

MAD

PROJECT ID:

WITH:

5990-01-32

COUNTY:

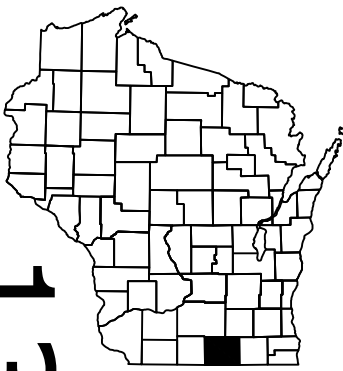
ROCK

JANUARY 2021

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 = 124



N

DESIGN DESIGNATION		
A.A.D.T.	2021	= 9970
A.A.D.T.	2041	= 11900
D.H.V.		=
D.D.		=
T.		= 2.7%
DESIGN SPEED		= 30 MPH (W); 35 MPH (E)
ESALS		=

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
	WATER
MARSH AREA	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C JANESVILLE, E RACINE STREET

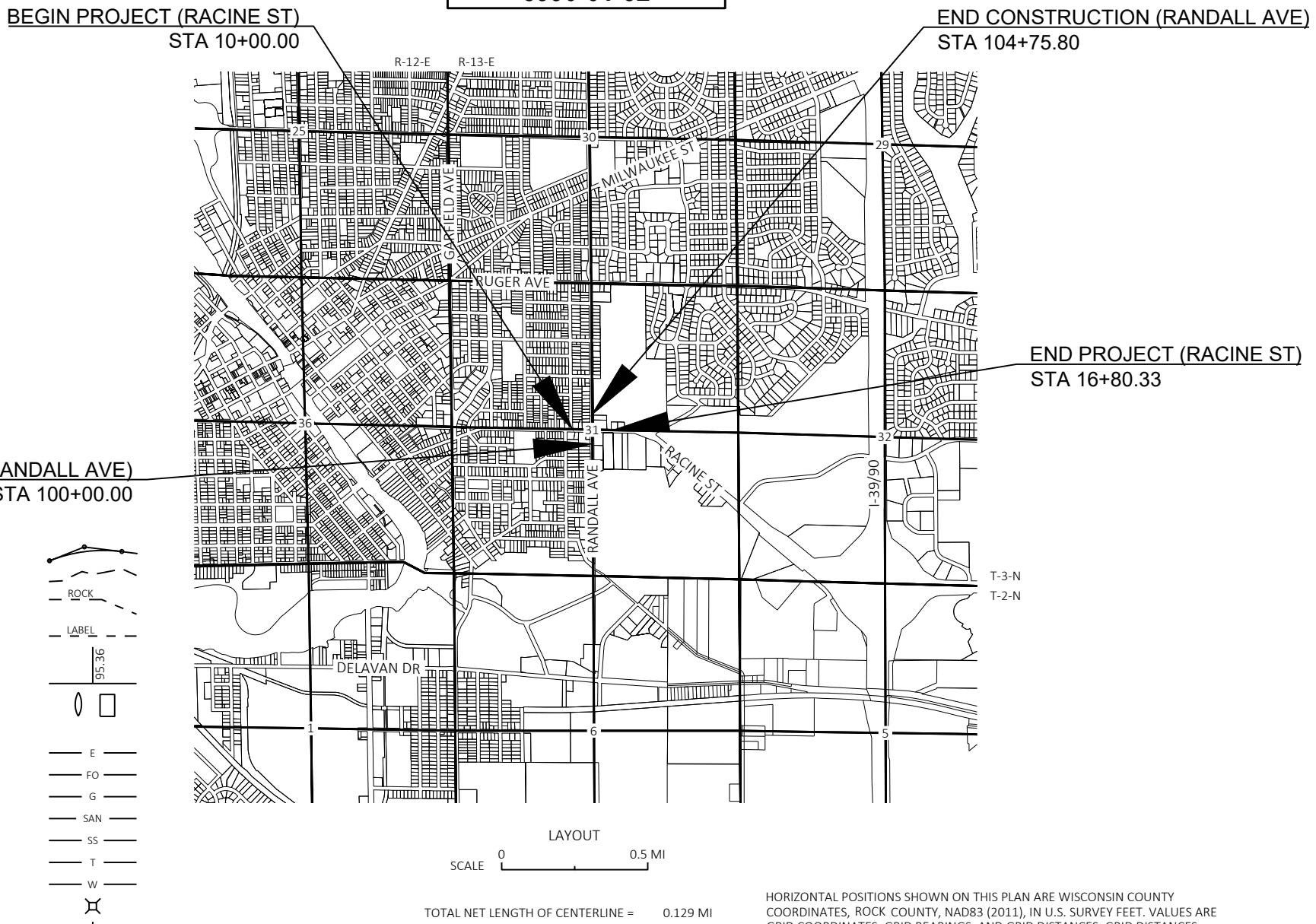
S RANDALL AVENUE INTERSECTION

LOC STR

ROCK COUNTY

STATE PROJECT NUMBER

5990-01-32



STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5990-01-32	WISC 2021081	1

ACCEPTED FOR
CITY OF JANESVILLE
7-23-20
(Date)
Paul J. Woodard
(PUBLIC WORKS DIRECTOR)

ORIGINAL PLANS PREPARED BY
Batterman
engineers surveyors planners

WISCONSIN
RYAN D. RUDZINSKI
E-43310
ELKHORN
WIS.
PROFESSIONAL ENGINEER

7-23-20
DATE:
Ryan Rudzinski
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor
Designer
Project Manager
Regional Examiner
Regional Supervisor

APPROVED FOR THE DEPARTMENT
DATE: 7/28/2020
(Signature)

E

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NAVD OF 83 (2012).

THE CONTRACTOR SHALL COORDINATE ALL UTILITY ADJUSTMENTS WITH THE APPROPRIATE UTILITY.

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

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTY OWNERS ALONG THE PROJECT AT ALL TIMES.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE, UTILITIES AND LOCAL GOVERNMENT BEFORE THE START OF CONSTRUCTION WORK.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION OF EBS SHALL BE DETERMINED BY THE ENGINEER.

SELECT CRUSHED MATERIAL SHALL BE USED IN ALL EBS AREAS.

THE EROSION CONTROL FEATURES ARE SHOWN ON THE PLAN AND ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

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

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

RESTORATION OF EXPOSED SLOPE AND DITCHES SHALL TAKE PLACE NOT MORE THAN 7 DAYS AFTER FINISHED GRADING IS COMPLETE.

CITY OF JANESVILLE UTILITIES

CITY OF JANESVILLE (SIGNALS AND STREET LIGHTING)
ATTN: MATT GOSLINE
2200 US HWY 51 NORTH
JANESVILLE, WI 53548
TELEPHONE: (608) 751-5220
EMAIL: GOSLINEM@CI.JANESVILLE.WI.US

CITY OF JANESVILLE (STORM SEWER)
ATTN: TIM WHITTAKER
18 N JACKSON ST
JANESVILLE, WI 53545
TELEPHONE: (608) 755-3169
EMAIL: WHITTAKERT@CI.JANESVILLE.WI.US

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

UTILITIES

AT&T OF WISCONSIN (WISCONSIN BELL, INC.)
ATTN: CAROL ANASON
316 W WASHINGTON AVE
MADISON, WI 53701
TELEPHONE: (608) 252-2385
EMAIL: CA2624@ATT.COM

CHARTER COMMUNICATIONS
ATTN: BRANDON OPHEIM
1348 PLAINFIELD AVE
JANESVILLE, WI 53545
TELEPHONE: (608) 290-3195
EMAIL: BRANDON.OPHEIM@CHARTER.COM

CITY OF JANESVILLE (SEWER & WATER)
ATTN: CRAIG THIESENHUSEN
123 E DELAVAN DR
JANESVILLE, WI 53546
TELEPHONE: (608) 755-3471
EMAIL: THIESENHUSENC@CI.JANESVILLE.WI.US

JANESVILLE SCHOOL DISTRICT (FIBER OPTIC)
ATTN: MULTIMEDIA COMMUNICATIONS & ENGINEERING, INC.
GREG SELISSEN
PO BOX 11064
GREEN BAY, WI 54307
TELEPHONE: (877) 870-6968 EXT 1004
EMAIL: GSELISSEN@MCEWI.COM

WISCONSIN POWER & LIGHT (ELECTRIC AND GAS)
ATTN: RON ROHM
3730 KENNEDY RD
JANESVILLE, WI 53545
TELEPHONE: (608) 757-7514
EMAIL: RONALDROHM@ALLIANTENERGY.COM

**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

ABBREVIATIONS

AC	ACRES	IP	IRON PIPE
AEW	APRON ENDWALL	JCT	JUNCTION
ASPH	ASPHALT	LHF	LEFT HAND FORWARD
AVG	AVERAGE	L	LENGTH
ADT	AVERAGE DAILY TRAFFIC	LS	LUMP SUM
BAD	BASE AGGREGATE DENSE	LT	LEFT
BM	BENCHMARK	MH	MANHOLE
CL	CENTERLINE OR CLASS	NC	NORMAL CROWN
CC	CENTER TO CENTER	N	NORTH
CE	COMMERCIAL ENTRANCE	PT	POINT
CONC	CONCRETE	PC	POINT OF CURVATURE
CMP	CORRUGATED METAL PIPE	PI	POINT OF INTERSECTION
CPRC	CULVERT PIPE CORRUGATED STEEL	PT	POINT OF TANGENCY
CSCP	CORRUGATED STEEL CULVERT PIPE	PL	PROPERTY LINE
CSM	CERTIFIED SURVEY MAP	PE	PRIVATE ENTRANCE
CTH	COUNTY TRUNK HIGHWAYS	R/RAD	RADIUS
CULV	CULVERT	RCP	REINFORCED CONCRETE PIPE
CP	CULVERT PIPE	REQ'D	REQUIRED
C&G	CURB & GUTTER	RT	RIGHT
D	DEGREE OF CURVATURE	R/W	RIGHT-OF-WAY
DHV	DESIGN HOURLY VOLUME	RHF	RIGHT HAND FORWARD
DIA	DIAMETER	SALV	SALVAGED
DWY	DRIVEWAY	SAN	SANITARY SEWER
E	EAST	SHLDR	SHOULDER
ELEV	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
EW	ENDWALL	STA	STATION
ENT	ENTRANCE	STM	STORM SEWER
ESALS	EQUIVALENT SINGLE AXLE LOADS	SE	SUPERELEVATION
EX	EXISTING	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	TAN	TANGENT
EXIST	EXISTING	TLE	TEMPORARY LIMITED EASEMENT
FF	FACE TO FACE	T	TRUCKS
FERT	FERTILIZER	TYP	TYPICAL
FE	FEILD ENTRANCE	VERT	VERTICAL
FG	FINISHED GRADE	VC	VERTICAL CURVE
FT	FOOT	VOL	VOLUME
GV	GAS VALVE	VV	WATER VALVE
IE	INVERT ELEVATION	W	WELL
INL	INLET	X	EAST GRID COORDINATE
INV	INVERT	Y	NORTH GRID COORDINATE

ORDER OF DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS - PERMANENT
CURB RAMP DETAILS
EROSION CONTROL
UTILITY PLAN
PERMANENT SIGNING
TRAFFIC SIGNAL PLAN
PAVEMENT MARKING
TRAFFIC CONTROL PLAN
ALIGNMENT & CONTROL POINT TIES

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: SHELLEY NELSON
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
TELEPHONE: (608) 444-2835
EMAIL: SHELLEY.NELSON@WISCONSIN.GOV

CITY OF JANESVILLE

PROJECT ENGINEER
AHNARAY BIZIAK, P.E.
18 N. JACKSON STREET
JANESVILLE, WI 53548
TELEPHONE: (608) 755-3171
EMAIL: BIZIAKA@CI.JANESVILLE.WI.US

DESIGN CONTACT

R.H. BATTERMAN
ATTN: RYAN RUDZINSKI, P.E.
2857 BARTELLS DRIVE
BELOIT, WI 53511
TELEPHONE: (608) 365-4464
EMAIL: RRUDZINSKI@RHBATTERMAN.COM

PROJECT NO: 5990-01-32

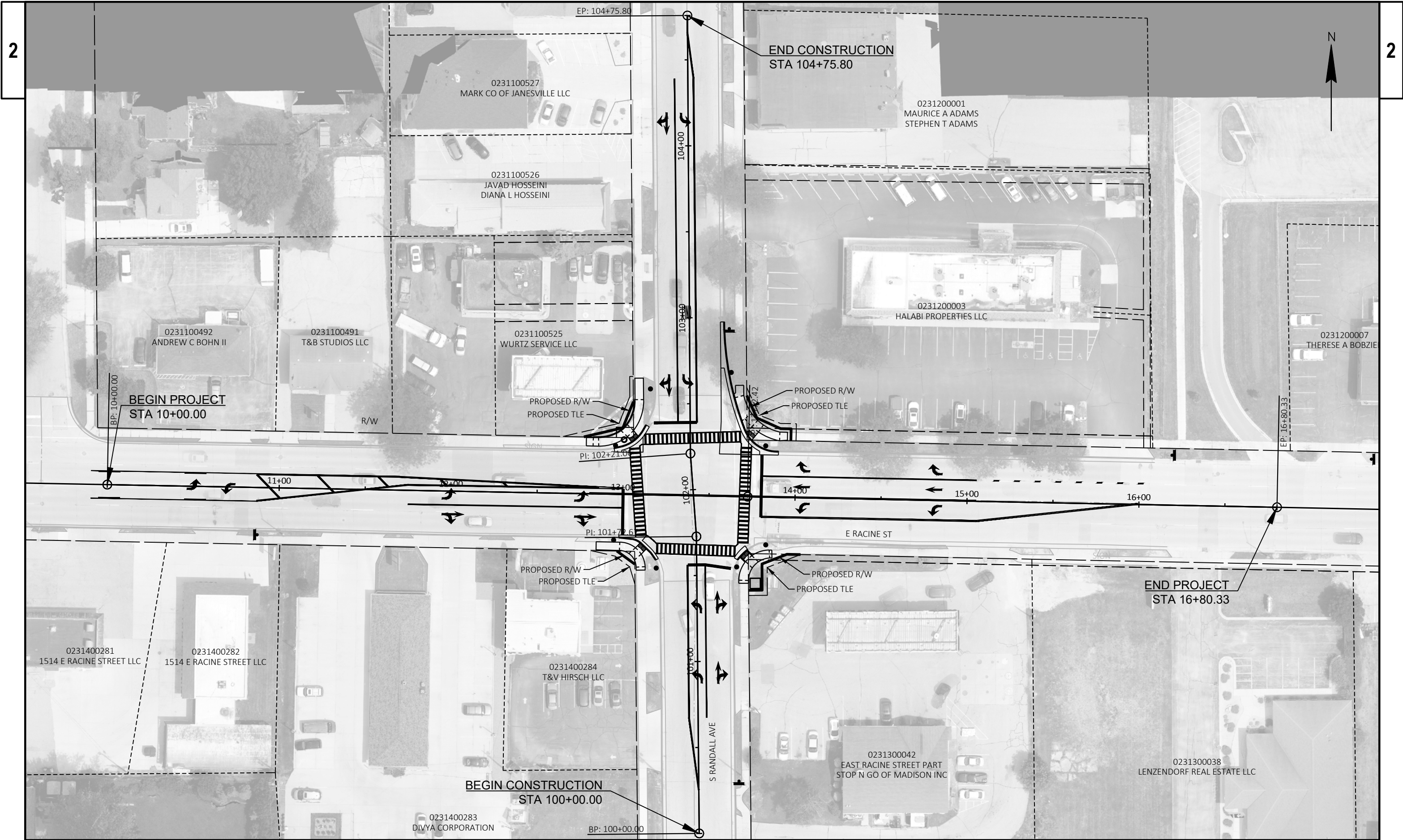
HWY: LOC STR

COUNTY: ROCK

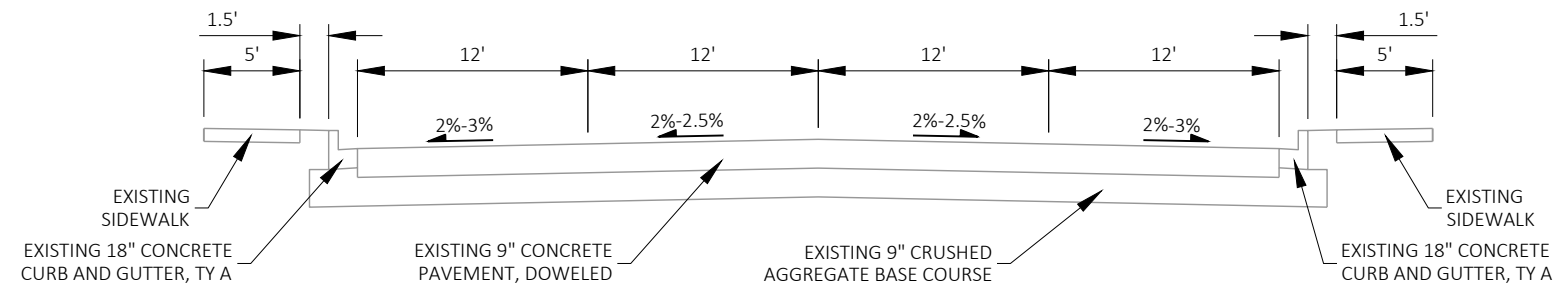
GENERAL NOTES

SHEET

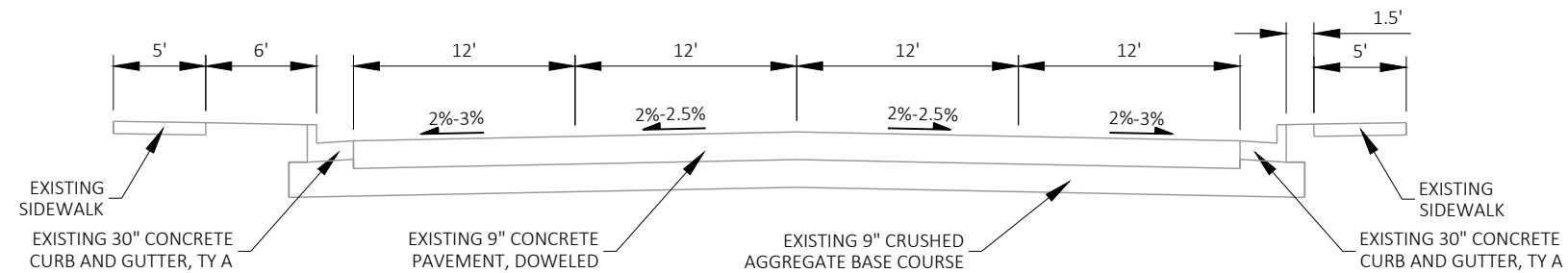
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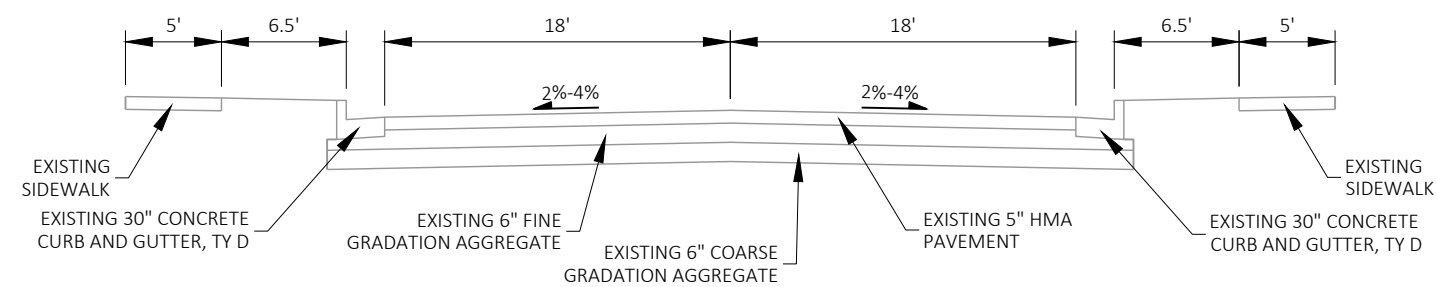
PROJECT NO: 5990-01-32	HWY: LOC STR	COUNTY: ROCK	PROJECT OVERVIEW	SHEET	E
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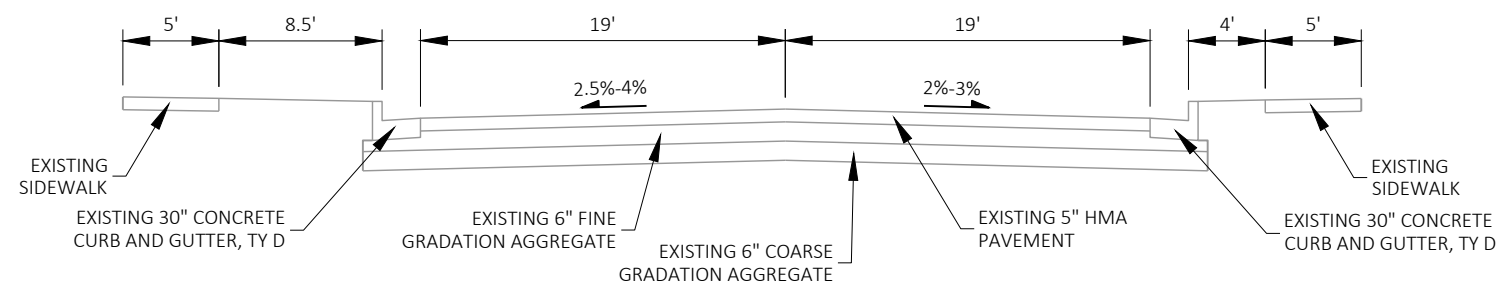
TYPICAL EXISTING SECTION
RACINE STREET (WEST OF RANDALL)



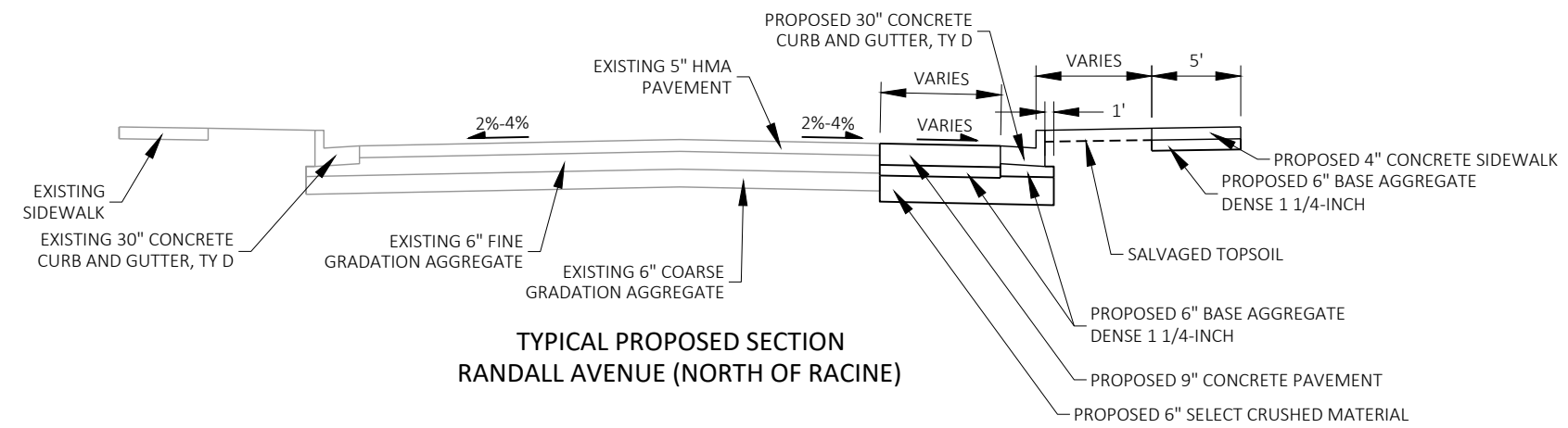
TYPICAL EXISTING SECTION
RACINE STREET (EAST OF RANDALL)



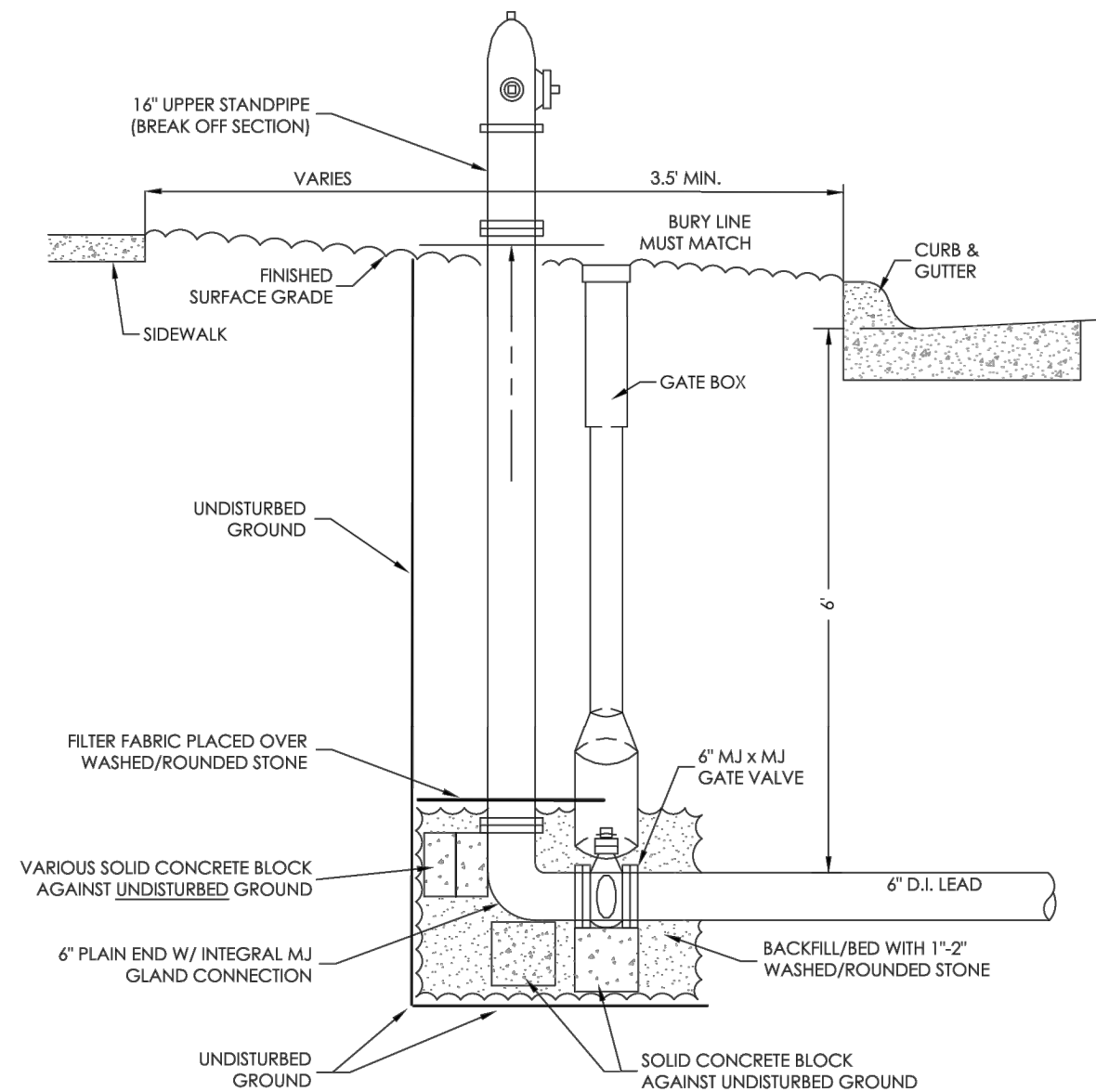
TYPICAL EXISTING SECTION
RANDALL AVENUE (NORTH OF RACINE)



TYPICAL EXISTING SECTION
RANDALL AVENUE (SOUTH OF RACINE)



PROJECT NO: 5990-01-32		HWY: LOC STR		COUNTY: ROCK		PROPOSED TYPICAL SECTIONS				SHEET		E
FILE NAME : J:\33300-33399\33309 - COJ - RACINE & RANDALL INTERSECTION\DESIGN\5990-01-31\SHEETS\PLAN\59900132_020301_TS.DWG				PLOT DATE : 7/21/2020 3:16 PM		PLOT BY : CARYN MELLOM		PLOT NAME :		PLOT SCALE : 1 IN:10 FT		WISDOT/CADDs SHEET 42
LAYOUT NAME - 02												

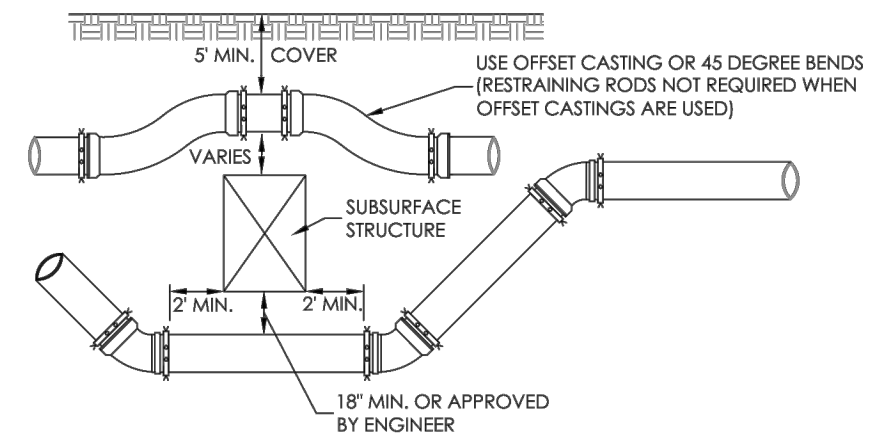
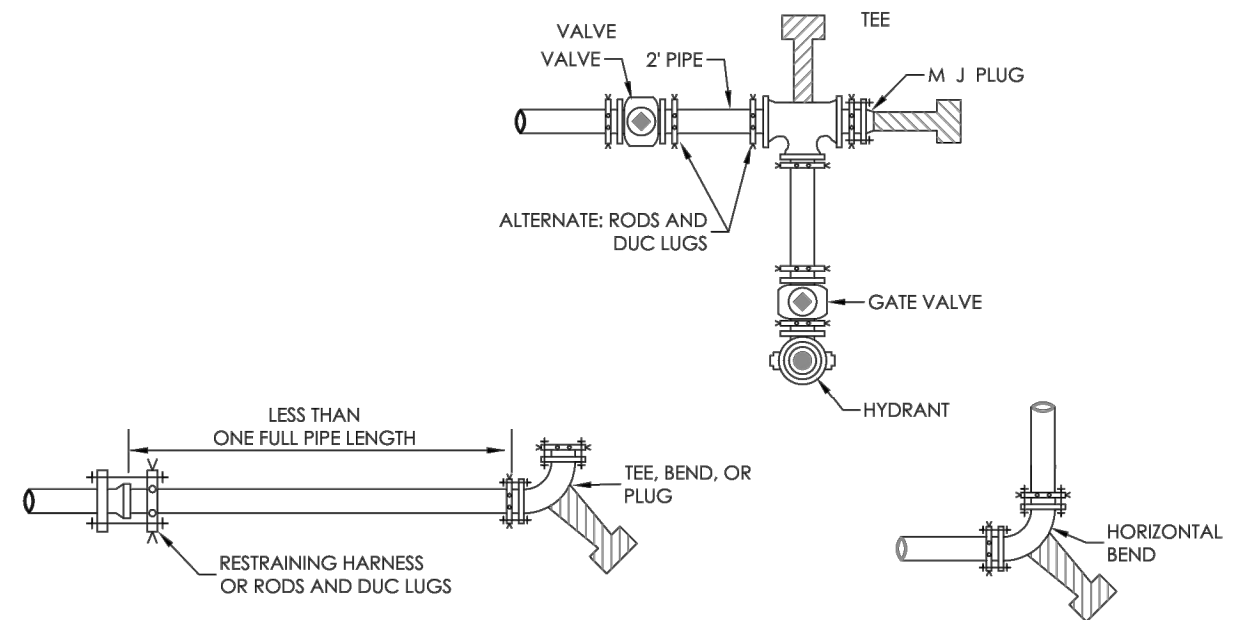


City of Janesville
Engineering Division
January - 2013
Last revision: January 2020

HYDRANT

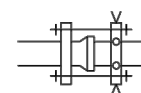
NOT
TO
SCALE

DETAIL # 9

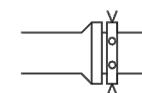


NOTE: SEE FILE NO. 44 - 47A OF STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN FOR BLOCKING DETAILS

LEGEND



- RESTRAINING
- HARNESS WITH ROD



— RESTRAINING HARNESS



CONCRETE BLOCKING

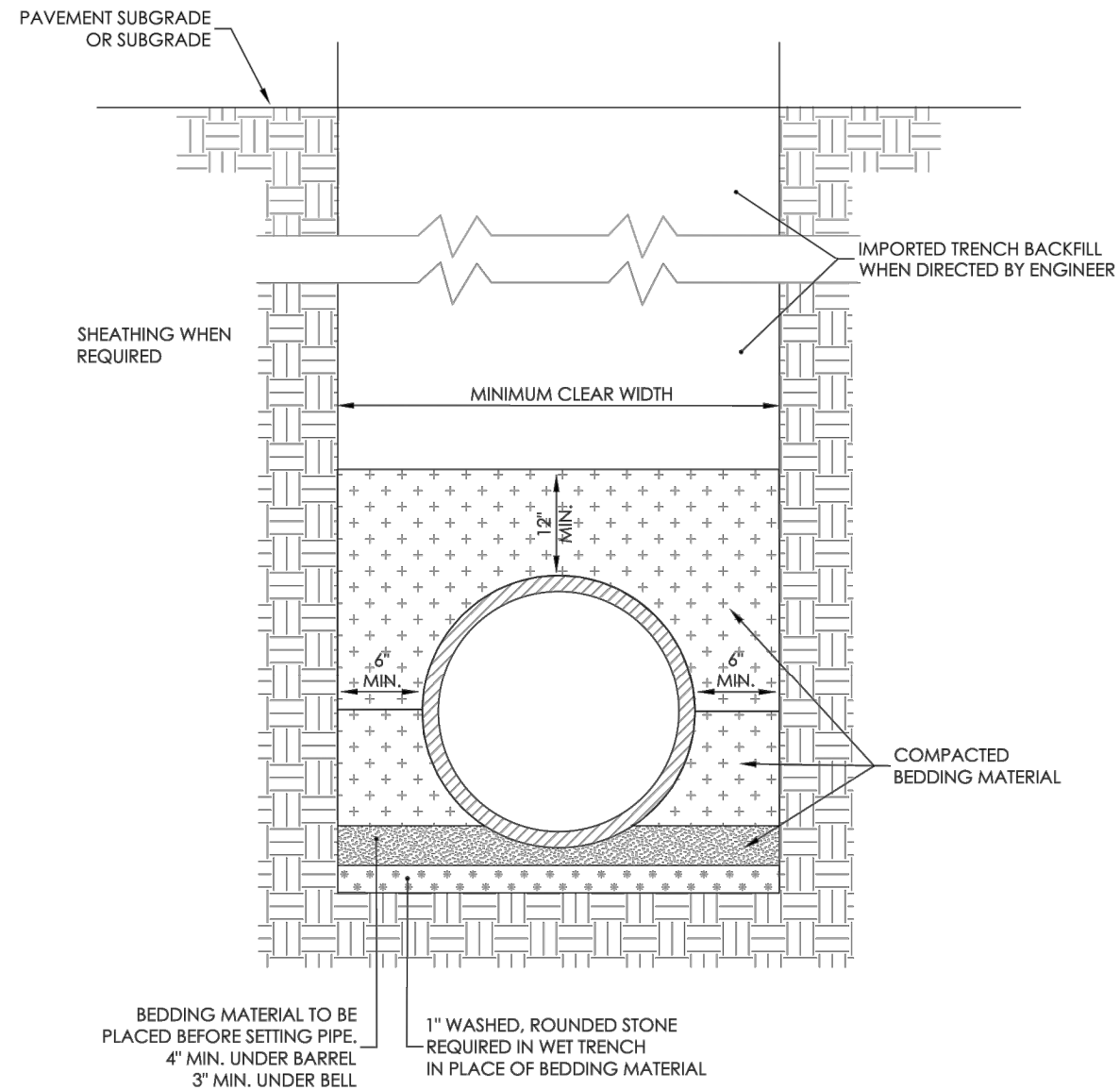
**City of Janesville
Engineering Division
January - 2013**

last revision: January 2013

PIPE RESTRAINTS

NOT
TO
SCALE

DETAIL # 11

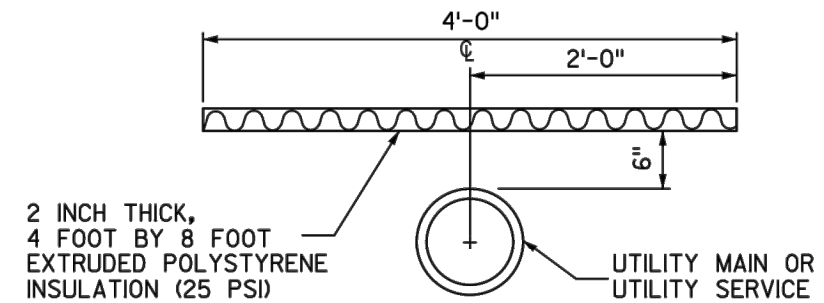


City of Janesville
Engineering Division
January - 2013
last revision: January 2013

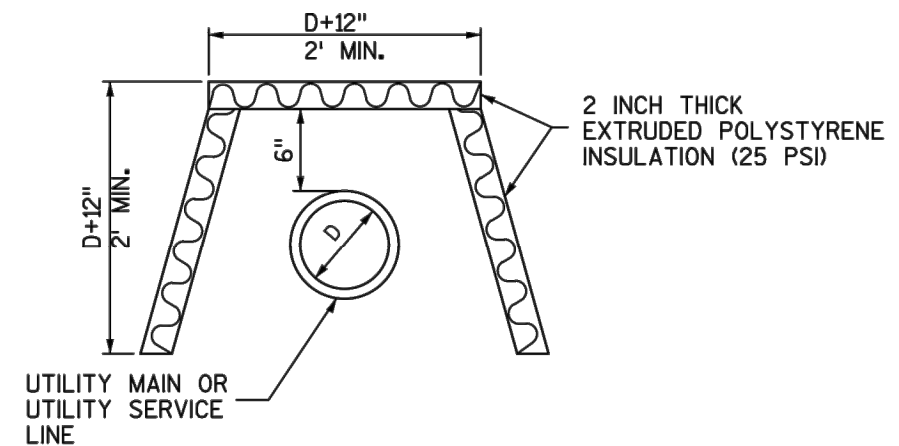
TRENCH BACKFILL

NOT
TO
SCALE

DETAIL # 14



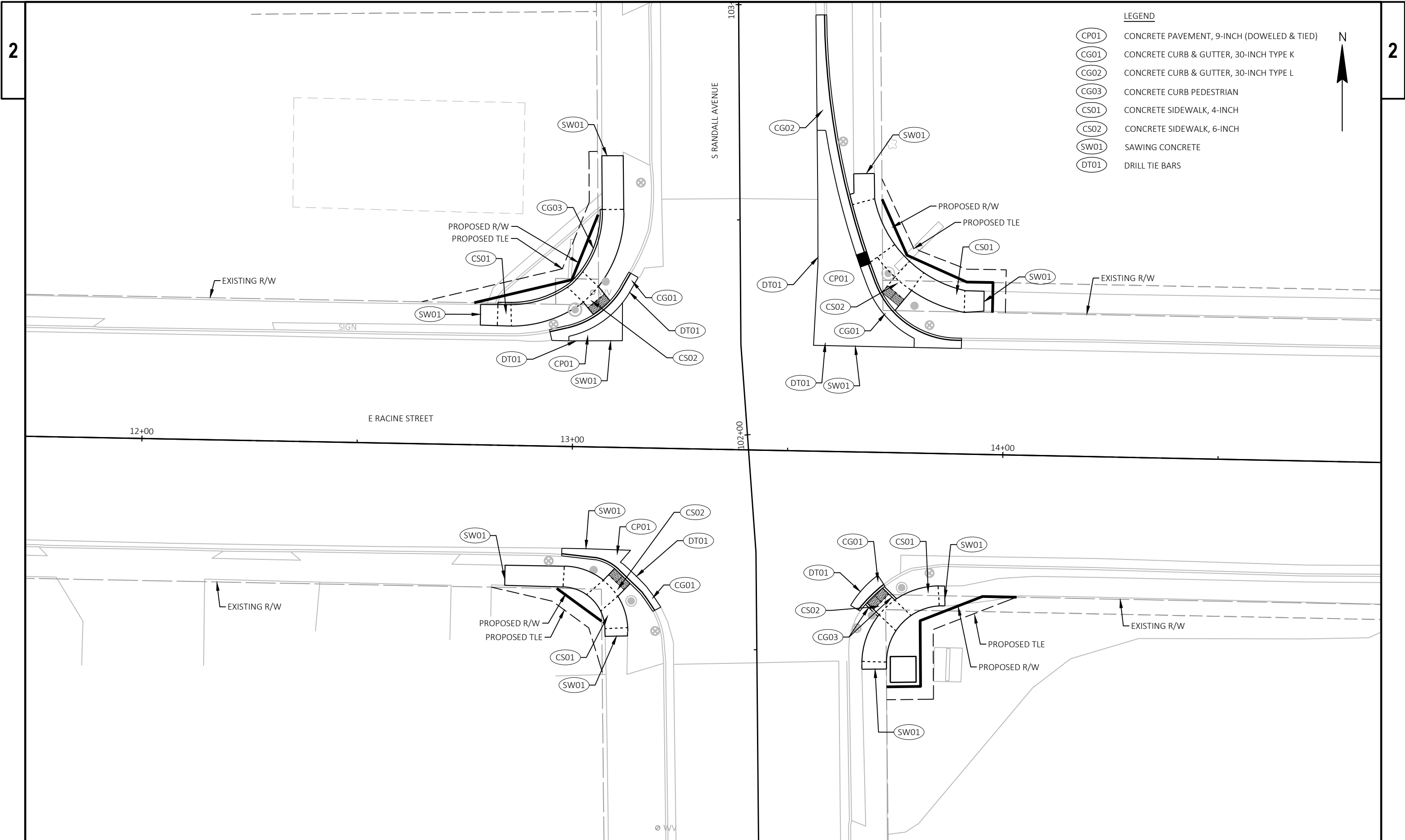
STANDARD INSTALLATION

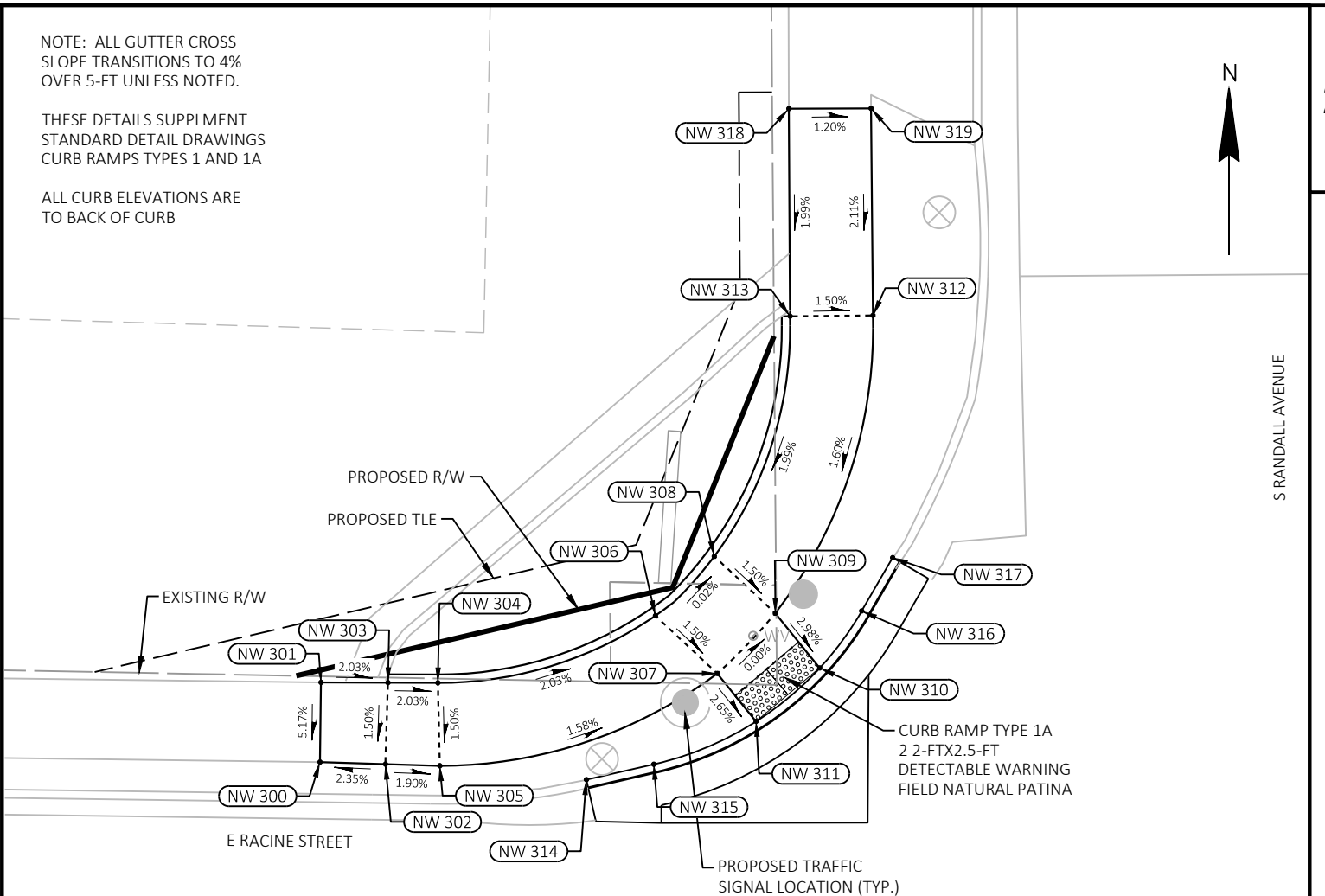


SIDE PROTECTION INSTALLATION

NOTE: THE SIDE PROTECTION INSULATION SHALL BE USED WHERE FROST WILL PENETRATE BELOW THE PIPE INVERT

PIPE INSULATION DETAIL
SCALE: NONE



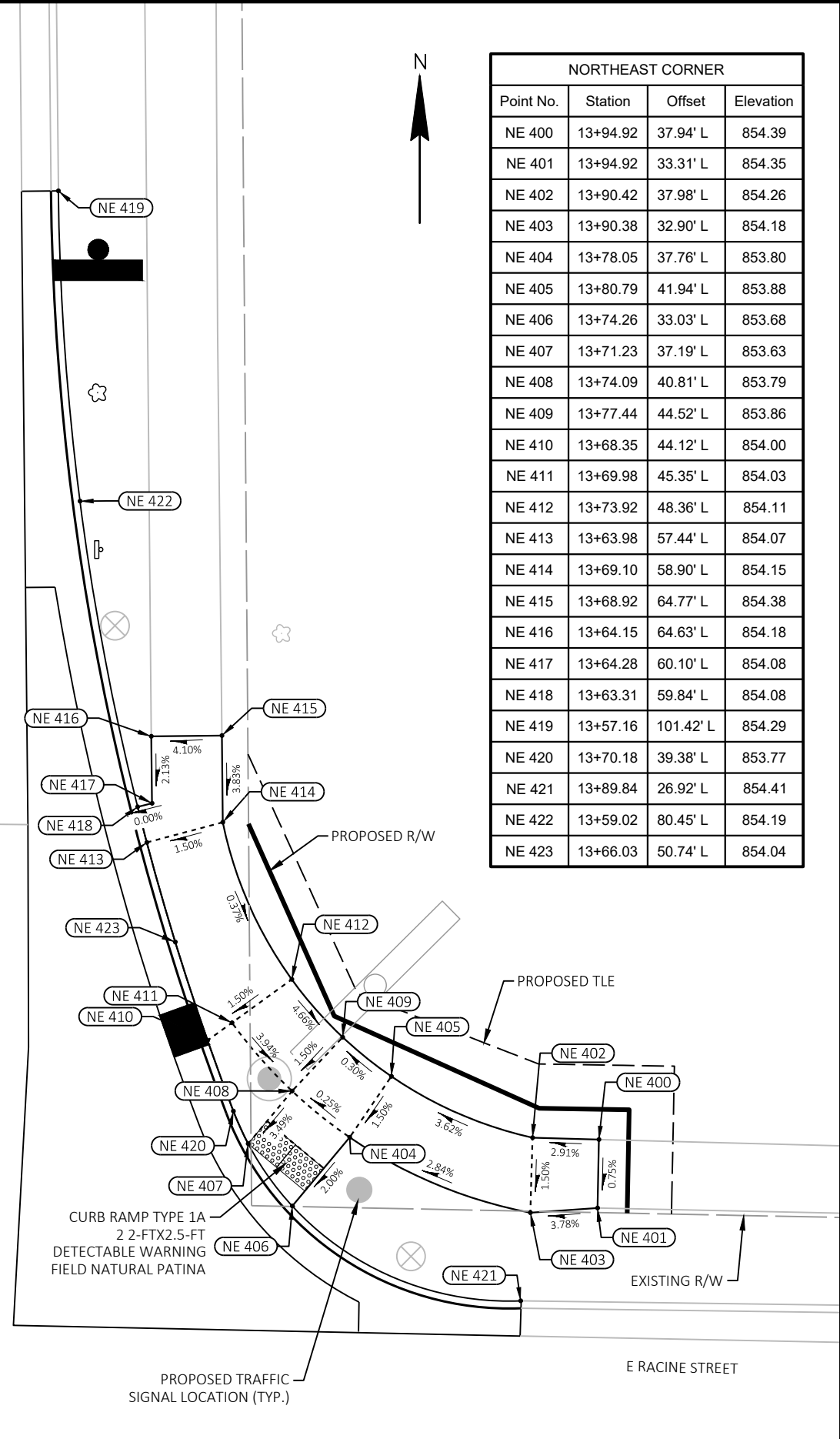


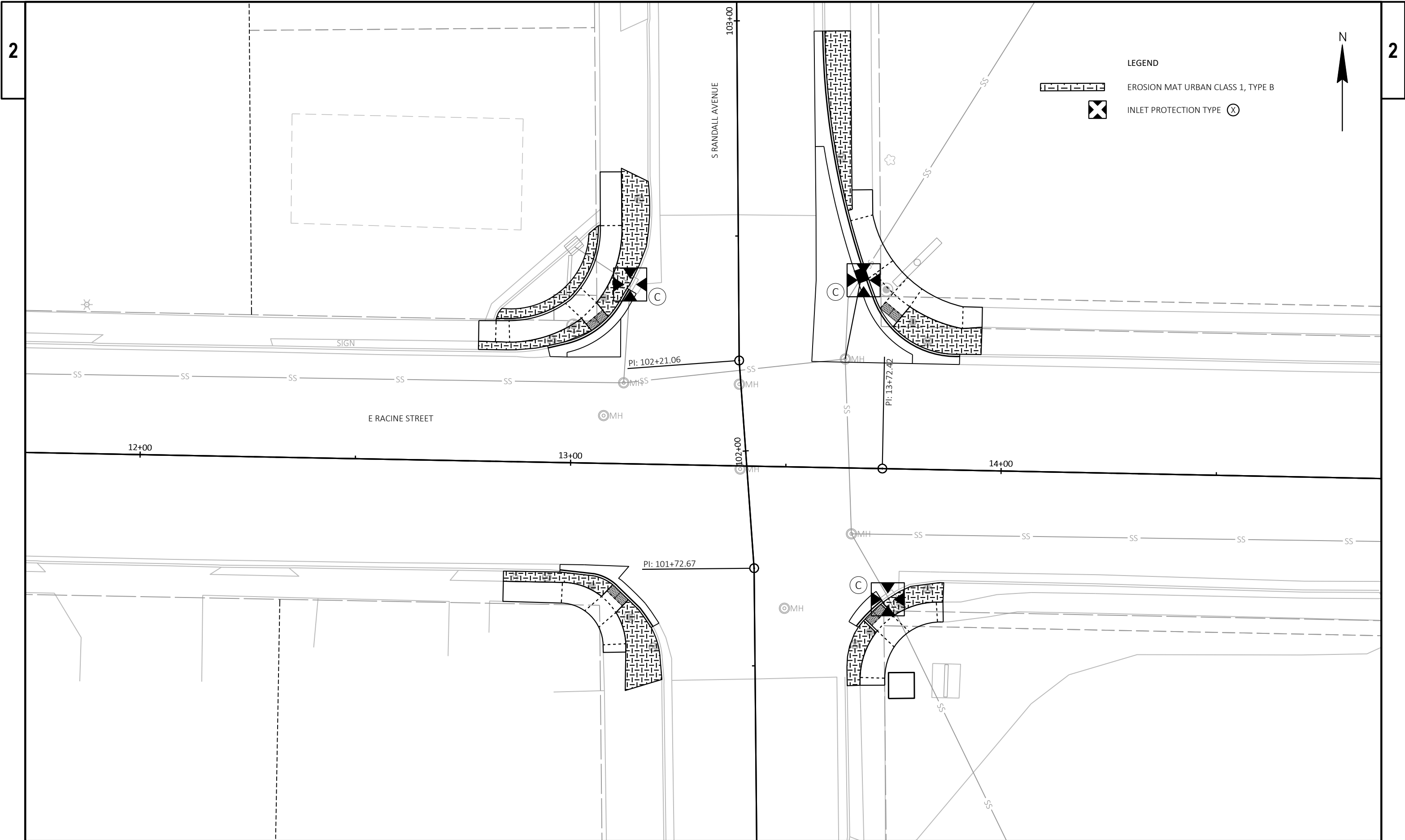
NORTHWEST CORNER			
Point No.	Station	Offset	Elevation
NW 300	12+78.10	27.83' L	854.20
NW 301	12+78.07	32.63' L	854.45
NW 302	12+82.04	27.78' L	854.29
NW 303	12+82.10	32.69' L	854.36
NW 304	12+85.11	32.74' L	854.30
NW 305	12+85.31	27.74' L	854.23
NW 306	12+98.12	37.02' L	854.02
NW 307	13+01.91	33.62' L	853.94
NW 308	13+01.60	40.67' L	854.02
NW 309	13+05.34	37.31' L	853.94

NORTHWEST CORNER			
Point No.	Station	Offset	Elevation
NW 310	13+08.06	34.08' L	853.82
NW 311	13+04.30	30.78' L	853.85
NW 312	13+10.88	55.35' L	854.25
NW 313	13+05.89	55.21' L	854.33
NW 314	12+94.15	27.07' L	854.45
NW 315	12+98.19	28.08' L	854.47
NW 316	13+10.54	37.54' L	854.21
NW 317	13+12.34	40.79' L	854.19
NW 318	13+05.58	67.70' L	854.57
NW 319	13+10.53	67.81' L	854.52

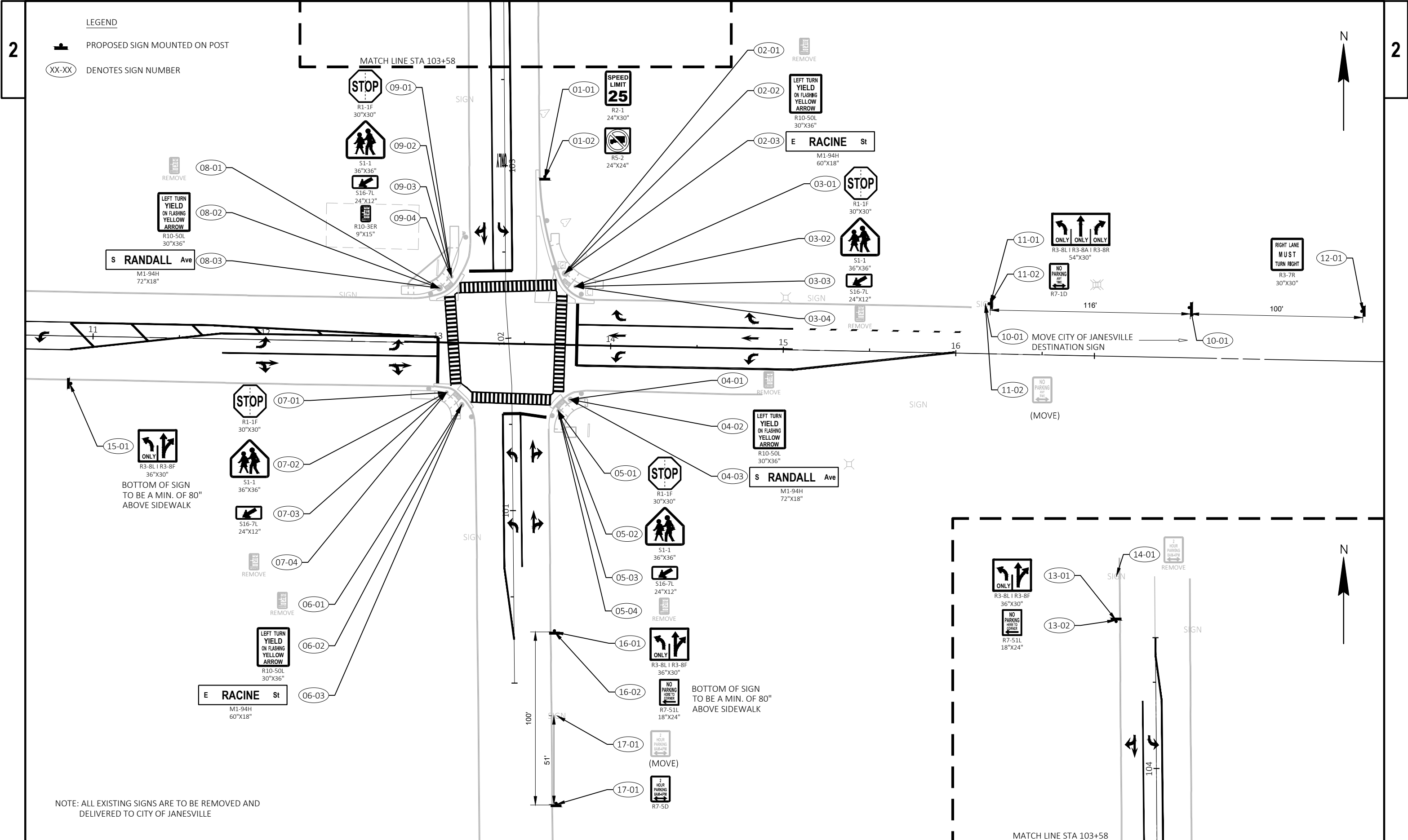
SOUTHEAST CORNER			
Point No.	Station	Offset	Elevation
SE 100	13+68.21	50.43' R	854.01
SE 101	13+68.18	48.62' R	854.00
SE 102	13+74.01	50.30' R	854.10
SE 103	13+73.97	48.67' R	854.09
SE 104	13+76.00	41.37' R	853.96
SE 105	13+71.98	37.72' R	853.88
SE 106	13+79.44	37.75' R	853.89
SE 107	13+75.61	34.23' R	853.85
SE 108	13+85.94	35.40' R	854.26
SE 109	13+87.28	35.34' R	854.30
SE 110	13+87.11	30.72' R	854.18
SE 111	13+85.58	30.78' R	854.19
SE 112	13+73.23	31.04' R	854.29
SE 113	13+72.69	31.48' R	853.78
SE 114	13+69.08	34.99' R	853.72
SE 115	13+67.51	36.93' R	854.18

S RANDALL AVENUE	103+00
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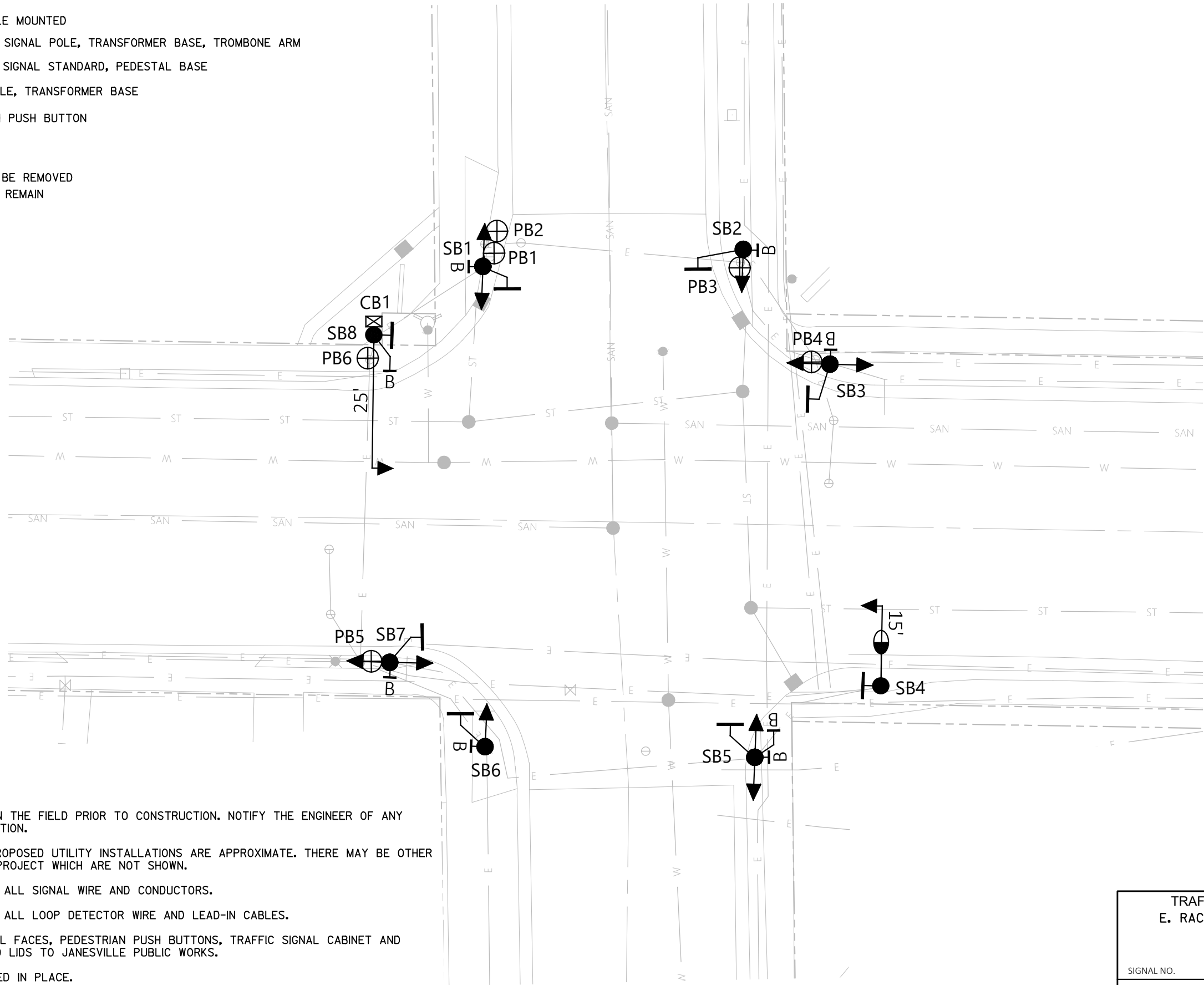
PROJECT NO: 5990-01-32	HWY: LOC STR	COUNTY: ROCK	EROSION CONTROL	SHEET	E
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LEGEND

- ☒ CONTROL CABINET, POLE MOUNTED
- 15' ● SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE, TROMBONE ARM
- ←● SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- ⊕ PEDESTRIAN HEAD WITH PUSH BUTTON
- ⊕ EXISTING PULL BOX

NOTE: BOLD REPRESENTS ITEMS TO BE REMOVED
GRAYSHADE REPRESENTS EXISTING TO REMAIN



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. REMOVE AND PROPERLY DISPOSE OF ALL SIGNAL WIRE AND CONDUCTORS.
4. REMOVE AND PROPERLY DISPOSE OF ALL LOOP DETECTOR WIRE AND LEAD-IN CABLES.
5. RETURN ALL REMOVED POLES, SIGNAL FACES, PEDESTRIAN PUSH BUTTONS, TRAFFIC SIGNAL CABINET AND CONTENTS, AND PULL BOX RIMS AND LIDS TO JANESVILLE PUBLIC WORKS.
6. EXISTING CONDUIT MAY BE ABANDONED IN PLACE.

TRAFFIC CONTROL SIGNAL
E. RACINE ST & S. RANDALL AVE
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO.

REGION CONTACT: A. BIZJAK
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 1

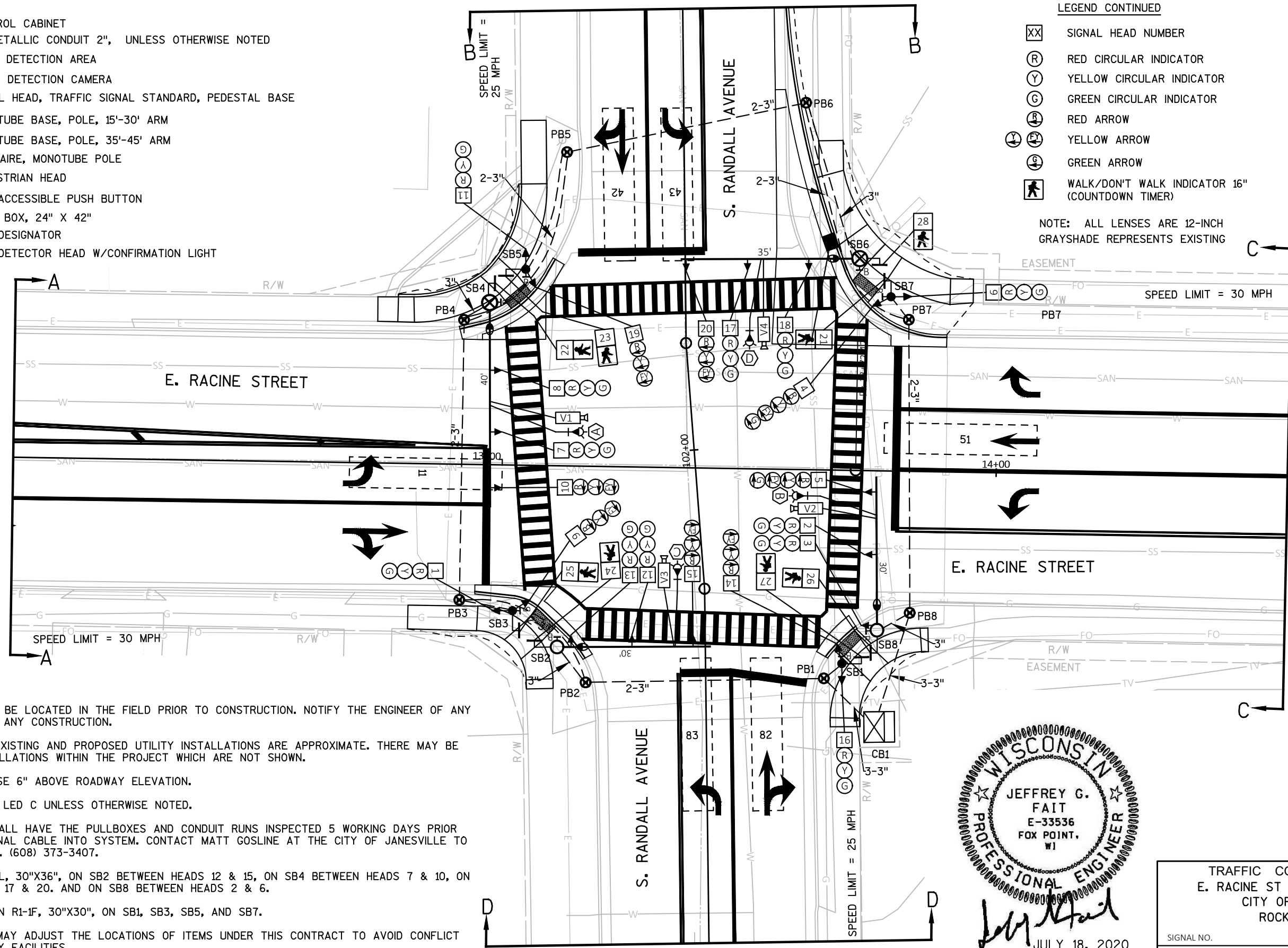
LEGEND

- ☒ CONTROL CABINET
--- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
--- VIDEO DETECTION AREA
VX VIDEO DETECTION CAMERA
● SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
(XX) ○ MONOTUBE BASE, POLE, 15'-30' ARM
(XX) ⊗ MONOTUBE BASE, POLE, 35'-45' ARM
● LUMINAIRE, MONOTUBE POLE
● PEDESTRIAN HEAD
-B APS ACCESSIBLE PUSH BUTTON
⊗ PULL BOX, 24" X 42"
⊗ EVP DESIGNATOR
⊗ EVP DETECTOR HEAD W/CONFIRMATION LIGHT

LEGEND CONTINUED

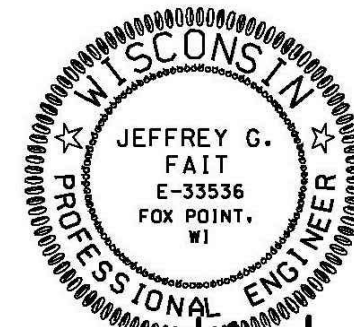
- XX SIGNAL HEAD NUMBER
Ⓡ RED CIRCULAR INDICATOR
Ⓢ YELLOW CIRCULAR INDICATOR
Ⓢ GREEN CIRCULAR INDICATOR
Ⓢ RED ARROW
Ⓢ YELLOW ARROW
Ⓢ GREEN ARROW
Ⓢ WALK/DON'T WALK INDICATOR 16"
(COUNTDOWN TIMER)

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
4. ALL LUMINAIRES ARE LED C UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL HAVE THE PULLBOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING THE SIGNAL CABLE INTO SYSTEM. CONTACT MATT GOSLINE AT THE CITY OF JANESVILLE TO MAKE ARRANGEMENTS. (608) 373-3407.
6. INSTALL SIGN R10-50L, 30"X36", ON SB2 BETWEEN HEADS 12 & 15, ON SB4 BETWEEN HEADS 7 & 10, ON SB6 BETWEEN HEADS 17 & 20. AND ON SB8 BETWEEN HEADS 2 & 6.
7. INSTALL FOLDING SIGN R1-1F, 30"X30", ON SB1, SB3, SB5, AND SB7.
8. THE CITY ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.



JULY 18, 2020

TRAFFIC CONTROL SIGNAL
E. RACINE ST & S. RANDALL AVE
CITY OF JANESVILLE
ROCK COUNTY

SIGNAL NO.

