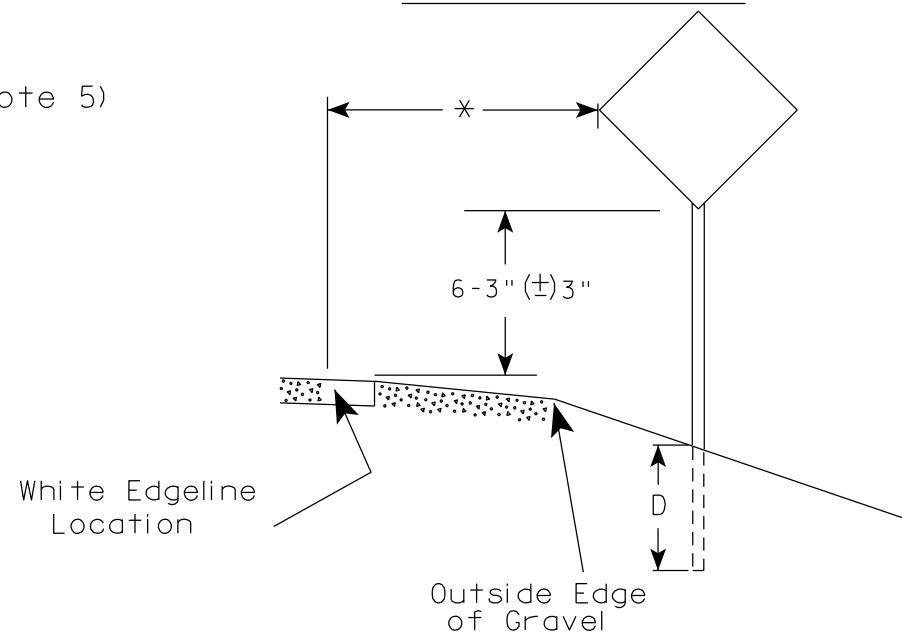
DATE 6/7/23 PLATE NO. A2-1S.10

URBAN AREA



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

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

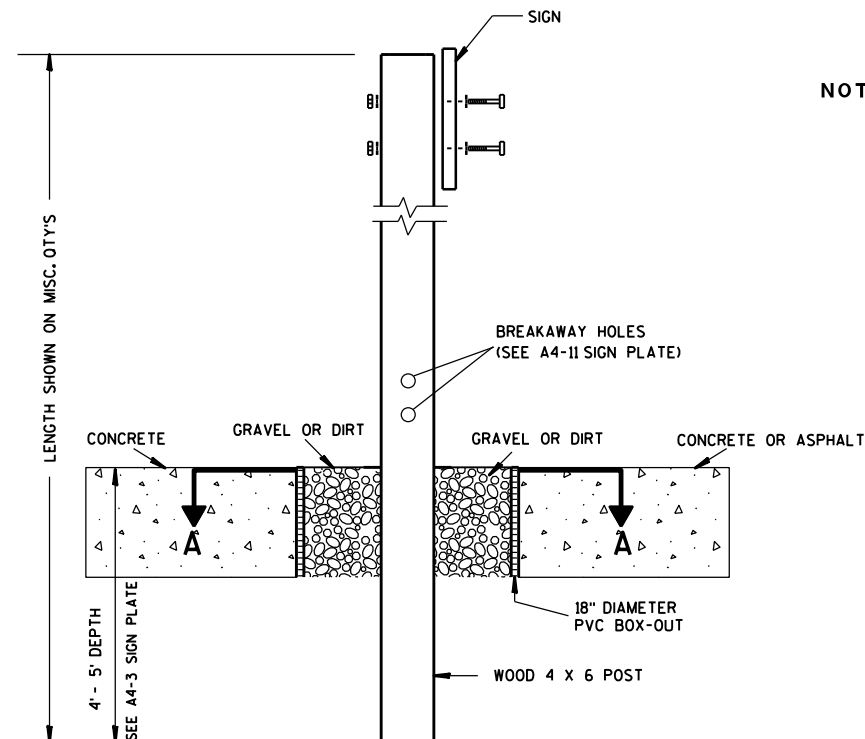
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

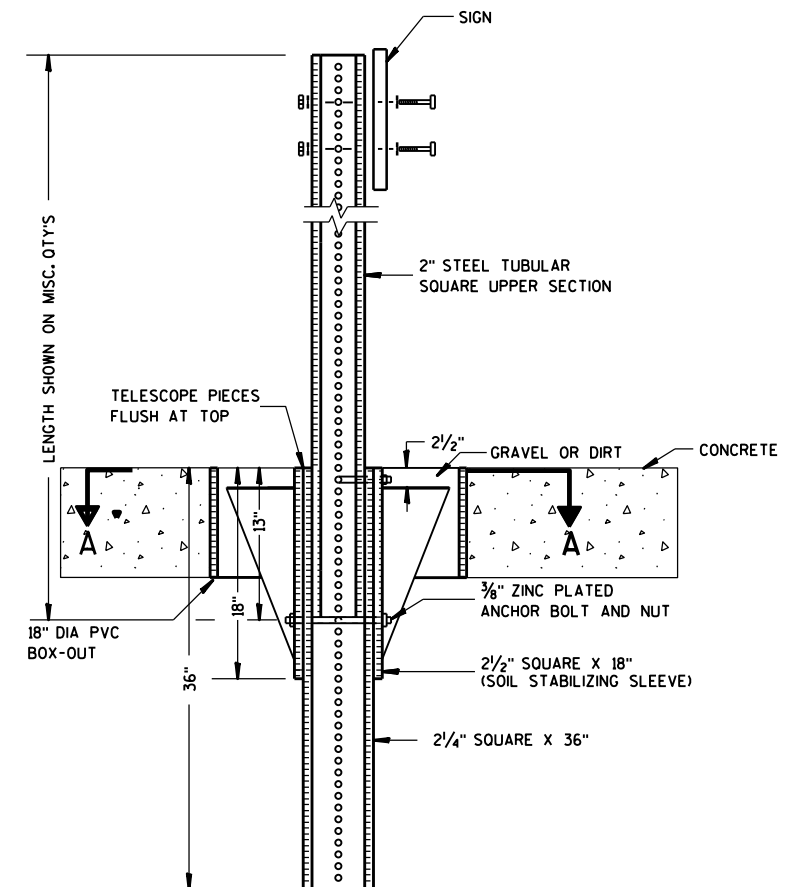
DATE 12/6/23 PLATE NO. A4-3.23



- 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.

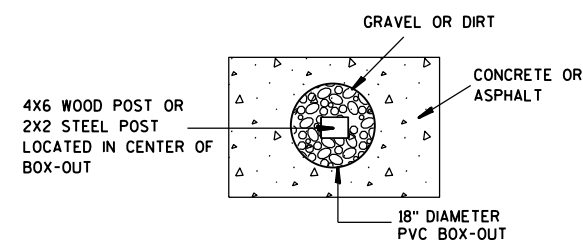
ELEVATION VIEW

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



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 212 A4-3B.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

GENERAL NOTES

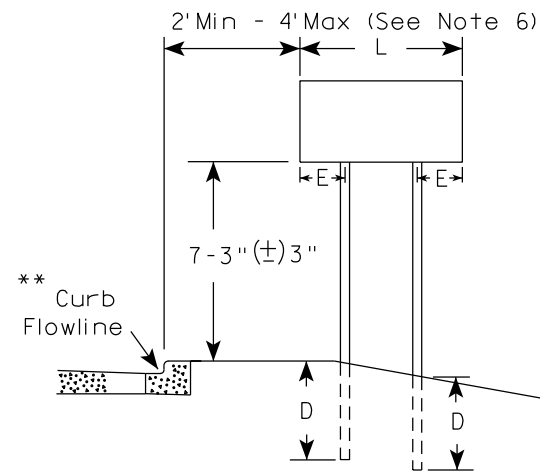
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" ($\pm$) 3" or 6'-3" ($\pm$) 3" depending upon existence of sub-sign.
4. The ($\pm$) tolerance for mounting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

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

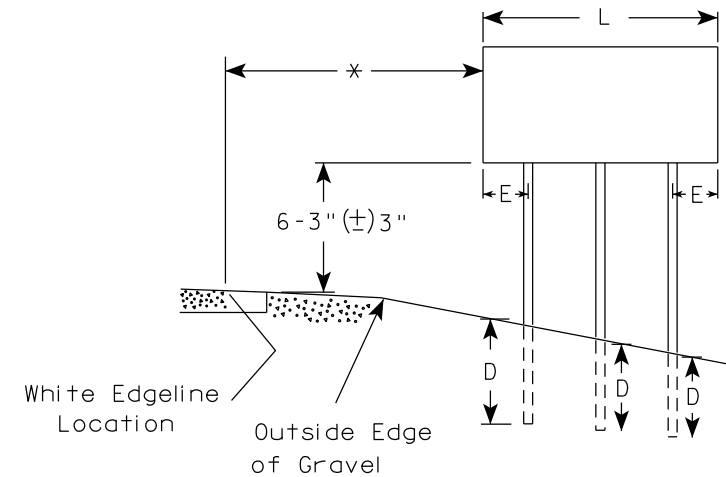
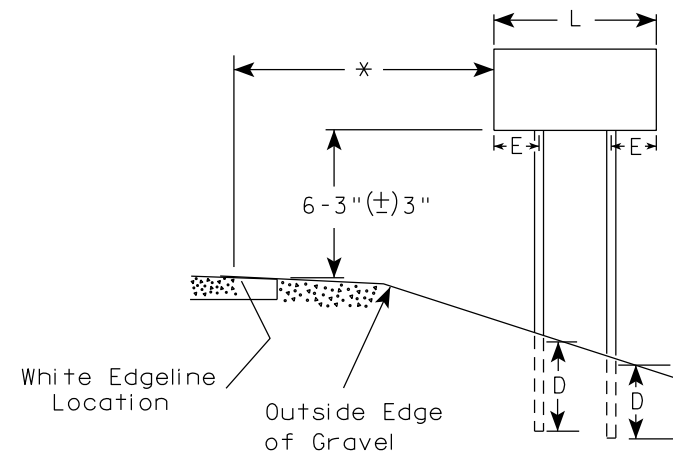
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

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

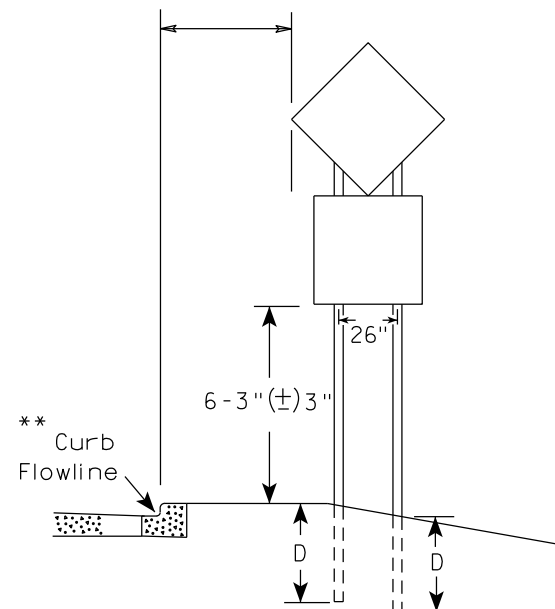
URBAN AREA



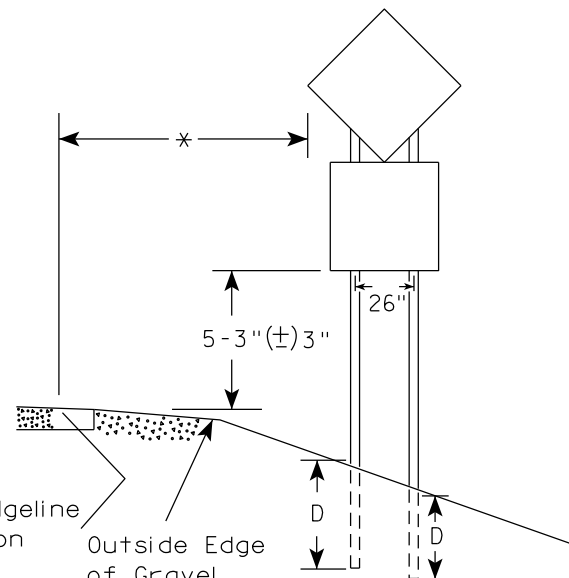
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

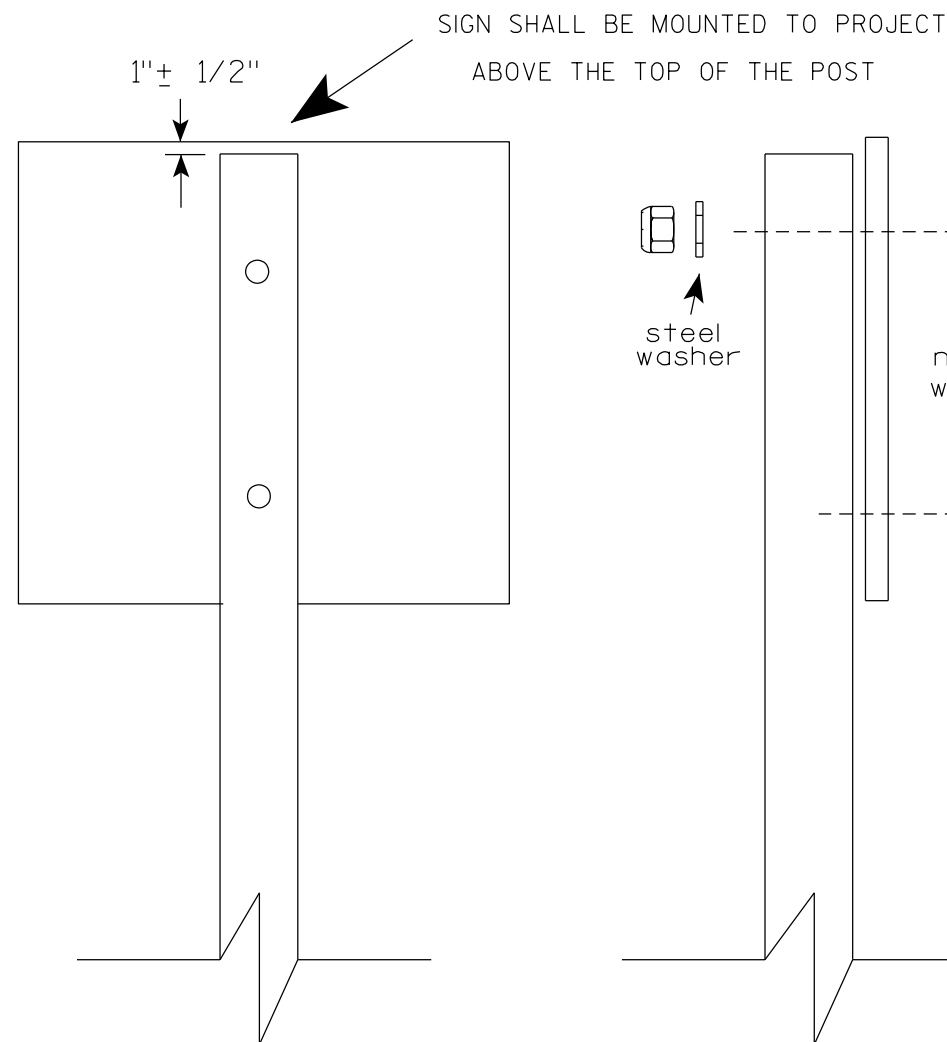
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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

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

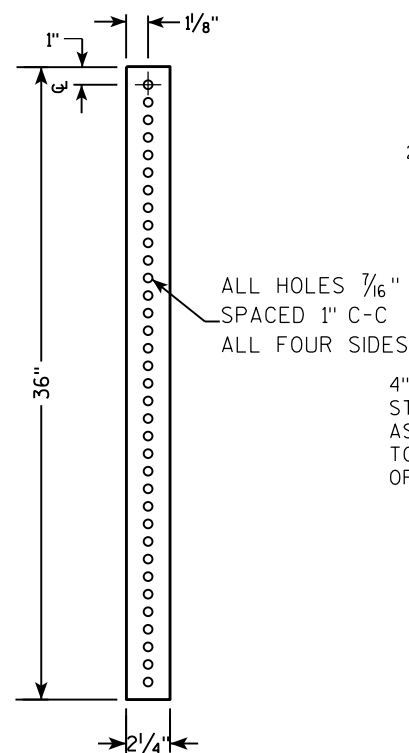
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

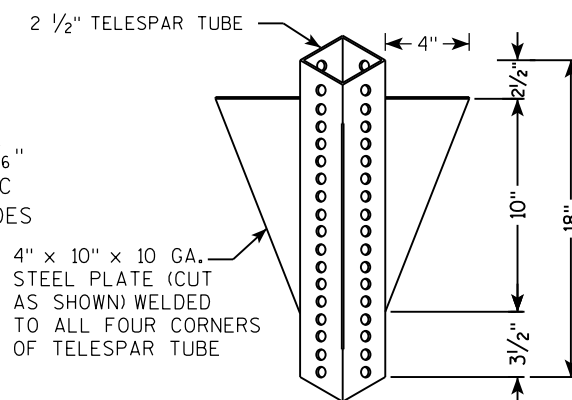
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**

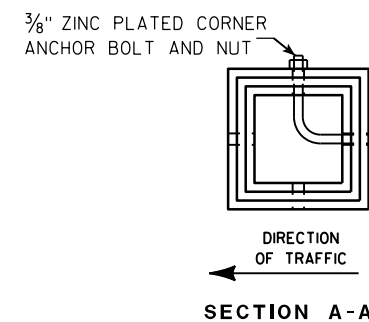


**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- TELESCOPE PIECES FLUSH AT TOP**: Indicated by a dimension line on the left.
- 2" STEEL TUBULAR SQUARE UPPER SECTION**: The main vertical support.
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES**: Specification for the perforations in the tubular section.
- SIGN**: Attached to the top of the post.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to a sign plate for hardware details.
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT**: Hardware used to secure the post to the base.
- 1"**: Dimension for the offset of the anchor bolt from the post face.
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT**: Hardware used to secure the base plate to the ground.
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**: The base plate of the post.
- 2 1/4" SQUARE X 36"**: The base plate of the signpost.
- 36"**: Dimension for the height of the signpost base plate.
- 18"** and **12"**: Dimensions for the offset of the anchor bolt from the post face.
- A**: Downward arrows indicating the direction of force or weight applied to the sign and the base plate.



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 PLATI 215 14-9.9

PROJECT NO:

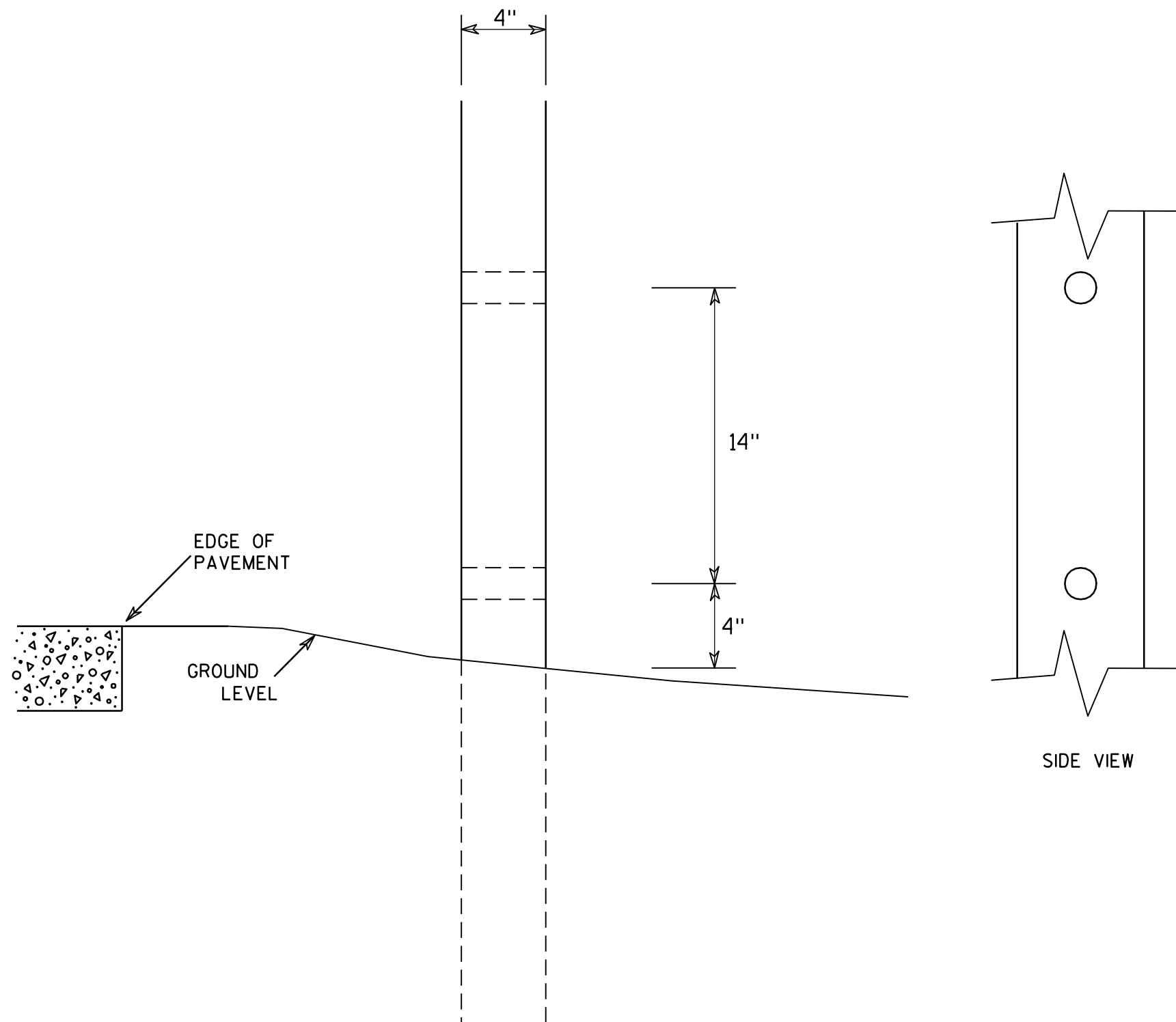
HWY:

COUNTY:

SHEET NO:

TE

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

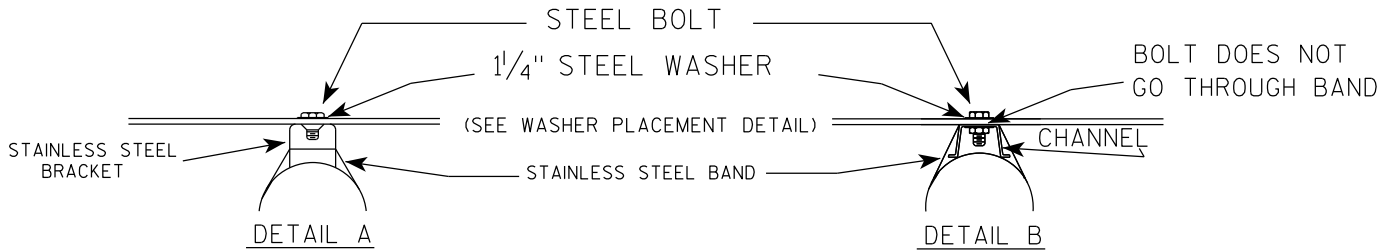
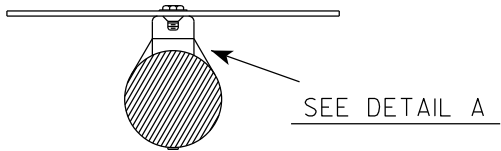
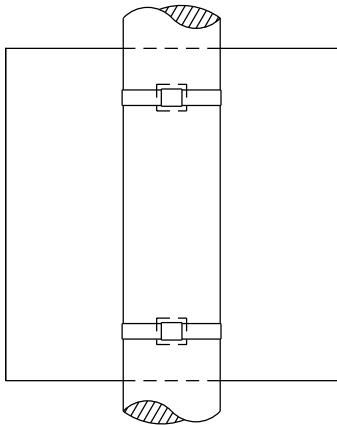
COUNTY:

SHEET NO: 216

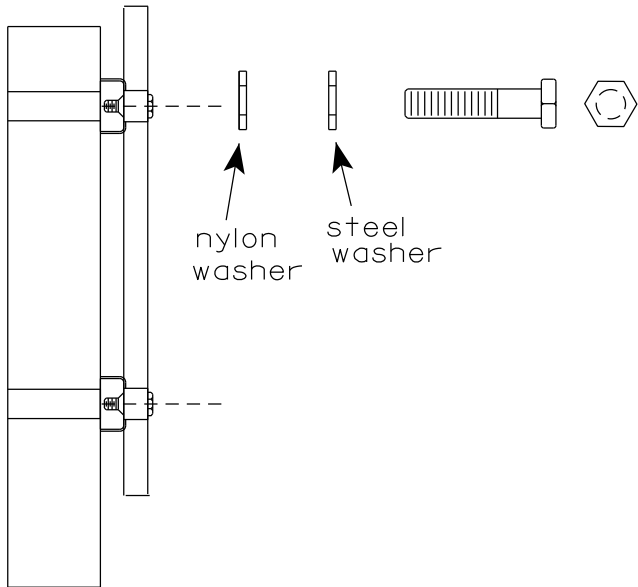
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

