

SEL

PROJECT ID: 2160-15-70

WITH: N/A

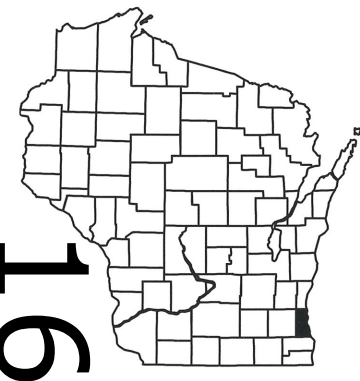
COUNTY: MILWAUKEE

APR 2017

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 = 178



DESIGN DESIGNATION

A.A.D.T.	2014	= 27,800
A.A.D.T.	2036	= 30,800
D.H.V.		= N/A
D.D.		= N/A
T.		= 5.3%
DESIGN SPEED		= 40 MPH
ESALS		= N/A

CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

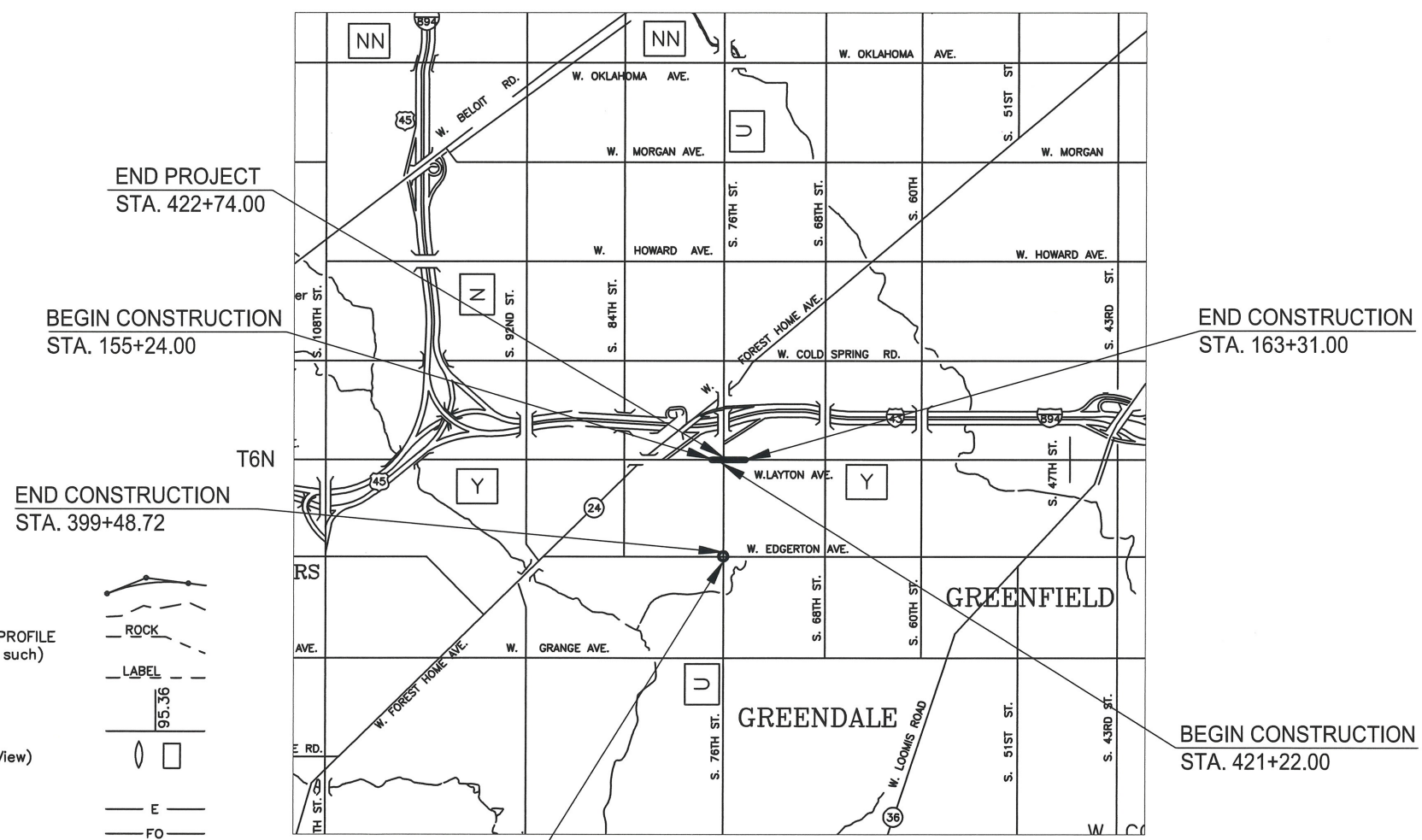
S 76TH STREET

INTS WITH EDGERTON & LAYTON AVE

CTH U

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2160-15-70



GENERAL NOTES

REMOVALS

- FILL ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WITH GRANULAR BACKFILL. GRANULAR BACKFILL IS INCIDENTAL TO THE PERTINENT REMOVAL ITEM.

UTILITIES

- 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.

EROSION CONTROL

- EROSION CONTROL ITEMS SHOWN ARE AT SUGGESTED LOCATIONS AND THE EXACT LOCATIONS/DIMENSIONS WILL BE DETERMINED BY THE ENGINEER. MAINTAIN ALL EROSION CONTROL MEASURES UNTIL SUCH TIME THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.
- TOPSOIL, SEED, FERTILIZE AND WATER DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED ROADWAY AS DIRECTED BY THE ENGINEER.

STORM SEWER/DRAINAGE

- COST OF CONNECTING STORM SEWER OR CULVERT PIPE TO EXISTING STRUCTURES IS INCIDENTAL TO THE COST OF THE PIPE.
- EXISTING ELEVATIONS OF STORM SEWER CONNECTIONS SHOWN ON THE PLANS ARE APPROXIMATE. FIELD ADJUSTMENTS MAY BE NECESSARY.
- UNCOVER AND CHECK ELEVATIONS OF EXISTING UTILITIES WHERE THEY CROSS PROPOSED STORM SEWER/CULVERT PIPES. ADJUSTMENT OF UTILITY OR REVISION OF SEWER/CULVERT ELEVATION MAY BE REQUIRED TO RESOLVE CONFLICT. THE COST OF UNCOVERING AND CHECKING UTILITIES IS NOT INCIDENTAL TO THE COST OF THE PIPE AND WILL BE PAID FOR UNDER A SEPERATE BID ITEM.

SIGNING/MARKING

- DO NOT REMOVE SIGNS WITHOUT THE CONSENT OF THE ENGINEER.
- SALVAGE ALL REMOVED SIGNS AND PLACE AT A SITE SPECIFIED BY THE ENGINEER TO BE PICKED UP BY MILWAUKEE COUNTY.
- ALL NEW PERMANENT SIGNS SHALL BE MADE OF ALUMINUM MATERIAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

MISCELLANEOUS

- ADJUST TRAFFIC CONTROL DEVICES TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- CURB AND GUTTER JOINT SPACING SHALL BE 20 FEET UNLESS AUTHORIZED BY THE ENGINEER.
- CONSTRUCT TRANSVERSE JOINTS IN THE CONCRETE SIDEWALK AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES WITHIN THE PROJECT LIMITS AT ALL TIMES.
- STAMP ALL ENDS OF MONOLITHIC CONCRETE SURFACES WITH A STAMP BEARING CONTRACTOR’S NAME AND YEAR OF CONSTRUCTION. ALL LETTERING SHALL BE 2-INCH. THE COST OF THIS WORK IS INCIDENTAL TO THE ASSOCIATED CONCRETE ITEM.
- PLACE ½-INCH THICK EXPANSION FILLER IN THE CURB & GUTTER AT BOTH ENDS OF EACH REMOVAL & REPLACEMENT SECTION. COST IS INCIDENTAL TO THE CURB & GUTTER ITEM.
- DETAILS OF CONSTRUCTION NOT SHOWN IN THE PLANS SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
- RESTORE EXISTING DRIVEWAYS IN-KIND BEHIND THE CONCRETE SIDEWALK. EXACT LOCATION AND WIDTH WILL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ASPH	ASPHALT OR ASPHALTIC
BAD	BASE AGGREGATE DENSE
BK	BACK
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CL or C/L	CENTER LINE
CONC	CONCRETE
CTH	COUNTY TRUNK HIGHWAY
C&G	CURB AND GUTTER
DWY	DRIVEWAY
EL or ELEV	ELEVATION
EBS	EXCAVATION BELOW SUBGRADE
HMA	HOT MIX ASPHALT
INL	INLET
INV	INVERT
LT	LEFT
MH	MANHOLE
MIS	METROPOLITAN INTERCEPTOR SEWER
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PCC	POINT OF COMPOUND CURVATURE
RL or R/L	REFERENCE LINE
R	RADIUS
REQD	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
SE	SUPERELEVATION
SEC	SECTION
SDD	STANDARD DETAIL DRAWING
STH	STATE TRUNK HIGHWAY
STA	STATION
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
S/W	SIDEWALK
TLE	TEMPORARY LIMITED EASEMENT
VERT	VERTICAL
VC	VERTICAL CURVE
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY

UTILITIES

AT&T
2005 Pewaukee Rd
Waukesha, WI 53188
ATTN: Mr. Matthew Dinnauer
Phone: (262) 896-7690

Charter Communications
1320 N. Martin Luther King Dr.
Milwaukee, WI 53212
ATTN: Mr. Steve Cramer
Phone: (414) 277-4045

Milwaukee Water Works
3850 N 35th St
Milwaukee, WI 53216
ATTN: Dave Goldapp
Phone: (414) 286-6301

WE ENERGIES – ELECTRIC
333 W. Everett St. A-299
Milwaukee, WI 53203
ATTN: Mr. Latroy Brumfield
Phone: (414) 221-5617

WE ENERGIES – GAS
333 W. Everett St. A-299
Milwaukee, WI 53203
ATTN: Mr. Latroy Brumfield
Phone: (414) 221-5617

UTILITIES (CONT)

Village of Greendale
6500 Northway
Greendale, WI 53129
ATTN: Todd Michaels, Village
Manager
Phone: (414) 423-2100

**City of Greenfield
Department of Neighborhood
Services**
7325 W. Forest Home Ave.
Greenfield, WI 53220
ATTN: Mr. Jeff Katz
Phone: (414) 939-8322

MILWAUKEE COUNTY

Milwaukee County Transit System
1942 N. 17th St.
Milwaukee, WI 53205
ATTN: Mr. Christopher Fox
Phone: (414) 344-4550 ext.3500

**Milwaukee County DOT
Highway Maintenance Division**
10320 W. Watertown Plank Rd
1ST Floor
Wauwatosa, WI 53226
ATTN: Mr. Greg Heisel
Phone: (414) 257-6566

**Milwaukee County DOT
Electrical Maintenance Division**
10320 W. Watertown Plank Rd
1ST Floor
Wauwatosa, WI 53226
ATTN: Mr. Stanley Jackson
Phone: (414) 257-6593

**Milwaukee County DOT
Transportation Services Division**
10320 W. Watertown Plank Rd
2nd Floor
Wauwatosa, WI 53226
ATTN: Ms. Andrea Weddle-Henning
Phone: (414) 257-5934

**Milwaukee County DOT
Transportation Services Division**
10320 W. Watertown Plank Rd
2nd Floor
Wauwatosa, WI 53226
ATTN: Mr. Daniel Murphy
Phone: (414) 257-5942

STATE AGENCIES

**State of Wisconsin
Department of Natural
Resources**
2300 N. Martin Luther King Jr. Dr.
Milwaukee, WI 53212
ATTN: Ms. Kristina Betzold
Phone: (414) 263-8517

SHEET INDEX

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- PLAN DETAILS
- CONSTRUCTION DETAILS
- STORM SEWER PLAN
- TRAFFIC SIGNAL PLAN
- TRAFFIC CONTROL

DIGGERS



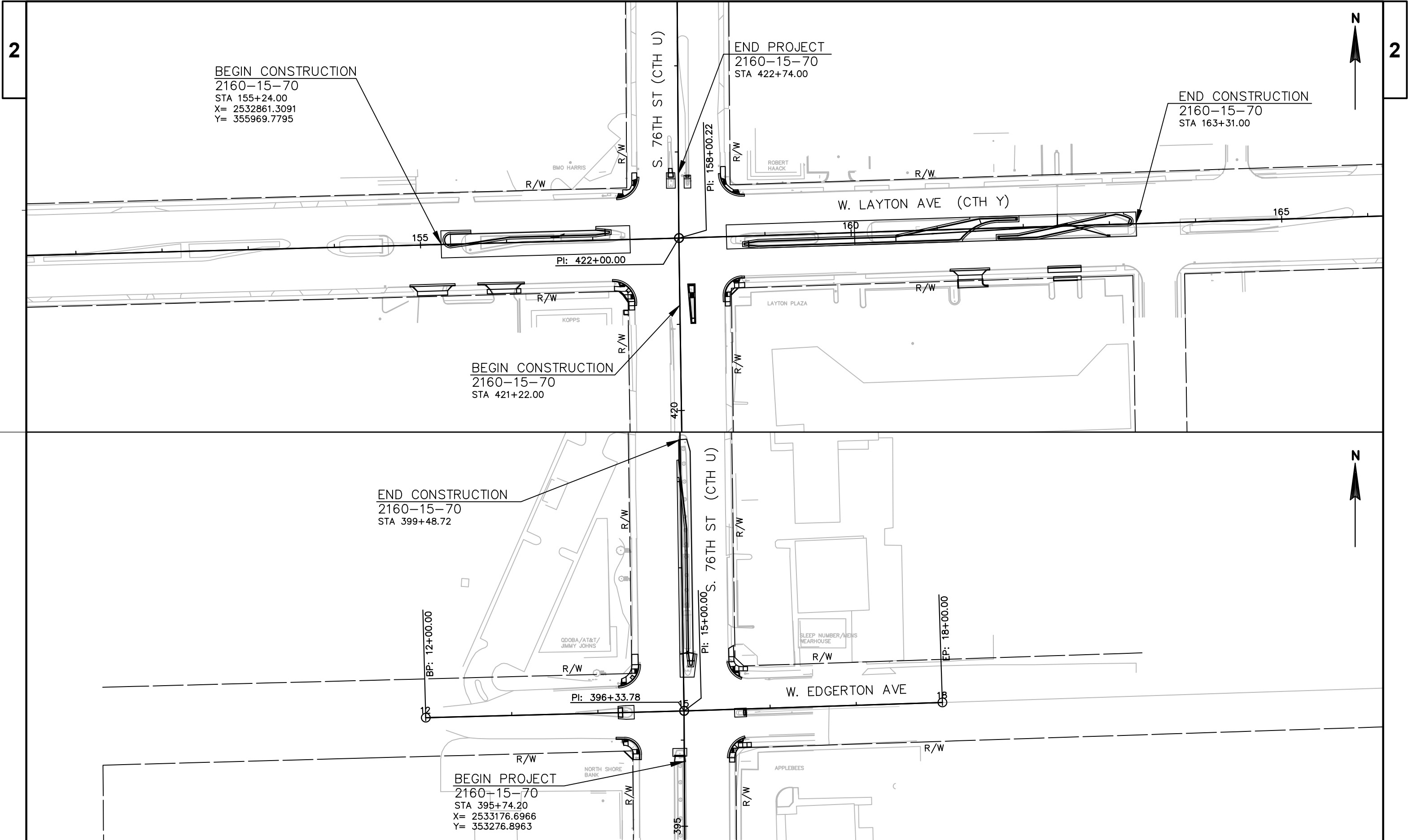
HOTLINE

Dial



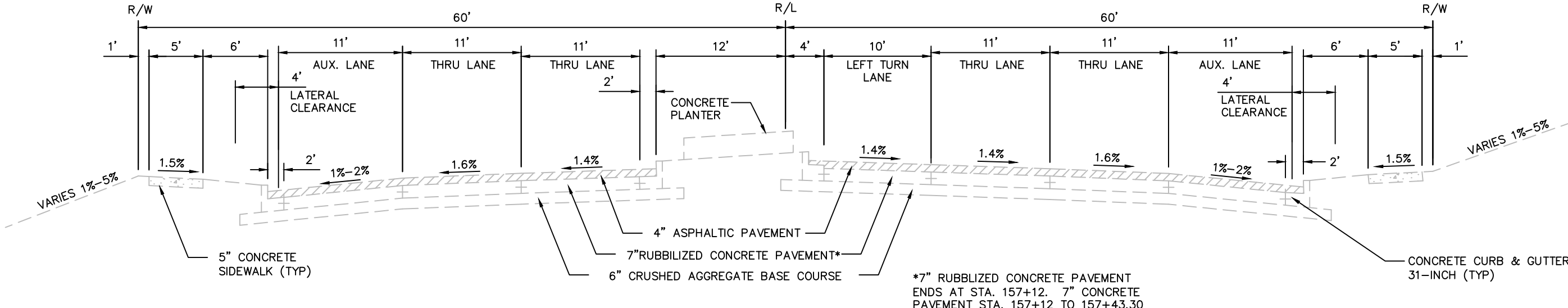
or (800) 242-8511

www.DiggersHotline.com

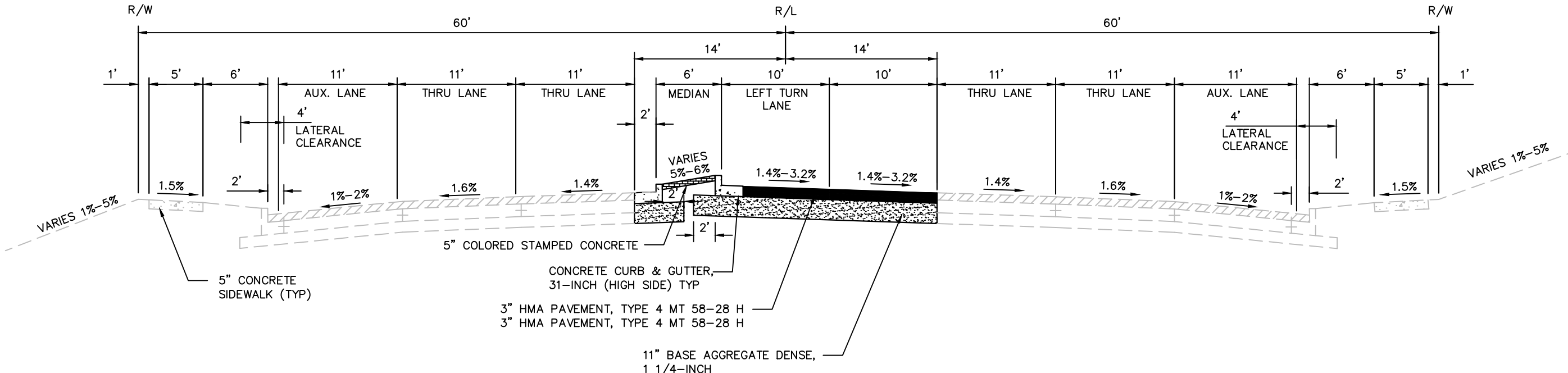


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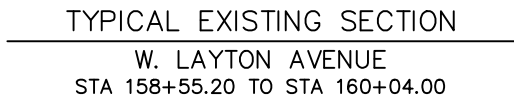
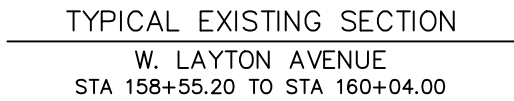
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STA 155+24.00 TO STA 157+43.30



W. LAYTON AVENUE
STA 155+24.00 TO STA 157+43.30

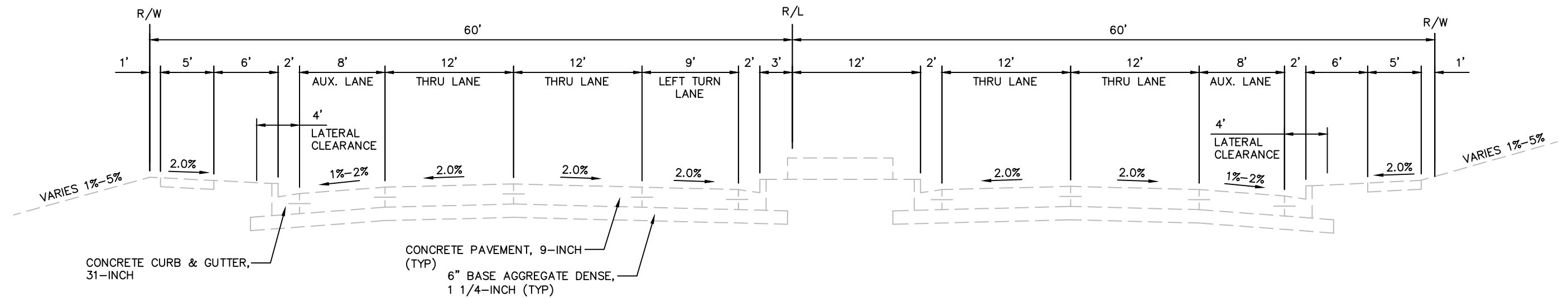
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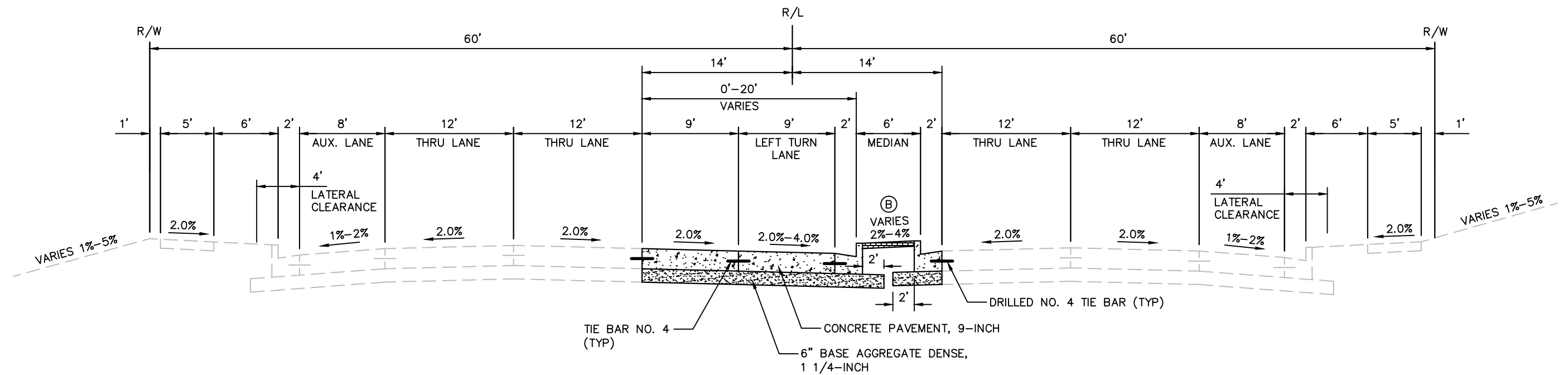
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WISDOT/CADDS SHEET 42



TYPICAL EXISTING SECTION

W. LAYTON AVENUE
STA 160+04.00 TO STA 163+31.00

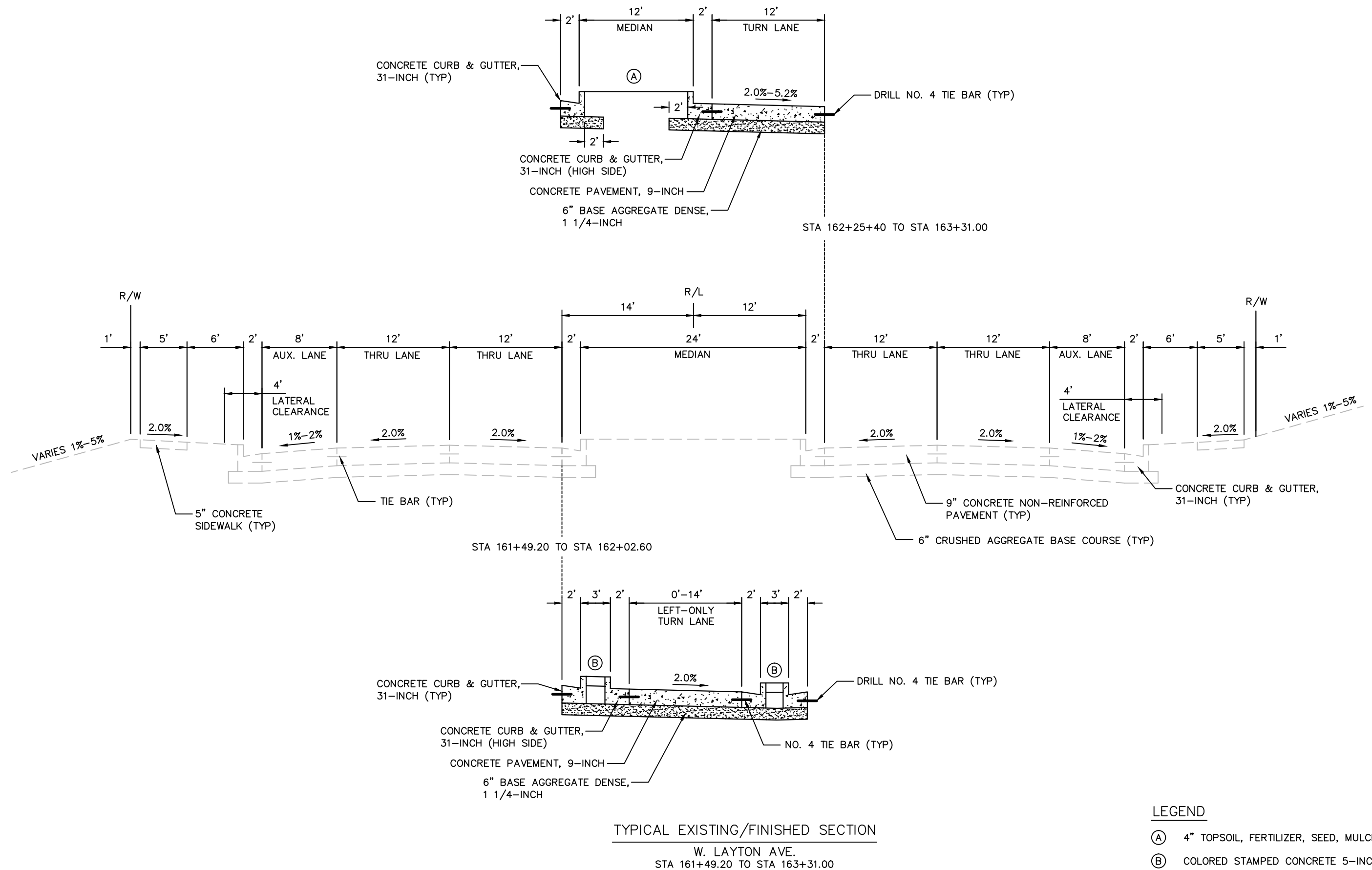


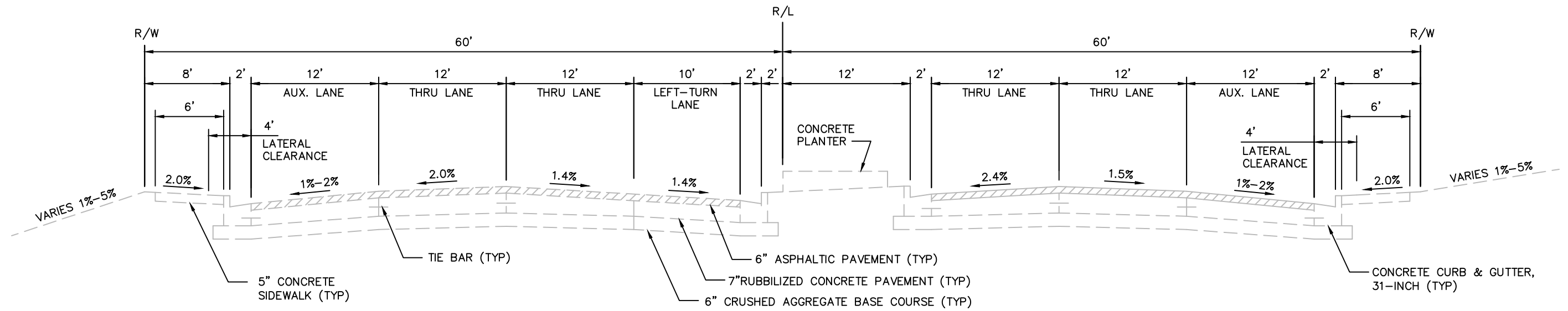
TYPICAL FINISHED SECTION

W. LAYTON AVENUE
STA 160+04.00 TO STA 163+31.00

LEGEND

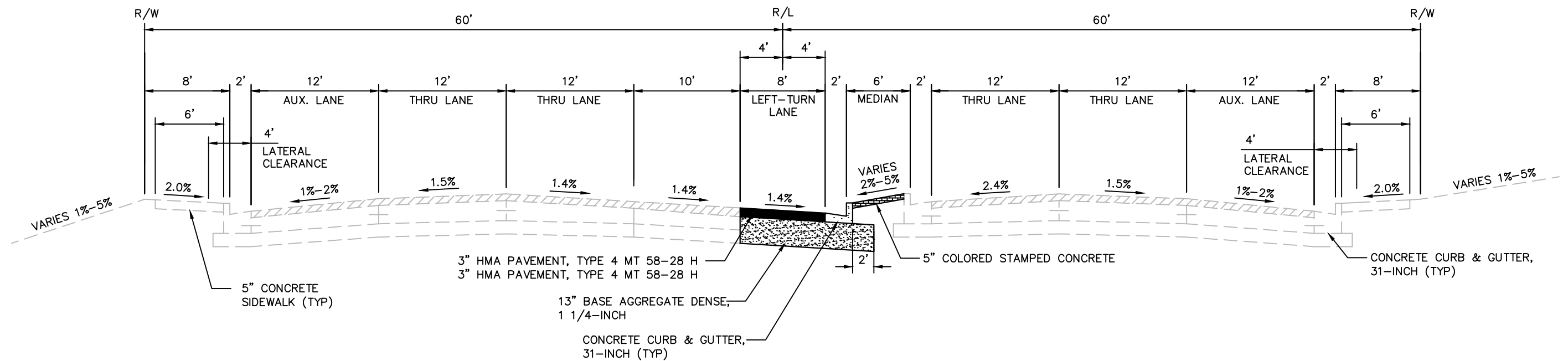
- (A) 4" TOPSOIL, FERTILIZER, SEED, MULCH
- (B) COLORED STAMPED CONCRETE 5-INCH





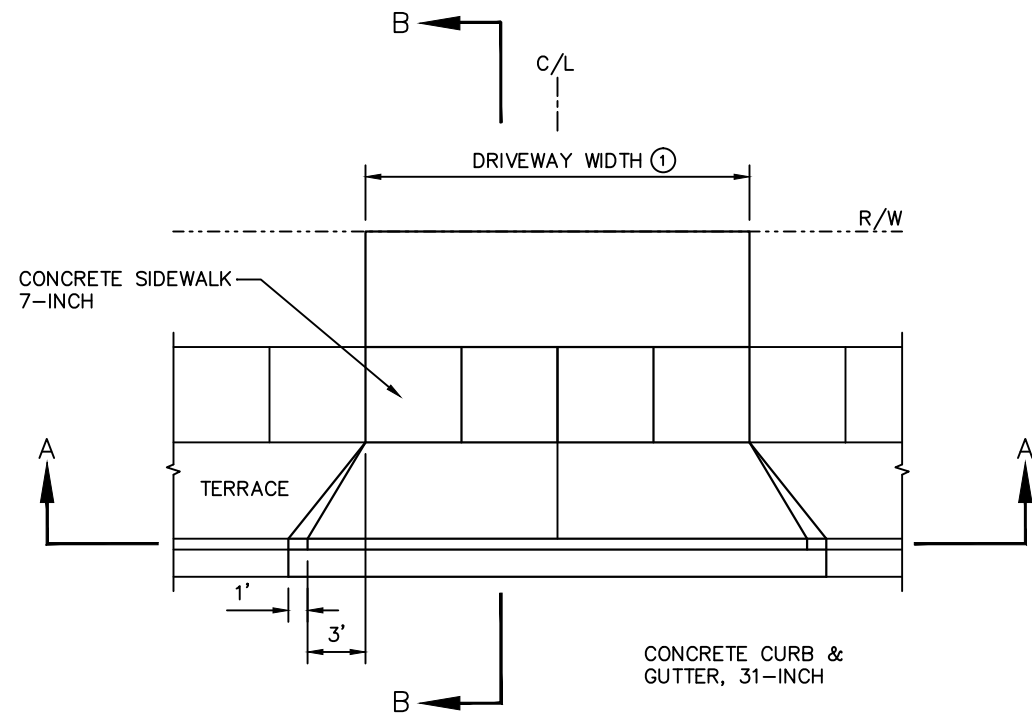
TYPICAL EXISTING SECTION

S. 76TH STREET AT W. EDGERTON AVE.
STA 395+74.20 TO STA 399+48.72

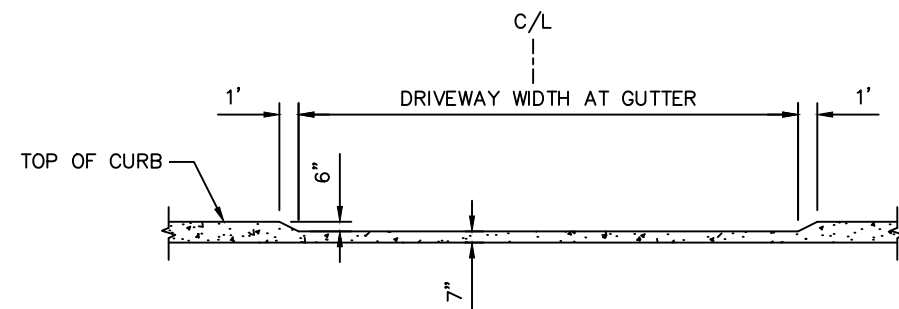


TYPICAL FINISHED SECTION

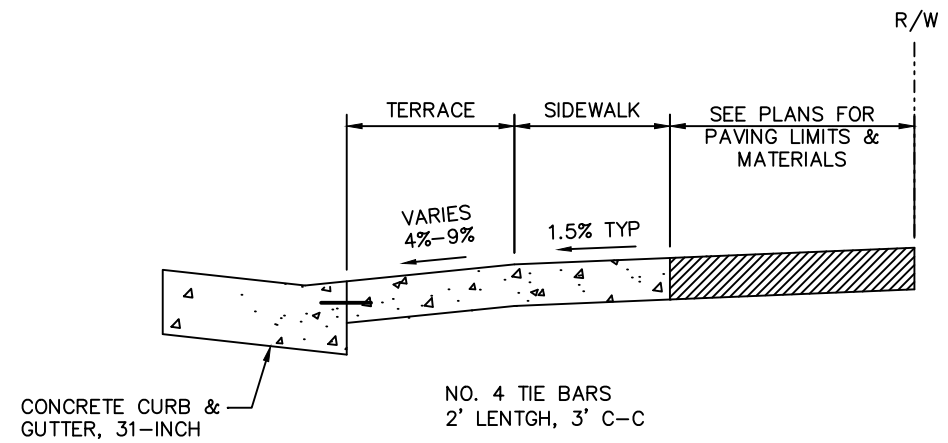
S. 76TH STREET AT W. EDGERTON AVE.
STA 395+74.20 TO STA 399+48.72



PLAN VIEW



SECTION A-A



SECTION B-B

DRIVEWAY NOTES:

- ① RESIDENTIAL WIDTH: 10' MIN. / 24' MAX.
COMMERCIAL WIDTH: 12' MIN / 35' MAX.

CONCRETE DRIVEWAYS:

CONCRETE DRIVEWAY 7-INCH ON 4" BASE AGGREGATE DENSE 1 ¼"

ASPHALT DRIVEWAYS:

4" ASPHALTIC SURFACE DRIVEWAYS

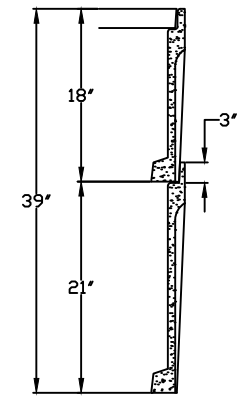
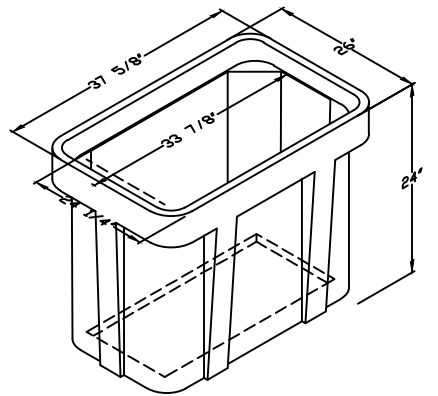
	HMA PAVEMENT	THICKNESS
UPPER LAYER	5 LT 58-28 S	2.0 in
LOWER LAYER	5 LT 58-28 S	2.0 in
BASE AGG. DENSE	1 ¼"	4.0 in

GRAVEL DRIVEWAYS:

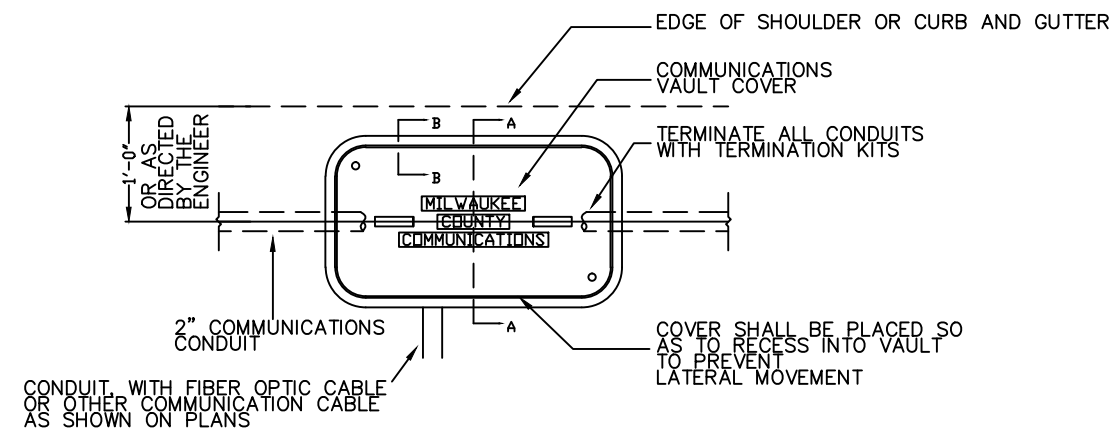
6" BASE AGGREGATE DENSE 1 ¼"

ALL DRIVEWAY APRONS ARE CONCRETE UNLESS NOTED OTHERWISE
IN THE PLANS. PLACE DUMMY JOINT AT CENTER OF DRIVEWAY
APRON 14' WIDE OR GREATER OR AT ALL JOINTS IN THE CURB &
GUTTER.

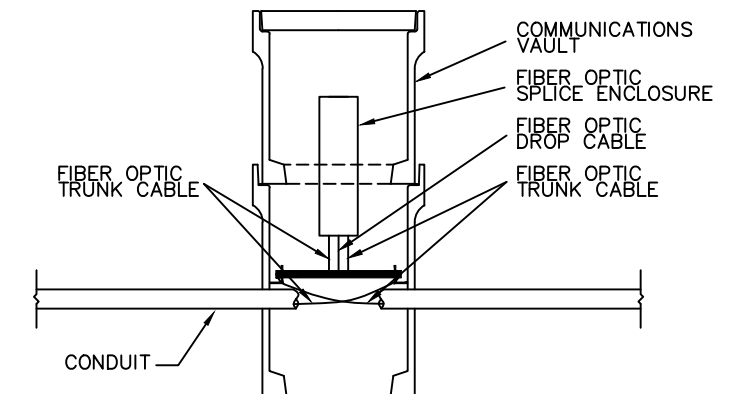
DRIVEWAY WITH SIDEWALK DETAIL



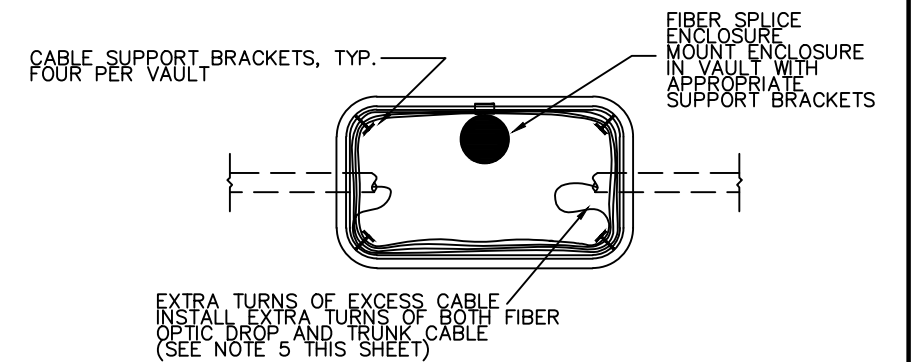
SECTION A-A



COMMUNICATIONS VAULT



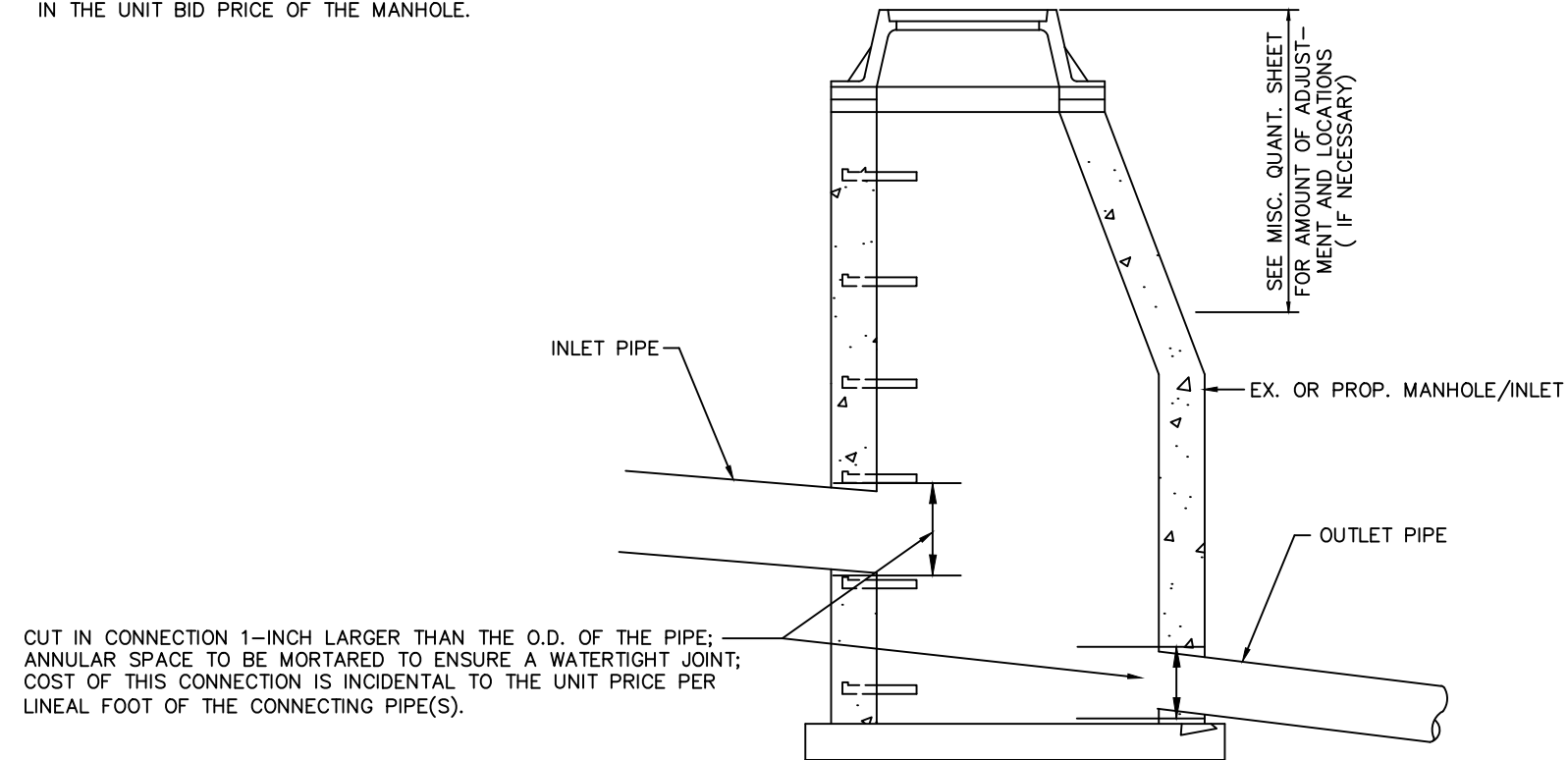
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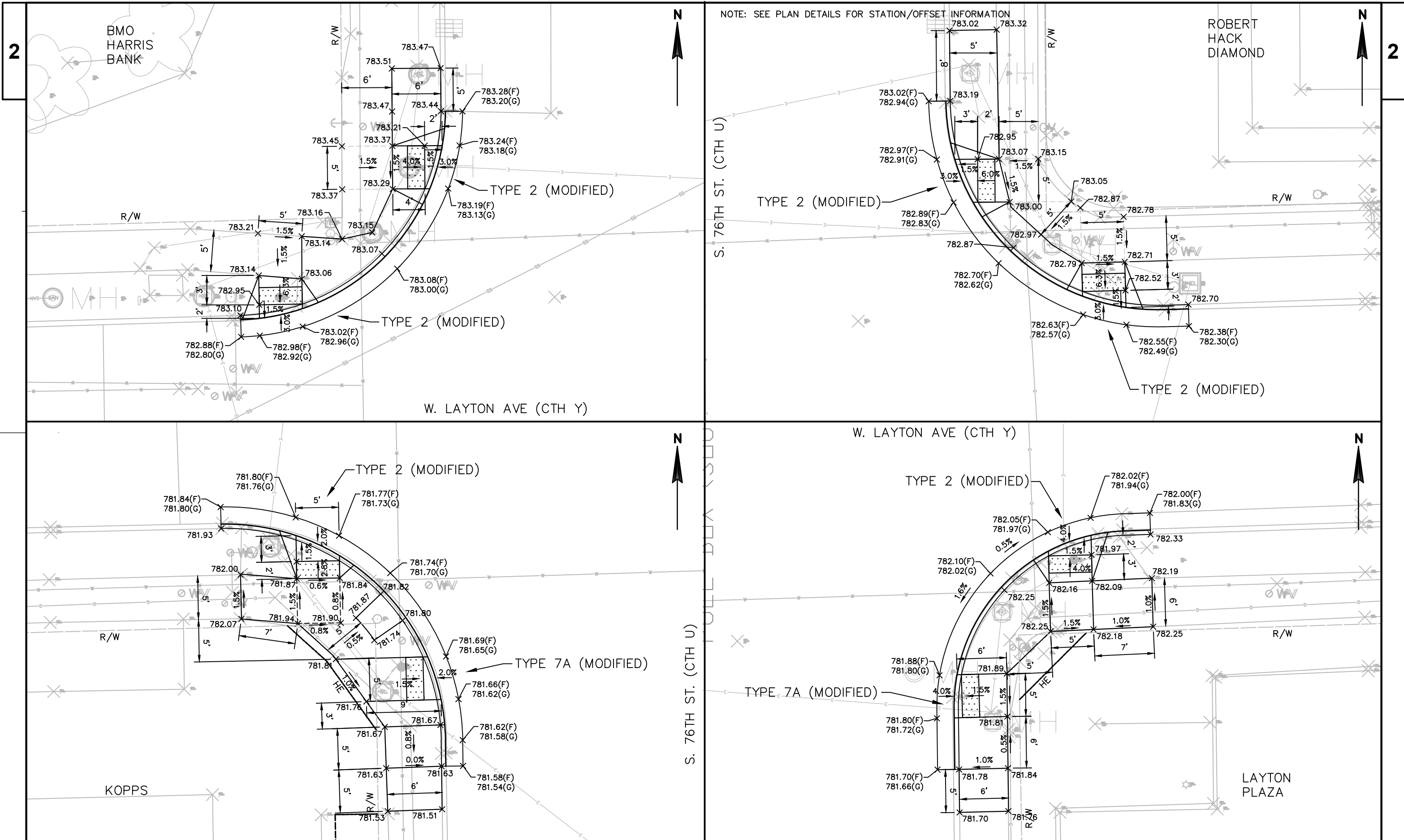


FIBER OPTIC DROP SPLICE IN COMMUNICATIONS VAULT

NOTES:

1. CONSTRUCTION METHODS ARE "TYPICAL" AND APPLY TO NEW PIPE CONNECTING TO EXISTING MANHOLES/INLETS, NEW MANHOLES/INLETS CONSTRUCTED OVER EXISTING PIPES, AND NEW CONSTRUCTION
2. WHEN A NEW MANHOLE/INLETS IS CONSTRUCTED OVER AN EXISTING PIPE, THE COST OF THE CONNECTION SHALL BE INCLUDED IN THE UNIT BID PRICE OF THE MANHOLE.

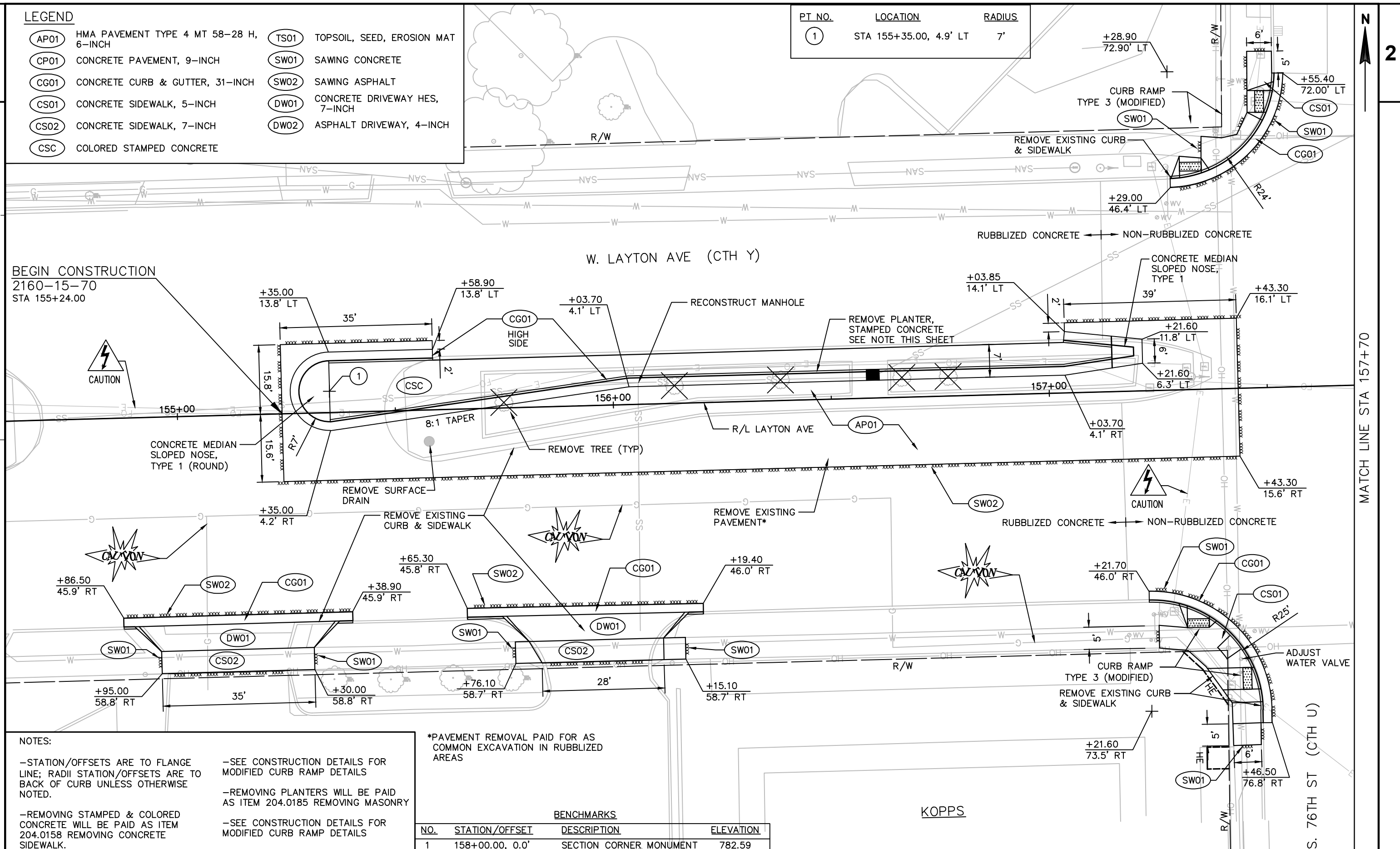
DETAIL FOR CONNECTION TO MANHOLES/INLETS



LEGEND

AP01	HMA PAVEMENT TYPE 4 MT 58-28 H, 6-INCH	TS01	TOPSOIL, SEED, EROSION MAT
CP01	CONCRETE PAVEMENT, 9-INCH	SW01	SAWING CONCRETE
CG01	CONCRETE CURB & GUTTER, 31-INCH	SW02	SAWING ASPHALT
CS01	CONCRETE SIDEWALK, 5-INCH	DW01	CONCRETE DRIVEWAY HES, 7-INCH
CS02	CONCRETE SIDEWALK, 7-INCH	DW02	ASPHALT DRIVEWAY, 4-INCH
CSC	COLOR STAMPED CONCRETE		

PT. NO.	LOCATION	RADIUS
1	STA 155+35.00, 4.9' LT	7'



PROJECT NO: 2160-15-70

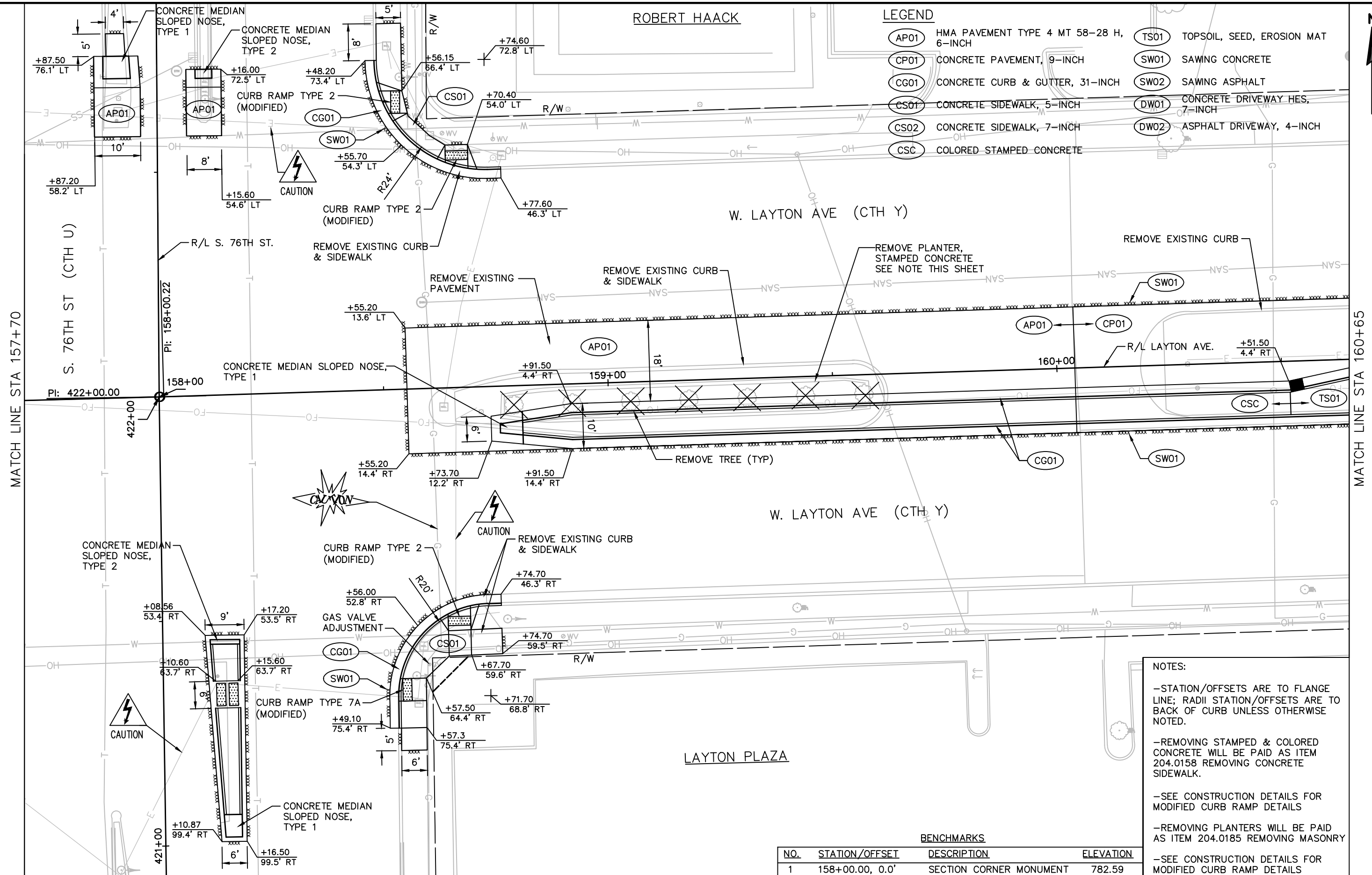
HWY: CTH U

COUNTY: MILWAUKEE

PLAN DETAILS- W. LAYTON AVE/S. 76TH ST

SHEET

E



NOTES:

—STATION/OFFSETS ARE TO FLANGE LINE; RADII STATION/OFFSETS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.

—REMOVING STAMPED & COLORED CONCRETE WILL BE PAID AS ITEM 204.0158 REMOVING CONCRETE SIDEWALK.

—SEE CONSTRUCTION DETAILS FOR MODIFIED CURB RAMP DETAILS

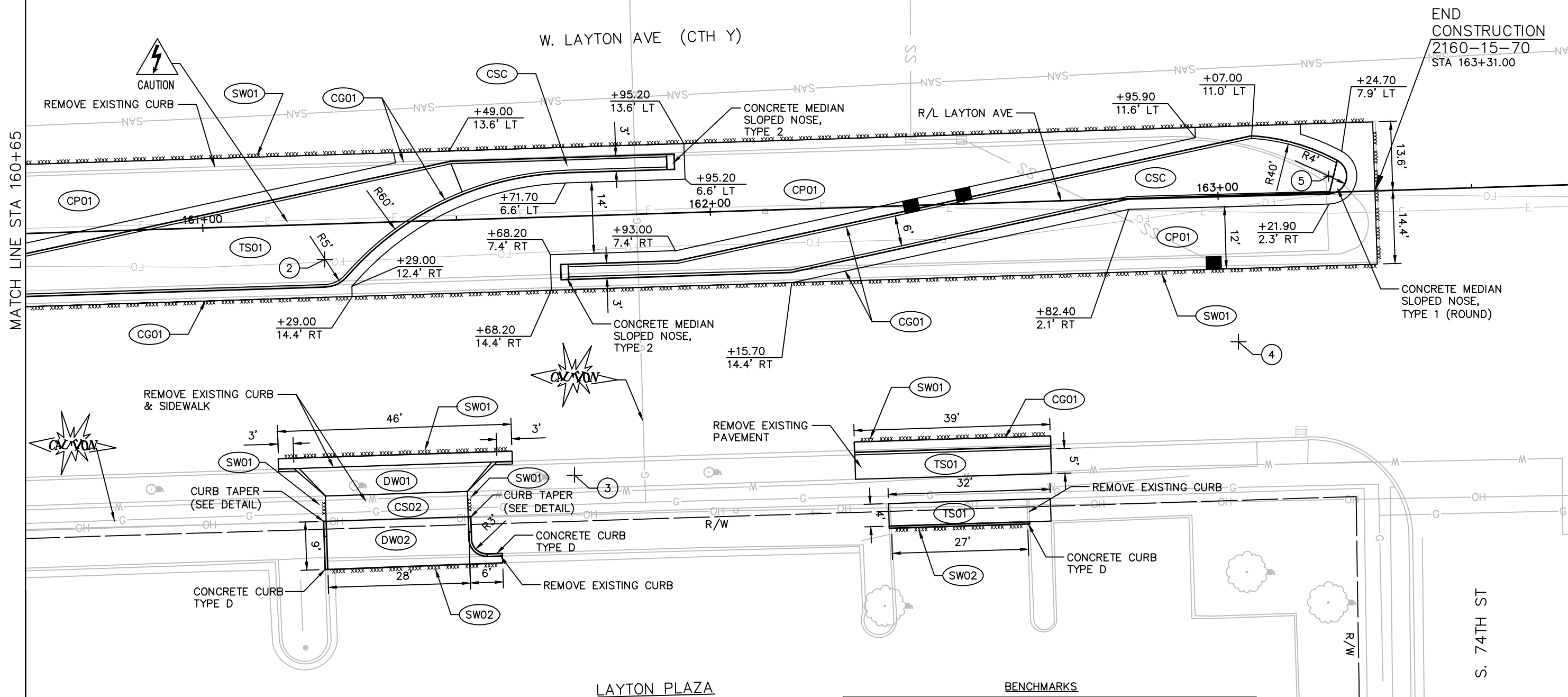
—REMOVING PLANTERS WILL BE PAID AS ITEM 204.0185 REMOVING MASONRY

—SEE CONSTRUCTION DETAILS FOR MODIFIED CURB RAMP DETAILS

PT. NO.	LOCATION	RADIUS
②	STA 161+23.90, 6.9' RT	5'
③	STA 161+71.70, 50.9' RT	60'
④	STA 163+03.20, 28.7' RT	40'
⑤	STA 163+21.92, 3.2' LT	4'

LEGEND

AP01	HMA PAVEMENT TYPE 4 MT 58-28 H, 6-INCH	TS01	TOPSOIL, SEED, EROSION MAT
CP01	CONCRETE PAVEMENT, 9-INCH	SW01	SAWING CONCRETE
CG01	CONCRETE CURB & GUTTER, 31-INCH	SW02	SAWING ASPHALT
CS01	CONCRETE SIDEWALK, 5-INCH	DW01	CONCRETE DRIVEWAY HES, 7-INCH
CS02	CONCRETE SIDEWALK, 7-INCH	DW02	ASPHALT DRIVEWAY, 4-INCH
CSC	COLORLED STAMPED CONCRETE		



LAYTON PLAZA

BENCHMARKS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
1	158+00.00, 0.0'	SECTION CORNER MONUMENT	782.59

PROJECT NO: 2160-15-70

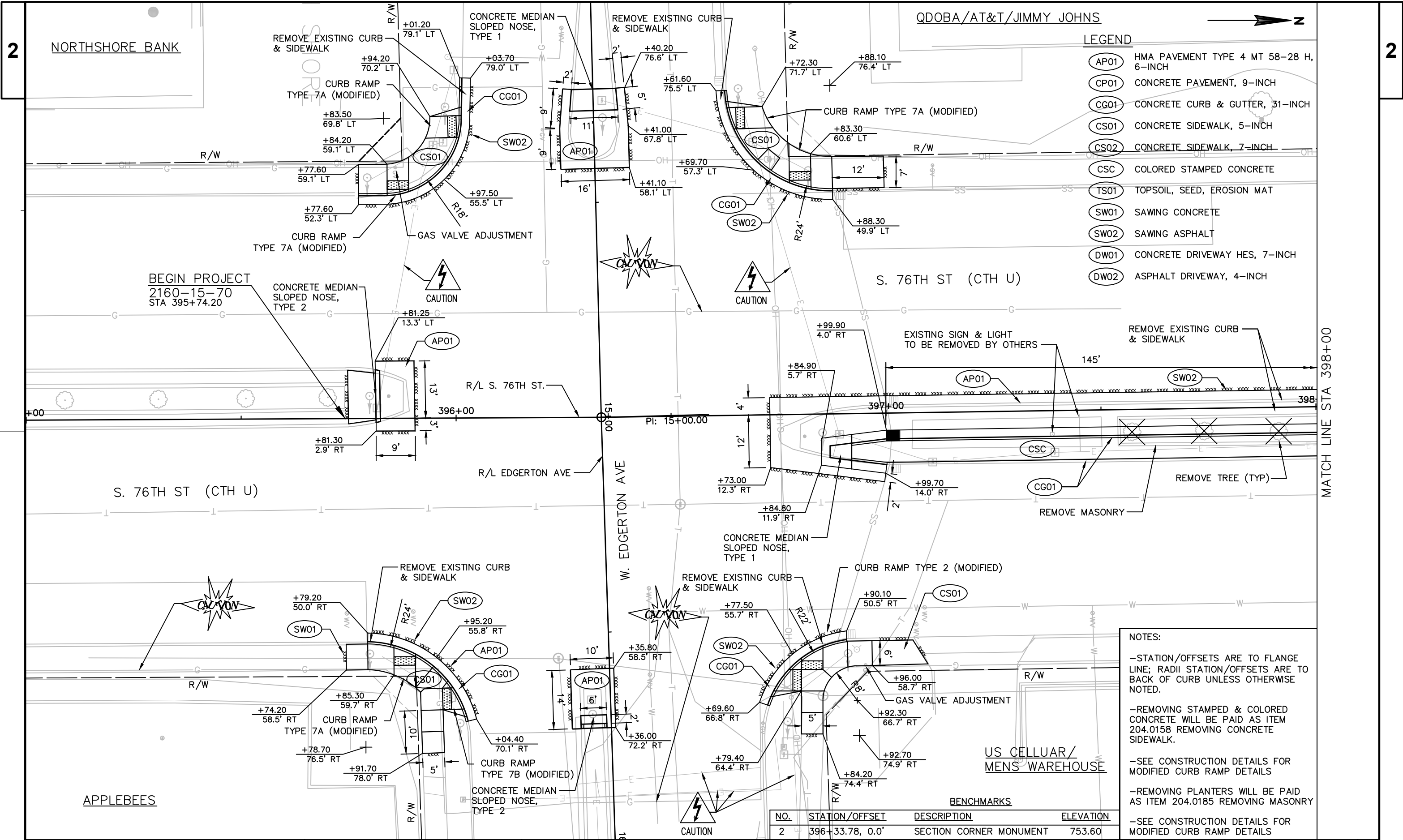
HWY: CTH U

COUNTY: MILWAUKEE

PLAN DETAILS— W. LAYTON AVE/S. 76TH ST

SHEET

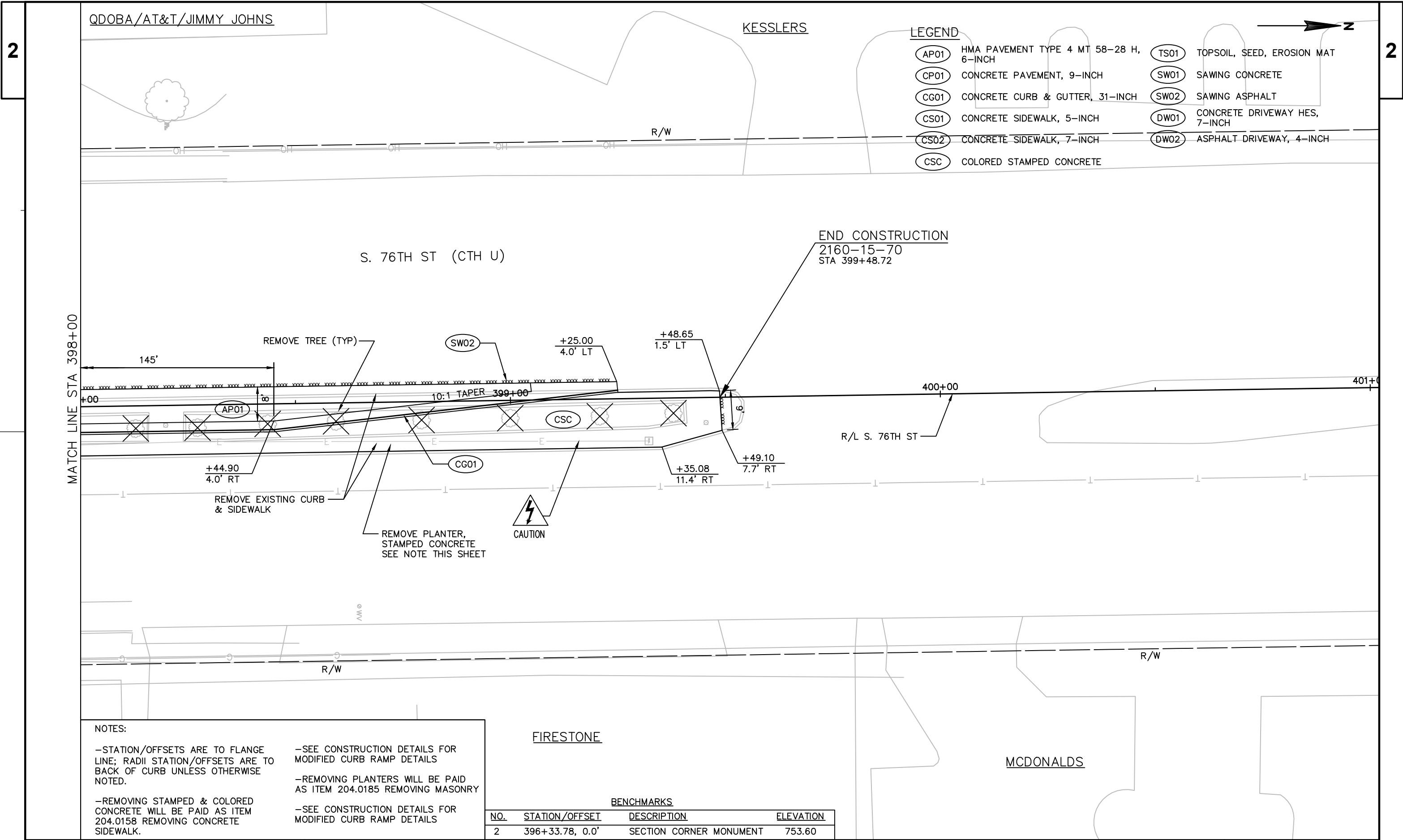
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NOTES:

- STATION/OFFSETS ARE TO FLANGE LINE; RADII STATION/OFFSETS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
- REMOVING STAMPED & COLORED CONCRETE WILL BE PAID AS ITEM 204.0158 REMOVING CONCRETE SIDEWALK.
- SEE CONSTRUCTION DETAILS FOR MODIFIED CURB RAMP DETAILS
- REMOVING PLANTERS WILL BE PAID AS ITEM 204.0185 REMOVING MASONRY
- SEE CONSTRUCTION DETAILS FOR MODIFIED CURB RAMP DETAILS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
2	396+33.78, 0.0'	SECTION CORNER MONUMENT	753.60



NOTE:
SEE CONSTRUCTION DETAILS FOR
PROPOSED CURB RAMP/SIDEWALK
GRADES

BMO HARRIS

SEE NOTE

W. LAYTON AVE. (CTH Y)

R/L LAYTON AVE.

BEGIN CONSTRUCTION
2160-15-70
STA 155+24.00

MATCH LINE STA 157+65

S. 76TH ST. (CTH U)

BENCHMARKS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
1	158+00.00, 0.0'	SECTION CORNER MONUMENT	782.59

PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

PAVING GRADES- W. LAYTON AVE.

SHEET

E

FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\CTH U - S. 76TH ST\S 76TH ST-EDGERTON AND LAYTON HSIP -
2160-15-00\PLANS\FINAL\08_PAV GRADES\2160-15-70_PG.DWG

PLOT DATE : 10/26/2016 3:14 PM

PLOT BY : WIECZOREK, JOE

PLOT NAME :

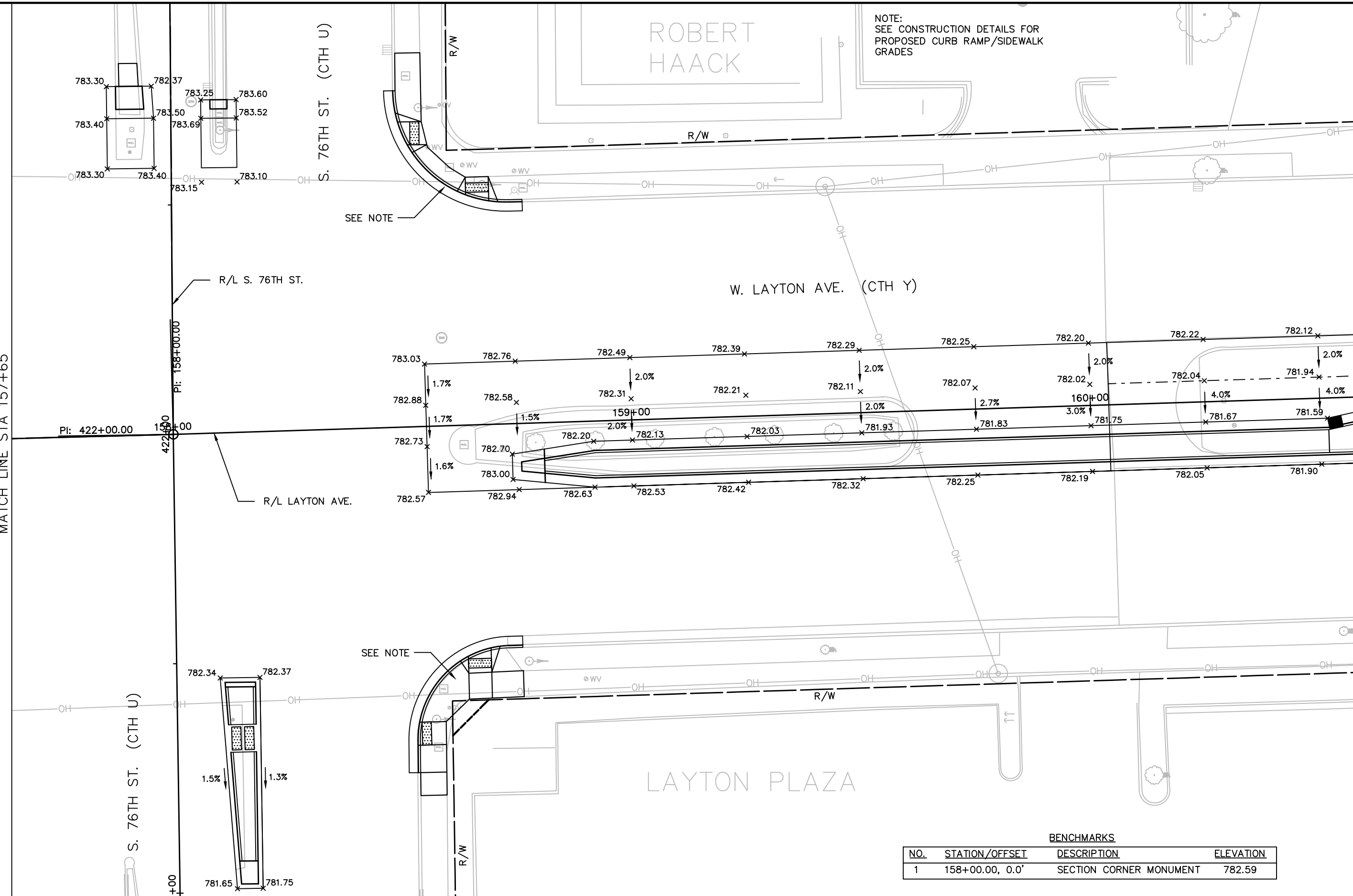
PLOT SCALE : 1" = 20'_XREF

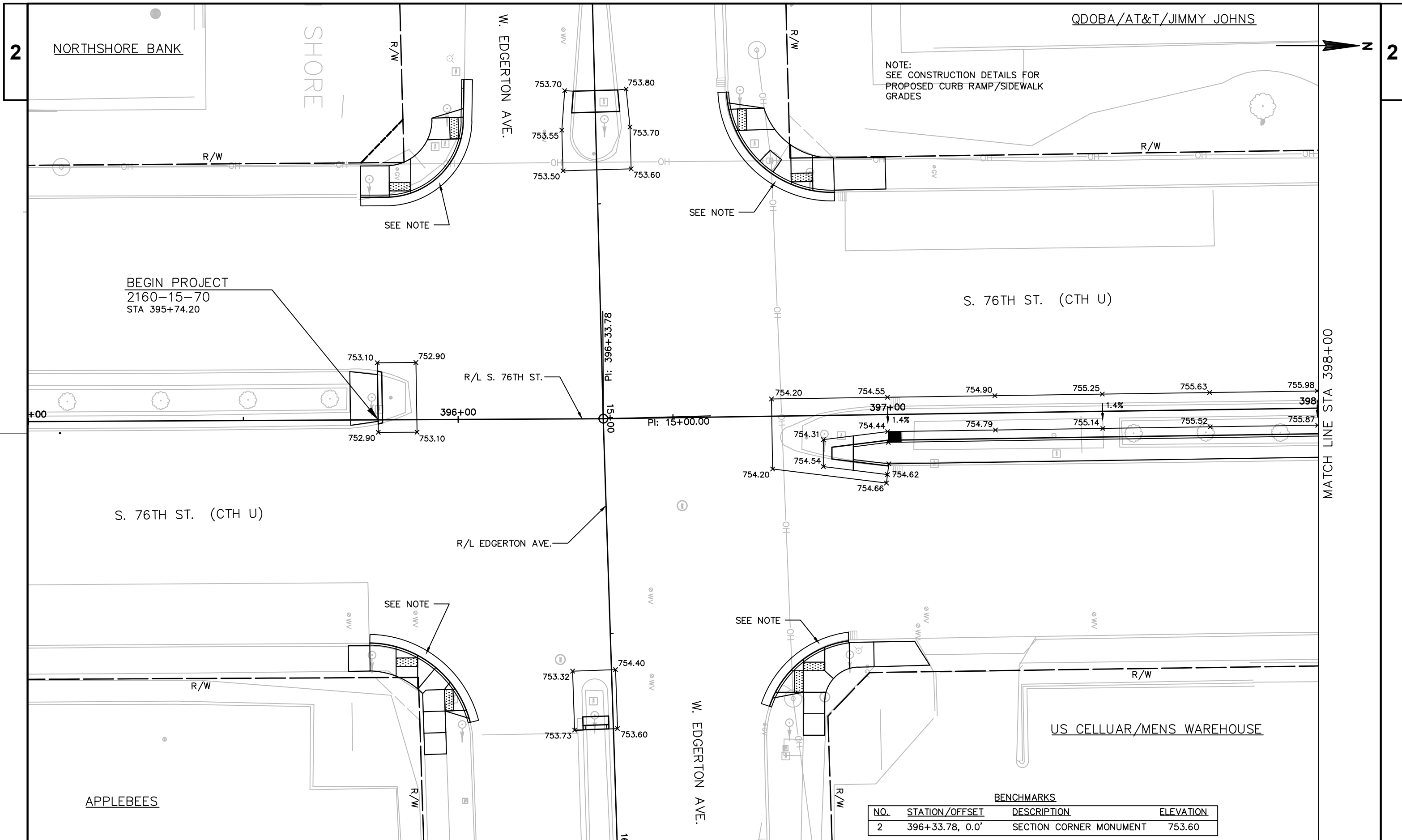
WISDOT/CADDS SHEET 42



MATCH LINE STA 157+65

MATCH LINE STA 160+70





QDOBA/AT&T/JIMMY JOHNS

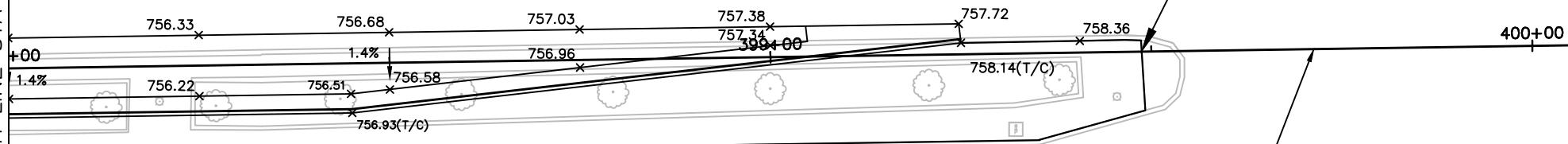
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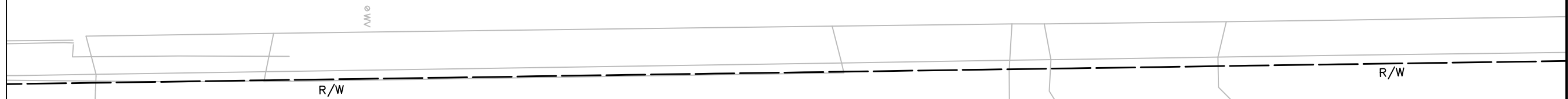
S. 76TH ST. (CTH U)

END CONSTRUCTION
2160-15-70
STA 399+48.72

MATCH LINE STA 398+00



S. 76TH ST. (CTH U)

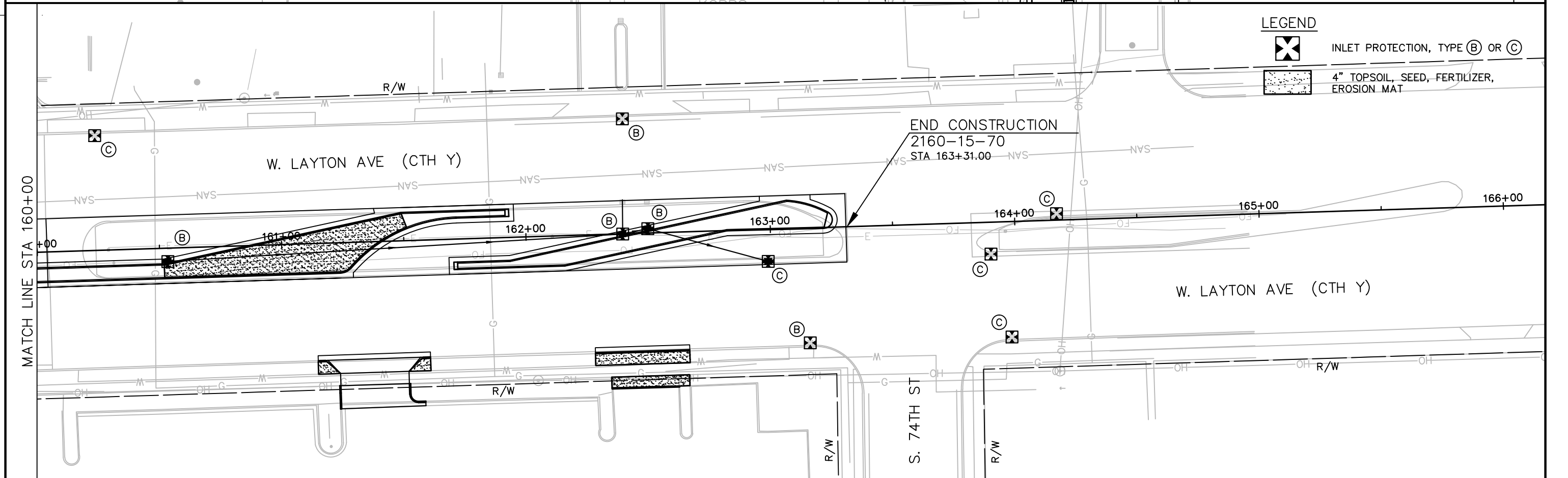


FIRESTONE

MCDONALDS

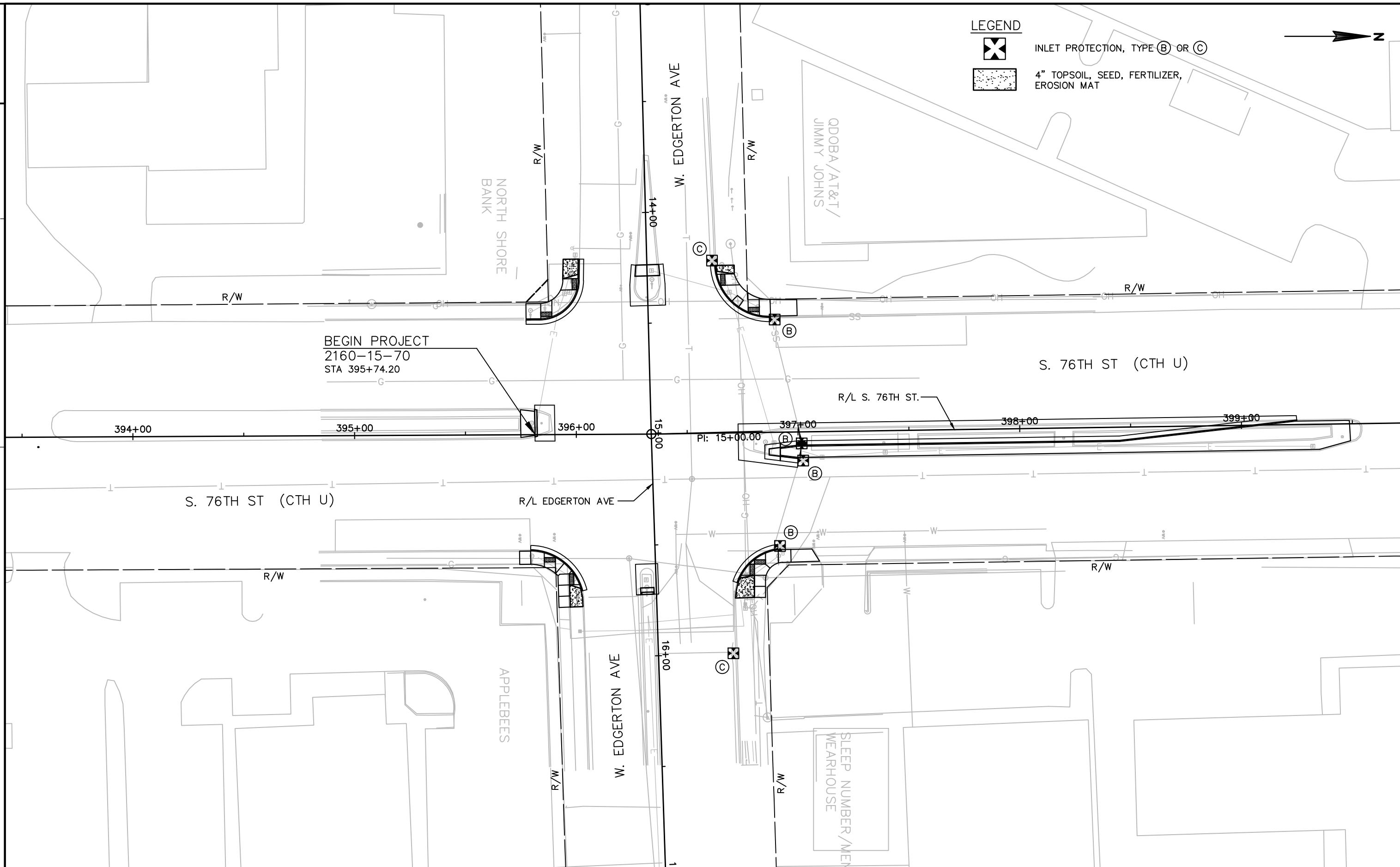
BENCHMARKS

NO.	STATION/OFFSET	DESCRIPTION	ELEVATION
2	396+33.78, 0.0'	SECTION CORNER MONUMENT	753.60



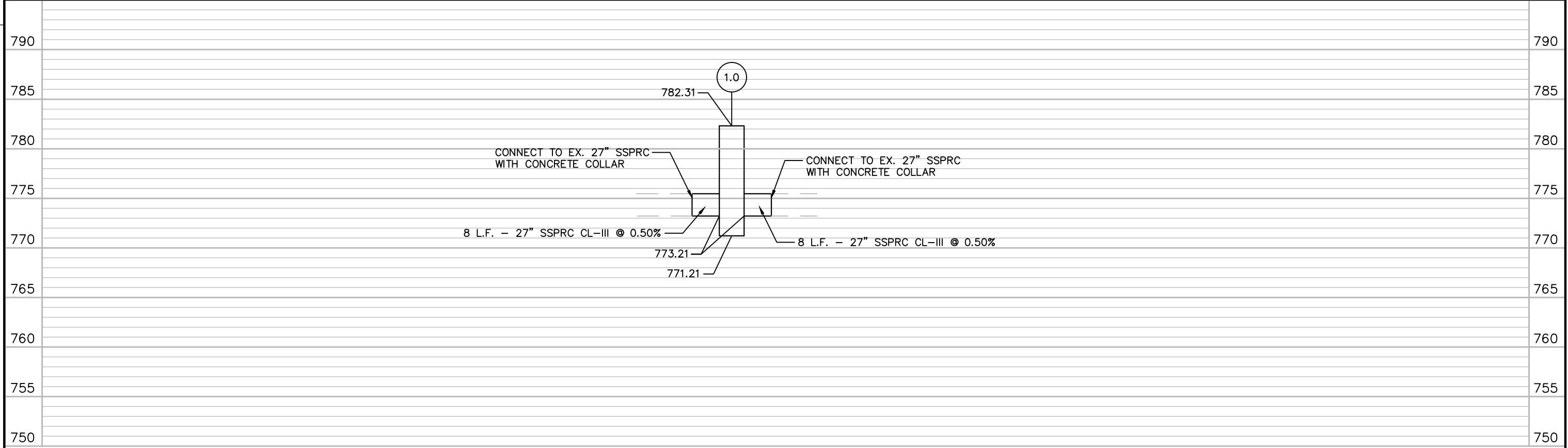
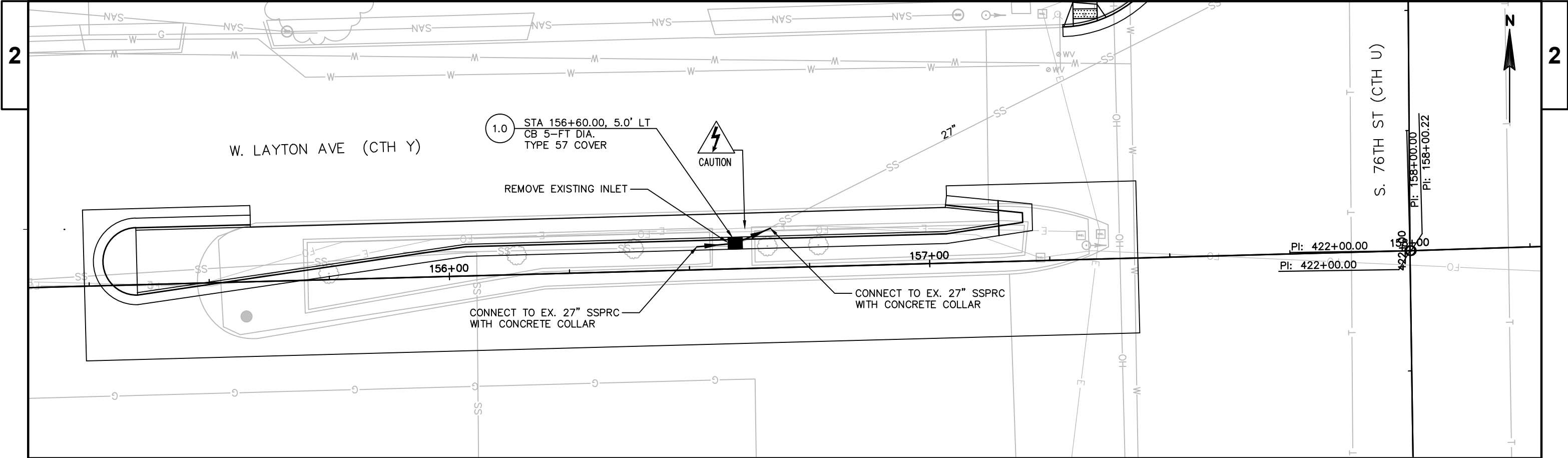
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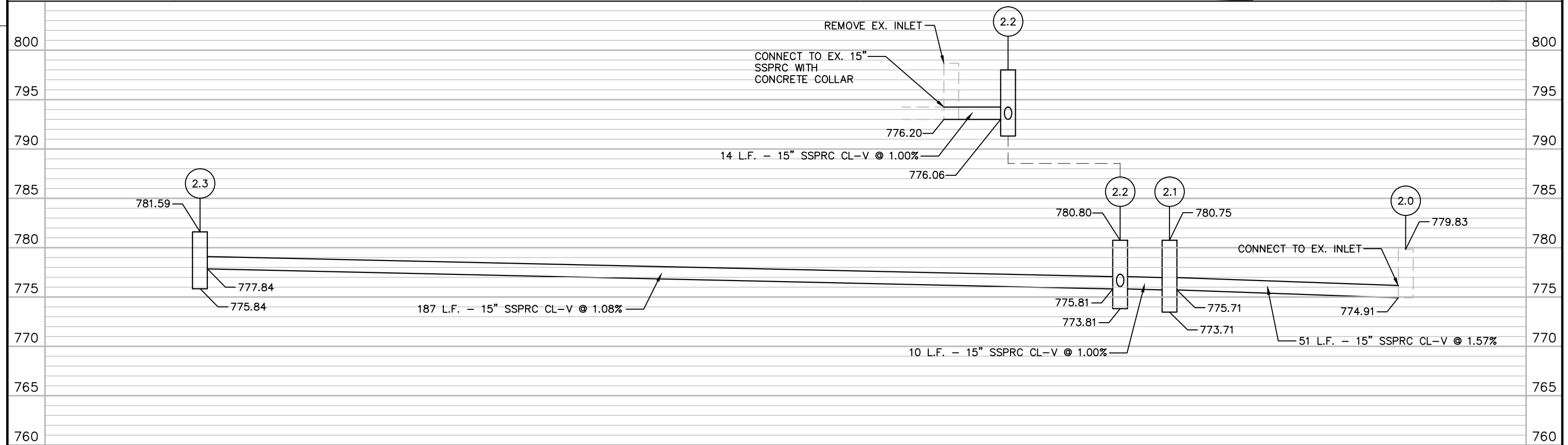
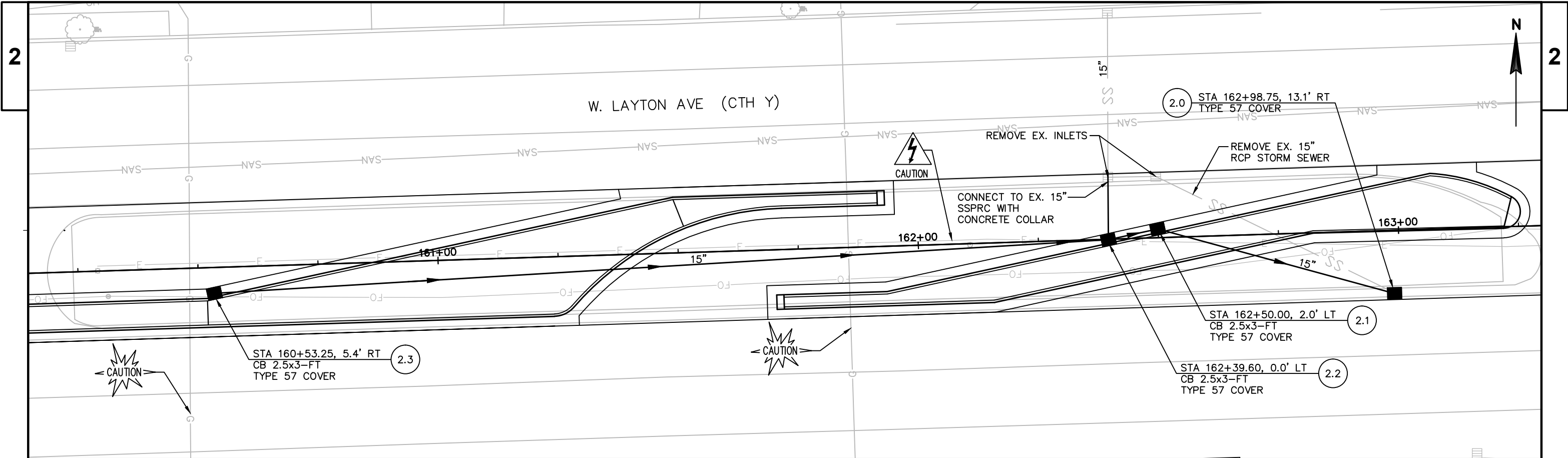
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PROJECT NO: 2160-15-70	HWY: CTH U	COUNTY: MILWAUKEE	EROSION CONTROL- W. EDGERTON AVE/S. 76TH ST	SHEET	E
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FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\CTH U - S. 76TH ST\S 76TH ST-EDGERTON AND LAYTON HSIP - 2160-DATDQ\0425\2016-9-5-37MEC.DWG PLOT BY : HILLIARD, MARC PLOT NAME : PLOT SCALE : 1" = 40' _XREF WSDOT/CADDs SHEET 42





QDOBA / AT&T
JIMMY JOHNS

SLEEP NUMBER /
MENS WEARHOUSE

3.0

STA 397+02.00, 4.8' RT
CB 2.5x3-FT
TYPE 57 COVER

REMOVE EX. INLET

CAUTION

CONNECT TO EX. 24" SS
WITH CONCRETE COLLAR

CONNECT TO EX. INLET

S. 76TH ST (CTH U)

760

760

755

755

750

750

745

745

740

740

735

735

730

730

725

725

720

720

CONNECT TO EX. 24" SS
WITH CONCRETE COLLAR

CONNECT TO EX. INLET

7 L.F. - 24" SS
CL-IV @ 1.57%

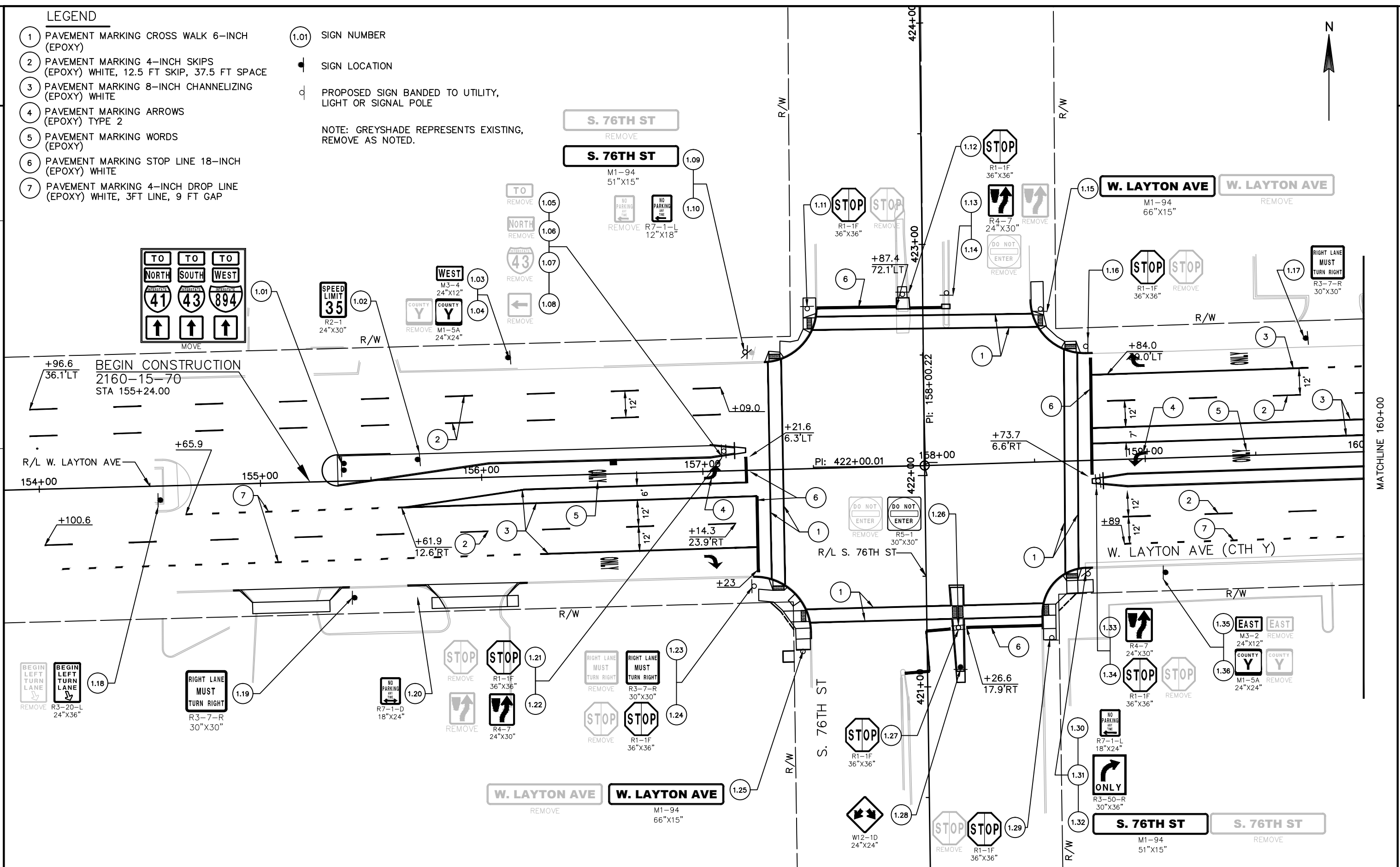
8 L.F. - 24" SS
CL-IV @ 1.37%

LEGEND

- 1 PAVEMENT MARKING CROSS WALK 6-INCH (EPOXY)
- 2 PAVEMENT MARKING 4-INCH SKIPS (EPOXY) WHITE, 12.5 FT SKIP, 37.5 FT SPACE
- 3 PAVEMENT MARKING 8-INCH CHANNELIZING (EPOXY) WHITE
- 4 PAVEMENT MARKING ARROWS (EPOXY) TYPE 2
- 5 PAVEMENT MARKING WORDS (EPOXY)
- 6 PAVEMENT MARKING STOP LINE 18-INCH (EPOXY) WHITE
- 7 PAVEMENT MARKING 4-INCH DROP LINE (EPOXY) WHITE, 3FT LINE, 9 FT GAP

- 1.01 SIGN NUMBER
- SIGN LOCATION
- ◻ PROPOSED SIGN BANDED TO UTILITY, LIGHT OR SIGNAL POLE

NOTE: GREYSHADE REPRESENTS EXISTING, REMOVE AS NOTED.