REGION CONTACT: A. BIZJAK
DESIGNED BY: TADI
REVISED BY:

PAGE 1 OF 5

PROJECT NO: 5990-01-32

HWY: E. RACINE STREET

COUNTY: ROCK

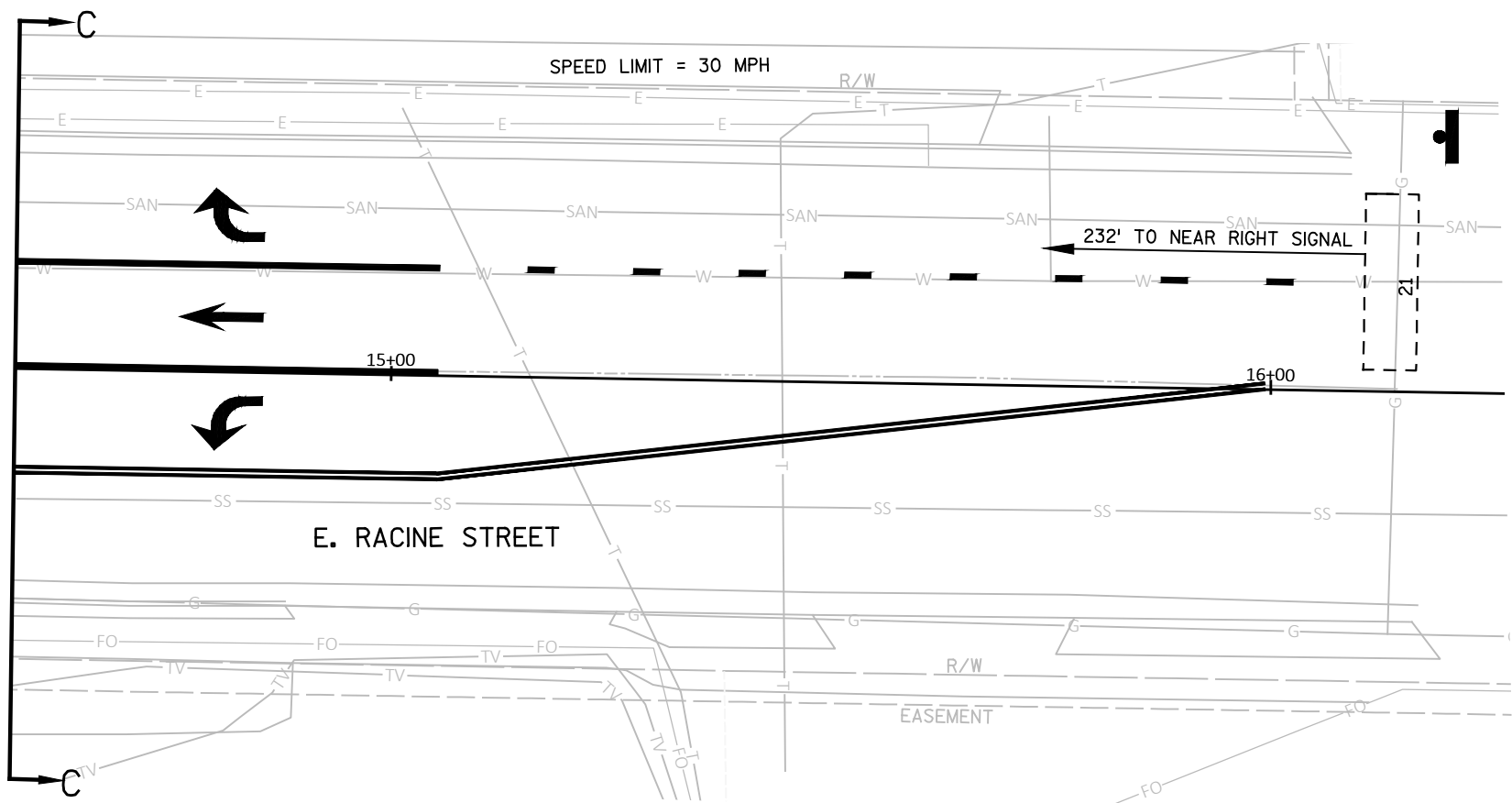
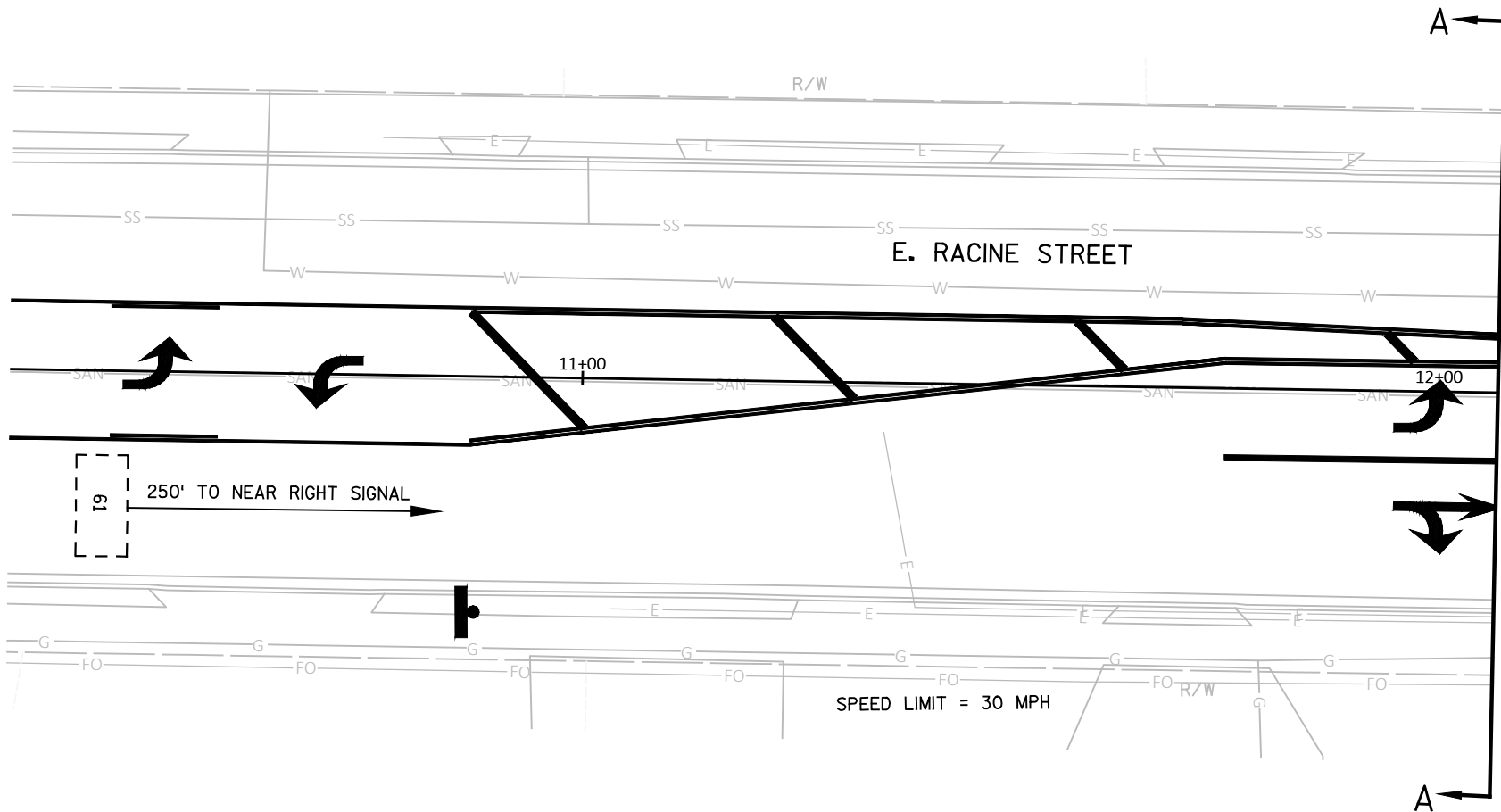
TRAFFIC SIGNAL PLAN

SHEET

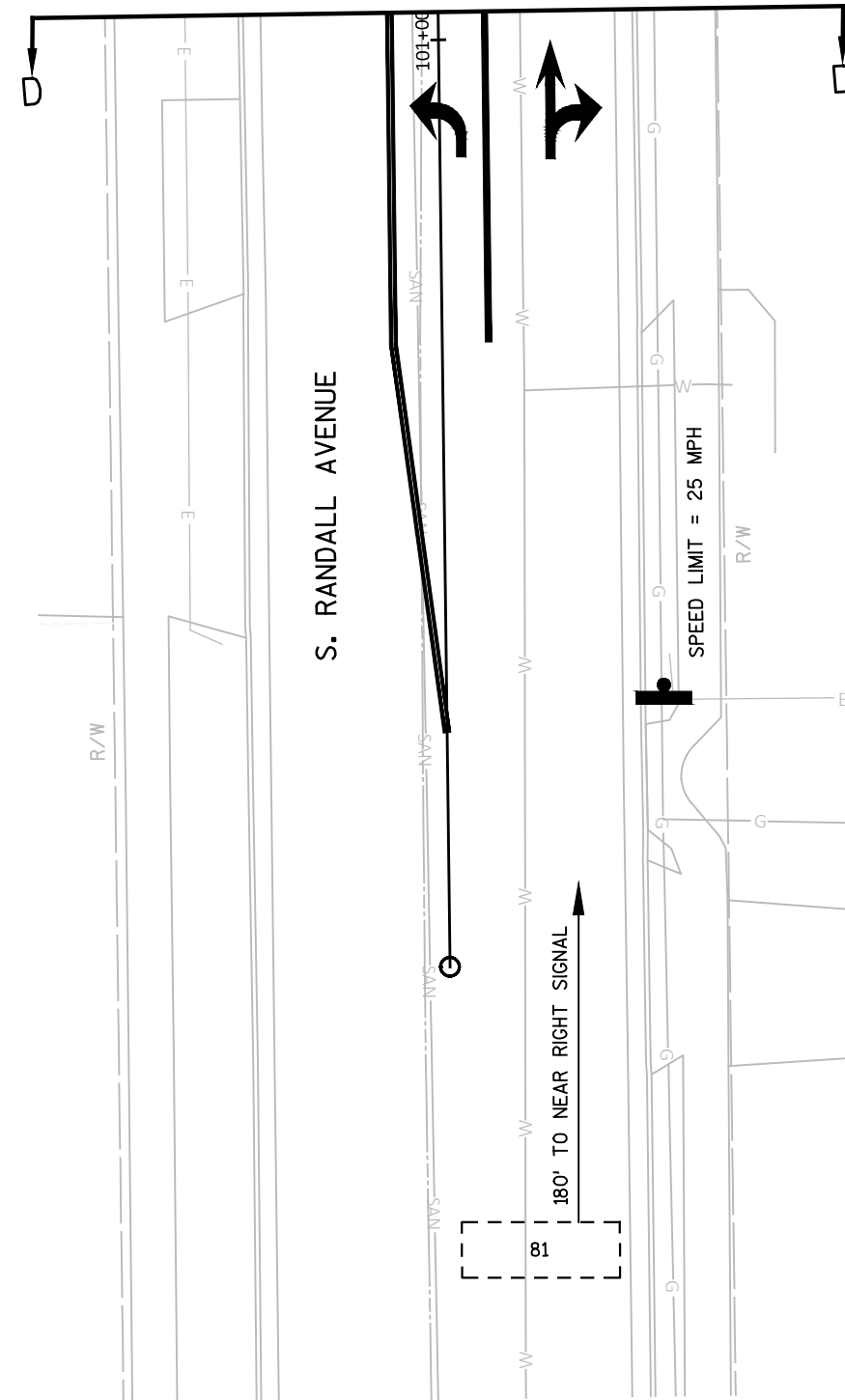
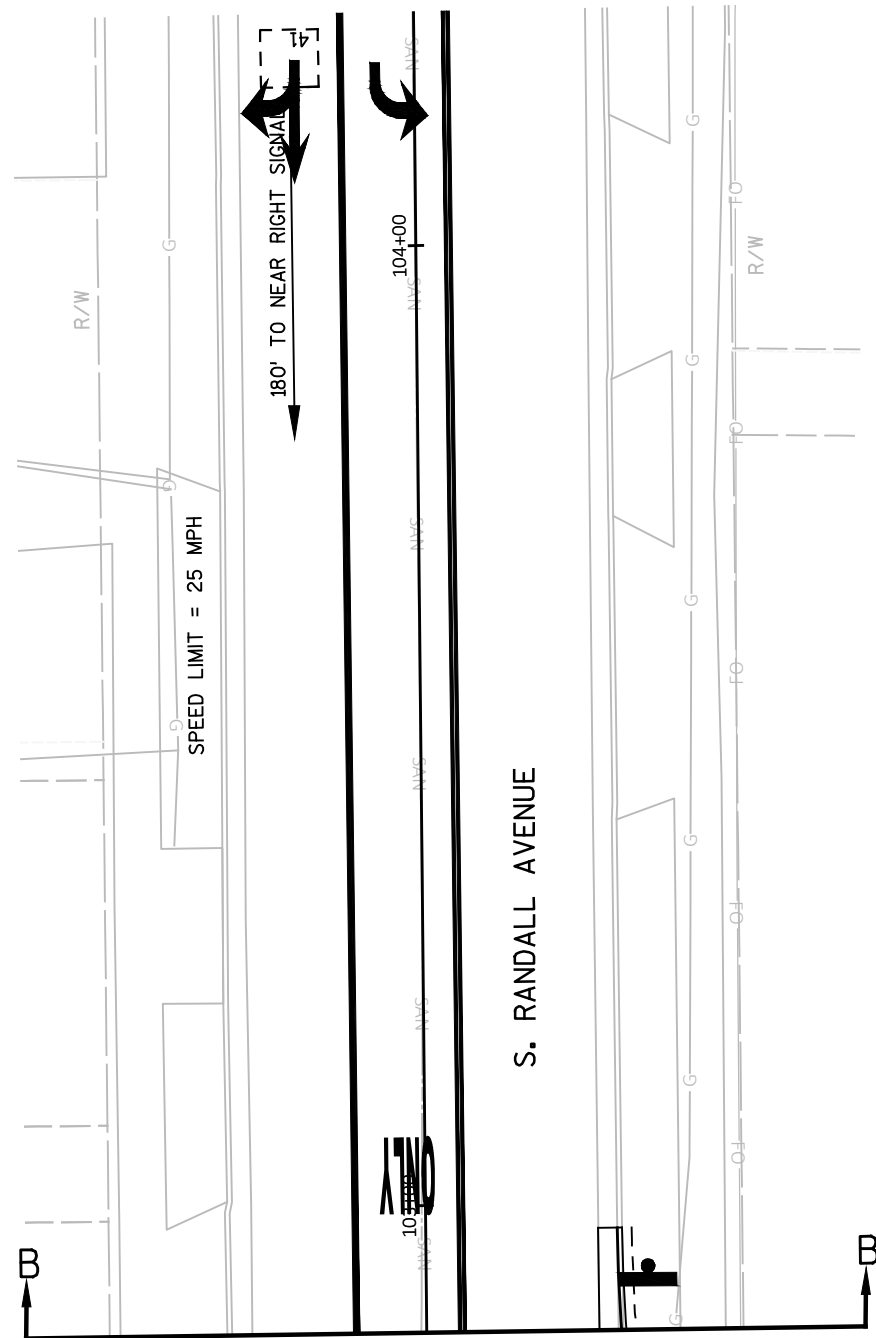
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2

2



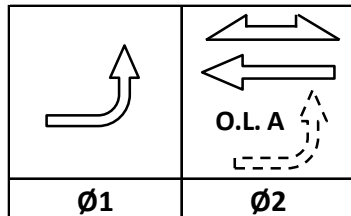
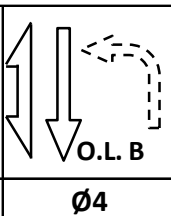
TRAFFIC CONTROL SIGNAL E. RACINE ST & S. RANDALL AVE CITY OF JANESVILLE ROCK COUNTY	
SIGNAL NO.	
REGION CONTACT: A. BIZJAK	PAGE 2 OF 5
DESIGNED BY: TADI	
REVISED BY:	



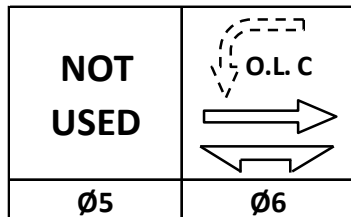
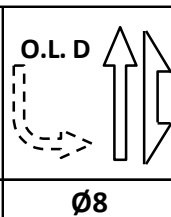
TRAFFIC CONTROL SIGNAL E. RACINE ST & S. RANDALL AVE CITY OF JANESVILLE ROCK COUNTY	
SIGNAL NO.	
REGION CONTACT: A. BIZJAK DESIGNED BY: TADI REVISED BY:	PAGE 3 OF 5

	HEAD NUMBERS	F L A S H
Ø1	4,5	-
Ø2	6,7,8	R
Ø3		
Ø4	11,12,13	R
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	16,17,18	R
Ø2P	21,22	
Ø4P	23,24	
Ø6P	25,26	
Ø8P	27,28	
OLA	4,5	R←
OLB	19,20	R←
OLC	9,10	R←
OLD	14,15	R←

RING 1

NOT
USED

RING 2

NOT
USED

BARRIER

N

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT	←→	→↗	↓↑	↓↑
PHASE	2+6	6+1	4+8	8+4

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+8 OR 8+4, CONTROLLER SHALL RETURN TO PHASES 4+8.

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

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

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

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

DETECTOR LOGIC

VIDEO DETECTION

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	41	43	61	82			
ASSIGNED PHASE	1	4	4	6	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND		X		X				
DELAY								

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	21	42	51	81	83			
ASSIGNED PHASE	2	4	2	8	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND	X			X				
DELAY								

19	17	23	21	27	25	31	29
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH

20	18	24	22	28	26	32	30
VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH

DETECTOR INPUT	
PLAN LOOP DETECTOR*(S)	
ASSIGNED PHASE	
OPERATION MODE	
SWITCH	
EXTEND	
DELAY	

DETECTOR INPUT	
PLAN LOOP DETECTOR*(S)	
ASSIGNED PHASE	
OPERATION MODE	
SWITCH	
EXTEND	
DELAY	

E. RACINE ST & S. RANDALL AVE	
CITY OF JANESVILLE	
ROCK COUNTY	
SIGNAL NO:	CABINET TYPE: TS2-S
CONTROLLER TYPE: EPAC	
DATE: 06/2020	PAGE NUMBER: 4 OF 5

PROJECT ID:	5990-01-32
INTERSECTION:	RACINE AT RANDALL

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

CB1 TO	JUMPER	# OF COND. AWG 14	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	PED BUTTON 2
				RED	YELLOW	GREEN	<RED	<YELLOW>	<FL YELLOW>	<GREEN>	D/WALK	WALK		
SB1		12	16	RED	ORG	GRN								
			14				RED/BLK	ORG/BLK	GRN/BLK					
			27								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB2		12	12	RED	ORG	GRN								
			13	RED	ORG	GRN								
			15				RED/BLK	ORG/BLK	GRN/BLK					
			24								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB3		12	1	RED	ORG	GRN								
			9				RED/BLK	ORG/BLK	GRN/BLK					
			25								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB4		12	7	RED	ORG	GRN								
			8	RED	ORG	GRN								
			10				RED/BLK	ORG/BLK	GRN/BLK					
			22								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB5		12	19				RED	ORG	GRN					
			11	RED/BLK	ORG/BLK	GRN/BLK								
			23								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB6		12	17	RED	ORG	GRN								
			18	RED	ORG	GRN								
			20				RED/BLK	ORG/BLK	GRN/BLK					
			28								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB7		12	4				RED	ORG	BLK/WHT	GRN				
			6	RED/BLK	ORG/BLK	GRN/BLK								
			21								BLK	BLU		
			B										WHT/BLK	BLU/BLK
SB8		12	2	RED	ORG	GRN								
			3	RED	ORG	GRN								
			5				RED/BLK	ORG/BLK	BLK/WHT	GRN/BLK				
			26								BLK	BLU		
			B										WHT/BLK	BLU/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
CB1	PB1
SB2	PB2
SB3	PB3
SB4	PB4
SB5	PB5
SB6	PB6
SB7	PB7
SB8	PB8

LIGHTING UF 12 AWG W/GROUND	
FROM	TO
CB1	SB2
SB2	SB4
CB1	SB8
SB8	SB6

VIDEO DETECTION CABLE	
FROM	TO
CB1	SB2 (V3)
CB1	SB4 (V1)
CB1	SB6 (V4)
CB1	SB8 (V2)

EMERGENCY VEHICLE PREEMPTION CABLE	
FROM	TO
CB1	SB4 (A)
CB1	SB8 (B)
CB1	SB2 (C)
CB1	SB6 (D)

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

GENERAL NOTES

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

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

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

BASES (SHAFT) 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.

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 THE 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, UL 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.

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

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 THE WRITTEN APPROVAL OF THE ENGINEER.

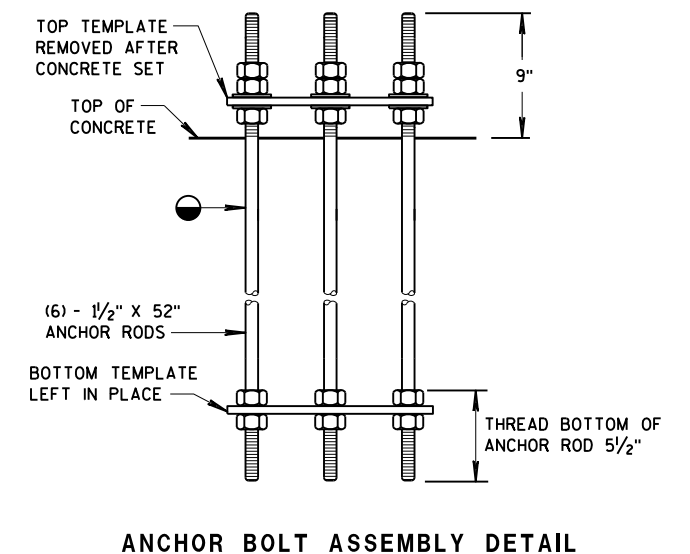
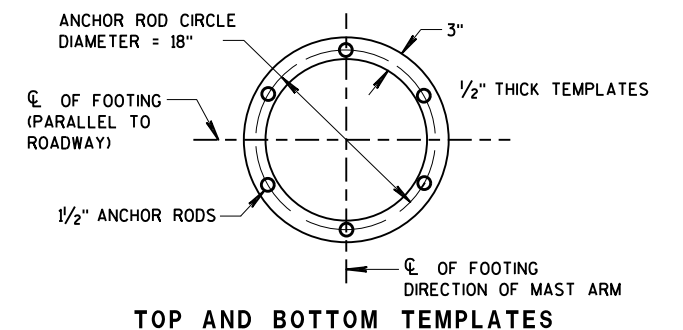
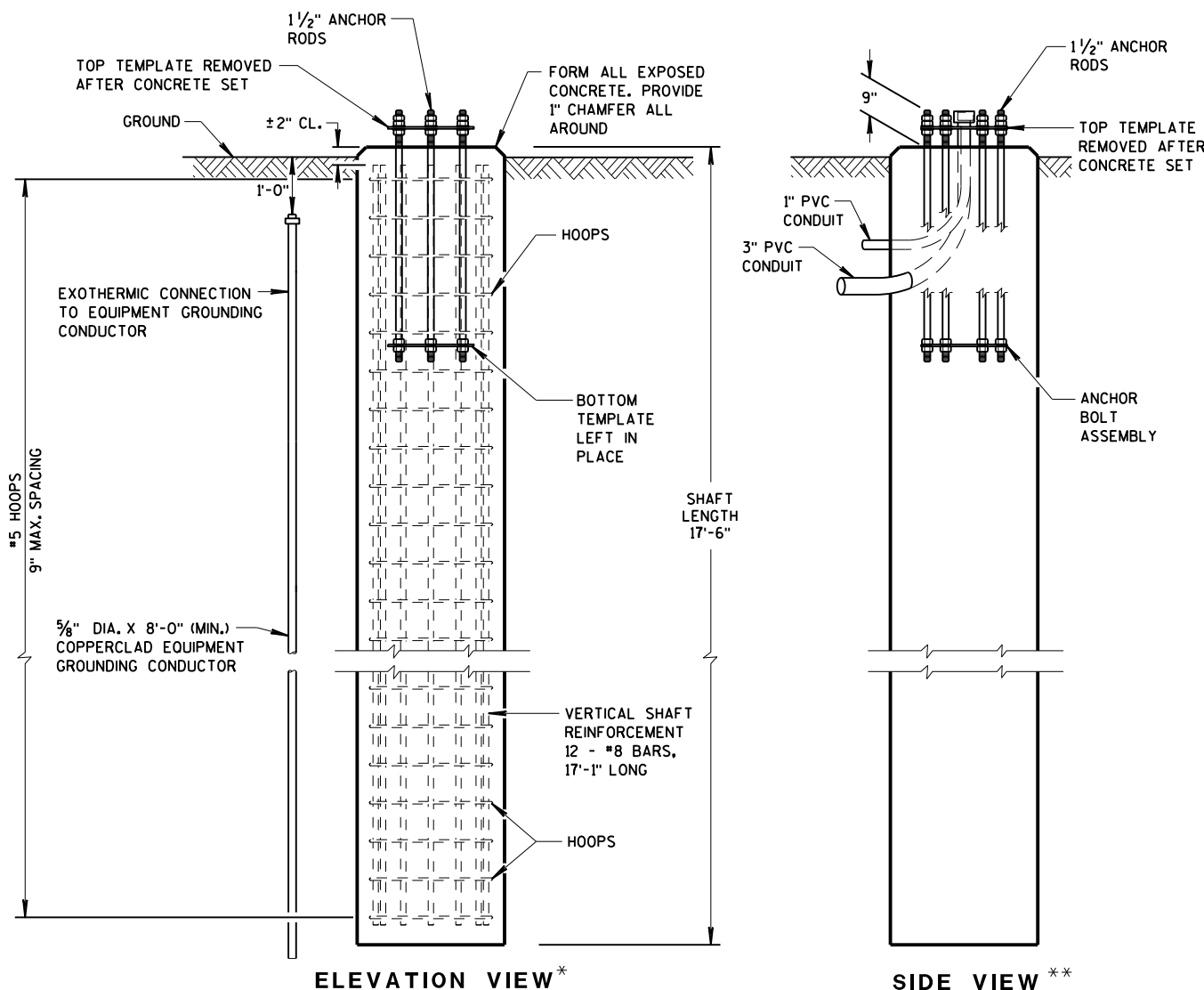
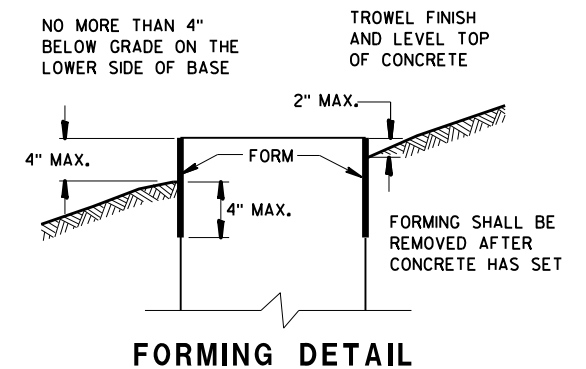
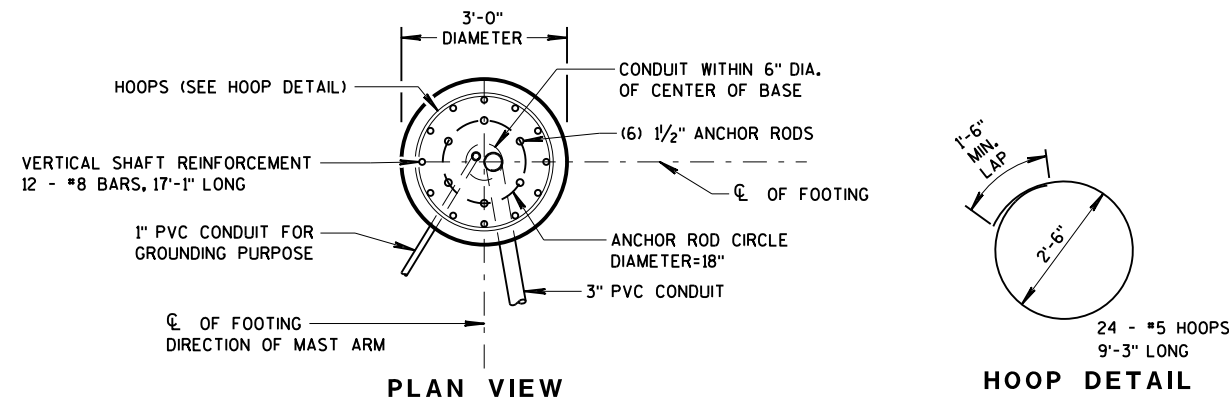
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

CONCRETE MASONRY ----- $f_c=3,500$ p.s.i.

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ----- $f_y=60,000$ p.s.i.

ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATIONS --- $f_y=55,000$ p.s.i.

TEMPLATES, ASTM A709 GRADE 36 ----- $f_y=36,000$ p.s.i.



CONCRETE BASE ANCHOR ASSEMBLY

● THREAD TOP 9" 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 RODS (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.

ELEVATION VIEW *

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY

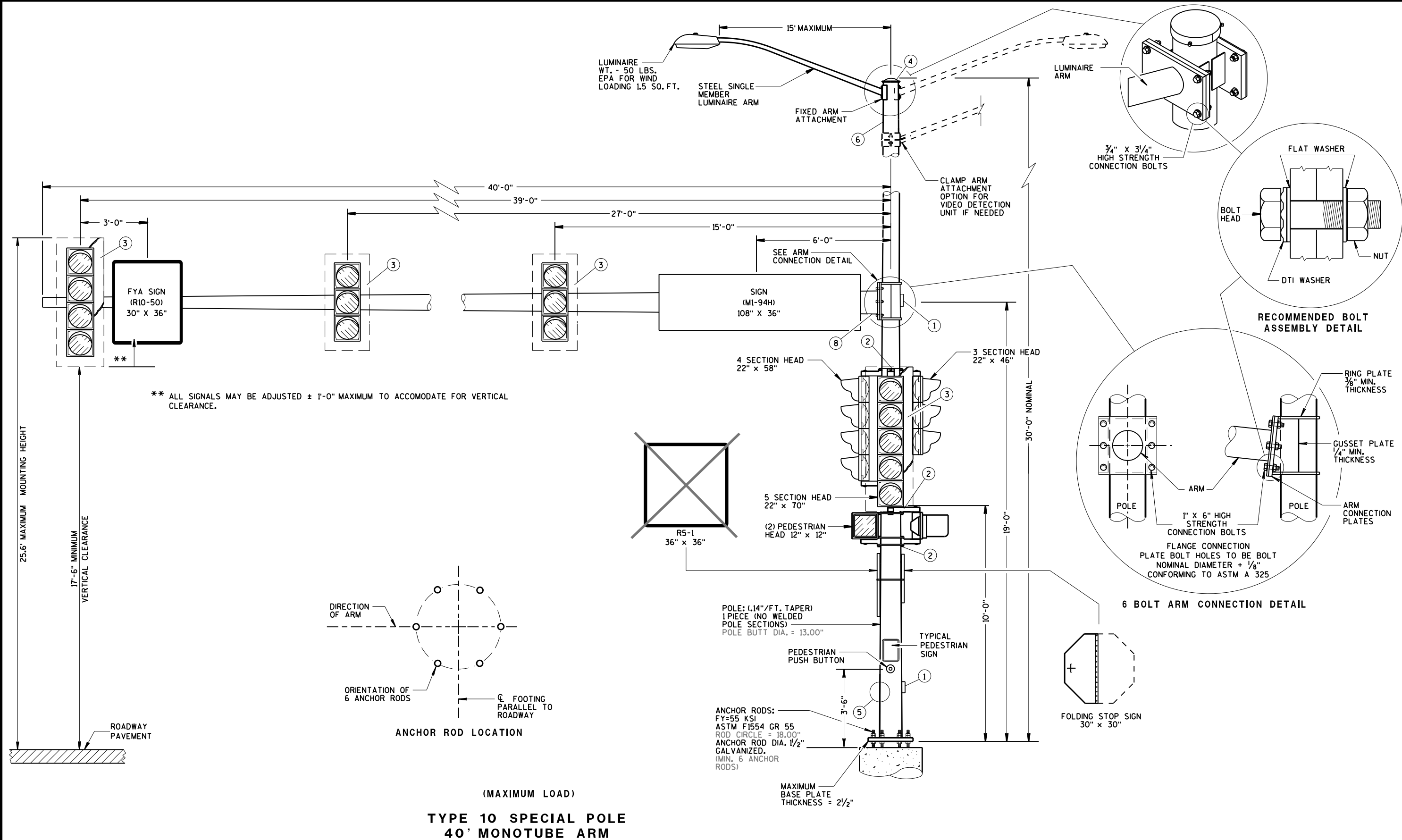
SIDE VIEW **

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

(FOR TYPE 9 & 10 SPECIAL POLES)

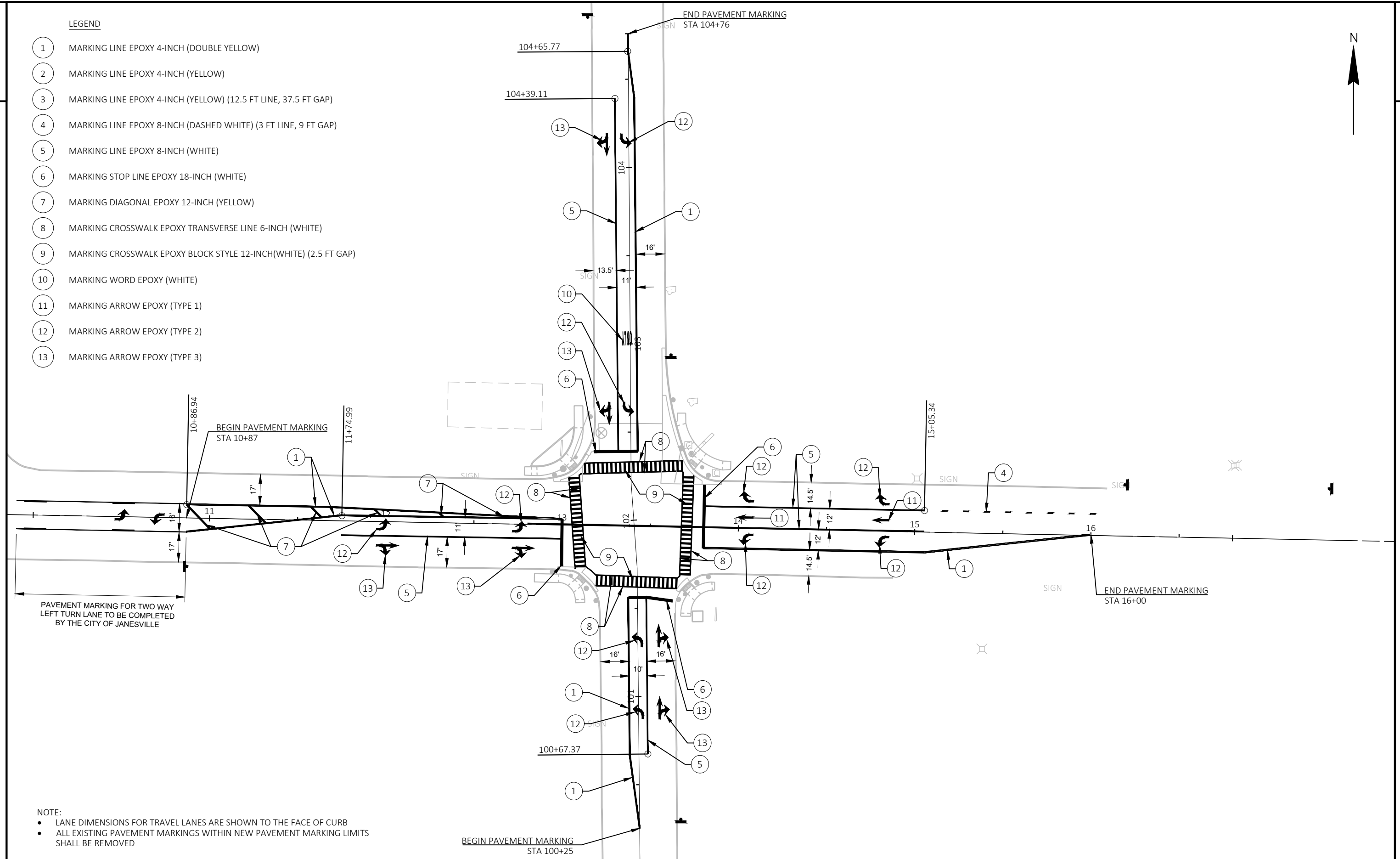
CONCRETE = 4.6 C.Y.
H.S. REINFORCEMENT = 779 LBS.

TO BE USED WHEN GROUND ELEVATION, AT BASE, EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

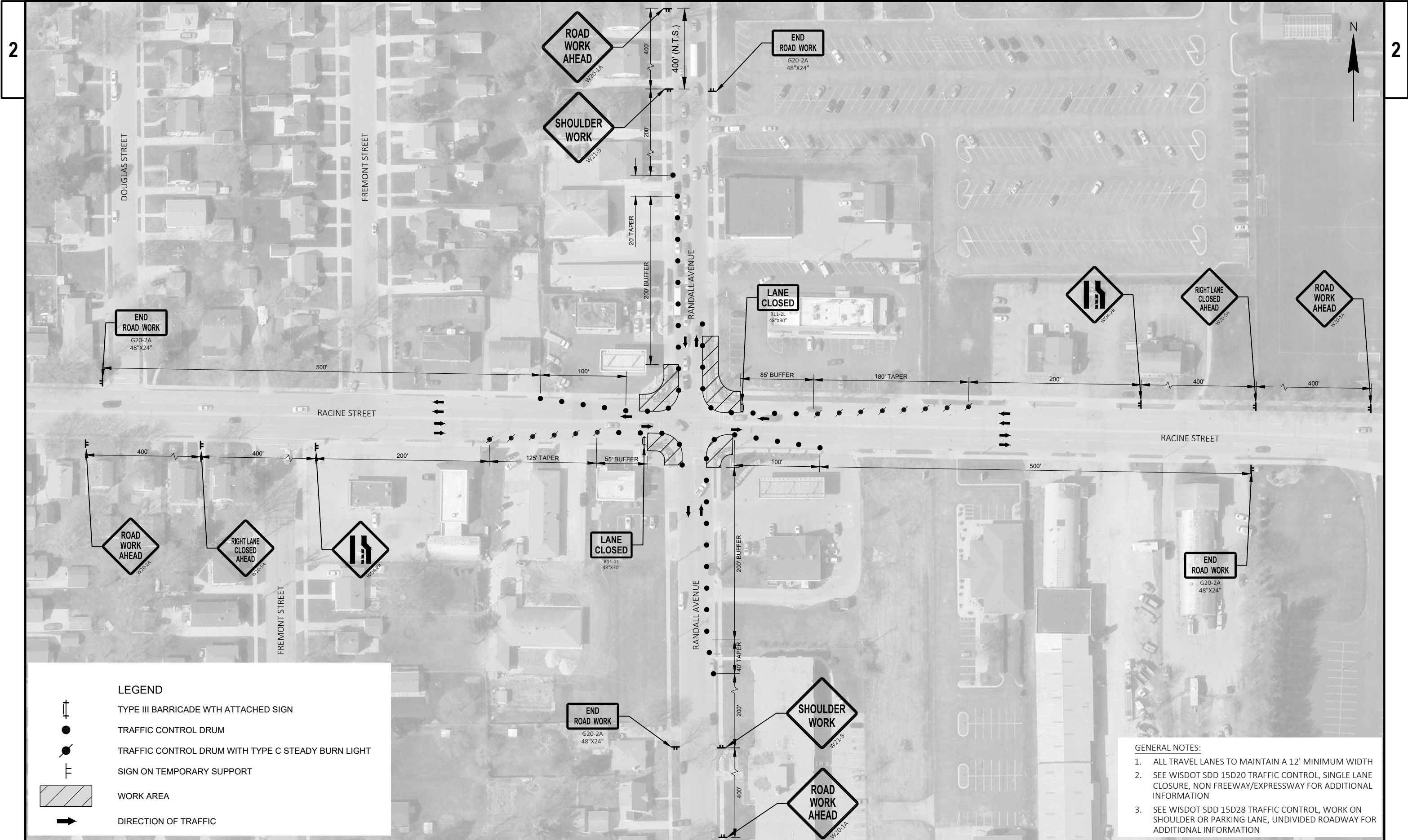


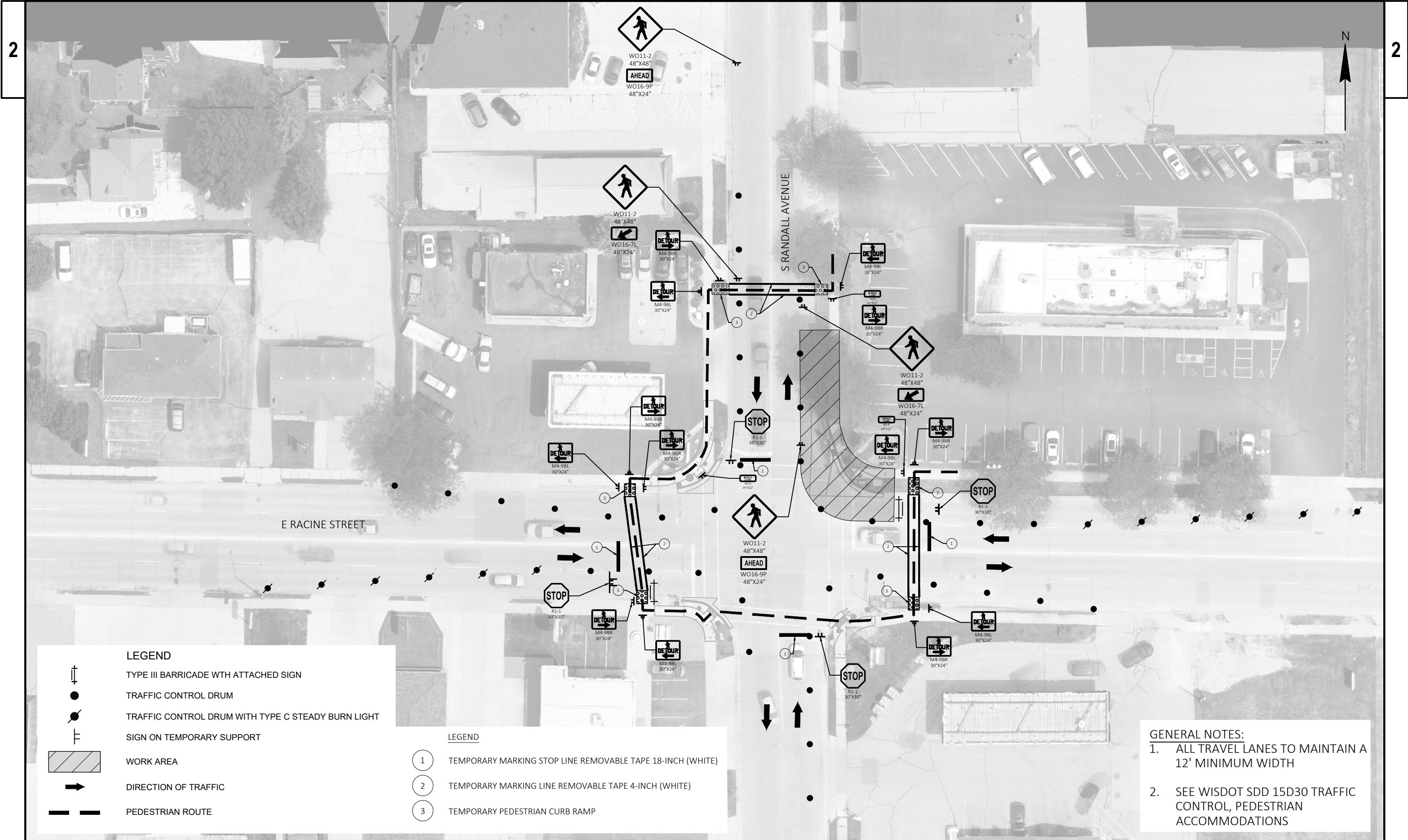
LEGEND

- 1 MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- 2 MARKING LINE EPOXY 4-INCH (YELLOW)
- 3 MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT GAP)
- 4 MARKING LINE EPOXY 8-INCH (DASHED WHITE) (3 FT LINE, 9 FT GAP)
- 5 MARKING LINE EPOXY 8-INCH (WHITE)
- 6 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 7 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 8 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
- 9 MARKING CROSSWALK EPOXY BLOCK STYLE 12-INCH(WHITE) (2.5 FT GAP)
- 10 MARKING WORD EPOXY (WHITE)
- 11 MARKING ARROW EPOXY (TYPE 1)
- 12 MARKING ARROW EPOXY (TYPE 2)
- 13 MARKING ARROW EPOXY (TYPE 3)



NOTE:
• LANE DIMENSIONS FOR TRAVEL LANES ARE SHOWN TO THE FACE OF CURB
• ALL EXISTING PAVEMENT MARKINGS WITHIN NEW PAVEMENT MARKING LIMITS SHALL BE REMOVED





LEGEND

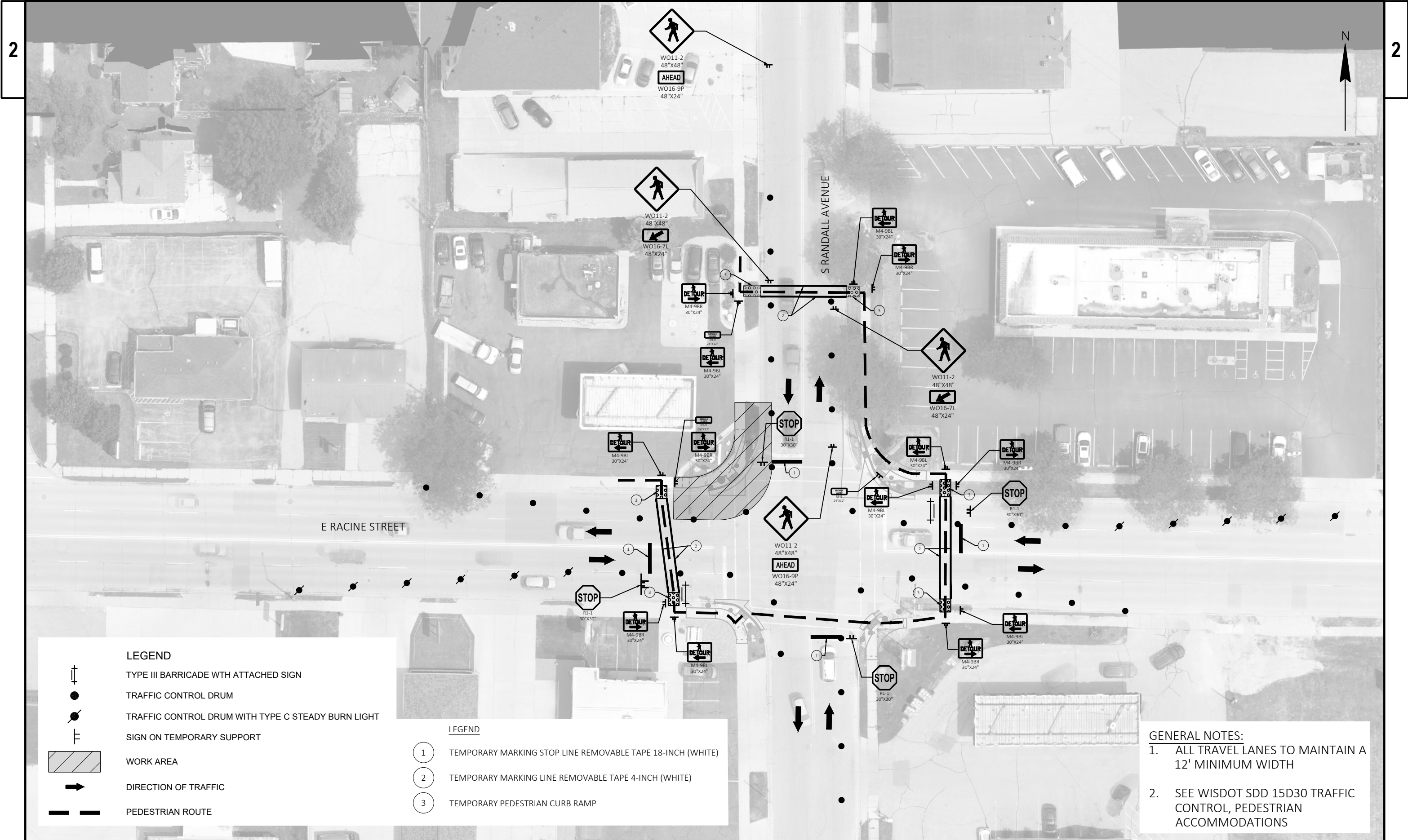
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- PEDESTRIAN ROUTE

LEGEND

- TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- TEMPORARY PEDESTRIAN CURB RAMP

GENERAL NOTES:

- ALL TRAVEL LANES TO MAINTAIN A 12' MINIMUM WIDTH
- SEE WISDOT SDD 15D30 TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATIONS



LEGEND

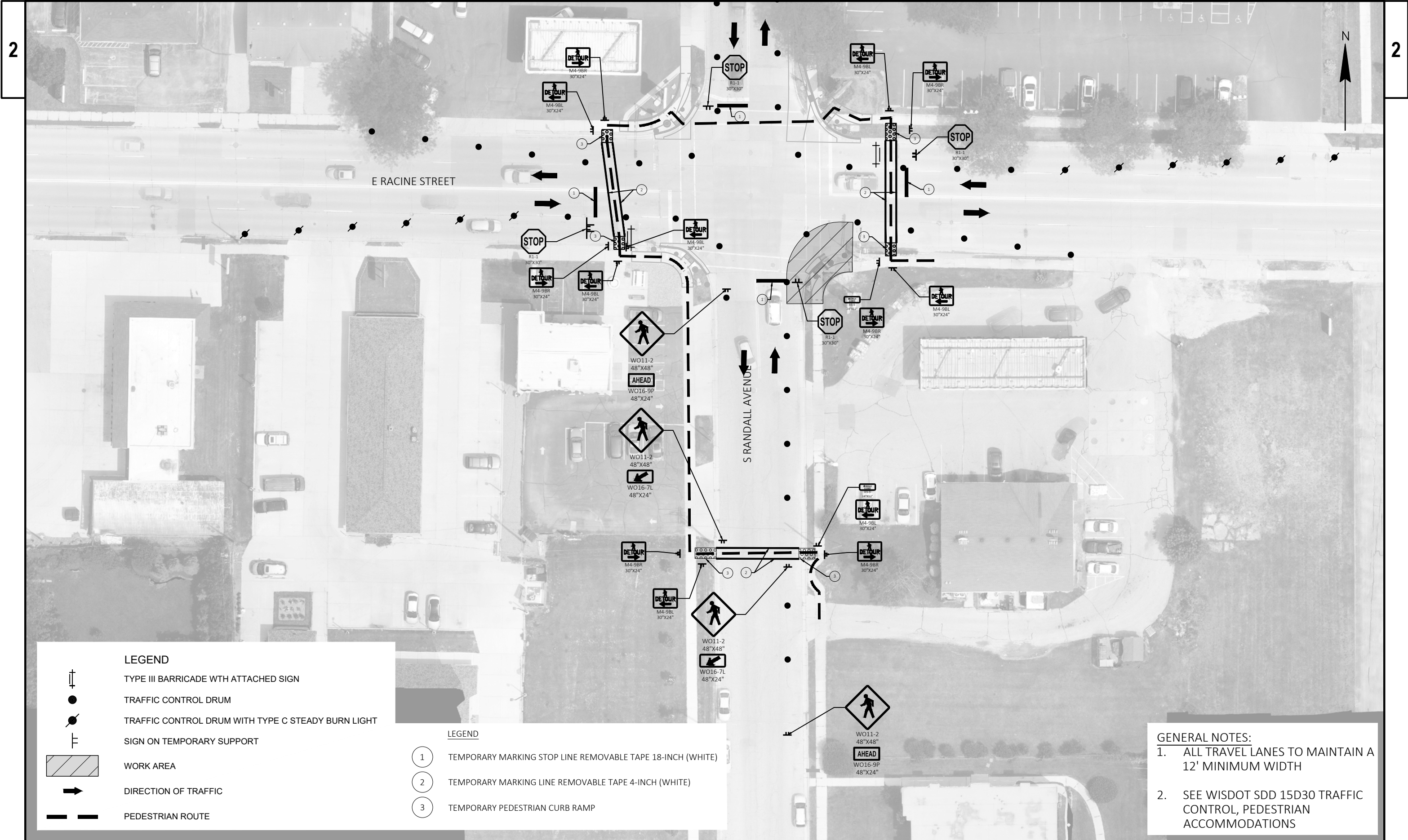
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- WORK AREA
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- PEDESTRIAN ROUTE

LEGEND

- 1 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- 2 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 3 TEMPORARY PEDESTRIAN CURB RAMP

GENERAL NOTES:

- 1. ALL TRAVEL LANES TO MAINTAIN A 12' MINIMUM WIDTH
- 2. SEE WISDOT SDD 15D30 TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATIONS



LEGEND

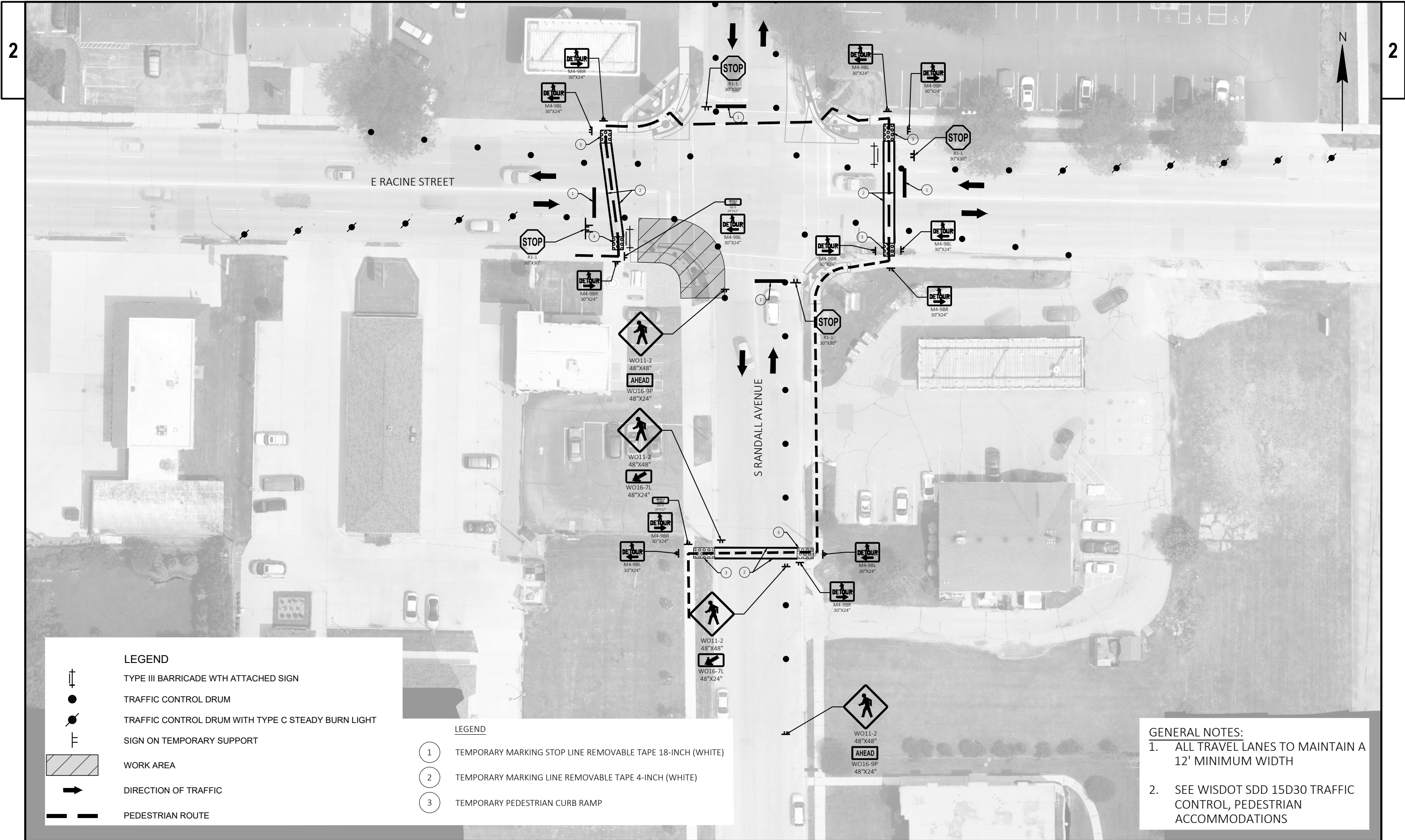
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- DIRECTION OF TRAFFIC
- PEDESTRIAN ROUTE

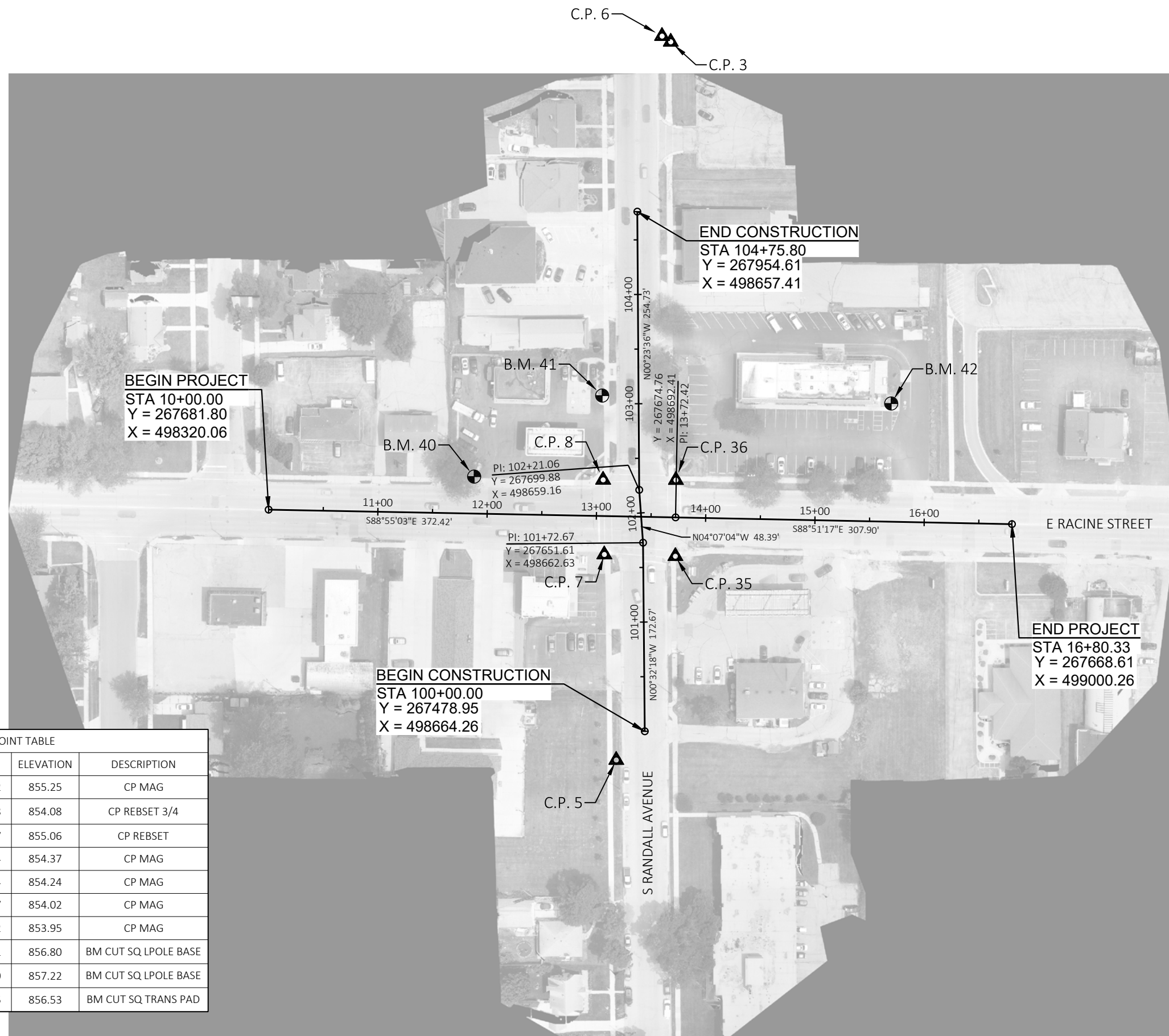
LEGEND

- 1 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- 2 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 3 TEMPORARY PEDESTRIAN CURB RAMP

GENERAL NOTES:

- 1. ALL TRAVEL LANES TO MAINTAIN A 12' MINIMUM WIDTH
- 2. SEE WISDOT SDD 15D30 TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATIONS





CONTROL POINT TABLE				
POINT NAME	Y	X	ELEVATION	DESCRIPTION
3	268110.07	498688.02	855.25	CP MAG
5	267452.62	498638.18	854.08	CP REBSET 3/4
6	268115.28	498680.07	855.06	CP REBSET
7	267640.76	498627.24	854.37	CP MAG
8	267709.10	498626.14	854.24	CP MAG
35	267639.21	498692.27	854.02	CP MAG
36	267708.90	498692.72	853.95	CP MAG
40	267712.12	498508.11	856.80	BM CUT SQ LPOLE BASE
41	267786.26	498625.30	857.22	BM CUT SQ LPOLE BASE
42	267778.99	498889.75	856.53	BM CUT SQ TRANS PAD

Estimate Of Quantities

5990-01-32

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	12.000	12.000
0004	201.0220	Grubbing	ID	12.000	12.000
0006	204.0100	Removing Concrete Pavement	SY	34.000	34.000
0008	204.0150	Removing Curb & Gutter	LF	156.000	156.000
0010	204.0155	Removing Concrete Sidewalk	SY	112.000	112.000
0012	204.0195	Removing Concrete Bases	EACH	8.000	8.000
0014	204.0220	Removing Inlets	EACH	1.000	1.000
0016	204.0245	Removing Storm Sewer (size) 01. 12 inch	LF	20.000	20.000
0018	204.9105.S	Removing (item description) 01. Traffic Signals Racine St & Randall Ave	LS	1.000	1.000
0020	205.0100	Excavation Common	CY	25.000	25.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	70.000	70.000
0024	312.0110	Select Crushed Material	TON	40.000	40.000
0026	415.0090	Concrete Pavement 9-Inch	SY	57.000	57.000
0028	415.5110.S	Concrete Pavement Joint Layout	LS	1.000	1.000
0030	416.0610	Drilled Tie Bars	EACH	76.000	76.000
0032	601.0417	Concrete Curb & Gutter 30-Inch Type K	LF	121.000	121.000
0034	601.0419	Concrete Curb & Gutter 30-Inch Type L	LF	27.000	27.000
0036	601.0600	Concrete Curb Pedestrian	LF	45.000	45.000
0038	602.0405	Concrete Sidewalk 4-Inch	SF	860.000	860.000
0040	602.0415	Concrete Sidewalk 6-Inch	SF	87.000	87.000
0042	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	40.000	40.000
0044	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	20.000	20.000
0046	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000
0048	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
0050	612.0902.S	Insulation Board Polystyrene (inch) 01. 2-Inch	SY	10.000	10.000
0052	616.0700.S	Fence Safety	LF	300.000	300.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	2.000	2.000
0058	625.0100	Topsoil	SY	105.000	105.000
0060	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0062	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0064	628.2008	Erosion Mat Urban Class I Type B	SY	105.000	105.000
0066	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0068	629.0210	Fertilizer Type B	CWT	1.000	1.000
0070	630.0140	Seeding Mixture No. 40	LB	3.000	3.000
0072	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	2.000	2.000
0074	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	7.000	7.000
0076	637.2210	Signs Type II Reflective H	SF	175.000	175.000

Estimate Of Quantities

5990-01-32

Line	Item	Item Description	Unit	Total	Qty
0078	637.2215	Signs Type II Reflective H Folding	SF	20.720	20.720
0080	637.2230	Signs Type II Reflective F	SF	35.000	35.000
0082	638.2102	Moving Signs Type II	EACH	3.000	3.000
0084	638.2602	Removing Signs Type II	EACH	21.000	21.000
0086	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0300	Traffic Control Drums	DAY	6,000.000	6,000.000
0092	643.0420	Traffic Control Barricades Type III	DAY	200.000	200.000
0094	643.0715	Traffic Control Warning Lights Type C	DAY	1,800.000	1,800.000
0096	643.0900	Traffic Control Signs	DAY	2,400.000	2,400.000
0098	643.5000	Traffic Control	EACH	1.000	1.000
0100	644.1420	Temporary Pedestrian Surface Plywood	SF	200.000	200.000
0102	644.1601	Temporary Pedestrian Curb Ramp	DAY	500.000	500.000
0104	646.1020	Marking Line Epoxy 4-Inch	LF	2,005.000	2,005.000
0106	646.3020	Marking Line Epoxy 8-Inch	LF	690.000	690.000
0108	646.5020	Marking Arrow Epoxy	EACH	18.000	18.000
0110	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0112	646.6120	Marking Stop Line Epoxy 18-Inch	LF	119.000	119.000
0114	646.7120	Marking Diagonal Epoxy 12-Inch	LF	50.000	50.000
0116	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	440.000	440.000
0118	646.9000	Marking Removal Line 4-Inch	LF	1,950.000	1,950.000
0120	646.9200	Marking Removal Line Wide	LF	100.000	100.000
0122	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	340.000	340.000
0124	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	56.000	56.000
0126	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0128	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	90.000	90.000
0130	650.8500	Construction Staking Electrical Installations (project) 01. 5990-01-32	LS	1.000	1.000
0132	650.9000	Construction Staking Curb Ramps	EACH	4.000	4.000
0134	650.9910	Construction Staking Supplemental Control (project) 01. 5990-01-32	LS	1.000	1.000
0136	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	45.000	45.000
0138	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	430.000	430.000
0140	652.0615	Conduit Special 3-Inch	LF	430.000	430.000
0142	653.0140	Pull Boxes Steel 24x42-Inch	EACH	8.000	8.000
0144	653.0905	Removing Pull Boxes	EACH	6.000	6.000
0146	654.0101	Concrete Bases Type 1	EACH	4.000	4.000
0148	654.0110	Concrete Bases Type 10	EACH	2.000	2.000
0150	654.0120	Concrete Bases Type 10-Special	EACH	2.000	2.000
0152	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000

Estimate Of Quantities

5990-01-32

Line	Item	Item Description	Unit	Total	Qty
0154	655.0230	Cable Traffic Signal 5-14 AWG	LF	760.000	760.000
0156	655.0240	Cable Traffic Signal 7-14 AWG	LF	70.000	70.000
0158	655.0260	Cable Traffic Signal 12-14 AWG	LF	1,175.000	1,175.000
0160	655.0305	Cable Type UF 2-12 AWG Grounded	LF	520.000	520.000
0162	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,040.000	1,040.000
0164	655.0610	Electrical Wire Lighting 12 AWG	LF	480.000	480.000
0166	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. Racine St & Randall Ave	LS	1.000	1.000
0168	657.0100	Pedestal Bases	EACH	4.000	4.000
0170	657.0350	Poles Type 10	EACH	2.000	2.000
0172	657.0352	Poles Type 10-Special	EACH	2.000	2.000
0174	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	4.000	4.000
0176	657.0530	Monotube Arms 30-FT	EACH	2.000	2.000
0178	657.0536	Monotube Arms 35-FT-Special	EACH	1.000	1.000
0180	657.0541	Monotube Arms 40-FT-Special	EACH	1.000	1.000
0182	657.0815	Luminaire Arms Steel 15-FT	EACH	4.000	4.000
0184	658.0173	Traffic Signal Face 3S 12-Inch	EACH	18.000	18.000
0186	658.0174	Traffic Signal Face 4S 12-Inch	EACH	2.000	2.000
0188	658.0416	Pedestrian Signal Face 16-Inch	EACH	8.000	8.000
0190	658.0500	Pedestrian Push Buttons	EACH	8.000	8.000
0192	658.5069	Signal Mounting Hardware (location) 01. Racine St & Randall Ave	LS	1.000	1.000
0194	659.1125	Luminaires Utility LED C	EACH	4.000	4.000
0196	690.0150	Sawing Asphalt	LF	43.000	43.000
0198	690.0250	Sawing Concrete	LF	203.000	203.000
0200	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0202	SPV.0060	Special 01. Traffic Signal Controller and Cabinet 8-Phase Fully Actuated	EACH	1.000	1.000
0204	SPV.0060	Special 02. Remove and Salvage Hydrant	EACH	1.000	1.000
0206	SPV.0060	Special 03. Hydrant	EACH	1.000	1.000
0208	SPV.0060	Special 04. Utility Line Opening	EACH	5.000	5.000
0210	SPV.0090	Special 01. 6-Inch Ductile Iron Water Main	LF	30.000	30.000
0212	SPV.0090	Special 02. Marking Crosswalk Epoxy Block Style 12-Inch	LF	360.000	360.000
0214	SPV.0105	Special 01. Video Vehicle Detection System, Racine St & Randall Ave	LS	1.000	1.000
0216	SPV.0105	Special 02. Emergency Vehicle Preemption System, Racine St & Randall Ave	LS	1.000	1.000
0218	SPV.0105	Special 03. Accessible Pedestrian Push Button System, Racine St & Randall Ave	LS	1.000	1.000

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CLEARING AND GRUBBING			
		201.0120	201.0220
		CLEARING	GRUBBING
		ID	ID
CATEGORY 0010			
102+84	RANDALL - 22.9' LT	12	12
SUBTOTAL		12	12
TOTAL CATEGORY 0010		12	12

REMOVING ITEMS								
			204.0100	204.0150	204.0155	204.0220	204.0245	205.0100
			REMOVING PAVEMENT	REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK	REMOVING INLETS	REMOVING STORM SEWER (12 INCH)	EXCAVATION COMMON
			SY	LF	SY	EA	LF	CY
CATEGORY 0010								
10+00	-	16+80	RACINE - RT	2	36	43	-	-
10+00	-	16+80	RACINE - LT	32	120	69	1	20
TOTAL CATEGORY 0010			34	156	112	1	20	

CONSTRUCTION STAKING									
				650.4000	650.5500	650.8500	650.9000	650.9910	
				CONSTRUCTION STAKING STORM SEWER	CONSTRUCTION STAKING CURB & GUTTER	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT)	CONSTRUCTION STAKING CURB RAMPS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)	
STATION				LOCATION	EA	LF	LS	EA	LS
CATEGORY 0010									
10+00	-	16+80	RACINE	1	90	1	4	1	
TOTAL CATEGORY 0010				1	90	1	4	1	

					HYDRANTS			
					SPV.0060.02	SPV.0060.03	SPV.0090.01	SPV.0902.5
					REMOVE AND SALVAGE HYDRANT	HYDRANT	6" DUCTILE IRON WATER MAIN	INSULATION BOARD, POLYSTYRENE, 2-INCH
STATION		LOCATION		EA	EA	LF	SY	
CATEGORY 0020								
10+00	-	16+80	RACINE - LT	1	1	30	10	
SUBTOTAL					1	1	30	10
TOTAL CATEGORY 0010					1	1	30	10

SAWING PAVEMENT					
			690.0150	690.0250	
			SAWING ASPHALT	SAWING CONCRETE	
			LF	LF	
CATEGORY 0010					
10+00	-	16+80	RACINE - RT	-	73
10+00	-	16+80	RACINE - LT	43	130
SUBTOTAL			43	203	
TOTAL CATEGORY 0010			43	203	

EARTHWORK				
		STATION	LOCATION	CY
CATEGORY 0010				
10+00	-	16+80	RACINE ST	25
SUBTOTAL				25
TOTAL CATEGORY 0010				25

UTILITY LINE OPENING				
SPV.0060.01				
UTILITY LINE OPENING				
STATION			LOCATION	EA
CATEGORY 0010				
10+00	-	16+80	RACINE ST	5
SUBTOTAL				5
TOTAL CATEGORY 0010				5

BASE AGGREGATE ITEMS						
				305.0120	312.0110	624.0100
				BASE AGGREGATE DENSE 1 1/4-INCH	SELECT CRUSHED MATERIAL	WATER
STATION		LOCATION		TON	TON	MGAL
CATEGORY 0010						
10+00	-	16+80	RACINE - RT	17	-	1
10+00	-	16+80	RACINE - LT	53	40	1
SUBTOTAL				70	40	2
TOTAL CATEGORY				70	40	2

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EROSION CONTROL ITEMS							
				628.1905	628.1910	628.2008	628.7015
				MOBILIZATIONS	MOBILIZATIONS	EROSION MAT	INLET PROTECTION
				EROSION CONTROL	EMERGENCY	URBAN CLASS I	TYPE C
					EROSION CONTROL	TYPE B	
STATION		LOCATION		EA	EA	SY	EA
CATEGORY 0010							
10+00	-	16+80	RACINE - RT	1	-	35	1
10+00	-	16+80	RACINE - LT	1	1	70	2
SUBTOTAL				2	1	105	3
TOTAL CATEGORY 0010				2	1	105	3

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TRAFFIC CONTROL ITEMS														
					643.0300	643.0420	643.0715	643.0900	649.0150	649.0850	644.1420	644.1601	616.0700.S	
# OF DAYS					TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL SIGNS	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH	TEMPORARY PEDESTRAIN SURFACE PLYWOOD	TEMPORARY PEDESTRIAN CURB RAMP	FENCE SAFETY	
STATION		LOCATION			DAY	DAY	DAY	DAY	LF	LF	SF	DAYS	LF	
CATEGORY 0010														
10+00	-	16+80	RACINE - RT		90	2520	90	720	1080	171	28	90	225	-
10+00	-	16+80	RACINE - LT		90	3150	90	900	1080	169	28	110	225	-
SUBTOTAL					5670	180	1620	2160	340	56	200	450	0	
UNDISTRIBUTED					330	20	180	240	-	-	-	50	300	
TOTAL CATEGORY 0010					6000	200	1800	2400	340	56	200	500	300	

PAVEMENT MARKINGS											
		646.1020	646.3020	646.5020	646.5120	646.6120	646.7120	646.7420	SPV.0090.02	646.9000	646.9200
		MARKING LINE EPOXY 4-INCH	MARKING LINE EPOXY 8-INCH	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 CROSSWALK EPOXY LADDER PATTERN 12-INCH	MARKING REMOVAL LINE 4-INCH	MARKING REMOVAL LINE WIDE
STATION	LOCATION	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF
CATEGORY 0010											
10+00 - 13+41	RACINE	825	125	4	-	28	50	114	90	640	25
13+41 - 16+80	RACINE	440	275	6	-	38	-	118	96	700	29
100+00 - 101+97	RANDALL	265	90	4	-	28	-	95	84	190	23
101+97 - 104+76	RANDALL	475	200	4	1	25	-	113	90	420	23
SUBTOTAL		2005	690	18	1	119	50	440	360	1950	100
TOTAL CATEGORY 0010		2005	690	18	1	119	50	440	360	1950	100

STORM SEWER						STORM SEWER STRUCTURES							
608.0312						611.0639						611.3230	
STORM SEWER PIPE REINFORCED CONCRETE CLASS III						INLET COVERS TYPE H-S						INLETS 2X3-FT	
INLET		OUTLET		SLOPE %	12 INCH LF	STRUCTURE NO.	STATION	OFFSET	BOC ELEV.	EA	EA		
STRUCTURE	ELEVATION	STRUCTURE	ELEVATION										
CATEGORY 0010	1.0	850.29	EXIST	849.94	1.75	20							
TOTAL CATEGORY 0010						20	TOTAL CATEGORY 0010					1	1

SIGNING												
			634.0814	634.0816	637.2210	637.2215	637.2230	638.2102	638.2602	638.3000		
			POSTS TUBULAR STEEL 2X2-INCH X 14-FT	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE H FOLDING	SIGNS TYPE II REFLECTIVE F	MOVING SIGNS TYPE II	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS		
SIGN NO.	SIGN CODE	SIGN SIZE IN X IN	EA	EA	SF	SF	SF	EA	EA	EA	COMMENTS	
CATEGORY 0010												
01-01	R2-1	24X30	-	1	5	-	-	-	1	1		
01-02	R5-2	24X24	-	-	4	-	-	-	1	-	ON SAME POST AS 01-01	
02-01	R10-3EL	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
02-01	R10-50L	30X36	-	-	7.5	-	-	-	-	-	ON SIGNAL POLE	
02-03	M1-94H	108X30	-	-	22.5	-	-	-	-	-	ON SIGNAL POLE	
03-01	R1-1F	30X30	-	-	-	5.18	-	-	1	-	ON SIGNAL POLE	
03-02	S1-1	36X36	-	-	-	-	6.75	-	1	-	ON SIGNAL POLE	
03-03	S16-7L	24X12	-	-	-	-	2	-	-	-	ON SIGNAL POLE	
03-04	R10-3ER	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
04-01	R10-3EL	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
04-02	R10-50L	30X36	-	-	7.5	-	-	-	-	-	ON SIGNAL POLE	
04-03	M1-94H	108X30	-	-	22.5	-	-	-	2	-	ON SIGNAL POLE	
05-01	R1-1F	30X30	-	-	-	5.18	-	-	1	-	ON SIGNAL POLE	
05-02	S1-1	36X36	-	-	-	-	6.75	-	1	-	ON SIGNAL POLE	
05-03	S16-7L	24X12	-	-	-	-	2	-	-	-	ON SIGNAL POLE	
05-04	R10-3ER	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
06-01	R10-3EL	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
06-02	R10-50L	30X36	-	-	7.5	-	-	-	-	-	ON SIGNAL POLE	
06-03	M1-94H	108X30	-	-	22.5	-	-	-	-	-	ON SIGNAL POLE	
07-01	R1-1F	30X30	-	-	-	5.18	-	-	1	-	ON SIGNAL POLE	
07-02	S1-1	36X36	-	-	-	-	6.75	-	1	-	ON SIGNAL POLE	
07-03	S16-7L	24X12	-	-	-	-	2	-	-	-	ON SIGNAL POLE	
07-04	R10-3ER	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
08-01	R10-3EL	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
08-02	R10-50L	30X36	-	-	7.5	-	-	-	-	-	ON SIGNAL POLE	
08-03	M1-94H	108X30	-	-	22.5	-	-	-	-	-	ON SIGNAL POLE	
09-01	R1-1F	30X30	-	-	-	5.18	-	-	1	-	ON SIGNAL POLE	
09-02	S1-1	36X36	-	-	-	-	6.75	-	1	-	ON SIGNAL POLE	
09-03	S16-7L	24X12	-	-	-	-	2	-	-	-	ON SIGNAL POLE	
09-04	R10-3ER	9X15	-	-	-	-	-	-	1	-	REMOVE EXISTING SIGN	
10-01	-	-	-	2	-	-	-	1	-	1	MOVE EXISTING SIGN	
11-01	R3-8L,R3-8A,R3-8R	54X30	-	1	11.25	-	-	-	-	-		
11-02	R7-1D	-	-	-	-	-	-	1	-	-	MOVE EXISTING SIGN	
12-01	R3-7R	30X30	1	-	6.25	-	-	-	-	-		
13-01	R3-8L,R3-8F	36X30	-	1	7.5	-	-	-	-	-		
13-02	R7-51L	18X24	-	-	3	-	-	-	-	-	ON SAME POST AS 13-01	
14-01	R7-5D	18X24	-	-	-	-	-	-	1	1	REMOVE EXISTING SIGN	
15-01	R3-8L,R3-8F	36X30	-	1	7.5	-	-	-	-	-		
16-01	R3-8L,R3-8F	36X30	-	1	7.5	-	-	-	-	-		
16-02	R7-51L	18X24	-	-	3	-	-	-	-	-	ON SAME POST AS 16-01	
17-01	R7-5D	18X24	1	-	-	-	-	1	.	1	MOVE EXISTING SIGN	
TOTAL CATEGORY 0010			2	7	175	20.72	35	3	21	4		

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REMOVING CONCRETE BASES

204.0195	
REMOVING CONCRETE BASES	
SIGNAL BASE NO.	EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
TOTAL	8

REMOVE PULL BOXES

653.0905	
REMOVING PULL BOXES	
PULL BOX NO.	EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
TOTAL	6

REMOVING TRAFFIC SIGNALS

204.9105.S.01	
REMOVING TRAFFIC SIGNALS	
LOCATION	L.S.
RACINE ST & RANDALL AVE	1
TOTAL	1

RACINE ST & RANDALL AVE

CONDUIT

		652.0225	652.0235	652.0615
		CONDUIT RIGID	CONDUIT RIGID	CONDUIT
		NONMETALLIC	NONMETALLIC	SPECIAL
		SCHEDULE 40	SCHEDULE 40	3-INCH
		2-INCH	3-INCH	
FROM	TO	L.F.	L.F.	L.F.
CB1	PB1	--	45	--
PB1	SB1	5	--	--
PB1	PB2	--	--	100
PB2	SB2	--	10	--
PB2	PB3	--	70	--
PB3	SB3	10	--	--
PB3	PB4	--	--	110
PB4	SB4	--	5	--
PB4	PB5	--	90	--
PB5	SB5	25	--	--
PB5	PB6	--	--	100
PB6	SB6	--	35	--
PB6	PB7	--	110	--
PB7	SB7	5	--	--
PB7	PB8	--	--	120
PB8	SB8	--	5	--
PB8	CB1	--	60	--
TOTAL		45	430	430

PULL BOXES

653.0140			
PULL BOXES STEEL			
PULL BOX NO.	LOCATION STA	OFFSET	24x42-INCH EACH
PB1	13+66.8	40.8 RT	1
PB2	13+20.0	42.3 RT	1
PB3	12+95.0	26.7 RT	1
PB4	12+95.0	28.3 LT	1
PB5	13+14.8	61.4 LT	1
PB6	13+61.5	71.8 LT	1
PB7	13+82.4	29.7 LT	1
PB8	13+83.5	27.7 RT	1
TOTAL	TOTAL		8

CONCRETE BASES

		654.0101	654.0110	654.0120	654.0217
		CONCRETE BASES	CONCRETE BASES	CONCRETE BASES	CONCRETE CONTROL CABINET BASES
SIGNAL BASE NO.	LOCATION STA	TYPE 1 EACH	TYPE 10 EACH	TYPE 10 SPECIAL EACH	TYPE 9 SPECIAL EACH
CB1	13+76.9	--	--	--	1
SB1	13+70.3	1	--	--	--
SB2	13.14.3	--	1	--	--
SB3	13+05.4	1	--	--	--
SB4	13+00.0	--	--	1	--
SB5	13+07.0	1	--	--	--
SB6	13+72.6	--	--	1	--
SB7	13+78.8	1	--	--	--
SB8	13+76.9	--	1	--	--
TOTAL	TOTAL	4	2	2	1

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TRAFFIC SIGNAL CABLE AND WIRE		
655.0260		
CABLE		
TRAFFIC SIGNAL		
12-14 AWG		
FROM	TO	L.F.
CB1	SB1	60
CB1	SB2	115
CB1	SB3	150
CB1	SB4	200
CB1	SB5	250
CB1	SB6	210
CB1	SB7	125
CB1	SB8	65
TOTAL		1175

TRAFFIC SIGNAL CABLE AND WIRE		
655.0515		
ELECTRICAL		
WIRE TRAFFIC		
SIGNALS		
10 AWG		
FROM	TO	L.F.
CB1	SB1	45
SB1	SB2	90
SB2	SB3	80
SB3	SB4	95
SB4	SB5	100
SB5	SB6	135
SB6	SB7	120
SB7	SB8	95
SB8	CB1	50
CB1	PB1	30
SB2	PB2	25
SB3	PB3	25
SB4	PB4	20
SB5	PB5	40
SB6	PB6	50
SB7	PB7	20
SB8	PB8	20
TOTAL		1040

TRAFFIC SIGNAL CABLE AND WIRE			
655.0305 655.0610			
CABLE TYPE UF ELECTRICAL			
2-12 AWG WIRE			
GROUNDED LIGHTING			
12 AWG			
FROM	TO	L.F.	L.F.
CB1	SB2	115	--
SB2	LUMINAIRE 1	--	120
SB2	SB4	145	--
SB4	LUMINAIRE 1	--	120
CB1	SB8	65	--
SB8	LUMINAIRE 1	--	120
SB8	SB6	195	--
SB6	LUMINAIRE 1	--	120
TOTAL		520	480

RACINE ST & RANDALL AVE

TRAFFIC SIGNAL CABLE AND WIRE			
655.0230 655.0240*			
CABLE CABLE			
TRAFFIC SIGNAL TRAFFIC SIGNAL			
5-14 AWG 7-14 AWG			
FROM	TO	L.F.	L.F.
SB1	HEAD 14	20	--
SB1	HEAD 16	20	--
SB1	HEAD 27	20	--
SB2	HEAD 12	40	--
SB2	HEAD 13	30	--
SB2	HEAD 15	50	--
SB2	HEAD 24	20	--
SB3	HEAD 1	20	--
SB3	HEAD 9	20	--
SB3	HEAD 25	20	--
SB4	HEAD 7	50	--
SB4	HEAD 8	40	--
SB4	HEAD 10	60	--
SB4	HEAD 22	20	--
SB5	HEAD 11	20	--
SB5	HEAD 19	20	--
SB5	HEAD 23	20	--
SB6	HEAD 17	40	--
SB6	HEAD 18	30	--
SB6	HEAD 20	50	--
SB6	HEAD 28	20	--
SB7	HEAD 4	--	20
SB7	HEAD 6	20	--
SB7	HEAD 21	20	--
SB8	HEAD 2	40	--
SB8	HEAD 3	30	--
SB8	HEAD 5	--	50
SB8	HEAD 26	20	--
TOTAL		760	70

3

POLES									
	657.0100	657.0425	657.0350	657.0352	657.0530	657.0536	657.0541	657.0815	659.1125
	TRAFFIC SIGNAL STANDARDS			POLES		MONOTUBE	MONOTUBE		LUMINAIRES
	PEDESTAL	ALUMINUM	POLES	TYPE 10	MONOTUBE	ARMS 35-FT	ARMS 40-FT	LUMINAIRE ARMS	UTILITY
SIGNAL	BASES	15-FT	TYPE 10	SPECIAL	ARMS 30-FT	SPECIAL	SPECIAL	STEEL 15-FT	LED C
BASE NO.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1	1	1	--	--	--	--	--	--	--
SB2	--	--	1	--	1	--	--	1	1
SB3	1	1	--	--	--	--	--	--	--
SB4	--	--	--	1	--	--	1	1	1
SB5	1	1	--	--	--	--	--	--	--
SB6	--	--	--	1	--	1	--	1	1
SB7	1	1	--	--	--	--	--	--	--
SB8	--	--	1	--	1	--	--	1	1
TOTAL	4	4	2	2	2	1	1	4	4

TRAFFIC SIGNAL CONTROLLER	
SPV.0060.01	
TRAFFIC SIGNAL CONTROLLER	
AND CABINET	
8-PHASE	
FULLY ACTUATED	
LOCATION	EACH
RACINE ST & RANDALL AVE	1
TOTAL	1

RACINE ST & RANDALL AVE

FACES				
SIGNAL BASE NO.	SIGNAL HEAD NO.	658.0173	658.0174	658.0416
		TRAFFIC	TRAFFIC	PEDESTRIAN
		SIGNAL FACE	SIGNAL FACE	SIGNAL FACE
		3S-12 INCH EACH	4S-12 INCH EACH	16-INCH EACH
SB1	HEAD 14	1	--	--
SB1	HEAD 16	1	--	--
SB1	HEAD 27	--	--	1
SB2	HEAD 12	1	--	--
SB2	HEAD 13	1	--	--
SB2	HEAD 15	1	--	--
SB2	HEAD 24	--	--	1
SB3	HEAD 1	1	--	--
SB3	HEAD 9	1	--	--
SB3	HEAD 25	--	--	1
SB4	HEAD 7	1	--	--
SB4	HEAD 8	1	--	--
SB4	HEAD 10	1	--	--
SB4	HEAD 22	--	--	1
SB5	HEAD 11	1	--	--
SB5	HEAD 19	1	--	--
SB5	HEAD 23	--	--	1
SB6	HEAD 17	1	--	--
SB6	HEAD 18	1	--	--
SB6	HEAD 20	1	--	--
SB6	HEAD 28	--	--	1
SB7	HEAD 4	--	1	--
SB7	HEAD 6	1	--	--
SB7	HEAD 21	--	--	1
SB8	HEAD 2	1	--	--
SB8	HEAD 3	1	--	--
SB8	HEAD 5	--	1	--
SB8	HEAD 26	--	--	1
TOTAL		18	2	8

ELECTRICAL SERVICE METER BREAKER PEDESTAL	
	656.0200.01
	ELECTRICAL SERVICE METER BREAKER PEDESTAL
LOCATION	L.S.
RACINE ST & RANDALL AVE	1
TOTAL	1

TRAFFIC SIGNAL MOUNTING HARDWARE	
	658.5069.01
	SIGNAL MOUNTING HARDWARE
LOCATION	L.S.
RACINE ST & RANDALL AVE	1
TOTAL	1

VIDEO VEHICLE DETECTION SYSTEM	
	SPV.0105.01
	VIDEO VEHICLE DETECTION SYSTEM
LOCATION	L.S.
RACINE ST & RANDALL AVE	1
TOTAL	1

EMERGENCY VEHICLE PREEMPTION	
	SPV.0105.02
	EMERGENCY VEHICLE PREEMPTION SYSTEM
LOCATION	L.S.
RACINE ST & RANDALL AVE	1
TOTAL	1

ACCESSIBLE PEDESTRIAN SIGNAL PUSH BUTTON EQUIPMENT	
	SPV.0105.03
	ACCESSIBLE PEDESTRIAN PUSH BUTTON SYSTEM
LOCATION	L.S.
RACINE ST & RANDALL AVE	1
TOTAL	1

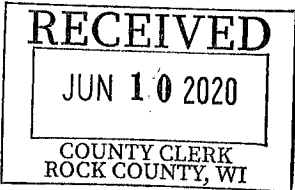
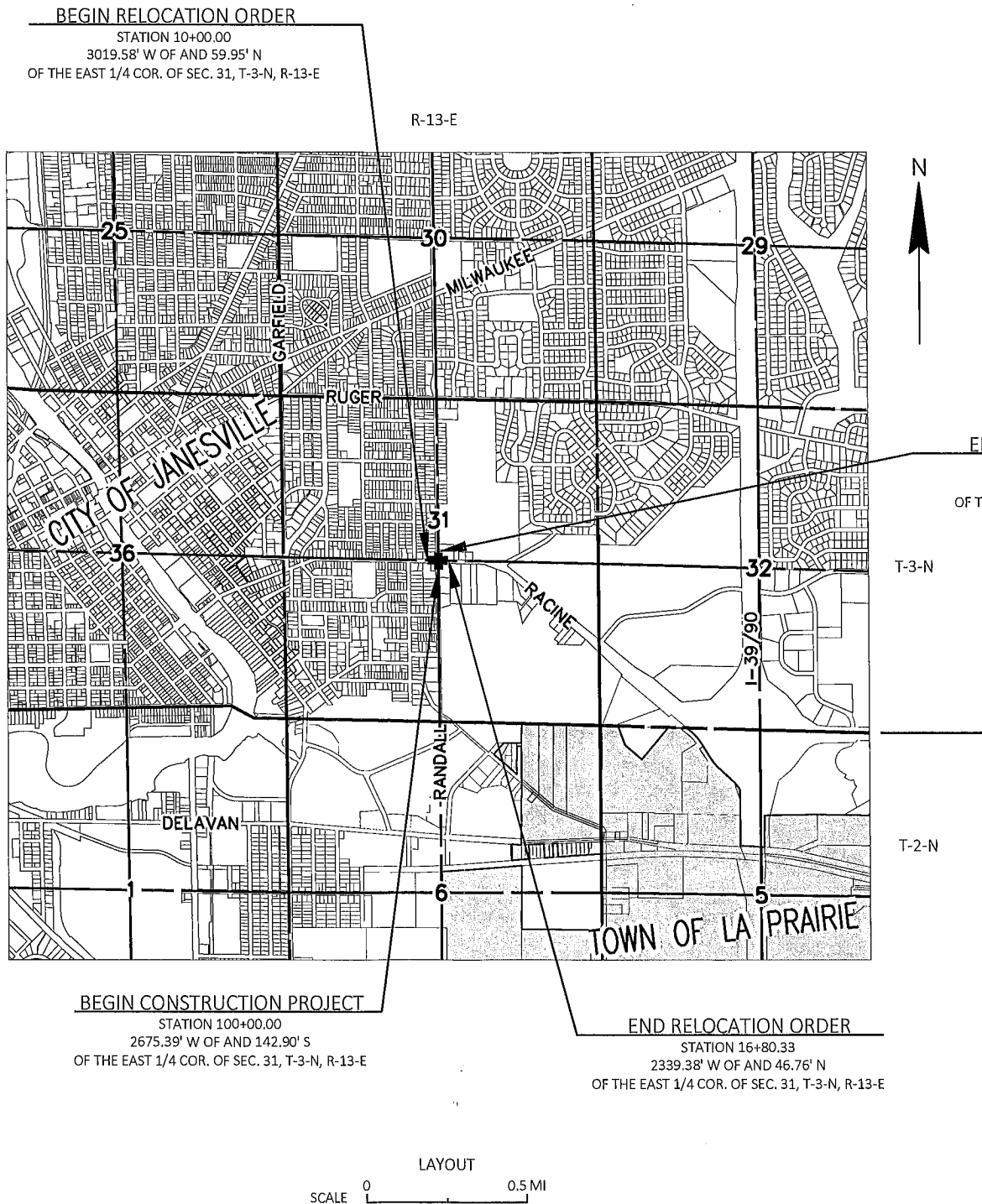
TRAFFIC SIGNAL EVP DETECTOR CABLE		
		INFO ONLY
		TRAFFIC SIGNAL EVP DETECTOR CABLE
FROM	TO	L.F.
CB1	SB4 (HEAD A)	165
CB1	SB8 (HEAD B)	325
CB1	SB2 (HEAD C)	125
CB1	SB6 (HEAD D)	390
TOTAL		1005

CONVENTIONAL SYMBOLS			
SECTION LINE	---	PARCEL NUMBER	25
QUARTER LINE	---	UTILITY NUMBER	40
SIXTEENTH LINE	---	SECTION CORNER	23 24 16 15 9
NEW REFERENCE LINE	---	R/W MONUMENT	●
NEW R/W LINE	---	NON-MONUMENTED R/W POINT	○
EXISTING R/W LINE	---	NOTATION FOR COMBUSTIBLE FLUIDS	CAUTION
PROPERTY LINE	---	FOUND IRON PIN	IP
LOT, TIE, AND OTHER MINOR LINES	---	VALVE (GAS, WATER, ETC.)	⊗ (TYPE)
SLOPE INTERCEPT	---	SIGN	⊞ SIGN
CORPORATE LIMITS	---	OFF-PREMISE SIGN	⊞ SIGN
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---		
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)	---		
TEMP. LIMITED EASEMENT AREA	---	ACCESS CONTROLLED BY ACQUISITION	---
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)	---	NO ACCESS (BY STATUTORY AUTHORITY)	---
TRANSMISSION STRUCTURES	---	ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	---
BUILDING	---	NO ACCESS (NEW HIGHWAY)	---
BUILDING (TO BE REMOVED)	---	NATIONAL GEODETIC SURVEY MONUMENT	⊙
BRIDGE	---	SIXTEENTH CORNER MONUMENT	⊙
		PARALLEL OFFSETS	---

CONVENTIONAL UTILITY SYMBOLS	
WATER	---
GAS	---
TELEPHONE	---
OVERHEAD TRANSMISSION LINES	---
ELECTRIC	---
CABLE TELEVISION	---
FIBER OPTIC	---
SANITARY SEWER	---
STORM SEWER	---
ELECTRIC TOWER	---
POWER POLE	---
TELEPHONE POLE	---
TELEPHONE PEDESTAL	---

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

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



R/W PROJECT NUMBER 5990-01-31	SHEET NUMBER	TOTAL SHEETS
R/W PROJECT NUMBER 5990-01-32	4.01	4
PLAT OF RIGHT OF WAY REQUIRED FOR C JANESVILLE, E RACINE STREET S RANDALL AVENUE INTERSECTION		
LOC STR	ROCK COUNTY	

NOTES:

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

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" x 24" REBAR) AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

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

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

CAUTION:
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

ACCEPTED FOR
CITY OF JANESVILLE

3-25-20
(Date)

[Signature]
(PUBLIC WORKS DIRECTOR)

ORIGINAL PLANS PREPARED BY

Batterman

engineers surveyors planners

R.H. BATTERMAN & CO., INC.
2857 BARTELLS DRIVE
BELOIT, WI 53511

P 608.365.4464
TF 877.457.2235
F 608.365.1850

WISCONSIN
LAND SURVEYOR

KRISTIN J. BELONGIA
S-2943
ELKHORN WIS.