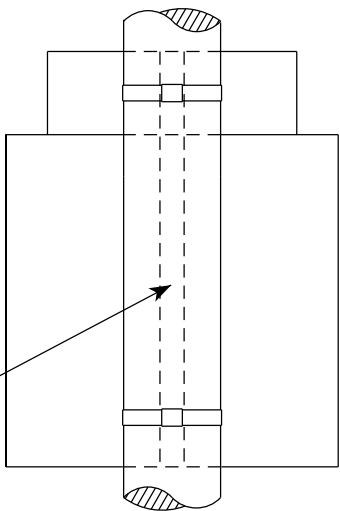


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

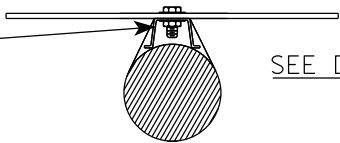
GENERAL NOTES

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

"J" ASSEMBLY



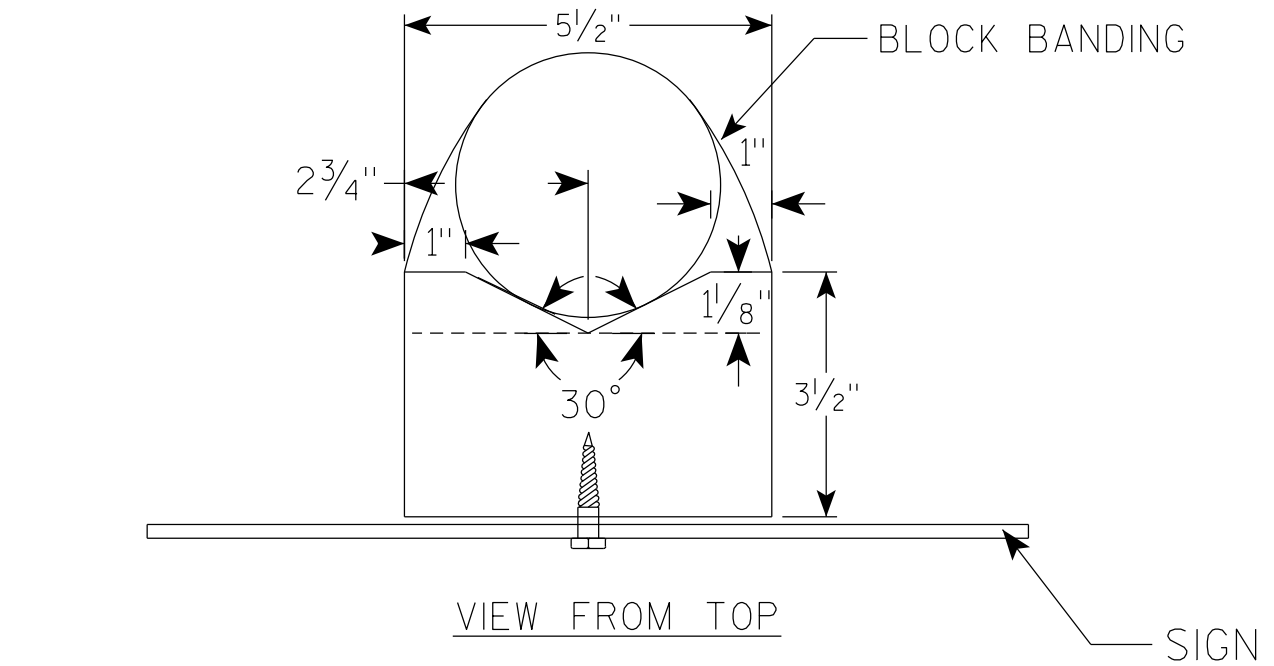
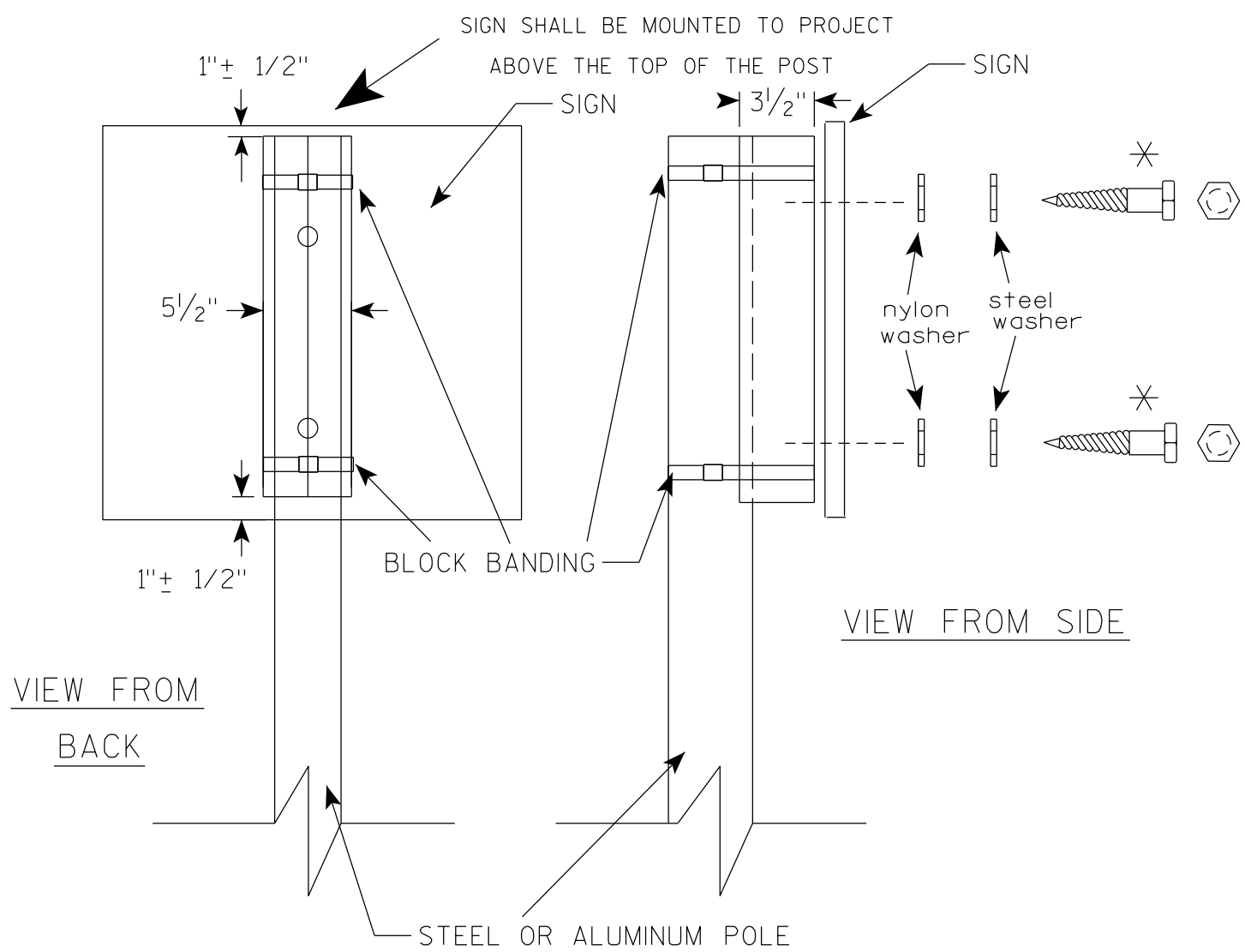
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

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



GENERAL NOTES

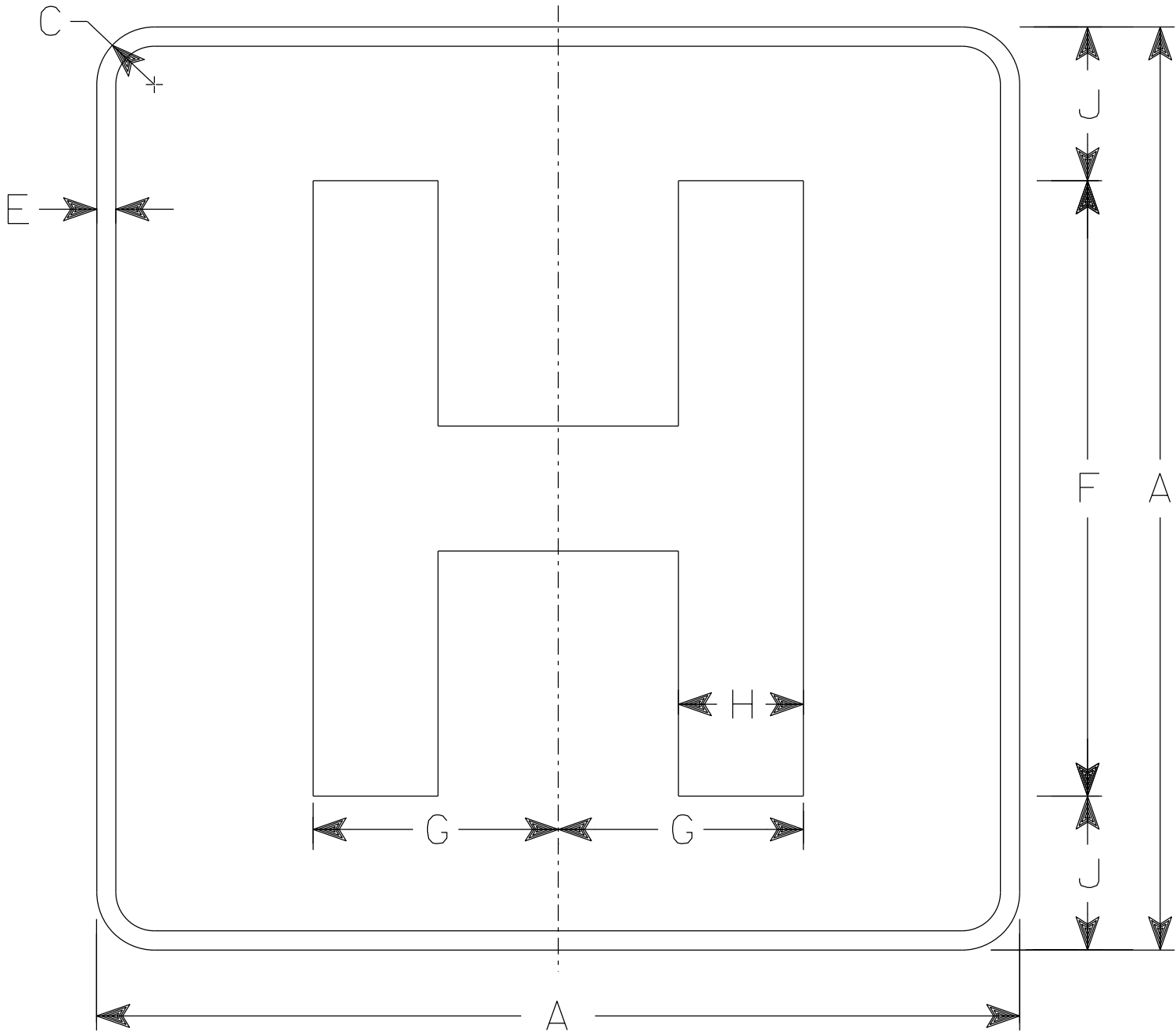
1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS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

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

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

NOTES

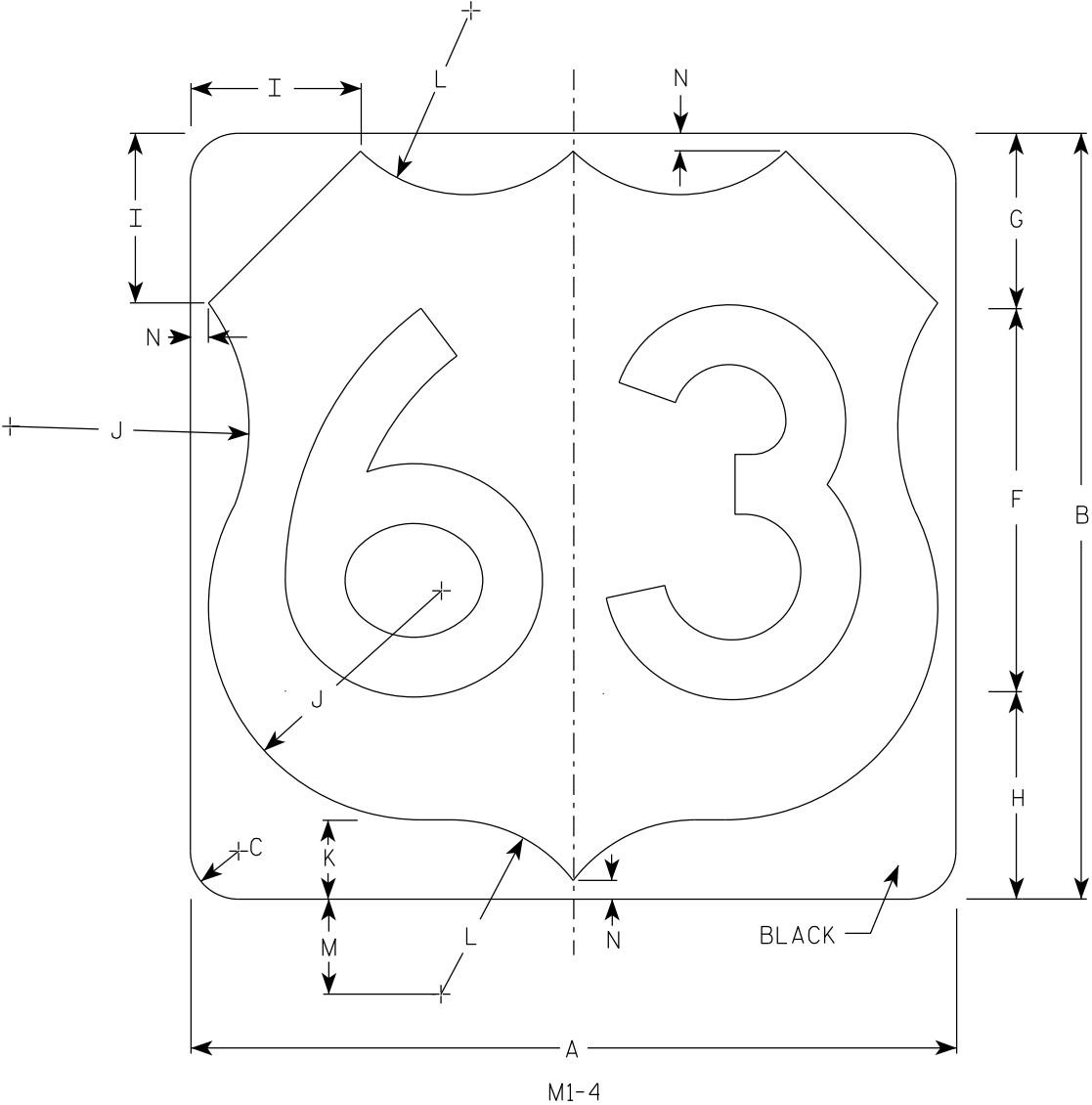
- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - Blue
 - Message - White
- 3. Message Series - E Modified
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



D9-2

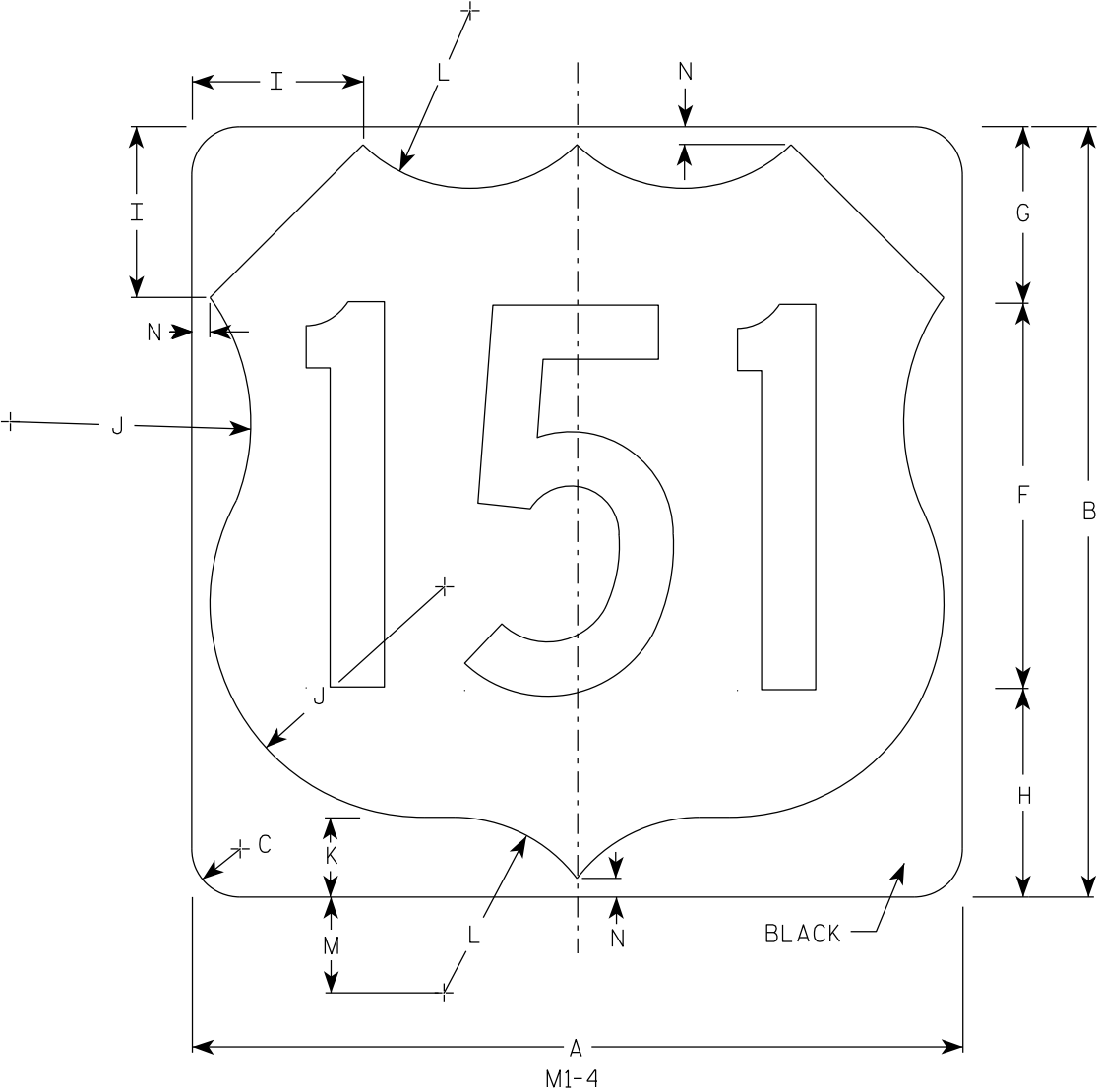
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/2		1/2	12	4 3/4	2 3/8		3																	2.25
2S	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
2M	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

7



NOTES

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



7

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

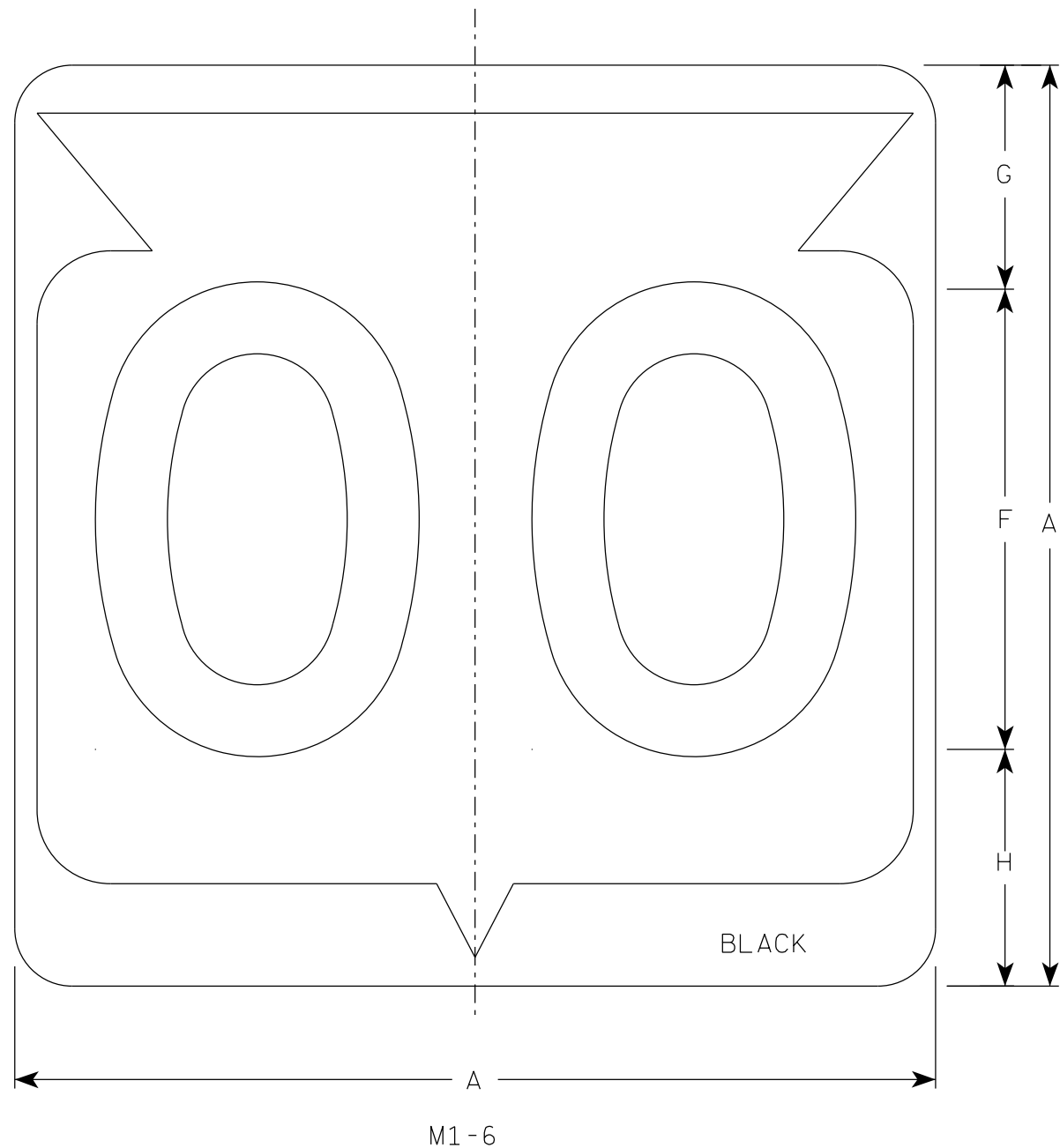
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

