

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2250-15-70	WISC 2024115	1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WASHINGTON AVE. - VILLAGE OF MOUNT PLEASANT

OAKES RD - STH 31

STH 20

RACINE COUNTY

STATE PROJECT NUMBER
2250-15-70

ORDER OF SHEETS

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

TOTAL SHEETS = 400



10

DESIGN DESIGNATION

A.A.D.T.	2024	=	40,500
A.A.D.T.	2044	=	44,800
D.H.V.		=	4,750
D.D.		=	59/41
T.		=	8.5%
DESIGN SPEED		=	35 - 45 MPH
ESALS		=	3,500,000

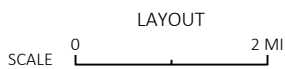
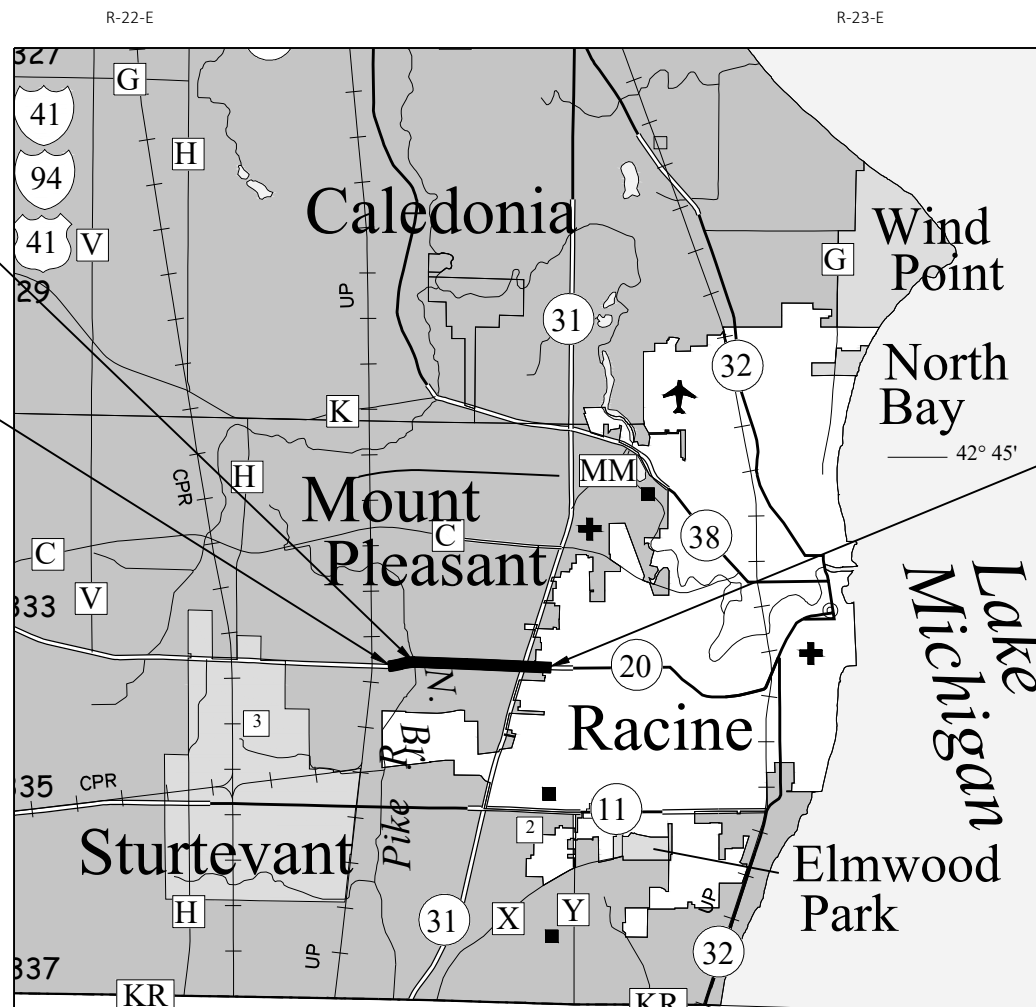
CONVENTIONAL SYMBOLS

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

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

BEGIN PROJECT
STA 314+45
X=615,822,953
Y=183,064.641

END PROJECT
STA 397+50
X=624,099.983
Y=182,979.285



TOTAL NET LENGTH OF CENTERLINE = 1.573 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), RACINE COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2007). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	Surveyor _____ WISDOT _____
Designer	_____ JON GILL _____
Project Manager	_____ GARY METZER _____
Regional Examiner	_____ STEVE CHOJNACKI _____
Regional Supervisor	_____ JANET CANNON _____

APPROVED FOR THE DEPARTMENT
DATE: 27 July 2023

E

GENERAL NOTES

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. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND EXISTING PAVEMENT ELEVATIONS.

CONSTRUCT PAVEMENT CONSISTENT WITH THE PLAN TYPICAL SECTIONS. LOCATE LONGITUDINAL JOINTS IN ASPHALT PAVEMENT OUTSIDE OF DRIVING, TURNING, BIKE OR PARKING LANES UNLESS DIRECTED OTHERWISE BY THE ENGINEER. OBTAIN THE ENGINEERS APPROVAL FOR THE LOCATIONS OF JOINTS IN ASPHALT PAVEMENT PRIOR TO PAVING OPERATIONS.

SAWCUT EXISTING ASPHALT AND CONCRETE PAVEMENT AT THE MATCHLINE AS INDICATED ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

CONSTRUCT INSIDE EDGE OF SIDEWALK 1/2 INCH HIGHER THAN TOP OF CURB WHEN THEY ARE ADJACENT TO EACH OTHER.

PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD OR MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

EXISTING DRIVEWAYS AND FIELD ENTRANCES SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

RESHAPE, RESTORE AND FINISH ALL PREVIOUSLY GRASSED AREAS DISTURBED BY OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT NO EXPENSE TO THE DEPARTMENT.

TRAFFIC AND EROSION CONTROL ITEMS AS SHOWN IN THE PLAN ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL PLACE RING(S) AT REFERENCE AND/OR SECTION CORNER MONUMENTS DURING HMA PAVING OPERATIONS TO PERPETUATE THE MONUMENTS. THE RING(S) WILL BE REUSED FROM EXISTING MONUMENTS OR SUPPLIED BY THE CONTRACTOR. RING INSTALLATION SHALL BE INCIDENTAL TO HMA PAVING.

CONTACT THE PROJECT ENGINEER, THE COUNTY SURVEYOR, AND SEWRPC AT LEAST TWO WEEKS BEFORE WORKING NEAR ANY PUBLIC SURVEY MONUMENT.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE AND MULCH TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS, AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE DEVICE IS NO LONGER REQUIRED.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AND BUSINESSES AT ALL TIMES.

4" HMA PAVING: 2 1/4" LOWER LAYER 3 MT 58-28 S
1 3/4" UPPER LAYER 4 MT 58-28 S

5" HMA PAVING: 3 1/4" LOWER LAYER 3 MT 58-28 S
1 3/4" UPPER LAYER 4 MT 58-28 S

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

CHIEF SURVEYOR
ROB MERRY
W239 N1812 ROCKWOOD DRIVE
P.O.BOX 1607
WAUKESHA, WI 53187-1607
PHONE: (262) 953-4289
CELL: (920) 912-1036
FAX: (262) 547-1103
EMAIL: RMERRY@SEWRPC.ORG

CONSTRUCTION COORDINATOR
ANDY TRAEGER
W239 N1812 ROCKWOOD DRIVE
P.O.BOX 1607
WAUKESHA, WI 53187-1607
PHONE: (262) 953-4296
CELL: (262) 853-8463
FAX: (262) 547-1103
EMAIL: ATRAEGER@SEWRPC.ORG

COMMUNICATIONS

AT&T LOCAL NETWORK
DALE DEFEVER
39869 LINN ST
CANTON, MI 48147
PHONE: (586) 242-2671
EMAIL: DD2579@ATT.COM

COMMUNICATIONS

MIDWEST FIBER NETWORKS LLC
CORY SCHMUKI
6070 N FLINT RD
GLENDALE, WI 53209
PHONE: (414) 459-3561
EMAIL: CSCHMUKI@MIDWESTFIBERNETWORKS.COM

COMMUNICATIONS

SPECTRUM
BEAU ABUYA
1320 N DR MARTIN LUTHER KING JR DR
MILWAUKEE, WI 53212
PHONE: (414) 908-1343
EMAIL: WIS.ENGINEERING@CHARTER.COM

COMMUNICATIONS

AT&T WISCONSIN
MIKE VANBOVEN
411 7TH STREET
RACINE, WI 53403
PHONE: (262) 676-3958
EMAIL: MV3658@ATT.COM

COMMUNICATIONS

PAETEC COMMUNICATIONS, LLC
LORI KETTER
314 N. DANZ AVE
GREEN BAY, WI 54302-3526
PHONE: (920) 410-6902
EMAIL: LORI.KETTER@WINDSTREAM.COM

ELECTRICITY

WE ENERGIES
JAMES NELSON
7815 NORTHWESTERN AVE
RACINE, WI 53406
PHONE: (262) 884-6734
EMAIL: JAMES.NELSON@WE-ENERGIES.COM

ELECTRICITY-TRANSMISSION

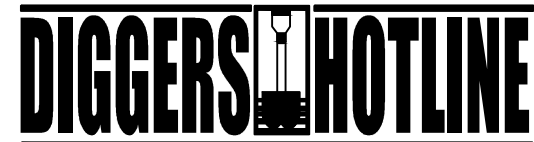
ATC MANAGEMENT, INC.
CHRIS DAILEY
PO BOX 47
WAUKESHA, WI 53187
PHONE: (262) 506-6884
EMAIL: CDAILEY@ATCLLC.COM

WATER

RACINE WATER WORKS COMMISSION
CHAD REGALIA, PE
100 HUBBARD STREET
RACINE, WI 53402
PHONE: (262) 497-4611
EMAIL: CHAD.REGALIA@CITYOFRACINE.COM

GAS/PETROLEUM

WE ENERGIES
EVON KARPINSKI
7815 NORTHWESTERN AVE
RACINE, WI 53406
PHONE: (262) 884-6722
EMAIL: EVON.KARPINSKI@WE-ENERGIES.COM



Dial **811** or (800)242-8511

www.DiggersHotline.com

OTHER AGENCIES

RYDE - RACINE TRANSIT

TRANSIT SYSTEMS MANAGER
730 WASHINGTON AVE.,
RACINE, WI 53403
OFFICE: (262) 636-9121
DIRECT: (262) 636-9123
EMAIL: TREVOR.JUNG@CITYOFRACINE.ORG

SEWER

VILLAGE OF MOUNT PLEASANT
LINSEY WEBER
8811 CAMPUS DR
MOUNT PLEASANT, WI 53406
PHONE: (262) 664-7833
EMAIL: LWEBER@MTPLEASANTWI.COM

WISCONSIN SIGNAL

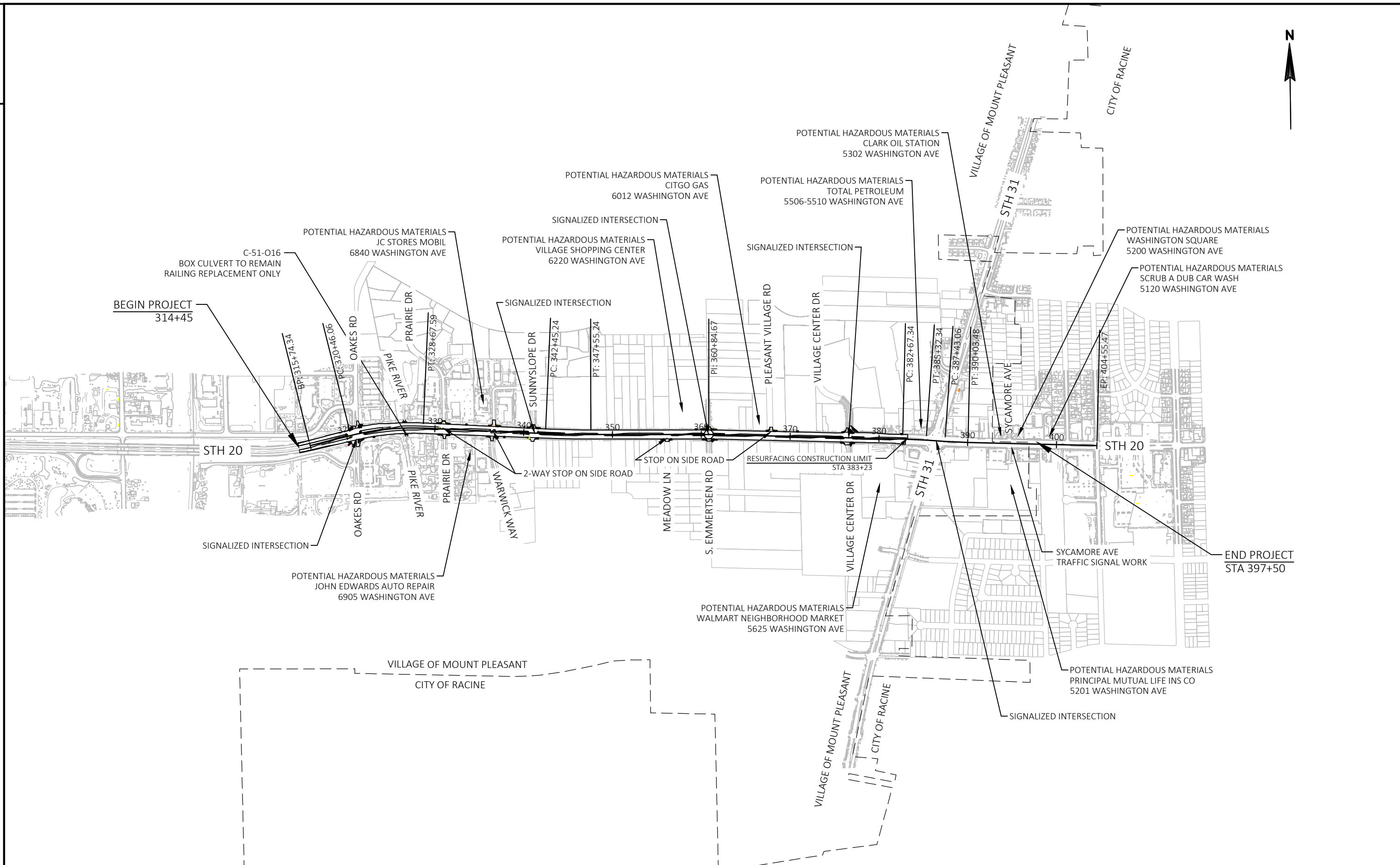
WISCONSIN DEPARTMENT OF TRANSPORTATION
JOYCE MURPHY
141 NW BARSTOW ST
WAUKESHA, WI 53187
PHONE: (262) 548-5933
EMAIL: JOYCE.MURPHY@DOT.WI.GOV

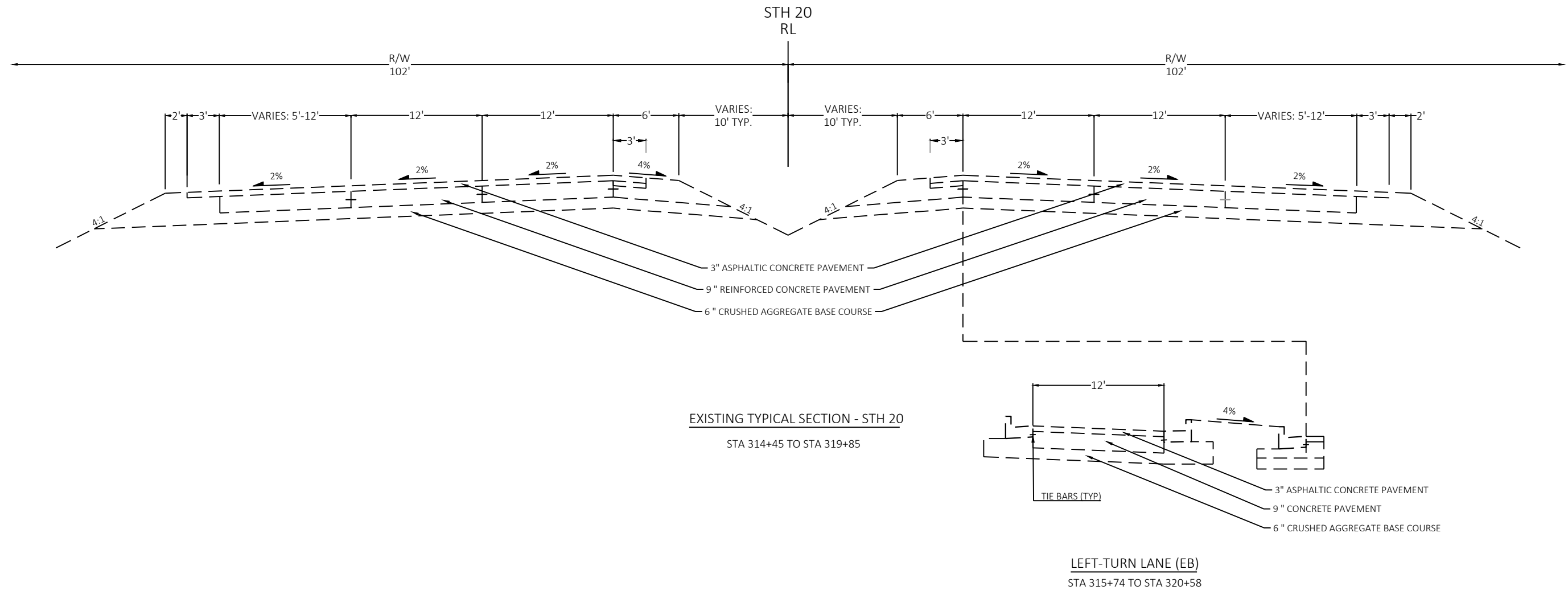
STREET LIGHTING

WISCONSIN DEPARTMENT OF TRANSPORTATION
ERIC PEREA
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 574-5422
EMAIL: ERIC.PEREA@DOT.WI.GOV

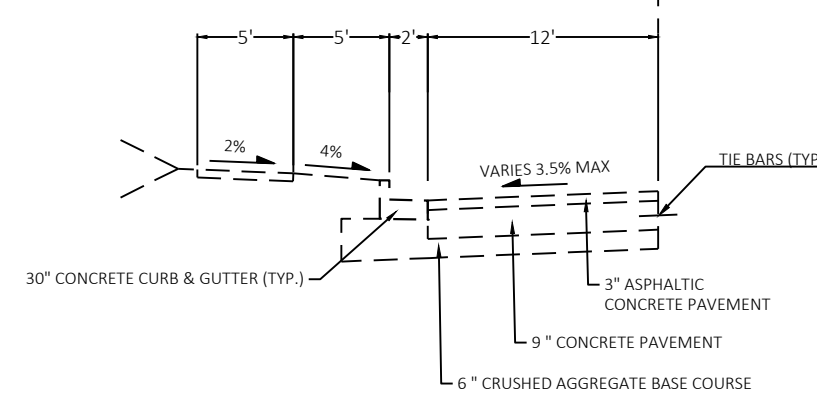
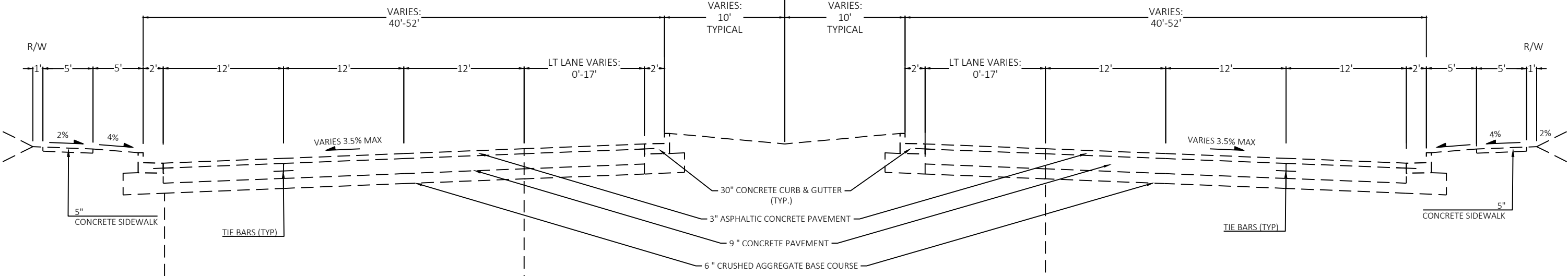
WI DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
BENTON STELZEL
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 623-0194
EMAIL: BENTON.STELZEL@WISCONSIN.GOV



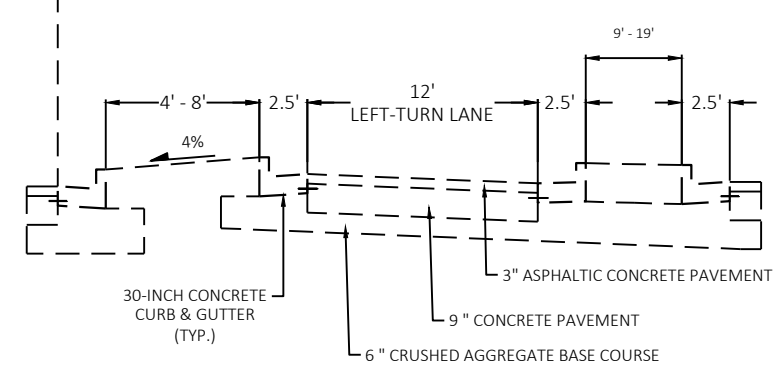


STH 20
RL



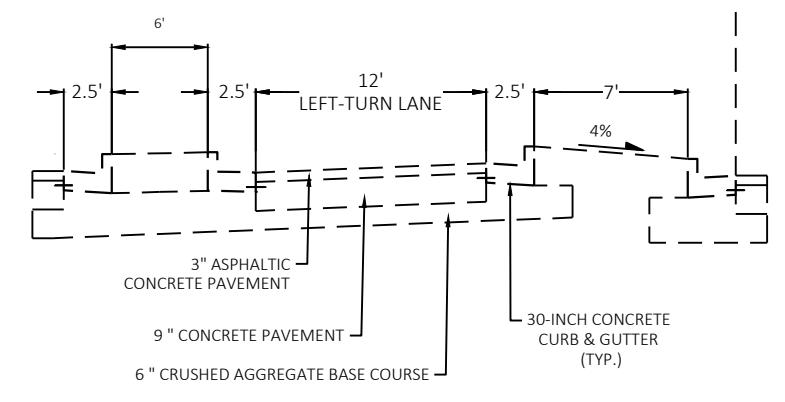
RT LANE (WB)

STA 321+00 TO STA 323+70 (OAKES RD.)
STA 377+10 TO STA 379+63 (VILLAGE CENTER DR.)



SLOTTED LEFT TURN LANE (WB)

STA 321+50 TO 324+20 (OAKES RD)
STA 341+55 TO 344+21 (SUNNYSLOPE DR)

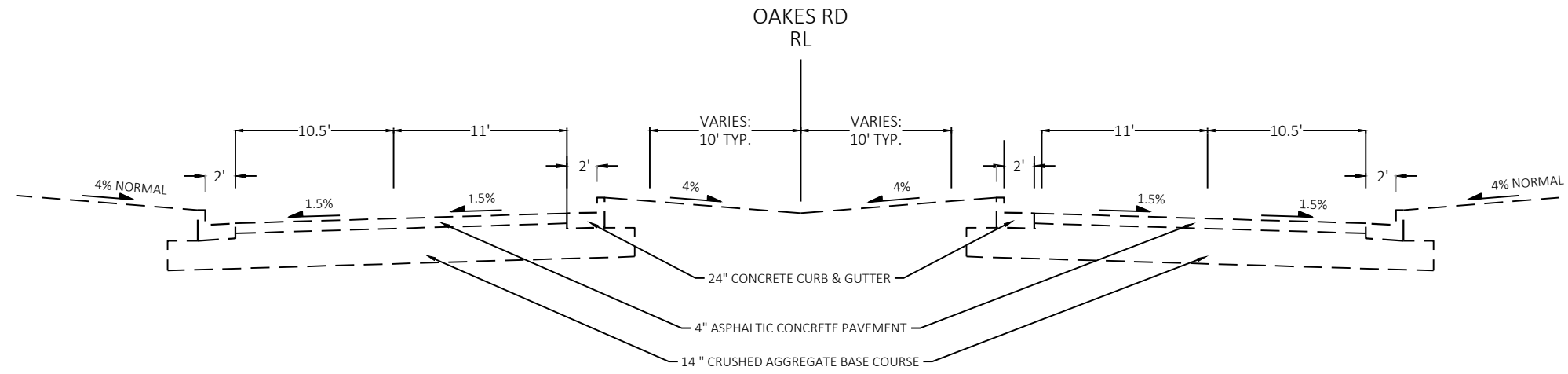


SLOTTED LEFT TURN LANE (EB)

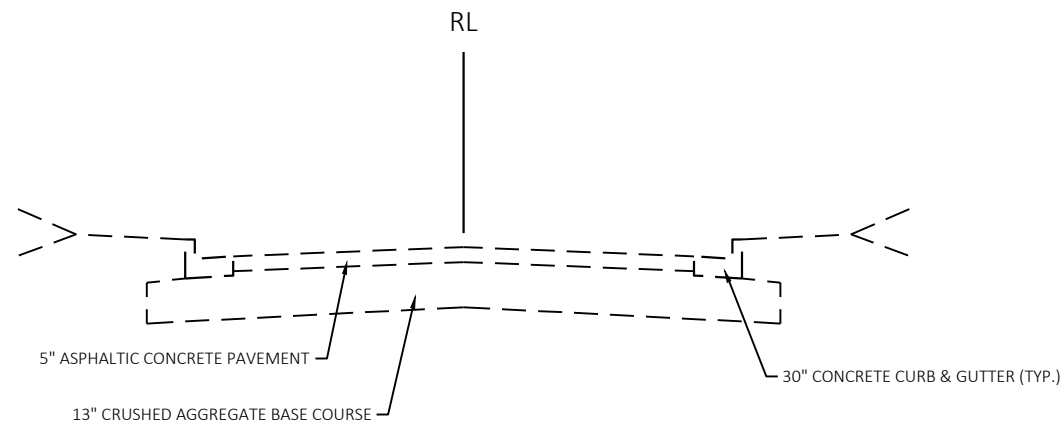
STA 339+59 TO 340+65 (SUNNYSLOPE DR)

EXISTING TYPICAL SECTION - STH 20

STA 319+85 TO STA 383+23

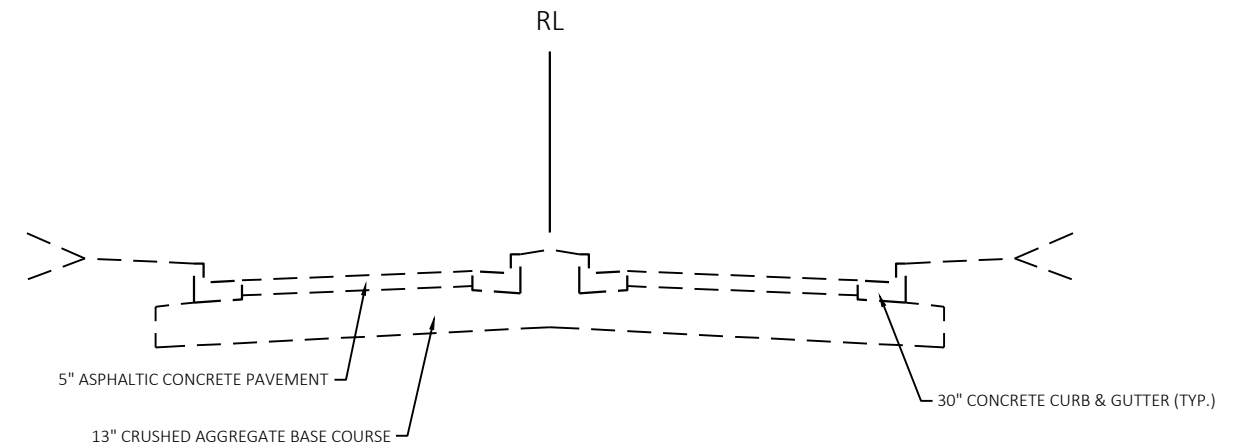


EXISTING TYPICAL SECTION - OAKES RD.
STA 4+75 TO STA 7+76



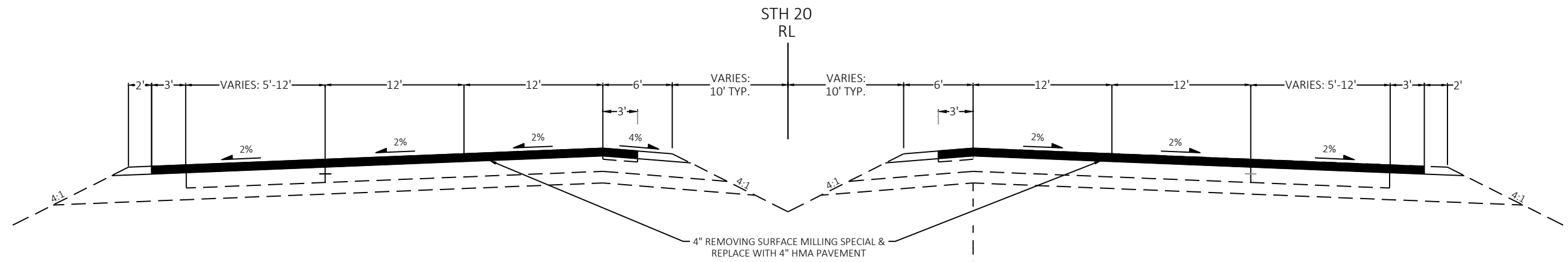
EXISTING TYPICAL SECTION

- PRAIRIE DR
- WARWICK WAY
- SUNNYSLOPE DR
- MEADOW LANE AVE
- EMMERTSEN RD
- HUNTER DR
- VILLAGE CENTER DR S

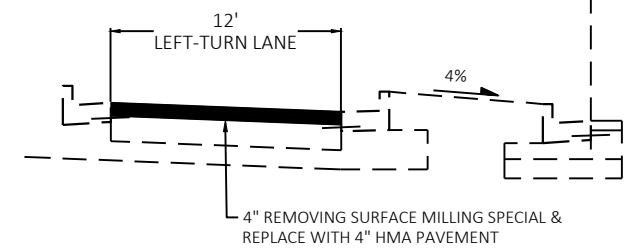


EXISTING TYPICAL SECTION

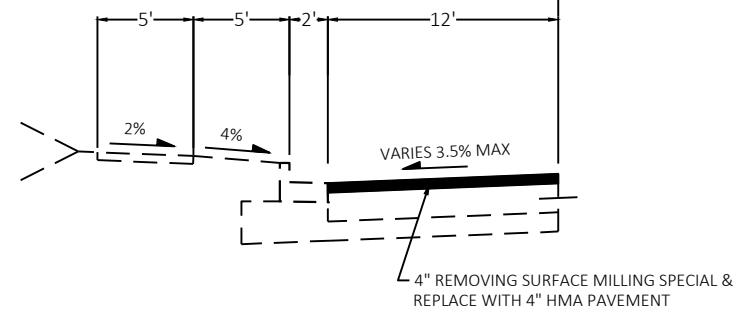
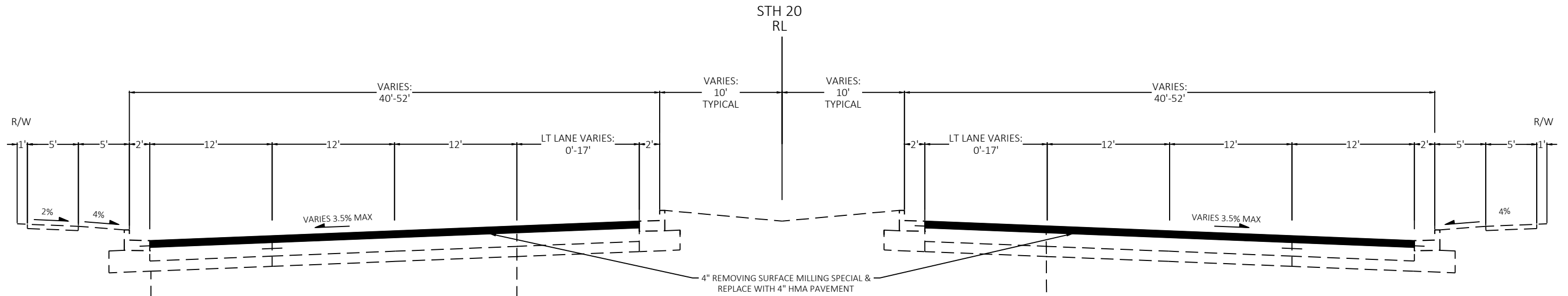
VILLAGE CENTER DR N



FINISHED TYPICAL SECTION - STH 20
STA 314+45 TO STA 319+85

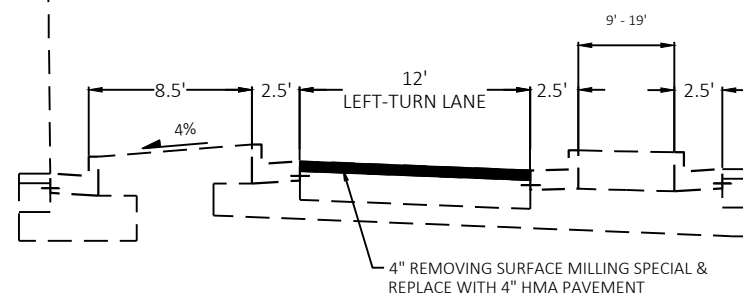


LEFT-TURN LANE (EB)
STA 315+74 TO STA 320+58



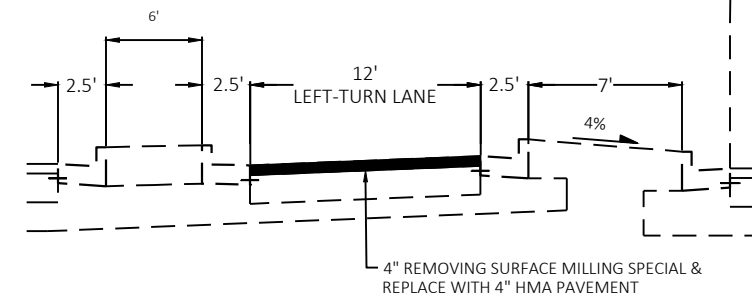
RT LANE (WB)

STA 321+00 TO STA 324+10 (OAKES RD.)
STA 377+10 TO STA 380+62 (VILLAGE CENTER DR.)



SLOTTED LEFT TURN LANE (WB)

STA 321+50 TO 324+20 (OAKES RD)
STA 341+55 TO 344+21 (SUNNYSLOPE DR)

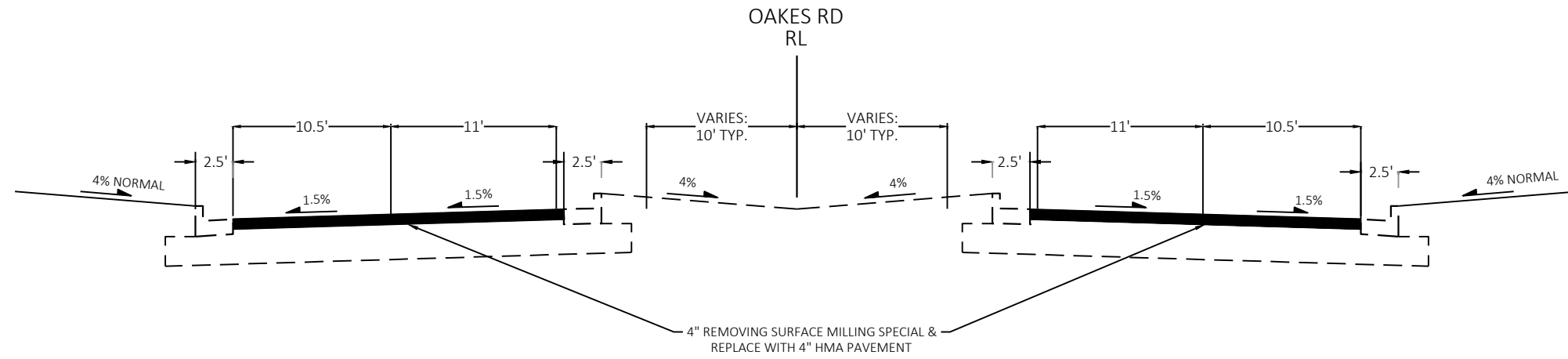


SLOTTED LEFT TURN LANE (EB)

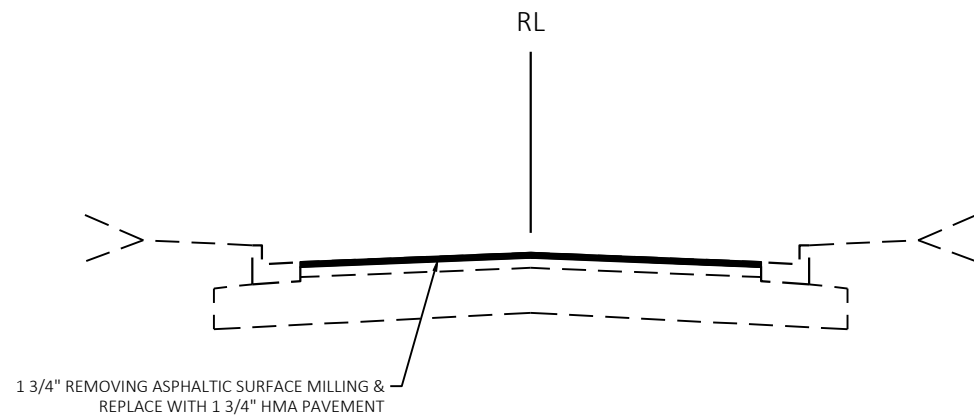
STA 339+59 TO 340+65 (SUNNYSLOPE DR)

FINISHED TYPICAL SECTION - STH 20

STA 319+85 TO STA 383+23

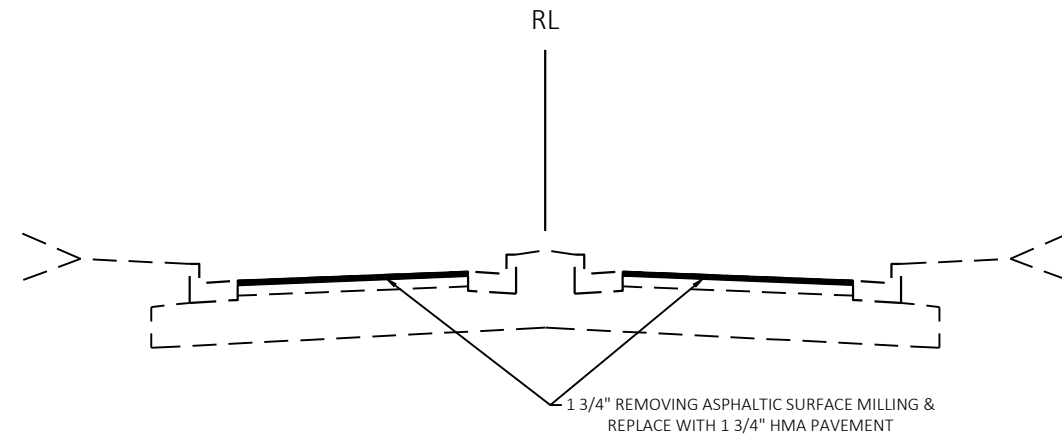


FINISHED TYPICAL SECTION - OAKES RD.
STA 4+75 TO STA 7+76



FINISHED TYPICAL SECTION

- PRAIRIE DR
- WARWICK WAY
- SUNNYSLOPE DR
- MEADOW LANE AVE
- EMMERTSEN RD
- HUNTER DR
- VILLAGE CENTER DR S



FINISHED TYPICAL SECTION

VILLAGE CENTER DR N

REMOVING CURB AND GUTTER AND PAVEMENT TO THE LIMITS SHOWN, EXCAVATING, PREPARING THE FOUNDATION AND SHIMMING ARE INCIDENTAL TO THE ADJUSTING OR RECONSTRUCTING BID ITEMS.

THE DEPARTMENT WILL PAY SEPARATELY FOR SAWING CONCRETE, CONCRETE CURB & GUTTER AND DRILLED TIE BARS.

MONOLITHIC SHIM CONCRETE, CONCRETE PLACEMENT AND FINISHING IS INCIDENTAL TO THE CONCRETE CURB & GUTTER BID ITEM.

PREVENT CONCRETE AND OTHER DEBRIS FROM FALLING INTO STRUCTURE.

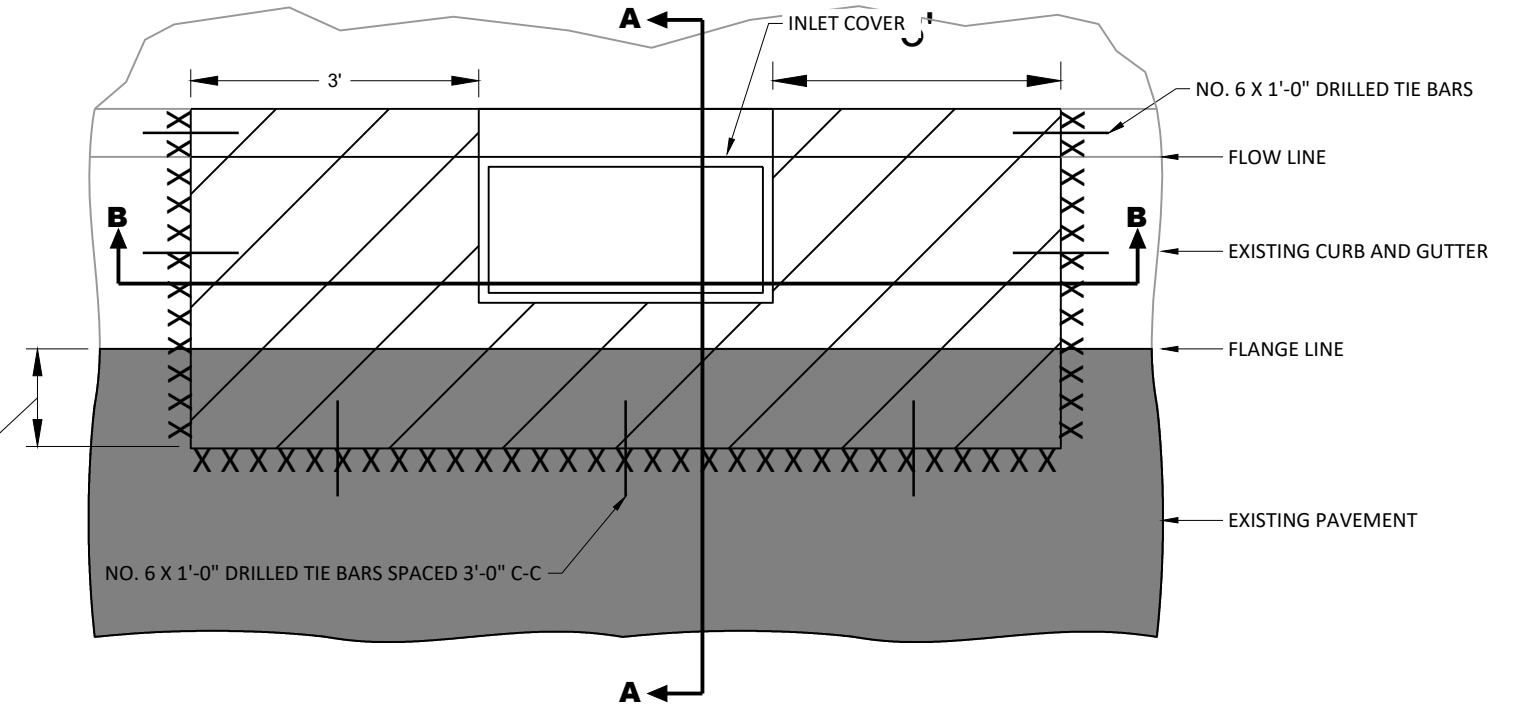
REFER TO PLAN DETAILS AND MISCELLANEOUS QUANTITIES FOR ADDITIONAL INFORMATION.

XXX SAWING CONCRETE

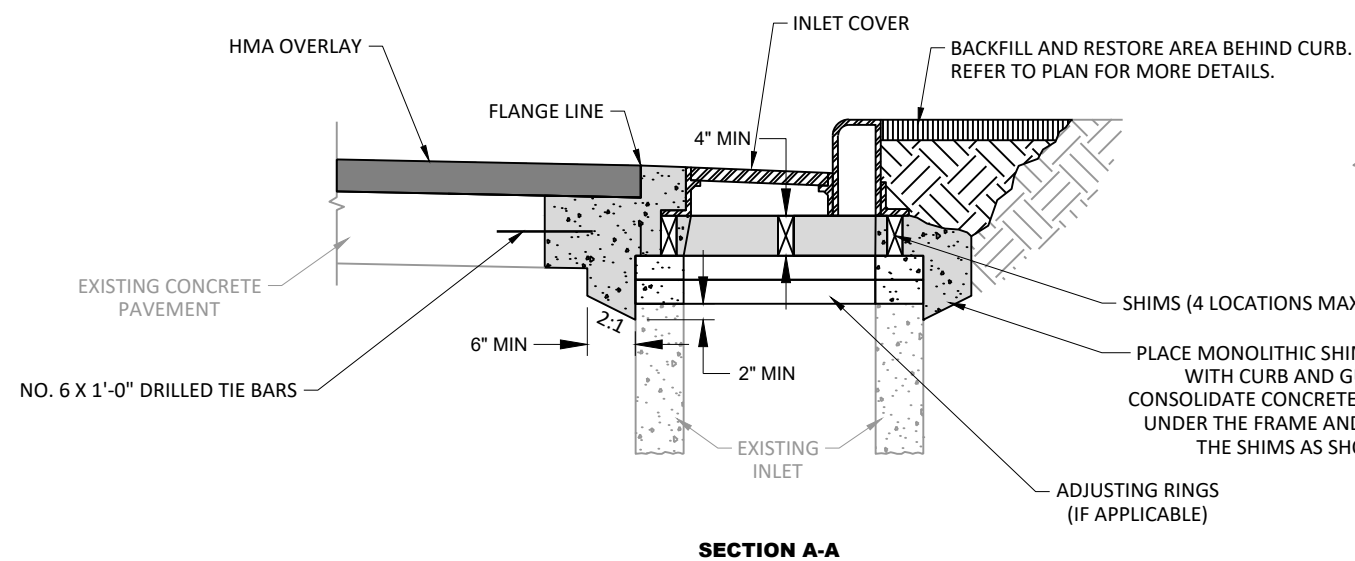
REMOVING CURB & GUTTER AND PAVEMENT

MONOLITHIC CONCRETE

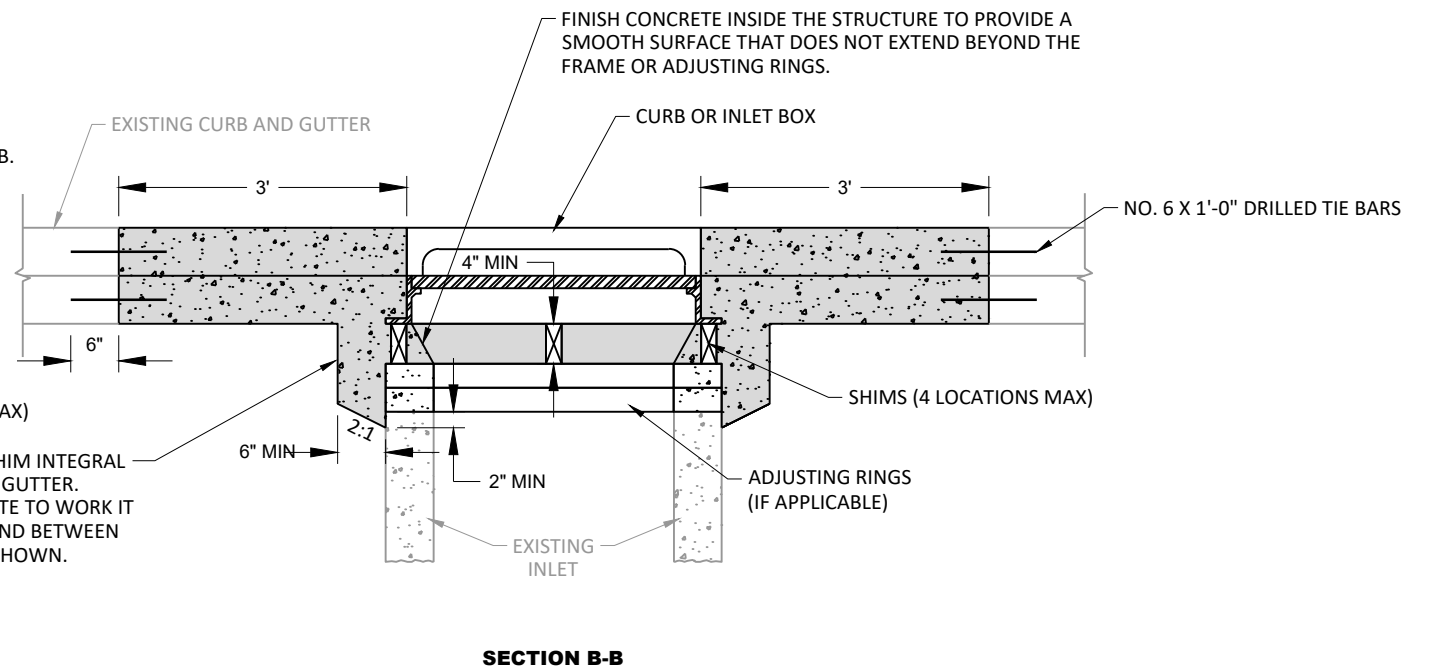
1-FT OR AS DIRECTED BY THE ENGINEER



PLAN VIEW



SECTION A-A



SECTION B-B

ADJUSTING / RECONSTRUCTING CATCH BASINS & INLETS - MONOLITHIC SHIM

PRIOR TO MILLING AND PAVING.

- A. SAWCUT EXISTING PAVEMENT FULL DEPTH.
- B. REMOVE AND STORE MANHOLE COVER.
- C. FURNISH AND INSTALL TEMPORARY COVER PLATE.
- D. BACKFILL USING ASPHALT SURFACE PATCHING.

AFTER PAVING HMA LOWER LAYER(S)

- A. REMOVE ASPHALTIC SURFACE PATCHING.
- B. EXCAVATE AROUND MANHOLE.
- C. ADJUST OR RECONSTRUCT MANHOLE AND RE-INSTALL MANHOLE FRAME AND COVER.
- D. POUR MONOLITHIC CONCRETE SHIM SO CONCRETE FILLS IN VOIDS BELOW THE CASTING BETWEEN THE SHIMS.
- E. PAVE UPPER LAYER HMA.

PAVEMENT REMOVAL, ASPHALT PATCH REMOVAL, EXCAVATING, PREPARING THE FOUNDATION AND SHIMMING ARE INCIDENTAL TO THE ADJUSTING OR RECONSTRUCTING BID ITEMS.

THE DEPARTMENT WILL PAY SEPARATELY FOR SAWING CONCRETE, COVER PLATES TEMPORARY, ASPHALTIC SURFACE PATCHING, BASE PATCHING CONCRETE SHES AND DRILLED TIE BARS.

MONOLITHIC SHIM CONCRETE, CONCRETE PLACEMENT AND FINISHING IS INCIDENTAL TO THE BASE PATCHING CONCRETE SHES BID ITEM.

PREVENT CONCRETE AND OTHER DEBRIS FROM FALLING INTO STRUCTURE.

REFER TO PLAN DETAILS AND MISCELLANEOUS QUANTITIES FOR ADDITIONAL INFORMATION.

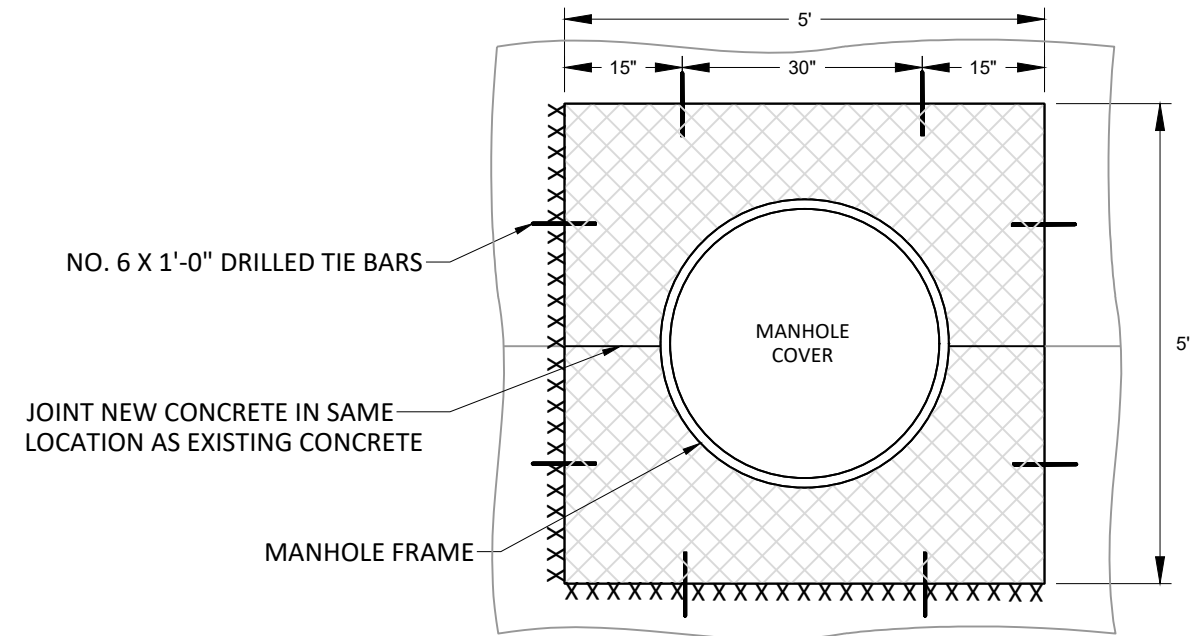
*SAWCUT WILL ONLY BE PAID ONCE. REMOVE ASPHALT SURFACE PATCHING MATERIAL TO THE ORIGINAL SAWCUT LIMITS.

X X X SAWING CONCRETE

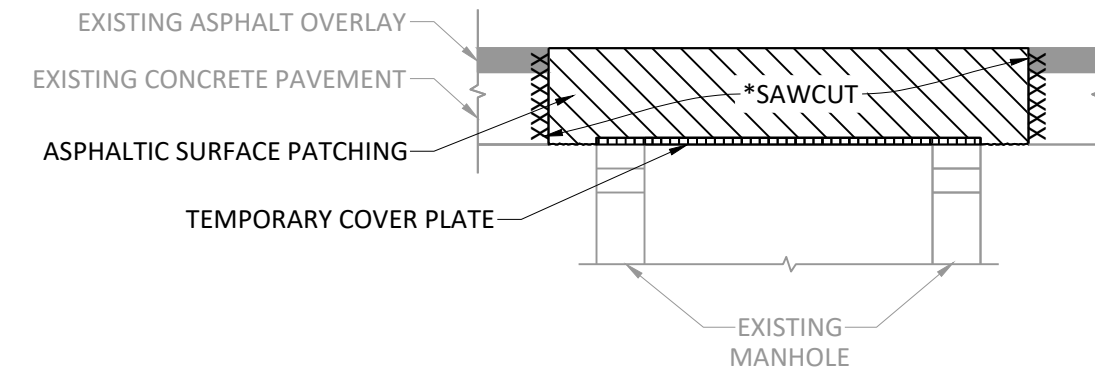
 REMOVING PAVEMENT (INCIDENTAL TO ADJUSTING / RECONSTRUCTING BID ITEMS)

 ASPHALTIC SURFACE PATCHING

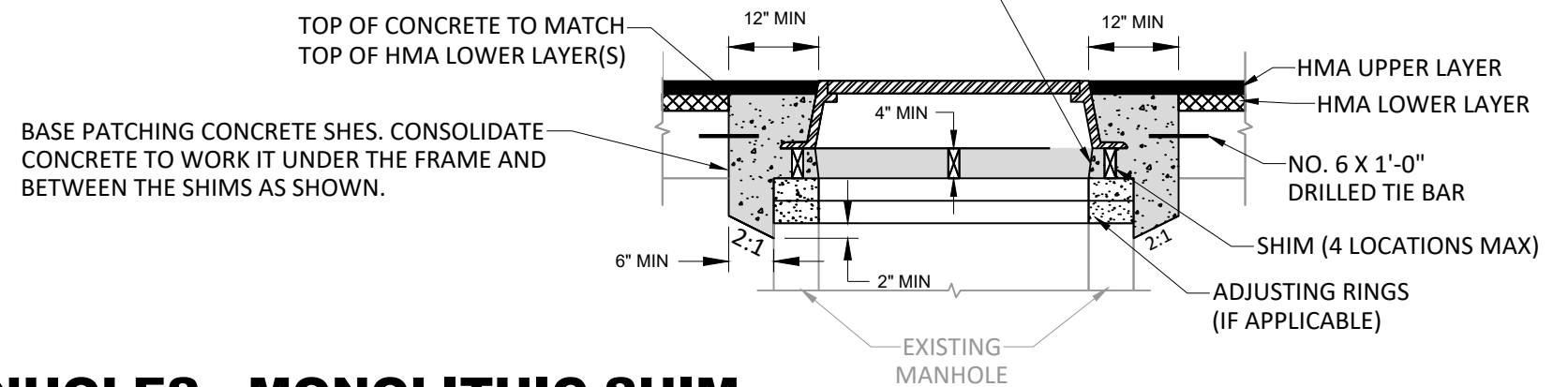
 MONOLITHIC CONCRETE



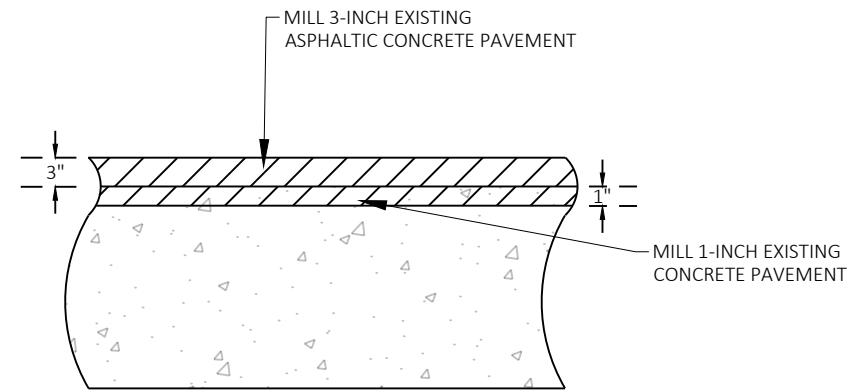
PLAN VIEW



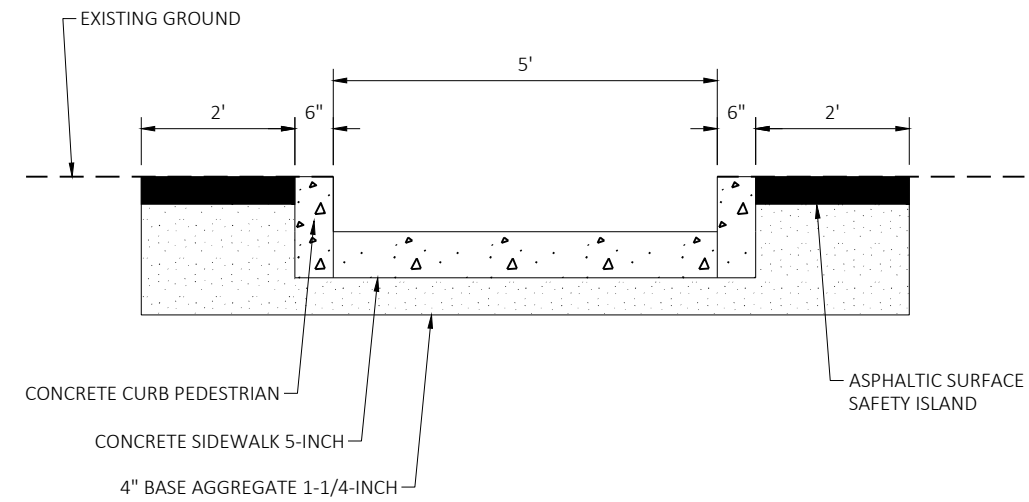
FINISH CONCRETE INSIDE THE STRUCTURE TO PROVIDE A SMOOTH SURFACE THAT DOES NOT EXTEND BEYOND THE FRAME OR ADJUSTING RINGS.



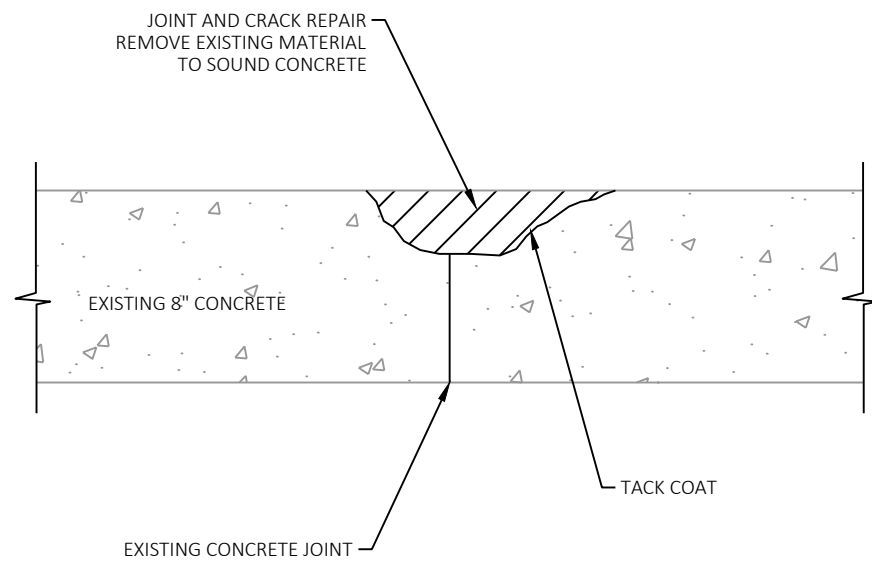
ADJUSTING / RECONSTRUCTING MANHOLES - MONOLITHIC SHIM



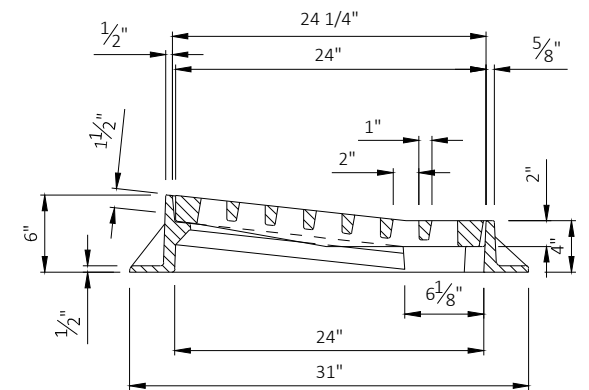
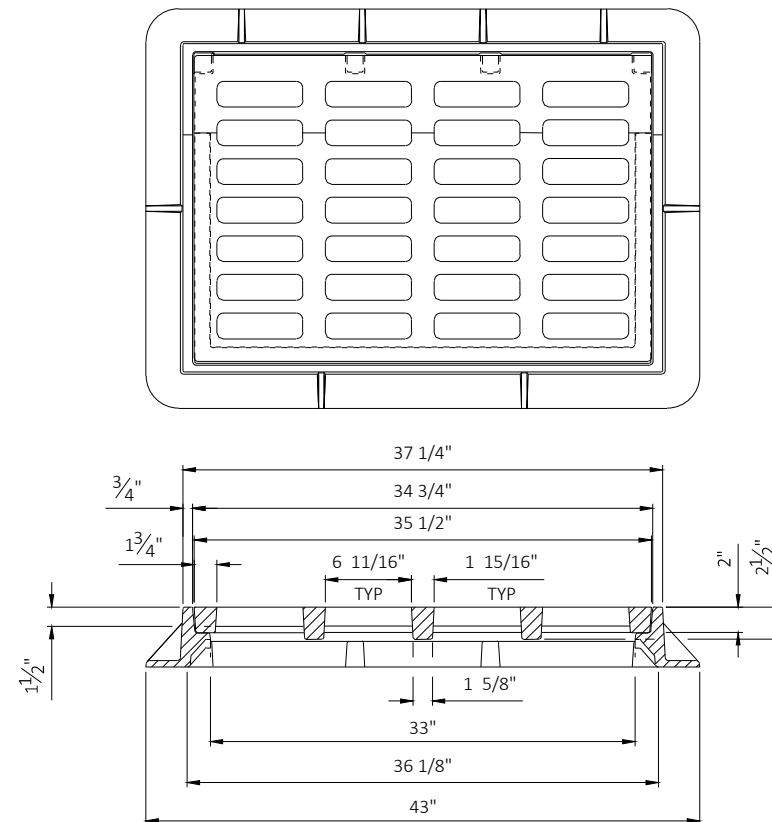
REMOVING SURFACE MILLING SPECIAL DETAIL



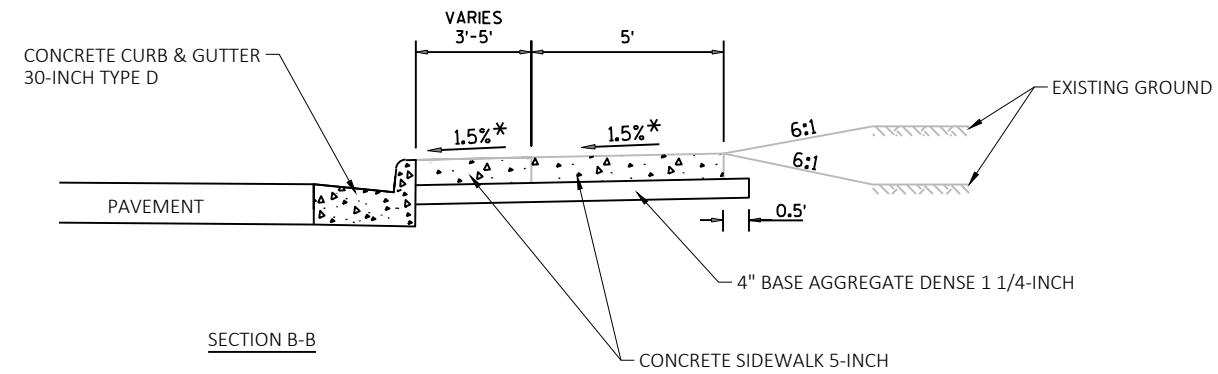
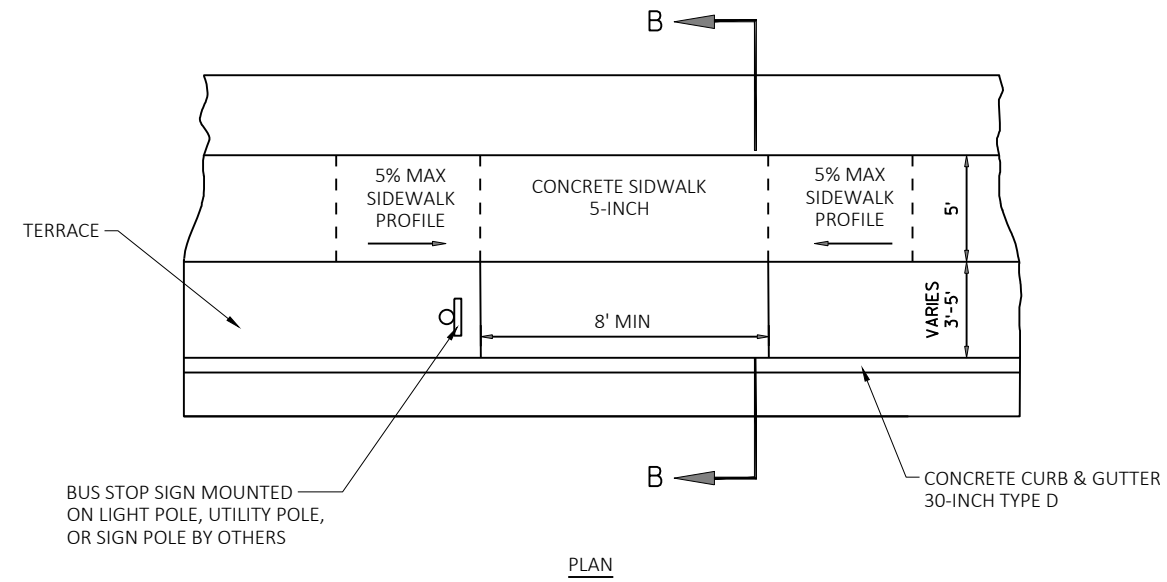
TYPICAL SECTION
SAFETY ISLAND SIDEWALK



JOINT AND CRACK REPAIR
LOCATIONS TO BE DETERMINED BY ENGINEER IN THE FIELD

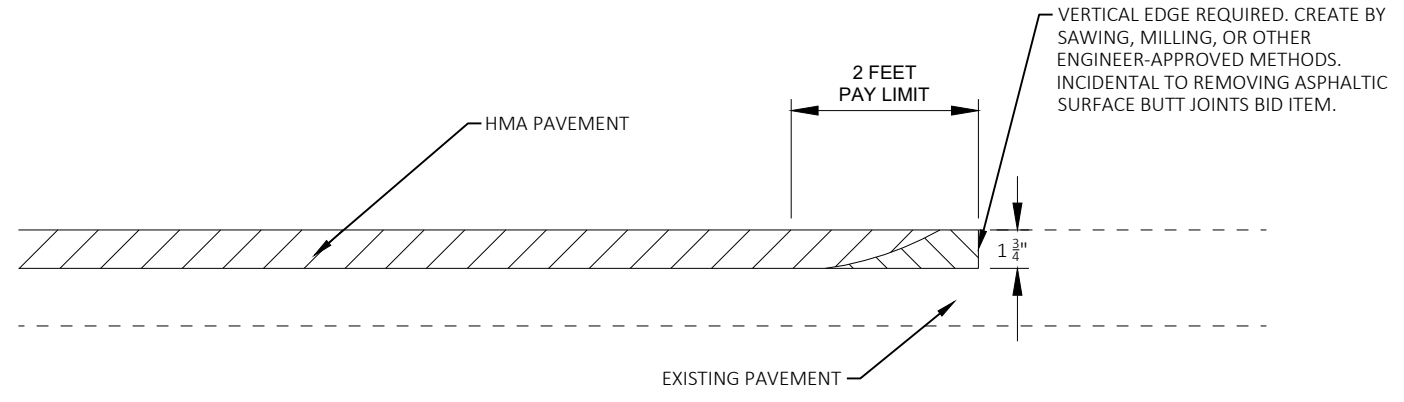


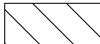

INLET COVERS TYPE H-D



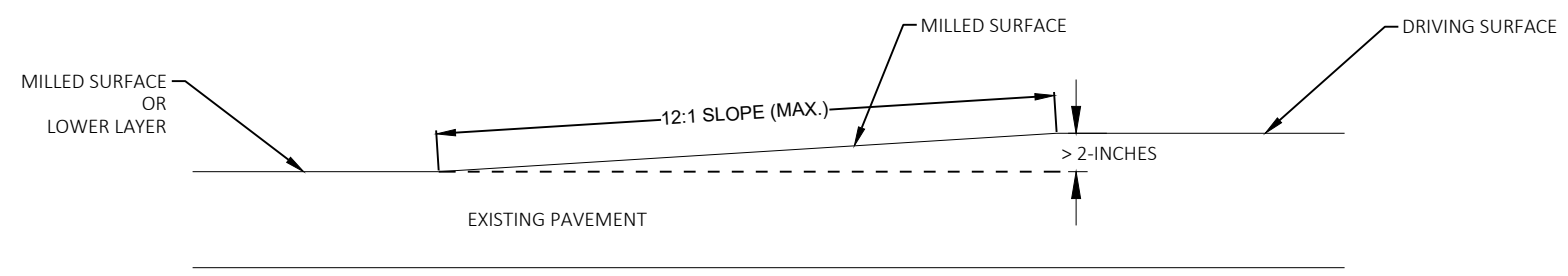
BUS STOP DETAIL
SEE PLAN DETAILS FOR LOCATIONS

NOTES:
BUS STOP SHALL HAVE A MINIMUM LENGTH OF 8 FEET ALONG CURB EDGE AND A MINIMUM WIDTH OF 8 FEET (IN THE DIRECTION PERPENDICULAR TO THE ROADWAY)
* ±0.5%



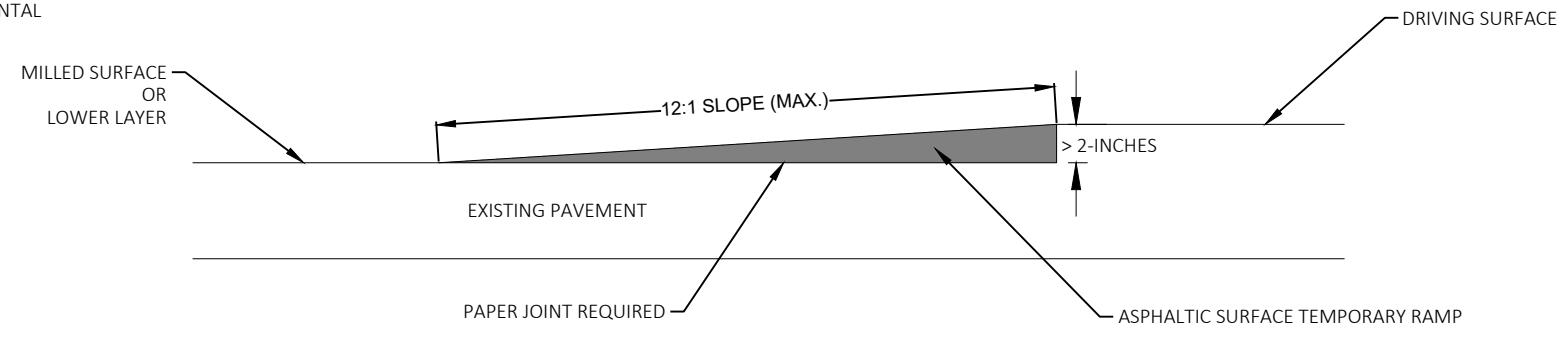
-  REMOVE MATERIAL UNDER ITEM 'REMOVING ASPHALTIC SURFACE BUTT JOINT'
-  REMOVING ASPHALTIC SURFACE MILLING

BUTT JOINT - NO CHANGE IN PROFILE

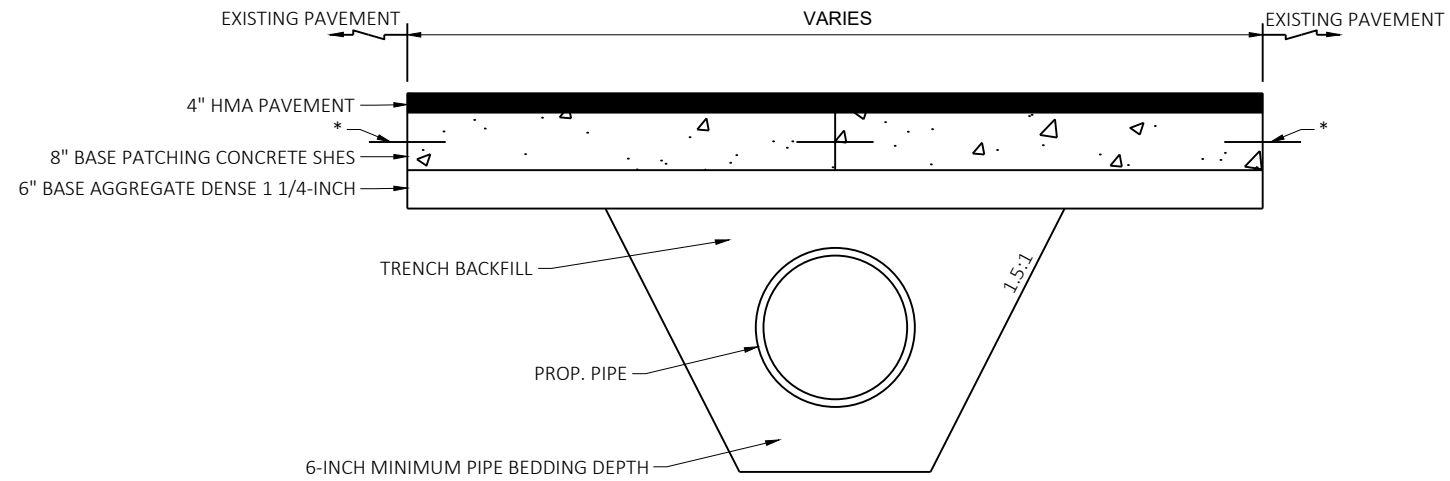


MILLED RAMP

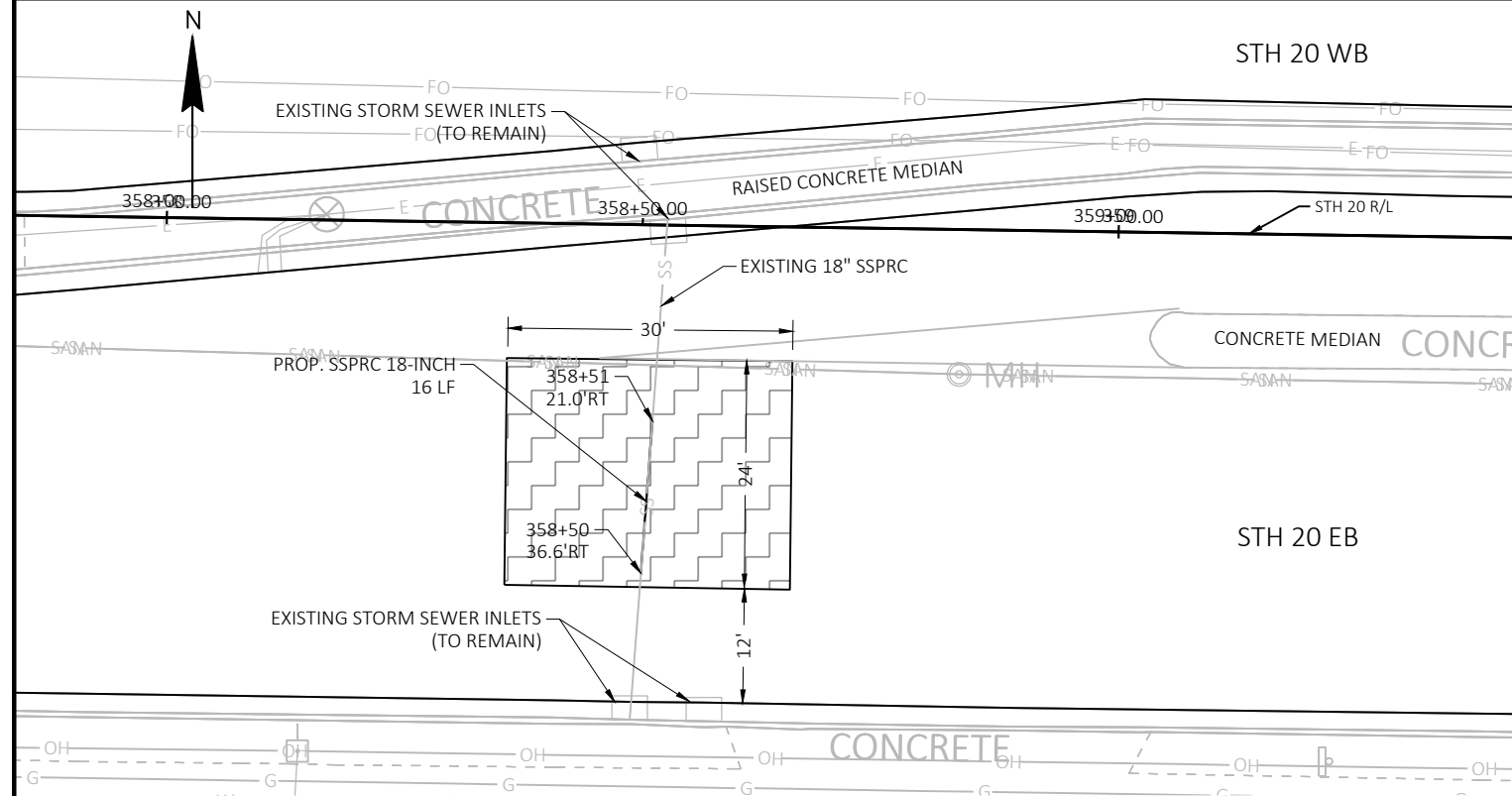
- NOTES:
- THESE CONSTRUCTION DETAILS AND THE SPECIAL PROVISIONS SUPPLEMENT THE REQUIREMENTS FOR PROVIDING DROP-OFF PROTECTION AS STATED IN STANDARD SPECIFICATION 104.6.1.2.3.
 - ASPHALTIC SURFACE TEMPORARY RAMP PAID FOR AS 'ASPHALTIC SURFACE TEMPORARY'
 - INSTALLATION, REMOVAL, AND DISPOSAL OF RAMP IS INCIDENTAL TO ASPHALTIC SURFACE TEMPORARY BID ITEM.



ASPHALTIC SURFACE TEMPORARY RAMP



PIPE REPAIR CROSS SECTION



STORM SEWER PIPE REPAIR PLAN VIEW
STA 358+50

CONSTRUCTION NOTES:

1. LOCATION OF DAMAGED STORM SEWER PIPE IS BASED UPON FIELD INVESTIGATION FROM DECEMBER 13, 2022. EXACT LIMITS OF REPAIR WILL BE DETERMINED BY ENGINEER UPON EXCAVATION OF THE SUBJECT STORM SEWER PIPE.
2. REMOVE TWO (2) FAILED 8-FT SECTIONS OF CONCRETE STORM SEWER PIPE.
3. INSTALL 16-FT OF STORM SEWER PIPE REINFORCED CONCRETE (SSPRC) CLASS III 18-INCH
4. TWO (2) CONCRETE COLLARS FOR PIPE REQUIRED.

TRAFFIC CONTROL & STAGING NOTES:

1. CONSTRUCT STORM SEWER REPAIR DURING STAGE 2B, UTILIZING TRAFFIC CONTROL AS DETAILED IN THE PLANS.

LEGEND

- (ADJ) ADJUSTING INLET COVERS
- (ADJ-MP) ADJUSTING MANHOLE COVERS
- (AINL) ABANDONING INLETS
- (BP) BUS STOP (SEE CONSTRUCTION DETAIL)
- (CG30) REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
- (HMA2) 1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
- (HMA4) REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
- (MED) REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
- (MED2) REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (H-D) INLET COVERS TYPE H-D
- (RCCM) REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
- (SW5) REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
- [Hatched Box] BASE PATCHING FOR CONCRETE
- [Cross-hatched Box] REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
- [Wavy Box] BASE PATCHING FOR CONCRETE SHES
- .XXXXX. SAWING ASPHALT
- YYYYY SAWING CONCRETE
- SLOPE INTERCEPT



PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

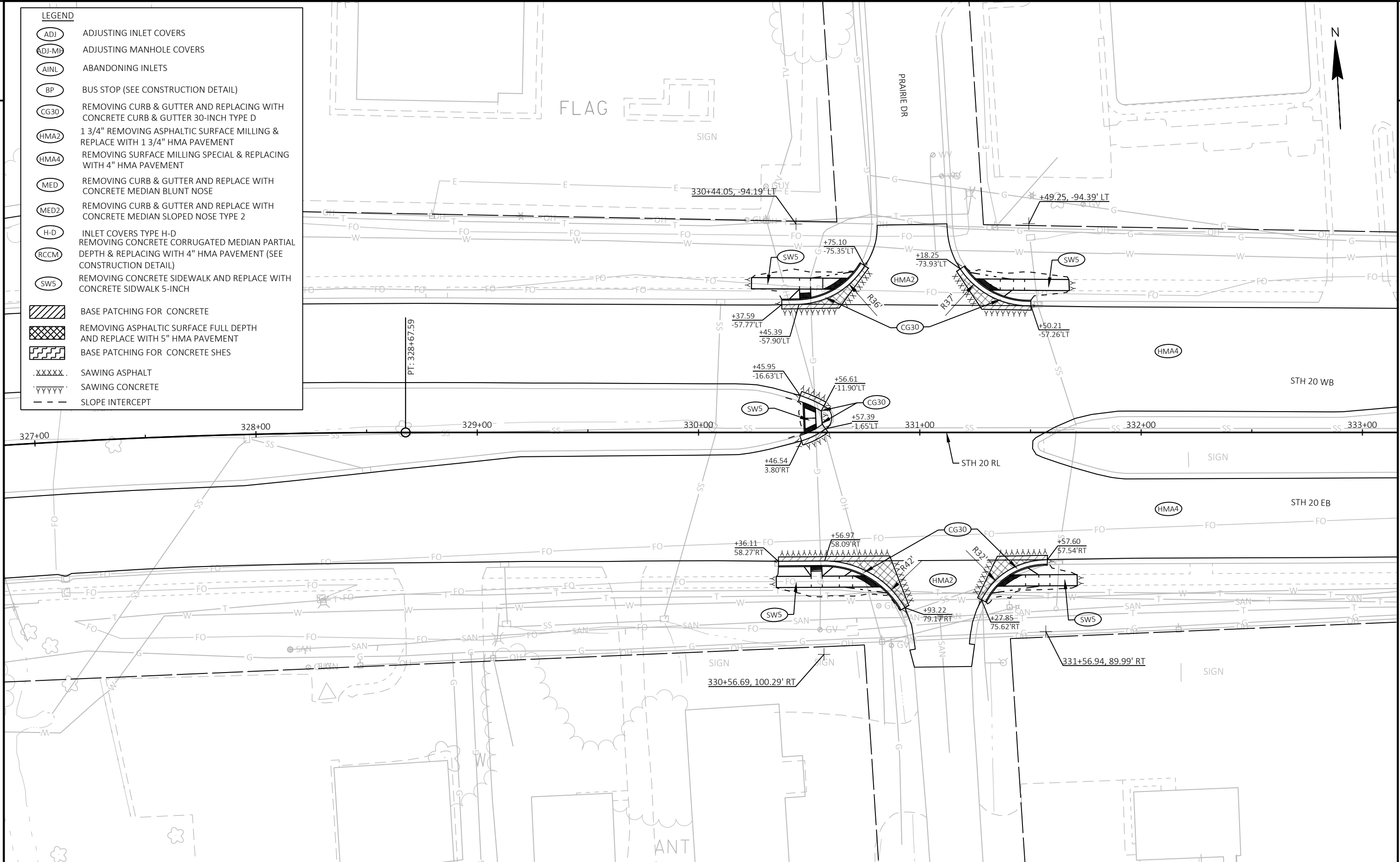
INTERSECTION DETAILS: STH 20 & OAKES RD

SHEET

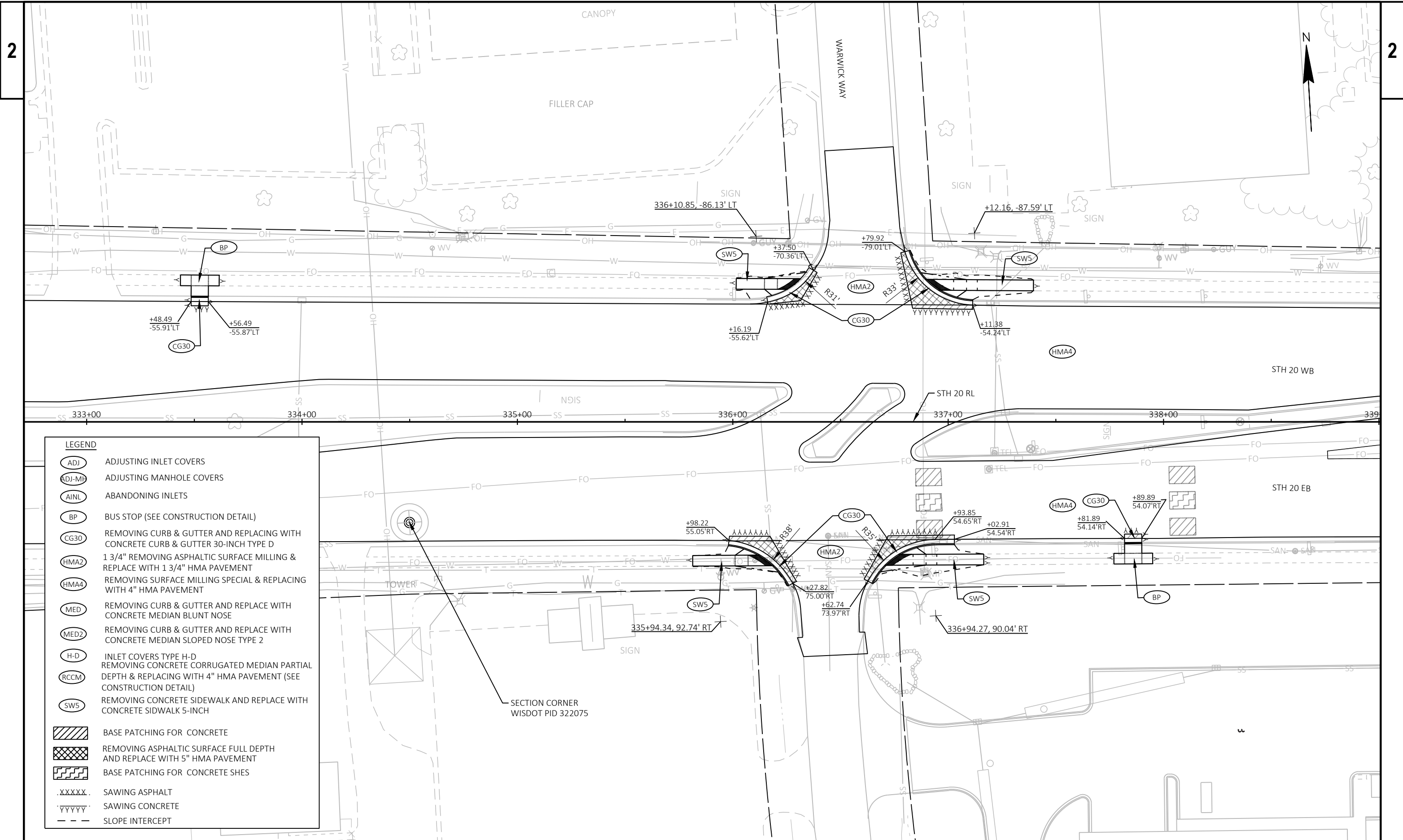
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LEGEND

(ADJ)	ADJUSTING INLET COVERS
(ADJ-M)	ADJUSTING MANHOLE COVERS
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
(HMA2)	1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(RCCM)	REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
(SW5)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
	BASE PATCHING FOR CONCRETE
	REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
	BASE PATCHING FOR CONCRETE SHES
.....	SAWING ASPHALT
YYYYY	SAWING CONCRETE
---	SLOPE INTERCEPT

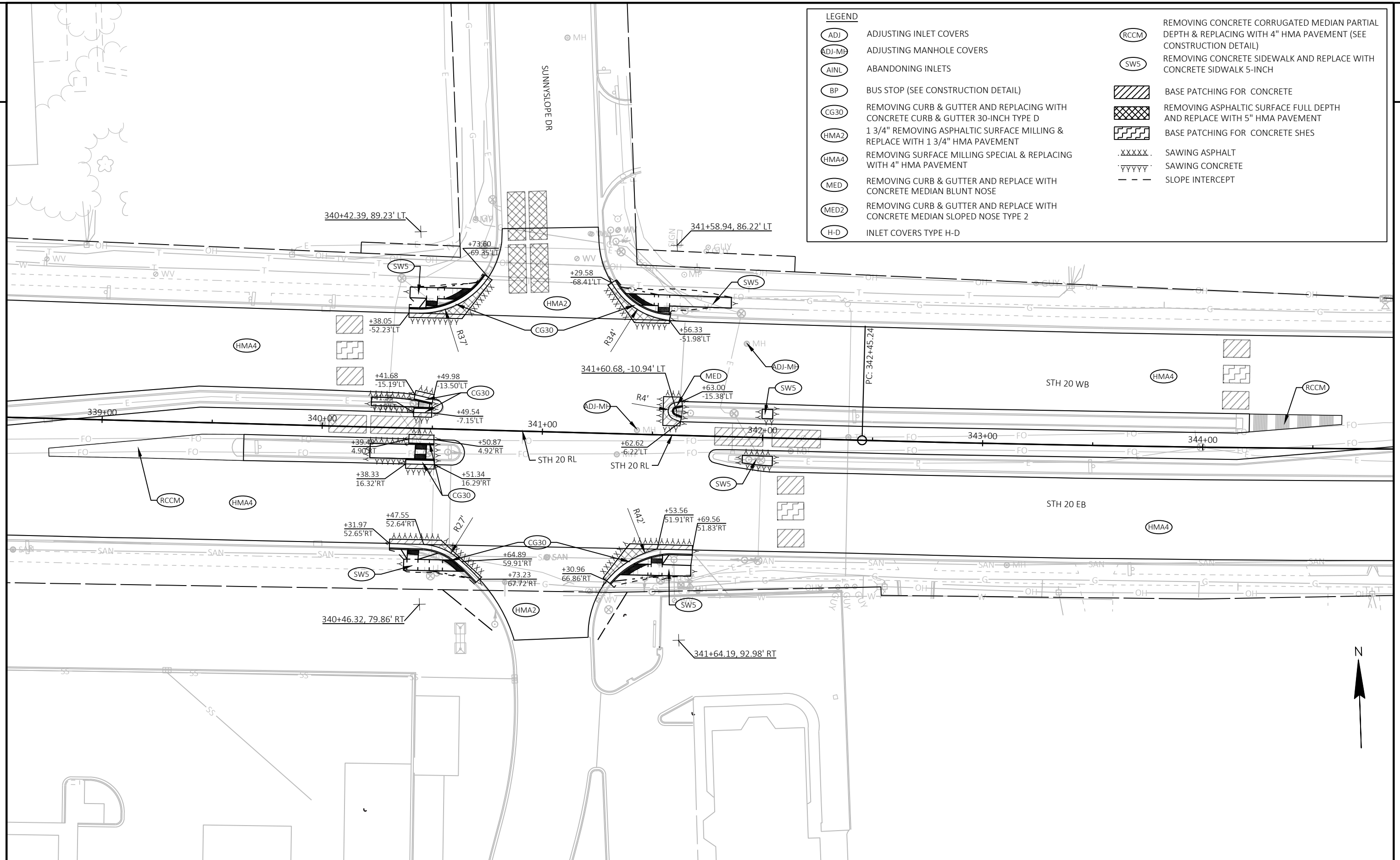


PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	INTERSECTION DETAILS - STH 20 & PRAIRIE DR	SHEET E
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LEGEND

(ADJ)	ADJUSTING INLET COVERS
(ADJ-M)	ADJUSTING MANHOLE COVERS
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
(HMA2)	1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(RCCM)	REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
(SW5)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
[Hatched Box]	BASE PATCHING FOR CONCRETE
[Cross-hatched Box]	REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
[Stippled Box]	BASE PATCHING FOR CONCRETE SHES
.XXXXX.	SAWING ASPHALT
YYYYY	SAWING CONCRETE
- - -	SLOPE INTERCEPT



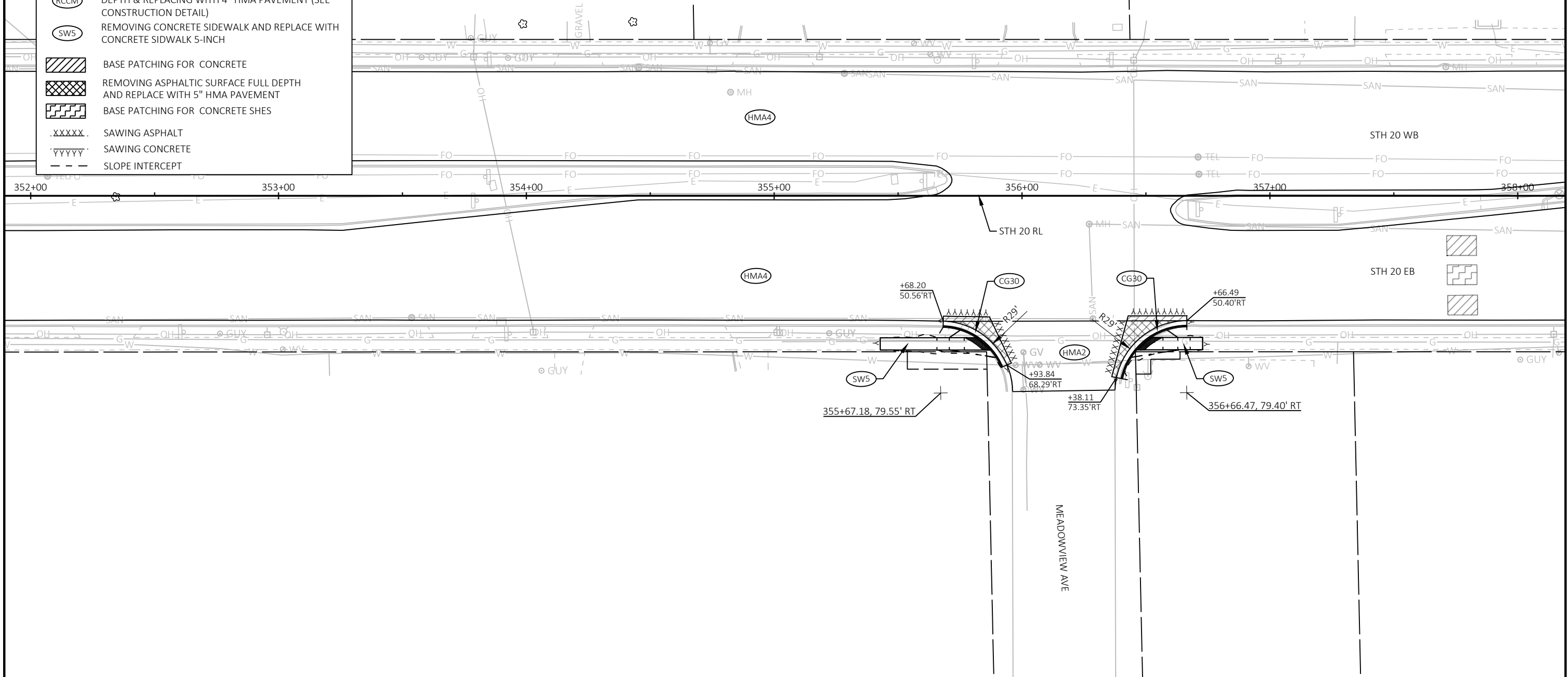
LEGEND			
(ADJ)	ADJUSTING INLET COVERS	(RCCM)	REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
(ADJ-MH)	ADJUSTING MANHOLE COVERS	(SWS)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
(AINL)	ABANDONING INLETS	[Hatched Box]	BASE PATCHING FOR CONCRETE
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)	[Cross-hatched Box]	REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D	[Stippled Box]	BASE PATCHING FOR CONCRETE SHES
(HMA2)	1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT	.XXXXX.	SAWING ASPHALT
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT	YYYYYY	SAWING CONCRETE
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE	---	SLOPE INTERCEPT
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2		
(H-D)	INLET COVERS TYPE H-D		

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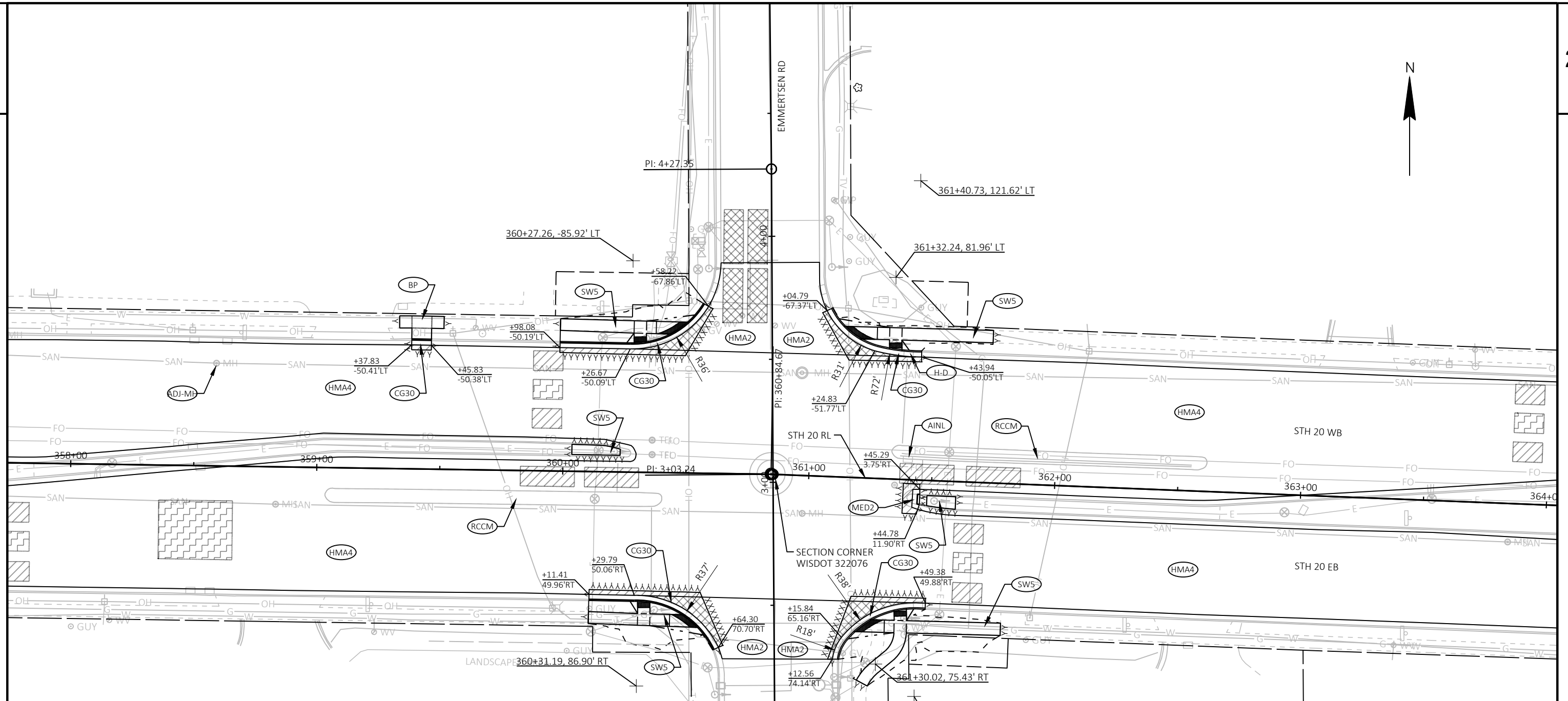


LEGEND

(ADJ)	ADJUSTING INLET COVERS
(ADJ-M)	ADJUSTING MANHOLE COVERS
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
(HMA2)	1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(RCCM)	REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
(SW5)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
	BASE PATCHING FOR CONCRETE
	REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
	BASE PATCHING FOR CONCRETE SHES
.XXXXX.	SAWING ASPHALT
YYYYY.	SAWING CONCRETE
---	SLOPE INTERCEPT

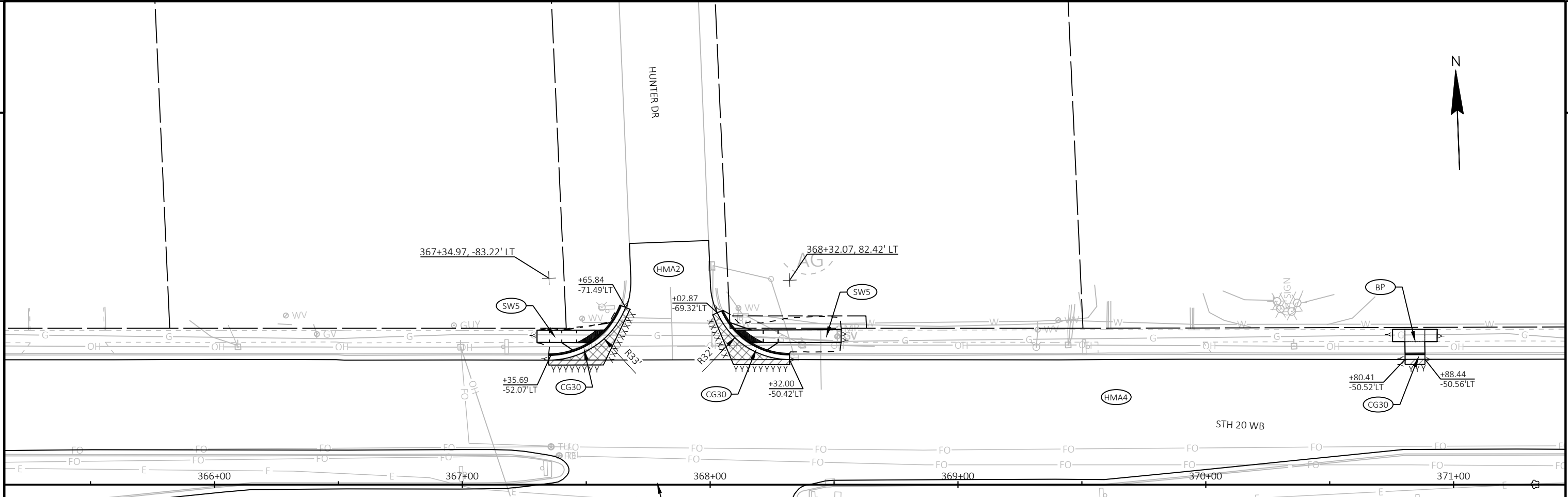


PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	INTERSECTION DETAILS - STH 20 & MEADOWVIEW DR	SHEET	E
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LEGEND	
(ADJ)	ADJUSTING INLET COVERS
(ADJ-MH)	ADJUSTING MANHOLE COVERS
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
(HMA2)	1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(RCCM)	REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
(SWS)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
(Hatched Box)	BASE PATCHING FOR CONCRETE
(Cross-hatched Box)	REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
(Stippled Box)	BASE PATCHING FOR CONCRETE SHES
(XXXXXX)	SAWING ASPHALT
(YYYYYY)	SAWING CONCRETE
(Dashed Line)	SLOPE INTERCEPT

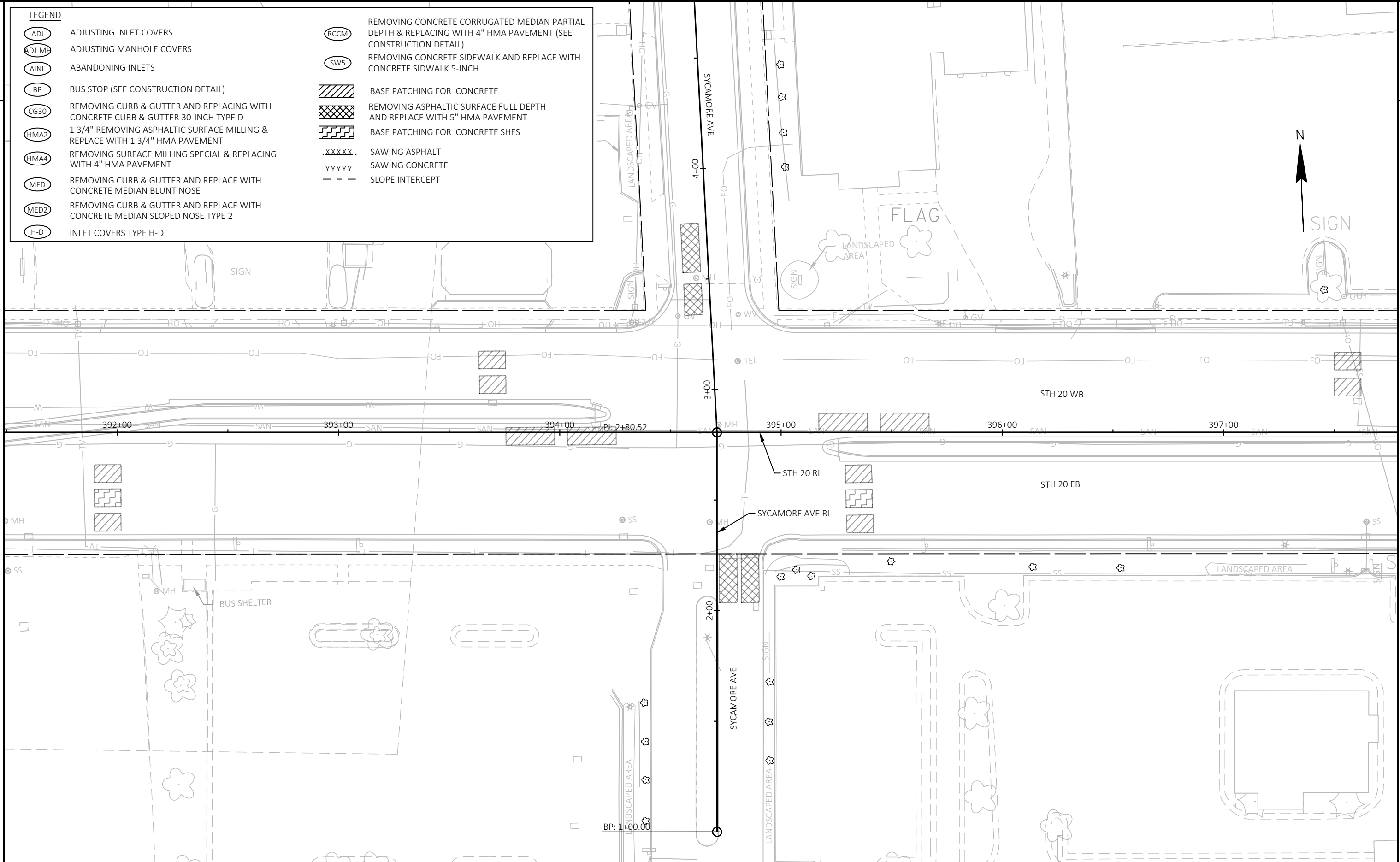
PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE INTERSECTION DETAILS: STH 20 & EMMERTSEN RD SHEET E

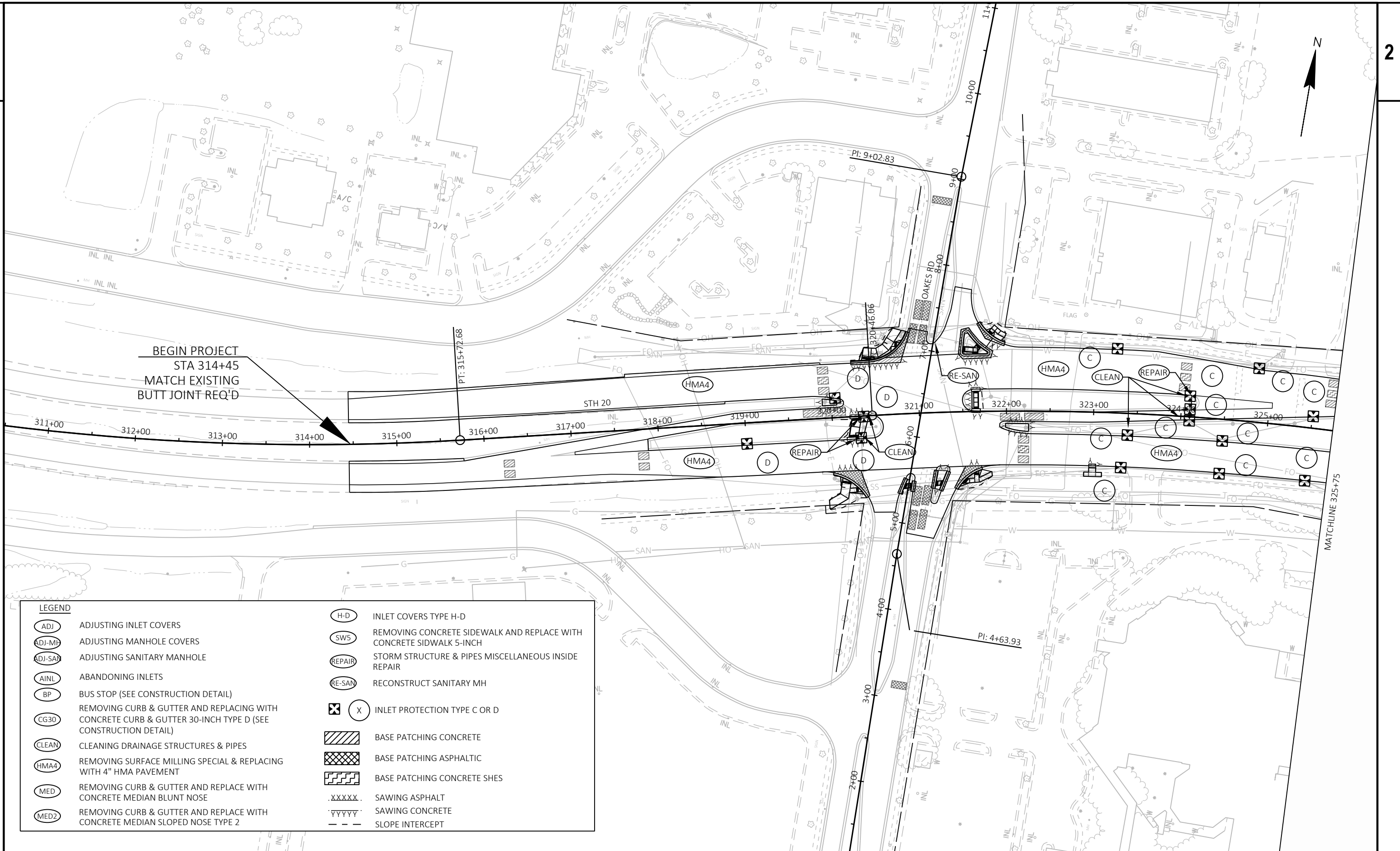


LEGEND	
(ADI)	ADJUSTING INLET COVERS
(ADI-MH)	ADJUSTING MANHOLE COVERS
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
(HMA2)	1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(RCCM)	REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
(SW5)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
	BASE PATCHING FOR CONCRETE
	REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
	BASE PATCHING FOR CONCRETE SHES
.XXXXX.	SAWING ASPHALT
YYYYY	SAWING CONCRETE
---	SLOPE INTERCEPT

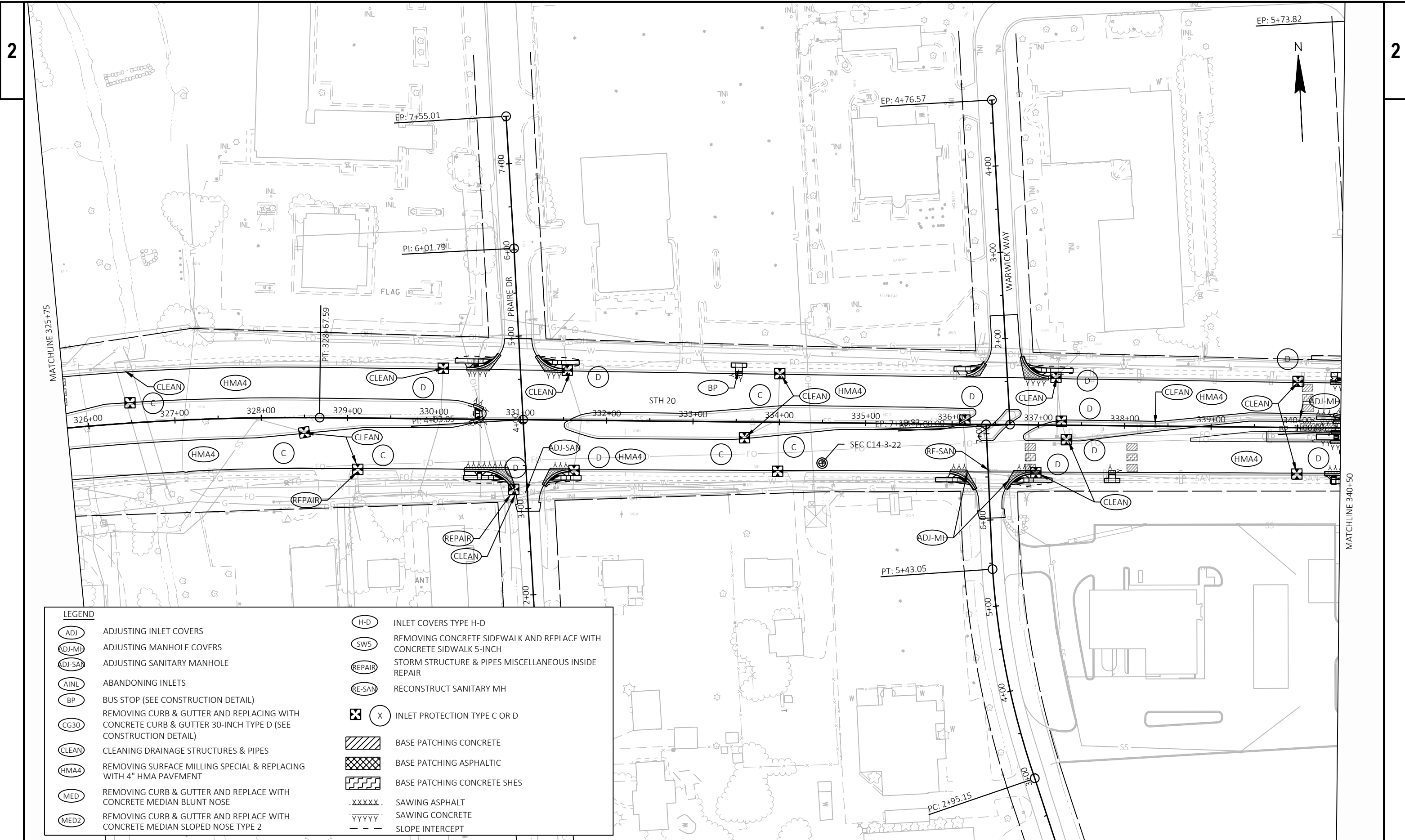
LEGEND

- (ADJ) ADJUSTING INLET COVERS
- (ADJ-M) ADJUSTING MANHOLE COVERS
- (AINL) ABANDONING INLETS
- (BP) BUS STOP (SEE CONSTRUCTION DETAIL)
- (CG30) REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D
- (HMA2) 1 3/4" REMOVING ASPHALTIC SURFACE MILLING & REPLACE WITH 1 3/4" HMA PAVEMENT
- (HMA4) REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
- (MED) REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
- (MED2) REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (H-D) INLET COVERS TYPE H-D
- (RCCM) REMOVING CONCRETE CORRUGATED MEDIAN PARTIAL DEPTH & REPLACING WITH 4" HMA PAVEMENT (SEE CONSTRUCTION DETAIL)
- (SW5) REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
- [Hatched Box] BASE PATCHING FOR CONCRETE
- [Cross-hatched Box] REMOVING ASPHALTIC SURFACE FULL DEPTH AND REPLACE WITH 5" HMA PAVEMENT
- [Stippled Box] BASE PATCHING FOR CONCRETE SHES
- SAWING ASPHALT
- SAWING CONCRETE
- SLOPE INTERCEPT





LEGEND			
(ADJ)	ADJUSTING INLET COVERS	(H-D)	INLET COVERS TYPE H-D
(ADJ-MH)	ADJUSTING MANHOLE COVERS	(SW5)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
(ADJ-SAN)	ADJUSTING SANITARY MANHOLE	(REPAIR)	STORM STRUCTURE & PIPES MISCELLANEOUS INSIDE REPAIR
(AINL)	ABANDONING INLETS	(RE-SAN)	RECONSTRUCT SANITARY MH
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)	(X) (C)	INLET PROTECTION TYPE C OR D
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D (SEE CONSTRUCTION DETAIL)	(Hatched)	BASE PATCHING CONCRETE
(CLEAN)	CLEANING DRAINAGE STRUCTURES & PIPES	(Cross-hatched)	BASE PATCHING ASPHALTIC
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT	(Stippled)	BASE PATCHING CONCRETE SHES
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE	(XXXXX)	SAWING ASPHALT
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2	(YYYYY)	SAWING CONCRETE
		(---)	SLOPE INTERCEPT



LEGEND	
(ADJ)	ADJUSTING INLET COVERS
(ADJ-MH)	ADJUSTING MANHOLE COVERS
(ADJ-SAN)	ADJUSTING SANITARY MANHOLE
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D (SEE CONSTRUCTION DETAIL)
(CLEAN)	CLEANING DRAINAGE STRUCTURES & PIPES
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(SWS)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
(REPAIR)	STORM STRUCTURE & PIPES MISCELLANEOUS INSIDE REPAIR
(RE-SAN)	RECONSTRUCT SANITARY MH
(X) (X)	INLET PROTECTION TYPE C OR D
(Hatched)	BASE PATCHING CONCRETE
(Cross-hatched)	BASE PATCHING ASPHALTIC
(Stippled)	BASE PATCHING CONCRETE SHES
(XXXXX)	SAWING ASPHALT
(YYYYY)	SAWING CONCRETE
(---)	SLOPE INTERCEPT

PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

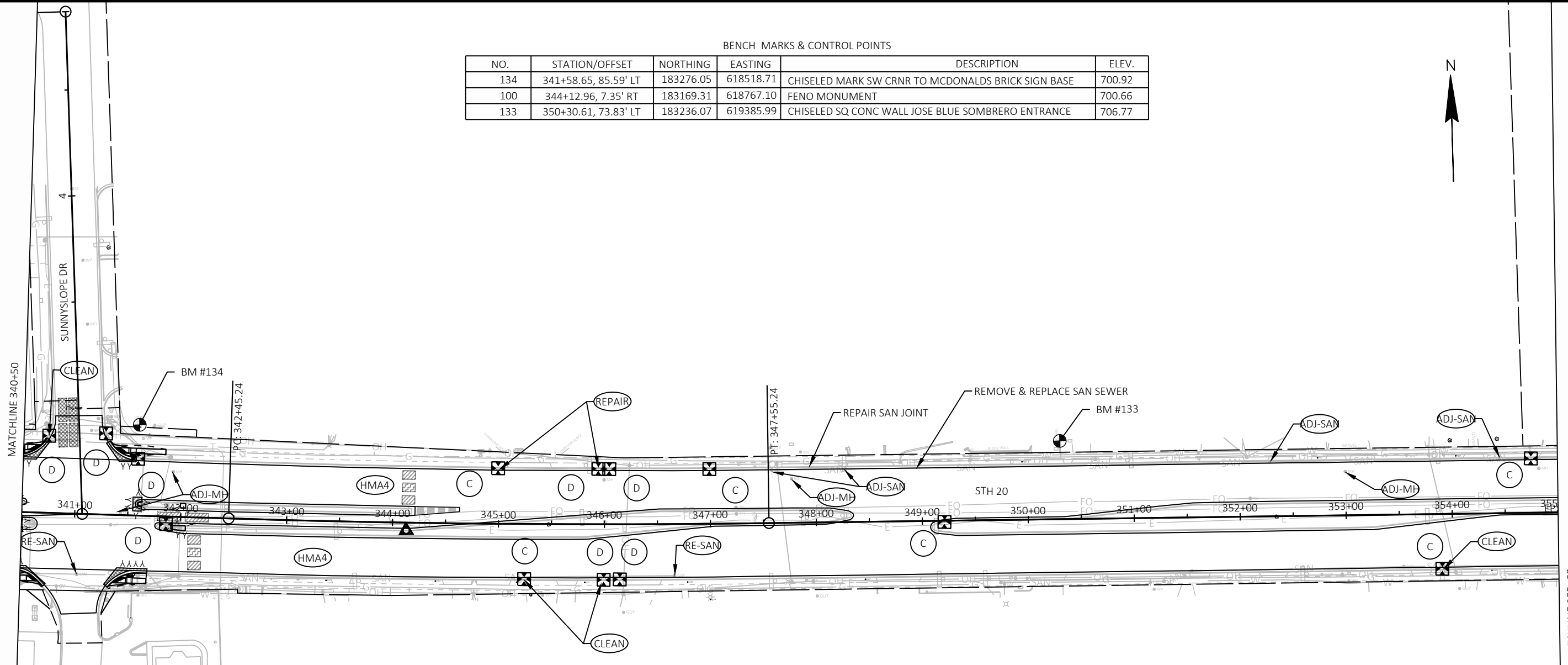
PLAN DETAILS

SHEET

E

BENCH MARKS & CONTROL POINTS

NO.	STATION/OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV.
134	341+58.65, 85.59' LT	183276.05	618518.71	CHISELED MARK SW CRNR TO MCDONALDS BRICK SIGN BASE	700.92
100	344+12.96, 7.35' RT	183169.31	618767.10	FENO MONUMENT	700.66
133	350+30.61, 73.83' LT	183236.07	619385.99	CHISELED SQ CONC WALL JOSE BLUE SOMBRERO ENTRANCE	706.77



LEGEND	
(ADJ)	ADJUSTING INLET COVERS
(ADJ-MH)	ADJUSTING MANHOLE COVERS
(ADJ-SAN)	ADJUSTING SANITARY MANHOLE
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D (SEE CONSTRUCTION DETAIL)
(CLEAN)	CLEANING DRAINAGE STRUCTURES & PIPES
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(SW5)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
(REPAIR)	STORM STRUCTURE & PIPES MISCELLANEOUS INSIDE REPAIR
(RE-SAN)	RECONSTRUCT SANITARY MH
(X) (X)	INLET PROTECTION TYPE C OR D
(Diagonal Hatching)	BASE PATCHING CONCRETE
(Cross-hatching)	BASE PATCHING ASPHALTIC
(Stippled)	BASE PATCHING CONCRETE SHES
.XXXXX.	SAWING ASPHALT
·YYYYY·	SAWING CONCRETE
---	SLOPE INTERCEPT

BENCH MARKS & CONTROL POINTS					
NO.	STATION/OFFSET	NORTHING	EASTING	DESCRIPTION	ELEV.
101	359+39.40, 65.87' RT	183082.74	620292.57	FENO MONUMENT	696.28
132	360+33.39, 84.66' RT	183062.50	620386.27	CHISELED CROSS NE COR SPEEDWAY SIGN	699.77

EP: 7+01.89

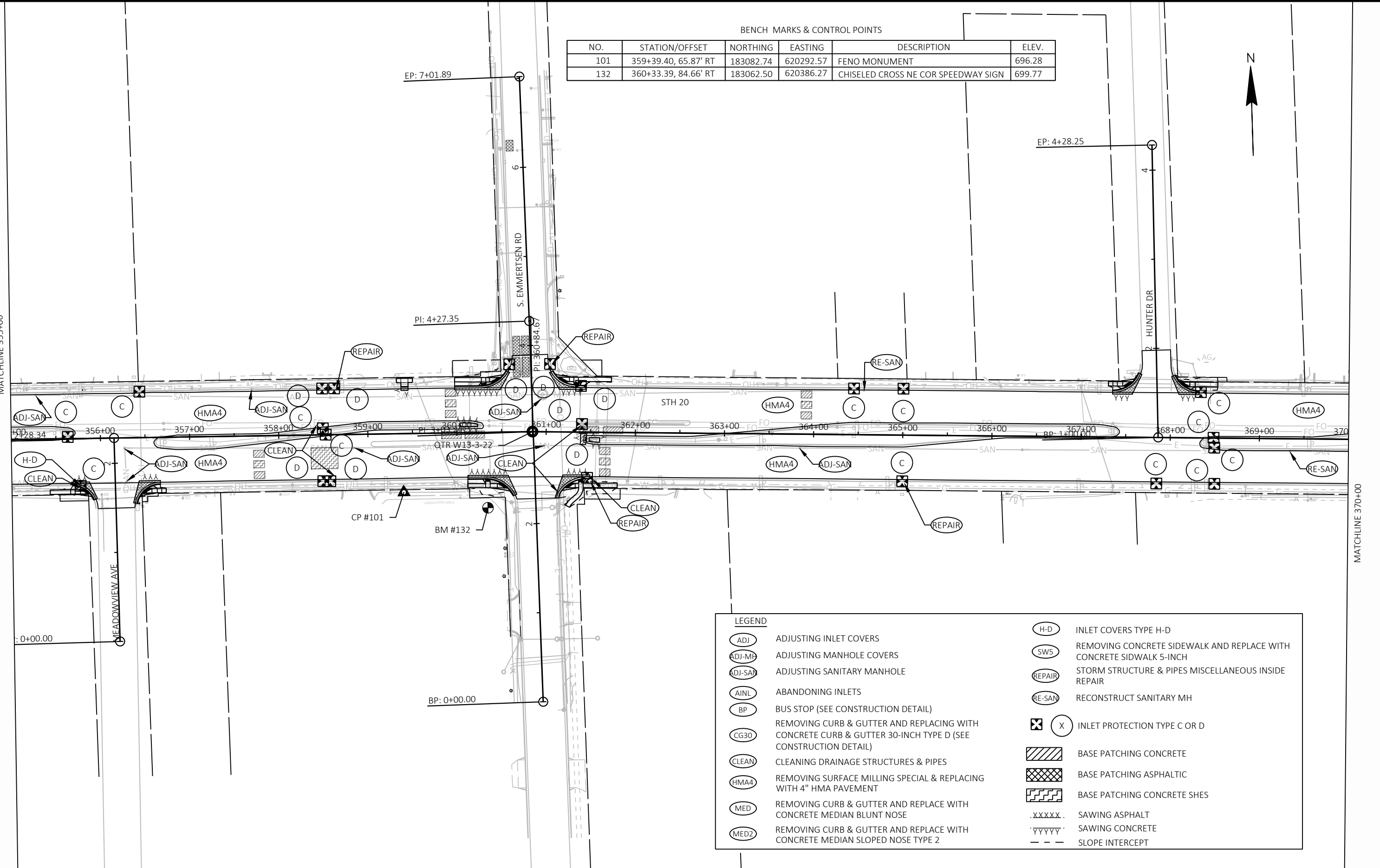
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PI: 4+27.35

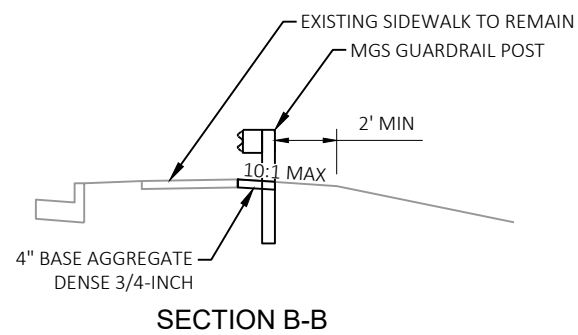
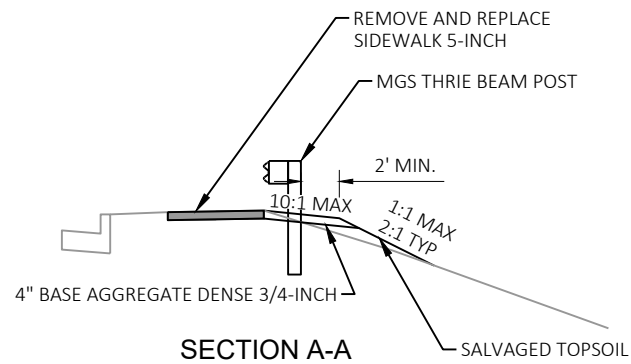
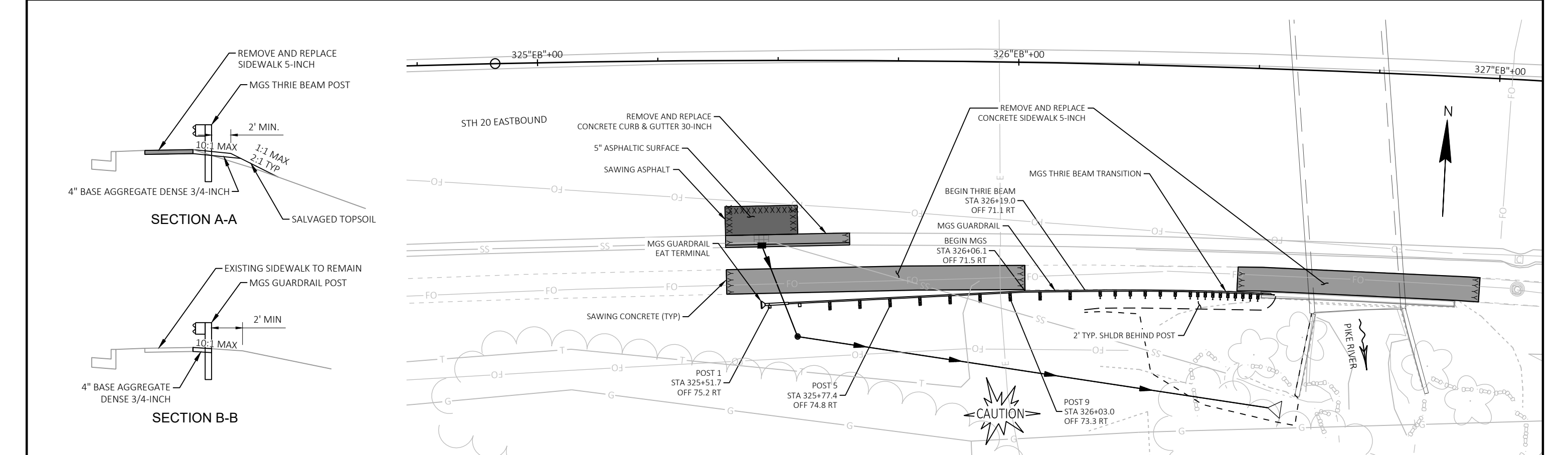
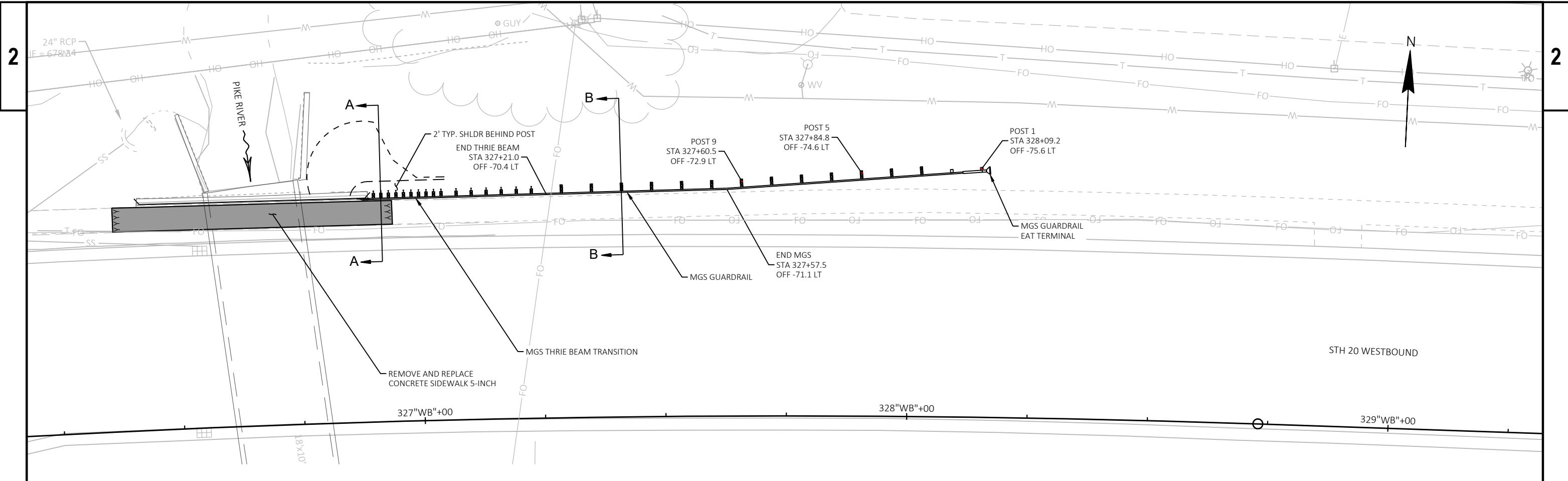
PI: 360+84.67

MATCHLINE 355+00

MATCHLINE 370+00



LEGEND	
(ADJ)	ADJUSTING INLET COVERS
(ADJ-M)	ADJUSTING MANHOLE COVERS
(ADJ-SAN)	ADJUSTING SANITARY MANHOLE
(AINL)	ABANDONING INLETS
(BP)	BUS STOP (SEE CONSTRUCTION DETAIL)
(CG30)	REMOVING CURB & GUTTER AND REPLACING WITH CONCRETE CURB & GUTTER 30-INCH TYPE D (SEE CONSTRUCTION DETAIL)
(CLEAN)	CLEANING DRAINAGE STRUCTURES & PIPES
(HMA4)	REMOVING SURFACE MILLING SPECIAL & REPLACING WITH 4" HMA PAVEMENT
(MED)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN BLUNT NOSE
(MED2)	REMOVING CURB & GUTTER AND REPLACE WITH CONCRETE MEDIAN SLOPED NOSE TYPE 2
(H-D)	INLET COVERS TYPE H-D
(SWS)	REMOVING CONCRETE SIDEWALK AND REPLACE WITH CONCRETE SIDEWALK 5-INCH
(REPAIR)	STORM STRUCTURE & PIPES MISCELLANEOUS INSIDE REPAIR
(RE-SAN)	RECONSTRUCT SANITARY MH
(X) (C)	INLET PROTECTION TYPE C OR D
(Diagonal Hatching)	BASE PATCHING CONCRETE
(Cross Hatching)	BASE PATCHING ASPHALTIC
(Staggered Hatching)	BASE PATCHING CONCRETE SHES
.xxxxx.	SAWING ASPHALT
'yyyyyy'	SAWING CONCRETE
- - -	SLOPE INTERCEPT



PROJECT NO: 2250-15-70

HWY: STH 20

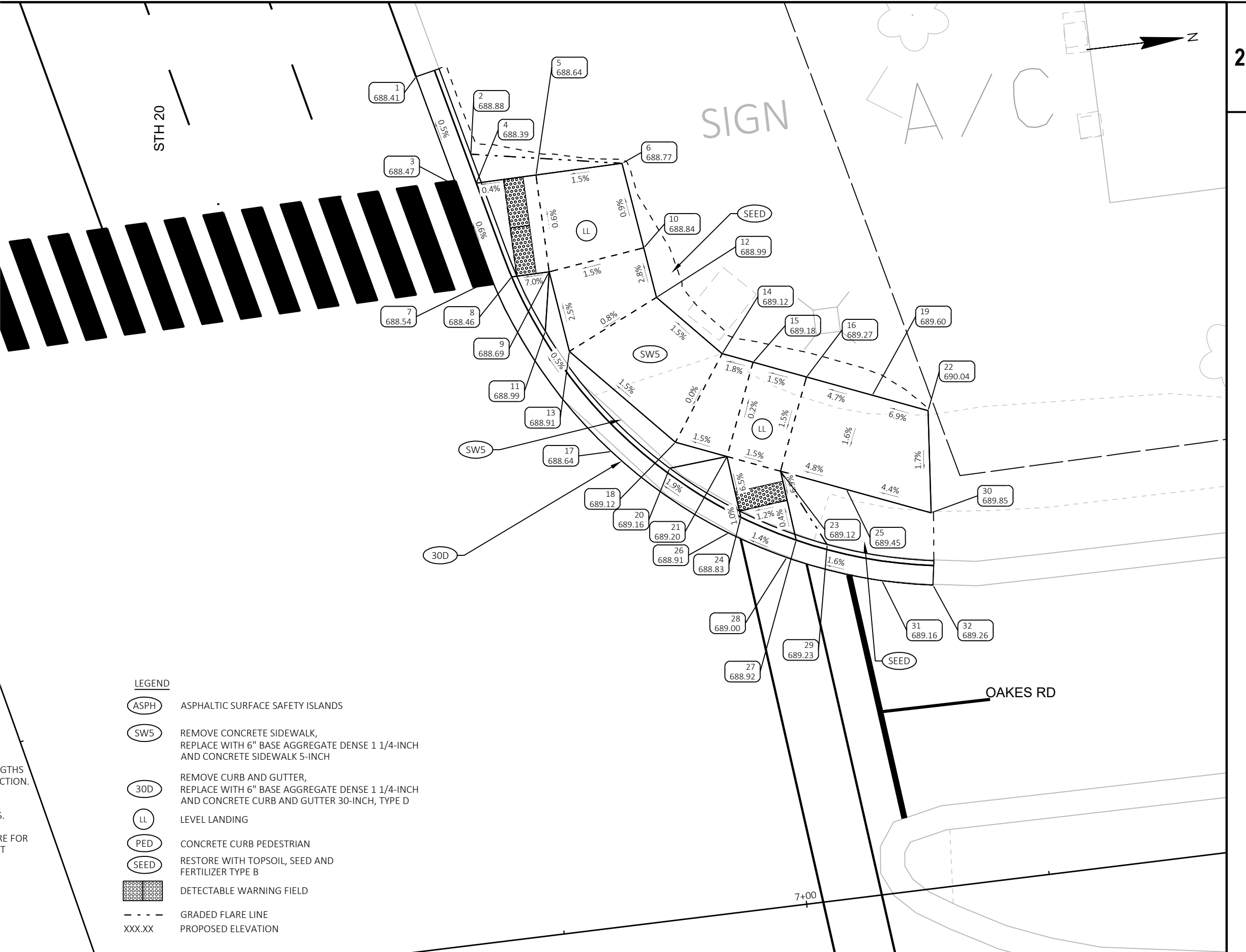
COUNTY: RACINE

STH 20 GUARDRAIL - PLAN DETAIL

SHEET

E

OakesRd-NW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
1	320+25.02	61.36' LT	183253.13	616374.56
2	320+34.38	63.89' LT	183257.72	616383.10
3	320+36.92	61.39' LT	183255.87	616386.14
4	320+37.36	63.39' LT	183257.91	616386.12
5	320+38.68	69.41' LT	183264.07	616386.04
6	320+40.59	78.13' LT	183273.00	616385.92
7	320+47.15	61.47' LT	183258.27	616396.11
8	320+47.59	63.50' LT	183260.34	616396.09
9	320+48.39	67.27' LT	183264.20	616396.04
10	320+49.39	77.22' LT	183274.12	616394.78
11	320+53.87	64.80' LT	183263.06	616402.05
12	320+54.46	76.69' LT	183274.78	616399.98
13	320+56.57	66.43' LT	183265.26	616404.38
14	320+61.97	81.05' LT	183280.75	616406.53
15	320+63.82	83.72' LT	183283.78	616407.79
16	320+66.99	88.36' LT	183289.02	616409.96
17	320+67.40	66.98' LT	183268.26	616415.07
18	320+68.70	73.48' LT	183274.89	616414.94
19	320+70.89	94.09' LT	183295.49	616412.64
20	320+70.95	72.03' LT	183273.97	616417.51
21	320+71.77	77.97' LT	183279.96	616417.04
22	320+74.17	98.93' LT	183300.95	616414.89
23	320+74.94	82.62' LT	183285.20	616419.20
24	320+77.94	77.22' LT	183280.60	616423.38
25	320+78.83	88.36' LT	183291.67	616421.88
26	320+79.00	75.50' LT	183279.15	616424.82
27	320+81.92	81.78' LT	183285.93	616426.40
28	320+83.25	80.28' LT	183284.76	616428.05
29	320+83.36	84.62' LT	183289.03	616427.24
30	320+83.81	95.74' LT	183299.99	616425.31
31	320+88.55	88.68' LT	183294.13	616431.59
32	320+90.64	93.47' LT	183299.27	616432.69



- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - (Pattern) DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

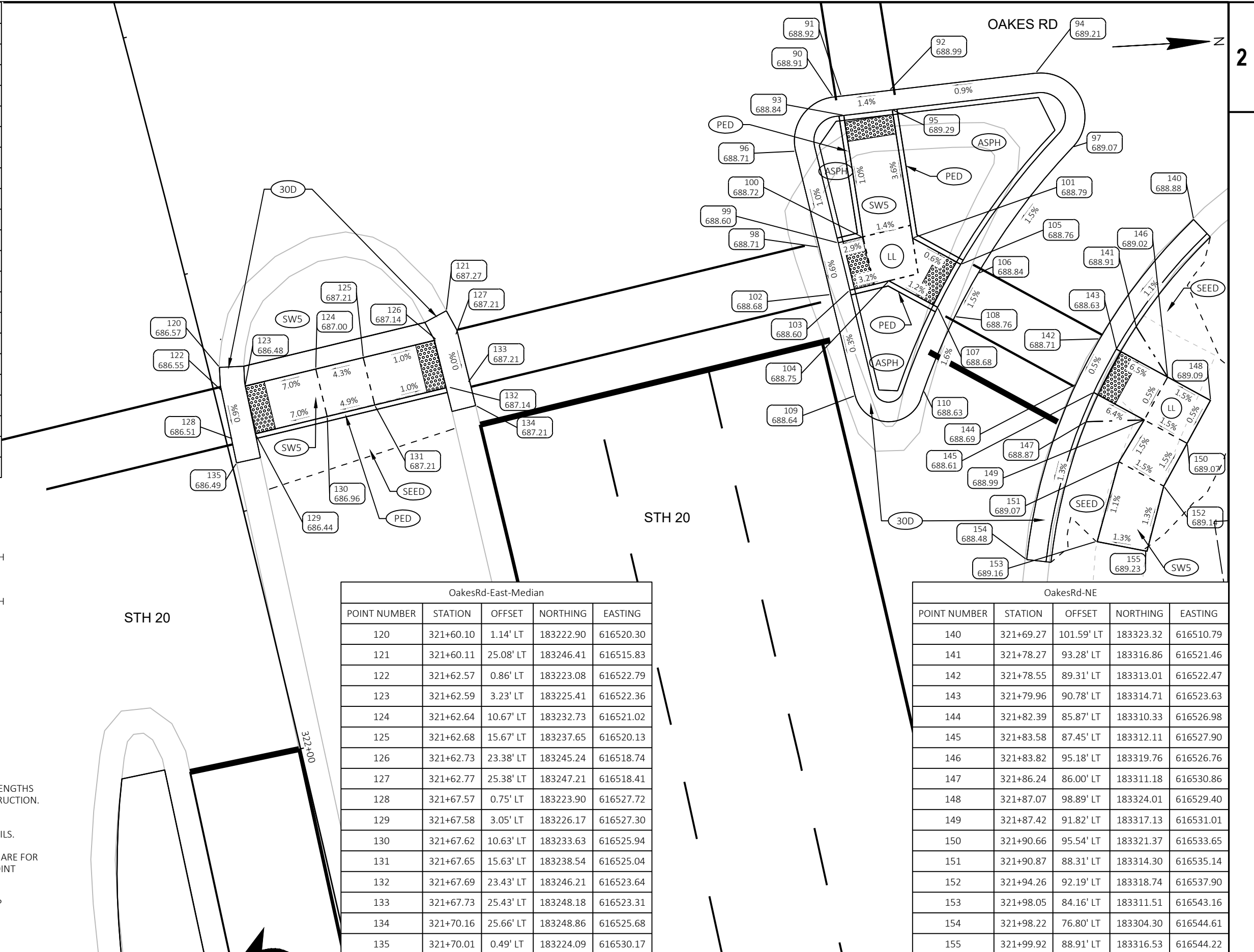
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DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

OakesRd-NE-Island				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
90	321+48.76	68.83' LT	183287.18	616496.20
91	321+48.87	69.67' LT	183288.02	616496.15
92	321+49.50	74.60' LT	183292.99	616495.85
93	321+50.80	69.43' LT	183288.17	616498.14
94	321+51.42	89.53' LT	183308.03	616494.93
95	321+51.44	74.37' LT	183293.14	616497.84
96	321+53.10	63.74' LT	183283.03	616501.53
97	321+59.43	91.37' LT	183311.39	616502.70
98	321+62.98	63.68' LT	183284.87	616511.47
99	321+63.03	65.68' LT	183286.85	616511.14
100	321+63.04	68.21' LT	183289.34	616510.68
101	321+64.36	73.19' LT	183294.48	616511.08
102	321+67.87	63.66' LT	183285.78	616516.38
103	321+67.91	65.65' LT	183287.75	616516.06
104	321+67.94	69.79' LT	183291.82	616515.31
105	321+68.06	77.33' LT	183299.26	616514.04
106	321+69.35	78.83' LT	183300.97	616515.07
107	321+71.67	73.98' LT	183296.65	616518.31
108	321+72.98	75.46' LT	183298.35	616519.36
109	321+78.29	63.64' LT	183287.71	616526.85
110	321+79.41	70.57' LT	183294.74	616526.73



- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

OakesRd-East-Median				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
120	321+60.10	1.14' LT	183222.90	616520.30
121	321+60.11	25.08' LT	183246.41	616515.83
122	321+62.57	0.86' LT	183223.08	616522.79
123	321+62.59	3.23' LT	183225.41	616522.36
124	321+62.64	10.67' LT	183232.73	616521.02
125	321+62.68	15.67' LT	183237.65	616520.13
126	321+62.73	23.38' LT	183245.24	616518.74
127	321+62.77	25.38' LT	183247.21	616518.41
128	321+67.57	0.75' LT	183223.90	616527.72
129	321+67.58	3.05' LT	183226.17	616527.30
130	321+67.62	10.63' LT	183233.63	616525.94
131	321+67.65	15.63' LT	183238.54	616525.04
132	321+67.69	23.43' LT	183246.21	616523.64
133	321+67.73	25.43' LT	183248.18	616523.31
134	321+70.16	25.66' LT	183248.86	616525.68
135	321+70.01	0.49' LT	183224.09	616530.17

OakesRd-NE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
140	321+69.27	101.59' LT	183323.32	616510.79
141	321+78.27	93.28' LT	183316.86	616521.46
142	321+78.55	89.31' LT	183313.01	616522.47
143	321+79.96	90.78' LT	183314.71	616523.63
144	321+82.39	85.87' LT	183310.33	616526.98
145	321+83.58	87.45' LT	183312.11	616527.90
146	321+83.82	95.18' LT	183319.76	616526.76
147	321+86.24	86.00' LT	183311.18	616530.86
148	321+87.07	98.89' LT	183324.01	616529.40
149	321+87.42	91.82' LT	183317.13	616531.01
150	321+90.66	95.54' LT	183321.37	616533.65
151	321+90.87	88.31' LT	183314.30	616535.14
152	321+94.26	92.19' LT	183318.74	616537.90
153	321+98.05	84.16' LT	183311.51	616543.16
154	321+98.22	76.80' LT	183304.30	616544.61
155	321+99.92	88.91' LT	183316.53	616544.22

OakesRd-South -Median					OakesRd-SE-Island					OakesRD-SE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
160	320+72.85	90.93' RT	183115.34	616454.87	180	321+12.57	86.64' RT	183127.65	616491.58	200	321+40.03	87.74' RT	183131.88	616517.88
161	320+75.28	85.34' RT	183121.31	616455.95	181	321+13.21	83.92' RT	183130.44	616491.63	201	321+43.64	82.42' RT	183137.77	616520.29
162	320+77.57	85.27' RT	183121.86	616458.11	182	321+14.31	78.86' RT	183135.61	616491.65	202	321+44.42	85.64' RT	183134.76	616521.66
163	320+77.72	80.26' RT	183126.78	616457.17	183	321+15.31	83.83' RT	183130.95	616493.61	203	321+46.38	82.27' RT	183138.43	616522.87
164	320+80.05	80.19' RT	183127.34	616459.36	184	321+16.44	78.77' RT	183136.12	616493.66	204	321+48.37	77.15' RT	183143.83	616523.79
165	320+81.02	74.03' RT	183133.56	616458.97	185	321+17.14	66.14' RT	183148.63	616491.77	205	321+51.55	76.97' RT	183144.60	616526.79
166	320+83.24	85.08' RT	183123.23	616463.44	186	321+22.26	89.82' RT	183126.43	616501.42	206	321+55.86	76.72' RT	183145.64	616530.86
167	320+84.38	80.04' RT	183128.39	616463.45	187	321+22.90	83.48' RT	183132.78	616500.76	207	321+56.17	81.71' RT	183140.79	616532.10
168	320+87.40	84.94' RT	183124.23	616467.35	188	321+25.21	83.37' RT	183133.33	616502.93	208	321+62.00	76.35' RT	183147.12	616536.66
169	320+88.45	79.90' RT	183129.37	616467.28	189	321+25.24	78.36' RT	183138.24	616501.96	209	321+62.05	69.87' RT	183153.50	616535.49
170	320+88.54	89.51' RT	183120.00	616469.40	190	321+27.52	78.25' RT	183138.79	616504.11	210	321+62.06	67.63' RT	183155.71	616535.09
171	320+89.52	84.87' RT	183124.74	616469.34	191	321+32.14	68.06' RT	183149.67	616506.51	211	321+62.32	81.34' RT	183142.28	616537.90
172	320+90.57	79.82' RT	183129.88	616469.28						212	321+67.14	76.04' RT	183148.36	616541.51
173	320+91.04	77.61' RT	183132.14	616469.25						213	321+67.19	67.64' RT	183156.63	616540.01
										214	321+67.20	65.50' RT	183158.73	616539.62
										215	321+67.47	81.03' RT	183143.52	616542.75
										216	321+68.46	80.96' RT	183143.76	616543.69
										217	321+70.37	67.10' RT	183157.73	616542.96
										218	321+70.94	64.33' RT	183160.55	616543.00
										219	321+71.77	73.88' RT	183151.32	616545.55
										220	321+82.44	69.29' RT	183157.72	616554.95
										221	321+82.79	74.26' RT	183152.90	616556.17

NOTES:

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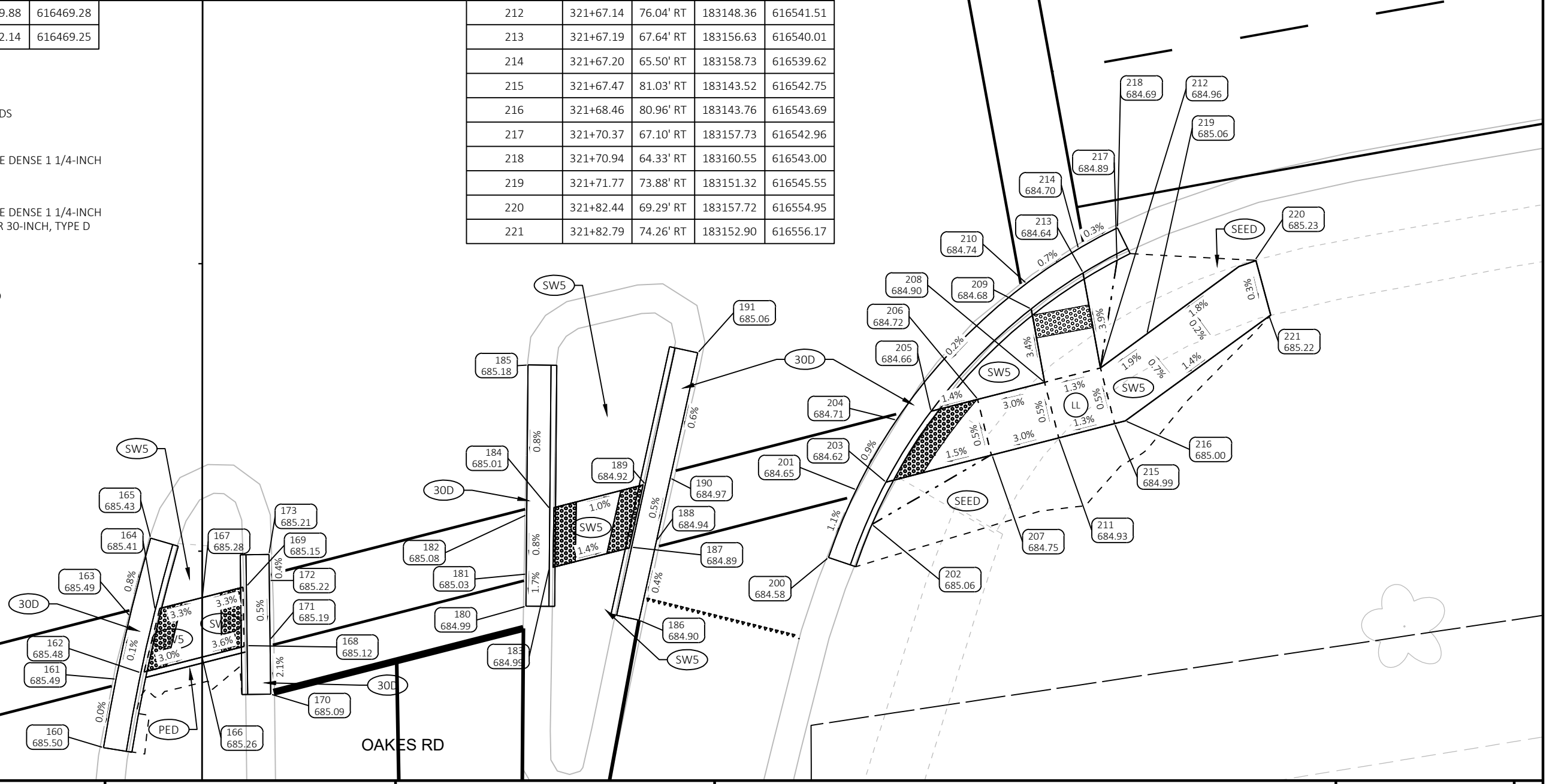
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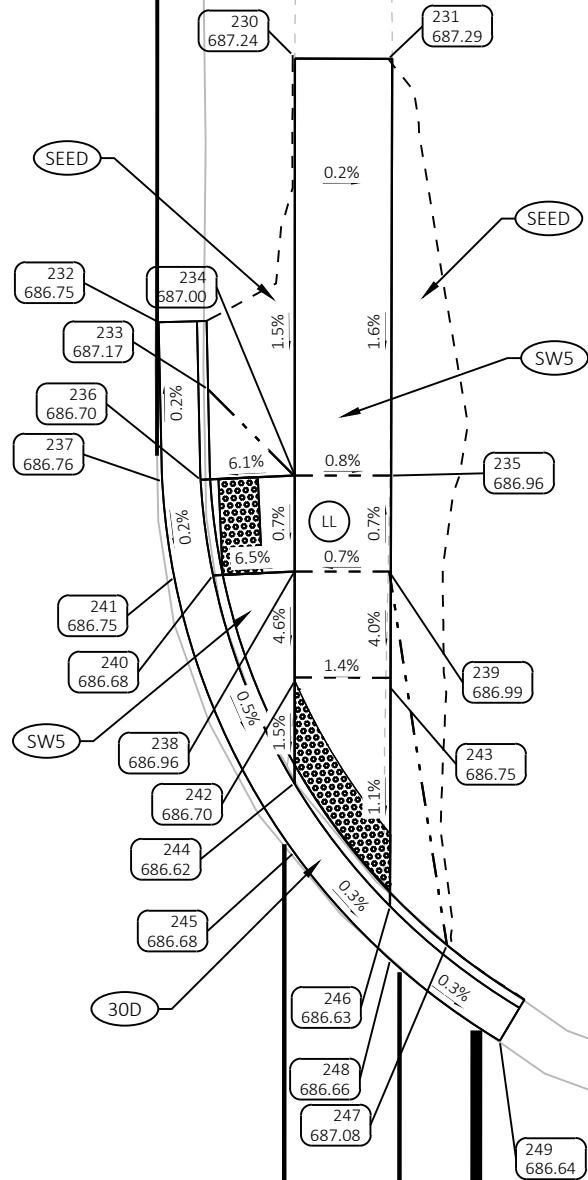
ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

N

- LEGEND**
- ASPH ASPHALTIC SURFACE SAFETY ISLANDS
 - SW5 REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - 30D REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - LL LEVEL LANDING
 - PED CONCRETE CURB PEDESTRIAN
 - SEED RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - DETECTABLE WARNING FIELD
 - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION



STH 20



Prairie-NW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
230	330+23.71	64.82' LT	183322.76	617384.42
231	330+23.94	69.80' LT	183327.72	617384.94
232	330+37.59	57.77' LT	183314.89	617397.86
233	330+41.09	60.33' LT	183317.24	617401.50
234	330+45.61	64.83' LT	183321.46	617406.28
235	330+45.64	69.83' LT	183326.45	617406.61
236	330+45.81	59.92' LT	183316.55	617406.19
237	330+45.89	57.91' LT	183314.54	617406.15
238	330+50.61	64.79' LT	183321.13	617411.27
239	330+50.64	69.72' LT	183326.05	617411.59
240	330+50.78	60.54' LT	183316.87	617411.19
241	330+50.87	58.52' LT	183314.85	617411.16
242	330+56.30	64.77' LT	183320.77	617416.95
243	330+56.64	69.71' LT	183325.67	617417.58
244	330+61.63	64.72' LT	183320.40	617422.27
245	330+65.24	64.69' LT	183320.16	617425.87
246	330+68.06	69.67' LT	183324.96	617428.98
247	330+70.10	72.62' LT	183327.78	617431.19
248	330+70.84	69.66' LT	183324.79	617431.75
249	330+75.10	75.35' LT	183330.21	617436.35

NOTES:

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SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

LEGEND

- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
- (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
- (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
- (LL) LEVEL LANDING
- (PED) CONCRETE CURB PEDESTRIAN
- (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
- (Pattern) DETECTABLE WARNING FIELD
- - - GRADED FLARE LINE
- XXX.XX PROPOSED ELEVATION

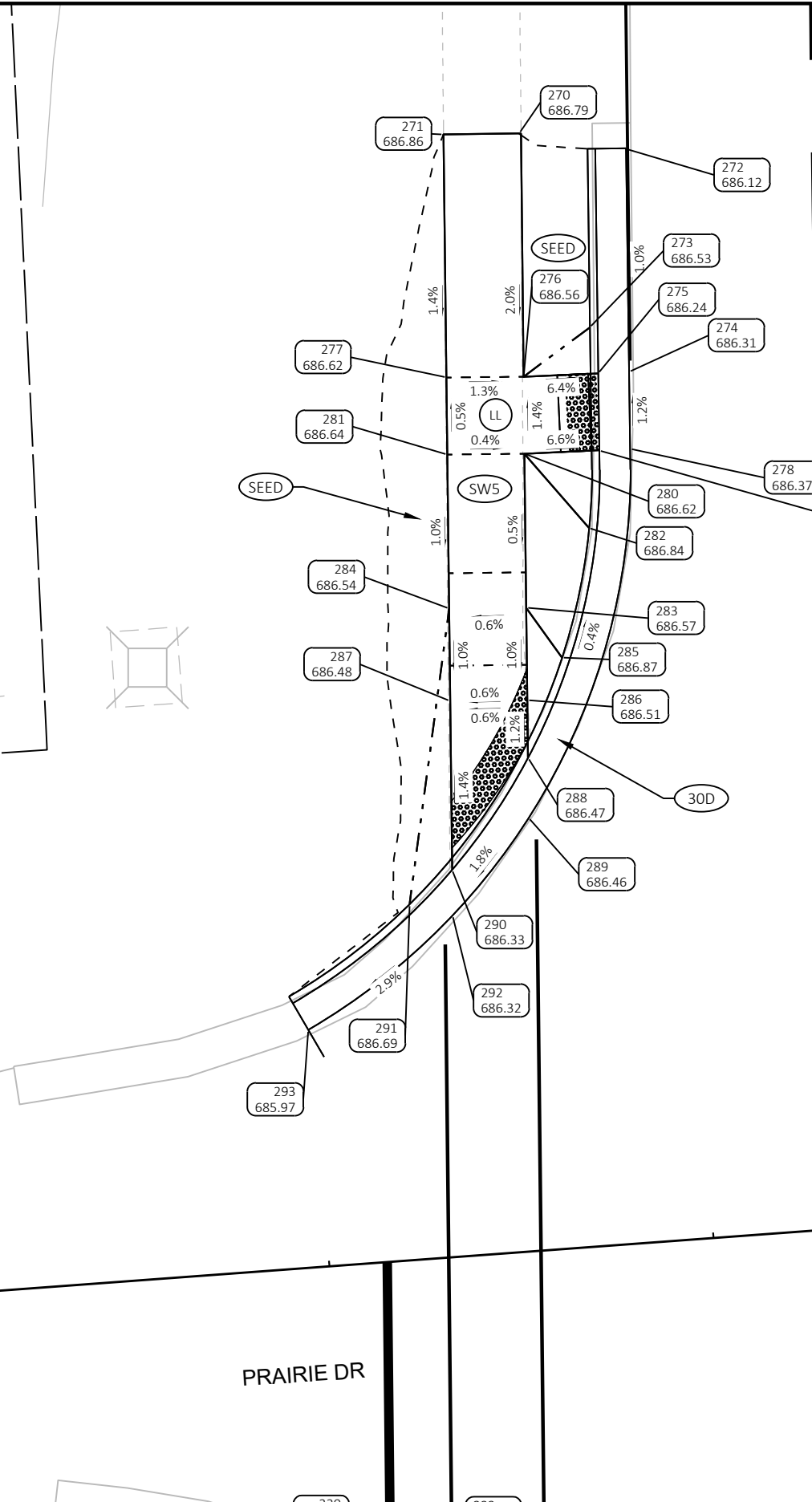


PRAIRIE DR

5+00

Prairie-SW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
270	330+35.11	65.20' RT	183192.29	617388.06
271	330+35.15	70.11' RT	183187.39	617387.81
272	330+36.12	58.34' RT	183199.07	617389.48
273	330+47.72	60.67' RT	183196.06	617400.92
274	330+50.62	58.14' RT	183198.41	617403.97
275	330+50.70	60.14' RT	183196.41	617403.93
276	330+50.89	64.98' RT	183191.57	617403.84
277	330+50.93	69.98' RT	183186.57	617403.57
278	330+55.61	58.10' RT	183198.16	617408.96
279	330+55.71	60.11' RT	183196.14	617408.93
280	330+55.89	64.95' RT	183191.30	617408.83
281	330+55.92	69.95' RT	183186.31	617408.56
282	330+60.73	60.79' RT	183195.16	617413.90
283	330+65.89	64.89' RT	183190.77	617418.81
284	330+65.92	69.89' RT	183185.77	617418.55
285	330+69.13	62.59' RT	183192.87	617422.18
286	330+71.89	64.85' RT	183190.45	617424.81
287	330+71.92	69.85' RT	183185.46	617424.54
288	330+75.63	64.83' RT	183190.25	617428.53
289	330+79.53	64.80' RT	183190.04	617432.43
290	330+82.87	69.78' RT	183184.88	617435.47
291	330+85.09	72.55' RT	183181.98	617437.52
292	330+85.83	69.77' RT	183184.71	617438.43
293	330+93.22	79.17' RT	183174.89	617445.25

- LEGEND**
- ASPH ASPHALTIC SURFACE SAFETY ISLANDS
 - SW5 REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - 30D REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE 'D'
 - LL LEVEL LANDING
 - PED CONCRETE CURB PEDESTRIAN
 - SEED RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION



Prairie-West-Median				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
250	330+45.95	16.63' LT	183273.33	617403.75
251	330+46.52	3.72' RT	183252.98	617403.11
252	330+47.60	15.81' LT	183272.42	617405.36
253	330+47.69	13.63' LT	183270.23	617405.31
254	330+47.99	6.36' LT	183262.95	617405.18
255	330+48.29	0.91' RT	183255.68	617405.05
256	330+48.37	3.04' RT	183253.55	617405.00
257	330+52.69	13.57' LT	183269.88	617410.30
258	330+52.78	11.32' LT	183267.62	617410.26
259	330+52.98	6.51' LT	183262.81	617410.17
260	330+53.18	1.69' LT	183257.98	617410.08
261	330+53.27	0.59' RT	183255.70	617410.04
262	330+56.50	11.72' LT	183267.80	617413.99
263	330+57.06	2.06' LT	183258.13	617413.97

NOTES:

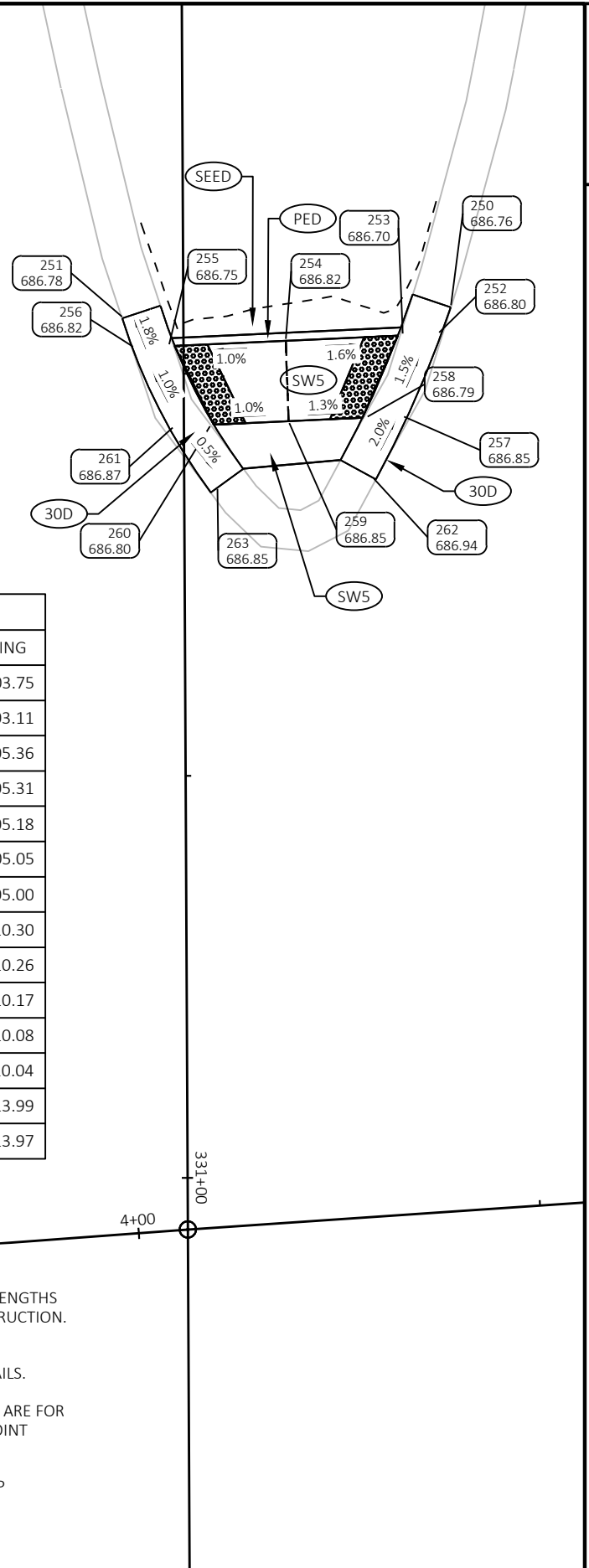
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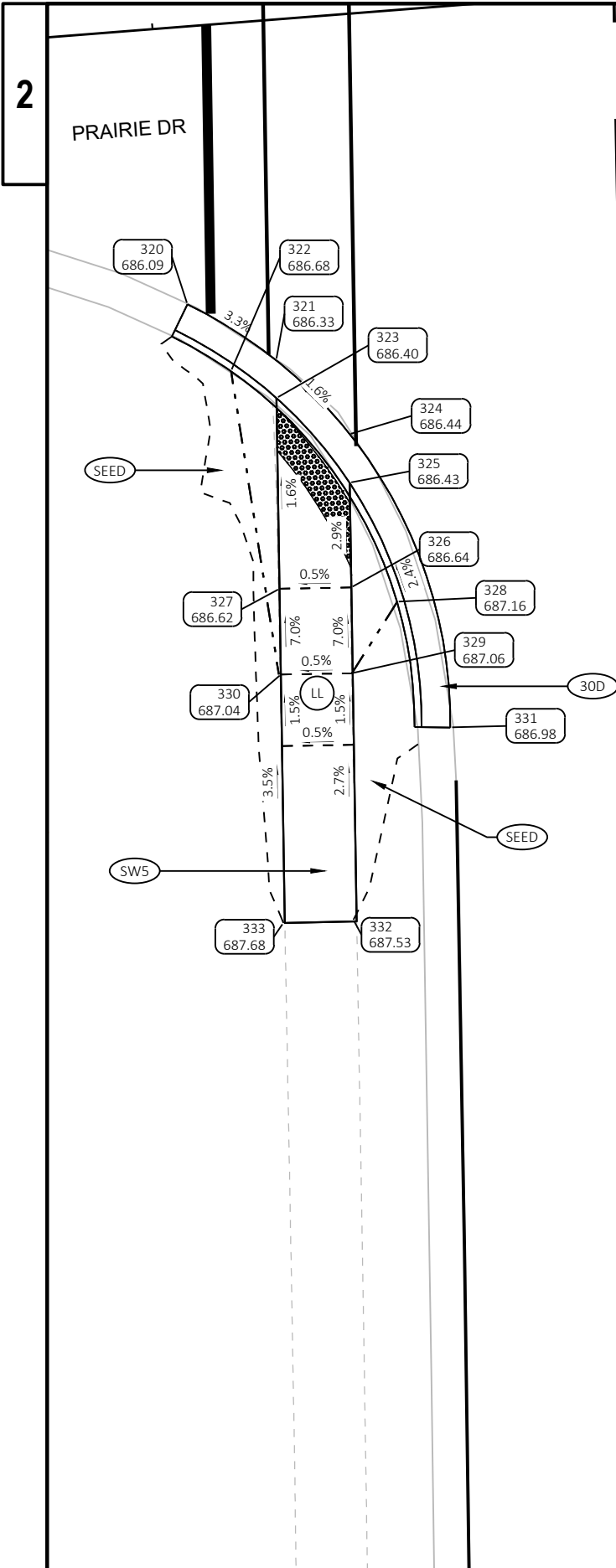
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SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

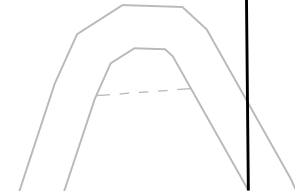
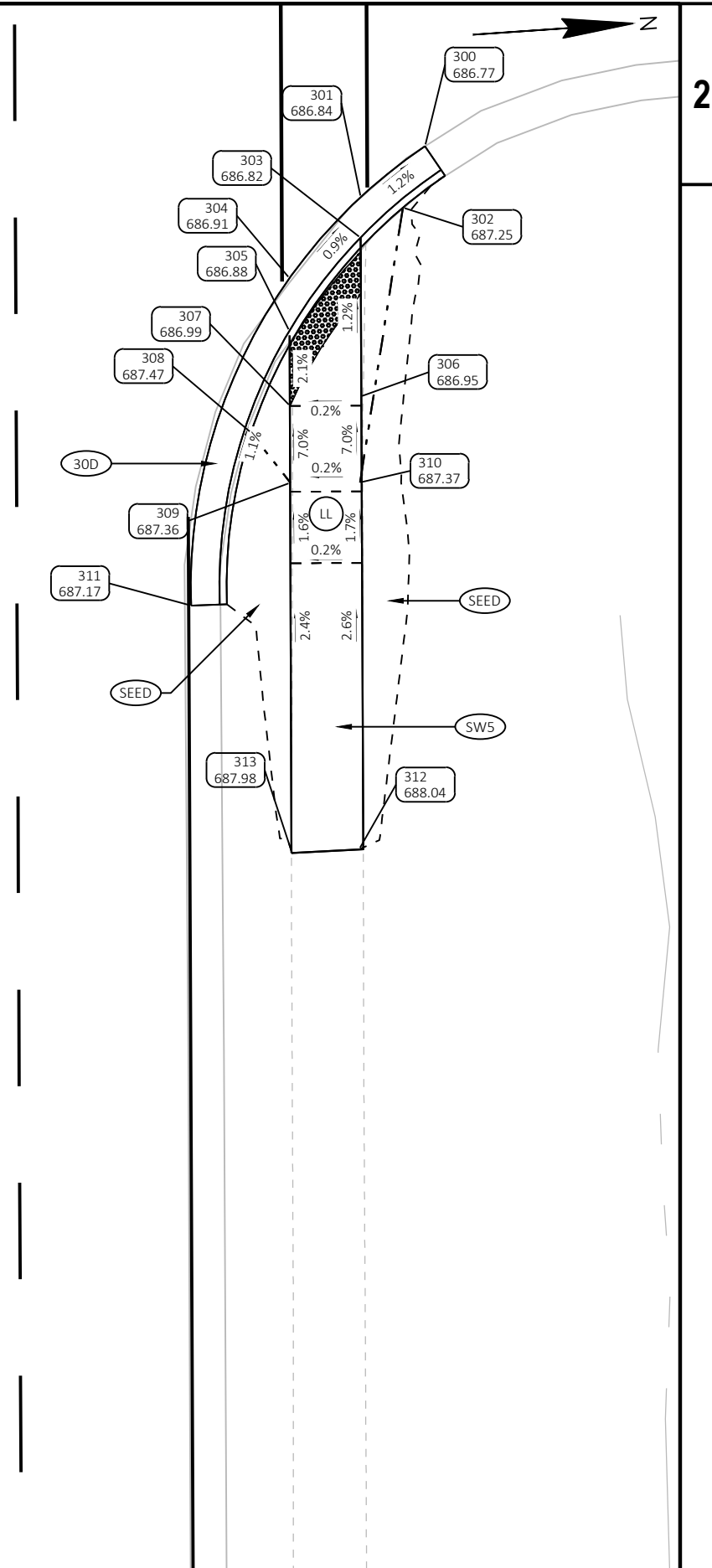
ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.





Prairie-SE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
320	331+27.84	75.62' RT	183176.37	617480.02
321	331+31.81	69.46' RT	183182.28	617484.34
322	331+32.55	72.61' RT	183179.09	617484.89
323	331+34.46	69.46' RT	183182.13	617486.98
324	331+37.04	64.41' RT	183187.02	617489.87
325	331+40.42	64.41' RT	183186.81	617493.24
326	331+47.75	64.37' RT	183186.42	617500.56
327	331+47.78	69.37' RT	183181.42	617500.29
328	331+48.78	61.17' RT	183189.55	617501.77
329	331+53.75	64.42' RT	183186.01	617506.54
330	331+53.78	69.33' RT	183181.10	617506.28
331	331+57.60	57.54' RT	183192.65	617510.80
332	331+70.97	64.43' RT	183184.97	617523.74
333	331+71.14	69.33' RT	183180.07	617523.61

Prairie-NE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
300	331+18.25	73.93' LT	183326.23	617479.34
301	331+21.78	69.40' LT	183321.49	617482.59
302	331+22.53	72.34' LT	183324.39	617483.52
303	331+24.60	69.34' LT	183321.27	617485.40
304	331+27.38	64.37' LT	183316.14	617487.88
305	331+31.08	64.31' LT	183315.87	617491.57
306	331+35.72	69.23' LT	183320.50	617496.50
307	331+36.32	64.31' LT	183315.55	617496.80
308	331+38.16	61.57' LT	183312.71	617498.47
309	331+41.70	64.28' LT	183315.20	617502.17
310	331+41.72	69.16' LT	183320.07	617502.48
311	331+50.21	57.26' LT	183307.69	617510.25
312	331+67.36	68.85' LT	183318.24	617528.05
313	331+67.57	64.15' LT	183313.53	617527.98



- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

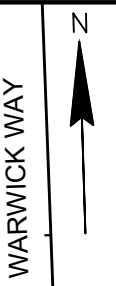
CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

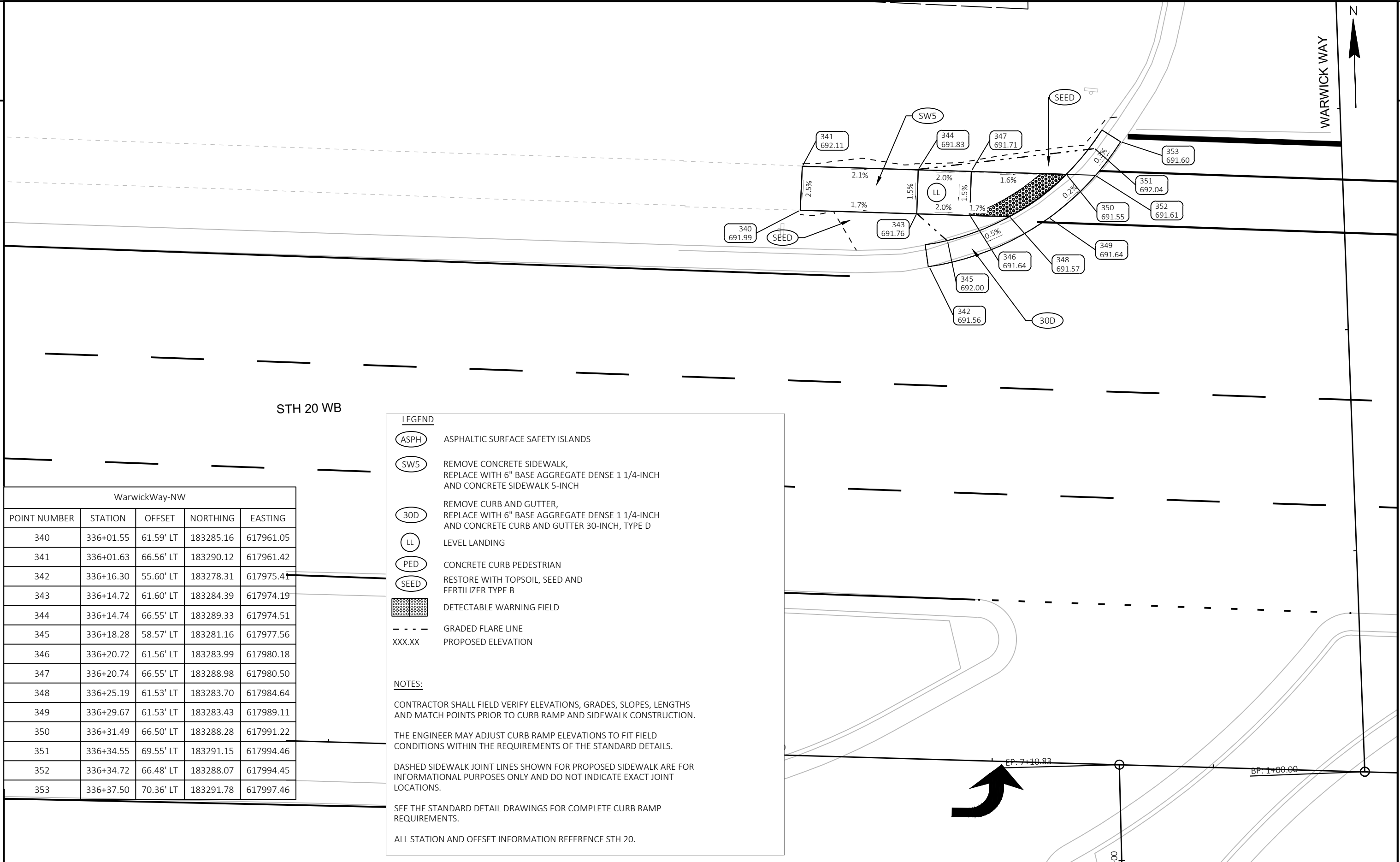
DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



WARWICK WAY



STH 20 WB

WarwickWay-NW

POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
340	336+01.55	61.59' LT	183285.16	617961.05
341	336+01.63	66.56' LT	183290.12	617961.42
342	336+16.30	55.60' LT	183278.31	617975.41
343	336+14.72	61.60' LT	183284.39	617974.19
344	336+14.74	66.55' LT	183289.33	617974.51
345	336+18.28	58.57' LT	183281.16	617977.56
346	336+20.72	61.56' LT	183283.99	617980.18
347	336+20.74	66.55' LT	183288.98	617980.50
348	336+25.19	61.53' LT	183283.70	617984.64
349	336+29.67	61.53' LT	183283.43	617989.11
350	336+31.49	66.50' LT	183288.28	617991.22
351	336+34.55	69.55' LT	183291.15	617994.46
352	336+34.72	66.48' LT	183288.07	617994.45
353	336+37.50	70.36' LT	183291.78	617997.46

LEGEND

- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
- (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
- (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
- (LL) LEVEL LANDING
- (PED) CONCRETE CURB PEDESTRIAN
- (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
- [Grid Pattern] DETECTABLE WARNING FIELD
- - - - GRADED FLARE LINE
- XXX.XX PROPOSED ELEVATION

NOTES:

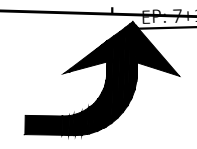
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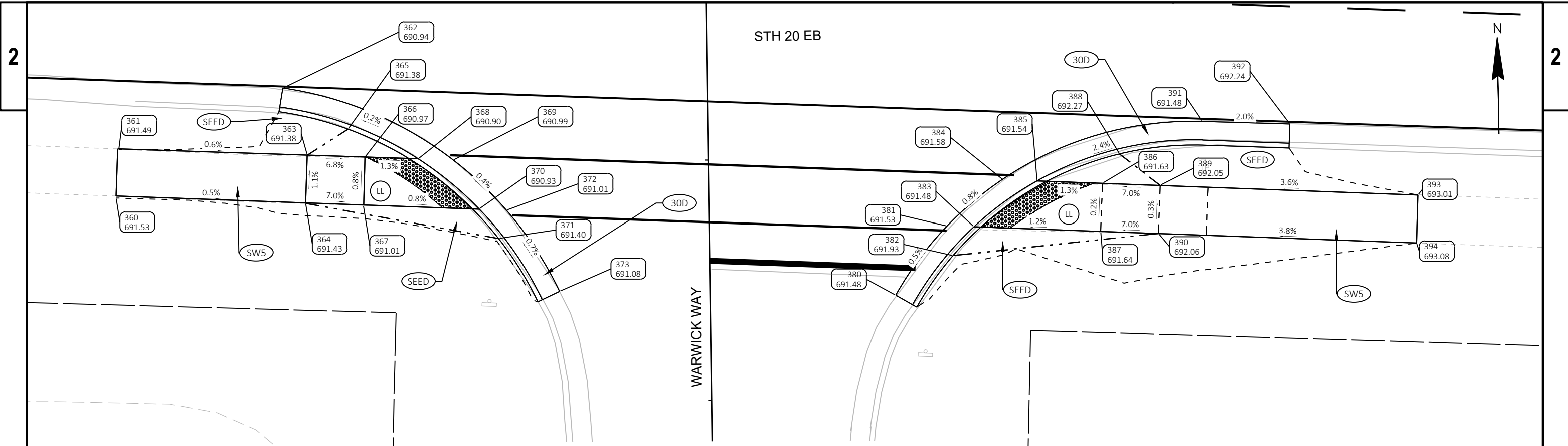
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DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.





WarwickWay-SW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
360	335+81.42	67.12' RT	183157.88	617933.29
361	335+81.49	62.12' RT	183162.87	617933.67
362	335+98.26	55.06' RT	183168.92	617950.82
363	336+01.08	61.89' RT	183161.93	617953.23
364	336+01.10	66.89' RT	183156.93	617952.95
365	336+05.19	59.06' RT	183164.51	617957.50
366	336+07.08	61.86' RT	183161.60	617959.22
367	336+07.10	66.86' RT	183156.61	617958.94
368	336+12.59	61.84' RT	183161.30	617964.72
369	336+16.23	61.82' RT	183161.10	617968.36
370	336+19.10	66.81' RT	183155.95	617970.93
371	336+21.26	69.77' RT	183152.87	617972.91
372	336+21.97	66.79' RT	183155.79	617973.80
373	336+27.80	75.01' RT	183147.25	617979.13

- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

WarwickWay-SE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
380	336+62.76	73.99' RT	183146.18	618014.09
381	336+67.77	66.59' RT	183153.27	618019.52
382	336+68.51	69.62' RT	183150.20	618020.08
383	336+70.57	66.56' RT	183153.14	618022.32
384	336+73.42	61.56' RT	183157.95	618025.46
385	336+76.93	61.52' RT	183157.78	618028.97
386	336+83.72	61.49' RT	183157.41	618035.75
387	336+83.74	66.49' RT	183152.42	618035.48
388	336+85.37	58.37' RT	183160.43	618037.58
389	336+89.72	61.46' RT	183157.09	618041.74
390	336+89.74	66.46' RT	183152.09	618041.47
391	336+93.85	54.65' RT	183163.64	618046.26
392	337+02.91	54.54' RT	183163.21	618055.32
393	337+16.50	61.37' RT	183155.58	618068.48
394	337+16.55	66.36' RT	183150.60	618068.24

WarwickWay-NE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
400	336+79.92	79.01' LT	183297.89	618040.31
401	336+86.62	66.13' LT	183284.63	618046.23
402	336+87.34	69.25' LT	183287.71	618047.14
403	336+89.26	66.16' LT	183284.51	618048.87
404	336+91.89	61.09' LT	183279.29	618051.20
405	336+95.33	61.13' LT	183279.12	618054.63
406	337+02.53	61.09' LT	183278.65	618061.82
407	337+02.56	66.09' LT	183283.64	618062.14
408	337+03.94	57.84' LT	183275.33	618063.03
409	337+08.53	61.05' LT	183278.26	618067.80
410	337+08.56	66.05' LT	183283.25	618068.13
411	337+11.38	54.24' LT	183271.29	618070.24
412	337+39.54	60.95' LT	183276.31	618098.75
413	337+39.61	65.86' LT	183281.21	618099.11



- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - (Pattern) DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

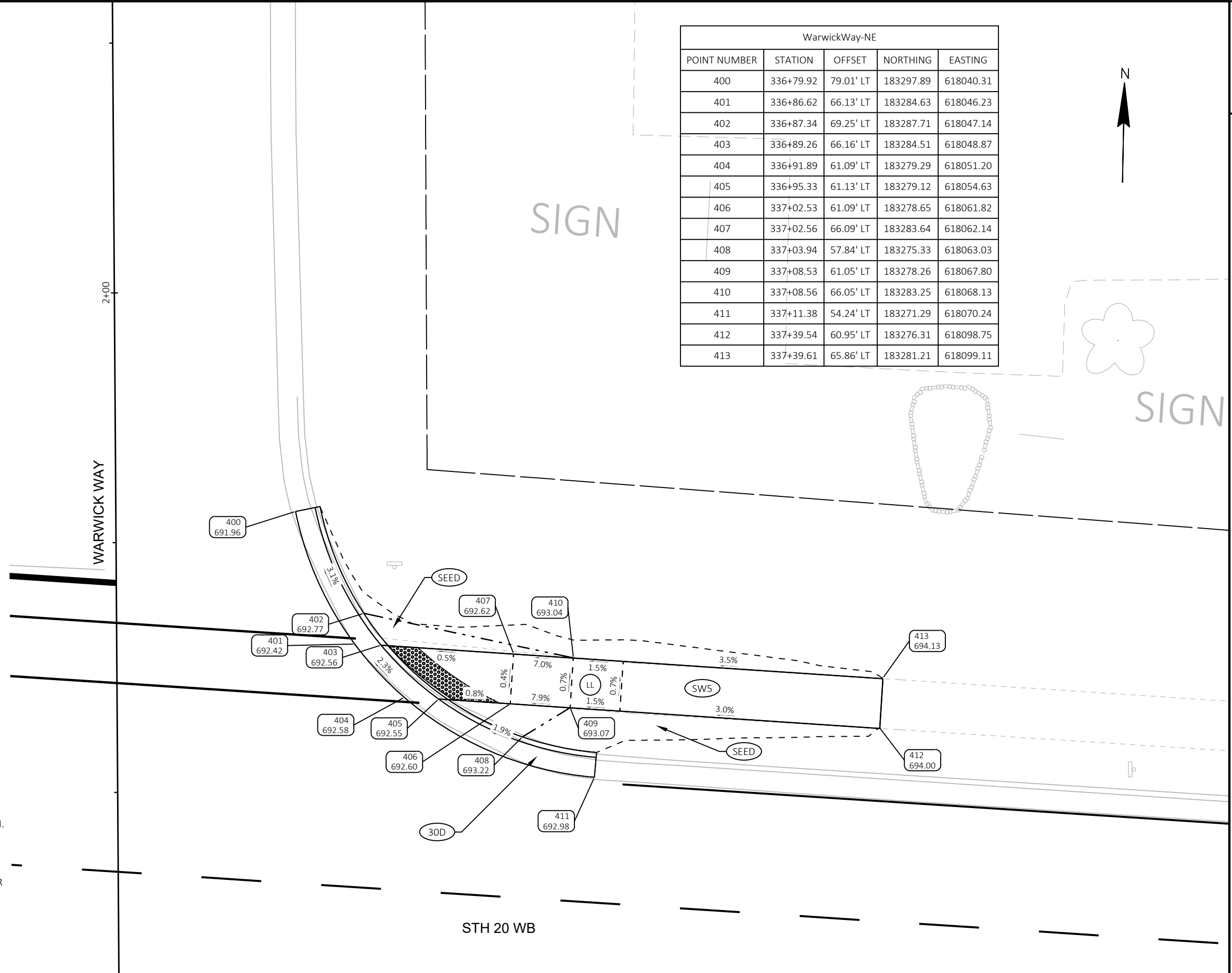
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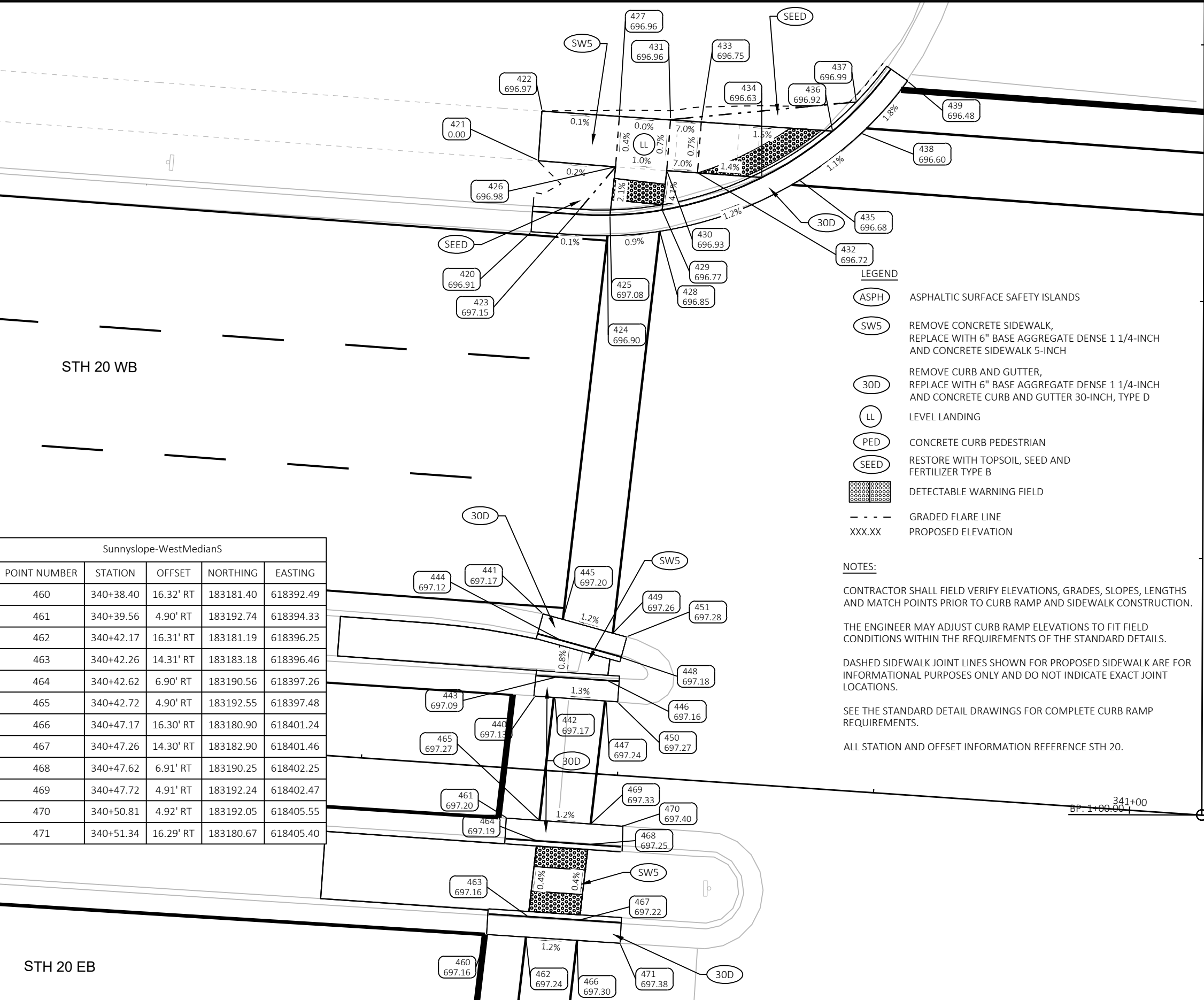
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SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



Sunnyslope-NW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
420	340+38.05	52.23' LT	183249.86	618396.21
421	340+38.20	59.24' LT	183256.84	618396.78
422	340+38.29	64.05' LT	183261.65	618397.16
423	340+42.58	54.73' LT	183252.09	618400.89
424	340+45.47	52.37' LT	183249.56	618403.63
425	340+45.57	54.38' LT	183251.55	618403.85
426	340+45.80	59.10' LT	183256.26	618404.36
427	340+45.82	64.04' LT	183261.19	618404.68
428	340+50.51	53.16' LT	183250.05	618408.71
429	340+50.61	55.21' LT	183252.08	618408.93
430	340+50.80	59.08' LT	183255.94	618409.35
431	340+50.82	64.08' LT	183260.93	618409.67
432	340+53.80	59.07' LT	183255.74	618412.34
433	340+53.82	64.07' LT	183260.73	618412.66
434	340+60.09	59.04' LT	183255.34	618418.62
435	340+63.72	59.04' LT	183255.13	618422.25
436	340+66.66	64.00' LT	183259.91	618425.47
437	340+68.77	66.99' LT	183262.77	618427.76
438	340+69.43	63.99' LT	183259.73	618428.24
439	340+73.60	69.36' LT	183264.84	618432.73



Sunnyslope-WestMedianN					Sunnyslope-WestMedianS				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
440	340+41.47	7.15' LT	183204.65	618396.95	460	340+38.40	16.32' RT	183181.40	618392.49
441	340+41.69	15.19' LT	183212.67	618397.65	461	340+39.56	4.90' RT	183192.74	618394.33
442	340+43.42	7.15' LT	183204.54	618398.89	462	340+42.17	16.31' RT	183181.19	618396.25
443	340+43.42	9.15' LT	183206.53	618399.01	463	340+42.26	14.31' RT	183183.18	618396.46
444	340+43.51	12.78' LT	183210.15	618399.32	464	340+42.62	6.90' RT	183190.56	618397.26
445	340+43.66	14.79' LT	183212.15	618399.59	465	340+42.72	4.90' RT	183192.55	618397.48
446	340+48.39	9.15' LT	183206.24	618403.98	466	340+47.17	16.30' RT	183180.90	618401.24
447	340+48.42	7.15' LT	183204.24	618403.88	467	340+47.26	14.30' RT	183182.90	618401.46
448	340+48.52	11.75' LT	183208.83	618404.26	468	340+47.62	6.91' RT	183190.25	618402.25
449	340+48.62	13.78' LT	183210.84	618404.48	469	340+47.72	4.91' RT	183192.24	618402.47
450	340+49.54	7.09' LT	183204.12	618405.00	470	340+50.81	4.92' RT	183192.05	618405.55
451	340+49.96	13.50' LT	183210.49	618405.80	471	340+51.34	16.29' RT	183180.67	618405.40

- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

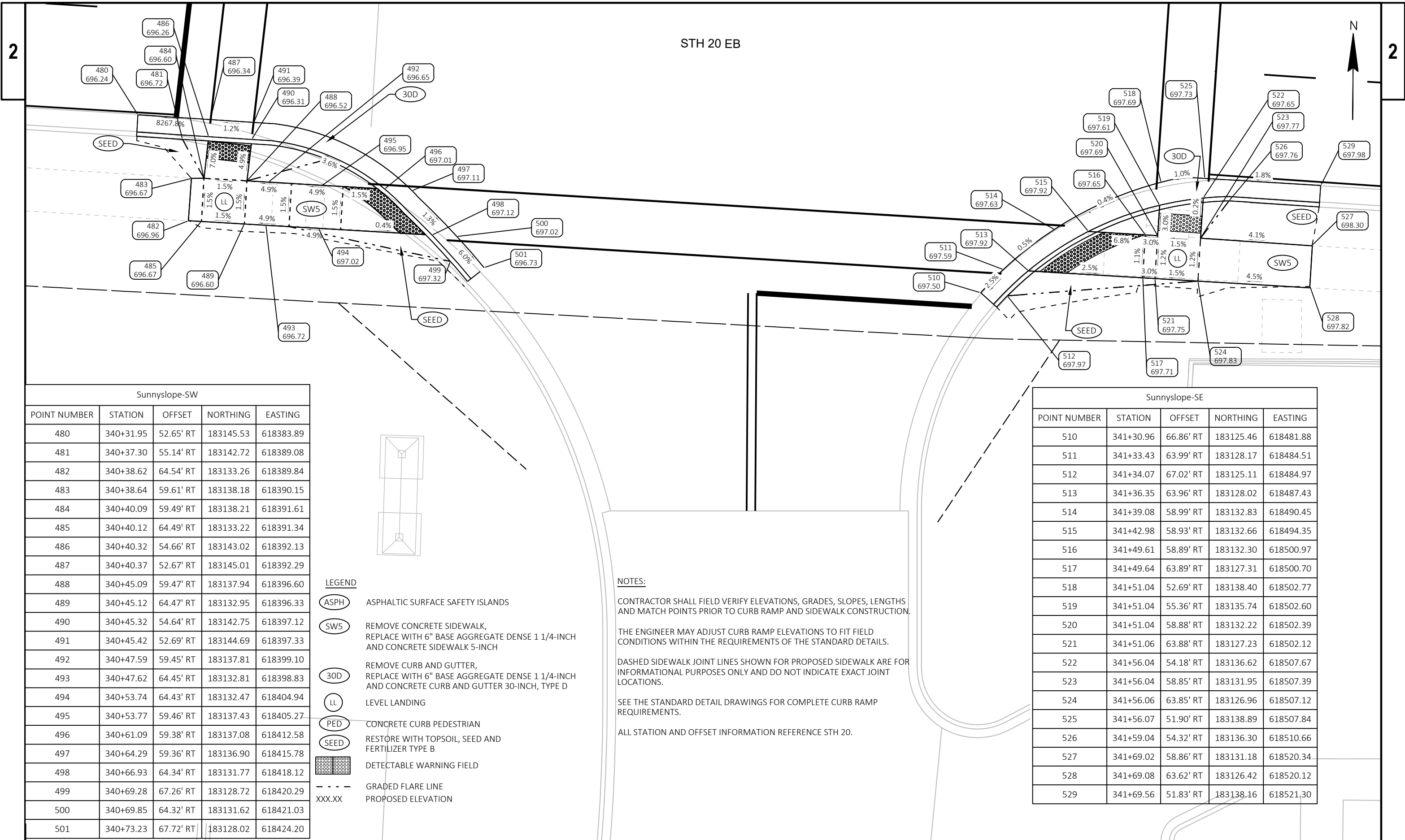
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DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



STH 20 EB



Sunnyslope-SW

POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
480	340+31.95	52.65' RT	183145.53	618383.89
481	340+37.30	55.14' RT	183142.72	618389.08
482	340+38.62	64.54' RT	183133.26	618389.84
483	340+38.64	59.61' RT	183138.18	618390.15
484	340+40.09	59.49' RT	183138.21	618391.61
485	340+40.12	64.49' RT	183133.22	618391.34
486	340+40.32	54.66' RT	183143.02	618392.13
487	340+40.37	52.67' RT	183145.01	618392.29
488	340+45.09	59.47' RT	183137.94	618396.60
489	340+45.12	64.47' RT	183132.95	618396.33
490	340+45.32	54.64' RT	183142.75	618397.12
491	340+45.42	52.69' RT	183144.69	618397.33
492	340+47.59	59.45' RT	183137.81	618399.10
493	340+47.62	64.45' RT	183132.81	618398.83
494	340+53.74	64.43' RT	183132.47	618404.94
495	340+53.77	59.46' RT	183137.43	618405.27
496	340+61.09	59.38' RT	183137.08	618412.58
497	340+64.29	59.36' RT	183136.90	618415.78
498	340+66.93	64.34' RT	183131.77	618418.12
499	340+69.28	67.26' RT	183128.72	618420.29
500	340+69.85	64.32' RT	183131.62	618421.03
501	340+73.23	67.72' RT	183128.02	618424.20

LEGEND

- ASPH ASPHALTIC SURFACE SAFETY ISLANDS
- SW5 REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
- 30D REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
- LL LEVEL LANDING
- PED CONCRETE CURB PEDESTRIAN
- SEED RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
- DETECTABLE WARNING FIELD
- - - - GRADED FLARE LINE
- XXX.XX PROPOSED ELEVATION

NOTES:

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- ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

Sunnyslope-SE

POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
510	341+30.96	66.86' RT	183125.46	618481.88
511	341+33.43	63.99' RT	183128.17	618484.51
512	341+34.07	67.02' RT	183125.11	618484.97
513	341+36.35	63.96' RT	183128.02	618487.43
514	341+39.08	58.99' RT	183132.83	618490.45
515	341+42.98	58.93' RT	183132.66	618494.35
516	341+49.61	58.89' RT	183132.30	618500.97
517	341+49.64	63.89' RT	183127.31	618500.70
518	341+51.04	52.69' RT	183138.40	618502.77
519	341+51.04	55.36' RT	183135.74	618502.60
520	341+51.04	58.88' RT	183132.22	618502.39
521	341+51.06	63.88' RT	183127.23	618502.12
522	341+56.04	54.18' RT	183136.62	618507.67
523	341+56.04	58.85' RT	183131.95	618507.39
524	341+56.06	63.85' RT	183126.96	618507.12
525	341+56.07	51.90' RT	183138.89	618507.84
526	341+59.04	54.32' RT	183136.30	618510.66
527	341+69.02	58.86' RT	183131.18	618520.34
528	341+69.08	63.62' RT	183126.42	618520.12
529	341+69.56	51.83' RT	183138.16	618521.30

MeadowLnAve-SW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
550	355+42.79	57.28' RT	183097.27	619896.13
551	355+42.90	62.19' RT	183092.36	619896.17
552	355+68.20	50.57' RT	183103.59	619921.64
553	355+70.66	57.24' RT	183096.89	619924.00
554	355+70.67	62.24' RT	183091.89	619923.93
555	355+75.01	54.23' RT	183099.83	619928.39
556	355+76.66	57.23' RT	183096.80	619930.00
557	355+76.67	62.23' RT	183091.80	619929.93
558	355+82.36	57.22' RT	183096.72	619935.70
559	355+85.65	57.25' RT	183096.64	619938.99
560	355+87.88	62.22' RT	183091.65	619941.15
561	355+89.47	65.22' RT	183088.63	619942.69
562	355+90.46	62.25' RT	183091.57	619943.72
563	355+93.90	68.29' RT	183085.49	619947.08

MeadowLnAve-SE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
570	356+38.12	73.32' RT	183079.79	619991.21
571	356+43.19	62.19' RT	183090.85	619996.45
572	356+44.13	65.15' RT	183087.87	619997.35
573	356+45.70	62.15' RT	183090.84	619998.96
574	356+47.89	57.16' RT	183095.80	620001.23
575	356+51.19	57.15' RT	183095.77	620004.52
576	356+56.86	57.14' RT	183095.69	620010.20
577	356+56.87	62.14' RT	183090.69	620010.13
578	356+58.48	54.14' RT	183098.66	620011.86
579	356+62.86	57.13' RT	183095.60	620016.20
580	356+62.87	62.13' RT	183090.60	620016.13
581	356+66.49	50.40' RT	183102.28	620019.92
582	356+72.86	57.12' RT	183095.46	620026.19
583	356+72.87	62.12' RT	183090.47	620026.12

LEGEND

- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
- (SWS) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
- (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
- (LL) LEVEL LANDING
- (PED) CONCRETE CURB PEDESTRIAN
- (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
- [Pattern] DETECTABLE WARNING FIELD
- - - - GRADED FLARE LINE
- XXX.XX PROPOSED ELEVATION

NOTES:

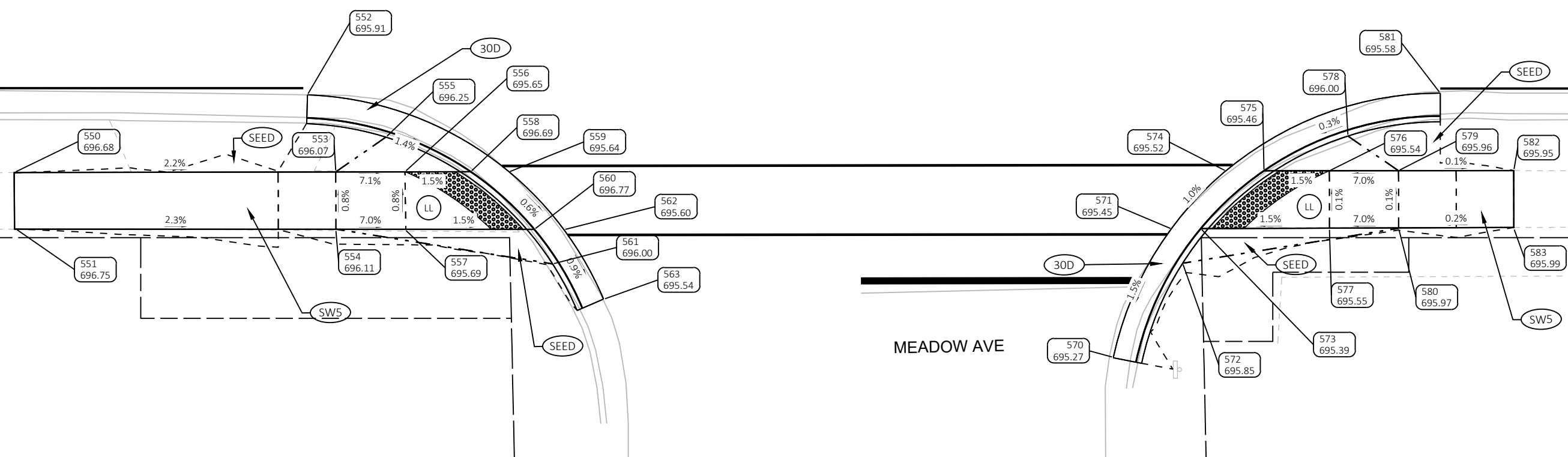
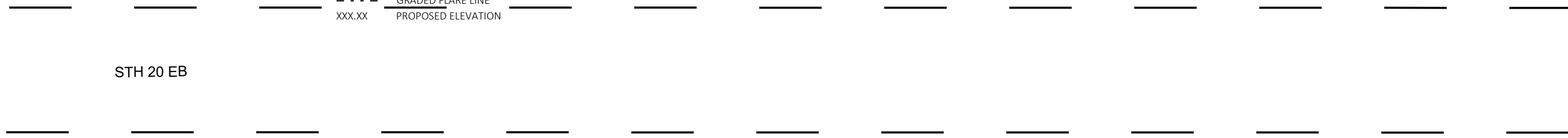
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THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

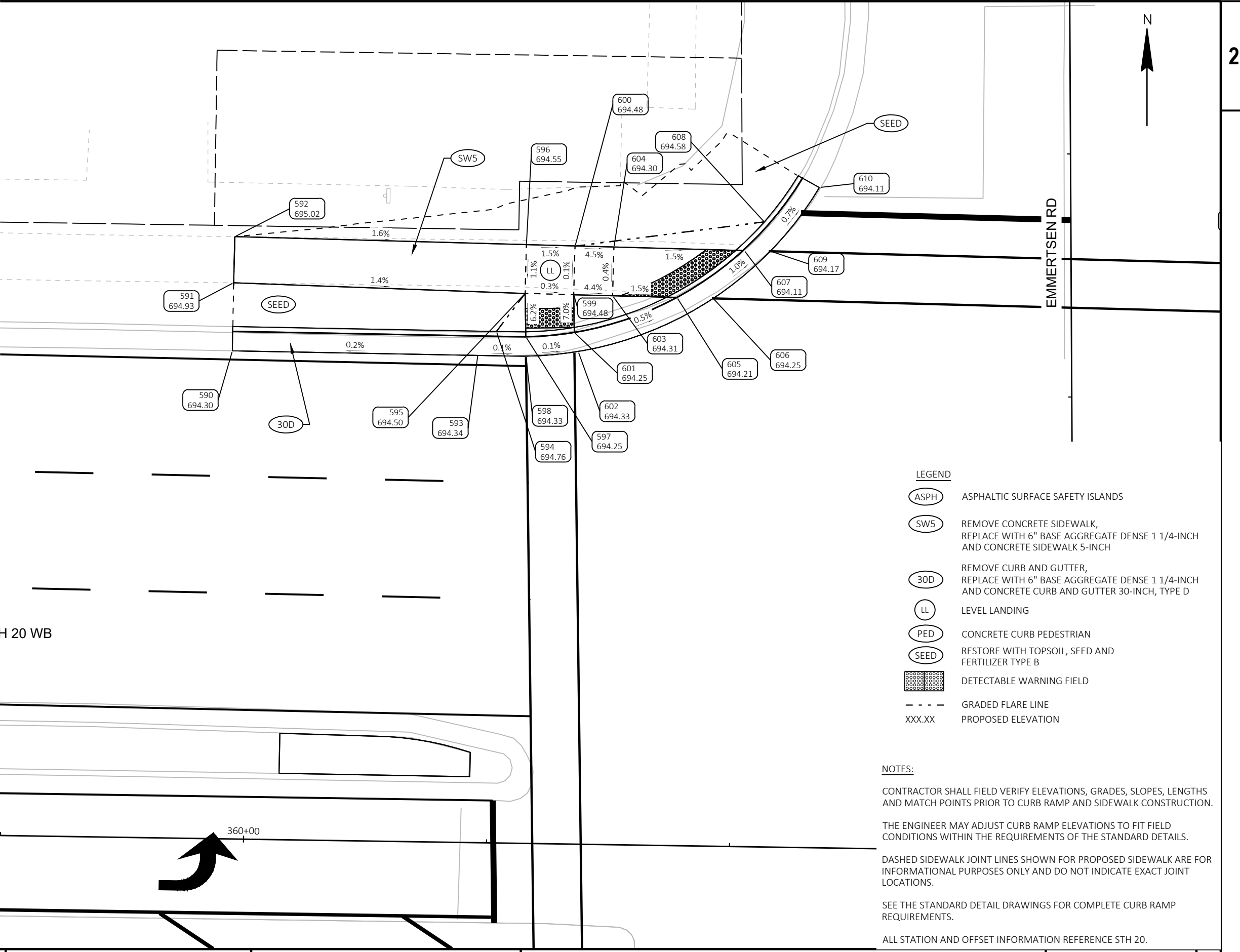
DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



Emmertsen-NW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
590	359+98.11	50.19' LT	183197.87	620353.02
591	359+98.13	57.19' LT	183204.87	620353.15
592	359+98.18	61.94' LT	183209.62	620353.27
593	360+23.35	50.16' LT	183197.46	620378.26
594	360+25.24	52.59' LT	183199.87	620380.18
595	360+28.13	56.54' LT	183203.77	620383.13
596	360+28.18	61.54' LT	183208.77	620383.26
597	360+28.26	52.10' LT	183199.33	620383.19
598	360+28.31	50.10' LT	183197.33	620383.22
599	360+33.13	56.48' LT	183203.64	620388.13
600	360+33.18	61.48' LT	183208.64	620388.26
601	360+33.23	52.62' LT	183199.77	620388.18
602	360+33.67	50.66' LT	183197.81	620388.58
603	360+37.13	56.44' LT	183203.53	620392.13
604	360+37.18	61.44' LT	183208.53	620392.26
605	360+43.74	56.37' LT	183203.36	620398.74
606	360+47.44	56.36' LT	183203.29	620402.44
607	360+50.59	61.29' LT	183208.18	620405.67
608	360+52.61	64.27' LT	183211.13	620407.73
609	360+53.23	61.30' LT	183208.15	620408.31
610	360+58.23	67.89' LT	183214.66	620413.40



- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

Emmertsen-SW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
620	360+11.30	56.95' RT	183090.55	620364.59
621	360+11.30	61.75' RT	183085.74	620364.53
622	360+11.34	49.94' RT	183097.55	620364.74
623	360+28.16	52.55' RT	183094.69	620381.52
624	360+29.79	50.06' RT	183097.16	620383.19
625	360+31.09	50.04' RT	183097.16	620384.49
626	360+31.14	52.03' RT	183095.16	620384.51
627	360+31.24	62.18' RT	183085.02	620384.46
628	360+31.29	57.43' RT	183089.76	620384.58
629	360+36.08	50.38' RT	183096.74	620389.47
630	360+36.15	52.39' RT	183094.73	620389.51
631	360+36.24	62.29' RT	183084.83	620389.45
632	360+36.29	57.49' RT	183089.63	620389.58
633	360+44.24	62.46' RT	183084.54	620397.45
634	360+44.29	57.58' RT	183089.42	620397.58
635	360+50.16	57.65' RT	183089.26	620403.44
636	360+53.66	57.69' RT	183089.17	620406.94
637	360+56.31	62.72' RT	183084.10	620409.51
638	360+58.27	65.74' RT	183081.05	620411.43
639	360+59.03	62.75' RT	183084.02	620412.23
640	360+64.28	70.66' RT	183076.04	620417.37

STH 20 EB

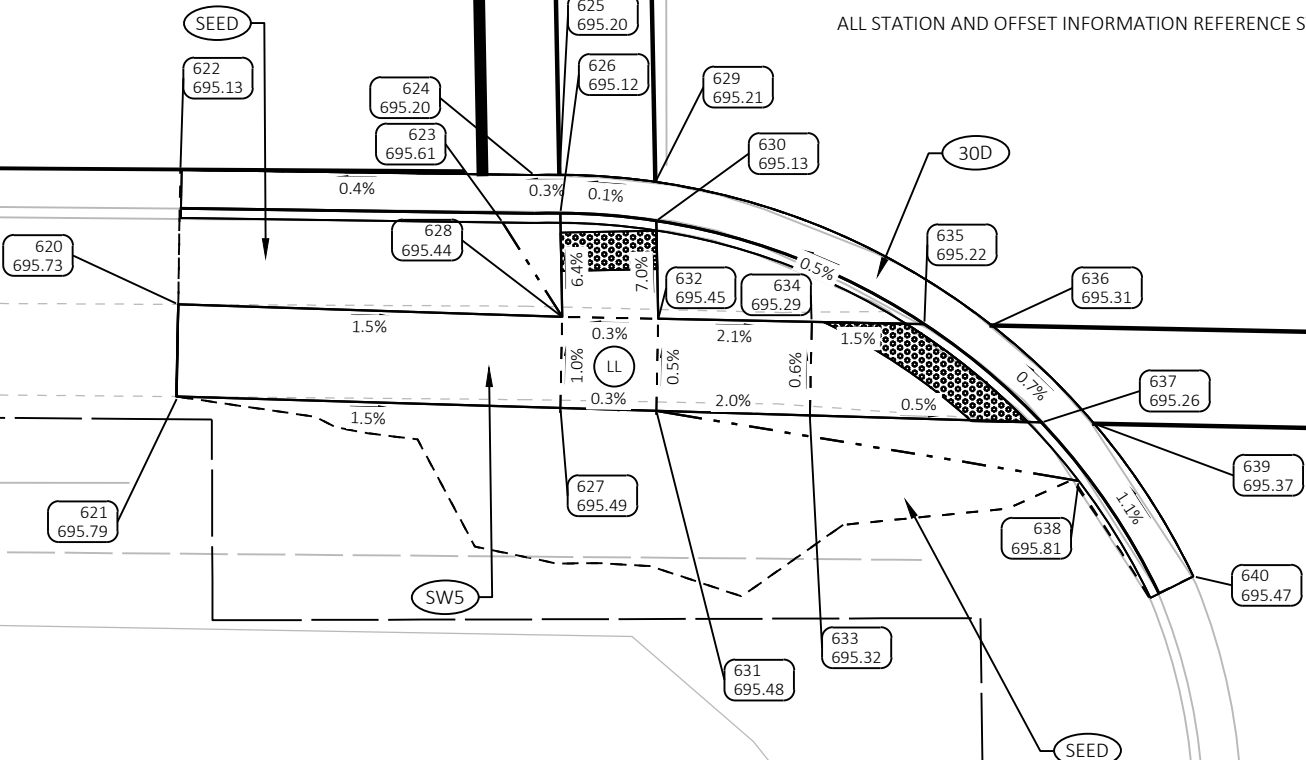
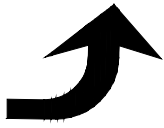
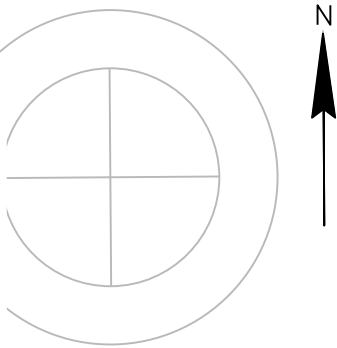
LANDSCAPED AREA

LEGEND

- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
- (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
- (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
- (LL) LEVEL LANDING
- (PED) CONCRETE CURB PEDESTRIAN
- (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
- [Hatched Box] DETECTABLE WARNING FIELD
- - - GRADED FLARE LINE
- XXX.XX PROPOSED ELEVATION

NOTES:

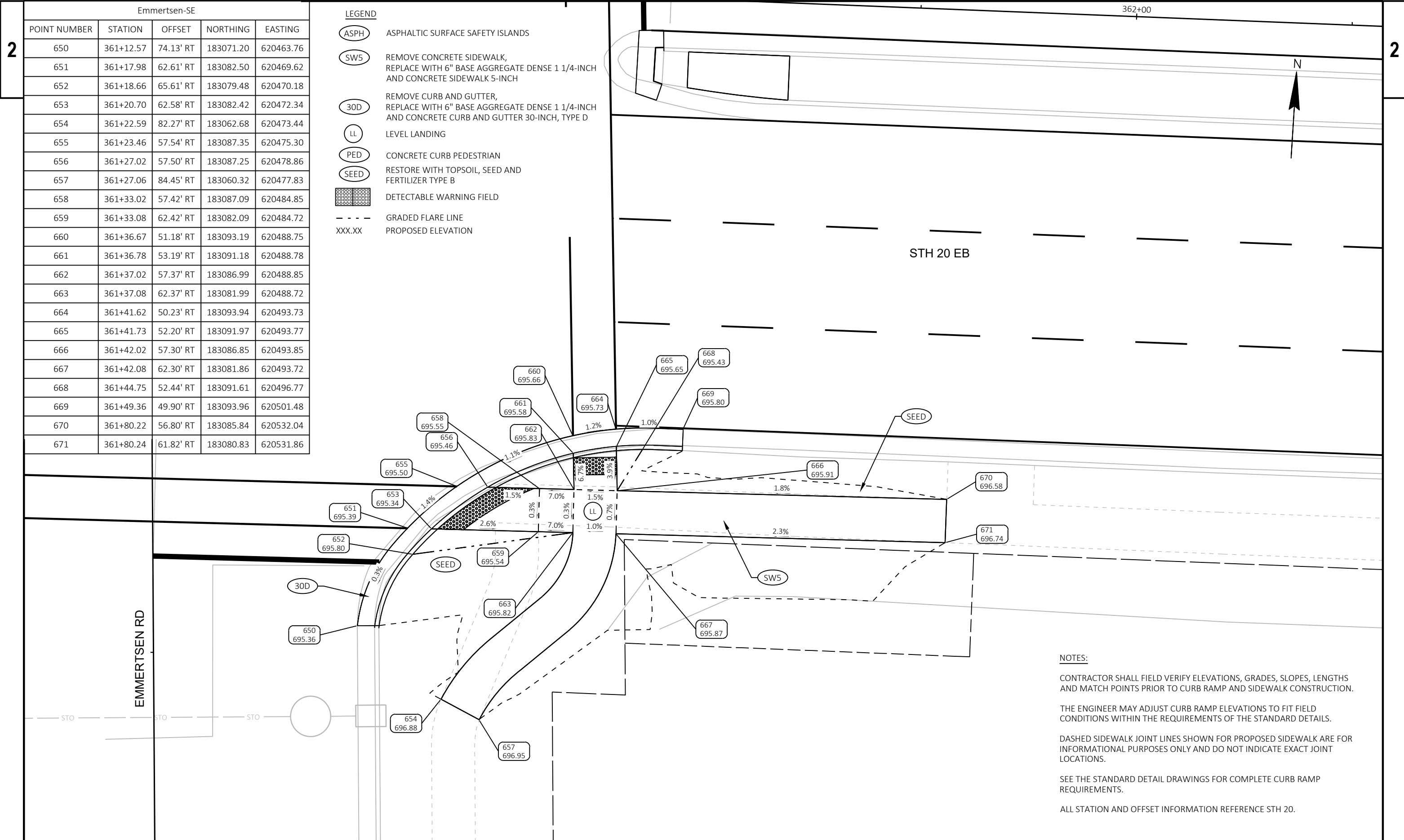
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- THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.
- DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
- SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
- ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



EMMERTSEN RD

Emmertsen-SE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
650	361+12.57	74.13' RT	183071.20	620463.76
651	361+17.98	62.61' RT	183082.50	620469.62
652	361+18.66	65.61' RT	183079.48	620470.18
653	361+20.70	62.58' RT	183082.42	620472.34
654	361+22.59	82.27' RT	183062.68	620473.44
655	361+23.46	57.54' RT	183087.35	620475.30
656	361+27.02	57.50' RT	183087.25	620478.86
657	361+27.06	84.45' RT	183060.32	620477.83
658	361+33.02	57.42' RT	183087.09	620484.85
659	361+33.08	62.42' RT	183082.09	620484.72
660	361+36.67	51.18' RT	183093.19	620488.75
661	361+36.78	53.19' RT	183091.18	620488.78
662	361+37.02	57.37' RT	183086.99	620488.85
663	361+37.08	62.37' RT	183081.99	620488.72
664	361+41.62	50.23' RT	183093.94	620493.73
665	361+41.73	52.20' RT	183091.97	620493.77
666	361+42.02	57.30' RT	183086.85	620493.85
667	361+42.08	62.30' RT	183081.86	620493.72
668	361+44.75	52.44' RT	183091.61	620496.77
669	361+49.36	49.90' RT	183093.96	620501.48
670	361+80.22	56.80' RT	183085.84	620532.04
671	361+80.24	61.82' RT	183080.83	620531.86

- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION



NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

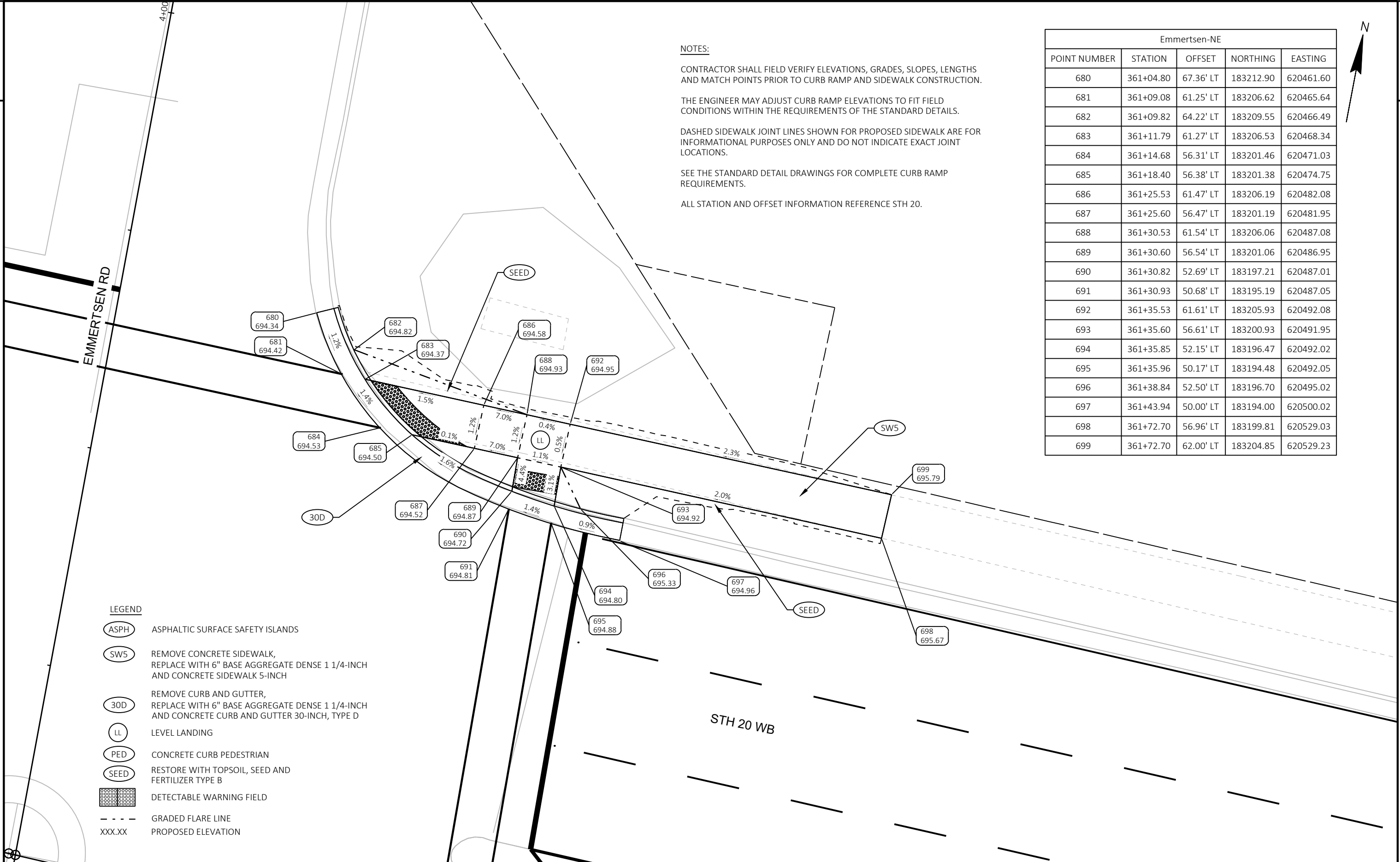
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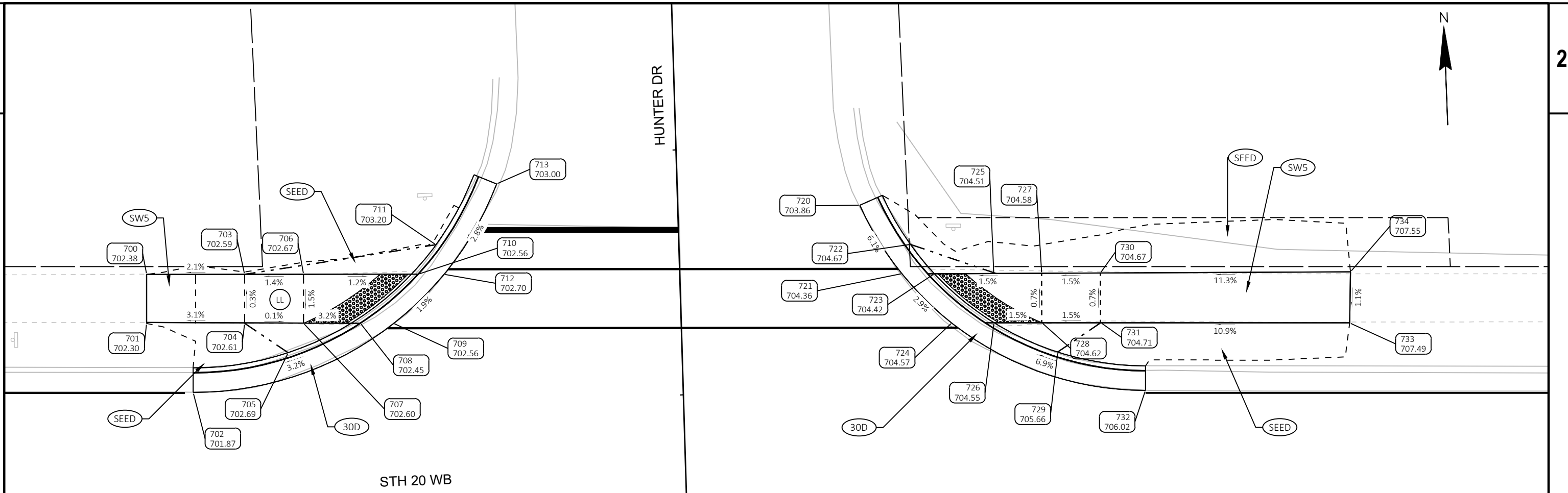
ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

Emmertsen-NE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
680	361+04.80	67.36' LT	183212.90	620461.60
681	361+09.08	61.25' LT	183206.62	620465.64
682	361+09.82	64.22' LT	183209.55	620466.49
683	361+11.79	61.27' LT	183206.53	620468.34
684	361+14.68	56.31' LT	183201.46	620471.03
685	361+18.40	56.38' LT	183201.38	620474.75
686	361+25.53	61.47' LT	183206.19	620482.08
687	361+25.60	56.47' LT	183201.19	620481.95
688	361+30.53	61.54' LT	183206.06	620487.08
689	361+30.60	56.54' LT	183201.06	620486.95
690	361+30.82	52.69' LT	183197.21	620487.01
691	361+30.93	50.68' LT	183195.19	620487.05
692	361+35.53	61.61' LT	183205.93	620492.08
693	361+35.60	56.61' LT	183200.93	620491.95
694	361+35.85	52.15' LT	183196.47	620492.02
695	361+35.96	50.17' LT	183194.48	620492.05
696	361+38.84	52.50' LT	183196.70	620495.02
697	361+43.94	50.00' LT	183194.00	620500.02
698	361+72.70	56.96' LT	183199.81	620529.03
699	361+72.70	62.00' LT	183204.85	620529.23



LEGEND

- ASPH ASPHALTIC SURFACE SAFETY ISLANDS
- SW5 REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
- 30D REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
- LL LEVEL LANDING
- PED CONCRETE CURB PEDESTRIAN
- SEED RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
- DETECTABLE WARNING FIELD
- GRADED FLARE LINE
- XXX.XX PROPOSED ELEVATION



HunterDr-NW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
700	367+30.14	62.26' LT	183183.04	621086.25
701	367+30.15	57.26' LT	183178.05	621086.05
702	367+34.89	50.22' LT	183170.82	621090.52
703	367+40.14	62.27' LT	183182.65	621096.24
704	367+40.15	57.27' LT	183177.66	621096.04
705	367+44.58	54.28' LT	183174.49	621100.36
706	367+46.14	62.28' LT	183182.42	621102.23
707	367+46.15	57.28' LT	183177.43	621102.04
708	367+51.94	57.28' LT	183177.20	621107.83
709	367+55.32	57.28' LT	183177.07	621111.20
710	367+57.83	62.29' LT	183181.97	621113.92
711	367+59.64	65.29' LT	183184.90	621115.84
712	367+60.46	62.29' LT	183181.86	621116.54
713	367+65.82	71.50' LT	183190.85	621122.26

- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

HunterDr-NE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
720	368+02.88	69.32' LT	183187.21	621159.20
721	368+07.19	62.35' LT	183180.08	621163.24
722	368+08.03	65.32' LT	183183.02	621164.19
723	368+10.47	62.33' LT	183179.93	621166.51
724	368+12.26	57.33' LT	183174.86	621168.10
725	368+16.53	62.33' LT	183179.69	621172.57
726	368+16.56	57.33' LT	183174.69	621172.40
727	368+21.41	62.37' LT	183179.54	621177.44
728	368+21.43	57.34' LT	183174.50	621177.27
729	368+23.05	54.34' LT	183171.44	621178.77
730	368+27.41	62.41' LT	183179.34	621183.44
731	368+27.43	57.34' LT	183174.27	621183.26
732	368+32.00	50.42' LT	183167.18	621187.56
733	368+52.82	57.32' LT	183173.24	621208.64
734	368+52.91	62.53' LT	183178.45	621208.93

NOTES:

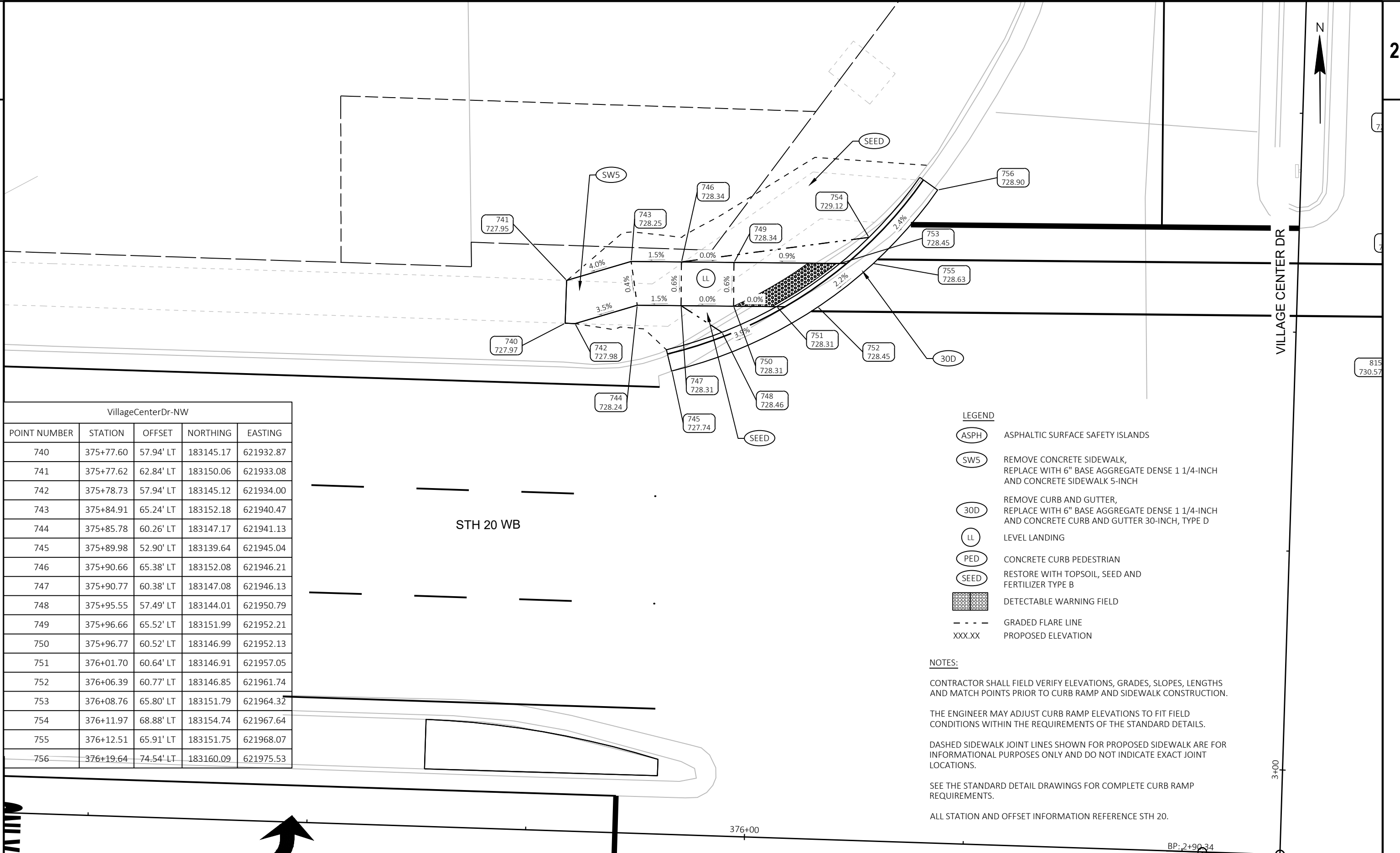
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SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



VillageCenterDr-NW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
740	375+77.60	57.94' LT	183145.17	621932.87
741	375+77.62	62.84' LT	183150.06	621933.08
742	375+78.73	57.94' LT	183145.12	621934.00
743	375+84.91	65.24' LT	183152.18	621940.47
744	375+85.78	60.26' LT	183147.17	621941.13
745	375+89.98	52.90' LT	183139.64	621945.04
746	375+90.66	65.38' LT	183152.08	621946.21
747	375+90.77	60.38' LT	183147.08	621946.13
748	375+95.55	57.49' LT	183144.01	621950.79
749	375+96.66	65.52' LT	183151.99	621952.21
750	375+96.77	60.52' LT	183146.99	621952.13
751	376+01.70	60.64' LT	183146.91	621957.05
752	376+06.39	60.77' LT	183146.85	621961.74
753	376+08.76	65.80' LT	183151.79	621964.32
754	376+11.97	68.88' LT	183154.74	621967.64
755	376+12.51	65.91' LT	183151.75	621968.07
756	376+19.64	74.54' LT	183160.09	621975.53

- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Grid Pattern] DETECTABLE WARNING FIELD
 - - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION

NOTES:

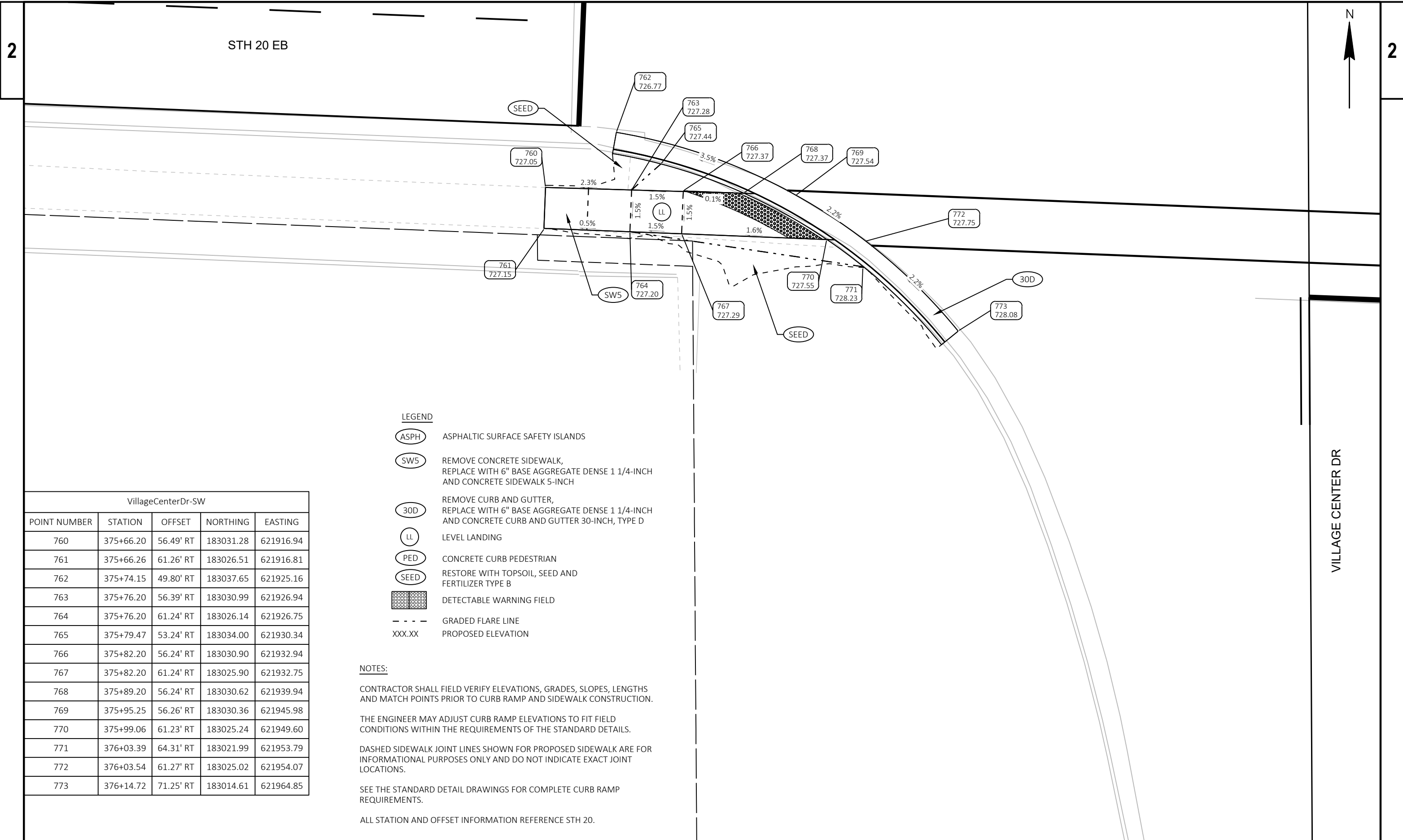
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






ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.