THIS SURVEY IS PREPARED AT THE REQUEST OF THE CITY OF JANESVILLE. THE FIELD SURVEY WAS PERFORMED IN JULY 2019. THIS SURVEY IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

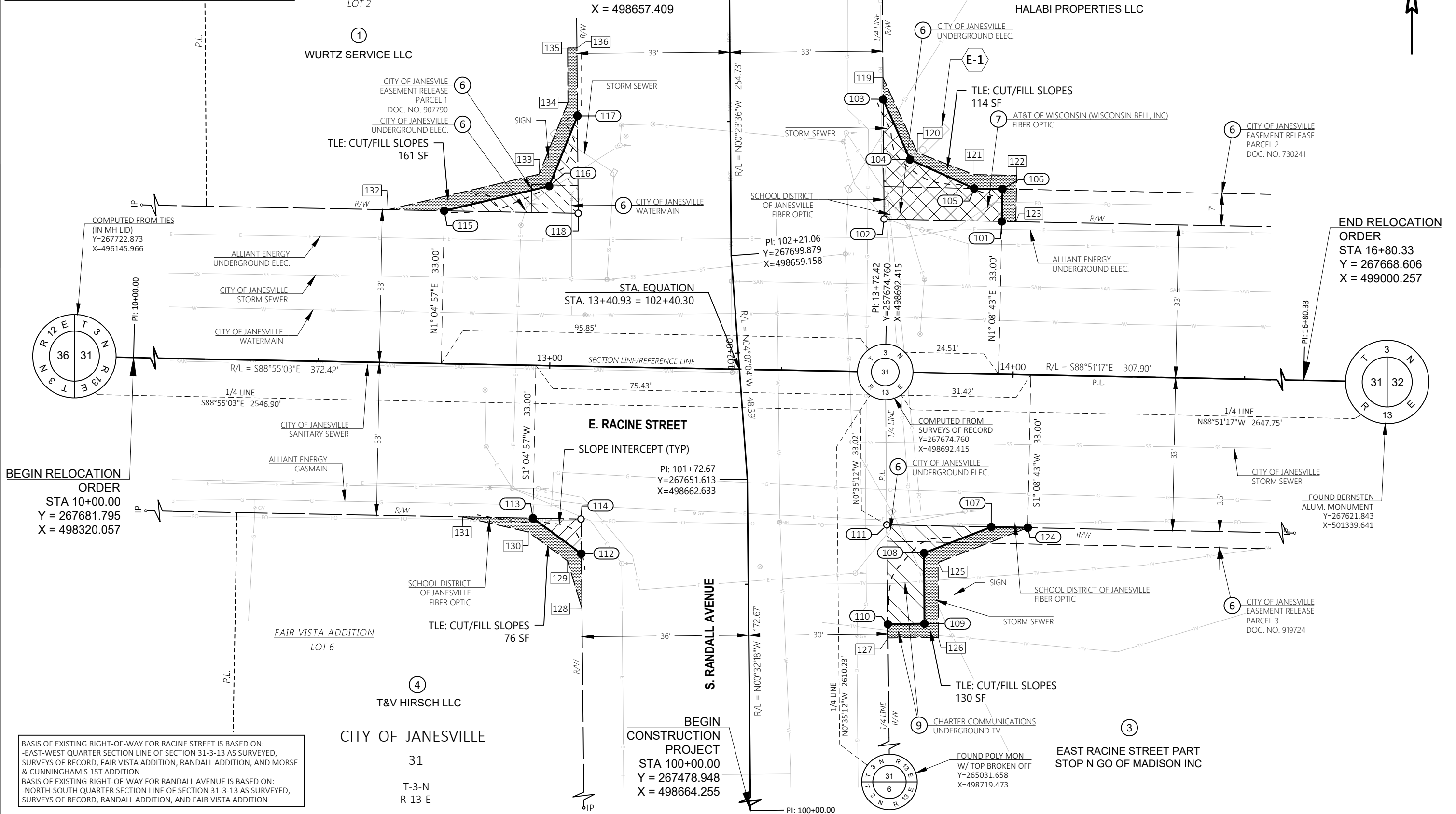
(SIGNATURE) *Kristin J. Belongia*

DATE 03/09/2020

(PRINTED NAME) KRISTIN J. BELONGIA

(REGISTRATION NUMBER) S-2943

ENCROACHMENT TABLE			
ENCROACHMENT NUMBER	OWNER	TYPE	LOCATION
E-1	HALABI PROPERTIES LLC	SIGN	13+75 LT



BASIS OF EXISTING RIGHT-OF-WAY FOR RACINE STREET IS BASED ON:
-EAST-WEST QUARTER SECTION LINE OF SECTION 31-3-13 AS SURVEYED,
SURVEYS OF RECORD, FAIR VISTA ADDITION, RANDALL ADDITION, AND MORSE
& CUNNINGHAM'S 1ST ADDITION
BASIS OF EXISTING RIGHT-OF-WAY FOR RANDALL AVENUE IS BASED ON:
-NORTH-SOUTH QUARTER SECTION LINE OF SECTION 31-3-13 AS SURVEYED,
SURVEYS OF RECORD, RANDALL ADDITION, AND FAIR VISTA ADDITION

REVISION DATE 05/15/2020	DATE 03-09-2020	SCALE, FEET 0 10 20	HWY: E. RACINE STREET	STATE R/W PROJECT NUMBER 5990-01-31	PLAT SHEET 4.03
	GRID FACTOR		COUNTY: ROCK	CONSTRUCTION PROJECT NUMBER 5990-01-32	PS&E SHEET

SCHEDULE OF LANDS & INTERESTS REQUIRED				AREAS SHOWN IN THE TOTAL AREA COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.			OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTEREST TO THE CITY OF JANESVILLE.	
PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	FEE REQUIRED (SF)			TLE (SF)	
				NEW	EXISTING	TOTAL		
1	4.03	WURTZ SERVICE LLC	FEE, TLE	148	---	148	161	
2	4.03	HALABI PROPERTIES LLC	FEE, TLE	290	---	290	114	
3	4.03	EAST RACINE STREET PART STOP N GO OF MADISON INC	FEE, TLE	212	1004	1216	130	
4	4.03	T&V HIRSCH LLC	FEE, TLE	39	---	39	76	

UTILITY INTERESTS REQUIRED			
UTILITY NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED
6	4.03	CITY OF JANESVILLE	RELEASE OF RIGHTS
7	4.03	AT&T OF WISCONSIN (WISCONSIN BELL, INC)	RELEASE OF RIGHTS
9	4.03	CHARTER COMMUNICATIONS	RELEASE OF RIGHTS

FEE COURSE TABLE		
COURSE	BEARING	DISTANCE
101 - 102	N88° 51' 17"W	25.43'
102 - 103	N00° 27' 30"W	25.84'
103 - 104	S24° 03' 21"E	14.24'
104 - 105	S65° 46' 02"E	15.21'
105 - 106	S89° 04' 07"E	6.10'
106 - 101	S01° 08' 43"W	7.00'

TLE COURSE TABLE		
COURSE	BEARING	DISTANCE
103 - 119	N00° 27' 30"W	4.72'
119 - 120	S24° 35' 38"E	17.83'
120 - 121	S68° 48' 13"E	13.15'
121 - 122	S89° 04' 07"E	9.19'
122 - 123	S01° 08' 43"W	10.01'
123 - 101	N88° 51' 17"W	3.00'

FEE COURSE TABLE		
COURSE	BEARING	DISTANCE
107 - 108	S68° 48' 43"W	15.54'
108 - 109	S00° 18' 54"E	15.27'
109 - 110	S89° 24' 48"W	7.90'
110 - 111	N00° 35' 12"W	21.42'
111 - 107	S88° 51' 17"E	22.53'

TLE COURSE TABLE		
COURSE	BEARING	DISTANCE
107 - 124	S88° 51' 17"E	7.89'
124 - 125	S68° 48' 43"W	20.78'
125 - 126	S00° 18' 54"E	16.19'
126 - 127	S89° 24' 48"W	10.88'
127 - 110	N00° 35' 12"W	3.00'

FEE COURSE TABLE		
COURSE	BEARING	DISTANCE
112 - 113	N53° 44' 26"W	12.95'
113 - 114	S88° 55' 03"E	10.37'
114 - 112	S00° 35' 12"E	7.46'

TLE COURSE TABLE		
COURSE	BEARING	DISTANCE
112 - 128	S00° 35' 12"E	11.80'
128 - 129	N16° 49' 38"W	10.73'
129 - 130	N53° 44' 26"W	10.50'
130 - 131	N77° 01' 22"W	14.56'
131 - 113	S88° 55' 03"E	15.19'

FEE COURSE TABLE		
COURSE	BEARING	DISTANCE
115 - 116	N76° 47' 06"E	23.28'
116 - 117	N21° 58' 22"E	16.31'
117 - 118	S00° 27' 30"E	21.00'
118 - 115	N88° 55' 03"W	28.94'

TLE COURSE TABLE		
COURSE	BEARING	DISTANCE
115 - 132	N88° 55' 03"W	12.15'
132 - 133	N76° 47' 06"E	33.49'
133 - 134	N21° 58' 22"E	16.70'
134 - 135	N00° 17' 48"W	11.76'
135 - 136	N89° 42' 12"E	2.00'
136 - 117	S00° 27' 30"E	14.69'

R/W STATION & OFFSET		
POINT #	STATION	OFFSET
101	13+96.93	33.00'
102	13+71.54	33.00'
103	13+70.84	58.83'
104	13+76.84	45.94'
105	13+90.84	39.98'
106	13+96.93	40.00'

TLE STATION & OFFSET		
POINT #	STATION	OFFSET
119	13+70.71	63.55'
120	13+78.39	47.48'
121	13+90.74	42.98'
122	13+99.93	43.01'
123	13+99.93	33.00'

R/W STATION & OFFSET		
POINT #	STATION	OFFSET
107	13+95.95	33.00'
108	13+81.57	38.91'
109	13+81.96	54.17'
110	13+74.07	54.41'
111	13+73.42	33.00'
124	14+03.84	33.00'

TLE STATION & OFFSET		
POINT #	STATION	OFFSET
125	13+84.62	40.89'
126	13+85.04	57.08'
127	13+74.16	57.41'

R/W STATION & OFFSET		
POINT #	STATION	OFFSET
112	13+07.57	40.46'
113	12+96.99	33.00'
114	13+07.36	33.00'

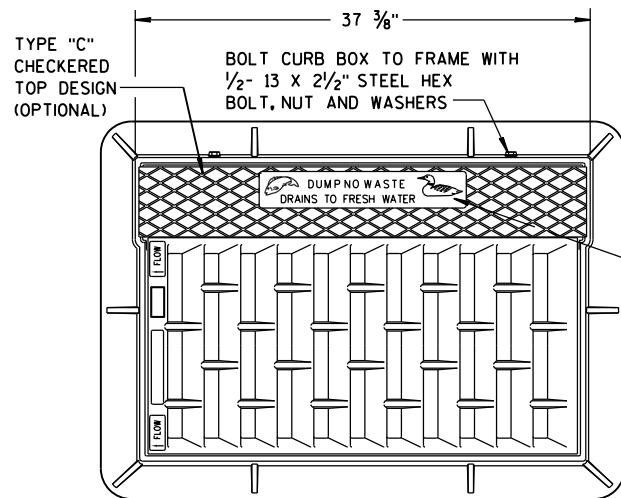
TLE STATION & OFFSET		
POINT #	STATION	OFFSET
128	13+07.92	52.25'
129	13+04.62	42.05'
130	12+96.04	36.00'
131	12+81.80	33.00'

R/W STATION & OFFSET		
POINT #	STATION	OFFSET
115	12+76.58	33.00'
116	12+99.13	38.75'
117	13+04.95	53.99'
118	13+05.51	33.00'

TLE STATION & OFFSET		
POINT #	STATION	OFFSET
132	12+64.43	33.00'
133	12+96.88	41.27'
134	13+02.84	56.88'
135	13+02.55	68.63'
136	13+04.55	68.68'

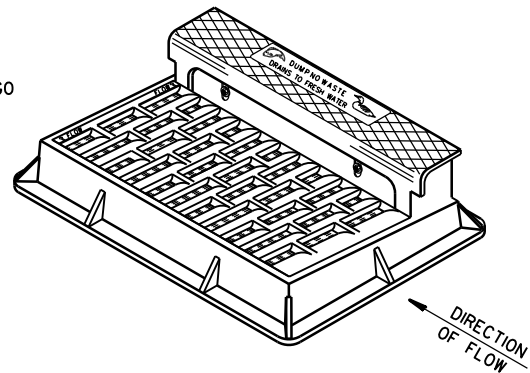
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-08B	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-15A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-15C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C18-07A	CONCRETE PAVEMENT JOINTING
13C18-07B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-07C	CONCRETE PAVEMENT JOINT TYPES
13C18-07D	CONCRETE PAVEMENT JOINT TYPES AT UTILITY FIXTURES
13C18-07E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-07F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C18-07G	CONCRETE PAVEMENT JOINTING ACCELERATION/DECELERATION LANE
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C07-15D	ROUNDABOUT ARROWS
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-05A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D20-05B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-05C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-06A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-06B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-06C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

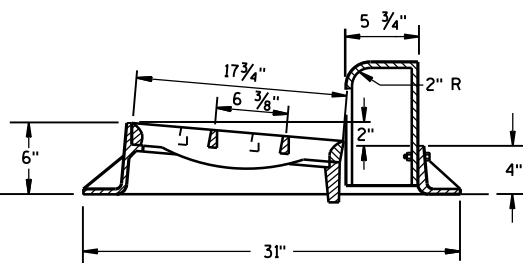
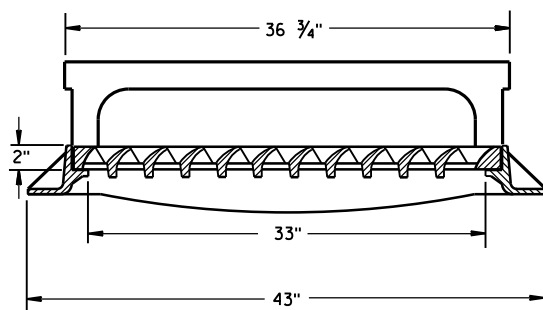
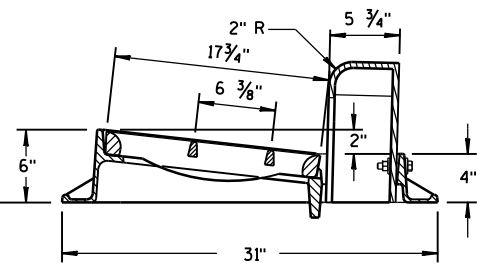
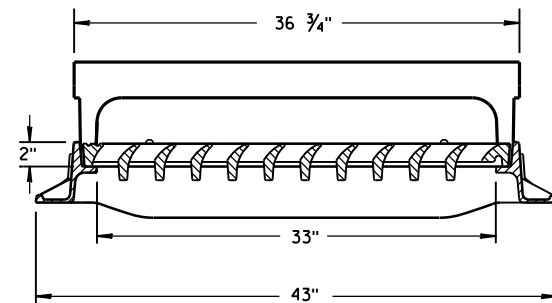
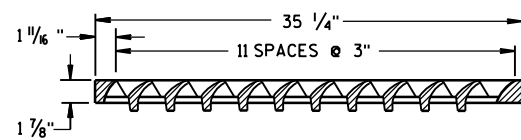


SEE LOGO
DETAIL

NOTE:
GRATE IS REVERSIBLE.

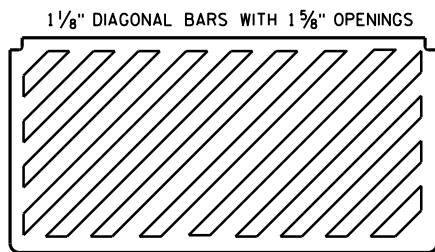


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

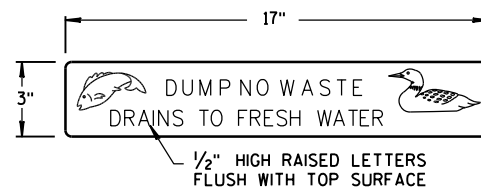
NOTE: EITHER CASTING IS ACCEPTABLE



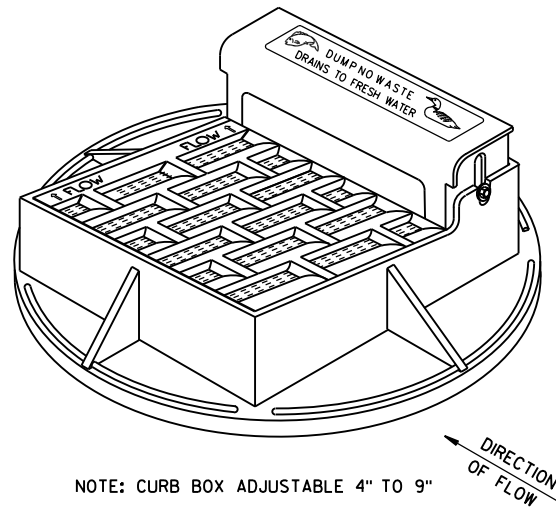
**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

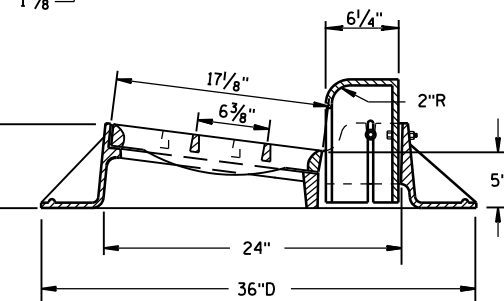
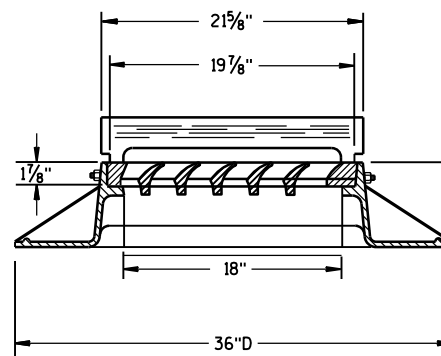
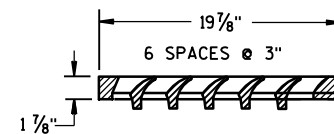
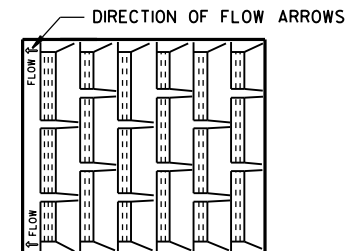


LOGO DETAIL

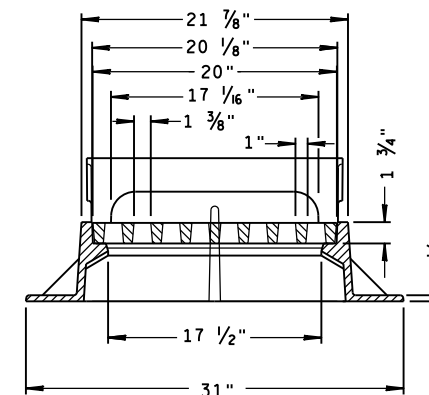
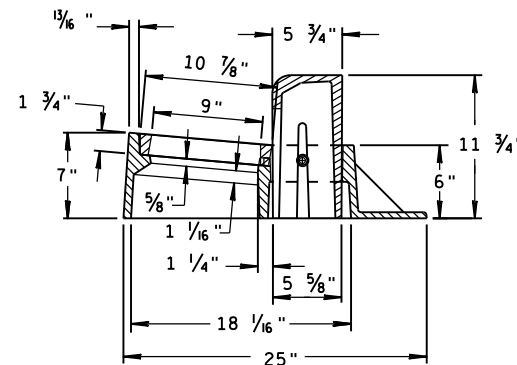


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

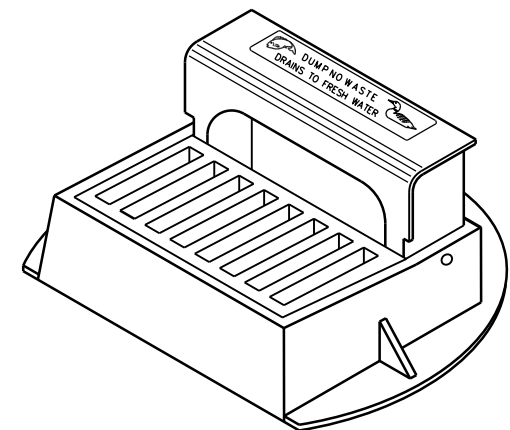
NOTE:
GRATE IS REVERSIBLE.



TYPE "A"



TYPE "Z"



**INLET COVERS
TYPE A, H, A-S, H-S & Z**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
11-27-13
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

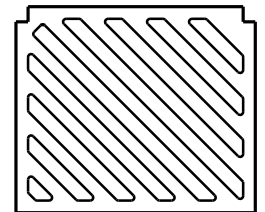
GENERAL NOTES

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.

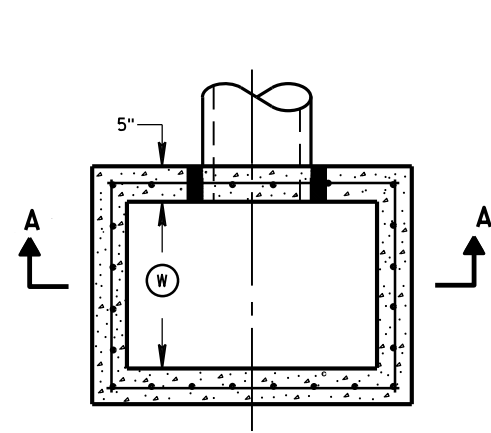
1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



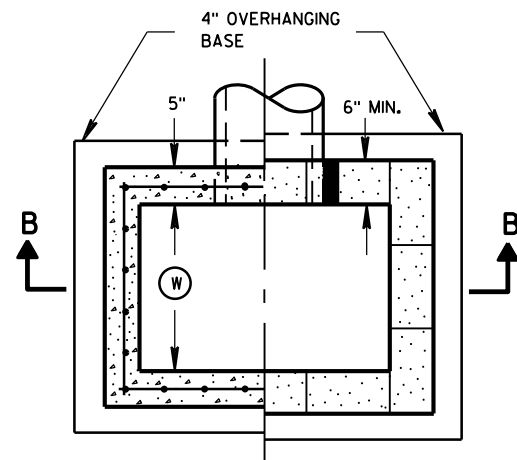
**SPECIAL GRATE FOR
TYPE "A" COVER**

(MEASURES 19 3/4" X 17" X 1 1/8")

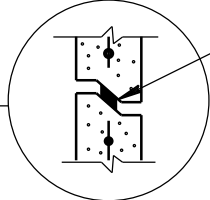
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



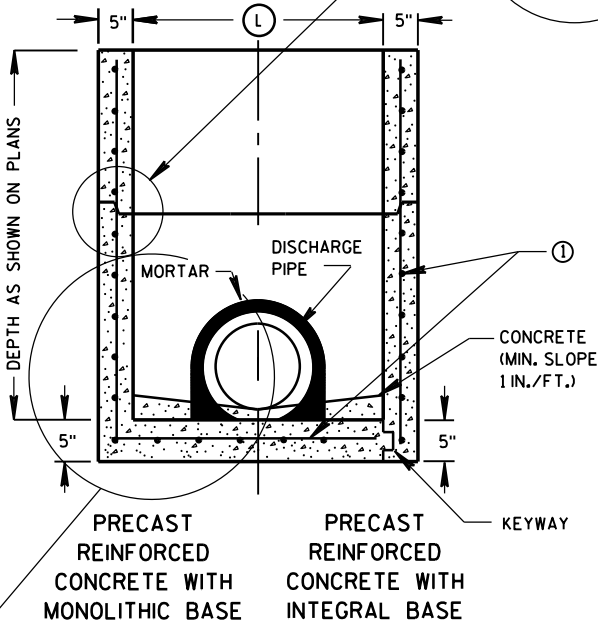
PLAN VIEW



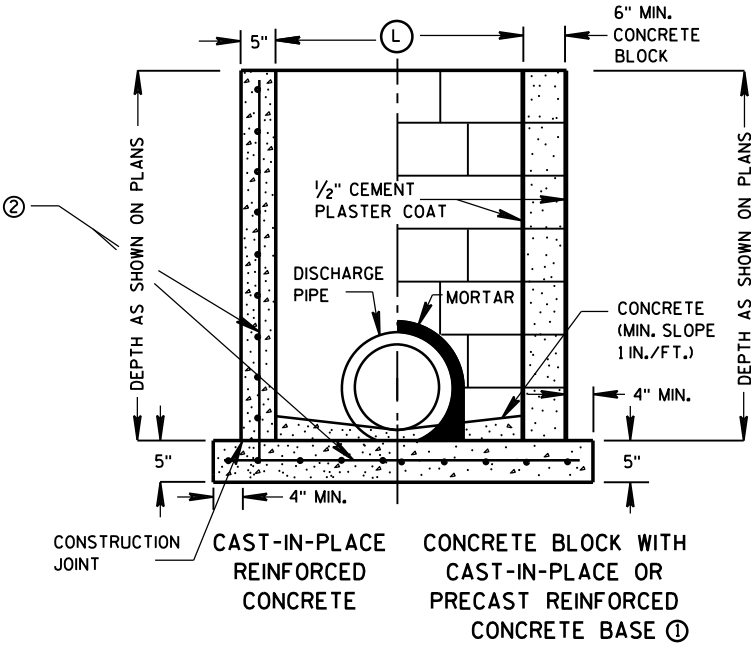
PLAN VIEW



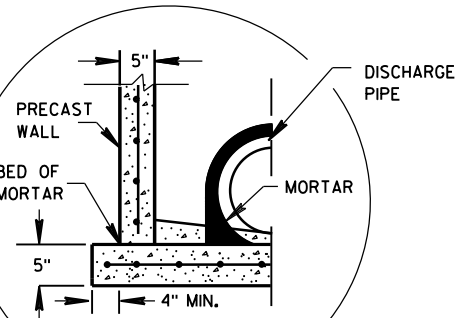
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-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 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

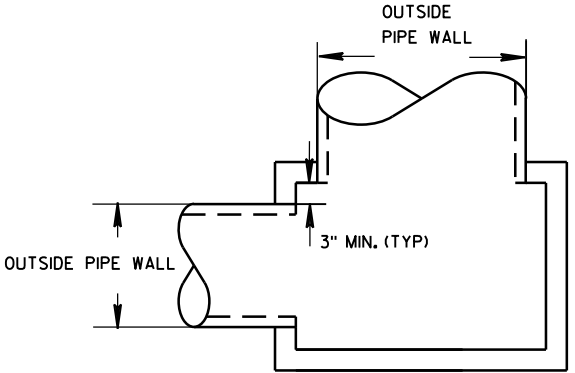
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH ① (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24

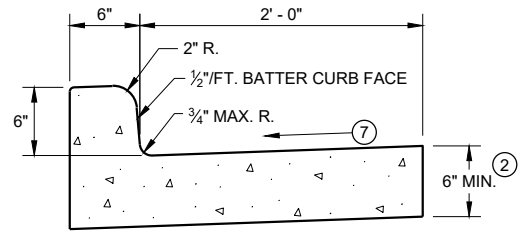


DETAIL "A"

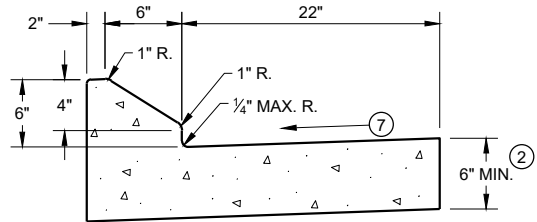
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

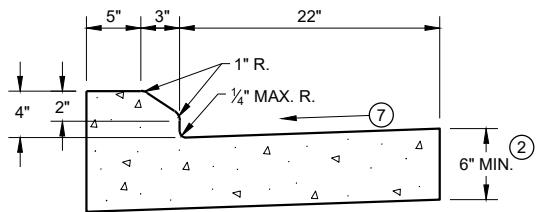
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



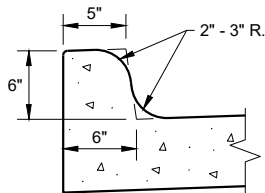
TYPES A^① & D



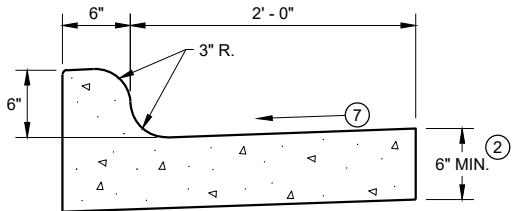
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

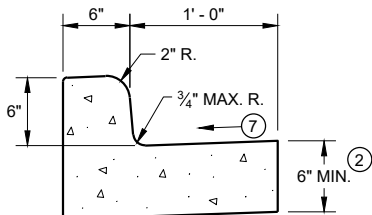


TYPES K^① & L
(OPTIONAL CURB SHAPE)



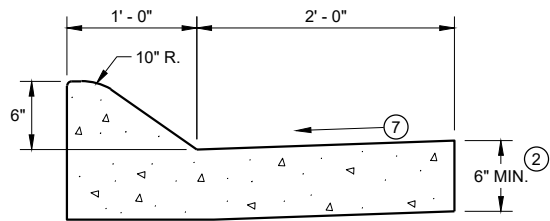
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

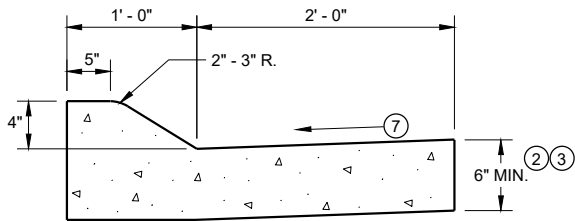


TYPES A^① & D

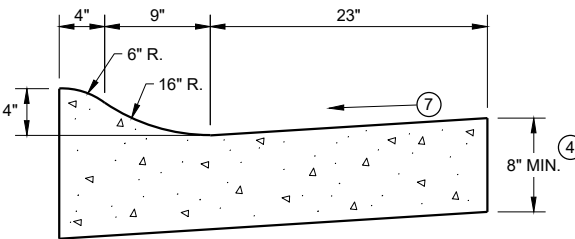
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D



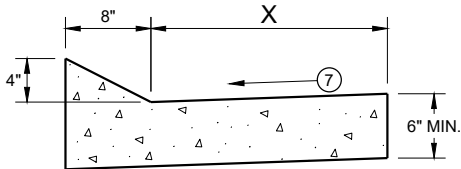
4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

CONCRETE CURB AND GUTTER 36"

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

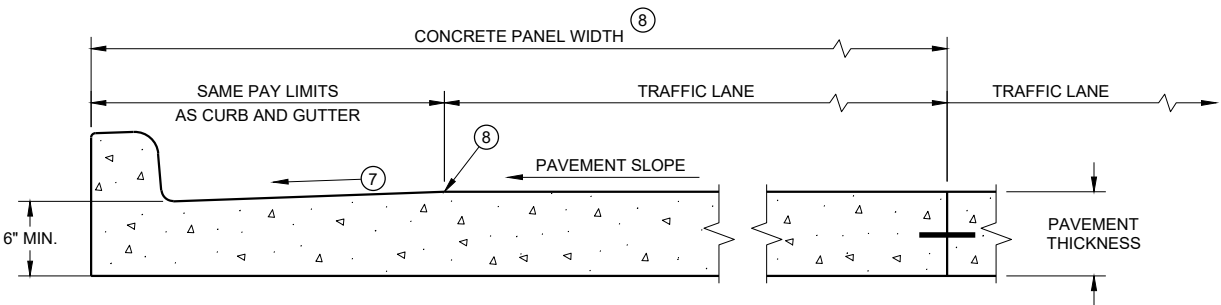


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

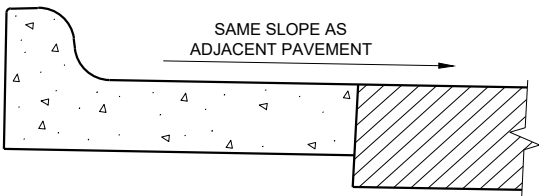
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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)

GENERAL NOTES

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

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

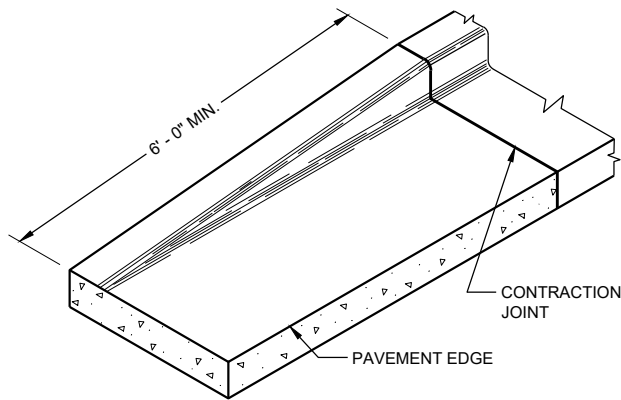
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

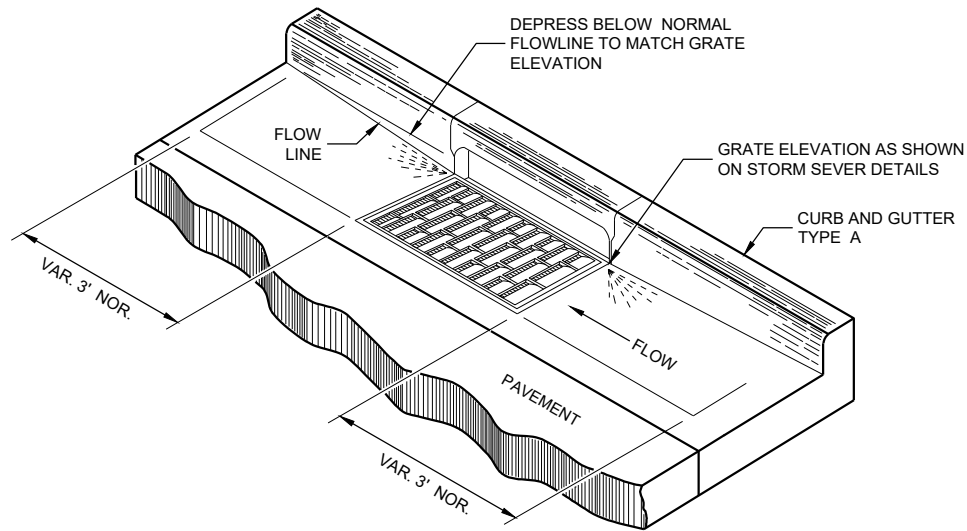
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH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

CONCRETE CURB AND GUTTER

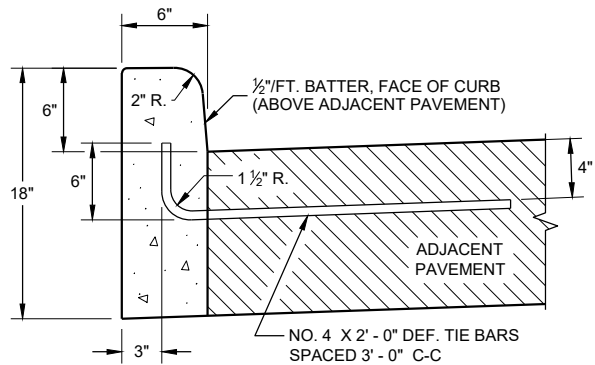
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



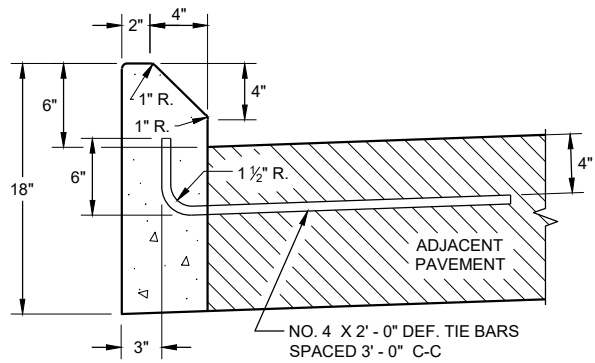
END SECTION CURB AND GUTTER



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

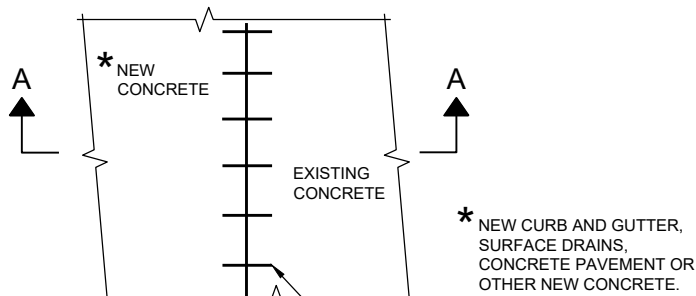


TYPES A^① & D

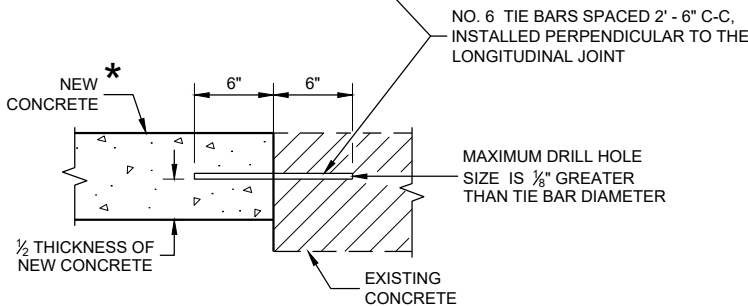


TYPES G^① & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

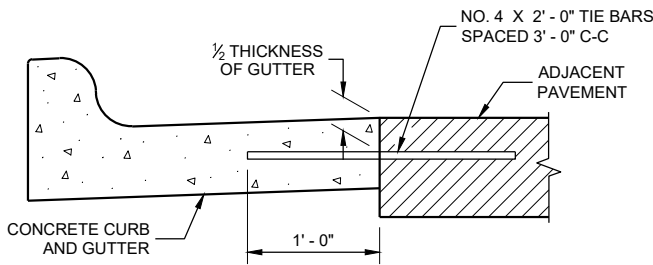
GENERAL NOTES

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

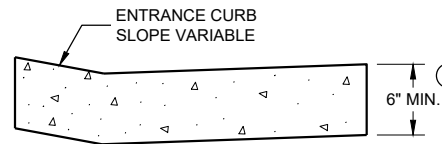
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

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



TYPICAL TIE BAR LOCATION^①



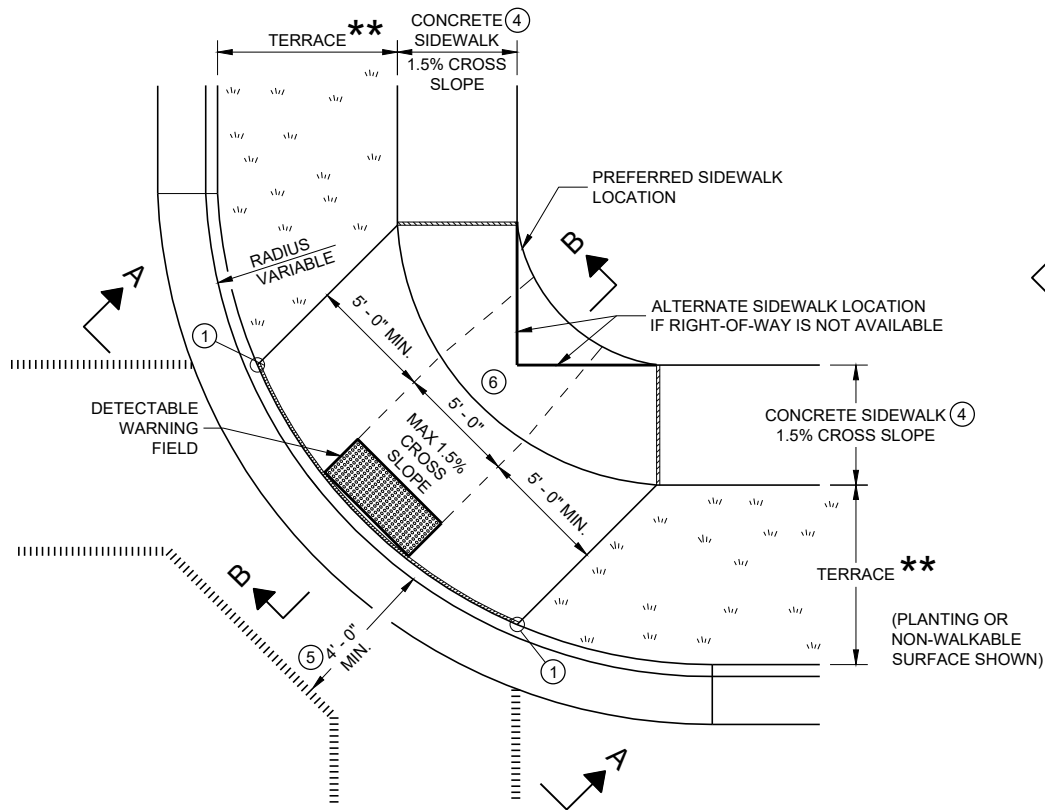
DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

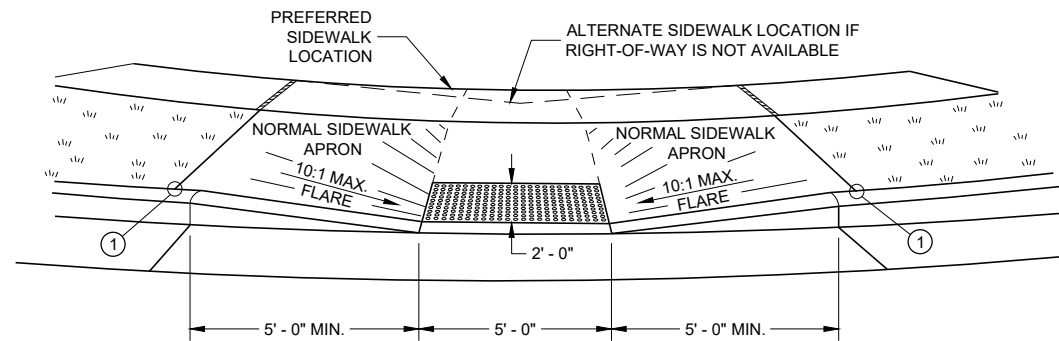
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

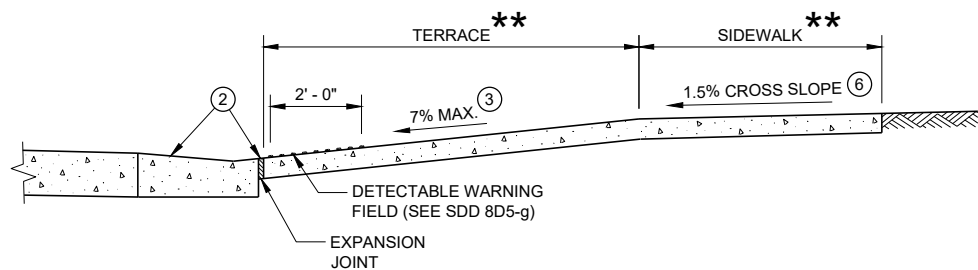


PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

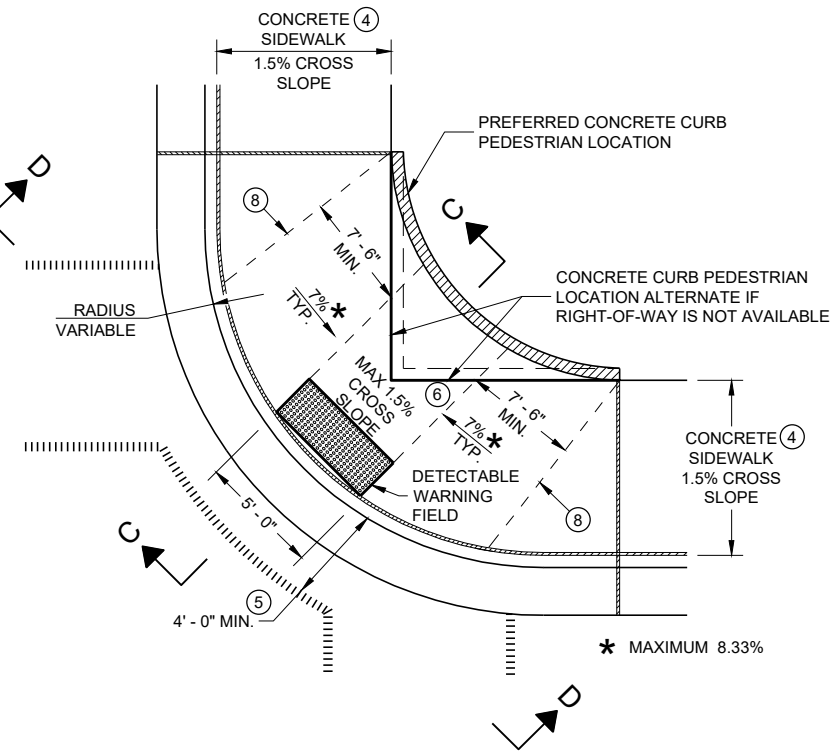


VIEW A - A FOR TYPE 1

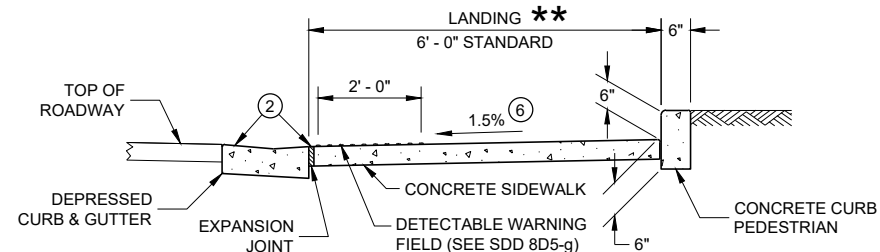
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



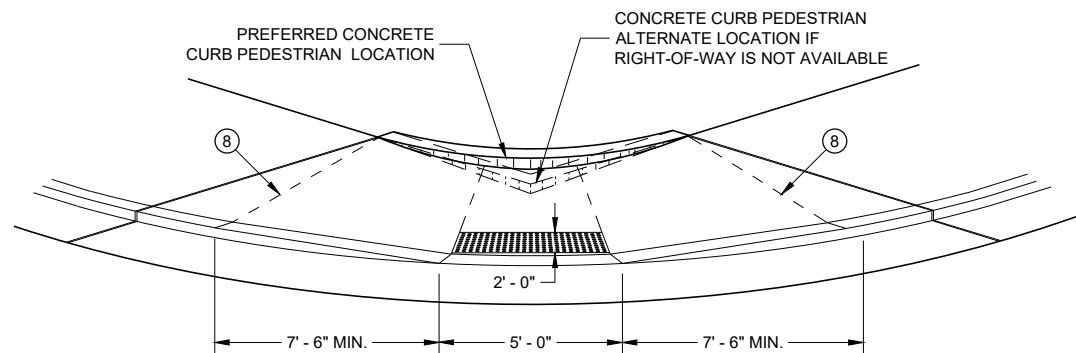
SECTION B - B FOR TYPE 1



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 RAMP ACCESS AREAS.

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

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

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

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

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

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

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

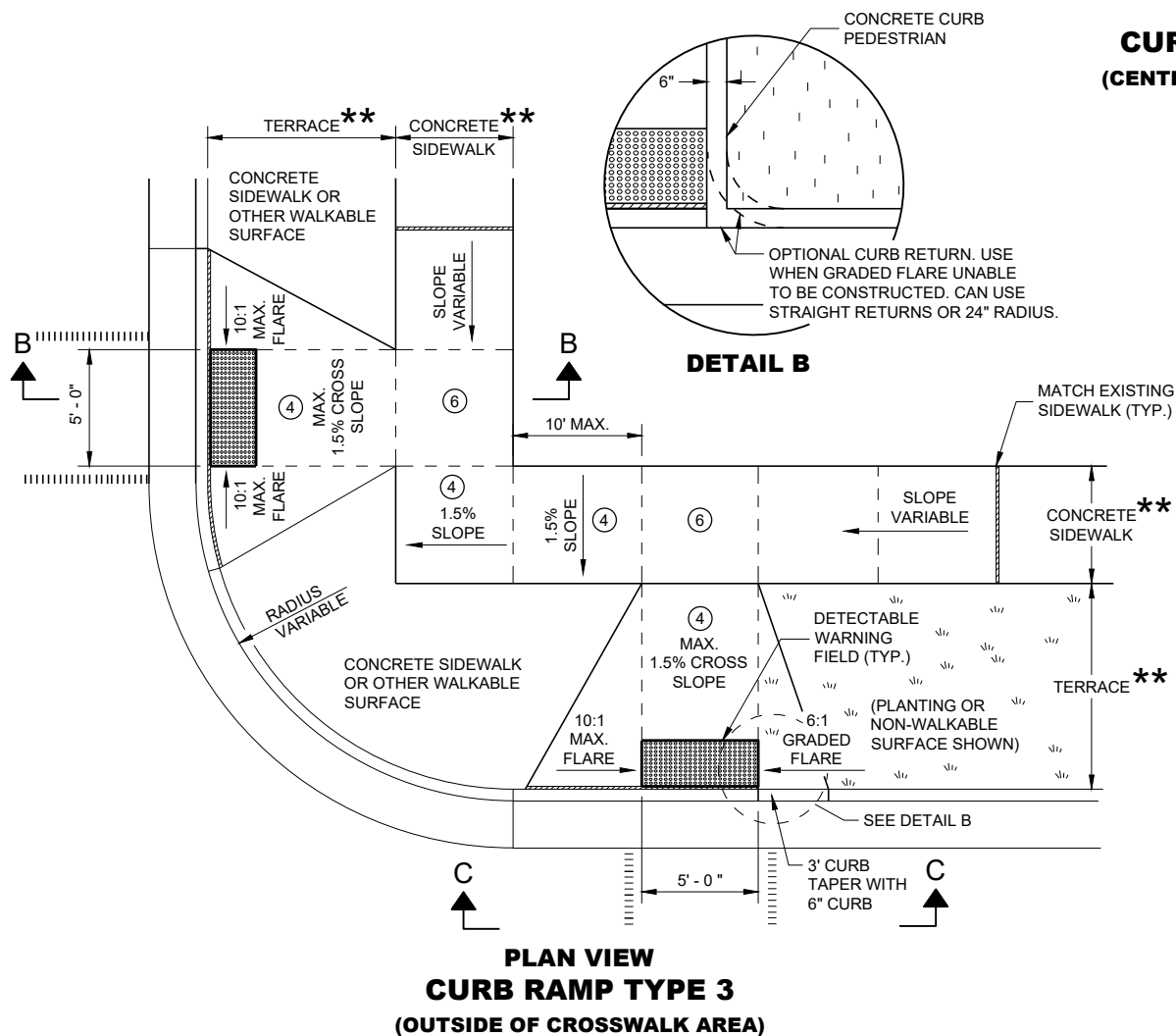
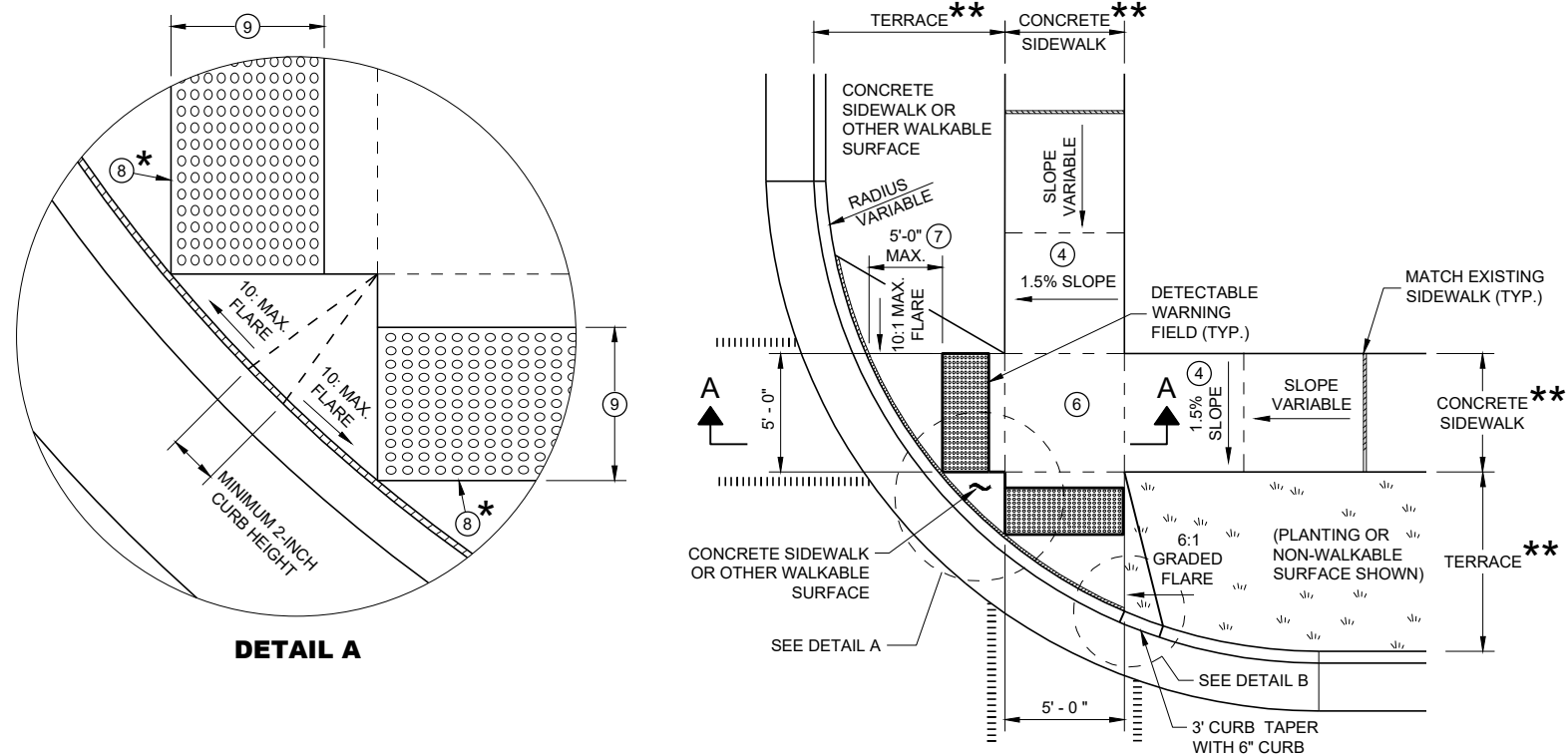
- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM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

LEGEND

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

CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



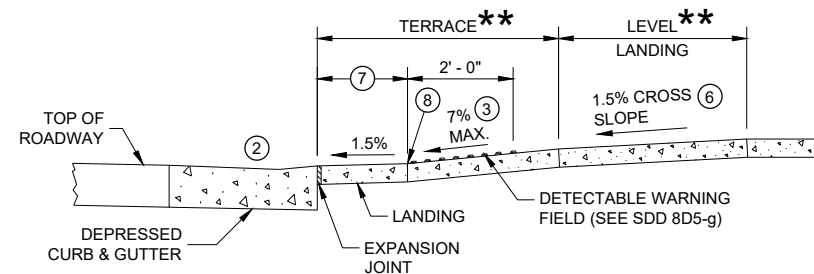
GENERAL NOTES

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

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

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

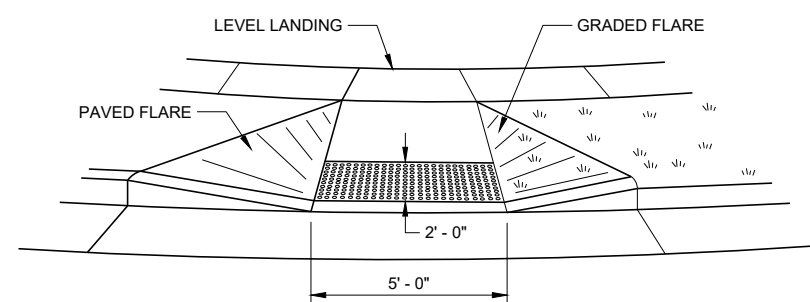
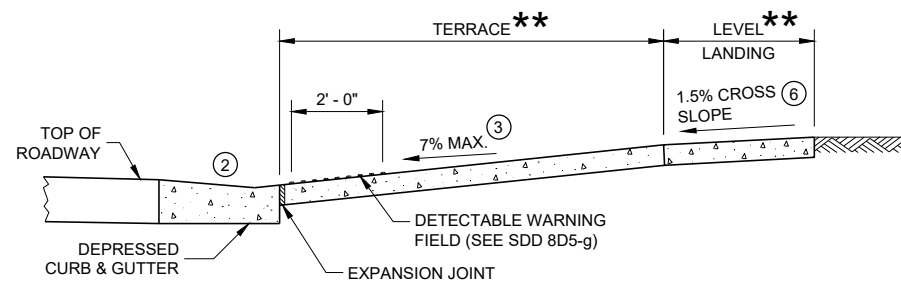


* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE
IN THE PLANS

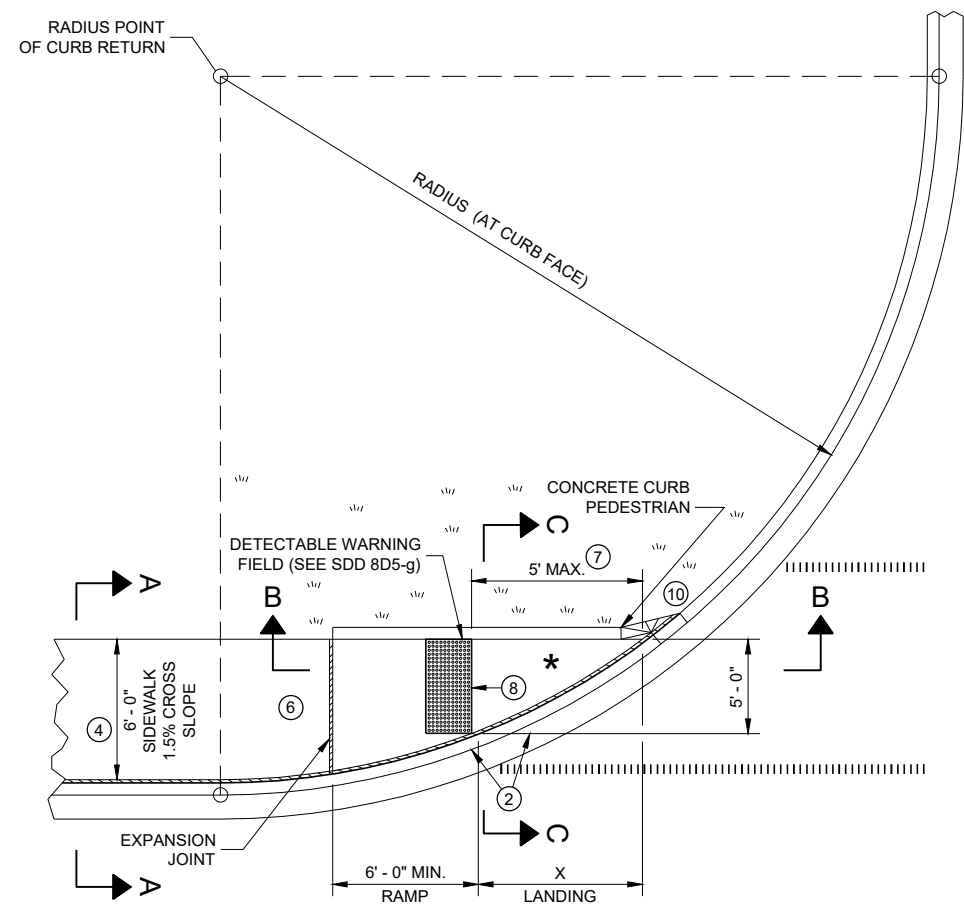
LEGEND

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

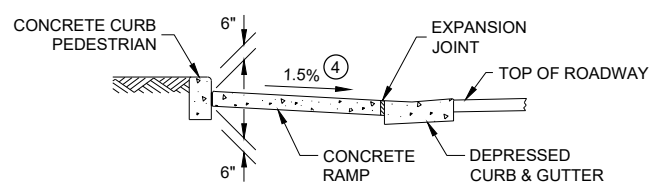


CURB RAMPS TYPE 2 AND 3

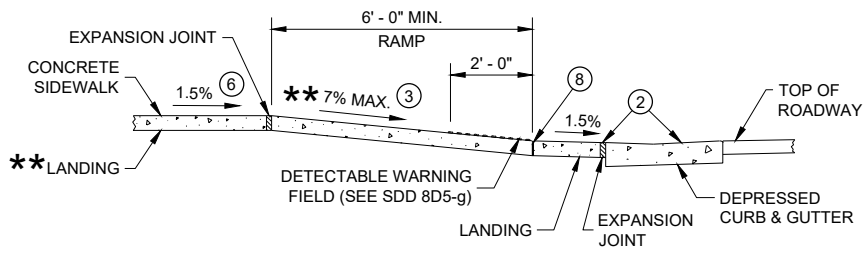
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A



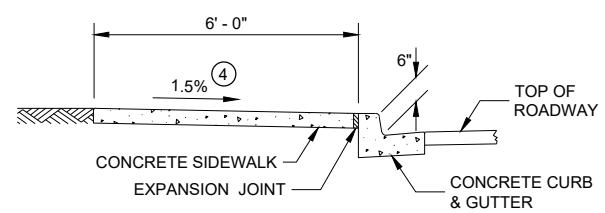
SECTION B - B FOR
TYPE 4A AND TYPE 4A1

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

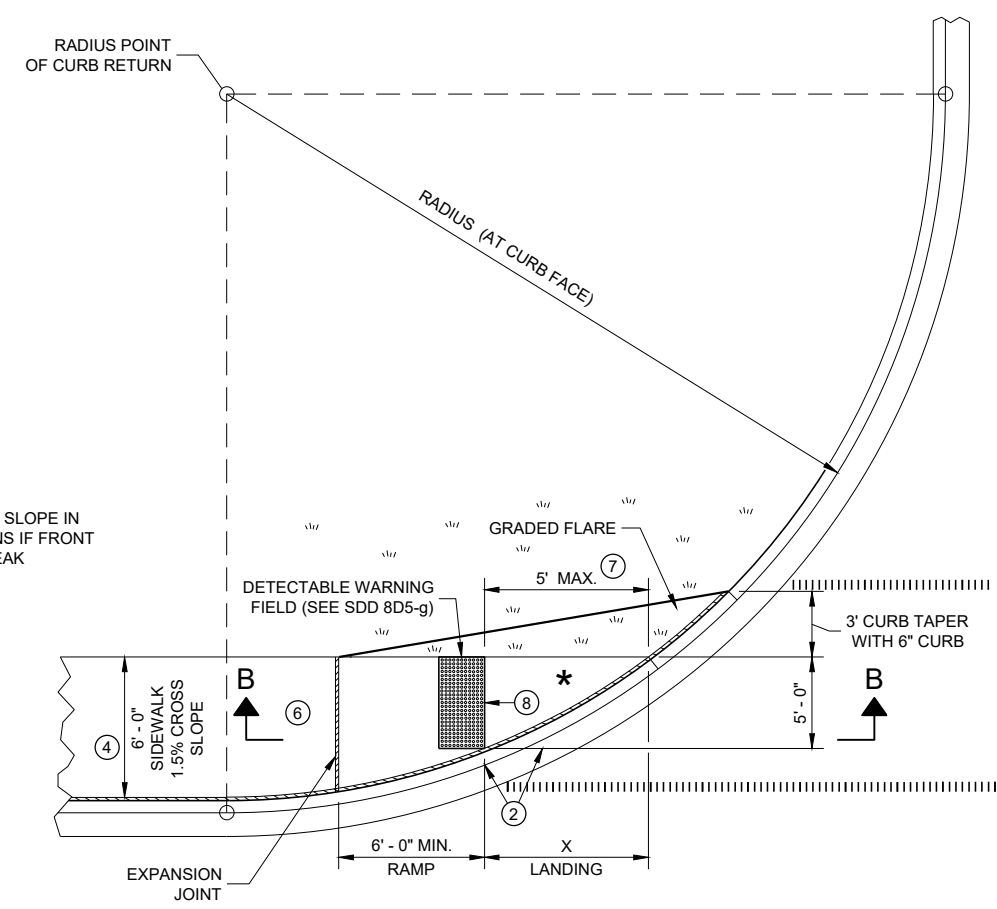
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



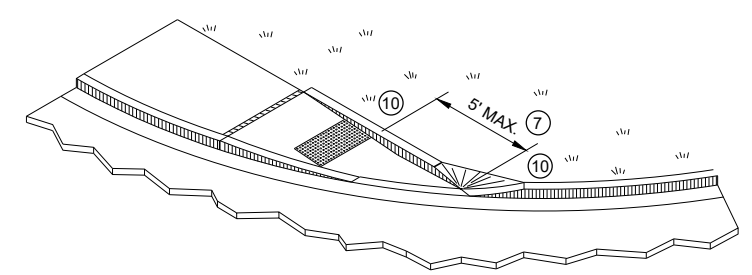
PLAN VIEW
CURB RAMP TYPE 4A1

GENERAL NOTES

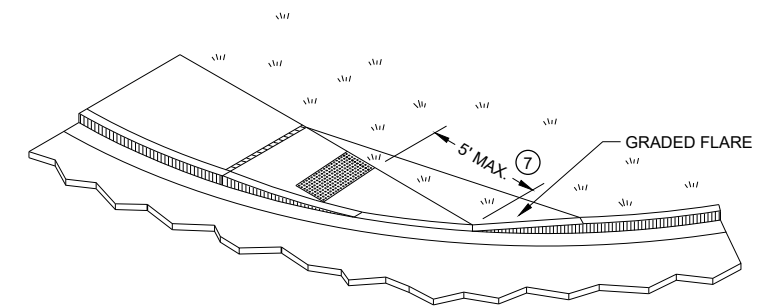
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE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