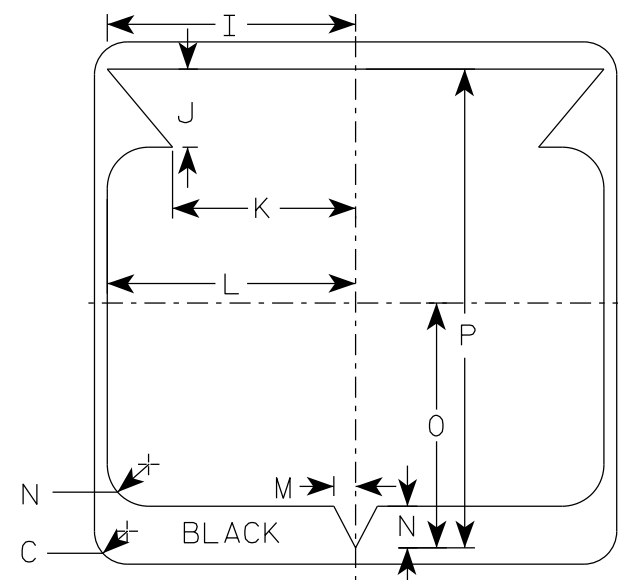
DATE 12/20/22 PLATE NO. M1-4.11

7



NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

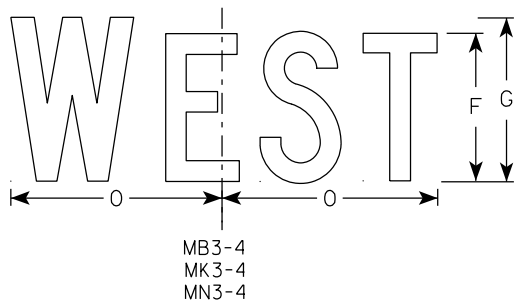
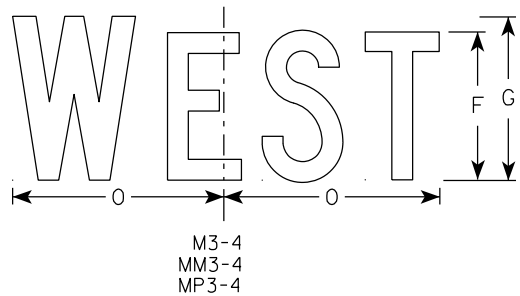
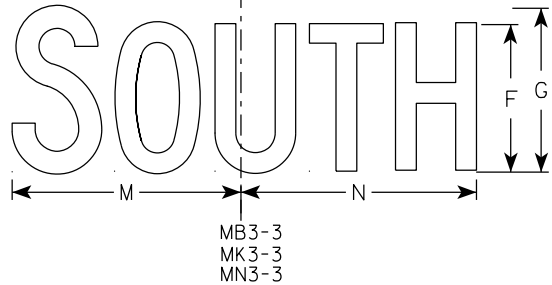
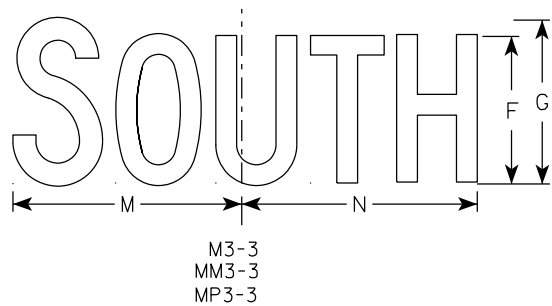
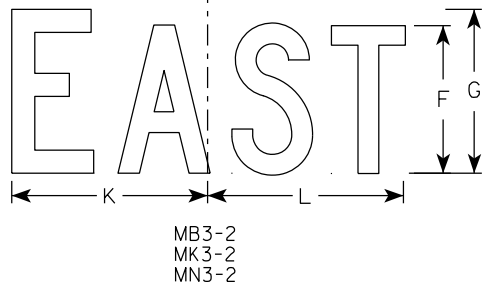
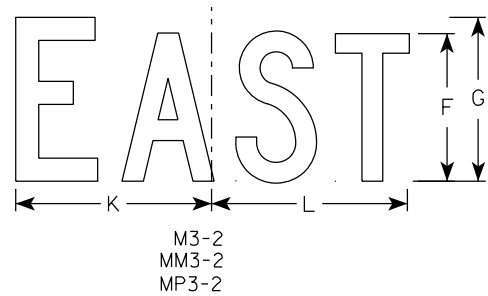
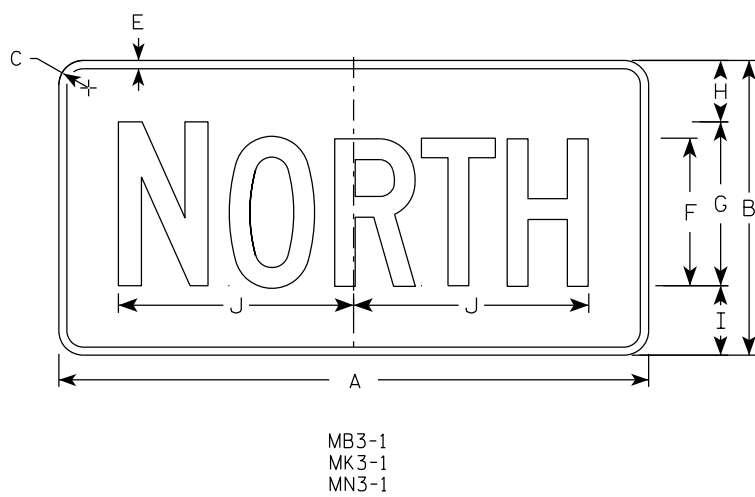
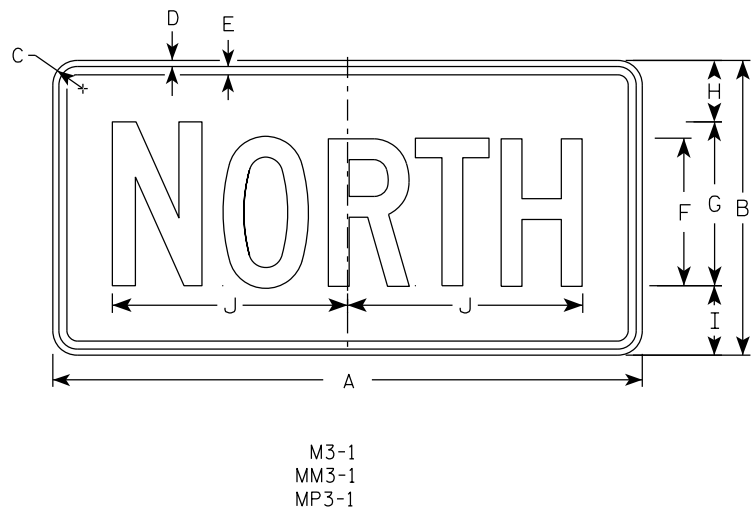
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 222	E
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STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

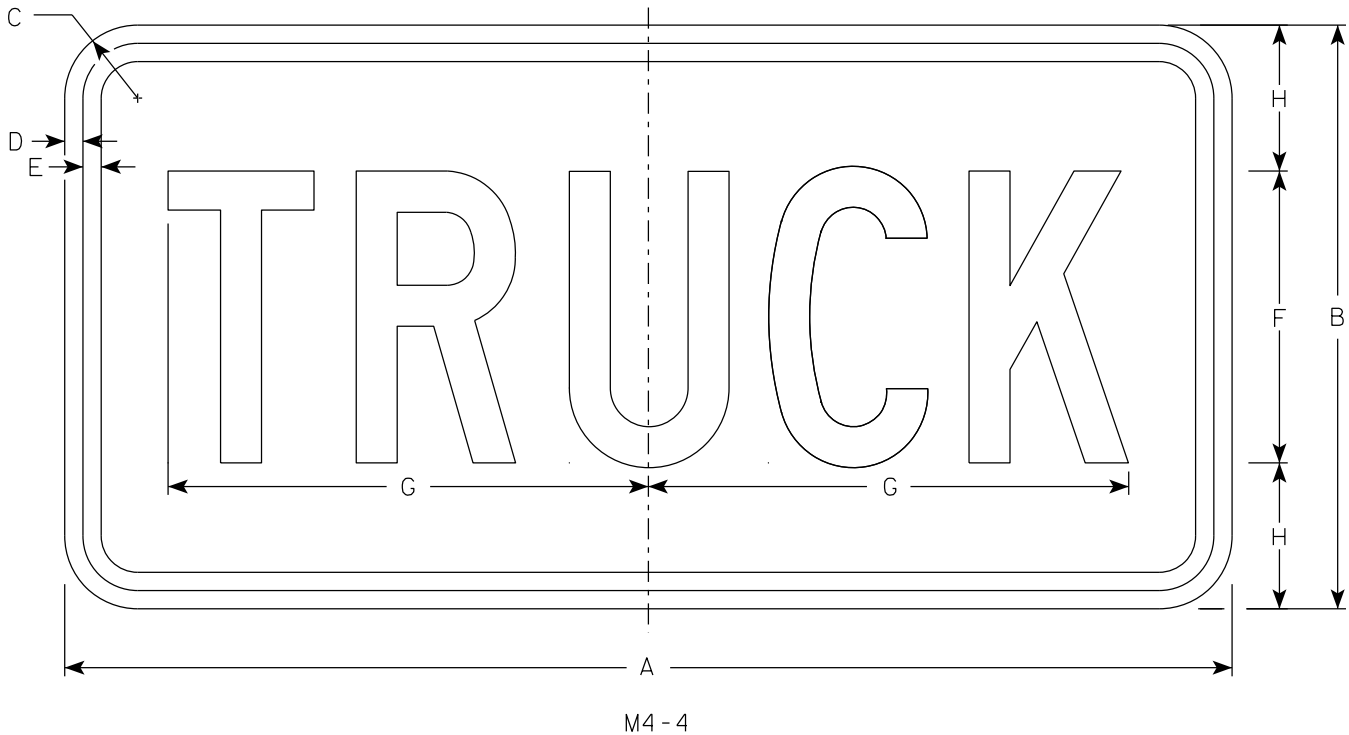
DATE 2/8/2023 PLATE NO. M3-1.15

7

7

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	9 7/8	3																			2.0
2M	24	12	1 1/2	3/8	3/8	6	9 7/8	3																			2.0
3	36	18	1 1/2	3/8	1/2	9	15 5/8	4 1/2																			4.5
4	36	18	1 1/2	3/8	1/2	9	15 5/8	4 1/2																			4.5
5	36	18	1 1/2	3/8	1/2	9	15 5/8	4 1/2																			4.5

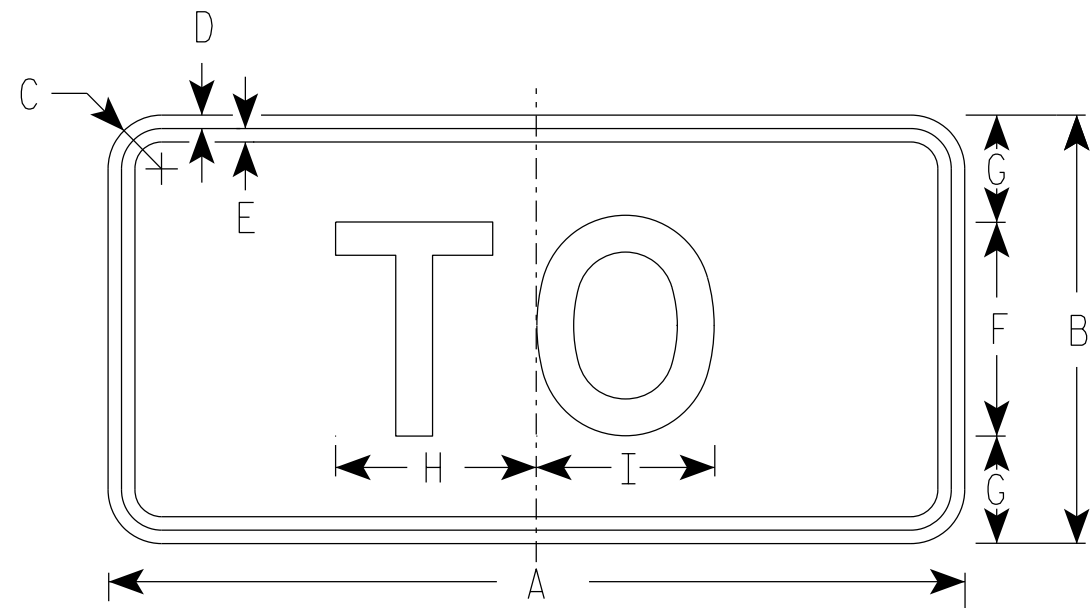
STANDARD SIGN

M4 - 4

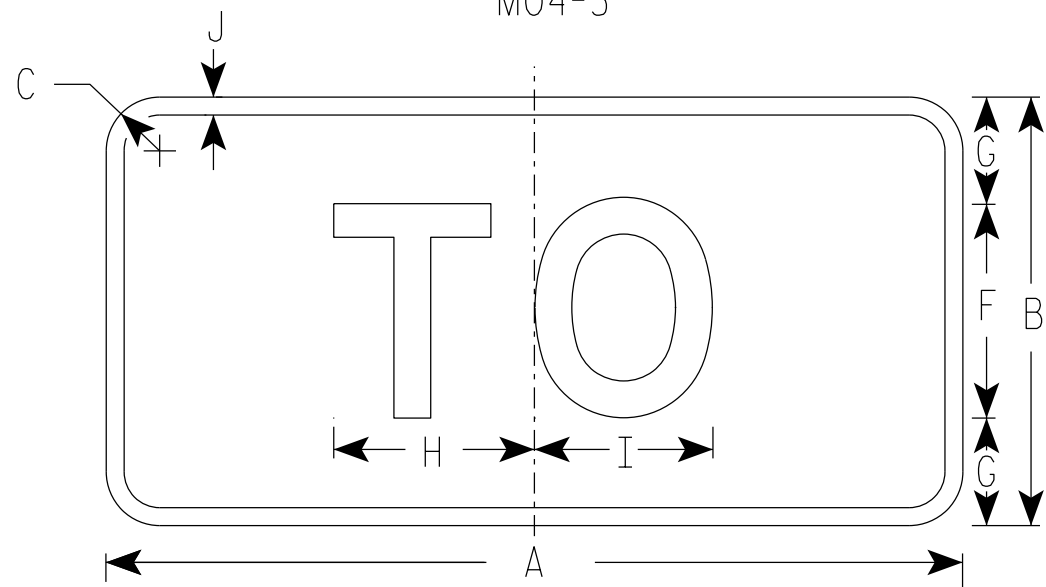
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/21/2022 PLATE NO. M4-4.4



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



MB4-5
MK4-5
MN4-5

NOTES

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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 224

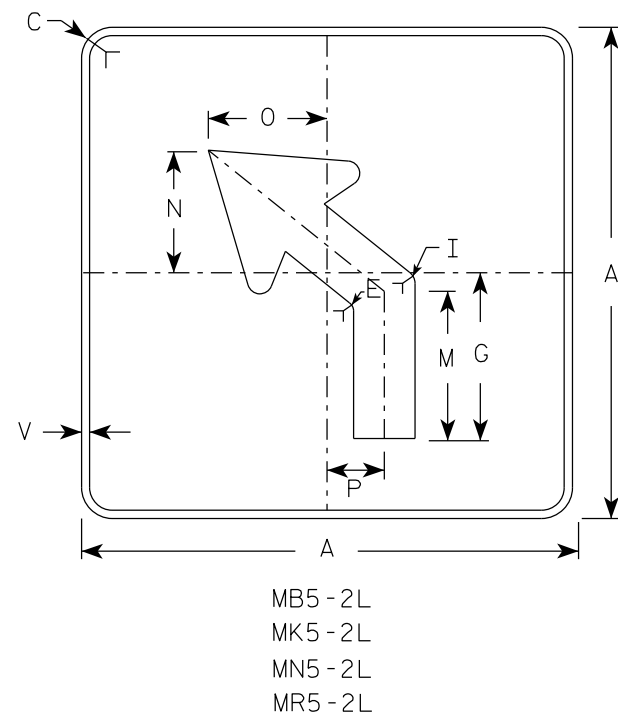
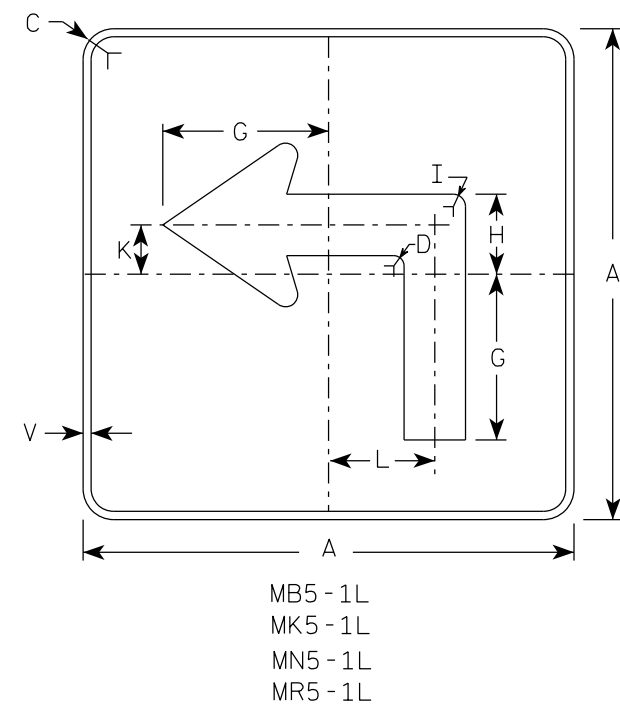
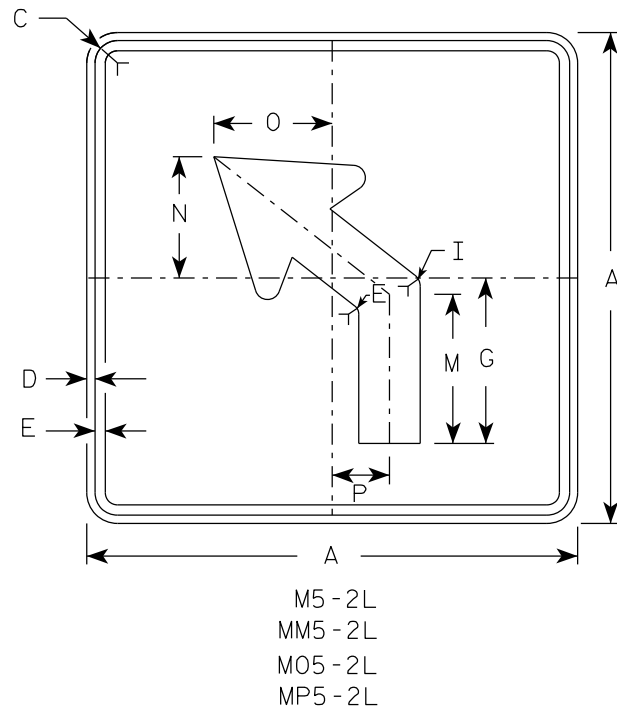
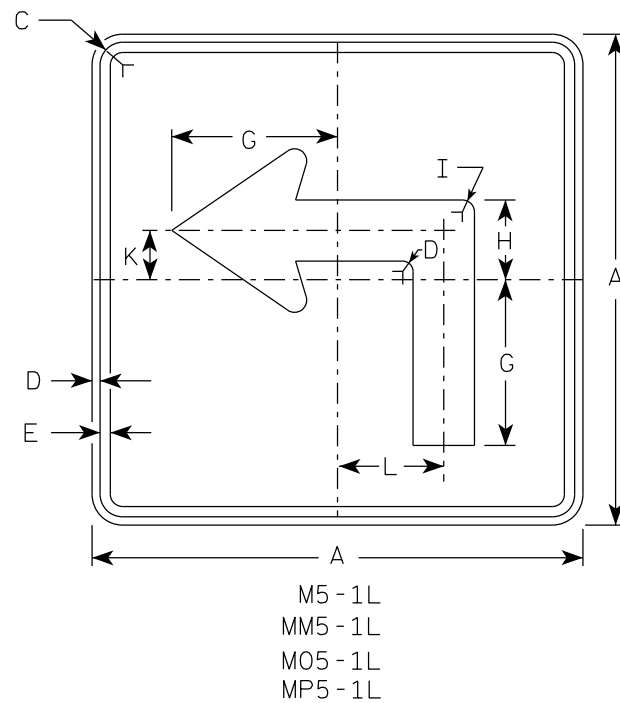
E

STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

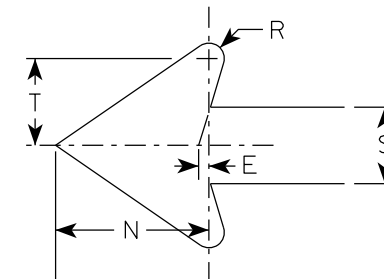
DATE 2/8/2023 PLATE NO. M4-5.11



NOTES

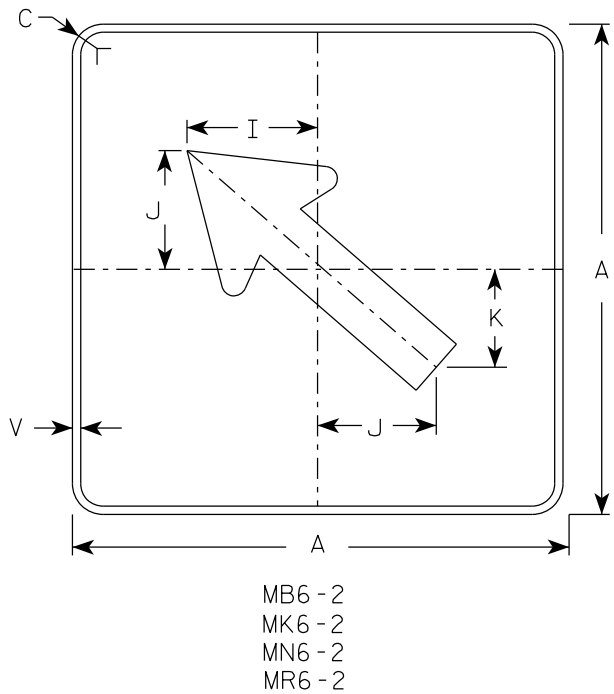
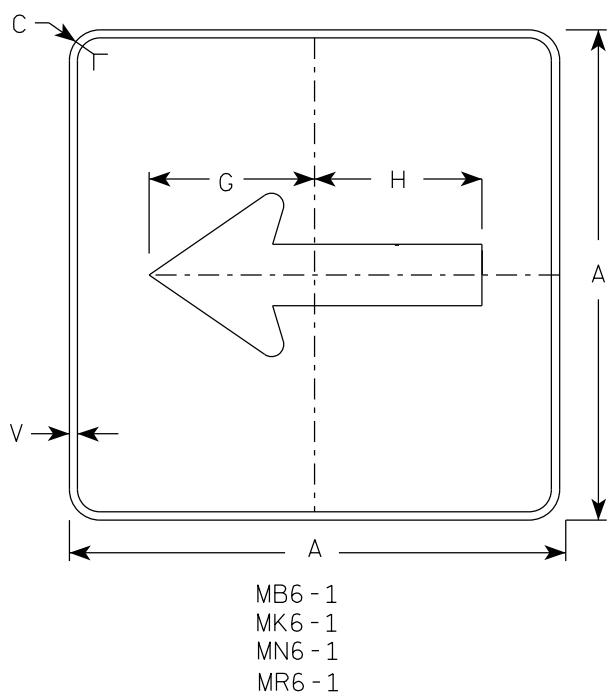
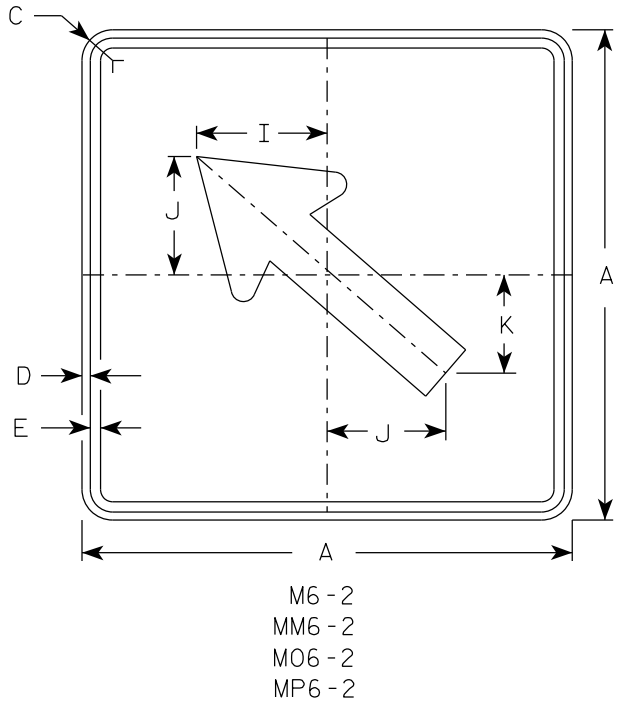
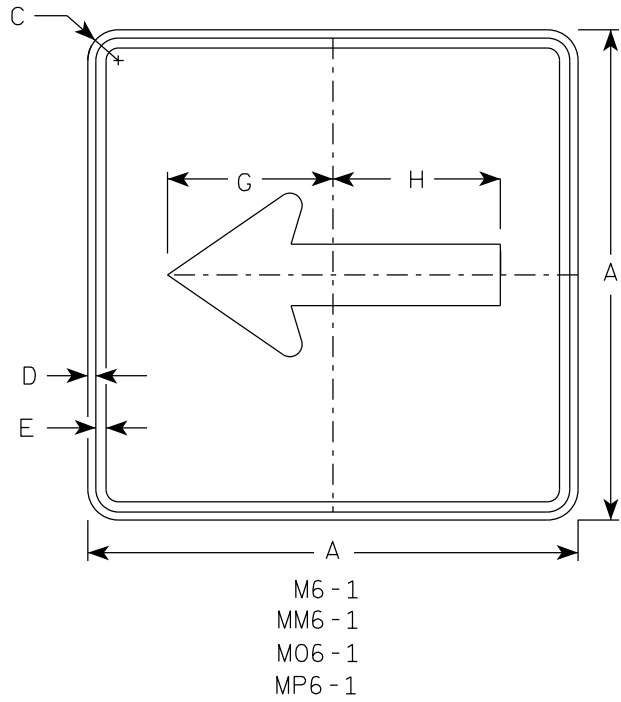
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|
| M5-1 and | M5-2 | Background - White |
| | | Message - Black |
| MB5-1 and | MB5-2 | Background - Blue |
| | | Message - White |
| MK5-1 and | MK5-2 | Background - Green |
| | | Message - White |
| MM5-1 and | MM5-2 | Background - White |
| | | Message - Green |
| MN5-1 and | MN5-2 | Background - Brown |
| | | Message - White |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
| | | Message - Black |
| MP5-1 and | MP5-2 | Background - White |
| | | Message - Blue |
| MR5-1 and | MR5-2 | Background - Brown |
| | | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL

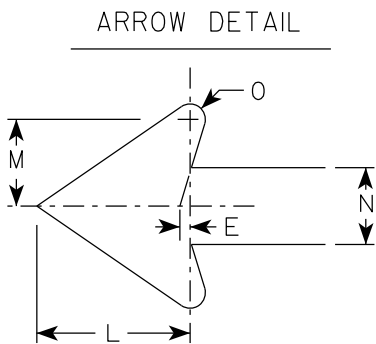


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2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

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 225	E
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- NOTES**
- Signs are Type II - Type H Reflective except as Shown
 - Color:
Background - See note 4
Message - See note 4
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow



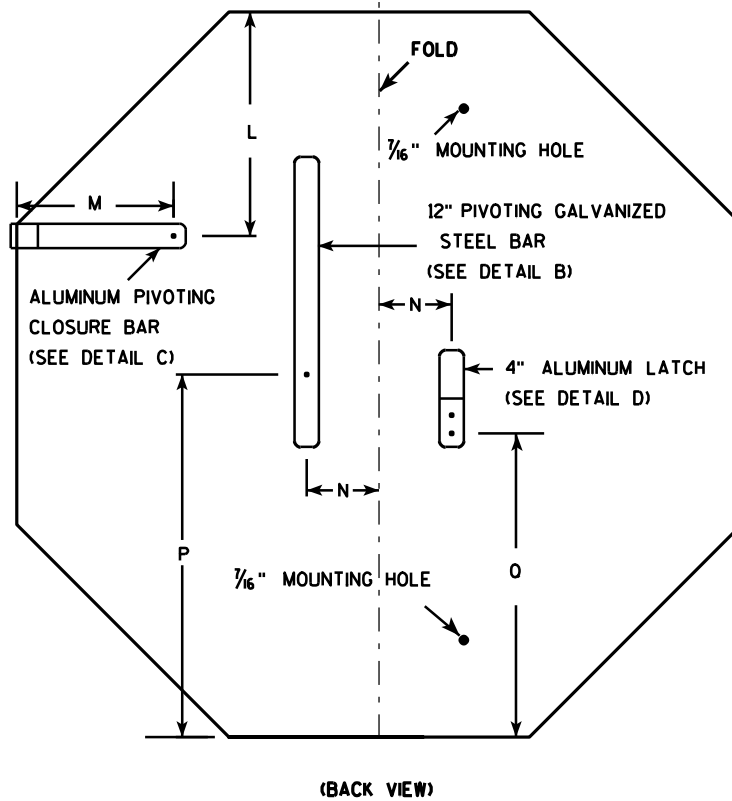
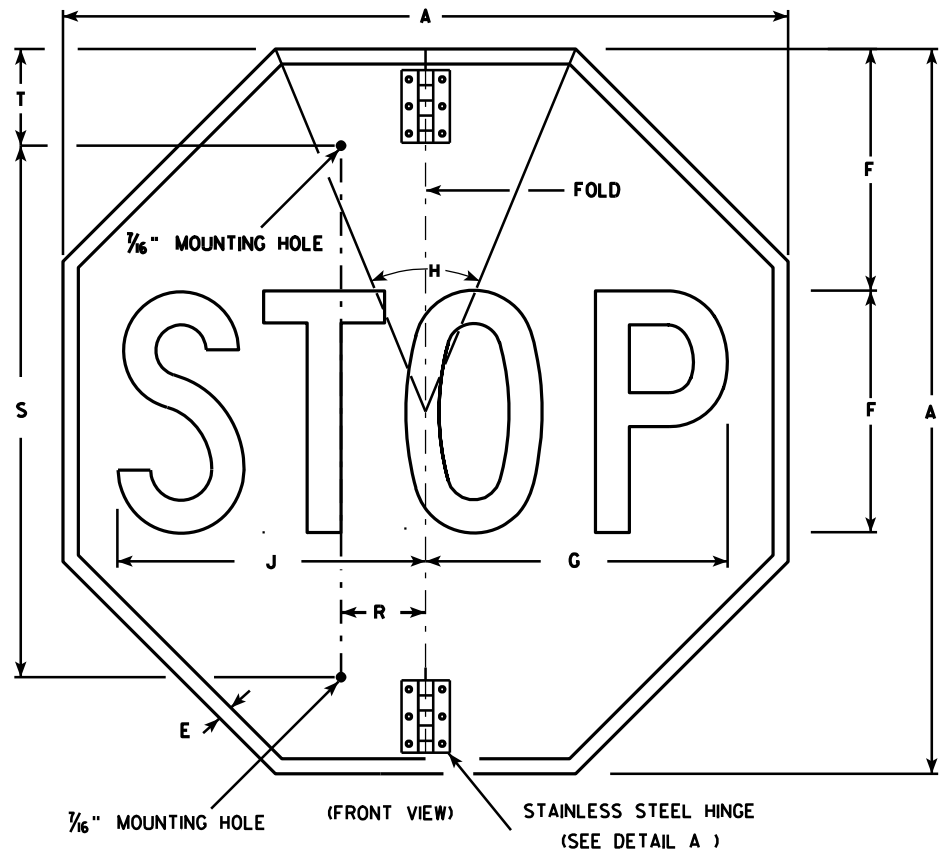
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4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

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

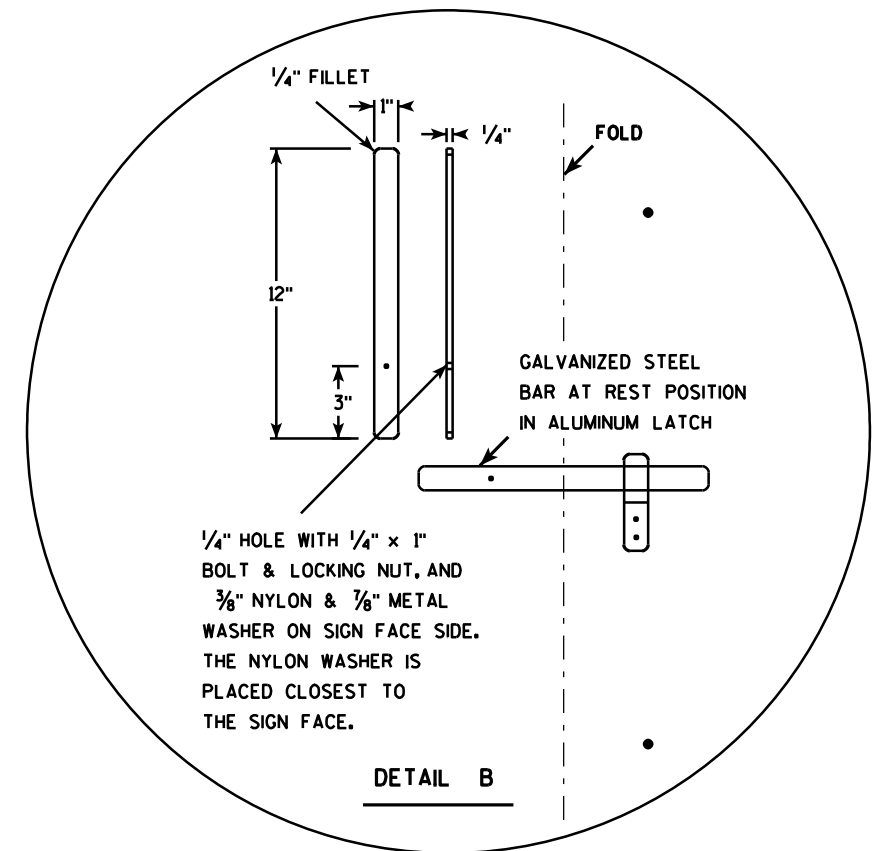
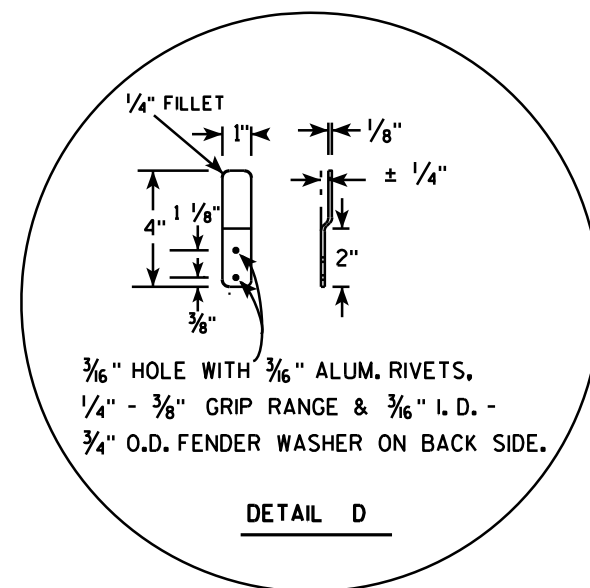
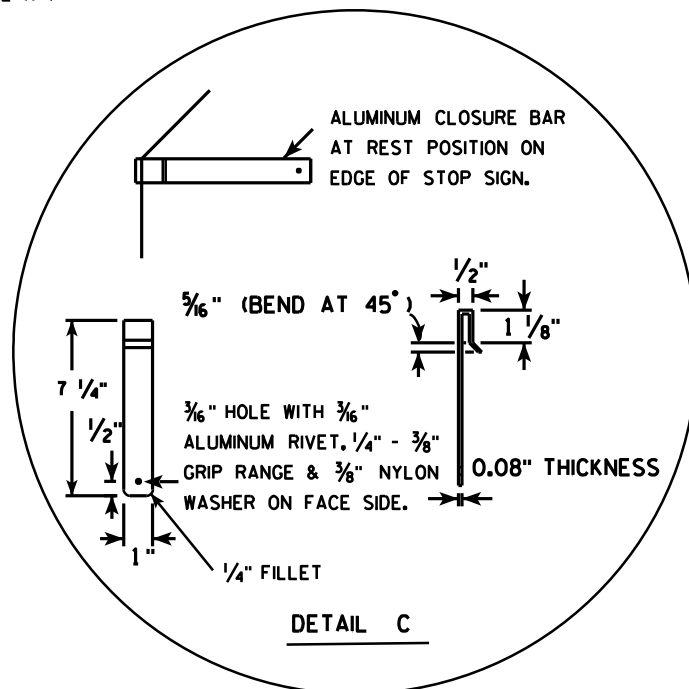
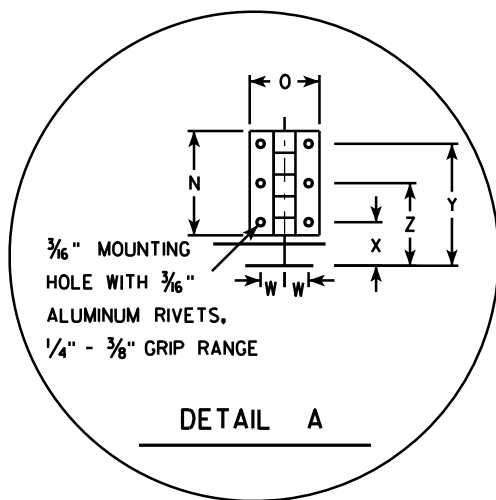
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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



NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/8	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/8	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/8	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 227	E
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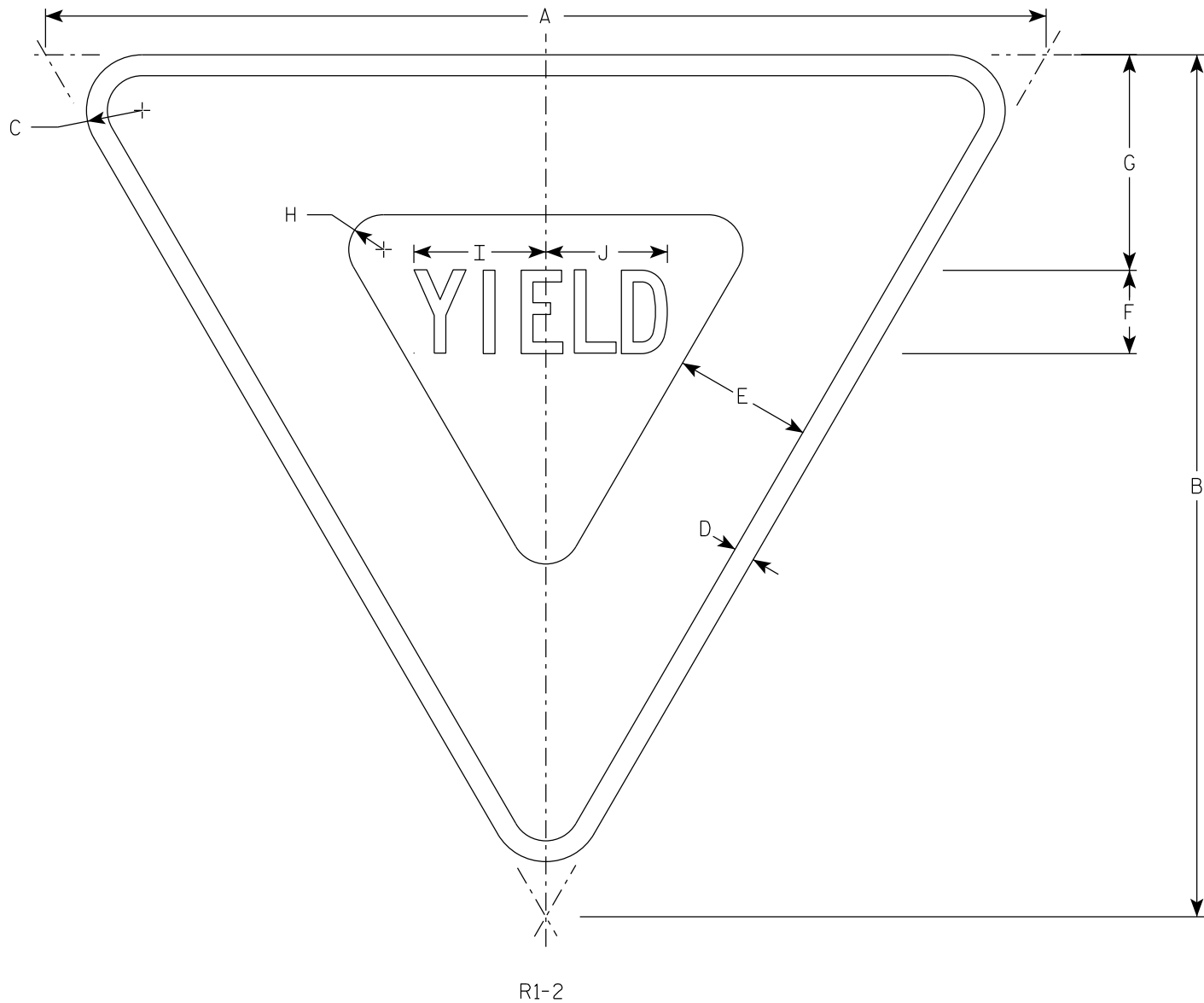
STANDARD SIGN R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



NOTES

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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	2	5⁄8	4	2 1⁄2	6 3⁄8	7⁄8	4	3 5⁄8																	2.71
2S	36	31	2	3⁄4	5	3	7 3⁄4	1 1⁄4	4 3⁄4	4 3⁄8																	3.88
2M	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
3	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
4	48	42	3	1	6	4	9 3⁄4	2	6 1⁄4	5 7⁄8																	7.00
5	60	52	3	1 1⁄2	8	5	13	2 1⁄2	7 7⁄8	7 1⁄4																	10.83
6																											
7	18	15 1⁄2	1	3⁄8	2 1⁄2	1 1⁄2	3 7⁄8	5⁄8	2 3⁄8	2 1⁄4																	0.97

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 228

E

STANDARD SIGN

R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

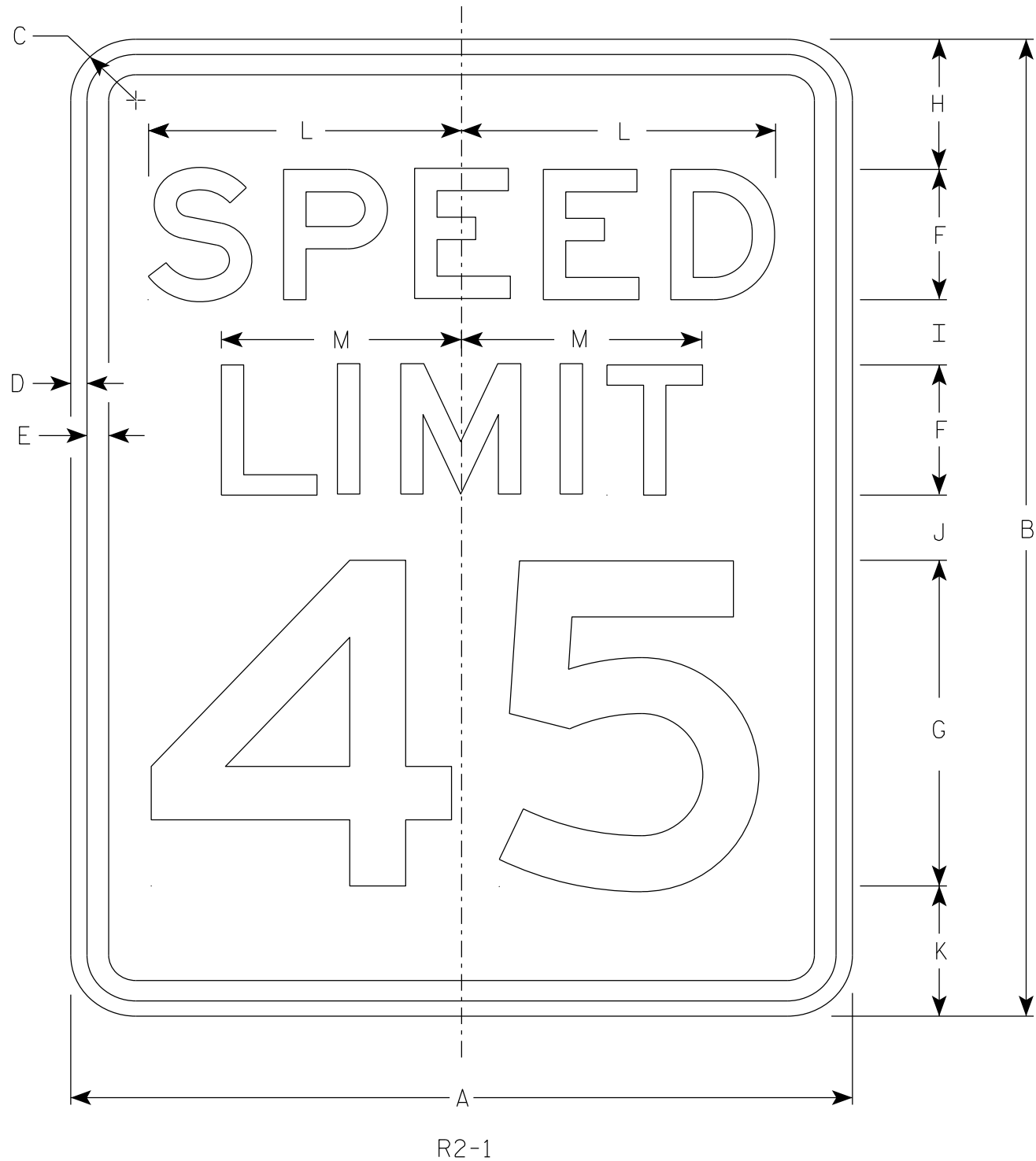
Matthew R. Rauch

for State Traffic Engineer

DATE 9/10/2024

PLATE NO. R1-2.13

7



NOTES

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

7

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

STANDARD SIGN

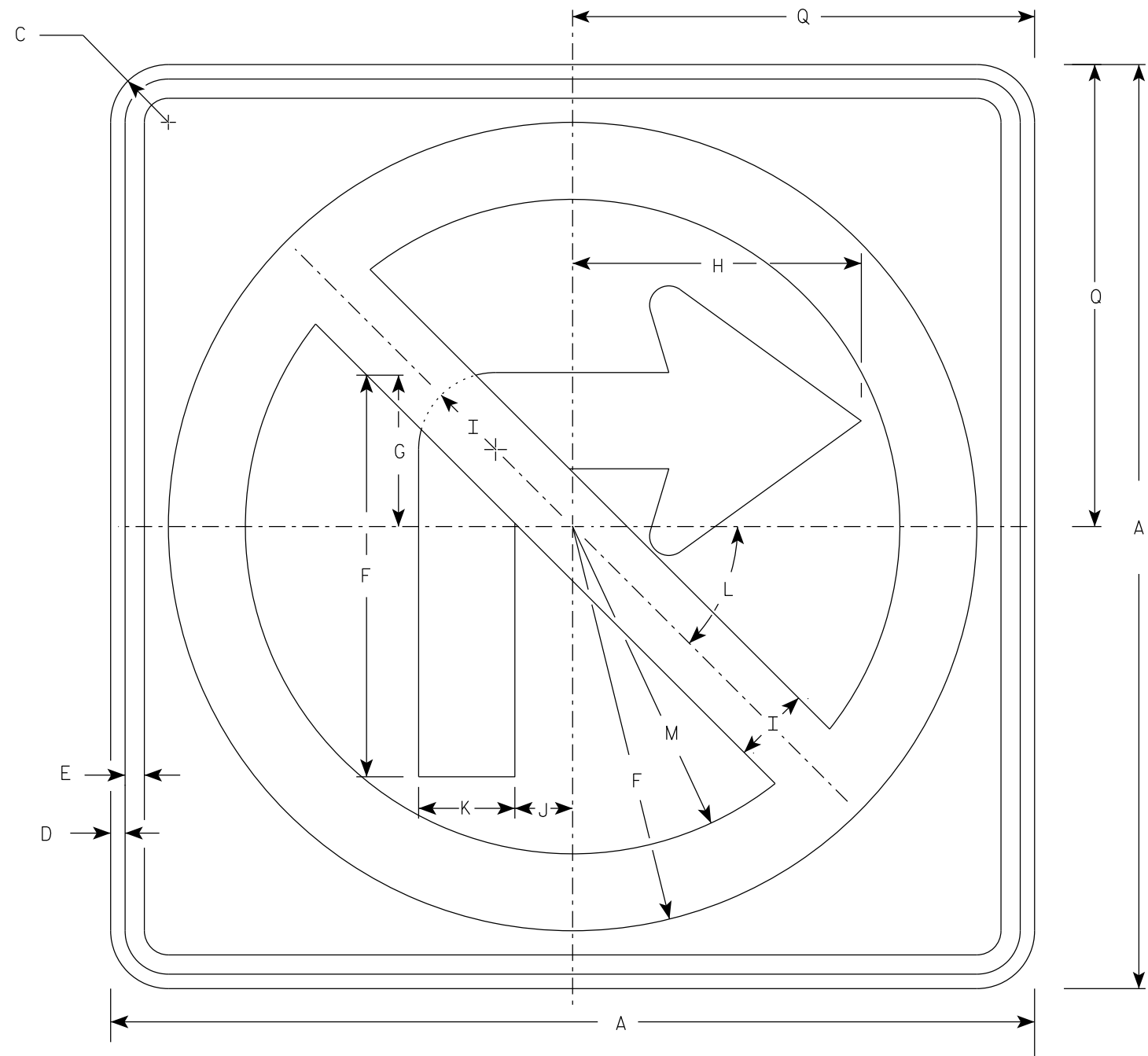
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