STH 20 EB

VILLAGE CENTER DR

LEGEND

-  ASPHALTIC SURFACE SAFETY ISLANDS
-  REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
-  REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
-  LEVEL LANDING
-  CONCRETE CURB PEDESTRIAN
-  RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
-  DETECTABLE WARNING FIELD
-  GRADED FLARE LINE
-  XXX.XX PROPOSED ELEVATION

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

THE ENGINEER MAY ADJUST CURB RAMP ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE REQUIREMENTS OF THE STANDARD DETAILS.

DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

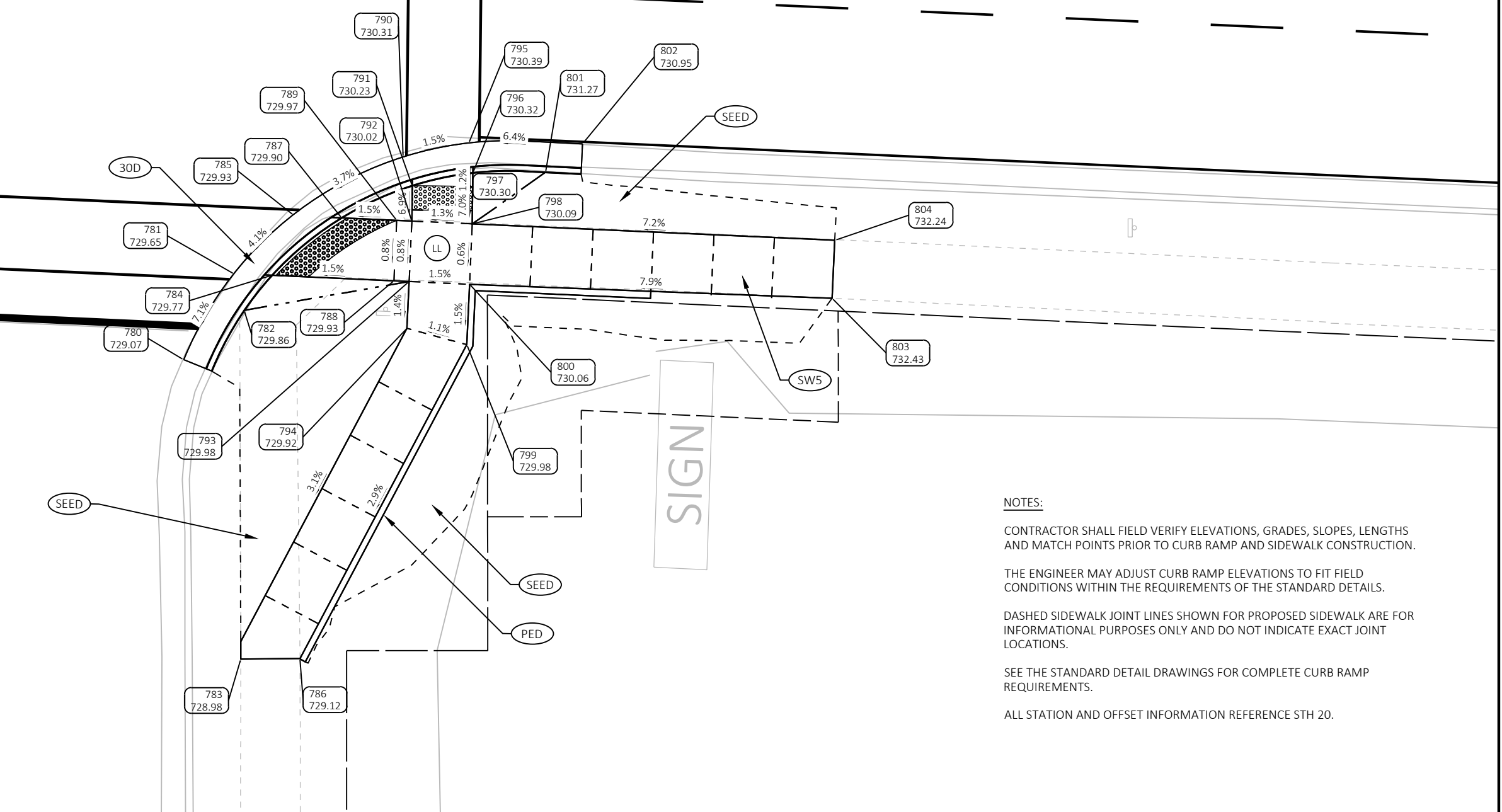
SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

VillageCenterDr-SW				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
760	375+66.20	56.49' RT	183031.28	621916.94
761	375+66.26	61.26' RT	183026.51	621916.81
762	375+74.15	49.80' RT	183037.65	621925.16
763	375+76.20	56.39' RT	183030.99	621926.94
764	375+76.20	61.24' RT	183026.14	621926.75
765	375+79.47	53.24' RT	183034.00	621930.34
766	375+82.20	56.24' RT	183030.90	621932.94
767	375+82.20	61.24' RT	183025.90	621932.75
768	375+89.20	56.24' RT	183030.62	621939.94
769	375+95.25	56.26' RT	183030.36	621945.98
770	375+99.06	61.23' RT	183025.24	621949.60
771	376+03.39	64.31' RT	183021.99	621953.79
772	376+03.54	61.27' RT	183025.02	621954.07
773	376+14.72	71.25' RT	183014.61	621964.85

VillageCenterDr-SE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
780	376+74.79	68.51' RT	183014.97	622024.98
781	376+78.66	61.25' RT	183022.07	622029.13
782	376+79.61	64.21' RT	183019.08	622029.97
783	376+80.66	93.02' RT	182990.25	622029.87
784	376+81.78	61.21' RT	183021.99	622032.25
785	376+83.33	56.16' RT	183026.97	622034.00
786	376+85.54	92.74' RT	182990.33	622034.76
787	376+87.31	56.21' RT	183026.77	622037.98
788	376+91.87	61.21' RT	183021.59	622042.33
789	376+91.87	56.21' RT	183026.59	622042.53
790	376+92.16	50.94' RT	183031.84	622043.03
791	376+93.02	53.29' RT	183029.46	622043.80
792	376+93.12	56.20' RT	183026.54	622043.78
793	376+93.13	61.20' RT	183021.54	622043.59
794	376+93.13	65.08' RT	183017.67	622043.44
795	376+97.54	49.54' RT	183033.02	622048.46
796	376+97.98	52.00' RT	183030.55	622048.80
797	376+98.02	53.12' RT	183029.43	622048.80
798	376+98.12	56.20' RT	183026.34	622048.78
799	376+98.13	66.20' RT	183016.35	622048.39
800	376+98.13	61.20' RT	183021.35	622048.58
801	377+03.97	51.68' RT	183030.64	622054.80
802	377+06.93	49.18' RT	183033.01	622057.85
803	377+28.11	60.99' RT	183020.37	622078.56
804	377+28.12	56.19' RT	183025.16	622078.76

- LEGEND**
- (ASPH) ASPHALTIC SURFACE SAFETY ISLANDS
 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION



NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

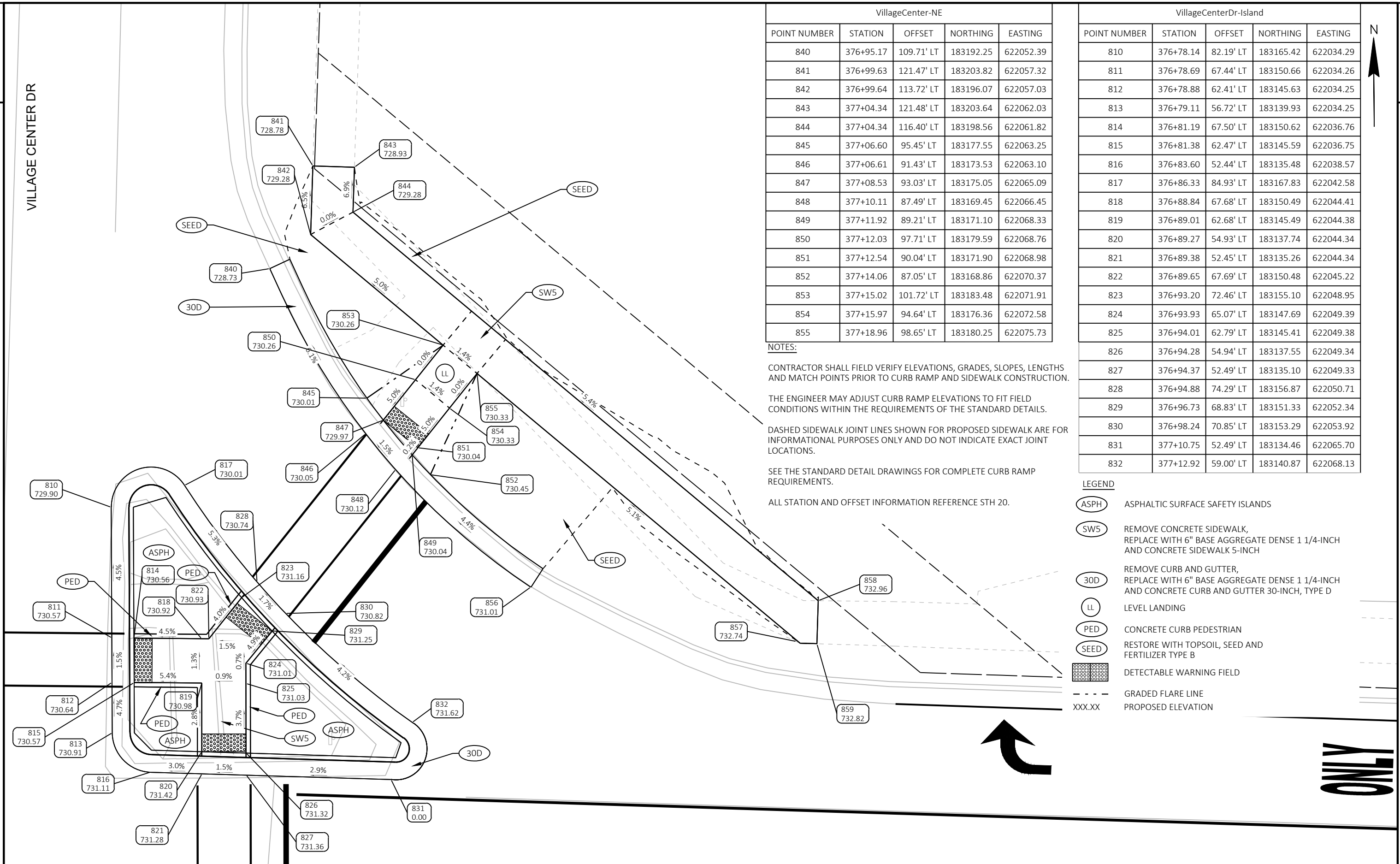
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DASHED SIDEWALK JOINT LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

VILLAGE CENTER DR



VillageCenter-NE				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
840	376+95.17	109.71' LT	183192.25	622052.39
841	376+99.63	121.47' LT	183203.82	622057.32
842	376+99.64	113.72' LT	183196.07	622057.03
843	377+04.34	121.48' LT	183203.64	622062.03
844	377+04.34	116.40' LT	183198.56	622061.82
845	377+06.60	95.45' LT	183177.55	622063.25
846	377+06.61	91.43' LT	183173.53	622063.10
847	377+08.53	93.03' LT	183175.05	622065.09
848	377+10.11	87.49' LT	183169.45	622066.45
849	377+11.92	89.21' LT	183171.10	622068.33
850	377+12.03	97.71' LT	183179.59	622068.76
851	377+12.54	90.04' LT	183171.90	622068.98
852	377+14.06	87.05' LT	183168.86	622070.37
853	377+15.02	101.72' LT	183183.48	622071.91
854	377+15.97	94.64' LT	183176.36	622072.58
855	377+18.96	98.65' LT	183180.25	622075.73

VillageCenterDr-Island				
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING
810	376+78.14	82.19' LT	183165.42	622034.29
811	376+78.69	67.44' LT	183150.66	622034.26
812	376+78.88	62.41' LT	183145.63	622034.25
813	376+79.11	56.72' LT	183139.93	622034.25
814	376+81.19	67.50' LT	183150.62	622036.76
815	376+81.38	62.47' LT	183145.59	622036.75
816	376+83.60	52.44' LT	183135.48	622038.57
817	376+86.33	84.93' LT	183167.83	622042.58
818	376+88.84	67.68' LT	183150.49	622044.41
819	376+89.01	62.68' LT	183145.49	622044.38
820	376+89.27	54.93' LT	183137.74	622044.34
821	376+89.38	52.45' LT	183135.26	622044.34
822	376+89.65	67.69' LT	183150.48	622045.22
823	376+93.20	72.46' LT	183155.10	622048.95
824	376+93.93	65.07' LT	183147.69	622049.39
825	376+94.01	62.79' LT	183145.41	622049.38
826	376+94.28	54.94' LT	183137.55	622049.34
827	376+94.37	52.49' LT	183135.10	622049.33
828	376+94.88	74.29' LT	183156.87	622050.71
829	376+96.73	68.83' LT	183151.33	622052.34
830	376+98.24	70.85' LT	183153.29	622053.92
831	377+10.75	52.49' LT	183134.46	622065.70
832	377+12.92	59.00' LT	183140.87	622068.13

NOTES:

CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.

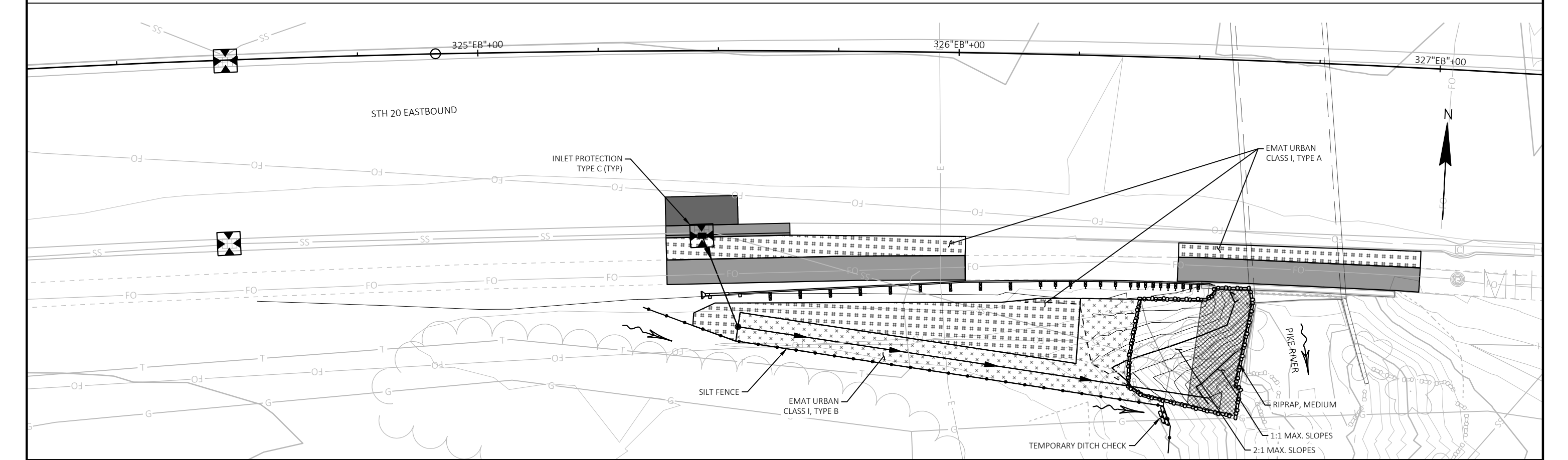
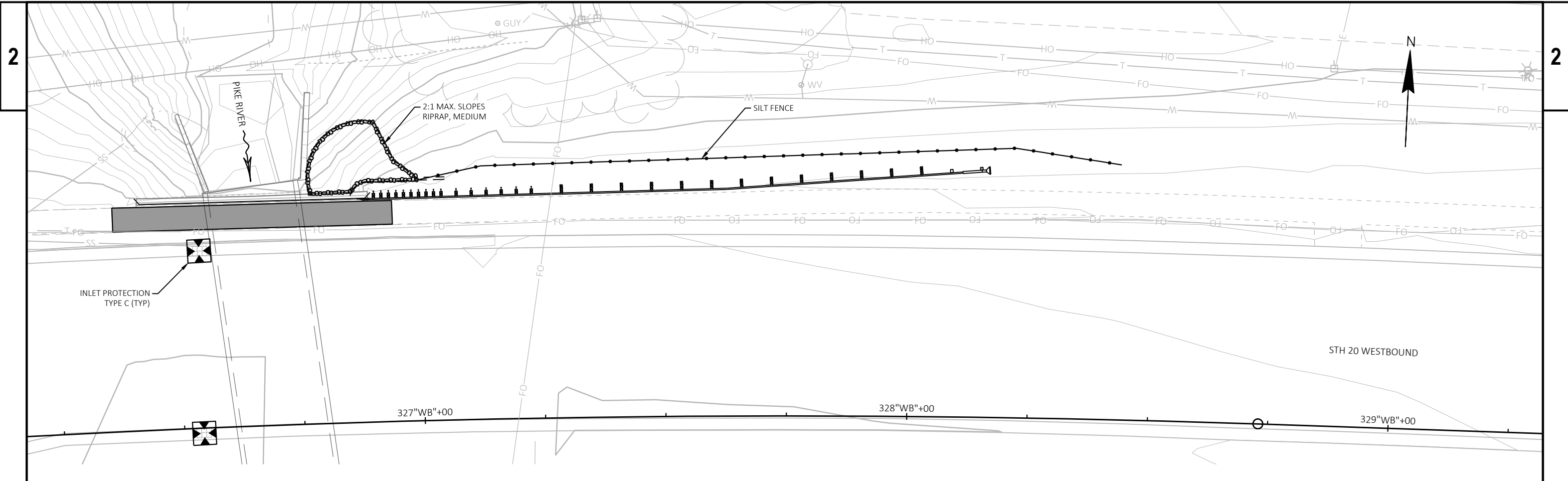
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ALL STATION AND OFFSET INFORMATION REFERENCE STH 20.

- LEGEND**
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 - (SW5) REMOVE CONCRETE SIDEWALK, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE SIDEWALK 5-INCH
 - (30D) REMOVE CURB AND GUTTER, REPLACE WITH 6" BASE AGGREGATE DENSE 1 1/4-INCH AND CONCRETE CURB AND GUTTER 30-INCH, TYPE D
 - (LL) LEVEL LANDING
 - (PED) CONCRETE CURB PEDESTRIAN
 - (SEED) RESTORE WITH TOPSOIL, SEED AND FERTILIZER TYPE B
 - [Pattern] DETECTABLE WARNING FIELD
 - - - GRADED FLARE LINE
 - XXX.XX PROPOSED ELEVATION



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	STH 20 GUARDRAIL - EROSION CONTROL	SHEET	E
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LAYOUT NAME - 01

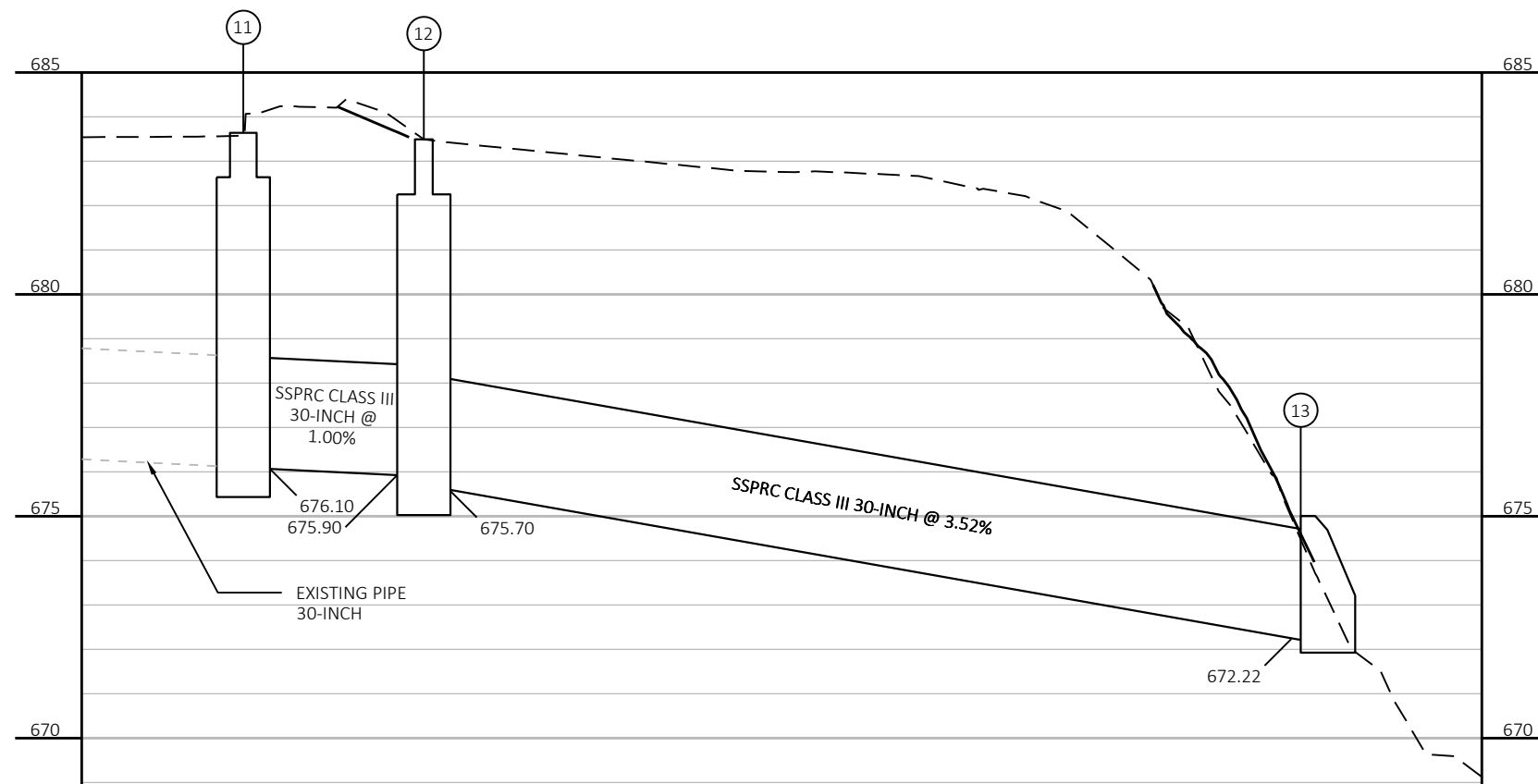
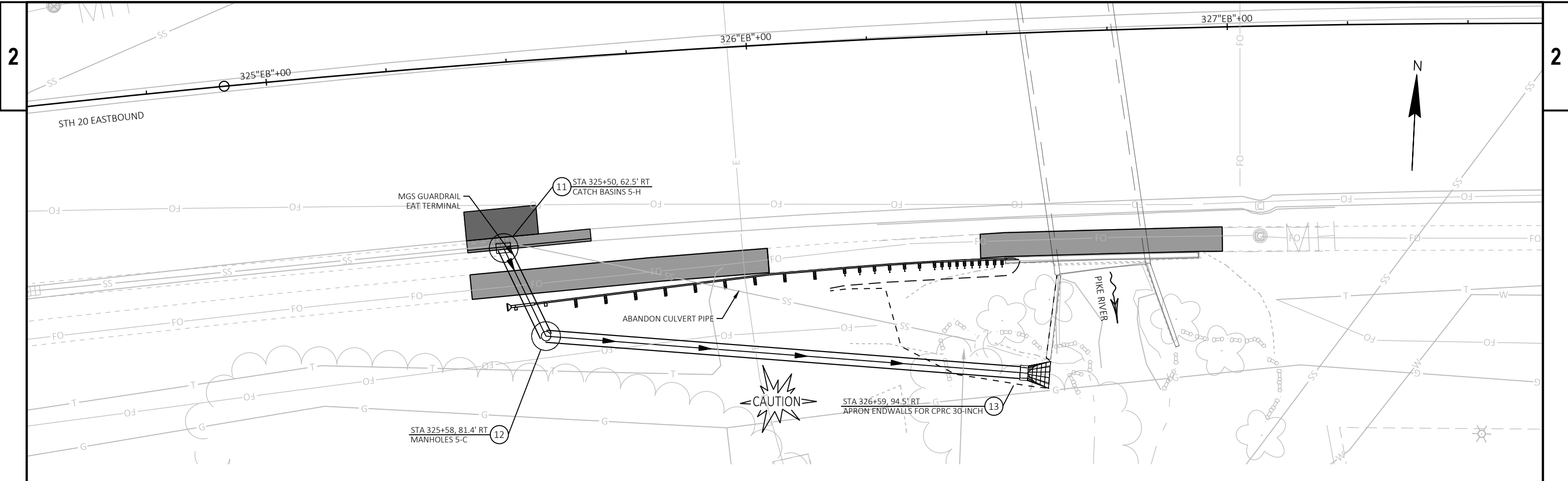
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PLOT BY : DEITCH, AIDAN











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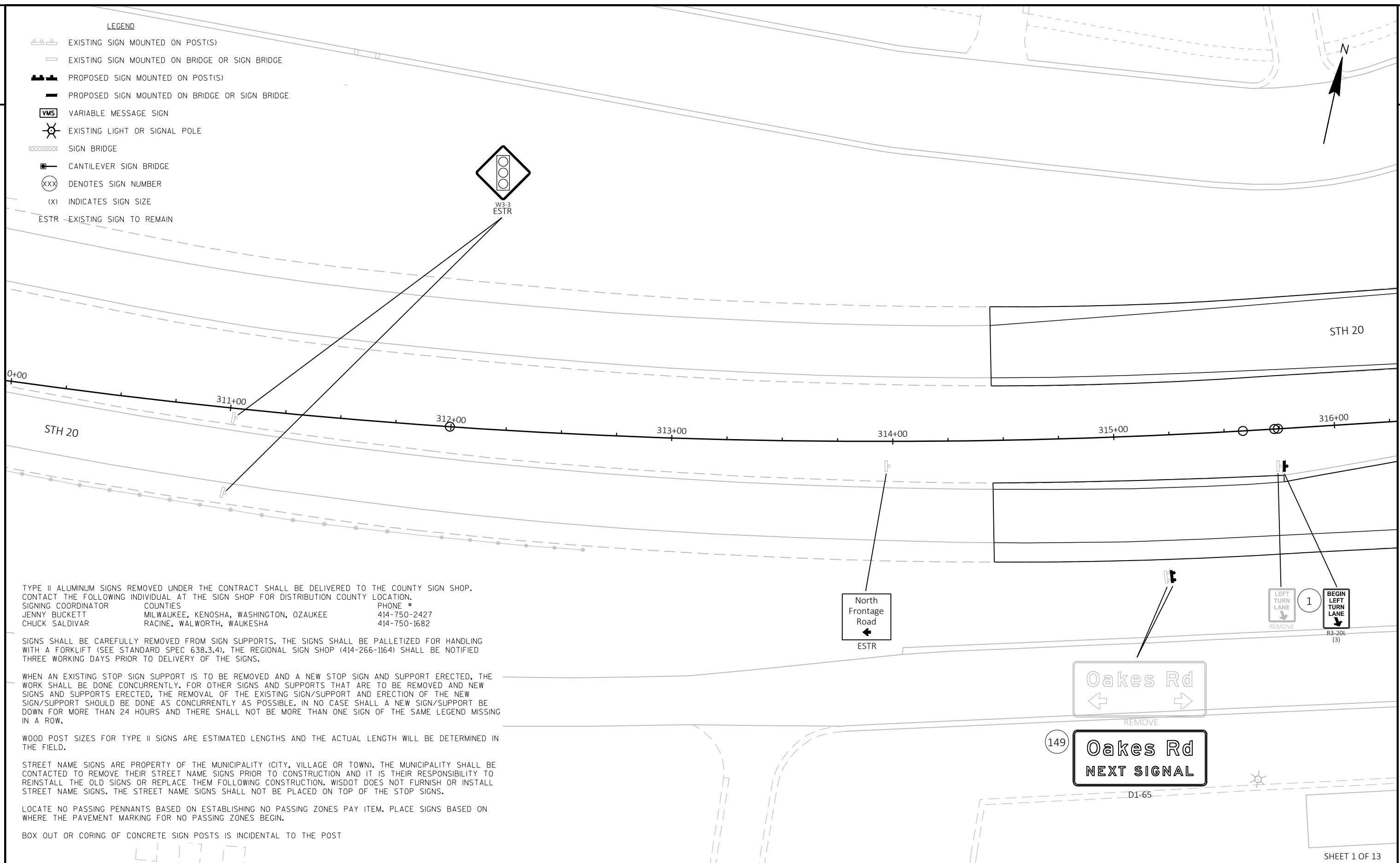
PLOT SCALE : 1 IN:20 FT

WISDOT/CADD SHEET 42



LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  VARIABLE MESSAGE SIGN
-  EXISTING LIGHT OR SIGNAL POLE
-  SIGN BRIDGE
-  CANTILEVER SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE
- ESTR - EXISTING SIGN TO REMAIN



TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

SIGNING COORDINATOR	COUNTIES	PHONE #
JENNY BUCKETT	MILWAUKEE, KENOSHA, WASHINGTON, OZAUKEE	414-750-2427
CHUCK SALDIVAR	RACINE, WALWORTH, WAUKESHA	414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1164) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

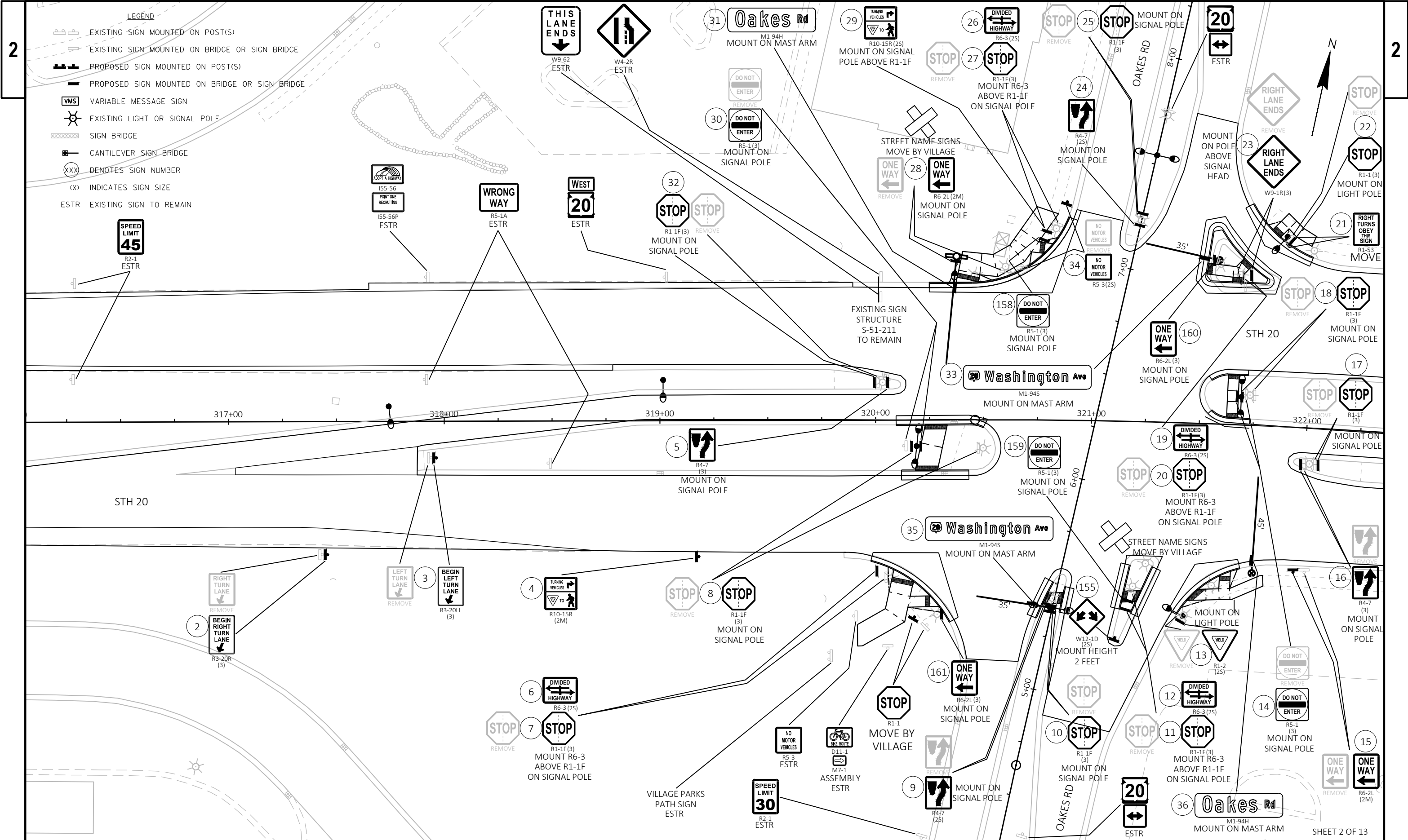
WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE SIGN POSTS IS INCIDENTAL TO THE POST



PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

PERMANENT SIGNING PLAN

SHEET

E

FILE NAME : N:\PDS\C3D\CAD\22501500\SIGN\023201_PS.DWG
LAYOUT NAME - 02

PLOT DATE : 5/11/2023 3:54 PM

PLOT BY : MARTENS, KAREN L

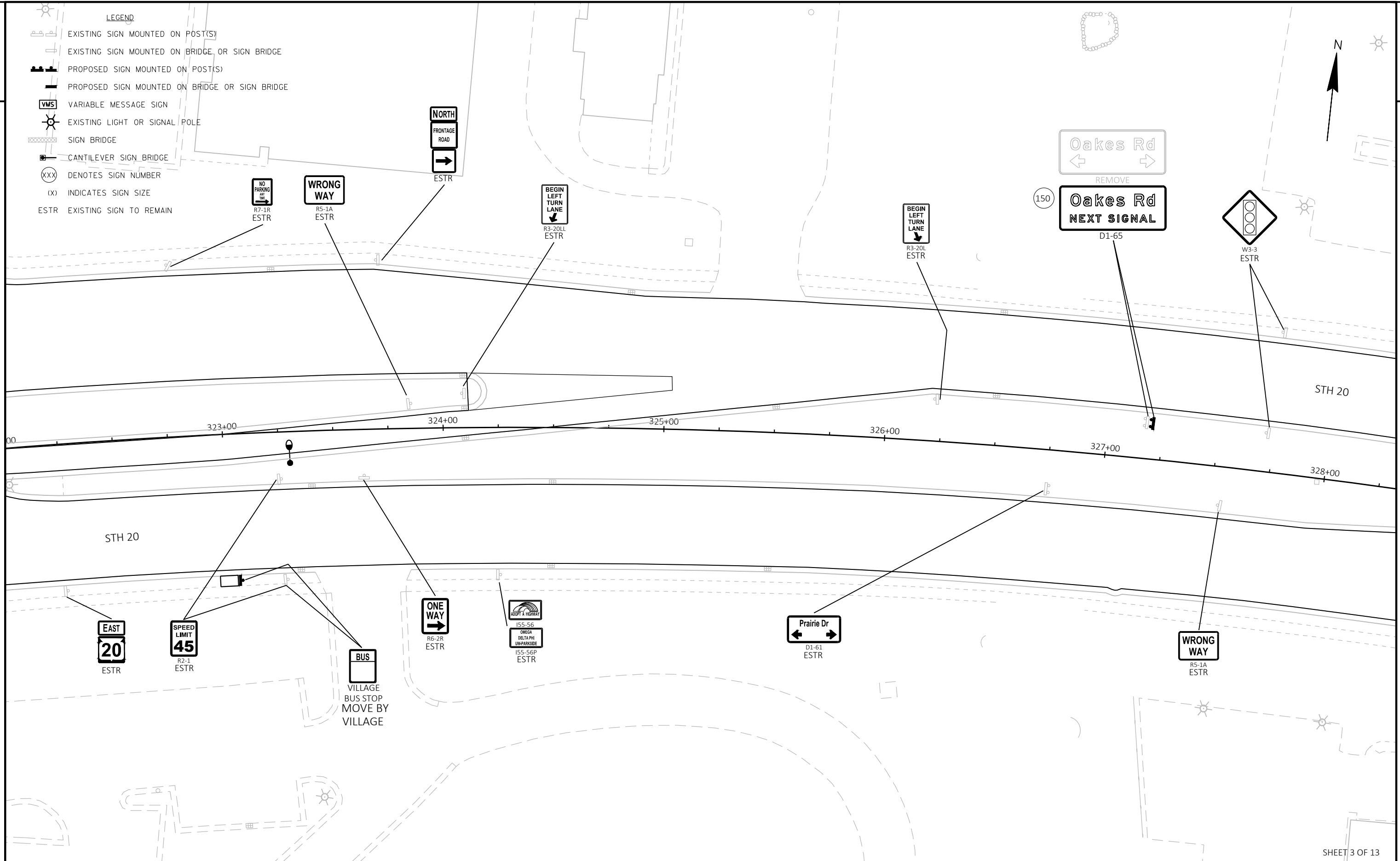
PLOT NAME :

PLOT SCALE : 1 IN=40 FT

WISDOT/CADD'S SHEET 42

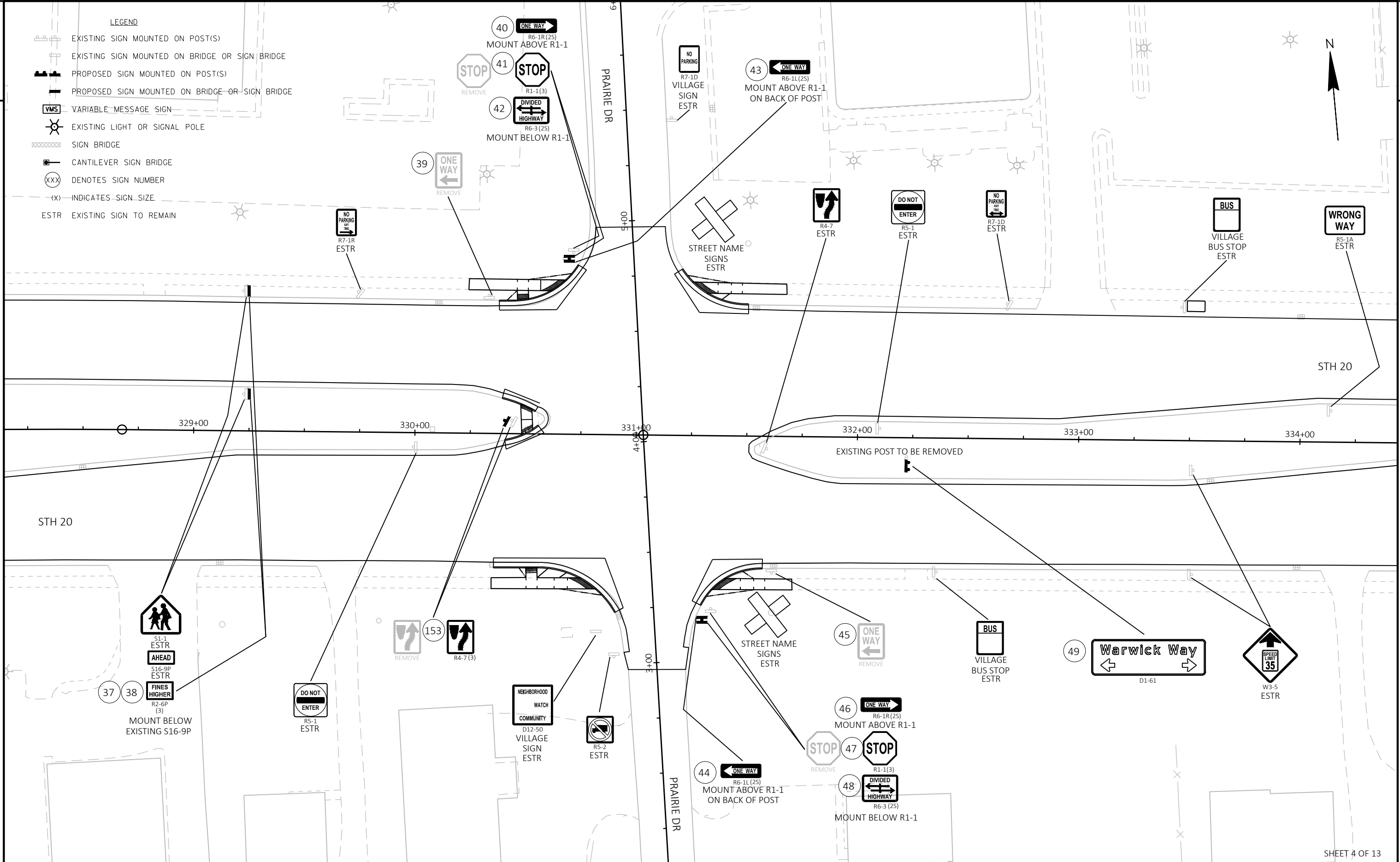
SHEET 2 OF 13

- LEGEND**
- EXISTING SIGN MOUNTED ON POST(S)
 - EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
 - PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
 - VARIABLE MESSAGE SIGN
 - EXISTING LIGHT OR SIGNAL POLE
 - SIGN BRIDGE
 - CANTILEVER SIGN BRIDGE
 - DENOTES SIGN NUMBER
 - INDICATES SIGN SIZE
 - ESTR EXISTING SIGN TO REMAIN



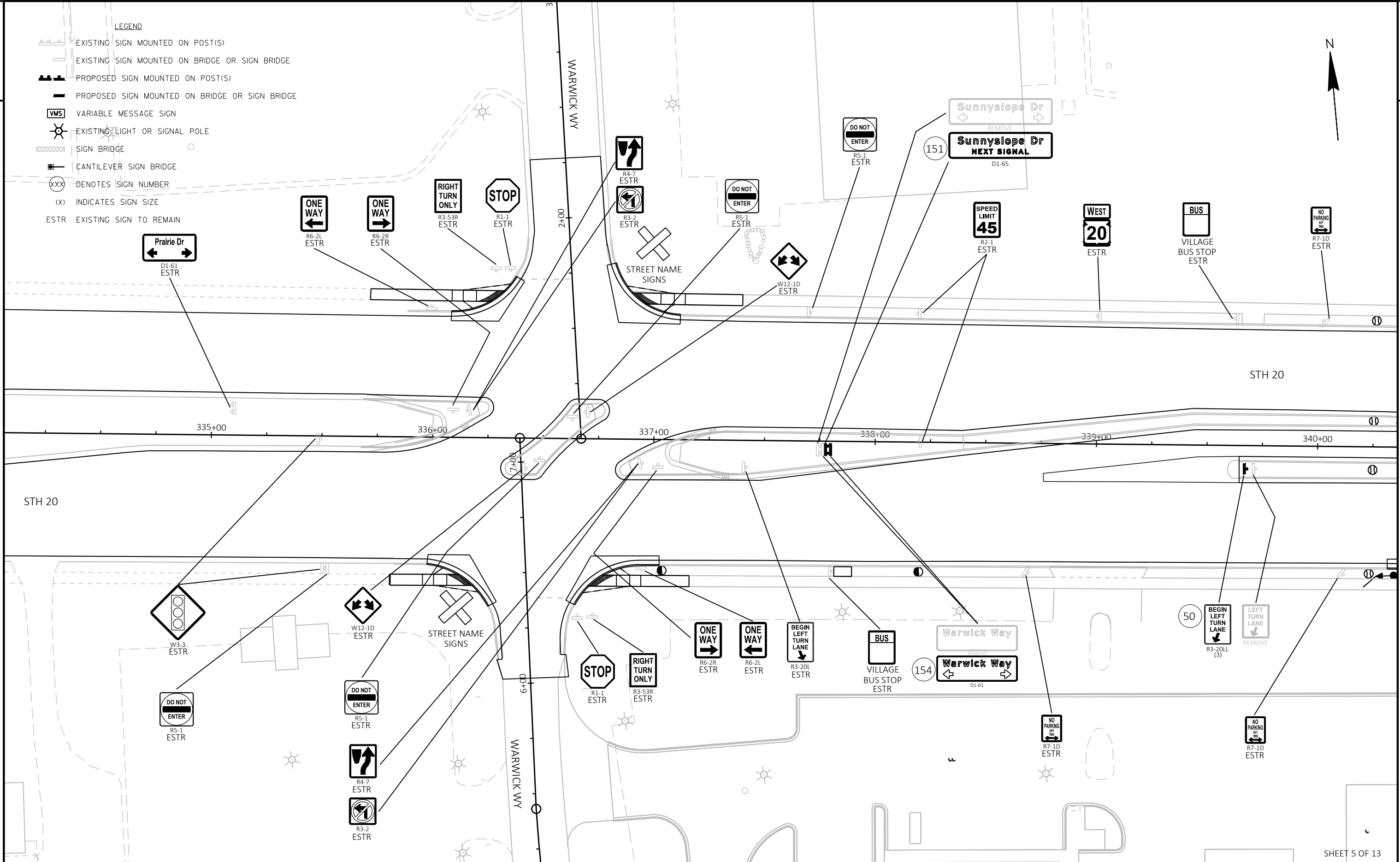
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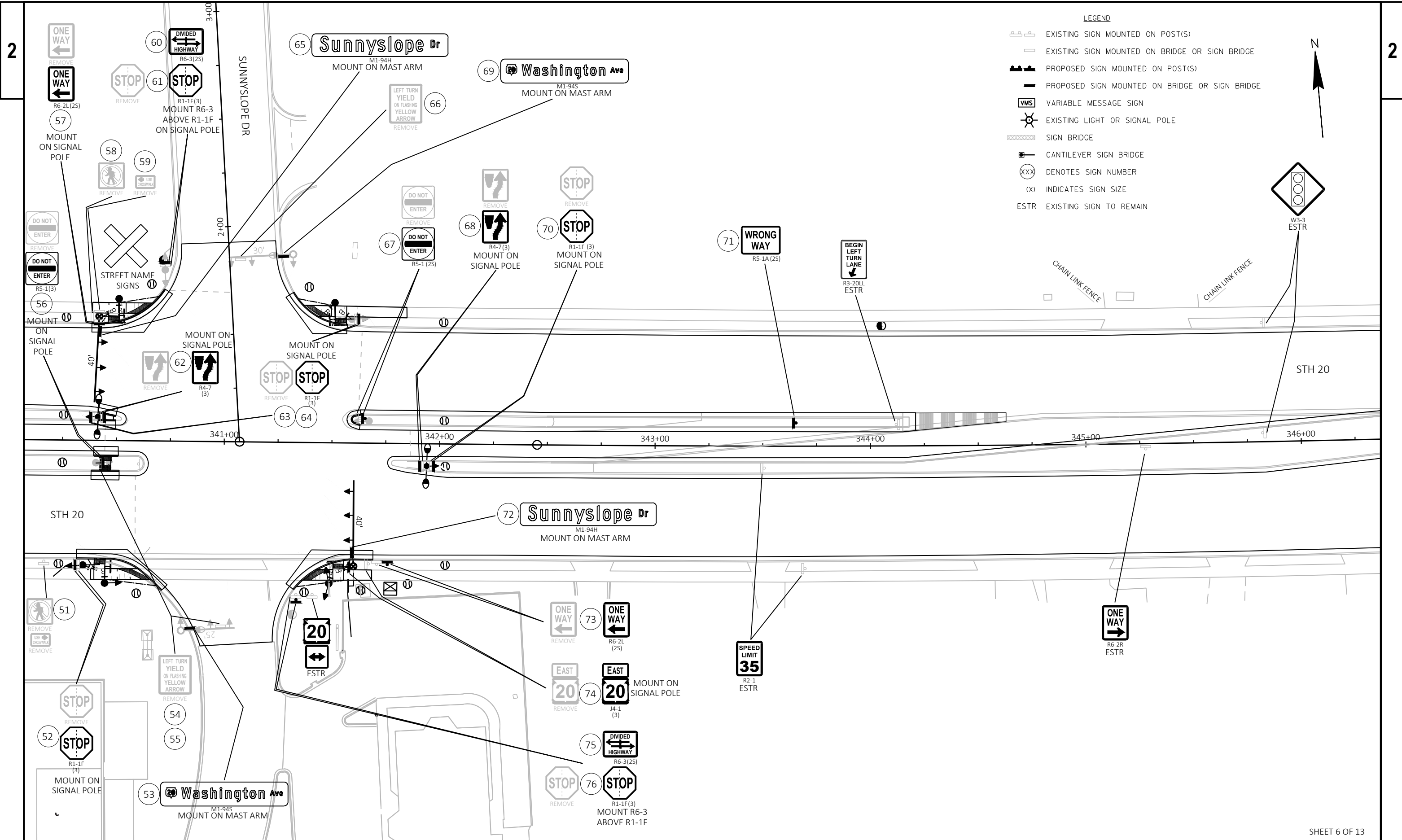
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LEGEND











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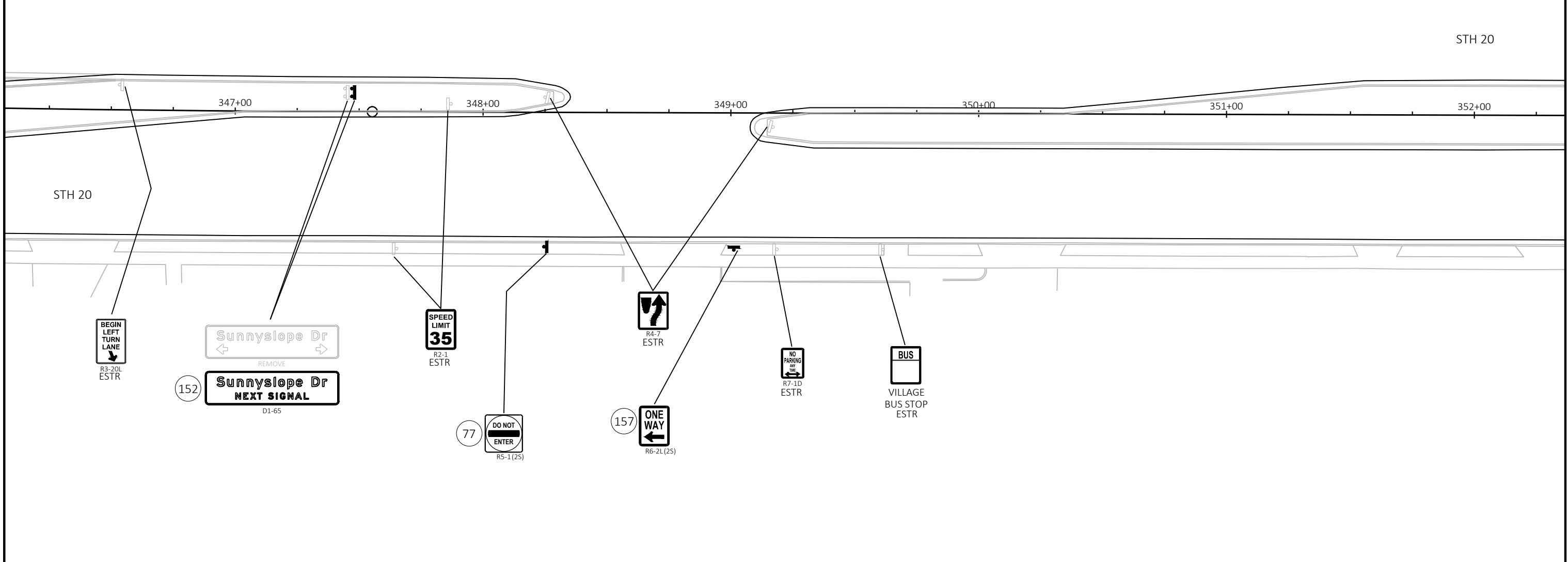
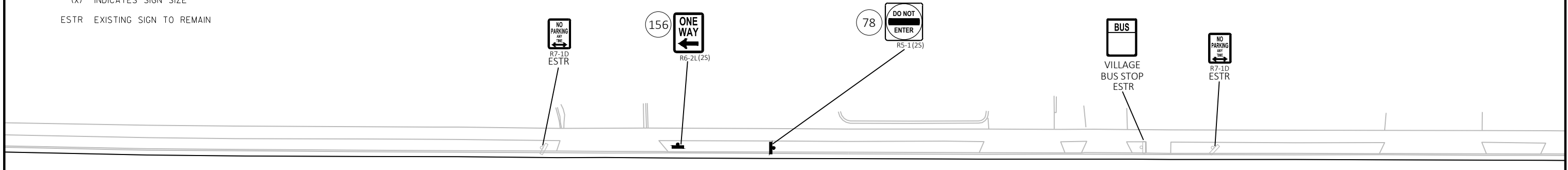




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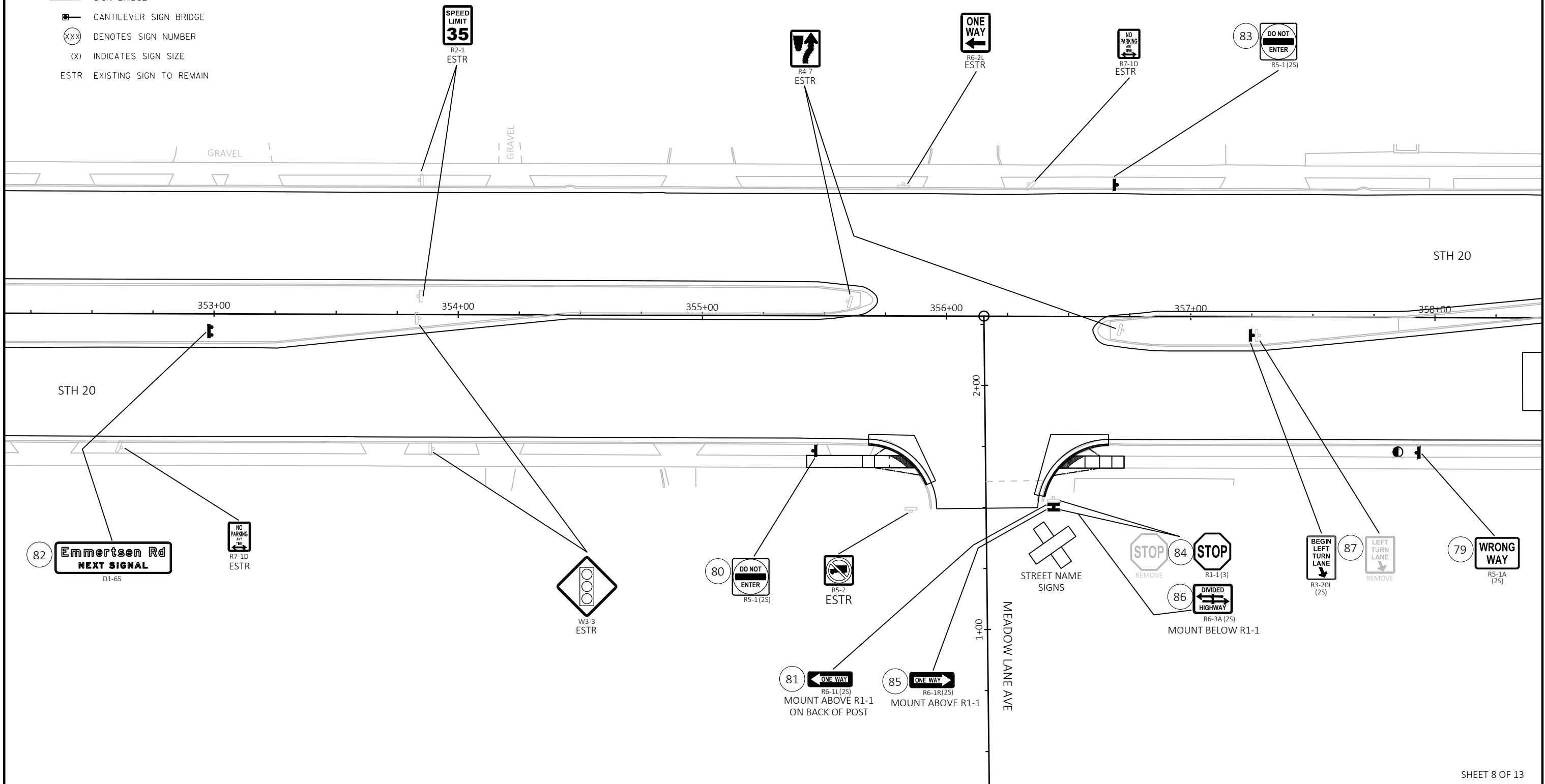
LEGEND

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-  PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
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-  EXISTING LIGHT OR SIGNAL POLE
-  SIGN BRIDGE
-  CANTILEVER SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN



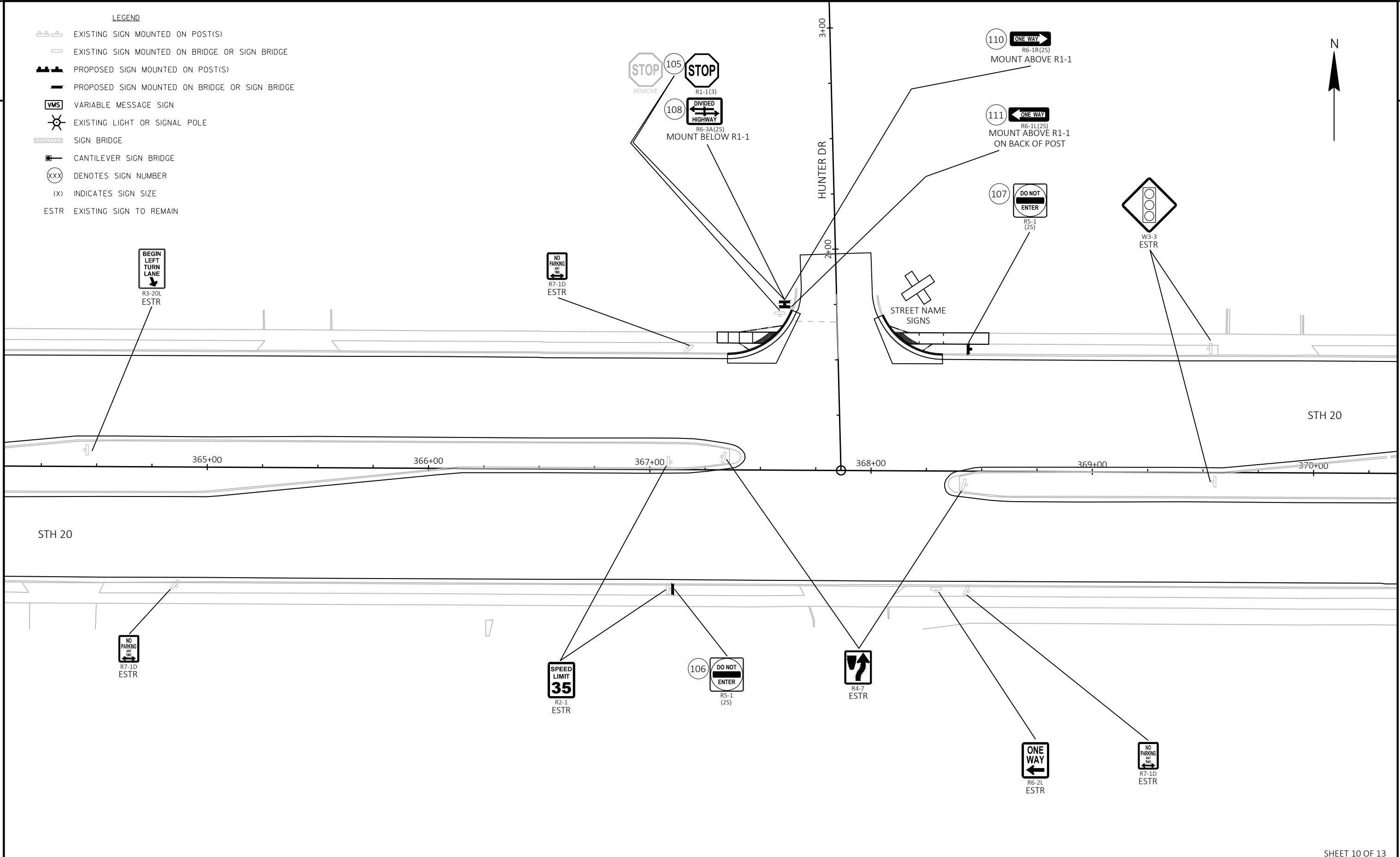
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





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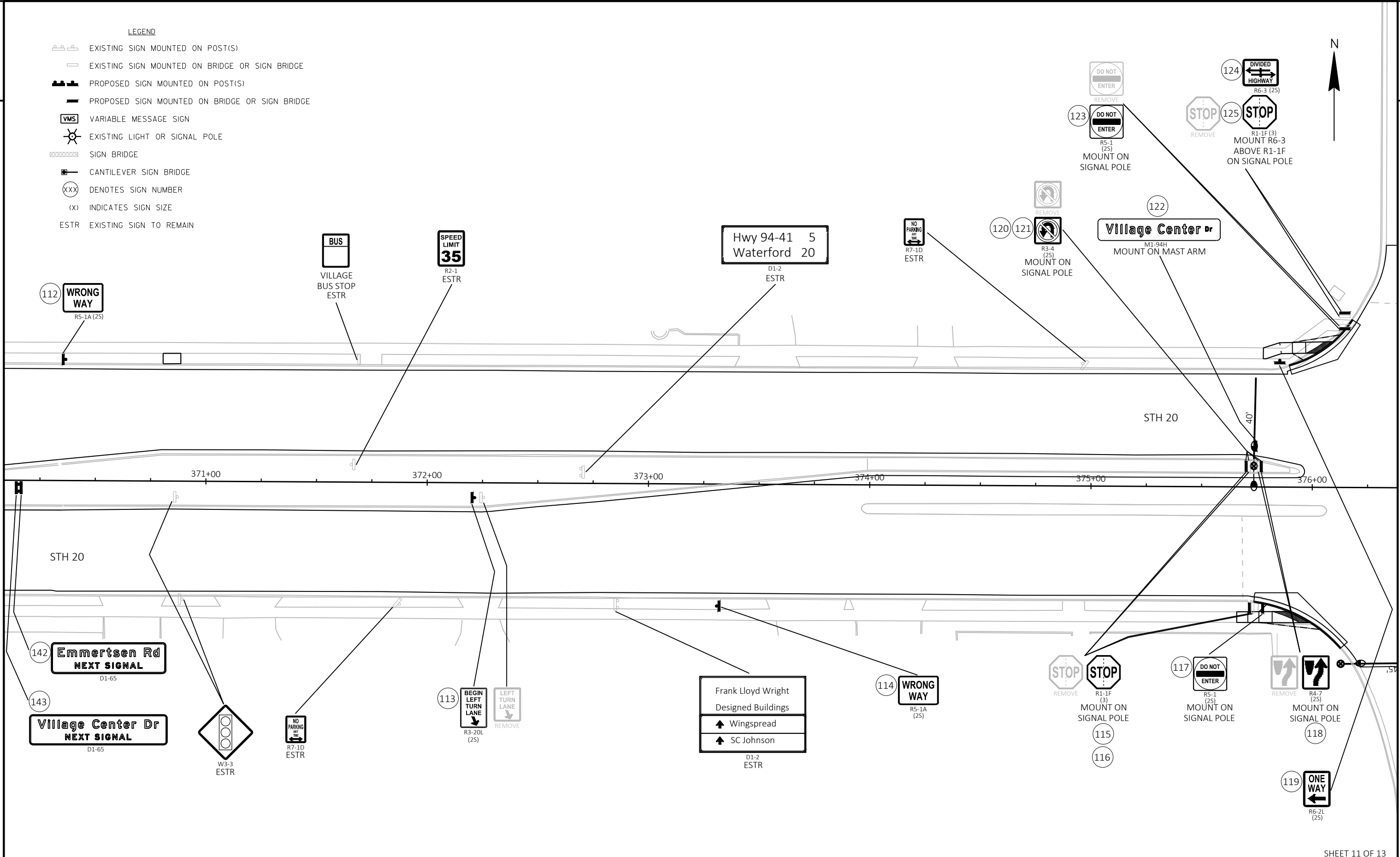
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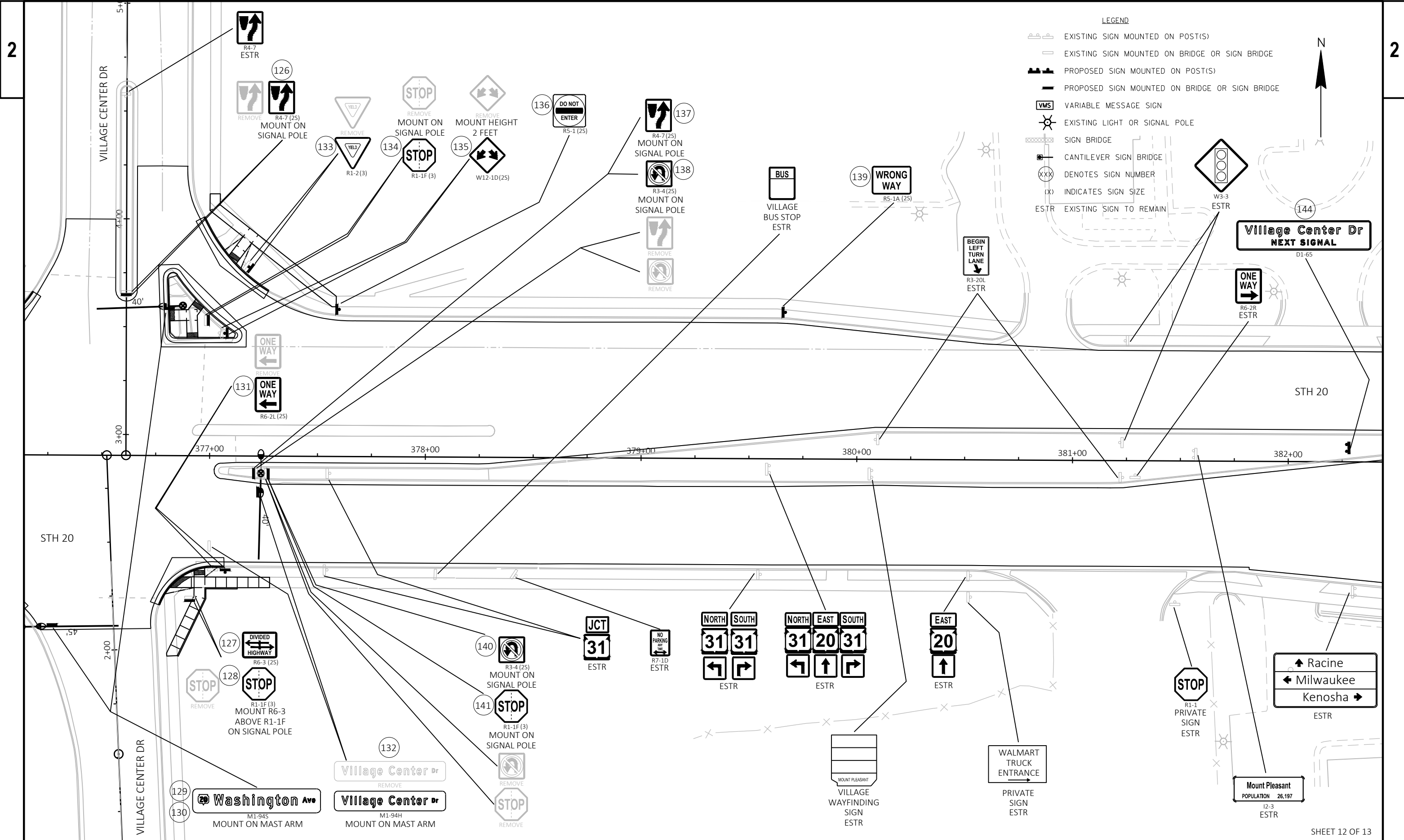
PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	PERMANENT SIGNING PLAN	SHEET E
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LEGEND

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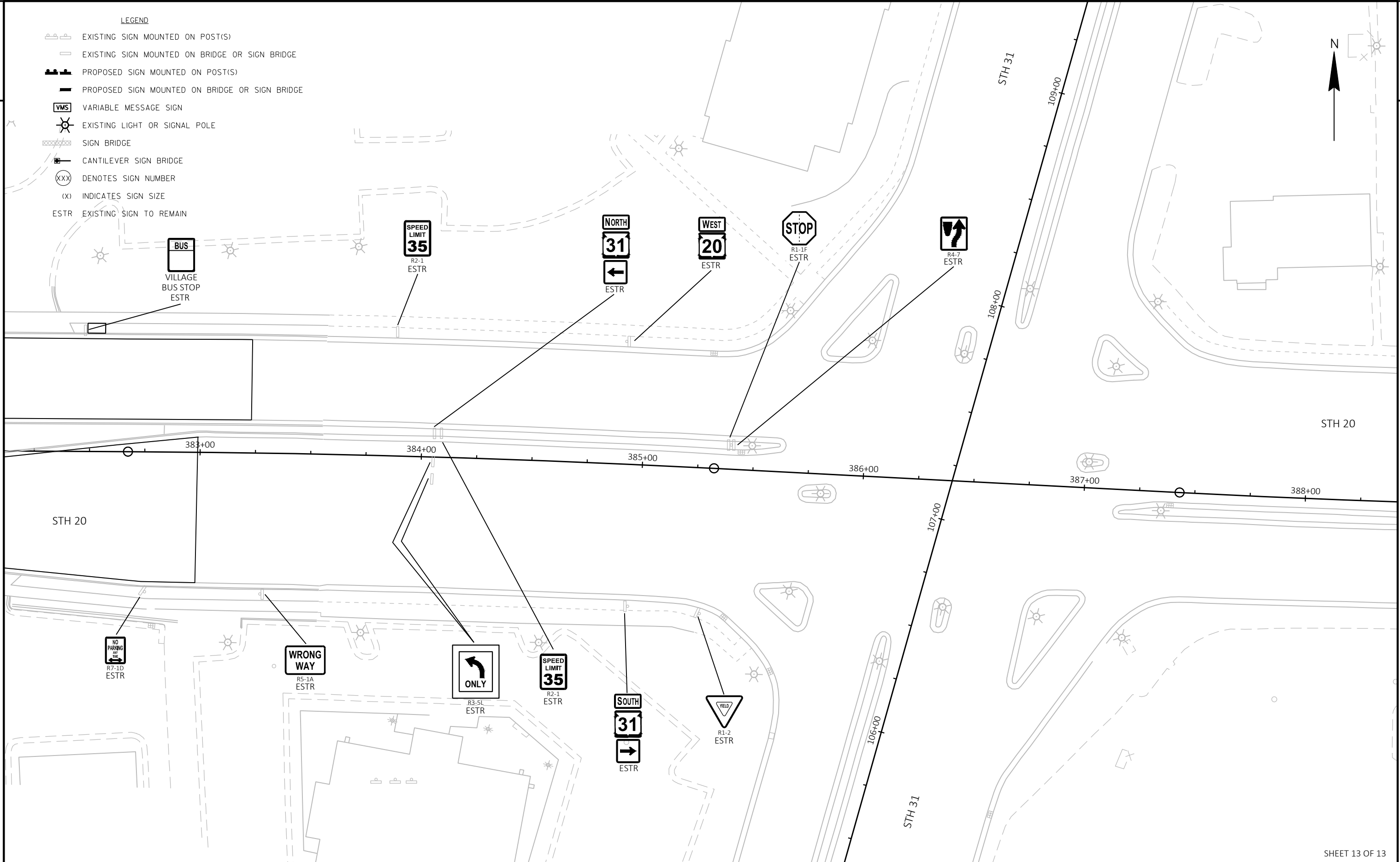
PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	PERMANENT SIGNING PLAN	SHEET E
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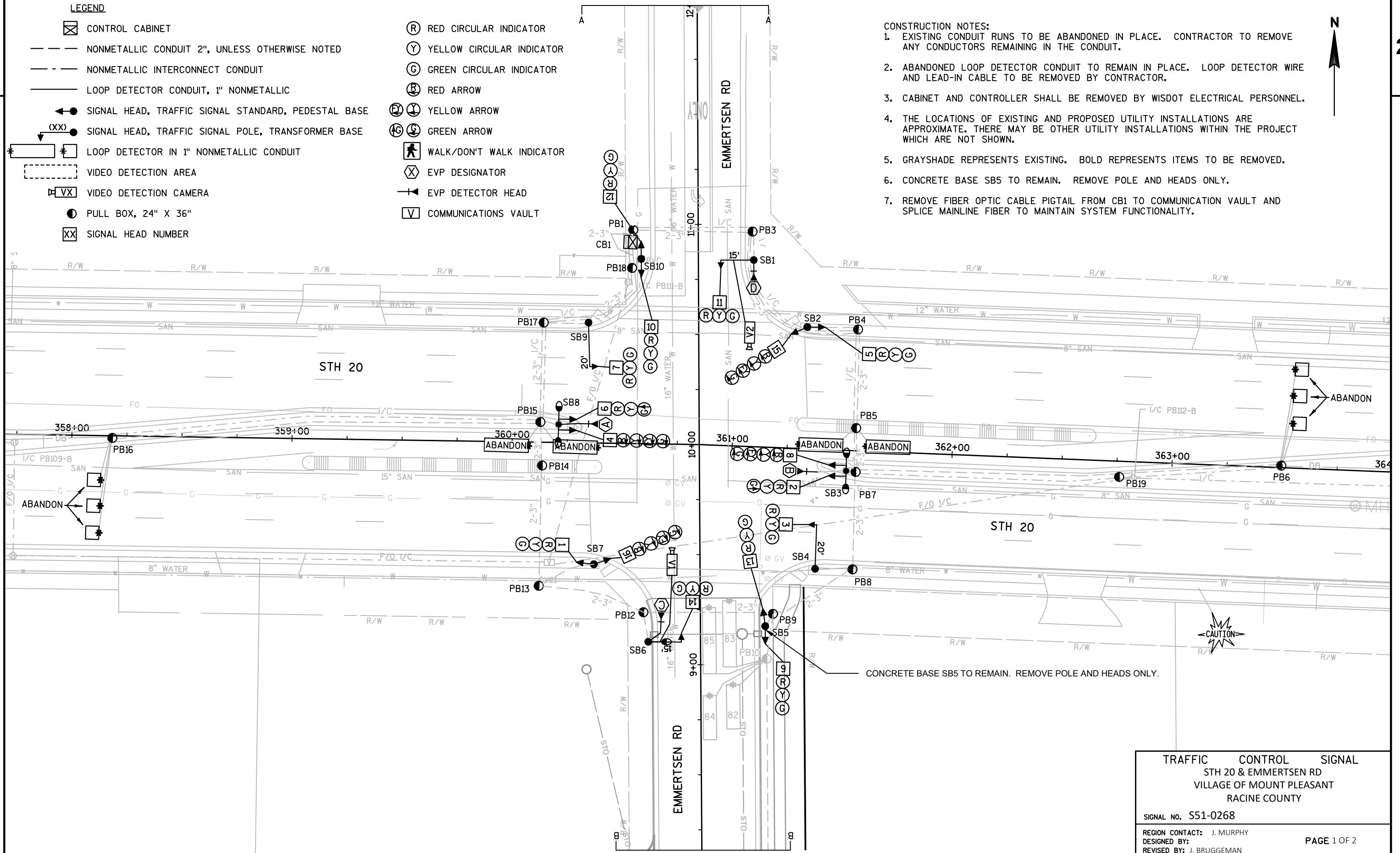
PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	PERMANENT SIGNING PLAN	SHEET E
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LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- VIDEO DETECTION AREA
- VIDEO DETECTION CAMERA
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- COMMUNICATIONS VAULT

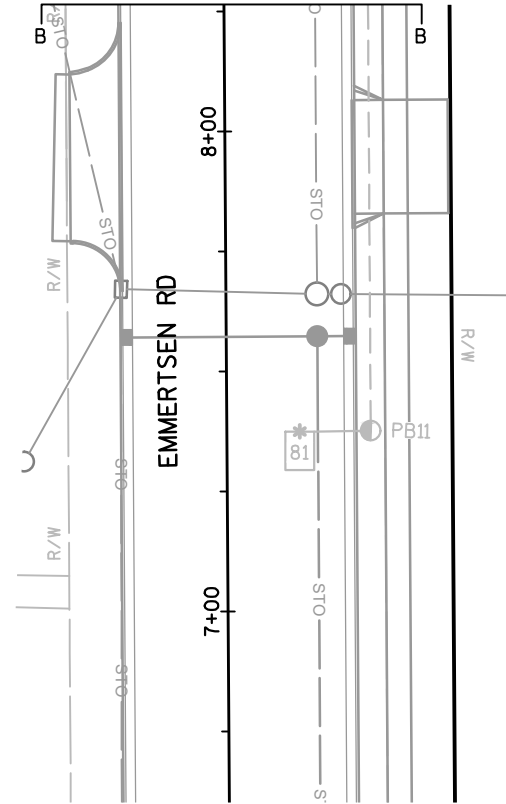
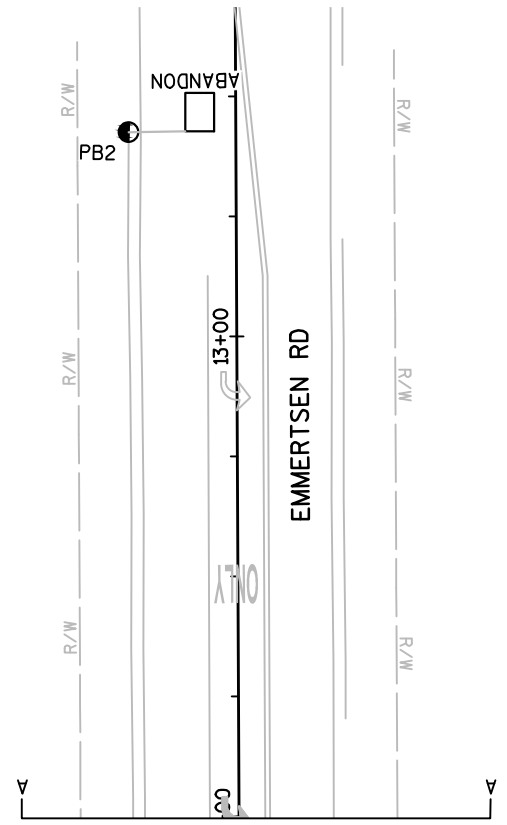
CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
5. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
6. CONCRETE BASE SB5 TO REMAIN. REMOVE POLE AND HEADS ONLY.
7. REMOVE FIBER OPTIC CABLE PIGTAIL FROM CB1 TO COMMUNICATION VAULT AND SPLICE MAINLINE FIBER TO MAINTAIN SYSTEM FUNCTIONALITY.



CONCRETE BASE SB5 TO REMAIN. REMOVE POLE AND HEADS ONLY.

TRAFFIC CONTROL SIGNAL	
STH 20 & EMMERTSEN RD	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO. S51-0268	
REGION CONTACT: J. MURPHY	PAGE 1 OF 2
DESIGNED BY:	
REVISED BY: J. BRUGGEMAN	



TRAFFIC CONTROL SIGNAL
 STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-0268

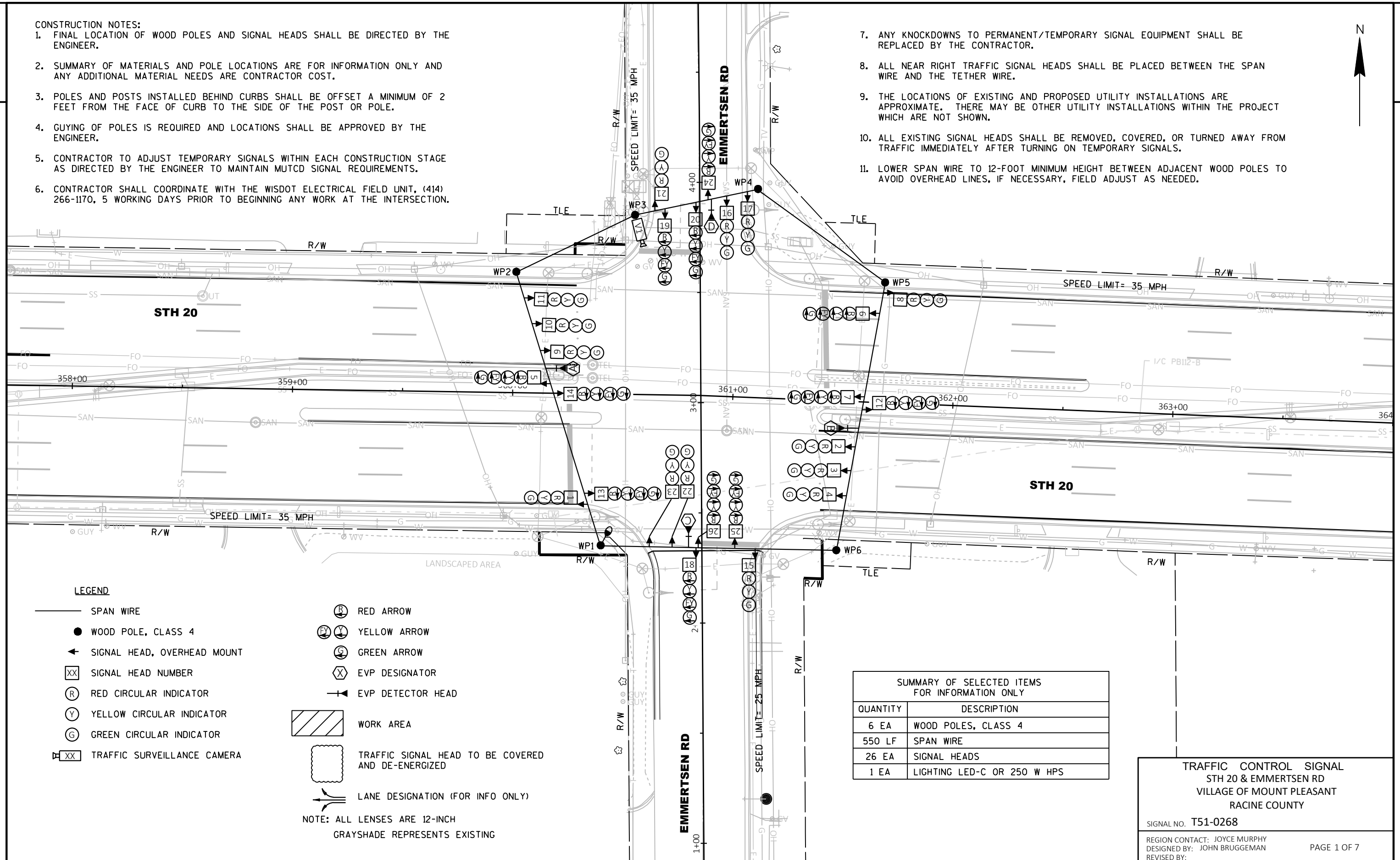
REGION CONTACT: J. MURPHY
 DESIGNED BY: J. BRUGGEMAN
 REVISED BY: J. BRUGGEMAN

PAGE 2 OF 2

CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.
3. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.

7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND THE TETHER WIRE.
9. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
10. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
11. LOWER SPAN WIRE TO 12-FOOT MINIMUM HEIGHT BETWEEN ADJACENT WOOD POLES TO AVOID OVERHEAD LINES, IF NECESSARY, FIELD ADJUST AS NEEDED.



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓢ YELLOW ARROW
- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- Ⓧ EVP DETECTOR HEAD
- ▨ WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- LANE DESIGNATION (FOR INFO ONLY)

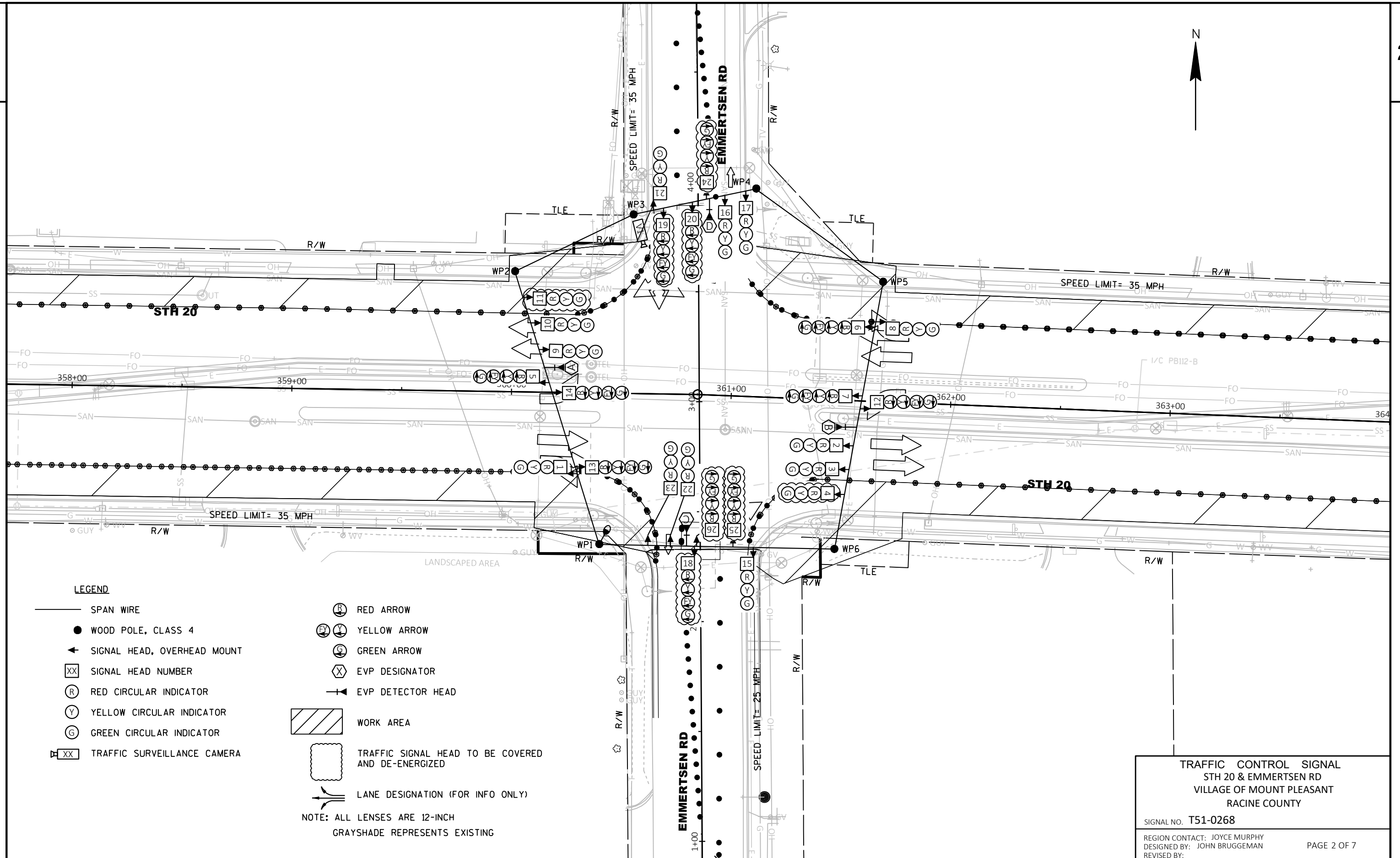
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
6 EA	WOOD POLES, CLASS 4
550 LF	SPAN WIRE
26 EA	SIGNAL HEADS
1 EA	LIGHTING LED-C OR 250 W HPS

TRAFFIC CONTROL SIGNAL
 STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. T51-0268

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓢ YELLOW ARROW
- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- Ⓧ EVP DETECTOR HEAD
- ▨ WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- LANE DESIGNATION (FOR INFO ONLY)

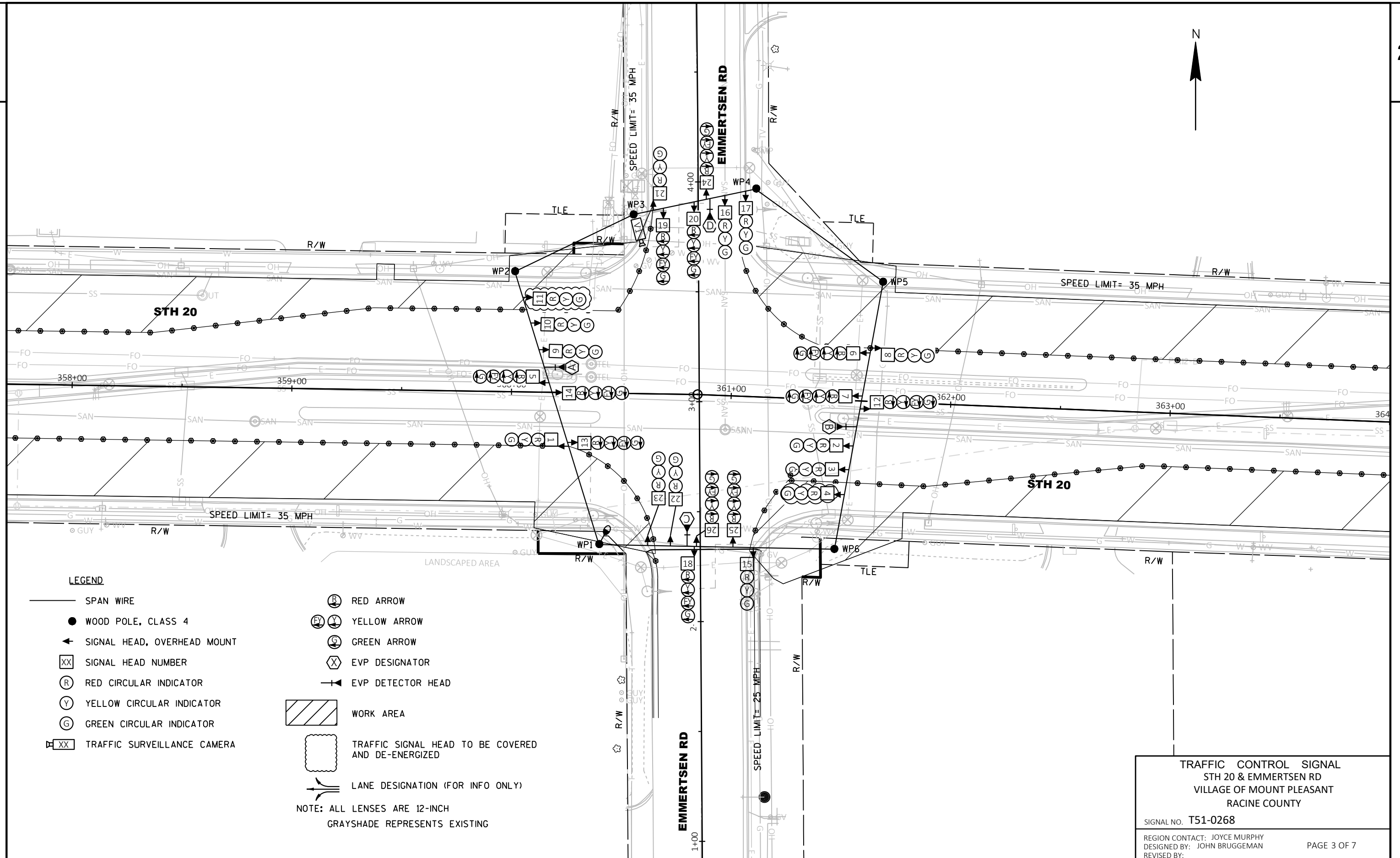
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. **T51-0268**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 2 OF 7



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ◀ SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓢ YELLOW ARROW
- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- ▶ EVP DETECTOR HEAD
- ▨ WORK AREA
- ▭ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ↔ LANE DESIGNATION (FOR INFO ONLY)

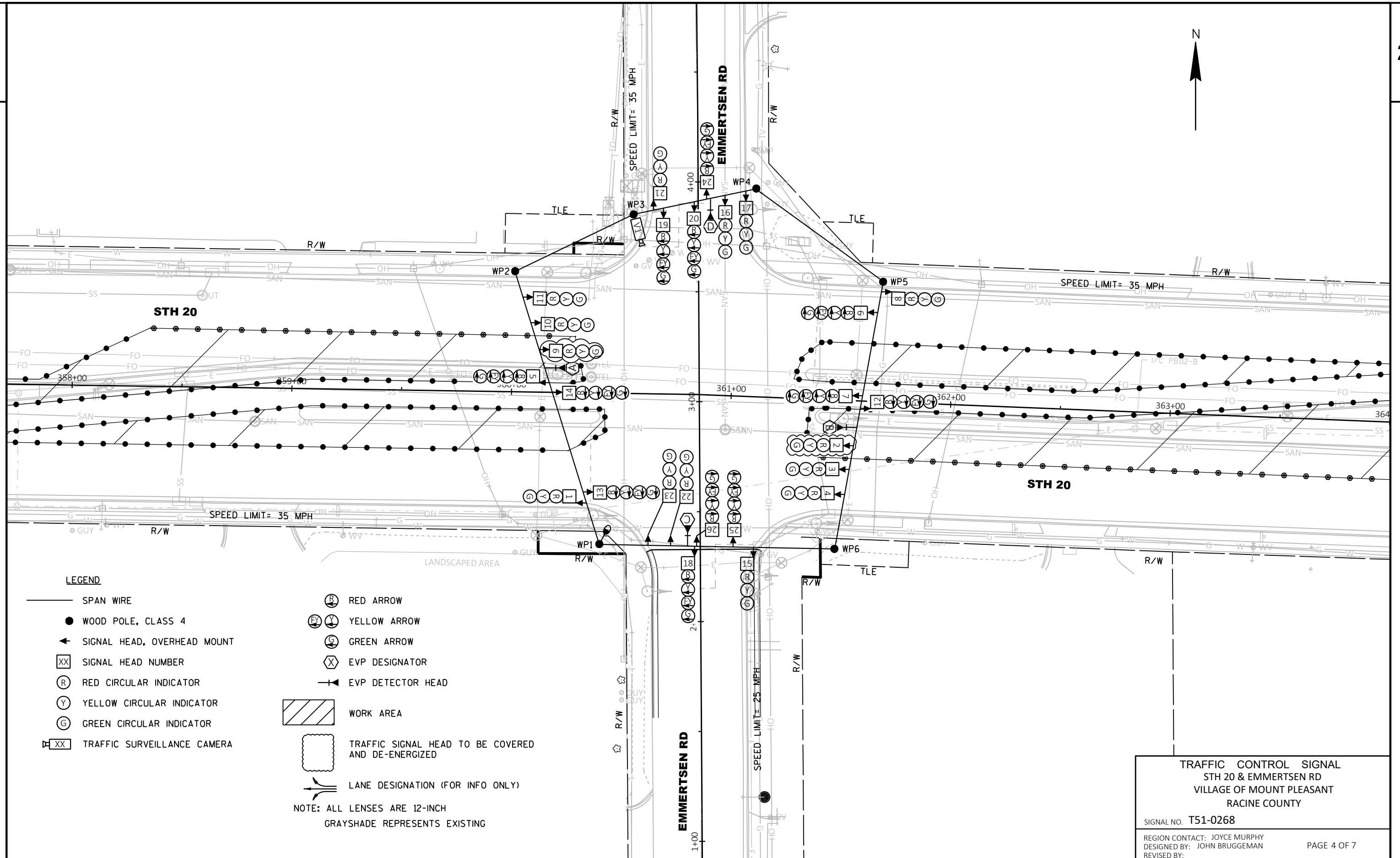
NOTE: ALL LENSES ARE 12-INCH
 GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
 STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. **T51-0268**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 3 OF 7



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- ⊙ RED ARROW
- ⊙ Y YELLOW ARROW
- ⊙ G GREEN ARROW
- ⊙ EVP DESIGNATOR
- ⊙ EVP DETECTOR HEAD
- ▨ WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ↔ LANE DESIGNATION (FOR INFO ONLY)

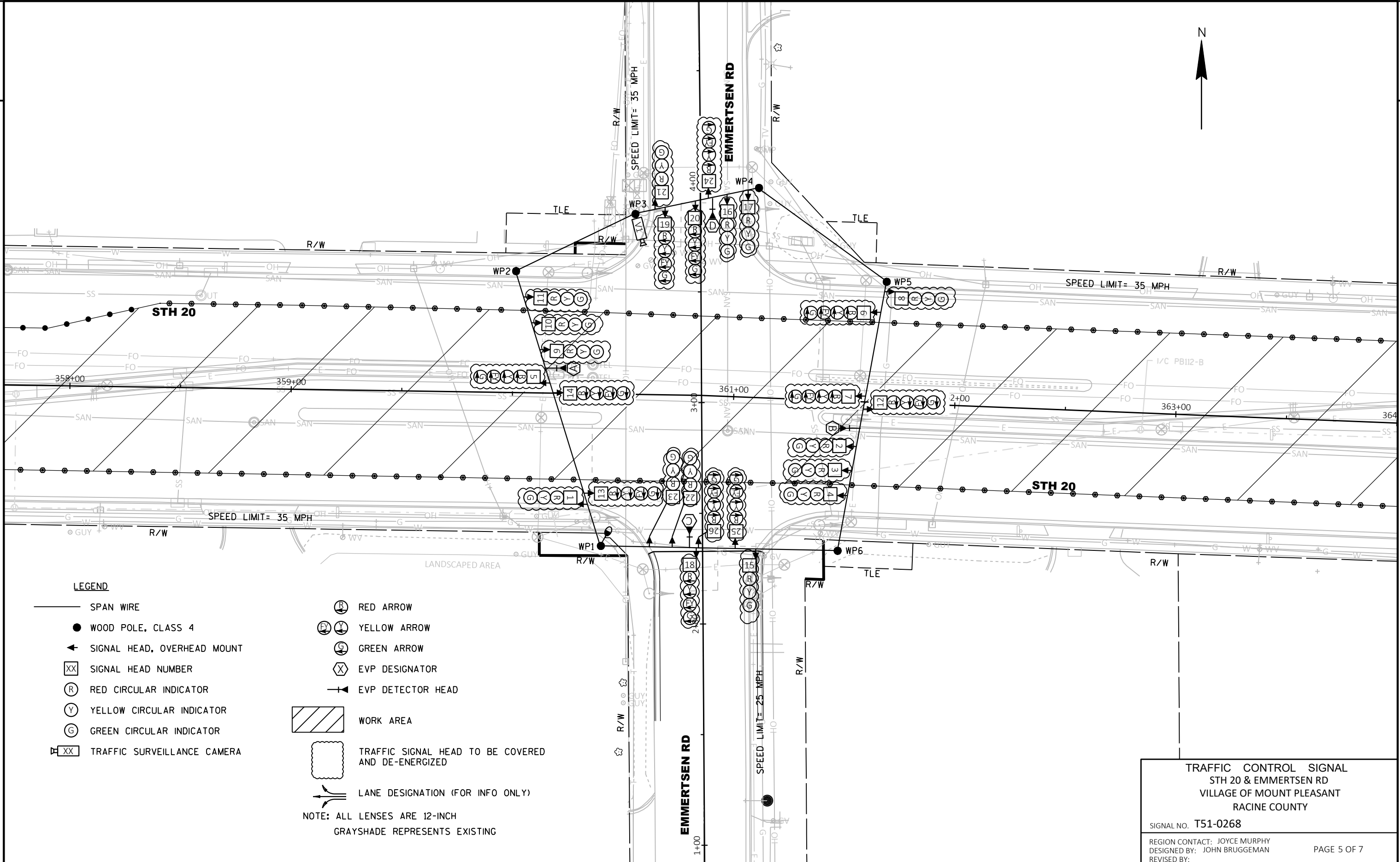
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. **T51-0268**

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LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ◀ SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓢ YELLOW ARROW
- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- Ⓧ EVP DETECTOR HEAD
- ▨ WORK AREA
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- ↔ LANE DESIGNATION (FOR INFO ONLY)

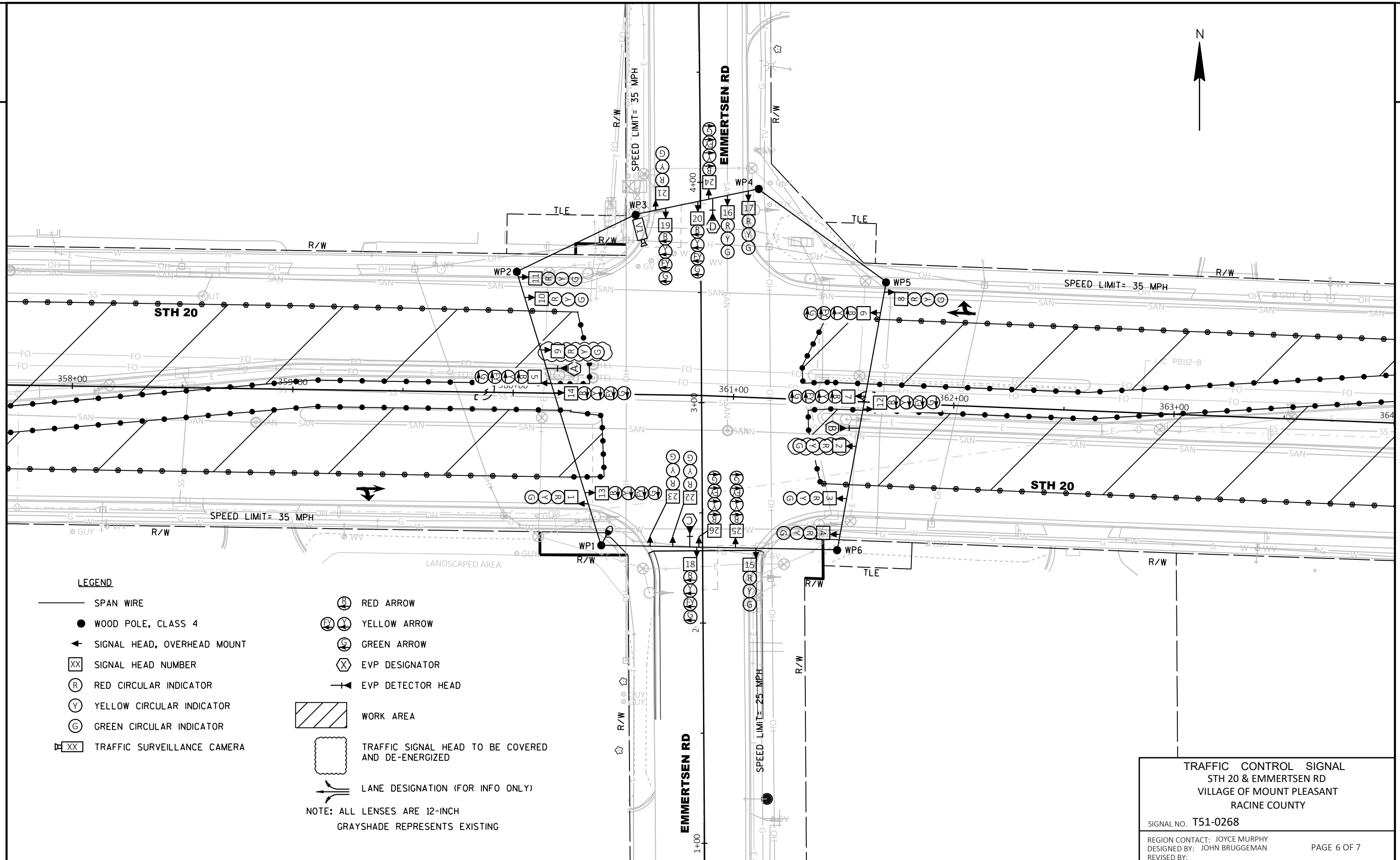
NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 20 & EMMERTSEN RD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

SIGNAL NO. **T51-0268**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 5 OF 7



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ◀ SIGNAL HEAD, OVERHEAD MOUNT
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
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- ▶ EVP DETECTOR HEAD
- ▨ WORK AREA
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ↔ LANE DESIGNATION (FOR INFO ONLY)

NOTE: ALL LENSES ARE 12-INCH
 GRAYSHADE REPRESENTS EXISTING

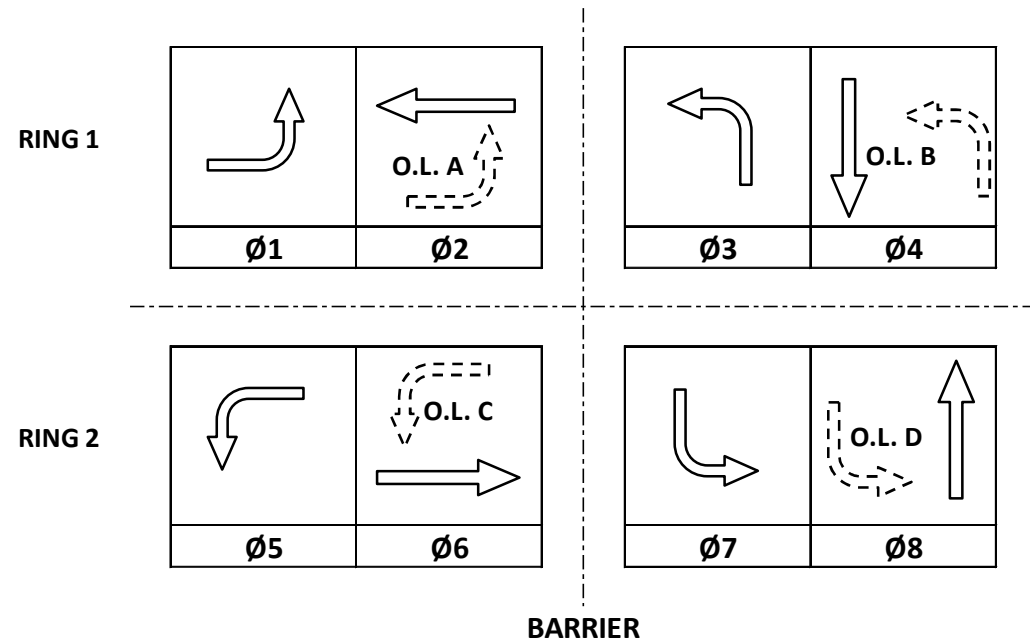
TRAFFIC CONTROL SIGNAL
 STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. **T51-0268**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 6 OF 7

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



CONTROLLER LOGIC

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

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

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

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

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

STH 20 & EMMERTSEN RD	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: T51-0268	CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 7 OF 7

LEGEND

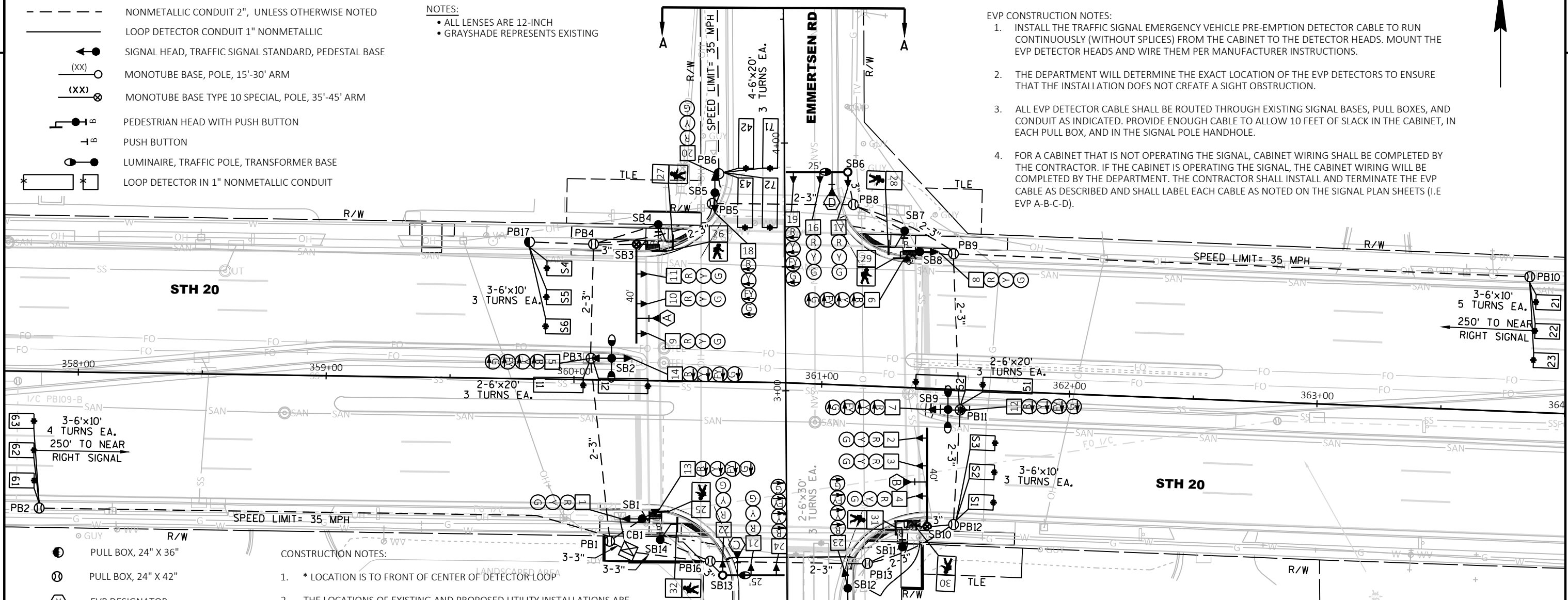
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE TYPE 10 SPECIAL, POLE, 35'-45' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING SHALL BE COMPLETED BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE CABINET WIRING WILL BE COMPLETED BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE SIGNAL PLAN SHEETS (I.E EVP A-B-C-D).



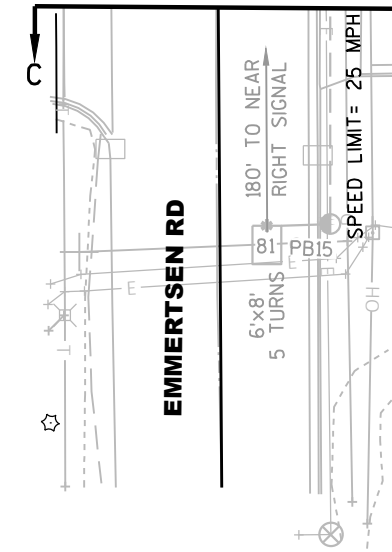
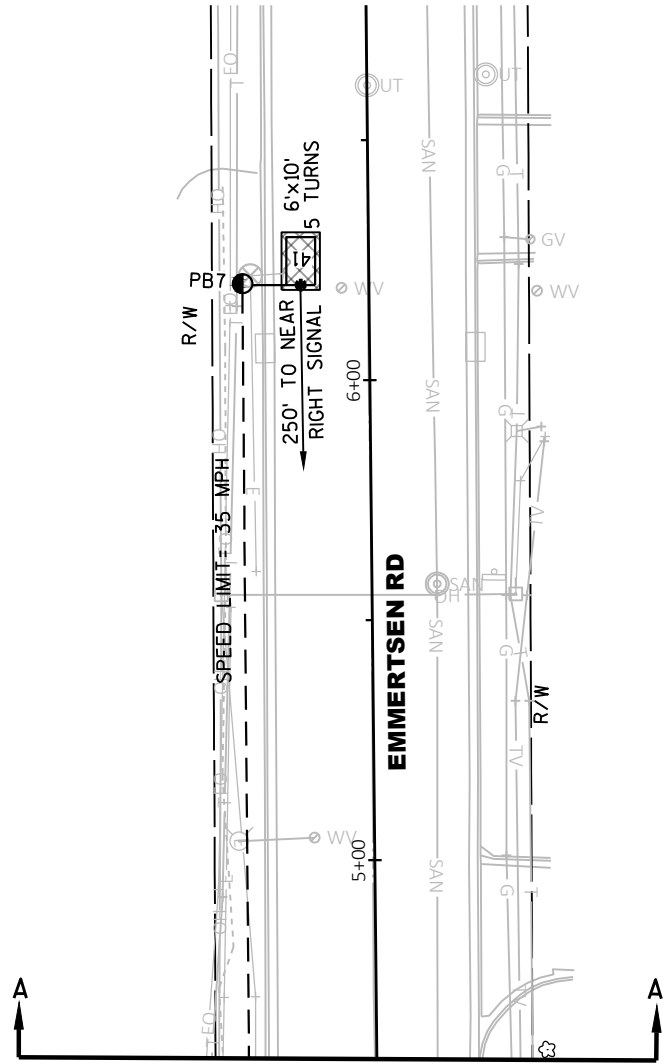
CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT OF CENTER OF DETECTOR LOOP
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. PROPOSED PAVEMENT, PAVEMENT MARKING SYMBOLS, AND STRUCTURES SHOWN GRAYSHADE FOR PLAN CLARITY.
4. ALL LUMINAIRES ARE CATEGORY C LED.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS AT (414) 266-1170.
7. PLACE POLE FOR SB12 ON EXISTING CONCRETE BASE.

MONOTUBE STRUCTURE NUMBERS	
SB3	= S-51-2268-01
SB6	= S-51-2268-02
SB10	= S-51-2268-03
SB13	= S-51-2268-04

RE-STRIPE NORTH AND SOUTH APPROACHES; REPLACE NB & SB VEHICLE DETECTION WITH VIDEO 3/15/13	REVISION RECONSTRUCT INTERSECTION EXCEPT SOUTH APPROACH
RELOCATE LOOP 81 11/27/12	
CHANGE CONTROLLER TO EPAC 10/4/11	APPROVAL RECOMMENDED REGION DATE 7-28-23 BY JMM
RELOCATE SB5, PB9; INSTALL PB10, PB11; INSTALL LOOPS 81, 82, 83, 84, 85. 8/14/20	APPROVED CENTRAL OFFICE DATE 8-7-23 BY JR
INSTALL FIBER OPTIC INTERCONNECT, PLAN UPDATE PER 0082-03-01, & CHANGE CONTROLLER TO ECONOLITE 9/2017	TRAFFIC CONTROL SIGNAL STH 20 & EMMERTSEN RD VILLAGE OF MOUNT PLEASANT RACINE COUNTY
INSTALL EVP IN ALL DIRECTIONS 1/2017	SIGNAL NO. S51-0268 CABINET TYPE: TS2-E CONTROLLER TYPE: ECONOLITE
CHANGE PHASES 1 & 5 TO FLASHING YELLOW ARROWS; CHANGE CABINET TO TS2 10/2013	WISCONSIN DEPARTMENT OF TRANSPORTATION
	APPROVAL RECOMMENDED DATE 3/18/80 APPROVED DATE 8/19/80
	REGION CONTACT: JOYCE MURPHY DESIGNED BY: JOHN BRUGGEMAN

REVISION			
REV. NO.	RECONSTRUCT INTERSECTION EXCEPT SOUTH APPROACH		
12	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
	DATE	BY	DATE BY
	7-28-23	JMM	8-7-23 JR
TRAFFIC CONTROL SIGNAL STH 20 & EMMERTSEN RD VILLAGE OF MOUNT PLEASANT RACINE COUNTY			
CABINET TYPE: TS2-E CONTROLLER TYPE: ECONOLITE			
SIGNAL NO. S51-0268			
WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVAL RECOMMENDED DATE 3/18/80			
APPROVED DATE 8/19/80			
REGION CONTACT: JOYCE MURPHY DESIGNED BY: JOHN BRUGGEMAN			
PAGE 1 OF 3			



TRAFFIC CONTROL SIGNAL
 STH 20 & EMMERTSEN RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

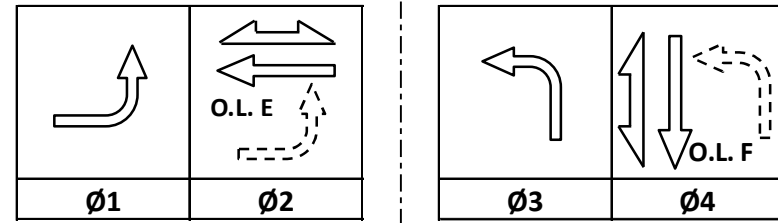
SIGNAL NO. S51-0268

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY: JOHN BRUGGEMAN

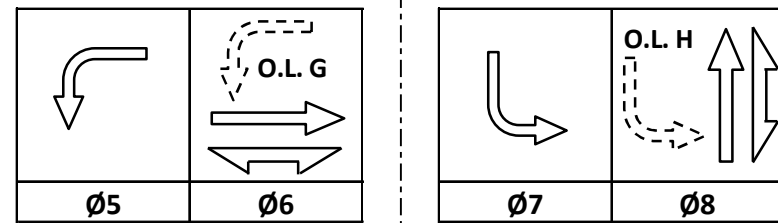
PAGE 2 OF 3

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø3	18,19	R
Ø4	20,21,22	R
Ø5	12,13,14	R
Ø6	1,2,3,4	R
Ø7	23,24	R
Ø8	15,16,17	
Ø2P	27,28	
Ø4P	25,26	
Ø6P	31,32	
Ø8P	29,30	
OLE	5,6,7	-
OLF	18,19	-
OLG	12,13,14	-
OLH	23,24	-

RING 1



RING 2



BARRIER

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
 AFTER PREEMPTION SEQUENCE 4+7 OR 3+8, CONTROLLER SHALL RETURN TO PHASES 4+8.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	23	31	41	42	51	61
CALLED PHASE	1	2	2	4	4	4	5	6
CALL OPTION	X	X	X	X		X	X	X
DELAY TIME						X		
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME					X			
USE ADDED INITIAL		X	X					X
CROSS SWITCH PHASE	2			4			6	

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)	63	71	81	82		S1	S3	S5
CALLED PHASE	6	8	8	8				
CALL OPTION	X	X		X				
DELAY TIME				X				
EXTENTION OPTION	X	X	X	X				
EXTEND TIME			X					
USE ADDED INITIAL	X	X						
CROSS SWITCH PHASE		8						

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22		32		43	52	62
CALLED PHASE	1	2		4		4	5	6
CALL OPTION	X	X		X		X	X	X
DELAY TIME						X		
EXTENTION OPTION	X	X		X		X	X	X
EXTEND TIME								
USE ADDED INITIAL		X						X
CROSS SWITCH PHASE	2			4			6	

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)		72		83		S2	S4	S6
CALLED PHASE		8		8				
CALL OPTION		X		X				
DELAY TIME				X				
EXTENTION OPTION		X		X				
EXTEND TIME								
USE ADDED INITIAL		X						
CROSS SWITCH PHASE		8						

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

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

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

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

STH 20 & EMMERTSEN RD	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: S51-0268	CABINET TYPE: TS2-E
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 3 OF 3

PROJECT ID:	2250-15-70
INTERSECTION:	STH 20 & EMMERTSEN RD

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR								D/WALK	WALK	PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>					
SB1	15	1	RED	ORG	GRN									
		13				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		25 B								BLK	BLU	WHT/BLK		
SB2	12	5				RED	ORG	GRN						
		14				RED/BLK	ORG/BLK	GRN/BLK	BLU/BLK	BLK/WHT				
SB3	15	9	RED	ORG	GRN									
		10	RED	ORG	GRN									
		11	RED	ORG	GRN									
		26 B									BLK	BLU	WHT/BLK	
SB4	7	27												
		B								BLK	BLU	WHT/BLK		
SB5	12	18				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		20	RED	ORG	GRN									
SB6	15	16	RED	ORG	GRN									
		17	RED	ORG	GRN									
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB7	7	28												
		B								BLK	BLU	WHT/BLK		
SB8	15	6				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		8	RED	ORG	GRN									
		29									BLK	BLU		
		B										WHT/BLK		
SB9	12	7				RED	ORG	GRN	BLU/BLK					
		12				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB10	15	2	RED	ORG	GRN									
		3	RED	ORG	GRN									
		4	RED	ORG	GRN									
		30 B									BLK	BLU	WHT/BLK	
SB11	7	31												
		B								BLK	BLU	WHT/BLK		
SB12	12	15	RED	ORG	GRN									
		23				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB13	12	21	RED	ORG	GRN									
		22	RED	ORG	GRN									
		24				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB14	7	32												
		B								BLK	BLU	WHT/BLK		

- *Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
- *Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
- *At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
- *Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.










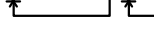













Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB3	SB2
PB4	SB3
PB5	SB5
PB8	SB6
PB9	SB8
PB11	SB9
PB12	SB10
PB13	SB12
PB16	SB13

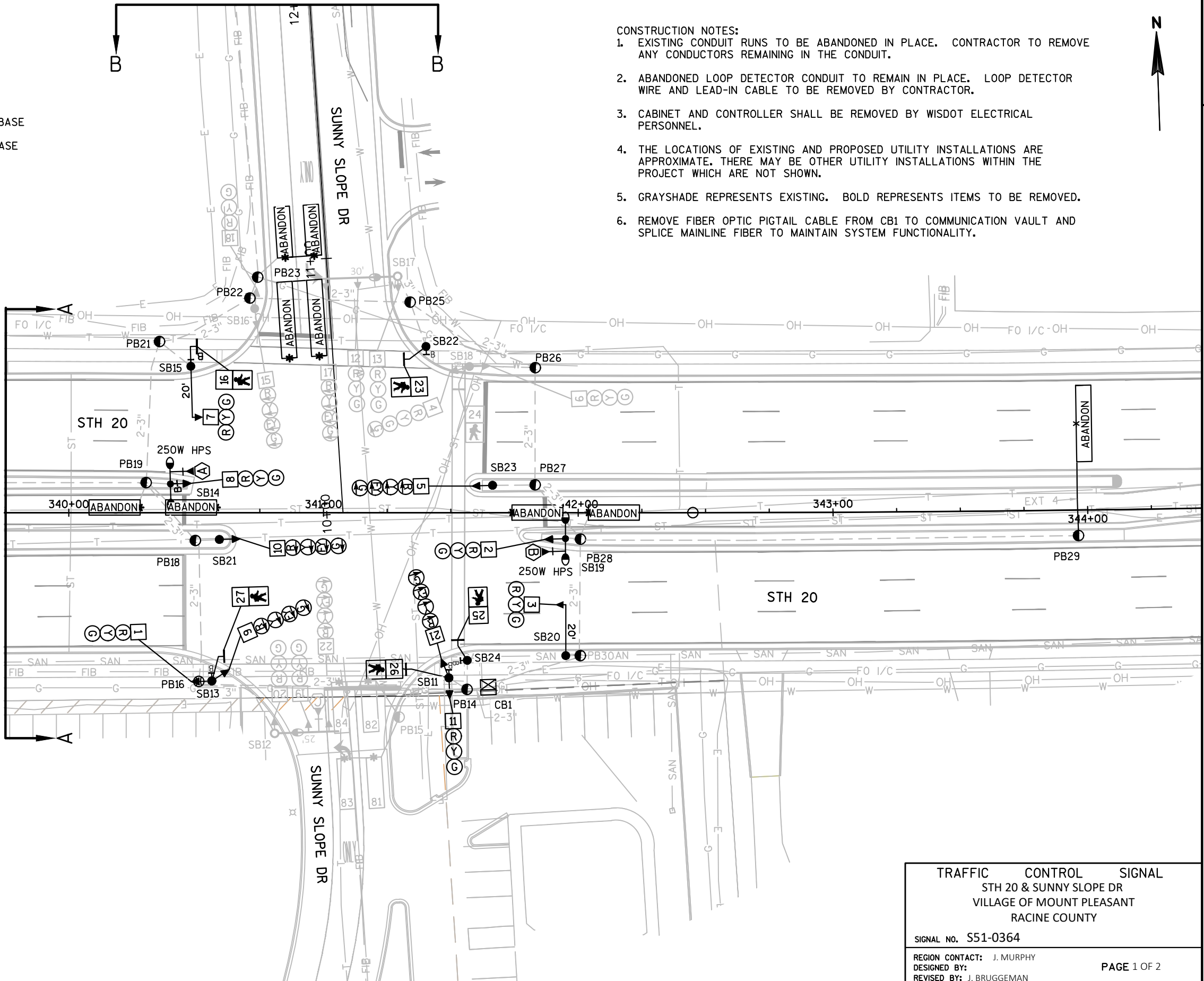
Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB2
SB2	SB6
CB1	SB13
SB13	SB9

Emergency Vehicle Preemption	
From	To
CB1	SB3 (HEAD 'A')
CB1	SB10 (HEAD 'B')
CB1	SB13 ('HEAD C')
CB1	SB6 ('HEAD D')

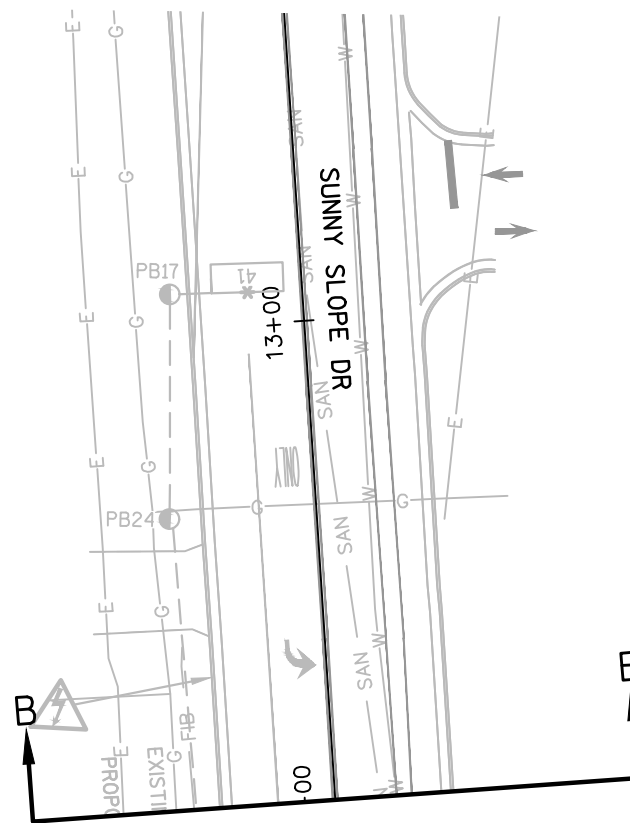
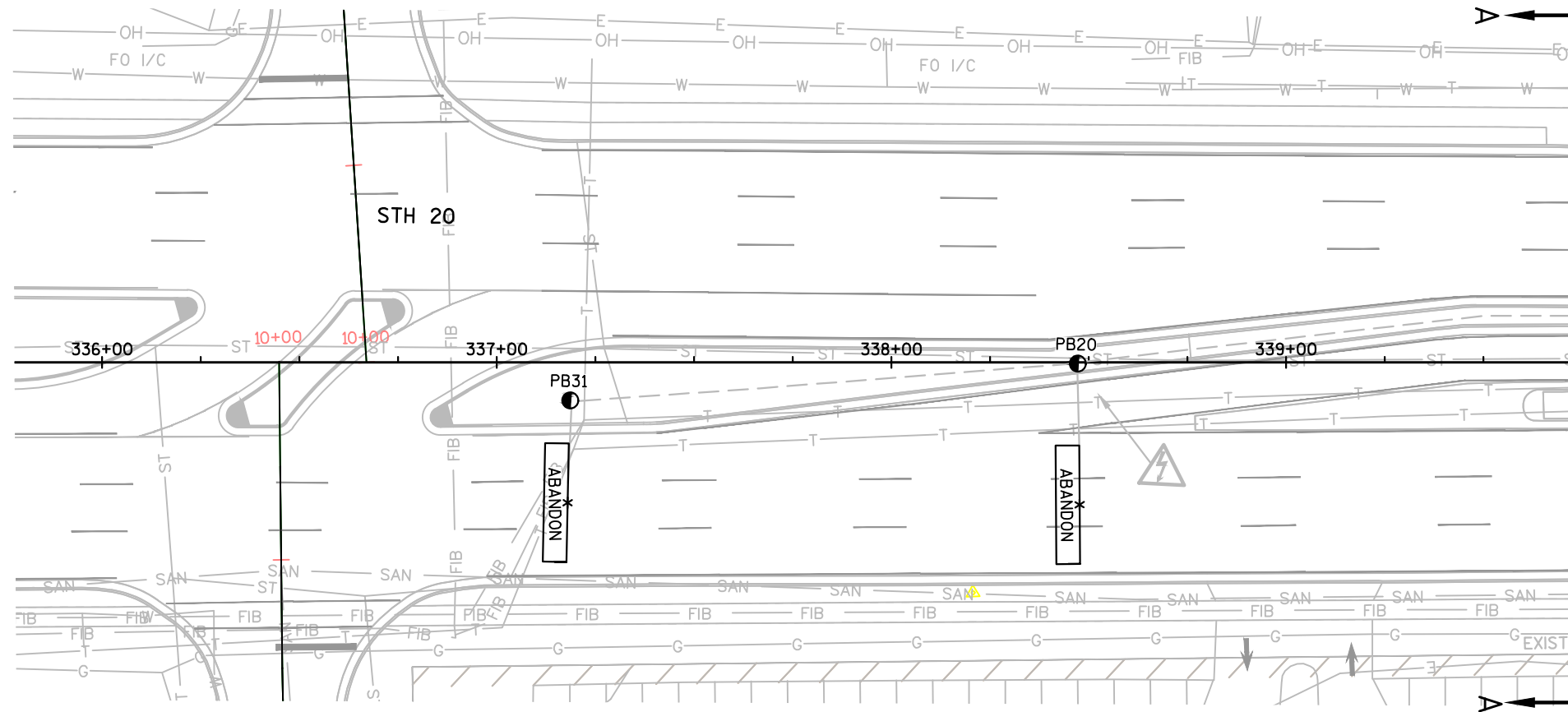
LEGEND

-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
-  NONMETALLIC INTERCONNECT CONDUIT
-  LOOP DETECTOR CONDUIT, 1" NONMETALLIC
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  (XX) MONOTUBE BASE, POLE, 15'-30' ARM
-  PEDESTRIAN HEAD WITH PUSH BUTTON
-  LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
-  LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
-  PULL BOX, 24" X 36"
-  PULL BOX, 24" X 42"
-  (XX) SIGNAL HEAD NUMBER
-  (R) RED CIRCULAR INDICATOR
-  (Y) YELLOW CIRCULAR INDICATOR
-  (G) GREEN CIRCULAR INDICATOR
-  (R) RED ARROW
-  (Y) YELLOW ARROW
-  (G) GREEN ARROW
-  WALK/DON'T WALK INDICATOR 16"
-  (X) EVP DESIGNATOR
-  EVP DETECTOR HEAD
-  (V) COMMUNICATIONS VAULT

- CONSTRUCTION NOTES:
1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
 2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
 3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
 4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
 5. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
 6. REMOVE FIBER OPTIC PIGTAIL CABLE FROM CB1 TO COMMUNICATION VAULT AND SPLICE MAINLINE FIBER TO MAINTAIN SYSTEM FUNCTIONALITY.



TRAFFIC CONTROL SIGNAL	
STH 20 & SUNNY SLOPE DR	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO. S51-0364	
REGION CONTACT: J. MURPHY	PAGE 1 OF 2
DESIGNED BY:	
REVISED BY: J. BRUGGEMAN	



TRAFFIC CONTROL SIGNAL
 STH 20 & SUNNY SLOPE DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-0364

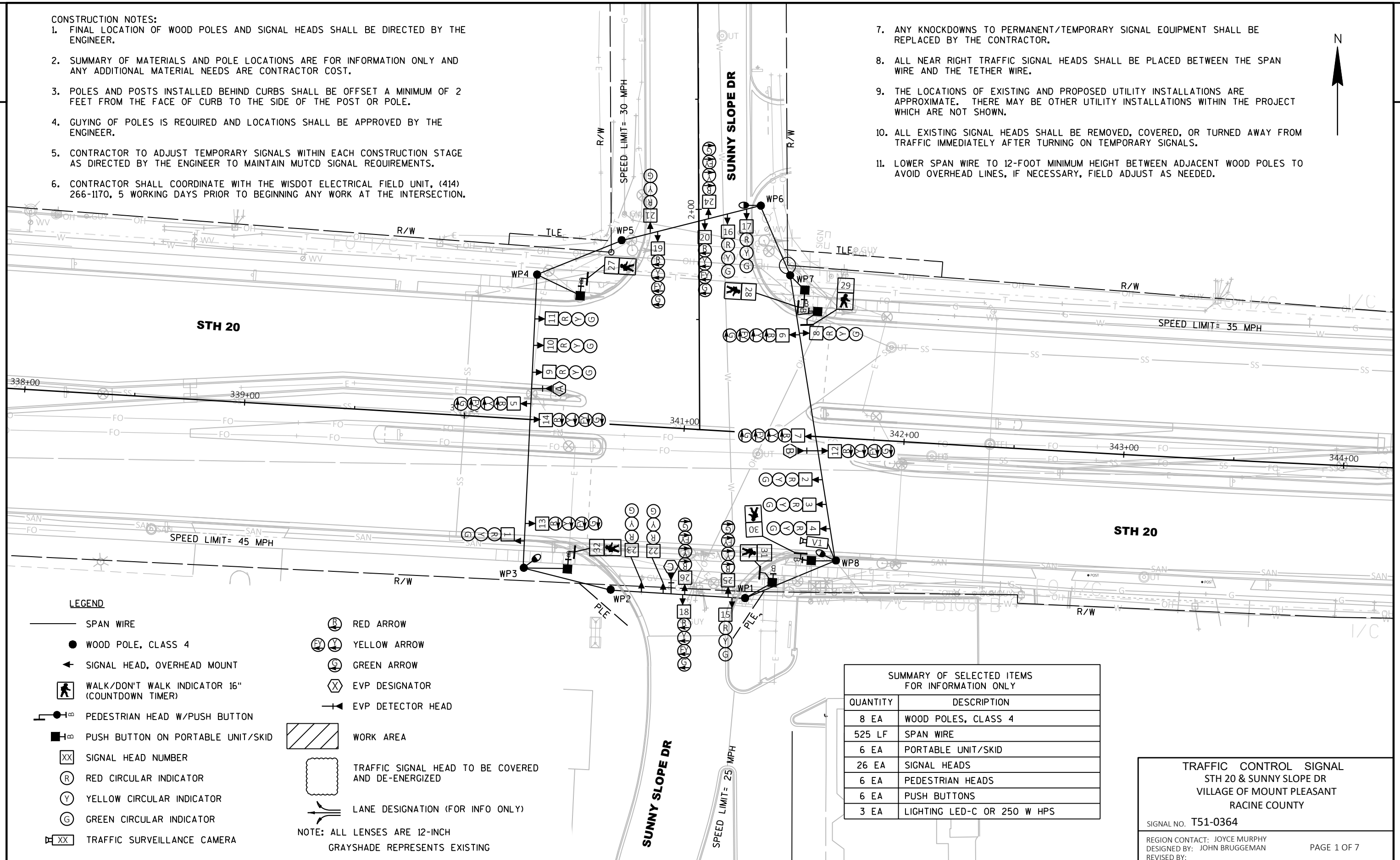
REGION CONTACT: J. MURPHY
 DESIGNED BY:
 REVISED BY: J. BRUGGEMAN

PAGE 2 OF 2

CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.
3. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.

7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND THE TETHER WIRE.
9. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
10. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
11. LOWER SPAN WIRE TO 12-FOOT MINIMUM HEIGHT BETWEEN ADJACENT WOOD POLES TO AVOID OVERHEAD LINES, IF NECESSARY, FIELD ADJUST AS NEEDED.



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ◀ SIGNAL HEAD, OVERHEAD MOUNT
- ◻ WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- ◻ PEDESTRIAN HEAD W/PUSH BUTTON
- ◻ PUSH BUTTON ON PORTABLE UNIT/SKID
- ◻ SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- ◻ TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓢ YELLOW ARROW
- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- ◻ EVP DETECTOR HEAD
- ▨ WORK AREA
- ◻ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ▬ LANE DESIGNATION (FOR INFO ONLY)

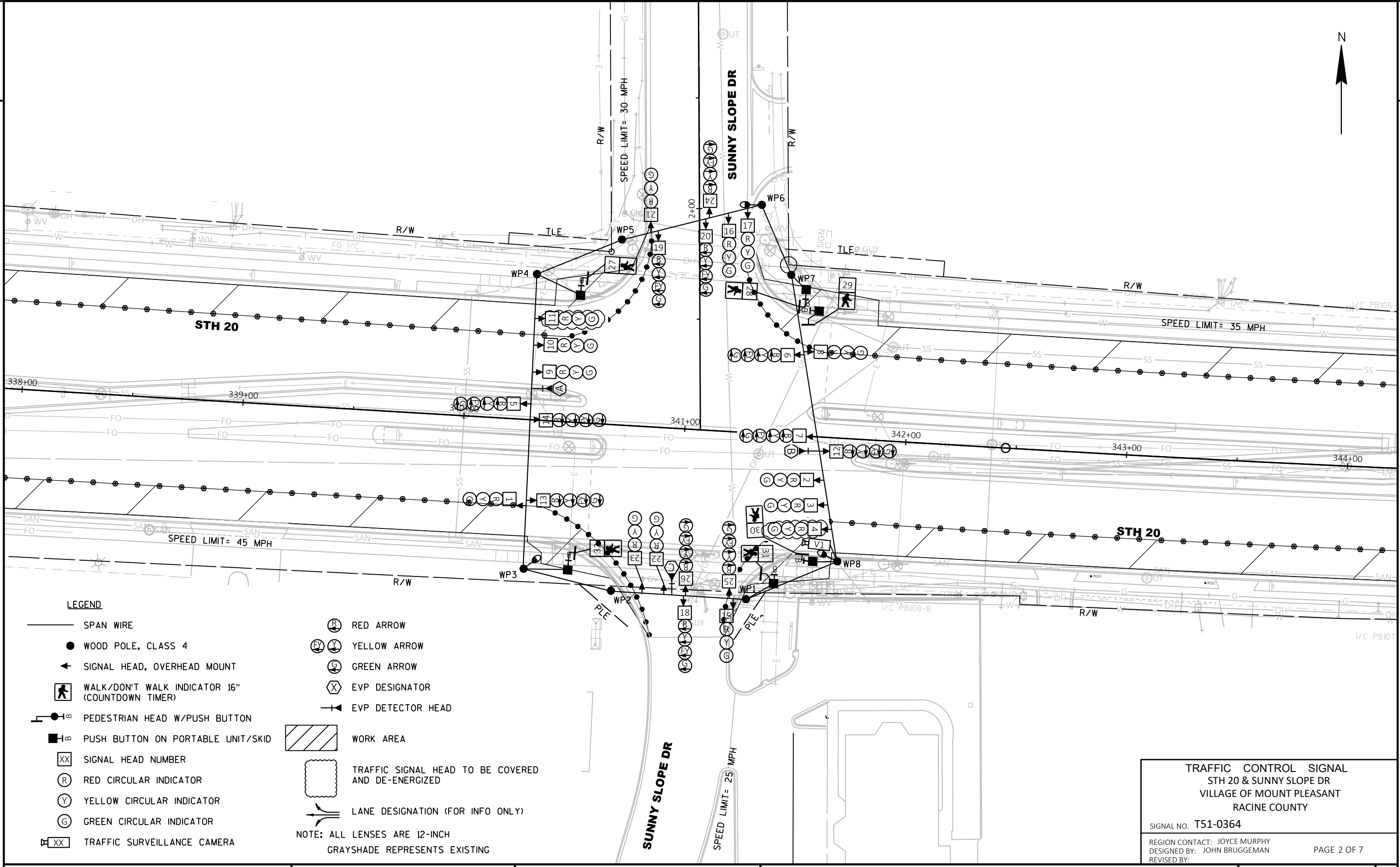
NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
8 EA	WOOD POLES, CLASS 4
525 LF	SPAN WIRE
6 EA	PORTABLE UNIT/SKID
26 EA	SIGNAL HEADS
6 EA	PEDESTRIAN HEADS
6 EA	PUSH BUTTONS
3 EA	LIGHTING LED-C OR 250 W HPS

TRAFFIC CONTROL SIGNAL
 STH 20 & SUNNY SLOPE DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. T51-0364

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:



LEGEND

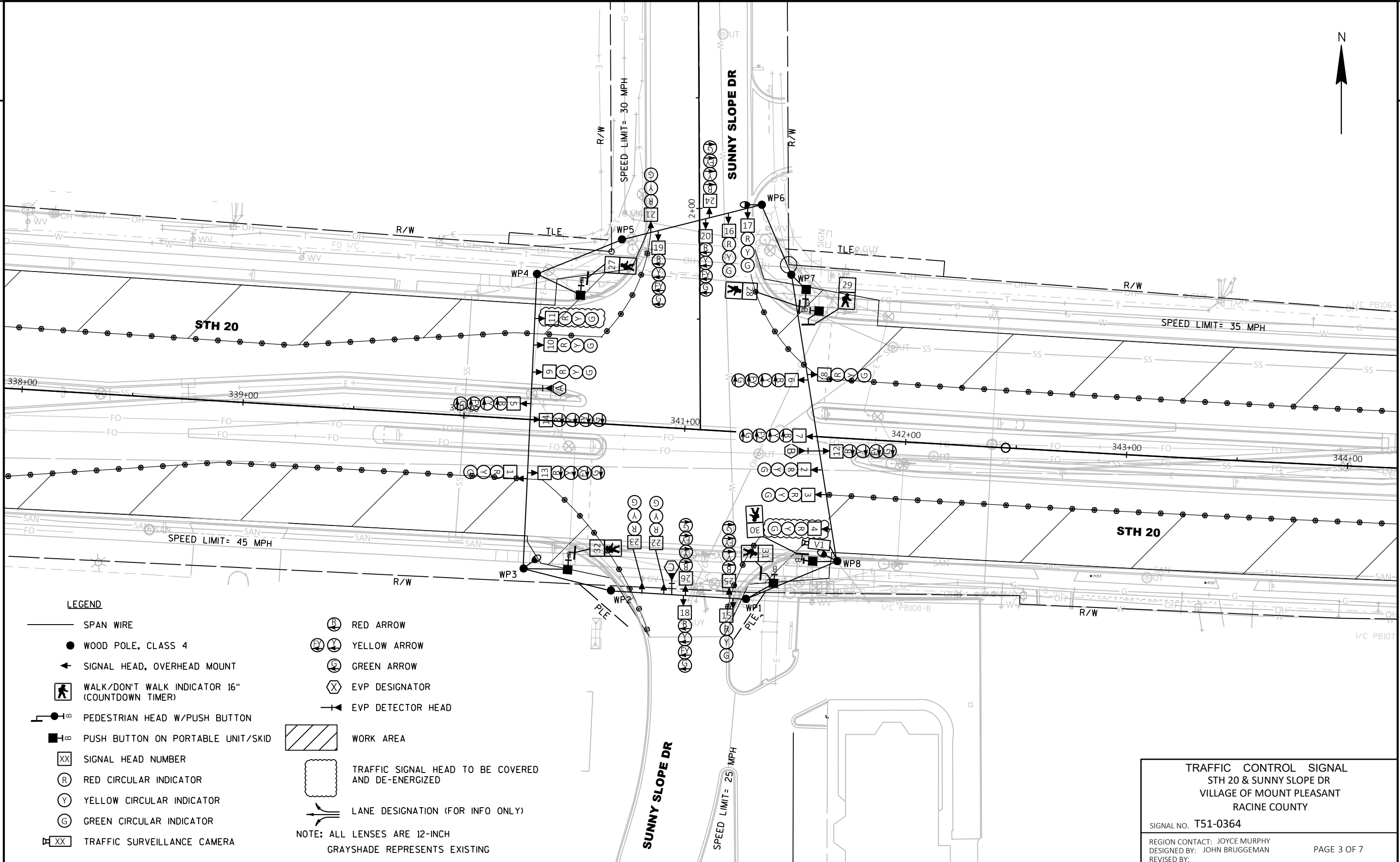
- SPAN WIRE
 - WOOD POLE, CLASS 4
 - ◀ SIGNAL HEAD, OVERHEAD MOUNT
 - ◻ WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
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 - Ⓣ GREEN CIRCULAR INDICATOR
 - ◻ TRAFFIC SURVEILLANCE CAMERA
 - Ⓡ RED ARROW
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GRAYSHADE REPRESENTS EXISTING

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STH 20 & SUNNY SLOPE DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. **T51-0364**

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LEGEND

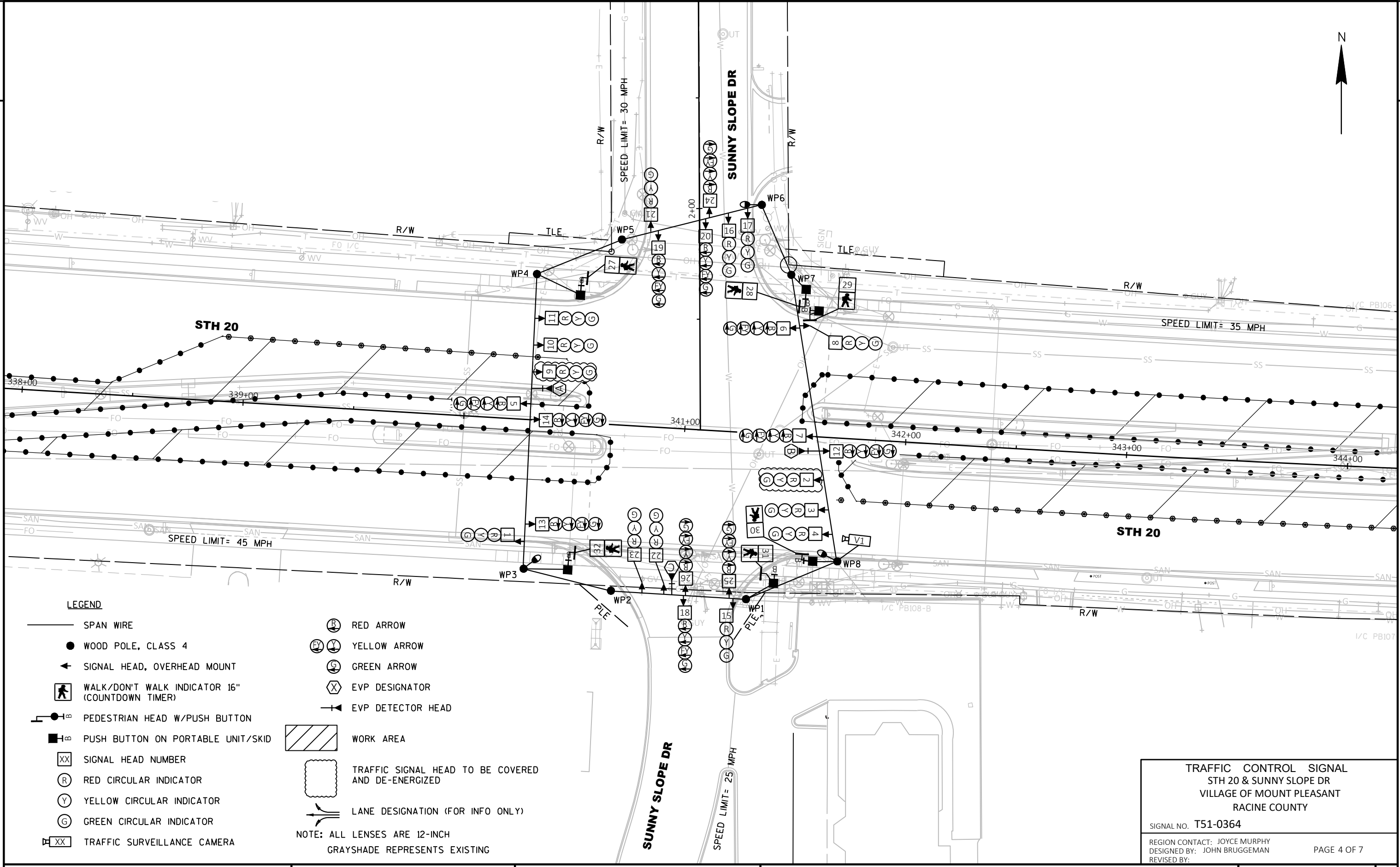
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 - WOOD POLE, CLASS 4
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LEGEND

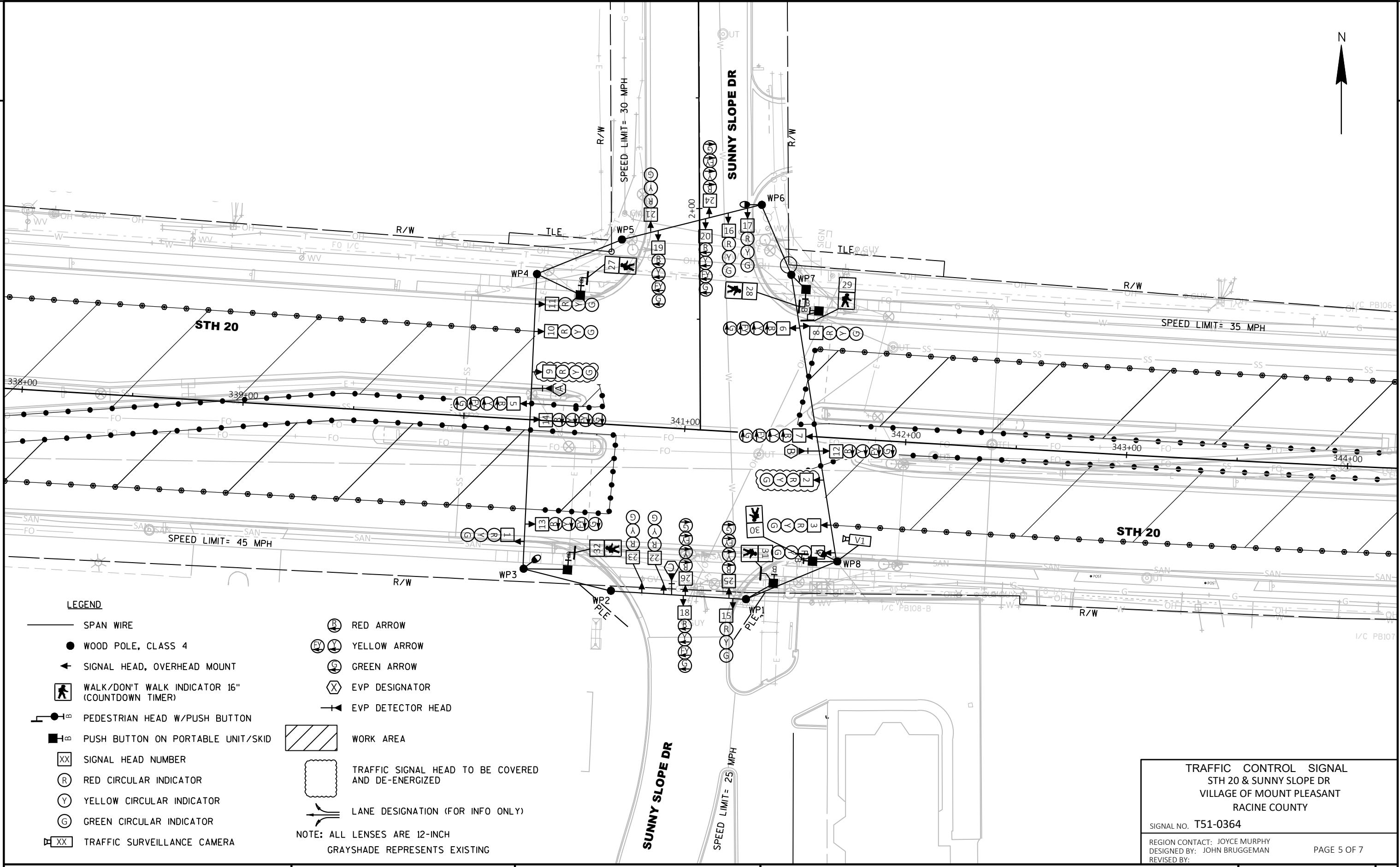
- SPAN WIRE
 - WOOD POLE, CLASS 4
 - ◀ SIGNAL HEAD, OVERHEAD MOUNT
 - ◻ WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
 - ◻ PEDESTRIAN HEAD W/PUSH BUTTON
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 RACINE COUNTY

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LEGEND

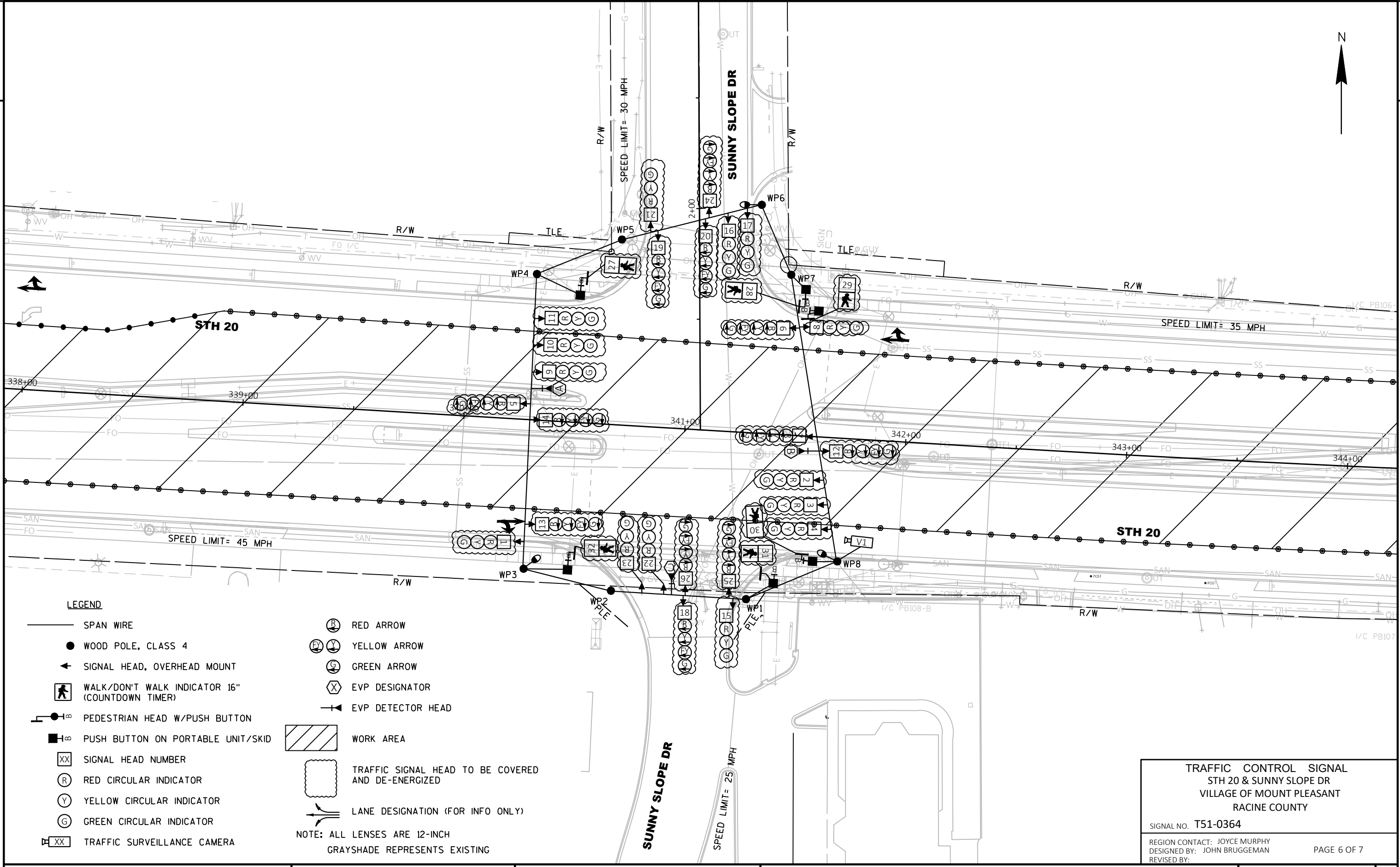
- SPAN WIRE
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 REVISED BY:

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LEGEND

- SPAN WIRE
 - WOOD POLE, CLASS 4
 - ◀ SIGNAL HEAD, OVERHEAD MOUNT
 - ◻ WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
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 RACINE COUNTY

SIGNAL NO. **T51-0364**

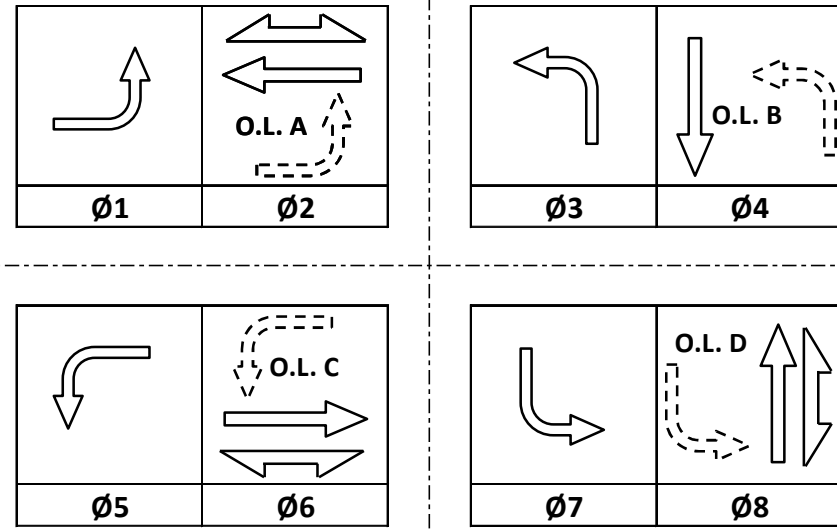
REGION CONTACT: JOYCE MURPHY
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	HEAD NUMBERS	FLASH
Ø1	5,6,7	-
Ø2	8,9,10,11	R
Ø3	18,19,20	-
Ø4	21,22,23	R
Ø5	12,13,14	-
Ø6	1,2,3,4	R
Ø7	24,25,26	-
Ø8	15,16,17	R
Ø2P	27,28	
Ø4P		
Ø6P	31,32	
Ø8P	29,30	
OLA	5,6,7	R
OLB	18,19,20	R
OLC	12,13,14	R
OLD	24,25,26	R

RING 1

RING 2



BARRIER

N

CONTROLLER LOGIC

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

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

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

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

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

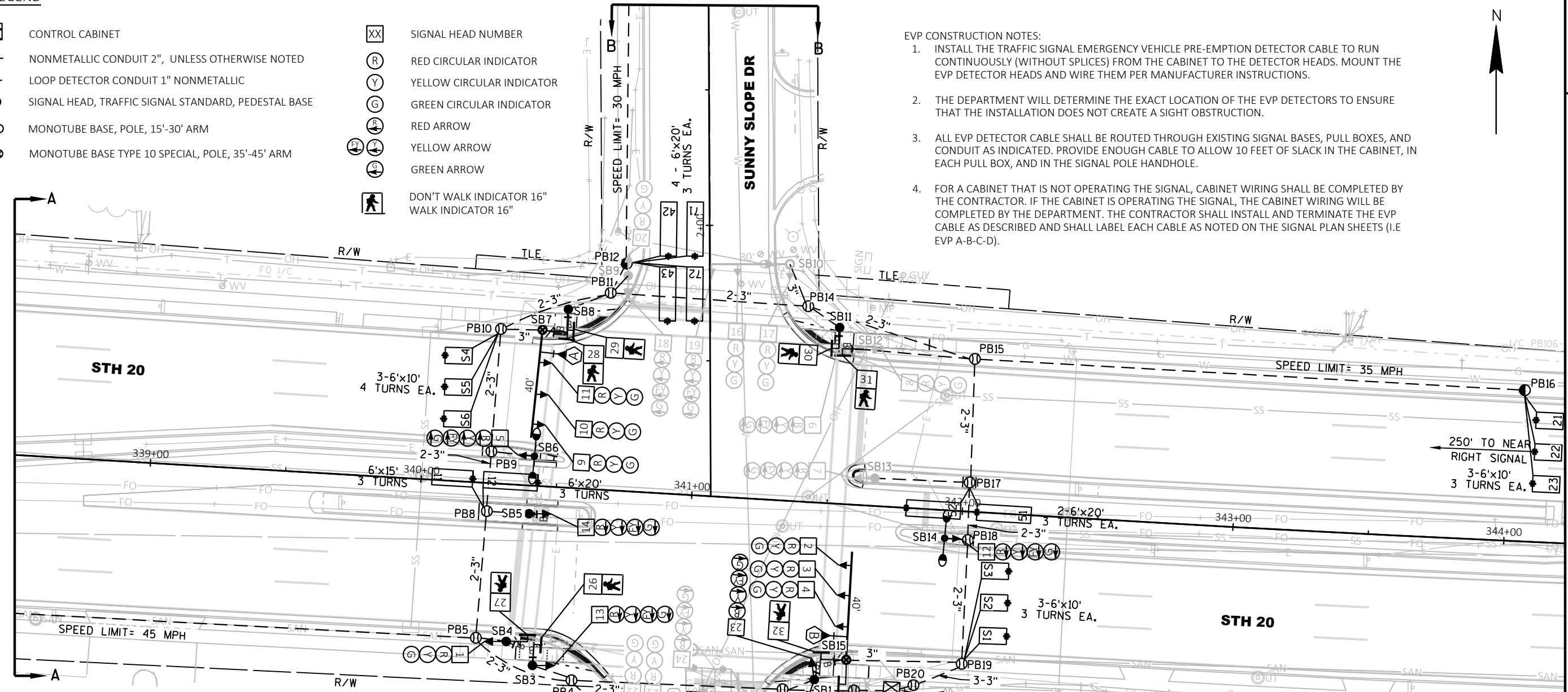
STH 20 & SUNNY SLOPE DR	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: T51-0364	CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 7 OF 7

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE TYPE 10 SPECIAL, POLE, 35'-45' ARM
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- DON'T WALK INDICATOR 16"
- WALK INDICATOR 16"

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING SHALL BE COMPLETED BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE CABINET WIRING WILL BE COMPLETED BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE SIGNAL PLAN SHEETS (I.E EVP A-B-C-D).



NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT OF CENTER OF DETECTOR LOOP
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. PROPOSED PAVEMENT, PAVEMENT MARKING SYMBOLS, AND STRUCTURES SHOWN GRAYSHADE FOR PLAN CLARITY.
4. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS AT (414) 266-1170.
5. ALL LUMINAIRES ARE CATEGORY C LED.
6. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- LANE DESIGNATION FOR INFO ONLY
- NONMETALLIC INTERCONNECT CONDUIT
- COMMUNICATIONS VAULT

MONOTUBE STRUCTURE NUMBERS	
SB2	= S-51-1219
SB7	= S-51-1364-01
SB10	= S-51-1220
SB15	= S-51-1364-02

INSTALL FIBER OPTIC INTERCONNECT; PLAN UPDATE 5/7/18

CHANGE CABINET AND CONTROLLER TO TS2 ECONOLITE. ADD 4-SECTION FYAS TO ALL LEFT TURNS. ACTIVATE LOOPS 51 AND 52. INSTALL LOOPS 41, 81, 82, 83, AND 84. REMOVE WEST LEG PEDESTRIAN CROSSING. ADD PEDESTRIAN HEADS 24, 25, 26, AND 27

INSTALL EVP FOR SB, EB AND WB DIRECTIONS 1/4/17

CHANGE TO R-R EMERGENCY FLASH; ADD EB LT PROTECTED/PERMITTED SIGNALS; ADD PED. HEADS AND BUTTONS 7/10/07

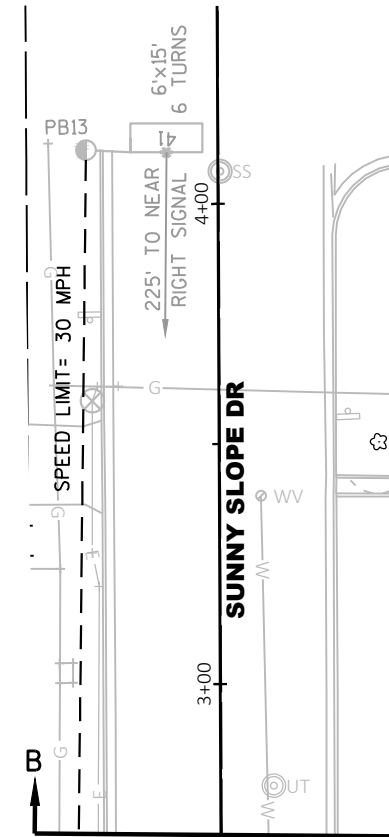
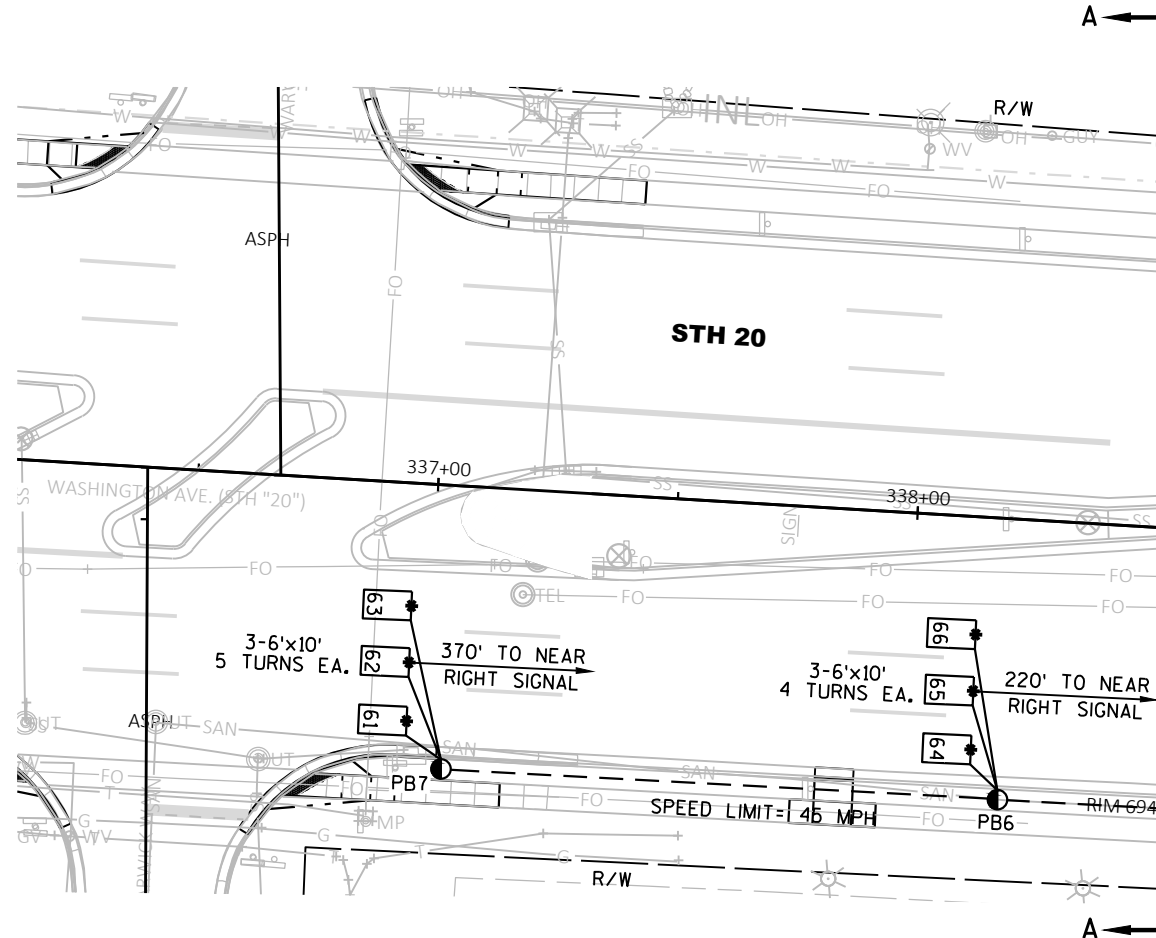
GEOMETRIC CHANGES 8/18/99

INSTALL WEST SIDE PED'S AND PUSH BUTTONS 5/1/91

INITIAL INSTALL 12/11/88

REVISION			
REV. NO.	REBUILD UNDERGROUND, INSTALL MONOTUBES FOR EB & WB, UPDATE LOOP PLACEMENT FOR EB & WB		
7	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
	DATE	BY	DATE BY
	7-28-23	JMM	8-7-23 JTB

TRAFFIC CONTROL SIGNAL	
STH 20 & SUNNY SLOPE DR VILLAGE OF MOUNT PLEASANT RACINE COUNTY	
SIGNAL NO. S51-0364	CABINET TYPE: TS2-E CONTROLLER TYPE: ECONOLITE
WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVAL RECOMMENDED	H. O. PRICE REGION TRAFFIC ENGINEER
DATE 3/10/88	
APPROVED	EDWARD FRIEDE STATE TRAFFIC ENGINEER
DATE 3/28/88	
REGION CONTACT: JOYCE MURPHY	PAGE 1 OF 3
DESIGNED BY: JOHN BRUGGEMAN	



TRAFFIC CONTROL SIGNAL
 STH 20 & SUNNY SLOPE DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

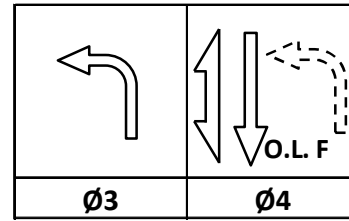
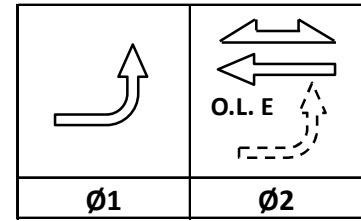
SIGNAL NO. S51-0364

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY: JOHN BRUGGEMAN

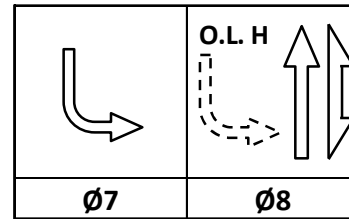
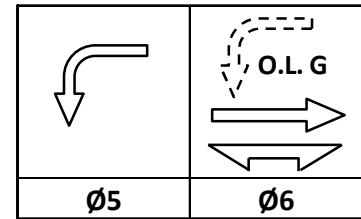
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	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø3	18,19	R
Ø4	20,21,22	R
Ø5	12,13,14	R
Ø6	1,2,3,4	R
Ø7	23,24	R
Ø8	15,16,17	R
Ø2P	29,30	
Ø4P	27,28	
Ø6P	25,26	
Ø8P	31,32	
OLE	5,6,7	-
OLF	18,19	-
OLG	12,13,14	-
OLH	23,24	-

RING 1



RING 2



BARRIER

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT			
PHASE	2+5	6+1	4+7

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
 AFTER PREEMPTION SEQUENCE 4+7, CONTROLLER SHALL RETURN TO PHASES 4+8.

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

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 51-0034

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	23	31	41	42	51	61
CALLED PHASE	1	2	2	4	4	4	5	6
CALL OPTION	X	X	X	X		X	X	X
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME					X			
USE ADDED INITIAL		X	X					X
CROSS SWITCH PHASE	2			4			6	

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)	63	65	71	81		S1	S3	S5
CALLED PHASE	6	6	8	8				
CALL OPTION	X	X	X	X				
DELAY TIME								
EXTENTION OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL	X	X						
CROSS SWITCH PHASE			8					

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22		32		43	52	62
CALLED PHASE	1	2		4		4	5	6
CALL OPTION	X	X		X		X	X	X
DELAY TIME								
EXTENTION OPTION	X	X		X		X	X	X
EXTEND TIME								
USE ADDED INITIAL		X						X
CROSS SWITCH PHASE	2			4			6	

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)	64	66	72	82		S2	S4	S6
CALLED PHASE	6	6	8	8				
CALL OPTION	X	X	X	X				
DELAY TIME								
EXTENTION OPTION	X	X	X	X				
EXTEND TIME								
USE ADDED INITIAL	X	X						
CROSS SWITCH PHASE			8					

STH 20 & SUNNY SLOPE DR	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: 551-0364	CABINET TYPE: TS2-E
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 3 OF 3

PROJECT ID:	2250-15-70
INTERSECTION:	STH 20 & SUNNY SLOPE DR

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	FUTURE APS	
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK			
SB1	12	15	RED	ORG	GRN									
		23				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		B										WHT/BLK		
SB2	15	21	RED	ORG	GRN									
		22	RED	ORG	GRN									
		24				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB3	12	13				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		26								BLK	BLU			
		B										WHT/BLK		
SB4	12	1	RED	ORG	GRN									
		27									BLK	BLU		
		B										WHT/BLK		
SB5	12	14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		B										WHT/BLK		
SB6	12	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB7	12	9	RED	ORG	GRN									
		10	RED	ORG	GRN									
		11	RED	ORG	GRN									
		28									BLK	BLU		
SB8	7	29									BLK	BLU		
		B										WHT/BLK		
SB9	12	18				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		20	RED	ORG	GRN									
SB10	12	16	RED	ORG	GRN									
		17	RED	ORG	GRN									
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB11	7	30									BLK	BLU		
		B										WHT/BLK		
SB12	15	6				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		8	RED	ORG	GRN									
		31									BLK	BLU		
SB13	12	7				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB14	12	12				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB15	19	2	RED	ORG	GRN									
		3	RED	ORG	GRN									
		4	RED	ORG	GRN									
		25									BLK	BLU		
		32									BLK/WHT	BLU/BLK		
		B									WHT/BLK			

- *Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
- *Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
- *At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
- *Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

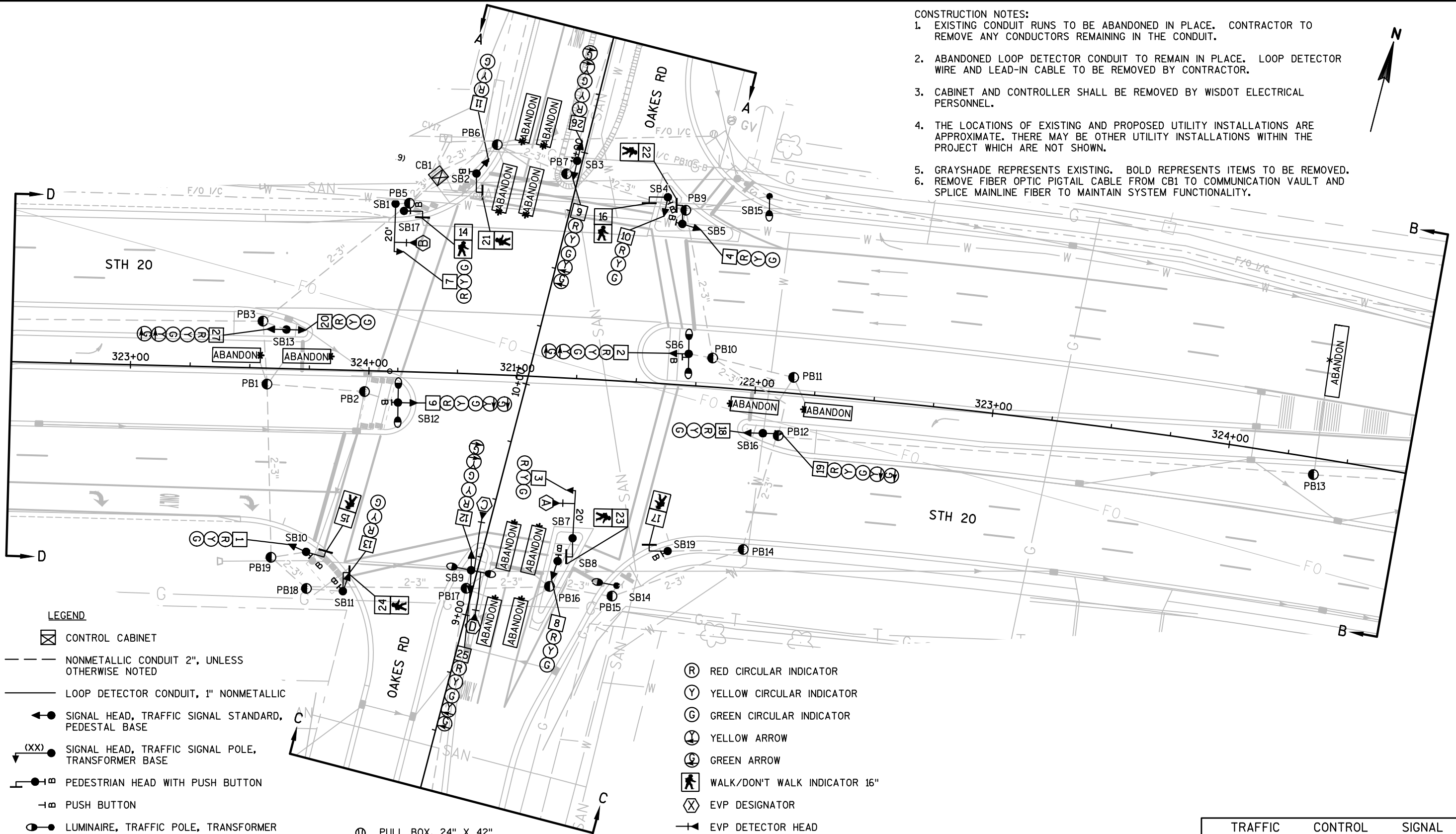
Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	SB12
SB12	SB13
SB13	SB14
SB14	SB15
SB15	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB1
PB4	SB2
PB5	SB4
PB8	SB5
PB9	SB6
PB10	SB7
PB11	SB9
PB14	SB10
PB15	SB12
PB17	SB13
PB18	SB14
PB19	SB15
PB20	CB1

Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB2
SB2	SB6
CB1	SB14
SB14	SB10

Emergency Vehicle Preemption	
From	To
CB1	SB7 (HEAD 'A')
CB1	SB15 (HEAD 'B')
CB1	SB2 (HEAD 'C')

- CONSTRUCTION NOTES:
- EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
 - ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
 - CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
 - THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
 - GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
 - REMOVE FIBER OPTIC PIGTAIL CABLE FROM CB1 TO COMMUNICATION VAULT AND SPLICE MAINLINE FIBER TO MAINTAIN SYSTEM FUNCTIONALITY.

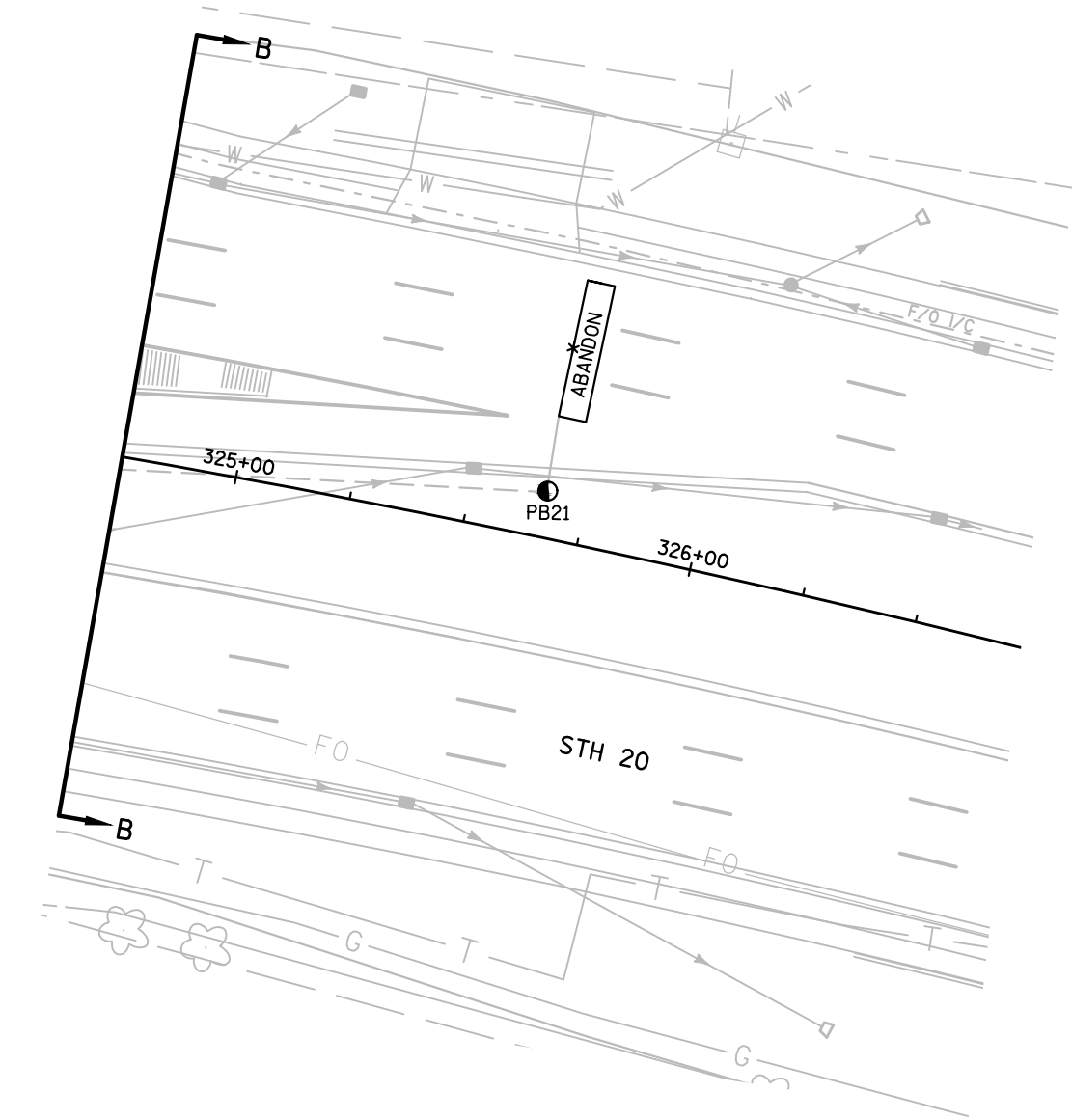
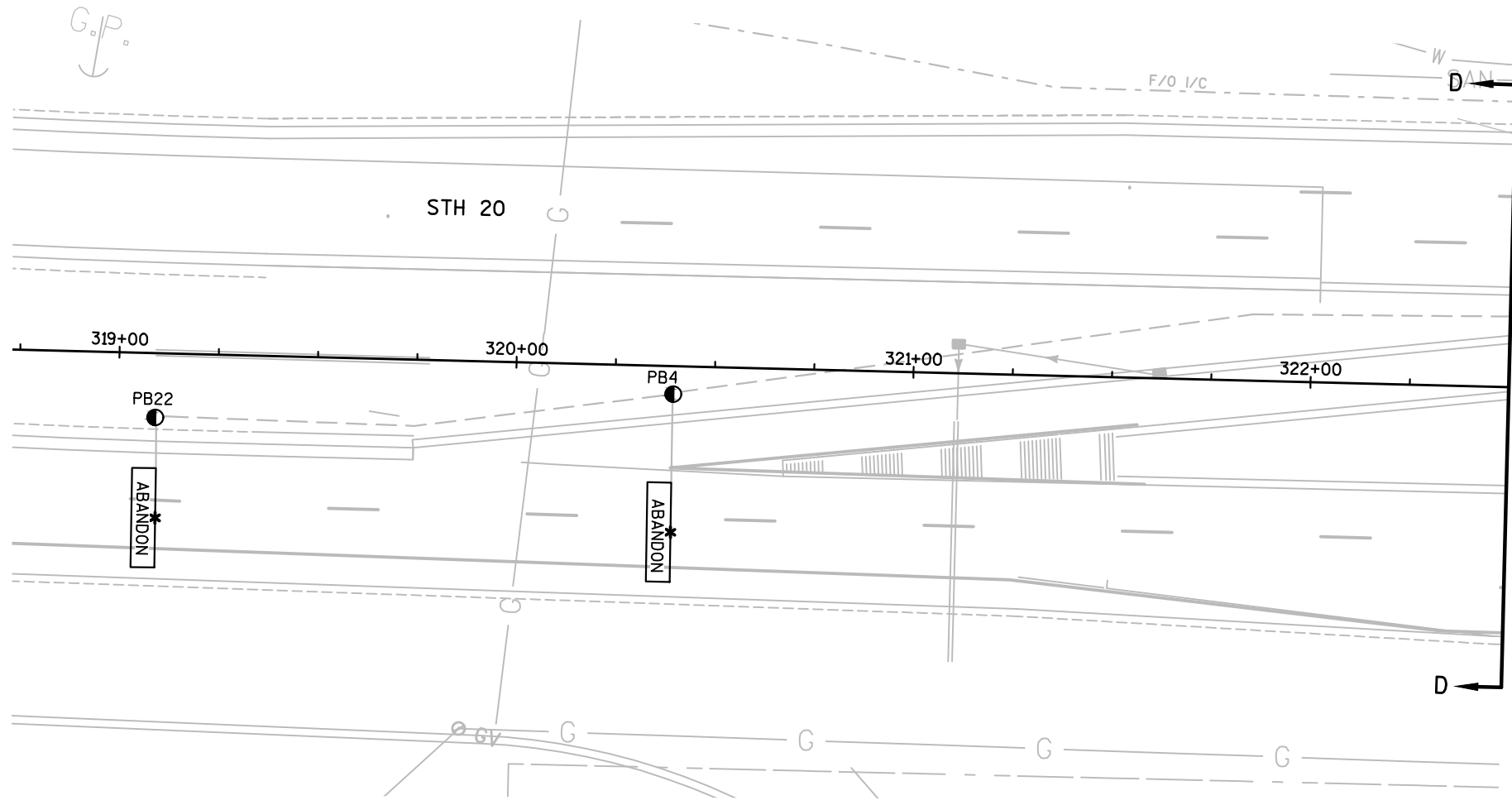


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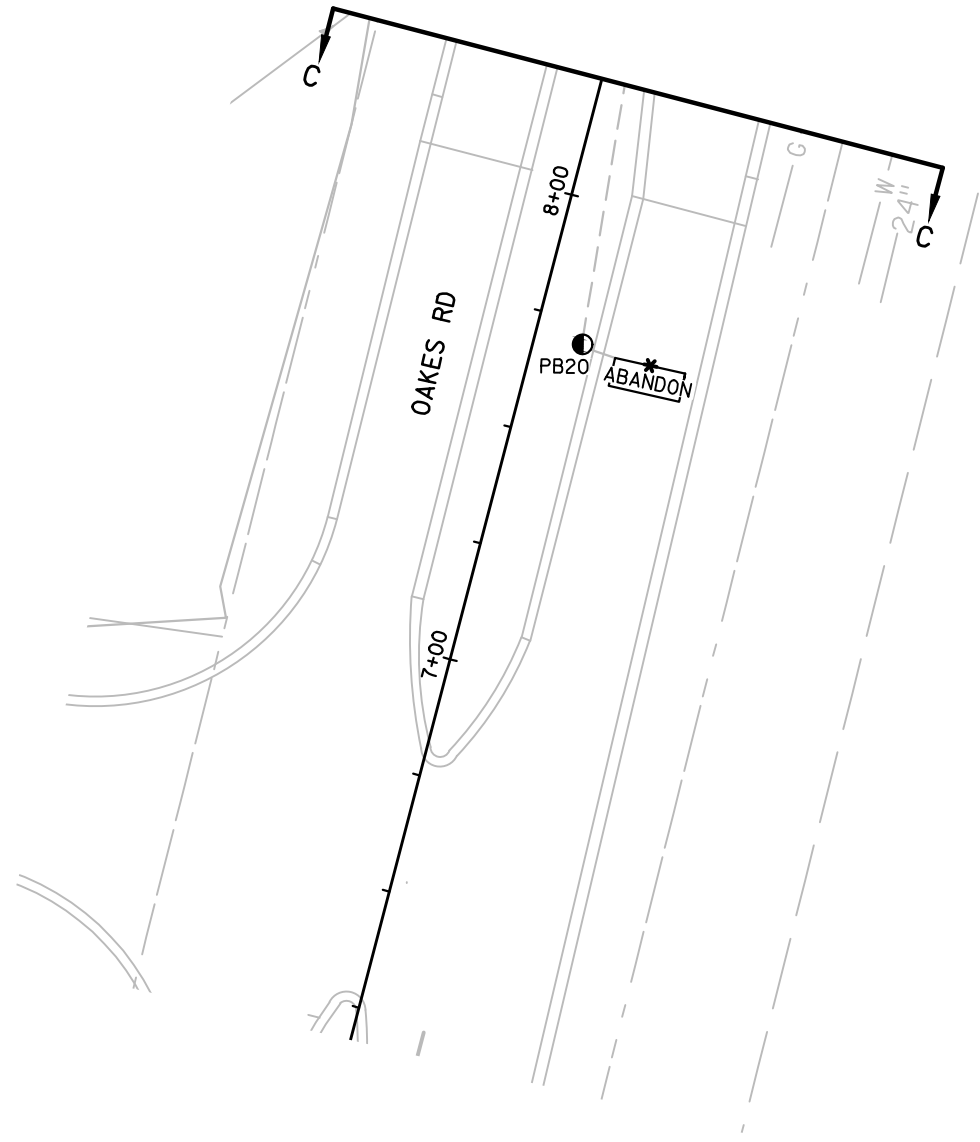
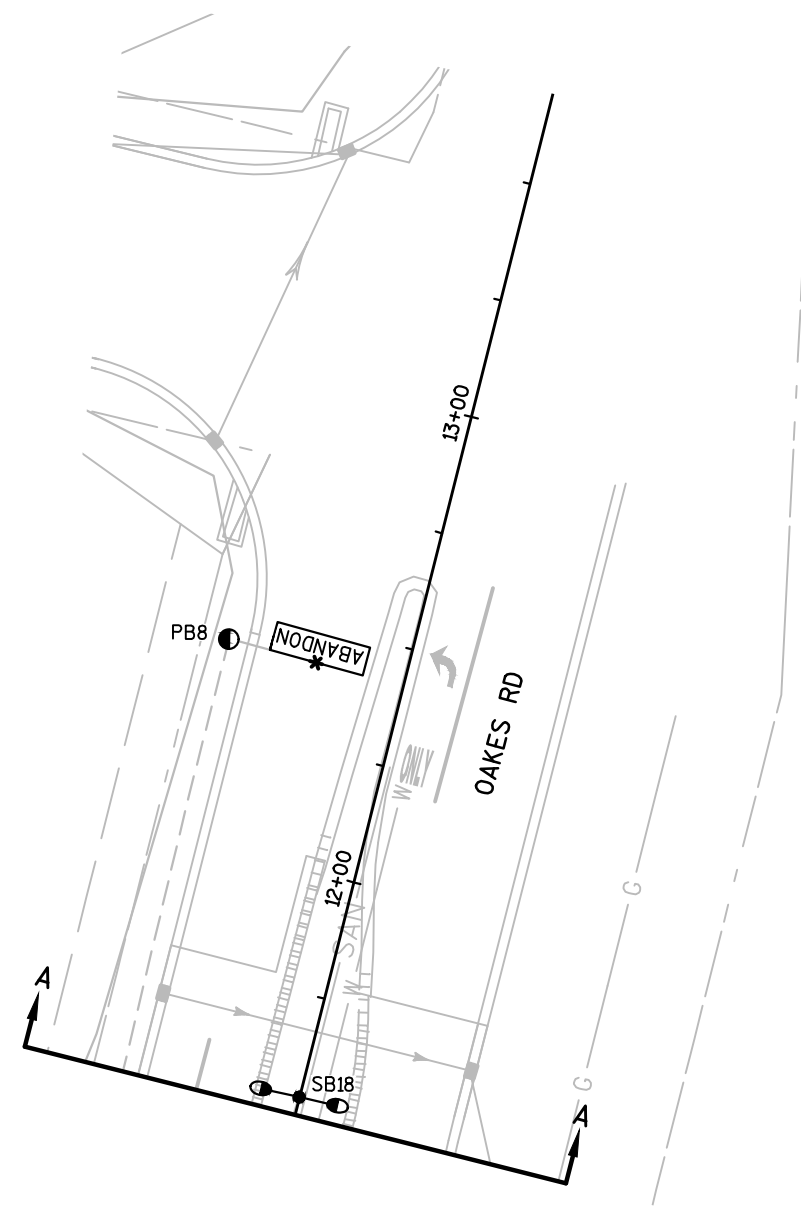
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- PULL BOX, 24" X 42"
- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 36"
- SIGNAL HEAD NUMBER

- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- YIELD SIGN
- STOP SIGN
- LANE DESIGNATION FOR INFO ONLY

TRAFFIC CONTROL SIGNAL		
STH 20 & OAKES RD		
VILLAGE OF MOUNT PLEASANT		
RACINE COUNTY		
SIGNAL NO. S51-0429		
REGION CONTACT: J. MUIRPHY	PAGE 1 OF 3	
DESIGNED BY:		
REVISED BY: J. BRUGGEMAN		



TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY
 SIGNAL NO. S51-0429
 REGION CONTACT: J. MURPHY
 DESIGNED BY:
 REVISED BY: J. BRUGGEMAN



TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-0429

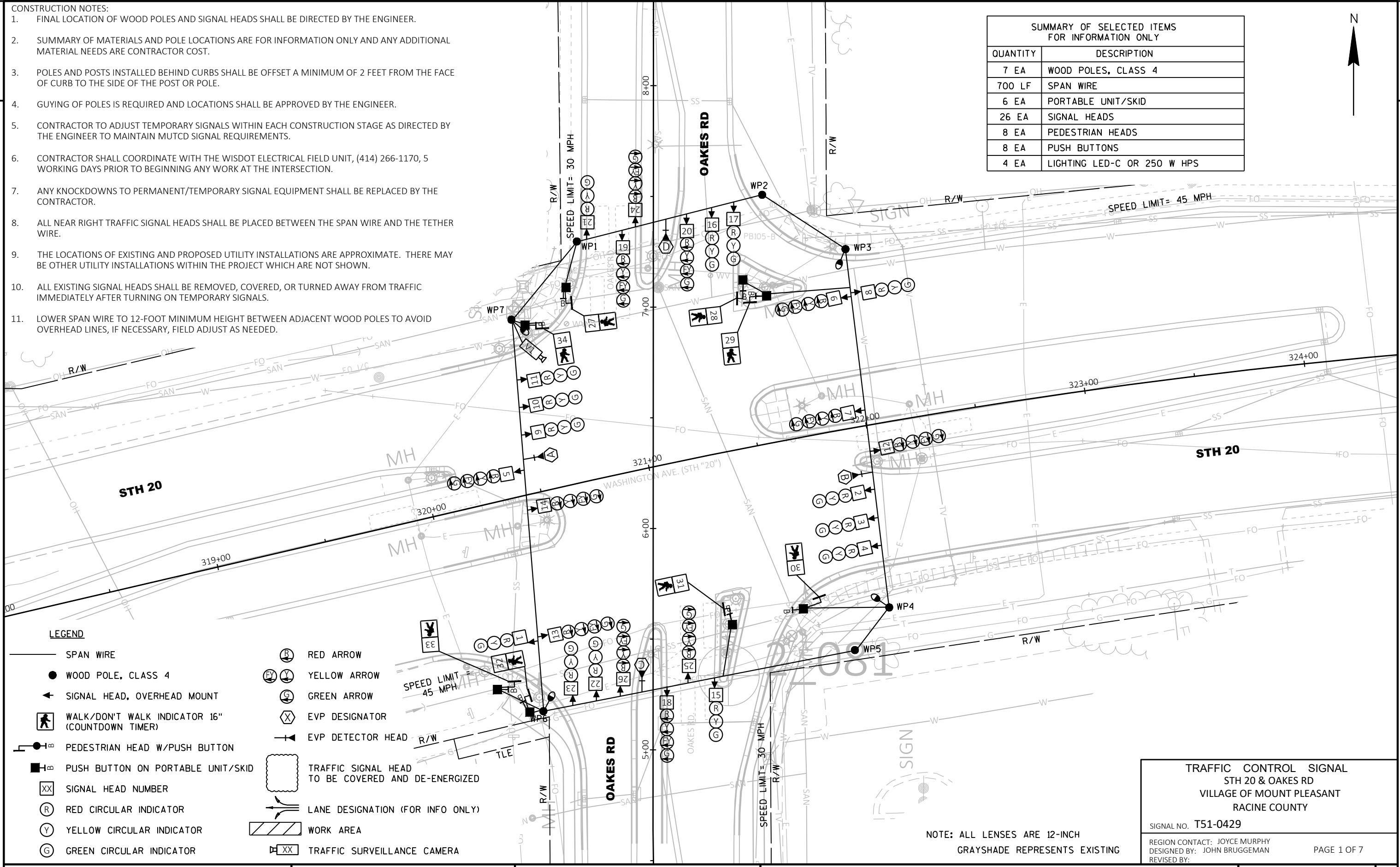
REGION CONTACT: J. MURPHY
 DESIGNED BY:
 REVISED BY: J. BRUGGEMAN

PAGE 3 OF 3

CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.
3. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.
7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND THE TETHER WIRE.
9. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
10. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
11. LOWER SPAN WIRE TO 12-FOOT MINIMUM HEIGHT BETWEEN ADJACENT WOOD POLES TO AVOID OVERHEAD LINES, IF NECESSARY, FIELD ADJUST AS NEEDED.

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
7 EA	WOOD POLES, CLASS 4
700 LF	SPAN WIRE
6 EA	PORTABLE UNIT/SKID
26 EA	SIGNAL HEADS
8 EA	PEDESTRIAN HEADS
8 EA	PUSH BUTTONS
4 EA	LIGHTING LED-C OR 250 W HPS



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- 🚶 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- 🚶➡ PEDESTRIAN HEAD W/PUSH BUTTON
- ➡ PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓨ YELLOW CIRCULAR INDICATOR
- Ⓞ GREEN CIRCULAR INDICATOR
- 🔴 RED ARROW
- 🟡 YELLOW ARROW
- 🟢 GREEN ARROW
- ⊗ EVP DESIGNATOR
- ⊣ EVP DETECTOR HEAD
- ☐ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- 📡 LANE DESIGNATION (FOR INFO ONLY)
- ▨ WORK AREA
- 📷 TRAFFIC SURVEILLANCE CAMERA

TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. T51-0429

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

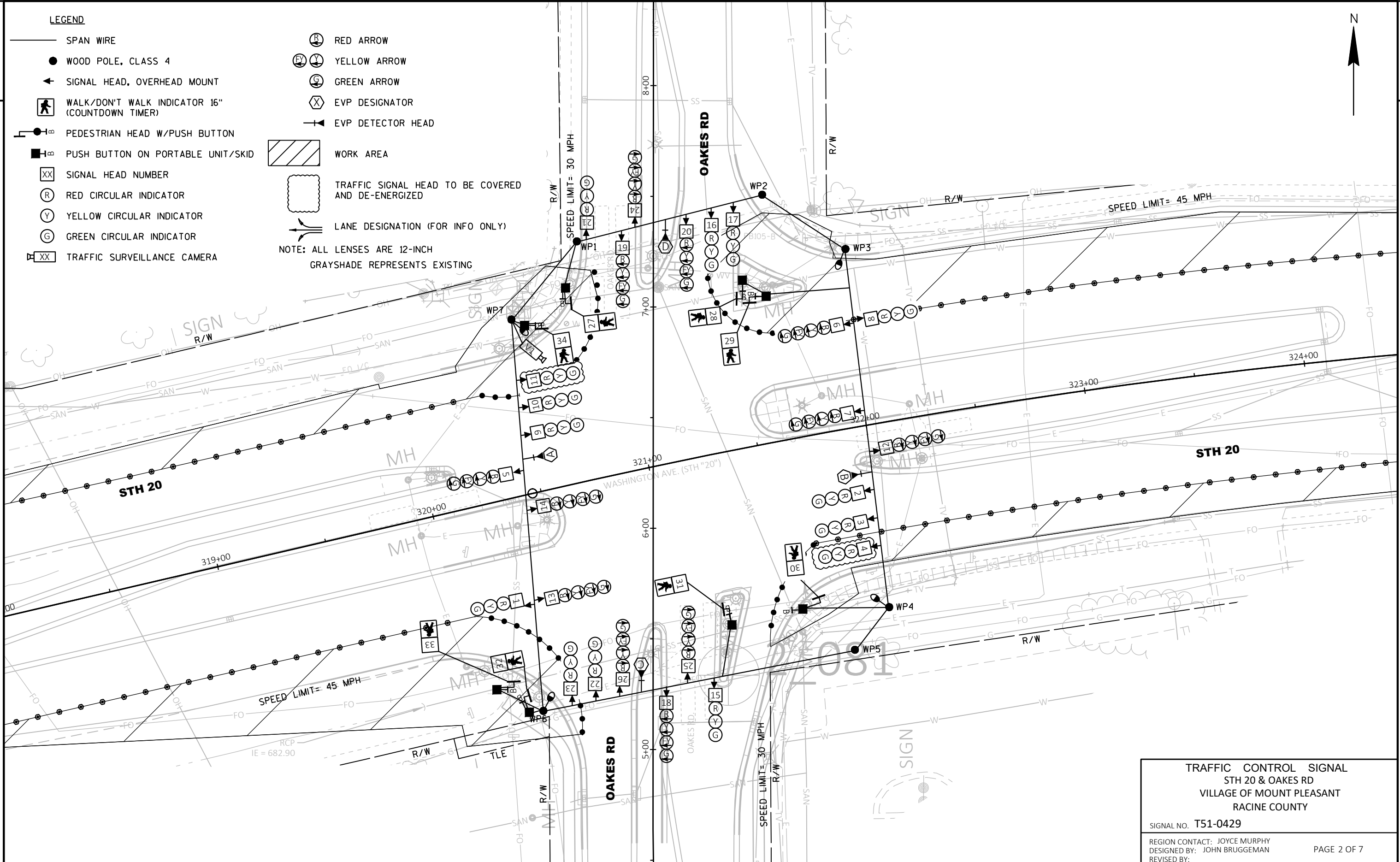
PAGE 1 OF 7

NOTE: ALL LENSES ARE 12-INCH
 GRAYSHADE REPRESENTS EXISTING

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- 🚶 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- 🚶 PEDESTRIAN HEAD W/PUSH BUTTON
- PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓨ YELLOW CIRCULAR INDICATOR
- Ⓞ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓨ YELLOW ARROW
- Ⓞ GREEN ARROW
- Ⓧ EVP DESIGNATOR
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 RACINE COUNTY

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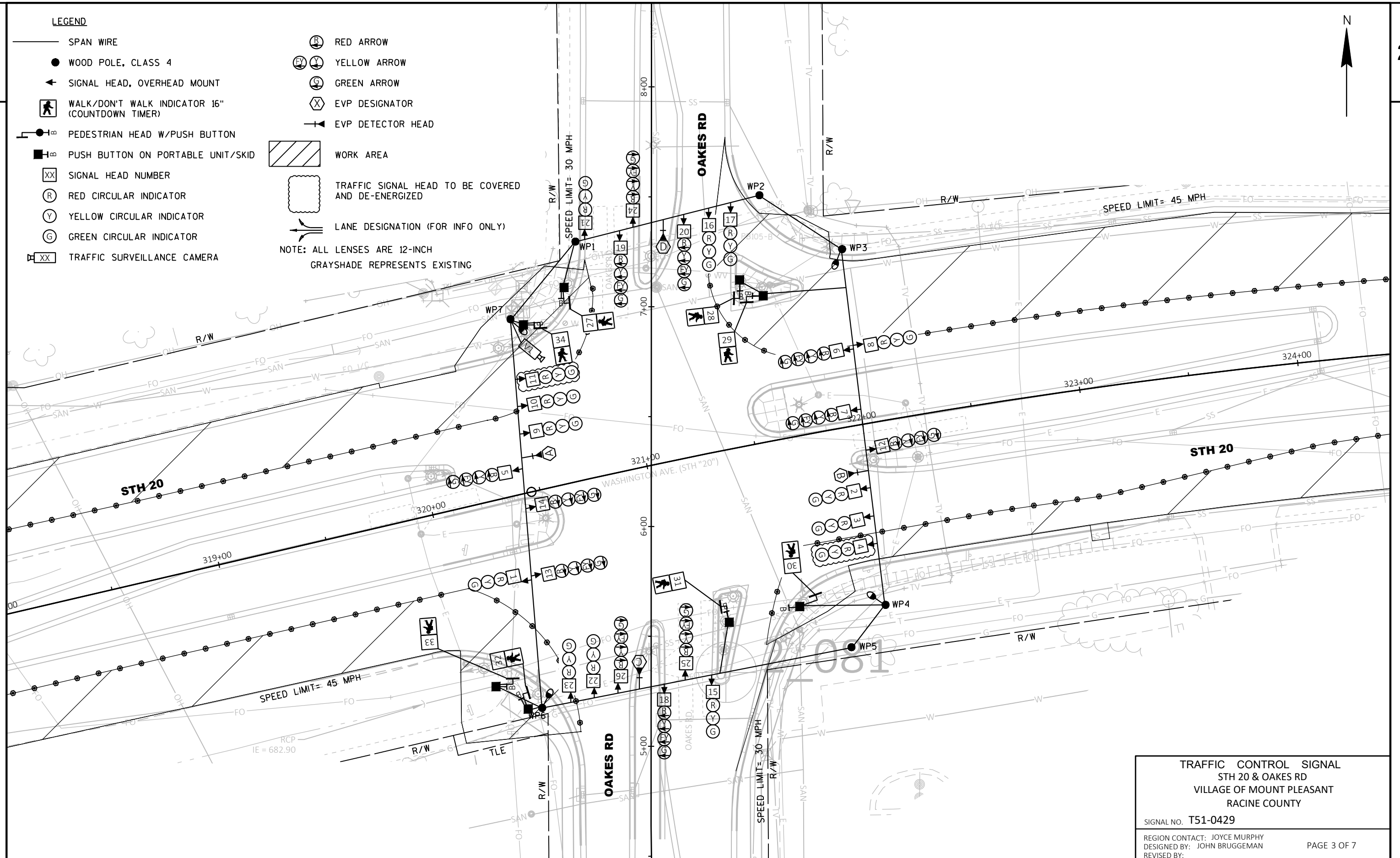
REGION CONTACT: JOYCE MURPHY
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- SPAN WIRE
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- Ⓞ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
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TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

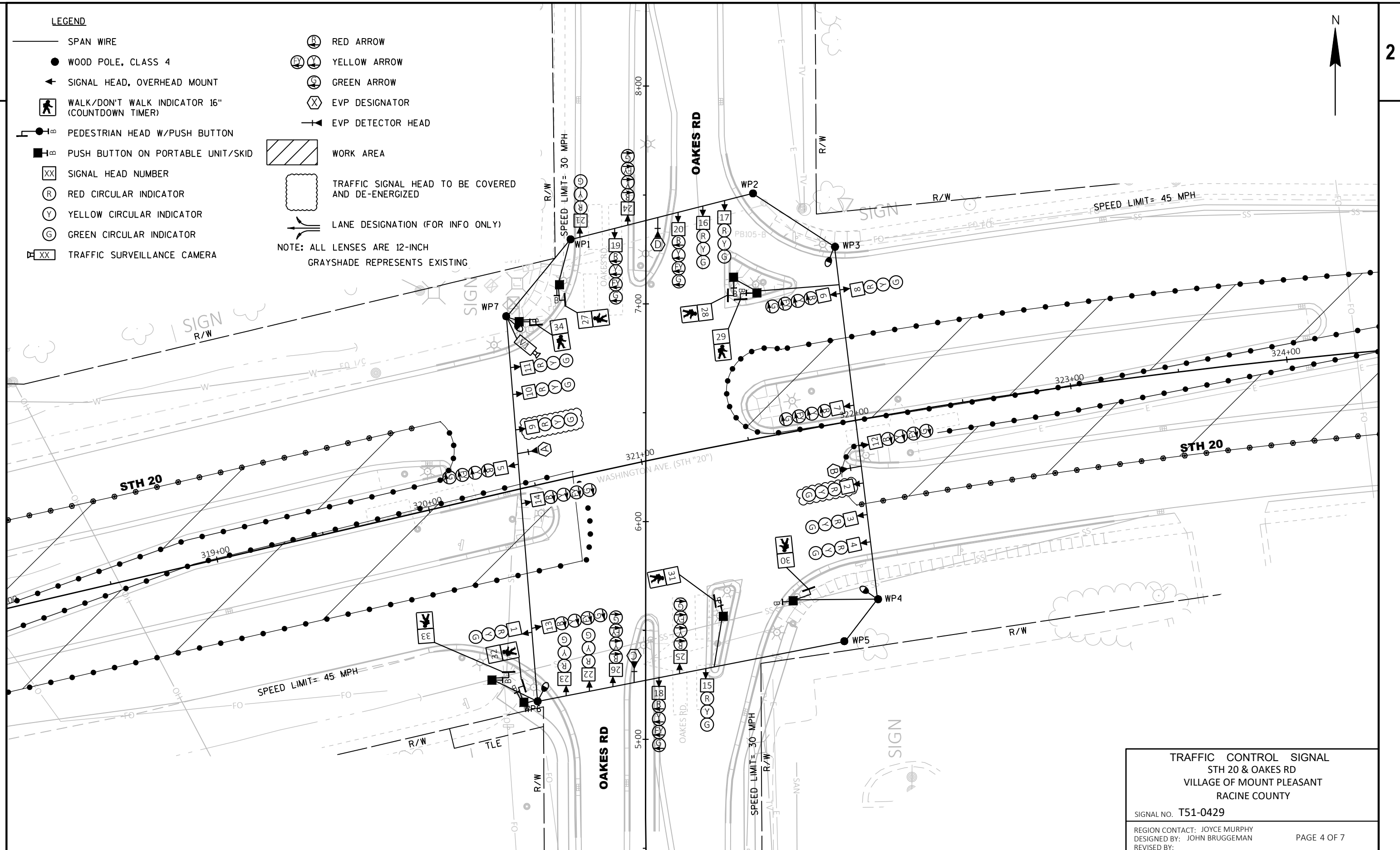
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REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

LEGEND

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- WOOD POLE, CLASS 4
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- 👤 PEDESTRIAN HEAD W/PUSH BUTTON
- PUSH BUTTON ON PORTABLE UNIT/SKID
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- Ⓞ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓨ YELLOW ARROW
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TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

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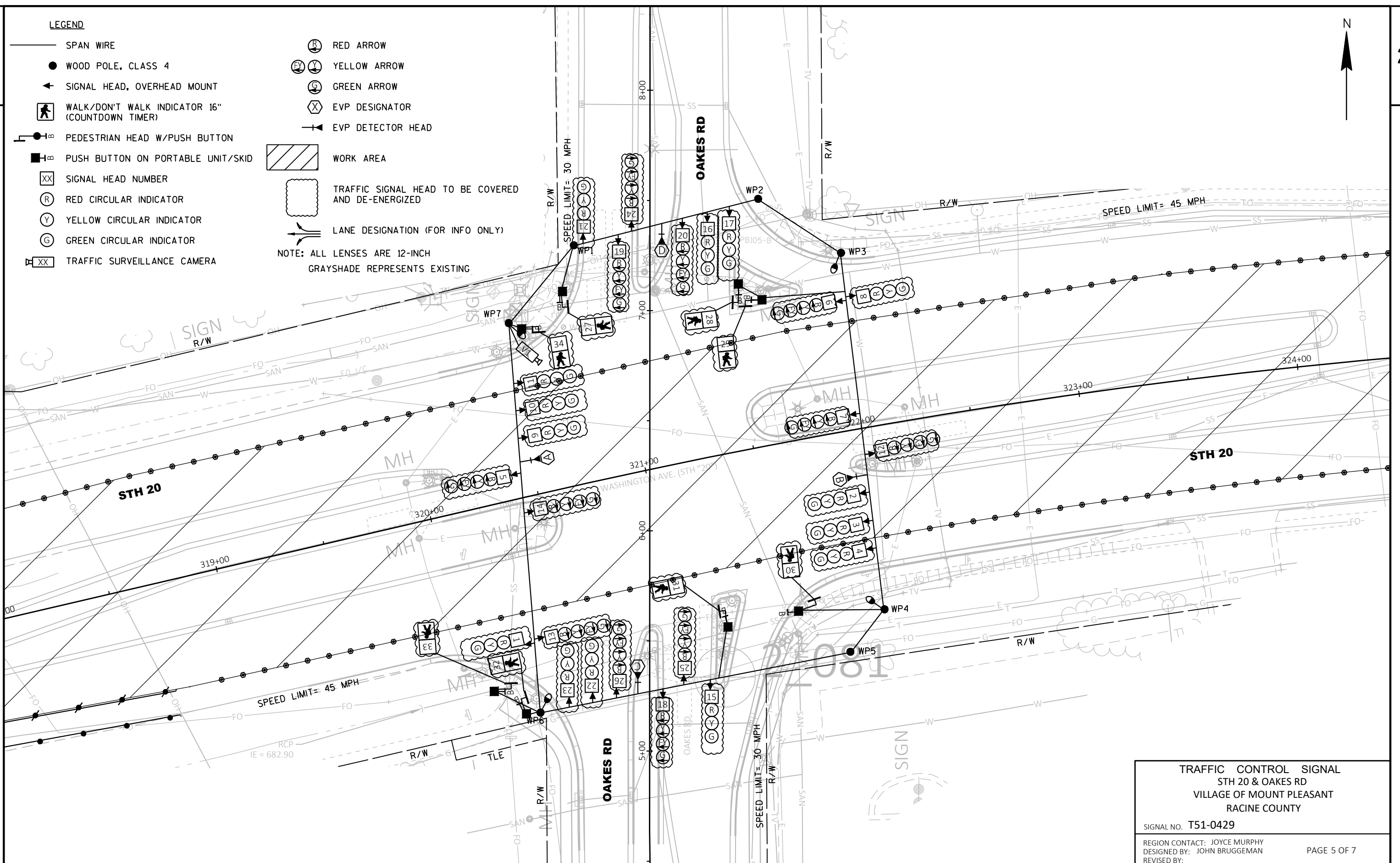
PAGE 4 OF 7



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ◀ SIGNAL HEAD, OVERHEAD MOUNT
- 🚶 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- 🚶 PEDESTRIAN HEAD W/PUSH BUTTON
- PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- 📷 XX TRAFFIC SURVEILLANCE CAMERA
- Ⓡ RED ARROW
- Ⓢ YELLOW ARROW
- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- ▶ EVP DETECTOR HEAD
- ▨ WORK AREA
- ☐ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
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NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
STH 20 & OAKES RD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

SIGNAL NO. **T51-0429**

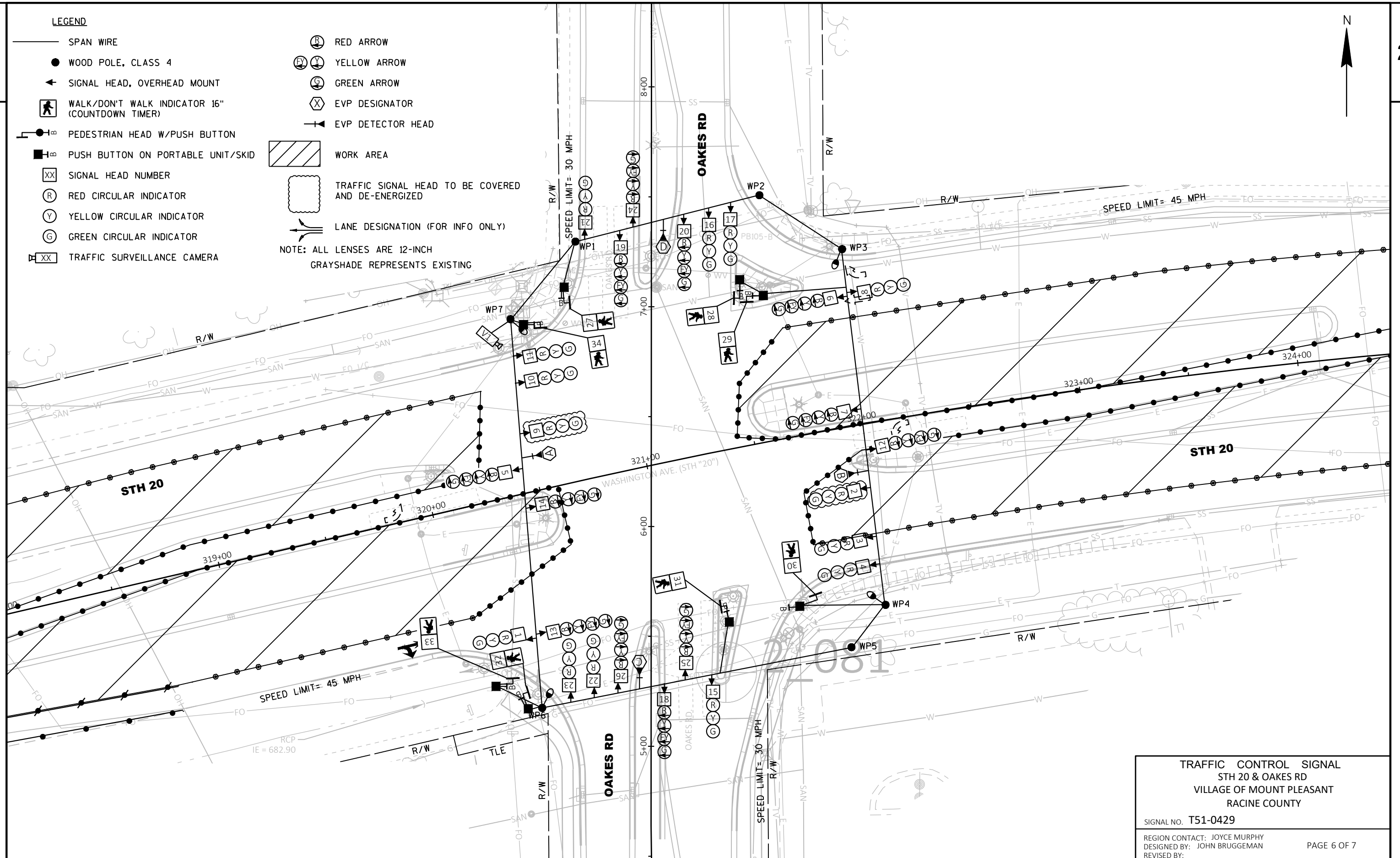
REGION CONTACT: JOYCE MURPHY
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 REVISED BY:

PAGE 5 OF 7

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ◀ SIGNAL HEAD, OVERHEAD MOUNT
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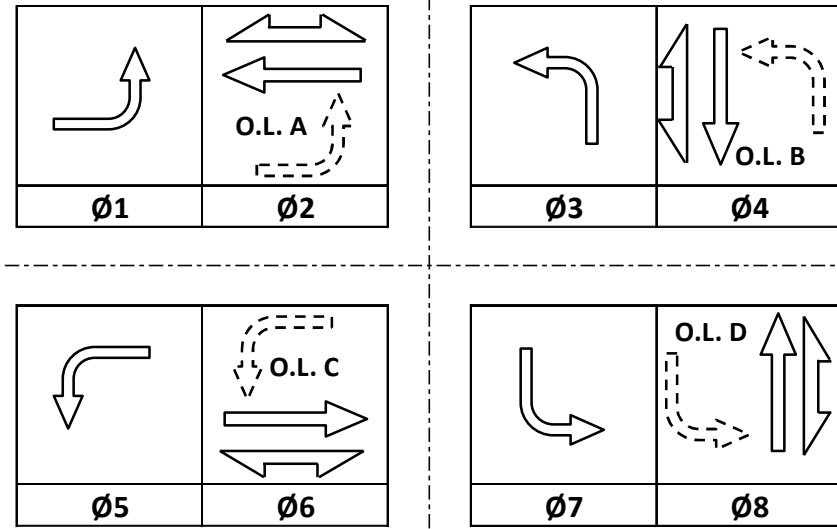
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Ø5	12,13,14	-
Ø6	1,2,3,4	R
Ø7	24,25,26	-
Ø8	15,16,17	R
Ø2P	27,28	
Ø4P	33,34	
Ø6P	31,32	
Ø8P	29,30	
OLA	5,6,7	R
OLB	18,19,20	R
OLC	12,13,14	R
OLD	24,25,26	R

RING 1

RING 2



N



CONTROLLER LOGIC

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

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

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

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

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

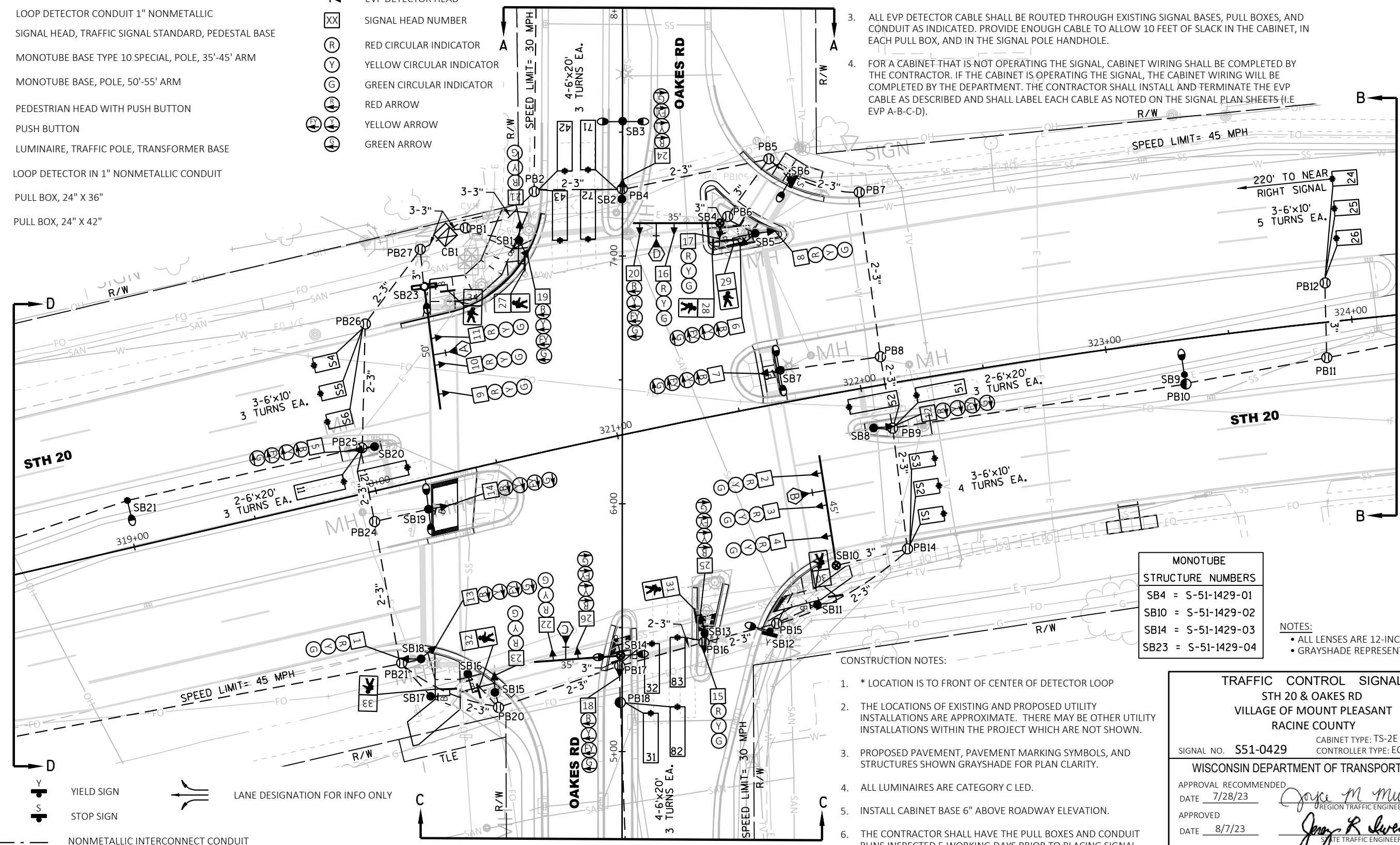
STH 20 & OAKES RD	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: T51-0429	CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 7 OF 7

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE TYPE 10 SPECIAL, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 50'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING SHALL BE COMPLETED BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE CABINET WIRING WILL BE COMPLETED BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE SIGNAL PLAN SHEETS (I.E EVP A-B-C-D).