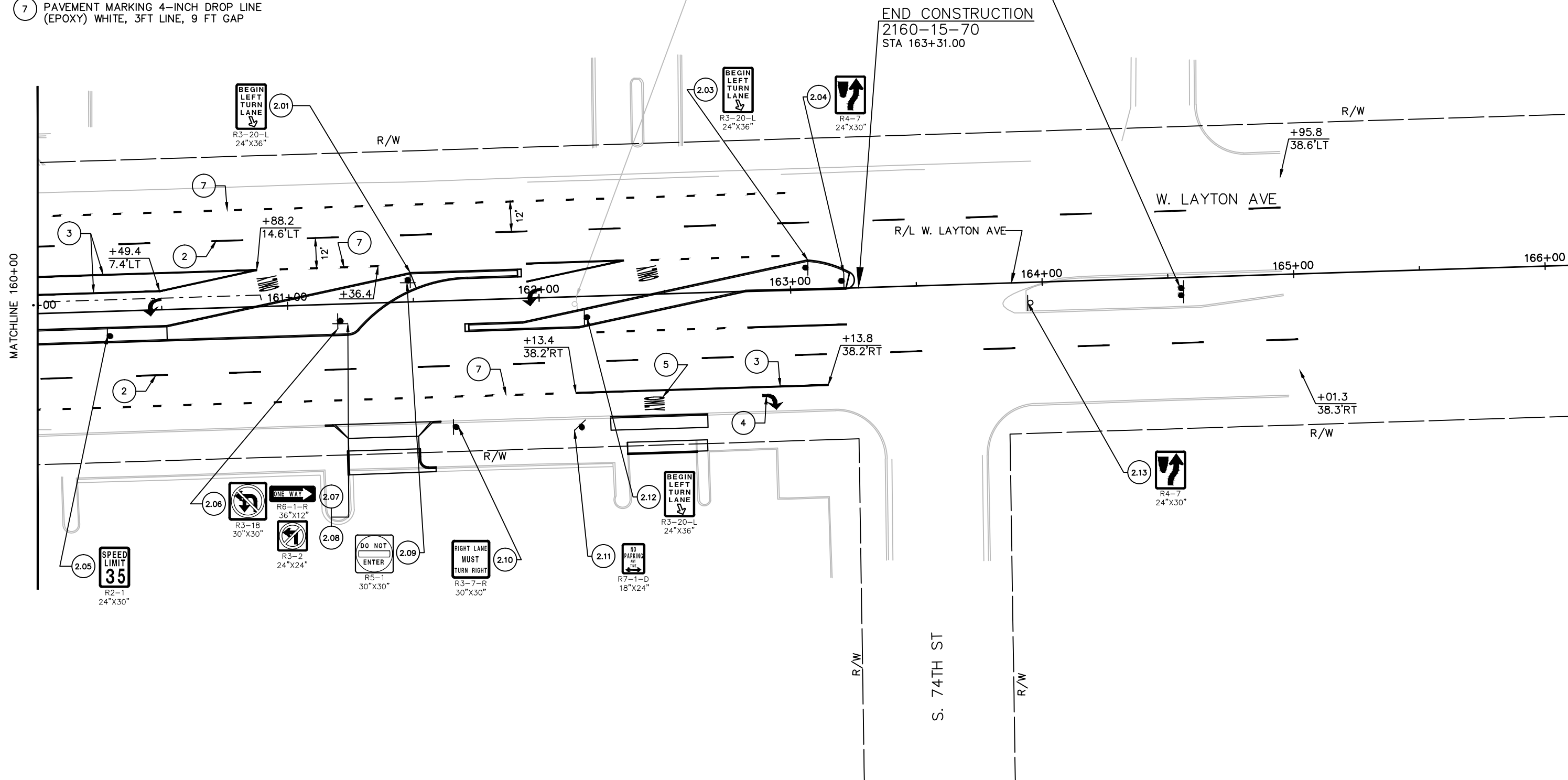
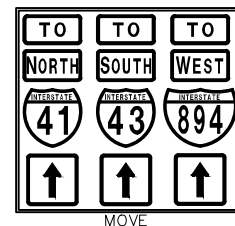


LEGEND

- 1 PAVEMENT MARKING CROSS WALK 6-INCH (EPOXY)
- 2 PAVEMENT MARKING 4-INCH SKIPS (EPOXY) WHITE, 12.5 FT SKIP, 37.5 FT SPACE
- 3 PAVEMENT MARKING 8-INCH CHANNELIZING (EPOXY) WHITE
- 4 PAVEMENT MARKING ARROWS (EPOXY) TYPE 2
- 5 PAVEMENT MARKING WORDS (EPOXY)
- 6 PAVEMENT MARKING STOP LINE 18-INCH (EPOXY) WHITE
- 7 PAVEMENT MARKING 4-INCH DROP LINE (EPOXY) WHITE, 3FT LINE, 9 FT GAP

- (1.01) SIGN NUMBER
- SIGN LOCATION
- PROPOSED SIGN BANDED TO UTILITY, LIGHT OR SIGNAL POLE

NOTE: GREYSHADE REPRESENTS EXISTING, REMOVE AS NOTED.



PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

SIGNING AND PAVEMENT MARKING

SHEET

E

FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\CTH U - S. 76TH ST\76TH ST-EDGERTON AND LAYTON HSIP - 2160-15-70\PLAN\2160-15-70-PAV MARK-2160-15-70.DWG

PLOT NAME :

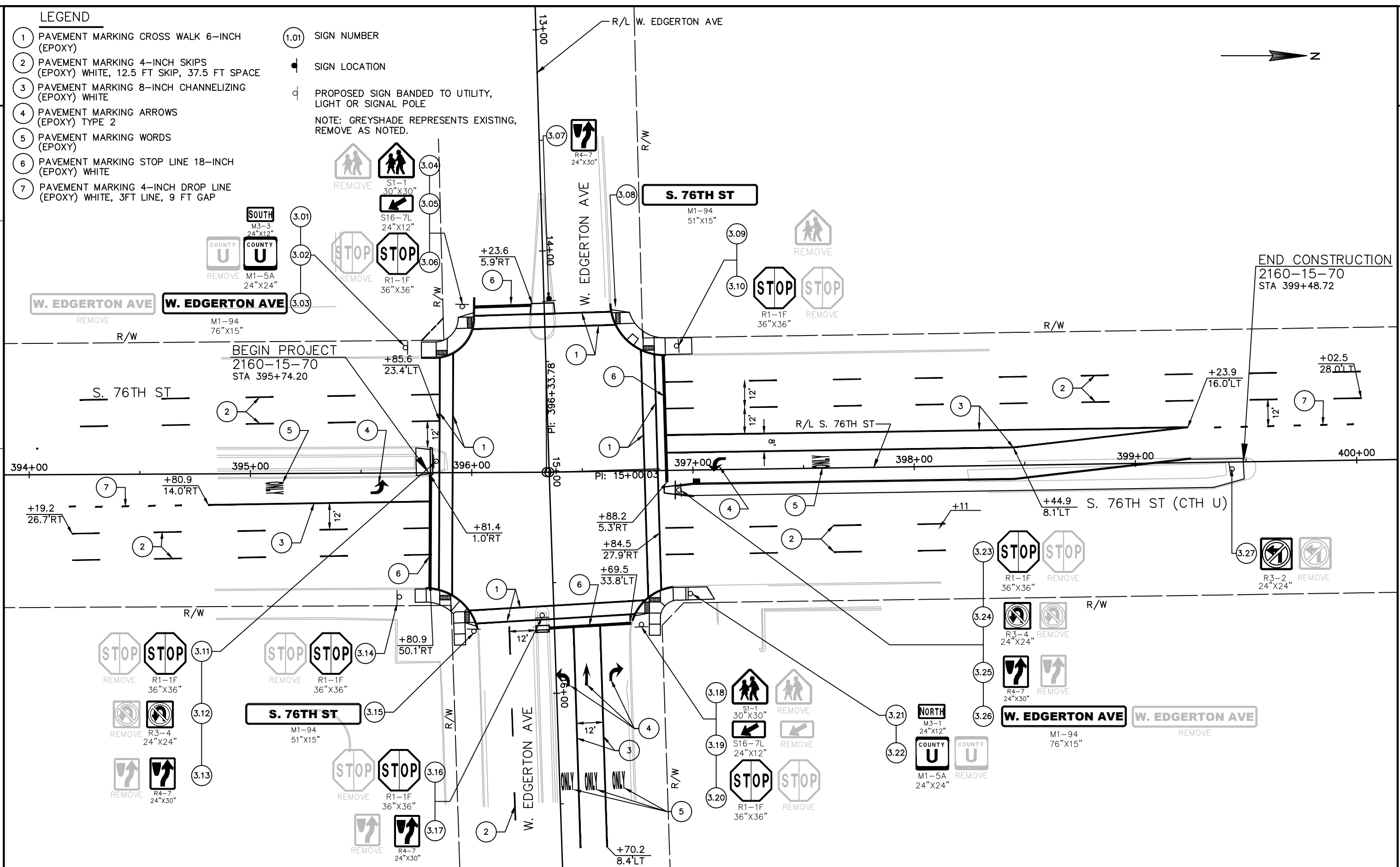
PLOT SCALE : 1" = 40'-XREF

WISDOT/CADDs SHEET 42

LEGEND

- 1 PAVEMENT MARKING CROSS WALK 6-INCH (EPOXY)
- 2 PAVEMENT MARKING 4-INCH SKIPS (EPOXY) WHITE, 12.5 FT SKIP, 37.5 FT SPACE
- 3 PAVEMENT MARKING 8-INCH CHANNELIZING (EPOXY) WHITE
- 4 PAVEMENT MARKING ARROWS (EPOXY) TYPE 2
- 5 PAVEMENT MARKING WORDS (EPOXY)
- 6 PAVEMENT MARKING STOP LINE 18-INCH (EPOXY) WHITE
- 7 PAVEMENT MARKING 4-INCH DROP LINE (EPOXY) WHITE, 3FT LINE, 9 FT GAP

- (1.01) SIGN NUMBER
 - ◆ SIGN LOCATION
 - PROPOSED SIGN BANNED TO UTILITY, LIGHT OR SIGNAL POLE
- NOTE: GREYSHADE REPRESENTS EXISTING, REMOVE AS NOTED.

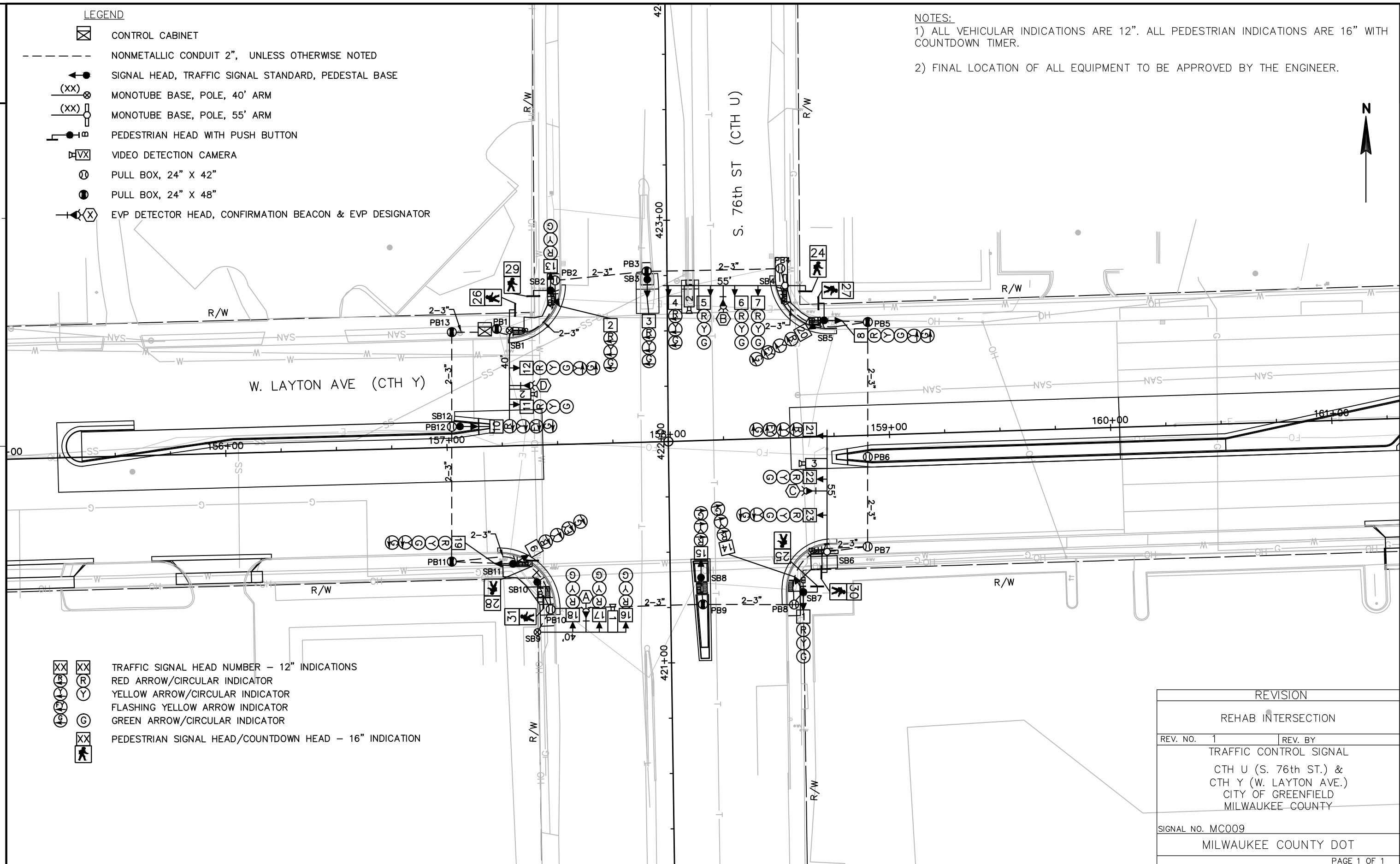


LEGEND

- ☒ CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- ◀● SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) ⊗ MONOTUBE BASE, POLE, 40' ARM
- (XX) ⊖ MONOTUBE BASE, POLE, 55' ARM
- ⊖ PEDESTRIAN HEAD WITH PUSH BUTTON
- ⊖ VIDEO DETECTION CAMERA
- ⊖ PULL BOX, 24" X 42"
- ⊖ PULL BOX, 24" X 48"
- ⊖ EVP DETECTOR HEAD, CONFIRMATION BEACON & EVP DESIGNATOR

NOTES:

- 1) ALL VEHICULAR INDICATIONS ARE 12". ALL PEDESTRIAN INDICATIONS ARE 16" WITH COUNTDOWN TIMER.
- 2) FINAL LOCATION OF ALL EQUIPMENT TO BE APPROVED BY THE ENGINEER.



- XX ⊗ TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- ⊗ RED ARROW/CIRCULAR INDICATOR
- ⊗ YELLOW ARROW/CIRCULAR INDICATOR
- ⊗ FLASHING YELLOW ARROW INDICATOR
- ⊗ GREEN ARROW/CIRCULAR INDICATOR
- XX ⊖ PEDESTRIAN SIGNAL HEAD/COUNTDOWN HEAD - 16" INDICATION

REVISION	
REHAB INTERSECTION	
REV. NO. 1	REV. BY
TRAFFIC CONTROL SIGNAL	
CTH U (S. 76th ST.) & CTH Y (W. LAYTON AVE.) CITY OF GREENFIELD MILWAUKEE COUNTY	
SIGNAL NO. MC009	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

PROJECT NO:2160-15-70

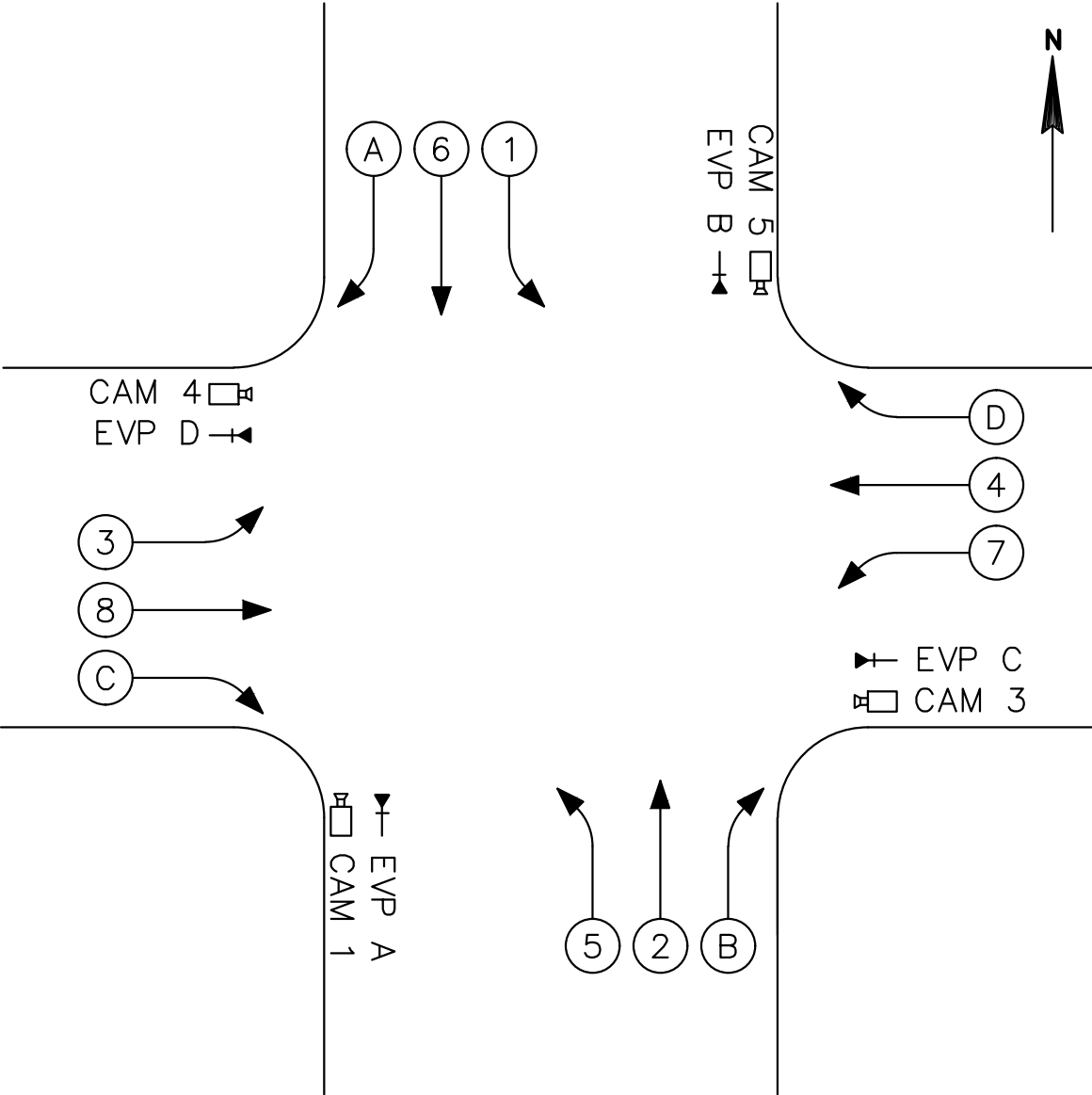
HWY:S. 76th ST (CTH U)

COUNTY:MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

E



PHASES				OVERLAPS		
PHASE	VEHICLE	LEFT TURN TYPE	PED	OVLP	INCLUDES	OUTPUT
1	X	PROT		A		13
2	X		X	B		14
3	X	FYA		C	5	15
4	X		X	D	1	16
5	X	PROT		E		
6	X		X	F	3 FY	10 Y
7	X	FYA		G		
8	X		X	H	7 FY	12 Y

COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	
MM FIBER	X
5.8 GHZ RADIO	
900 MHZ ETHERNET RADIO	
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

PRE-EMPTION	
EMERGENCY VEHICLE	X
CONFIRMATION BEACONS	X
RAILROAD	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	X

REV. NO. 1	REV. DATE
TYPE: 16 CHANNEL	
TRAFFIC CONTROL SIGNAL	
CTH U (S. 76th ST.) & CTH Y (W. LAYTON AVE.) CITY OF GREENFIELD MILWAUKEE COUNTY	
SIGNAL NO. MC009	
MILWAUKEE COUNTY DOT	
PAGE 2 OF 3	

PROJECT ID:	2160-15-70
INTERSECTION:	CTH U & CTH Y

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

CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR									PED BUTTON
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK	
SB1	12	11	4	RED	ORG	GRN							
		12	4	RED	ORG	GRN		ORG/BLK		GRN/BLK			
		29	6								BLU	BLK	
		B	6										WHT/BLK
SB2	15	13	6	RED	ORG	GRN							
		2	5				RED/BLK	ORG/BLK		GRN/BLK			
		26	4								BLU	BLK	
		B	4										WHT/BLK
SB3	7	3	5				RED	ORG		GRN			
SB4	15	5	2	RED	ORG	GRN							
		6	2	RED	ORG	GRN							
		7	2	RED	ORG	GRN							
		4	5				RED/BLK	ORG/BLK		GRN/BLK			
		24	2								BLU	BLK	
		B	4										WHT/BLK
SB5	15	8	4	RED	ORG	GRN		BLU/WHT		GRH/WHT			
		20	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		27	4								BLU	BLK	
		B	2										WHT/BLK
SB6	15	22	8	RED	ORG	GRN							
		23	8	RED	ORG	GRN		BLU/WHT		GRH/WHT			
		21	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		25	2								BLU	BLK	
		B	2										WHT/BLK
SB7	15	1	2	RED	ORG	GRN							
		14	1				RED/BLK	ORG/BLK		GRN/BLK			
		30	8								BLU	BLK	
		B	8										WHT/BLK
SB8	7	15	1				RED	ORG		GRN			
		B	8										WHT/BLK
SB9	7	16	6	RED	ORG	GRN							
		17	6	RED	ORG	GRN							
		18	6	RED	ORG	GRN							
SB10	7	31	8								BLU	BLK	
		B	8										WHT/BLK
SB11	15	19	8	RED	ORG	GRN		BLU/WHT		GRH/WHT			
		9	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		28	6								BLU	BLK	
		B	6										WHT/BLK
SB12	7	10					RED	ORG		GRN			



- NOTES:
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - AT THE SIGNAL BASES, CONNECT ONE TERMINAL OF THE PEDESTRIAN BUTTON TO THE COLOR INDICATED IN THE CHART, CONNECT THE OTHER TERMINAL TO THE WHITE CONDUCTOR IN THE SIGNAL CABLE

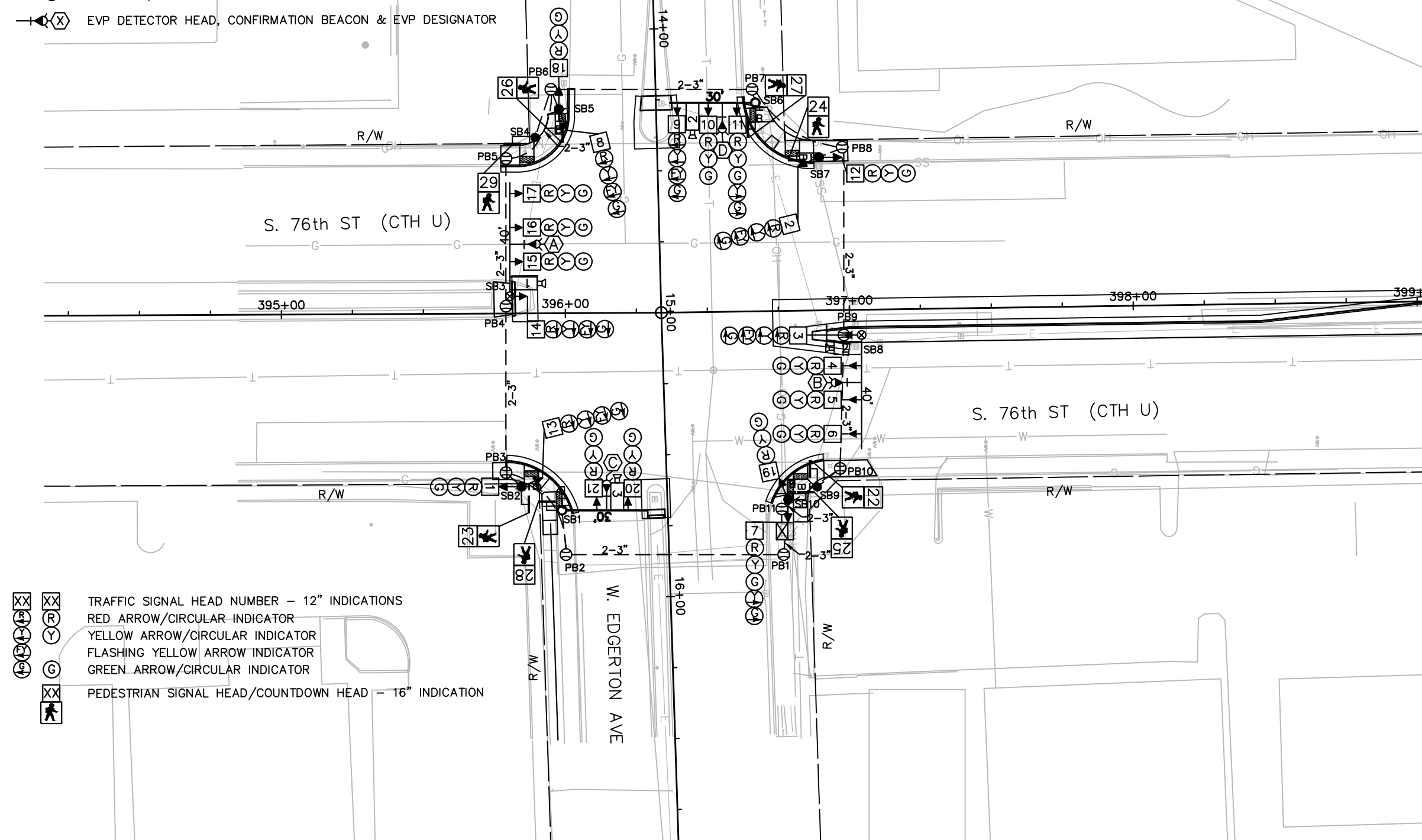
REV. NO. 1	REV. BY
TRAFFIC CONTROL SIGNAL	
CTH U (S. 76th ST.) & CTH Y (W. LAYTON AVE.) CITY OF GREENFIELD MILWAUKEE COUNTY	
SIGNAL NO. MC009	
MILWAUKEE COUNTY DOT	
PAGE 1 OF 1	

LEGEND

- ☒ CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- ◀● SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) ⊗ MONOTUBE BASE, POLE, 40' ARM
- (XX) ⊗ MONOTUBE BASE, POLE, 55' ARM
- ⬇● PEDESTRIAN HEAD WITH PUSH BUTTON
- ☒ VX VIDEO DETECTION CAMERA
- ⊗ PULL BOX, 24" X 42"
- ⊗ PULL BOX, 24" X 48"
- ⬇⊗ EVP DETECTOR HEAD, CONFIRMATION BEACON & EVP DESIGNATOR

NOTES:

- 1) BOLD REPRESENTS REMOVE AND REPLACE. GREYSHADE REPRESENTS EXISTING.
- 2) FINAL LOCATION OF ALL EQUIPMENT TO BE APPROVED BY THE ENGINEER.



- XX XX TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- ⊗ ⊗ RED ARROW/CIRCULAR INDICATOR
- ⊗ ⊗ YELLOW ARROW/CIRCULAR INDICATOR
- ⊗ ⊗ FLASHING YELLOW ARROW INDICATOR
- ⊗ ⊗ GREEN ARROW/CIRCULAR INDICATOR
- XX PEDESTRIAN SIGNAL HEAD/COUNTDOWN HEAD - 16" INDICATION

REVISION

REHAB INTERSECTION

REV. NO. 1 REV. BY

TRAFFIC CONTROL SIGNAL

CTH U (S. 76th ST.) &
W. EDGERTON AVE.

CITY OF GREENFIELD/VILLAGE OF
GREENDALE

MILWAUKEE COUNTY

SIGNAL NO. MC034

MILWAUKEE COUNTY DOT

PAGE 1 OF 1

PROJECT NO:2160-15-70

HWY:S. 76th ST. (CTH U)

COUNTY:MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

E

FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\CTH U - S. 76th ST\S 76th ST-EDGERTON AND LAYTON HSIP -
2160-15-00\PLANS\FINAL\13_TRAF SIG\U_EDGERTON-SIG-02.DWG

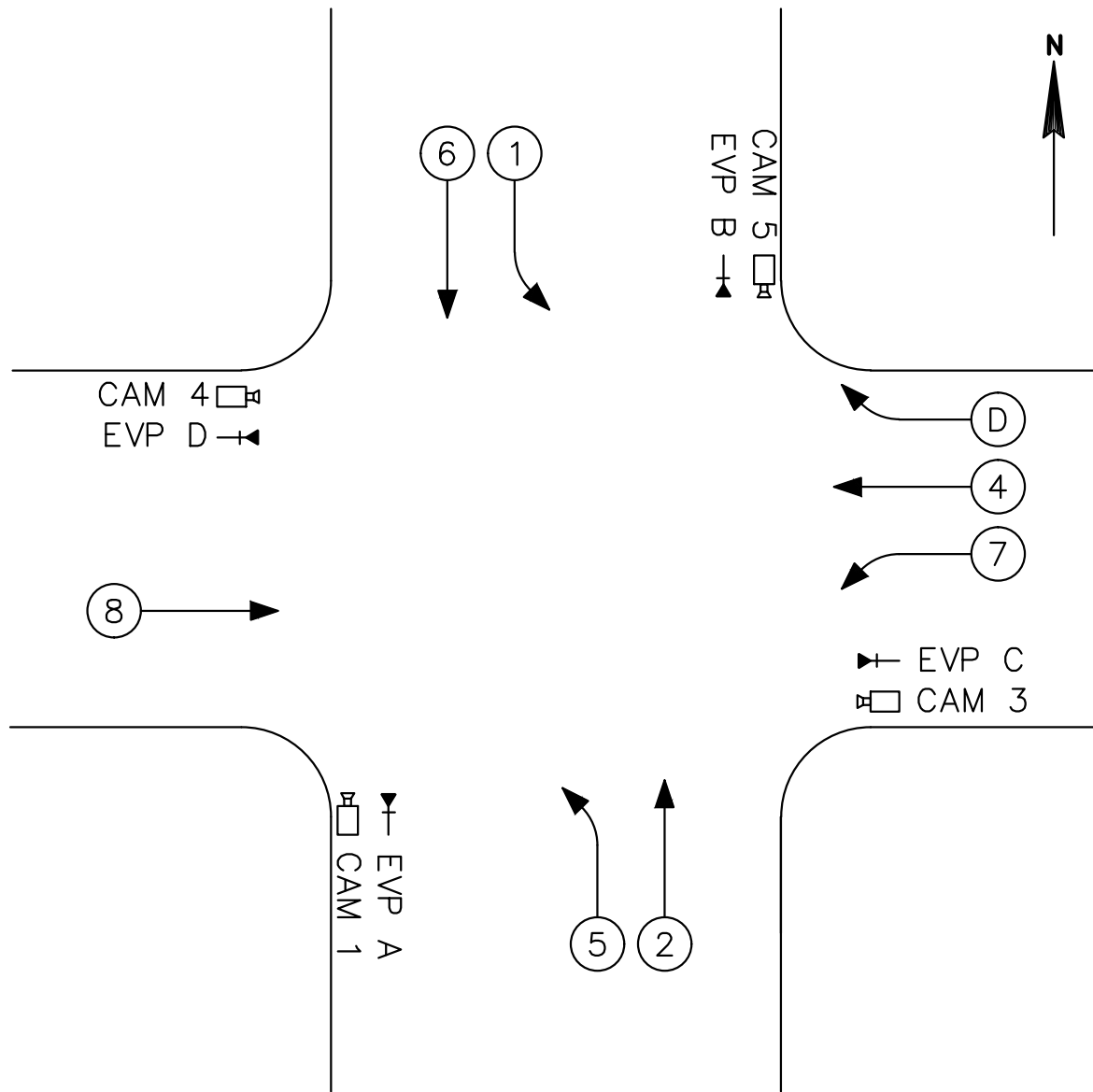
PLOT DATE : 10/4/2016 8:49 PM

PLOT BY : MURPHY, DANIEL

PLOT NAME :

PLOT SCALE : 1" = 40' XREF

WISDOT/CADDs SHEET 42



PHASES				OVERLAPS		
PHASE	VEHICLE	LEFT TURN TYPE	PED	OVLP	INCLUDES	OUTPUT
1	X	FYA		A		13
2	X		X	B		14
3	X			C		15
4	X		X	D	1	16
5	X	FYA		E	1 FY	9 Y
6	X		X	F		
7	X	FYA		G	5 FY	11 Y
8	X		X	H	7 FY	12 Y

COMMUNICATION	
ETHERNET SWITCH	X
SM FIBER	
MM FIBER	X
5.8 GHZ RADIO	
900 MHZ ETHERNET RADIO	
900 MHZ SERIAL RADIO	
ETHERNET OVER COPPER	

PRE-EMPTION	
EMERGENCY VEHICLE	X
CONFIRMATION BEACONS	X
RAILROAD	

AUXILARY EQUIPMENT	
LIGHTING FROM CABINET	
BATTERY BACKUP	
PTZ CAMERA	
AUDIBLE PEDESTRIAN HEADS	
AUDIBLE PEDESTRIAN BUTTONS	X

REV. NO. 1	REV. DATE
TYPE: 16 CHANNEL	
TRAFFIC CONTROL SIGNAL	
CTH U (S. 76th ST.) & W. EDGERTON AVE.	
CITY OF GREENFIELD/VILLAGE OF GREENDALE	
MILWAUKEE COUNTY	
SIGNAL NO. MC034	
MILWAUKEE COUNTY DOT	
PAGE 2 OF 3	

PROJECT ID:	2160-15-70
INTERSECTION:	CTH U & EDGERTON

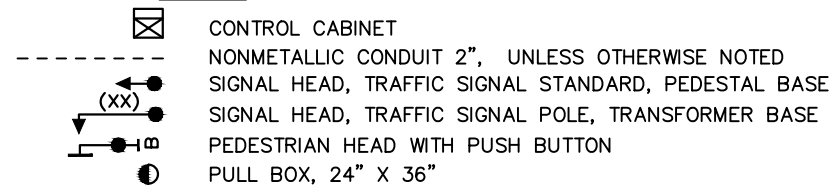
SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR									PED BUTTON
				RED	YELLOW	GREEN	<RED>	<YELLOW>	<FL YLW>	<GREEN>	D/WALK	WALK	
SB1	12	20	8	RED	ORG	GRN							
		21	8	RED	ORG	GRN							
		28	8								BLU	BLK	
		B	2										WHT/BLK
SB2	15	1	2	RED	ORG	GRN							
		13	3				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		23	2								BLU	BLK	
		B	8										WHT/BLK
SB3	12	15	6	RED	ORG	GRN							
		16	6	RED	ORG	GRN							
		17	6	RED	ORG	GRN							
		14	1				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
SB4	7	29	8								BLU	BLK	
		B	8										WHT/BLK
SB5	15	18	8	RED	ORG	GRN							
		8	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		28	6								BLU	BLK	
		B	6										WHT/BLK
SB6	15	10	4	RED	ORG	GRN							
		11	4	RED	ORG	GRN		BLU/WHT		GRH/WHT			
		9	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		27	6								BLU	BLK	
		B	6										WHT/BLK
SB7	15	12	4	RED	ORG	GRN							
		2	7				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
		24	6								BLU	BLK	
		B	6										WHT/BLK
SB8	12	4	2	RED	ORG	GRN							
		5	2	RED	ORG	GRN							
		6	2	RED	ORG	GRN							
		3	5				RED/BLK	ORG/BLK	BLU/BLK	GRN/BLK			
SB9	12	22	2								ORG	GRN	
		25	4								BLU	BLK	
		B	4										WHT/BLK
SB11	12	7	4	RED	ORG	GRN		BLU		BLK			
		19	8	RED/BLK	ORG/BLK	GRN/BLK							
		B	2										WHT/BLK

- NOTES:
- DO NOT USE THE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - AT THE SIGNAL BASES, CONNECT ONE TERMINAL OF THE PEDESTRIAN BUTTON TO THE COLOR INDICATED IN THE CHART, CONNECT THE OTHER TERMINAL TO THE WHITE CONDUCTOR IN THE SIGNAL CABLE

REV. NO.	1	REV. DATE	
TYPE:	16 CHANNEL		
TRAFFIC CONTROL SIGNAL			
CTH U (S. 76th ST.) & W. EDGERTON AVE.			
CITY OF GREENFIELD/VILLAGE OF GREENDALE			
MILWAUKEE COUNTY			
SIGNAL NO. MC034			
MILWAUKEE COUNTY DOT			
PAGE 3 OF 3			

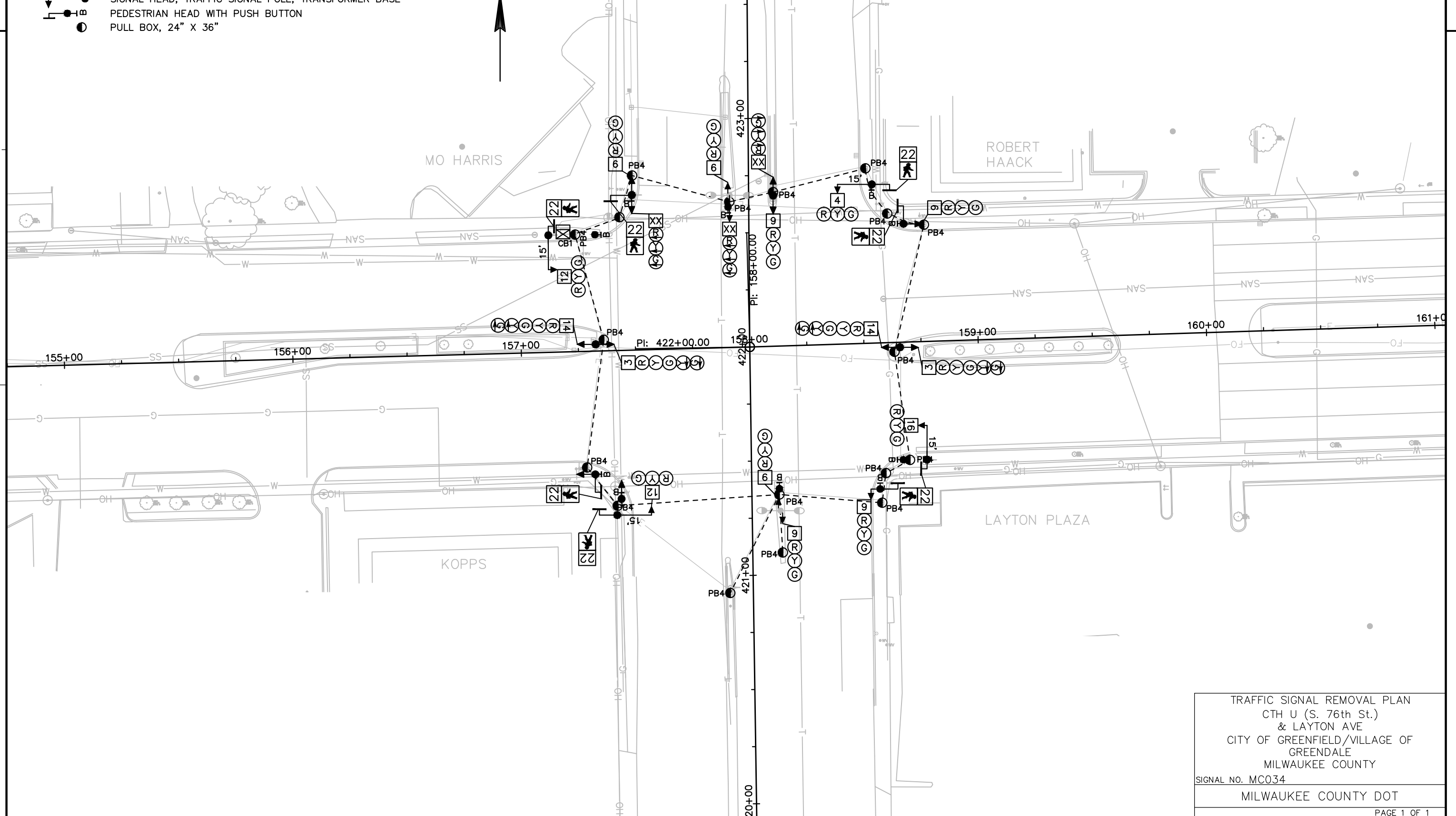
LEGEND



NOTES:

1) BOLD REPRESENTS REMOVAL.

2) STREET LIGHT POLES WILL BE REMOVED BY THE CITY OF GREENFIELD AFTER THE TRAFFIC SIGNAL HEADS AND RISERS ARE REMOVED.



TRAFFIC SIGNAL REMOVAL PLAN
CTH U (S. 76th St.)
& LAYTON AVE
CITY OF GREENFIELD/VILLAGE OF
GREENDALE
MILWAUKEE COUNTY
SIGNAL NO. MC034
MILWAUKEE COUNTY DOT

PAGE 1 OF 1

PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

SHEET

E

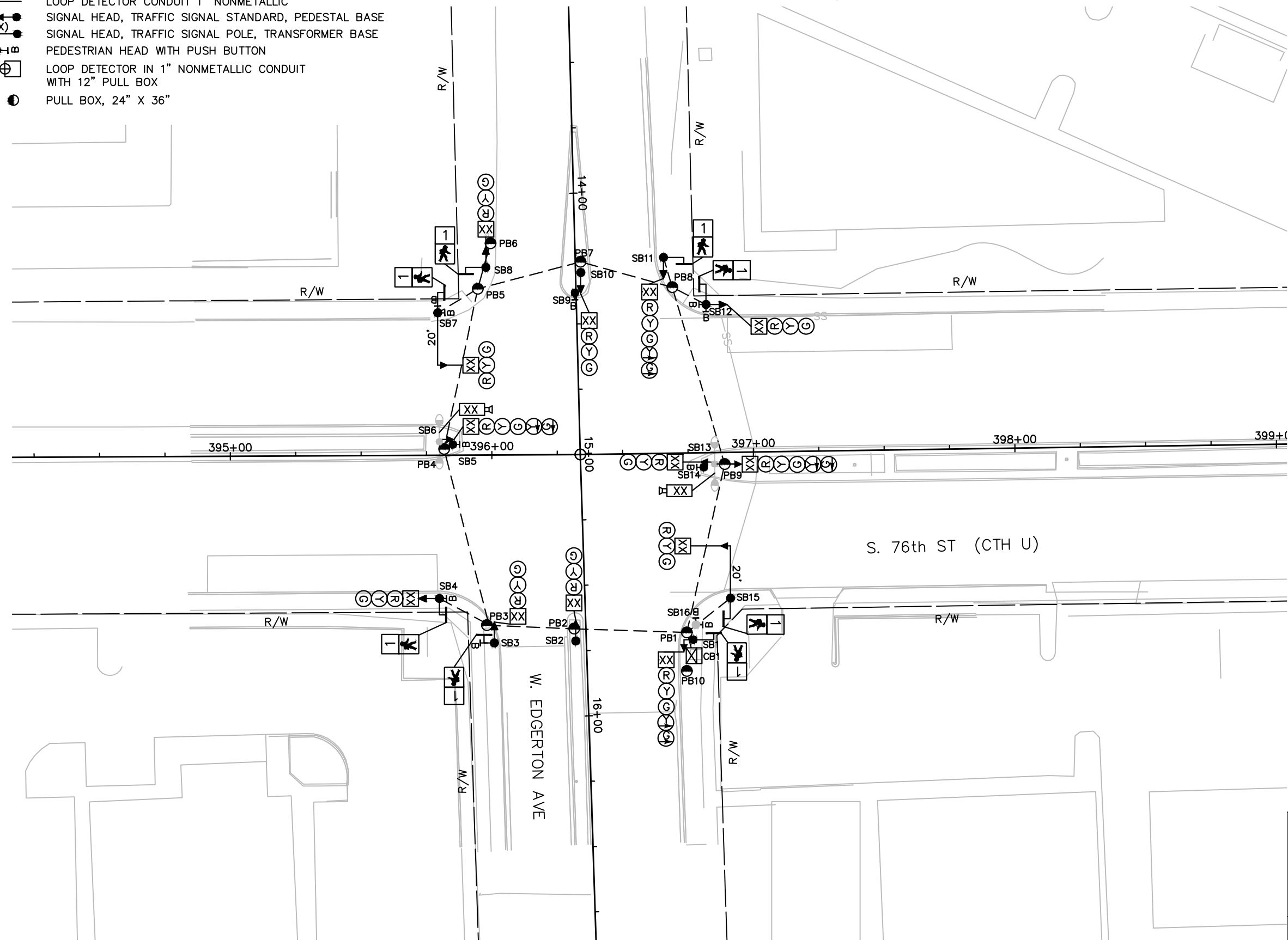
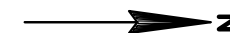
LEGEND

- ☒ CONTROL CABINET
--- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
— LOOP DETECTOR CONDUIT 1" NONMETALLIC
● (XX) SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
● SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
● PEDESTRIAN HEAD WITH PUSH BUTTON
☐ LOOP DETECTOR IN 1" NONMETALLIC CONDUIT WITH 12" PULL BOX
● PULL BOX, 24" X 36"

NOTES:

1) BOLD REPRESENTS REMOVE. GREYSHADE REPRESENTS EQUIPMENT TO REMAIN.

2) FINAL LOCATION OF ALL EQUIPMENT TO BE APPROVED BY THE ENGINEER.



PROJECT NO: 2160-15-70

HWY: S. 76th ST. (CTH U)

COUNTY: MILWAUKEE

TRAFFIC SIGNAL REMOVAL PLAN

SHEET

E

FILE NAME : O:\HIGHWAY OPERATIONS CONTROL FILE\CENTRAL FILES\2010-2014\CTH U - S. 76TH ST\S 76TH ST-EDGERTON AND LAYTON HSIP - 2160-15-00\PLANS\90%\13_TRAF SIG REMOV\21601570_SR_EDGERTON.DWG

PLOT DATE : 7/27/2016 11:30 AM

PLOT BY : MURPHY, DANIEL

PLOT NAME :

PLOT SCALE : 1/8" = 1'-0"

WISDOT/CADDS SHEET 42

2

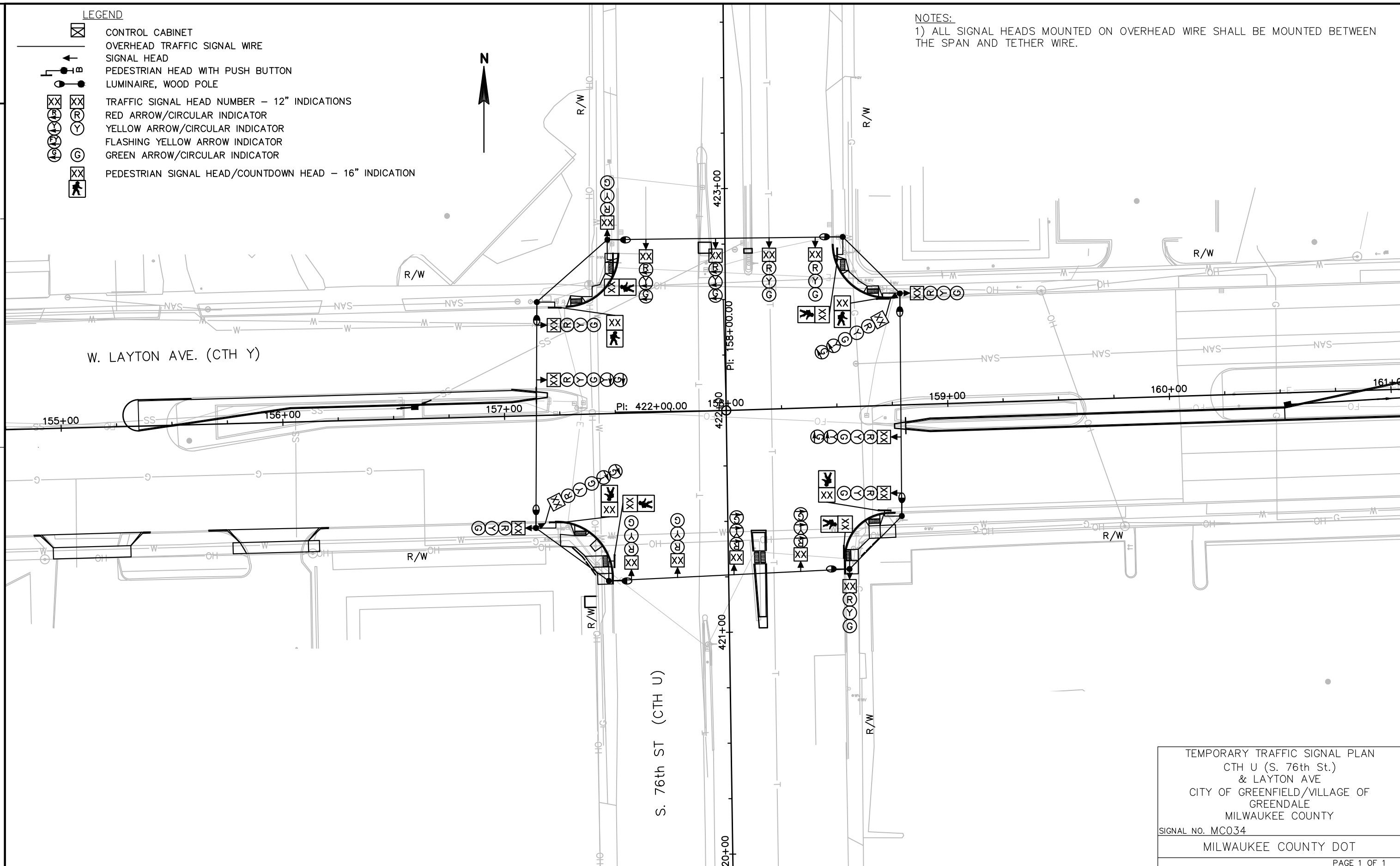
LEGEND

- CONTROL CABINET
- OVERHEAD TRAFFIC SIGNAL WIRE
- SIGNAL HEAD
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE, WOOD POLE
- TRAFFIC SIGNAL HEAD NUMBER - 12" INDICATIONS
- RED ARROW/CIRCULAR INDICATOR
- YELLOW ARROW/CIRCULAR INDICATOR
- FLASHING YELLOW ARROW INDICATOR
- GREEN ARROW/CIRCULAR INDICATOR
- PEDESTRIAN SIGNAL HEAD/COUNTDOWN HEAD - 16" INDICATION

NOTES:

- 1) ALL SIGNAL HEADS MOUNTED ON OVERHEAD WIRE SHALL BE MOUNTED BETWEEN THE SPAN AND TETHER WIRE.

2



TEMPORARY TRAFFIC SIGNAL PLAN
CTH U (S. 76th St.)
& LAYTON AVE
CITY OF GREENFIELD/VILLAGE OF
GREENDALE
MILWAUKEE COUNTY

SIGNAL NO. MC034

MILWAUKEE COUNTY DOT

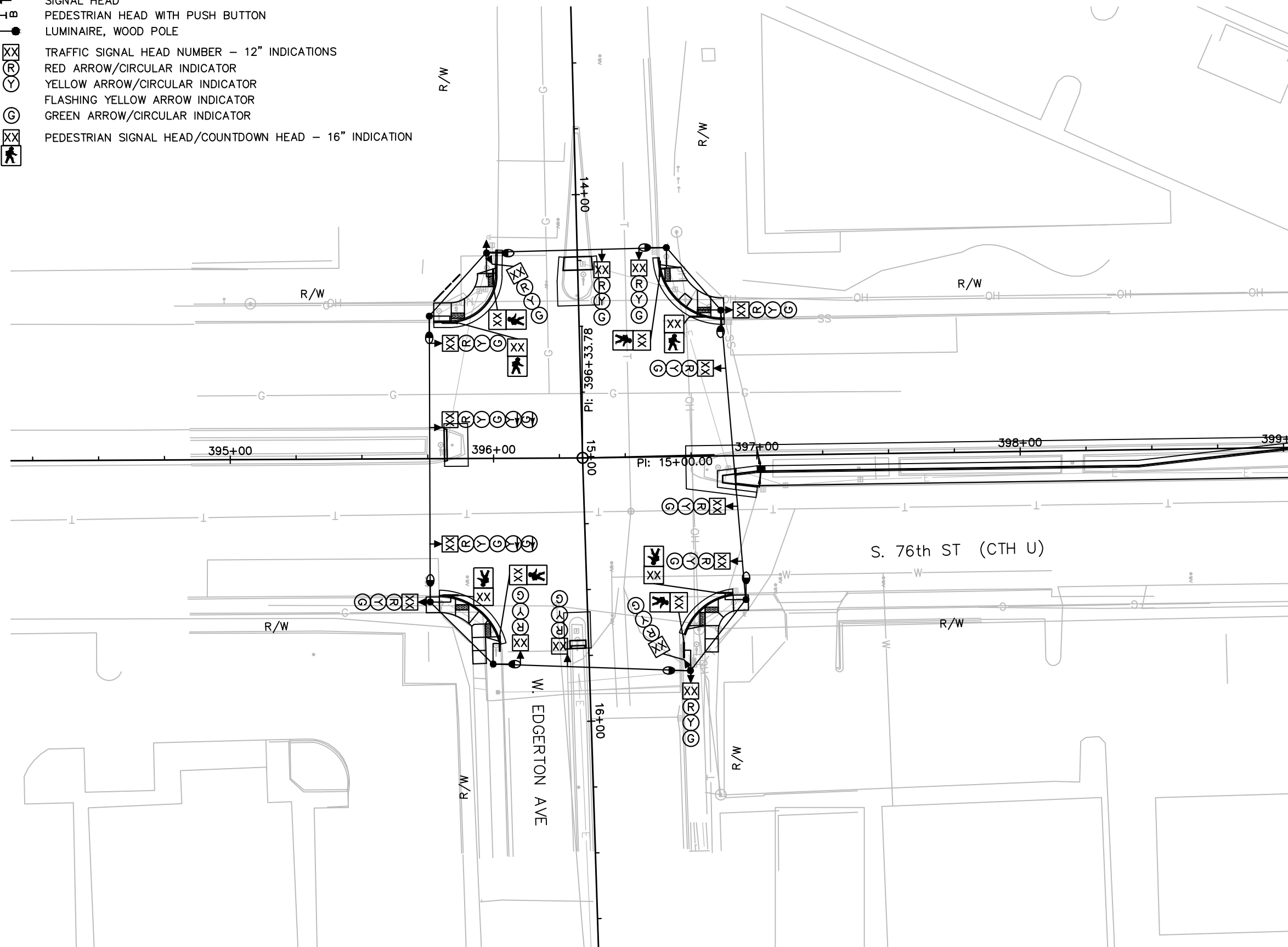
PAGE 1 OF 1

LEGEND

- ☒ CONTROL CABINET
— OVERHEAD TRAFFIC SIGNAL WIRE
— SIGNAL HEAD
— PEDESTRIAN HEAD WITH PUSH BUTTON
— LUMINAIRE, WOOD POLE
- XX TRAFFIC SIGNAL HEAD NUMBER — 12" INDICATIONS
R RED ARROW/CIRCULAR INDICATOR
Y YELLOW ARROW/CIRCULAR INDICATOR
G FLASHING YELLOW ARROW INDICATOR
G GREEN ARROW/CIRCULAR INDICATOR
- XX PEDESTRIAN SIGNAL HEAD/COUNTDOWN HEAD — 16" INDICATION
—

NOTES:

- 1) ALL SIGNAL HEADS MOUNTED ON OVERHEAD WIRE SHALL BE MOUNTED BETWEEN THE SPAN AND TETHER WIRE.



TEMPORARY TRAFFIC SIGNAL
CTH U (S. 76th ST.) &
W. EDGERTON AVE.
CITY OF GREENFIELD/VILLAGE OF
GREENDALE
MILWAUKEE COUNTY

SIGNAL NO. MC034

MILWAUKEE COUNTY DOT

PAGE 1 OF 1

PROJECT NO: 2160-15-70

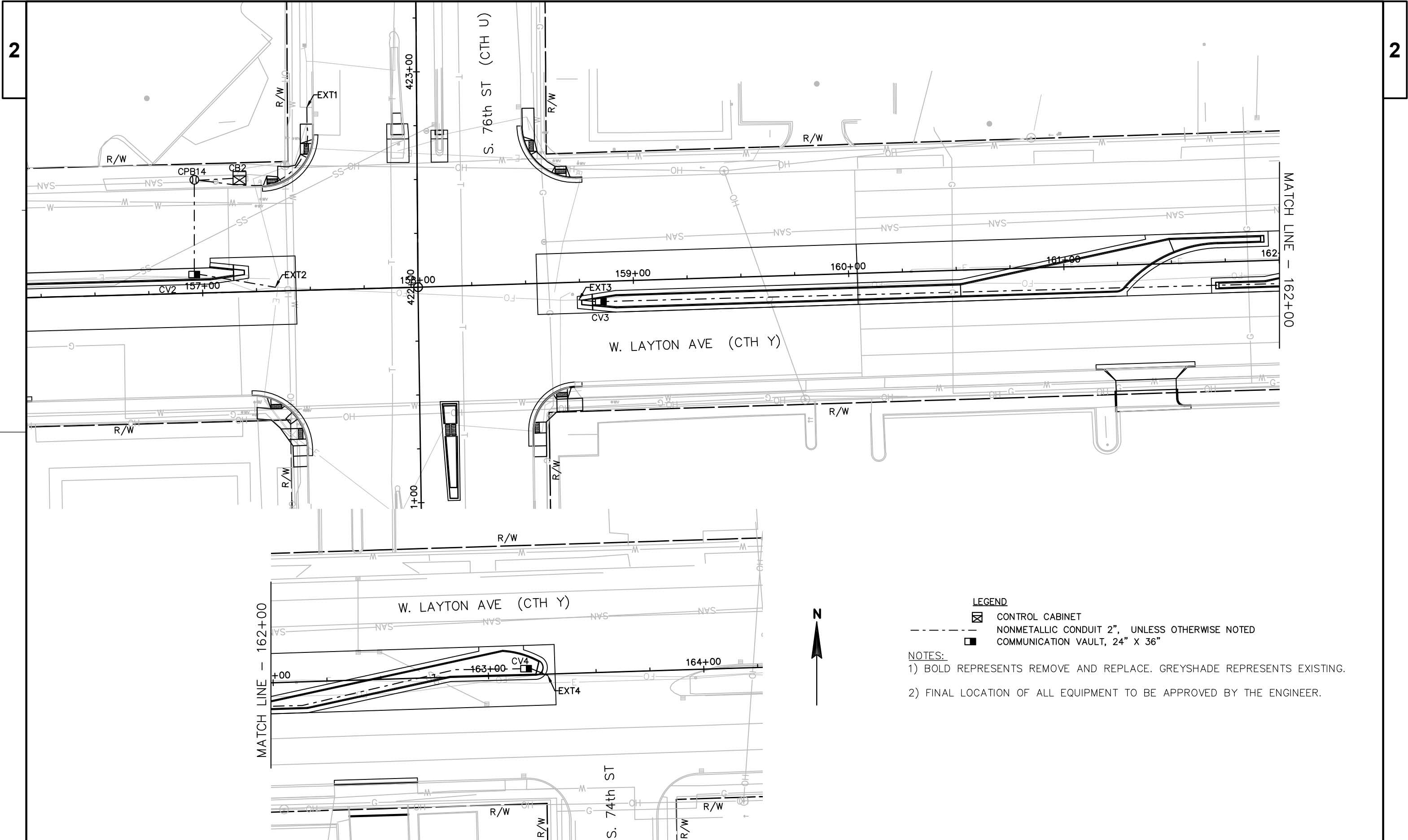
HWY: S. 76th ST. (CTH U)

COUNTY: MILWAUKEE

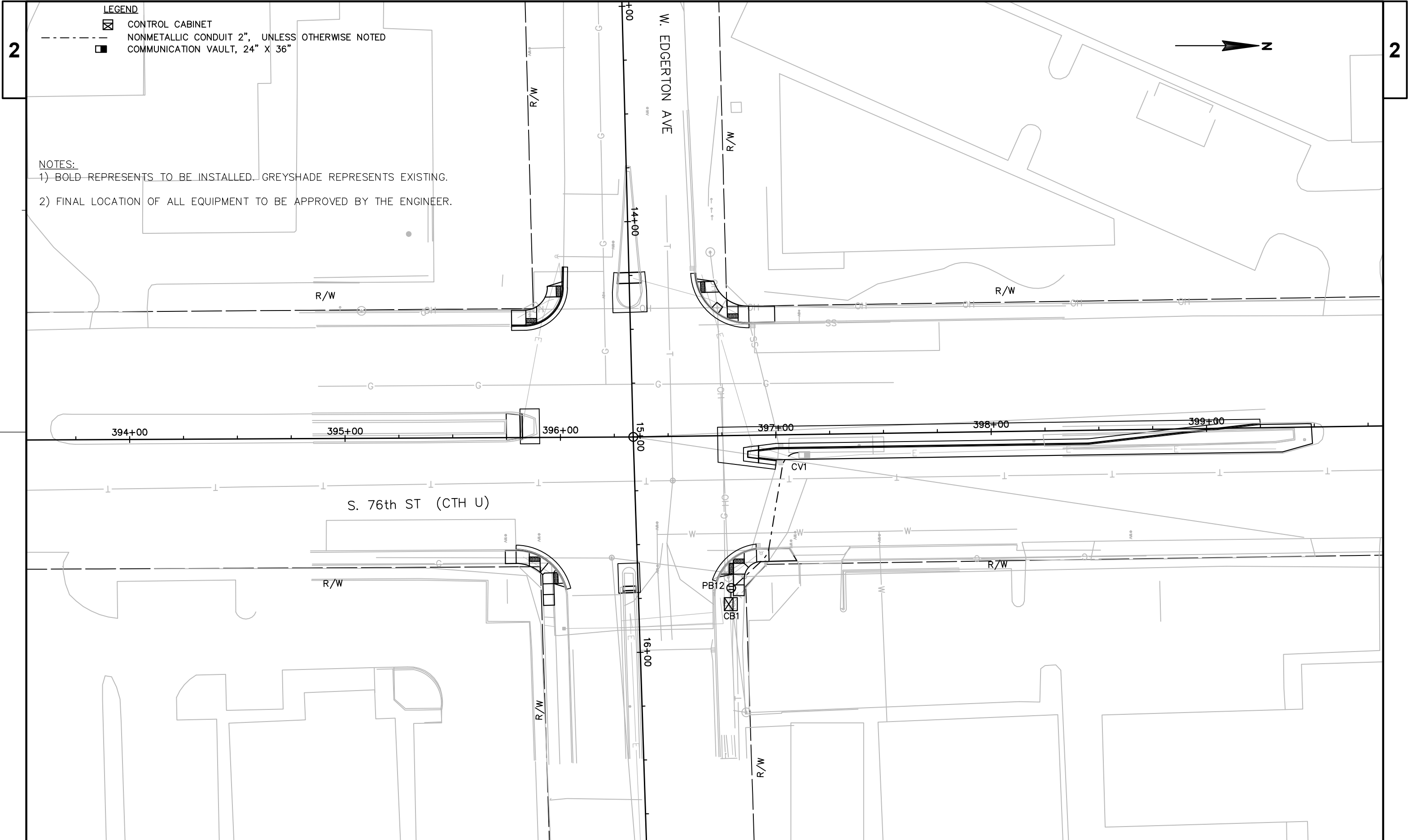
TRAFFIC SIGNAL — TEMPORARY SIGNAL PLAN

SHEET

















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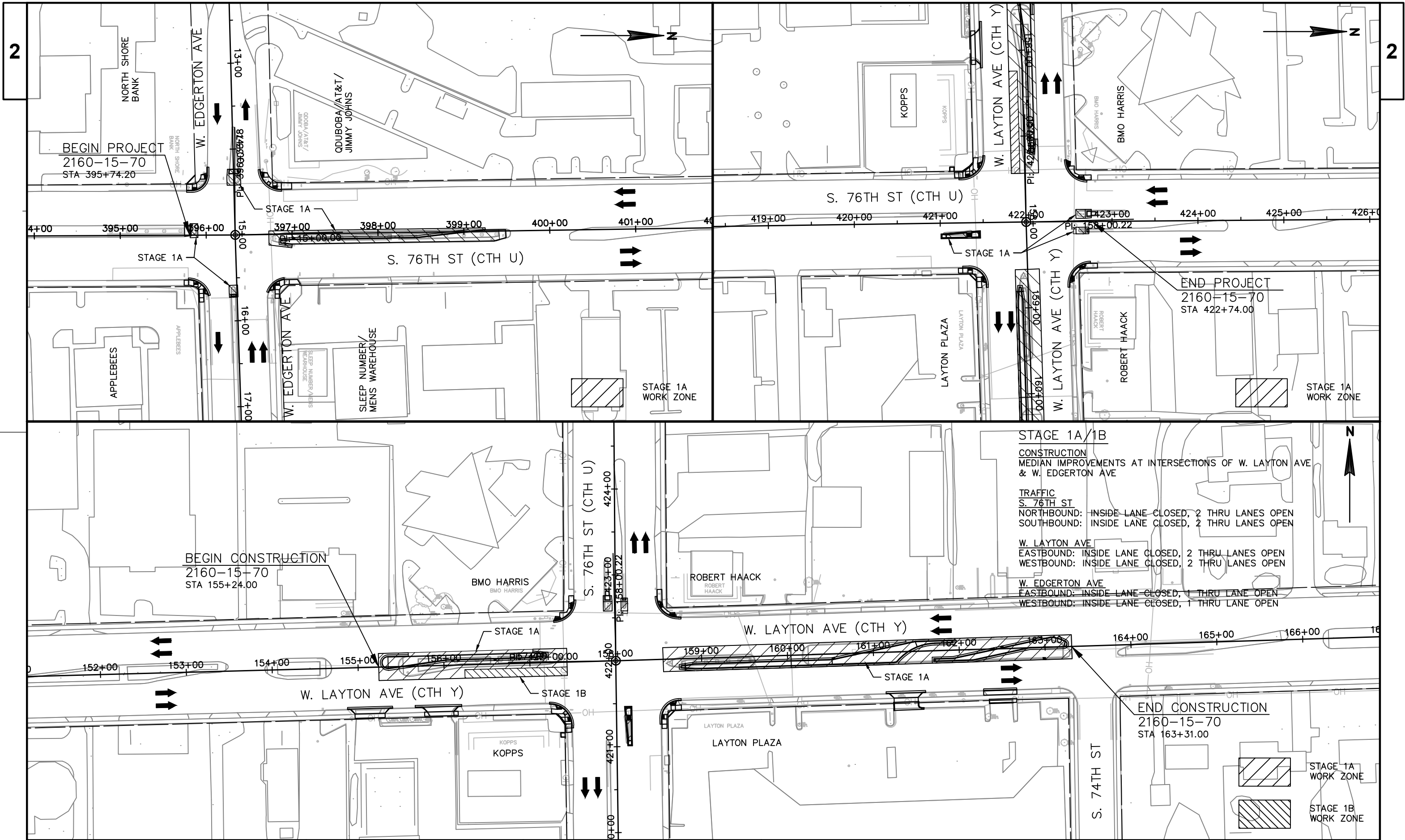


- LEGEND**
- CONTROL CABINET
 - NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
 - COMMUNICATION VAULT, 24" X 36"
- NOTES:**
- 1) BOLD REPRESENTS REMOVE AND REPLACE. GREYSHADE REPRESENTS EXISTING.
 - 2) FINAL LOCATION OF ALL EQUIPMENT TO BE APPROVED BY THE ENGINEER.

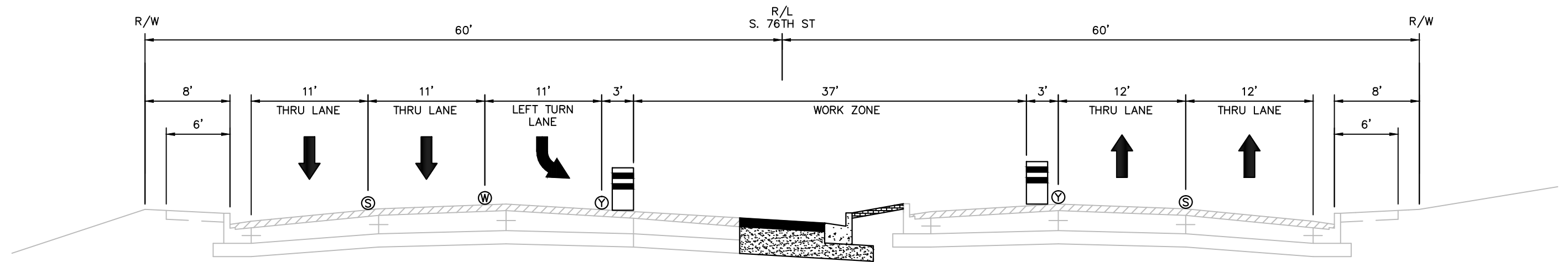


LEGEND

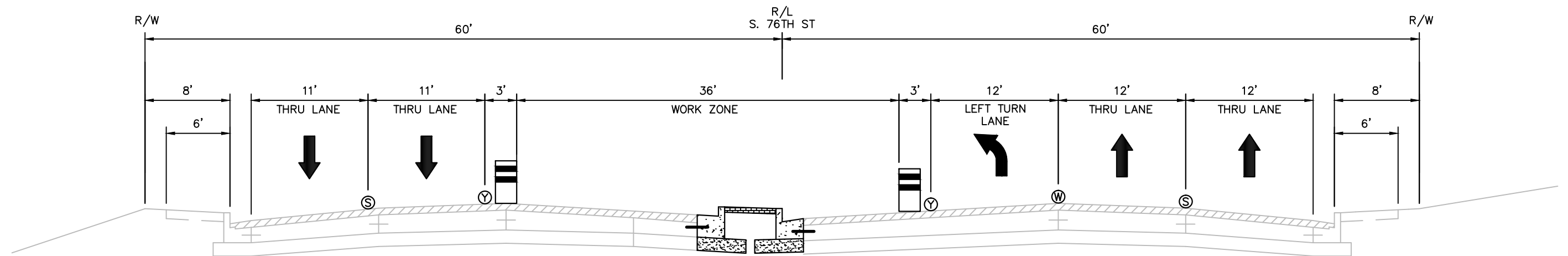
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	WORK ZONE
	DIRECTION OF TRAFFIC
	FIXED MESSAGE SIGN
	TEMPORARY PEDESTRIAN FENCE
	TEMPORARY CURB RAMP
	TEMPORARY PEDESTRIAN SURFACE
	TEMPORARY PAVEMENT MARKING REMOVABLE 4-INCH TAPE (YELLOW)
	TEMPORARY PAVEMENT MARKING REMOVABLE 4-INCH TAPE (WHITE)
	TEMPORARY PAVEMENT MARKING REMOVABLE 4-INCH TAPE (WHITE), 12.5' DASH, 37.5' SKIP



PROJECT NO: 2160-15-70	HWY: CTH U	COUNTY: MILWAUKEE	TRAFFIC CONTROL- STAGE 1A/1B OVERVIEW	SHEET	E
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MEDIAN WORK ON S. 76TH STREET – STAGE 1A
(NORTH OF W. EDGERTON AVE)
STA 396+71.60 TO STA 399+54.30



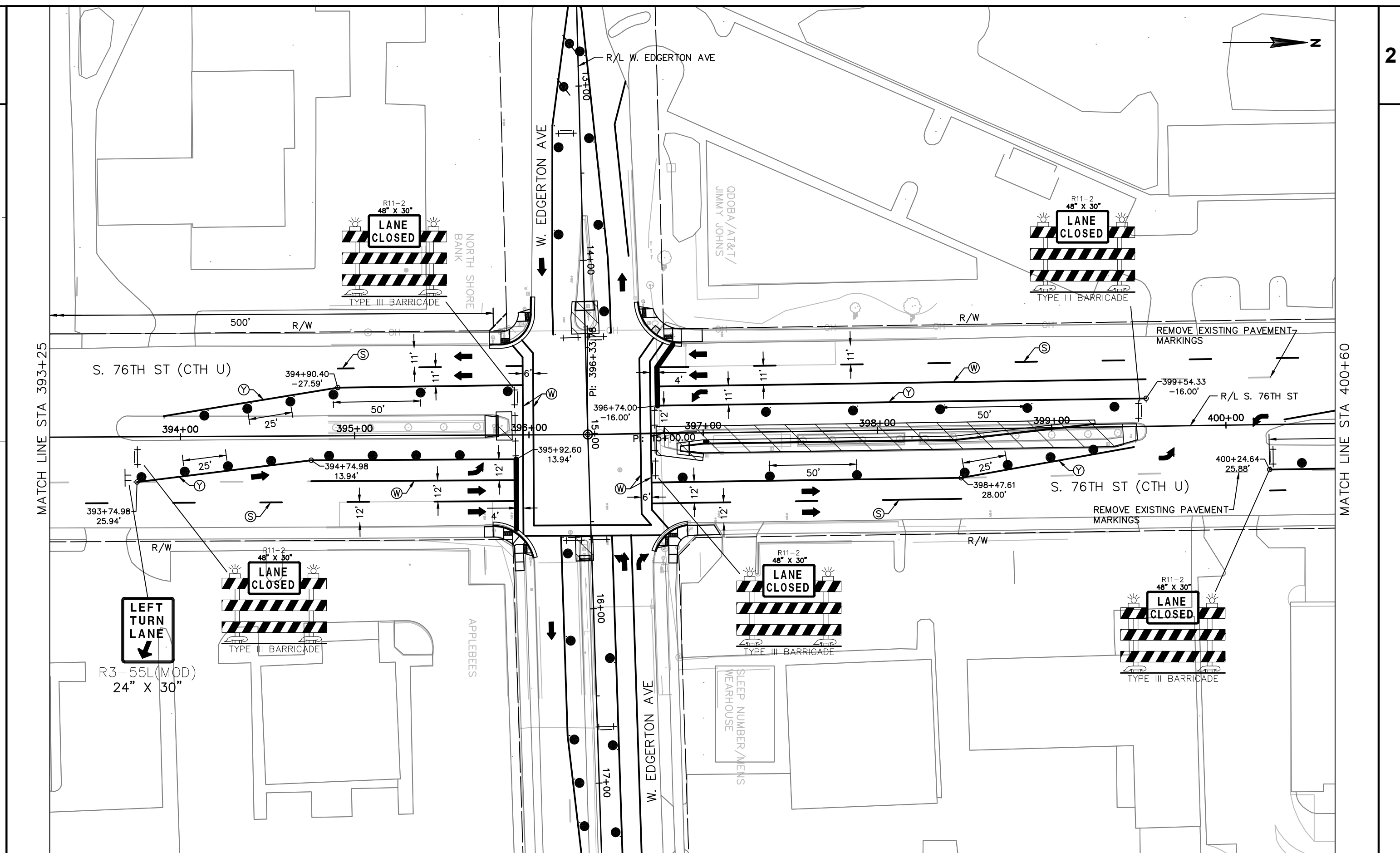
MEDIAN WORK ON S. 76TH STREET – STAGE 1A
(SOUTH OF W. EDGERTON AVE)
STA 393+75.00 TO STA 395+92.60

LEGEND

- Ⓨ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)
- Ⓦ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)
- Ⓢ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) 12.5' DASH, 37.5' SKIP

MATCH LINE STA 393+25

MATCH LINE STA 400+60



PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

TRAFFIC CONTROL- S. 76TH ST. (STAGE 1A)

SHEET

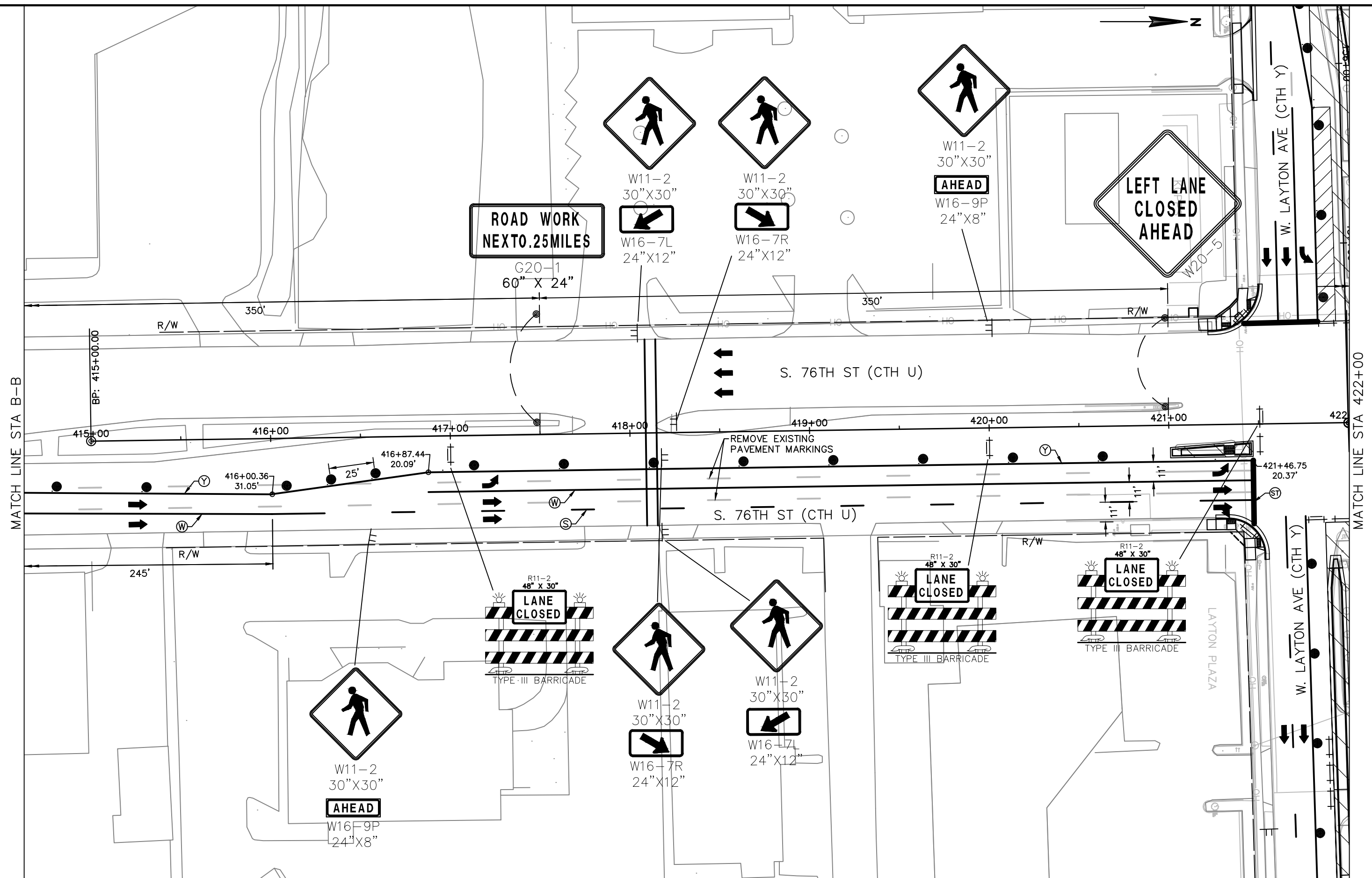
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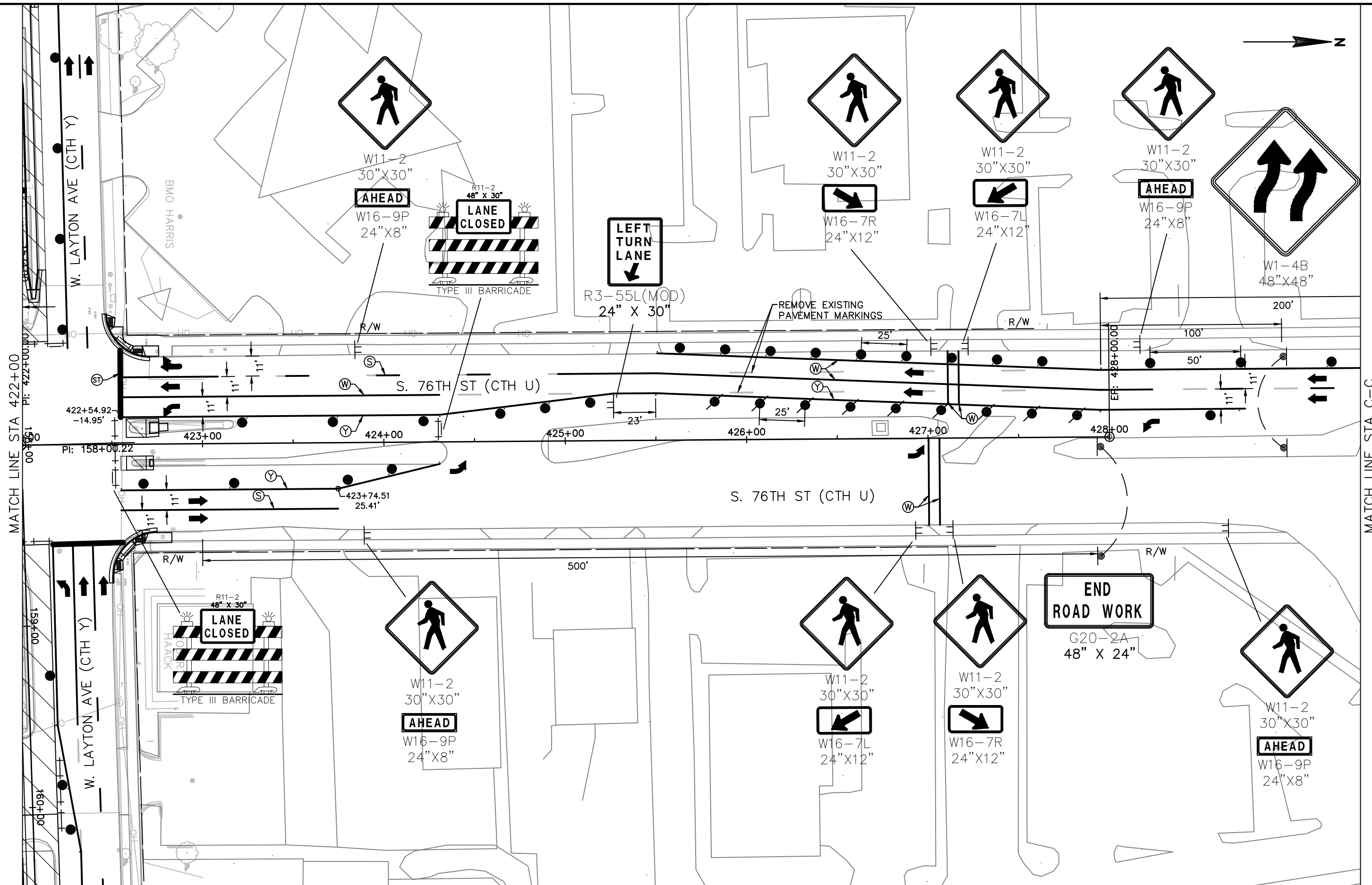
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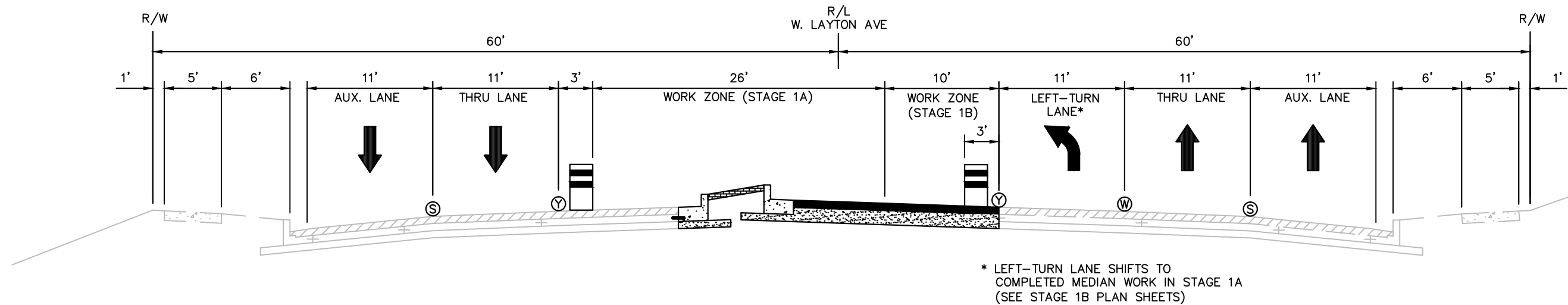
PLOT NAME :

PLOT SCALE : 1" = 50'-XREF

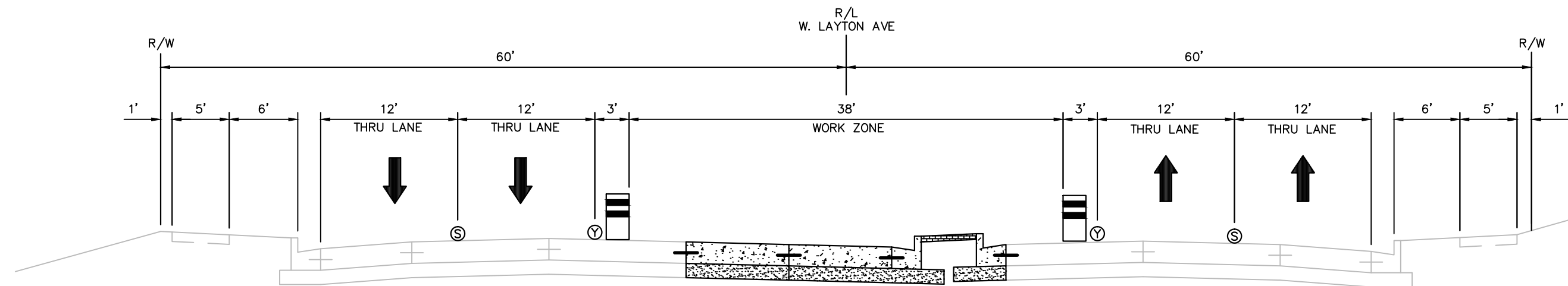
WISDOT/CADDs SHEET 42







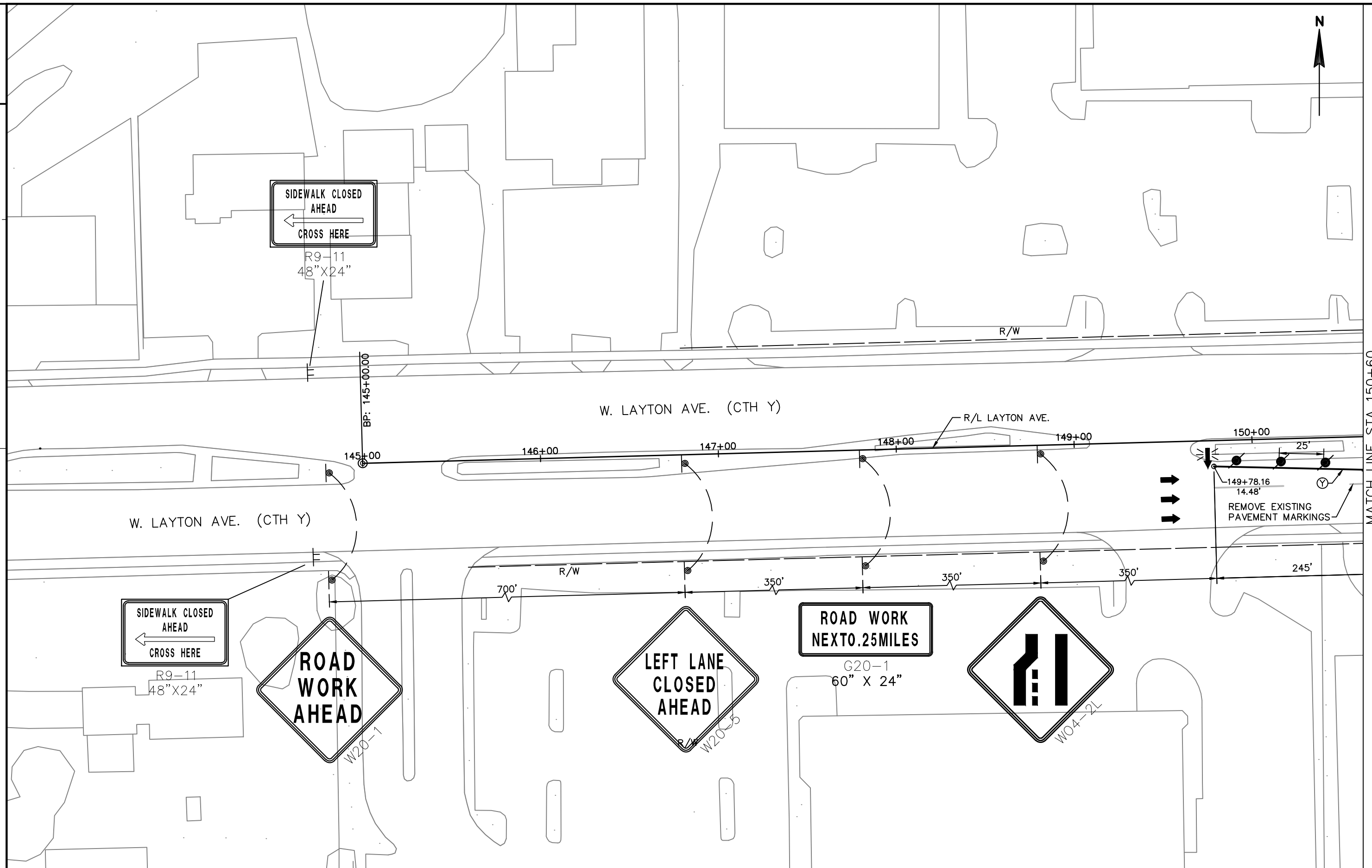
MEDIAN WORK ON W. LAYTON AVE. – STAGE 1A/1B
(WEST OF S. 76TH ST)
STA 155+24.00 TO STA 157+43.30



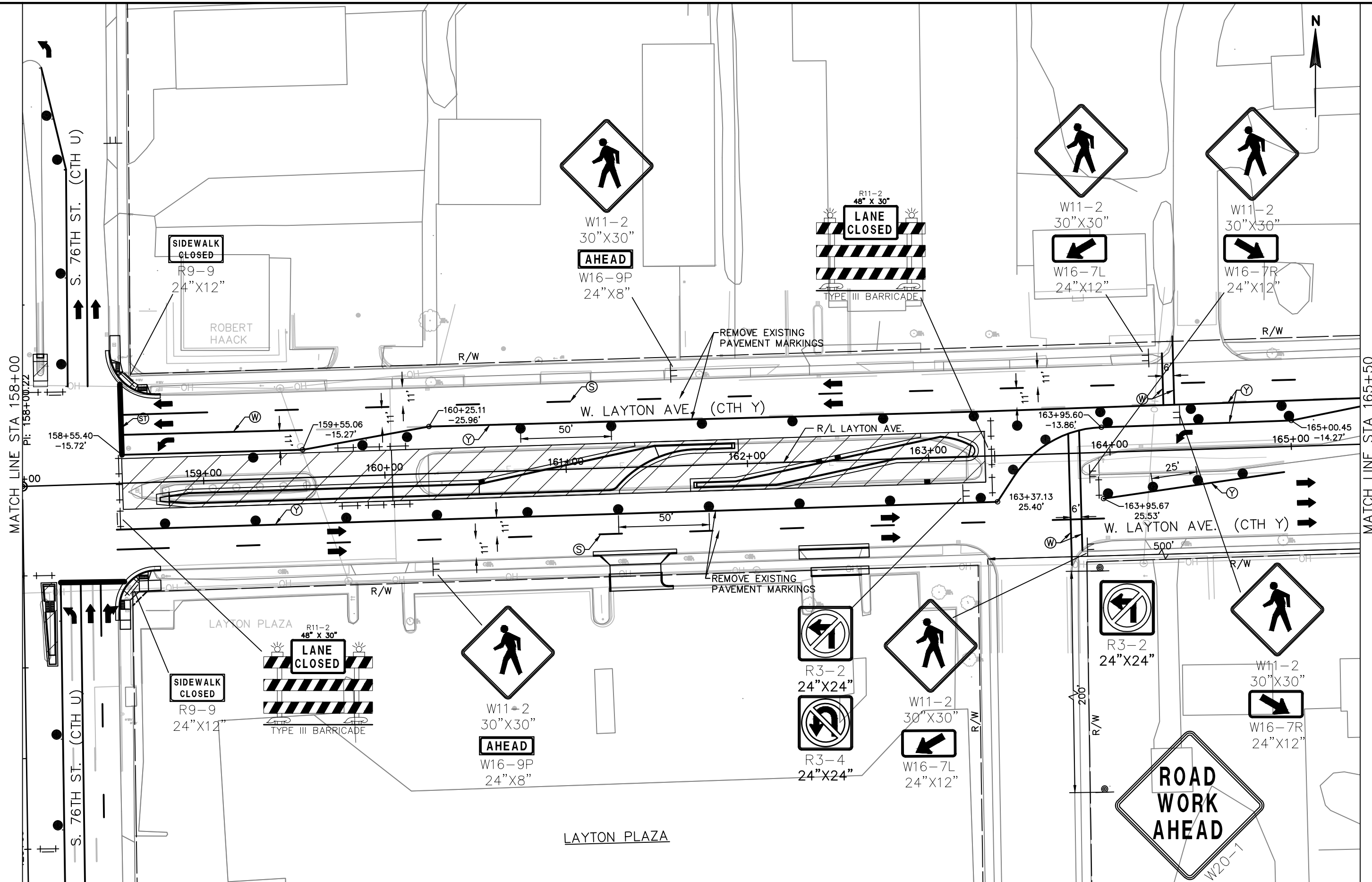
MEDIAN WORK ON W. LAYTON AVE. – STAGE 1A
(EAST OF S. 76TH ST)
STA 158+55.20 TO STA 161+49.20

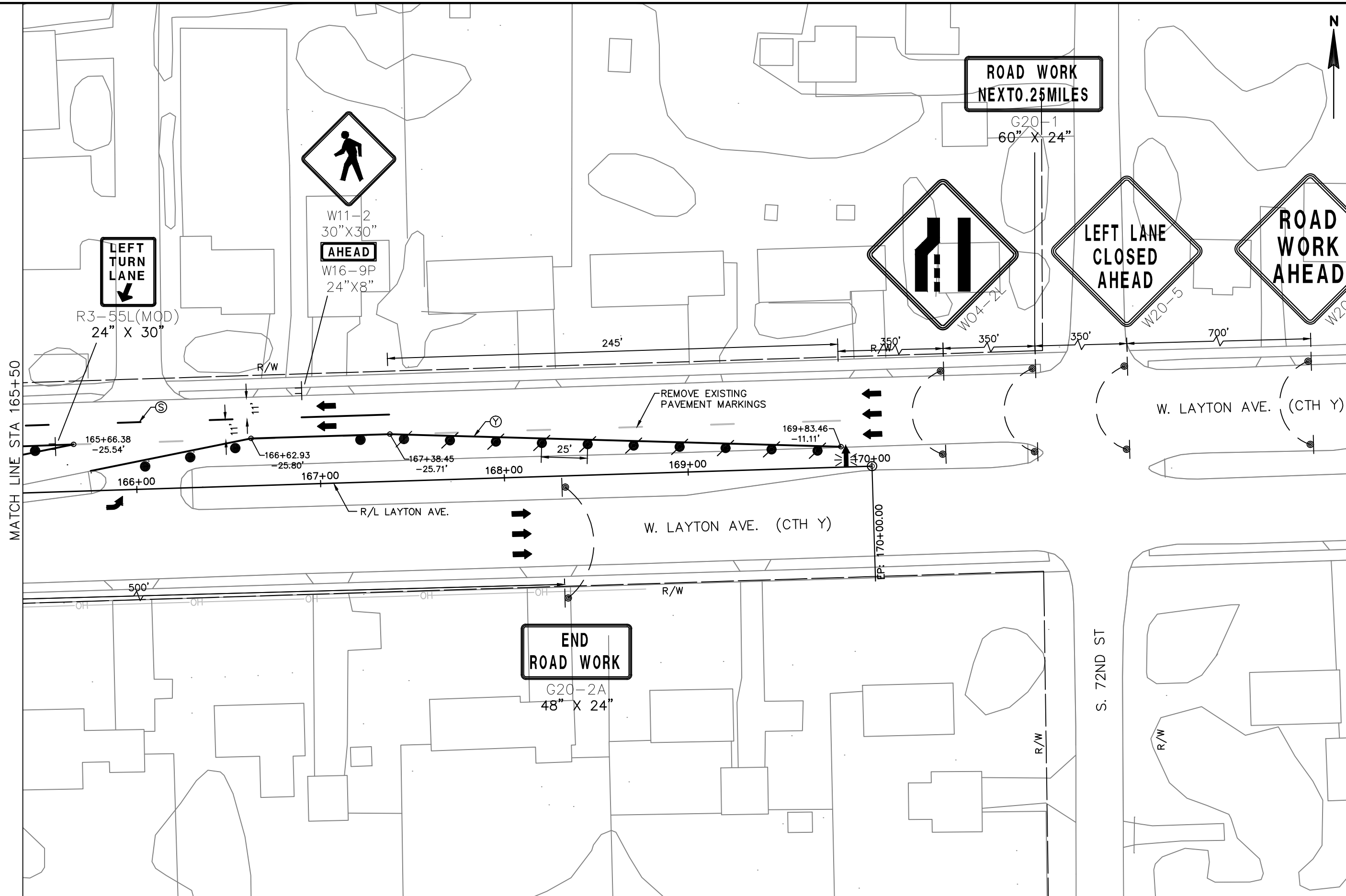
LEGEND

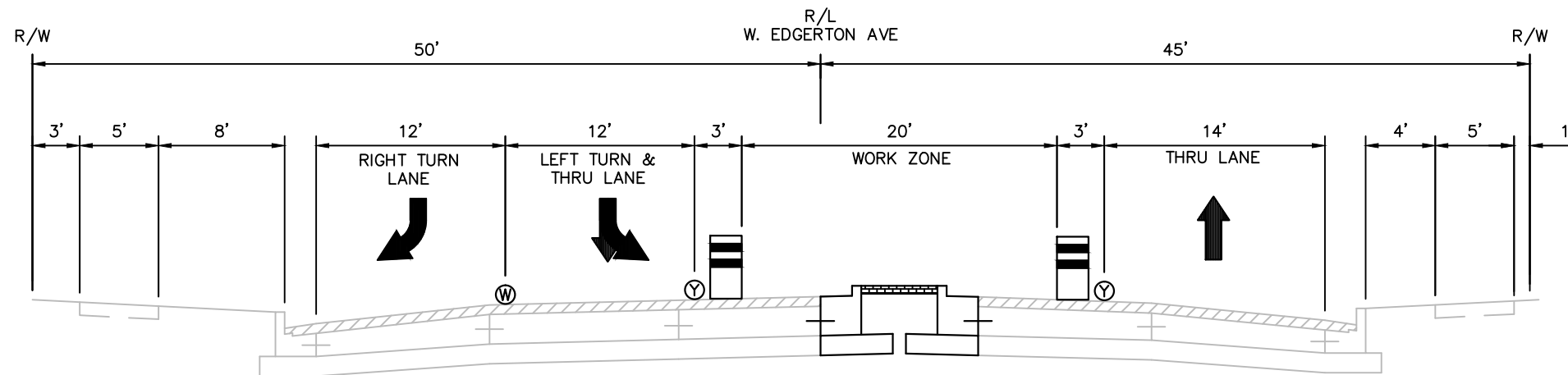
- (Y) TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)
- (W) TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)
- (S) TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) 12.5' DASH, 37.5' SKIP