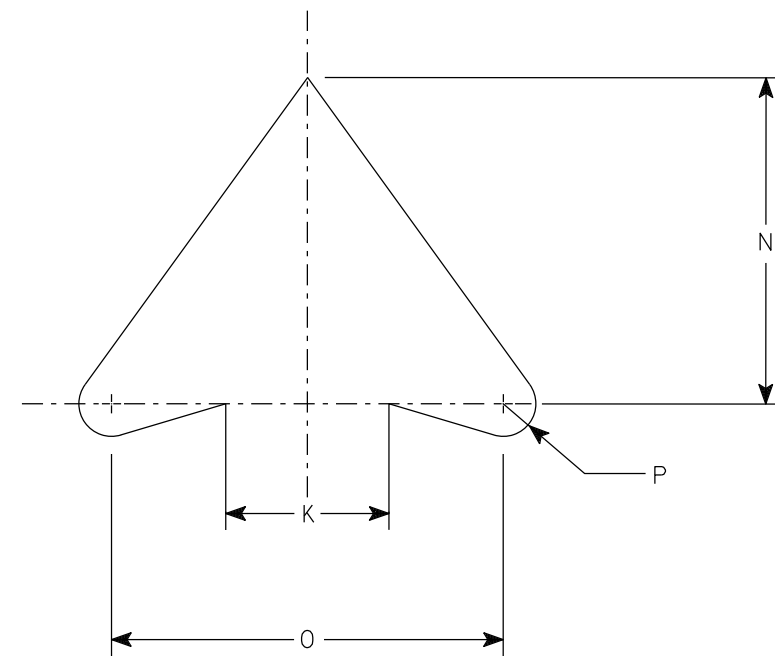
7



R3-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

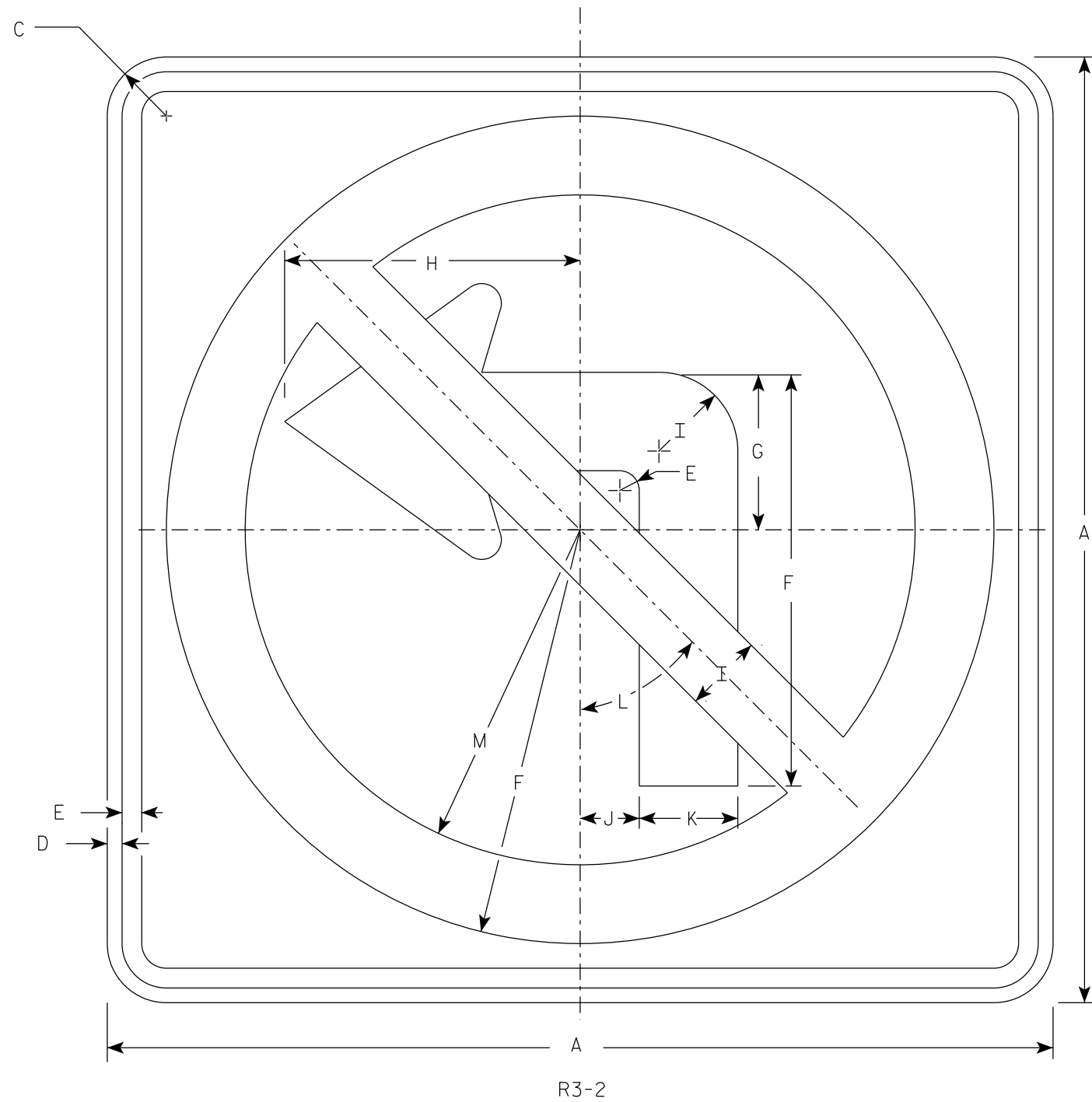


ARROW DETAIL

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

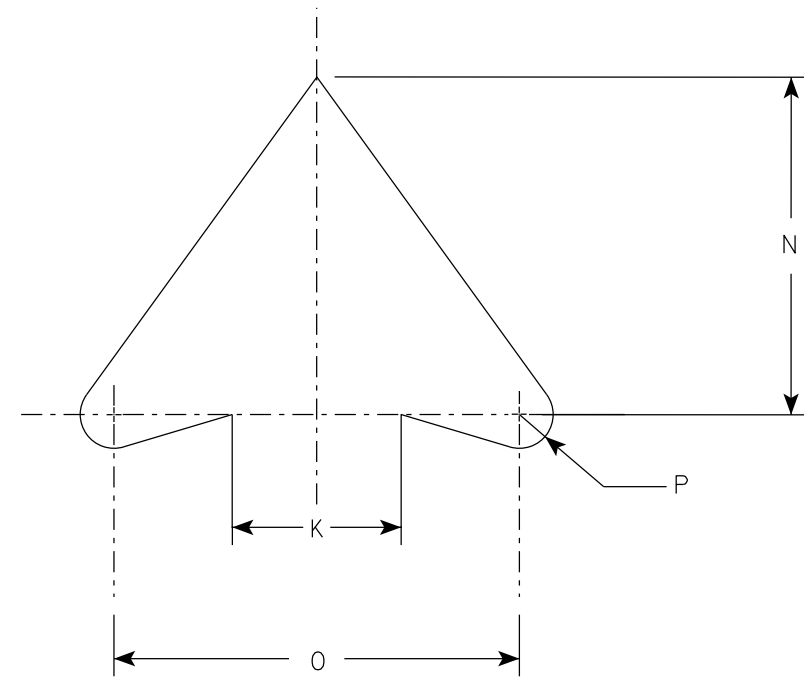
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 230												E
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7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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

PROJECT NO:

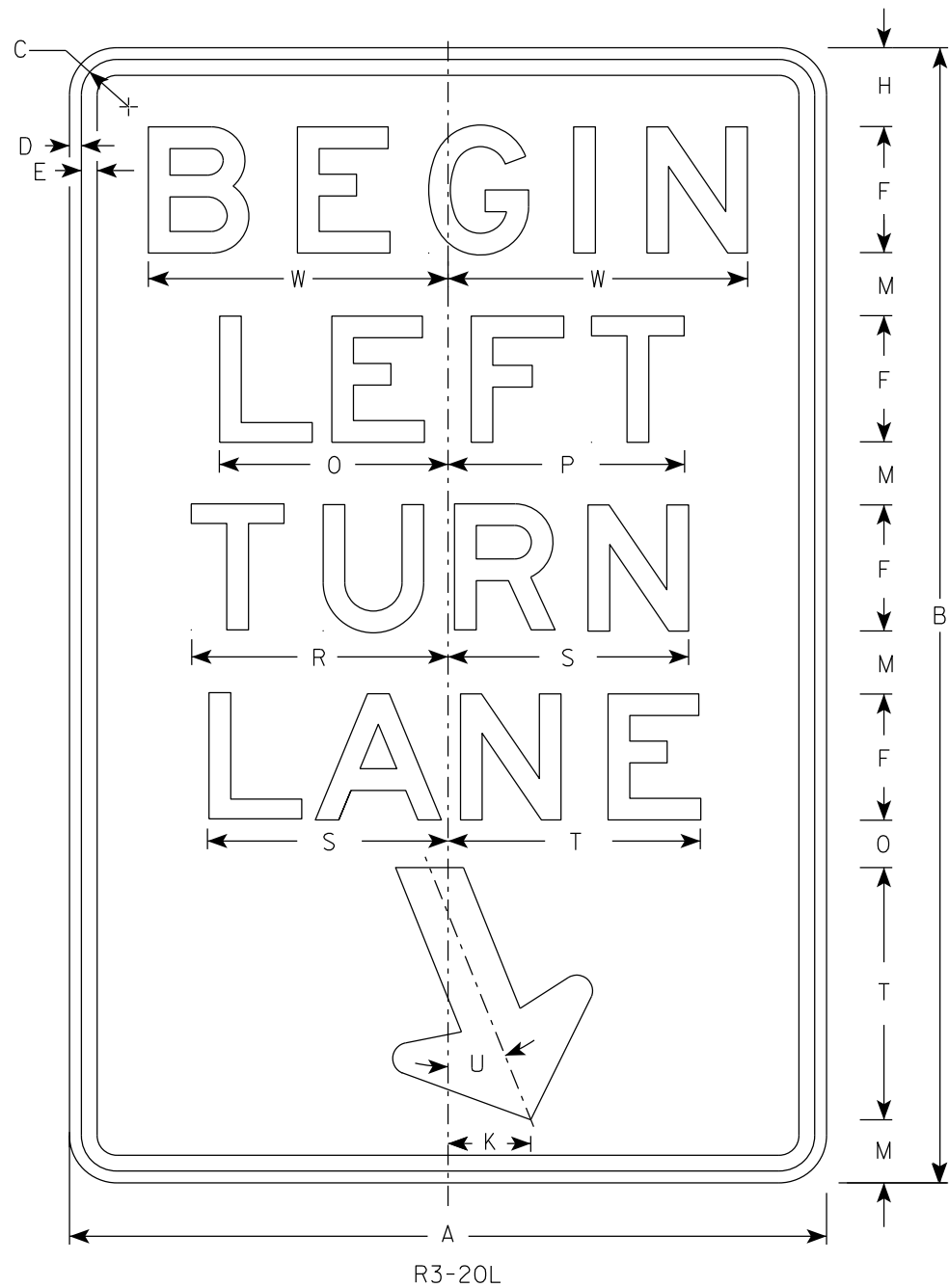
HWY:

COUNTY:

SHEET NO: 231

E

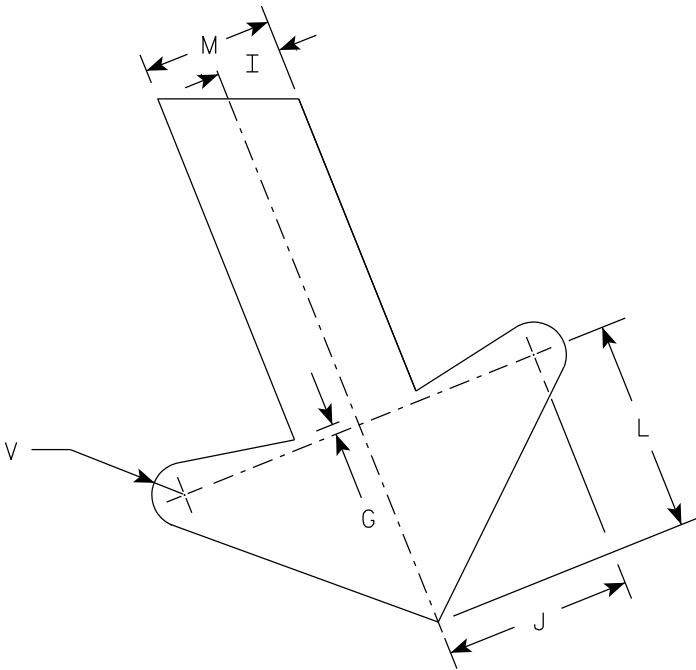
7



R3-20L

NOTES

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



ARROW DETAIL

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 7/8	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

PROJECT NO:

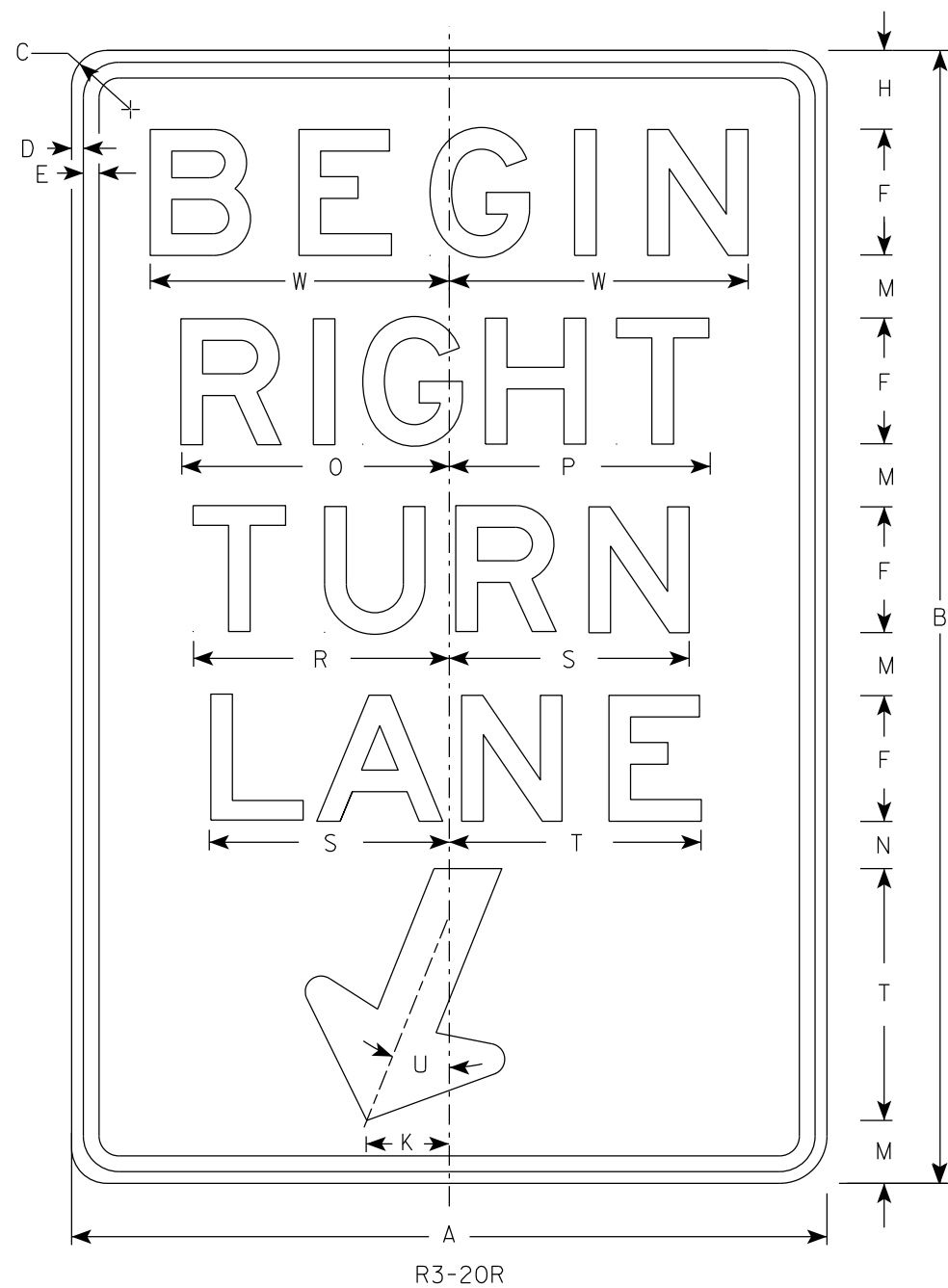
HWY:

COUNTY:

SHEET NO: 232

E

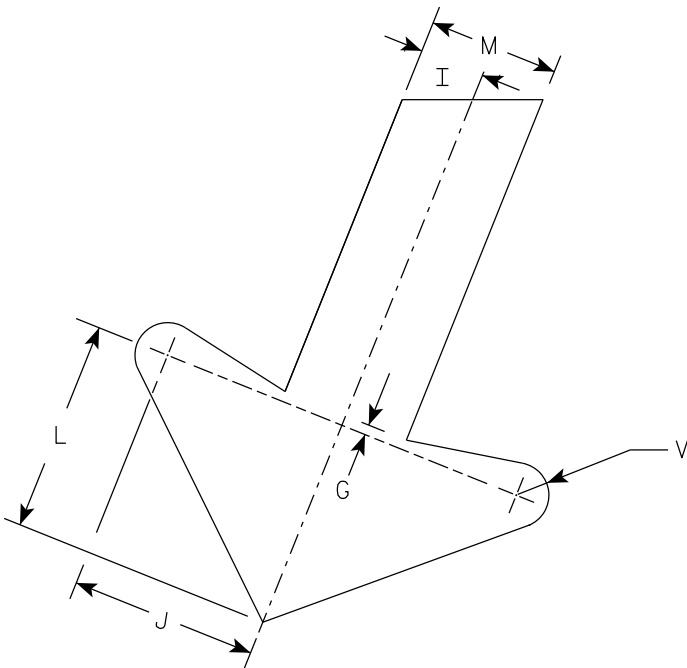
7



R3-20R

NOTES

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



ARROW DETAIL

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 7/8	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

PROJECT NO:

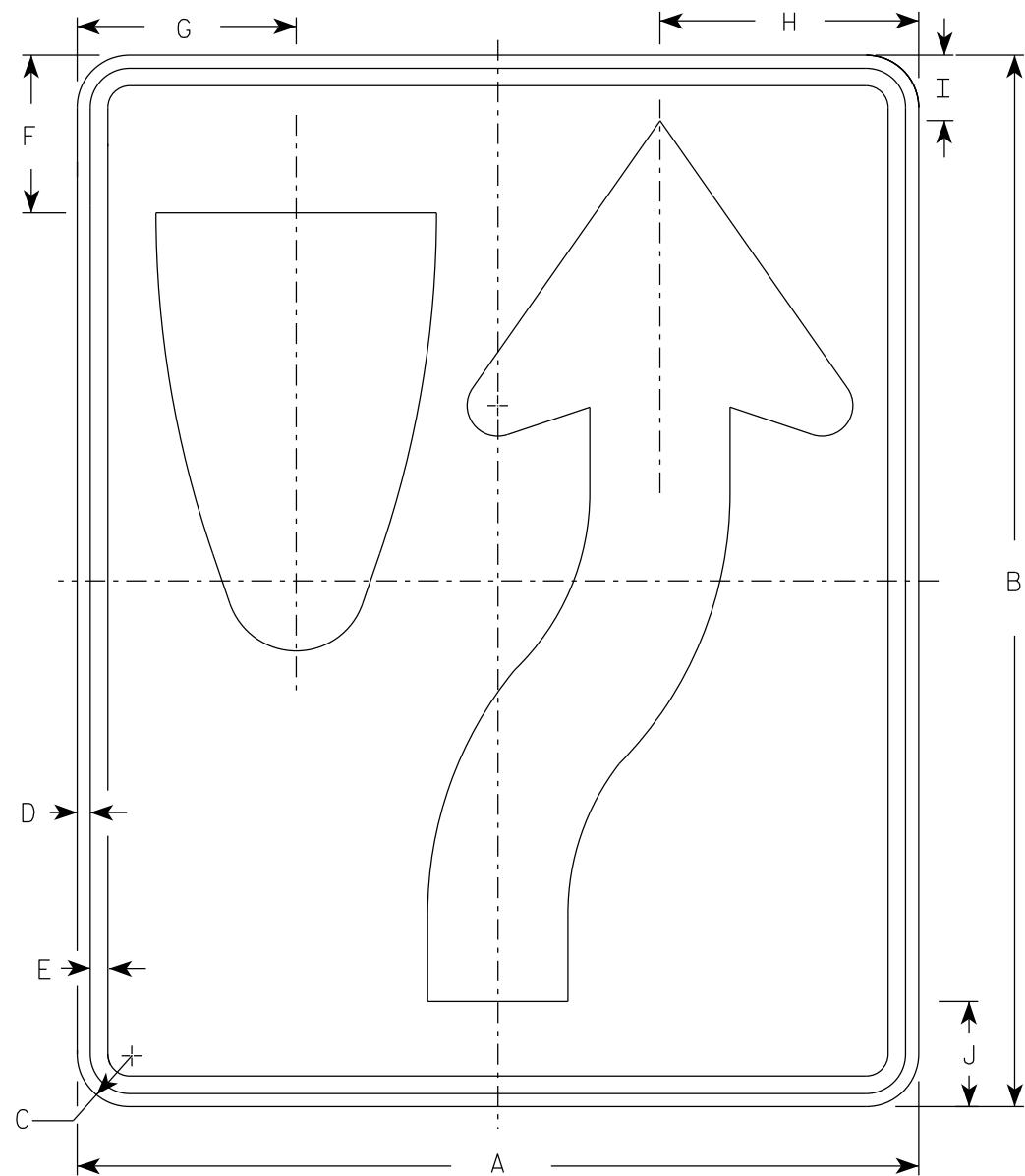
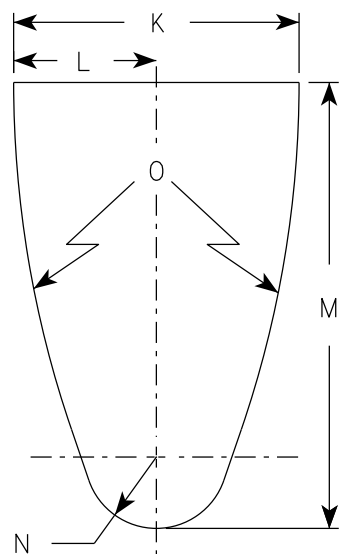
HWY:

COUNTY:

SHEET NO: 233

E

DIVIDER DETAIL

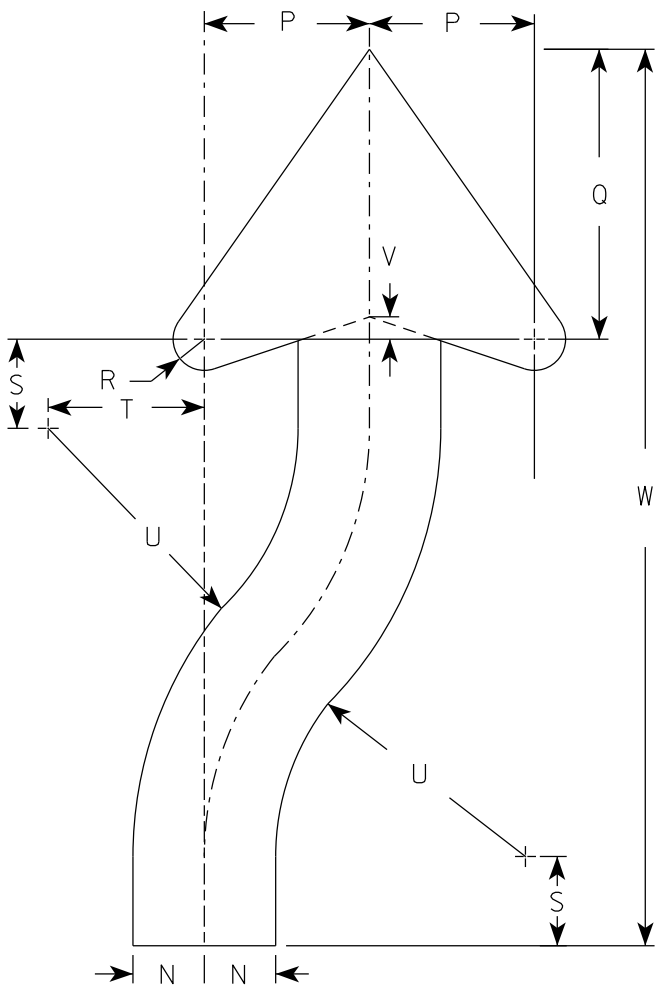


R4-7

NOTES

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

ARROW DETAIL



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

PROJECT NO:

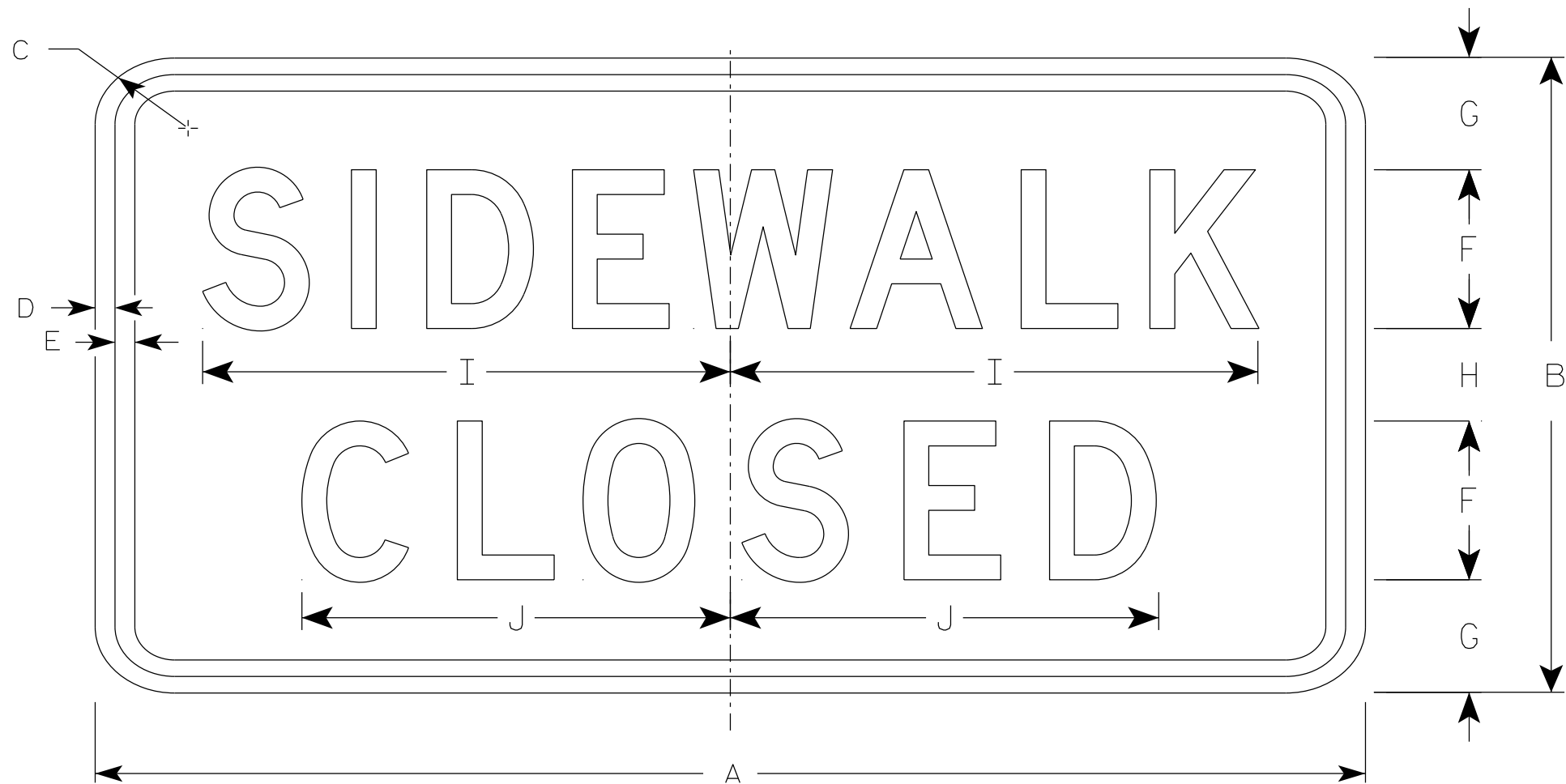
HWY:

COUNTY:

SHEET NO: 234

E

7



R9-9

NOTES

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

7

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

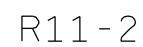
PROJECT NO:

HWY:

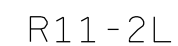
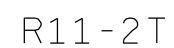
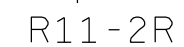
COUNTY:

SHEET NO: 235

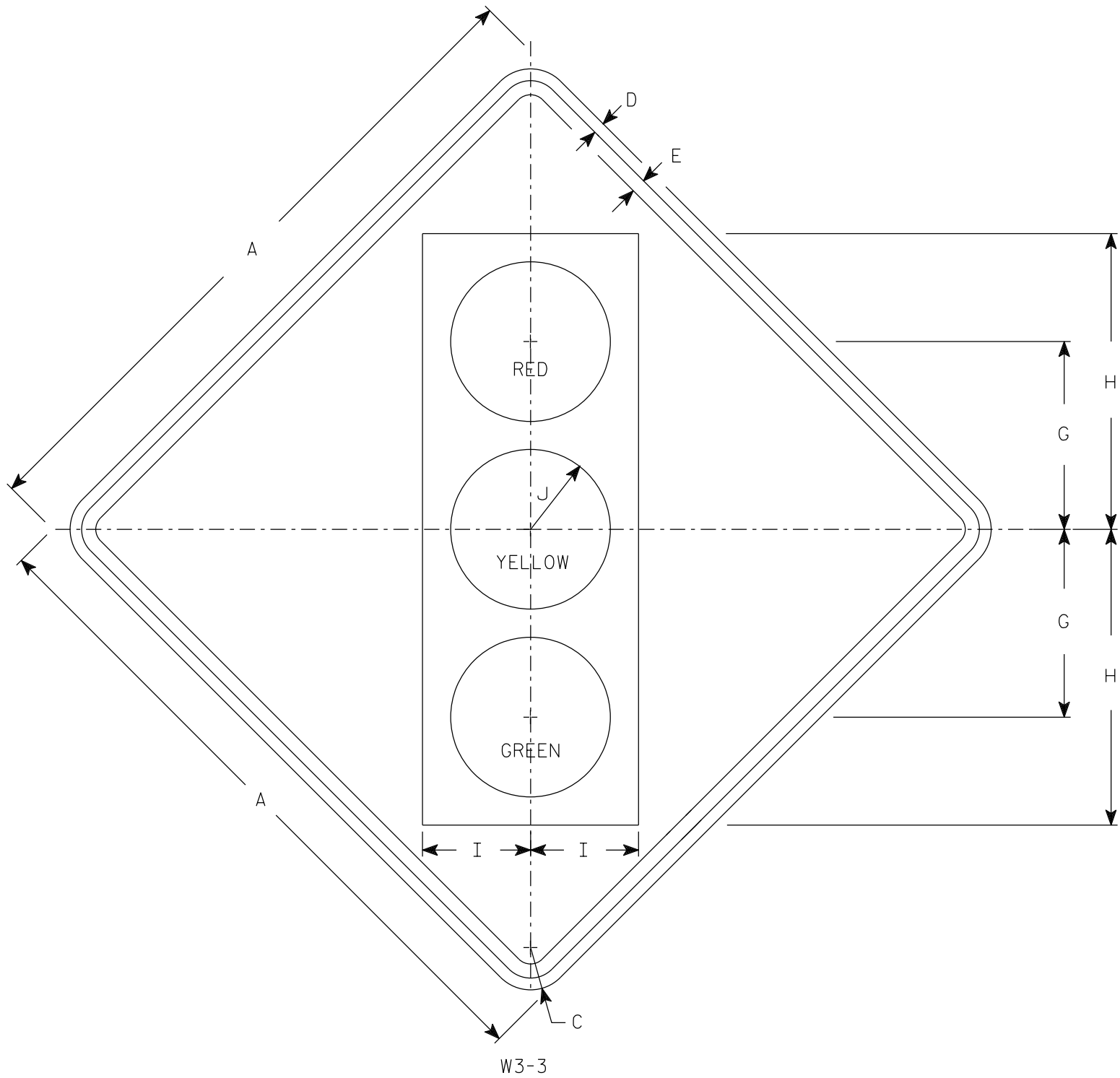
E



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.



STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE <u>2/5/24</u>	PLATE NO. <u>R11-2.12</u>



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Message - See Note 3
- 3. Symbol and border are non-reflective black.
 - Top circle - Type H Reflectorized Red
 - Center circle - Same as background
 - Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 7/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		2 1/4	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN

W3-3

WISCONSIN DEPT OF TRANSPORTATION

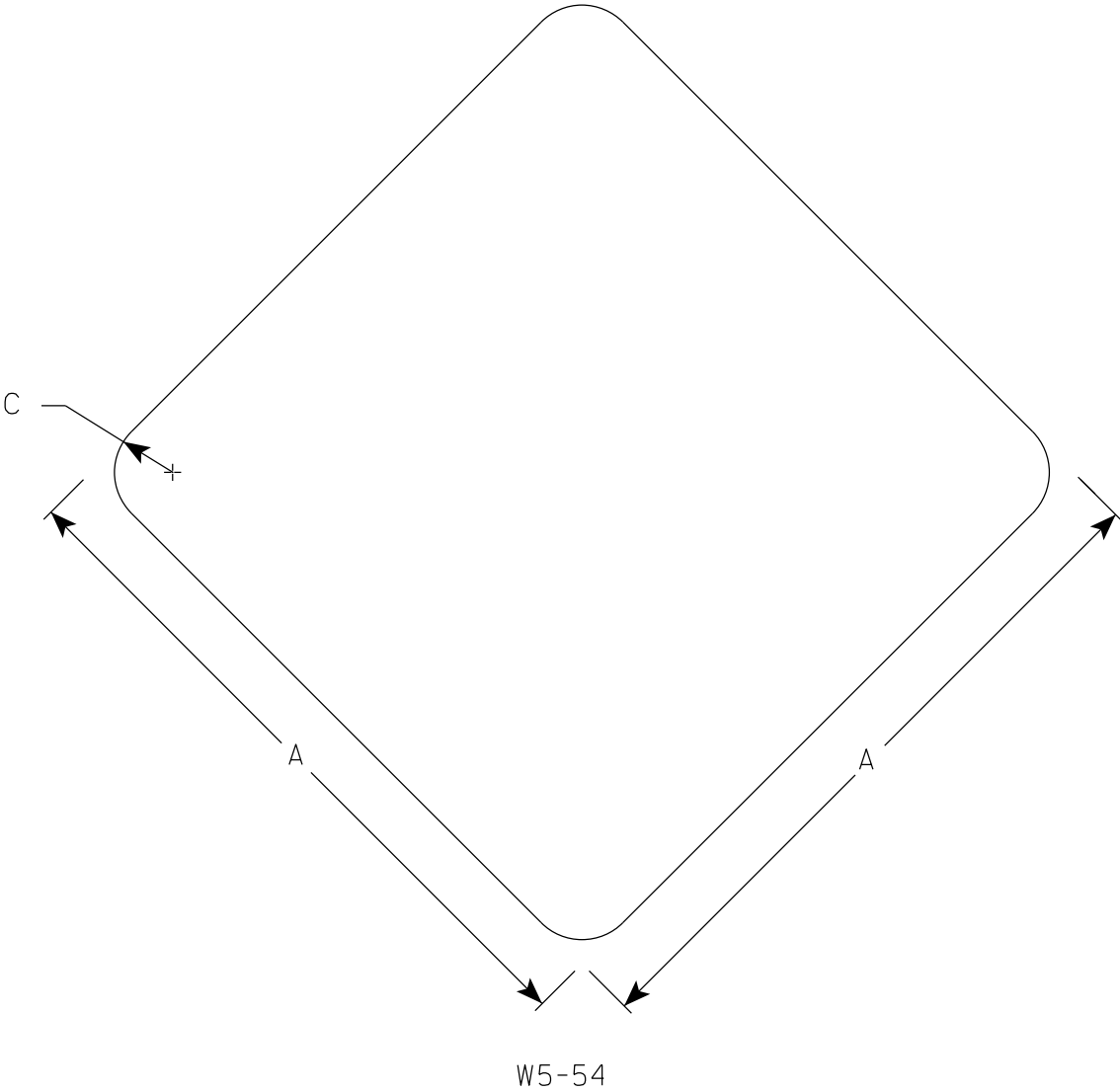
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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

Background - Yellow



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12		1 1/2																								1.0
2S	18		1 1/2																								2.25
2M	18		1 1/2																								2.25
3																											
4																											
5																											

STANDARD SIGN
W5-54

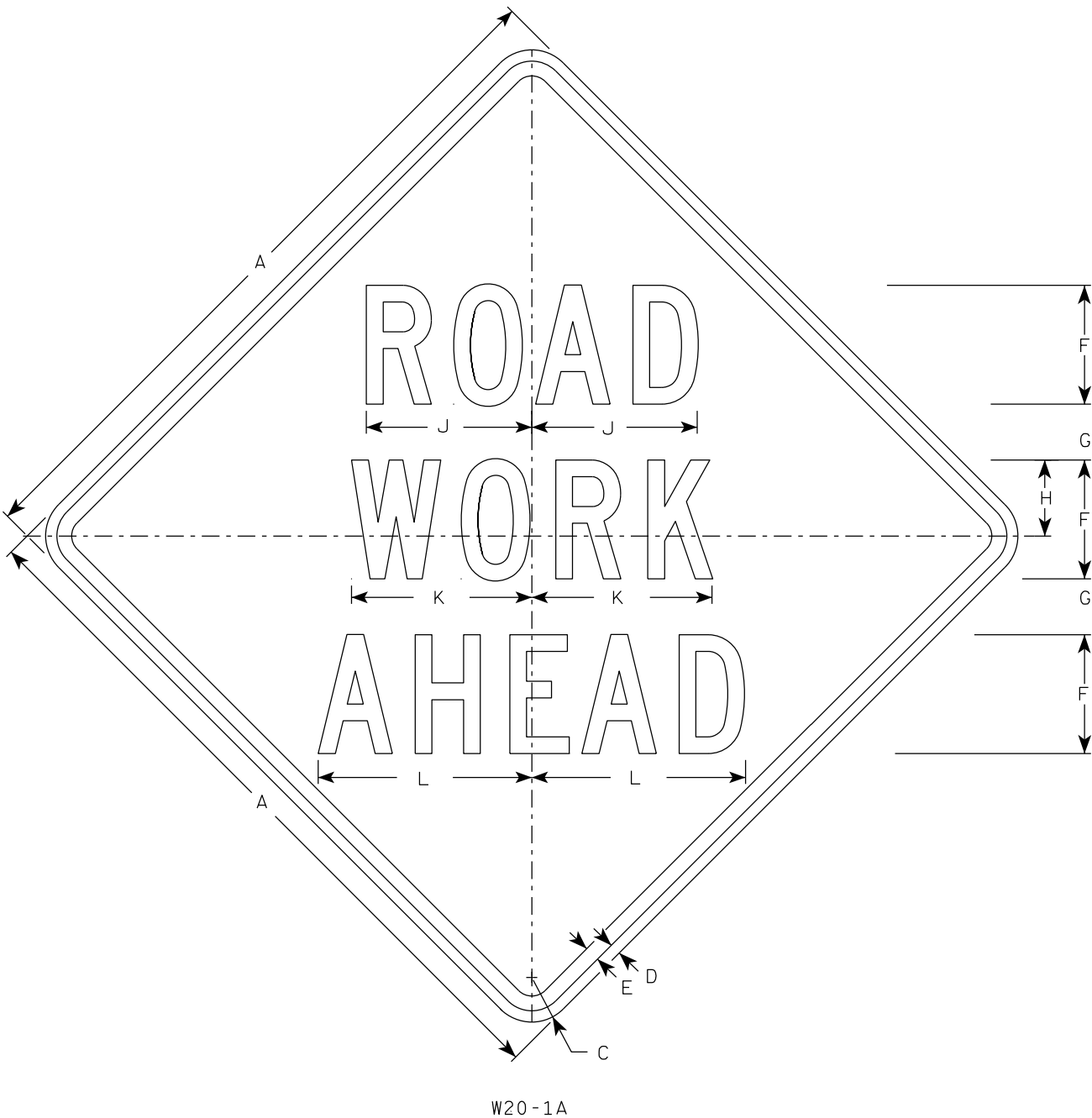
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

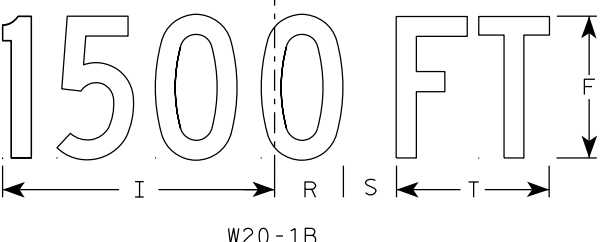
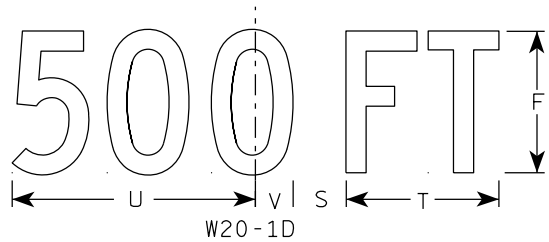
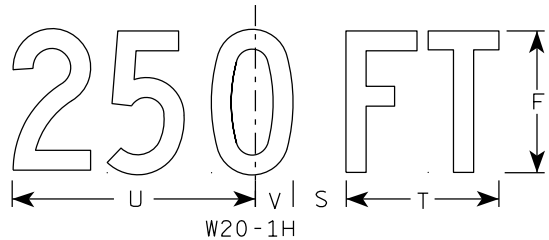
Matthew R. Rauch

for State Traffic Engineer

DATE 3/5/2024PLATE NO. W5-54.9

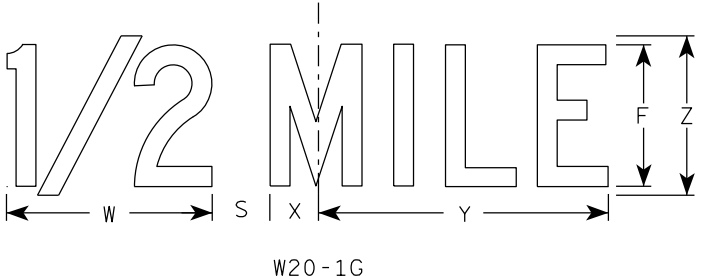


W20-1A

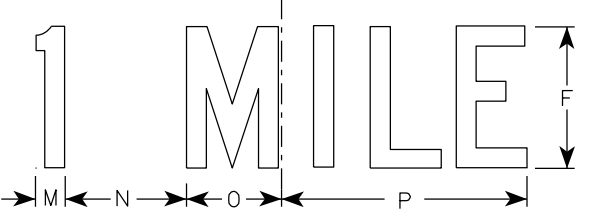


W20-1B

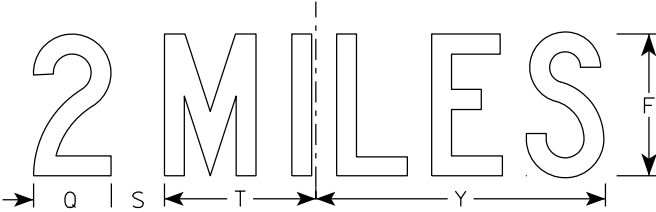
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



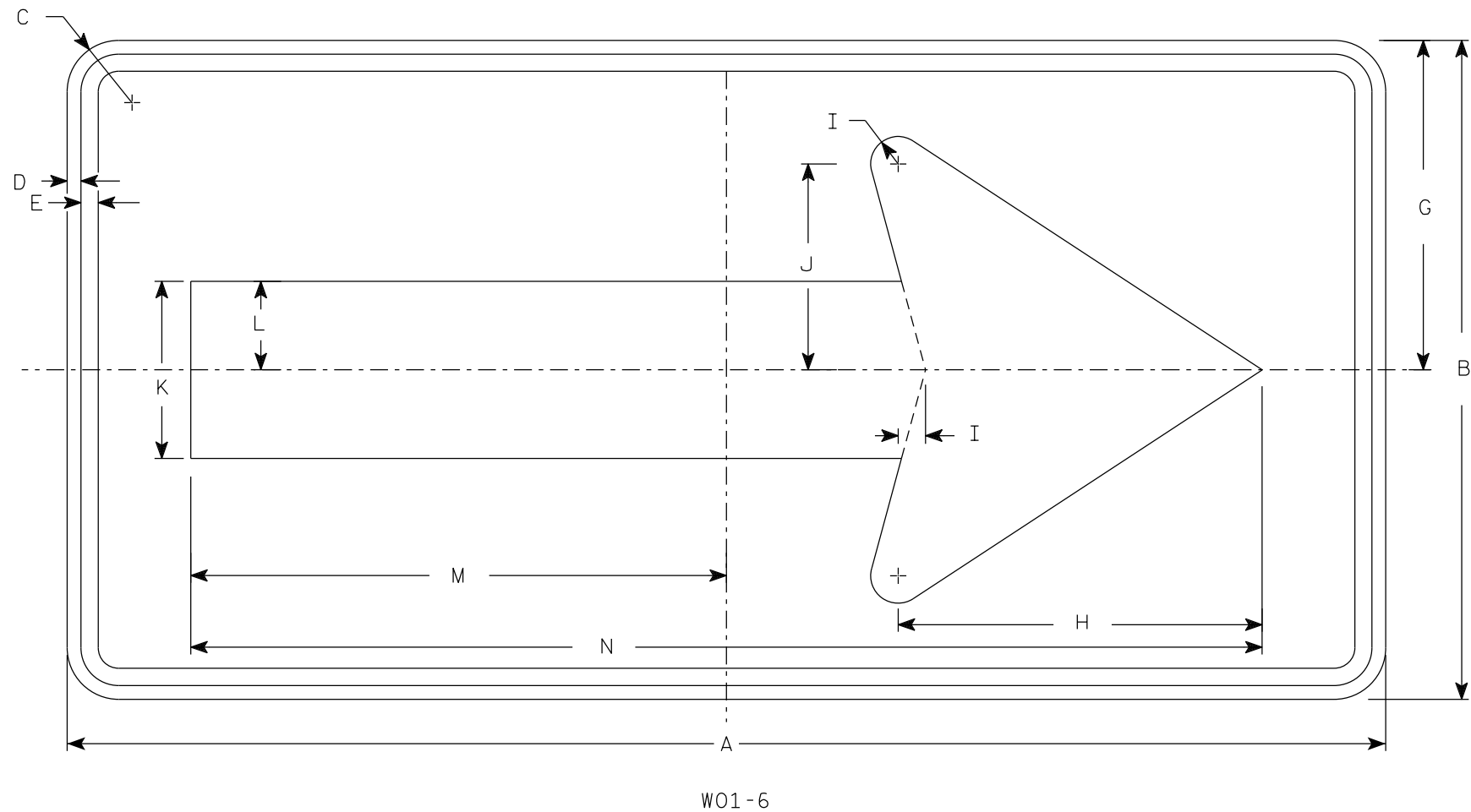
W20-1F



W20-1E

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

7



NOTES

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

7

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 7/8	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 7/8	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 7/8	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 7/8	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 7/8	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