MONOTUBE STRUCTURE NUMBERS	
SB4	= S-51-1429-01
SB10	= S-51-1429-02
SB14	= S-51-1429-03
SB23	= S-51-1429-04

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

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT OF CENTER OF DETECTOR LOOP
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. PROPOSED PAVEMENT, PAVEMENT MARKING SYMBOLS, AND STRUCTURES SHOWN GRAYSHADE FOR PLAN CLARITY.
4. ALL LUMINAIRES ARE CATEGORY C LED.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.

TRAFFIC CONTROL SIGNAL
STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

CABINET TYPE: TS-2E
 CONTROLLER TYPE: ECONOLITE

SIGNAL NO. **S51-0429**

WISCONSIN DEPARTMENT OF TRANSPORTATION

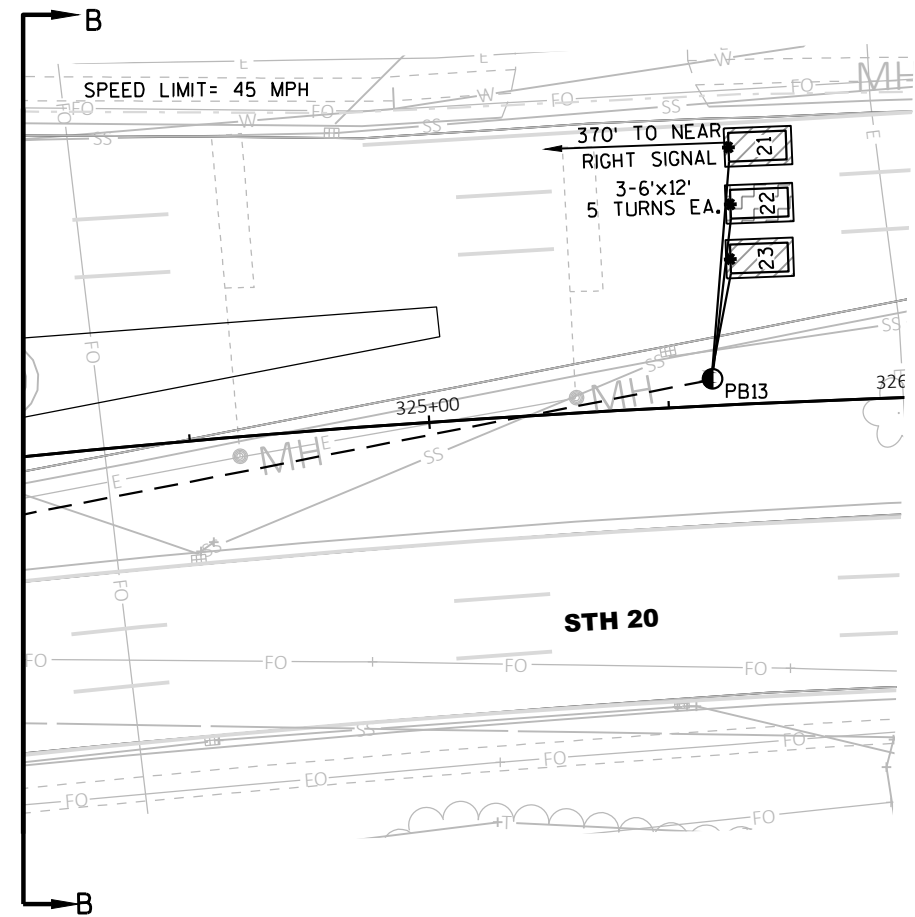
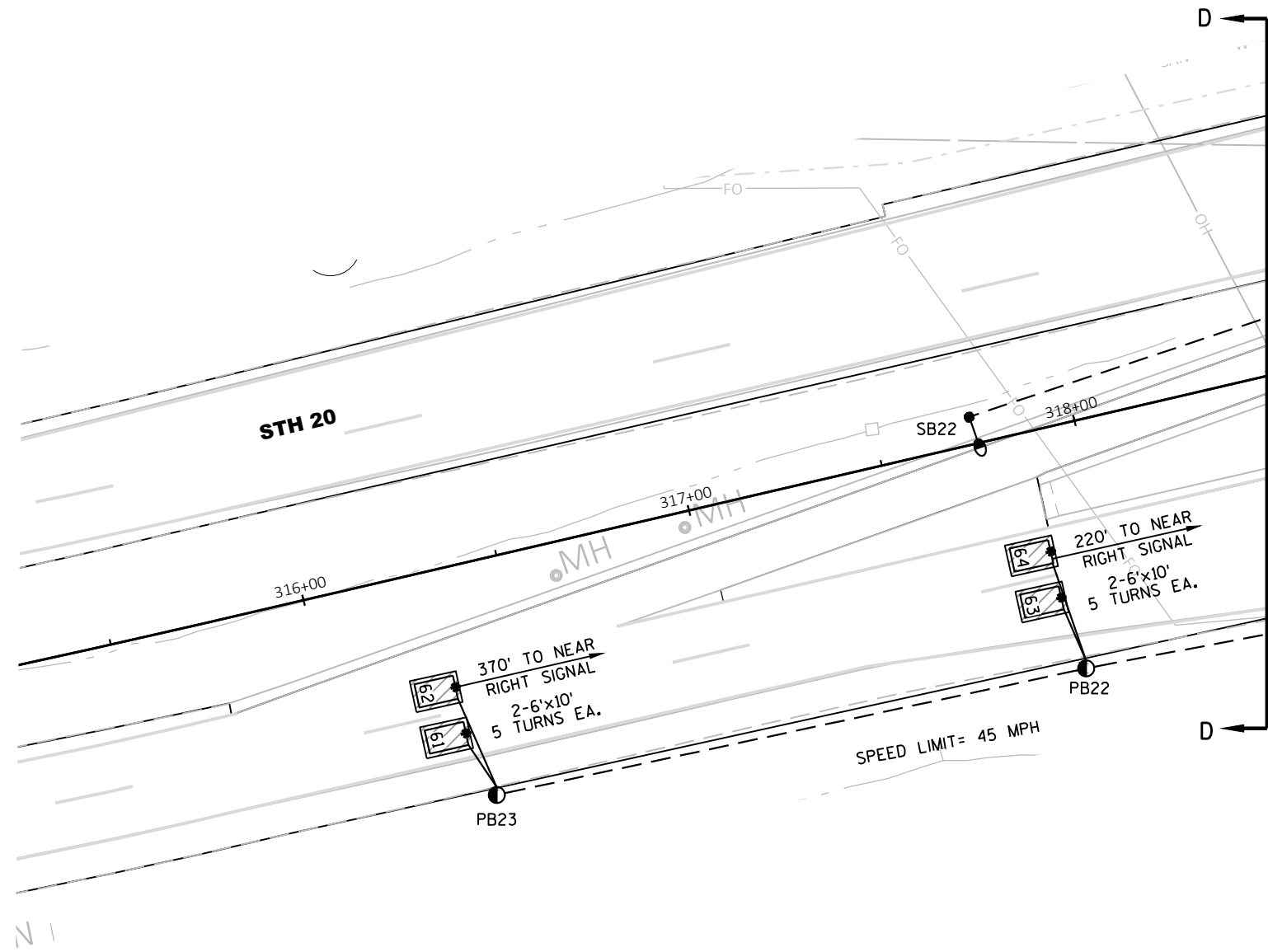
APPROVAL RECOMMENDED
 DATE 7/28/23 *Joyce M. Murphy*
 REGION TRAFFIC ENGINEER

APPROVED
 DATE 8/7/23 *James R. Laven*
 STATE TRAFFIC ENGINEER

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 1 OF 4

7-28-23 JPB

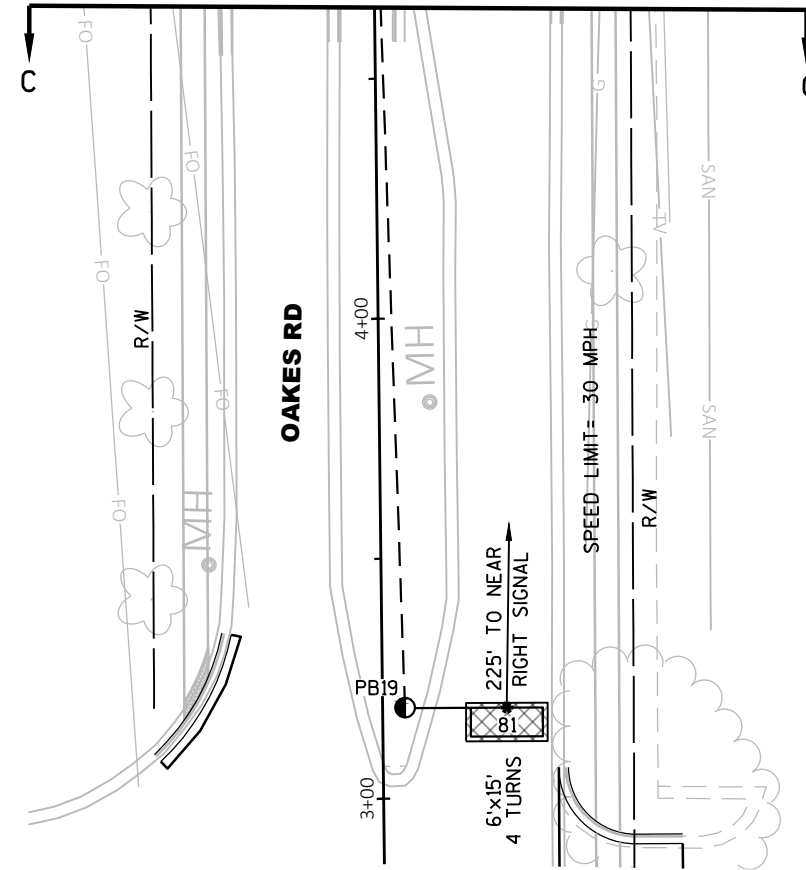
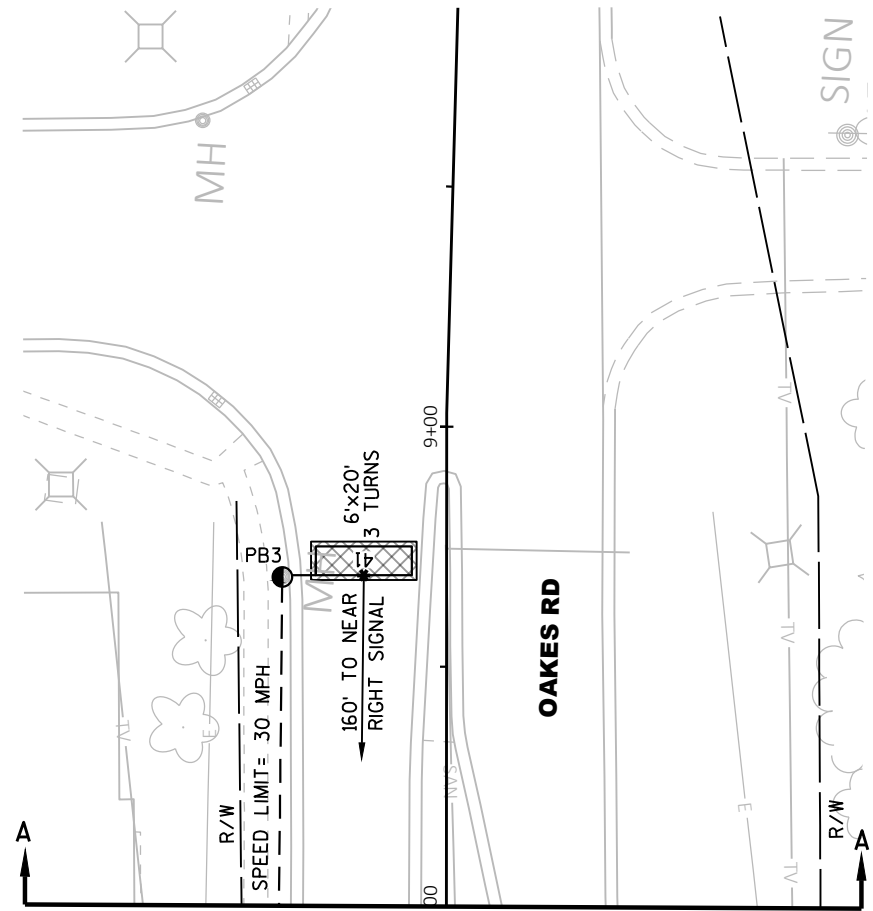


TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-0429

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 2 OF 4



TRAFFIC CONTROL SIGNAL
 STH 20 & OAKES RD
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

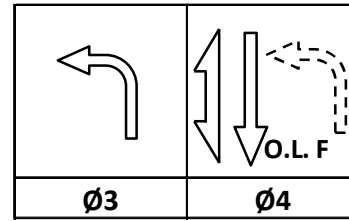
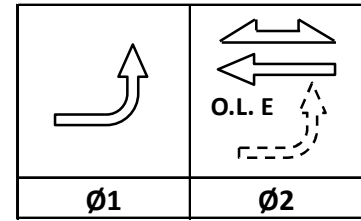
SIGNAL NO. **S51-0429**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

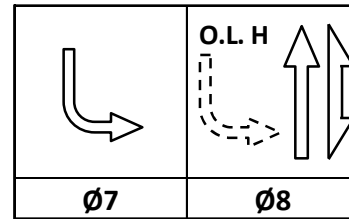
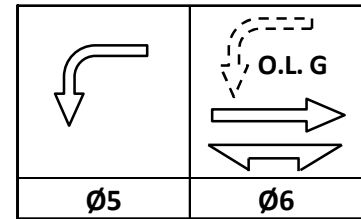
PAGE 3 OF 4

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø3	18,19,20	R
Ø4	21,22,23	R
Ø5	12,13,14	R
Ø6	1,2,3,4	R
Ø7	24,25,26	R
Ø8	15,16,17	
Ø2P	27,28	
Ø4P	33,34	
Ø6P	31,32	
Ø8P	29,30	
OLE	5,6,7	-
OLF	18,19,20	-
OLG	12,13,14	-
OLH	24,25,26	-

RING 1



RING 2



BARRIER



CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.
 AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

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

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 51-0034

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	23	25	31	41	42	51
CALLED PHASE	1	2	2	2	3	4	4	5
CALL OPTION	X	X	X	X	X		X	X
DELAY TIME							X	
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME						X		
USE ADDED INITIAL		X	X	X				
CROSS SWITCH PHASE	2				4			6

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)	61	63	71	81	82	S1	S3	S5
CALLED PHASE	6	6	7	8	8			
CALL OPTION	X	X	X		X			
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X			
EXTEND TIME				X				
USE ADDED INITIAL	X	X						
CROSS SWITCH PHASE			8					

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22	24	26	32		43	52
CALLED PHASE	1	2	2	2	3		4	5
CALL OPTION	X	X	X	X	X		X	X
DELAY TIME							X	
EXTENTION OPTION	X	X	X	X	X		X	X
EXTEND TIME								
USE ADDED INITIAL		X	X	X				
CROSS SWITCH PHASE	2				4			6

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)	62	64	72		83	S2	S4	S6
CALLED PHASE	6	6	7		8			
CALL OPTION	X	X	X		X			
DELAY TIME								
EXTENTION OPTION	X	X	X		X			
EXTEND TIME								
USE ADDED INITIAL	X	X						
CROSS SWITCH PHASE			8					

STH 20 & OAKES RD	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: S51-0429	CABINET TYPE: TS2-E
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 4 OF 4

PROJECT ID:	2250-15-70
INTERSECTION:	STH 20 & OAKES RD

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR								D/WALK	WALK	PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>					
SB1	15	19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		21	RED	ORG	GRN									
		27 B								BLK	BLU	WHT/BLK		
SB2	12	24				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB4	12	16	RED	ORG	GRN									
		17	RED	ORG	GRN									
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		28 B								BLK	BLU	WHT/BLK		
SB5	12	6				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		8	RED	ORG	GRN									
		29 B								BLK	BLU	WHT/BLK		
SB7	12	7				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		B										WHT/BLK		
SB8	12	12				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB10	15	2	RED	ORG	GRN									
		3	RED	ORG	GRN									
		4	RED	ORG	GRN									
SB11	7	30								BLK	BLU			
		B										WHT/BLK		
SB13	12	15	RED	ORG	GRN									
		25				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		31 B								BLK	BLU	WHT/BLK		
SB14	15	18				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
		22	RED	ORG	GRN									
		26				RED/WHT	BLU/BLK	GRN/WHT	BLU/WHT					
		B										WHT/BLK		
SB15	7	23	RED	ORG	GRN									
SB16	12	32								BLK	BLU			
		B										WHT/BLK		
SB17	12	33								BLK	BLU			
		B										WHT/BLK		
SB18	12	1	RED	ORG	GRN									
		13				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB19	12	14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB20	12	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT					
SB23	15	9	RED	ORG	GRN									
		10	RED	ORG	GRN									
		11	RED	ORG	GRN									
		34								BLK	BLU			
		B										WHT/BLK		

Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB4
SB4	SB5
SB5	SB7
SB7	SB8
SB8	SB10
SB10	SB11
SB11	SB13
SB13	SB14
SB14	SB15
SB15	SB16
SB16	SB17
SB17	SB18
SB18	SB19
SB19	SB20
SB20	SB23
SB23	CB1

Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB2	SB2
PB4	SB2
PB5	SB4
PB6	SB4
PB7	SB5
PB8	SB7
PB9	SB8
PB14	SB10
PB15	SB11
PB16	SB13
PB17	SB14
PB20	SB15
PB21	SB18
PB24	SB19
PB25	SB20
PB26	SB23
PB27	CB1

UF 2-10 AWG Grounded	
From	To
CB1	SB3
SB3	SB6
SB6	SB7
SB7	SB9
CB1	SB23
SB23	SB19
SB19	SB14
SB14	SB12
CB1	SB21
SB21	SB22

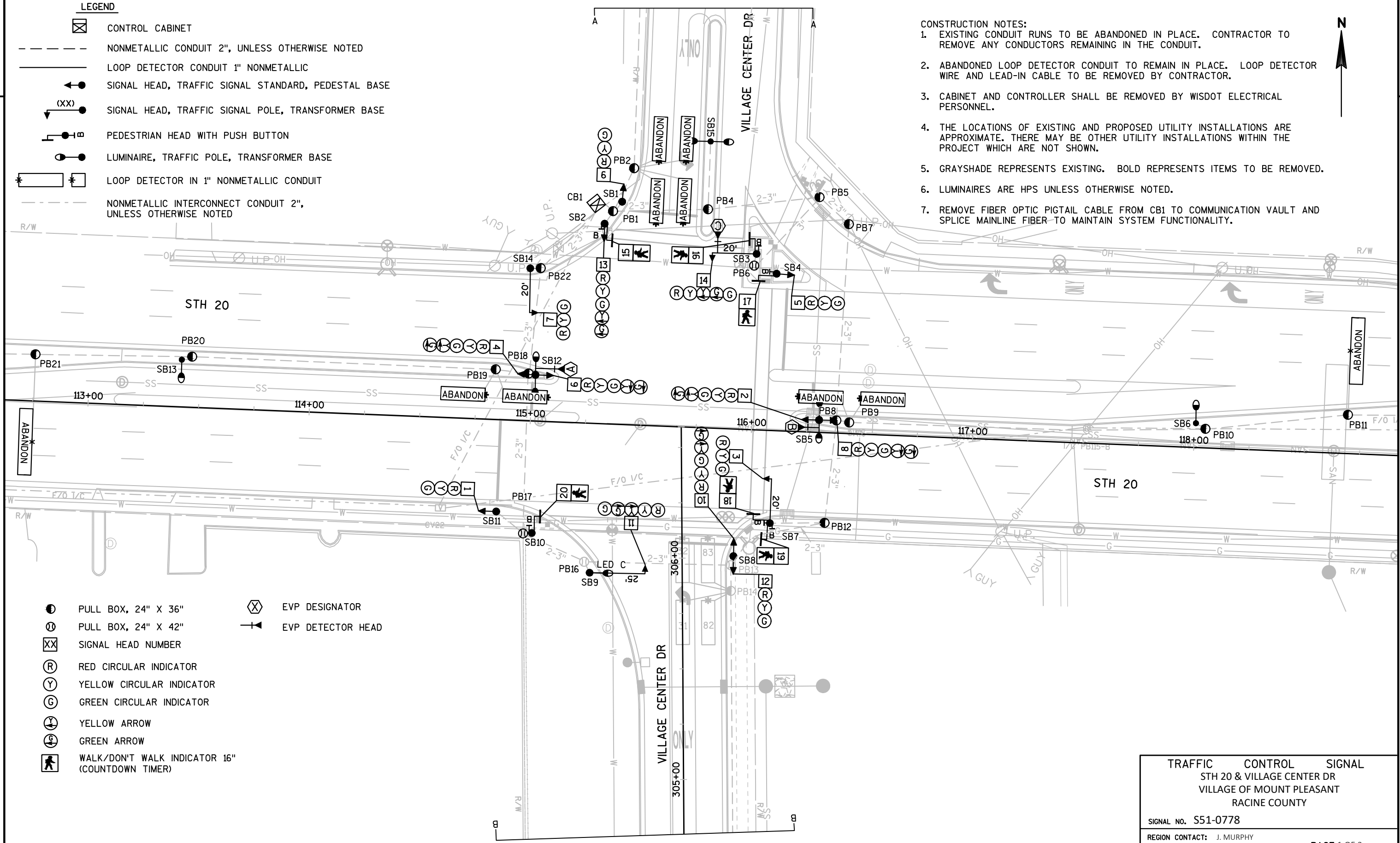
Vehicle Preemption	
From	To
CB1	SB23 (HEAD 'A')
CB1	SB10 (HEAD 'B')
CB1	SB14 (HEAD 'C')
CB1	SB4 (HEAD 'D')

- *Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
- *Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
- *At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED

- CONSTRUCTION NOTES:
1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
 2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY CONTRACTOR.
 3. CABINET AND CONTROLLER SHALL BE REMOVED BY WISDOT ELECTRICAL PERSONNEL.
 4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
 5. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
 6. LUMINAIRES ARE HPS UNLESS OTHERWISE NOTED.
 7. REMOVE FIBER OPTIC PIGTAIL CABLE FROM CB1 TO COMMUNICATION VAULT AND SPLICE MAINLINE FIBER TO MAINTAIN SYSTEM FUNCTIONALITY.



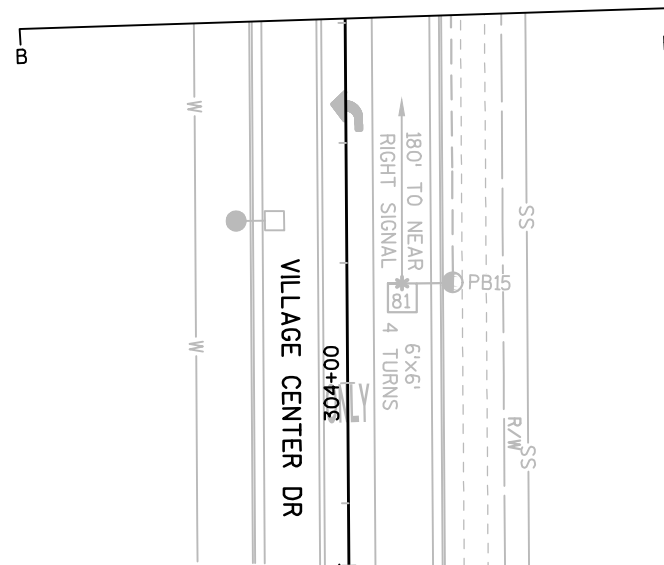
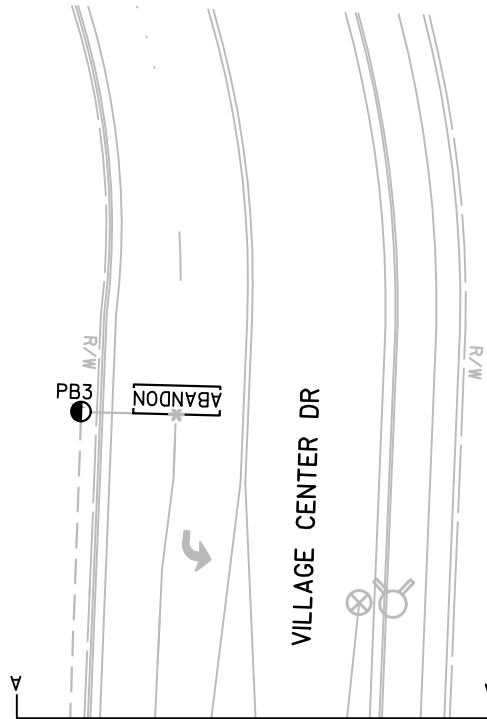
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD

TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-0778

REGION CONTACT: J. MURPHY
 DESIGNED BY: J. BRUGGEMAN
 REVISED BY: J. BRUGGEMAN

PAGE 1 OF 2



TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-0778

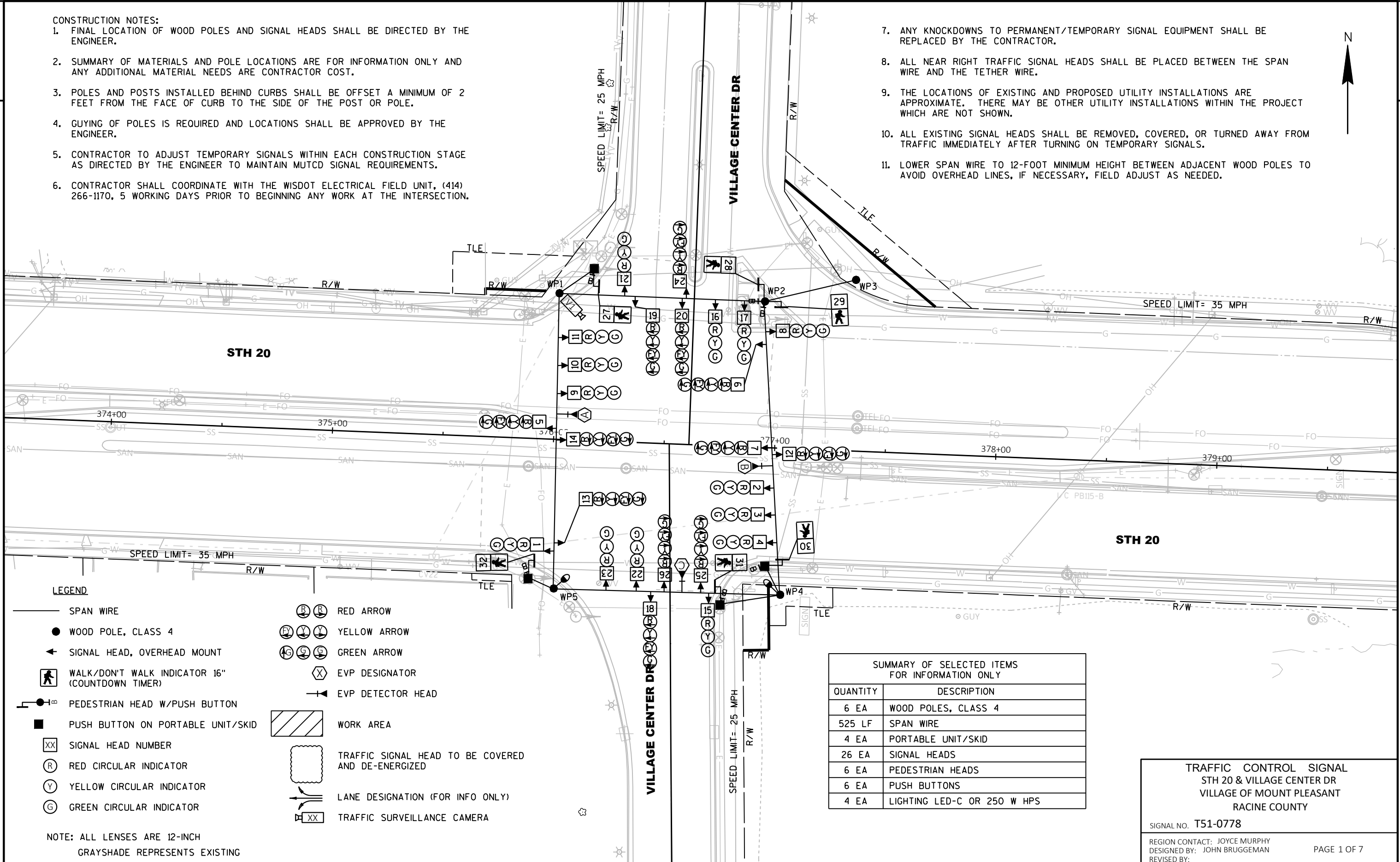
REGION CONTACT: J. MURPHY
 DESIGNED BY:
 REVISED BY: J. BRUGGEMAN

PAGE 2 OF 2

CONSTRUCTION NOTES:

1. FINAL LOCATION OF WOOD POLES AND SIGNAL HEADS SHALL BE DIRECTED BY THE ENGINEER.
2. SUMMARY OF MATERIALS AND POLE LOCATIONS ARE FOR INFORMATION ONLY AND ANY ADDITIONAL MATERIAL NEEDS ARE CONTRACTOR COST.
3. POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
4. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
6. CONTRACTOR SHALL COORDINATE WITH THE WISDOT ELECTRICAL FIELD UNIT, (414) 266-1170, 5 WORKING DAYS PRIOR TO BEGINNING ANY WORK AT THE INTERSECTION.

7. ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
8. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND THE TETHER WIRE.
9. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
10. ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED, OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.
11. LOWER SPAN WIRE TO 12-FOOT MINIMUM HEIGHT BETWEEN ADJACENT WOOD POLES TO AVOID OVERHEAD LINES, IF NECESSARY, FIELD ADJUST AS NEEDED.



LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- 🚶 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- 🚶 PEDESTRIAN HEAD W/PUSH BUTTON
- PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- ⓇⓈ RED ARROW
- ⓈⓉ YELLOW ARROW
- ⓉⓉ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- ⚡ EVP DETECTOR HEAD
- ▨ WORK AREA
- ☐ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ↔ LANE DESIGNATION (FOR INFO ONLY)
- 📷 XX TRAFFIC SURVEILLANCE CAMERA

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
6 EA	WOOD POLES, CLASS 4
525 LF	SPAN WIRE
4 EA	PORTABLE UNIT/SKID
26 EA	SIGNAL HEADS
6 EA	PEDESTRIAN HEADS
6 EA	PUSH BUTTONS
4 EA	LIGHTING LED-C OR 250 W HPS

TRAFFIC CONTROL SIGNAL
STH 20 & VILLAGE CENTER DR
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

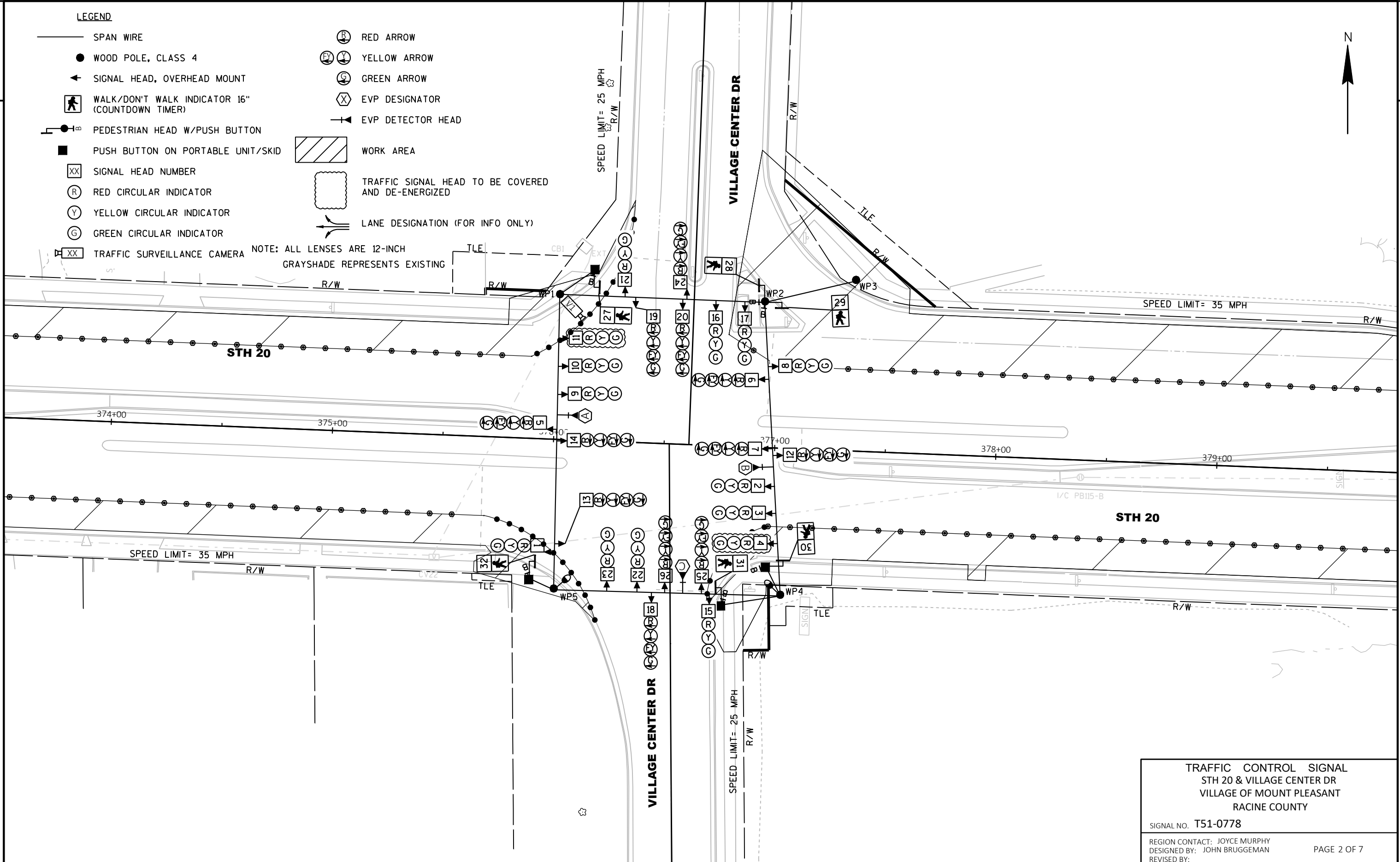
SIGNAL NO. **T51-0778**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- 🚶 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- 🚶 PEDESTRIAN HEAD W/PUSH BUTTON
- PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- ➡ RED ARROW
- ➡ YELLOW ARROW
- ➡ GREEN ARROW
- ⊗ EVP DESIGNATOR
- ➡ EVP DETECTOR HEAD
- ▨ WORK AREA
- ☐ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ➡ LANE DESIGNATION (FOR INFO ONLY)

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. T51-0778

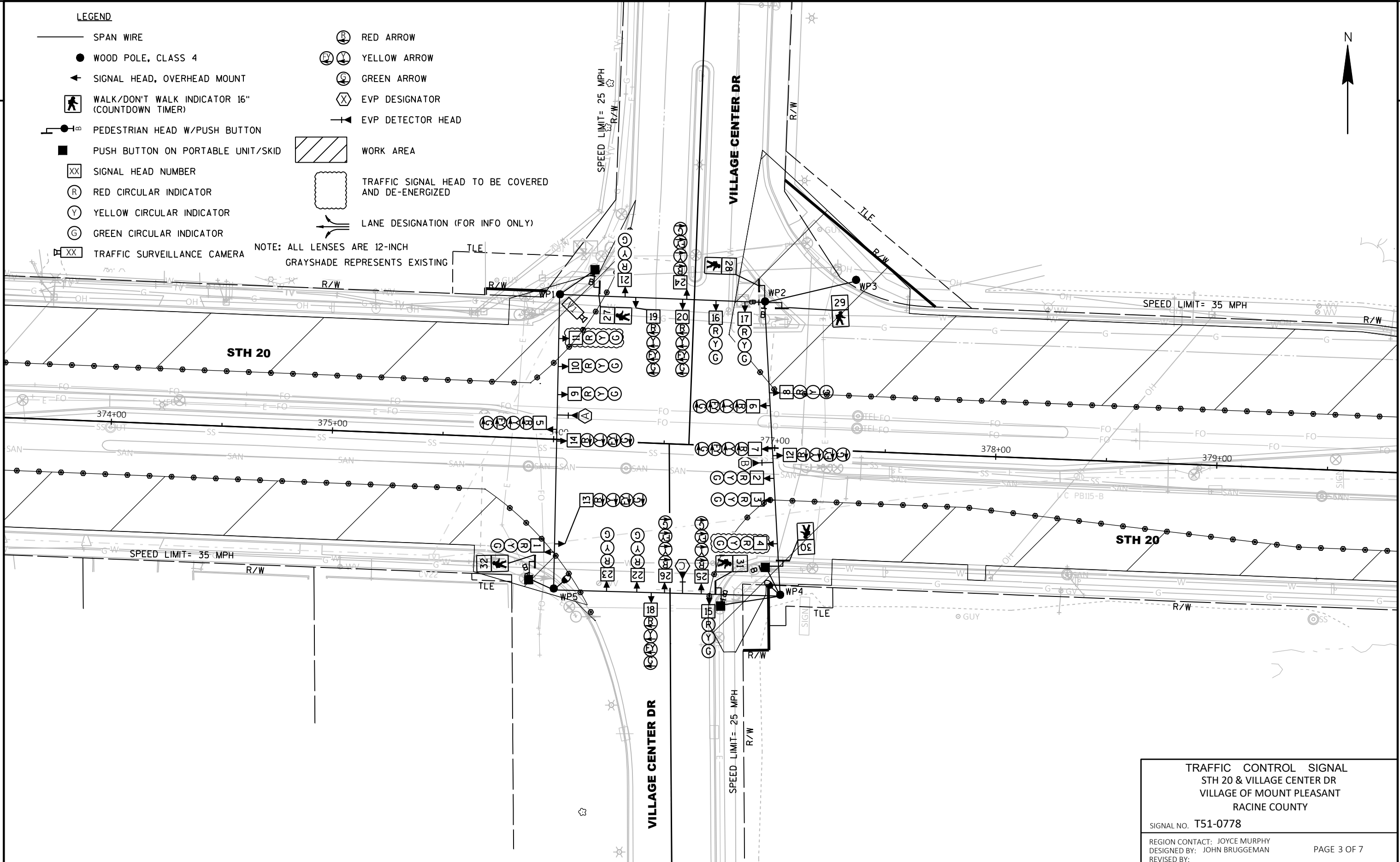
REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 2 OF 7

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
- ← SIGNAL HEAD, OVERHEAD MOUNT
- 🚶 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- 🚶 PEDESTRIAN HEAD W/PUSH BUTTON
- PUSH BUTTON ON PORTABLE UNIT/SKID
- XX SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓣ GREEN CIRCULAR INDICATOR
- XX TRAFFIC SURVEILLANCE CAMERA
- ➡ RED ARROW
- ➡ YELLOW ARROW
- ➡ GREEN ARROW
- ⊗ EVP DESIGNATOR
- ➡ EVP DETECTOR HEAD
- ▨ WORK AREA
- ☐ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ➡ LANE DESIGNATION (FOR INFO ONLY)

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. T51-0778

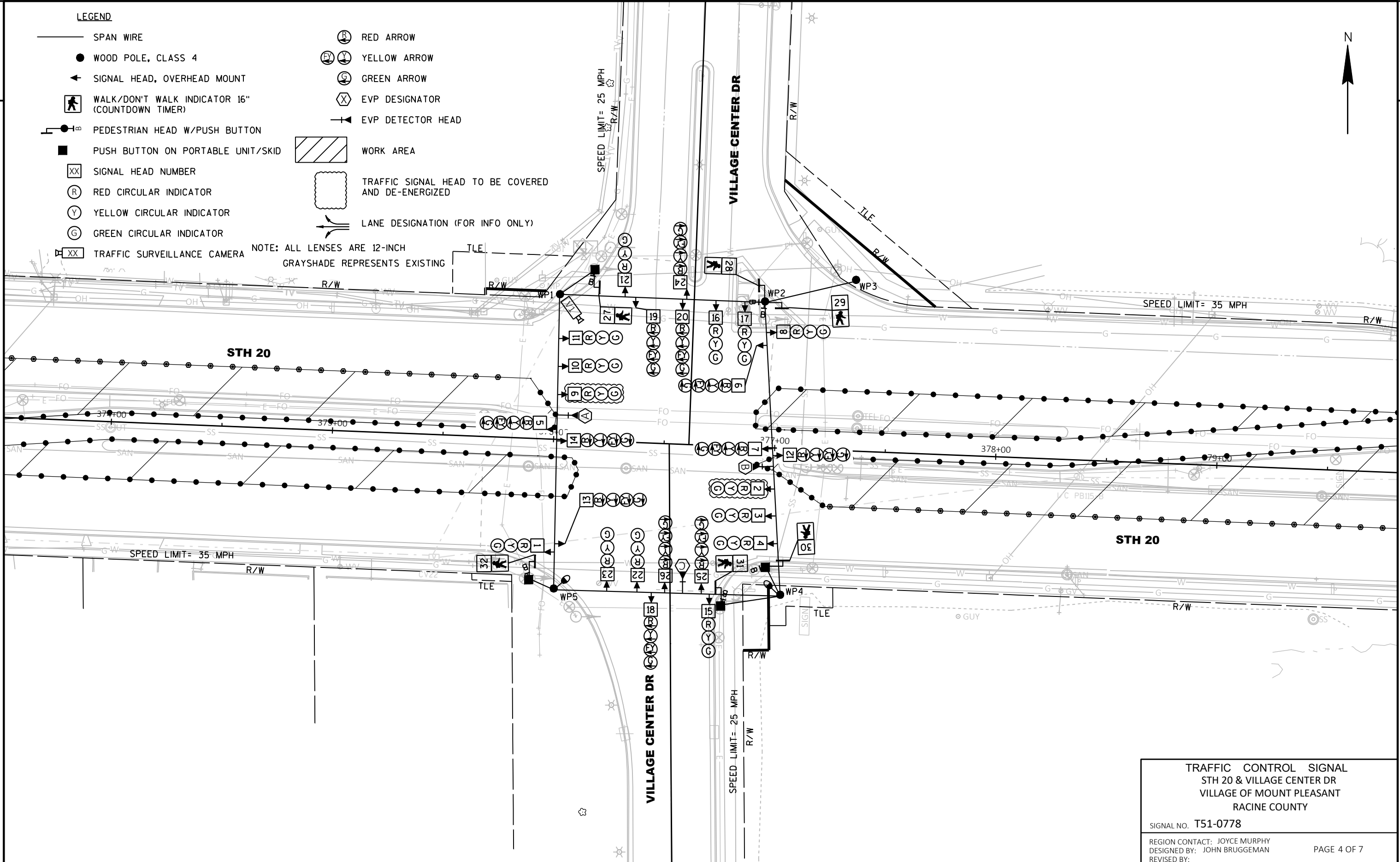
REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 3 OF 7

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
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TRAFFIC CONTROL SIGNAL
STH 20 & VILLAGE CENTER DR
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

SIGNAL NO. **T51-0778**

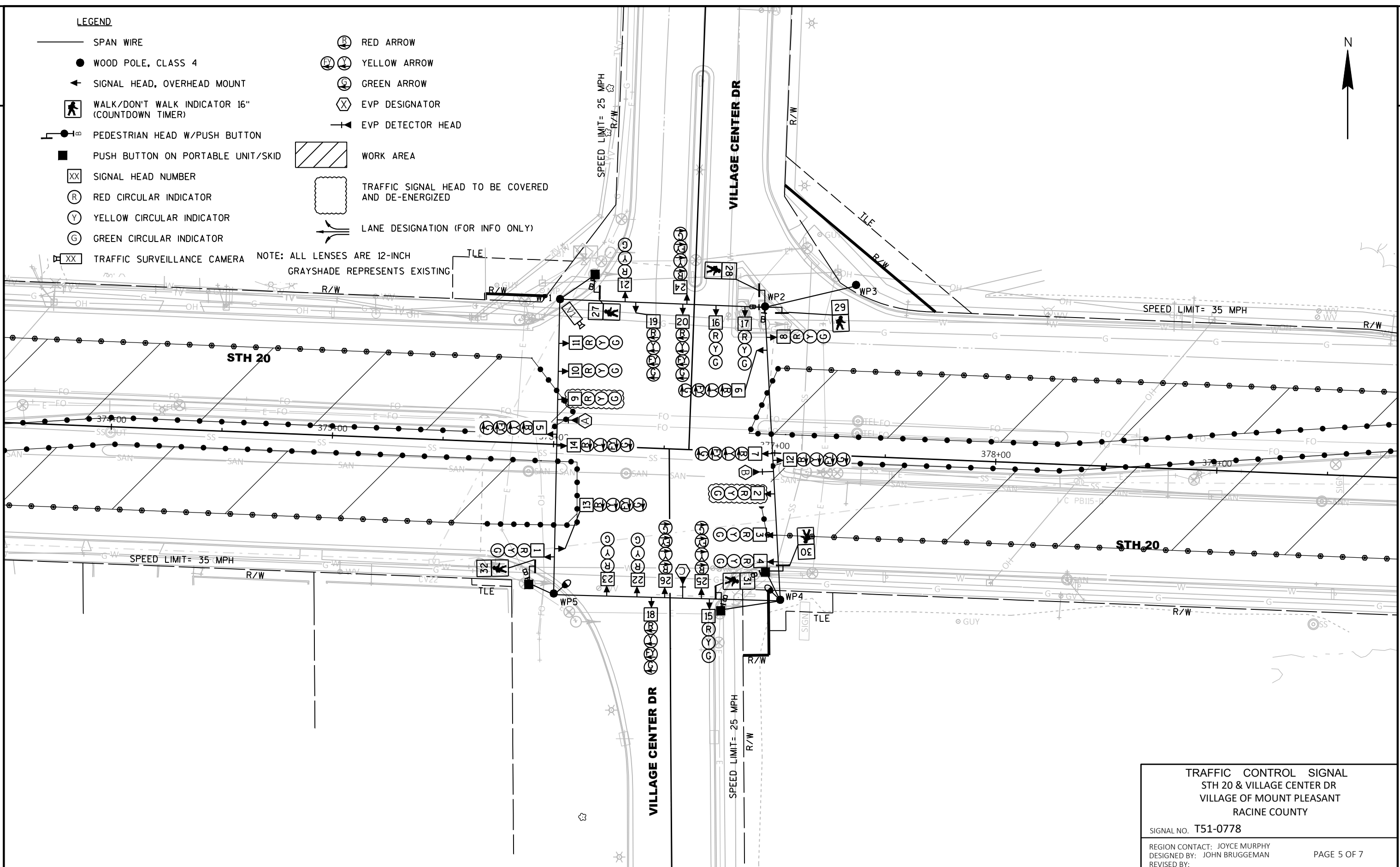
REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 4 OF 7

LEGEND

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- Ⓡ RED ARROW
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- Ⓣ GREEN ARROW
- Ⓧ EVP DESIGNATOR
- ▶ EVP DETECTOR HEAD
- ▨ WORK AREA
- ☐ TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED
- ↔ LANE DESIGNATION (FOR INFO ONLY)

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

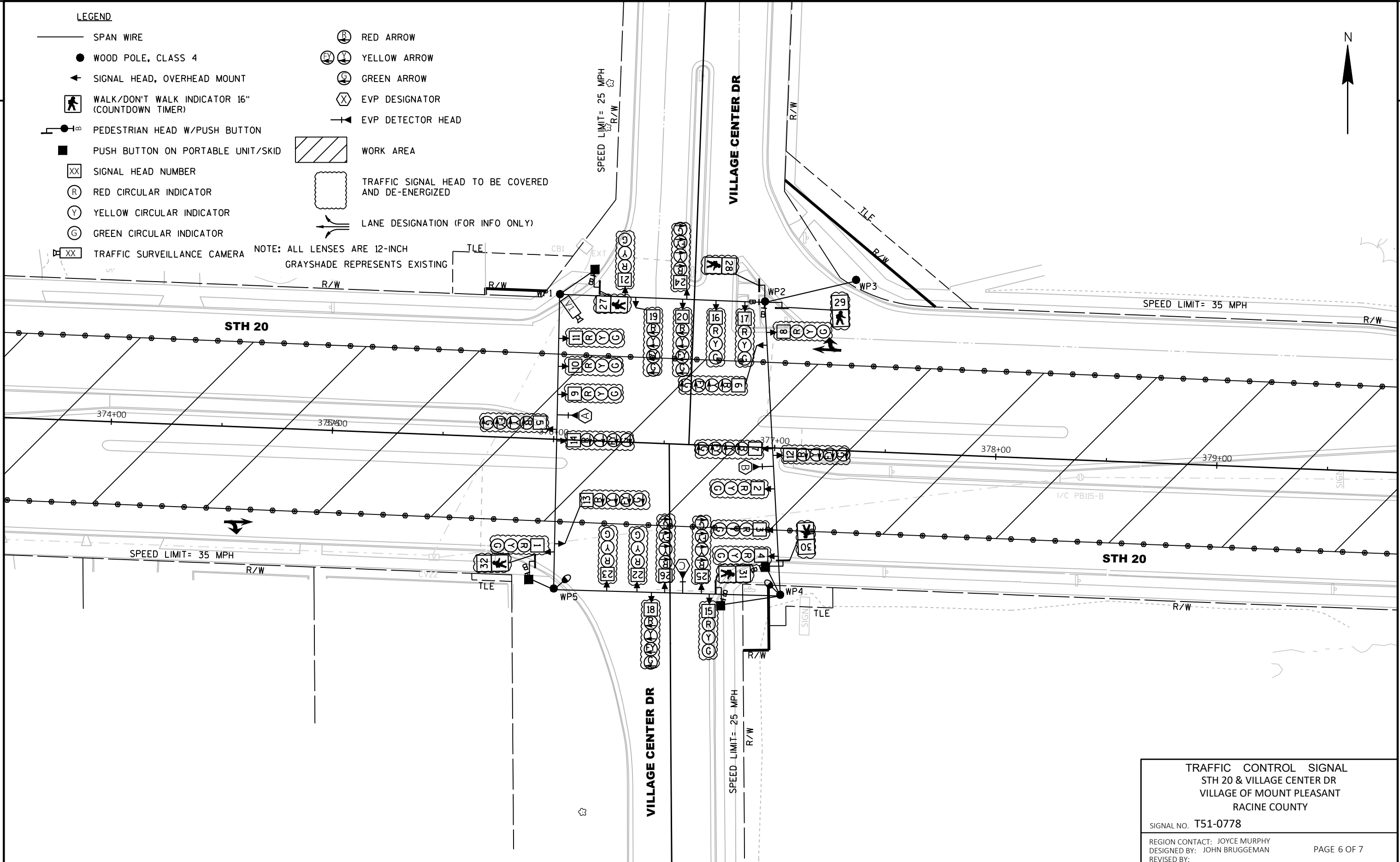
SIGNAL NO. T51-0778

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

LEGEND

- SPAN WIRE
- WOOD POLE, CLASS 4
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NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



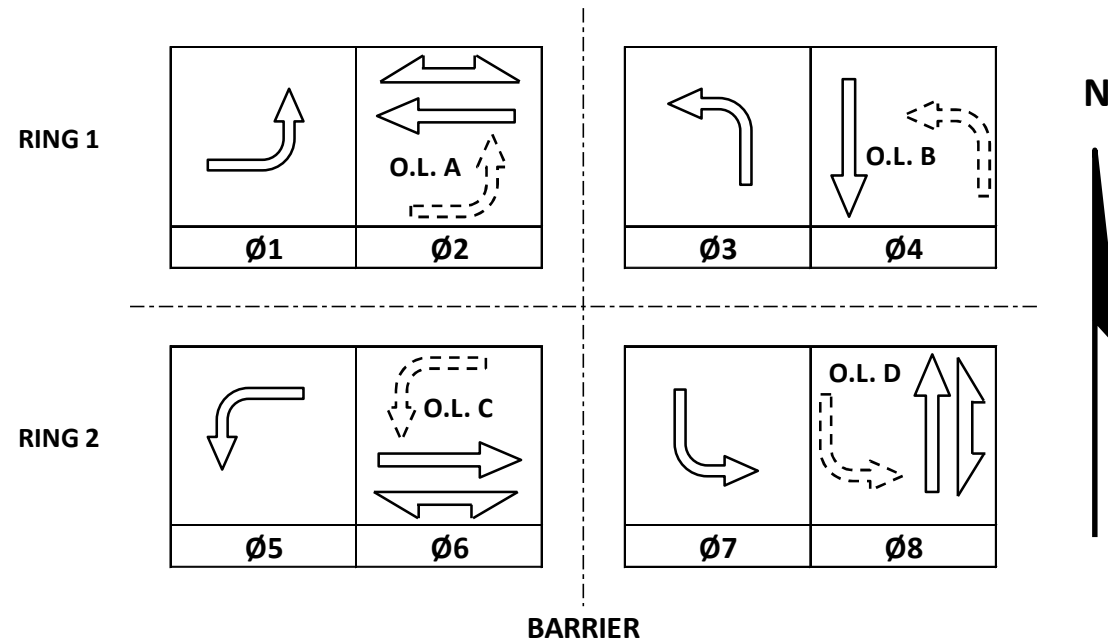
TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. T51-0778

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

PAGE 6 OF 7

	HEAD NUMBERS	FLASH
Ø1	5,6,7	-
Ø2	8,9,10,11	R
Ø3	18,19,20	-
Ø4	21,22,23	R
Ø5	12,13,14	-
Ø6	1,2,3,4	R
Ø7	24,25,26	-
Ø8	15,16,17	R
Ø2P	27,28	
Ø4P		
Ø6P	31,32	
Ø8P	29,30	
OLA	5,6,7	R
OLB	18,19,20	R
OLC	12,13,14	R
OLD	24,25,26	R



CONTROLLER LOGIC

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

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

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

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

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

STH 20 & VILLAGE CENTER DR	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: T51-0778	CABINET TYPE: TEMP
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 7 OF 7

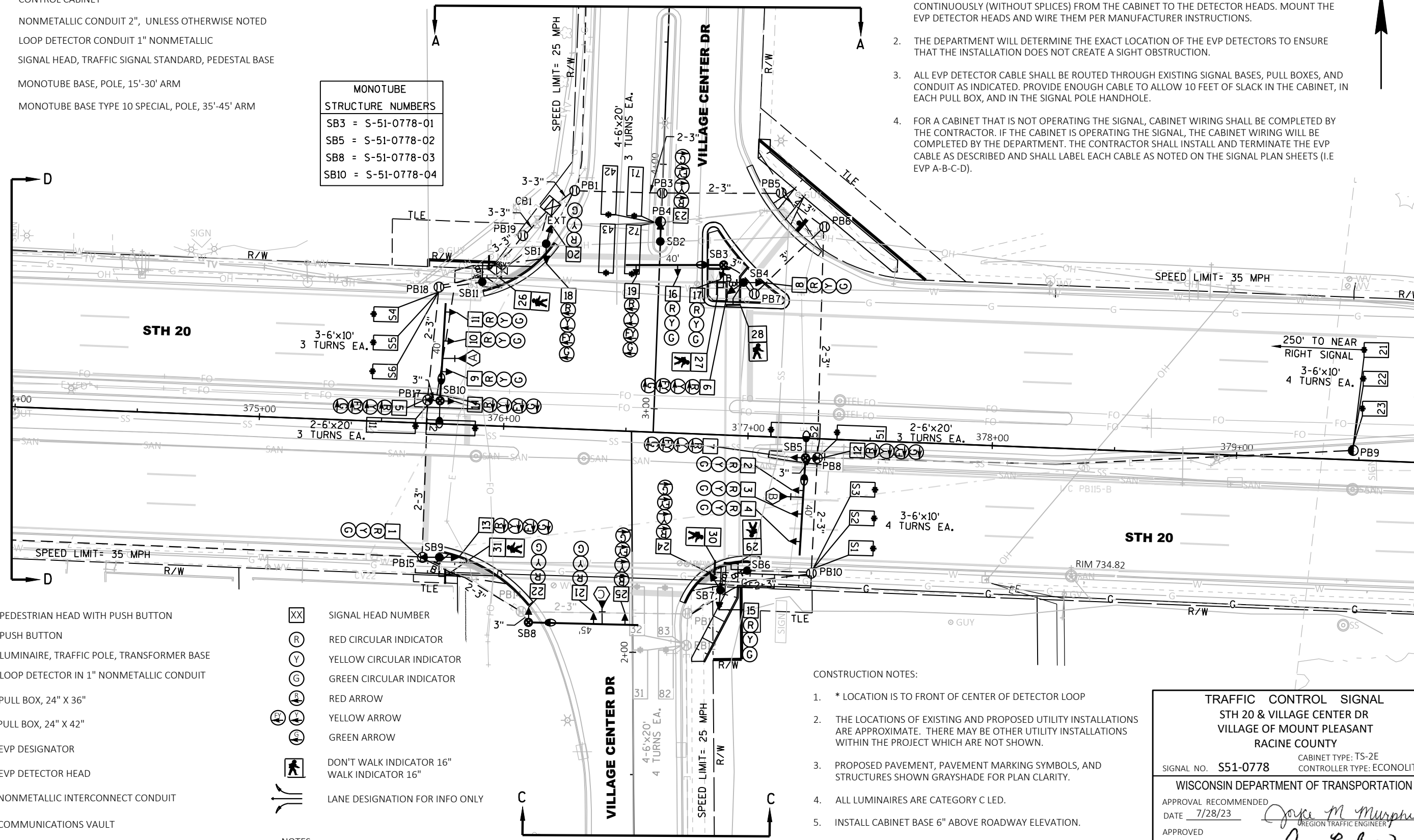
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE TYPE 10 SPECIAL, POLE, 35'-45' ARM

MONOTUBE STRUCTURE NUMBERS	
SB3	= S-51-0778-01
SB5	= S-51-0778-02
SB8	= S-51-0778-03
SB10	= S-51-0778-04

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH EXISTING SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING SHALL BE COMPLETED BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE CABINET WIRING WILL BE COMPLETED BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE SIGNAL PLAN SHEETS (I.E EVP A-B-C-D).



- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- NONMETALLIC INTERCONNECT CONDUIT
- COMMUNICATIONS VAULT

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

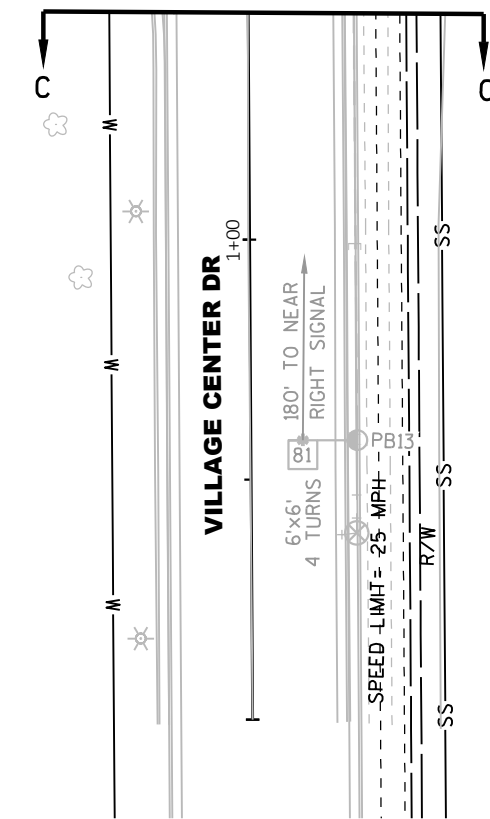
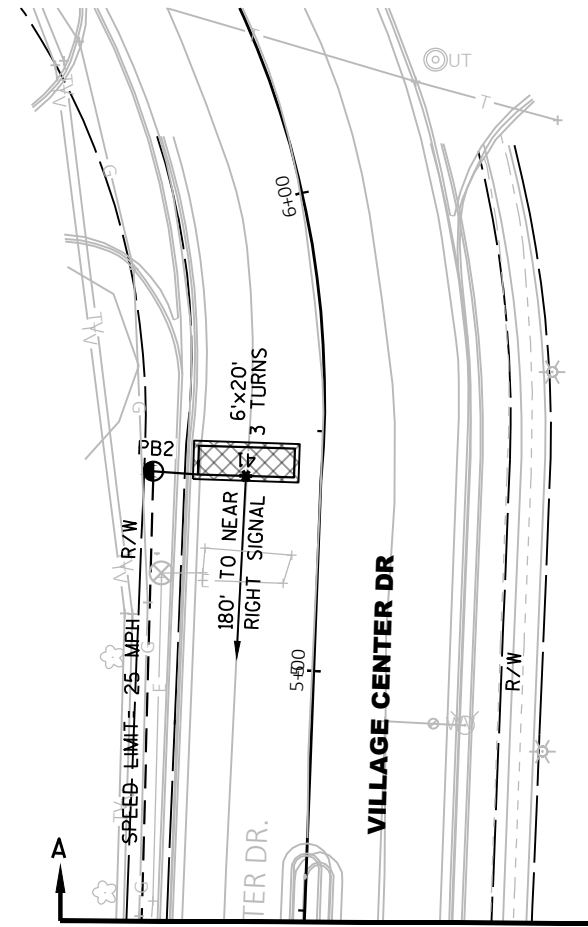
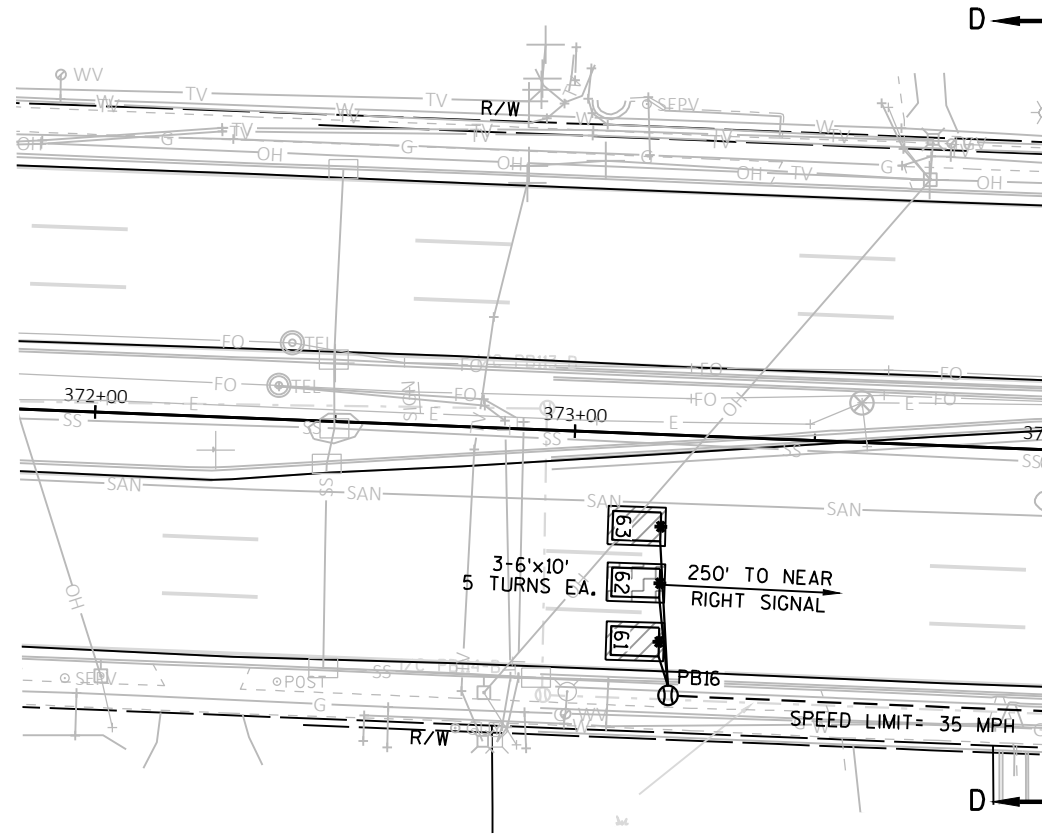
- NOTES:
- ALL LENSES ARE 12-INCH
 - GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT OF CENTER OF DETECTOR LOOP
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. PROPOSED PAVEMENT, PAVEMENT MARKING SYMBOLS, AND STRUCTURES SHOWN GRAYSHADE FOR PLAN CLARITY.
4. ALL LUMINAIRES ARE CATEGORY C LED.
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
6. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED AT LEAST 5 WORKING DAYS PRIOR TO PLACING THE SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170

TRAFFIC CONTROL SIGNAL	
STH 20 & VILLAGE CENTER DR VILLAGE OF MOUNT PLEASANT RACINE COUNTY	
SIGNAL NO. S51-0778	CABINET TYPE: TS-2E CONTROLLER TYPE: ECONOLITE
WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVAL RECOMMENDED DATE <u>7/28/23</u>	<i>Joyce M. Murphy</i> REGIONAL TRAFFIC ENGINEER
APPROVED DATE <u>8/7/23</u>	<i>James R. Luten</i> STATE TRAFFIC ENGINEER
REGION CONTACT: JOYCE MURPHY DESIGNED BY: JOHN BRUGGEMAN REVISED BY:	
PAGE 1 OF 3	

7-28-23 JPB



TRAFFIC CONTROL SIGNAL
 STH 20 & VILLAGE CENTER DR
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

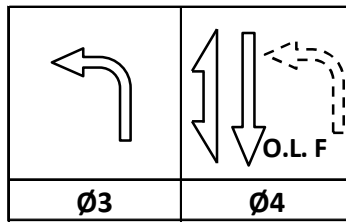
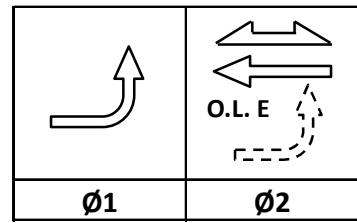
SIGNAL NO. S51-0778

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY:

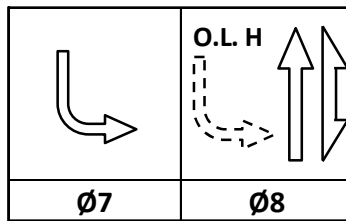
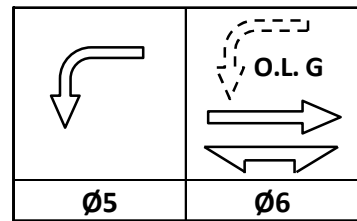
PAGE 2 OF 3

	HEAD NUMBERS	FLASH
Ø1	5,6,7	R
Ø2	8,9,10,11	R
Ø3	18,19	R
Ø4	20,21,22	R
Ø5	12,13,14	R
Ø6	1,2,3,4	R
Ø7	23,24,25	R
Ø8	15,16,17	
Ø2P	26,27	
Ø4P		
Ø6P	30,31	
Ø8P	28,29	
OLE	5,6,7	-
OLF	18,19	-
OLG	12,13,14	-
OLH	23,24,25	-

RING 1



RING 2



BARRIER

N

CONTROLLER LOGIC

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C
MOVEMENT			
PHASE	2+5	6+1	4+7

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7, CONTROLLER SHALL RETURN TO PHASES 4+8.

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	23	31	41	42	51	61
CALLED PHASE	1	2	2	3	4	4	5	6
CALL OPTION	X	X	X	X		X	X	X
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME					X			
USE ADDED INITIAL		X	X					X
CROSS SWITCH PHASE	2			4			6	

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)	63	71	81	82	S1	S3	S5	
CALLED PHASE	6	7	8	8				
CALL OPTION	X	X		X				
DELAY TIME								
EXTENTION OPTION	X	X	X	X				
EXTEND TIME			X					
USE ADDED INITIAL	X							
CROSS SWITCH PHASE		8						

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22		32		43	52	62
CALLED PHASE	1	2		3		4	5	6
CALL OPTION	X	X		X		X	X	X
DELAY TIME								
EXTENTION OPTION	X	X		X		X	X	X
EXTEND TIME								
USE ADDED INITIAL		X						X
CROSS SWITCH PHASE	2			4			6	

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)		72		83	S2	S4	S6	
CALLED PHASE		7		8				
CALL OPTION		X		X				
DELAY TIME								
EXTENTION OPTION		X		X				
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE		8						

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

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 51-0034

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

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

STH 20 & VILLAGE CENTER DR	
VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: 551-0778	CABINET TYPE: TS2-E
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NUMBER: 3 OF 3

PROJECT ID:	2250-15-70
INTERSECTION:	STH 20 & VILLAGE CENTER DR

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

CB1 TO	AWG14 # OF CONDUCTORS	HEAD NO.	SIGNAL INDICATION WIRE COLOR								PED BUTTON	FUTURE APS
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK		
SB1	12	18				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		20	RED	ORG	GRN							
SB2	12	23				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB3	12	16	RED	ORG	GRN							
		17	RED	ORG	GRN							
		19				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		27								BLK	BLU	WHT/BLK
SB4	12	6				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		8	RED	ORG	GRN							
		28								BLK	BLU	WHT/BLK
		B										
SB5	21	2	RED	ORG	GRN							
		3	RED	ORG	GRN							
		4	RED	ORG	GRN							
		7				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		12				RED/WHT	BLU/BLK	GRN/WHT	BLU/WHT			
SB6	12	29								BLK	BLU	WHT/BLK
		B										
SB7	15	15	RED	ORG	GRN							
		24				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		30								BLK	BLU	WHT/BLK
		B										
SB8	15	21	RED	ORG	GRN							
		22	RED	ORG	GRN							
		25				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
SB9	12	1	RED	ORG	GRN							
		13				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		31								BLK	BLU	WHT/BLK
		B										
SB10	15	5				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
		9	RED	ORG	GRN							
		10	RED	ORG	GRN							
		11	RED	ORG	GRN							
		14				RED/WHT	BLU/BLK	GRN/WHT	BLU/WHT			
SB11	7	26								BLK	BLU	WHT/BLK
		B										

- *Use the white conductor in the cable assembly as the grounded conductor for all traffic signal indications
- *Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.
- *At the signal bases, connect one terminal from the pedestrian push buttons to the color indicated in the chart. Connect the other terminal to the grounded conductor.
- *Reconnect the grounding conductors wherever the circuit has been interrupted to ensure the grounding circuit is complete.

Equipment Grounding Conductor 10 AWG Green XLP	
From	To
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	CB1

Pull Box Bonding Jumper 10 AWG Green XLP	
From	To
PB1	CB1
PB3	SB2
PB4	SB2
PB5	SB2
PB6	SB4
PB7	SB4
PB8	SB5
PB10	SB6
PB11	SB7
PB14	SB8
PB15	SB9
PB17	SB10
PB18	SB11
PB19	CB1

Lighting UF 2-10 AWG Grounded	
From	To
CB1	SB3
SB3	SB5
CB1	SB10
SB10	SB8

Emergency Vehicle Preemption	
From	To
CB1	SB10 (HEAD 'A')
CB1	SB5 (HEAD 'B')
CB1	SB8 (HEAD 'C')

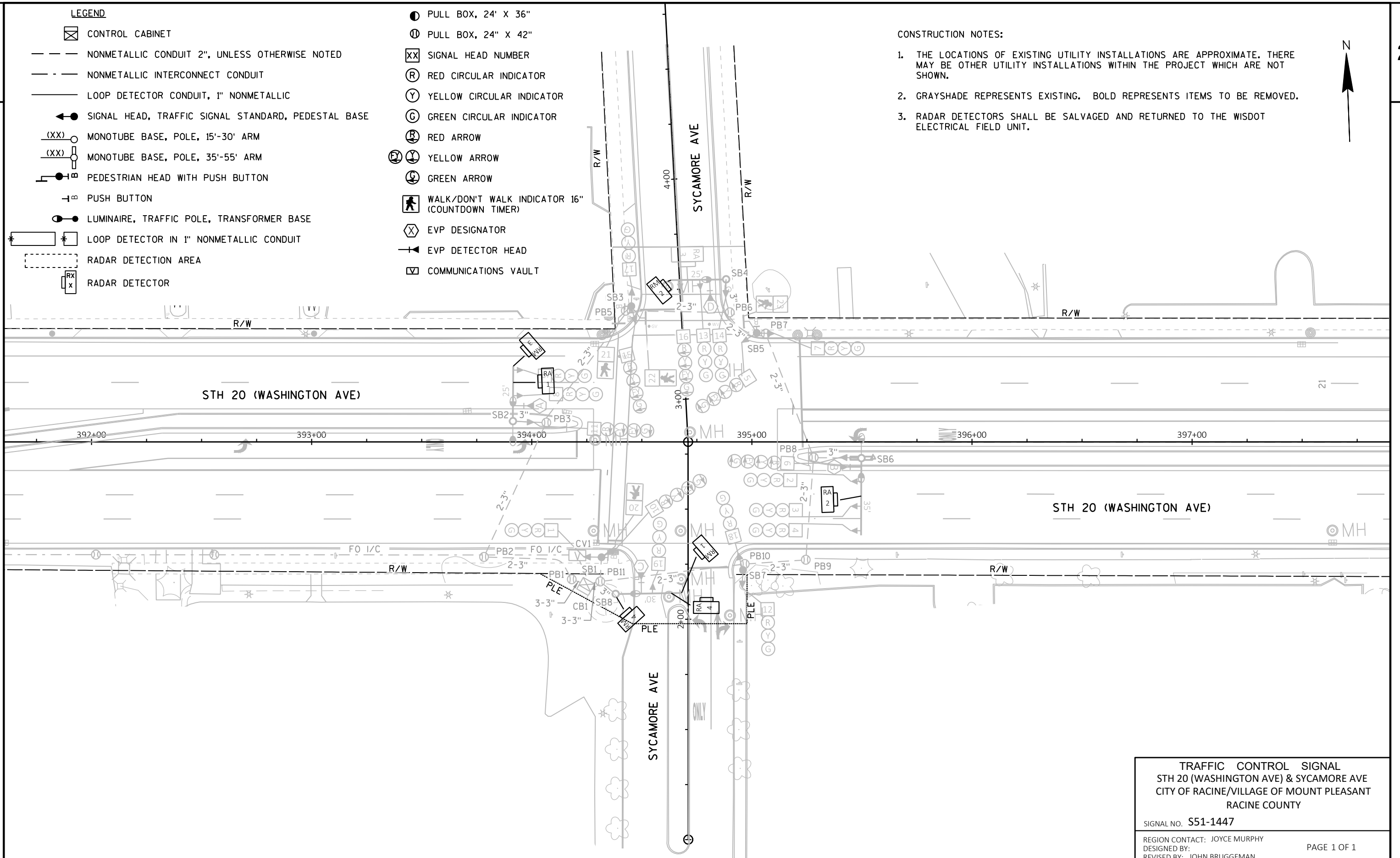
LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-55' ARM
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- RADAR DETECTION AREA
- RADAR DETECTOR

- PULL BOX, 24' X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- COMMUNICATIONS VAULT

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.
3. RADAR DETECTORS SHALL BE SALVAGED AND RETURNED TO THE WISDOT ELECTRICAL FIELD UNIT.



TRAFFIC CONTROL SIGNAL
 STH 20 (WASHINGTON AVE) & SYCAMORE AVE
 CITY OF RACINE/VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. **S51-1447**

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY: JOHN BRUGGEMAN

PAGE 1 OF 1

LEGEND

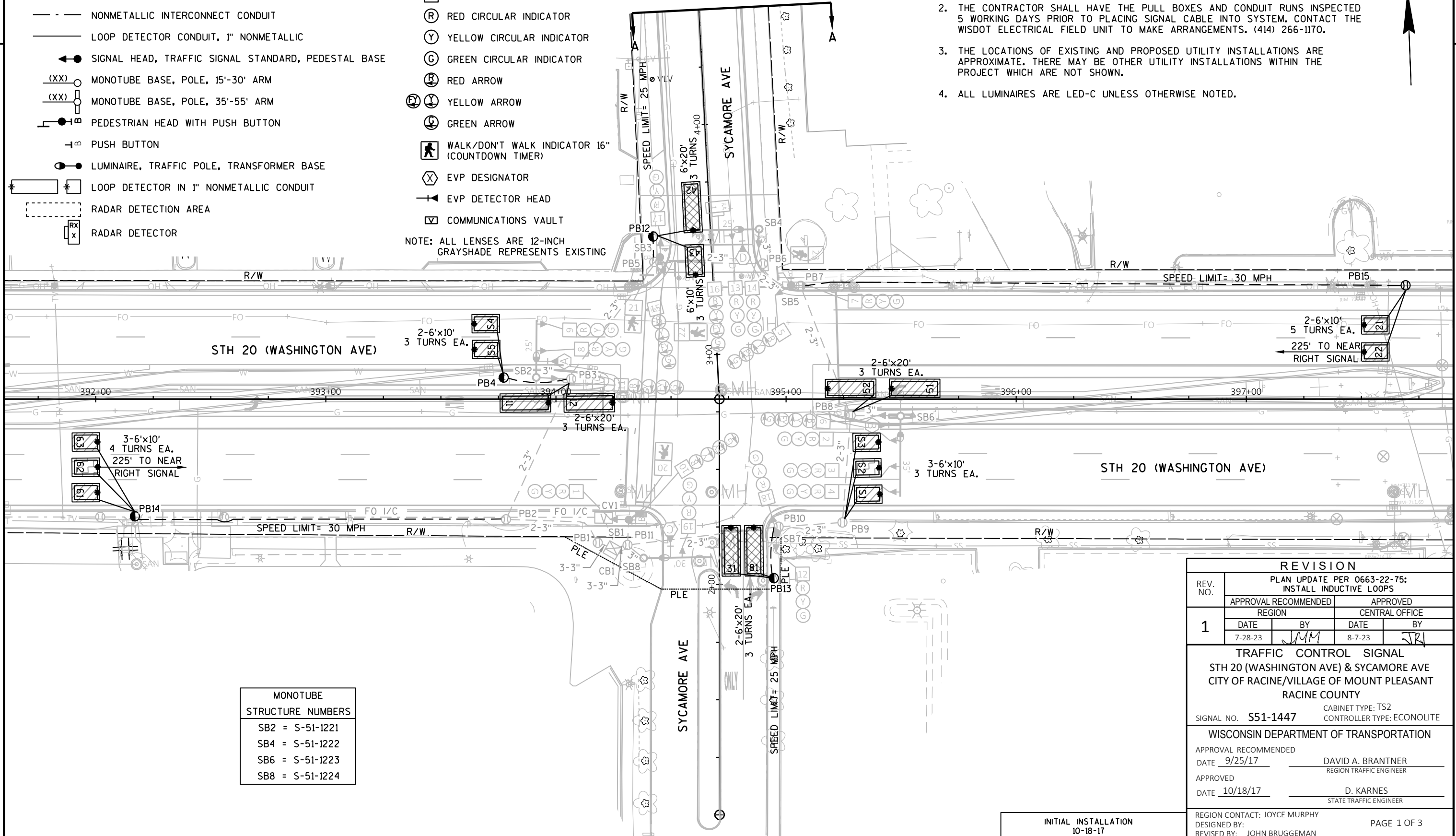
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- NONMETALLIC INTERCONNECT CONDUIT
- LOOP DETECTOR CONDUIT, 1" NONMETALLIC
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- EVP DESIGNATOR
- EVP DETECTOR HEAD
- COMMUNICATIONS VAULT

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

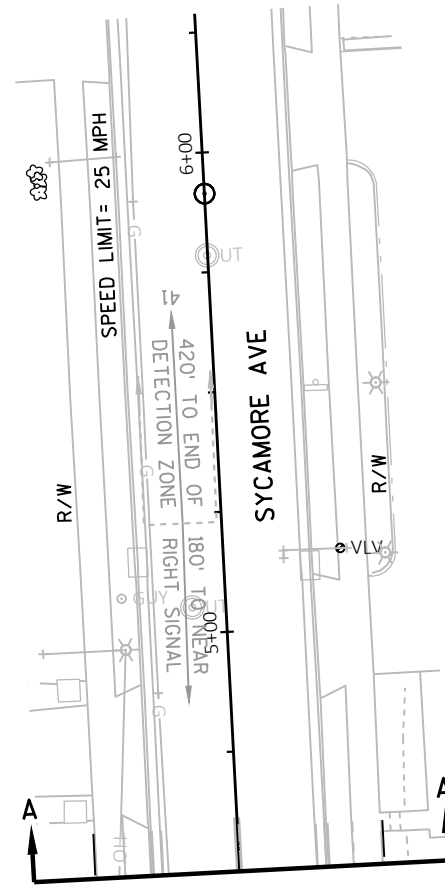
1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.



MONOTUBE STRUCTURE NUMBERS	
SB2 =	S-51-1221
SB4 =	S-51-1222
SB6 =	S-51-1223
SB8 =	S-51-1224

REVISION			
REV. NO.	PLAN UPDATE PER 0663-22-75; INSTALL INDUCTIVE LOOPS		
1	APPROVAL RECOMMENDED	APPROVED	
	REGION	CENTRAL OFFICE	
	DATE	BY	DATE BY
	7-28-23	JMM	8-7-23 JRI
TRAFFIC CONTROL SIGNAL			
STH 20 (WASHINGTON AVE) & SYCAMORE AVE			
CITY OF RACINE/VILLAGE OF MOUNT PLEASANT			
RACINE COUNTY			
SIGNAL NO. S51-1447		CABINET TYPE: TS2	
		CONTROLLER TYPE: ECONOLITE	
WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVAL RECOMMENDED			
DATE	9/25/17	DAVID A. BRANTNER	
		REGION TRAFFIC ENGINEER	
APPROVED			
DATE	10/18/17	D. KARNES	
		STATE TRAFFIC ENGINEER	
REGION CONTACT: JOYCE MURPHY		PAGE 1 OF 3	
DESIGNED BY: JOHN BRUGGEMAN			
REVISED BY: JOHN BRUGGEMAN			

7-28-23 JPB



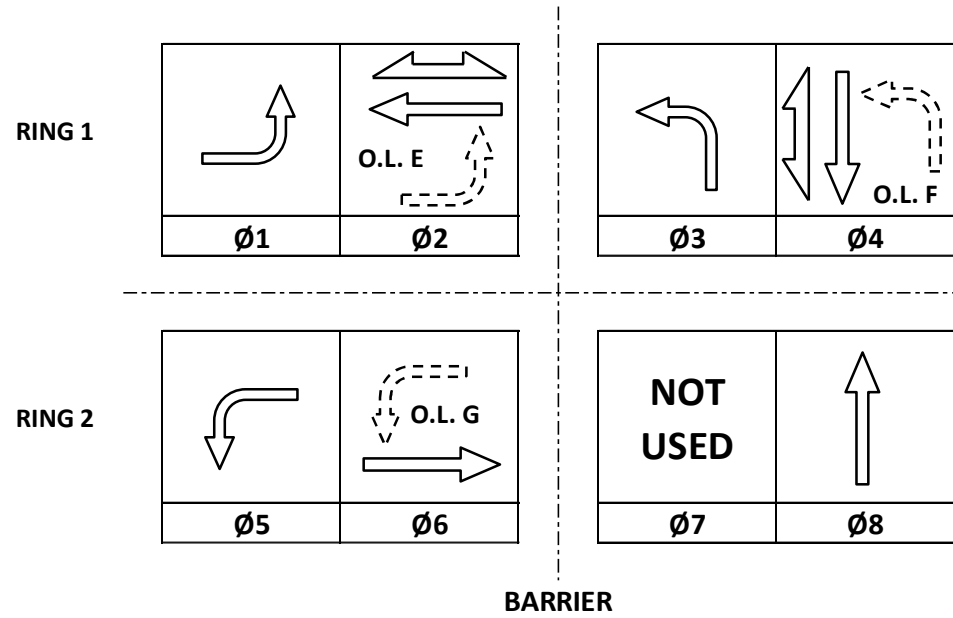
TRAFFIC CONTROL SIGNAL
 STH 20 (WASHINGTON AVE) & SYCAMORE AVE
 CITY OF RACINE/VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY

SIGNAL NO. S51-1447

REGION CONTACT: JOYCE MURPHY
 DESIGNED BY: JOHN BRUGGEMAN
 REVISED BY: JOHN BRUGGEMAN

PAGE 2 OF 3

	HEAD NUMBERS	FLASH
Ø1	5,6	R
Ø2	7,8,9	R
Ø3	15,16	R
Ø4	17,18,19	R
Ø5	10,11	R
Ø6	1,2,3,4	R
Ø7		
Ø8	12,13,14	R
Ø2P	22,23	
Ø4P	20,21	
Ø6P		
Ø8P		
OLE	5,6	-
OLF	15,16	-
OLG	10,11	-
OLH		



CONTROLLER LOGIC

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

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+8	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 1+6 CONTROLLER SHALL RETURN TO PHASES 2+6
 AFTER PREEMPTION SEQUENCE 4+8 OR 8+3 CONTROLLER SHALL RETURN TO PHASES 4+8.

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

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

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	31	42	51	61	63	81
CALLED PHASE	1	2	3	4	5	6	6	8
CALL OPTION	X	X	X	X	X	X	X	X
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME								
USE ADDED INITIAL		X				X	X	
CROSS SWITCH PHASE	2		4		6			

DETECTOR INPUT	19	17	23	21	27	25		35
PLAN LOOP DETECTOR*(S)	S1	S3	S5					41
CALLED PHASE								4
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								X
EXTEND TIME								X
USE ADDED INITIAL								
CROSS SWITCH PHASE								

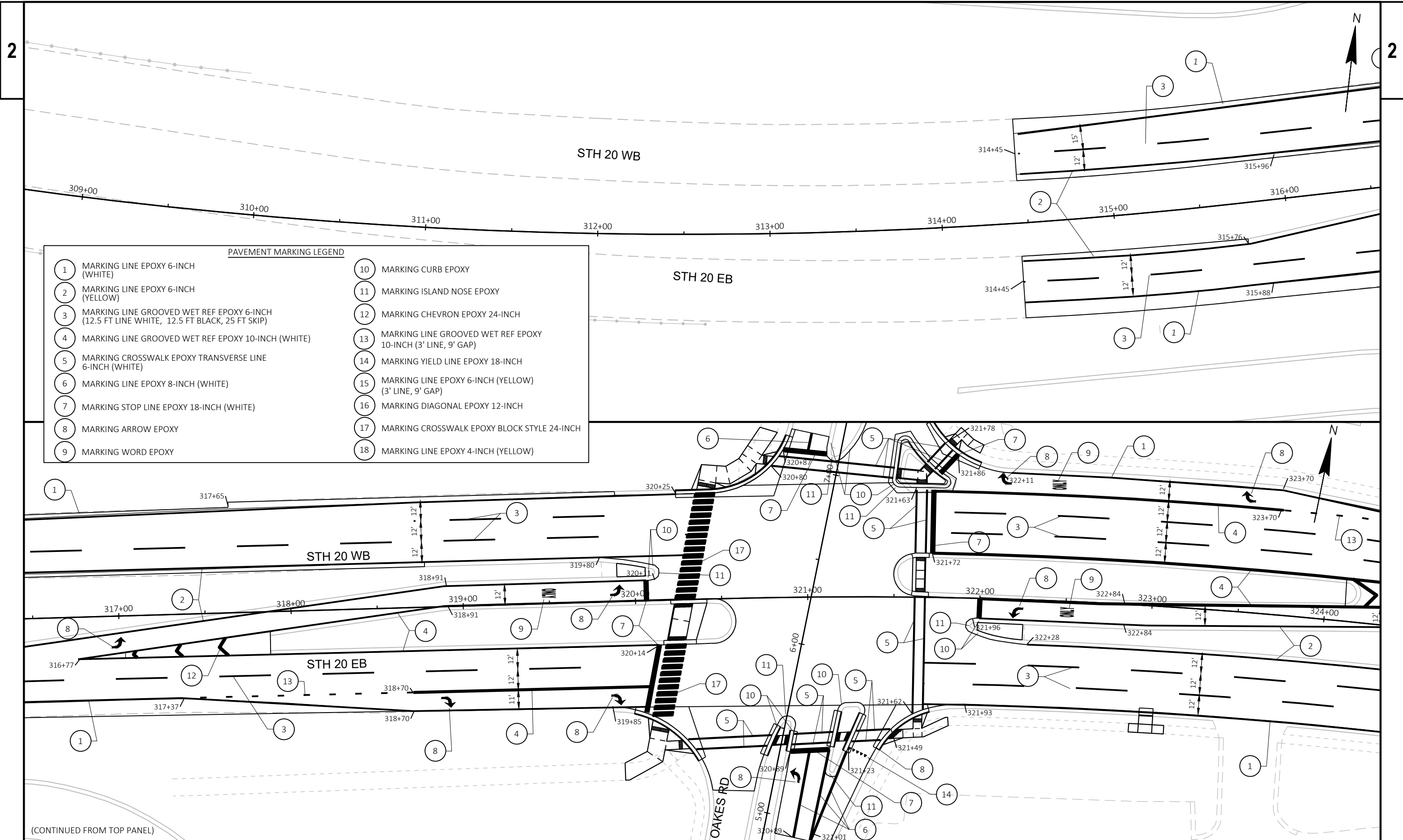
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22		43	52	62		
CALLED PHASE	1	2		4	5	6		
CALL OPTION	X	X		X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X		X	X	X		
EXTEND TIME								
USE ADDED INITIAL		X				X		
CROSS SWITCH PHASE	2				6			

DETECTOR INPUT	20	18	24	22	28	26		
PLAN LOOP DETECTOR*(S)	S2	S4						
CALLED PHASE								
CALL OPTION								
DELAY TIME								
EXTENTION OPTION								
EXTEND TIME								
USE ADDED INITIAL								
CROSS SWITCH PHASE								

N



STH 20 (WASHINGTON AVE) & SYCAMORE AVE	
CITY OF RACINE/VILLAGE OF MOUNT PLEASANT	
RACINE COUNTY	
SIGNAL NO: S51-1447	CABINET TYPE: TS2
CONTROLLER TYPE: ECONOLITE	
DATE: AUGUST 2023	PAGE NO. 3 OF 3

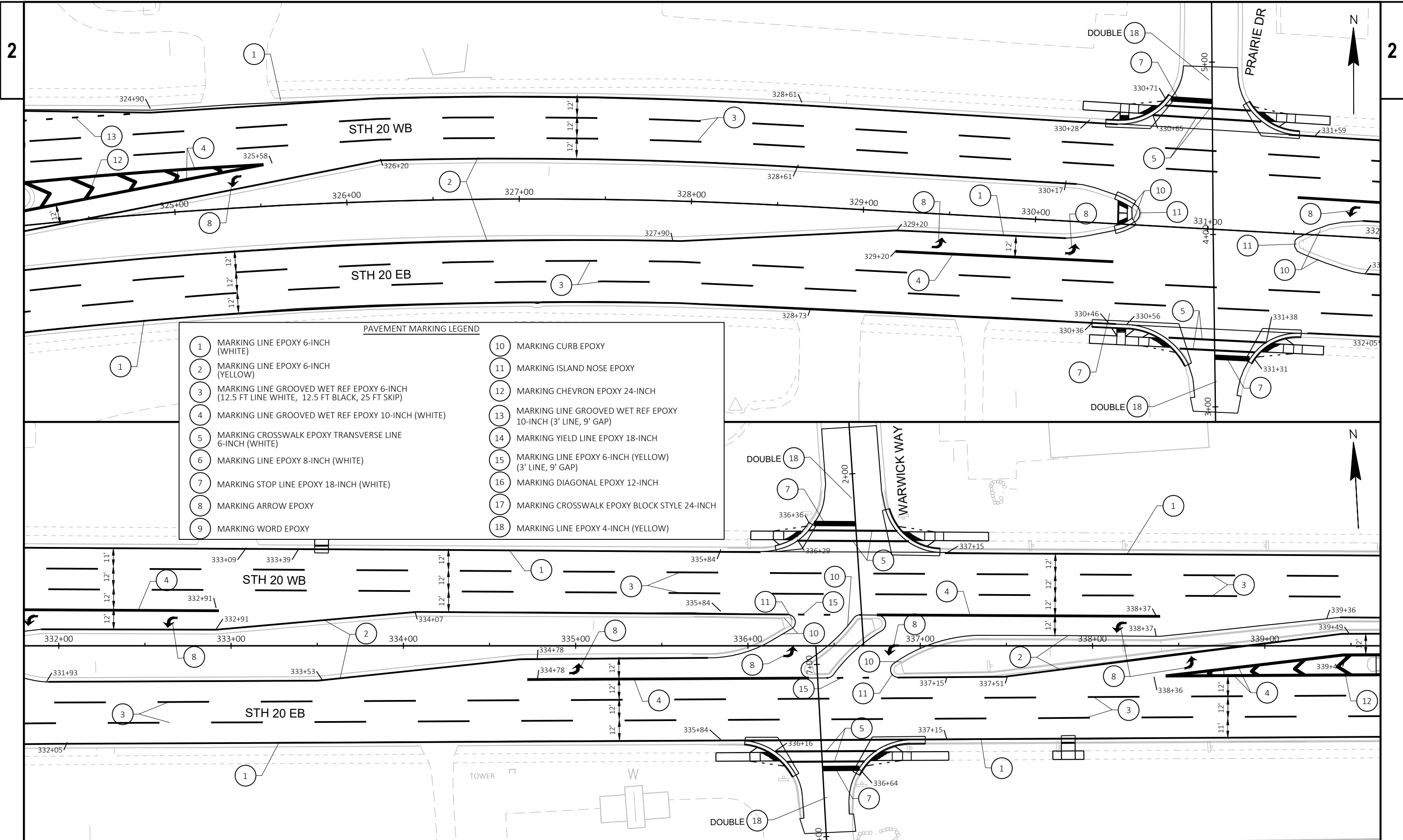


PAVEMENT MARKING LEGEND

1 MARKING LINE EPOXY 6-INCH (WHITE)	10 MARKING CURB EPOXY
2 MARKING LINE EPOXY 6-INCH (YELLOW)	11 MARKING ISLAND NOSE EPOXY
3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (12.5 FT LINE WHITE, 12.5 FT BLACK, 25 FT SKIP)	12 MARKING CHEVRON EPOXY 24-INCH
4 MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)	13 MARKING LINE GROOVED WET REF EPOXY 10-INCH (3' LINE, 9' GAP)
5 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)	14 MARKING YIELD LINE EPOXY 18-INCH
6 MARKING LINE EPOXY 8-INCH (WHITE)	15 MARKING LINE EPOXY 6-INCH (YELLOW) (3' LINE, 9' GAP)
7 MARKING STOP LINE EPOXY 18-INCH (WHITE)	16 MARKING DIAGONAL EPOXY 12-INCH
8 MARKING ARROW EPOXY	17 MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH
9 MARKING WORD EPOXY	18 MARKING LINE EPOXY 4-INCH (YELLOW)

(CONTINUED FROM TOP PANEL)

PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	PAVEMENT MARKING	SHEET	E
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PROJECT NO: 2250-15-70

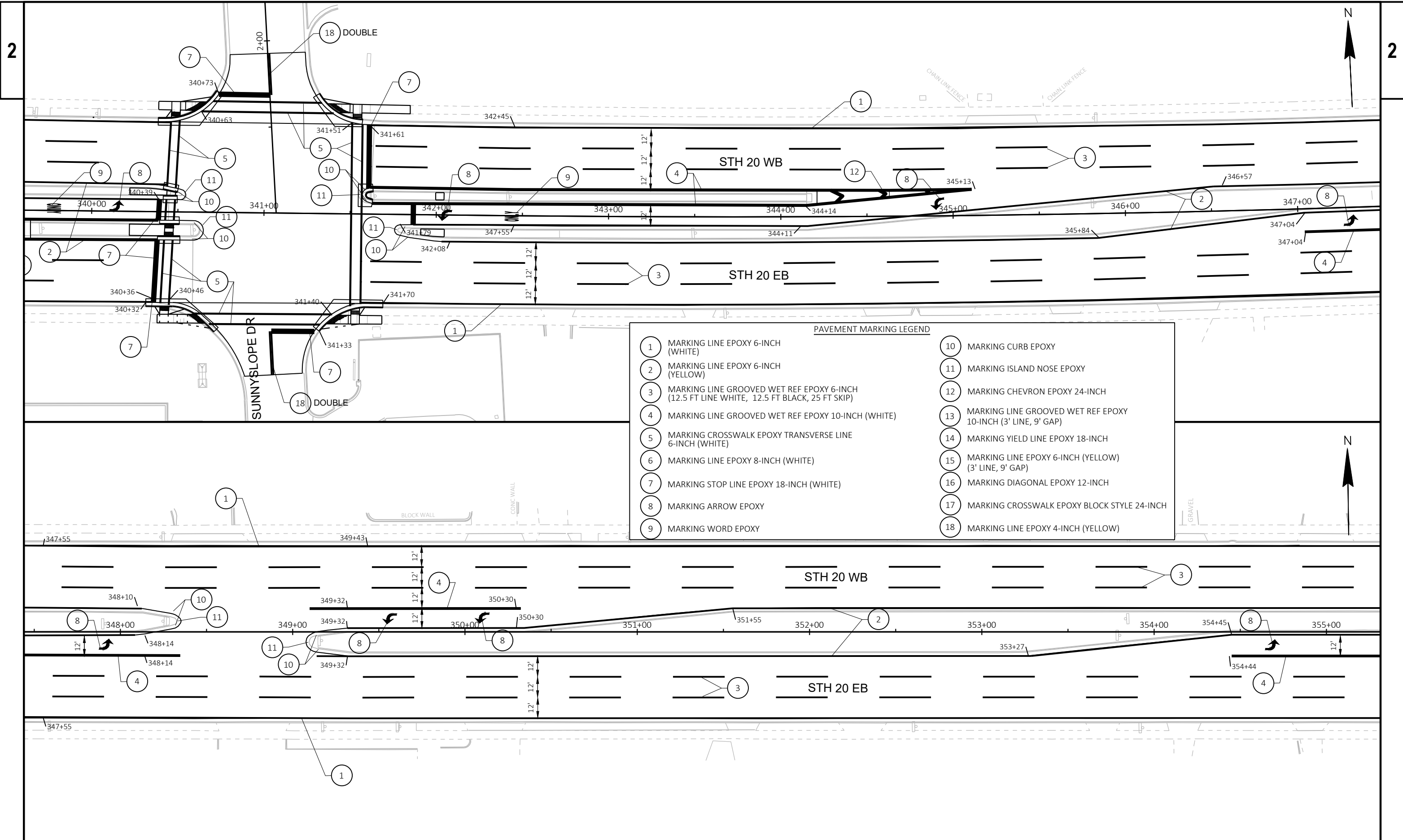
HWY: STH 20

COUNTY: RACINE

PAVEMENT MARKING

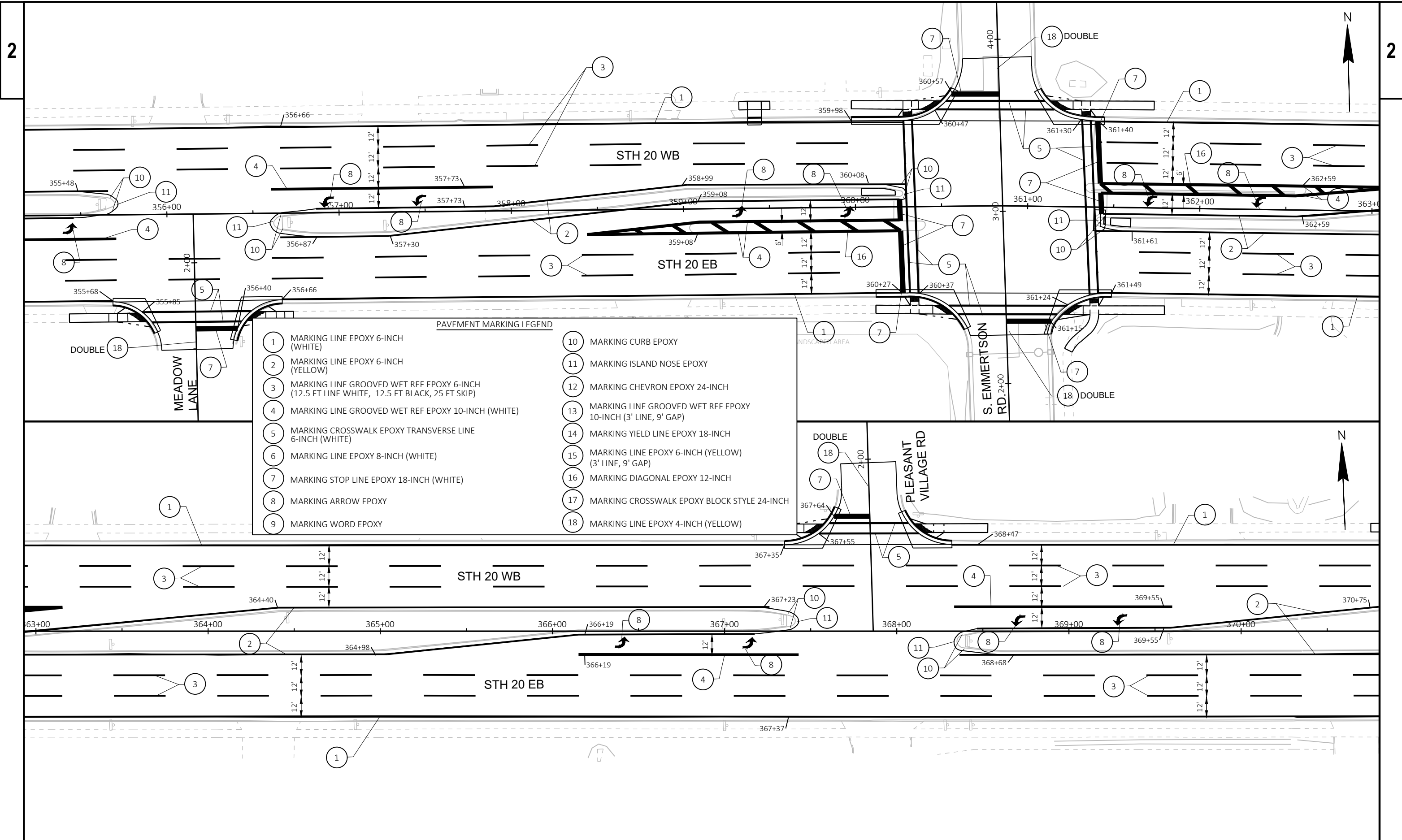
SHEET

E



PAVEMENT MARKING LEGEND

1 MARKING LINE EPOXY 6-INCH (WHITE)	10 MARKING CURB EPOXY
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9 MARKING WORD EPOXY	18 MARKING LINE EPOXY 4-INCH (YELLOW)



PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

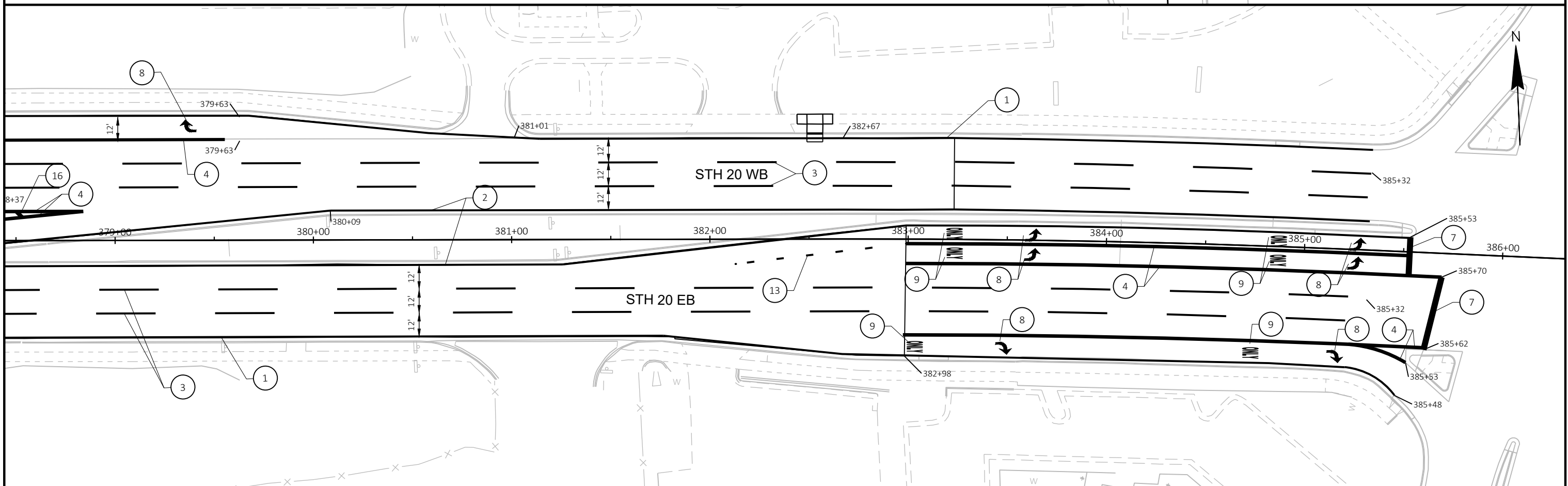
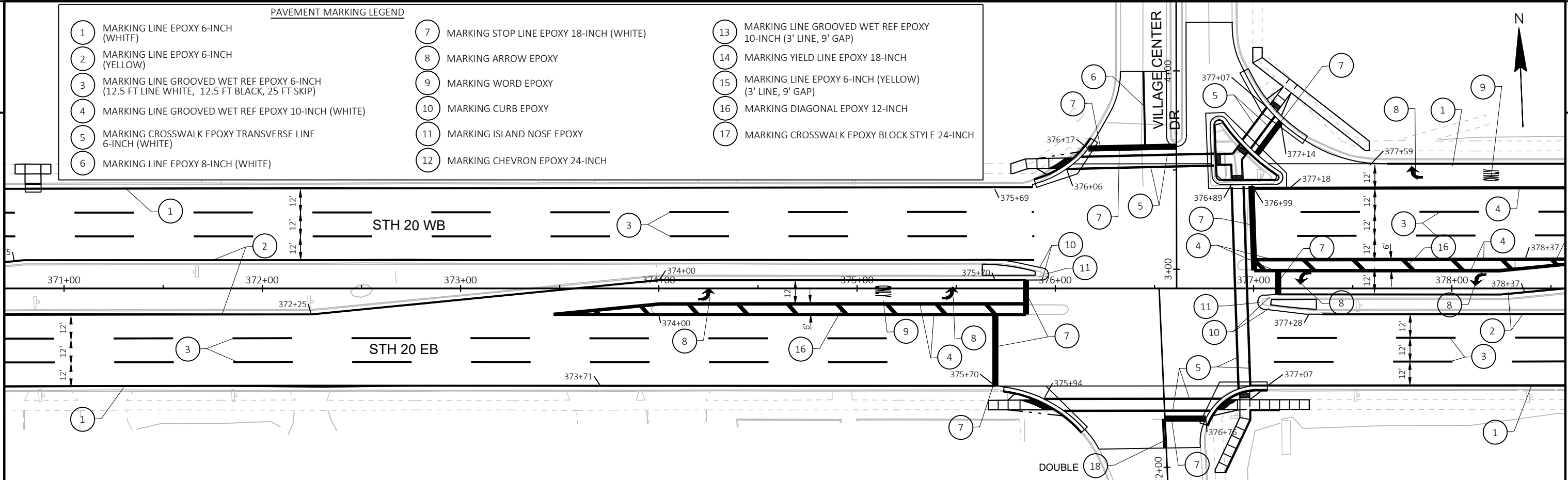
PAVEMENT MARKING

SHEET

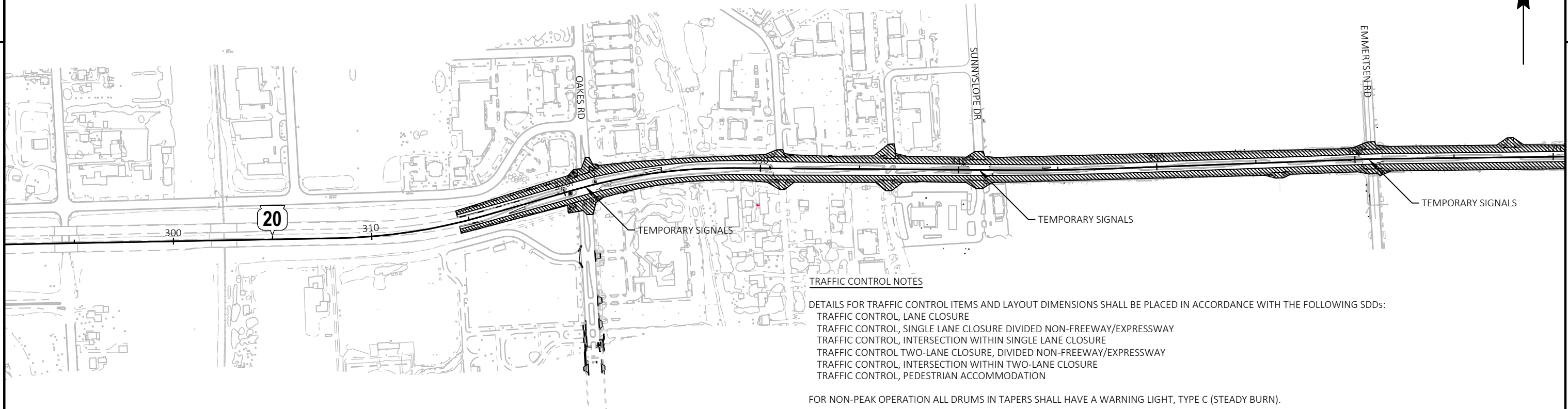
E

PAVEMENT MARKING LEGEND

- | | | |
|---------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------|
| 1 MARKING LINE EPOXY 6-INCH (WHITE) | 7 MARKING STOP LINE EPOXY 18-INCH (WHITE) | 13 MARKING LINE GROOVED WET REF EPOXY 10-INCH (3' LINE, 9' GAP) |
| 2 MARKING LINE EPOXY 6-INCH (YELLOW) | 8 MARKING ARROW EPOXY | 14 MARKING YIELD LINE EPOXY 18-INCH |
| 3 MARKING LINE GROOVED WET REF EPOXY 6-INCH (12.5 FT LINE WHITE, 12.5 FT BLACK, 25 FT SKIP) | 9 MARKING WORD EPOXY | 15 MARKING LINE EPOXY 6-INCH (YELLOW) (3' LINE, 9' GAP) |
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| 6 MARKING LINE EPOXY 8-INCH (WHITE) | 12 MARKING CHEVRON EPOXY 24-INCH | |



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	PAVEMENT MARKING	SHEET	E
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TRAFFIC CONTROL NOTES

DETAILS FOR TRAFFIC CONTROL ITEMS AND LAYOUT DIMENSIONS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SDDs:
 TRAFFIC CONTROL, LANE CLOSURE
 TRAFFIC CONTROL, SINGLE LANE CLOSURE DIVIDED NON-FREEWAY/EXPRESSWAY
 TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 TRAFFIC CONTROL TWO-LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
 TRAFFIC CONTROL, INTERSECTION WITHIN TWO-LANE CLOSURE
 TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

FOR NON-PEAK OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

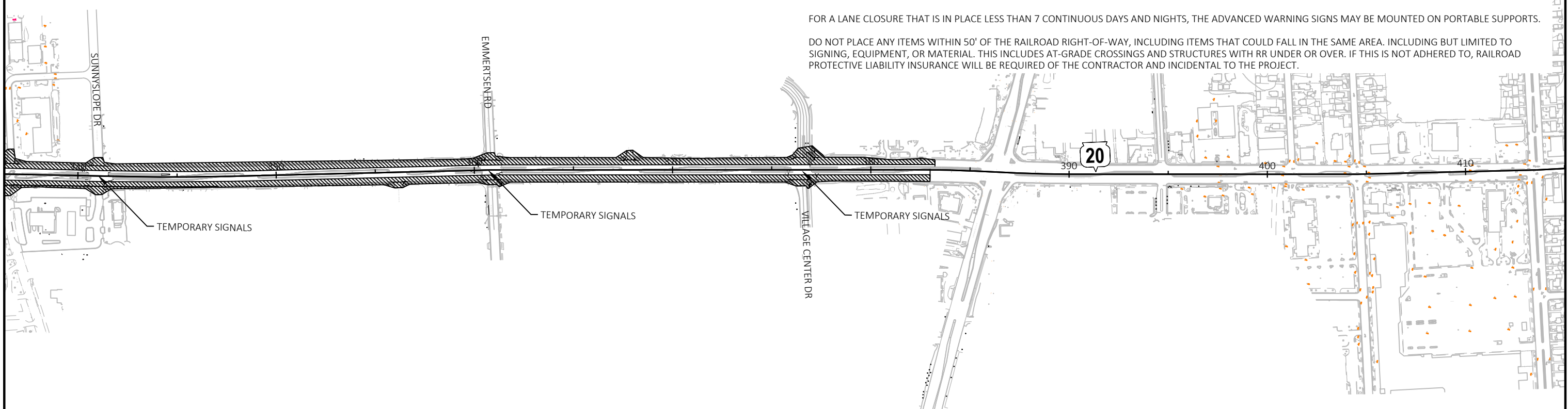
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

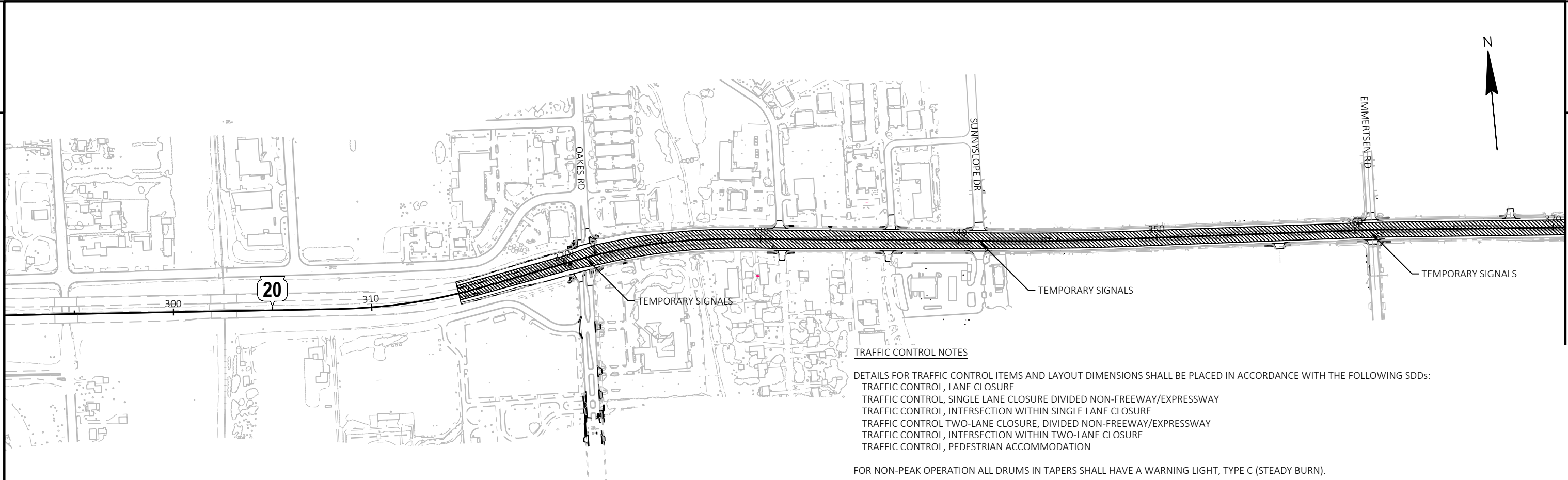
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

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

DO NOT PLACE ANY ITEMS WITHIN 50' OF THE RAILROAD RIGHT-OF-WAY, INCLUDING ITEMS THAT COULD FALL IN THE SAME AREA. INCLUDING BUT LIMITED TO SIGNING, EQUIPMENT, OR MATERIAL. THIS INCLUDES AT-GRADE CROSSINGS AND STRUCTURES WITH RR UNDER OR OVER. IF THIS IS NOT ADHERED TO, RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED OF THE CONTRACTOR AND INCIDENTAL TO THE PROJECT.



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL OVERVIEW - STAGE 1	SHEET	E
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TRAFFIC CONTROL NOTES

- DETAILS FOR TRAFFIC CONTROL ITEMS AND LAYOUT DIMENSIONS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SDDs:
- TRAFFIC CONTROL, LANE CLOSURE
- TRAFFIC CONTROL, SINGLE LANE CLOSURE DIVIDED NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
- TRAFFIC CONTROL TWO-LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN TWO-LANE CLOSURE
- TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

FOR NON-PEAK OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

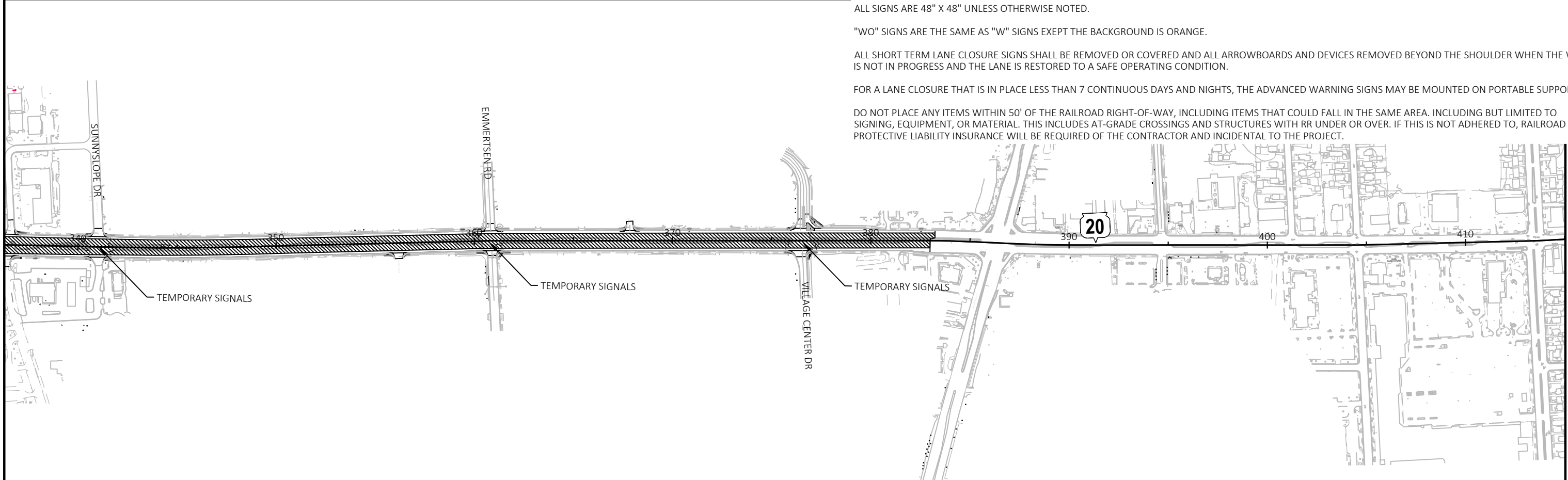
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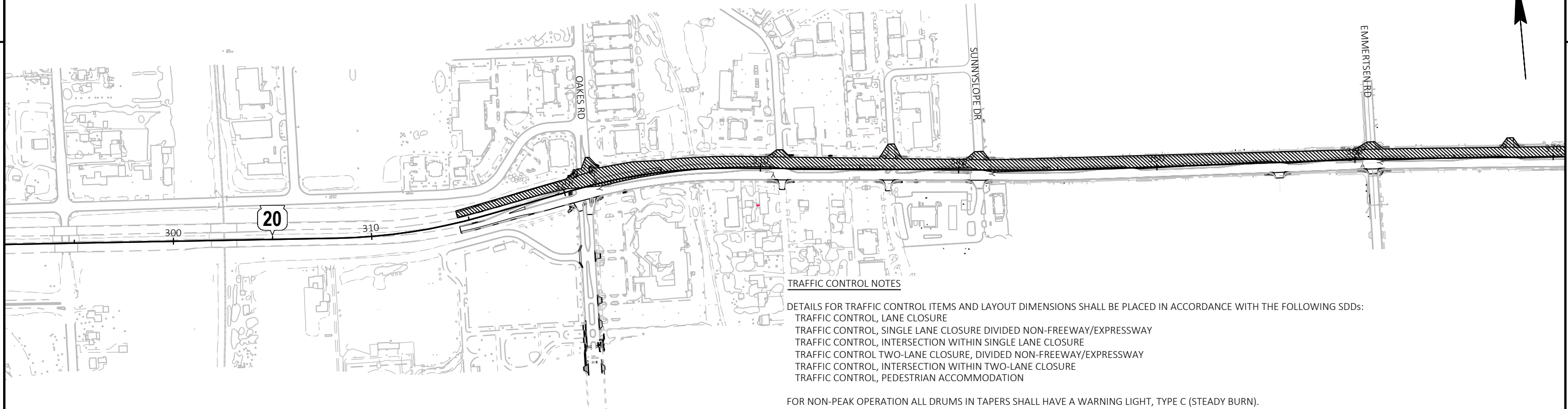
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

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

DO NOT PLACE ANY ITEMS WITHIN 50' OF THE RAILROAD RIGHT-OF-WAY, INCLUDING ITEMS THAT COULD FALL IN THE SAME AREA. INCLUDING BUT LIMITED TO SIGNING, EQUIPMENT, OR MATERIAL. THIS INCLUDES AT-GRADE CROSSINGS AND STRUCTURES WITH RR UNDER OR OVER. IF THIS IS NOT ADHERED TO, RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED OF THE CONTRACTOR AND INCIDENTAL TO THE PROJECT.



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL OVERVIEW - STAGE 2	SHEET	E
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TRAFFIC CONTROL NOTES

- DETAILS FOR TRAFFIC CONTROL ITEMS AND LAYOUT DIMENSIONS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SDDS:
- TRAFFIC CONTROL, LANE CLOSURE
- TRAFFIC CONTROL, SINGLE LANE CLOSURE DIVIDED NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
- TRAFFIC CONTROL TWO-LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN TWO-LANE CLOSURE
- TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

FOR NON-PEAK OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

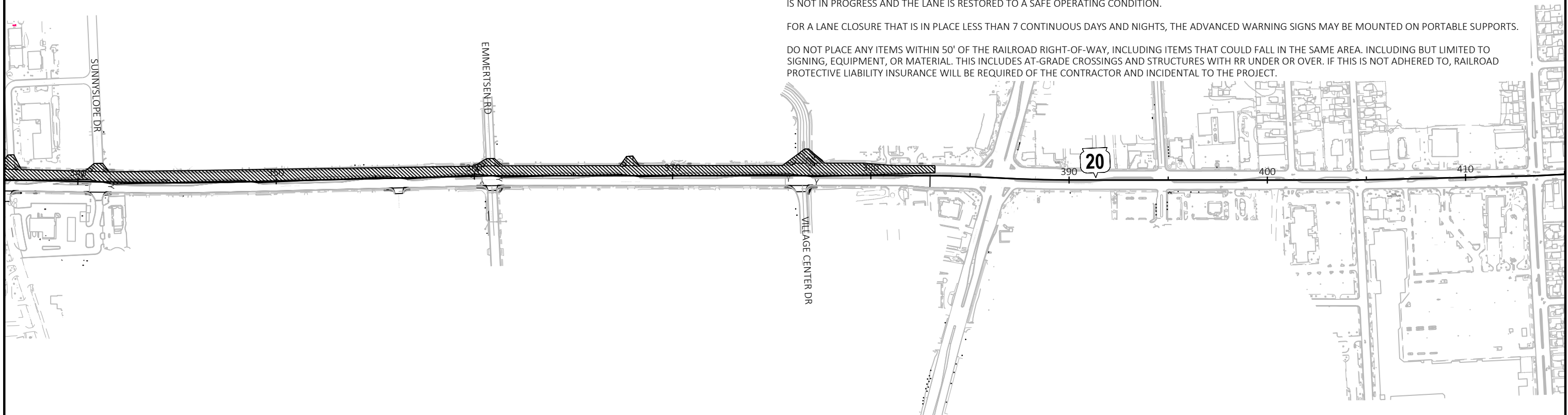
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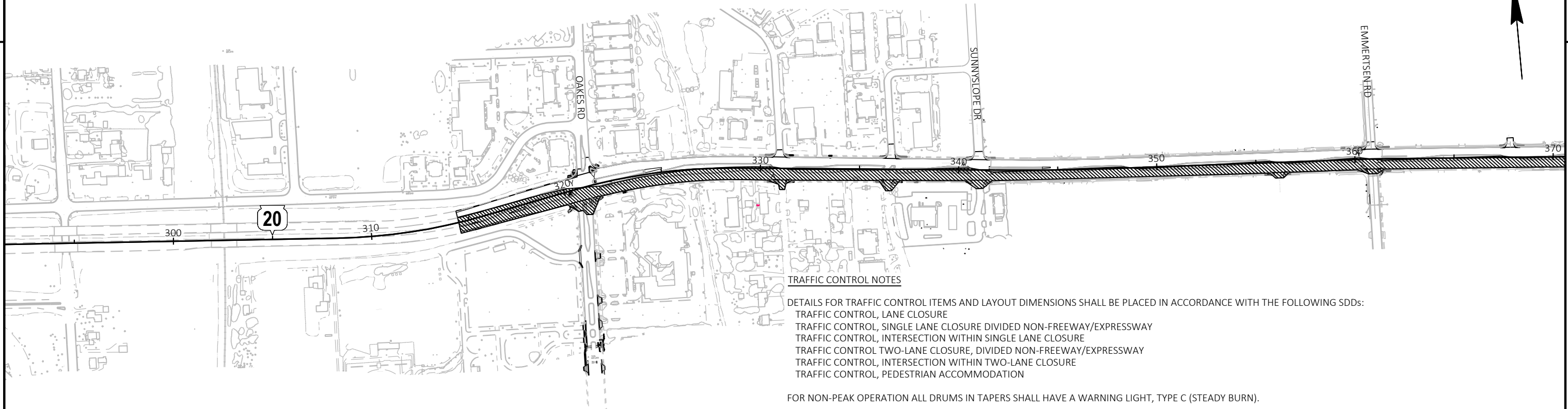
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FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

DO NOT PLACE ANY ITEMS WITHIN 50' OF THE RAILROAD RIGHT-OF-WAY, INCLUDING ITEMS THAT COULD FALL IN THE SAME AREA. INCLUDING BUT LIMITED TO SIGNING, EQUIPMENT, OR MATERIAL. THIS INCLUDES AT-GRADE CROSSINGS AND STRUCTURES WITH RR UNDER OR OVER. IF THIS IS NOT ADHERED TO, RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED OF THE CONTRACTOR AND INCIDENTAL TO THE PROJECT.



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL OVERVIEW - STAGE 3A	SHEET	E
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TRAFFIC CONTROL NOTES

DETAILS FOR TRAFFIC CONTROL ITEMS AND LAYOUT DIMENSIONS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SDDs:

- TRAFFIC CONTROL, LANE CLOSURE
- TRAFFIC CONTROL, SINGLE LANE CLOSURE DIVIDED NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
- TRAFFIC CONTROL TWO-LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
- TRAFFIC CONTROL, INTERSECTION WITHIN TWO-LANE CLOSURE
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FOR NON-PEAK OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

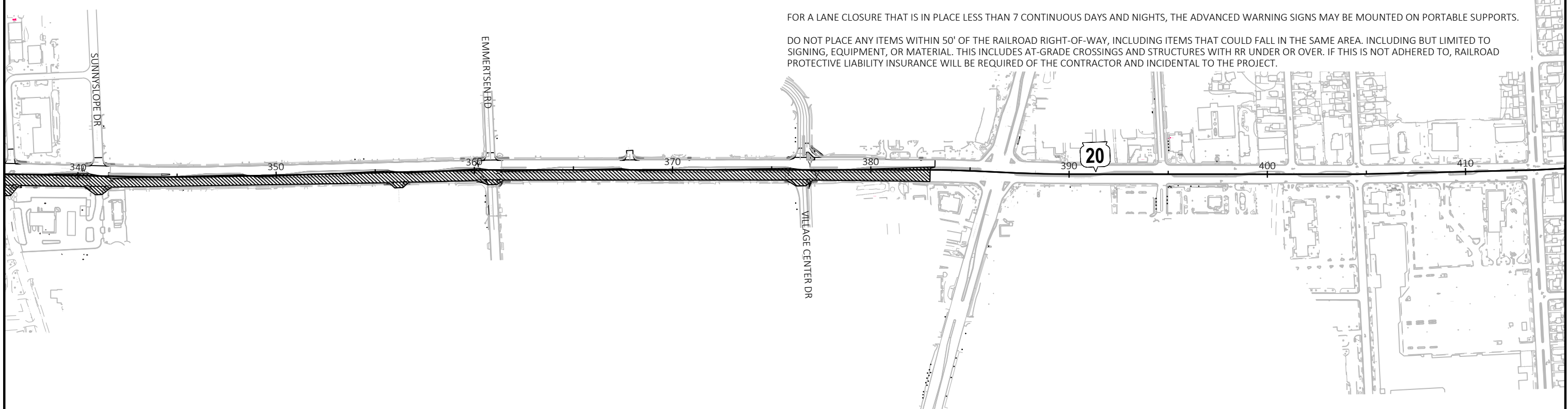
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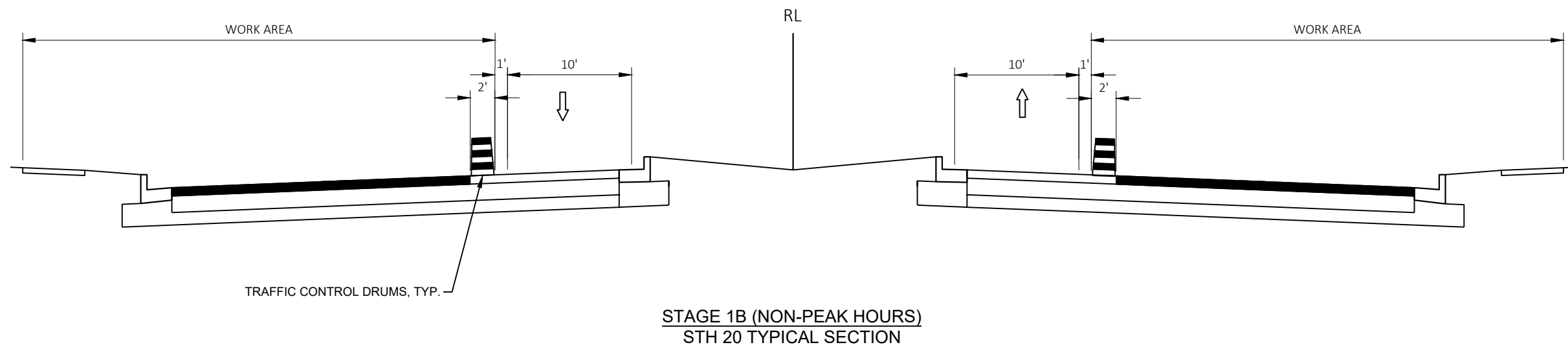
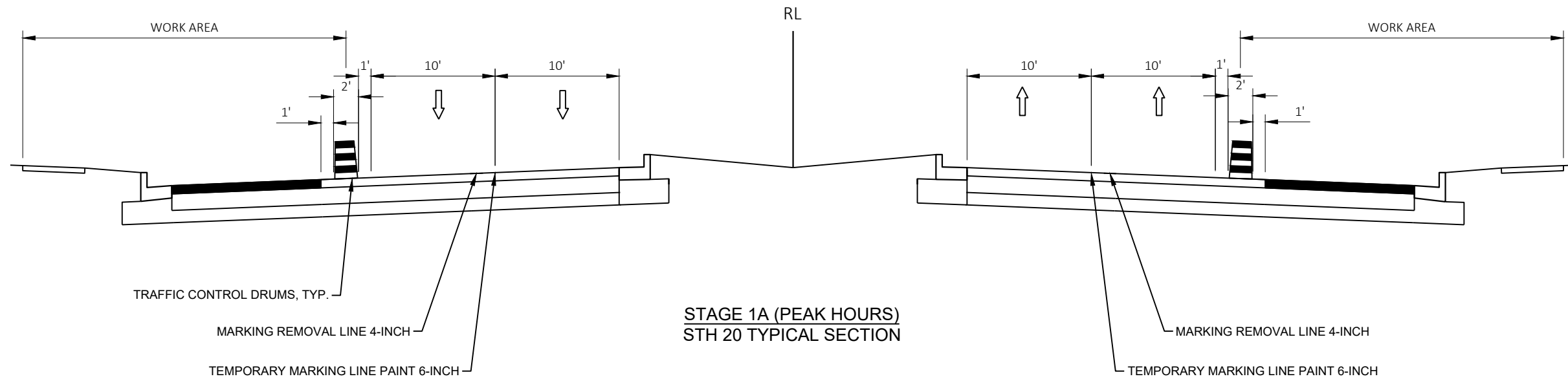
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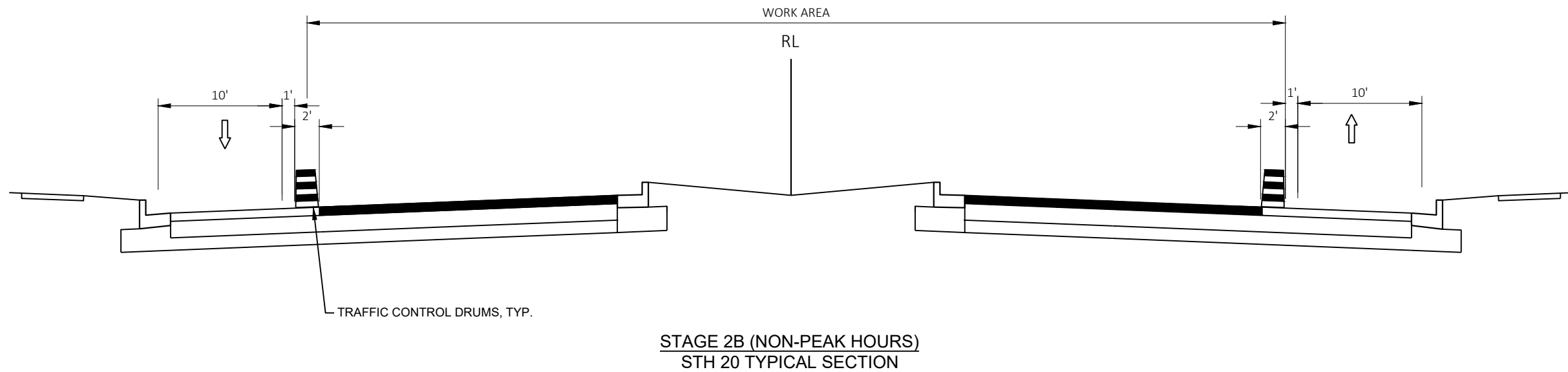
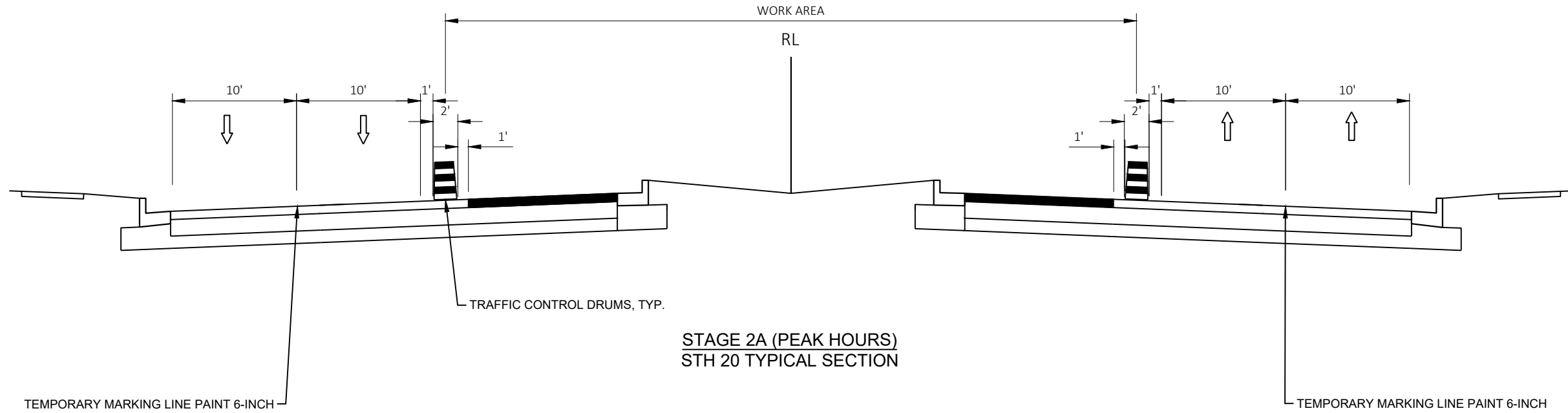
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

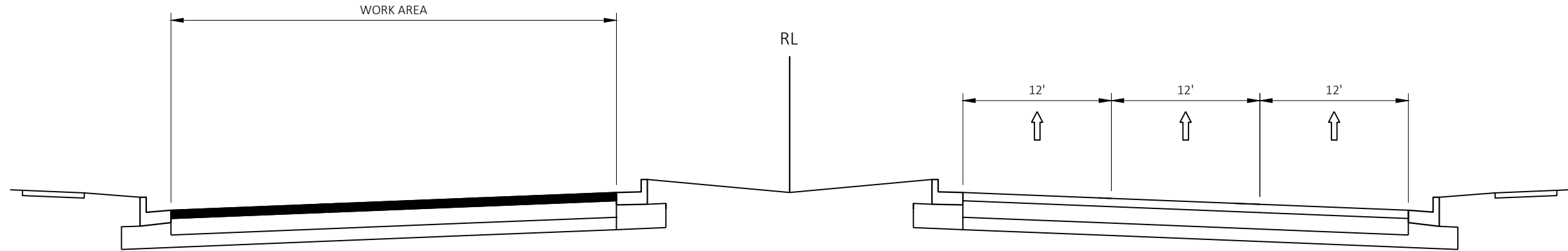
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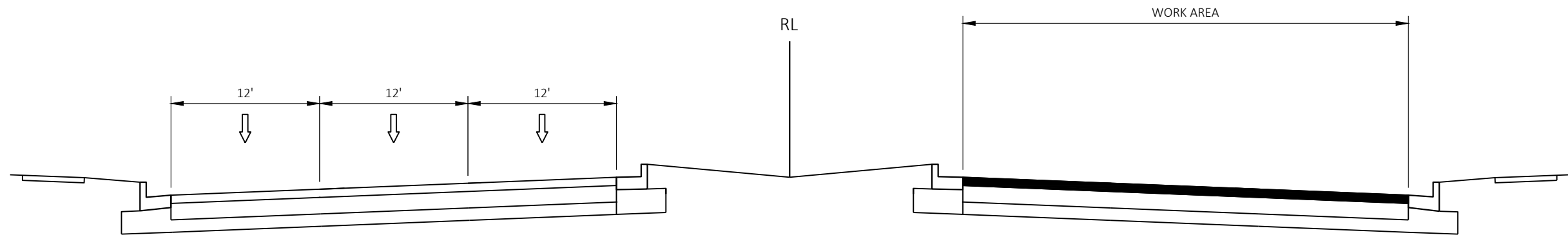
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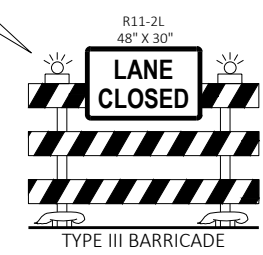
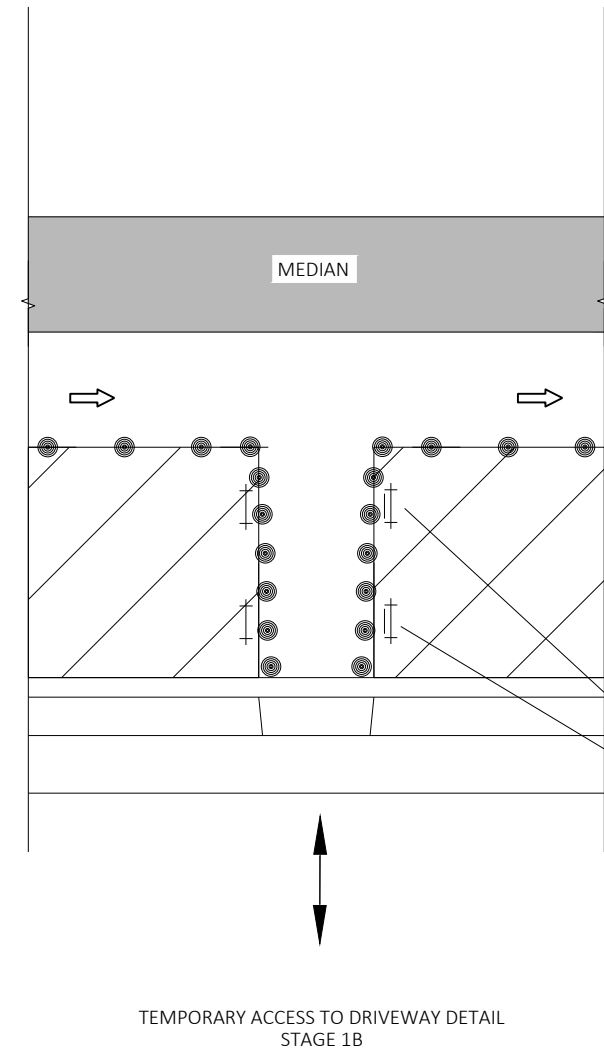
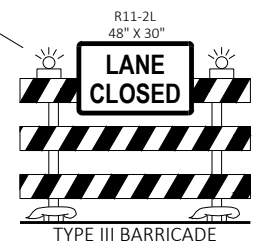
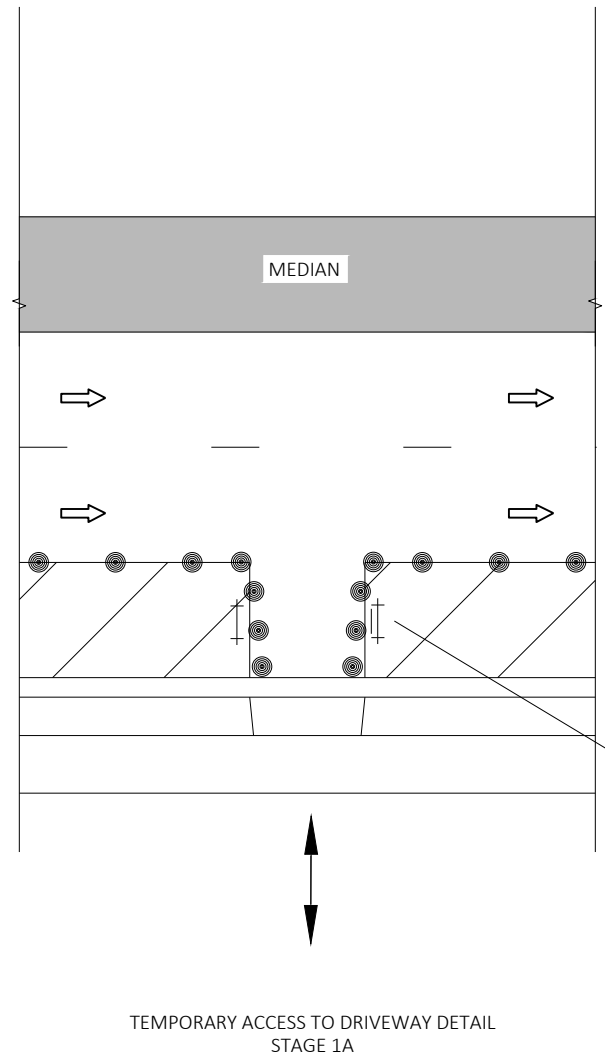




STAGE 3A
STH 20 TYPICAL SECTION







STAGE 3B
STH 20 TYPICAL SECTION



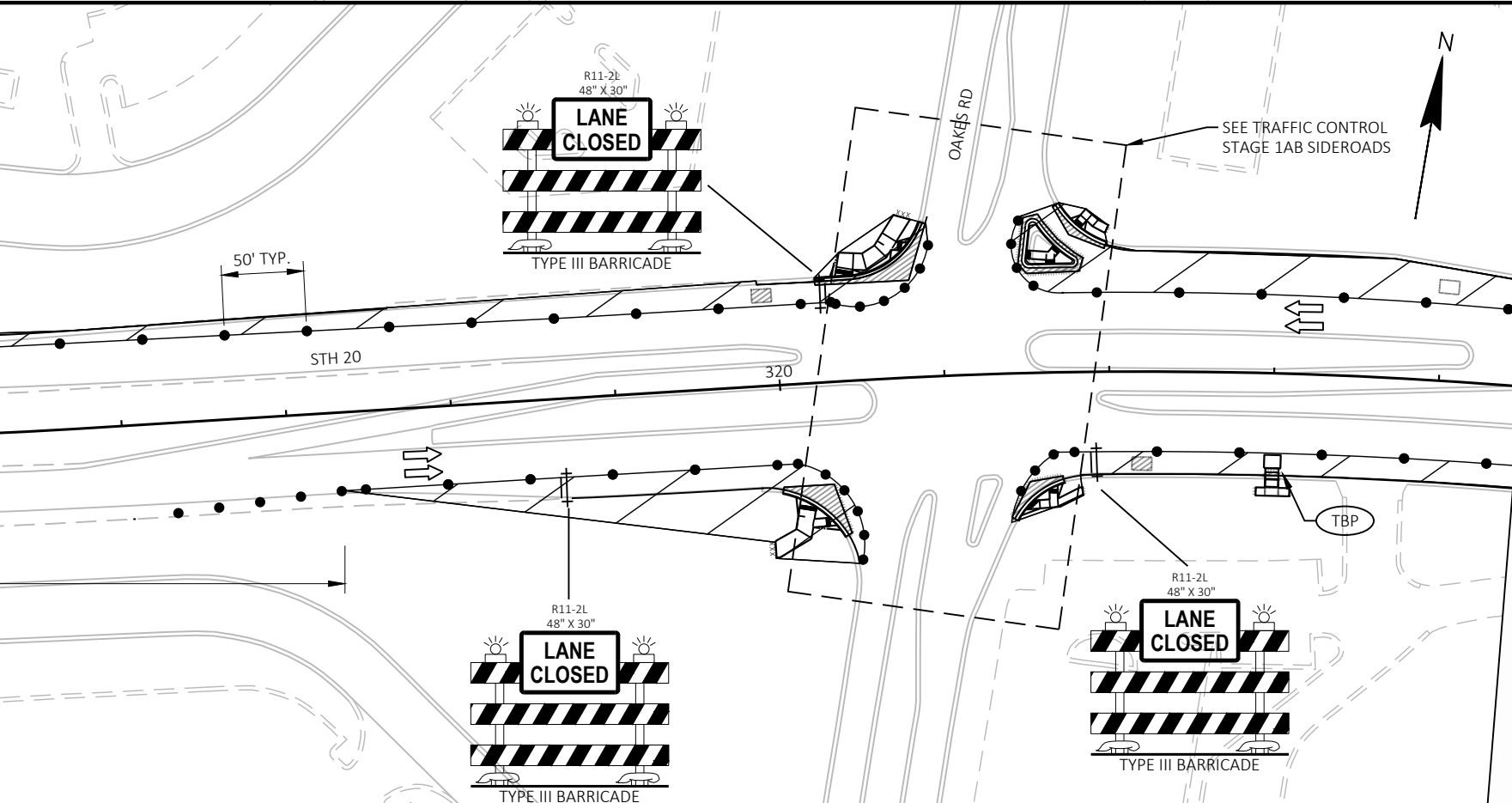
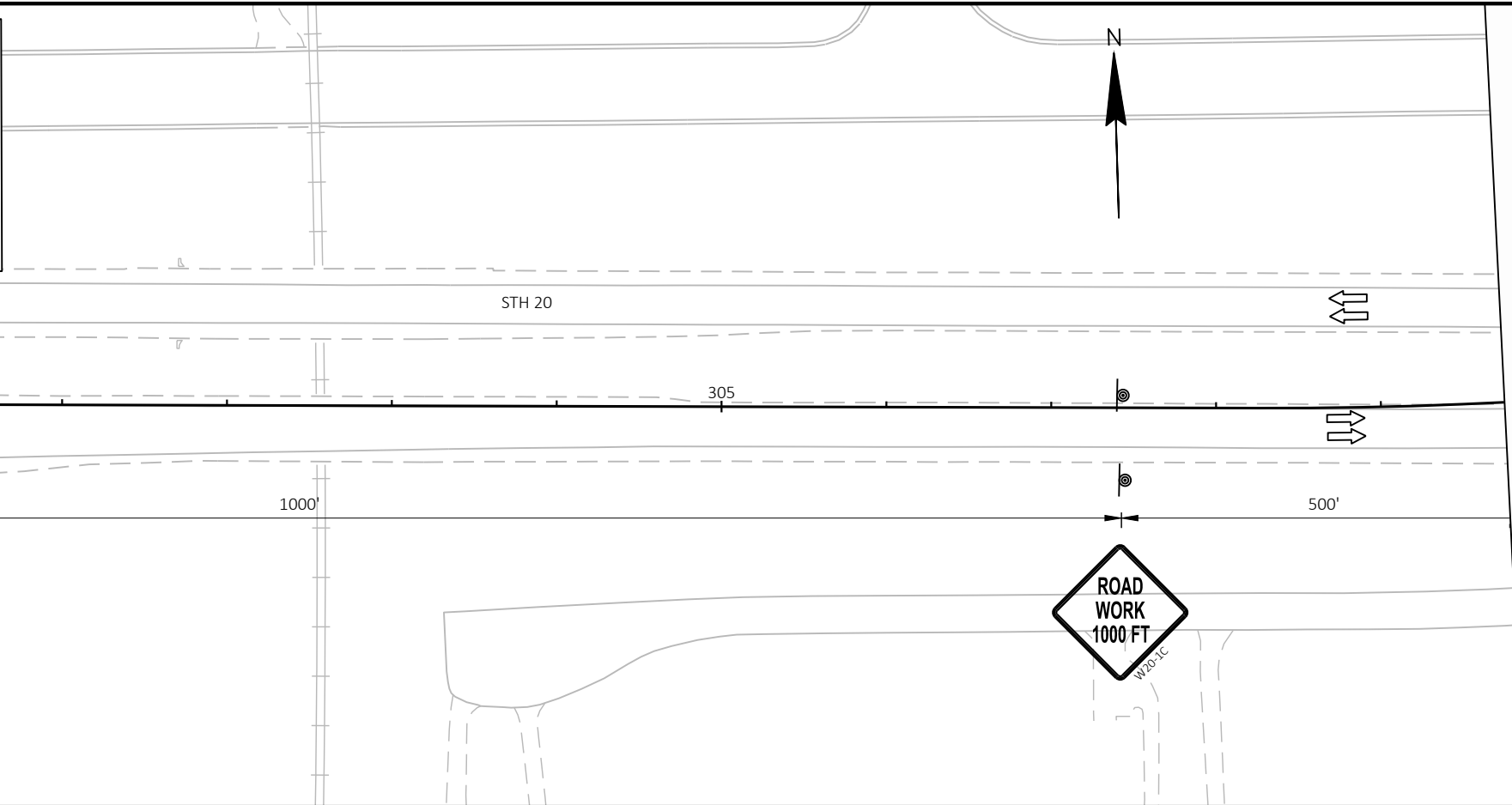
LOCATIONS

- BEGIN PROJECT TO OAKES ROAD - 0 DRIVEWAYS
- OAKES ROAD TO SUNNY SLOPE DRIVE - 6 DRIVEWAYS
- SUNNY SLOPE DRIVE TO EMMERTSEN ROAD - 25 DRIVEWAYS
- EMMERTSEN ROAD TO VILLAGE CENTER DRIVE - 13 DRIVEWAYS
- VILLAGE CENTER DRIVE TO RESURFACING CONSTRUCTION LIMIT - 4 DRIVEWAYS

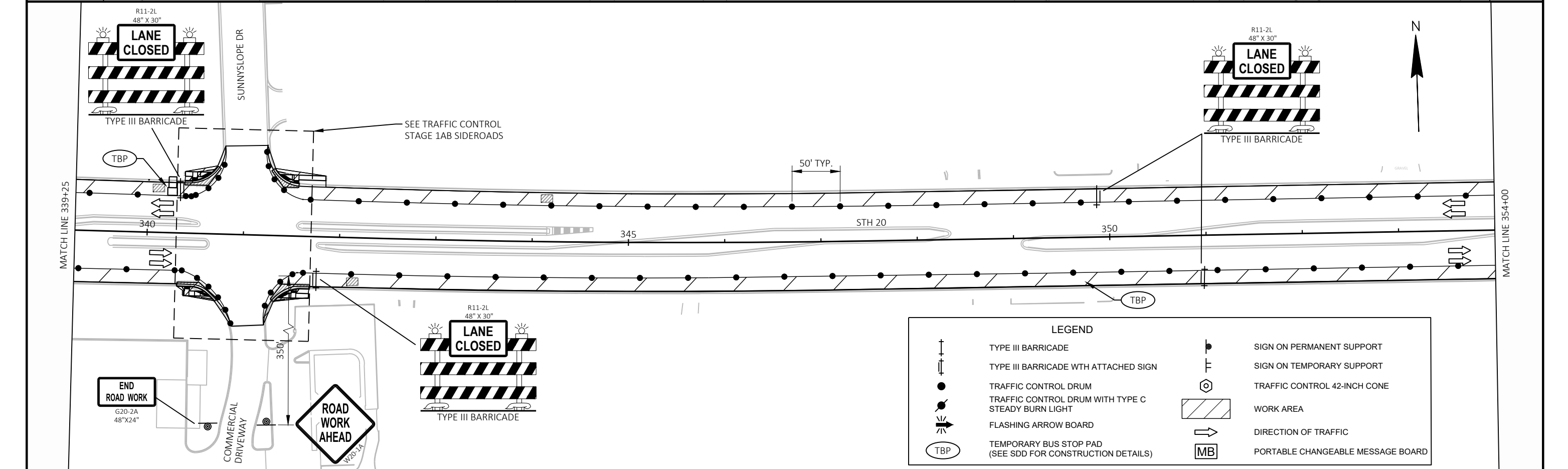
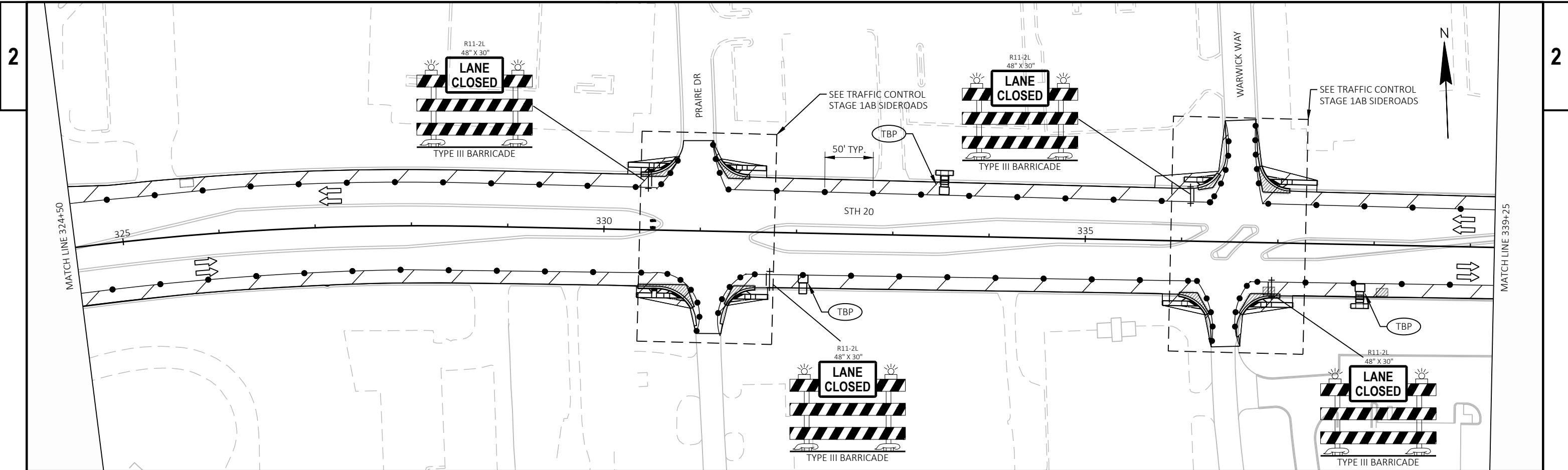
LEGEND

-  TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  WORK AREA
-  DIRECTION OF TRAFFIC

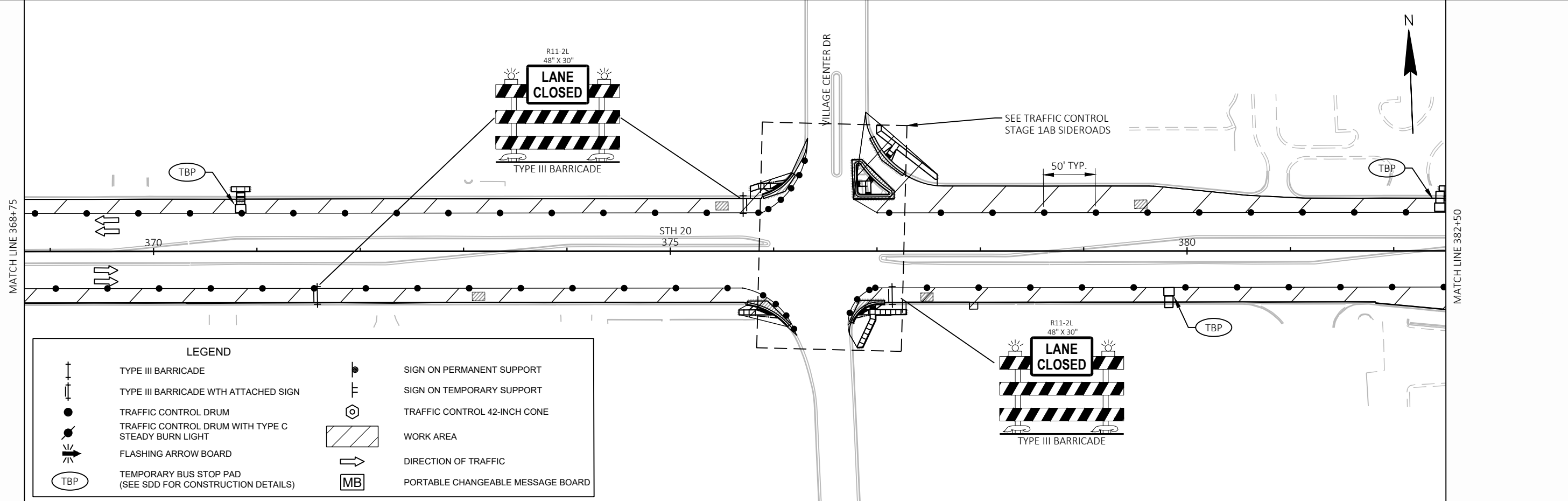
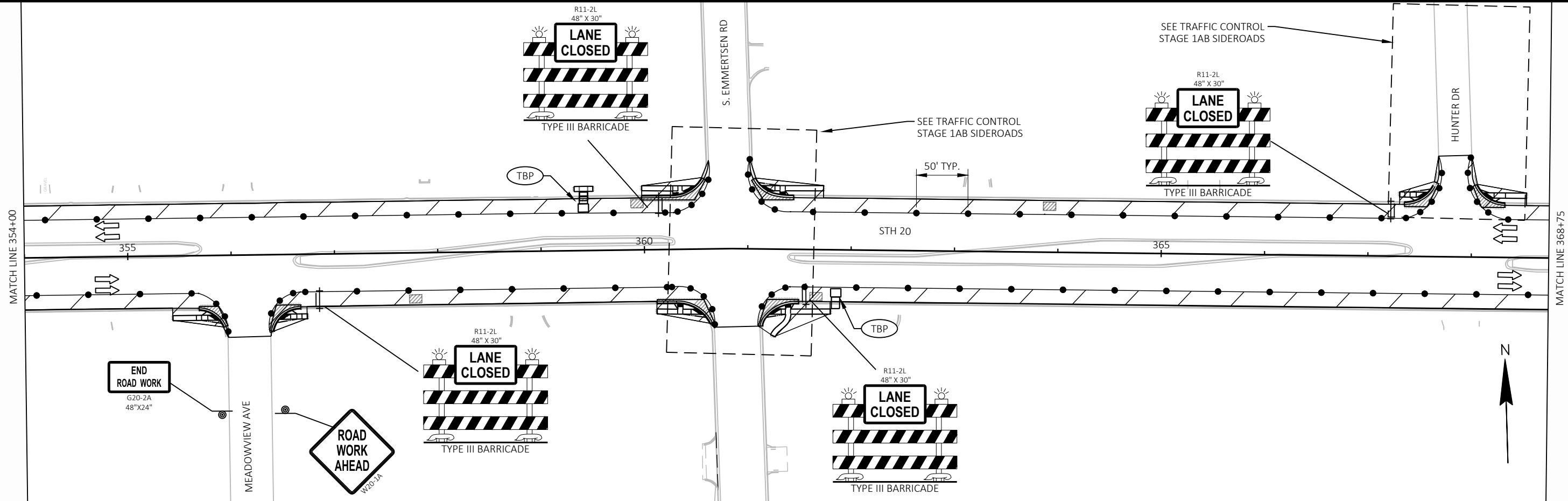
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
	TEMPORARY BUS STOP PAD (SEE SDD FOR CONSTRUCTION DETAILS)		PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE TRAFFIC CONTROL STAGE 1A MAINLINE SHEET E



PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE TRAFFIC CONTROL STAGE 1A MAINLINE SHEET E



LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	TEMPORARY BUS STOP PAD (SEE SDD FOR CONSTRUCTION DETAILS)
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2250-15-70

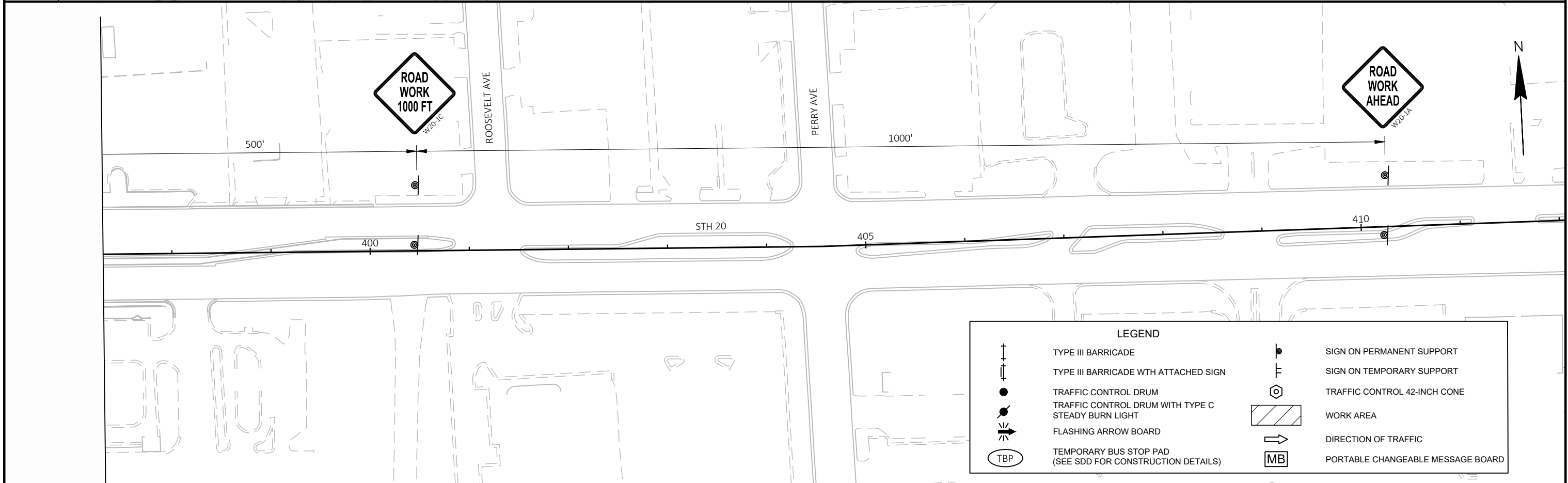
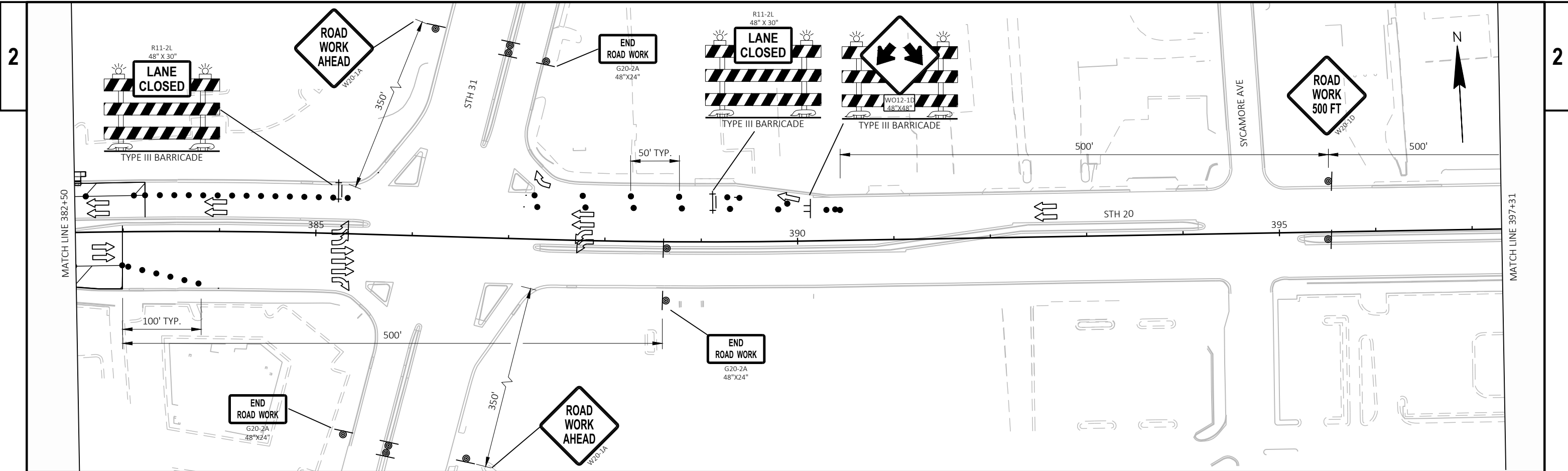
HWY: STH 20

COUNTY: RACINE

TRAFFIC CONTROL STAGE 1A MAINLINE

SHEET

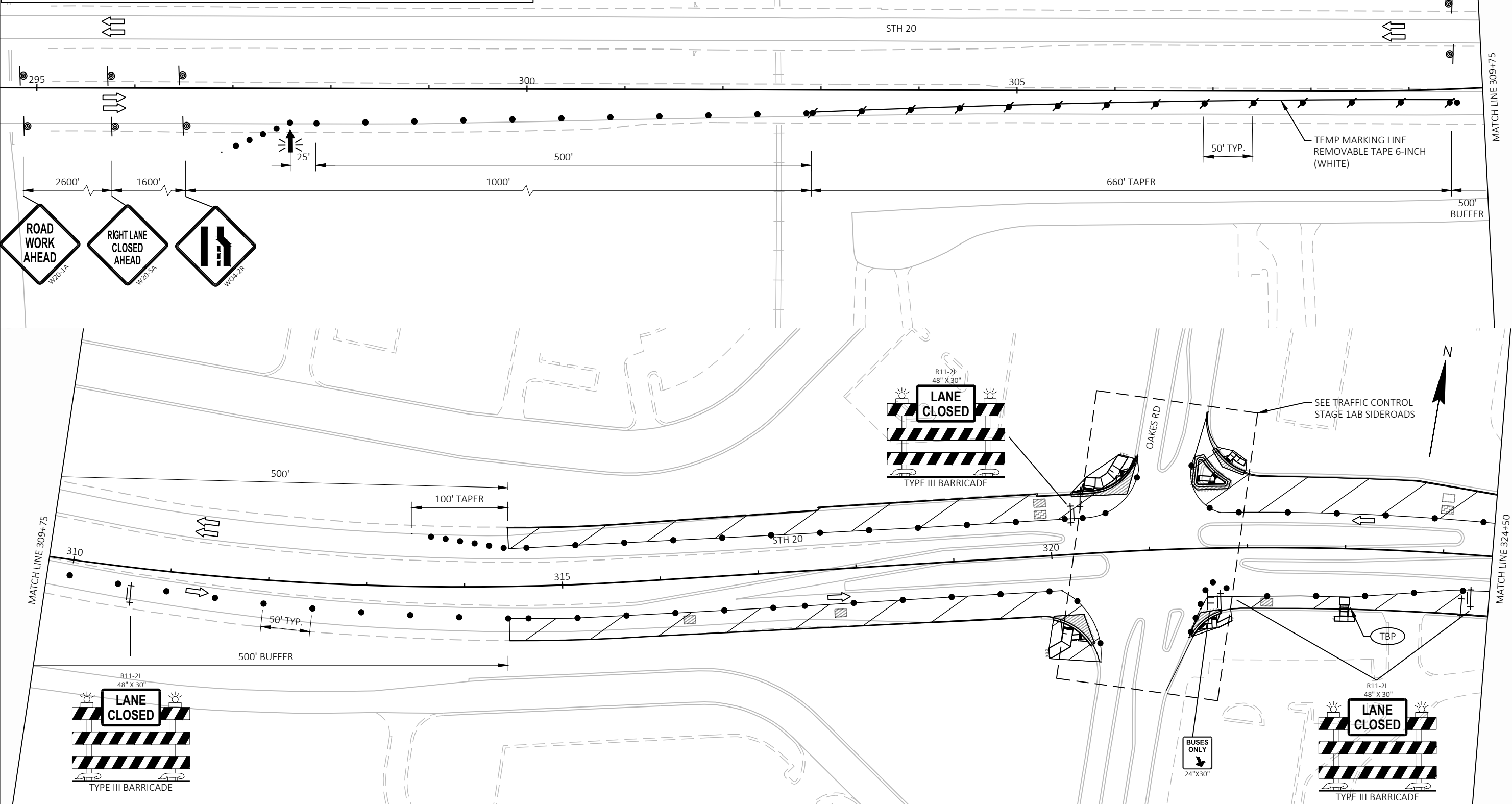
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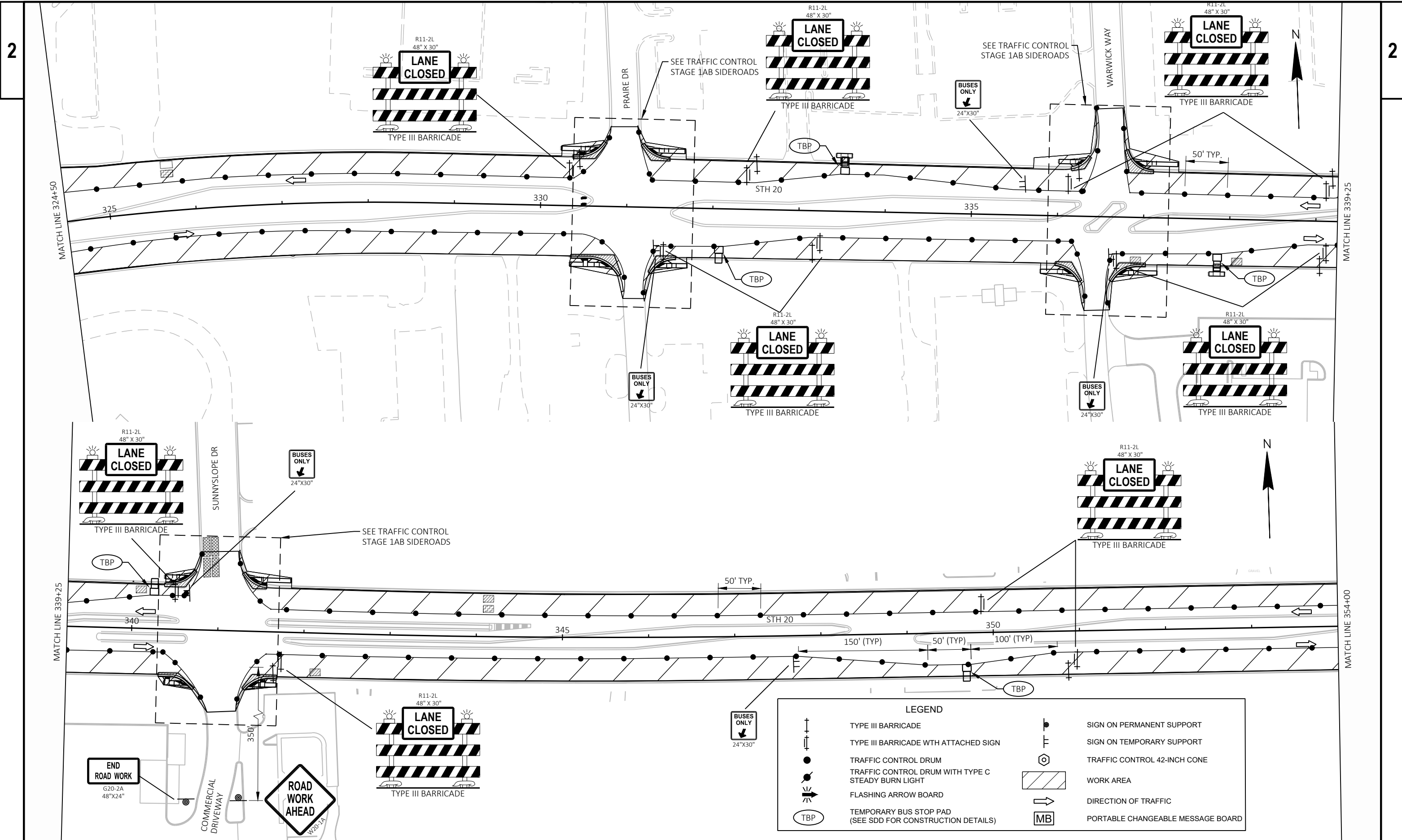
LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	TEMPORARY BUS STOP PAD (SEE SDD FOR CONSTRUCTION DETAILS)
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1A MAINLINE	SHEET E
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LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
	TEMPORARY BUS STOP PAD (SEE SDD FOR CONSTRUCTION DETAILS)		PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1B MAINLINE	SHEET	E
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PROJECT NO: 2250-15-70

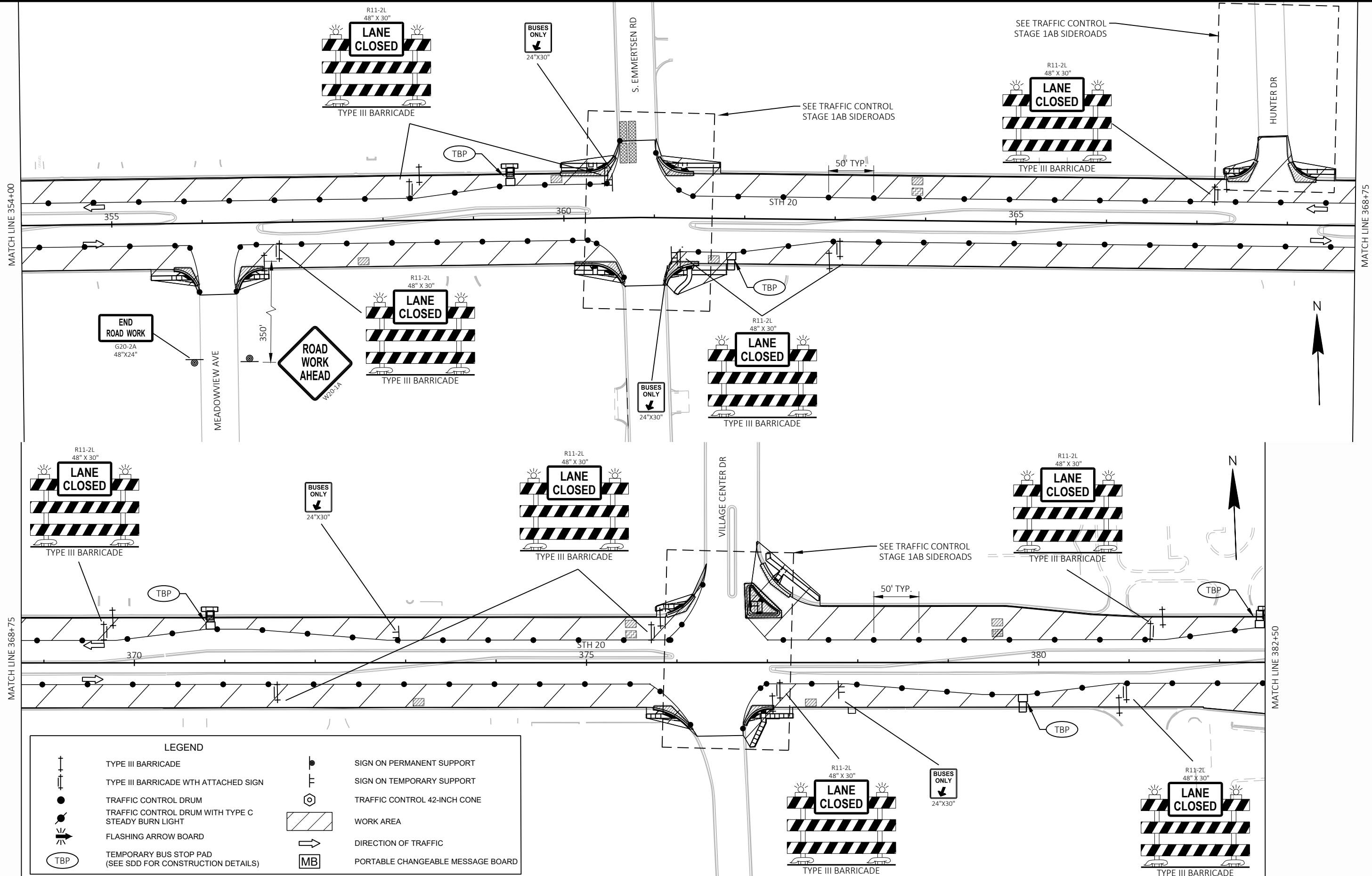
HWY: STH 20

COUNTY: RACINE

TRAFFIC CONTROL STAGE 1B MAINLINE

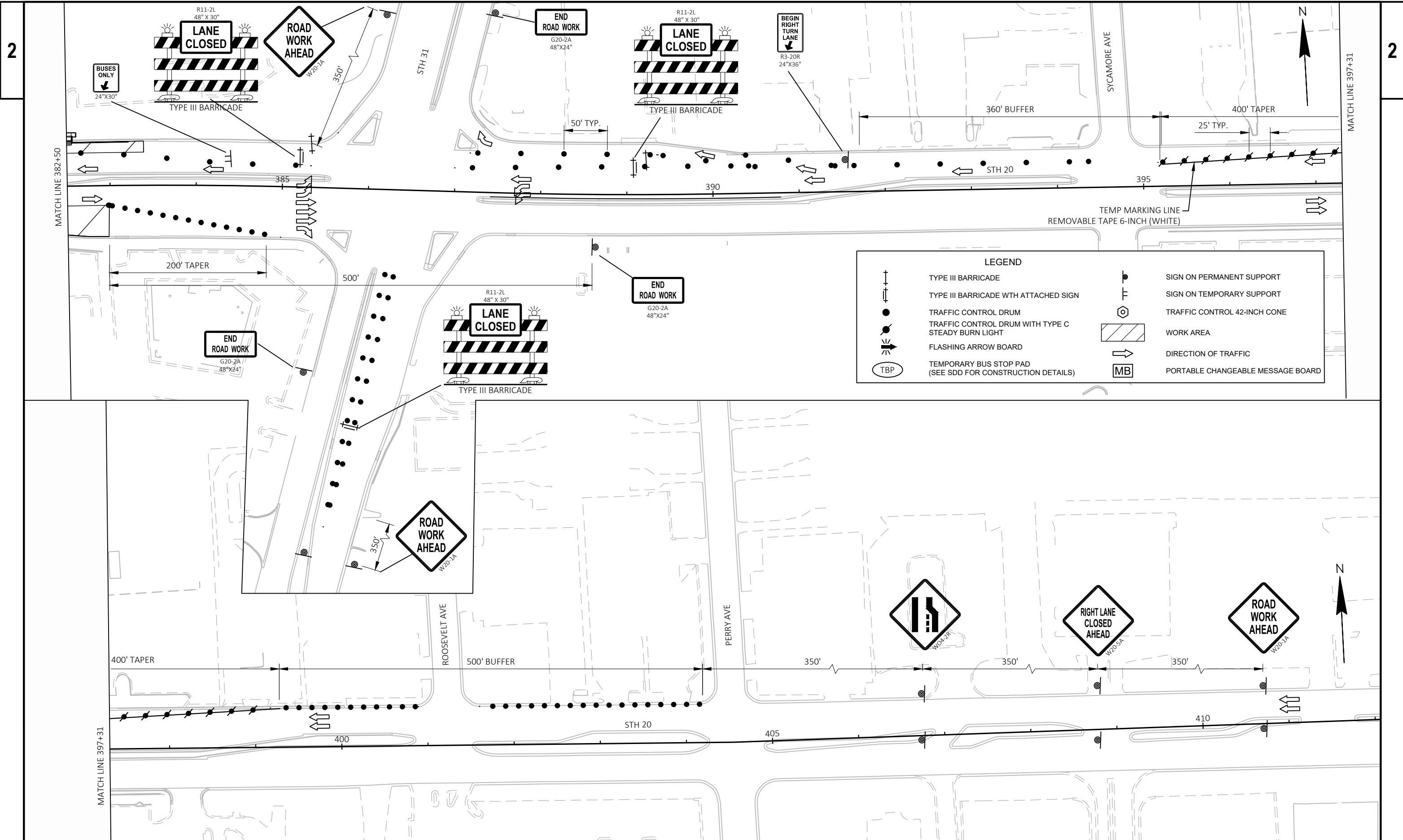
SHEET

E



LEGEND

	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
	TEMPORARY BUS STOP PAD (SEE SDD FOR CONSTRUCTION DETAILS)		PORTABLE CHANGEABLE MESSAGE BOARD



PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

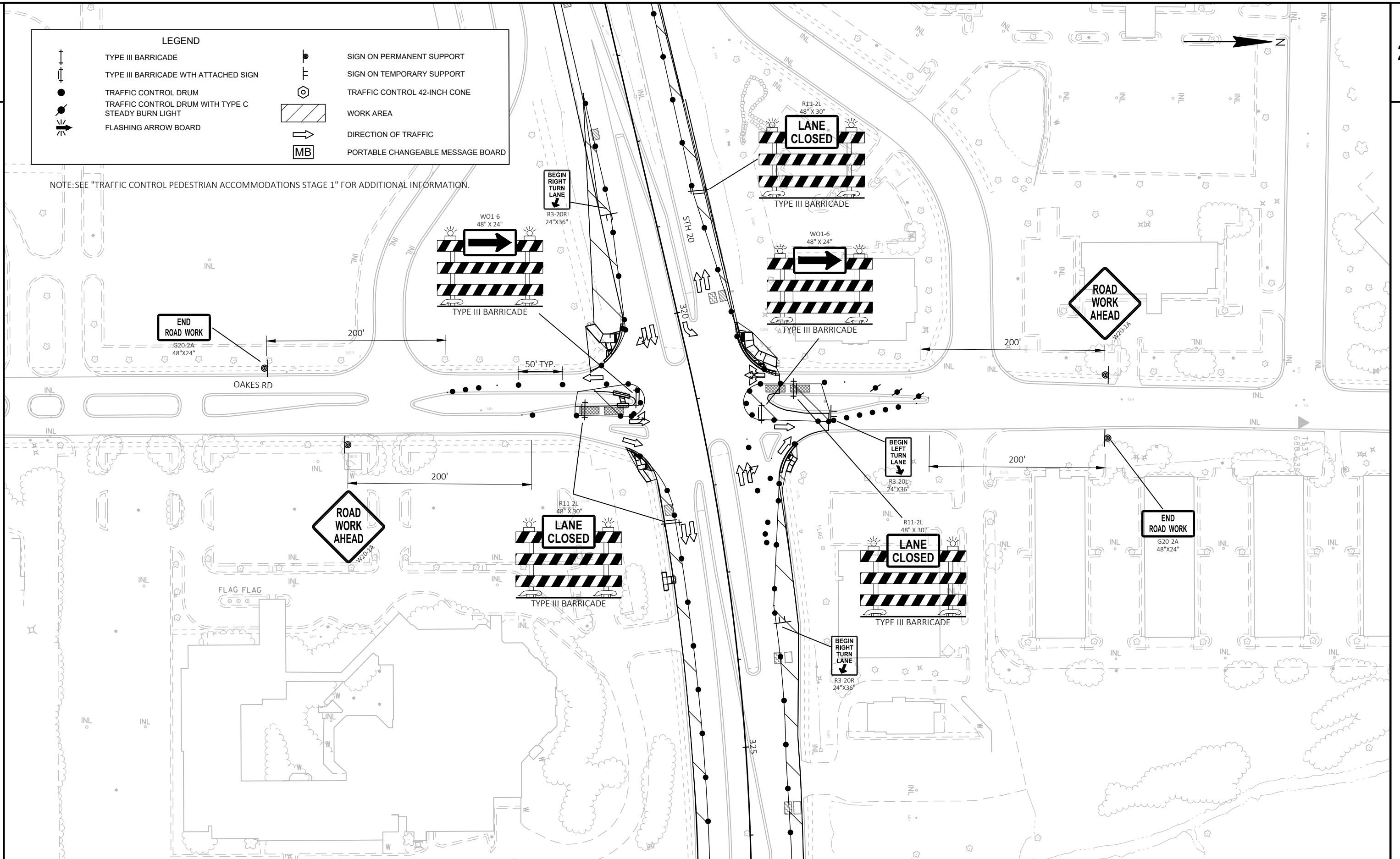
TRAFFIC CONTROL STAGE 1B MAINLINE

SHEET

E

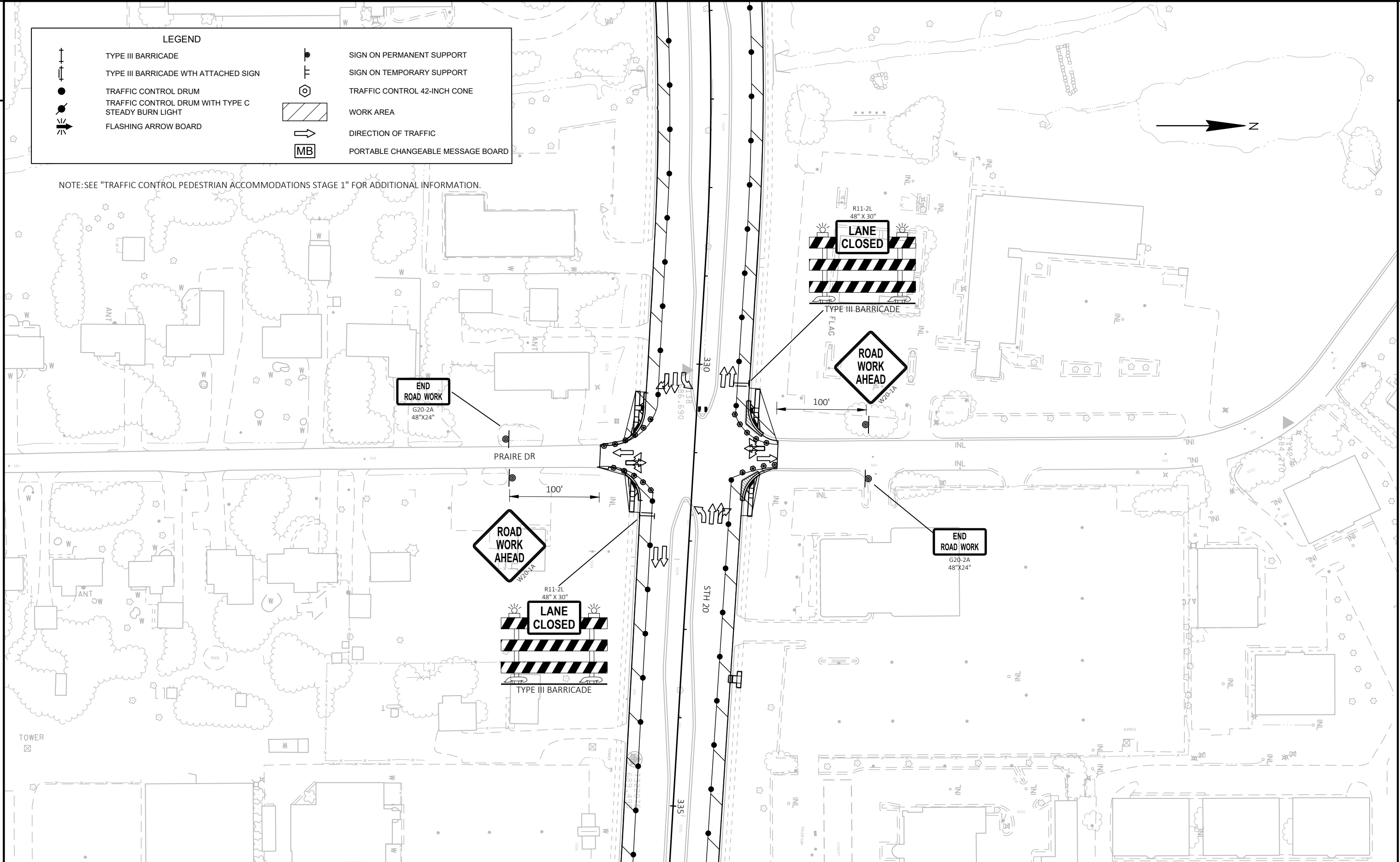
LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



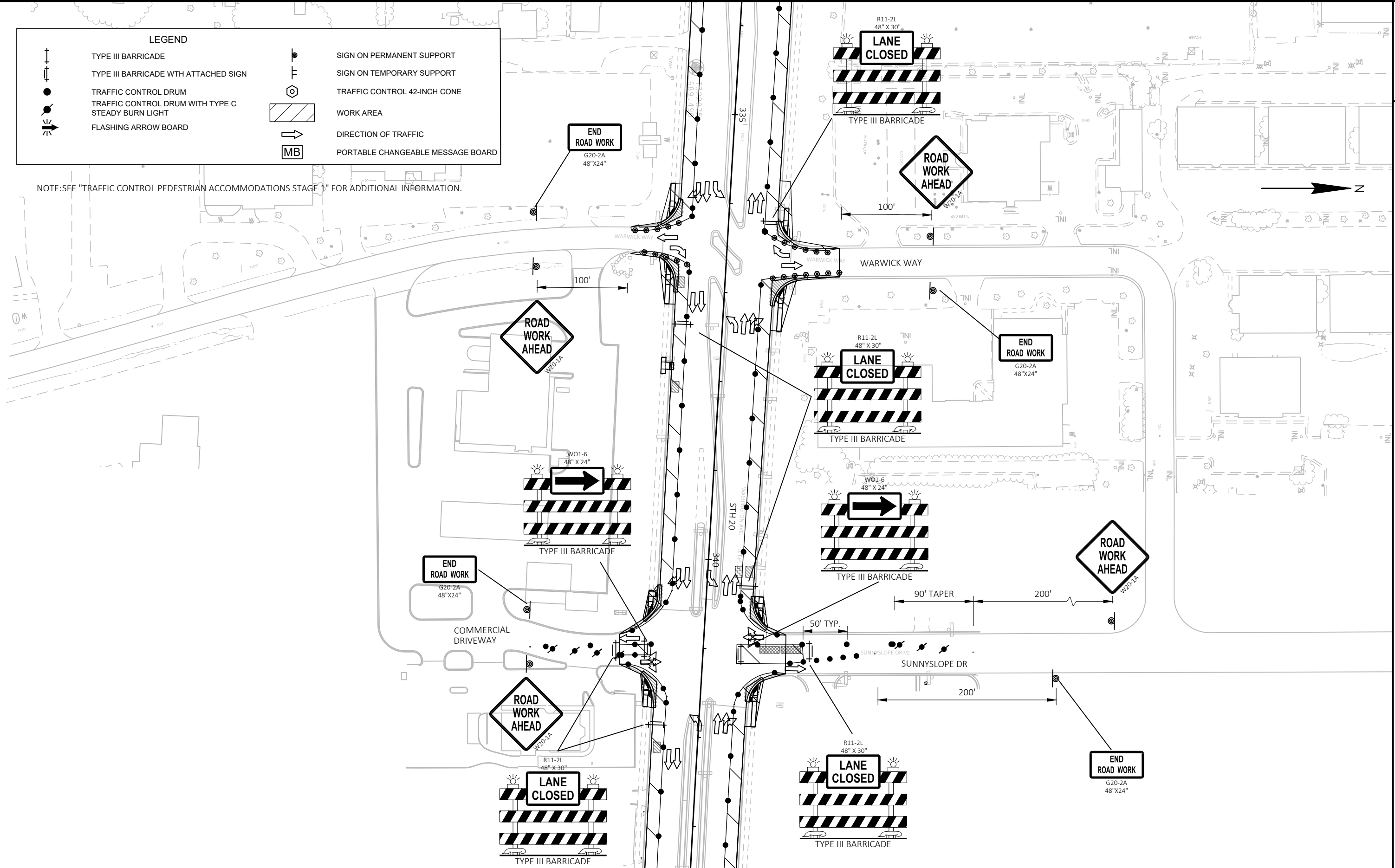
LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.

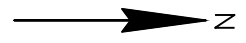


LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

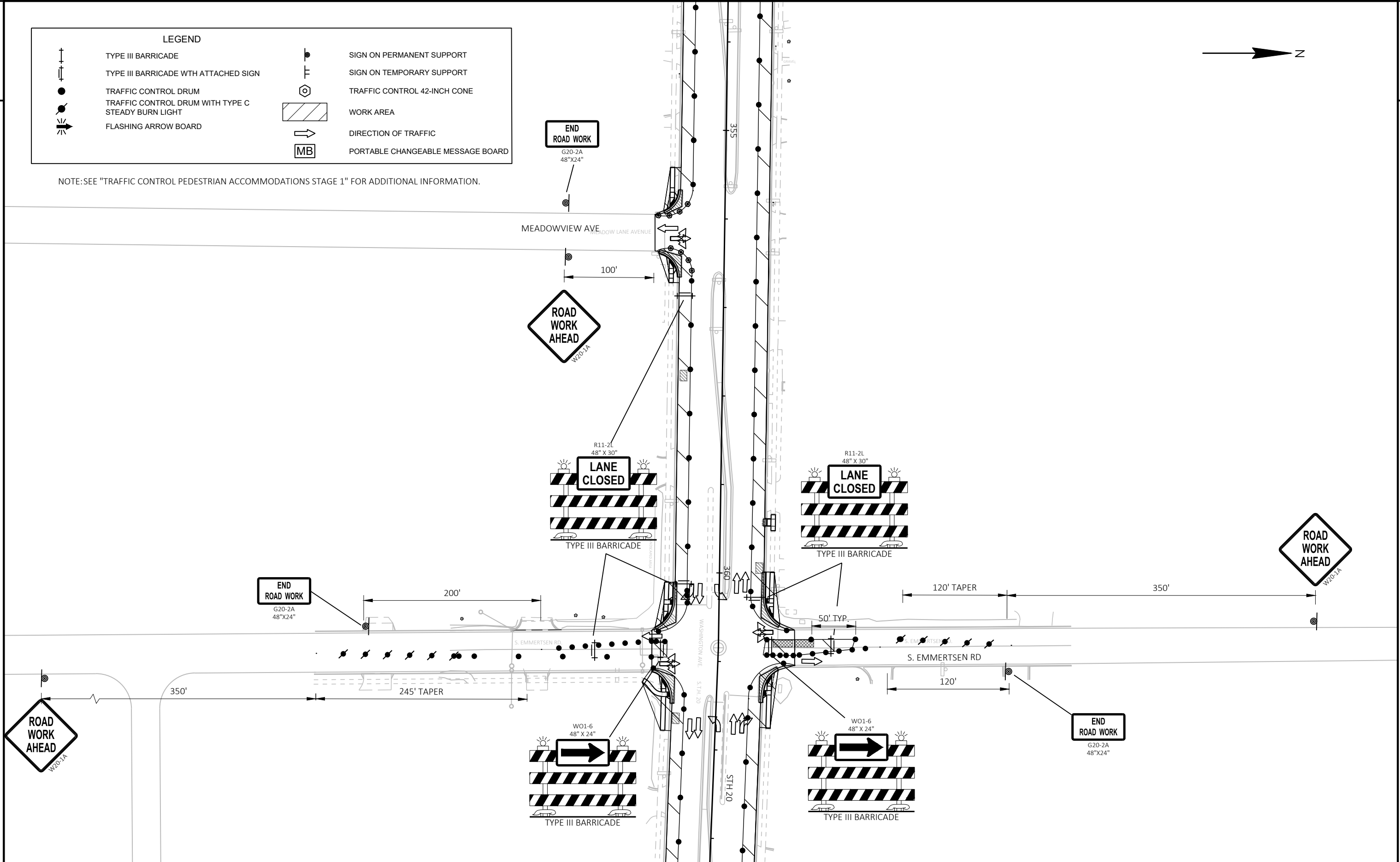
NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

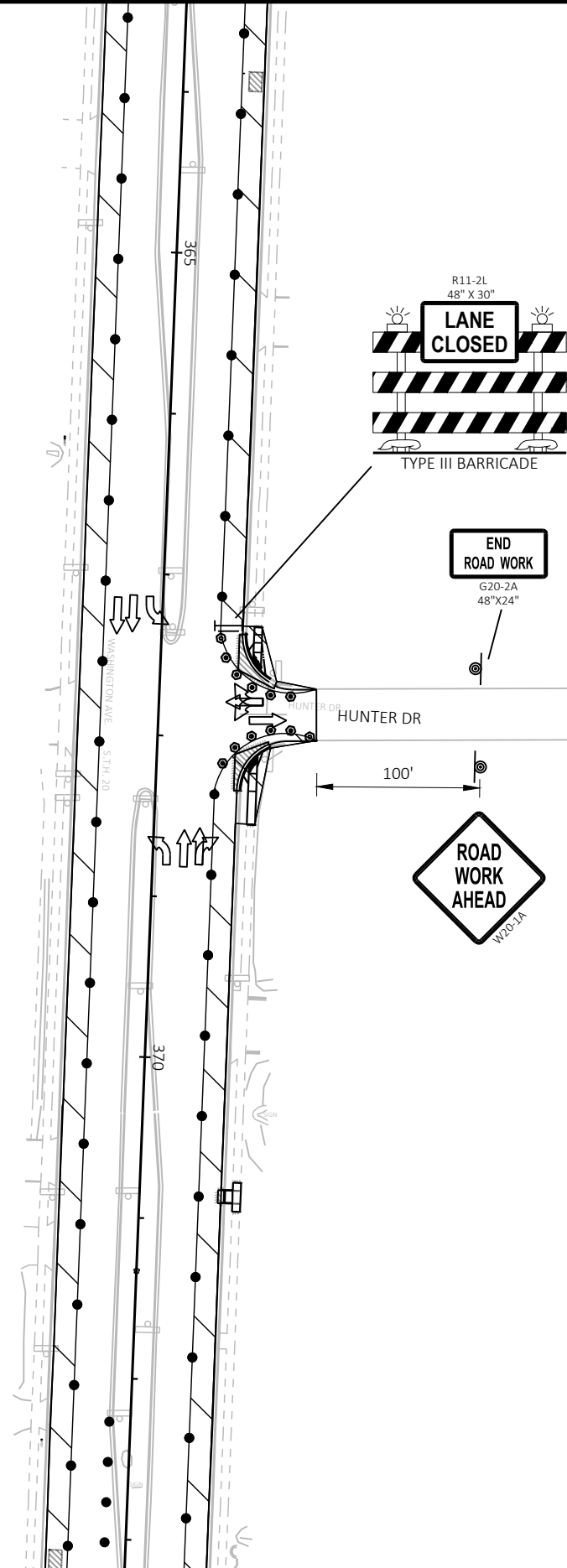


NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



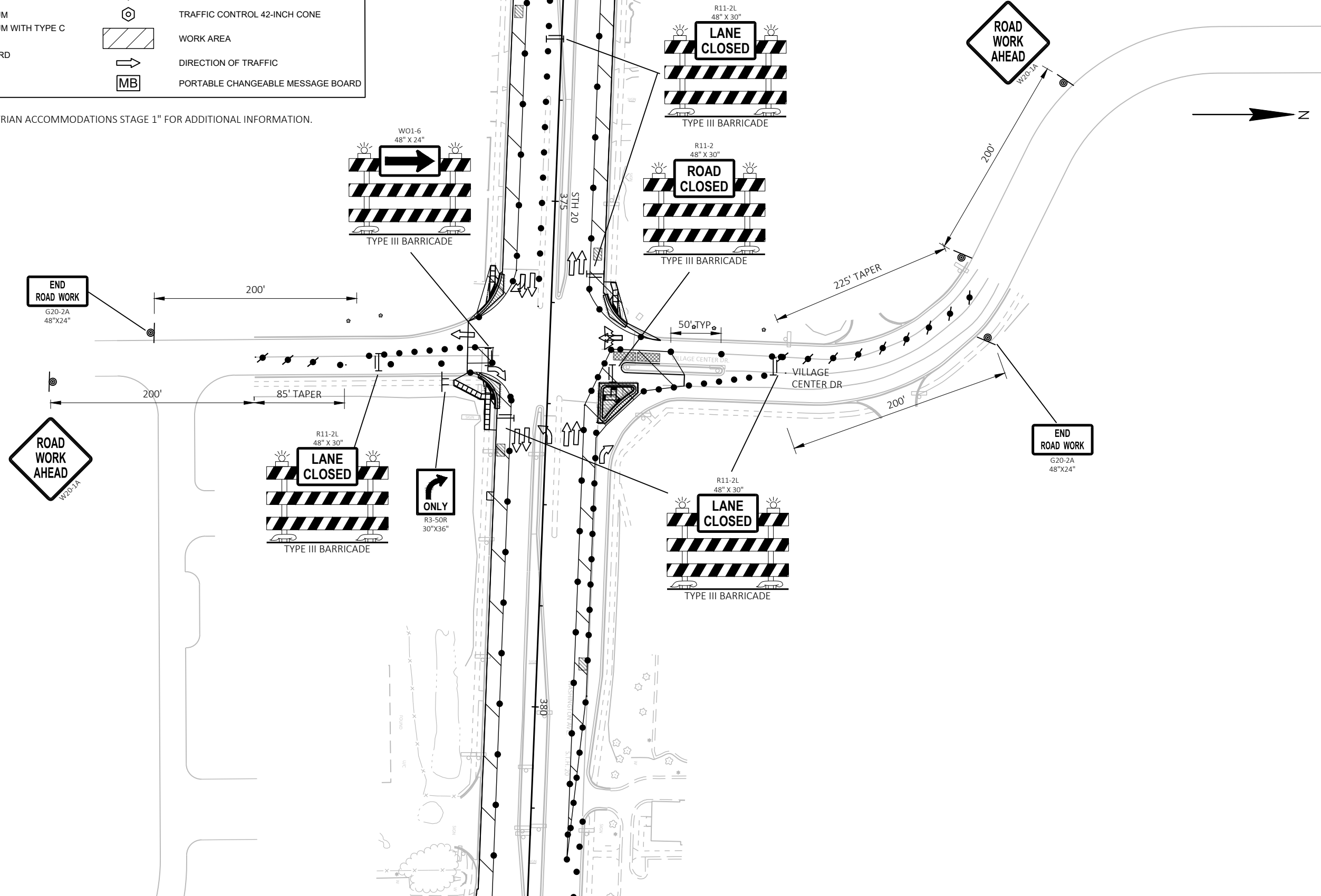
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



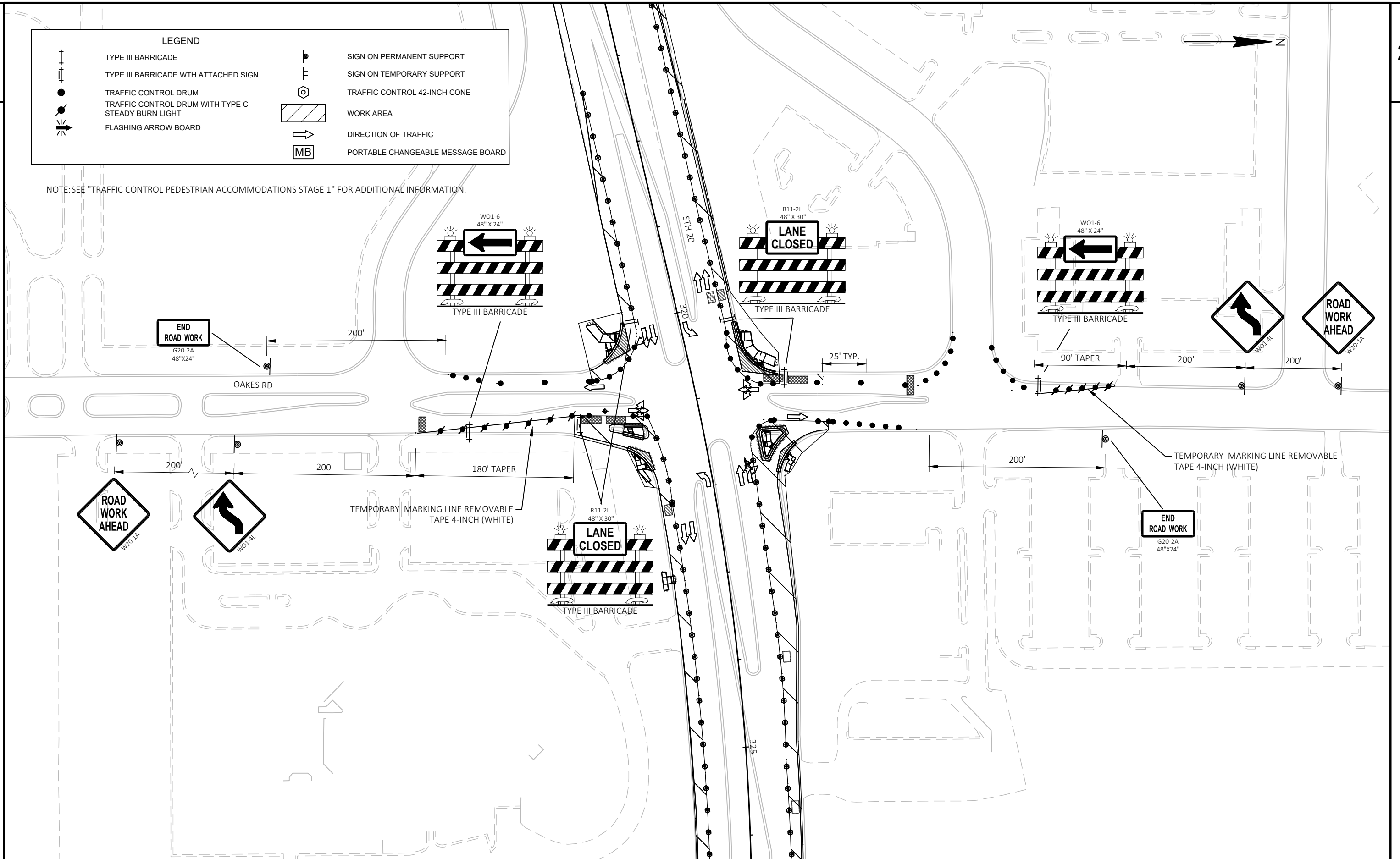
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



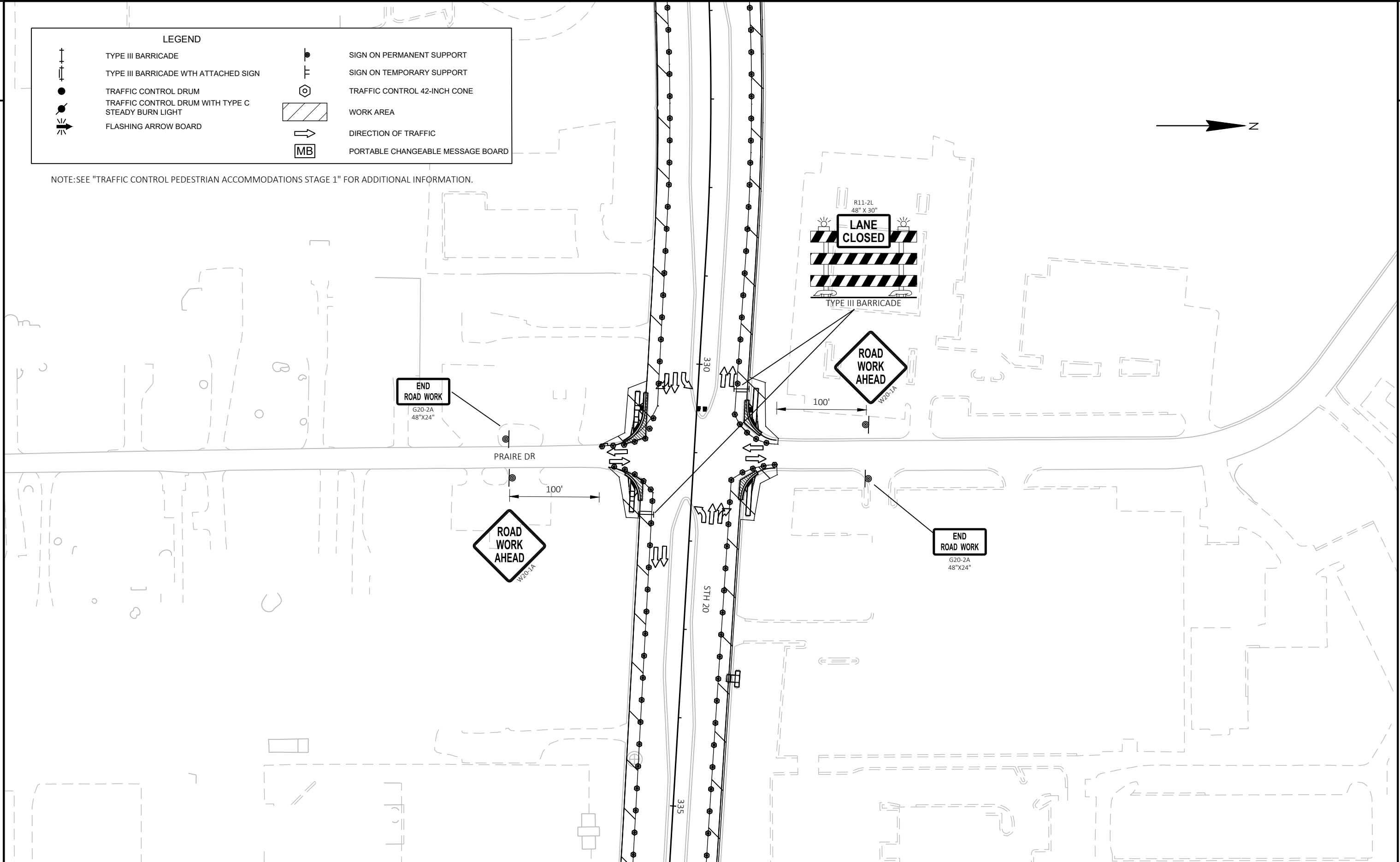
LEGEND	
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	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

NOTE:SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.