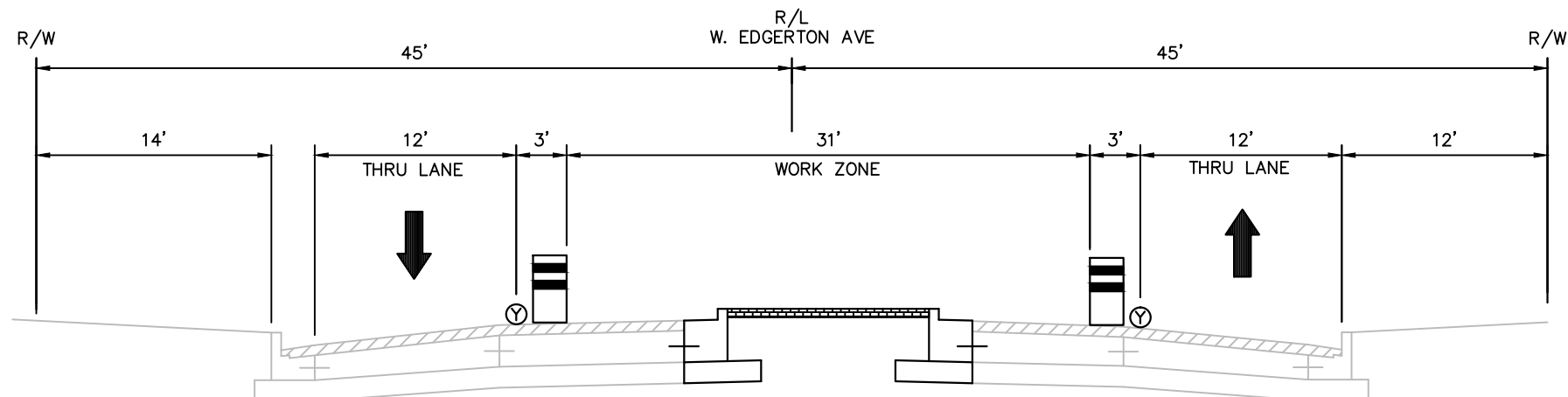








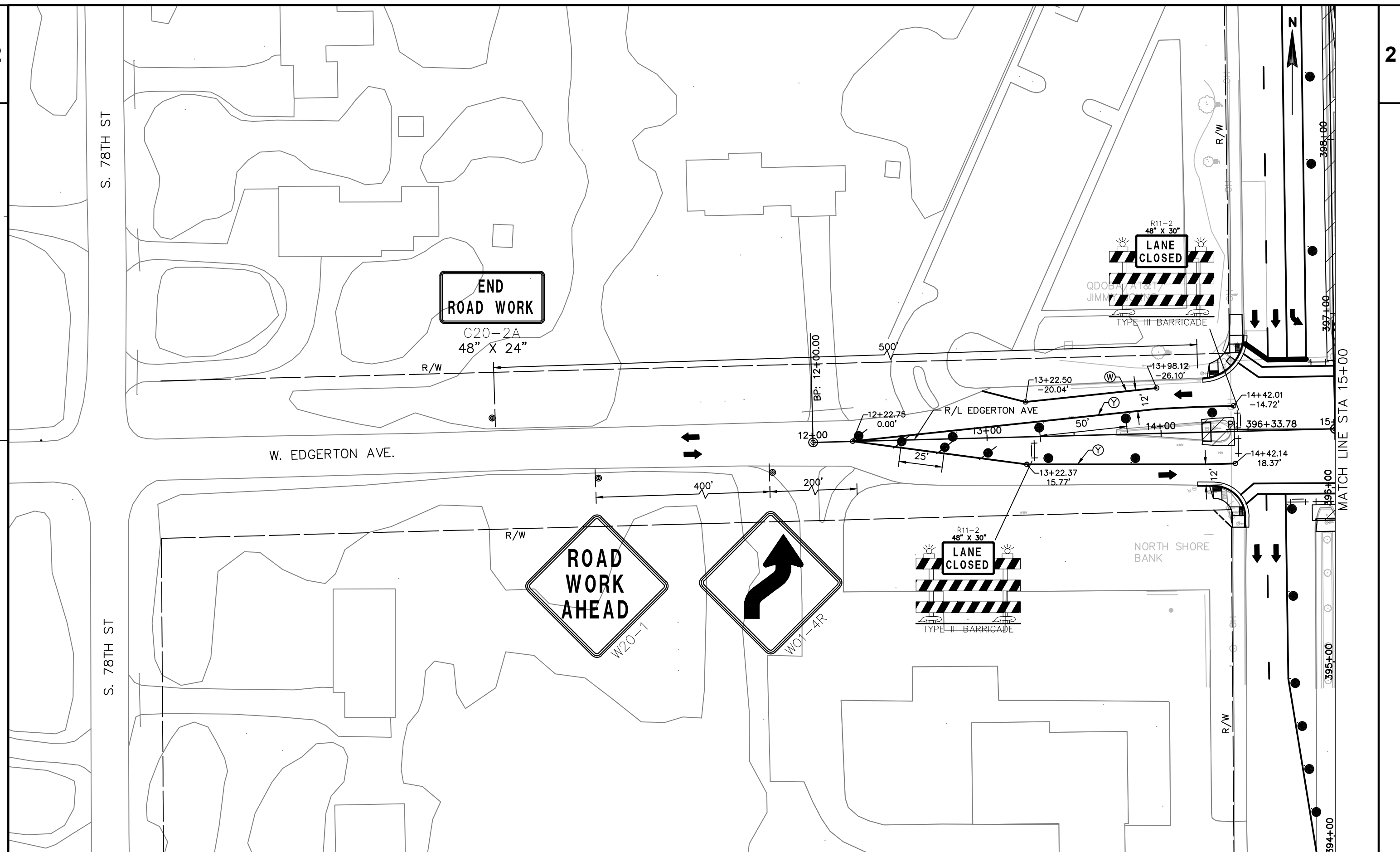
MEDIAN WORK ON W. EDGERTON AVE. – STAGE 1A
(EAST OF S. 76TH ST)
STA 15+58.50 TO STA 17+72.20

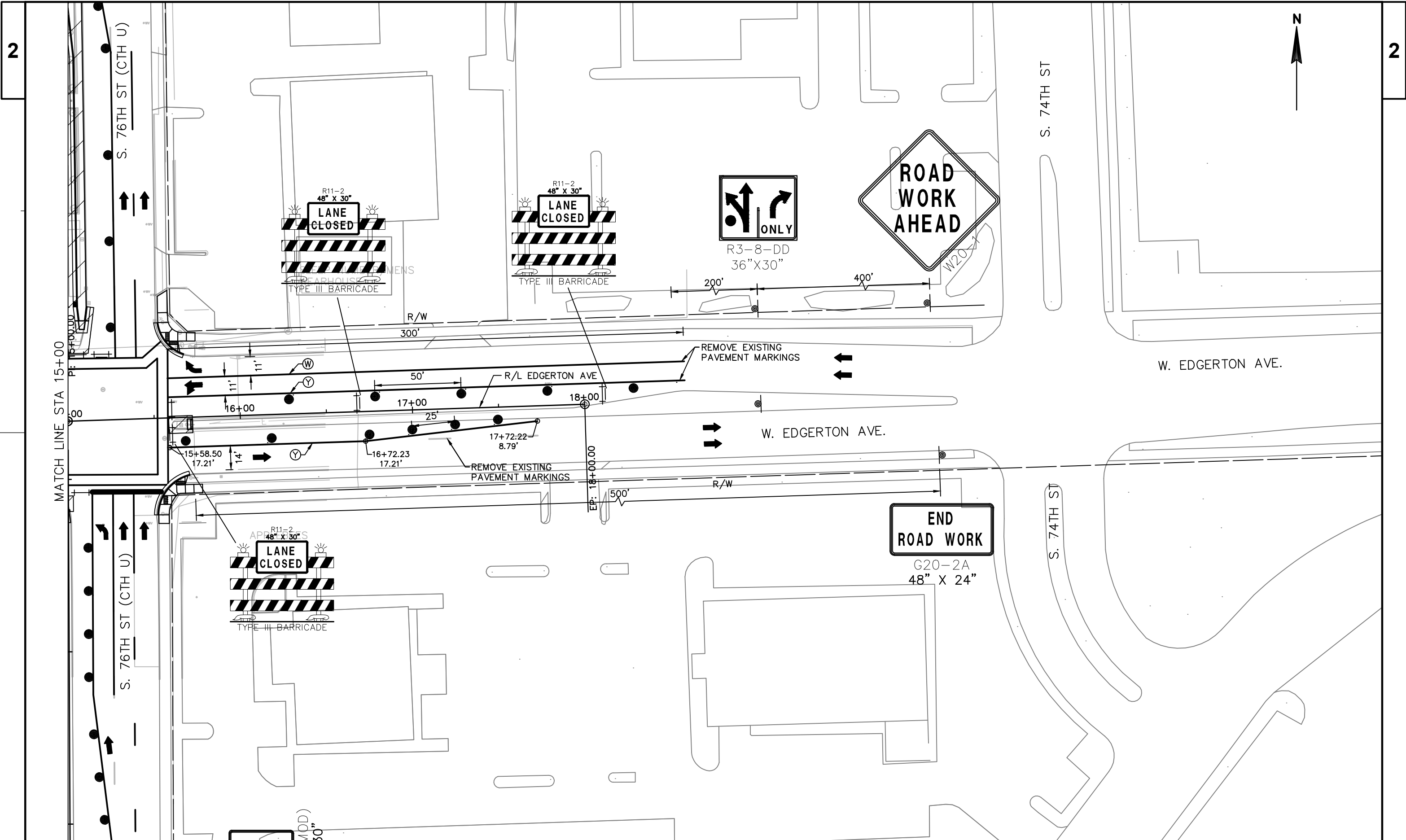


MEDIAN WORK ON W. EDGERTON AVE. – STAGE 1A
(WEST OF S. 76TH ST)
STA 12+22.75 TO STA 14+42.00

LEGEND

- Ⓨ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (YELLOW)
- Ⓦ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE)
- Ⓢ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) 12.5' DASH, 37.5' SKIP

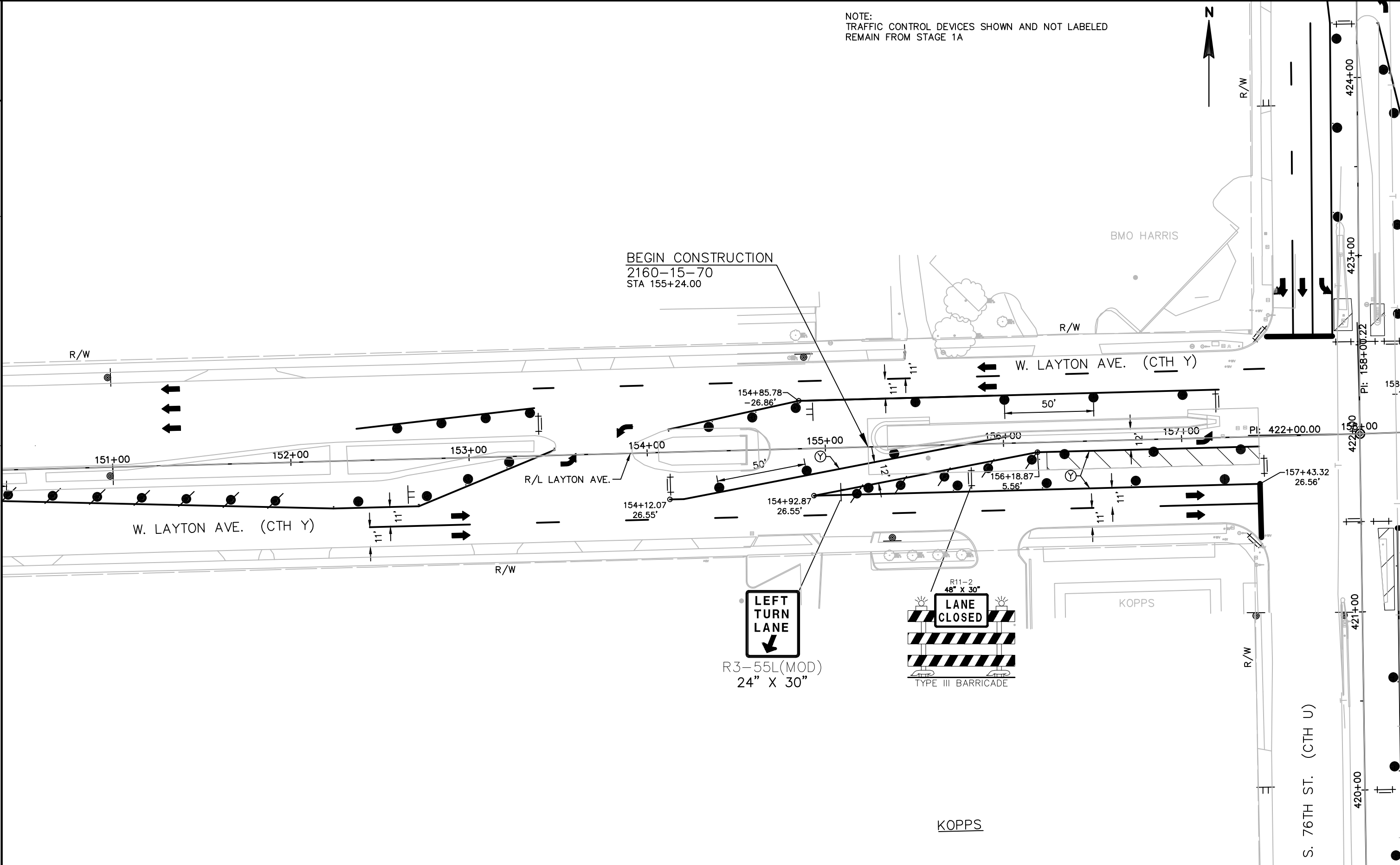




2

2

NOTE:
TRAFFIC CONTROL DEVICES SHOWN AND NOT LABELED
REMAIN FROM STAGE 1A



PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

TRAFFIC CONTROL- W. LAYTON AVE (STAGE 1B)

SHEET

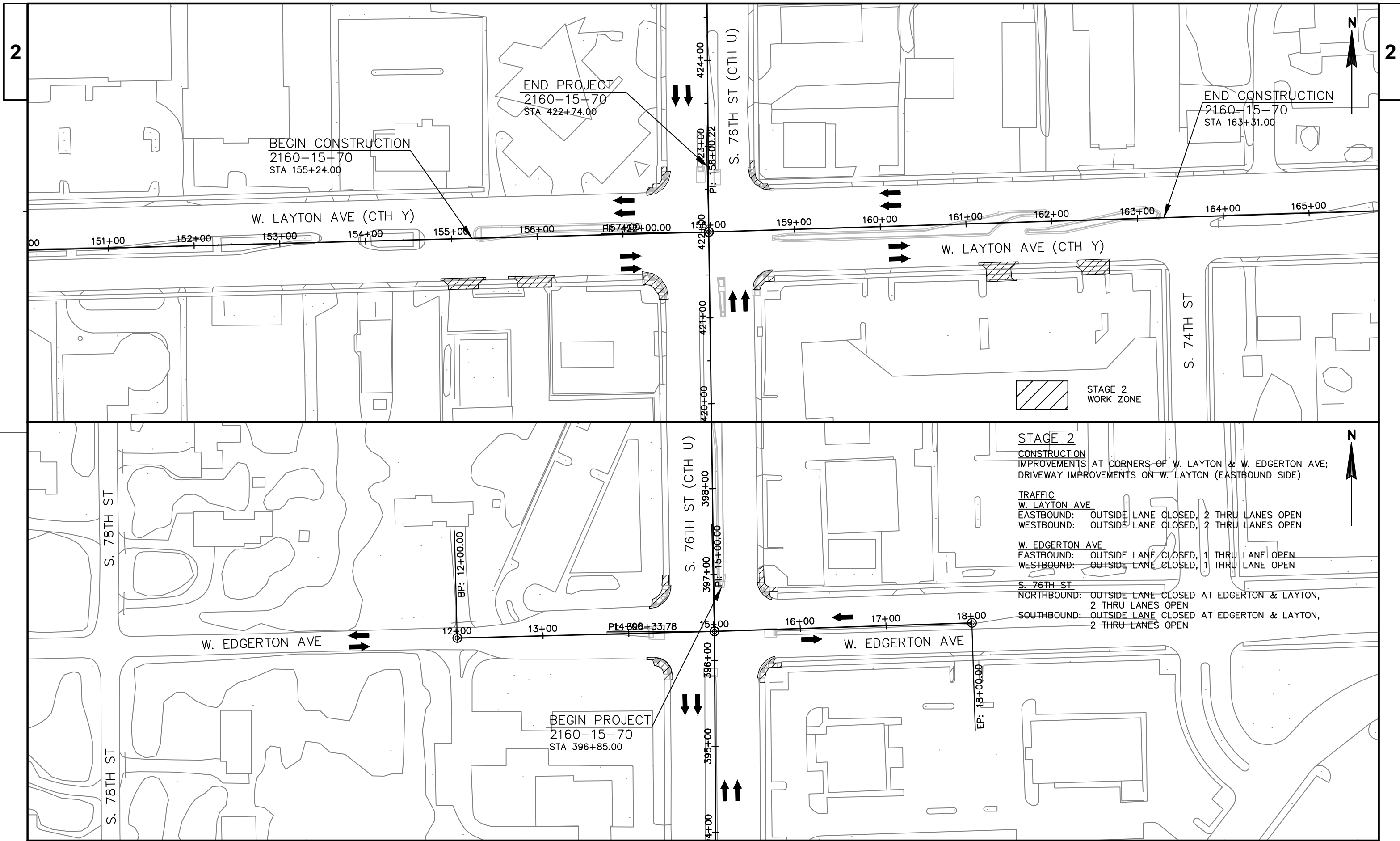
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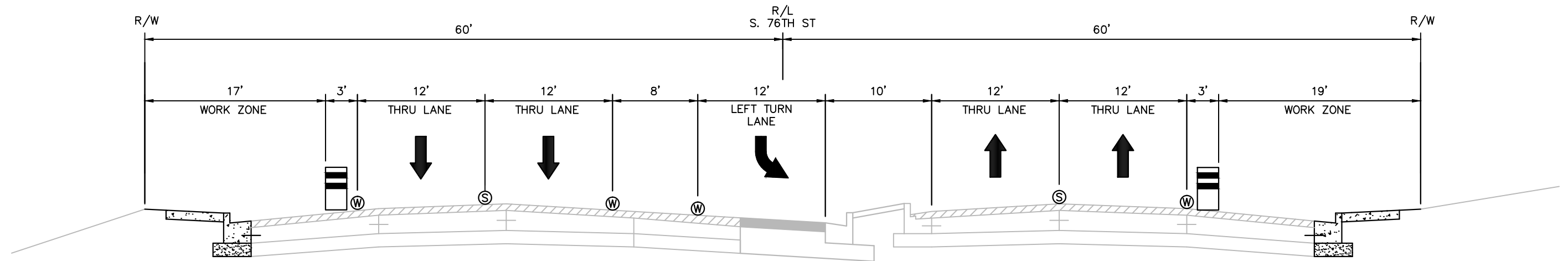
PLOT NAME :

PLOT SCALE : 1" = 50'_XREF

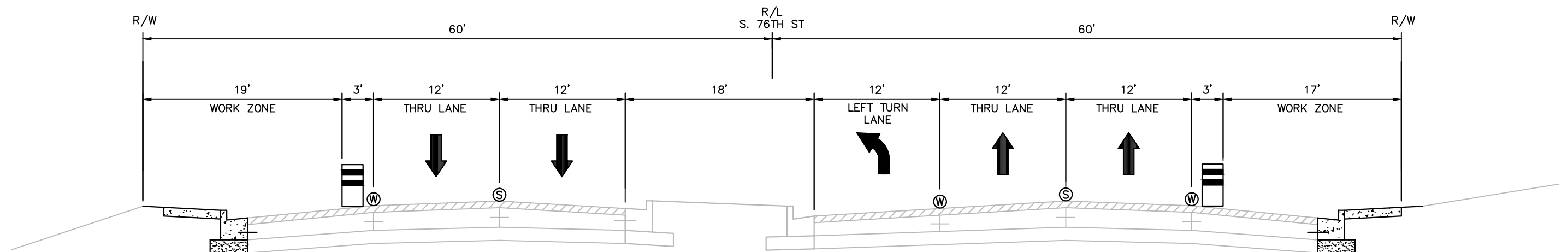
WISDOT/CADDS SHEET 42



PROJECT NO: 2160-15-70	HWY: CTH U	COUNTY: MILWAUKEE	TRAFFIC CONTROL- STAGE 2 OVERVIEW	SHEET	E
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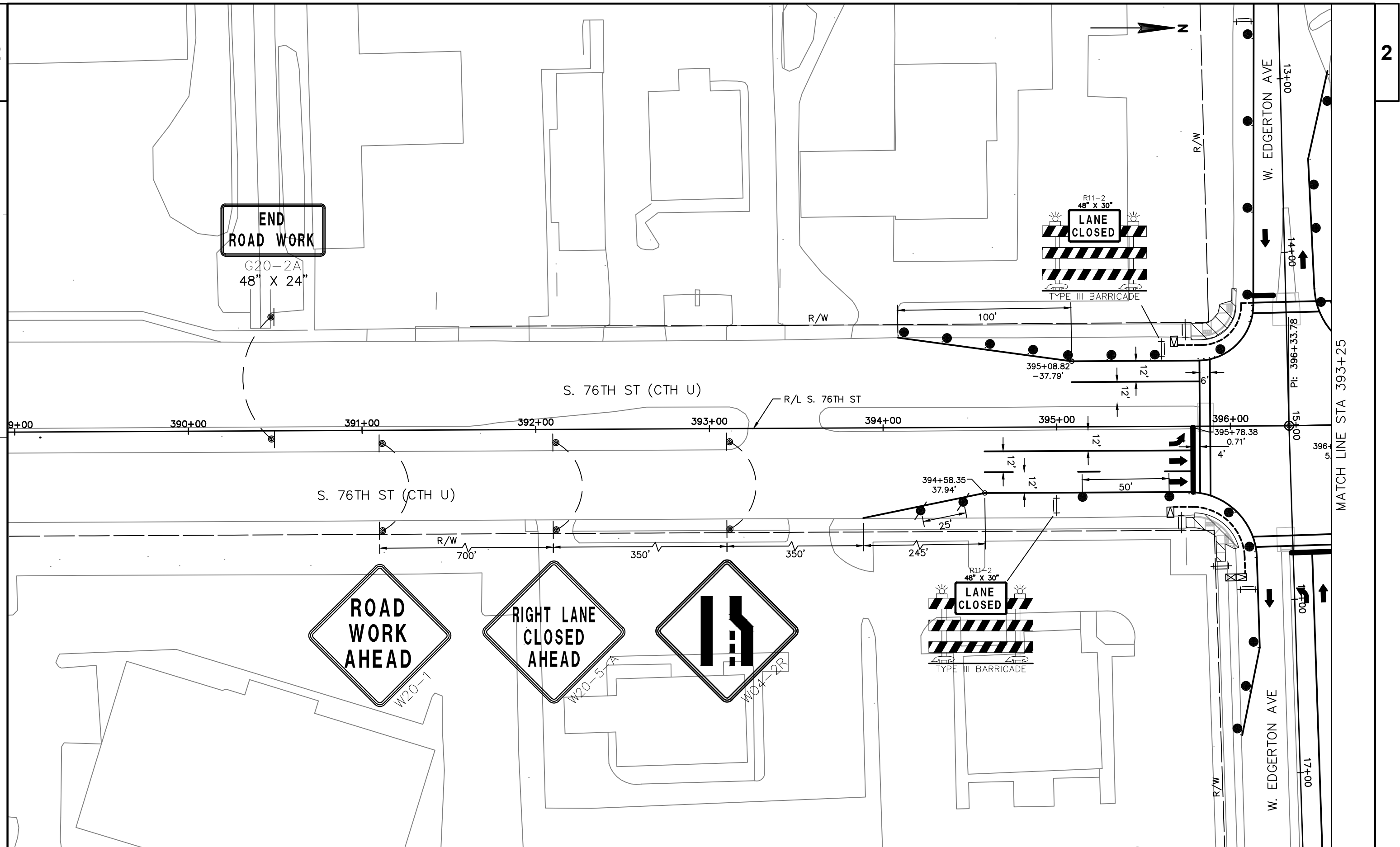
CORNER WORK ON S. 76TH STREET – STAGE 2
(NORTH OF W. EDGERTON AVE)
STA 396+71.60 TO STA 399+54.30

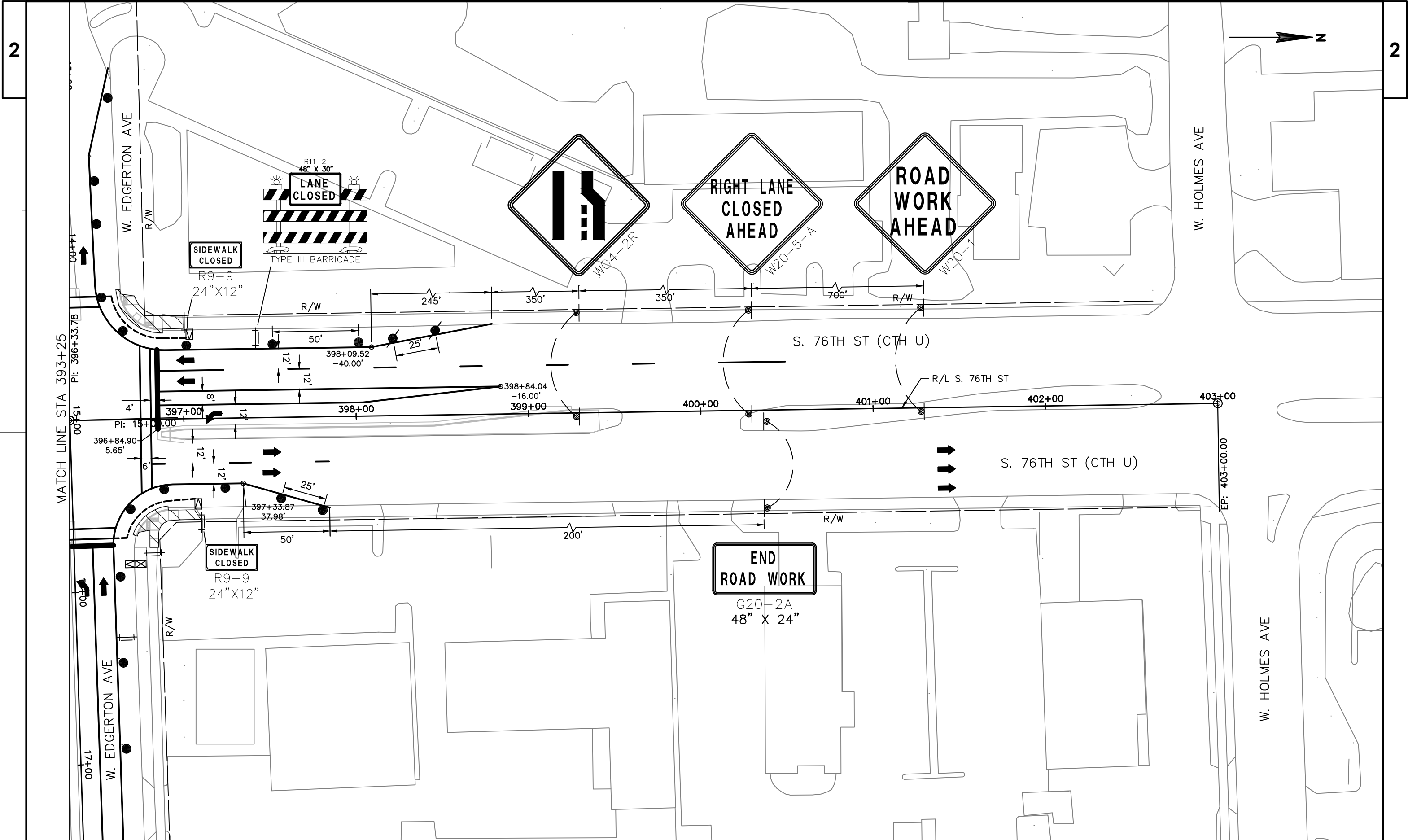


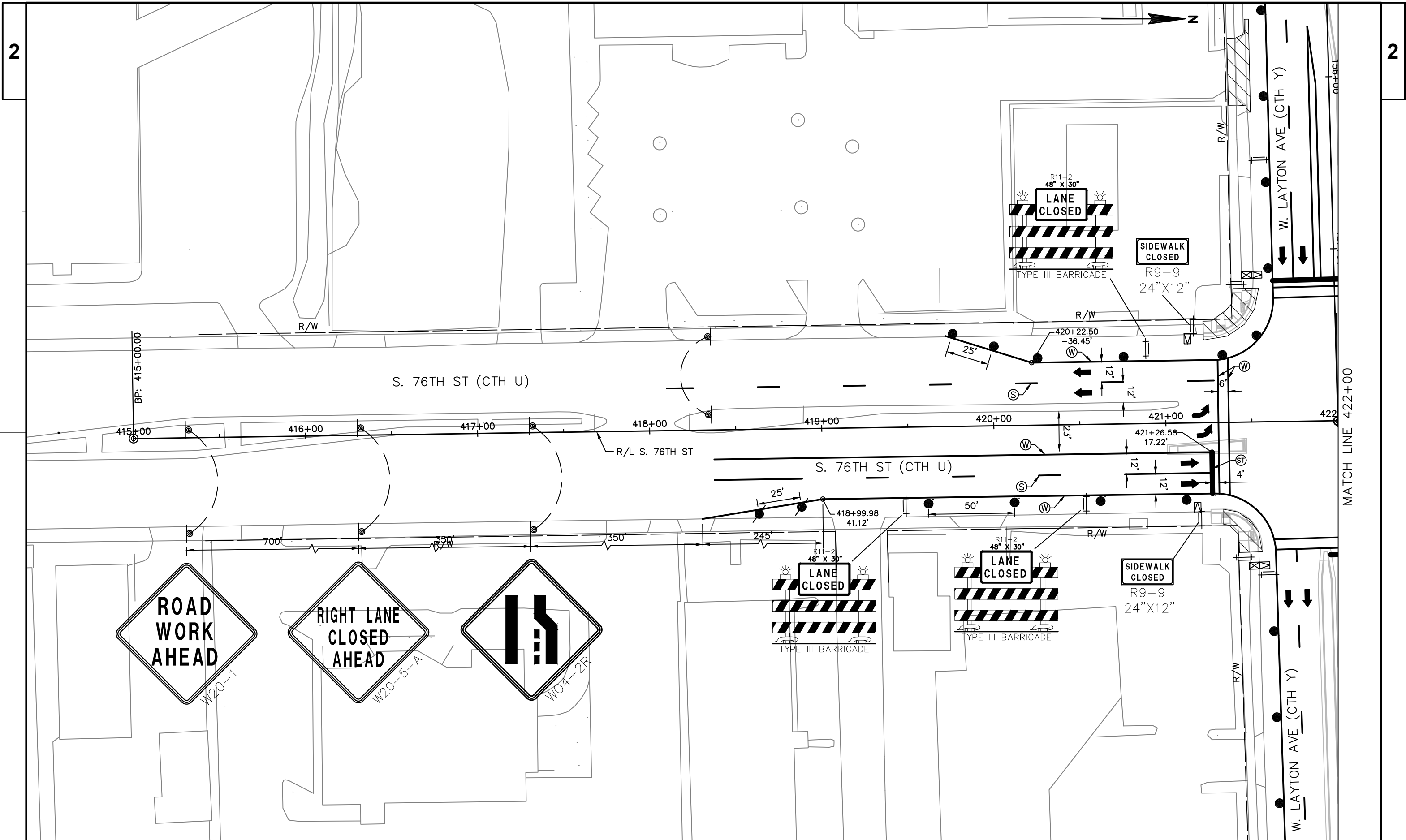
CORNER WORK ON S. 76TH STREET – STAGE 2
(SOUTH OF W. EDGERTON AVE)
STA 393+75.00 TO STA 395+92.60

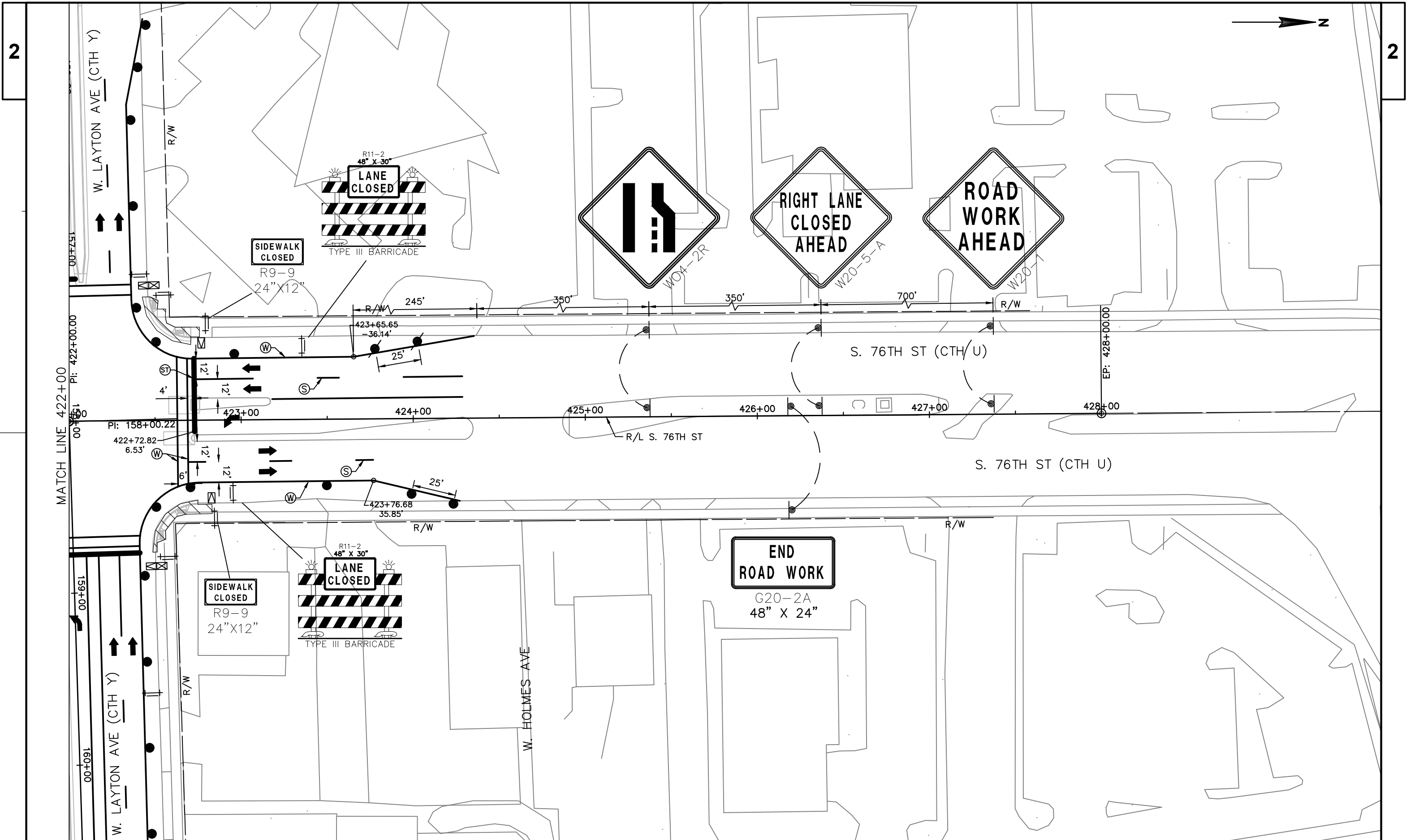
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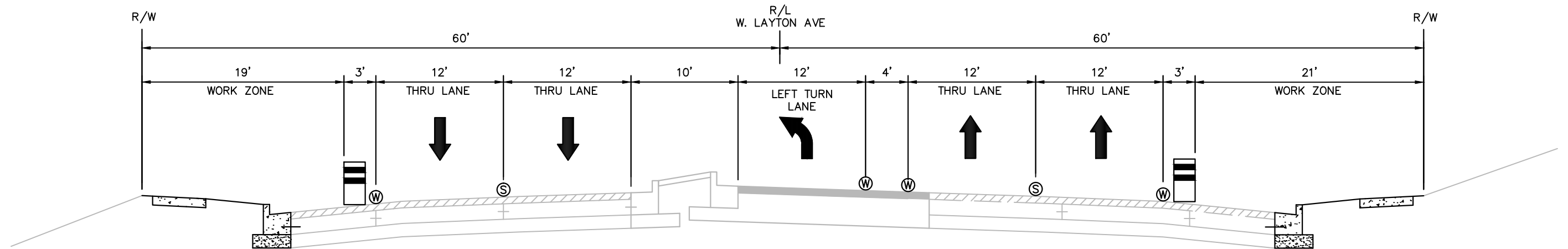
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- (S) TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) 12.5' DASH, 37.5' SKIP



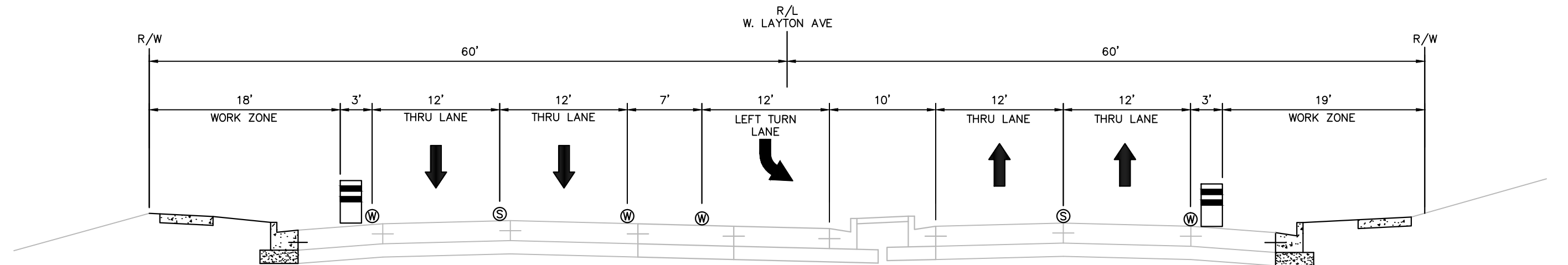








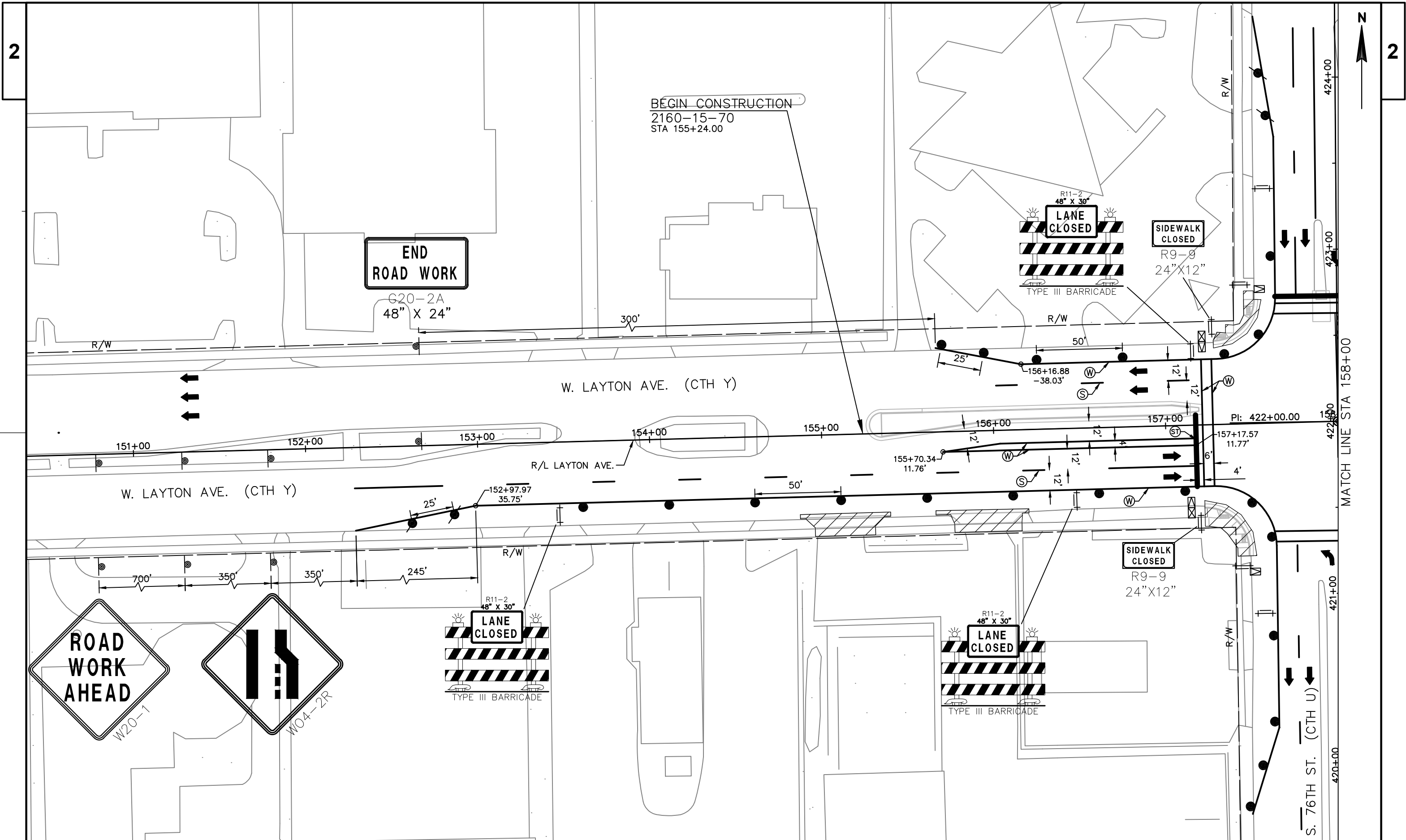
CORNER WORK ON W. LAYTON AVE. – STAGE 2
(WEST OF S. 76TH ST)
STA 155+24.00 TO STA 157+43.30



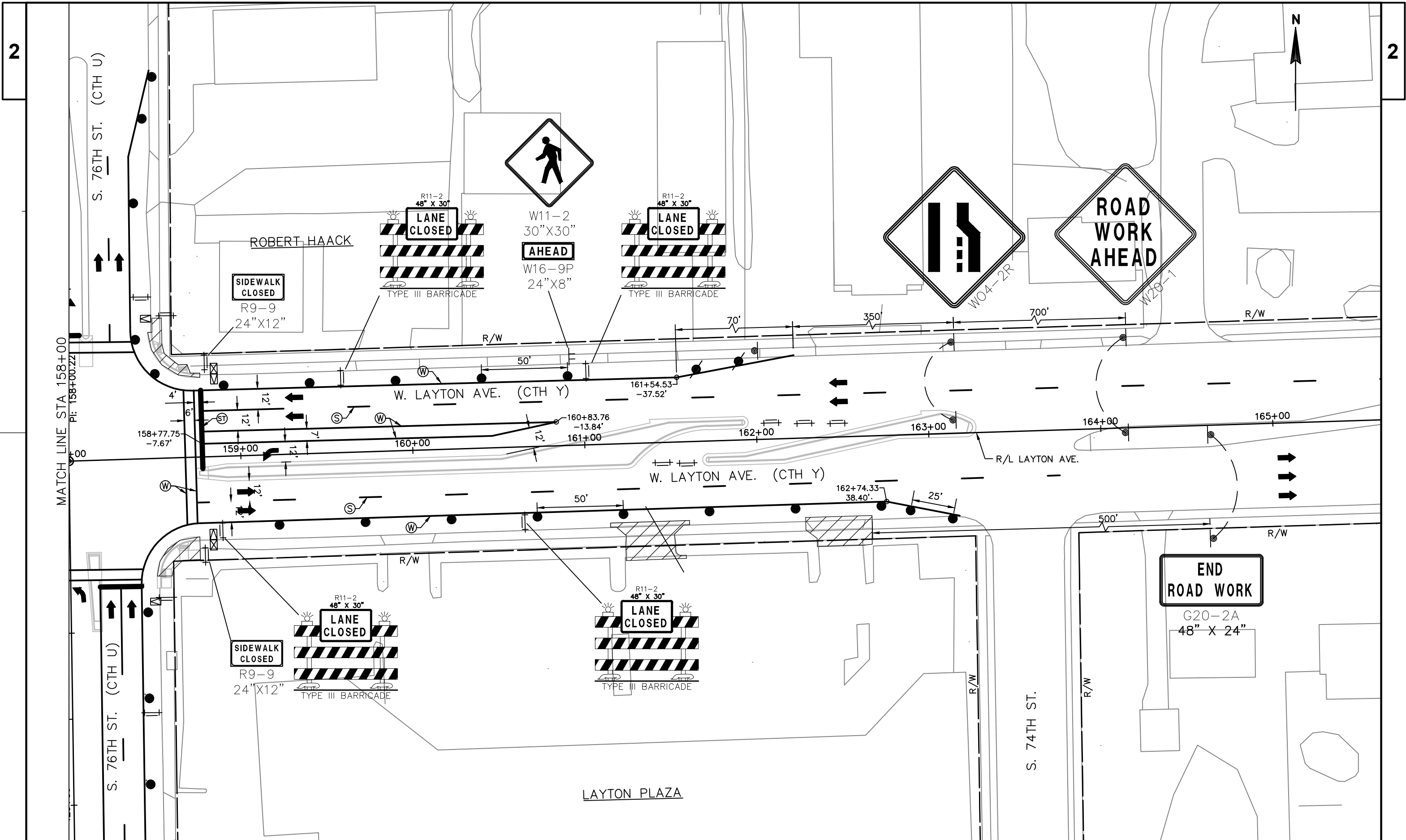
CORNER WORK ON W. LAYTON AVE. – STAGE 2
(EAST OF S. 76TH ST)
STA 158+55.20 TO STA 161+49.20

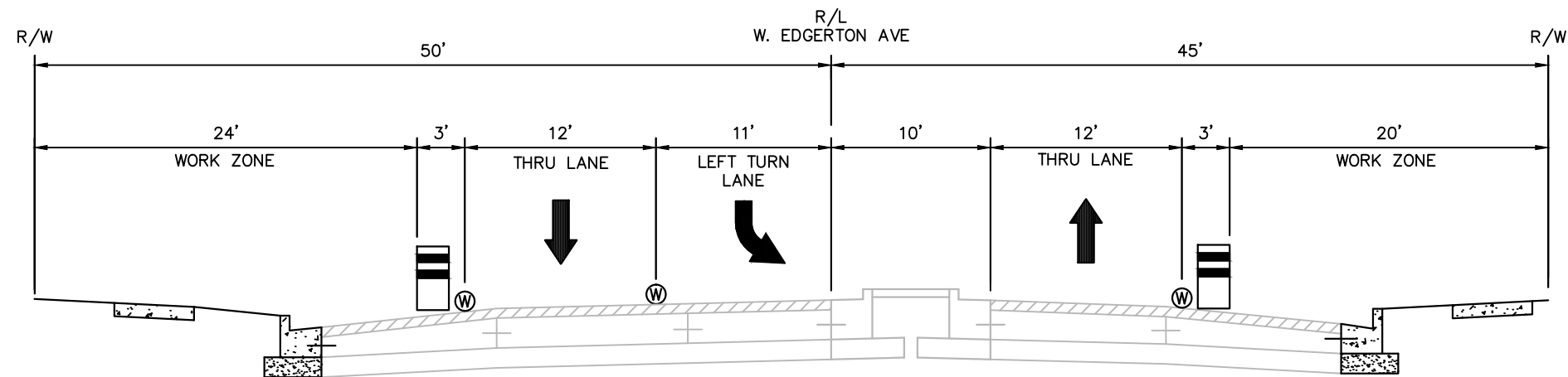
LEGEND

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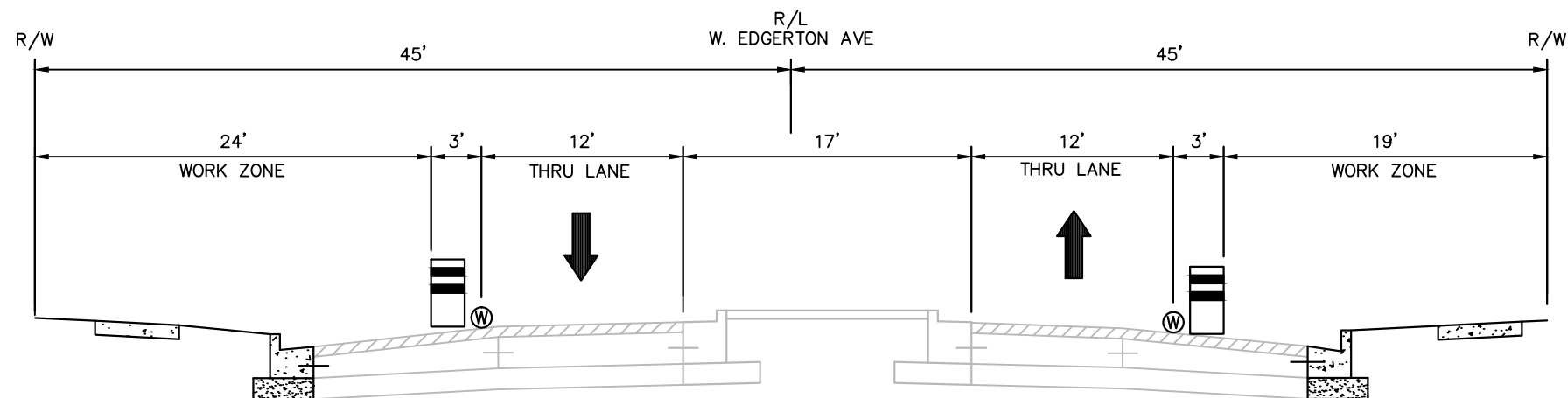


PROJECT NO: 2160-15-70	HWY: CTH U	COUNTY: MILWAUKEE	TRAFFIC CONTROL- W. LAYTON AVE (STAGE 2)	SHEET	E
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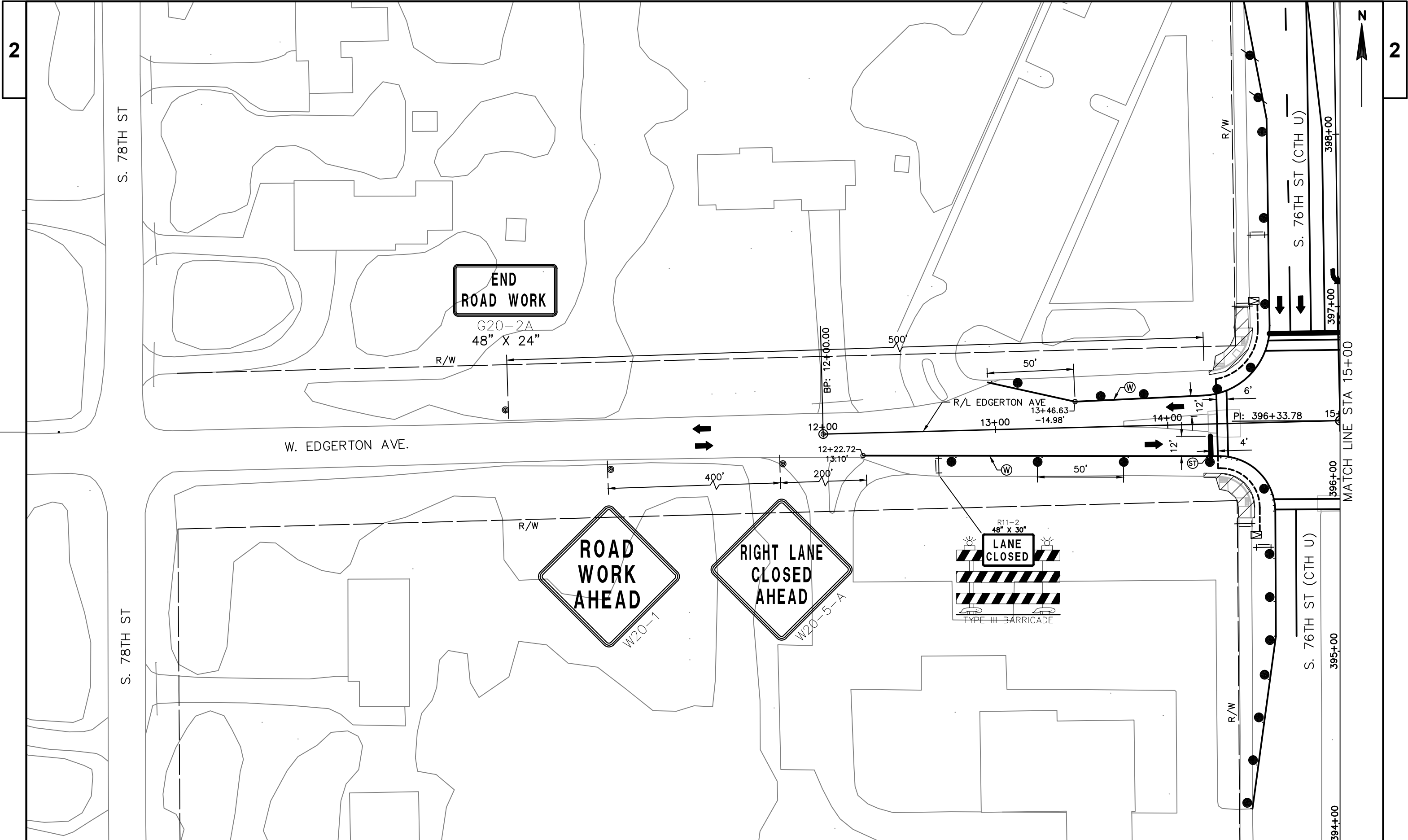
MEDIAN WORK ON W. EDGERTON AVE. – STAGE 1
(EAST OF S. 76TH ST)
STA 15+58.50 TO STA 17+72.20

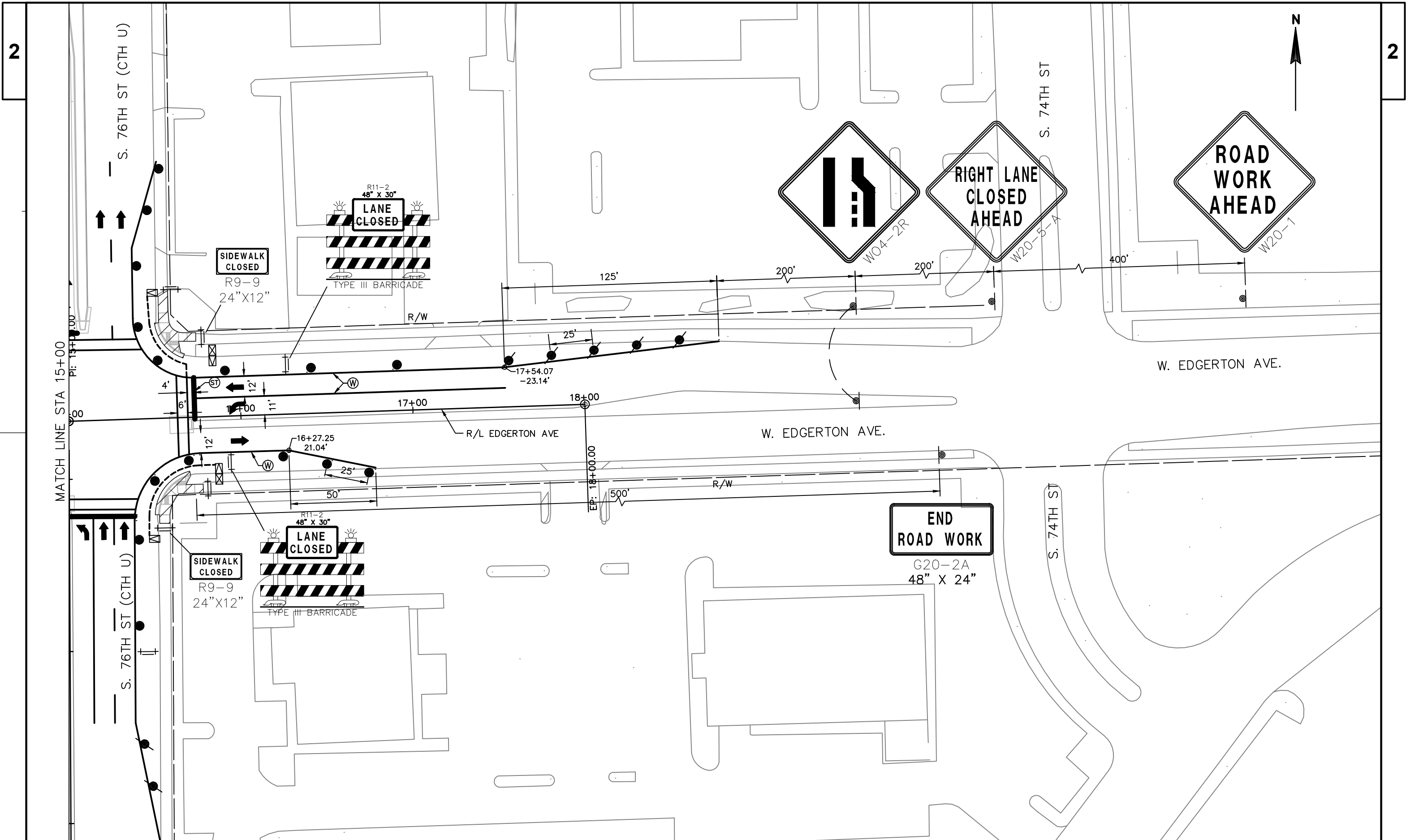


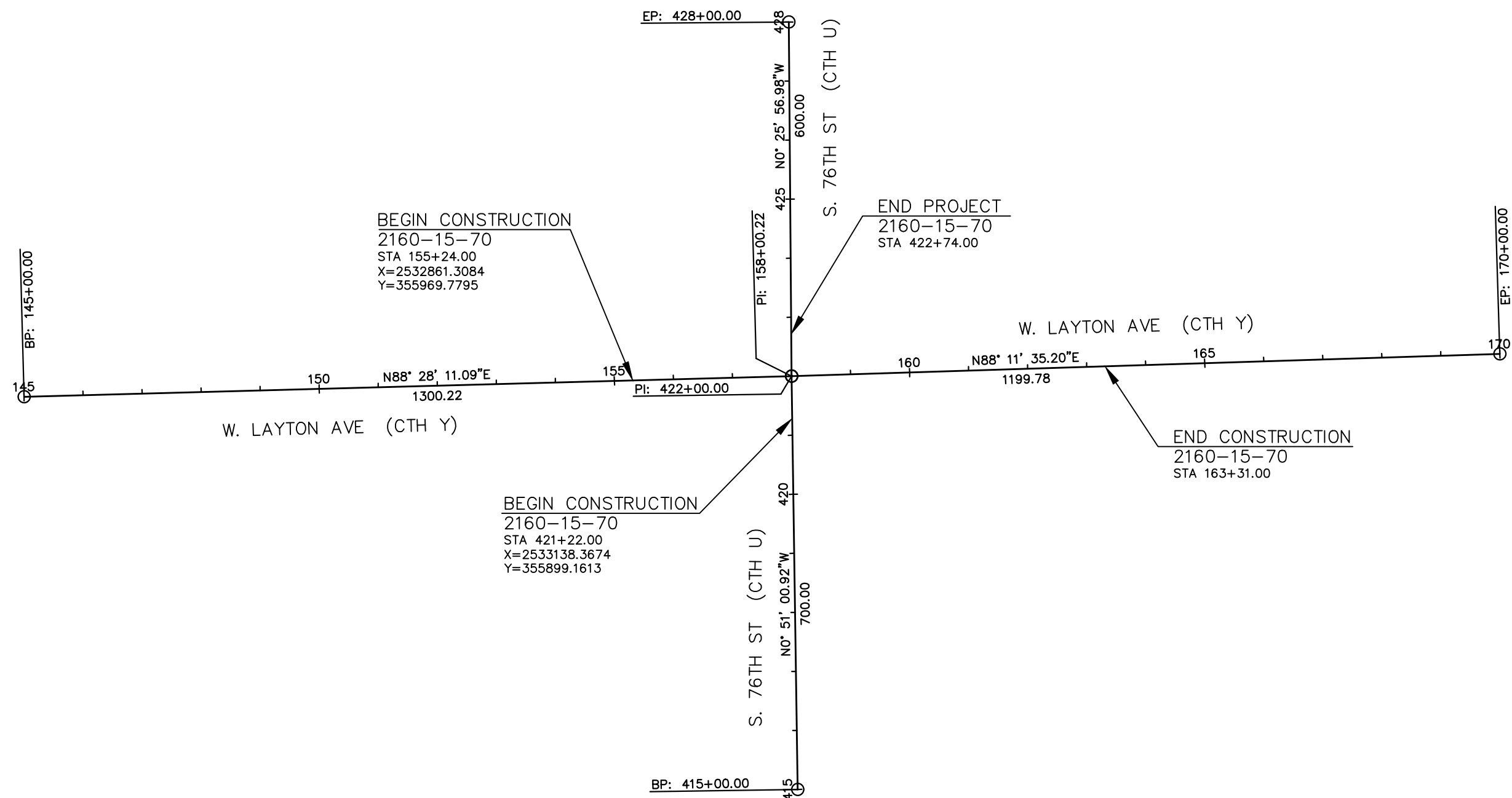
MEDIAN WORK ON W. EDGERTON AVE. – STAGE 1
(WEST OF S. 76TH ST)
STA 12+22.75 TO STA 14+42.00

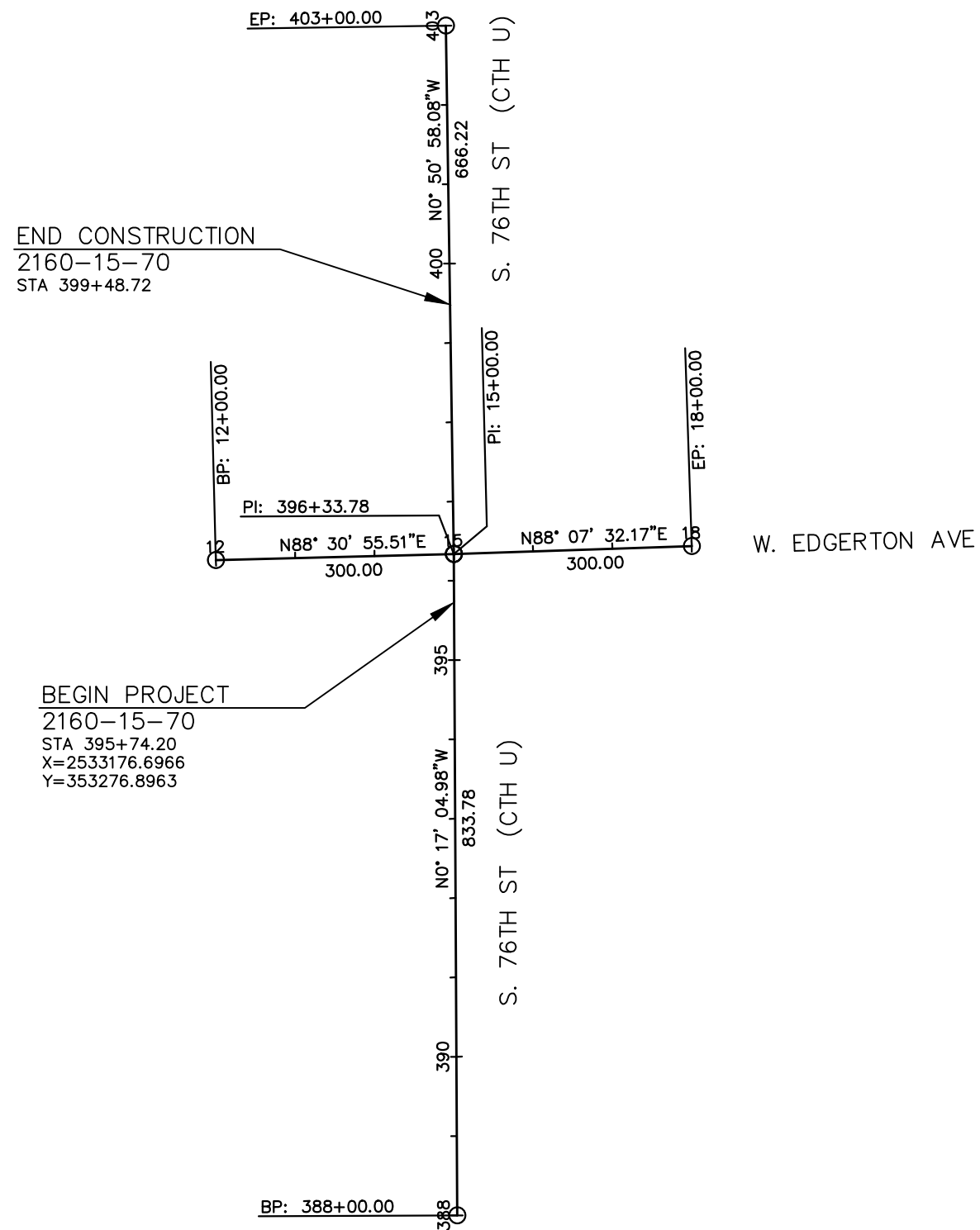
LEGEND

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- Ⓢ TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE 4-INCH (WHITE) 12.5' DASH, 37.5' SKIP









Estimate Of Quantities

2160-15-70

Line	Item	Item Description	Unit	Total	Qty
0010	201.0120	Clearing	ID	107.000	107.000
0020	201.0220	Grubbing	ID	107.000	107.000
0030	204.0100	Removing Pavement	SY	750.000	750.000
0040	204.0150	Removing Curb & Gutter	LF	1,600.000	1,600.000
0050	204.0155	Removing Concrete Sidewalk	SY	750.000	750.000
0060	204.0185	Removing Masonry	CY	25.000	25.000
0070	204.0195	Removing Concrete Bases	EACH	32.000	32.000
0080	204.0220	Removing Inlets	EACH	4.000	4.000
0090	204.0245	Removing Storm Sewer (size) 01. 15-INCH	LF	66.000	66.000
0100	204.0245	Removing Storm Sewer (size) 02. 24-INCH	LF	16.000	16.000
0110	204.0245	Removing Storm Sewer (size) 03. 27-INCH	LF	16.000	16.000
0120	205.0100	Excavation Common	CY	800.000	800.000
0130	213.0100	Finishing Roadway (project) 01. 2216-15-70	EACH	1.000	1.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,000.000	1,000.000
0150	405.0100	Coloring Concrete WisDOT Red	CY	100.000	100.000
0160	405.1000	Stamping Colored Concrete	CY	100.000	100.000
0170	415.0090	Concrete Pavement 9-Inch	SY	900.000	900.000
0180	416.0270	Concrete Driveway HES 7-Inch	SY	80.000	80.000
0190	416.0610	Drilled Tie Bars	EACH	200.000	200.000
0200	416.0620	Drilled Dowel Bars	EACH	20.000	20.000
0210	455.0605	Tack Coat	GAL	50.000	50.000
0220	460.6424	HMA Pavement 4 MT 58-28 H	TON	300.000	300.000
0230	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	10.000	10.000
0240	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0250	601.0110	Concrete Curb Type D	LF	60.000	60.000
0260	601.0331	Concrete Curb & Gutter 31-Inch	LF	1,700.000	1,700.000
0270	602.0410	Concrete Sidewalk 5-Inch	SF	7,000.000	7,000.000
0280	602.0420	Concrete Sidewalk 7-Inch	SF	550.000	550.000
0290	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	180.000	180.000
0300	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	20.000	20.000
0310	608.0327	Storm Sewer Pipe Reinforced Concrete Class III 27-Inch	LF	20.000	20.000
0320	608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	LF	280.000	280.000
0330	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0340	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0350	611.1253	Catch Basins 2.5x3-FT	EACH	4.000	4.000
0360	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0370	619.1000	Mobilization	EACH	1.000	1.000
0380	620.0300	Concrete Median Sloped Nose	SF	600.000	600.000

Estimate Of Quantities

2160-15-70

Line	Item	Item Description	Unit	Total	Qty
0390	624.0100	Water	MGAL	10.000	10.000
0400	625.0100	Topsoil	SY	450.000	450.000
0410	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0420	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0430	628.2006	Erosion Mat Urban Class I Type A	SY	450.000	450.000
0440	628.7010	Inlet Protection Type B	EACH	16.000	16.000
0450	628.7015	Inlet Protection Type C	EACH	7.000	7.000
0460	629.0210	Fertilizer Type B	CWT	0.200	0.200
0470	630.0140	Seeding Mixture No. 40	LB	5.000	5.000
0480	634.0805	Posts Tubular Steel 2x2-Inch X 5-FT	EACH	1.000	1.000
0490	634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	14.000	14.000
0500	637.2210	Signs Type II Reflective H	SF	240.090	240.090
0510	637.2215	Signs Type II Reflective H Folding	SF	111.900	111.900
0520	637.2230	Signs Type II Reflective F	SF	18.070	18.070
0530	638.2102	Moving Signs Type II	EACH	2.000	2.000
0540	638.2602	Removing Signs Type II	EACH	50.000	50.000
0550	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0560	642.5001	Field Office Type B	EACH	1.000	1.000
0570	643.0100	Traffic Control (project) 01. 2160-15-70	EACH	1.000	1.000
0580	643.0300	Traffic Control Drums	DAY	19,000.000	19,000.000
0590	643.0420	Traffic Control Barricades Type III	DAY	3,300.000	3,300.000
0600	643.0705	Traffic Control Warning Lights Type A	DAY	4,400.000	4,400.000
0610	643.0715	Traffic Control Warning Lights Type C	DAY	4,300.000	4,300.000
0620	643.0800	Traffic Control Arrow Boards	DAY	250.000	250.000
0630	643.0900	Traffic Control Signs	DAY	9,100.000	9,100.000
0640	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0650	643.1050	Traffic Control Signs PCMS	DAY	30.000	30.000
0660	644.1420.S	Temporary Pedestrian Surface Plywood	SF	480.000	480.000
0670	644.1601.S	Temporary Curb Ramp	EACH	16.000	16.000
0680	644.1616.S	Temporary Pedestrian Safety Fence	LF	300.000	300.000
0690	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,000.000	4,000.000
0700	646.0126	Pavement Marking Epoxy 8-Inch	LF	2,200.000	2,200.000
0710	646.0600	Removing Pavement Markings	LF	6,800.000	6,800.000
0720	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	14.000	14.000
0730	647.0356	Pavement Marking Words Epoxy	EACH	14.000	14.000
0740	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	400.000	400.000
0750	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	1,600.000	1,600.000
0760	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	22,400.000	22,400.000
0770	650.4000	Construction Staking Storm Sewer	EACH	5.000	5.000
0780	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,700.000	1,700.000

Estimate Of Quantities

2160-15-70

Line	Item	Item Description	Unit	Total	Qty
0790	650.8500	Construction Staking Electrical Installations (project) 01. 2216-15-70	LS	1.000	1.000
0800	650.9910	Construction Staking Supplemental Control (project) 01. 2216-15-70	LS	1.000	1.000
0810	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	760.000	760.000
0820	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	610.000	610.000
0830	652.0605	Conduit Special 2-Inch	LF	90.000	90.000
0840	652.0615	Conduit Special 3-Inch	LF	1,490.000	1,490.000
0850	653.0140	Pull Boxes Steel 24x42-Inch	EACH	15.000	15.000
0860	653.0145	Pull Boxes Steel 24x48-Inch	EACH	10.000	10.000
0870	653.0905	Removing Pull Boxes	EACH	28.000	28.000
0880	654.0101	Concrete Bases Type 1	EACH	14.000	14.000
0890	654.0110	Concrete Bases Type 10	EACH	2.000	2.000
0900	654.0113	Concrete Bases Type 13	EACH	2.000	2.000
0910	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	2.000	2.000
0920	655.0210	Cable Traffic Signal 3-14 AWG	LF	2,700.000	2,700.000
0930	655.0230	Cable Traffic Signal 5-14 AWG	LF	800.000	800.000
0940	655.0240	Cable Traffic Signal 7-14 AWG	LF	2,800.000	2,800.000
0950	655.0260	Cable Traffic Signal 12-14 AWG	LF	900.000	900.000
0960	655.0270	Cable Traffic Signal 15-14 AWG	LF	3,800.000	3,800.000
0970	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	6,300.000	6,300.000
0980	655.0900	Traffic Signal EVP Detector Cable	LF	2,800.000	2,800.000
0990	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. 76TH & EDGERTON	LS	1.000	1.000
1000	656.0200	Electrical Service Meter Breaker Pedestal (location) 02. 76TH & LAYTON	LS	1.000	1.000
1010	657.0100	Pedestal Bases	EACH	14.000	14.000
1020	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	11.000	11.000
1030	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	4.000	4.000
1040	658.0110	Traffic Signal Face 3-12 Inch Vertical	EACH	30.000	30.000
1050	658.0115	Traffic Signal Face 4-12 Inch Vertical	EACH	12.000	12.000
1060	658.0120	Traffic Signal Face 5-12 Inch Vertical	EACH	5.000	5.000
1070	658.0215	Backplates Signal Face 3 Section 12-Inch	EACH	30.000	30.000
1080	658.0220	Backplates Signal Face 4 Section 12-Inch	EACH	12.000	12.000
1090	658.0225	Backplates Signal Face 5 Section 12-Inch	EACH	5.000	5.000
1100	658.0416	Pedestrian Signal Face 16-Inch	EACH	16.000	16.000
1110	658.0600	Led Modules 12-Inch Red Ball	EACH	29.000	29.000
1120	658.0605	Led Modules 12-Inch Yellow Ball	EACH	29.000	29.000
1130	658.0610	Led Modules 12-Inch Green Ball	EACH	29.000	29.000
1140	658.0615	Led Modules 12-Inch Red Arrow	EACH	16.000	16.000
1150	658.0620	Led Modules 12-Inch Yellow Arrow	EACH	33.000	33.000

Estimate Of Quantities

2160-15-70

Line	Item	Item Description	Unit	Total	Qty
1160	658.0625	Led Modules 12-Inch Green Arrow	EACH	22.000	22.000
1170	658.0635	Led Modules Pedestrian Countdown Timer 16-Inch	EACH	16.000	16.000
1180	658.5069	Signal Mounting Hardware (location) 01. 76TH & EDGERTON	LS	1.000	1.000
1190	658.5069	Signal Mounting Hardware (location) 02. 76TH & LAYTON	LS	1.000	1.000
1200	661.0200	Temporary Traffic Signals for Intersections (location) 01. 76TH & EDGERTON	LS	1.000	1.000
1210	661.0200	Temporary Traffic Signals for Intersections (location) 02. 76TH & LAYTON	LS	1.000	1.000
1220	678.0200	Fiber Optic Splice Enclosure	EACH	2.000	2.000
1230	678.0300	Fiber Optic Splice	EACH	104.000	104.000
1240	678.0400	Fiber Optic Termination	EACH	8.000	8.000
1250	690.0150	Sawing Asphalt	LF	900.000	900.000
1260	690.0250	Sawing Concrete	LF	1,750.000	1,750.000
1270	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
1280	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	650.000	650.000
1290	SPV.0060	Special 01. CONCRETE BASES TYPE 10 MODIFIED	EACH	4.000	4.000
1300	SPV.0060	Special 02. POLES TYPE 9	EACH	2.000	2.000
1310	SPV.0060	Special 03. POLES TYPE 12	EACH	2.000	2.000
1320	SPV.0060	Special 04. POLES TYPE 12 MODIFIED	EACH	4.000	4.000
1330	SPV.0060	Special 05. MONOTUBE ARMS 30-FT	EACH	2.000	2.000
1340	SPV.0060	Special 06. MONOTUBE ARMS 55-FT	EACH	2.000	2.000
1350	SPV.0060	Special 07. MONOTUBE ARMS 40-FT MODIFIED	EACH	4.000	4.000
1360	SPV.0060	Special 08. UTILITY LINE OPENING	EACH	8.000	8.000
1370	SPV.0060	Special 09. CIRCULAR COMMUNICATIONS VAULT 36X42-INCH	EACH	3.000	3.000
1380	SPV.0060	Special 10. INLET COVERS TYPE 57	EACH	6.000	6.000
1390	SPV.0060	Special 11. ADJUSTING WATER VALVE BOXES	EACH	1.000	1.000
1400	SPV.0090	Special 01. FURNISH AND INSTALL 12SM/12MM FIBER OPTIC COMMUNICATIONS CABLE	LF	940.000	940.000
1410	SPV.0090	Special 02. TRACER WIRE 12 AWG	LF	320.000	320.000
1420	SPV.0090	Special 03. CONSTRUCTION STAKING CONCRETE SIDEWALK	LF	1,200.000	1,200.000
1430	SPV.0105	Special 01. REMOVE TRAFFIC SIGNAL EQUIPMENT 76TH & EDGERTON	LS	1.000	1.000
1440	SPV.0105	Special 02. REMOVE TRAFFIC SIGNAL EQUIPMENT 76TH & LAYTON	LS	1.000	1.000
1450	SPV.0105	Special 03. TRAFFIC SIGNAL CABINET 16-PHASE 76TH & EDGERTON	LS	1.000	1.000
1460	SPV.0105	Special 04. TRAFFIC SIGNAL CABINET 16-PHASE 76TH & LAYTON	LS	1.000	1.000

Estimate Of Quantities

2160-15-70					
Line	Item	Item Description	Unit	Total	Qty
1470	SPV.0105	Special 05. EMERGENCY VEHICLE PREEMPTION SYSTEM 76TH & EDGERTON	LS	1.000	1.000
1480	SPV.0105	Special 06. EMERGENCY VEHICLE PREEMPTION SYSTEM 76TH & LAYTON	LS	1.000	1.000
1490	SPV.0105	Special 07. VEHICULAR VIDEO DETECTION SYSTEM (4-CAMERAS) 76TH & EDGERTON	LS	1.000	1.000
1500	SPV.0105	Special 08. VEHICULAR VIDEO DETECTION SYSTEM (4-CAMERAS) 76TH & LAYTON	LS	1.000	1.000
1510	SPV.0105	Special 09. ACCESSIBLE PEDESTRIAN PUSH BUTTON SYSTEM (8-BUTTONS) 76TH & EDGERTON	LS	1.000	1.000
1520	SPV.0105	Special 10. ACCESSIBLE PEDESTRIAN PUSH BUTTON SYSTEM (8-BUTTONS) 76TH & LAYTON	LS	1.000	1.000
1530	SPV.0105	Special 11. FIBER OPTIC COMMUNICATION SYSTEM INTEGRATION AND DOCUMENTATION	LS	1.000	1.000

3

CLEARING & GRUBBING						
				201.0120	201.0220	
LOCATION	STATION	-	STATION	OFFSET	CLEARING ID	GRUBBING ID
<hr/>						
STAGE 1						
<hr/>						
76TH						
MEDIAN	397+54		399+40	RT	40	40
LAYTON						
MEDIAN	155+70		157+20	LF	30	30
MEDIAN	158+76		159+58	RT	35	35
<hr/>						
SUBTOTAL					105	105
STAGE 2						
<hr/>						
LAYTON	161+28			RT	2	2
<hr/>						
SUBTOTAL					2	2
<hr/>						
TOTAL					107	107

REMOVING CONCRETE SIDEWALK						
				204.0155		
				REMOVING CONCRETE		
LOCATION	STATION	-	STATION	OFFSET	SIDEWALK SY	
<hr/>						
STAGE 1						
<hr/>						
LAYTON						
MEDIAN	155+48	-	157+37		158	
MEDIAN	158+66	-	159+62		64	
76TH						
MEDIAN	395+75	-	395+81		9	
MEDIAN	396+78	-	399+41		205	
MEDIAN	422+75	-	422+81		3	
<hr/>						
SUBTOTAL					439	
STAGE 2						
<hr/>						
LAYTON						
DWY	155+14			RT	20	
DWY	155+95			RT	22	
NW CORNER	157+31	-	157+53	LT	16	
NE CORNER	158+50	-	158+70	LT	17	
SW CORNER	157+25	-	157+47	RT	36	
SE CORNER	158+52	-	158+75	RT	32	
DWY	161+37			RT	16	
DWY	162+46			RT	21	
EDGERTON						
SW CORNER	395+77	-	395+92	LT	12	
SE CORNER	395+74	-	396+00	RT	25	
NW CORNER	396+74	-	396+88	LT	21	
NE CORNER	396+75	-	396+96	RT	29	
<hr/>						
SUBTOTAL					267	
UNDISTRIBUTED					44	
<hr/>						
TOTAL					750	

REMOVING PAVEMENT				
				204.0100 REMOVING PAVEMENT
LOCATION	STATION	-	STATION	OFFSET SY
<u>STAGE 1</u>				
<u>LAYTON</u>				
MEDIAN	155+24	-	157+43	74
MEDIAN	158+55	-	160+30	377
MEDIAN	162+89	-	163+31	48
<u>76TH</u>				
MEDIAN	396+73	-	396+87	28
MEDIAN	421+00	-	421+47	37
SUBTOTAL				564
<u>STAGE 2</u>				
<u>LAYTON</u>				
DWY	155+11		RT	39
DWY	155+95		RT	36
DWY	162+47		RT	21
SUBTOTAL				96
UNDISTRIBUTED				90
TOTAL				750

REMOVING MASONRY				
				204.0185 REMOVING MASONRY
	STATION	-	STATION	OFFSET CY
<u>STAGE 1</u>				
MEDIAN	155+70	-	156+55	5
MEDIAN	158+76	-	159+58	4
MEDIAN	397+06	-	397+50	3
MEDIAN	397+54	-	398+16	4
MEDIAN	398+24	-	399+41	6
SUBTOTAL STAGE 1				22
UNDISTRIBUTED				3
TOTAL				25

LOCATION
<u>STAGE 1</u>
<u>LAYTON</u>
M
M
M
<u>76TH</u>
M
TOTAL

REMOVING CURB & GUTTER						
				204.0150		
				REMOVING CURB & GUTTER		
LOCATION	STATION	-	STATION	OFFSET	LF	
<u>STAGE 1</u>						
<u>LAYTON</u>						
MEDIAN	155+45	-	157+16		197	
MEDIAN	158+98	-	163+20		608	
<u>76TH</u>						
MEDIAN	396+87	-	399+25		238	
SUBTOTAL					1043	
<u>STAGE 2</u>						
<u>LAYTON</u>						
NW CORNER	157+31	-	157+53	LT	41	
NE CORNER	158+50	-	158+70	LT	46	
SW CORNER	157+25	-	157+47	RT	48	
SE CORNER	158+52	-	158+75	RT	46	
DWY	161+37			RT	81	
<u>EDGERTON</u>						
SW CORNER	395+77	-	395+92	LT	37	
SE CORNER	395+74	-	396+00	RT	36	
NW CORNER	396+74	-	396+88	LT	42	
NE CORNER	396+75	-	396+96	RT	28	
SUBTOTAL					405	
UNDISTRIBUTED					152	
TOTAL					1600	
*CURB AND GUTTER REMOVAL PAID AS PAVEMENT REMOVAL WHERE ADJACENT						

REMOVING STORM SEWER						
				204.0220	204.0245	
				REMOVING	REMOVING	
				INLETS	STORM SEWER	
					<u>15-INCH</u>	<u>24-INCH</u>
	STATION	OFFSET	EACH	LF	LF	27-INCH
				LF	LF	LF
MEDIAN	156+60	5' LT	1	--	--	16
MEDIAN	162+40	13' LT	1	10	--	--
MEDIAN	162+50	13' LT	1	56	--	--
<u>76TH</u>						
MEDIAN	392+02	5' RT	1	--	16	--
TOTAL				4	66	16
						16

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

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REMOVING CONCRETE BASES 76TH & EDGERTON 204.0195 REMOVING CONCRETE BASES		
BASE NO.	EACH	REMARKS
EXSB1	1	
EXSB2	1	
EXSB3	1	
EXSB4	1	
EXSB5	1	
EXSB7	1	
EXSB8	1	
EXSB9	1	
EXSB10	1	
EXSB11	1	
EXSB12	1	
EXSB14	1	
EXSB15	1	
EXCB1	1	
TOTAL	14	

REMOVING CONCRETE BASES 76TH & LAYTON 204.0195 REMOVING CONCRETE BASES		
BASE NO.	EACH	REMARKS
EXSB1	1	
EXSB2	1	
EXSB3	1	
EXSB5	1	
EXSB6	1	
EXSB7	1	
EXSB8	1	
EXSB9	1	
EXSB10	1	
EXSB11	1	
EXSB12	1	
EXSB14	1	
EXSB15	1	
EXSB16	1	
EXSB17	1	
EXSB18	1	
EXSB19	1	
EXCB1	1	
TOTAL	18	
PROJECT TOTAL	32	

REMOVING PULL BOXES 76TH & EDGERTON 653.0905 REMOVING PULL BOXES		
PULL BOX NO.	EACH	REMARKS
EXPB1	1	
EXPB2	1	
EXPB3	1	
EXPB4	1	
EXPB5	1	
EXPB6	1	
EXPB7	1	
EXPB8	1	
EXPB9	1	
EXPB10	1	
TOTAL	10	

REMOVING PULL BOXES 76TH & LAYTON 653.0905 REMOVING PULL BOXES		
PULL BOX NO.	EACH	REMARKS
EXPB1	1	
EXPB2	1	
EXPB3	1	
EXPB4	1	
EXPB5	1	
EXPB6	1	
EXPB7	1	
EXPB8	1	
EXPB9	1	
EXPB10	1	
EXPB11	1	
EXPB12	1	
EXPB13	1	
EXPB14	1	
EXPB15	1	
EXPB16	1	
EXPB17	1	
EXPB18	1	
TOTAL	18	
PROJECT TOTAL	28	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

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COMMON EXCAVATION				
LOCATION	STATION	-	STATION	205.0100 EXCAVATION COMMON CY
<u>STAGE 1</u>				
<u>LAYTON</u>				
MEDIAN	155+24	-	157+43	232
MEDIAN	158+55	-	163+31	330
<u>76TH</u>				
MEDIAN	395+81	-	395+90	4
MEDIAN	396+73	-	396+87	118
MEDIAN	421+00	-	421+47	9
MEDIAN	422+55	-	422+76	9
<u>EDGERTON</u>				
MEDIAN	14+24	-	14+42	8
MEDIAN	15+59	-	15+73	4
SUBTOTAL				714
<u>STAGE 2</u>				
<u>LAYTON</u>				
DWY	155+11		RT	5
DWY	155+95		RT	5
NW CORNER	157+31	-	157+53	2
NE CORNER	158+50	-	158+70	2
SW CORNER	157+25	-	157+47	3
SE CORNER	158+52	-	158+75	3
DWY	161+37		RT	6
DWY	162+46		RT	6
<u>EDGERTON</u>				
SW CORNER	395+77	-	395+92	3
SE CORNER	395+74	-	396+00	3
NW CORNER	396+74	-	396+88	3
NE CORNER	396+75	-	396+96	2
SUBTOTAL				43
UNDISTRIBUTED				43
GRAND TOTAL				800

AGGREGATE ITEMS				
LOCATION	STATION	-	STATION	305.0120* BASE AGGREGATE DENSE 1 1/4 -INCH TON
<u>STAGE 1</u>				
<u>LAYTON</u>				
MEDIAN	155+24	-	157+44	354
MEDIAN	158+56	-	163+31	295
<u>76TH</u>				
MEDIAN	395+82	-	395+90	12
MEDIAN	396+73	-	396+87	151
MEDIAN	421+00	-	421+47	26
<u>EDGERTON</u>				
MEDIAN	14+24	-	14+42	23
MEDIAN	15+59	-	15+72	11
SUBTOTAL				872
UNDISTRIBUTED				108
TOTAL				980
* ADDITIONAL QUANTITIES ELSEWHERE				

DRIVEWAYS				
LOCATION	OFFSET	TON	SY	TON
<u>STAGE 2</u>				
<u>W. LAYTON AVE</u>				
155+11	RT	6	27	0
155+95	RT	5	24	0
161+37	RT	5	21	7
UNDISTRUBUTED		4	8	3
TOTALS		20	80	10

CONCRETE PAVEMENT ITEMS						
LOCATION	STATION	-	STATION	OFFSET	415.0090 CONCRETE PAVEMENT 9-INCH SY	416.0610 DRILLED TIE BARS EACH
<u>STAGE 1</u>						
<u>LAYTON</u>						
MEDIAN	158+56	-	163+31	-	885	192
SUBTOTAL					885	192
UNDISTRIBUTED					15	8
TOTAL					900	200
ASPHALT PAVEMENT ITEMS						
LOCATION	STATION	-	STATION	OFFSET	455.0605 TACK COAT GAL	460.6424 HMA PAVEMENT 4 MT 58-28 H TON
<u>STAGE 1</u>						
<u>LAYTON</u>						
MEDIAN	155+24	-	157+43	-	25	169
<u>76TH</u>						
MEDIAN	395+82		395+90	-	1	6
MEDIAN	396+73	-	396+87	-	10	72
MEDIAN	422+55	-	422+69	-	2	13
<u>EDGERTON</u>						
MEDIAN	14+24	-	14+42	-	2	11
MEDIAN	15+59	-	15+72	-	1	6
SUBTOTAL					41	277
UNDISTRIBUTED					9	23
TOTAL					50	300
ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS						

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CONCRETE CURB & GUTTER									
LOCATION	STATION	-	STATION	OFFSET	ITEM 601.0110	ITEM 601.0331	ITEM 620.0300	LF	SF
					CONCRETE CURB	CONCRETE CURB & GUTTER	CONCRETE MEDIAN		
					TYPE D	31-INCH	SLOPED NOSE		
STAGE 1 (MEDIANS)									
76TH	395+74	-	399+49	-	--	242			63
76TH	421+00	-	422+76	-	--	76			154
LAYTON	155+24	-	157+43	-	--	215			172
LAYTON	158+55	-	163+31	-	--	936			133
EDGERTON	14+23	-	14+42	-	--	--			54
EDGERTON	15+59	-	15+72	-	--	--			12
SUBTOTAL					0	1151			588
STAGE 2 (CORNERS)									
LAYTON									
NW CORNER	157+28	-	157+55	LT	--	41			--
NE CORNER	158+47	-	158+77	LT	--	46			--
SW CORNER	157+22	-	157+50	RT	--	47			--
SE CORNER	158+49	-	158+75	RT	--	45			--
DWY	155+14			RT	--	53			--
DWY	155+95			RT	--	54			--
DWY	161+36			RT	23	46			--
DWY	162+46			RT	28	39			--
SUBTOTAL					51	371			0
EDGERTON									
NW CORNER	14+25	-	14+51	LT	--	41			--
NE CORNER	15+51	-	15+67	LT	--	28			--
SW CORNER	14+21	-	14+50	RT	--	47			--
SE CORNER	15+49	-	15+70	RT	--	36			--
SUBTOTAL					0	152			0
UNDISTRIBUTED					9	26			12
TOTAL					60	1700			600

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

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CONCRETE SIDEWALK									
LOCATION	STATION	-	STATION	OFFSET	602.0410	602.0420	405.0100	405.1000	602.0515
					CONCRETE SIDEWALK	CONCRETE SIDEWALK	COLORING CONCRETE	STAMPING COLORED	CURB RAMP DETECTABLE
					5-INCH	7-INCH	WISDOT RED	CONCRETE	WARNING FIELD NATURAL PATINA
STAGE 1 (MEDIANS)					SF	SF	CY	CY	SF
76TH	395+75	-	395+81	--	75	--	--	--	--
76TH	396+92	-	399+49	--	1750	--	27	27	--
76TH	421+07	-	421+45	--	163	--	3	3	20
76th	422+75	-	422+81	--	21	--	--	--	--
LAYTON	155+35	-	157+15	--	1146	--	18	18	--
LAYTON	158+80	-	163+24	--	1844	--	28	28	--
SUBTOTAL					4924	0	76	76	20
STAGE 2 (CORNERS)									
LAYTON AVE									
NW CORNER	157+28	-	157+55	LT	172	--	--	--	20
NE CORNER	158+47	-	158+77	LT	168	--	--	--	20
SW CORNER	157+22	-	157+50	RT	289	--	--	--	20
SE CORNER	158+49	-	158+75	RT	264	--	--	--	20
DWY	155+14			RT	--	178	--	--	
DWY	155+95			RT	--	194	--	--	
DWY	161+36			RT	--	140	--	--	
DWY	162+46			RT	--	--	--	--	--
SUBTOTAL					893	512	0	0	80
EDGERTON AVE									
NW CORNER	14+25	-	14+51	LT	319	--	--	--	20
NE CORNER	15+51	-	15+67	LT	264	--	--	--	20
SW CORNER	14+21	-	14+50	RT	201	--	--	--	20
SE CORNER	15+49	-	15+70	RT	237	--	--	--	20
SUBTOTAL					1021	0	0	0	80
UNDISTRIBUTED					162	38	24	24	0
TOTAL					7000	550	100	100	180

DUST CONTROL		
624.0100		
WATER		
LOCATION	MGAL	
UNDISTRIBUTED	10	
TOTAL	10	
NOTE: WATER FOR USE IN DUST CONTROL		
MOBILIZATIONS EROSION CONTROL		
628.1905		
MOBILIZATIONS		
EROSION CONTROL		
PROJECT I.D.	EACH	
2160-15-70	2	
TOTAL	2	
MOBILIZATIONS EMERGENCY EROSION CONTROL		
628.1910		
MOBILIZATIONS		
EMERGENCY		
EROSION CONTROL		
PROJECT I.D.	EACH	
2160-15-70	2	
TOTAL	2	

PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

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LOCATION	INLET PROTECTION	
	628.7010	628.7015
	INLET PROTECTION TYPE B	INLET PROTECTION TYPE C
	EACH	EACH
<u>S. 76TH ST</u>		
396+90	1	--
396+01	1	--
397+02	2	--
422+75	1	--
422+81	1	--
422+84	1	--
SUBTOTAL	7	0
<u>W. LAYTON AVE</u>		
156+60	1	--
160+25	--	1
160+53	1	--
162+40	2	--
162+51	1	--
162+98	--	1
163+16	1	--
163+90	--	1
163+98	--	1
164+20	--	1
	1	--
SUBTOTAL	7	5
<u>W. EDGERTON AVE</u>		
14+23	--	1
16+00	--	1
SUBTOTAL	2	2
TOTAL	16	7

STORM SEWER											
STR NO.	STATION	OFFSET	611.0420	611.1005	611.1253	SPV.0060.10	608.0324	608.0327	608.0515	520.8000	611.8115
			RECONSTRUCTING	CATCH BASINS	CATCH BASINS	INLET COVER	STORM SEWER PIPE	STORM SEWER PIPE	STORM SEWER PIPE	CONCRETE	ADJUSTING
			MANHOLES	5-FT DIA	2.5x3-FT	TYPE 57	REINFORCED CONCRETE	REINFORCED CONCRETE	REINFORCED CONCRETE	COLLARS	INLET
			EACH	EACH	EACH	EACH	LF	LF	LF	EACH	EACH
<u>W. LAYTON AVE</u>											
1.0	156+60	5.0' LT	--	1	--	1	--	16	--	2	--
2.0	162+99	13.1' RT	--	--	--	1	--	--	25	--	1
2.1	162+50	2.0' LT	--	--	1	1	--	--	26	--	--
2.2	162+40	0.0' --	--	--	1	1	--	--	10	0	--
2.3	160+53	5.4' RT	--	--	1	1	--	--	187	--	--
2.4	156+06	5.0' LT	1	--	--	--	--	--	--	--	--
SUBTOTAL			1	1	3	5	0	16	248	2	1
<u>W. EDGERTON AVE</u>											
3.0	397+02	4.8' RT	--	--	1	1	15	--	--	1	--
SUBTOTAL			0	0	1	1	15	0	0	1	0
UNDISTRIBUTED			0	0	0	0	5	4	32	0	0
TOTAL			1	1	4	6	20	20	280	3	1

TRAFFIC CONTROL ITEMS												
LOCATION	643.0300	643.0420	643.0705	643.0715	643.0800	643.0900	643.0920	643.1050	644.1420.S	644.1601.S	644.1616.S	
	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TEMPORARY	TEMPORARY	TEMPORARY	
	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	PEDESTRIAN	CURB	PEDESTRIAN	
	DRUMS	BARRICADES TYPE III	WARNING LIGHTS TYPE A	WARNING LIGHTS TYPE C	ARROW BOARDS	SIGNS	COVERING SIGNS TYPE II	SIGNS PCMS	SURFACE PLYWOOD	RAMP	SAFETY FENCE	
DAY	DAY	DAY	DAY	DAY	DAY	DAY	EACH	CYCLES	DAY	SF	EACH	LF
STAGE 1A/1B												
S. 76TH ST	7,750	1,300	1,700	2,000	150	3,450	--	--	--	--	--	--
W. LAYTON AVE	4,250	800	600	1,000	100	2,250	2	2	--	128	--	--
W. EDGERTON AVE	1,250	350	500	250	--	550	--	--	--	64	--	--
SUBTOTAL STAGE 1	13,250	2,450	2,800	3,250	250	6,250	2	2	--	192	--	--
STAGE 2												
S. 76TH ST	2,310	336	672	504	--	1,428	--	--	--	--	8	--
W. LAYTON AVE	2,310	294	588	252	--	882	--	--	--	128	4	--
W. EDGERTON AVE	1,092	168	336	252	--	504	--	--	--	64	4	234
SUBTOTAL STAGE 2	5,712	798	1,596	1,008	--	2,814	--	--	--	192	16	234
UNDISTRIBUTED	38	52	4	42	--	36	4	4	30	96	--	66
TOTAL	19000	3300	4400	4300	250	9100	6	--	30	480	16	300

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

3

SIGN SUMMARY														
				SIZE		638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0805 POSTS TUBULAR STEEL 2x2-1NCH x 5-FT EACH	634.0810 POSTS TUBULAR STEEL 2x2-1NCH x 10-FT EACH	NOTES
SIGN NO.	SIGN CODE	DESCRIPTION												
01 . 01		INTERSTATE DIRECTIONAL SIGNAGE		X		1	--	--	--	--	--	--	--	ON TWO WOOD POSTS
01 . 02	R2-1	SPEED LIMIT 35	24	X	30	--	--	--	5.00	--	--	--	1	
01 . 03	M3-4	WEST	24	X	12	--	--	--	2.00	--	--	--	--	SAME POST AS 1.04
01 . 04	M1-5A	CTH ROUTE MARKER (CTH Y)	24	X	24	--	1	1	4.00	--	--	--	1	
01 . 05	M4-5	TO		X		--	1	--	--	--	--	--	--	ON LIGHT POLE
01 . 06	M3-1	NORTH		X		--	1	--	--	--	--	--	--	SAME POLE AS 1.05
01 . 07	M1-1	INTERSTATE 43		X		--	1	--	--	--	--	--	--	SAME POLE AS 1.05
01 . 08	M6-1L	LEFT		X		--	1	--	--	--	--	--	--	SAME POLE AS 1.05
01 . 09	M1-94	S. 76TH ST	51	X	15	--	1	--	5.31	--	--	--	--	ON SIGNAL ARM
01 . 10	R7-1-L	NO PARKING (ANYTIME)	18	X	24	--	1	1	3.00	--	--	--	--	ON SIGNAL POLE
01 . 11	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
01 . 12	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON LIGHT POLE
01 . 13	R4-7	KEEP RIGHT	24	X	30	--	1	--	5.00	--	--	--	--	ON LIGHT POLE
01 . 14		DO NOT ENTER		X		--	1	--	--	--	--	--	--	ON LIGHT POLE
01 . 15	M1-94	W. LAYTON AVE	66	X	15	--	1	--	6.88	--	--	--	--	ON SIGNAL ARM
01 . 16	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
01 . 17	R3-7-R	RIGHT LANE MUST TURN RIGHT	30	X	30	--	1	--	6.25	--	--	--	1	
01 . 18	R3-20-L	BEGIN LEFT TURN LANE	24	X	36	--	--	--	6.00	--	--	--	1	
01 . 19	R3-7-R	RIGHT LANE MUST TURN RIGHT	30	X	30	--	1	--	6.25	--	--	--	1	
01 . 20	R7-1-D	NO PARKING (ANYTIME)	18	X	24	--	1	1	3.00	--	--	--	--	
01 . 21	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
01 . 22	R4-7	KEEP RIGHT	24	X	30	--	1	--	5.00	--	--	--	--	ON SIGNAL POLE
01 . 23	R3-7-R	RIGHT LANE MUST TURN RIGHT	30	X	30	--	1	--	6.25	--	--	--	--	ON SIGNAL POLE
01 . 24	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
01 . 25	M1-94	W. LAYTON AVE	66	X	15	--	1	--	6.88	--	--	--	--	ON SIGNAL ARM
01 . 26	R5-1	DO NOT ENTER	30	X	30	--	1	--	6.25	--	--	--	--	ON SIGNAL POLE
01 . 27	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
01 . 28	W12-1D	DIVIDER DOUBLE ARROW	24	X	24	--	--	--	--	--	4.00	1	--	
01 . 29	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
01 . 30	R7-1-L	NO PARKING (ANYTIME)	18	X	24	--	--	--	3.00	--	--	--	--	ON SIGNAL POLE
01 . 31	R3-50-R	RIGHT TURN ONLY	30	X	36	--	--	--	7.50	--	--	--	--	ON SIGNAL ARM
01 . 32	M1-94	S. 76TH ST	51	X	15	--	1	--	5.31	--	--	--	--	ON SIGNAL ARM
01 . 33	R4-7	KEEP RIGHT	24	X	30	--	1	--	5.00	--	--	--	--	ON LIGHT POLE
01 . 34	R1-1F	STOP (Folding)	36	X	36	--	1	--	--	7.46	--	--	--	ON LIGHT POLE
01 . 35	M3-4	WEST	24	X	12	--	--	--	2.00	--	--	--	--	SAME POST AS 1.35
01 . 36	M1-5A	CTH ROUTE MARKER (CTH Y)	24	X	24	--	1	1	4.00	--	--	--	1	
02 . 01	R3-20-L	BEGIN LEFT TURN LANE	24	X	36	--	--	--	6.00	--	--	--	1	
02 . 02		INTERSTATE DIRECTIONAL SIGNAGE		X		1	--	--	--	--	--	--	--	ON TWO WOOD POSTS
02 . 03	R3-20-L	BEGIN LEFT TURN LANE	24	X	36	--	--	--	6.00	--	--	--	1	
02 . 04	R4-7	KEEP RIGHT	24	X	30	--	--	--	5.00	--	--	--	1	
02 . 05	R2-1	SPEED LIMIT 35	24	X	30	--	--	--	5.00	--	--	--	1	
02 . 06	R3-18	NO LEFT TURN / NO U-TURN	30	X	30	--	--	--	6.25	--	--	--	1	
02 . 07	R6-1-R	ONE WAY	36	X	12	--	--	--	3.00	--	--	--	--	SAME POST AS 2.06
02 . 08	R3-2	NO LEFT TURN	24	X	24	--	--	--	4.00	--	--	--	--	SAME POST AS 2.06
02 . 09	R5-1	DO NOT ENTER	30	X	30	--	--	--	6.25	--	--	--	--	SAME POST AS 2.03
02 . 10	R3-7-R	RIGHT LANE MUST TURN RIGHT	30	X	30	--	1	--	6.25	--	--	--	1	
02 . 11	R7-1-D	NO PARKING (ANYTIME)	18	X	24	--	1	1	3.00	--	--	--	1	
02 . 12	R3-20-L	BEGIN LEFT TURN LANE	24	X	36	--	--	--	6.00	--	--	--	1	
02 . 13	R4-7	KEEP RIGHT	24	X	30	--	--	--	5.00	--	--	--	--	ON LIGHT POLE
03 . 01	M3-3	SOUTH	24	X	12	--	1	--	2.00	--	--	--	--	ON SIGNAL ARM
03 . 02	M1-5A	CTH ROUTE MARKER (COUNTY U)	24	X	24	--	1	--	4.00	--	--	--	--	ON SIGNAL ARM
03 . 03	M1-94	W. EDGERTON AVE	76	X	15	--	1	--	7.92	--	--	--	--	ON SIGNAL ARM
03 . 04	S1-1	SCHOOL ZONE	30	X	30	--	1	--	--	--	4.69	--	--	ON SIGNAL POLE
03 . 05	S16-7L	YELLOW DIAGONAL ARROW	24	X	12	--	--	--	2.00	--	--	--	--	ON SIGNAL POLE
03 . 06	R1-1F	STOP (FOLDING)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 07	R4-7	KEEP RIGHT	24	X	30	--	--	--	5.00	--	--	--	--	
03 . 08	M1-94	S. 76TH ST	51	X	15	--	1	--	5.31	--	--	--	--	ON SIGNAL ARM
03 . 09	S1-1	SCHOOL ZONE	30	X	30	--	1	--	--	--	4.69	--	--	ON SIGNAL POLE
03 . 10	R1-1F	STOP (FOLDING)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 11	R1-1F	STOP (FOLDING)	36	X	36	--	--	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 12	R3-4	NO U TURN	24	X	24	--	1	--	4.00	--	--	--	--	ON SIGNAL POLE
03 . 13	R4-7	KEEP RIGHT	24	X	30	--	--	--	5.00	--	--	--	--	ON SIGNAL POLE
03 . 14	R1-1F	STOP (FOLDING)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 15	M1-94	S. 76TH ST	51	X	15	--	1	--	5.31	--	--	--	--	ON SIGNAL ARM
03 . 16	R1-1F	STOP (FOLDING)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 17	R4-7	KEEP RIGHT	24	X	30	--	1	--	5.00	--	--	--	--	ON SIGNAL POLE
03 . 18	S1-1	SCHOOL ZONE	30	X	30	--	1	--	--	--	4.69	--	--	ON SIGNAL POLE
03 . 19	S16-7L	YELLOW DIAGONAL ARROW	24	X	12	--	1	--	2.00	--	--	--	--	ON SIGNAL POLE
03 . 20	R1-1F	STOP (FOLDING)	36	X	36	--	1	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 21	R1-1F	STOP (FOLDING)	36	X	36	--	--	--	--	7.46	--	--	--	ON SIGNAL POLE
03 . 22	R3-4	NO U TURN	24	X	24	--	1	--	4.00	--	--	--	--	ON SIGNAL POLE
03 . 23	R4-7	KEEP RIGHT	24	X	30	--	--	--	5.00	--	--	--	--	ON SIGNAL POLE
03 . 24	M1-94	W. EDGERTON AVE	76	X	15	--	1	--	7.92	--	--	--	--	ON SIGNAL ARM
03 . 25	M3-1	NORTH	24		12	--	--	--	2.00	--	--	--	--	ON SIGNAL POLE
03 . 26	M1-5A	CTH ROUTE MARKER (COUNTY U)	24	X	24	--	1	--	4.00	--	--	--	--	ON SIGNAL POLE
03 . 27	R3-2	NO LEFT TURN	24	X	24	--	1	--	4.00	--	--	--	--	ON LIGHT POLE
TOTAL:						2	50	5	240.09	111.90	18.07	1	14	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