LEGEND

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



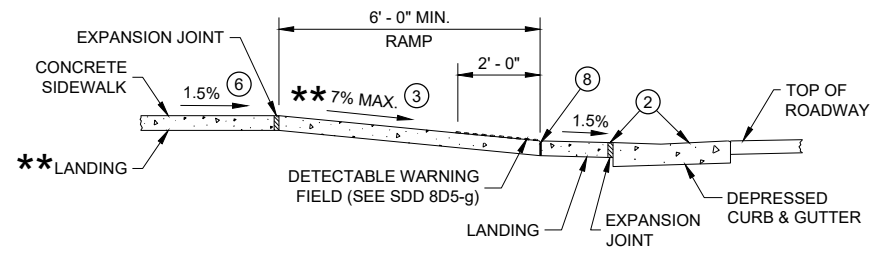
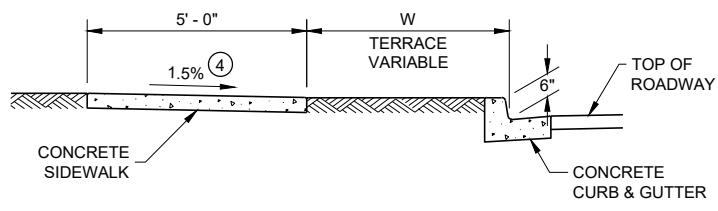
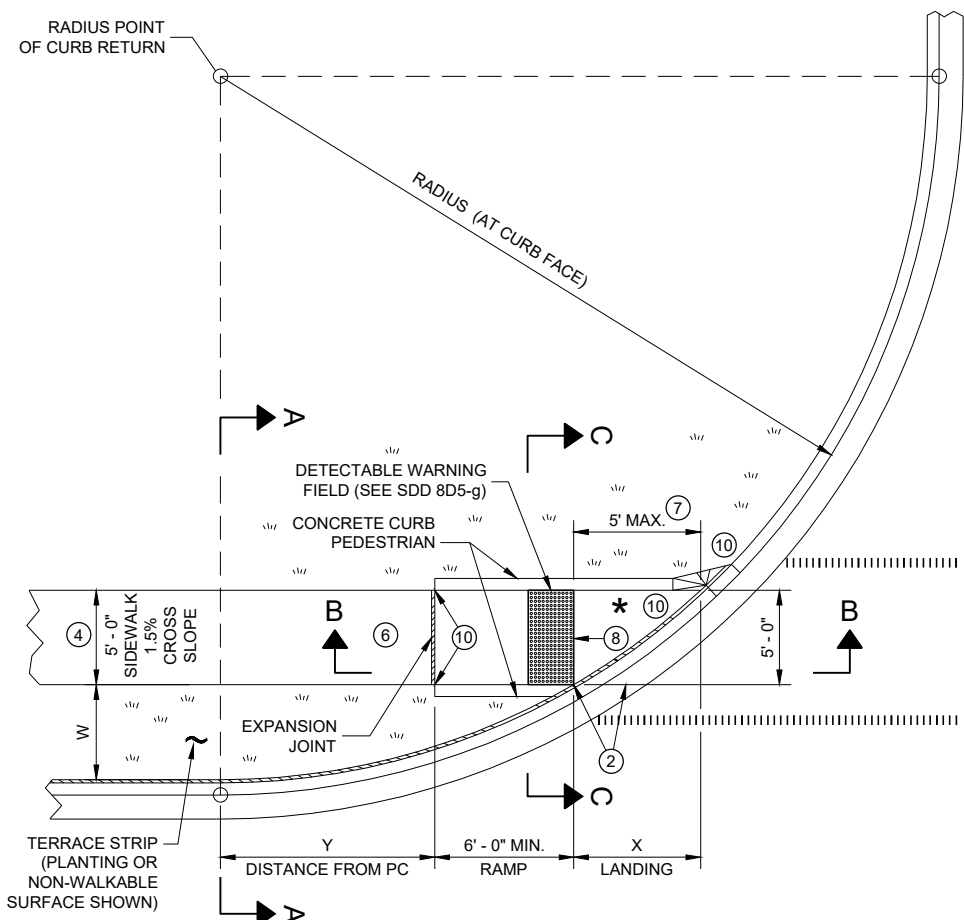
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

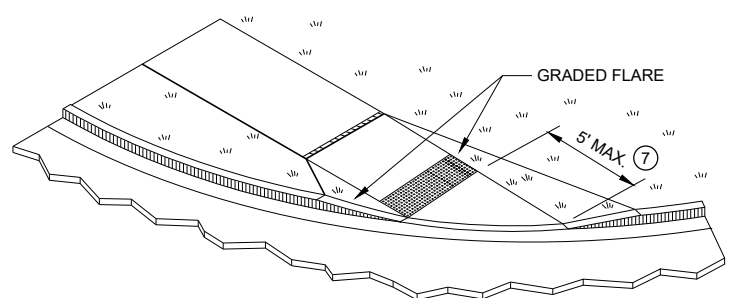
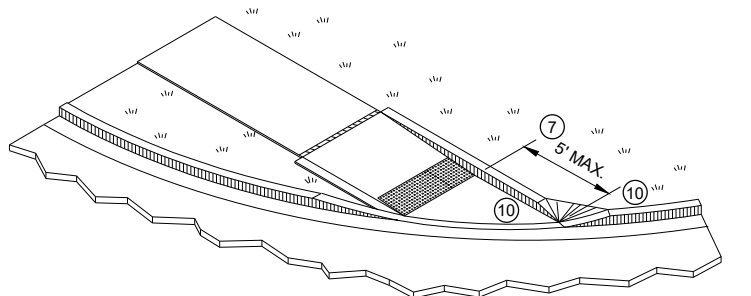
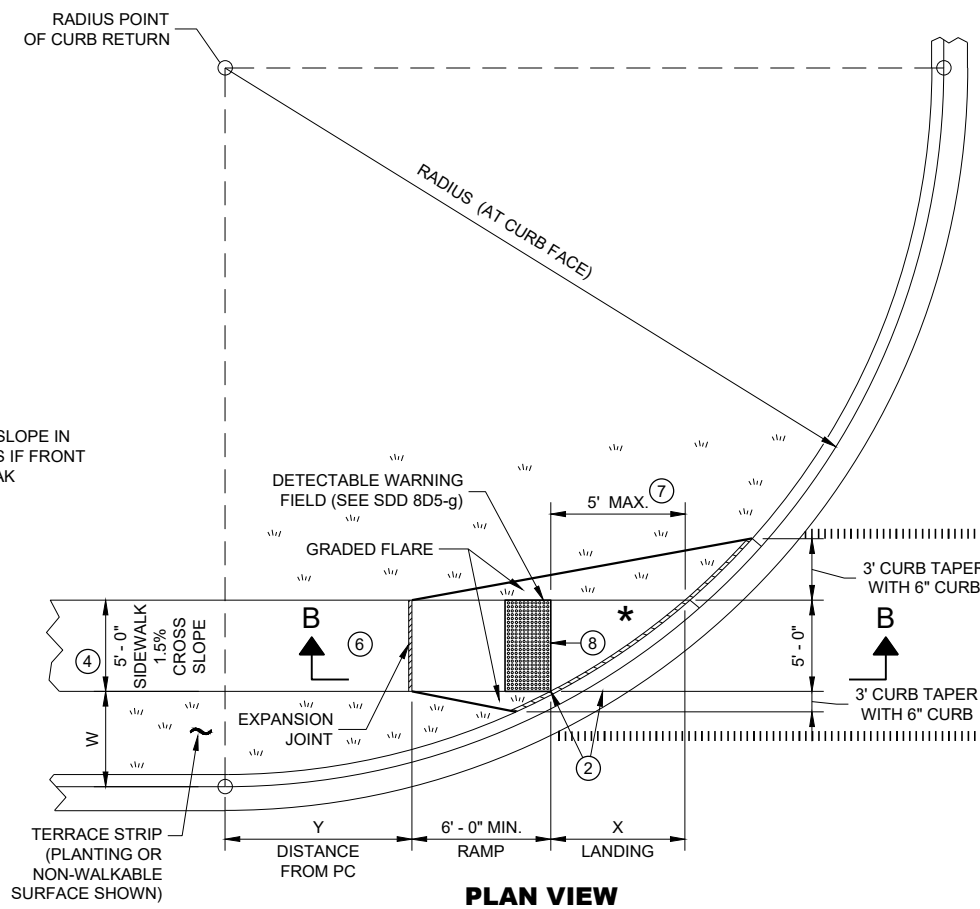
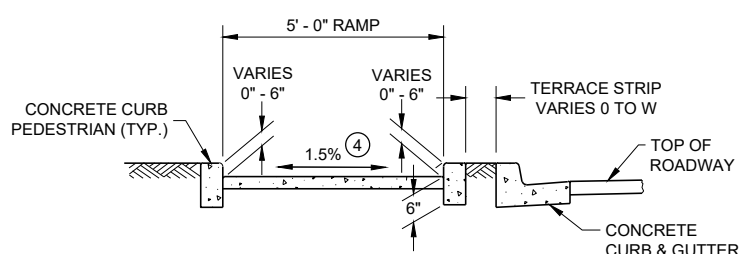


** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

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

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

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



LEGEND

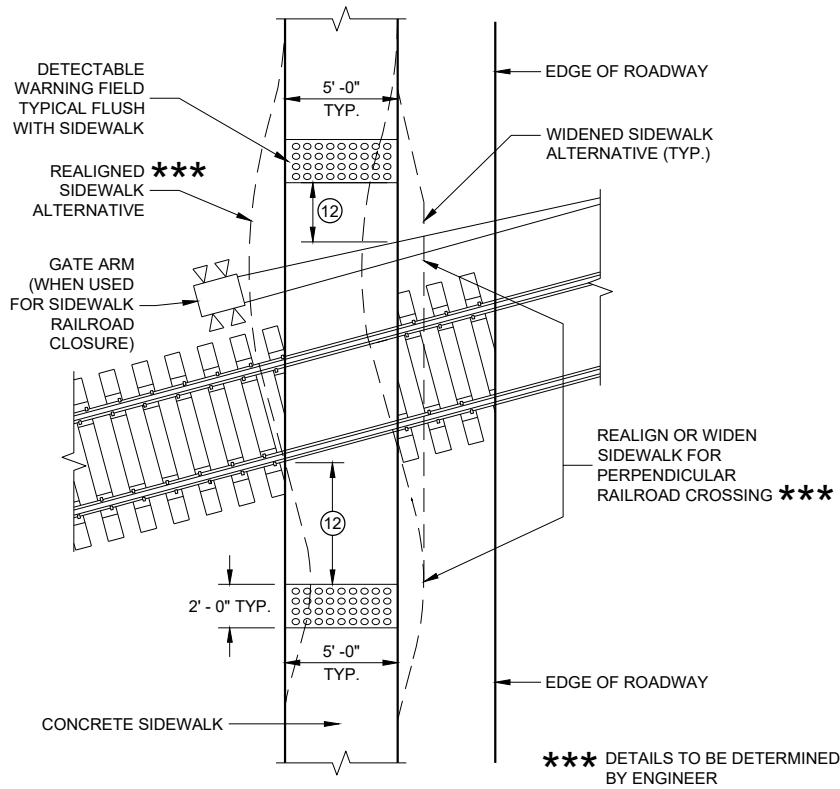
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

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

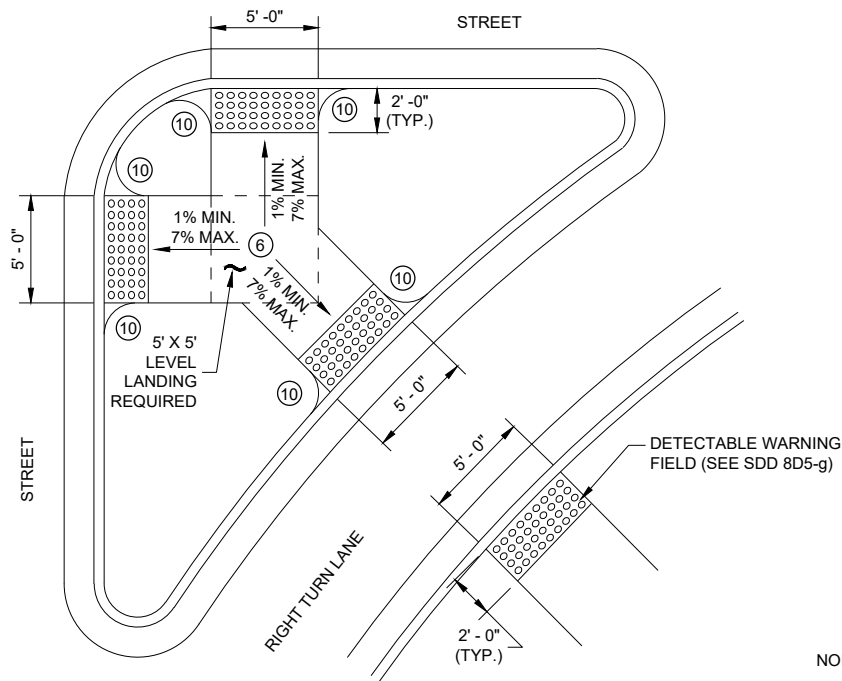
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 8

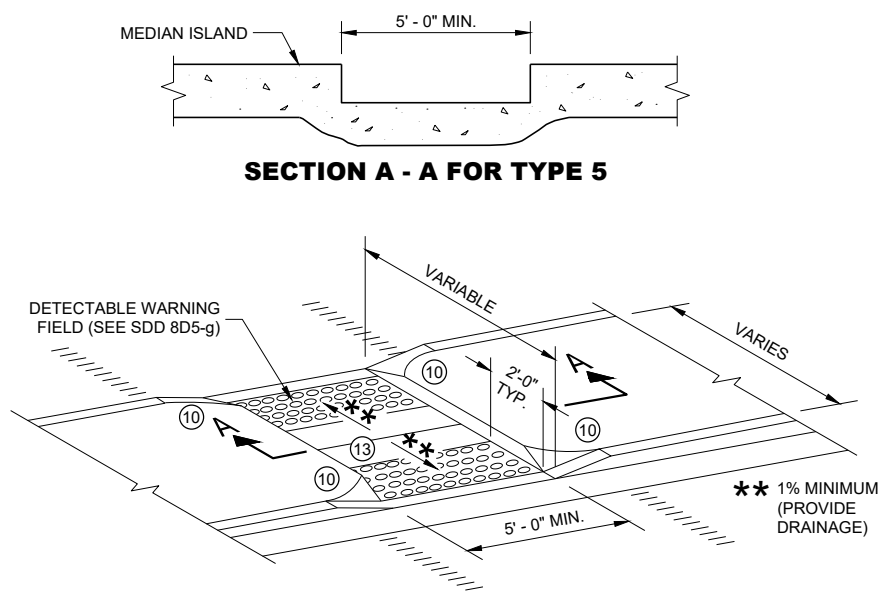
DETECTABLE WARNINGS AT RAILROAD CROSSING



CURB RAMP TYPE 6

DETECTABLE WARNING AT ISLANDS

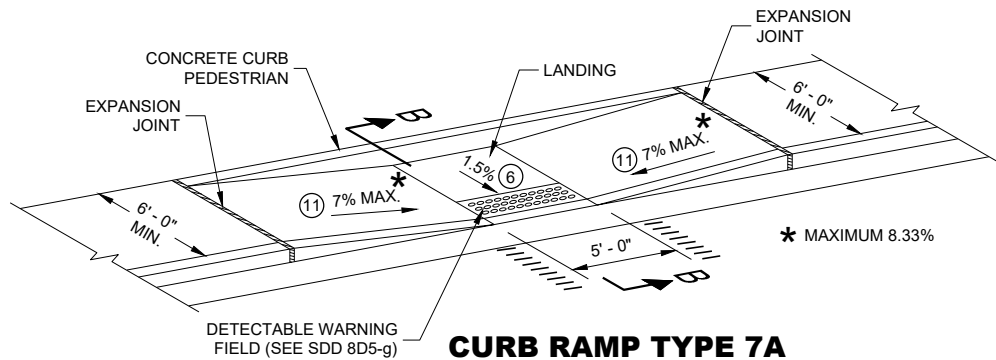
REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



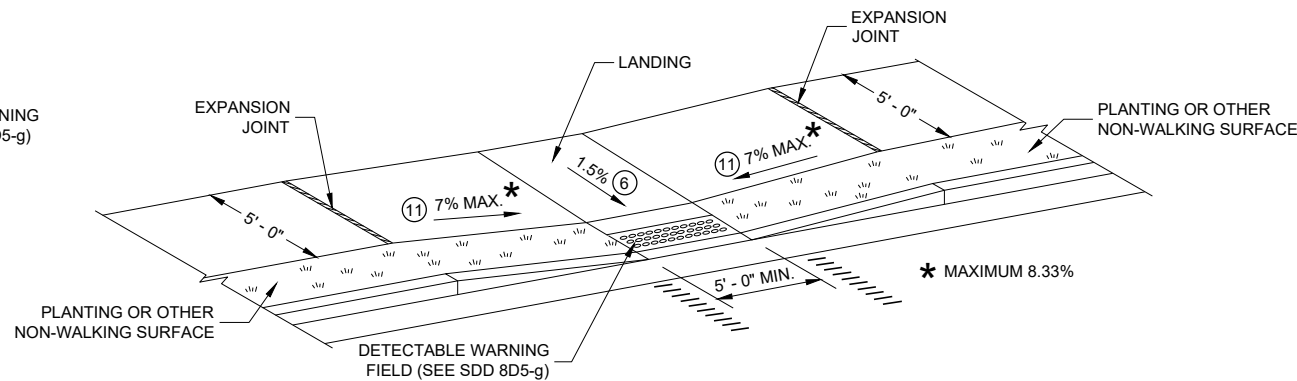
SECTION A - A FOR TYPE 5

CURB RAMP TYPE 5

**MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING**



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



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

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

GENERAL NOTES

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

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

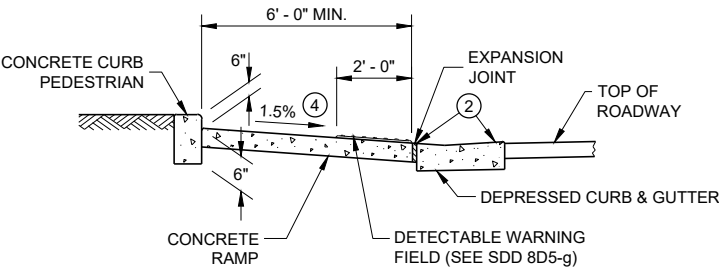
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

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

LEGEND

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



SECTION B - B FOR TYPE 7A

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

Diagram illustrating the placement of a radial detectable warning field when the 5-foot grade break distance per SDD 8D5-c is exceeded.

Key Components and Dimensions:

- EXPANSION JOINT:** Located at the start of the detectable warning field.
- DETECTABLE WARNING FIELD RADIAL:** The area covered by the detectable warning field.
- GRADED FLARE:** The transition area between the detectable warning field and the ramp.
- MIN. 2'-0" DWF (16) COVERAGE:** Minimum detectable warning field coverage required.
- LANDING 'XR':** The landing area for the ramp.
- 6'-0" MIN. RAMP:** Minimum ramp length.
- 6'-0" SIDEWALK 1.5% CROSS SLOPE:** Dimensions for the sidewalk section.
- 3' CURB TAPER WITH 6" CURB:** Dimensions for the curb taper.
- SEE DETAIL A:** Reference to a detail view of the curb taper.
- 5'-0" (17):** Dimension for the curb taper.
- 2'-0":** Dimension for the detectable warning field.
- 15:** Callout for the detectable warning field.
- 16:** Callout for the minimum detectable warning field coverage.
- 14:** Callout for the expansion joint.
- 8:** Callout for the expansion joint.
- 17:** Callout for the curb taper.
- A:** Callout for the curb taper.

*** MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK**

PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

The diagram illustrates the plan view of Curb Ramp Type 4A1. It shows a ramp with a 7% typical grade (*** 7% TYP.) and a 6'-0" minimum landing (6'-0" MIN. LANDING). The ramp is flanked by concrete sidewalks (CONCRETE SIDEWALK) and expansion joints (EXPANSION JOINT). A radial detectable warning field (RADIAL DETECTABLE WARNING FIELD (SEE SDD 8D5-g)) is shown on the ramp. The grade break distance (GRADE BREAK DIST.) is greater than 5 feet. The diagram also shows a depressed curb and gutter (DEPRESSED CURB & GUTTER) and a top of roadway (TOP OF ROADWAY). Callouts 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 are present.

SECTION A - A FOR TYPE 4A1

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

The diagram illustrates the placement of a detectable warning field radial when the 5-foot grade break distance is exceeded. Key features include:

- 5'-0" SIDEWALK 1.5% CROSS SLOPE**: Indicated by a vertical dimension line and a slope arrow.
- EXPANSION JOINT**: Located at the edge of the sidewalk, marked with a wavy line.
- GRADED FLARE**: The area where the sidewalk meets the street, shown with a dashed line.
- DETECTABLE WARNING FIELD RADIAL**: A circular area of detectable warning material, labeled with a circled '15'.
- SEE DETAIL B**: A callout pointing to the radial area.
- 3' CURB BREAK WITH 6" CURB**: The curb structure at the break, shown with a vertical dimension line.
- 3' CURB TAPER WITH 6" CURB**: The tapered curb structure, shown with a vertical dimension line.
- 2'-0"**: A horizontal dimension line indicating the width of the radial area.
- 6'-0" MIN.**: A horizontal dimension line indicating the minimum distance from the curb break to the radial.
- LANDING 'XR'**: The area between the curb break and the radial, labeled with a circled '14'.
- * MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK**: A note indicating the slope requirement for the landing area.

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

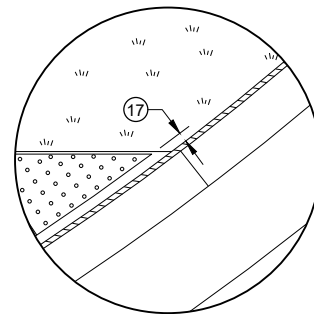
Diagram illustrating the Plan View of CURB RAMP TYPE 4B1, showing the ramp structure and associated components:

- CONCRETE SIDEWALK** (6)
- EXPANSION JOINT** (2)
- LANDING** (8)
- RAMP** (14)
- TOP OF ROADWAY**
- DEPRESSED CURB & GUTTER**
- RADIAL DETECTABLE WARNING FIELD (SEE SDD 8D5-q)**
- Grade Break Distance** (6'-0" MIN.)
- Slope** (1.5%)
- Other Labels**: CONCRETE SIDEWALK, EXPANSION JOINT, TOP OF ROADWAY, DEPRESSED CURB & GUTTER, RADIAL DETECTABLE WARNING FIELD (SEE SDD 8D5-q), LANDING, RAMP, GRADE BREAK DIST., 7% TYP., 6'-0" MIN., 1.5%, 6, 8, 14, 2.

SECTION B - B FOR TYPE 4B1

LEGEND

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



DETAIL A

GENERAL NOTES

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

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

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

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

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

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

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

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

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

NOTE: SECOND TYPE 2

CONCRETE **

EXPANSION JOINT

TOP OF ROADWAY

DEPRESSED CURB & GUTTER

LANDING "XR" (GRADE BREAK DIST.)

1.5%*

7% TYP.

1.5% CROSS SLOPE

TERRACE

SIDEWALK

RADIAL DETECTABLE WARNING FIELD (SEE SDD 8D5-g)

SECTION C - C FOR TYPE 2

10:1 MAX FLARE

8 14

2'-0"

GRADED FLARE

15

TERRACE **

LANDING "XR"

DETECTABLE WARNING FIELD RADIAL

SEE DETAIL C

5'-0"

3' CURB TAPER WITH 6" CURB

TERRACE STRIP (PLANTING OR)

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%

17

SURFACE SHOWN)

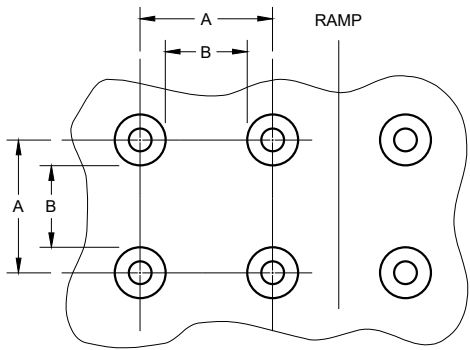
PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

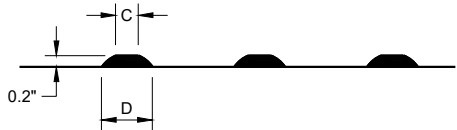
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

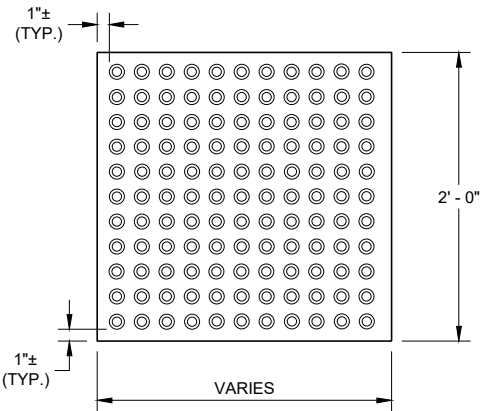


PLAN VIEW

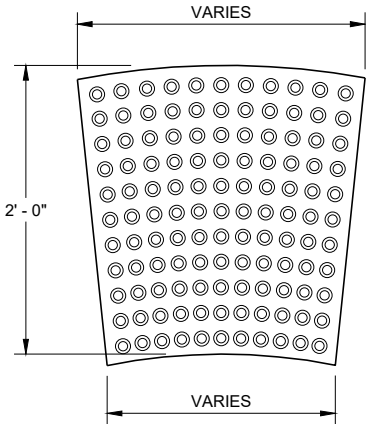


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR
PLATES



RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

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

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

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

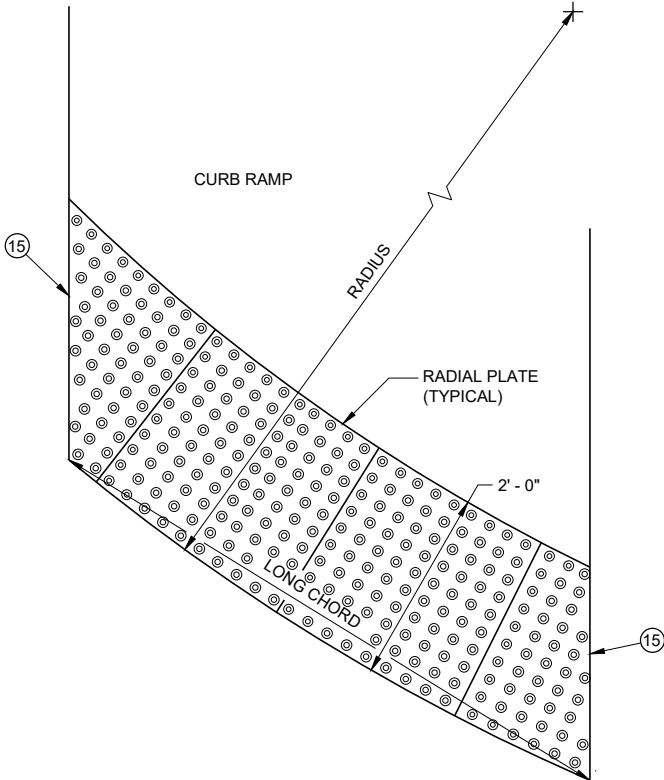
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

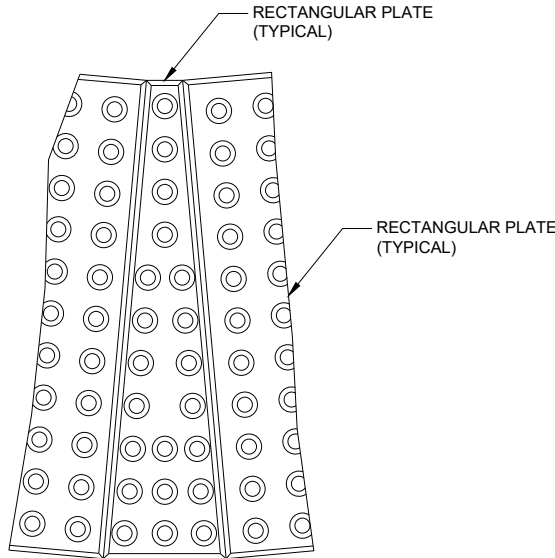
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

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



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

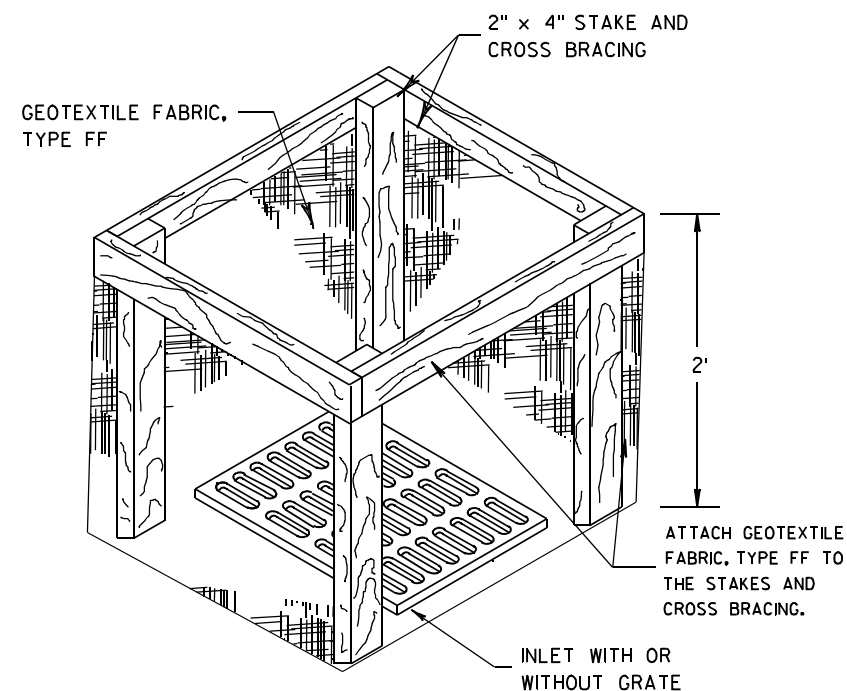
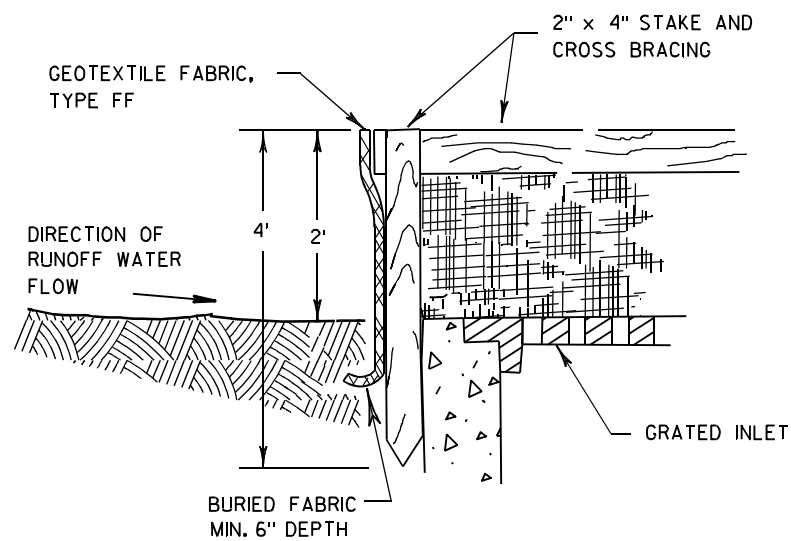


PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



INLET PROTECTION, TYPE A

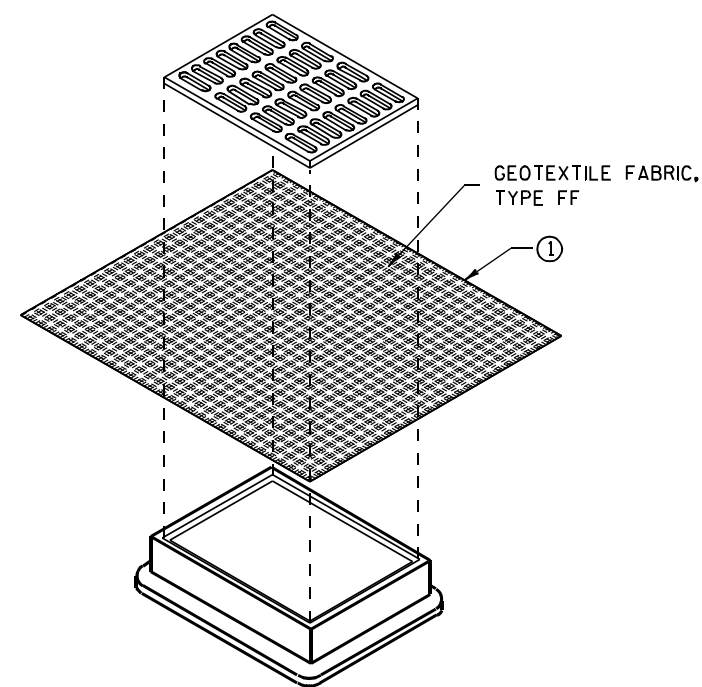
GENERAL NOTES

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

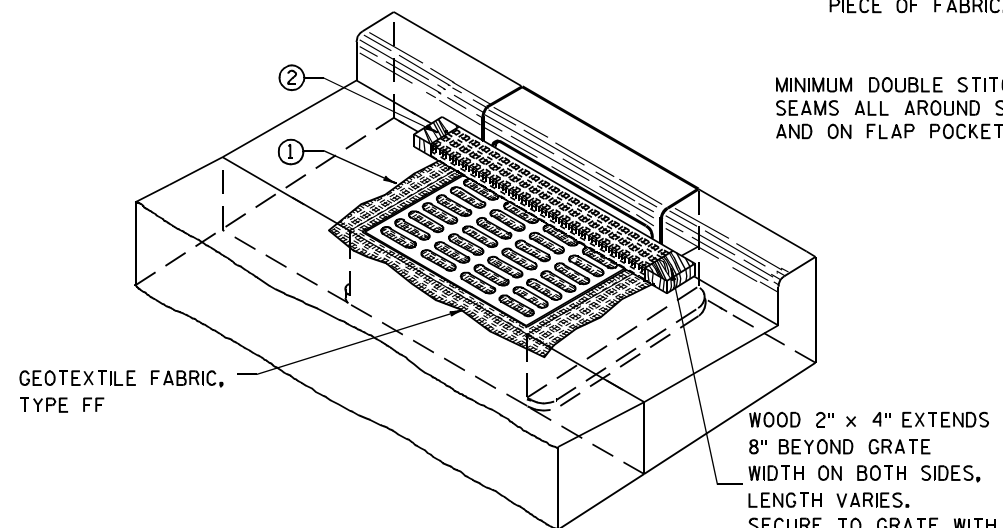
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

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

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



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

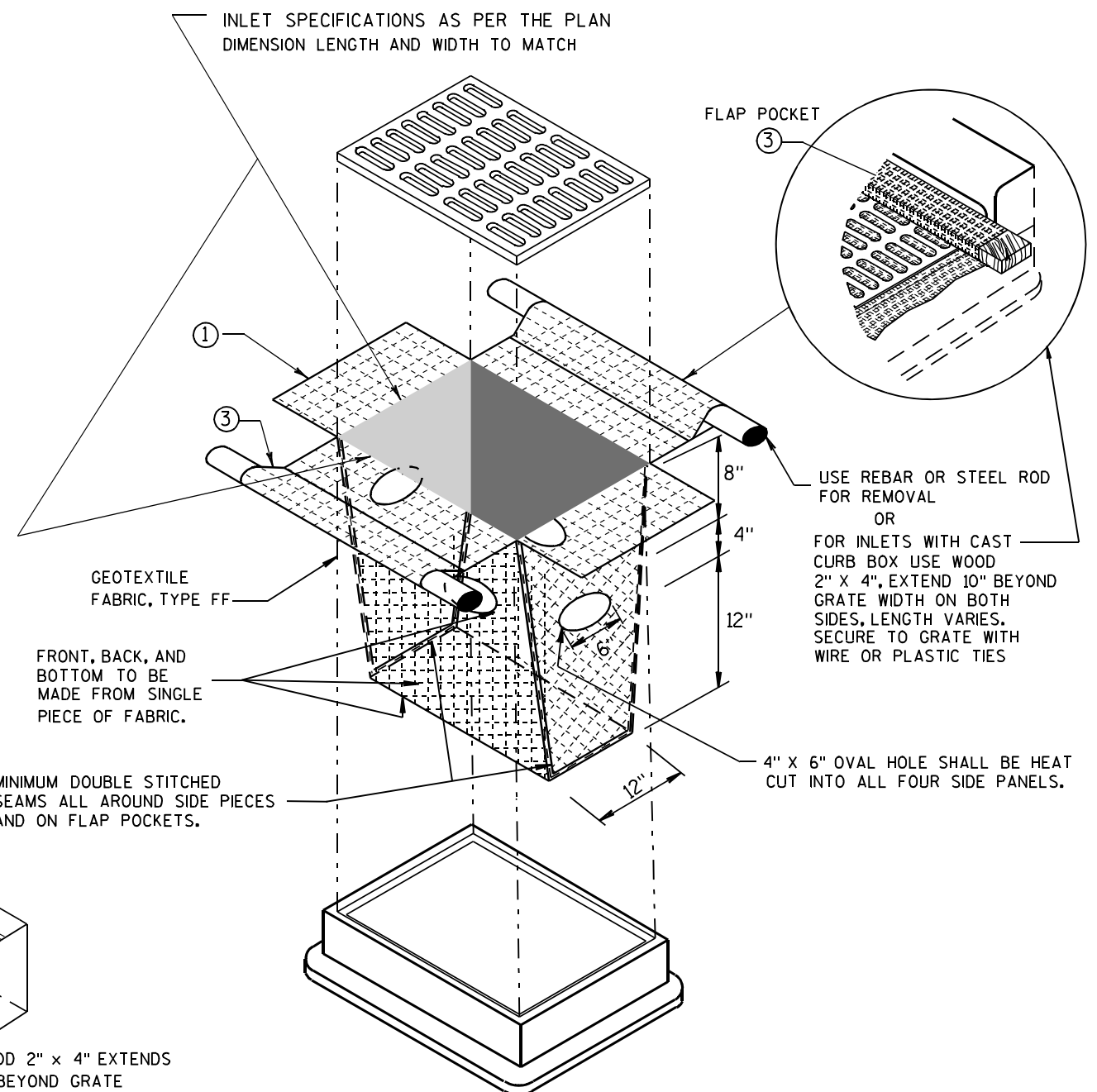
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



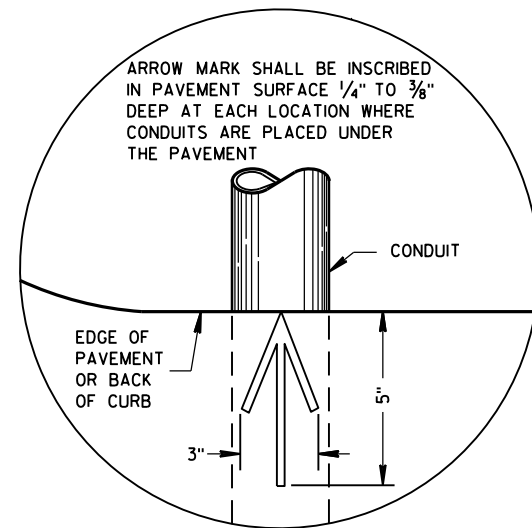
INLET PROTECTION, TYPE D

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

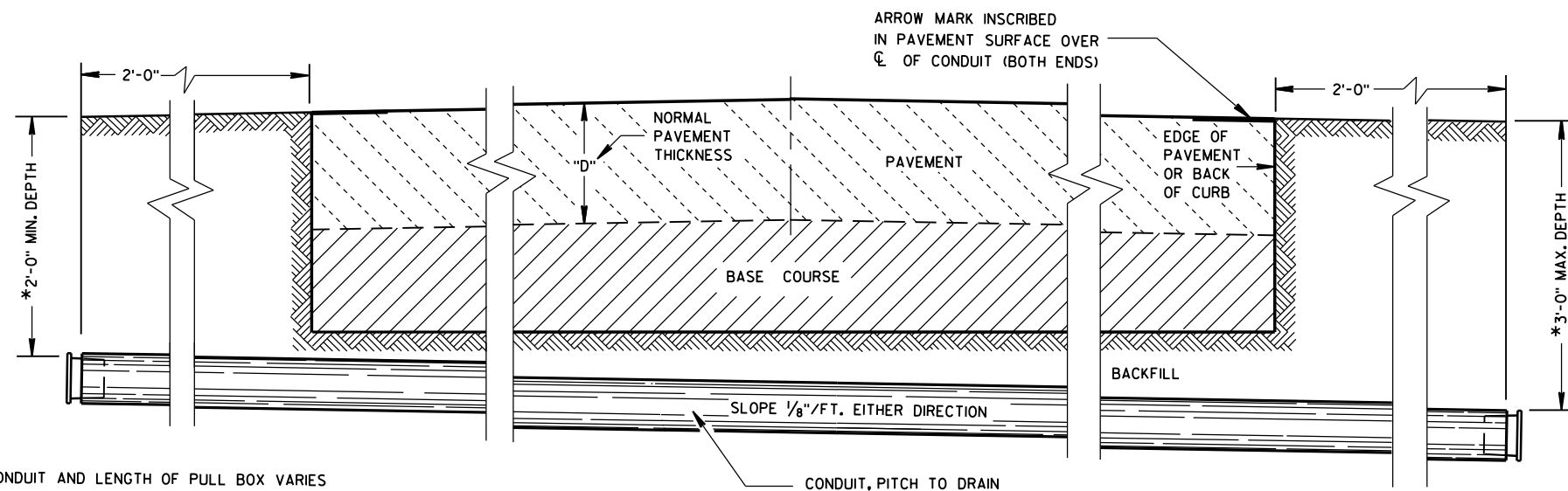
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

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

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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

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

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

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

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

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

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

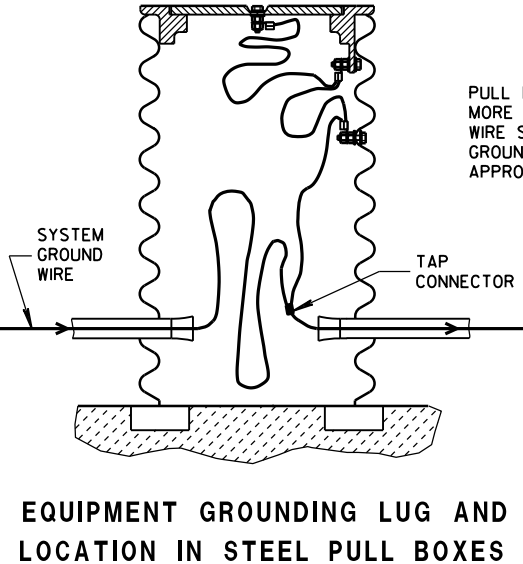
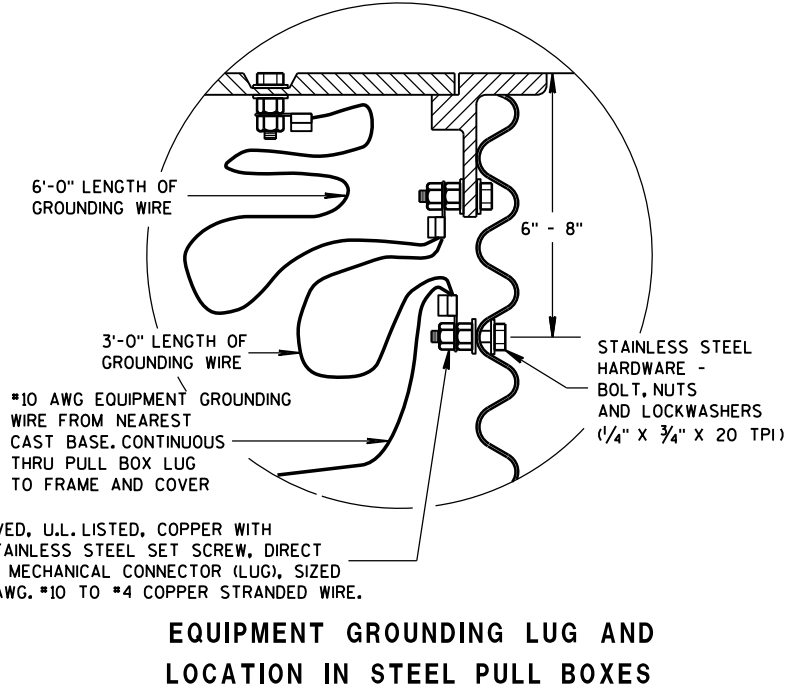
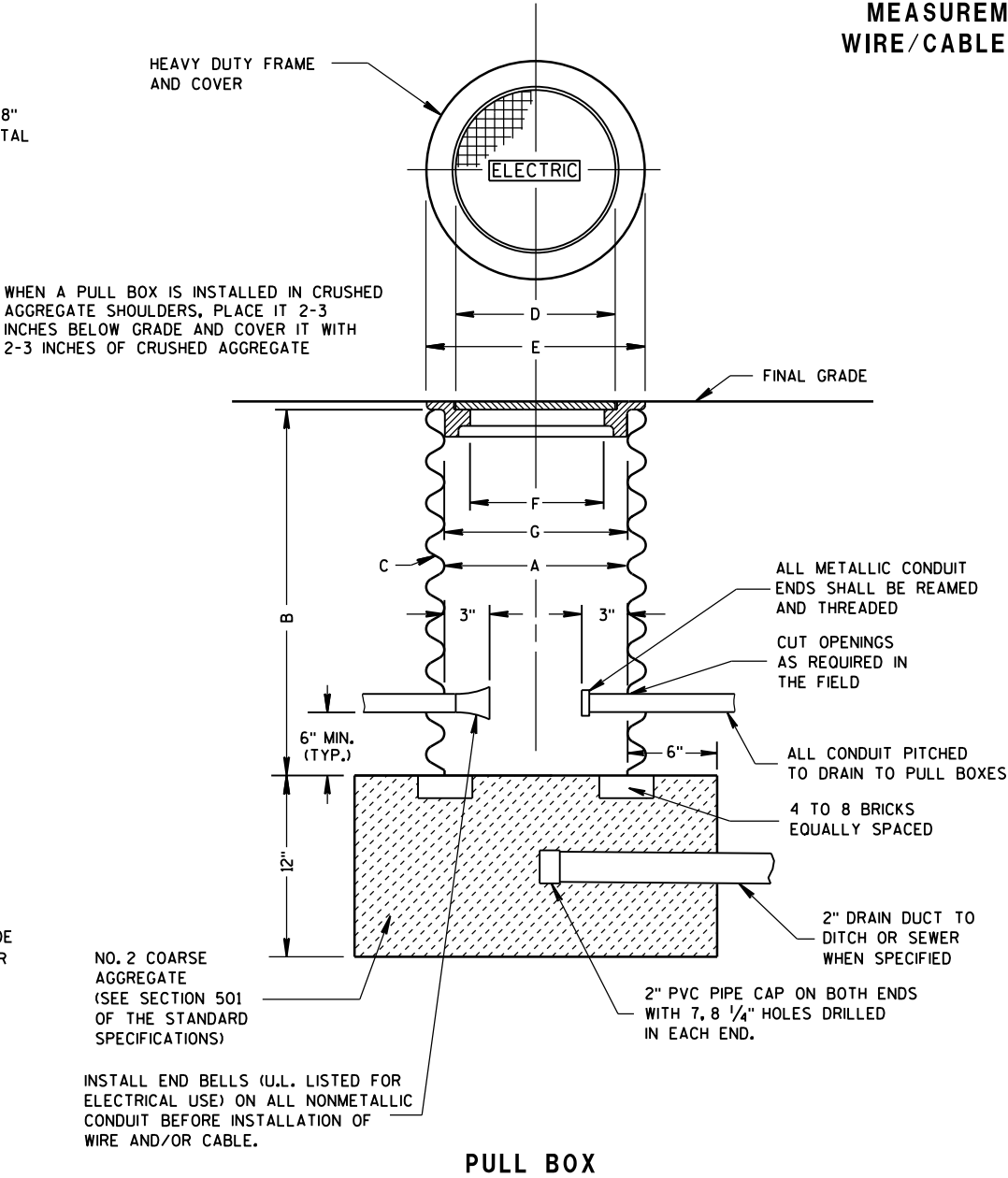
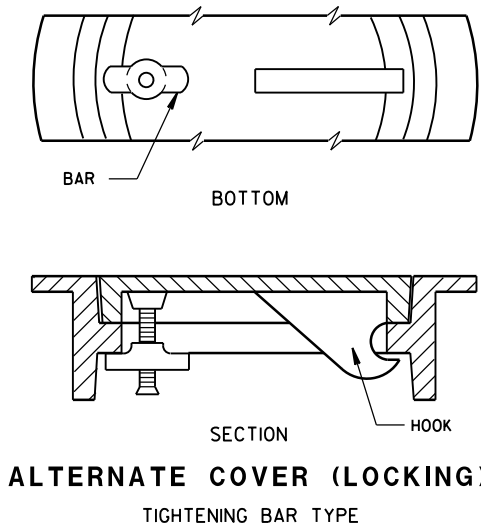
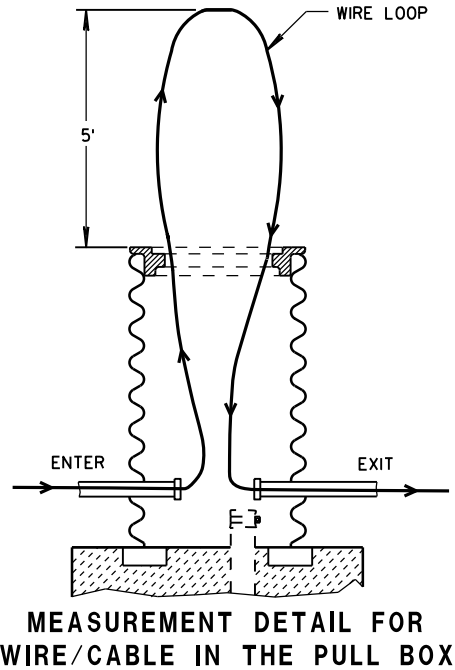
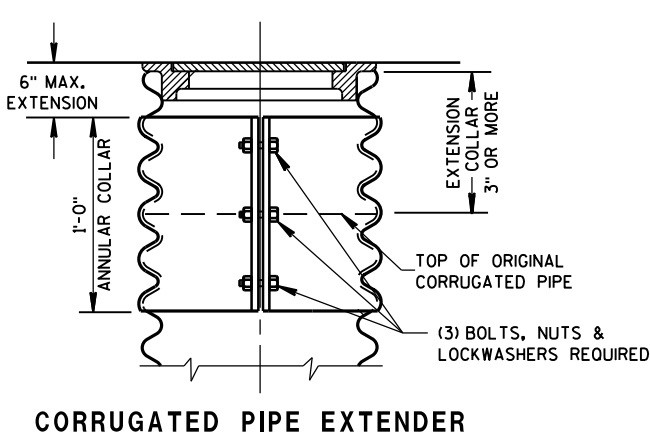
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

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

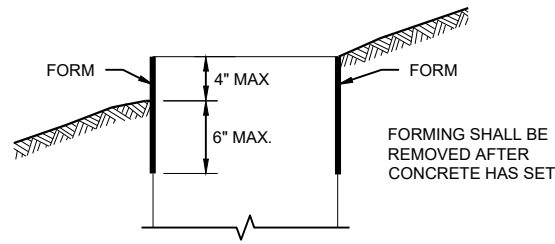
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

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



PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

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



FORMING DETAIL

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

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.

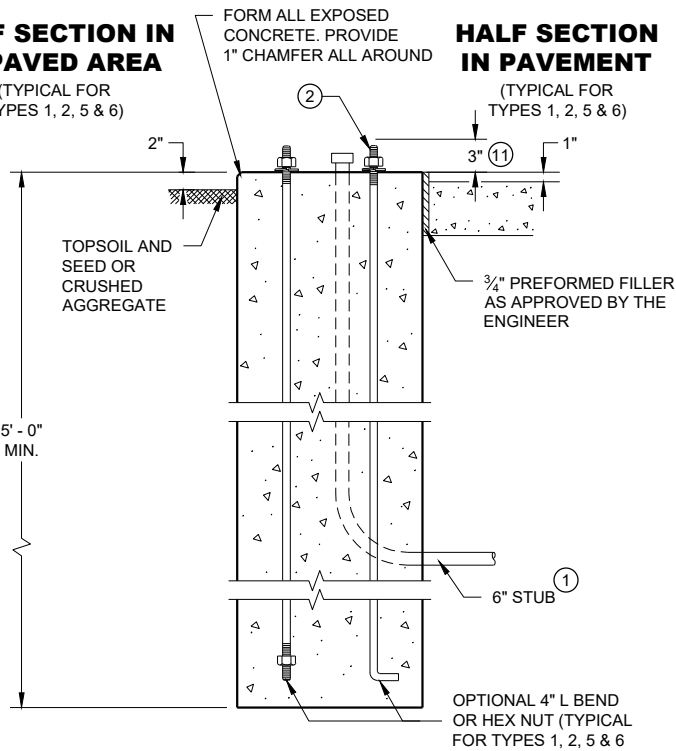
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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).

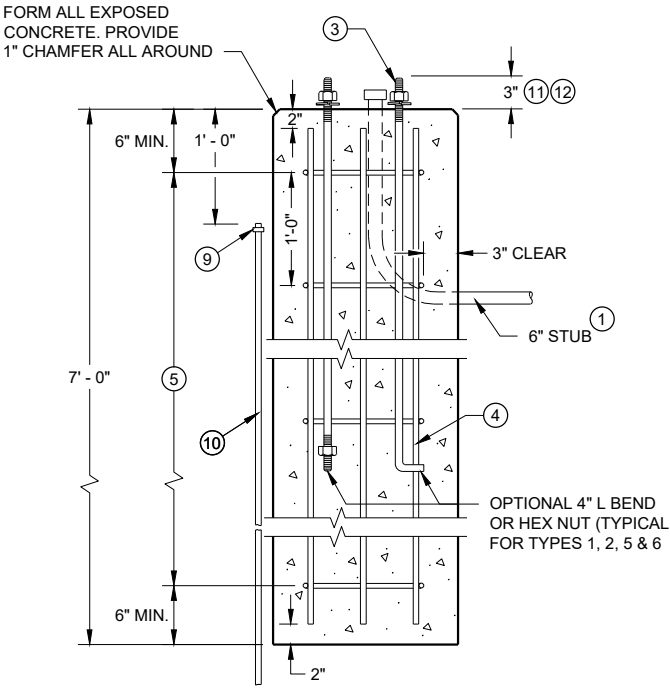
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN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



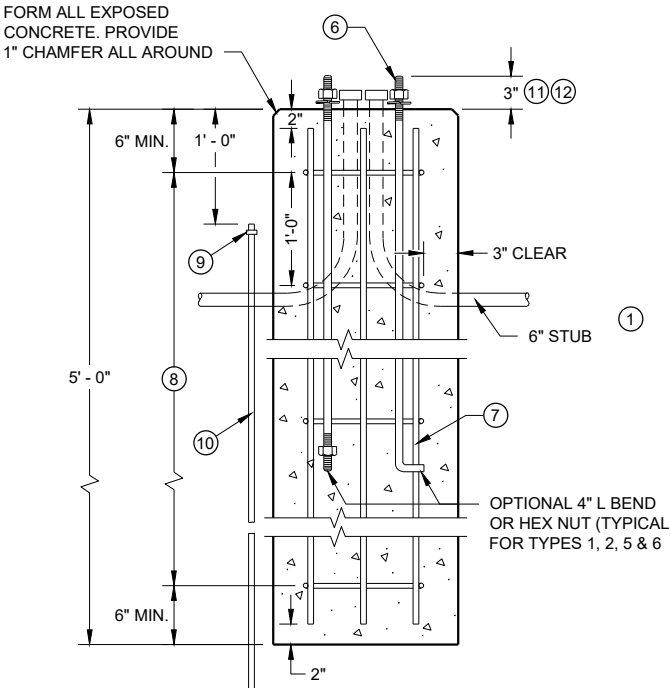
TYPE 1

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 641.2.2 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.

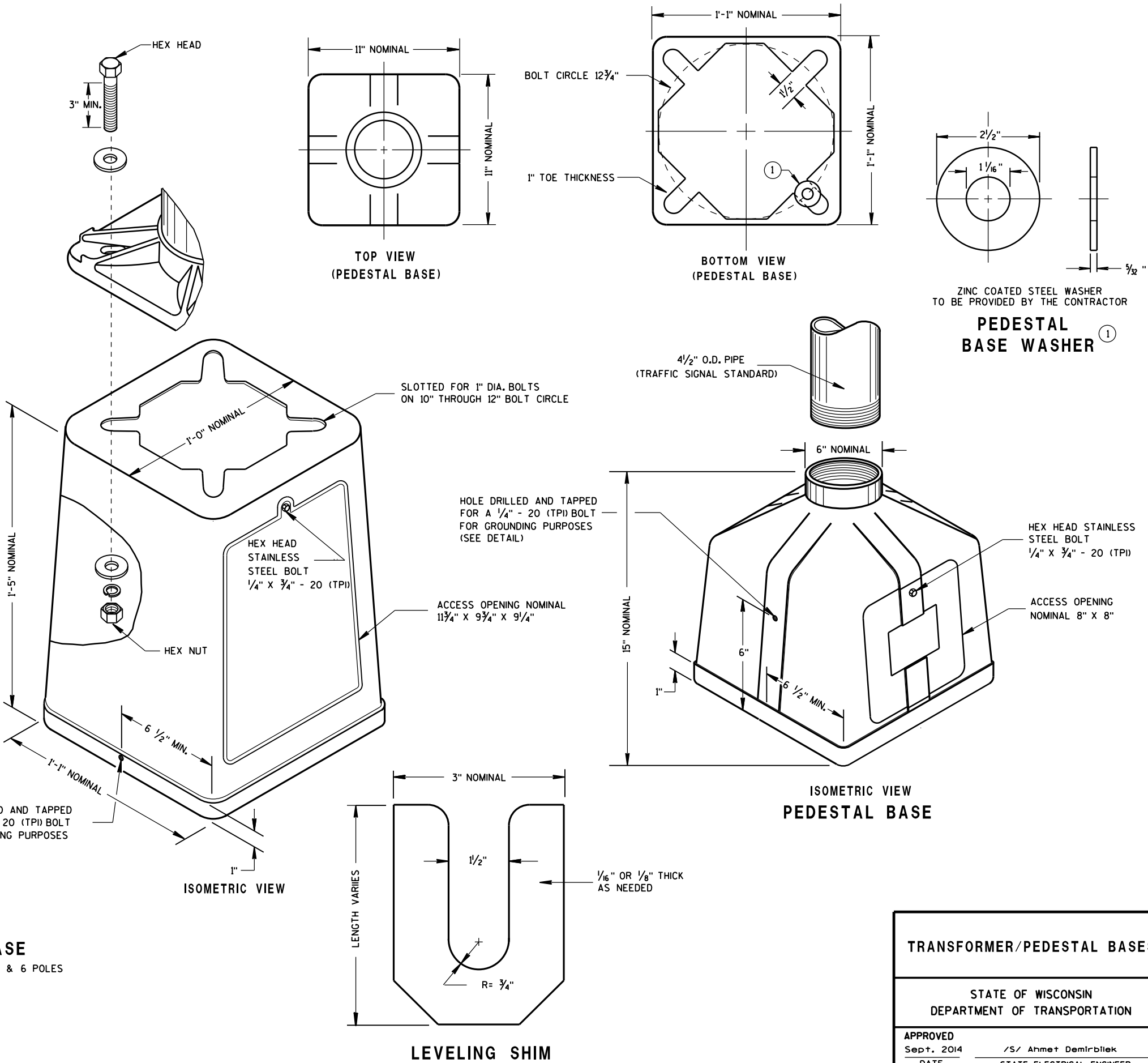
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.



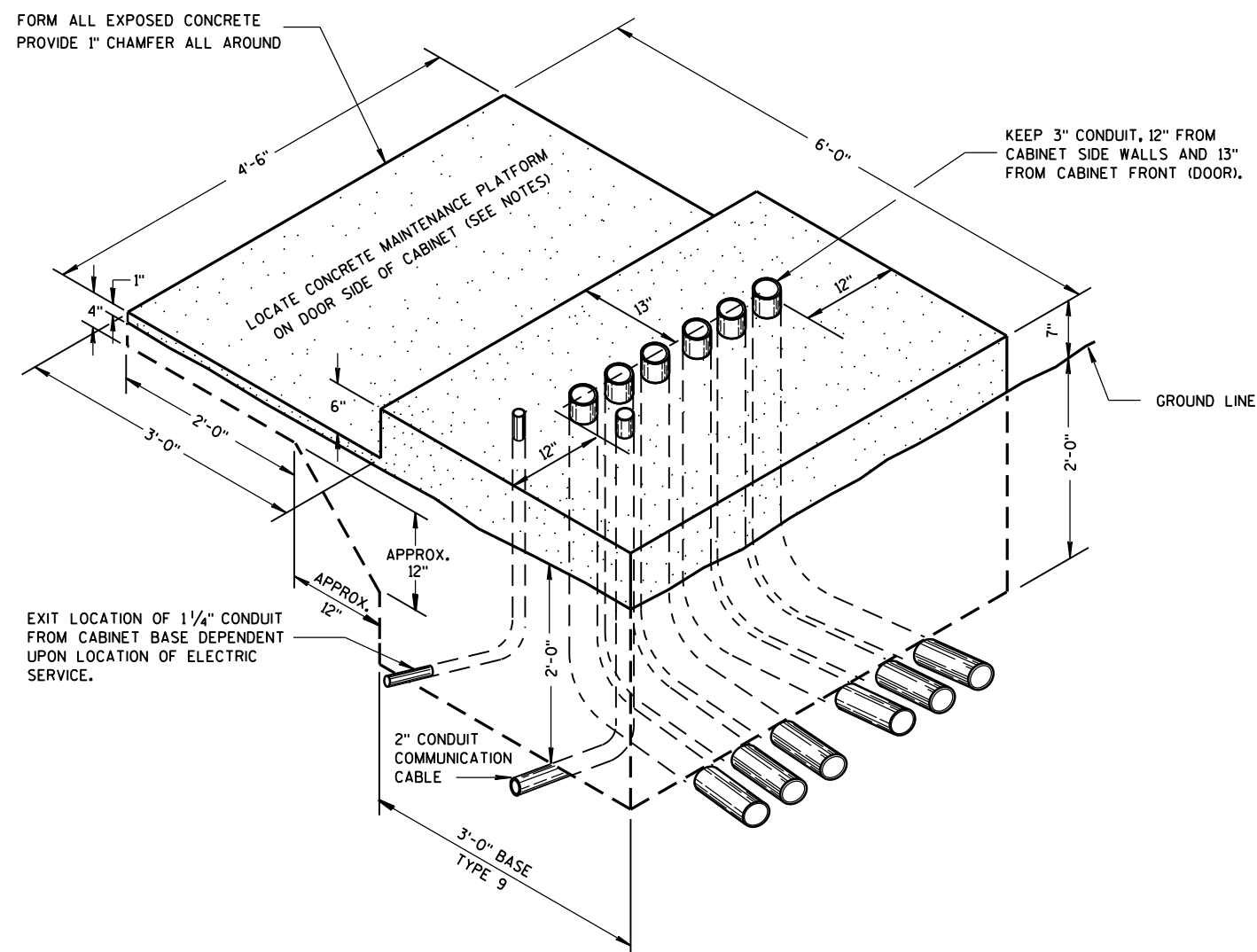
TYPICAL MECHANICAL CONNECTOR LUG TO BE FURNISHED WITH EACH BASE

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

TRANSFORMER/PEDESTAL BASES

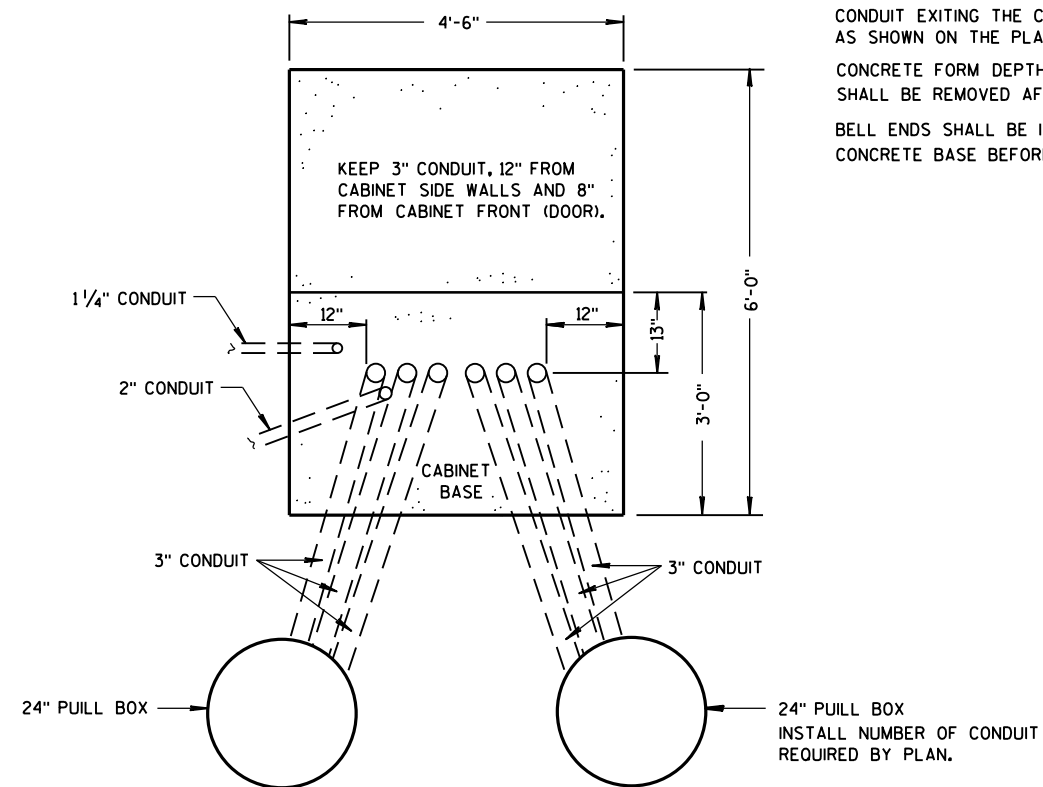
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED Sept. 2014 DATE /S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER 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 1/2 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 NONMETALLIC 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 BE LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X 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 NONMETALLIC 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

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

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

CONCRETE CONTROL CABINET
BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE AS 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.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED 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. CONDUIT 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.

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

WHEN REQUIRED TO CONNECT NONMETALLIC 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).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL 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.

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

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

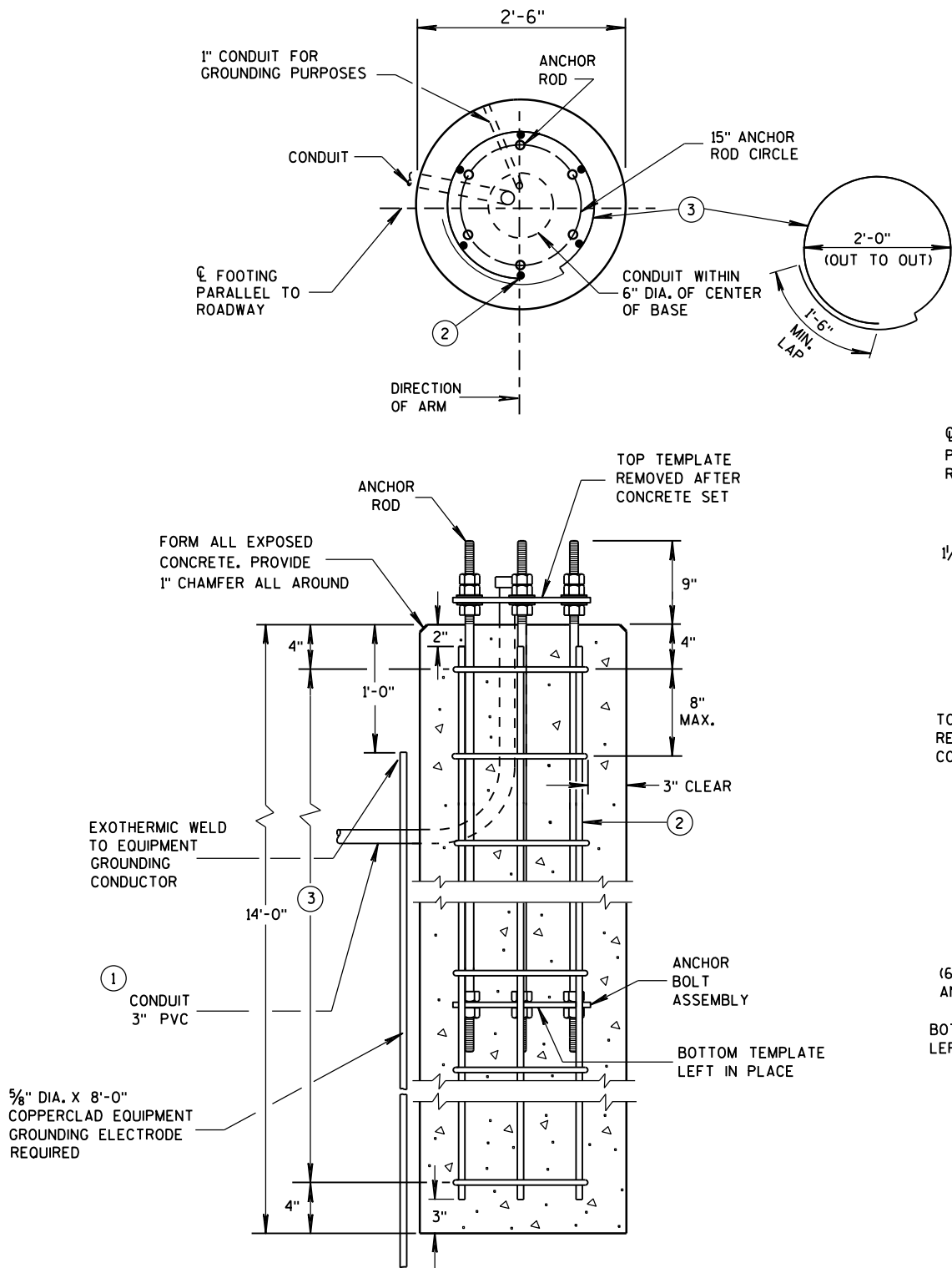
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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 BY THE ENGINEER.

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

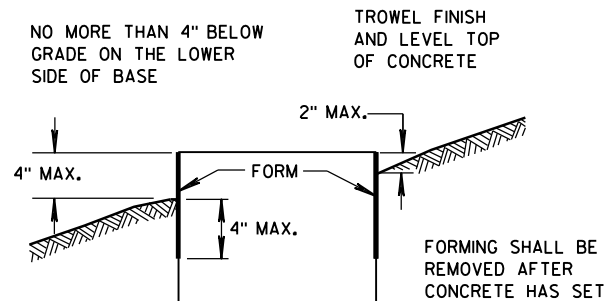
③ (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

CONCRETE MASONRY	-----	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	-----	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	-----	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	-----	fy=36,000 p.s.i.

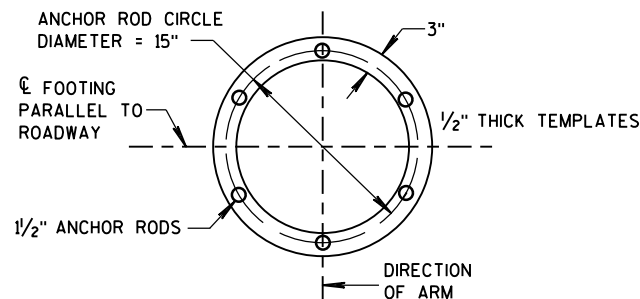


CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 & OVER HEIGHT (OH) POLES)

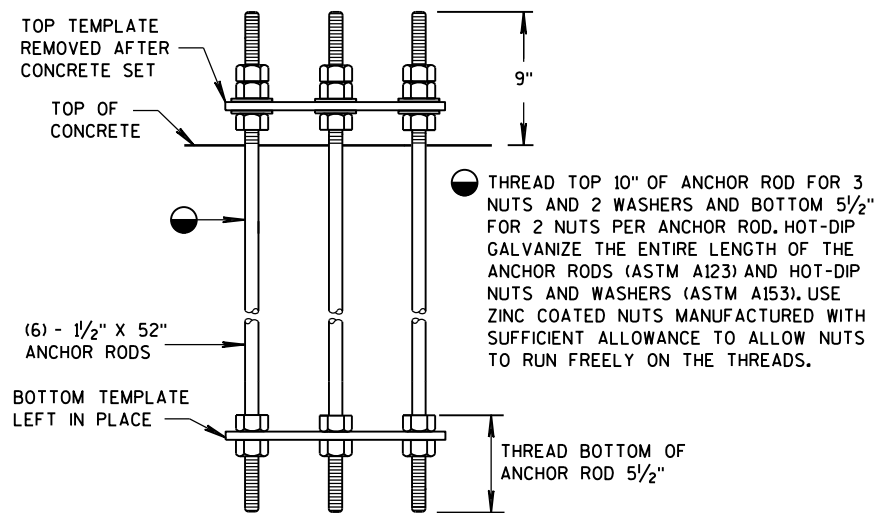
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 10
ANCHOR ASSEMBLY

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

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

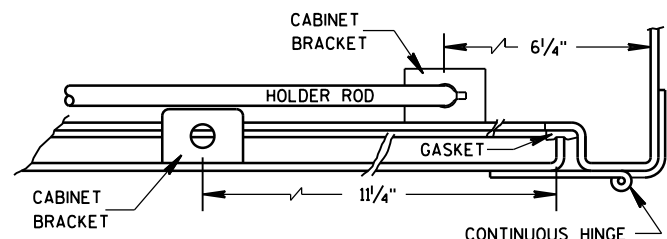
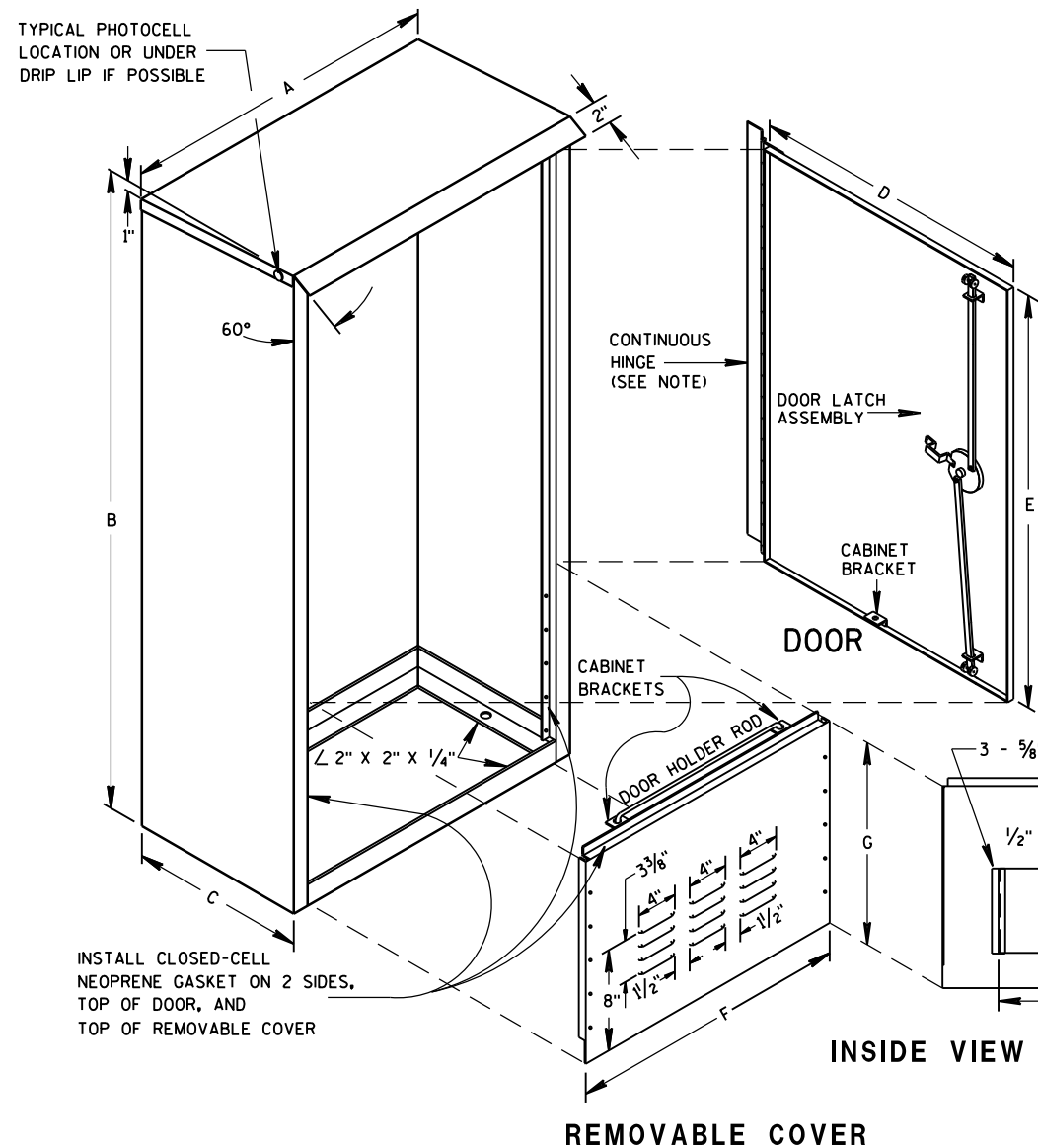


* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

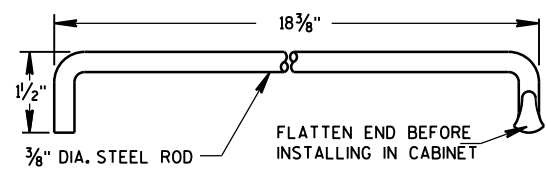
APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

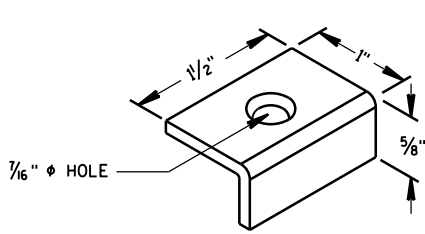
FHWA



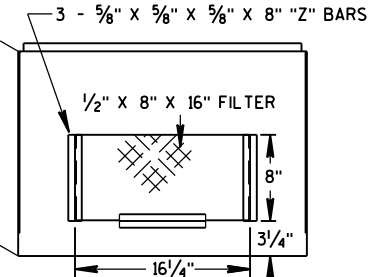
HINGE & DOOR HOLDER



HOLDER ROD



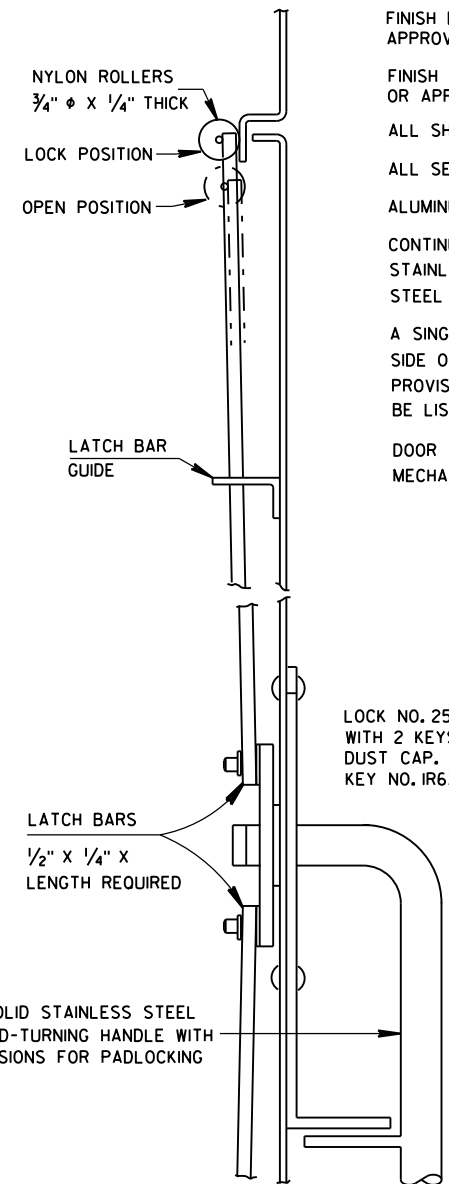
CABINET BRACKET



INSIDE VIEW SHOWING FILTER

TABLE OF DIMENSIONS (INCHES)

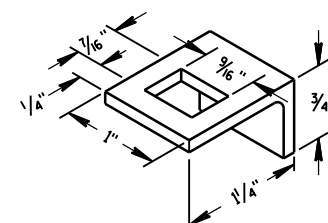
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

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

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

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

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

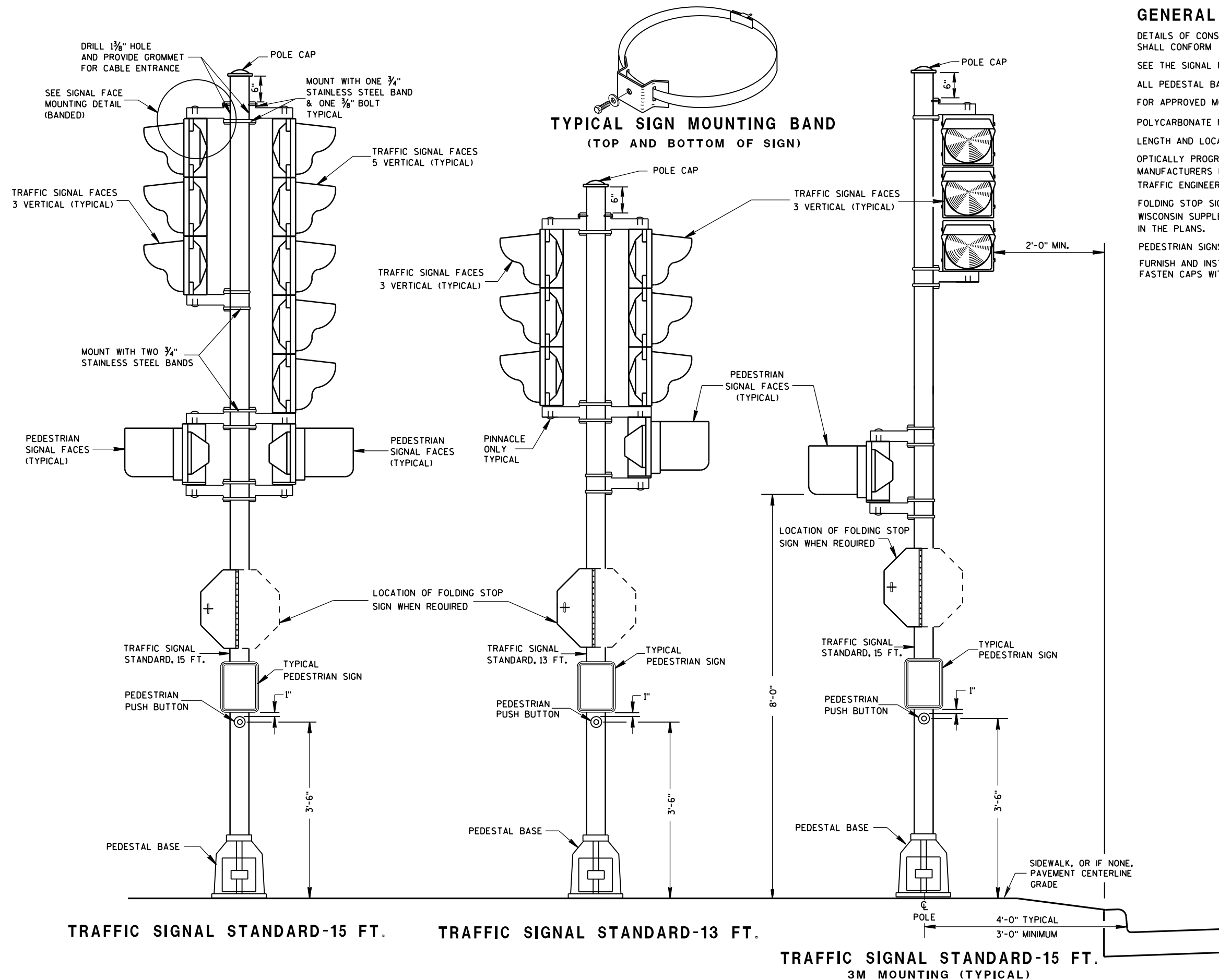
ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" 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.