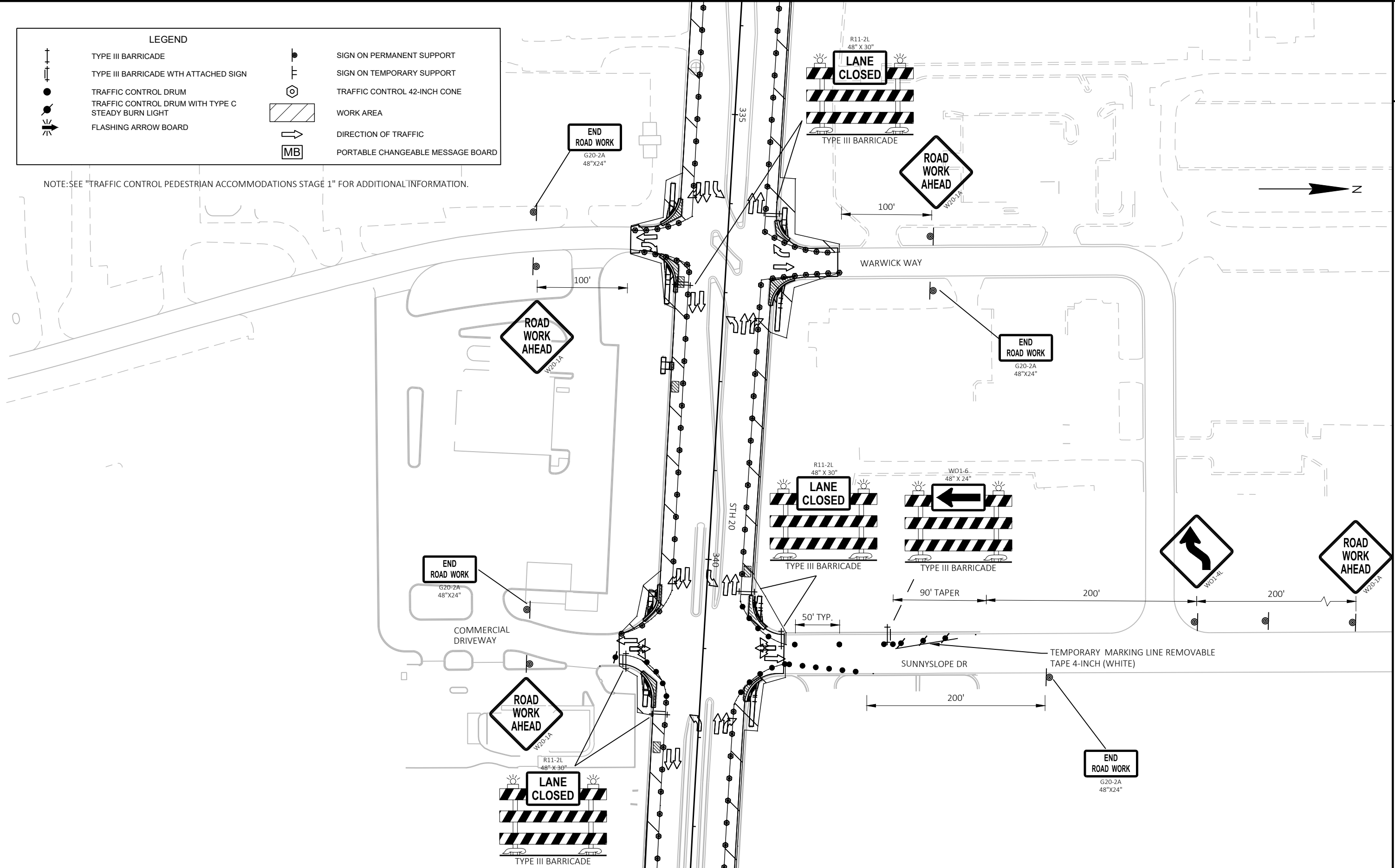


PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1AB-SIDEROADS OUTSIDE WORK ZONE	SHEET	E
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LEGEND

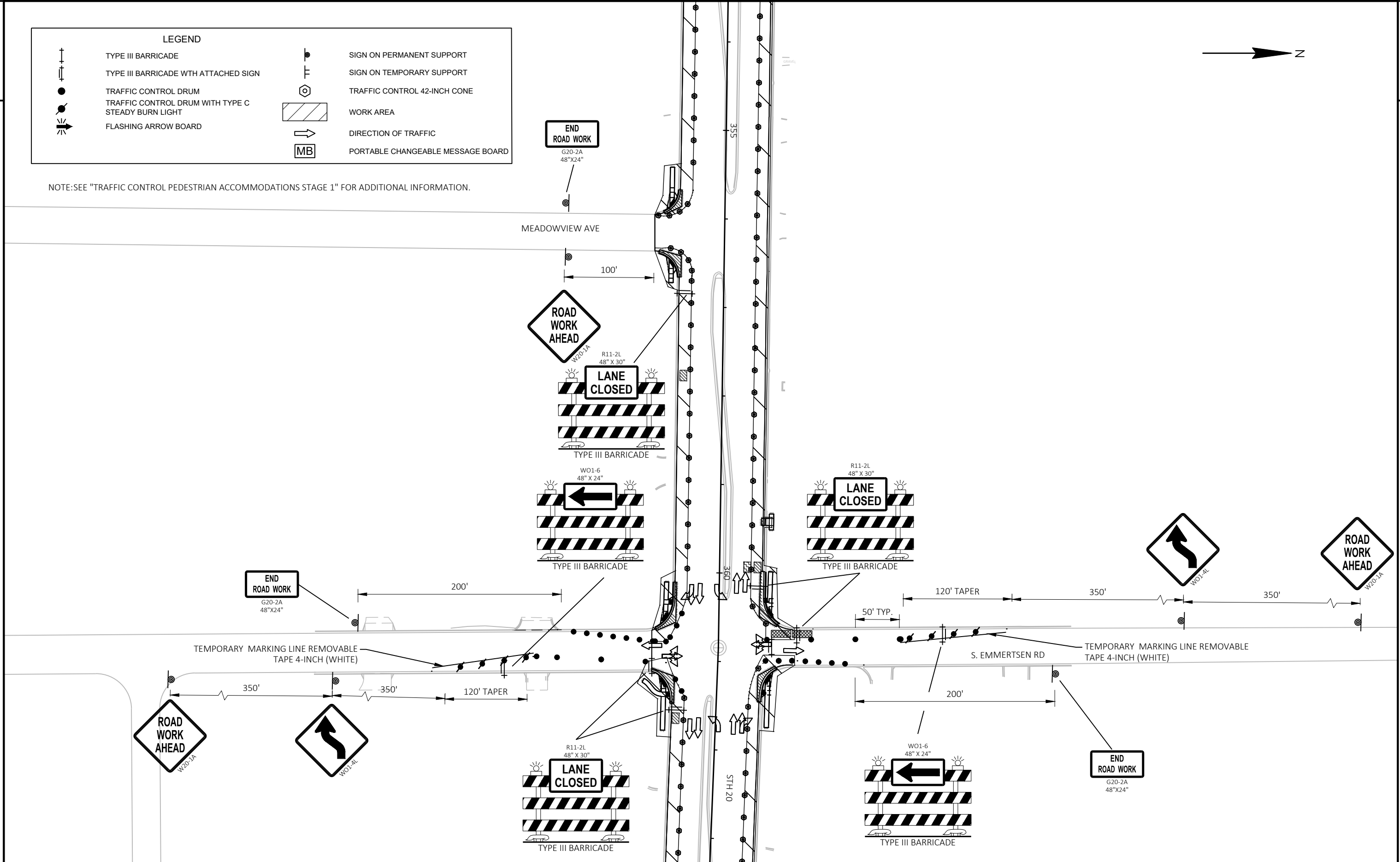
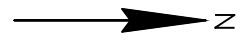
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

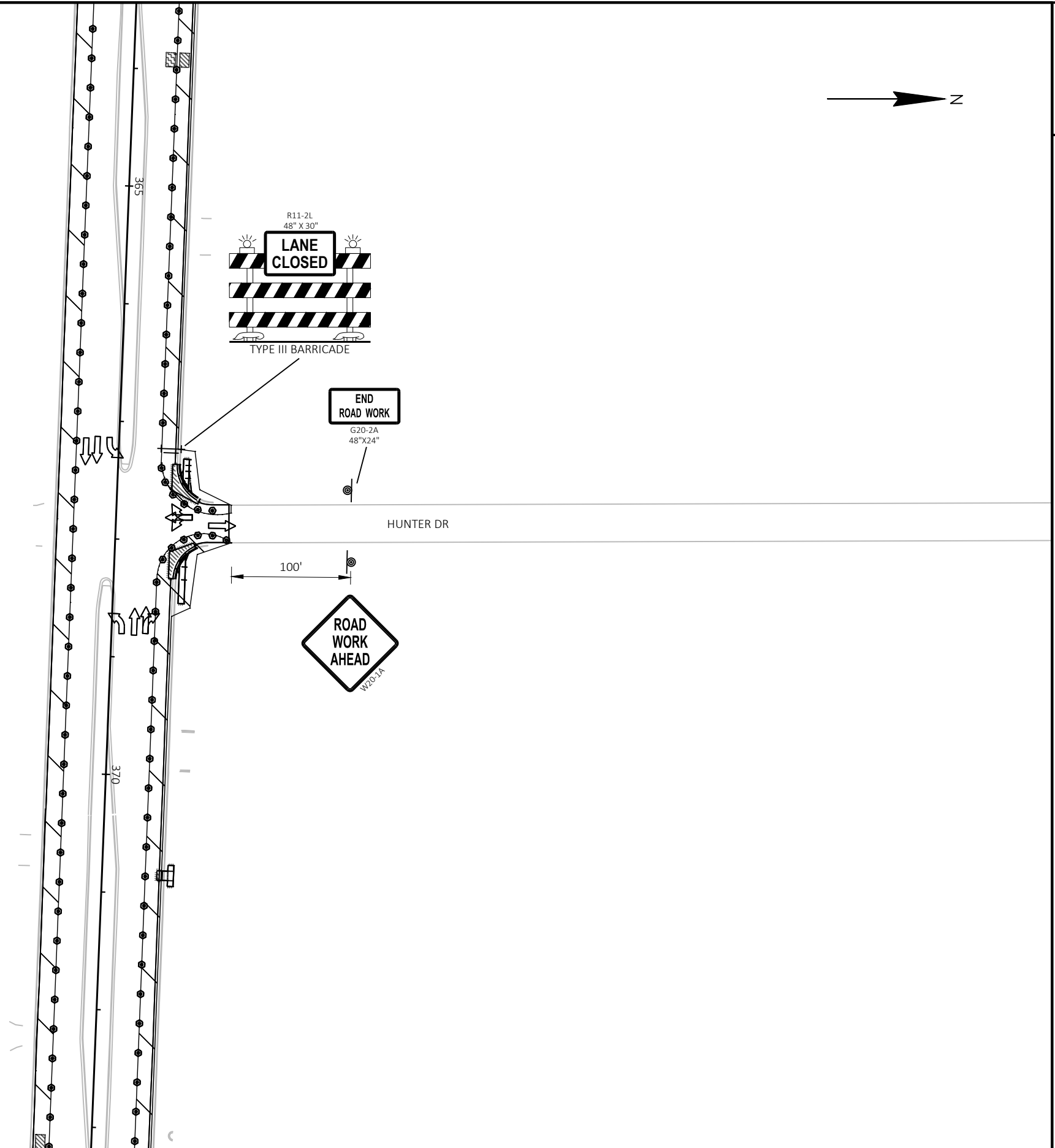
NOTE:SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL STAGE 1AB-SIDERoads OUTSIDE WORK ZONE	SHEET	E
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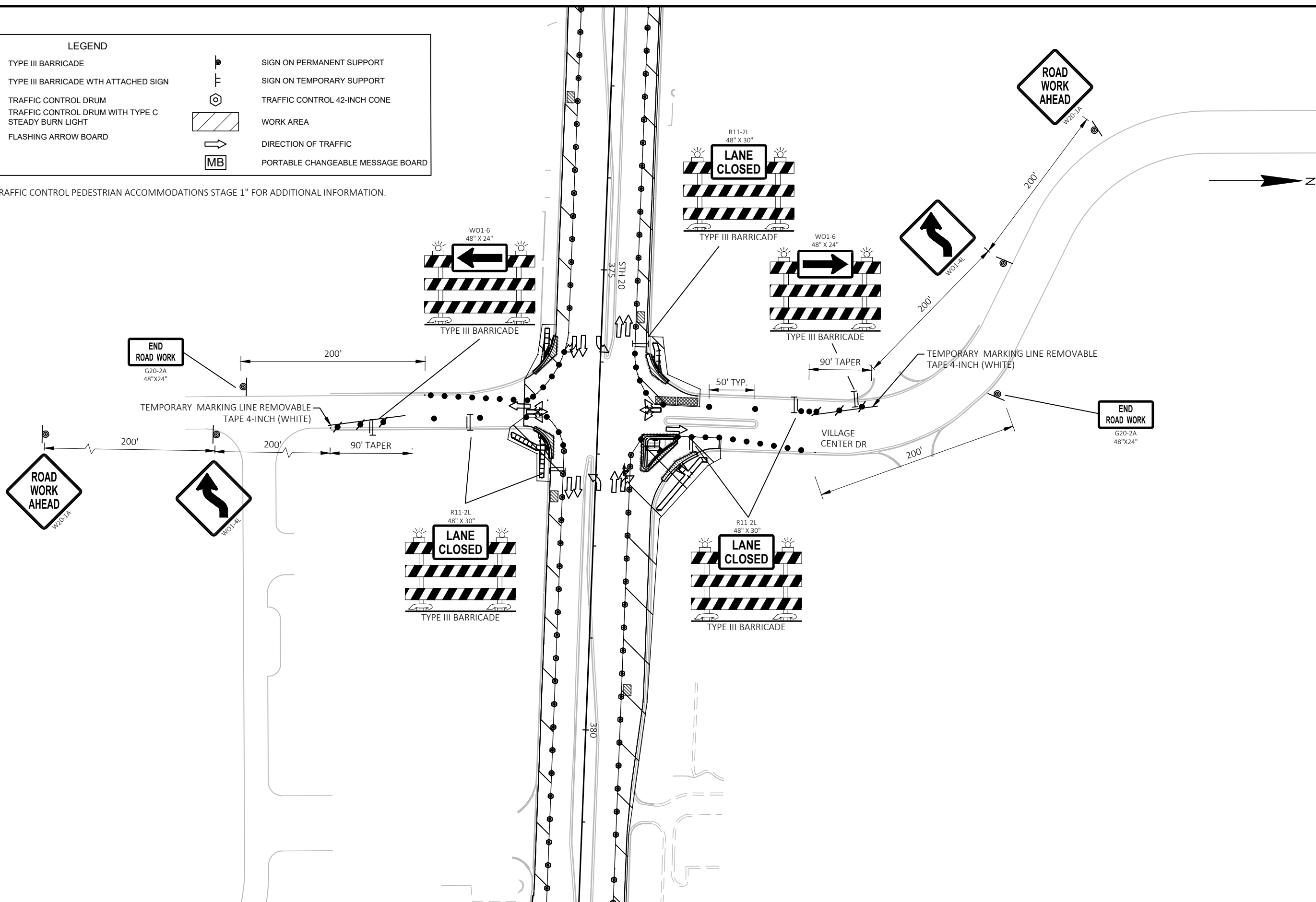
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

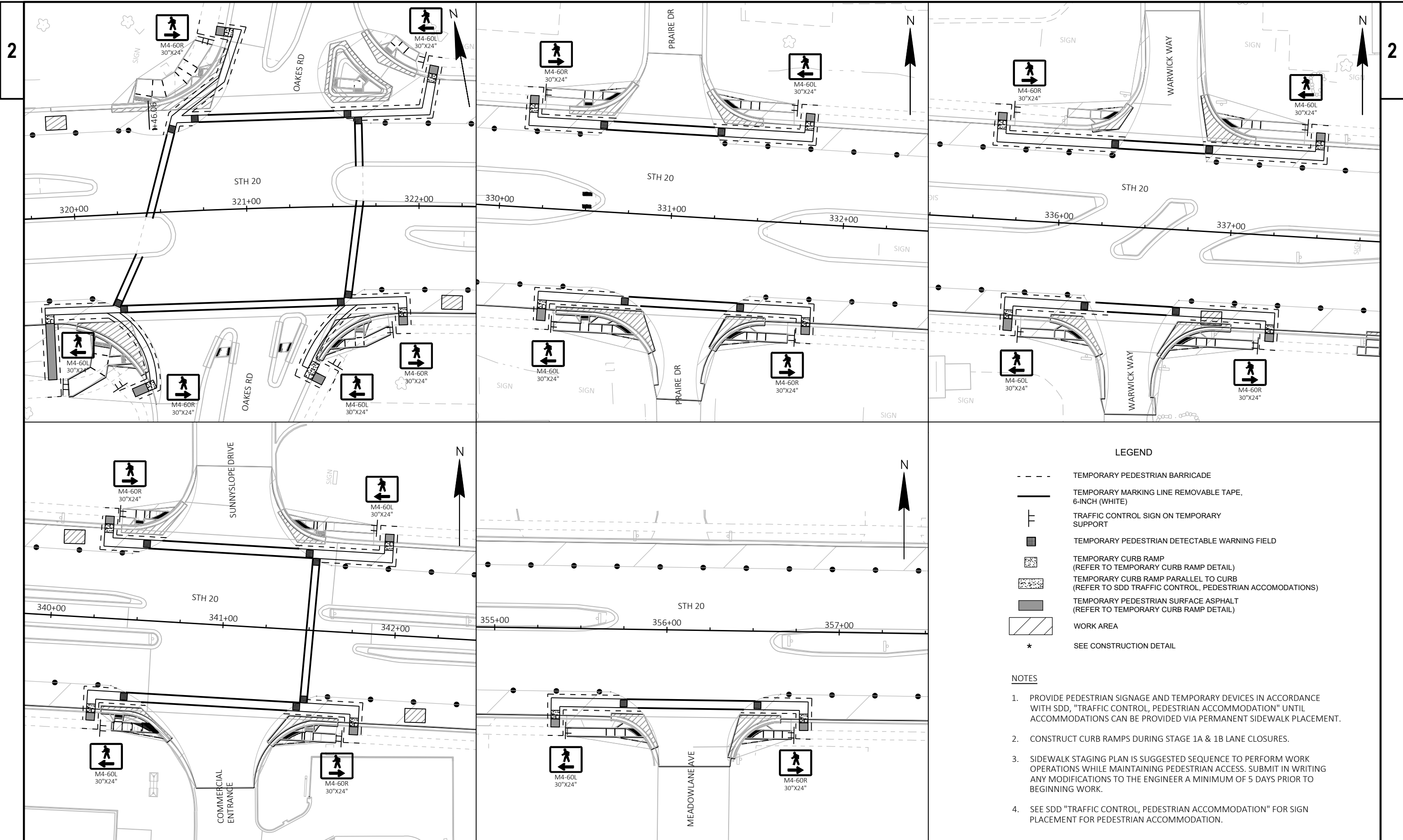
NOTE:SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 1" FOR ADDITIONAL INFORMATION.



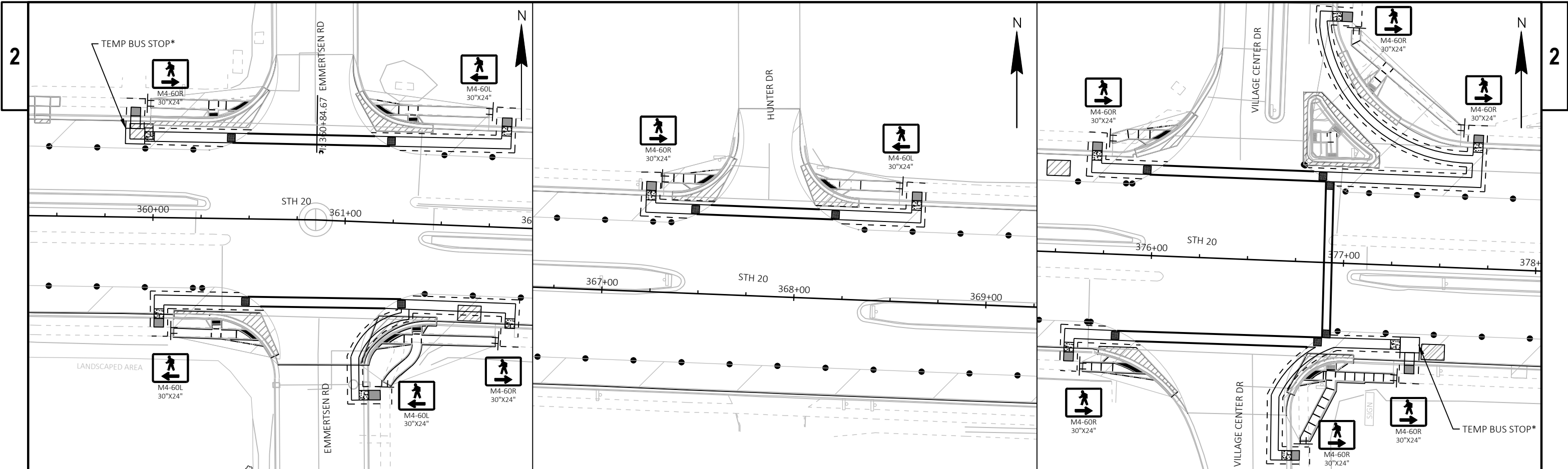


LEGEND

- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY MARKING LINE REMOVABLE TAPE, 6-INCH (WHITE)
- ⊥ TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
- ▨ TEMPORARY CURB RAMP (REFER TO TEMPORARY CURB RAMP DETAIL)
- ▩ TEMPORARY CURB RAMP PARALLEL TO CURB (REFER TO SDD TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATIONS)
- TEMPORARY PEDESTRIAN SURFACE ASPHALT (REFER TO TEMPORARY CURB RAMP DETAIL)
- ▨ WORK AREA
- * SEE CONSTRUCTION DETAIL

NOTES

1. PROVIDE PEDESTRIAN SIGNAGE AND TEMPORARY DEVICES IN ACCORDANCE WITH SDD, "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" UNTIL ACCOMMODATIONS CAN BE PROVIDED VIA PERMANENT SIDEWALK PLACEMENT.
2. CONSTRUCT CURB RAMPS DURING STAGE 1A & 1B LANE CLOSURES.
3. SIDEWALK STAGING PLAN IS SUGGESTED SEQUENCE TO PERFORM WORK OPERATIONS WHILE MAINTAINING PEDESTRIAN ACCESS. SUBMIT IN WRITING ANY MODIFICATIONS TO THE ENGINEER A MINIMUM OF 5 DAYS PRIOR TO BEGINNING WORK.
4. SEE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR SIGN PLACEMENT FOR PEDESTRIAN ACCOMMODATION.

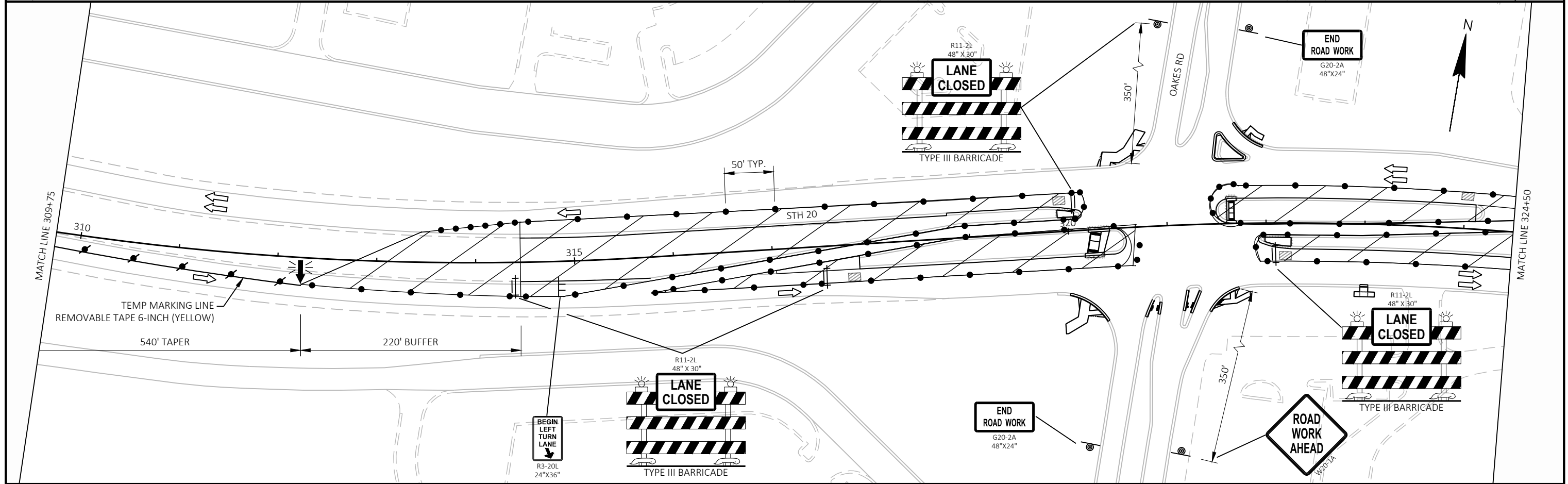
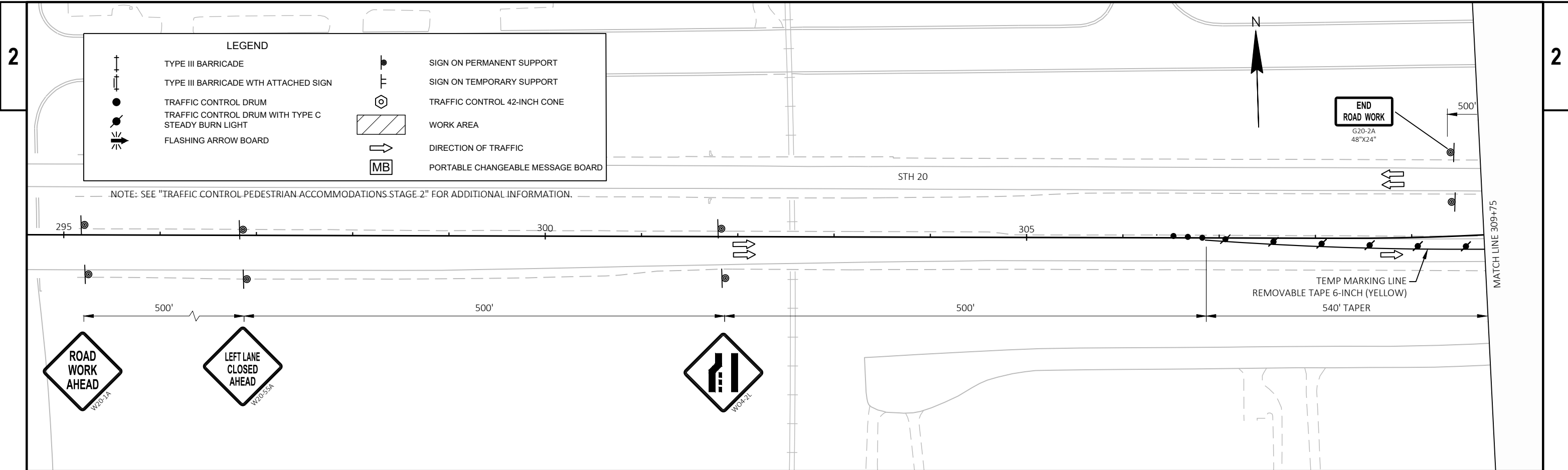


LEGEND

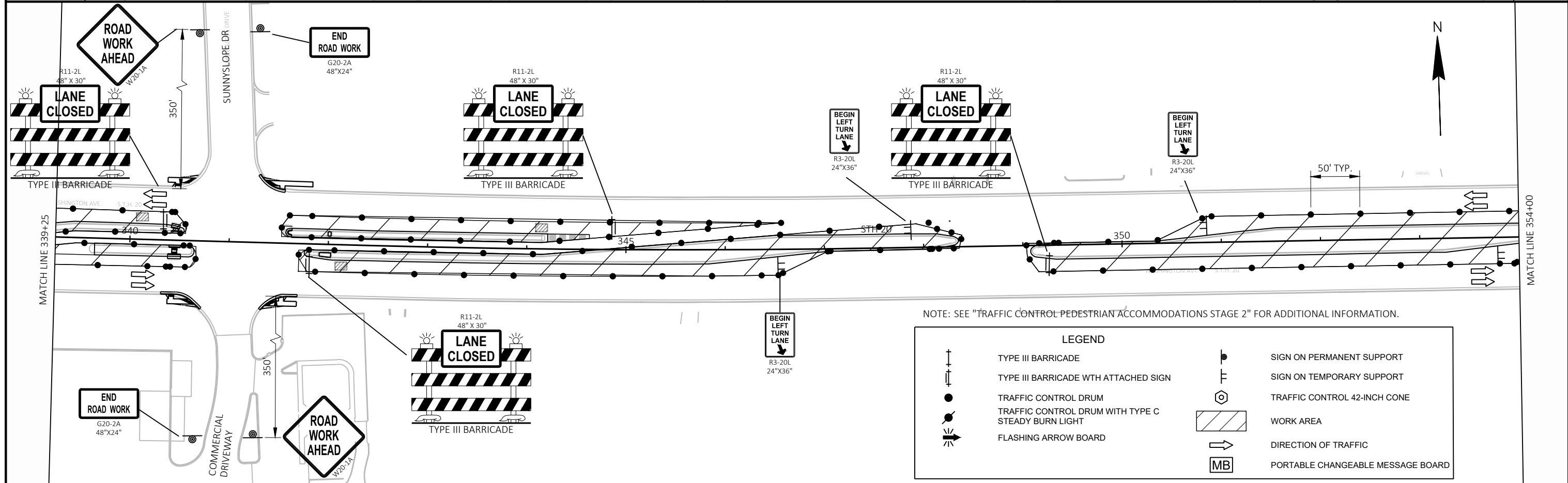
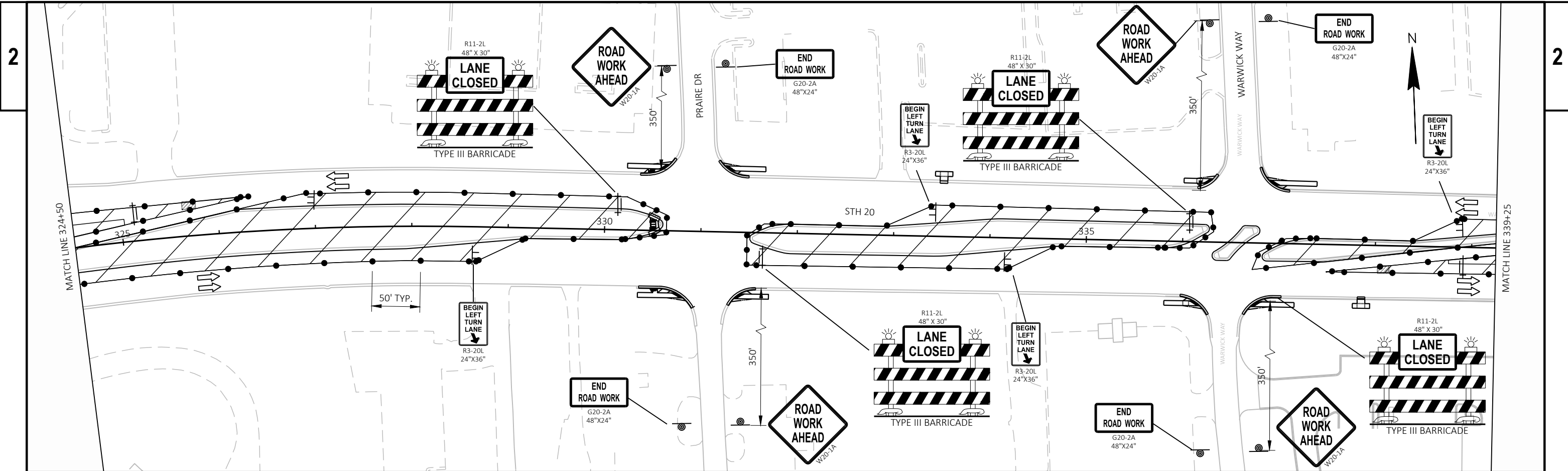
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY MARKING LINE REMOVABLE TAPE, 6-INCH (WHITE)
- T TEMPORARY TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
- ▨ TEMPORARY CURB RAMP (REFER TO TEMPORARY CURB RAMP DETAIL)
- ▩ TEMPORARY CURB RAMP PARALLEL TO CURB (REFER TO SDD TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATIONS)
- TEMPORARY PEDESTRIAN SURFACE ASPHALT (REFER TO TEMPORARY CURB RAMP DETAIL)
- ▨ WORK AREA
- * SEE CONSTRUCTION DETAIL

NOTES

1. PROVIDE PEDESTRIAN SIGNAGE AND TEMPORARY DEVICES IN ACCORDANCE WITH SDD, "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" UNTIL ACCOMMODATIONS CAN BE PROVIDED VIA PERMANENT SIDEWALK PLACEMENT.
2. CONSTRUCT CURB RAMP DURING STAGE 1A & 1B LANE CLOSURES.
3. SIDEWALK STAGING PLAN IS SUGGESTED SEQUENCE TO PERFORM WORK OPERATIONS WHILE MAINTAINING PEDESTRIAN ACCESS. SUBMIT IN WRITING ANY MODIFICATIONS TO THE ENGINEER A MINIMUM OF 5 DAYS PRIOR TO BEGINNING WORK.
4. SEE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR SIGN PLACEMENT FOR PEDESTRIAN ACCOMMODATION.



PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE TRAFFIC CONTROL STAGE 2A MAINLINE SHEET E



NOTE: SEE "TRAFFIC CONTROL-PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2250-15-70

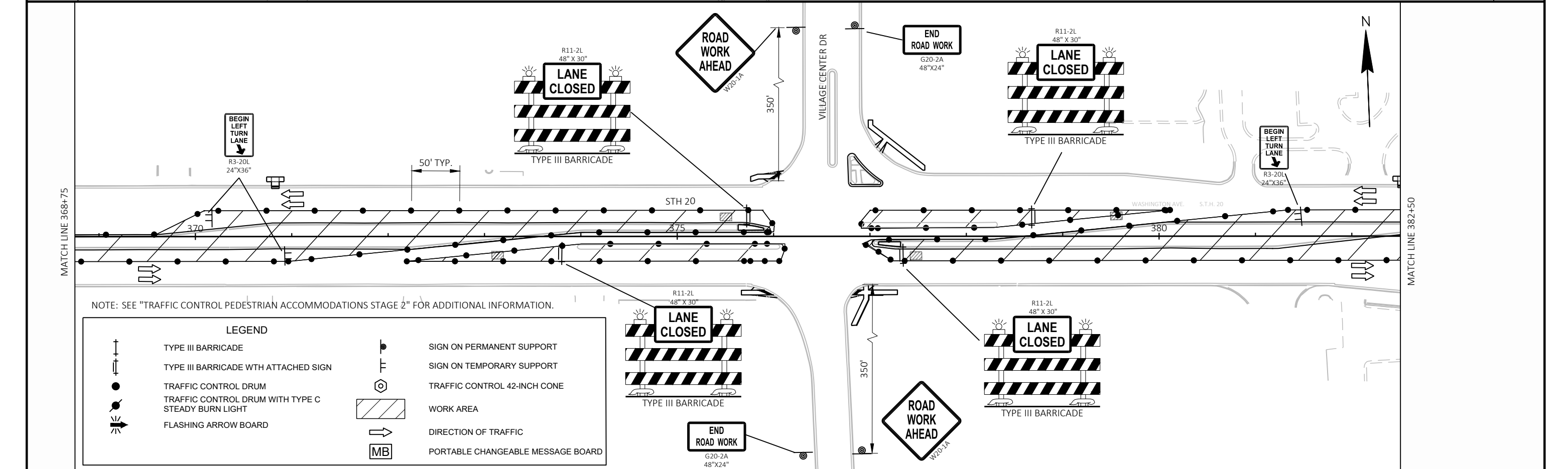
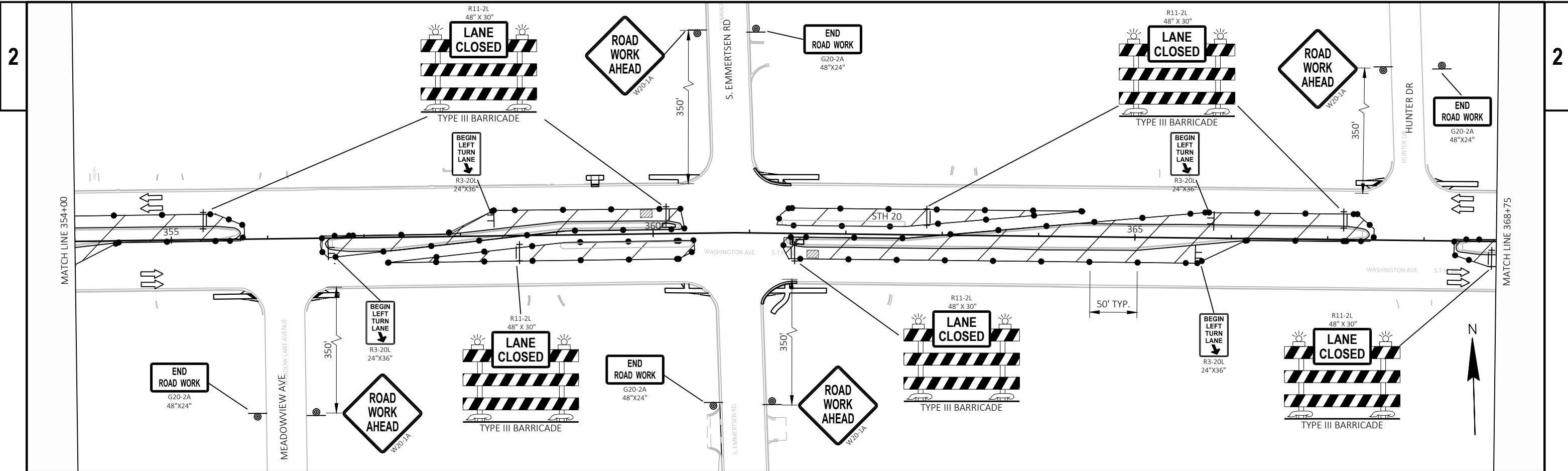
HWY: STH 20

COUNTY: RACINE

TRAFFIC CONTROL STAGE 2A MAINLINE

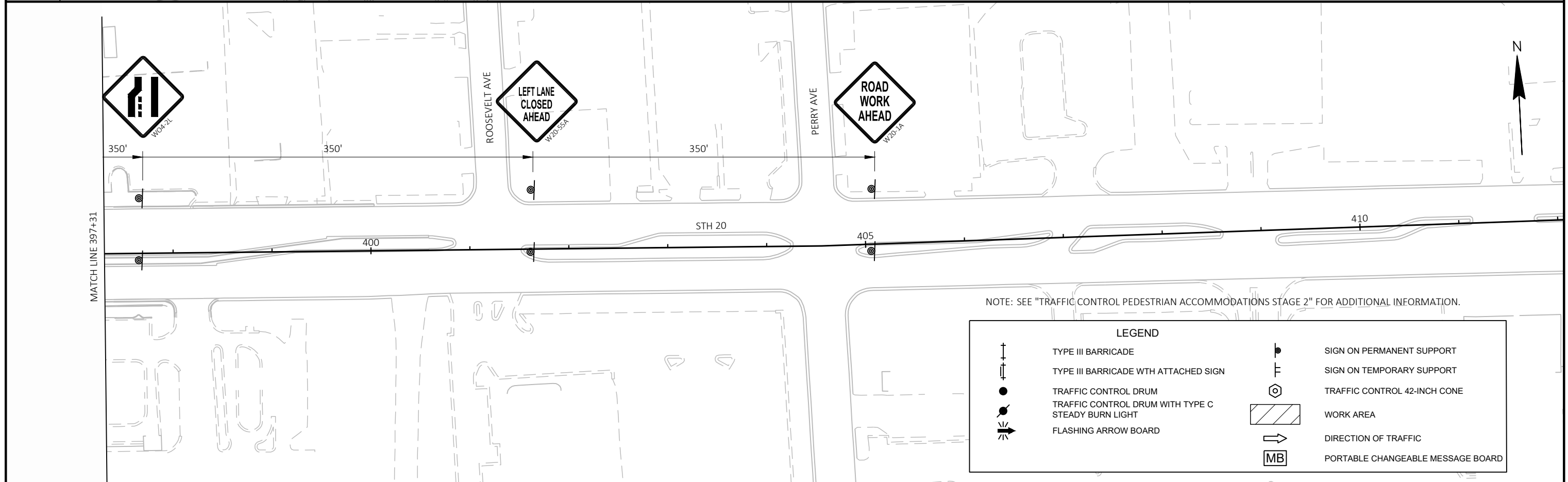
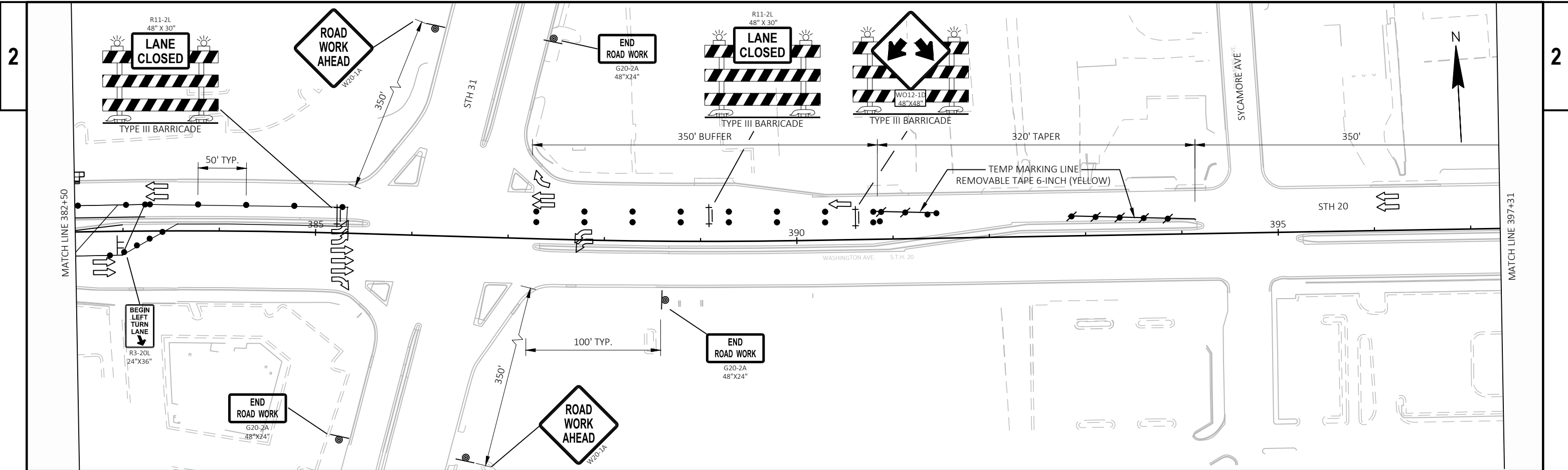
SHEET

E



NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

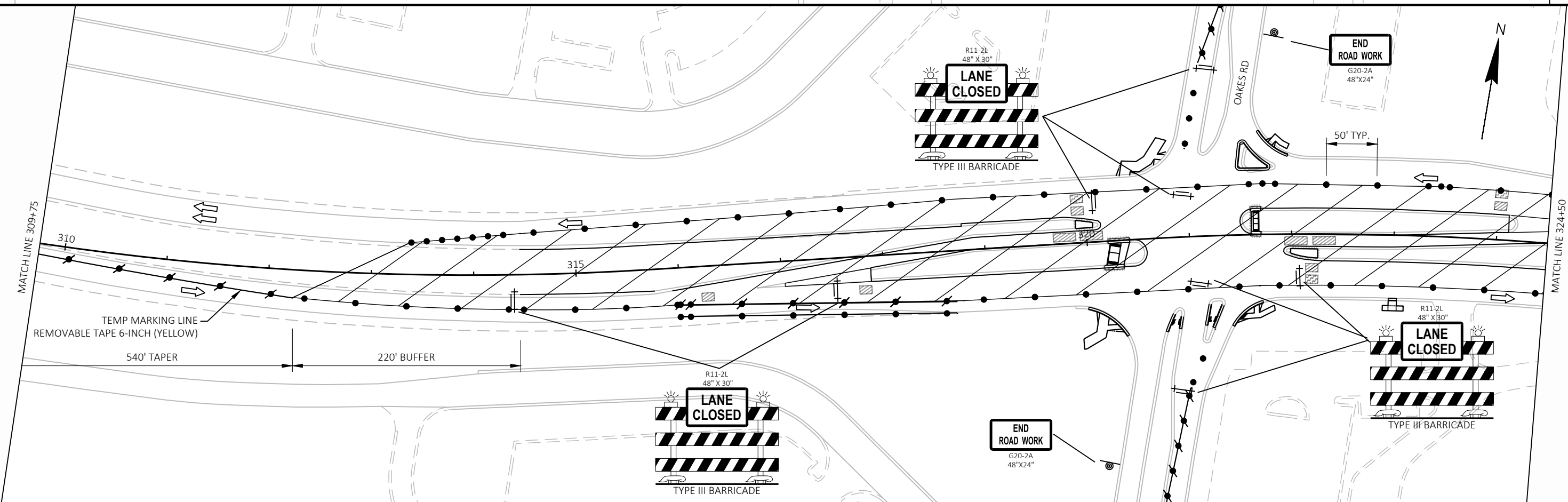
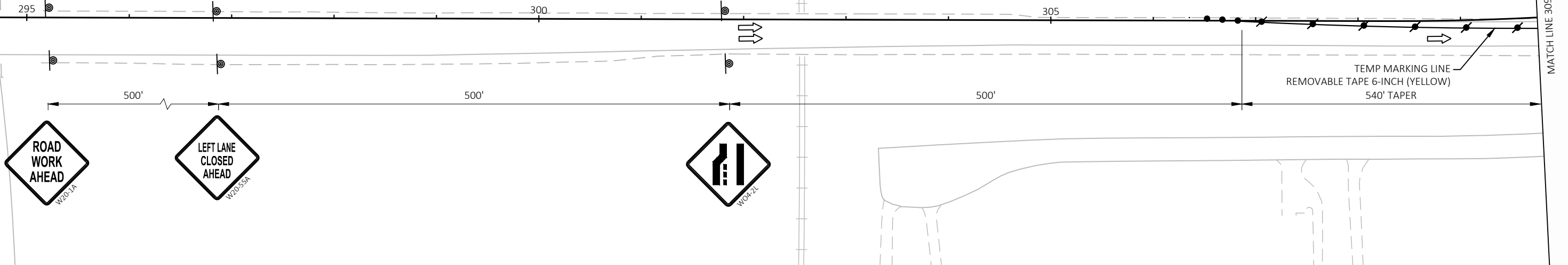


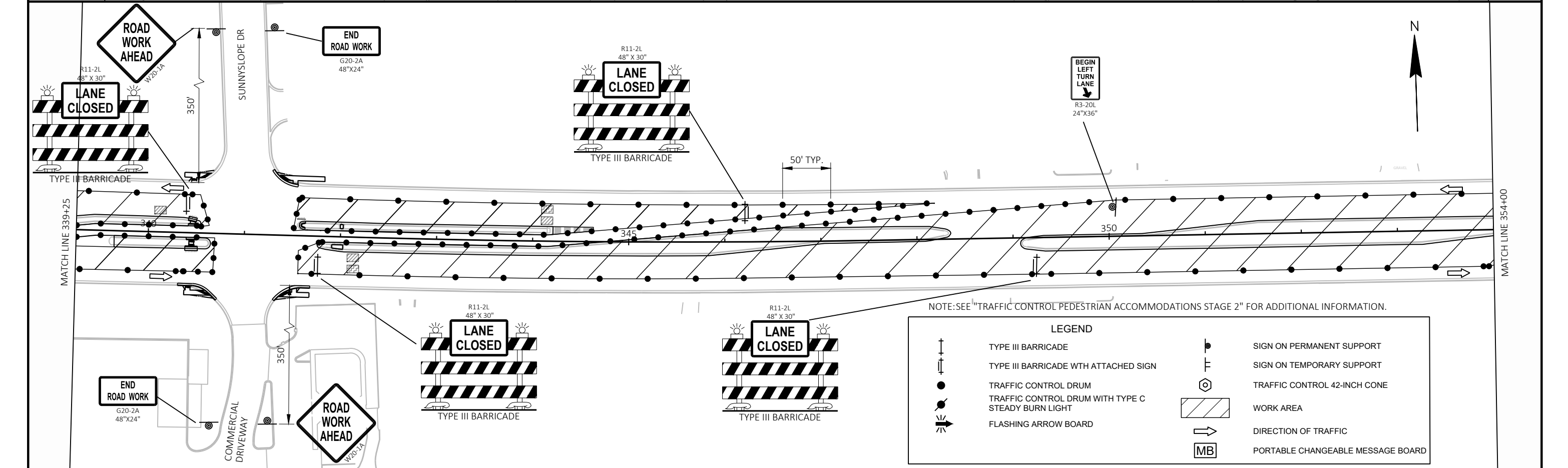
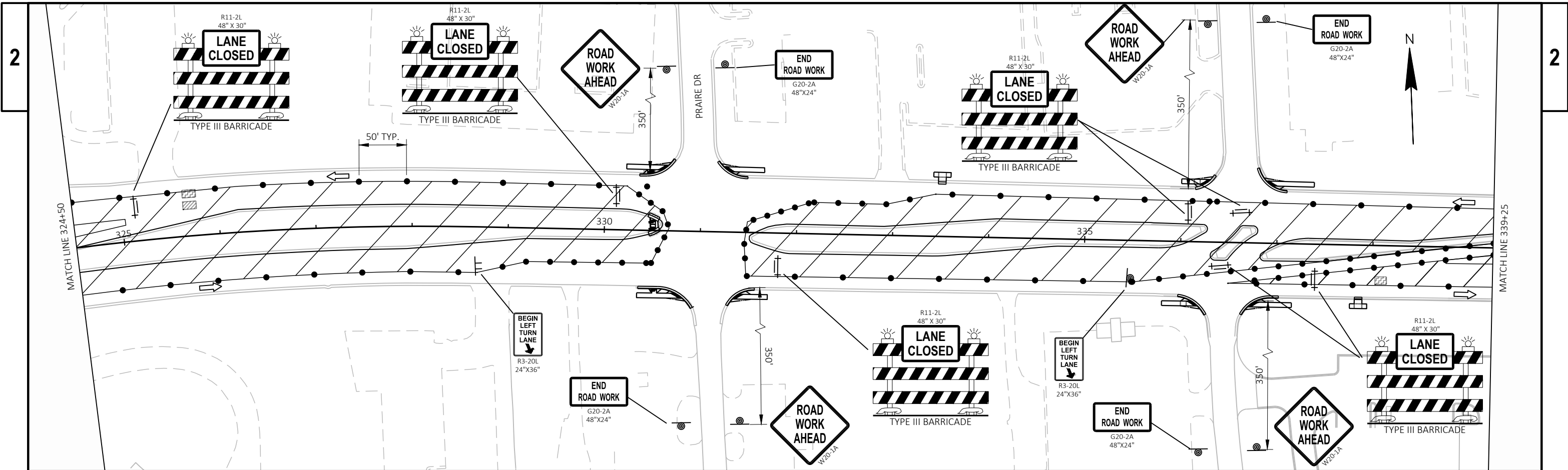
NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL-PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

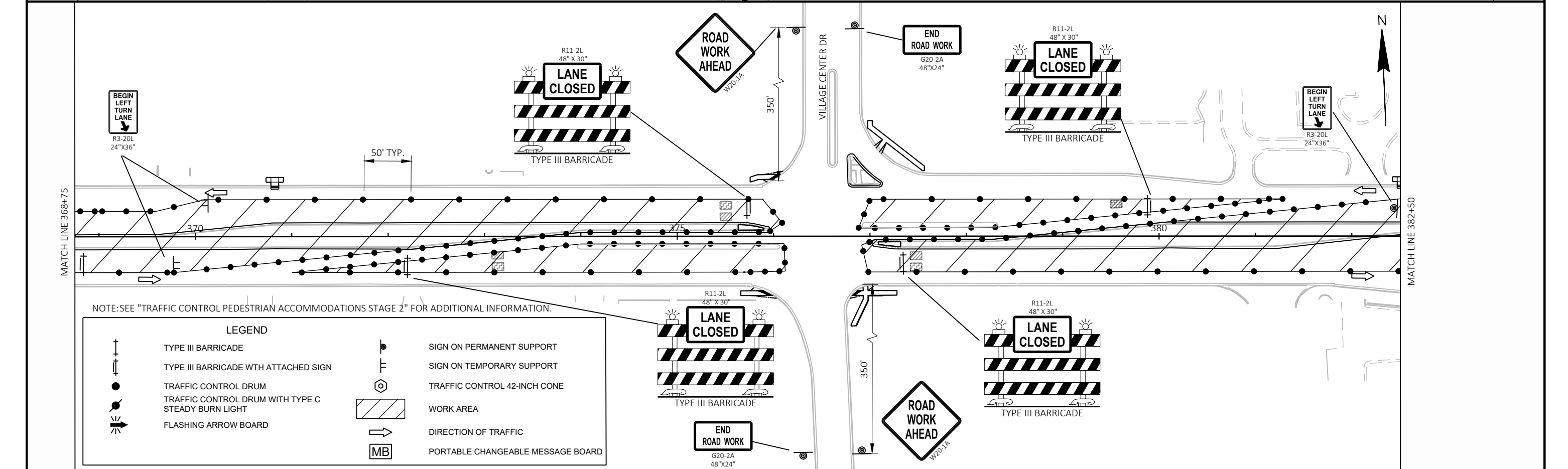
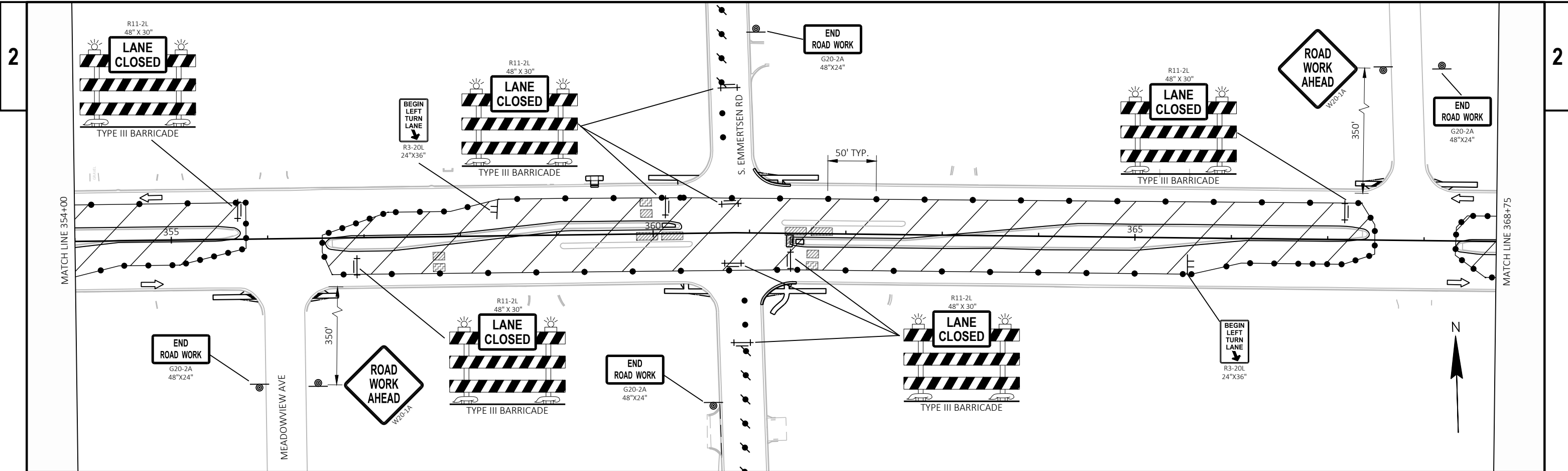




NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE TRAFFIC CONTROL STAGE 2B MAINLINE SHEET E



NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

PROJECT NO: 2250-15-70

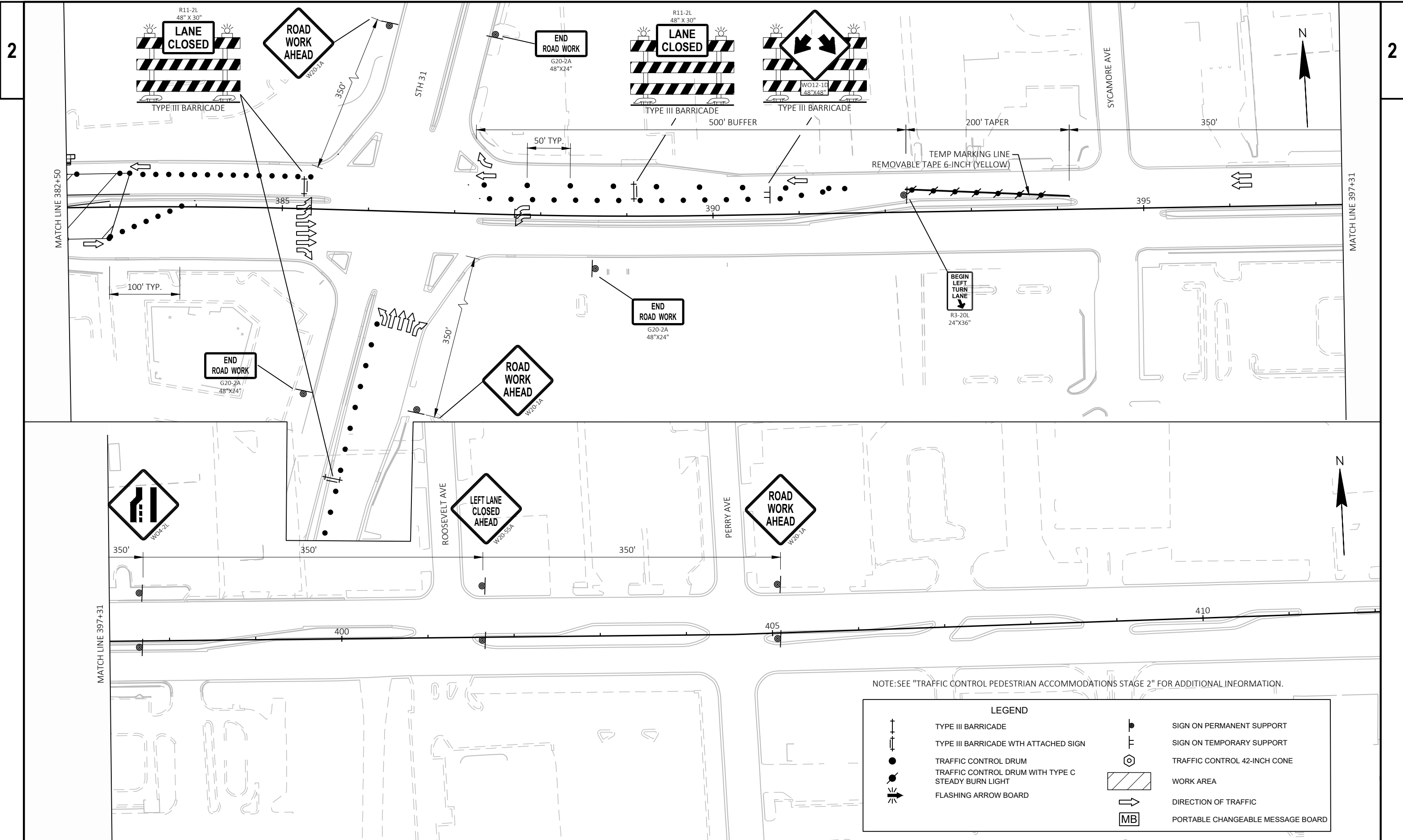
HWY: STH 20

COUNTY: RACINE

TRAFFIC CONTROL STAGE 2B MAINLINE

SHEET

E



PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

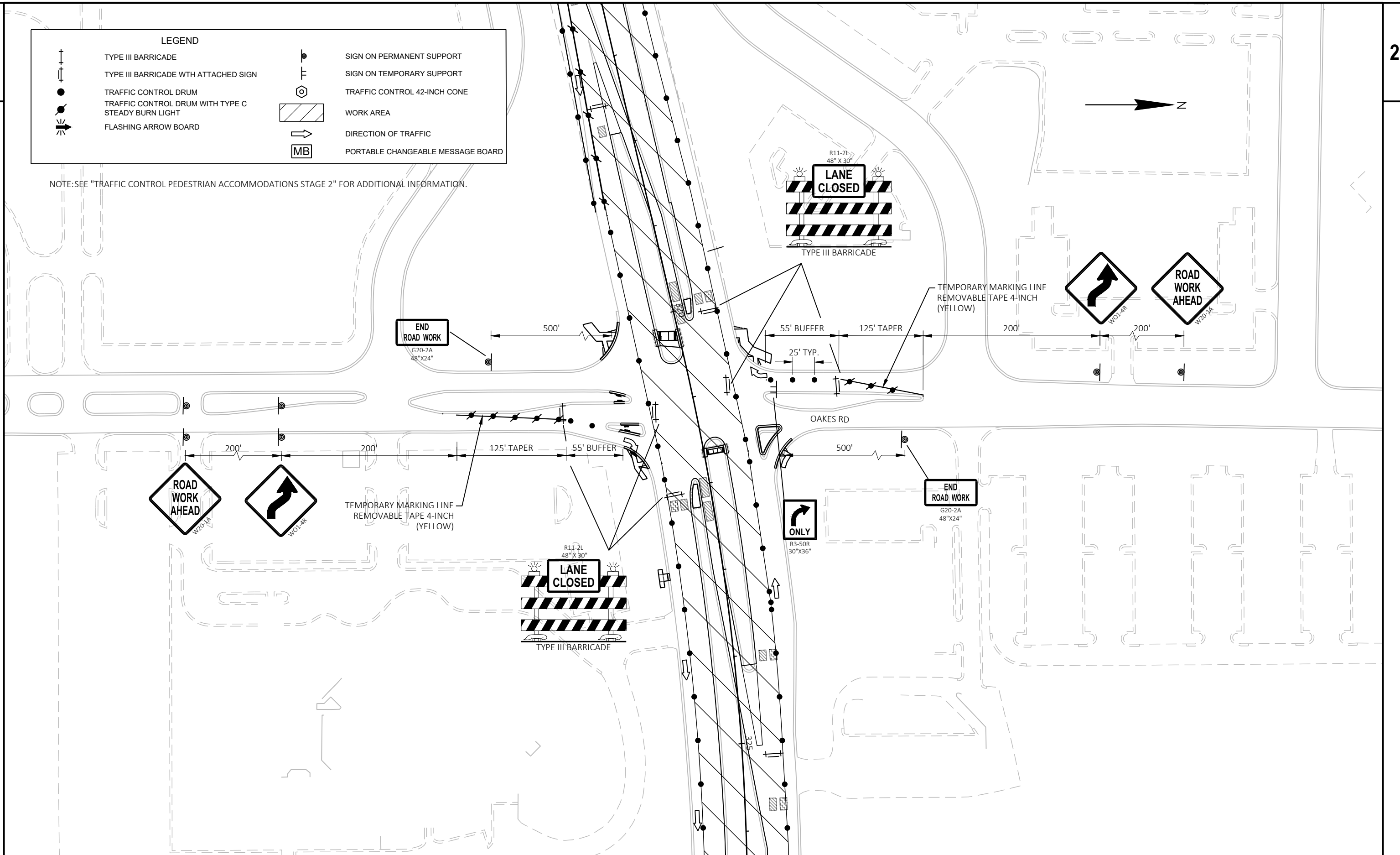
TRAFFIC CONTROL STAGE 2B MAINLINE

SHEET

2

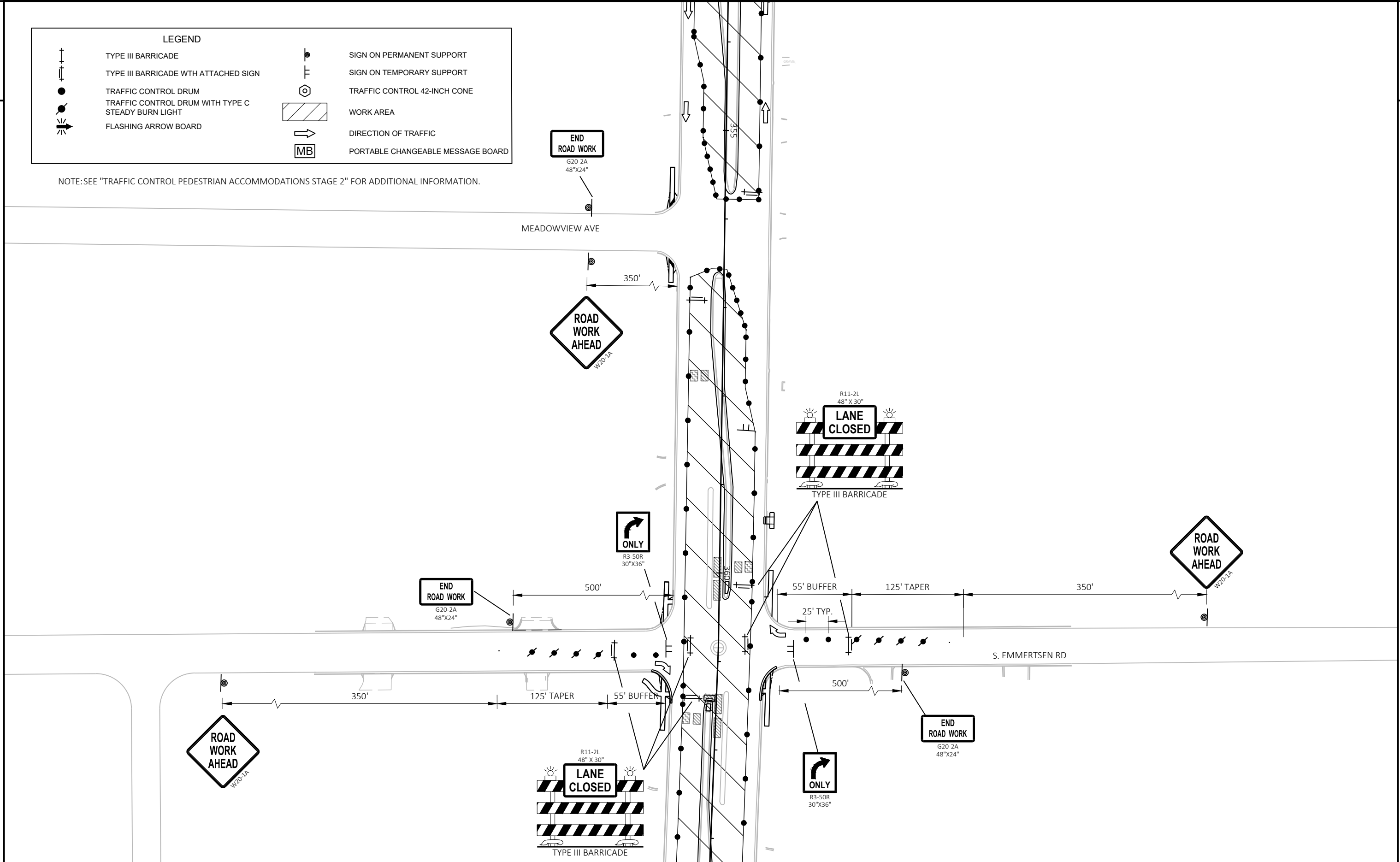
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WTH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

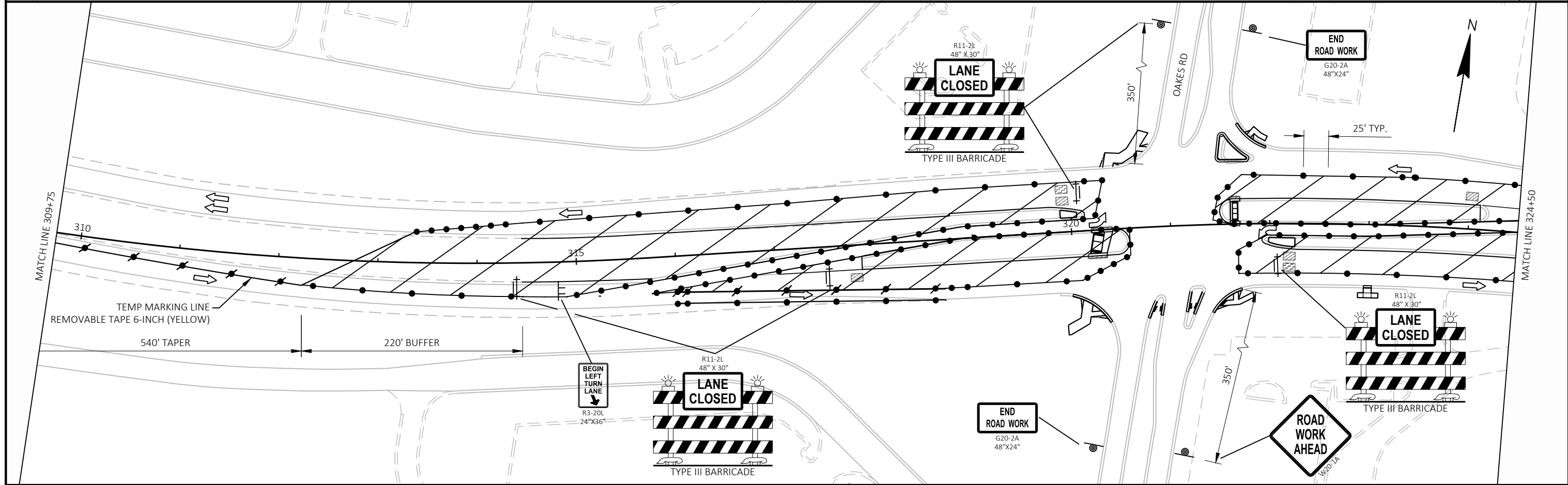
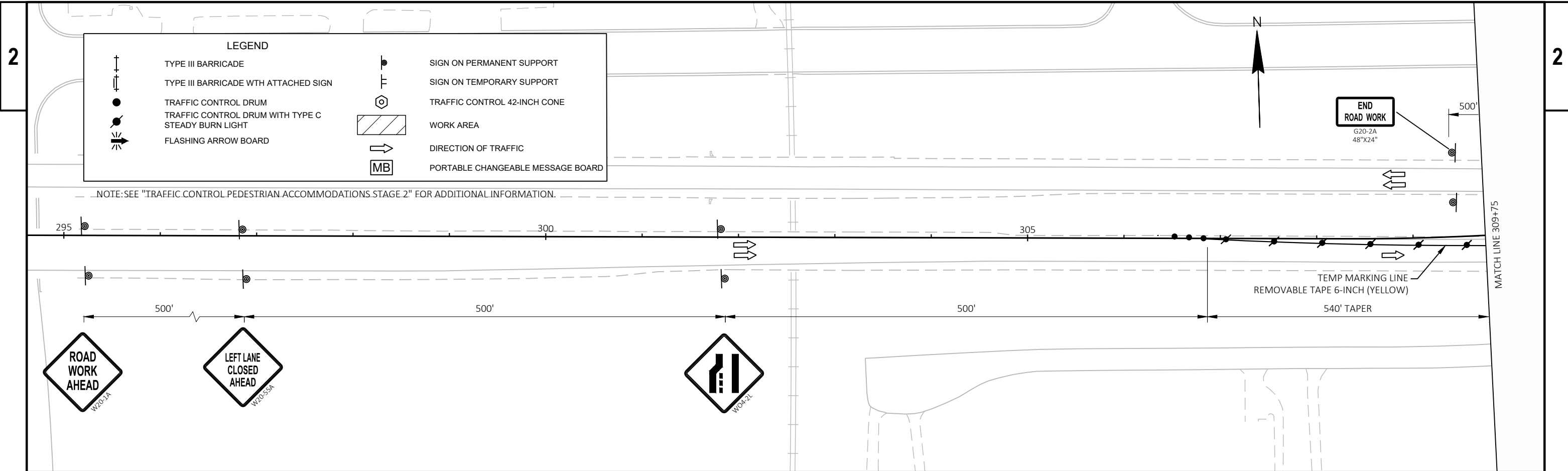


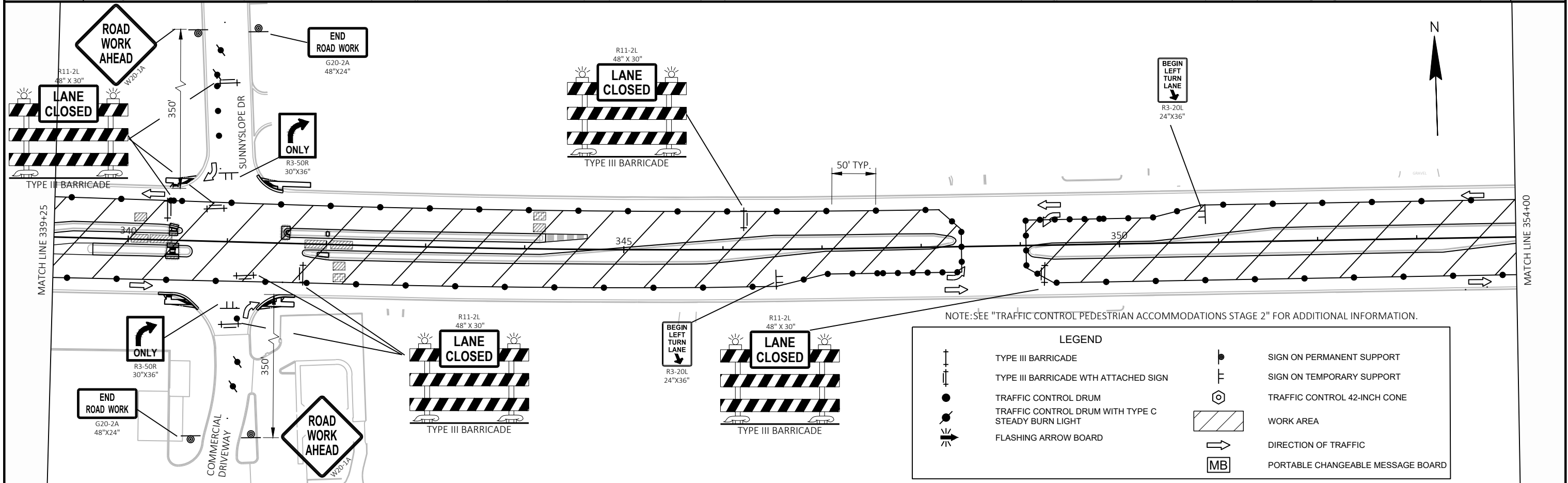
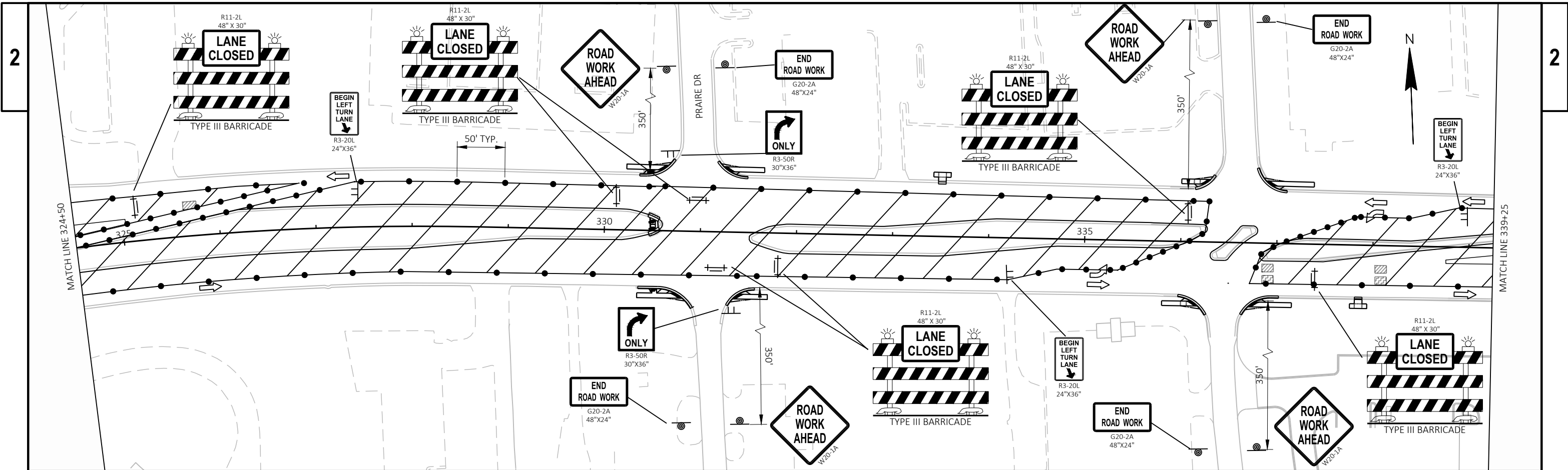
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.



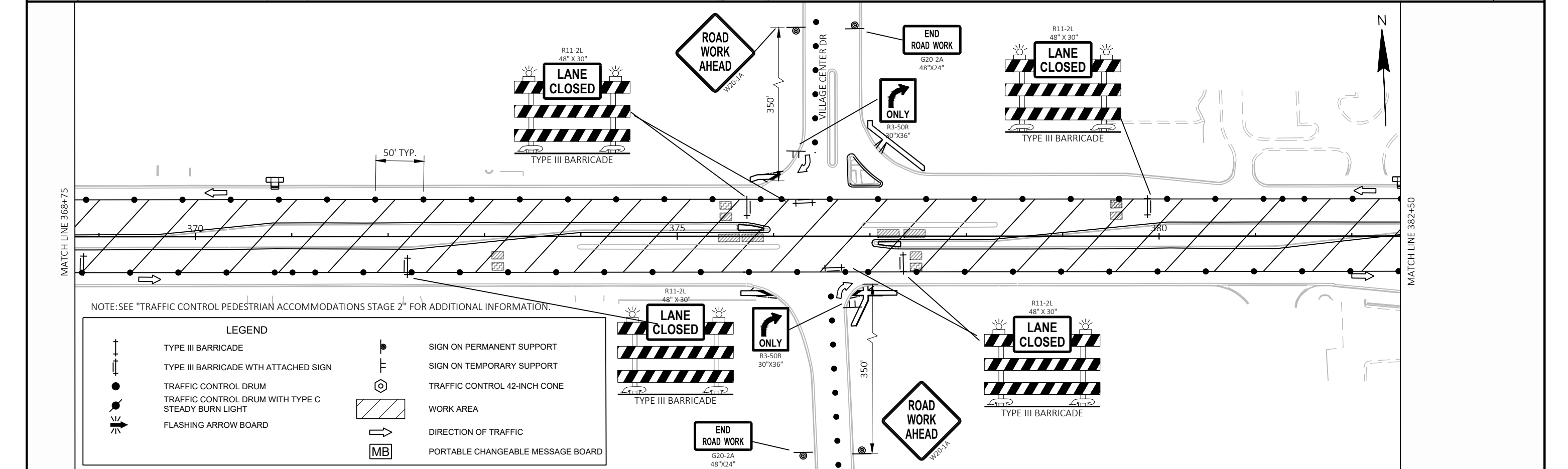
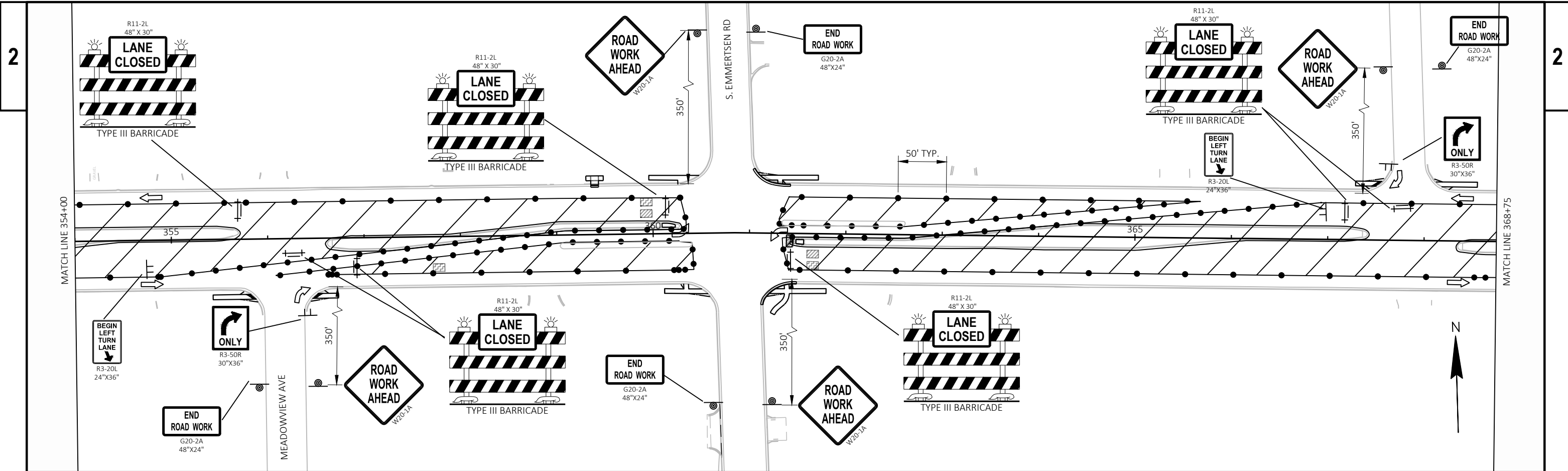
PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL STAGE 2B SIDEROADS	SHEET	E
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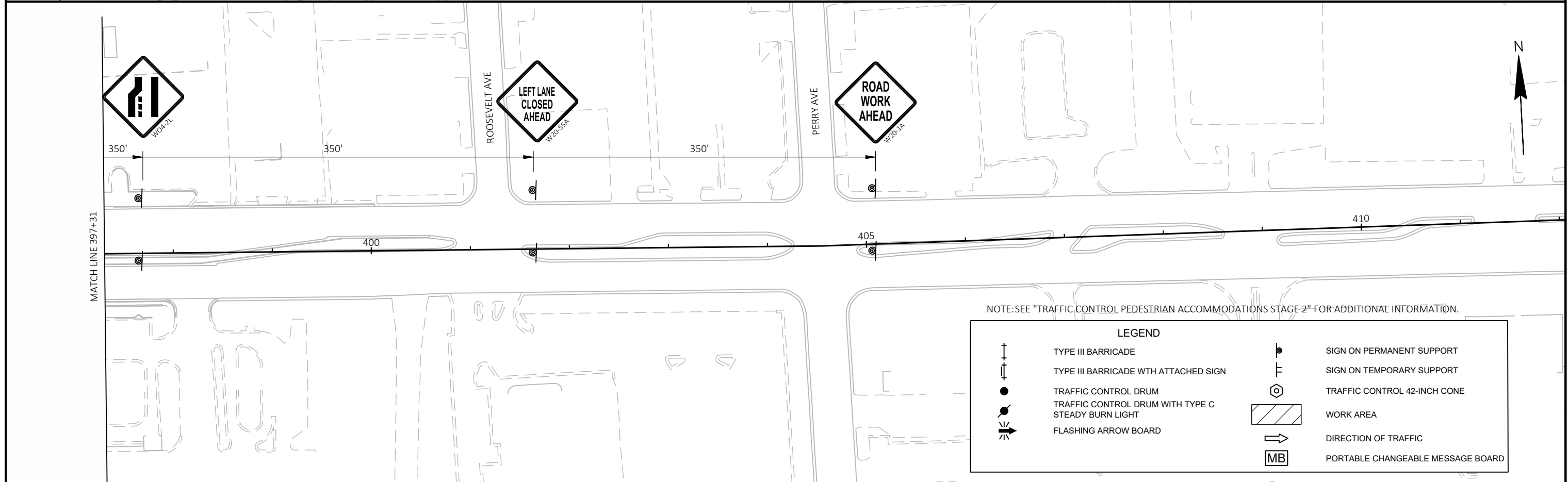
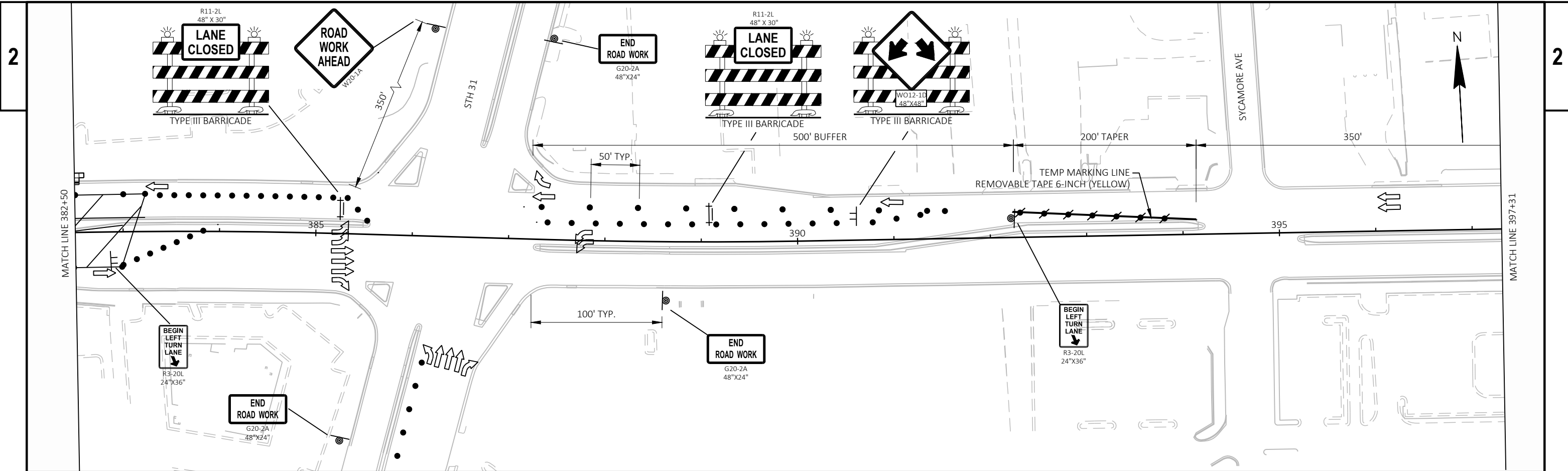
NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD



NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

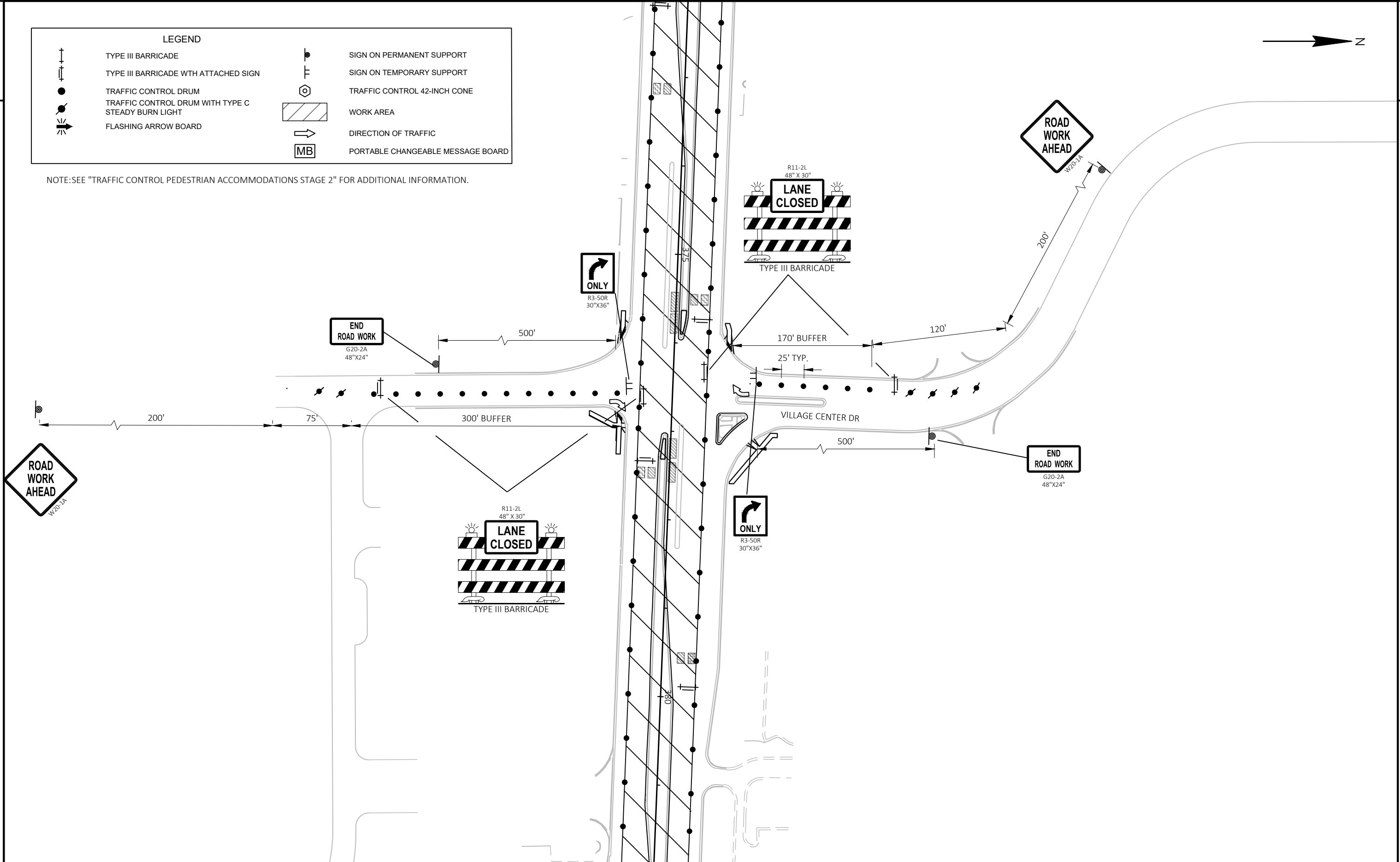


NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

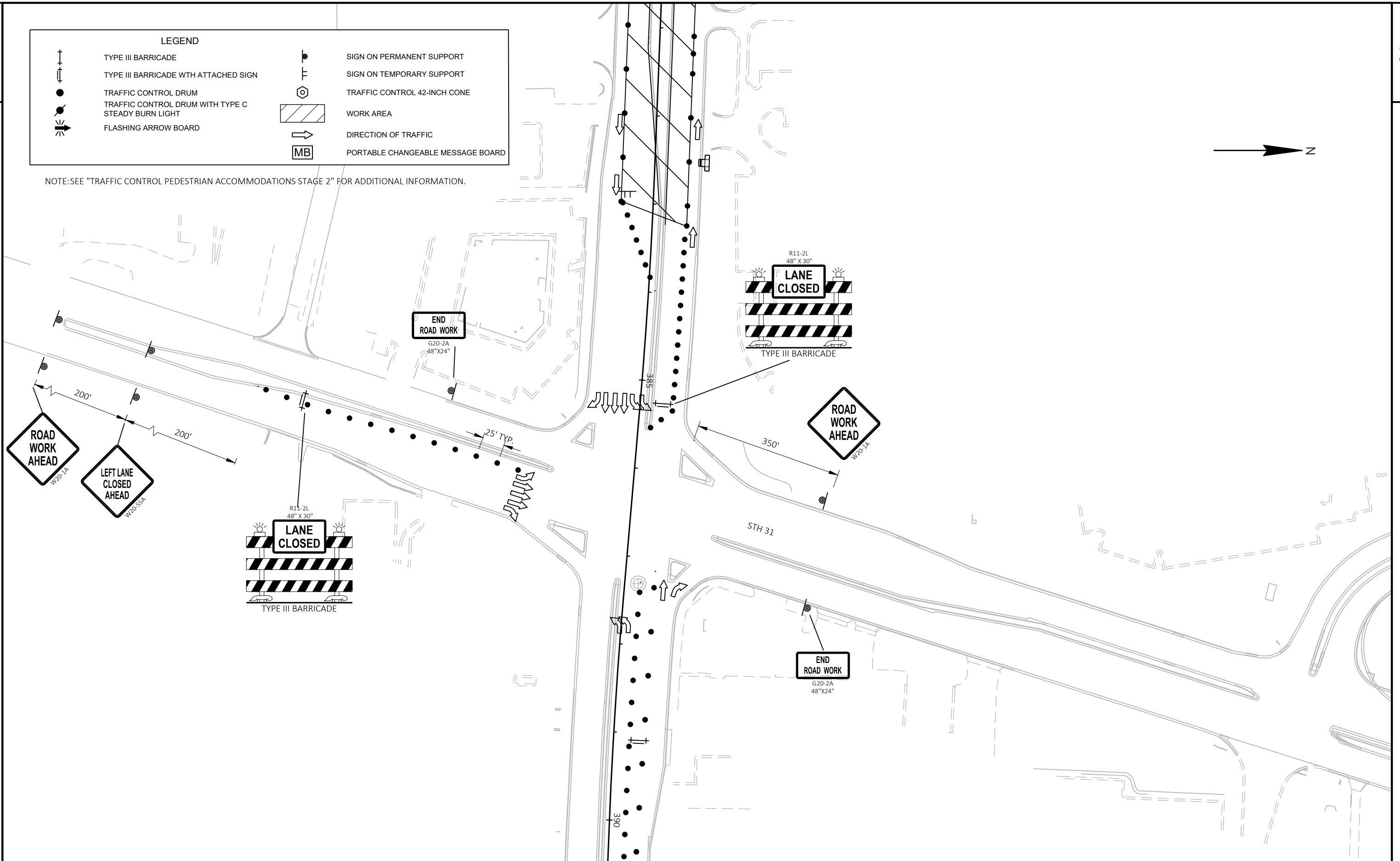
LEGEND			
	TYPE III BARRICADE		SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE WITH ATTACHED SIGN		SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL DRUM		TRAFFIC CONTROL 42-INCH CONE
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		WORK AREA
	FLASHING ARROW BOARD		DIRECTION OF TRAFFIC
			PORTABLE CHANGEABLE MESSAGE BOARD

NOTE:SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.

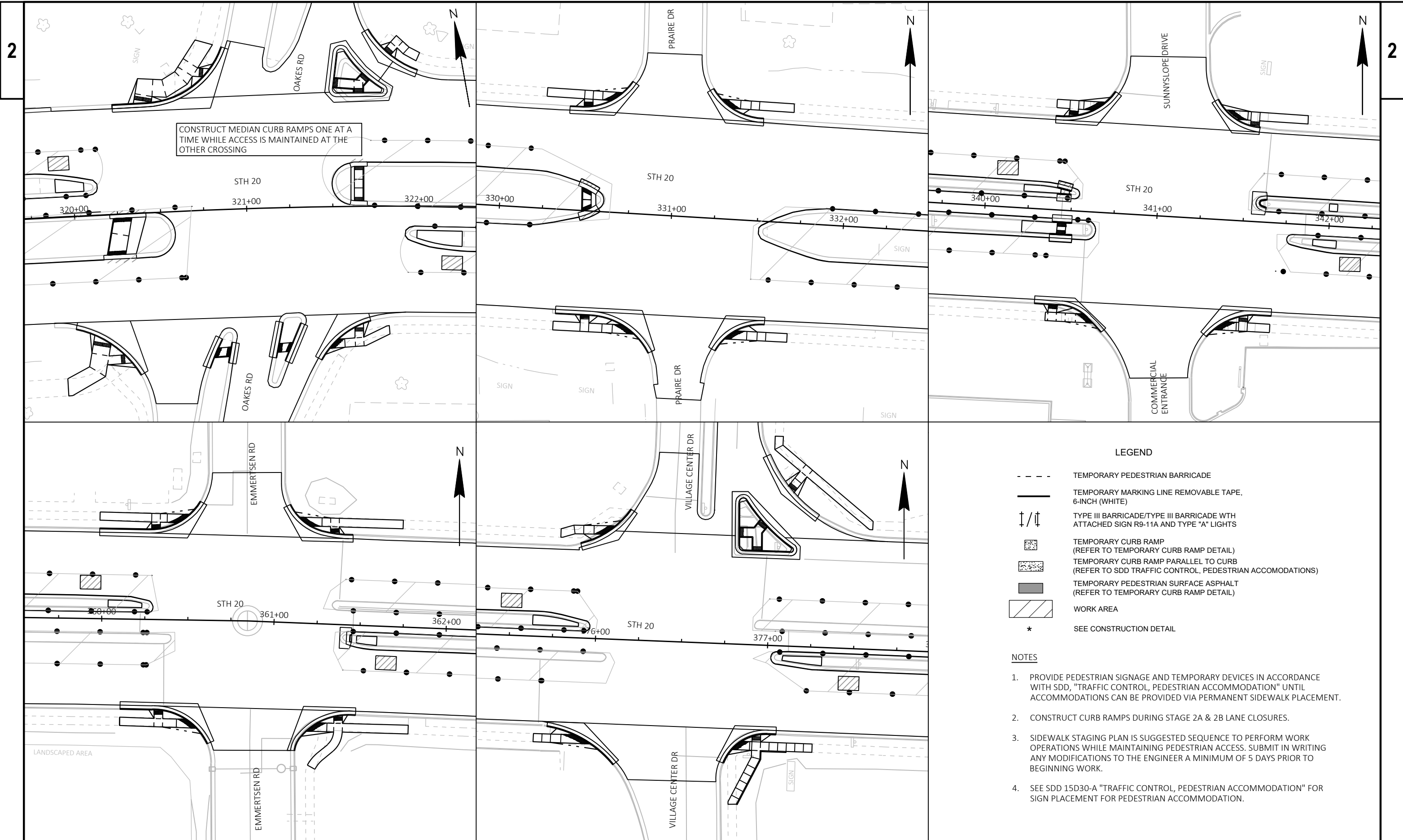


LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC CONTROL 42-INCH CONE
	WORK AREA
	DIRECTION OF TRAFFIC
	PORTABLE CHANGEABLE MESSAGE BOARD

NOTE: SEE "TRAFFIC CONTROL PEDESTRIAN ACCOMMODATIONS STAGE 2" FOR ADDITIONAL INFORMATION.



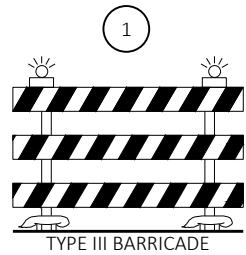
PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	TRAFFIC CONTROL STAGE 2C SIDEROADS	SHEET	E
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CONSTRUCT MEDIAN CURB RAMPS ONE AT A TIME WHILE ACCESS IS MAINTAINED AT THE OTHER CROSSING

- LEGEND**
- TEMPORARY PEDESTRIAN BARRICADE
 - TEMPORARY MARKING LINE REMOVABLE TAPE, 6-INCH (WHITE)
 - ⊥/⊥ TYPE III BARRICADE/TYPE III BARRICADE WTH ATTACHED SIGN R9-11A AND TYPE "A" LIGHTS
 - ▨ TEMPORARY CURB RAMP (REFER TO TEMPORARY CURB RAMP DETAIL)
 - ▨ TEMPORARY CURB RAMP PARALLEL TO CURB (REFER TO SDD TRAFFIC CONTROL, PEDESTRIAN ACCOMODATIONS)
 - TEMPORARY PEDESTRIAN SURFACE ASPHALT (REFER TO TEMPORARY CURB RAMP DETAIL)
 - ▨ WORK AREA
 - * SEE CONSTRUCTION DETAIL

- NOTES**
1. PROVIDE PEDESTRIAN SIGNAGE AND TEMPORARY DEVICES IN ACCORDANCE WITH SDD, "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" UNTIL ACCOMMODATIONS CAN BE PROVIDED VIA PERMANENT SIDEWALK PLACEMENT.
 2. CONSTRUCT CURB RAMPS DURING STAGE 2A & 2B LANE CLOSURES.
 3. SIDEWALK STAGING PLAN IS SUGGESTED SEQUENCE TO PERFORM WORK OPERATIONS WHILE MAINTAINING PEDESTRIAN ACCESS. SUBMIT IN WRITING ANY MODIFICATIONS TO THE ENGINEER A MINIMUM OF 5 DAYS PRIOR TO BEGINNING WORK.
 4. SEE SDD 15D30-A "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR SIGN PLACEMENT FOR PEDESTRIAN ACCOMMODATION.



2: DETOUR WEST 20 M4-8 24"x12" M3-4 24"x12" M1-6 24"x24"

3: DETOUR WEST 20 M4-8 24"x12" M3-4 24"x12" MO6-1 21"x21"

4: DETOUR WEST 20 M4-8 24"x12" M3-4 24"x12" MO6-1 21"x21"

5: DETOUR WEST 20 M4-8 24"x12" M3-4 24"x12" MO5-1L 21"x21"

6: DETOUR EAST 20 M4-8 24"x12" M3-2 24"x12" M1-6 24"x24"

7: DETOUR EAST 20 M4-8 24"x12" M3-2 24"x12" MO6-1 21"x21"

8: DETOUR EAST 20 M4-8 24"x12" M3-2 24"x12" MO6-1 21"x21"

9: DETOUR EAST 20 M4-8 24"x12" M3-2 24"x12" MO5-1R 21"x21"

10: END DETOUR WEST 20 M4-8A 24"x18" M3-4 24"x12" M1-6 24"x24"

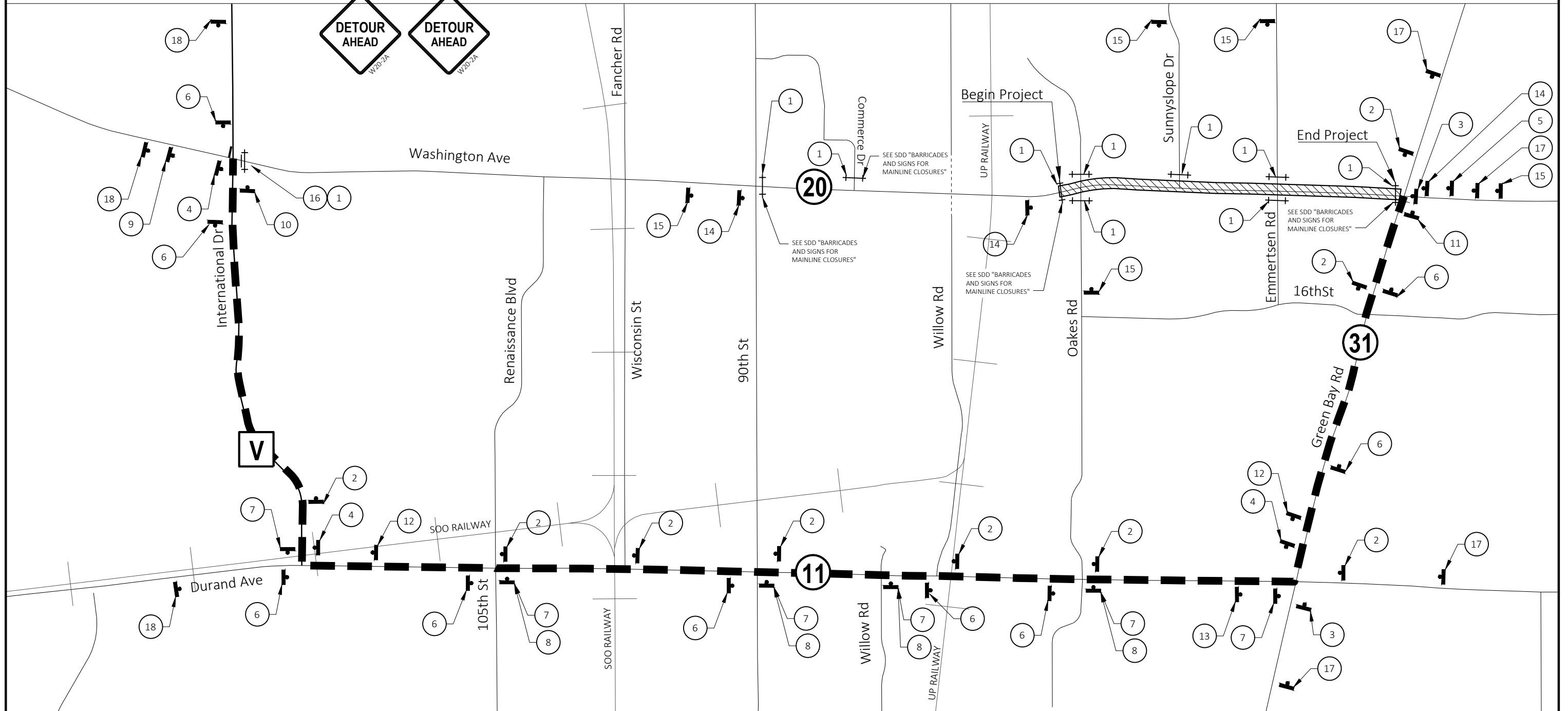
11: END DETOUR EAST 20 M4-8A 24"x18" M3-2 24"x12" M1-6 24"x24"

12: DETOUR WEST 20 M4-8 24"x12" M3-4 24"x12" M1-6 24"x24"

13: DETOUR EAST 20 M4-8 24"x12" M3-2 24"x12" MO5-1L 21"x21"

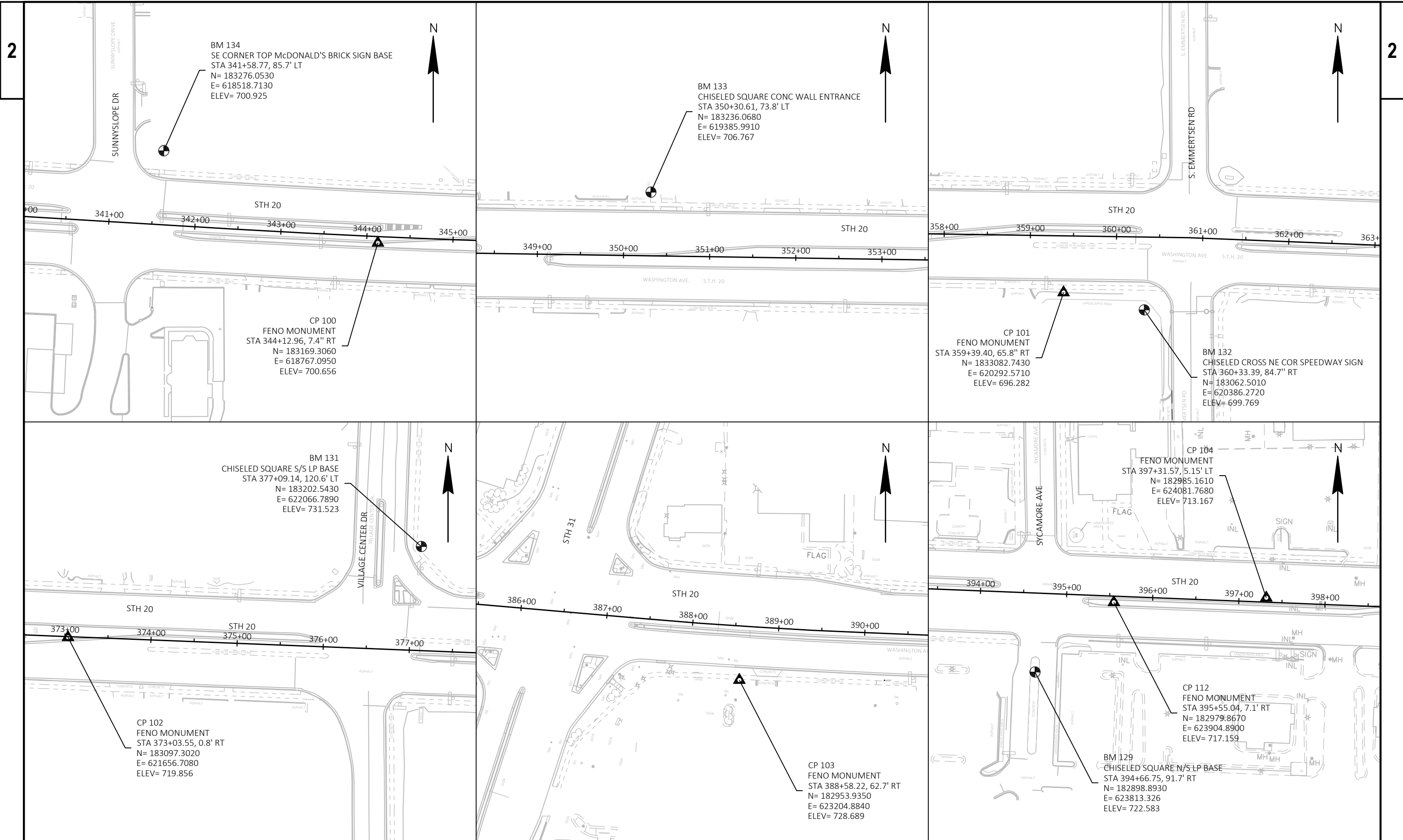


DO NOT PLACE ANY ITEMS WITHIN 50-FOET OF RAILROAD RIGHT-OF-WAY.





PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	ALIGNMENT SURVEY CONTROL	SHEET E
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PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE ALIGNMENT SURVEY CONTROL SHEET E

Estimate Of Quantities

2250-15-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. C-51-16	EACH	1.000	1.000
0004	204.0105	Removing Concrete Pavement Butt Joints	SY	44.000	44.000
0006	204.0110	Removing Asphaltic Surface	SY	865.000	865.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	112.000	112.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	2,509.000	2,509.000
0012	204.0150	Removing Curb & Gutter	LF	1,688.000	1,688.000
0014	204.0155	Removing Concrete Sidewalk	SY	999.000	999.000
0016	204.0195	Removing Concrete Bases	EACH	57.000	57.000
0018	204.0220	Removing Inlets	EACH	1.000	1.000
0020	204.0245	Removing Storm Sewer (size) 01. 18-Inch	LF	16.000	16.000
0022	204.0260	Abandoning Inlets	EACH	1.000	1.000
0024	204.0270	Abandoning Culvert Pipes	EACH	1.000	1.000
0026	204.9060.S	Removing (item description) 01. Traffic Signals (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0028	204.9060.S	Removing (item description) 02. Traffic Signals (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0030	204.9060.S	Removing (item description) 03. Traffic Signals (STH 20 & Oakes Rd)	EACH	1.000	1.000
0032	204.9060.S	Removing (item description) 04. Traffic Signals (STH 20 & Village Center Dr)	EACH	1.000	1.000
0034	204.9060.S	Removing (item description) 05. Traffic Signals (STH 20 & Sycamore Ave)	EACH	1.000	1.000
0036	204.9060.S	Removing (item description) 06. Loop Detector Wire & Lead-in Cable (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0038	204.9060.S	Removing (item description) 07. Loop Detector Wire & Lead-in Cable (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0040	204.9060.S	Removing (item description) 08. Loop Detector Wire & Lead-in Cable (STH 20 & Oakes Rd)	EACH	1.000	1.000
0042	204.9060.S	Removing (item description) 09. Loop Detector Wire & Lead-in Cable (STH 20 & Village Center Dr)	EACH	1.000	1.000
0044	204.9060.S	Removing (item description) 10. Endwall	EACH	1.000	1.000
0046	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	20.000	20.000
0048	206.2001	Excavation for Structures Culverts (structure) 01. C-51-16	EACH	1.000	1.000
0050	210.2500	Backfill Structure Type B	TON	122.000	122.000
0052	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 2250-15-70	EACH	1.000	1.000
0054	213.0100	Finishing Roadway (project) 01. 2250-15-70	EACH	1.000	1.000
0056	305.0110	Base Aggregate Dense 3/4-Inch	TON	20.000	20.000
0058	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,082.000	1,082.000
0060	390.0100	Removing Pavement for Base Patching	CY	1,407.000	1,407.000
0062	390.0305	Base Patching Concrete HES	CY	911.000	911.000
0064	390.0405	Base Patching Concrete SHES	CY	345.000	345.000
0066	416.0610	Drilled Tie Bars	EACH	3,807.000	3,807.000
0068	416.0620	Drilled Dowel Bars	EACH	21,686.000	21,686.000
0070	455.0605	Tack Coat	GAL	14,520.000	14,520.000
0072	460.2000	Incentive Density HMA Pavement	DOL	10,510.000	10,510.000
0074	460.6223	HMA Pavement 3 MT 58-28 S	TON	9,061.000	9,061.000
0076	460.6224	HMA Pavement 4 MT 58-28 S	TON	7,267.000	7,267.000
0078	465.0105	Asphaltic Surface	TON	3.000	3.000
0080	465.0110	Asphaltic Surface Patching	TON	218.000	218.000
0082	465.0125	Asphaltic Surface Temporary	TON	666.000	666.000
0084	465.0305	Asphaltic Surface Safety Islands	TON	9.000	9.000
0086	504.0100	Concrete Masonry Culverts	CY	16.000	16.000
0088	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	2,987.000	2,987.000
0090	513.7093	Railing Steel Type 3T	LF	88.000	88.000
0092	516.0500	Rubberized Membrane Waterproofing	SY	29.000	29.000
0094	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000

Estimate Of Quantities

2250-15-70

Line	Item	Item Description	Unit	Total	Qty
0096	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0098	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,744.000	1,744.000
0100	601.0600	Concrete Curb Pedestrian	LF	282.000	282.000
0102	602.0410	Concrete Sidewalk 5-Inch	SF	11,084.000	11,084.000
0104	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	650.000	650.000
0106	606.0200	Riprap Medium	CY	21.000	21.000
0108	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	16.000	16.000
0110	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	119.000	119.000
0112	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0114	611.0624	Inlet Covers Type H	EACH	1.000	1.000
0116	611.1005	Catch Basins 5-FT Diameter	EACH	1.000	1.000
0118	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0120	611.8110	Adjusting Manhole Covers	EACH	10.000	10.000
0122	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0124	611.8120.S	Cover Plates Temporary	EACH	34.000	34.000
0126	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0128	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0130	614.2300	MGS Guardrail 3	LF	50.000	50.000
0132	614.2500	MGS Thrie Beam Transition	LF	79.000	79.000
0134	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0136	618.0100	Maintenance and Repair of Haul Roads (project) 01. 2250-15-70	EACH	1.000	1.000
0138	619.1000	Mobilization	EACH	1.000	1.000
0140	620.0200	Concrete Median Blunt Nose	SF	155.000	155.000
0142	620.0300	Concrete Median Sloped Nose	SF	23.000	23.000
0144	624.0100	Water	MGAL	11.100	11.100
0146	625.0100	Topsoil	SY	594.000	594.000
0148	625.0500	Salvaged Topsoil	SY	795.000	795.000
0150	627.0200	Mulching	SY	694.000	694.000
0152	628.1504	Silt Fence	LF	300.000	300.000
0154	628.1520	Silt Fence Maintenance	LF	300.000	300.000
0156	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0158	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0160	628.2006	Erosion Mat Urban Class I Type A	SY	121.000	121.000
0162	628.2008	Erosion Mat Urban Class I Type B	SY	80.000	80.000
0164	628.6505	Soil Stabilizer Type A	ACRE	1.000	1.000
0166	628.7015	Inlet Protection Type C	EACH	55.000	55.000
0168	628.7020	Inlet Protection Type D	EACH	85.000	85.000
0170	628.7504	Temporary Ditch Checks	LF	5.000	5.000
0172	629.0210	Fertilizer Type B	CWT	13.200	13.200
0174	630.0130	Seeding Mixture No. 30	LB	7.000	7.000
0176	630.0140	Seeding Mixture No. 40	LB	59.000	59.000
0178	630.0200	Seeding Temporary	LB	39.000	39.000
0180	630.0500	Seed Water	MGAL	39.700	39.700
0182	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	57.000	57.000
0184	637.2210	Signs Type II Reflective H	SF	934.930	934.930
0186	637.2215	Signs Type II Reflective H Folding	SF	208.880	208.880
0188	637.2230	Signs Type II Reflective F	SF	17.000	17.000
0190	638.2102	Moving Signs Type II	EACH	1.000	1.000
0192	638.2602	Removing Signs Type II	EACH	86.000	86.000
0194	638.3000	Removing Small Sign Supports	EACH	33.000	33.000

Estimate Of Quantities

2250-15-70

Line	Item	Item Description	Unit	Total	Qty
0196	642.5001	Field Office Type B	EACH	1.000	1.000
0198	643.0300	Traffic Control Drums	DAY	244,200.000	244,200.000
0200	643.0420	Traffic Control Barricades Type III	DAY	14,130.000	14,130.000
0202	643.0705	Traffic Control Warning Lights Type A	DAY	27,500.000	27,500.000
0204	643.0715	Traffic Control Warning Lights Type C	DAY	20,950.000	20,950.000
0206	643.0800	Traffic Control Arrow Boards	DAY	313.000	313.000
0208	643.0900	Traffic Control Signs	DAY	52,820.000	52,820.000
0210	643.0920	Traffic Control Covering Signs Type II	EACH	8.000	8.000
0212	643.1050	Traffic Control Signs PCMS	DAY	56.000	56.000
0214	643.1070	Traffic Control Cones 42-Inch	DAY	9,250.000	9,250.000
0216	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	1,090.000	1,090.000
0218	643.3165	Temporary Marking Line Paint 6-Inch	LF	34,500.000	34,500.000
0220	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	6,668.000	6,668.000
0222	643.5000	Traffic Control	EACH	1.000	1.000
0224	644.1430	Temporary Pedestrian Surface Plate	SF	1,157.000	1,157.000
0226	644.1601	Temporary Pedestrian Curb Ramp	DAY	6,000.000	6,000.000
0228	644.1605	Temporary Pedestrian Detectable Warning Field	SF	450.000	450.000
0230	644.1810	Temporary Pedestrian Barricade	LF	5,835.000	5,835.000
0232	645.0120	Geotextile Type HR	SY	42.000	42.000
0234	646.1020	Marking Line Epoxy 4-Inch	LF	750.000	750.000
0236	646.2020	Marking Line Epoxy 6-Inch	LF	18,740.000	18,740.000
0238	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	6,100.000	6,100.000
0240	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	6,100.000	6,100.000
0242	646.3020	Marking Line Epoxy 8-Inch	LF	396.000	396.000
0244	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,582.000	2,582.000
0246	646.5020	Marking Arrow Epoxy	EACH	38.000	38.000
0248	646.5120	Marking Word Epoxy	EACH	28.000	28.000
0250	646.6120	Marking Stop Line Epoxy 18-Inch	LF	796.000	796.000
0252	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	1.000	1.000
0254	646.7120	Marking Diagonal Epoxy 12-Inch	LF	238.000	238.000
0256	646.7220	Marking Chevron Epoxy 24-Inch	LF	187.000	187.000
0258	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	3,207.000	3,207.000
0260	646.7520	Marking Crosswalk Epoxy Block Style 24-Inch	LF	162.000	162.000
0262	646.8120	Marking Curb Epoxy	LF	1,181.000	1,181.000
0264	646.8220	Marking Island Nose Epoxy	EACH	18.000	18.000
0266	646.9000	Marking Removal Line 4-Inch	LF	20,880.000	20,880.000
0268	650.4000	Construction Staking Storm Sewer	EACH	3.000	3.000
0270	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,744.000	1,744.000
0272	650.6501	Construction Staking Structure Layout (structure) 01. C-51-16	EACH	1.000	1.000
0274	650.8000	Construction Staking Resurfacing Reference	LF	16,620.000	16,620.000
0276	650.8501	Construction Staking Electrical Installations (project) 01. 2250-15-70	EACH	1.000	1.000
0278	650.9000	Construction Staking Curb Ramps	EACH	61.000	61.000
0280	650.9500	Construction Staking Sidewalk (project) 01. 2050-15-70	EACH	1.000	1.000
0282	650.9911	Construction Staking Supplemental Control (project) 01. 2250-15-70	EACH	1.000	1.000
0284	650.9920	Construction Staking Slope Stakes	LF	247.000	247.000
0286	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	3,519.000	3,519.000
0288	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,847.000	1,847.000
0290	652.0605	Conduit Special 2-Inch	LF	923.000	923.000
0292	652.0615	Conduit Special 3-Inch	LF	2,959.000	2,959.000
0294	652.0800	Conduit Loop Detector	LF	7,432.000	7,432.000

Estimate Of Quantities

2250-15-70

Line	Item	Item Description	Unit	Total	Qty
0296	653.0135	Pull Boxes Steel 24x36-Inch	EACH	24.000	24.000
0298	653.0140	Pull Boxes Steel 24x42-Inch	EACH	55.000	55.000
0300	653.0905	Removing Pull Boxes	EACH	71.000	71.000
0302	654.0101	Concrete Bases Type 1	EACH	31.000	31.000
0304	654.0102	Concrete Bases Type 2	EACH	6.000	6.000
0306	654.0105	Concrete Bases Type 5	EACH	6.000	6.000
0308	654.0110	Concrete Bases Type 10	EACH	2.000	2.000
0310	654.0113	Concrete Bases Type 13	EACH	1.000	1.000
0312	654.0120	Concrete Bases Type 10-Special	EACH	11.000	11.000
0314	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	4.000	4.000
0316	655.0230	Cable Traffic Signal 5-14 AWG	LF	2,864.000	2,864.000
0318	655.0240	Cable Traffic Signal 7-14 AWG	LF	3,345.000	3,345.000
0320	655.0260	Cable Traffic Signal 12-14 AWG	LF	7,600.000	7,600.000
0322	655.0270	Cable Traffic Signal 15-14 AWG	LF	3,383.000	3,383.000
0324	655.0280	Cable Traffic Signal 19-14 AWG	LF	99.000	99.000
0326	655.0290	Cable Traffic Signal 21-14 AWG	LF	296.000	296.000
0328	655.0320	Cable Type UF 2-10 AWG Grounded	LF	3,923.000	3,923.000
0330	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	7,798.000	7,798.000
0332	655.0610	Electrical Wire Lighting 12 AWG	LF	3,809.000	3,809.000
0334	655.0700	Loop Detector Lead In Cable	LF	31,147.000	31,147.000
0336	655.0800	Loop Detector Wire	LF	19,154.000	19,154.000
0338	655.0900	Traffic Signal EVP Detector Cable	LF	4,140.000	4,140.000
0340	656.0201	Electrical Service Meter Breaker Pedestal (location) 01. STH 20 & Emmertsen Rd	EACH	1.000	1.000
0342	656.0201	Electrical Service Meter Breaker Pedestal (location) 02. STH 20 & Sunnyslope Dr	EACH	1.000	1.000
0344	656.0201	Electrical Service Meter Breaker Pedestal (location) 03. STH 20 & Oakes Rd	EACH	1.000	1.000
0346	656.0201	Electrical Service Meter Breaker Pedestal (location) 04. STH 20 & Village Center Dr	EACH	1.000	1.000
0348	657.0100	Pedestal Bases	EACH	32.000	32.000
0350	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	12.000	12.000
0352	657.0310	Poles Type 3	EACH	6.000	6.000
0354	657.0322	Poles Type 5-Aluminum	EACH	6.000	6.000
0356	657.0420	Traffic Signal Standards Aluminum 13-FT	EACH	2.000	2.000
0358	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	19.000	19.000
0360	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	11.000	11.000
0362	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	10.000	10.000
0364	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	7.000	7.000
0366	658.0173	Traffic Signal Face 3S 12-Inch	EACH	50.000	50.000
0368	658.0174	Traffic Signal Face 4S 12-Inch	EACH	38.000	38.000
0370	658.0416	Pedestrian Signal Face 16-Inch	EACH	30.000	30.000
0372	658.0500	Pedestrian Push Buttons	EACH	34.000	34.000
0374	658.5070	Signal Mounting Hardware (location) 01. STH 20 & Emmertsen Rd	EACH	1.000	1.000
0376	658.5070	Signal Mounting Hardware (location) 02. STH 20 & Sunnyslope Dr	EACH	1.000	1.000
0378	658.5070	Signal Mounting Hardware (location) 03. STH 20 & Oakes Rd	EACH	1.000	1.000
0380	658.5070	Signal Mounting Hardware (location) 04. STH 20 & Village Center Dr	EACH	1.000	1.000
0382	659.1125	Luminaires Utility LED C	EACH	30.000	30.000
0384	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	132.000	132.000
0386	661.0201	Temporary Traffic Signals for Intersections (location) 01. STH 20 & Emmertsen Rd	EACH	1.000	1.000
0388	661.0201	Temporary Traffic Signals for Intersections (location) 02. STH 20 & Sunnyslope Dr	EACH	1.000	1.000
0390	661.0201	Temporary Traffic Signals for Intersections (location) 03. STH 20 & Oakes Rd	EACH	1.000	1.000
0392	661.0201	Temporary Traffic Signals for Intersections (location) 04. STH 20 & Village Center Dr	EACH	1.000	1.000
0394	661.0300	Generators	DAY	4.000	4.000

Estimate Of Quantities

2250-15-70

Line	Item	Item Description	Unit	Total	Qty
0396	670.0101	Field System Integrator	EACH	1.000	1.000
0398	677.0200	Install Camera Assembly	EACH	4.000	4.000
0400	678.0300	Fiber Optic Splice	EACH	16.000	16.000
0402	690.0150	Sawing Asphalt	LF	3,931.000	3,931.000
0404	690.0250	Sawing Concrete	LF	4,095.000	4,095.000
0406	740.0440	Incentive IRI Ride	DOL	15,190.000	15,190.000
0408	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. C-51-16	EACH	1.000	1.000
0410	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	3,000.000	3,000.000
0412	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	4,500.000	4,500.000
0414	SPV.0060	Special 01. Install Poles Type 10	EACH	2.000	2.000
0416	SPV.0060	Special 02. Install Poles Type 9 Special	EACH	6.000	6.000
0418	SPV.0060	Special 03. Install Poles Type 10 Special	EACH	5.000	5.000
0420	SPV.0060	Special 04. Install Poles Type 13	EACH	1.000	1.000
0422	SPV.0060	Special 05. Install Monotube Arms 25-Ft	EACH	2.000	2.000
0424	SPV.0060	Special 06. Install Monotube Arms 35-Ft Type 9/10 Spec Pole	EACH	2.000	2.000
0426	SPV.0060	Special 07. Install Monotube Arms 40-Ft Type 9/10 Spec Pole	EACH	7.000	7.000
0428	SPV.0060	Special 08. Install Monotube Arms 45-Ft Type 9/10 Spec Pole	EACH	2.000	2.000
0430	SPV.0060	Special 09. Install Monotube Arms 50-Ft	EACH	1.000	1.000
0432	SPV.0060	Special 10. Install Luminaire Arms Steel 15-Ft	EACH	11.000	11.000
0434	SPV.0060	Special 11. Trnsprt & Install State Furn Traffic Signal Cabinet (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0436	SPV.0060	Special 12. Trnsprt & Install State Furn Traffic Signal Cabinet (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0438	SPV.0060	Special 13. Trnsprt & Install State Furn Traffic Signal Cabinet (STH 20 & Oakes Rd)	EACH	1.000	1.000
0440	SPV.0060	Special 14. Trnsprt & Install State Furn Traffic Signal Cab (STH 20 & Village Center Dr)	EACH	1.000	1.000
0442	SPV.0060	Special 15. Temp Infrared EVP System (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0444	SPV.0060	Special 16. Temp Infrared EVP System (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0446	SPV.0060	Special 17. Temp Infrared EVP System (STH 20 & Oakes Rd)	EACH	1.000	1.000
0448	SPV.0060	Special 18. Temp Infrared EVP System (STH 20 & Village Center Dr)	EACH	1.000	1.000
0450	SPV.0060	Special 19. Trnsprt Traffic Signal & Inter Lighting Materials (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0452	SPV.0060	Special 20. Trnsprt Traffic Signal & Inter Lighting Materials (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0454	SPV.0060	Special 21. Trnsprt Traffic Signal & Inter Lighting Materials (STH 20 & Oakes Rd)	EACH	1.000	1.000
0456	SPV.0060	Special 22. Trnsprt Traffic Signal & Inter Lighting Material (STH 20 & Village Center Dr)	EACH	1.000	1.000
0458	SPV.0060	Special 23. Trnsprt & Install State Furn EVP Heads (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0460	SPV.0060	Special 24. Trnsprt & Install State Furn EVP Heads (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0462	SPV.0060	Special 25. Trnsprt & Install State Furn EVP Heads (STH 20 & Oakes Rd)	EACH	1.000	1.000
0464	SPV.0060	Special 26. Trnsprt & Install State Furn EVP Heads (STH 20 & Village Center Dr)	EACH	1.000	1.000
0466	SPV.0060	Special 27. Remove, Salvage, & Reinstall FO Interconnect (STH 20 & Emmertsen Rd)	EACH	1.000	1.000
0468	SPV.0060	Special 28. Remove, Salvage, & Reinstall FO Interconnect (STH 20 & Sunnyslope Dr)	EACH	1.000	1.000
0470	SPV.0060	Special 29. Remove, Salvage, & Reinstall FO Interconnect (STH 20 & Oakes Rd)	EACH	1.000	1.000
0472	SPV.0060	Special 30. Remove, Salvage, & Reinstall FO Interconnect (STH 20 & Village Center Dr)	EACH	1.000	1.000
0474	SPV.0060	Special 31. Temporary Bus Stop	EACH	15.000	15.000
0476	SPV.0060	Special 32. Section Corner Monuments	EACH	2.000	2.000
0478	SPV.0060	Special 33. Cleaning Drainage Structures & Pipes	EACH	29.000	29.000
0480	SPV.0060	Special 34. Storm Structure & Pipes Miscellaneous Inside Repair	EACH	12.000	12.000
0482	SPV.0060	Special 35. Adjusting Sanitary Manholes	EACH	20.000	20.000
0484	SPV.0060	Special 36. Reconstructing Sanitary Manholes	EACH	4.000	4.000
0486	SPV.0060	Special 37. Utility Line Opening (ULO)	EACH	24.000	24.000
0488	SPV.0060	Special 38. Inlet Covers Type H-D	EACH	4.000	4.000
0490	SPV.0090	Special 01. Removing & Installing Sanitary Sewer Pipe 8-Inch	LF	30.000	30.000
0492	SPV.0180	Special 01. Removing Surface Milling Special	SY	69,200.000	69,200.000

Estimate Of Quantities

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Line	Item	Item Description	Unit	Total	Qty
0494	SPV.0195	Special 01. Excavation, Hauling, Disposal of VOC Contaminated Soil	TON	47.000	47.000
0496	SPV.0195	Special 02. Excavation, Hauling, and Disposal of Lead Contaminated Soil	TON	197.000	197.000
0498	SPV.0195	Special 03. Joint and Crack Repair	TON	168.000	168.000

CONCRETE REMOVALS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	204.0105 204.0150 204.0155 REMOVING CONCRETE PAVEMENT BUTT JOINTS SY			REMOVING CURB & GUTTER LF			REMOVING CONCRETE SIDEWALK SY		
							SY	LF	SY	SY	LF	SY			
0010															
1	STH 20		314+45	-	397+50	ML	22	--	--						
			319+98	-	321+98	OAKES RD INT	--	365	174						
			330+36	-	331+58	PRAIRIE DR INT	--	175	87						
			335+98	-	337+11	WARWICK WAY INT	--	155	101						
			340+32	-	341+70	SUNNYSLOPE DR INT	--	156	69						
			355+68	-	356+66	MEADOW LANE AVE INT	--	68	36						
			359+98	-	361+49	EMMERTSEN RD INT	--	211	123						
			367+35	-	368+32	HUNTER DR INT	--	72	37						
			375+74	-	377+26	VILLAGE CENTER DR INT	--	271	129						
SUBTOTAL							22	1,473	756						
2	STH 20		314+45	-	397+50	ML	22	--	--						
			319+98	-	321+98	OAKES RD INT	--	109	98						
			330+36	-	331+58	PRAIRIE DR INT	--	33	--						
			340+32	-	341+70	SUNNYSLOPE DR INT	--	51	17						
			359+98	-	361+49	EMMERTSEN RD INT	--	6	10						
			375+74	-	377+26	VILLAGE CENTER DR INT	--	--	23						
SUBTOTAL							22	199	148						
TOTAL							44	1,672	904						

ASPHALT REMOVALS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	204.0110 204.0115 204.0120 SPV.0180.01 REMOVING ASPHALTIC SURFACE							
							SY	BUTT JOINTS SY	MILLING SY	SPECIAL SY				
0010														
1	STH 20		314+45	-	397+50	ML	--	--	--	33,200				
			319+98	-	321+98	OAKES RD INT	285	19	550	--				
			330+36	-	331+58	PRAIRIE DR INT	54	13	291	--				
			335+98	-	337+11	WARWICK WAY INT	55	14	439	--				
			340+32	-	341+70	SUNNYSLOPE DR INT	125	16	300	--				
			355+68	-	356+66	MEADOW LANE AVE INT	26	7	118	--				
			359+98	-	361+49	EMMERTSEN RD INT	121	16	251	--				
			367+35	-	368+32	HUNTER DR INT	27	7	167	--				
			375+74	-	377+26	VILLAGE CENTER DR INT	162	20	393	--				
SUBTOTAL							855	112	2,509	33,200				
2	STH 20		314+45	-	397+50	ML	--	--	--	36,000				
			319+98	-	321+98	OAKES RD INT	--	--	--	--				
			330+36	-	331+58	PRAIRIE DR INT	--	--	--	--				
			340+32	-	341+70	SUNNYSLOPE DR INT	--	--	--	--				
			359+98	-	361+49	EMMERTSEN RD INT	--	--	--	--				
			375+74	-	377+26	VILLAGE CENTER DR INT	--	--	--	--				
SUBTOTAL							--	--	--	36,000				
TOTAL							855	112	2,509	69,200				

BASE AGGREGATE ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	305.0120 624.0100 BASE AGGREGATE DENSE 1 1/4-INCH	
							TON	WATER MGAL
0010								
1	STH 20		314+45	-	397+50	ML	30	0.3
			319+98	-	321+98	OAKES RD INT	210	2.0
			330+36	-	331+58	PRAIRIE DR INT	104	1.0
			335+98	-	337+11	WARWICK WAY INT	99	1.0
			340+32	-	341+70	SUNNYSLOPE DR INT	93	0.9
			355+68	-	356+66	MEADOW LANE AVE INT	40	0.4
			359+98	-	361+49	EMMERTSEN RD INT	138	1.3
			367+35	-	368+32	HUNTER DR INT	42	0.4
			375+74	-	377+26	VILLAGE CENTER DR INT	159	1.5
SUBTOTAL							915	8.8
2	STH 20		314+45	-	397+50	ML	31	0.3
			319+98	-	321+98	OAKES RD INT	80	0.8
			330+36	-	331+58	PRAIRIE DR INT	13	0.2
			340+32	-	341+70	SUNNYSLOPE DR INT	27	0.3
			359+98	-	361+49	EMMERTSEN RD INT	7	0.1
			375+74	-	377+26	VILLAGE CENTER DR INT	9	0.1
SUBTOTAL							167	1.8
TOTAL							1,082	10.6

REMOVING STORM SEWER

CATEGORY	STAGE	ROADWAY	STATION	O/S	204.0245 SPV.0060.38 REMOVING STORM SEWER (O1. 18-INCH)		INLET COVERS TYPE H-D EACH	
					LF	EACH		
0010								
1	STH 20		355+75	RT	--	1		
			361+50	LT	--	1		
			377+00	LT & RT	--	2		
SUBTOTAL							--	4
2	STH 20		358+50	RT	16	--		
SUBTOTAL							16	--
TOTAL							16	4

BASE PATCHING CONCRETE

390.0100 390.0305 390.0405

CATEGORY	STAGE	ROADWAY	STATION TO	STATION	O/S	REMOVING	BASE		
						PAVEMENT	PATCHING	CONCRETE	
						FOR BASE	CONCRETE	SHES	
						PATCHING	HES	CY	
0010	1	STH 20	314+45 -	397+50	ML	58	29	23	
			319+98 -	321+98	OAKES RD INT	15	13	--	
			330+36 -	331+58	PRAIRIE DR INT	7	6	--	
			335+98 -	337+11	WARWICK WAY INT	7	6	--	
			340+32 -	341+70	SUNNYSLOPE DR INT	8	7	--	
			355+68 -	356+66	MEADOW LANE AVE INT	3	3	--	
			359+98 -	361+49	EMMERTSEN RD INT	15	13	--	
			367+35 -	368+32	HUNTER DR INT	3	3	--	
			375+74 -	377+26	VILLAGE CENTER DR INT	13	12	--	
			394+55 -	394+90	SYCAMORE AVE INT	--	--	--	
			SUBTOTAL				129	92	23
	2	STH 20	314+45 -	397+50	ML	218	153	41	
			319+98 -	321+98	OAKES RD INT	52	47	--	
			330+36 -	331+58	PRAIRIE DR INT	1	1	--	
			340+32 -	341+70	SUNNYSLOPE DR INT	31	28	--	
			359+98 -	361+49	EMMERTSEN RD INT	40	36	--	
			375+74 -	377+26	VILLAGE CENTER DR INT	47	42	--	
			SUBTOTAL				389	307	41
			UNDISTRIBUTED (5% OF RESURFACE AREA)				864	512	256
TOTAL						1,382	911	320	

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ASPHALTIC PAVING

455.0605 460.6223 460.6224 465.0110 465.0125 465.0305 SPV.0195.03

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	ASPHALTIC SURFACE							
							TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE PATCHING TON	ASPHALTIC SURFACE TEMPORARY TON	SAFETY ISLANDS TON	JOINT AND CRACK REPAIR TON	
0010	1	STH 20	314+45	-	397+50	ML	6,260	4,030	3,130	72	333	--	72	
			319+98	-	321+98	OAKES RD INT	176	56	88	2	--	4	2	
			330+36	-	331+58	PRAIRIE DR INT	73	11	37	1	--	--	1	
			335+98	-	337+11	WARWICK WAY INT	104	11	52	1	--	--	1	
			340+32	-	341+70	SUNNYSLOPE DR INT	90	25	45	1	--	--	1	
			355+68	-	356+66	MEADOW LANE AVE INT	31	6	16	1	--	--	1	
			359+98	-	361+49	EMMERTSEN RD INT	78	24	39	1	--	--	1	
			367+35	-	368+32	HUNTER DR INT	41	6	21	1	--	--	1	
			375+74	-	377+26	VILLAGE CENTER DR INT	117	32	59	1	--	5	1	
			SUBTOTAL					6,970	4,201	3,487	81	333	9	81
	2	STH 20	314+45	-	397+50	ML	7,550	4,860	3,780	87	333	--	87	
			319+98	-	321+98	OAKES RD INT	--	--	--	--	--	--	--	
			330+36	-	331+58	PRAIRIE DR INT	--	--	--	--	--	--	--	
			340+32	-	341+70	SUNNYSLOPE DR INT	--	--	--	--	--	--	--	
			359+98	-	361+49	EMMERTSEN RD INT	--	--	--	--	--	--	--	
			375+74	-	377+26	VILLAGE CENTER DR INT	--	--	--	--	--	--	--	
			SUBTOTAL					7,550	4,860	3,780	87	333	--	87
TOTAL							14,520	9,061	7,267	168	666	9	168	

CONCRETE ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	416.0610 416.0620		
							DRILLED TIE BARS EACH	DRILLED DOWEL BARS EACH	
0010	1	STH 20	314+45	-	397+50	ML	584	3,510	
			319+98	-	321+98	OAKES RD INT	253	1,515	
			330+36	-	331+58	PRAIRIE DR INT	121	723	
			335+98	-	337+11	WARWICK WAY INT	120	717	
			340+32	-	341+70	SUNNYSLOPE DR INT	140	837	
			355+68	-	356+66	MEADOW LANE AVE INT	42	252	
			359+98	-	361+49	EMMERTSEN RD INT	257	1,542	
			367+35	-	368+32	HUNTER DR INT	46	273	
			375+74	-	377+26	VILLAGE CENTER DR INT	226	1,353	
			SUBTOTAL					1,786	10,722
	2	STH 20	314+45	-	397+50	ML	3,096	18,580	
			319+98	-	321+98	OAKES RD INT	936	5,616	
			330+36	-	331+58	PRAIRIE DR INT	18	108	
			340+32	-	341+70	SUNNYSLOPE DR INT	554	3,321	
			359+98	-	361+49	EMMERTSEN RD INT	716	4,293	
			375+74	-	377+26	VILLAGE CENTER DR INT	837	5,022	
			SUBTOTAL					6,156	36,940
TOTAL							321,328	1,928,000	
TOTAL							329,269	1,975,662	

CATEGORY	STAGE	ROADWAY	STATION	O/S	INLETS	
					204.0260 ABANDONING INLETS EA	611.8115 ADJUSTING INLET COVERS EA
0010	2	STH 20	320+25	RT	--	1
			361+40	LT	1	--
TOTAL					1	1

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SANITARY MANHOLE REPAIR

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	390.0100	390.0405	416.0610	465.0110	611.8120.5	690.0250	SPV.0060.35	SPV.0060.36	SPV.0090.01	REMARKS
					REMOVING PAVEMENT FOR BASE PATCHING CY	BASE PATCHING CONCRETE SHES CY	DRILLED TIE BARS EACH	ASPHALTIC SURFACE PATCHING TON	COVER PLATES TEMPORARY EACH	SAWING CONCRETE LF	ADJUSTING SANITARY MANHOLES EACH	RECONSTRUCTING SANITARY MANHOLES EACH	REMOVING & INSTALLING SANITARY SEWER PIPE 8-INCH LF	
0040	1	STH 20	321+20	79' LT	1	1	8	2	1	16	--	1	--	
			331+09	83' RT	1	1	8	2	1	16	1	--	--	
			336+44	53' RT	1	1	8	2	1	16	--	1	--	
			341+03	57' RT	1	1	8	2	1	16	--	1	--	
			346+66	49' RT	1	1	8	2	1	16	1	--	--	PAVED OVER - UNABLE TO INSPECT. EXPOSE STRUCTURE FOR INSPECTION.
			347+58	50' LT	1	1	8	2	1	16	1	--	10	ALIGN PIPE SECTIONS & INSTALL RUBBER PIPE GASKET SEAL PER SPECIFICATIONS
			348+27	51' LT	1	1	8	2	1	16	1	--	--	PAVED OVER - UNABLE TO INSPECT. EXPOSE STRUCTURE FOR INSPECTION.
			349+00	51' LT	1	1	8	2	--	16	--	--	10	
			352+28	51' LT	1	1	8	2	1	16	1	--	--	
			353+52	49' RT	1	1	8	2	1	16	1	--	--	PAVED OVER - UNABLE TO INSPECT. EXPOSE STRUCTURE FOR INSPECTION.
			354+45	52' LT	1	1	8	2	1	16	1	--	--	
			355+28	49' LT	1	1	8	2	1	16	1	--	--	
			356+29	50' RT	1	1	8	2	1	16	1	--	--	REUSE RINGS
			357+71	52' LT	1	1	8	2	1	16	1	--	--	
			360+95	47' LT	1	1	8	2	1	16	1	--	--	UNABLE TO INSPECT DUE TO TRAFFIC. VILLAGE WILL INSPECT DURING CONSTRUCTION.
			364+56	50' LT	1	1	8	2	1	16	1	--	--	
SUBTOTAL					16	16	128	32	15	256	12	3	20	
2	2	STH 20	356+27	11' RT	1	1	8	2	1	16	1	--	--	REUSE RINGS
			358+83	15' RT	1	1	8	2	1	16	1	--	--	REUSE RINGS
			360+98	15' RT	1	1	8	2	1	16	1	--	--	UNABLE TO INSPECT DUE TO TRAFFIC. VILLAGE WILL INSPECT DURING CONSTRUCTION.
			363+85	16' RT	1	1	8	2	1	16	1	--	--	REUSE RINGS
			366+34	15' RT	1	1	8	2	1	16	1	--	--	
			369+35	14' RT	1	1	8	2	1	16	--	1	--	
			374+00	3' RT	1	1	8	2	1	16	1	--	--	
			375+89	13' RT	1	1	8	2	1	16	1	--	10	
			376+33	11' RT	1	1	8	2	1	16	1	--	--	REUSE RINGS
SUBTOTAL					9	9	72	18	9	144	8	1	10	
TOTAL					25	25	200	50	24	400	20	4	30	

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

STORM SEWER

CATEGORY	STAGE	ROADWAY	STATION	O/S	520.8000	608.0318
					CONCRETE COLLARS FOR PIPE EA	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF
0010	2	STH 20	358+50	RT	2	16
TOTAL					2	16

CONCRETE CURB & GUTTER ITEMS

601.0411 601.0600
 CONCRETE CONCRETE
 CURB & GUTTER CURB
 30-INCH TYPED PEDESTRIAN

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	LF	LF
0010								
	1	STH 20	314+45	-	397+50	ML	56	--
			319+98	-	321+98	OAKES RD INT	365	69
			330+36	-	331+58	PRAIRIE DR INT	175	--
			335+98	-	337+11	WARWICK WAY INT	155	--
			340+32	-	341+70	SUNNYSLOPE DR INT	156	--
			355+68	-	356+66	MEADOW LANE AVE INT	68	--
			359+98	-	361+49	EMMERTSEN RD INT	211	--
			367+35	-	368+32	HUNTER DR INT	72	--
			375+74	-	377+26	VILLAGE CENTER DR INT	271	93
			SUBTOTAL				1,529	162
	2	STH 20	319+98	-	321+98	OAKES RD INT	109	82
			330+36	-	331+58	PRAIRIE DR INT	33	21
			340+32	-	341+70	SUNNYSLOPE DR INT	51	17
			359+98	-	361+49	EMMERTSEN RD INT	6	--
			SUBTOTAL				199	120
			TOTAL				1,728	282

CONCRETE SIDEWALK

602.0410 602.0505
 CONCRETE
 SIDEWALK CURB RAMP DETECTABLE
 5-INCH WARNING FIELD YELLOW

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	SF	SF
0010								
	1	STH 20	314+45	-	397+50	ML	1,470	--
			319+98	-	321+98	OAKES RD INT	1,630	160
			330+36	-	331+58	PRAIRIE DR INT	865	60
			335+98	-	337+11	WARWICK WAY INT	908	40
			340+32	-	341+70	SUNNYSLOPE DR INT	768	80
			355+68	-	356+66	MEADOW LANE AVE INT	325	20
			359+98	-	361+49	EMMERTSEN RD INT	1,320	80
			367+35	-	368+32	HUNTER DR INT	323	20
			375+74	-	377+26	VILLAGE CENTER DR INT	1,290	80
			SUBTOTAL				8,899	540
	2	STH 20	319+98	-	321+98	OAKES RD INT	879	60
			330+36	-	331+58	PRAIRIE DR INT	--	20
			340+32	-	341+70	SUNNYSLOPE DR INT	155	30
			359+98	-	361+49	EMMERTSEN RD INT	88	--
			375+74	-	377+26	VILLAGE CENTER DR INT	208	--
			SUBTOTAL				1,330	110
			TOTAL				10,229	650

ADJUSTING MANHOLES

*
 611.8110 611.8120.5
 ADJUSTING COVER PLATES
 MANHOLE COVERS TEMPORARY

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	EA	EA
0010								
	1	STH 20	314+45	-	397+50	ML	3	3
			335+98	-	337+11	WARWICK WAY INT	2	2
			SUBTOTAL				5	5
	2	STH 20	314+45	-	397+50	ML	2	2
			340+32	-	341+70	SUNNYSLOPE DR INT	2	2
			375+74	-	377+26	VILLAGE CENTER DR INT	1	1
			SUBTOTAL				5	5
			TOTAL				10	10

*ADDITIONAL QTY SHOWN ELSEWHERE

CONCRETE MEDIAN

620.0200 620.0300
 BLUNT NOSE SLOPED NOSE

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	SF	SF	COMMENT
0010									
	1	STH 20	319+98	-	321+98	OAKES RD INT	57	--	
			375+74	-	377+26	VILLAGE CENTER DR INT	54	--	
			SUBTOTAL				111	--	
	2	STH 20	340+32	-	341+70	SUNNYSLOPE DR INT	44	--	
			359+98	-	361+49	EMMERTSEN RD INT	--	23	TYPE 2
			SUBTOTAL				44	23	--
			TOTAL				155	23	

RESTORATION

625.0100 625.0500 627.0200 629.0210 630.0140 630.0200 630.0500

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	SALVAGED		FERTILIZER	SEEDING	SEEDING	SEED		
							TOPSOIL	TOPSOIL	MULCHING	TYPE B	MIXTURE NO. 40	TEMPORARY	WATER	
							SY	SY	CWT	LB	LB	MGAL		
0010	1	STH 20	319+98	-	321+98	OAKES RD INT	77	77	154	1	7	5	4	
			330+36	-	331+58	PRAIRIE DR INT	56	56	56	1	5	3	3	
			335+98	-	337+11	WARWICK WAY INT	74	74	74	1	7	4	4	
			340+32	-	341+70	SUNNYSLOPE DR INT	31	31	31	1	3	2	2	
			355+68	-	356+66	MEADOW LANE AVE INT	26	26	26	1	3	2	2	
			359+98	-	361+49	EMMERTSEN RD INT	89	89	89	1	8	5	4	
			367+35	-	368+32	HUNTER DR INT	26	26	26	1	3	2	2	
			375+74	-	377+26	VILLAGE CENTER DR INT	93	93	93	1	9	6	5	
			SUBTOTAL					472	472	549	8	45	29	26
	2	STH 20	319+98	-	321+98	OAKES RD INT	2	2	4	1	1	1	1	
			330+36	-	331+58	PRAIRIE DR INT	1	1	2	1	1	1	1	
			SUBTOTAL					3	3	6	2	2	2	2
			UNDISTRIBUTED					119	119	139	3	12	8	7
			TOTAL					594	594	694	13	59	39	35

EROSION CONTROL

628.1905 628.1910 628.7015 628.7020

MOBILIZATIONS INLET PROTECTION

EROSION EMERGENCY EROSION

CONTROL CONTROL TYPE C TYPE D

EA EA EA EA

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	O/S	EA	EA	EA	EA	
0010	1	STH 20	314+45	-	397+50	ML	2	2	22	27	
			SUBTOTAL					2	2	22	61
	2	STH 20	314+45	-	397+50	ML	2	2	17	7	
			SUBTOTAL					2	2	17	7
			UNDISTRIBUTED (25%)					1	1	10	17
			TOTAL					5	5	49	85

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TRAFFIC CONTROL

643.0300 643.0420 643.0705 643.0715 643.0800 643.0900 643.0920 643.1050 643.1070 644.1430 644.1601 644.1605 644.1810 646.3165 643.3150 646.3180 646.9000 SPV.0060.01

CATEGORY	STAGE	ROADWAY	STATION	TO STATION	O/S	DRUMS DAY	BARRICADES TYPE III DAY	WARNING LIGHTS TYPE A DAY	WARNING LIGHTS TYPE C DAY	ARROW BOARDS DAY	COVERING SIGNS TYPE II EACH	SIGNS PCMS DAY	MESSAGE PANEL 1 PANEL 2	CONES 42- INCH DAY	TEMPORARY PEDESTRIAN SURFACE PLATE SF	TEMPORARY PEDESTRIAN CURB RAMP DAY	TEMPORARY DETECTABLE WARNING FIELD SF	TEMPORARY PEDESTRIAN BARRICADE LF	TEMPORARY MARKING LINE PAINT 6-INCH LF	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH LF	TEMPORARY MARKING LINE REMOVAL LINE 4-INCH LF	TEMPORARY BUS STOP EA
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0010																									
														BEGINS											
														ROAD XXXDAY											
1	STH 20		314+45 -	397+50	ML	78,800	3,150	6,300	3,000	150	6,150	3	28	WORK	XX/XX	--	--	--	--	13,800	--	745	16,700	12	
			319+98 -	321+98	OAKES RD INT	4,050	900	1,800	300	--	4,200	--	--	--	--	308	750	80	817	--	180	744	--	--	
			330+36 -	331+58	PRAIRIE DR INT	--	300	600	1,200	--	2,100	--	--	--	2,550	104	600	40	514	--	--	237	--	--	
			335+98 -	337+11	WARWICK WAY INT	--	150	300	600	--	1,950	--	--	--	2,400	102	600	40	595	--	--	211	--	--	
			340+32 -	341+70	SUNNYSLOPE DR INT	2,850	900	1,800	1,950	--	3,150	--	--	--	--	89	600	60	401	--	90	530	--	--	
			355+68 -	356+66	MEADOW LANE AVE INT	--	--	--	--	--	900	--	--	--	1,200	45	300	20	217	--	--	137	--	--	
			359+98 -	361+49	EMMERTSEN RD INT	3,150	600	1,200	2,700	--	3,450	--	--	--	--	98	750	40	699	--	240	294	--	--	
			367+35 -	368+32	HUNTER DR INT	--	--	--	--	--	900	--	--	--	1,200	45	300	20	209	--	--	128	--	--	
			375+74 -	377+26	VILLAGE CENTER DR INT	3,150	900	1,800	1,650	--	4,050	--	--	--	--	134	900	60	923	--	180	529	--	--	
			386+00 -	387+00	STH 31	1,800	150	--	--	--	150	--	--	--	--	--	--	--	--	--	--	--	--	--	
			SUBTOTAL			93,800	7,050	13,800	11,400	150	27,000	3	28	--	--	7,350	925	4,800	360	4,375	13,800	690	3,555	16,700	12
														BEGINS											
														ROAD XXXDAY											
2	STH 20		314+45 -	397+50	ML	99,700	3,300	6,600	2,160	100	9,500	3	28	WORK	XX/XX	--	--	--	--	13,800	--	860	--	--	
			319+98 -	321+98	OAKES RD INT	--	200	400	800	--	400	--	--	--	--	--	--	77	--	180	241	--	--		
			330+36 -	331+58	PRAIRIE DR INT	--	--	--	--	--	1,600	--	--	--	--	--	--	53	--	--	190	--	--		
			340+32 -	341+70	SUNNYSLOPE DR INT	--	200	400	800	--	2,100	--	--	--	--	--	--	44	--	--	182	--	--		
			359+98 -	361+49	EMMERTSEN RD INT	--	200	400	800	--	400	--	--	--	--	--	--	80	--	--	123	--	--		
			375+74 -	377+26	VILLAGE CENTER DR INT	--	200	400	800	--	1,100	--	--	--	--	--	--	36	--	--	177	--	--		
			386+00 -	387+00	STH 31	1,800	150	--	--	--	150	--	--	--	--	--	--	--	--	--	--	--	--		
			SUBTOTAL			101,500	4,250	8,200	5,360	100	15,250	3	28	--	--	--	--	--	290	13,800	180	1,773	--	--	
			UNDISTRIBUTED			48,900	2,830	5,500	4,190	63	10,570	2	--	--	--	1,900	232	1,200	90	1,170	6,900	220	1,340	4,180	3
			TOTAL			244,200	14,130	27,500	20,950	313	52,820	8	56	--	--	9,250	1,157	6,000	450	5,835	34,500	1,090	6,668	20,880	15

*THREE CYCLES FOR ALL SIGN COVERINGS

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PAVEMENT MARKING

CATEGORY	STAGE	ROADWAY	STATION TO	STATION	O/S	646.1020	646.2020	646.2025	646.2040	646.3020	646.4040	646.5020	646.5120	646.6120	646.6220	646.7120	646.7220	646.7420	646.7520	646.8120	646.8220				
						MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING	MARKING
						LINE EPOXY	LINE EPOXY	GROOVED	GROOVED	LINE EPOXY	LINE EPOXY	WORD	STOP LINE	YIELD LINE	DIAGONAL	CHEVRON	EPOXY	EPOXY	CROSSWALK	CROSSWALK	MARKING	ISLAND			
						4-INCH	6-INCH	6-INCH	6-INCH	8-INCH	10-INCH	ARROW	18-INCH	18-INCH	12-INCH	24-INCH	6-INCH	24-INCH	6-INCH	24-INCH	EPOXY	EPOXY			
YELLOW	WHITE	YELLOW	WHITE	WHITE	WHITE	TYPE 2	TYPE 3	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA					
0010	1	STH 20	314+45 - 397+50	ML		--	11,400	--	3,050	3,050	--	596	6	--	3	295	--	--	--	652	--	--			
			319+98 - 321+98	OAKES RD INT		--	--	--	--	173	86	2	--	2	77	1	--	--	342	81	--	--			
			330+36 - 331+58	PRAIRIE DR INT		100	--	--	--	--	--	--	--	--	44	--	--	--	214	--	--	--			
			335+98 - 337+11	WARWICK WAY INT		300	--	--	--	--	--	--	--	--	45	--	--	--	221	--	--	--			
			340+32 - 341+70	SUNNYSLOPE DR INT		100	--	--	--	--	--	2	--	2	55	--	--	--	286	--	--	--			
			355+68 - 356+66	MEADOW LANE AVE INT		--	--	--	--	173	--	--	--	--	24	--	--	--	115	--	--	--			
			359+98 - 361+49	EMMERTSEN RD INT		100	--	--	--	--	--	2	--	--	54	--	--	--	252	--	--	--			
			367+35 - 368+32	HUNTER DR INT		100	--	--	--	--	--	--	--	--	21	--	--	--	104	--	--	--			
			375+74 - 377+26	VILLAGE CENTER DR INT		50	--	--	--	50	--	2	2	--	85	--	--	--	346	--	--	--			
			SUBTOTAL			750	11,400	--	3,050	3,050	396	682	14	2	7	700	1	--	--	2,532	81	--	--		
0010	2	STH 20	314+45 - 397+50	ML		--	--	7,340	3,050	3,050	--	1,900	22	--	21	96	--	--	--	676	--	601	8		
			319+98 - 321+98	OAKES RD INT		--	--	--	--	--	--	--	--	--	--	--	--	--	114	--	81	149	2		
			330+36 - 331+58	PRAIRIE DR INT		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	199	2		
			340+32 - 341+70	SUNNYSLOPE DR INT		--	--	--	--	--	--	--	--	--	--	--	--	--	73	--	--	85	2		
			359+98 - 361+49	EMMERTSEN RD INT		--	--	--	--	--	--	--	--	--	--	--	126	--	--	--	--	55	2		
			375+74 - 377+26	VILLAGE CENTER DR INT		--	--	--	--	--	--	--	--	--	--	112	--	--	--	--	--	92	2		
			SUBTOTAL			--	--	7,340	3,050	3,050	--	1,900	22	--	21	96	--	238	187	676	81	1,181	18		
			TOTAL			750	18,740	6,100	6,100	396	2,582	38	28	796	1	238	187	3,207	162	1,181	18				

CONSTRUCTION STAKING

CATEGORY	STAGE	ROADWAY	STATION TO	STATION	O/S	650.5500	650.8000	650.8501	650.9000	650.9500	650.9911
						CURB AND	RESURFACING	INSTALLATION	CURB	SIDEWALK	SUPPLEMENTAL
						GUTTER	REFERENCE	2250-15-70	RAMPS	2250-15-70	CONTROL 2250-15-70
						EA	EA	EA	EA	EA	EA
0010	1	STH 20	314+45 - 397+50	ML		56	8,310	1	--	1	1
			319+98 - 321+98	OAKES RD INT		365	--	--	14	--	--
			330+36 - 331+58	PRAIRIE DR INT		175	--	--	6	--	--
			335+98 - 337+11	WARWICK WAY INT		155	--	--	4	--	--
			340+32 - 341+70	SUNNYSLOPE DR INT		156	--	--	8	--	--
			355+68 - 356+66	MEADOW LANE AVE INT		68	--	--	2	--	--
			359+98 - 361+49	EMMERTSEN RD INT		211	--	--	8	--	--
			367+35 - 368+32	HUNTER DR INT		72	--	--	2	--	--
			375+74 - 377+26	VILLAGE CENTER DR INT		271	--	--	8	--	--
			SUBTOTAL			1,529	8,310	1	52	1	1
0010	2	STH 20	314+45 - 397+50	ML		--	8,310	--	--	--	--
			319+98 - 321+98	OAKES RD INT		109	--	--	4	--	--
			330+36 - 331+58	PRAIRIE DR INT		33	--	--	2	--	--
			340+32 - 341+70	SUNNYSLOPE DR INT		51	--	--	3	--	--
			359+98 - 361+49	EMMERTSEN RD INT		6	--	--	--	--	--
			375+74 - 377+26	VILLAGE CENTER DR INT		--	--	--	--	--	--
			SUBTOTAL			199	8,310	--	9	--	--
			TOTAL			1,728	16,620	1	61	1	1

SAWING EXISTING PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	- STATION	O/S	690.0150	690.0250
						ASPHALT LF	CONCRETE LF
0010							
1	STH 20		314+45	- 397+50	ML	--	730
			319+98	- 321+98	OAKES RD INT	1,140	860
			330+36	- 331+58	PRAIRIE DR INT	325	417
			335+98	- 337+11	WARWICK WAY INT	320	390
			340+32	- 341+70	SUNNYSLOPE DR INT	566	408
			355+68	- 356+66	MEADOW LANE AVE INT	162	115
			359+98	- 361+49	EMMERTSEN RD INT	467	635
			367+35	- 368+32	HUNTER DR INT	169	120
			375+74	- 377+26	VILLAGE CENTER DR INT	755	677
SUBTOTAL						3,904	4,353
2	STH 20		314+45	- 397+50	ML	--	--
			319+98	- 321+98	OAKES RD INT	--	4,022
			330+36	- 331+58	PRAIRIE DR INT	--	55
			340+32	- 341+70	SUNNYSLOPE DR INT	--	135
			359+98	- 361+49	EMMERTSEN RD INT	--	729
			375+74	- 377+26	VILLAGE CENTER DR INT	--	894
SUBTOTAL						--	5,835
TOTAL						3,904	10,188

SECTION CORNER MONUMENT

CATEGORY	STAGE	ROADWAY	STATION	O/S	SPV.0060.32
					SECTION CORNER MONUMENTS EACH
0010					
1	STH 20		334+50	RT	1
2	STH 20		360+85	LT	1
TOTAL					2

MANAGEMENT OF SOLID WASTE

CATEGORY	STAGE	ROADWAY	STATION	TO STATION	O/S	205.0501.S	SPV.0195.01	SPV.0195.02
						EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL TON	EXCAVATION, HAULING, AND DISPOSAL OF VOC CONTAMINATED SOIL TON	EXCAVATION, HAULING, AND DISPOSAL OF LEAD CONTAMINATED SOIL TON
0010								
1	STH 20		335+00	- 337+00	RT	--	--	197
			359+00	- 361+00	RT	20	16	--
			361+00	- 362+00	RT	--	31	--
TOTAL						20	47	197

STORM SEWER REHABILITATION

CATEGORY	STAGE	ROADWAY	STATION	O/S	SPV.0060.33	SPV.0060.34
					CLEANING DRAINAGE STRUCTURES & PIPES EACH	STORM STRUCTURE & PIPES MISCELLANEOUS INSIDE REPAIR EACH
0010						
1	STH 20		326+50	60' LT	1	--
			329+12	60' RT	1	1
			330+93	82' RT	1	1
			331+53	59' LT	1	--
			334+00	57' LT	1	--
			337+19	56' LT	1	--
			336+97	56' RT	1	--
			340+00	54' LT	1	--
			339+99	54' RT	1	--
			340+74	54' LT	1	--
			344+99	52' LT	--	1
			345+24	52' RT	1	--
			345+94	52' LT	--	1
			346+00	51' RT	1	--
			353+90	51' RT	1	--
			355+77	54' RT	1	--
			358+57	50' RT	1	--
			358+63	51' LT	--	1
			361+03	75' LT	--	1
			361+15	68' RT	1	--
			361+46	50' RT	1	1
			364+99	51' RT	--	1
			377+03	50' RT	--	1
			SUBTOTAL			
2	STH 20		320+37	0.5' LT	1	1
			320+32	26' RT	1	1
			323+37	23' RT	1	--
			324+09	25' LT	1	1
			324+10	4' RT	1	--
			328+50	17' RT	1	--
			330+11	60' LT	1	--
			333+60	18' RT	1	--
			337+33	18' RT	1	--
			338+74	8' LT	1	--
358+49	8' LT	1	--			
361+40	8' LT	1	--			
SUBTOTAL					12	3
TOTAL					29	12

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REMOVING SIGNS TYPE II [EA]	REMOVING SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4"X 6"X18' [EA]	MOVE SIGNS TYPE II [EA]			
1	R3-20L (3)		36	X	54	13.500			1	1	1		SHEET 2 OF 13		
2	R3-20R (3)		36	X	54	13.500			1	1	1				
3	R3-20LL (3)		36	X	54	13.500			1	1	1				
4	R10-15R (2M)		30	X	30	6.250					1				
5	R4-7 (3)		36	X	48	12.000								MOUNT ON SIGNAL POLE	
6	R6-3 (2S)		30	X	24	5.000							6	MOUNT ABOVE R1-1F ON SIGNAL POLE	
7	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE	
8	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE	
9	R4-7 (2S)		24	X	30	5.000			1					MOUNT ON SIGNAL POLE	
10	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE	
11	R1-1F (3)		36	X	36			7.460	1				11	MOUNT ON SIGNAL POLE	
12	R6-3 (2S)		30	X	24	5.000								MOUNT ABOVE R1-1F ON SIGNAL POLE	
13	R1-2 (2S)		36	X	31	3.880			1					MOUNT ON LIGHT POLE	
14	R5-1 (3)		36	X	36	9.000			1					MOUNT ON SIGNAL POLE	
15	R6-2L (2M)		30	X	36	7.500			1	1	1				
16	R4-7 (3)		36	X	48	12.000			1				16	MOUNT ON SIGNAL POLE	
17	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE	
18	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE	
19	R6-3 (2S)		30	X	24	5.000								MOUNT ABOVE R1-1F ON SIGNAL POLE	
20	R1-1F (3)		36	X	36			7.460	1				19	MOUNT ON SIGNAL POLE	
21	R1-53								1			1	21	MOUNT BELOW R1-1 ON LIGHT POLE	
22	R1-1 (3)		36	X	36	7.460			1					MOUNT ON LIGHT POLE	
23	W9-1R (3)		36	X	36		9.000		1					19	MOUNT ON POLE ABOVE SIGNAL HEAD
24	R4-7 (2S)		24	X	30	5.000									MOUNT ON SIGNAL POLE
25	R1-1F (3)		36	X	36			7.460	1					24	MOUNT ON SIGNAL POLE
26	R6-3 (2S)		30	X	24	5.000							26	MOUNT ABOVE R1-1F ON SIGNAL POLE	
27	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE	
28	R6-2L (2M)		30	X	36	7.500			1					MOUNT ON SIGNAL POLE	
29	R10-15R (2S)		30	X	30	6.250								26	MOUNT ABOVE R1-1F ON SIGNAL POLE
30	R5-1 (3)		36	X	36	9.000			1	1			8	MOUNT ON SIGNAL POLE	

TYPE II PERMANENT SIGNING -

2250-15-70 STH 20

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REMOVING SIGNS TYPE II [EA]	REMOVING SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4"X 6"X18' [EA]	MOVE SIGNS TYPE II [EA]		
31	M1-94H	OAKES RD	66	X	18	8.250								MOUNT ON MAST ARM
32	R1-1F (3)		36	X	36			7.460	1				5	MOUNT ON SIGNAL POLE
33	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000								MOUNT ON MAST ARM
34	R5-3 (2S)		24	X	24	4.000			1	1	1			
35	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000								MOUNT ON MAST ARM
36	M1-94H	OAKES RD	66	X	18	8.250								MOUNT ON MAST ARM
37	R2-6P (3)		36	X	24	6.000								SHEET 4 OF 13; MOUNT BELOW S16-9P
38	R2-6P (3)		36	X	24	6.000								MOUNT BELOW EXISTING S16-9P
39	R6-2L								1	1				
40	R6-1R (2S)		36	X	12	3.000					1			MOUNT ABOVE R1-1
41	R1-1 (3)		36	X	36	7.460			1	1			40	
42	R6-3 (2S)		30	X	24	5.000							40	MOUNT BELOW R1-1
43	R6-1L (2S)		36	X	12	3.000							40	MOUNT ABOVE R1-1 ON BACK OF POST
44	R6-1L (2S)		36	X	12	3.000					1			MOUNT ABOVE R1-1 ON BACK OF POST
45	R6-2L								1	1				
46	R6-1R (2S)		36	X	12	3.000							44	MOUNT ABOVE R1-1
47	R1-1 (3)		36	X	36	7.460			1	1			44	
48	R6-3 (2S)		30	X	24	5.000							44	MOUNT BELOW R1-1
49	D1-61	WARWICK WAY	96	X	30	20.000					2			
50	R3-20LL (3)		36	X	54	13.500			1	1	1			SHEET 5 OF 13
51	R9-3A								1	1				SHEET 6 OF 13; REMOVES R9-3BR
52	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE
53	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000								MOUNT ON MAST ARM
54	R10-50L								1					
55	R10-50L								1					
56	R5-1 (3)		36	X	36	9.000			1					MOUNT ON SIGNAL POLE
57	R6-2L (2S)		24	X	30	5.000			1					MOUNT ON SIGNAL POLE
58	R9-3A								1					
59	R9-3BL								1					
60	R6-3 (2S)		30	X	24	5.000								MOUNT ABOVE R1-1F ON SIGNAL POLE

TYPE II PERMANENT SIGNING -

2250-15-70 STH 20

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REMOVING SIGNS TYPE II [EA]	REMOVING SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4"X 6"X18' [EA]	MOVE SIGNS TYPE II [EA]		
61	R1-1F (3)		36	X	36			7.460	1			60	MOUNT ON SIGNAL POLE	
62	R4-7 (3)		36	X	48	12.000			1				MOUNT ON SIGNAL POLE	
63	R1-1F (3)		36	X	36			7.460	1			62	MOUNT ON SIGNAL POLE	
64	R1-1F (3)		36	X	36			7.460	1				MOUNT ON SIGNAL POLE	
65	M1-94H	SUNNYSLOPE DR	108	X	18	13.500							MOUNT ON MAST ARM	
66	R10-50L								1					
67	R5-1 (2S)		30	X	30	6.250			1	1				
68	R4-7 (3)		36	X	48	12.000			1				MOUNT ON SIGNAL POLE	
69	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000							MOUNT ON MAST ARM	
70	R1-1F (3)		36	X	36			7.460	1			68	MOUNT ON SIGNAL POLE	
71	R5-1A (2S)		36	X	24	6.000				1				
72	M1-94H	SUNNYSLOPE DR	108	X	18	13.500							MOUNT ON MAST ARM	
73	R6-2L (2S)		24	X	30	5.000			1	1	1			
74	J4-1 (3)		36	X	54	13.500			1	1			MOUNT ON SIGNAL POLE	
	M3-2		36	x	18									
	M1-6	WIS 20	36	x	36									
75	R6-3 (2S)		30	X	24	5.000				1			MOUNT ABOVE R1-1F	
76	R1-1F (3)		36	X	36			7.460	1	1		75		
77	R5-1 (2S)		30	X	30	6.250				1			SHEET 7 OF 13	
78	R5-1 (2S)		30	X	30	6.250				1				
79	R5-1A (2S)		36	X	24	6.000				1			SHEET 8 OF 13	
80	R5-1 (2S)		30	X	30	6.250				1				
81	R6-1L (2S)		36	X	12	3.000				1			MOUNT ABOVE R1-1 ON BACK OF POST	
82	D1-65	EMMERTSEN RD NEXT SIGNAL	78	X	21	11.375				2				
83	R5-1 (2S)		30	X	30	6.250				1				
84	R1-1 (3)		36	X	36	7.460			1	1		81		
85	R6-1R (2S)		36	X	12	3.000						81	MOUNT ABOVE R1-1	
86	R6-3A (2S)		30	X	24	5.000						81	MOUNT BELOW R1-1	

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TYPE II PERMANENT SIGNING -

2250-15-70 STH 20

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REMOVING SIGNS TYPE II [EA]	REMOVING SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4"X 6"X18' [EA]	MOVE SIGNS TYPE II [EA]		
87	R3-20L (2S)		24	X	36	6.000			1	1	1		SHEET 9 OF 13 MOUNT ON SIGNAL POLE MOUNT ABOVE R1-1F ON SIGNAL POLE MOUNT ON SIGNAL POLE	
88	R7-1L (2S)		18	X	24	3.000			1	1	1			
89	R1-1F (3)		36	X	36			7.460	1					
90	R6-3 (2S)		30	X	24	5.000								
91	R1-1F (3)		36	X	36			7.460	1			90		
92	R6-2L (2S)	WIS 20 WASHINGTON AVE	24	X	30	5.000			1				MOUNT ON SIGNAL POLE MOUNT ON MAST ARM MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE	
93	M1-94S		96	X	18	12.000								
94	R5-1 (2S)		30	X	30	6.250								
95	R1-1F (3)		36	X	36			7.460	1			94		
96	R1-1F (3)		36	X	36			7.460	1					
97	R5-1A (2S)	S EMMERTSEN RD	36	X	24	6.000					1		MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE MOUNT ON MAST ARM MOUNT ABOVE R1-1F ON SIGNAL POLE	
98	R4-7 (2S)		24	X	30	5.000			1			89		
99	R4-7 (2S)		24	X	30	5.000			1			96		
100	M1-94H		102	X	18	12.750								
101	R6-3 (2S)		30	X	24	5.000								
102	R1-1F (3)		36	X	36			7.460	1			101	MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE	
103	R6-2L (2S)		24	X	30	5.000								
104	R10-50L								1					
105	R1-1 (3)		36	X	36	7.460			1	1	1		SHEET 10 OF 13	
106	R5-1 (2S)		30	X	30	6.250							MOUNT ON BACK OF EXISTING R2-1	
107	R5-1 (2S)		30	X	30	6.250					1		MOUNT BELOW R1-1 MOUNT ABOVE R1-1 MOUNT ABOVE R1-1 ON BACK OF POST	
108	R6-3A (2S)		30	X	24	5.000						105		
109	NOT USED													
110	R6-1R (2S)		36	X	12	3.000						105		
111	R6-1L (2S)		36	X	12	3.000						105		
112	R5-1A (2S)		36	X	24	6.000					1		SHEET 11 OF 13 MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE	
113	R3-20L (2S)		24	X	36	6.000			1	1	1			
114	R5-1A (2S)		36	X	24	6.000					1			
115	R1-1F (3)		36	X	36			7.460	1					
116	R1-1F (3)		36	X	36			7.460	1					

TYPE II PERMANENT SIGNING -

2250-15-70 STH 20

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REMOVING SIGNS TYPE II [EA]	REMOVING SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4"X 6"X18' [EA]	MOVE SIGNS TYPE II [EA]		
117	R5-1 (2S)		30	X	30	6.250							116	MOUNT ON SIGNAL POLE
118	R4-7 (2S)		24	X	30	5.000			1				115	MOUNT ON SIGNAL POLE
119	R6-2L (2S)		24	X	30	5.000				1				
120	R3-4 (2S)		24	X	24	4.000			1				115	MOUNT ON SIGNAL POLE
121	R3-4 (2S)		24	X	24	4.000			1				115	MOUNT ON BACK OF SIGNAL POLE
122	M1-94H	VILLAGE CENTER DR	102	X	18	12.750								MOUNT ON MAST ARM
123	R5-1 (2S)		30	X	30	6.250			1					MOUNT ON SIGNAL POLE
124	R6-3 (2S)		30	X	24	5.000							123	MOUNT ABOVE R1-1F ON SIGNAL POLE
125	R1-1F (3)		36	X	36			7.460	1				123	MOUNT ON SIGNAL POLE
126	R4-7 (2S)		24	X	30	5.000			1					SHEET 12 OF 13; MOUNT ON SGNL POLE
127	R6-3 (2S)		30	X	24	5.000								MOUNT ABOVE R1-1F ON SIGNAL POLE
128	R1-1F (3)		36	X	36			7.460	1				127	MOUNT ON SIGNAL POLE
129	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000								MOUNT ON MAST ARM
130	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000								MOUNT ON MAST ARM
131	R6-2L (2S)		24	X	30	5.000			1	1	1			
132	M1-94H	VILLAGE CENTER DR	102	X	18	12.750			1					MOUNT ON MAST ARM
133	R1-2 (3)		48	X	42	7.000			1	1	1			
134	R1-1F (3)		36	X	36			7.460	1					MOUNT ON SIGNAL POLE
135	W12-1D (2S)		24	X	24		4.000		1	1	1			MOUNT HEIGHT 2 FEET
136	R5-1 (2S)		30	X	30	6.250					1			
137	R4-7 (2S)		24	X	30	5.000			1					MOUNT ON SIGNAL POLE
138	R3-4 (2S)		24	X	24	4.000			1				137	MOUNT ON SIGNAL POLE
139	R5-1A (2S)		36	X	24	6.000					1			
140	R3-4 (2S)		24	X	24	4.000			1				137	MOUNT ON OTHER SIDE OF SIGNAL POLE

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TYPE II PERMANENT SIGNING -

2250-15-70 STH 20

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REMOVING SIGNS TYPE II [EA]	REMOVING SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4"X 6"X18' [EA]	MOVE SIGNS TYPE II [EA]		
141	R1-1F (3)		36	X	36			7.460	1			137	MOUNT ON OTHER SIDE OF SIGNAL POLE	
142	D1-65	EMMERTSEN RD NEXT SIGNAL	78	X	21	11.375				2			SHEET 11 OF 13	
143	D1-65	VILLAGE CENTER DR NEXT SIGNAL	96	X	21	14.000						142	MOUNT ON BACK OF D1-65	
144	D1-65	VILLAGE CENTER DR NEXT SIGNAL	96	X	21	14.000				2			SHEET 12 OF 13	
145	R1-1F (3)		36	X	36			7.460	1				SHEET 9 OF 13; MOUNT ON SIGNAL POLE	
146	R5-1 (2S)		30	X	30	6.250						145	MOUNT ON SIGNAL POLE	
147	M1-94S	WIS 20 WASHINGTON AVE	96	X	18	12.000							MOUNT ON MAST ARM	
148	M1-94H	S EMMERTSEN RD	102	X	18	12.750							MOUNT ON MAST ARM	
149	D1-65	OAKES RD NEXT SIGNAL	72	X	30	15.000			1	2			SHEET 1 OF 13; REMOVES D1-61	
150	D1-65	OAKES RD NEXT SIGNAL	72	X	30	15.000			1	2	2		SHEET 3 OF 13; REMOVES D1-61	
151	D1-65	SUNNYSLOPE DR NEXT SIGNAL	84	X	21	12.250			1	2	2		SHEET 5 OF 13; REMOVES D1-61 SIGNS	
152	D1-65	SUNNYSLOPE DR NEXT SIGNAL	84	X	21	12.250			1	2	2		SHEET 7 OF 13; REMOVES D1-61	
153	R4-7 (3)		36	X	48	12.000			1	1	1		SHEET 4 OF 13	
154	D1-61	WARWICK WAY	96	X	30	20.000						151	SHEET 5 OF 13	
155	W12-1D (2S)		24	X	24		4.000			1			SHEET 2 OF 13; MOUNT HEIGHT 2 FEET	
156	R6-2L (2S)		24	X	30	5.000				1			SHEET 7 OF 13	
157	R6-2L (2S)		24	X	30	5.000				1				
158	R5-1 (3)		36	X	36	9.000							SHEET 2 OF 13; MOUNT ON SIGNAL POLE	
159	R5-1 (3)		36	X	36	9.000							MOUNT ON SIGNAL POLE	
160	R6-2L (3)		36	X	48	12.000							MOUNT ON SIGNAL POLE	
161	R6-2L (3)		36	X	48	12.000							MOUNT ON SIGNAL POLE	
UNDISTRIBUTED										4				
TOTALS						934.930	17.000	208.880	86	33	57	1		

REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0110	204.0150	204.0155	204.0220	204.0270	204.9060.S.10
					REMOVING ASPHALTIC SURFACE SY	REMOVING CURB & GUTTER LF	REMOVING CONCRETE SIDEWALK SY	REMOVING INLETS EACH	ABANDONING CULVERT PIPES EACH	REMOVING (ITEM DESCRIPTION) (01. ENDWALL) EACH
0020	325+42	-	325+58	Right	10	16	-	-	-	-
0020	325+43	-	326+06	Right	-	-	35	-	-	-
0020	326+33	-	326+90	Left	-	-	32	-	-	-
0020	326+51	-	327+03	Right	-	-	28	-	-	-
0020			325+50	62.5' RT	-	-	-	1	1	-
0020			326+50	87.6' RT	-	-	-	-	-	1
TOTAL 0020					10	16	95	1	1	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVING

CATEGORY	STATION	TO	STATION	LOCATION	211.0101.01	305.0110	465.0105	601.0411	602.0410	624.0100
					PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 2250-15-70) EACH	BASE AGGREGATE DENSE 3/4-INCH TON	ASPHALTIC SURFACE TON	CONCRETE CURB & GUTTER 30-INCH TYPE D LF	CONCRETE SIDEWALK 5-INCH SF	WATER MGAL
0020	325+42	-	325+58	Right	-	-	3	16	-	-
0020	325+43	-	326+06	Right	-	-	-	-	315	-
0020	325+43	-	326+60	Right	-	9	-	-	-	0.2
0020	326+33	-	326+90	Left	-	-	-	-	288	-
0020	326+51	-	327+03	Right	-	-	-	-	252	-
0020	326+81	-	328+11	Left	-	9	-	-	-	0.2
0020				Undistributed	1	2	-	-	-	0.1
TOTAL 0020					1	20	3	16	855	0.5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.0010	614.2300	614.2500	614.2610	FOR INFORMATION ONLY		
					BARRIER SYSTEM GRADING SHAPING FINISHING EACH	MGS GUARDRAIL 3 LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH	EXCAVATION COMMON (CY)	FILL (CY)	BORROW (CY)
0020	325+52	-	326+03	Right	1	-	-	1	7	16	9
0020	326+03	-	326+19	Right	-	13	-	-	-	-	-
0020	326+19	-	Bridge	Right	-	-	39.5	-	-	-	-
0020	Bridge	-	327+21	Left	-	-	39.5	-	-	-	-
0020	327+21	-	327+58	Left	-	38	-	-	-	-	-
0020	327+58	-	328+09	Left	1	-	-	1	3	4	1
TOTAL 0020					2	50	79	2	10	20	10

EXCAVATION, BORROW, AND CONSTRUCTION STAKING ITEMS INCLUDED IN BARRIER SYSTEM GRADING SHAPING FINISHING. TOPSOIL, EROSION MAT, FERTILIZER, SEEDING AND SEED WATER WILL BE MEASURED SEPARATELY FOR

STORM SEWER PIPES

608.0330
STORM SEWER PIPE
REINFORCED CONCRETE
CLASS III 30-INCH

FROM	-	TO	LOCATION	LF	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT
11	-	12	ALI-STH 20	20	676.10	675.90	0.0100
12	-	13	ALI-STH 20	99	675.70	672.22	0.0352
TOTALS				119			

RIPRAP

CATEGORY	STATION	TO	STATION	LOCATION	606.0200	645.0120
					RIPRAP MEDIUM CY	GEOTEXTILE TYPE HR SY
0020	326+42	-	326+67	Right	9	18
0020	326+73	-	326+95	Left	12	24
TOTAL 0010					21	42

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	522.1030	611.0612	611.0624	611.1005	611.2005	650.4000	RIM** ELEVATION	INVERT ELEVATION	DEPTH*** FT
				APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	INLET COVERS TYPE C	INLET COVERS TYPE H	CATCH BASINS 5-FT DIAMETER	MANHOLES 5-FT DIAMETER	CONSTRUCTION STAKING STORM SEWER			
11	325+50.09	62.48' RT	ALI-STH 20	-	-	1	1	-	1	683.64	676.10	6.83
12	325+57.70	81.40' RT	ALI-STH 20	-	1	-	-	1	1	683.50	675.70	6.85
13	326+58.71	94.48' RT	ALI-STH 20	1	-	-	-	-	1	-	672.22	-
TOTALS				1	1	1	1	1	3			

REMARKS:
 *STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
 **RIM ELEV IS AT THE INLET COVER FLANGE LOCATION
 ***DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	628.1905	628.2006	628.2008	628.7015	628.7504
					SILT FENCE LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS EROSION CONTROL EACH	EROSION MAT URBAN CLASS I TYPE A SY	EROSION MAT URBAN CLASS I TYPE B SY	INLET PROTECTION TYPE C EACH	TEMPORARY DITCH CHECKS LF
0020	325+42	-	326+06	Right	-	-	-	30	-	-	-
0020	325+57	-	326+49	Right	-	-	-	-	75	-	-
0020	325+44	-	326+31	Right	-	-	-	65	-	-	-
0020	326+51	-	327+03	Right	-	-	-	18	-	-	-
0020	325+37	-	326+51	Right	120	120	-	-	-	-	-
0020	326+95	-	328+37	Left	147	147	-	-	-	-	-
0020	326+50			Right	-	-	-	-	-	-	5
0020				Undistributed	33	33	1	8	5	6	-
TOTAL 0010					300	300	1	121	80	6	5

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	* 625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	* 630.0500 SEED WATER MGAL
0020	325+42	-	326+06	Right	30	0.02	1	0.7
0020	325+57	-	326+49	Right	75	0.05	2	1.7
0020	325+44	-	326+31	Right	65	0.05	2	1.5
0020	326+51	-	327+03	Right	18	0.02	1	0.5
0020				Undistributed	13	0.01	1	0.3
				TOTAL 0010	201	0.2	7	4.7

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	* 650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	* 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0020	325+42	-	325+58	Right	16	-
0020	325+43	-	326+60	Right	-	117
0020	326+81	-	328+11	Left	-	130
				Undistributed	-	-
				TOTAL 0010	16	247

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SAWING

CATEGORY	STATION	TO	STATION	LOCATION	* 690.0150 SAWING ASPHALT LF	* 690.0250 SAWING CONCRETE LF
0020	325+42	-	325+58	Right	27	-
0020	325+42	-	325+42	Right	-	3
0020	325+43	-	325+43	Right	-	5
0020	325+69	-	325+69	Right	-	3
0020	326+06	-	326+06	Right	-	5
0020	326+33	-	326+33	Left	-	5
0020	326+51	-	326+51	Right	-	5
0020	326+89	-	326+90	Left	-	5
0020	327+03	-	327+03	Right	-	5
				TOTAL 0010	27	35

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

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REMOVING TRAFFIC SIGNALS

204.9060.S.01
REMOVING
TRAFFIC SIGNALS
EACH

LOCATION	EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

REMOVING CONCRETE BASES

204.0195
REMOVING
CONCRETE BASES
EACH

SIGNAL BASE NO.	EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
CB1	1
TOTAL	10

LAMP, BALLAST, LED, SWITCH DISPOSAL

659.5000.S
LAMP, BALLAST, LED,
SWITCH DISPOSAL
BY CONTRACTOR
EACH

FIXTURE	EACH
TRAFFIC SIGNAL, THREE SECTION	12
TRAFFIC SIGNAL, FOUR SECTION	4
HIGH PRESSURE SODIUM LAMP BALLASTS	5
MERCURY SWITCHES	1
TOTAL	27

3

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE

204.9060.S.06
REMOVING LOOP DETECTOR
WIRE & LEAD-IN CABLE
EACH

LOCATION	EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

LAMP, BALLAST, LED, SWITCH DISPOSAL
(FOR INFORMATION ONLY)

SIGNAL BASE NO.	TRAFFIC SIGNAL, THREE SECTION EACH	TRAFFIC SIGNAL, FOUR SECTION EACH	HIGH PRESSURE SODIUM LAMP EACH	BALLASTS EACH	MERCURY SWITCHES EACH
SB1	1	--	--	--	--
SB2	1	1	--	--	--
SB3	1	1	2	2	--
SB4	1	--	--	--	--
SB5	2	--	--	--	--
SB6	1	--	1	1	--
SB7	1	1	--	--	--
SB8	1	1	2	2	--
SB9	1	--	--	--	--
SB10	2	--	--	--	--
CB1	--	--	--	--	1
TOTAL	12	4	5	5	1

REMOVING PULL BOXES

653.0905
REMOVING
PULL BOXES
EACH

PULL BOX NO.	EACH
PB1	1
PB2	1
PB3	1
PB4	1
PB5	1
PB6	1
PB7	1
PB8	1
PB9	1
PB12	1
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
TOTAL	16

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
2	POLES TYPE 10
2	POLES TYPE 9 SPECIAL
2	MONOTUBE ARMS 25-FT
2	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE
2	LUMINAIRE ARMS 15-FT
4	EVP DETECTOR HEADS
1	COHU CAMERA ASSEMBLY

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
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CONCRETE BASES

SIGNAL BASE NO.	LOCATION^	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0120 CONCRETE BASES TYPE 10-SPECIAL EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	360+28.40, 55.8' RT	1	--	--	--	--
SB2	360+15.07, 8.7' LT	--	1	--	--	--
SB3	360+24.38, 55.0' LT	--	--	--	1	--
SB4	360+33.05, 63.1' LT	1	--	--	--	--
SB5	360+55.73, 76.3' LT	1	--	--	--	--
SB6	361+07.06, 86.0' LT	--	--	1	--	--
SB7	361+30.96, 63.2' LT	1	--	--	--	--
SB8	361+37.40, 54.9' LT	1	--	--	--	--
SB9	361+51.34, 8.2' RT	--	1	--	--	--
SB10	361+44.80, 55.8' RT	--	--	--	1	--
SB11	361+35.09, 64.4' RT	1	--	--	--	--
SB13	360+61.21, 78.1' RT	--	--	1	--	--
SB14	360+35.73, 64.2' RT	1	--	--	--	--
CB1	360+23.35, 68.0' RT	--	--	--	--	1
		--	--	--	--	--
TOTAL		7	2	2	2	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5070.01 SIGNAL MOUNTING HARDWARE EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0201.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH	661.0300 GENERATORS DAY	677.0200 INSTALL CAMERA ASSEMBLY EACH
STH 20 & EMMERTSEN RD	1	1	1
TOTAL	1	1	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION*	656.0201.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

STH 20 (WASHINGTON AVE) &
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ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

TRAFFIC DETECTOR LOOPS

3

3

OOP NO.	HOME RUN PB	LOCATION** ^	SIZE		NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	655.0700	655.0800
			(FT)	X (FT)				LOOP DETECTOR L.F.	LOOP DETECTOR LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
11	PB3	360+03.77, 2.3' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	89	180
12	PB3	360+29.85, 2.1' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	89	180
								0		
21	PB10	363+86.65, 44.6' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	44	463	184
22	PB10	363+86.68, 32.9' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	66	463	206
23	PB10	363+86.55, 21.1' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	90	463	230
31	PB14	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		122	
32	PB14	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		122	
41	PB7	360+63.85, 316.3' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	46	414	186
42	PB6	360+68.08, 86.3' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	186	180
43	PB6	360+68.07, 62.4' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	186	180
51	PB11	361+64.96, 2.4' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	72	175	188
52	PB11	361+37.91, 2.5' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	175	180
61	PB2	357+82.81, 44.0' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	44	243	152
62	PB2	357+82.54, 31.8' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	68	243	176
63	PB2	357+82.37, 20.0' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	92	243	200
71	PB6	360+77.87, 86.5' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	84	186	200
72	PB6	360+78.11, 62.6' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	84	186	200
81	PB15	--	6	X 8	5	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		278	
82	PB14	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		122	
83	PB14	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		122	
S1	PB12	361+71.15, 45.0' RT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	46	133	122
S2	PB12	361+70.68, 32.8' RT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	68	133	144
S3	PB12	361+70.80, 21.0' RT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	90	133	166
S4	PB4	359+88.38, 44.8' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	50	127	126
S5	PB4	359+88.49, 33.0' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	70	127	146
S6	PB4	359+88.23, 21.3' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	92	127	168
							TOTAL	1426	5350	3694

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
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TRAFFIC SIGNAL CABLE AND WIRE

		655.0230	655.0240
		CABLE	CABLE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL
		5-14 AWG	7-14 AWG
FROM	TO	L.F.	L.F.
SB1	HEAD 1	22	--
SB1	HEAD 13	--	22
SB1	HEAD 25	15	--
SB2	HEAD 5	--	22
SB2	HEAD 14	--	22
SB3	HEAD 9	65	--
SB3	HEAD 10	65	--
SB3	HEAD 11	65	--
SB3	HEAD 26	15	--
SB4	HEAD 27	15	--
SB5	HEAD 18	--	22
SB5	HEAD 20	22	--
SB6	HEAD 16	50	--
SB6	HEAD 17	22	--
SB6	HEAD 19	--	50
SB7	HEAD 28	15	--
SB8	HEAD 6	--	22
SB8	HEAD 8	22	--
SB8	HEAD 29	15	--
SB9	HEAD 7	--	22
SB9	HEAD 12	--	22
SB10	HEAD 2	65	--
SB10	HEAD 3	65	--
SB10	HEAD 4	65	--
SB10	HEAD 30	15	--
SB11	HEAD 31	15	--
SB12	HEAD 15	22	--
SB12	HEAD 23	--	22
SB13	HEAD 21	50	--
SB13	HEAD 22	22	--
SB13	HEAD 24	50	--
SB14	HEAD 32	15	--
		--	--
TOTAL		792	226

TRAFFIC SIGNAL CABLE AND WIRE

655.0515		
ELECTRICAL WIRE		
TRAFFIC SIGNALS		
10 AWG		
FROM	TO	L.F.
CB1	SB1	37
SB1	SB2	130
SB2	SB3	100
SB3	SB4	59
SB4	SB5	116
SB5	SB6	105
SB6	SB7	52
SB7	SB8	112
SB8	SB9	112
SB9	SB10	90
SB10	SB11	94
SB11	SB12	43
SB12	SB13	114
SB13	SB14	44
SB14	CB1	72
PB1	CB1	21
PB3	SB2	21
PB4	SB3	30
PB5	SB5	17
PB8	SB6	25
PB9	SB8	26
PB11	SB9	17
PB12	SB10	23
PB13	SB12	25
PB16	SB13	105
TOTAL		1590

TRAFFIC SIGNAL EVP DETECTOR CABLE

655.0900		
TRAFFIC SIGNAL		
EVP DETECTOR		
CABLE		
FROM	TO	L.F.
CB1	SB3 (HEAD A)	258
CB1	SB10 (HEAD B)	234
CB1	SB13 (HEAD C)	106
CB1	SB6 (HEAD D)	381
TOTAL		979

TRAFFIC SIGNAL CABLE AND WIRE

		655.0240	655.0260	655.0270	655.0320
		CABLE	CABLE	CABLE	CABLE TYPE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	UF 2-10 AWG
		7-14 AWG	12-14 AWG	15-14 AWG	GROUNDED
FROM	TO	L.F.	L.F.	L.F.	L.F.
CB1	SB1	--	--	37	--
CB1	SB2	--	121	--	121
CB1	SB3	--	--	193	--
CB1	SB4	204	--	--	--
CB1	SB5	--	249	--	--
CB1	SB6	--	--	331	--
CB1	SB7	342	--	--	--
CB1	SB8	--	--	393	--
CB1	SB9	--	72	--	--
CB1	SB10	--	--	169	--
CB1	SB11	145	--	--	--
CB1	SB12	--	142	--	--
CB1	SB13	--	56	--	56
CB1	SB14	--	72	--	72
SB2	SB6	--	--	--	228
SB9	SB13	--	--	--	221
TOTAL		691	712	1123	698

TRAFFIC SIGNAL CABLE AND WIRE

655.0610		
ELECTRICAL WIRE		
LIGHTING		
12 AWG		
FROM	TO	L.F.
SB2	LUMIN (2)	234
SB6	LUMIN	145
SB9	LUMIN (2)	234
SB13	LUMIN	145
TOTAL		758

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
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VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

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POLES (CONTRACTOR FURNISHED)

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1	--	--	1	--	--	1	--
SB2	--	1	1	--	--	1	--	2
SB4	1	--	--	--	1	--	1	--
SB5	1	--	--	1	--	--	--	--
SB7	1	--	--	--	1	--	1	--
SB8	1	--	--	1	--	--	1	--
SB9	--	1	1	--	--	1	--	2
SB11	1	--	--	--	1	--	1	--
SB12	1	--	--	1	--	--	--	--
SB14	1	--	--	--	1	--	1	--
TOTAL	8	2	2	4	4	2	6	4

POLES (STATE FURNISHED)

SIGNAL BASE NO.	SPV.0060.01 INSTALL POLES TYPE 10 EACH	SPV.0060.02 INSTALL POLES TYPE 9 SPECIAL EACH	SPV.0060.05 INSTALL MONOTUBE ARMS 25-FT EACH	SPV.0060.07 INSTALL MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE EACH	SPV.0060.10 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB3	--	1	--	1	--	1	--
SB6	1	--	1	--	1	--	1
SB10	--	1	--	1	--	1	--
SB13	1	--	1	--	1	--	1
TOTAL	2	2	2	2	2	2	2

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
EMMERTSEN RD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

3

TRANSPORT AND INSTALL
STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0060.11 TRNSPT AND INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

TRANSPORT TRAFFIC SIGNAL
AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0060.19 TRNSPT TRAFFIC SIGNAL & INTER LIGHTING MATERIALS EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

3

EVP DETECTOR HEAD INSTALLATION

LOCATION	SPV.0060.23 TRNSPT & INSTALL STATE FURN EVP HEADS EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

TEMPORARY INFRARED EVP SYSTEM

LOCATION	SPV.0060.15 TEMP INFRARED EVP SYSTEM EACH
STH 20 & EMMERTSEN RD	1
TOTAL	1

FIBER OPTIC INTERCONNECT

LOCATION	SPV.0060.27 REMOVE, SALVAGE, AND REINSTALL FIBER OPTIC INTERCONNECT EACH	670.0101 FIELD SYSTEM INTEGRATOR EACH	678.0300 FIBER OPTIC SPLICE EACH
STH 20 & EMMERTSEN RD	1	1	4
TOTAL	1	1	4

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
EMMERTSEN RD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY
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REMOVING TRAFFIC SIGNALS

204.9060.S.02
REMOVING
TRAFFIC SIGNALS
EACH

LOCATION	EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

REMOVING CONCRETE BASES

204.0195
REMOVING
CONCRETE BASES
EACH

SIGNAL BASE NO.	EACH
SB11	1
SB13	1
SB14	1
SB15	1
SB19	1
SB20	1
SB21	1
SB22	1
SB23	1
SB24	1
CB1	1
TOTAL	11

LAMP, BALLAST, LED, SWITCH DISPOSAL

659.5000.S
LAMP, BALLAST, LED,
SWITCH DISPOSAL
BY CONTRACTOR

FIXTURE	EACH
PEDESTRIAN SIGNAL - 16 INCH	5
TRAFFIC SIGNAL, THREE SECTION	6
TRAFFIC SIGNAL, FOUR SECTION	4
HIGH PRESSURE SODIUM LAMP BALLASTS	4
MERCURY SWITCHES	1
TOTAL	24

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REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE

204.9060.S.07
REMOVING LOOP DETECTOR
WIRE & LEAD-IN CABLE
EACH

LOCATION	EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

REMOVING PULL BOXES

653.0905
REMOVING
PULL BOXES
EACH

PULL BOX NO.	EACH
PB14	1
PB16	1
PB18	1
PB19	1
PB20	1
PB21	1
PB22	1
PB23	1
PB25	1
PB26	1
PB27	1
PB28	1
PB29	1
PB30	1
PB31	1
TOTAL	15

LAMP, BALLAST, LED, SWITCH DISPOSAL
(FOR INFORMATION ONLY)

SIGNAL BASE NO.	PEDESTRIAN SIGNAL, LED MODULE EACH	TRAFFIC SIGNAL, THREE SECTION EACH	TRAFFIC SIGNAL, FOUR SECTION EACH	HIGH PRESSURE SODIUM LAMP EACH	BALLASTS EACH	MERCURY SWITCHES EACH
SB11	1	1	1	--	--	--
SB13	1	1	1	--	--	--
SB14	--	1	--	2	2	--
SB15	1	1	--	--	--	--
SB19	--	1	--	2	2	--
SB20	--	1	--	--	--	--
SB21	--	--	1	--	--	--
SB22	1	--	--	--	--	--
SB23	--	--	1	--	--	--
SB24	1	--	--	--	--	--
CB1	--	--	--	--	--	1
TOTAL	5	6	4	4	4	1

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
2	POLES TYPE 9 SPECIAL
2	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE
2	EVP DETECTOR HEADS
1	COHU CAMERA ASSEMBLY

STH 20 (WASHINGTON AVE) &
SUNNY SLOPE DR
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

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CONCRETE BASES

SIGNAL BASE NO.	LOCATION [^]	654.0101	654.0102	654.0120	654.0217
		CONCRETE BASES TYPE 1 EACH	CONCRETE BASES TYPE 2 EACH	CONCRETE BASES TYPE 10-SPECIAL EACH	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	341+48.98, 65.5' RT	1	--	--	--
SB3	340+45.09, 66.3' RT	1	--	--	--
SB4	340+34.95, 58.0' RT	1	--	--	--
SB5	340+40.38, 10.9' RT	1	--	--	--
SB6	340+41.23, 10.9' LT	--	1	--	--
SB7	340+41.41, 57.6' LT	--	--	1	--
SB8	340+50.49, 65.8' LT	1	--	--	--
SB11	341+50.75, 65.0' LT	1	--	--	--
SB14	341+94.06, 10.4' RT	--	1	--	--
SB15	341+60.47, 57.3' RT	--	--	1	--
CB1	341+77.82, 66.5' RT	--	--	--	1
TOTAL		6	2	2	1

[^] FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

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SIGNAL MOUNTING HARDWARE

LOCATION	658.5070.02 SIGNAL MOUNTING HARDWARE EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0201.02	661.0300	677.0200
	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH	GENERATORS DAY	INSTALL CAMERA ASSEMBLY EACH
STH 20 & SUNNY SLOPE DR	1	1	1
TOTAL	1	1	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION*	656.0201.02 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
SUNNY SLOPE DR
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION** ^	SIZE		NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	655.0700	655.0800
			(FT)	X (FT)				CONDUIT LOOP DETECTOR L.F.	LOOP DETECTOR LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
11	PB8	340+19.01, 1.1' LT	6	X 15	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	58	250	154
12	PB8	340+42.99, 1.1' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	250	182
21	PB16	344+09.94, 45.0' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	46	475	154
22	PB16	344+09.91, 33.3' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	475	176
23	PB16	344+09.71, 21.5' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	475	200
31	PB3	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		57	
32	PB3	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		57	
41	PB13	--	6	X 15	6	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		521	
42	PB12	340+86.15, 87.6' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	470	190
43	PB12	340+87.20, 63.6' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	72	470	188
51	PB17	342+05.38, 0.0' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	192	182
52	PB17	341+79.29, 0.0' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	64	192	180
61	PB7	336+96.94, 49.6' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	50	562	190
62	PB7	336+96.15, 37.3' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	562	208
63	PB7	336+95.94, 25.6' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	562	232
64	PB6	338+13.94, 48.5' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	48	450	156
65	PB6	338+13.79, 36.3' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	450	176
66	PB6	338+13.58, 24.6' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	450	200
71	PB12	340+95.89, 88.1' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	470	208
72	PB12	340+97.19, 64.2' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	470	208
81	PB3	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		57	
82	PB3	--	6	X 20	3	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY		57	
S1	PB19	342+19.02, 45.2' RT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	48	74	124
S2	PB19	342+18.66, 32.8' RT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	74	146
S3	PB19	342+18.33, 21.1' RT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	74	168
S4	PB10	340+06.14, 46.1' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	54	380	162
S5	PB10	340+06.64, 34.5' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	380	178
S6	PB10	340+07.05, 22.7' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	380	200
TOTAL								1634	9336	4162

** LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
 ^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
 ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
 SUNNY SLOPE DR
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 RACINE COUNTY**

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TRAFFIC SIGNAL CABLE AND WIRE

655.0515
ELECTRICAL WIRE
TRAFFIC SIGNALS
10 AWG

FROM	TO	L.F.
CB1	SB1	79
SB1	SB2	151
SB2	SB3	57
SB3	SB4	84
SB4	SB5	103
SB5	SB6	81
SB6	SB7	106
SB7	SB8	105
SB8	SB9	40
SB9	SB10	131
SB10	SB11	45
SB11	SB12	155
SB12	SB13	157
SB13	SB14	92
SB14	SB15	129
SB15	CB1	99
PB1	CB1	26
PB20	SB1	15
PB4	SB3	28
PB5	SB4	23
PB8	SB5	29
PB9	SB6	29
PB10	SB7	28
PB11	SB9	21
PB14	SB11	30
PB15	SB12	58
PB17	SB13	50
PB18	SB14	21
PB19	SB15	58
PB20	CB1	20
TOTAL		2050

TRAFFIC SIGNAL EVP DETECTOR CABLE

655.0900
TRAFFIC SIGNAL
EVP DETECTOR
CABLE

FROM	TO	L.F.
CB1	SB7 (HEAD A)	458
CB1	SB15 (HEAD B)	164
CB1	SB2 (HEAD C)	248
TOTAL		870

TRAFFIC SIGNAL CABLE AND WIRE

655.0240	655.0260	655.0270	655.0280	655.0320
CABLE	CABLE	CABLE	CABLE	CABLE TYPE
TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	UF 2-10 AWG
7-14 AWG	12-14 AWG	15-14 AWG	19-14 AWG	GROUNDING
L.F.	L.F.	L.F.	L.F.	L.F.

FROM	TO	L.F.	L.F.	L.F.	L.F.	L.F.
CB1	SB1	--	79	--	--	--
CB1	SB2	--	--	193	--	193
CB1	SB3	--	179	--	--	--
CB1	SB4	--	230	--	--	--
CB1	SB5	--	297	--	--	--
CB1	SB6	--	332	--	--	--
CB1	SB7	--	393	--	--	--
CB1	SB8	438	--	--	--	--
CB1	SB9	--	449	--	--	--
CB1	SB10	--	310	--	--	--
CB1	SB11	307	--	--	--	--
CB1	SB12	--	--	257	--	--
CB1	SB13	--	187	--	--	--
CB1	SB14	--	123	--	--	123
CB1	SB15	--	--	--	99	--
SB2	SB6	--	--	--	--	210
SB10	SB14	--	--	--	--	217
TOTAL		745	2579	450	99	743

TRAFFIC SIGNAL CABLE AND WIRE

655.0230	655.0240
CABLE	CABLE
TRAFFIC SIGNAL	TRAFFIC SIGNAL
5-14 AWG	7-14 AWG
L.F.	L.F.