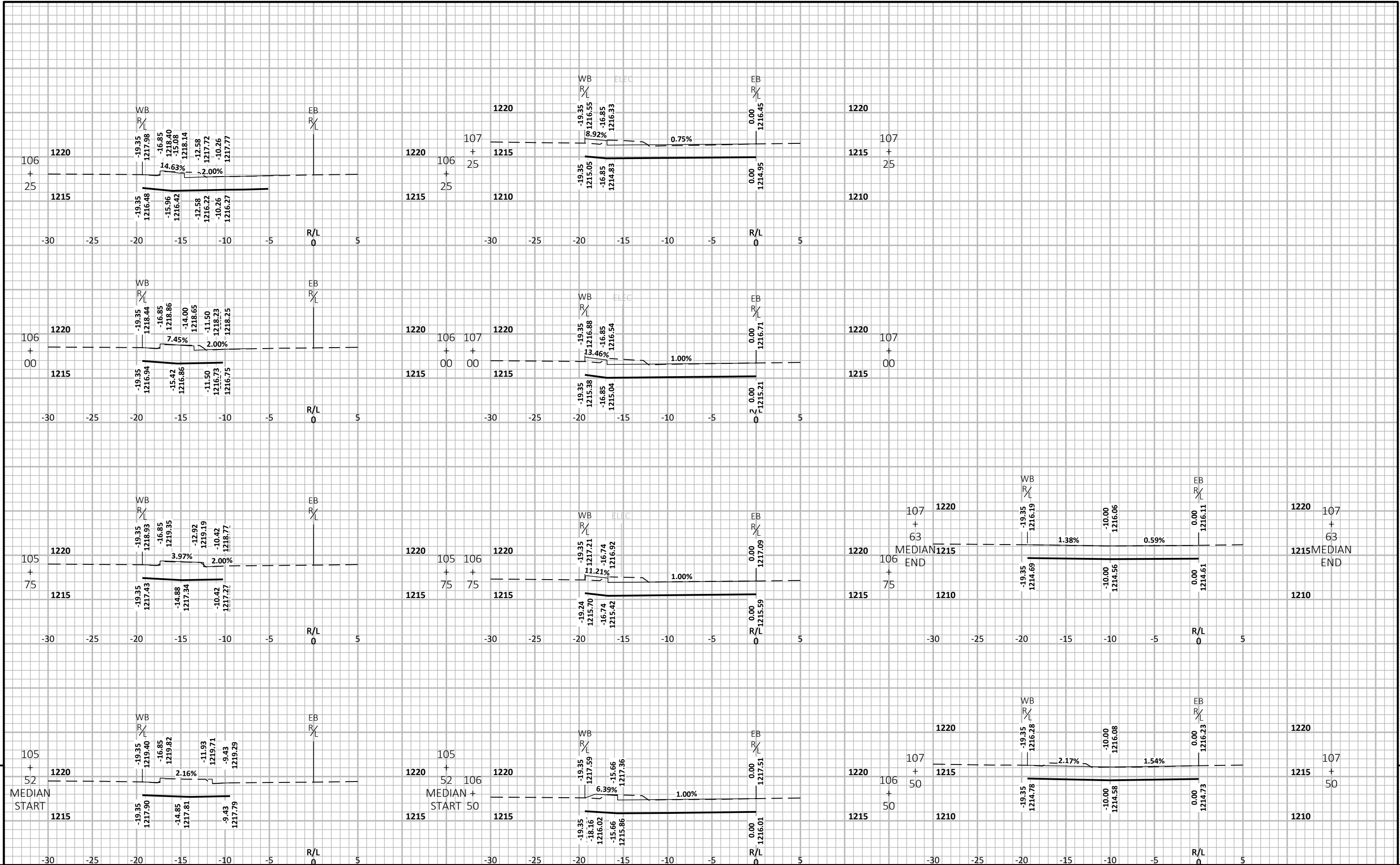
APPROVED

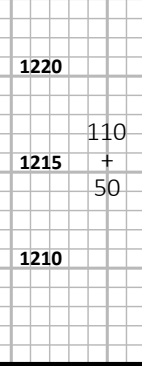
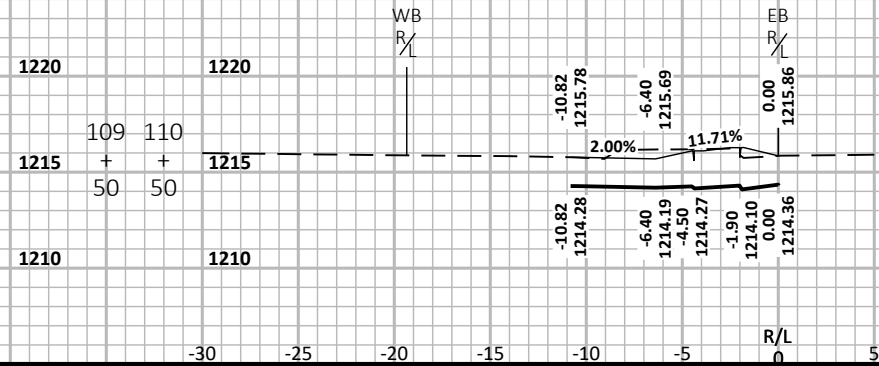
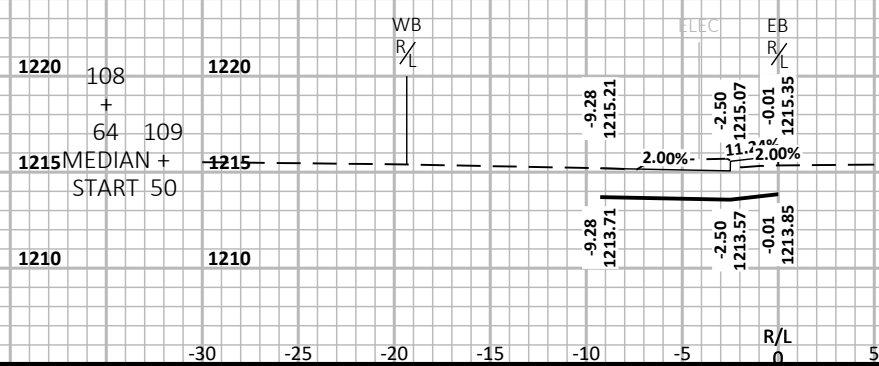
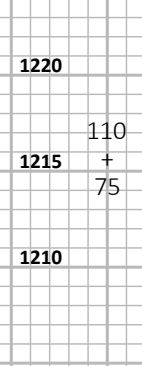
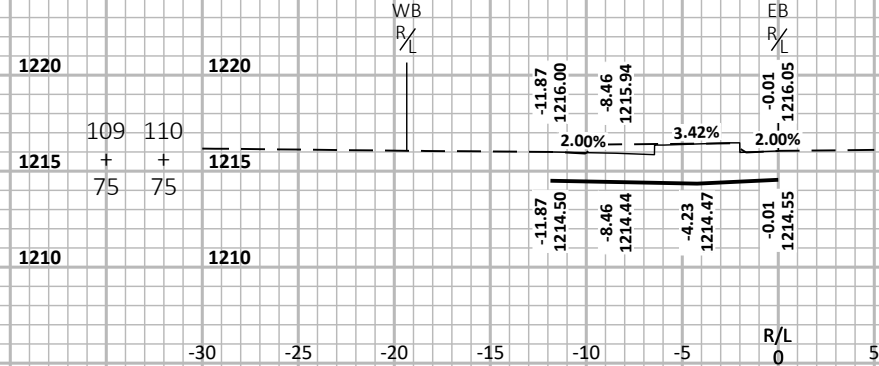
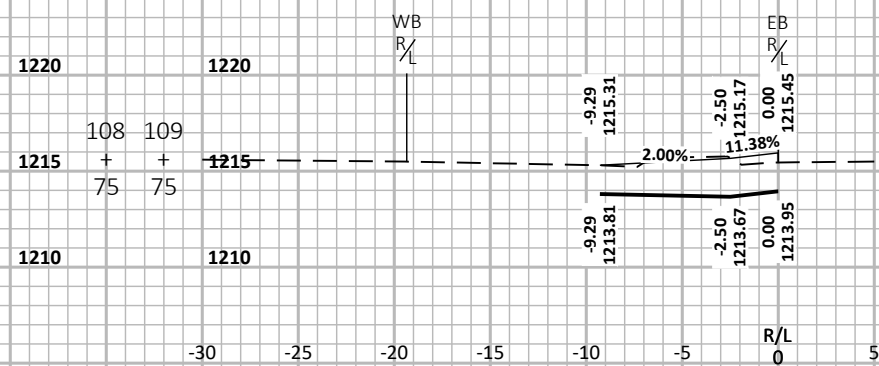
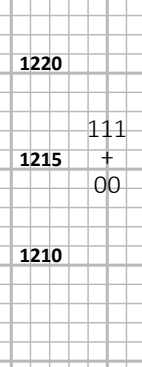
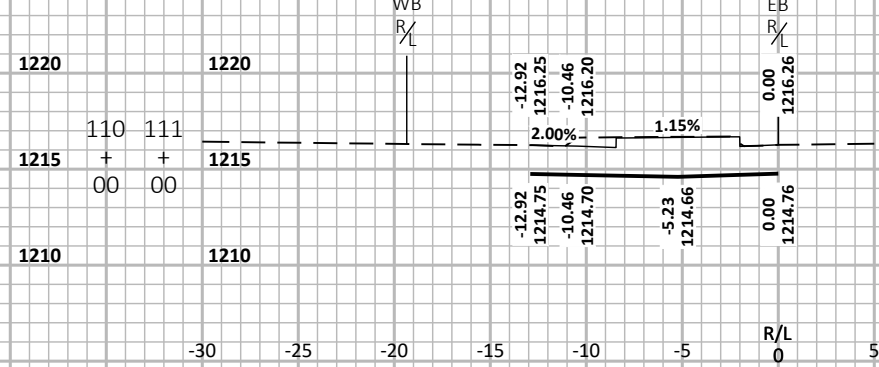
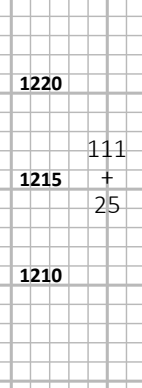
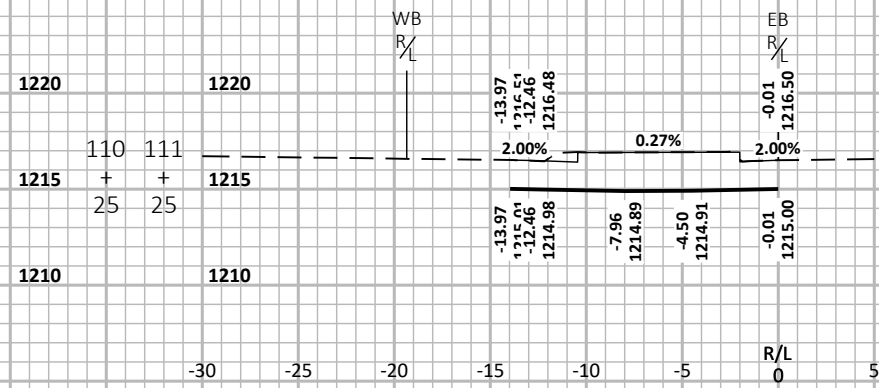
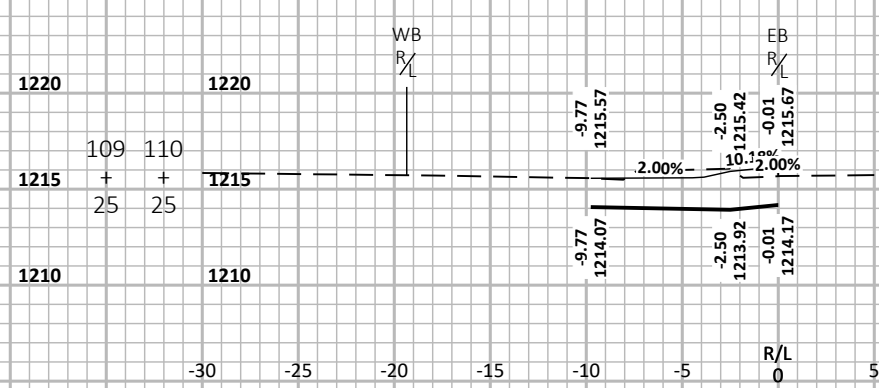
Matthew R. Rauch

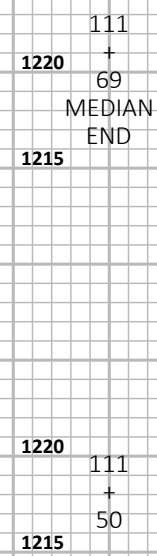
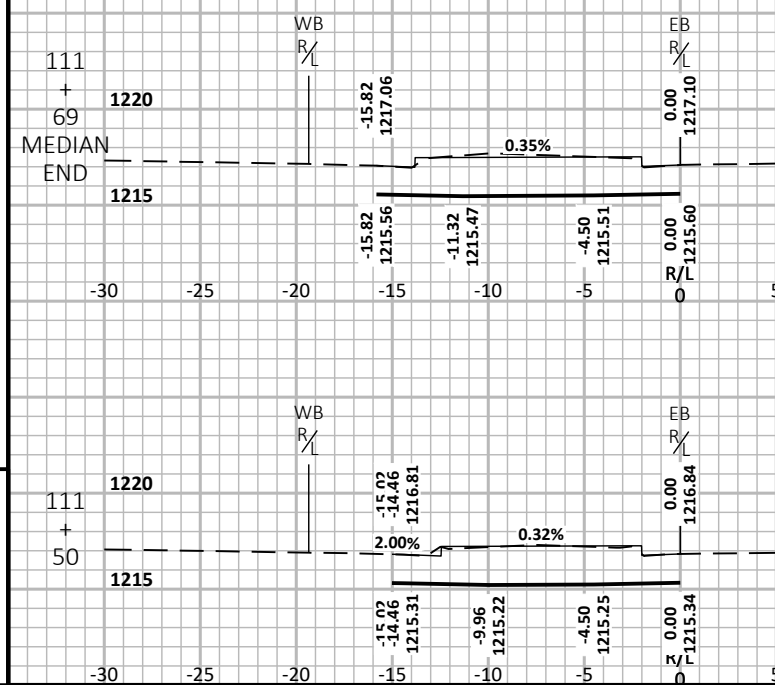
for State Traffic Engineer