SIGNAL CONTROL CABINET	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



GENERAL NOTES

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

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.

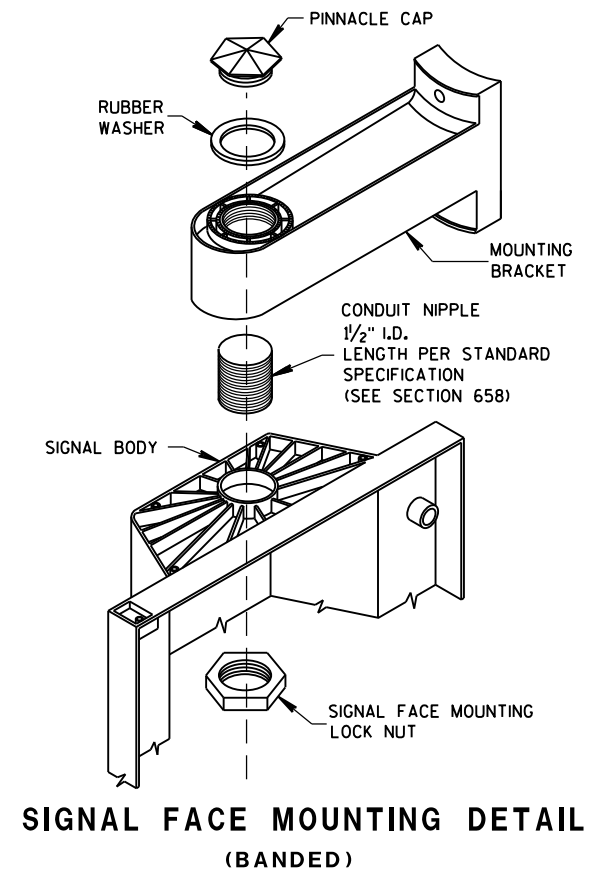
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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) $\frac{1}{4}$ " X $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



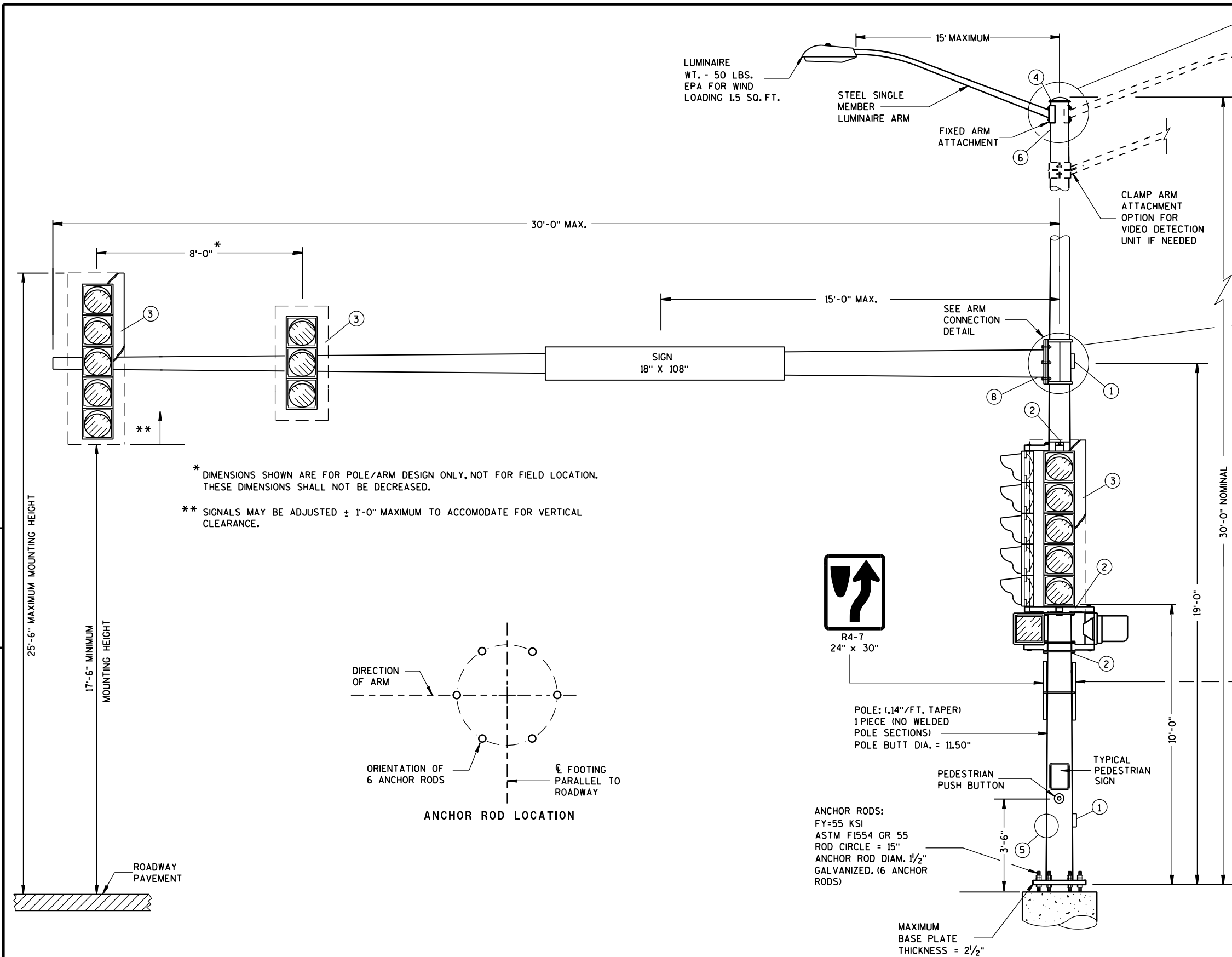
**TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

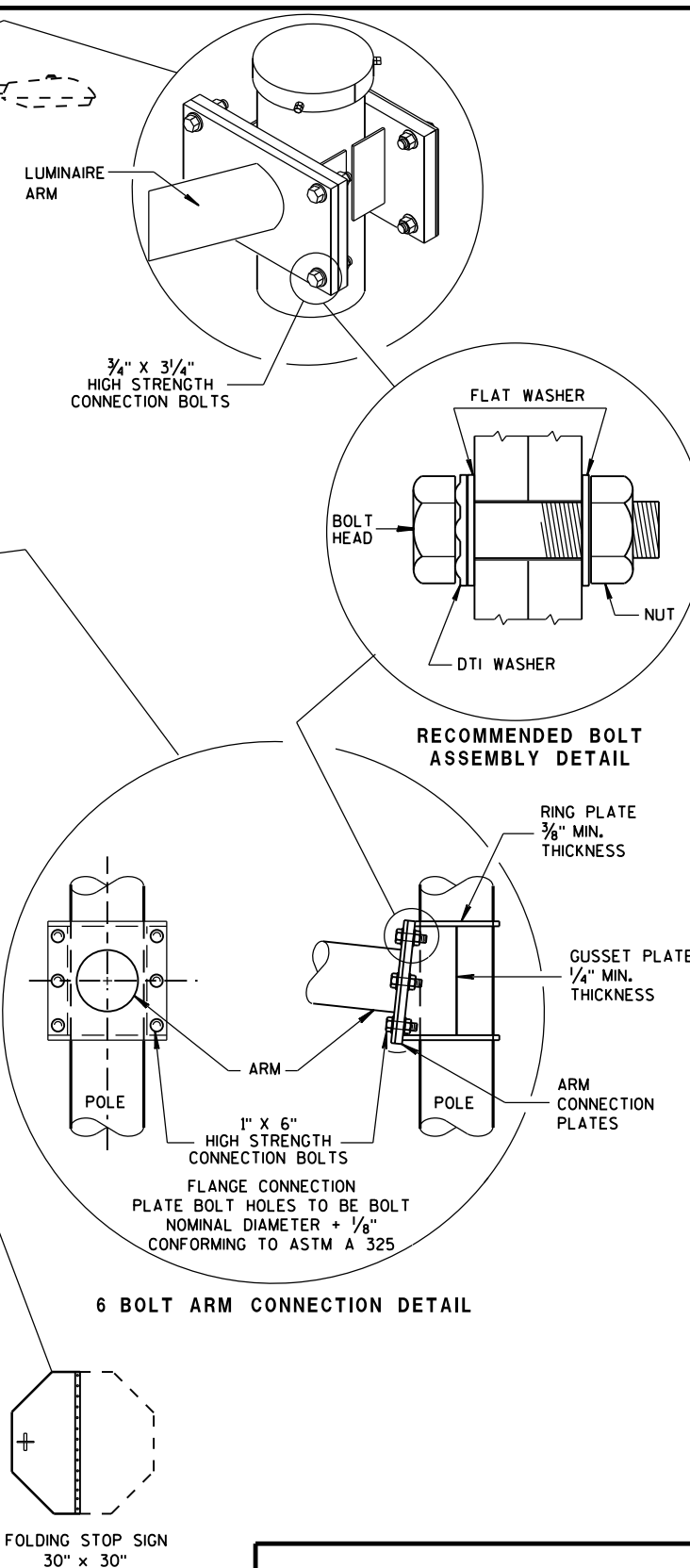
FHWA



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

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

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



TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May, 2016
 DATE

/S/ Ahmet Demirbilek
 STATE ELECTRICAL ENGINEER

FHWA

GENERAL NOTES

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

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

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

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

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

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

STANDARD STRAIGHT ARM DESIGN (3 ½ ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS 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 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

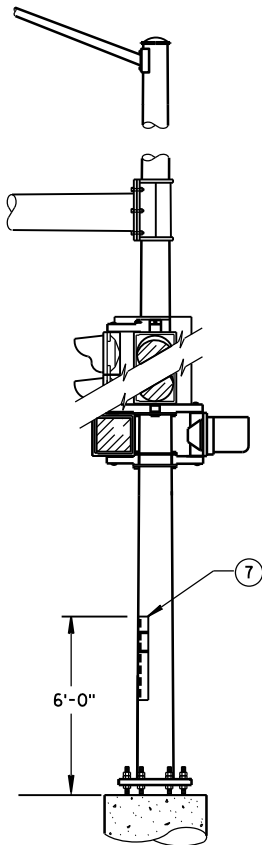
- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

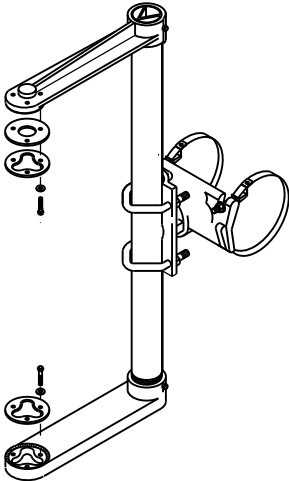
INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

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

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

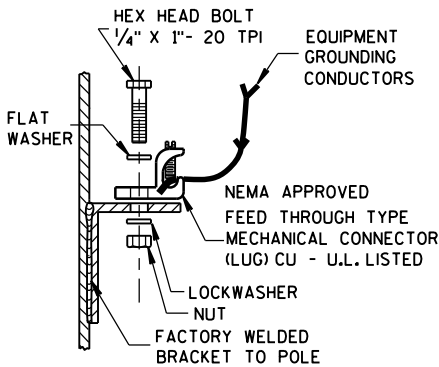


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT



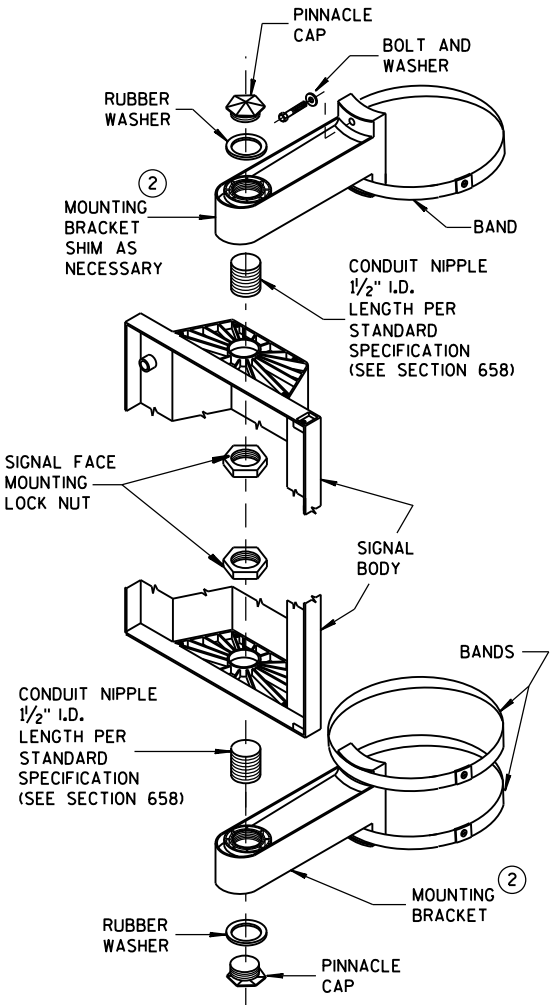
SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

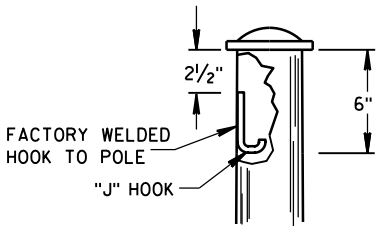


TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



SIGNAL FACE
VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT

- DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" x ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).
- SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" x ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

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

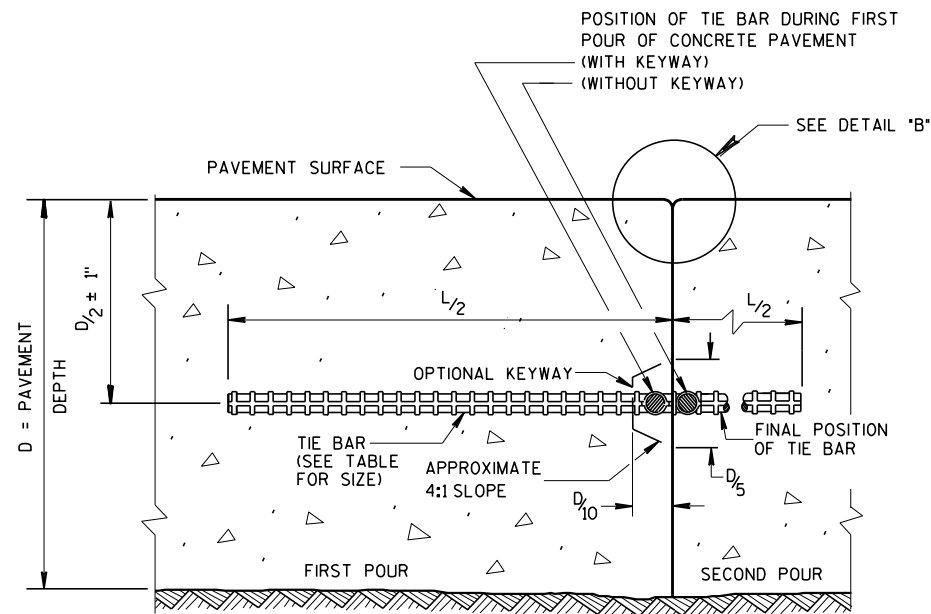
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

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

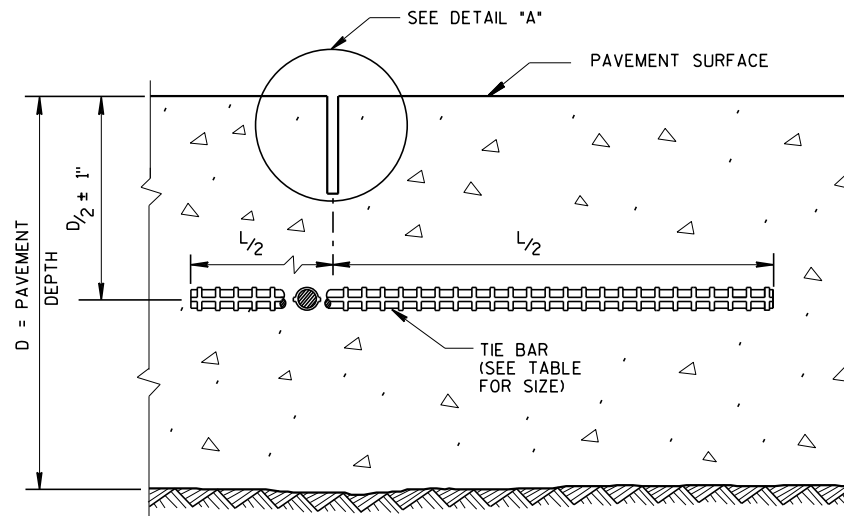
GENERAL NOTES AND HARDWARE
DETAILS FOR TYPE 9, 10, 12 & 13
POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA



CONSTRUCTION JOINT



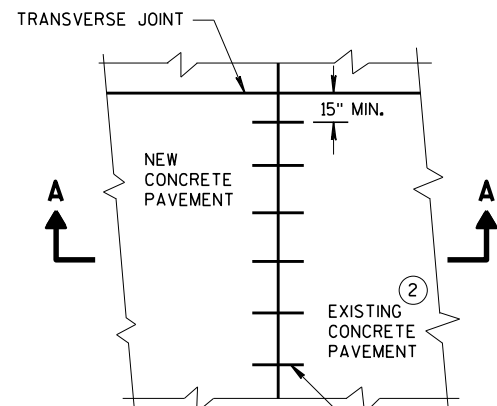
SAWED JOINT

GENERAL NOTES

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

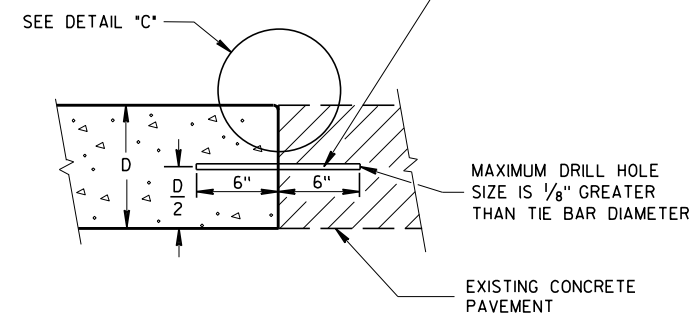
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

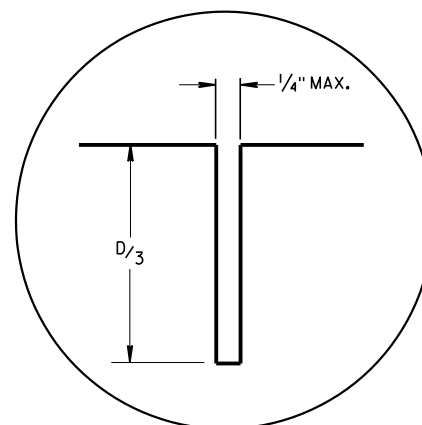


PLAN VIEW

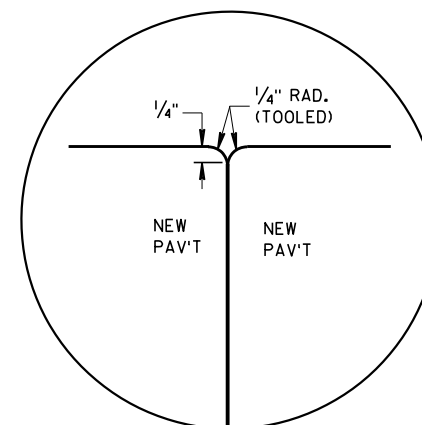
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



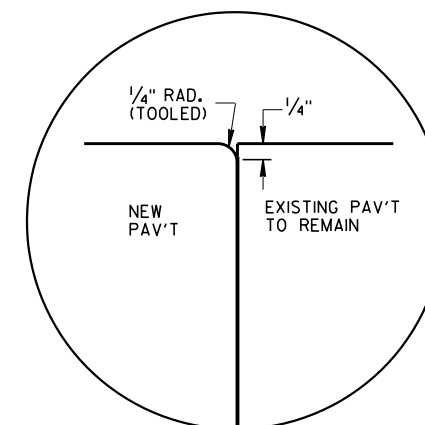
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



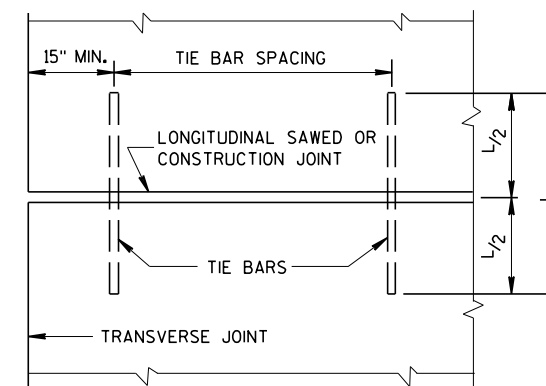
DETAIL "C"

TIE BAR TABLE

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

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

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

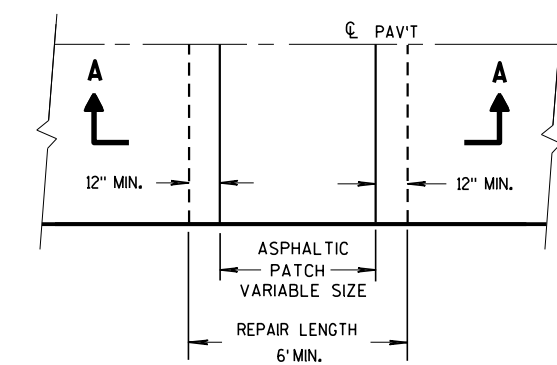


PLAN VIEW
SHOWING LOCATION OF TIE BARS

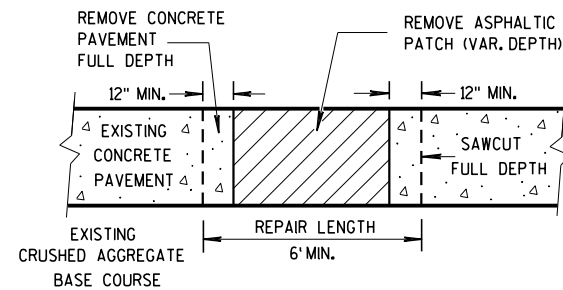
CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

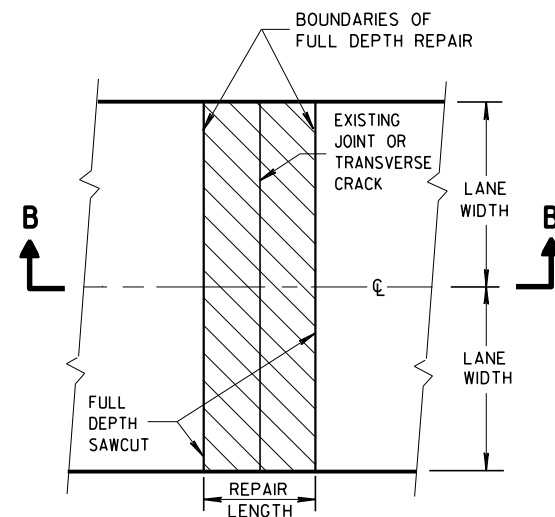
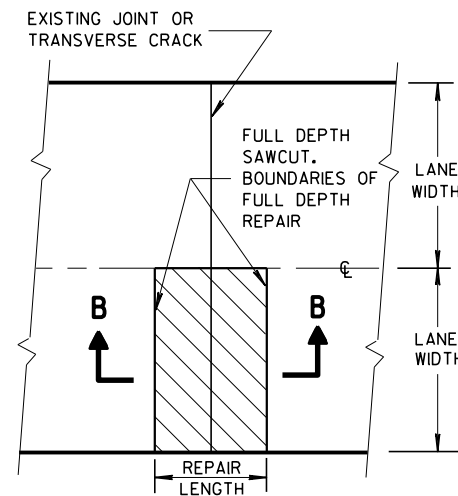


PLAN VIEW



SECTION A-A

HMA PATCH REMOVAL

PLAN VIEW
(DOUBLE LANE REPAIR)PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

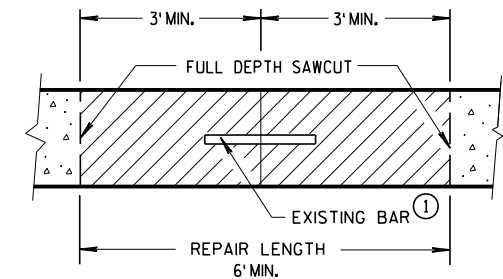
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

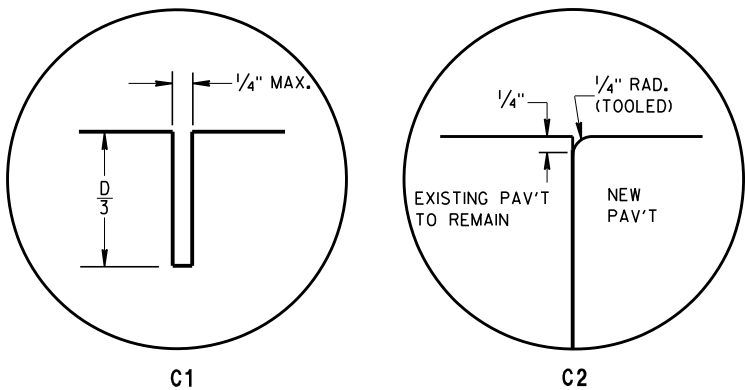
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MIGHT NOT EXIST.

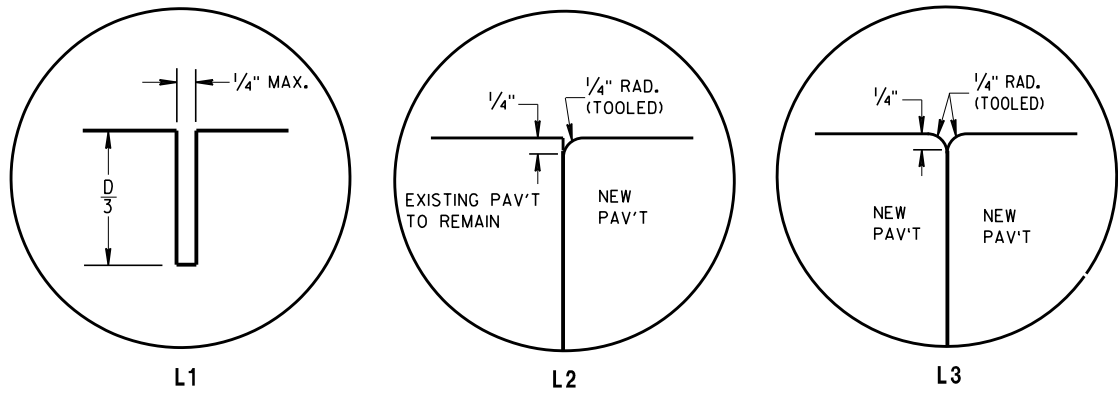
SECTION B-B
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR
AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TRANSVERSE JOINTS

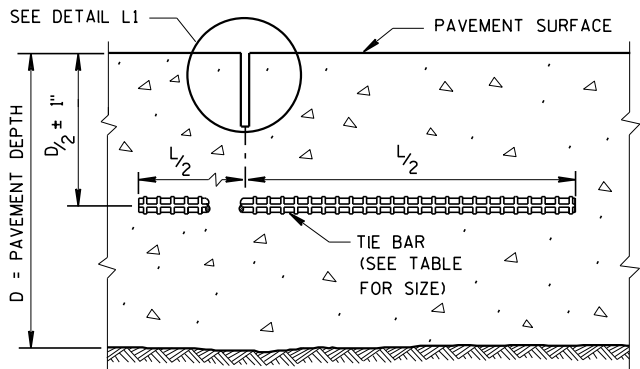


LONGITUDINAL JOINTS

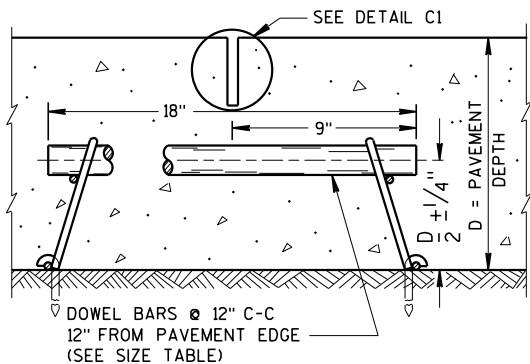
TIE BAR TABLE			
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

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



SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

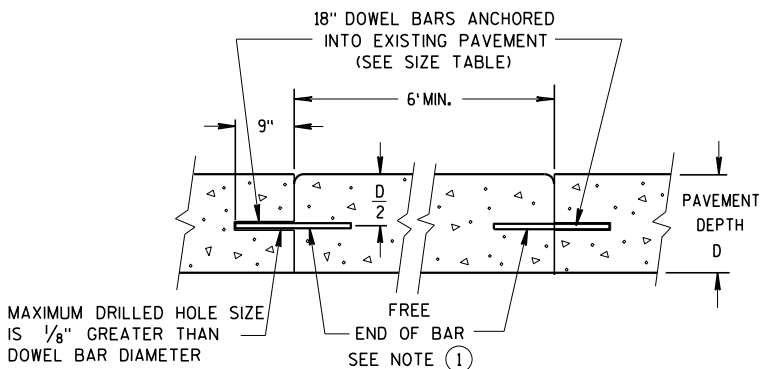
GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

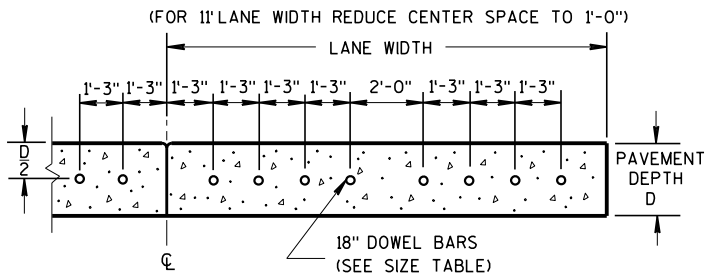
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



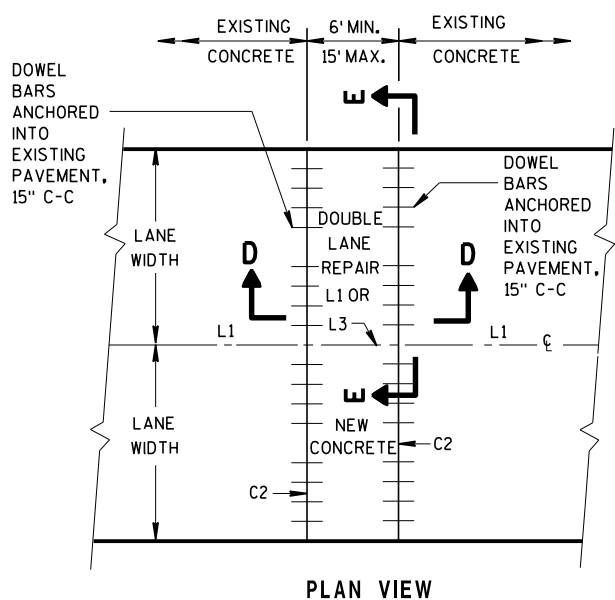
SECTION D-D



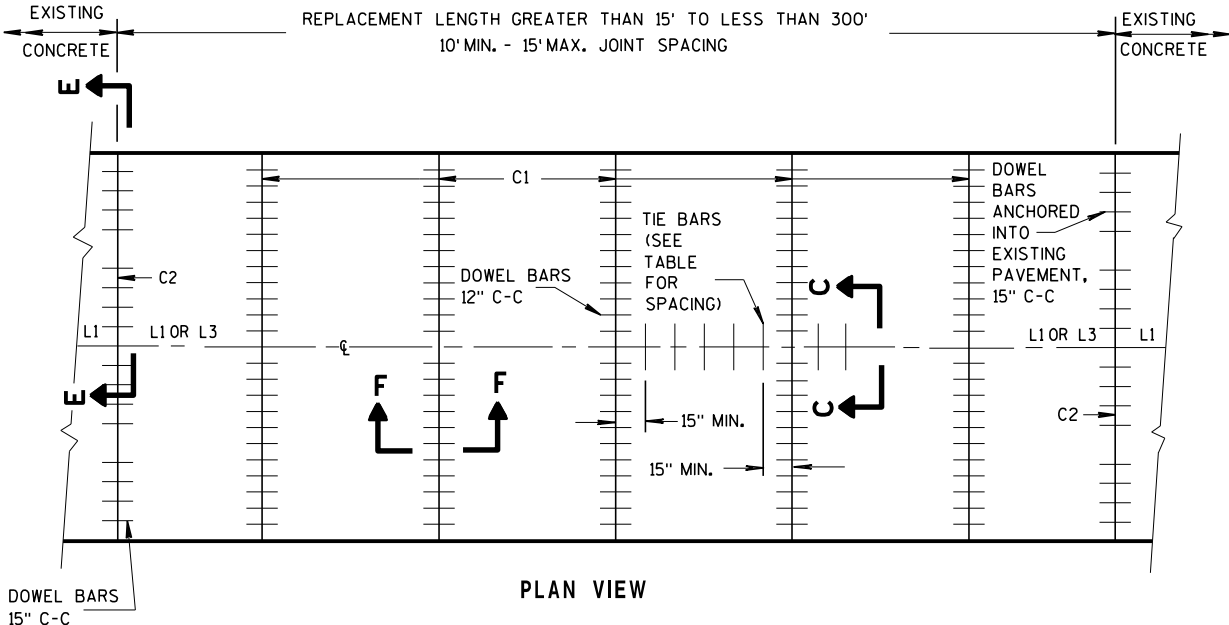
SECTION E-E
DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'



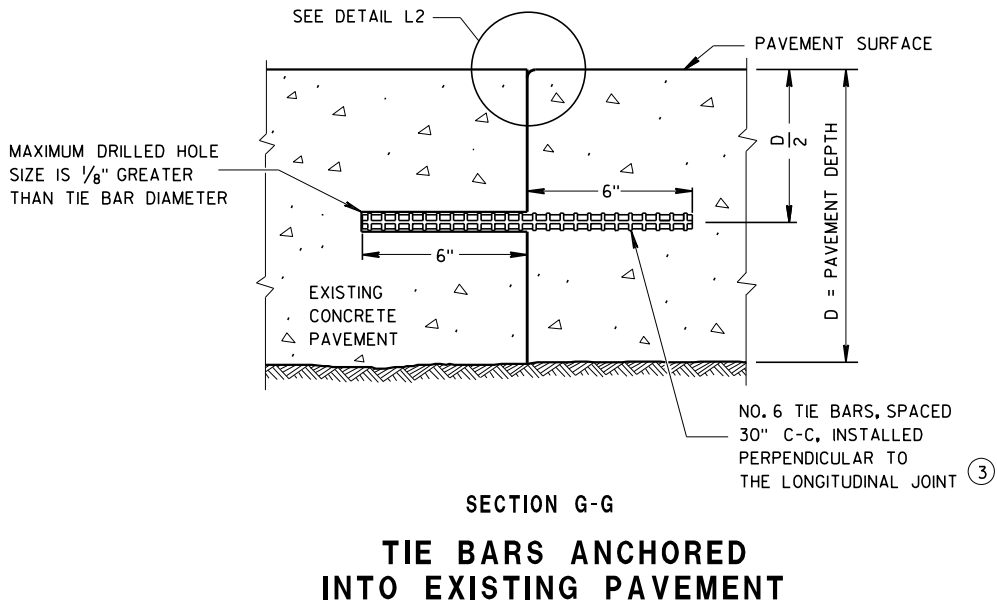
MULTI-LANE CONCRETE PAVEMENT REPAIR



MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

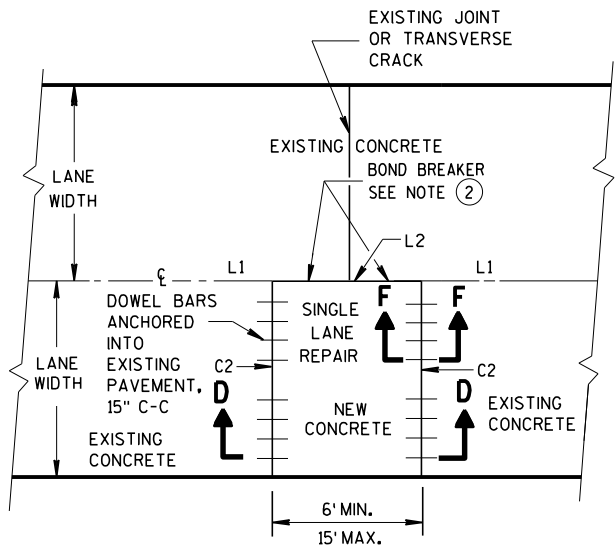
CONCRETE PAVEMENT
REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

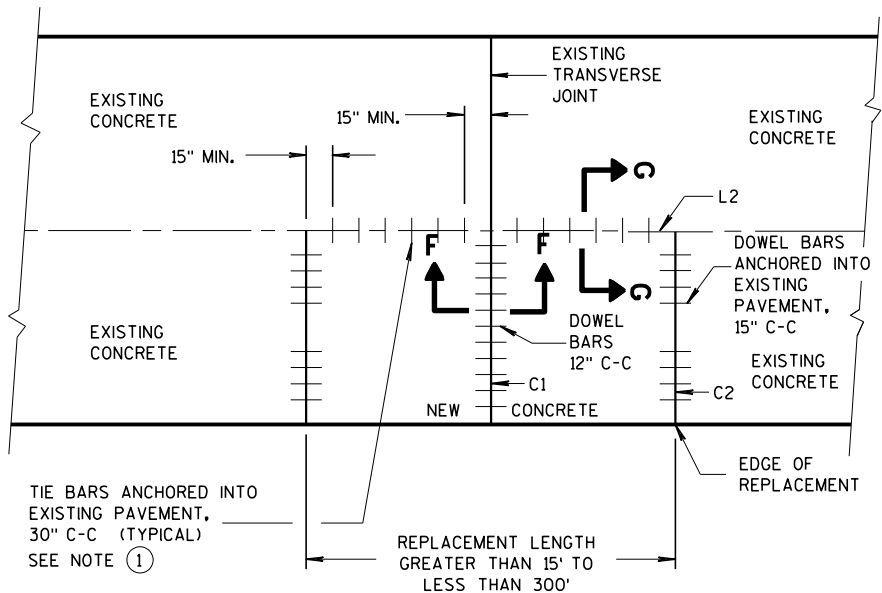


GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

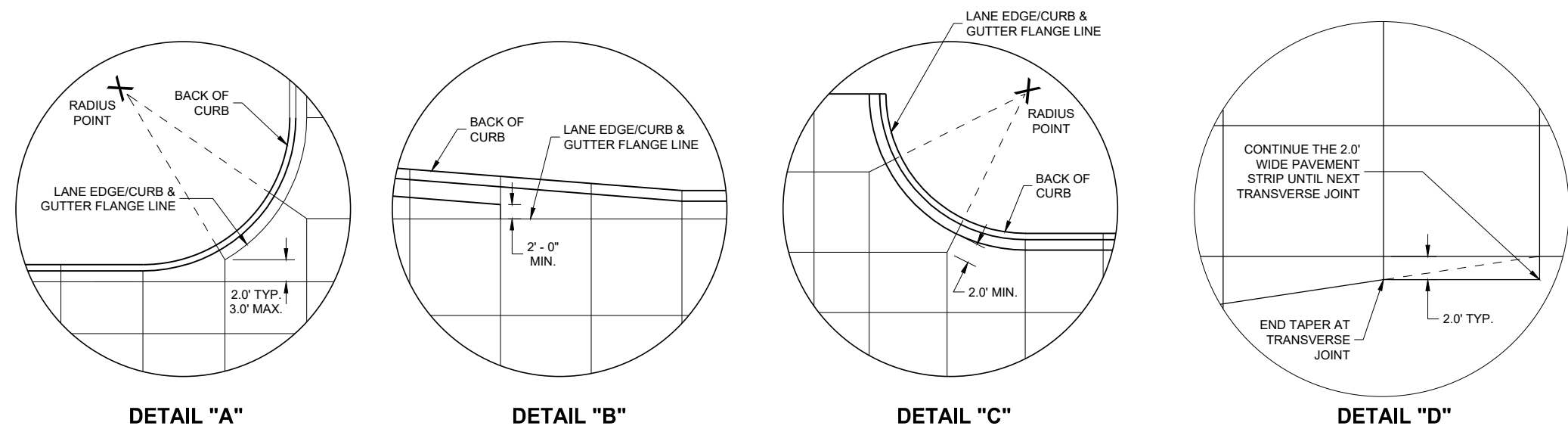


PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPAIR



PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2018 DATE	/S/ Peter Kemp, P.E. PAVEMENT SUPERVISOR
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.

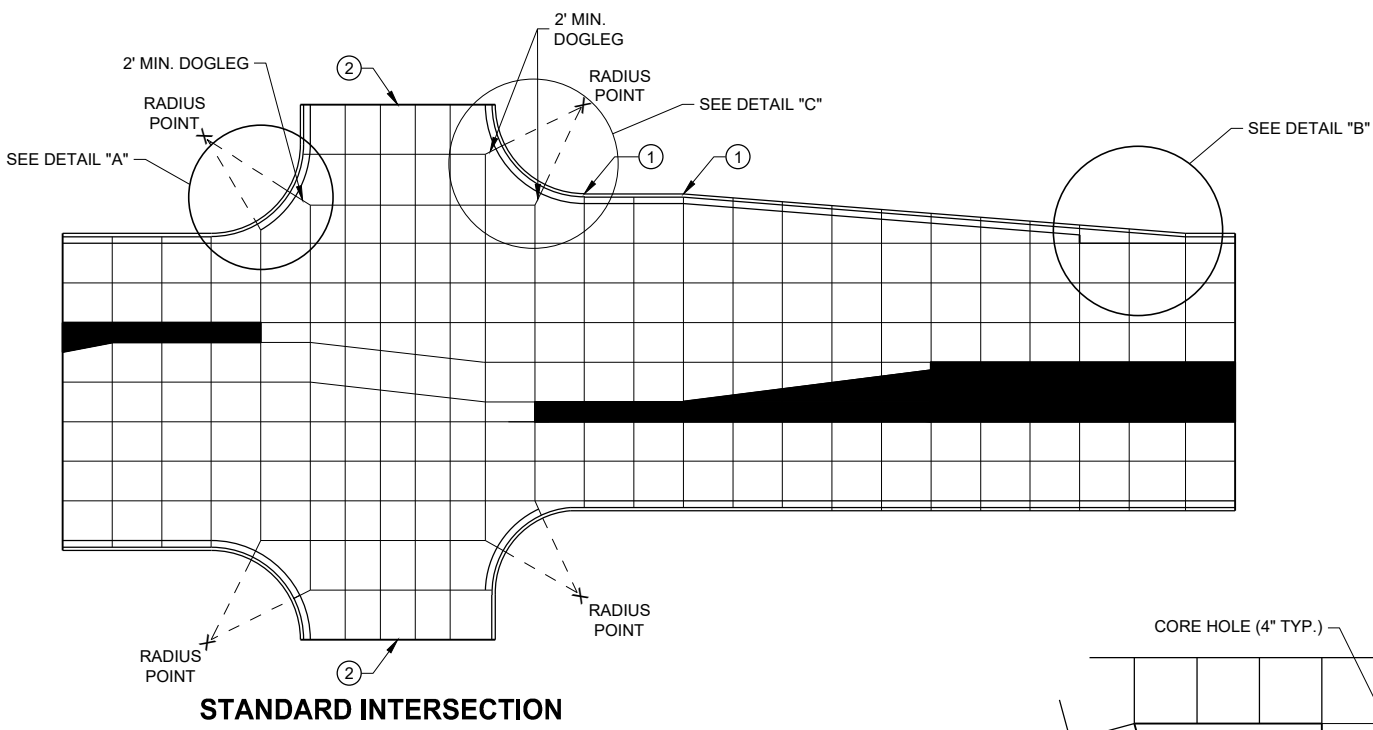
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

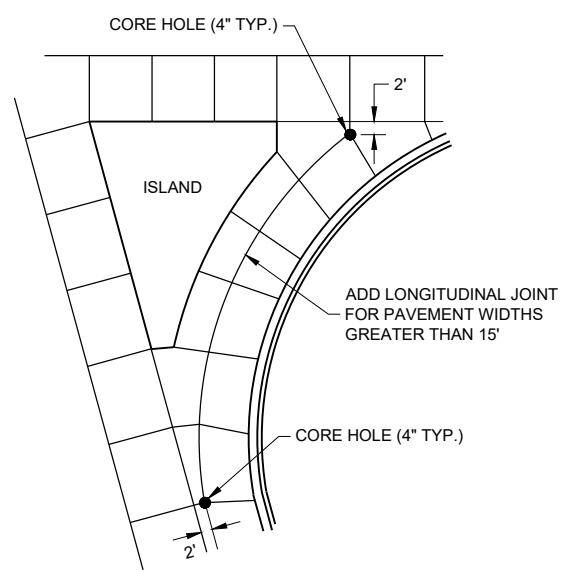
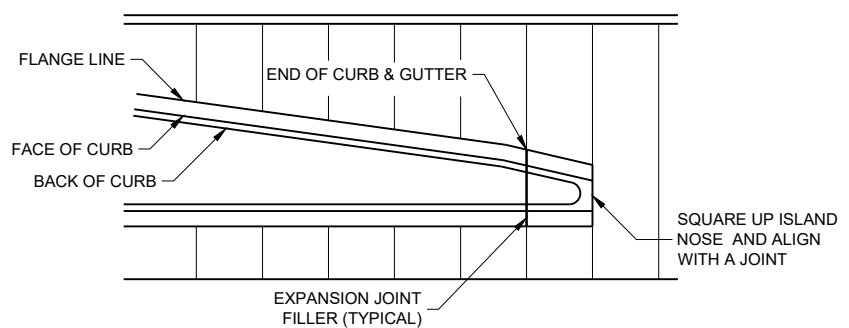
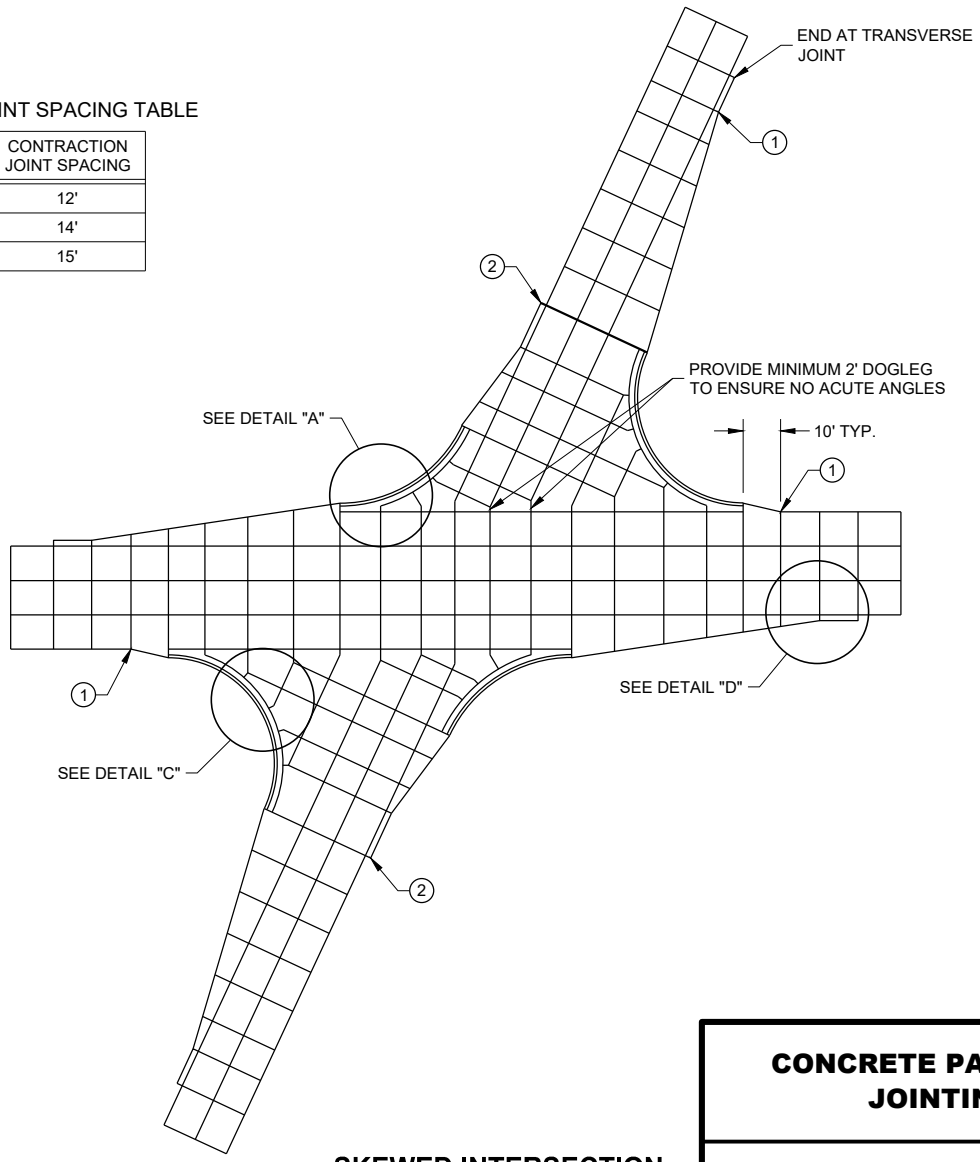
② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH HEDGE OF RADIUS.

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 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONCRETE PAVEMENT JOINTING

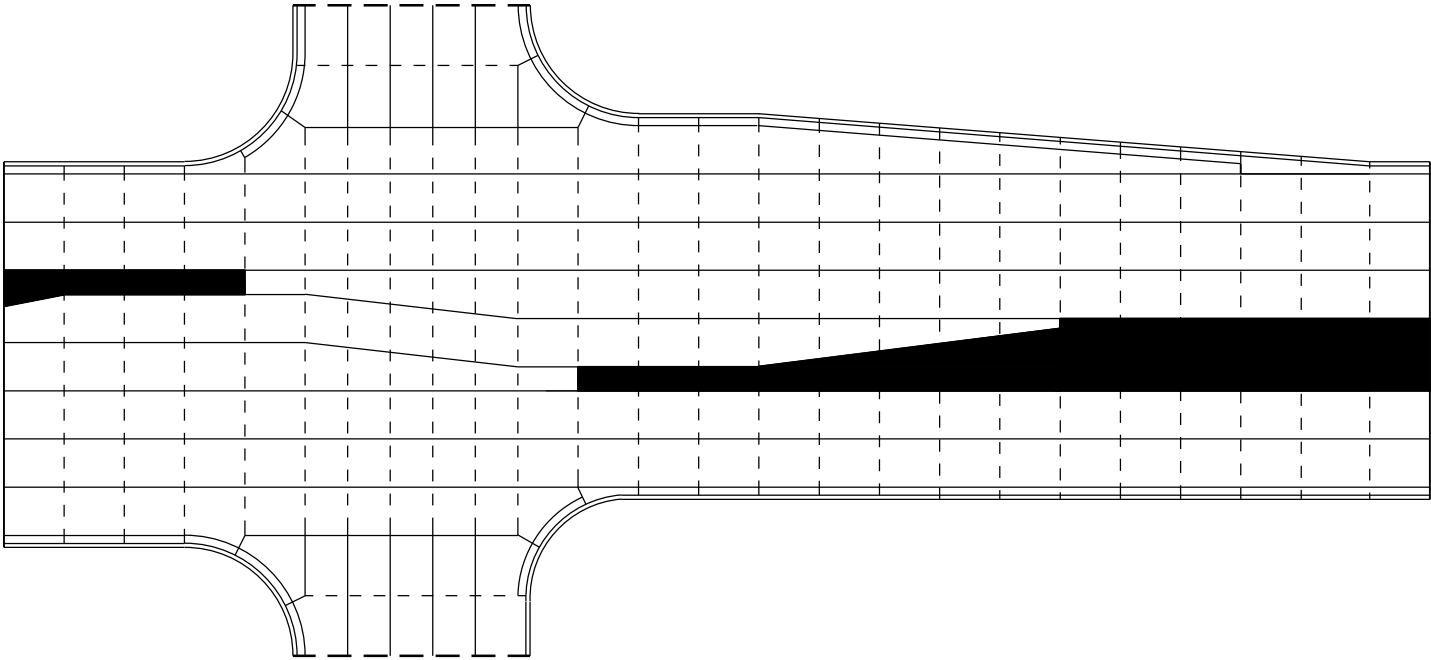
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

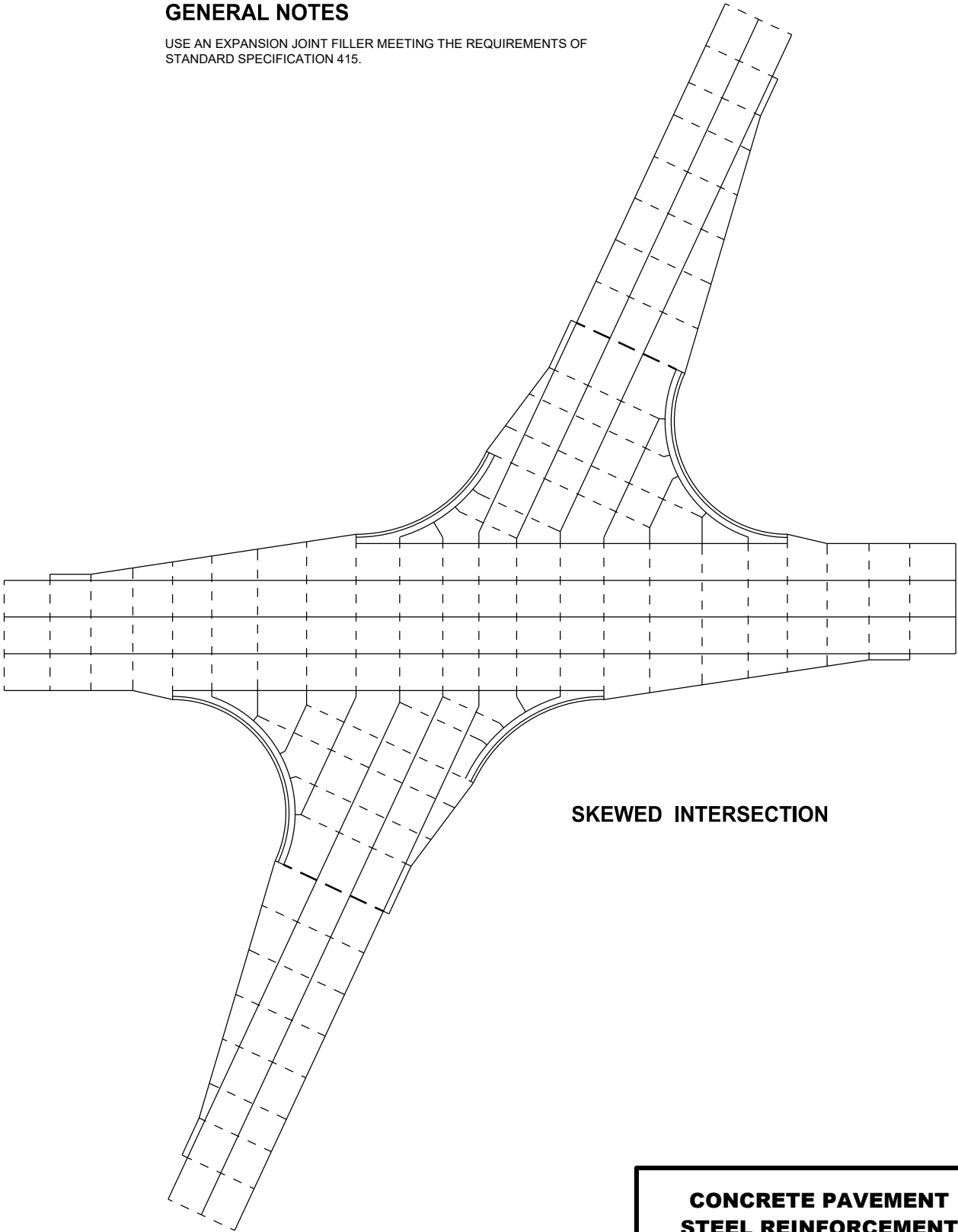
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT

GENERAL NOTES

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



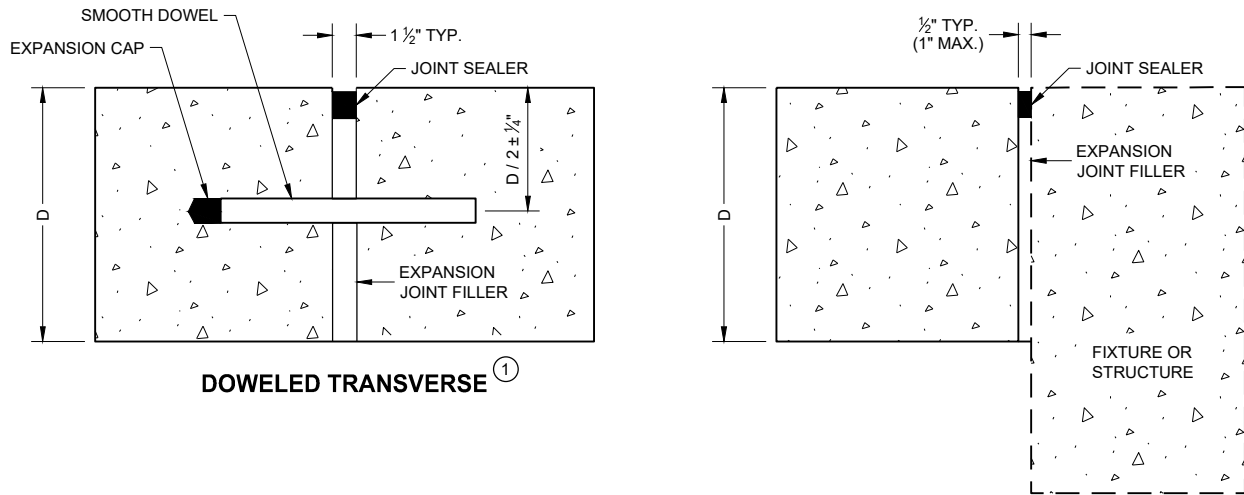
STANDARD INTERSECTION



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



EXPANSION JOINTS

UNTIED - LONGITUDINAL

TIE BAR TABLE

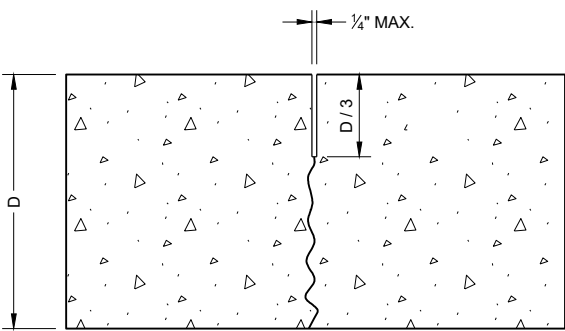
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
$< 10\ 1/2"$	NO. 4	30"	36"
$\geq 10\ 1/2"$	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

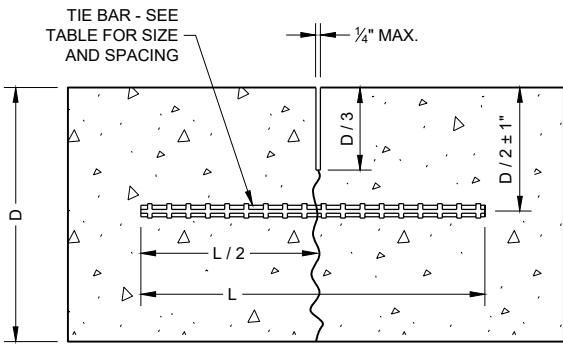
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

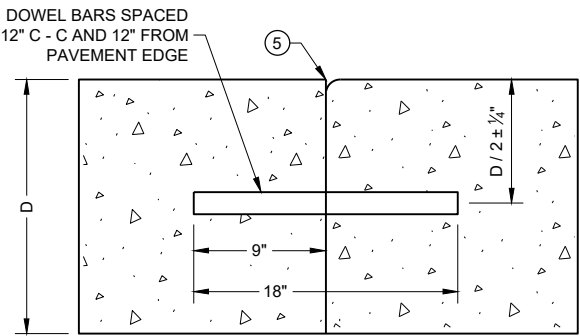
- 1 USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- 2 SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- 3 LOCATE CONSTRUCTION JOINTS A MINIMUM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



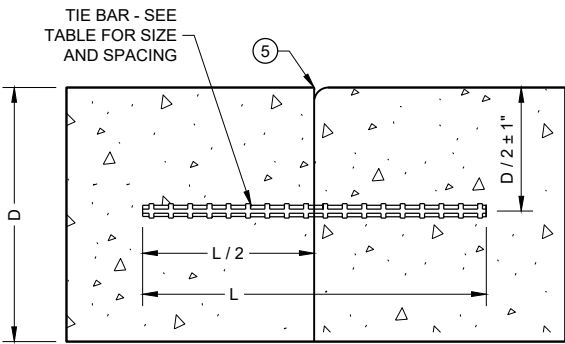
UNDOWELED TRANSVERSE



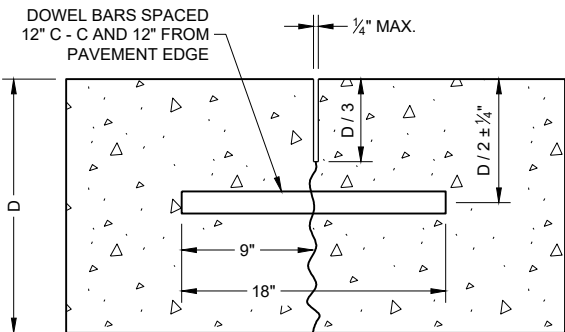
TIED LONGITUDINAL



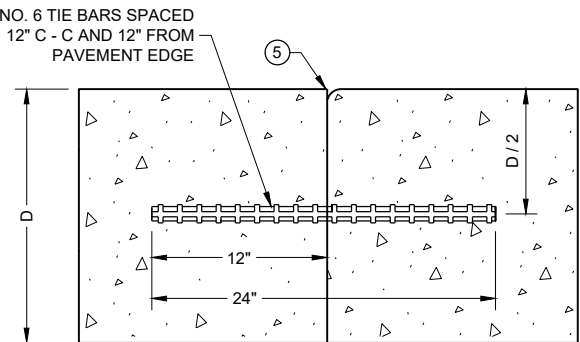
DOWELED TRANSVERSE



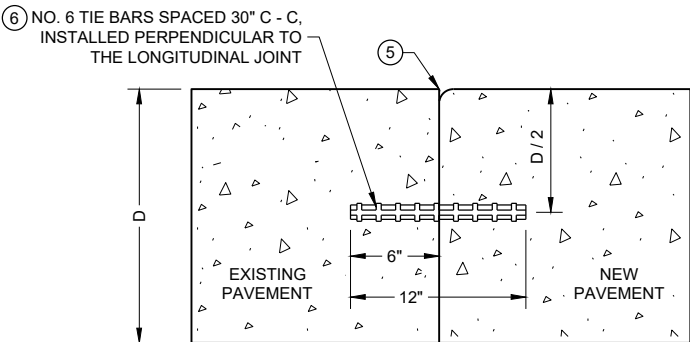
TIED LONGITUDINAL



DOWELED TRANSVERSE



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



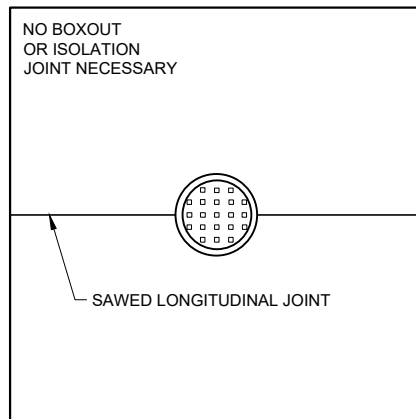
TIED LONGITUDINAL TO EXISTING

CONTRACTION JOINTS

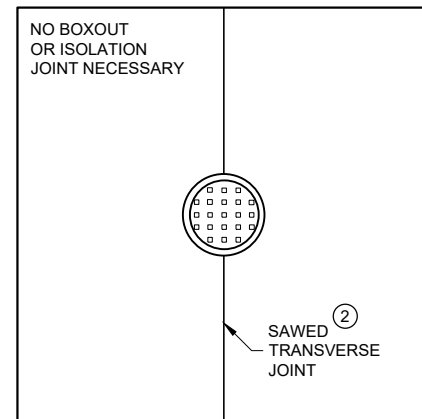
CONSTRUCTION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

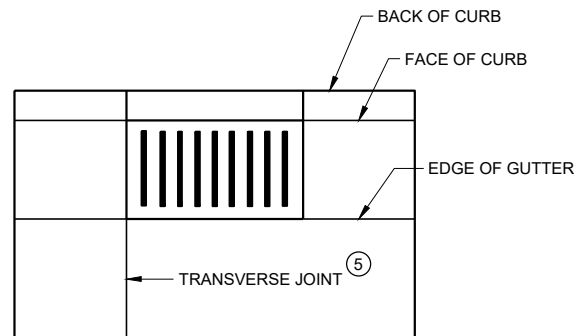
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**MANHOLE WITH
LONGITUDINAL JOINT**



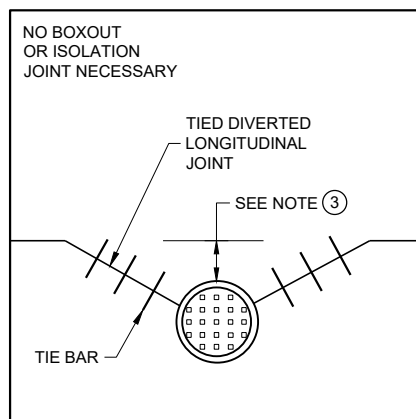
**MANHOLE WITH
TRANSVERSE JOINT**



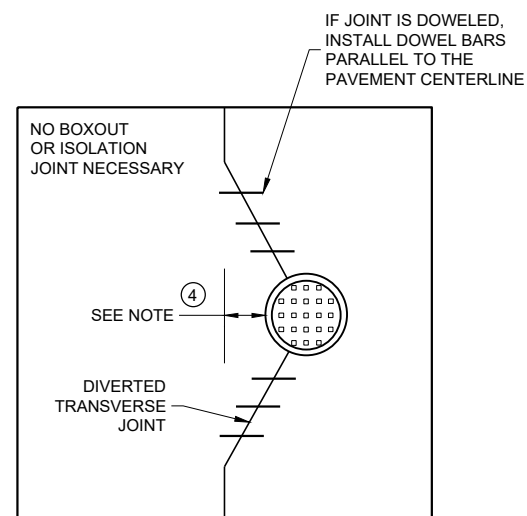
**INLET WITH
TRANSVERSE JOINT**

GENERAL NOTES

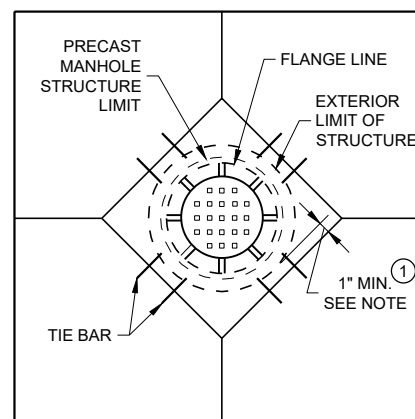
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE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



**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

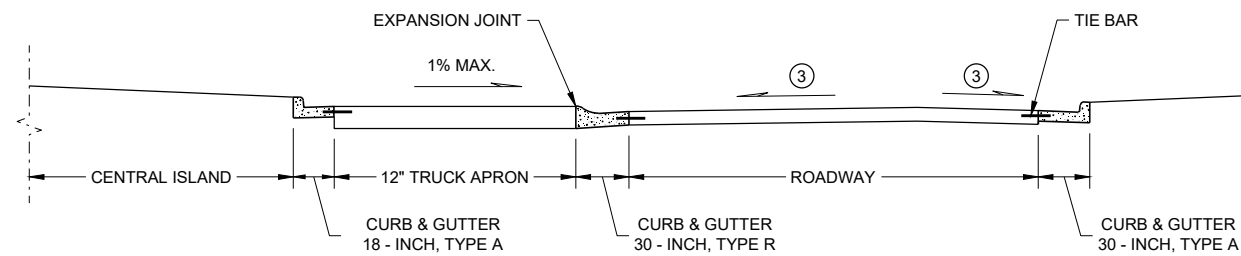


**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**

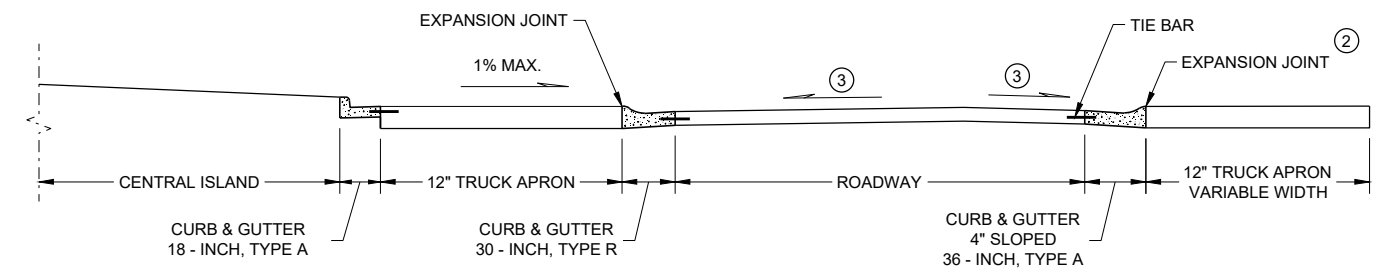
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

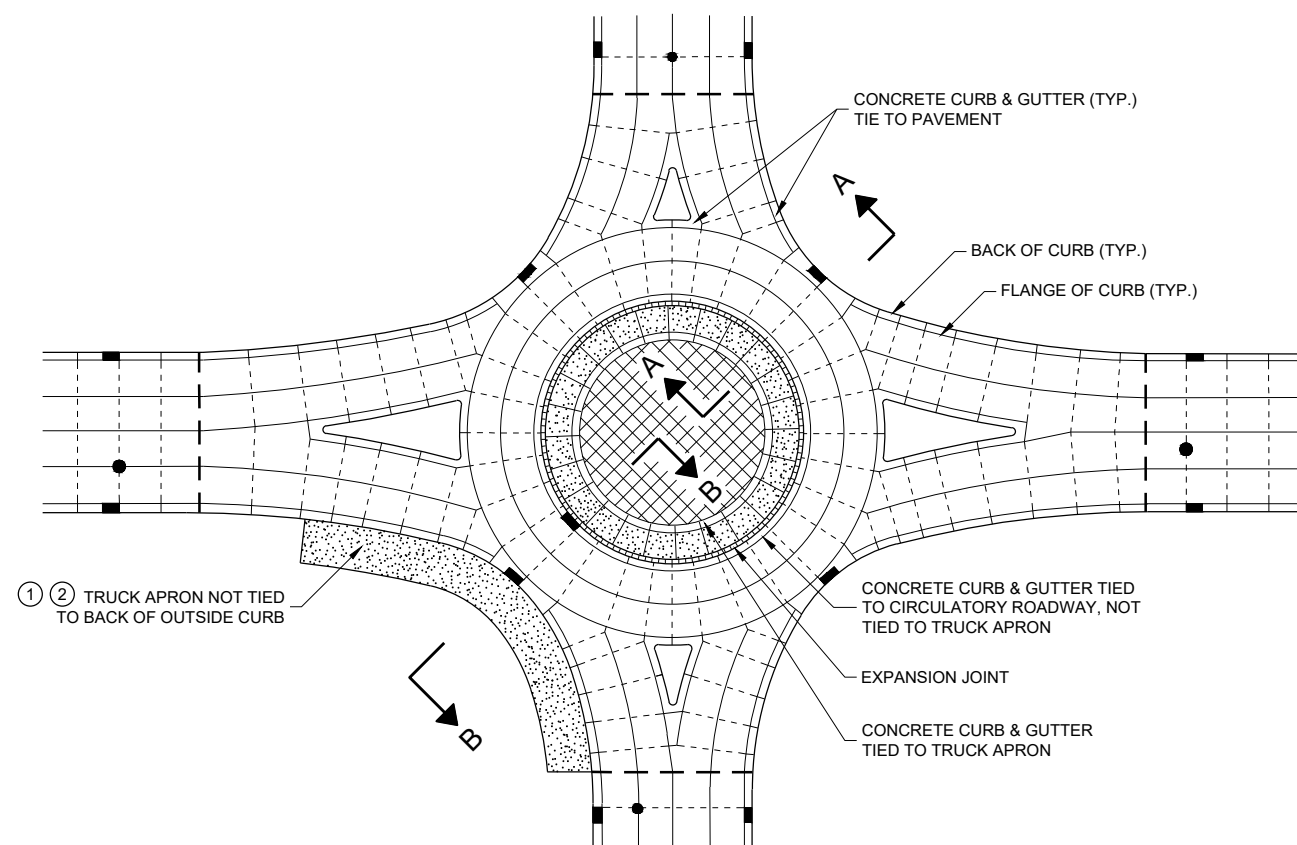
APPROVED
November 2018 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR
FHWA