PAVEMENT MARKING								
	646.0106 PAVEMENT MARKING EPOXY 4-INCH		646.0126 PAVEMENT MARKING EPOXY 8-INCH	646.0600 REMOVING PAVEMENT MARKINGS	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	647.0356 PAVEMENT MARKING WORDS EPOXY	647.0566 PAVEMENT MARKING STOP LINE 18-INCH EPOXY	647.0766 PAVEMENT MARKING CROSS WALK 6-INCH EPOXY
LOCATION	WHITE LF	YELLOW LF	WHITE LF	LF	EACH	EACH	LF	LF
LAYTON (WEST LEG)	900	--	470	713	2	2	55	200
LAYTON (EAST LEG)	1200	--	750	1120	5	5	55	200
76TH (SOUTH LEG)	--	--	--	788	--	--	55	215
76TH (NORTH LEG)	--	--	--	1128	--	--	50	205
SUBTOTAL	2100		1220	3749	7	7	215	820
EDGERTON (WEST LEG)	--	--	--	0	--	--	25	120
EDGERTON (EAST LEG)	--	--	200	396	3	3	37	152
76TH (SOUTH LEG)	800	--	120	816	1	1	52	215
76TH (NORTH LEG)	800	--	500	1748	2	2	58	217
SUBTOTAL	1600		820	2960	6	6	172	704
UNDISTRIBUTED	300	0	160	91	1	1	13	76
TOTAL	4000		2200	6800	14	14	400	1600

TEMPORARY PAVEMENT MARKING		
	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	
LOCATION	WHITE LF	YELLOW LF
STAGE 1		
S. 76TH ST	4211	4901
W. LAYTON AVE	824	3089
W. EDGERTON AVE	402	
SUBTOTAL STAGE 1	13427	
STAGE 2		
S. 76TH ST	3461	--
W. LAYTON AVE	3166	--
W. EDGERTON AVE	1325	--
SUBTOTAL STAGE 2	7952	
UNDISTRIBUTED	1021	
TOTAL	22400	

CONSTRUCTION STAKING					
	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS	SPV.0090.03 CONSTRUCTION STAKING CONCRETE SIDEWALK LF
TOTAL	5	1700	1	1	1200

MISC. ITEMS			
213.0100 FINISHING ROADWAY	619.1000 MOBILIZATION	642.5001 FIELD OFFICE TYPE B	
PROJECT I.D.	EACH	EACH	EACH
2160-15-70	1	1	1

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

CONDIT RIGID NONMETALLIC - 76th & EDGERTON

FROM	TO	652.0225	652.0235	652.0605	652.0615	REMARKS
		SCHEDULE 40 2-INCH	SCHEDULE 40 3-INCH	SPECIAL 2-INCH	SPECIAL 3-INCH	
CB1	PB1	--	10	--	--	2 RUNS
PB1	PB2	--	--	--	160	2 RUNS
PB2	SB1	10	--	--	--	2 RUNS
PB2	PB3	--	70	--	--	
PB3	SB2	5	--	--	--	
PB3	PB4	--	--	--	120	
PB4	SB3	5	--	--	--	2 RUNS
PB4	PB5	--	--	--	100	
PB5	PB6	--	60	--	--	2 RUNS
PB6	SB4	10	--	--	--	2 RUNS
PB6	SB5	5	--	--	--	
PB6	PB7	--	--	--	140	
PB7	SB6	5	--	--	--	
PB7	PB8	--	70	--	--	2 RUNS
PB8	SB7	10	--	--	--	2 RUNS
PB8	PB9	--	--	--	130	
PB9	SB8	5	--	--	--	2 RUNS
PB9	PB10	--	--	--	80	
PB10	SB9	10	--	--	--	2 RUNS
PB10	PB11	--	40	--	--	
PB11	SB10	5	--	--	--	2 RUNS
PB11	CB1	--	10	--	--	
CV1	CPB1	25	--	50	--	
CPB1	CB1	5	--	--	--	
SUBTOTAL:		100	260	50	730	

CONDIT RIGID NONMETALLIC - 76th & LAYTON

FROM	TO	652.0225	652.0235	652.0605	652.0615	REMARKS
		SCHEDULE 40 2-INCH	SCHEDULE 40 3-INCH	SPECIAL 2-INCH	SPECIAL 3-INCH	
CB1	PB1	--	10	--	--	2 RUNS
PB1	SB1	5	--	--	--	2 RUNS
PB1	PB2	--	70	--	--	
PB2	SB2	5	--	--	--	
PB2	PB3	--	--	--	80	
PB3	SB3	5	--	--	--	2 RUNS
PB3	PB4	--	--	--	110	
PB4	SB4	5	--	--	--	2 RUNS
PB4	PB5	--	80	--	--	
PB5	SB5	20	--	--	--	2 RUNS
PB5	PB6	--	--	--	110	
PB6	PB7	--	--	--	70	
PB7	SB6	15	--	--	--	
PB7	PB8	--	50	--	--	2 RUNS
PB8	SB7	10	--	--	--	2 RUNS
PB8	PB9	--	--	--	80	
PB9	SB8	5	--	--	--	2 RUNS
PB9	PB10	--	--	--	120	
PB10	SB9	10	--	--	--	2 RUNS
PB10	SB10	10	--	--	--	
PB10	PB11	--	110	--	--	2 RUNS
PB11	SB11	25	--	--	--	2 RUNS
PB11	PB12	--	--	--	110	
PB12	SB12	5	--	--	--	2 RUNS
PB12	PB13	--	--	--	80	
PB13	CB1	--	30	--	--	2 RUNS
CV2	CPB2	--	--	40	--	
CPB2	CB1	25	--	--	--	
CPB2	EXT1	75	--	--	--	
EXT2	CV3	10	--	--	--	
CV3	CV4	430	--	--	--	
SUBTOTAL:		660	350	40	760	
TOTAL		760	610	90	1490	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

PULL BOXES - 76TH & EDGERTON					
NO.	LOCATION		653.0140	653.0145	SPV.0060.09
			PULL BOXES STEEL	PULL BOXES STEEL	CIRCULAR COMMUNICATION VAULT
	STA.	OFFSET	24X42 - INCH EACH*	24X48 - INCH EACH*	36X42 - INCH EACH*
PB1			--	1	--
PB2			1	--	--
PB3			1	--	--
PB4			1	--	--
PB5			--	1	--
PB6			1	--	--
PB7			1	--	--
PB8			1	--	--
PB9			--	1	--
PB10			1	--	--
PB11			--	1	--
PB12			1	--	--
SUBTOTAL:			8	4	0

* FINAL LOCATION TO BE DETERMINED BY ENGINEER IN FIELD

PULL BOXES - 76TH & LAYTON					
NO.	LOCATION		653.0140	653.0145	SPV.0060.09
			PULL BOXES STEEL	PULL BOXES STEEL	CIRCULAR COMMUNICATION VAULT
	STA.	OFFSET	24X42 - INCH EACH*	24X48 - INCH EACH*	36X42 - INCH EACH*
PB1			--	1	--
PB2			1	--	--
PB3			--	1	--
PB4			1	--	--
PB5			1	--	--
PB6			--	1	--
PB7			1	--	--
PB8			1	--	--
PB9			--	1	--
PB10			1	--	--
PB11			--	--	--
PB12			--	1	--
PB13			--	1	--
CPB14			1	--	--
CV2			--	--	1
CV3			--	--	1
CV4			--	--	1
SUBTOTAL:			7	6	3
TOTAL:			15	10	3

* FINAL LOCATION TO BE DETERMINED BY ENGINEER IN FIELD

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

TRAFFIC SIGNAL BASES, STANDARDS, POLES, MAST ARMS - 76TH & EDGERTON

NO.	LOCATION*	654.0101	654.0110	654.0113	SPV.0060.01	657.0100	657.0425	657.0430	SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07
		CONCRETE	CONCRETE	CONCRETE	CONCRETE	PEDESTAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	POLES	POLES	POLES	MONOTUBE	MONOTUBE	MONOTUBE
		BASES	BASES	BASES	BASES	BASES	STANDARDS	STANDARDS	TYPE 9	TYPE 12	TYPE 12	ARMS	ARMS	ARMS
		TYPE 1	TYPE 10	TYPE 13	TYPE 10		ALUMINUM	ALUMINUM			MODIFIED	30-FT	55-FT	40-FT
					MODIFIED		15-FT	10-FT						MODIFIED
		EACH*	EACH*	EACH*	EACH*	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1		--	1	--	--	--	--	--	1	--	--	1	--	--
SB2		1	--	--	--	1	1	--	--	--	--	--	--	--
SB3		--	--	--	1	--	--	--	--	--	1	--	--	1
SB4		1	--	--	--	1	--	1	--	--	--	--	--	--
SB5		1	--	--	--	1	1	--	--	--	--	--	--	--
SB6		--	1	--	--	--	--	1	1	--	--	1	--	--
SB7		1	--	--	--	1	1	--	--	--	--	--	--	--
SB8		--	--	--	1	--	--	--	--	--	1	--	--	1
SB9		1	--	--	--	1	--	1	--	--	--	--	--	--
SB10		1	--	--	--	1	1	--	--	--	--	--	--	--
SUBTOTAL:		6	2	0	2	6	4	3	2	0	2	2	0	2

* FINAL LOCATION TO BE DETERMINED BY ENGINEER IN THE FIELD

** FOR INFORMATION ONLY

TRAFFIC SIGNAL BASES, STANDARDS, POLES, MAST ARMS - 76TH & LAYTON

NO.	LOCATION*	654.0101	654.0110	654.0113	SPV.0060.01	657.0100	657.0425	657.0430	SPV.0060.02	SPV.0060.03	SPV.0060.04	SPV.0060.05	SPV.0060.06	SPV.0060.07
		CONCRETE	CONCRETE	CONCRETE	CONCRETE	PEDESTAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	POLES	POLES	POLES	MONOTUBE	MONOTUBE	MONOTUBE
		BASES	BASES	BASES	BASES	BASES	STANDARDS	STANDARDS	TYPE 9	TYPE 12	TYPE 12	ARMS	ARMS	ARMS
		TYPE 1	TYPE 10	TYPE 13	TYPE 10		ALUMINUM	ALUMINUM			MODIFIED	30-FT	55-FT	40-FT
					MODIFIED		15-FT	10-FT						MODIFIED
		EACH*	EACH*	EACH*	EACH*	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1		--	--	--	1	--	--	--	--	--	1	--	--	1
SB2		1	--	--	--	1	1	--	--	--	--	--	--	--
SB3		1	--	--	--	1	1	--	--	--	--	--	--	--
SB4		--	--	1	--	--	--	--	--	1	--	--	1	--
SB5		1	--	--	--	1	1	--	--	--	--	--	--	--
SB6		--	--	1	--	--	--	--	--	1	--	--	1	--
SB7		1	--	--	--	1	1	--	--	--	--	--	--	--
SB8		1	--	--	--	1	1	--	--	--	--	--	--	--
SB9		--	--	--	1	--	--	--	--	--	1	--	--	1
SB10		1	--	--	--	1	--	1	--	--	--	--	--	--
SB11		1	--	--	--	1	1	--	--	--	--	--	--	--
SB12		1	--	--	--	1	1	--	--	--	--	--	--	--
SUBTOTAL:		8	0	2	2	8	7	1	0	2	2	0	2	2
TOTAL:		14	2	2	4	14	11	4	2	2	4	2	2	4

* FINAL LOCATION TO BE DETERMINED BY ENGINEER IN THE FIELD

** FOR INFORMATION ONLY

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

3

TRAFFIC SIGNAL FACES AND EQUIPMENT - 76th & EDGERTON

NO.	658.0110	658.0115	658.0120	658.0215	658.0220	658.0225	658.0416	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625	658.0635
	TRAFFIC	TRAFFIC	TRAFFIC	BACKPLATES	BACKPLATES	BACKPLATES	PEDESTRIAN	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULE
	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	RED	YELLOW	GREEN	RED	YELLOW	GREEN	PEDESTRIAN
	3-12 INCH	4-12 INCH	5-12 INCH	3-12	4-12	5-12		BALL	BALL	BALL	ARROW	ARROW	ARROW	COUNTDOWN TIMER
	VERTICAL	VERTICAL	VERTICAL				16-INCH	12-INCH	12-INCH	12-INCH	12-INCH	12-INCH	12-INCH	16-INCH
	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1	2	--	--	2	--	--	1	2	2	2	--	--	--	1
SB2	1	1	--	1	1	--	1	1	1	1	1	2	1	1
SB3	3	1	--	3	1	--	--	3	3	3	1	2	1	--
SB4	--	--	--	--	--	--	1	--	--	--	--	--	--	1
SB5	1	1	--	1	1	--	1	1	1	1	1	2	1	1
SB6	1	1	1	1	1	1	1	1	1	1	1	3	2	1
SB7	1	1	--	1	1	--	1	1	1	1	1	2	1	1
SB8	3	1	--	3	1	--	--	3	3	3	1	2	1	--
SB9	--	--	--	--	--	--	1	--	--	--	--	--	--	1
SB10	--	1	1	--	1	1	1	1	1	1	1	3	2	1
SUBTOTAL:	12	7	2	12	7	2	8	13	13	13	7	16	9	8

TRAFFIC SIGNAL FACES AND EQUIPMENT - 76th & LAYTON

NO.	658.0110	658.0115	658.0120	658.0215	658.0220	658.0225	658.0416	658.0600	658.0605	658.0610	658.0615	658.0620	658.0625	658.0635
	TRAFFIC	TRAFFIC	TRAFFIC	BACKPLATES	BACKPLATES	BACKPLATES	PEDESTRIAN	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULES	LED MODULE
	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	SIGNAL FACE	RED	YELLOW	GREEN	RED	YELLOW	GREEN	PEDESTRIAN
	3-12 INCH	4-12 INCH	5-12 INCH	3-12	4-12	5-12		BALL	BALL	BALL	ARROW	ARROW	ARROW	COUNTDOWN TIMER
	VERTICAL	VERTICAL	VERTICAL				16-INCH	12-INCH	12-INCH	12-INCH	12-INCH	12-INCH	12-INCH	16-INCH
	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1	2	--	1	2	--	1	1	3	3	3	--	1	1	1
SB2	2	1	--	2	1	--	1	1	1	1	1	1	1	1
SB3	1	--	--	1	--	--	--	--	--	--	1	1	1	--
SB4	4	--	--	4	--	--	1	3	3	3	1	1	1	1
SB5	--	1	1	--	1	1	1	1	1	1	1	3	2	1
SB6	2	1	1	2	1	1	1	3	3	3	1	3	2	1
SB7	2	--	--	2	--	--	1	1	1	1	1	1	1	1
SB8	1	--	--	1	--	--	--	--	--	--	1	1	1	--
SB9	3	--	--	3	--	--	--	3	3	3	--	--	--	--
SB10	--	--	--	--	--	--	1	--	--	--	--	--	--	1
SB11	1	1	--	1	1	--	1	1	1	1	1	3	2	1
SB12	--	1	--	--	1	--	--	--	--	--	1	2	1	--
SUBTOTAL:	18	5	3	18	5	3	8	16	16	16	9	17	13	8
TOTAL:	30	12	5	30	12	5	16	29	29	29	16	33	22	16

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

PROJECT NO: 2160-15-70	HWY: CTH U	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET	E
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ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING - 76TH & EDGERTON										
			655.0210	655.0230	655.0240	655.0260	655.0270	655.0515	655.0515	655.0900
			CABLE	CABLE	CABLE	CABLE	CABLE	ELECTRICAL WIRE	ELECTRICAL WIRE	TRAFFIC
			TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC SIGNALS	TRAFFIC SIGNALS	SIGNAL
			SIGNAL	SIGNAL	SIGNAL	SIGNAL	SIGNAL	(NEUTRAL)	(EQUIPMENT	EVP
			3-14 AWG	5-14 AWG	7-14 AWG	12-14 AWG	15-14 AWG	10 AWG	GROUNDING)	DETECTOR
								WHITE	GREEN	CABLE
FROM	THROUGH	TO	LF	LF	LF	LF	LF	LF	LF	LF
CB1		SB1	230	--	--	200	--	--	--	230
CB1		SB2	--	--	--	--	270	--	--	--
CB1		SB3	425	--	--	390	--	--	--	425
CB1		SB4	--	--	525	--	--	--	--	--
CB1		SB5	--	--	--	--	515	--	--	--
CB1		SB6	400	--	--	--	370	--	--	400
CB1		SB7	--	--	--	--	300	--	--	--
CB1		SB8	155	--	--	160	--	--	--	155
CB1		SB9	--	--	--	80	--	--	--	--
CB1		SB10	--	--	--	30	--	--	--	--
CB1		SB1	--	--	--	--	--	200	200	--
SB1		SB2	--	--	--	--	--	105	105	--
SB2		SB3	--	--	--	--	--	150	150	--
SB3		SB4	--	--	--	--	--	175	175	--
SB4		SB5	--	--	--	--	--	30	30	--
SB5		SB6	--	--	--	--	--	170	170	--
SB6		SB7	--	--	--	--	--	100	100	--
SB7		SB8	--	--	--	--	--	145	145	--
SB8		SB9	--	--	--	--	--	95	95	--
SB9		SB10	--	--	--	--	--	75	75	--
SB10		CB1	--	--	--	--	--	30	30	--
PB2		SB1	--	--	--	--	--	--	20	--
PB4		SB2	--	--	--	--	--	--	20	--
PB4		SB3	--	--	--	--	--	--	20	--
PB5		SB4	--	--	--	--	--	--	20	--
PB6		SB5	--	--	--	--	--	--	20	--
PB7		SB6	--	--	--	--	--	--	20	--
PB8		SB7	--	--	--	--	--	--	20	--
PB9		SB8	--	--	--	--	--	--	20	--
PB10		SB9	--	--	--	--	--	--	20	--
PB11		SB10	--	--	--	--	--	--	20	--
BASE TO SIGNAL HEAD CABLING				390	340	--	--	--	--	--
UNDISTRIBUTED			25	10	20	5	55	25	25	70
SUBTOTAL:			1235	400	885	865	1510	1300	1500	1280
INTERSECTION TOTAL:			1235	400	885	865	1510	2800		1280
			LF	LF	LF	LF	LF	LF		LF

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRING - 76TH & LAYTON										
			655.0210	655.0230	655.0240	655.0260	655.0270	655.0515	655.0515	655.0900
			CABLE	CABLE	CABLE	CABLE	CABLE	ELECTRICAL WIRE	ELECTRICAL WIRE	TRAFFIC
			TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC	TRAFFIC SIGNALS	TRAFFIC SIGNALS	SIGNAL
			SIGNAL	SIGNAL	SIGNAL	SIGNAL	SIGNAL	(NEUTRAL)	(EQUIPMENT	EVP
			3-14 AWG	5-14 AWG	7-14 AWG	12-14 AWG	15-14 AWG	10 AWG	GROUNDING)	DETECTOR
								WHITE	GREEN	CABLE
FROM	THROUGH	TO	LF	LF	LF	LF	LF	LF	LF	LF
CB1		SB1	60	--	--	30	--	--	--	60
CB1		SB2	--	--	--	--	100	--	--	--
CB1		SB3	--	--	185	--	--	--	--	--
CB1		SB4	350	--	--	--	300	--	--	350
CB1		SB5	--	--	--	--	400	--	--	--
CB1		SB6	635	--	--	--	585	--	--	635
CB1		SB7	--	--	--	--	580	--	--	--
CB1		SB8	--	--	495	--	--	--	--	--
CB1		SB9	400	--	370	--	--	--	--	400
CB1		SB10	--	--	370	--	--	--	--	--
CB1		SB11	--	--	--	--	270	--	--	--
CB1		SB12	--	--	130	--	--	--	--	--
CB1		SB1	--	--	--	--	--	30	30	--
SB1		SB2	--	--	--	--	--	100	100	--
SB2		SB3	--	--	--	--	--	110	110	--
SB3		SB4	--	--	--	--	--	140	140	--
SB4		SB5	--	--	--	--	--	120	120	--
SB5		SB6	--	--	--	--	--	235	235	--
SB6		SB7	--	--	--	--	--	95	95	--
SB7		SB8	--	--	--	--	--	120	120	--
SB8		SB9	--	--	--	--	--	160	160	--
SB9		SB10	--	--	--	--	--	30	30	--
SB10		SB11	--	--	--	--	--	160	160	--
SB11		SB12	--	--	--	--	--	160	160	--
SB12		CB1	--	--	--	--	--	130	130	--
PB1		SB1	--	--	--	--	--	--	20	--
PB2		SB2	--	--	--	--	--	--	20	--
PB3		SB3	--	--	--	--	--	--	20	--
PB4		SB4	--	--	--	--	--	--	20	--
PB5		SB5	--	--	--	--	--	--	30	--
PB7		SB6	--	--	--	--	--	--	30	--
PB8		SB7	--	--	--	--	--	--	20	--
PB9		SB8	--	--	--	--	--	--	20	--
PB10		SB9	--	--	--	--	--	--	20	--
PB11		SB10	--	--	--	--	--	--	20	--
PB12		SB11	--	--	--	--	--	--	40	--
PB13		SB12	--	--	--	--	--	--	20	--
BASE TO SIGNAL HEAD CABLING			--	390	340	--	--	--	--	--
UNDISTRIBUTED			20	10	25	5	55	10	30	75
SUBTOTAL:			1465	400	1915	35	2290	1600	1900	1520
INTERSECTION TOTAL:			1465	400	1915	35	2290	3500		1520
			LF	LF	LF	LF	LF	LF	LF	LF
TOTAL:			2700	800	2800	900	3800	6300		2800

PROJECT NO: 2160-15-70

HWY: CTH U

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

E

CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL			
LOCATION	BID ITEM	EACH	REMARKS
76th & Edgerton	654.0217	1	AT LOCATION OF EXISTING
76th & Layton	654.0217	1	AT LOCATION OF EXISTING

TRAFFIC SIGNAL CABINET 16-PHASE			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	SPV.0105.03	1	
76th & Layton	SPV.0105.04	1	

ELECTRICAL SERVICE METER BREAKER PEDESTAL			
LOCATION	BID ITEM	EACH	REMARKS
76th & Edgerton	656.0200.01	1	
76th & Layton	656.0200.02	1	

EMERGENCY VEHICLE PREEMPTION SYSTEM			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	SPV.0105.05	1	
76th & Layton	SPV.0105.06	1	

SIGNAL MOUNTING HARDWARE			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	658.5069.01	1	BLACK IN COLOR
76th & Layton	658.5069.02	1	BLACK IN COLOR

VEHICULAR VIDEO DETECTION SYSTEM			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	SPV.0105.07	1	4-CAMERA
76th & Layton	SPV.0105.08	1	4-CAMERA

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	661.0200.01	1	
76th & Layton	661.0200.02	1	

ACCESSIBLE PEDESTRIAN PUSH BUTTON SYSTEM			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	SPV.0105.09	1	8-BUTTONS
76th & Layton	SPV.0105.10	1	8-BUTTONS

REMOVE TRAFFIC SIGNAL EQUIPMENT			
LOCATION	BID ITEM	LS	REMARKS
76th & Edgerton	SPV.0105.01	1	
76th & Layton	SPV.0105.02	1	

UTILITY LINE OPENING			
LOCATION	BID ITEM	EACH	REMARKS
UNDISTRIBUTED	SPV.0060.08	8	

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

FIBER OPTIC SPLICE ENCLOSURE, SPLICE AND TERMINATION			
	678.0200 FIBER OPTIC SPLICE ENCLOSURE	678.0300 FIBER OPTIC SPLICE	678.0400 FIBER OPTIC TERMINATION
LOCATION	EACH	EACH	EACH
CB1 (EDGERTON)	--	--	4
CV1	--	4	--
CV2	1	76	--
CB1 (LAYTON)	--	--	4
CV4	1	24	--
ITEM TOTAL:	2	104	8

SAW CUTTING				
			690.0150 SAWING ASPHALT	690.0250 SAWING CONCRETE
LOCATION	STATION	- STATION	LF	LF
<u>STAGE 1</u>				
<u>LAYTON</u>				
MEDIAN	155+24	- 157+43	264	103
MEDIAN	158+55	- 163+31	--	1008
<u>EDGERTON</u>				
MEDIAN	396+73	- 396+87	302	--
SUBTOTAL			566	1111
<u>STAGE 2</u>				
<u>LAYTON</u>				
DWY	155+11	RT	58	46
DWY	155+95	RT	59	49
DWY	161+36	RT	--	97
DWY	162+46	RT	--	82
NW CORNER	157+46	LT	--	84
NE CORNER	158+58	LT	--	72
SW CORNER	157+40	RT	--	64
SE CORNER	158+58	RT	--	62
<u>EDGERTON</u>				
NW CORNER	396+74	LT	44	10
NE CORNER	396+78	RT	33	12
SW CORNER	395+96	LT	47	10
SE CORNER	395+96	RT	40	12
SUBTOTAL			281	600
UNDISTRIBUTED			53	39
TOTAL			900	1750

FIBER OPTIC COMMUNICATION SYSTEM INTEGRATION AND DOCUMENTATION		
	BID ITEM	LS
FIBER OPTIC COMMUNICATION SYSTEM INTEGRATION AND DOCUMENTATION	SPV.0105.11	1

FIBER OPTIC INTERCONNECT				
	SPV.0090.01	SPV.0090.02		
	FURNISH AND INSTALL 12SM/12MM FIBER OPTIC COMMUNICATIONS			
		TRACER WIRE		
FROM	TO	CABLE LF	12 AWG LF	REMARKS
CV1	CB1 (EDGERTON)	130	90	
CV2	CB1 (LAYTON)	170	120	
CV2	CV3	150	110	
CV3	CV4	490	450	
SUBTOTAL:		940	320	
ITEM TOTAL:		940	320	

VALVE ADJUSTMENTS				
				SPV.0060.11 ADJUSTING WATER VALVE BOXES
LOCATION				EACH
<u>LAYTON AVE</u>				
157+42	62.1'	RT		1
TOTAL				1

RESTORATION							
				625.0100	628.2006	629.0210	630.0140
				TOPSOIL	EROSION MAT URBAN	FERTILIZER	SEEDING MIXTURE
					CLASS 1 TYPE A	TYPE B	NO. 40
LOCATION	STATION	- STATION		SY	SY	CWT	LB
<u>W. LAYTON AVE</u>							
	154+86	- 157+43		14	14	0.01	0.3
	158+55	- 163+31		178	178	0.11	3.2
		-					
SUBTOTAL				192	192	0.12	4
<u>W. EDGERTON AVE</u>							
	14+23	- 14+42		81	81	0.01	0.2
	15+58	- 15+77		124	124	0.01	0.2
SUBTOTAL				205	205	0.02	0.4
UNDISTRIBUTED				53	53	0.06	1.1
TOTAL				450	450	0.20	5.0

ALL ITEMS ON THIS SHEET ARE CATEGORY 0010 ITEMS

CONVENTIONAL ABBREVIATIONS			
ACCESS POINT	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM
ACRES	AC	RIGHT-OF-WAY	R/W
AND OTHERS	ET AL	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.		
EASEMENT	EASE		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CONVENTIONAL SYMBOLS			
FOUND IRON PIPE/PIN	(1" UNLESS NOTED)	PROPOSED R/W LINE	
R/W MONUMENT	• (SET)	EXISTING H.E. LINE	
R/W STANDARD	Δ (SET)	PROPERTY LINE	
SIGN	ISIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT	•	SLOPE INTERCEPTS	
SECTION CORNER SYMBOL	•	CORPORATE LIMITS	
FEE (HATCH VARIES)	ZZZ	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT	ZZZ	NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT	ZZZ	NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	•	SECTION LINE	
PARCEL NUMBER	10	QUARTER LINE	
SIGN NUMBER (OFF PREMISE)	21	SIXTEENTH LINE	
BUILDING		EXISTING CENTERLINE	
		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

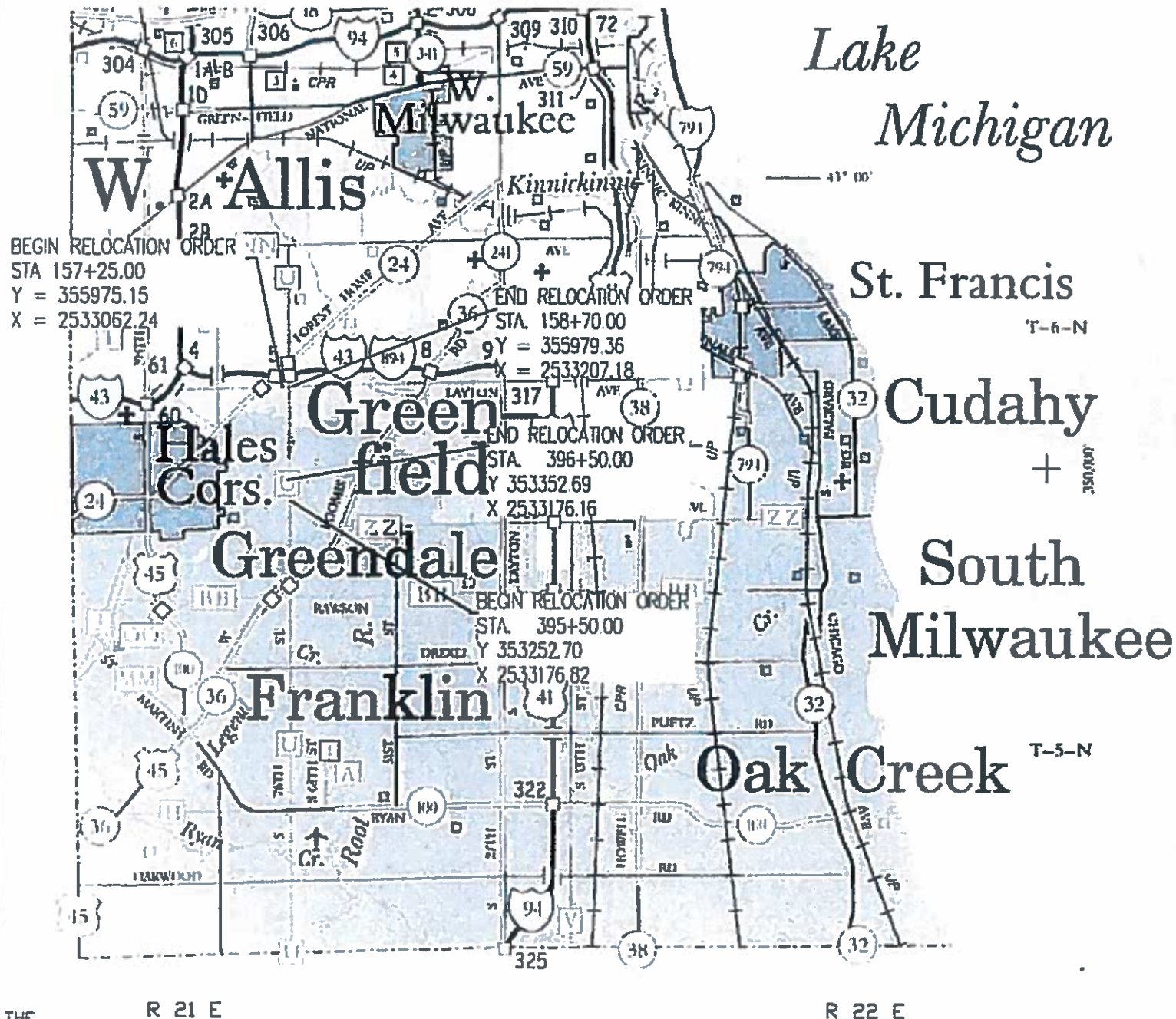
CONVENTIONAL UTILITY SYMBOLS			
WATER	—W—		
GAS	—G—		
TELEPHONE	—T—		
OVERHEAD	—OH—		
TRANSMISSION LINES	—E—		
ELECTRIC	—E—		
CABLE TELEVISION	—TV—		
FIBER OPTIC	—FO—		
SANITARY SEWER	—SAN—		
STORM SEWER	—SS—		
NON COMPENSABLE	•	COMPENSABLE	•
POWER POLE	•	TELEPHONE POLE	•
TELEPHONE PEDESTAL	•	TELEPHONE PEDESTAL	•
ELECTRIC TOWER	•	ELECTRIC TOWER	•

NOTES

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 27 (NORTH AMERICAN DATUM 1927). ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TRANSFER, BY MILWAUKEE COUNTY.

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.



LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 00277 MI



R/W PROJECT NUMBER 2160-15-00	SHEET NUMBER 4.01	TOTAL SHEETS 4
FEDERAL PROJECT NUMBER N/A		
PLAT OF RIGHT-OF-WAY REQUIRED FOR SOUTH 76TH STREET CTH U		
INTERSECTIONS WITH W. EDGERTON AVE., W. LAYTON AVE.		
CONSTRUCTION PROJECT NUMBER 2160-15-70		

RECEIVED
MILWAUKEE COUNTY CLERK
JOSEPH J. CZARNECKI
MILWAUKEE COUNTY CLERK
2016 MAY 17 A 11:47

REVISION DATE

MILWAUKEE COUNTY
DEPARTMENT OF TRANSPORTATION

APPROVED FOR HIGHWAY PURPOSES

DATE 5/17/16

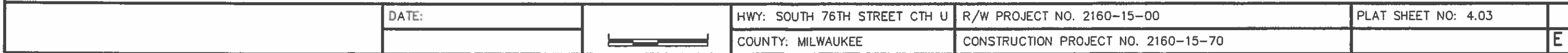
DIRECTOR OF TRANSPORTATION

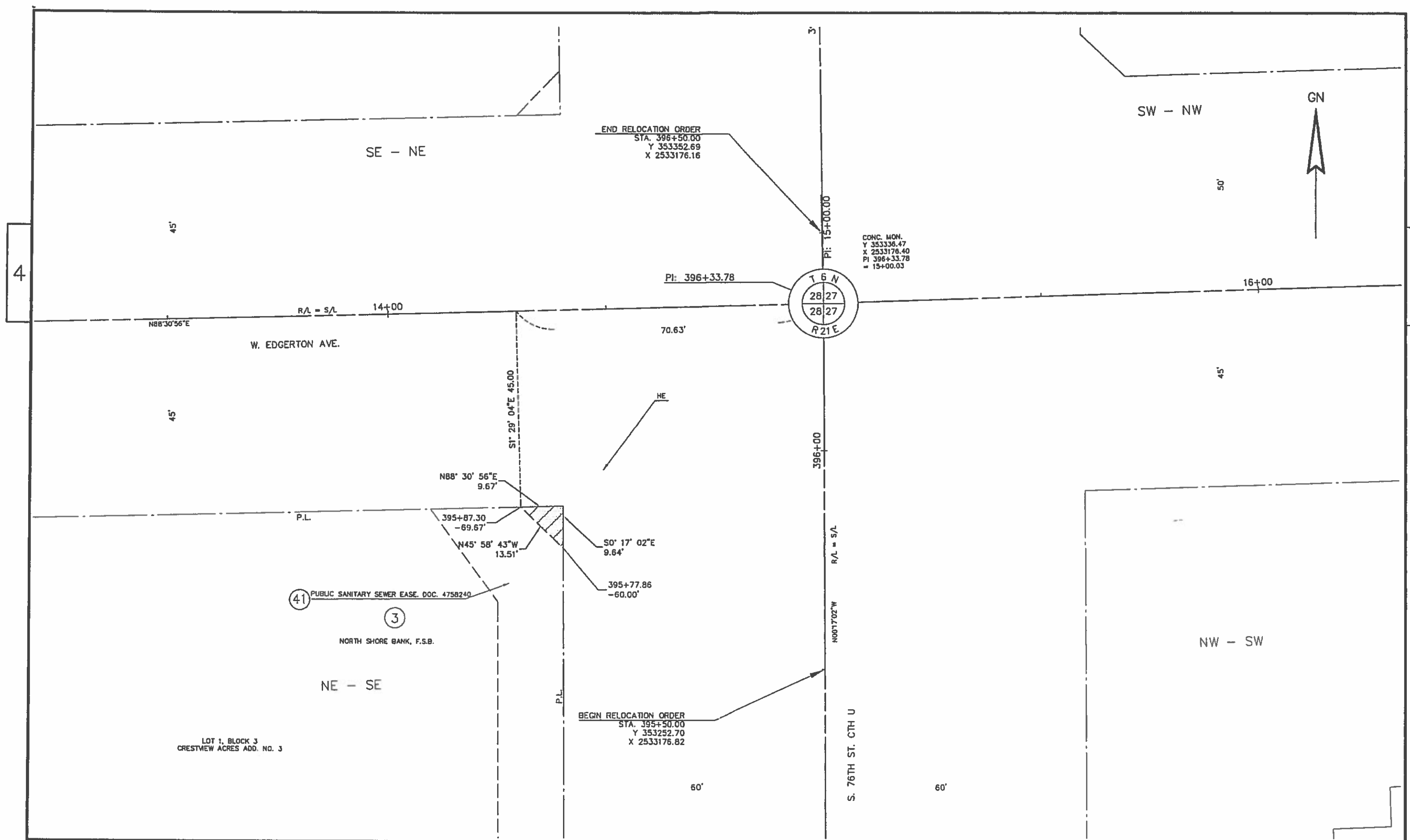
E

SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES 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 BEING ACQUIRED.

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL AREA ACRES	R/W AREA REQUIRED NEW EASEMENT ACRES
1	4.03	7601 WEST LAYTON AVENUE, LLC	HIGHWAY EASEMENT	0.3587	0.00189
2	4.03	LAYTON PARTNERS, LLC	HIGHWAY EASEMENT	2.1863	0.0007
3	4.04	NORTH SHORE BANK, F.S.B.	HIGHWAY EASEMENT	1.6879	0.0011
40	4.03	CITY OF GREENFIELD	RELEASE OF RIGHTS		
41	4.04	VILLAGE OF GREENDALE	RELEASE OF RIGHTS		
		DATE:	HWY: SOUTH 76TH STREET CTH U	R/W PROJECT NO. 2160-15-00	PLAT SHEET NO: 4.02
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NO. 2160-15--70	E

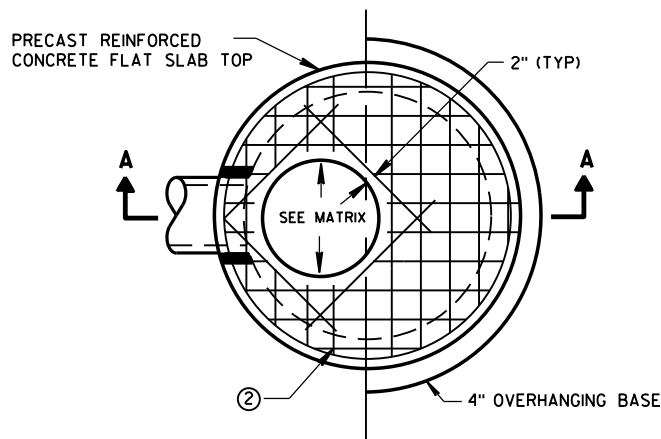




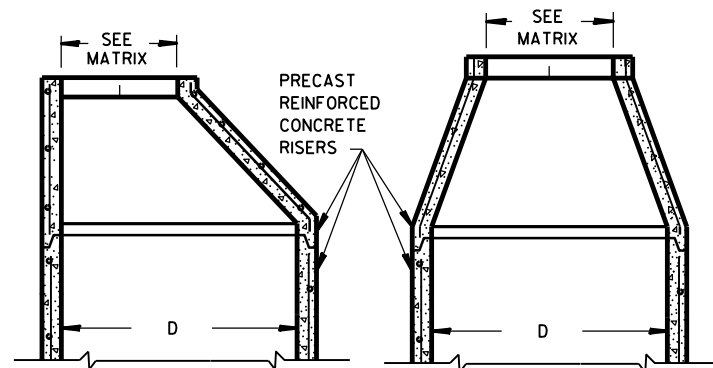
DATE:		HWY: SOUTH 76TH STREET CTH U		R/W PROJECT NO. 2160-15-00		PLAT SHEET NO: 4.04	
		COUNTY: MILWAUKEE		CONSTRUCTION PROJECT NO. 2160-15-70		E	

Standard Detail Drawing ListStandard Detail Drawing List

08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-09	CONCRETE BASE TYPE 10
09C12-08A	CONCRETE BASE TYPE 13
09C12-08B	CONCRETE BASE TYPE 13
09C13-02	CONCRETE BASE TYPE 10 & TYPE 13 EXTENSION
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E08-08A	TYPE 9 POLE 15' -30' MONOTUBE ARM
09E08-08C	TYPE 12 POLE 35' -55' MONOTUBE ARM
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIAN NOSE
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-04A	CONCRETE PAVEMENT JOINTING
13C18-04B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-04C	CONCRETE PAVEMENT JOINT TIES
13C18-04D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

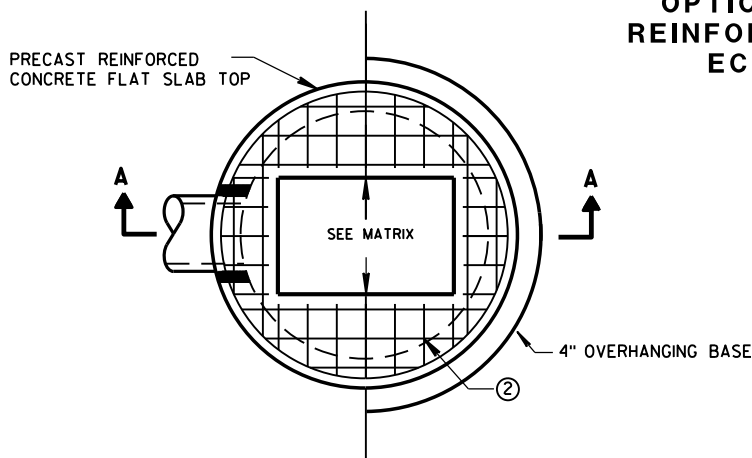


PLAN VIEW CIRCULAR OPENING

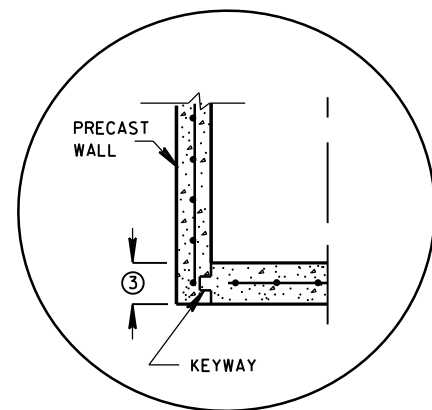


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

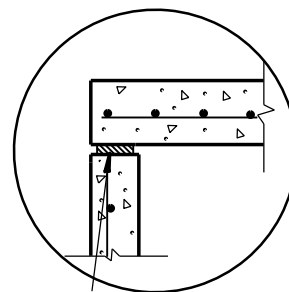
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



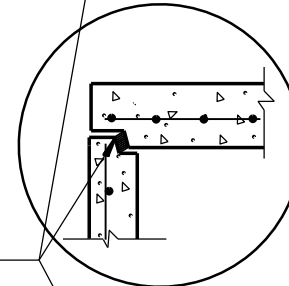
PLAN VIEW RECTANGULAR OPENING



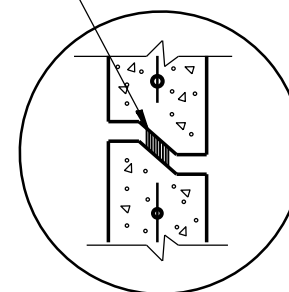
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



TOP WITH PLAIN END JOINT

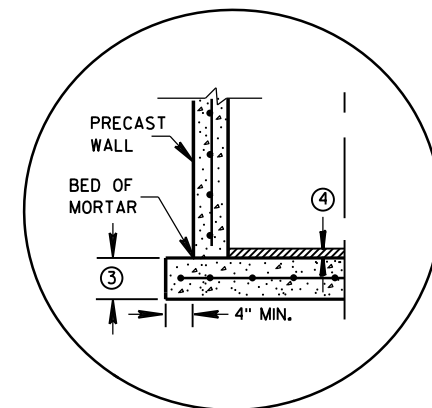


TOP WITH TONGUE AND GROOVE JOINT

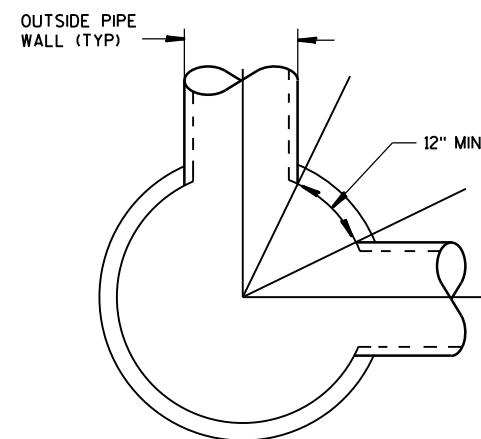


RISER WITH TONGUE AND GROOVE JOINT

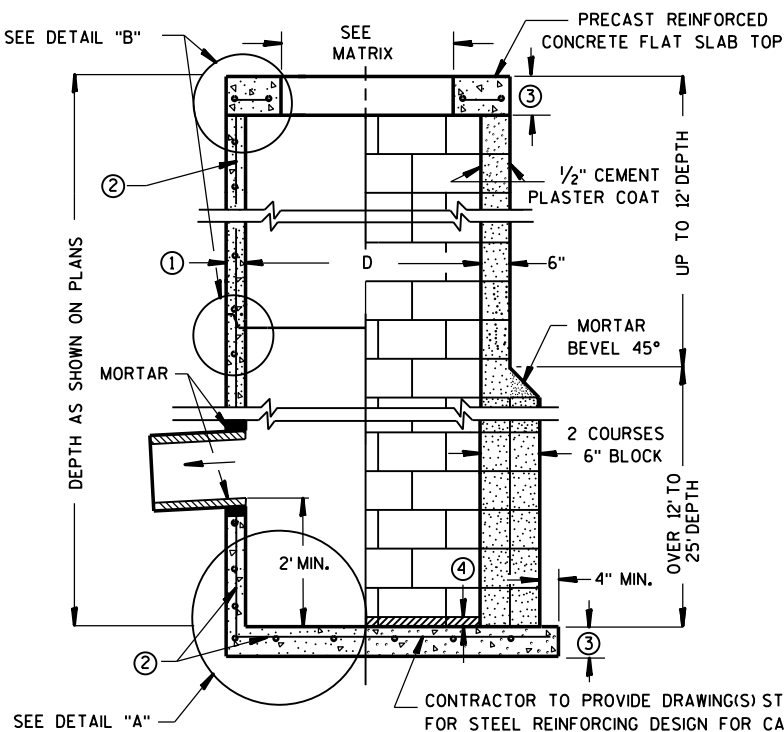
DETAIL "B"



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION



DETAIL "C"



SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

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

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

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

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

- MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.
- FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".
- 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER OPENING MATRIX

CATCH BASIN SIZE	INLET COVER TYPE OPENING SIZE (FT)	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
3-FT	2X2	X	X					X		X		
	2 DIA.				X							X
4-FT- 6-FT	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2 DIA.				X							X
	2X3						X					
	2.5X3					X						

PIPE MATRIX

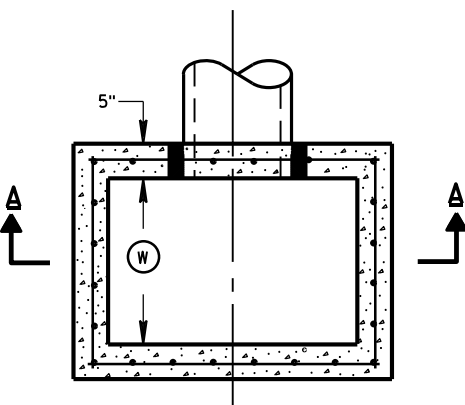
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER

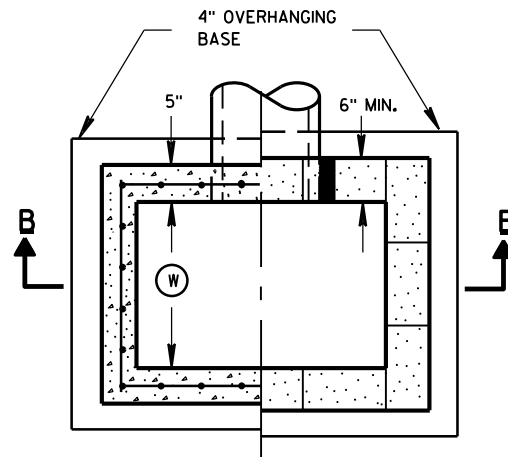
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

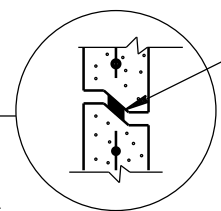
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER



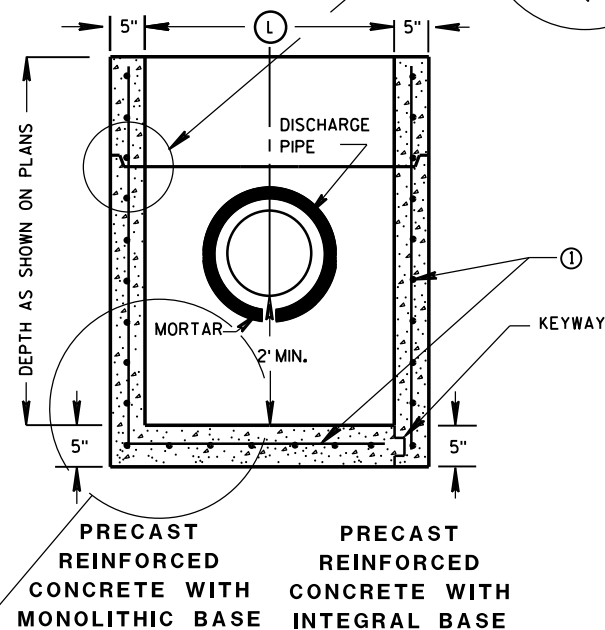
PLAN VIEW



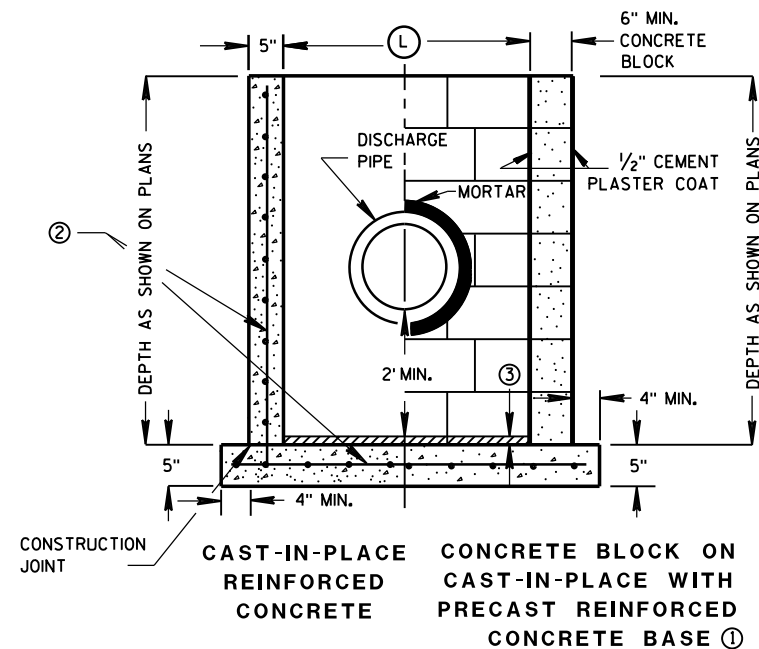
PLAN VIEW



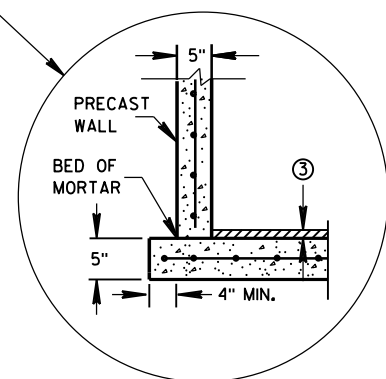
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

CATCH BASINS 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 CATCH BASIN 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 CATCH BASIN 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 GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

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

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

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

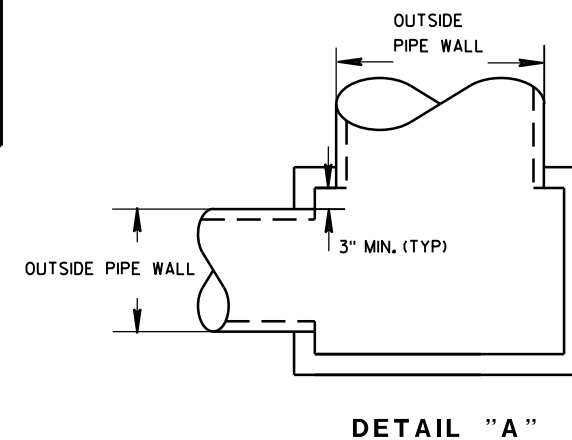
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	WIDTH (W) (FT)	LENGTH (L) (FT)	INLET COVER TYPE	F	ALL H'S
2X3-FT	2	3			X
2.5X3-FT	2.5	3		X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



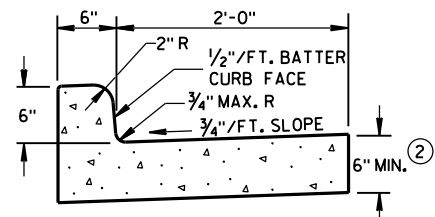
DETAIL "A"

CATCH BASINS 2X3-FT
AND 2.5X3-FT

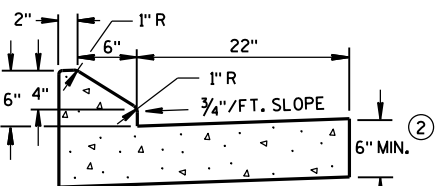
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

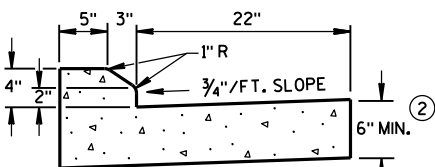
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TYPES A & D ①

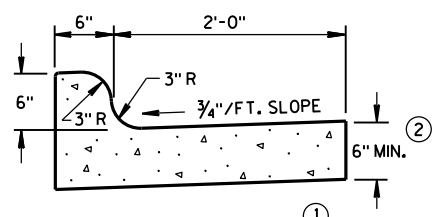


6" SLOPED CURB TYPES G & J ①



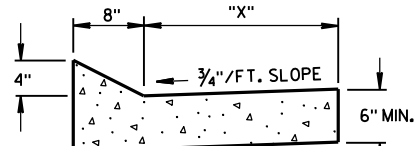
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



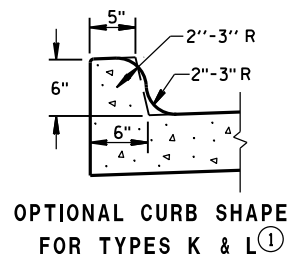
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

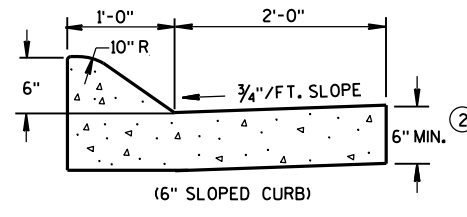


TYPES TBT & TBTt ①
CONCRETE CURB & GUTTER

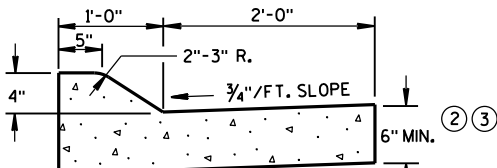
TBT & TBTt	"X"
30"	22"
36"	28"



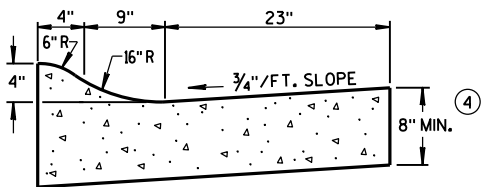
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)

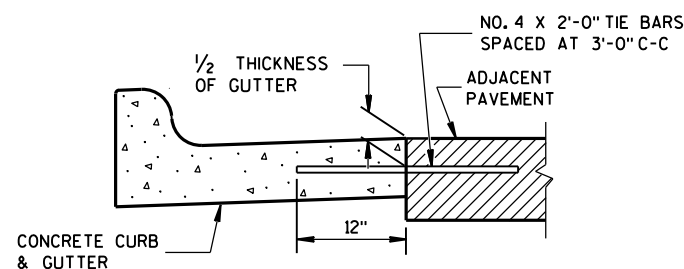


TYPES A & D ①

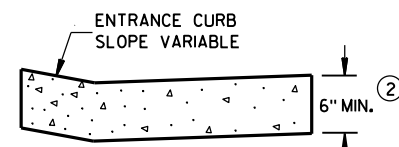


4" SLOPED CURB TYPES R & T ① ⑤

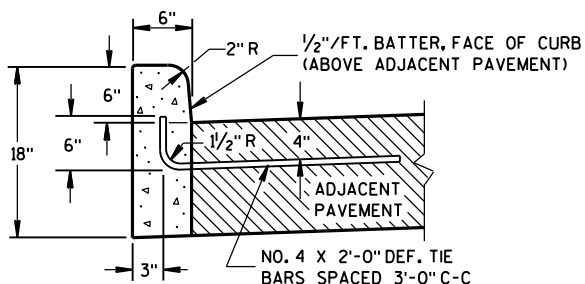
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

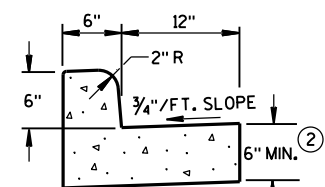


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

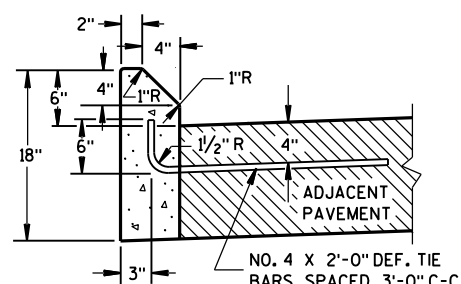


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

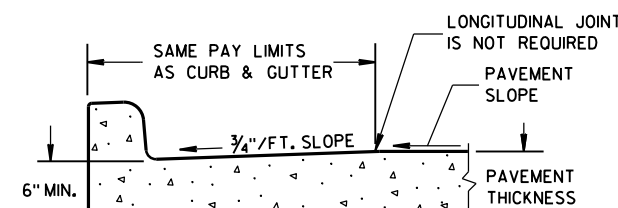
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

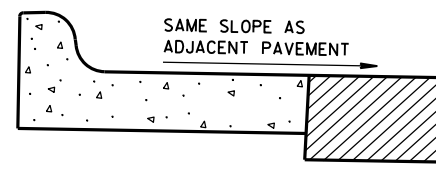
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

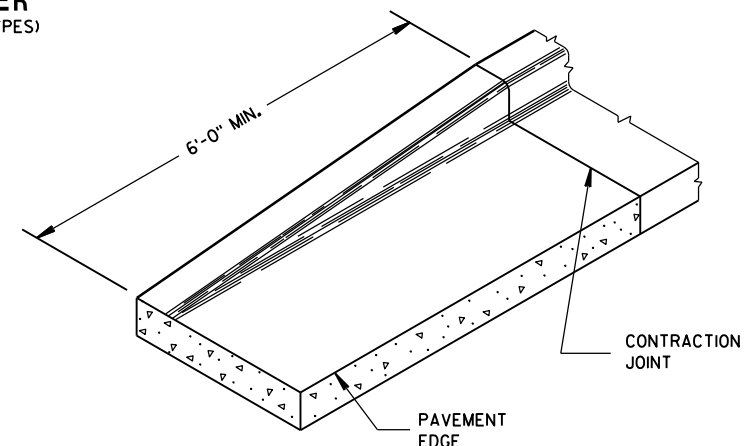
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTt.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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.



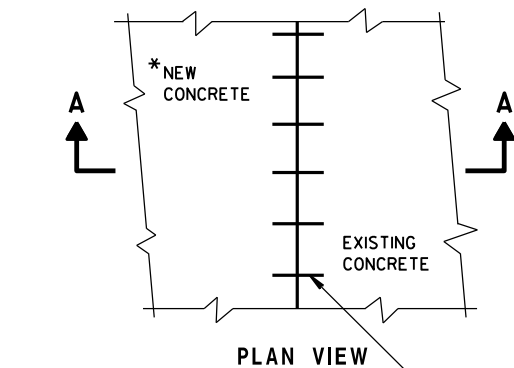
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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



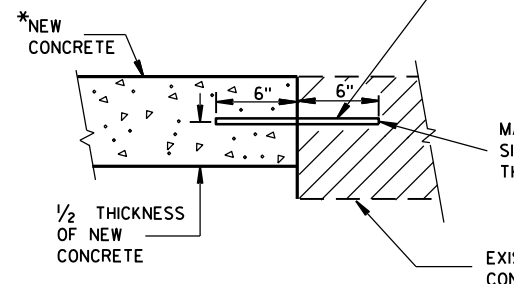
END SECTION CURB & GUTTER



PLAN VIEW

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

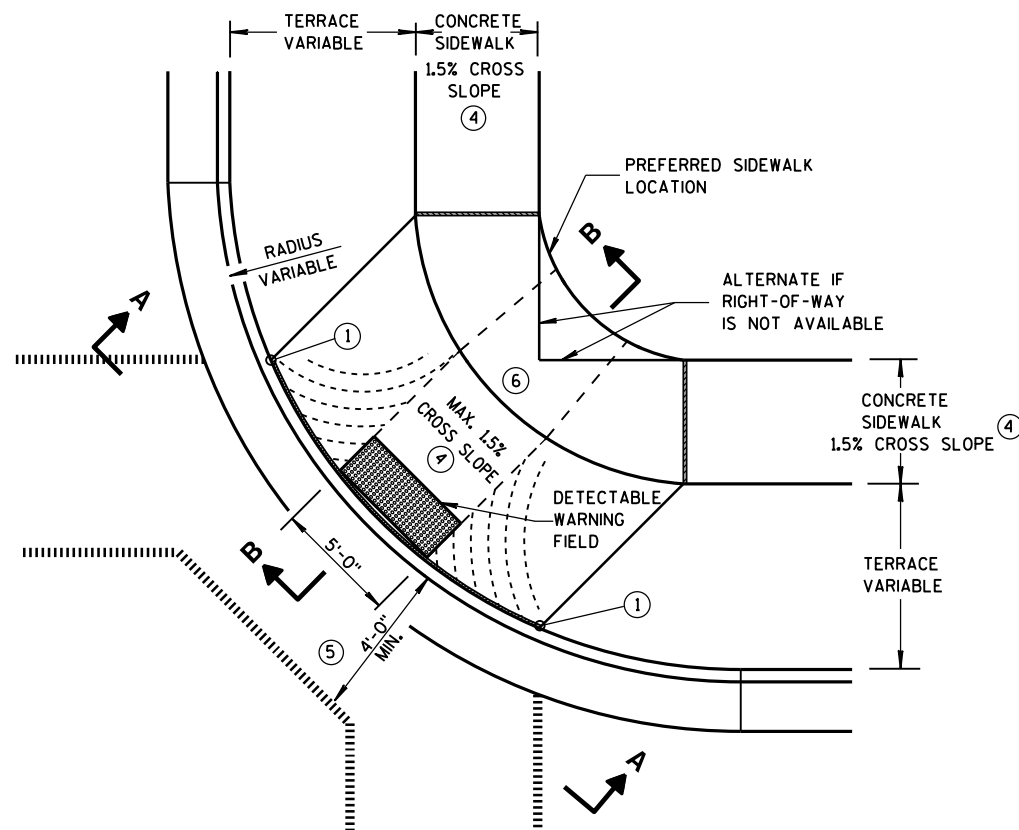
EXISTING CONCRETE

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

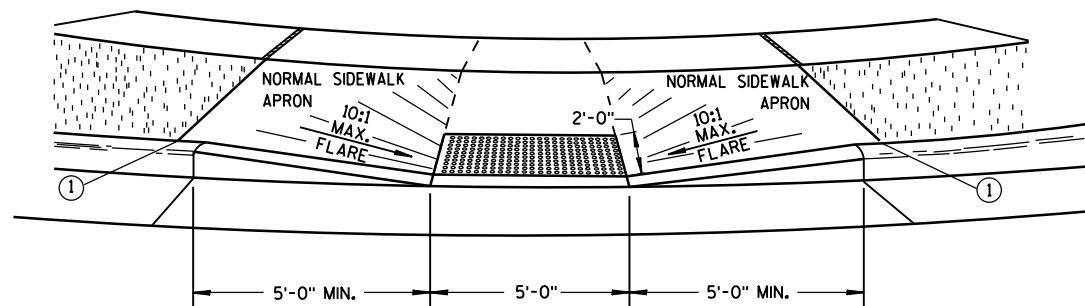
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

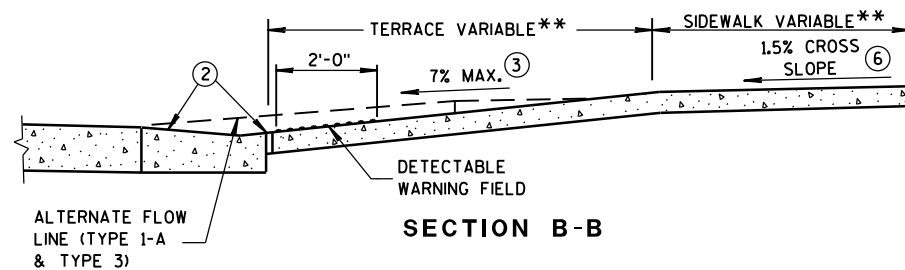


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

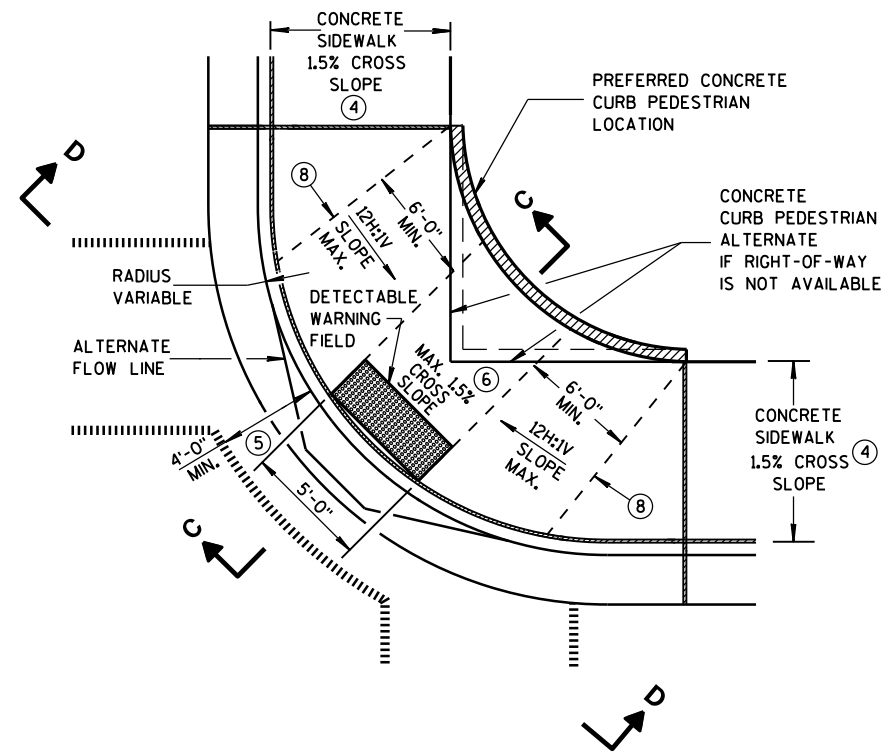


VIEW A-A

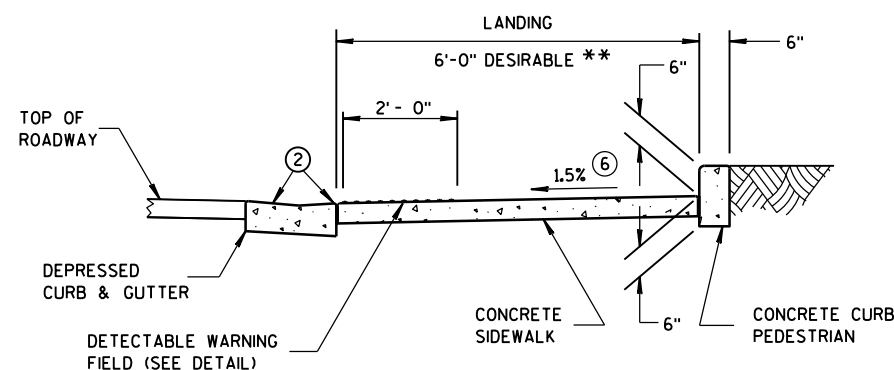
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



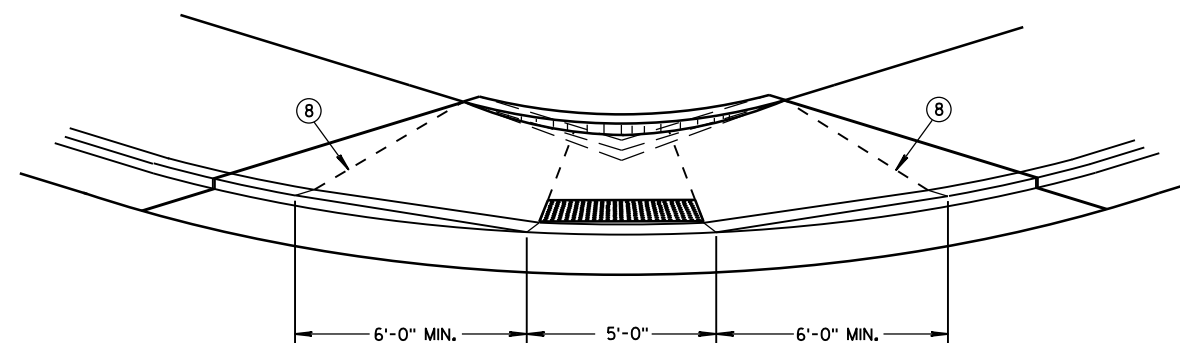
SECTION B-B



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



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

TYPE 1 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 LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

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

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

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

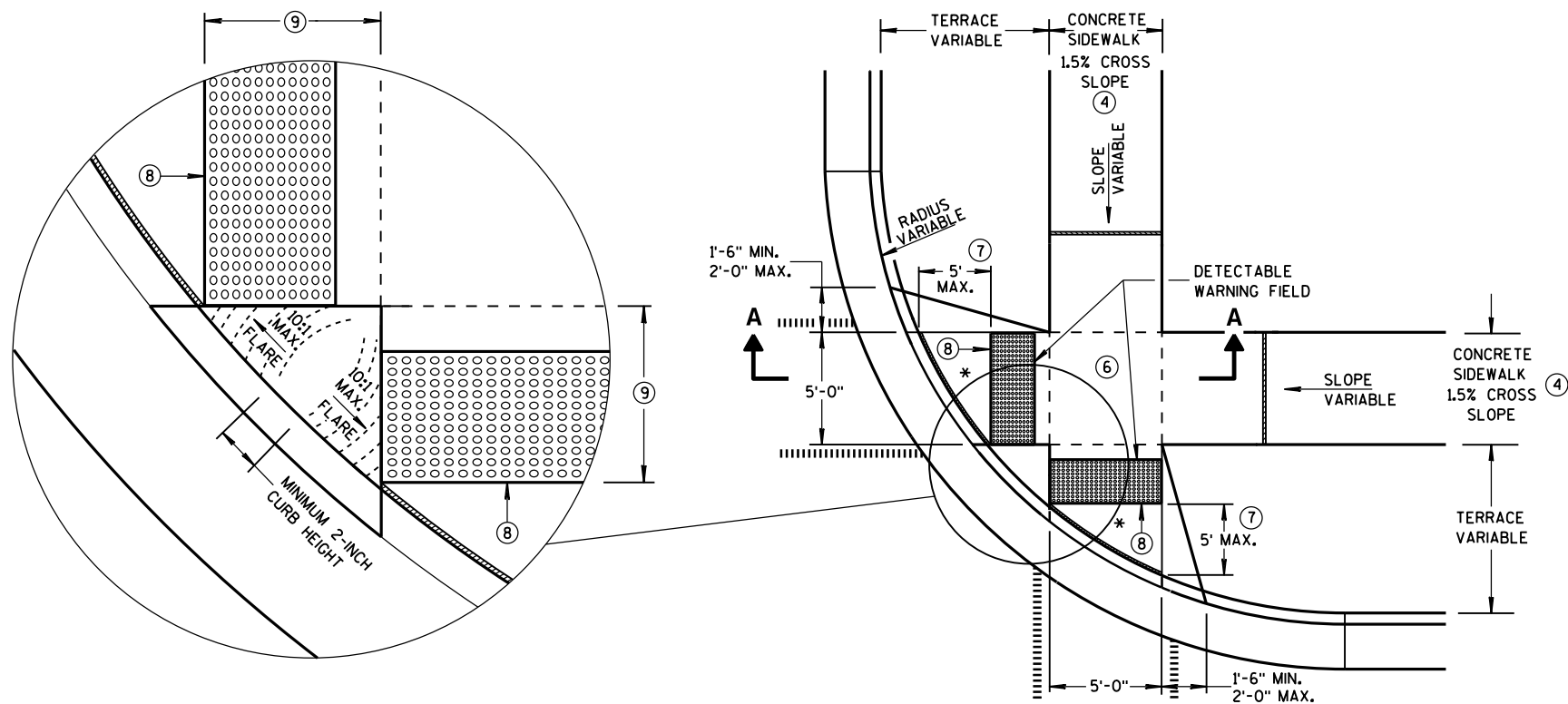
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (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.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

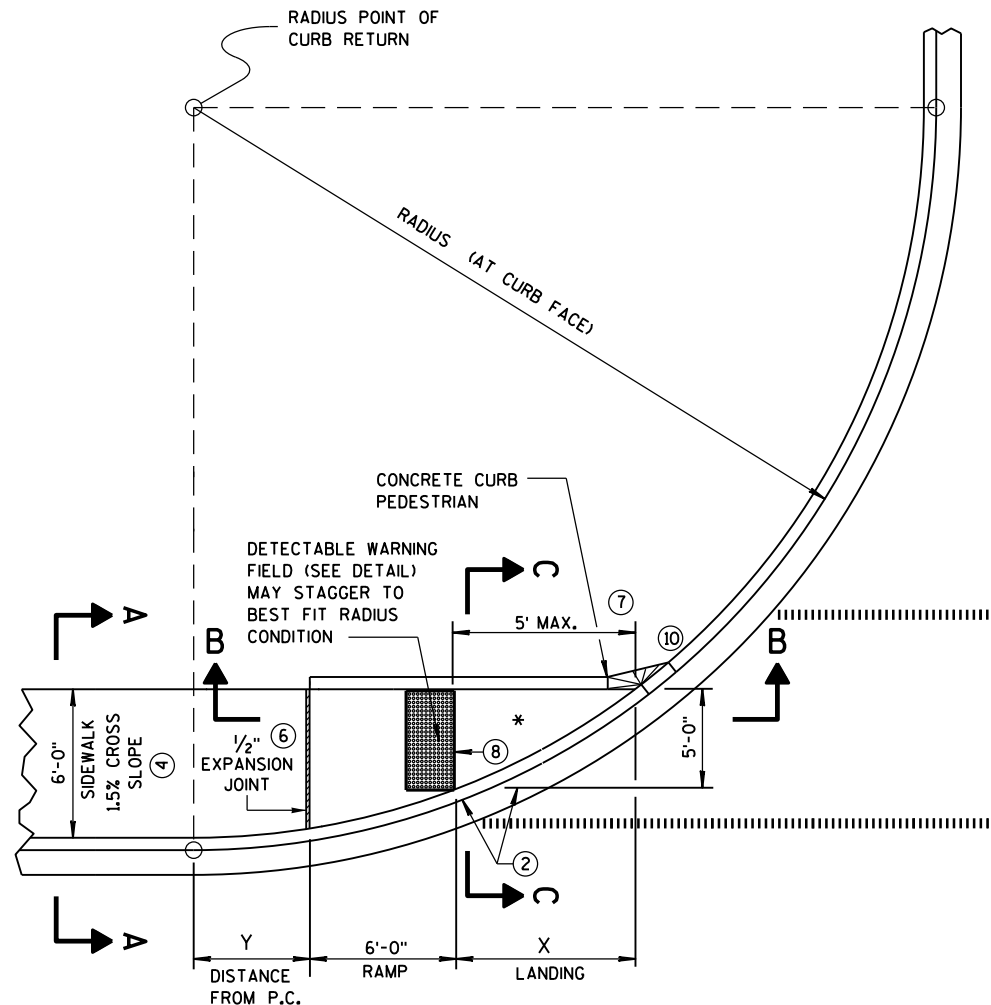
- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

**CURB RAMPS
TYPES 1 AND 1-A**

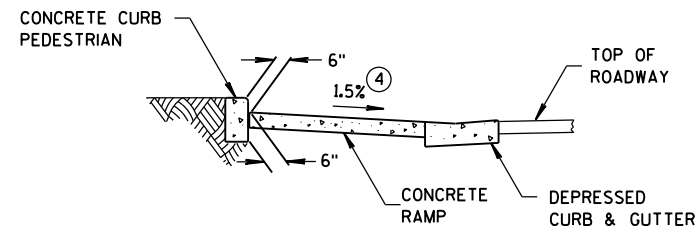
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



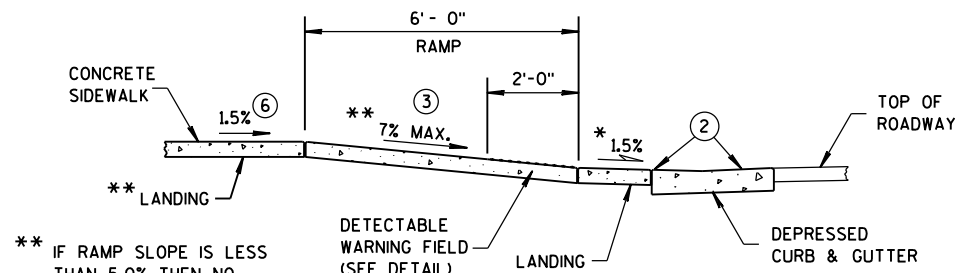
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



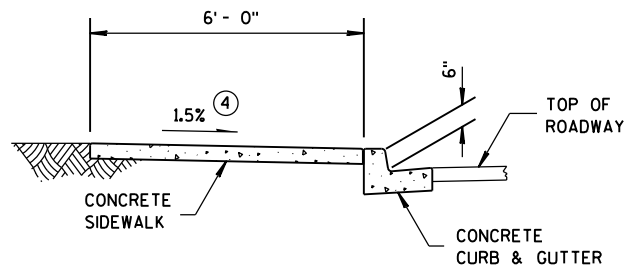
SECTION B-B FOR TYPE 4A

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

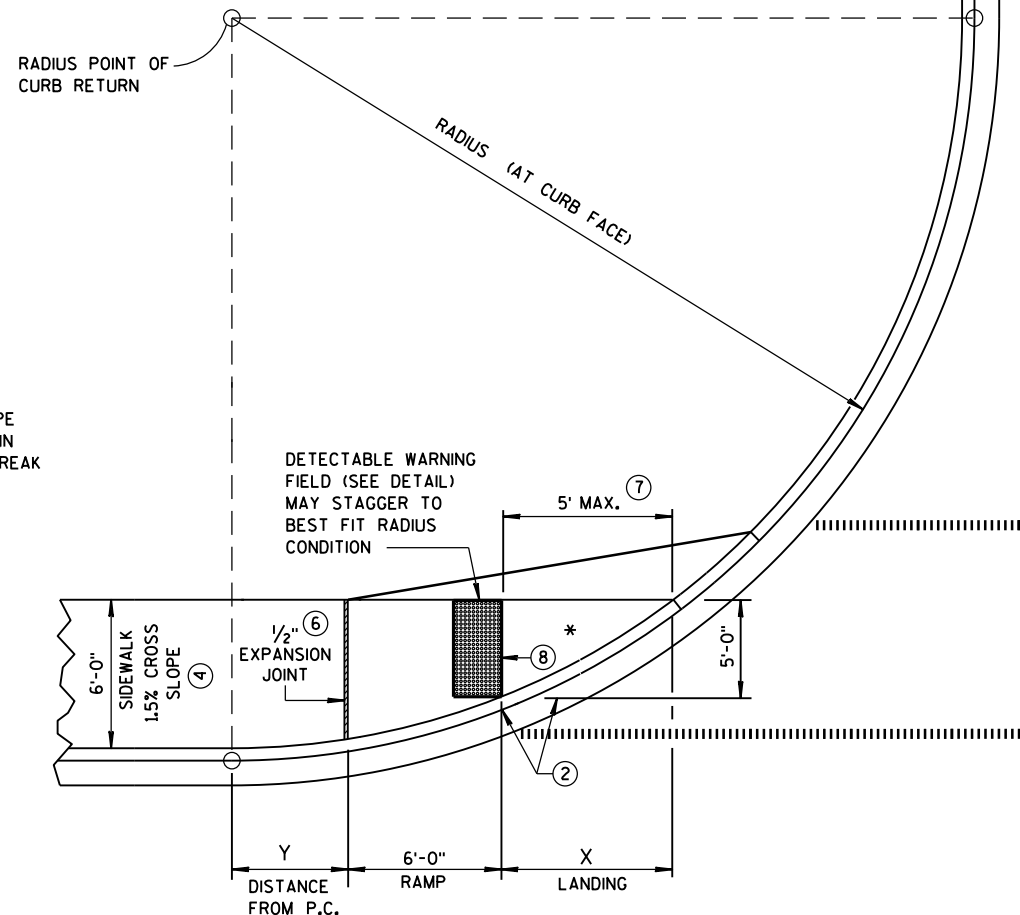
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2 3/4"	1'-7 1/2"
40 FEET	12'-1 1/4"	2'-10"
50 FEET	13'-8 3/4"	3'-10 3/4"
60 FEET	15'-2"	4'-10 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



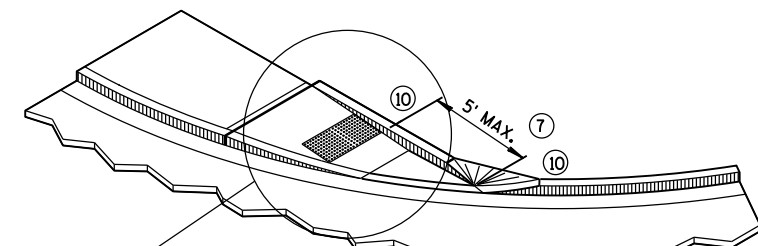
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

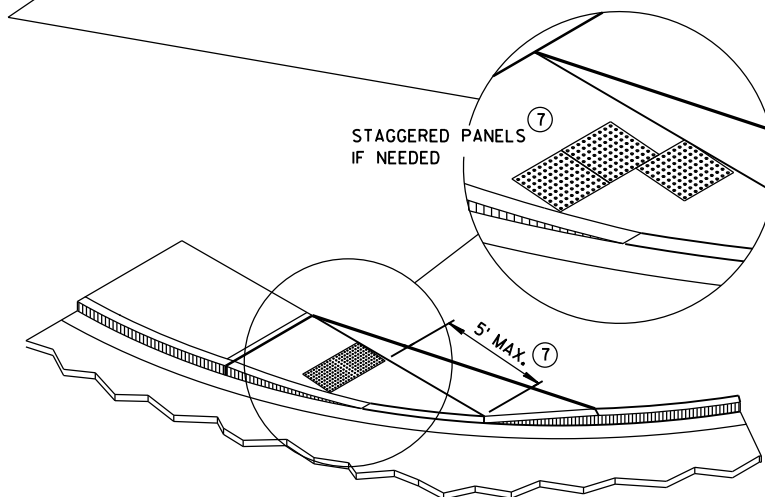
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 NOT EXCEED 7%.
- ABSOLUTE MAXIMUM 12H:1V (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 LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



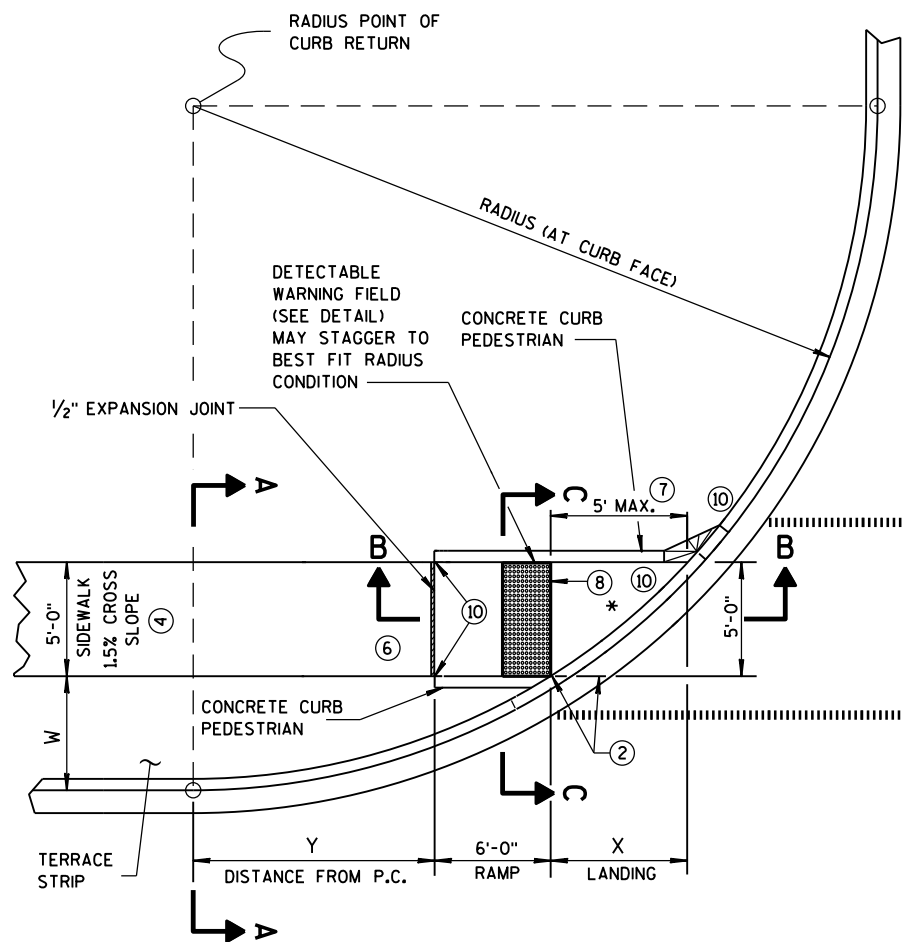
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

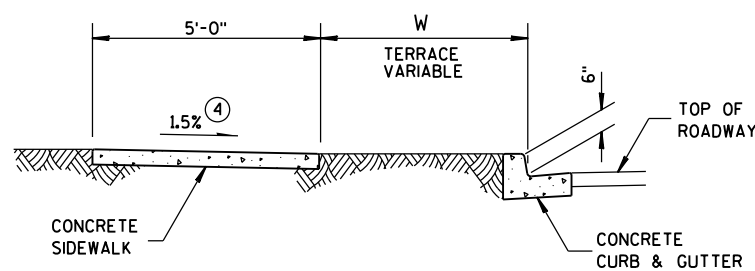
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

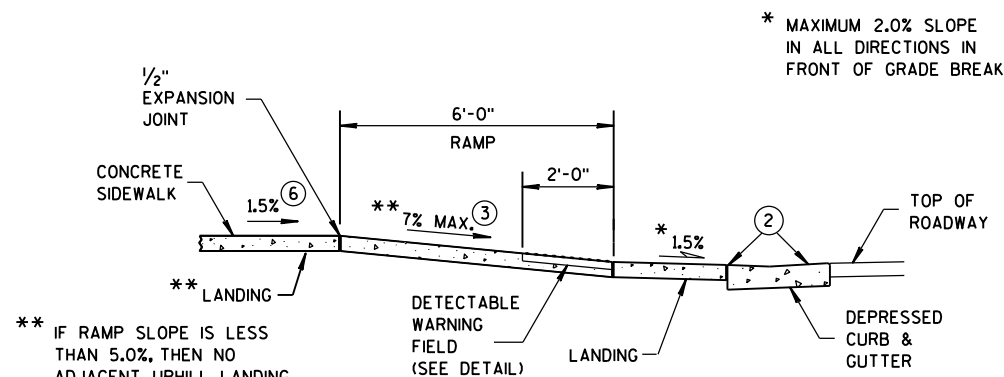
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4B
PLAN VIEW

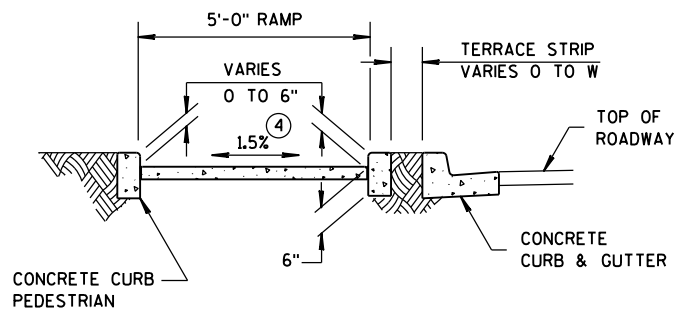


SECTION A-A FOR TYPE 4B

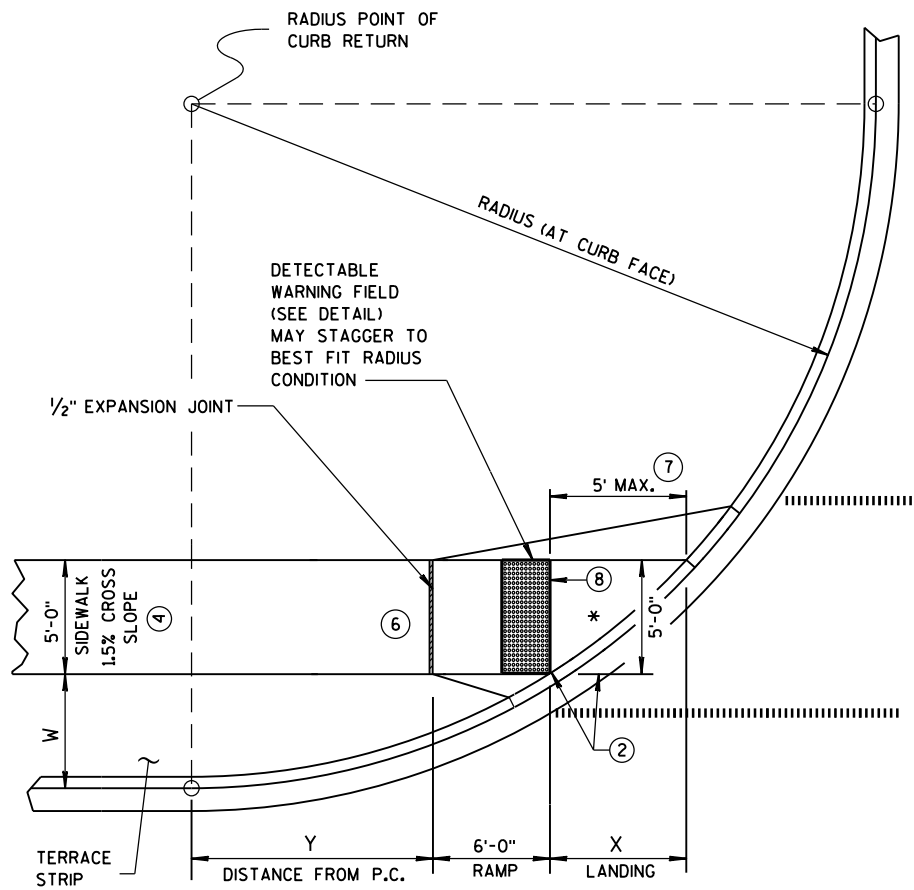


SECTION B-B FOR TYPE 4B

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



SECTION C-C FOR TYPE 4B



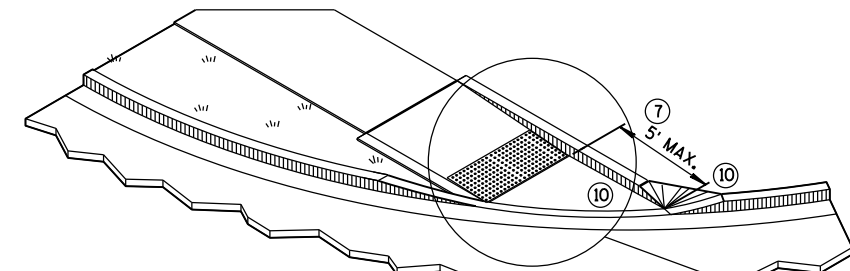
CURB RAMP TYPE 4B1
PLAN VIEW

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 3/4"	6'-5 1/2"	3'-8 3/4"	7'-6 3/4"	3'-3"	8'-6 1/4"
30 FEET	7'-9 1/4"	5'-10 1/2"	6'-9 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"
40 FEET	9'-4"	7'-10"	8'-2 3/4"	10'-3"	7'-4 3/4"	12'-3 3/4"	6'-8 1/2"	14'-1 1/4"	6'-1 3/4"	15'-8 1/2"
50 FEET	10'-8"	9'-6 1/2"	9'-5 1/2"	12'-3 1/4"	8'-6 1/2"	14'-7 1/2"	7'-9 3/4"	16'-8 1/4"	7'-2 1/2"	18'-6 1/4"
60 FEET	11'-10 1/4"	11'-0 3/4"	10'-6 1/2"	14'-1 1/4"	9'-6 1/2"	16'-8 1/2"	8'-9 1/4"	18'-11 3/4"	8'-1 1/2"	21'-0 1/2"

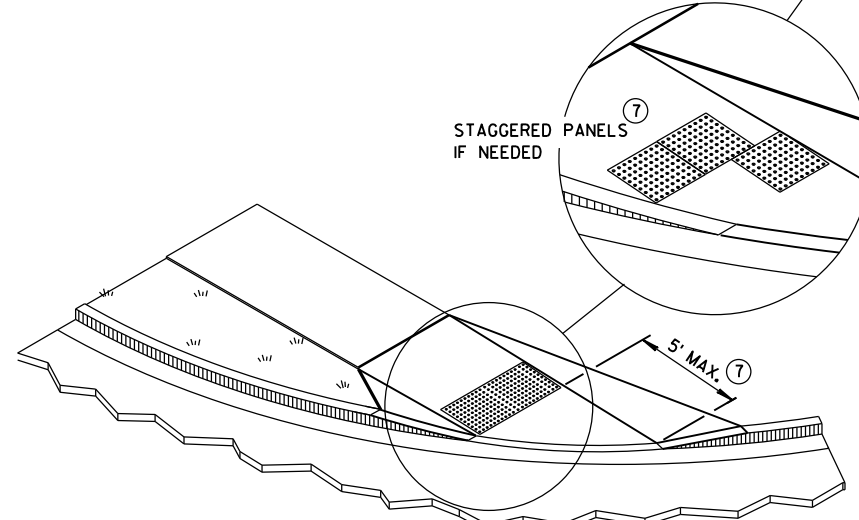
GENERAL NOTES

INTERMEDIATE RADII CAN BE INTERPOLATED

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. 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 NOT EXCEED 7%.
- ABSOLUTE MAXIMUM 12H:1V (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 LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



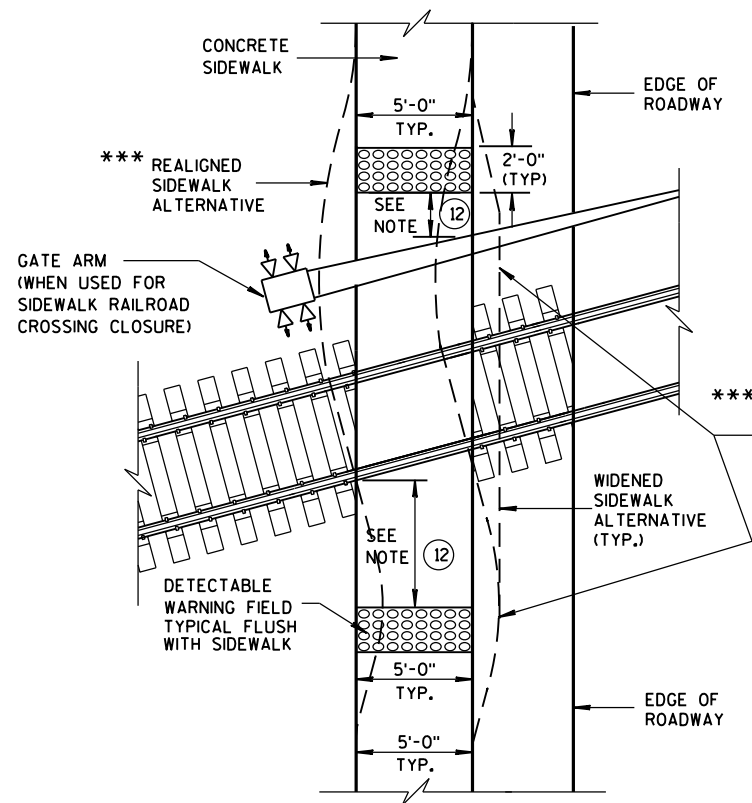
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

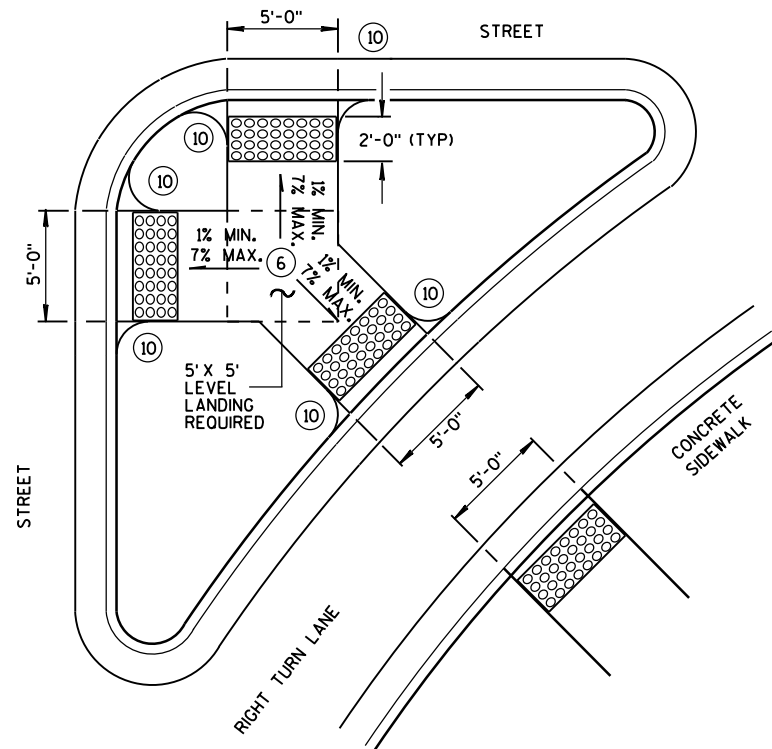
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

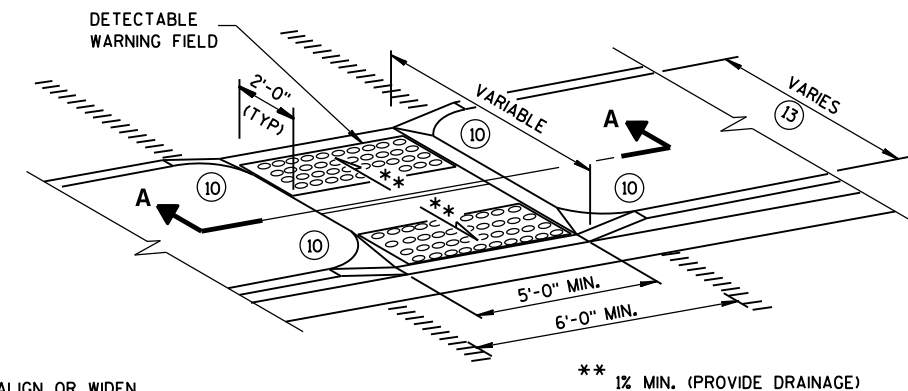


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

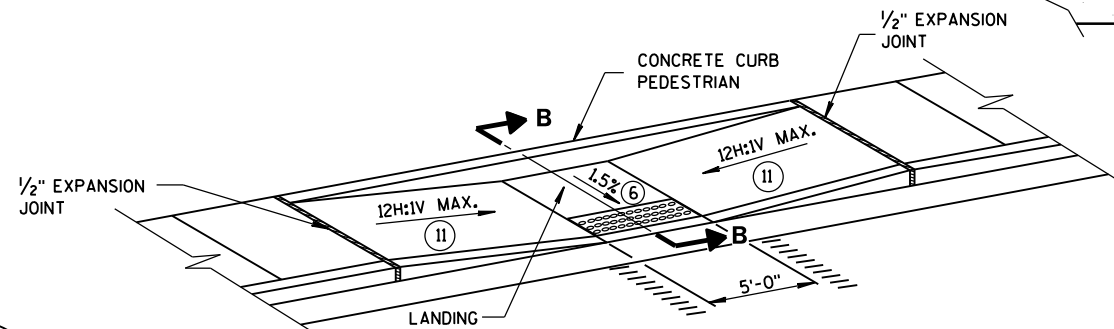
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



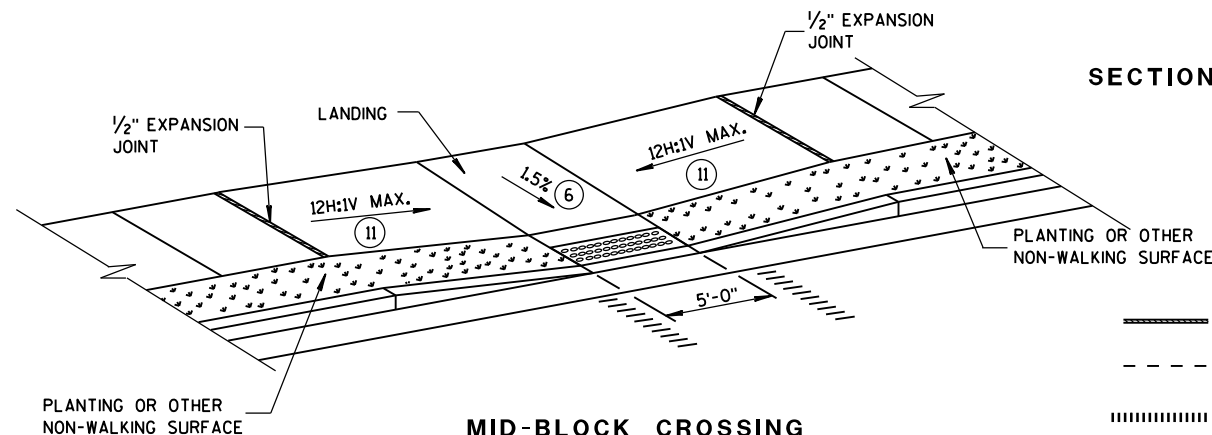
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

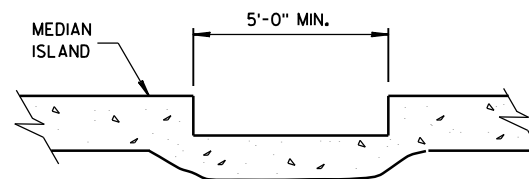


MID-BLOCK CROSSING
TYPE 7B

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

GENERAL NOTES

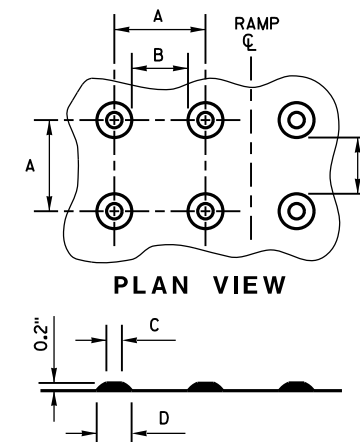
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE 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 NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 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 IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



SECTION A-A

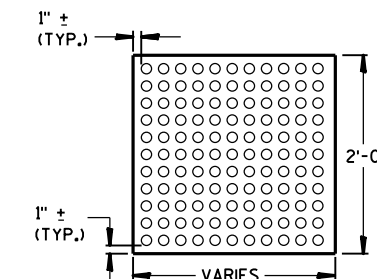
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



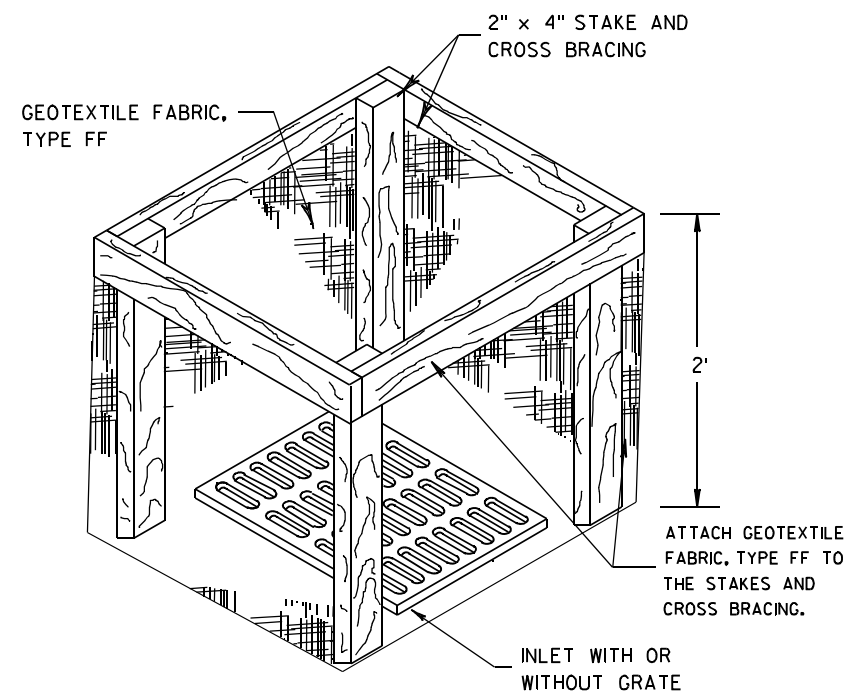
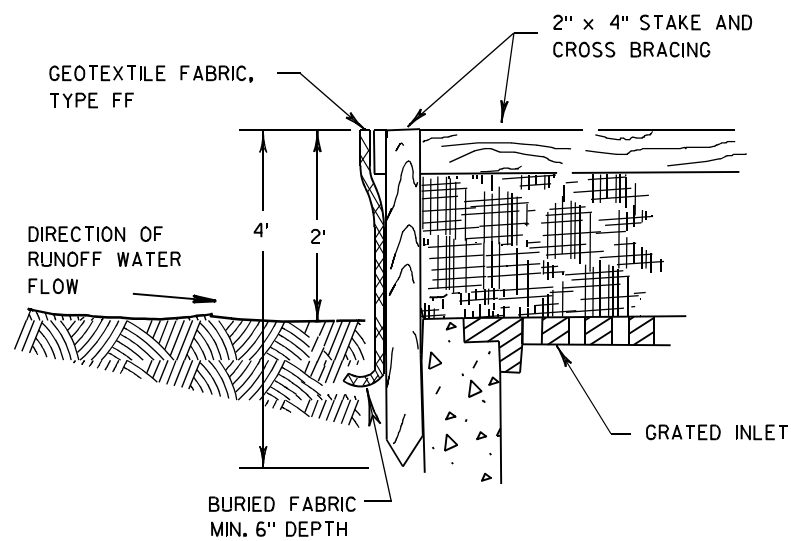
PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



INLET PROTECTION, TYPE A

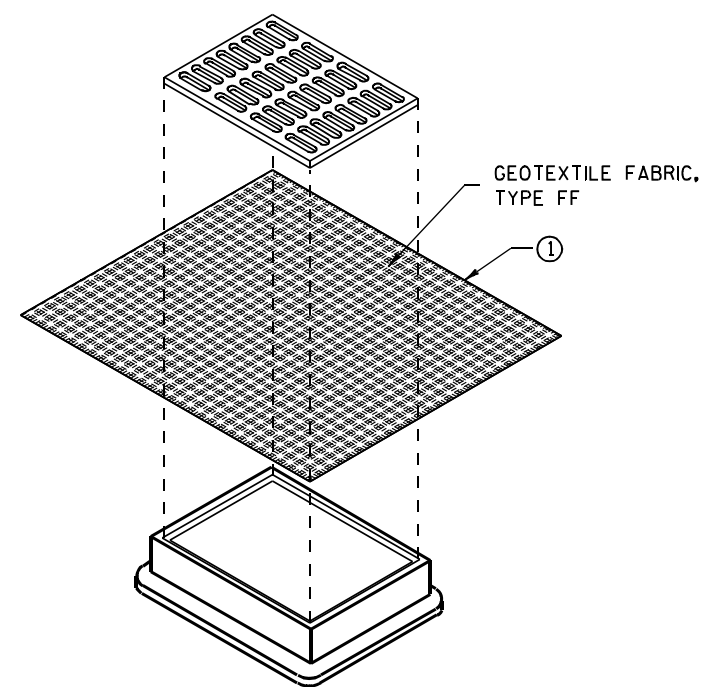
GENERAL NOTES

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.