FROM	TO	L.F.	L.F.
SB1	HEAD 15	22	--
SB1	HEAD 23	--	22
SB3	HEAD 13	--	22
SB3	HEAD 26	15	--
SB4	HEAD 1	19	--
SB4	HEAD 27	15	--
SB5	HEAD 14	--	22
SB6	HEAD 5	--	22
SB7	HEAD 9	65	--
SB7	HEAD 10	65	--
SB7	HEAD 11	65	--
SB7	HEAD 28	15	--
SB8	HEAD 29	15	--
SB11	HEAD 30	15	--
SB12	HEAD 31	15	--
SB14	HEAD 12	--	22
SB15	HEAD 2	65	--
SB15	HEAD 3	65	--
SB15	HEAD 4	65	--
SB15	HEAD 25	15	--
SB15	HEAD 32	15	--
TOTAL		551	110

TRAFFIC SIGNAL CABLE AND WIRE

655.0610
ELECTRICAL WIRE
LIGHTING
12 AWG

FROM	TO	L.F.
SB6	LUMIN (2)	234
SB14	LUMIN (2)	234
TOTAL		468

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
SUNNY SLOPE DR
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

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POLES (CONTRACTOR FURNISHED)

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1	--	--	--	1	--	--	1	--
SB3	1	--	--	--	1	--	--	1	--
SB4	1	--	--	1	--	--	--	1	--
SB5	1	--	--	--	1	--	--	1	--
SB6	--	1	1	--	--	--	2	--	2
SB8	1	--	--	--	--	1	--	1	--
SB11	1	--	--	--	--	1	--	1	--
SB12	--	--	--	--	--	--	--	1	--
SB14	--	1	1	--	--	--	2	--	2
	--	--	--	--	--	--	--	--	--
TOTAL	6	2	2	1	3	2	4	7	4

POLES (STATE FURNISHED)

SIGNAL BASE NO.	SPV.0060.02 INSTALL POLES TYPE 9 SPECIAL EACH	SPV.0060.07 INSTALL MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB7	1	1	1
SB15	1	1	1
	--	--	--
TOTAL	2	2	2

ADDITIONAL QTY SHOWN FOR
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FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173	658.0174	658.0416
		TRAFFIC SIGNAL FACE 3S 12-INCH EACH	TRAFFIC SIGNAL FACE 4S 12-INCH EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH
15	SB1	1	--	--
23	SB1	--	1	--
13	SB3	--	1	--
26	SB3	--	--	1
1	SB4	1	--	--
27	SB4	--	--	1
14	SB5	--	1	--
5	SB6	--	1	--
9	SB7	1	--	--
10	SB7	1	--	--
11	SB7	1	--	--
28	SB7	--	--	1
29	SB8	--	--	1
30	SB11	--	--	1
31	SB12	--	--	1
12	SB14	--	1	--
2	SB15	1	--	--
3	SB15	1	--	--
4	SB15	1	--	--
25	SB15	--	--	1
32	SB15	--	--	1
TOTAL		8	5	8

LED MODULES SUMMARY

SIGNAL HEAD NO.	SIGNAL BASE NO.	PEDESTRIAN SIGNAL FACE 16-INCH EACH	LED MODULES 12-INCH RED BALL EACH	LED MODULES 12-INCH YELLOW BALL EACH	LED MODULES 12-INCH GREEN BALL EACH	LED MODULES 12-INCH RED ARROW EACH	LED MODULES 12-INCH YELLOW ARROW EACH	LED MODULES 12-INCH GREEN ARROW EACH
		15	SB1	--	1	1	1	--
23	SB1	--	--	--	--	1	2	1
13	SB3	--	--	--	--	1	2	1
26	SB3	1	--	--	--	--	--	--
1	SB4	--	--	--	--	1	1	1
27	SB4	1	--	--	--	--	--	--
14	SB5	--	--	--	--	1	2	1
5	SB6	--	--	--	--	1	2	1
9	SB7	--	1	1	1	--	--	--
10	SB7	--	1	1	1	--	--	--
11	SB7	--	1	1	1	--	--	--
28	SB7	1	--	--	--	--	--	--
29	SB8	1	--	--	--	--	--	--
30	SB11	1	--	--	--	--	--	--
31	SB12	1	--	--	--	--	--	--
12	SB14	--	--	--	--	1	2	1
2	SB15	--	1	1	1	--	--	--
3	SB15	--	1	1	1	--	--	--
4	SB15	--	1	1	1	--	--	--
25	SB15	1	--	--	--	--	--	--
32	SB15	1	--	--	--	--	--	--
TOTAL		8	7	7	7	6	11	6

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
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TRANSPORT AND INSTALL
STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0060.12 TRNSPT AND INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

TRANSPORT TRAFFIC SIGNAL
AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0060.20 TRNSPT TRAFFIC SIGNAL & INTER LIGHTING MATERIALS EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

3

EVP DETECTOR HEAD INSTALLATION

LOCATION	SPV.0060.24 TRNSPT & INSTALL STATE FURN EVP HEADS EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

TEMPORARY INFRARED EVP SYSTEM

LOCATION	SPV.0060.16 TEMP INFRARED EVP SYSTEM EACH
STH 20 & SUNNY SLOPE DR	1
TOTAL	1

FIBER OPTIC INTERCONNECT

LOCATION	SPV.0060.28 REMOVE, SALVAGE, AND REINSTALL FIBER OPTIC INTERCONNECT EACH	678.0300 FIBER OPTIC SPLICE EACH
STH 20 & SUNNY SLOPE DR	1	4
TOTAL	1	4

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
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REMOVING TRAFFIC SIGNALS

LOCATION	204.9060.S.03 REMOVING TRAFFIC SIGNALS EACH
STH 20 & OAKES RD	1
TOTAL	1

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	204.9060.S.08 REMOVING LOOP DETECTOR WIRE & LEAD-IN CABLE EACH
STH 20 & OAKES RD	1
TOTAL	1

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
2	POLES TYPE 9 SPECIAL
1	POLES TYPE 10 SPECIAL
1	POLES TYPE 13
2	MONOTUBE ARMS 35-FT TYPE 9/10 SPEC POLE
1	MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE
1	MONOTUBE ARMS 50-FT
3	LUMINAIRE ARMS 15-FT
4	EVP DETECTOR HEADS
1	COHU CAMERA ASSEMBLY

REMOVING CONCRETE BASES

SIGNAL BASE NO.	204.0195 REMOVING CONCRETE BASES EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
SB11	1
SB12	1
SB13	1
SB14	1
SB15	1
SB16	1
SB17	1
SB18	1
SB19	1
CB1	1
TOTAL	20

REMOVING PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES 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
PB13	1
PB14	1
PB15	1
PB16	1
PB17	1
PB18	1
PB19	1
PB20	1
PB21	1
PB22	1
TOTAL	22

LAMP, BALLAST, LED, SWITCH DISPOSAL

FIXTURE	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
PEDESTRIAN SIGNAL - 16 INCH	8
TRAFFIC SIGNAL, THREE SECTION	10
TRAFFIC SIGNAL, FIVE SECTION	8
HIGH PRESSURE SODIUM LAMP	10
BALLASTS	10
MERCURY SWITCHES	1
TOTAL	47

LAMP, BALLAST, LED, SWITCH DISPOSAL (FOR INFORMATION ONLY)

SIGNAL BASE NO.	PEDESTRIAN SIGNAL, LED MODULE EACH	TRAFFIC SIGNAL, THREE SECTION EACH	TRAFFIC SIGNAL, FIVE SECTION EACH	HIGH PRESSURE SODIUM LAMP EACH	MERCURY BALLASTS EACH	MERCURY SWITCHES EACH
SB1	--	1	--	--	--	--
SB2	1	1	--	--	--	--
SB3	--	--	2	--	--	--
SB4	1	1	--	--	--	--
SB5	1	1	--	--	--	--
SB6	--	--	1	2	2	--
SB7	1	1	--	--	--	--
SB8	--	1	--	--	--	--
SB9	--	--	2	2	2	--
SB10	1	1	--	--	--	--
SB11	1	1	--	--	--	--
SB12	--	--	1	2	2	--
SB13	--	1	1	--	--	--
SB14	--	--	--	1	1	--
SB15	--	--	--	1	1	--
SB16	--	1	1	--	--	--
SB17	1	--	--	--	--	--
SB18	--	--	--	2	2	--
SB19	1	--	--	--	--	--
CB1	--	--	--	--	--	1
TOTAL	8	10	8	10	10	1

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) & OAKES ROAD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

CONCRETE BASES

SIGNAL BASE NO.	LOCATION^	654.0101	654.0102	654.0105	654.0113	654.0120	654.0217
		CONCRETE BASES TYPE 1 EACH	CONCRETE BASES TYPE 2 EACH	CONCRETE BASES TYPE 5 EACH	CONCRETE BASES TYPE 13 EACH	CONCRETE BASES TYPE 10-SPECIAL EACH	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	320+78.19, 85.5' LT	1	--	--	--	--	--
SB2	321+20.87, 93.1' LT	1	--	--	--	--	--
SB3	321+27.25, 123.9' LT	--	--	1	--	--	--
SB4	321+56.66, 75.9' LT	--	--	--	--	1	--
SB5	321+69.60, 69.2' LT	1	--	--	--	--	--
SB6	321+86.95, 88.1' LT	--	--	1	--	--	--
SB7	321+69.39, 13.0' LT	--	1	--	--	--	--
SB8	322+02.27, 16.6' RT	1	--	--	--	--	--
SB9	323+30.17, 14.8' LT	--	--	1	--	--	--
SB10	321+77.26, 68.5' RT	--	--	--	--	1	--
SB11	321+66.59, 82.7' RT	1	--	--	--	--	--
SB12	321+45.11, 89.6' RT	--	--	1	--	--	--
SB13	321+18.38, 85.3' RT	1	--	--	--	--	--
SB14	320+82.18, 87.0' RT	--	--	--	--	1	--
SB15	320+28.23, 90.1' RT	1	--	--	--	--	--
SB16	320+19.31, 80.3' RT	1	--	--	--	--	--
SB17	320+02.66, 85.8' RT	1	--	--	--	--	--
SB18	320+02.35, 70.2' RT	1	--	--	--	--	--
SB19	320+18.91, 12.1' RT	--	1	--	--	--	--
SB20	320+03.50, 17.5' LT	1	--	--	--	--	--
SB21	319+01.55, 18.9' LT	--	--	1	--	--	--
SB22	317+74.18, 7.0' LT	--	--	1	--	--	--
SB23	320+37.69, 75.8' LT	--	--	--	1	--	--
CB1	320+51.15, 93.3' LT	--	--	--	--	--	1
		--	--	--	--	--	--
TOTAL		11	2	6	1	3	1

SIGNAL MOUNTING HARDWARE

LOCATION	658.5070.03 SIGNAL MOUNTING HARDWARE EACH
STH 20 & OAKES RD	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0200.03	661.0300	677.0200
	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH	GENERATORS DAY	INSTALL CAMERA ASSEMBLY EACH
STH 20 & OAKES RD	1	1	1
TOTAL	1	1	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION*	656.0201.03 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
STH 20 & OAKES RD	1
TOTAL	1

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
OAKES ROAD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

3

TRAFFIC DETECTOR LOOPS

3

LOOP NO.	HOME RUN PB	LOCATION** ^	SIZE		NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	655.0700	655.0800
			(FT)	X (FT)				LOOP DETECTOR L.F.	LOOP DETECTOR LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
11	PB25	319+88.23, 6.5' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	74	97	190
12	PB25	320+14.49, 6.2' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	68	97	184
21	PB13	325+64.93, 53.5' LT	6	X 12	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	124	592	280
22	PB13	325+64.78, 41.7' LT	6	X 12	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	104	592	260
23	PB13	325+64.24, 30.3' LT	6	X 12	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	80	592	236
24	PB12	323+98.14, 57.3' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	106	450	246
25	PB12	323+97.70, 45.3' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	82	450	222
26	PB12	323+97.28, 33.2' LT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	60	450	200
31	PB18	320+89.37, 112.3' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	68	276	184
32	PB17	320+96.01, 85.0' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	265	192
41	PB3	321+32.69, 239.7' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	62	181	178
42	PB2	321+01.34, 108.9' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	74	42	190
43	PB2	320+93.87, 82.0' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	42	180
51	PB9	322+21.67, 6.5' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	78	254	194
52	PB9	321+94.02, 6.5' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	68	254	184
61	PB23	316+32.30, 42.1' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	58	527	198
62	PB23	316+32.40, 30.1' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	80	527	220
63	PB22	317+86.62, 42.8' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	56	379	196
64	PB22	317+86.65, 30.8' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	80	379	220
71	PB4	321+10.31, 107.5' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	74	192
72	PB4	321+04.73, 80.1' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	70	74	186
81	PB19	320+60.14, 307.5' RT	6	X 15	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	66	473	204
82	PB18	321+00.92, 112.0' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	88	276	204
83	PB16	321+06.77, 84.7' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	296	180
S1	PB14	322+24.58, 55.4' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	54	327	162
S2	PB14	322+24.59, 44.0' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	74	327	182
S3	PB14	322+24.65, 32.8' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	96	327	204
S4	PB26	319+87.15, 54.9' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	54	140
S5	PB26	319+87.14, 43.2' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	80	54	156
S6	PB26	319+87.28, 31.5' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	98	54	174
TOTAL								1826	7639	4920

** LOCATION IS TO FRONT CENTER OF DETECTOR LOOP

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS

ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
OAKES ROAD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

PAGE 4 OF 8

PROJECT NO: 2250-15-70

HWY: STH 20

COUNTY: RACINE

MISCELLANEOUS QUANTITIES

SHEET NO:

E

PLOT DATE : 7/27/2023 10:20 AM

PLOT BY :

PLOT NAME : 030201_mq

PLOT SCALE : 1.000000:1.000000

WISDOT / CADDs SHEET 42

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TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230	655.0240
		CABLE	CABLE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL
		5-14 AWG	7-14 AWG
		L.F.	L.F.
SB1	HEAD 19	--	22
SB1	HEAD 21	19	--
SB1	HEAD 27	15	--
SB2	HEAD 24	--	22
SB4	HEAD 16	60	--
SB4	HEAD 17	22	--
SB4	HEAD 20	--	60
SB4	HEAD 28	15	--
SB5	HEAD 6	--	22
SB5	HEAD 8	19	--
SB5	HEAD 29	15	--
SB7	HEAD 7	--	22
SB8	HEAD 12	--	22
SB10	HEAD 2	70	--
SB10	HEAD 3	70	--
SB10	HEAD 4	70	--
SB11	HEAD 30	15	--
SB13	HEAD 15	19	--
SB13	HEAD 25	--	22
SB13	HEAD 31	15	--
SB14	HEAD 18	--	22
SB14	HEAD 22	60	--
SB14	HEAD 26	--	60
SB15	HEAD 23	19	--
SB16	HEAD 32	15	--
SB17	HEAD 33	15	--
SB18	HEAD 1	19	--
SB18	HEAD 13	--	22
SB19	HEAD 14	--	22
SB20	HEAD 5	--	22
SB23	HEAD 9	75	--
SB23	HEAD 10	75	--
SB23	HEAD 11	75	--
SB23	HEAD 34	15	--
TOTAL		792	340

TRAFFIC SIGNAL CABLE AND WIRE

655.0515		
ELECTRICAL WIRE		
TRAFFIC SIGNALS		
10 AWG		
FROM	TO	L.F.
CB1	SB1	88
SB1	SB2	89
SB2	SB4	141
SB4	SB5	30
SB5	SB7	253
SB7	SB8	108
SB8	SB10	117
SB10	SB11	68
SB11	SB13	125
SB14	SB15	90
SB15	SB16	39
SB16	SB17	110
SB17	SB18	40
SB18	SB19	119
SB19	SB20	86
SB20	SB23	151
SB23	CB1	41
PB1	CB1	20
PB2	SB2	33
PB4	SB2	15
PB5	SB4	58
PB6	SB4	15
PB7	SB5	122
PB8	SB7	56
PB9	SB8	20
PB14	SB10	43
PB15	SB11	31
PB16	SB13	15
PB17	SB14	15
PB20	SB15	18
PB21	SB18	20
PB24	SB19	35
PB25	SB20	17
PB26	SB23	79
PB27	CB1	22
TOTAL		2329

TRAFFIC SIGNAL EVP DETECTOR CABLE

655.0900		
TRAFFIC SIGNAL		
EVP DETECTOR		
CABLE		
FROM	TO	L.F.
CB1	SB23 (HEAD A)	116
CB1	SB10 (HEAD B)	468
CB1	SB14 (HEAD C)	464
CB1	SB4 (HEAD D)	299
TOTAL		1347

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240	655.0260	655.0270	655.0320
		CABLE	CABLE	CABLE	CABLE TYPE
		TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	UF 2-10 AWG
		7-14 AWG	12-14 AWG	15-14 AWG	GROUNDED
		L.F.	L.F.	L.F.	L.F.
CB1	SB1	--	--	88	--
CB1	SB2	--	108	--	--
CB1	SB3	--	--	--	133
CB1	SB4	--	239	--	--
CB1	SB5	--	249	--	--
CB1	SB7	--	376	--	--
CB1	SB8	--	383	--	--
CB1	SB10	--	--	398	--
CB1	SB11	465	--	--	--
CB1	SB13	--	443	--	--
CB1	SB14	--	--	404	--
CB1	SB15	329	--	--	--
CB1	SB16	--	342	--	--
CB1	SB17	--	282	--	--
CB1	SB18	--	272	--	--
CB1	SB19	--	212	--	--
CB1	SB20	--	149	--	--
CB1	SB21	--	--	--	250
SB21	SB22	--	--	--	141
CB1	SB23	--	--	41	41
SB3	SB6	--	--	--	132
SB6	SB7	--	--	--	184
SB7	SB9	--	--	--	244
SB12	SB14	--	--	--	116
SB14	SB19	--	--	--	242
SB19	SB23	--	--	--	215
TOTAL		794	3055	931	1698

* ADDITIONAL QUANTITY SHOWN ELSEWHERE ON PLAN

TRAFFIC SIGNAL CABLE AND WIRE

655.0610		
ELECTRICAL WIRE		
LIGHTING		
12 AWG		
FROM	TO	L.F.
SB3	LUMIN (2)	234
SB6	LUMIN	117
SB7	LUMIN (2)	234
SB9	LUMIN	117
SB12	LUMIN	117
SB14	LUMIN (2)	288
SB19	LUMIN (2)	234
SB21	LUMIN	117
SB22	LUMIN	117
SB23	LUMIN	144
TOTAL		1719

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
OAKES ROAD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

3

3

POLES (CONTRACTOR FURNISHED)

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB1	1	--	--	--	--	1	--	--	--	1	--
SB2	1	--	--	--	--	1	--	--	--	--	--
SB3	--	1	--	1	--	--	--	--	2	--	2
SB5	1	--	--	--	--	1	--	--	--	1	--
SB6	--	1	--	1	--	--	--	--	1	--	1
SB7	--	1	1	--	--	--	--	2	--	1	2
SB8	1	--	--	--	--	1	--	--	--	--	--
SB9	--	1	--	1	--	--	--	--	1	--	1
SB11	1	--	--	--	--	--	1	--	--	1	--
SB12	--	1	--	1	--	--	--	--	1	--	1
SB13	1	--	--	--	--	1	--	--	--	1	--
SB15	1	--	--	--	1	--	--	--	--	--	--
SB16	1	--	--	--	--	--	1	--	--	1	--
SB17	1	--	--	--	--	--	1	--	--	1	--
SB18	1	--	--	--	--	1	--	--	--	--	--
SB19	--	1	1	--	--	--	--	2	--	1	2
SB20	1	--	--	--	--	1	--	--	--	--	--
SB21	--	1	--	1	--	--	--	--	1	--	1
SB22	--	1	--	1	--	--	--	--	1	--	1
TOTAL	11	8	2	6	1	7	3	4	7	8	11

POLES (STATE FURNISHED)

SIGNAL BASE NO.	SPV.0060.02 INSTALL POLES TYPE 9 SPECIAL EACH	SPV.0060.03 INSTALL POLES TYPE 10 SPECIAL EACH	SPV.0060.04 INSTALL POLES TYPE 13 EACH	SPV.0060.06 INSTALL MONOTUBE ARMS 35-FT TYPE 9/10 SPEC POLE EACH	SPV.0060.08 INSTALL MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE EACH	SPV.0060.09 INSTALL MONOTUBE ARMS 50-FT EACH	SPV.0060.10 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH	659.1125 LUMINAIRES UTILITY LED C EACH
SB4	1	--	--	1	--	--	--	1	--
SB10	1	--	--	--	1	--	--	--	--
SB14	--	1	--	1	--	--	2	1	2
SB23	--	--	1	--	--	1	1	1	1
TOTAL	2	1	1	2	1	1	3	3	3

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
OAKES ROAD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

PAGE 6 OF 8

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FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173	658.0174	658.0416
		TRAFFIC SIGNAL FACE 3S 12-INCH EACH	TRAFFIC SIGNAL FACE 4S 12-INCH EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH
19	SB1	--	1	--
21	SB1	1	--	--
27	SB1	--	--	1
24	SB2	--	1	--
16	SB4	1	--	--
17	SB4	1	--	--
20	SB4	--	1	--
28	SB4	--	--	1
6	SB5	--	1	--
8	SB5	1	--	--
29	SB5	--	--	1
7	SB7	--	1	--
12	SB8	--	1	--
2	SB10	1	--	--
3	SB10	1	--	--
4	SB10	1	--	--
30	SB11	--	--	1
15	SB13	1	--	--
25	SB13	--	1	--
31	SB13	--	--	1
18	SB14	--	1	--
22	SB14	1	--	--
26	SB14	--	1	--
23	SB15	1	--	--
32	SB16	--	--	1
33	SB17	--	--	1
1	SB18	1	--	--
13	SB18	--	1	--
14	SB19	--	1	--
5	SB20	--	1	--
9	SB23	1	--	--
10	SB23	1	--	--
11	SB23	1	--	--
34	SB23	--	--	1
TOTAL		14	12	8

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LED MODULES SUMMARY

SIGNAL HEAD NO.	SIGNAL BASE NO.	PEDESTRIAN SIGNAL FACE 16-INCH EACH	LED MODULES 12-INCH RED BALL EACH	LED MODULES 12-INCH YELLOW BALL EACH	LED MODULES 12-INCH GREEN BALL EACH	LED MODULES 12-INCH RED ARROW EACH	LED MODULES 12-INCH YELLOW ARROW EACH	LED MODULES 12-INCH GREEN ARROW EACH
		19	SB1	--	--	--	--	1
21	SB1	--	1	1	1	--	--	--
27	SB1	1	--	--	--	--	--	--
24	SB2	--	--	--	--	1	2	1
16	SB4	--	1	1	1	--	--	--
17	SB4	--	1	1	1	--	--	--
20	SB4	--	--	--	--	1	2	1
28	SB4	1	--	--	--	--	--	--
6	SB5	--	--	--	--	1	2	1
8	SB5	--	1	1	1	--	--	--
29	SB5	1	--	--	--	--	--	--
7	SB7	--	--	--	--	1	2	1
12	SB8	--	--	--	--	1	2	1
2	SB10	--	1	1	1	--	--	--
3	SB10	--	1	1	1	--	--	--
4	SB10	--	1	1	1	--	--	--
30	SB11	1	--	--	--	--	--	--
15	SB13	--	1	1	1	--	--	--
25	SB13	--	--	--	--	1	2	1
31	SB13	1	--	--	--	--	--	--
18	SB14	--	--	--	--	1	2	1
22	SB14	--	1	1	1	--	--	--
26	SB14	--	1	1	1	--	--	--
23	SB15	--	1	1	1	--	--	--
32	SB16	1	--	--	--	--	--	--
33	SB17	1	--	--	--	--	--	--
1	SB18	--	1	1	1	--	--	--
14	SB18	--	--	--	--	1	2	1
13	SB19	--	--	--	--	1	2	1
5	SB20	--	--	--	--	1	2	1
9	SB23	--	1	1	1	--	--	--
10	SB23	--	1	1	1	--	--	--
11	SB23	--	1	1	1	--	--	--
34	SB23	1	--	--	--	--	--	--
TOTAL		8	15	15	15	11	22	11

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) & OAKES ROAD
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY
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TRANSPORT AND INSTALL
STATE FURNISHED TRAFFIC SIGNAL CABINET

SPV.0060.13	
TRNSPT AND INSTALL STATE FURN TRAFFIC SIGNAL CABINET	
LOCATION	EACH
STH 20 & OAKES RD	1
TOTAL	1

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TRANSPORT TRAFFIC SIGNAL
AND INTERSECTION LIGHTING MATERIALS

SPV.0060.21	
TRNSPT TRAFFIC SIGNAL & INTER LIGHTING MATERIALS	
LOCATION	EACH
STH 20 & OAKES RD	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION

SPV.0060.25	
TRNSPT & INSTALL STATE FURN EVP HEADS	
LOCATION	EACH
STH 20 & OAKES RD	1
TOTAL	1

TEMPORARY INFRARED EVP SYSTEM

SPV.0060.17	
TEMP INFRARED EVP SYSTEM	
LOCATION	EACH
STH 20 & OAKES RD	1
TOTAL	1

FIBER OPTIC INTERCONNECT

SPV.0060.29		678.0300
REMOVE, SALVAGE, AND REINSTALL FIBER OPTIC INTERCONNECT		FIBER OPTIC SPLICE
LOCATION	EACH	EACH
STH 20 & OAKES RD	1	4
TOTAL	1	4

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
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VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

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REMOVING TRAFFIC SIGNALS

204.9060.S.04 REMOVING TRAFFIC SIGNALS	
LOCATION	EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

REMOVING LOOP DETECTOR WIRE AND LEAD-IN CABLE

204.9060.S.09 REMOVING LOOP DETECTOR WIRE & LEAD-IN CABLE	
LOCATION	EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

STATE FURNISHED MATERIALS SUMMARY

EACH	DESCRIPTION
1	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	TRAFFIC SIGNAL CABINET
4	POLES TYPE 10 SPECIAL
3	MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE
1	MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE
6	LUMINAIRE ARMS 15-FT
3	EVP DETECTOR HEADS
1	COHU CAMERA ASSEMBLY

REMOVING CONCRETE BASES

204.0195 REMOVING CONCRETE BASES	
SIGNAL BASE NO.	EACH
SB1	1
SB2	1
SB3	1
SB4	1
SB5	1
SB6	1
SB7	1
SB8	1
SB9	1
SB10	1
SB11	1
SB12	1
SB13	1
SB14	1
SB15	1
CB1	1
TOTAL	16

REMOVING PULL BOXES

653.0905 REMOVING PULL BOXES	
PULL BOX NO.	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
PB17	1
PB18	1
PB19	1
PB20	1
PB21	1
PB22	1
TOTAL	18

LAMP, BALLAST, LED, SWITCH DISPOSAL

659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR	
FIXTURE	EACH
PEDESTRIAN SIGNAL - 16 INCH	6
TRAFFIC SIGNAL, THREE SECTION	6
TRAFFIC SIGNAL, FIVE SECTION	8
HIGH PRESSURE SODIUM LAMP	6
LUMINAIRES UTILITY LED C	1
MERCURY SWITCHES	1
BALLASTS	6
TOTAL	34

LAMP, BALLAST, LED, SWITCH DISPOSAL (FOR INFORMATION ONLY)

SIGNAL BASE NO.	PEDESTRIAN SIGNAL, LED MODULE EACH	TRAFFIC SIGNAL, THREE SECTION EACH	TRAFFIC SIGNAL, FIVE SECTION EACH	HIGH PRESSURE SODIUM LAMP EACH	LUMINAIRES UTILITY LED C EACH	BALLASTS EACH	MERCURY SWITCHES EACH
SB1	--	1	--	--	--	--	--
SB2	1	--	1	--	--	--	--
SB3	1	--	1	--	--	--	--
SB4	1	1	--	--	--	--	--
SB5	--	--	2	2	--	2	--
SB6	--	--	--	1	--	1	--
SB7	2	1	--	--	--	--	--
SB8	--	1	1	--	--	--	--
SB9	--	--	1	--	1	--	--
SB10	1	--	--	--	--	--	--
SB11	--	1	--	--	--	--	--
SB12	--	--	2	2	--	2	--
SB13	--	--	--	1	--	1	--
SB14	--	1	--	--	--	--	--
CB1	--	--	--	--	--	--	1
TOTAL	6	6	8	6	1	6	1

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) & VILLAGE CENTER DRIVE
VILLAGE OF MOUNT PLEASANT
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CONCRETE BASES

SIGNAL BASE NO.	LOCATION^	654.0101	654.0120	654.0217
		CONCRETE BASES TYPE 1 EACH	CONCRETE BASES TYPE 10-SPECIAL EACH	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	376+14.35, 75.2' LT	1	--	--
SB2	376+60.93, 78.1' LT	1	--	--
SB3	376+87.26, 69.5' LT	--	1	--
SB4	376+95.66, 62.6' LT	1	--	--
SB5	377+23.82, 8.0' RT	--	1	--
SB6	377+01.85, 55.0' RT	1	--	--
SB7	376+91.18, 63.4' RT	1	--	--
SB8	376+13.27, 79.7' RT	--	1	--
SB9	375+75.76, 54.5' RT	1	--	--
SB10	375+78.55, 9.4' LT	--	1	--
SB11	375+88.96, 58.7' LT	1	--	--
CB1	376+16.31, 90.2' LT	--	--	1
		--	--	--
TOTAL		7	4	1

^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

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SIGNAL MOUNTING HARDWARE

LOCATION	658.5070.04 SIGNAL MOUNTING HARDWARE EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS

LOCATION	661.0201.04	661.0300	677.0200
	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS EACH	GENERATORS DAY	INSTALL CAMERA ASSEMBLY EACH
STH 20 & VILLAGE CENTER DR	1	1	1
TOTAL	1	1	1

ELECTRICAL SERVICE METER BREAKER PEDESTAL

LOCATION*	656.0201.04 ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
VILLAGE CENTER DRIVE
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

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TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION** ^	SIZE		NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800	655.0700	655.0800
			(FT)	X (FT)				CONDUIT LOOP DETECTOR L.F.	LOOP DETECTOR LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
11	PB17	375+63.92, 1.4' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	99	182
12	PB17	375+88.33, 1.3' RT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	64	99	180
21	PB8	379+50.39, 45.2' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	104	418	212
22	PB8	379+50.56, 33.4' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	418	190
23	PB8	379+50.67, 21.1' LT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	58	418	166
31	PB12	--	6	X 20	4	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY	--	332	--
32	PB12	--	6	X 20	4	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY	--	332	--
41	PB2	376+45.04, 249.7' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	66	165	182
42	PB4	376+39.35, 88.2' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	76	17	192
43	PB4	376+39.30, 64.4' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	82	17	198
51	PB8	377+36.37, 2.9' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	70	203	186
52	PB8	377+09.34, 3.0' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	64	203	180
61	PB16	373+19.22, 43.2' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	44	342	184
62	PB16	373+18.94, 31.0' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	342	208
63	PB16	373+18.65, 19.2' RT	6	X 10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	92	342	232
71	PB4	376+49.93, 88.1' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	74	49	190
72	PB4	376+49.88, 64.4' LT	6	X 20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	80	49	196
81	PB13	--	6	X 6	4	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY	--	476	--
82	PB12	--	6	X 20	4	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY	--	332	--
83	PB12	--	6	X 20	4	ASPHALT	LOOP DETECTOR LEAD-IN CABLE ONLY	--	332	--
S1	PB10	377+52.97, 43.9' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	62	265	170
S2	PB10	377+52.87, 31.6' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	78	265	186
S3	PB10	377+52.77, 19.9' RT	6	X 10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	98	265	206
S4	PB18	375+45.09, 43.8' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	68	63	144
S5	PB18	375+45.41, 32.2' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	80	63	156
S6	PB18	375+45.53, 20.4' LT	6	X 10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)	100	63	176
TOTAL								1576	5969	3916

** LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
 ^ FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
 ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) &
 VILLAGE CENTER DRIVE
 VILLAGE OF MOUNT PLEASANT
 RACINE COUNTY**

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TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0230	655.0240
		CABLE TRAFFIC SIGNAL 5-14 AWG L.F.	CABLE TRAFFIC SIGNAL 7-14 AWG L.F.
SB1	HEAD 18	--	22
SB1	HEAD 20	19	--
SB2	HEAD 23	--	22
SB3	HEAD 16	65	--
SB3	HEAD 17	19	--
SB3	HEAD 19	--	65
SB3	HEAD 27	15	--
SB4	HEAD 6	--	22
SB4	HEAD 8	19	--
SB4	HEAD 28	15	--
SB5	HEAD 2	65	--
SB5	HEAD 3	65	--
SB5	HEAD 4	65	--
SB5	HEAD 7	--	22
SB5	HEAD 12	--	22
SB6	HEAD 29	15	--
SB7	HEAD 15	19	--
SB7	HEAD 24	--	22
SB7	HEAD 30	15	--
SB8	HEAD 21	70	--
SB8	HEAD 22	19	--
SB8	HEAD 25	--	70
SB9	HEAD 1	19	--
SB9	HEAD 13	--	22
SB9	HEAD 31	15	--
SB10	HEAD 5	--	22
SB10	HEAD 9	65	--
SB10	HEAD 10	65	--
SB10	HEAD 11	65	--
SB10	HEAD 14	--	22
SB11	HEAD 26	15	--
TOTAL		729	333

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0515
		ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG L.F.
CB1	SB1	51
SB1	SB2	111
SB2	SB3	208
SB3	SB4	37
SB4	SB5	194
SB5	SB6	108
SB6	SB7	129
SB7	SB8	121
SB8	SB9	86
SB9	SB10	106
SB10	SB11	98
SB11	CB1	106
PB1	CB1	23
PB3	SB2	33
PB4	SB2	28
PB5	SB2	98
PB6	SB4	73
PB7	SB4	18
PB8	SB5	17
PB10	SB6	40
PB11	SB7	30
PB14	SB8	17
PB15	SB9	19
PB17	SB10	17
PB18	SB11	31
PB19	CB1	30
TOTAL		1829

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0610
		ELECTRICAL WIRE LIGHTING 12 AWG L.F.
SB3	LUMIN	144
SB5	LUMIN (2)	288
SB8	LUMIN	144
SB10	LUMIN (2)	288
TOTAL		864

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900
		TRAFFIC SIGNAL EVP DETECTOR CABLE L.F.
CB1	SB10 (HEAD A)	216
CB1	SB5 (HEAD B)	361
CB1	SB8 (HEAD C)	367
TOTAL		944

TRAFFIC SIGNAL CABLE AND WIRE

FROM	TO	655.0240	655.0260	655.0270	655.0290	655.0320
		CABLE TRAFFIC SIGNAL 7-14 AWG L.F.	CABLE TRAFFIC SIGNAL 12-14 AWG L.F.	CABLE TRAFFIC SIGNAL 15-14 AWG L.F.	CABLE TRAFFIC SIGNAL 21-14 L.F.	CABLE TYPE UF 2-10 AWG GROUNDED L.F.
CB1	SB1	--	51	--	--	--
CB1	SB2	--	96	--	--	--
CB1	SB3	--	249	--	--	249
CB1	SB4	--	238	--	--	--
CB1	SB5	--	--	--	296	--
CB1	SB6	--	382	--	--	--
CB1	SB7	--	--	431	--	--
CB1	SB8	--	--	297	--	--
CB1	SB9	--	238	--	--	--
CB1	SB10	--	--	151	--	151
CB1	SB11	106	--	--	--	--
SB3	SB5	--	--	--	--	218
SB8	SB10	--	--	--	--	166
TOTAL		106	1254	879	296	784

ADDITIONAL QTY SHOWN FOR OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

**STH 20 (WASHINGTON AVE) & VILLAGE CENTER DRIVE
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY**

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POLES (CONTRACTOR FURNISHED)

SIGNAL BASE NO.	657.0100	657.0425	657.0430	658.0500
	PEDESTAL BASES EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	PEDESTRIAN PUSH BUTTONS EACH
SB1	1	1	--	--
SB2	1	1	--	--
SB4	1	1	--	1
SB6	1	--	1	1
SB7	1	1	--	1
SB9	1	1	--	1
SB11	1	--	1	1
	--	--	--	--
TOTAL	7	5	2	5

POLES (STATE FURNISHED)

SIGNAL BASE NO.	SPV.0060.03	SPV.0060.07	SPV.0060.08	SPV.0060.10	658.0500	659.1125
	INSTALL POLES TYPE 10 SPECIAL EACH	INSTALL MONOTUBE ARMS 40-FT TYPE 9/10 SPEC POLE EACH	INSTALL MONOTUBE ARMS 45-FT TYPE 9/10 SPEC POLE EACH	INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	PEDESTRIAN PUSH BUTTONS EACH	LUMINAIRES UTILITY LED C EACH
SB3	1	1	--	1	1	1
SB5	1	1	--	2	--	2
SB8	1	--	1	1	--	1
SB10	1	1	--	2	--	2
	--	--	--	--	--	--
TOTAL	4	3	1	6	1	6

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
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FACES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0173	658.0174	658.0416
		TRAFFIC SIGNAL FACE 3S 12-INCH EACH	TRAFFIC SIGNAL FACE 4S 12-INCH EACH	PEDESTRIAN SIGNAL FACE 16-INCH EACH
18	SB1	--	1	--
20	SB1	1	--	--
23	SB2	--	1	--
16	SB3	1	--	--
17	SB3	1	--	--
19	SB3	--	1	--
27	SB3	--	--	1
6	SB4	--	1	--
8	SB4	1	--	--
28	SB4	--	--	1
2	SB5	1	--	--
3	SB5	1	--	--
4	SB5	1	--	--
7	SB5	--	1	--
12	SB5	--	1	--
29	SB6	--	--	1
15	SB7	1	--	--
24	SB7	--	1	--
30	SB7	--	--	1
21	SB8	1	--	--
22	SB8	1	--	--
25	SB8	--	1	--
1	SB9	1	--	--
13	SB9	--	1	--
31	SB9	--	--	1
5	SB10	--	1	--
9	SB10	1	--	--
10	SB10	1	--	--
11	SB10	1	--	--
14	SB10	--	1	--
26	SB11	--	--	1
TOTAL		14	11	6

LED MODULES SUMMARY

SIGNAL HEAD NO.	SIGNAL BASE NO.	PEDESTRIAN SIGNAL FACE 16-INCH EACH	LED MODULES 12-INCH RED BALL EACH	LED MODULES 12-INCH YELLOW BALL EACH	LED MODULES 12-INCH GREEN BALL EACH	LED MODULES 12-INCH RED ARROW EACH	LED MODULES 12-INCH YELLOW ARROW EACH	LED MODULES 12-INCH GREEN ARROW EACH
		18	SB1	--	--	--	--	1
20	SB1	--	1	1	1	--	--	--
23	SB2	--	--	--	--	1	2	1
16	SB3	--	1	1	1	--	--	--
17	SB3	--	1	1	1	--	--	--
19	SB3	--	--	--	--	1	2	1
27	SB3	1	--	--	--	--	--	--
6	SB4	--	--	--	--	1	2	1
8	SB4	--	1	1	1	--	--	--
28	SB4	1	--	--	--	--	--	--
2	SB5	--	1	1	1	--	--	--
3	SB5	--	1	1	1	--	--	--
4	SB5	--	1	1	1	--	--	--
7	SB5	--	--	--	--	1	2	1
12	SB5	--	--	--	--	1	2	1
29	SB6	1	--	--	--	--	--	--
15	SB7	--	1	1	1	--	--	--
24	SB7	--	--	--	--	1	2	1
30	SB7	1	--	--	--	--	--	--
21	SB8	--	1	1	1	--	--	--
22	SB8	--	1	1	1	--	--	--
25	SB8	--	--	--	--	1	2	1
1	SB9	--	1	1	1	--	--	--
13	SB9	--	--	--	--	1	2	1
31	SB9	1	--	--	--	--	--	--
5	SB10	--	--	--	--	1	2	1
9	SB10	--	1	1	1	--	--	--
10	SB10	--	1	1	1	--	--	--
11	SB10	--	1	1	1	--	--	--
14	SB10	--	--	--	--	1	2	1
26	SB11	1	--	--	--	--	--	--
TOTAL		6	14	14	14	11	22	11

STH 20 (WASHINGTON AVE) &
VILLAGE CENTER DRIVE
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

3

TRANSPORT AND INSTALL
STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0060.14 TRNSPT AND INSTALL STATE FURN TRAFFIC SIGNAL CABINET EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

3

TRANSPORT TRAFFIC SIGNAL
AND INTERSECTION LIGHTING MATERIALS

LOCATION	SPV.0060.22 TRNSPT TRAFFIC SIGNAL & INTER LIGHTING MATERIALS EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

EVP DETECTOR HEAD INSTALLATION

LOCATION	SPV.0060.26 TRNSPT & INSTALL STATE FURN EVP HEADS EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

TEMPORARY INFRARED EVP SYSTEM

LOCATION	SPV.0060.18 TEMP INFRARED EVP SYSTEM EACH
STH 20 & VILLAGE CENTER DR	1
TOTAL	1

FIBER OPTIC INTERCONNECT

LOCATION	SPV.0060.30 REMOVE, SALVAGE, AND REINSTALL FIBER OPTIC INTERCONNECT EACH	678.0300 FIBER OPTIC SPLICE EACH
STH 20 & VILLAGE CENTER DR	1	4
TOTAL	1	4

ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
VILLAGE CENTER DRIVE
VILLAGE OF MOUNT PLEASANT
RACINE COUNTY

3

REMOVING TRAFFIC SIGNALS	
LOCATION	204.9060.S.05 REMOVING TRAFFIC SIGNALS EACH
STH 20 & SYCAMORE AVE	1
TOTAL	1

PULL BOXES		
PULL BOX NO.	LOCATION^	653.0135 PULL BOXES STEEL 24x36-INCH EACH
PB4	393+77.27, 9.3' LT	1
PB12	349+42.22, 70.6' LT	1
PB13	349+94.65, 77.7' RT	1
PB14	392+16.98, 50.9' RT	1
PB15	397+42.49, 50.0' LT	1
		--
TOTAL		5

CONDUIT		
FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.
PB2	PB14	184
PB3	PB4	26
PB5	PB12	7
PB7	PB15	256
PB10	PB13	20
		--
TOTAL		493

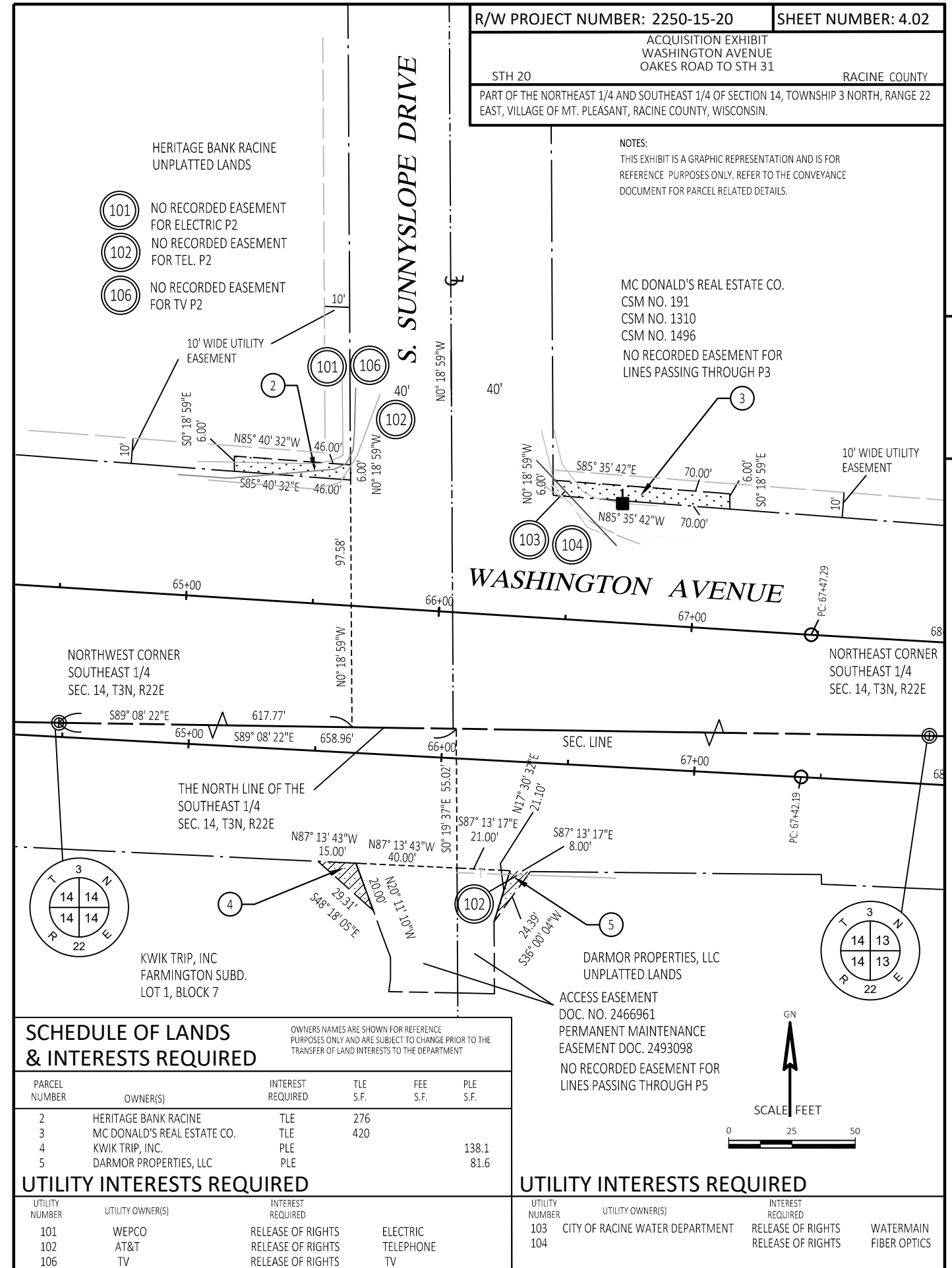
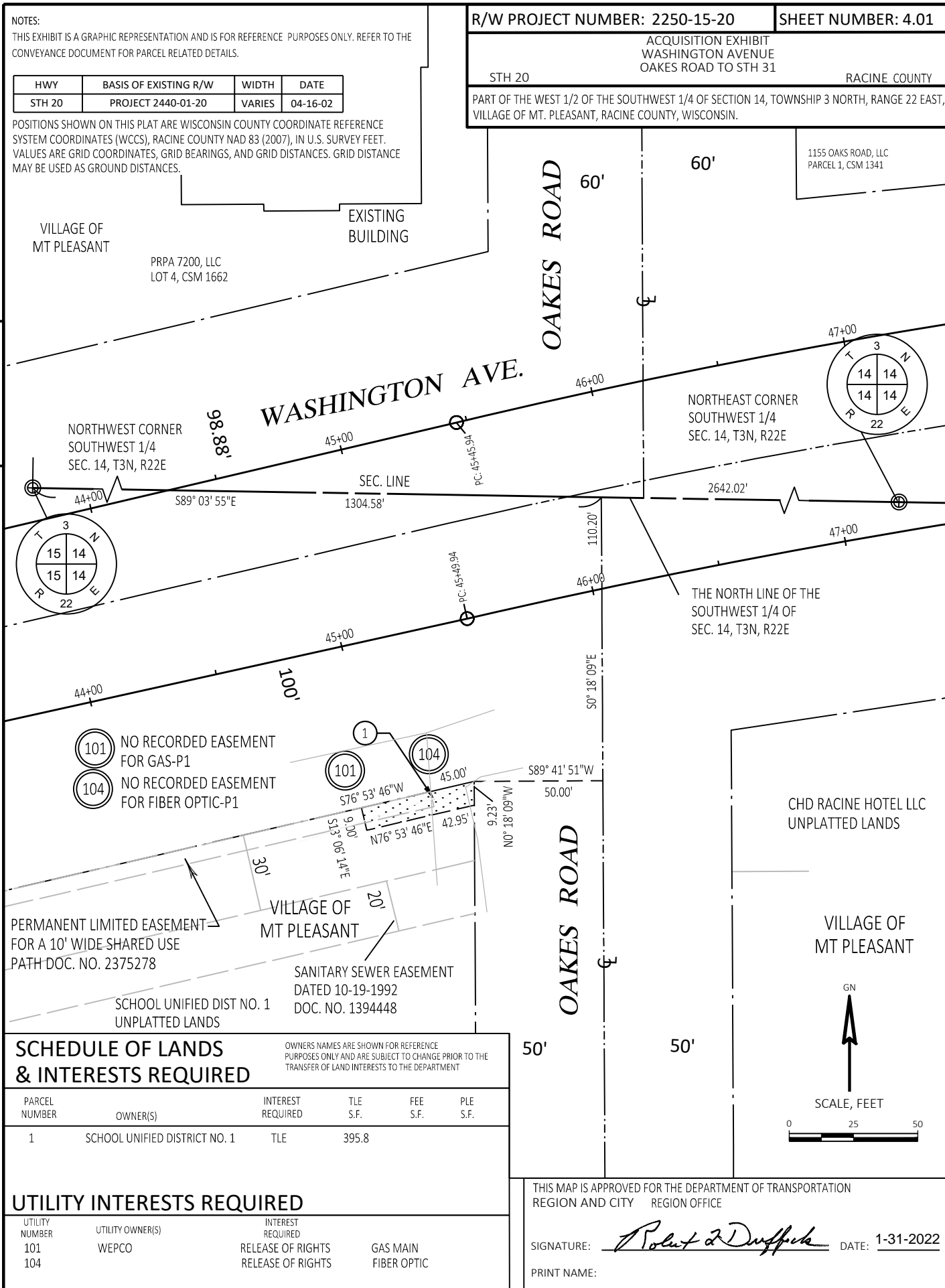
3

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION** ^	SIZE (FT)	X	SIZE (FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
11	PB3	393+96.69, 1.6' RT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	74	127	190
12	PB3	394+24.49, 1.5' RT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	62	127	178
21	PB15	397+51.24, 32.2' LT	6	X	10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	62	477	202
22	PB15	397+51.24, 20.5' LT	6	X	10	5	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	84	477	224
31	PB13	394+76.08, 55.8' RT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	82	103	198
42	PB12	394+59.61, 73.4' LT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	78	200	194
43	PB12	394+60.62, 54.1' LT	6	X	10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	60	200	136
51	PB8	395+45.86, 4.6' LT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	88	155	204
52	PB8	395+18.06, 4.6' LT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	76	155	192
61	PB14	392+00.72, 40.5' RT	6	X	10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	66	243	174
62	PB14	392+00.76, 29.5' RT	6	X	10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	78	243	186
63	PB14	392+00.68, 18.5' RT	6	X	10	4	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	96	243	204
81	PB13	394+85.94, 55.8' RT	6	X	20	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	64	103	180
S1	PB9	395+40.70, 41.2' RT	6	X	10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	50	105	126
S2	PB9	395+40.36, 29.8' RT	6	X	10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	72	105	148
S3	PB9	395+40.05, 18.7' RT	6	X	10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	92	105	168
S4	PB4	393+64.50, 32.8' LT	6	X	10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	68	153	144
S5	PB4	393+64.66, 21.5' LT	6	X	10	3	ASPHALT	9F15-4B - LOOP DETECTOR INSTALLED IN BASE COURSE WILL PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	48	153	124
TOTAL									970	2853	2462

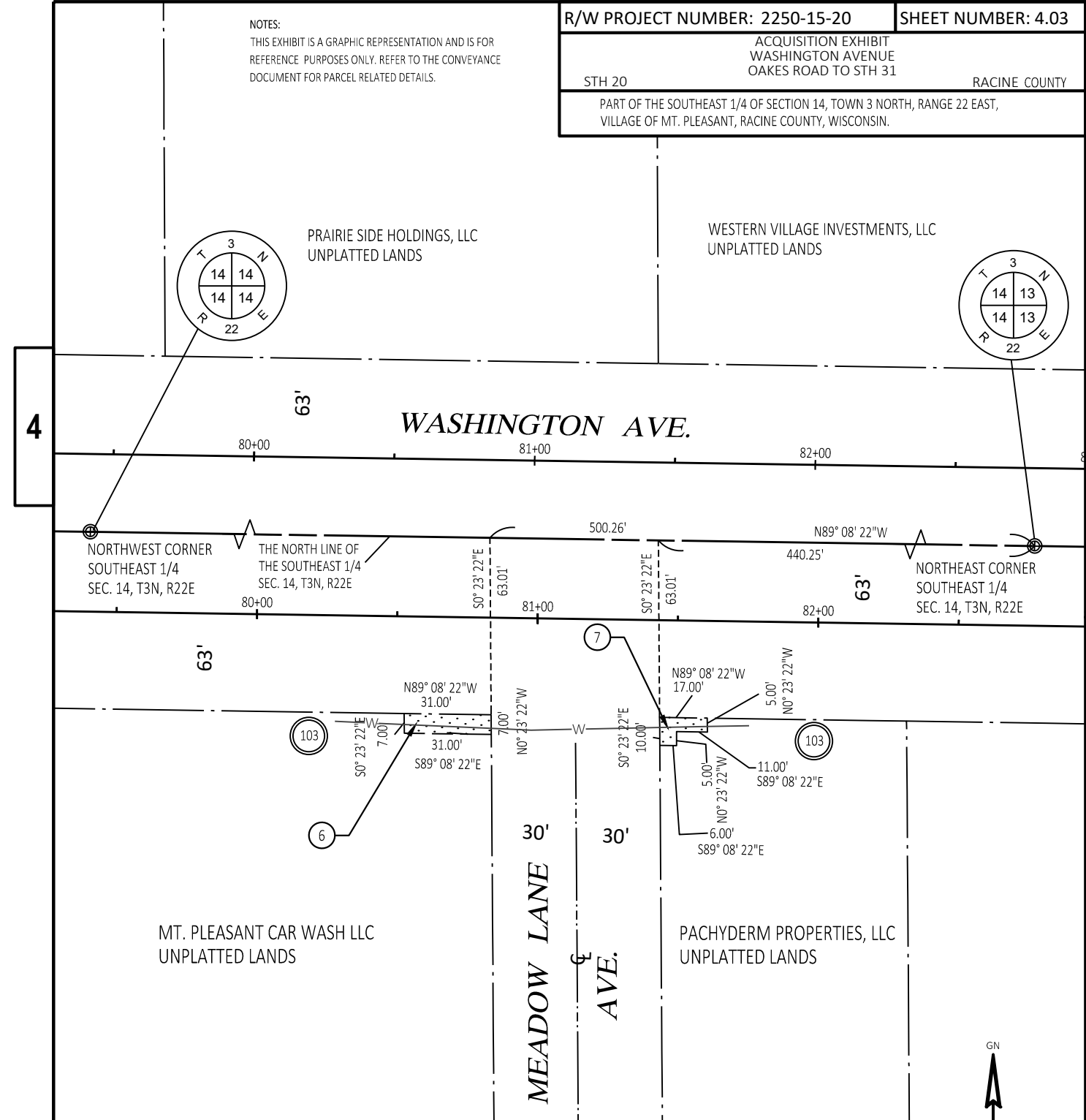
ADDITIONAL QTY SHOWN FOR
OTHER INTERSECTIONS
ALL ITEMS CATEGORY 0030

STH 20 (WASHINGTON AVE) &
SYCAMORE AVE
CITY OF RACINE / VILLAGE OF MOUNT PLEASANT
RACINE COUNTY



NOTES:
THIS EXHIBIT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. REFER TO THE CONVEYANCE DOCUMENT FOR PARCEL RELATED DETAILS.

R/W PROJECT NUMBER: 2250-15-20 SHEET NUMBER: 4.03
ACQUISITION EXHIBIT
WASHINGTON AVENUE
OAKES ROAD TO STH 31
STH 20 RACINE COUNTY
PART OF THE SOUTHEAST 1/4 OF SECTION 14, TOWN 3 NORTH, RANGE 22 EAST,
VILLAGE OF MT. PLEASANT, RACINE COUNTY, WISCONSIN.



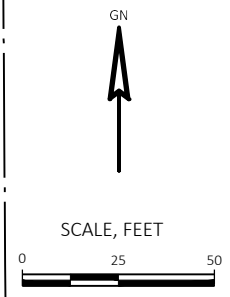
SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.	FEE S.F.	PLE S.F.
6	MT. PLEASANT CAR WASH, LLC	TLE	217		
7	PACHYDERM PROPETIES, LLC	TLE	115		

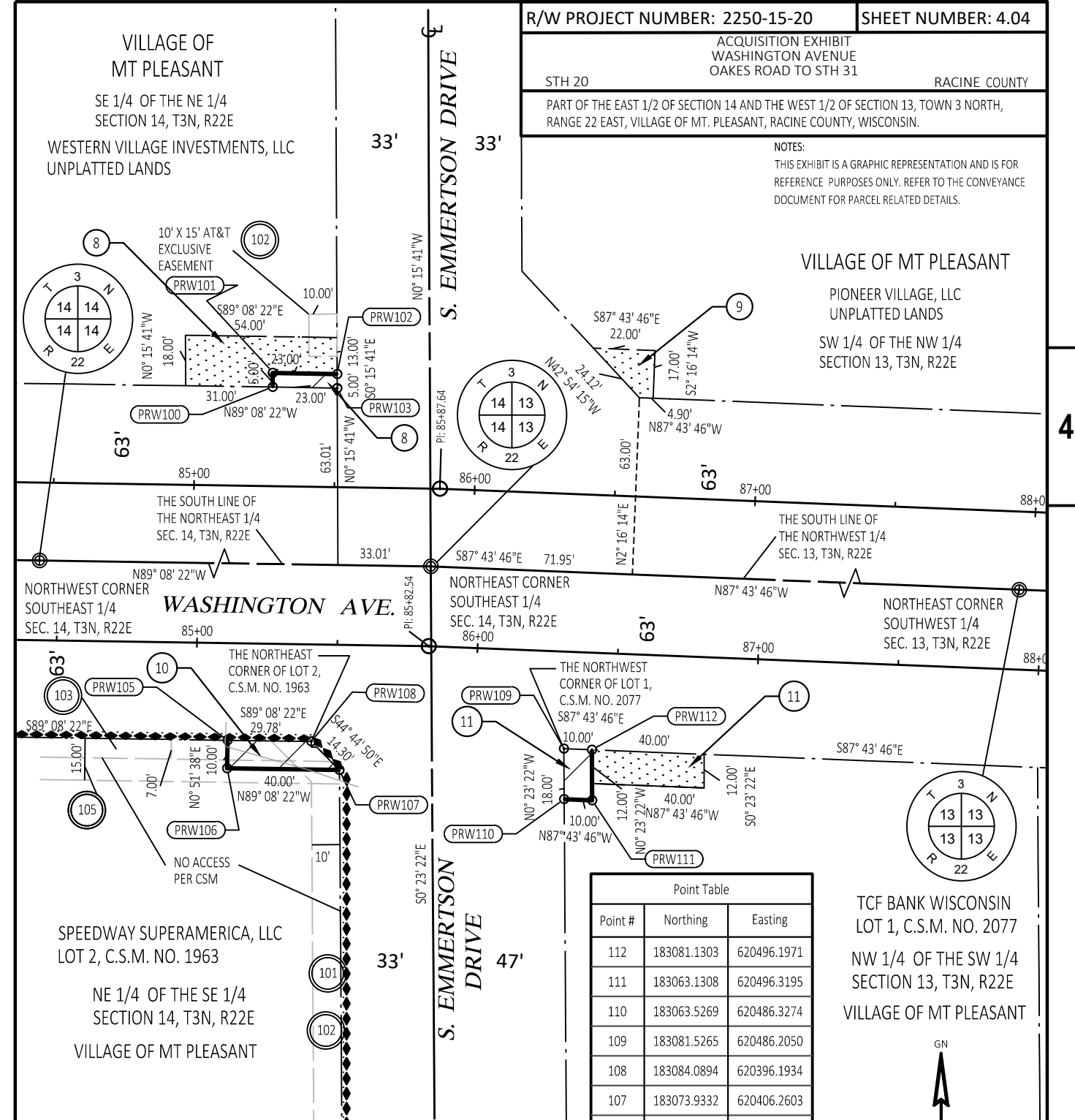
UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
103	CITY OF RACINE WATER DEPARTMENT	RELEASE OF RIGHTS WATERMAIN



R/W PROJECT NUMBER: 2250-15-20 SHEET NUMBER: 4.04
ACQUISITION EXHIBIT
WASHINGTON AVENUE
OAKES ROAD TO STH 31
STH 20 RACINE COUNTY
PART OF THE EAST 1/2 OF SECTION 14 AND THE WEST 1/2 OF SECTION 13, TOWN 3 NORTH,
RANGE 22 EAST, VILLAGE OF MT. PLEASANT, RACINE COUNTY, WISCONSIN.

NOTES:
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SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT

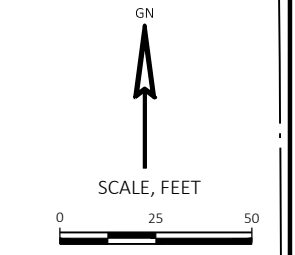
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.	FEE S.F.	PLE S.F.
8	WESTERN VILLAGE INVESTMENTS, LLC	TLE, FEE	857	115	
9	PIONEER VILLAGE, LLC	TLE	229		
10	SPEEDWAY SUPERAMERICA, LLC	FEE		349	
11	TCF BANK WISCONSIN	TLE, FEE	480	180	

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
102	AT&T WISCONSIN	RELEASE OF RIGHTS DOC. 2230015
103	CITY OF RACINE WATER DEPARTMENT	RELEASE OF RIGHTS WATERMAIN
105	UTILITY EASEMENT	RELEASE OF RIGHTS CSM 1861, DOC. 1544563

Point Table

Point #	Northing	Easting
112	183081.1303	620496.1971
111	183063.1308	620496.3195
110	183063.5269	620486.3274
109	183081.5265	620486.2050
108	183084.0894	620396.1934
107	183073.9332	620406.2603
106	183074.5340	620366.2648
105	183084.5367	620366.4151
103	183209.9641	620405.4759
102	183214.9641	620405.4548
101	183215.3095	620382.4574
100	183210.3096	620382.4785



ACQUISITION EXHIBIT
WASHINGTON AVENUE
OAKES ROAD TO STH 31
STH 20 RACINE COUNTY
PART OF LOT 2, CERTIFIED SURVEY MAP NO. 3385, BEING PART OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 13, TOWN 3 NORTH, R 22 EAST, VILLAGE OF MT PLEASANT, RACINE COUNTY, WISCONSIN

NOTES:
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VILLAGE OF MT PLEASANT

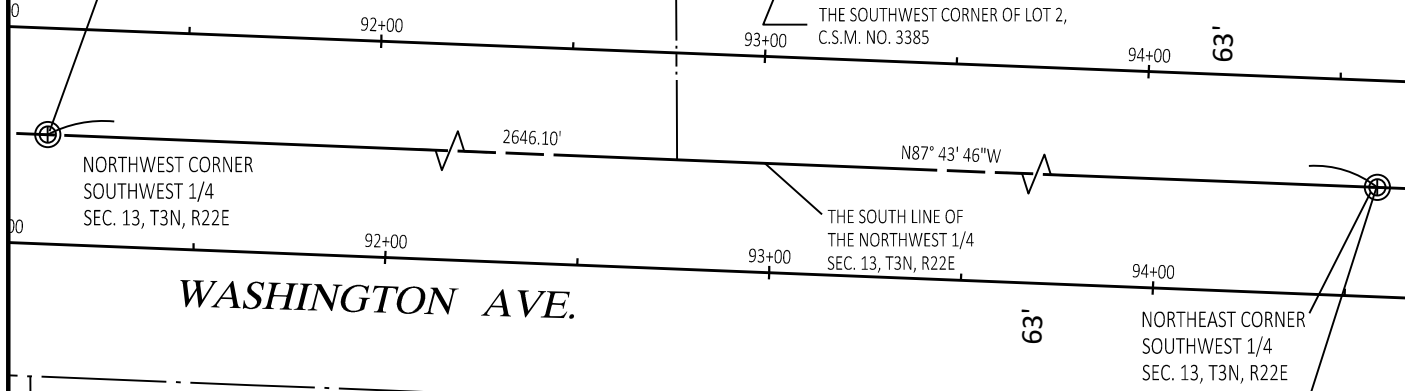
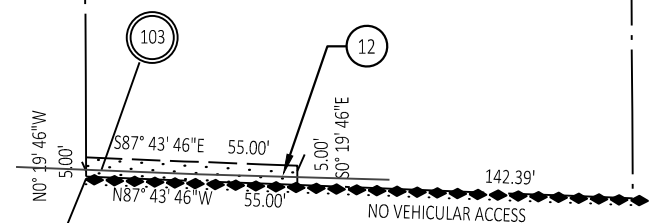
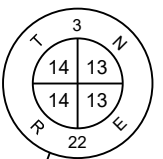
FCPT HOLDINGS LLC
LOT 2, C.S.M. 3385

SW 1/4 OF THE NW 1/4
SECTION 13, T3N, R22E

HUNTER DRIVE 33'

FRATELLI PROPERTIES, LLC
LOT 2, CSM 3314

4

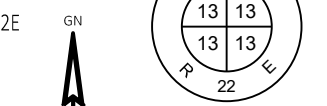


WASHINGTON AVE.

MARK PORCARO UNPLATTED LANDS

VILLAGE OF MT PLEASANT

MARK PORCARO UNPLATTED LANDS



SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.	FEE S.F.	PLE S.F.
12	FCPT HOLDINGS, LLC	TLE	275		

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
103	CITY OF RACINE WATER DEPARTMENT	RELEASE OF RIGHTS WATERMAIN

ACQUISITION EXHIBIT
WASHINGTON AVENUE
OAKES ROAD TO STH 31
STH 20 RACINE COUNTY
PART OF PARCEL 1, CSM NO. 2517, PART OF OUTLOT 3, CSM NO. 2357, PART OF LOT A, CSM NO. 1480 AND PARTS OF THE NORTHWEST 1/4 AND SOUTHWEST 1/4 OF SECTION 13, TOWN 3 NORTH, RANGE 22 EAST, VILLAGE OF MT. PLEASANT, RACINE COUNTY, WISCONSIN.

NOTES:
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DECLARATION OF EASEMENT (SIDEWALK)
DOC. 1771728, REC'D. 5-14-2001
VOL. 3176, PAGE 924-928
ORIX BRADFORD MT. PLEASANT VENTURE

CURVE C-1
RAD= 74.00
CHD BRG= N71°34'27"W
CHD= 41.18
I= 32°18'39"
L=41.73'

VILLAGE CENTER STATION LLC
PARCEL 1, CSM NO. 2517
20' PRIVATE SANITARY SEWER EASEMENT

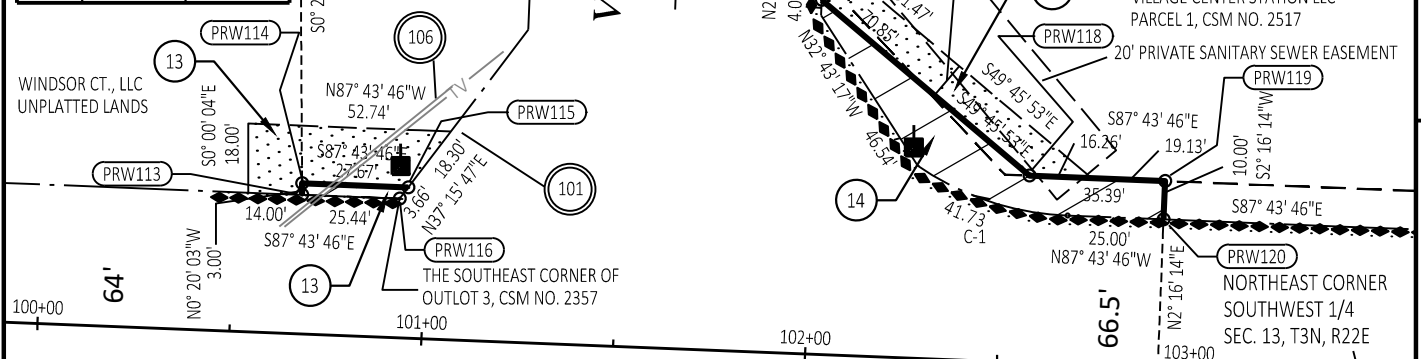
Point Table

Point #	Northing	Easting
124	183021.0534	622038.3898
123	182991.0541	622038.5928
122	182990.6579	622048.5849
121	183020.6572	622048.3820
120	183145.3005	622146.5239
119	183155.2927	622146.9200
118	183156.6946	622111.5624
117	183202.4584	622057.4756
116	183150.7138	621947.6379
115	183153.6252	621949.8529
114	183154.7216	621922.2004
113	183151.7217	621922.2179

VILLAGE OF MT PLEASANT

WINDSOR CT., LLC
OUTLOT 3, CSM NO. 2357

VILLAGE CENTER DRIVE 38'



WASHINGTON AVE.

LANDMARK BUILDING LLC UNPLATTED LANDS

SIGN EASEMENT EXHIBIT "C" DOC. 2341325, CNH AMERICA LLC AND WAL-MART REAL ESTATE BUSINESS TRUST

PRIVATE ROAD EASEMENT AREA, DOC. NO. 2341325
CASE EQUIPMENT CORP. UNPLATTED LANDS

POND MAINT. EASEMENT EXHIBIT "A" DOC. 2341326 WALMART REAL ESTATE BUSINESS TRUST

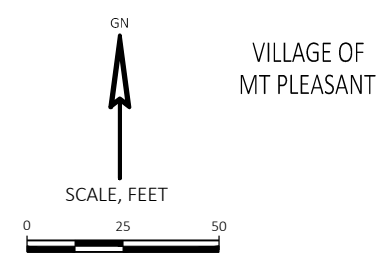
WAL-MART REAL ESTATE BUSINESS TRUST PARCELS LETTERED A AND B, CSM NO. 1480

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	TLE S.F.	FEE S.F.	PLE S.F.
13	WINDSOR CT, LLC	TLE, FEE	749.4	79.6	
14	VILLAGE CENTER STATION, LLC	TLE, FEE	811.6	1169	
15	LANDMARK BUILDING, LLC	TLE	78		
16	WAL-MART REAL ESTATE BUSINESS TRUST	TLE, FEE	272.0	300	

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
101	WEPCO	RELEASE OF RIGHTS ELECTRIC
106	TV	RELEASE OF RIGHTS TV

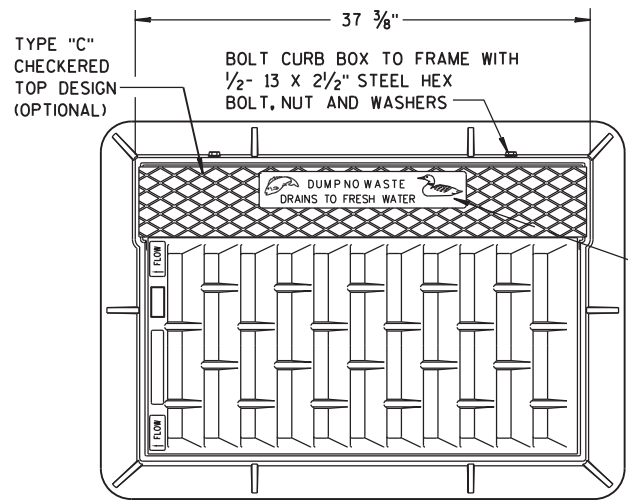


Standard Detail Drawing List

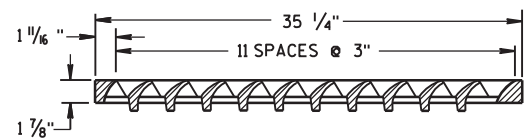
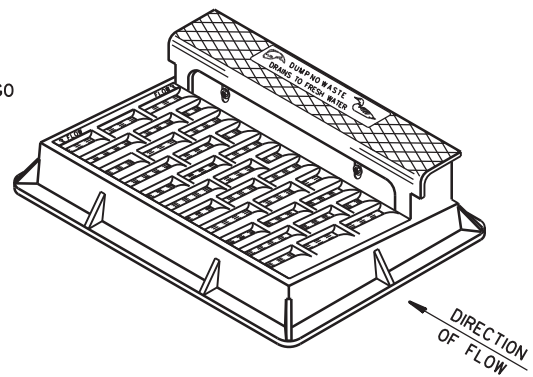
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A08-02	CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C11-10	CONCRETE BASE TYPE 10
09C12-09B	CONCRETE BASE TYPE 13
09C15-01	CONCRETE BASE TYPE 10 SPECIAL
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09B	TYPE 9 SPECIAL POLE 35' MONOTUBE ARM
09E08-09C	TYPE 9 SPECIAL POLE 40' MONOTUBE ARM
09E08-09D	TYPE 9 SPECIAL POLE 45' MONOTUBE ARM
09E08-09E	TYPE 10 POLE 15' -30' MONOTUBE ARM
09E08-09F	TYPE 10 SPECIAL POLE 35' MONOTUBE ARM
09E08-09G	TYPE 10 SPECIAL POLE 40' MONOTUBE ARM
09E08-09H	TYPE 10 SPECIAL POLE 45' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35' -55' MONOTUBE ARM
09E08-09K	GENERAL NOTES, HARDWARE DETAILS FOR TYPE 9/10, 9/10 SPECIAL, 12 & 13 POLES W/MONOTUBE ARMS
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09G01-04A	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04B	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04C	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04D	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04E	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04F	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
09G01-04G	SPAN WIRE TEMPORARY TRAFFIC SIGNAL
11B02-02	CONCRETE MEDIUM NOSE
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)

Standard Detail Drawing List

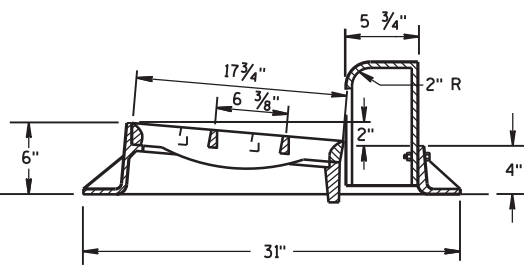
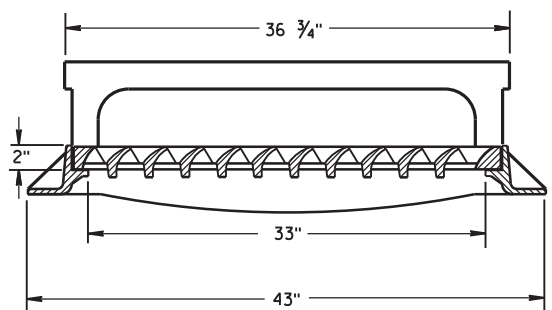
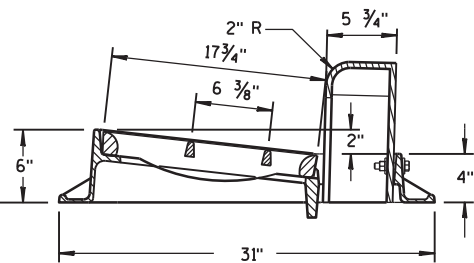
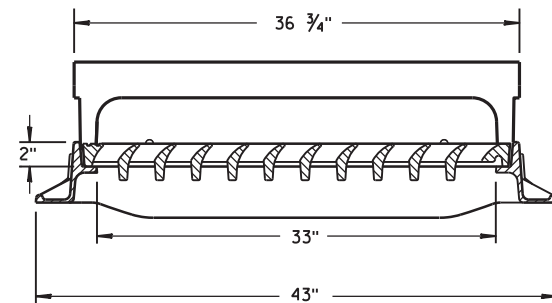
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C20-02	YIELD MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D22-06	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D23-07A	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D23-07B	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D50-03A	TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT



**NOTE:
GRATE IS REVERSIBLE.**

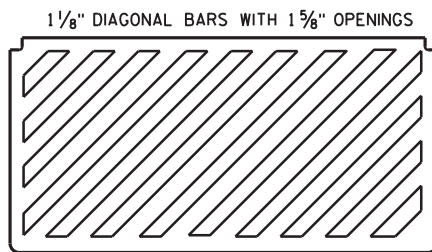


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

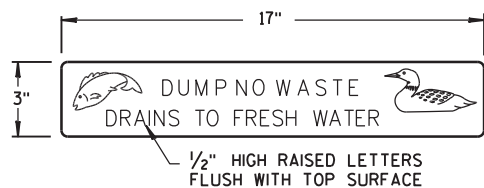


TYPE "H"

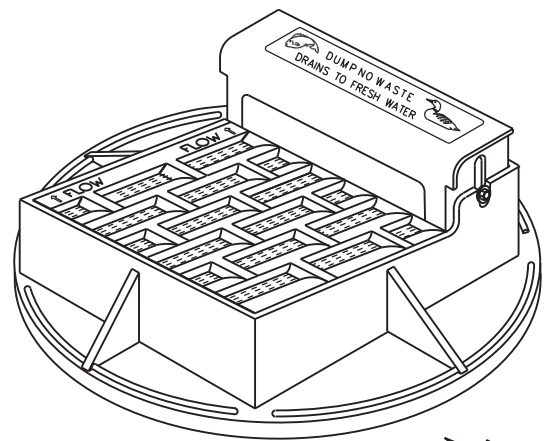
NOTE: EITHER CASTING IS ACCEPTABLE



**SPECIAL GRATE FOR
TYPE "H" COVER**
(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

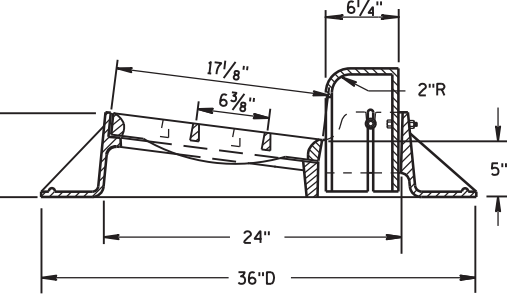
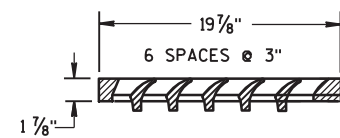
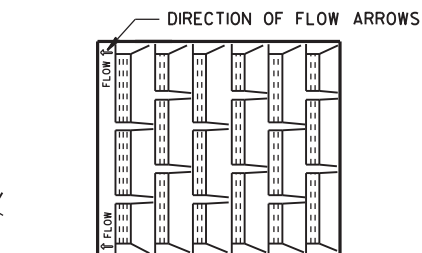
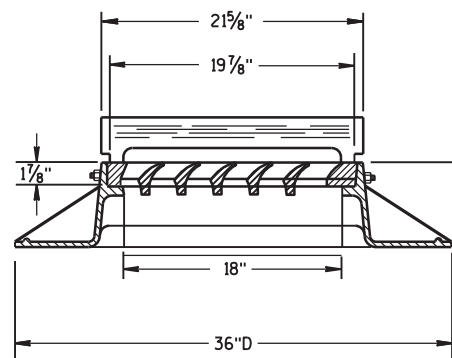


LOGO DETAIL

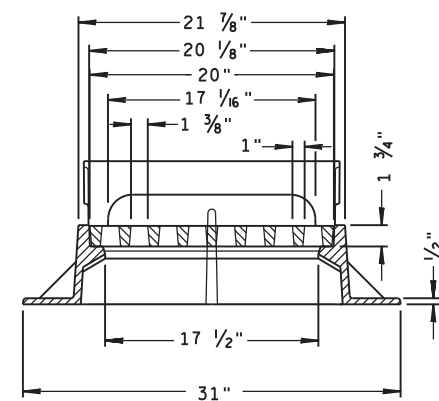
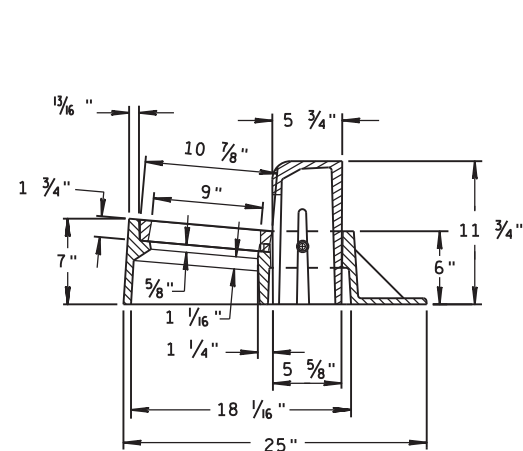


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

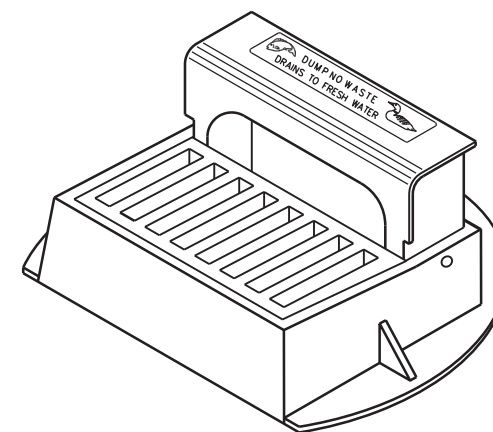
**NOTE:
GRATE IS REVERSIBLE.**



TYPE "A"



TYPE "Z"



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

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
11-27-13
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

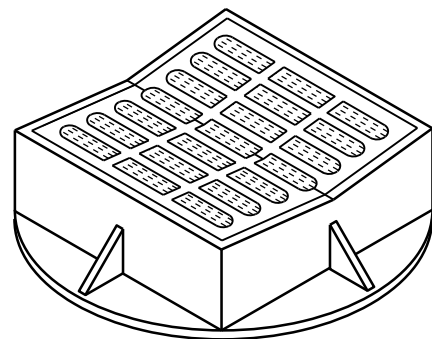
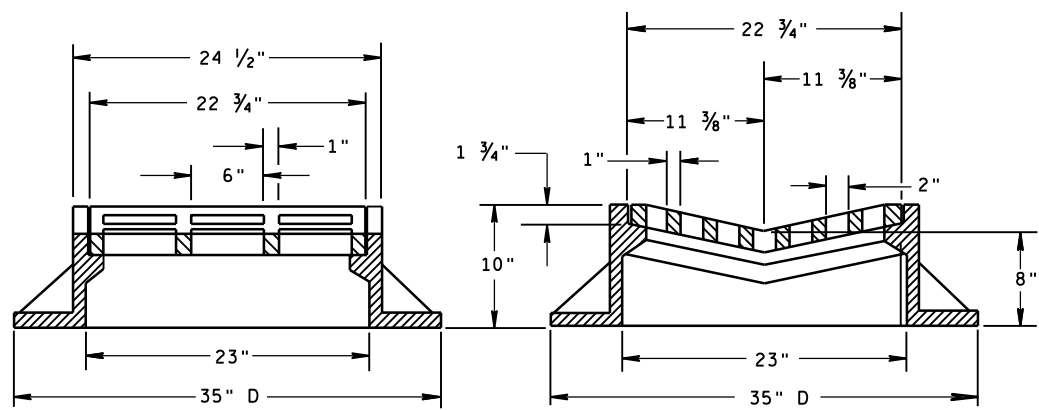
GENERAL NOTES

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

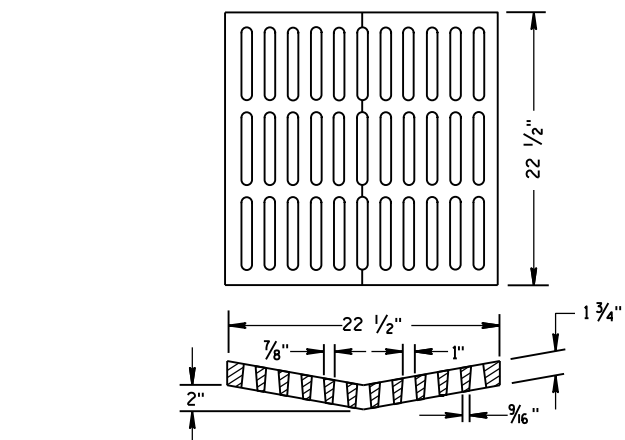
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 7/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

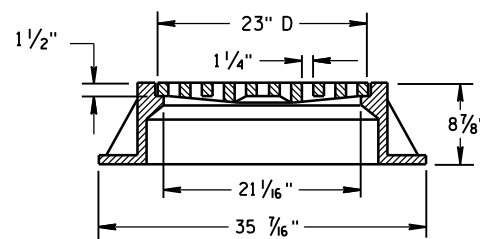
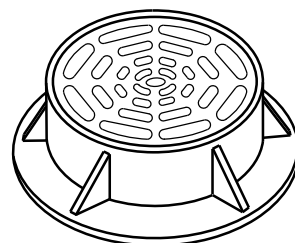
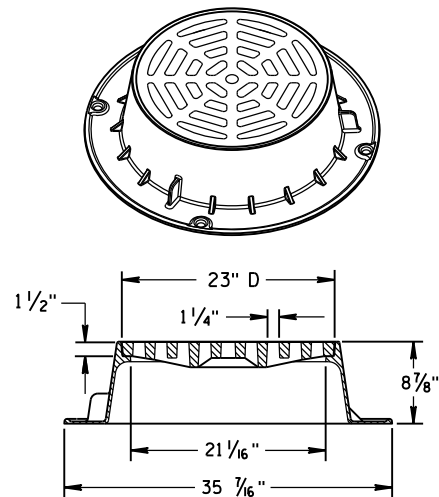


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

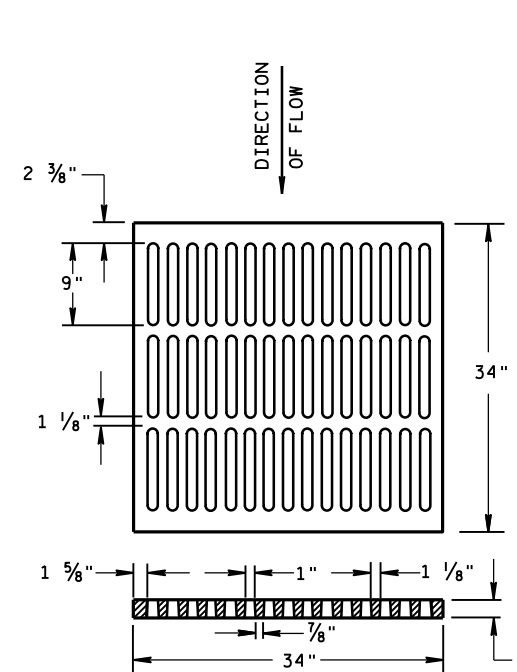
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

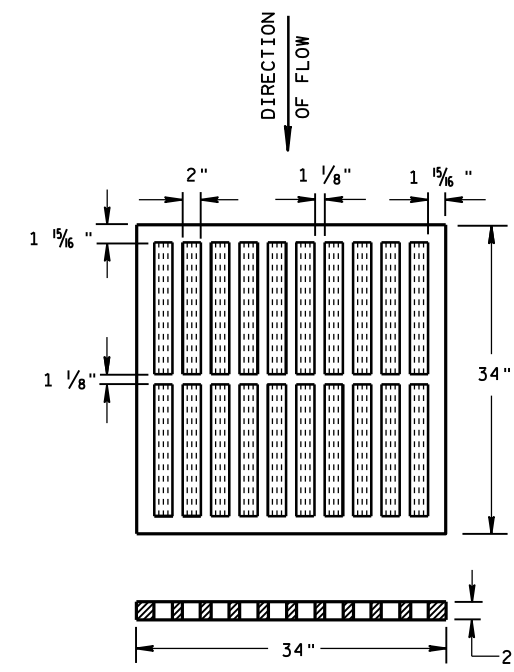
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



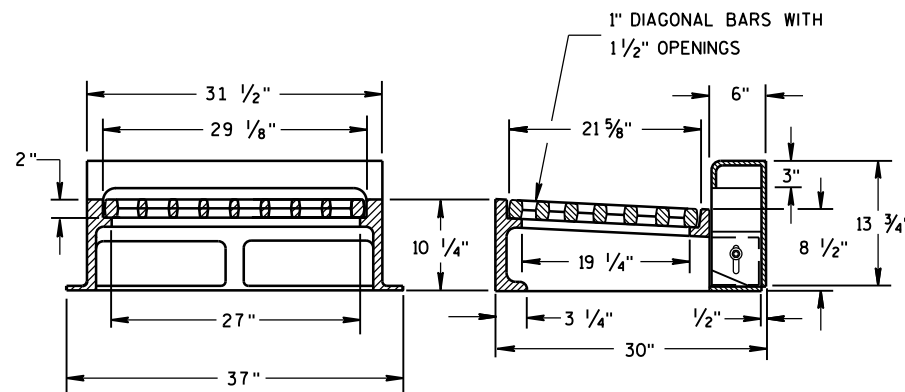
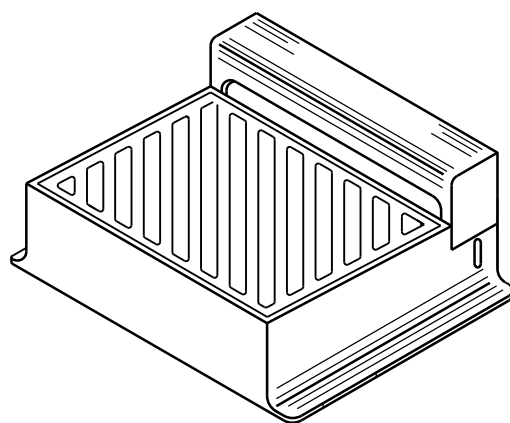
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

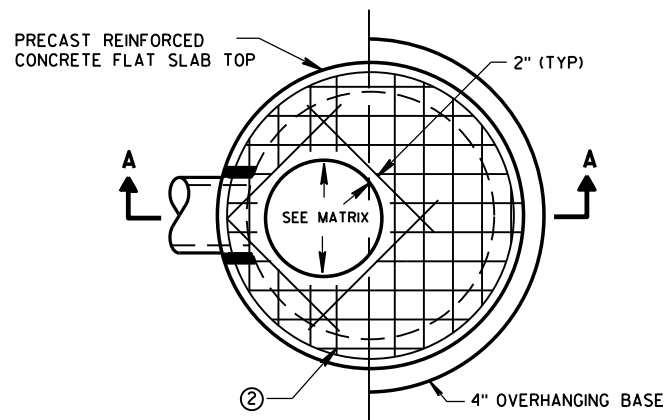
DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

DIRECTION OF FLOW

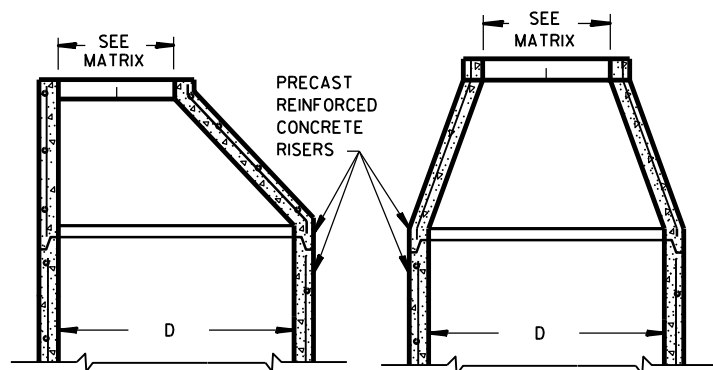
**INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 11/27/2013 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

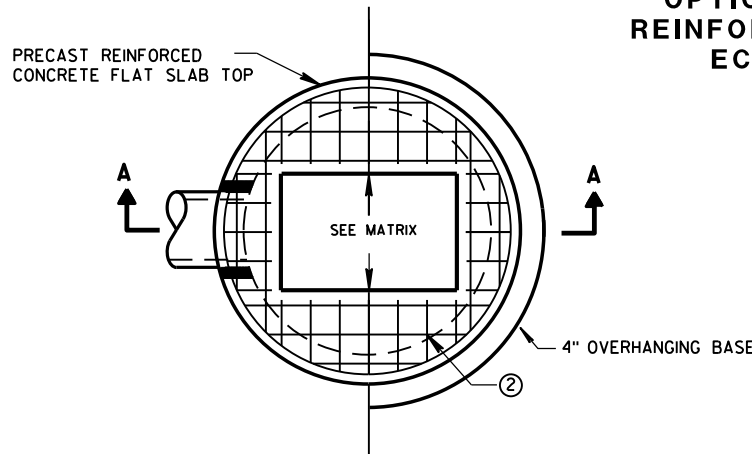


PLAN VIEW CIRCULAR OPENING

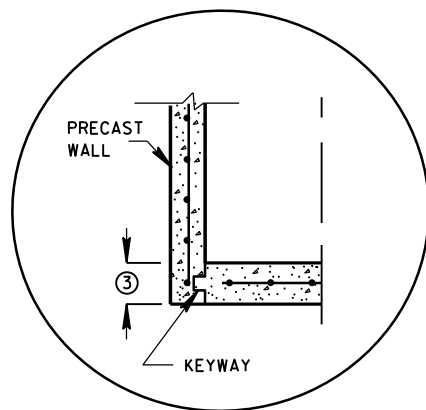


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

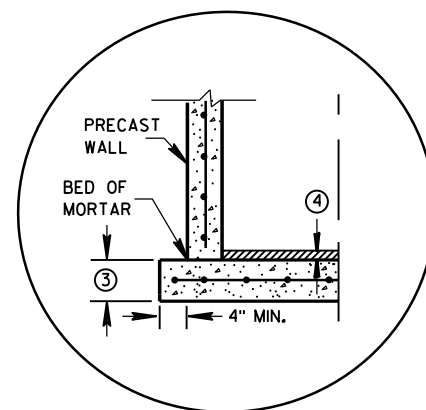
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PLAN VIEW RECTANGULAR OPENING

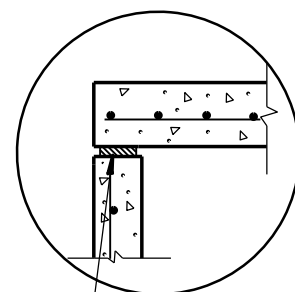


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

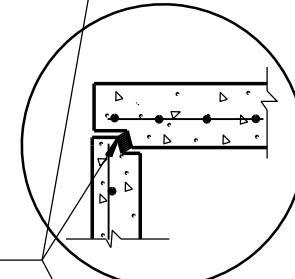


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

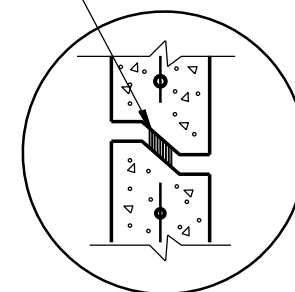
DETAIL "A"



TOP WITH PLAIN END JOINT

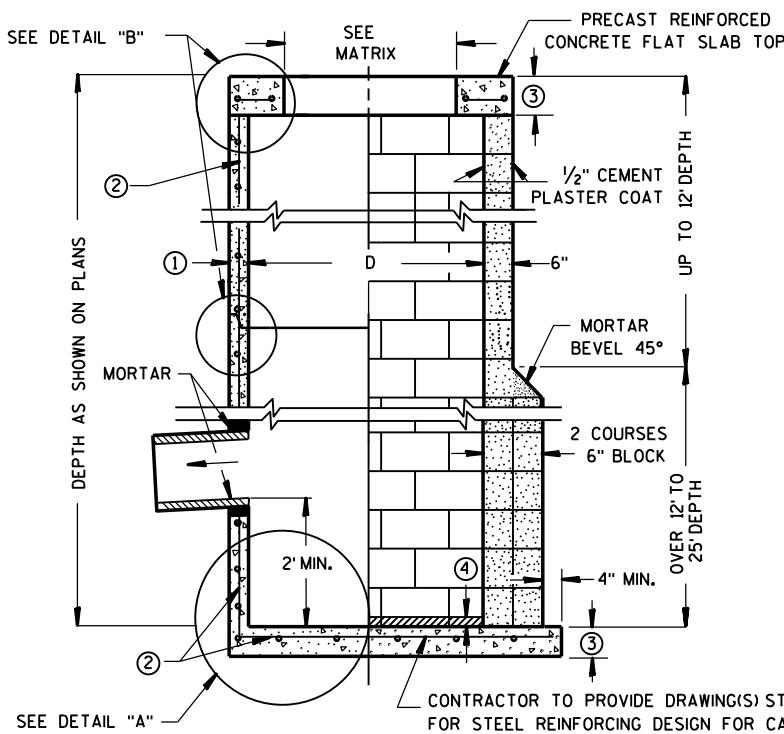


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

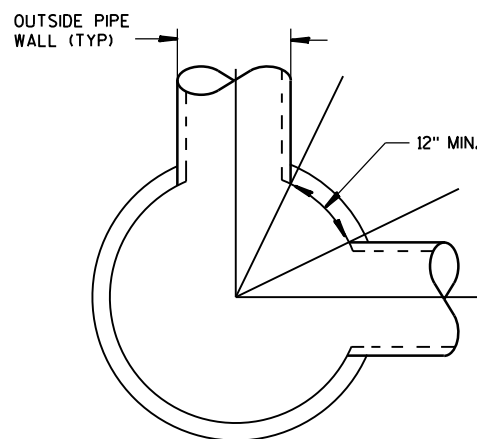


SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

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



DETAIL "C"

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".

- ① 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.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ 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".
- ④ 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											

PIPE MATRIX

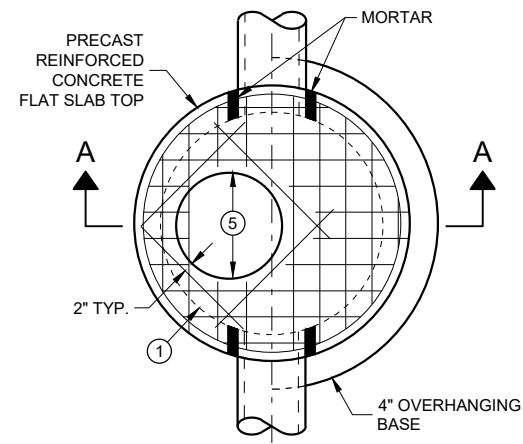
CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	30

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

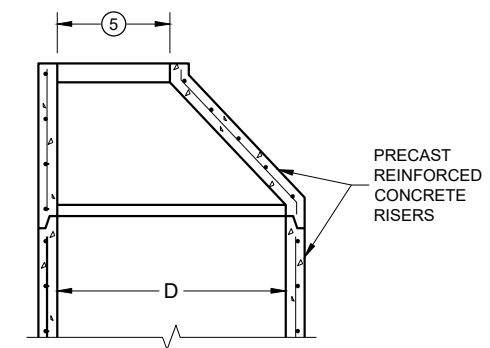
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
 Sep 1, 2016 /S/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
 FHWA

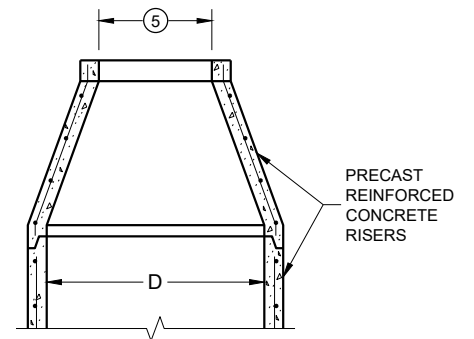
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER



PLAN VIEW CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

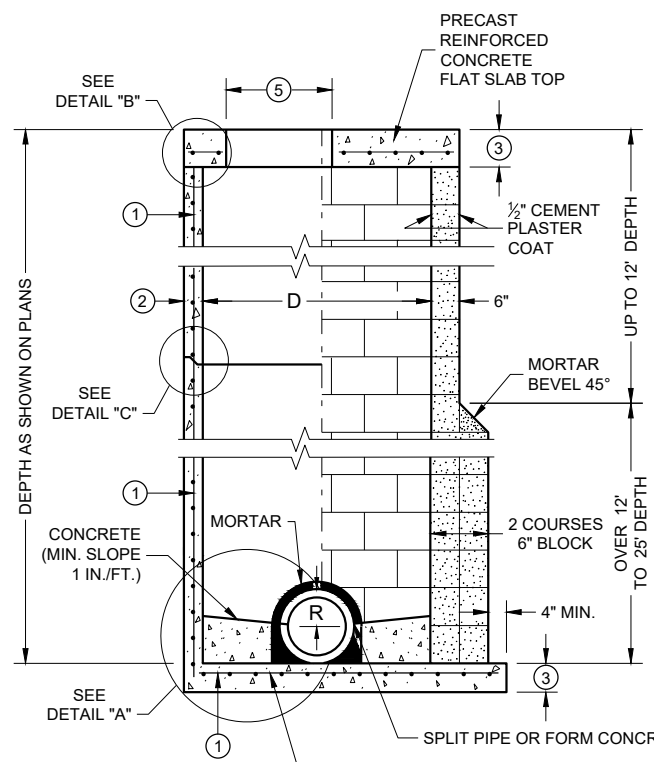
MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE \ OPENING SIZE (FT.)	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

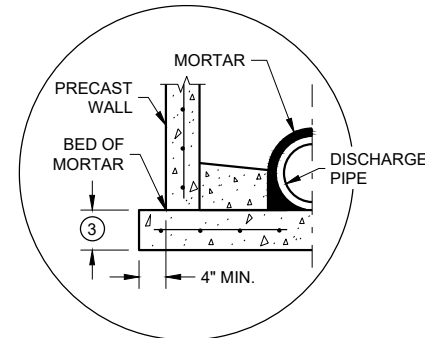
*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.



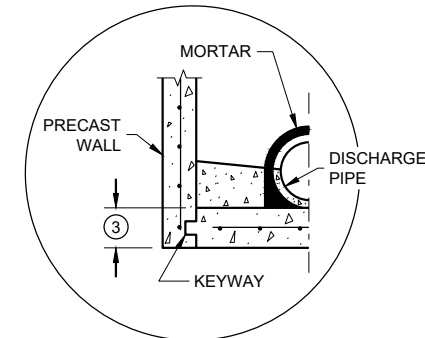
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

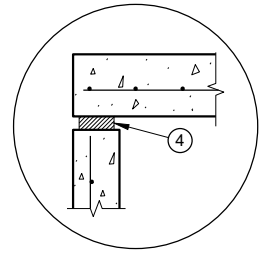


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

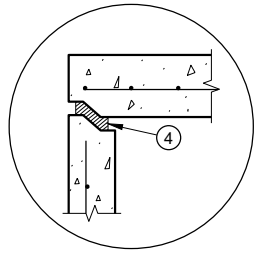


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

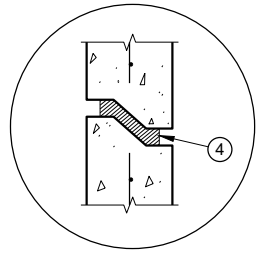
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

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 MANHOLE 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. 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 MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

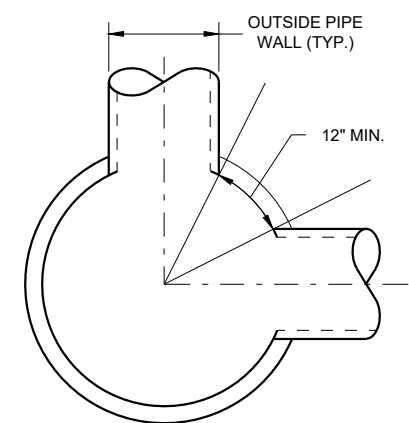
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

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 "D".

- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ② SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- ③ SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- ④ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).
- ⑤ SEE MANHOLE COVER OPENING MATRIX.



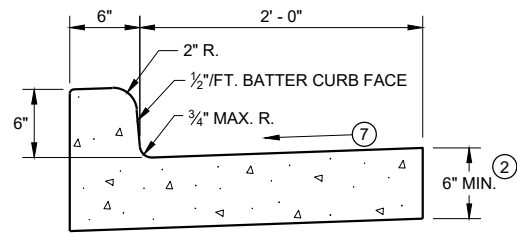
MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

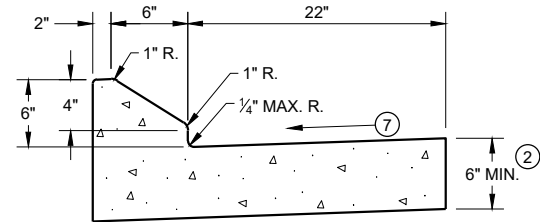
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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

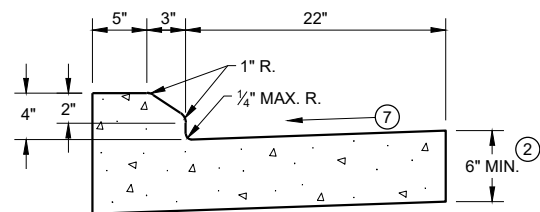
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER



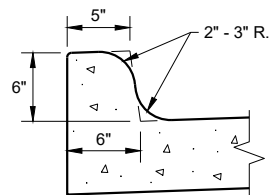
TYPES A^① & D



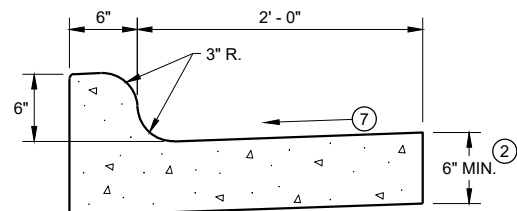
6" SLOPED CURB TYPES G^① & J



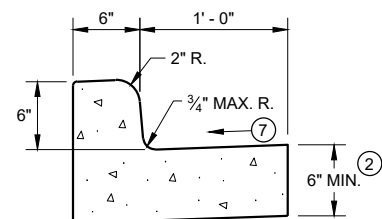
4" SLOPED CURB TYPES G^① & J



TYPES K^① & L
(OPTIONAL CURB SHAPE)

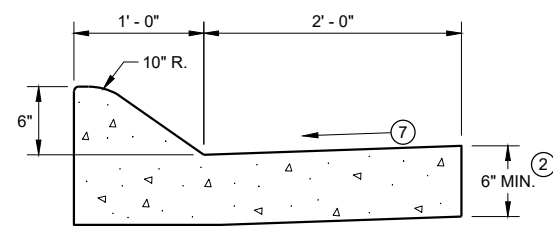


TYPES K^① & L
CONCRETE CURB AND GUTTER 30"

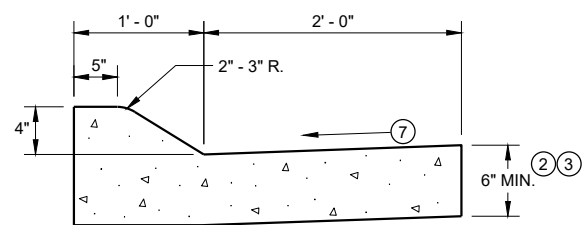


TYPES A^① & D

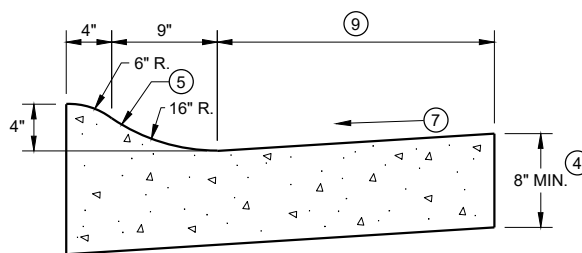
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D

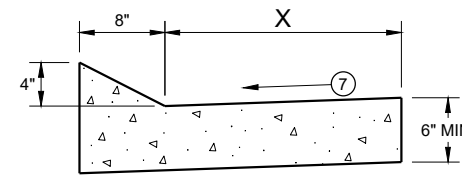


4" SLOPED CURB TYPES A^① & D
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

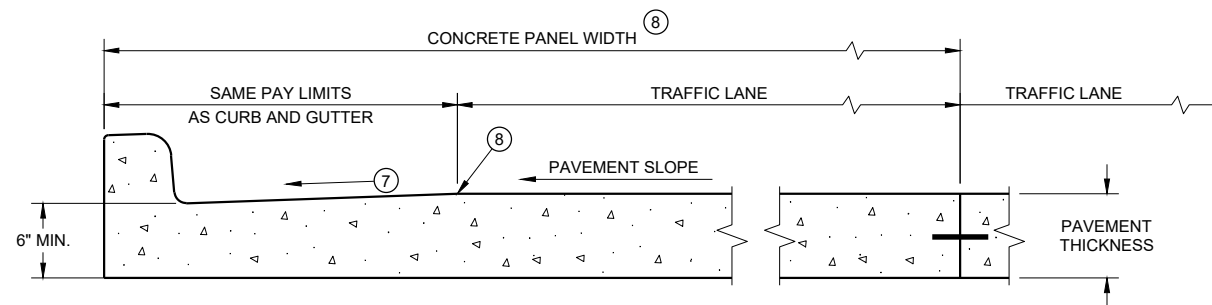


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

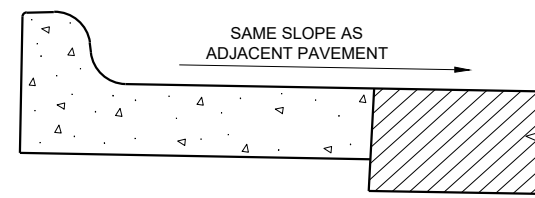
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT* WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

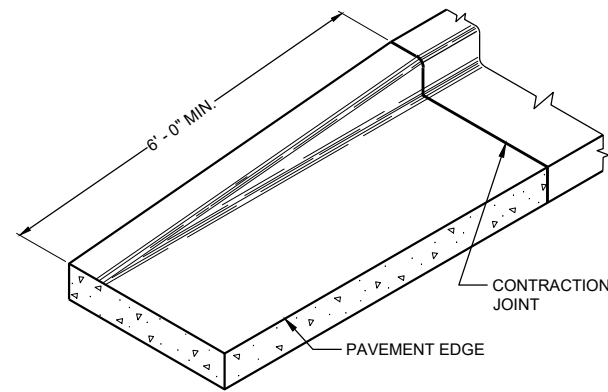
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

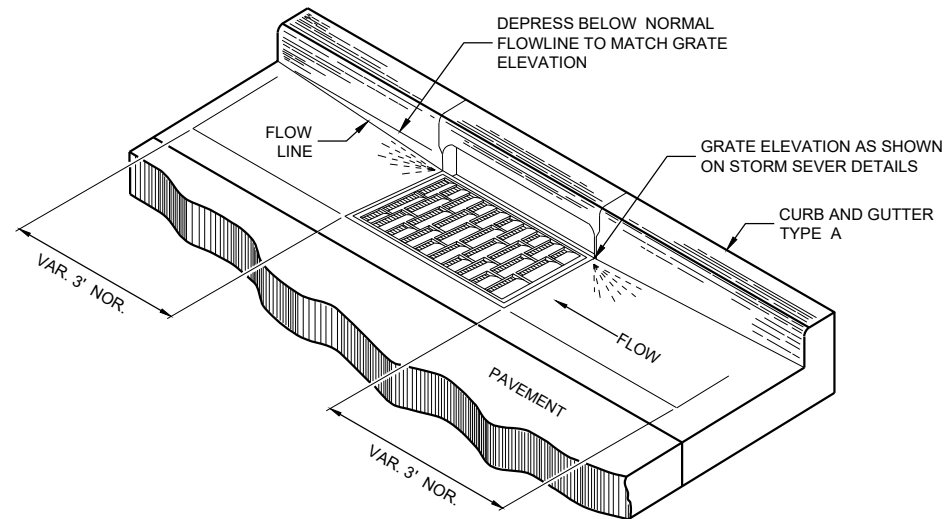
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

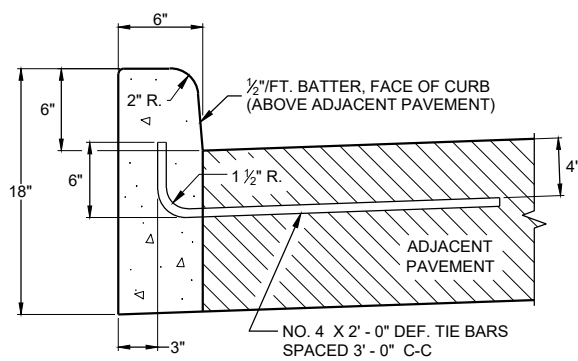
GENERAL NOTES

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

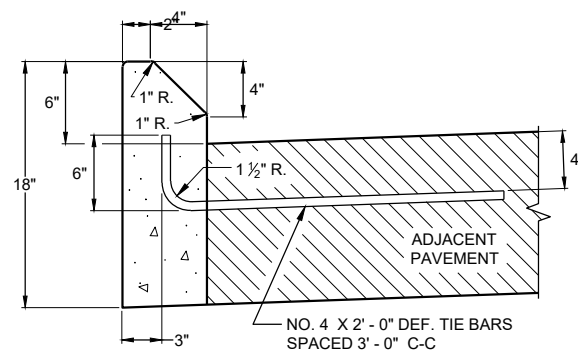
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

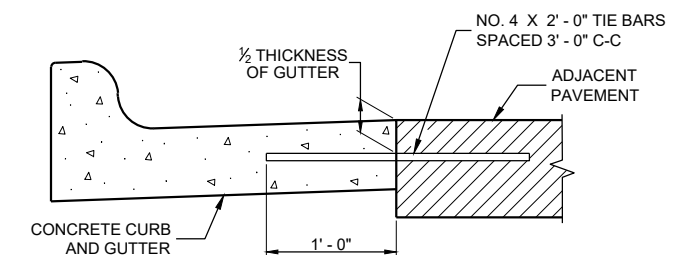
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL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



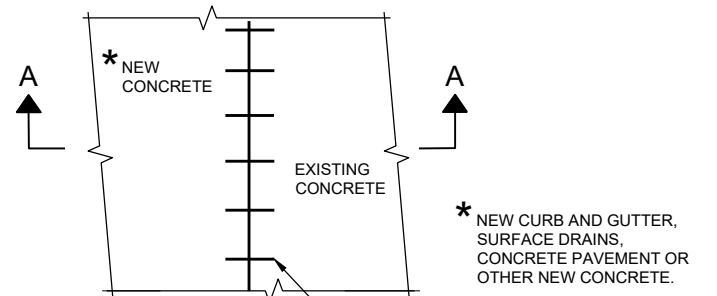
TYPES A^① & D



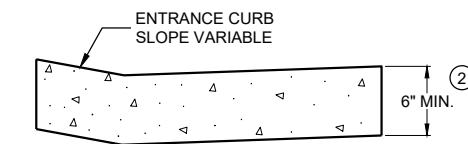
**TYPES G^① & J
CONCRETE CURB**



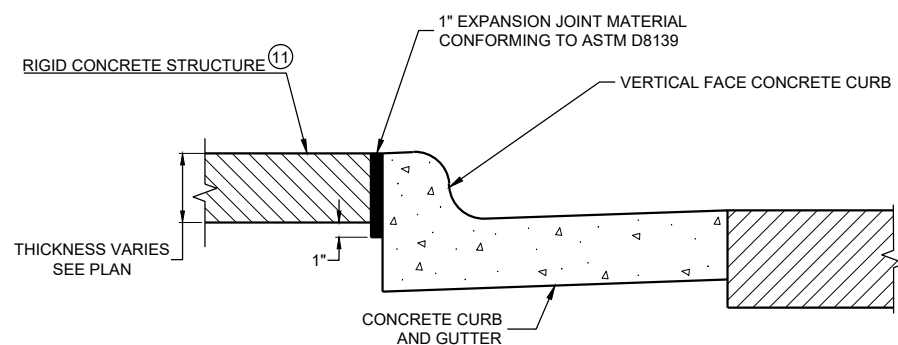
TYPICAL TIE BAR LOCATION^①



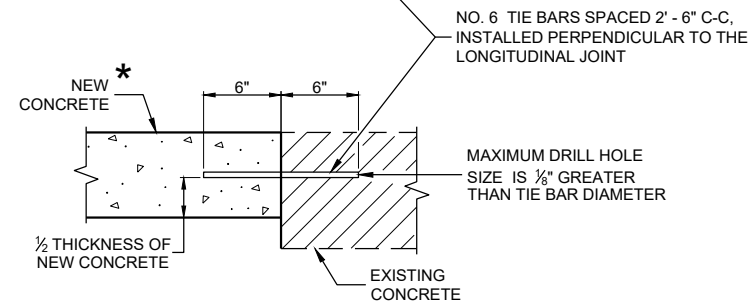
PLAN VIEW



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



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



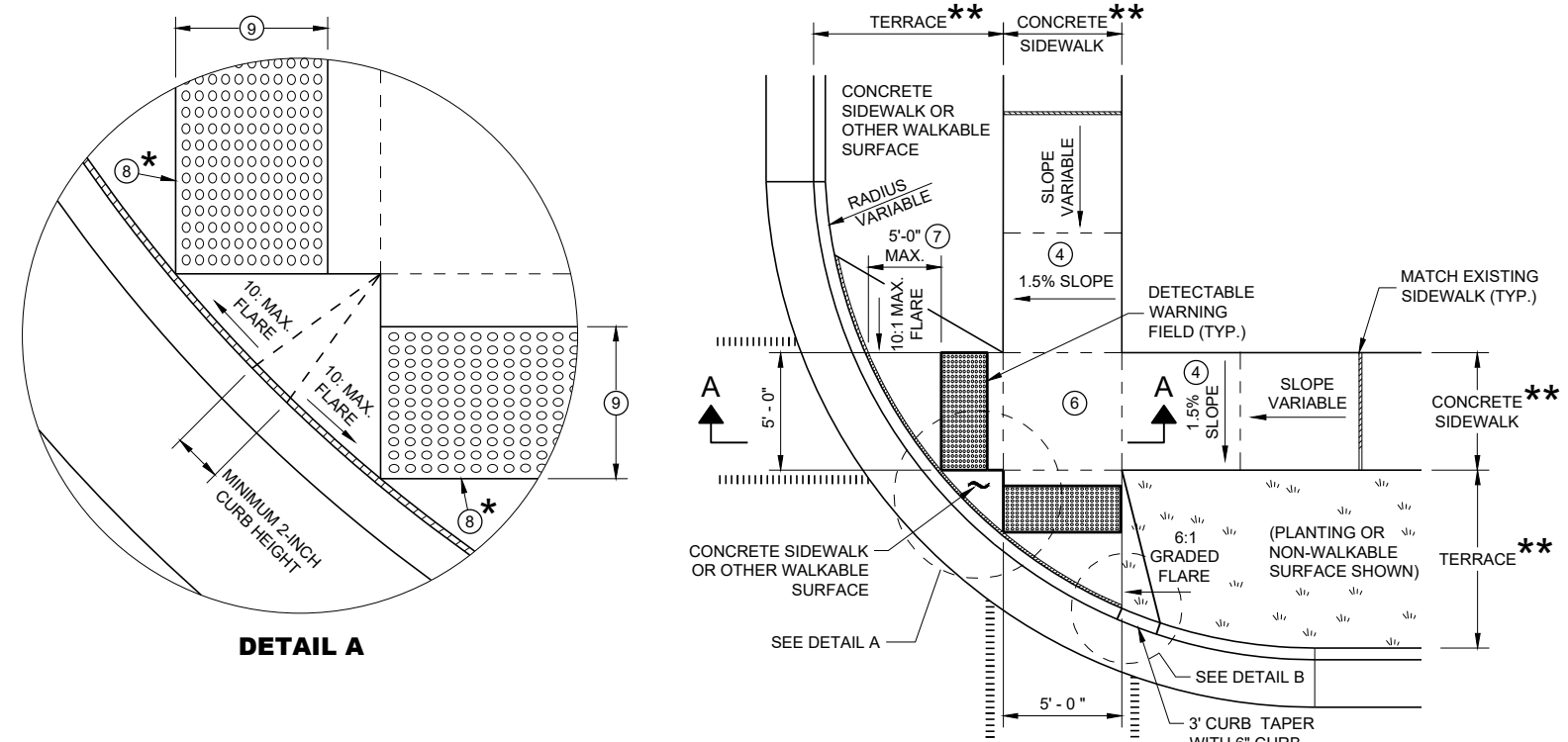
**SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT**

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

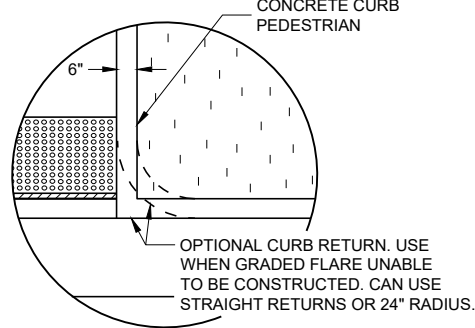
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2023 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

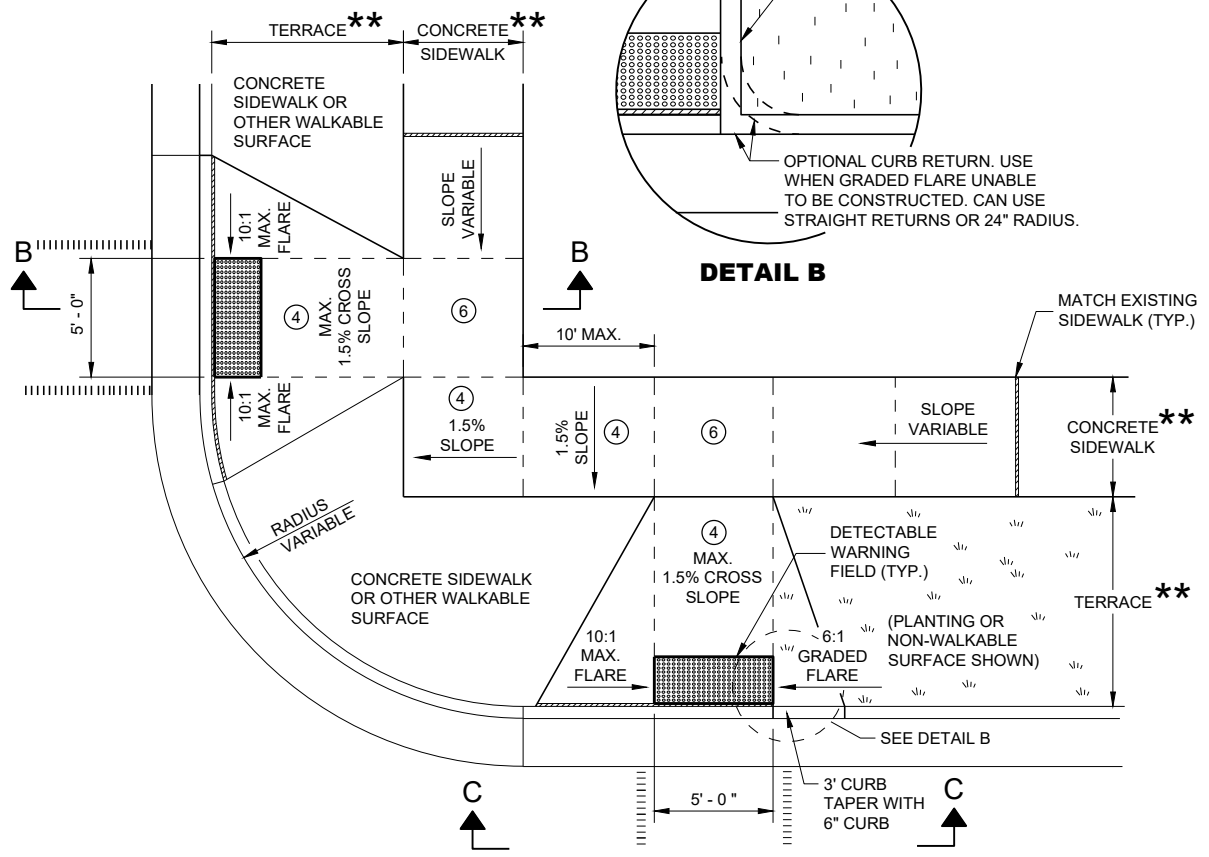
FHWA



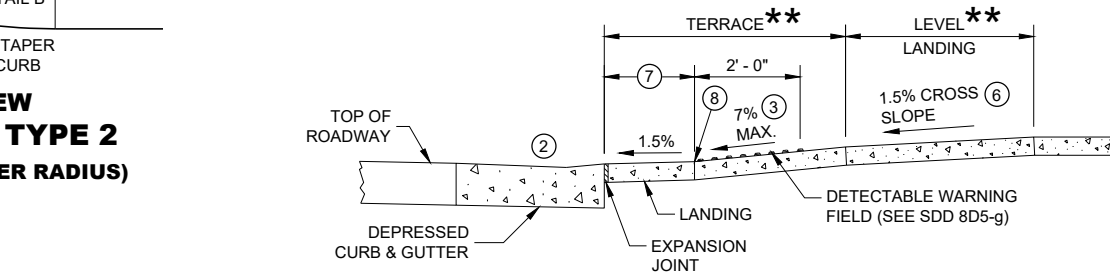
PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)



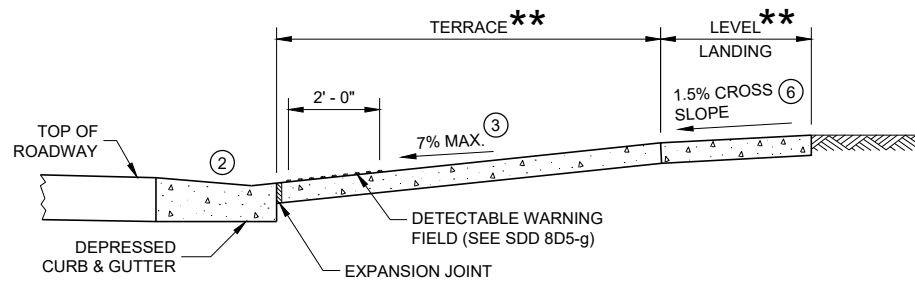
DETAIL B



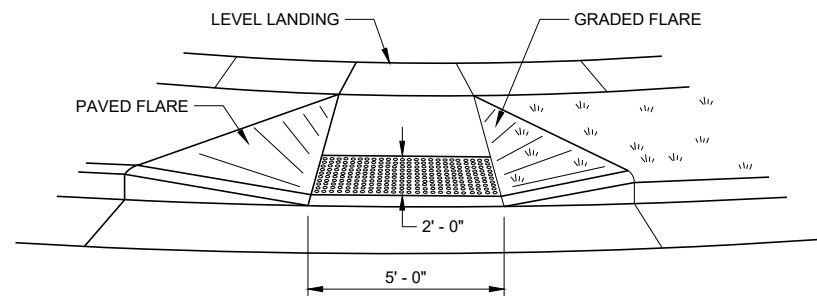
PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)



SECTION A - A FOR TYPE 2



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

GENERAL NOTES

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

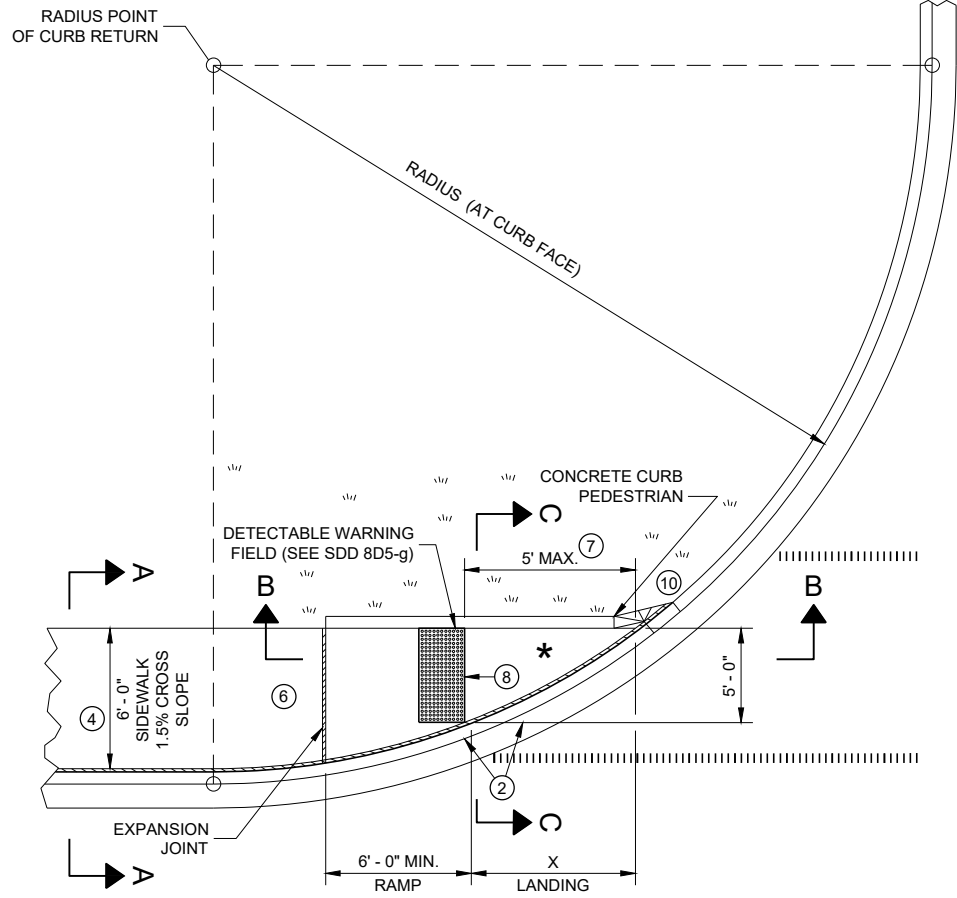
- * MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

LEGEND

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

**CURB RAMPS
TYPE 2 AND 3**

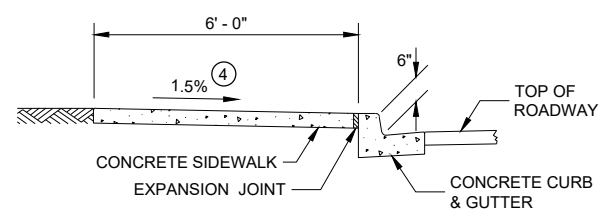
STATE OF WISCONSIN
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**PLAN VIEW
CURB RAMP TYPE 4A**

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

INTERMEDIATE RADII CAN BE INTERPOLATED



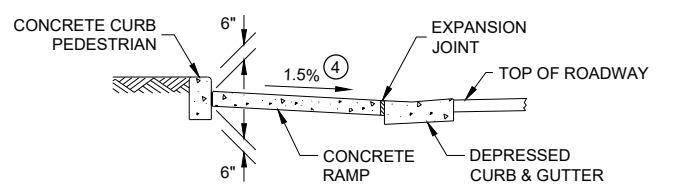
SECTION A - A FOR TYPE 4A

GENERAL NOTES

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

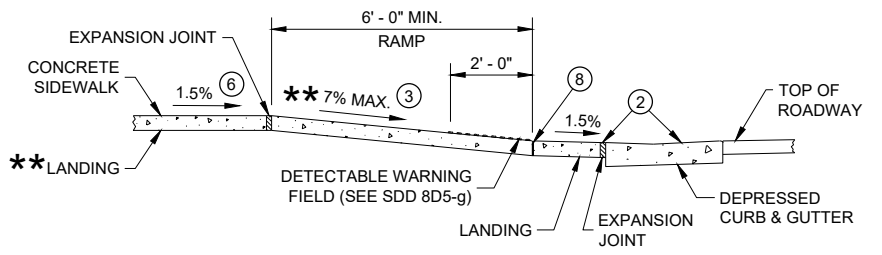
LEGEND

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



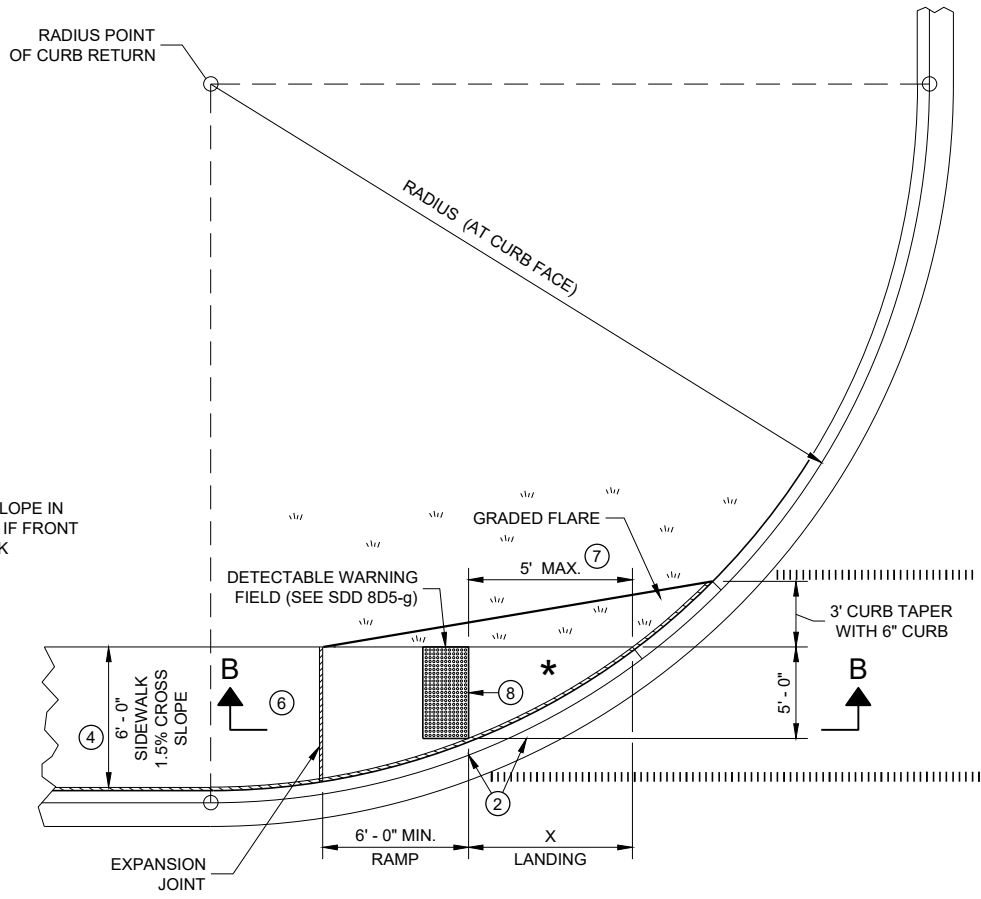
SECTION C - C FOR TYPE 4A

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

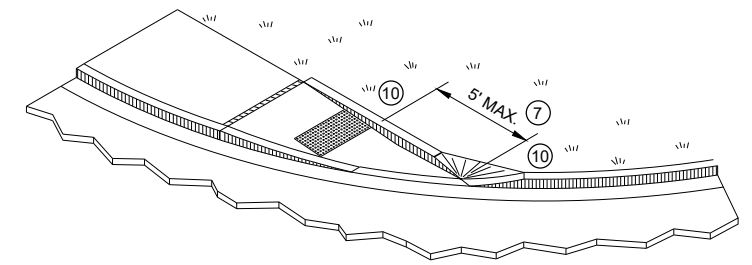


**SECTION B - B FOR
TYPE 4A AND TYPE 4A1**

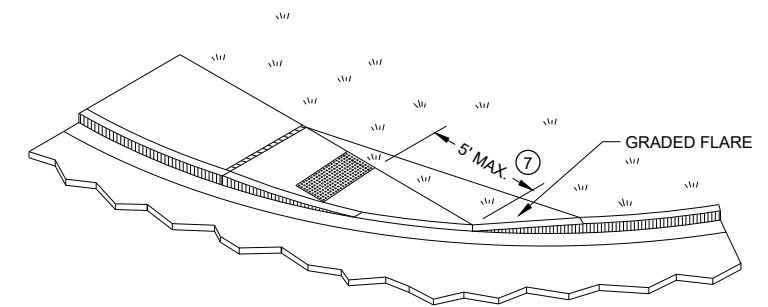
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW
CURB RAMP TYPE 4A1**



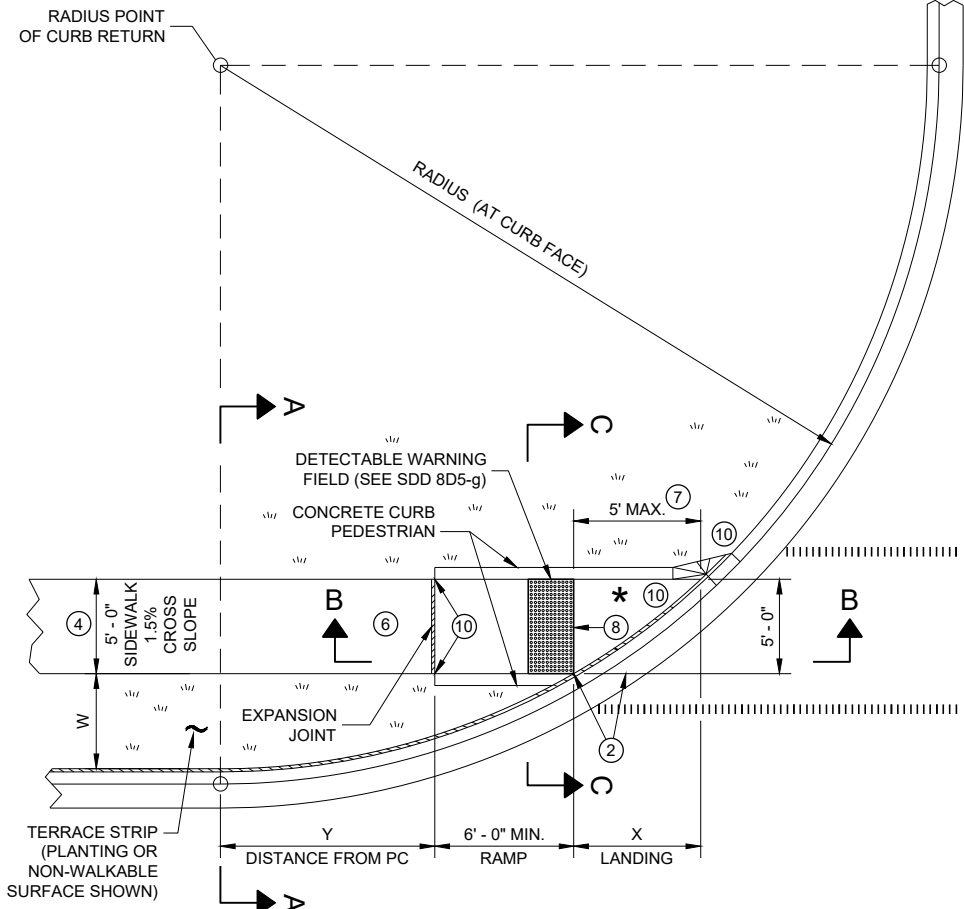
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



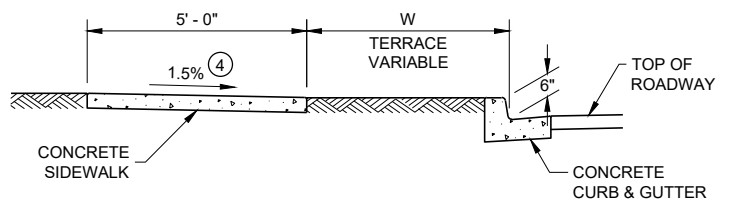
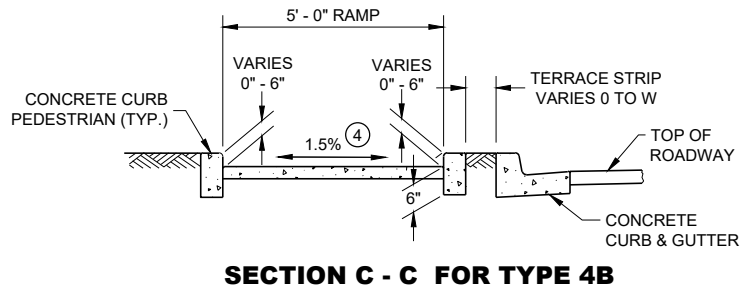
RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' -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

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

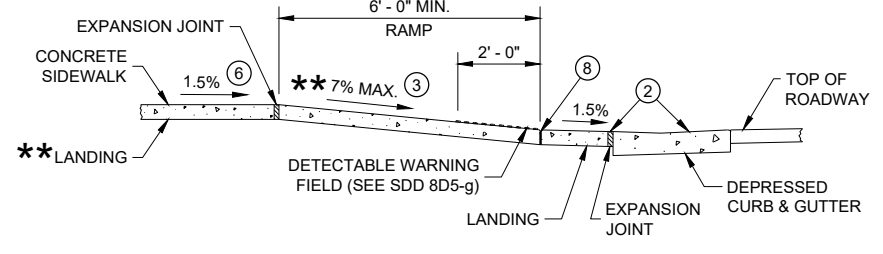
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

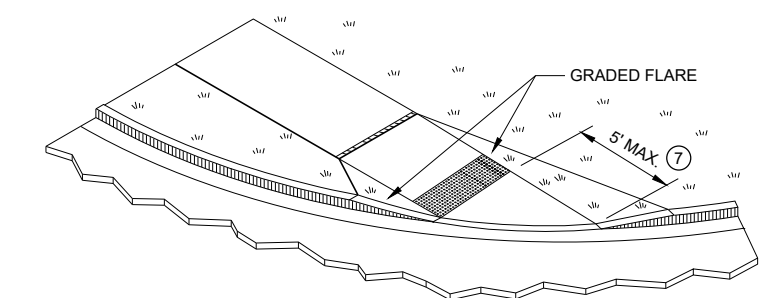
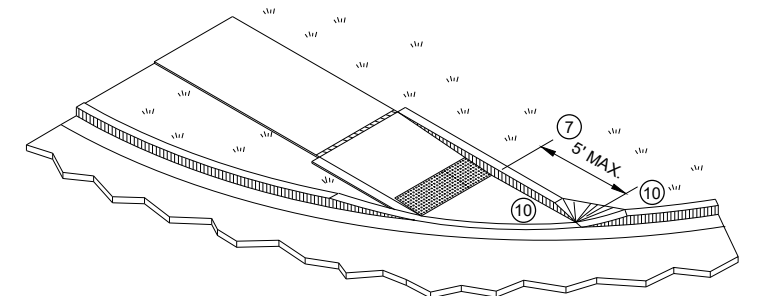
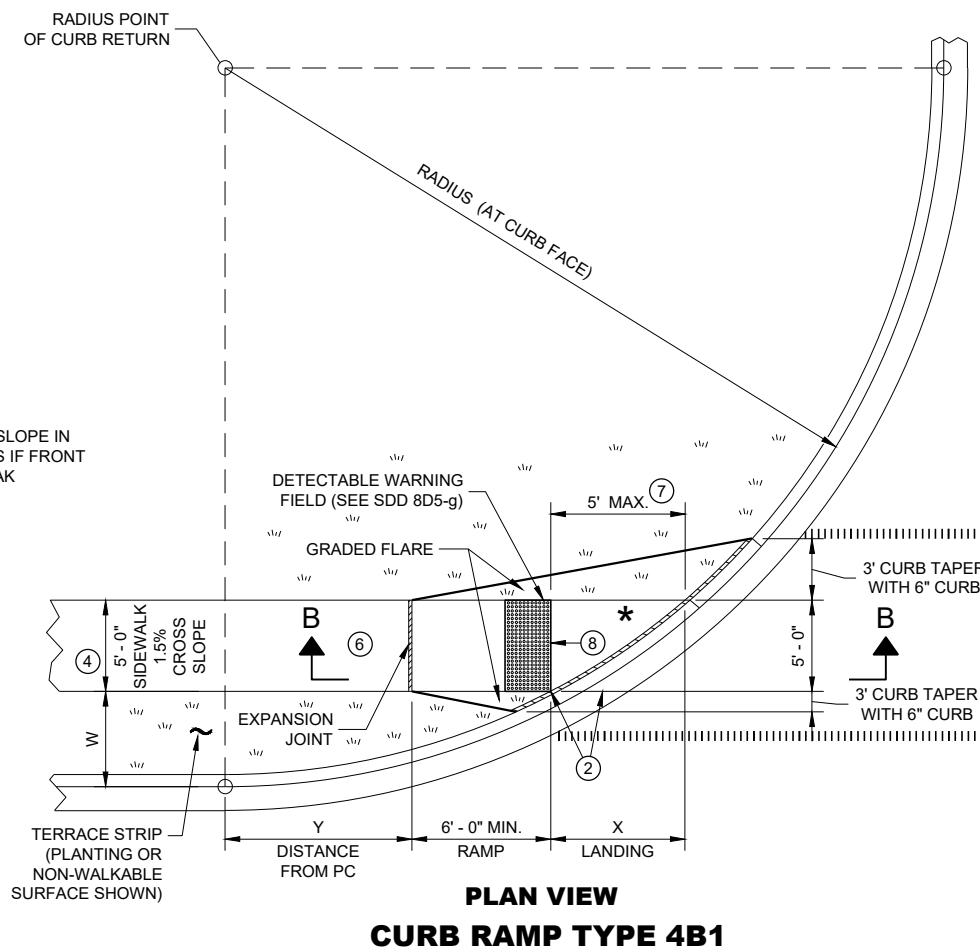
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE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



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



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

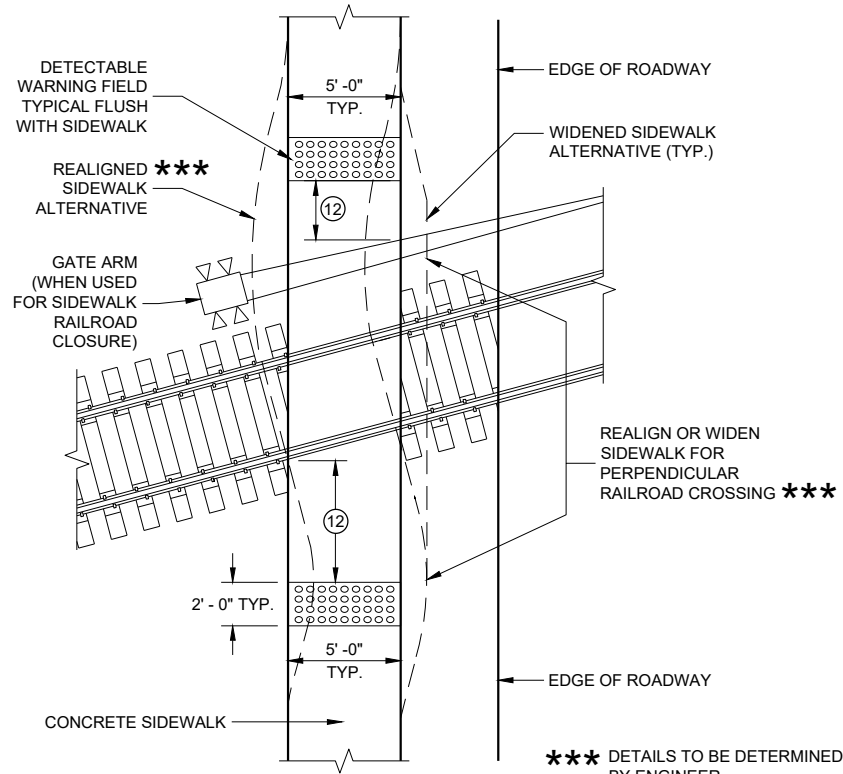


**CURB RAMPS
TYPE 4B AND 4B1**

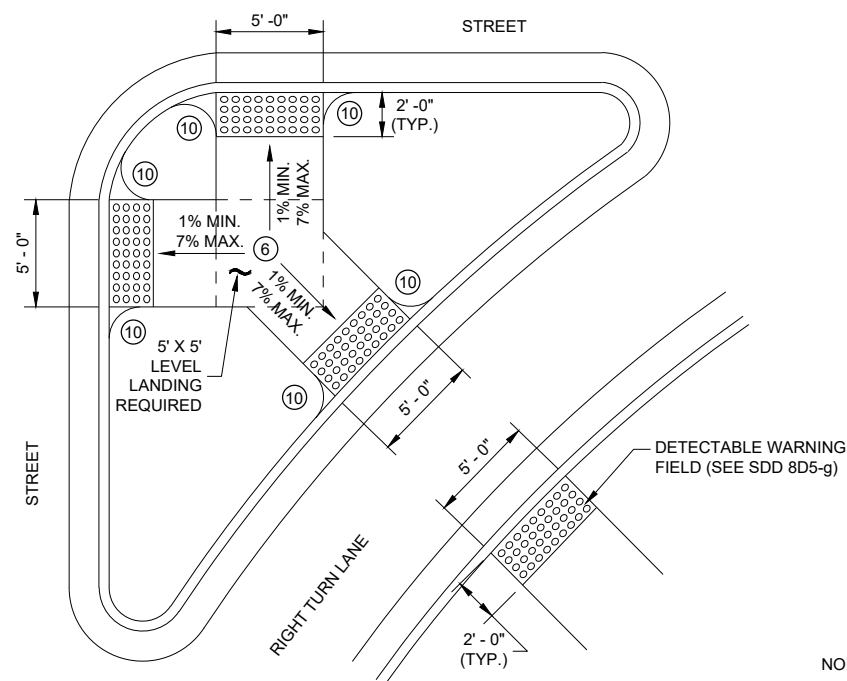
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20d

SDD 08D05 - 20d

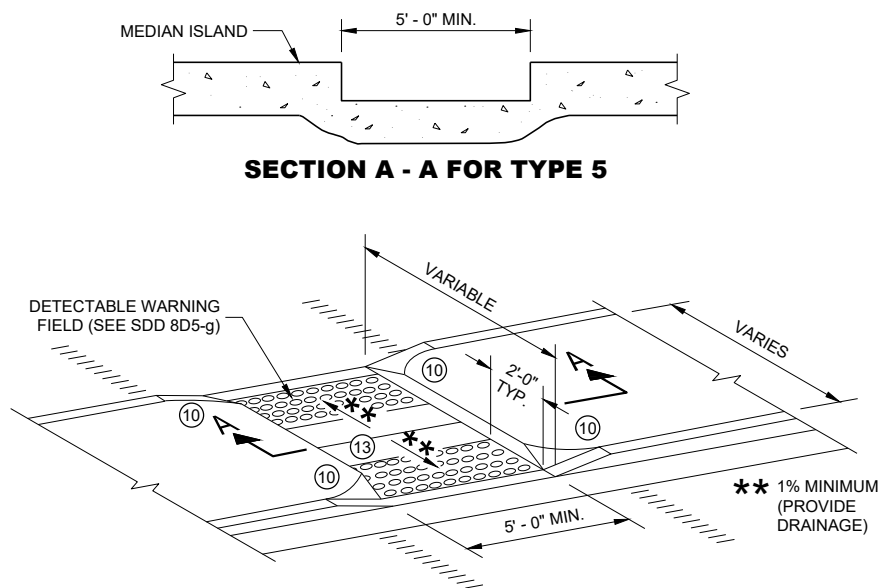


CURB RAMP TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

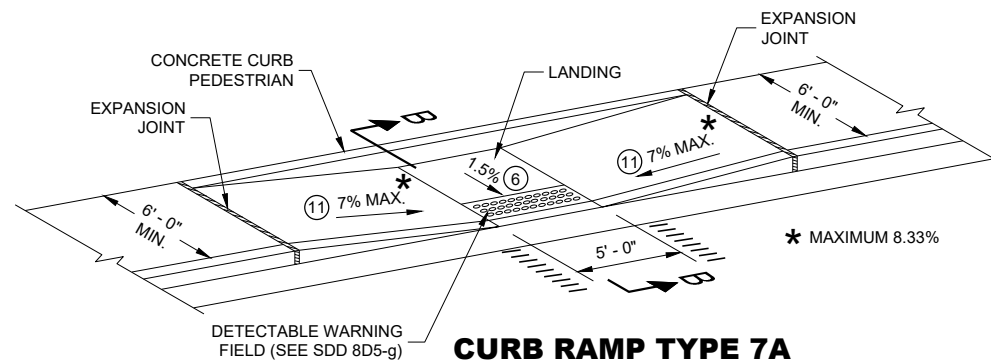


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

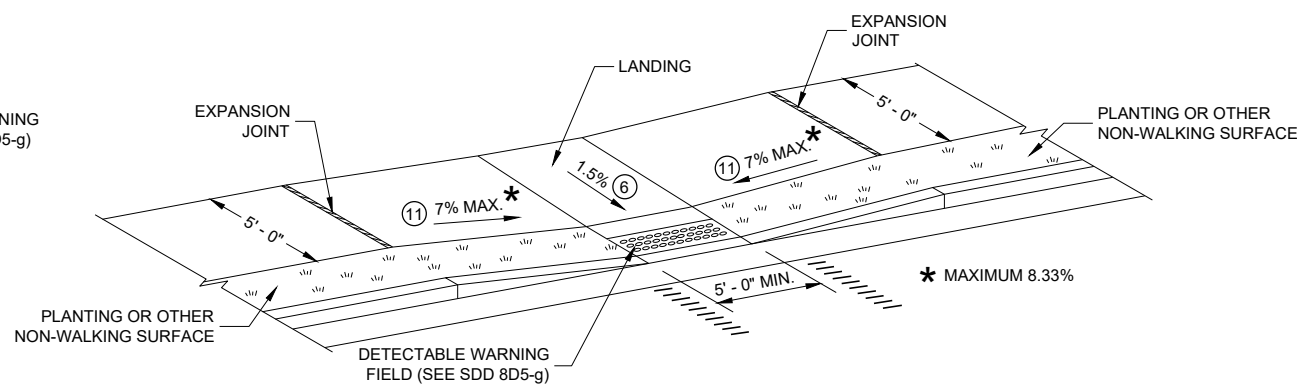
REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A
MID BLOCK CROSSING



CURB RAMP TYPE 7B
MID BLOCK CROSSING

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

GENERAL NOTES

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

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

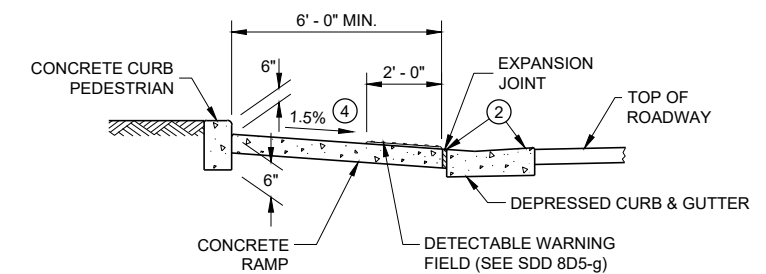
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

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

LEGEND

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

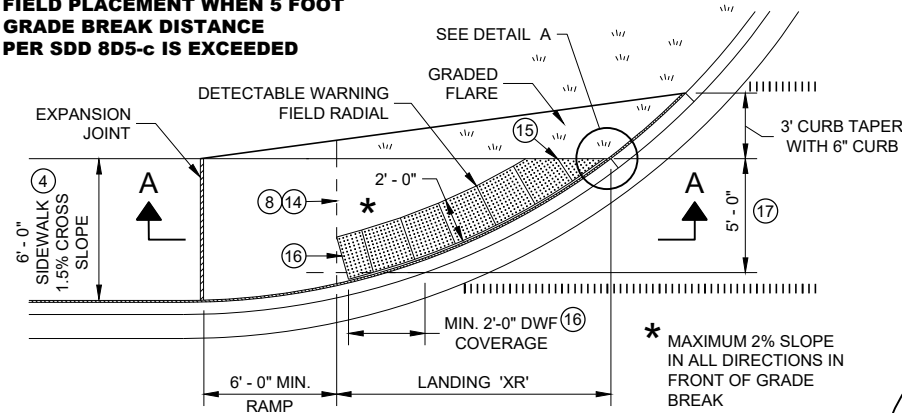


SECTION B - B FOR TYPE 7A

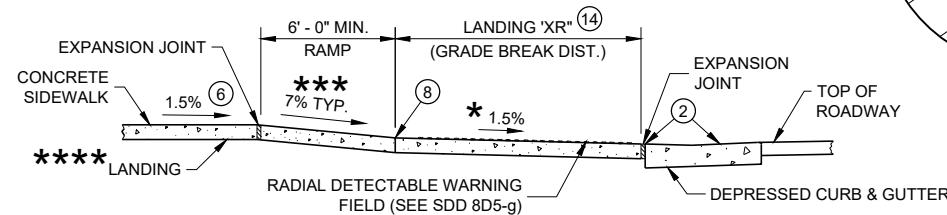
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

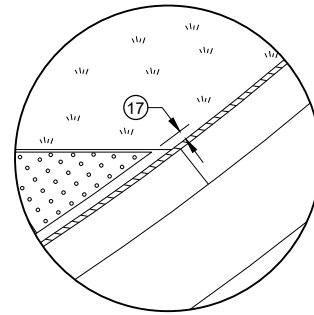


SECTION A - A FOR TYPE 4A1

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

*** MAXIMUM 8.33%

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

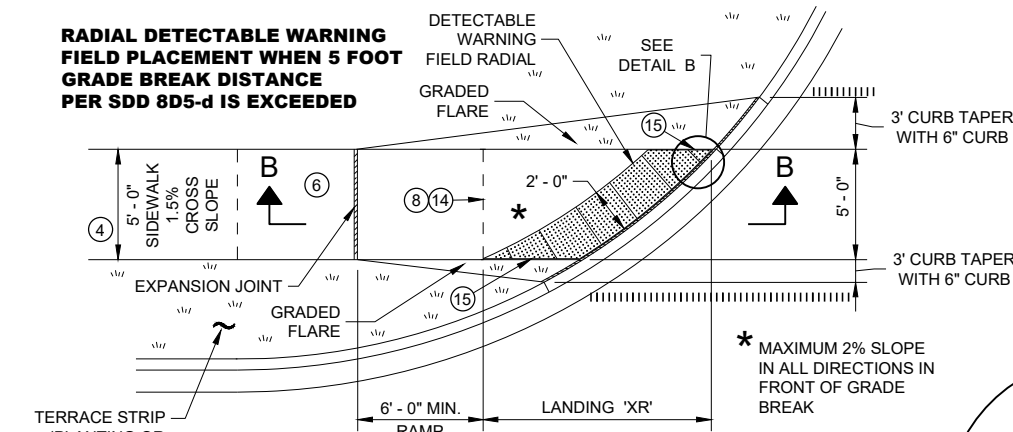


DETAIL A

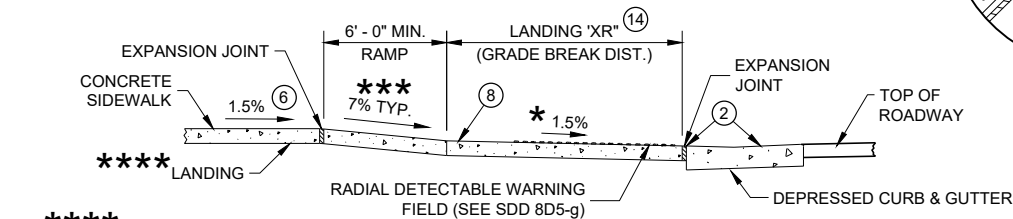
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- 8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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



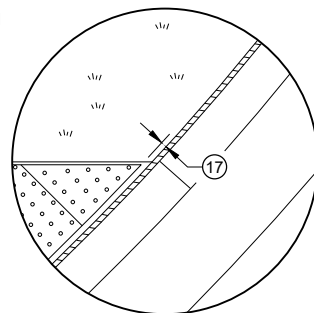
PLAN VIEW CURB RAMP TYPE 4B1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

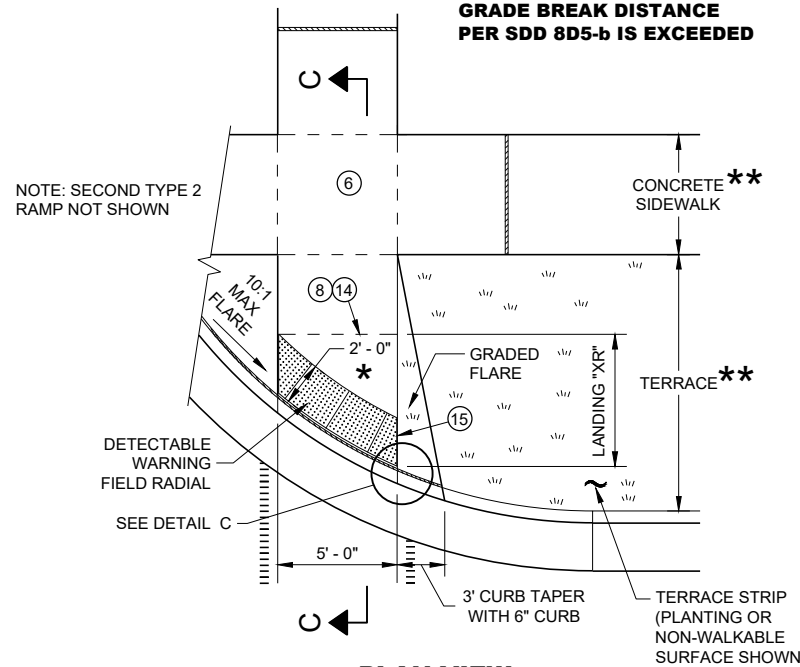
**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%



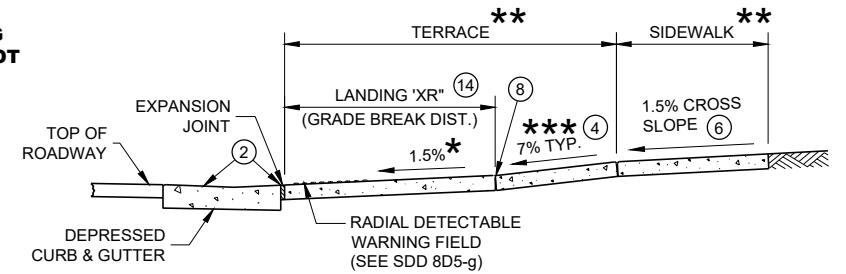
DETAIL B

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



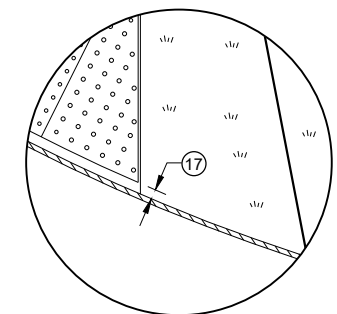
PLAN VIEW CURB RAMP TYPE 2 (GRADE BREAK DISTANCE GREATER THAN 5 FEET) (ON LINE WITH SIDEWALK)

NOTE: SECOND TYPE 2 RAMP NOT SHOWN



SECTION C - C FOR TYPE 2

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



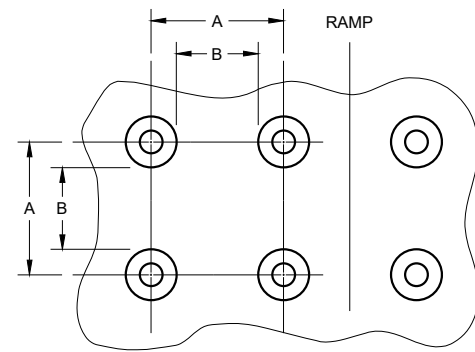
DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

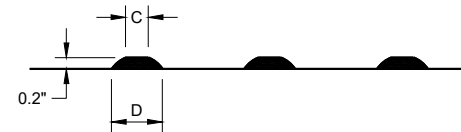
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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

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

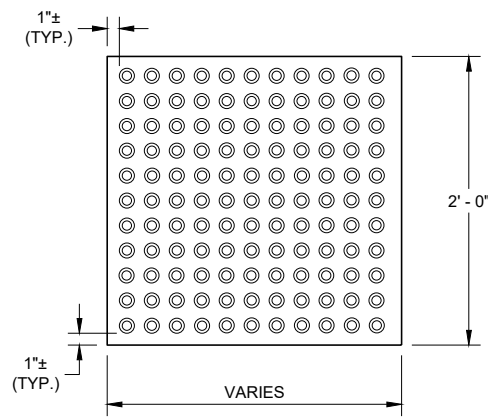


PLAN VIEW

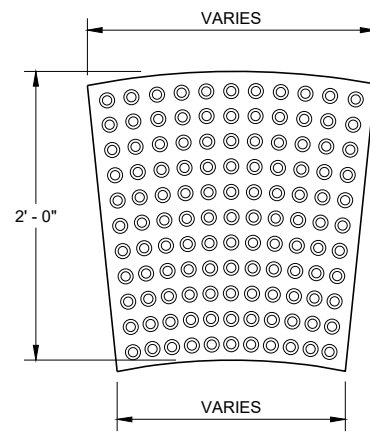


ELEVATION VIEW

**TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL**

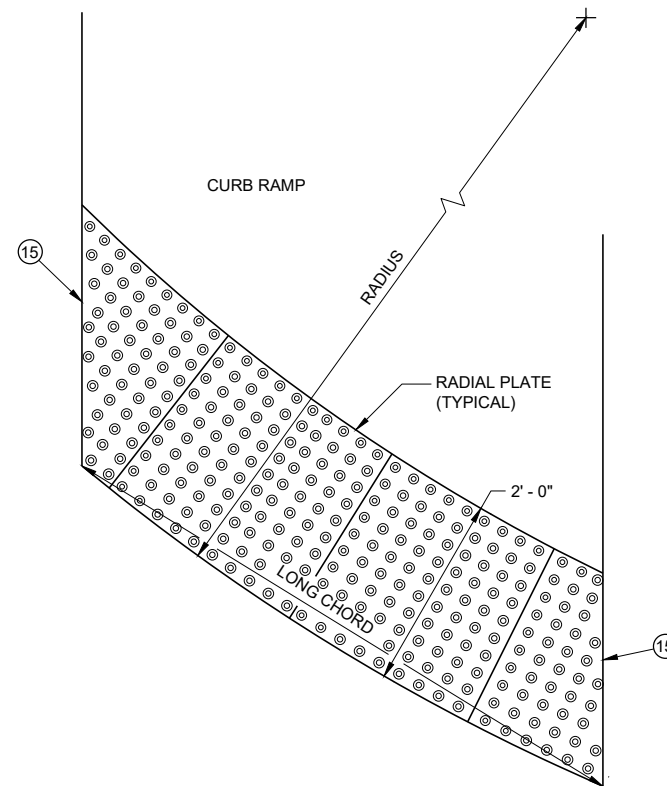


**RECTANGULAR
PLATES**

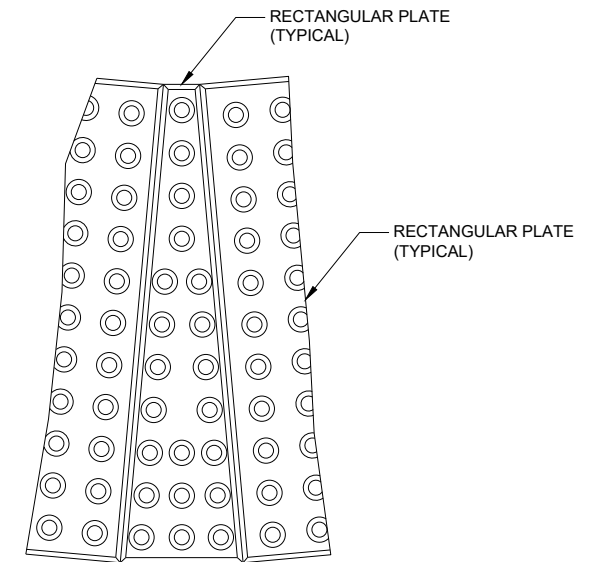


**RADIAL
PLATES**

**PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)**



**PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES**



**PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL**

GENERAL NOTES

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

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

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

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

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

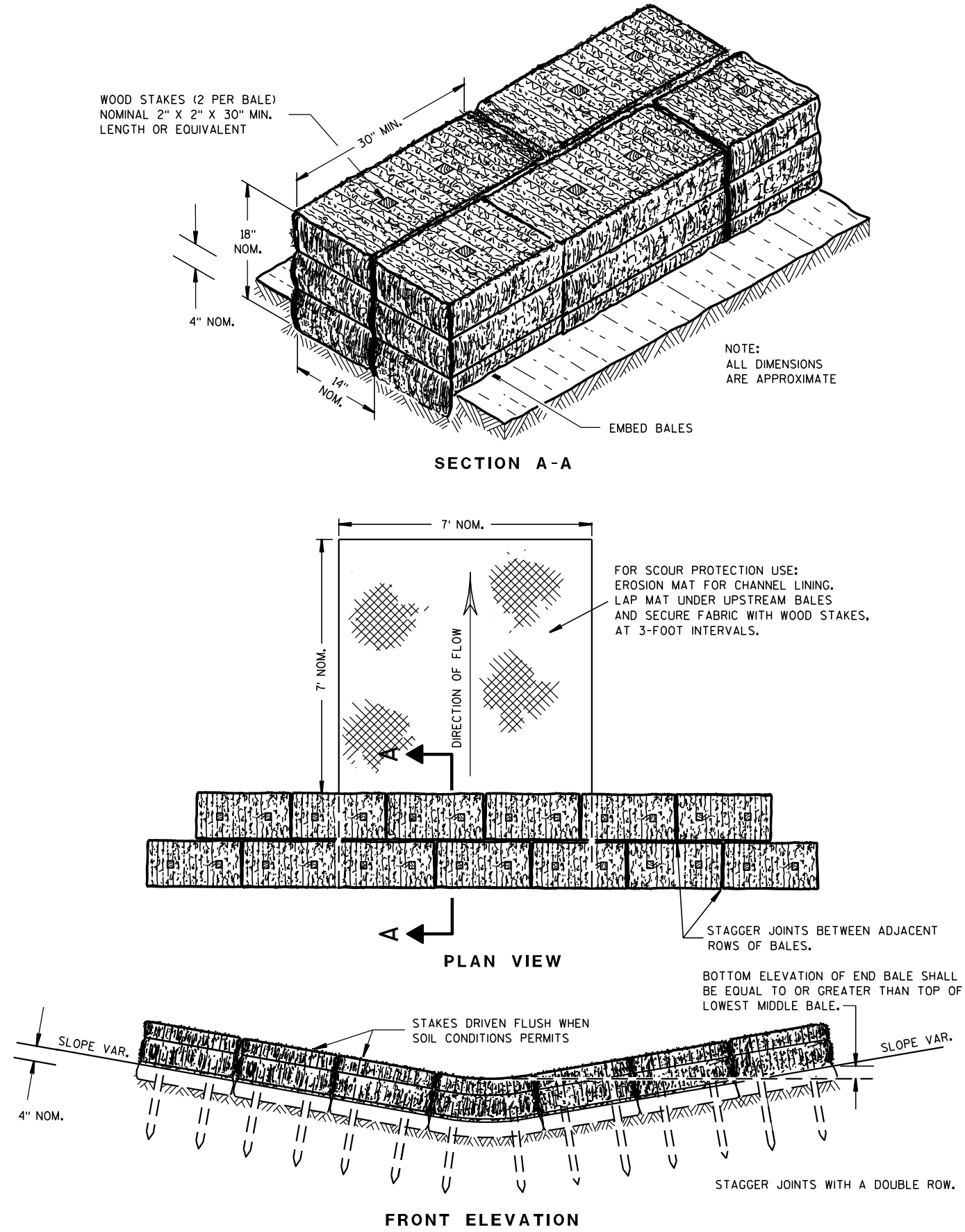
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

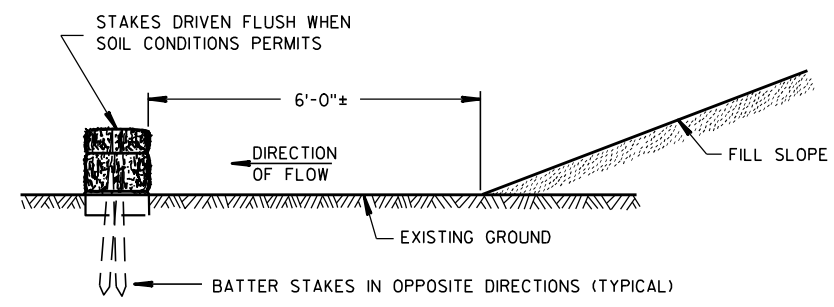
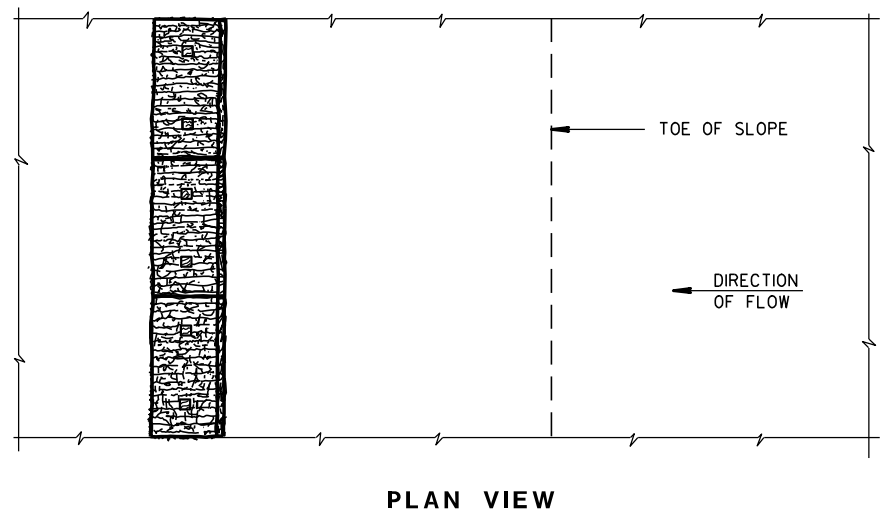
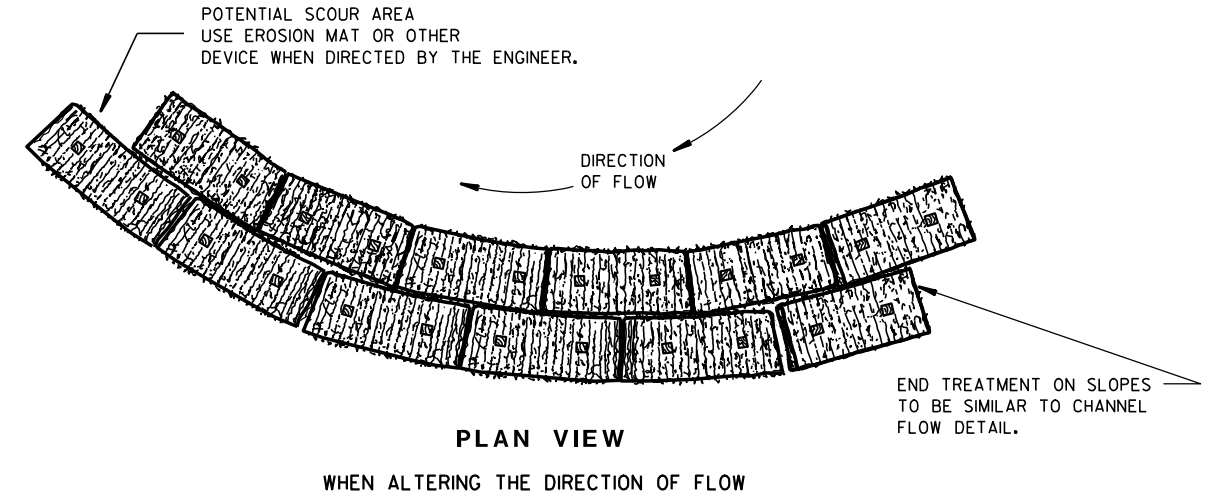


TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

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

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

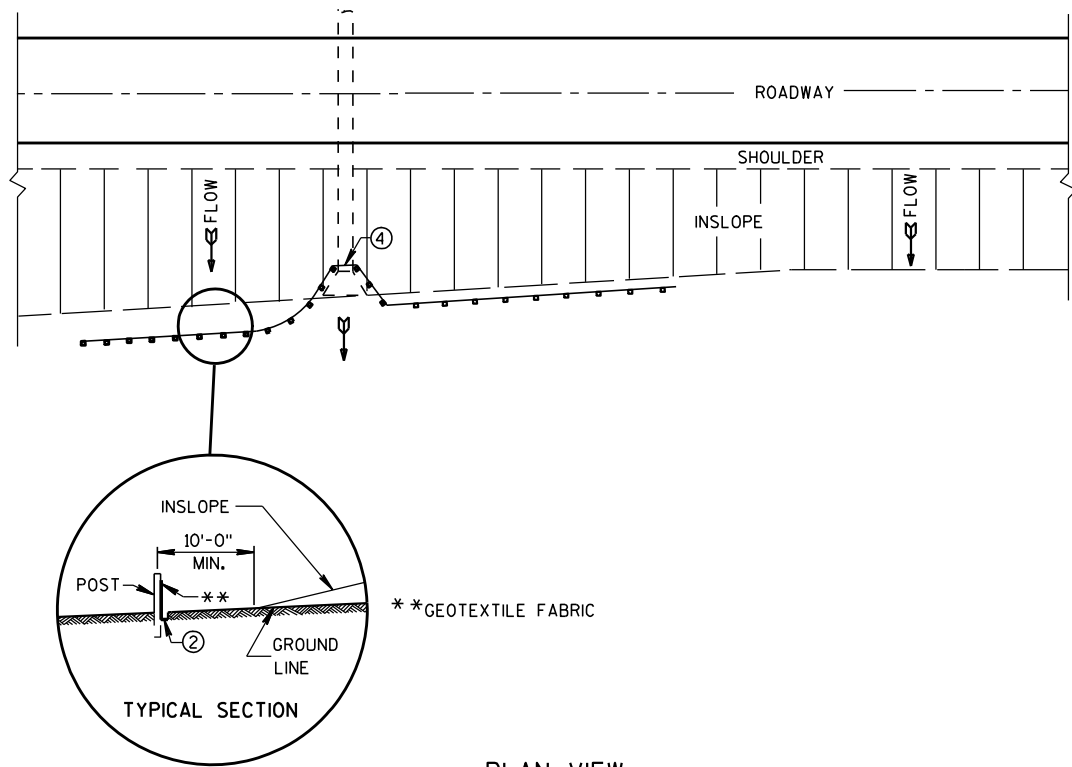


EROSION BALES FOR SHEET FLOW

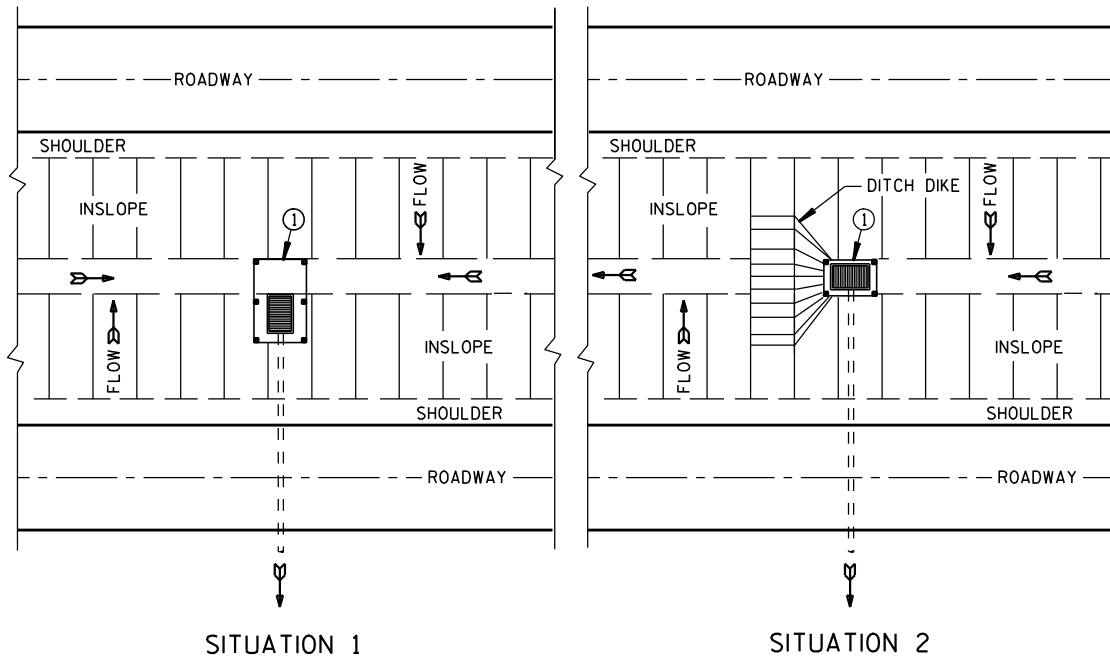
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

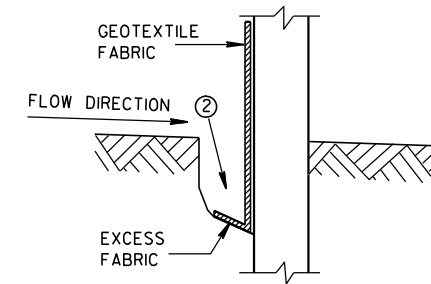


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

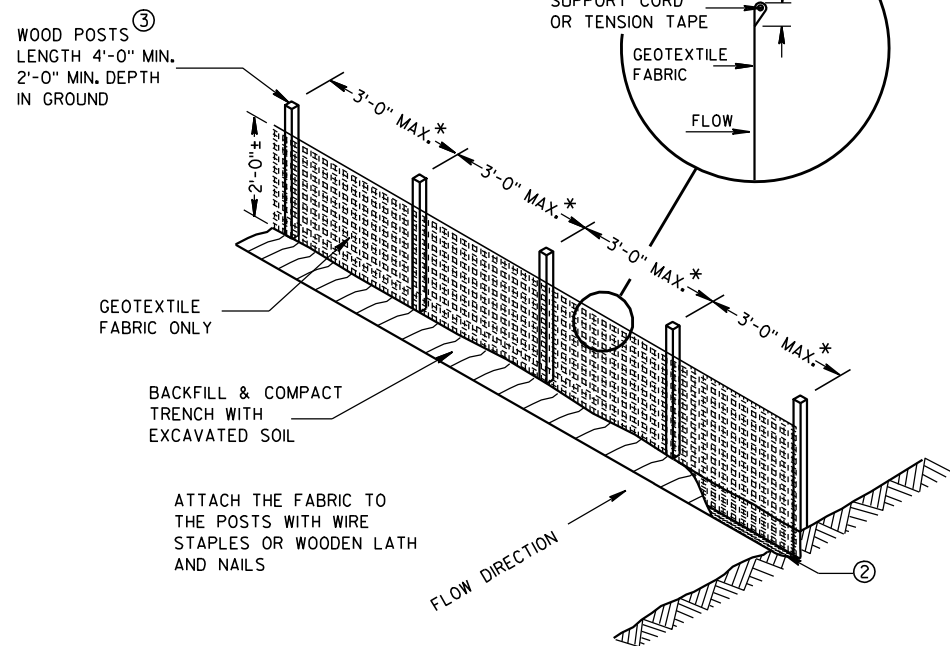
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



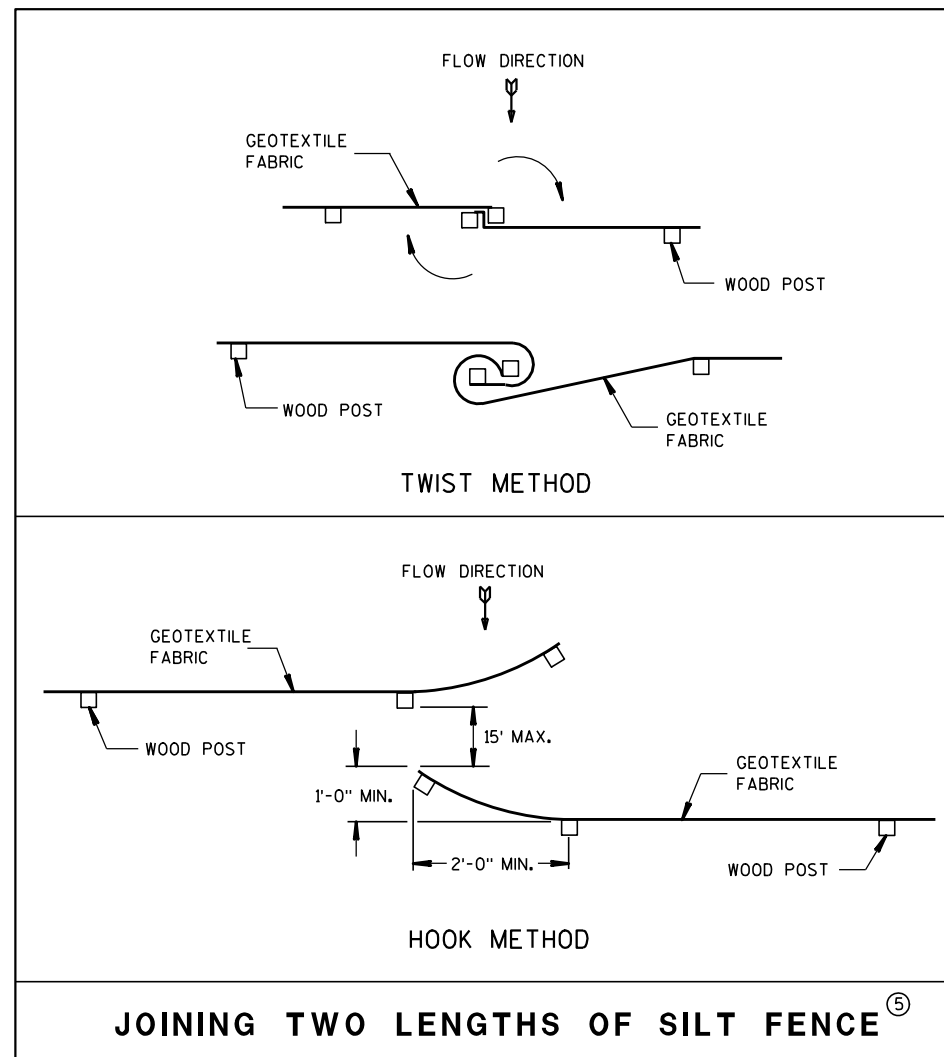
TRENCH DETAIL

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

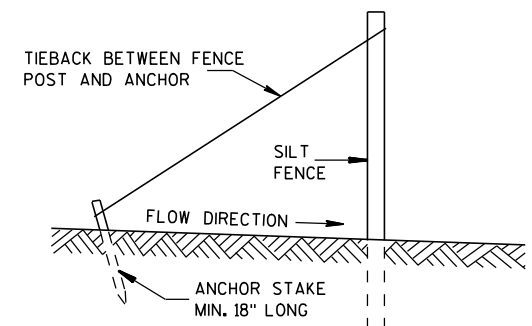


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

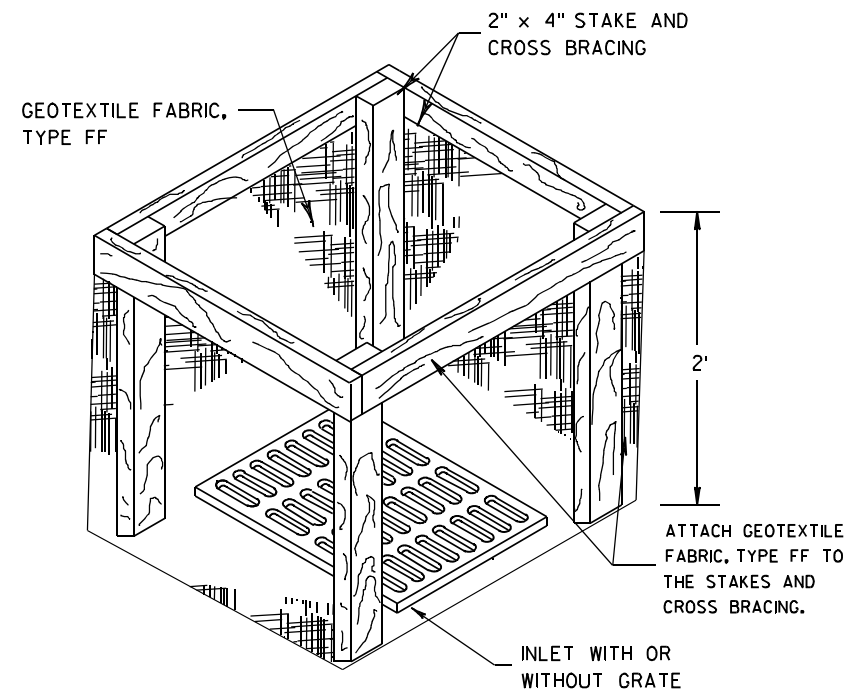
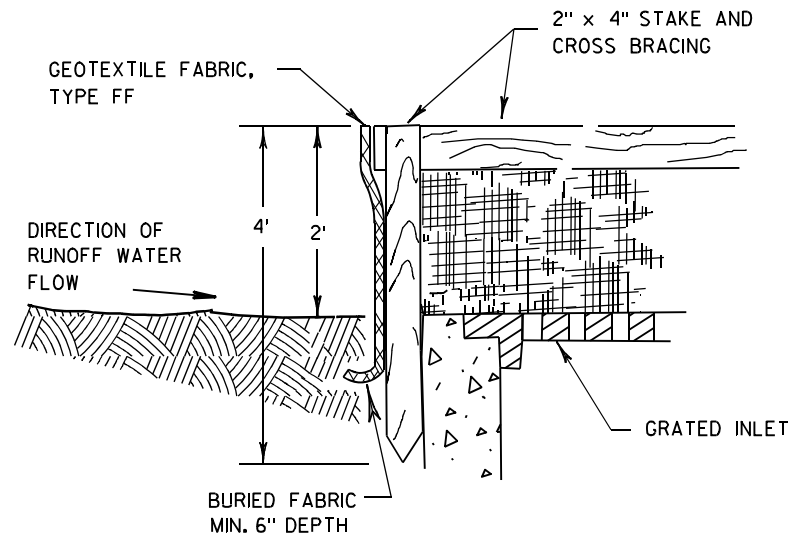


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



INLET PROTECTION, TYPE A

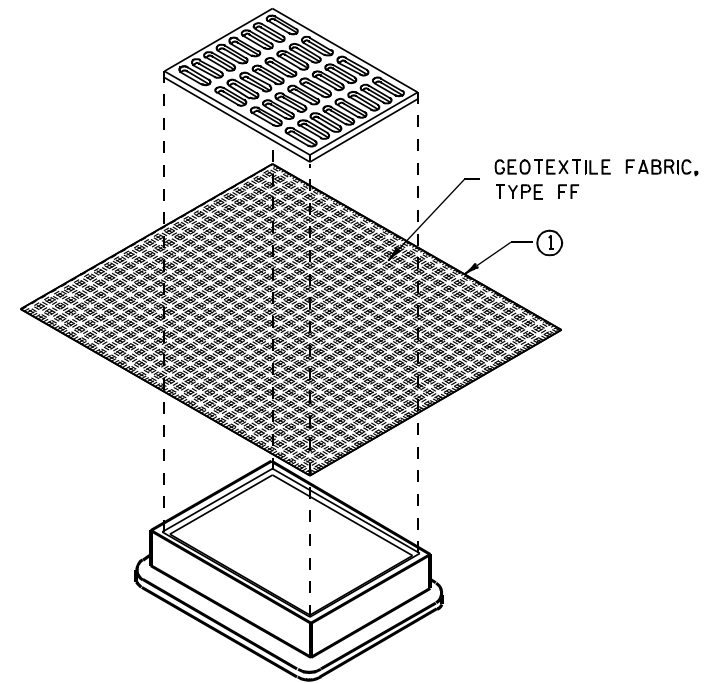
GENERAL NOTES

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

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

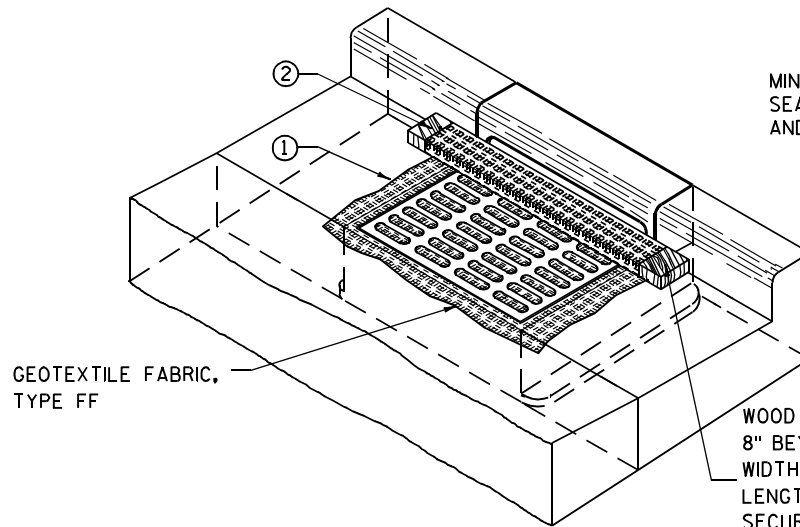
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

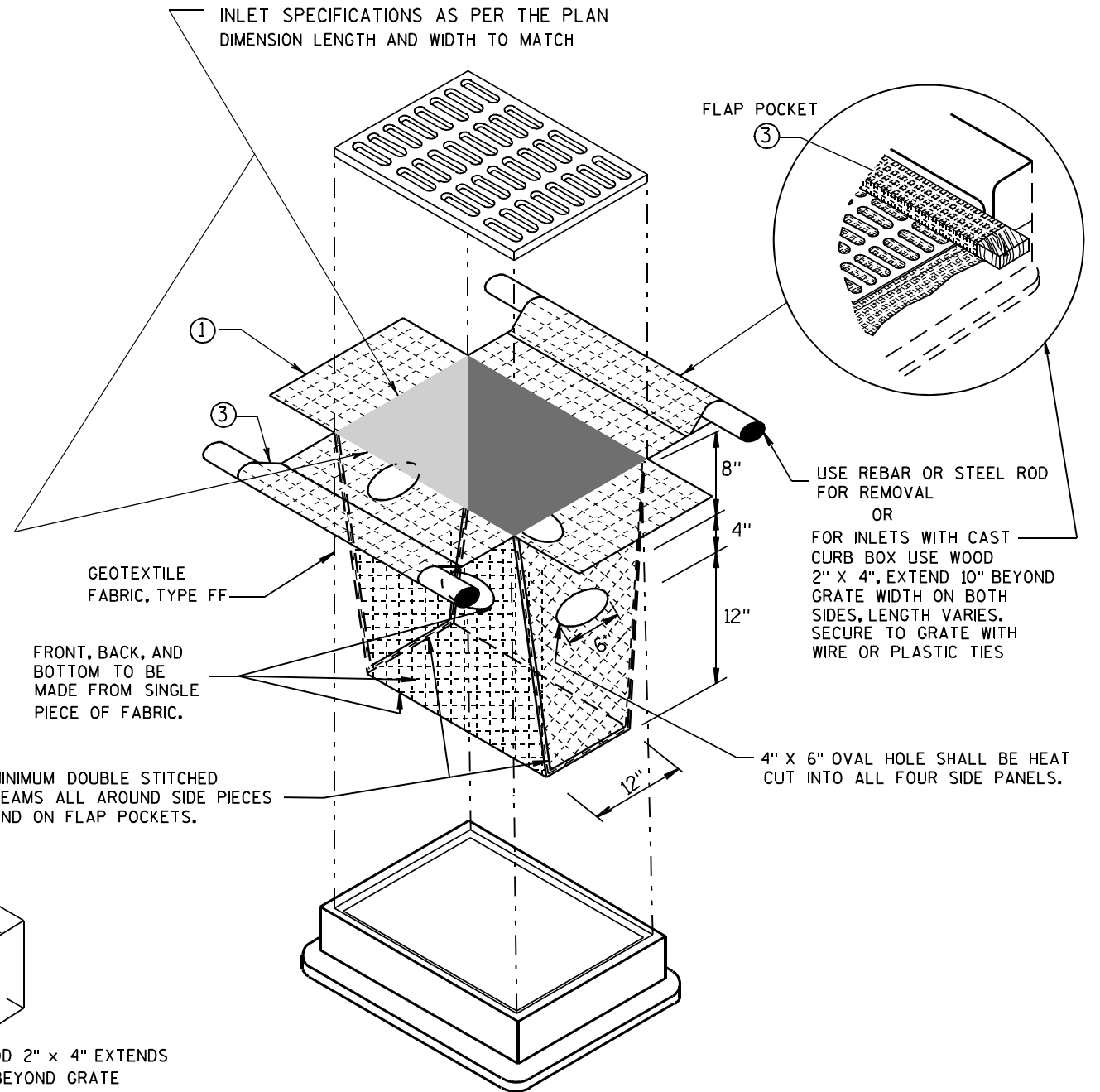
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



INLET PROTECTION, TYPE D

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

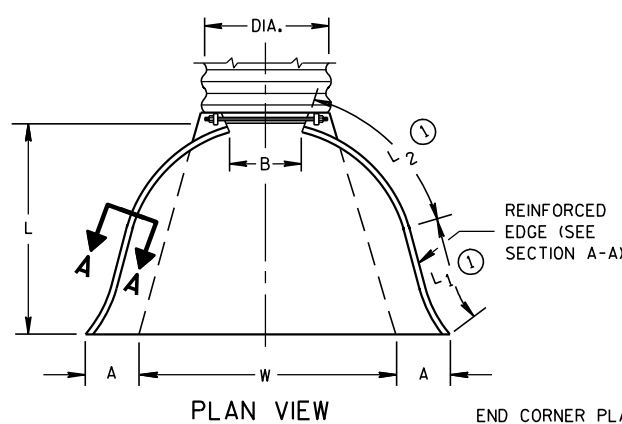
INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Connestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

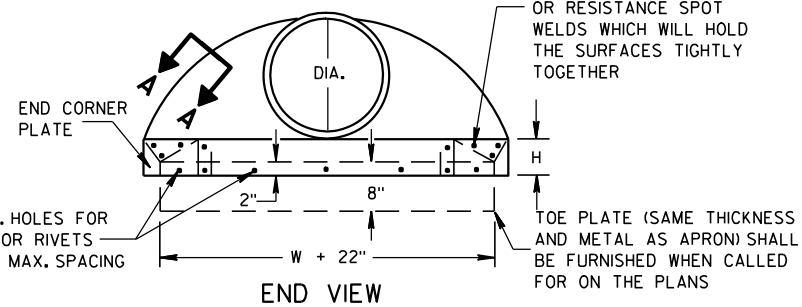
* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	30-35	78	21	99	108	6	2 to 1	
78	7 1/2	30-35	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

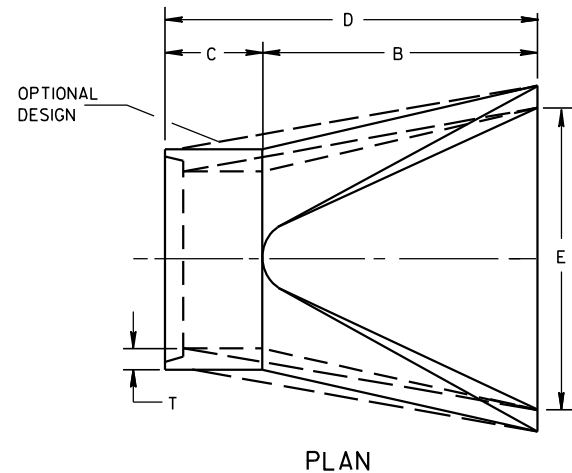
* MINIMUM
** MAXIMUM



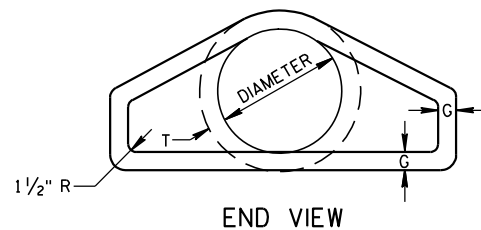
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



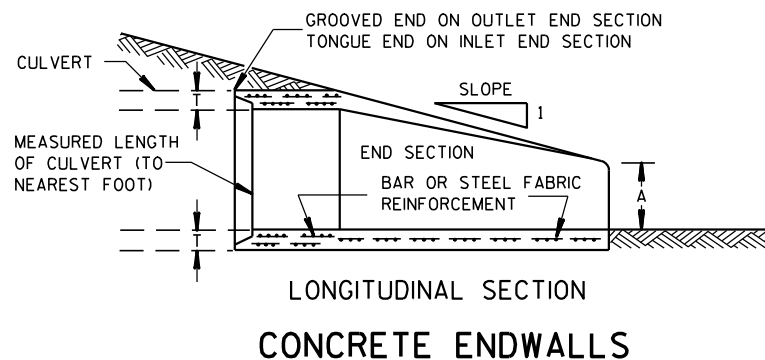
SIDE ELEVATION
METAL ENDWALLS



PLAN

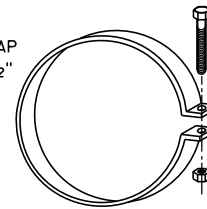


END VIEW

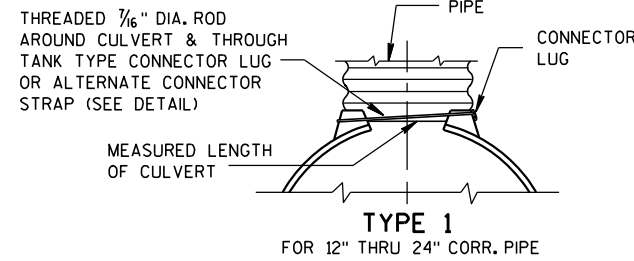


LONGITUDINAL SECTION
CONCRETE ENDWALLS

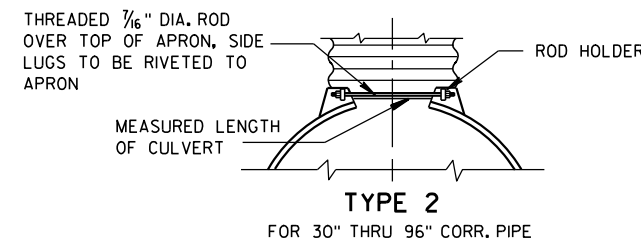
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



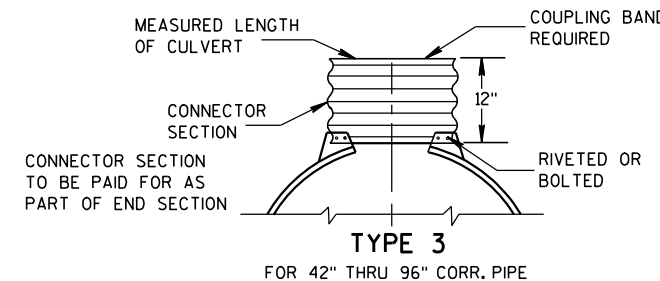
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



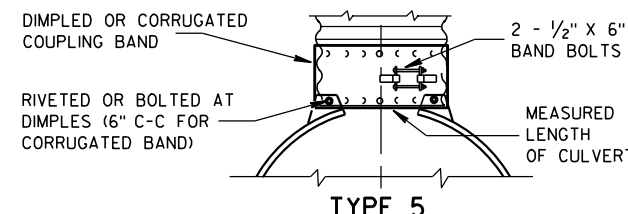
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

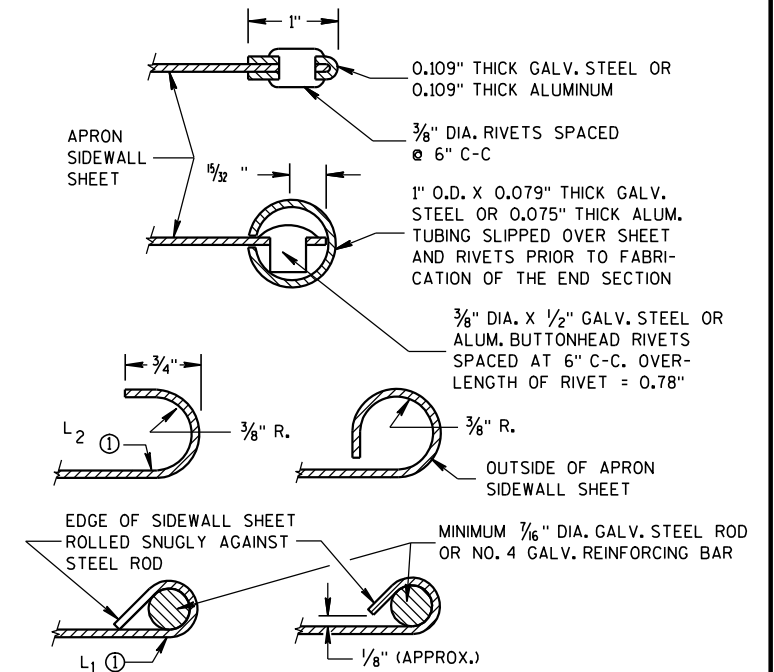
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

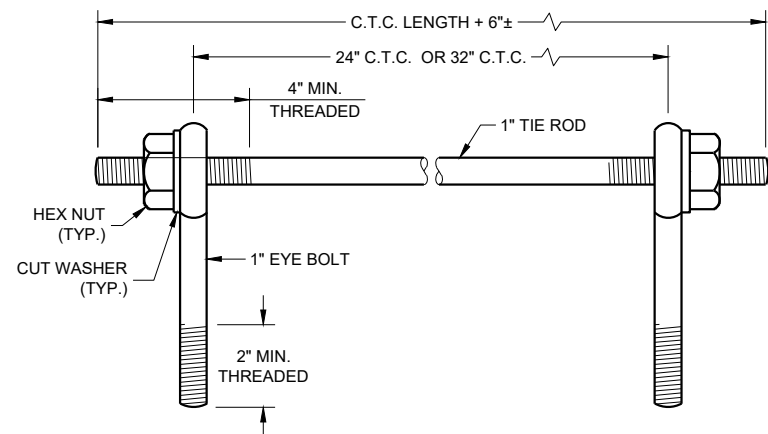
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

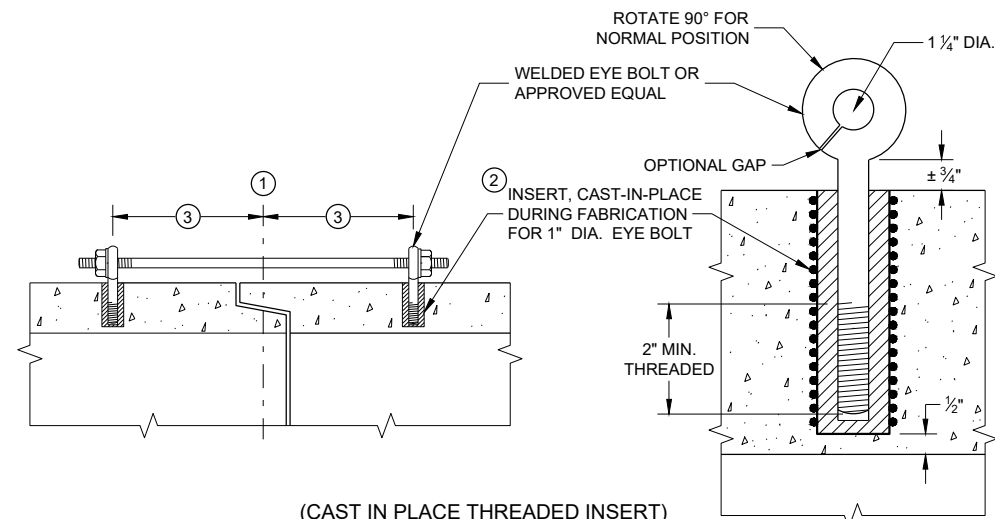
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

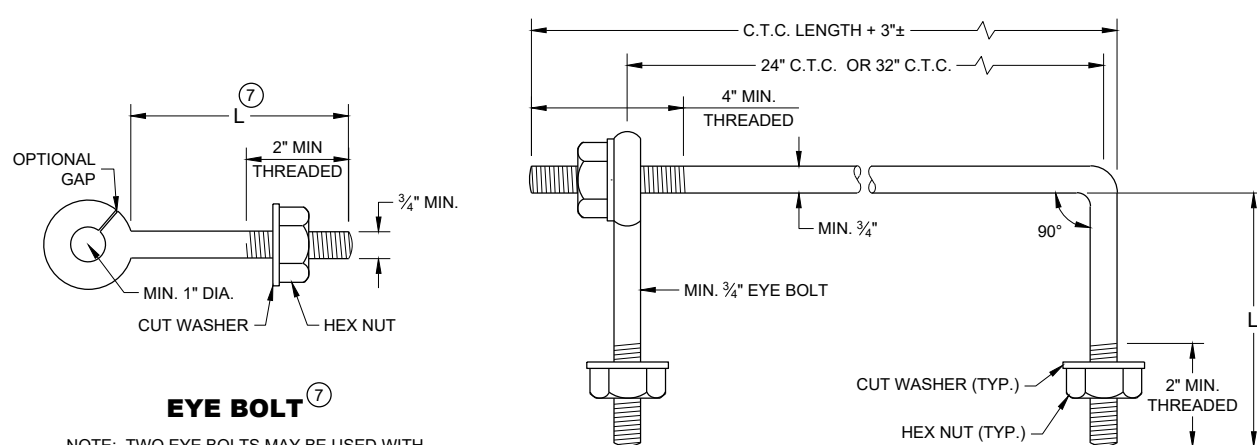
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

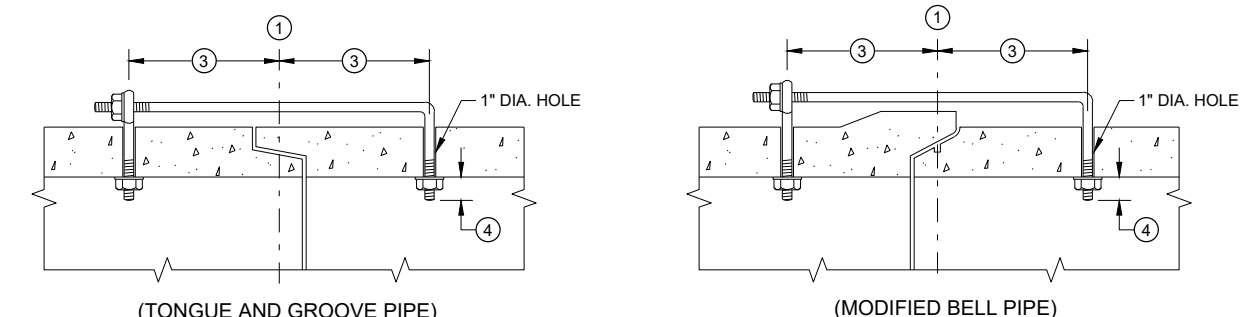
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT AND TIE ROD

EYE BOLT ⑦

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30\"/>



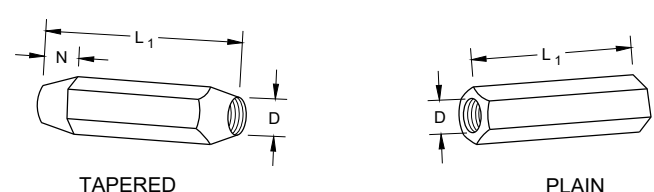
LONGITUDINAL SECTION
(JOINT TIES FOR 18\"/>

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

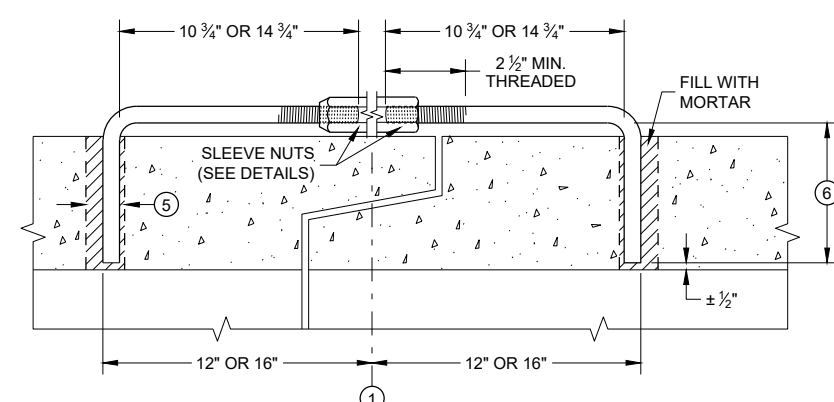
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 7/16

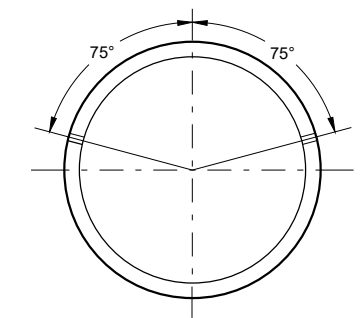
DIMENSIONS SHOWN ARE IN INCHES



RIGHT AND LEFT THREADS SLEEVE NUTS

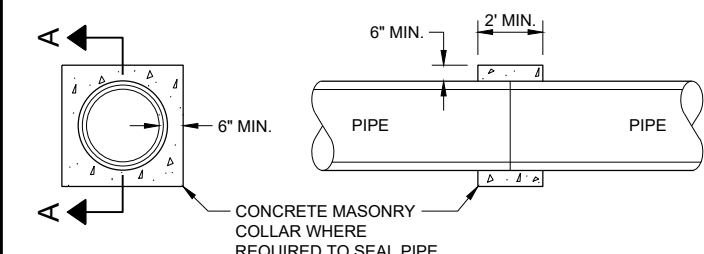


LONGITUDINAL SECTION
ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



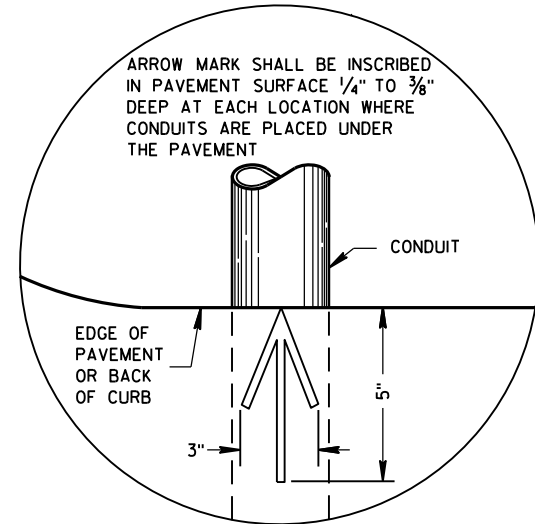
SECTION A - A
CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

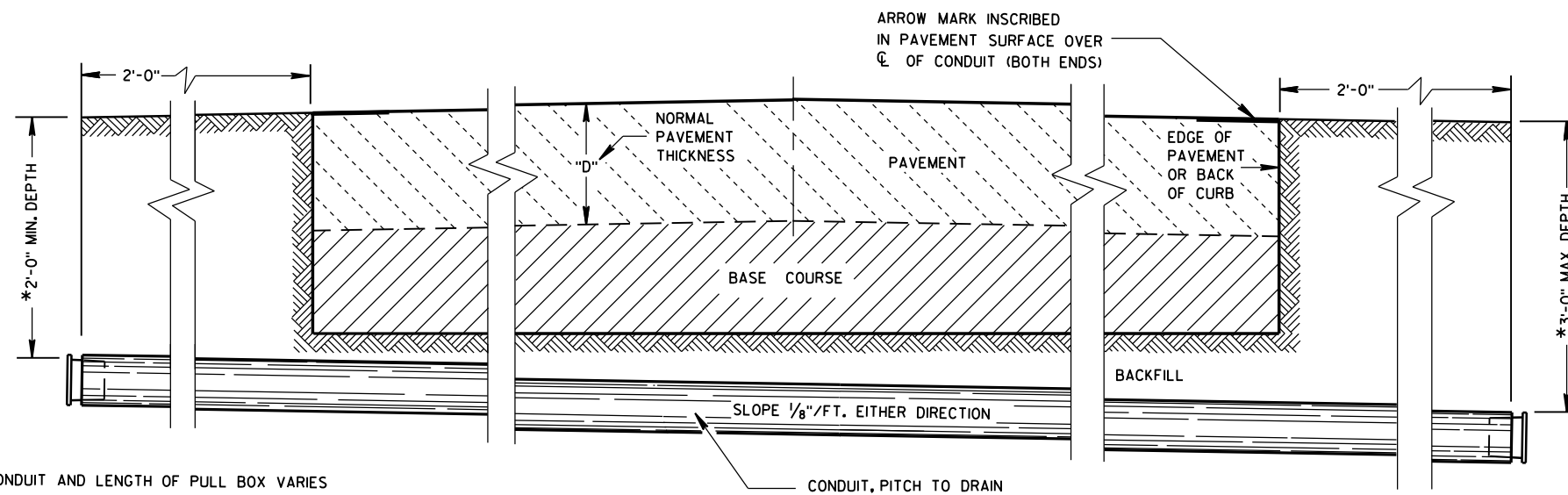
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

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

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

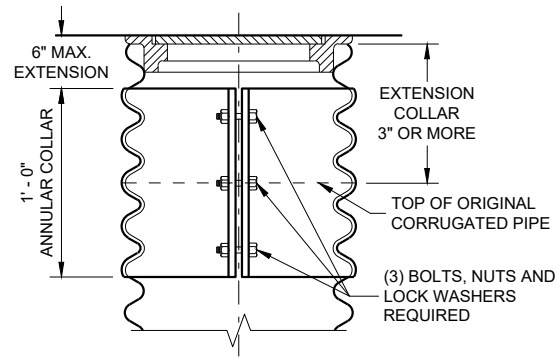
ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

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

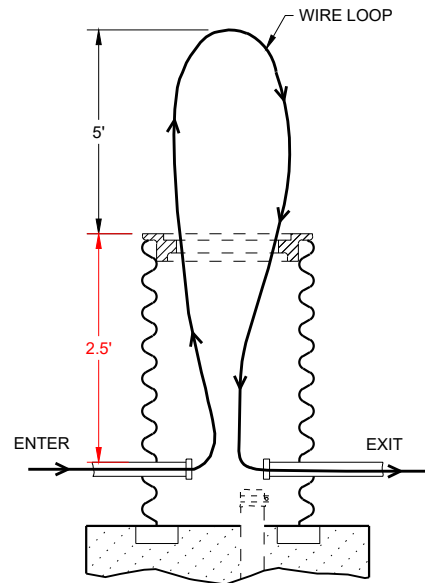
TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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

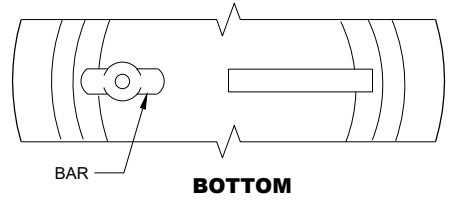
CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



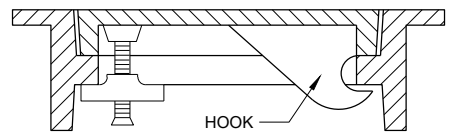
CORRUGATED PIPE EXTENDER



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



BOTTOM



SECTION

**ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE**

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.

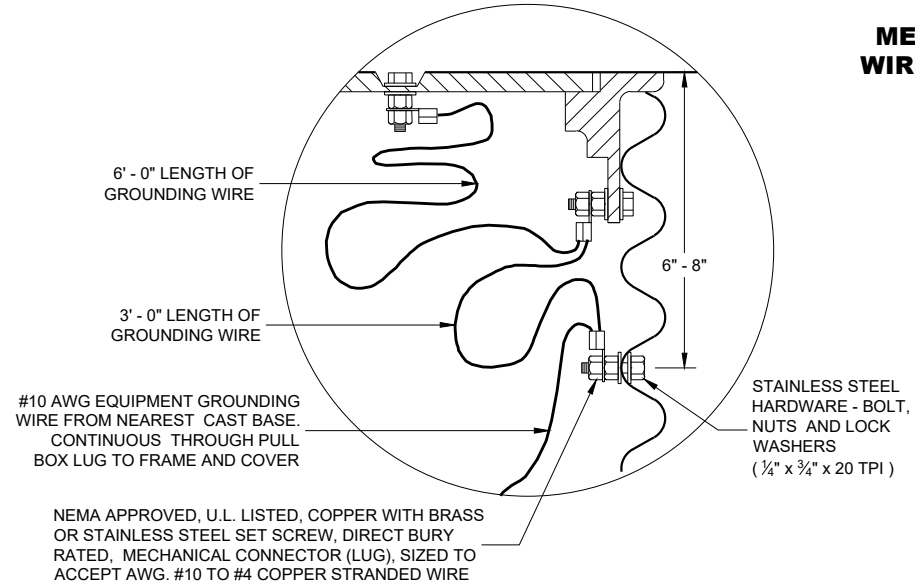
WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES	CORRUGATED STEEL PIPE									
	PIPE DIAMETER (INSIDE)	12	12	12	18	18	18	24	24	24
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

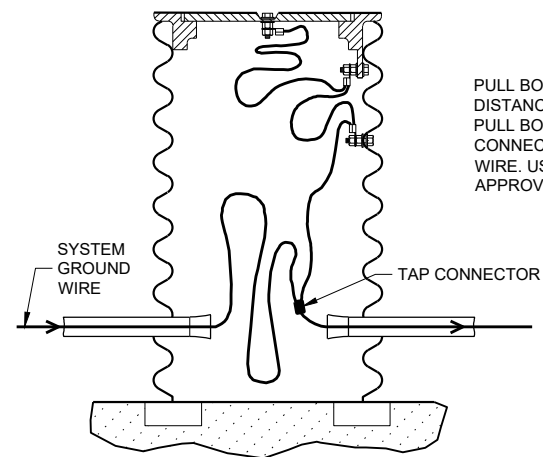
* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** 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.



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

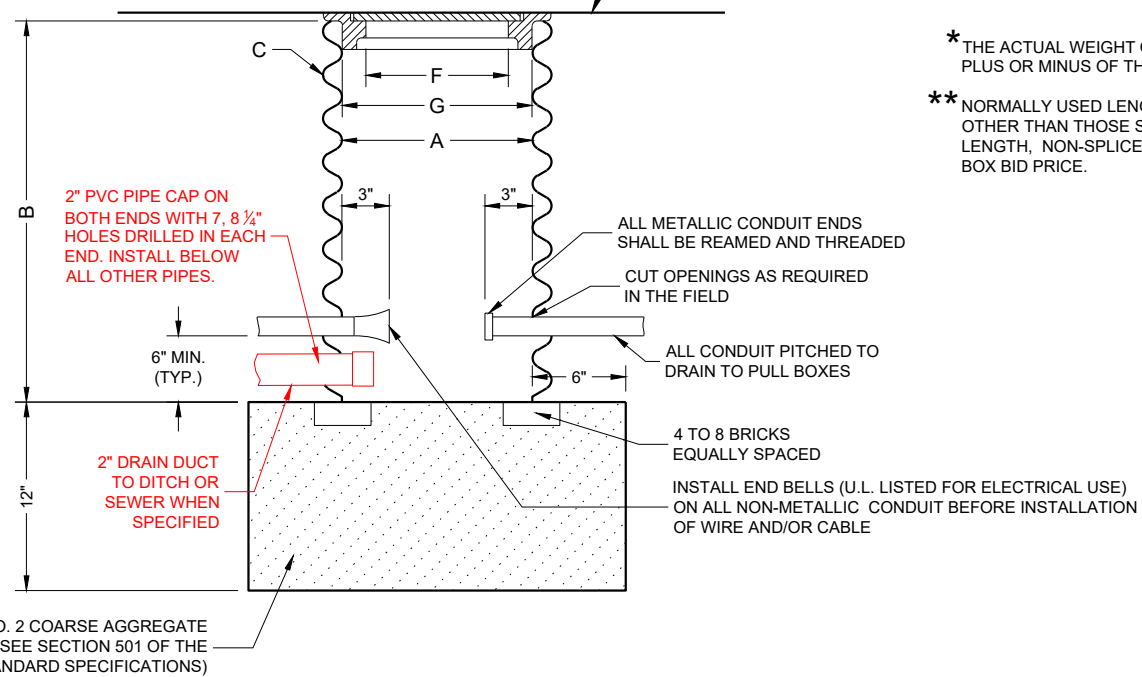
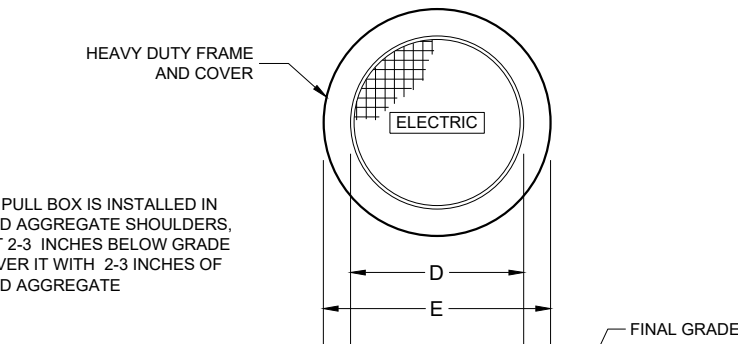
NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

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

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



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

PULL BOX

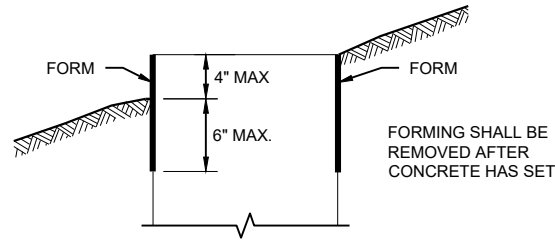
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER

FHWA

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



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

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

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

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

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

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

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

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

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

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

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

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

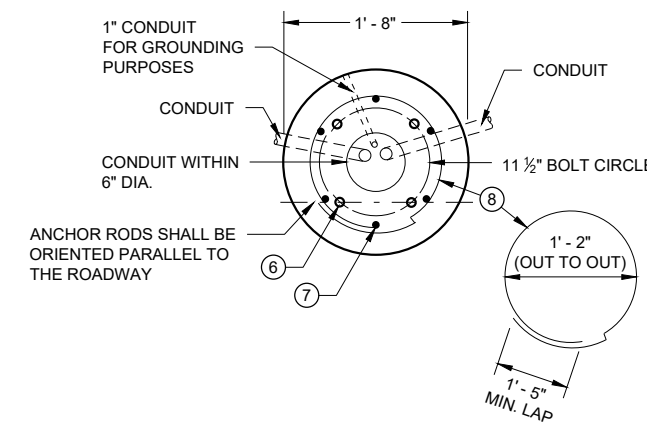
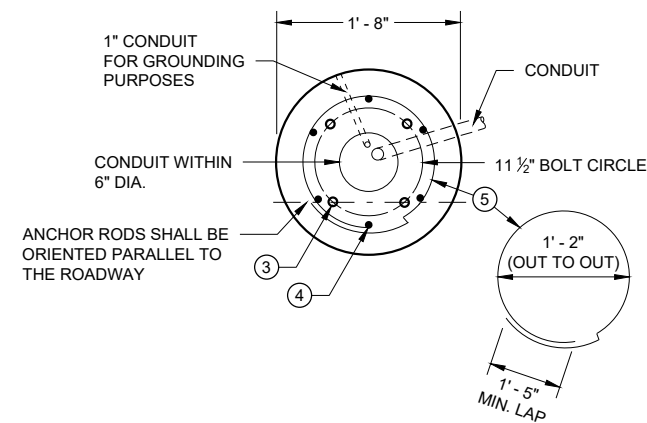
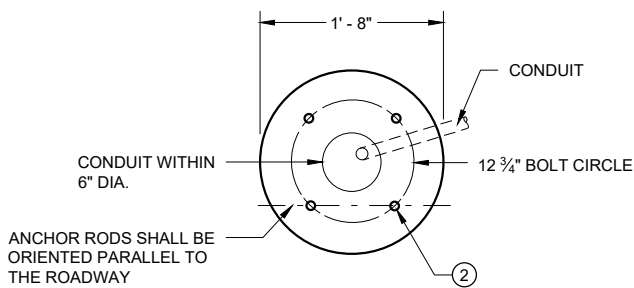
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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

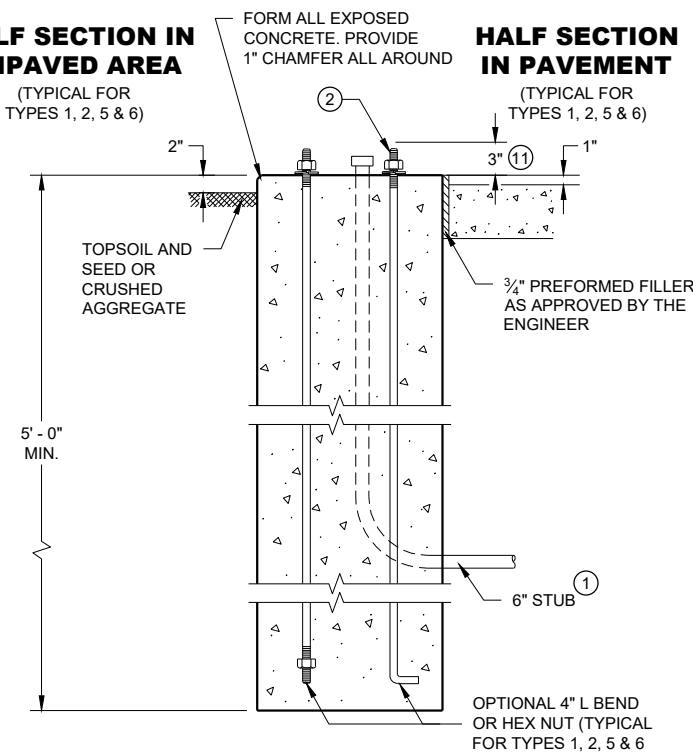
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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

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

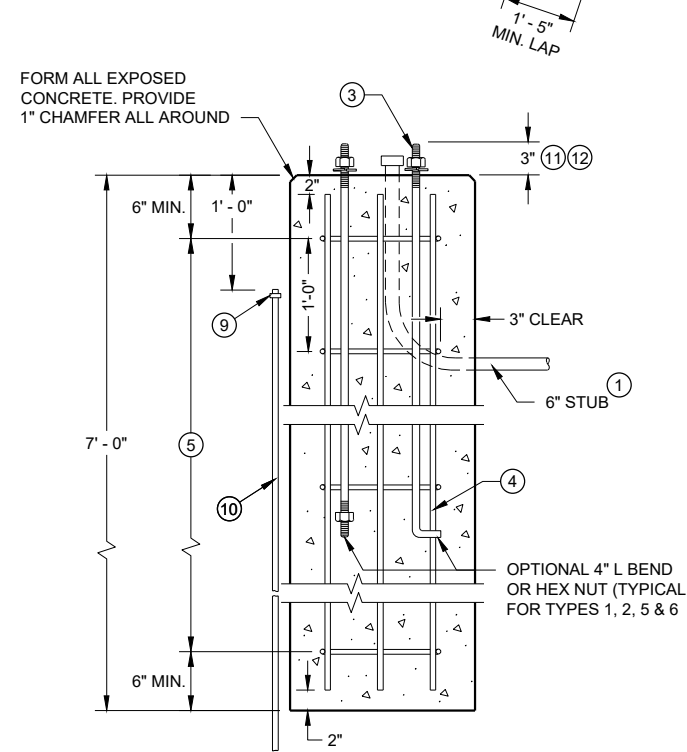


HALF SECTION IN UNPAVED AREA

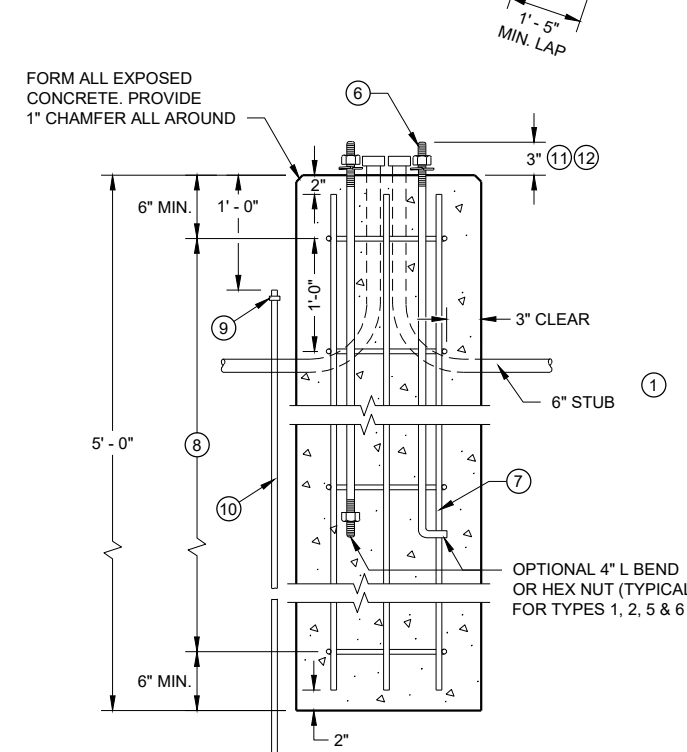


TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2



TYPE 5 & 6

CONCRETE BASES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

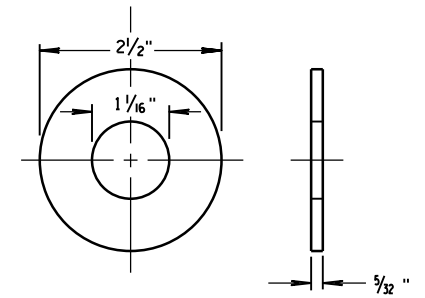
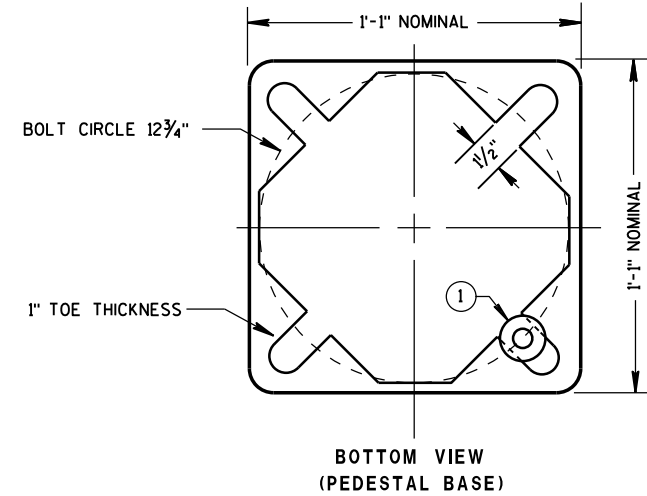
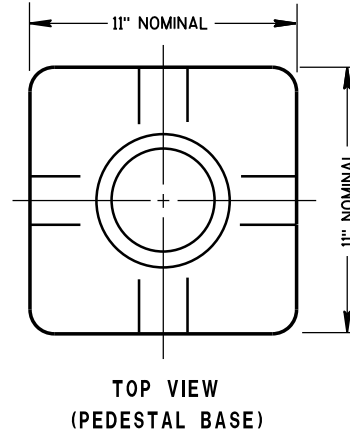
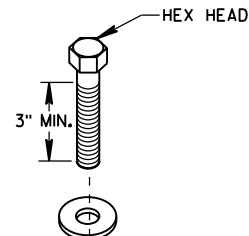
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

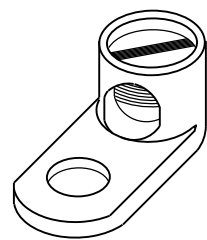
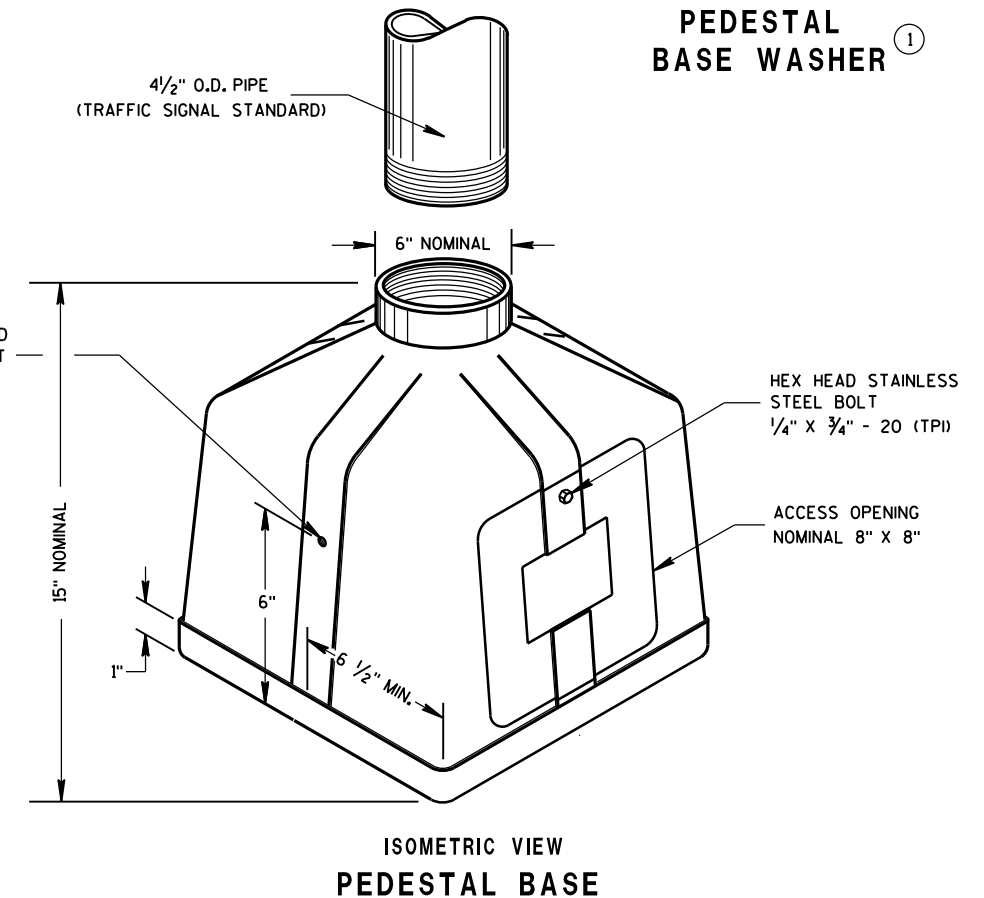
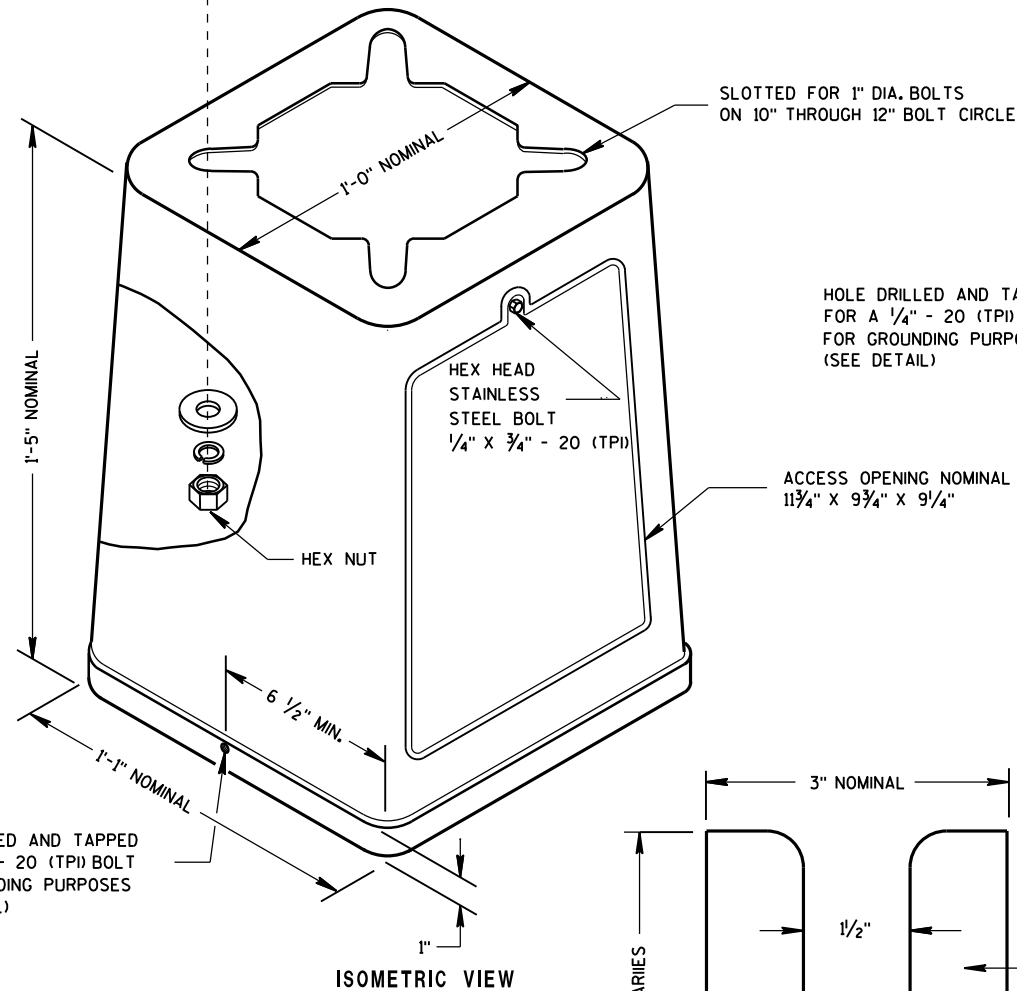
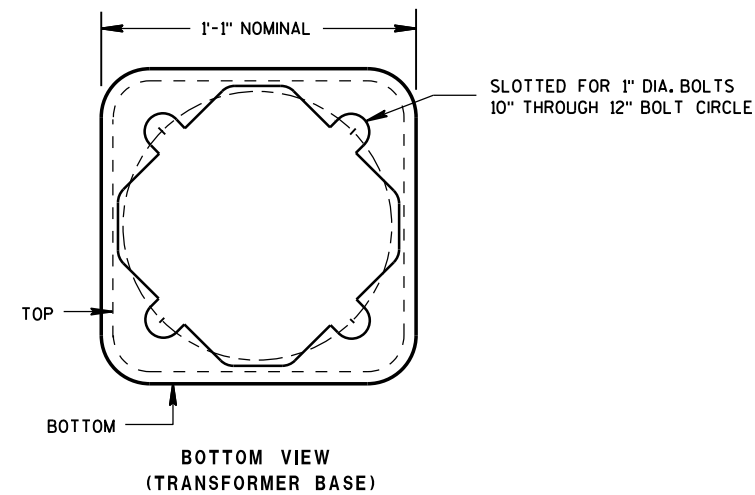
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

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

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

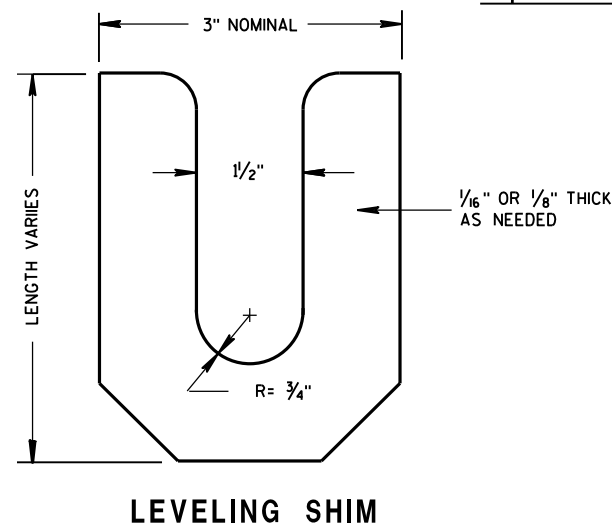


ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR
PEDESTAL BASE WASHER ①



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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



LEVELING SHIM

6

6

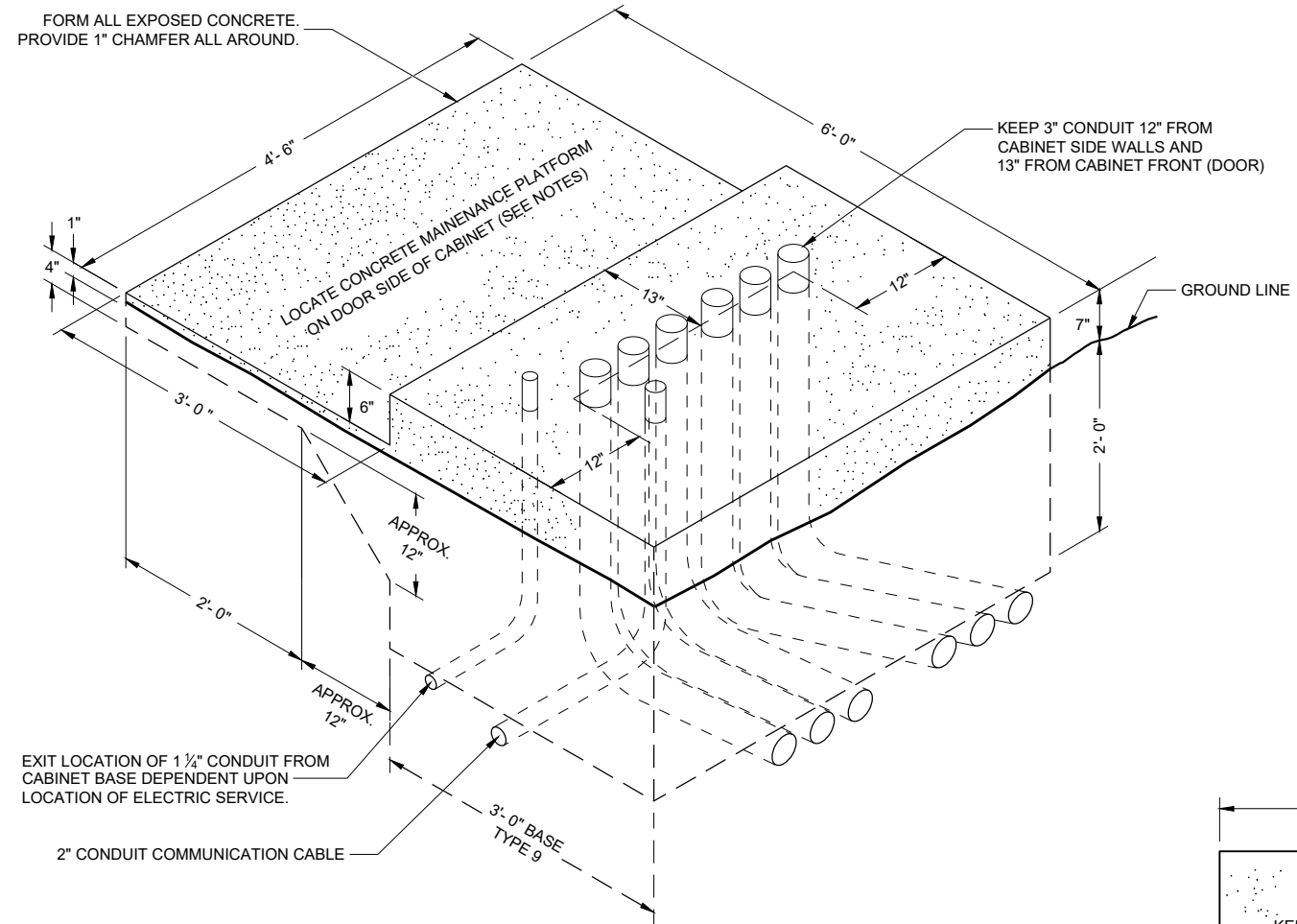
S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

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

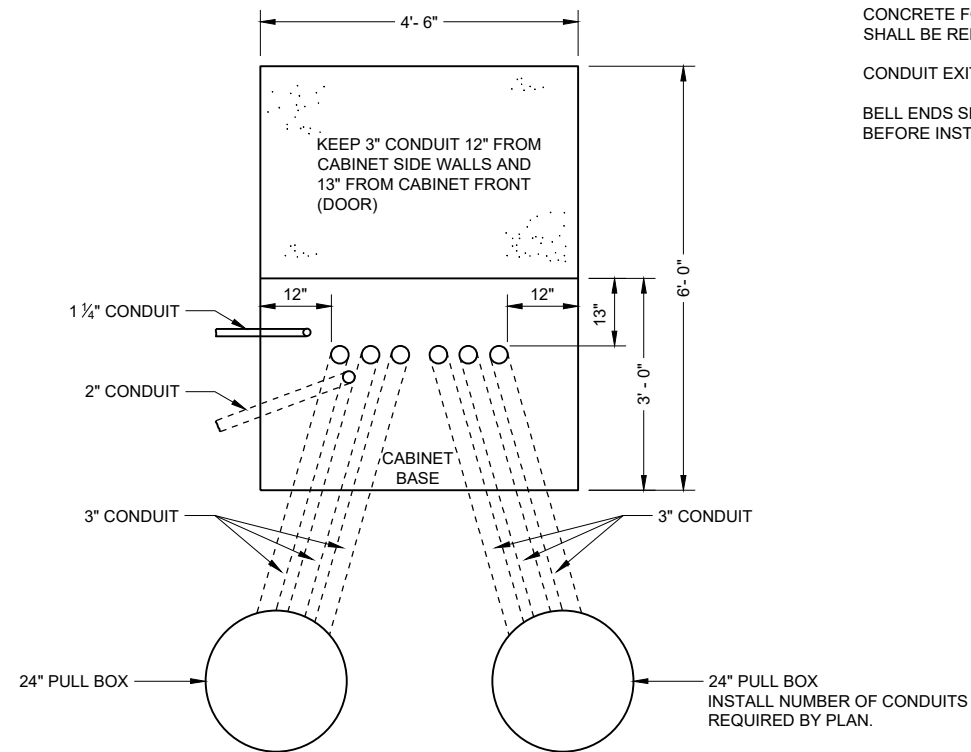


SDD 09C06 Concrete Control Cabinet Base, Type 9, Special



ISOMETRIC VIEW TYPE 9 SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW CONCRETE CONTROL CABINET BASE, TYPE 9 SPECIAL

GENERAL NOTES

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

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

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

6

6

SDD 09C06 - 07

SDD 09C06 - 07

CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

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

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

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

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

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

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

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

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

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

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

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

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

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

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

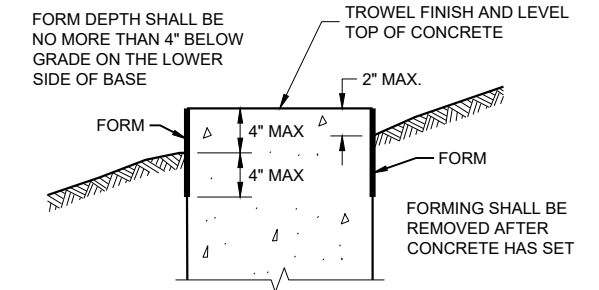
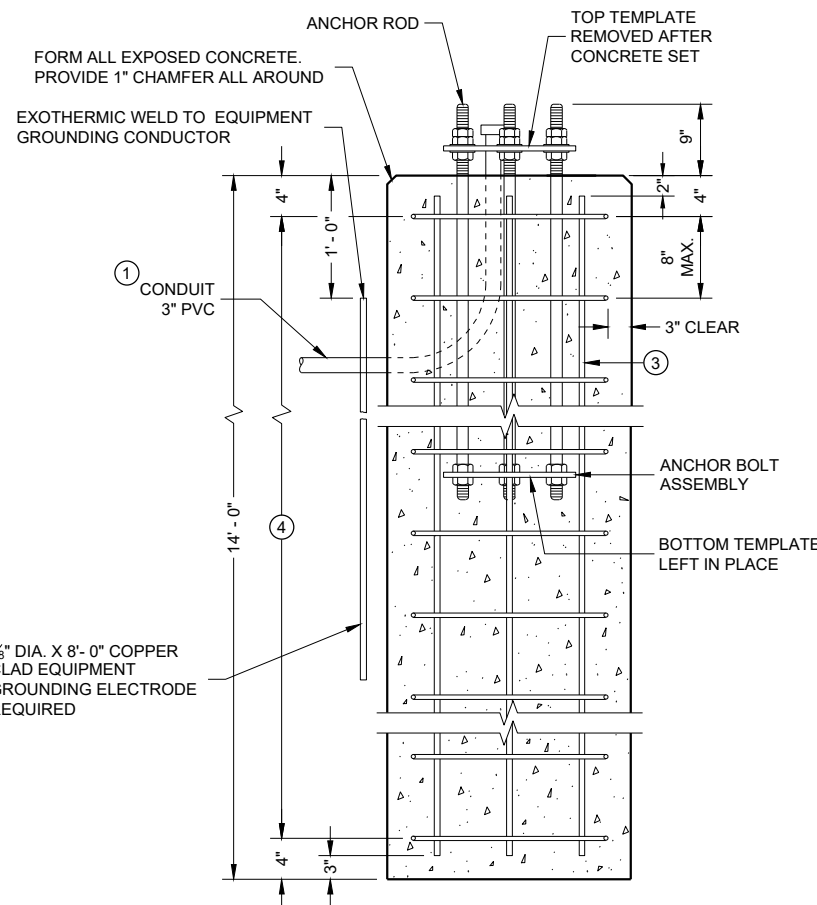
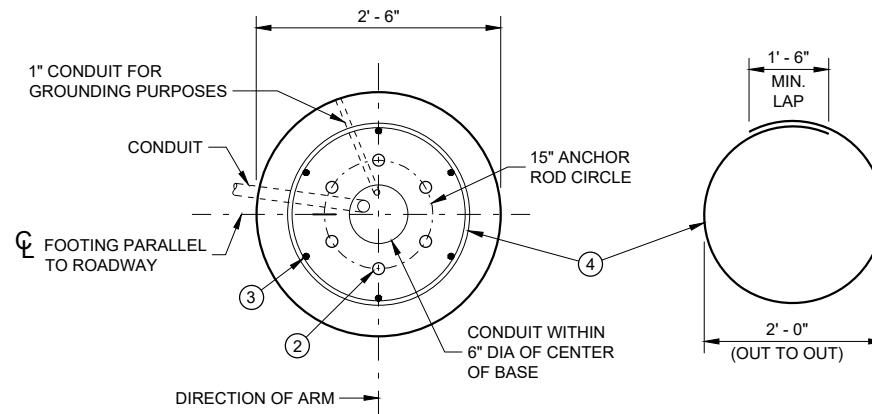
② (6) 1 1/2" DIA. X 4' - 4" ANCHOR RODS

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

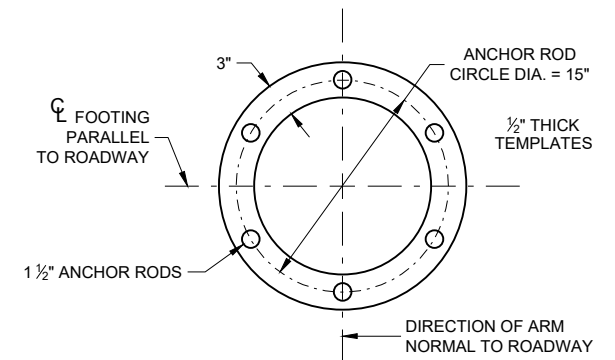
④ (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

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

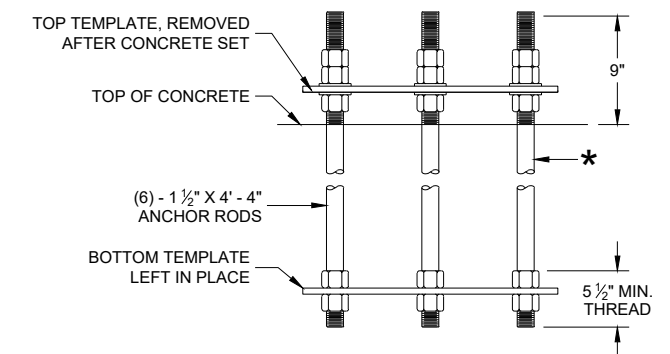
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122



FORMING DETAIL



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

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

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

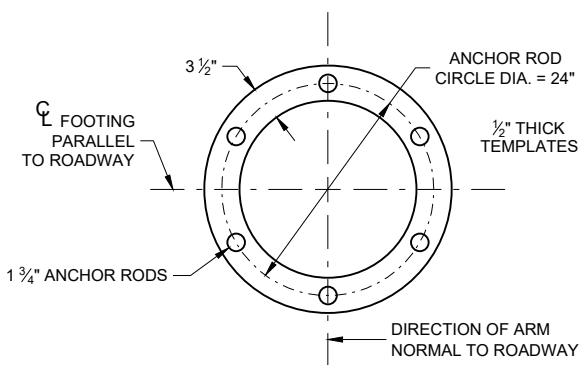
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE SDD 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 10

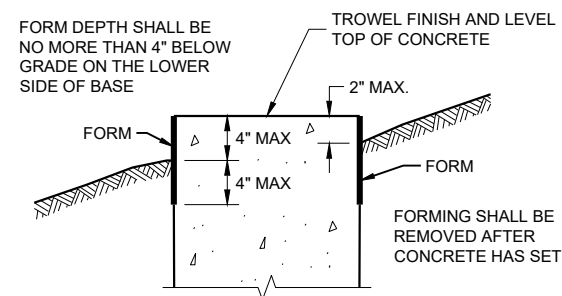
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

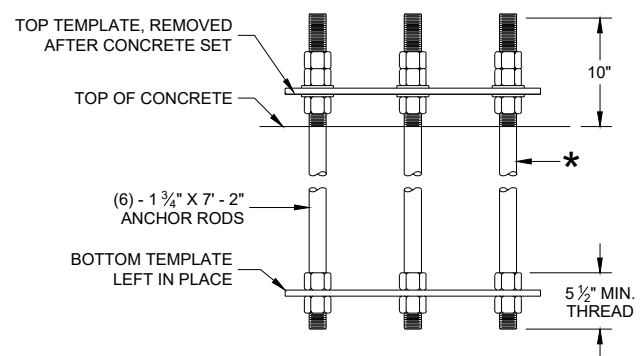
FHWA



TOP AND BOTTOM TEMPLATE



FORMING DETAIL



ANCHOR ROD ASSEMBLY DETAILS

* THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

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

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

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

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

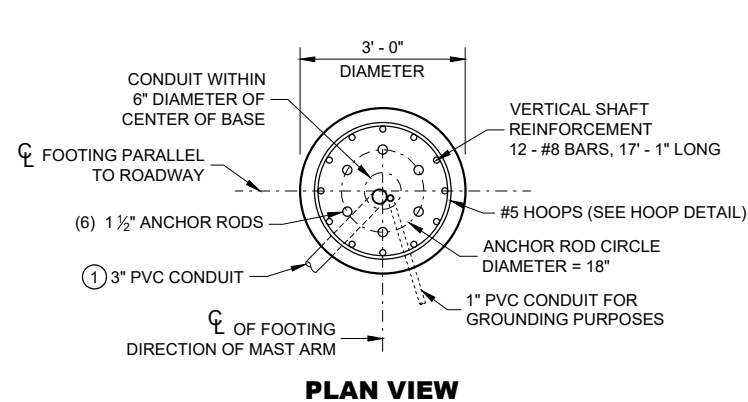
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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

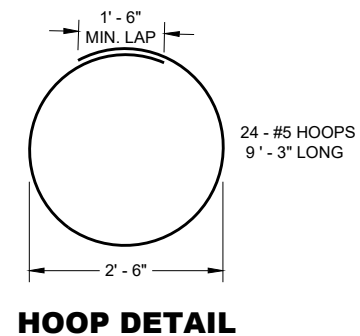
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

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

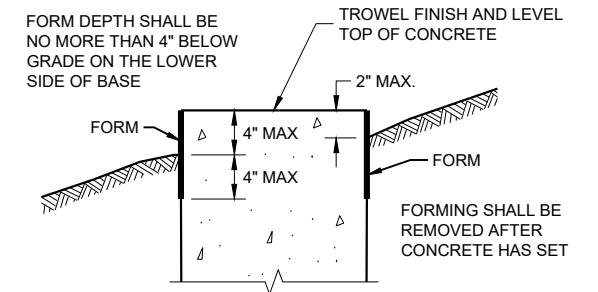
CONCRETE MASONRY.....fc = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
 ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
 TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



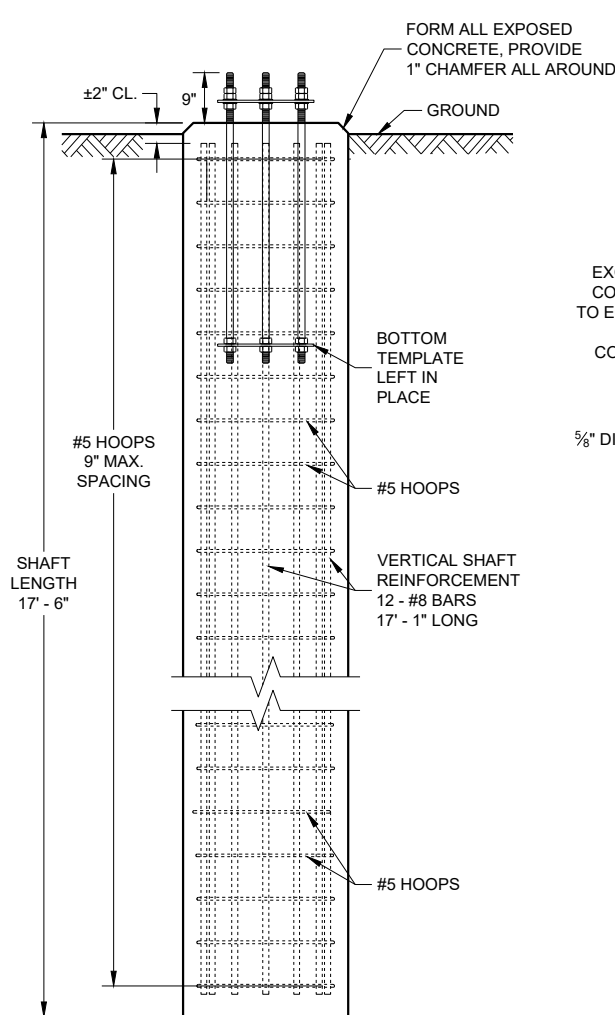
PLAN VIEW



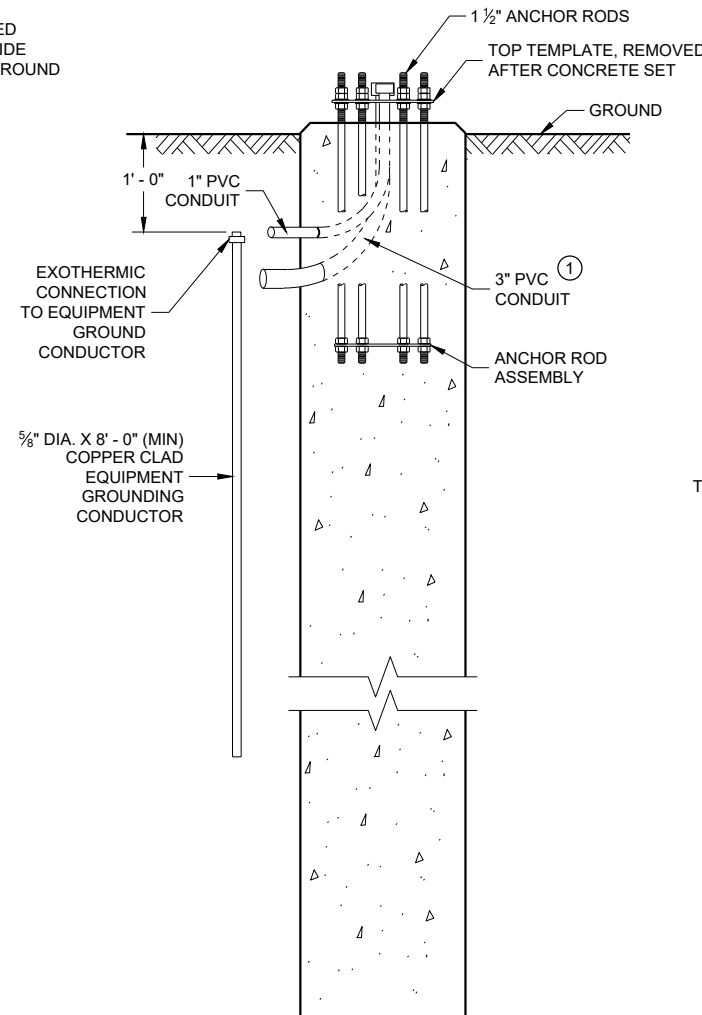
HOOP DETAIL



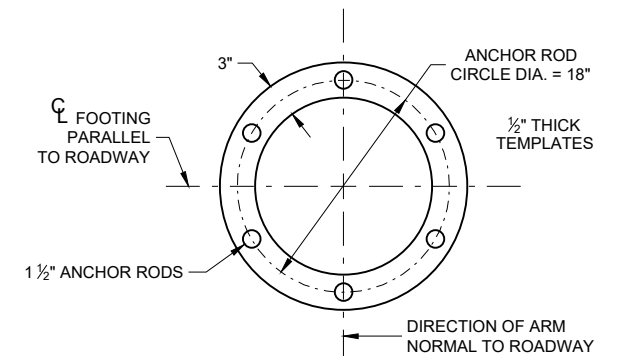
FORMING DETAIL



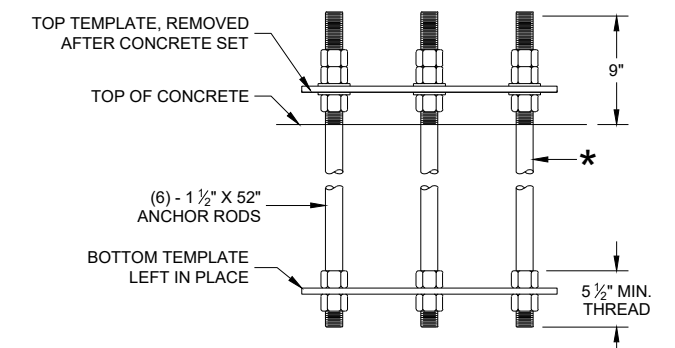
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



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



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

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

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

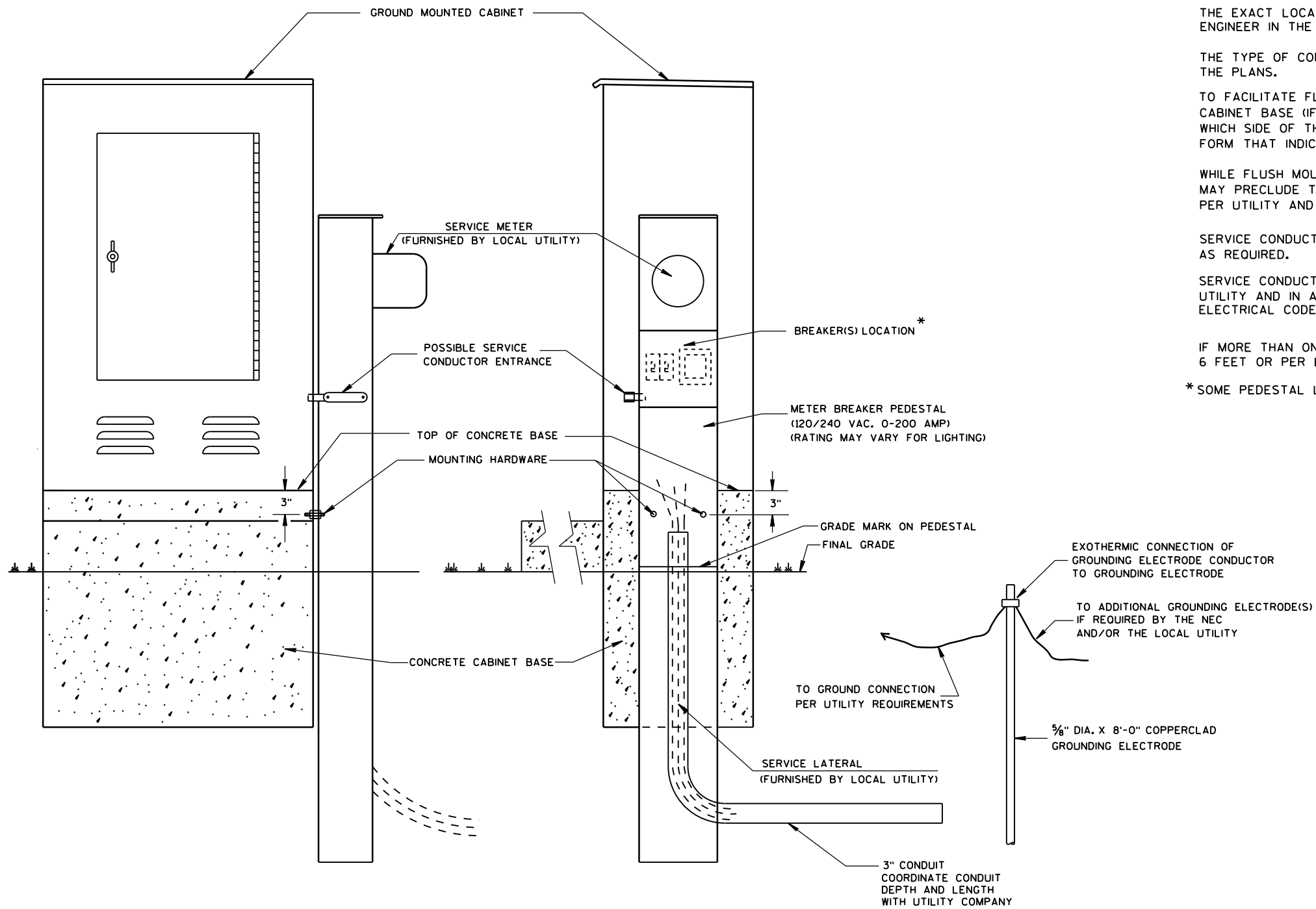
CONCRETE = 4.6 CUBIC YARD
 H.S. REINFORCEMENT = 779 LBS.