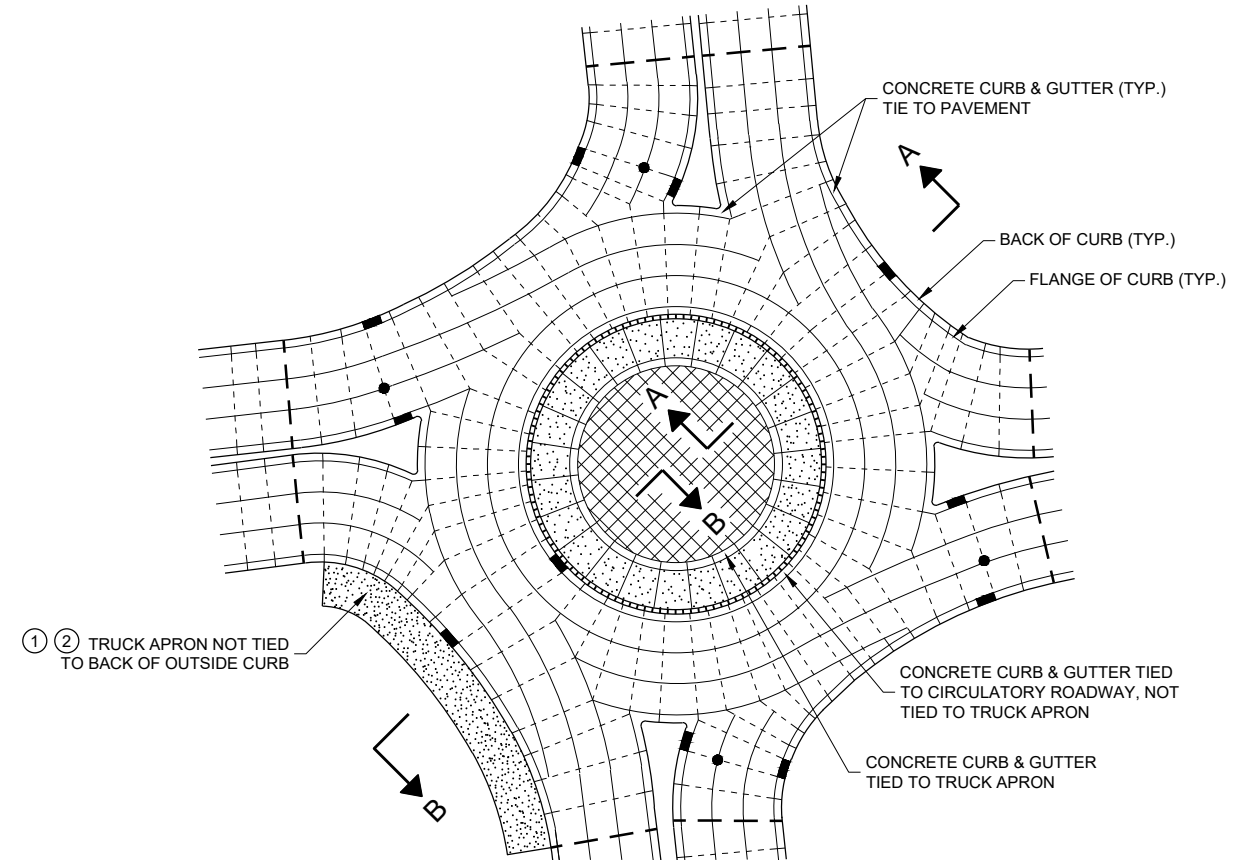
SECTION A - A



SECTION B - B



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"
USE EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.
DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

- ① DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.
- ② TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.
- ③ CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

-----	DOWELED JOINT		TRUCK APRON
————	TIED JOINT		CENTRAL ISLAND
=====	EXPANSION JOINT		UTILITY STRUCTURES
- - - - -	POTENTIAL DOWELED EXPANSION JOINT		

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

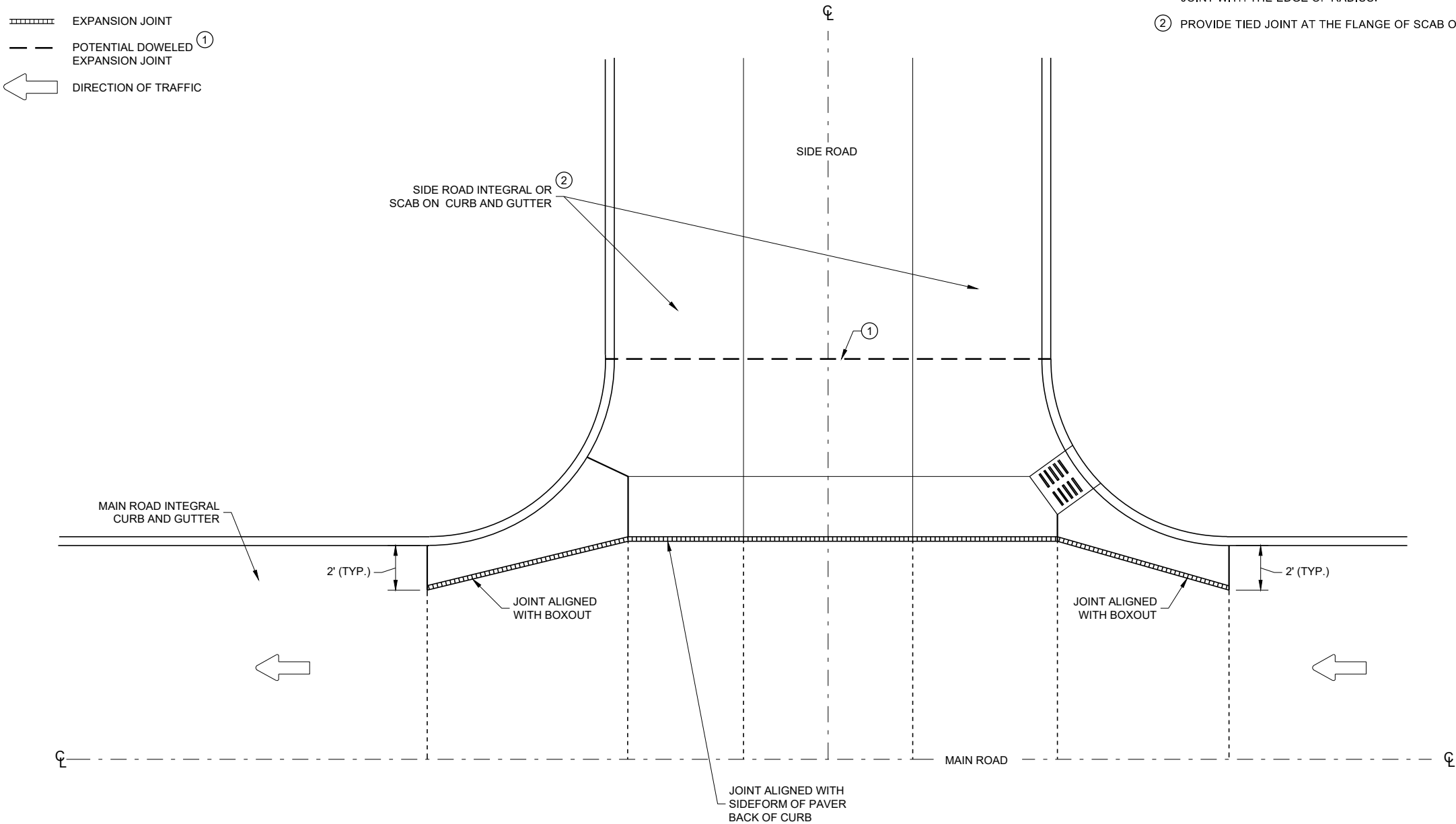
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

- LEGEND**
- DOWELED JOINT
 - TIED JOINT
 - ===== EXPANSION JOINT
 - — — — — POTENTIAL DOWELED EXPANSION JOINT ①
 - ← DIRECTION OF TRAFFIC

GENERAL NOTES

- ① 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 THE EDGE OF RADIUS.
- ② PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

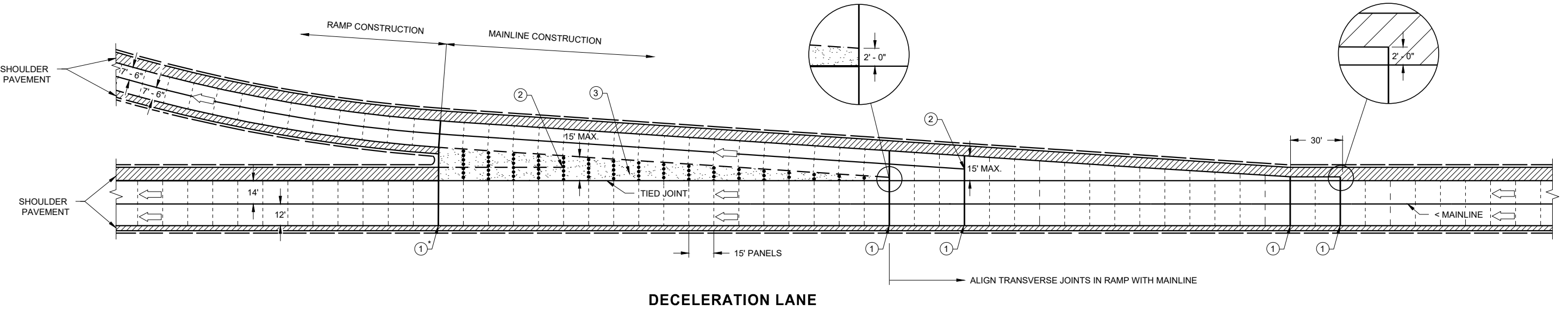


INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER

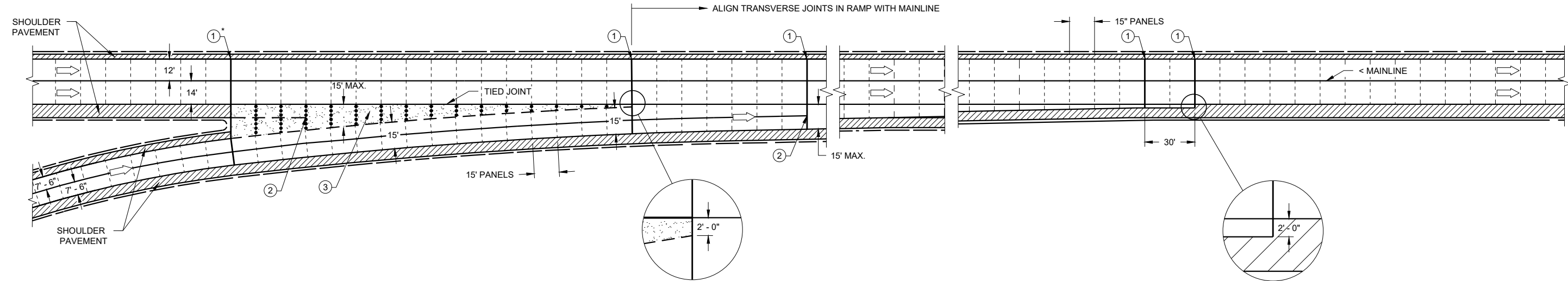
**CONCRETE PAVEMENT
INTERSECTION BOXOUT FOR
INTEGRAL CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp P.E.
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



DECELERATION LANE



ACCELERATION LANE

GENERAL NOTES

- PAVEMENT AND BASE THICKNESS, PANEL LENGTHS, JOINTS AND REINFORCEMENT FOR THE DECELERATION AND ACCELERATION LANES, INCLUDING TAPERS, SHALL BE THE SAME AS THE MAINLINE, EXCEPT WHERE OTHERWISE NOTED.
- ALL REINFORCEMENT BARS SHALL BE EPOXY COATED CONFORMING TO SUBSECTION 505.2.6 OF THE STANDARD SPECIFICATIONS.
- LANE AND SHOULDER WIDTHS MAY VARY FROM SHOWN. SEE CONSTRUCTION PLANS FOR ACTUAL PROPOSED WIDTHS.
- ① CRITICAL TRANSVERSE JOINT LOCATIONS AT PAVEMENT WIDTH CHANGES. (①* IS NOT A CRITICAL TRANSVERSE JOINT WHEN ASPHALTIC GORE IS INSTALLED).
 - ② STOP LONGITUDINAL JOINT WITH CORE HOLE (2" TYP.) WHEN IT MEETS THE FIRST TRANSVERSE JOINT LESS THAN 15' WIDE OR STOP LONGITUDINAL JOINT WHEN IT MEETS 2' AWAY FROM THE TIED JOINT OF THE MAINLINE.
 - ③ DISREGARD THE JOINT DETAILS IN AND AROUND THE GORE WHEN ASPHALTIC GORE IS INSTALLED.

LEGEND

- DOWELED JOINT
- UNDOWELED JOINT
- TIED JOINT
- - - - UNTIED JOINT
- [Pattern] GORE
- ➡ DIRECTION OF TRAVEL

CONCRETE PAVEMENT JOINTING

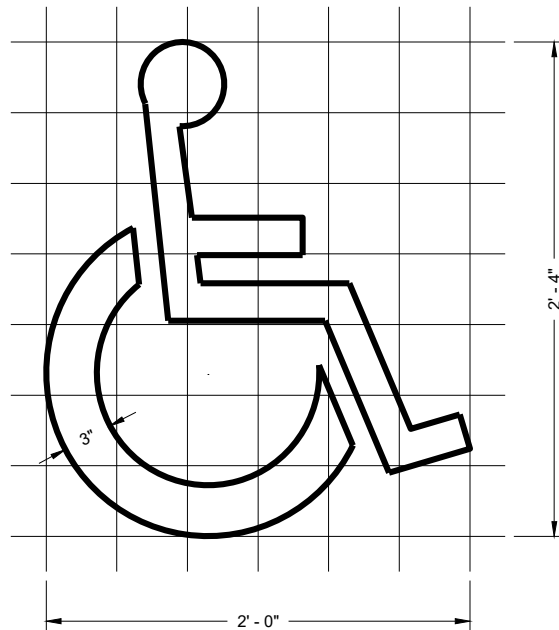
**ACCELERATION/
DECELERATION LANE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

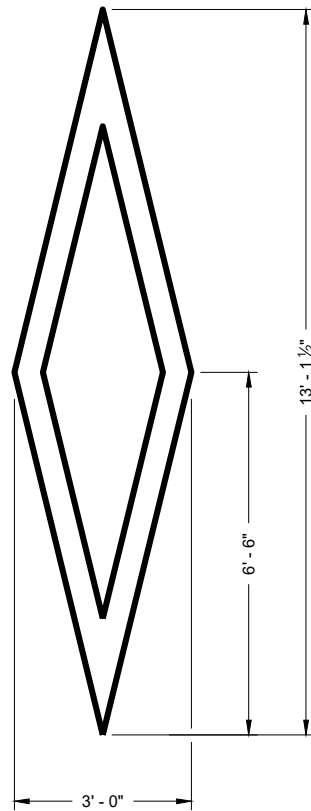
APPROVED
November 2018
DATE

/S/ Peter Kemp P.E.
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



HANDICAP SYMBOL



PREFERENTIAL
LANE SYMBOL

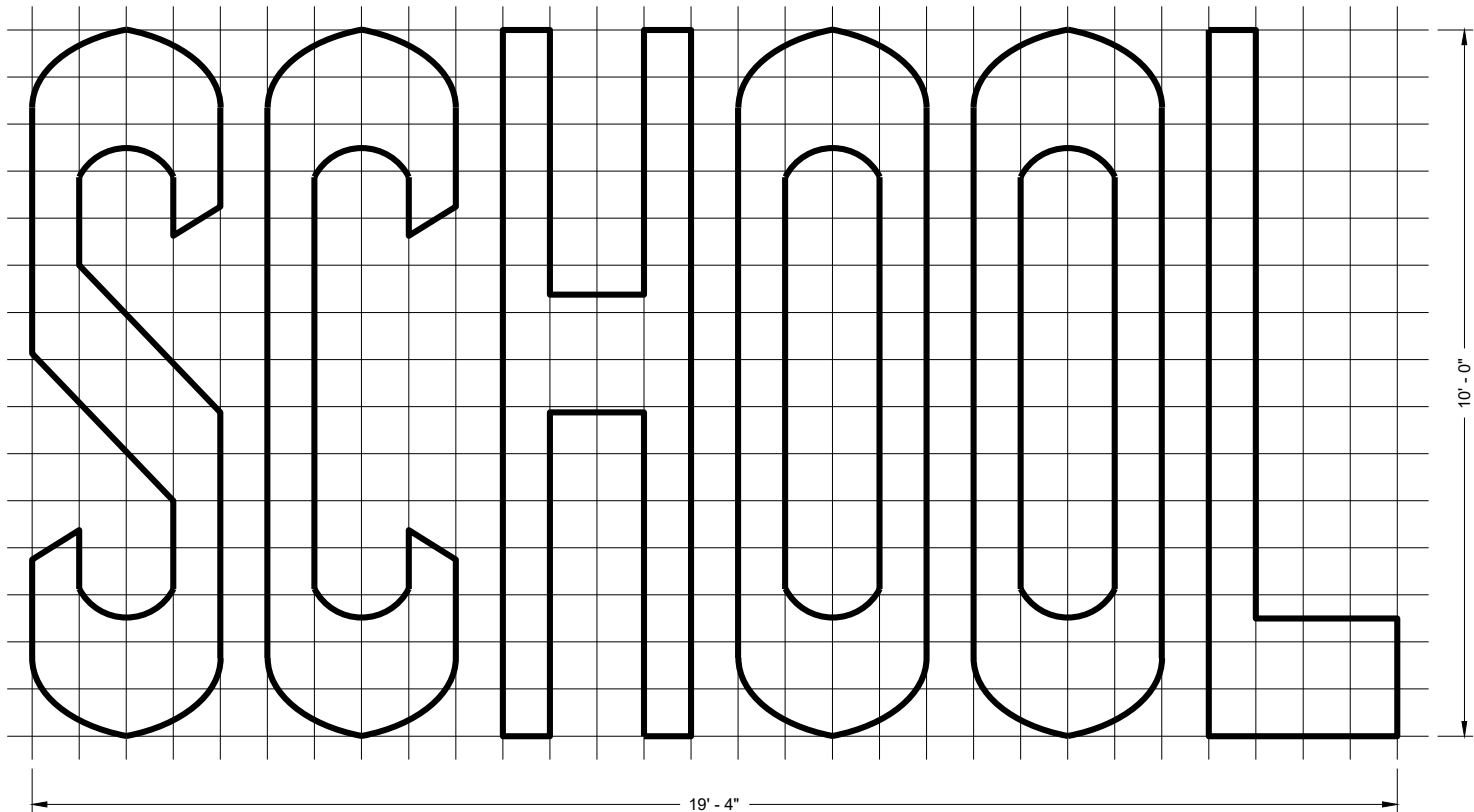
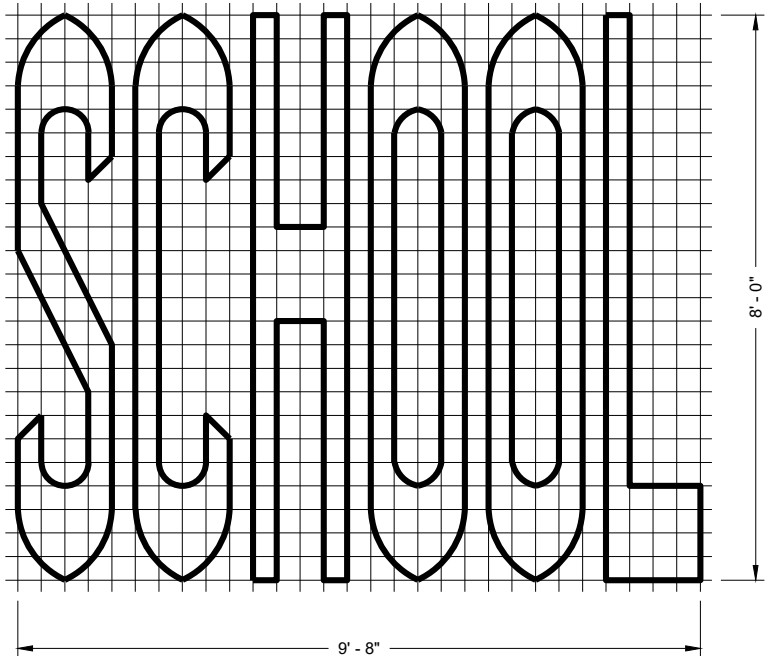
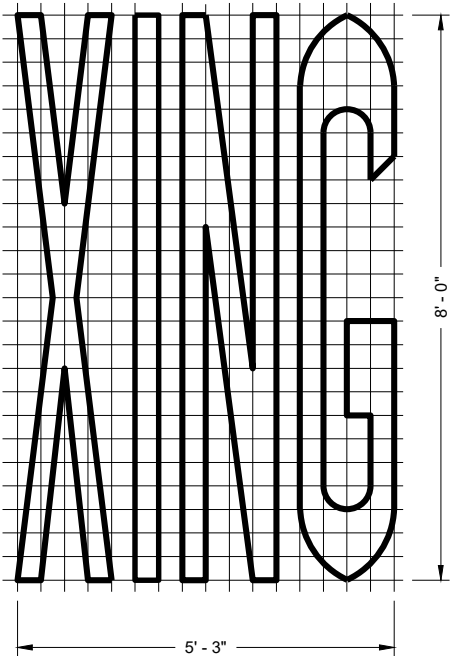
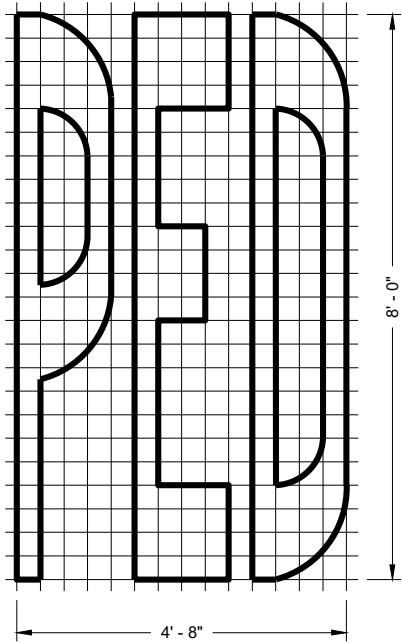
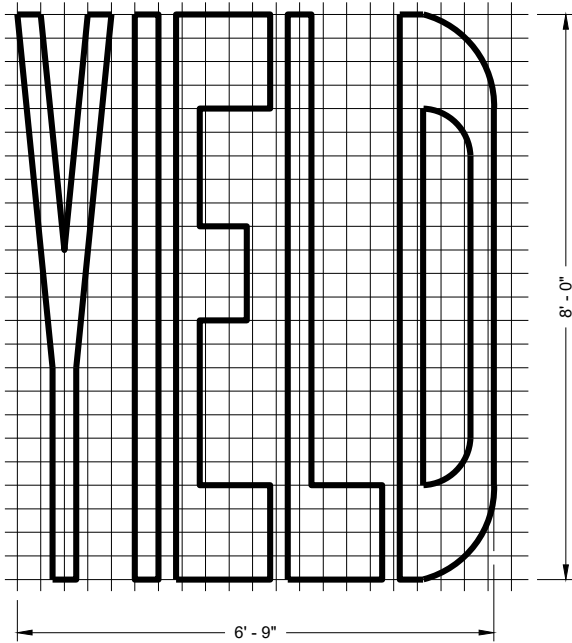
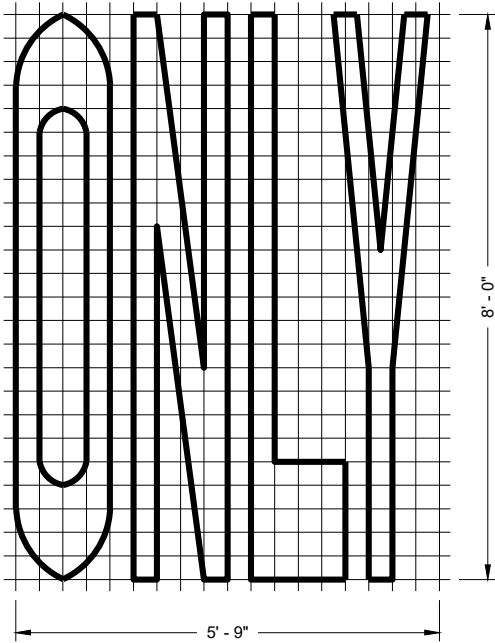
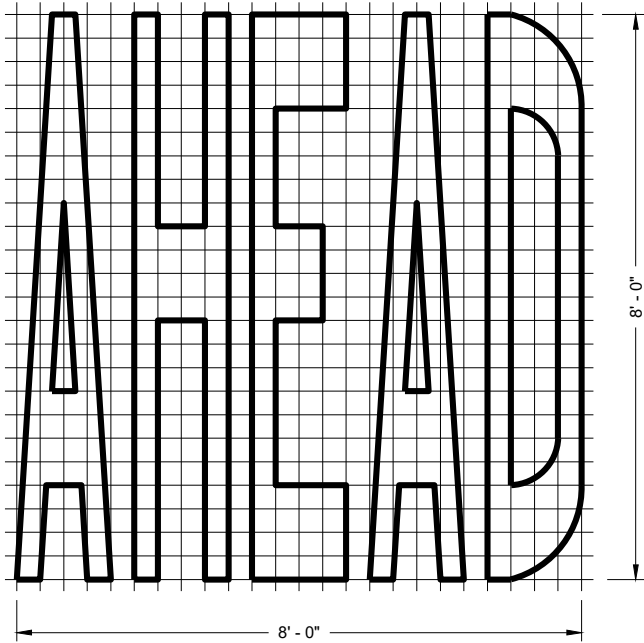
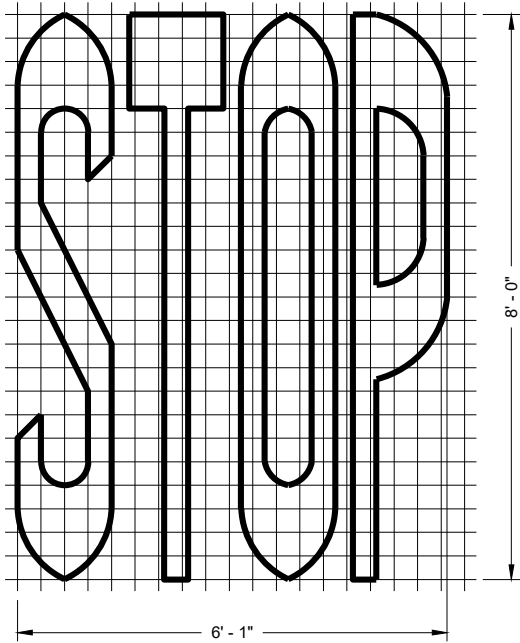
GENERAL NOTES

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 SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



SINGLE LANE

TWO - LANE

GENERAL NOTES

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

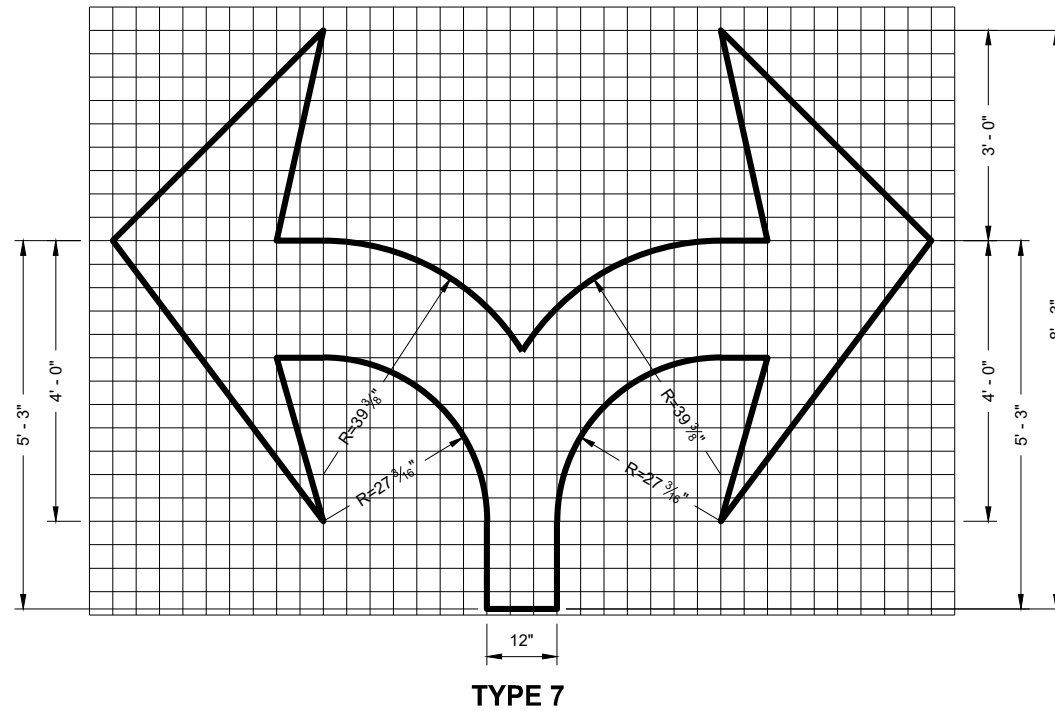
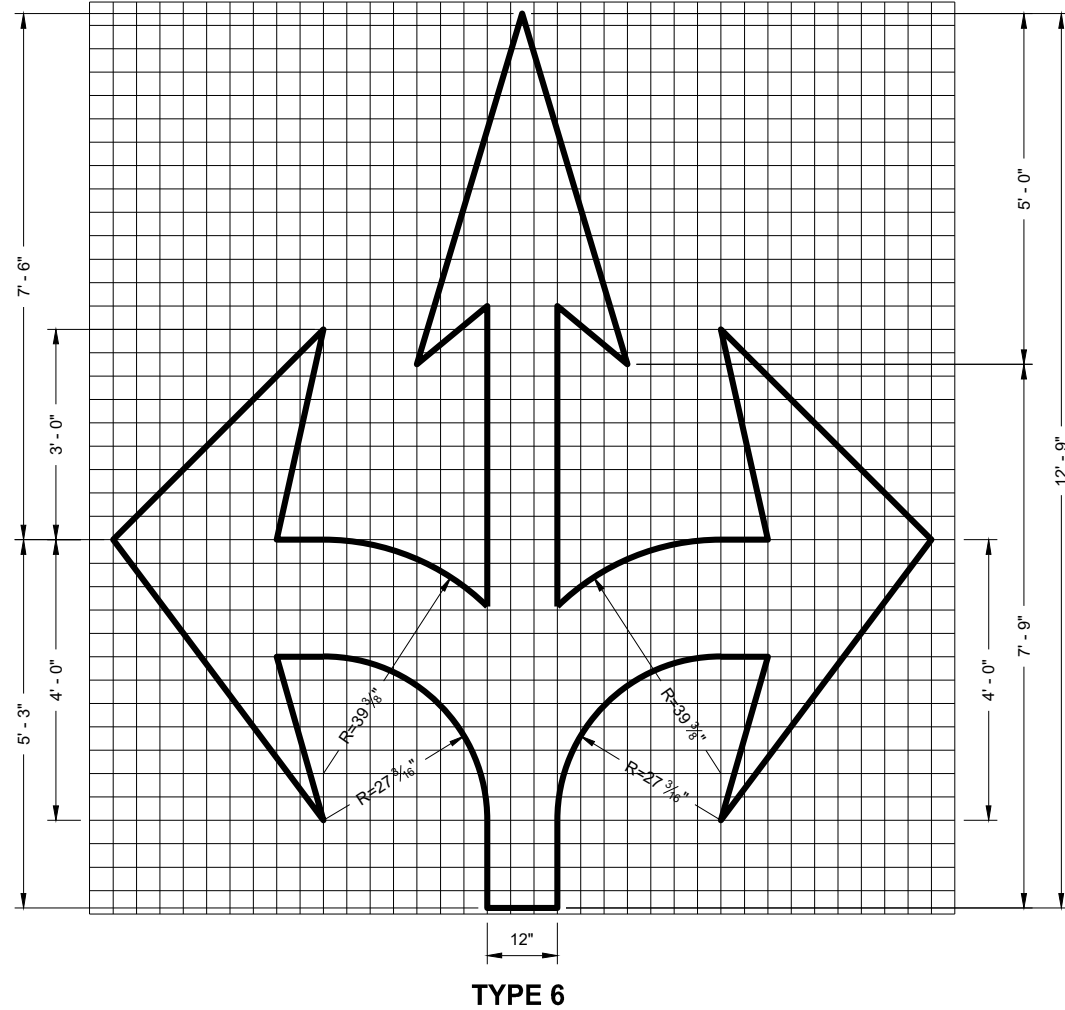
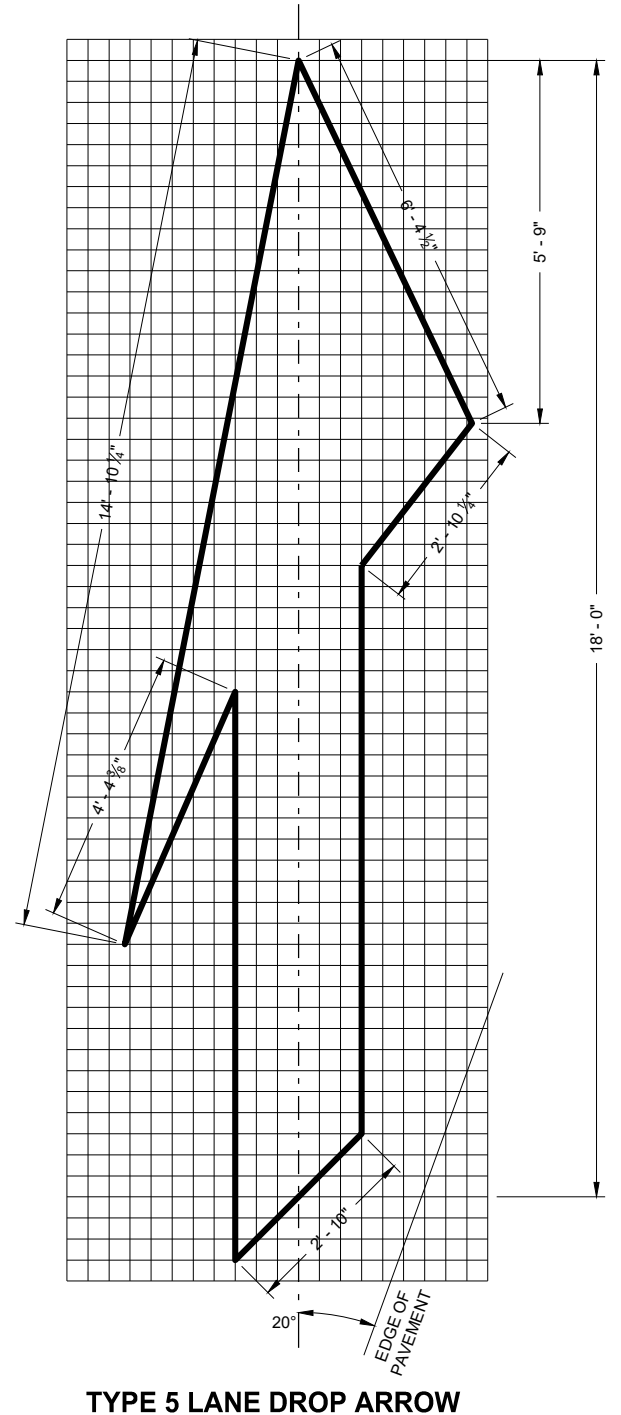
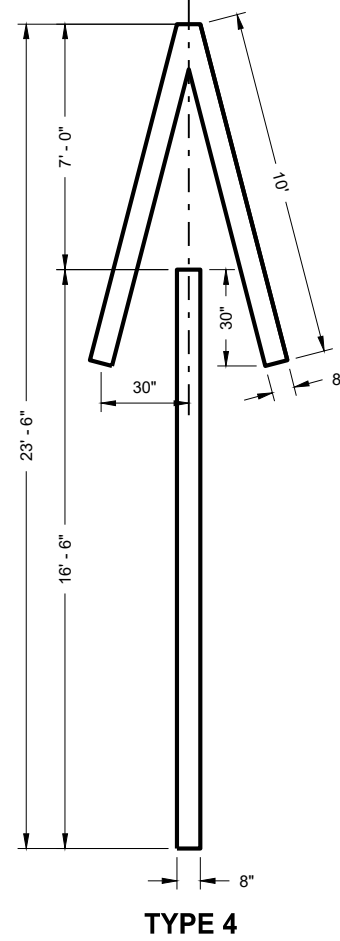
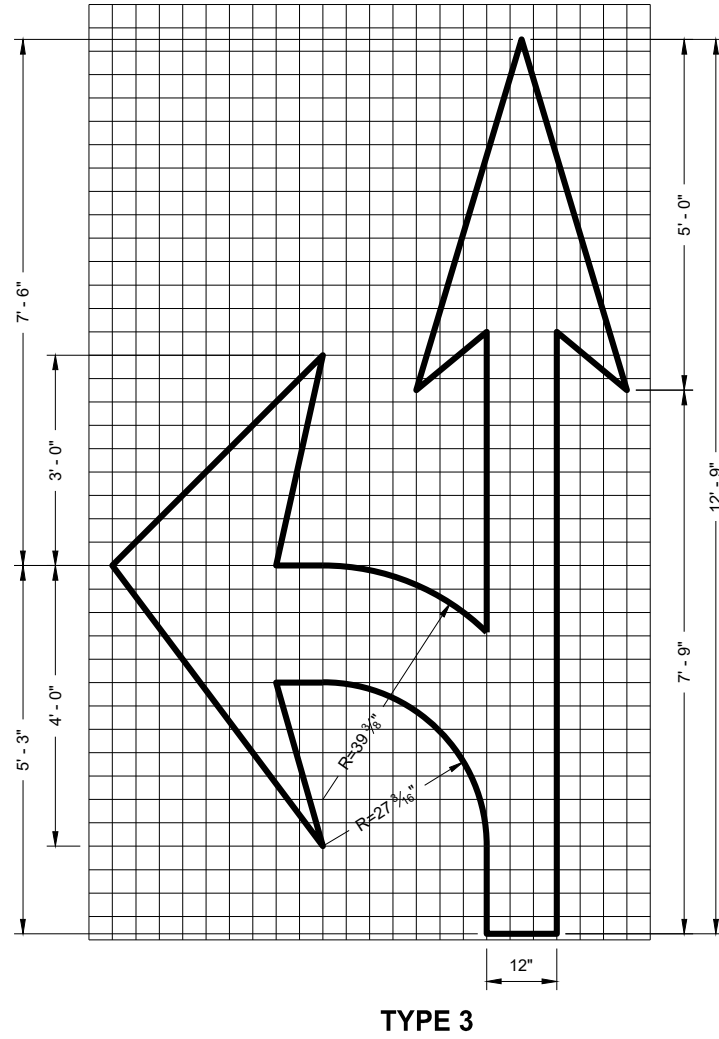
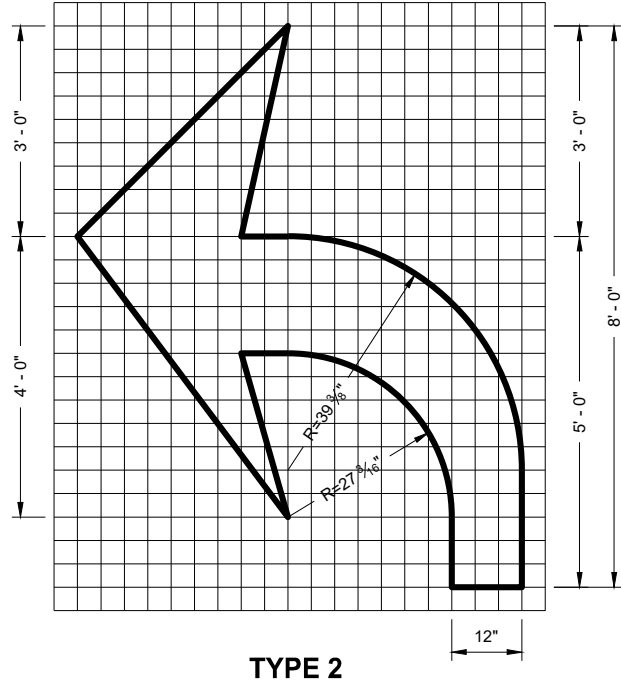
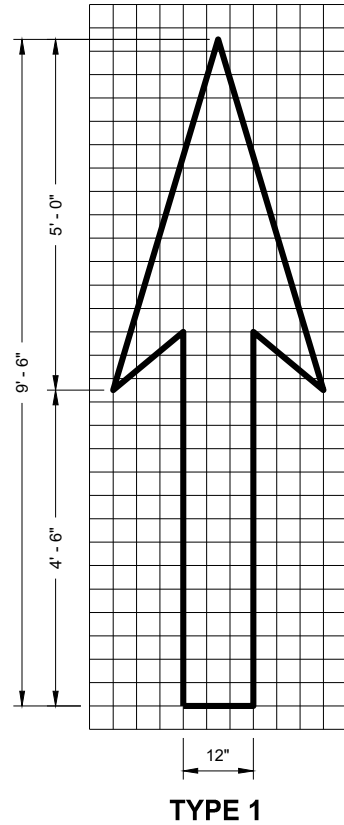
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

FHWA



GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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.

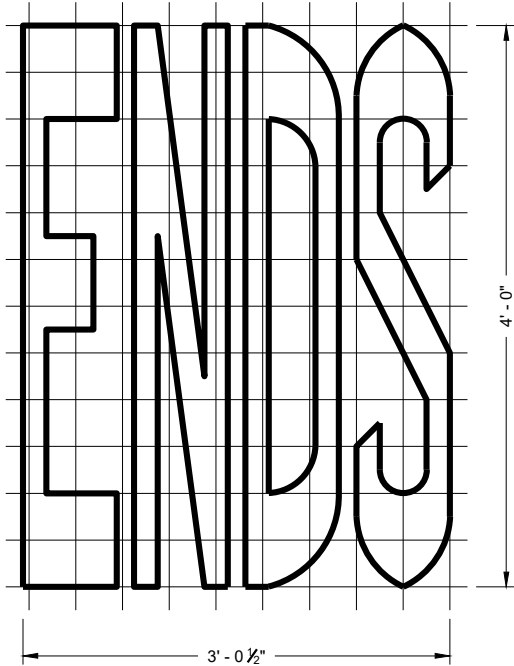
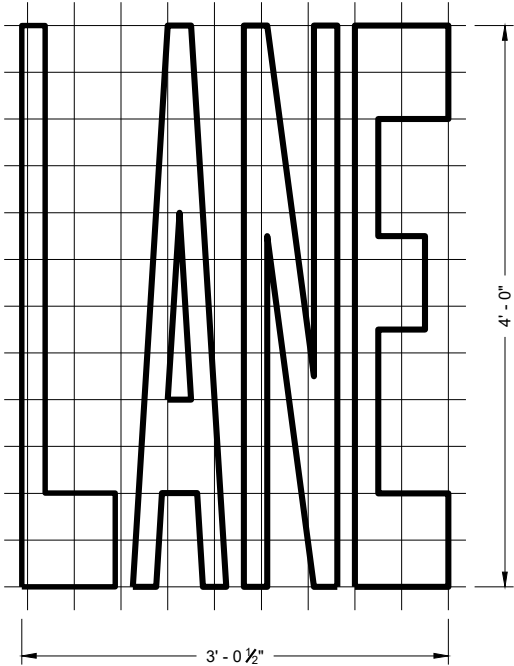
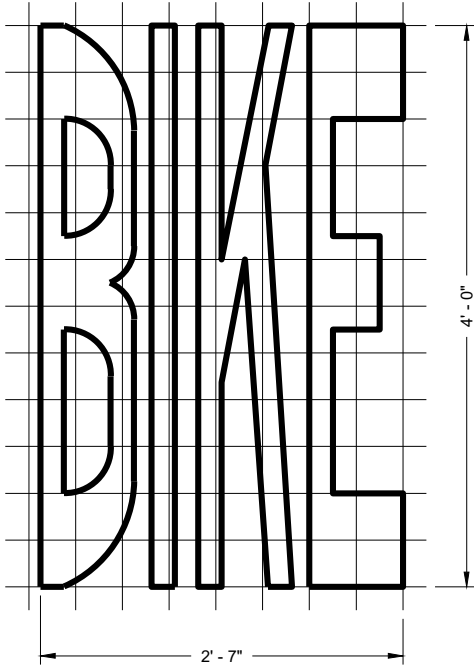


ROUNDAABOUT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

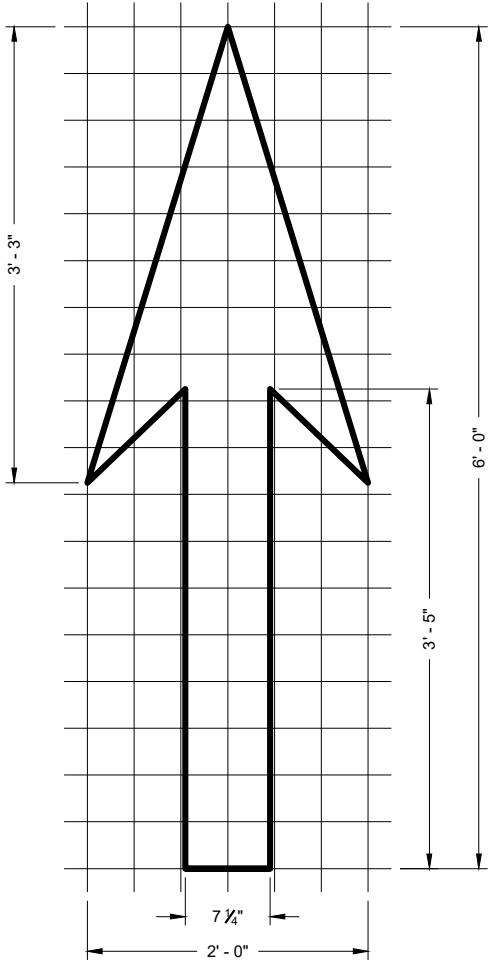
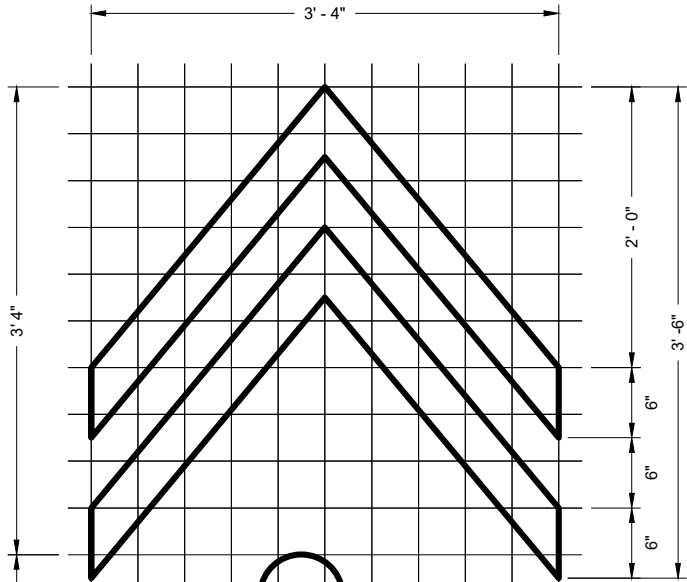
/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER



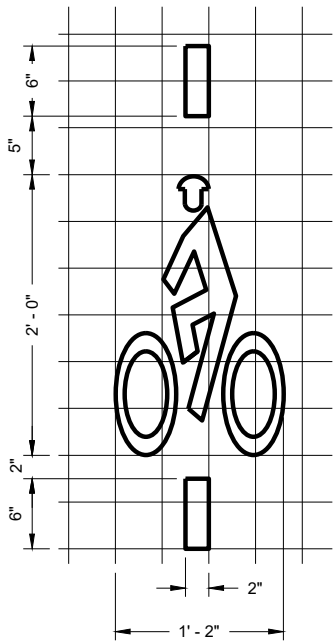
BIKE LANE WORDS

GENERAL NOTES

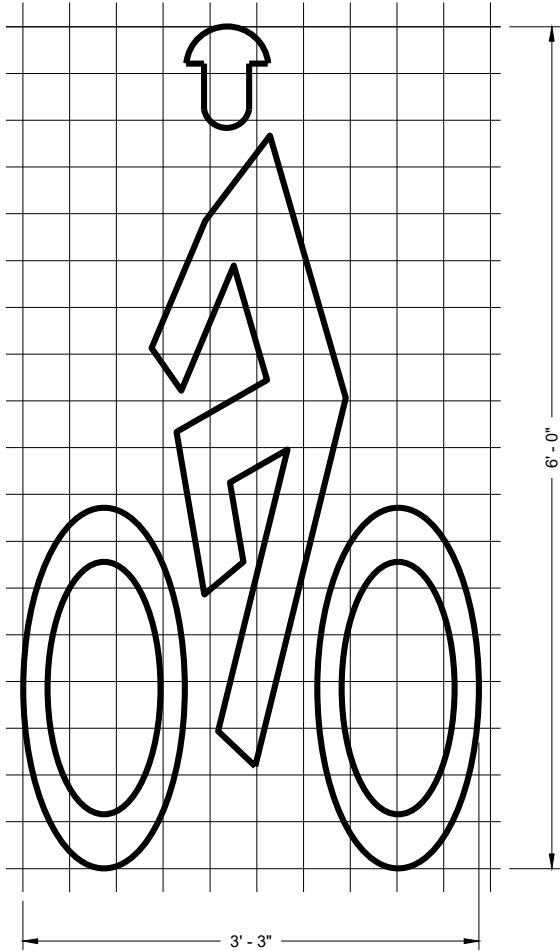
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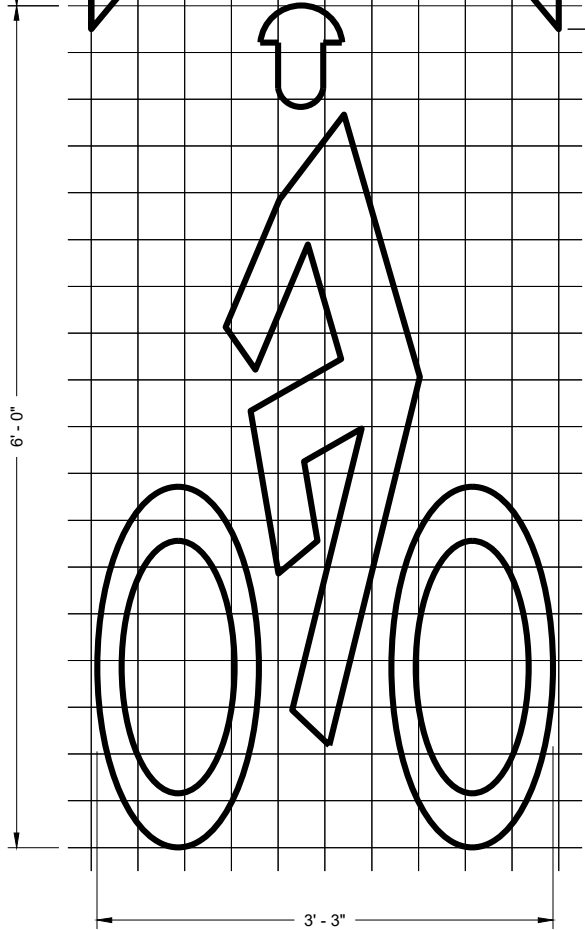
BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL

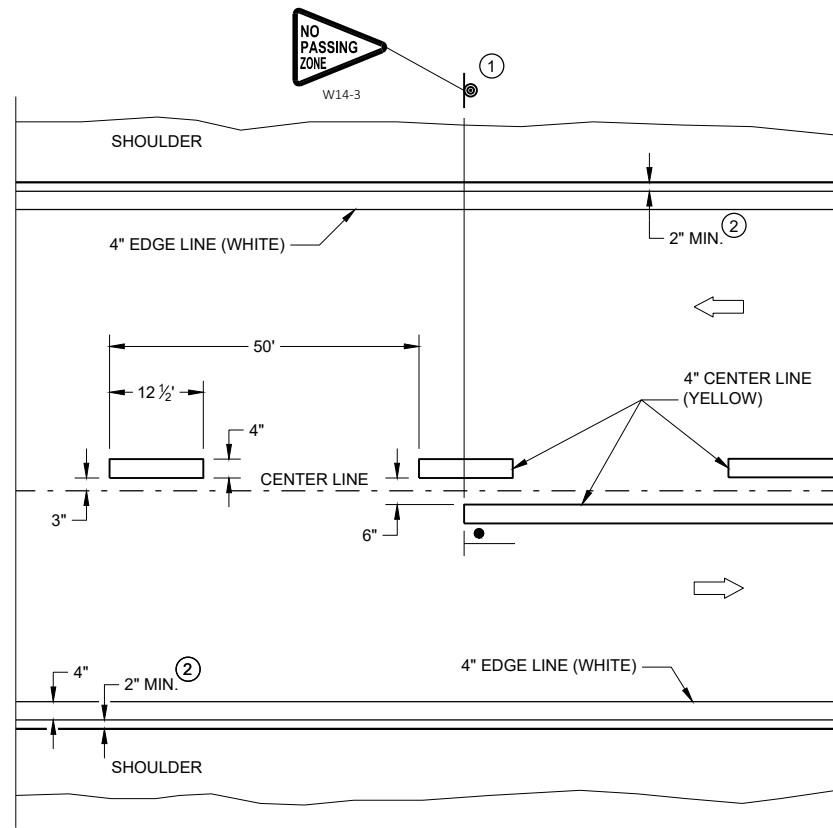


BIKE LANE SYMBOL FOR SHARED LANE

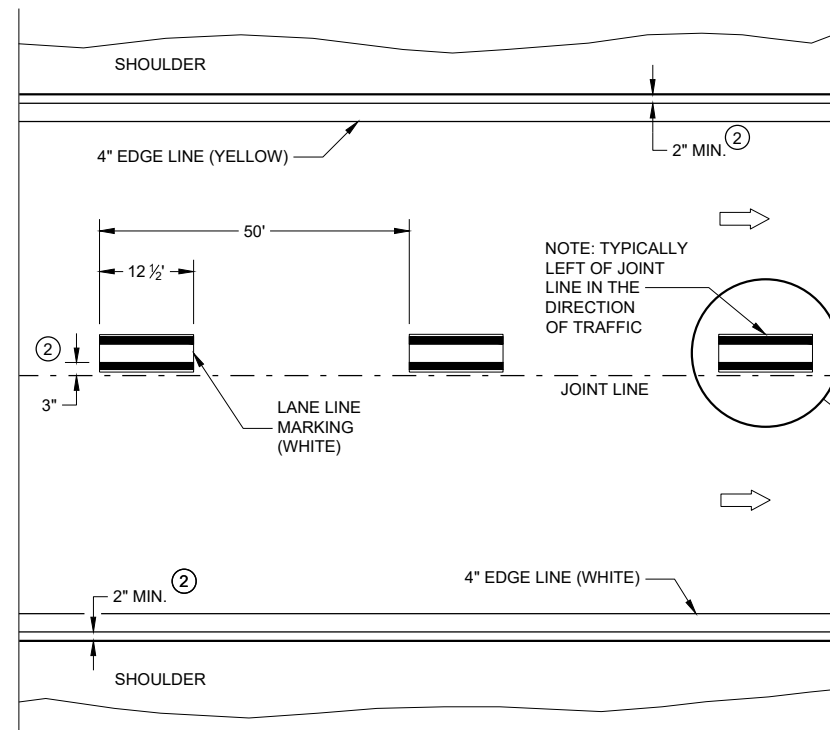
PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

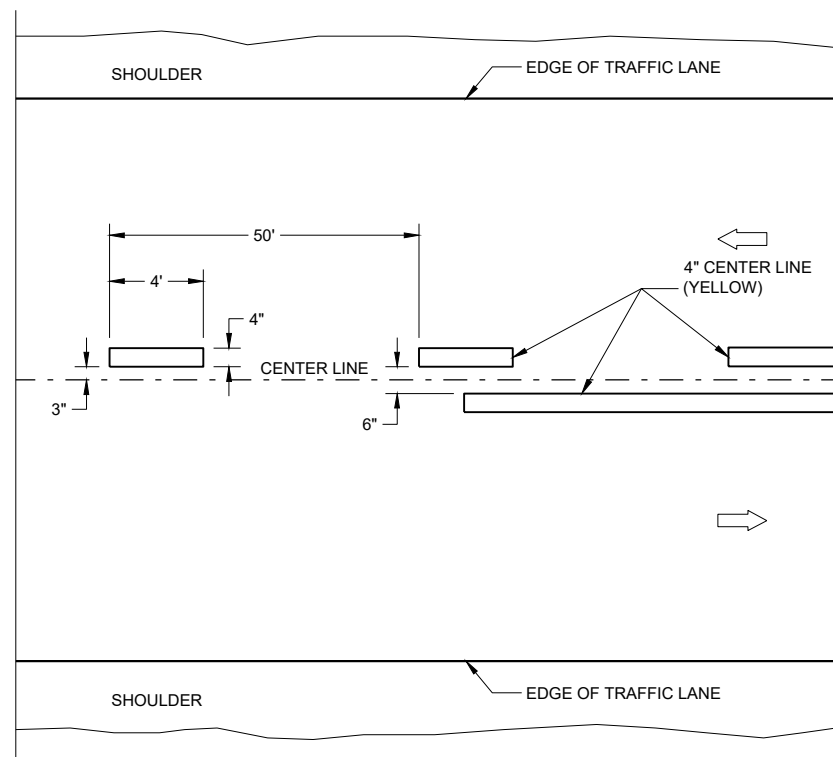


TWO WAY TRAFFIC

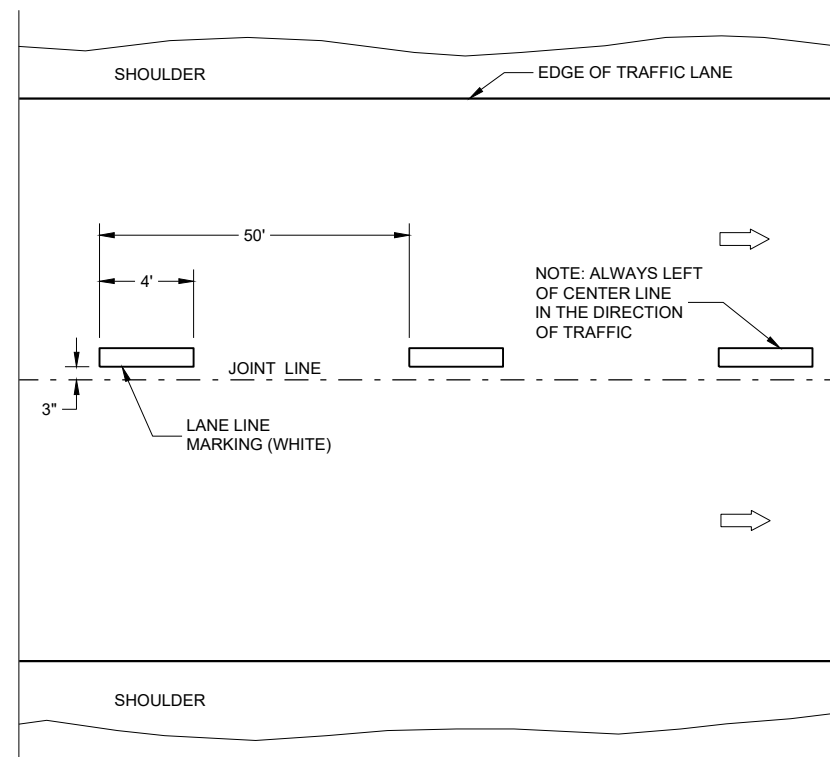


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

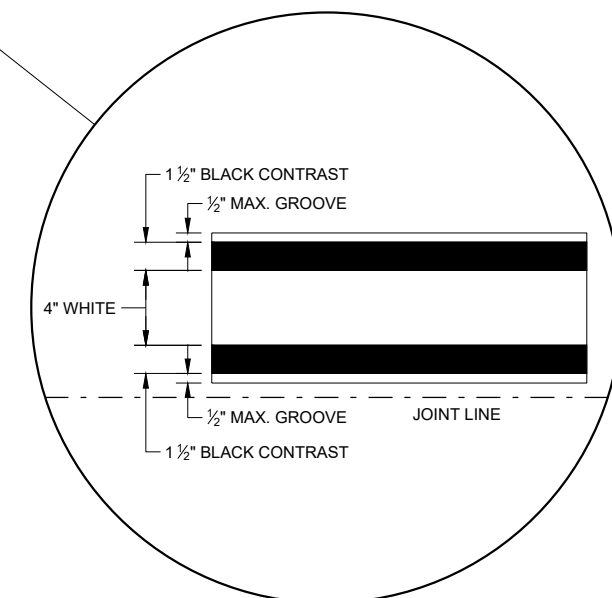
GENERAL NOTES

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 WITH 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

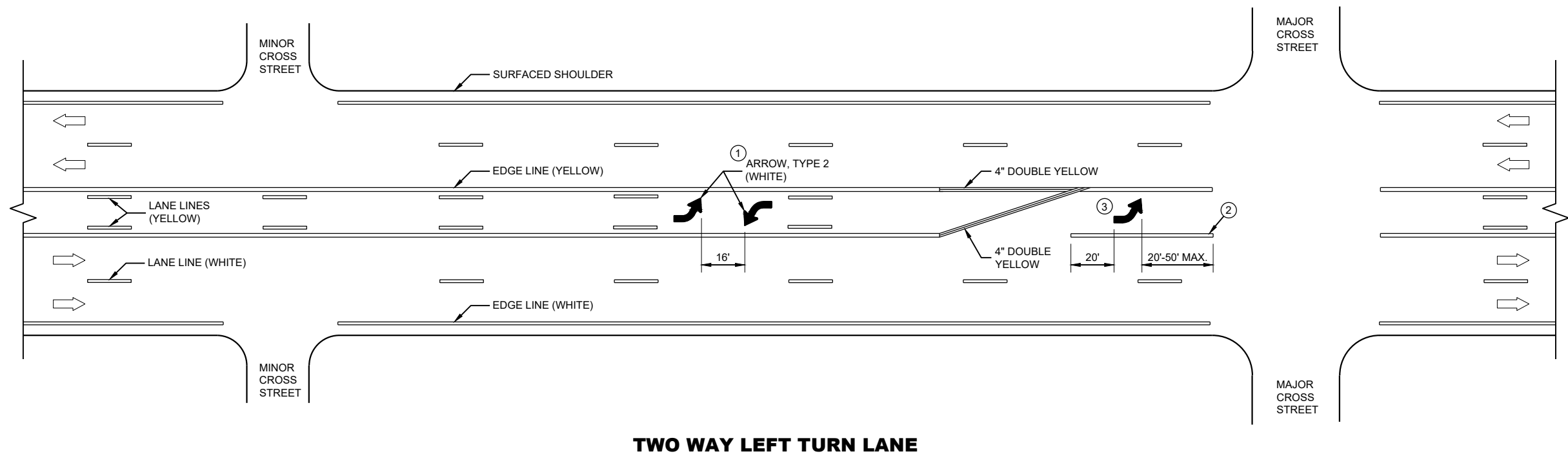


LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Matthew Rauch
STATEWIDE SIGNING AND MARKING
ENGINEER



GENERAL NOTES

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

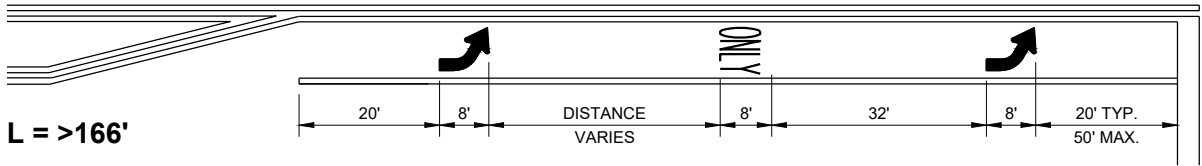
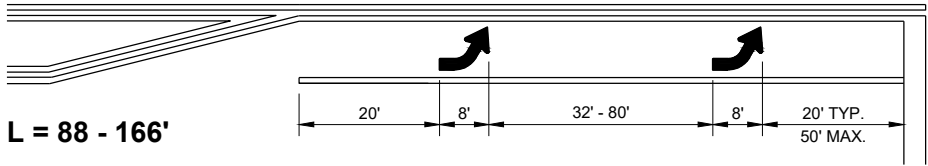
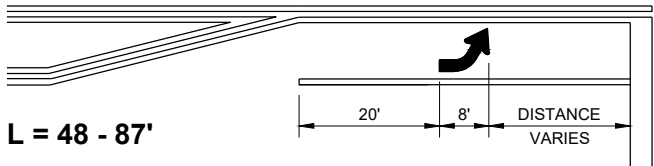
➡ DIRECTION OF TRAFFIC

**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



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

GENERAL NOTES

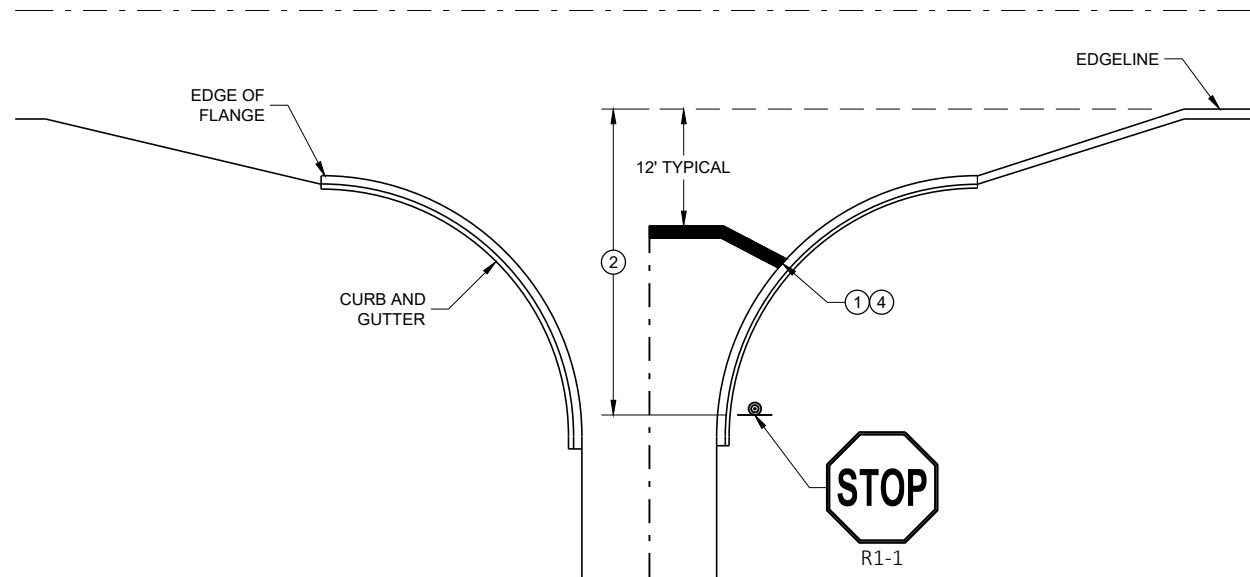
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

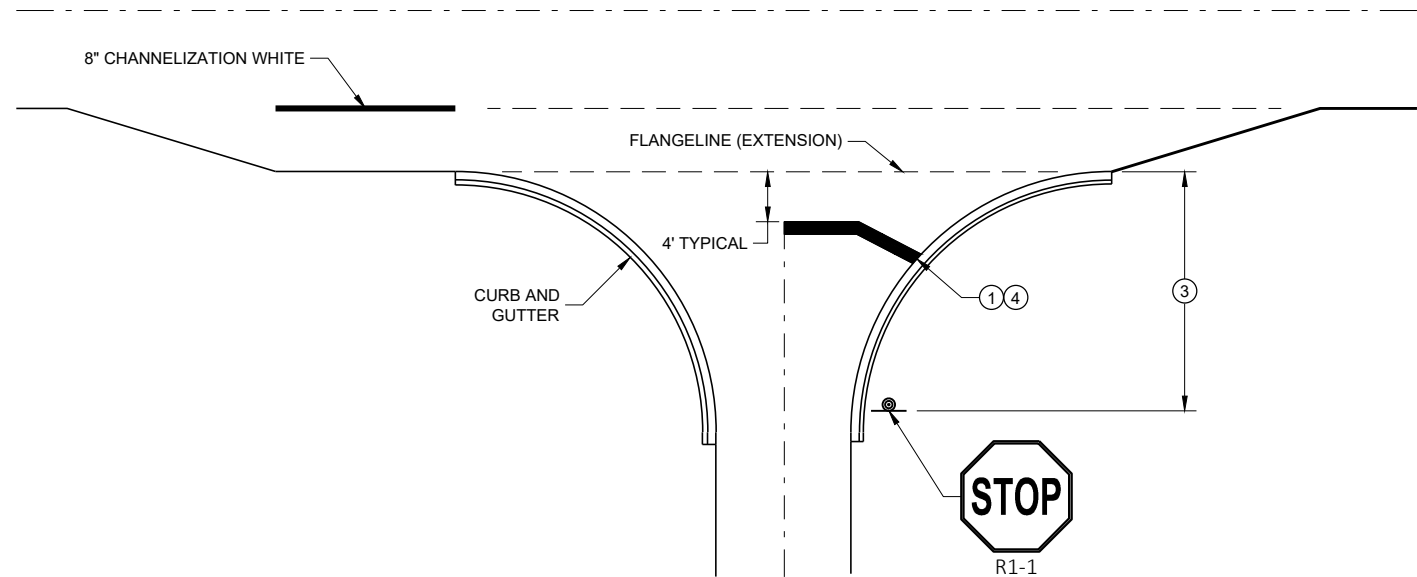
L = LENGTH OF TURN BAY

PAVEMENT MARKING
(TURN LANES)

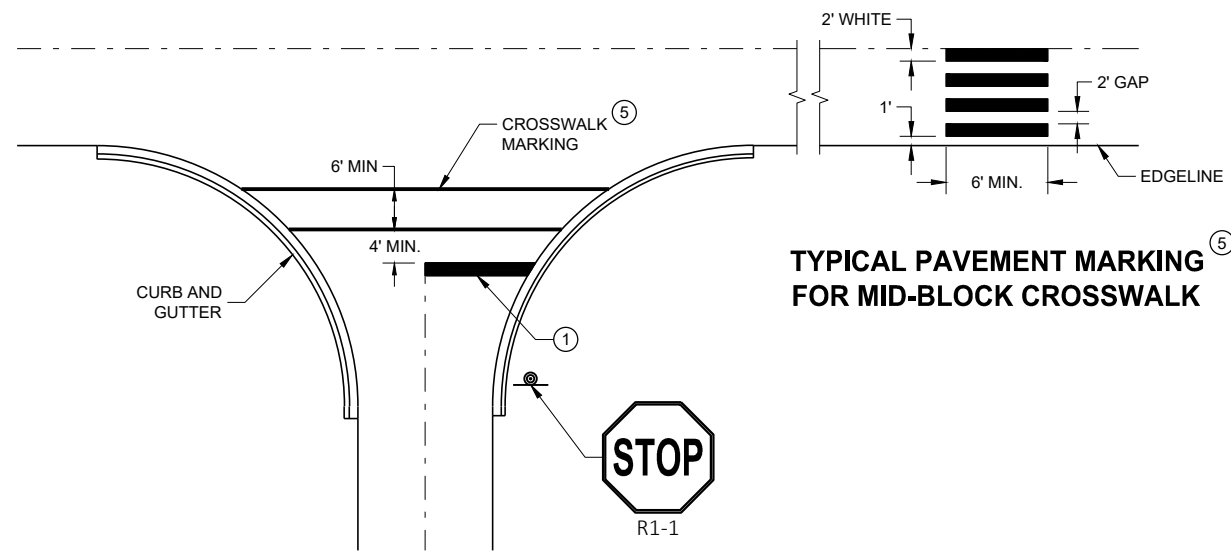
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



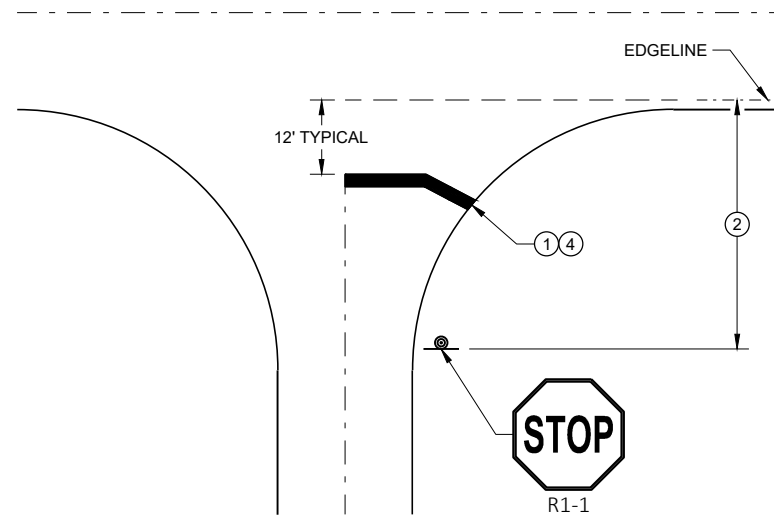
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL 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 EDGE LINE LOCATION.