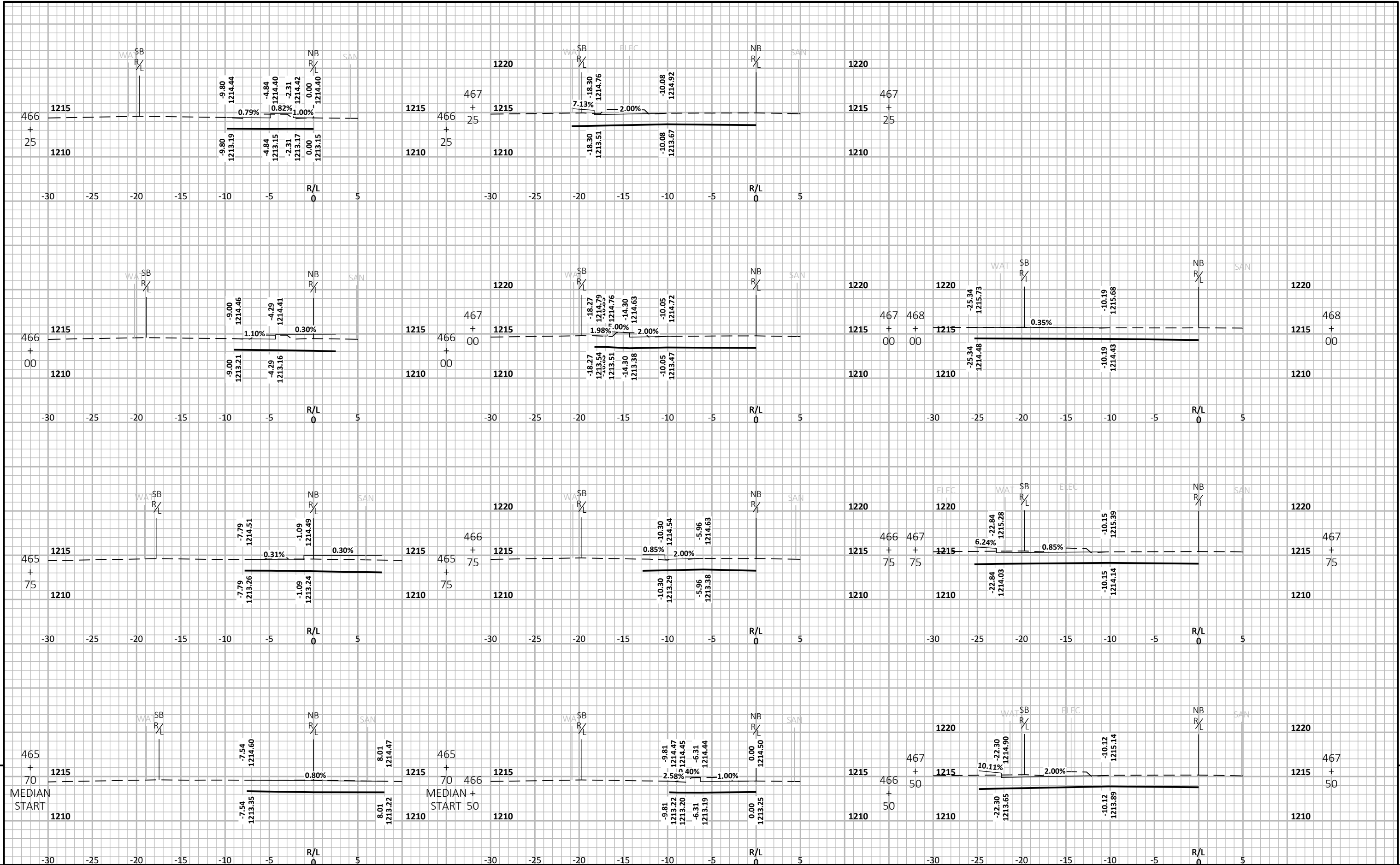
DATE 1/24/2024

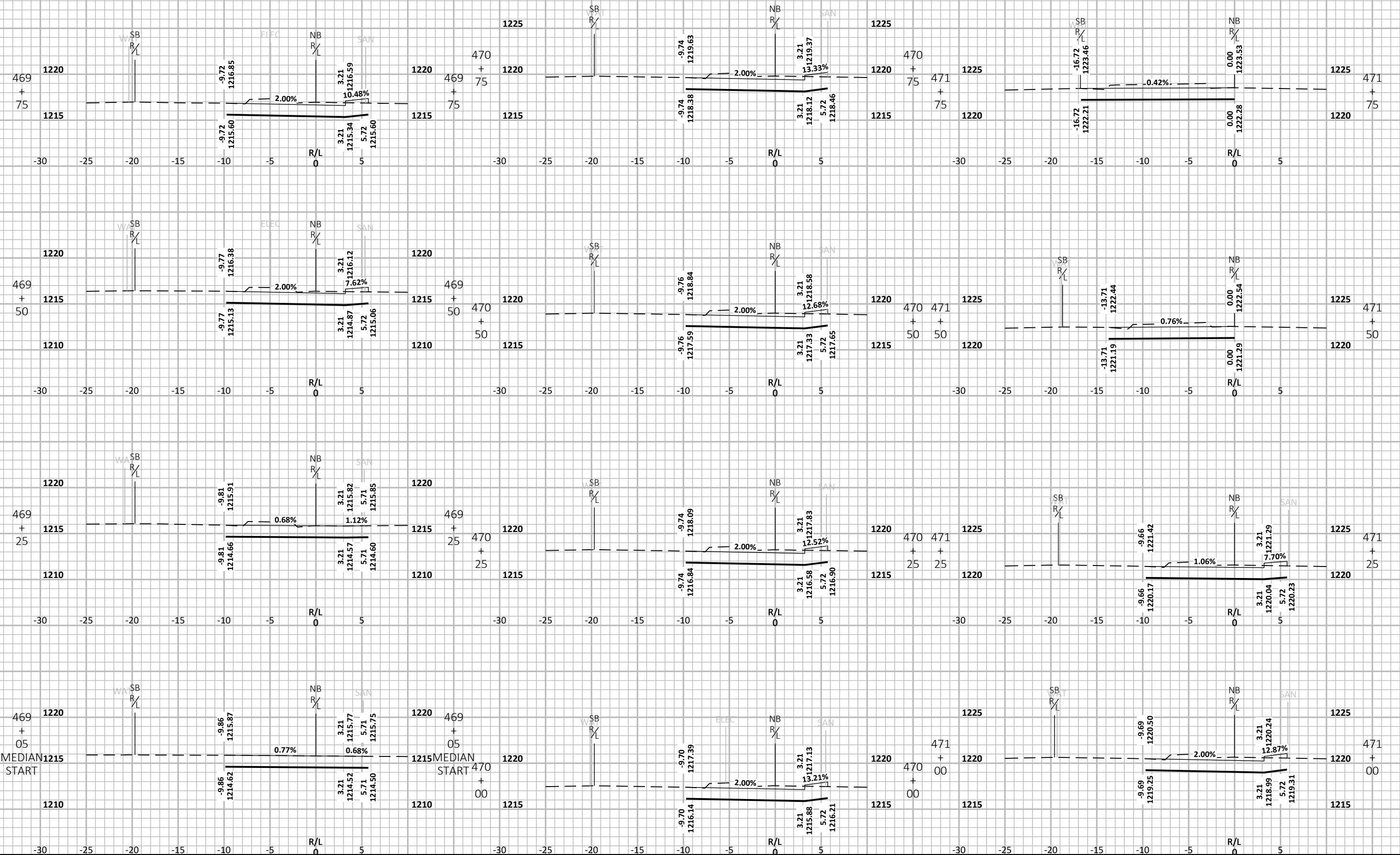
PLATE NO. W01-6.2



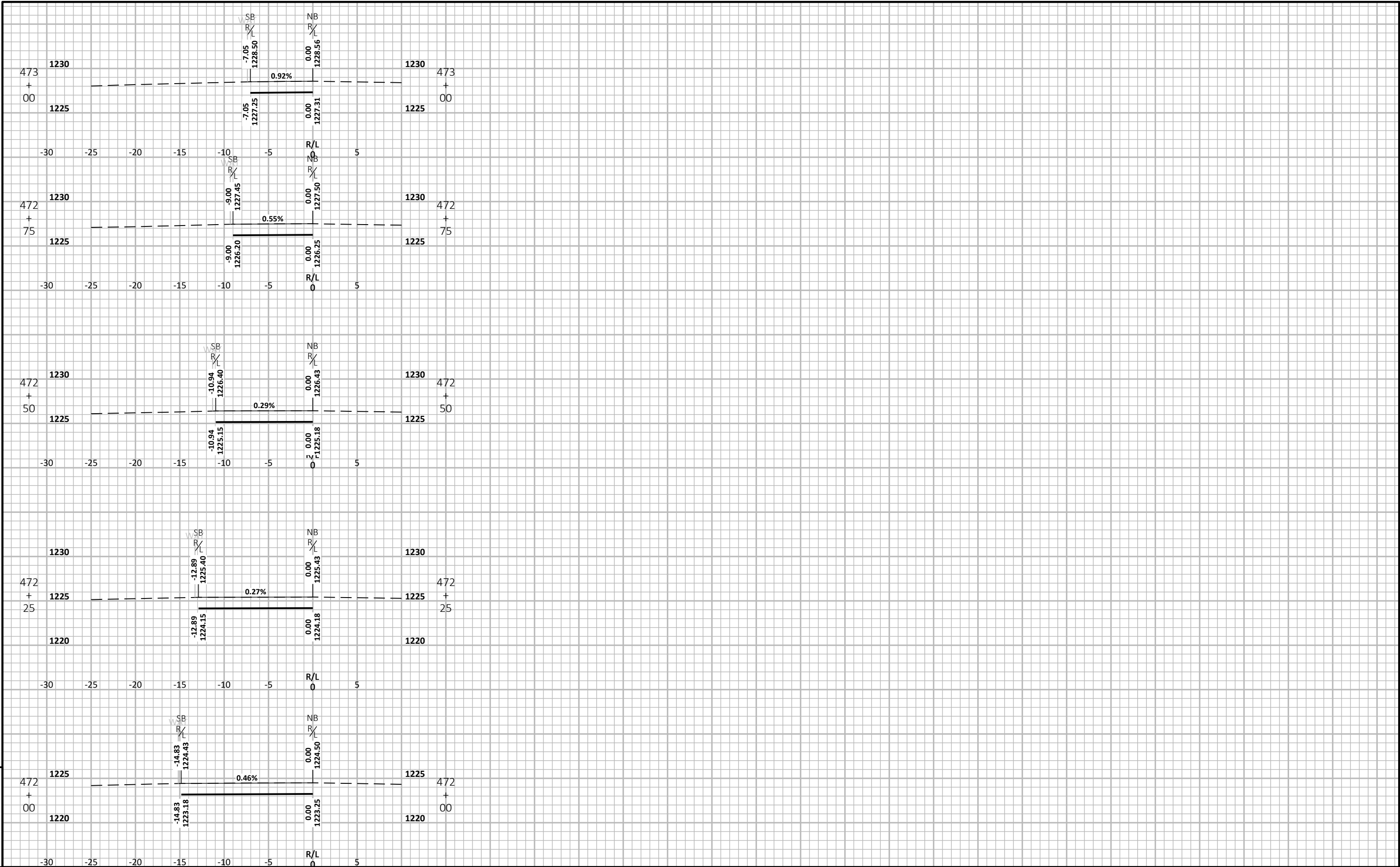




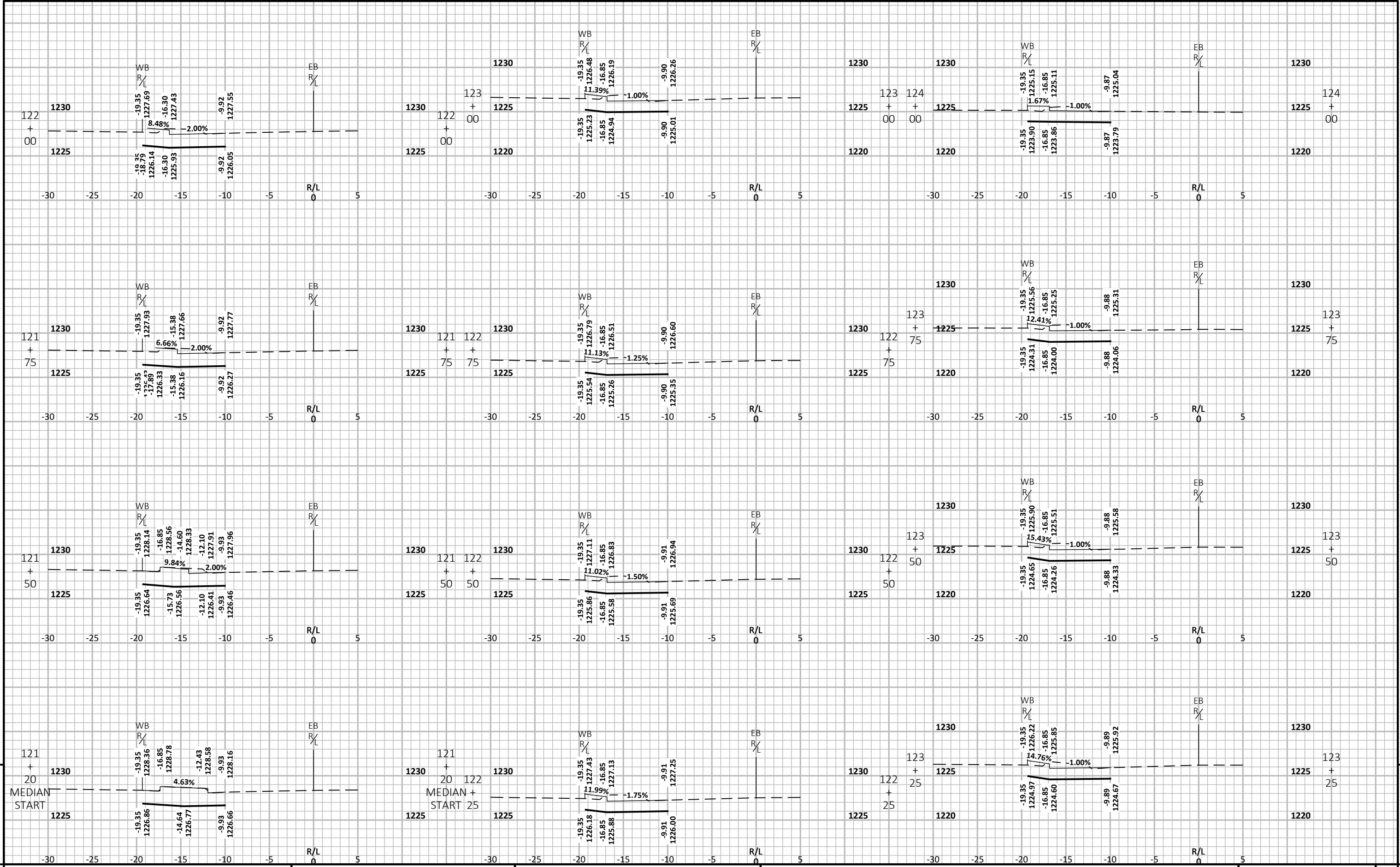




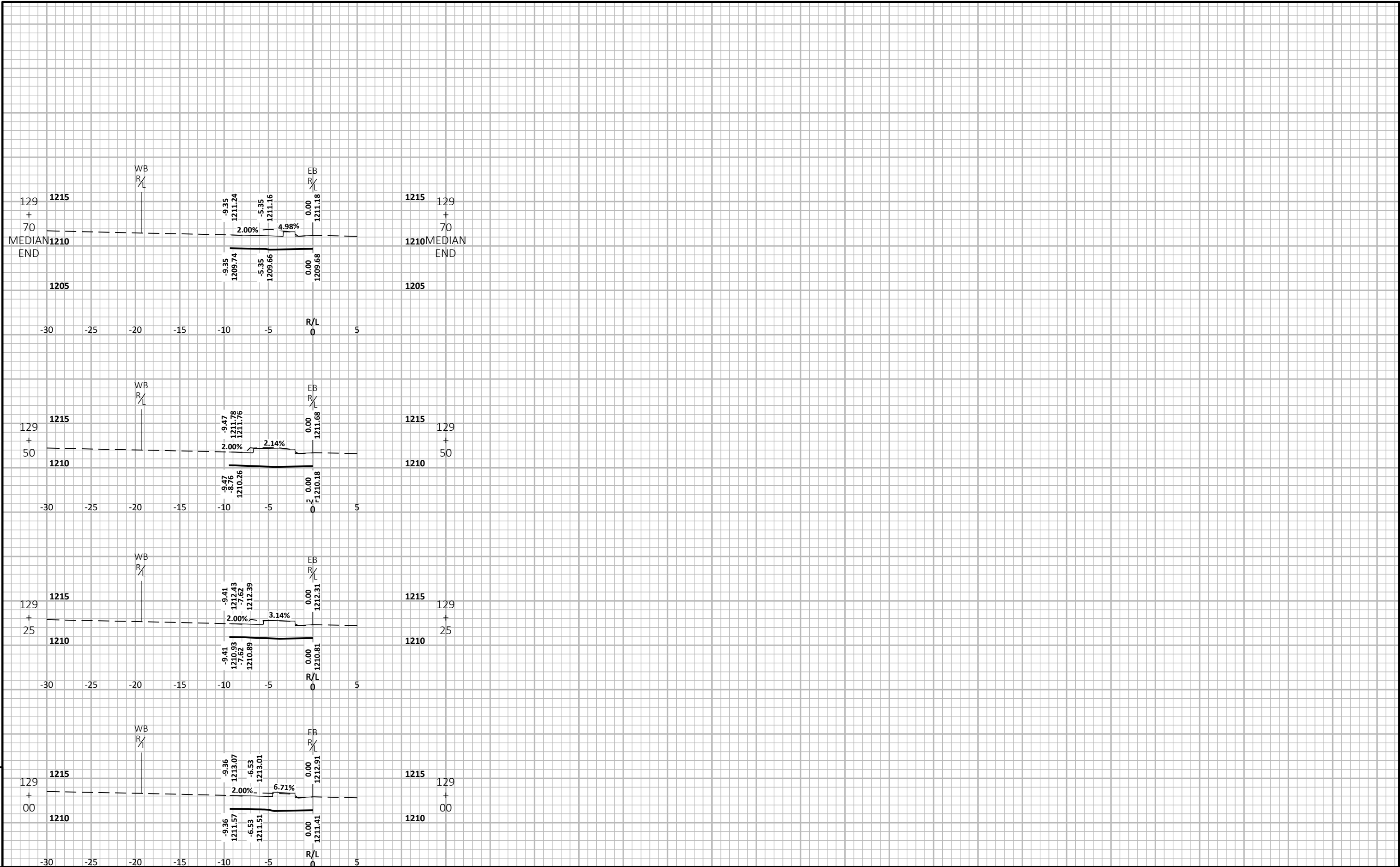
PROJECT NO:	1662-00-77
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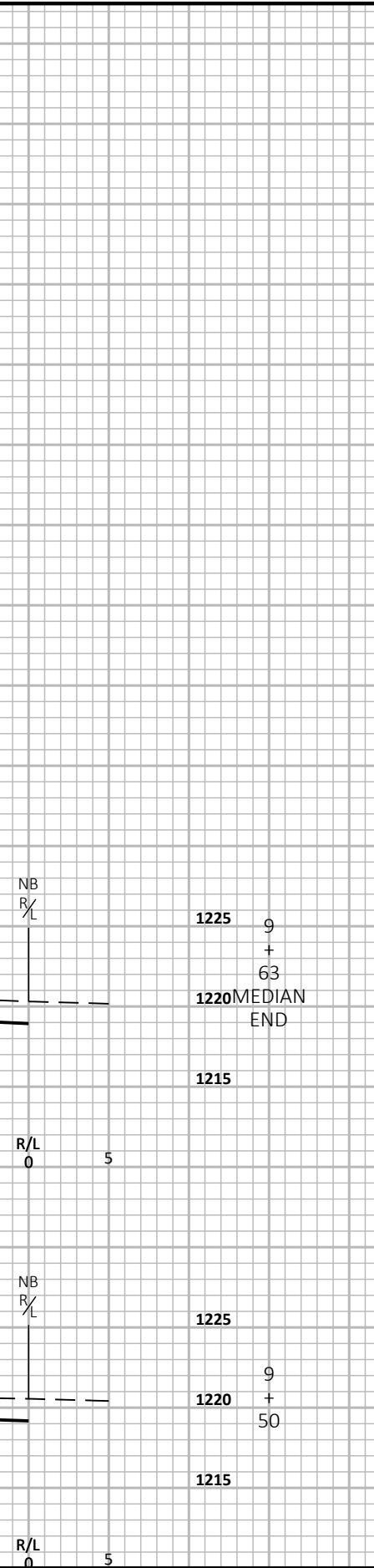
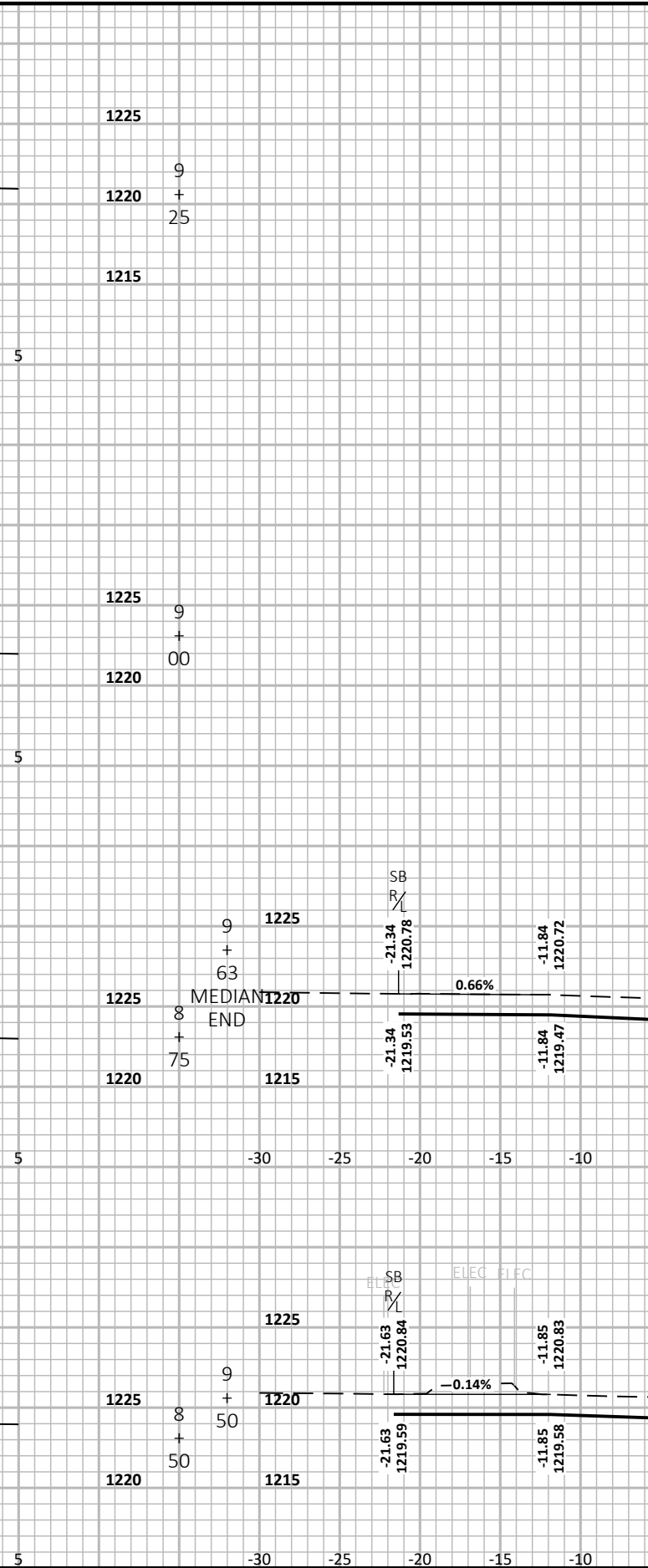
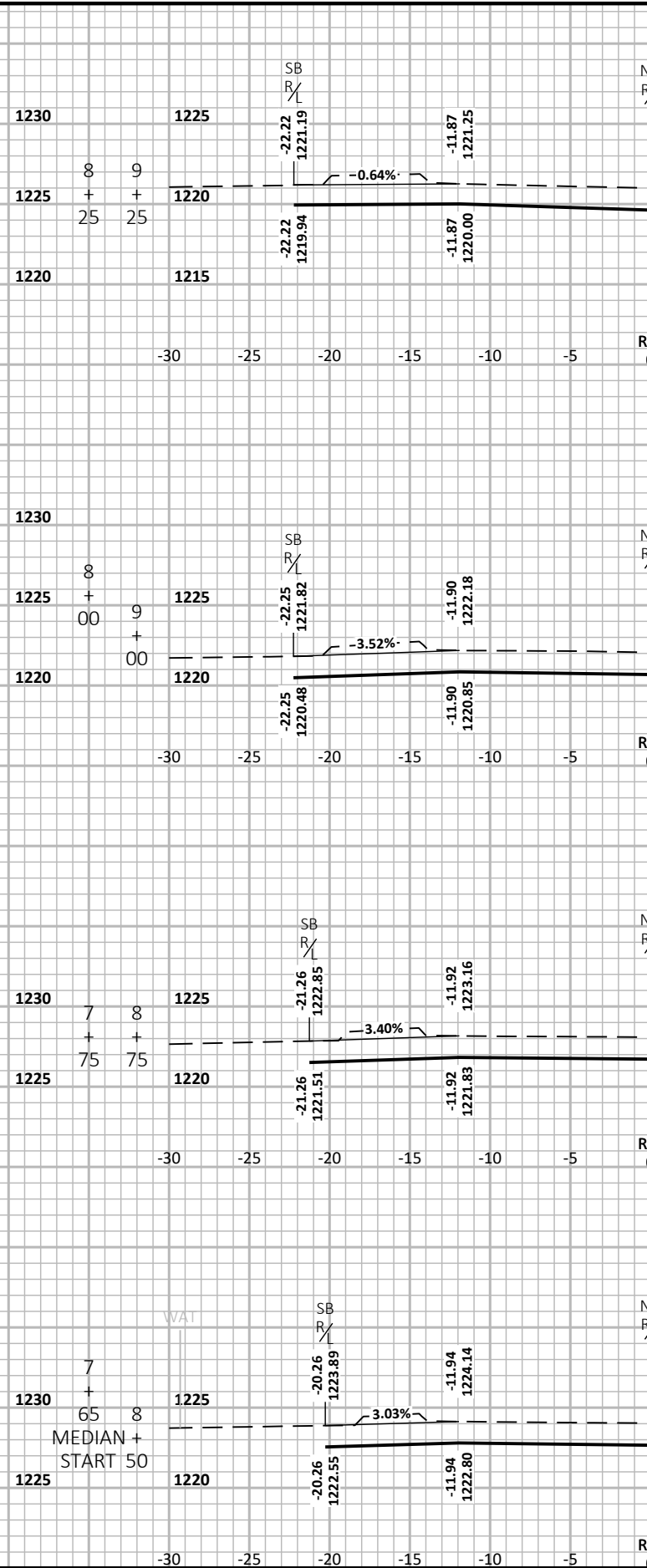
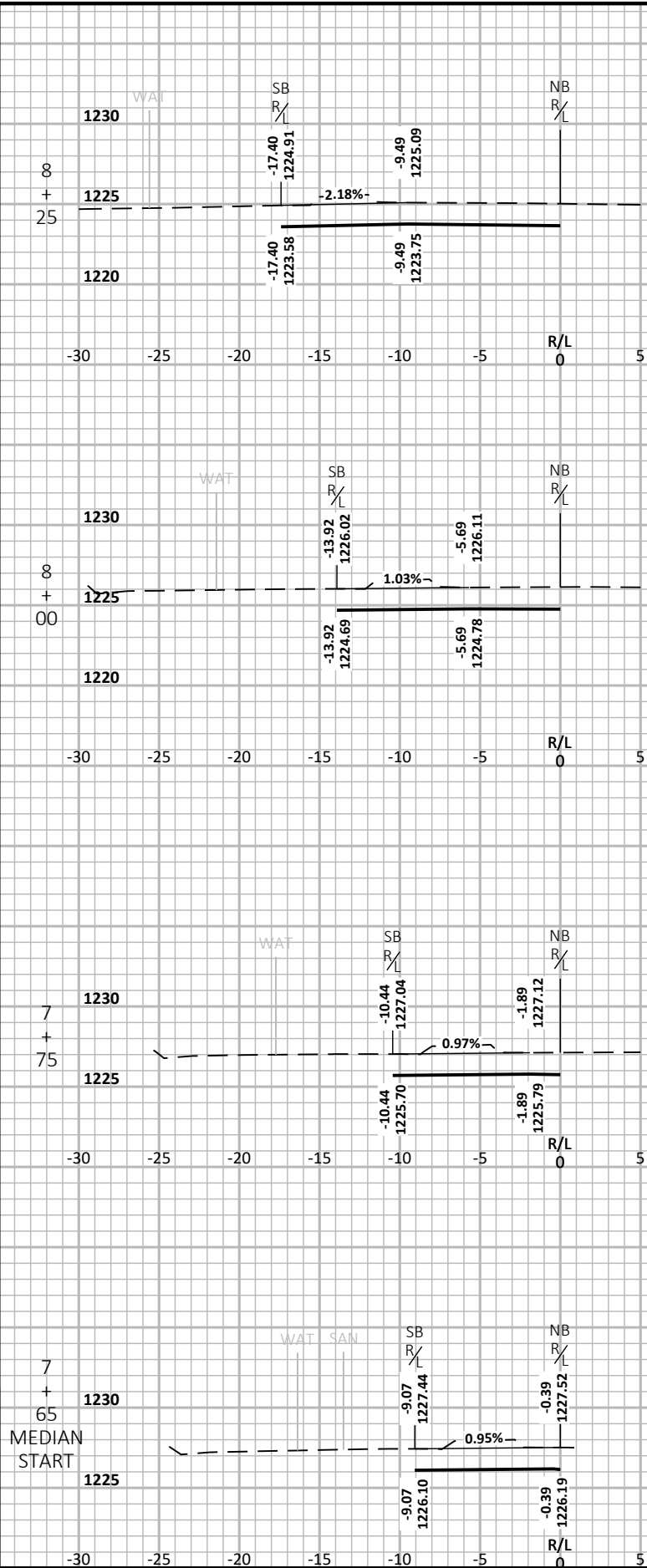


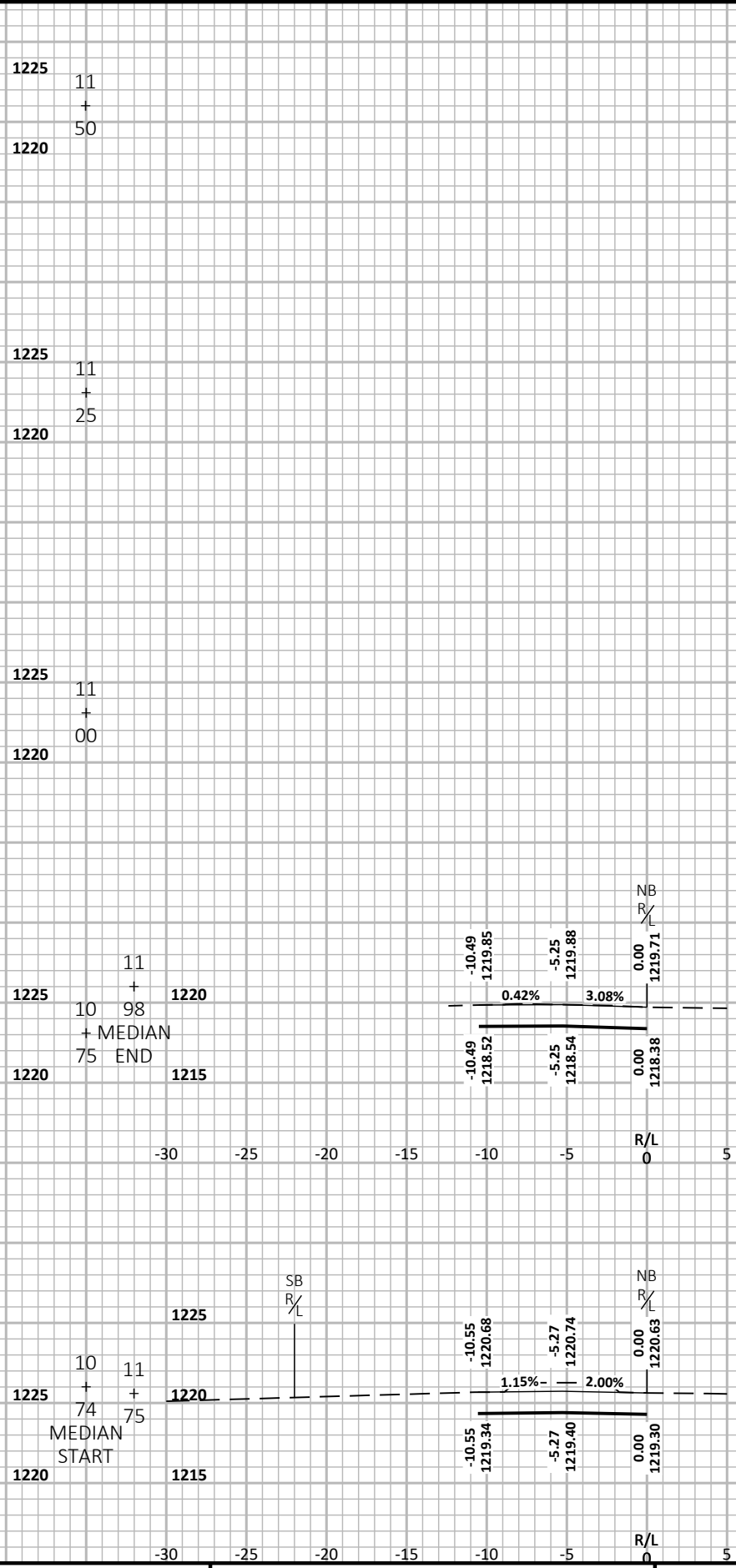
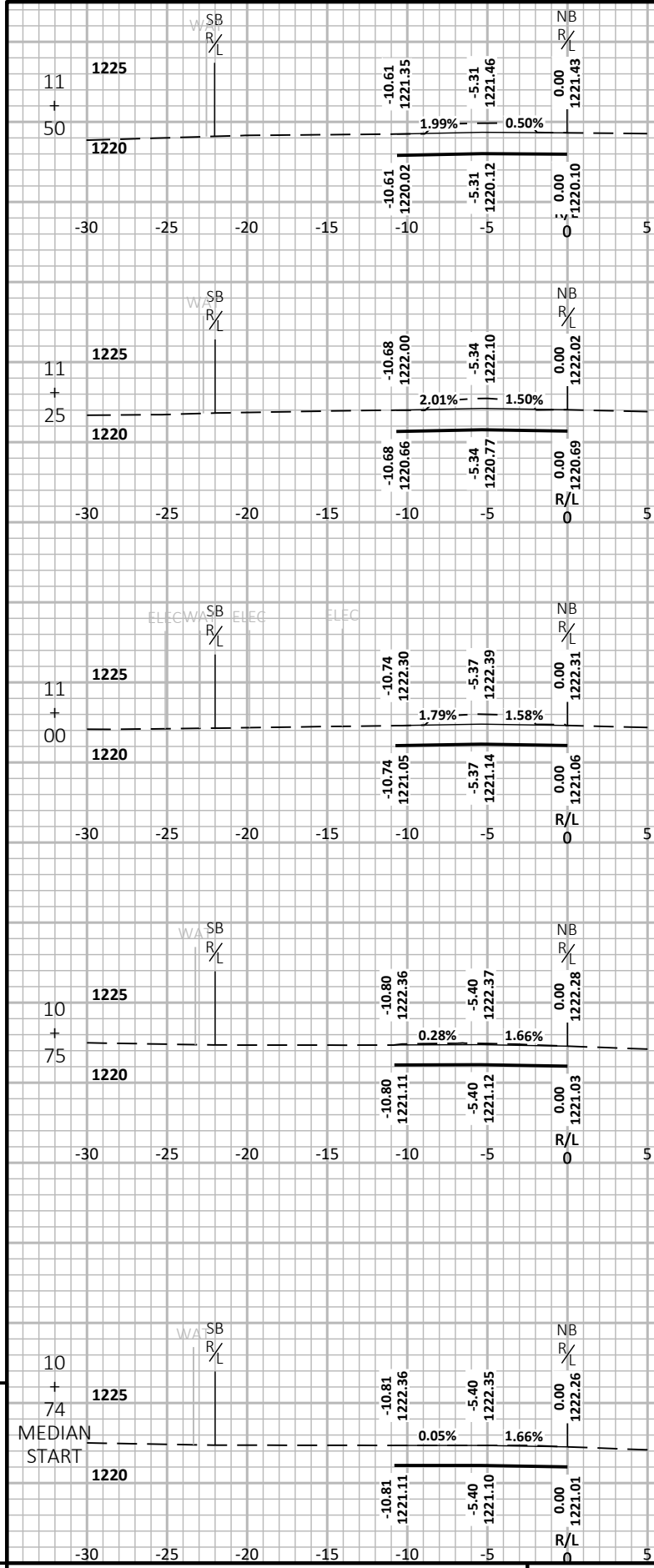
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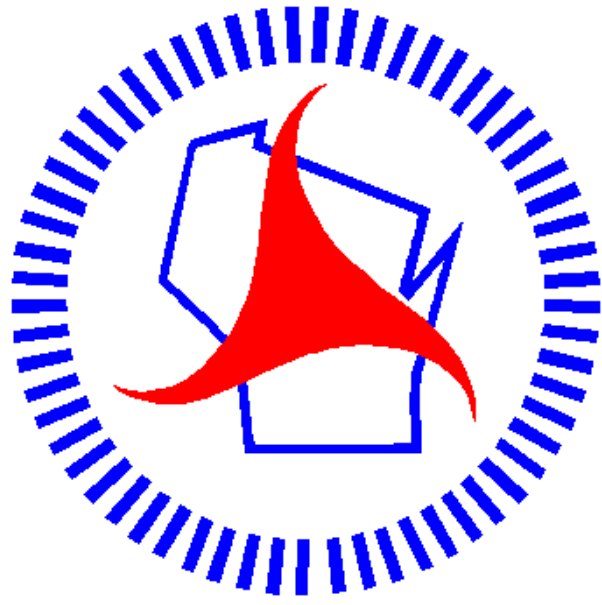


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