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

**CONCRETE BASE
TYPE 10 SPECIAL**

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

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



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.

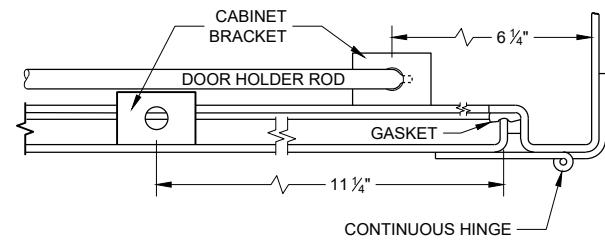
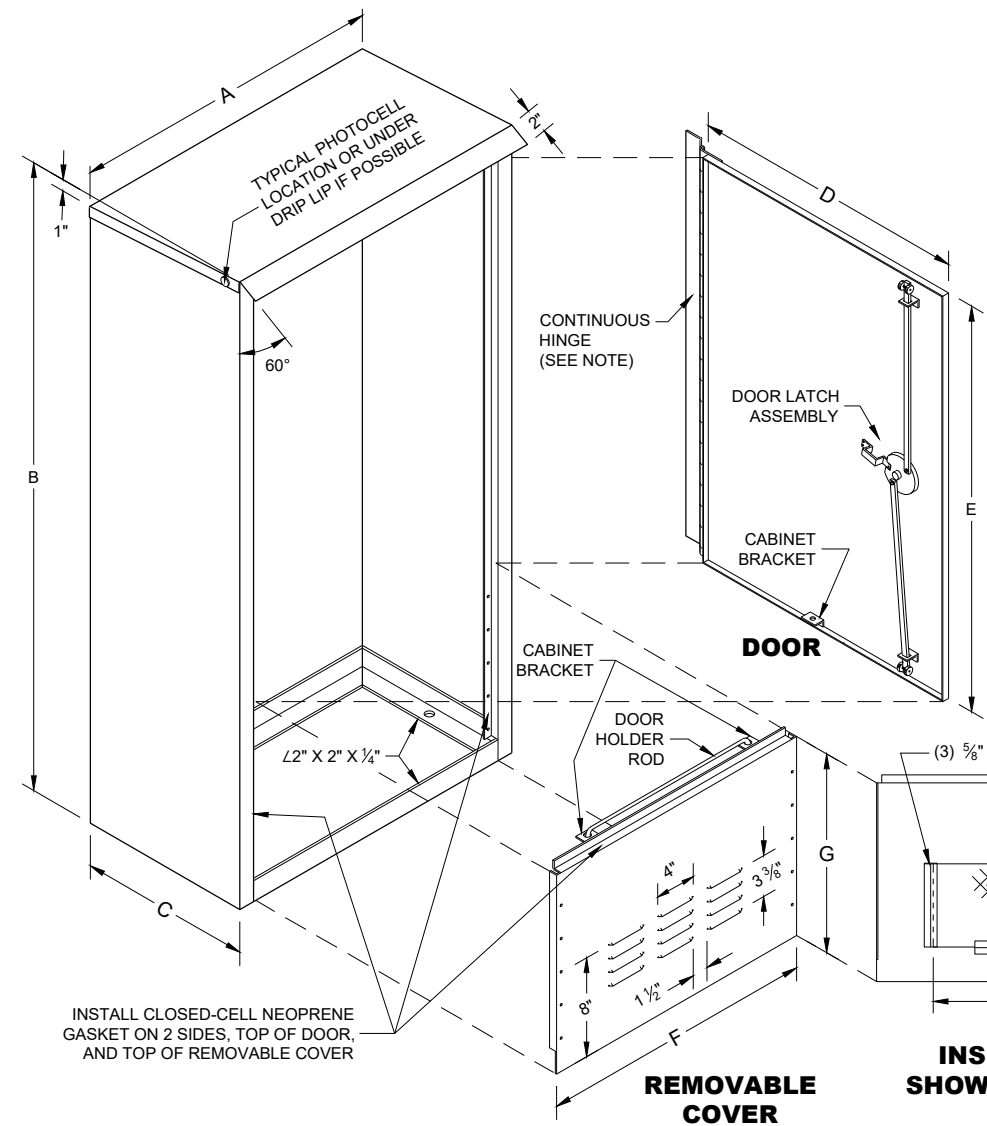
SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

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.

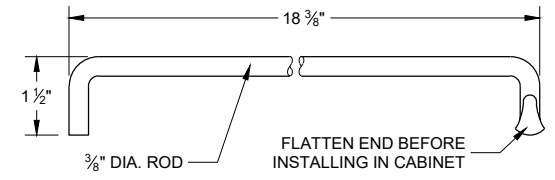
IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

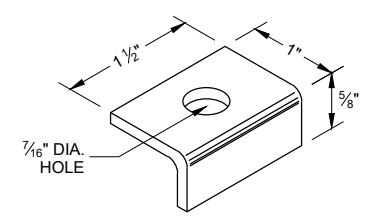
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER



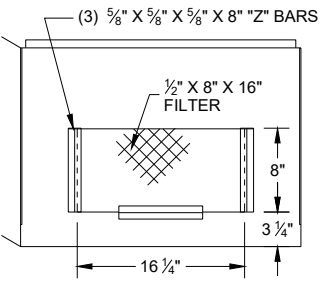
HINGE AND DOOR HOLDER



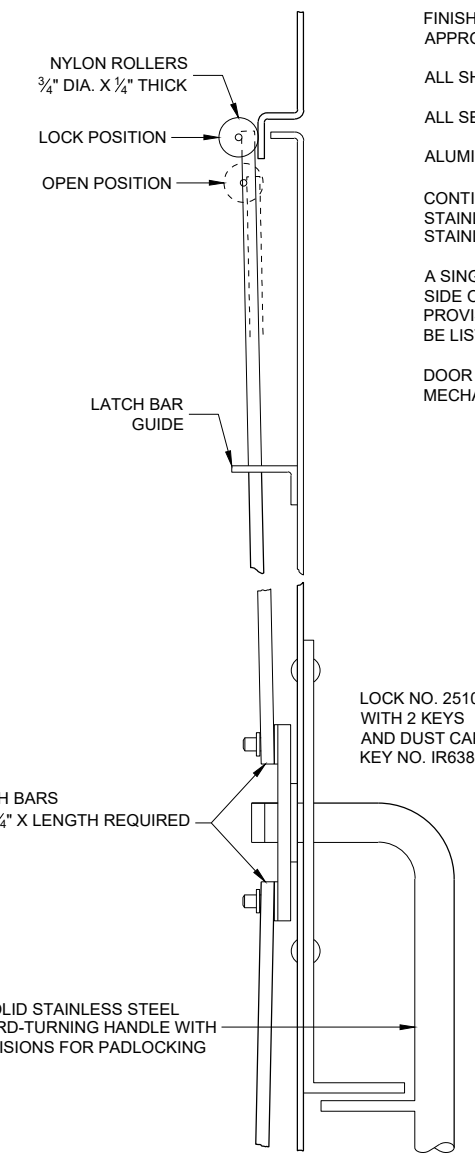
HOLDER ROD



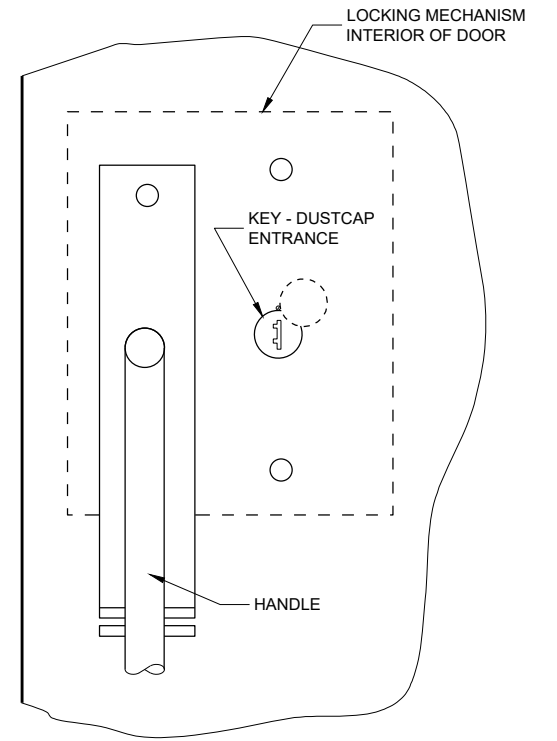
CABINET BRACKET



INSIDE VIEW SHOWING FILTER

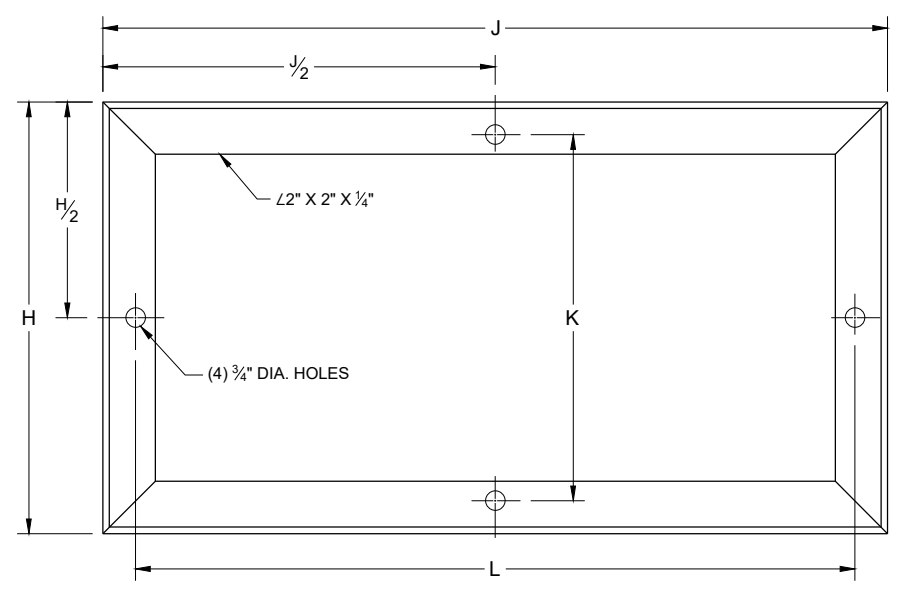


SIDE VIEW



FRONT VIEW

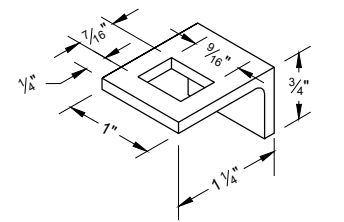
LATCH ASSEMBLY



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

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



LATCH BAR GUIDE

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

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

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

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

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/2" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/2" 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.

6

6

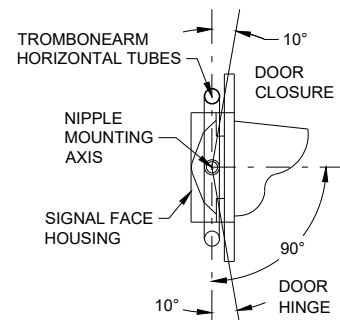
SDD 09D02 - 03

SDD 09D02 - 03

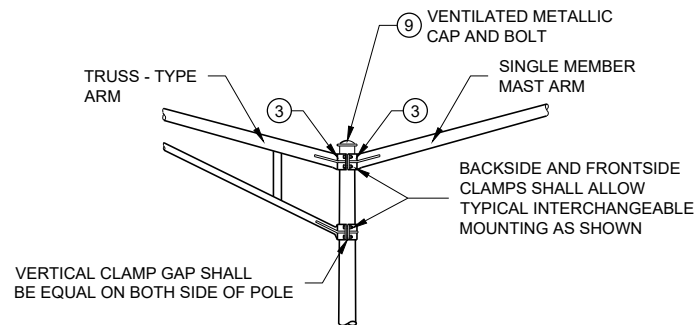
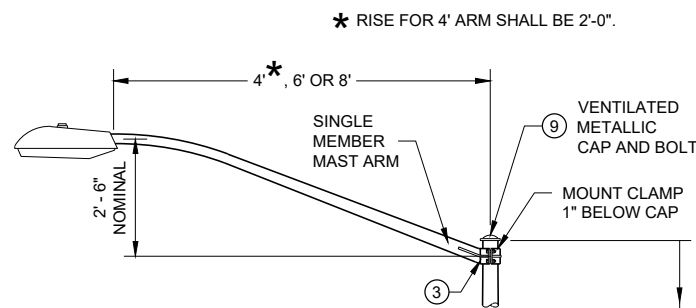
SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

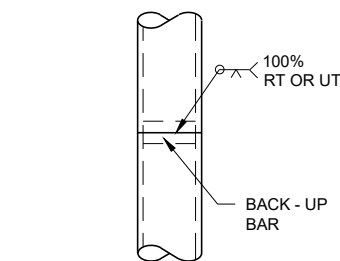
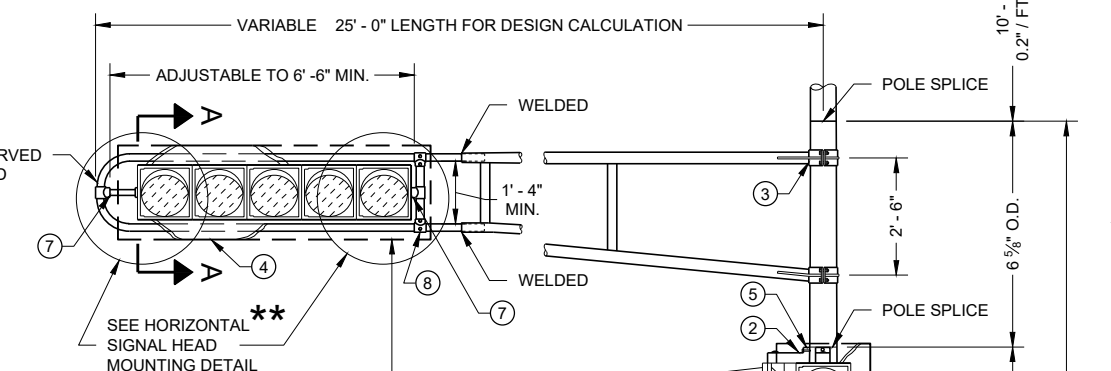
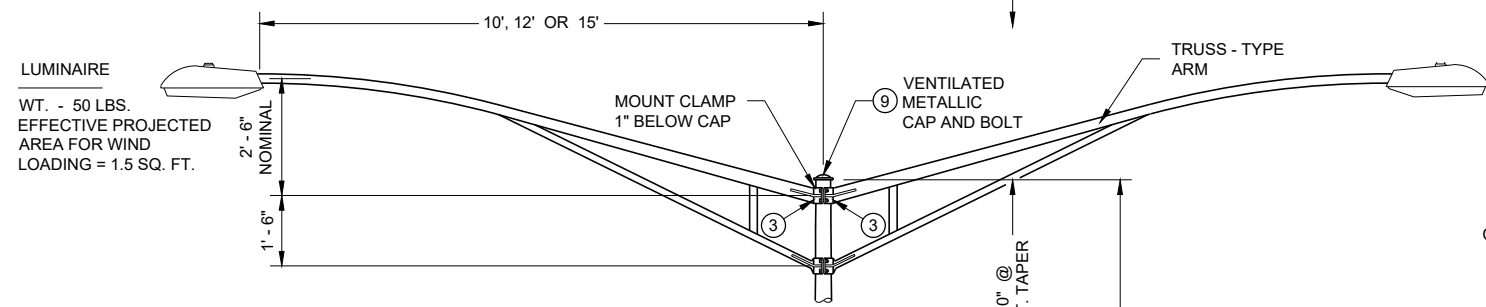
APPROVED
September 2014 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



SECTION A-A

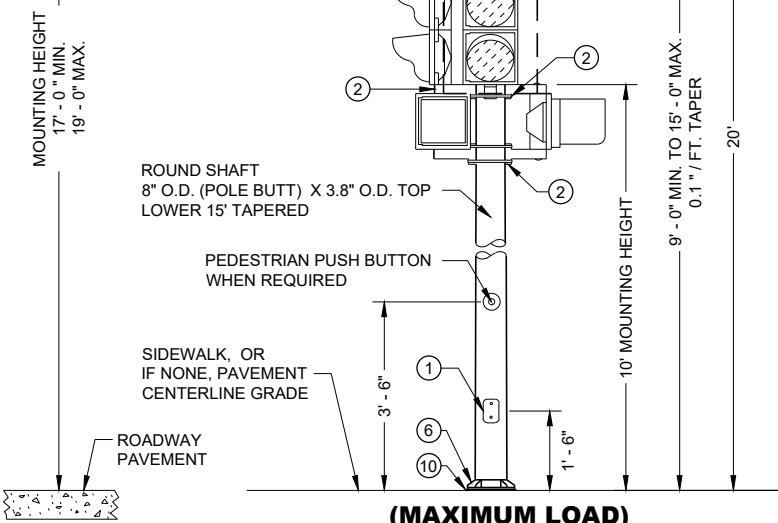


INTERCHANGEABLE MOUNTING DETAIL

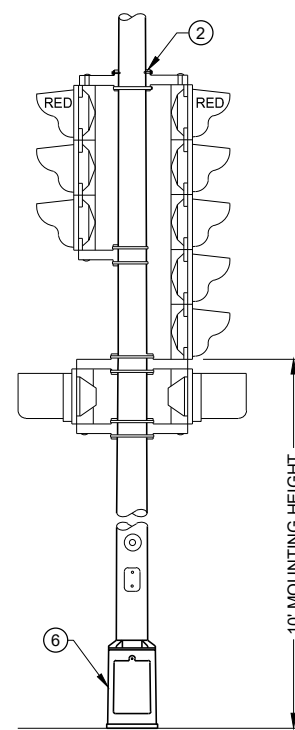


**POLE SPLICE DETAIL
FOR MANUFACTURERS
USE ONLY**

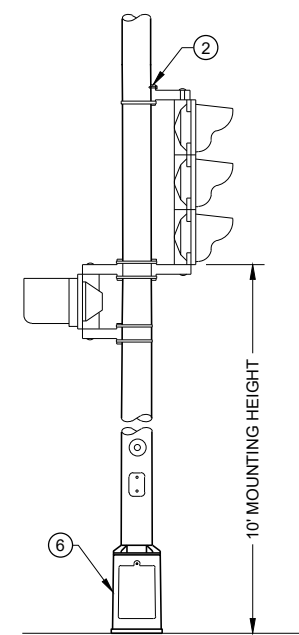
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



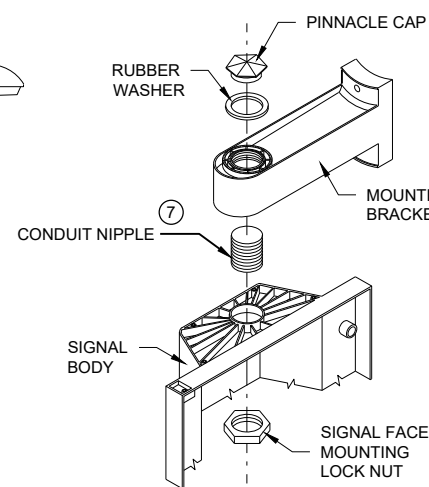
(MAXIMUM LOAD)



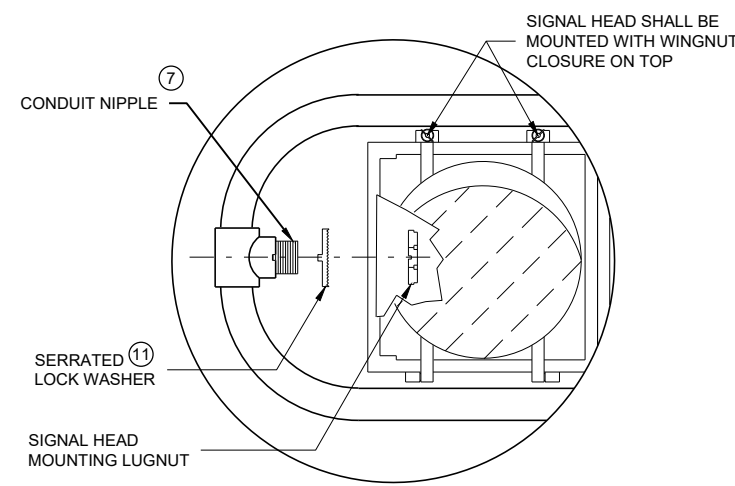
**TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES**



**TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE**



**SIGNAL FACE MOUNTING DETAIL
(BANDED)**



**HORIZONTAL SIGNAL HEAD
MOUNTING DETAIL**

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

GENERAL NOTES

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

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

POLES SHALL BE GALVANIZED STEEL.

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

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

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

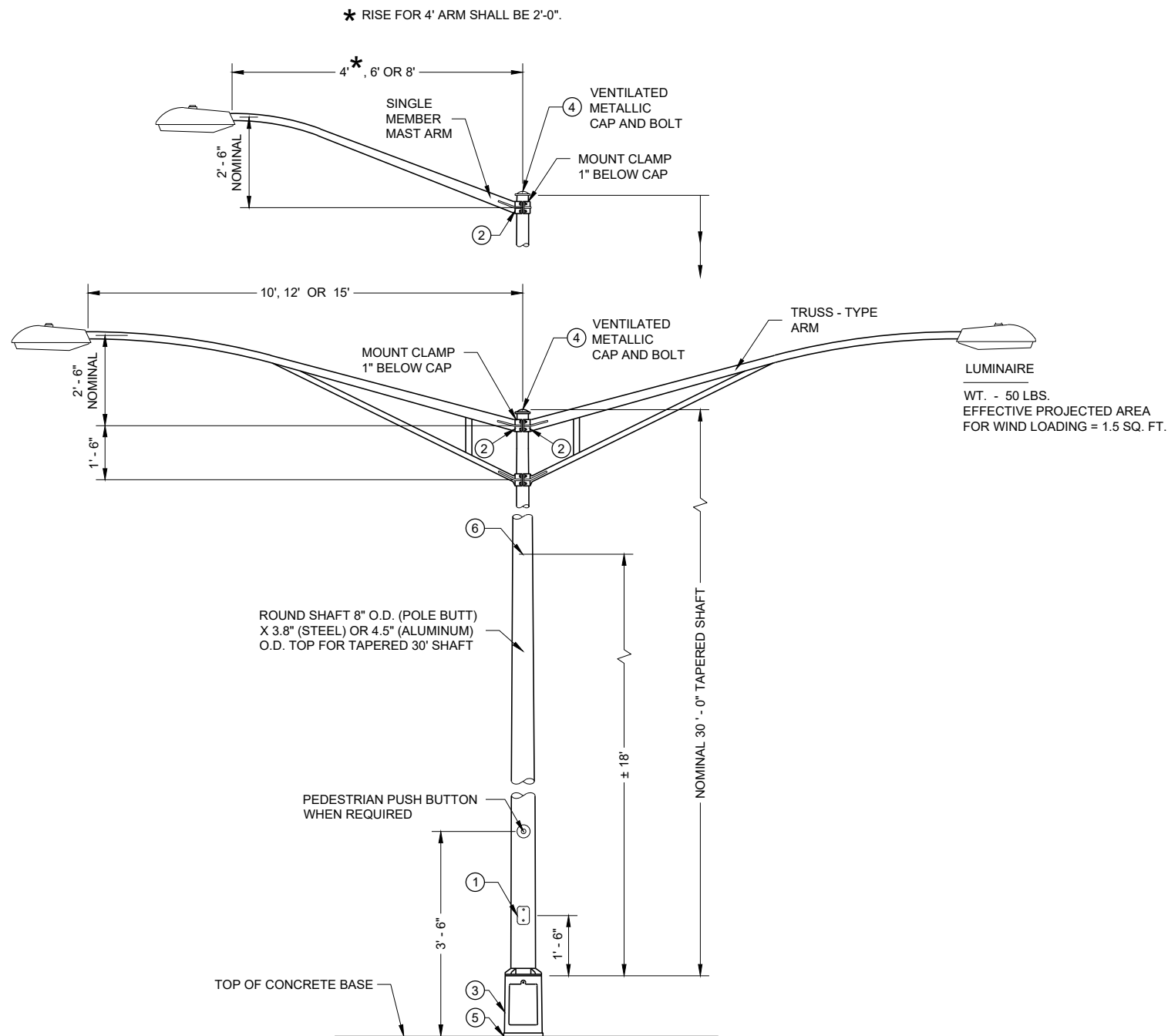
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

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

TYPE 3 POLE MOUNTING CONFIGURATION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY**

GENERAL NOTES

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

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

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

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

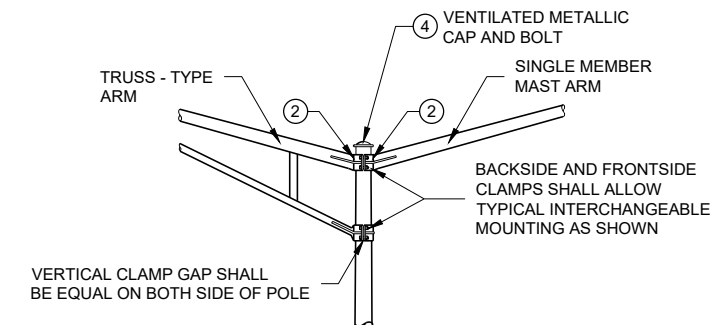
TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

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

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

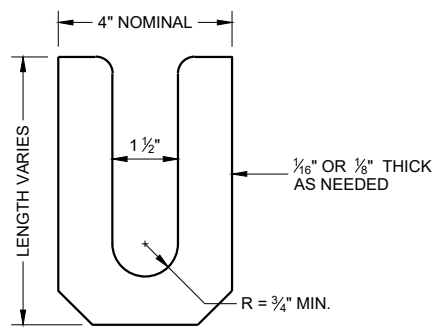
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.

LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED AREA
FOR WIND LOADING = 1.5 SQ. FT.

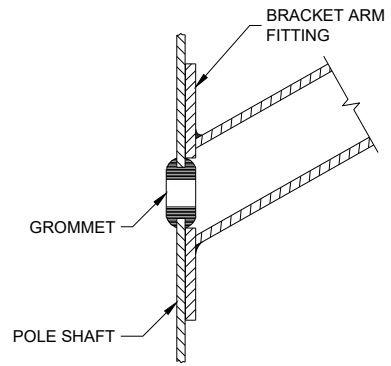


INTERCHANGEABLE MOUNTING DETAIL

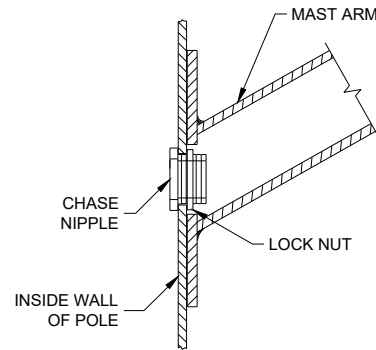
POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



LEVELING SHIM
SHALL BE ALUMINUM



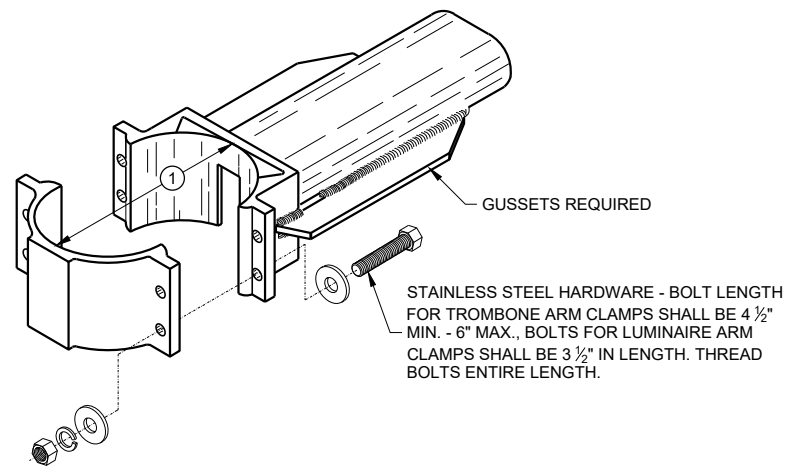
TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



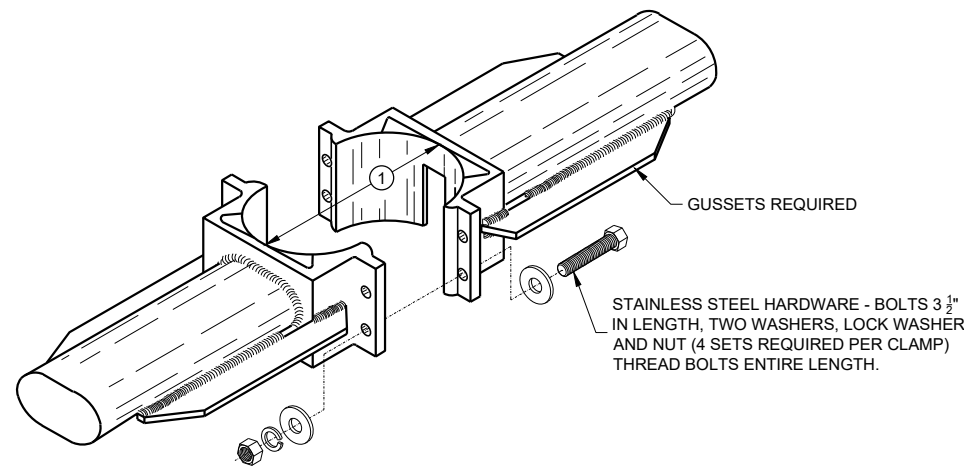
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

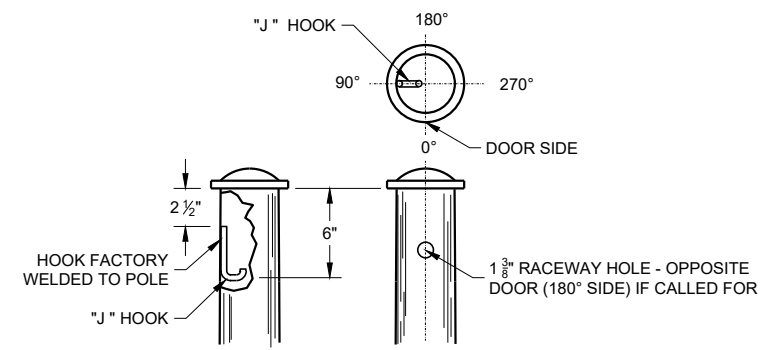
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
 - ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
 - ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
 - ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
- SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



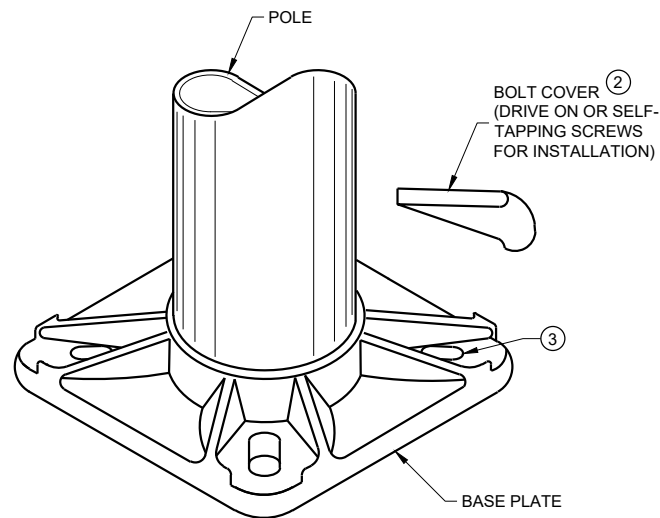
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



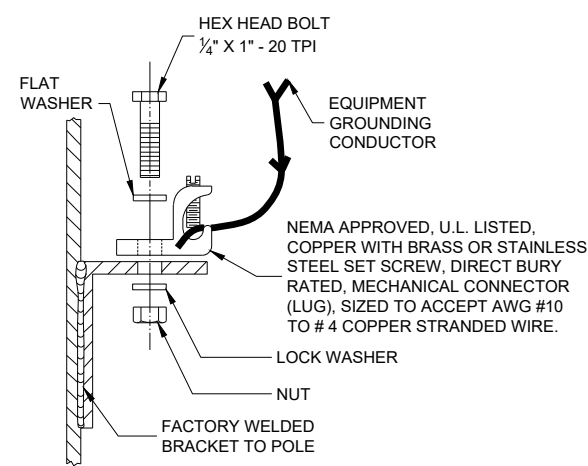
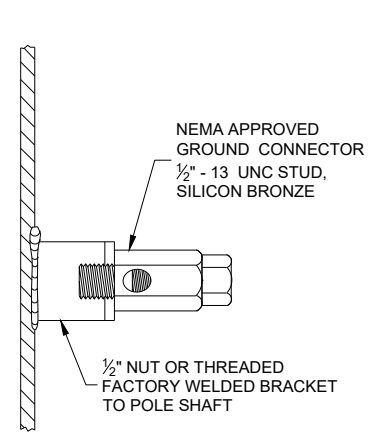
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



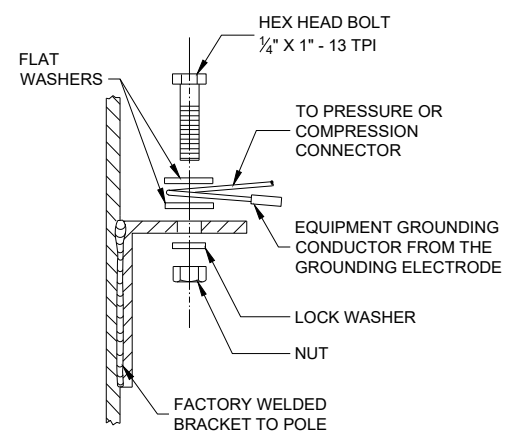
TYPICAL "J" HOOK LOCATION



BASE PLATE



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



HARDWARE DETAILS FOR POLE MOUNTING

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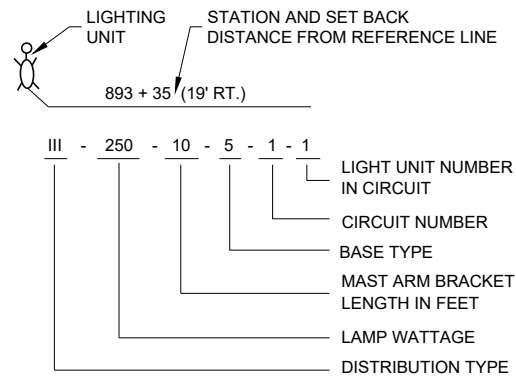
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DATE STATE ELECTRICAL ENGINEER
FHWA

GENERAL NOTES

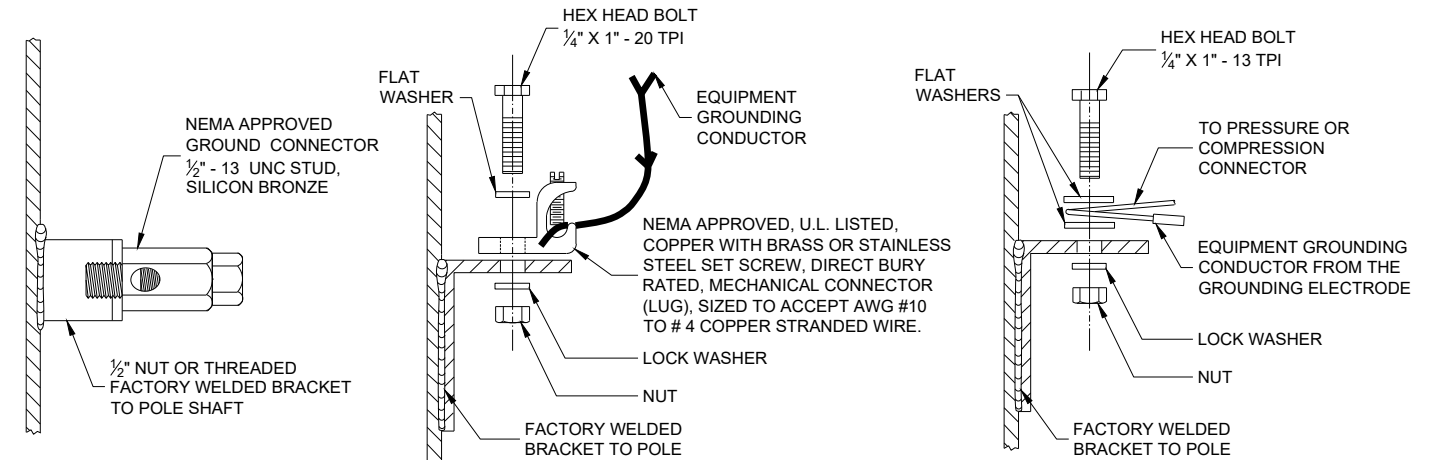
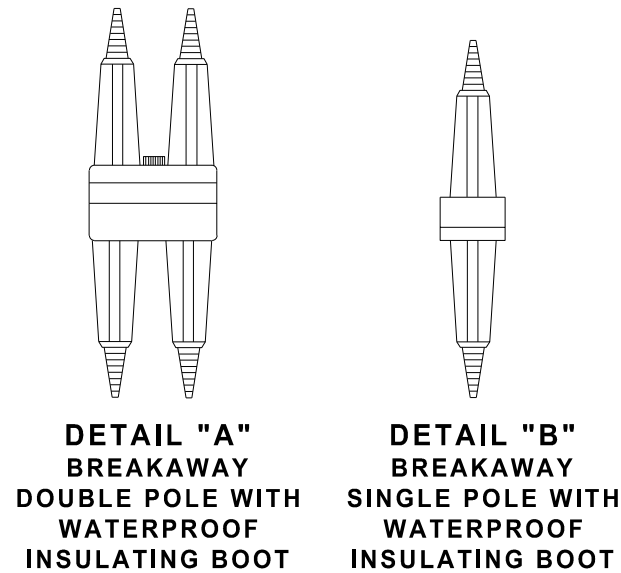
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

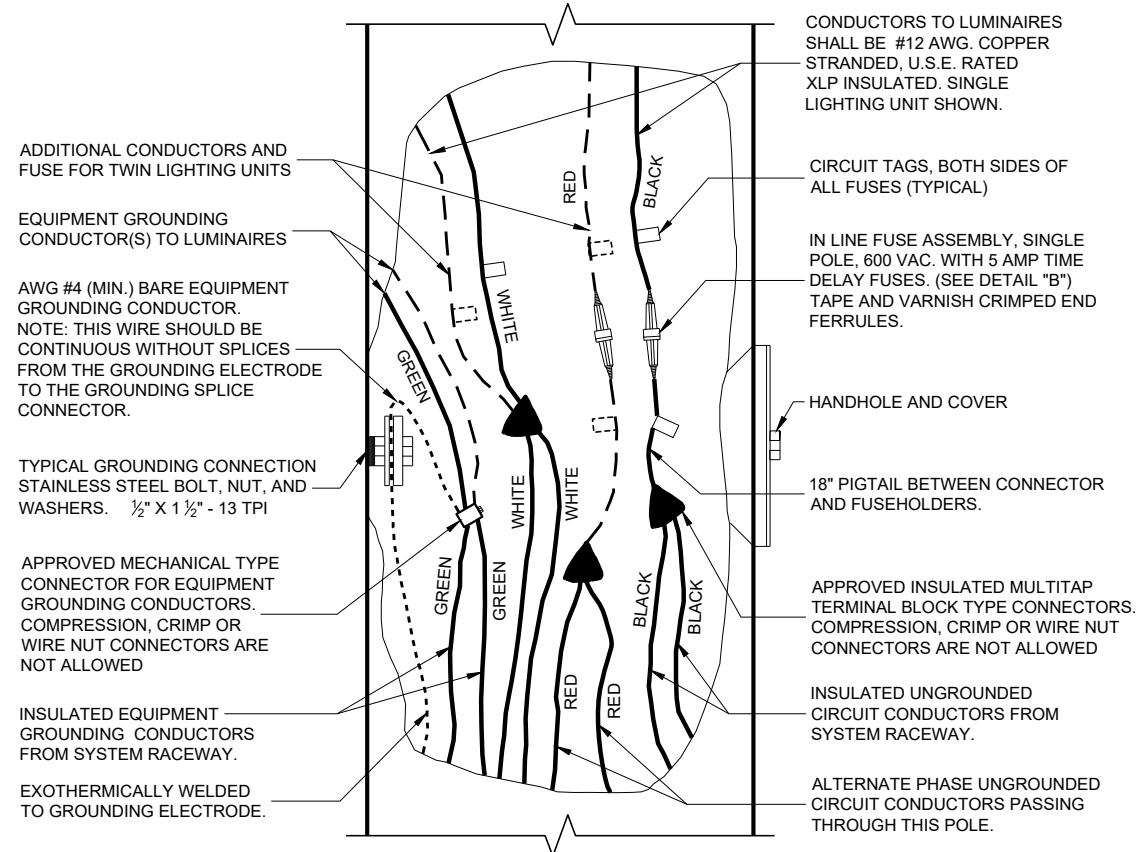
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



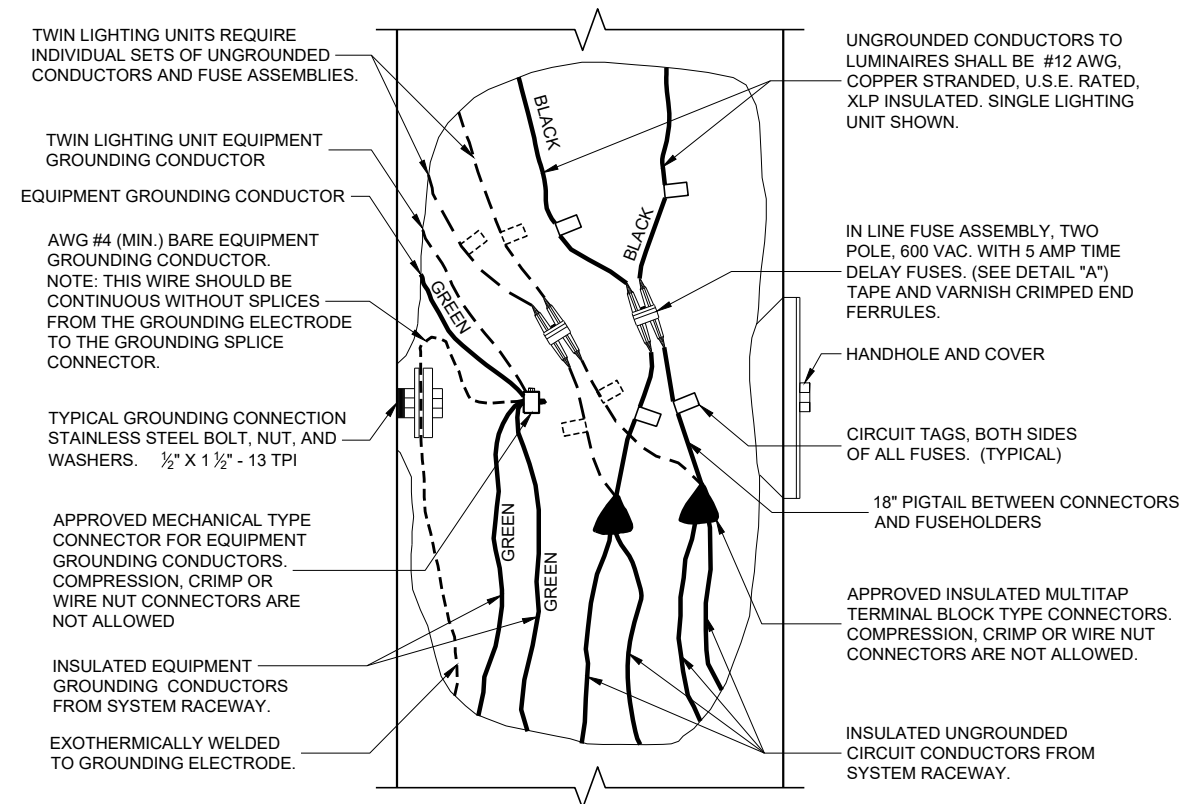
LIGHTING UNIT CODE (TYPICAL)



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



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

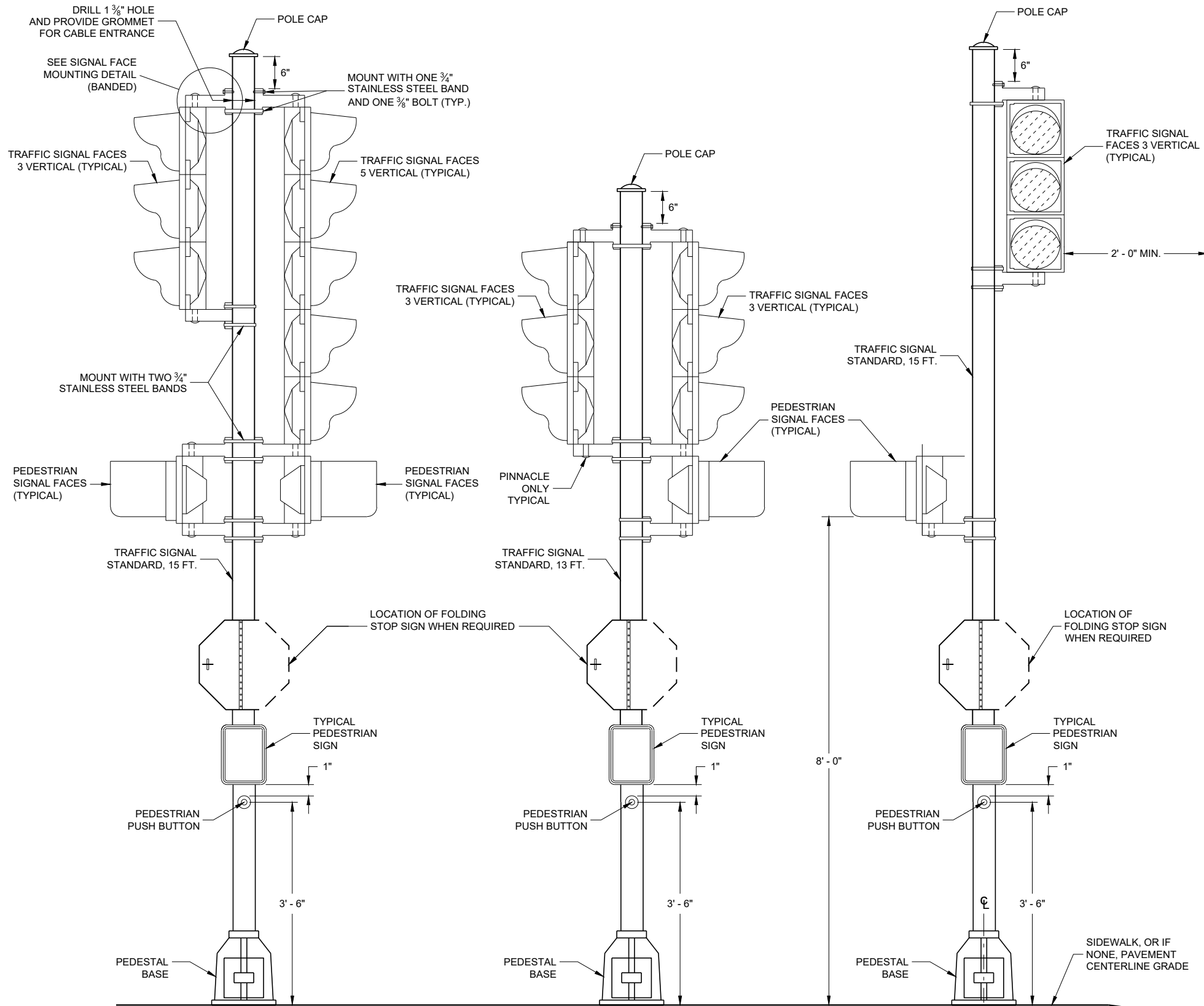


2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

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DEPARTMENT OF TRANSPORTATION

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GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

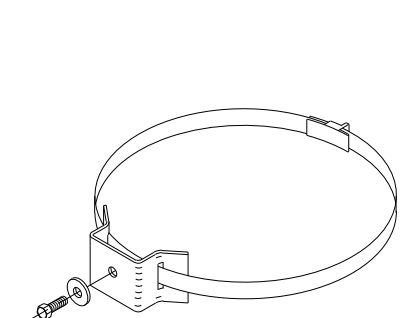
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

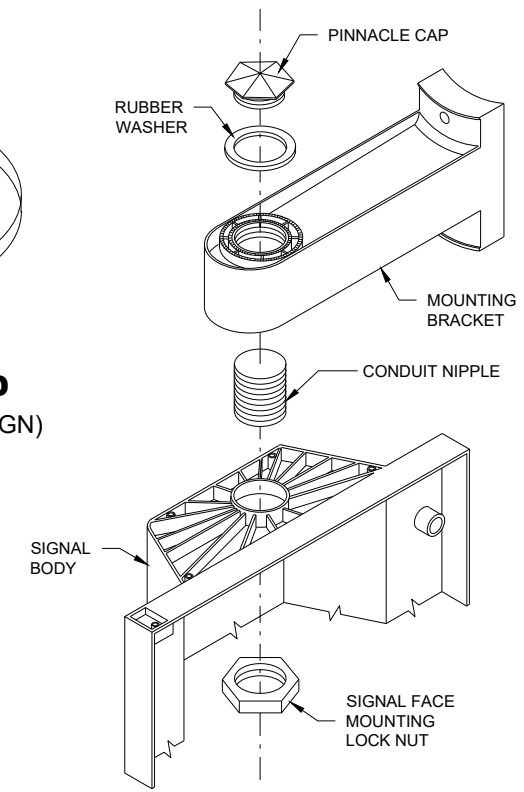
FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



SIGNAL FACE MOUNTING DETAIL (BANDED)

TRAFFIC SIGNAL STANDARD - 15 FT.

TRAFFIC SIGNAL STANDARD - 13 FT.

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

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

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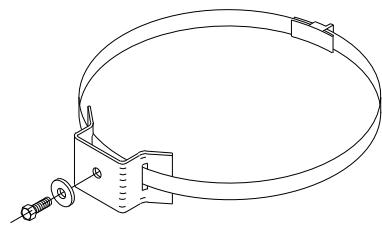
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6

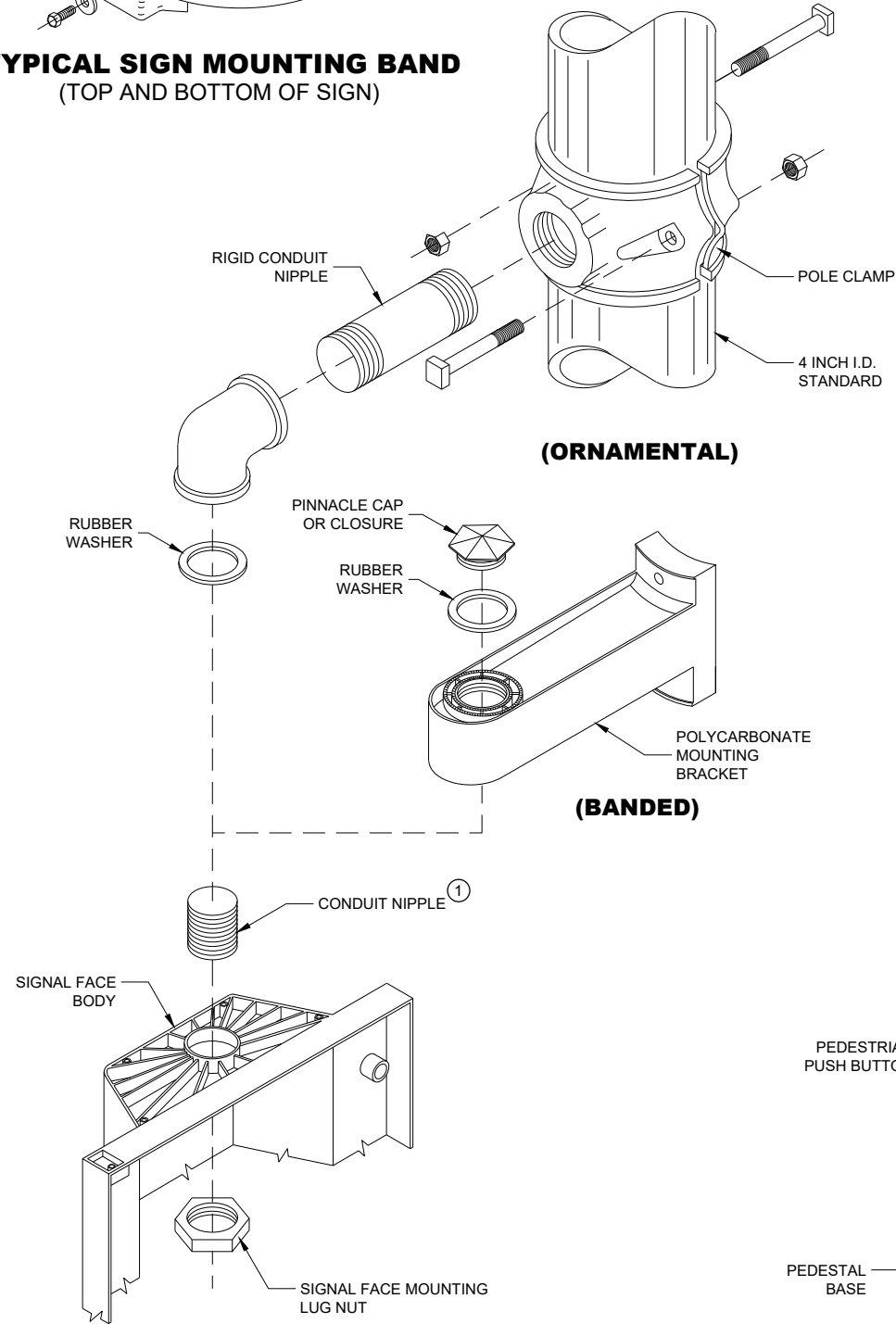
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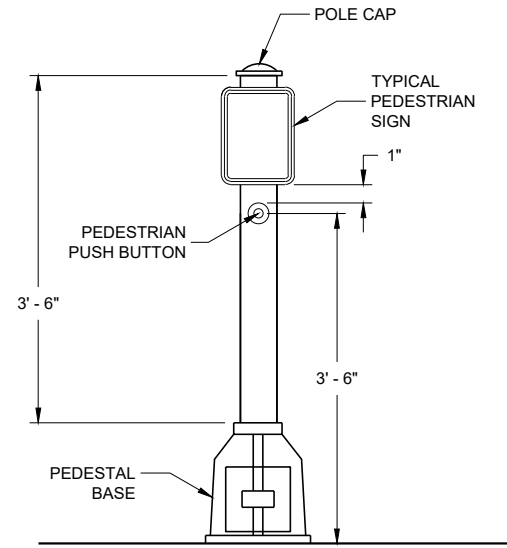
SDD 09E06 - 05



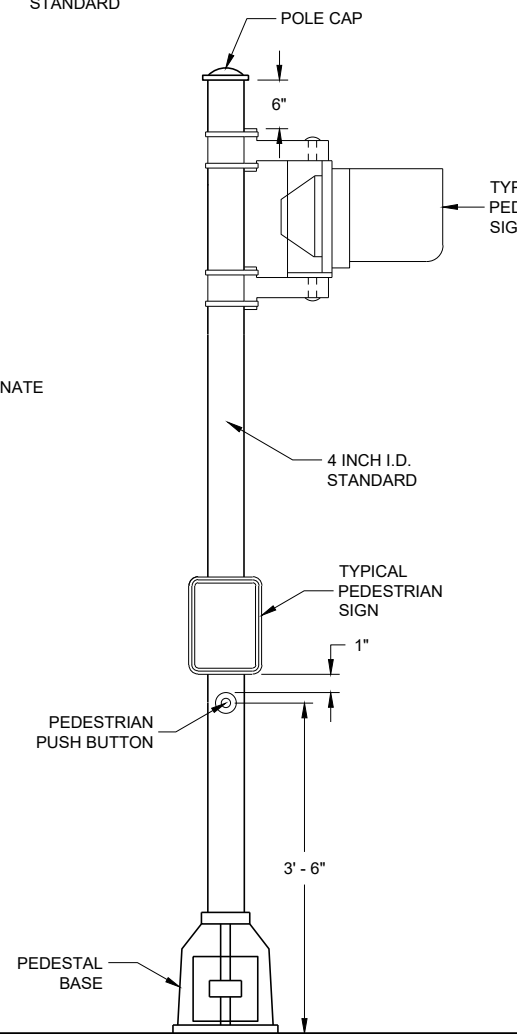
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



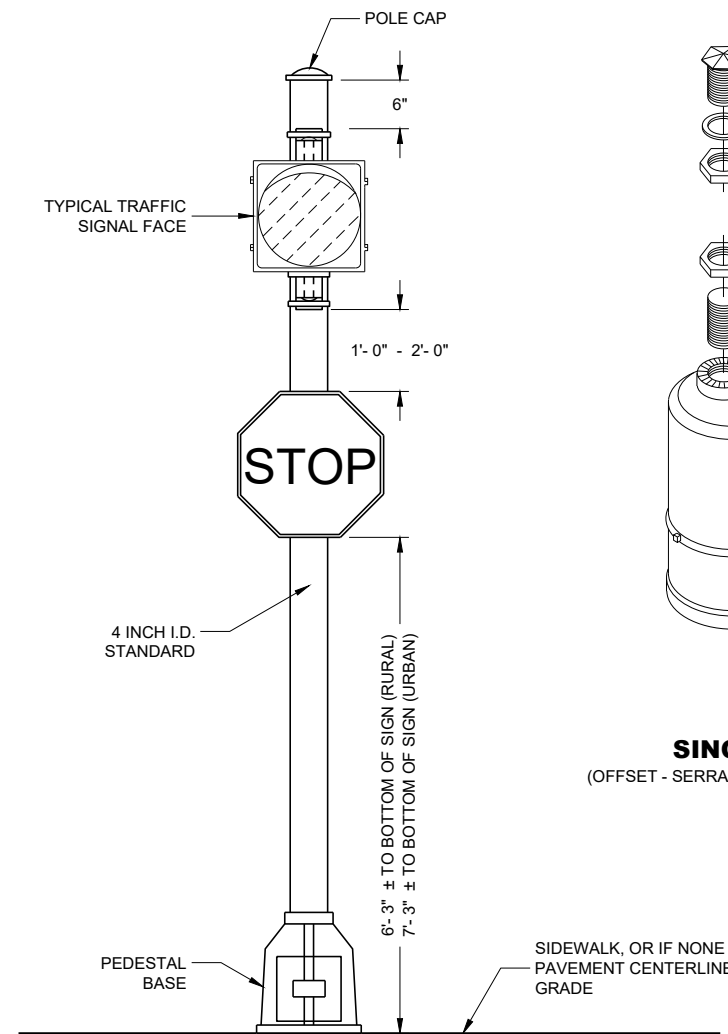
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON
TYPICAL MOUNTING



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



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

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

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

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

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

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

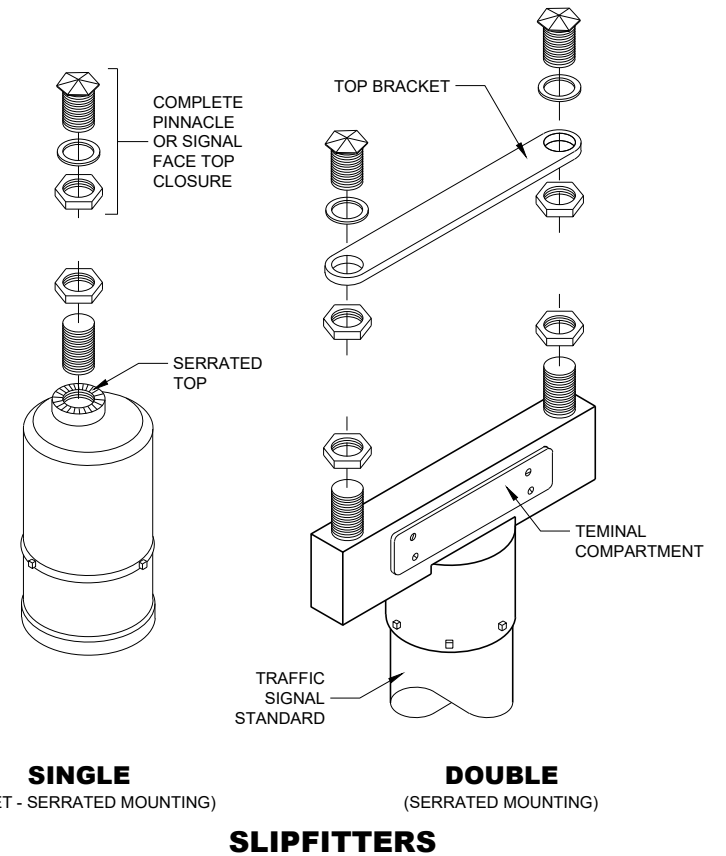
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

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

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

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

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



SINGLE
(OFFSET - SERRATED MOUNTING)

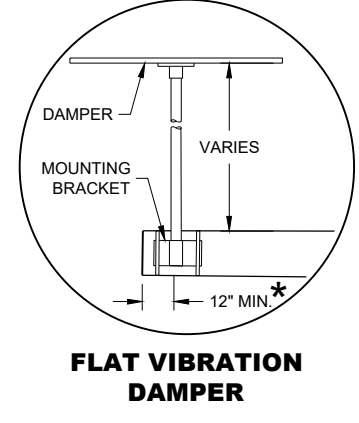
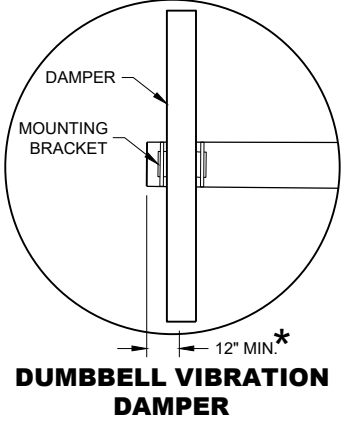
DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

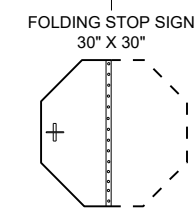
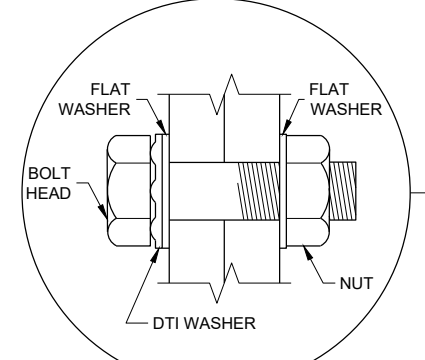
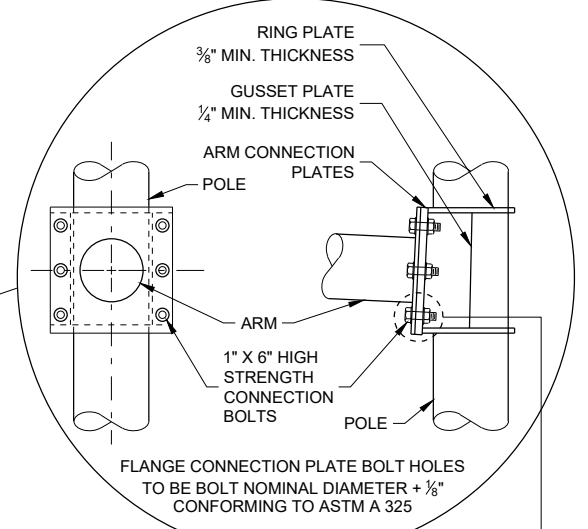
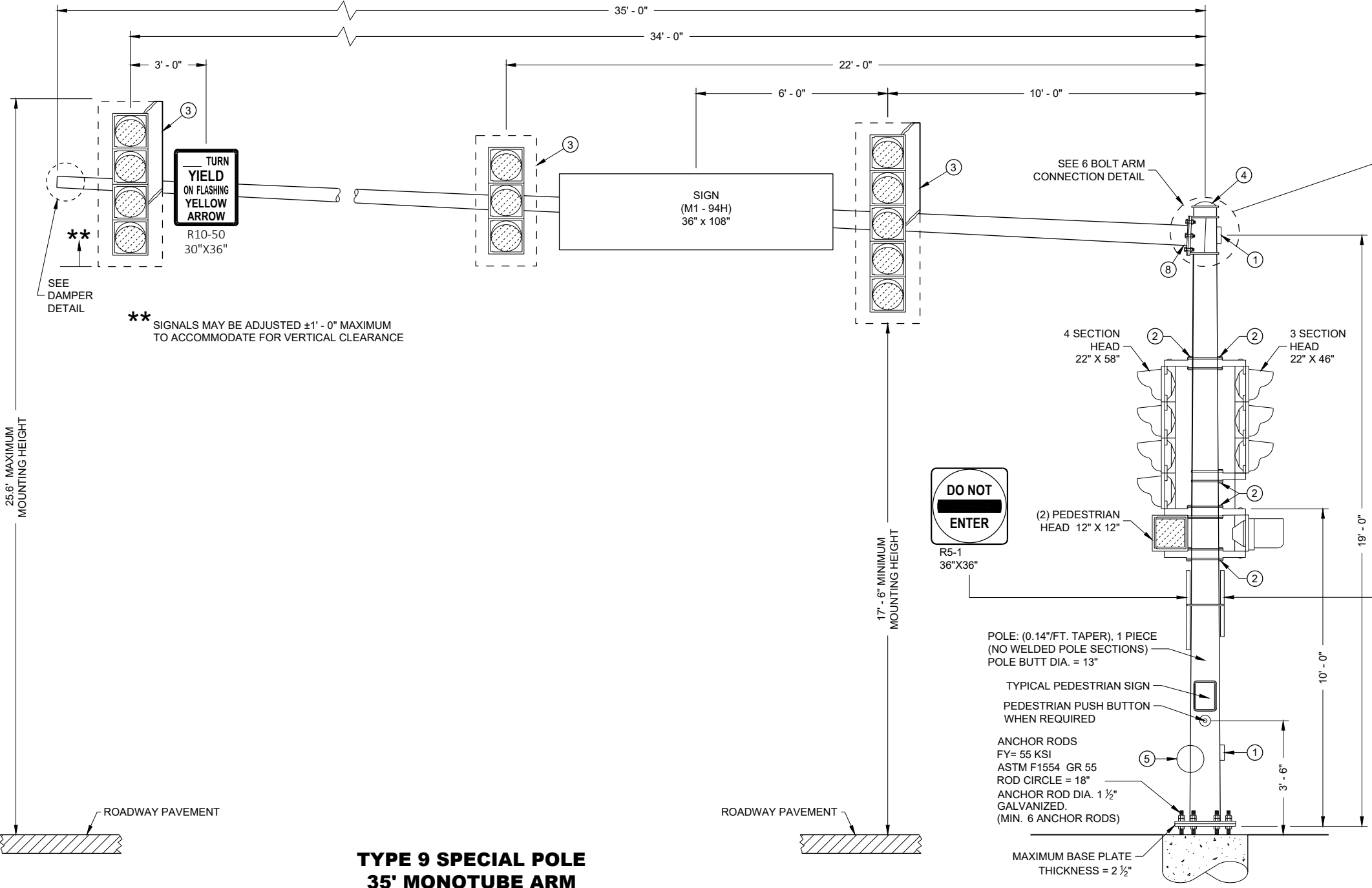
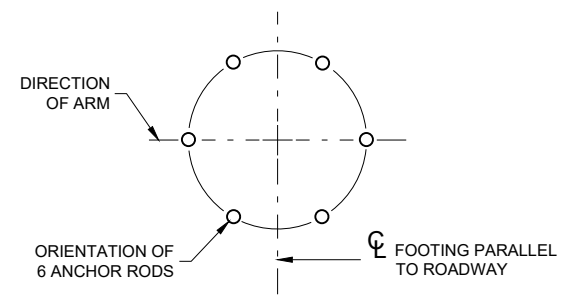
TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

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DEPARTMENT OF TRANSPORTATION

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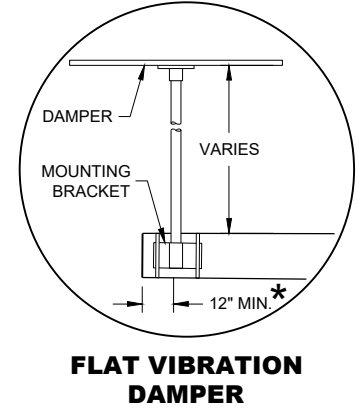
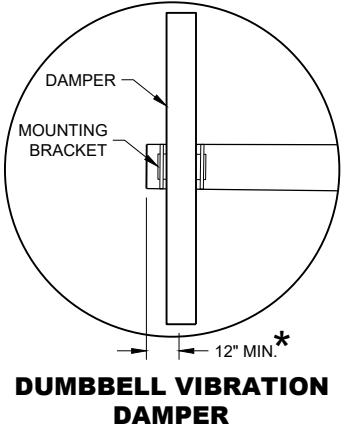
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



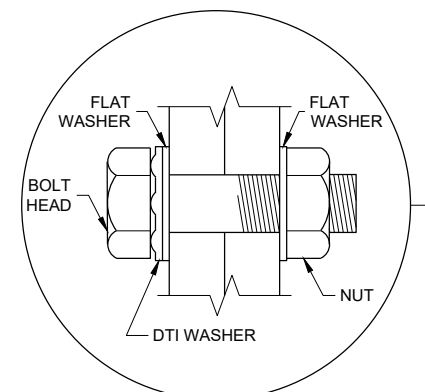
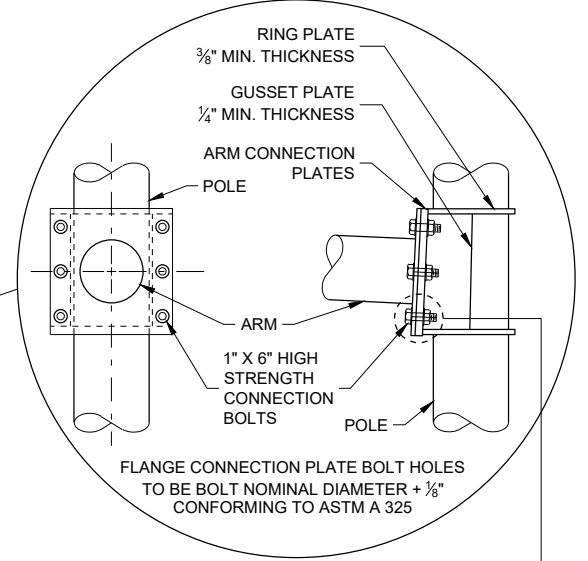
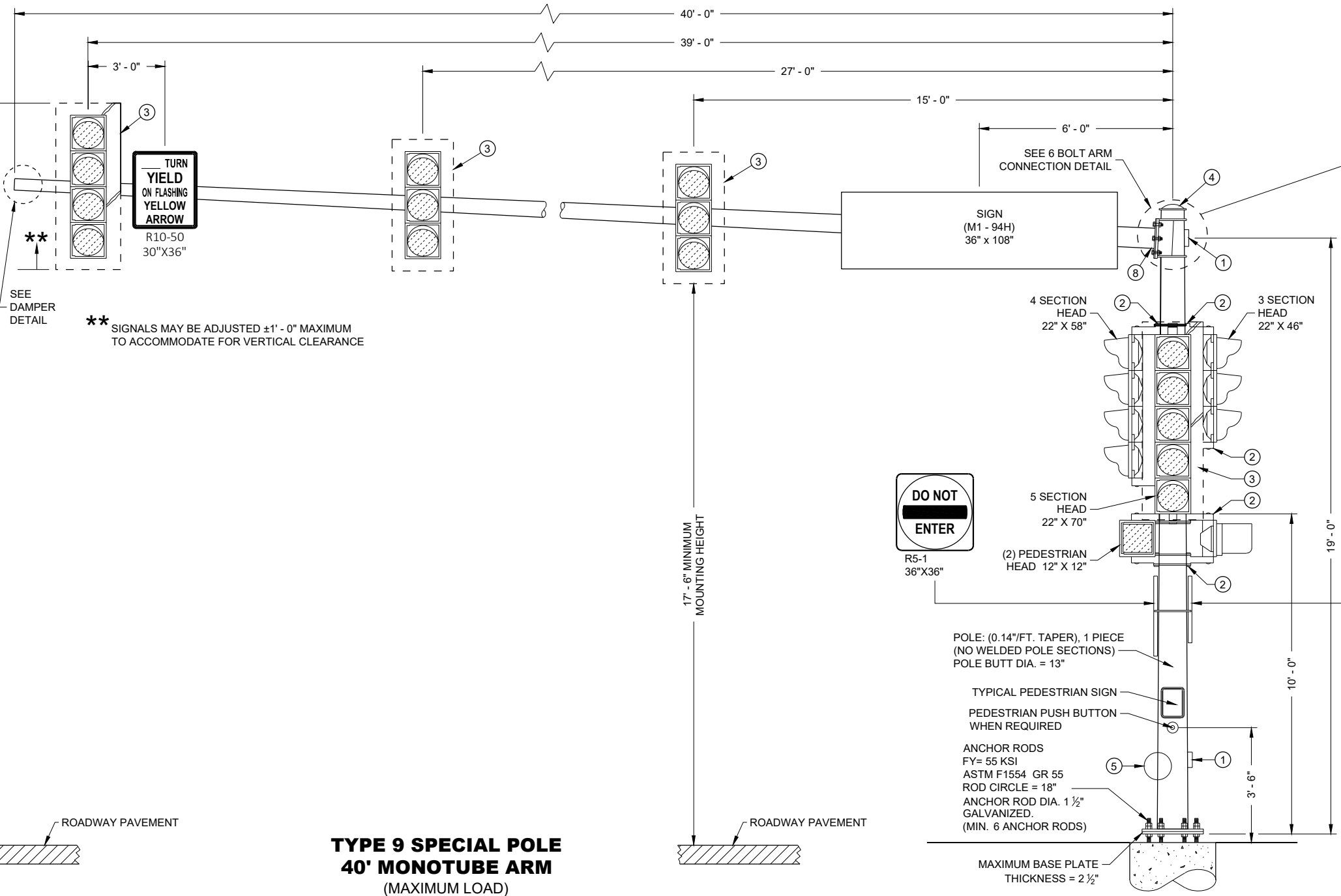
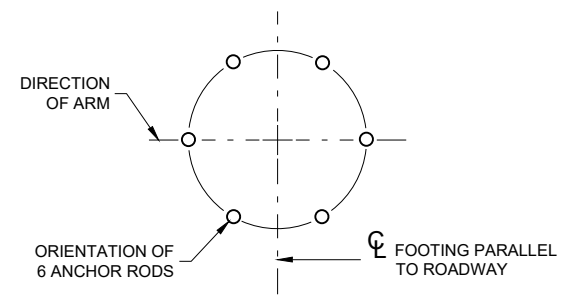
TYPE 9 SPECIAL POLE 35' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

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



TYPE 9 SPECIAL POLE 40' MONOTUBE ARM

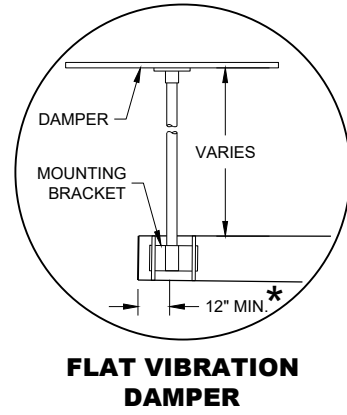
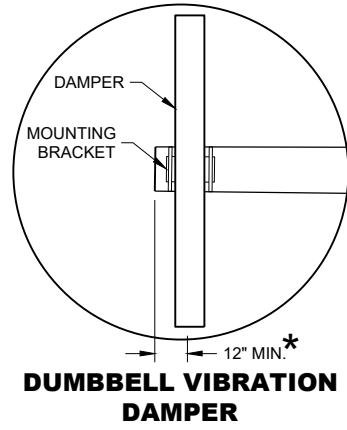
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

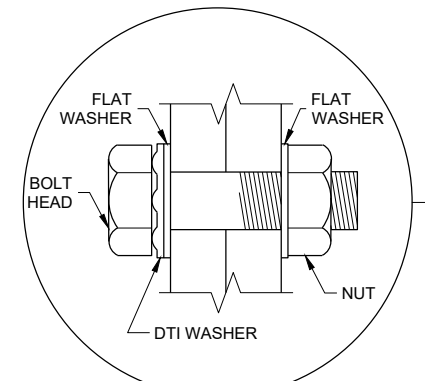
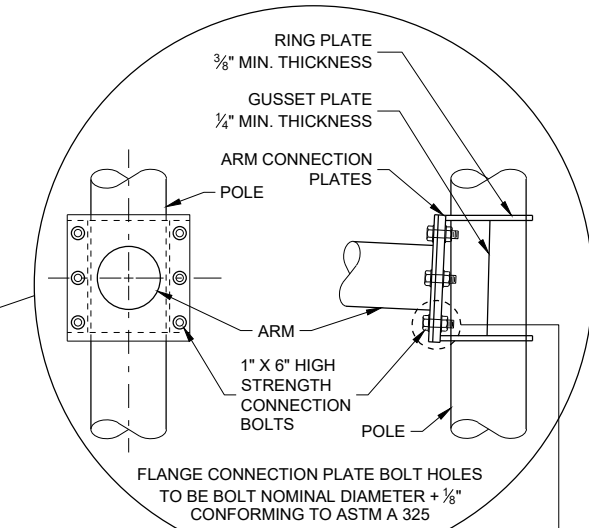
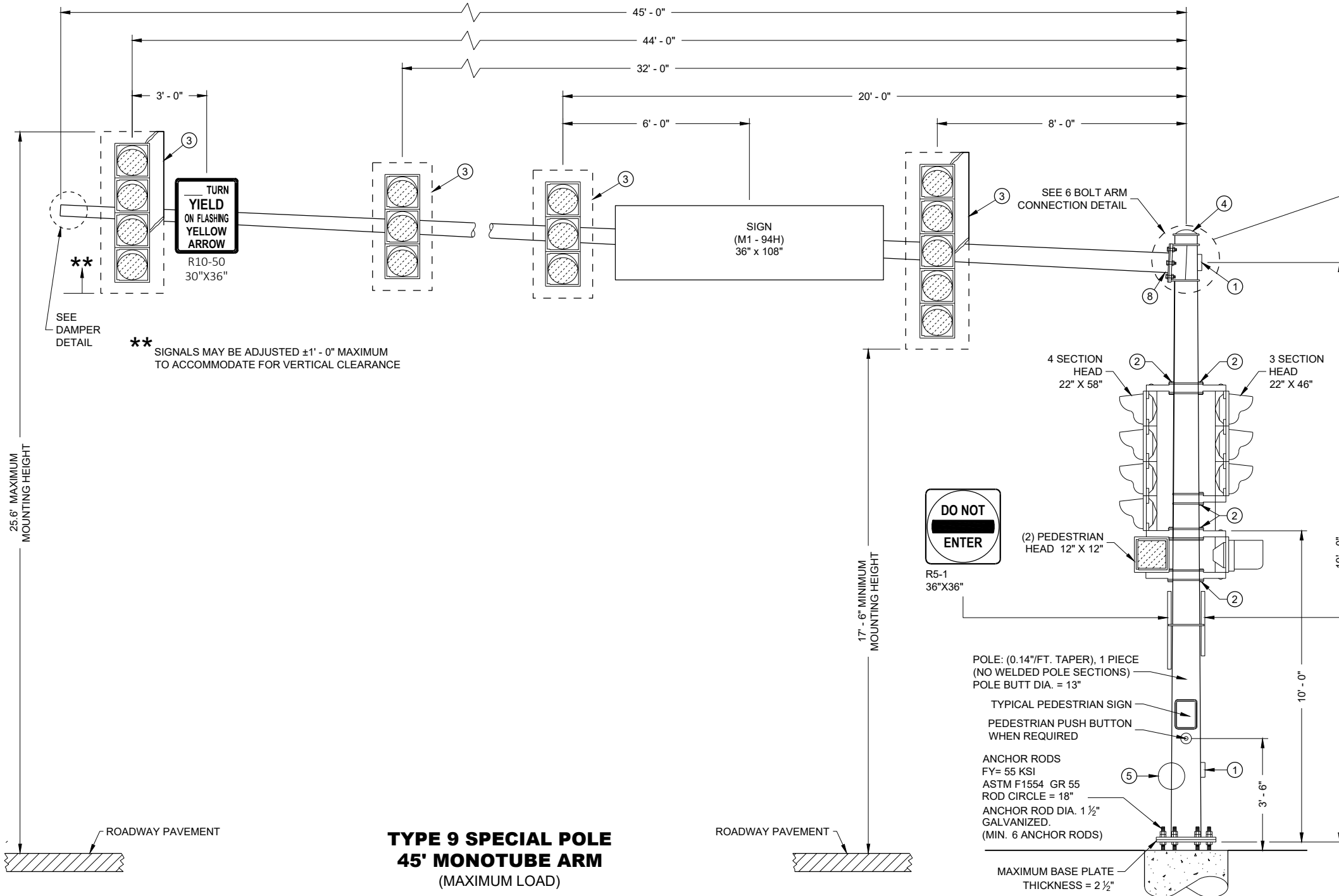
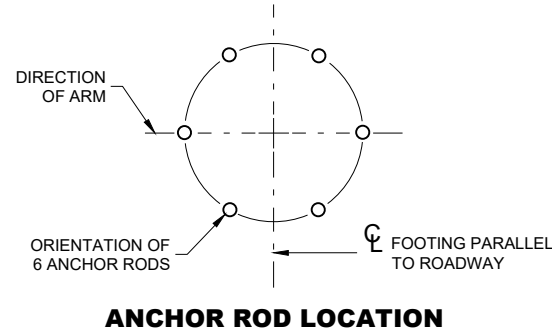
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SDD 09E08 - 09C

SDD 09E08 - 09C



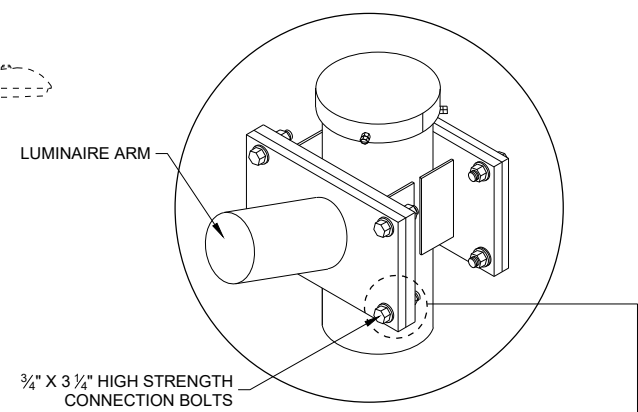
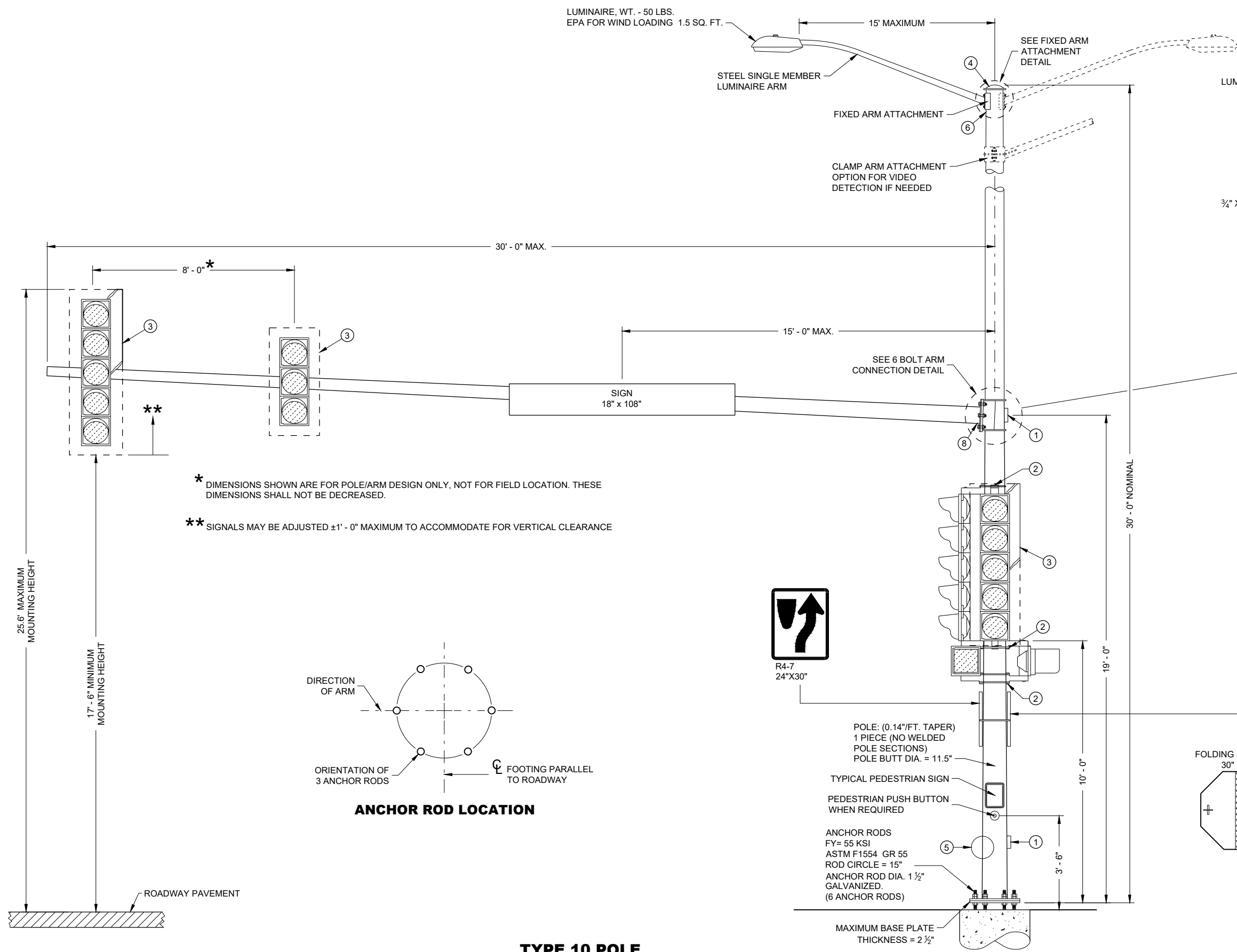
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



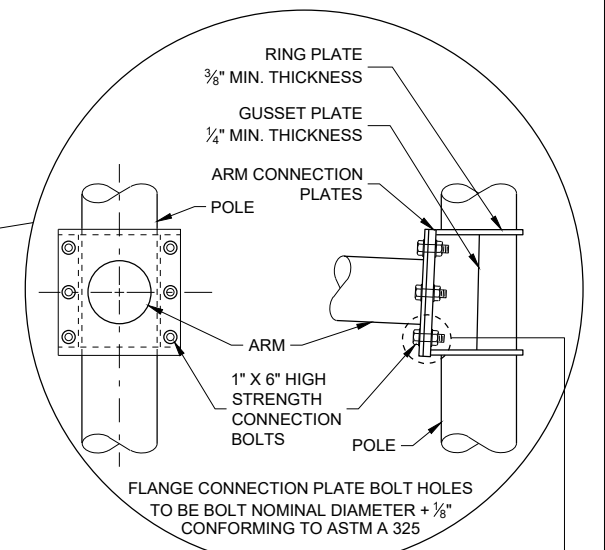
TYPE 9 SPECIAL POLE 45' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/s/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	

SDD 09E08 - 09d

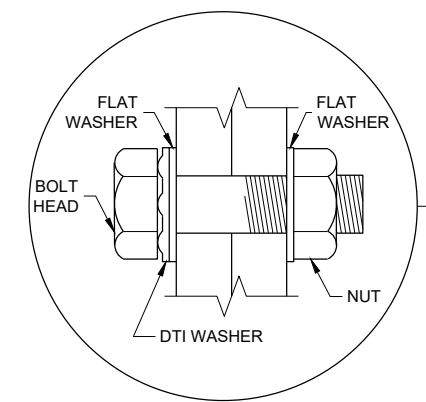
SDD 09E08 - 09d



FIXED ARM ATTACHMENT DETAIL



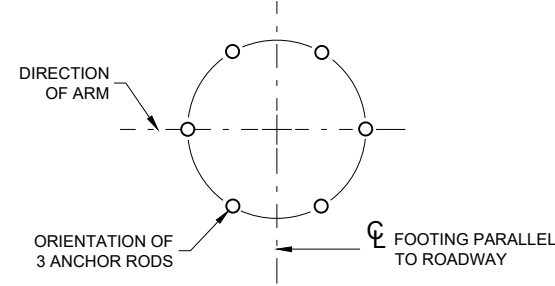
6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

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

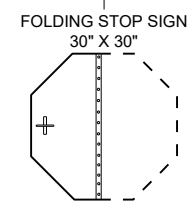
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



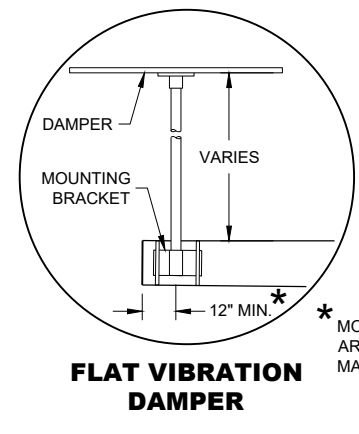
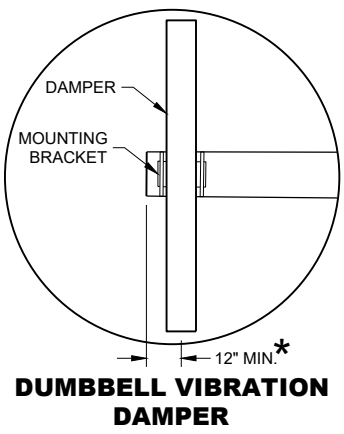
ANCHOR ROD LOCATION

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

- POLE: (0.14"/FT. TAPER)
1 PIECE (NO WELDED POLE SECTIONS)
POLE BUTT DIA. = 11.5"
- TYPICAL PEDESTRIAN SIGN
- PEDESTRIAN PUSH BUTTON WHEN REQUIRED
- ANCHOR RODS
FY= 55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 15"
ANCHOR ROD DIA. 1 1/2"
GALVANIZED.
(6 ANCHOR RODS)
- MAXIMUM BASE PLATE
THICKNESS = 2 1/2"

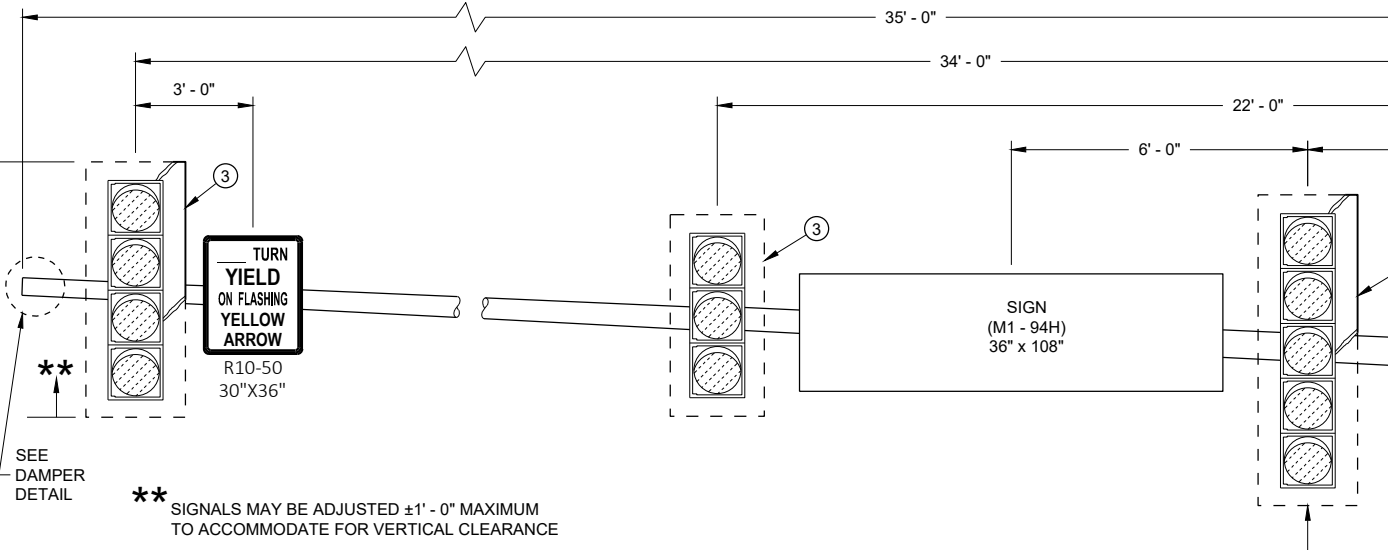
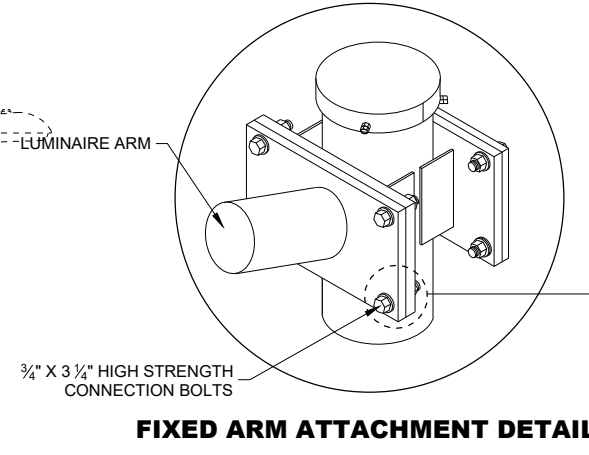
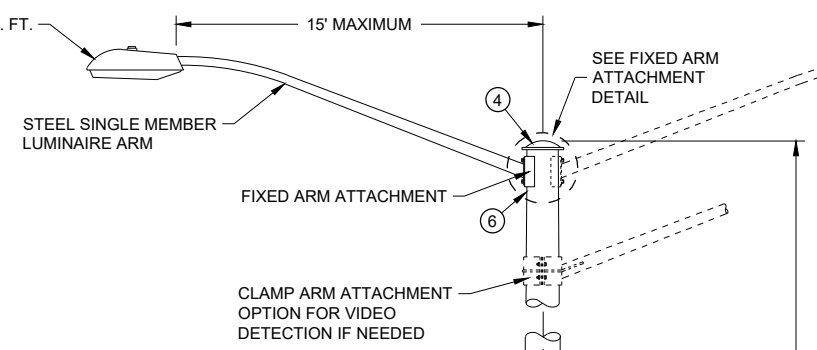


TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FHWA	



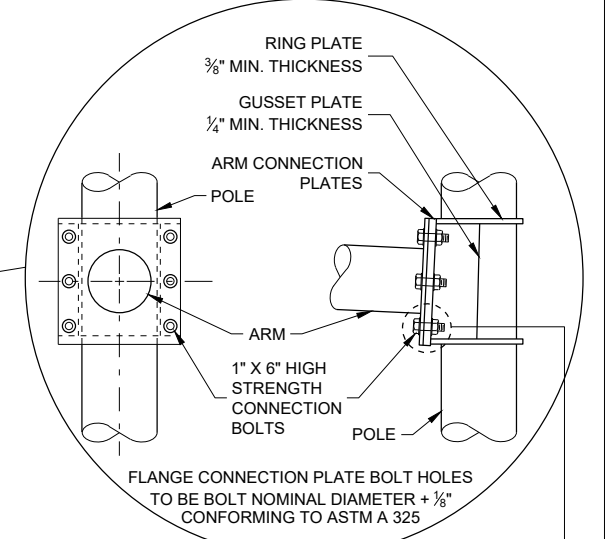
* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

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

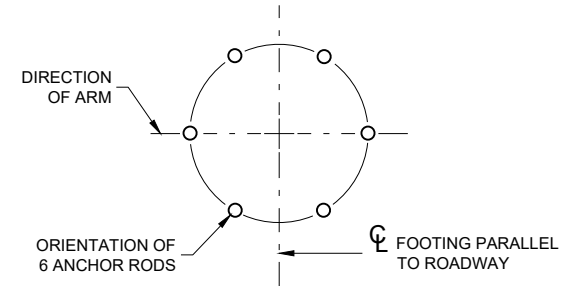


** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

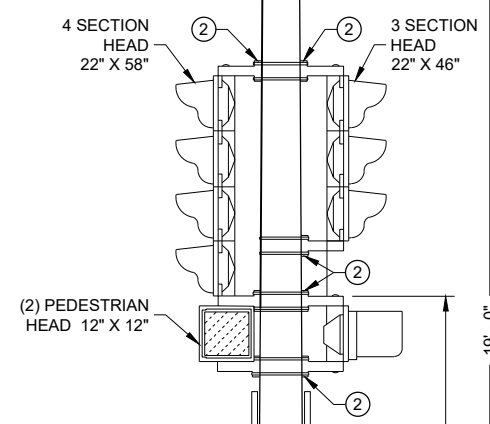
SEE 6 BOLT ARM CONNECTION DETAIL



6 BOLT ARM CONNECTION DETAIL



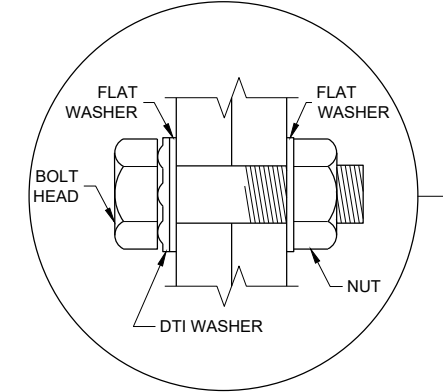
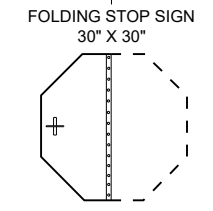
**TYPE 10 SPECIAL POLE
35' MONOTUBE ARM
(MAXIMUM LOAD)**



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

TYPICAL PEDESTRIAN SIGN
PEDESTRIAN PUSH BUTTON WHEN REQUIRED

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



RECOMMENDED BOLT ASSEMBLY DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

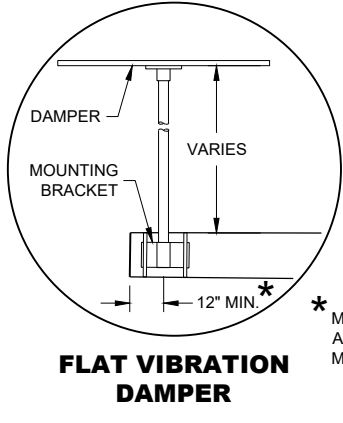
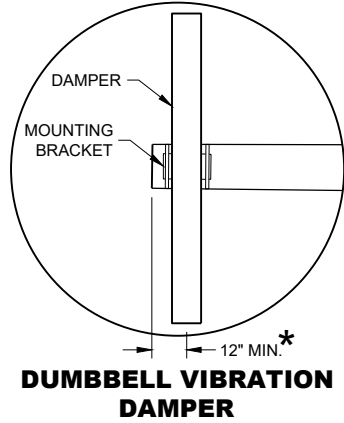
FHWA

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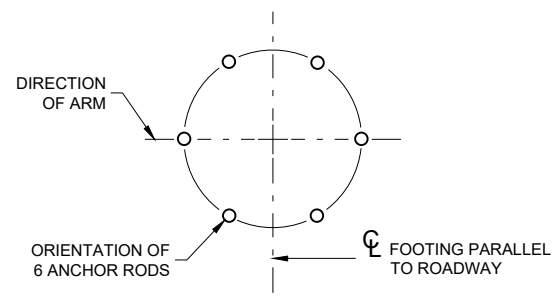
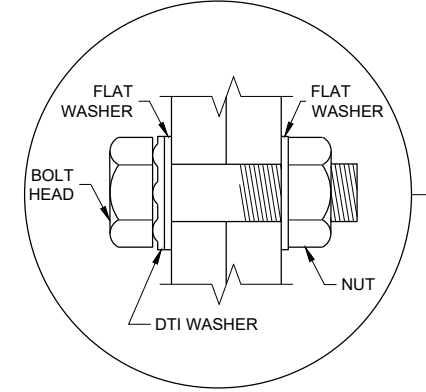
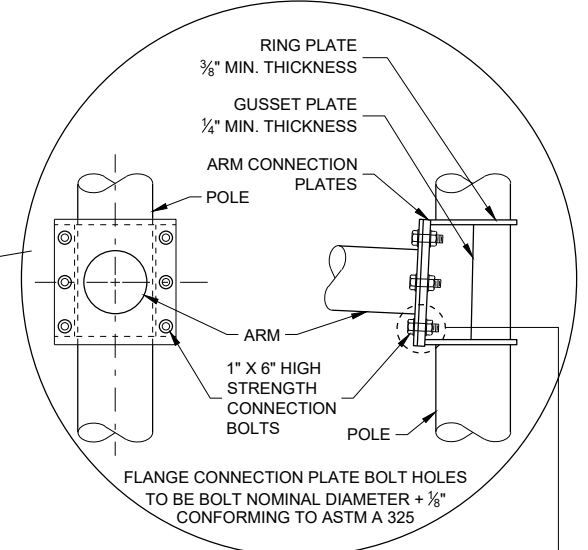
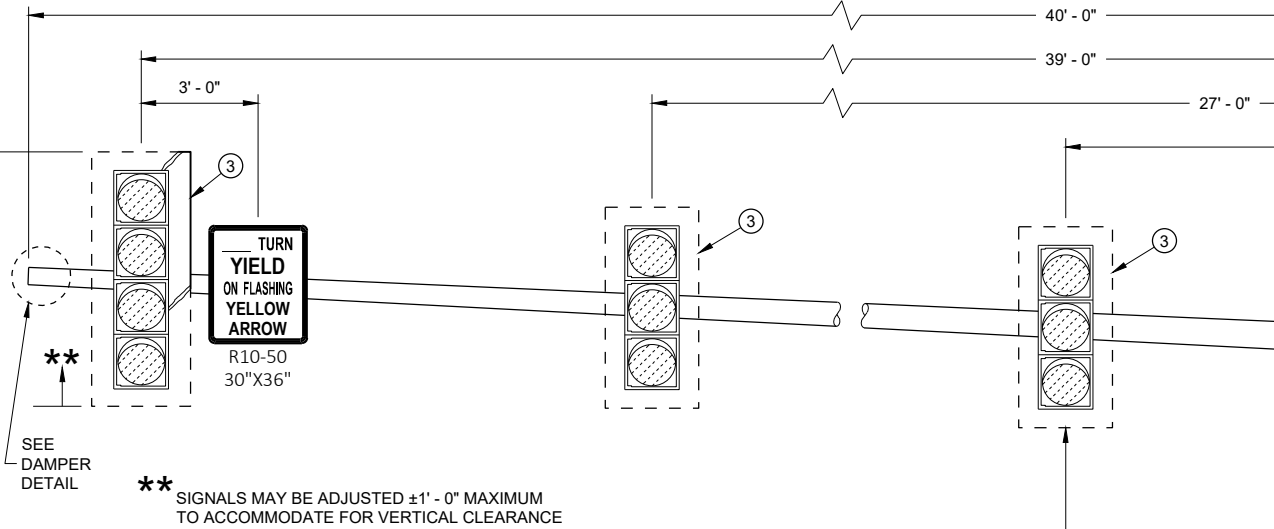
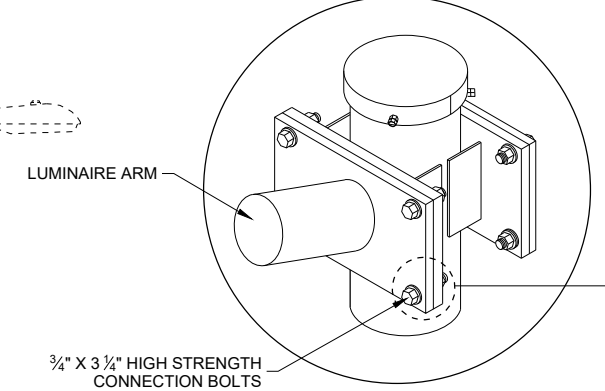
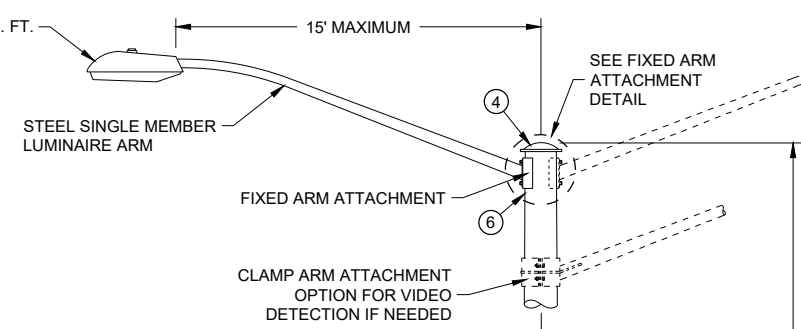
SDD 09E08 - 09f

SDD 09E08 - 09f



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

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



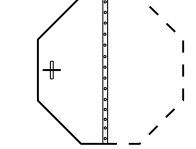
POLE: (0.14"/FT. TAPER), 1 PIECE (NO WELDED POLE SECTIONS)
POLE BUTT DIA. = 13"

TYPICAL PEDESTRIAN SIGN
PEDESTRIAN PUSH BUTTON WHEN REQUIRED

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

MAXIMUM BASE PLATE THICKNESS = 2 1/2"

FOLDING STOP SIGN 30" X 30"



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

TYPE 10 SPECIAL POLE 40' MONOTUBE ARM

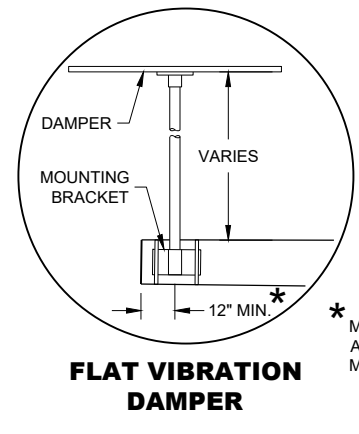
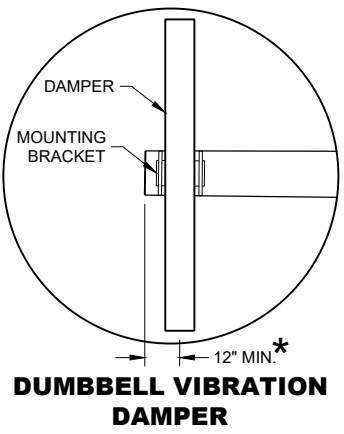
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

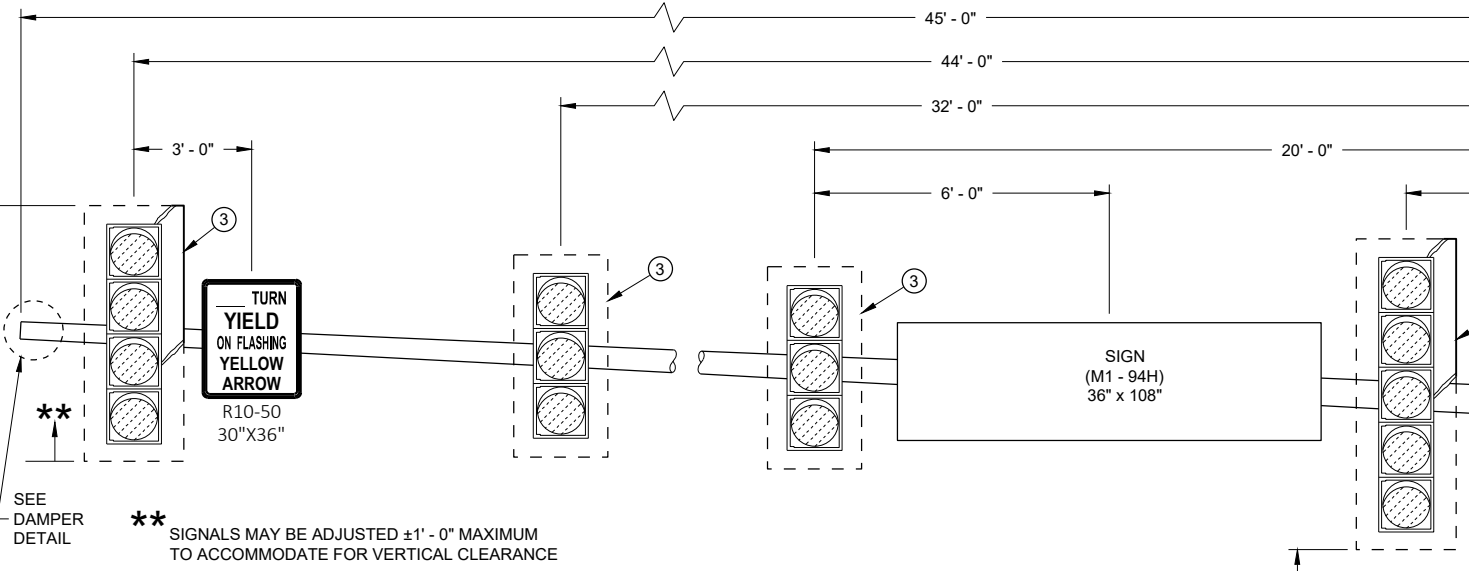
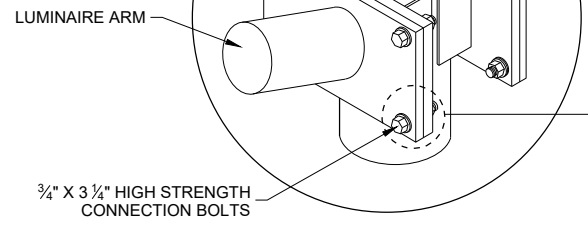
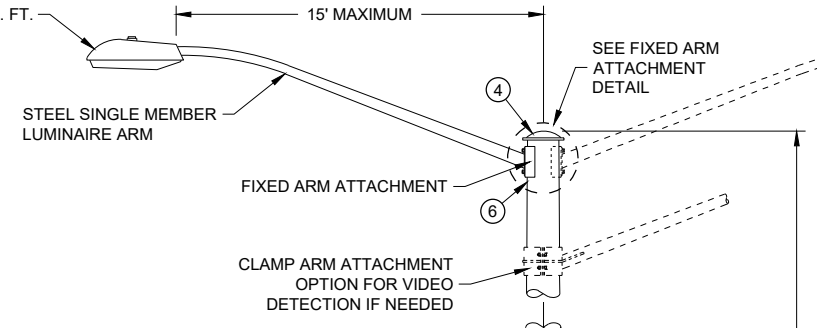
SDD 09E08 - 09g

SDD 09E08 - 09g

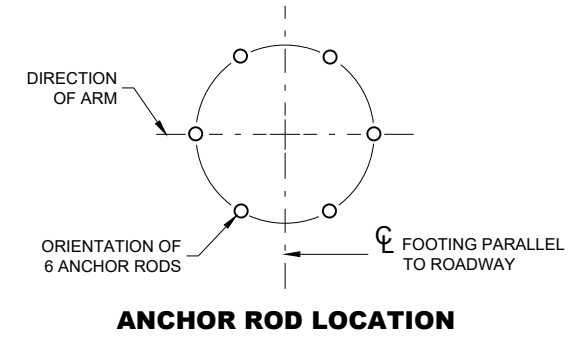
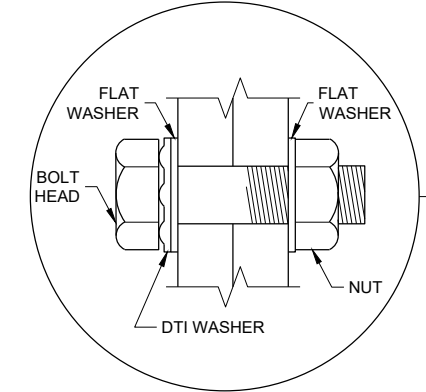
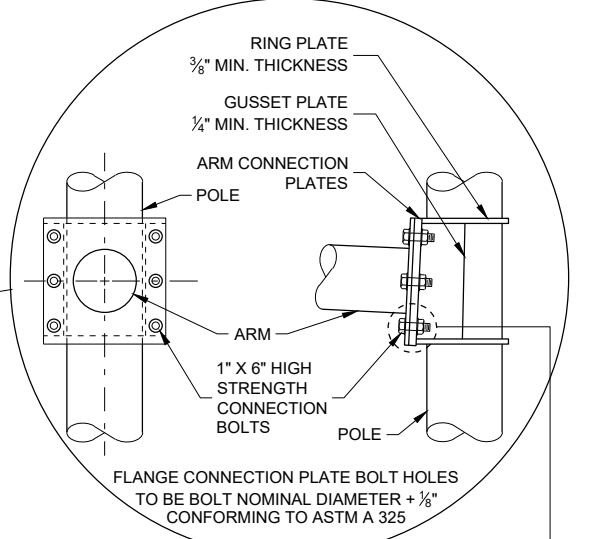


* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

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



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



- POLE: (0.14"/FT. TAPER), 1 PIECE (NO WELDED POLE SECTIONS) POLE BUTT DIA. = 13"
- TYPICAL PEDESTRIAN SIGN
- PEDESTRIAN PUSH BUTTON WHEN REQUIRED
- ANCHOR RODS
FY= 55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 18"
ANCHOR ROD DIA. 1 1/2"
GALVANIZED.
(MIN. 6 ANCHOR RODS)
- FOLDING STOP SIGN 30" X 30"

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

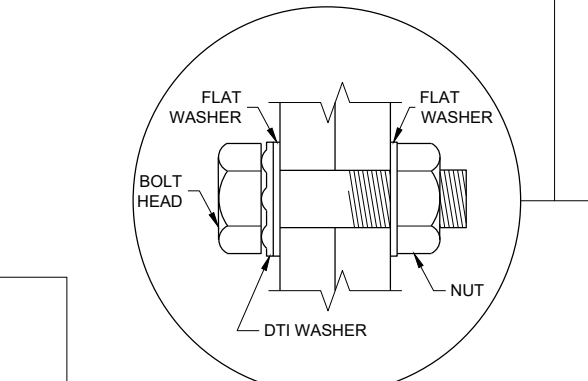
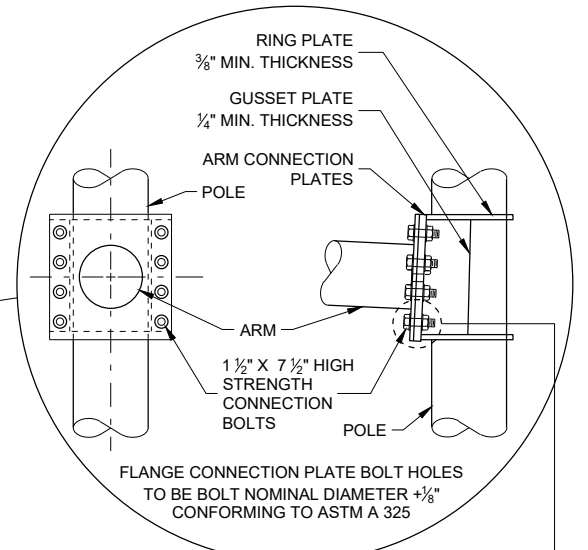
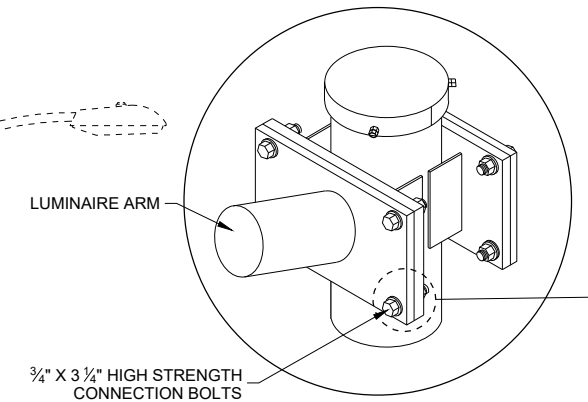
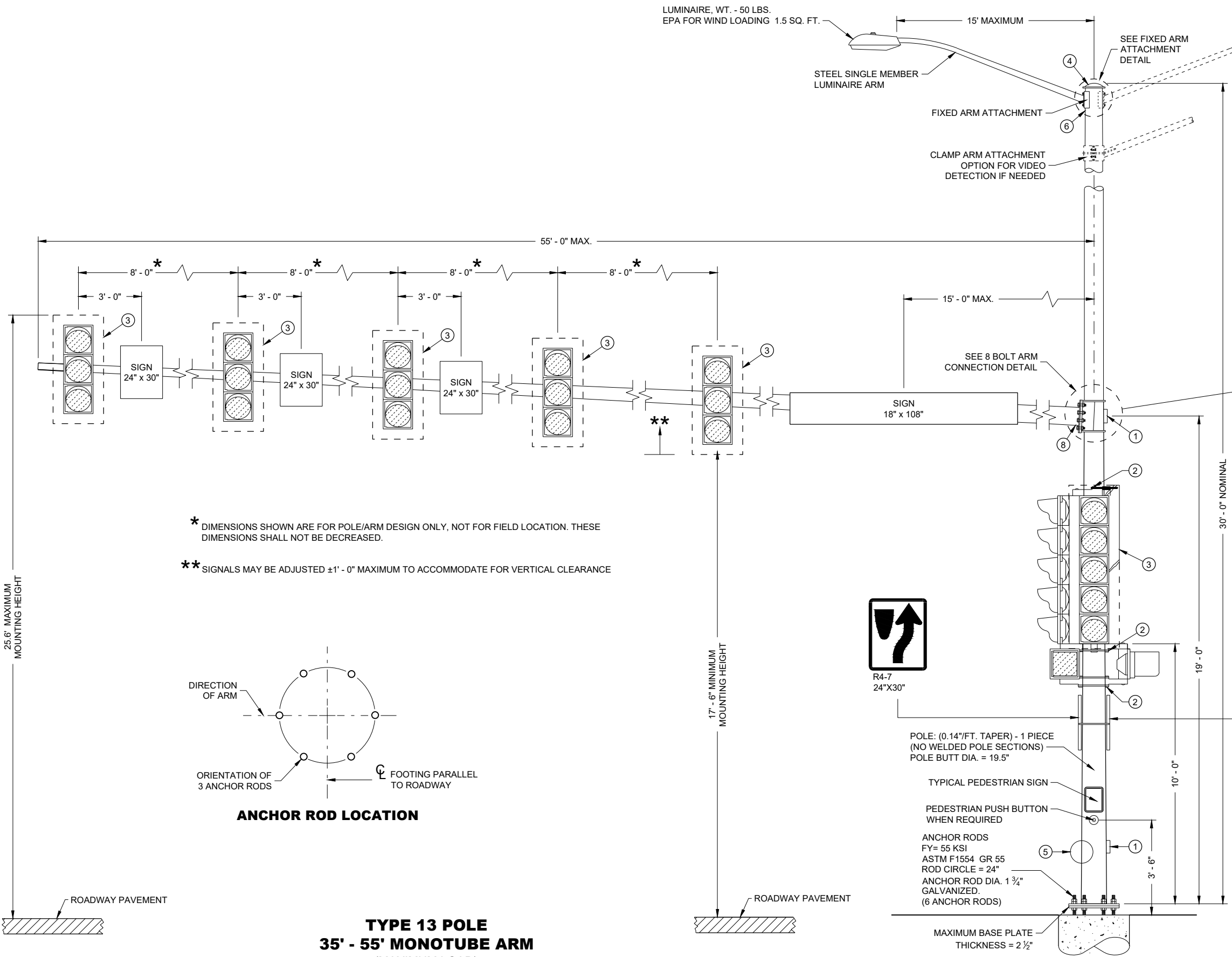
MAXIMUM BASE PLATE THICKNESS = 2 1/2"

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

SDD 09E08 - 08h

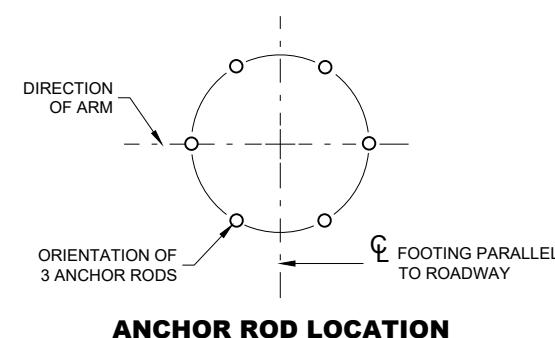
SDD 09E08 - 08h

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



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

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



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



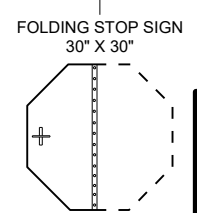
POLE: (0.14"/FT. TAPER) - 1 PIECE
(NO WELDED POLE SECTIONS)
POLE BUTT DIA. = 19.5"

TYPICAL PEDESTRIAN SIGN

PEDESTRIAN PUSH BUTTON
WHEN REQUIRED

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

MAXIMUM BASE PLATE
THICKNESS = 2 1/2"



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

GENERAL NOTES

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

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

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

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

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

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

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

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

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

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

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

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

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

115 MPH (700 YEAR MRI BASIC WIND SPEED).

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

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

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

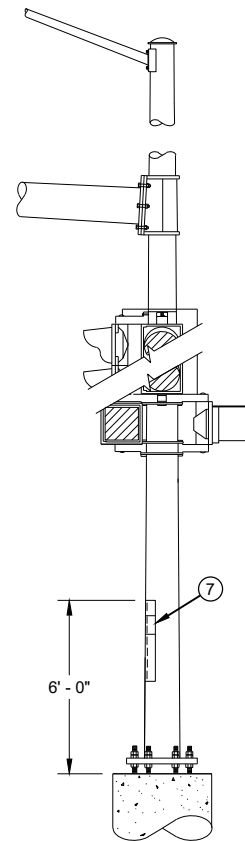
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

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

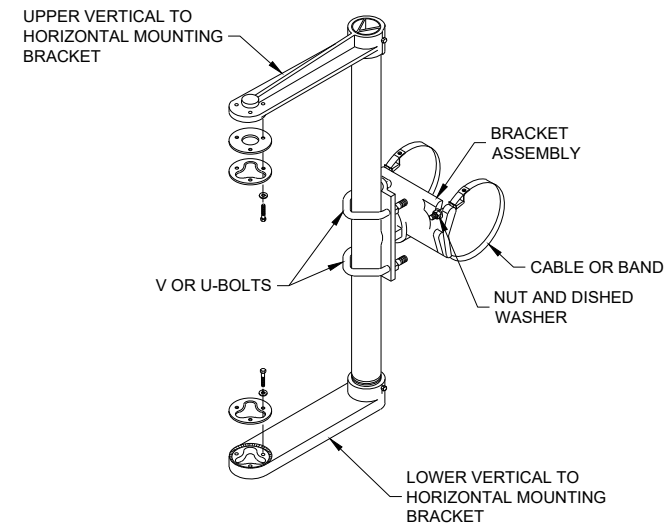
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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

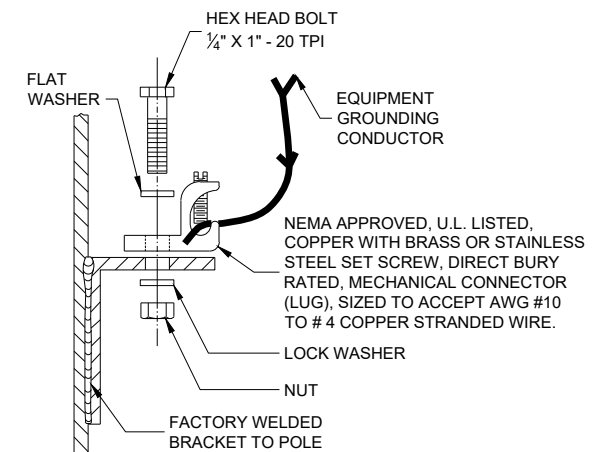
- ⑧ FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



**STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT**

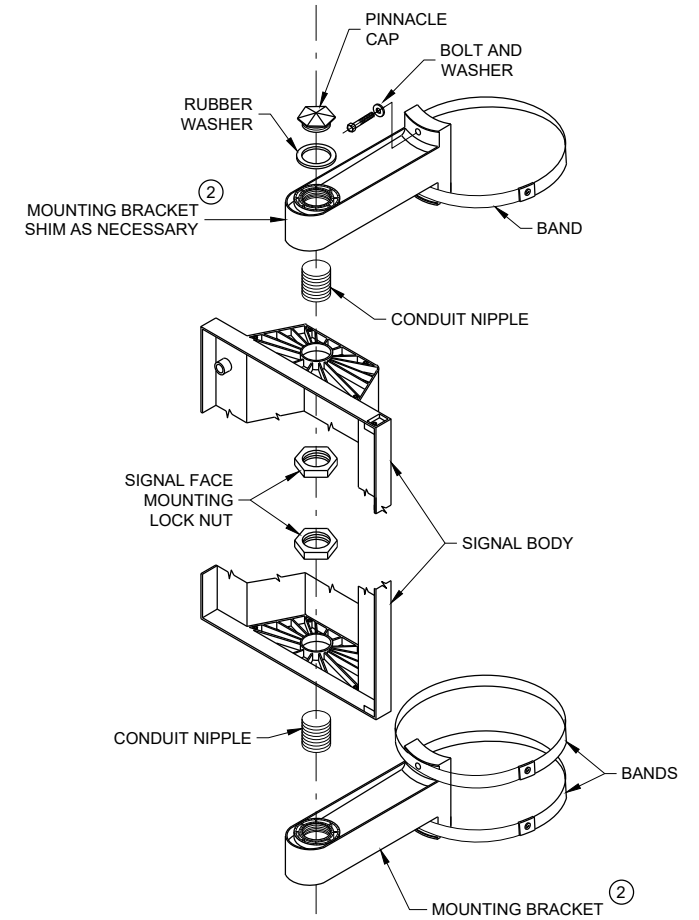


**SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM**
(MOUNT PER MANUFACTURER'S RECOMMENDATION)

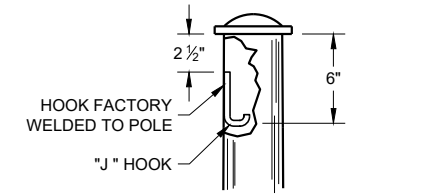


**TYPICAL GROUNDING
CONNECTIONS**

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



**SIGNAL FACE VERTICAL
MOUNTING DETAIL**



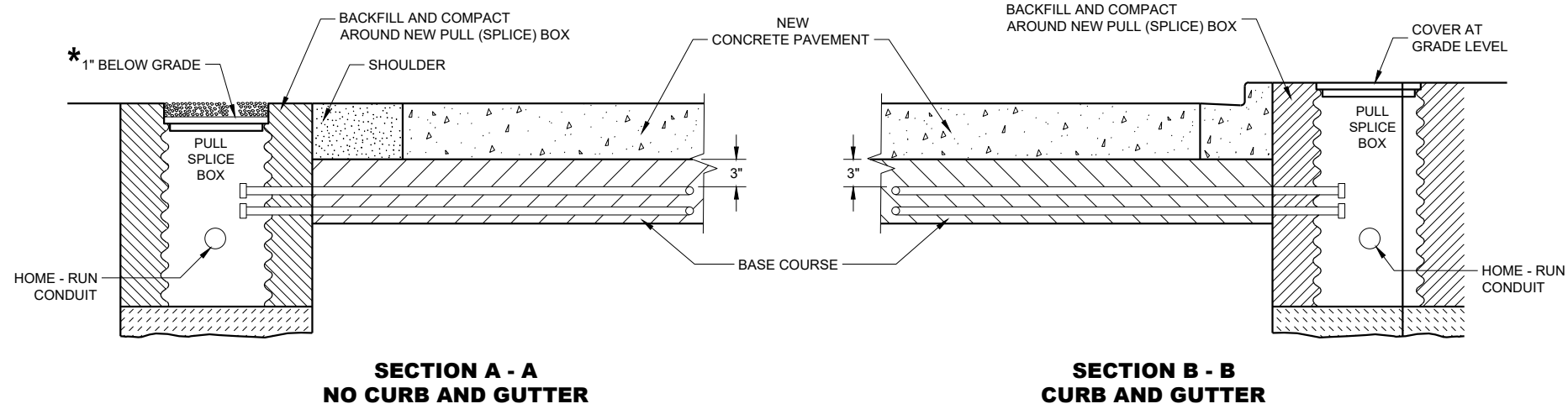
**TYPICAL "J" HOOK
WIRE SUPPORT**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

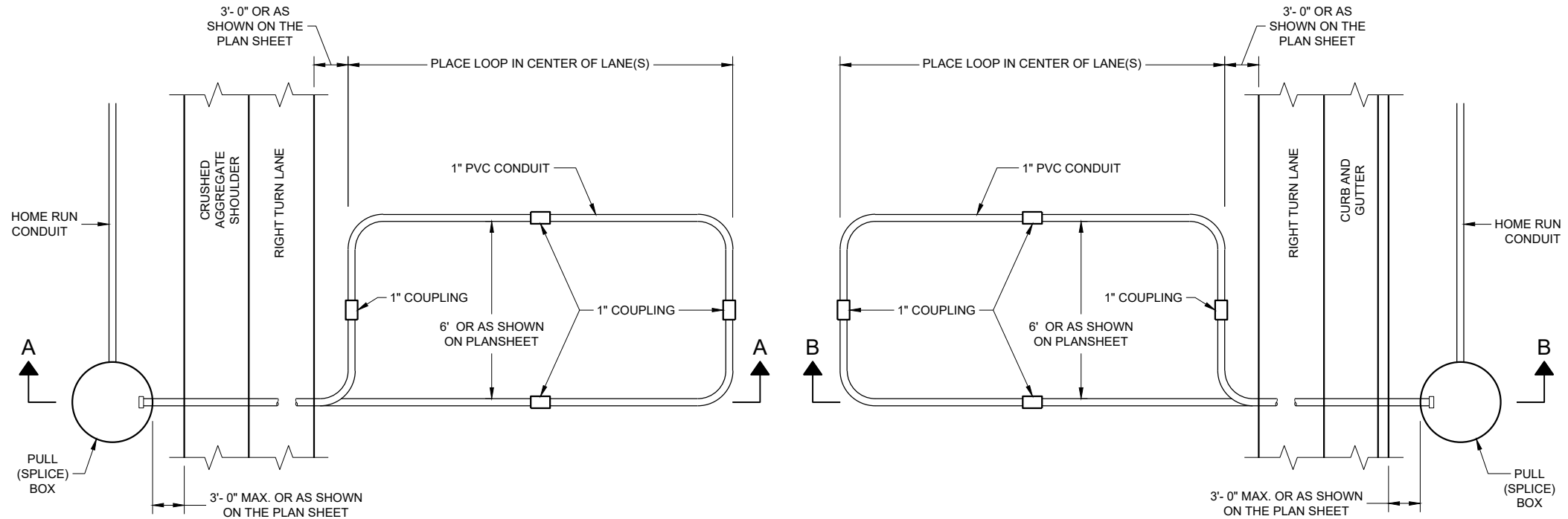


* RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

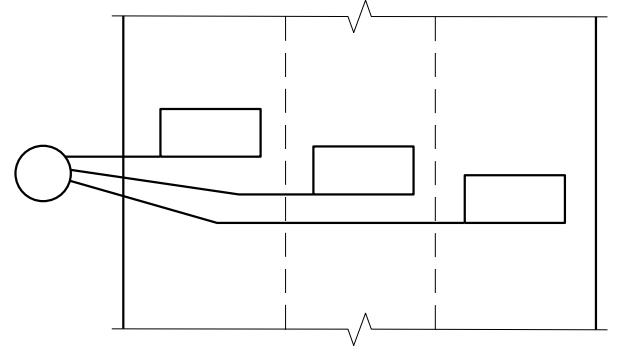
LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.
- LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.
- SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.
- MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.
- AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READING TO THE PROJECT ENGINEER FOR EVALUATION.
- LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.
- THE #12 AWG LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.
- SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.
- THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE NON-SPLICED, CONTINUOUS LENGTH.
- PROTECTION OF THE CONDUIT IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.
- SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



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



MULTI-LANE INSTALLATION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

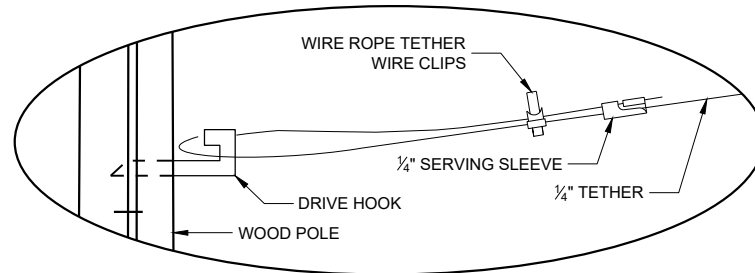
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SDD 09F15 - 04b

SDD 09F15 - 04b

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

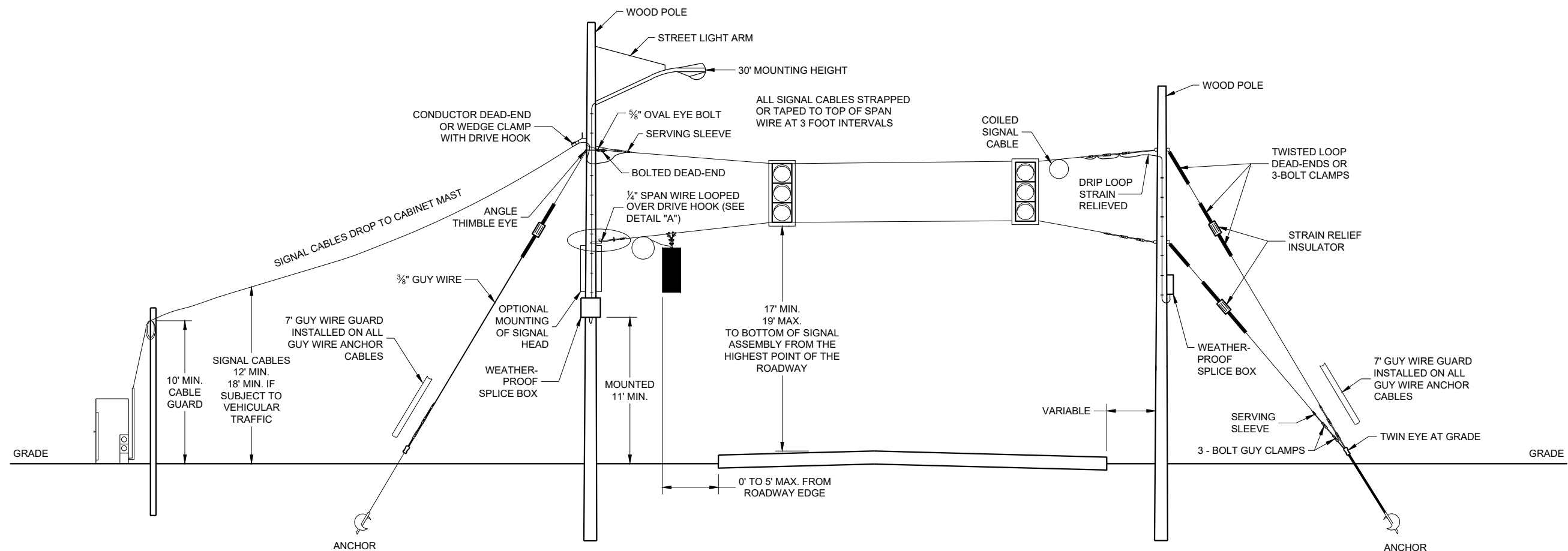


DETAIL "A"

GENERAL NOTES

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

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



SPAN WIRE TEMPORARY SIGNALS

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

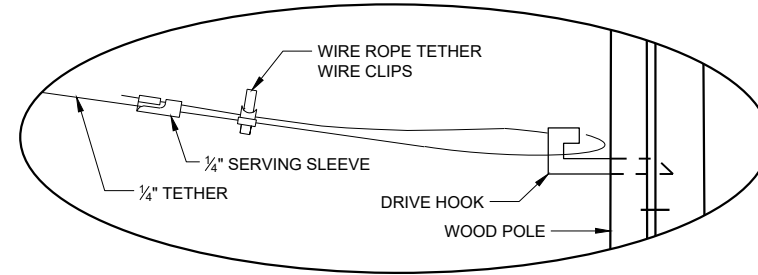
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6

SDD09G01 - 04a

SDD09G01 - 04a

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

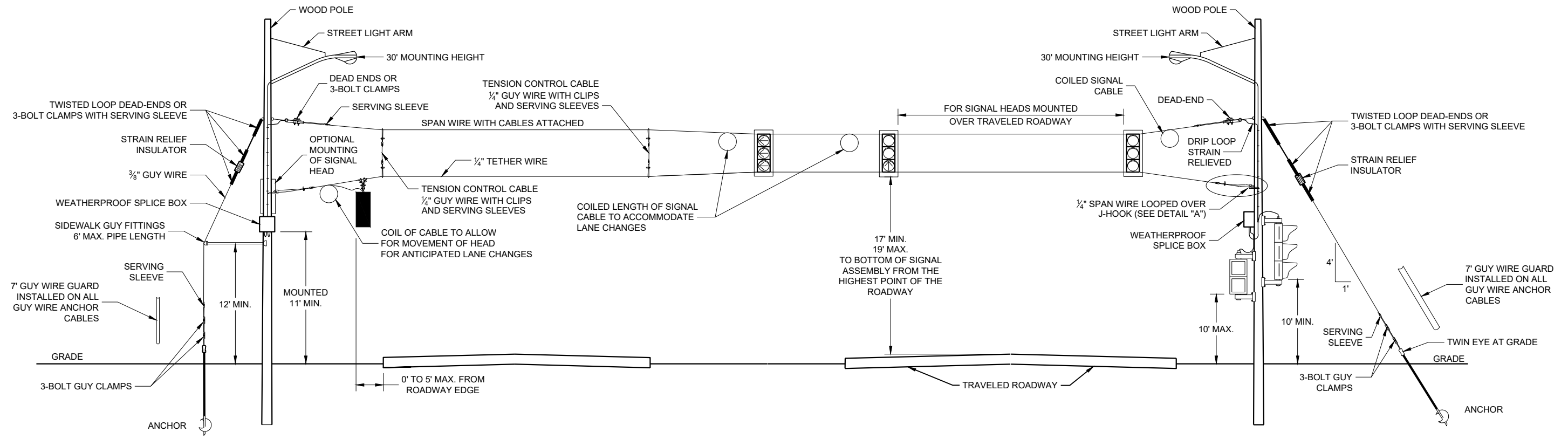


DETAIL "A"

GENERAL NOTES

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

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



**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

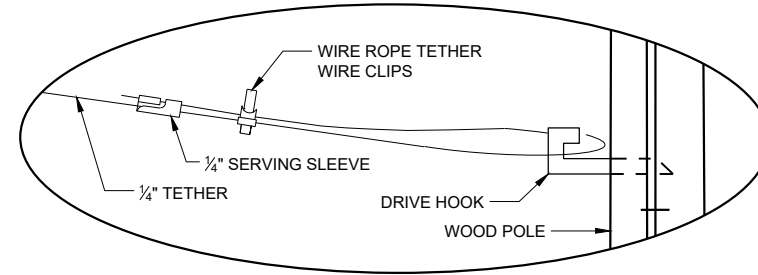
APPROVED
June 2015 /S/ Ahmet Demerbilek
DATE STATE ELECTRICAL ENGINEER

FHWA

SDD09G01 - 04b

SDD09G01 - 04b

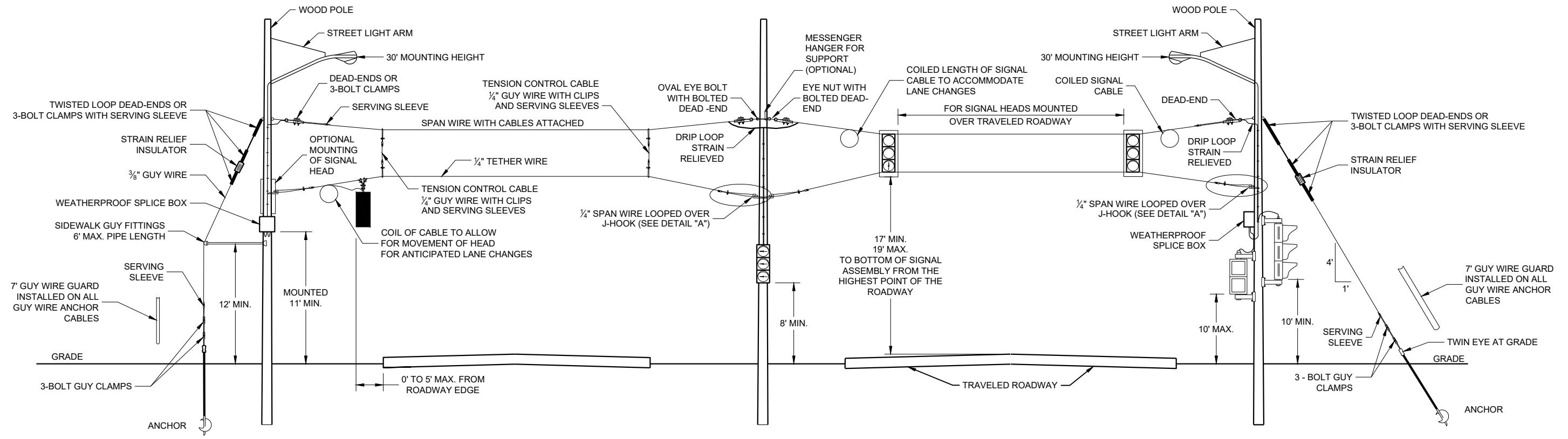
MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'



DETAIL "A"

GENERAL NOTES

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



**SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

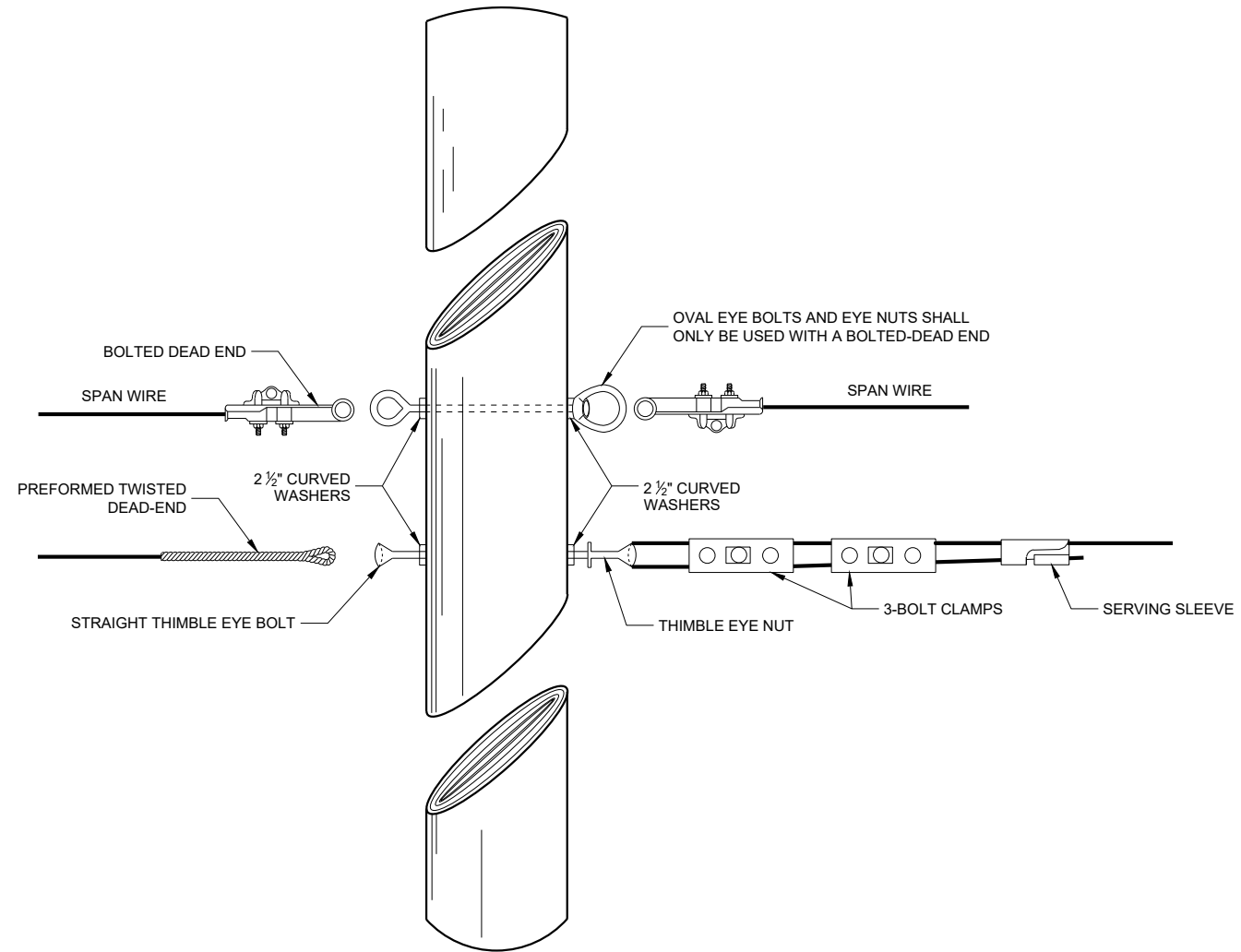
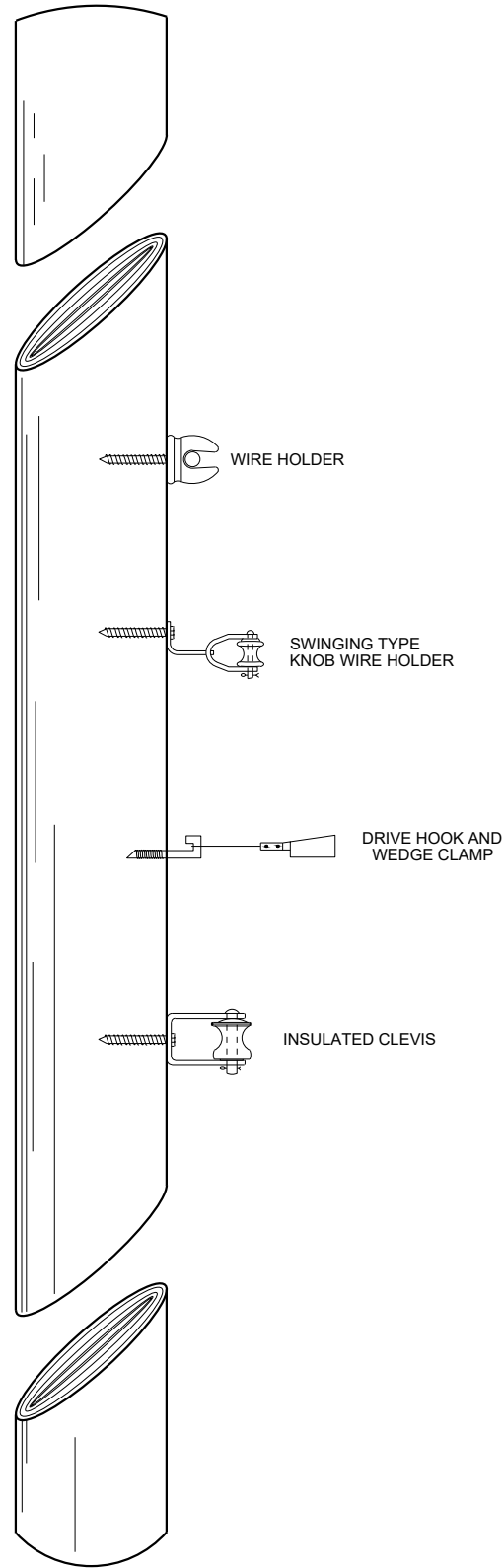
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

SDD09G01 - 04c

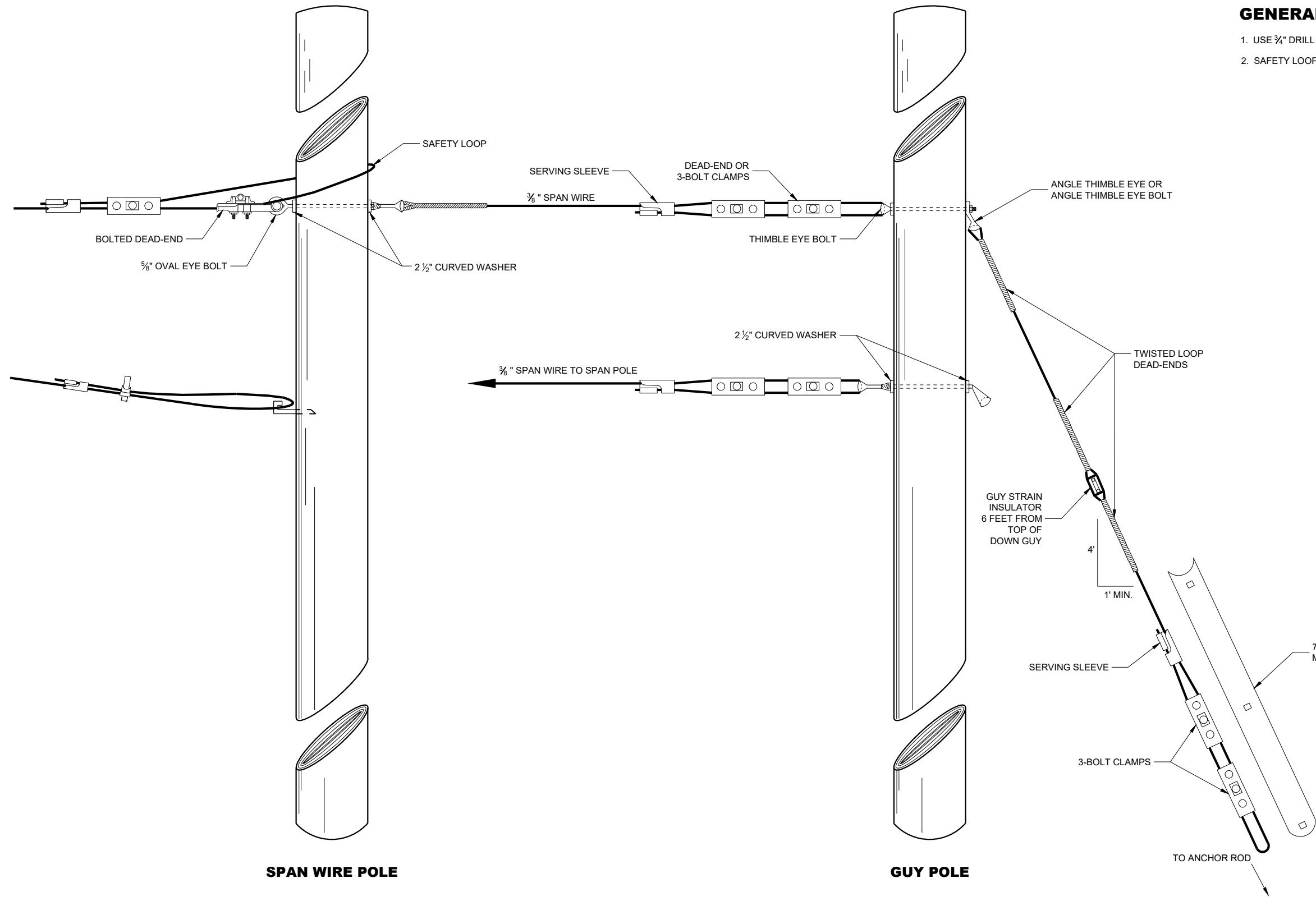
SDD09G01 - 04c



**SPAN WIRE TEMPORARY
TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



GENERAL NOTES

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

SPAN WIRE POLE

GUY POLE

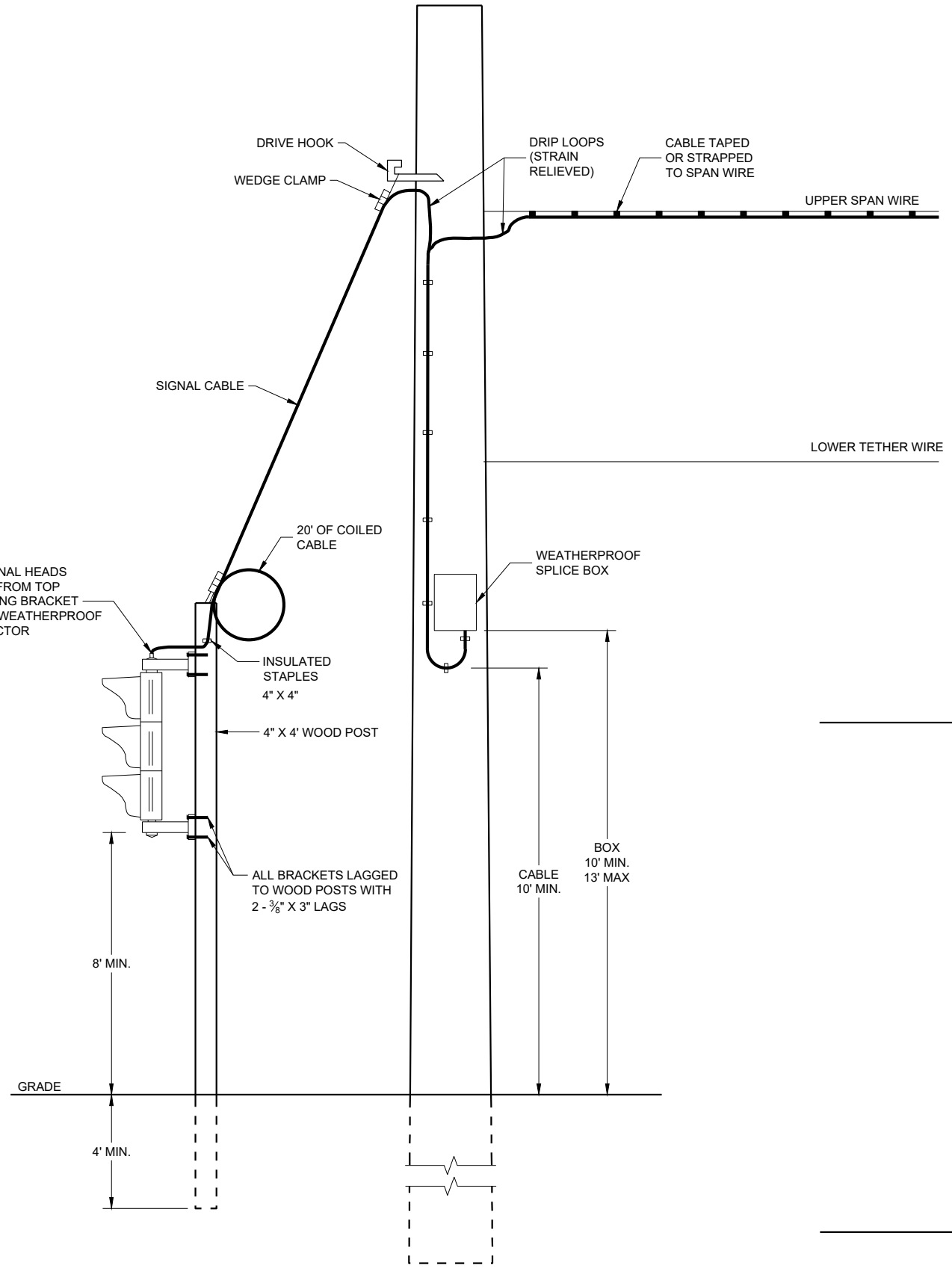
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

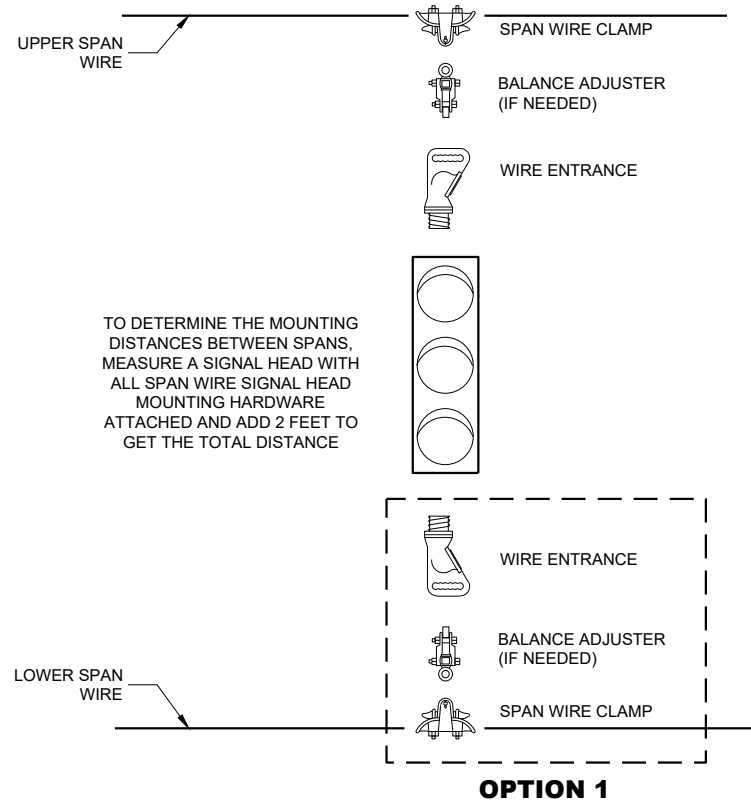
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

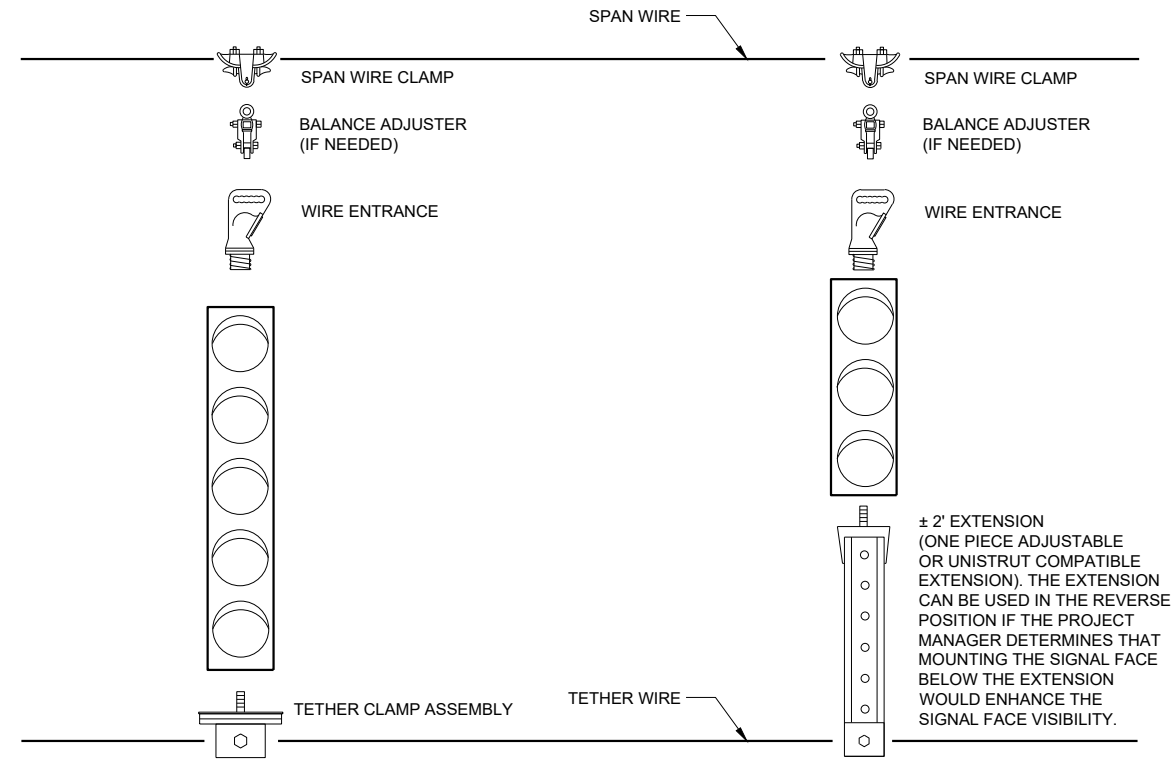
FHWA



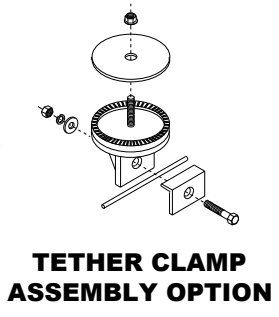
TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



TYPICAL SPAN WIRE MOUNTING HARDWARE



5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE



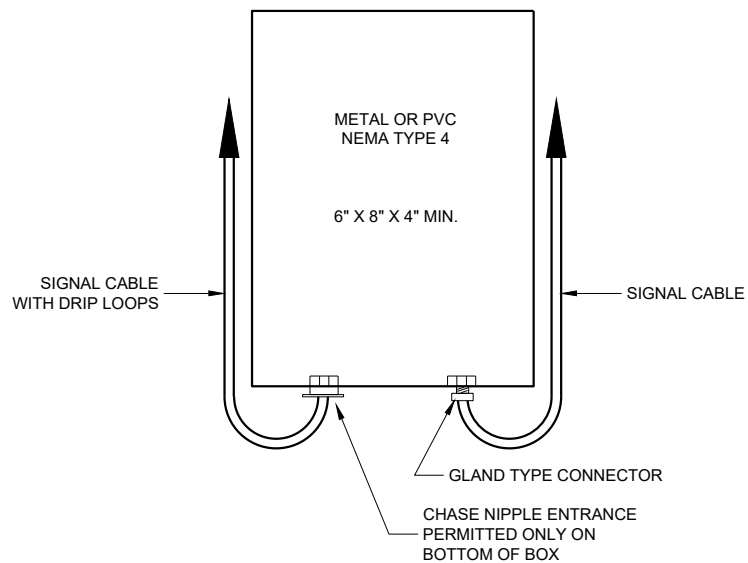
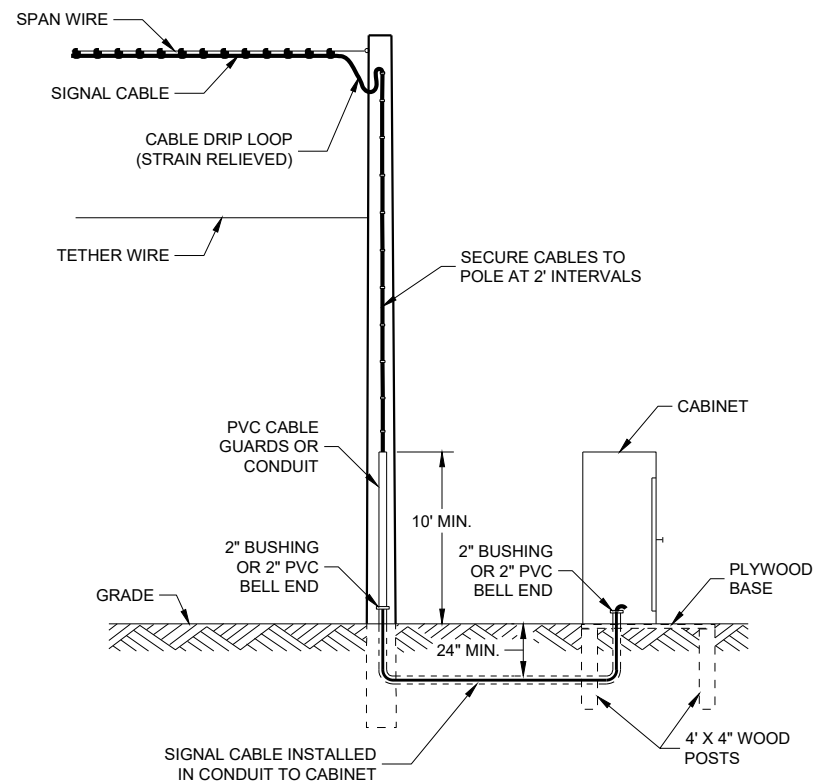
USE OPTION 1 OR TETHER CLAMP ASSEMBLY

TETHER CLAMP ASSEMBLY OPTION

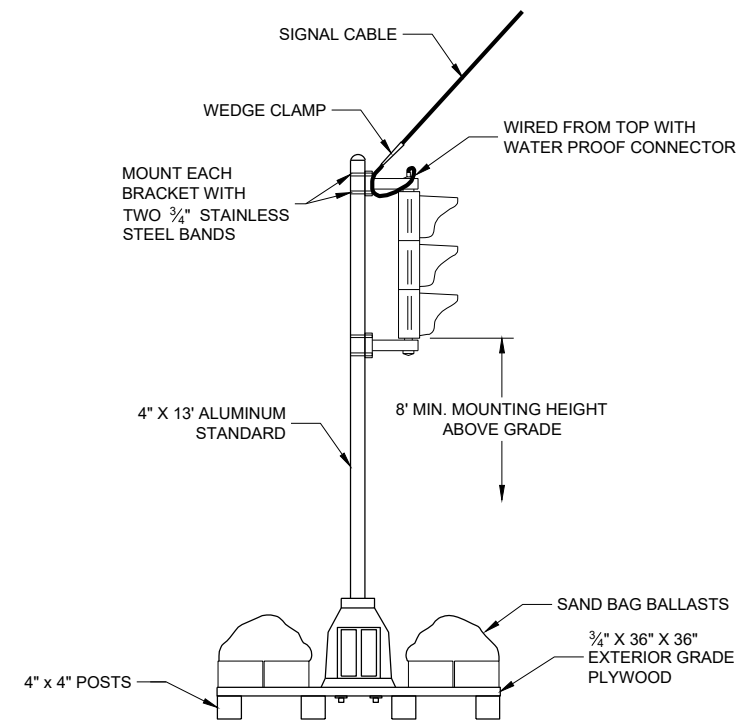
SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

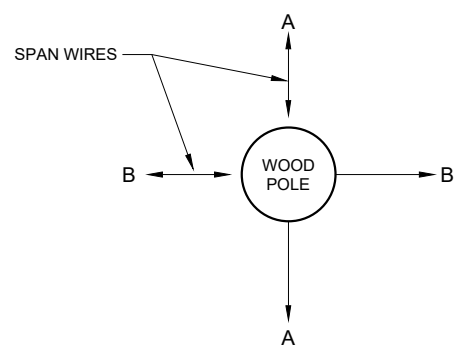
APPROVED
 June 2015 /S/ Ahmet Demerbilek
 DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER



SPLICE BOX

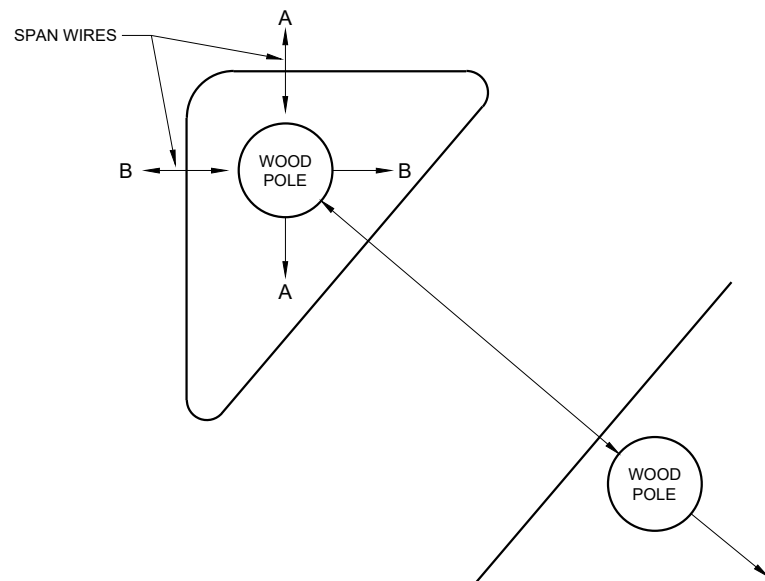


TYPICAL SKID TYPE TEMPORARY

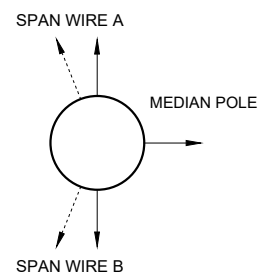


CORNER POLES

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



ISLAND POLES



MEDIAN POLES

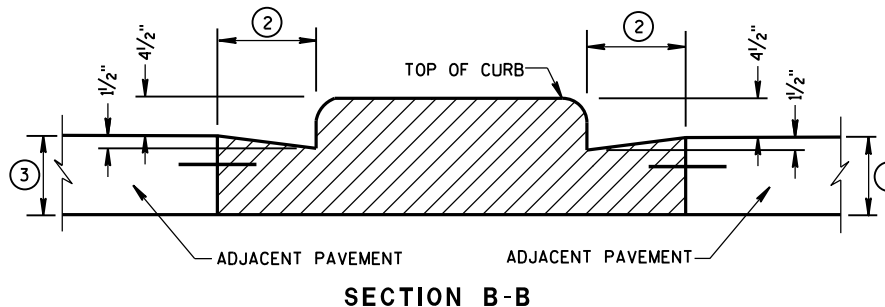
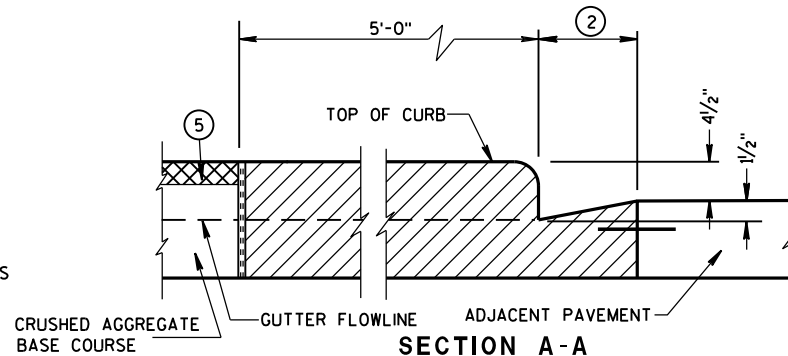
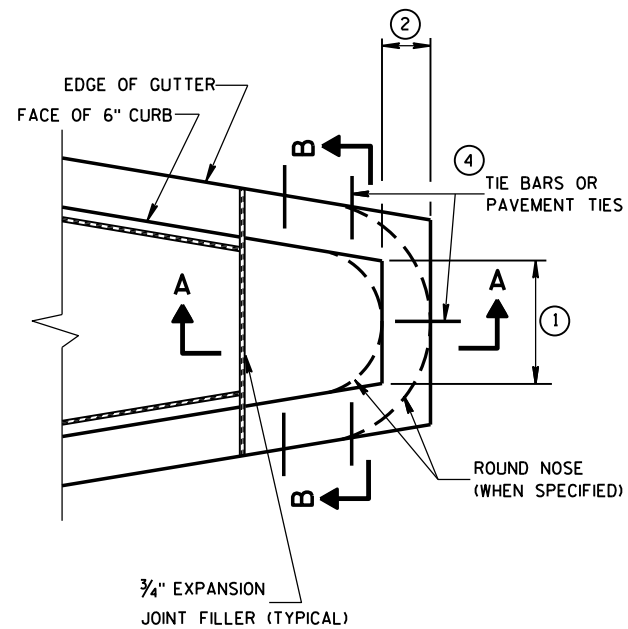
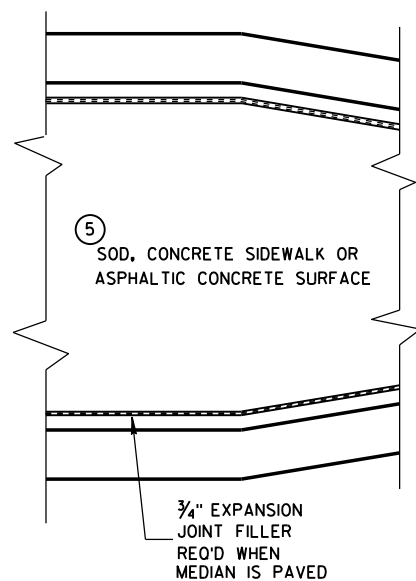
GUY AWAY FROM INTERSECTION OR IN OPPOSITE DIRECTION OF THE SPAN LOADING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

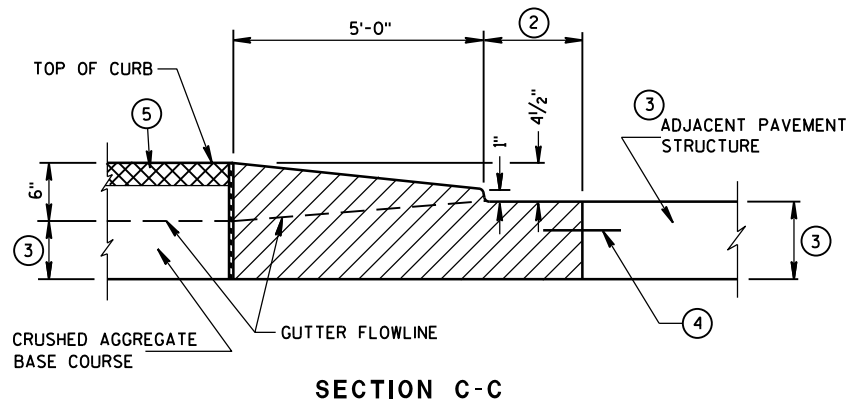
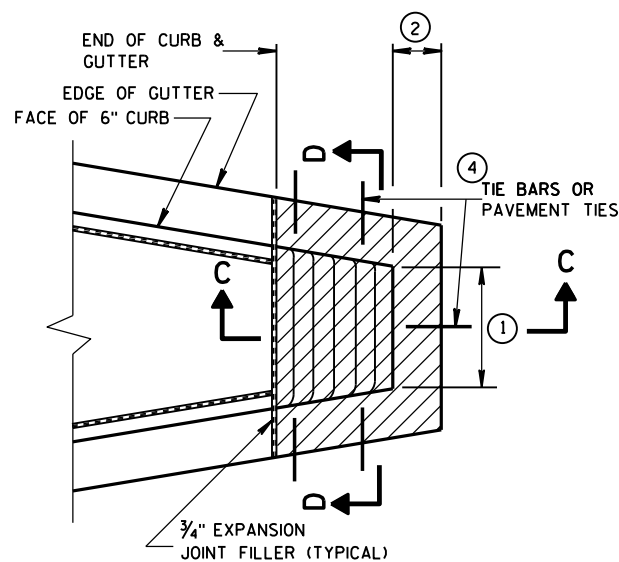
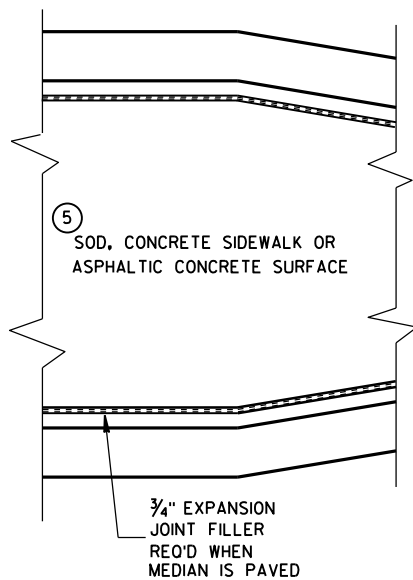
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

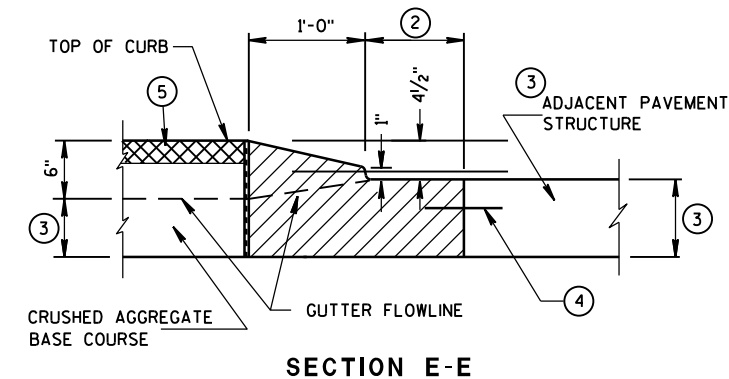
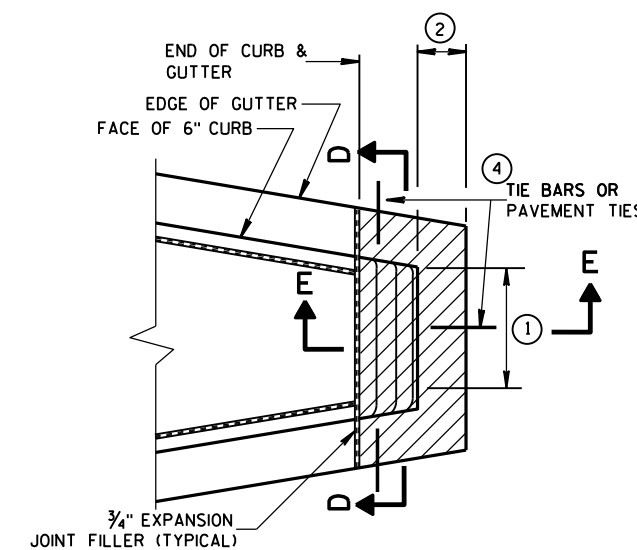
FHWA



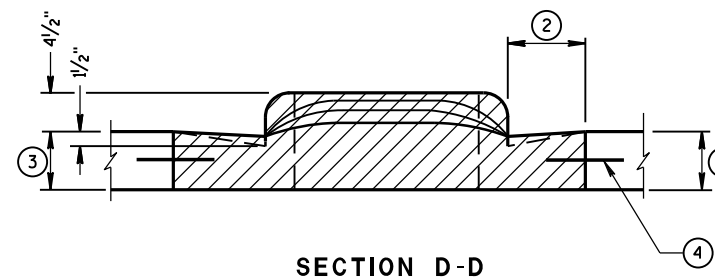
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



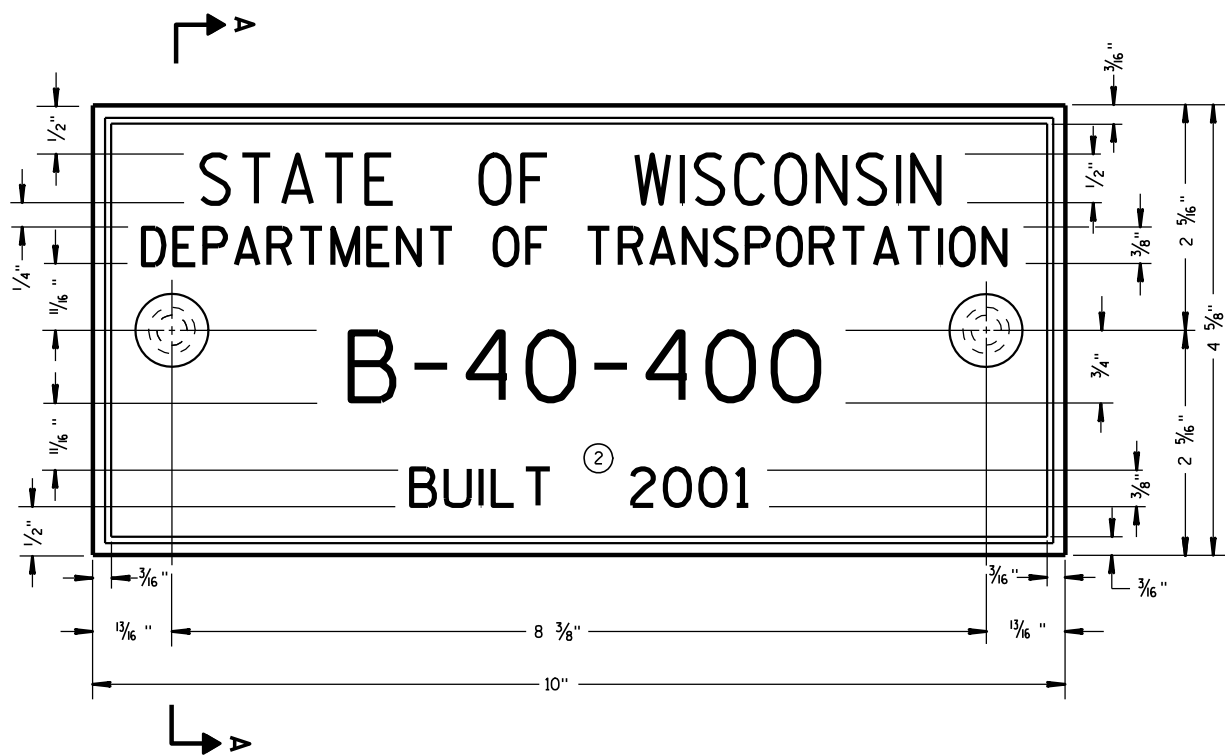
SECTION D-D

GENERAL NOTES

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

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

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



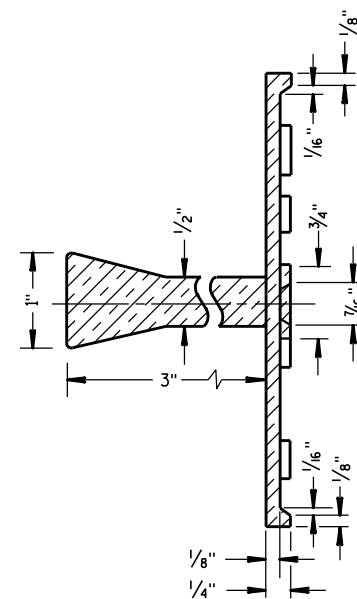
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

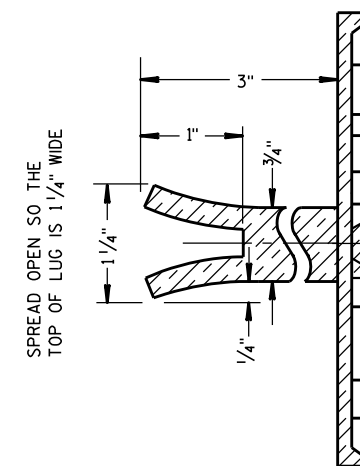
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

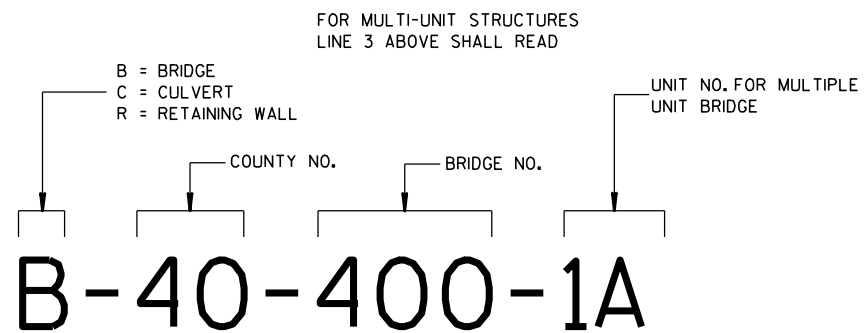
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A

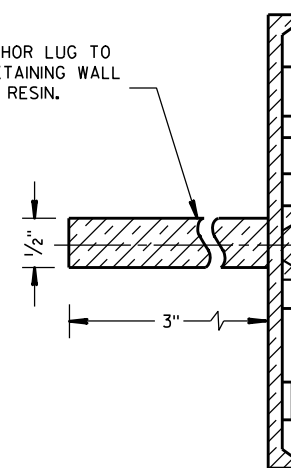


ALTERNATE LUG



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.

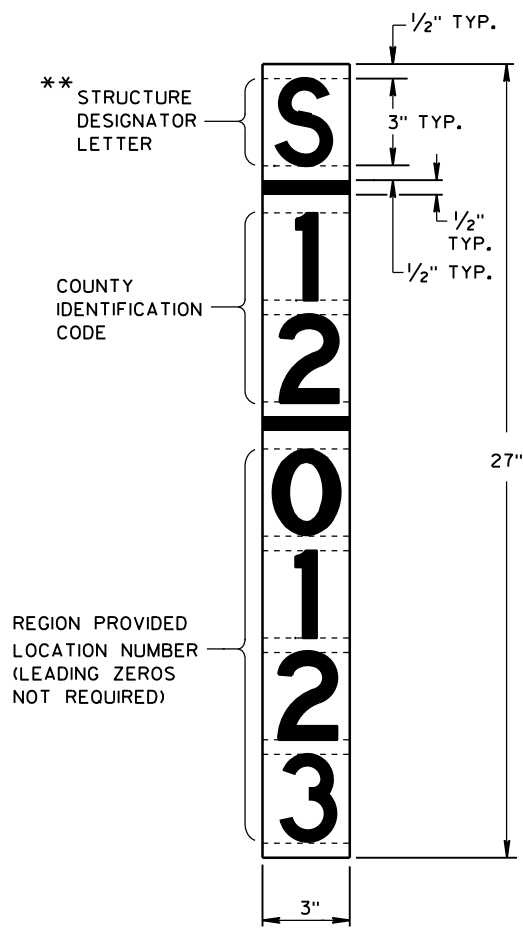
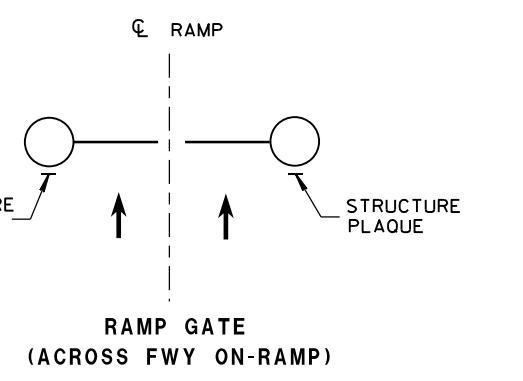
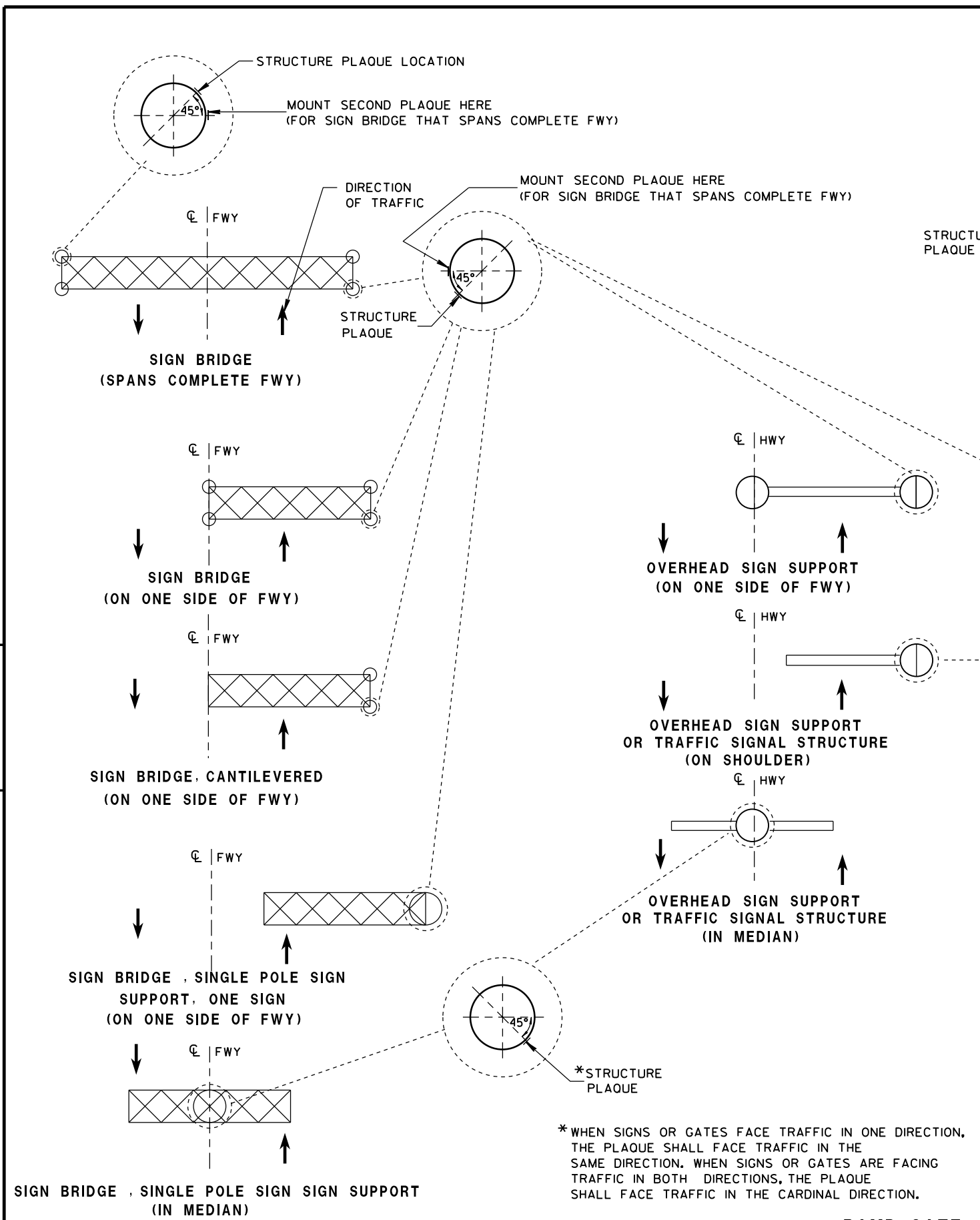


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 3/26/10 /S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA



GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

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

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

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

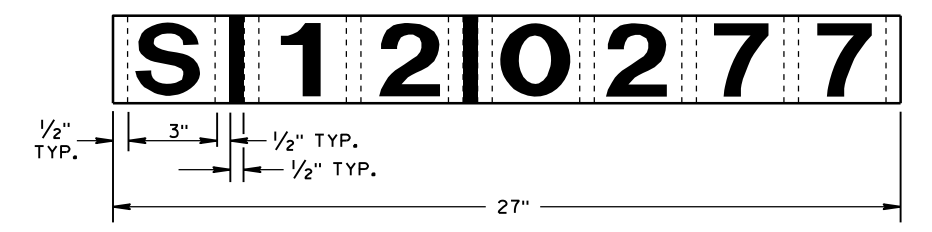
MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

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

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

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



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

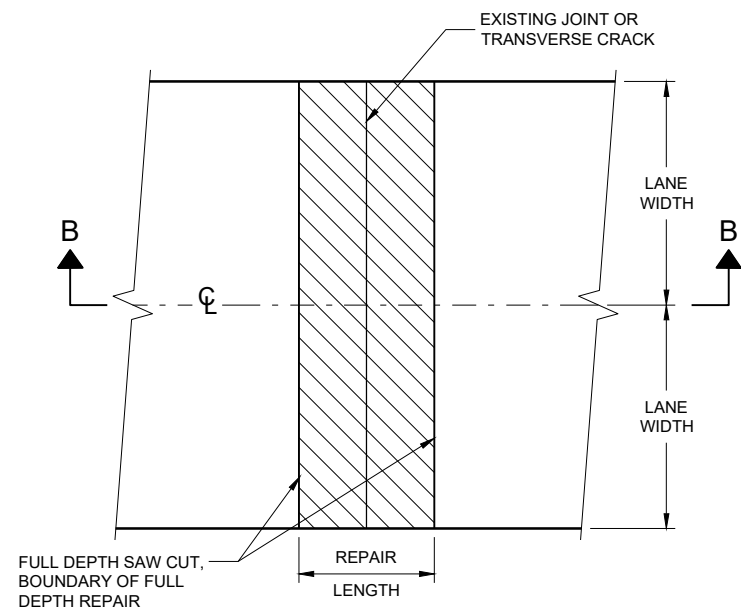
** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

* WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

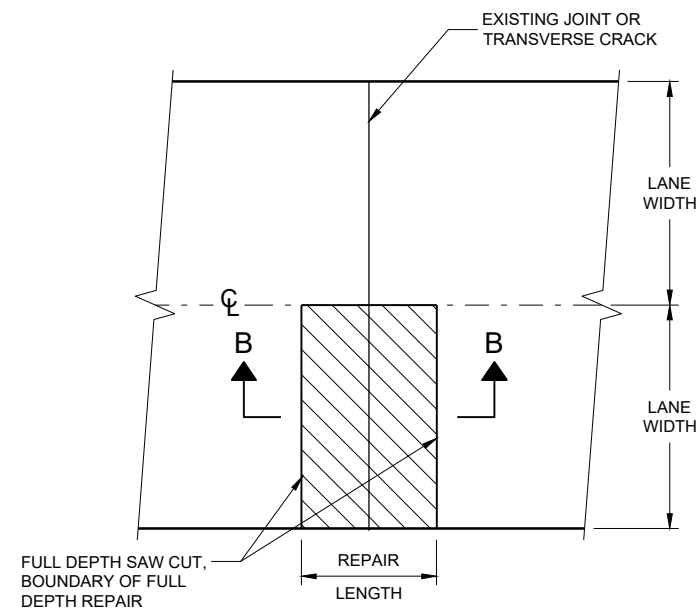
LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

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

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

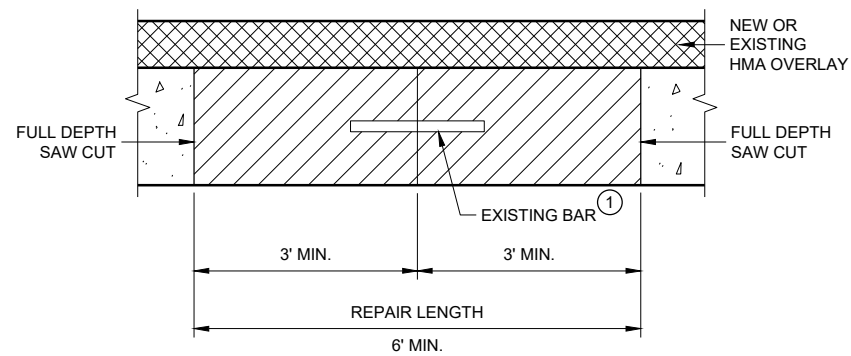


**PLAN VIEW
DOUBLE LANE REPAIR**



**PLAN VIEW
SINGLE LANE REPAIR**

FULL DEPTH CONCRETE PAVEMENT REMOVAL



**SECTION B - B
CONCRETE REMOVAL**

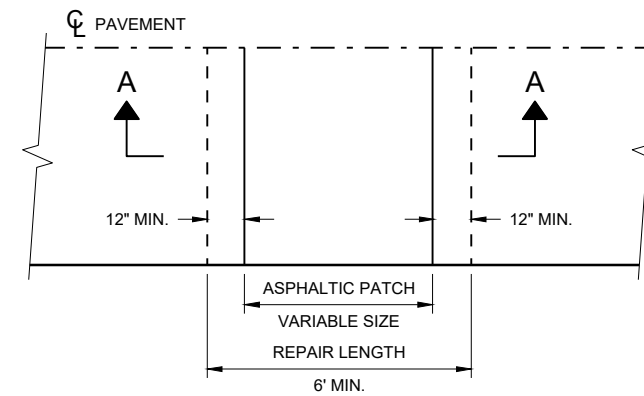
GENERAL NOTES

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

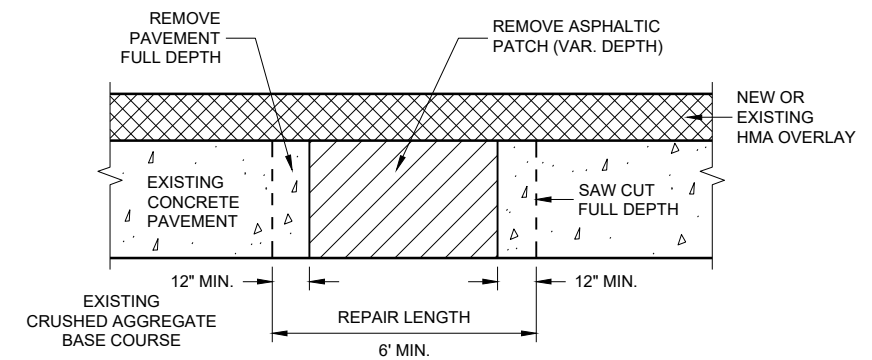
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

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

① DOWEL BARS MAY NOT BE PRESENT.