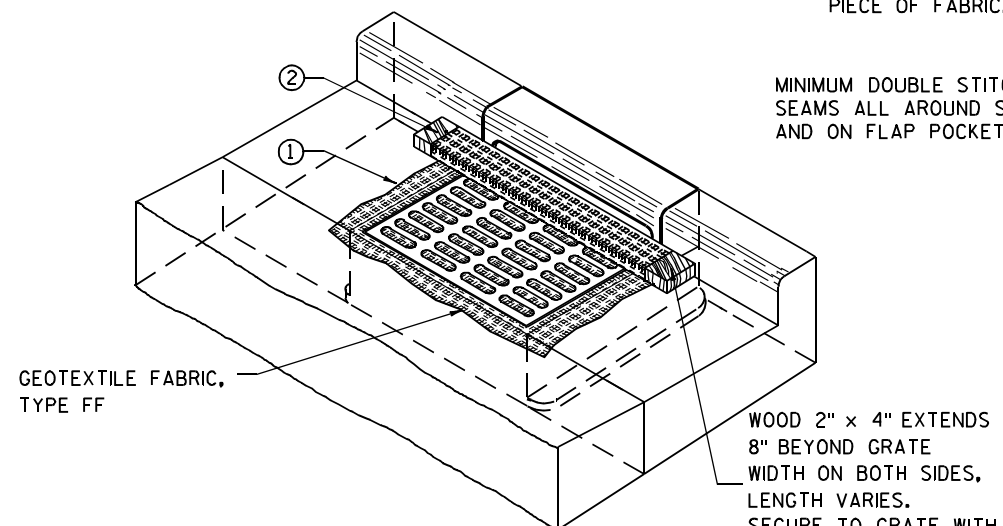
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

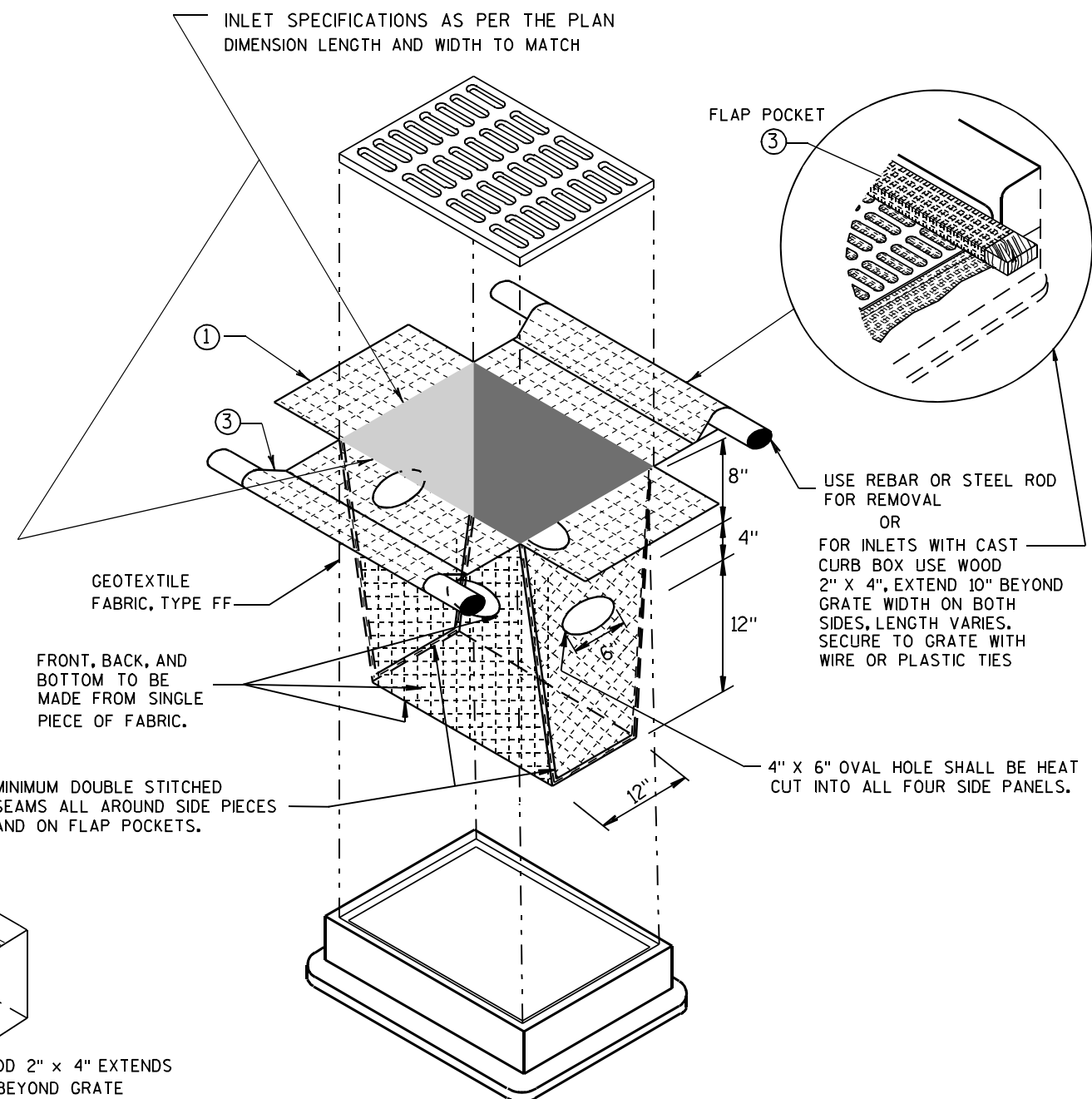
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



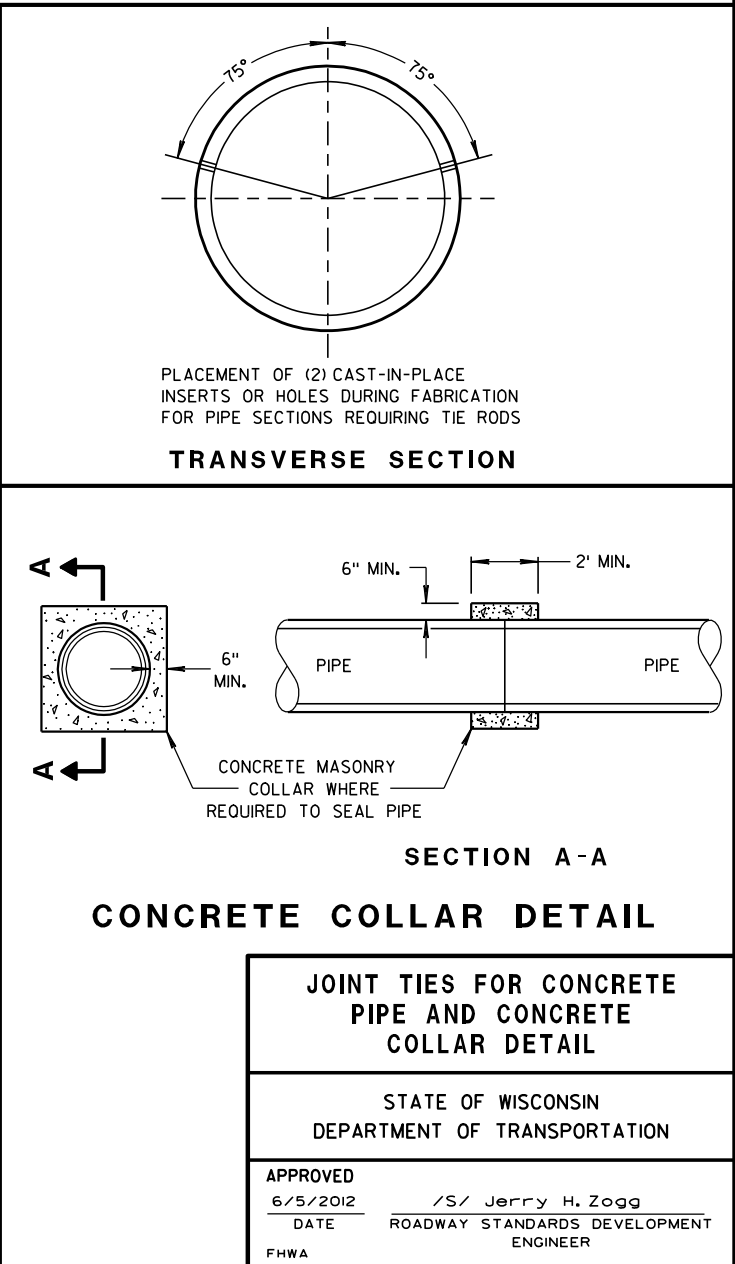
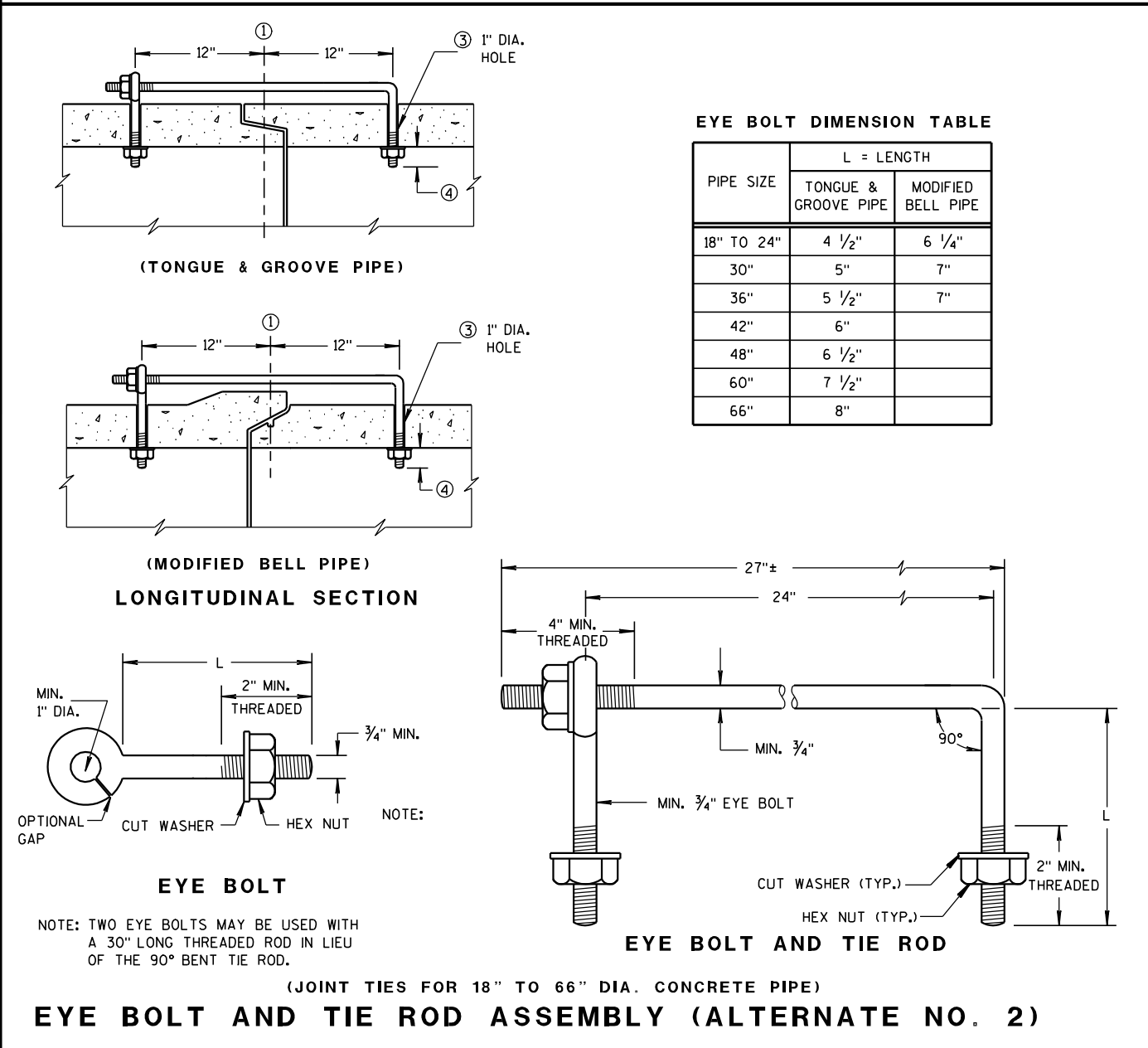
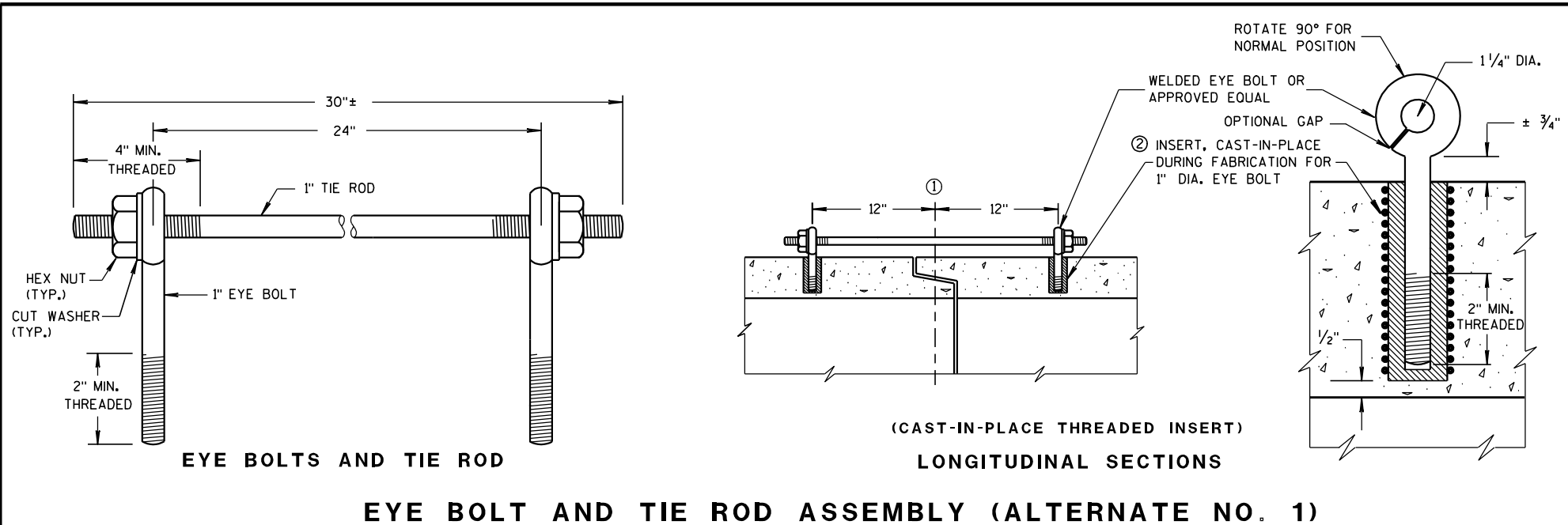
INLET PROTECTION, TYPE D

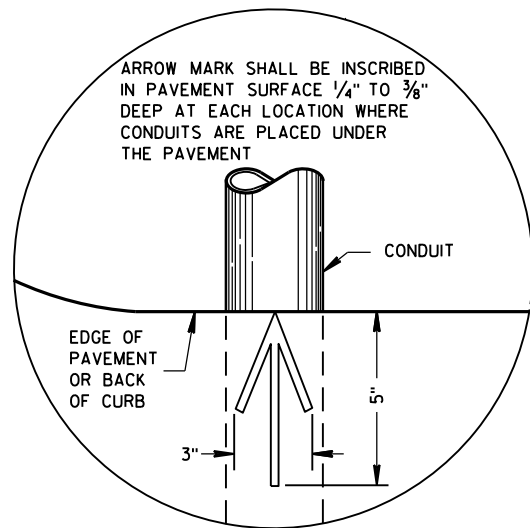
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

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

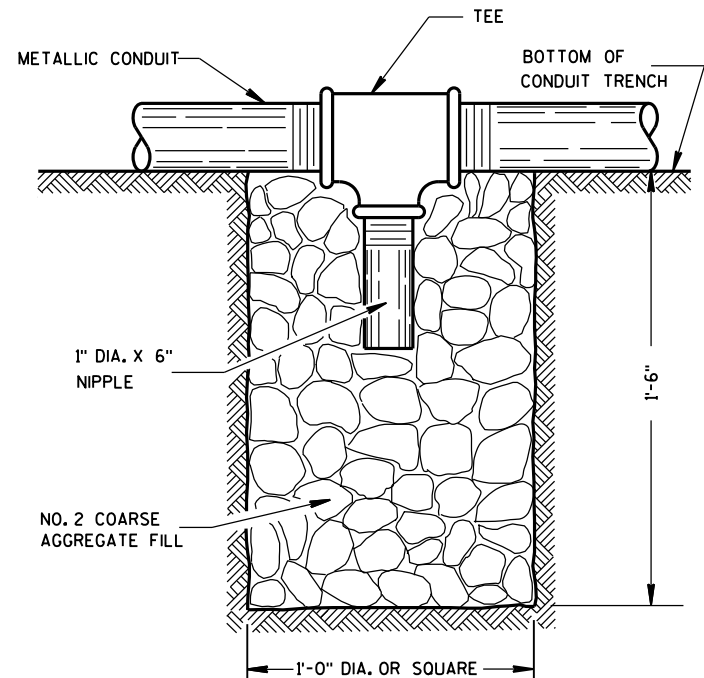
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



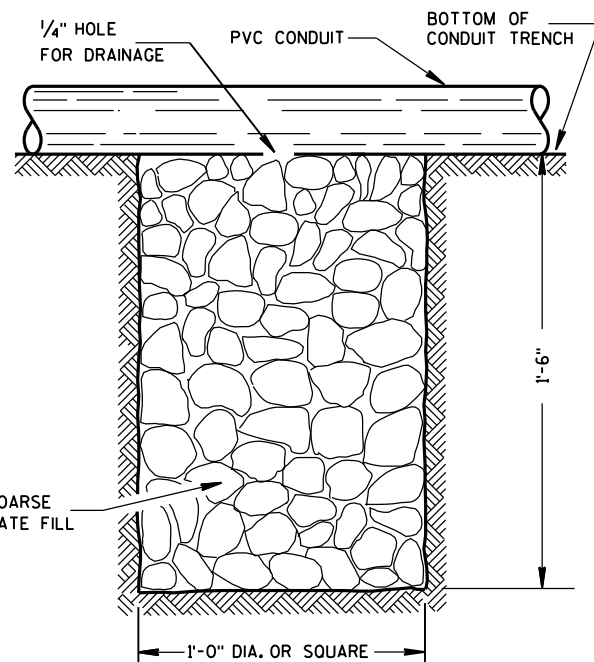


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

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.

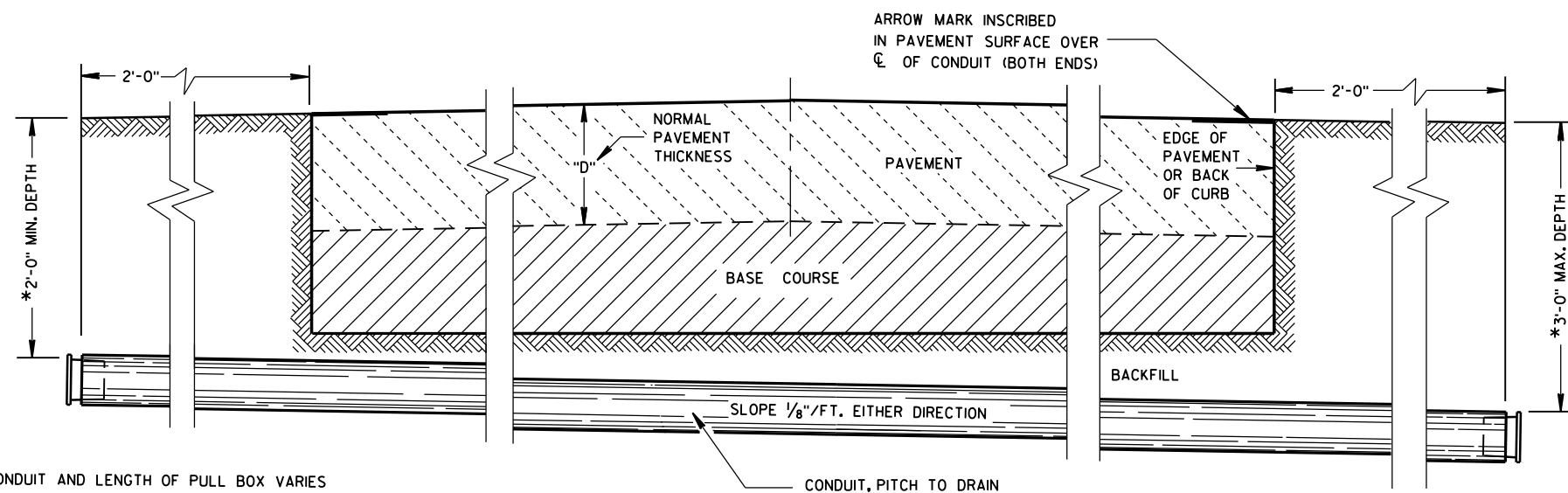
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.



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

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /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.

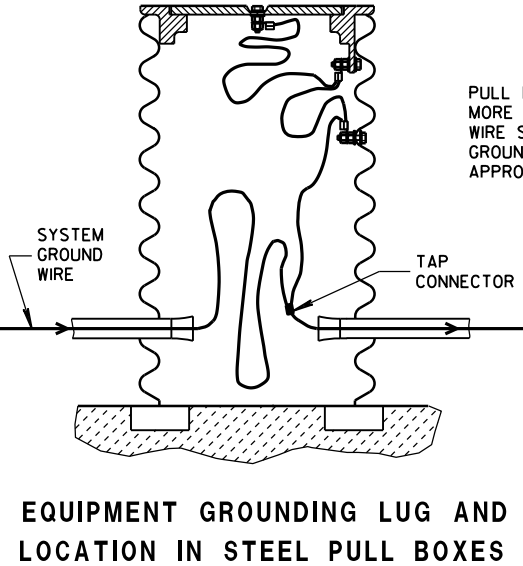
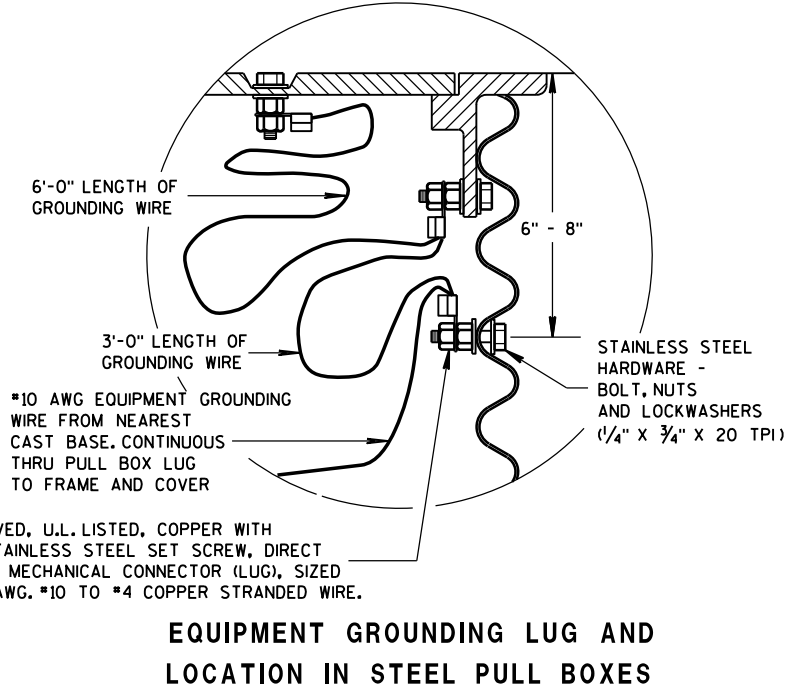
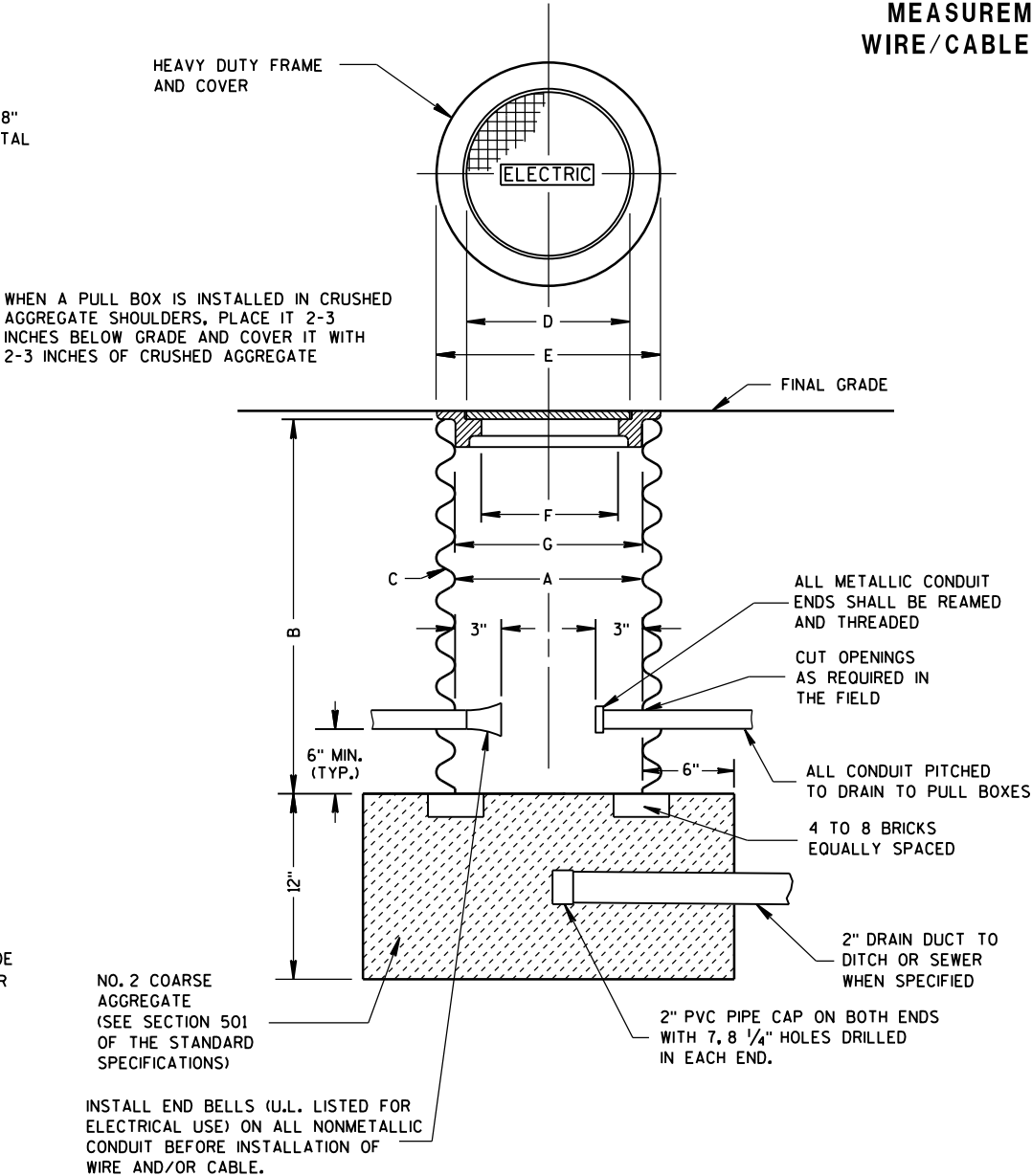
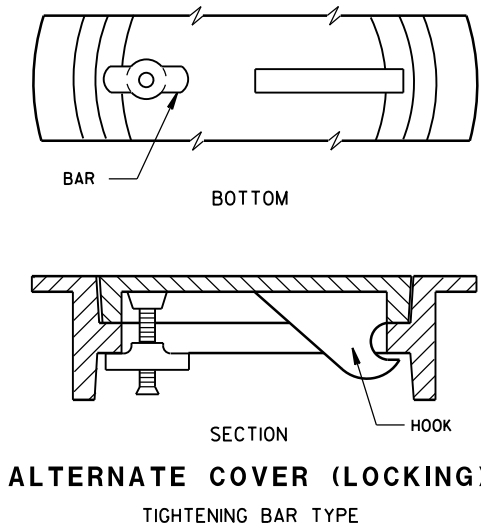
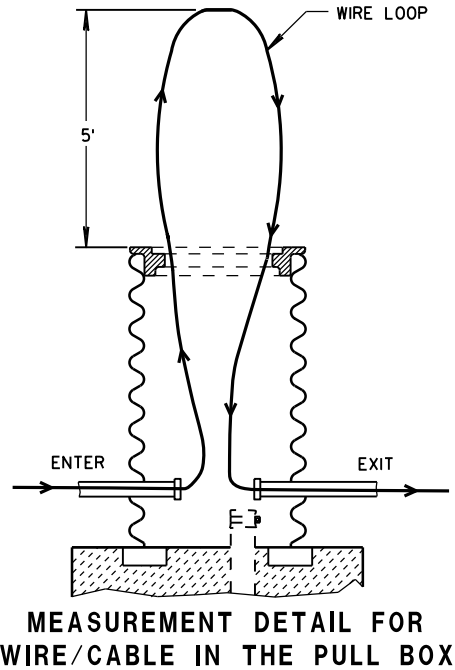
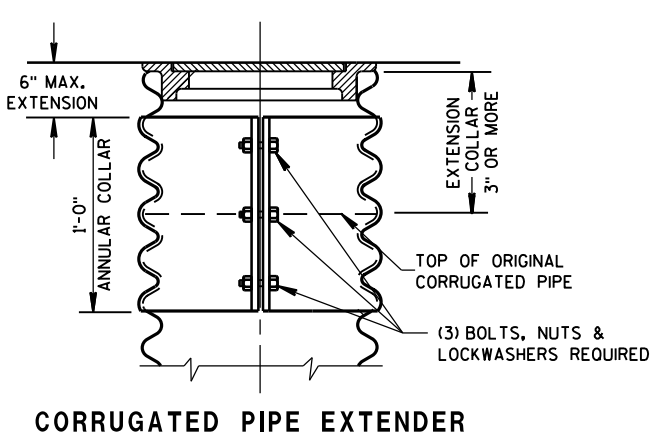
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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 Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

4" MAX.

FORM

6" MAX.

FORMING SHALL BE REMOVED AFTER CONCRETE HAS SET

1'-8"

CONDUIT

CONDUIT WITHIN 6" DIA.

12 3/4" BOLT CIRCLE

SHALL BE PARALLEL TO

2

**HALF SECTION
IN UNPAVED AREA**
(TYPICAL FOR TYPES 1, 2, 5, & 6)

5/8" DIA. X 8'-0"
COPPERCLAD
EQUIPMENT
GROUNDING
ELECTRODE
REQUIRED

5/8" DIA. X 8'-0"
COPPERCLAD EQUIPMENT
GROUNDING ELECTRODE
REQUIRED

[illegible]

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

ANCHOR RODS SHALL
BE ORIENTED _____
PARALLEL TO
THE ROADWAY

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

6

3" *

2"

6" MIN.

1'-0"

1'-0"

7

3" CLEAR

CONNECTION

DUCTOR

5'-0"

8

1

6" STUD

8'-0"

D EQUIPMENT

ELECTRODE

6" MIN.

2"

END

TYPICAL

5, & 6)

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

STATE ELECTRICAL ENGINEER

** FOR NONBREAKAWAY INSTALLATIONS, $4\frac{1}{2}$ " \pm ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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.

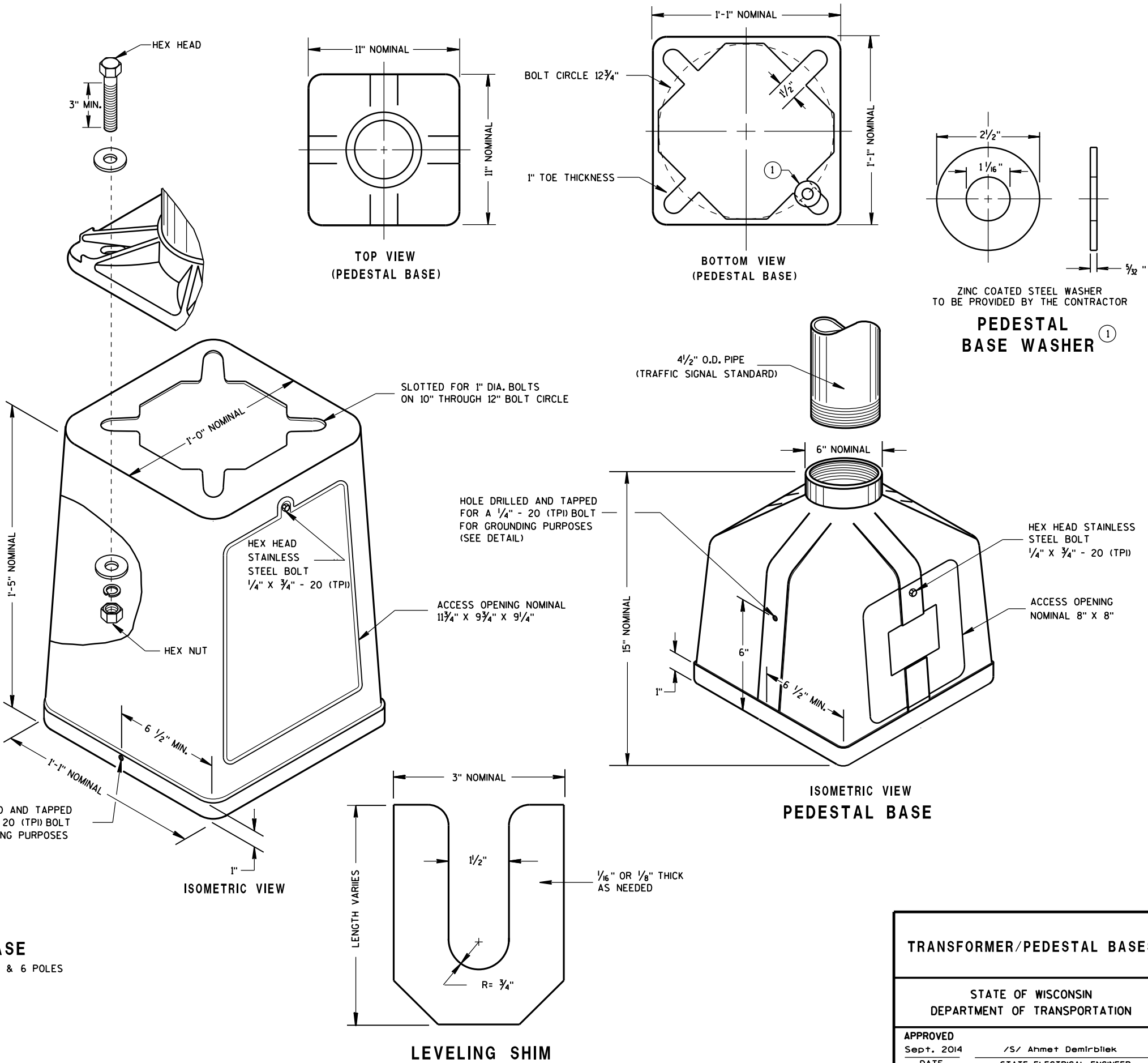
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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.



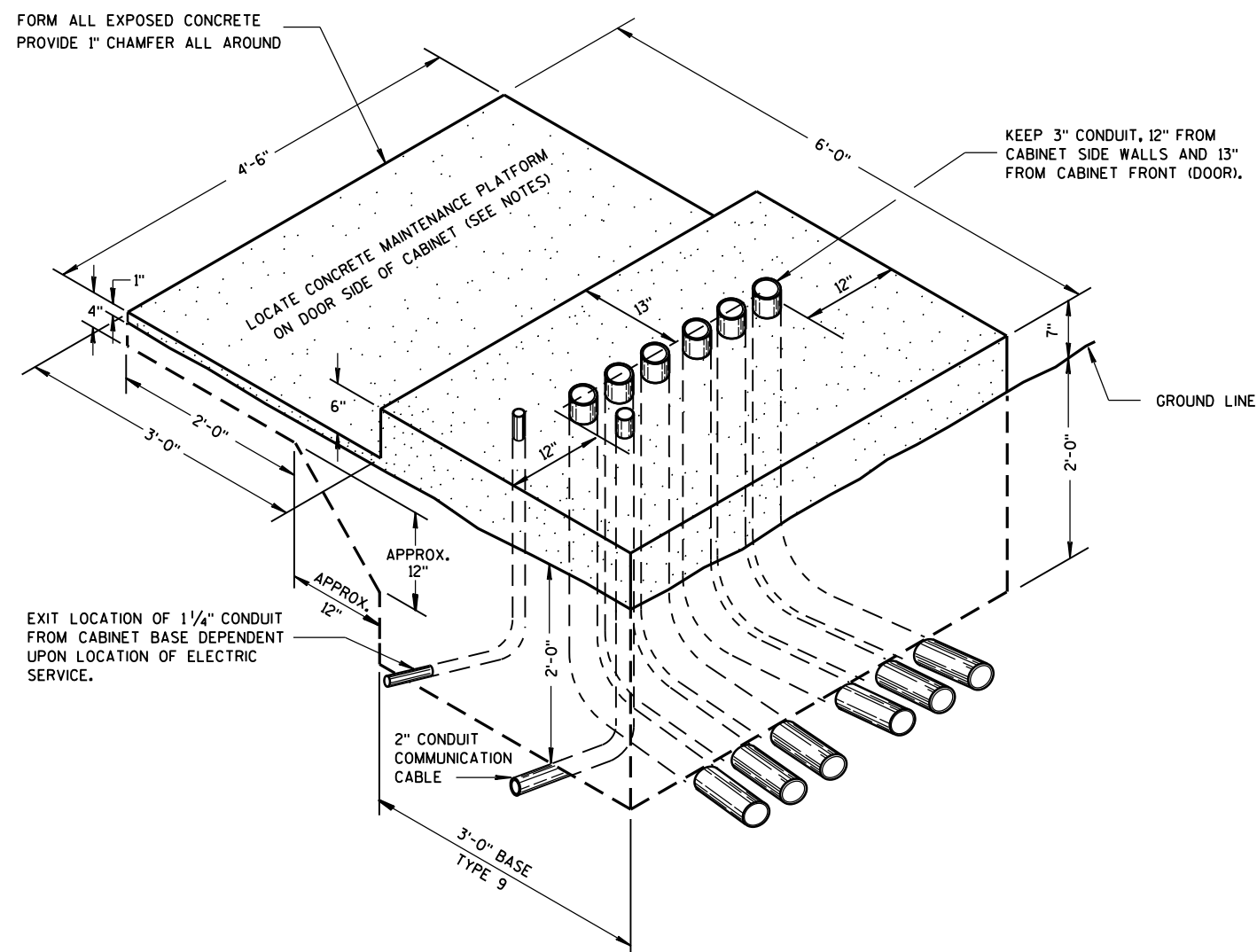
TYPICAL MECHANICAL
CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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

TRANSFORMER/PEDESTAL BASES

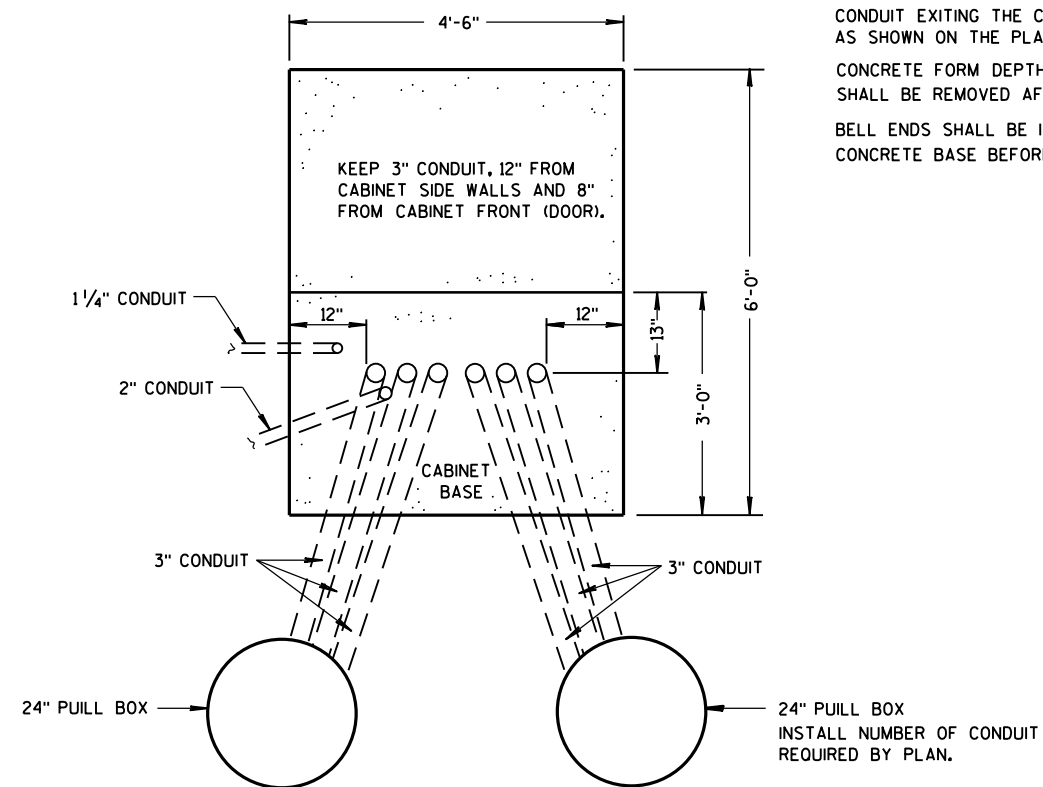
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE 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

6

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

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S.D.D. 9 C 11-9



S.D.D. 9 C 11-9

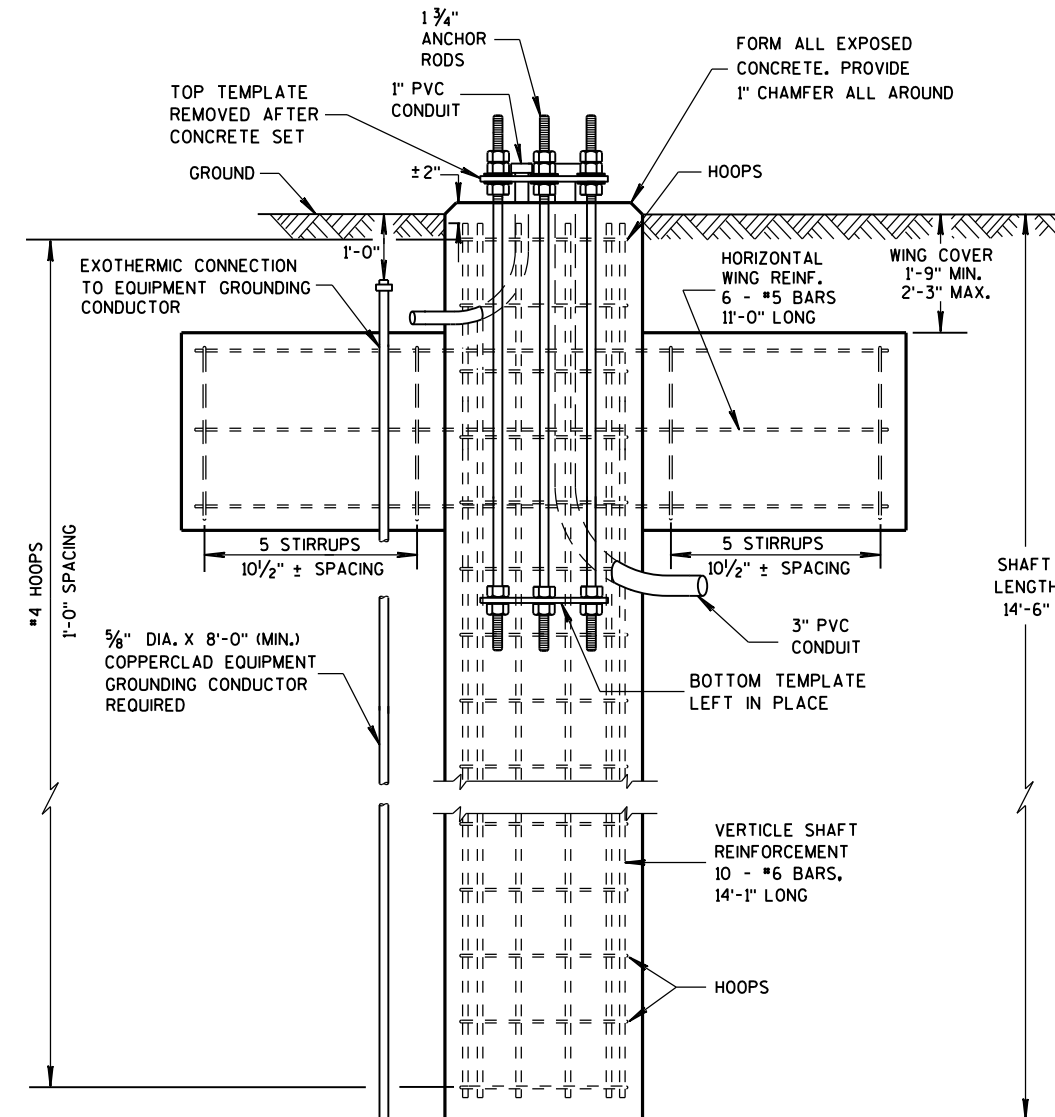
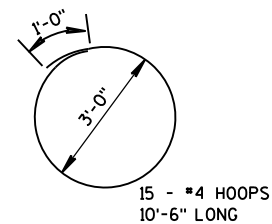
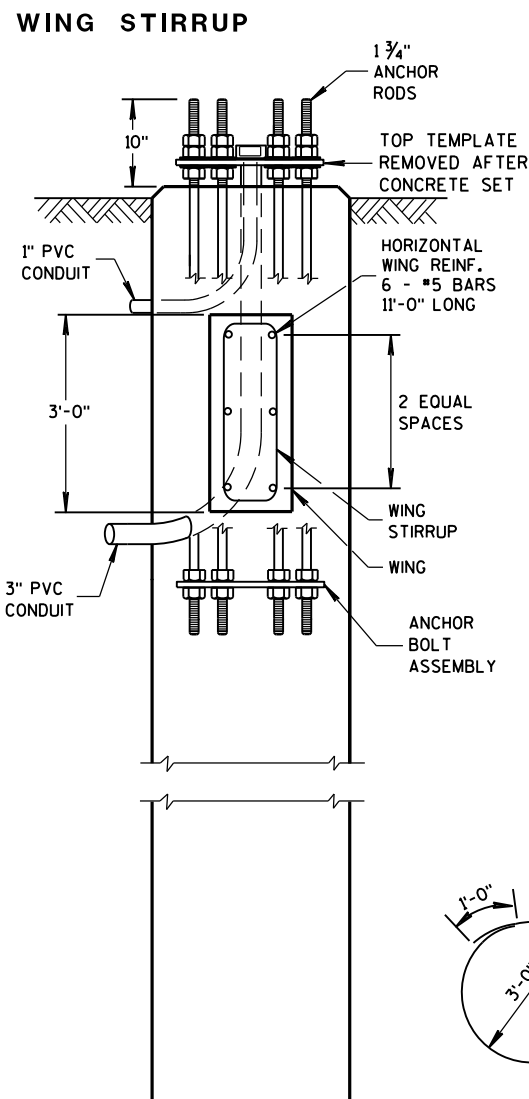
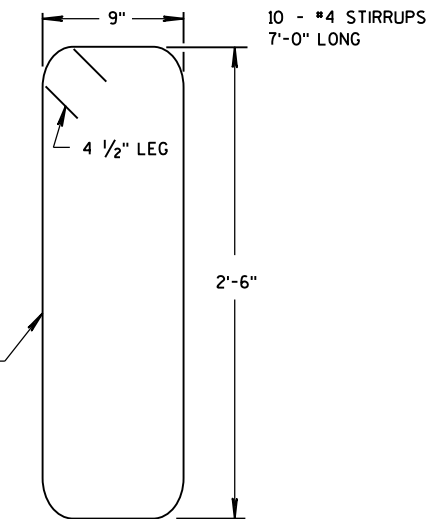
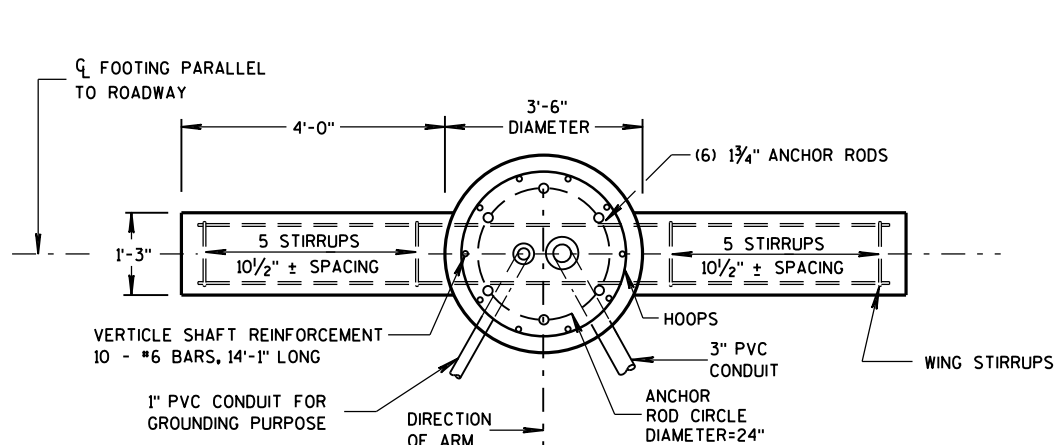


S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9

S.D.D. 9 C 11-9



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 HIS 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), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

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

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

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.

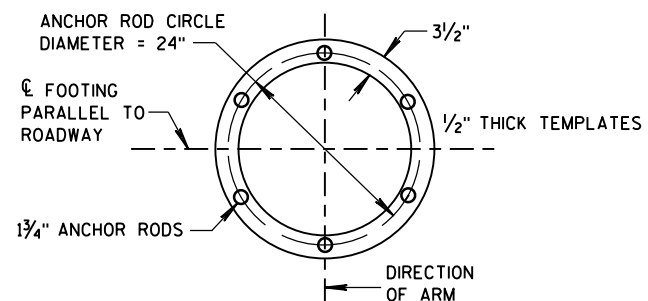
(FOR TYPE 12 & 13 POLES)

CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 433 LBS.

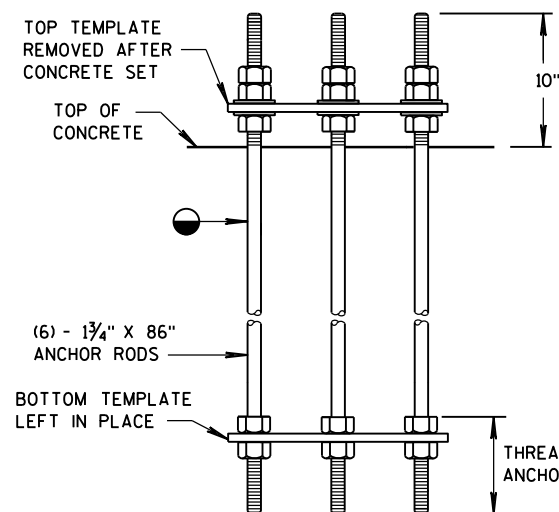
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



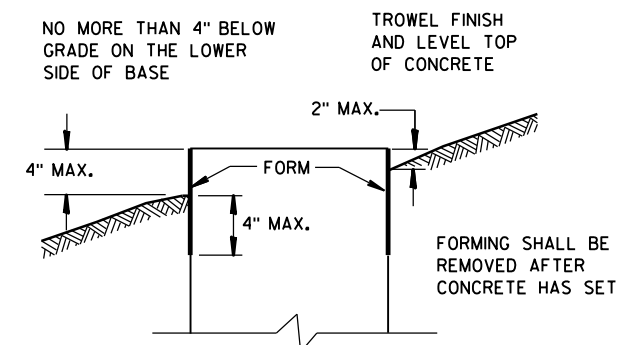
TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

● THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT-DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR 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.

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

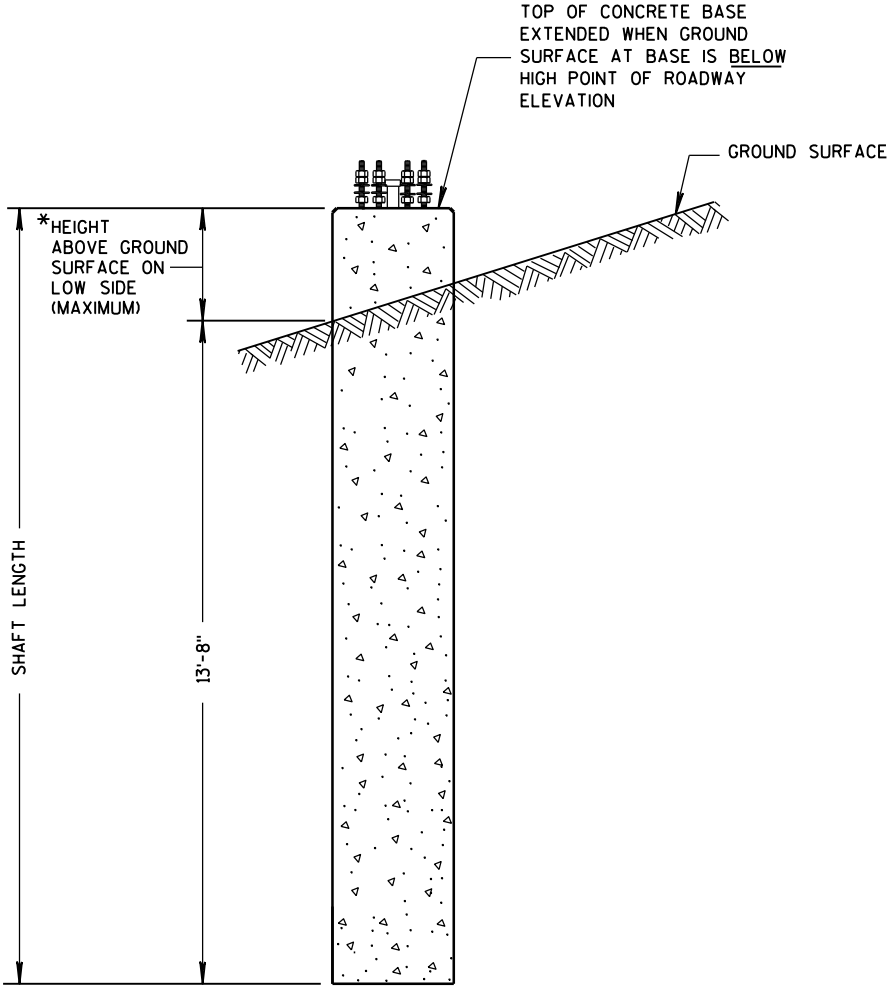
APPROVED

May 2016
DATE/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 10 CONCRETE BASE

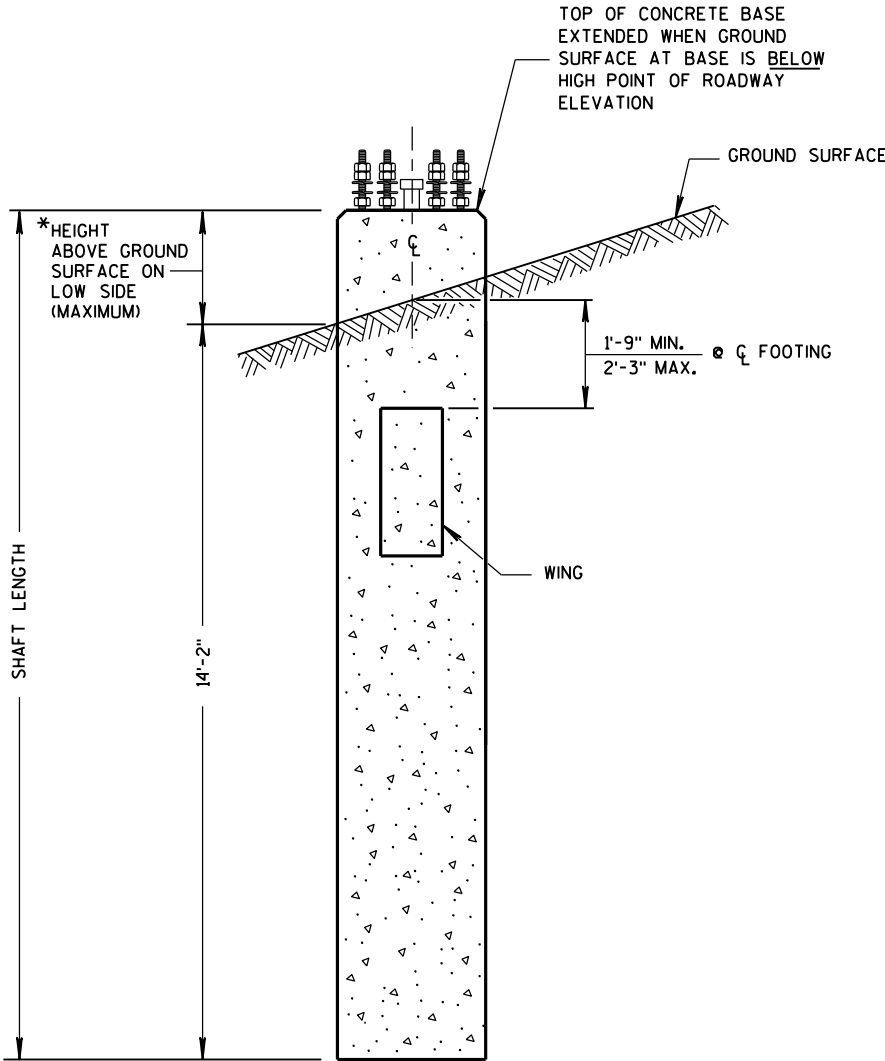
HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF HOOP BAR STEEL	LBS. OF VERTICAL BAR STEEL
>0" TO 6"	10"	14'-6"	14'-1"	16	2.6	78	127
>6" TO 1'-0"	1'-4"	15'-0"	14'-7"	16	2.7	78	131
>1'-0" TO 1'-6"	1'-10"	15'-6"	15'-1"	17	2.8	83	136
>1'-6" TO 2'-0"	2'-4"	16'-0"	15'-7"	17	2.9	83	141



CONCRETE BASE TYPE 10 (EXTENDED)

REINFORCEMENT AND CONCRETE QUANTITIES
ADJUSTED FOR EXTENDED TYPE 13 CONCRETE BASE

HEIGHT INCREASE REQUIRED	* HEIGHT ABOVE GROUND SURFACE ON LOW SIDE (MAXIMUM)	SHAFT LENGTH	LENGTH OF #6 VERTICAL REINF.	NO. OF #4 HOOPS	C.Y. OF CONCRETE	LBS. OF H.S. BAR STEEL
>0" TO 6"	10"	15'-0"	14'-7"	16	6.5	447
>6" TO 1'-0"	1'-4"	15'-6"	15'-1"	16	6.6	454
>1'-0" TO 1'-6"	1'-10"	16'-0"	15'-7"	17	6.8	469
>1'-6" TO 2'-0"	2'-4"	16'-6"	16'-1"	17	7.0	476

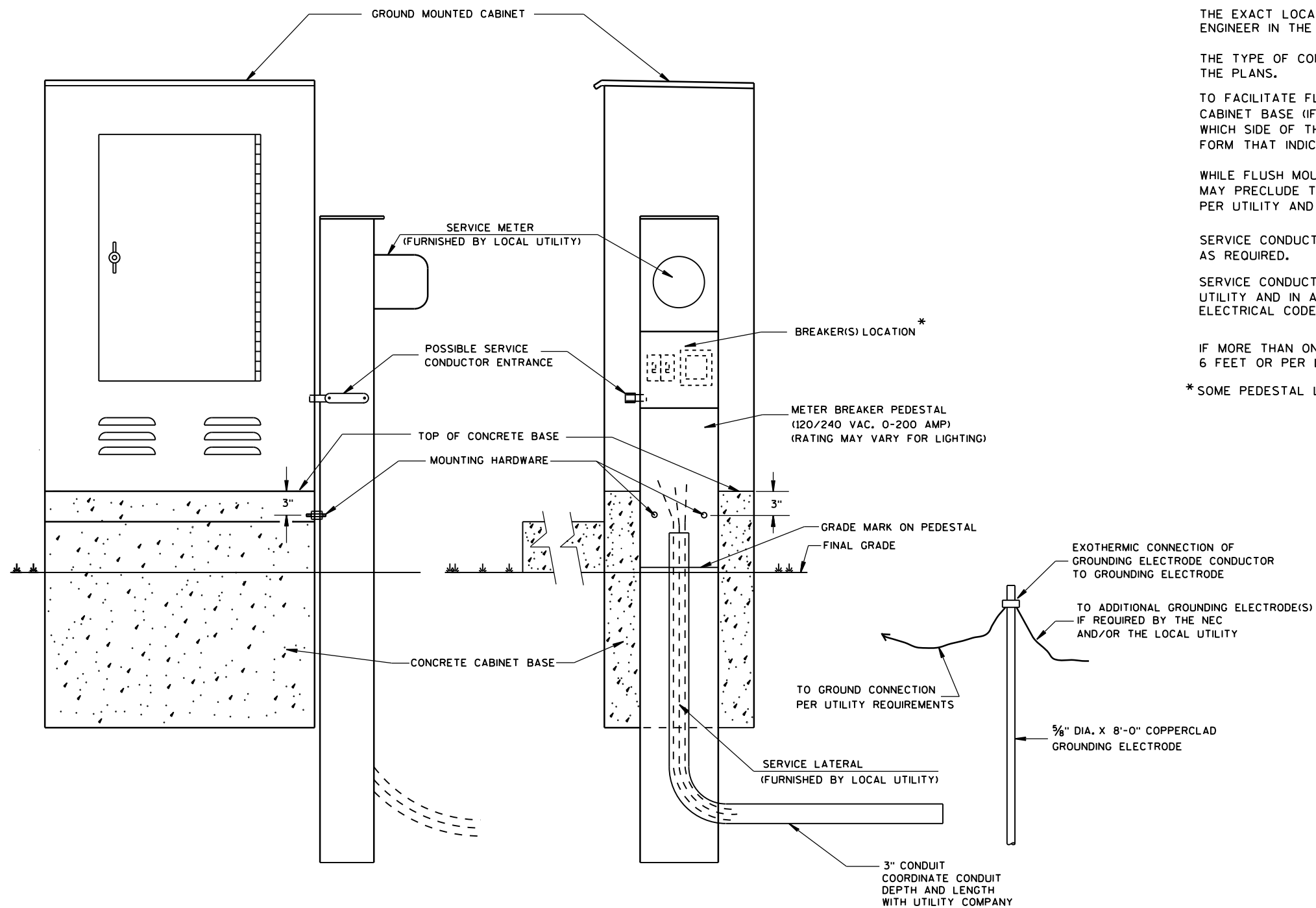


CONCRETE BASE TYPE 13 (EXTENDED)

CONCRETE BASE
TYPE 10 & TYPE 13 EXTENSION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-26-2013
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

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

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

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

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

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

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

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

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

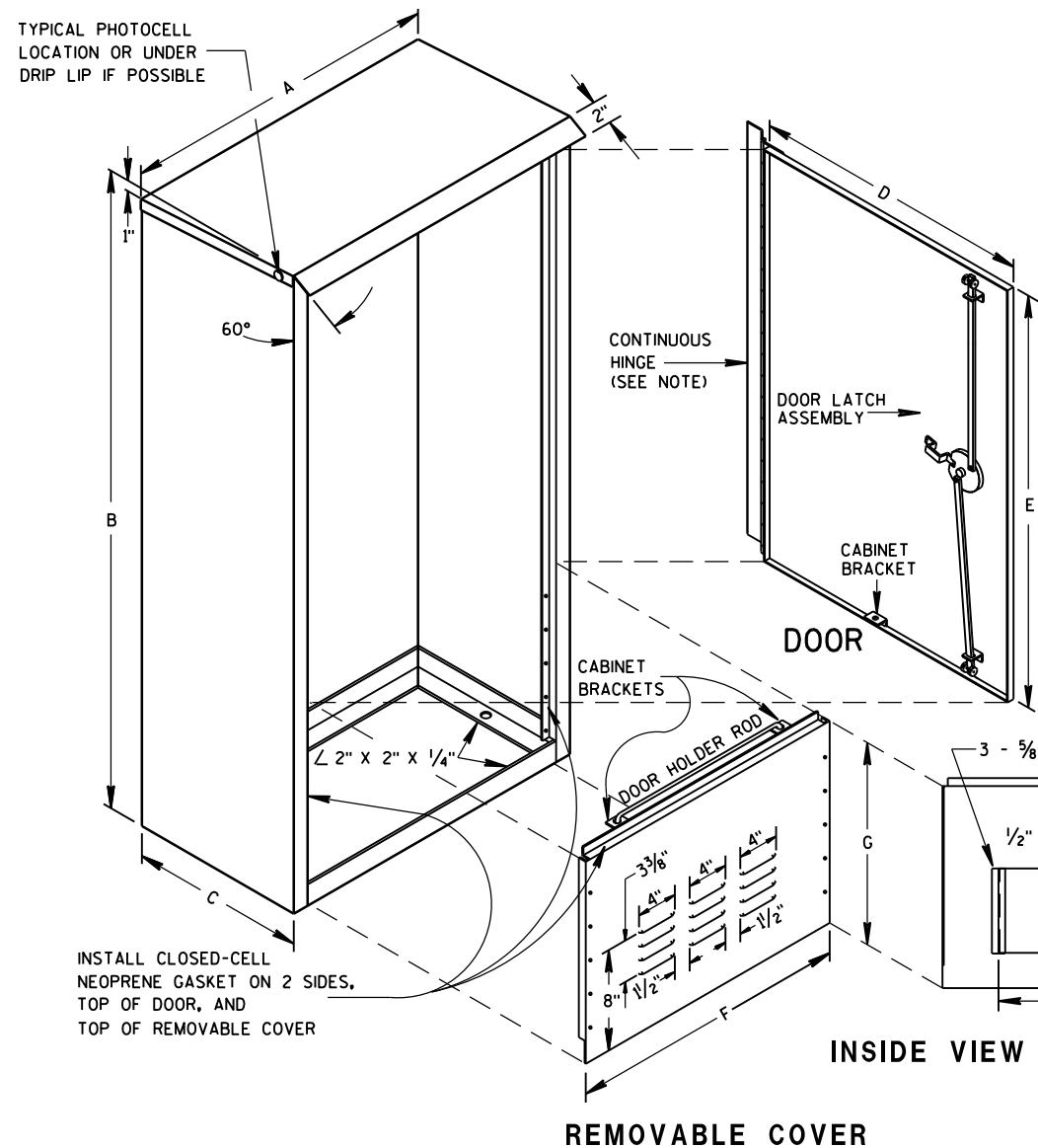
CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

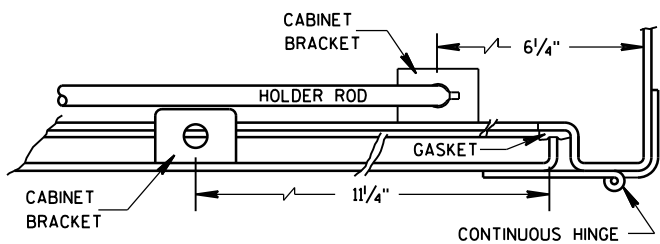
APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

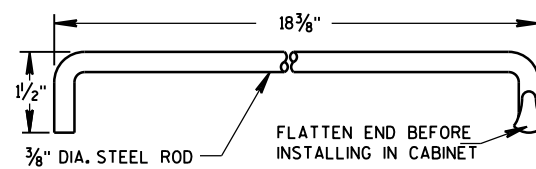
FHWA



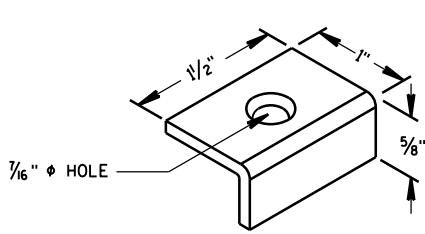
INSTALL CLOSED-CELL NEOPRENE GASKET ON 2 SIDES, TOP OF DOOR, AND TOP OF REMOVABLE COVER



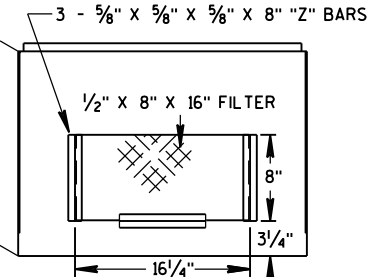
HINGE & DOOR HOLDER



HOLDER ROD



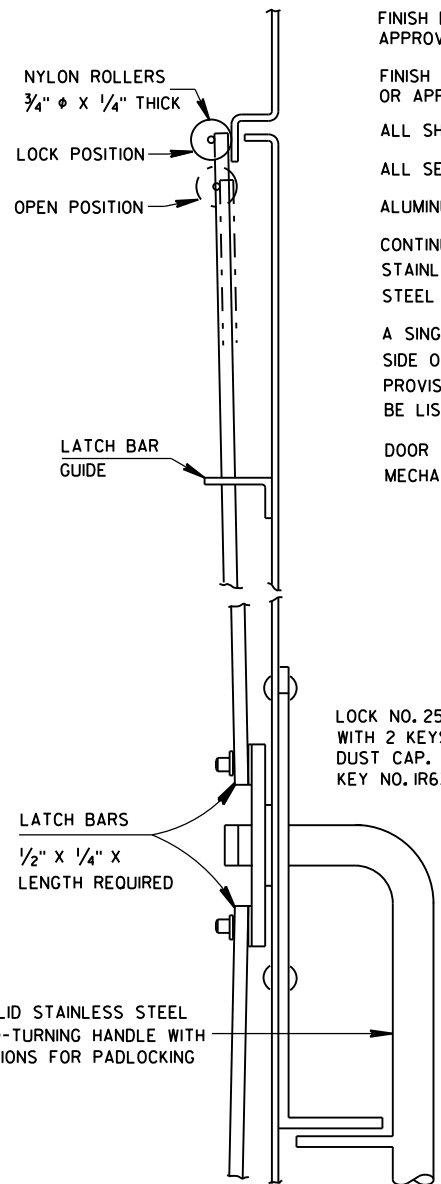
CABINET BRACKET



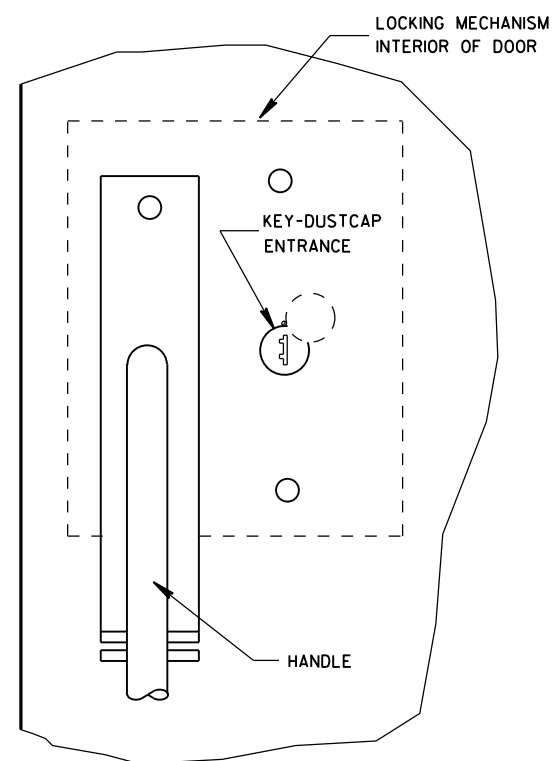
INSIDE VIEW SHOWING FILTER

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

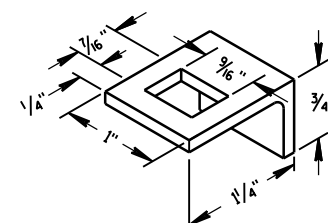


SIDE VIEW



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.

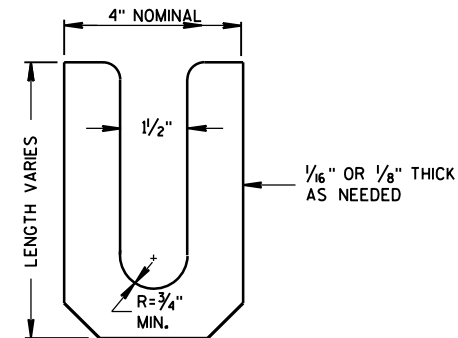
ALUMINUM SHALL BE TYPE 5052-H32.

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.

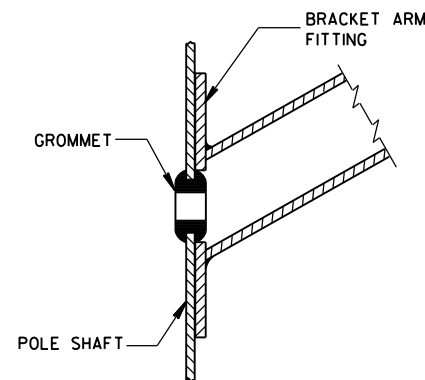
A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

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

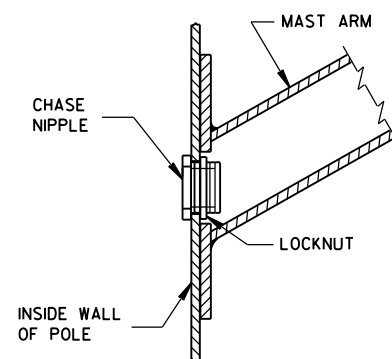
SIGNAL CONTROL CABINET	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



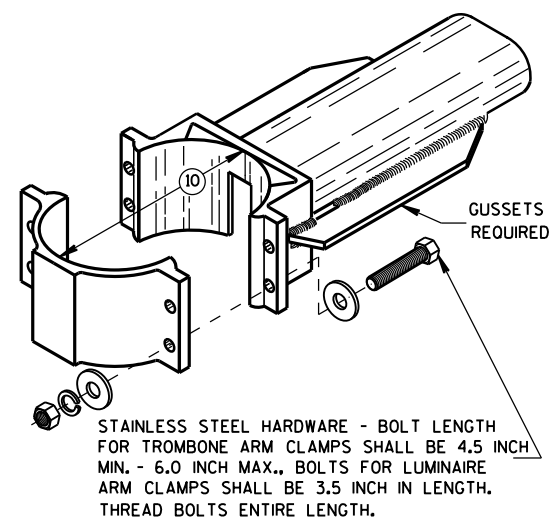
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

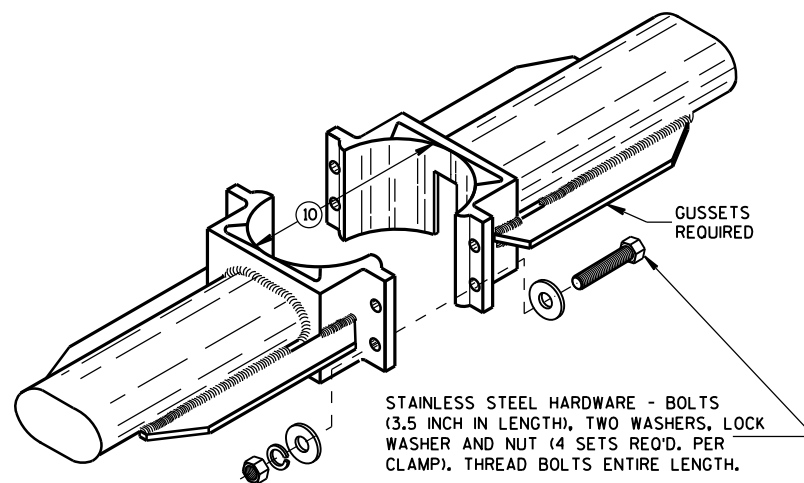
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ⑩ 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ⑪ INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ⑫ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT
CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ⑬ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING
POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT
ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE
CONCRETE BASE AND A METALLIC BASE PLATE.

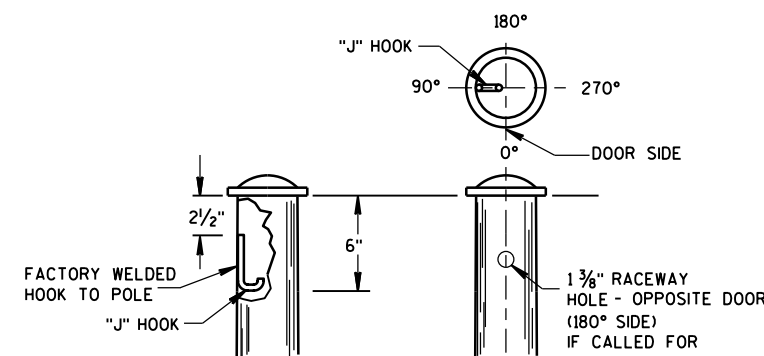
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE
AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



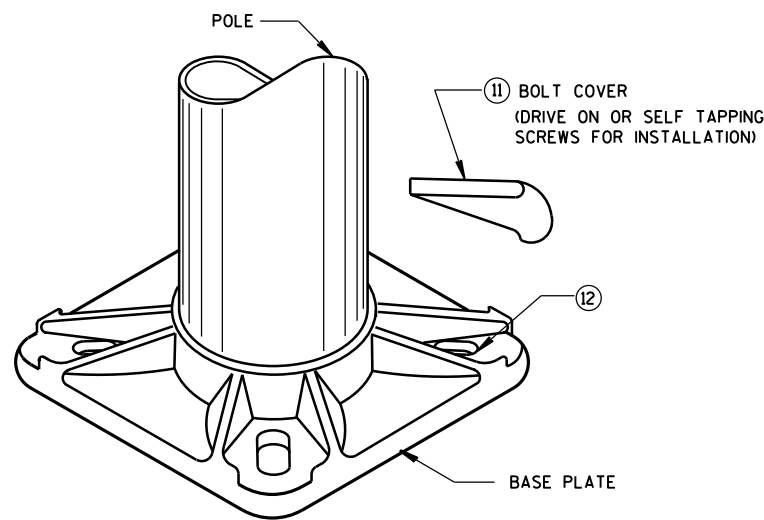
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



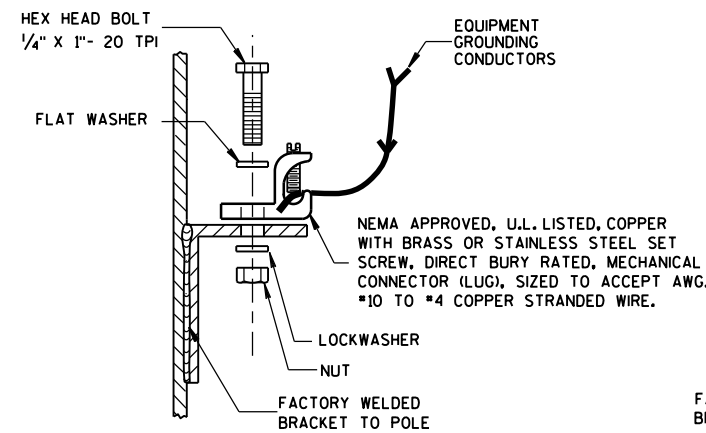
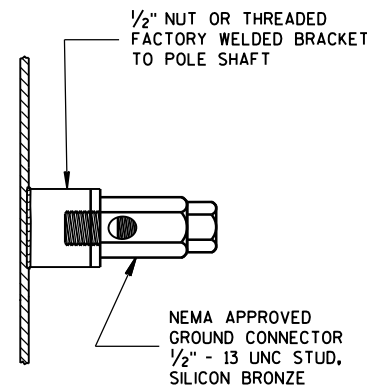
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



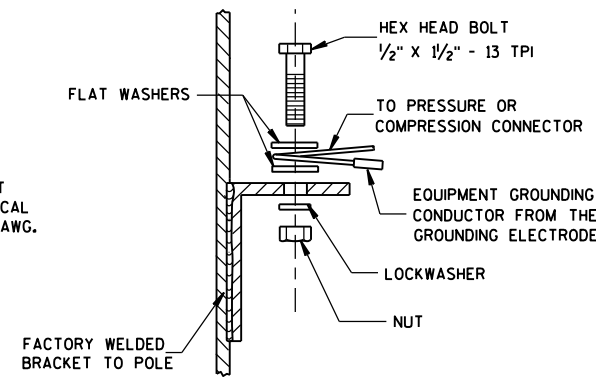
TYPICAL "J" HOOK LOCATION



BASE PLATE



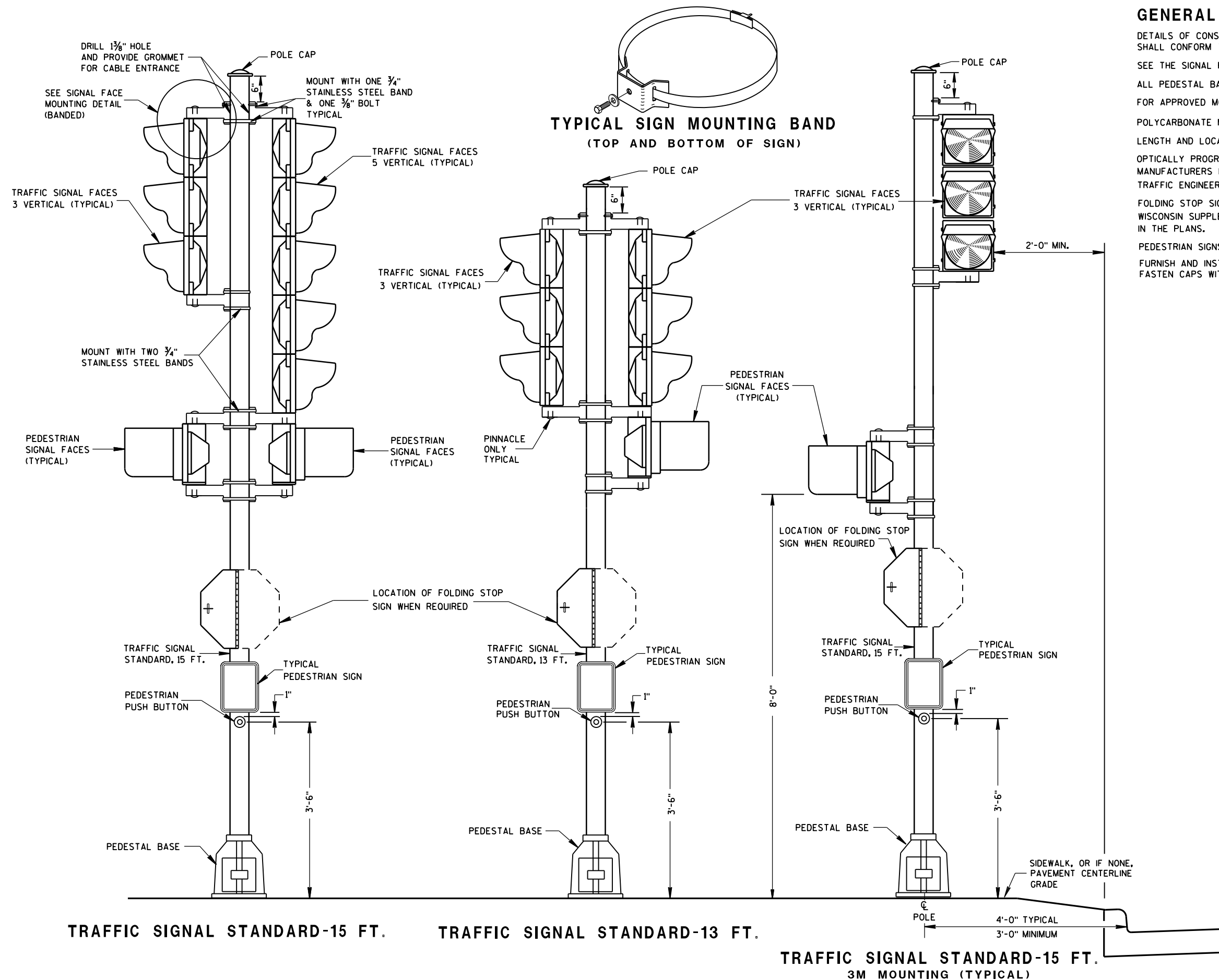
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
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.

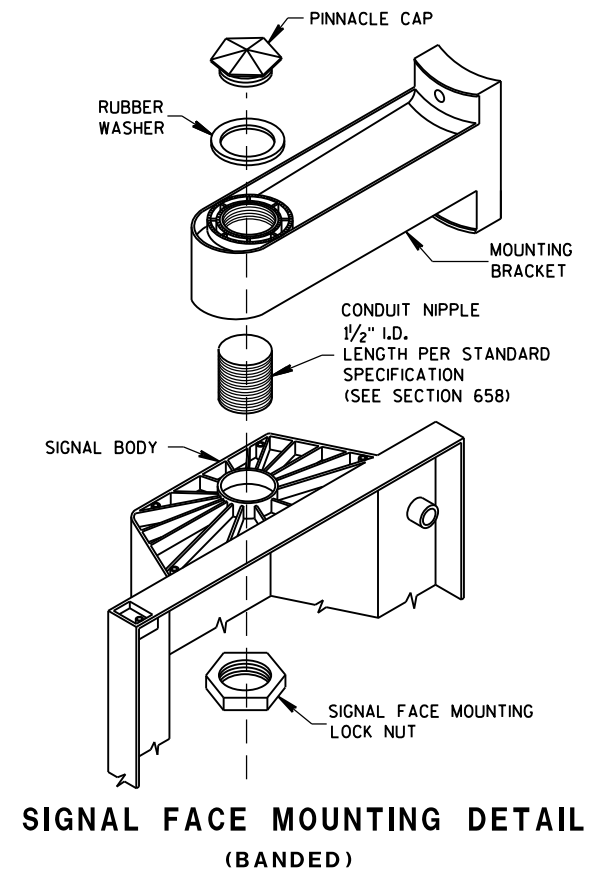
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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.



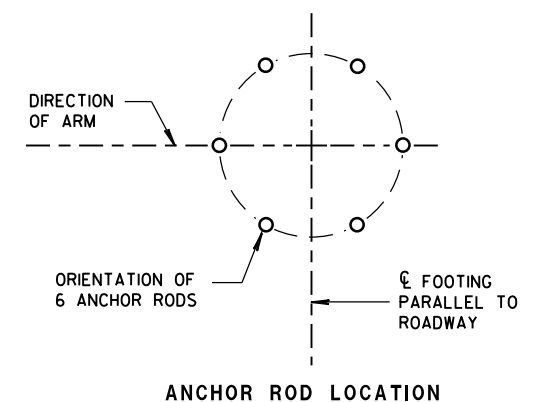
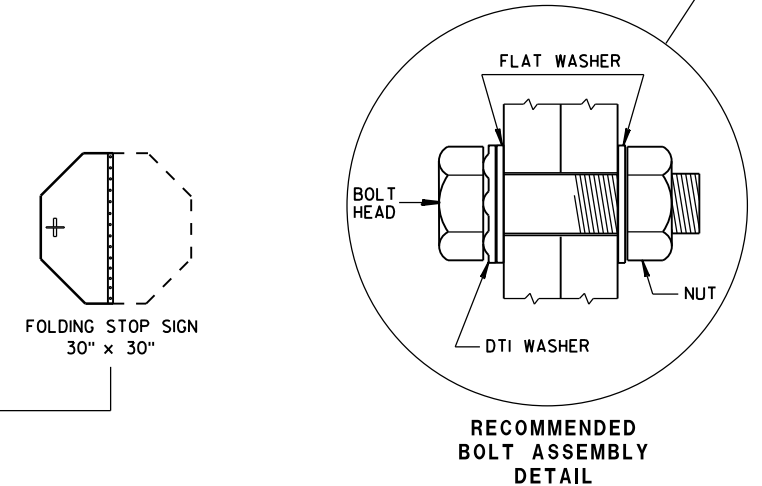
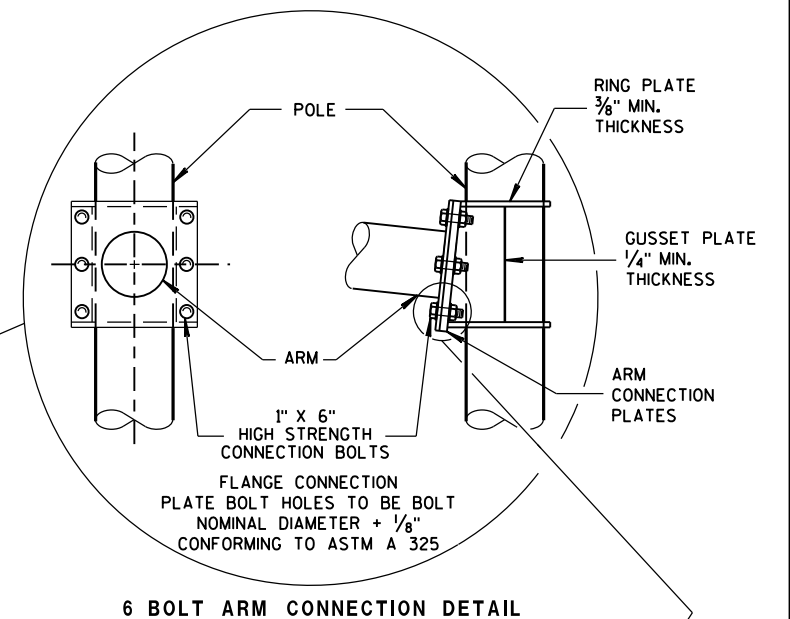
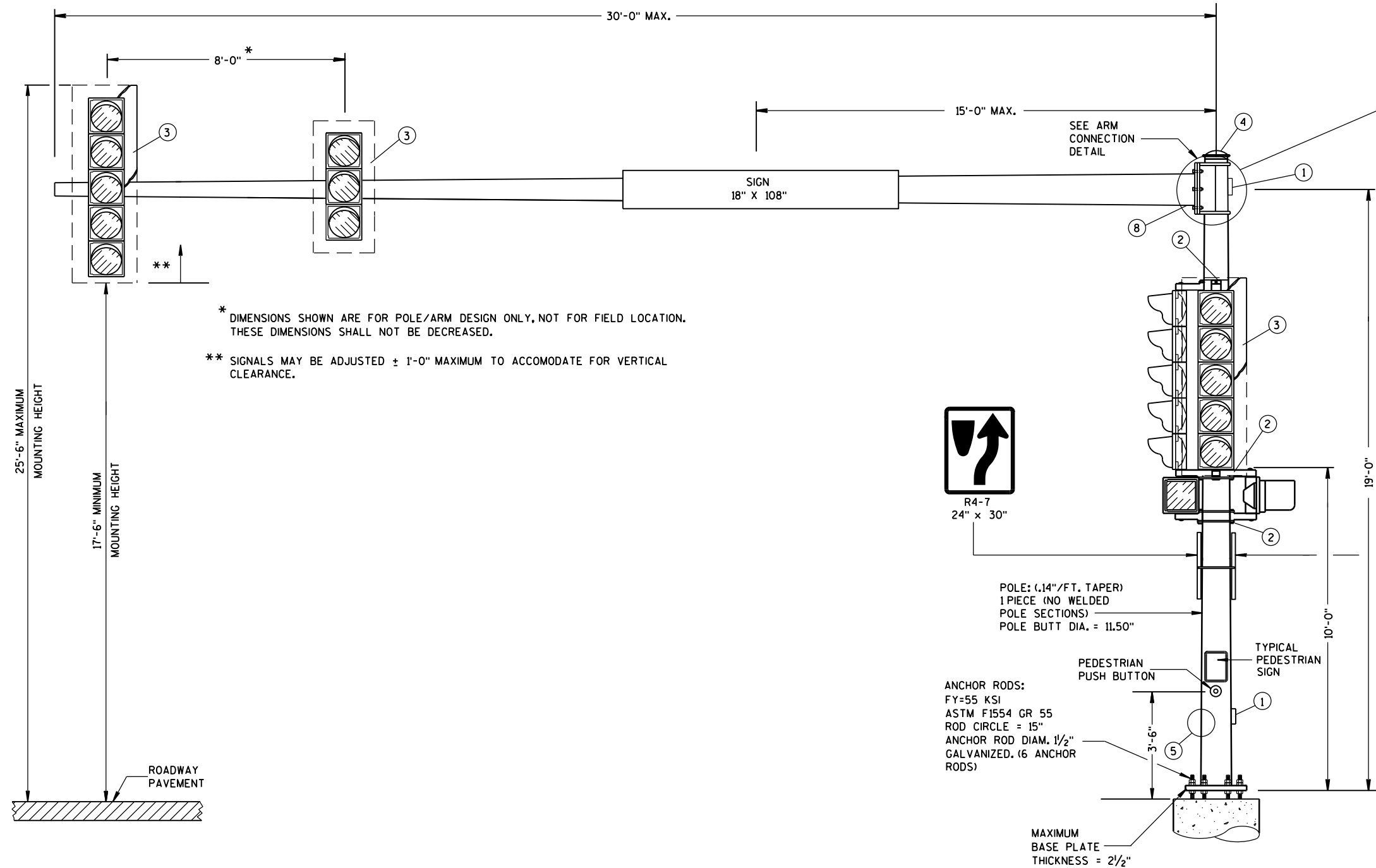
**TRAFFIC SIGNAL STANDARD
POLY BRACKET MOUNTINGS
(TYPICAL) 13 FT. OR 15 FT.**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA



(MAXIMUM LOAD)

TYPE 9 POLE 15' - 30' MONOTUBE ARM

TYPE 9 POLE
15' - 30' MONOTUBE ARMSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
May, 2016
DATE/S/ Ahmet Demireblek
STATE ELECTRICAL ENGINEER

FHWA



<p>TYPE 12 POLE 35' - 55' MONOTUBE ARM</p>	
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>	
<p>APPROVED May, 2015</p>	<p>/S/ Ahmet Demirbilek</p>
<p>DATE</p>	<p>STATE ELECTRICAL ENGINEER</p>
<p>FHWA</p>	

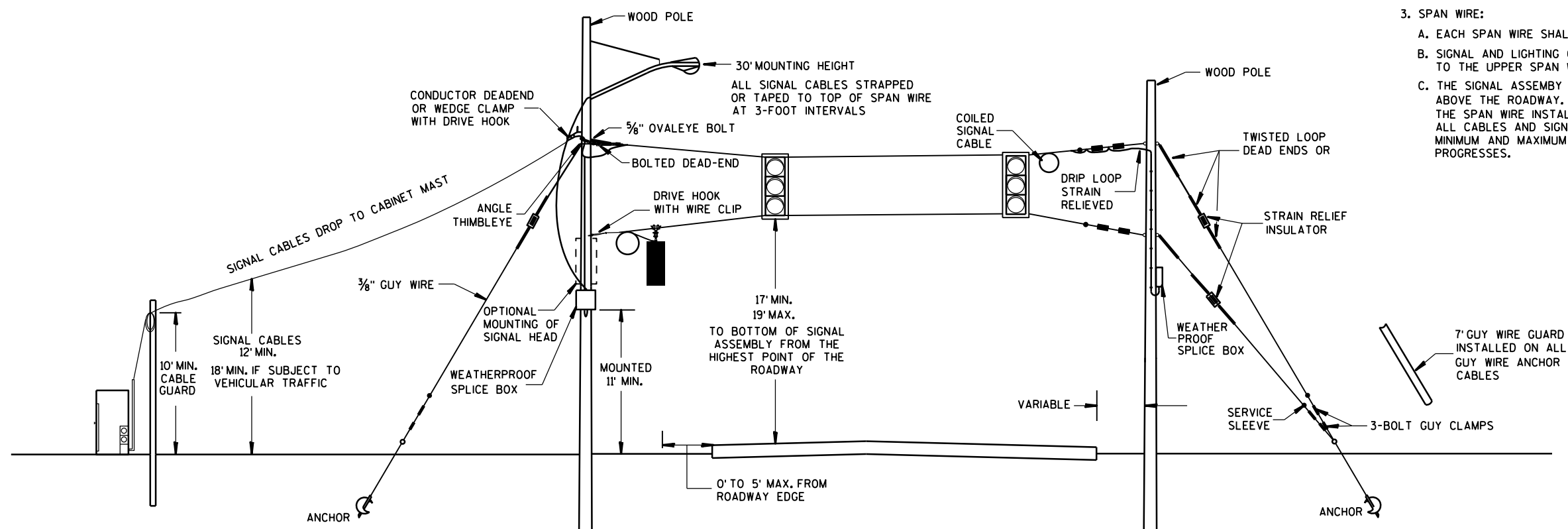
GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4, LENGTH DETERMINED BY SIGNAL PLAN.