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

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

LEGEND

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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"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, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

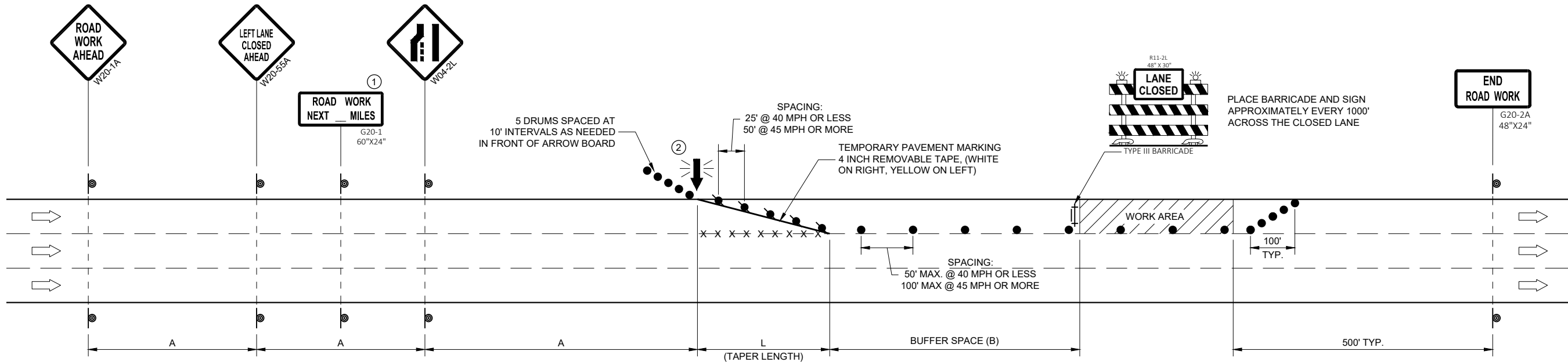
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

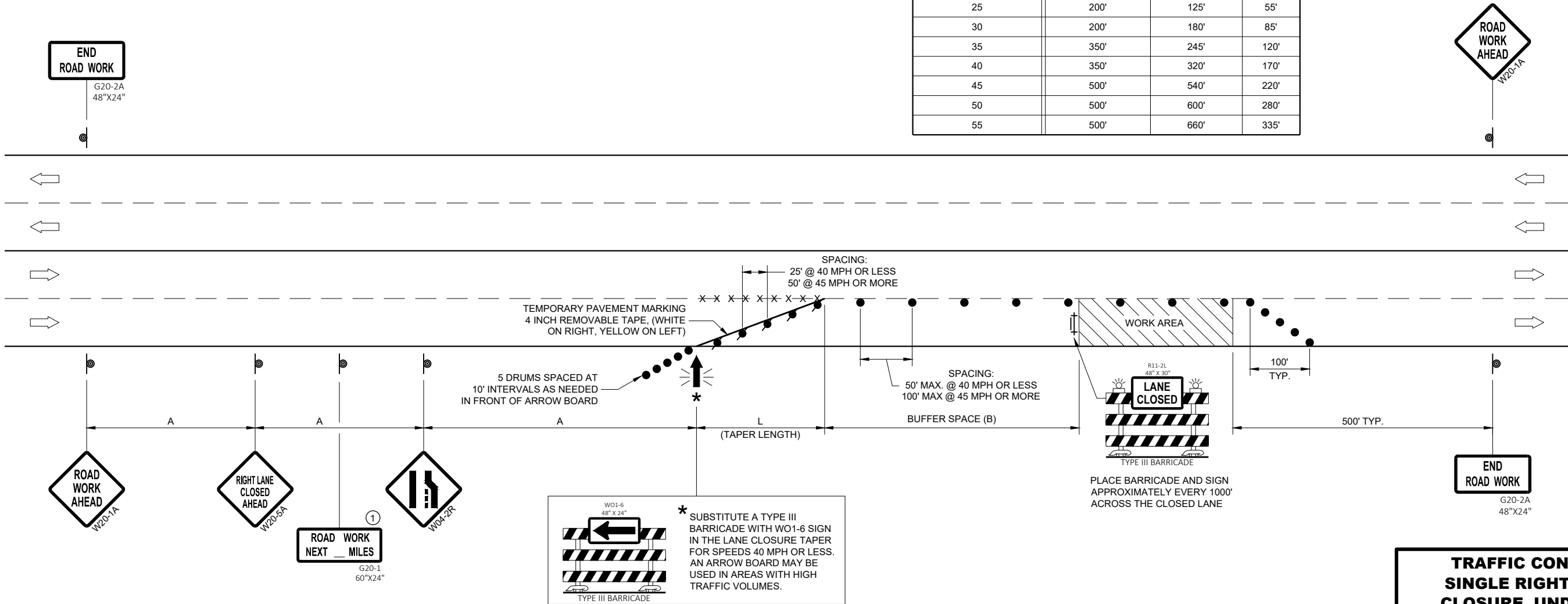
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

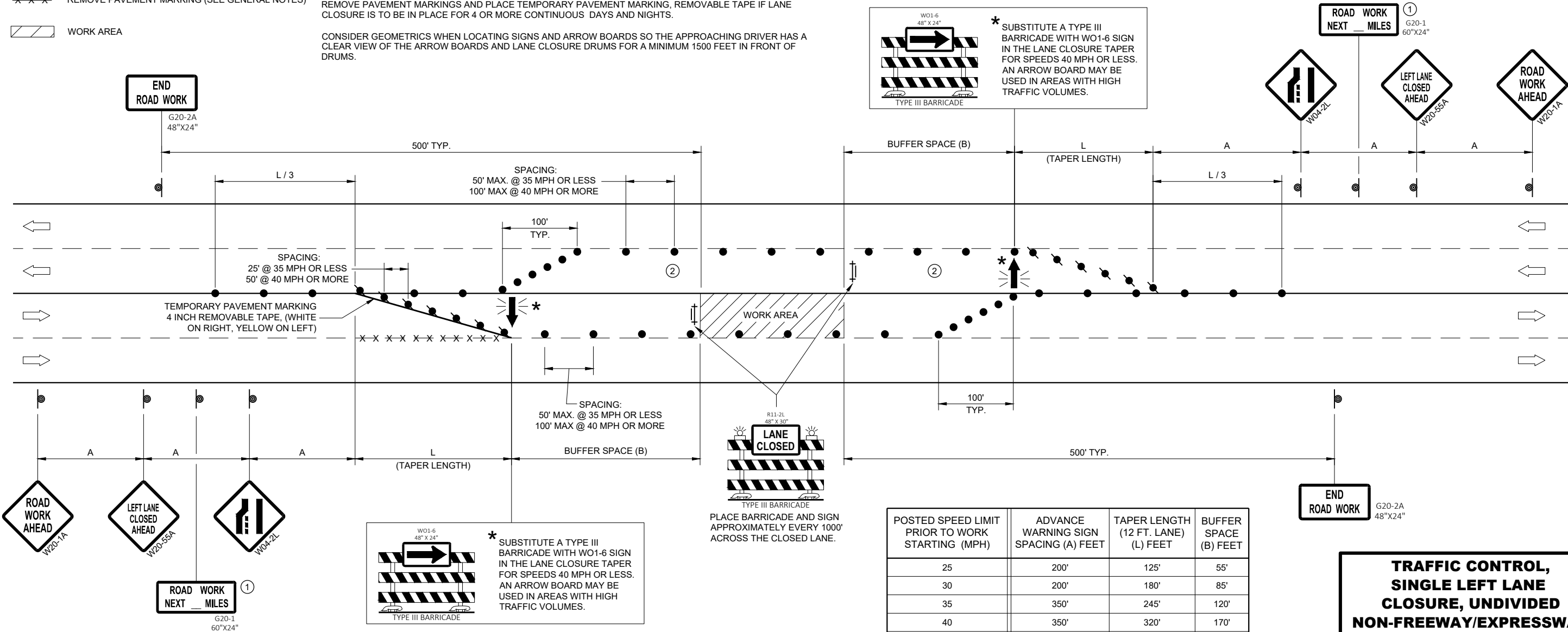
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

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

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

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

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

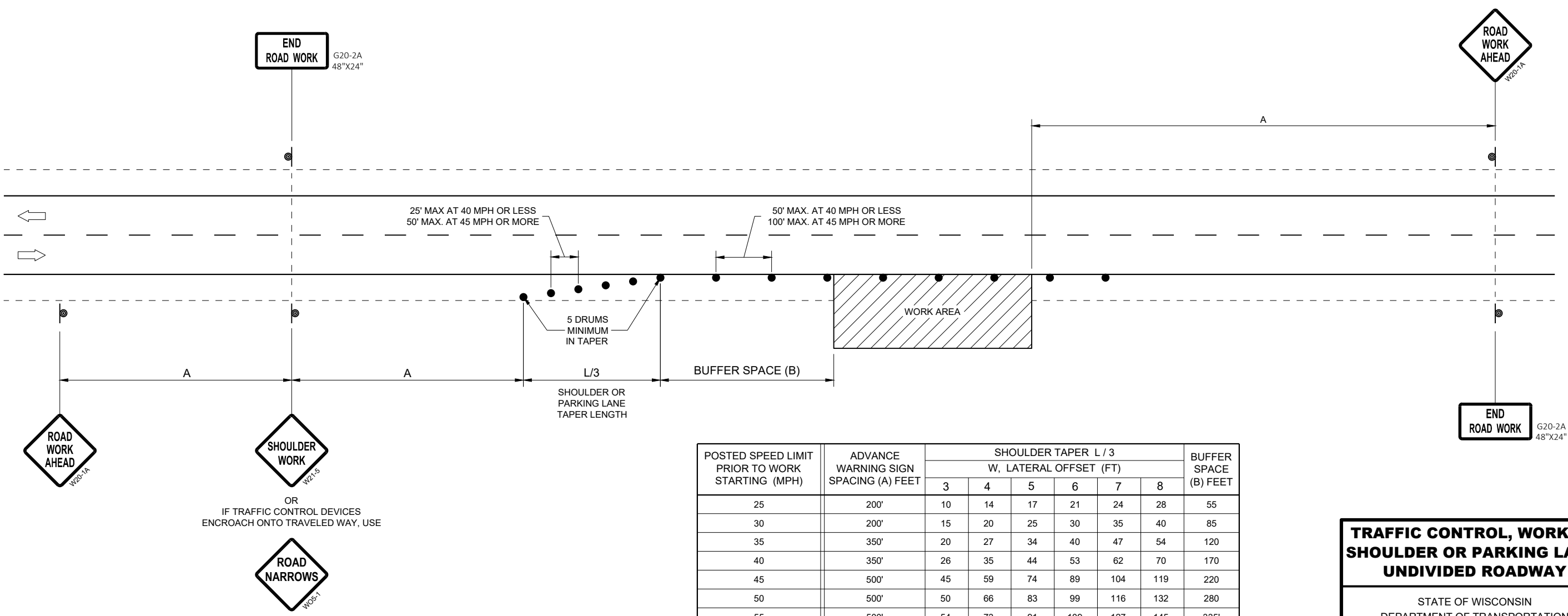
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

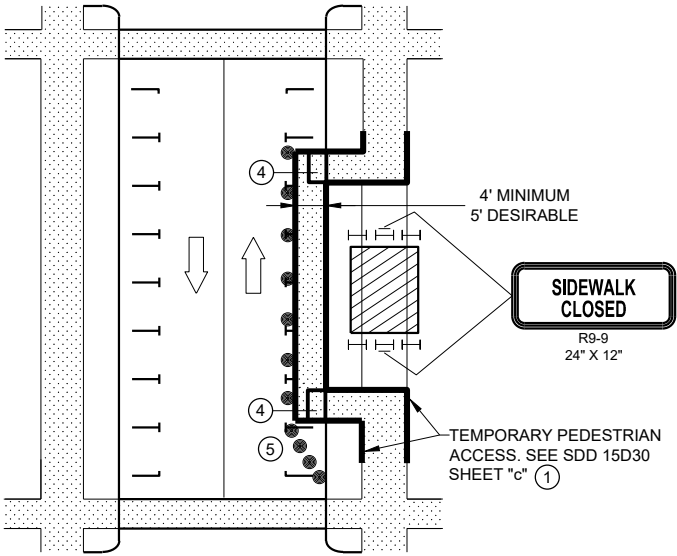
/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA

SDD 15D28 - 04

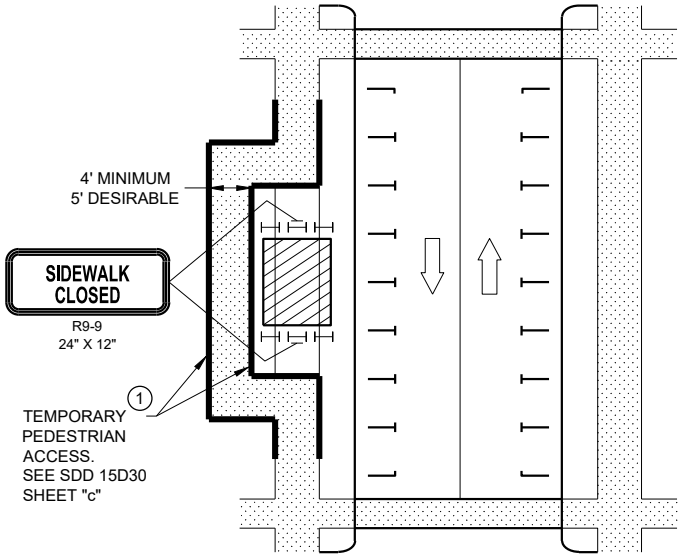
SDD 15D28 - 04

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

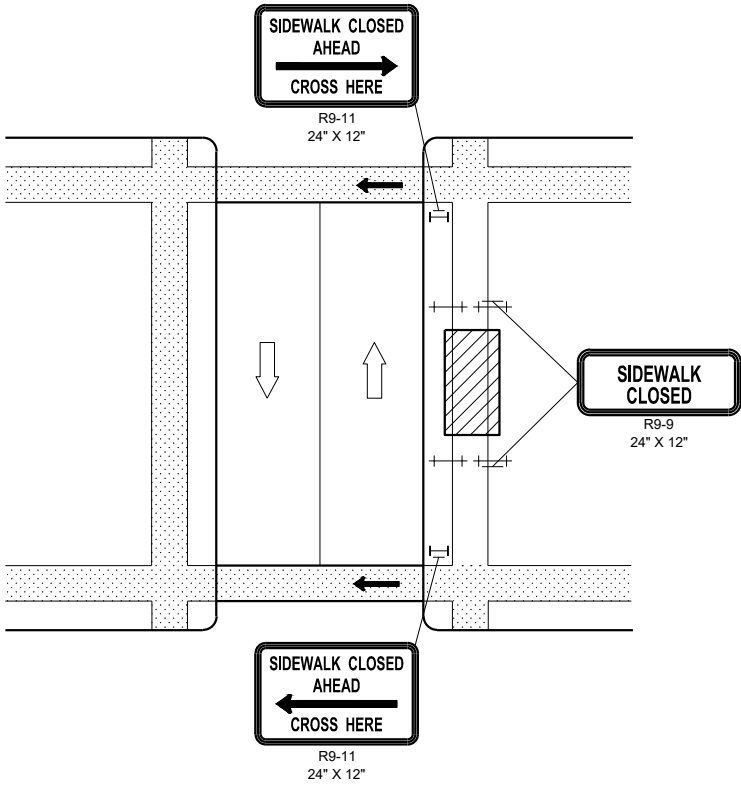


MID-BLOCK SIDEWALK CLOSURE
IN PARKING LANE

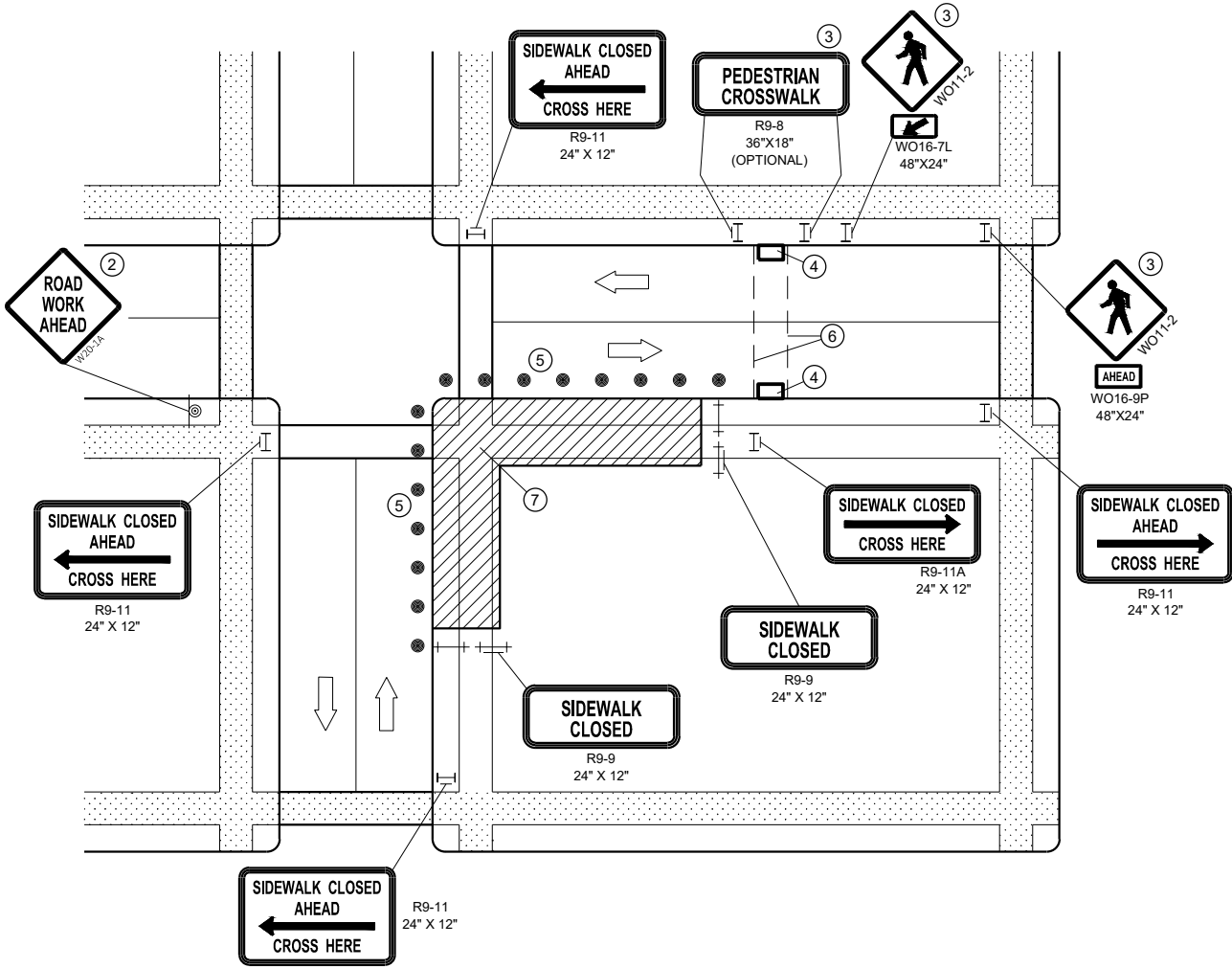
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK
CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

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

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

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

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

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

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

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

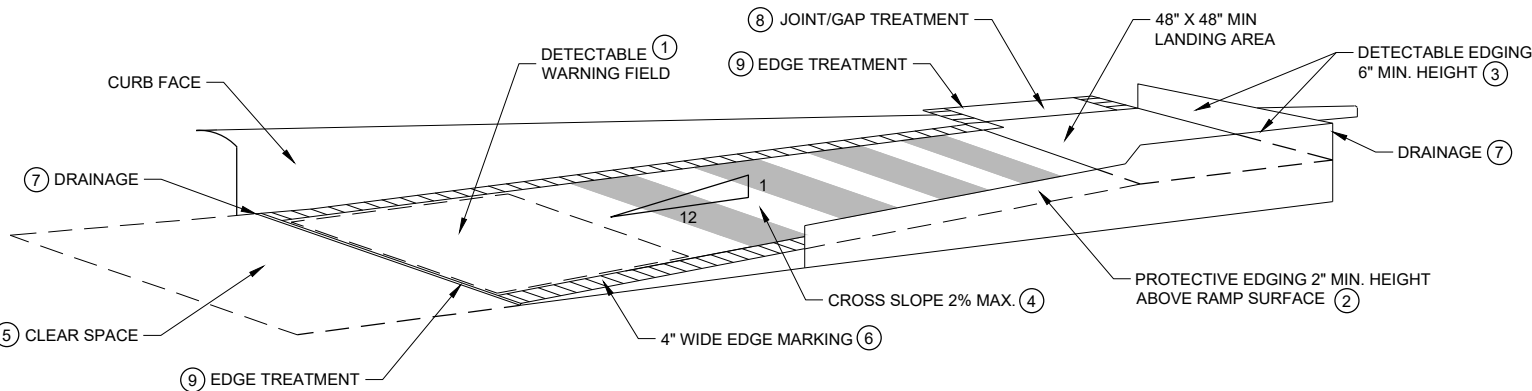
- ① IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
- ② "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR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

LEGEND

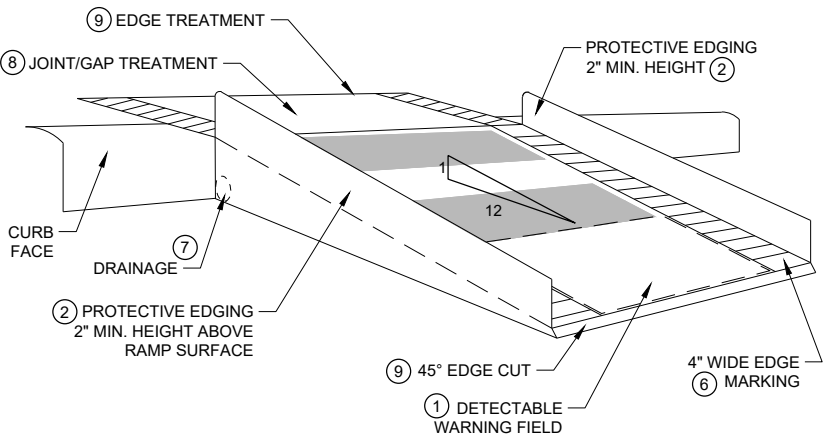
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN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

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

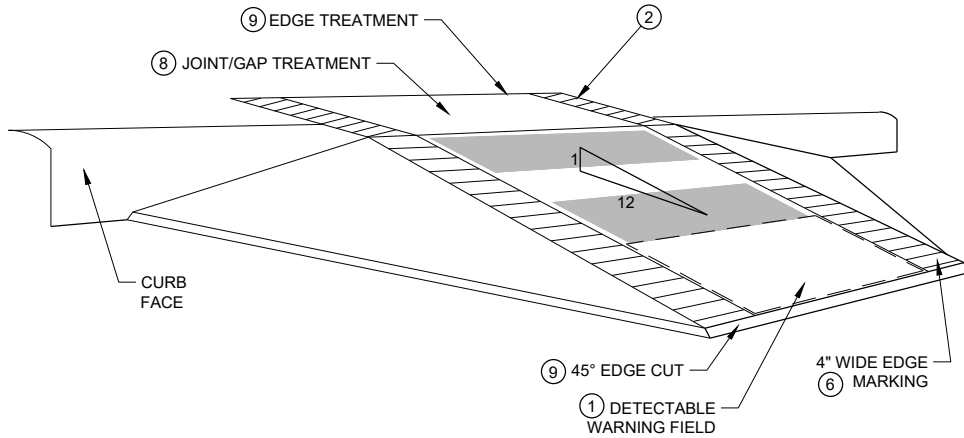
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TEMPORARY CURB RAMP PARALLEL TO CURB



WITH PROTECTIVE EDGE

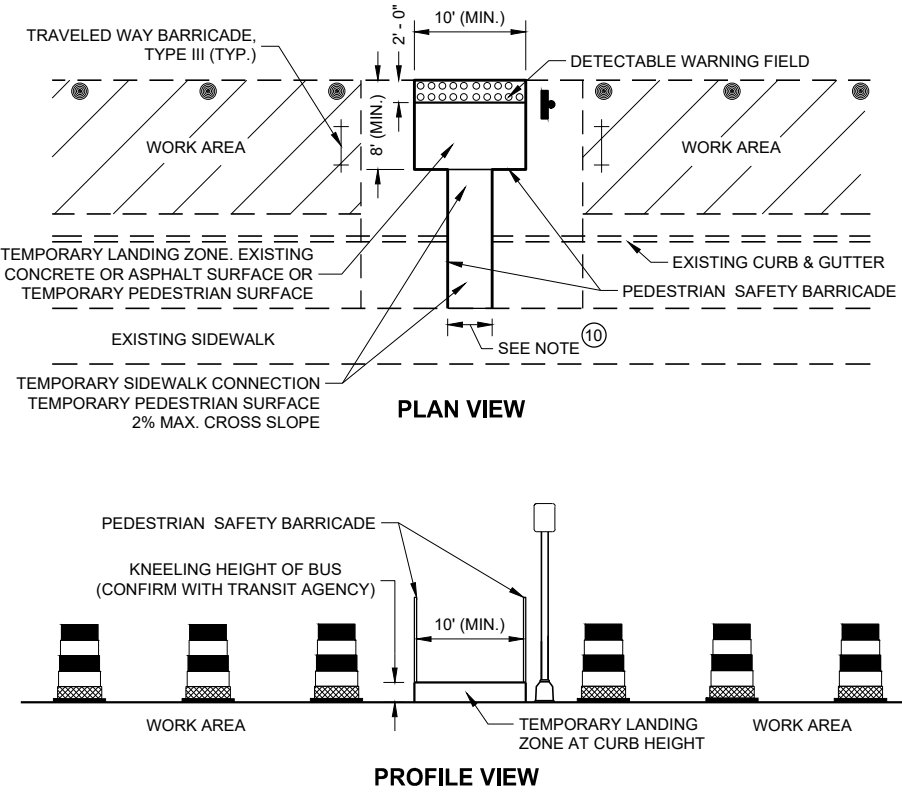


WITH SIDE APRON

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

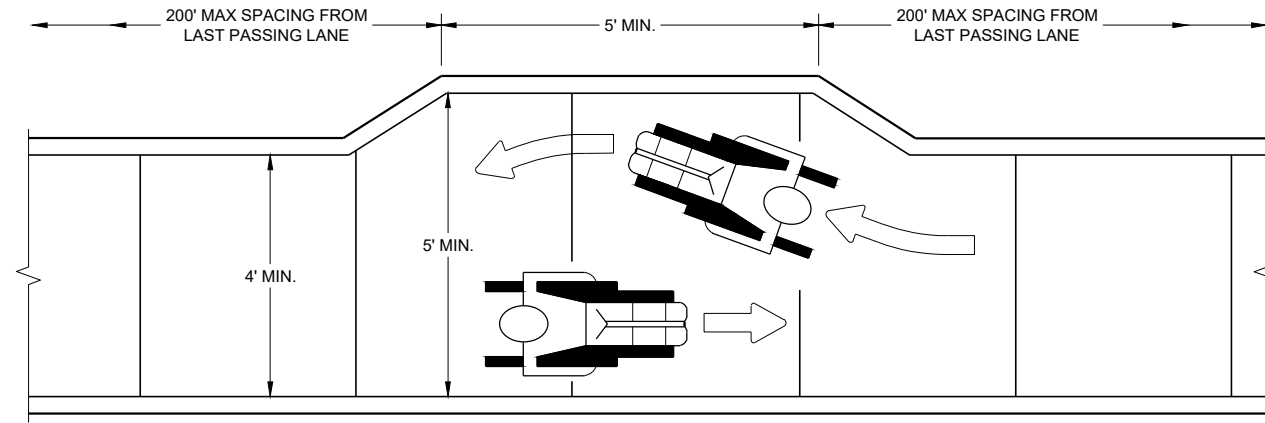


TEMPORARY BUS STOP PAD

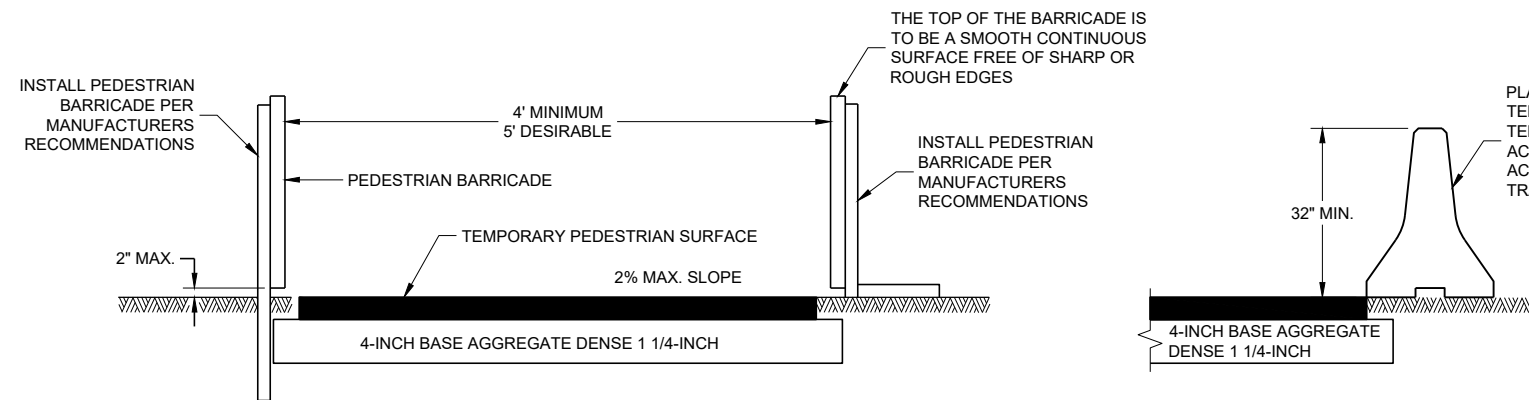
- LEGEND
- TRAFFIC CONTROL DRUM
 - † TYPE III BARRICADE
 - ▨ WORK AREA

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

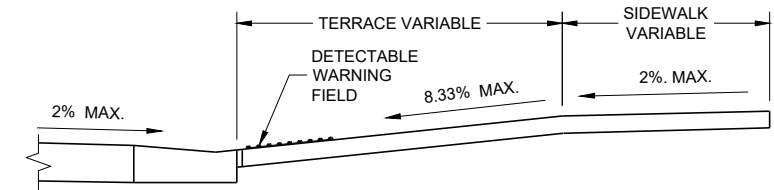
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



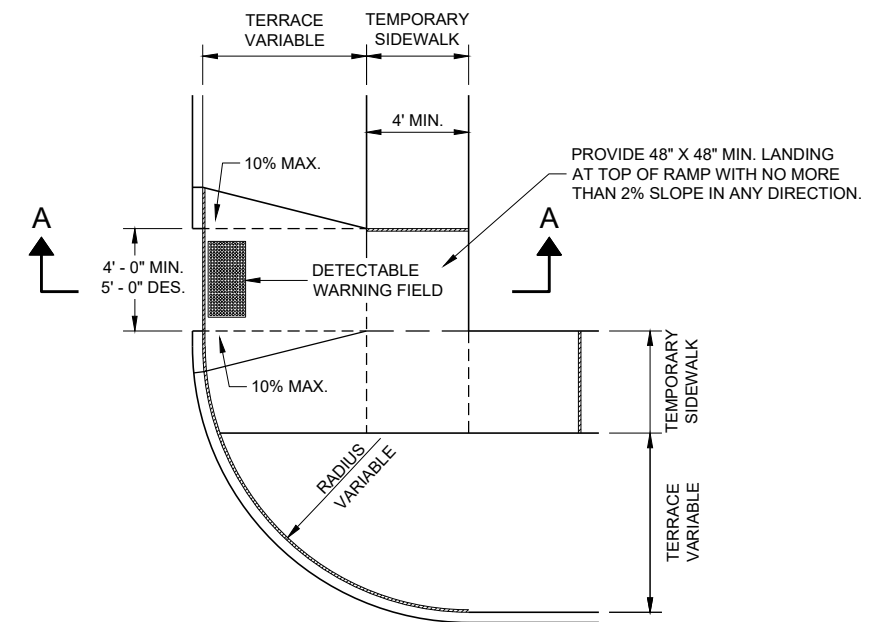
NARROW SIDEWALK PASSING DETAIL



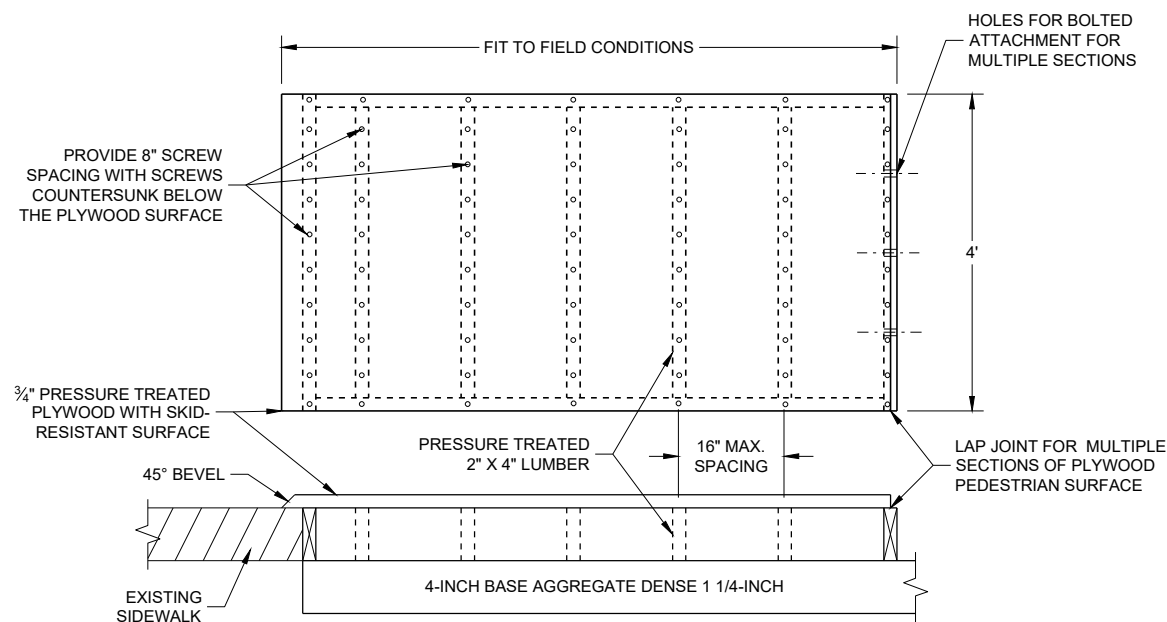
TEMPORARY PEDESTRIAN ACCESS



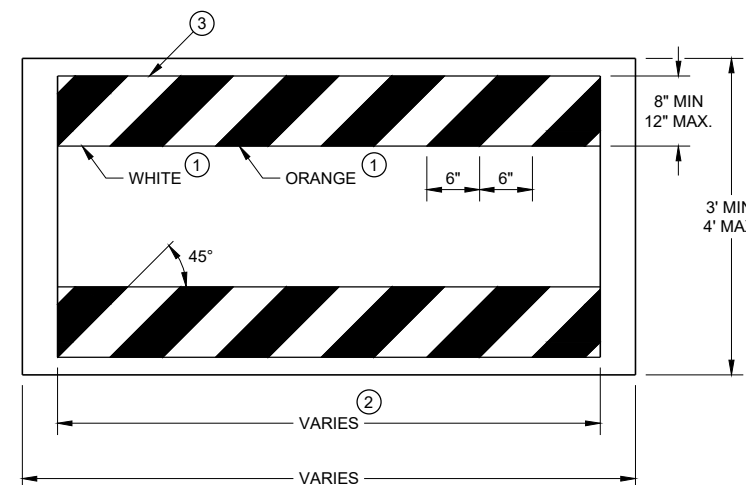
SECTION A - A



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



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



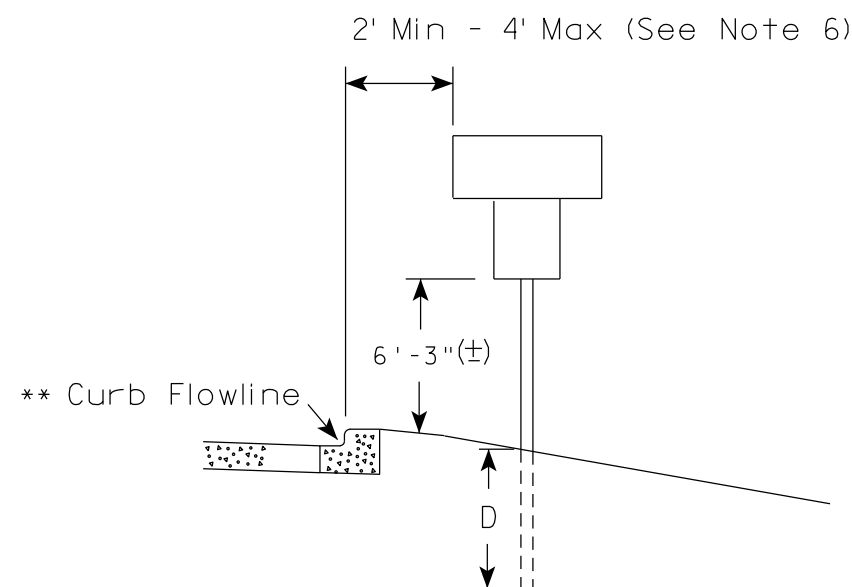
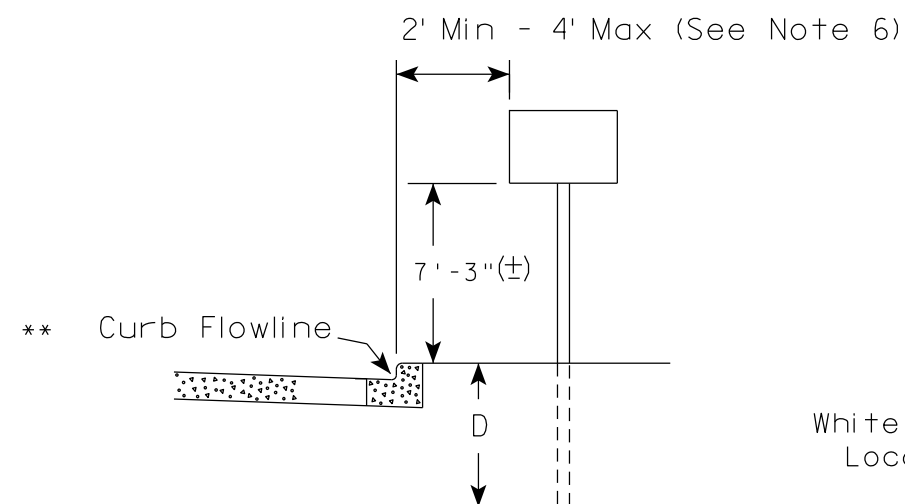
TEMPORARY PEDESTRIAN BARRICADE *

GENERAL NOTES

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

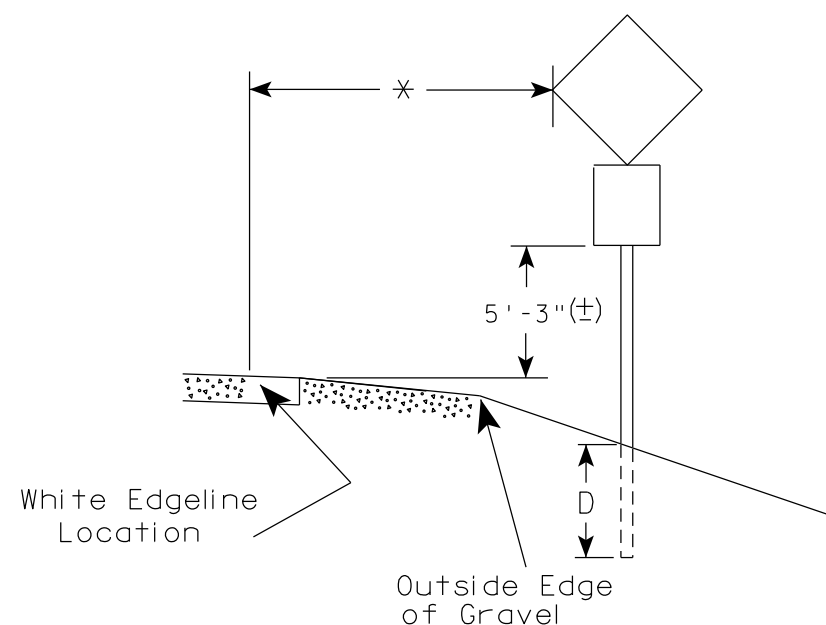
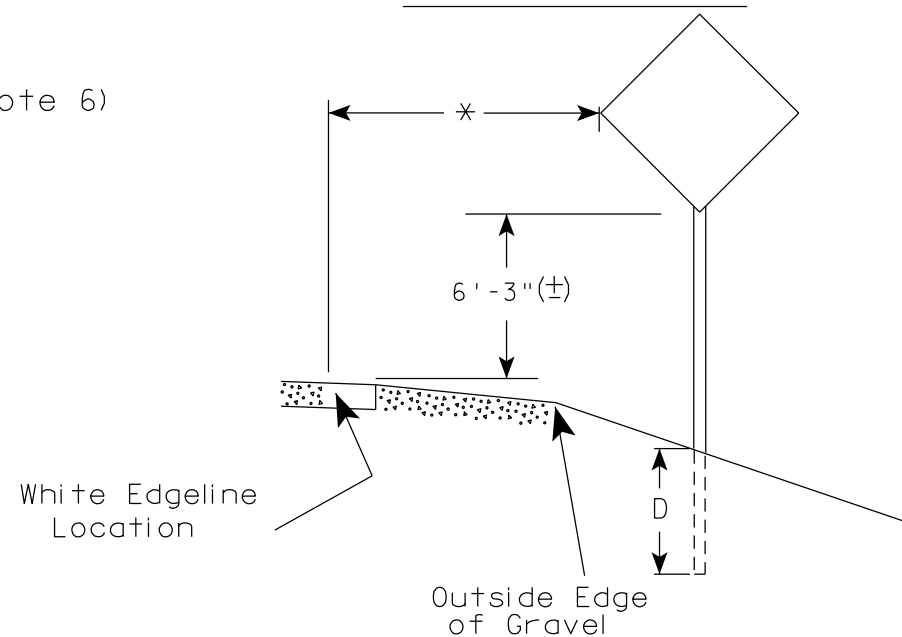
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

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

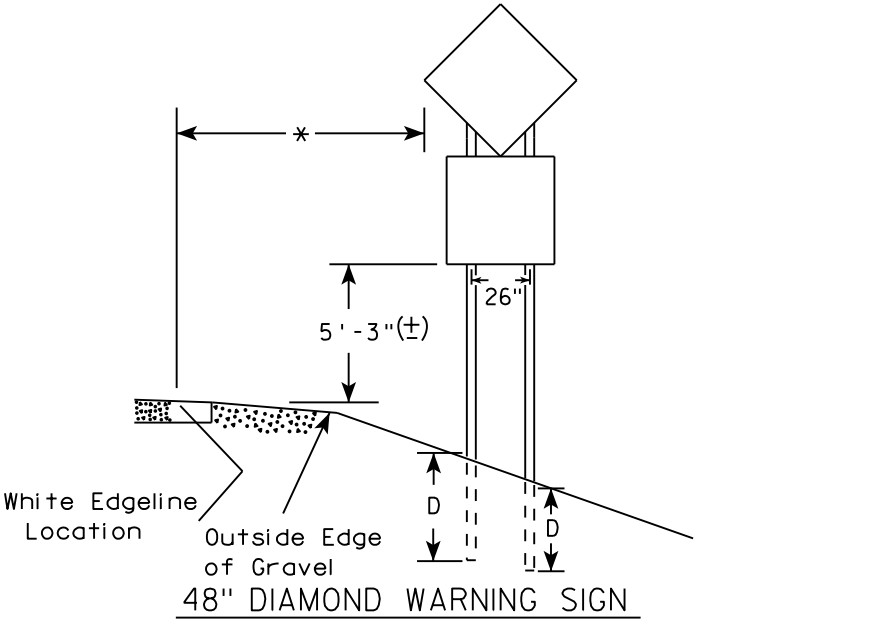
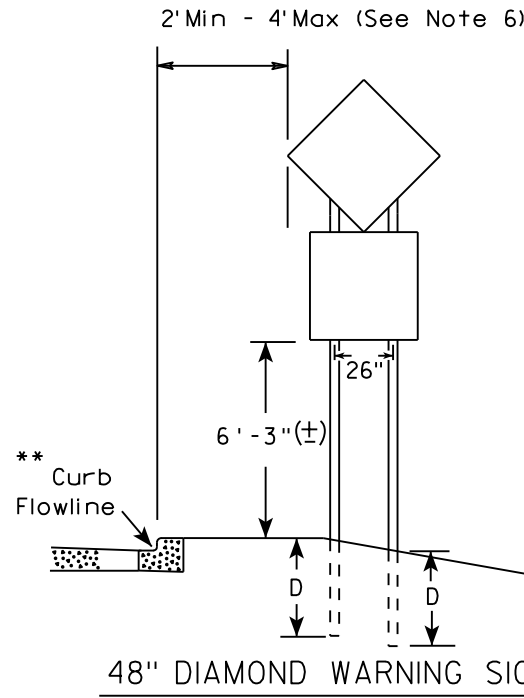
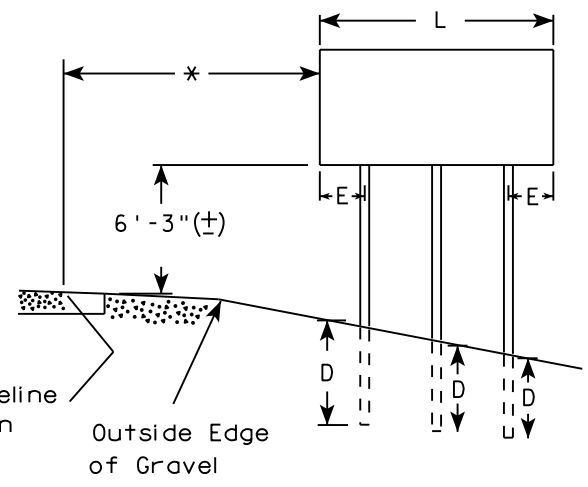
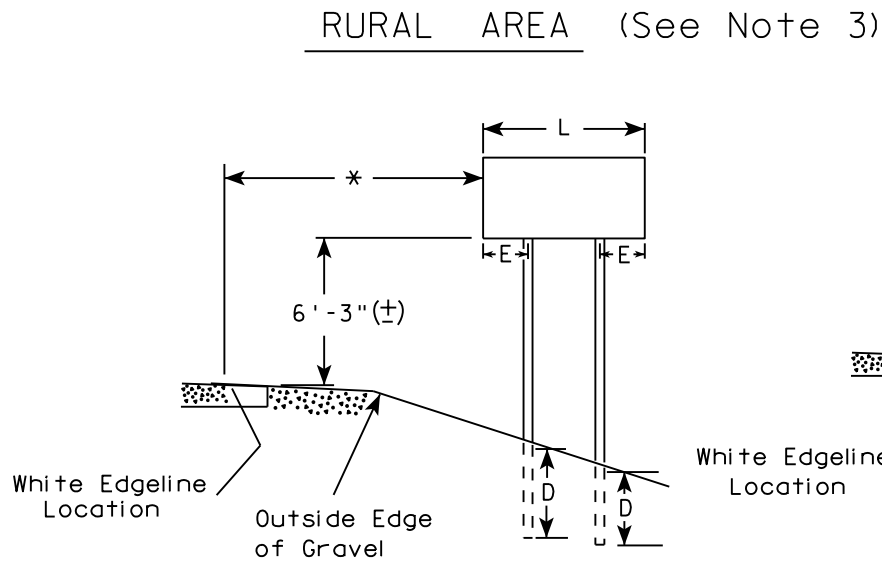
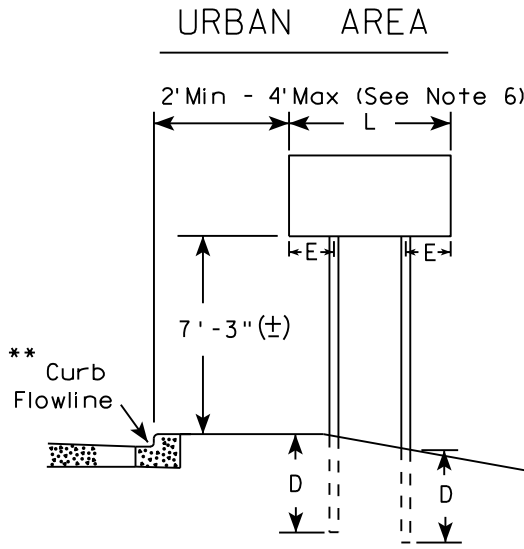
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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

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

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

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

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

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

POST EMBEDMENT DEPTH

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

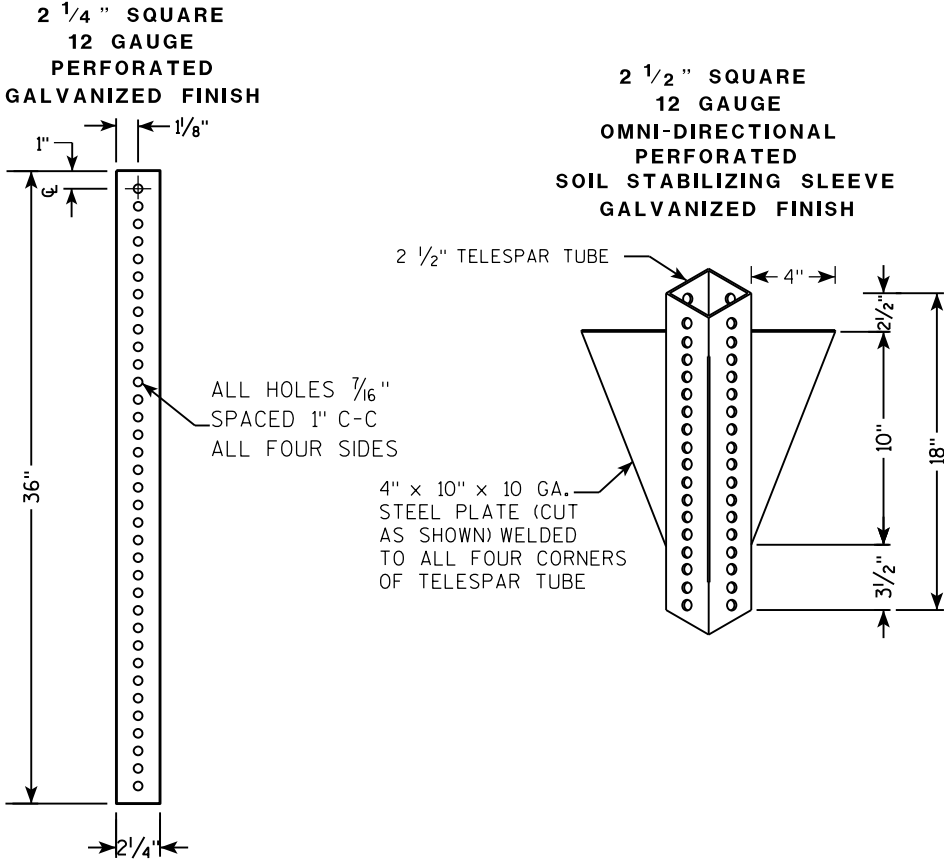
TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

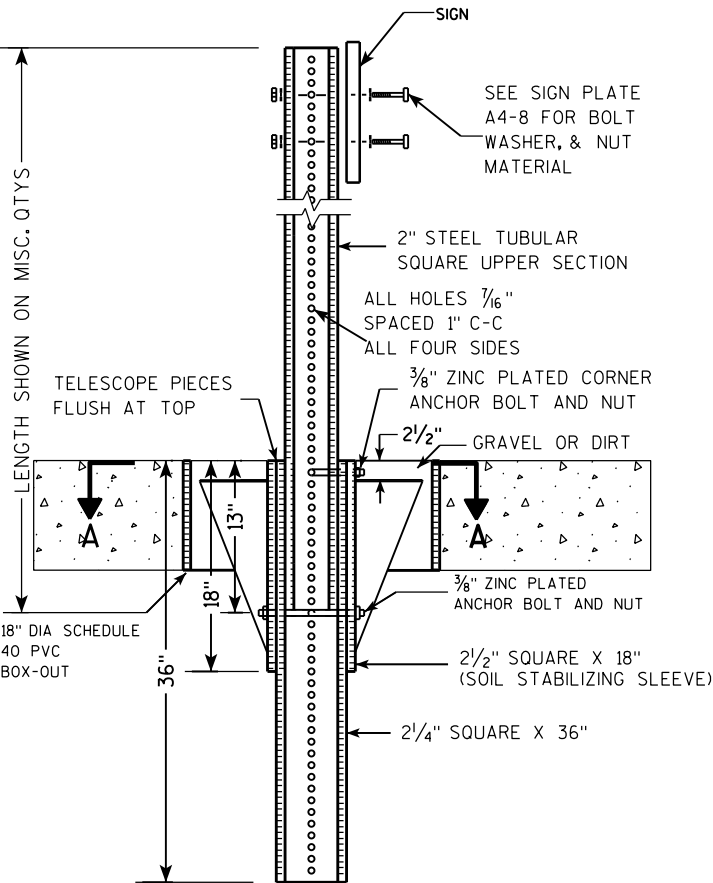
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

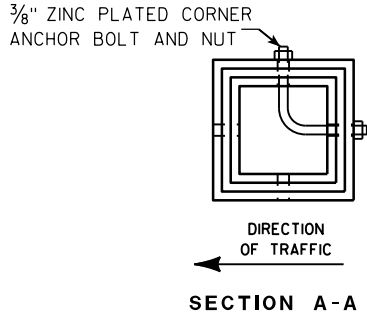
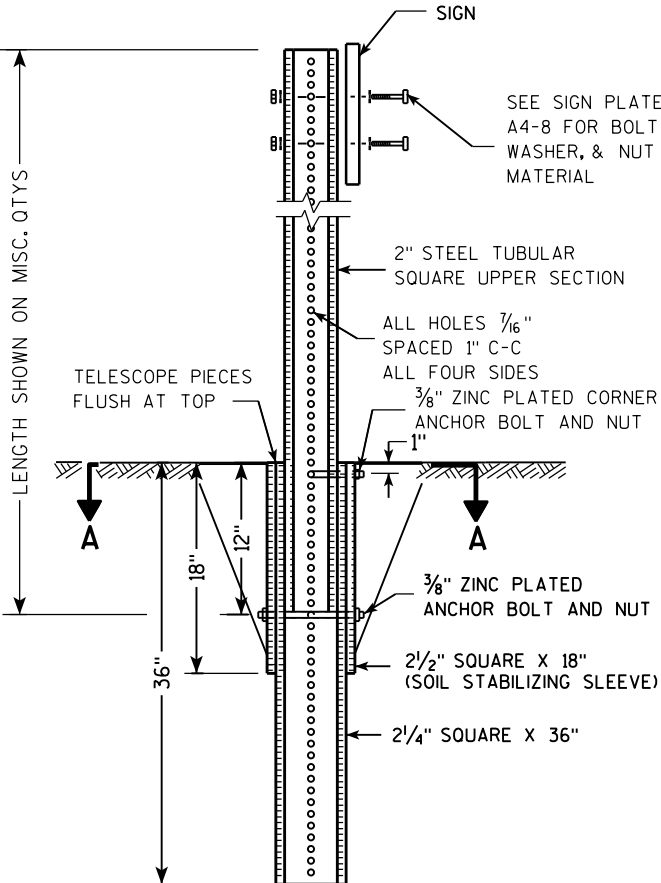
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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



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



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

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

TUBULAR STEEL
SIGN POST
A4-9

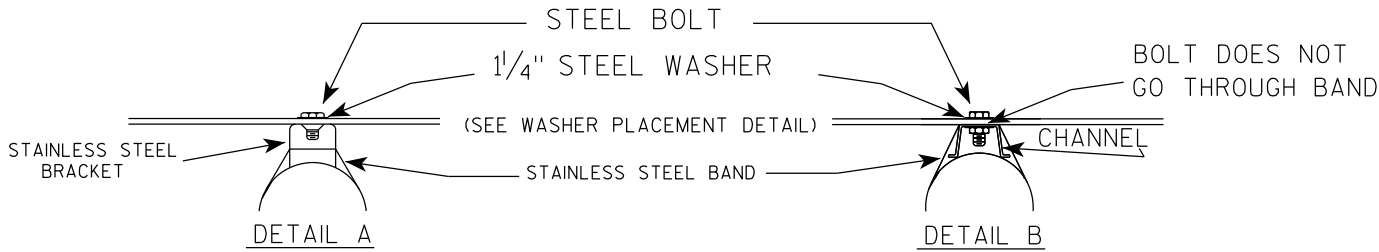
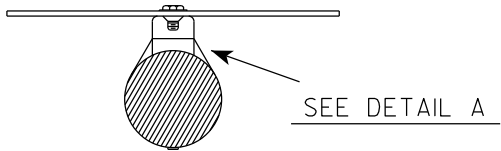
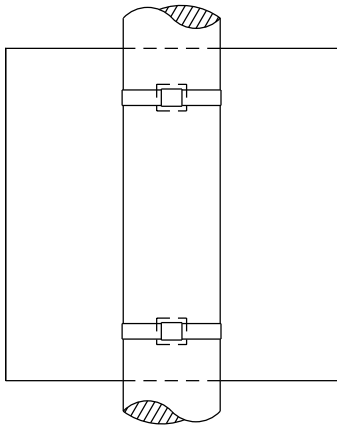
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

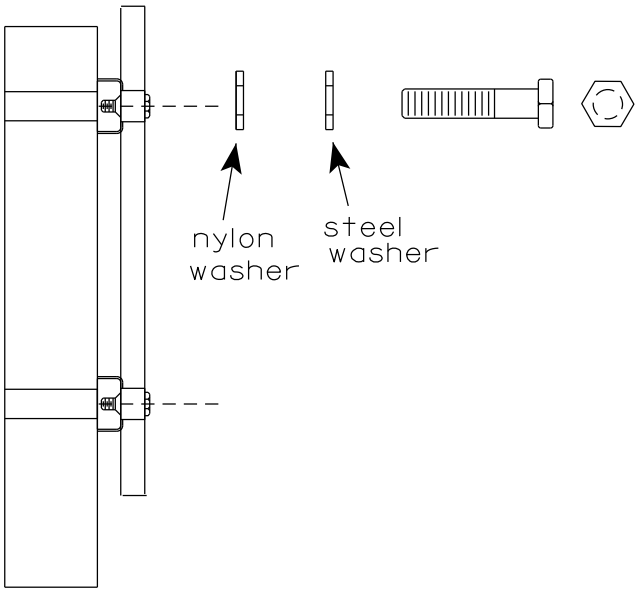
DATE 2/05/15 PLATE NO. A4-9.9

BANDING

SINGLE SIGN



WASHER PLACEMENT

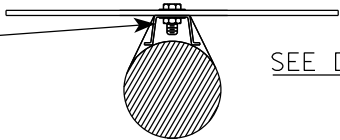
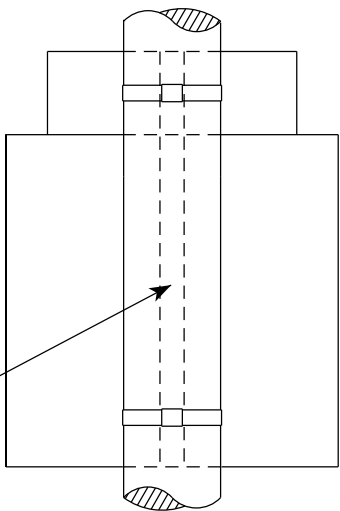


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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



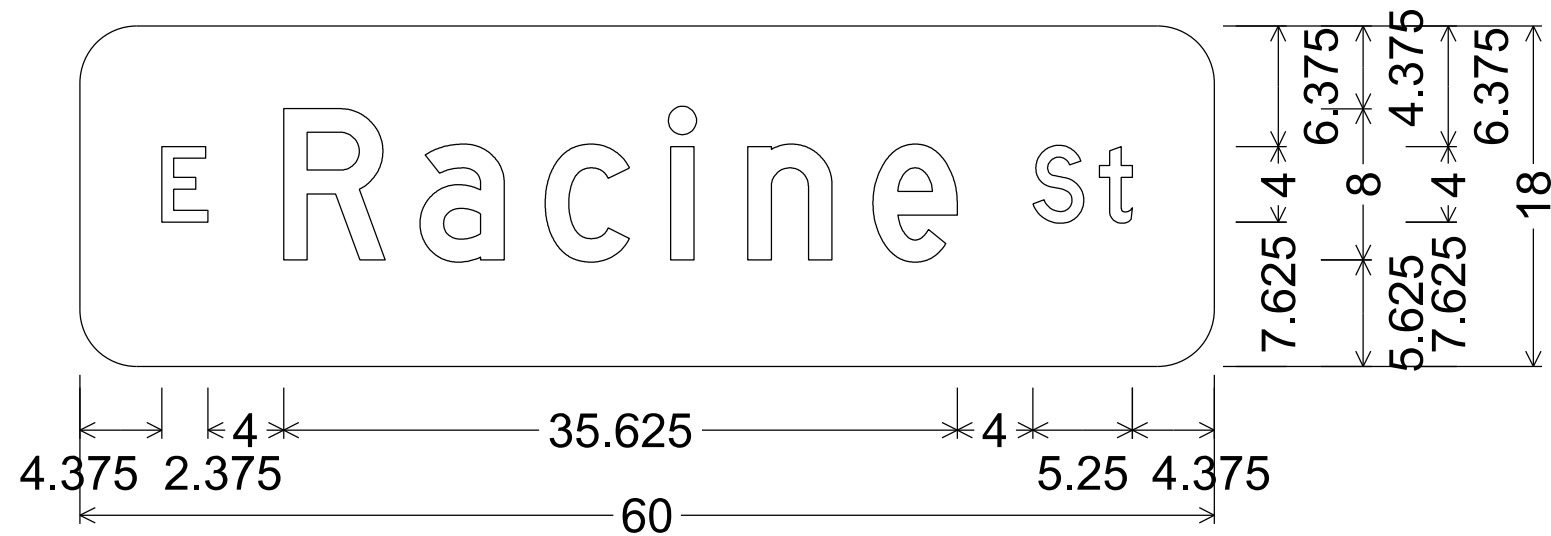
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

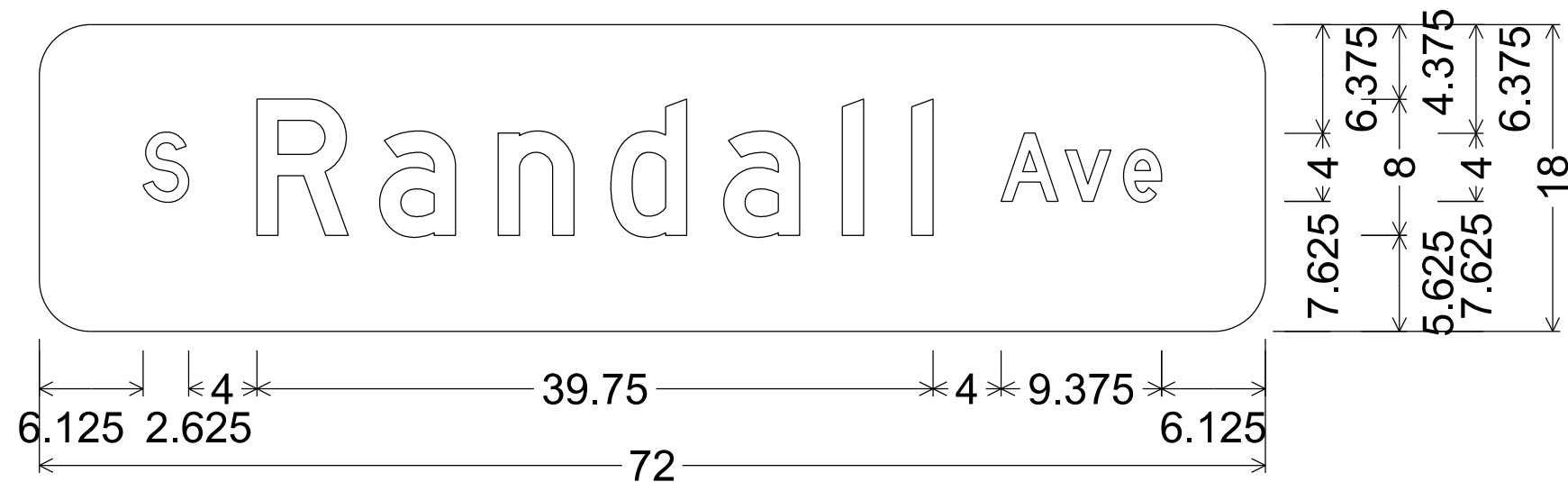
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

NOTES

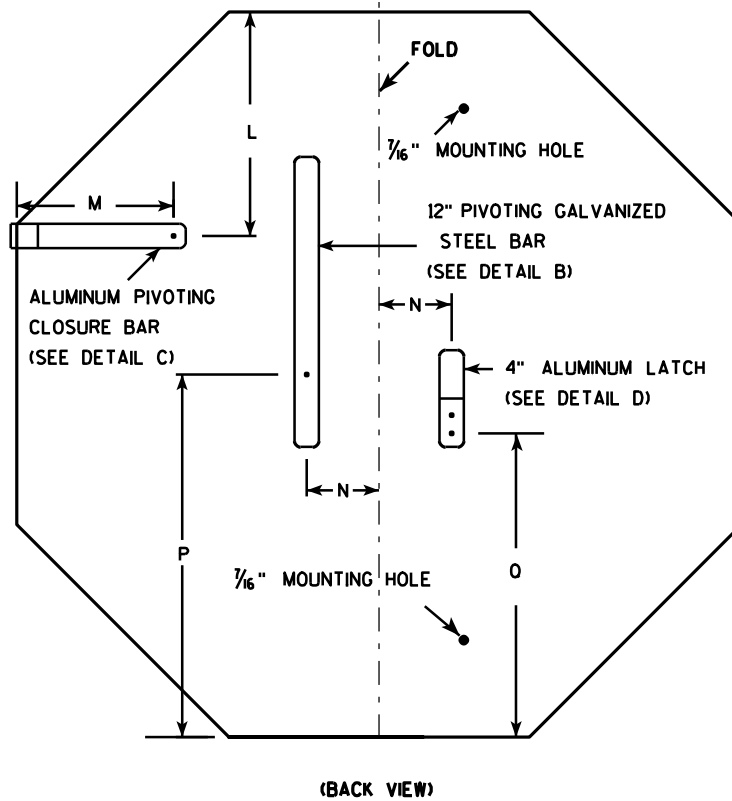
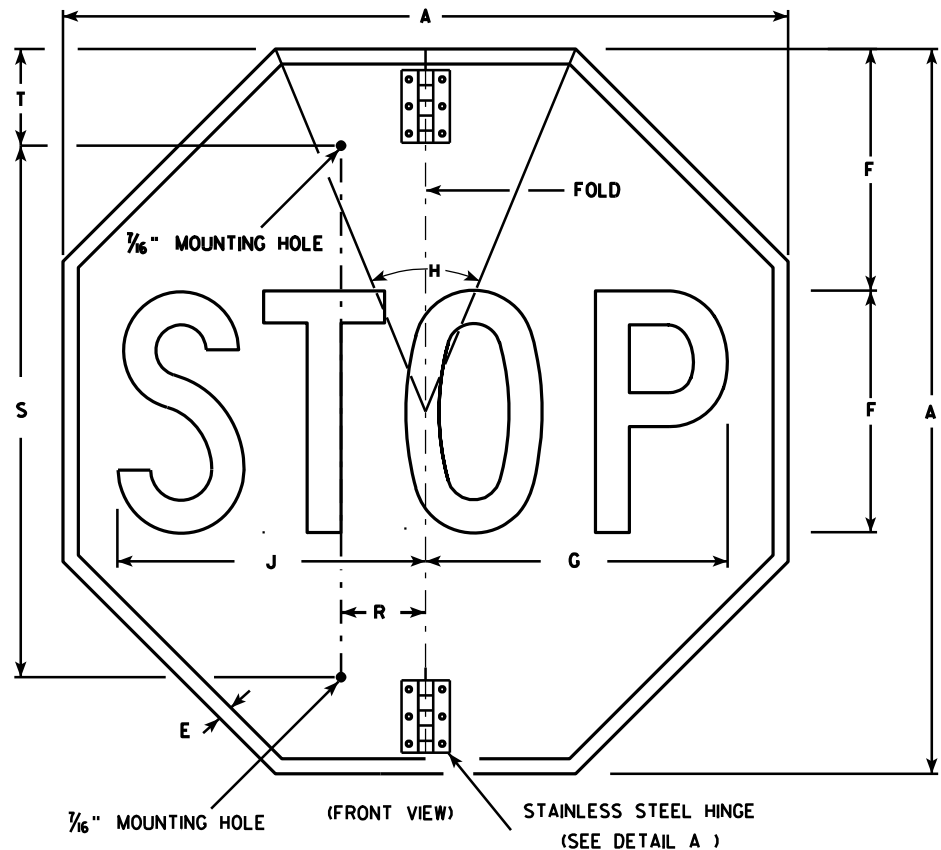
1. All Signs Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - D



M1-94H; 3.000" Radius, No border

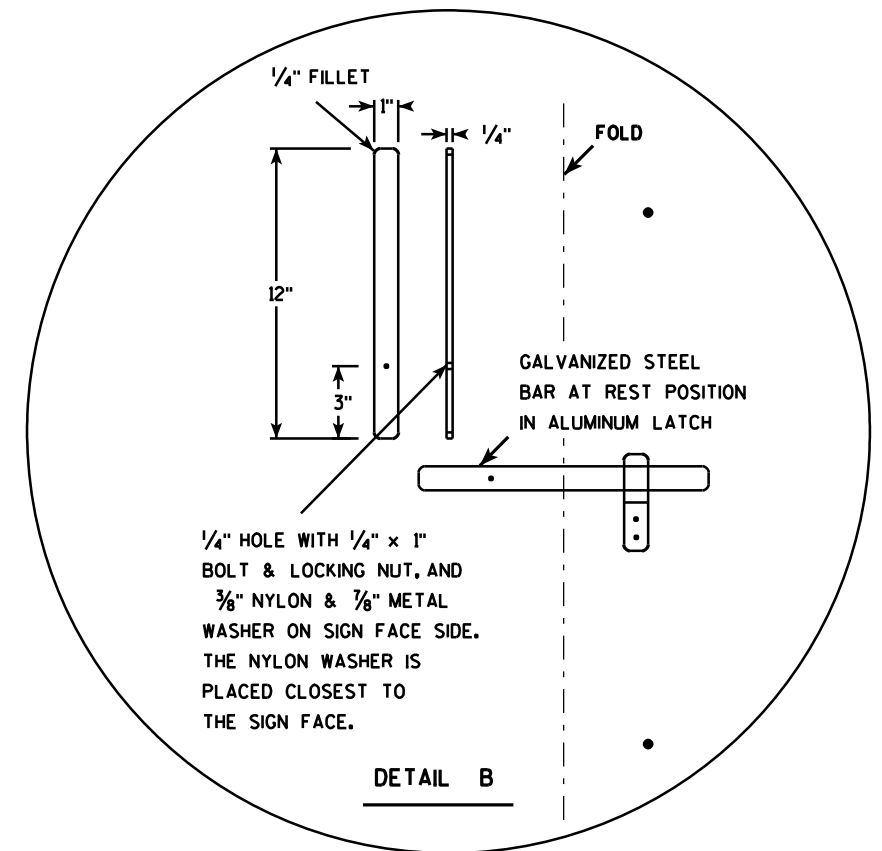
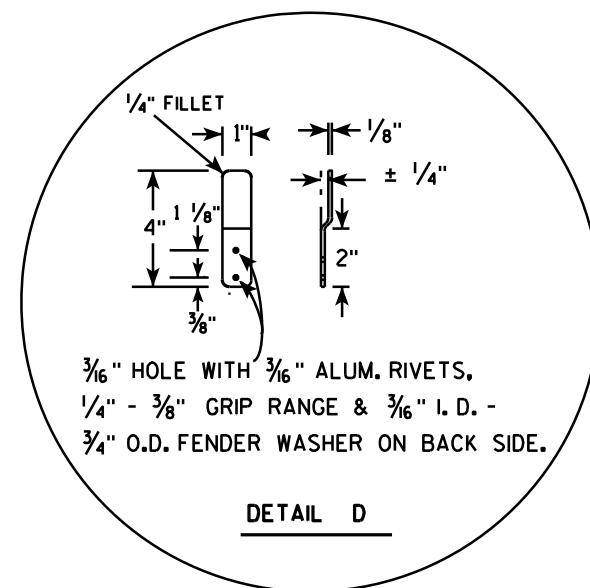
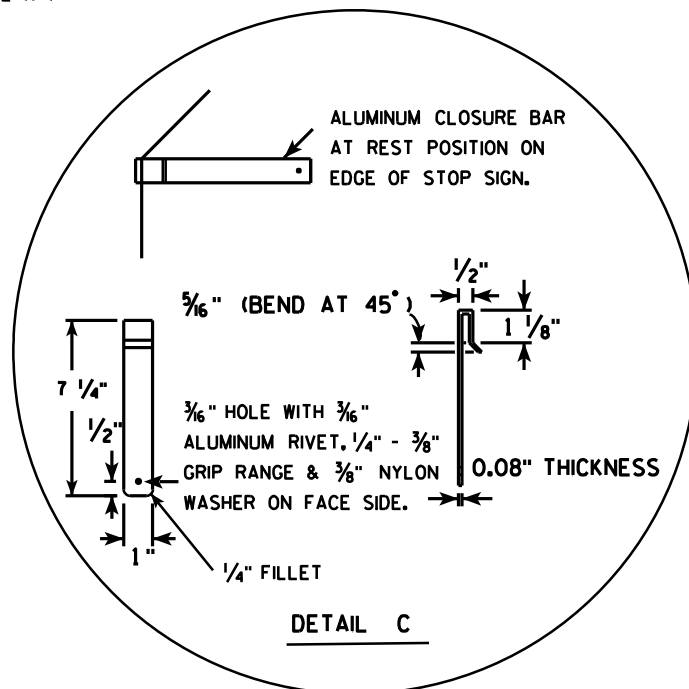
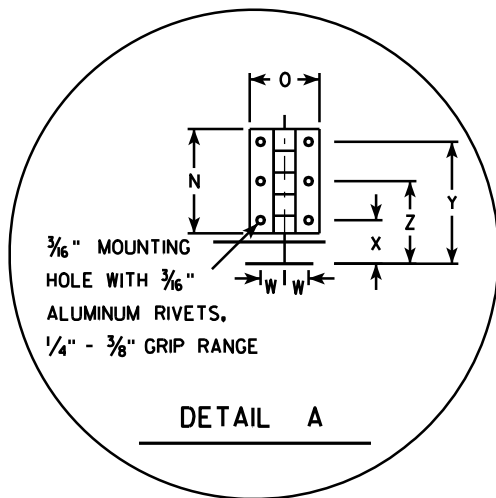


M1-94H; 3.000" Radius, No border



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: 5990-01-32

HWY: LOC STR

COUNTY: ROCK

PERMANENT SIGNING

SHEET NO:

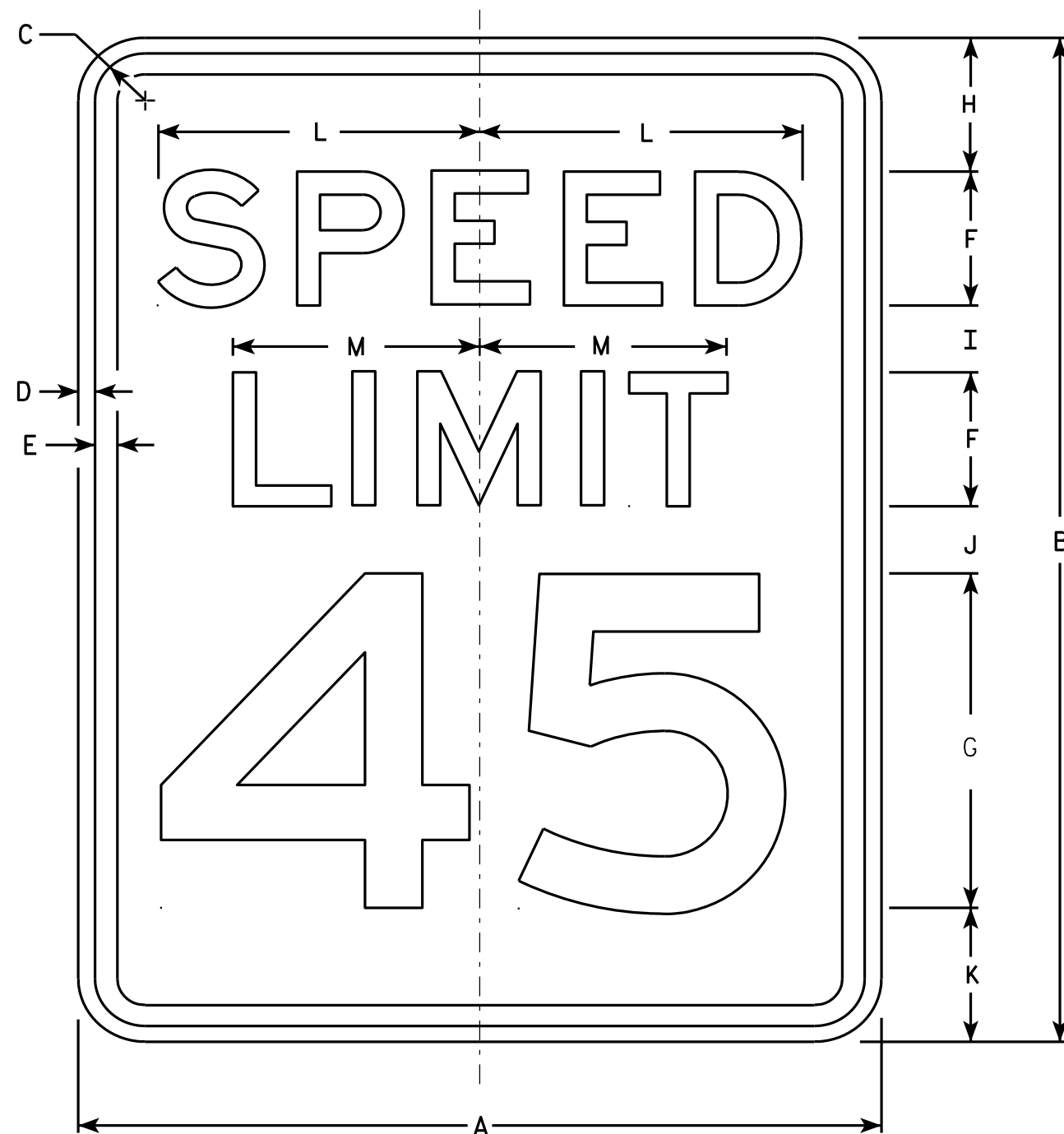
E

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



R2-1

NOTES

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

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

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: 5990-01-32

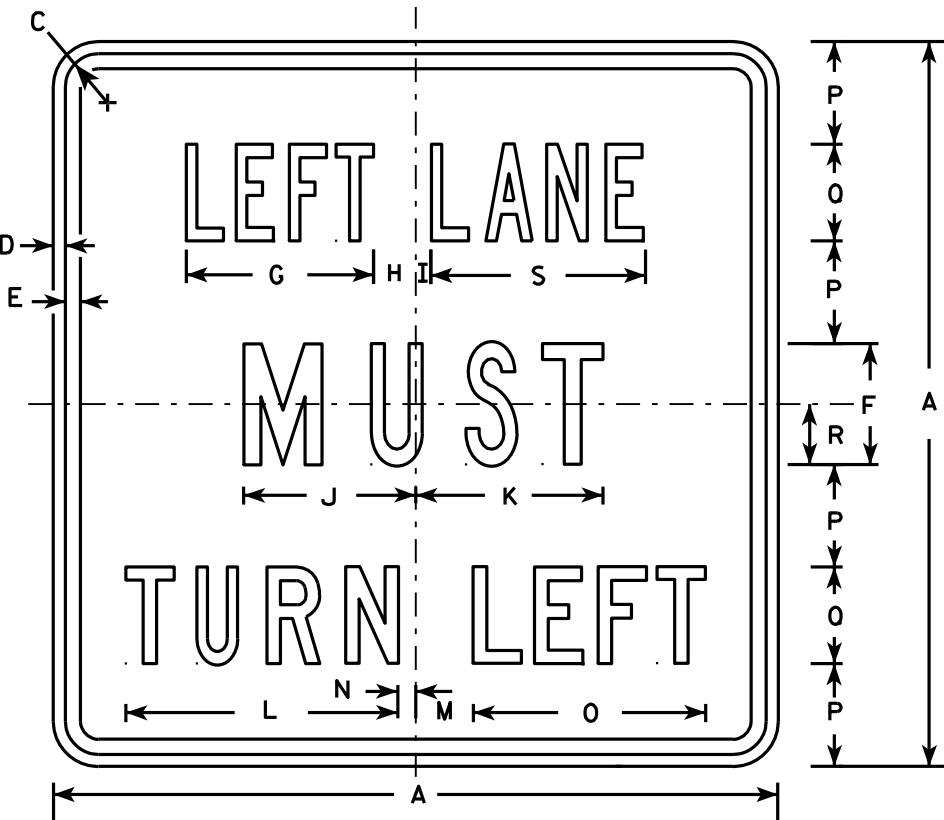
HWY: LOC STR

COUNTY: ROCK

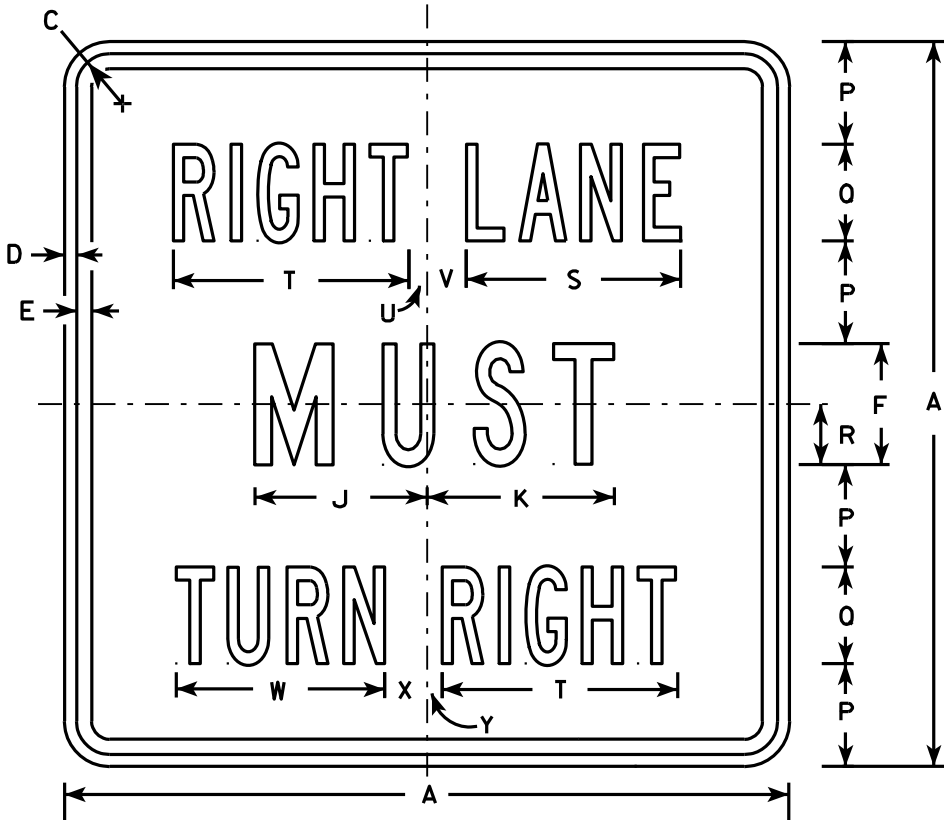
PERMANENT SIGNING

SHEET NO:

E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - Line 1 is Series B.
Line 2 is Series C.
Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

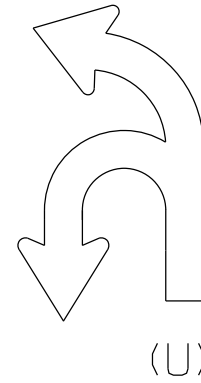
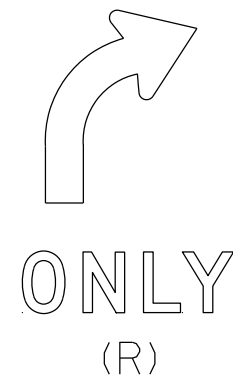
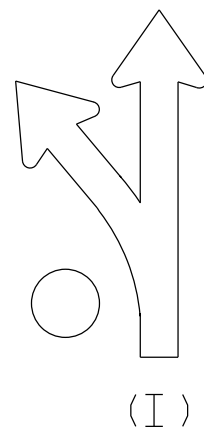
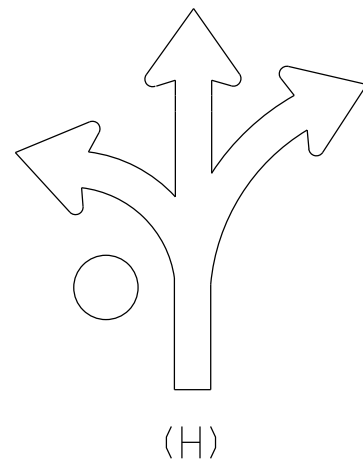
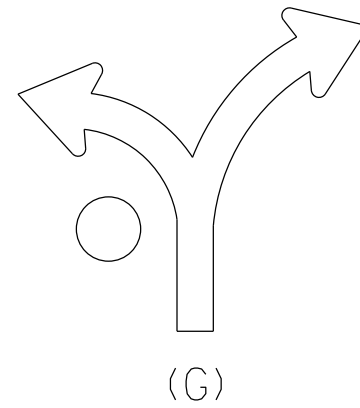
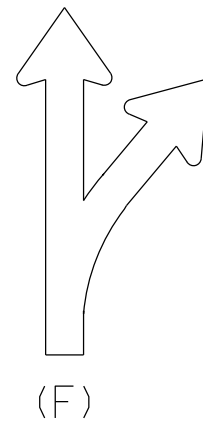
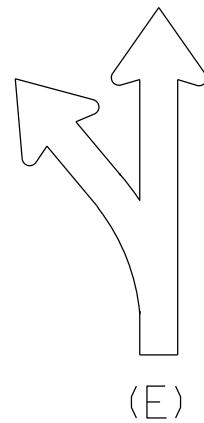
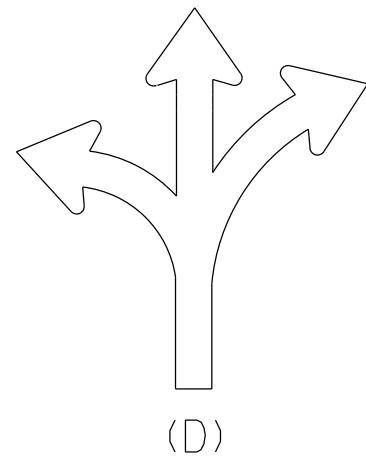
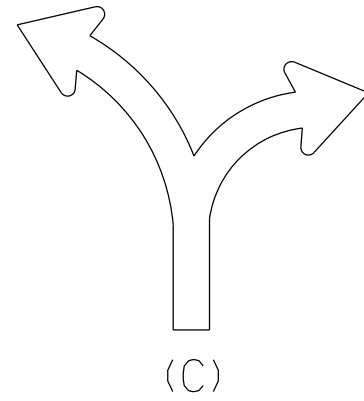
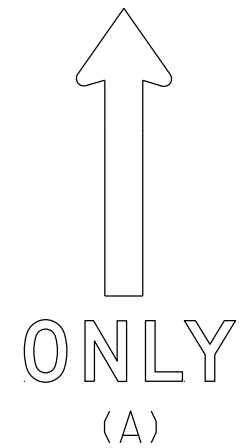
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3⁄8	1⁄2	5⁄8	5	7 3⁄4	1 3⁄4	5⁄8	7 1⁄8	7 3⁄4	11 1⁄4	2 3⁄8	3⁄4	9 5⁄8	4 1⁄4	4	2 1⁄2	8 7⁄8	9 3⁄4	3⁄4	1 5⁄8	8 5⁄8	1 5⁄8	5⁄8		6.25
2S	30		1 3⁄8	1⁄2	5⁄8	5	7 3⁄4	1 3⁄4	5⁄8	7 1⁄8	7 3⁄4	11 1⁄4	2 3⁄8	3⁄4	9 5⁄8	4 1⁄4	4	2 1⁄2	8 7⁄8	9 3⁄4	3⁄4	1 5⁄8	8 5⁄8	1 5⁄8	5⁄8		6.25
2M	30		1 3⁄8	1⁄2	5⁄8	5	7 3⁄4	1 3⁄4	5⁄8	7 1⁄8	7 3⁄4	11 1⁄4	2 3⁄8	3⁄4	9 5⁄8	4 1⁄4	4	2 1⁄2	8 7⁄8	9 3⁄4	3⁄4	1 5⁄8	8 5⁄8	1 5⁄8	5⁄8		6.25
3	36		1 5⁄8	5⁄8	3⁄4	6	9 5⁄8	2	1 1⁄8	8 3⁄4	9	13 1⁄2	3 7⁄8	1 1⁄2	12 1⁄2	5	5	3	10 5⁄8	12	7⁄8	2 1⁄4	10 5⁄8	2 1⁄8	1		9.00
4	48		2 1⁄4	3⁄4	1	8	13 1⁄2	2 3⁄8	1 1⁄2	11 1⁄2	11 7⁄8	17 3⁄4	3 5⁄8	2 1⁄2	16 3⁄8	6 1⁄2	7	4	14 3⁄8	16 7⁄8	5⁄8	3 1⁄4	15 1⁄8	2 3⁄4	1 1⁄8		16.00
5																											

STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3



NOTES

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

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

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

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

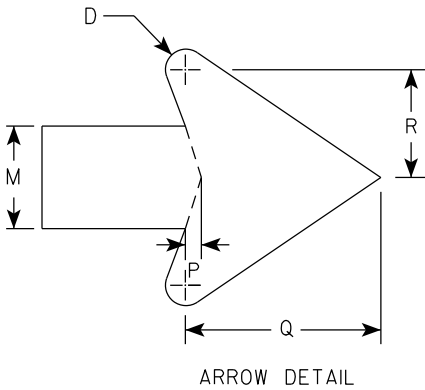
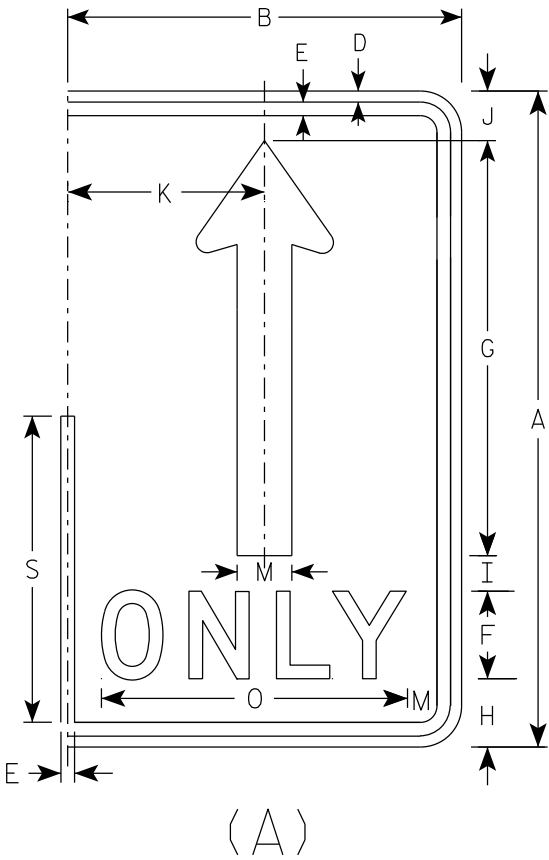
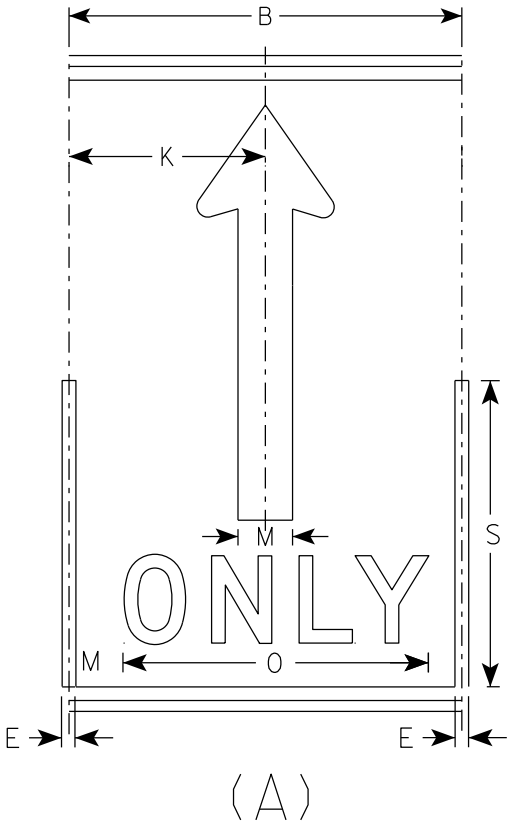
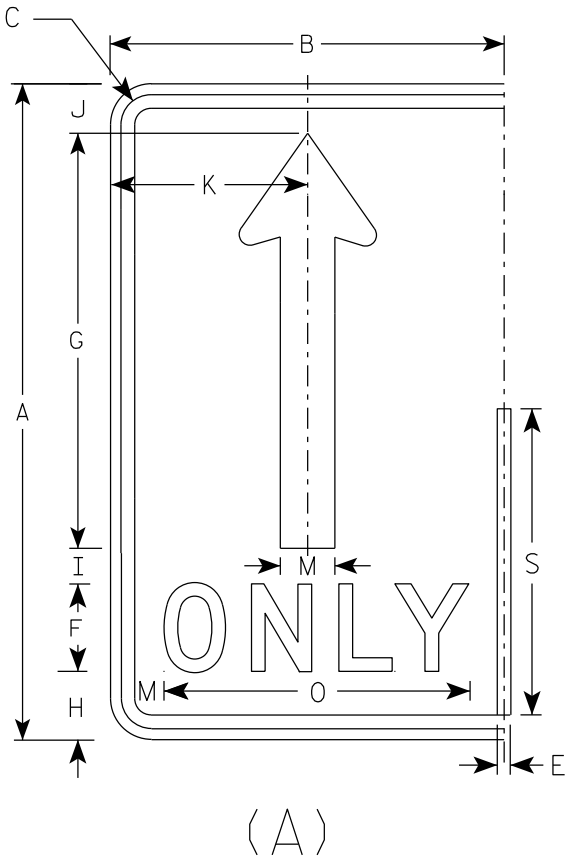
7

NOTES

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

Background - White

Message - Black
3. Message Series - D



7

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

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

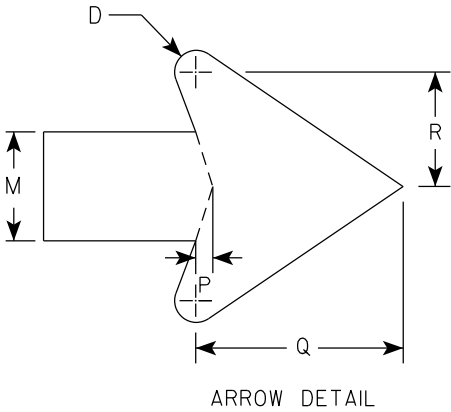
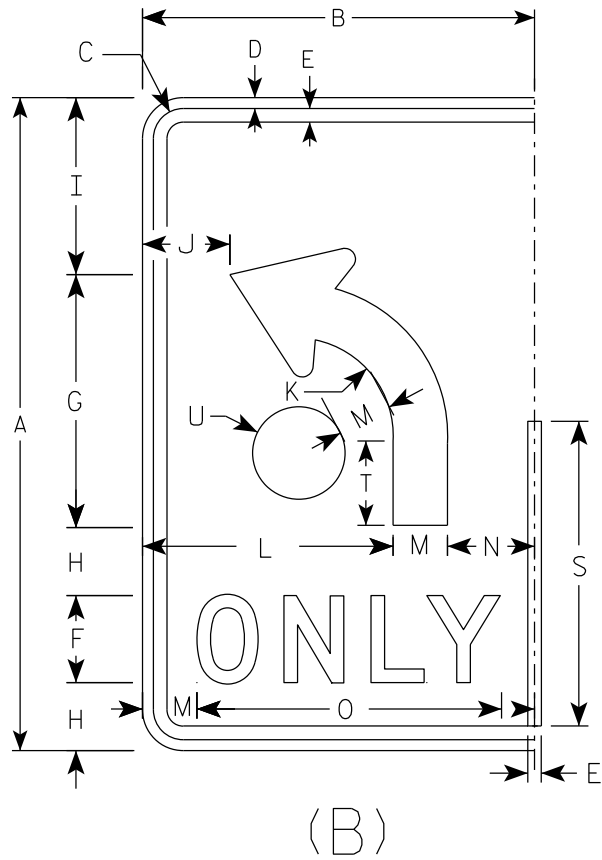
NOTES

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

Background - White

Message - Black

Message Series - D



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

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

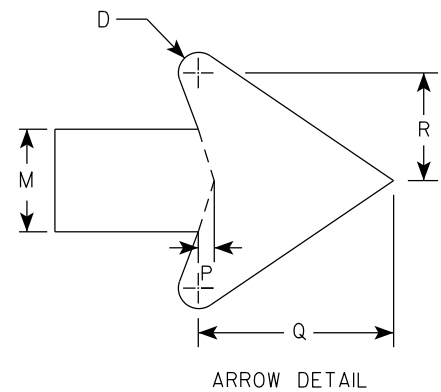
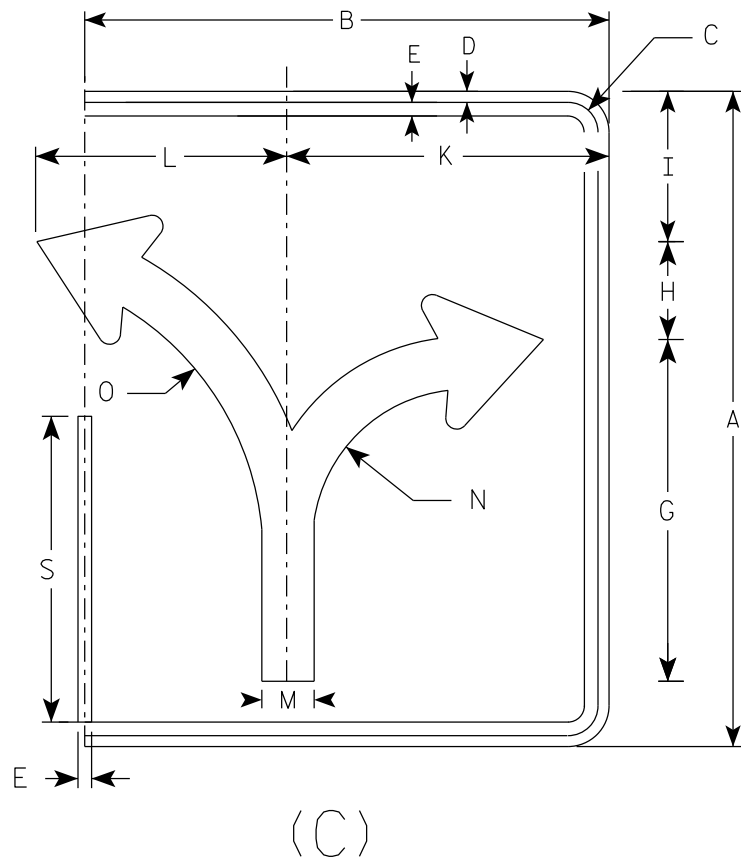
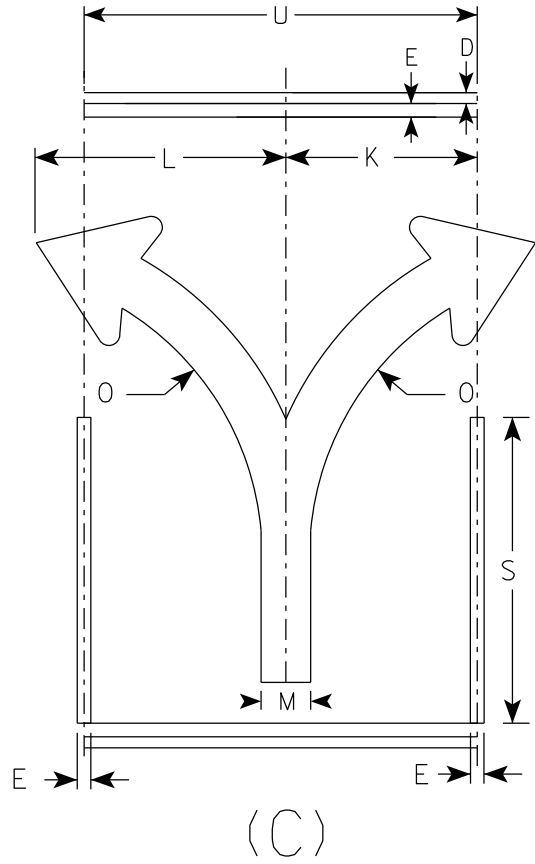
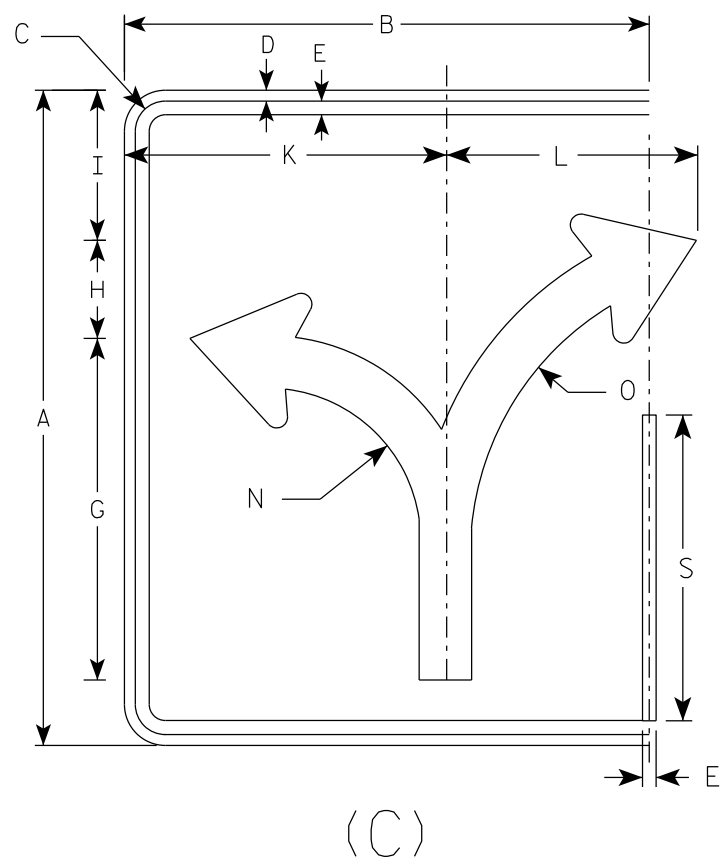
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 5/21/19

PLATE NO. R3-8.1

7



NOTES

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

																												ENDS	MIDDLE
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. ft.	
1																													
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75	
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75	
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0	
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0	
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0	

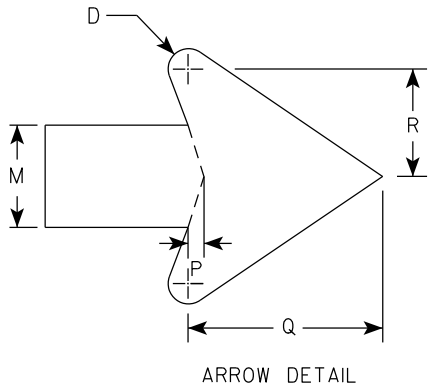
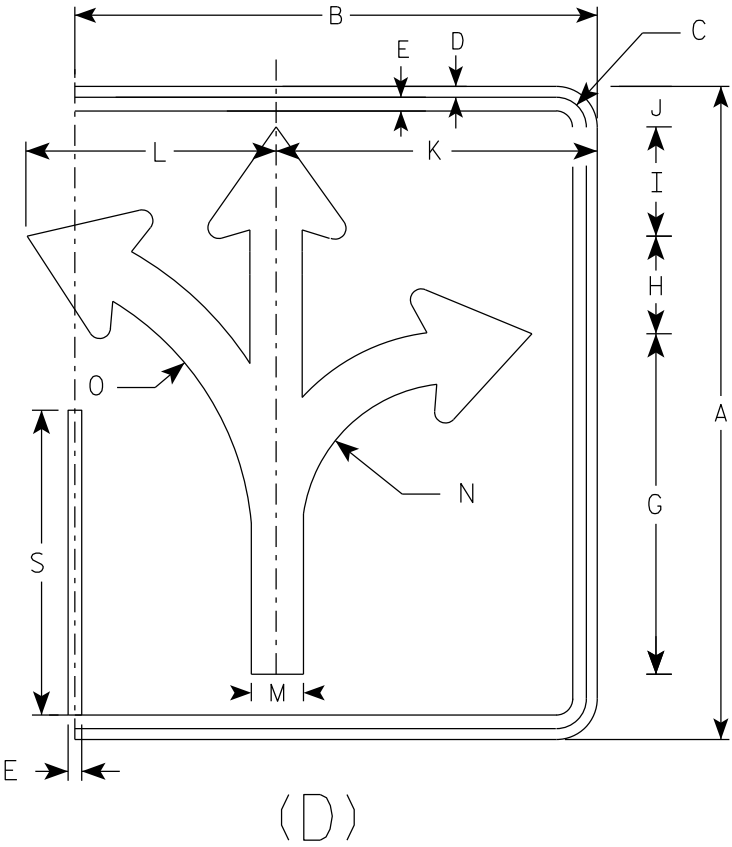
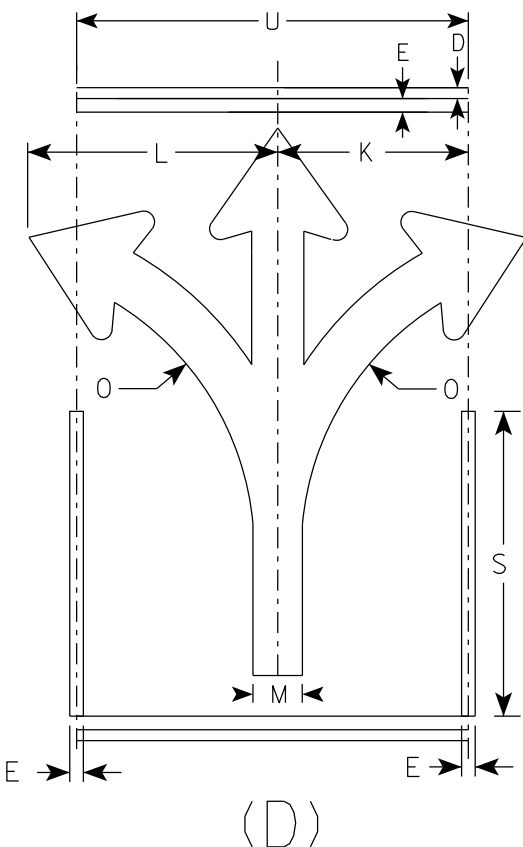
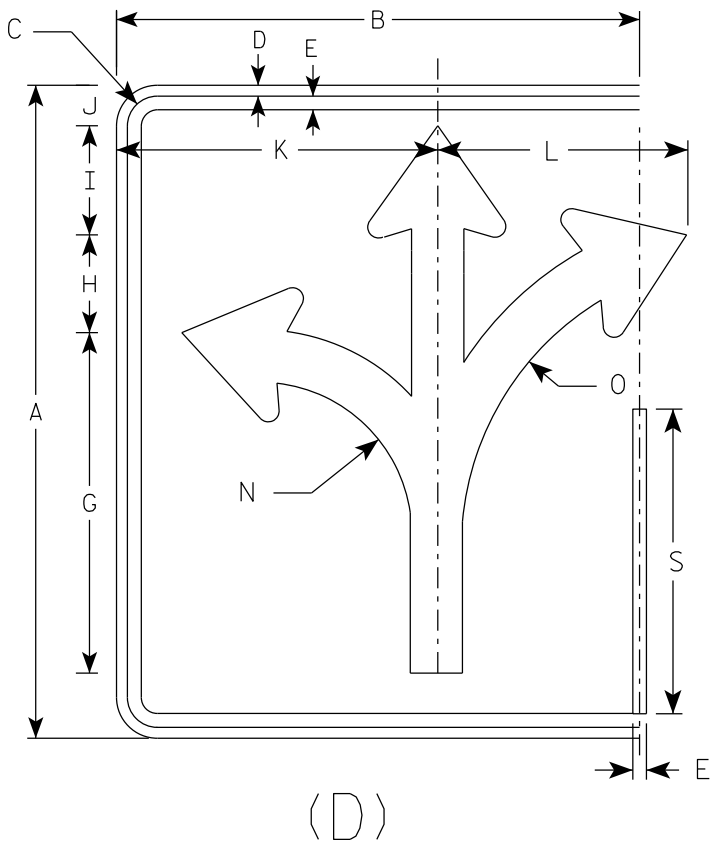
PROJECT NO: 5990-01-32			HWY: LOC STR			COUNTY: ROCK			PERMANENT SIGNING			SHEET NO:			E
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7

7

NOTES

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



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS	MIDDLE
																											Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN

R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

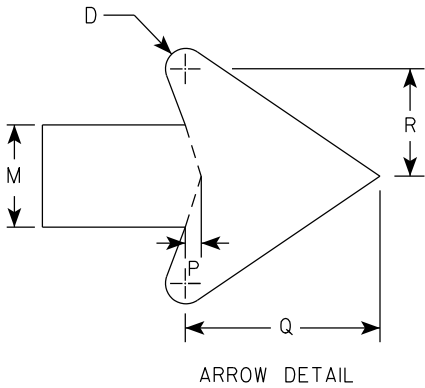
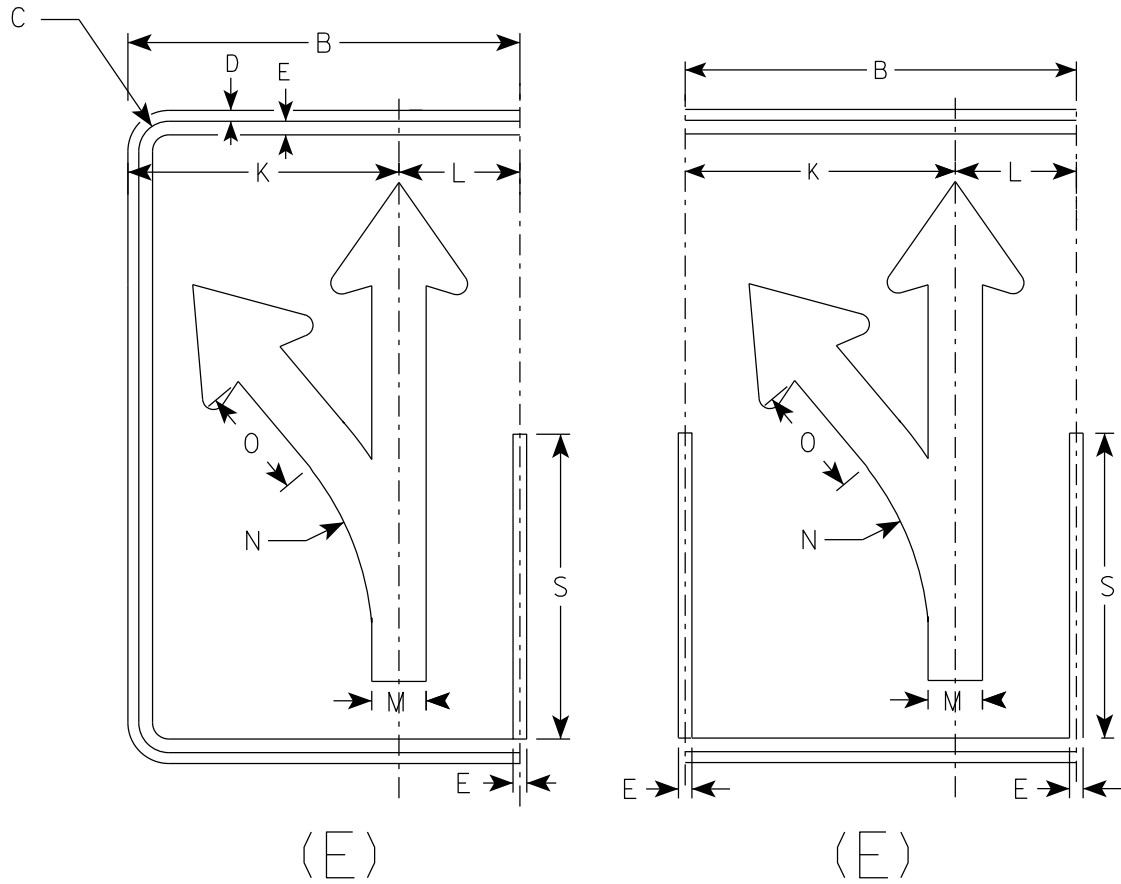
APPROVED *Matthew R. Rauch*

for State Traffic Engineer

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

NOTES

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



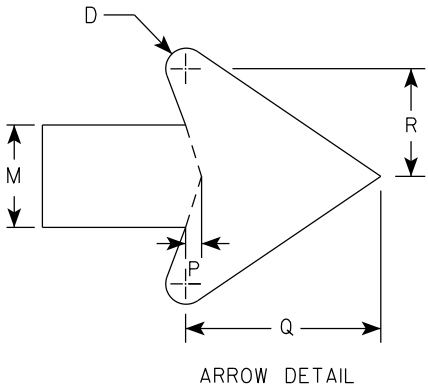
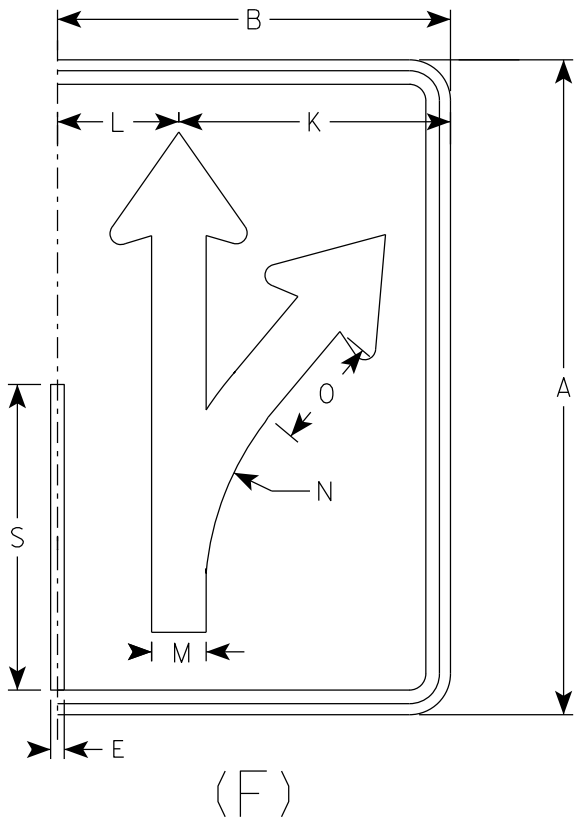
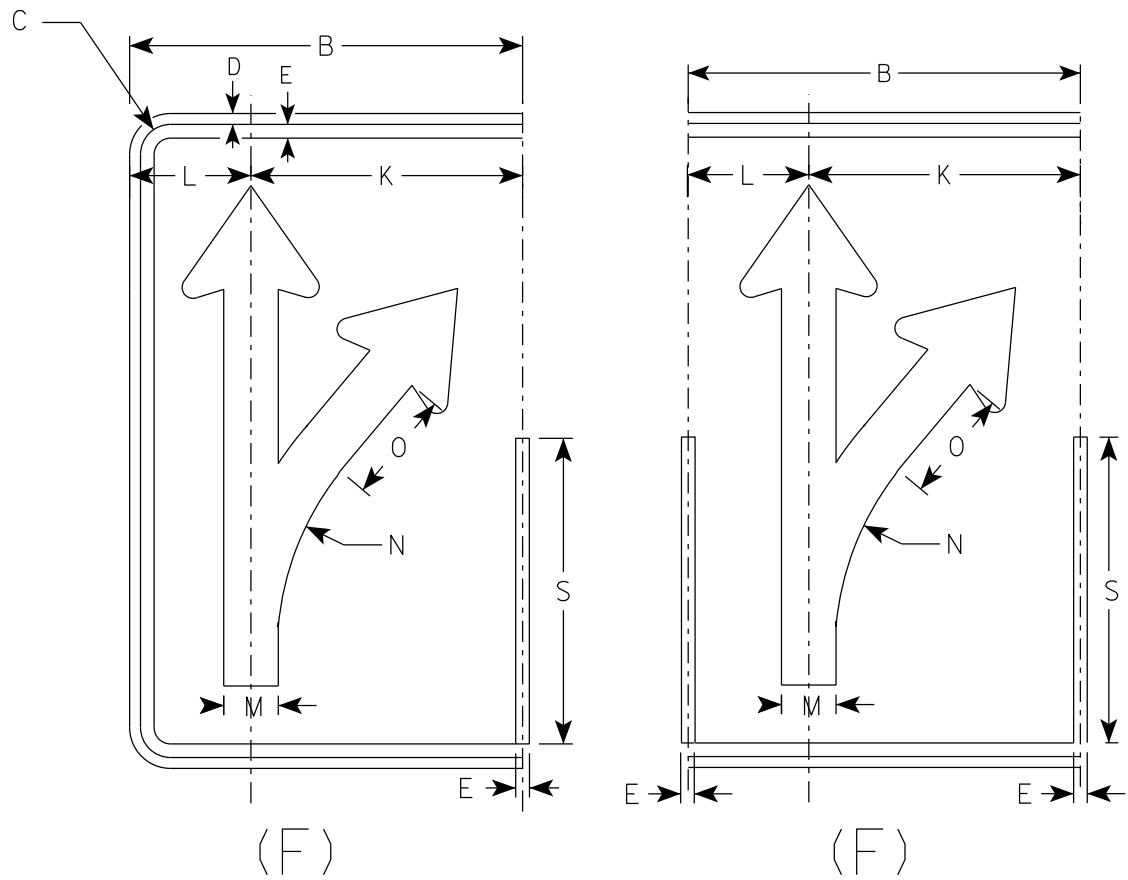
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14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

NOTES

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

Background - White

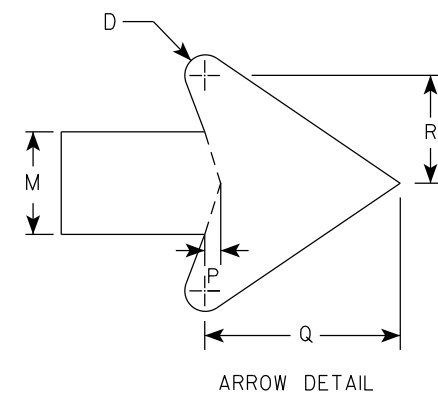
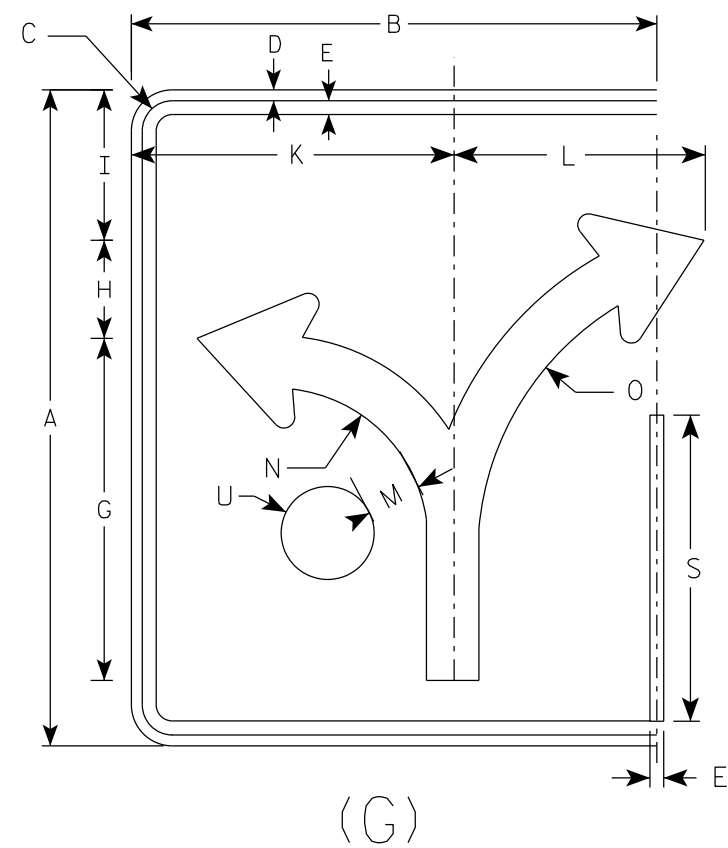
Message - Black
3. Message Series - None



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

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (G) Arrow

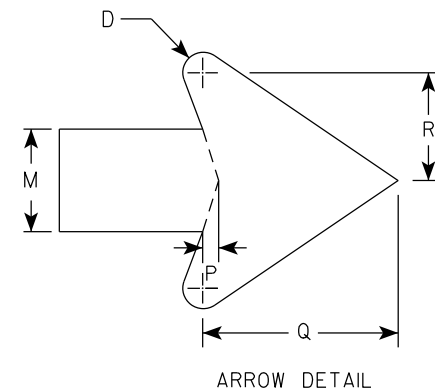
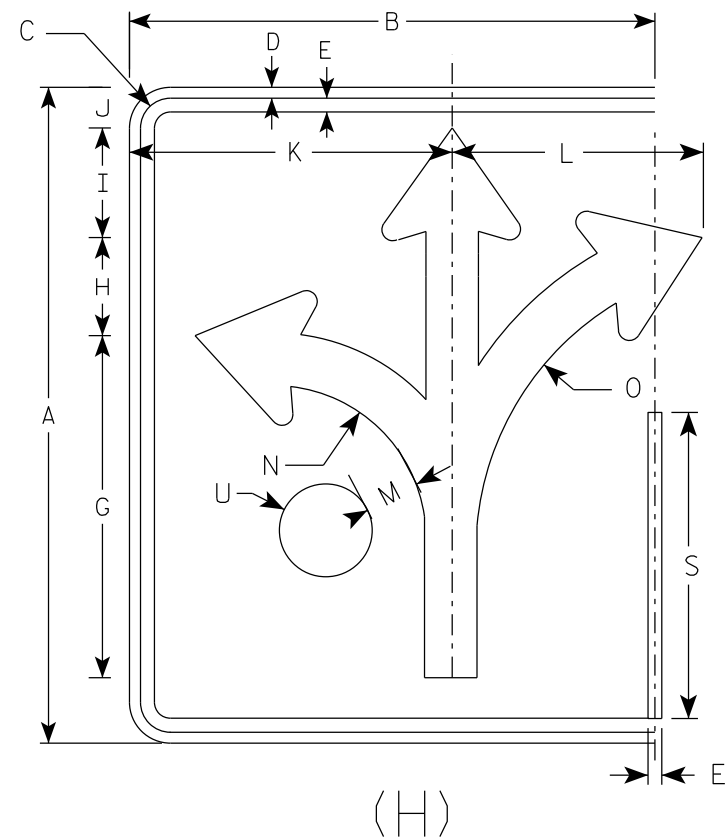
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	3 1⁄8	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

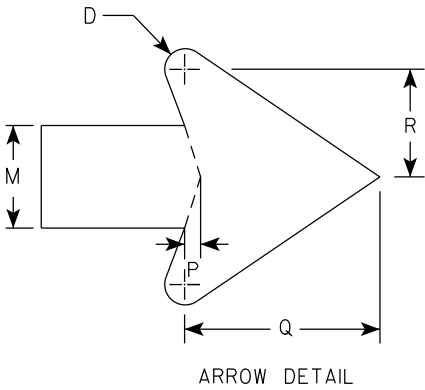
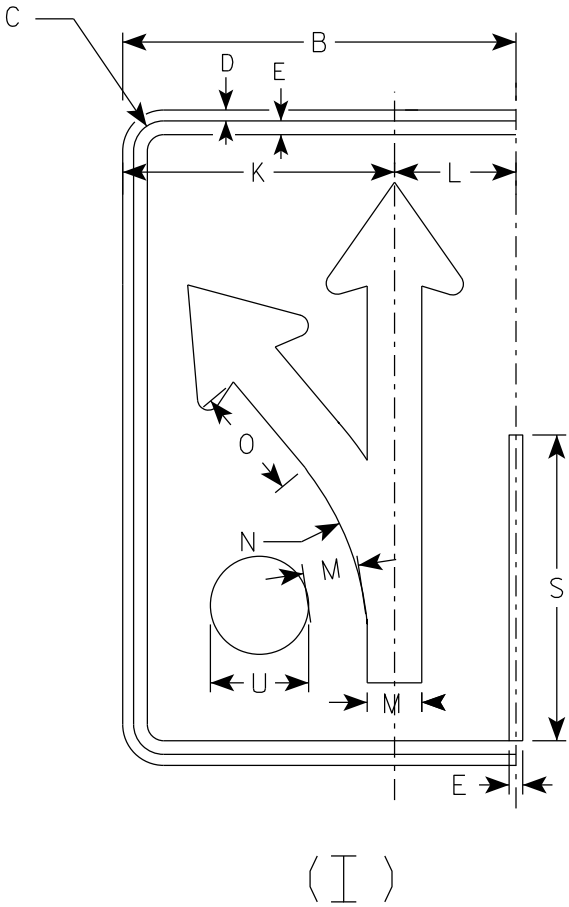
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

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

Background - White

Message - Black
3. Message Series - None



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

STANDARD SIGN

R3-8 (I) Arrow

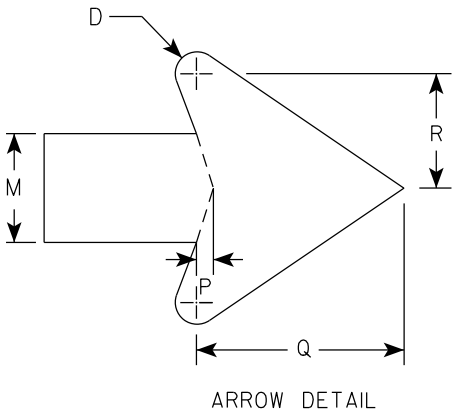
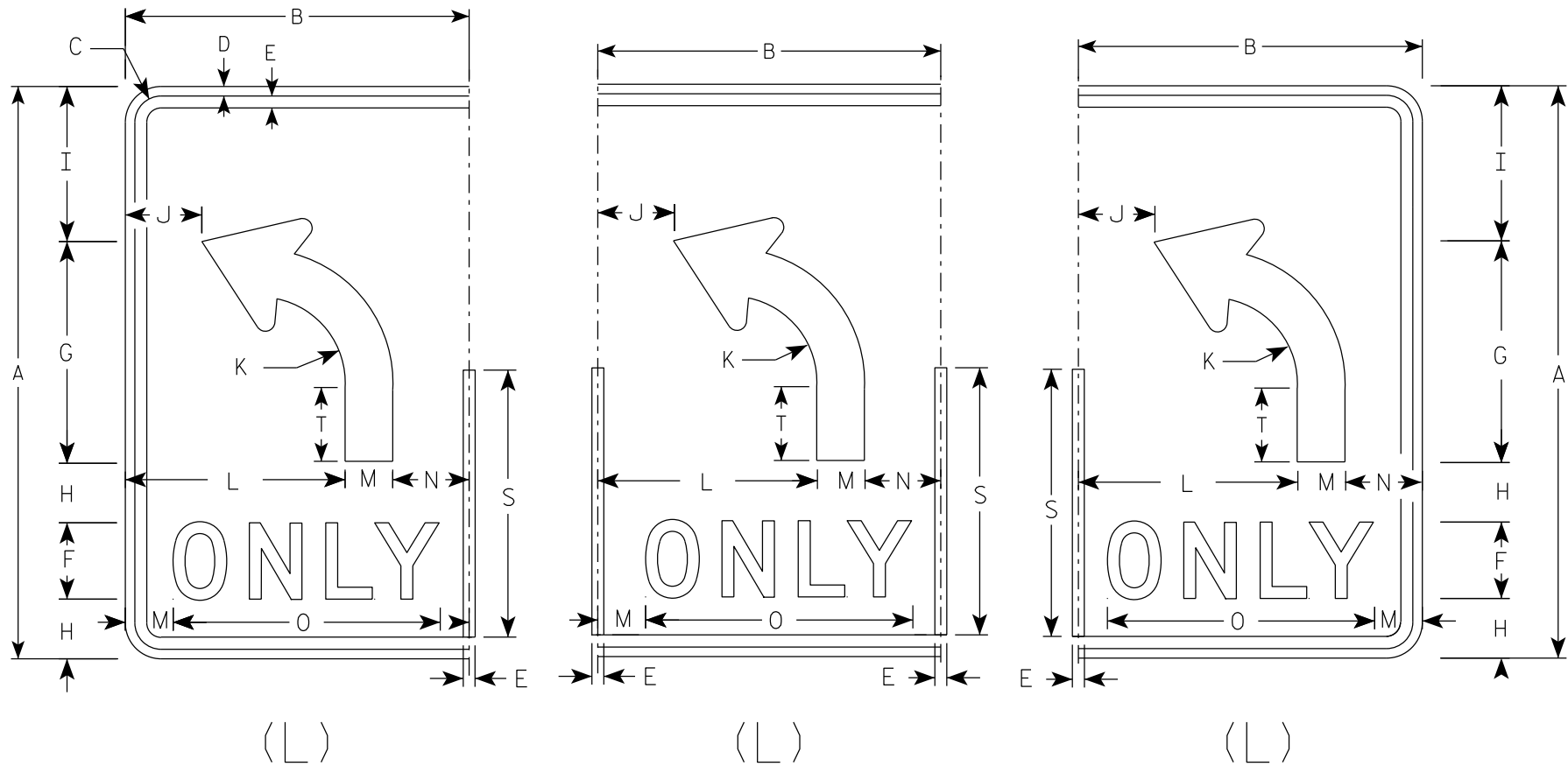
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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



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

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

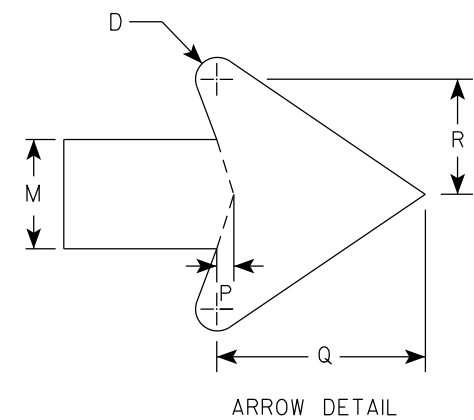
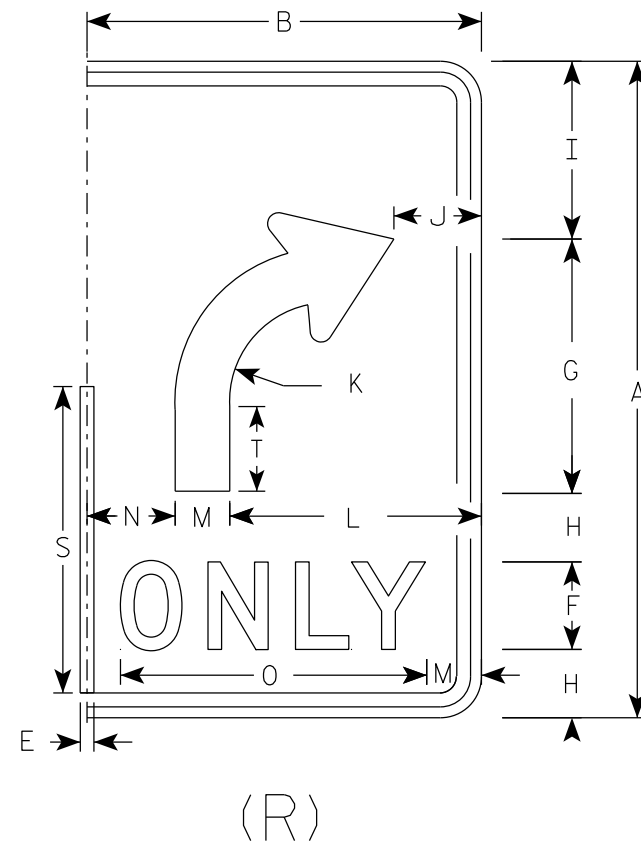
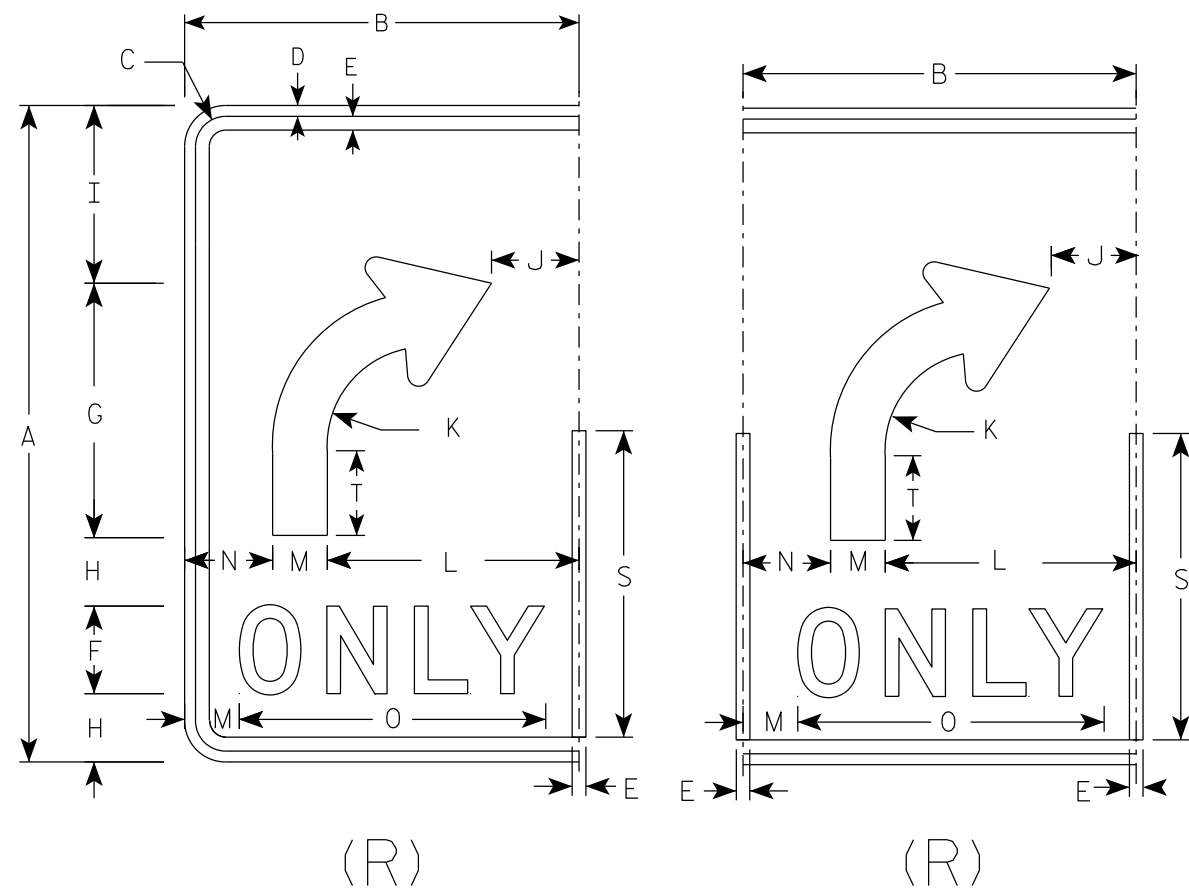
for State Traffic Engineer

DATE 5/21/19

PLATE NO. R3-8.1

NOTES

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



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

STANDARD SIGN

R3-8 (R) Arrow

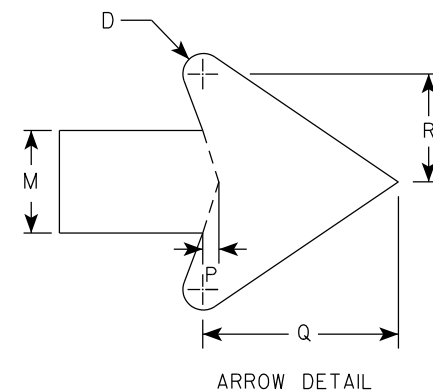
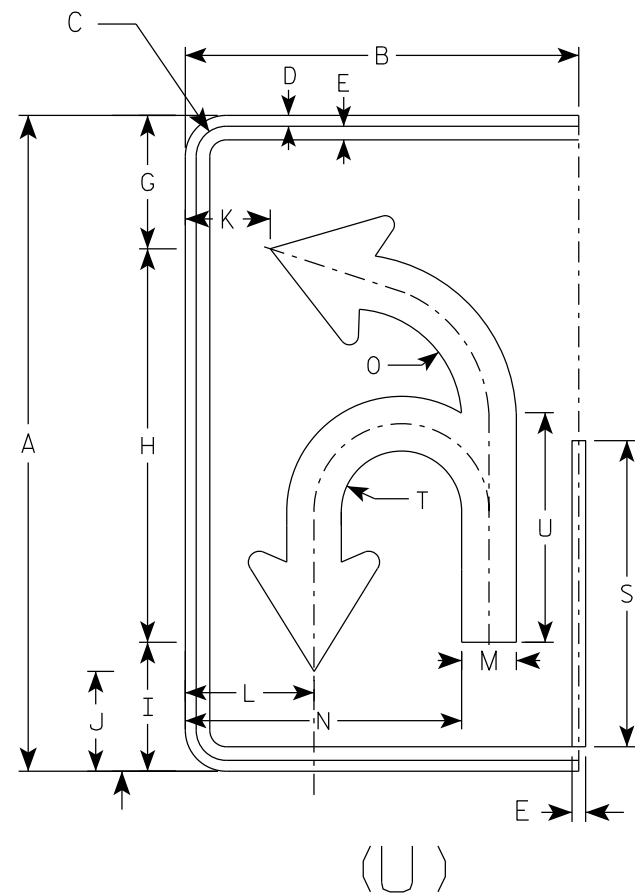
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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



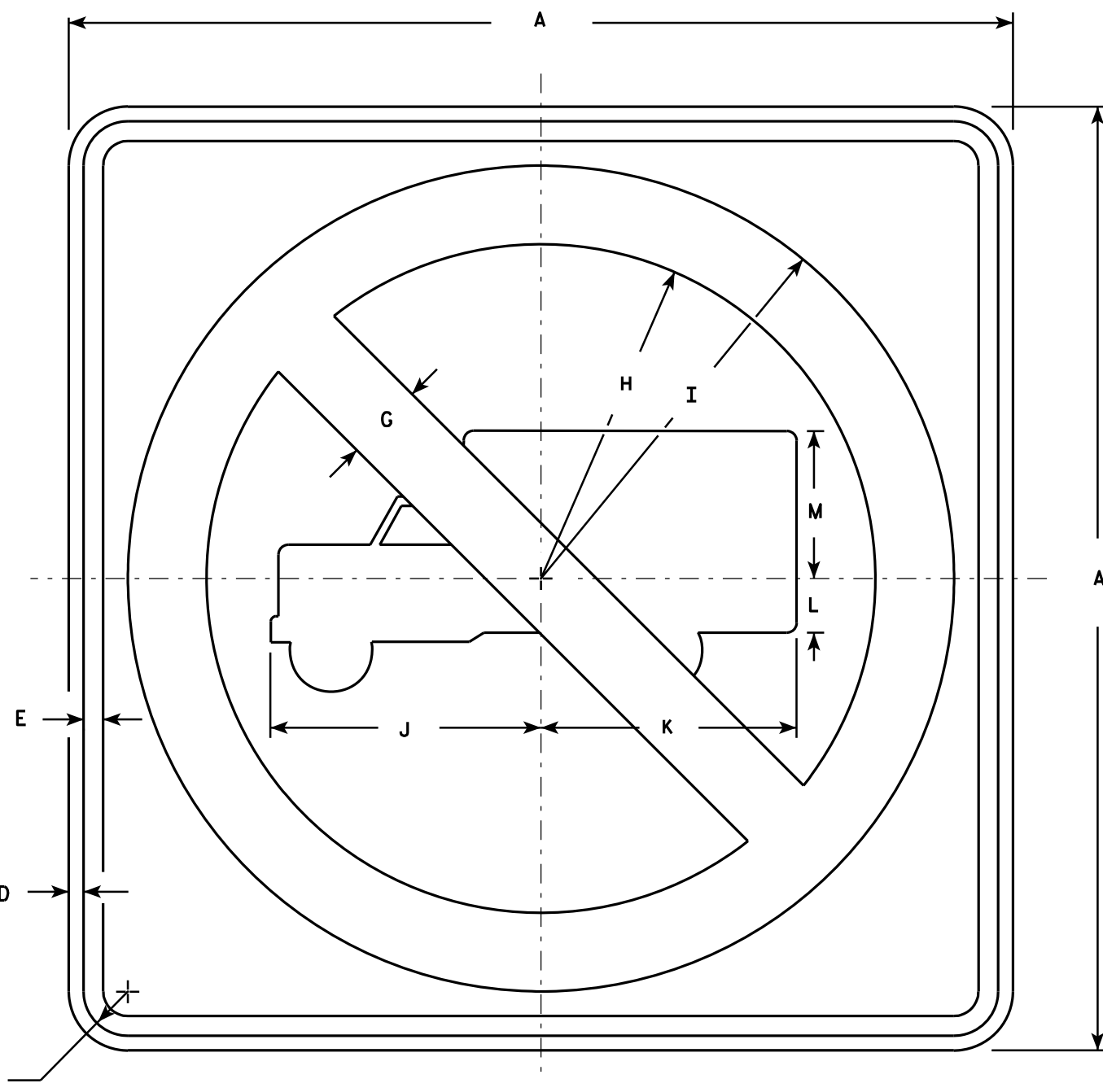
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	½	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 ½	12 5⁄8	5 1⁄8	3⁄8	4 ¾	2 5⁄8	14	2 ¾	10 ½						3.75
2M	30	18	1 3⁄8	½	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 ½	12 5⁄8	5 1⁄8	3⁄8	4 ¾	2 5⁄8	14	2 ¾	10 ½						3.75
3	36	24	1 3⁄8	½	5⁄8		21 7⁄8	21 5⁄8	7 1⁄8	5 ½	5 7⁄8	8 ¼	3	16 3⁄8	6 1⁄8	½	5 ¾	3 1⁄8	16 ¾	3 ¼	12 5⁄8						6.0
4	48	30	2 ¼	¾	1		29 1⁄8	28 ¾	9 3⁄8	7 ¼	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 ¼	22 3⁄8	4 3⁄8	16 ¾						10.0
5	48	30	2 ¼	¾	1		29 1⁄8	28 ¾	9 3⁄8	7 ¼	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 ¼	22 3⁄8	4 3⁄8	16 ¾						10.0

STANDARD SIGN
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflective red.
Truck Symbol & Border - Non-reflective black.

R5-2

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																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

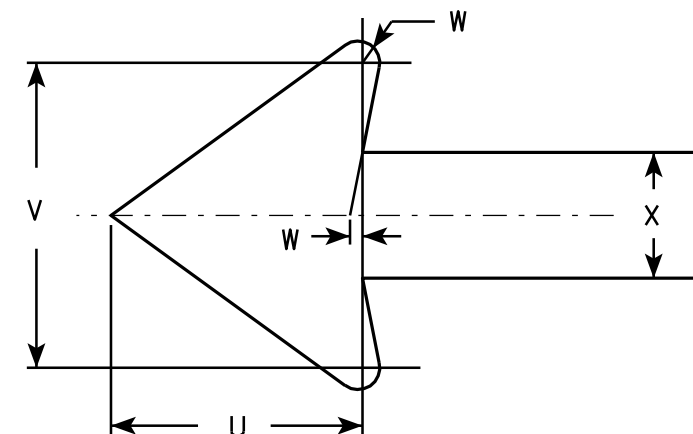
DATE 3/29/2011 PLATE NO. R5-2.6



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: 5990-01-32

HWY: LOC STR

COUNTY: ROCK

PERMANENT SIGNING

SHEET NO:

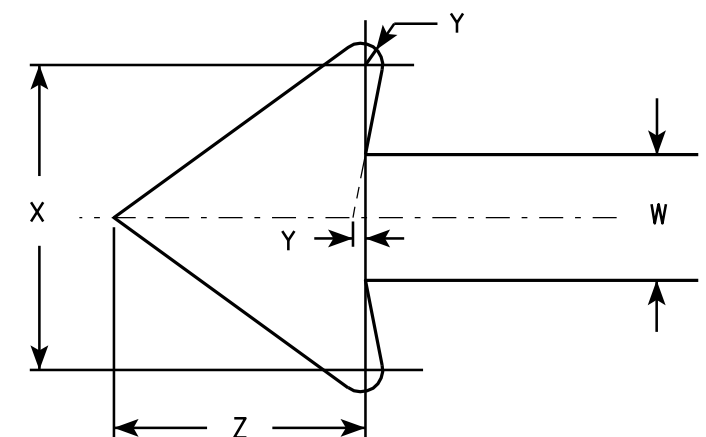
E



R7-51

NOTES

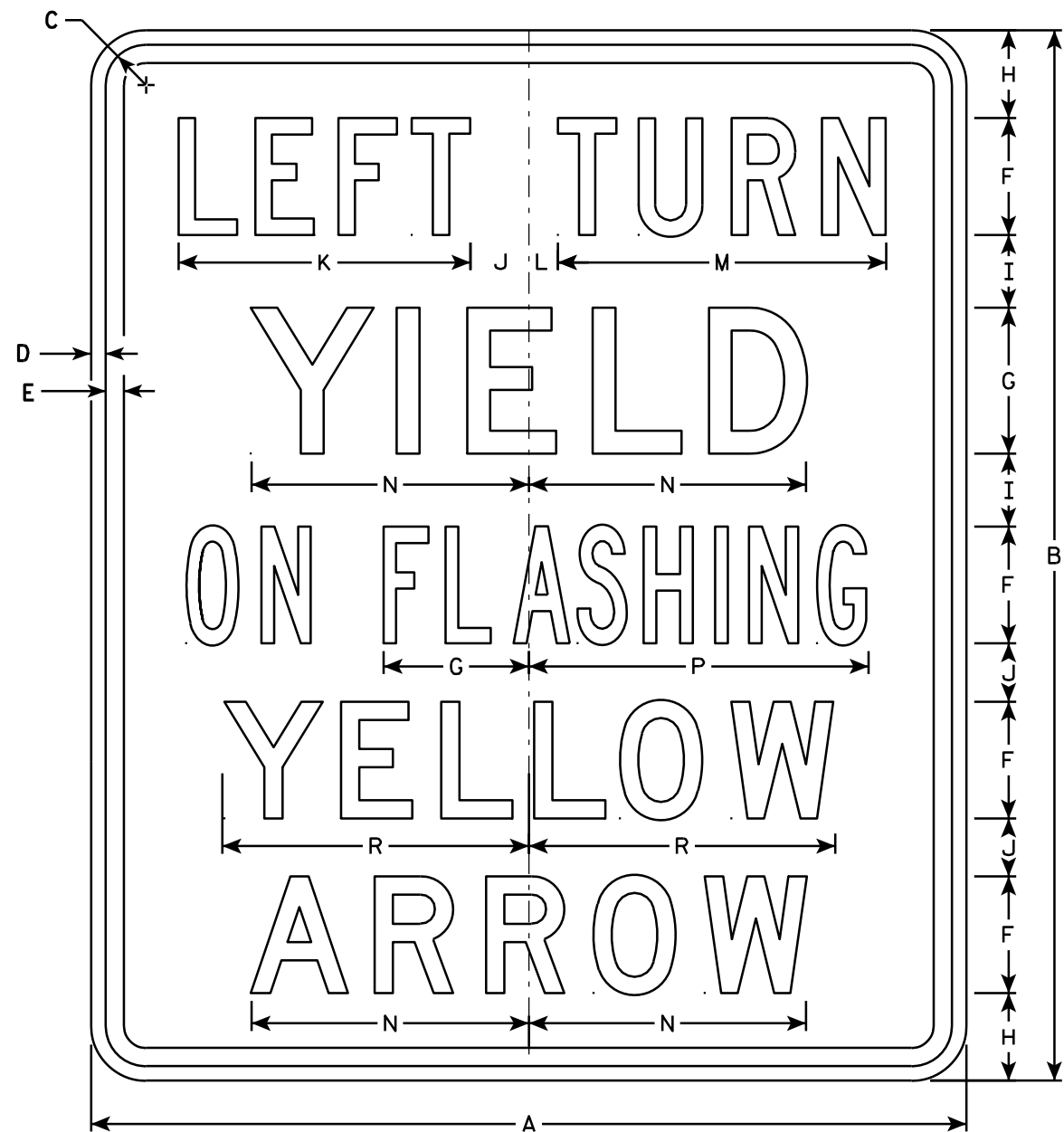
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R7-51D (double arrow)
R7-51R (right arrow)
R7-51L (left arrow)
6. Lines 1, 3 and 4 are Series C.
Line 2 is Series B.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	4 7/8	5/8	1 3/4	2 1/2	4 3/8	3 7/8	3/4	1 3/4	1/8	1 1/2	1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	5 3/4	1 1/8	1 1/2	3 1/8	5 1/2	5 7/8	1 1/8	2 5/8	1/4	2 1/4	3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	7 1/8	1 1/4	2	3 3/4	6 1/2	7 3/4	1 1/2	3 1/2	1/4	3	5.0
4																											
5																											

STANDARD SIGN R7-51	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/31/2011	PLATE NO. R7-51.6

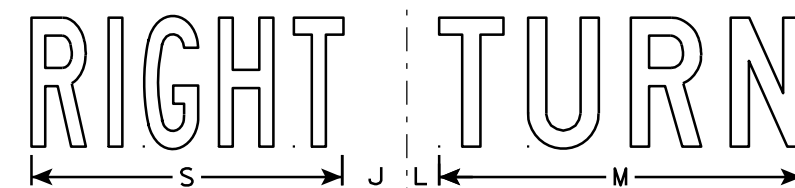


R10-50L

NOTES

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

"RIGHT" Is Series B



R10-50R

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	36	1 3⁄8	1⁄2	5⁄8	4	5	3	2 1⁄2	2	10	1	11 1⁄4	9 1⁄2	4 1⁄4	11 5⁄8		10 1⁄2	9 5⁄8								7.5
2M	30	36	1 3⁄8	1⁄2	5⁄8	4	5	3	2 1⁄2	2	10	1	11 1⁄4	9 1⁄2	4 1⁄4	11 5⁄8		10 1⁄2	9 5⁄8								7.5
3																											
4																											
5																											

STANDARD SIGN R10-50

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/11/13 PLATE NO. R10-50.2

PROJECT NO: 5990-01-32

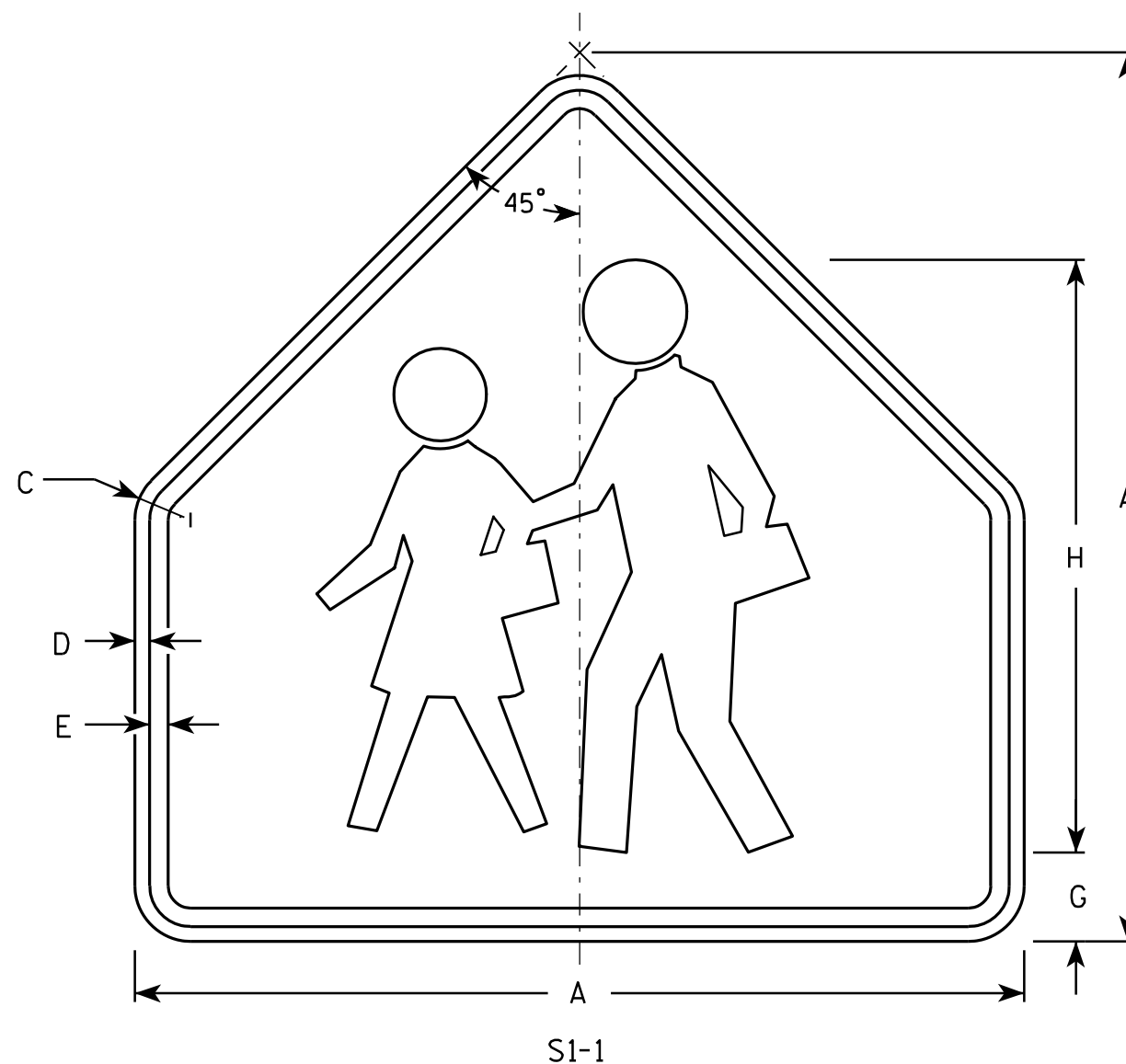
HWY: LOC STR

COUNTY: ROCK

PERMANENT SIGNING

SHEET NO:

E



NOTES

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

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 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

STANDARD SIGN S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO: 5990-01-32

HWY: LOC STR

COUNTY: ROCK

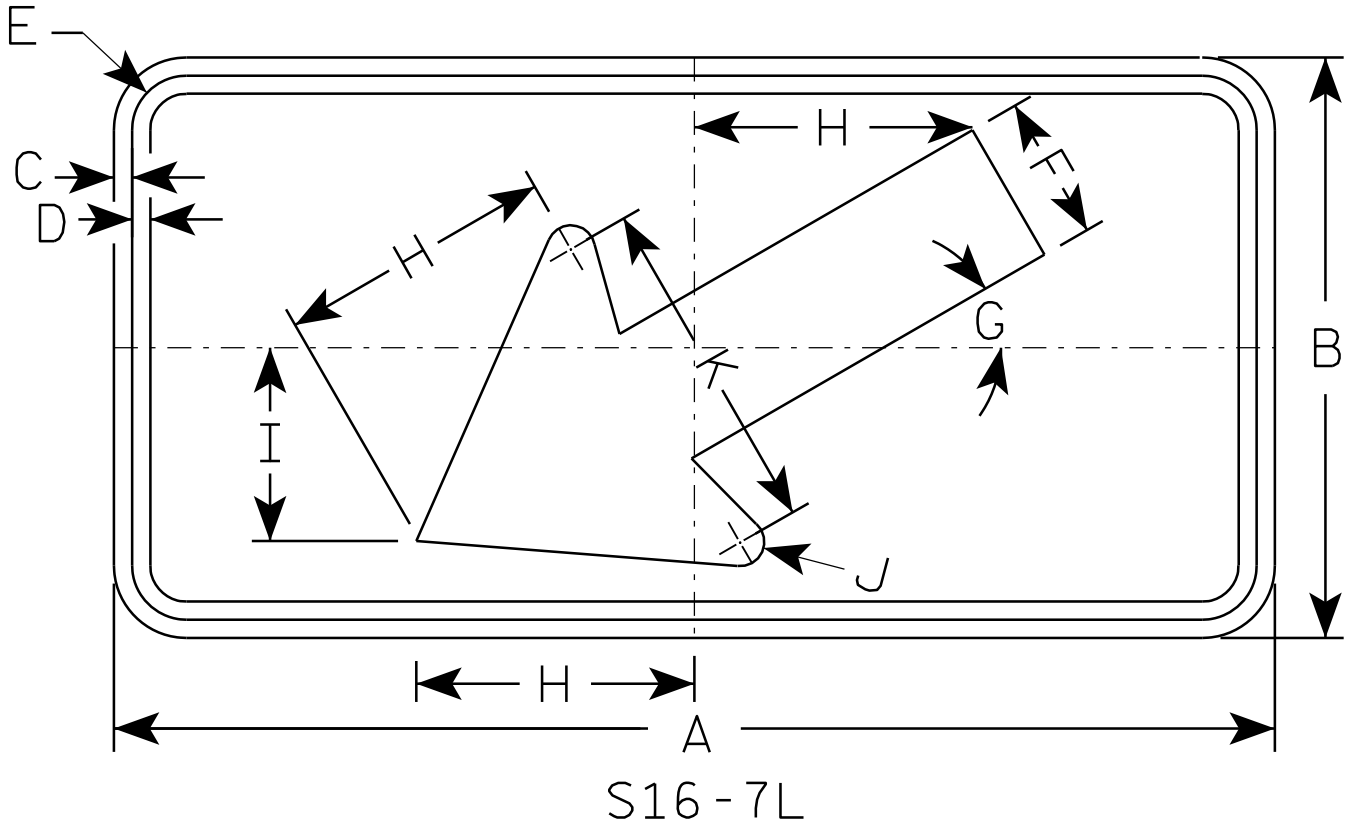
PERMANENT SIGNING

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow-Green
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. S16-7R are the same as S16-7L except the arrow is reversed along the vertical centerline.



S16 - 7L

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	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2S	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4	48	24	1/2	5/8	1 3/8	6	30°	11 1/2	8	1	14																8.0
5																											

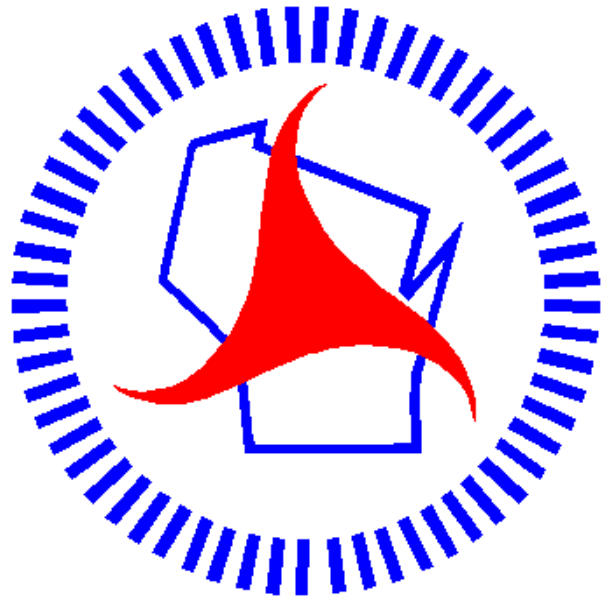
STANDARD SIGN

S16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/22/13 PLATE NO. S16-7.1



Wisconsin Department of Transportation

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