PLAN VIEW

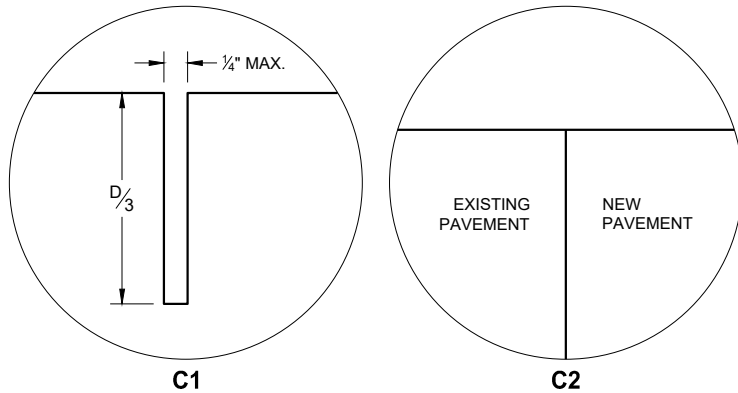


SECTION A - A

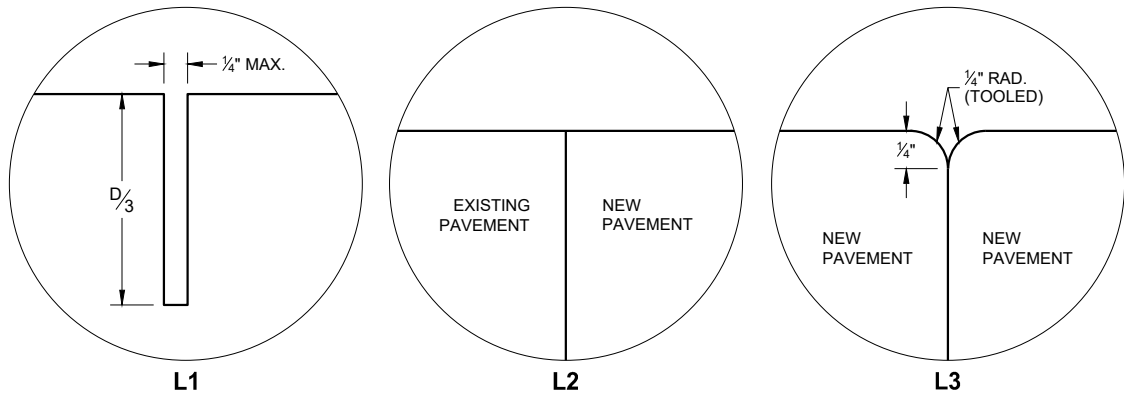
HMA PATCH REMOVAL

BASE PATCHING CONCRETE

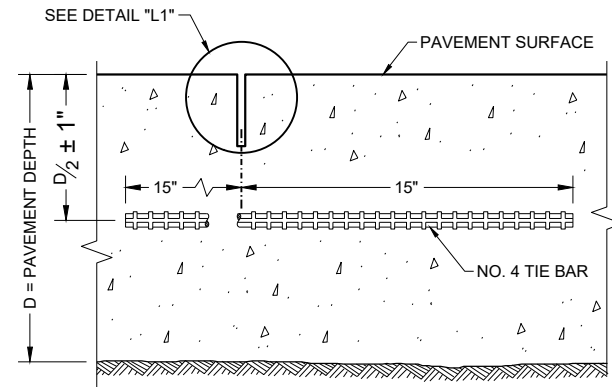
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



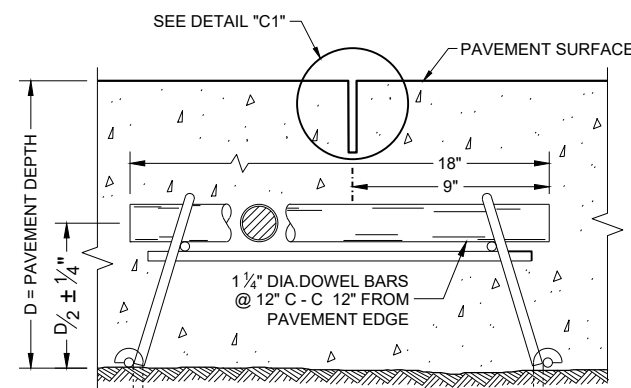
TRANSVERSE JOINTS



LONGITUDINAL JOINTS



**SECTION C - C
SAWED LONGITUDINAL JOINT**



**SECTION F - F
CONTRACTION JOINT**

GENERAL NOTES

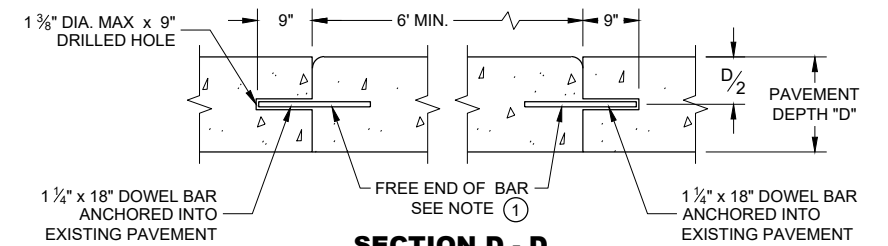
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

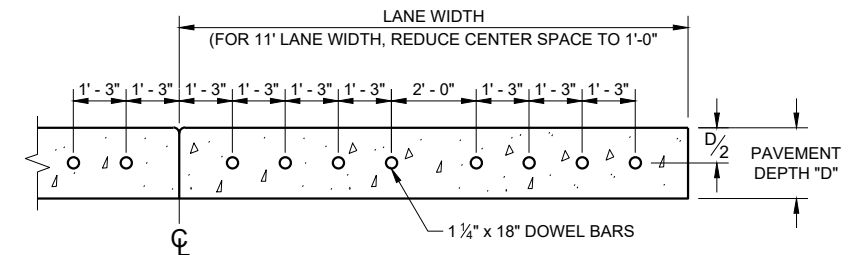
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

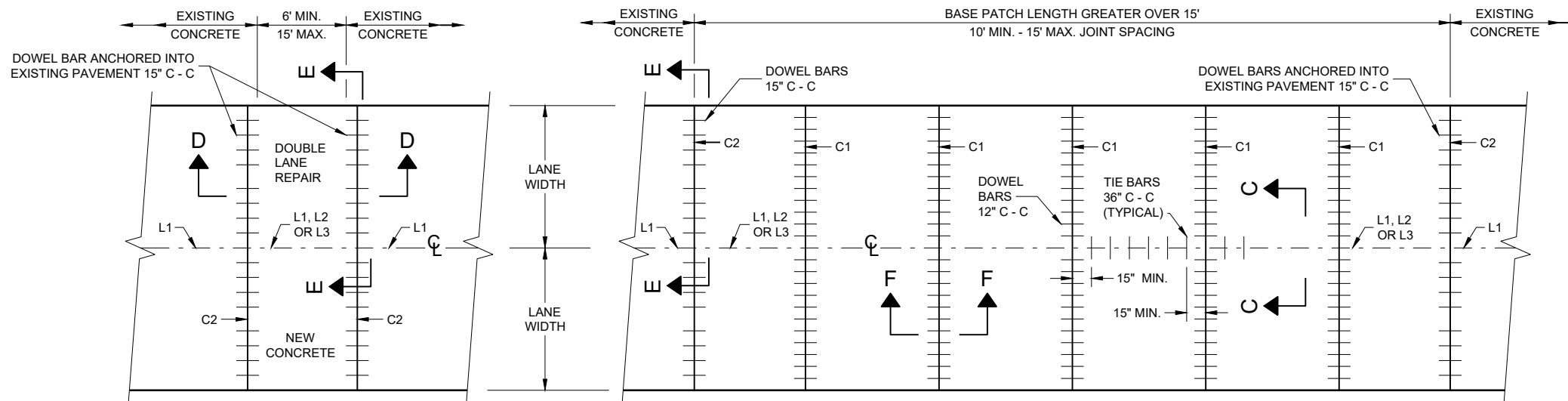
- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D - D



**SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT**

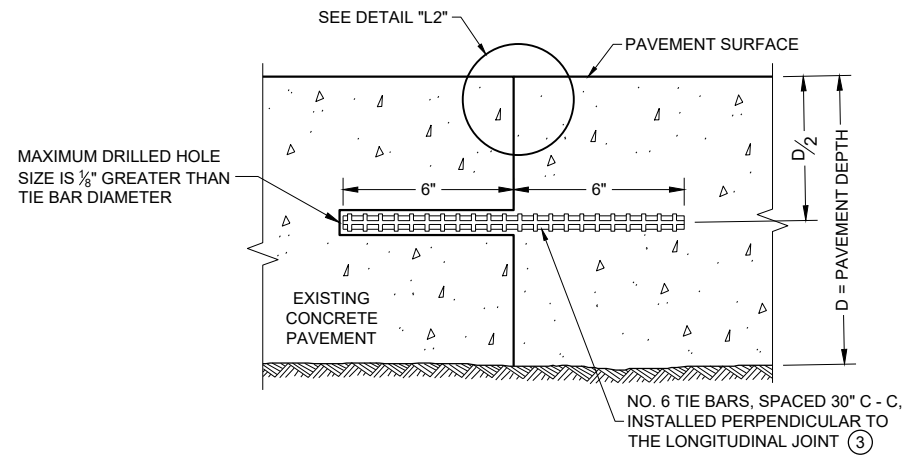


**PLAN VIEW
MULTILANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH**

**PLAN VIEW
MULTILANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH**

BASE PATCHING CONCRETE

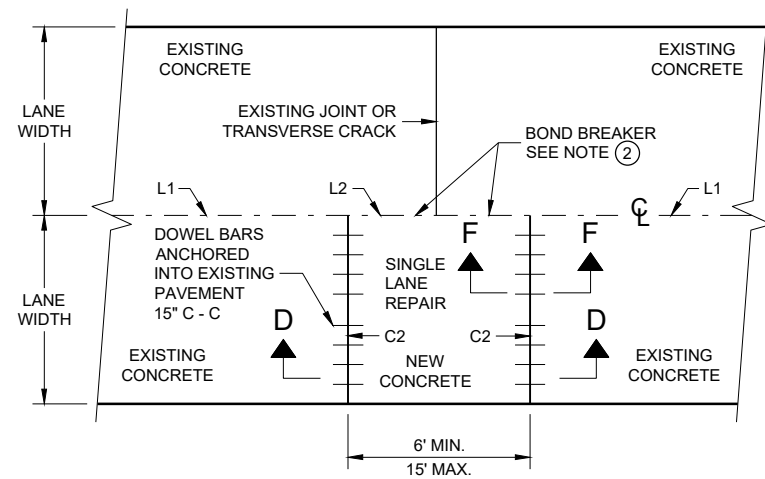
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



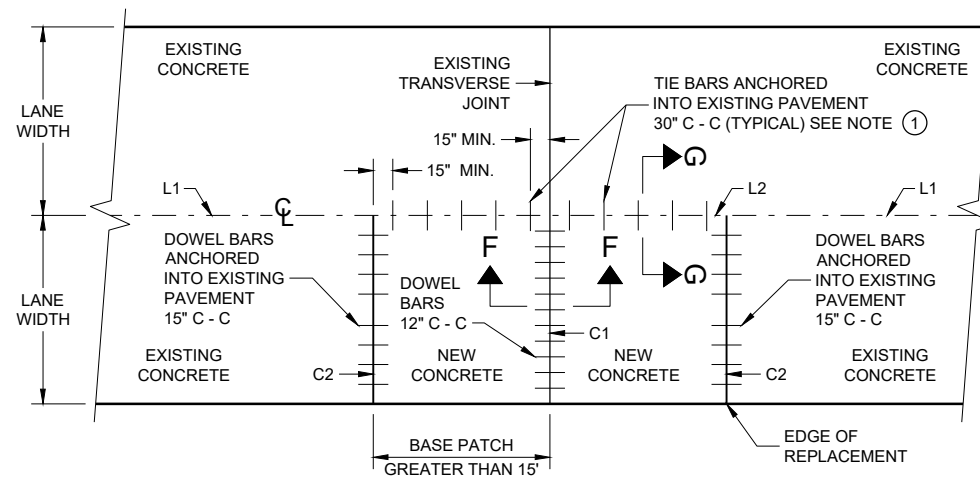
SECTION G - G
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

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



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



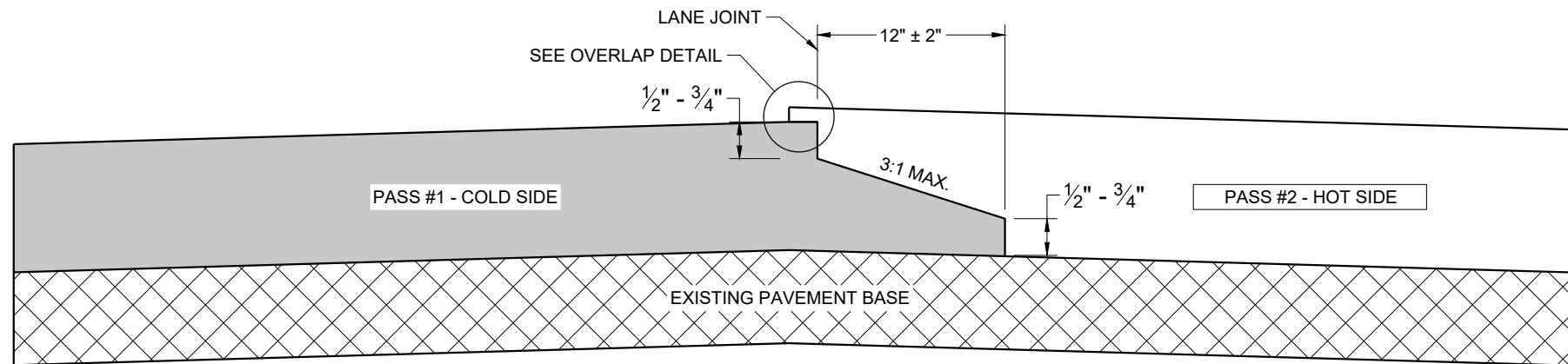
PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

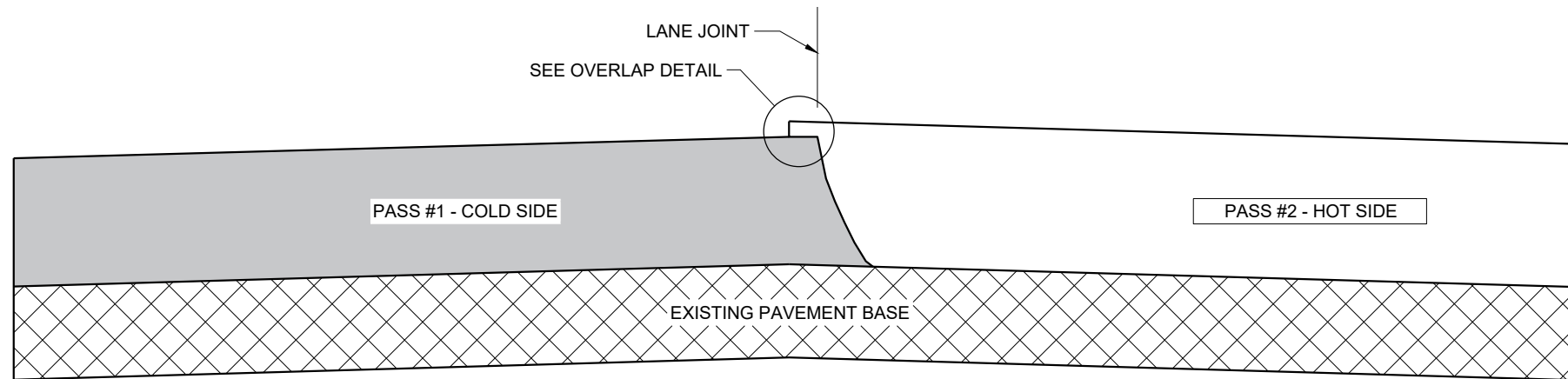
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

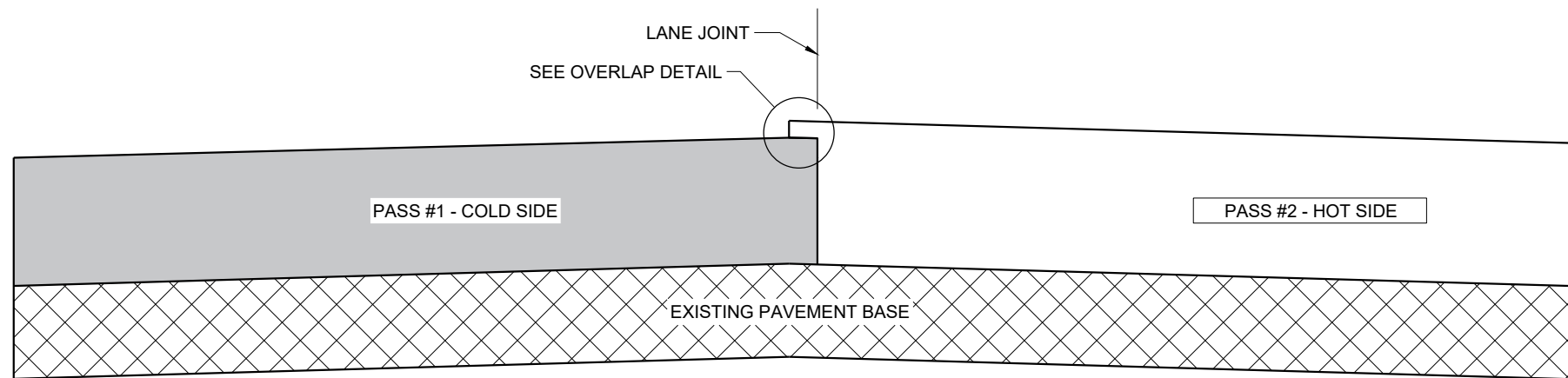
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

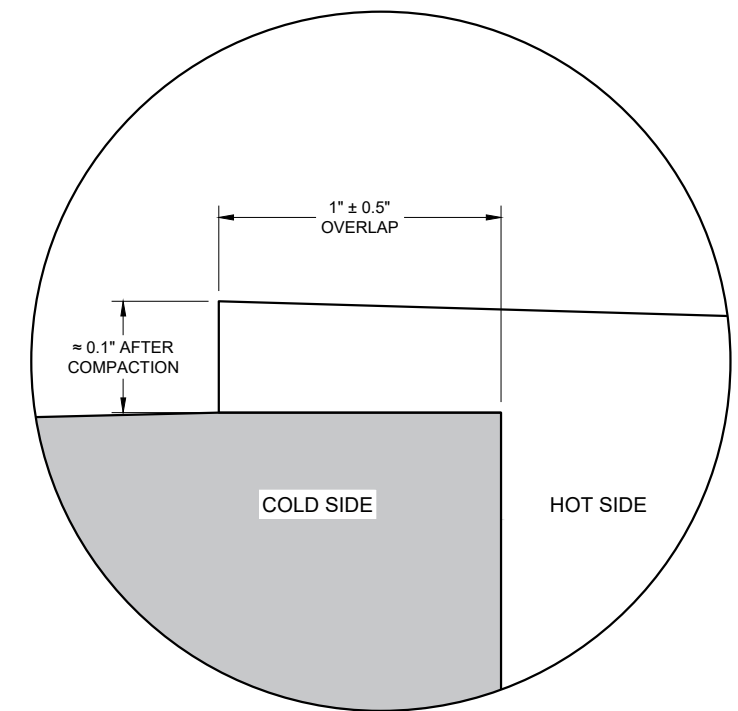
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO $2"$ FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

6

6

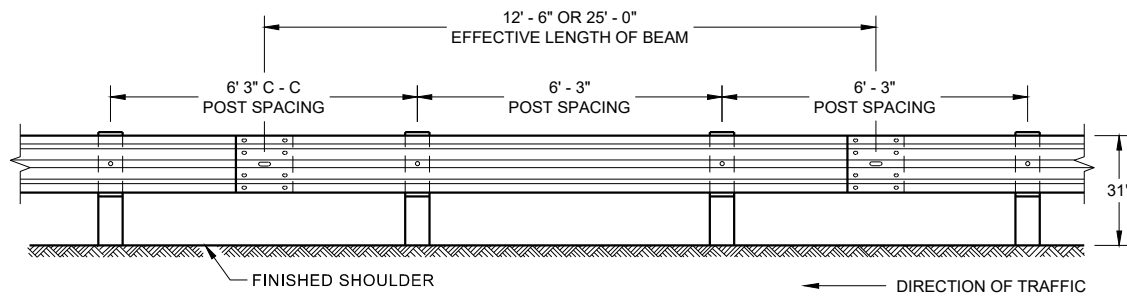
SDD 13C19 - 03

SDD 13C19 - 03

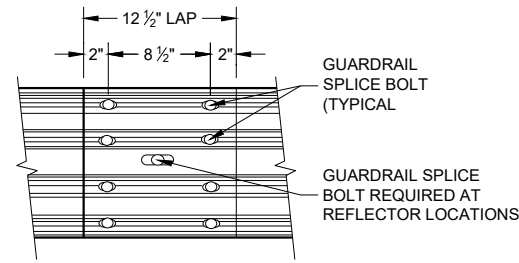
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



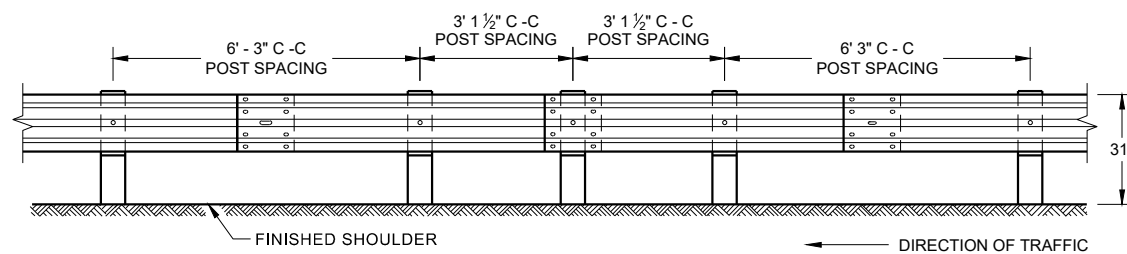
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



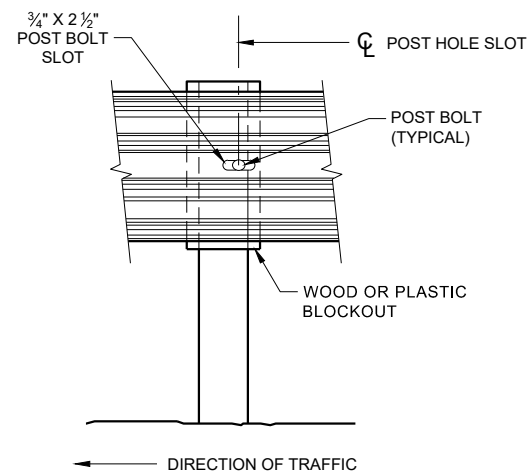
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

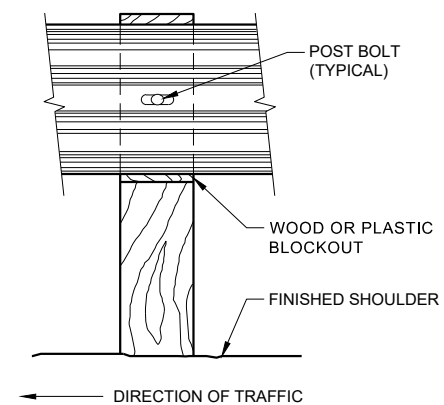
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



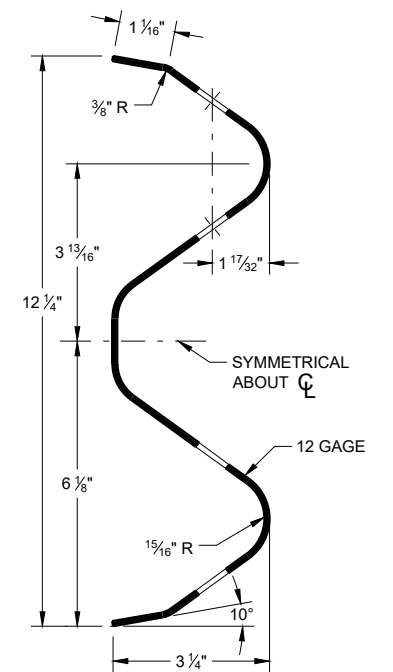
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



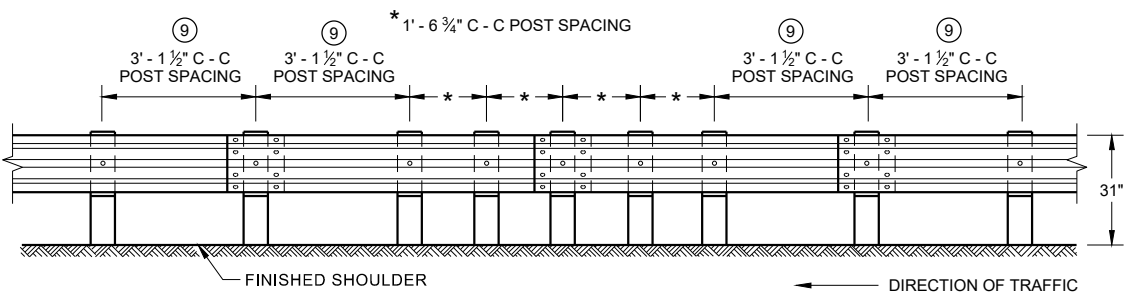
FRONT VIEW AT STEEL POST



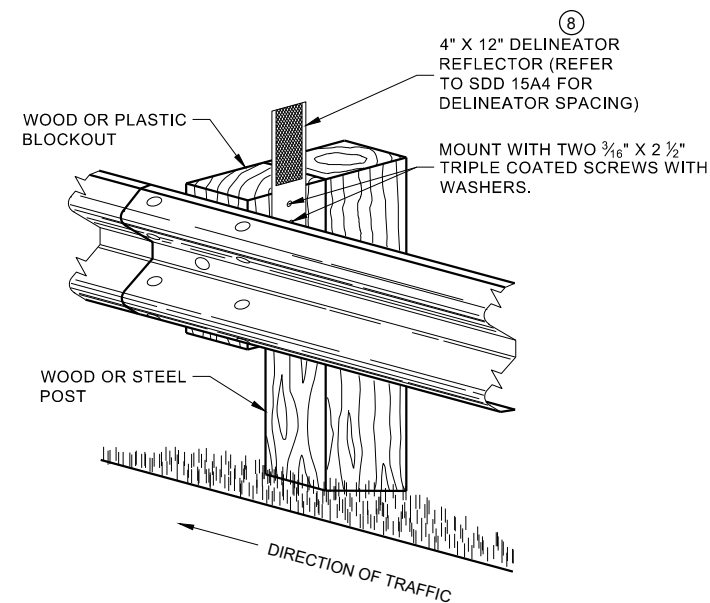
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

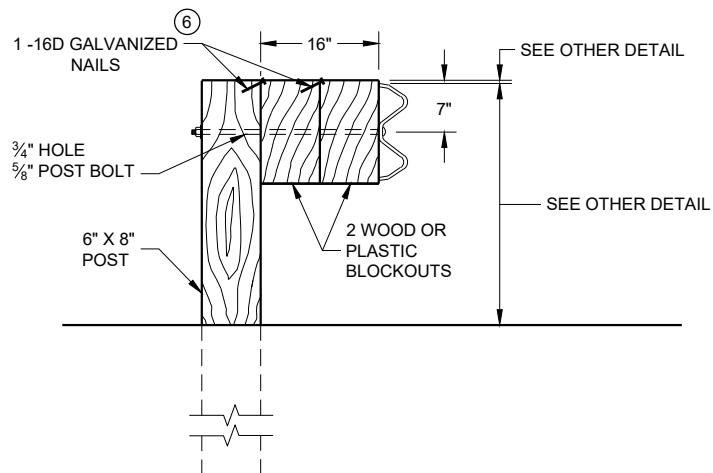
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

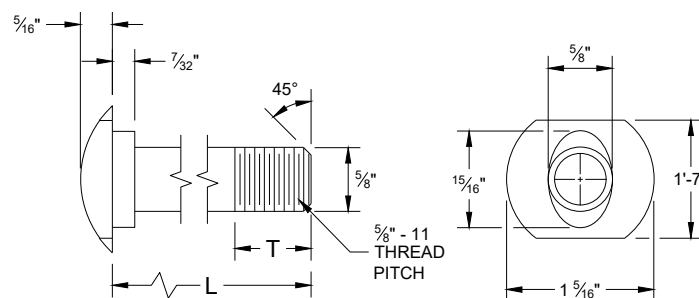


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

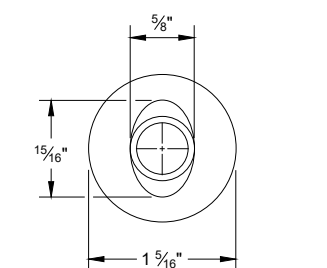
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

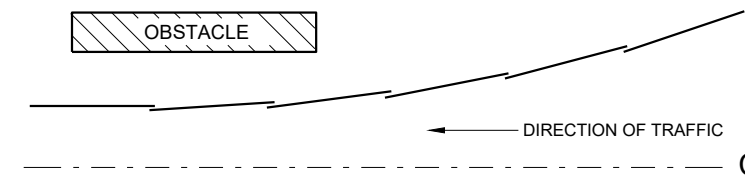


POST BOLT TABLE

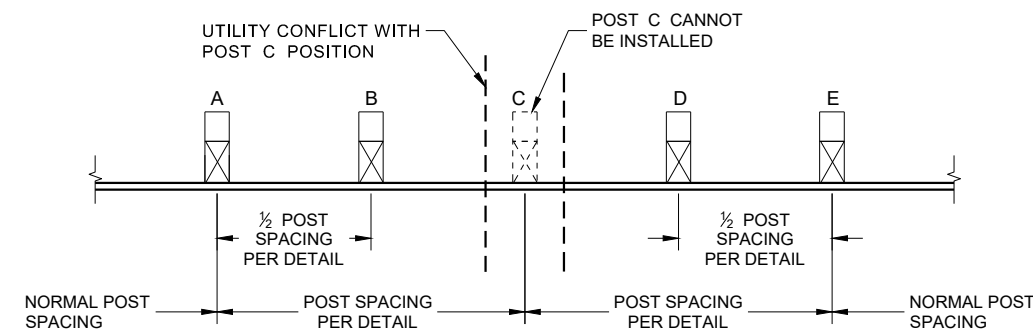
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



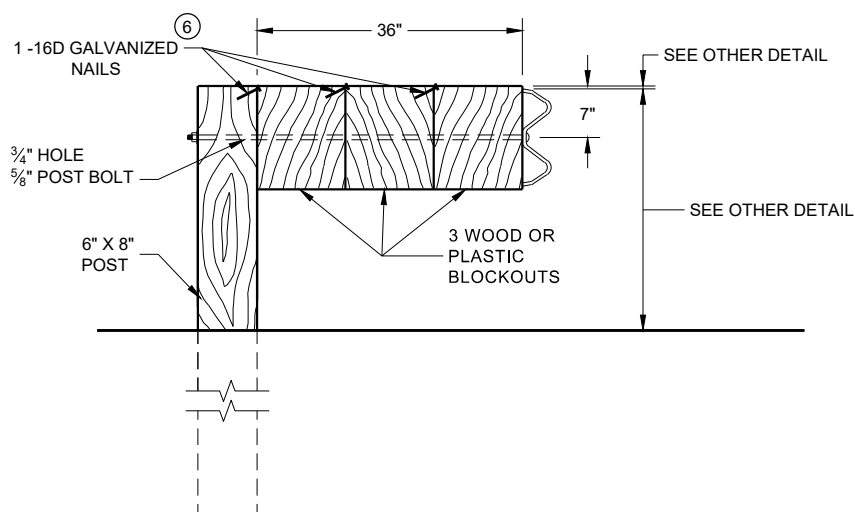
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

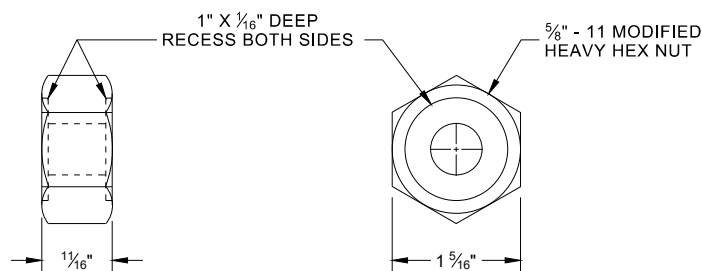


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

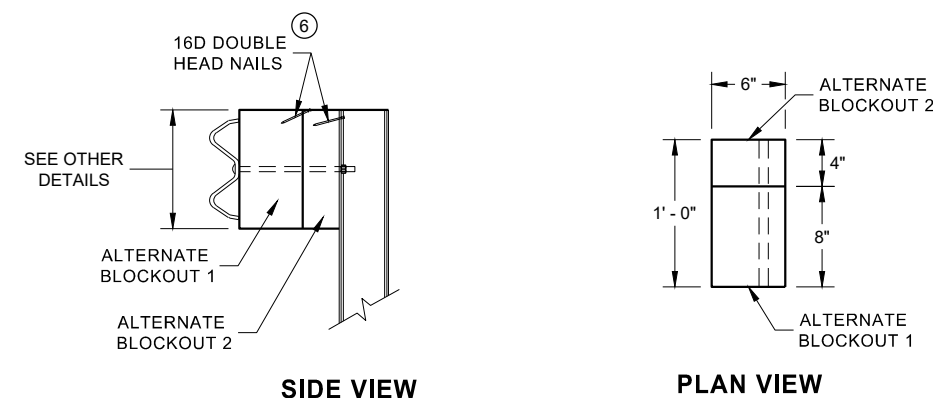


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**

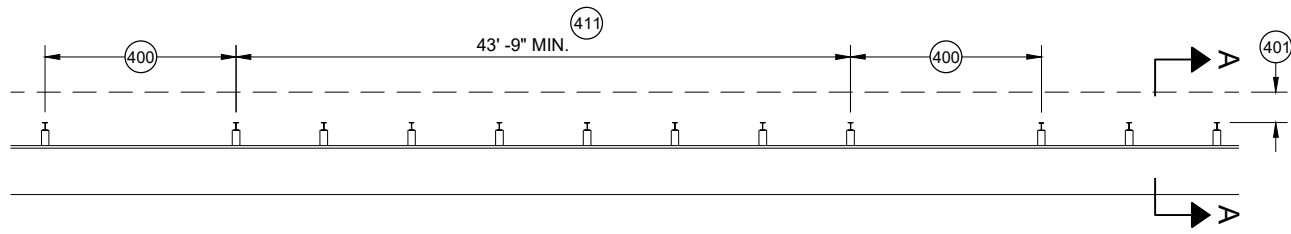


**ALTERNATE WOOD
BLOCKOUT DETAIL**

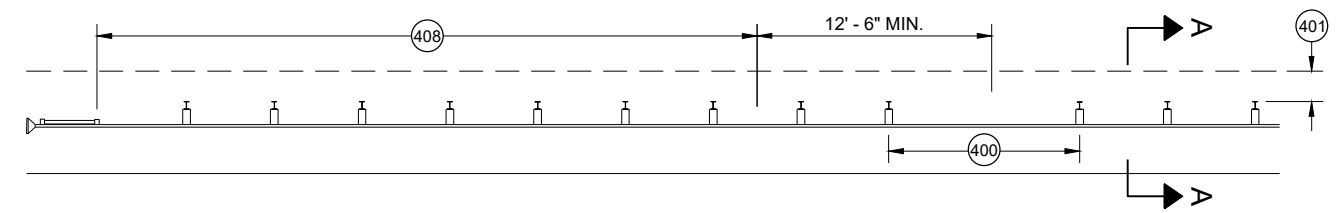
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

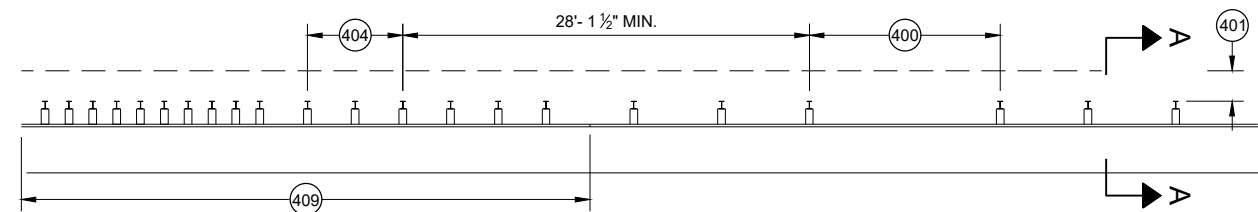
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



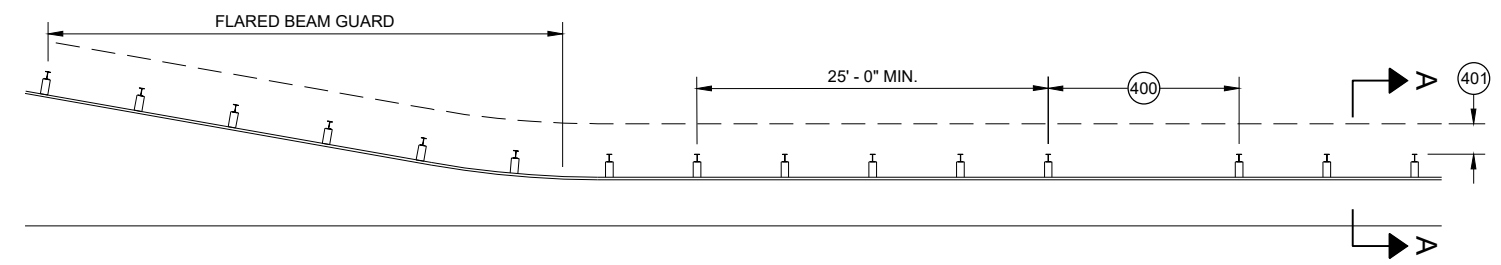
MISSING POST IN MGS GUARDRAIL



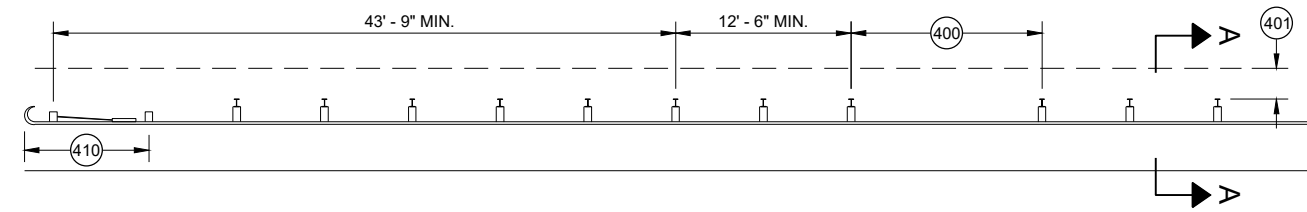
MISSING POST IN MGS GUARDRAIL NEAR EAT



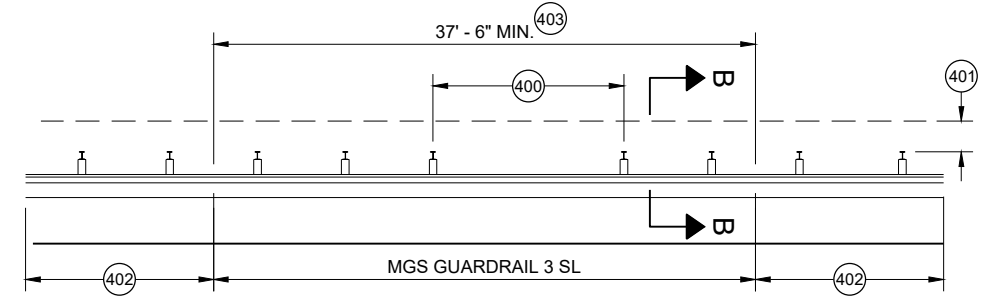
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

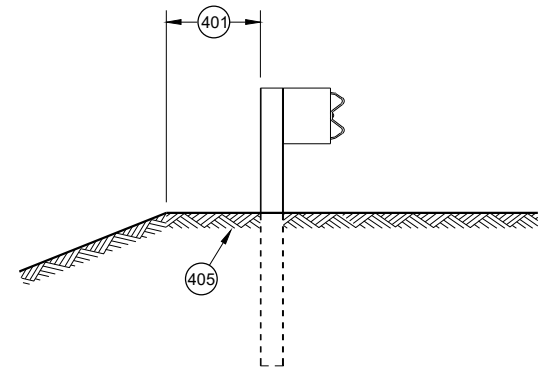


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

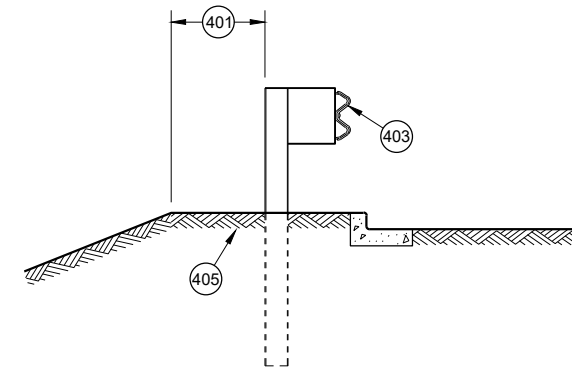


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

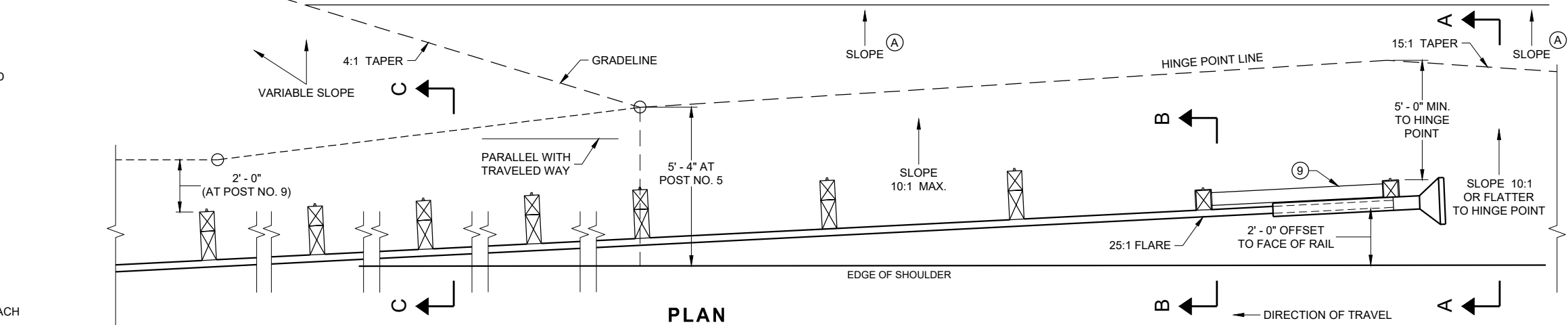
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

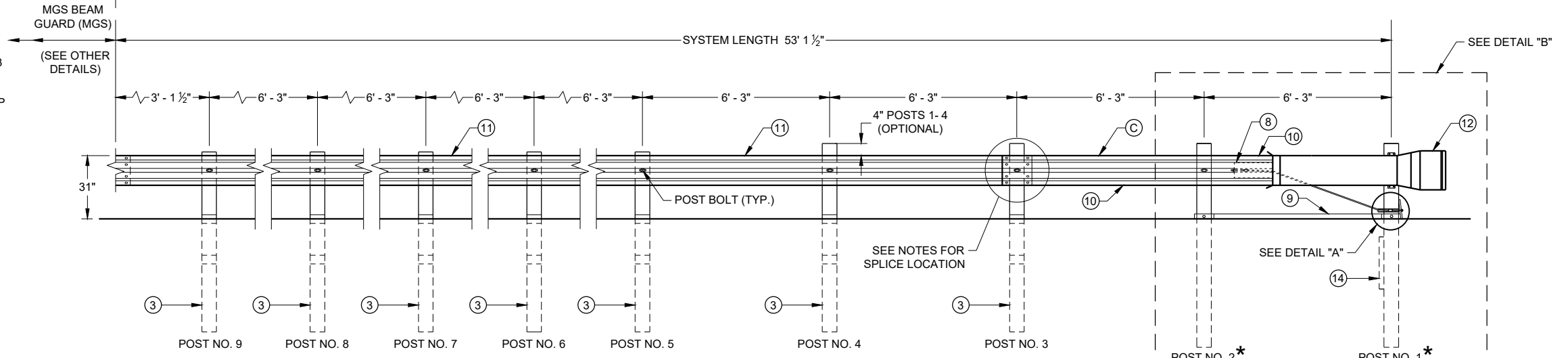
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

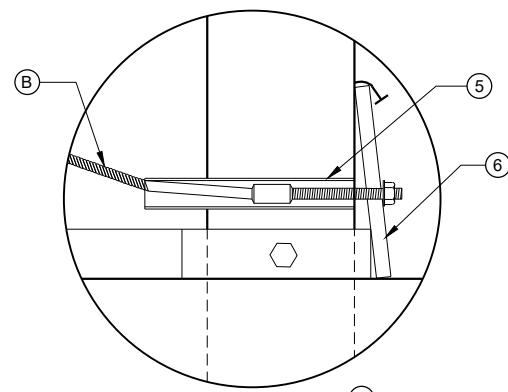
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



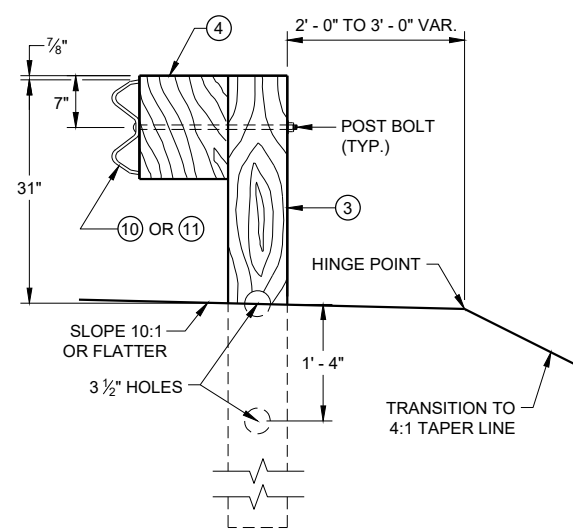
PLAN



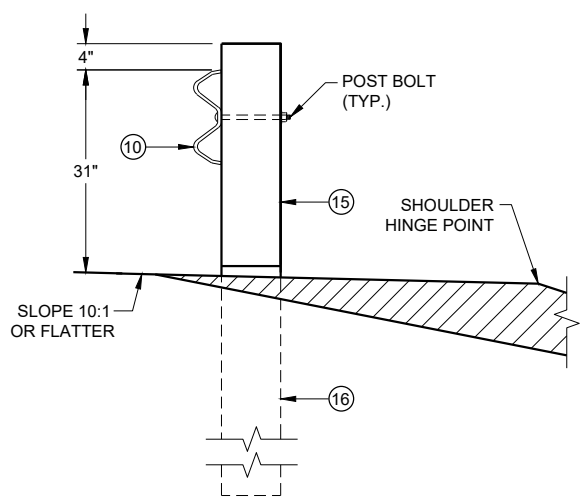
ELEVATION



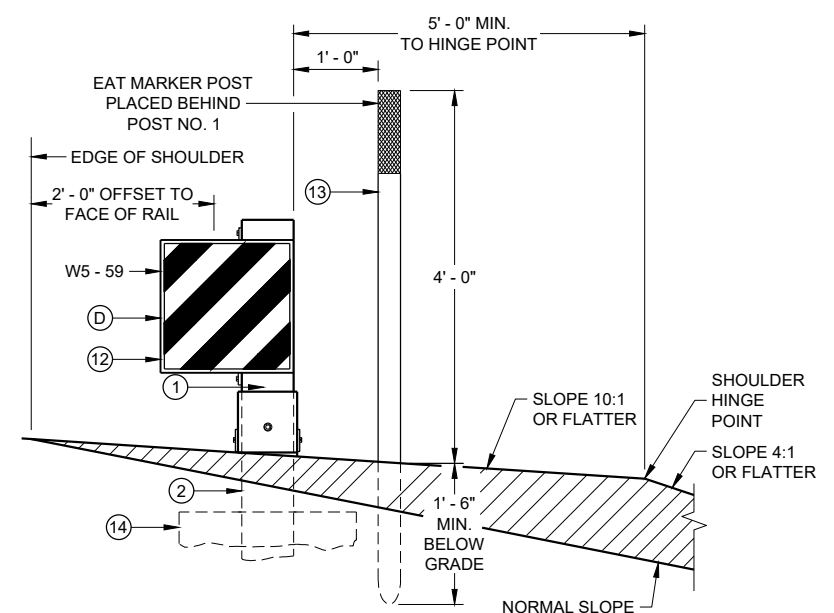
DETAIL "A"



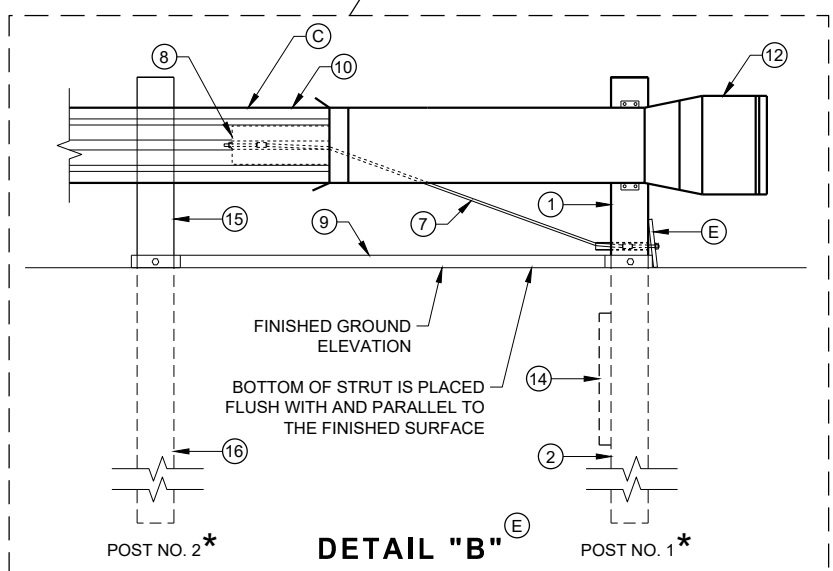
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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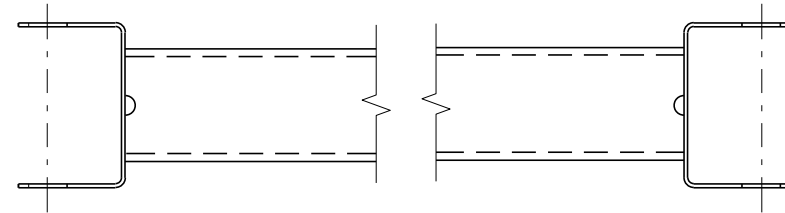
6

SDD 14B44 - 04a

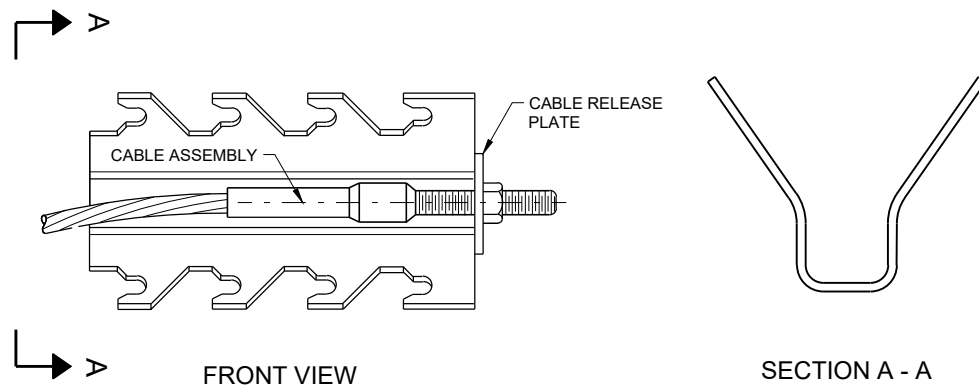
SDD 14B44 - 04a

BILL OF MATERIALS

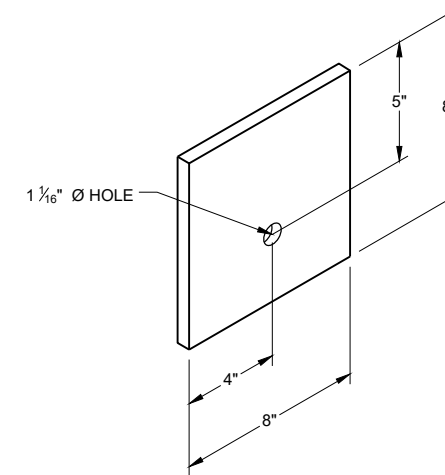
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC GROUND STRUT ⑨ ⑤



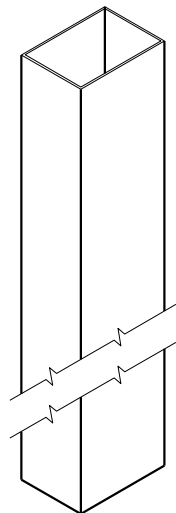
GENERIC ANCHOR CABLE BOX ⑨ ⑤



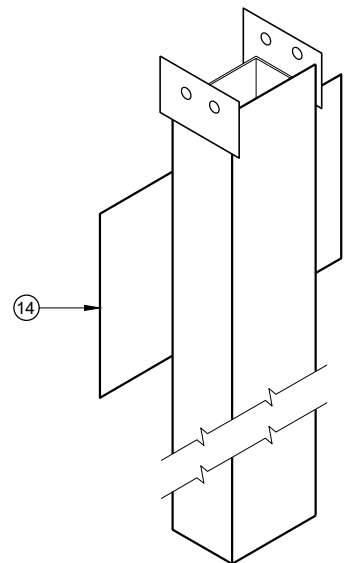
BEARING PLATE ⑥ ⑤

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

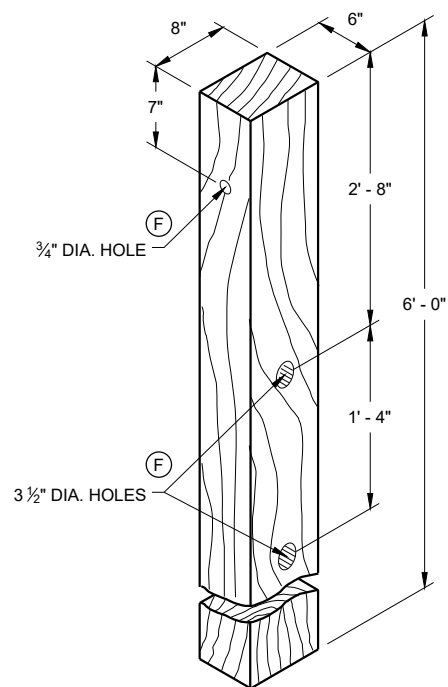
STATE OF WISCONSIN
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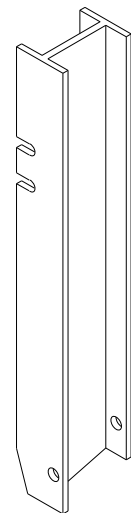
UPPER POST NO. 1 ⁽¹⁾ (E)



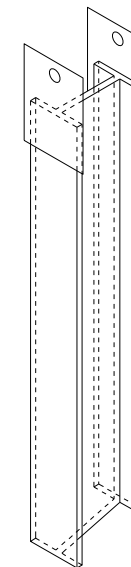
LOWER POST NO. 1 ⁽²⁾ (E)



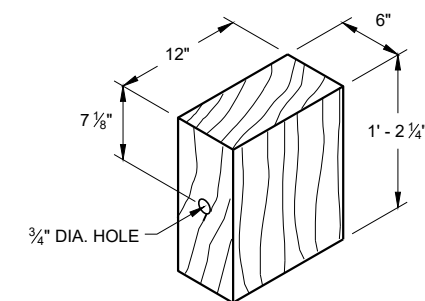
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

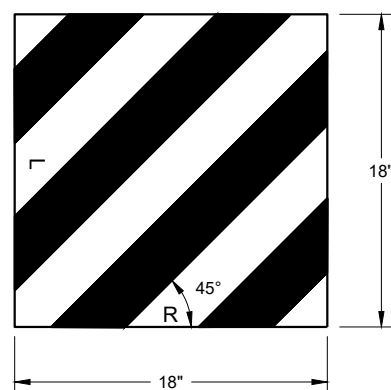


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

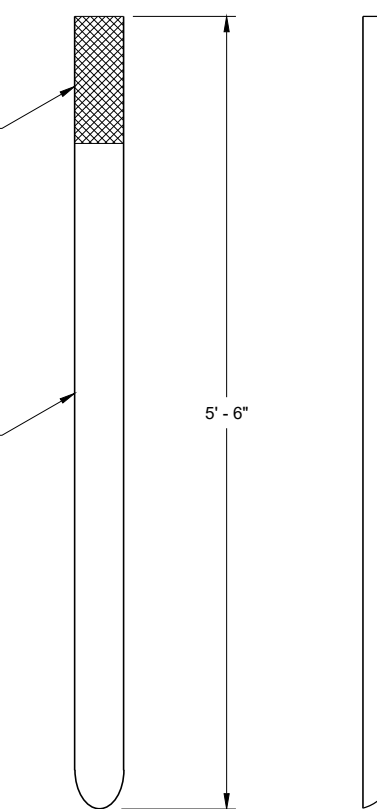
6



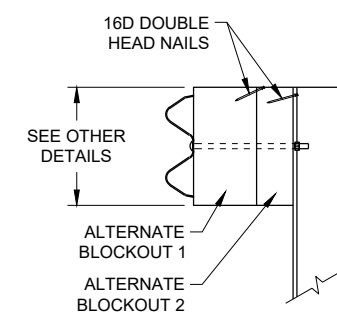
REFLECTIVE SHEETING DETAIL ^(E)

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

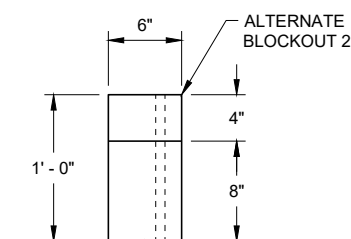
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

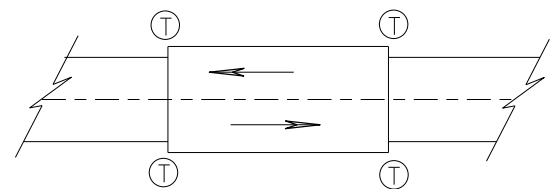
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

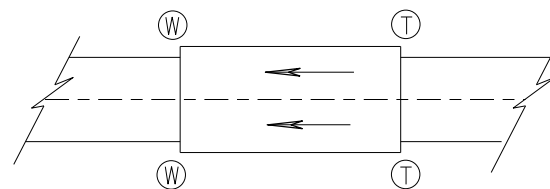
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

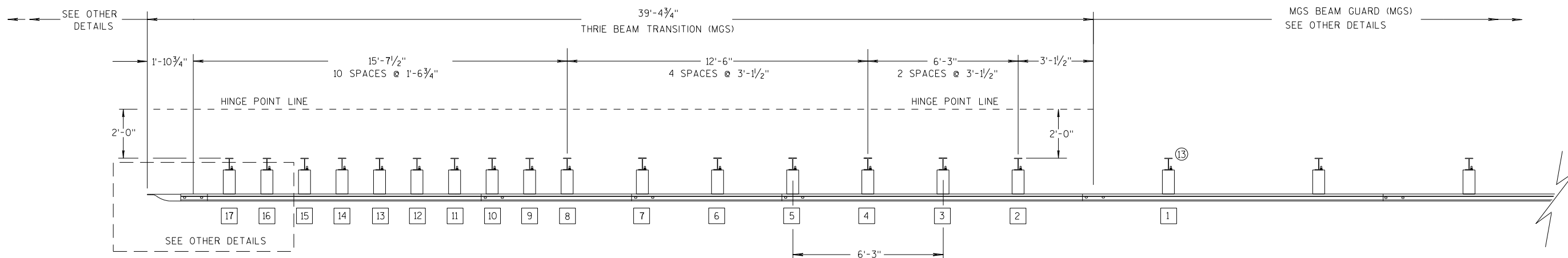
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

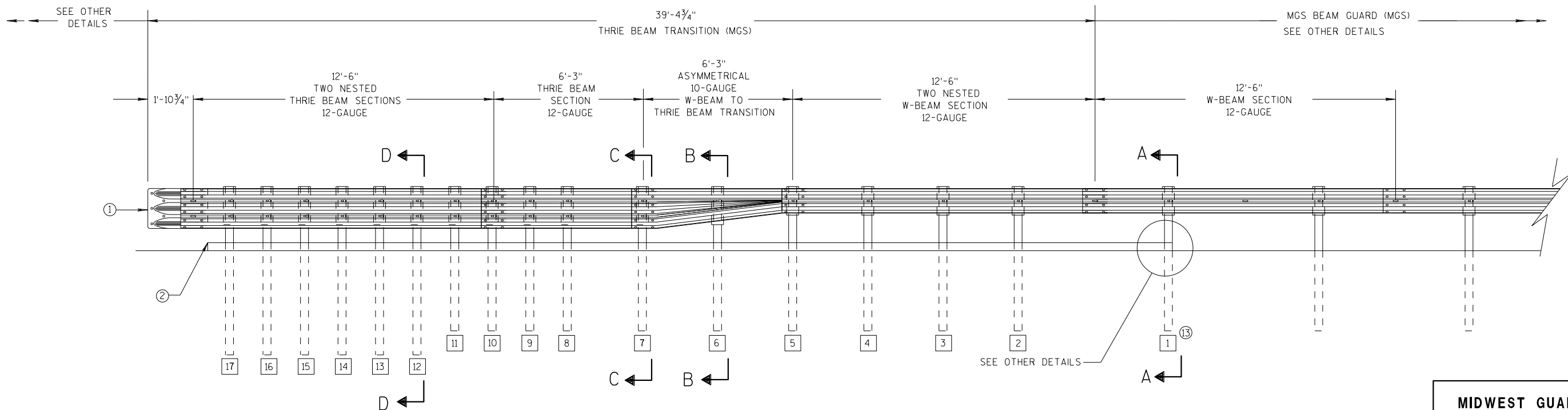
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

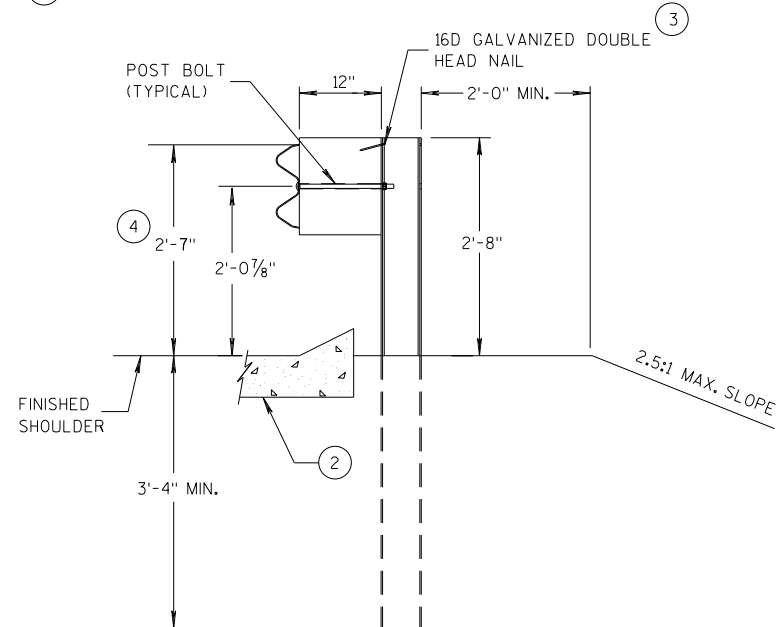
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S.D.D. 14 B 45-5a

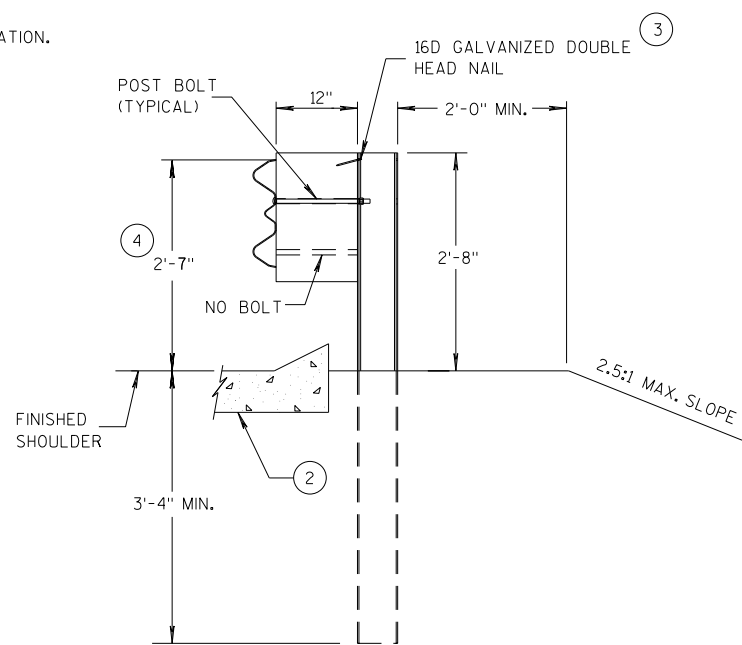
S.D.D. 14 B 45-5a

GENERAL NOTES

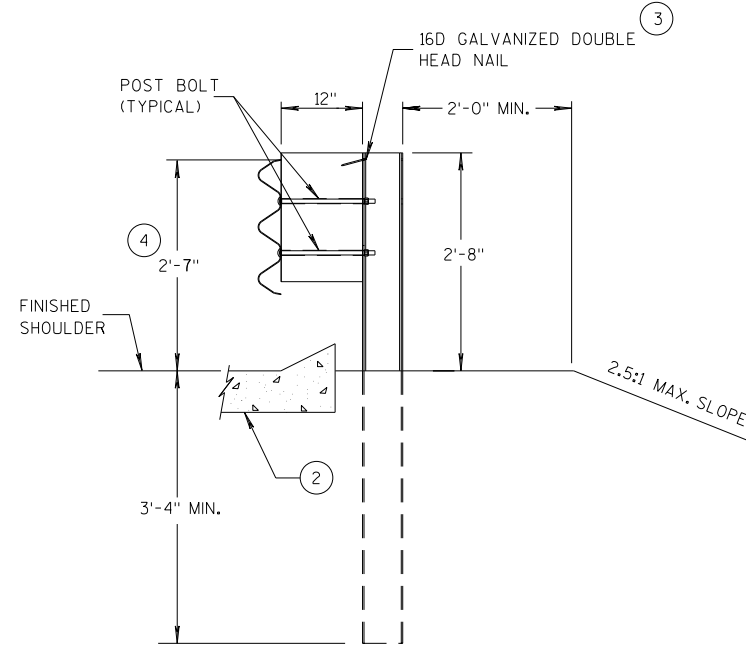
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



**SECTION C-C
POSTS 7-11**

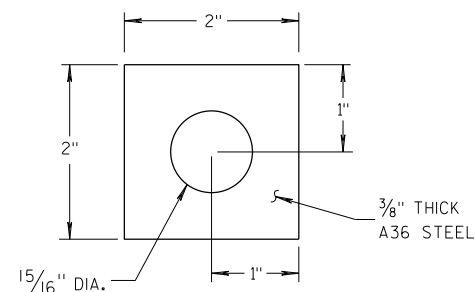
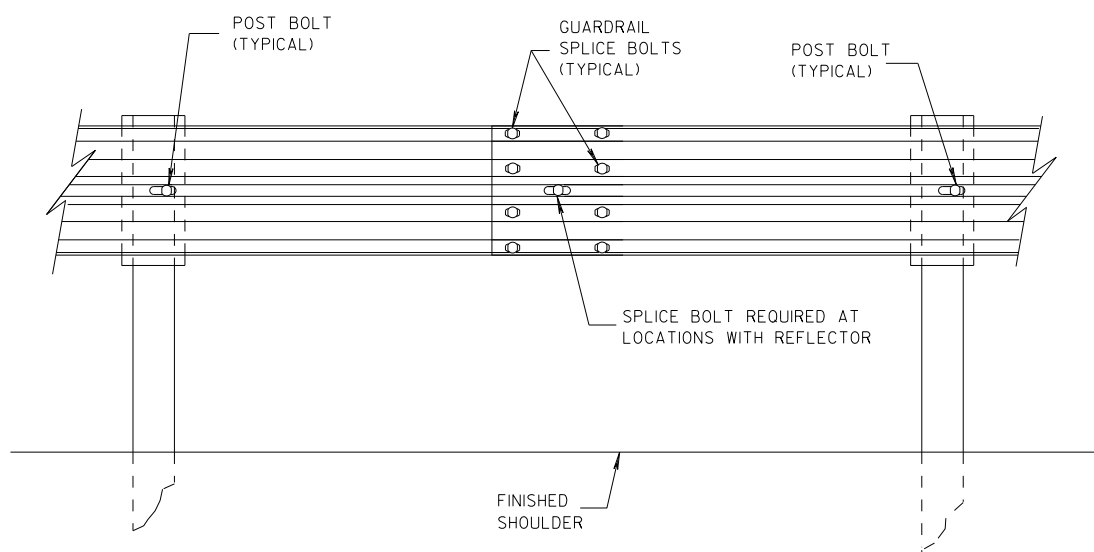
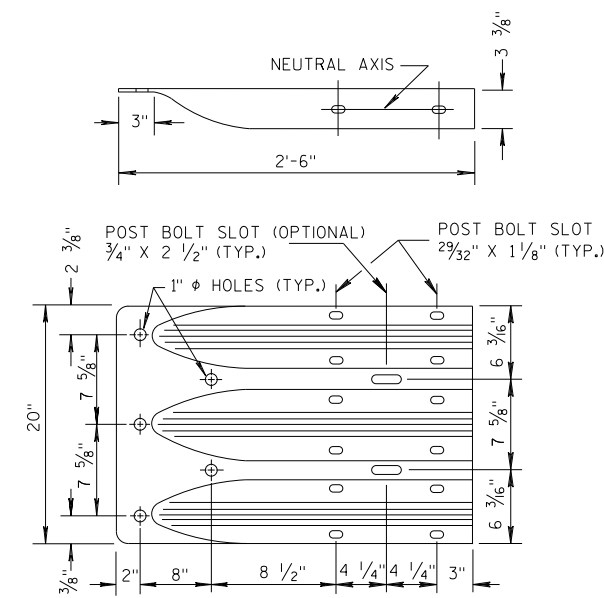


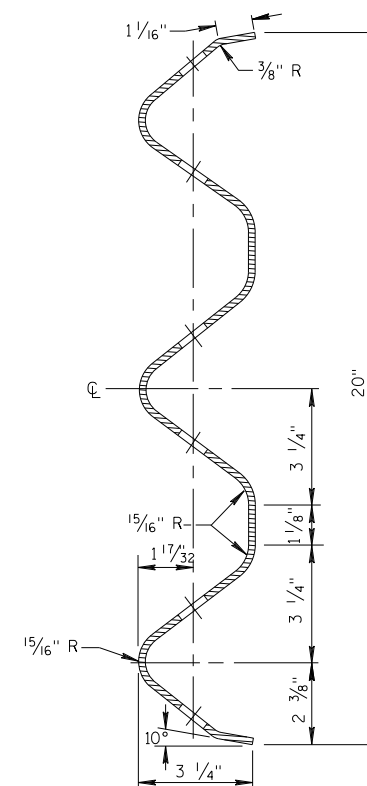
PLATE WASHER DETAIL



SPLICE DETAIL



**THRIE BEAM
TERMINAL CONNECTOR**

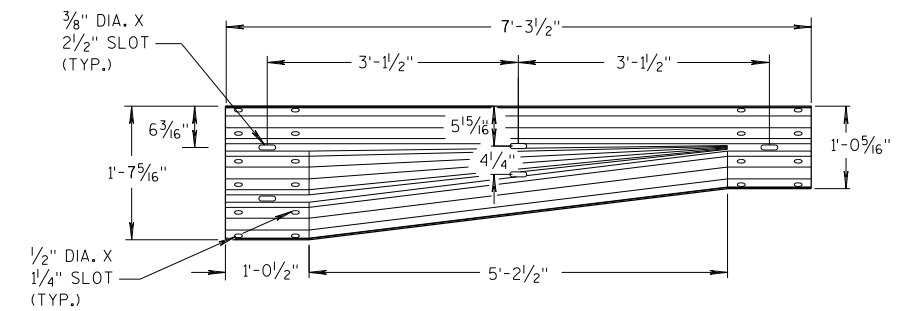


**SECTION THRU THRIE
BEAM RAIL ELEMENT**

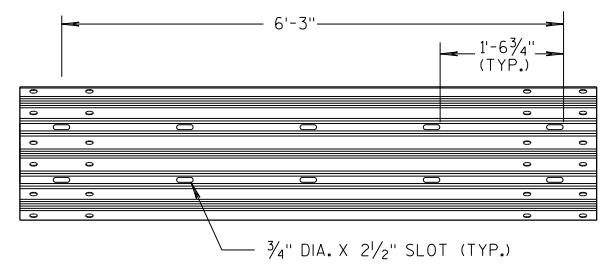
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

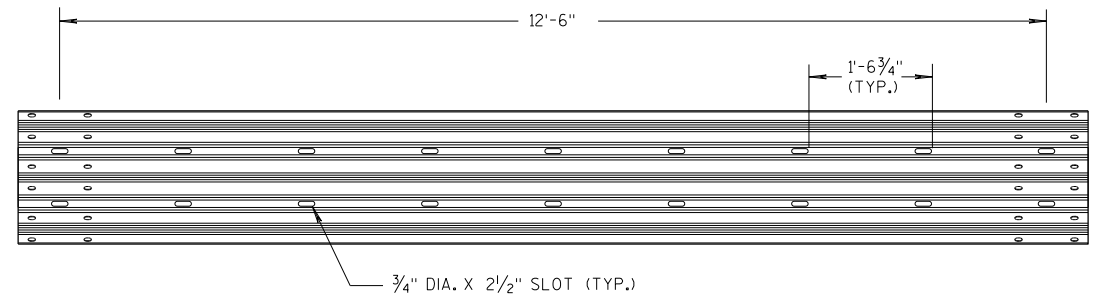
**SECTION D-D
POSTS 12-17**



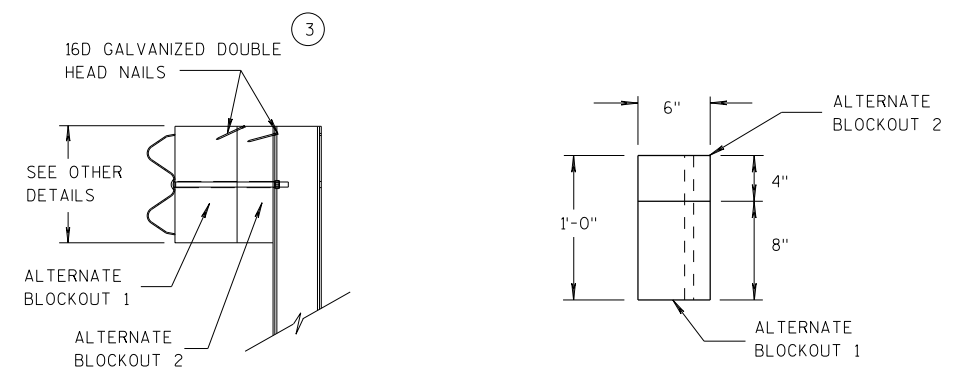
W-BEAM TO THRIE BEAM TRANSITION SECTION



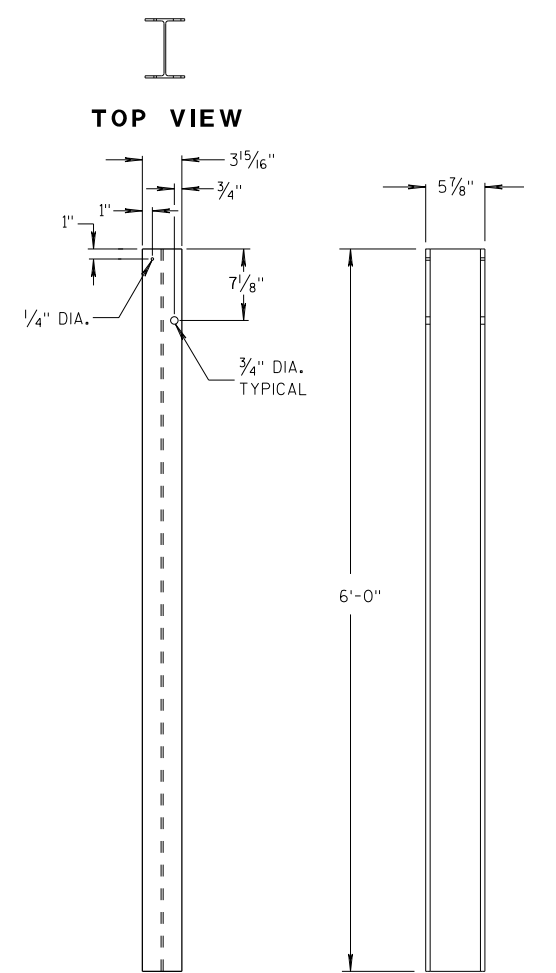
6'-3" THRIE BEAM SECTION



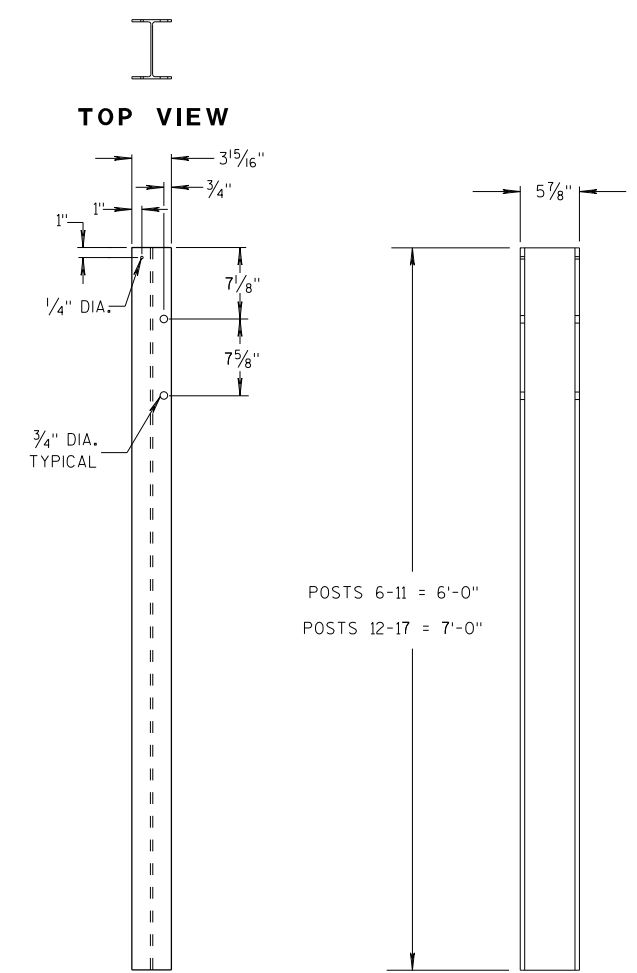
12'-6" THRIE BEAM SECTION



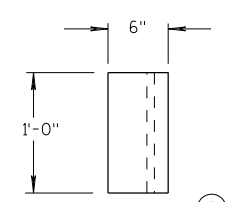
ALTERNATE WOOD BLOCKOUT DETAIL



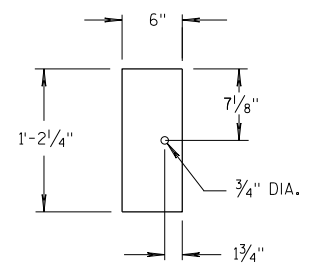
STEEL POSTS 1-5



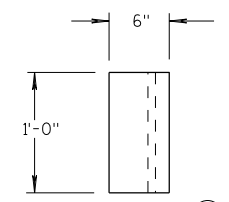
STEEL POSTS 6-17



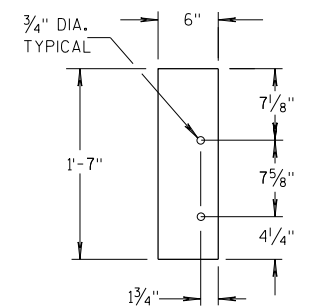
TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 1-5**



TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 6-17**

GENERAL NOTES

- STEEL POSTS ARE W6X9 OR W6X8.5.
- BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.
- (3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- (5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.
- (13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

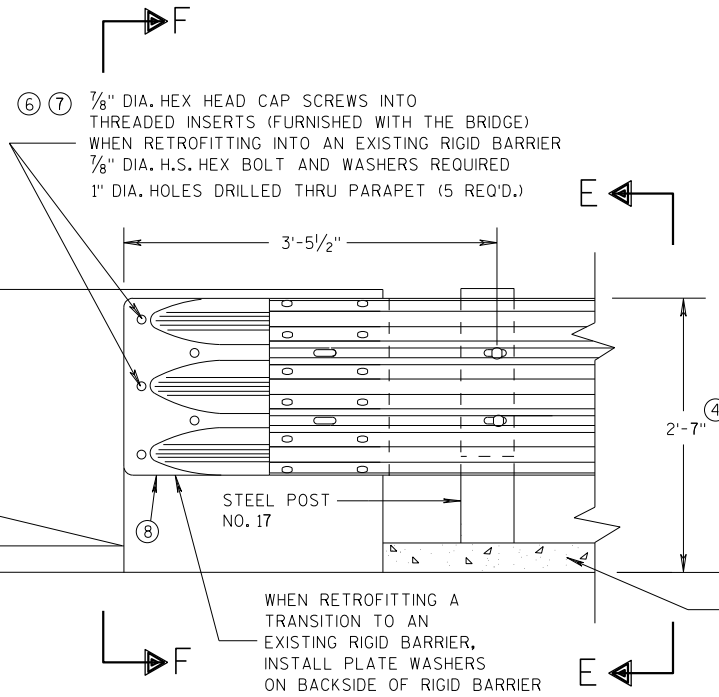
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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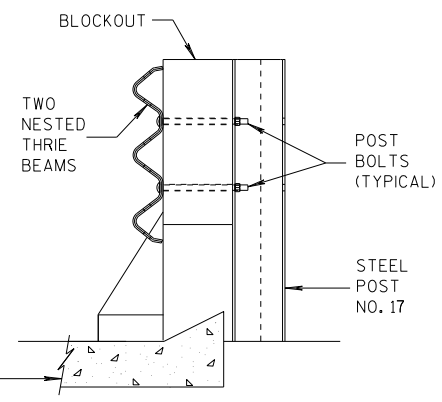
S.D.D. 14 B 45-5c

S.D.D. 14 B 45-5c



FRONT VIEW

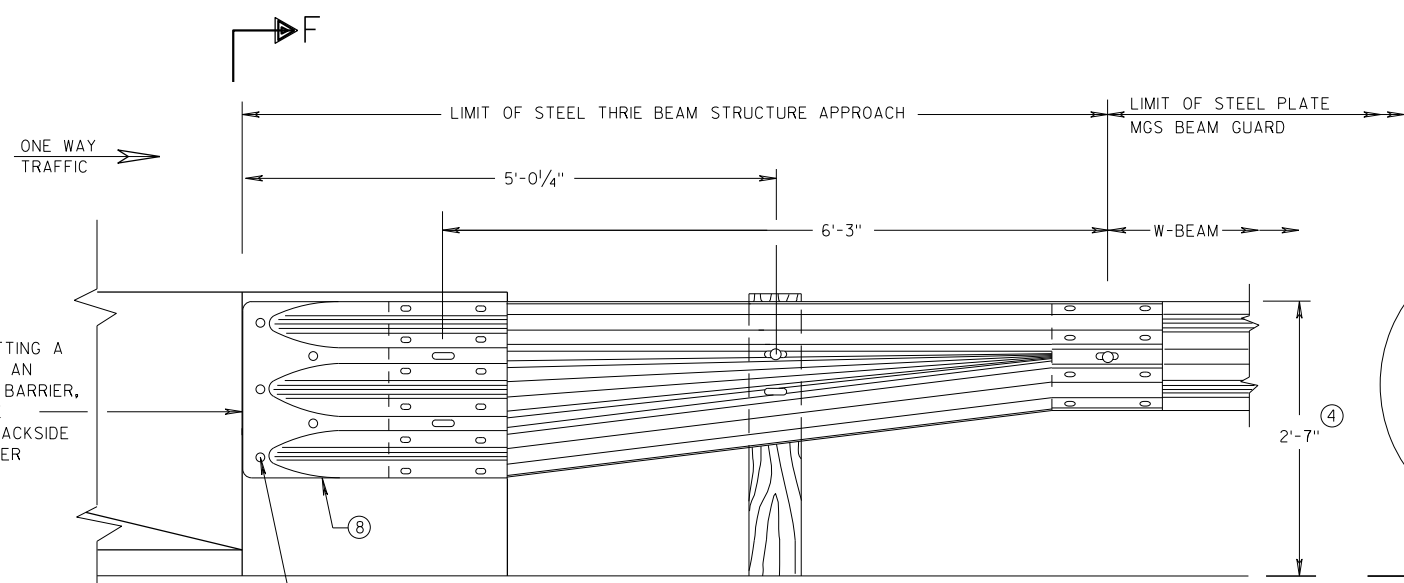
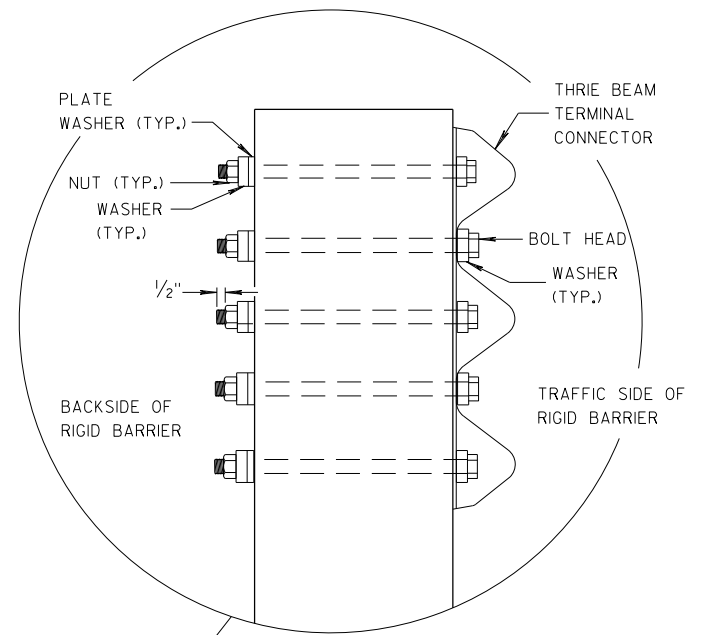
THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



SECTION E-E

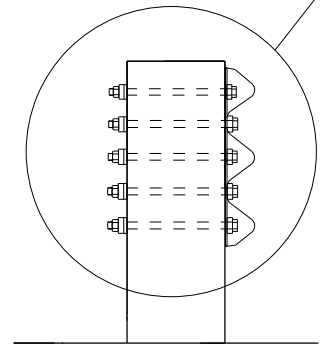
GENERAL NOTES

- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
 - (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
 - (6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
 - (7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
 - (8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

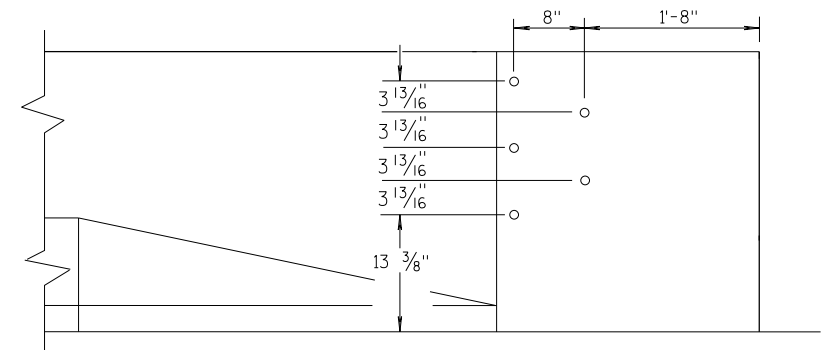


FRONT VIEW

**W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**



SECTION F-F



DRILL HOLE LOCATION

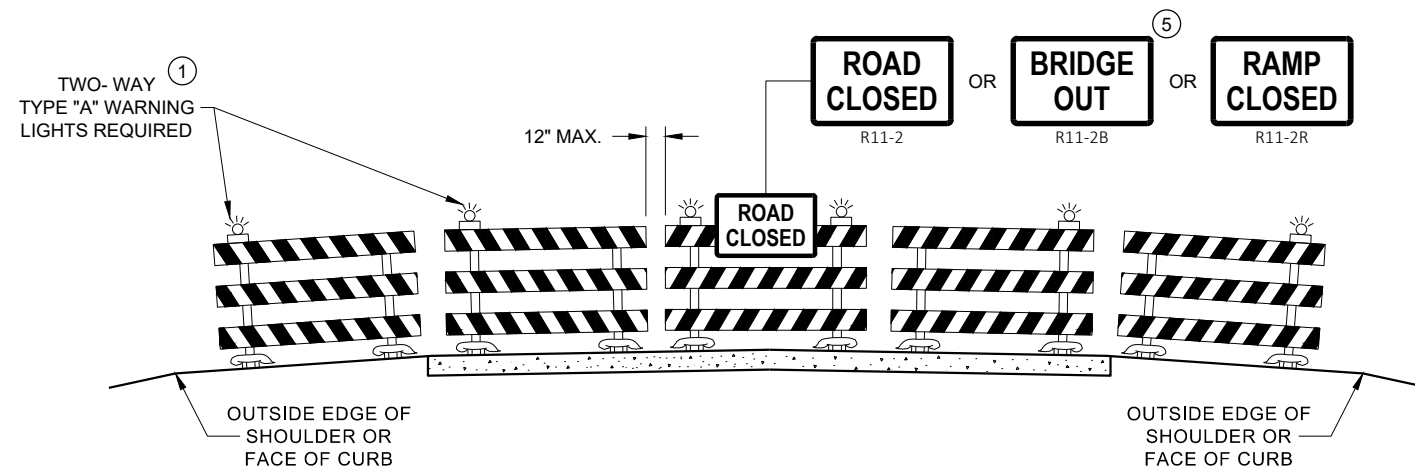
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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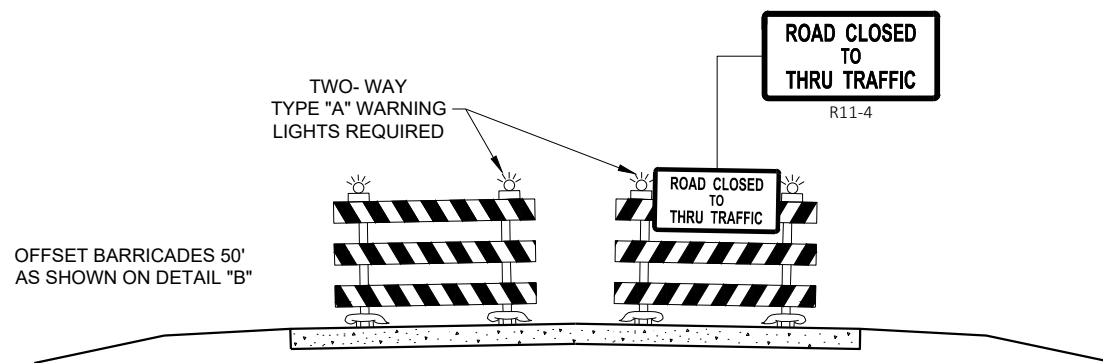
6

S.D.D. 14 B 45-5d

S.D.D. 14 B 45-5d



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

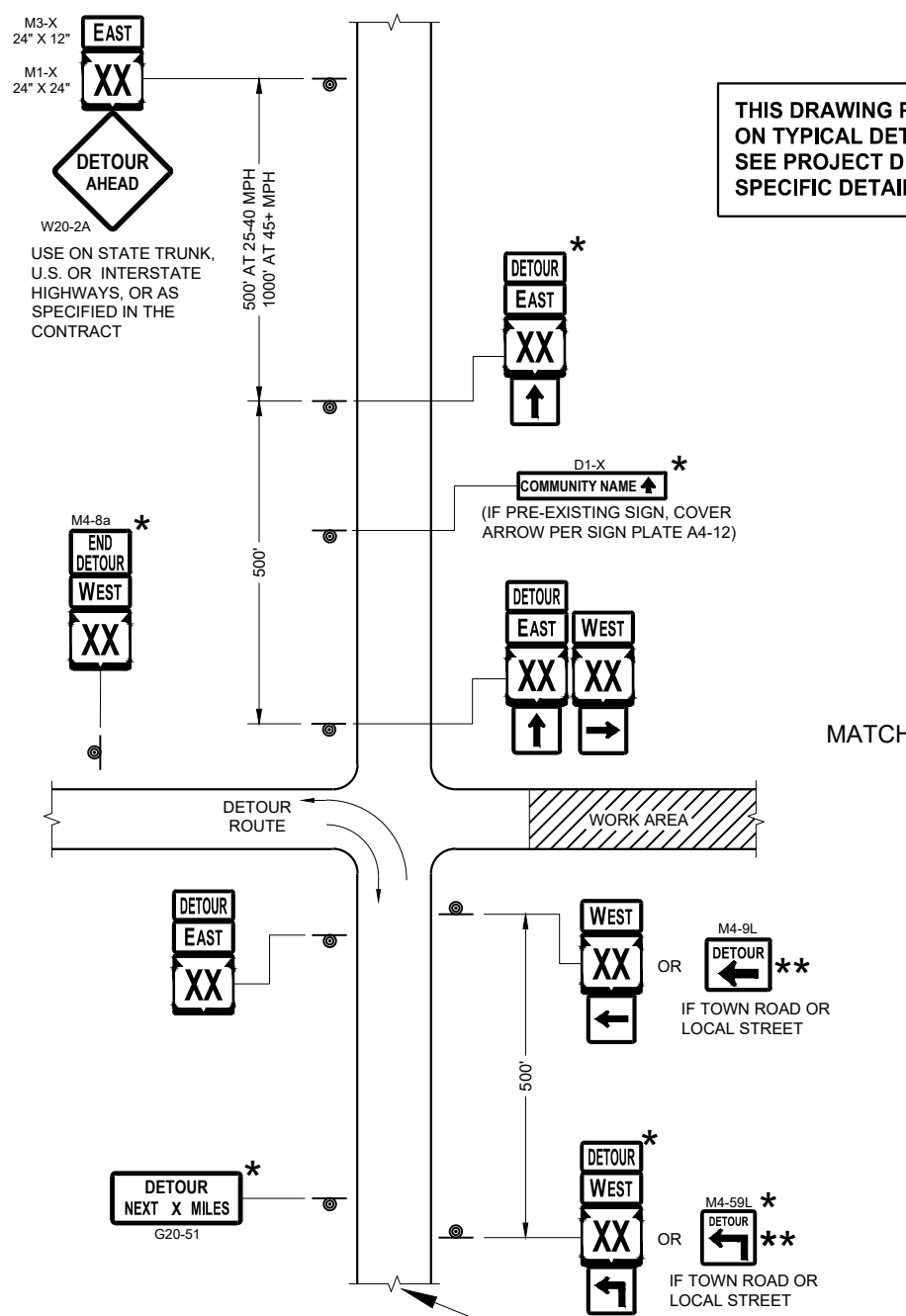
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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

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

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

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

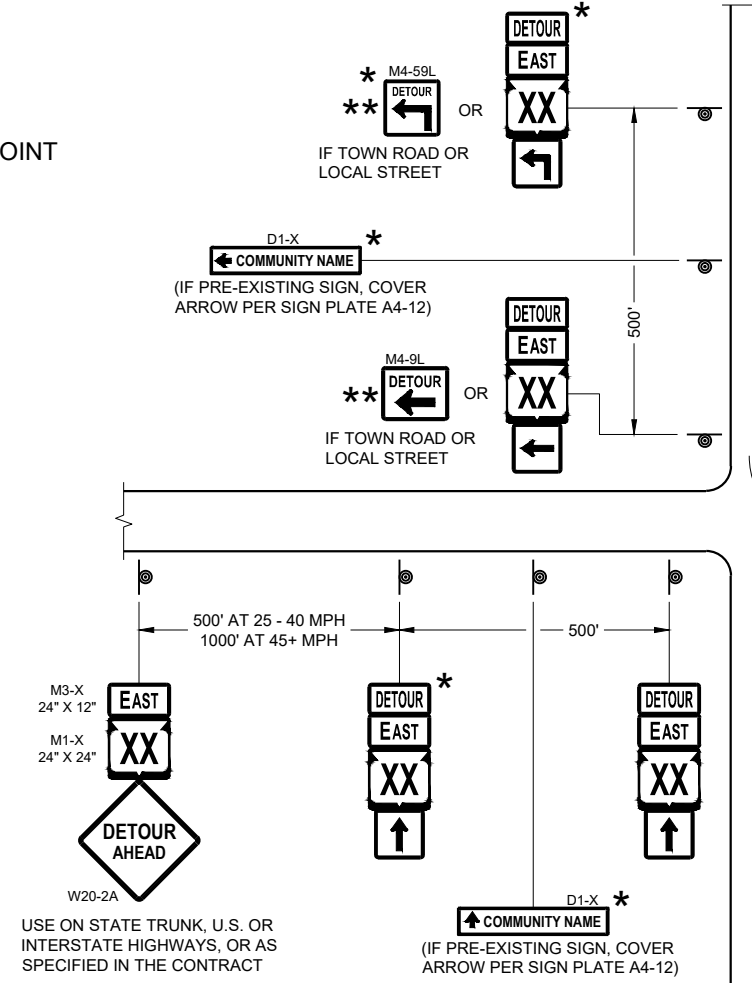
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

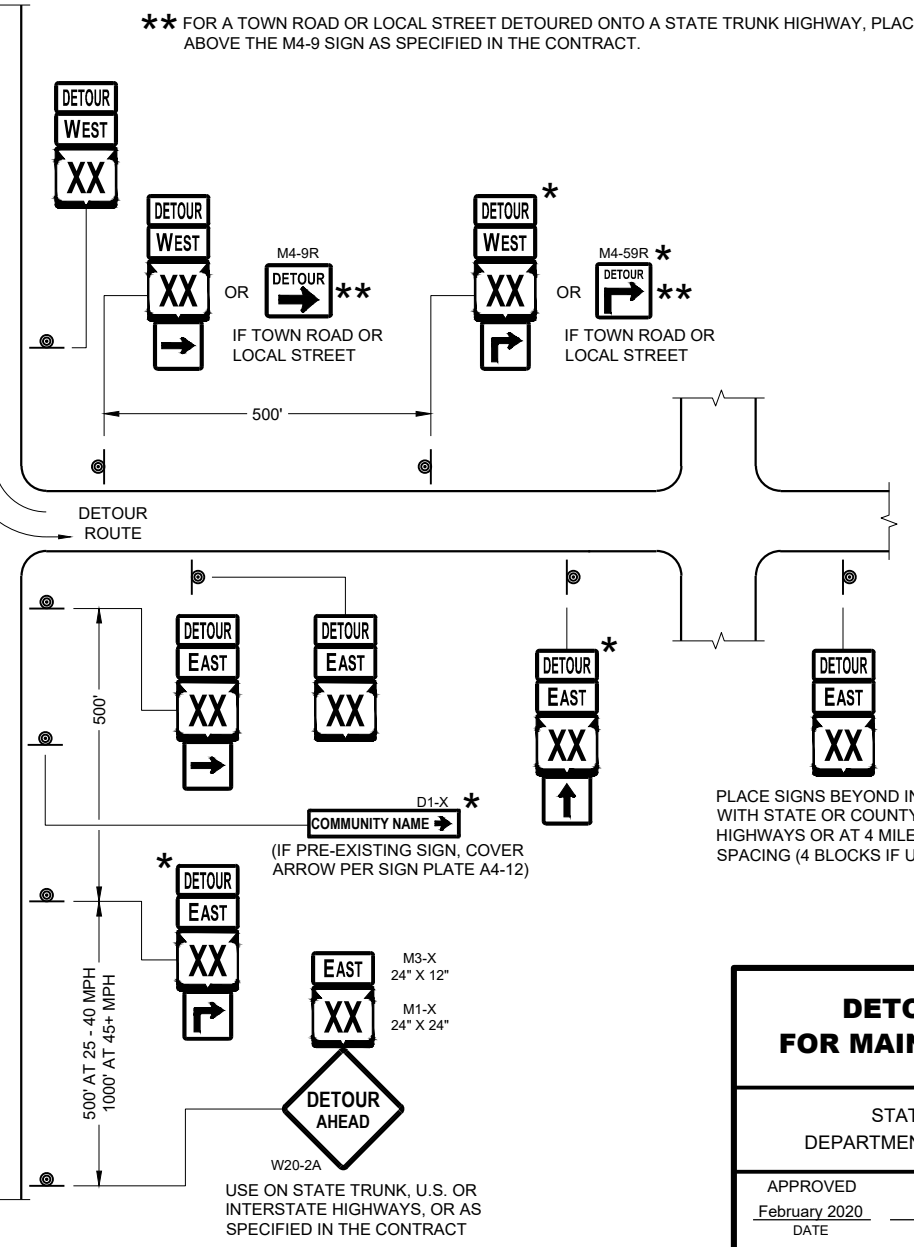
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



**DETAIL F
DETOUR SIGNING**

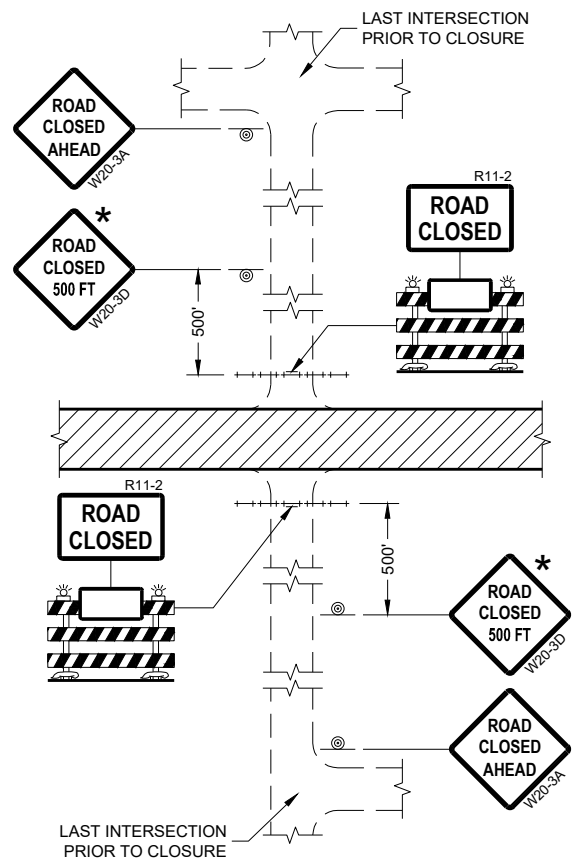


**DETOUR SIGNING
FOR MAINLINE CLOSURES**

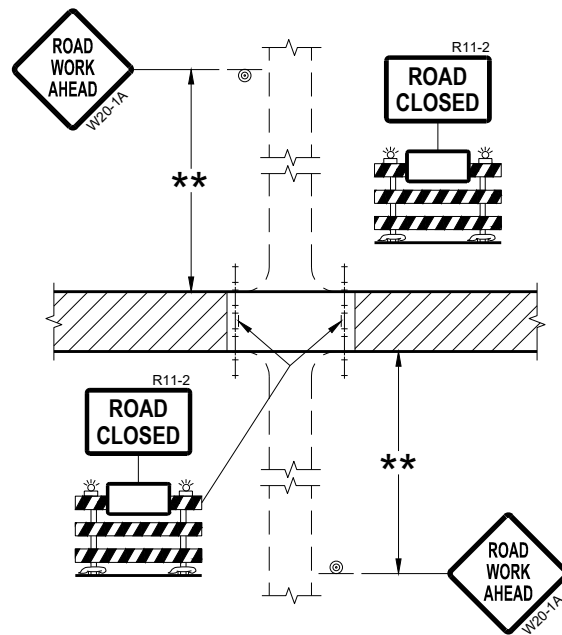
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

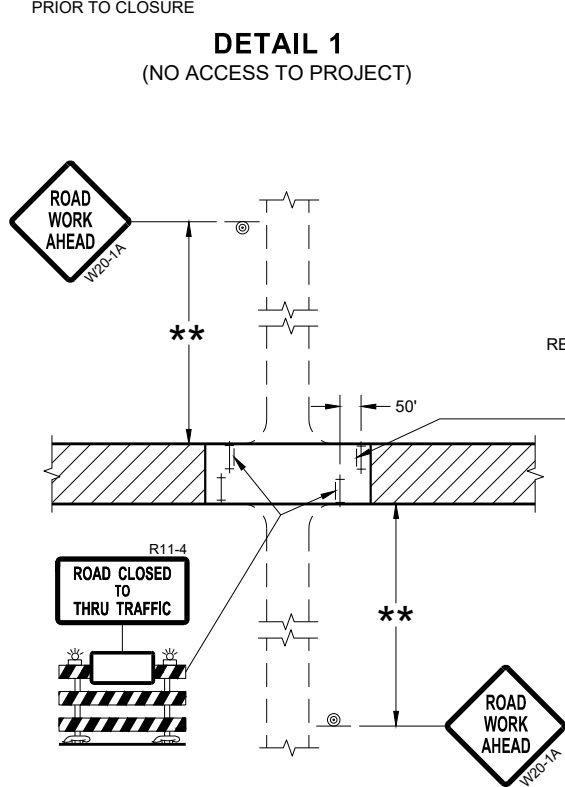
FHWA



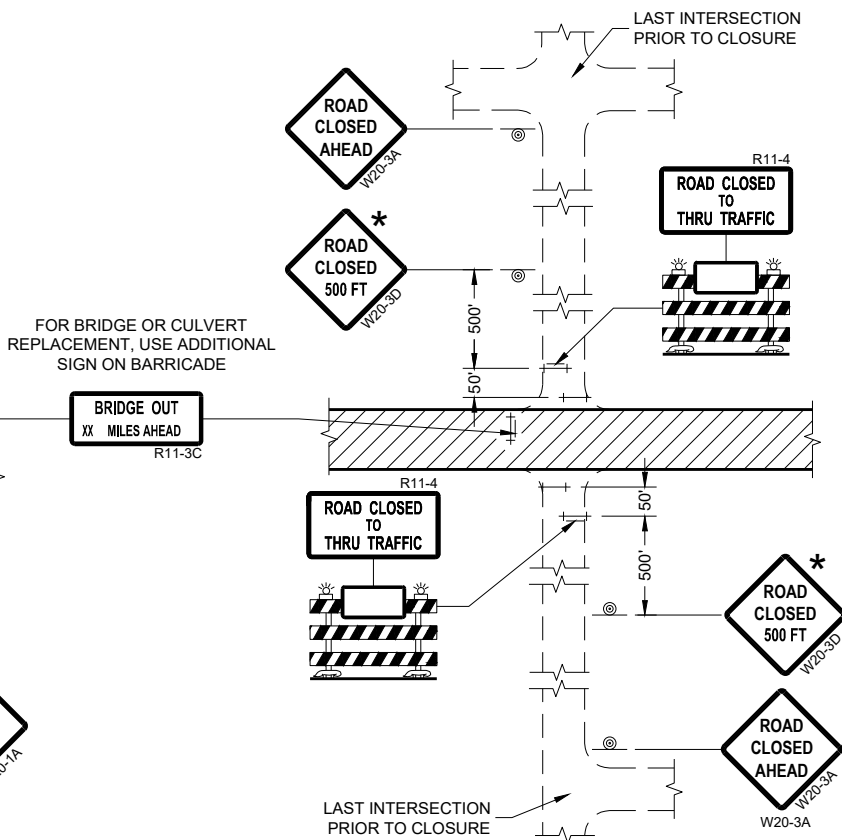
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

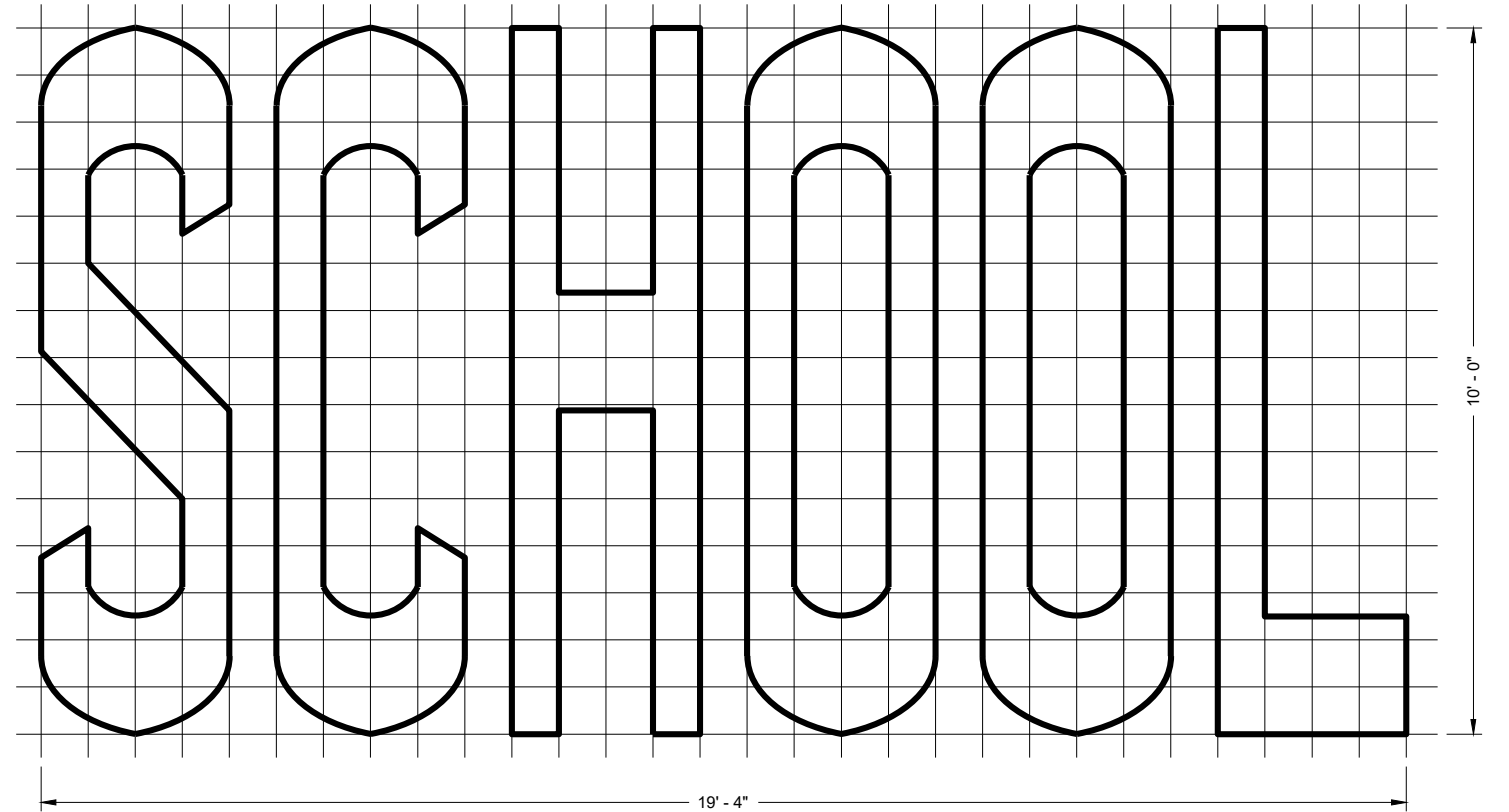
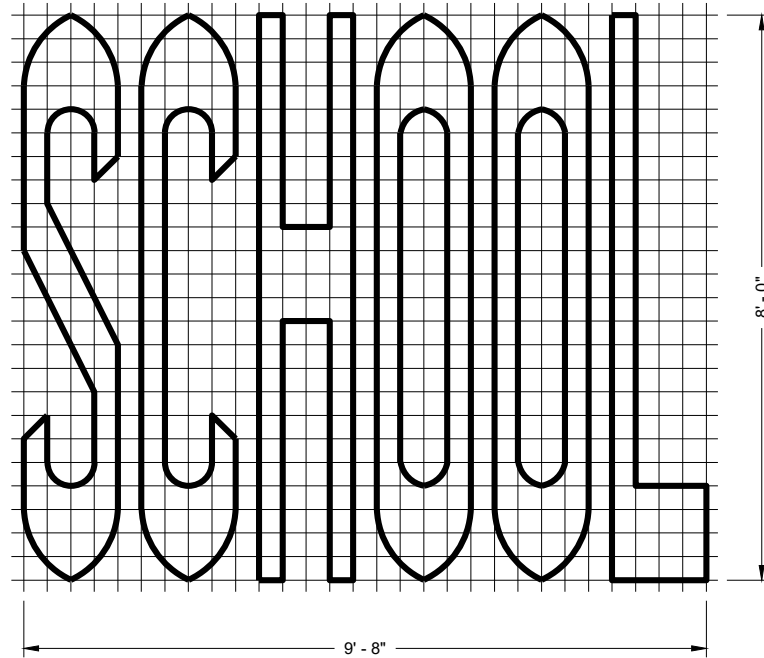
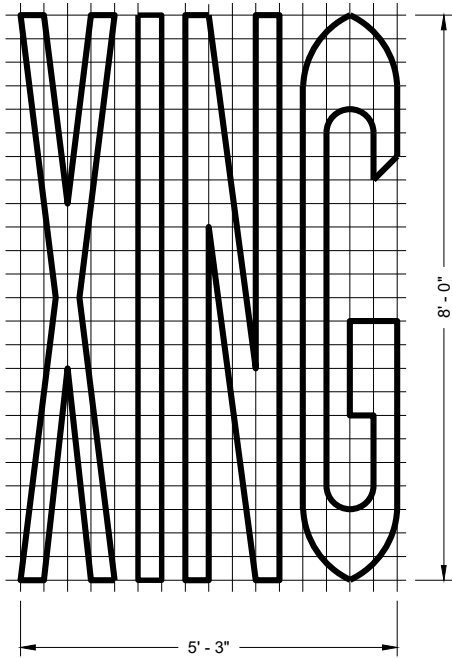
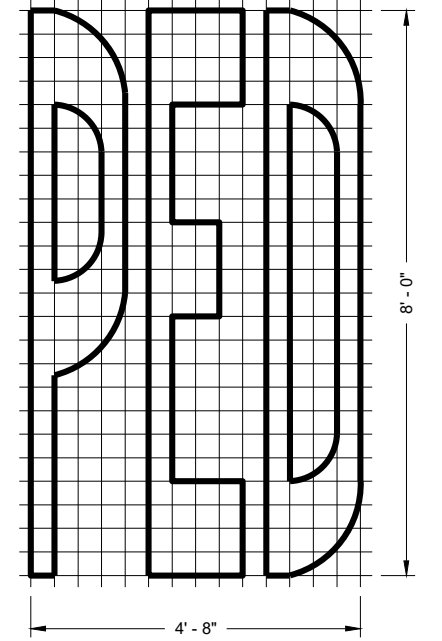
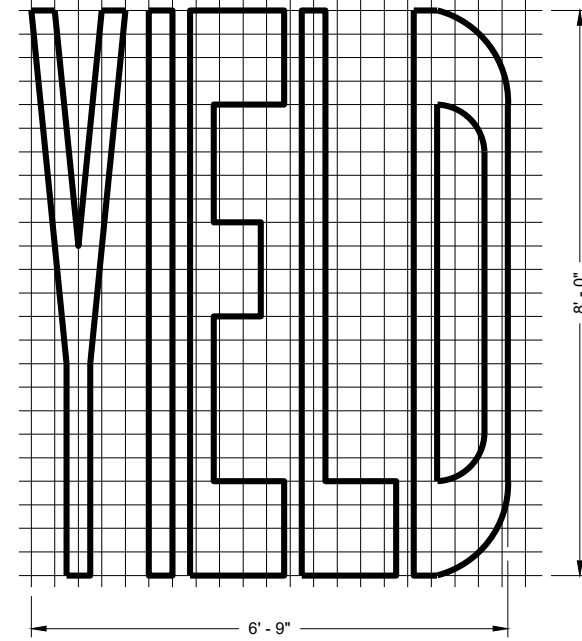
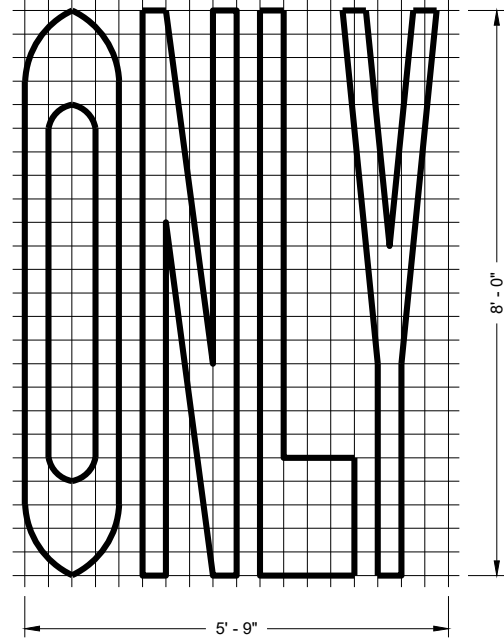
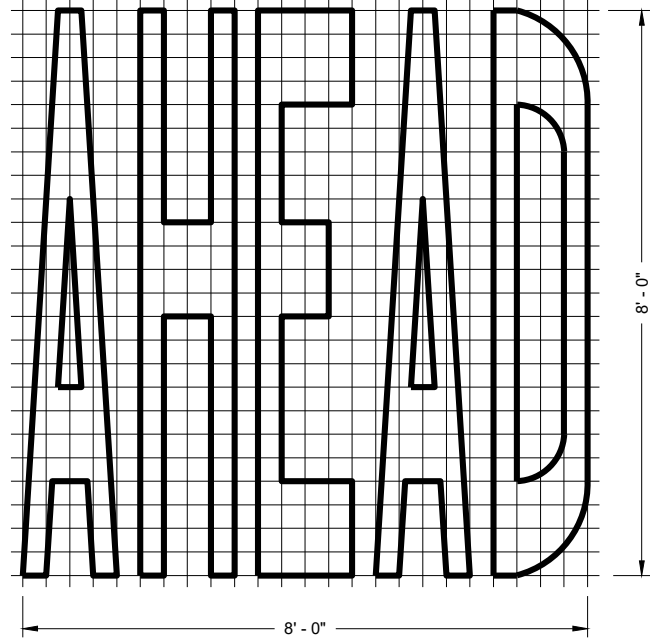
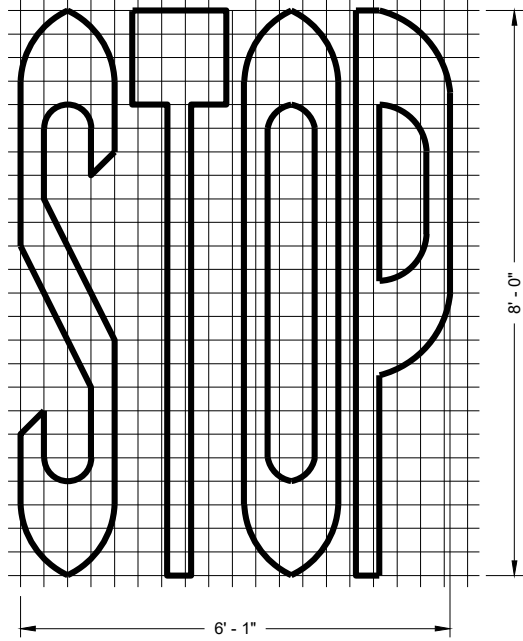
LEGEND

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

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



SINGLE LANE

TWO - LANE

GENERAL NOTES

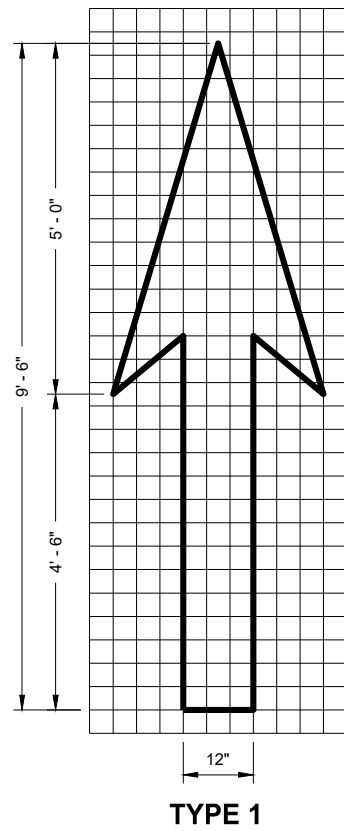
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

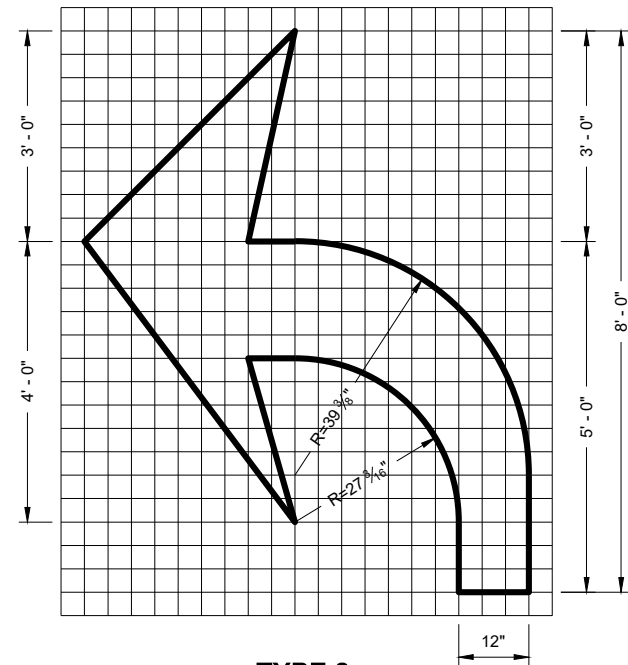
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

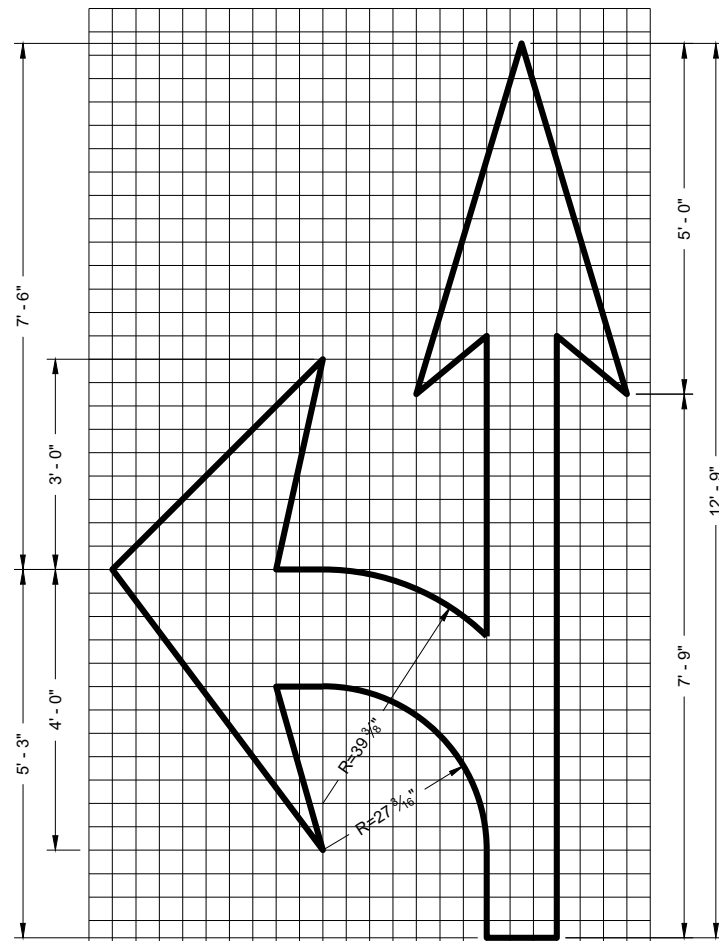
FHWA



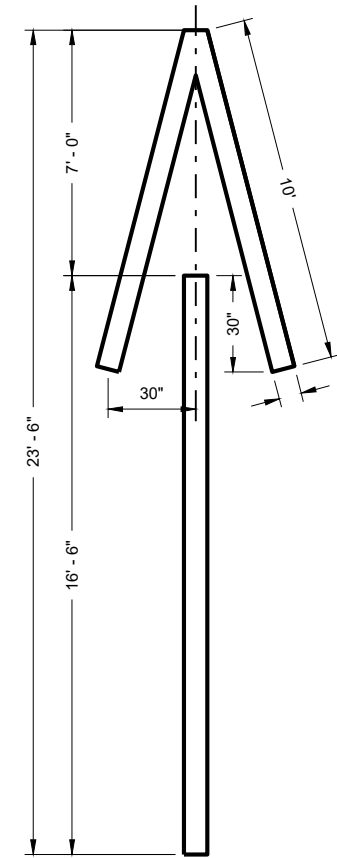
TYPE 1



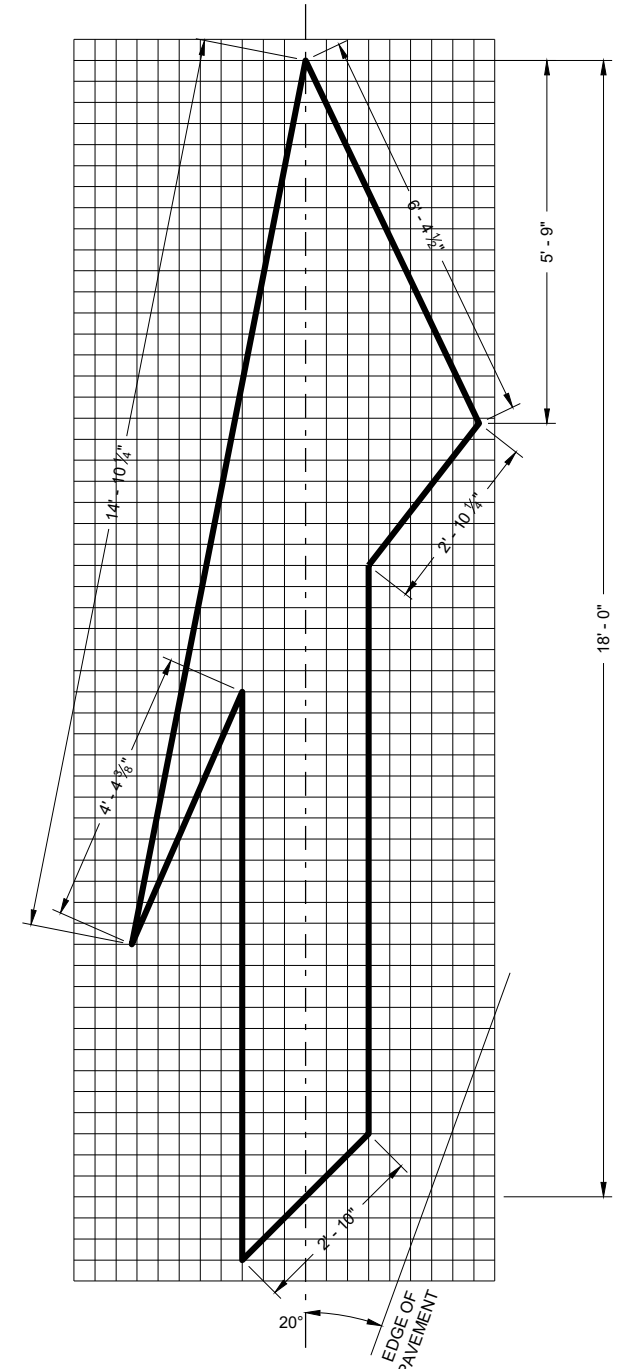
TYPE 2



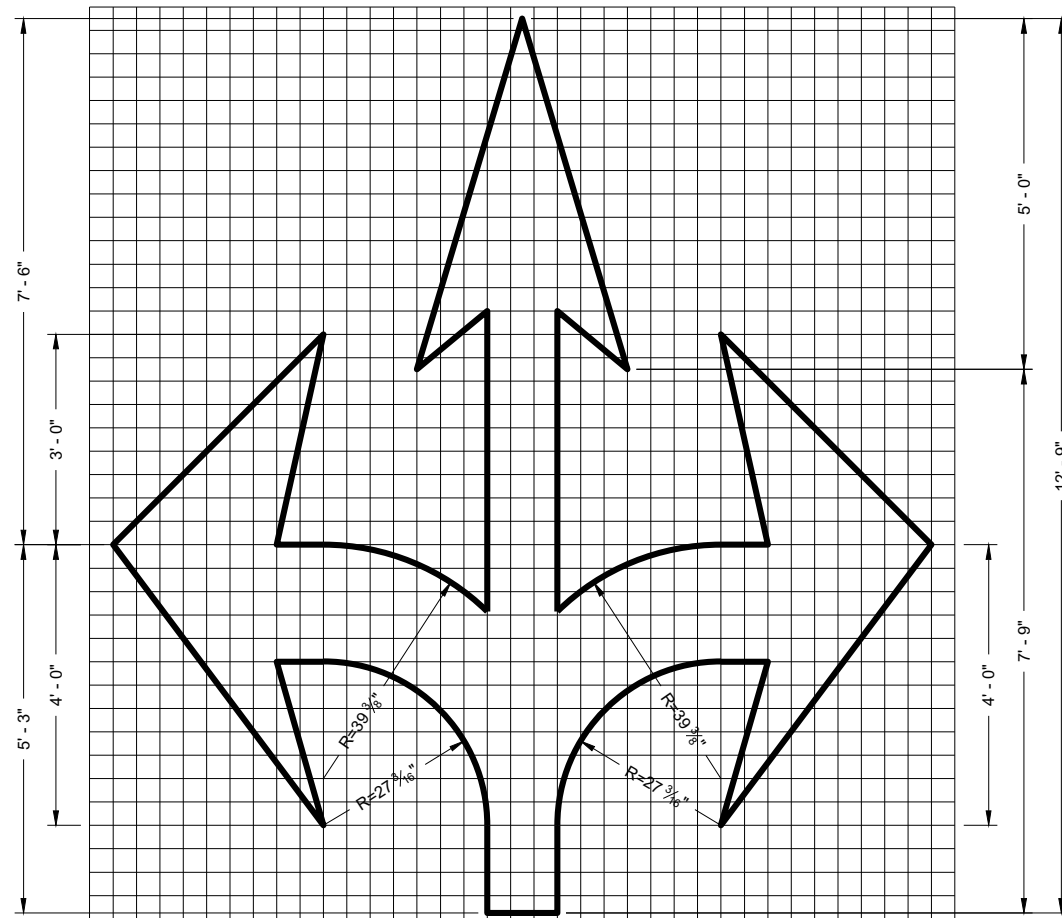
TYPE 3



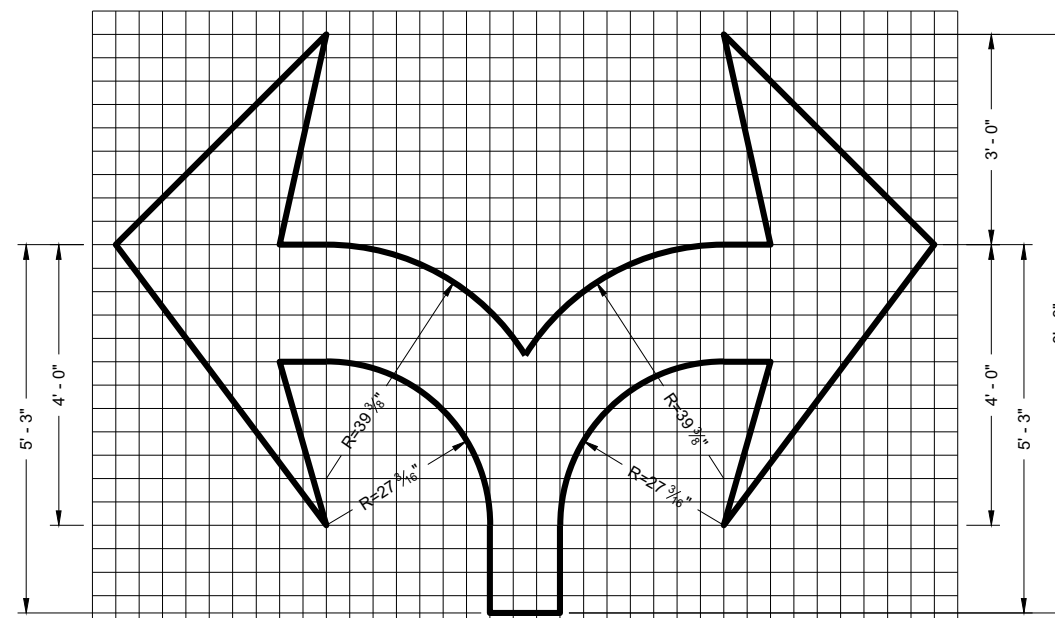
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

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

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

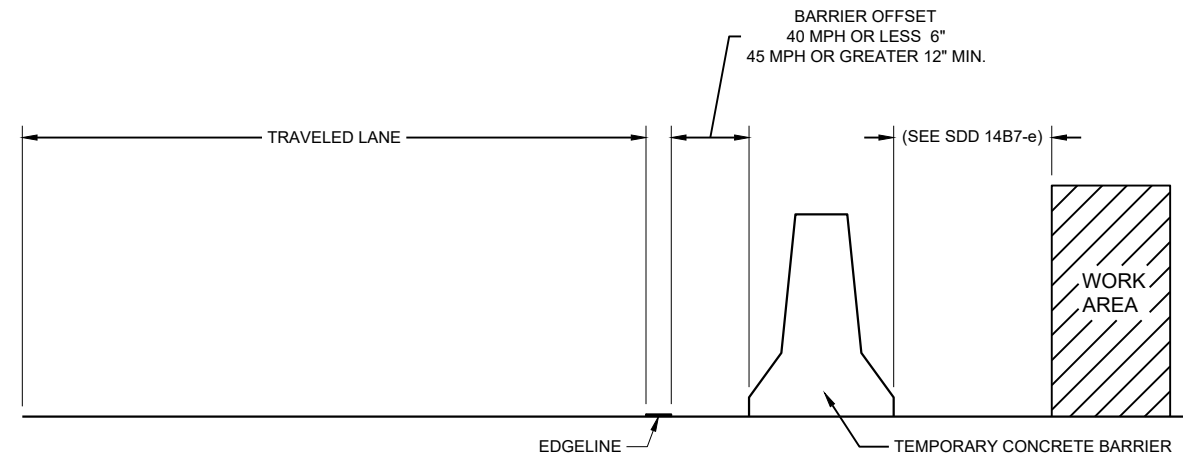
APPROVED

November 2019

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FHWA

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STATE SIGNING AND MARKING
ENGINEER



TEMPORARY BARRIER OFFSET FROM EDGELINE

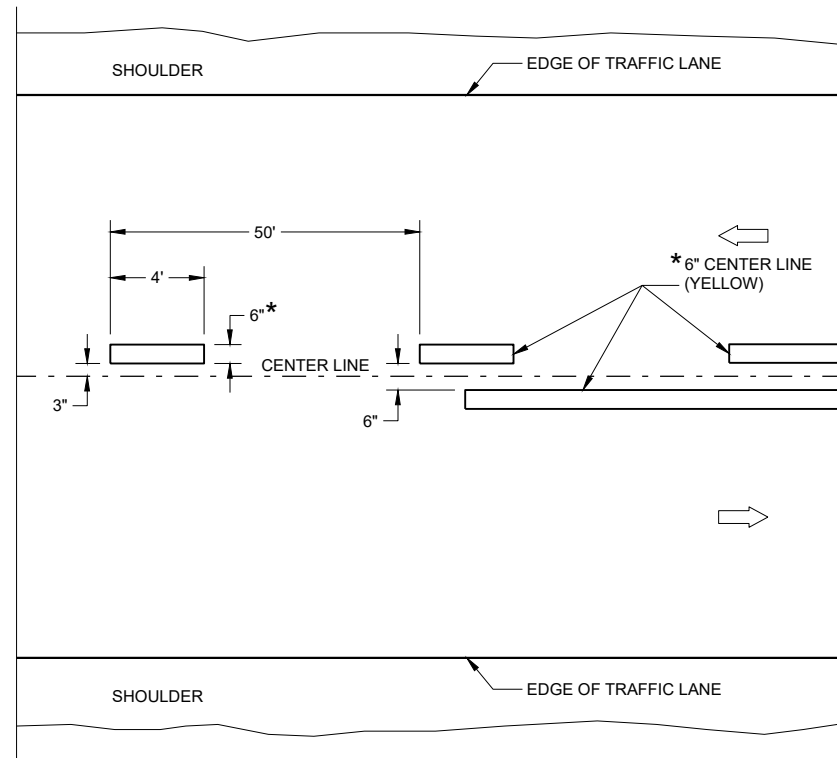
GENERAL NOTES

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

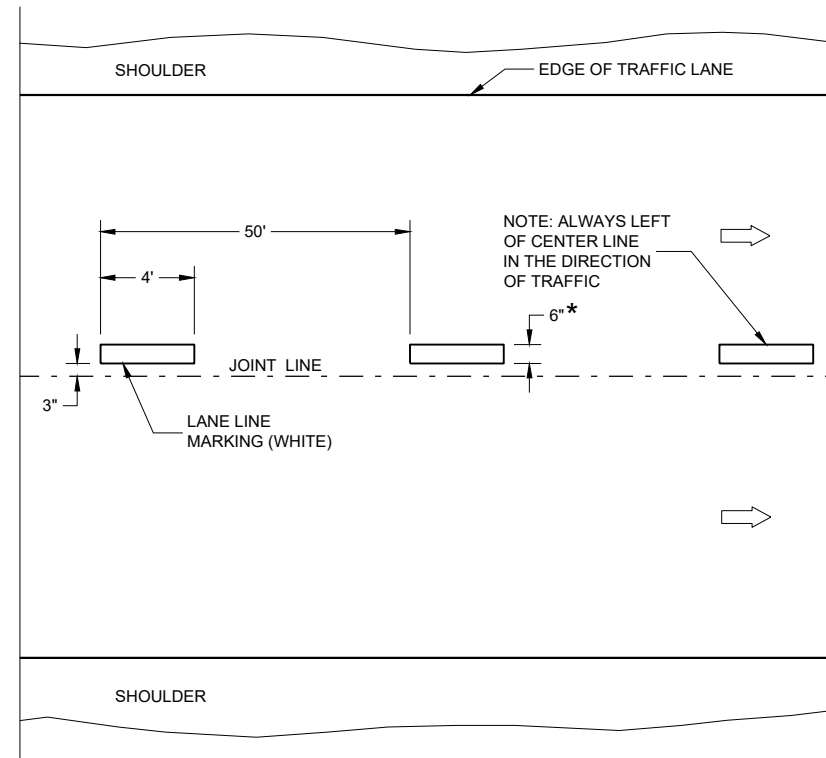
LEGEND

➡ DIRECTION OF TRAFFIC

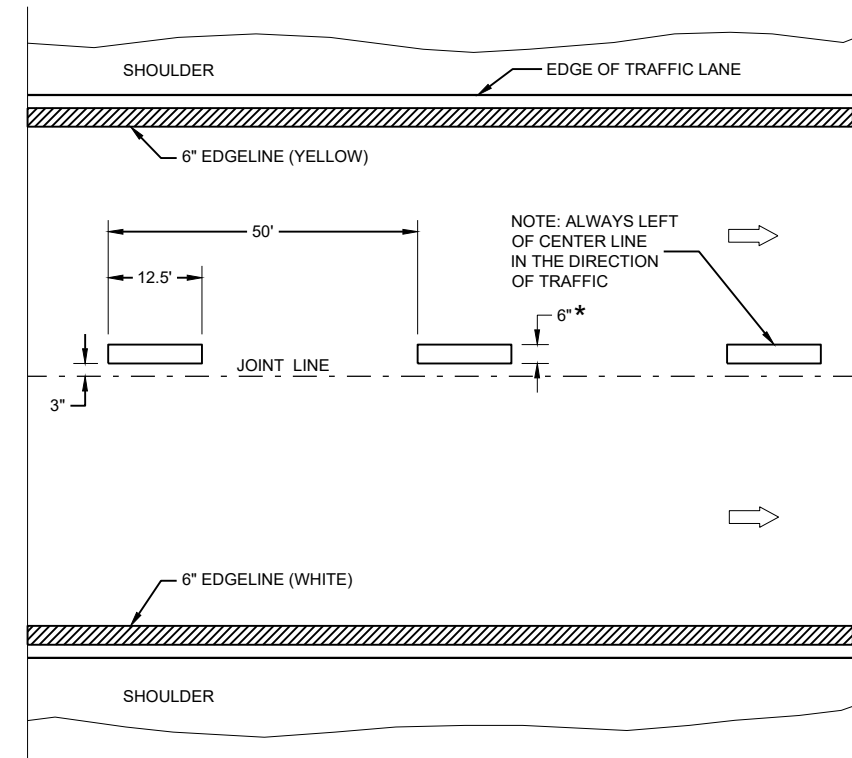
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

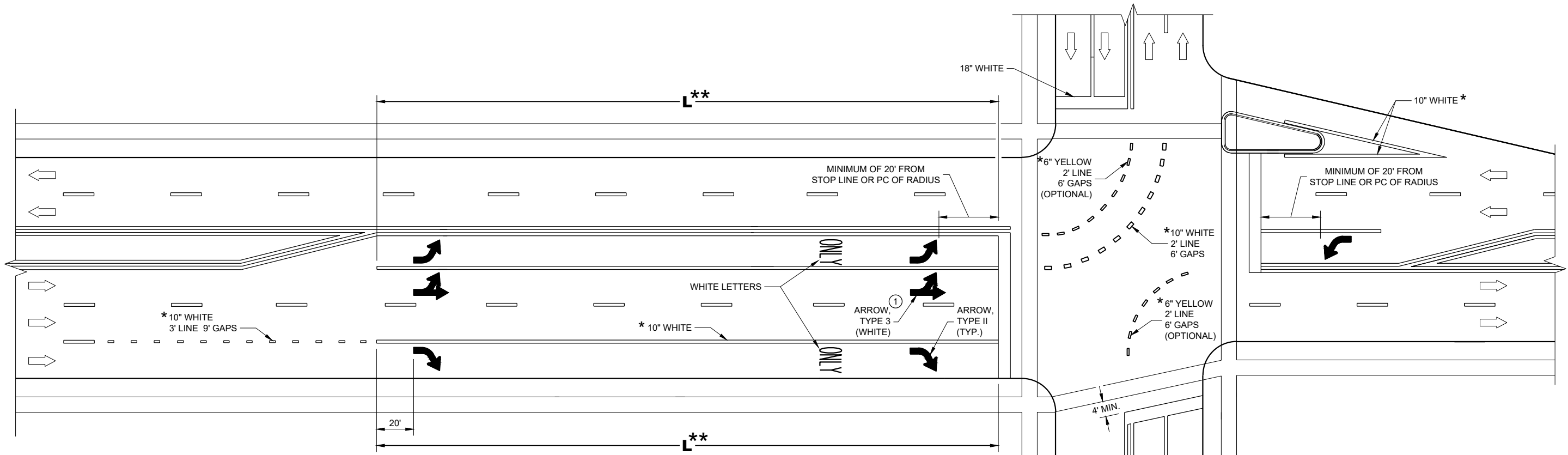
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

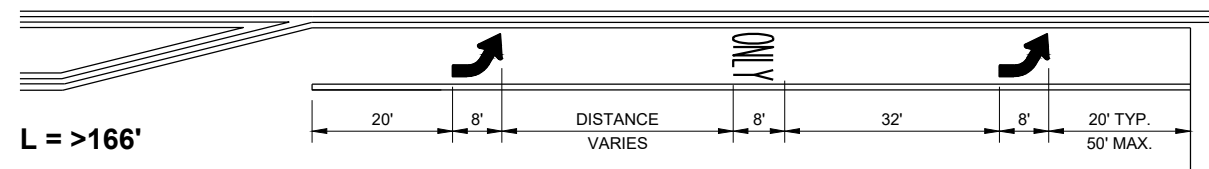
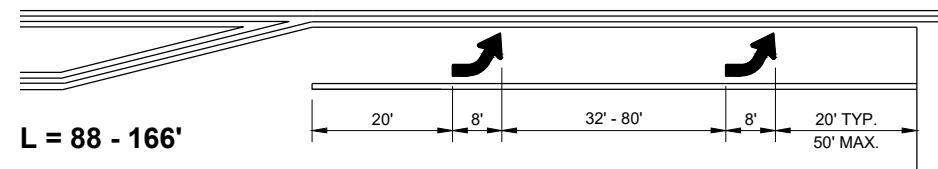
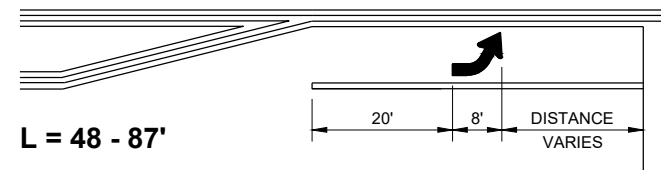
APPROVED
May 2023 /S/ Jeannie Silver
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA



TURN LANE OPTIONS

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



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

GENERAL NOTES

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

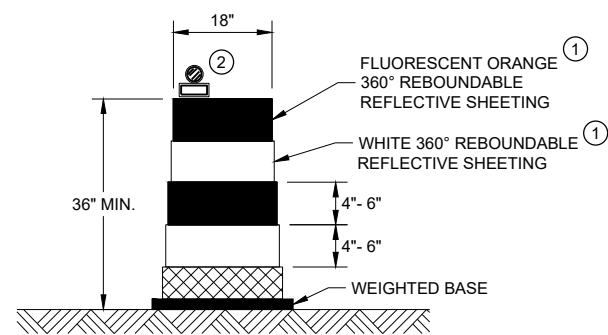
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

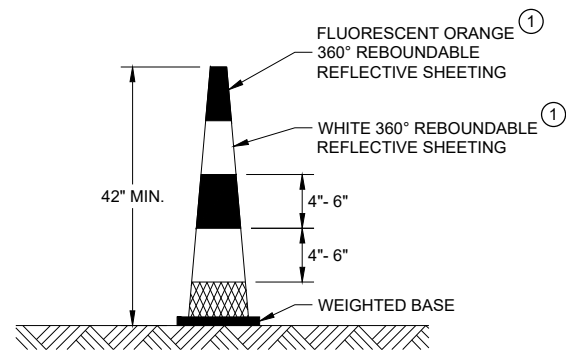
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



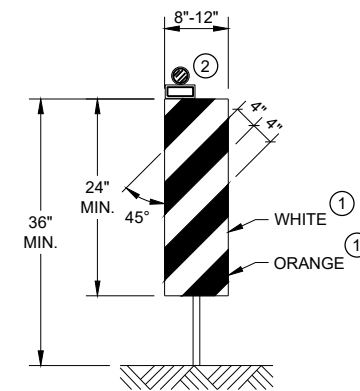
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

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

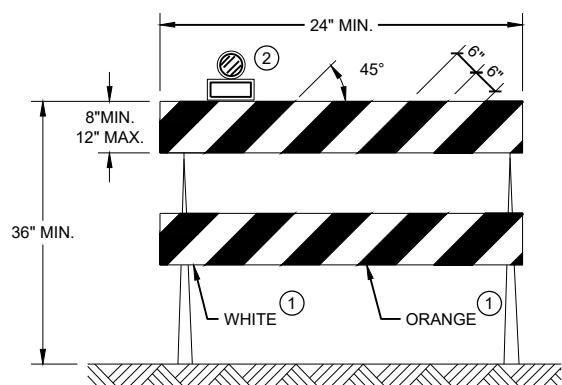


VERTICAL PANEL

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

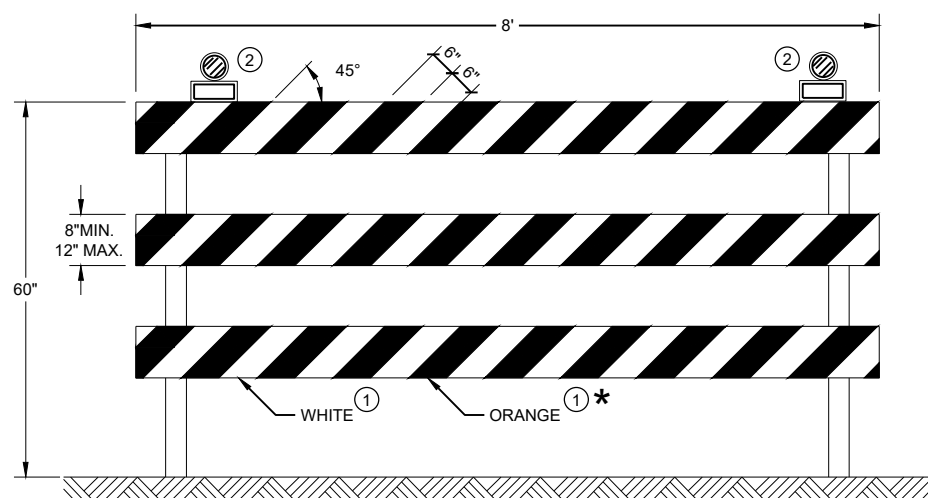
GENERAL NOTES

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2022 /S/ Andrew Heidtke
 DATE WORK ZONE ENGINEER
 FHWA

GENERAL NOTES

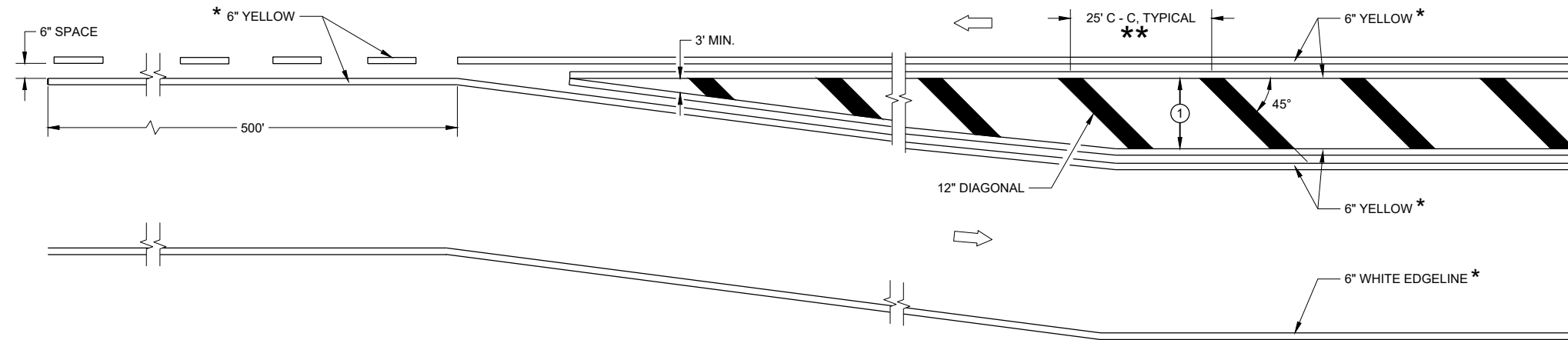
- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➔ DIRECTION OF TRAVEL

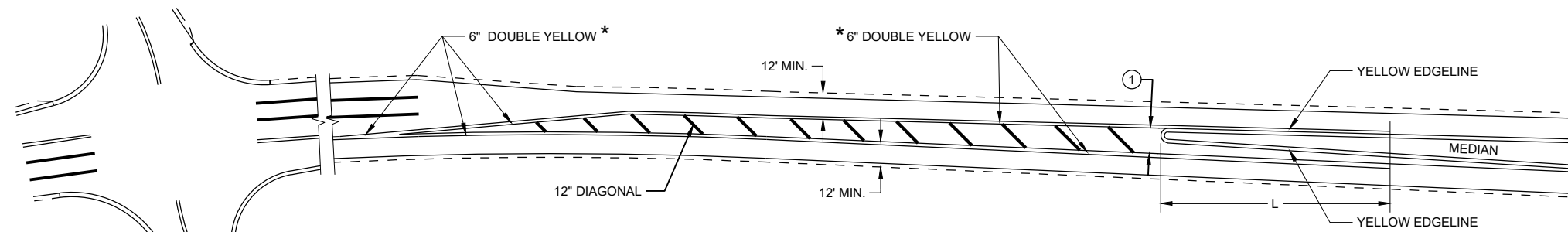
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'

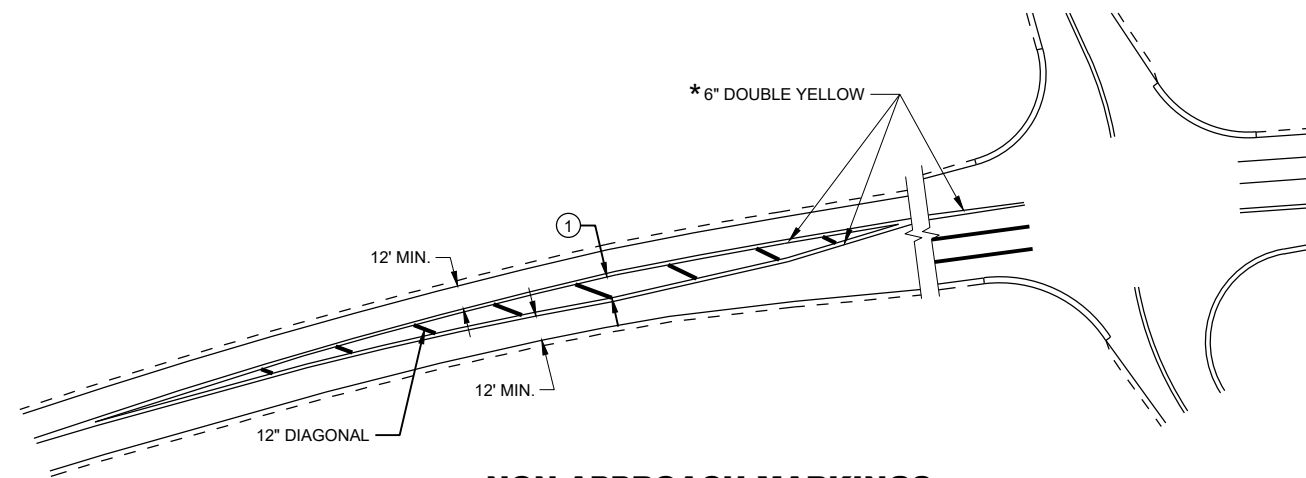
** WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

6

6

SDD 15C18-08a

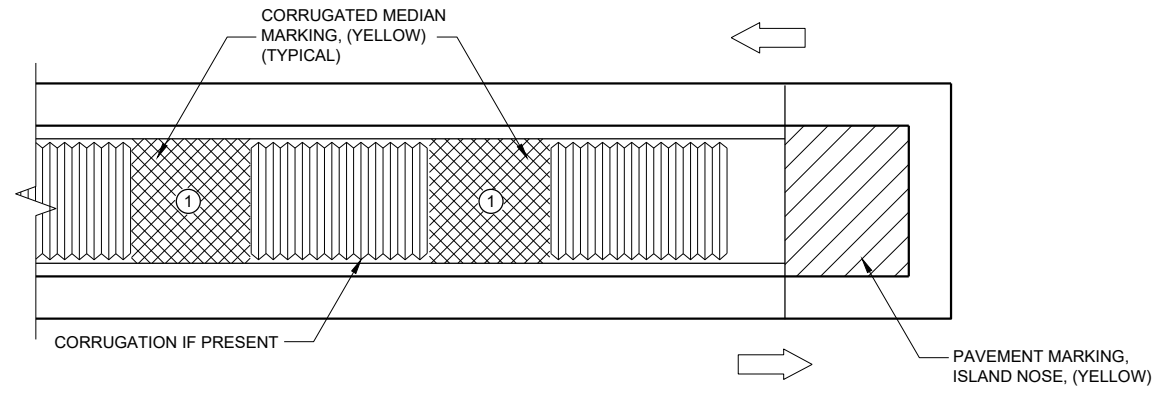
SDD 15C18-08a

MEDIAN ISLAND PAVEMENT MARKINGS

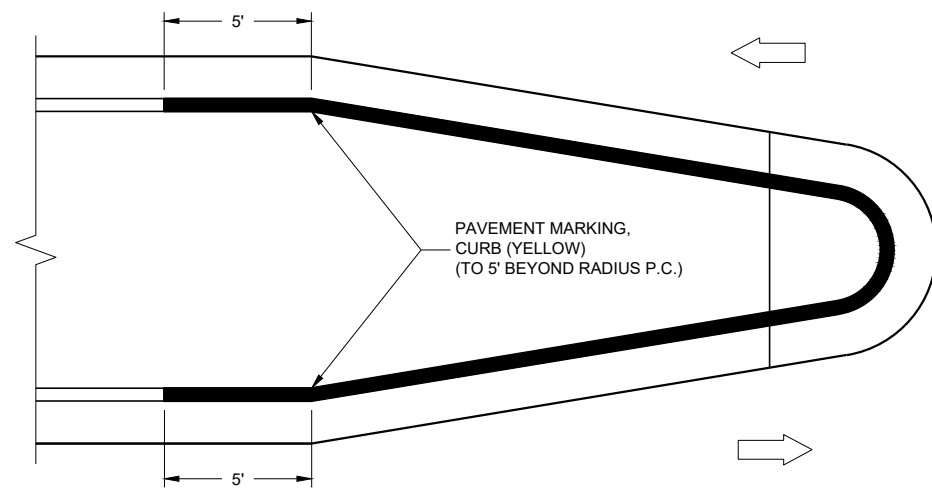
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 DATE /S/ Jeannie Silver
STATE SIGNING AND MARKING ENGINEER

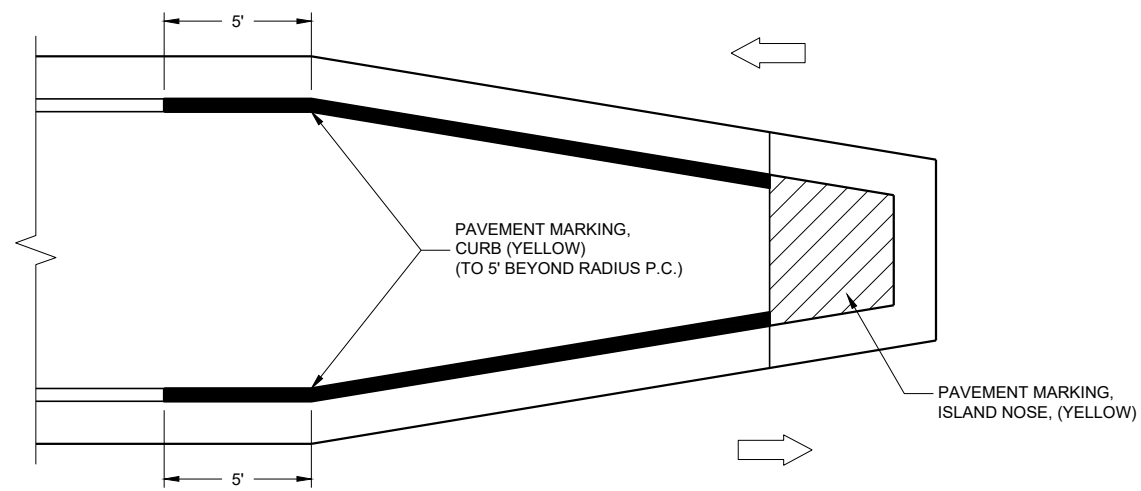
FHWA



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE







MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

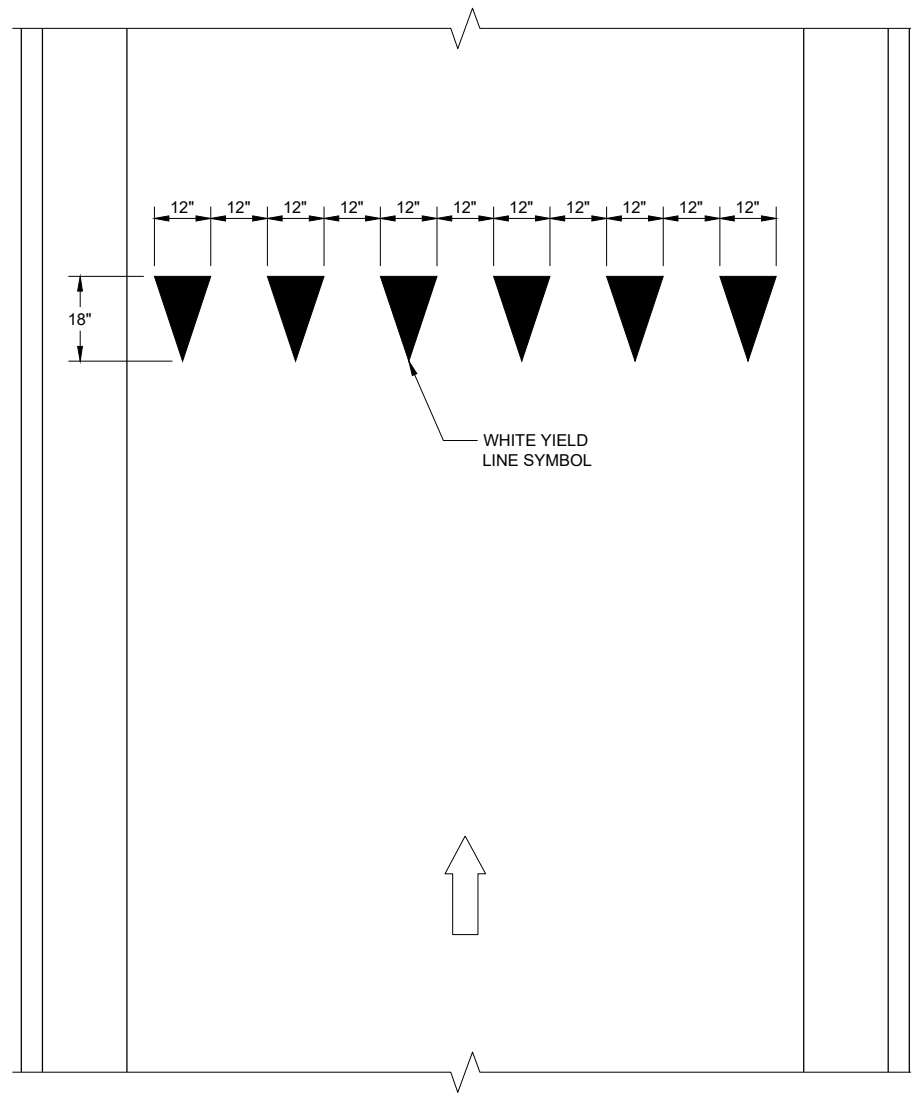
- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL



**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

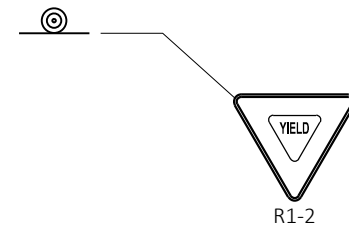
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATE SIGNING AND MARKING
ENGINEER



LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAVEL



YIELD LINE

6

6

SDD 15C20 - 02

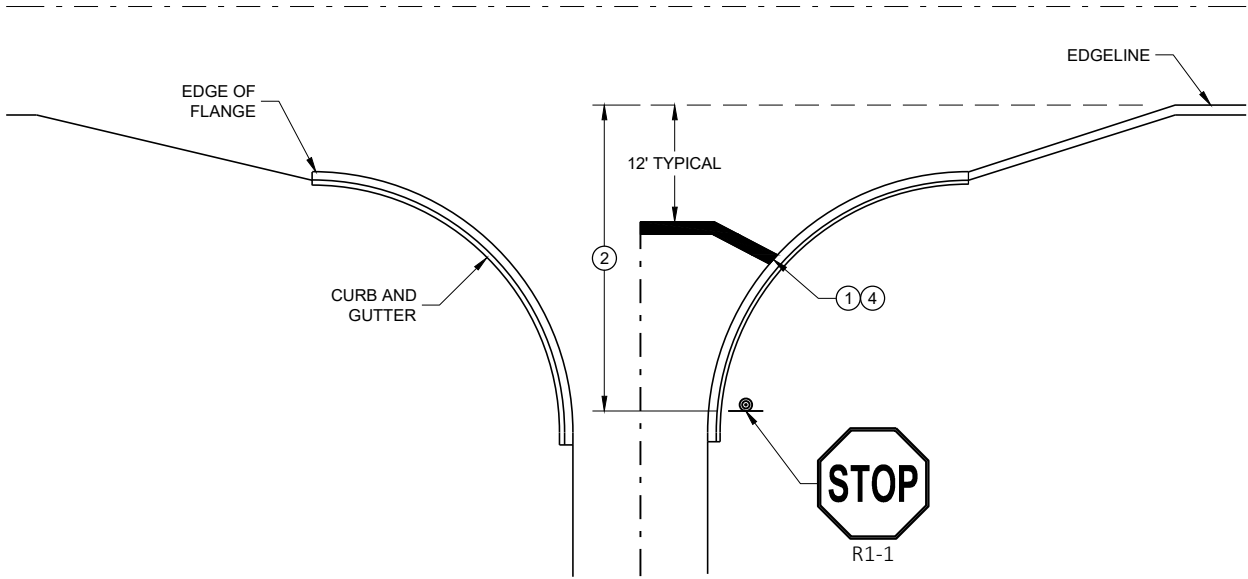
SDD 15C20 - 02

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

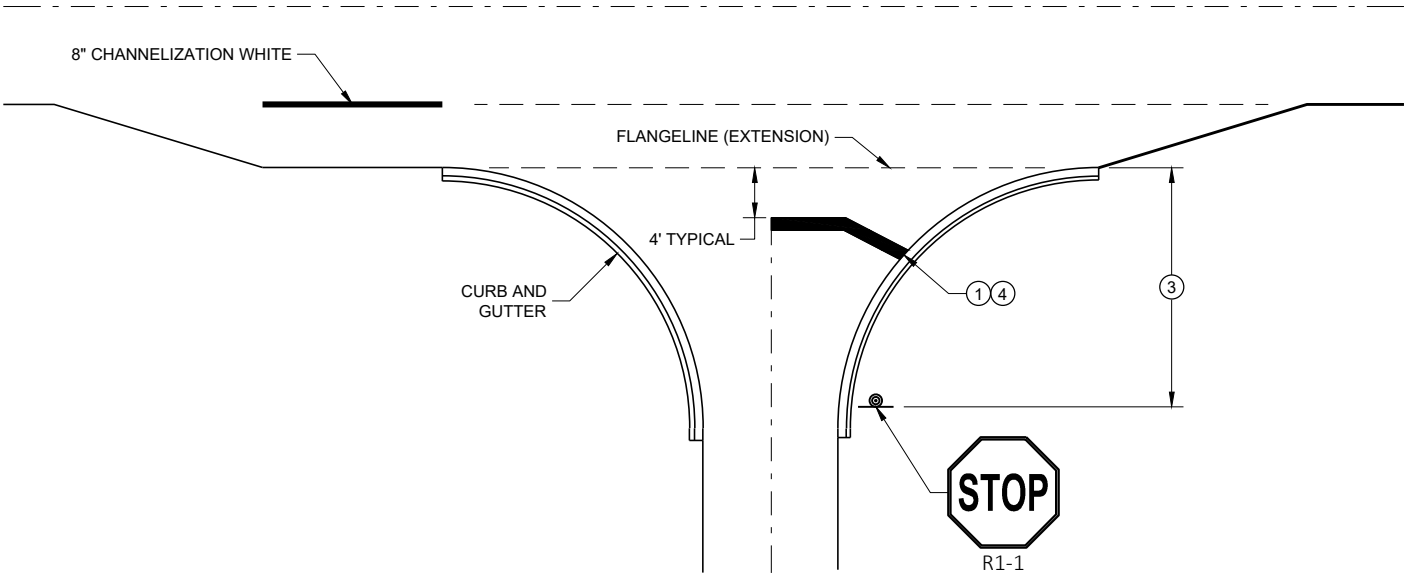
GENERAL NOTES

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

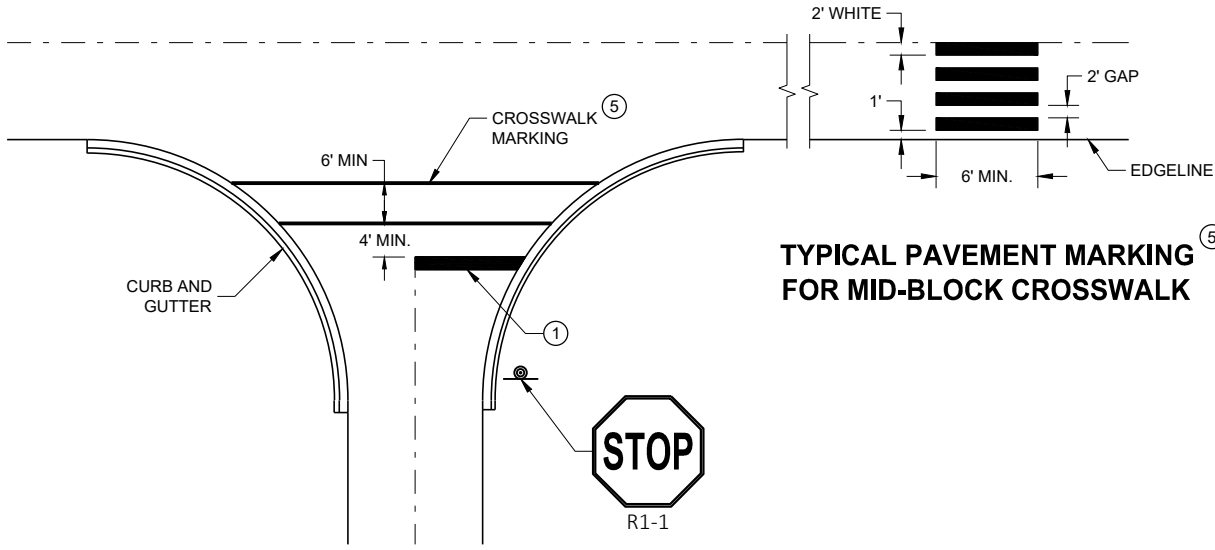
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE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



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

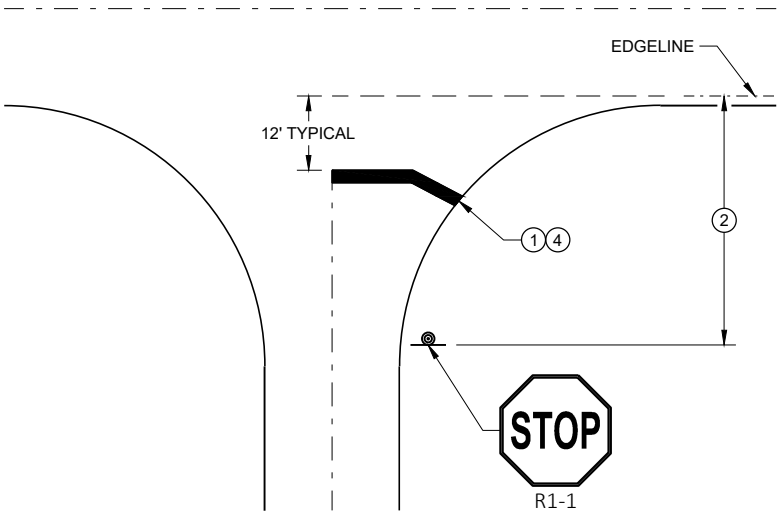


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

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

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

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

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

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

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

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











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

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

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

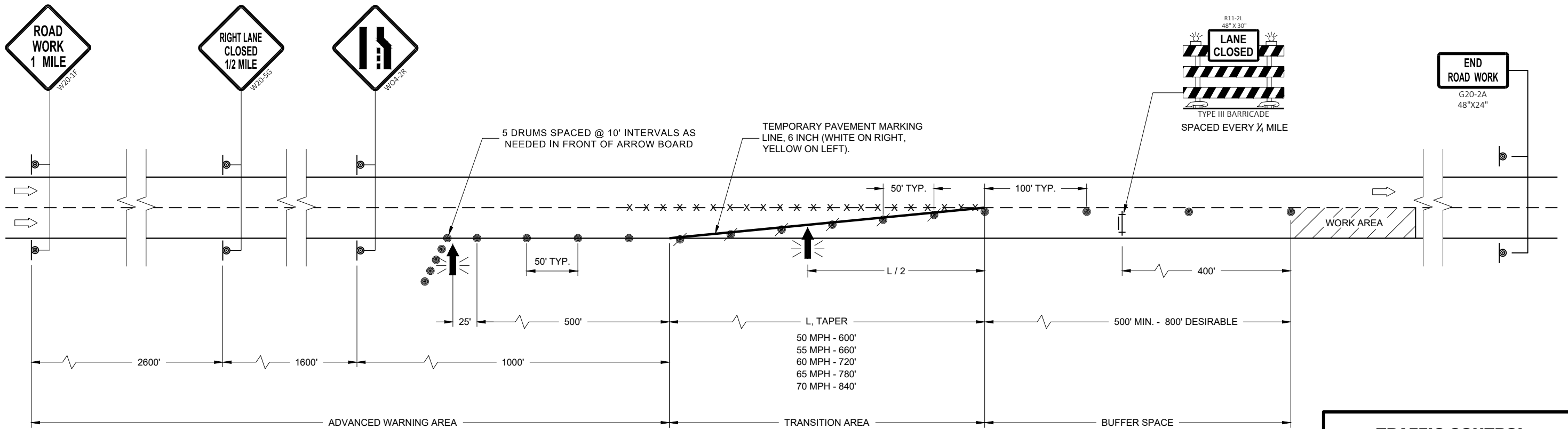
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

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

6

SDD 15D12 - 11a












6

SDD 15D12 - 11a

TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

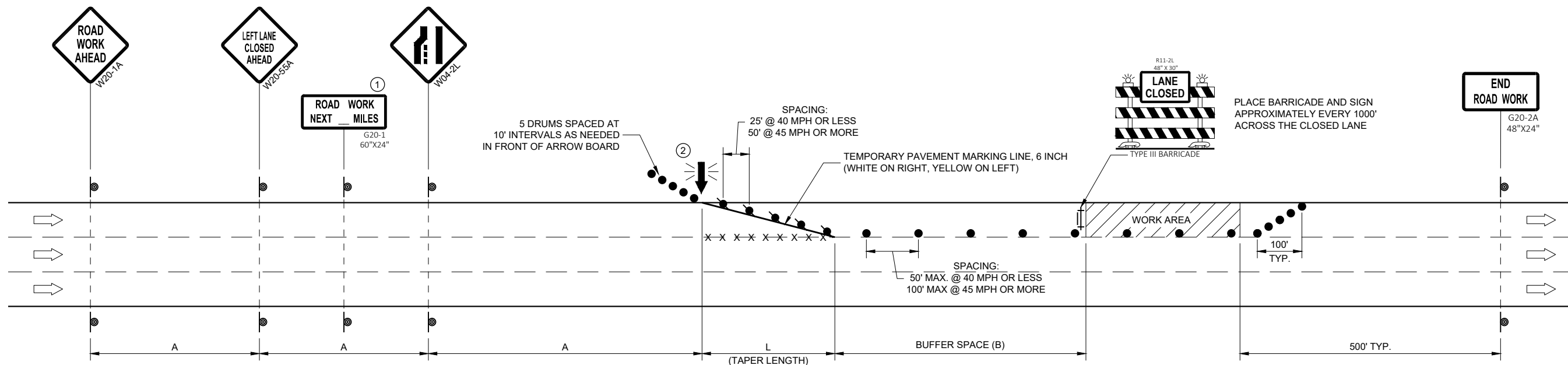
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

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

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

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



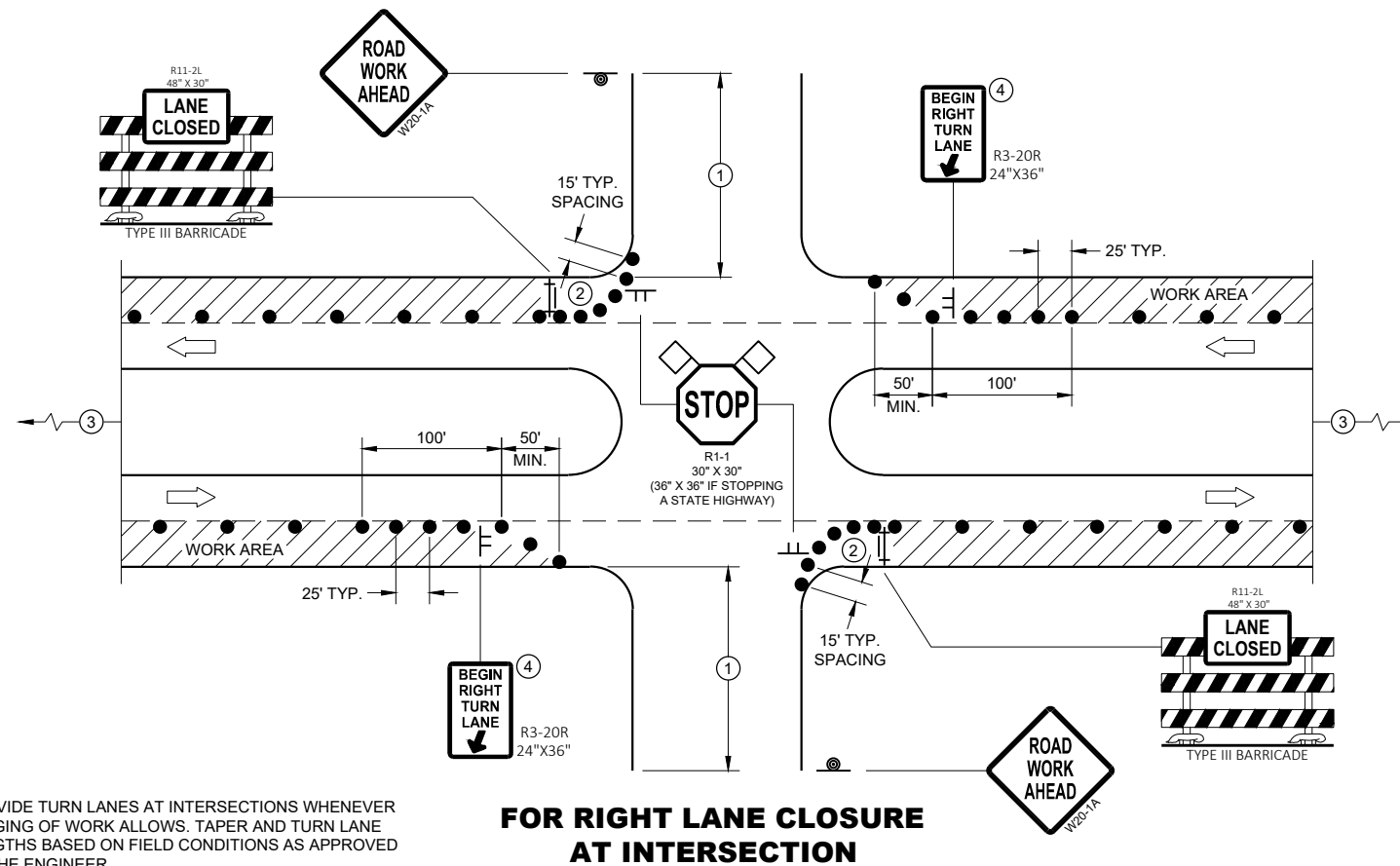
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



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

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

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

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

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

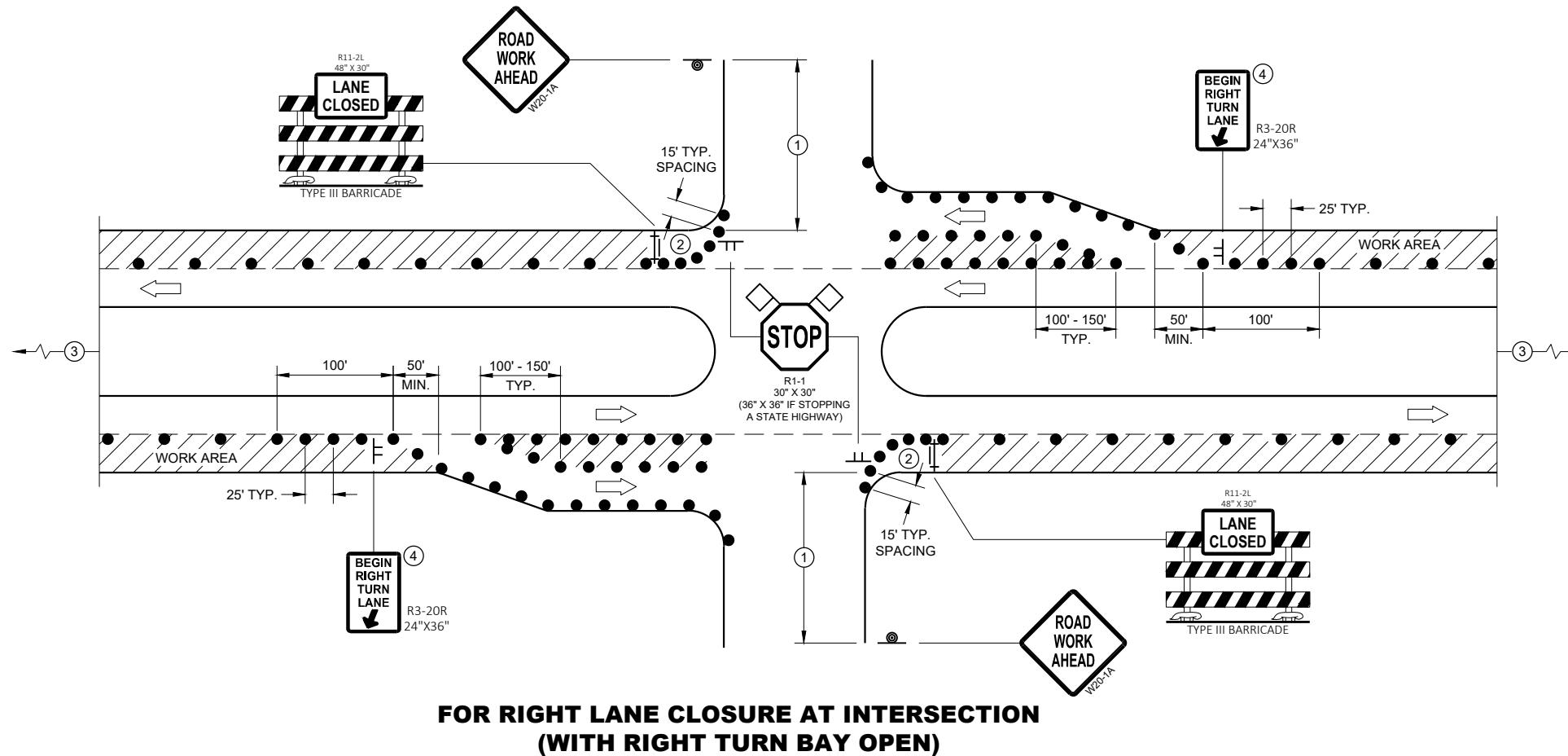
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SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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



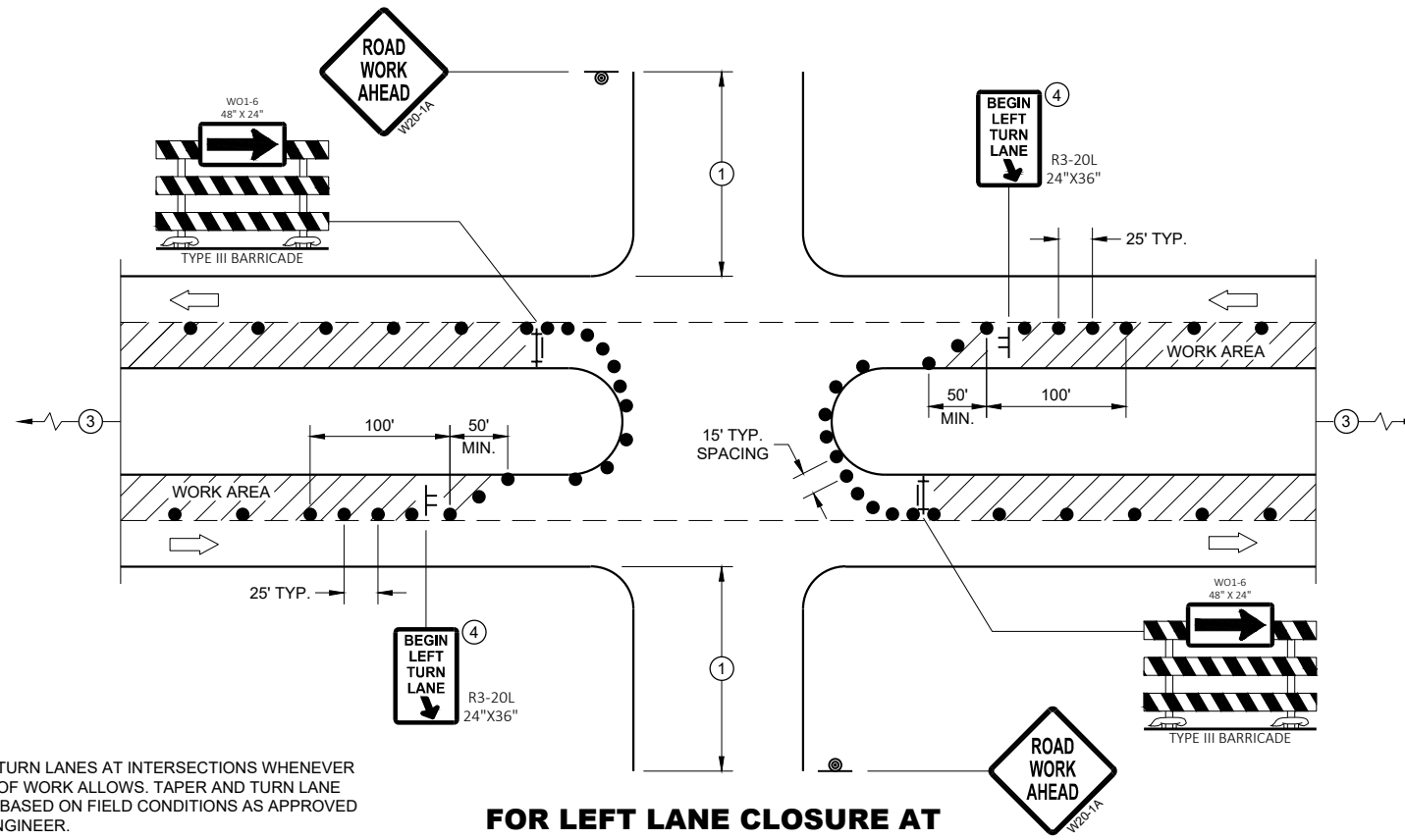
FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

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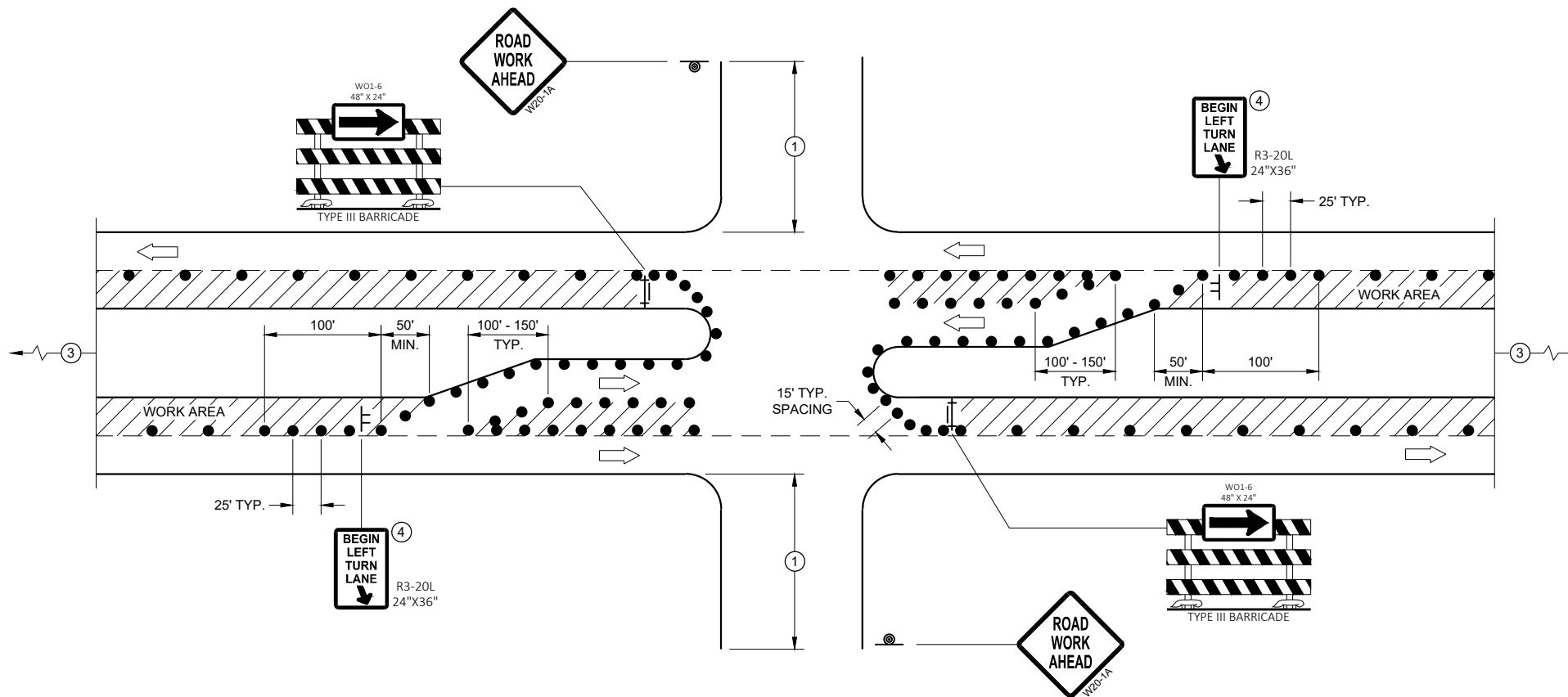
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350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT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



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

LEGEND

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












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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

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

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45 MPH, USE SDD 15D14.

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

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

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

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

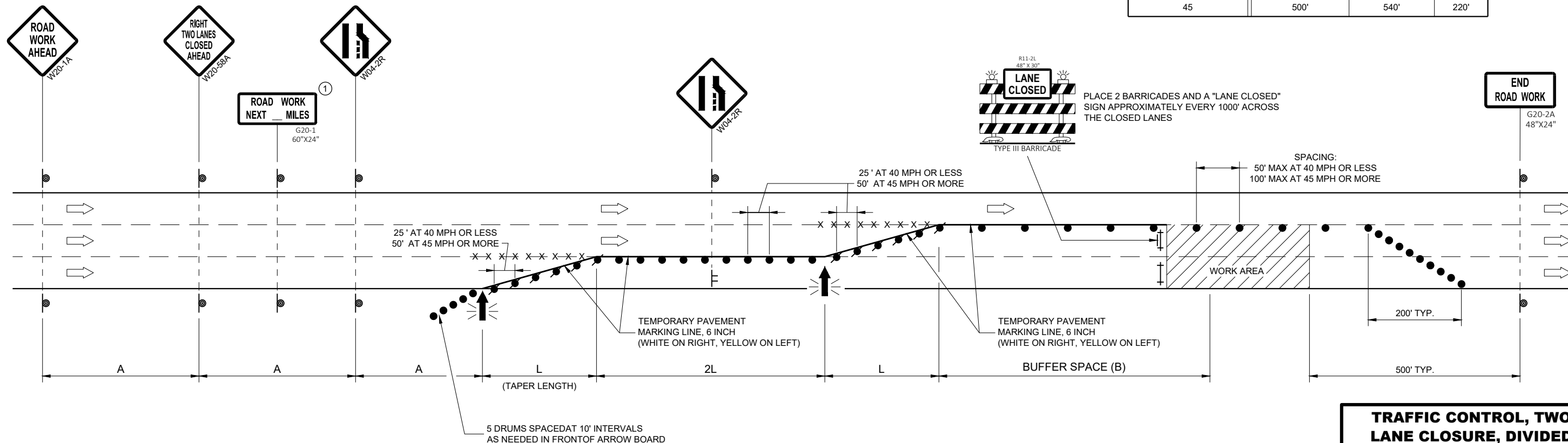
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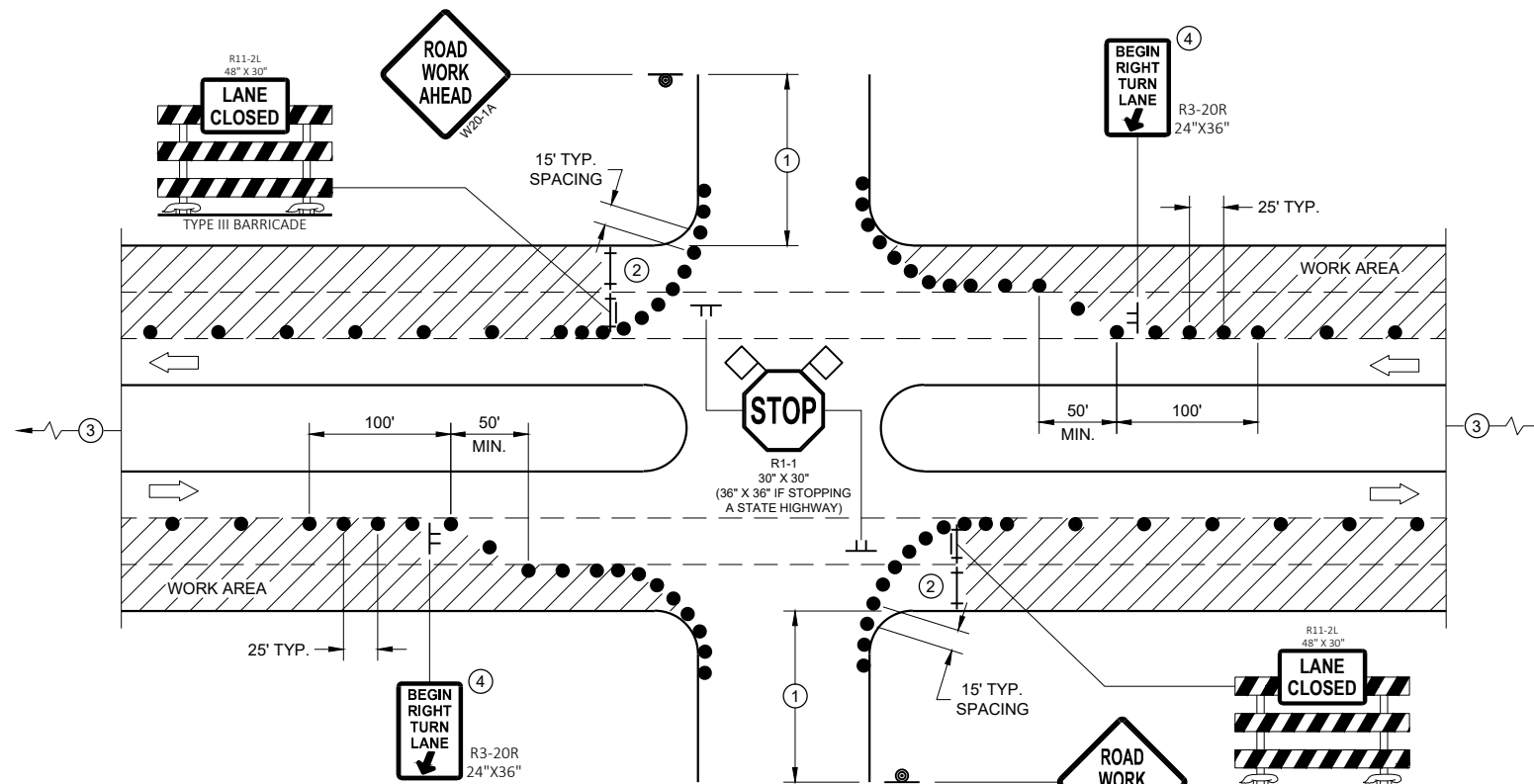


TRAFFIC CONTROL, TWO LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2023 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



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

FOR RIGHT TWO LANES CLOSED AT INTERSECTION

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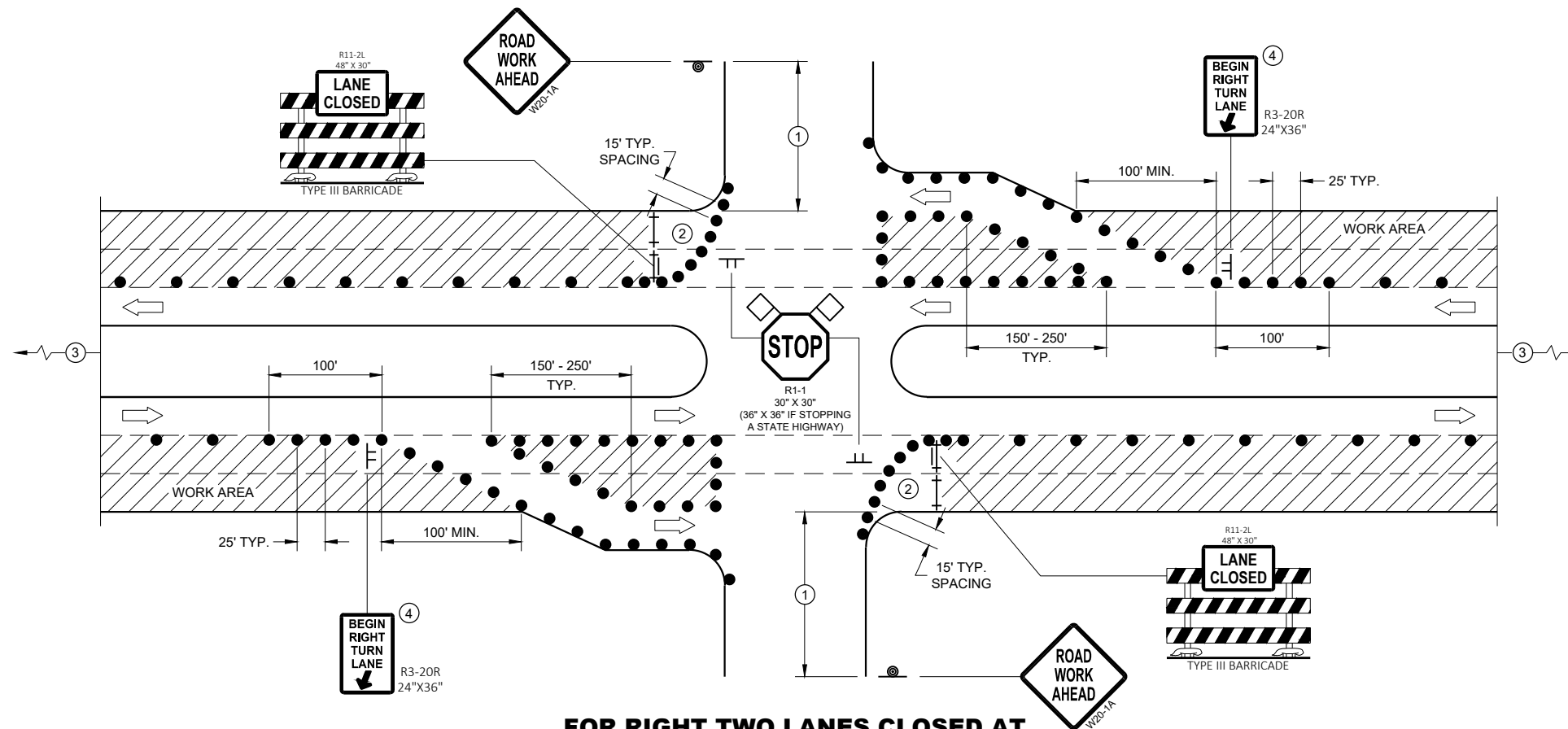
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- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
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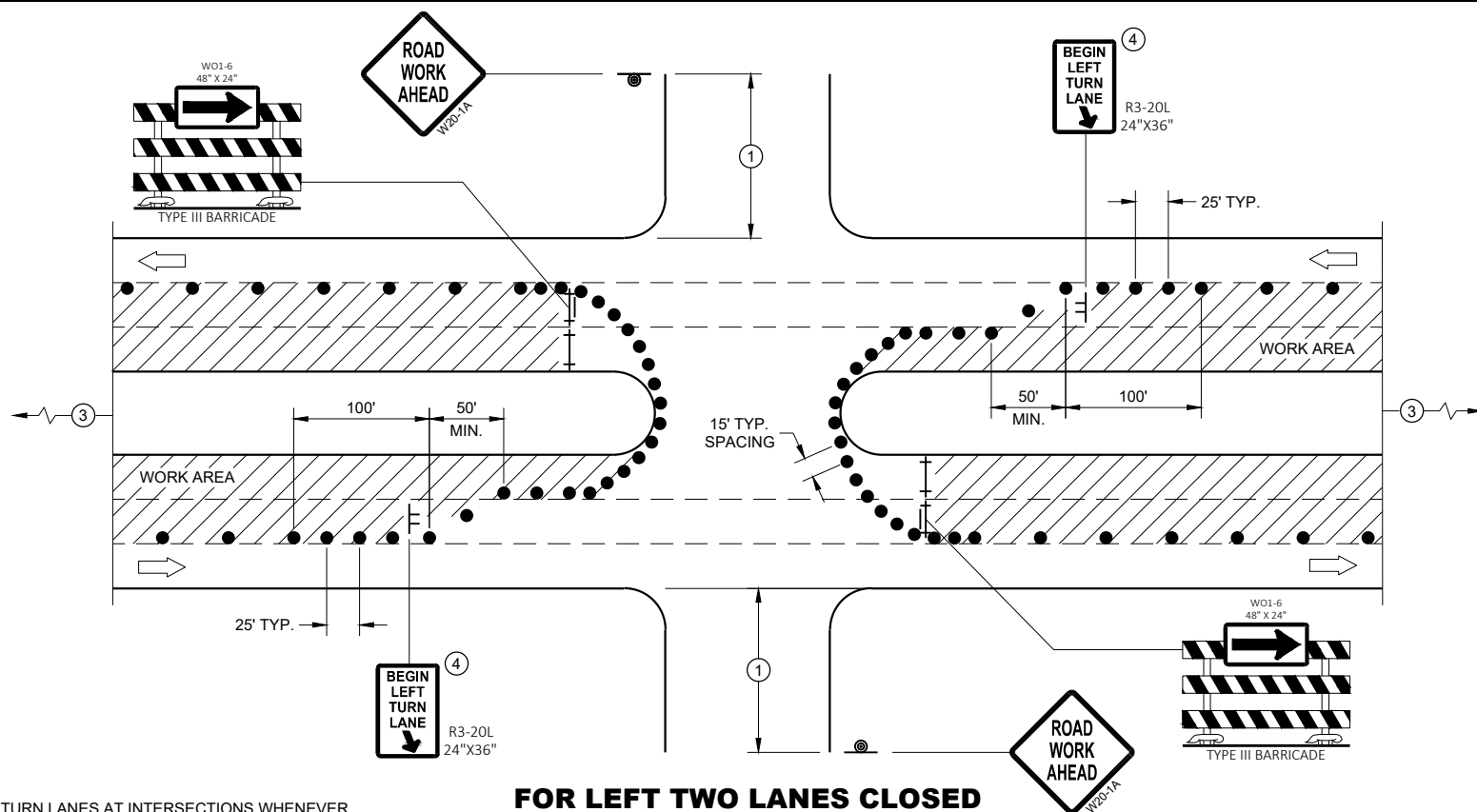
FOR RIGHT TWO LANES CLOSED AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK

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

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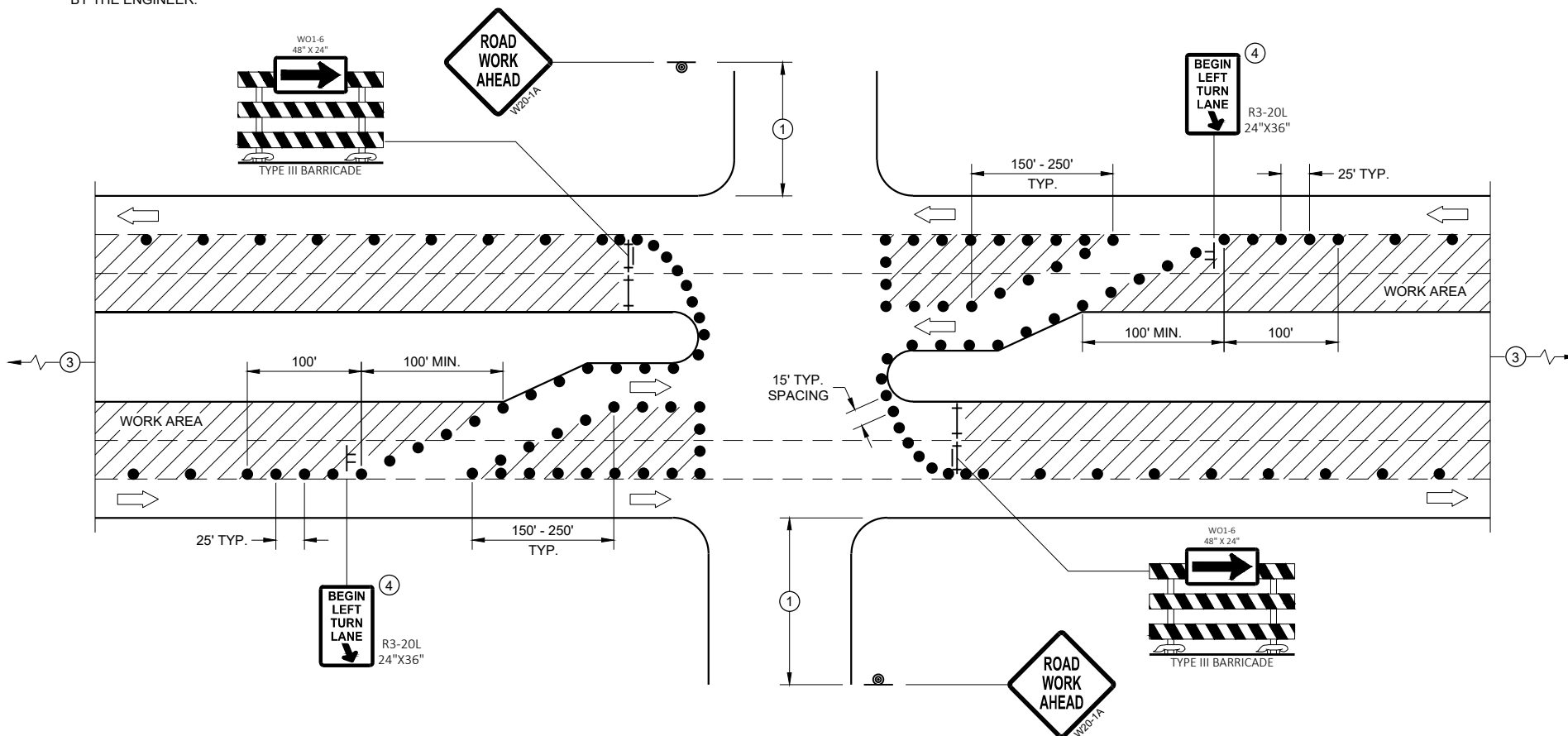
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- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
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FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK (WITH LEFT TURN BAY OPEN)

LEGEND

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

6

6

SDD 15D23 - 07b

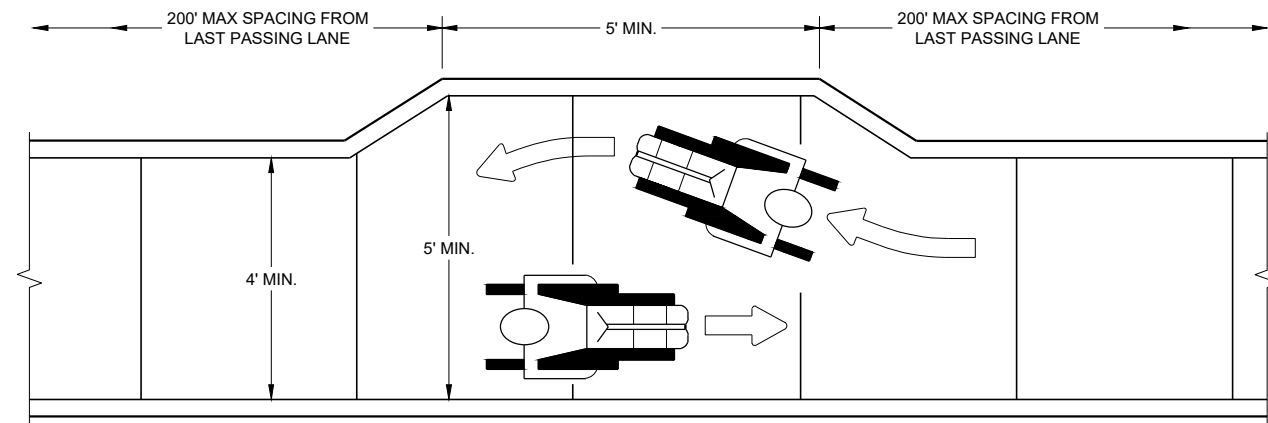
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TRAFFIC CONTROL, INTERSECTION WITHIN TWO LEFT LANE CLOSURE

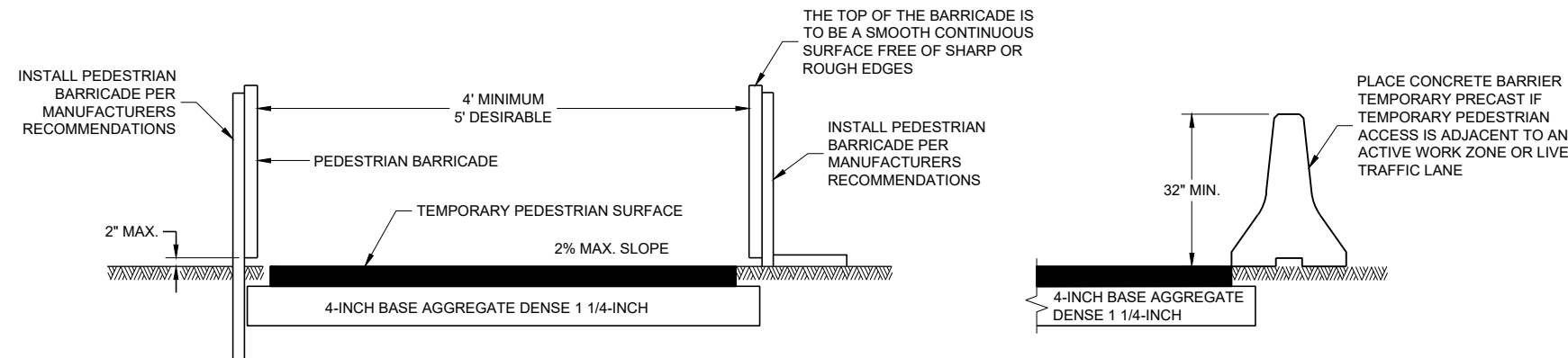
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



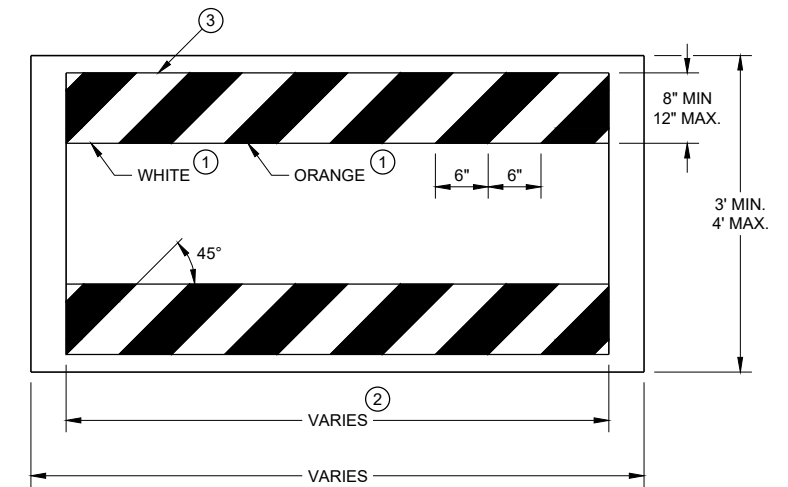
NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

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

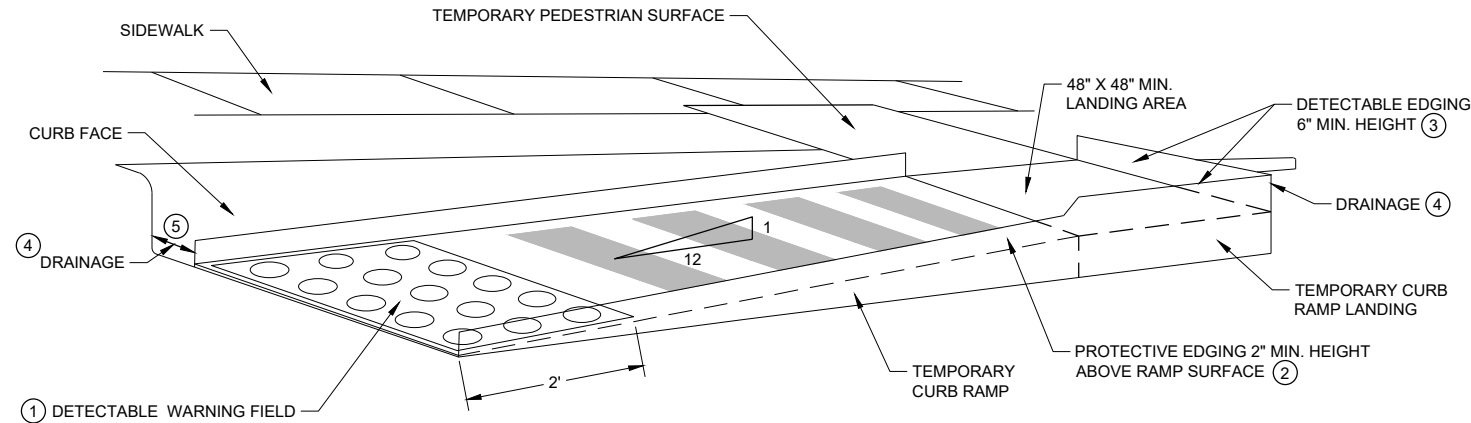


TEMPORARY PEDESTRIAN BARRICADE*

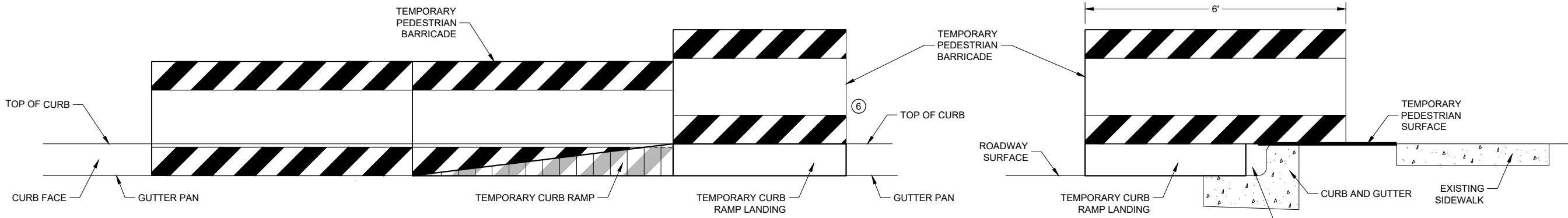
GENERAL NOTES

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

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



PERSPECTIVE VIEW

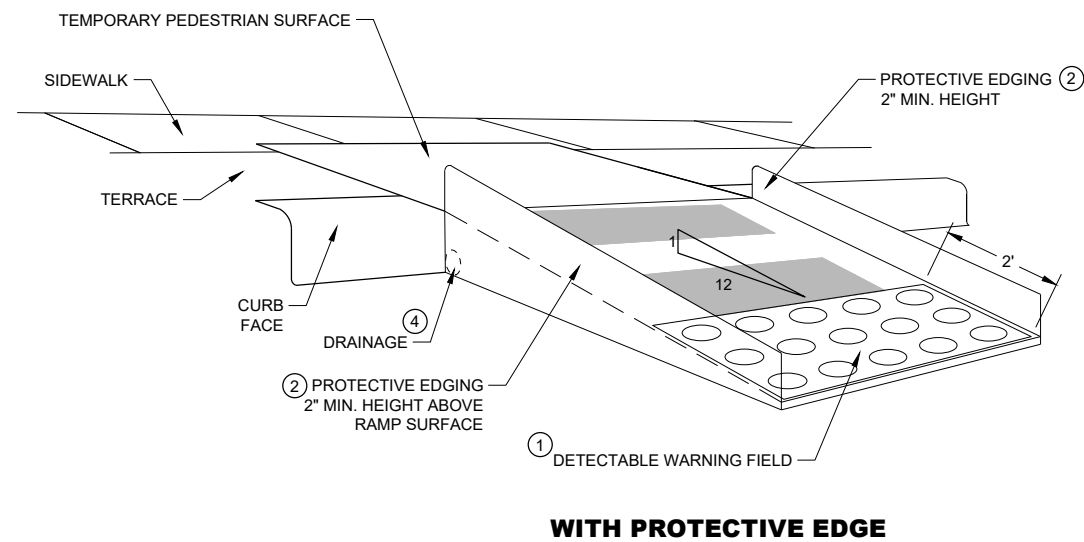
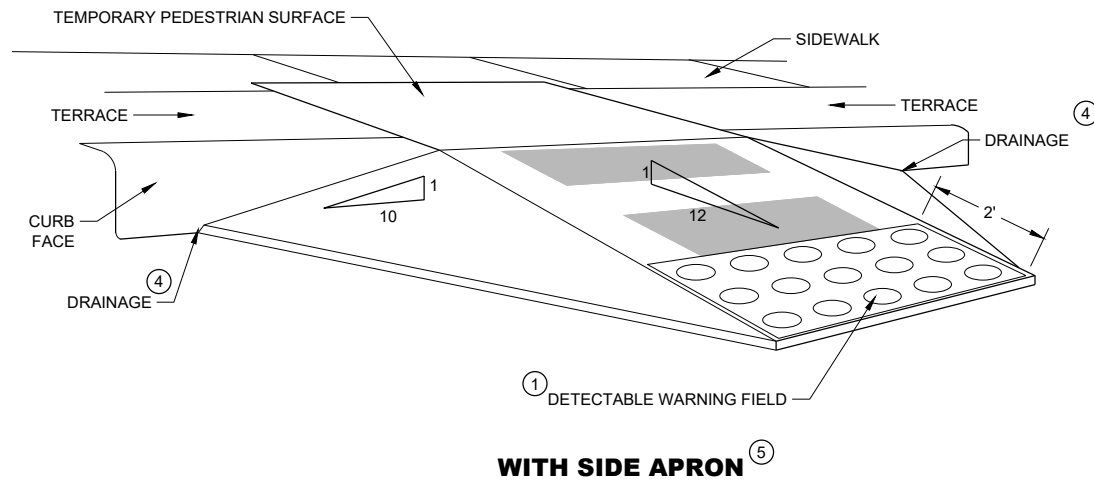


FRONT VIEW

SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

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



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

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

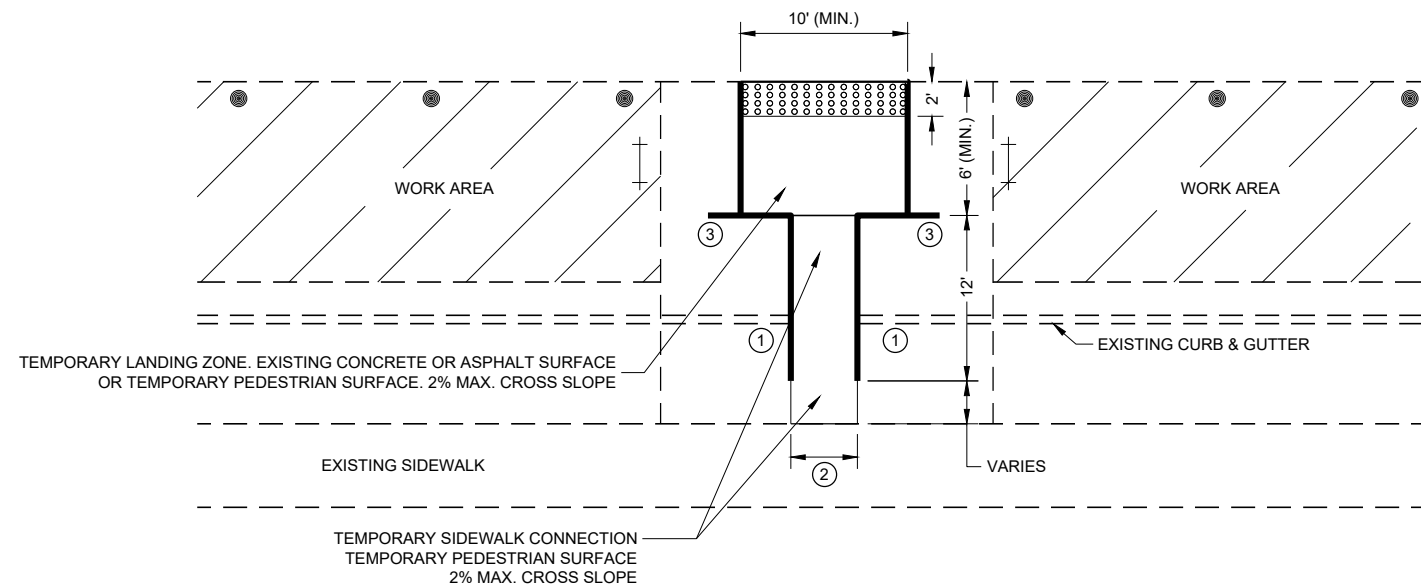
CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

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

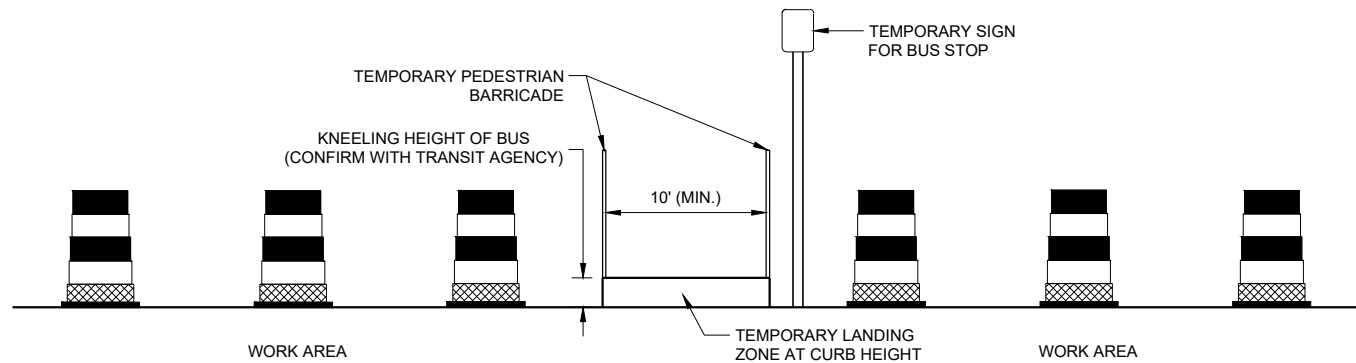
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CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

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



PLAN VIEW



PROFILE VIEW
TEMPORARY BUS STOP PAD

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
- PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

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







LEGEND

- TRAFFIC CONTROL DRUM
- ⊥ TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- ◻ TEMPORARY DETECTABLE WARNING FIELD
- ▨ WORK AREA

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

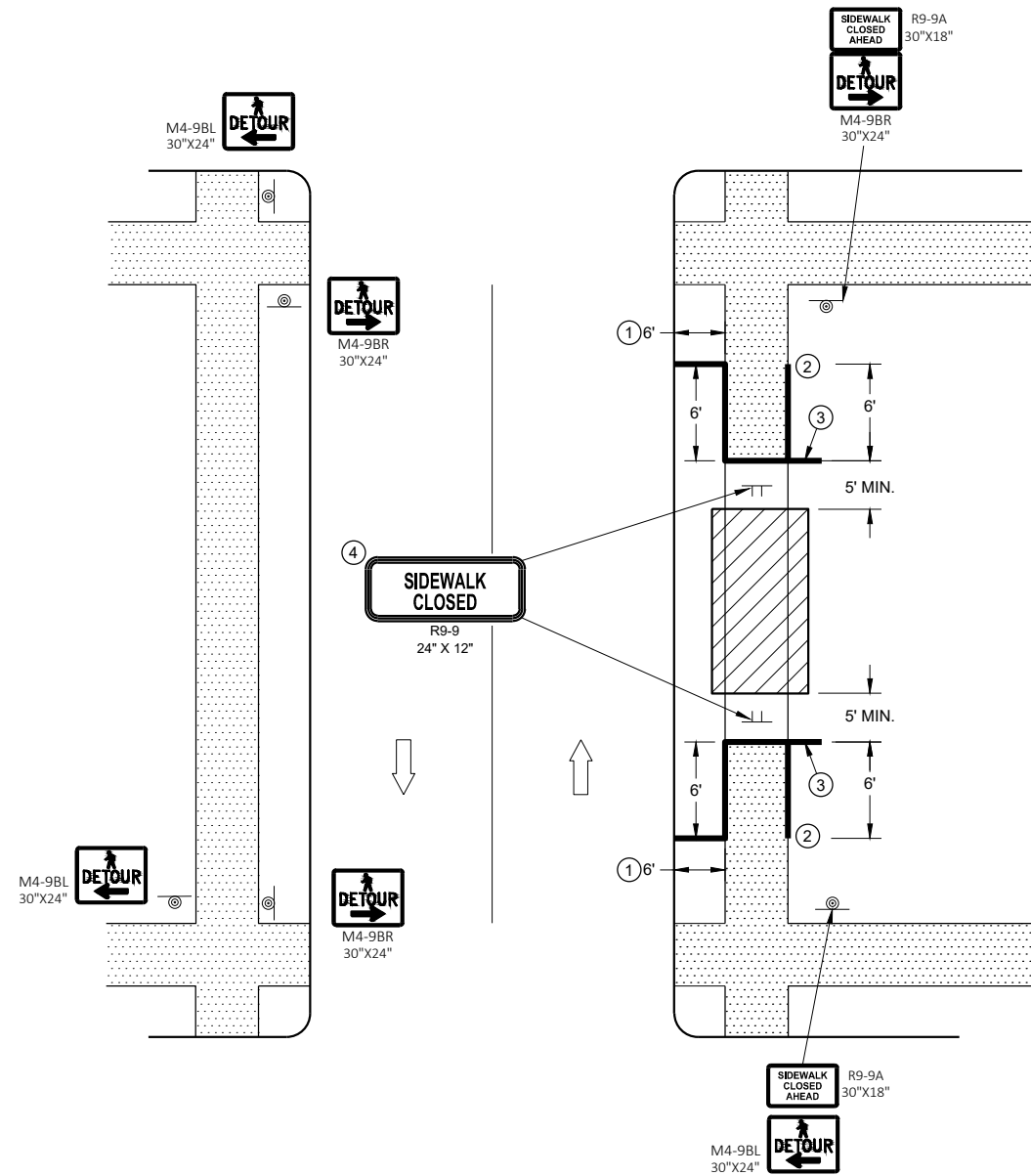
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

GENERAL NOTES

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



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION








6

6

SDD 15D30 - 09k

SDD 15D30 - 09k

LEGEND

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

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER $L/2$					
		W, LATERAL OFFSET (FT)					
		3	4	5	6	7	8
25	200	10	14	17	21	24	28
30	200	15	20	25	30	35	40
35	350	20	27	34	40	47	54
40	350	26	35	44	53	62	70
45	500	45	59	74	89	104	119
50	500	50	66	83	99	116	132
55	500	54	73	91	109	127	145

GENERAL NOTES

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

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

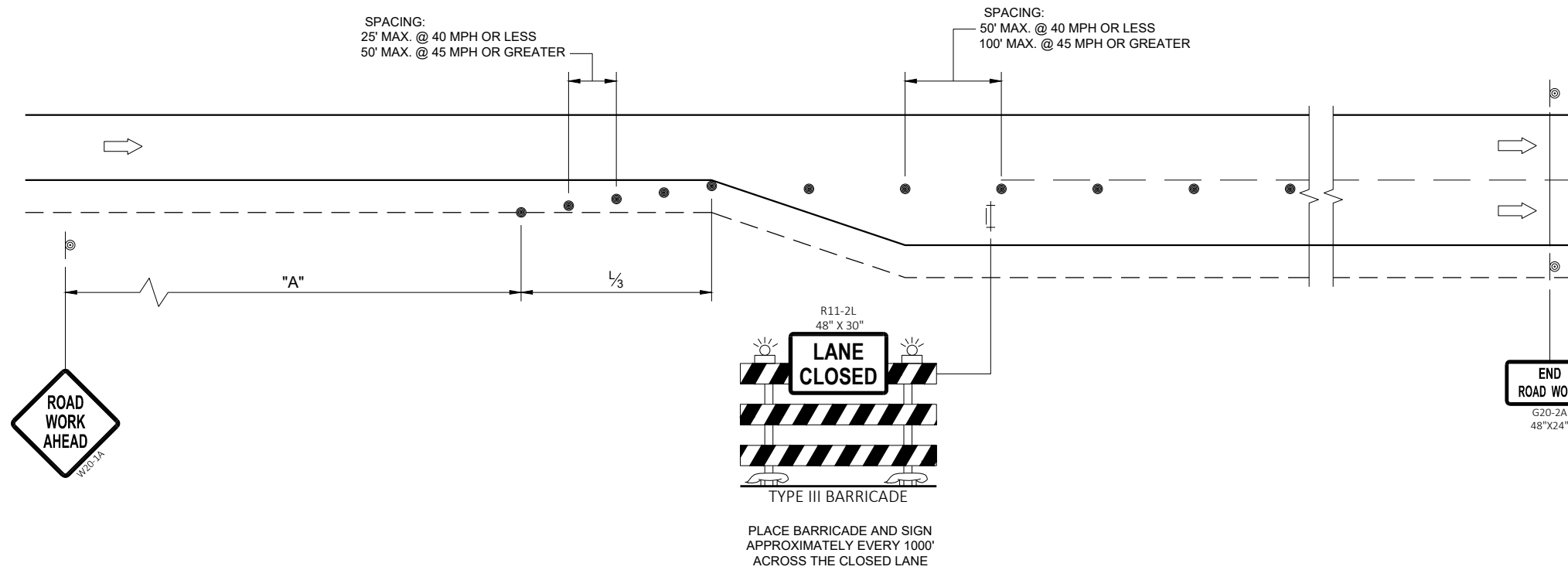
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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

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

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



6

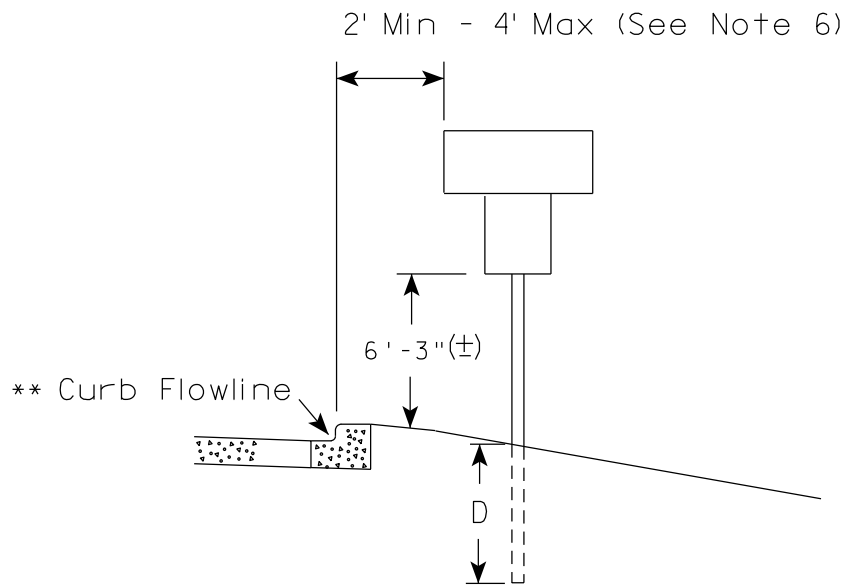
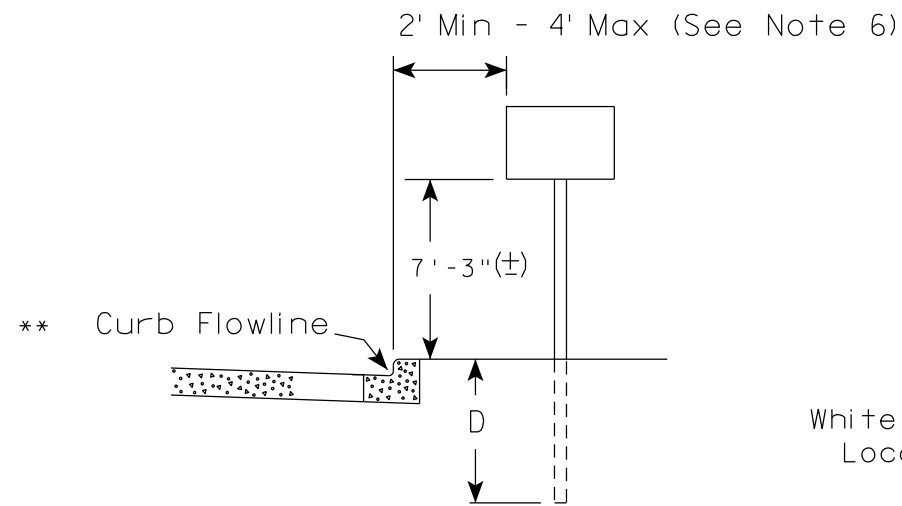
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SDD 15D50-03a

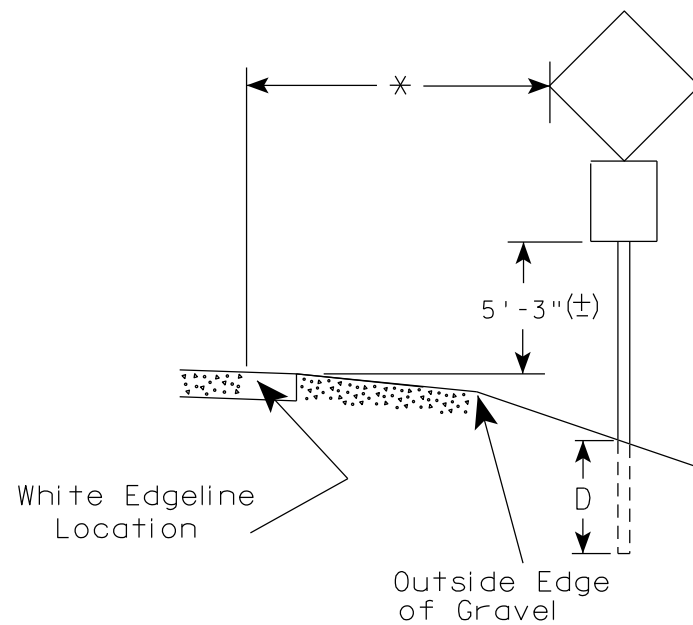
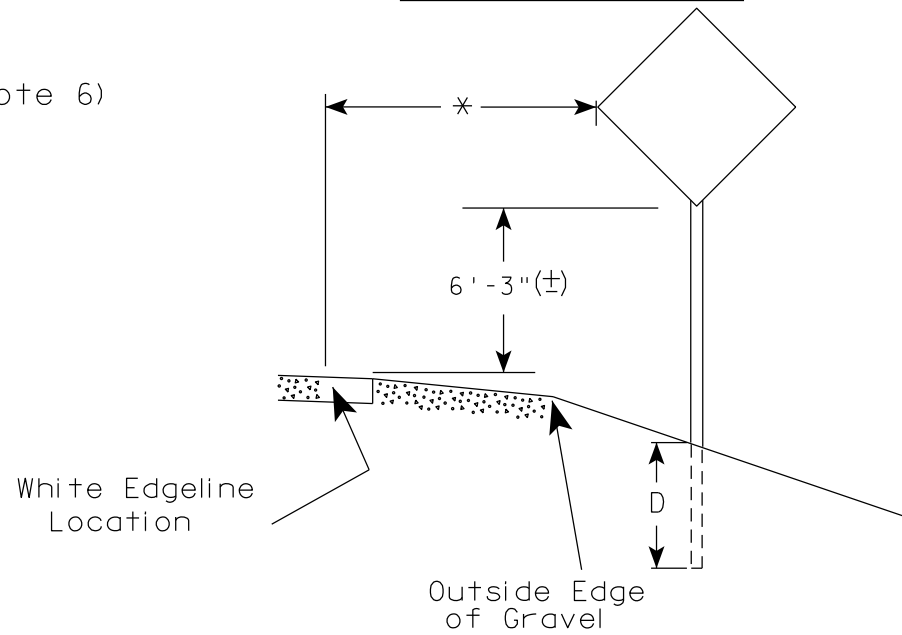
SDD 15D50-03a

TRAFFIC CONTROL ADDED LANE CLOSURE WITHOUT LANE SHIFT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE May 2023	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

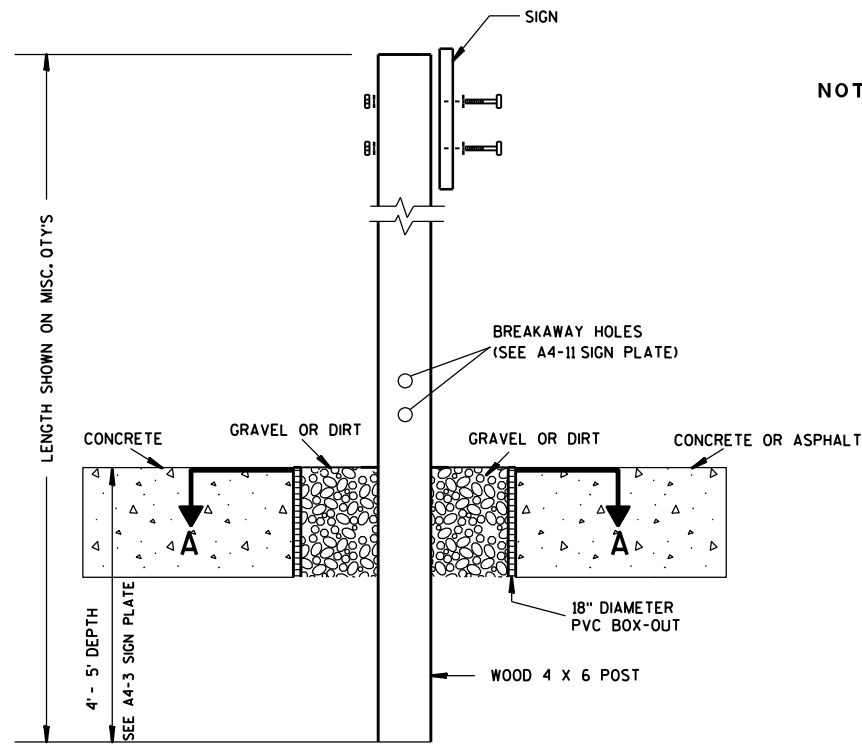
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

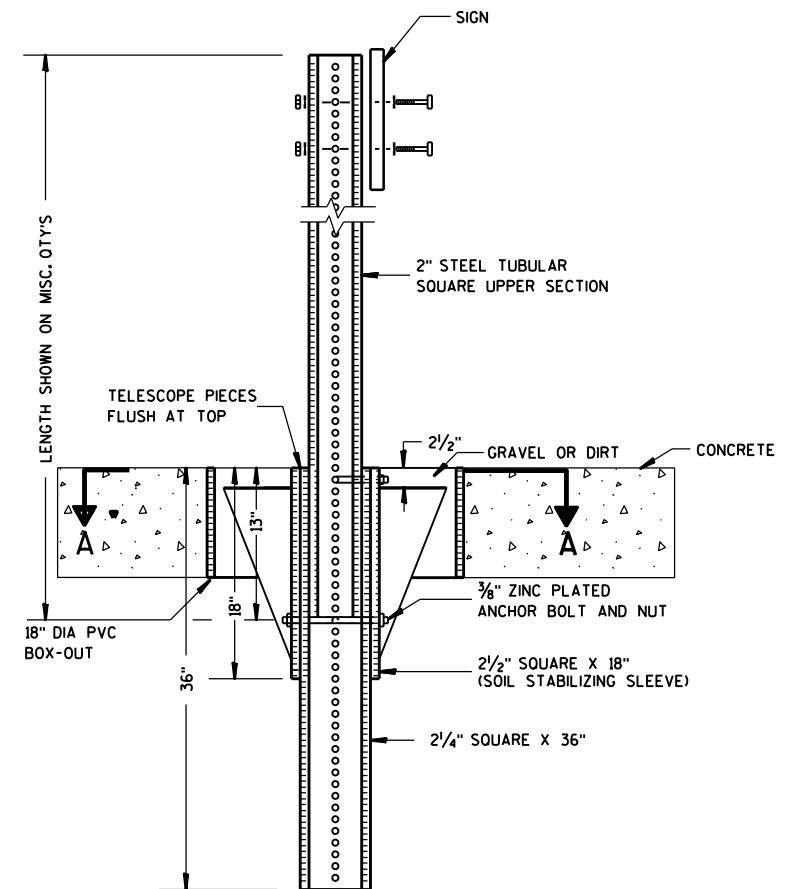
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

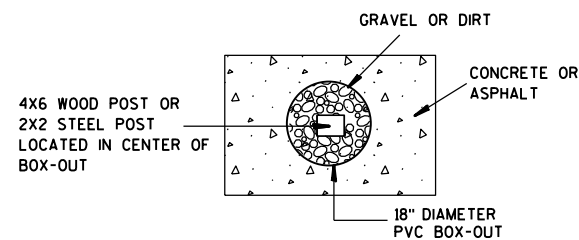
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

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



PLAN VIEW

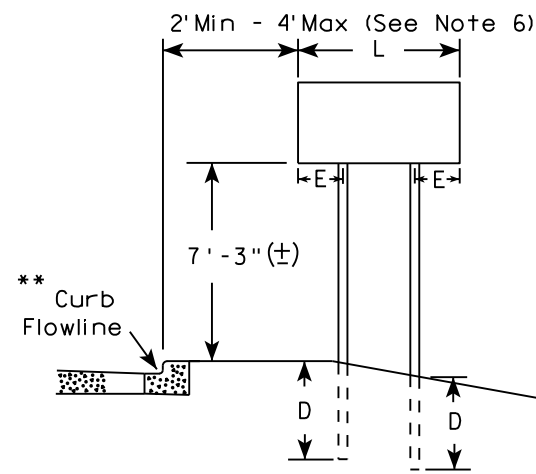
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

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

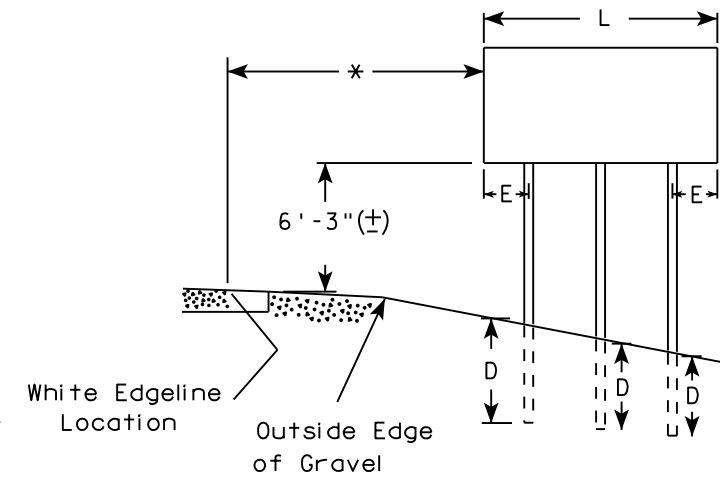
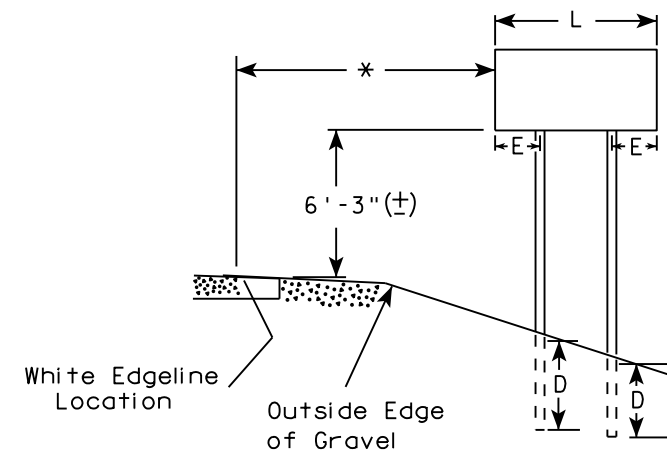
GENERAL NOTES