2. SIGNAL FACES:
 A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
 B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
 C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
 D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.

3. SPAN WIRE:
 A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
 B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
 C. THE SIGNAL ASSEMBY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.



SPAN WIRE TEMPORARY SIGNALS

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

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

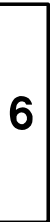
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

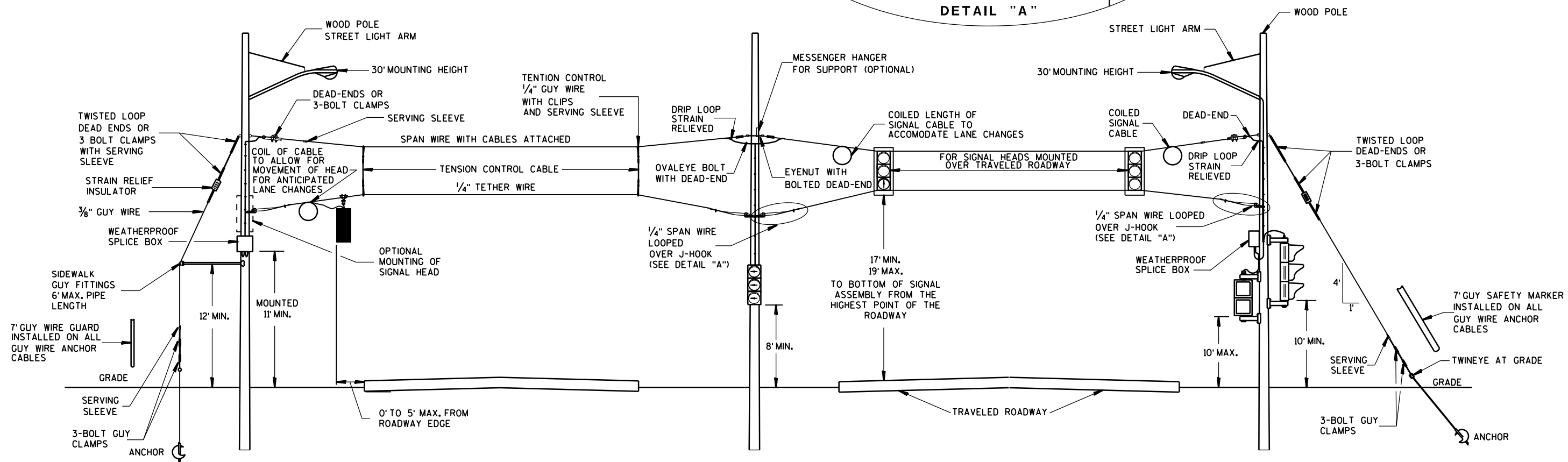
APPROVED

June, 2015
DATE

FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER





**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
 - A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
 - B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
 - C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
 - D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY, IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
 - E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.

3. SPAN WIRE:

- A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED.
- B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
- C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.

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

**SPAN WIRE
TEMPORARY TRAFFIC SIGNAL**

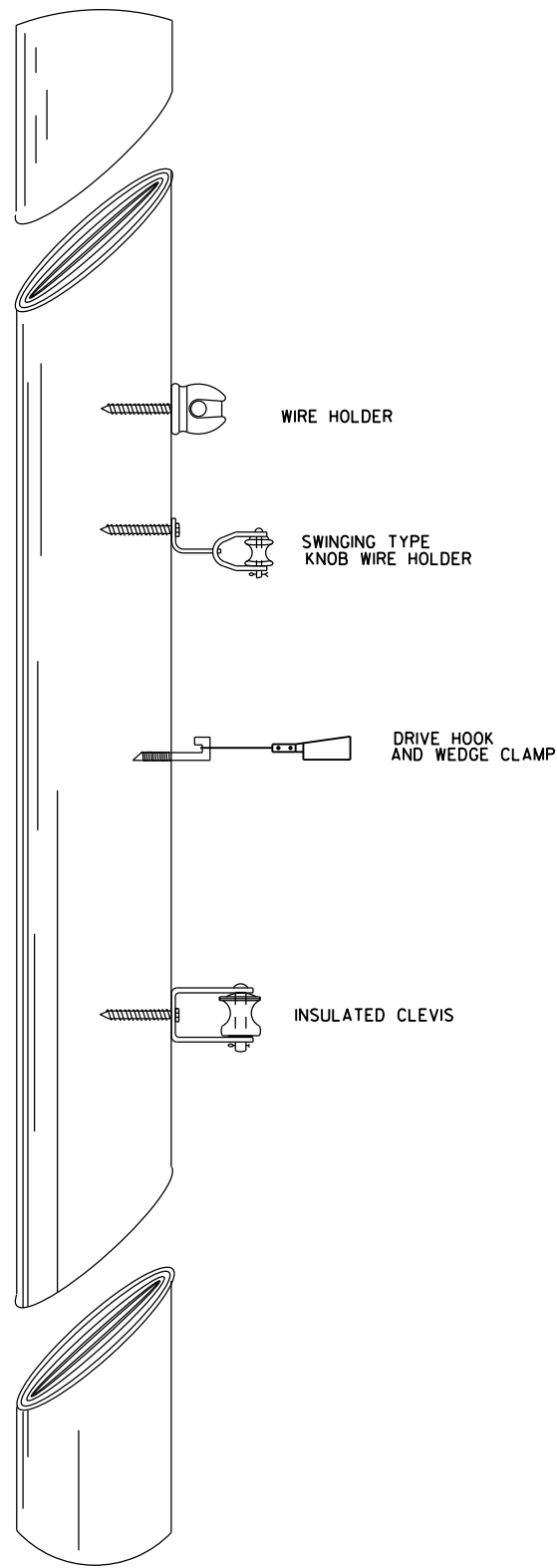
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

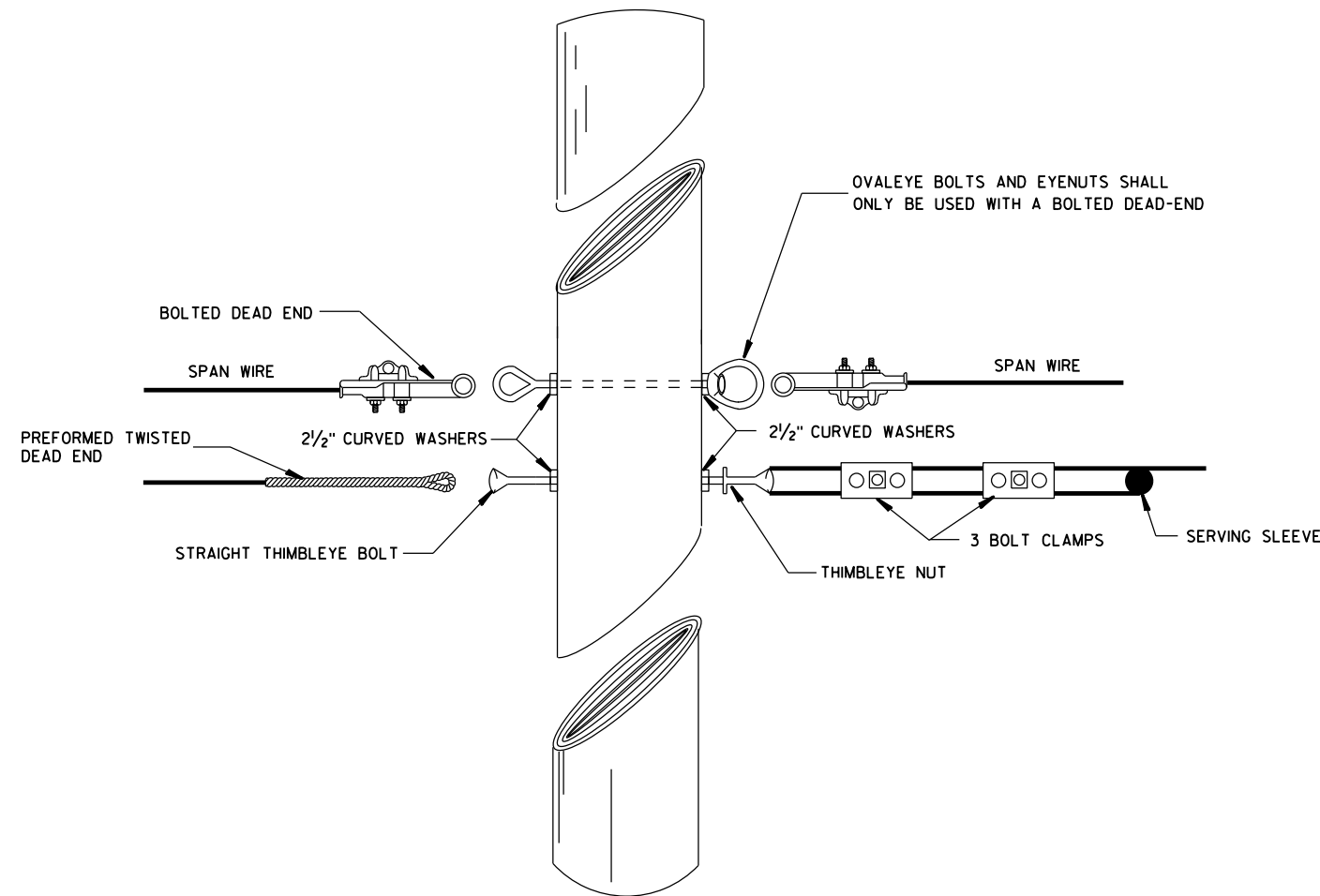
June, 2015
DATE

FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

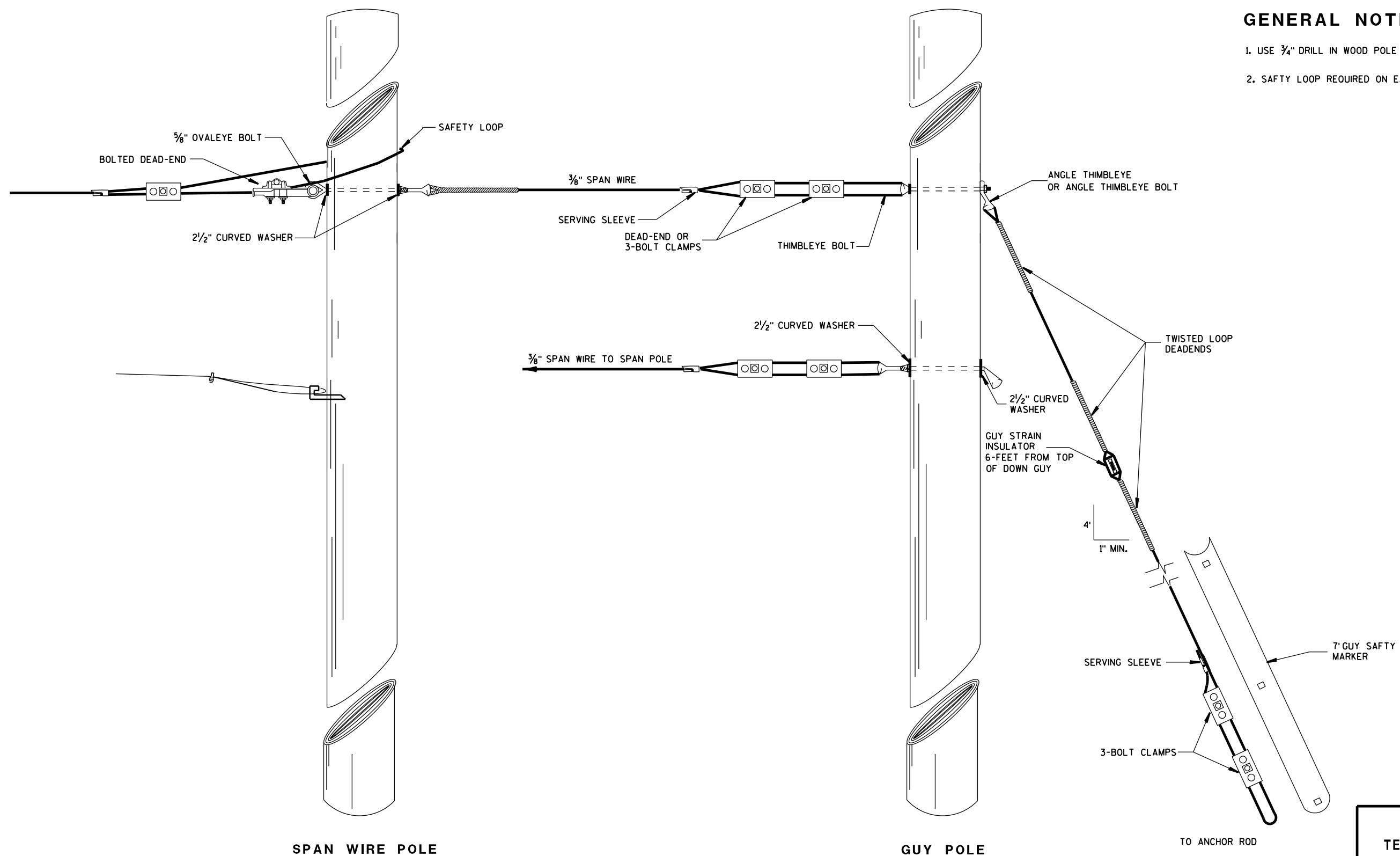


TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 DATE	/S/ Ahmet Demirblek STATE ELECTRICAL ENGINEER
FHWA	



GENERAL NOTES

1. USE $\frac{3}{4}$ " DRILL IN WOOD POLE TO PROVIDE HOLE FOR $\frac{5}{8}$ " BOLTS.
2. SAFTY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.

SPAN WIRE POLE

GUY POLE

TO ANCHOR ROD

TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

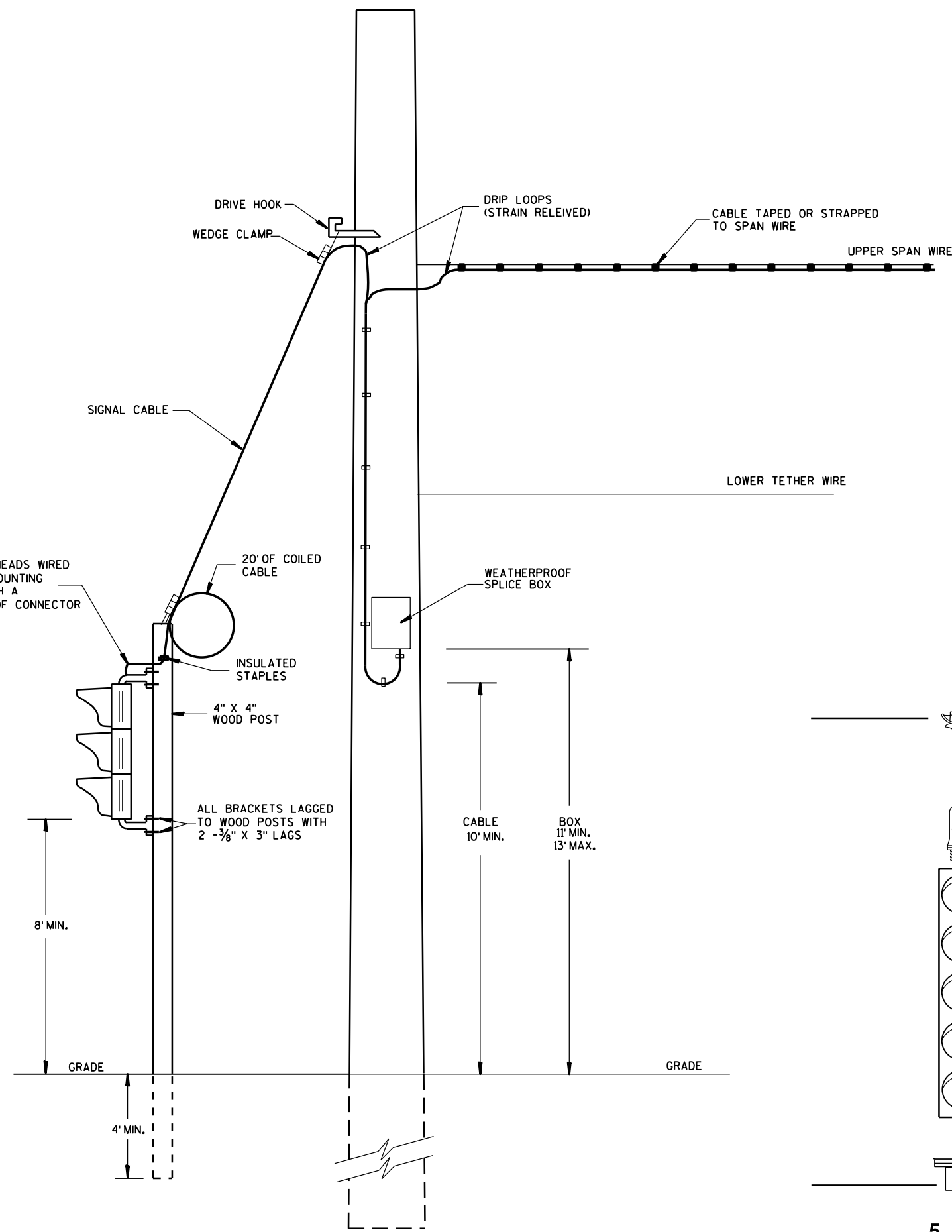
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

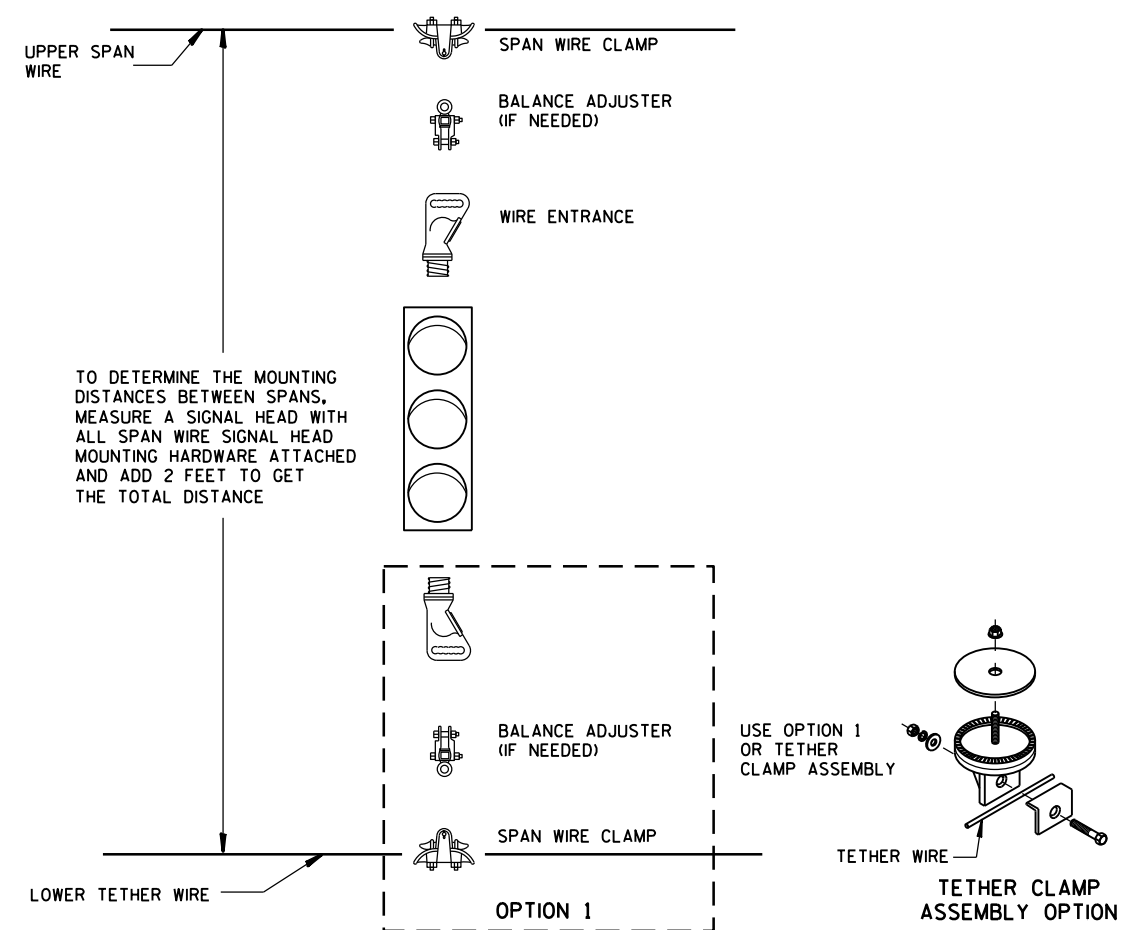
June, 2015
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

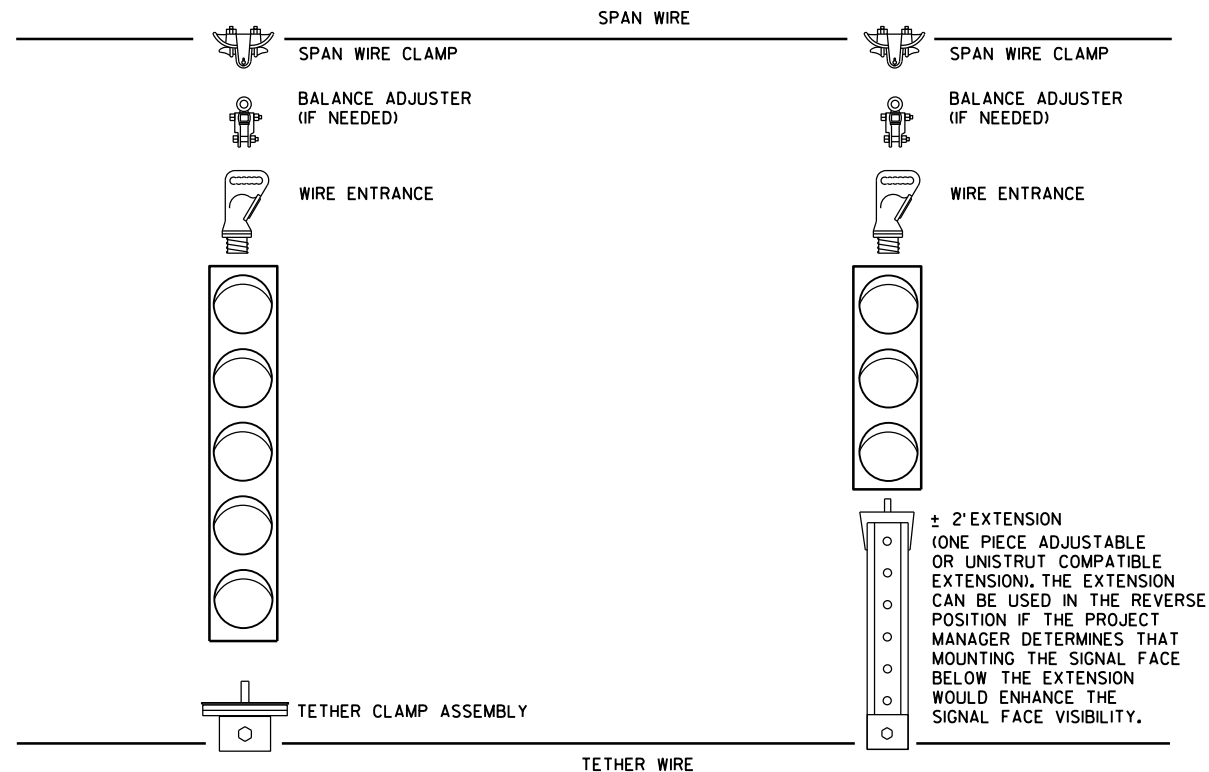
FHWA



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

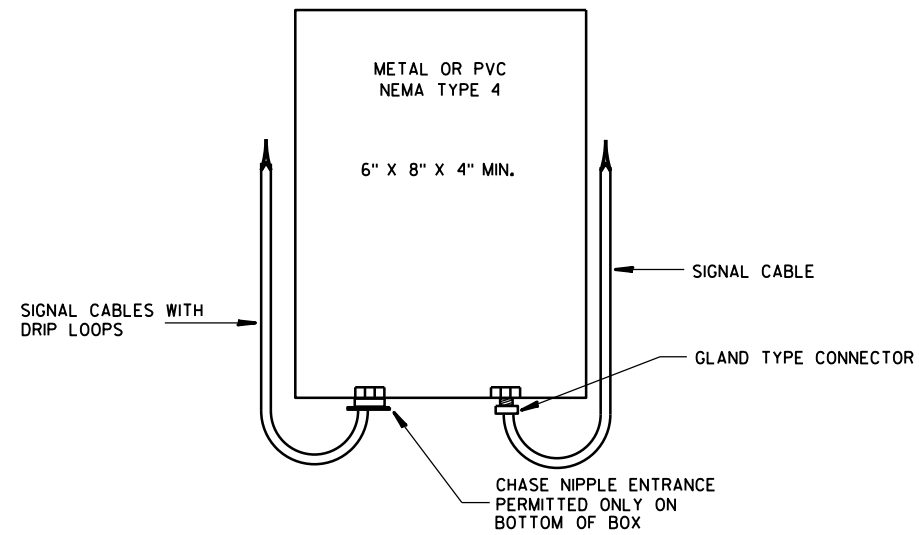
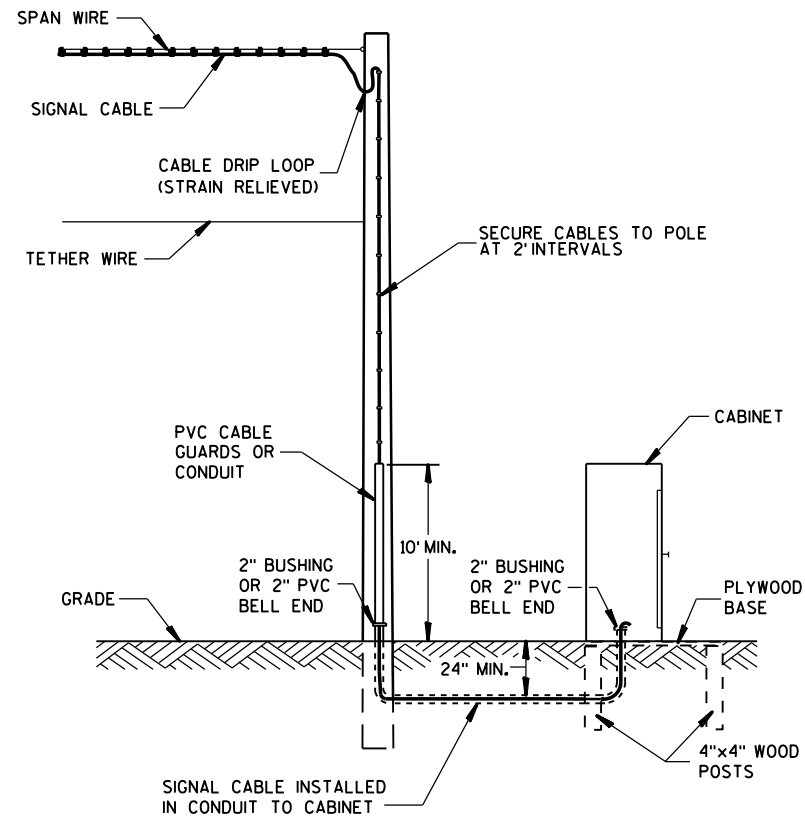


TYPICAL SPAN WIRE MOUNTING HARDWARE

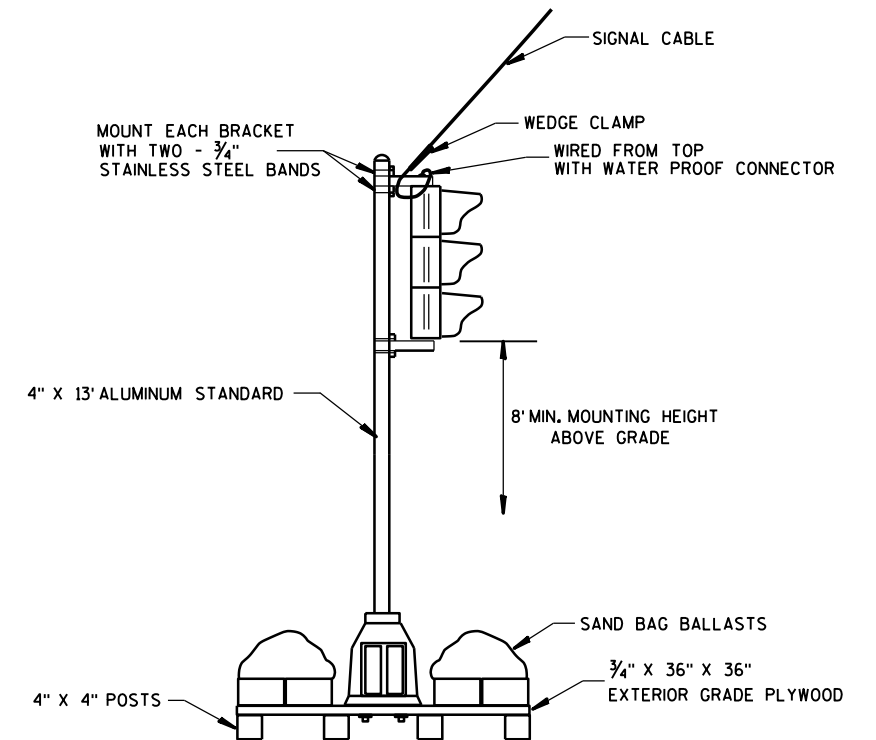


5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE

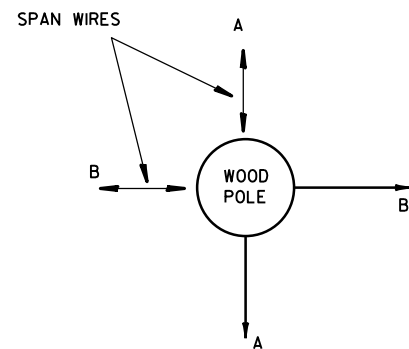
SPAN WIRE TEMPORARY TRAFFIC SIGNAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



SPLICE BOX

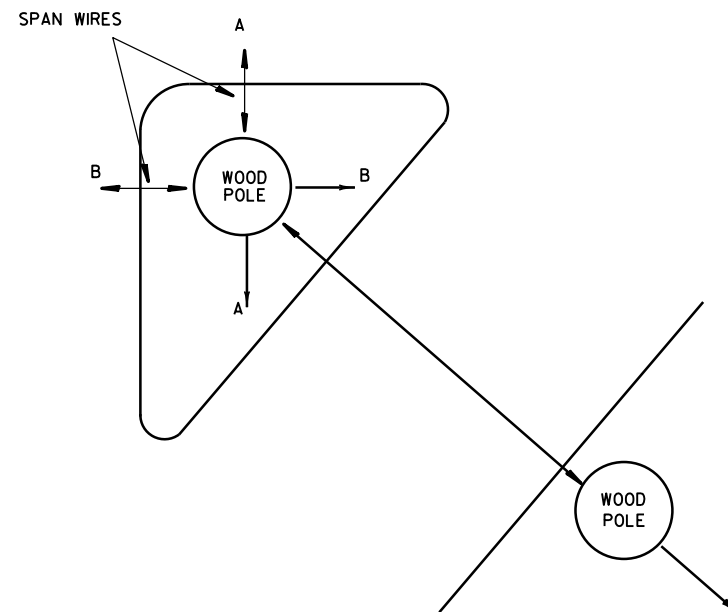


TYPICAL SKID TYPE TEMPORARY

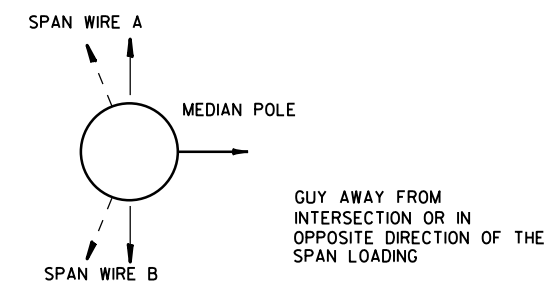


ALL DOWN OR SIDEWALK GUYS SHALL BE INSTALLED IN THE OPPOSITE DIRECTION OF THE STRAIN OF THE SPAN WIRE

CORNER POLES



ISLAND POLES



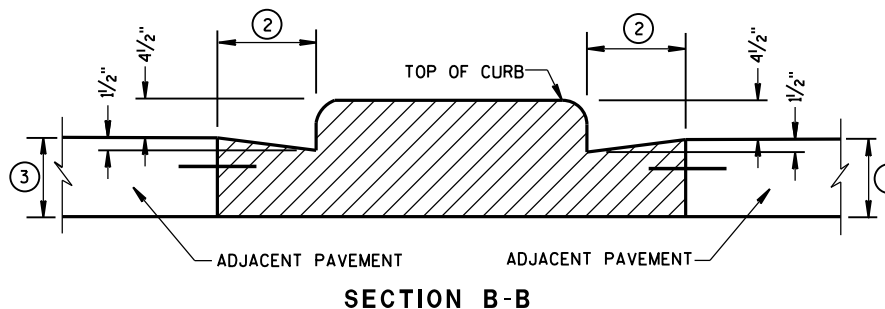
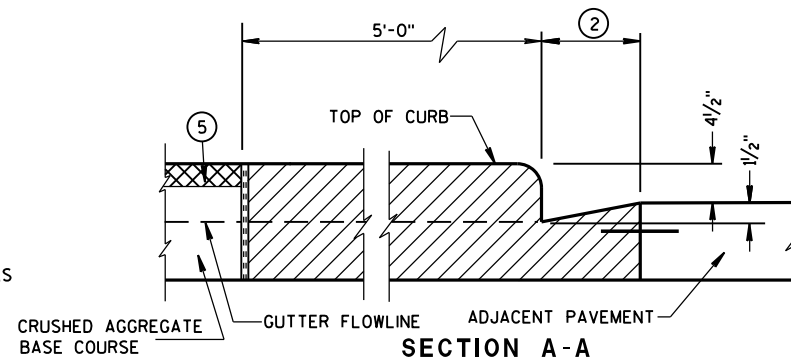
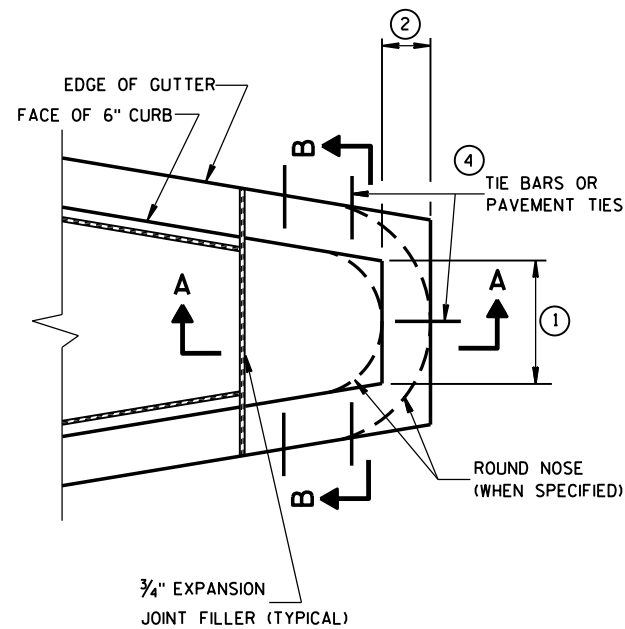
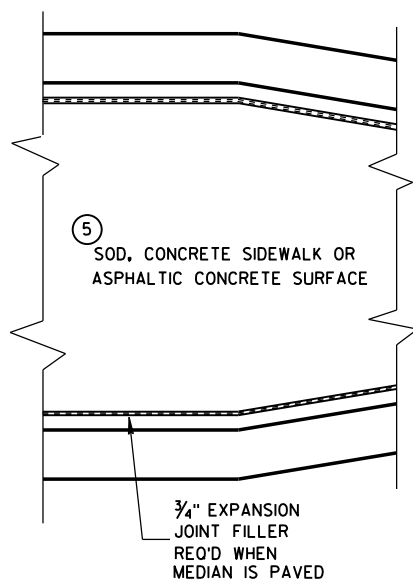
MEDIAN POLES

**SPAN WIRE
TEMPORARY TRAFFIC SIGNAL**

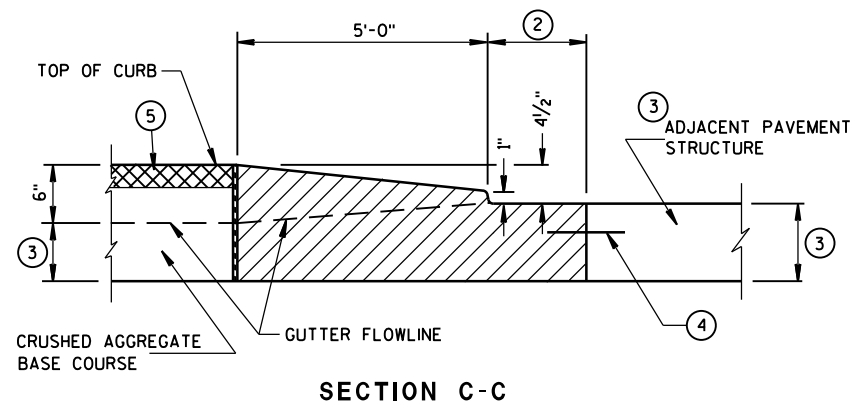
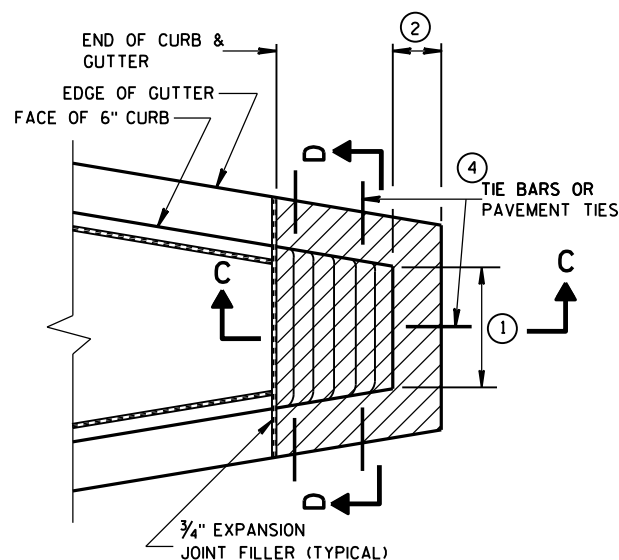
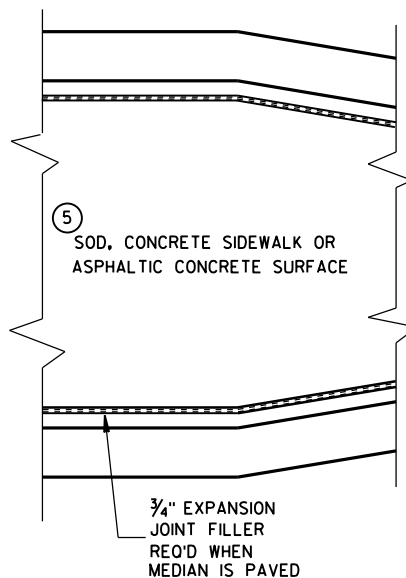
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
FHWA

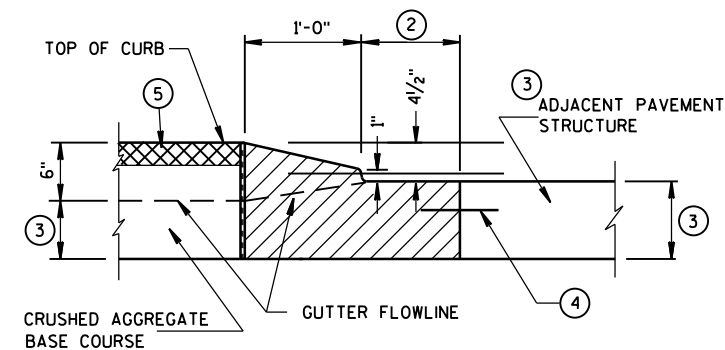
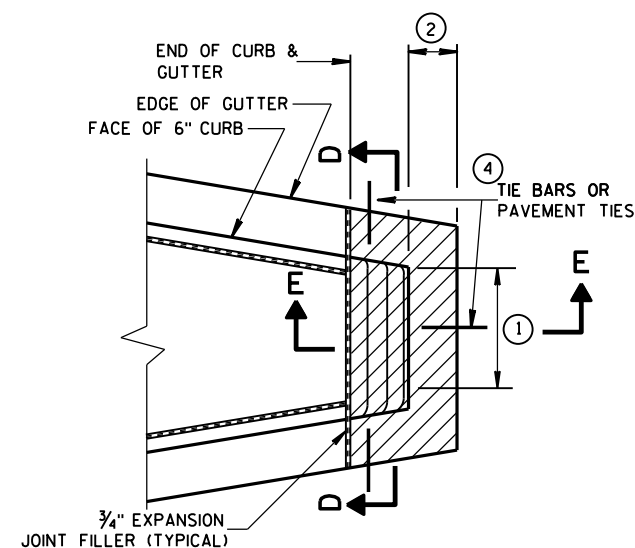
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER



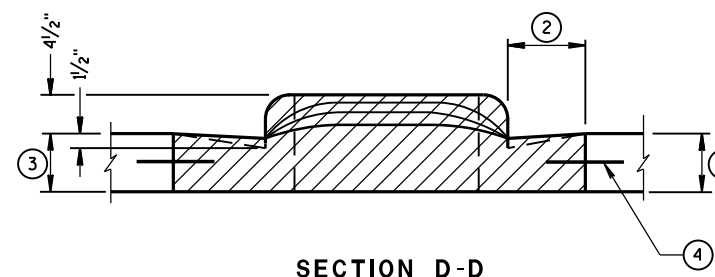
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



GENERAL NOTES

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

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

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

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

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

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

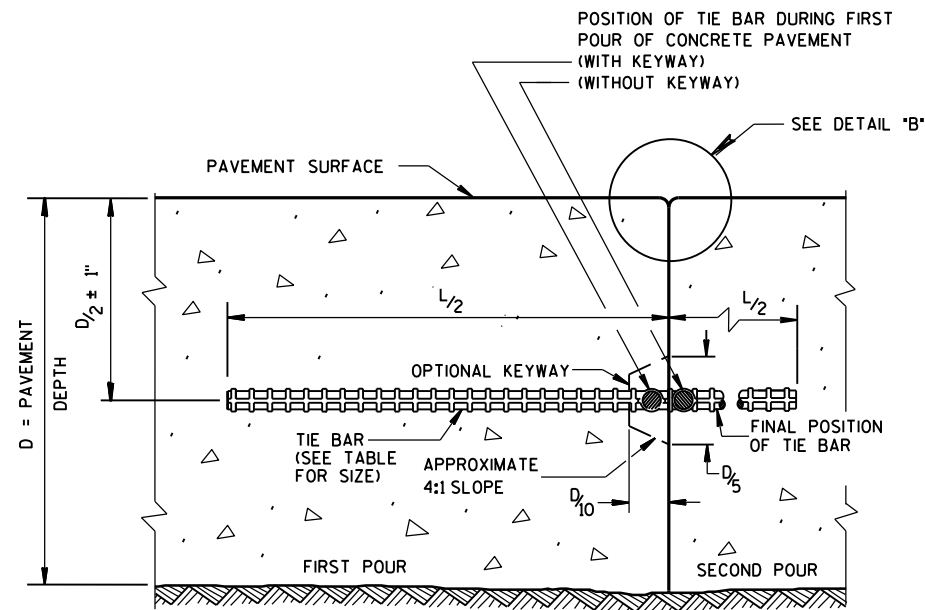
APPROVED

6/8/2006

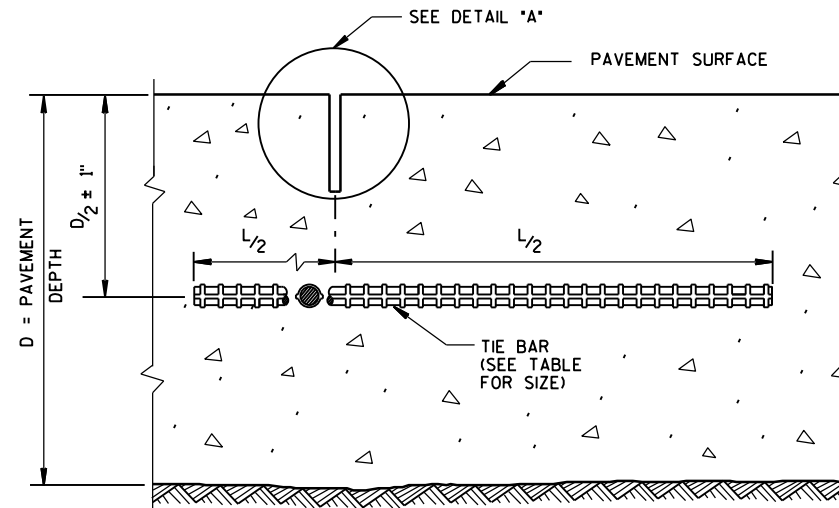
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



CONSTRUCTION JOINT



SAWED JOINT

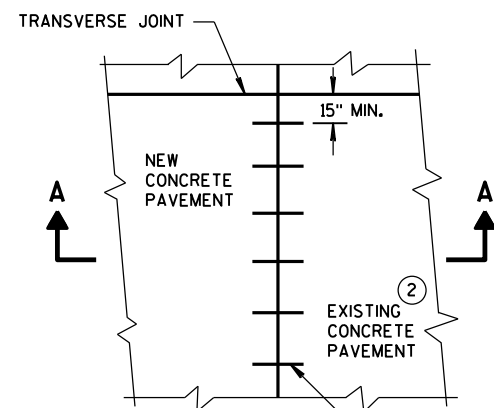
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

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

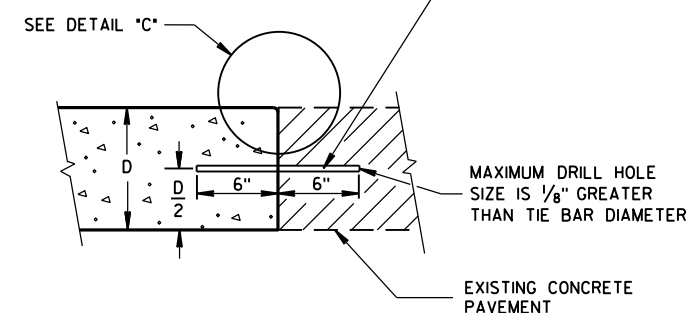
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

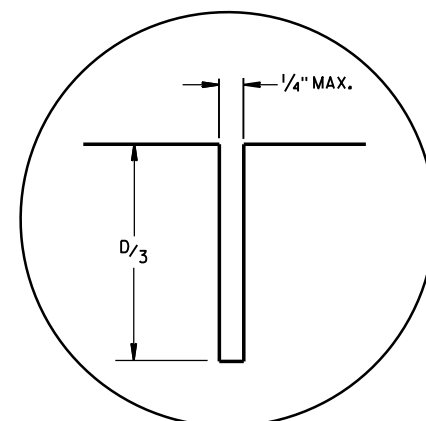


PLAN VIEW

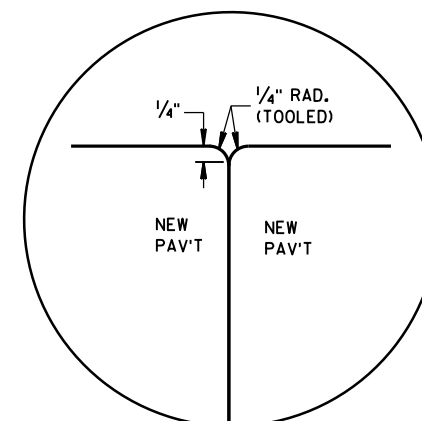
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



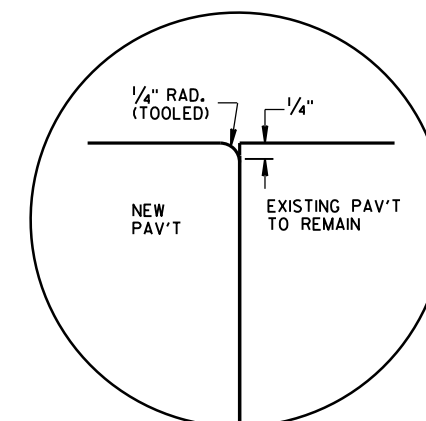
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"



DETAIL "B"



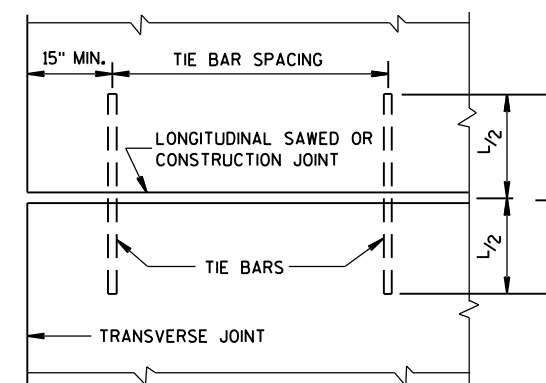
DETAIL "C"

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

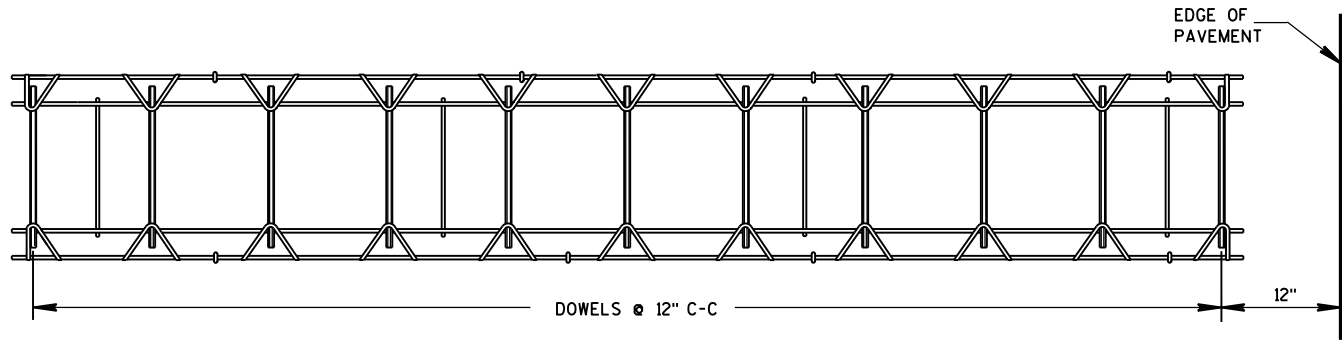
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

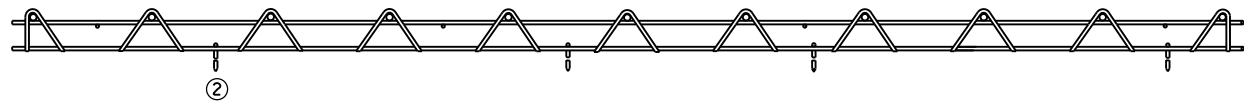
June, 2015
DATE

FHWA

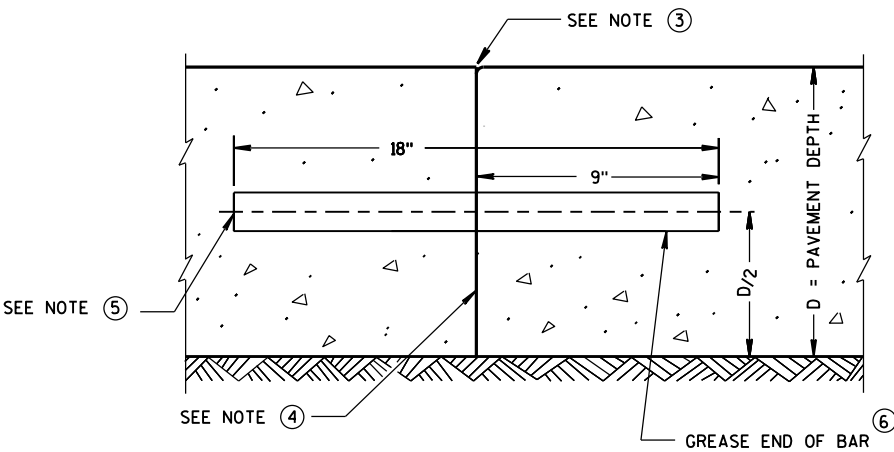
/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR



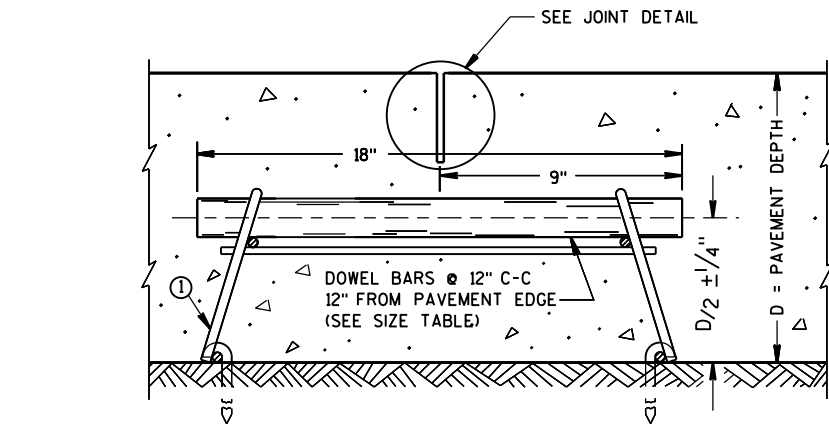
PLAN VIEW



SIDE VIEW
CONTRACTION JOINT DOWEL ASSEMBLY



TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

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

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

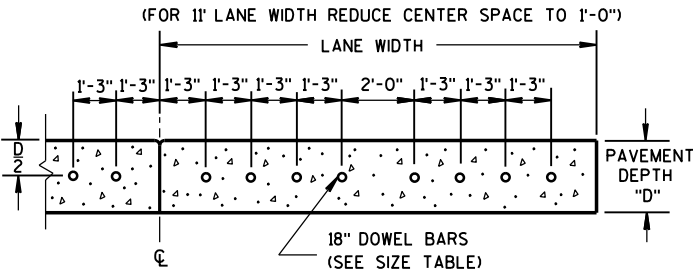
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

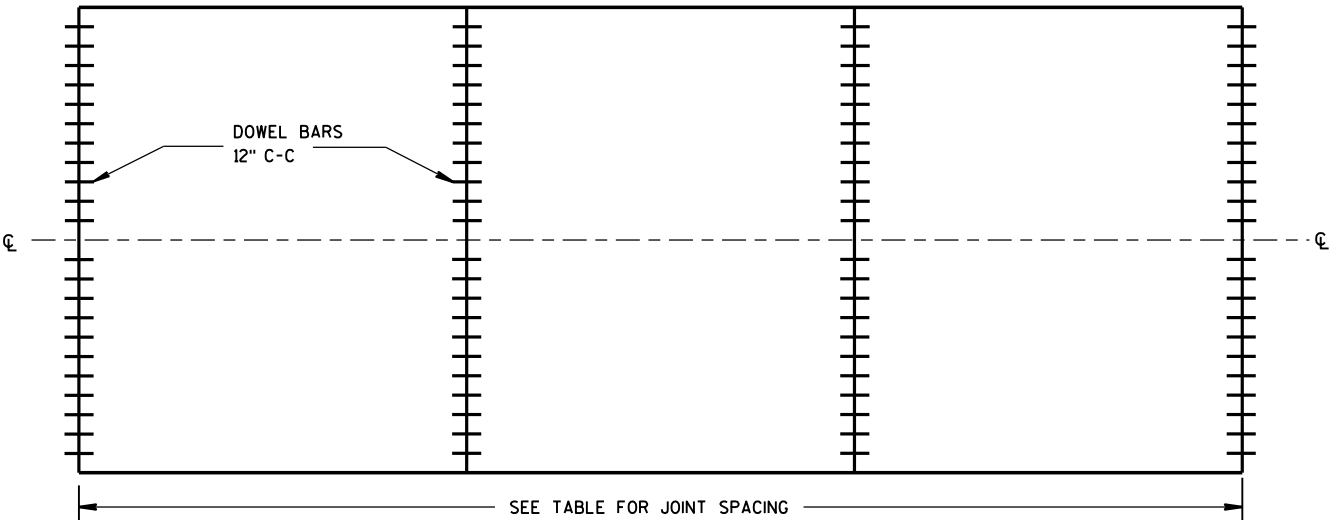
CONSTRUCTION JOINTS

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

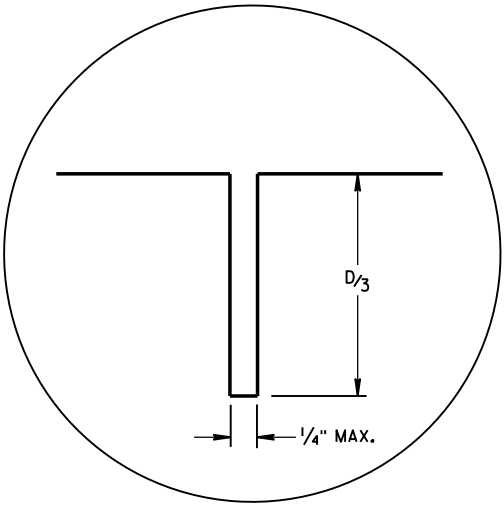
- OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH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



DRILLED DOWEL BAR CONSTRUCTION JOINT



CONTRACTION JOINT LOCATIONS

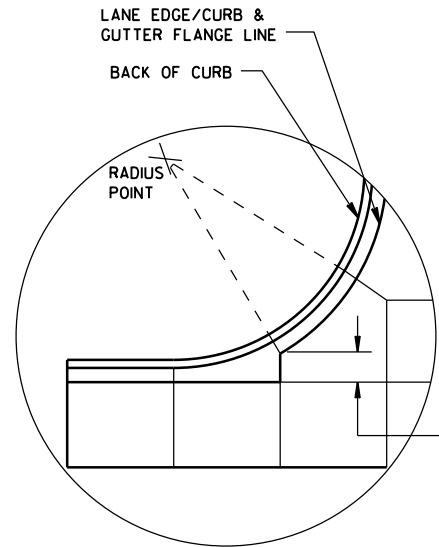


JOINT DETAIL

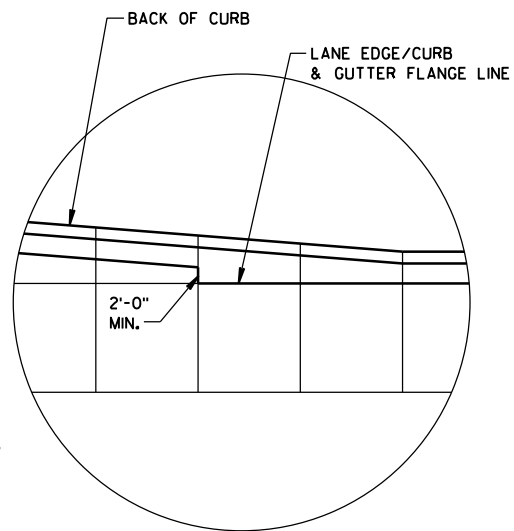
URBAN DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

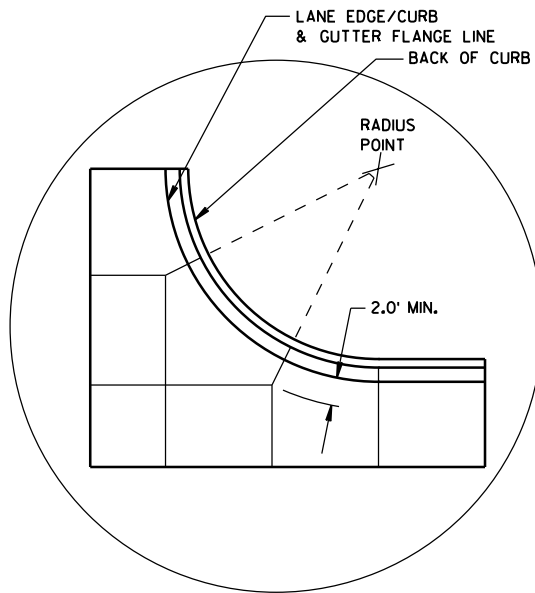
APPROVED
5/3/2013 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DESIGN ENGINEER
FHWA



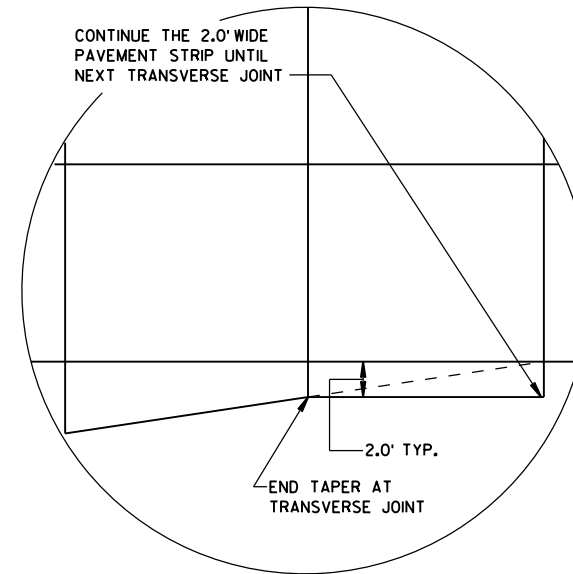
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

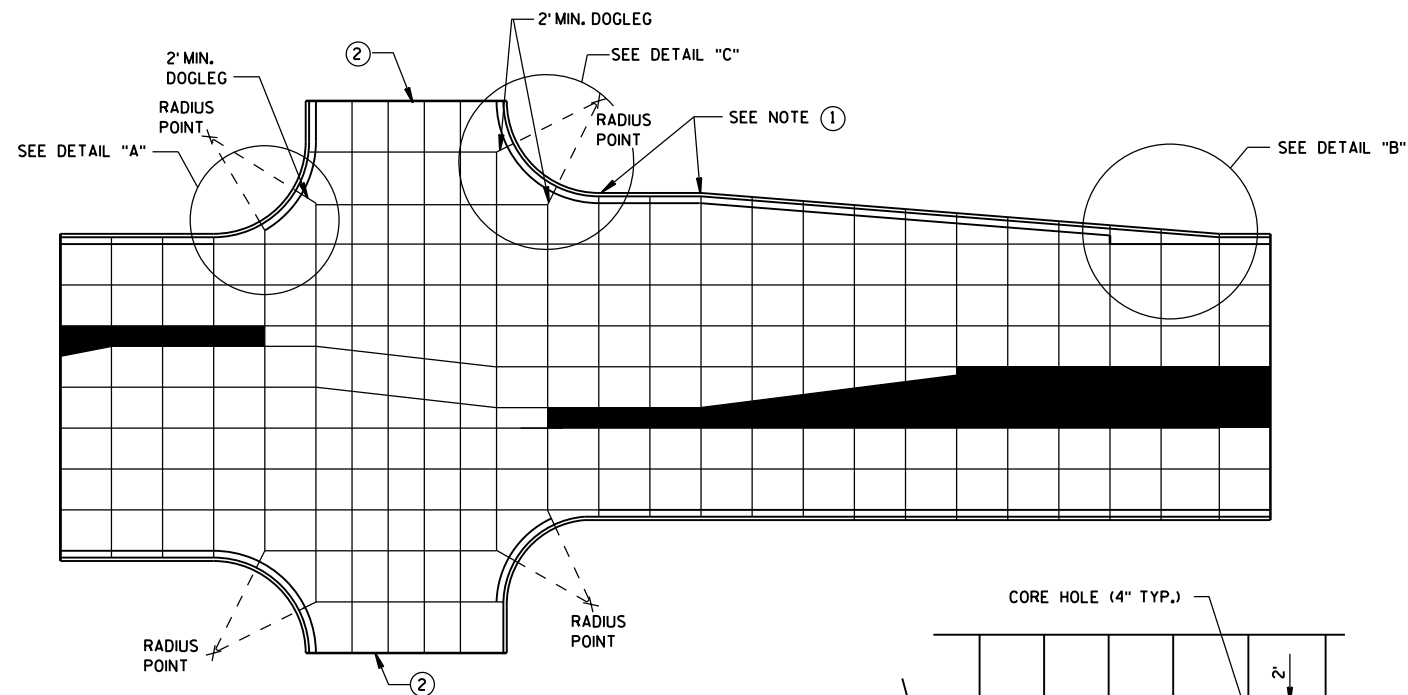
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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

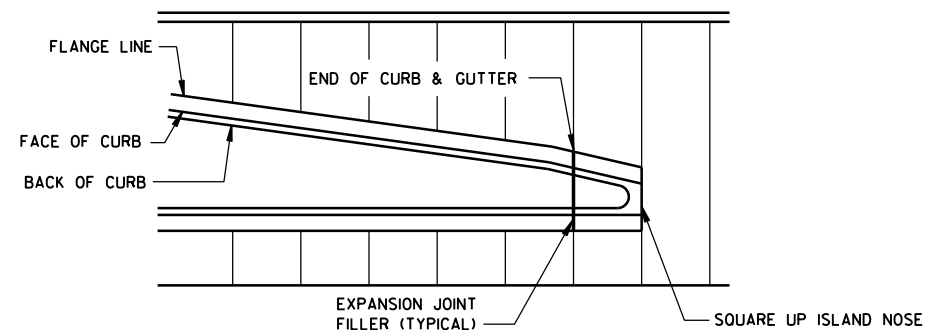
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

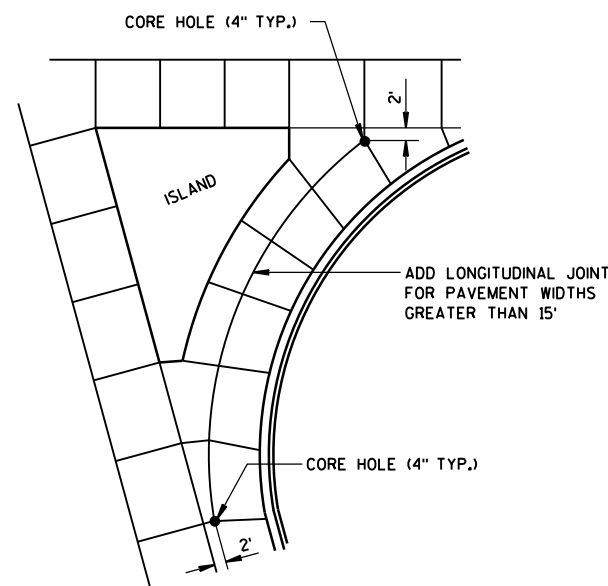
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



STANDARD INTERSECTION



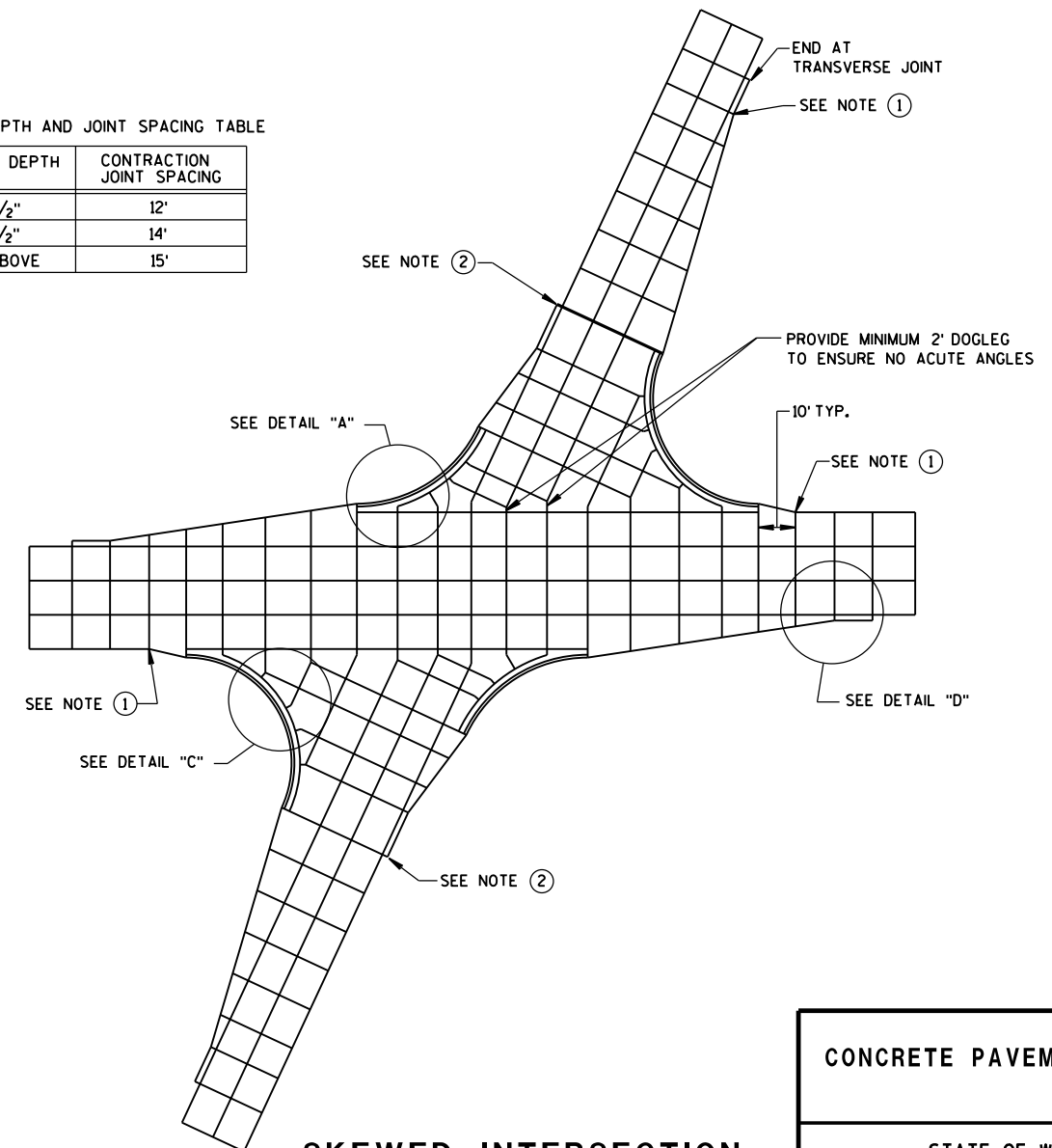
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

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



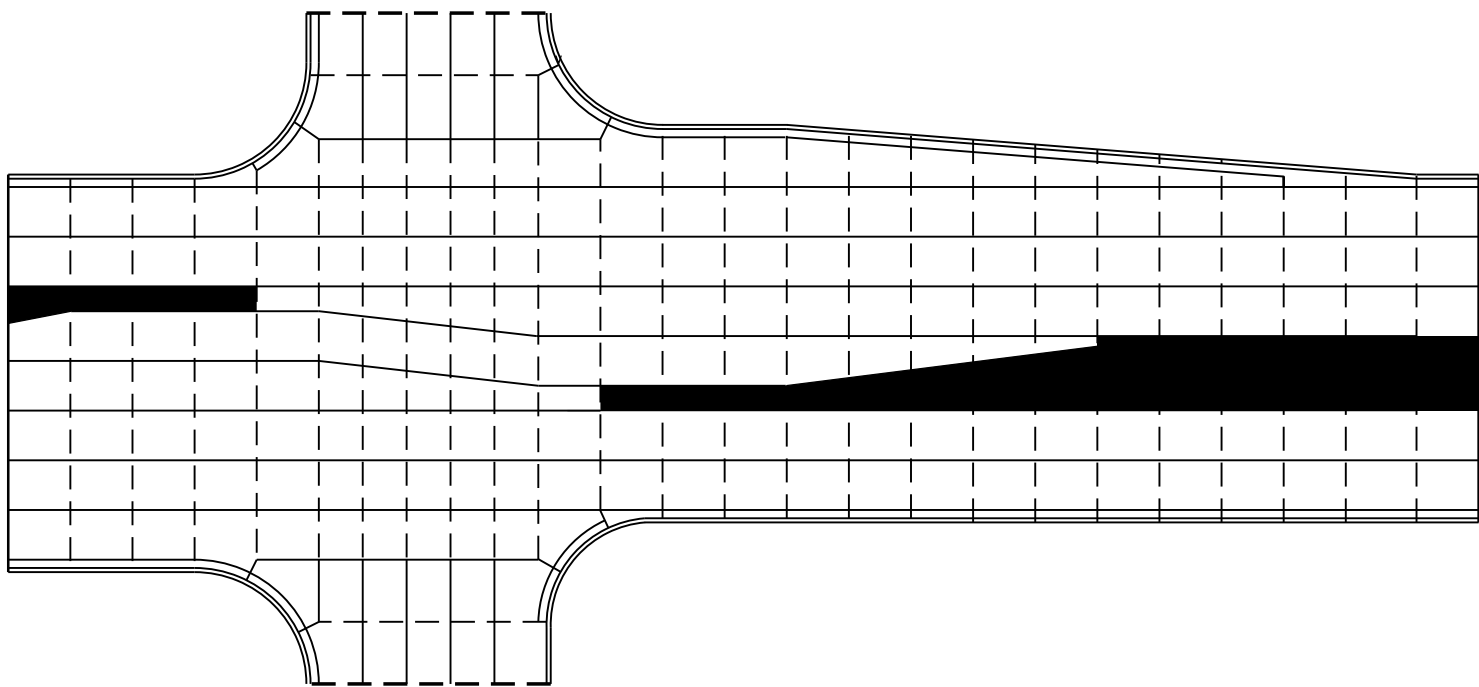
SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

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LEGEND

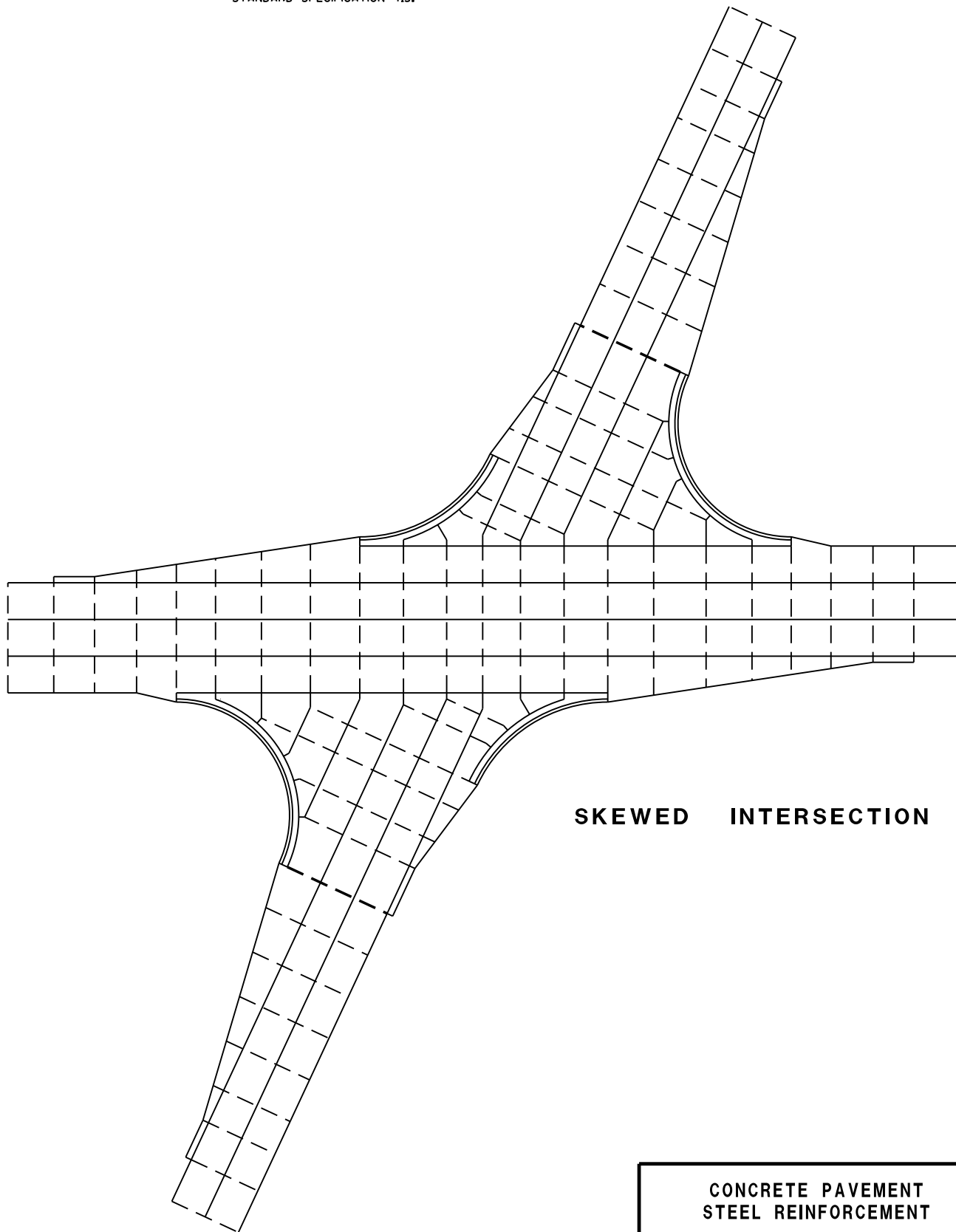
- POTENTIAL DOWELED EXPANSION JOINT
- - - DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

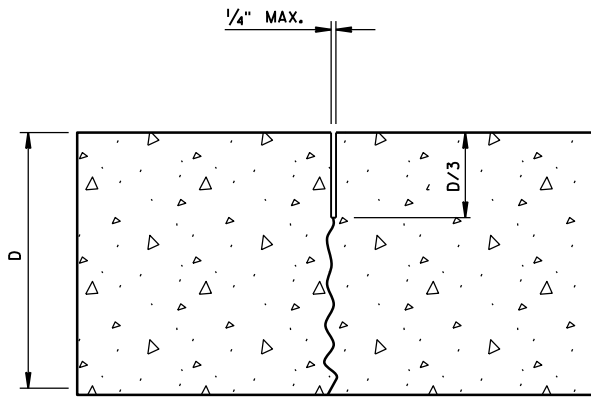
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



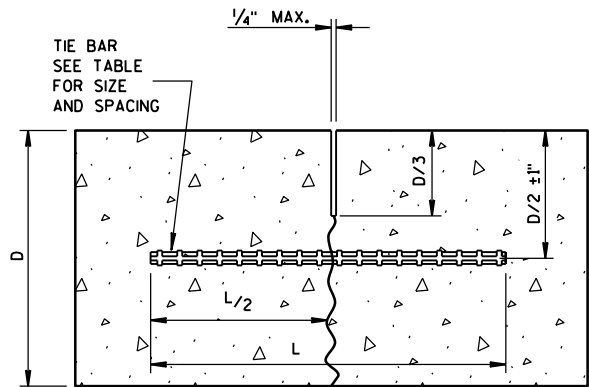
SKewed INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

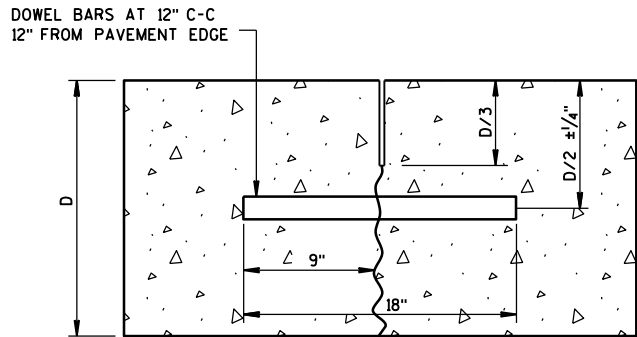
STATE OF WISCONSIN
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UNDOWELED-TRANSVERSE



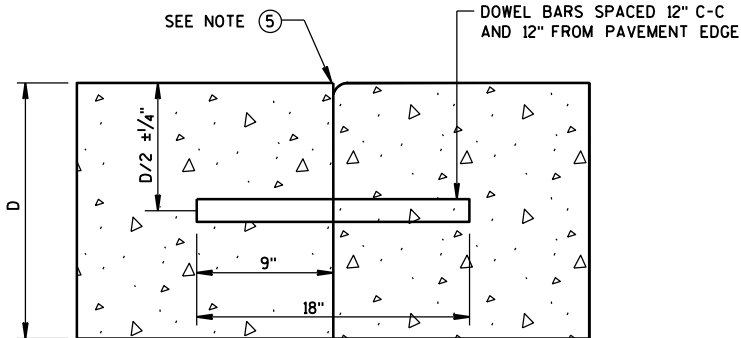
TIED LONGITUDINAL



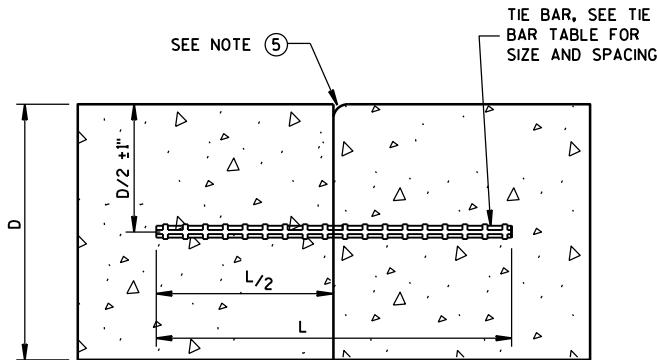
DOWELED-TRANSVERSE

CONTRACTION JOINTS

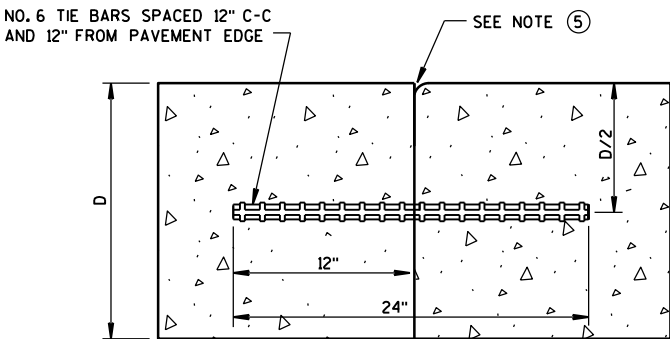
SEE NOTE ②



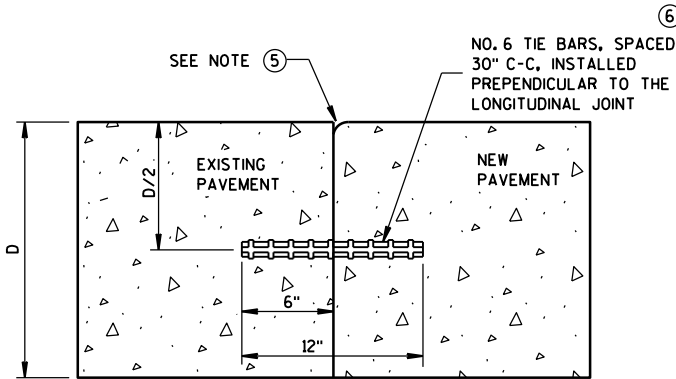
DOWELED TRANSVERSE ③



TIED LONGITUDINAL



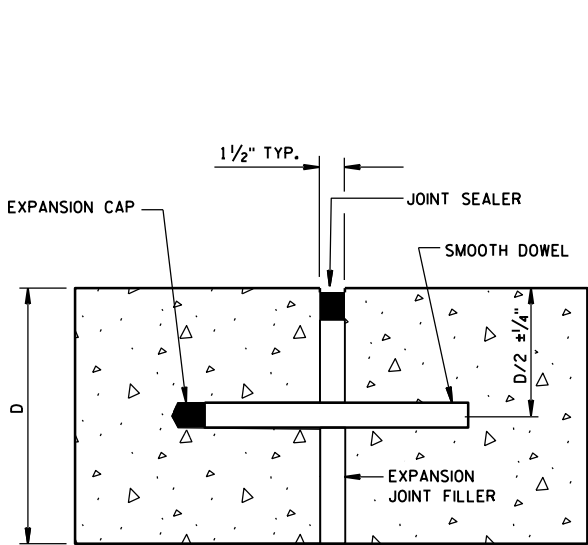
TIED TRANSVERSE ③
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



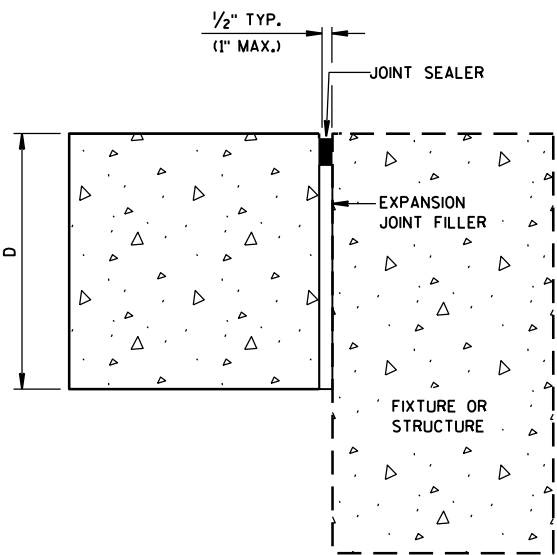
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE ④



DOWELED-TRANSVERSE
SEE NOTE ①



UNTIED-LONGITUDINAL

EXPANSION JOINTS

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

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

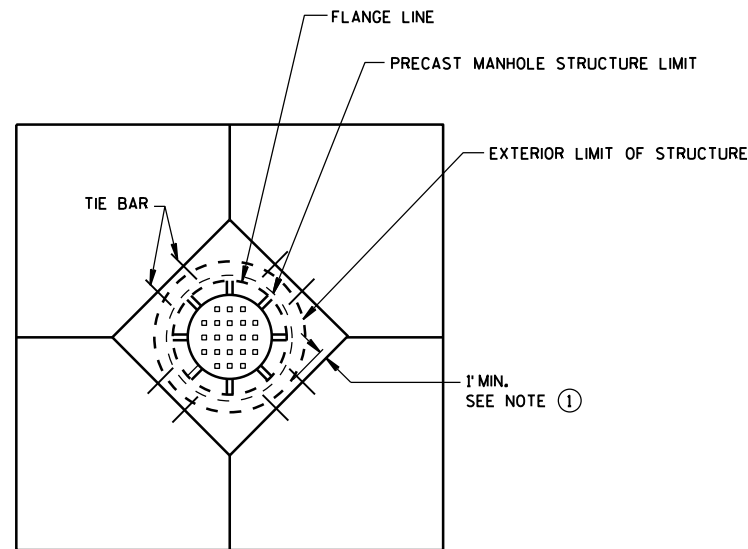
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

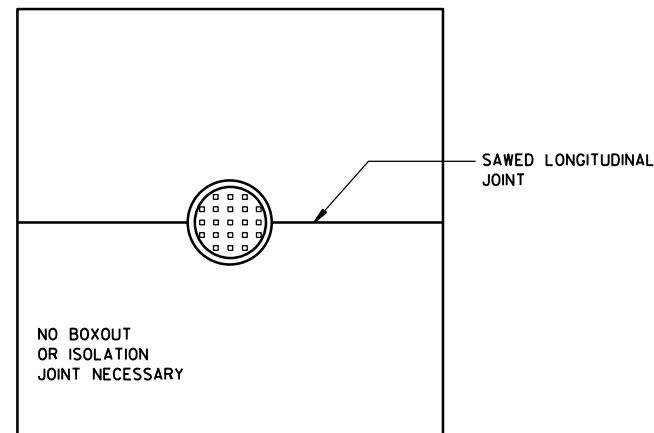
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM 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-INCH RADIUS.
- ⑥ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

CONCRETE PAVEMENT
JOINT TYPES

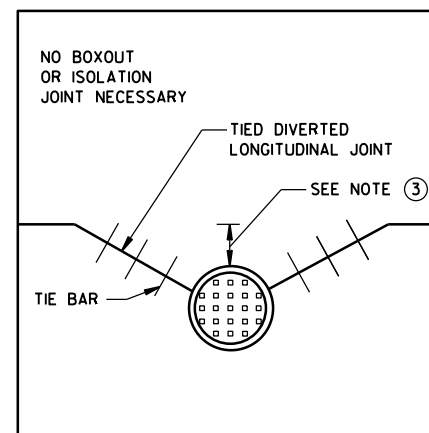
STATE OF WISCONSIN
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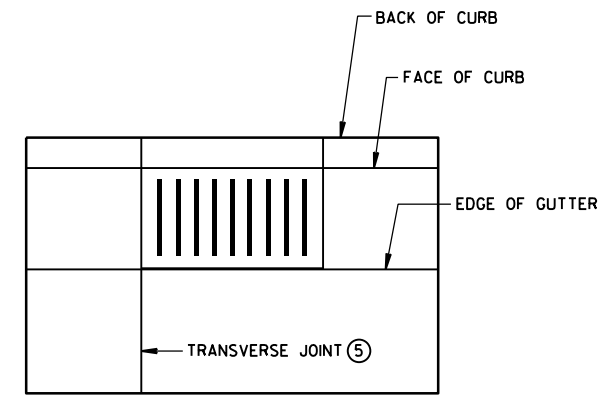
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



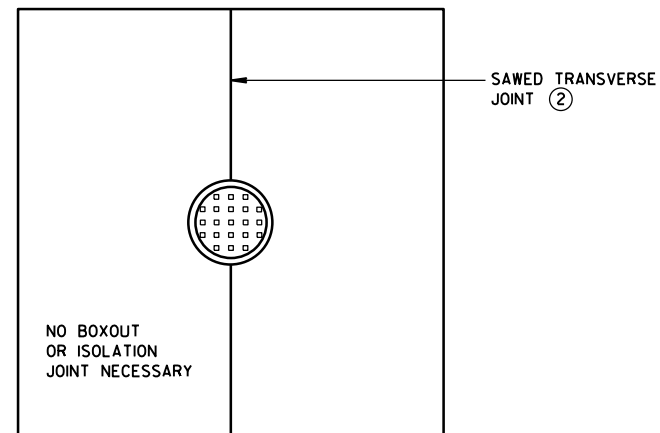
**MANHOLE WITH
LONGITUDINAL JOINT**



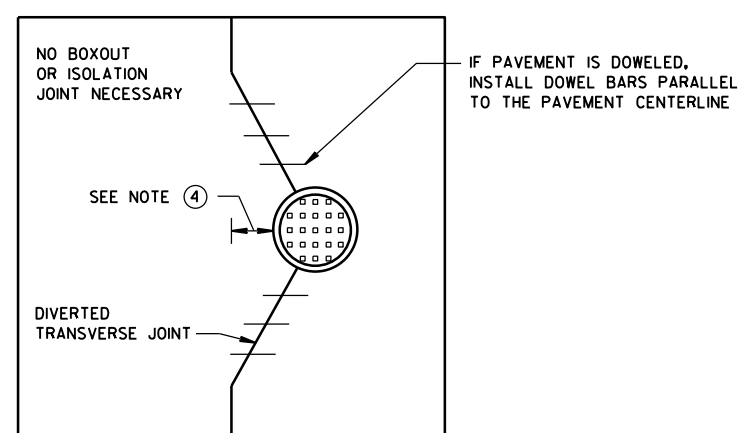
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**

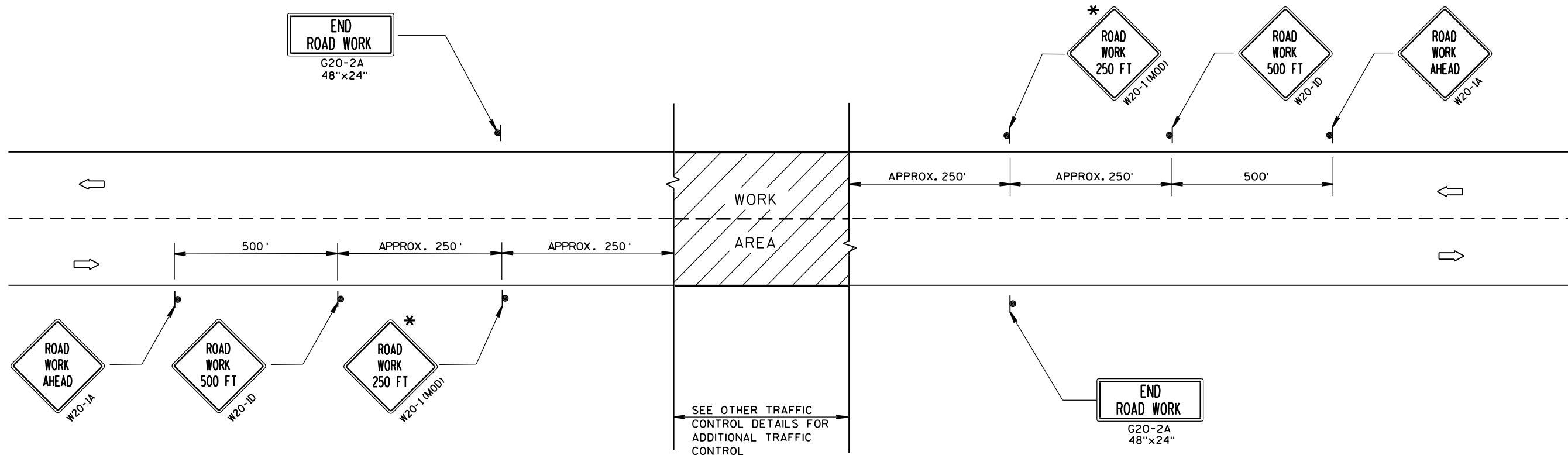


**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

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 REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 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 REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept., 2016 DATE	/S/ Peter Kemp, P.E. PAVEMENT SUPERVISOR
FHWA	



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

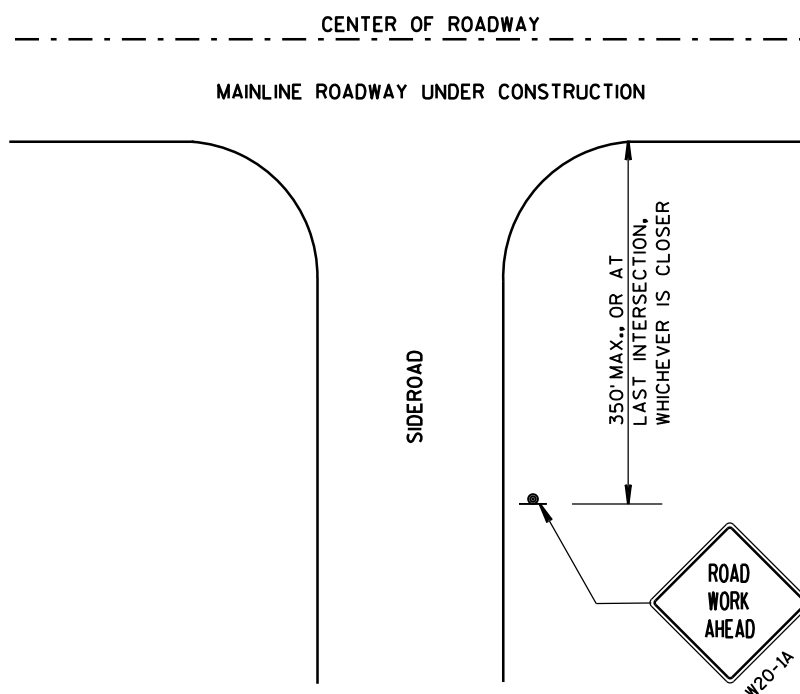
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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



LEGEND

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

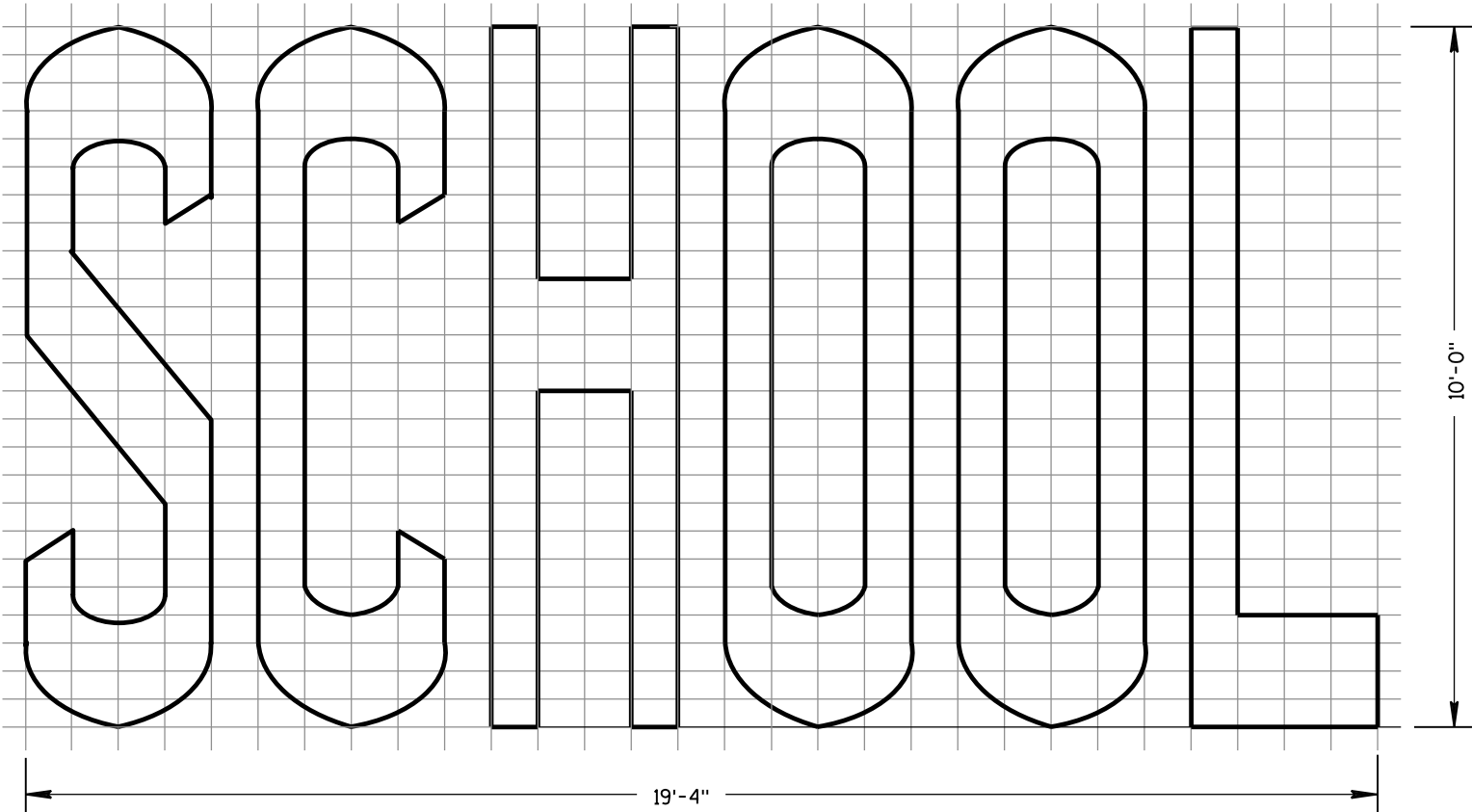
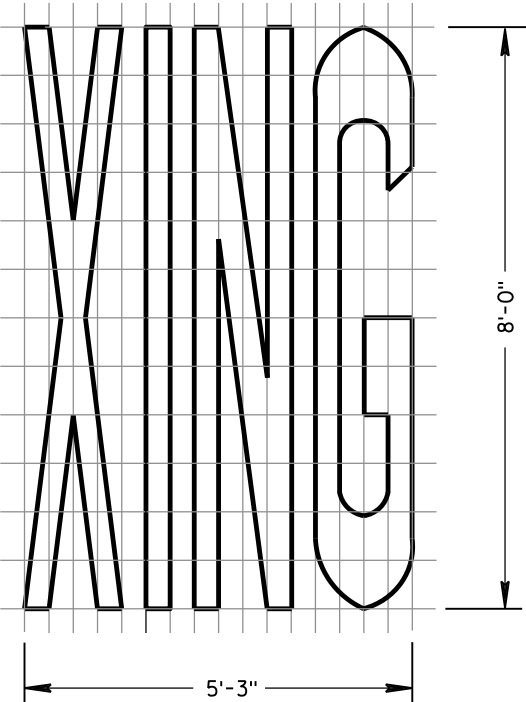
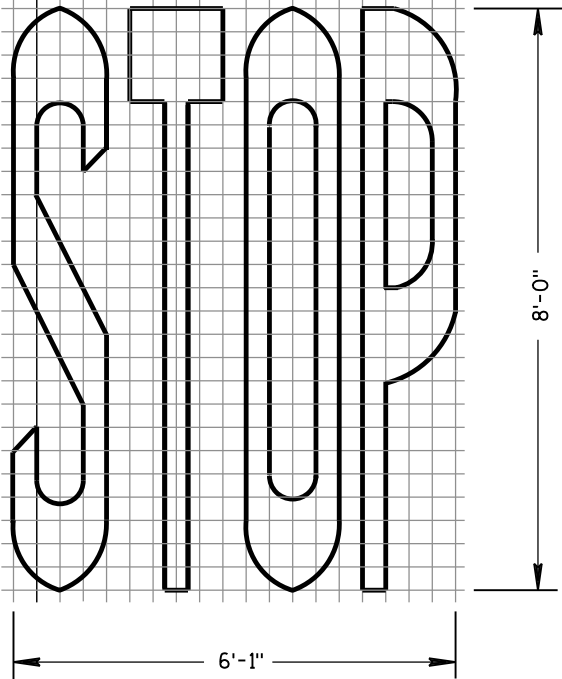
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

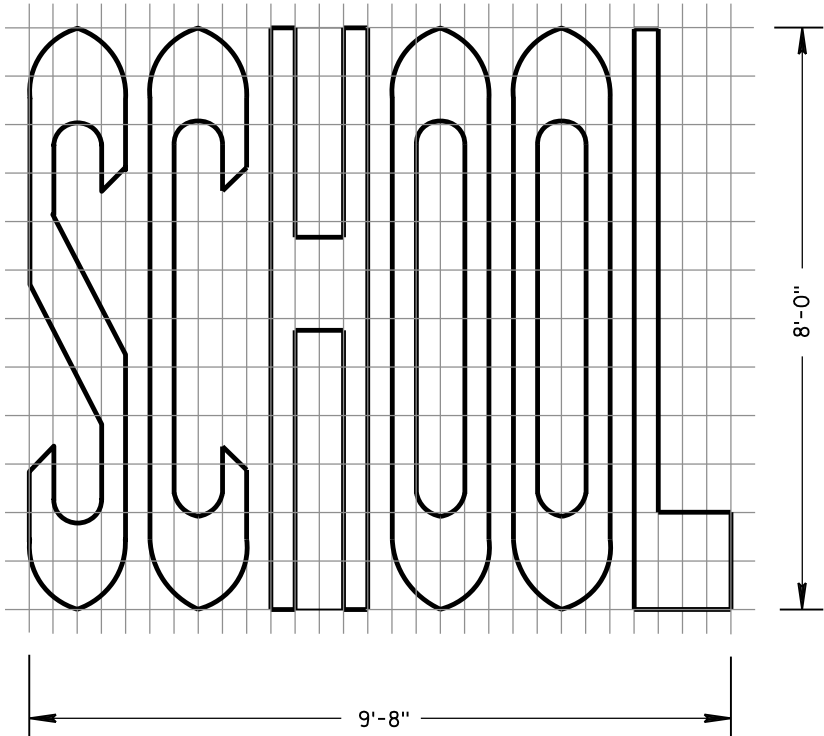
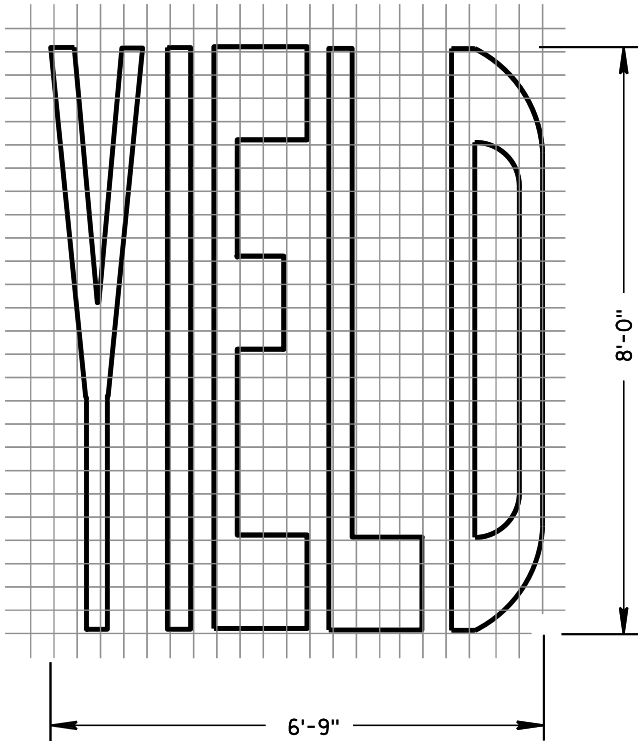
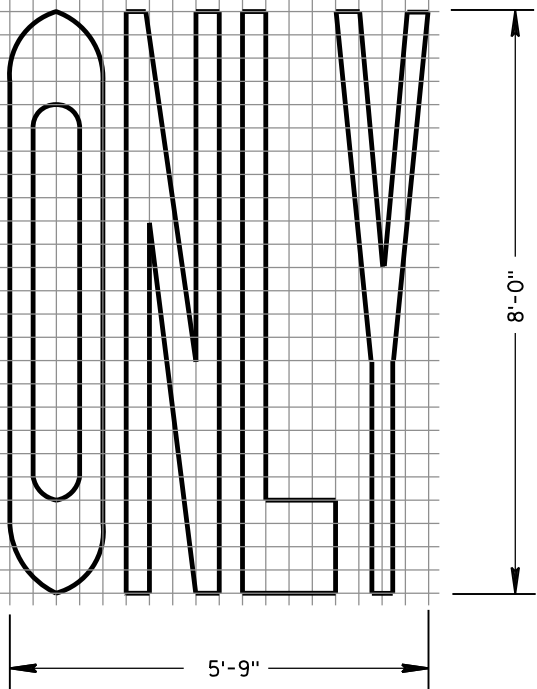
APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

GENERAL NOTES

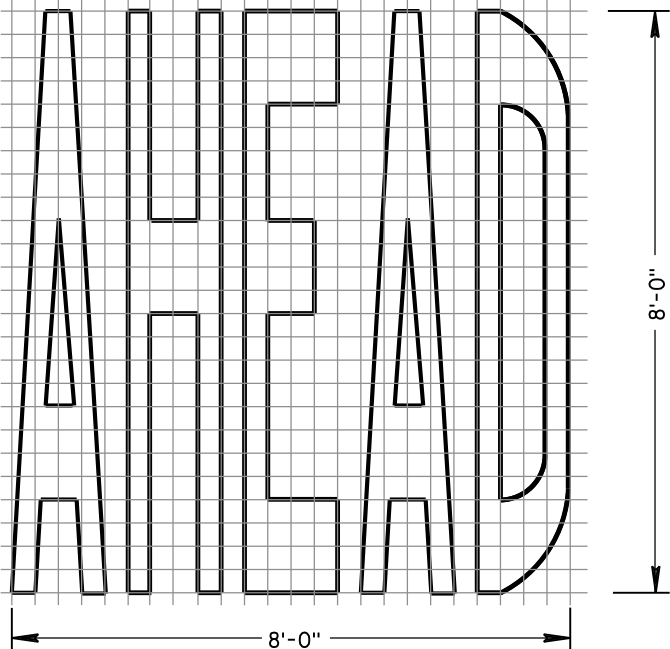
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TWO-LANE



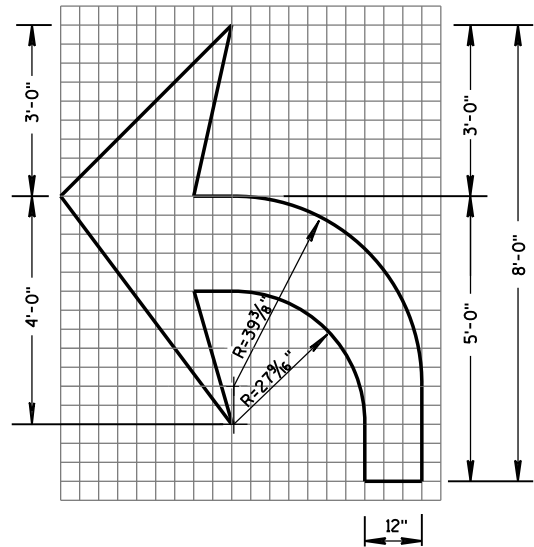
SINGLE-LANE



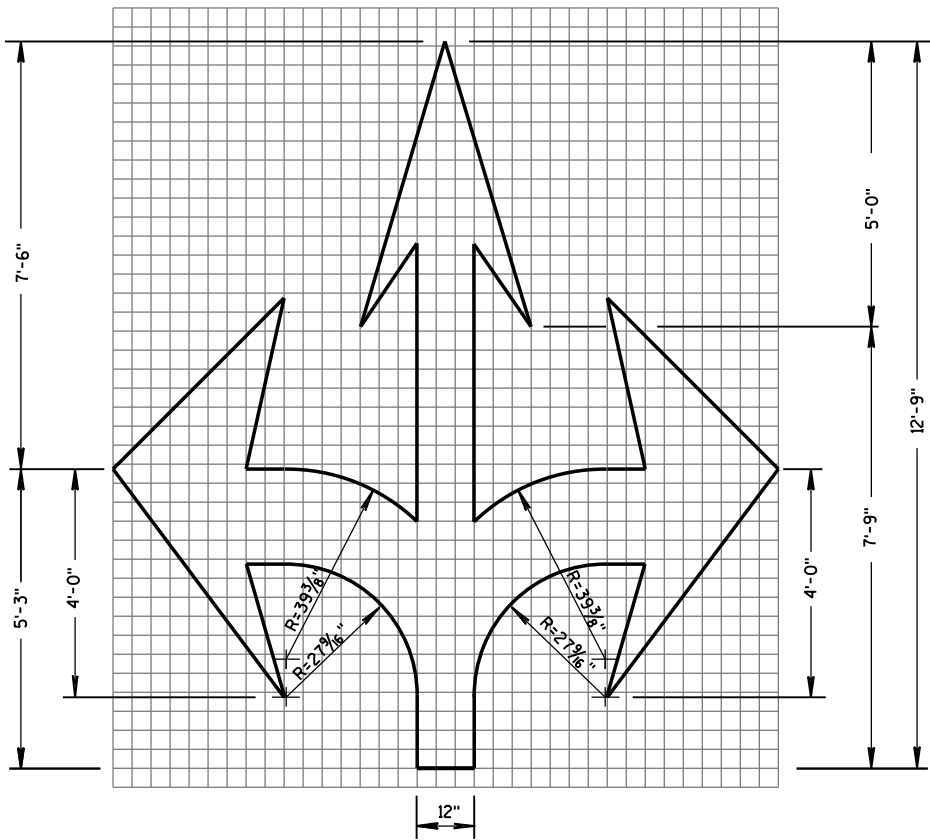
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

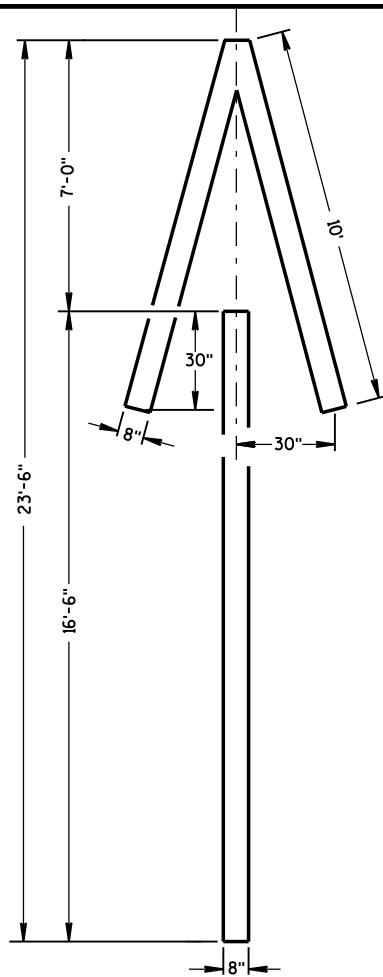
APPROVED
4-18-16 DATE /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA



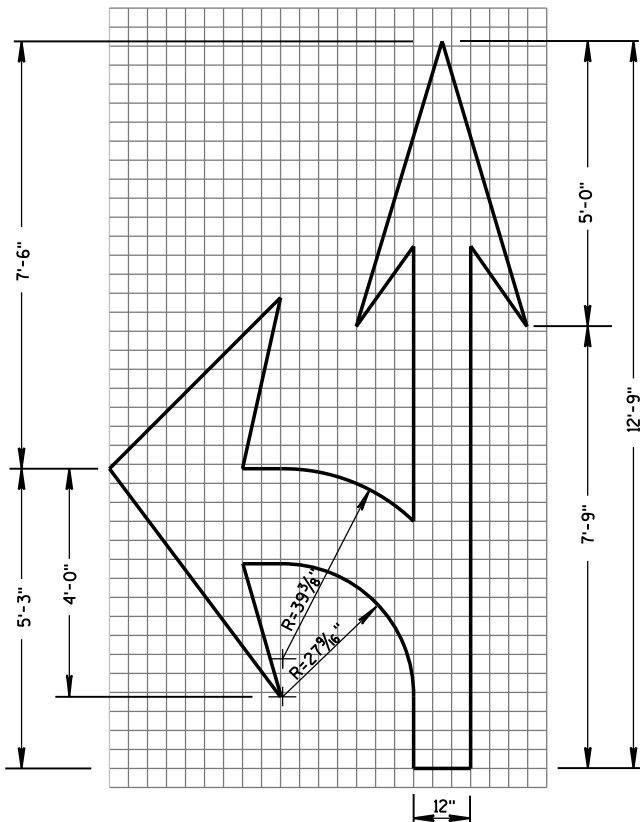
TYPE 2



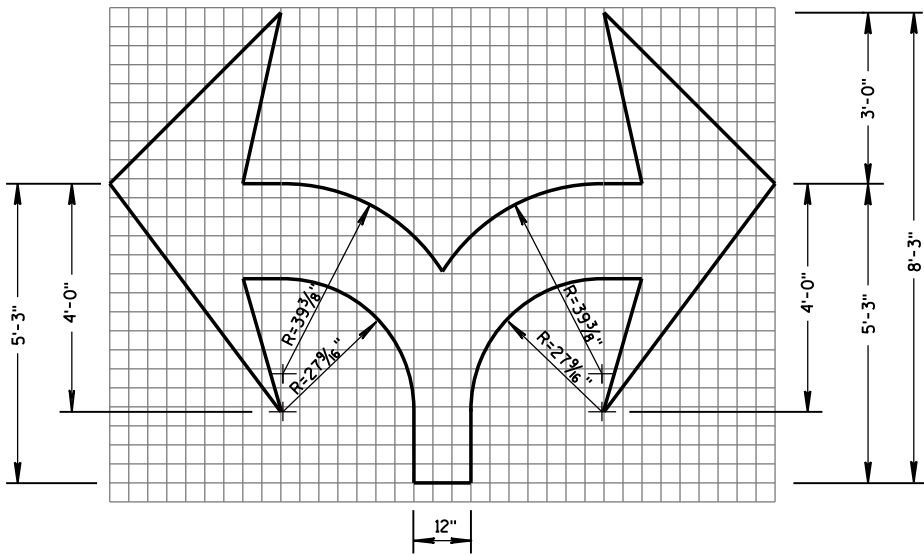
TYPE 6



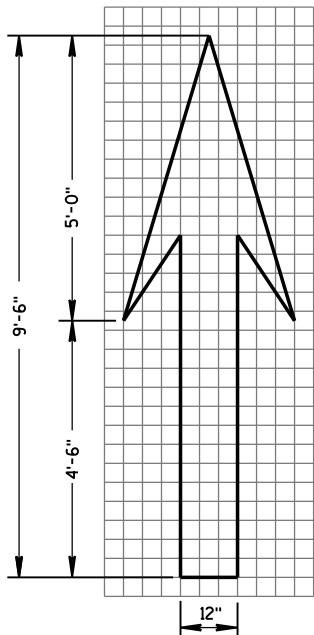
TYPE 4



TYPE 3



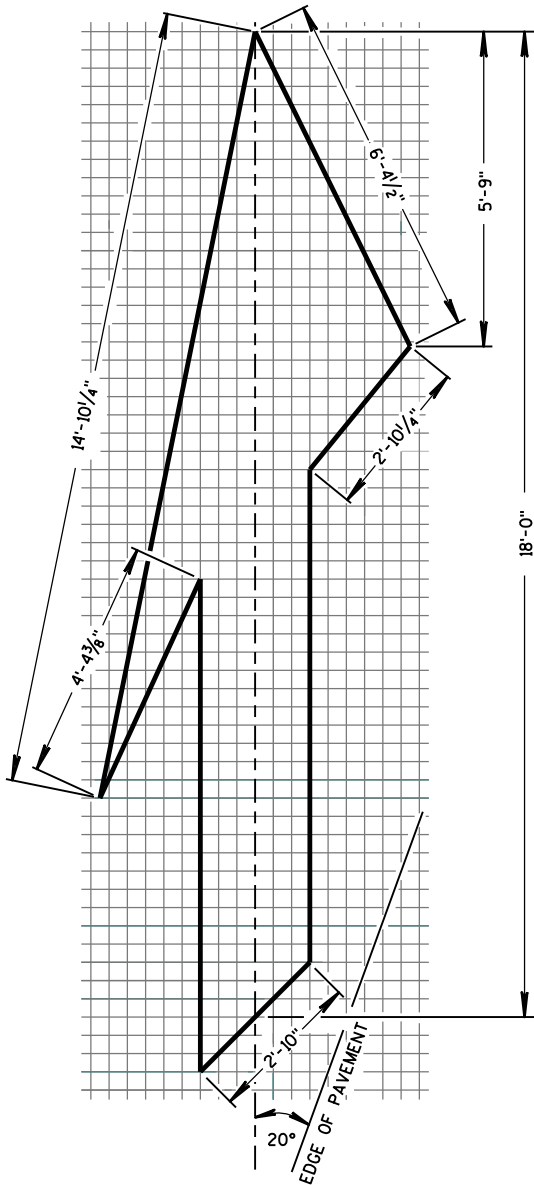
TYPE 7



TYPE 1

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.

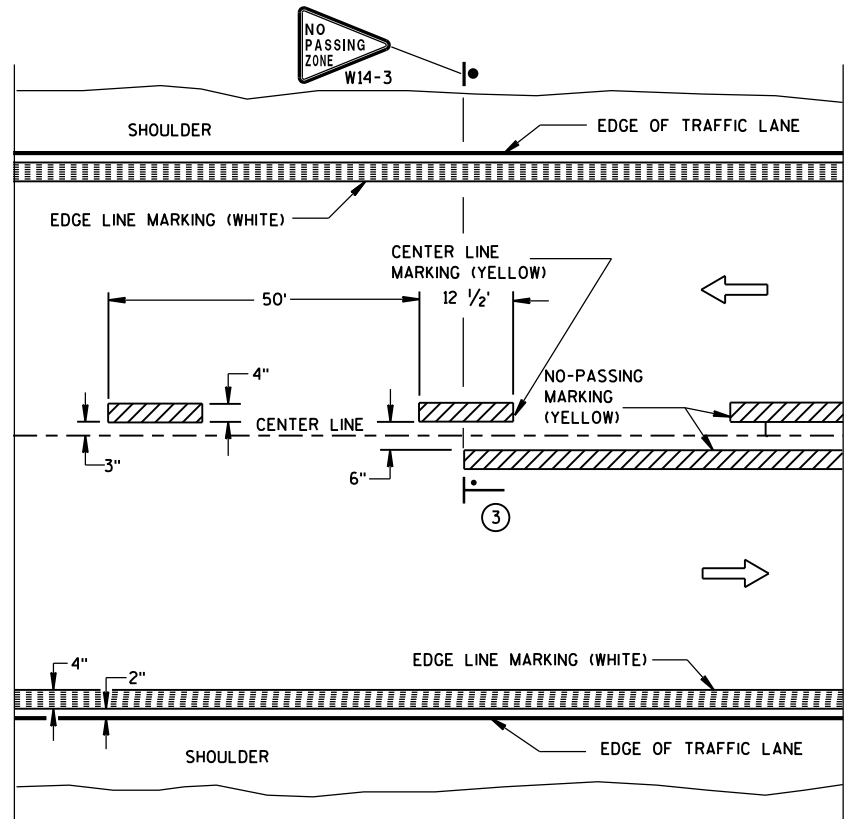


TYPE 5 LANE DROP ARROW

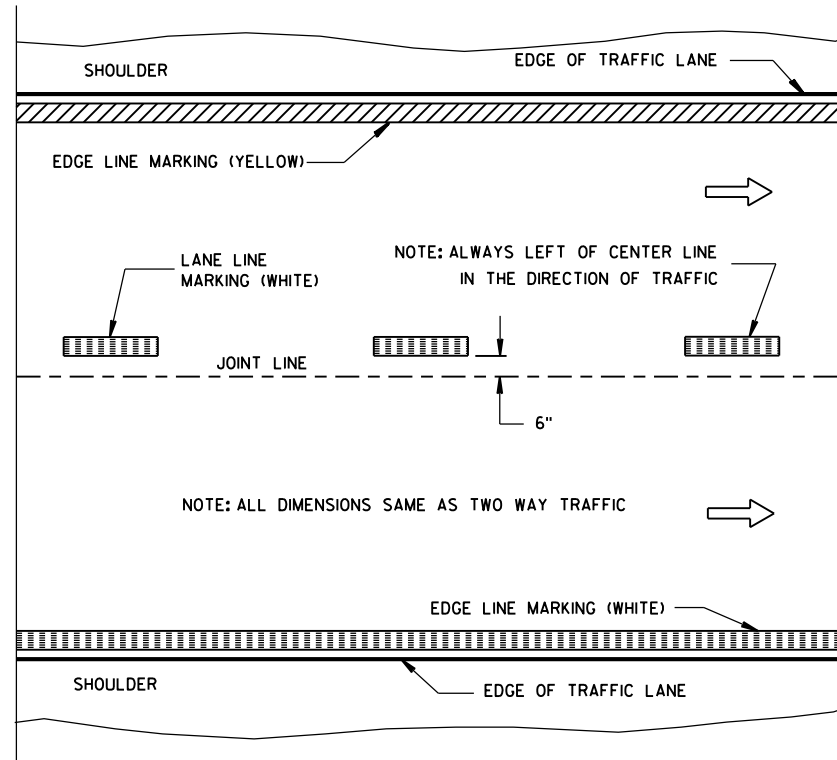
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

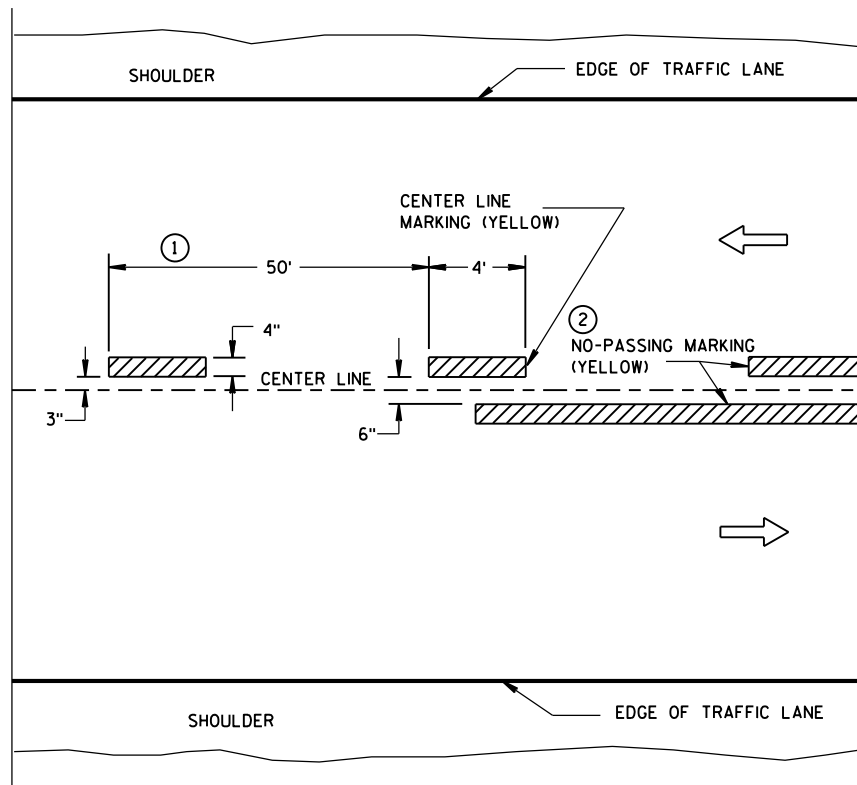


TWO WAY TRAFFIC

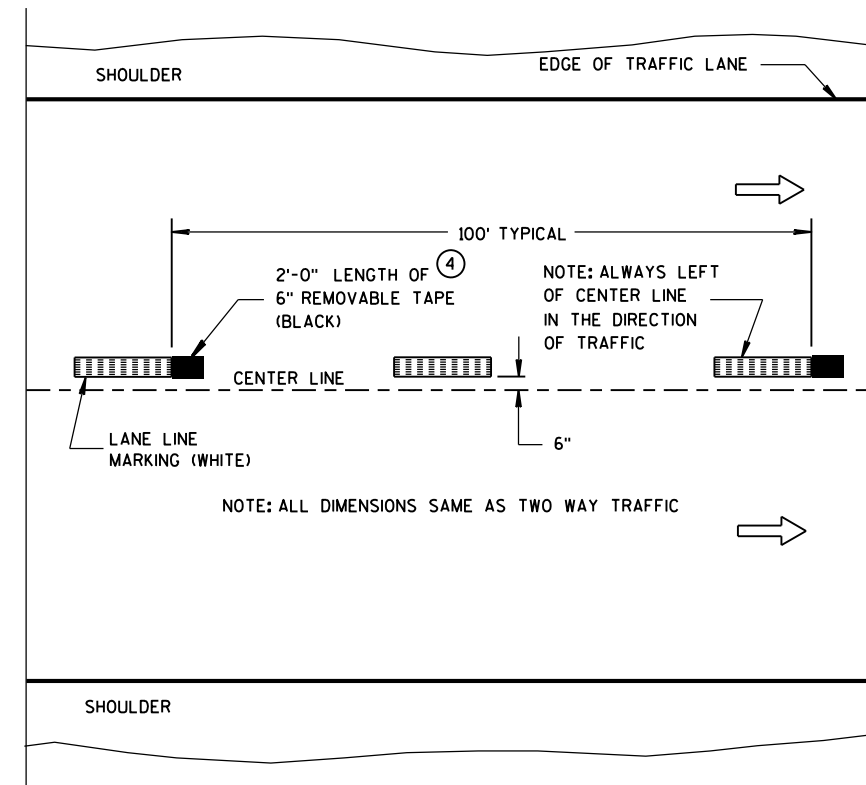


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

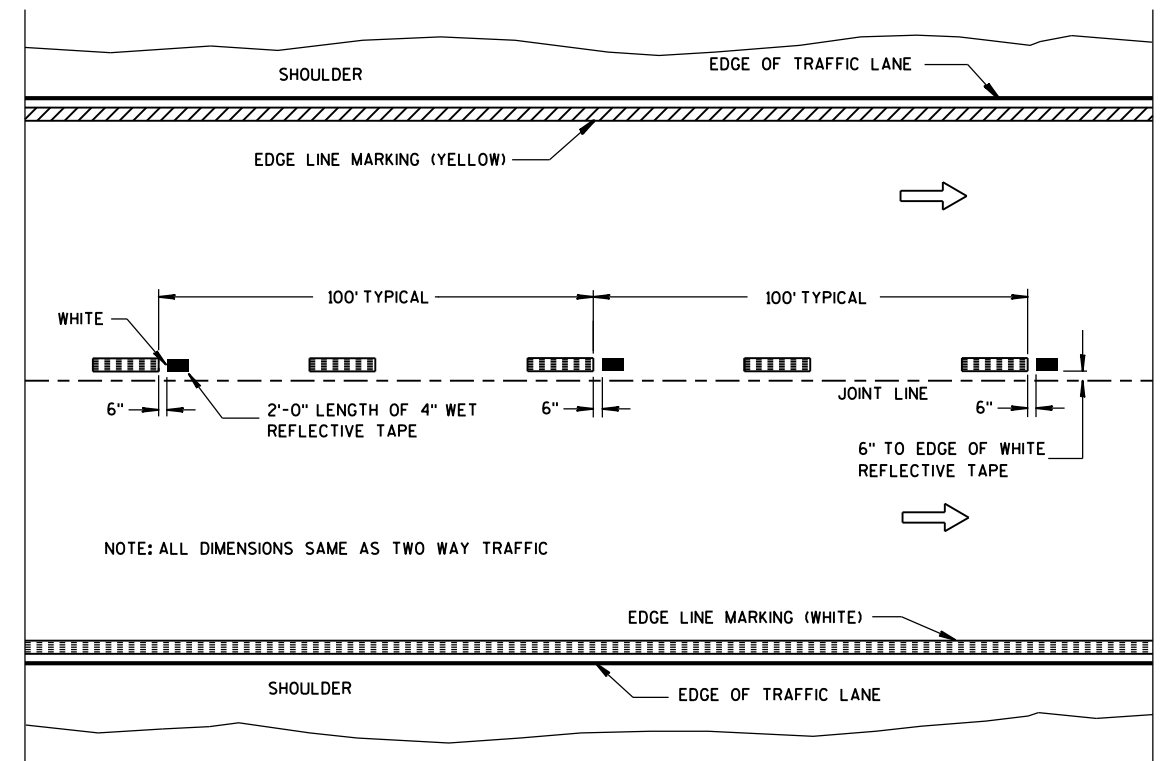
GENERAL NOTES

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

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- 4 CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

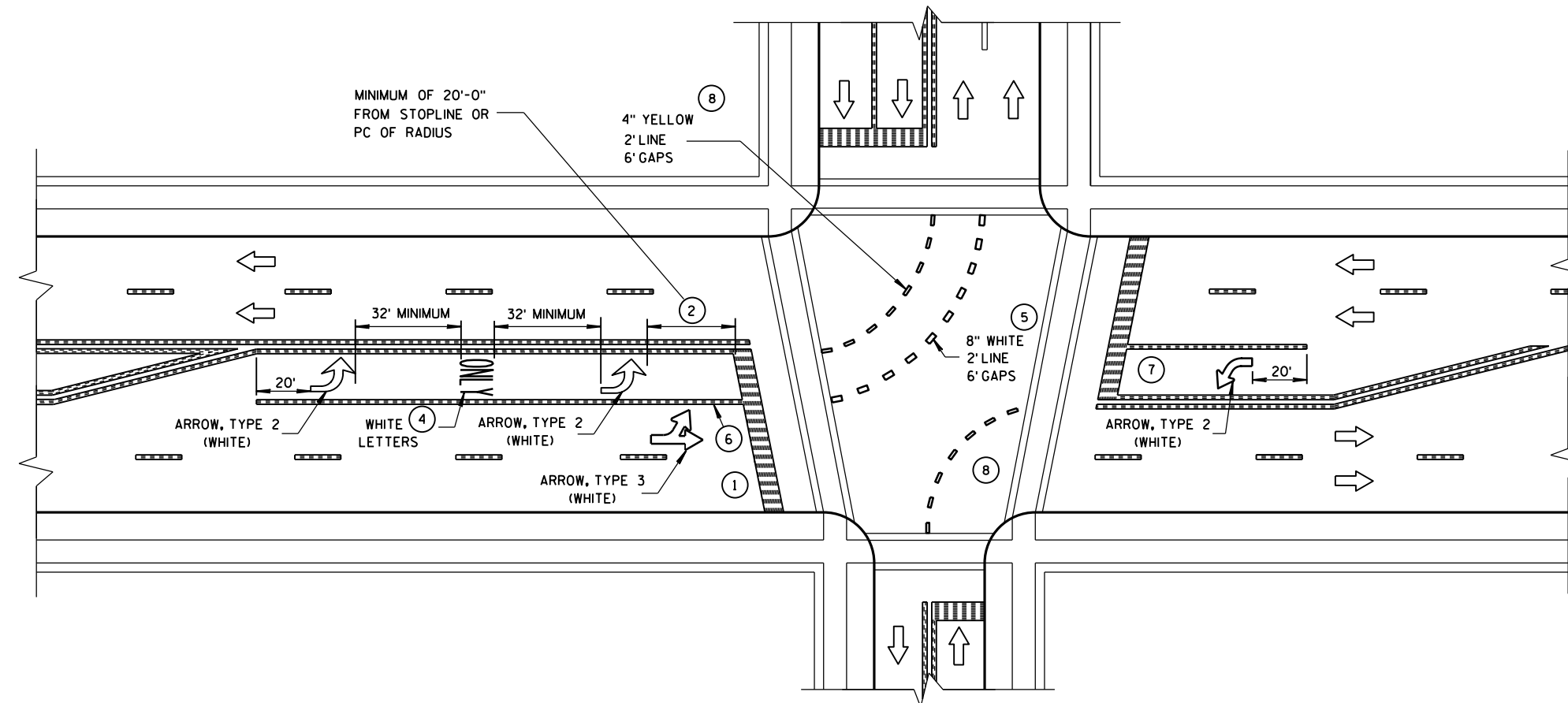
LEGEND

- "T" MARKING
- POST MOUNTED SIGN


PAVEMENT MARKING
(MAINLINE)

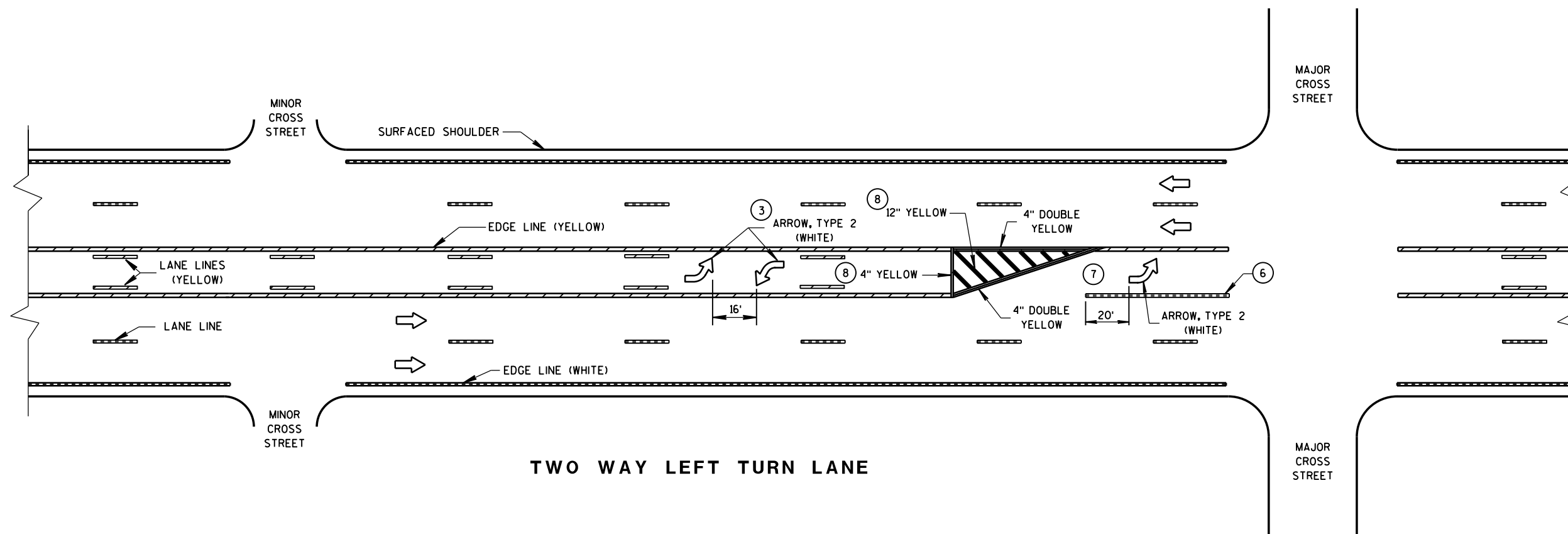
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



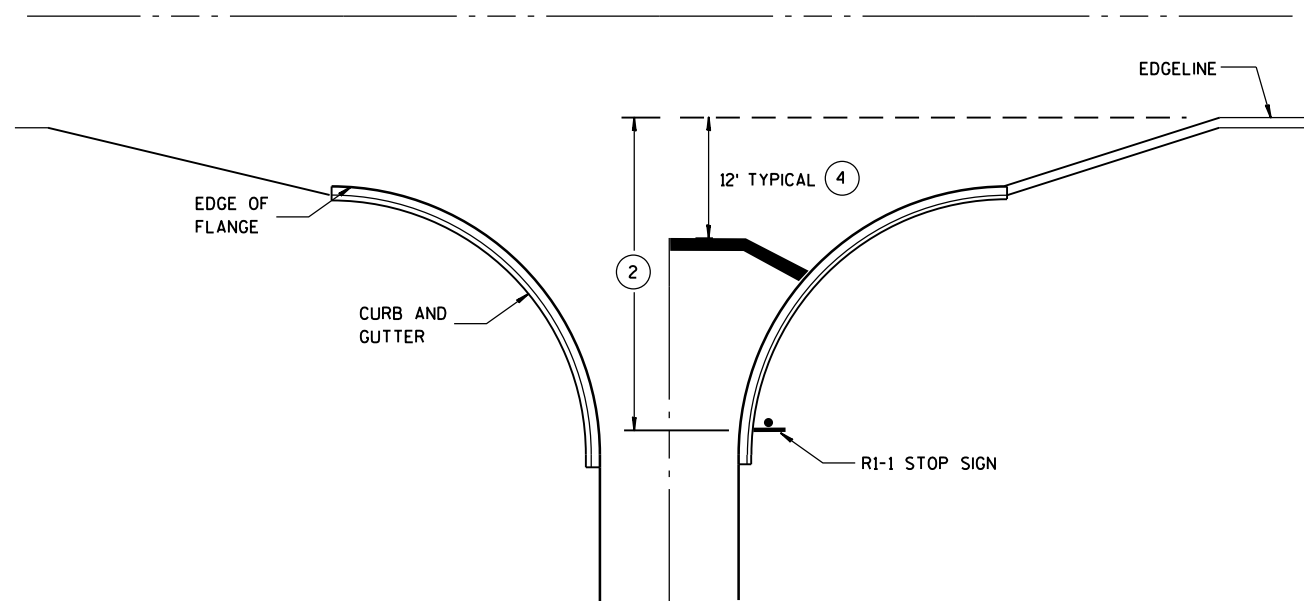
- ## GENERAL NOTES
- 1 STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
 - 2 DISTANCE MAY BE ADJUSTED TO ACCOMMODATE SHORT LEFT TURN LANES, AS APPROVED BY THE ENGINEER.
 - 3 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
 - 4 ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
 - 5 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
 - 6 8" WHITE
 - 7 ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
 - 8 REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL ()
SHOWS DIRECTION OF TRAVEL

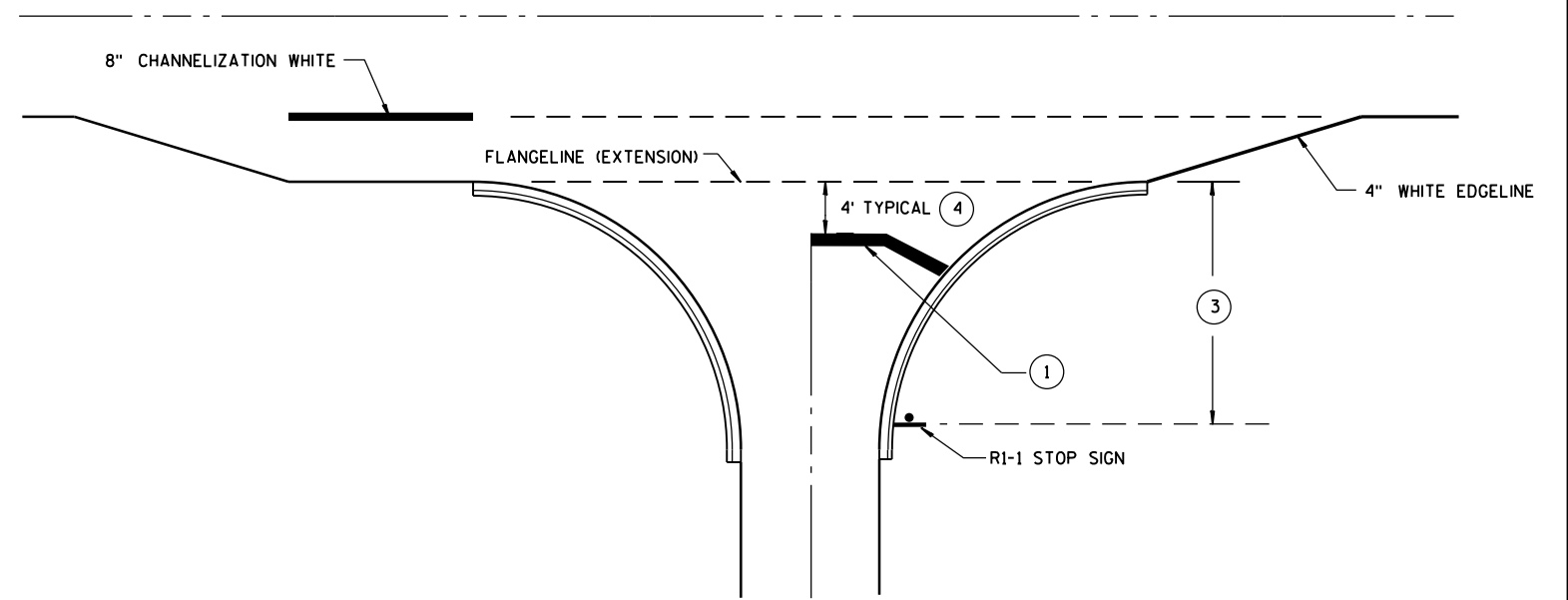


PAVEMENT MARKING
(LEFT TURN LANE)

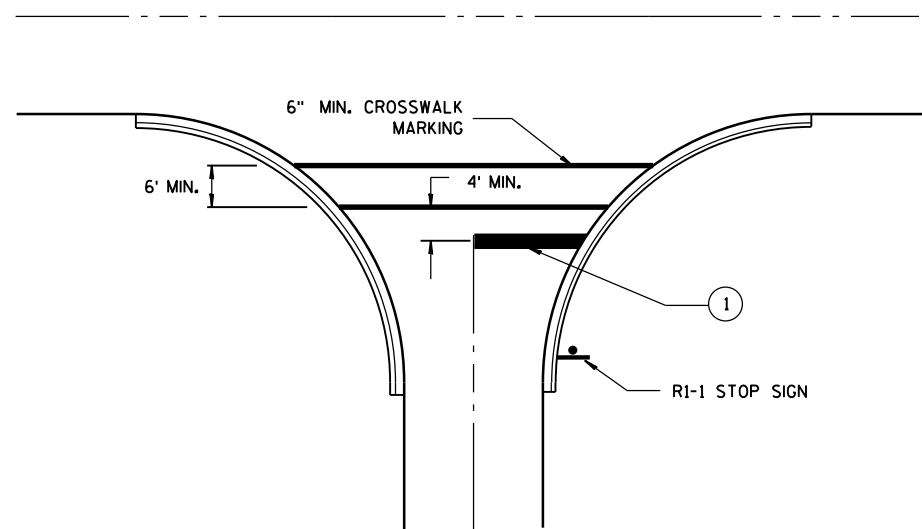
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



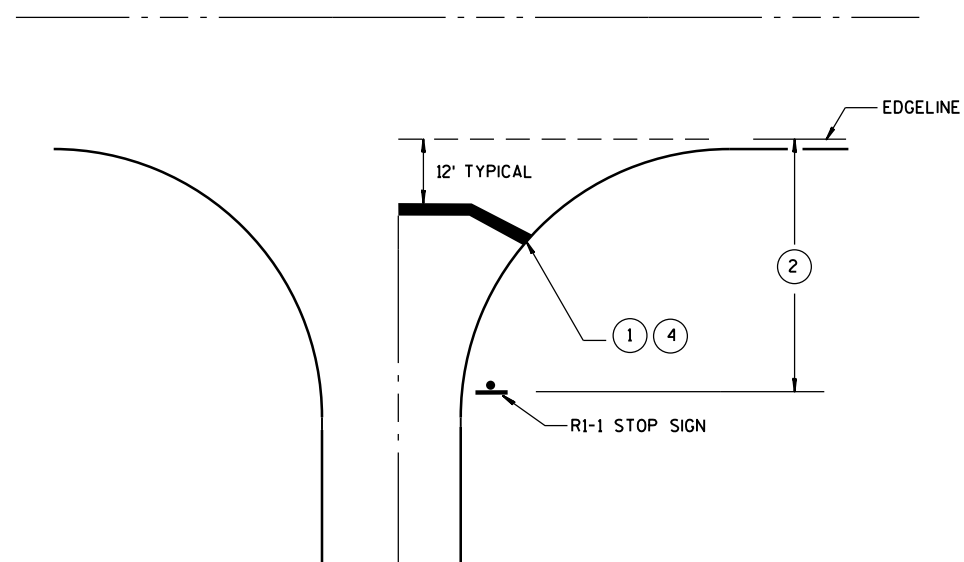
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**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

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

**STOP LINE AND CROSSWALK
PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

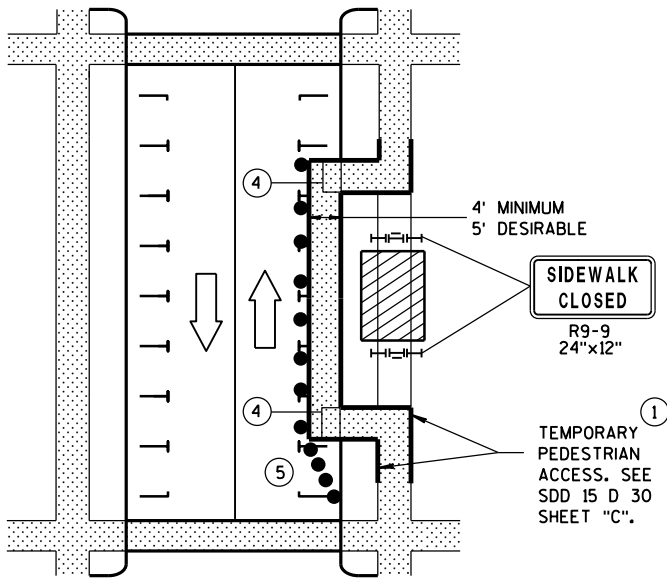
APPROVED

4-18-2016
DATE

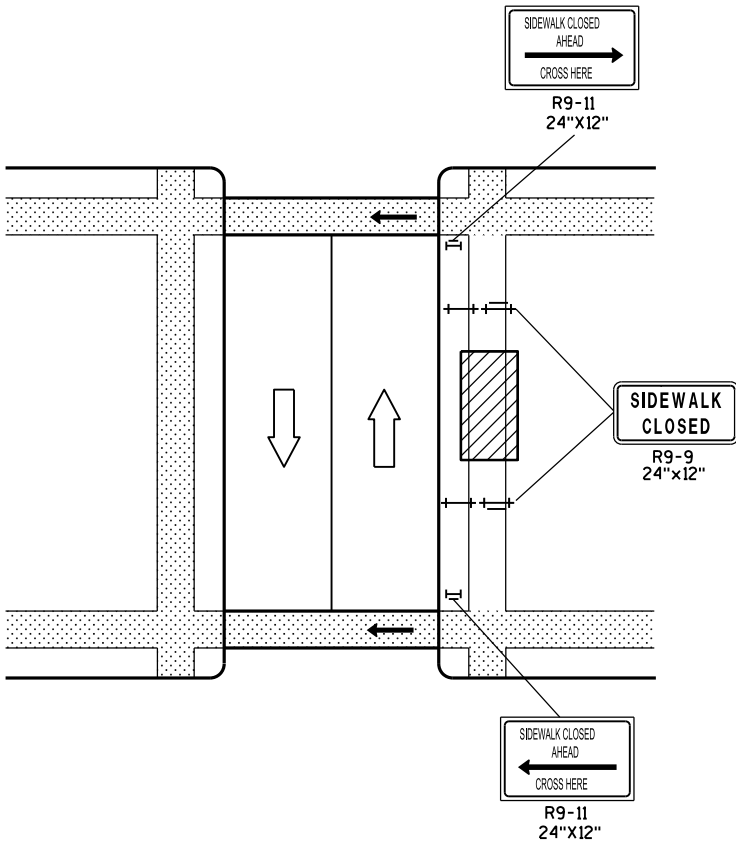
FHWA

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

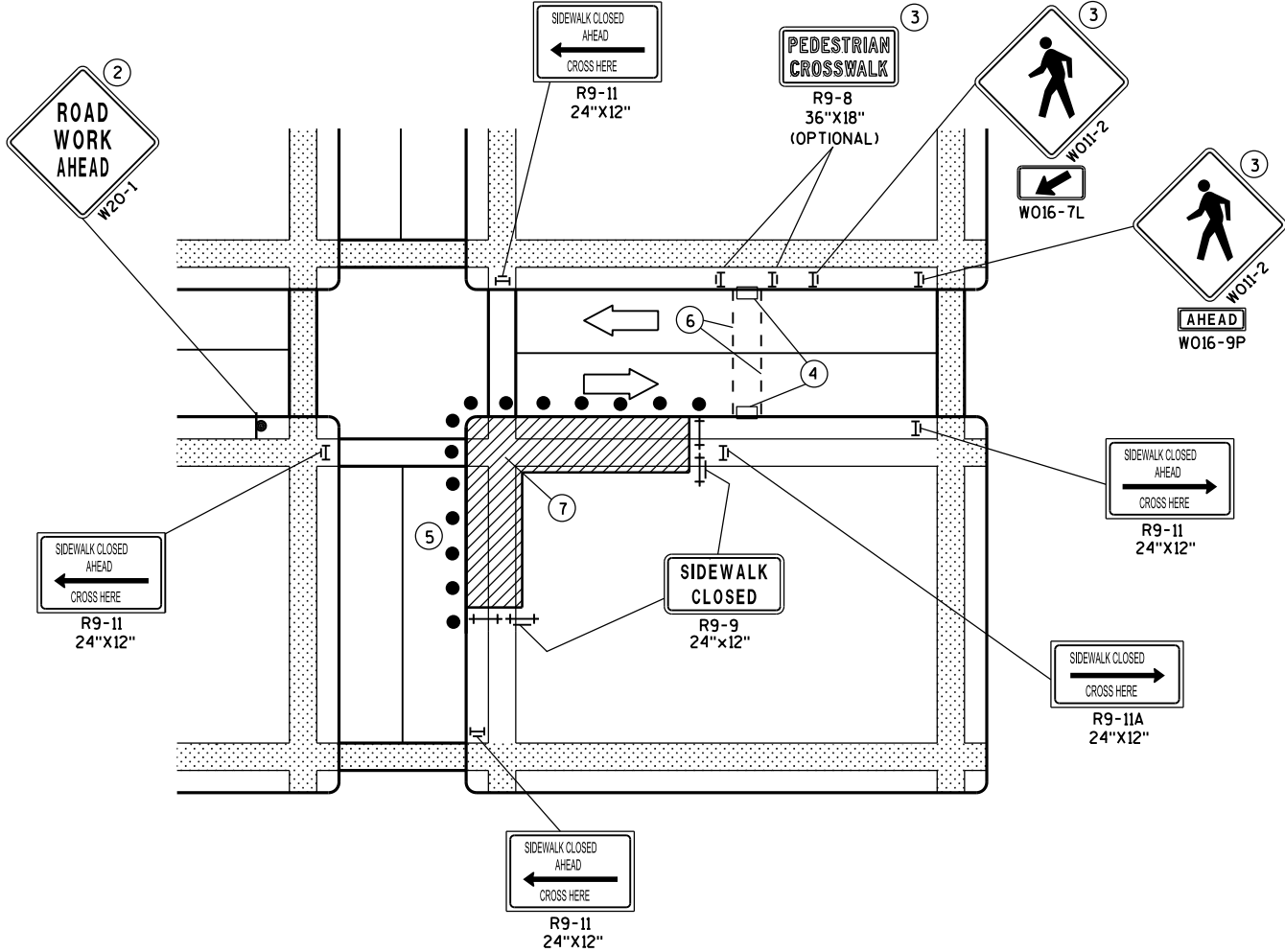
NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.



MID-BLOCK SIDEWALK CLOSURE
IN PARKING LANE

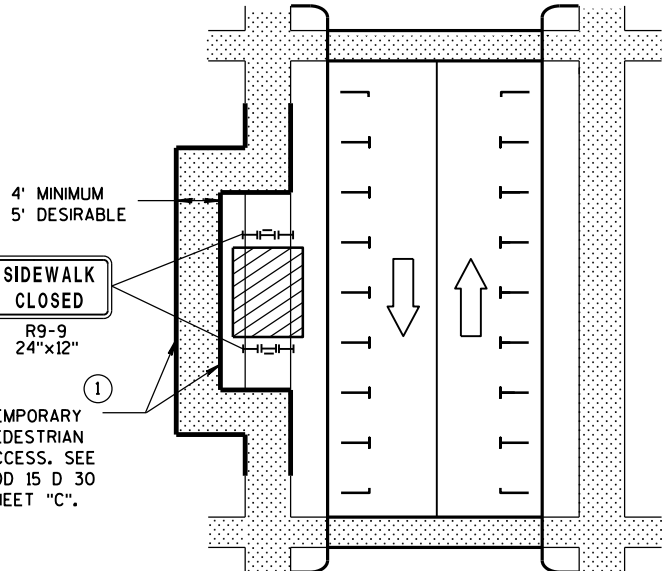


MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION

GENERAL NOTES

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

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

"W0" 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.

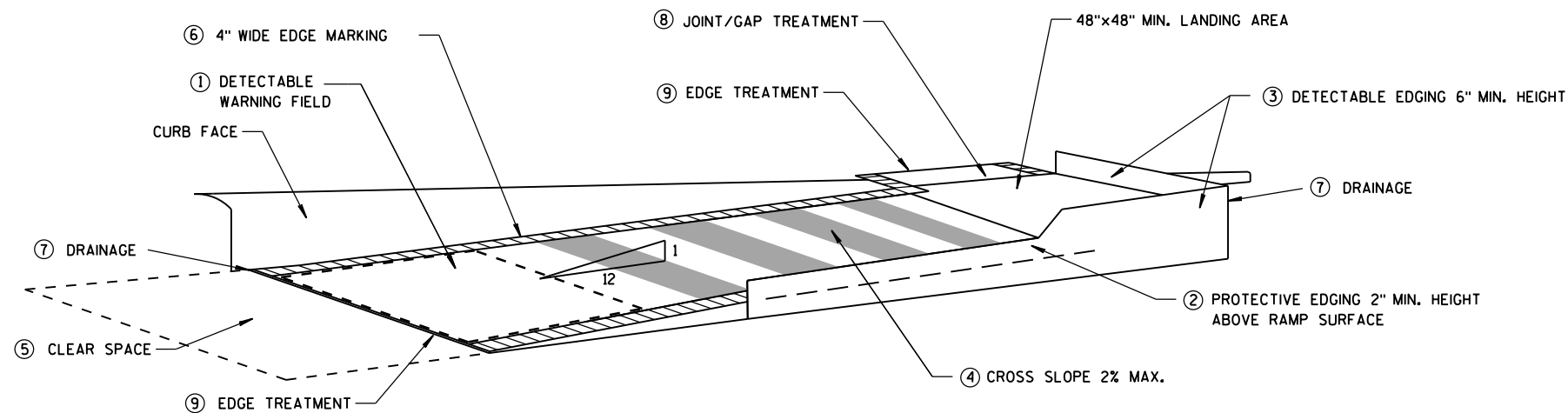
- 1 IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.
- 2 "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, 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 W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- 4 TEMPORARY CURB RAMPS. SEE SDD 15 D 30 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
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- 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)
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DRUM

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

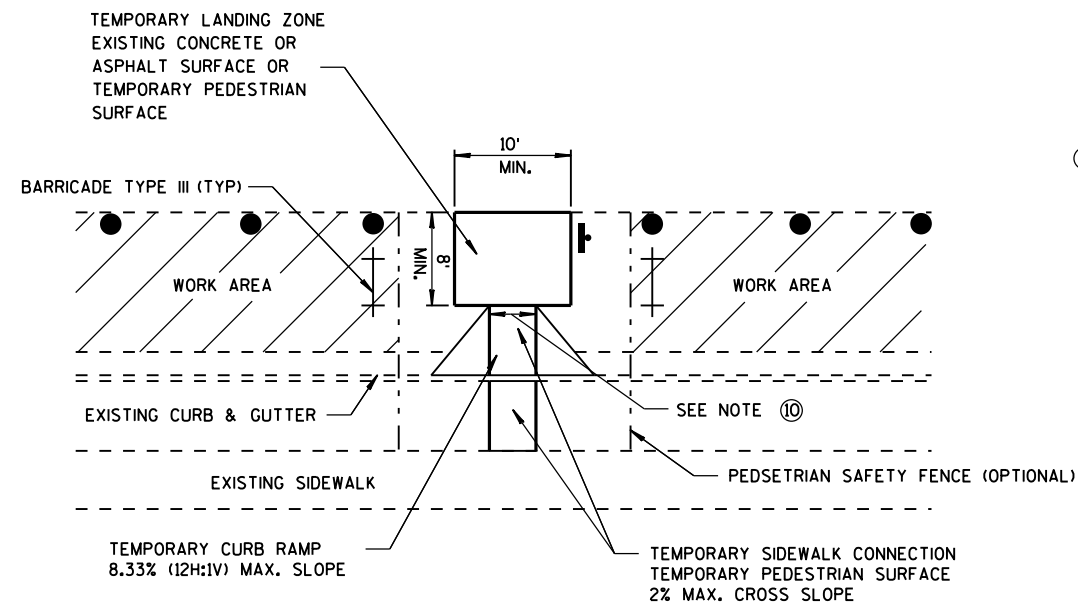
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



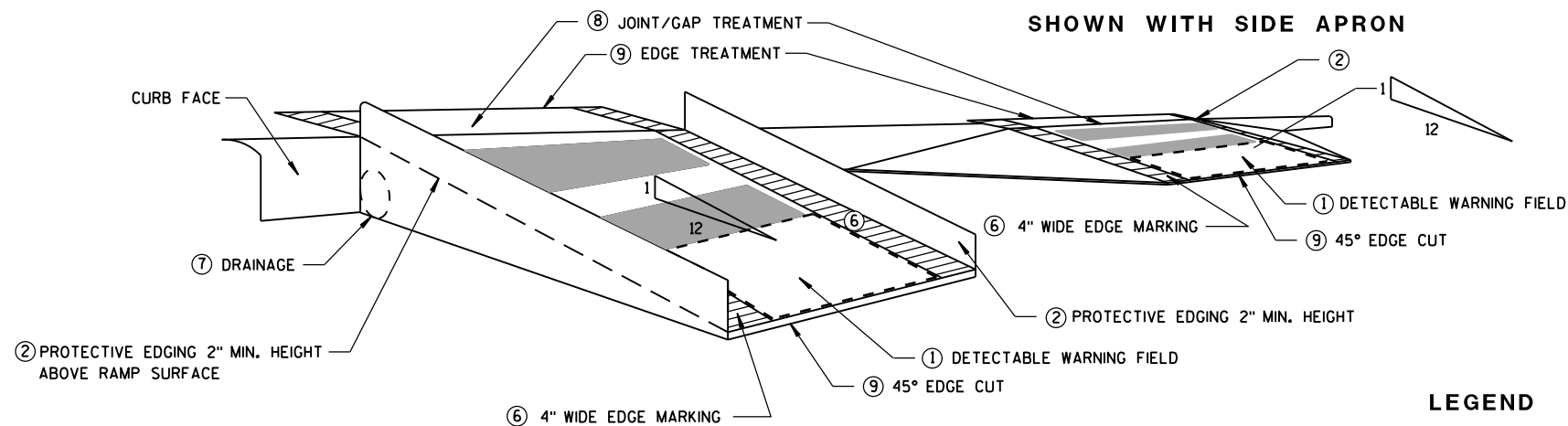
TEMPORARY CURB RAMP
PARALLEL TO CURB

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 8D5 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"x48" MIN. 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 FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



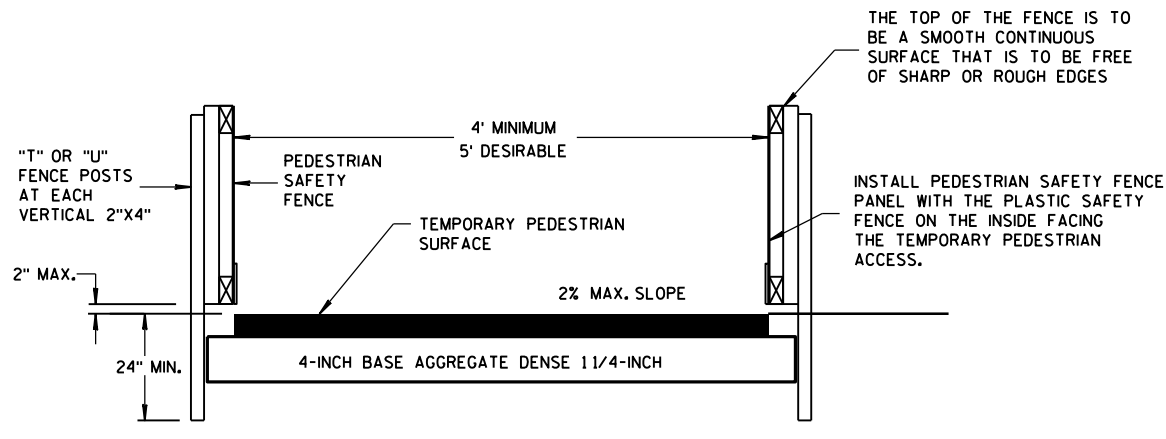
SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP
PERPENDICULAR TO CURB

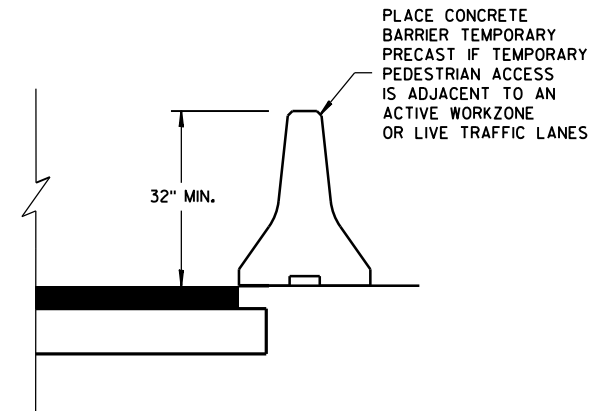
SHOWN WITH SIDE APRON

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

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

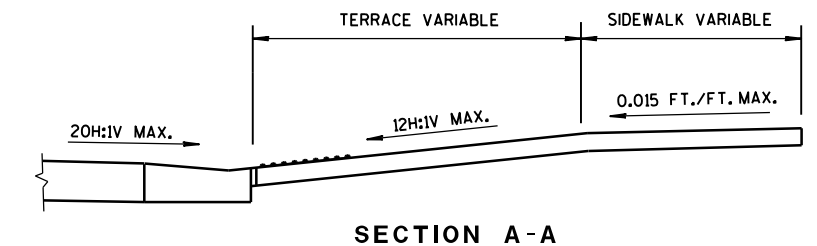


TEMPORARY PEDESTRIAN ACCESS

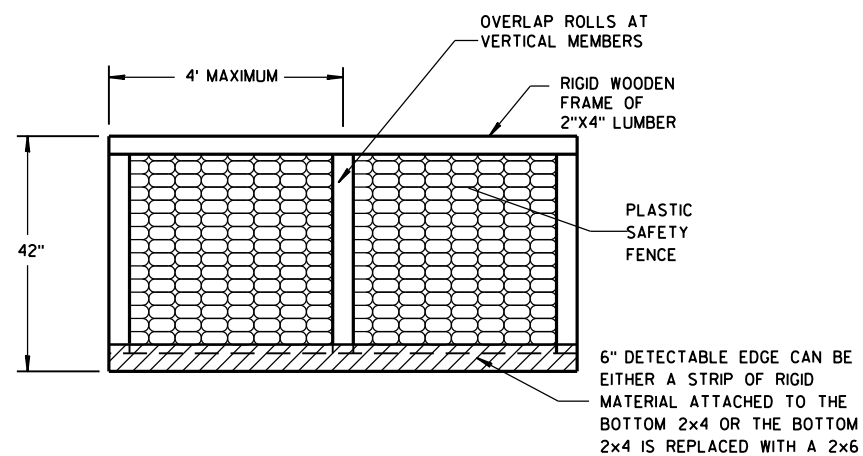


GENERAL NOTES

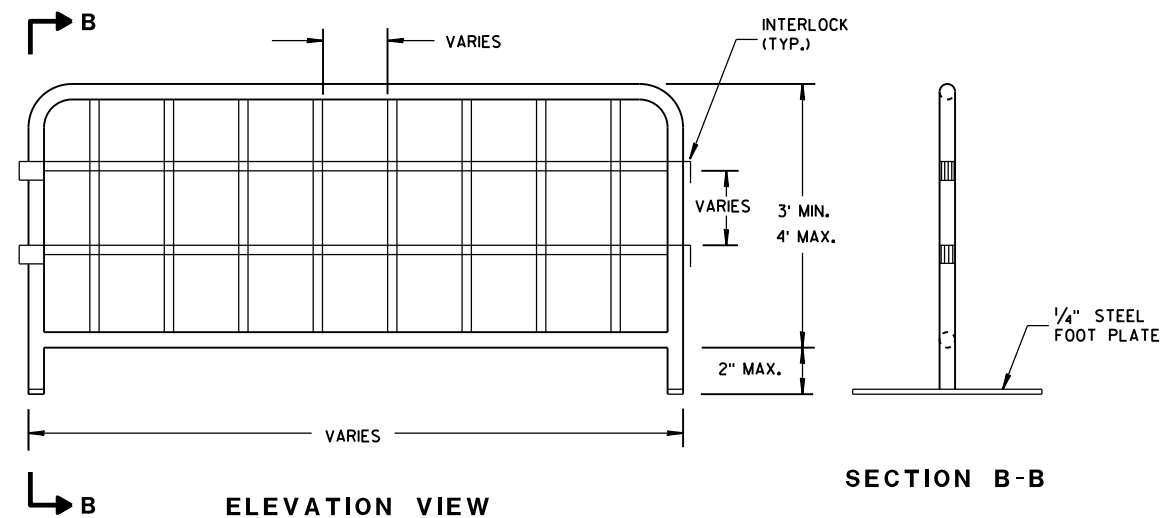
- INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



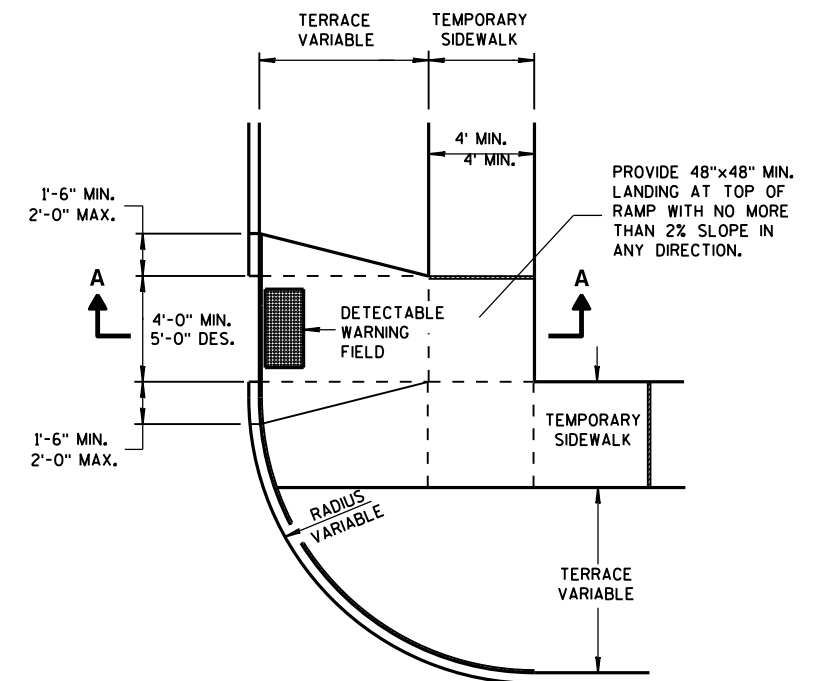
SECTION A-A



PEDESTRIAN SAFETY FENCE



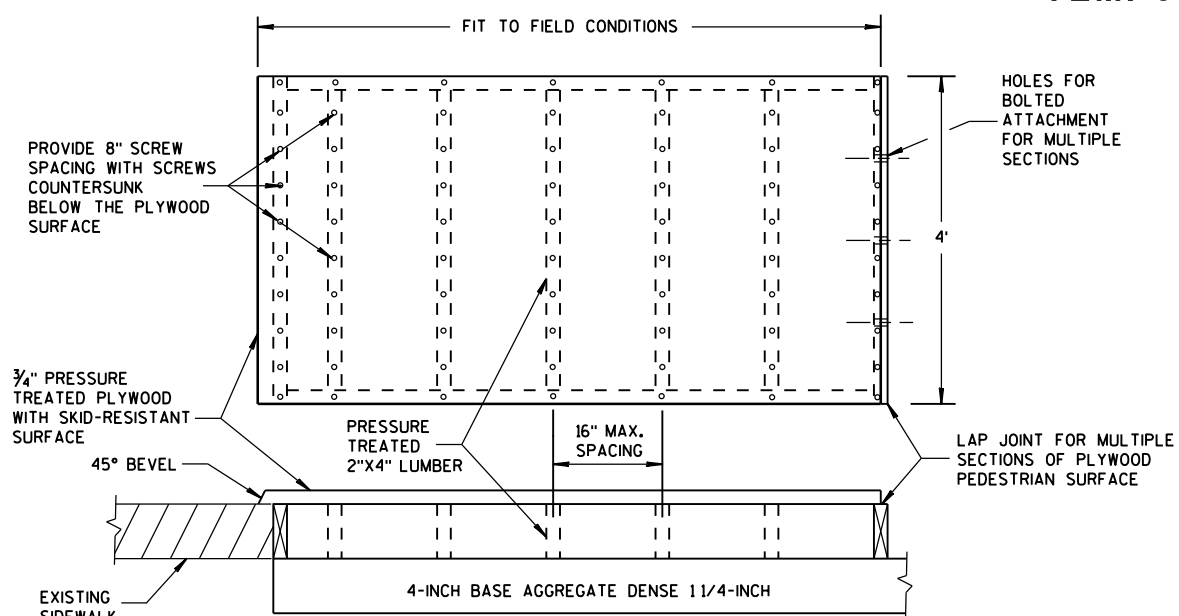
TEMPORARY PEDESTRIAN STEEL BARRICADE



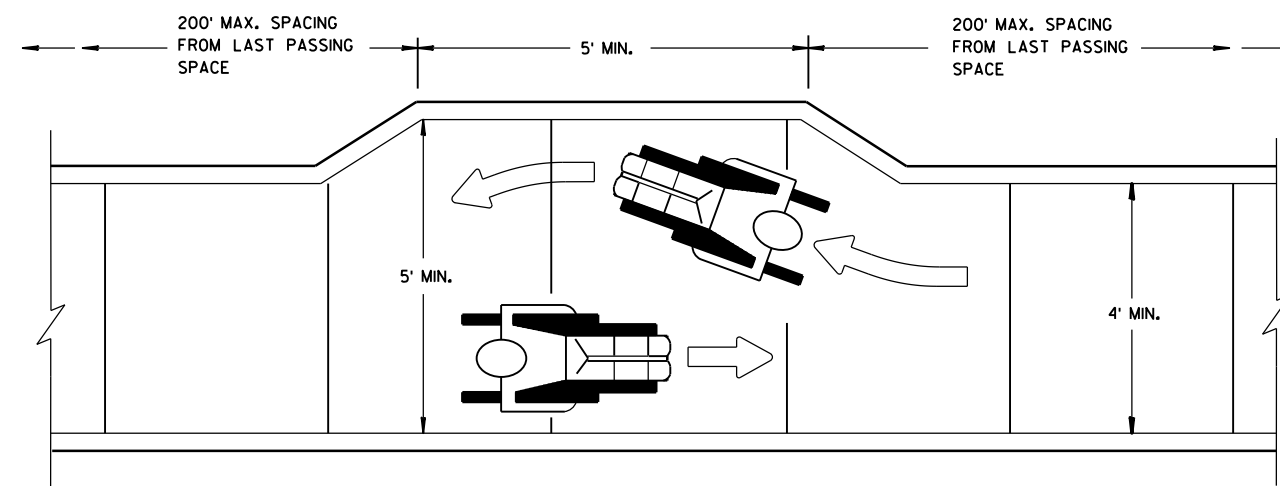
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

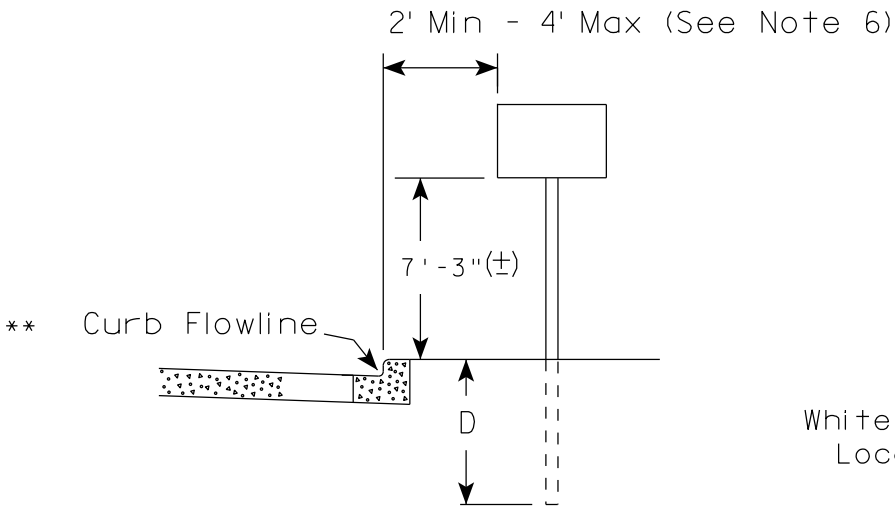
TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

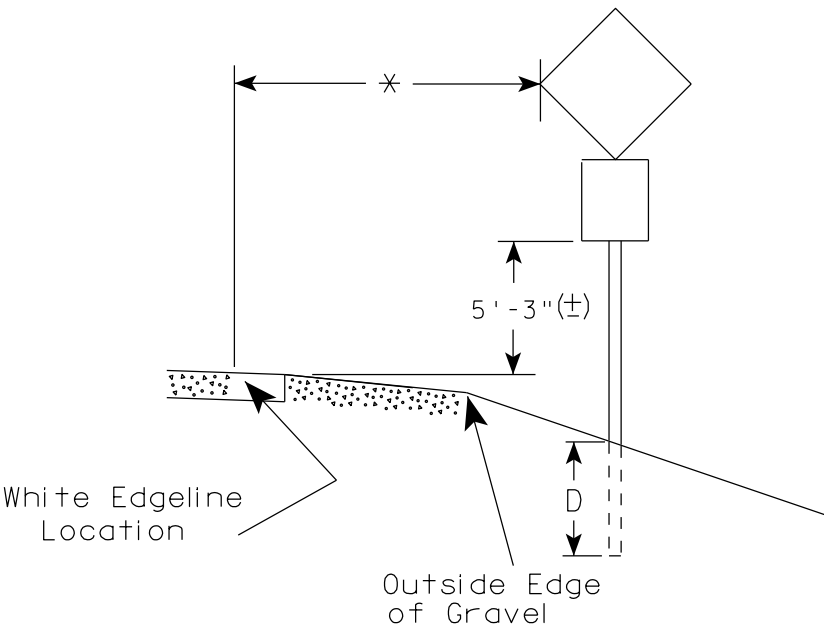
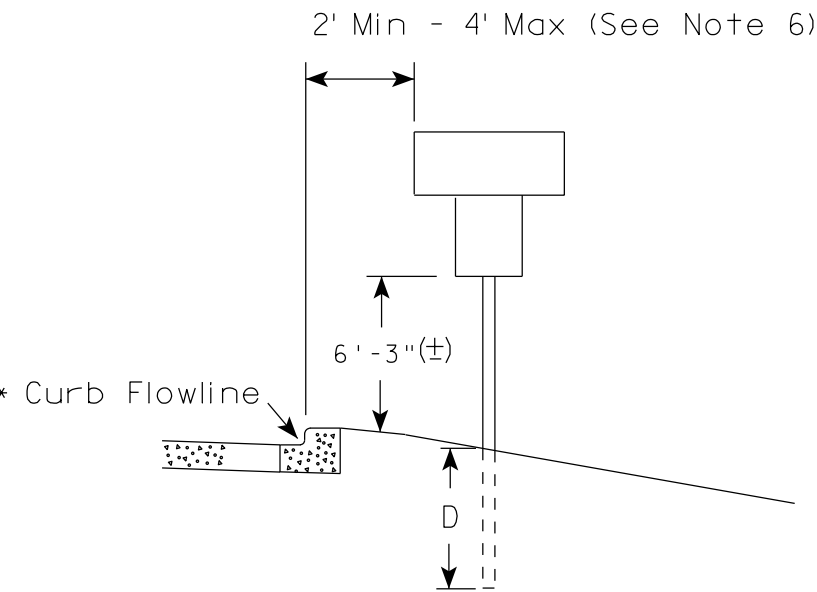
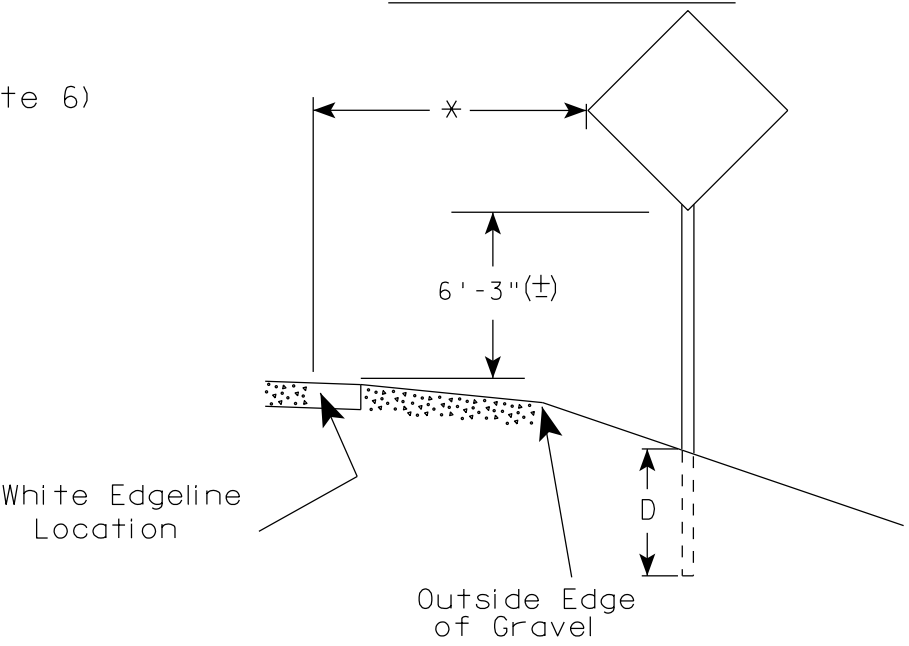
APPROVED
June 2016
DATE
FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
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 J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. 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), 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" (±).

POST EMBEDMENT DEPTH

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

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

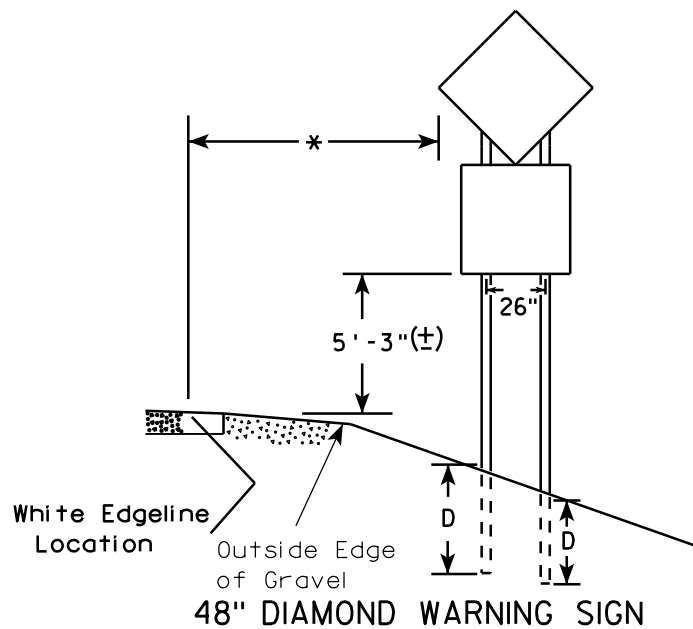
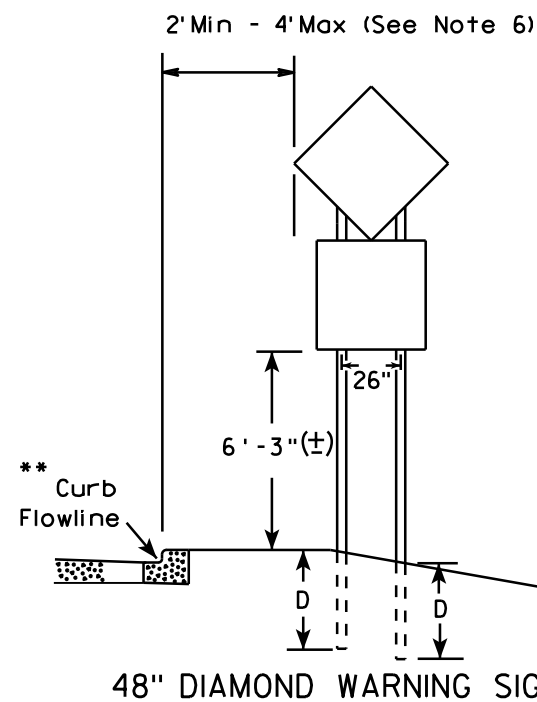
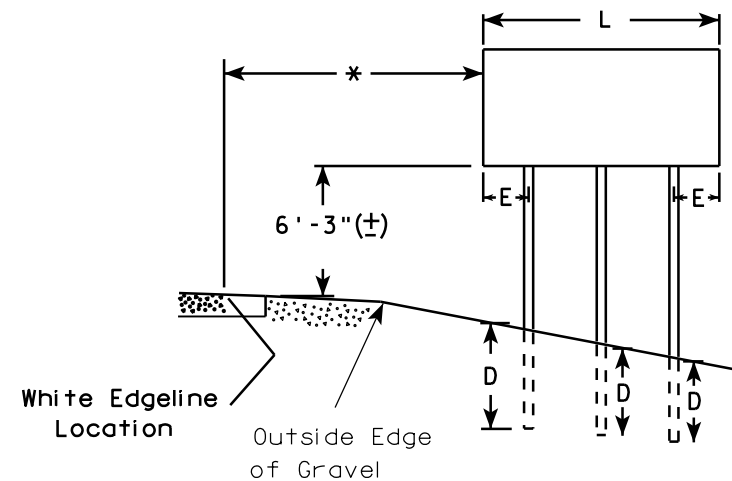
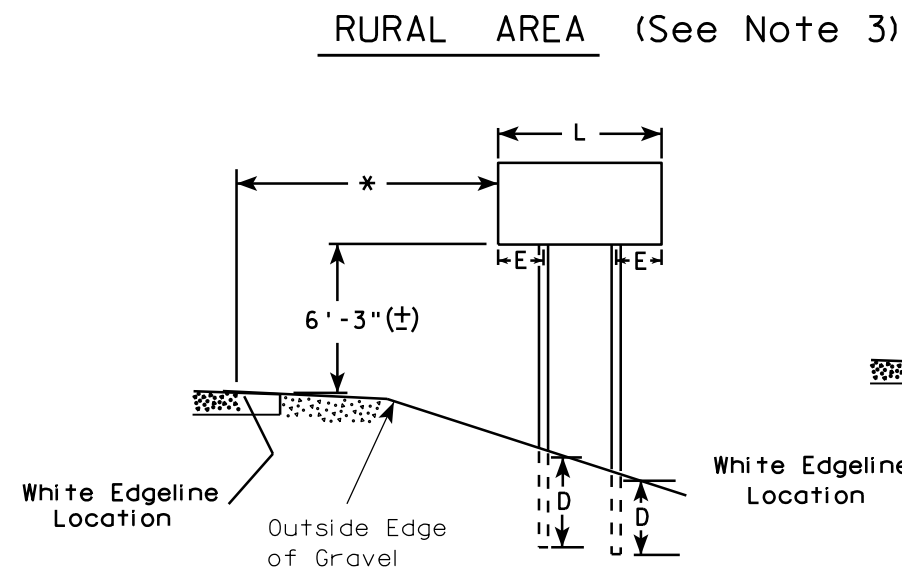
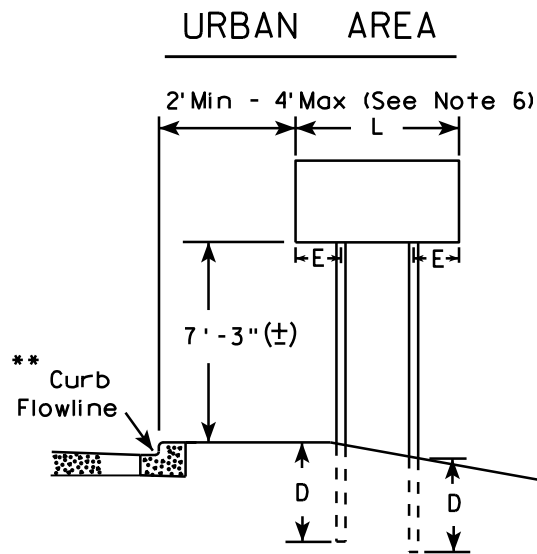
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20



- 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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 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 120"	L/5

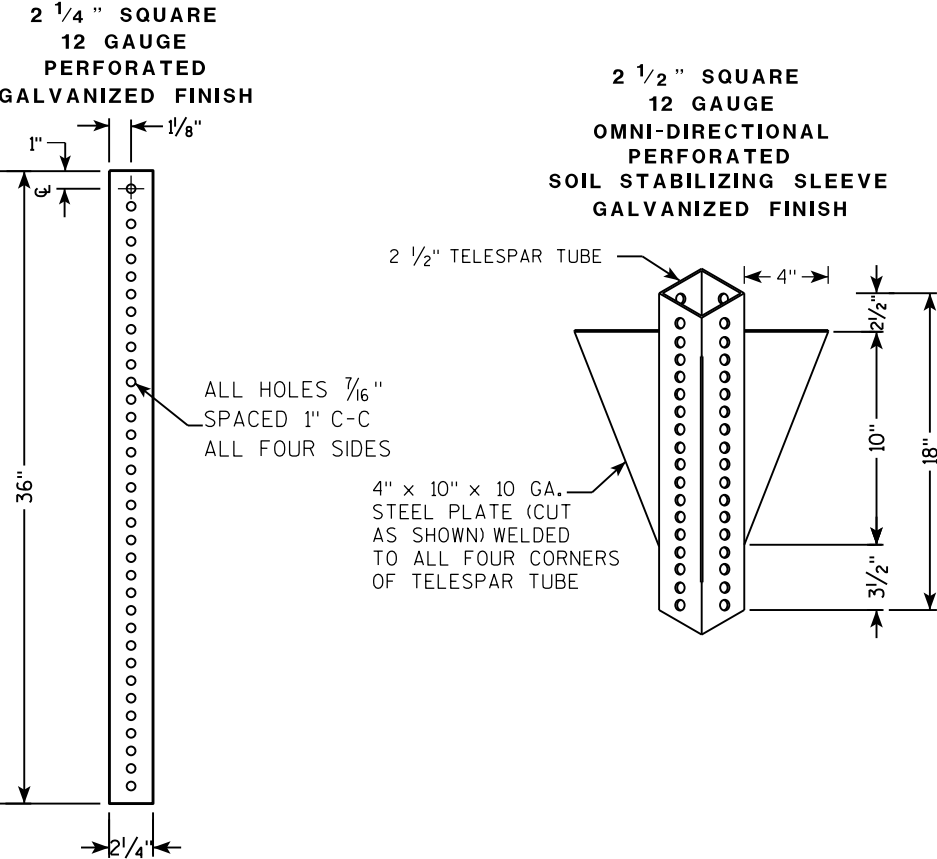
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

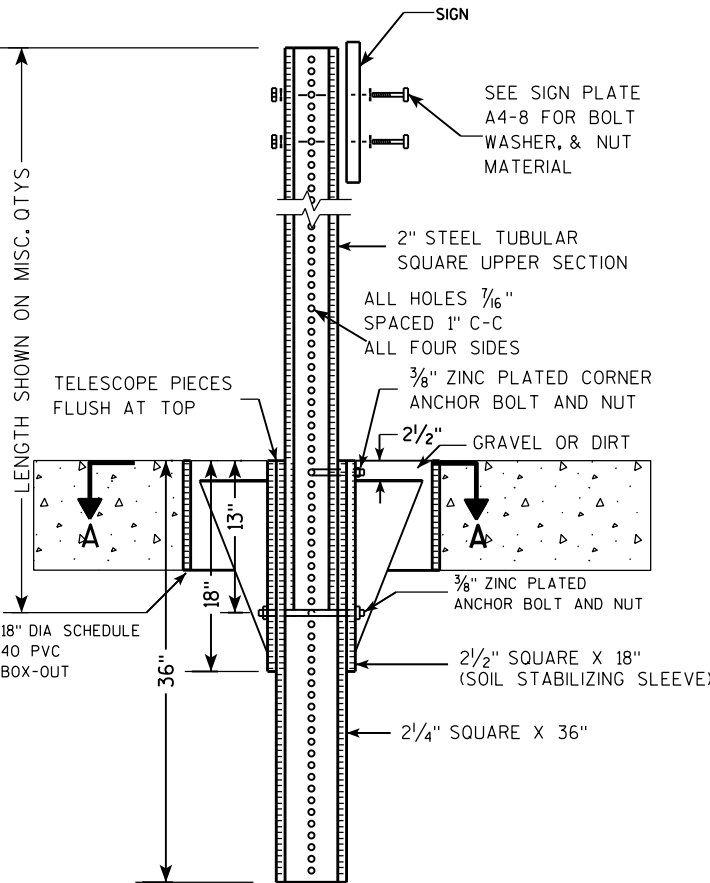
POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/23/15	PLATE NO. A4-4.14

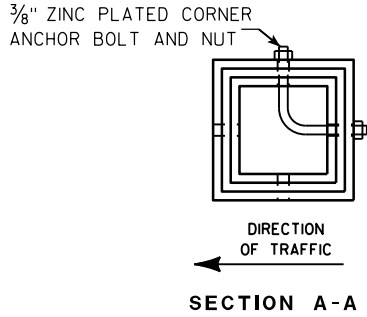
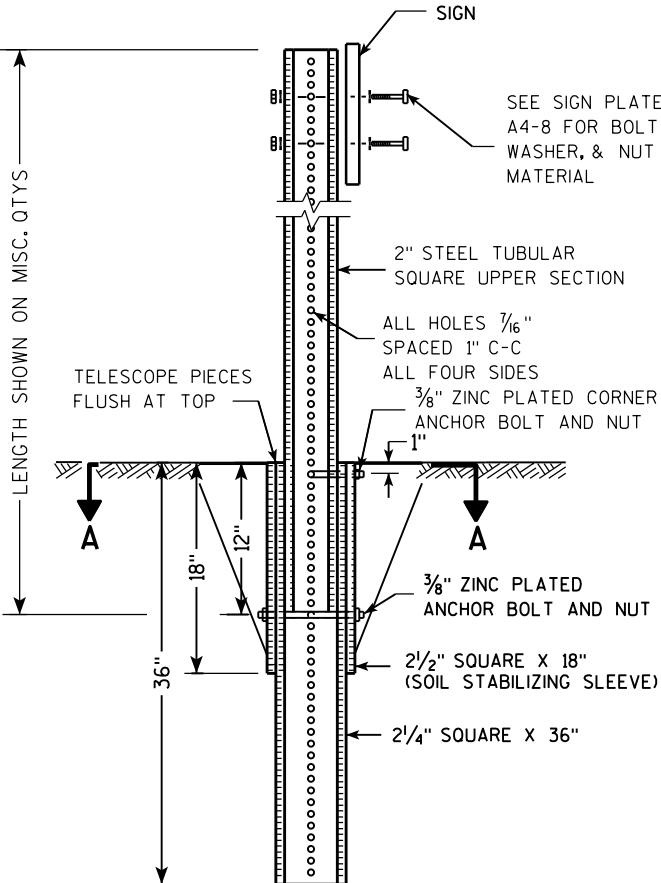
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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

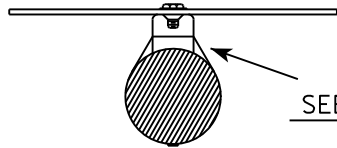
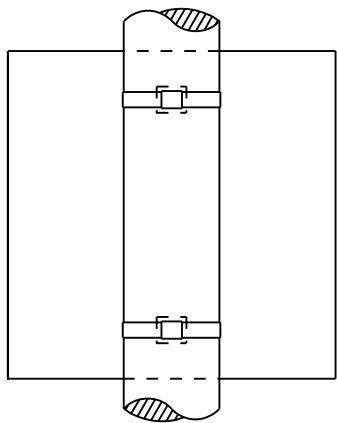
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

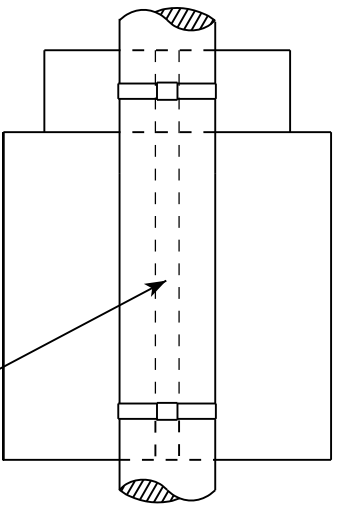
BANDING

SINGLE SIGN



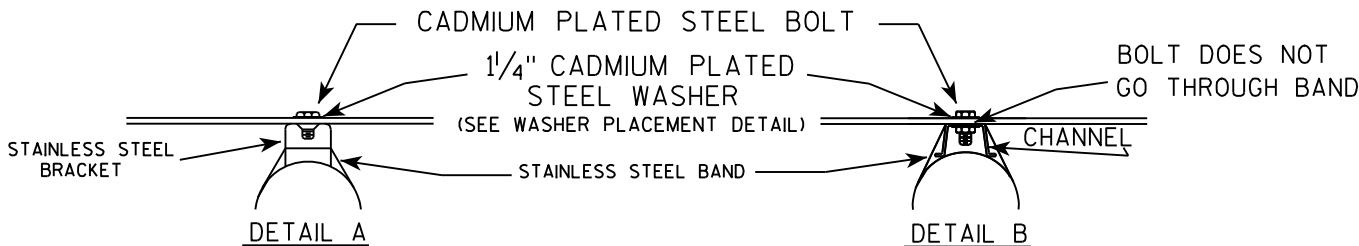
SEE DETAIL A

"J" ASSEMBLY



SEE DETAIL B

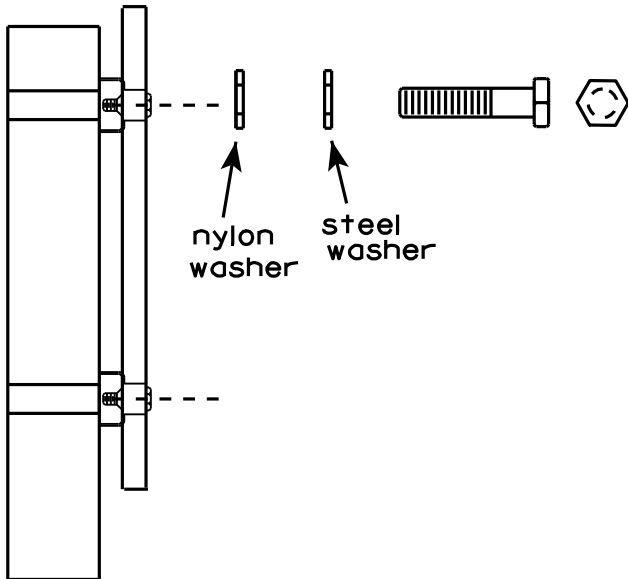
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

WASHER PLACEMENT



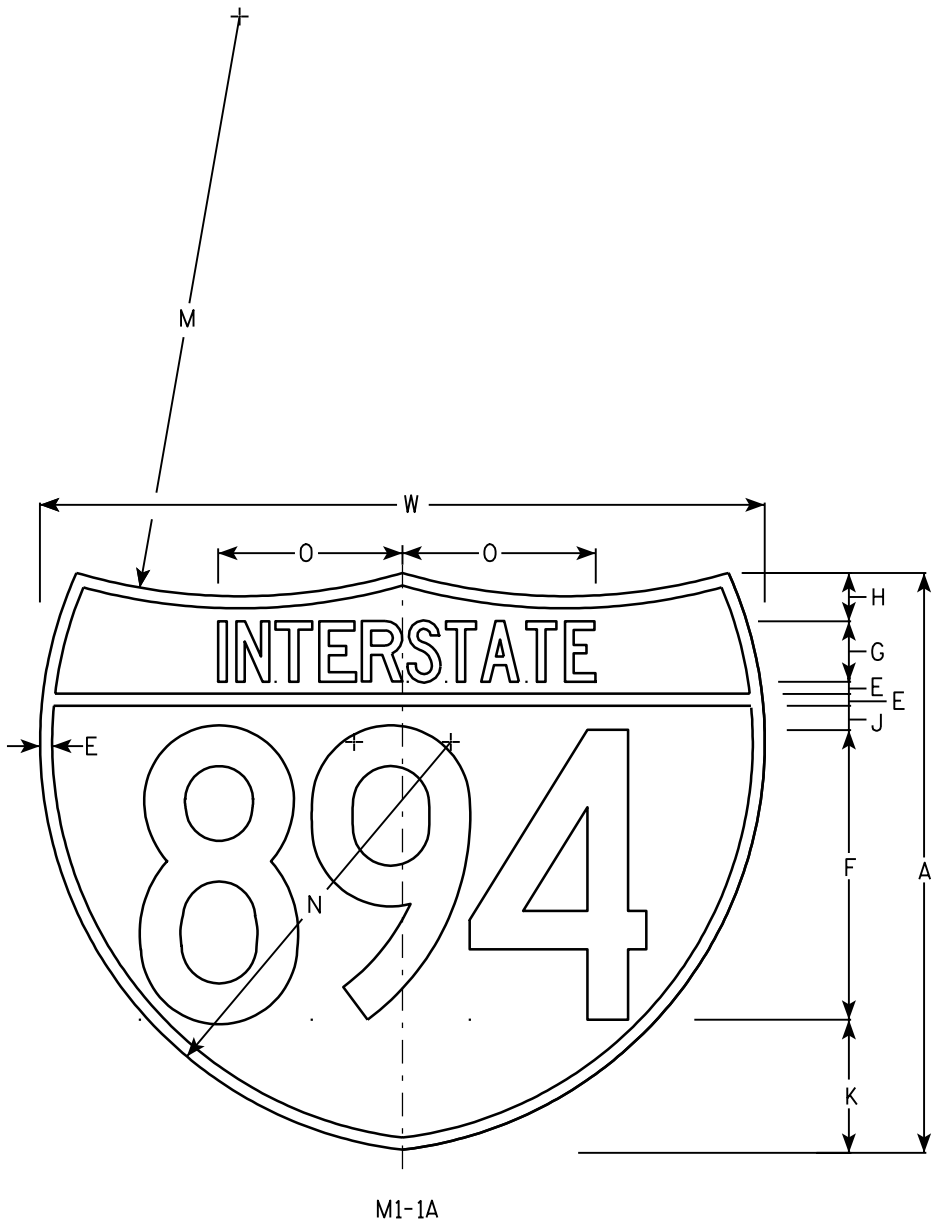
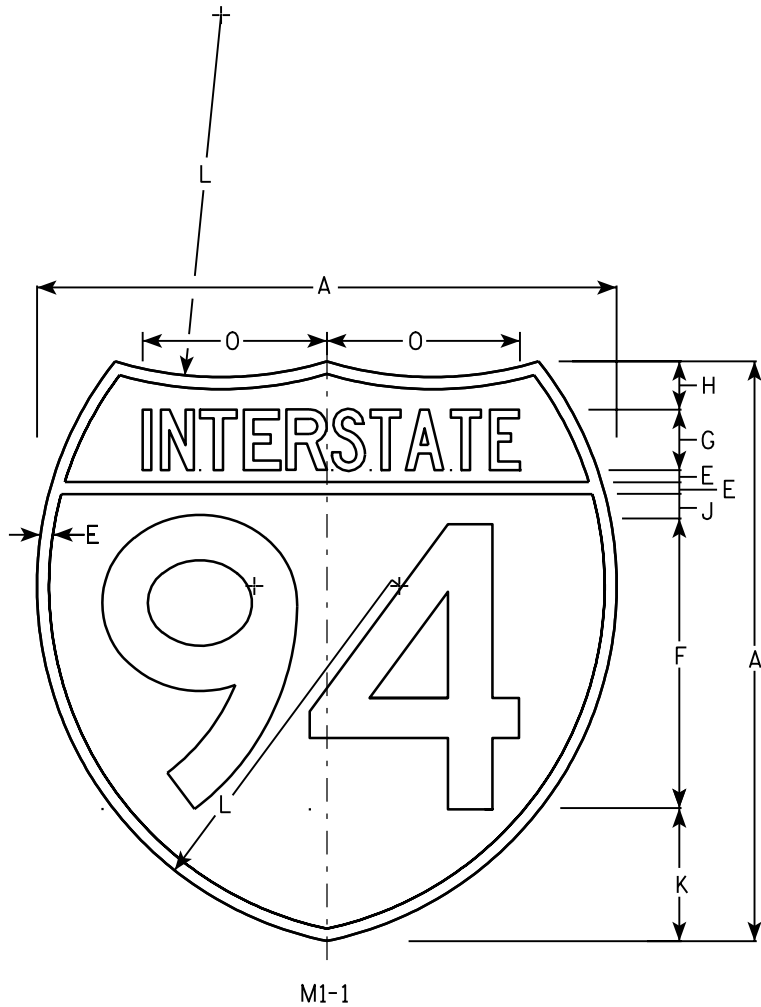
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3



NOTES

- 1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Top Red - Bottom Blue (See Note 6)
Message - White - See Note 6
- 3. Message Series - See note 5
- 4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
- 5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C
- 6. Permanent Signs
Message - Type H Reflective
Detour or other temporary signs
Background - Reflective
Message - Reflective

Metric equivalent for these signs are:

SIZE	M1 - 1	SIZE	M1 - 1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Area sq. ft.	Area sq. ft.	Area m ²	Area m ²
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

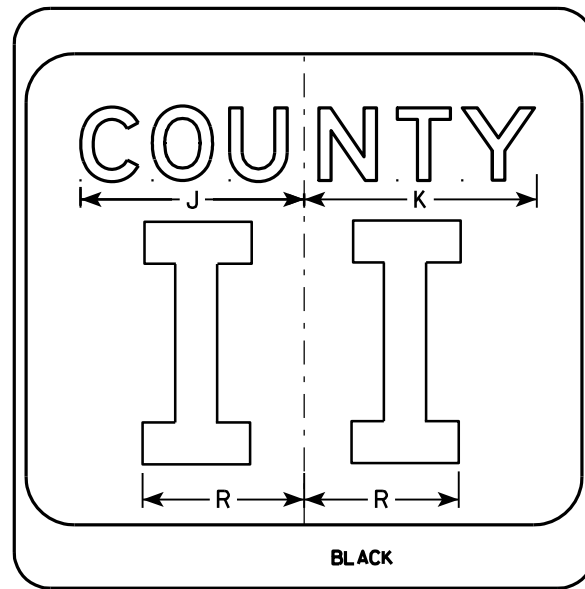
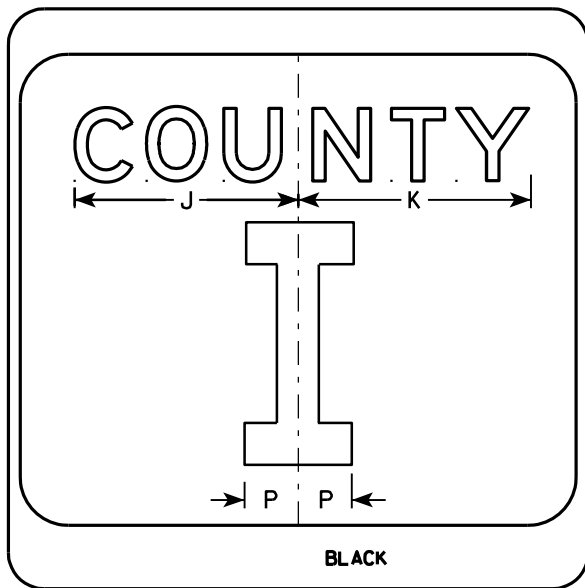
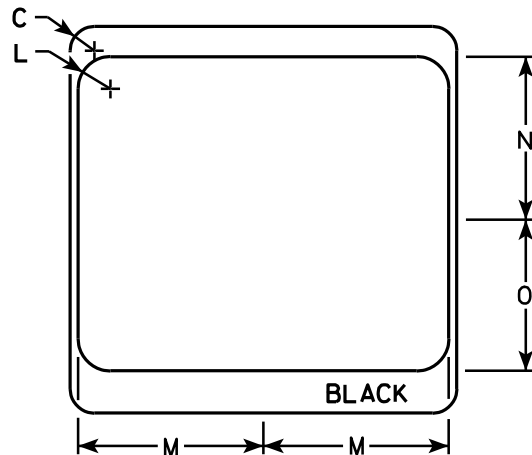
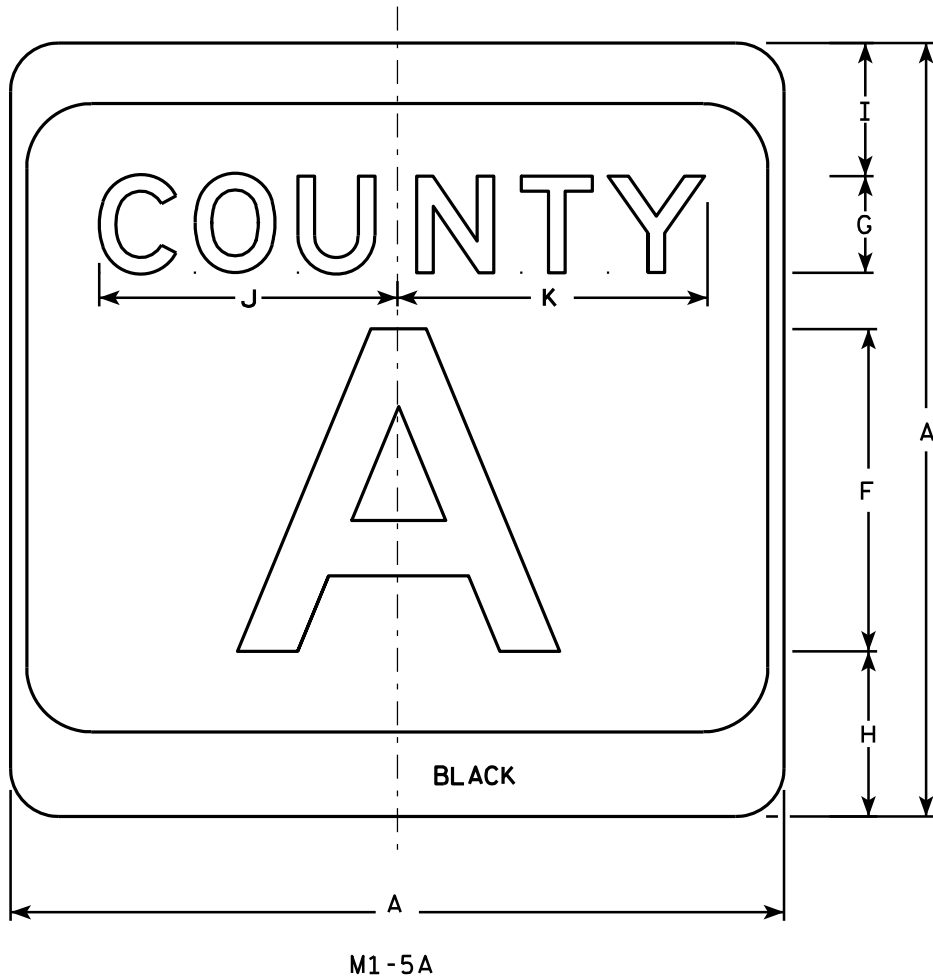
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

7



NOTES

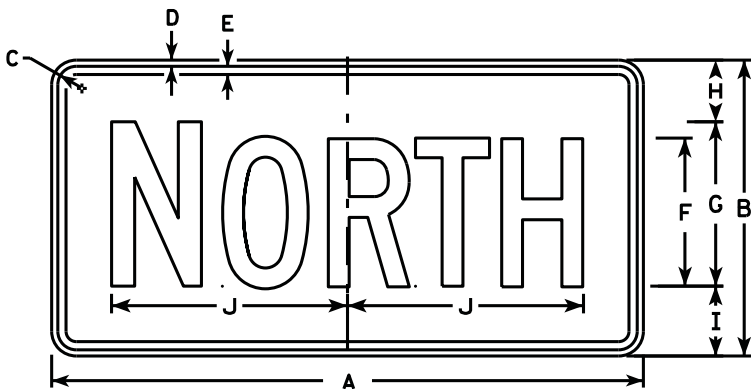
1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

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

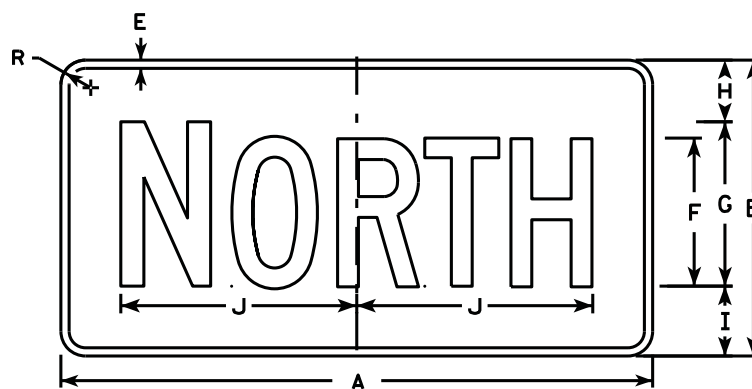
CTH MARKER	
M1-5A FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/27/11	PLATE NO. M1-5A.8

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



M3-1
MM3-1
MP3-1



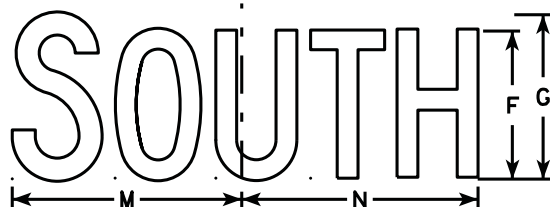
MB3-1
MK3-1
MN3-1



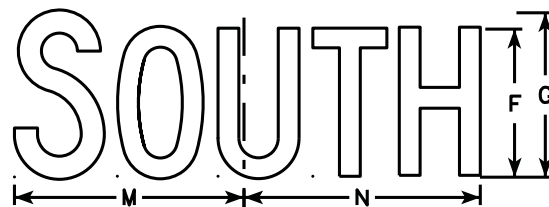
M3-2
MM3-2
MP3-2



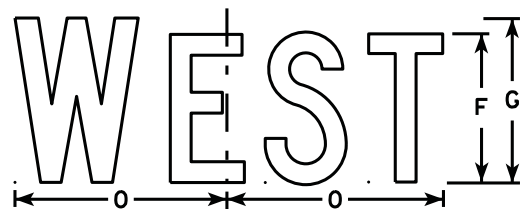
MB3-2
MK3-2
MN3-2



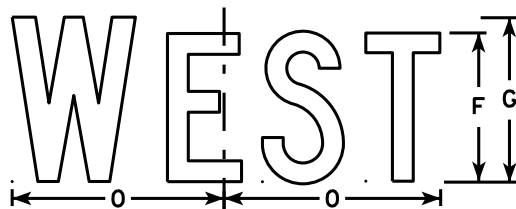
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGNS
M3-1 thru M3-4
SERIES

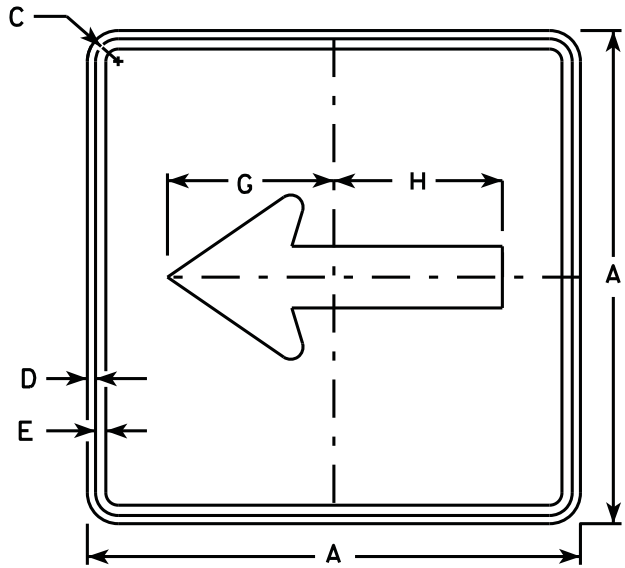
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

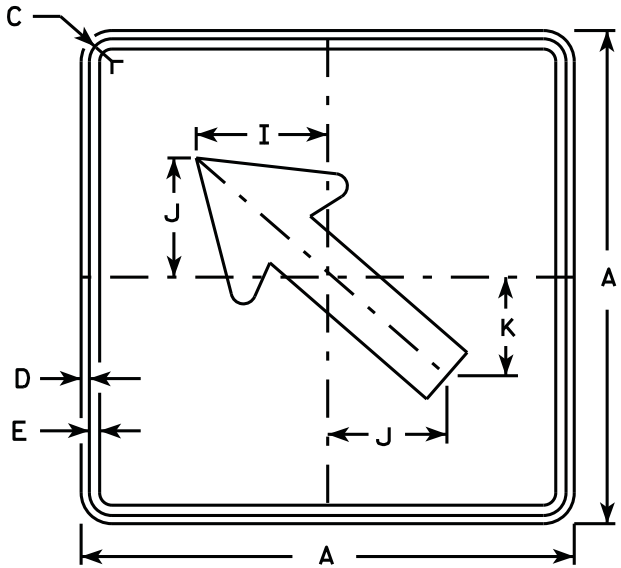
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15

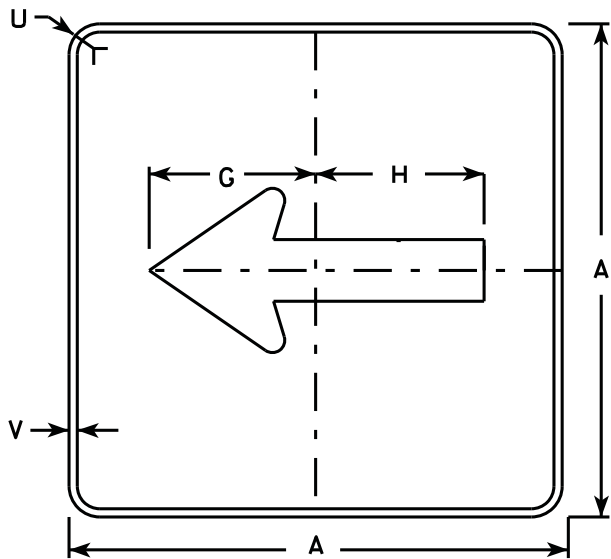
PLATE NO. M3-1.14



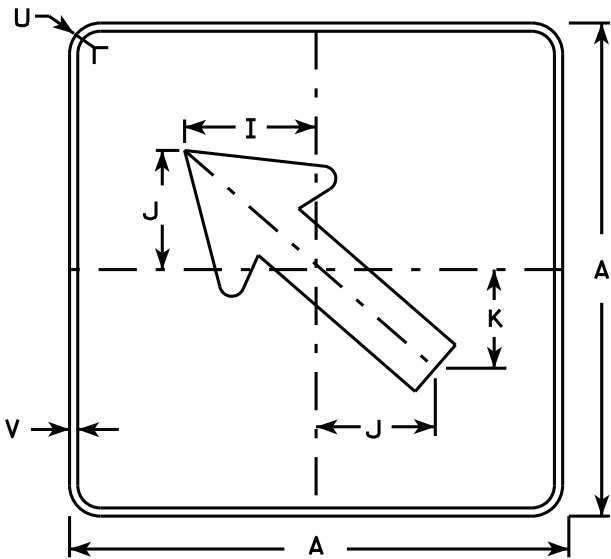
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



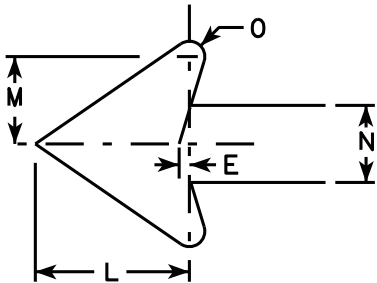
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:
 - Background - See note 4
 - 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. M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO: E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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



M1-94

* Minimum dimension is normally height of upper case letter.

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

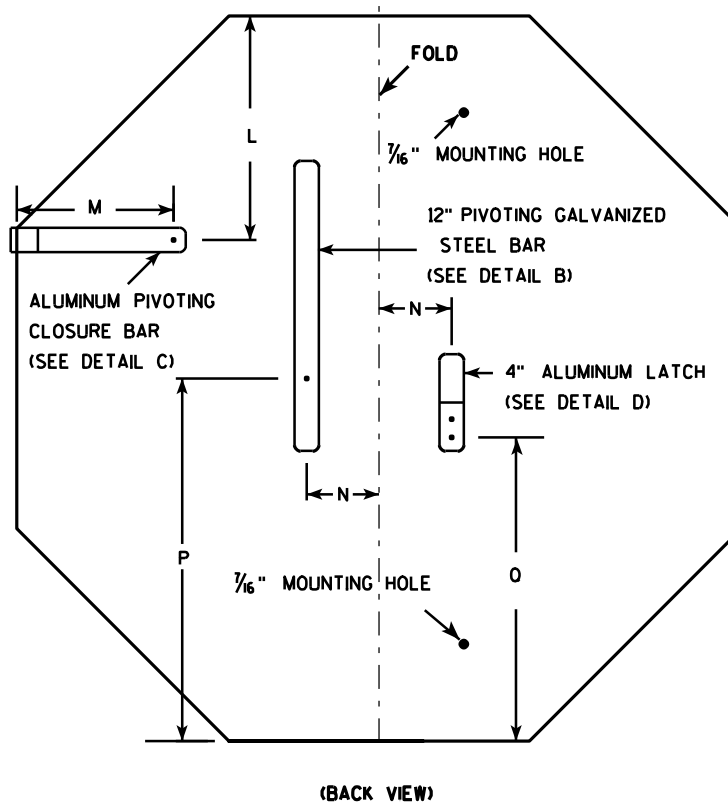
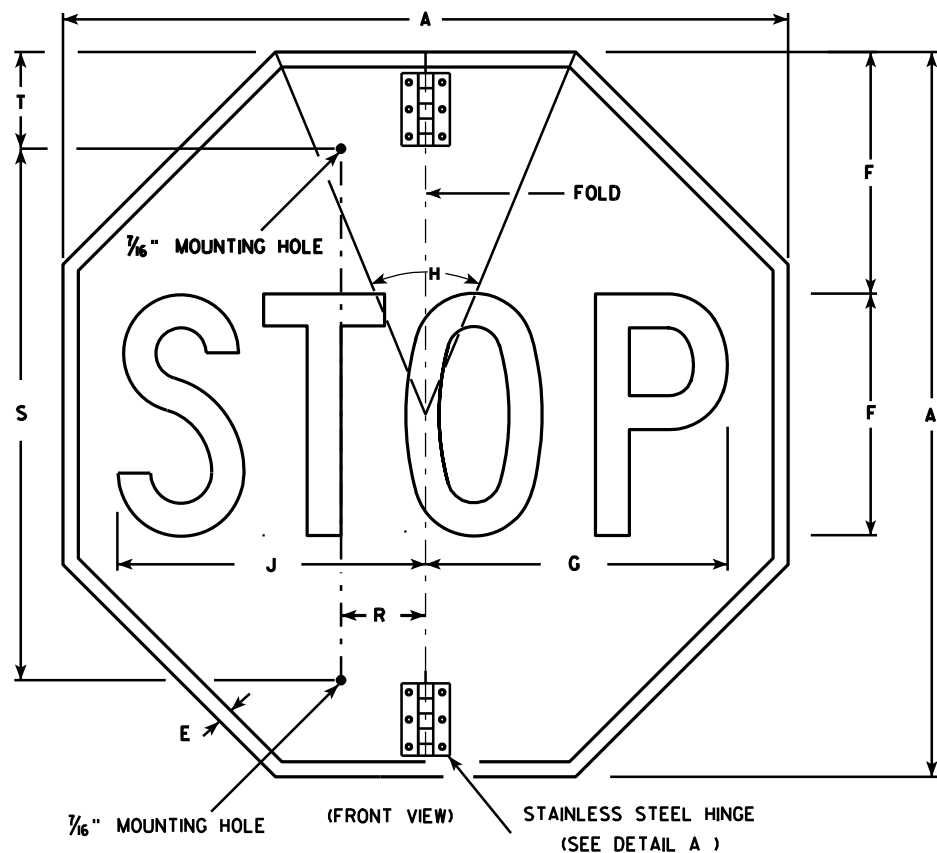
E

STANDARD SIGN
M1-94

WISCONSIN DEPT OF TRANSPORTATION

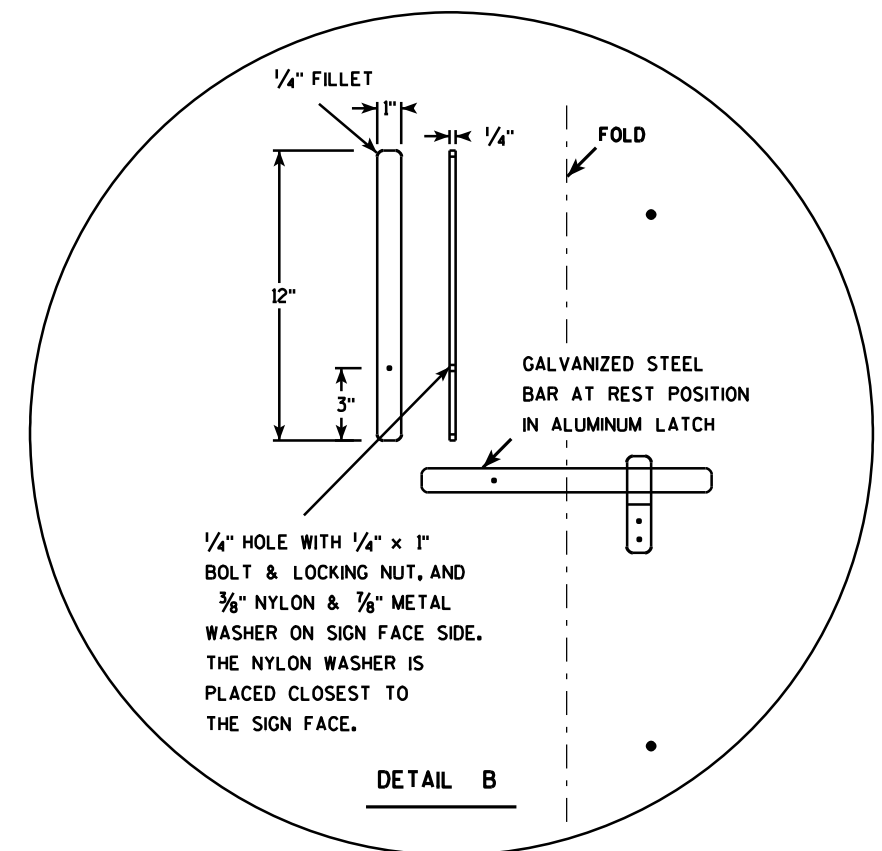
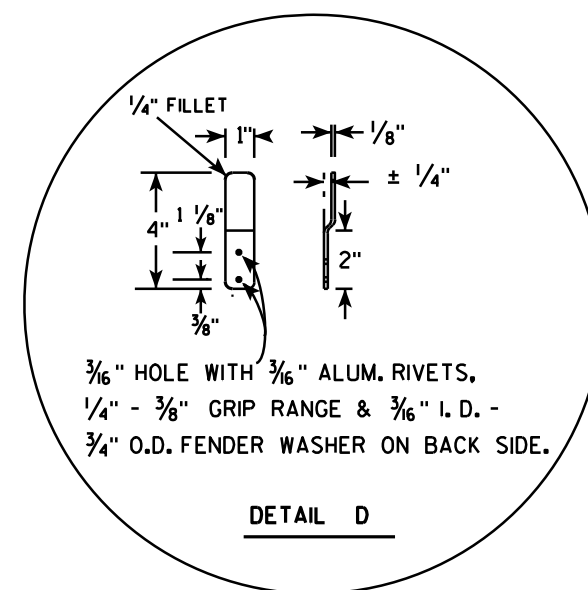
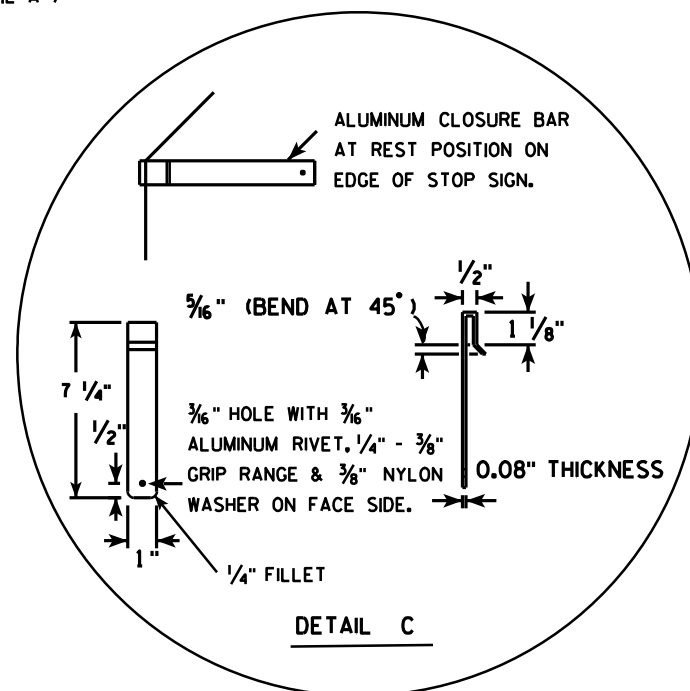
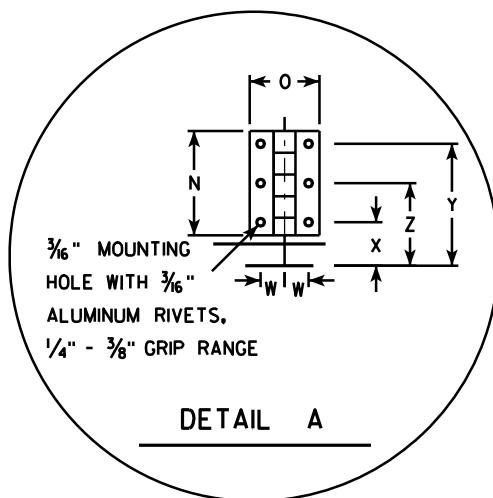
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/16/10 PLATE NO. M1-94.6



NOTES

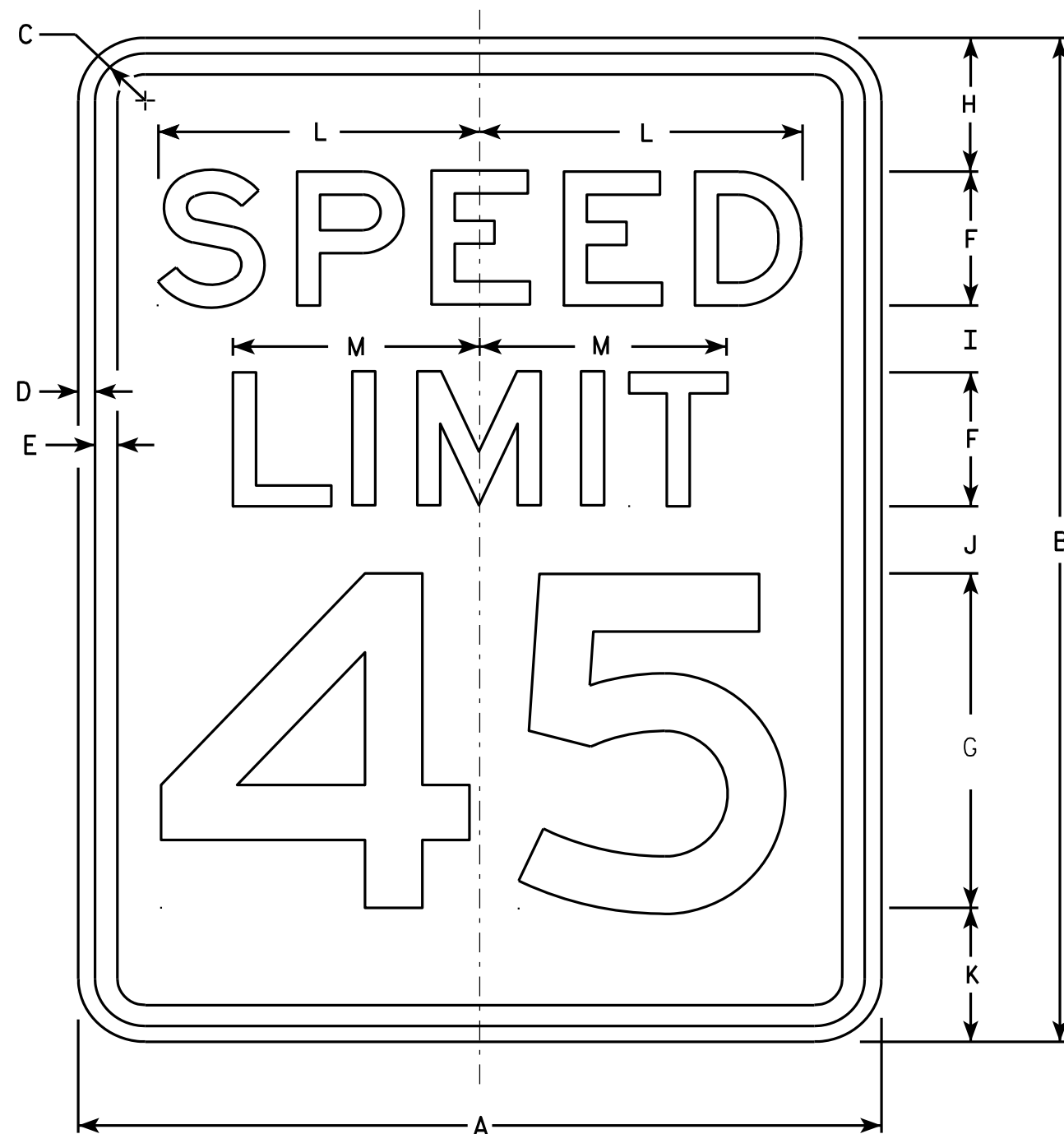
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			1/8	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			1/8	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			1/8	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

STANDARD SIGN R1-1F	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/03/10	PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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R2-1

NOTES

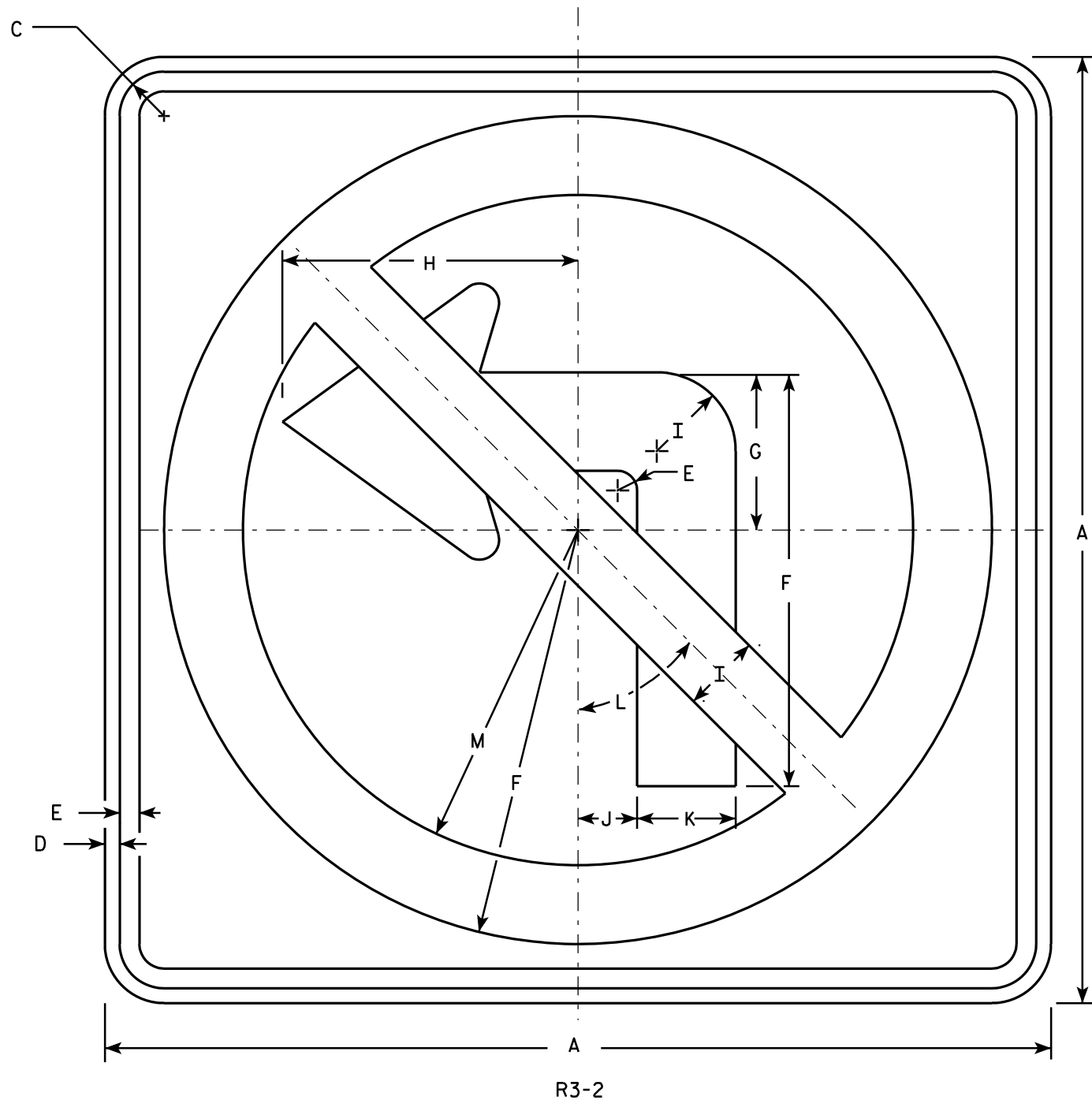
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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

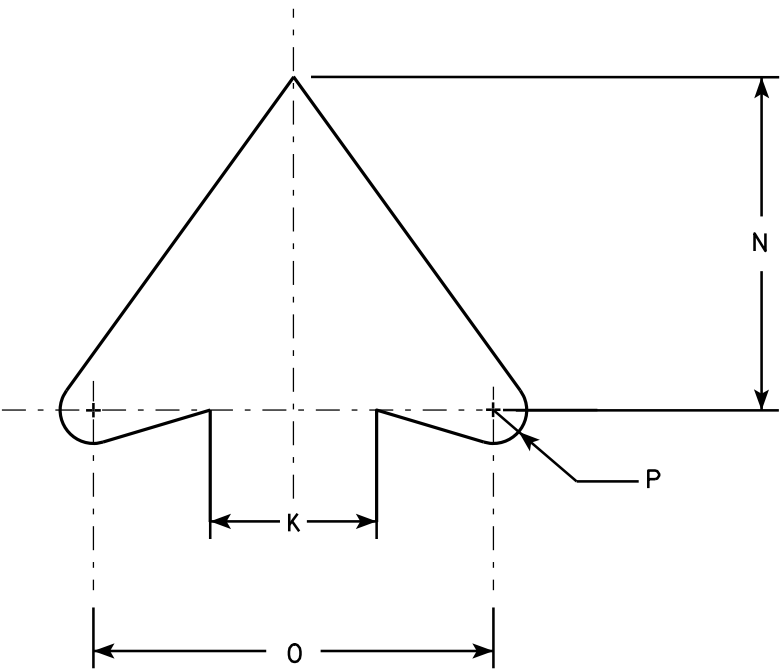
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

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



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

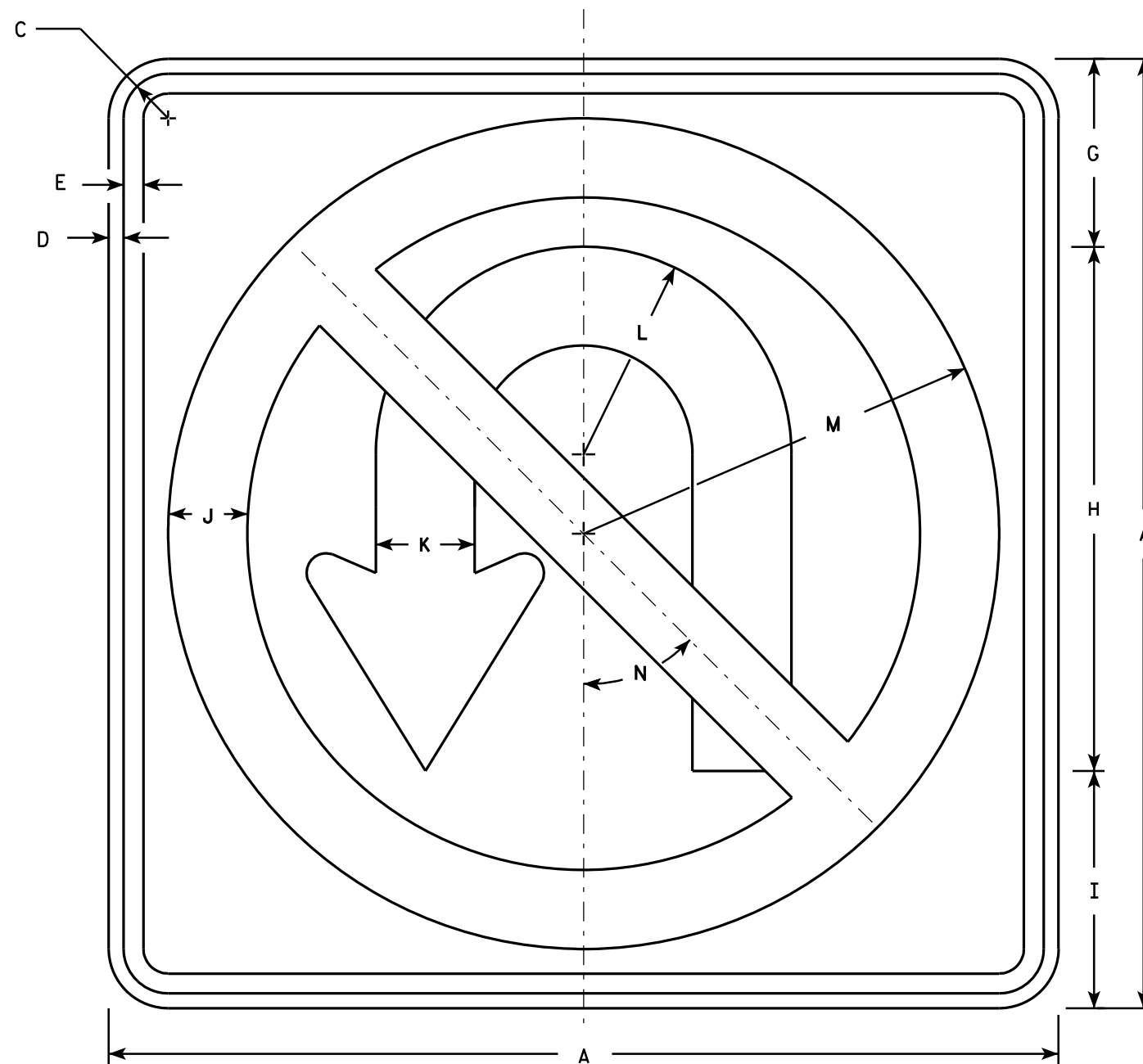
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

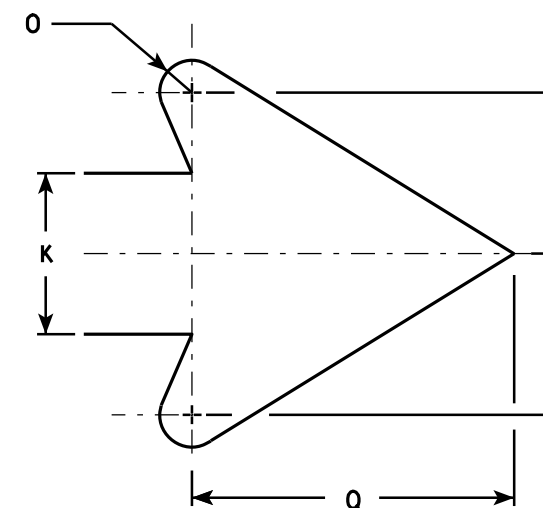
DATE 12/08/10 PLATE NO. R3-2.10



R3-4

NOTES

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

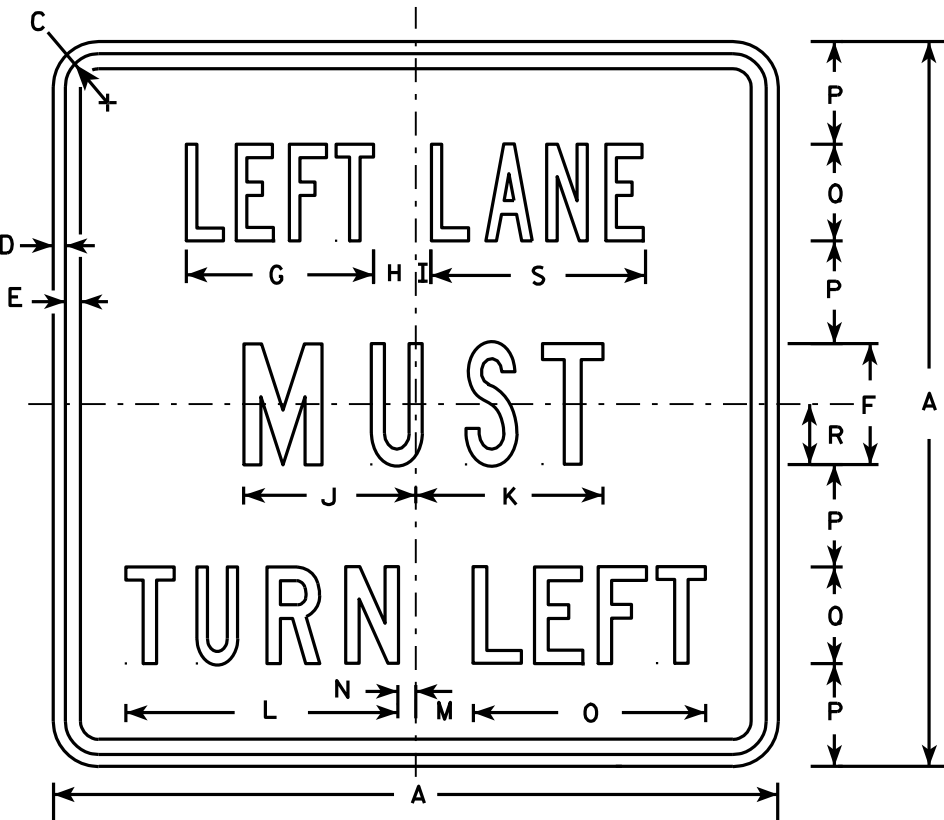


ARROW DETAIL

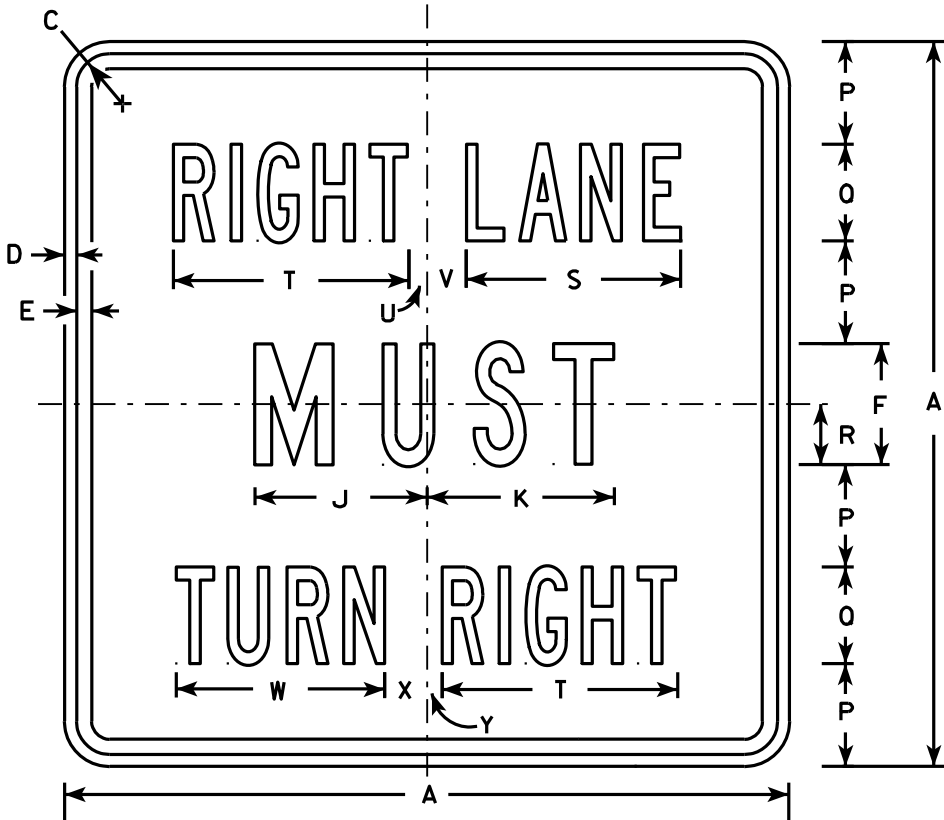
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		4 3/4	13 1/4	6	2	2 1/2	5 1/4	10 1/2	45°	1/2		5										4.0
2M	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
3	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
4	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0
5	36		1 5/8	5/8	3/4		7 1/8	19 7/8	9	3	3 3/4	7 7/8	15 3/4	45°	3/4		7 5/8										9.0

STANDARD SIGN	
R3-4	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/08/10	PLATE NO. R3-4.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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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	O	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																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

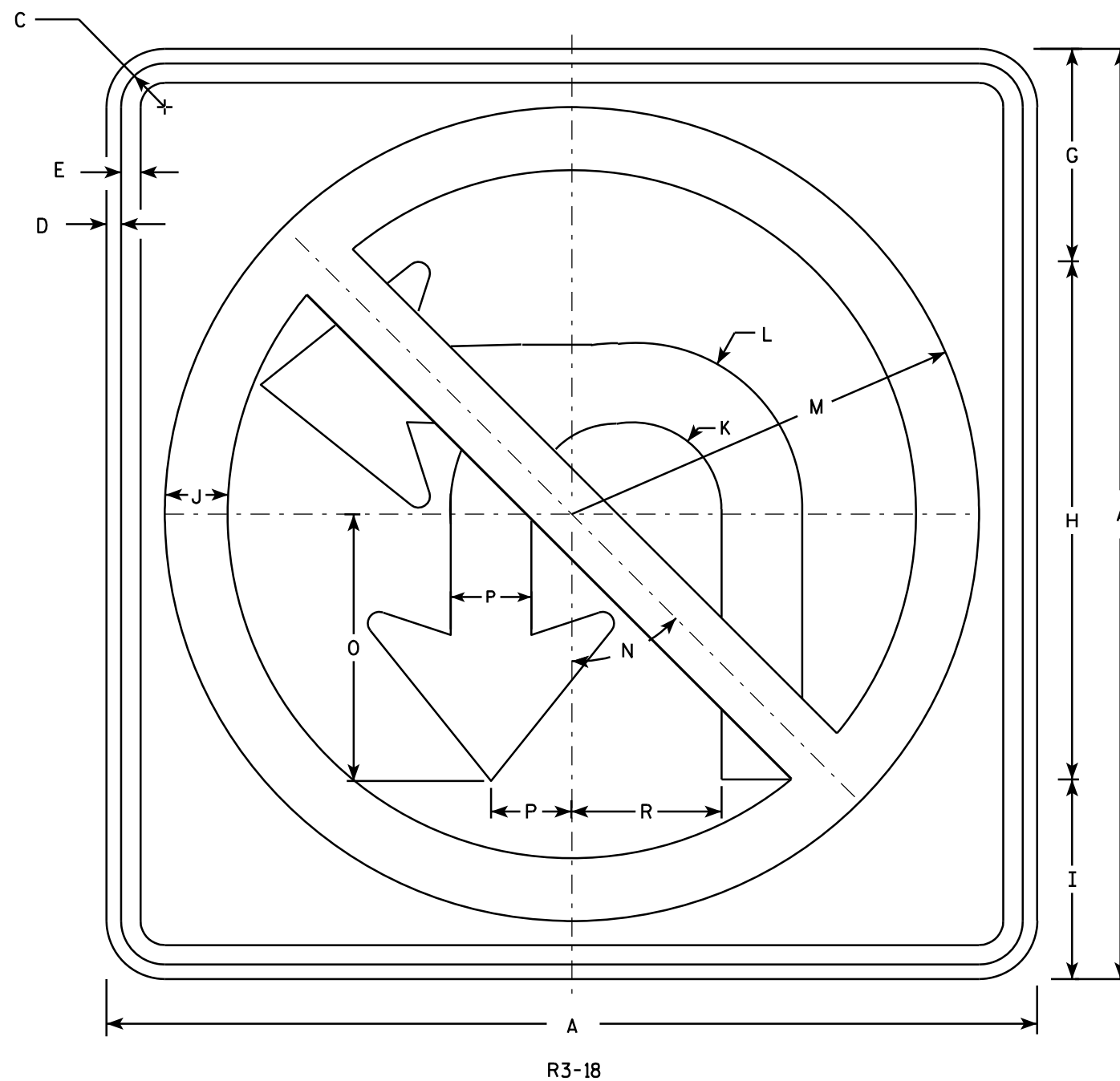
E

STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

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

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		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

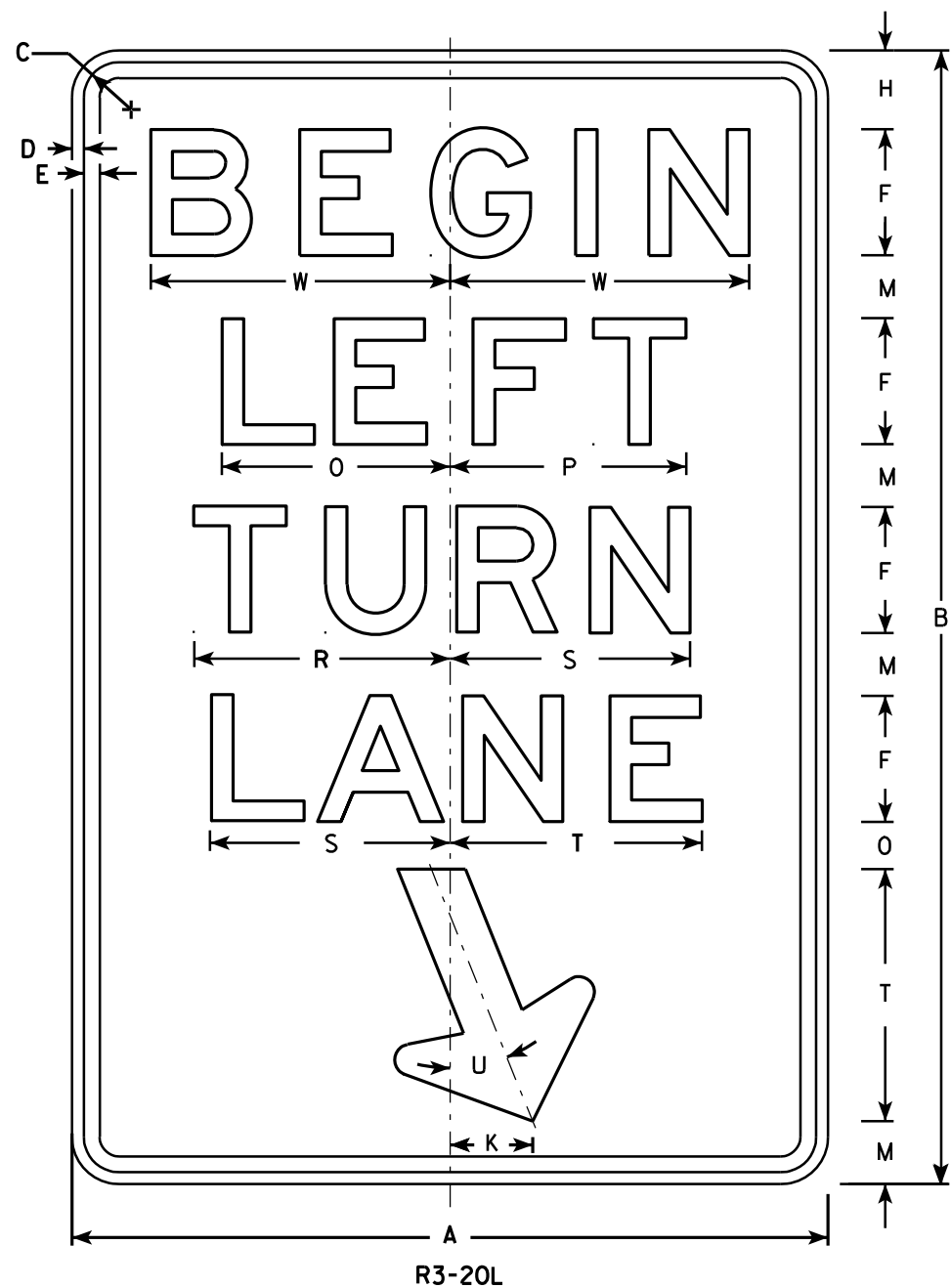
STANDARD SIGN R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

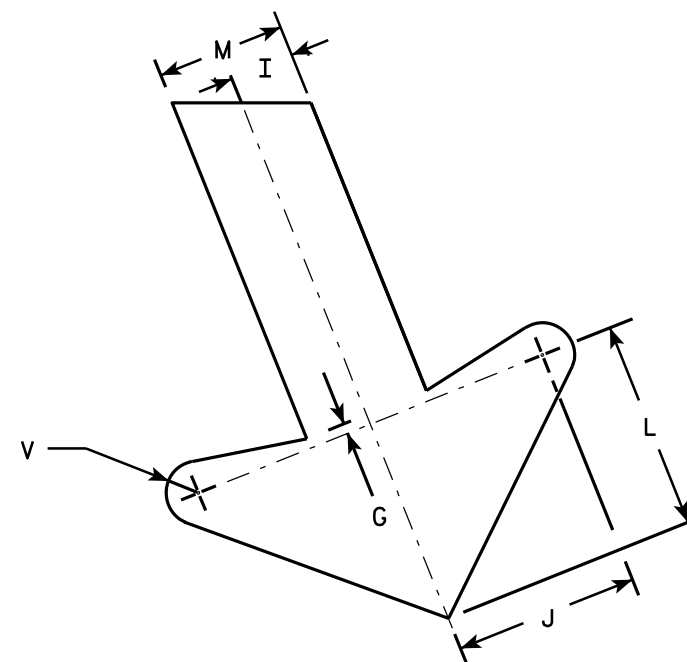
PROJECT NO: HWY: COUNTY: SHEET NO: E



R3-20L

NOTES

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



ARROW DETAIL

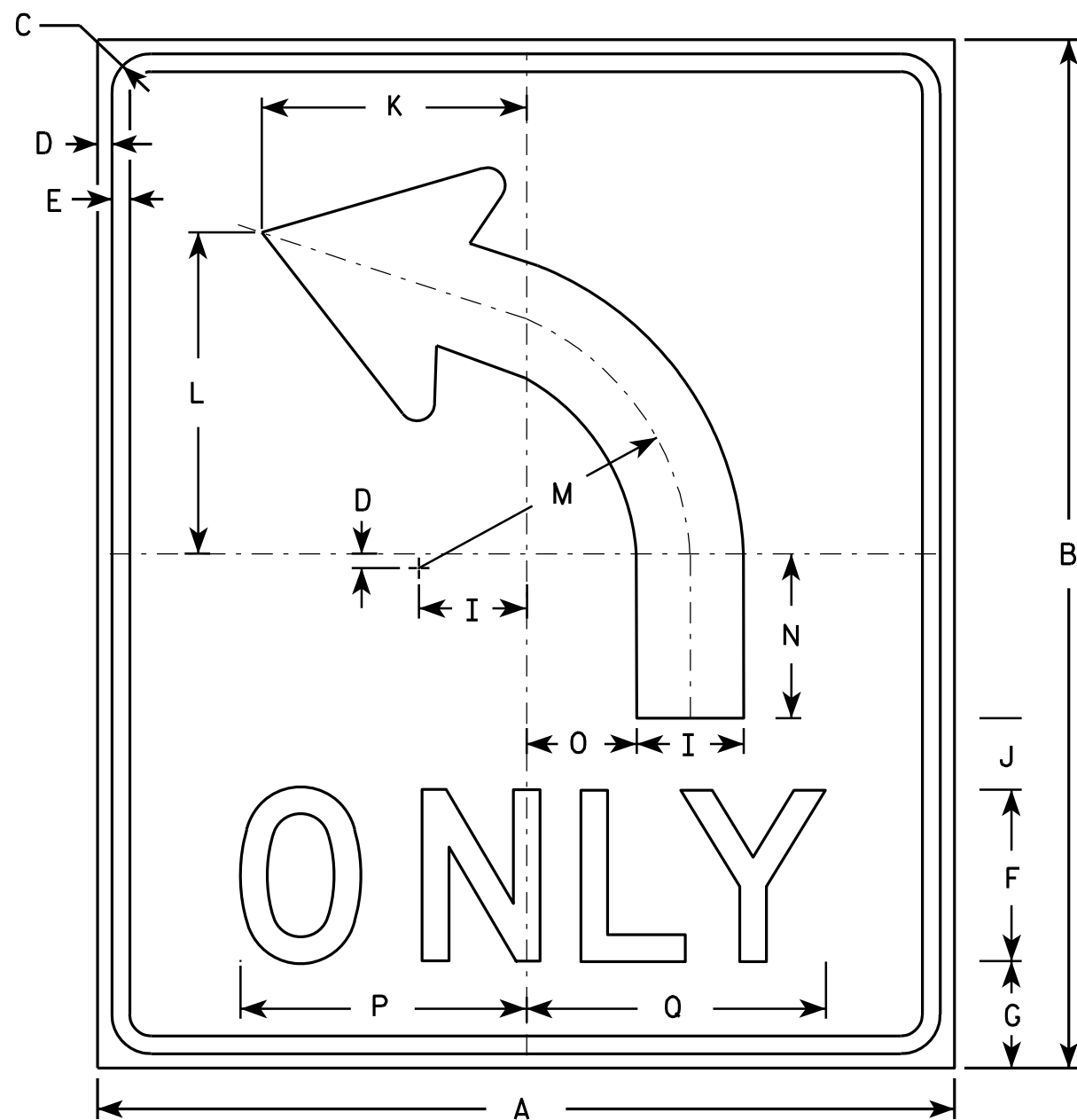
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

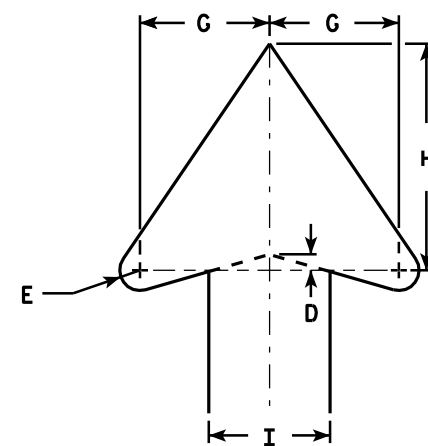
DATE 10/18/10 PLATE NO. R3-20L.7



R3-50L

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-50R is the same as R3-50L except curved portion of arrow points right.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3⁄8	1⁄2	5⁄8	6	4	7	3 3⁄4	2 1⁄2	9 1⁄4	11 1⁄4	9 1⁄2	5 3⁄4	3 7⁄8	10	10 1⁄2										7.5
2M	30	36	1 3⁄8	1⁄2	5⁄8	6	4	7	3 3⁄4	2 1⁄2	9 1⁄4	11 1⁄4	9 1⁄2	5 3⁄4	3 7⁄8	10	10 1⁄2										7.5
3																											
4																											
5																											

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
R3-50

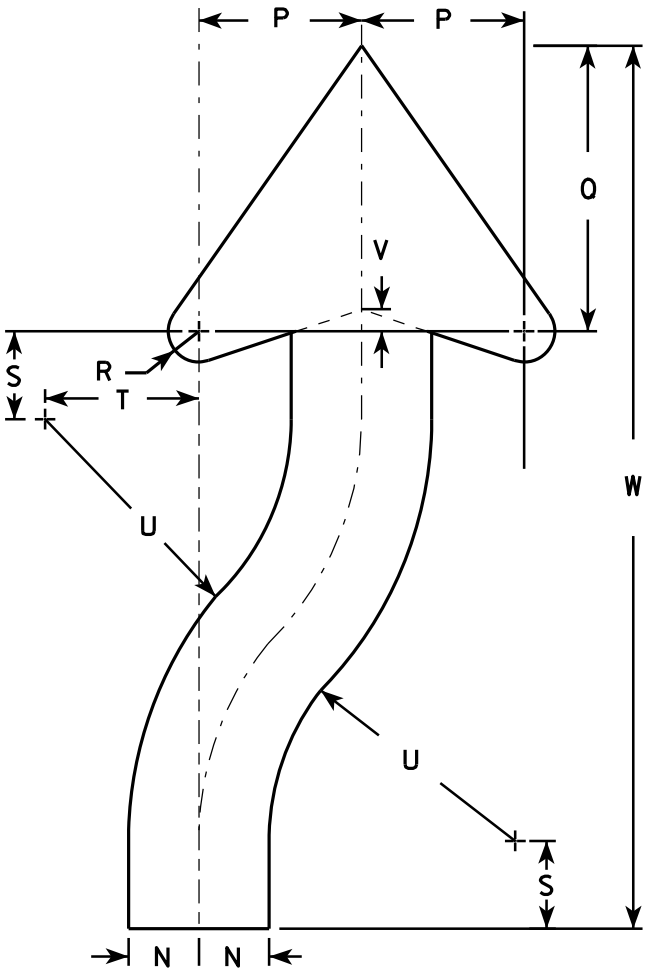
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

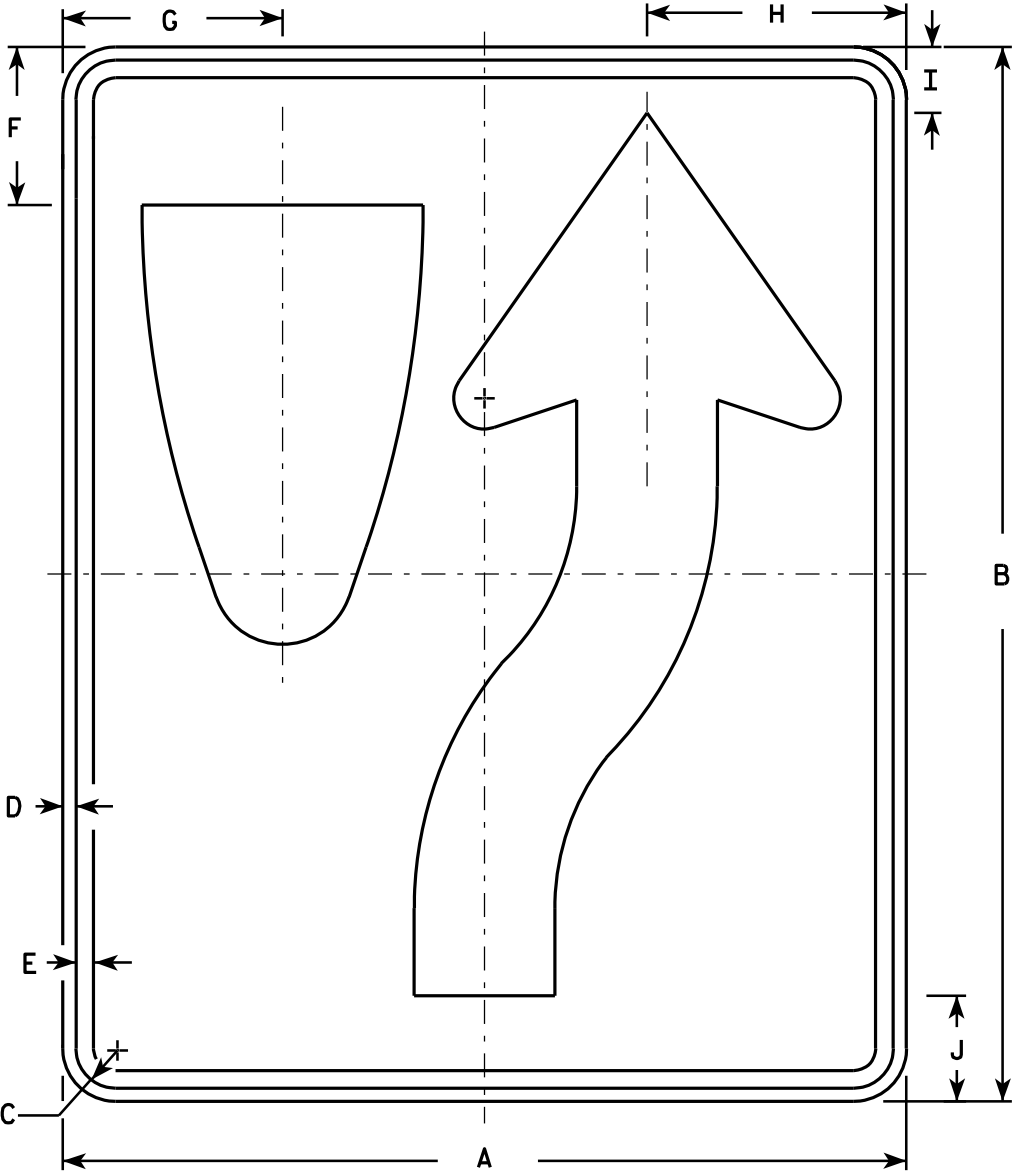
DATE 3/24/2011 PLATE NO. R3-50.2

NOTES

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



ARROW DETAIL



R4-7

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

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

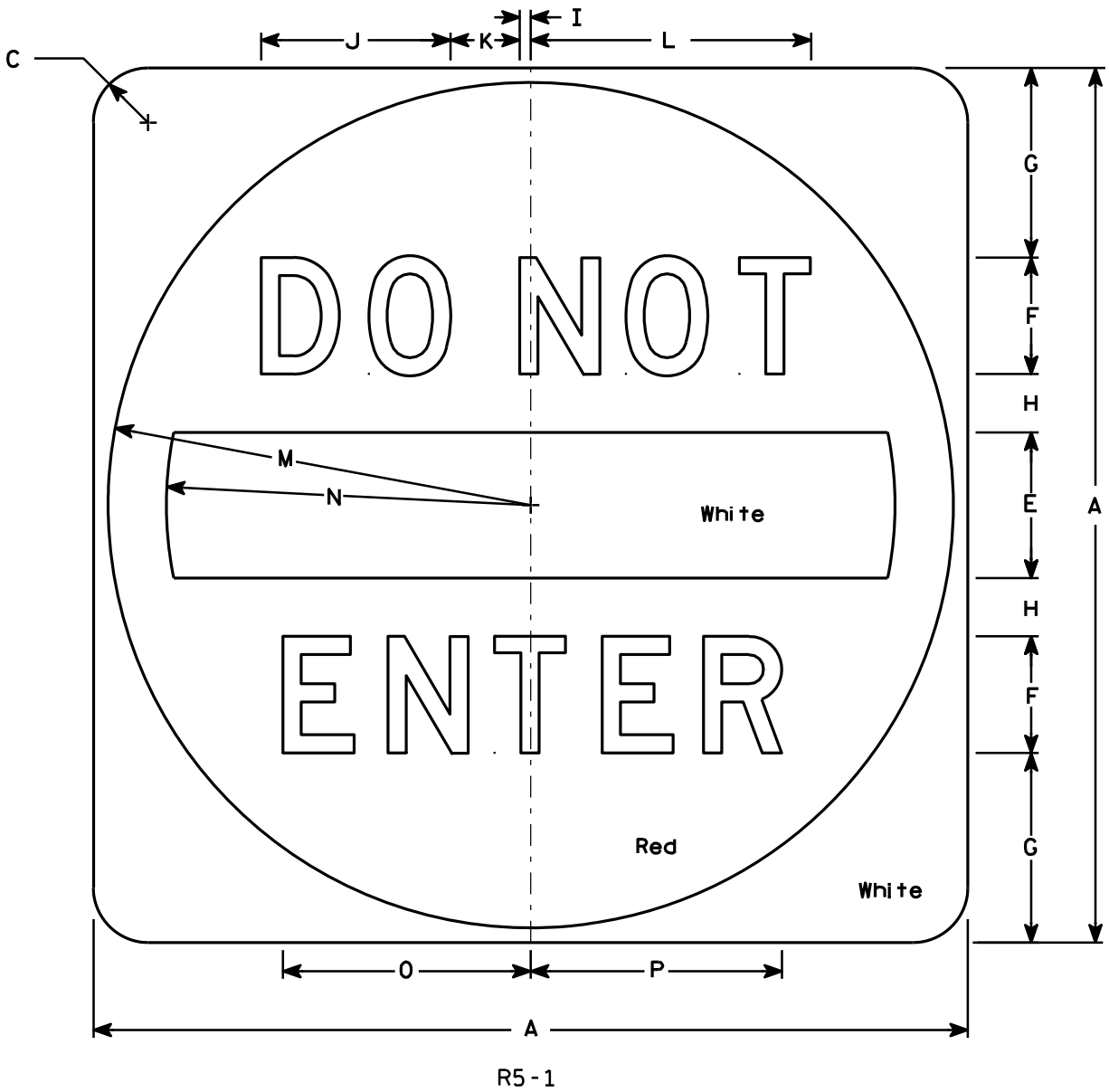
E

NOTES

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

Background - See detail

Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners 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																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN

R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

for State Traffic Engineer

DATE 12/17/10PLATE NO. R5-1.15

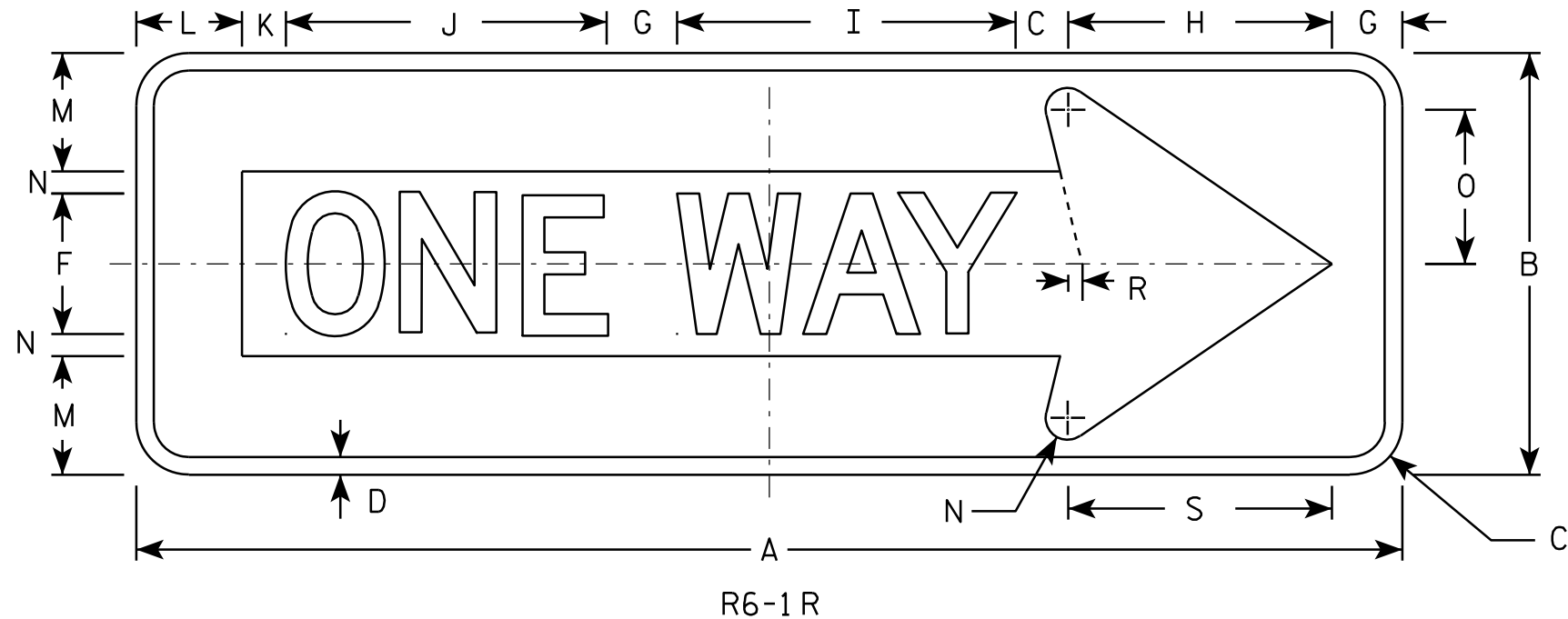
PROJECT NO:

HWY:

COUNTY:

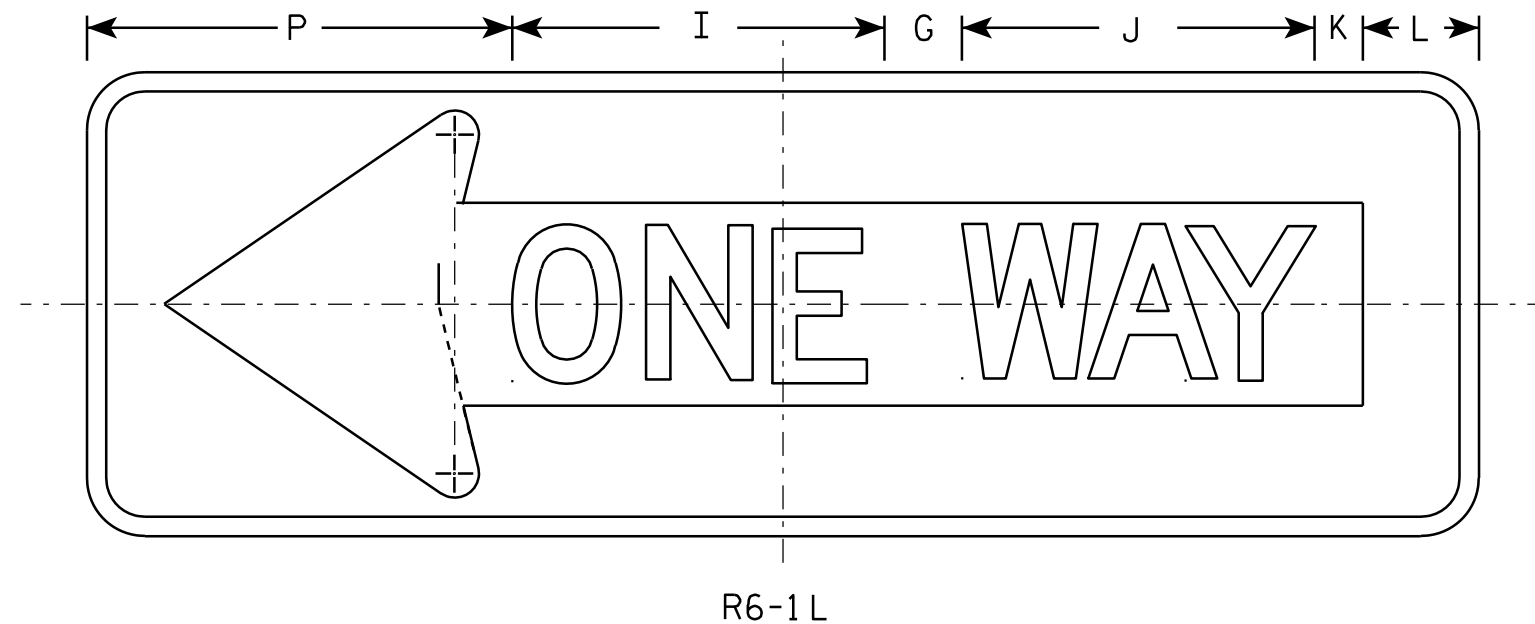
SHEET NO:

E



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - BLACK
Message - BLACK LEGEND & WHITE ARROW & BORDER
- Message Series - D
- 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																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

STANDARD SIGN R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

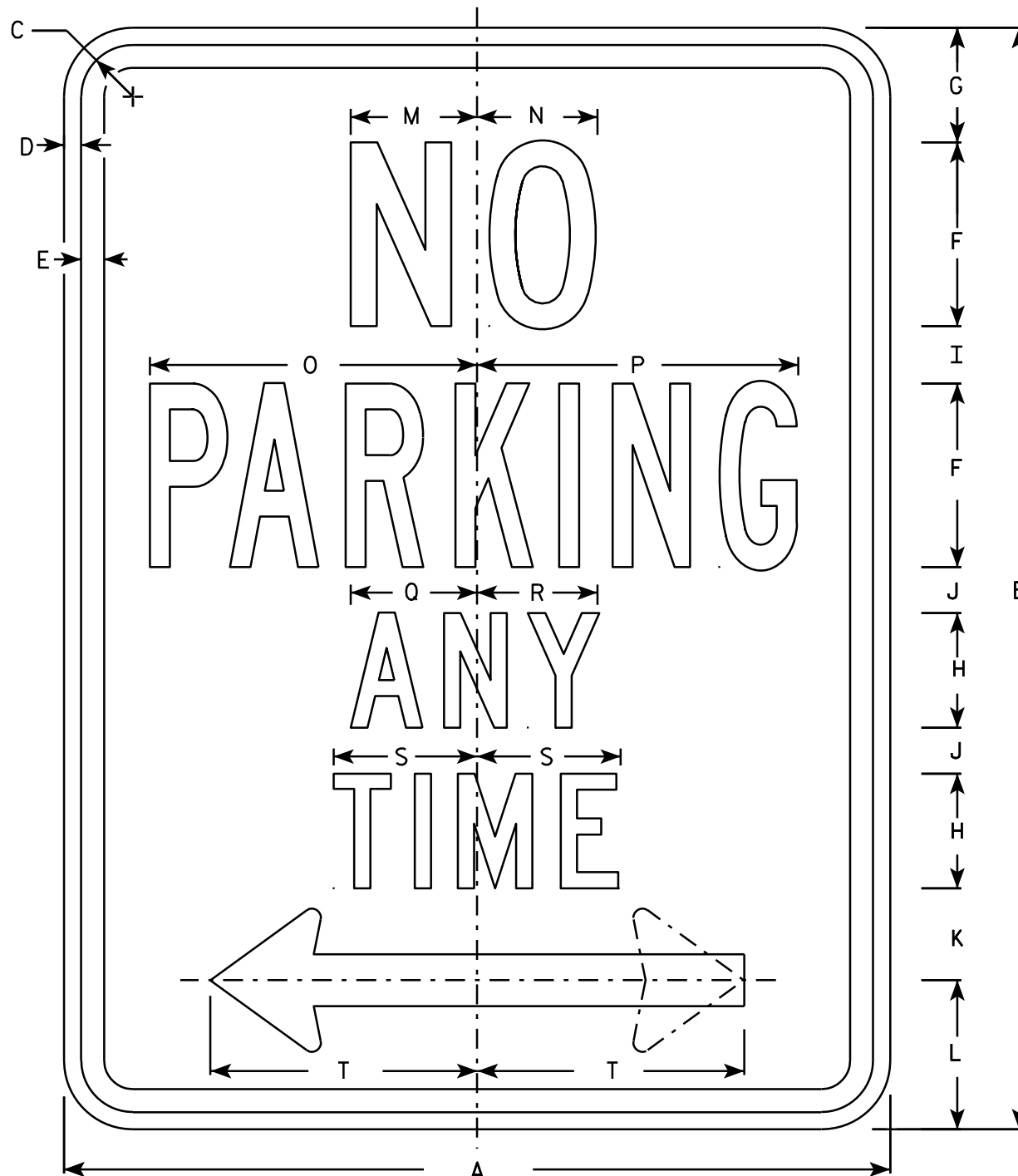
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO:

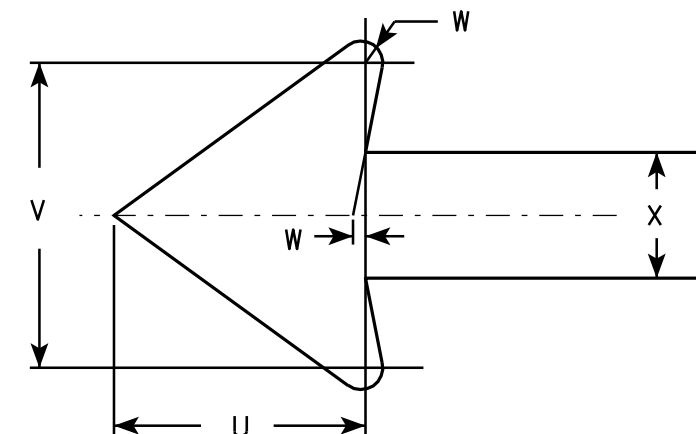
E



R7-1

NOTES

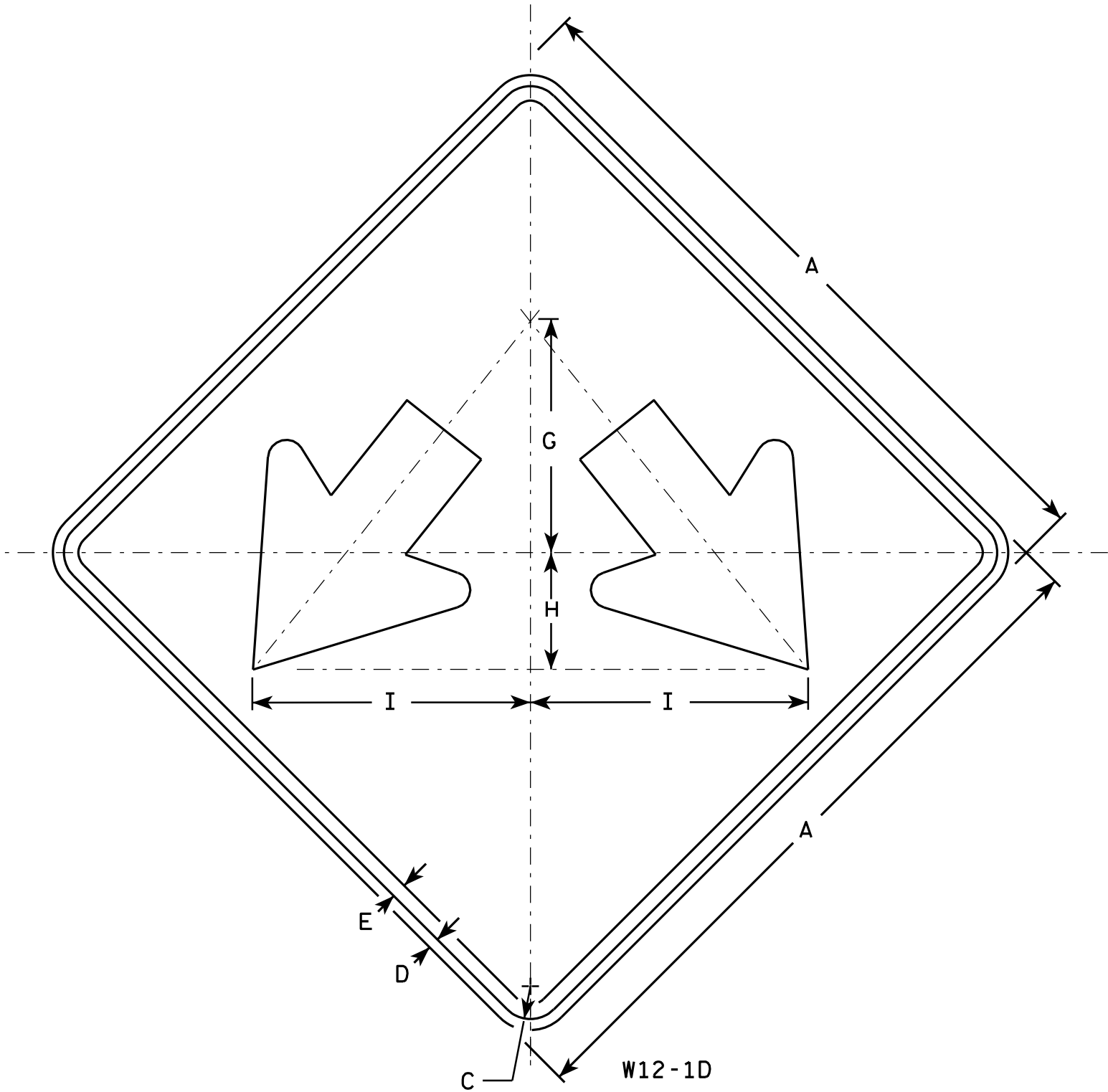
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded 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	O	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																											

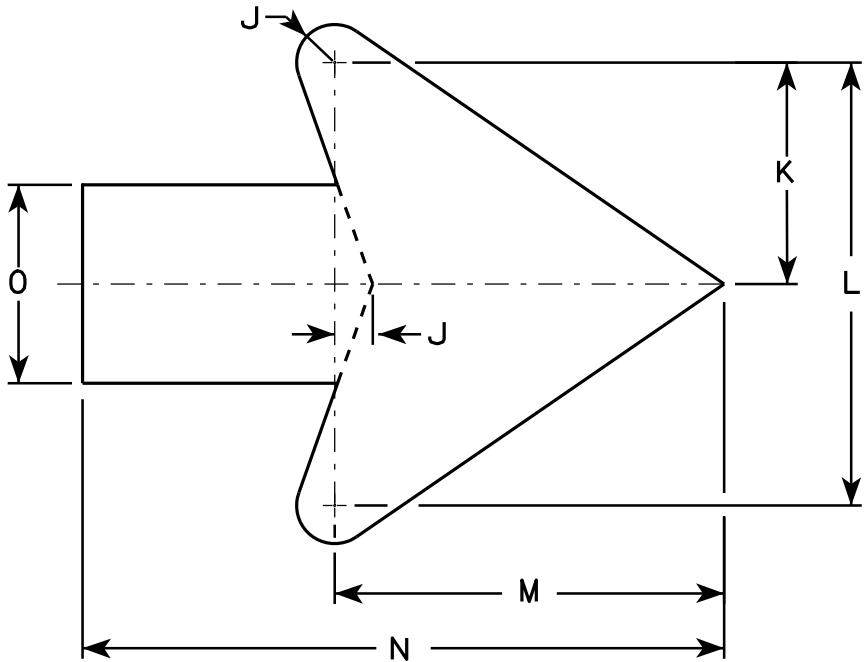
STANDARD SIGN R7-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/31/2011	PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

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



Arrow Detail

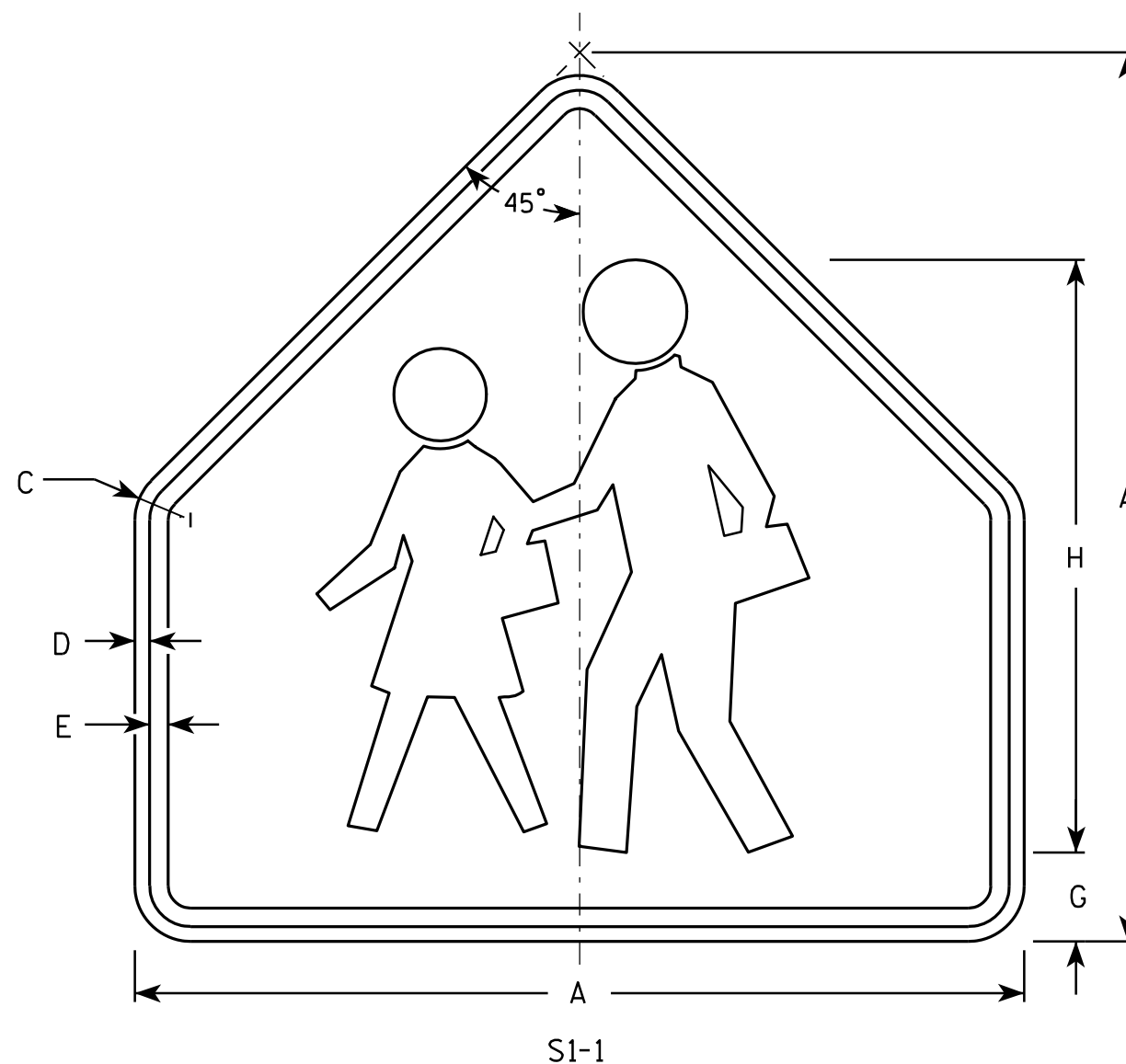
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4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

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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



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

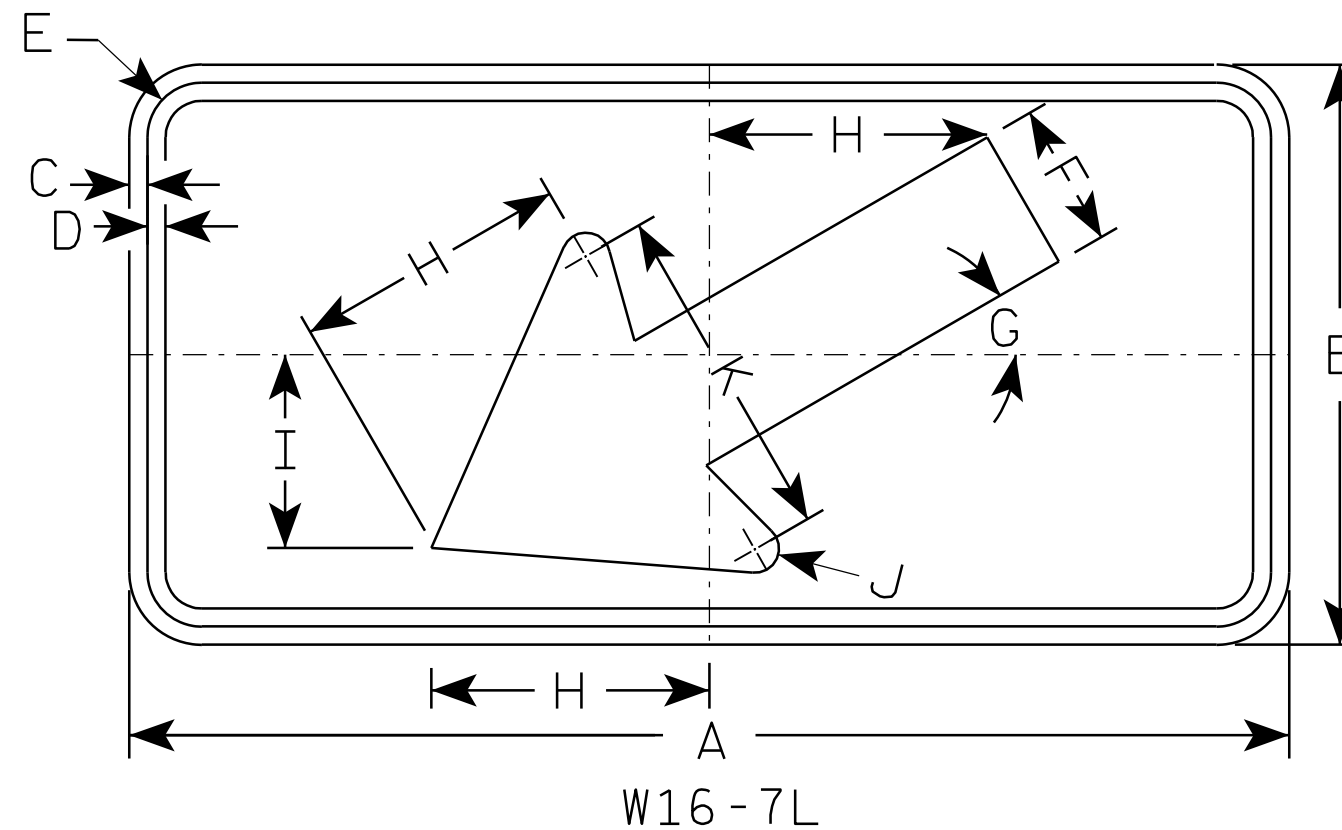
WISCONSIN DEPT OF TRANSPORTATION

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

PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W16-7R is the same as W16-L except the arrow is reversed along the vertical centerline.



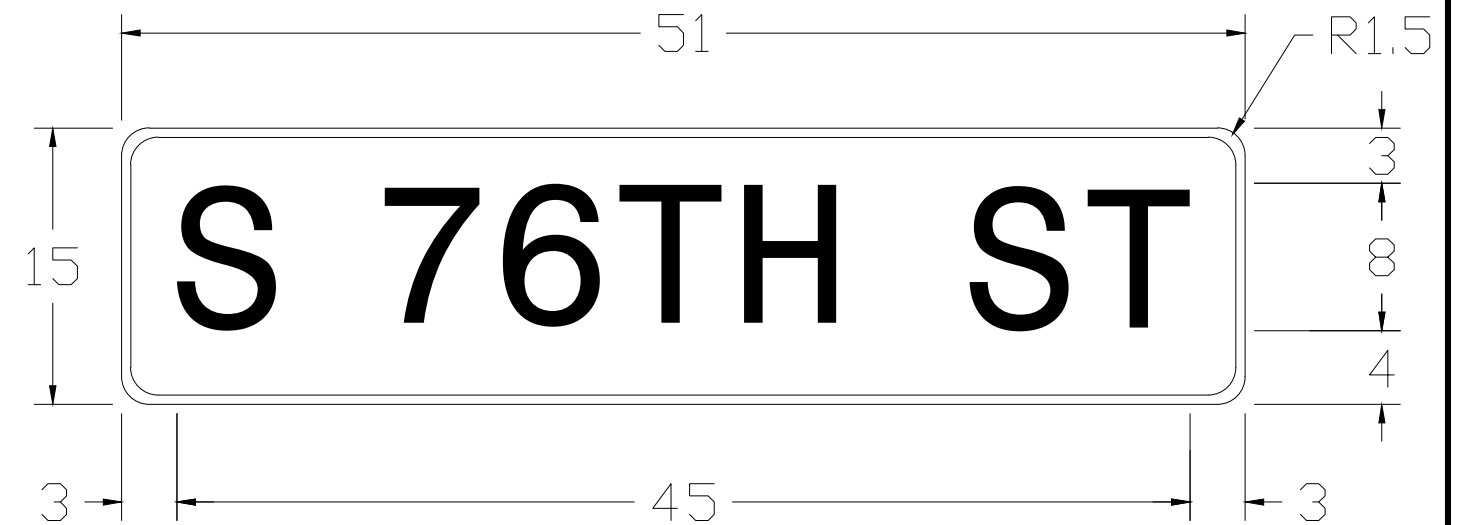
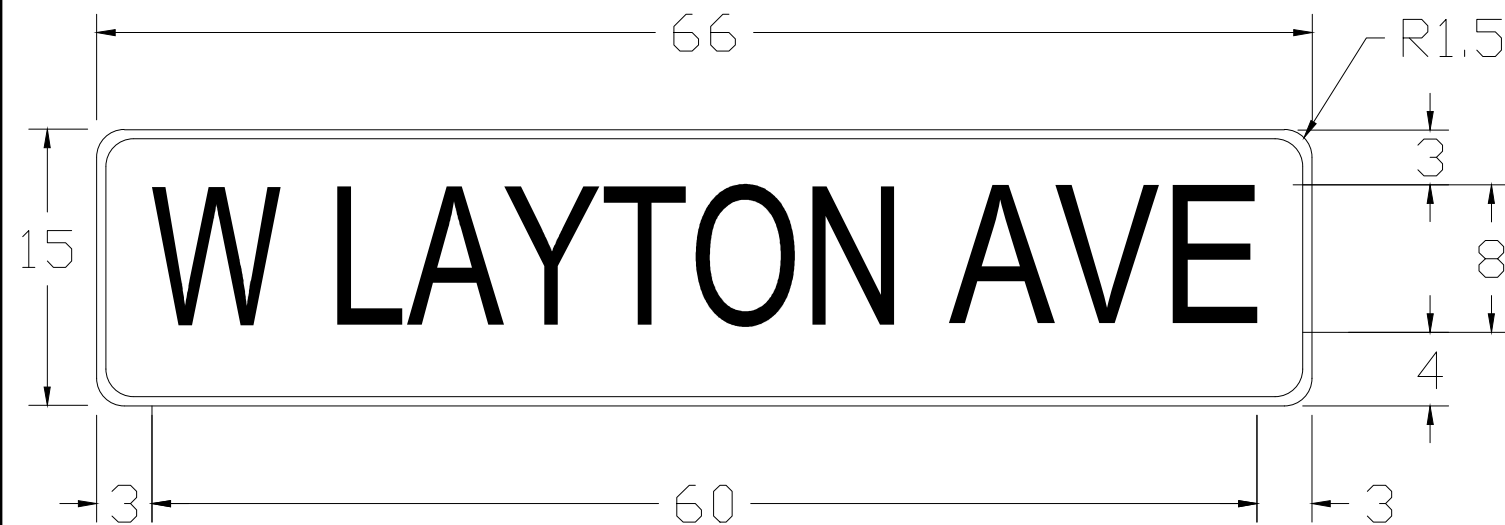
W16-7L

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																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
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																											8
5																											8

STANDARD SIGN	
W16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/02/10	PLATE NO. W16-7.5

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STREET NAME SIGN DETAILS
MAST ARM MOUNTED



CONSTRUCTION NOTES:

1. All Signs are Type II - Type SH Sheeting - reference WisDOT Standard Specifications for Highway and Structure Construction, latest edition.
2. Color: Background - Green; Message and Border - White
3. Letters are Series C (spaced to fit); 8" Upper Case; 6" Lower Case
4. Signs shall be sheet aluminum. The corners and borders shall be rounded.
5. Sign message texts shown are typical. See Sign Quantities for message and quantity of each sign type.
6. All dimensions are in inches.

Notes



Wisconsin Department of Transportation

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through innovation and exceptional service.

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