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

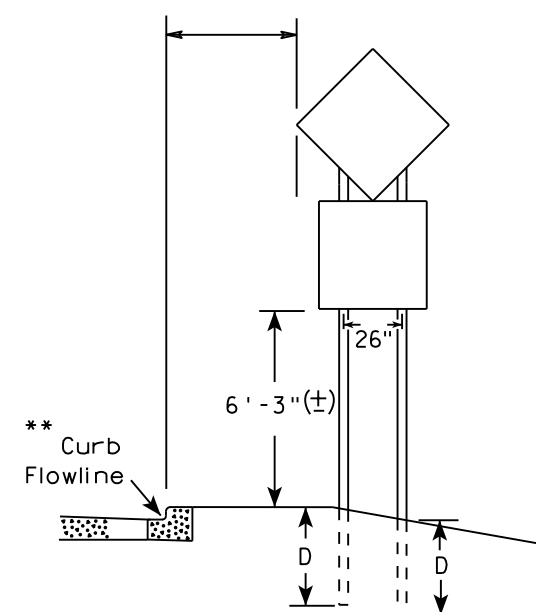
URBAN AREA



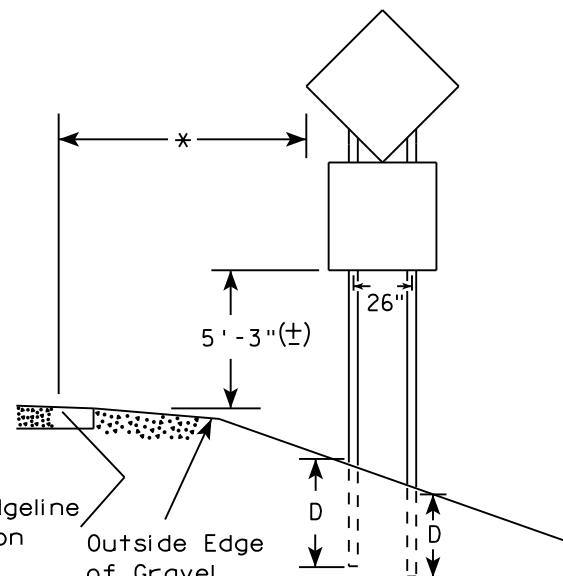
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

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

POST EMBEDMENT DEPTH

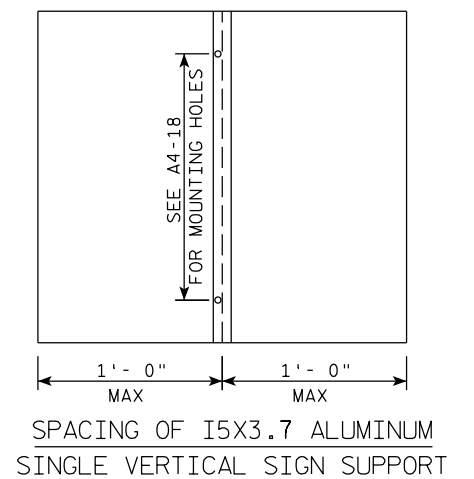
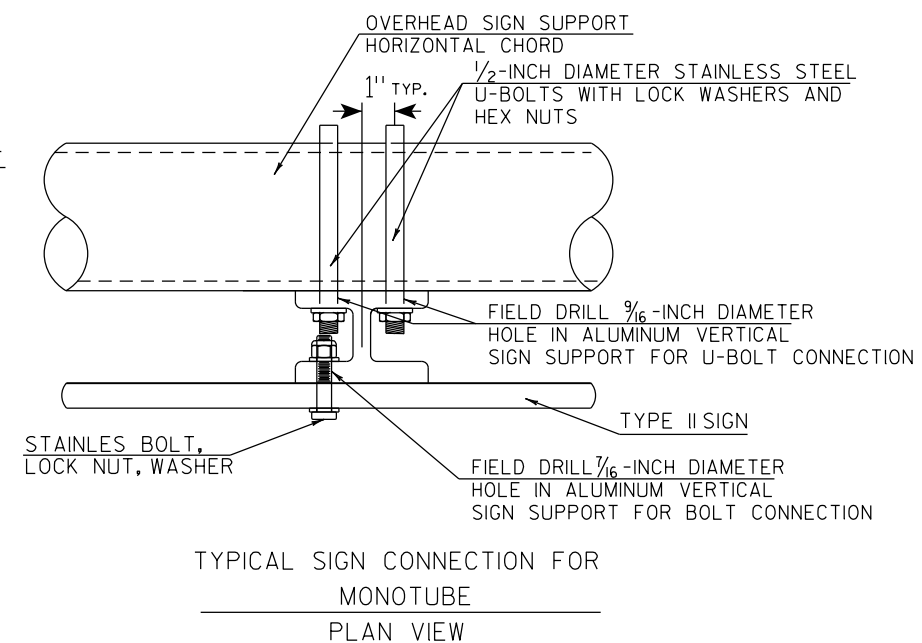
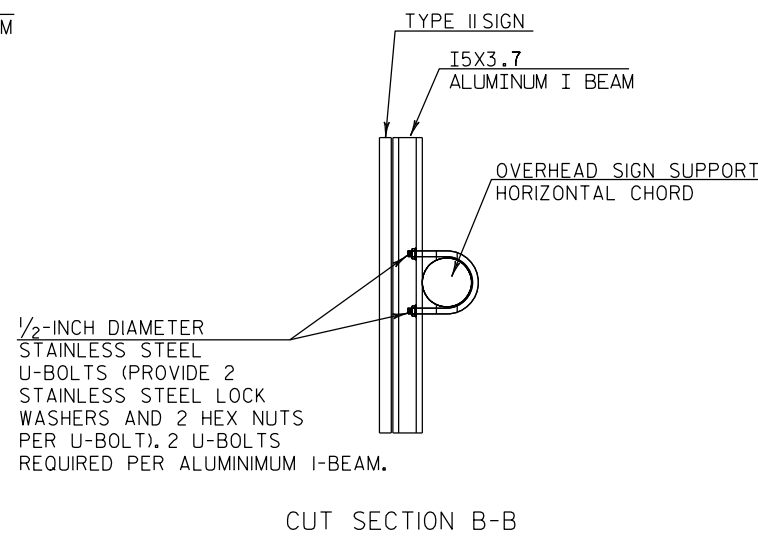
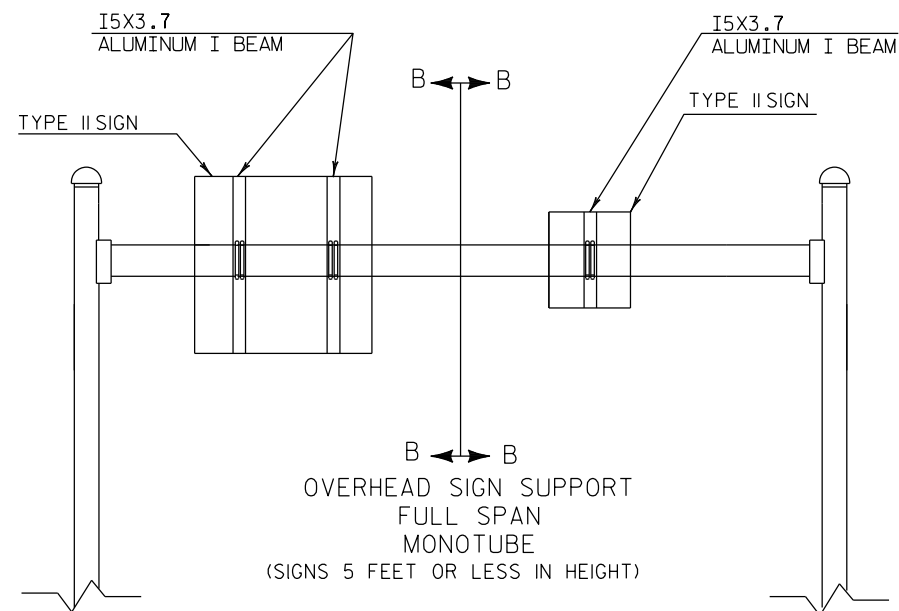
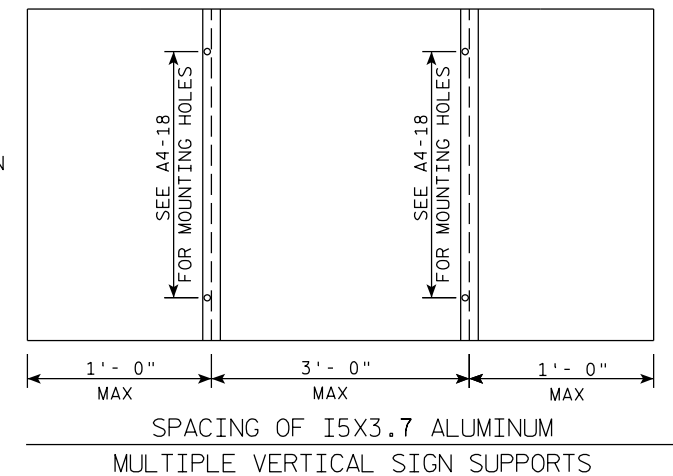
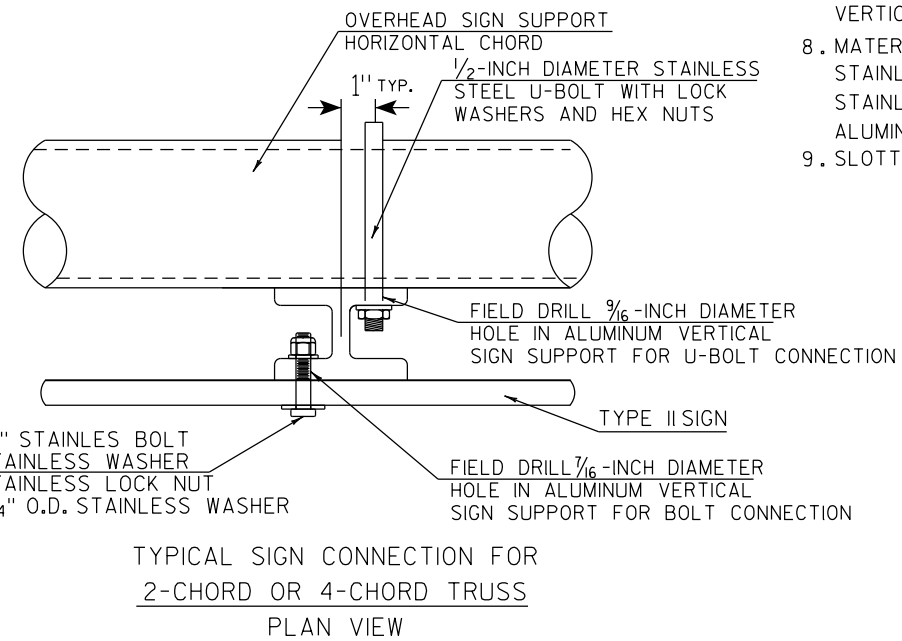
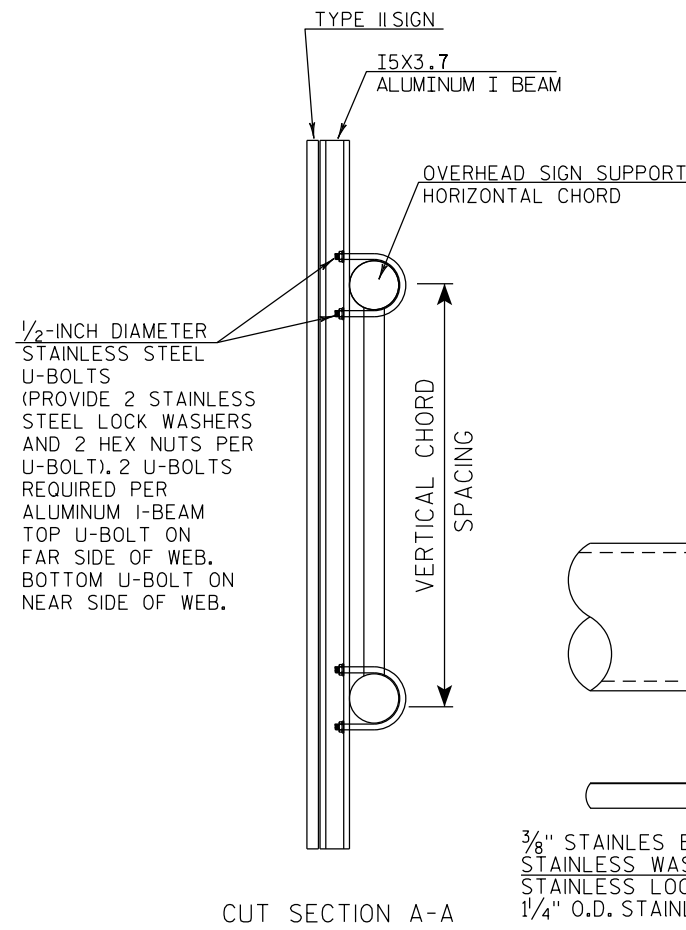
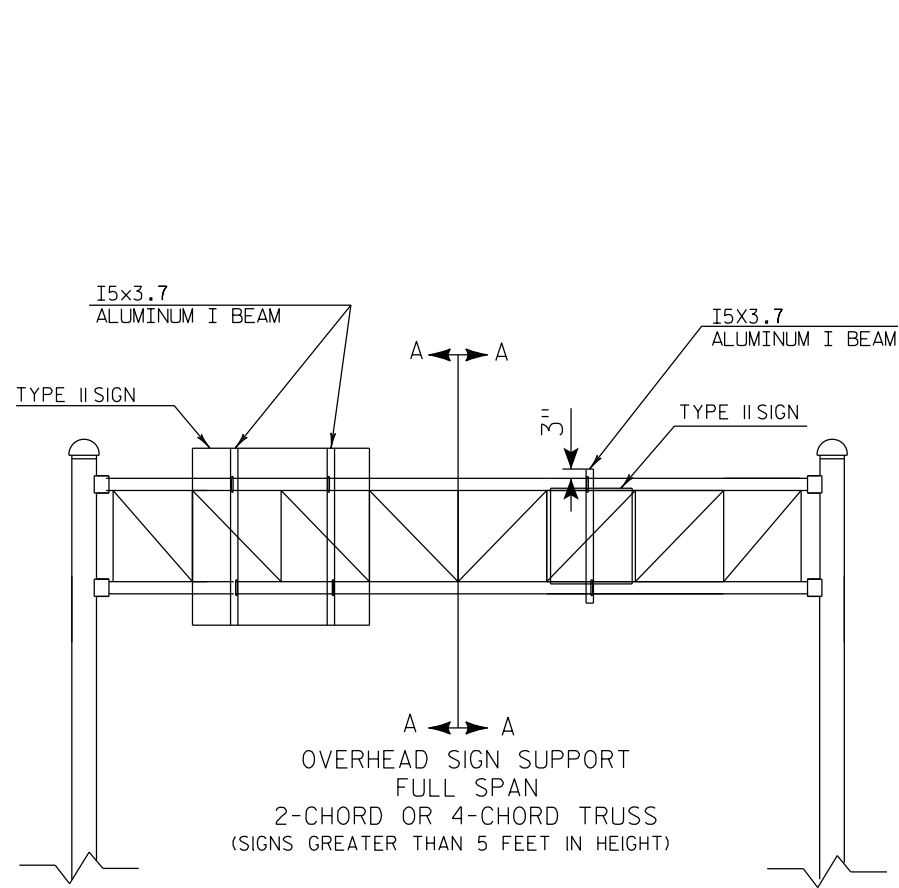
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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

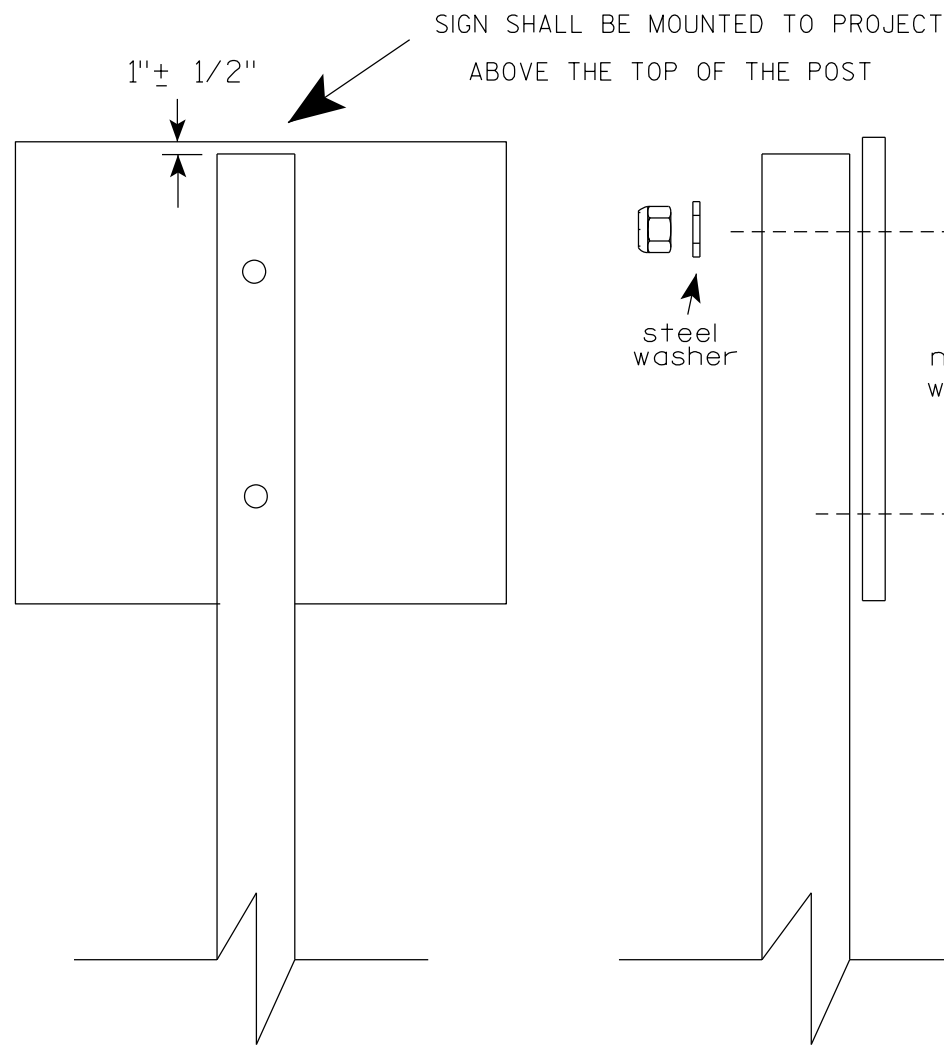
GENERAL NOTES

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



TYPE II SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 1/07/20 PLATE NO. A4-7B.1



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

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

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

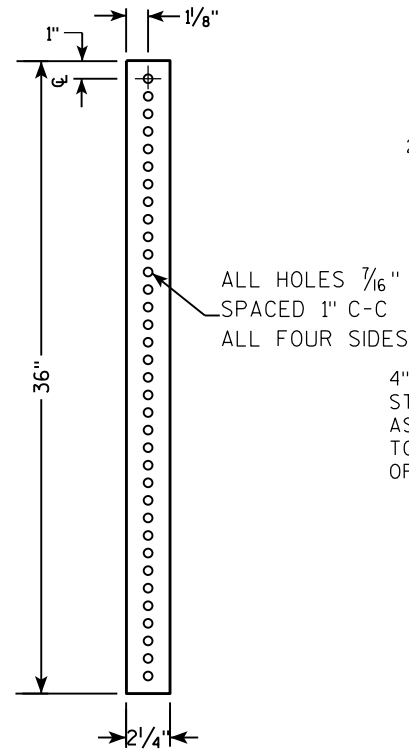
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

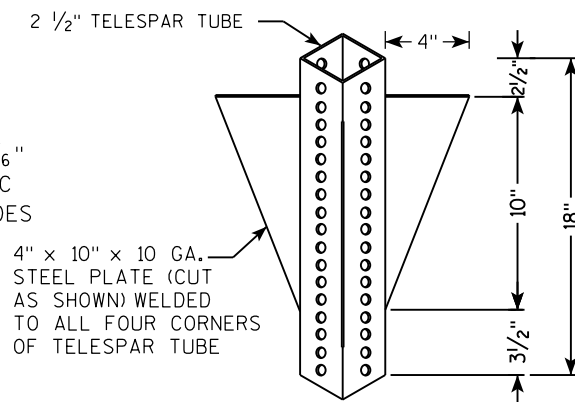
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

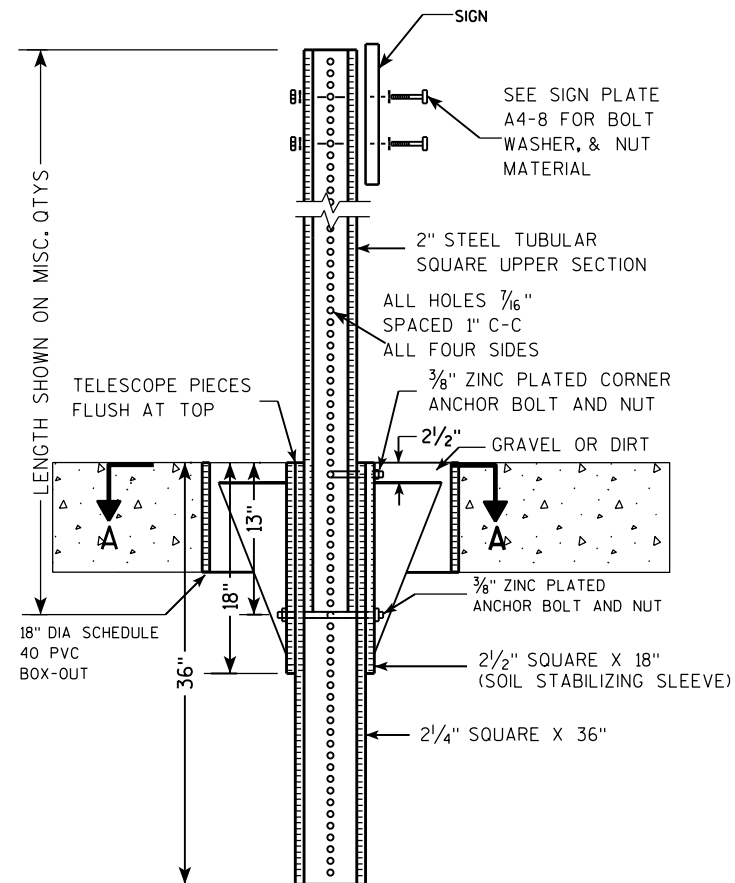
**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



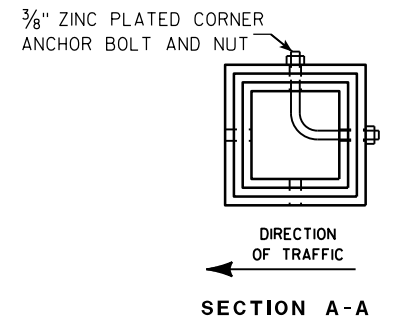
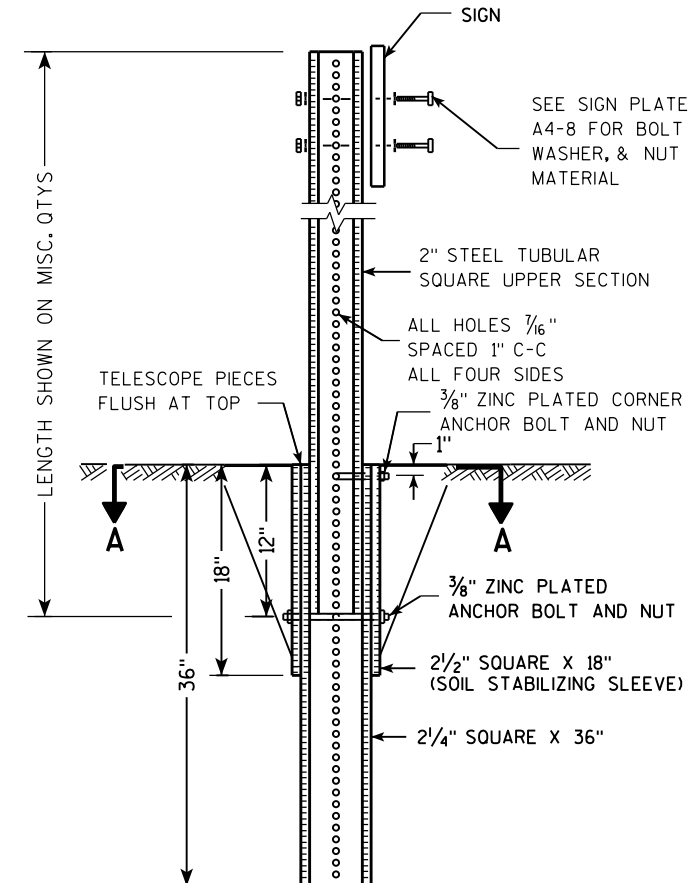
**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



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



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



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

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

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

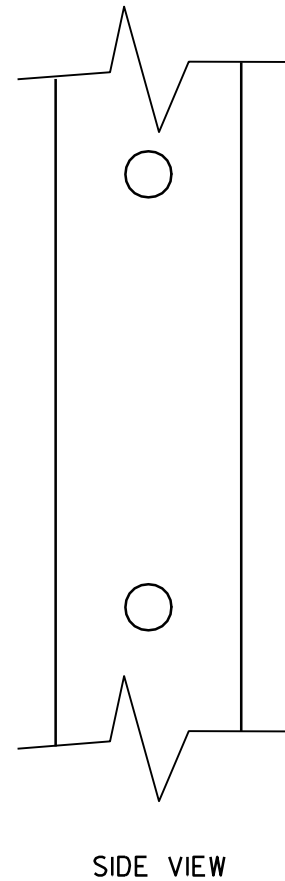
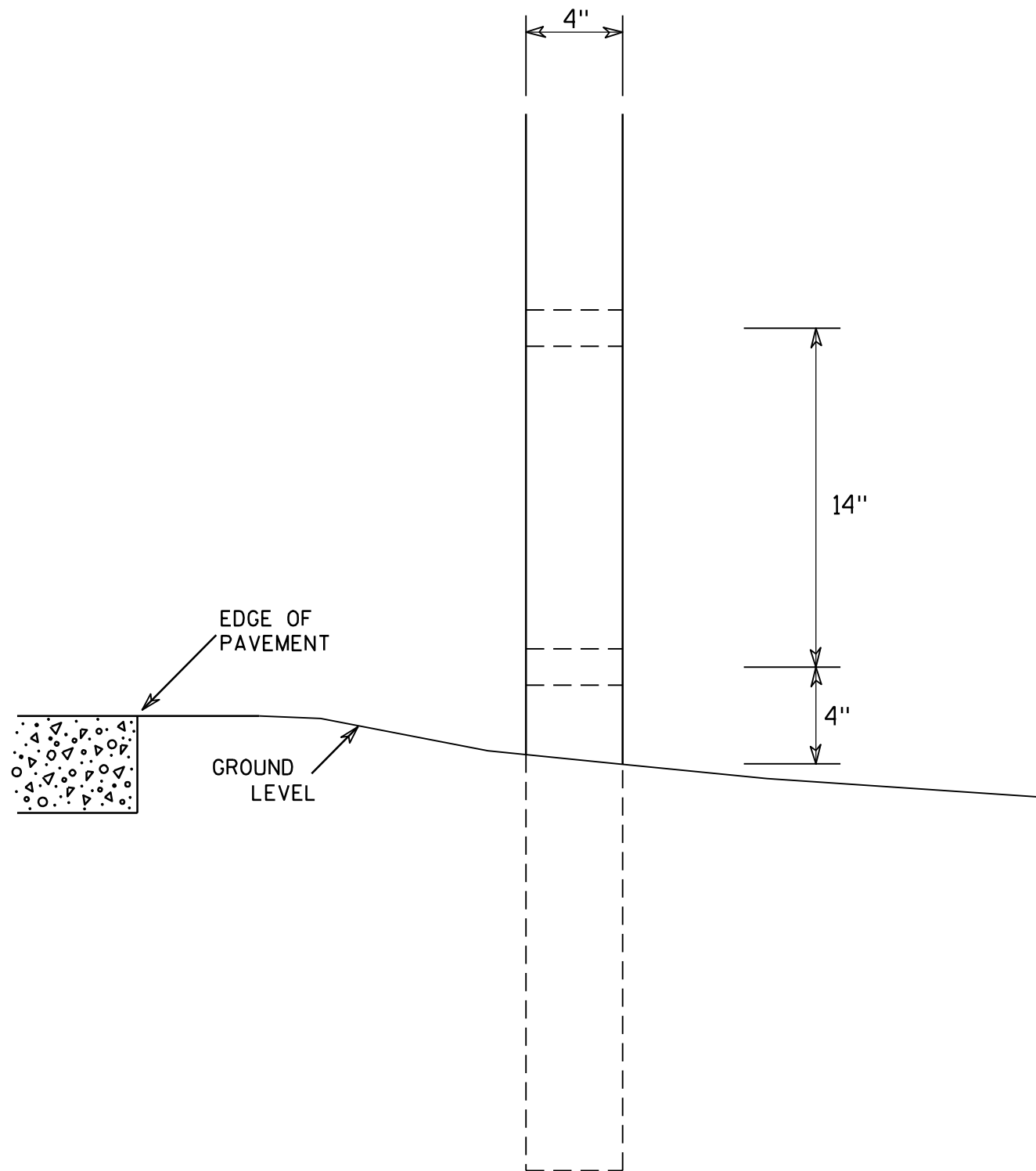
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



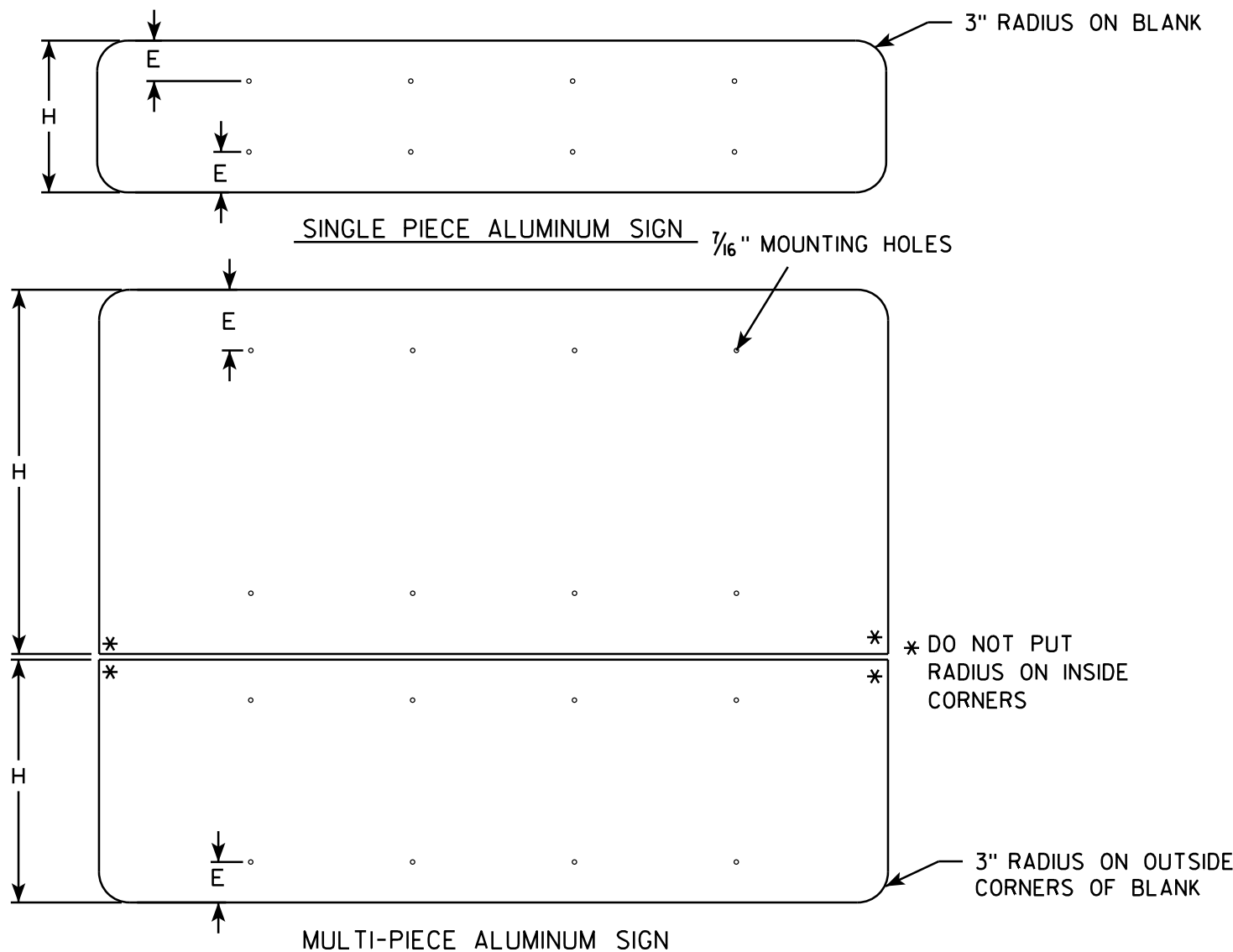
GENERAL NOTES

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

7

7

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



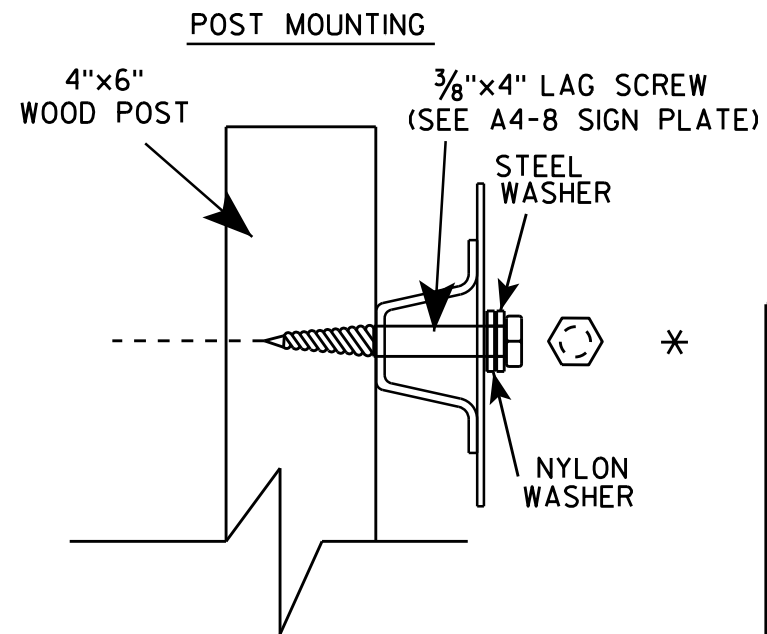
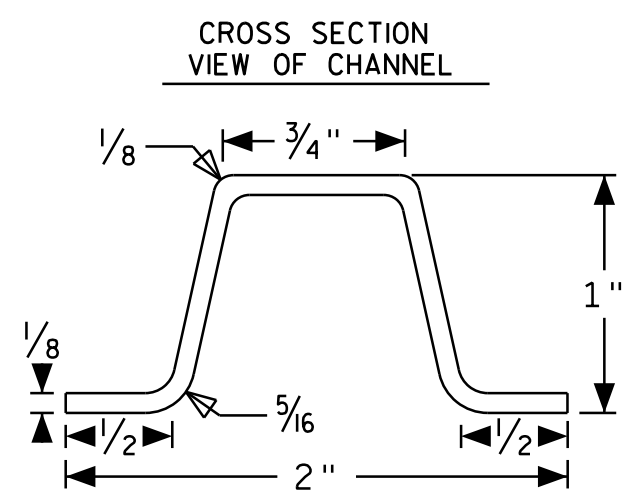
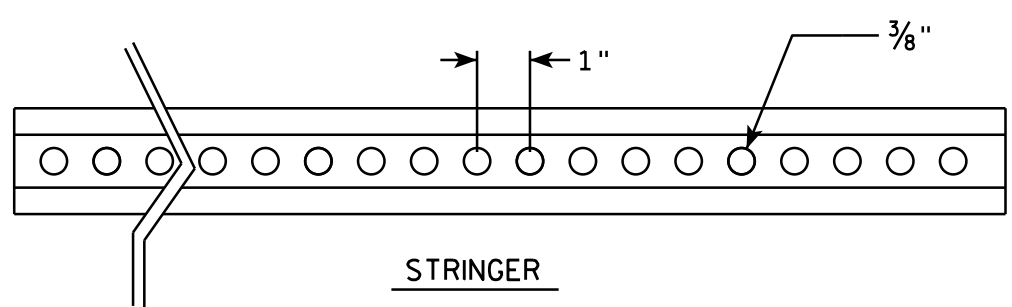
GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16 1/2" 33 1/2" 50 1/2" 67 1/2"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19 1/2" 38 1/2" 57 1/2" 76 1/2"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22 1/2" 43 1/2" 64 1/2" 85 1/2"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

* DO NOT PUT RADIUS ON INSIDE CORNERS

7



SIGN STRINGER MOUNTING REQUIREMENTS

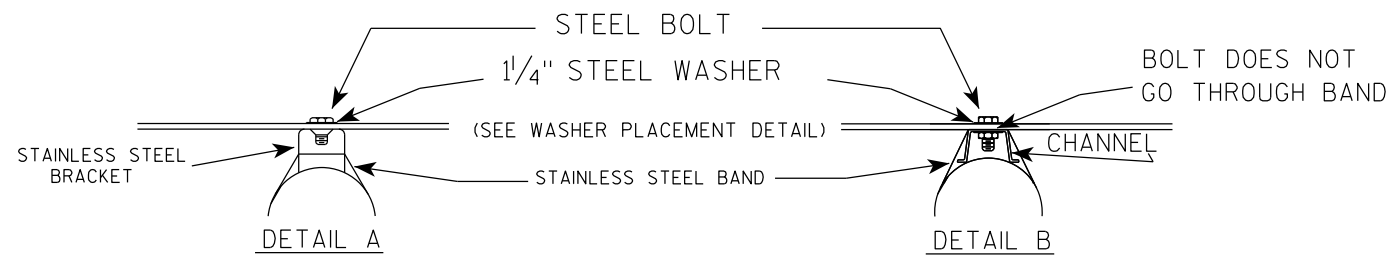
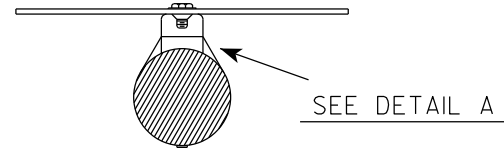
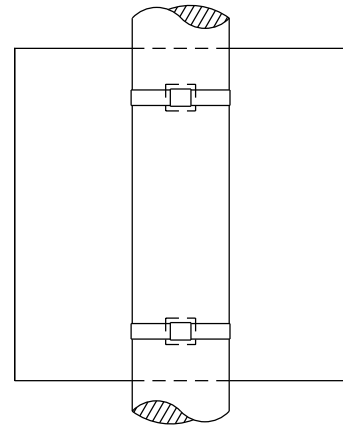
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

BANDING

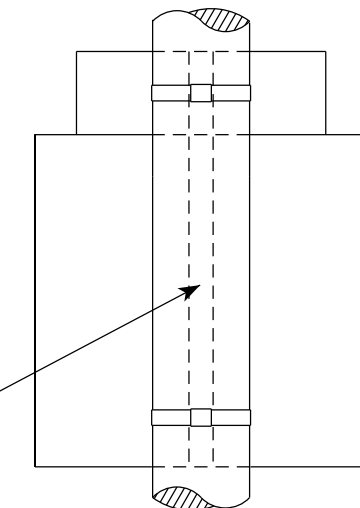
SINGLE SIGN



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

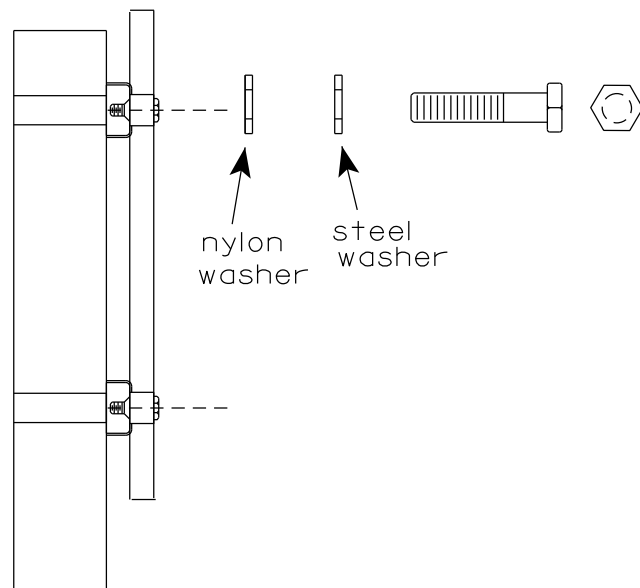
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



WASHER PLACEMENT



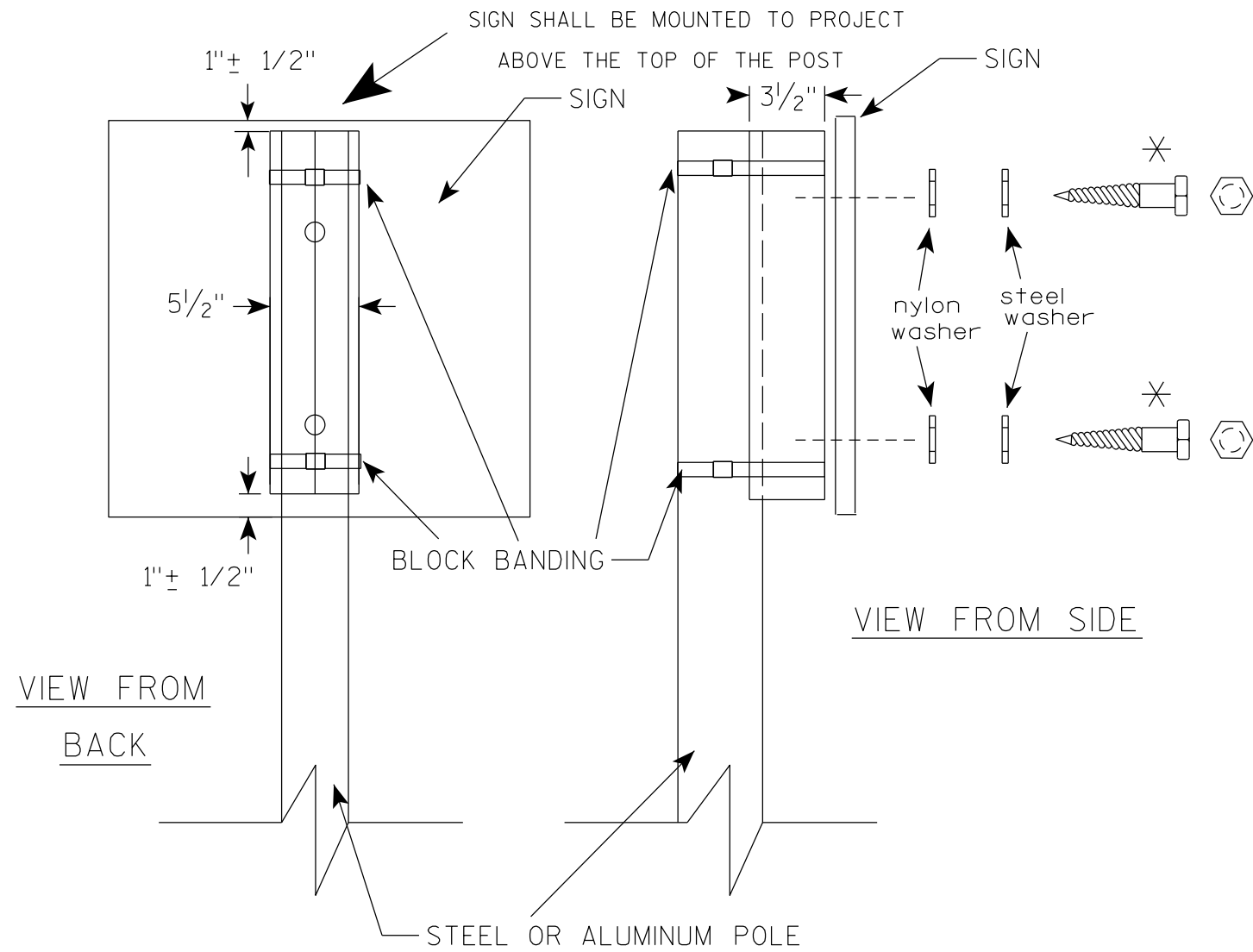
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

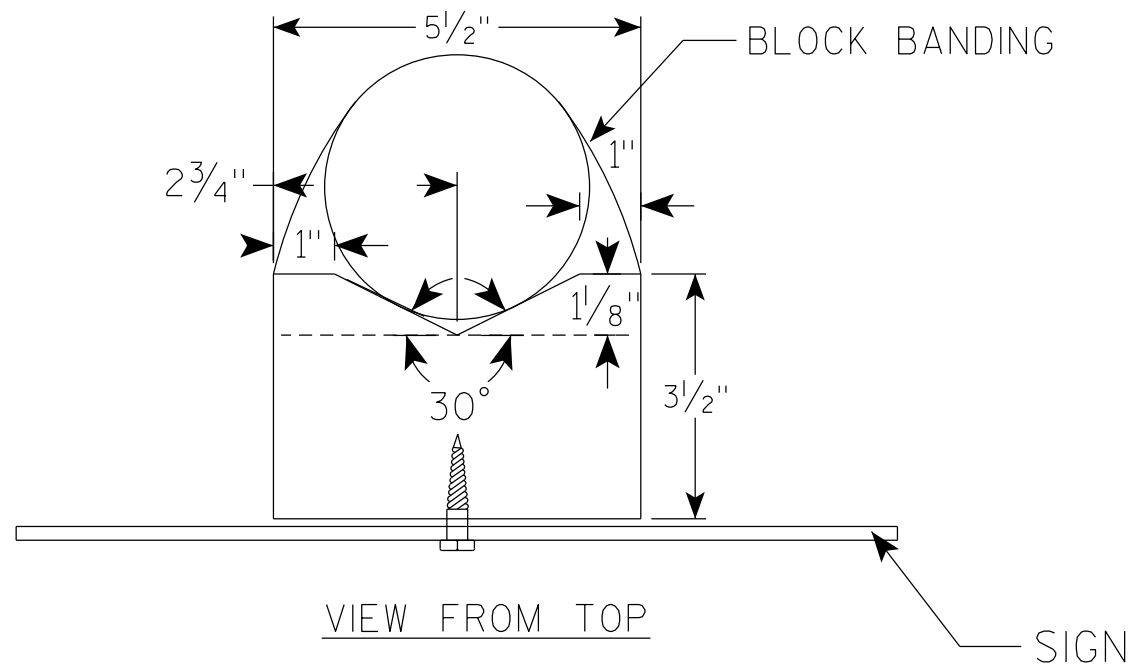
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

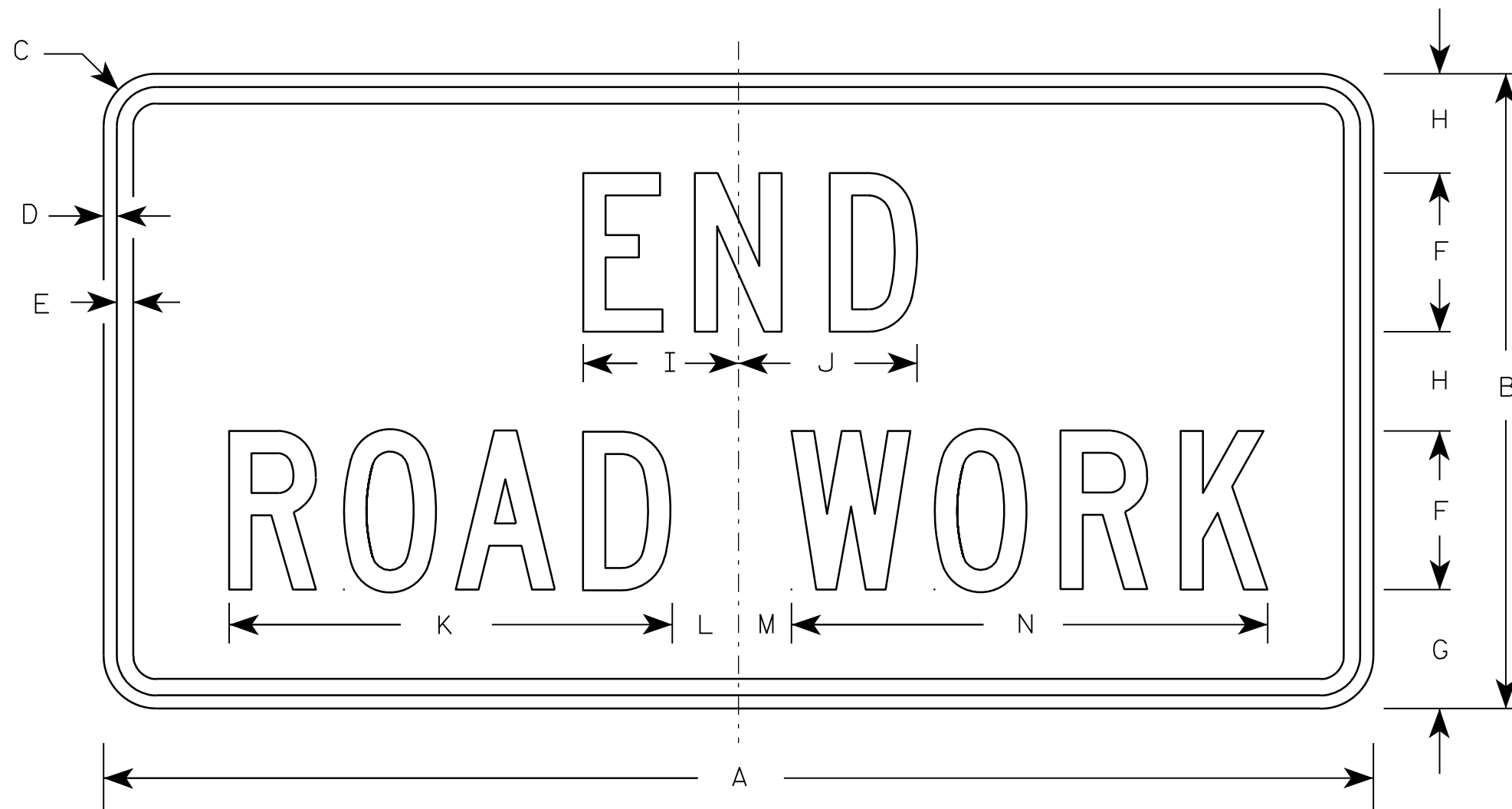
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



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

NOTES

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



G20-2A

7

7

Metric equivalent for this sign is:

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

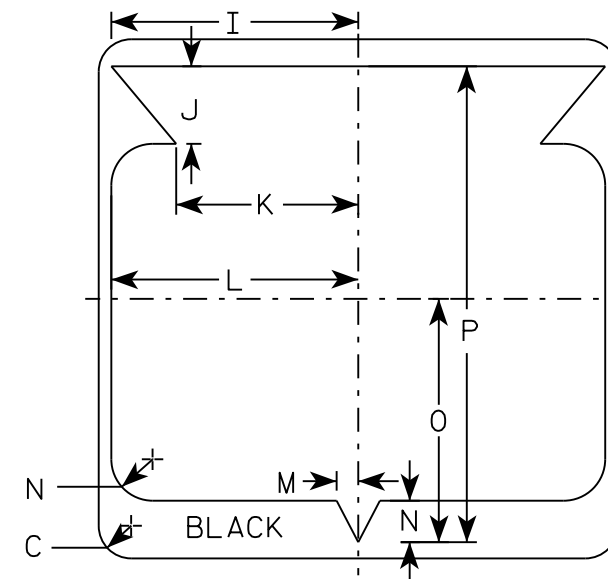
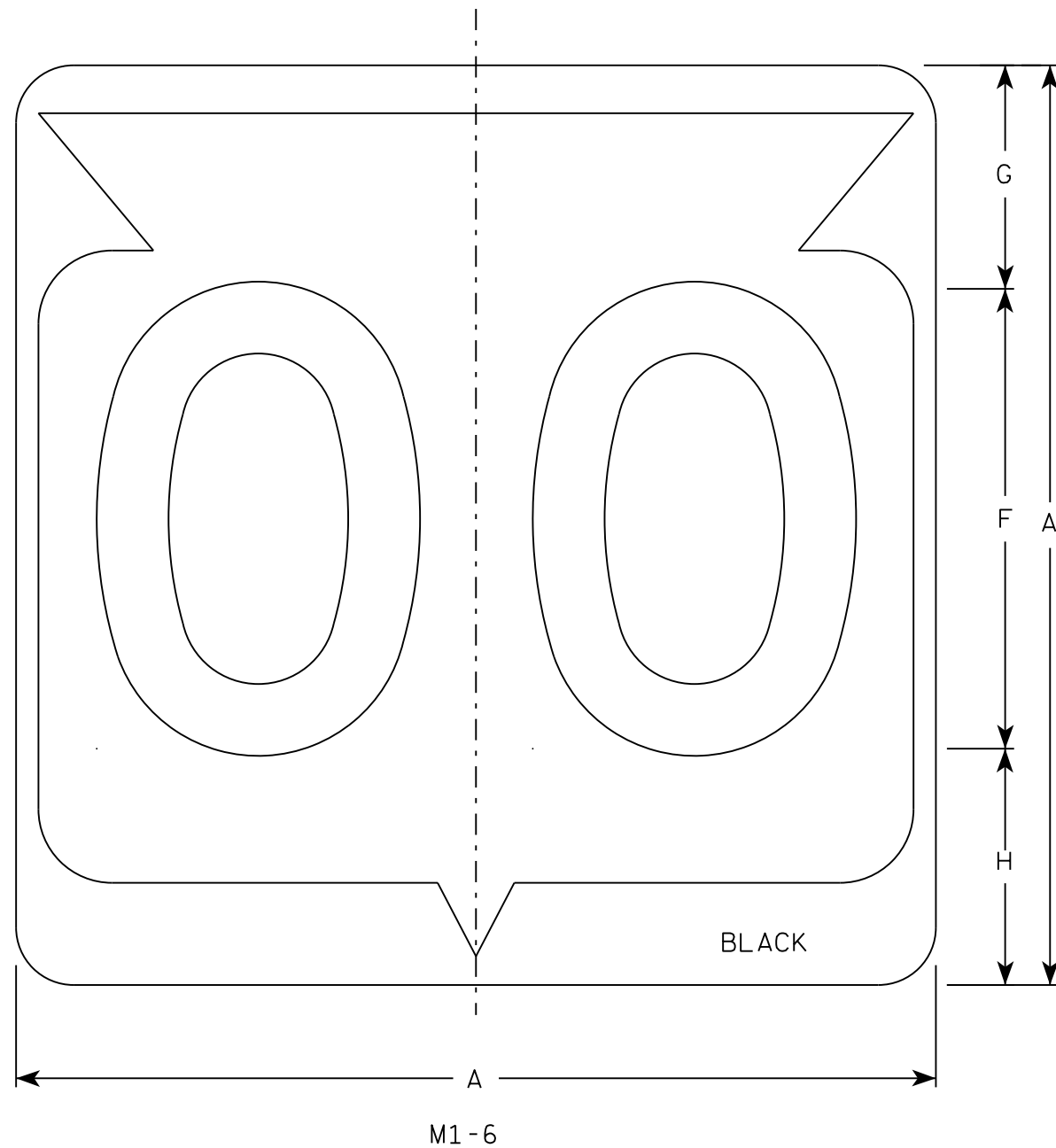
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5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

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

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

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

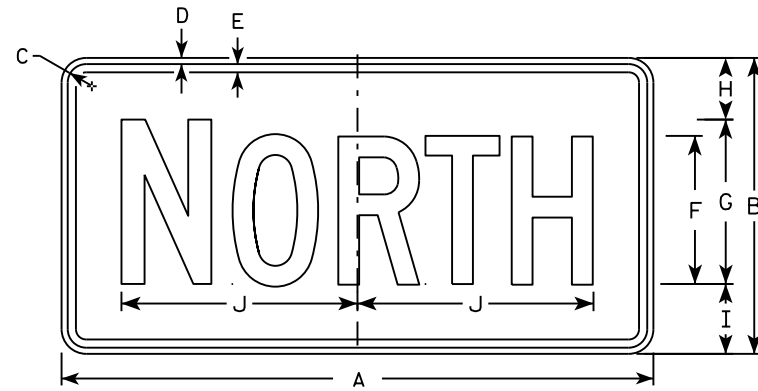
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

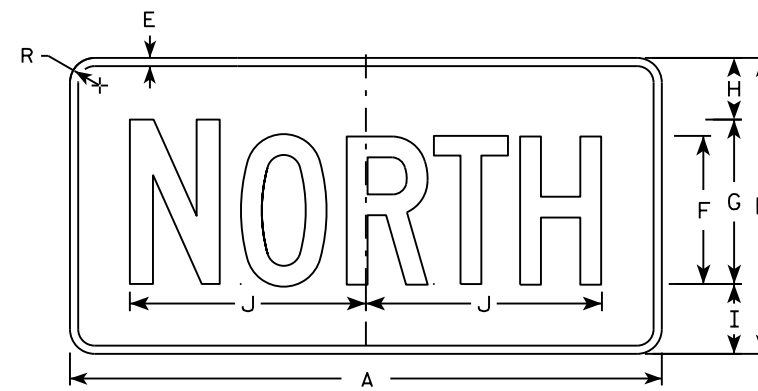
DATE 3/16/18 PLATE NO. M1-6.10

NOTES

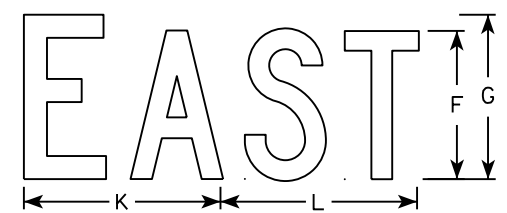
- All Signs Type II - Type H
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4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



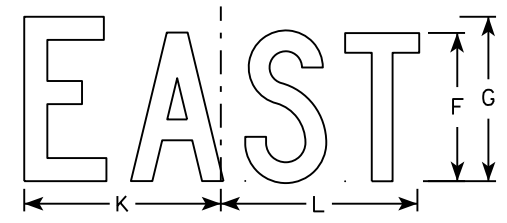
M3-1
MM3-1
MP3-1



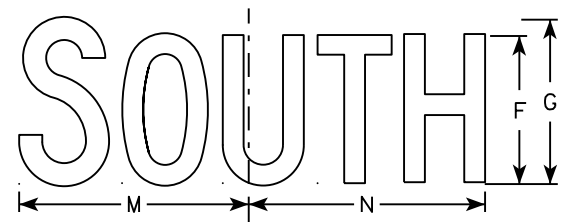
MB3-1
MK3-1
MN3-1



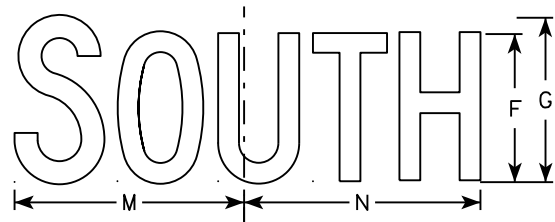
M3-2
MM3-2
MP3-2



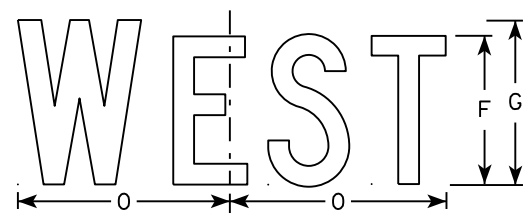
MB3-2
MK3-2
MN3-2



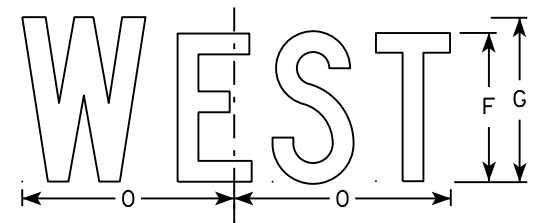
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

7

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

STANDARD SIGNS
M3-1 thru M3-4
SERIES

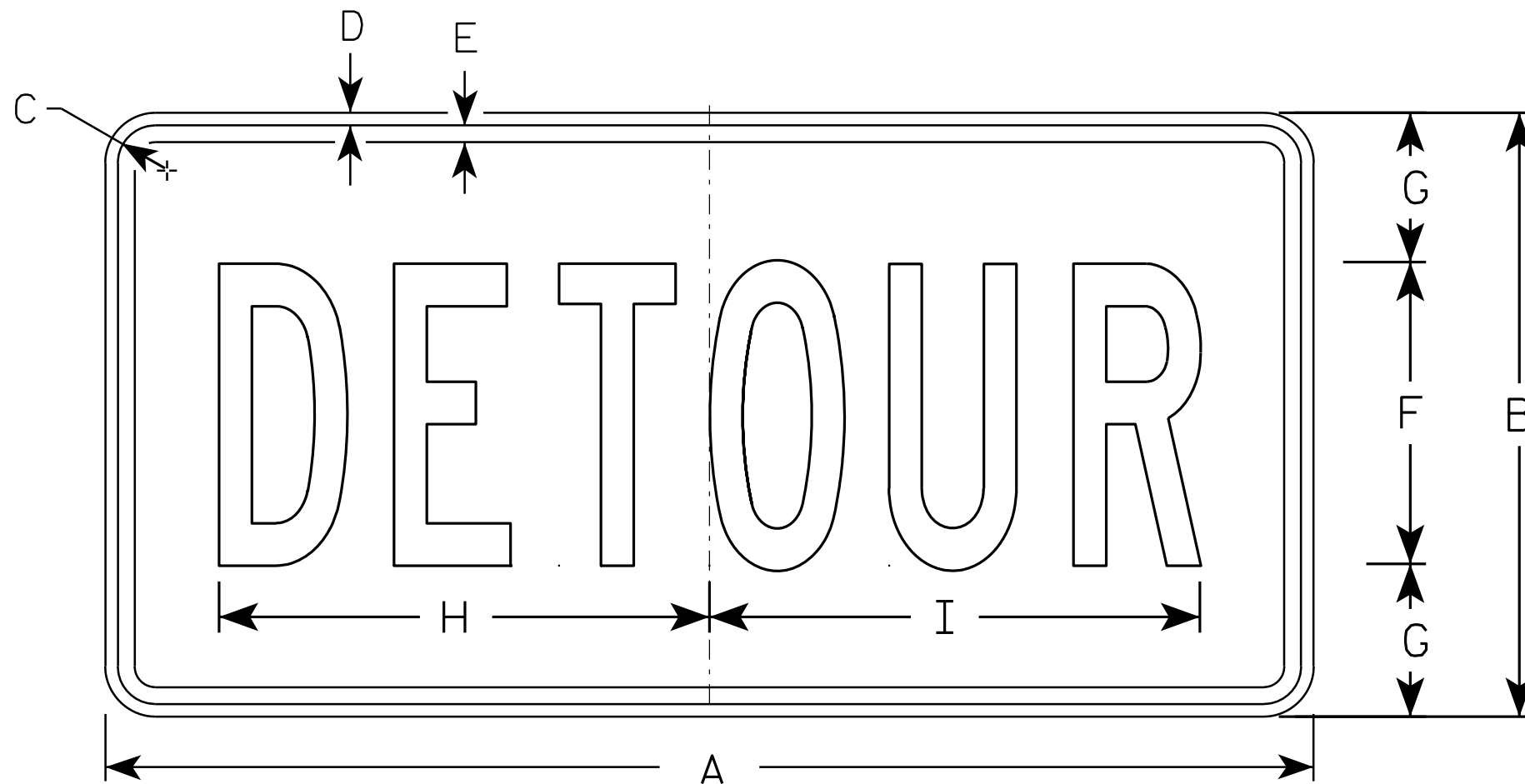
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

NOTES

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



M4-8

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

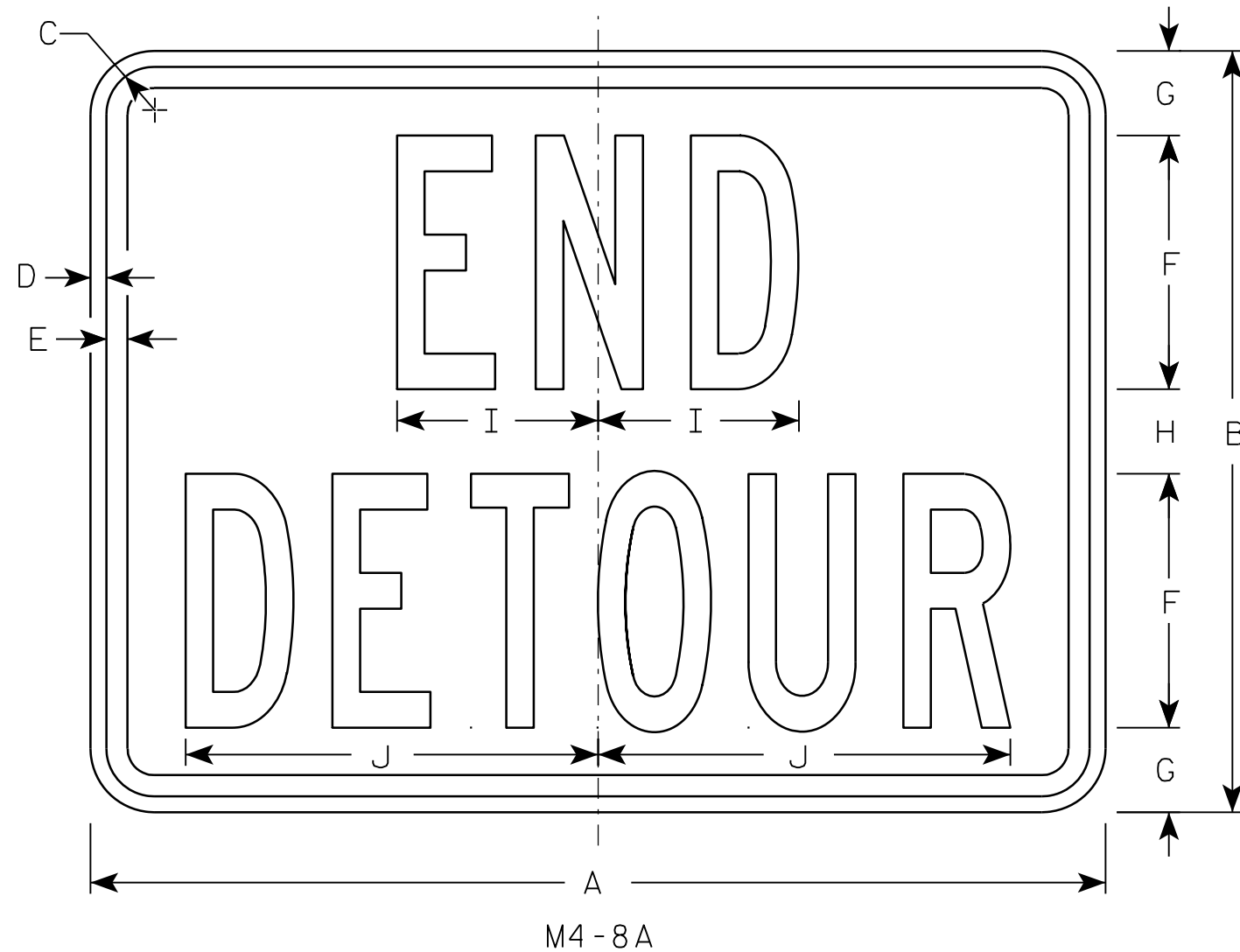
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

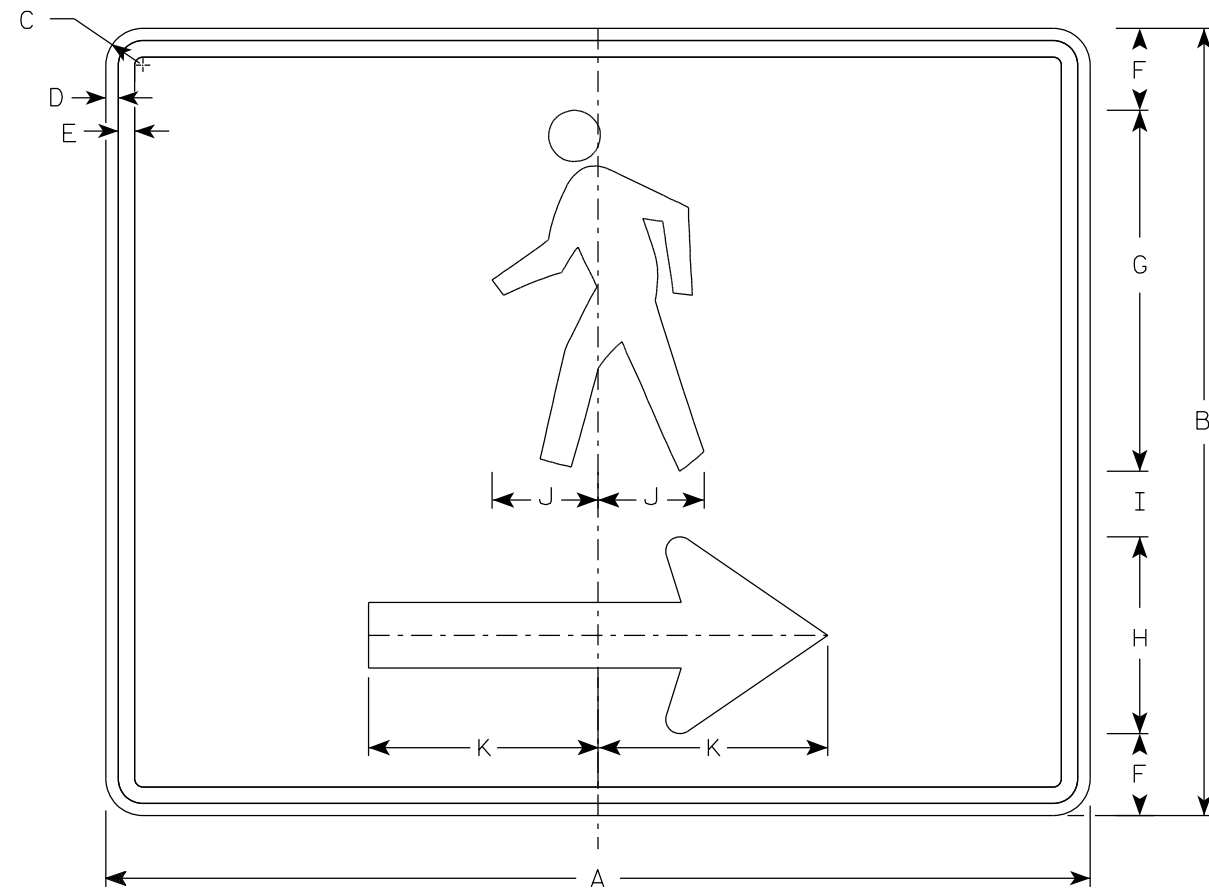
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

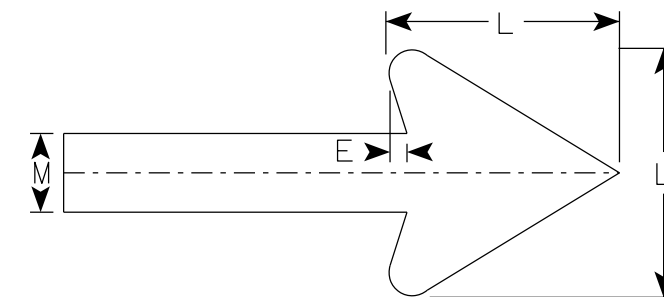
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded 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. M4-60L is the same as M4-60R except the arrow is reversed.



M4-60R



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																											
2	30	24	1 1/8	3/8	1/2	2 1/2	11	6	2	3 1/4	7	6	2														5.00
3																											
4																											
5																											

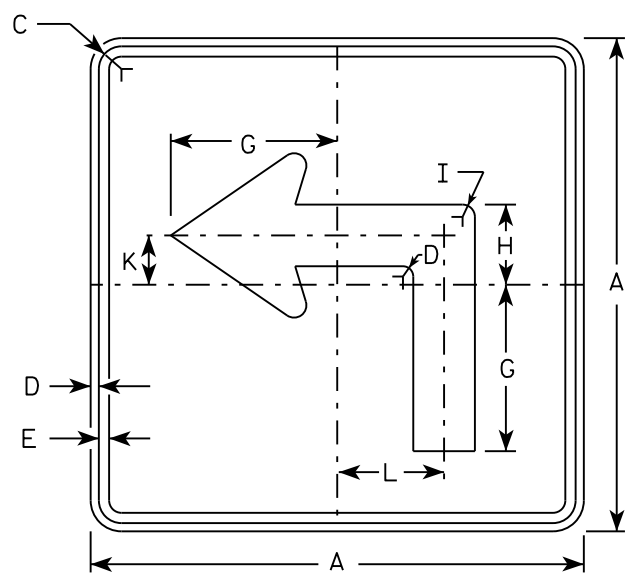
STANDARD SIGN
M4-60 L&R

WISCONSIN DEPT OF TRANSPORTATION

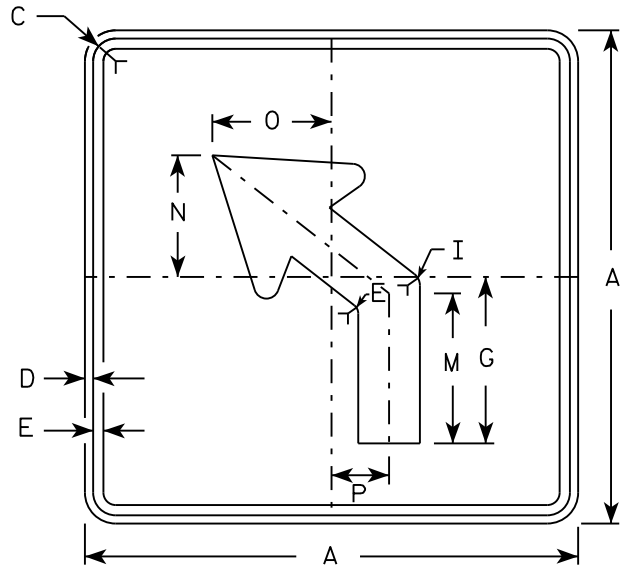
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 9/16/2021 PLATE NO. M4-60.1

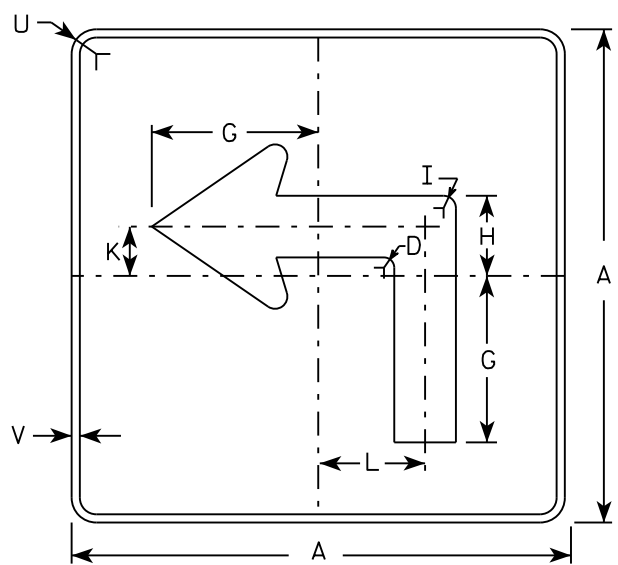
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



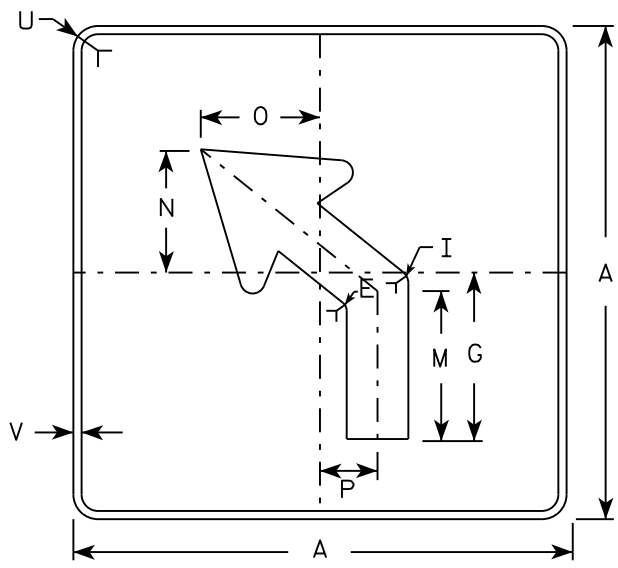
M5-1L
MM5-1L
M05-1L
MP5-1L



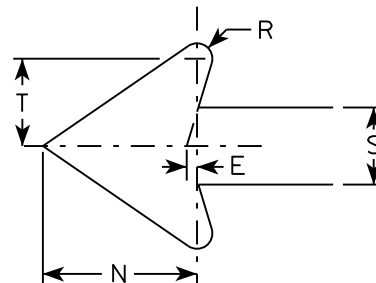
M5-2L
MM5-2L
M05-2L
MP5-2L



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



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



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
 - Background - See note 4
 - Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White
Message - Black
 - MB5-1 and MB5-2 Background - Blue
Message - White
 - MK5-1 and MK5-2 Background - Green
Message - White
 - MM5-1 and MM5-2 Background - White
Message - Green
 - MN5-1 and MN5-2 Background - Brown
Message - White
 - M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
 - MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
 - MR5-1 and MR5-2 Background - Brown
Message - Yellow
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

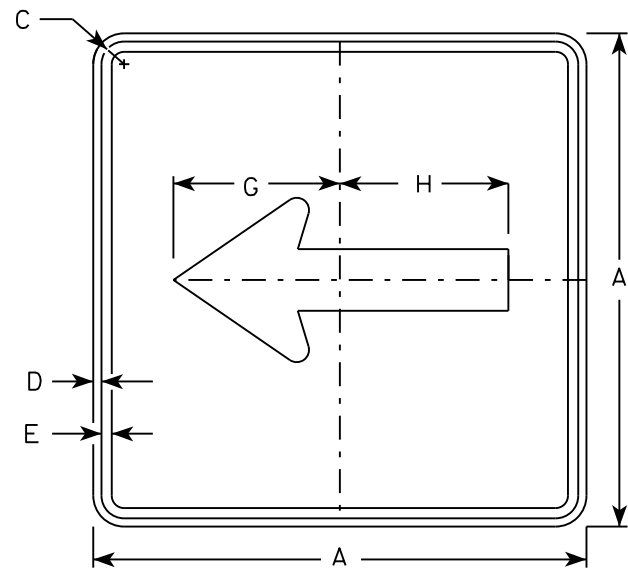
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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

STANDARD SIGN
M5-1 & M5-2

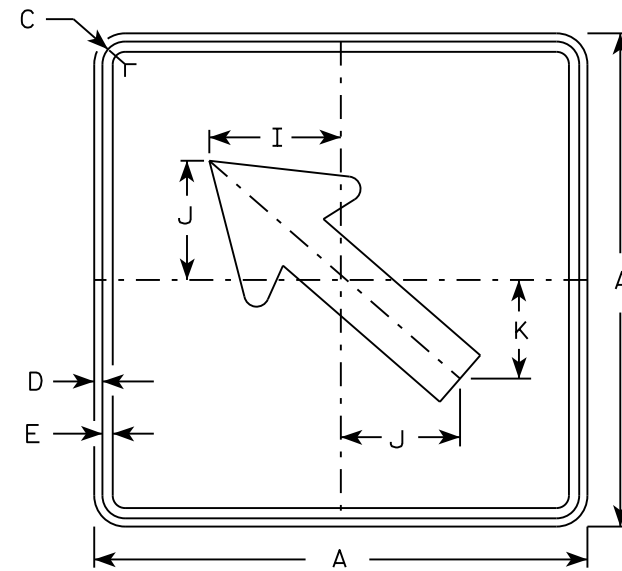
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

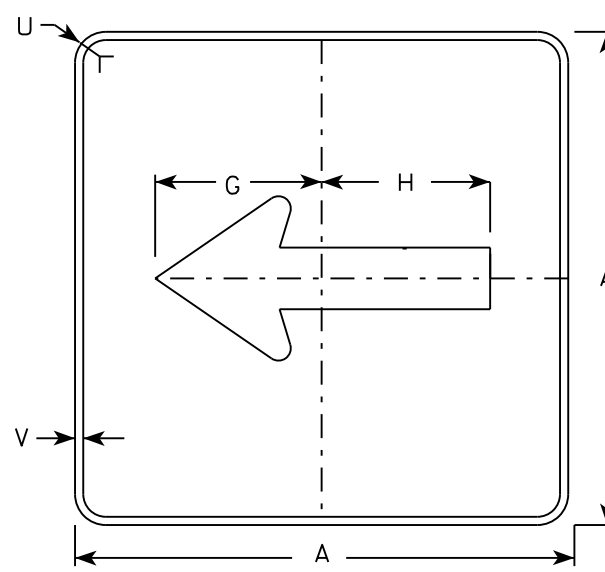
DATE 10/15/15 PLATE NO. M5-1.13



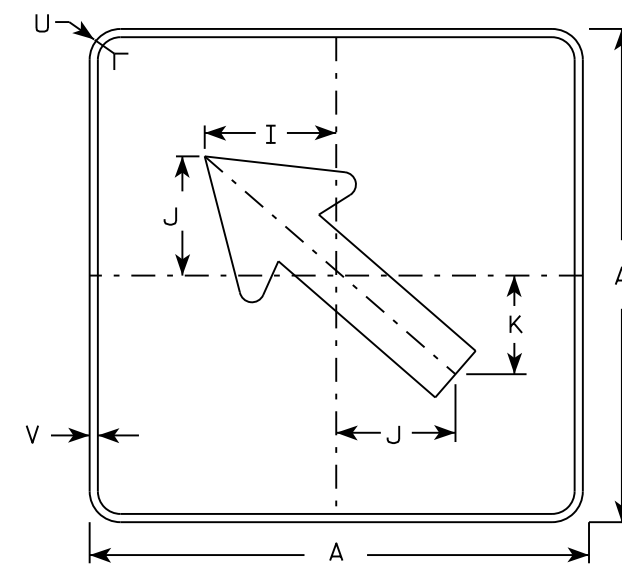
M6-1
MM6-1
M06-1
MP6-1



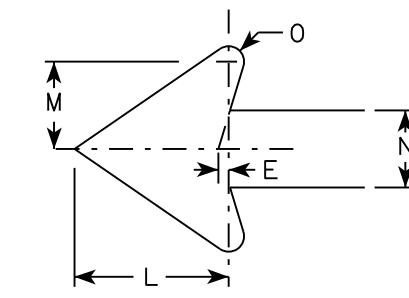
M6-2
MM6-2
M06-2
MP6-2



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



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



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

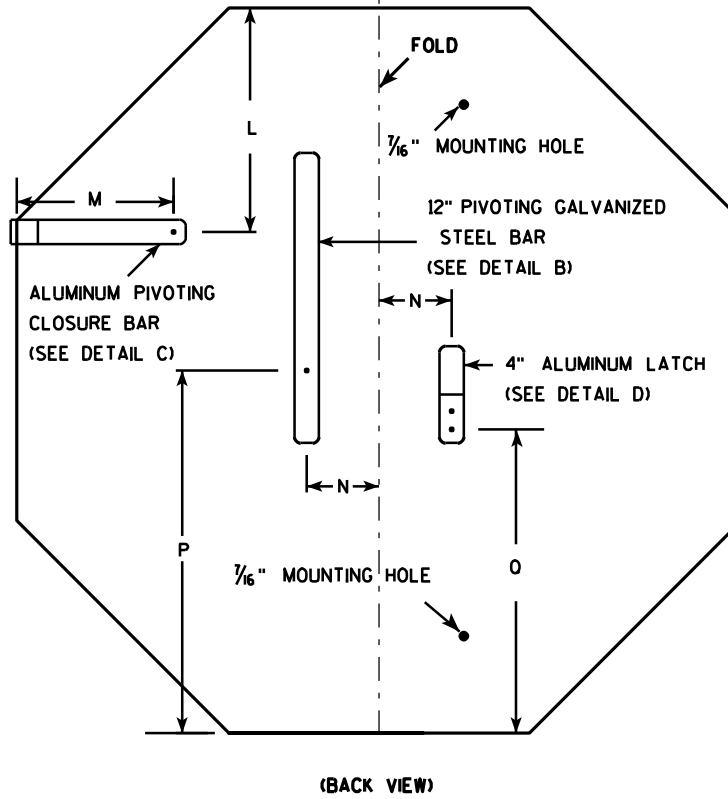
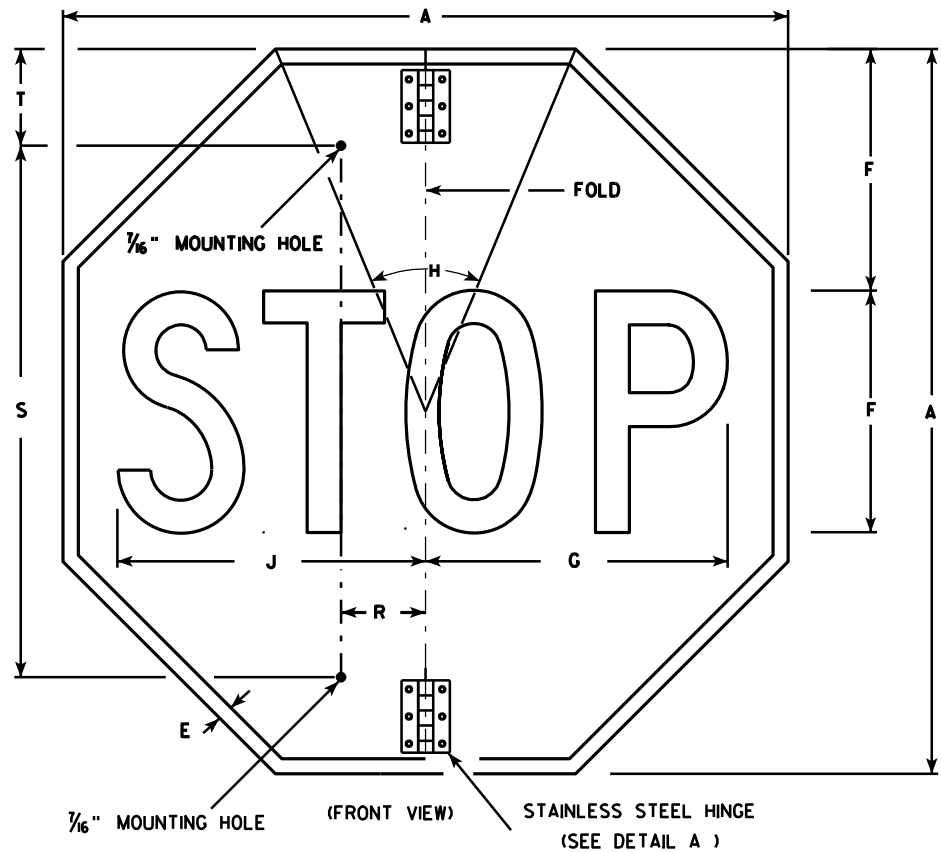
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10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

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

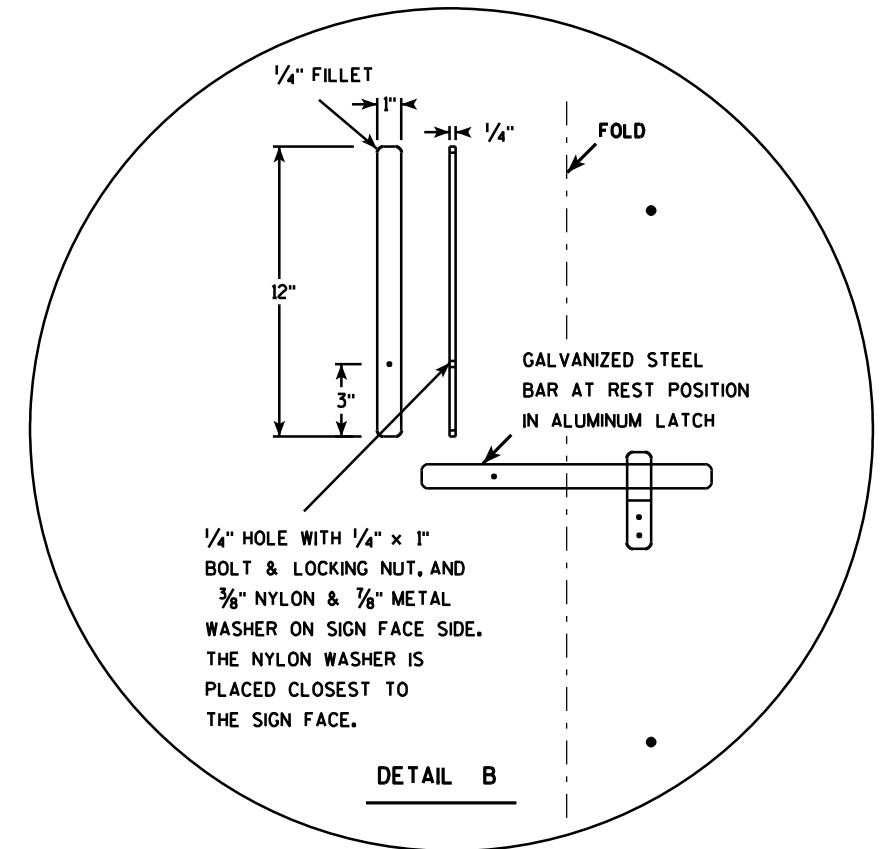
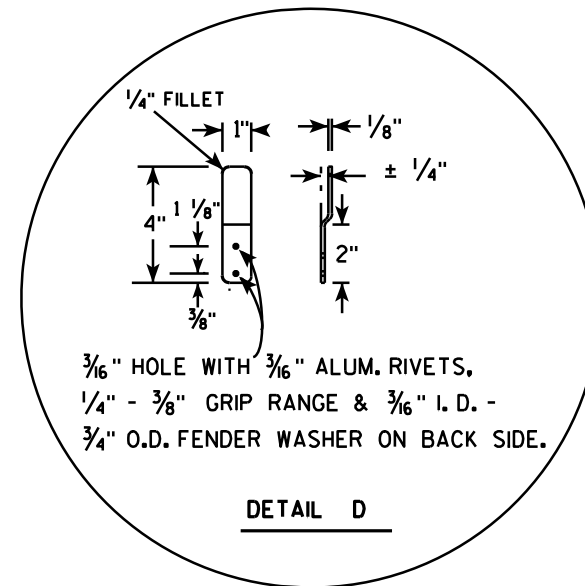
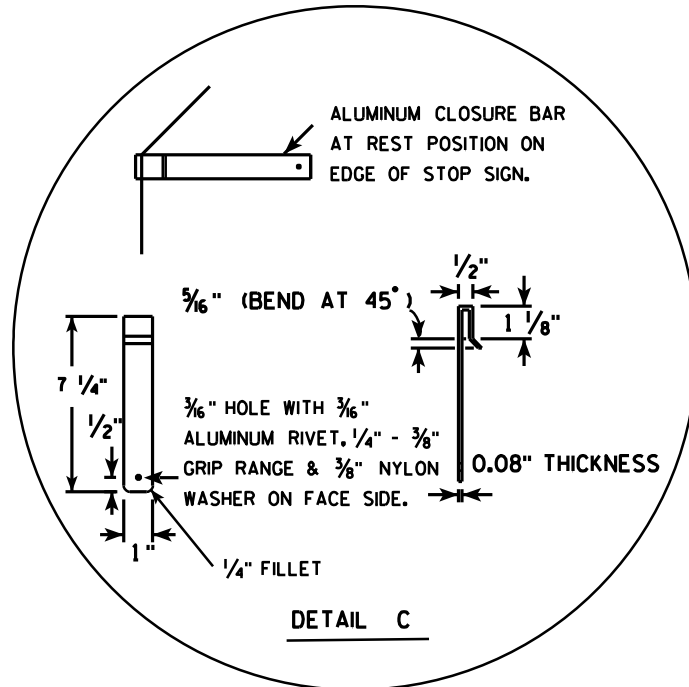
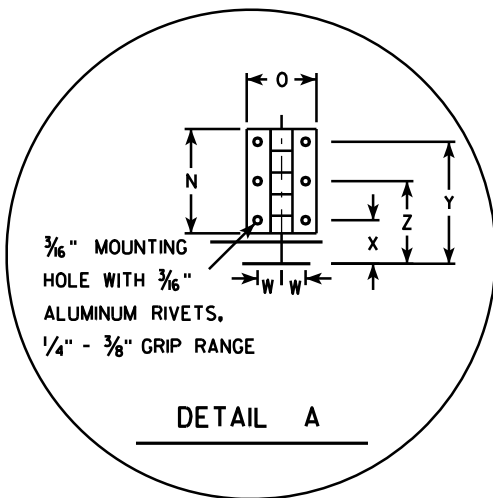
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

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



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

STANDARD SIGN
R1-1F

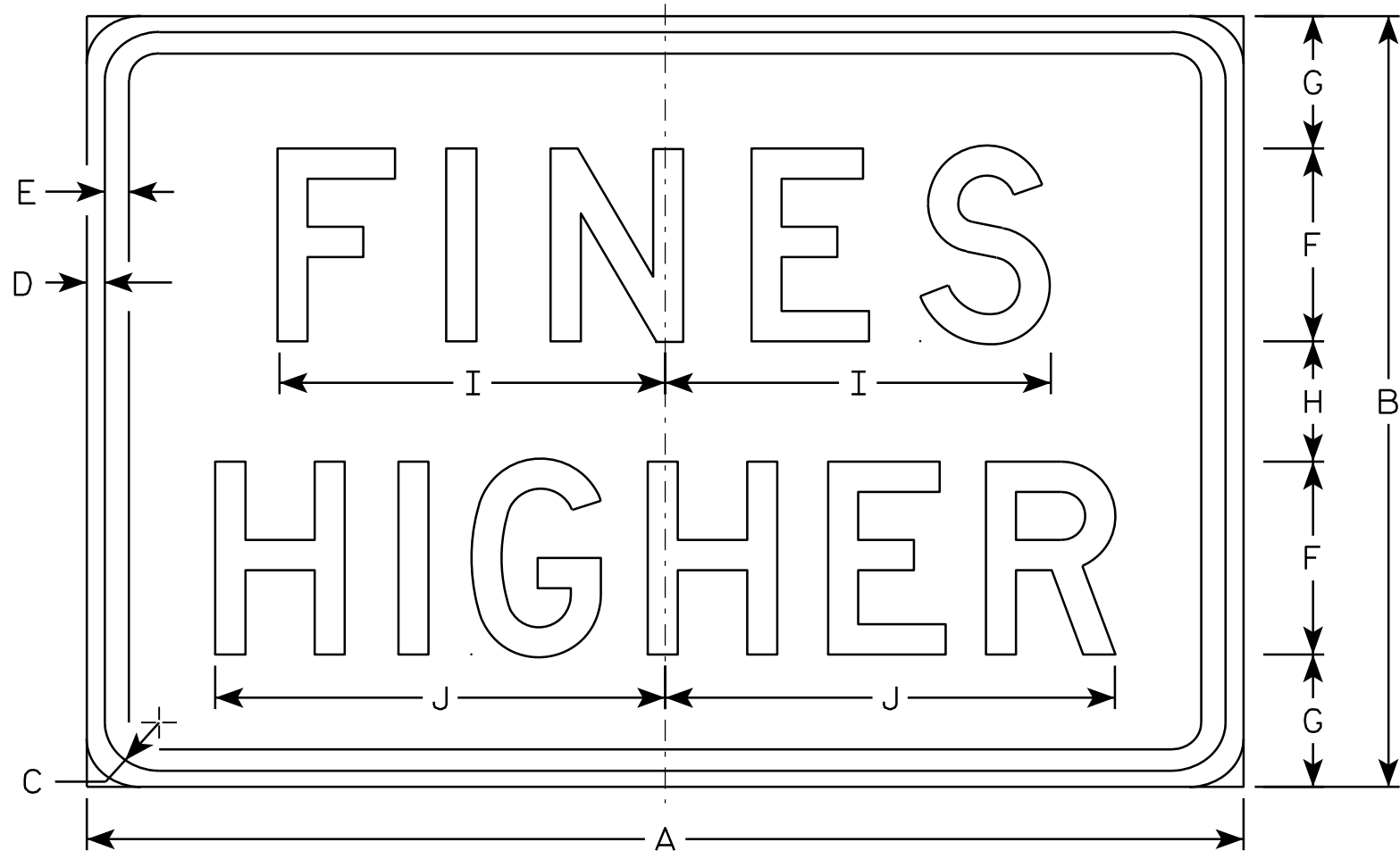
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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.



R2-6P

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
2M	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
3	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
4	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
5	48	36	1 3/8	1/2	5/8	8	7	6	15 1/8	19																	12.0

STANDARD SIGN
R2-6P

WISCONSIN DEPT OF TRANSPORTATION

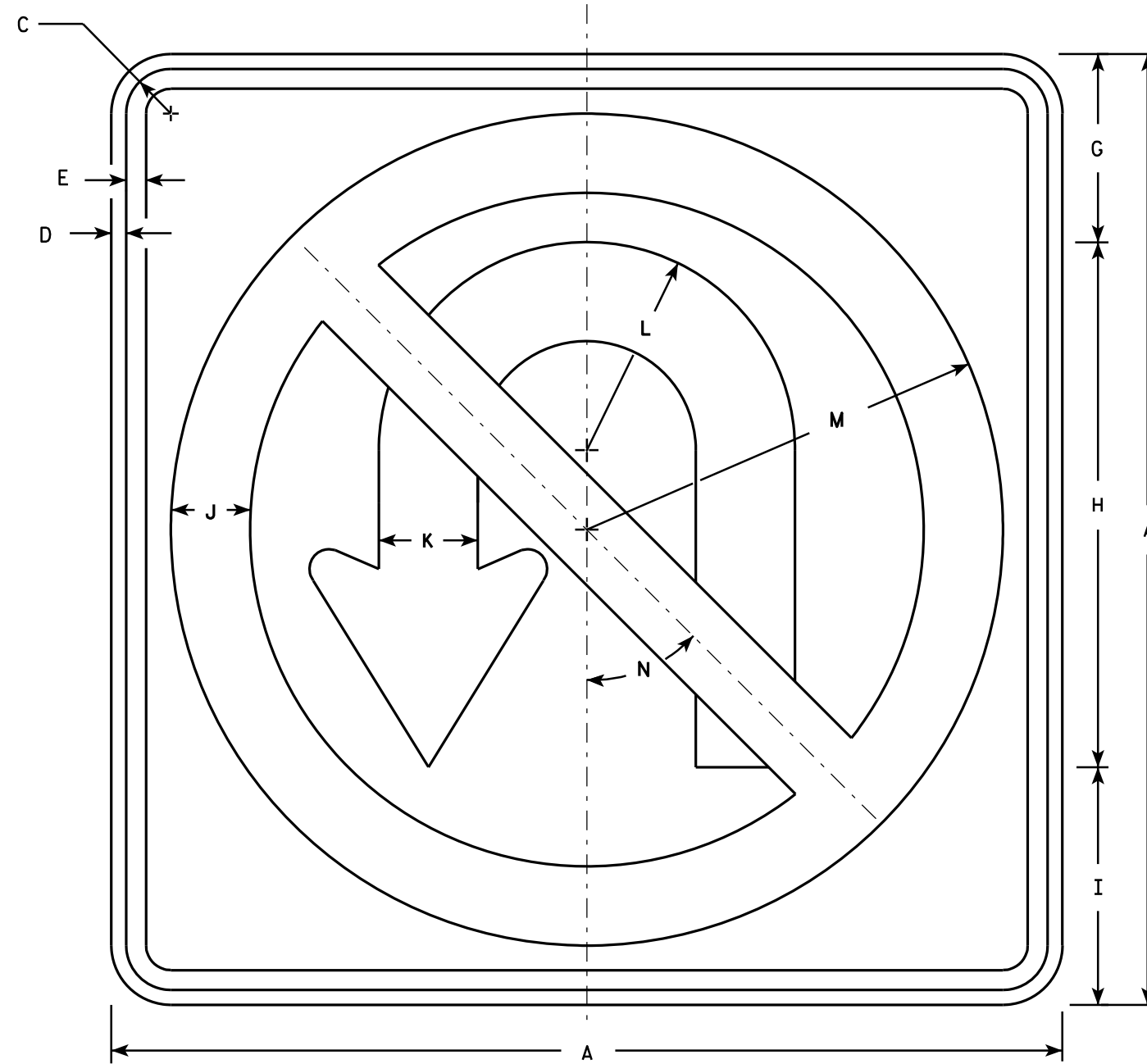
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/20/10 PLATE NO. R2-6P.2

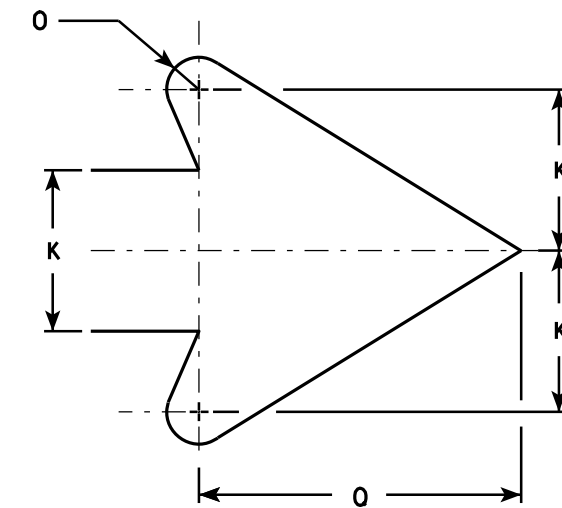
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

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.



R3-4



ARROW DETAIL

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area Sq. Ft.
1																											
2S	24		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

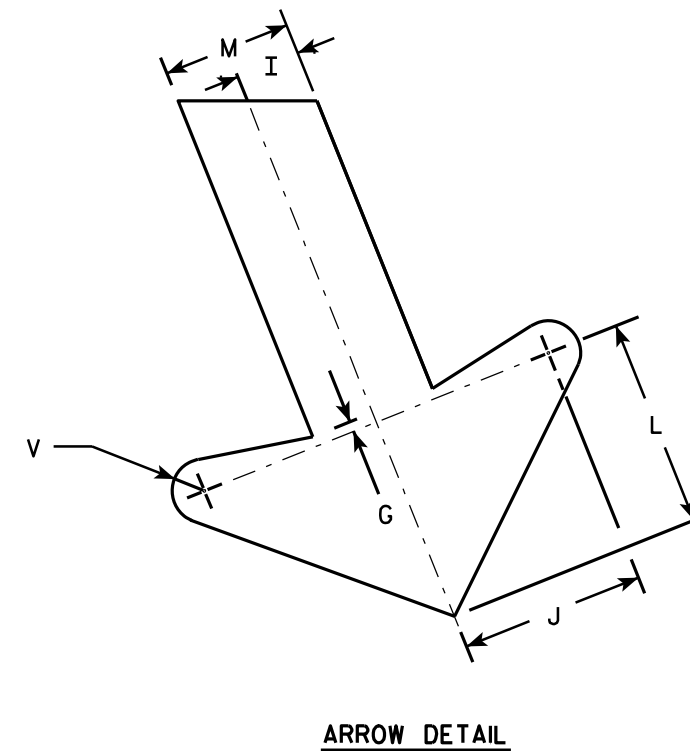
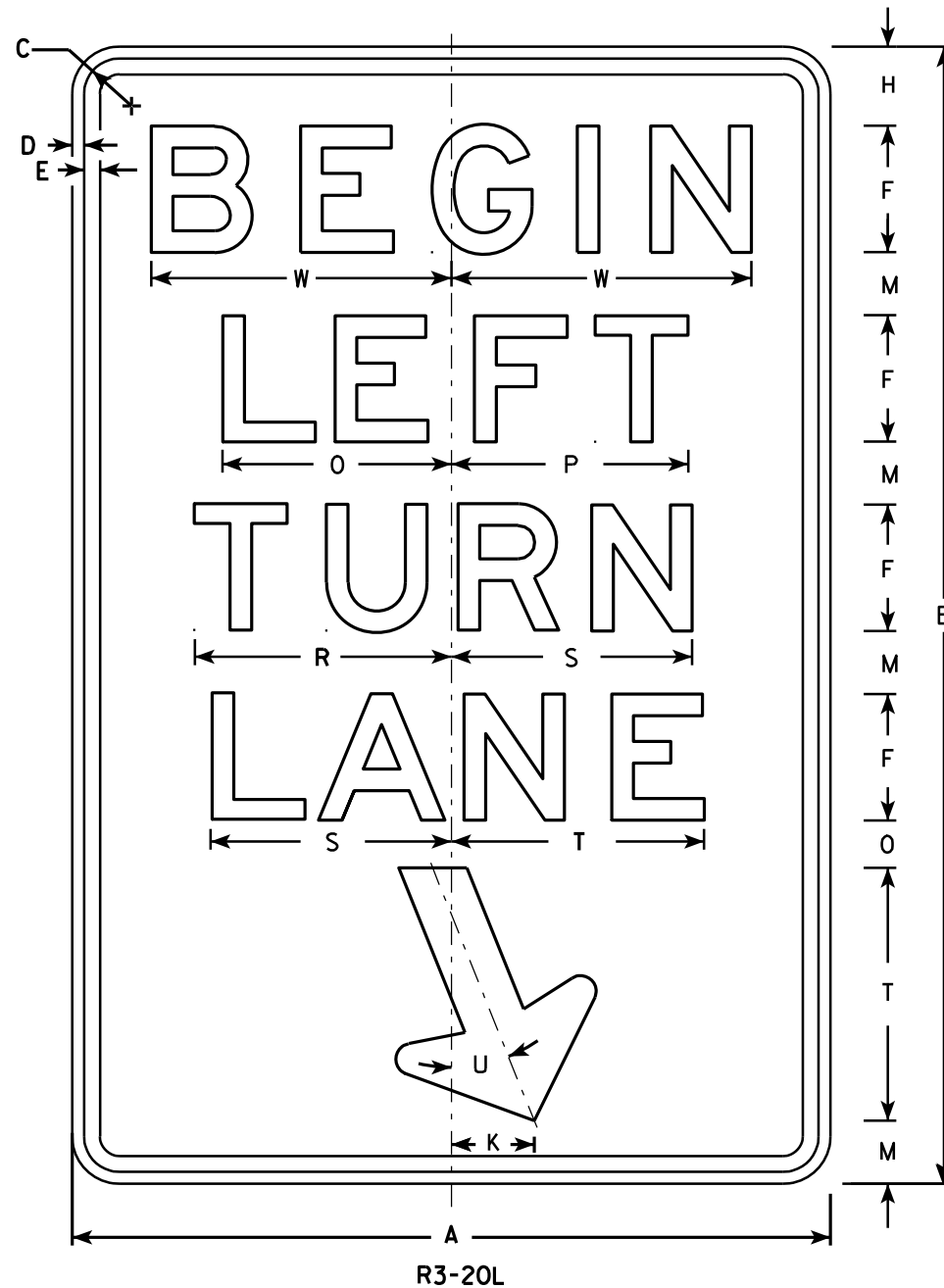
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE: 12/08/10 PLATE NO. R3-4.11

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

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



7

7

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

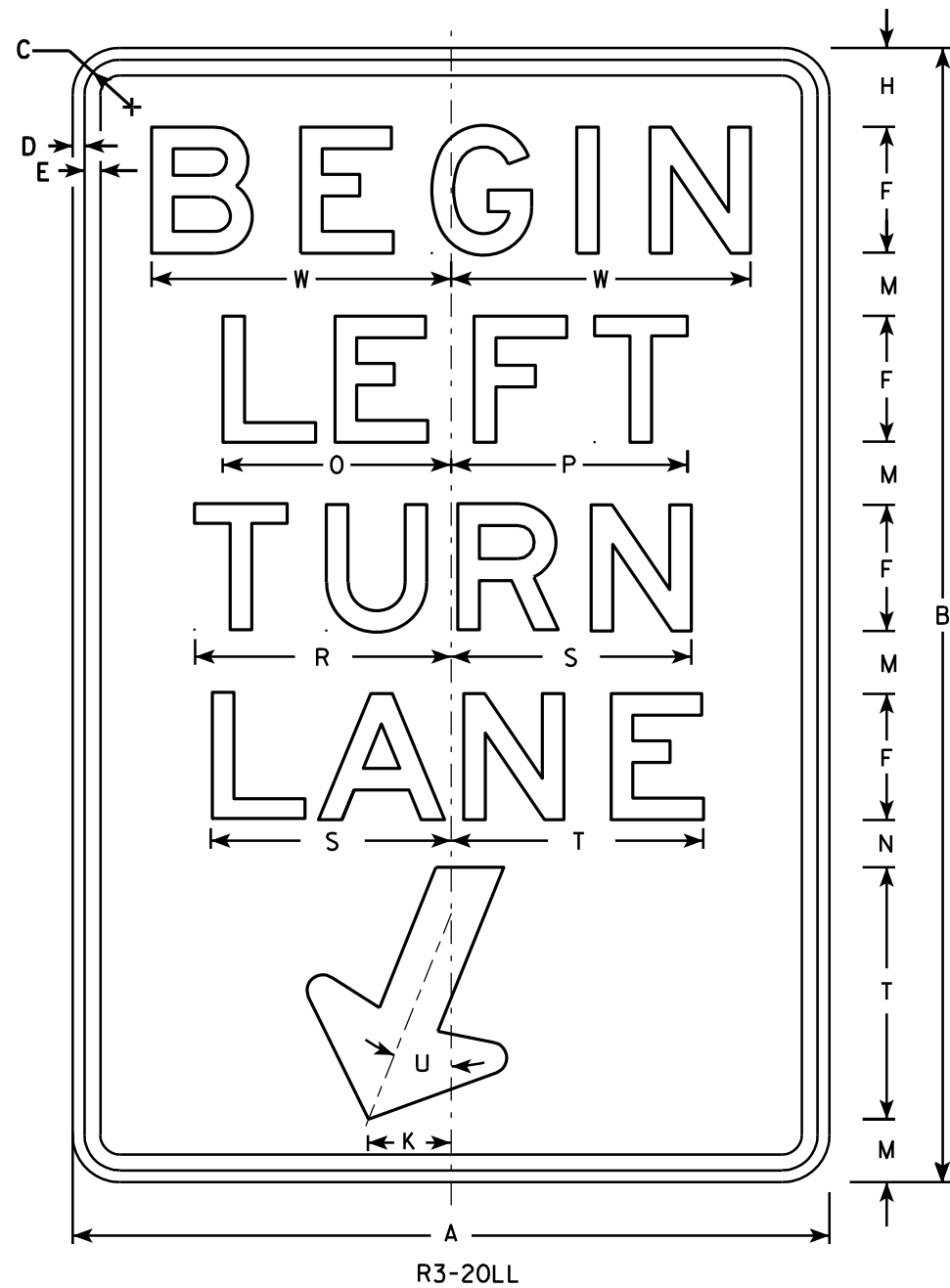
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

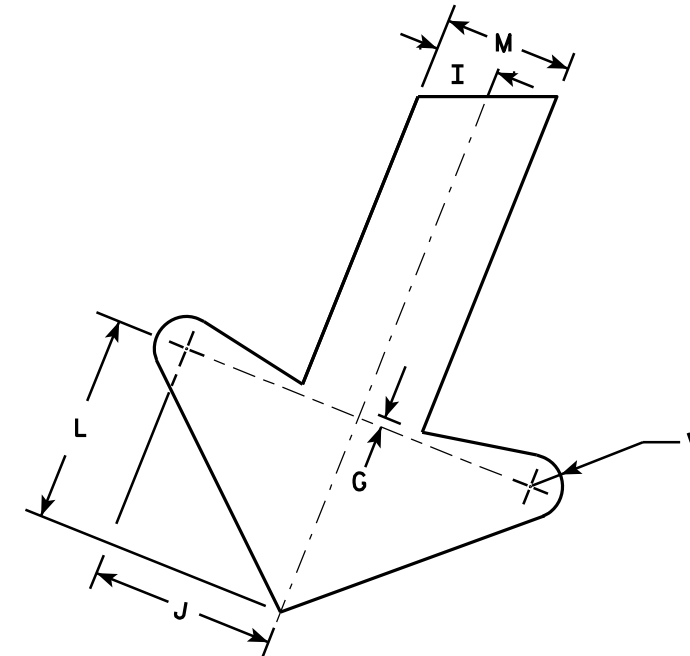
DATE 10/18/10 PLATE NO. R3-20L.7

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



NOTES

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

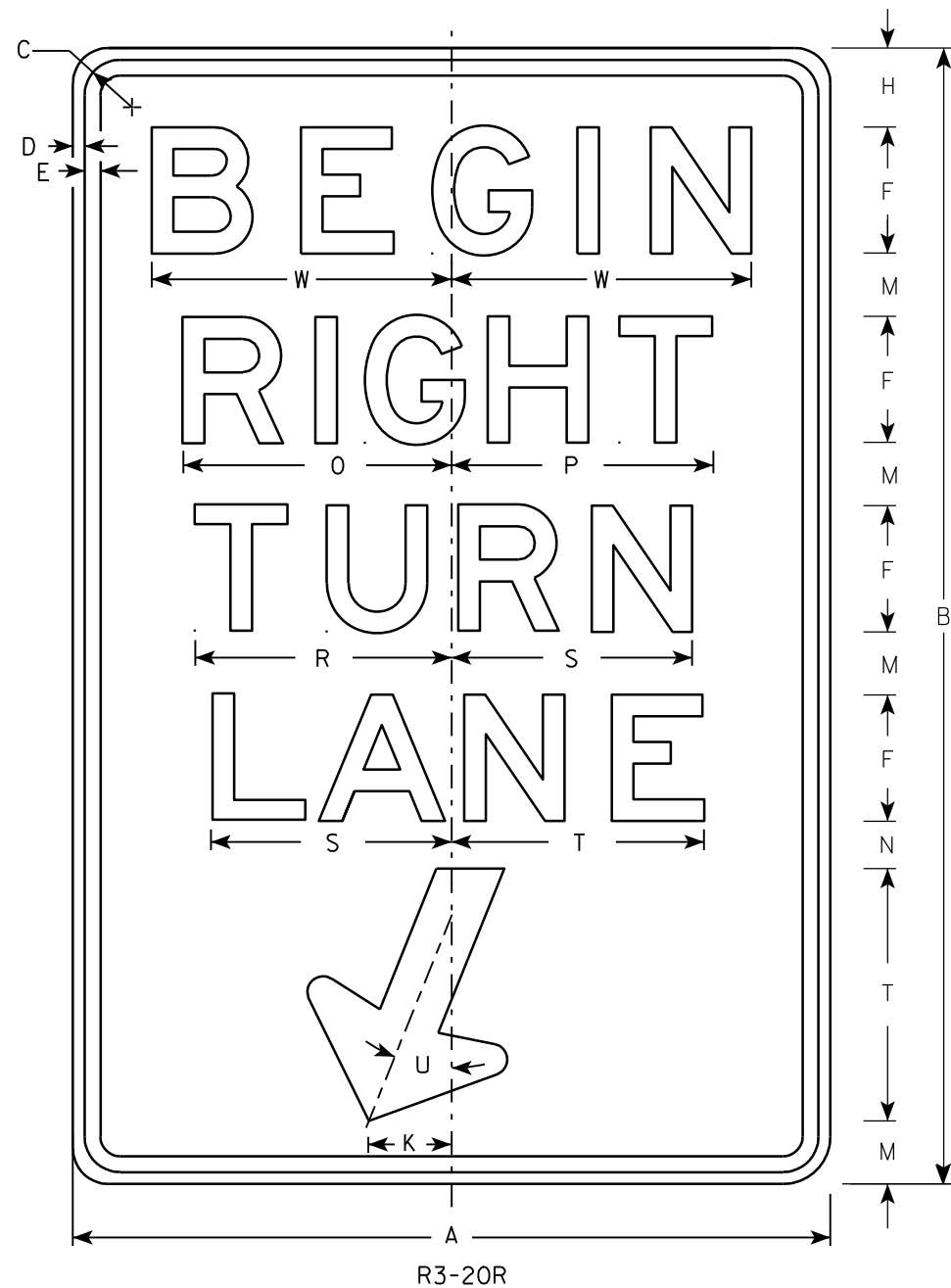
STANDARD SIGN
R3-20LL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20LL.1

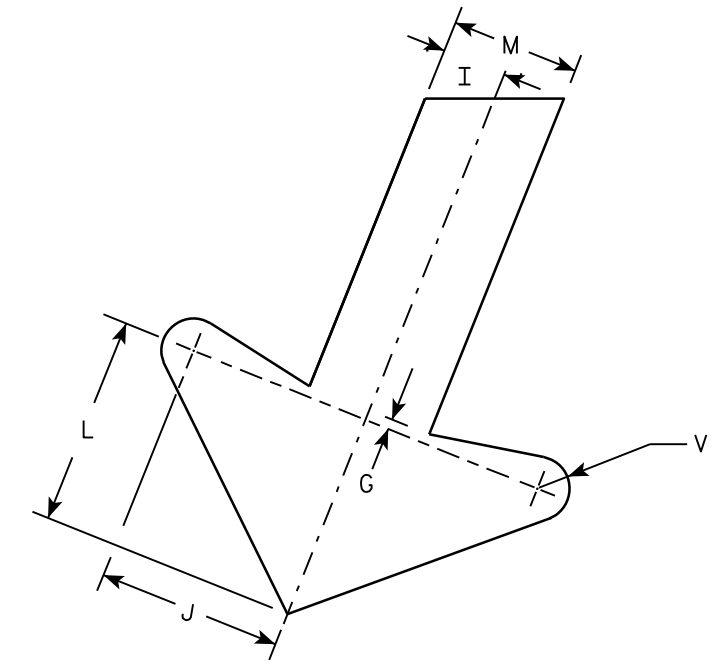
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**



R3-20R

NOTES

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



ARROW DETAIL

7

7

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

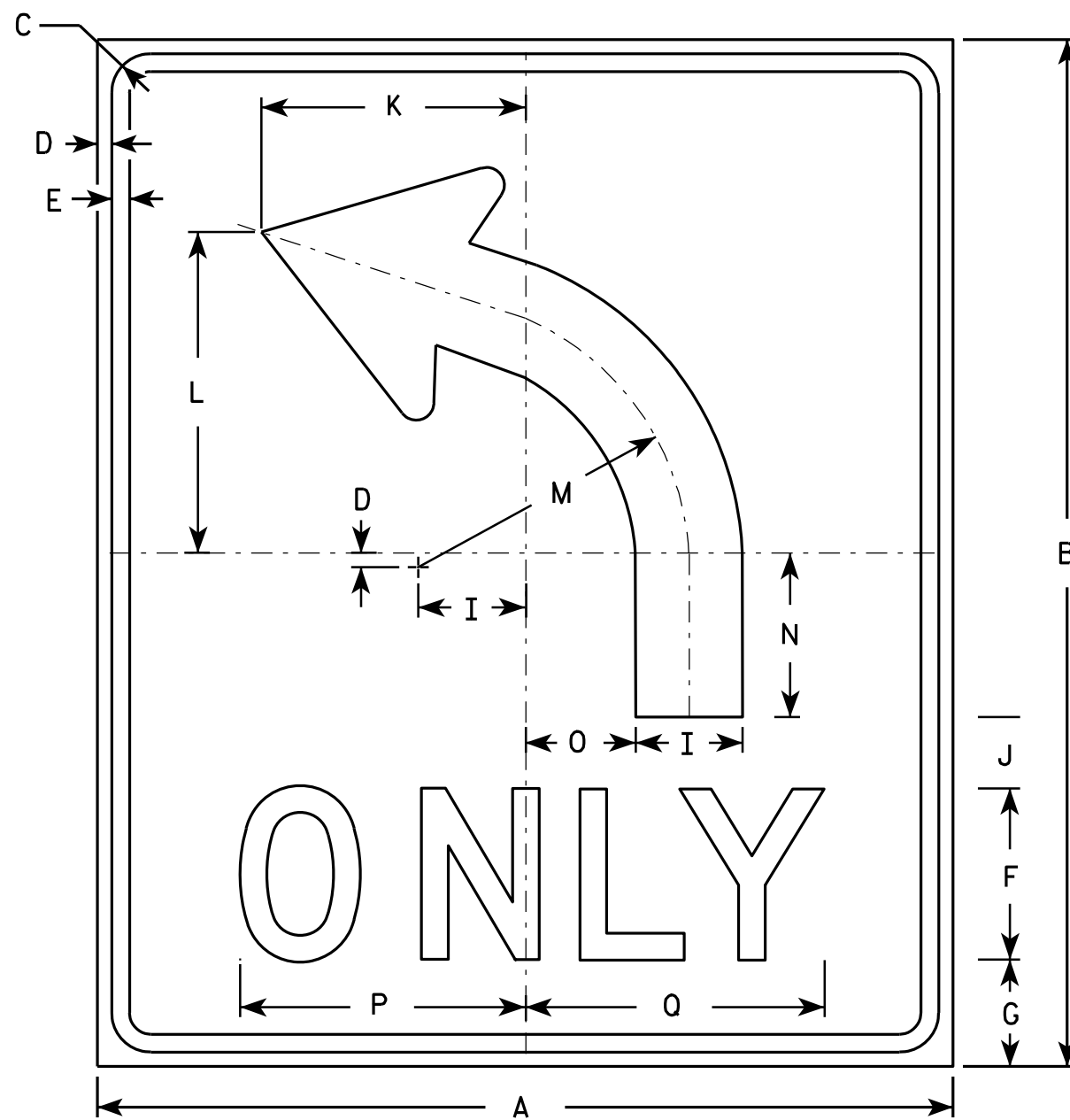
STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

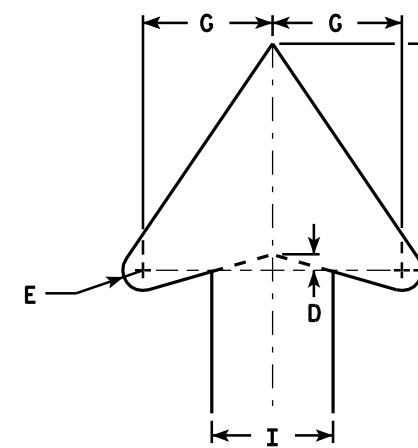
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	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																											

STANDARD SIGN
R3-50

WISCONSIN DEPT OF TRANSPORTATION

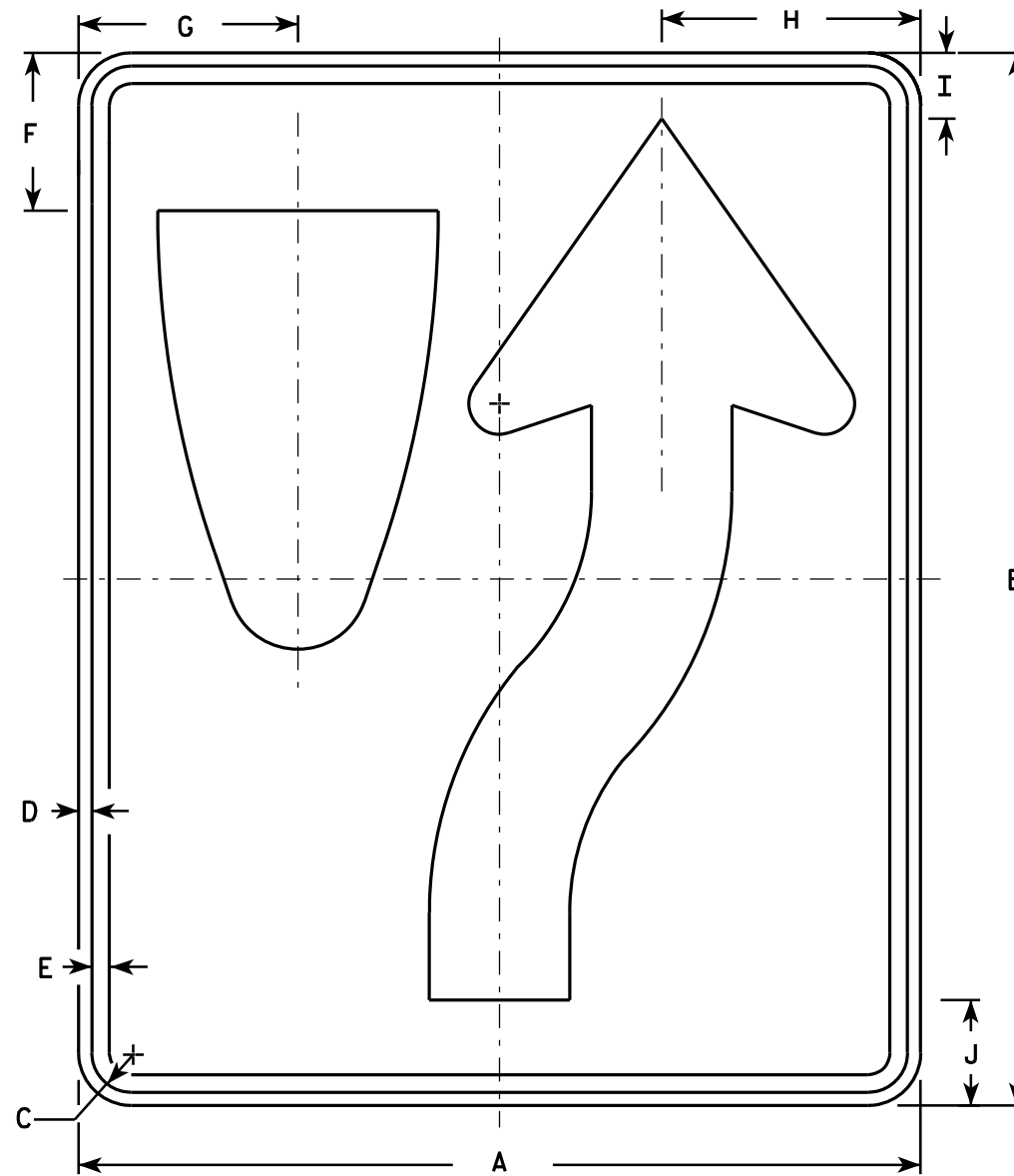
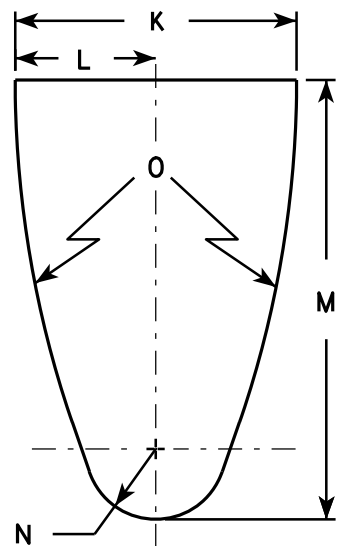
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

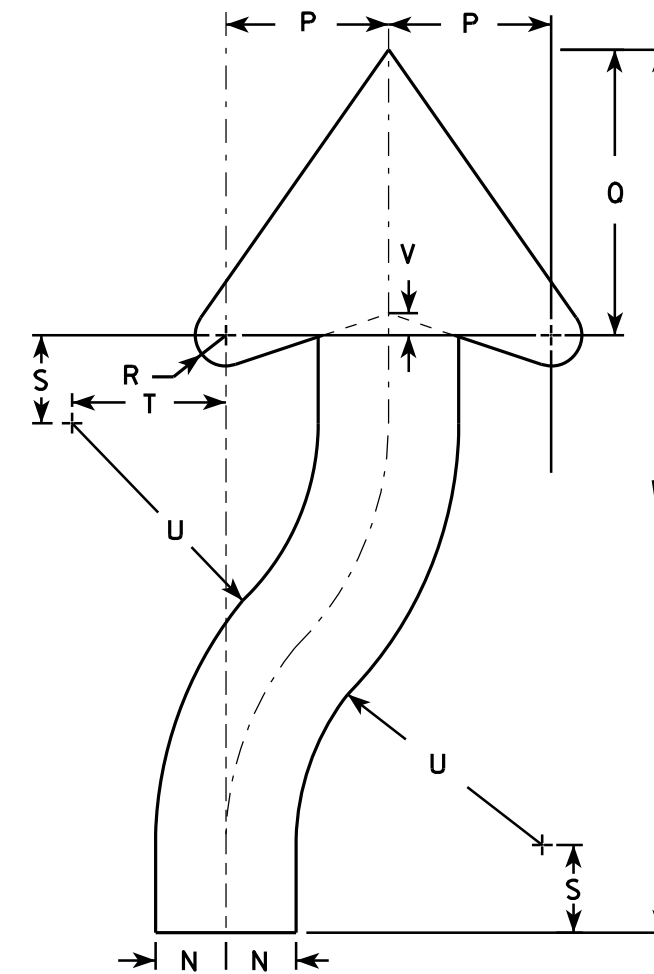
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

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



R4-7



ARROW DETAIL

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

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

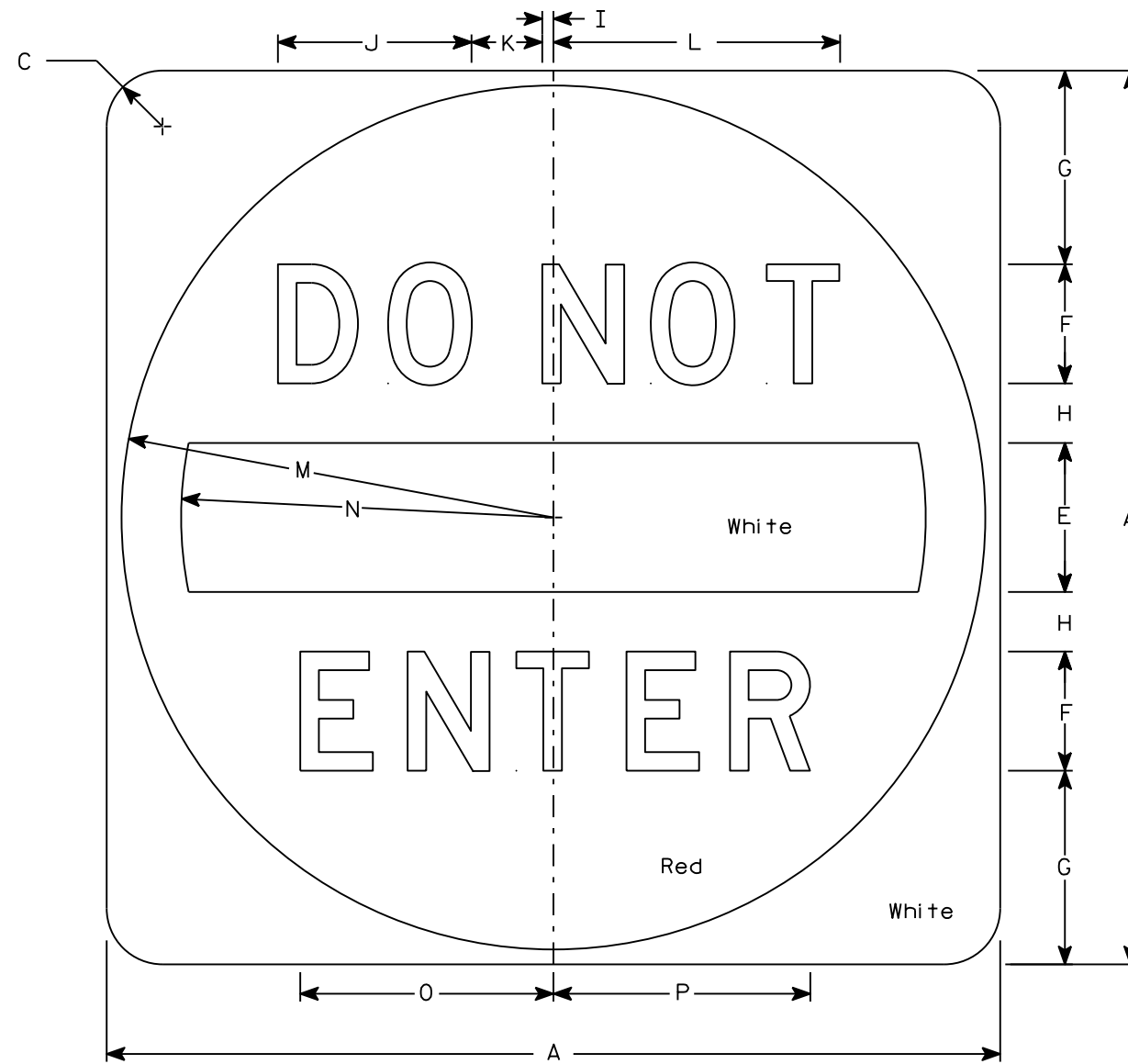
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



R5-1

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		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											6.25
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

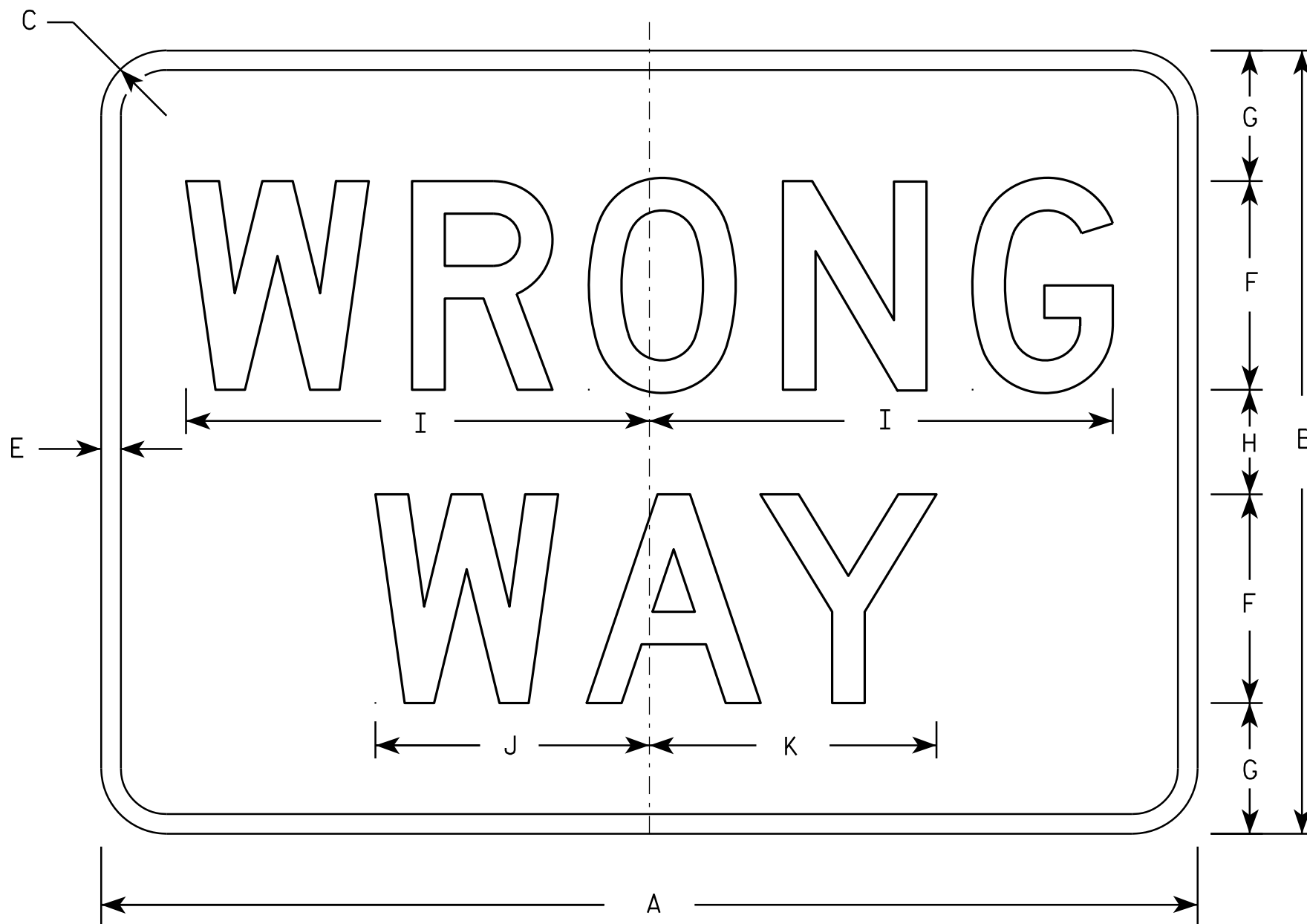
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

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 - Red
Message - White
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.

7

7

R5-1A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

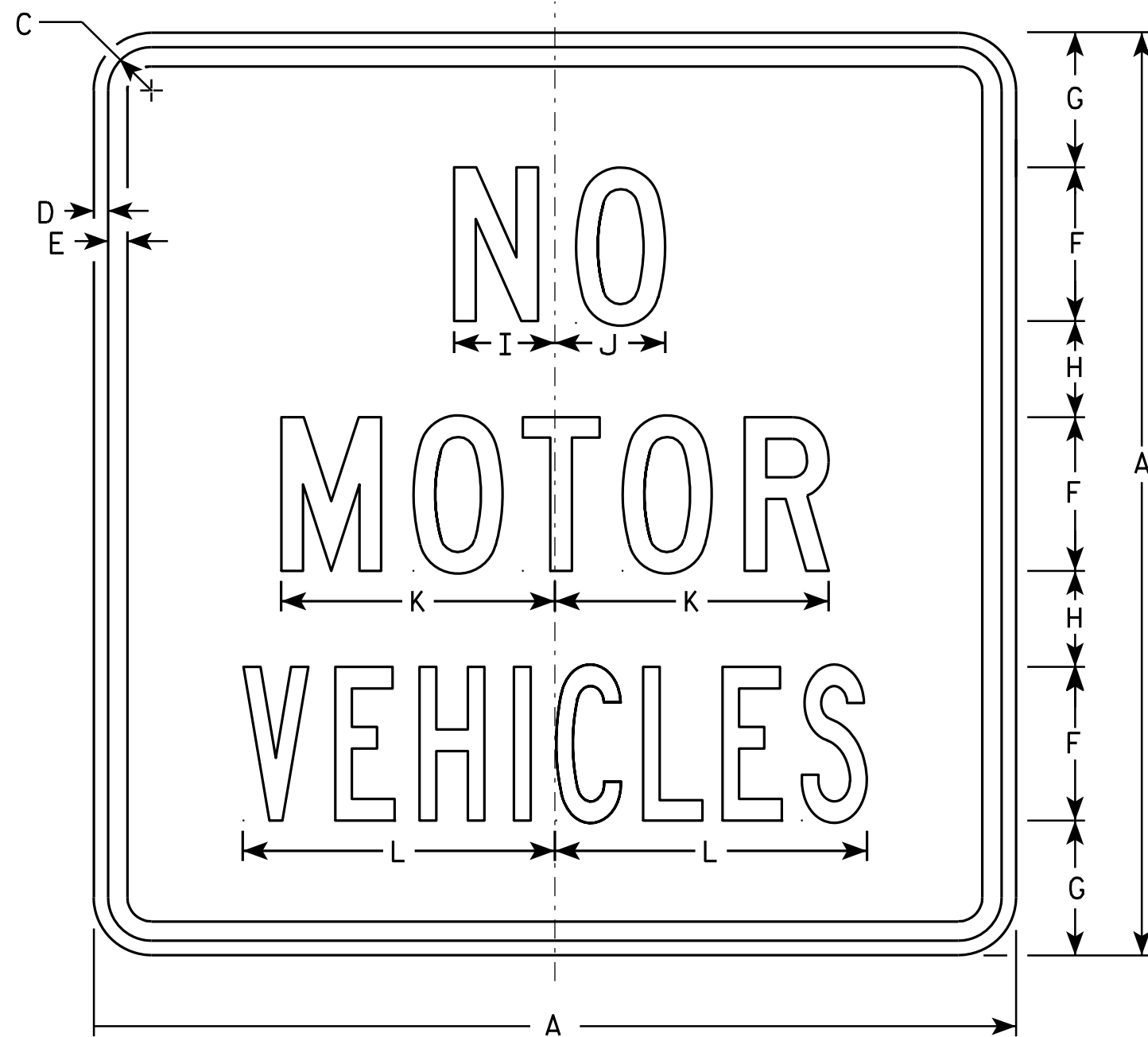
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



R5-3

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 - 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. Lines 1 & 2 are Series C.
Line 3 is Series B.

7

7

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

STANDARD SIGN
R5-3

WISCONSIN DEPT OF TRANSPORTATION

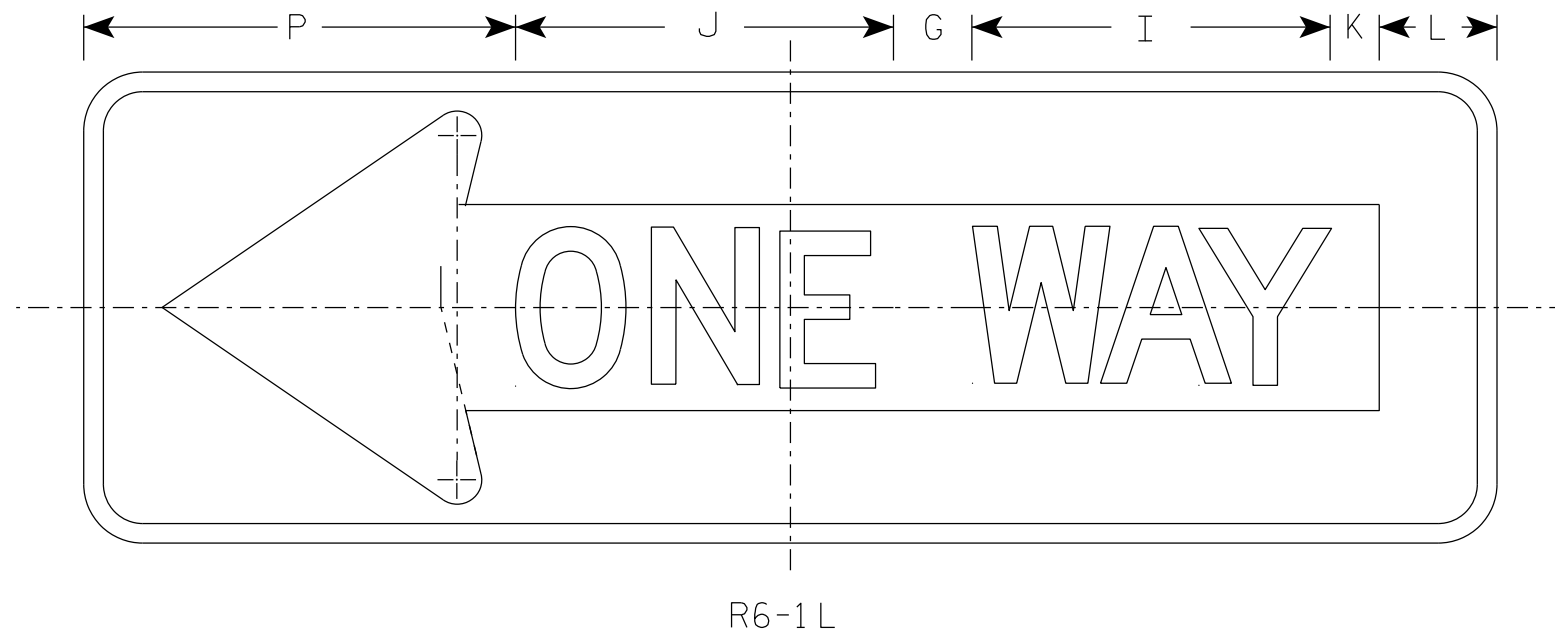
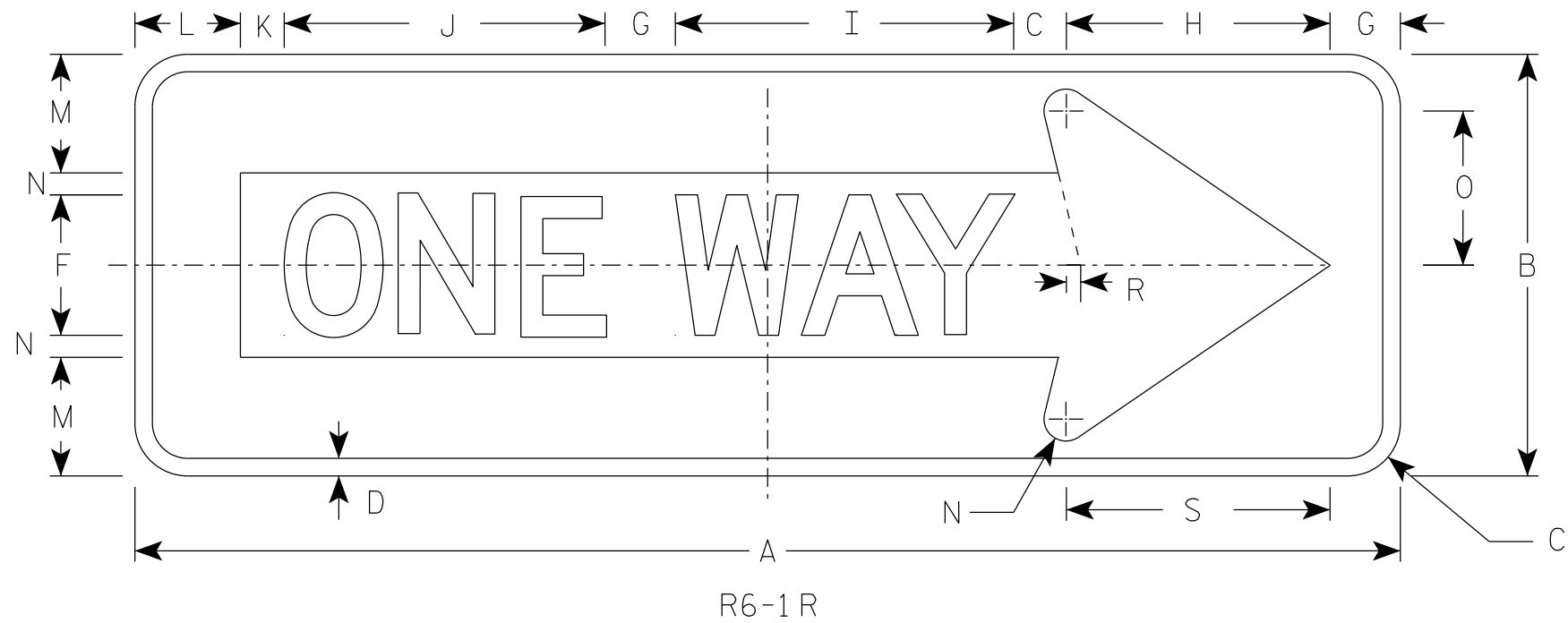
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-3.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - BLACK
Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	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	13 5/8	14 1/2	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	13 5/8	14 1/2	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	13 5/8	14 1/2	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

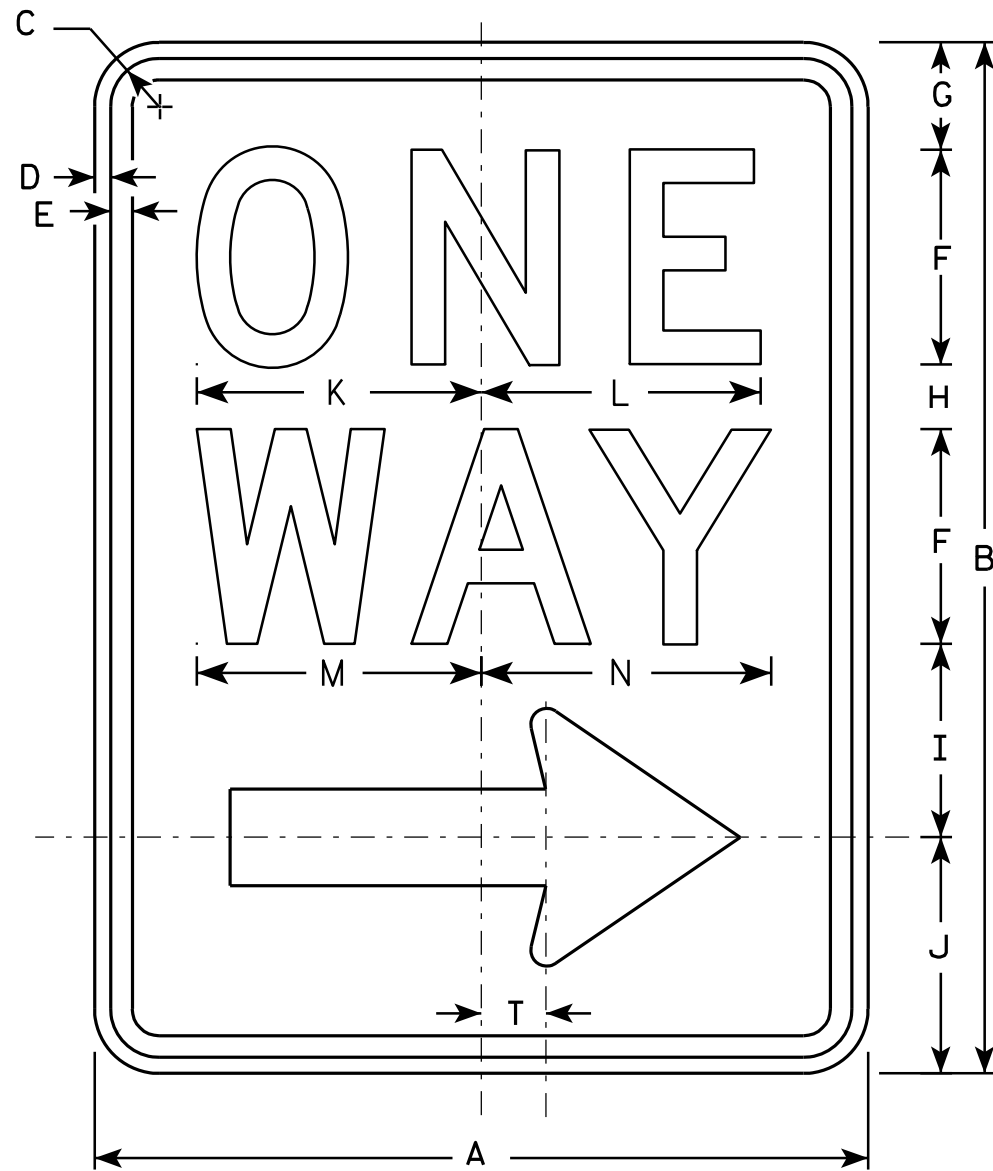
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 07/11/18 PLATE NO. R6-1.3

7

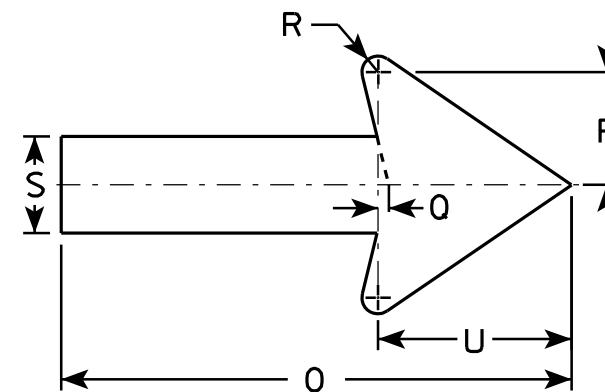
7



R6-2R

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. R6-2L same as R6-2R except arrow points to the left.



7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

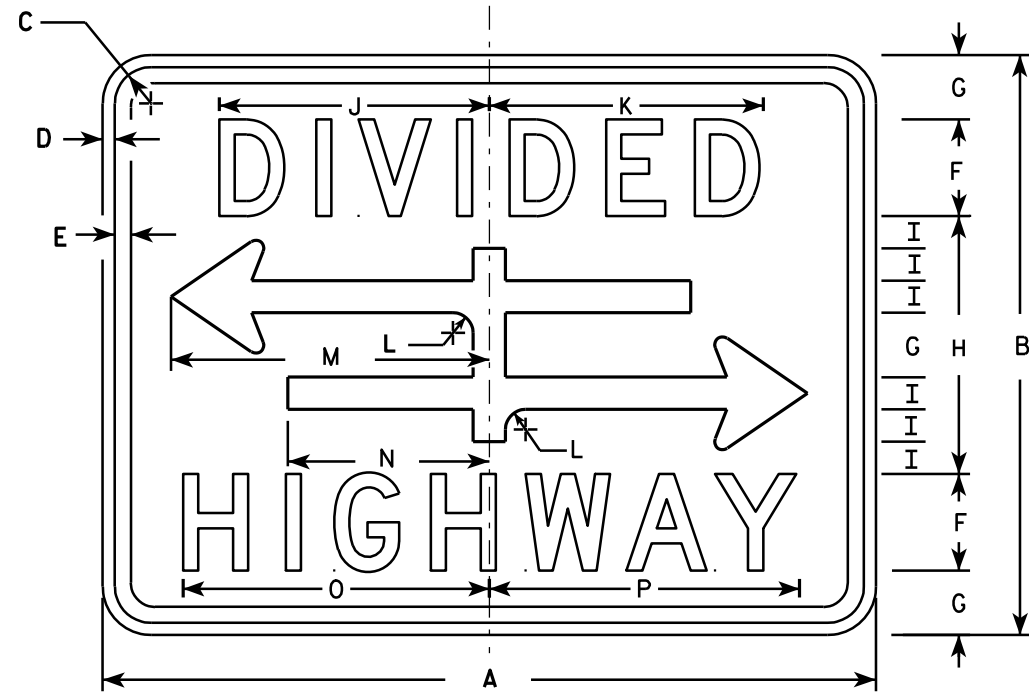
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

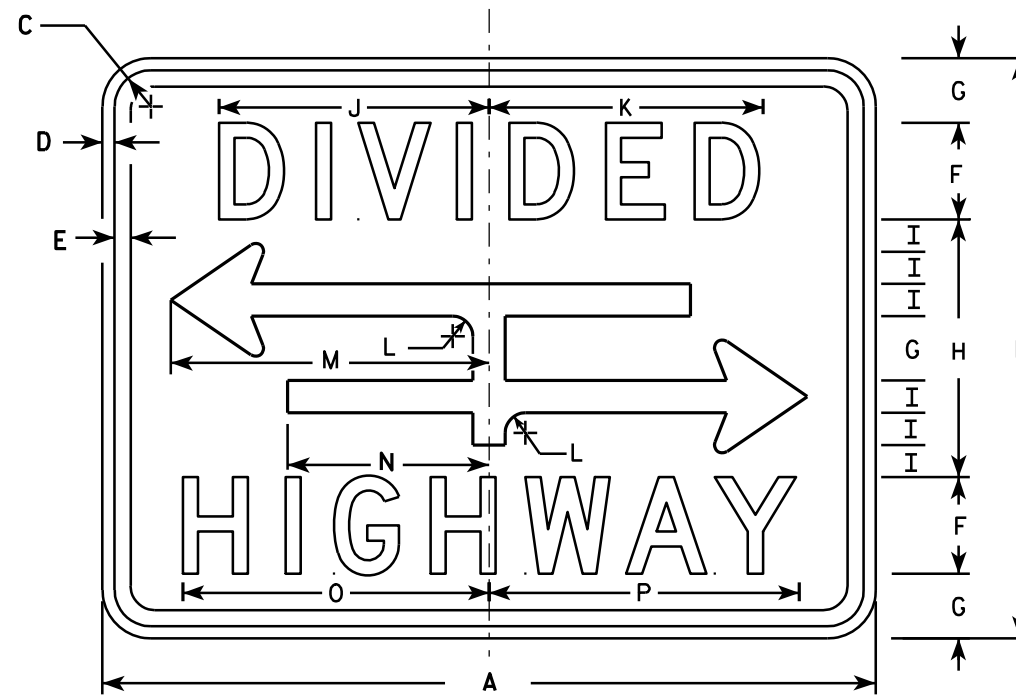
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

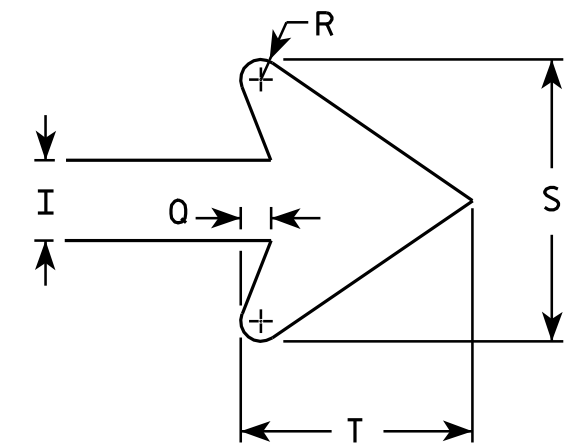
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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



R6-3



R6-3A



ARROW DETAIL

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

STANDARD SIGN
R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

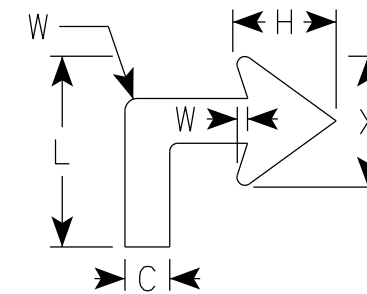
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

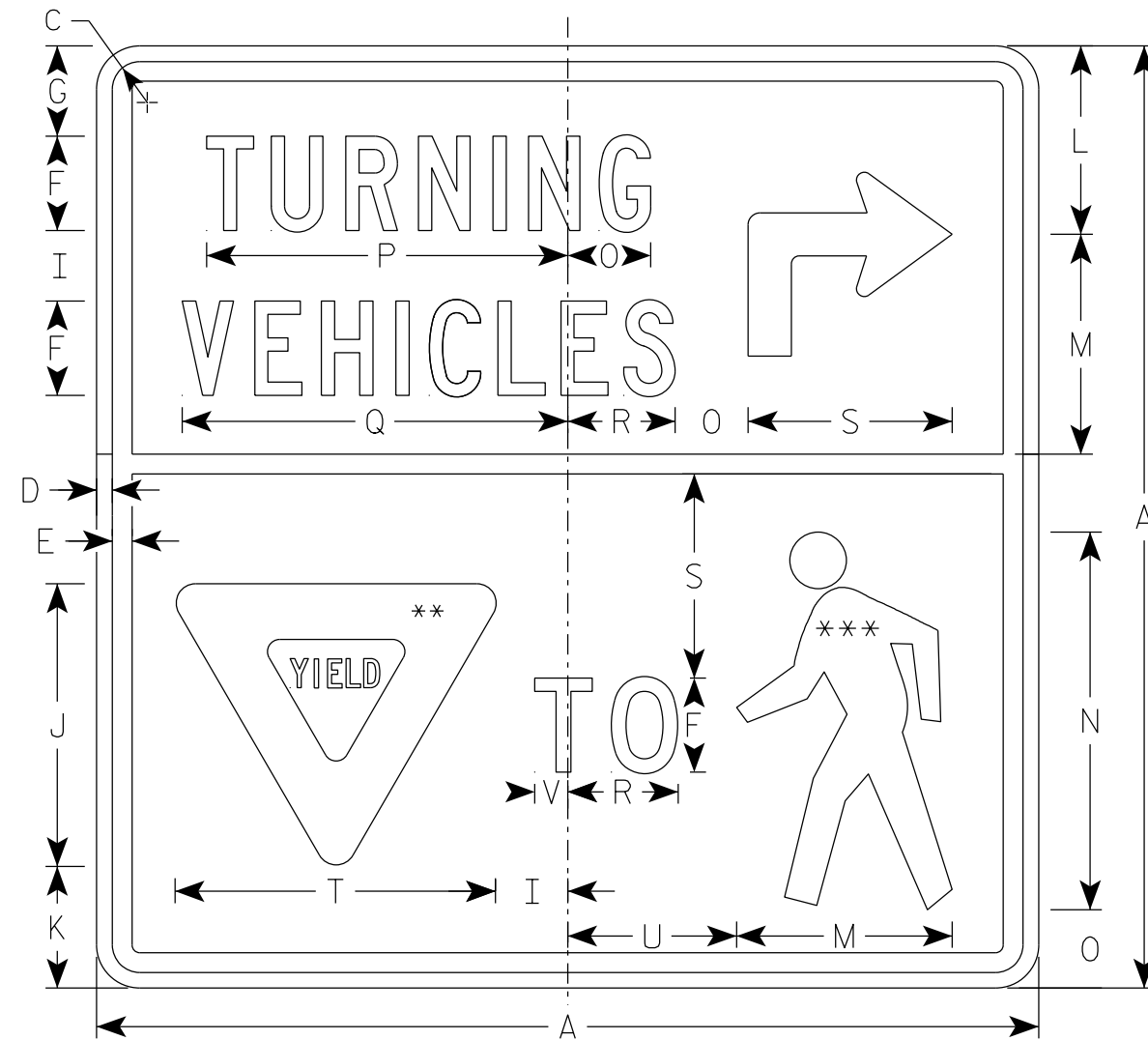
NOTES

- Sign is Type II - See Note 2 for Sheeting Type
- Color:
 - Background - Top Half - Yellow (Type F Reflective)
 - Background - Bottom Half - White (Type SH Reflective)
 - Message - Black
 - Yield Symbol - Red on White (Type SH Reflective)
 - Ped Symbol - Black on White (Type SH Reflective)
- Message Series - C except "T0" Series D

** INSERT R1-2 AND SIZE TO FIT
 *** INSERT W11-2 AND SIZE TO FIT



Arrow Detail



R10-15R

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 3/8	1/2	5/8	3	2 7/8	3	2 1/4	9	3 7/8	6	7	12	2 1/2	11 1/2	12 1/4	3 1/2	6 1/2	10 1/4	5 3/8	1	3/8	4		6.25	
2M	30		1 3/8	1/2	5/8	3	2 7/8	3	2 1/4	9	3 7/8	6	7	12	2 1/2	11 1/2	12 1/4	3 1/2	6 1/2	10 1/4	5 3/8	1	3/8	4		6.25	
3																											
4																											
5																											

STANDARD SIGN
 R10-15R

WISCONSIN DEPT OF TRANSPORTATION

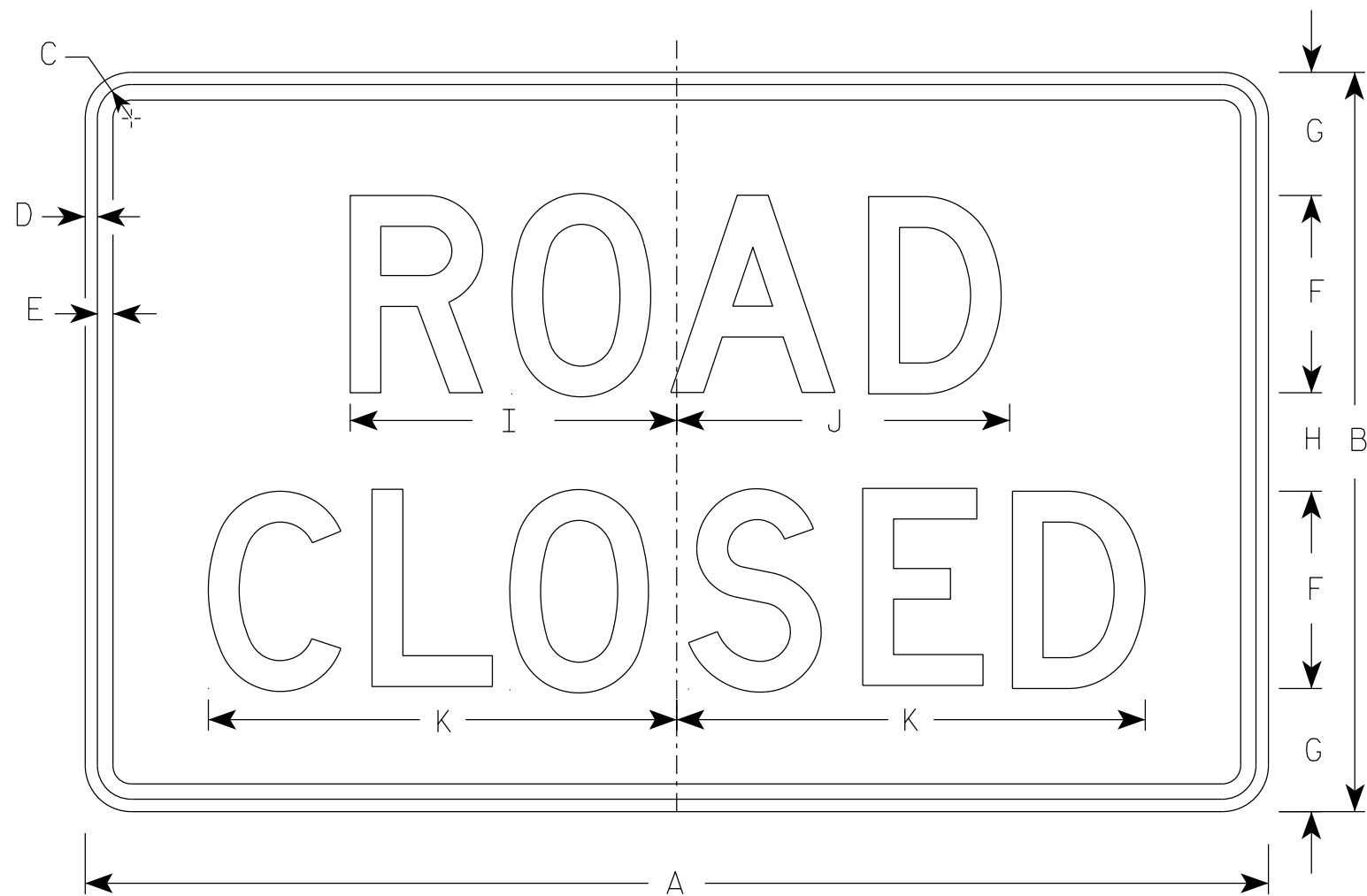
APPROVED *Matthew R. Rauch*
 For State Traffic Engineer

DATE 7/28/2020 PLATE NO. R10-15R.2

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

7

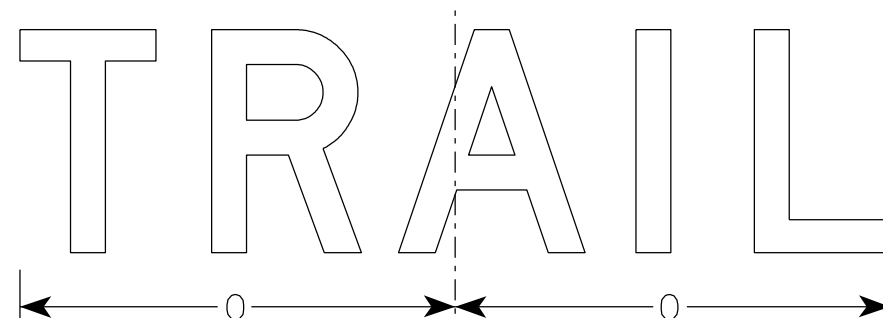
7



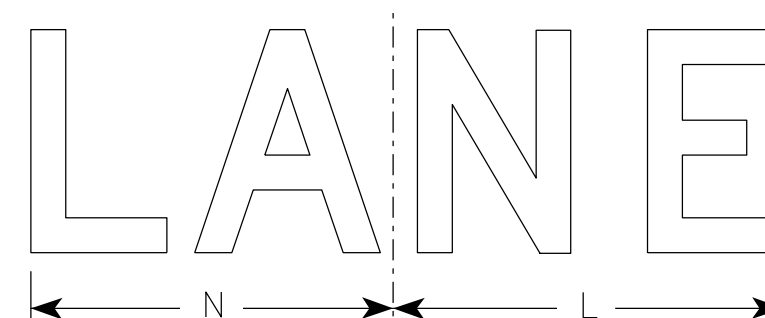
R11-2



R11-2R



R11-2T



R11-2L

NOTES

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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

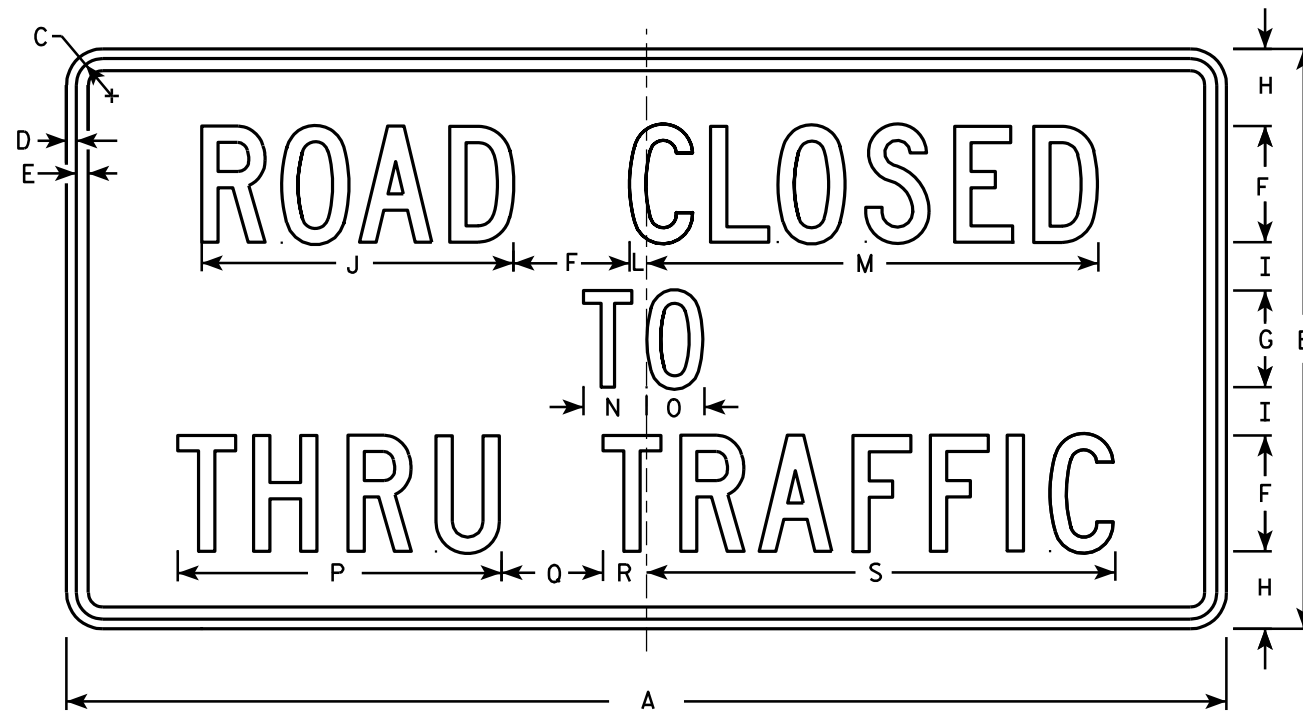
APPROVED *Matthew R Rauch*
For State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



R11-4

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

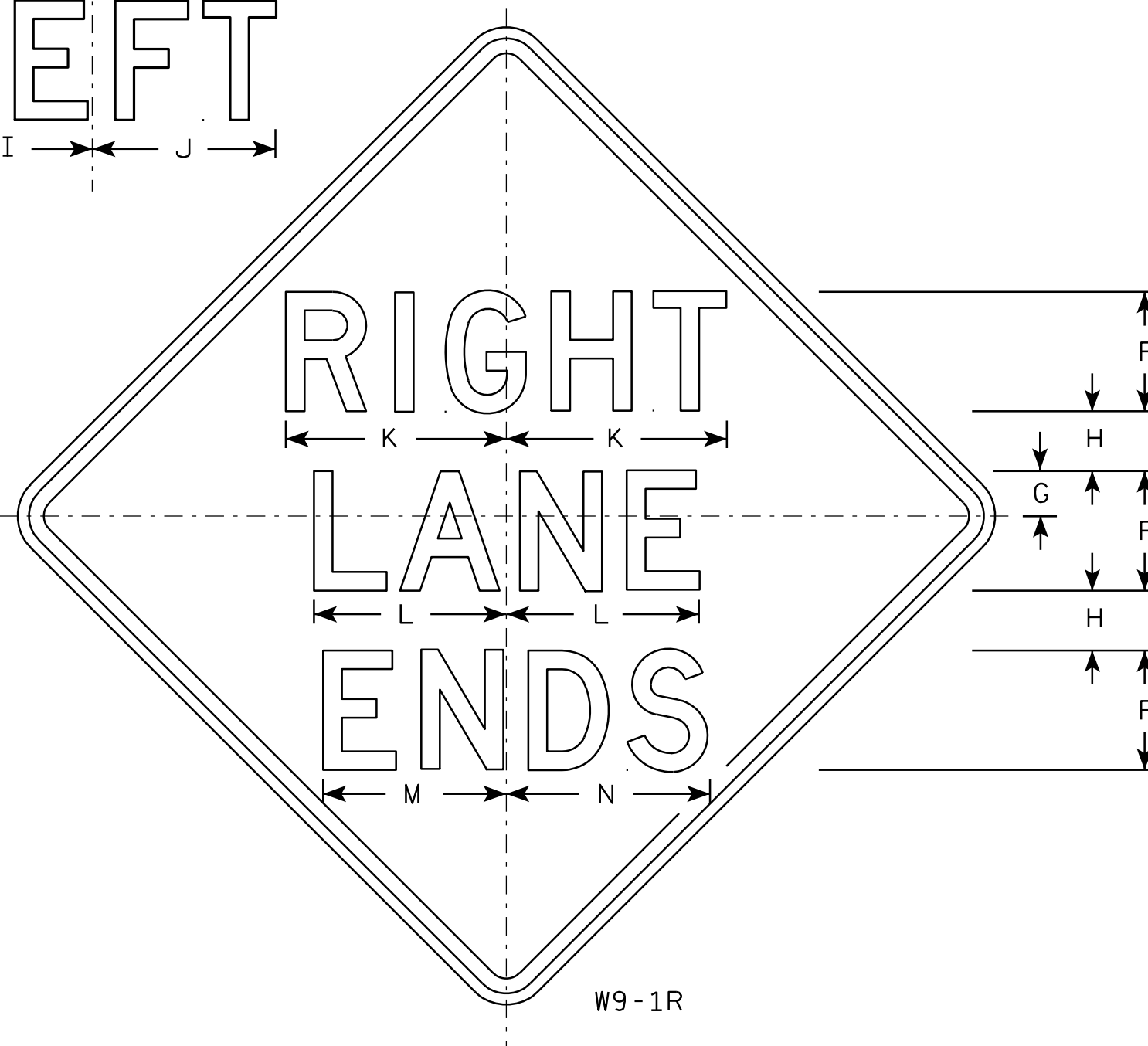
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

LEFT



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. 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. W9-1L same as W9-1R except the word Left replaces Right.

7

7

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

STANDARD SIGN

W9-1

WISCONSIN DEPT OF TRANSPORTATION

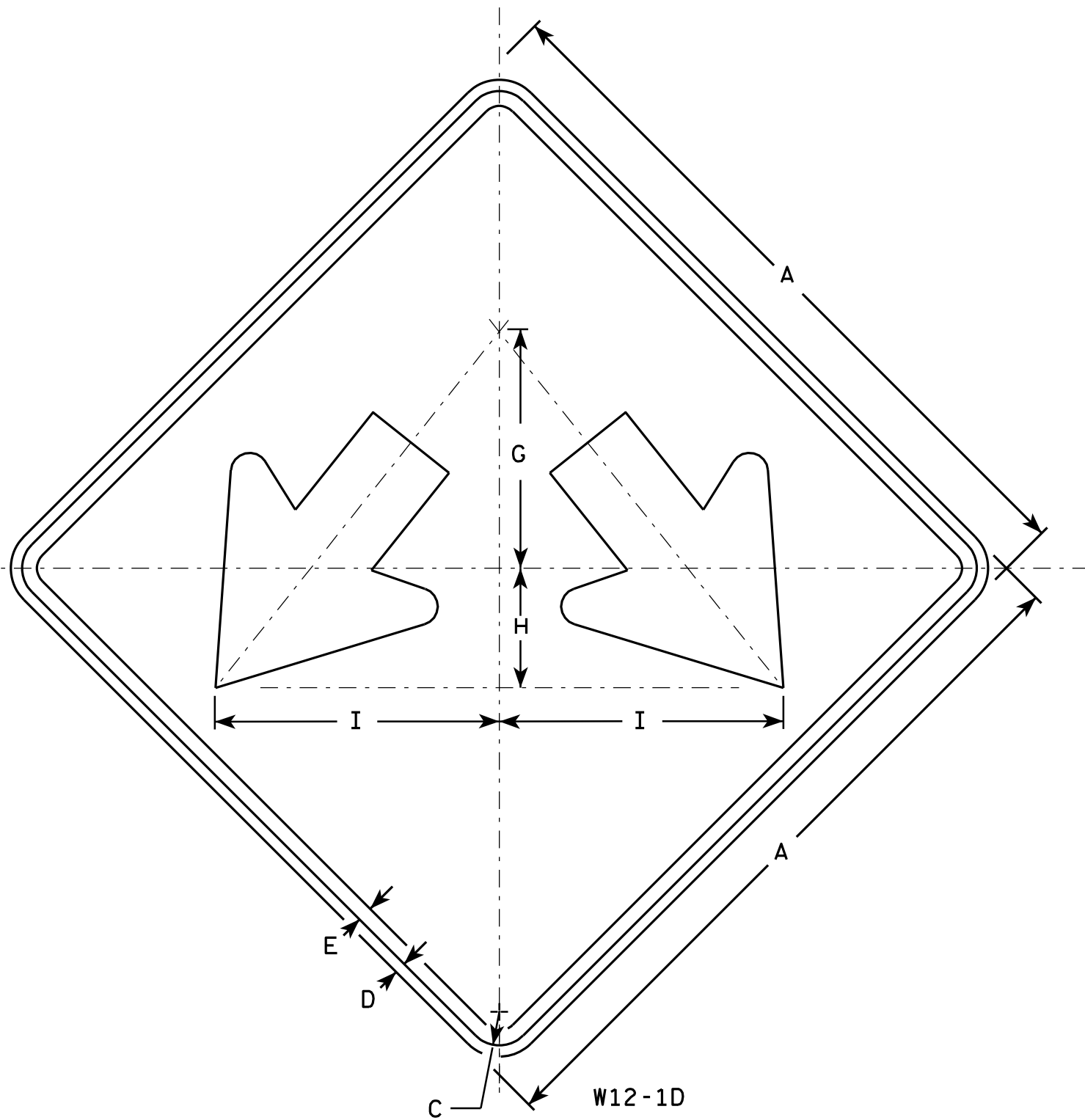
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/18/13 PLATE NO. W9-1.8

PROJECT NO:

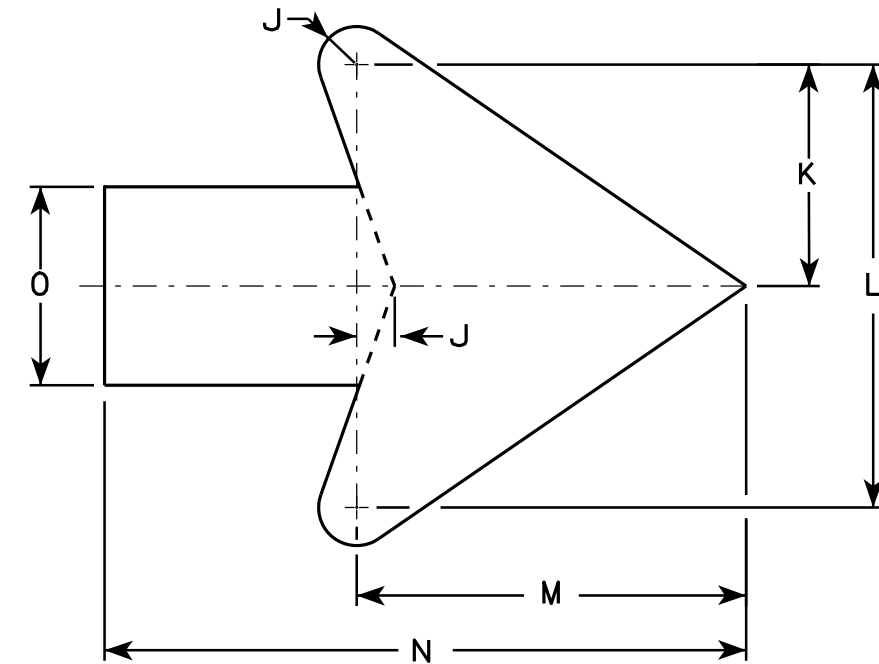
SHEET NO:

E



NOTES

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



Arrow Detail

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

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

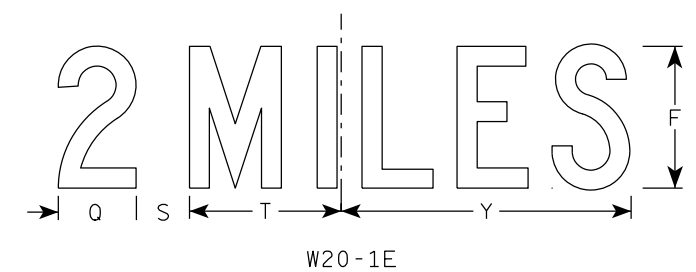
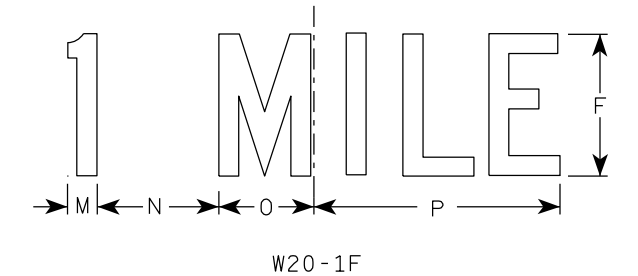
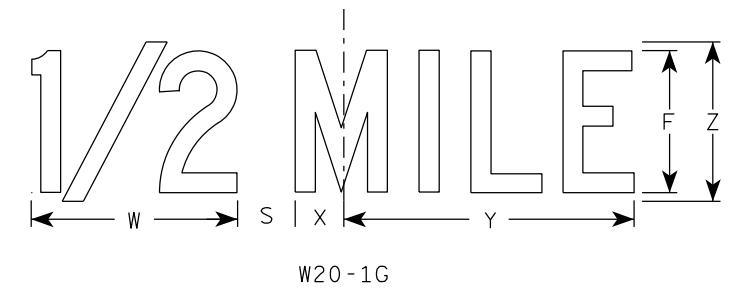
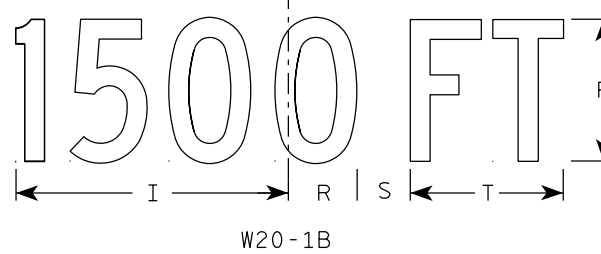
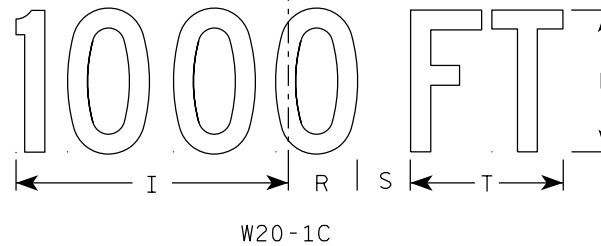
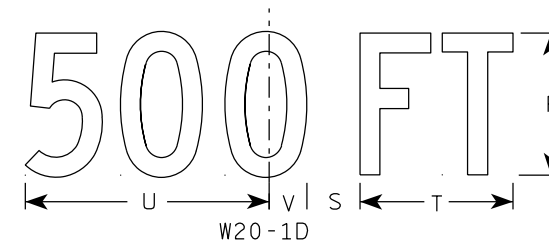
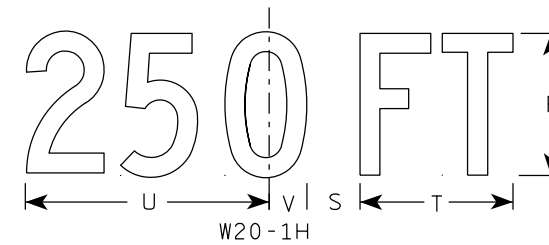
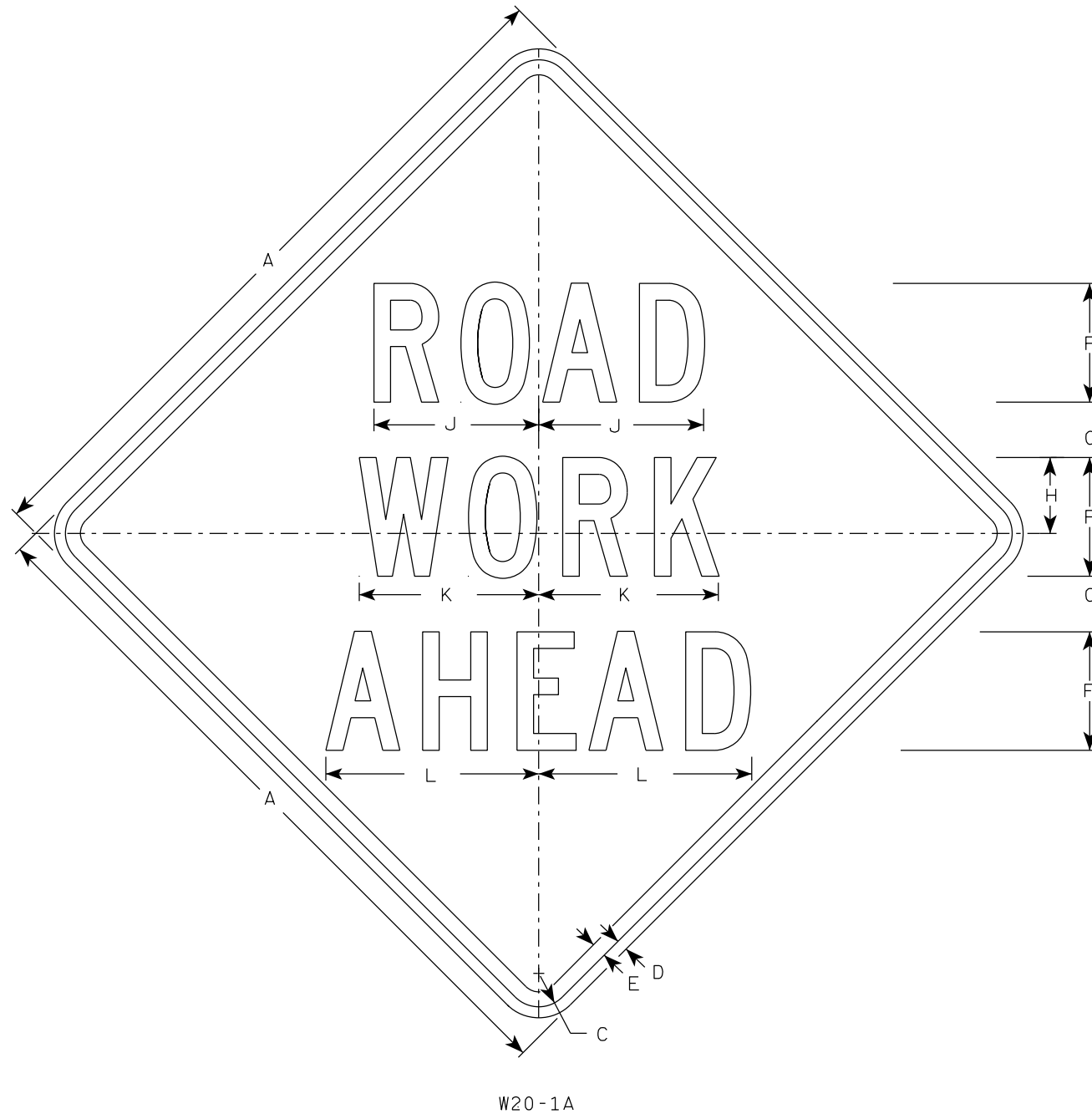
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



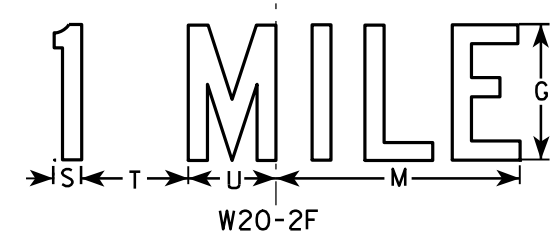
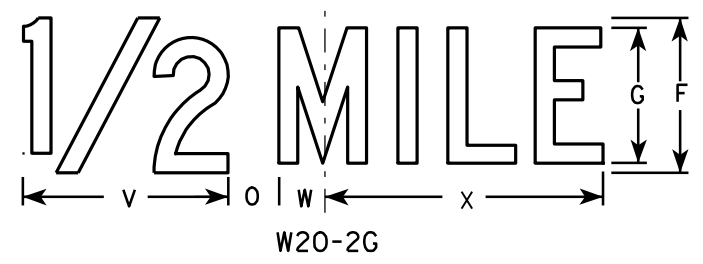
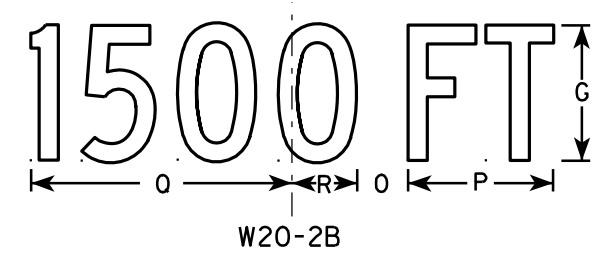
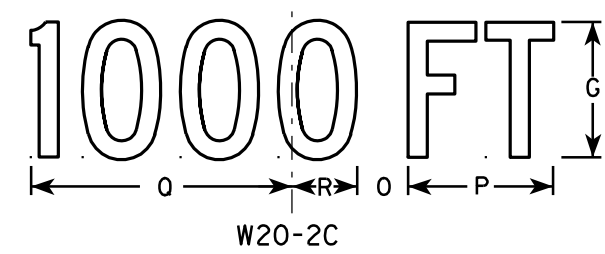
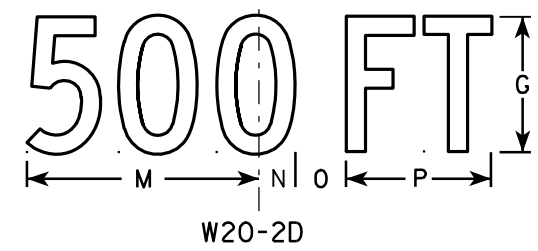
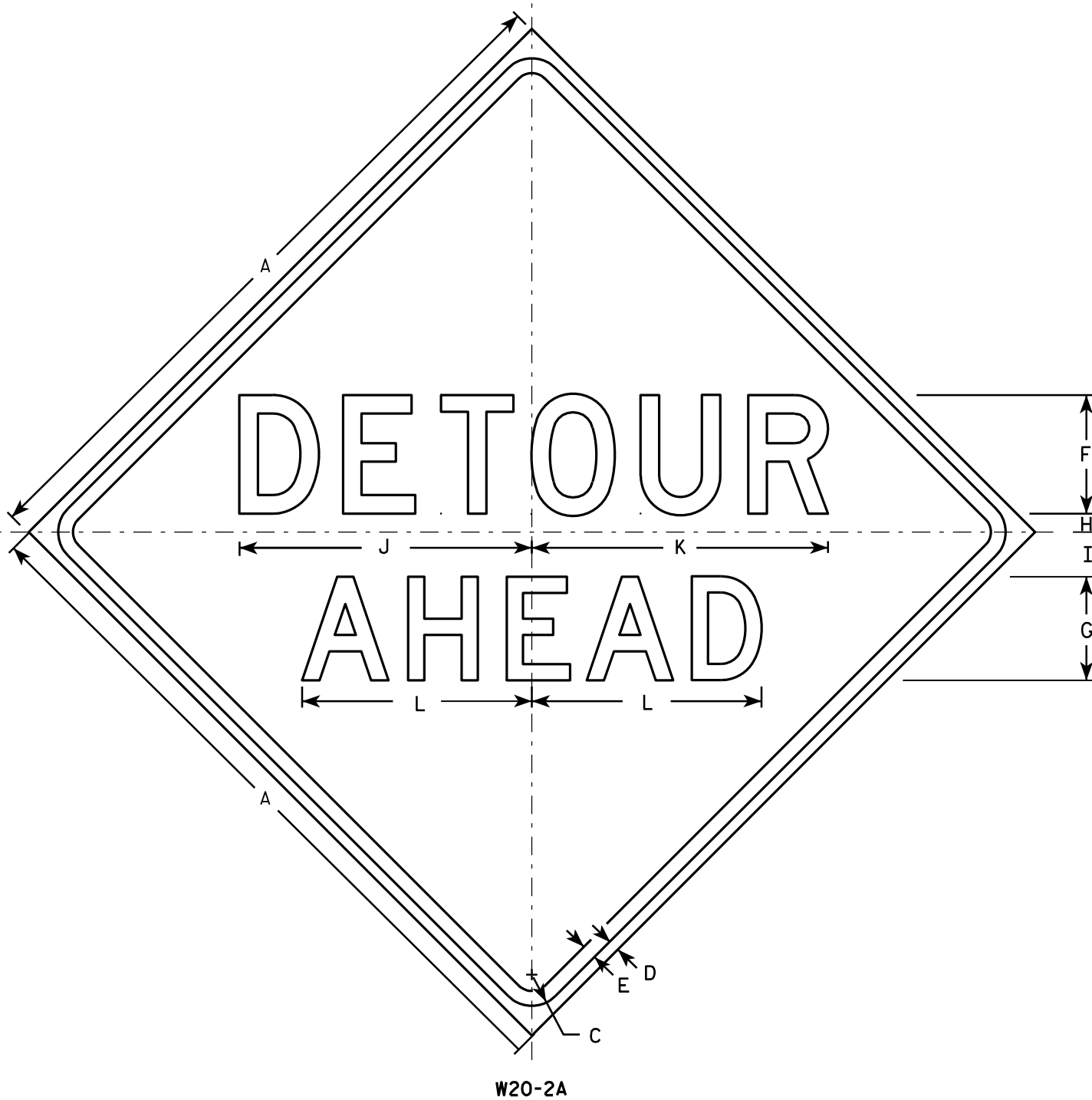
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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



NOTES

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

7

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

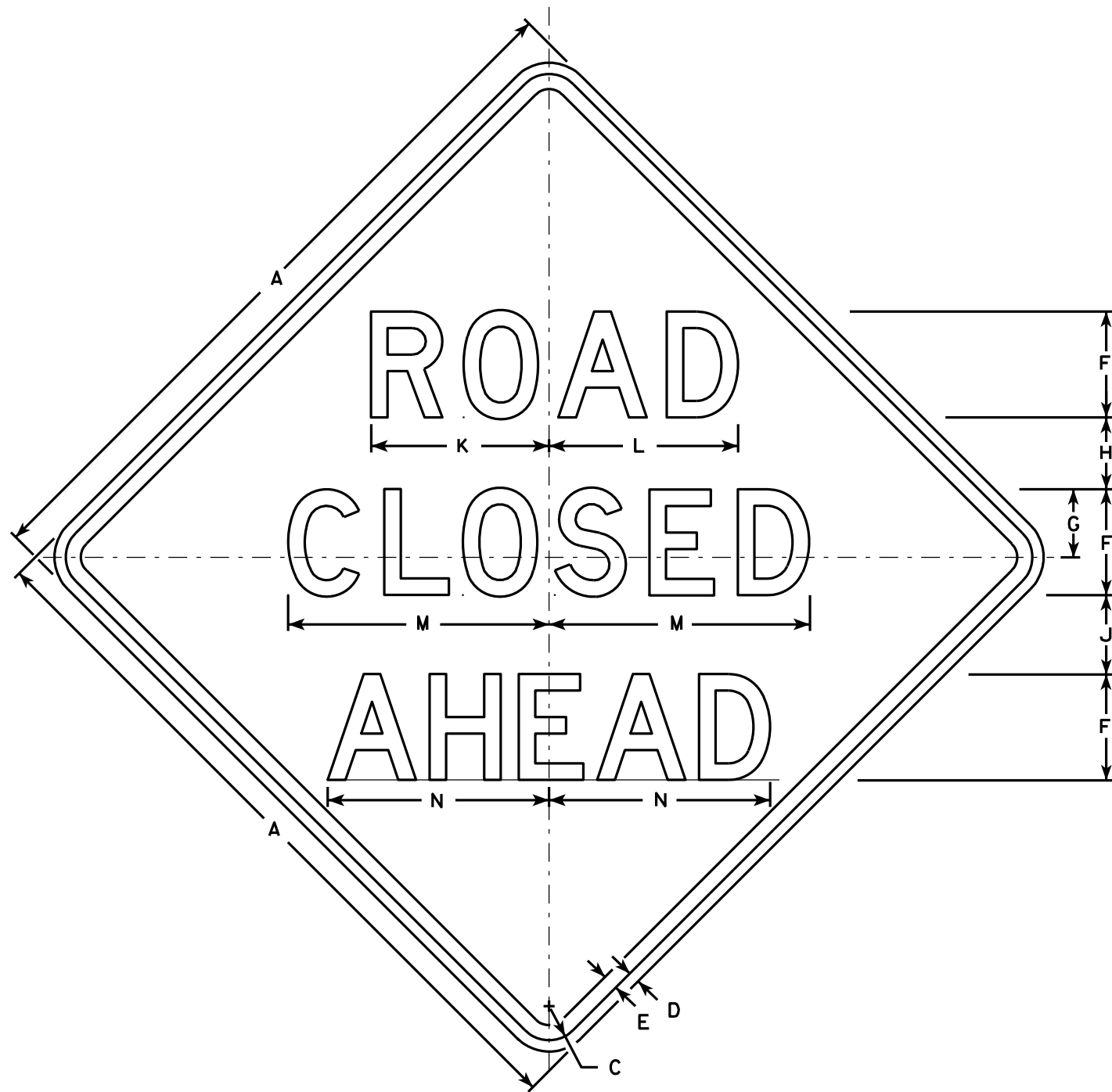
STANDARD SIGN
W20-2A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

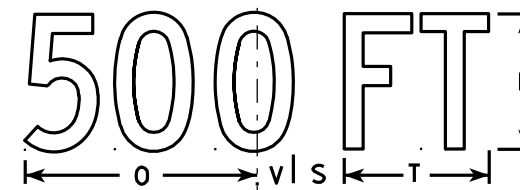
APPROVED *Matthew R. Raub*
for State Traffic Engineer

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

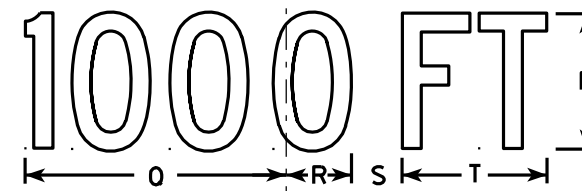
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



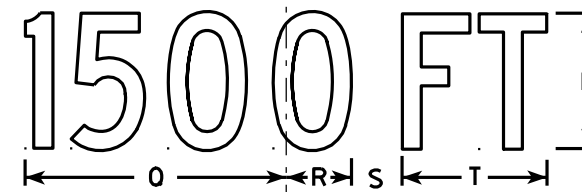
W20-3A



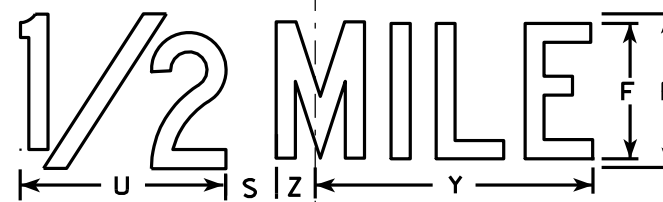
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

NOTES

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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

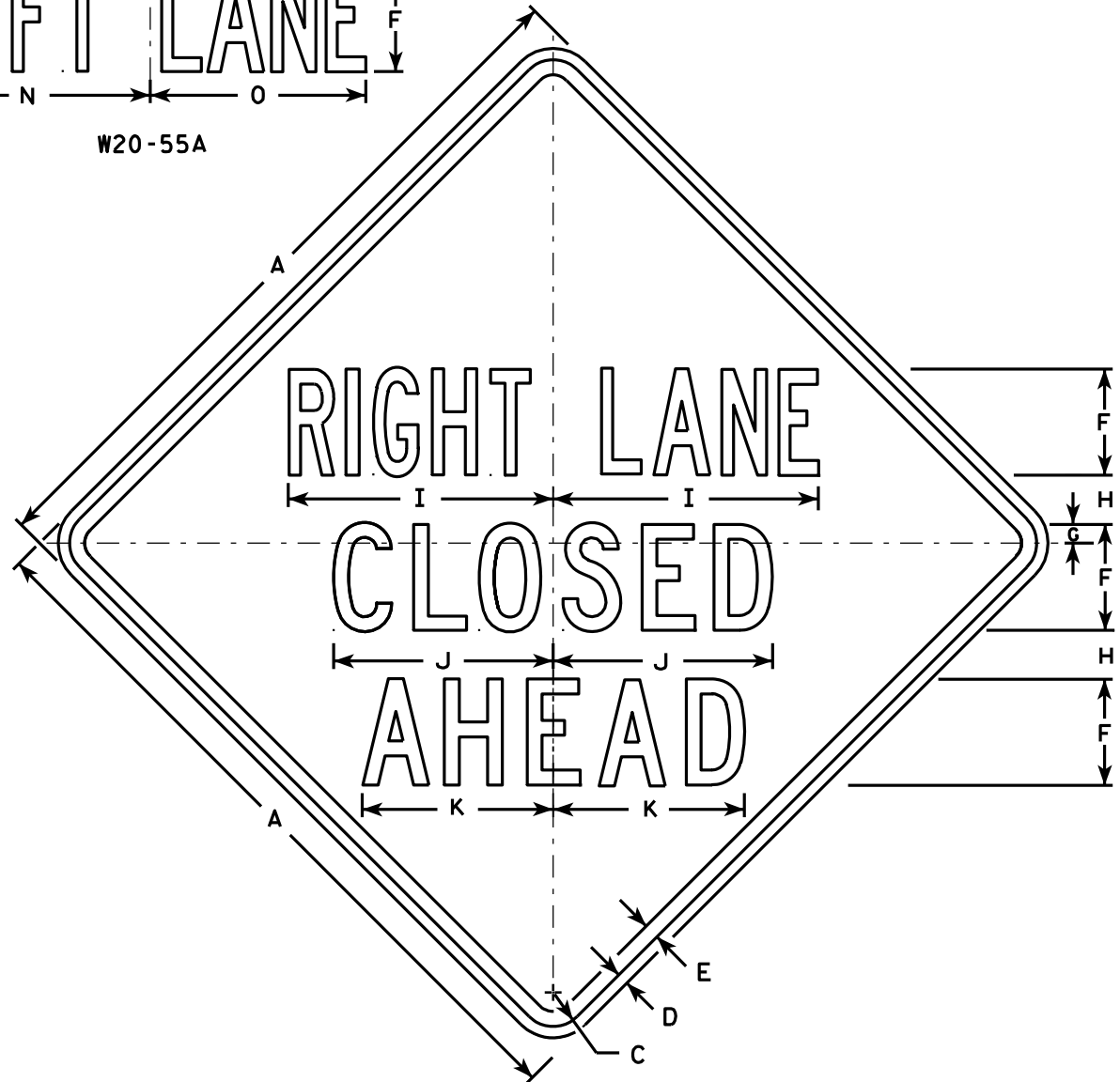
DATE 3/18/11 PLATE NO. W20-3.7

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

NOTES

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

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

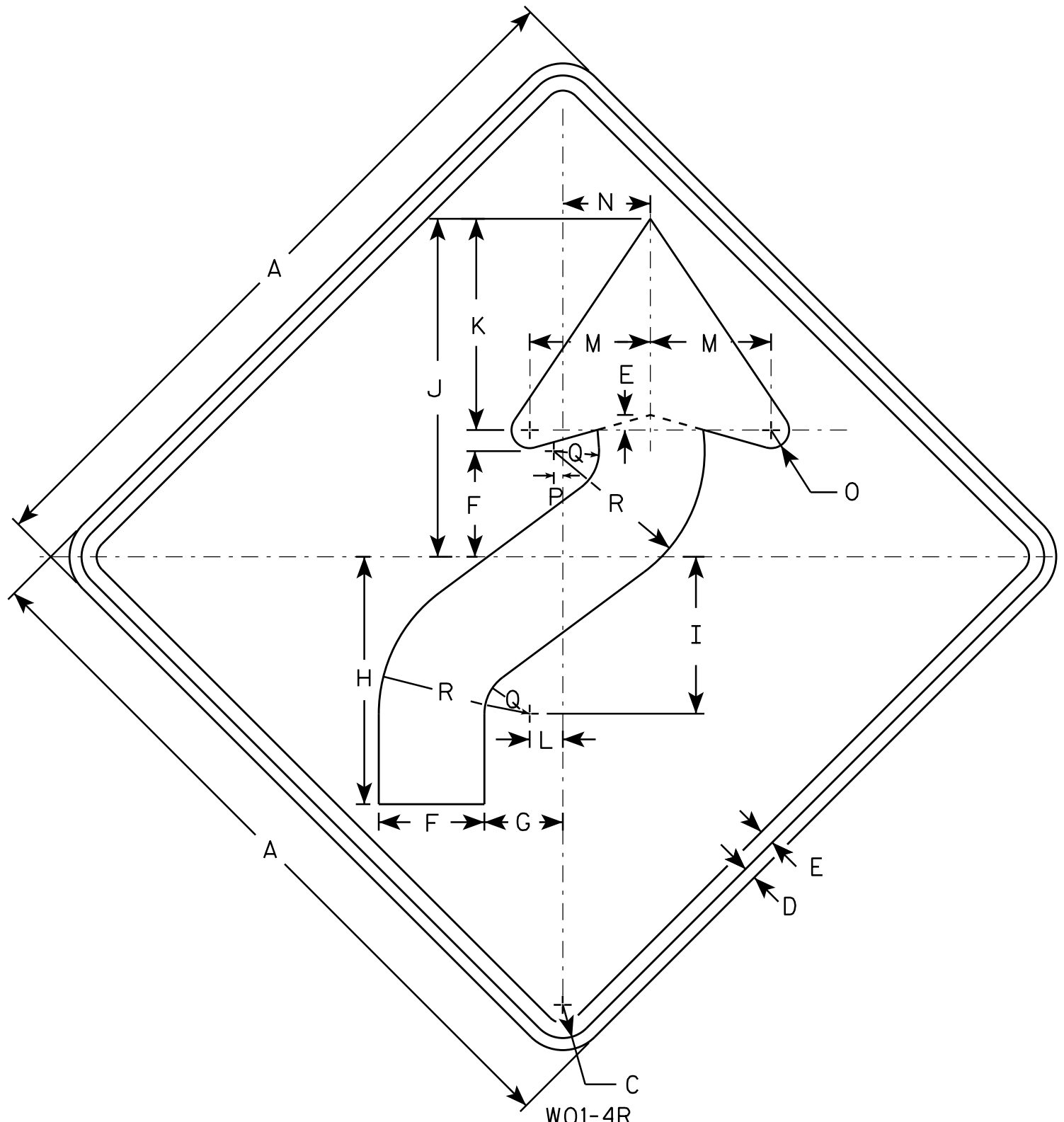
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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W01-4R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

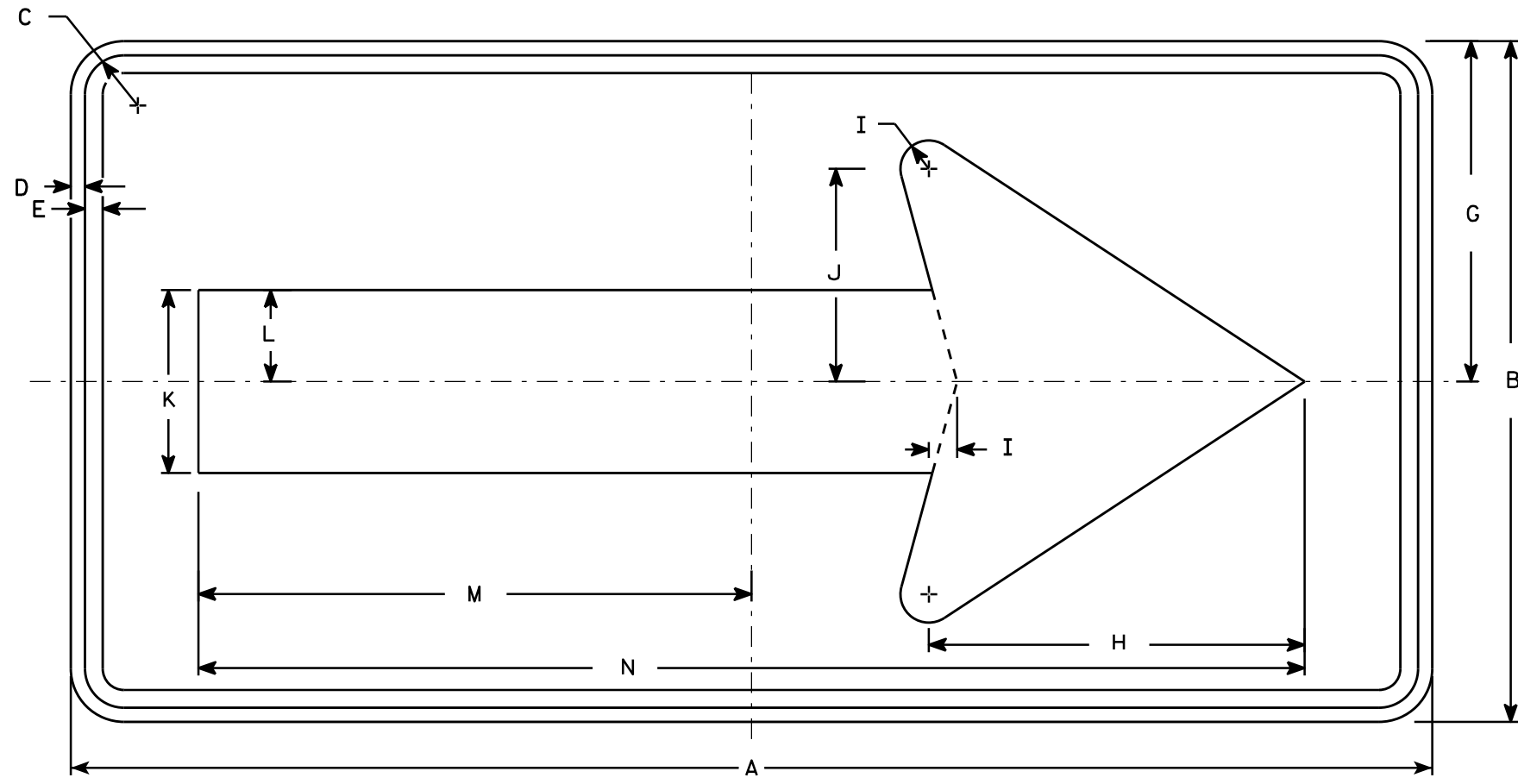
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



W01-6

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SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

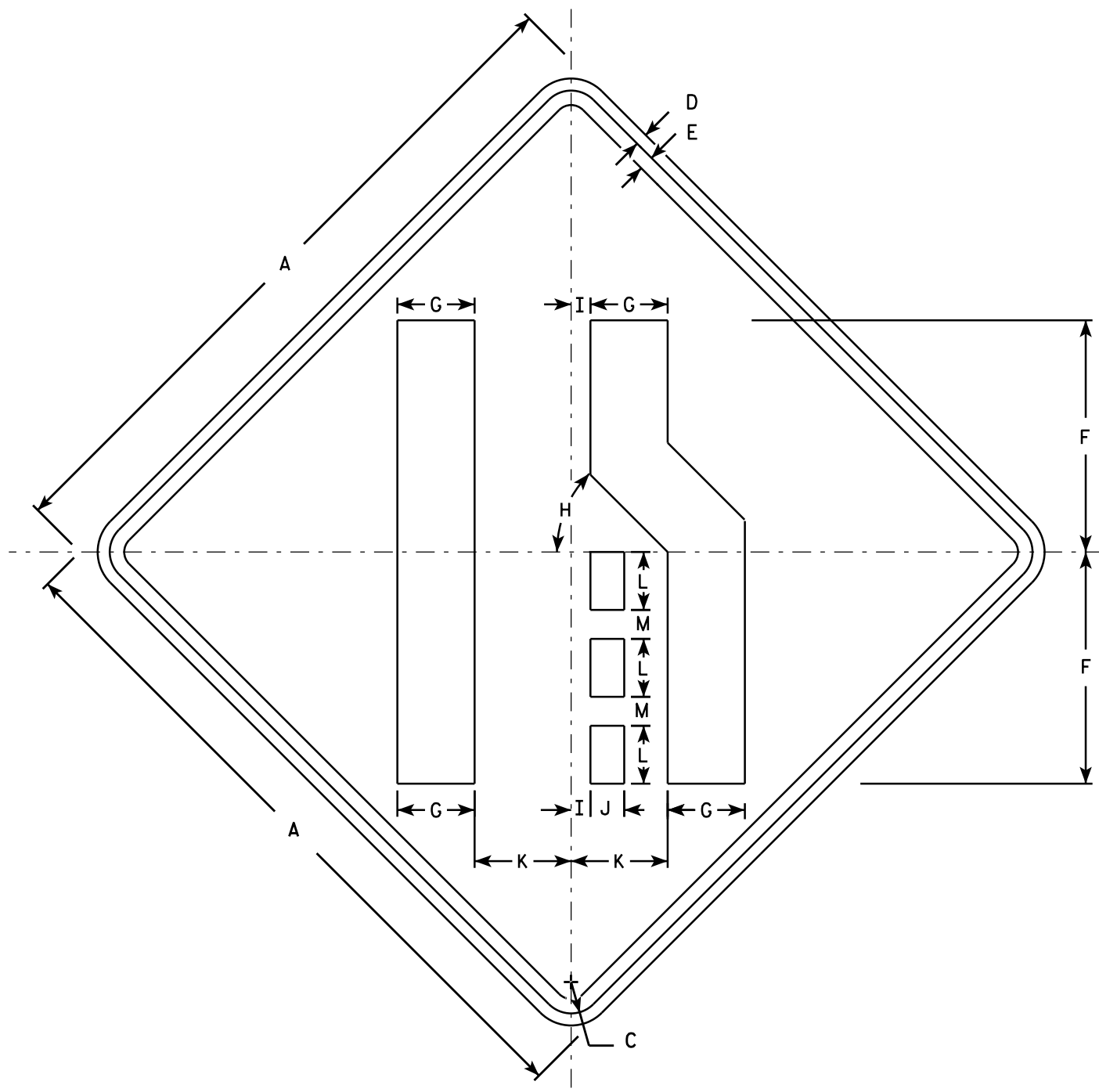
STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



W04-2R

NOTES

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

7

7

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

STANDARD SIGN
W04-2

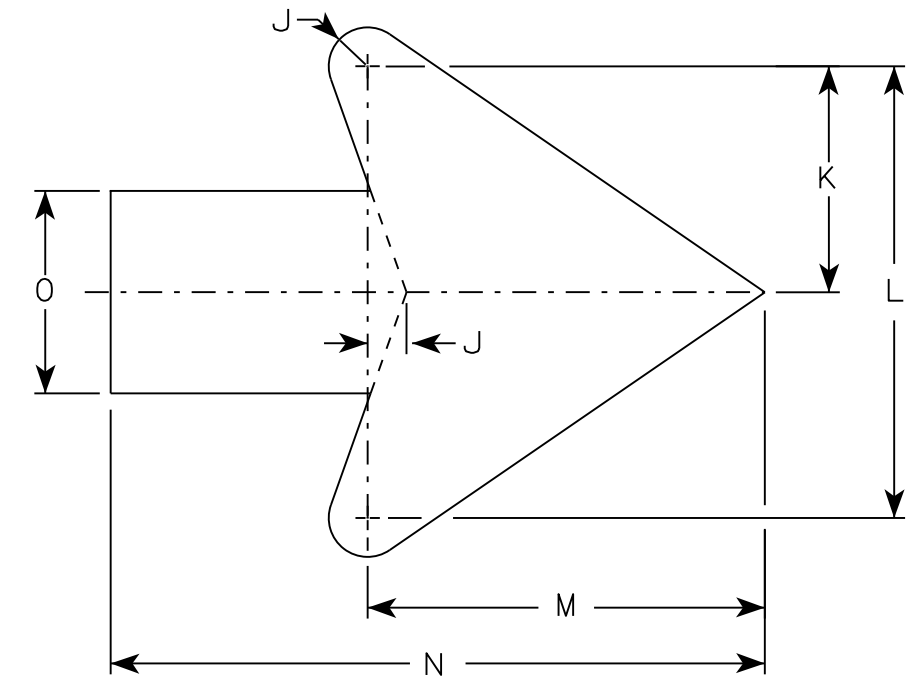
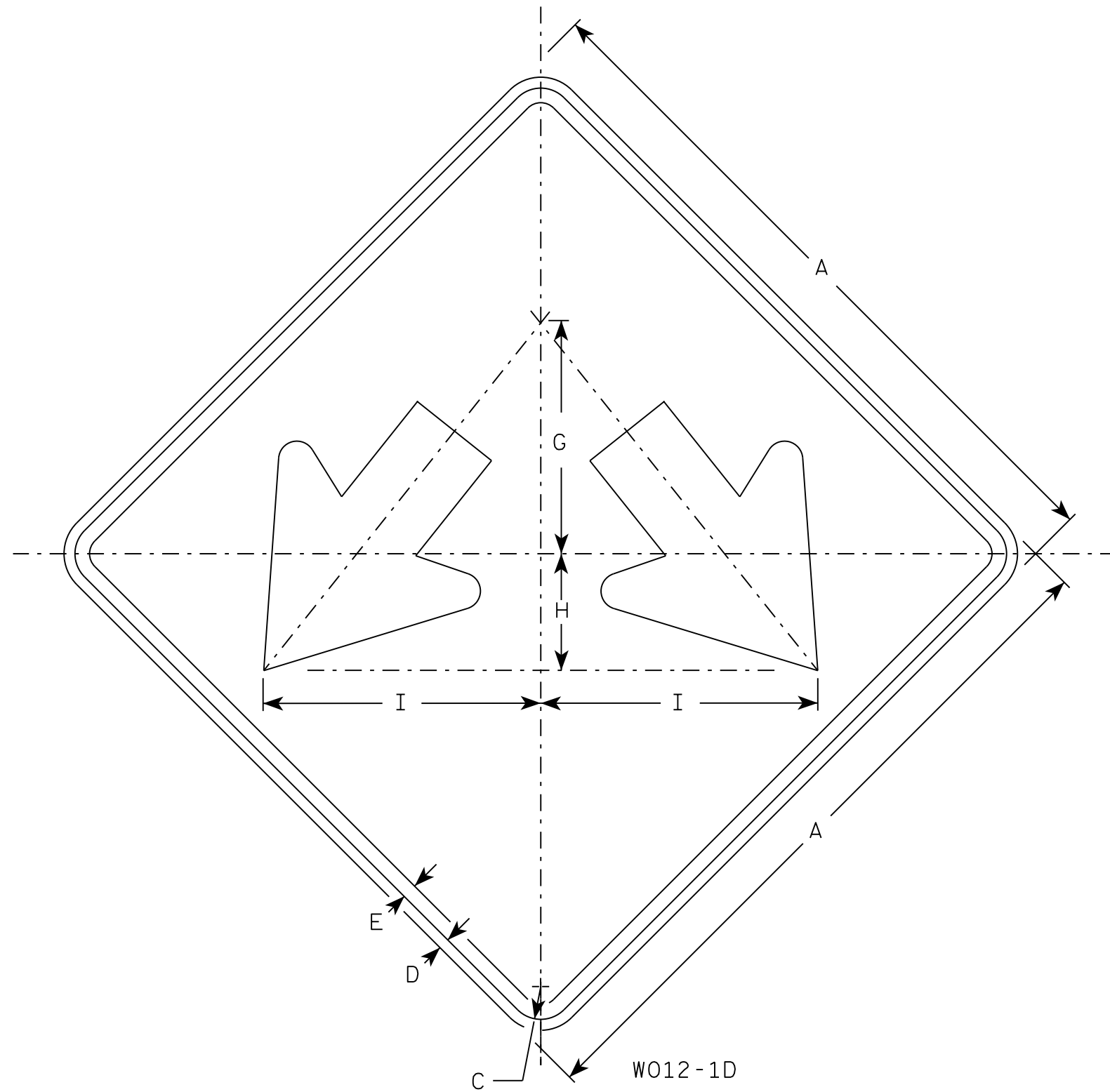
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

NOTES

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



Arrow Detail

7

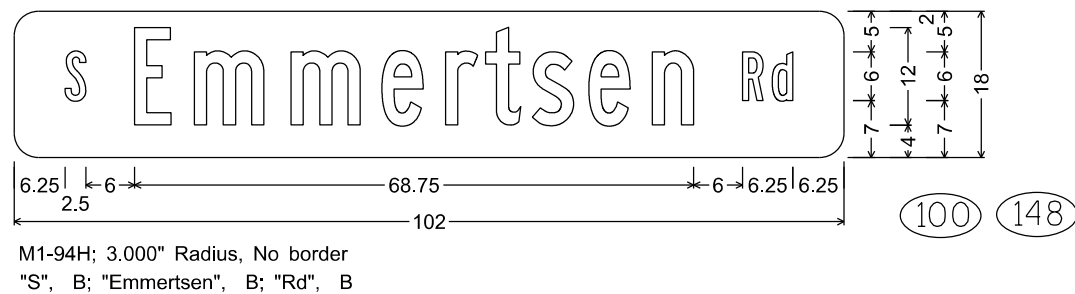
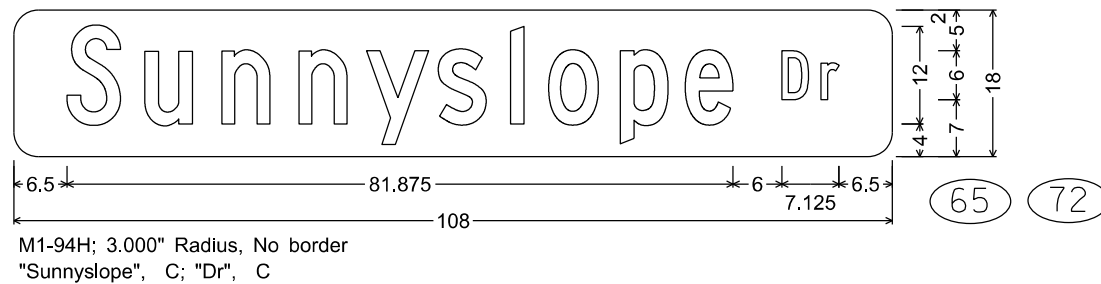
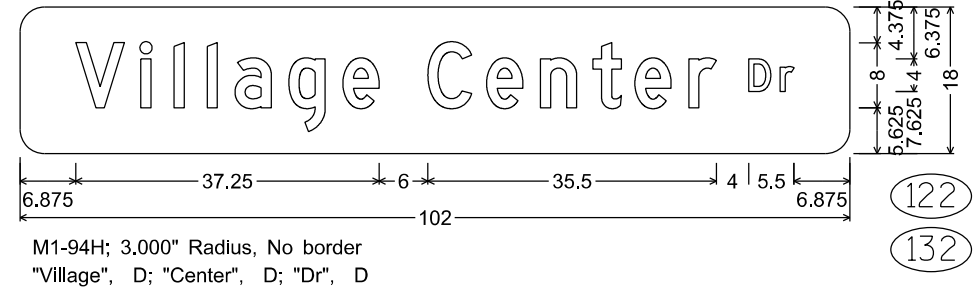
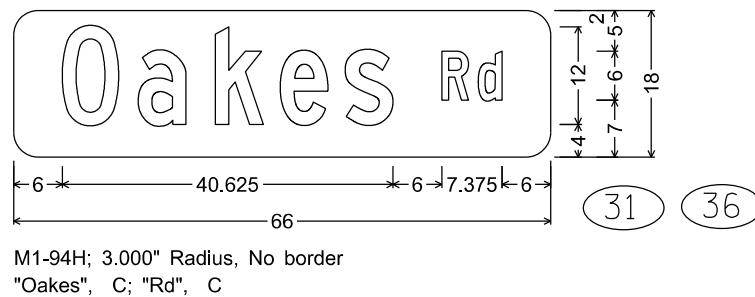
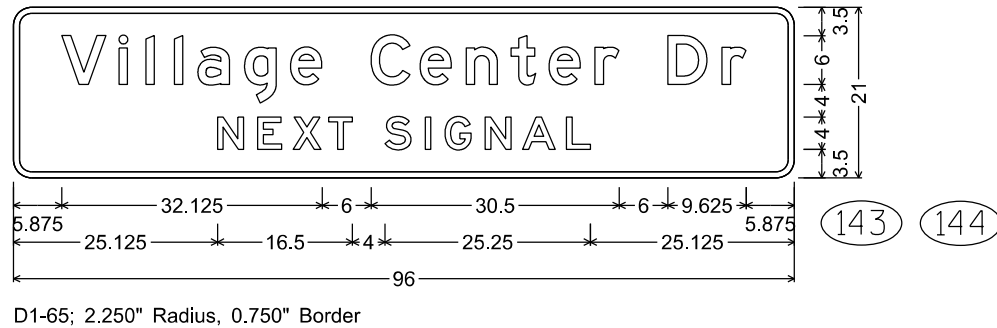
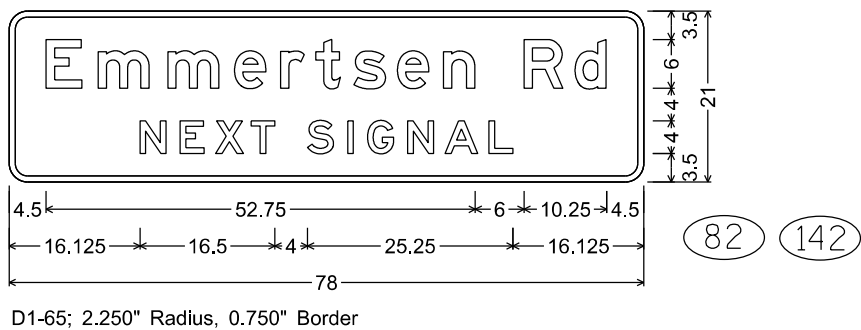
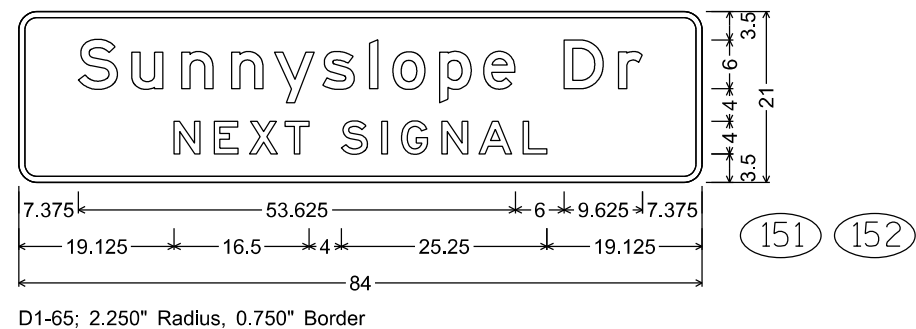
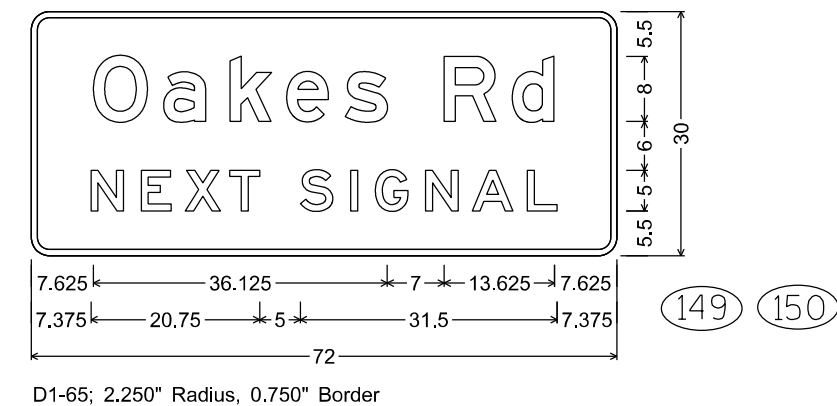
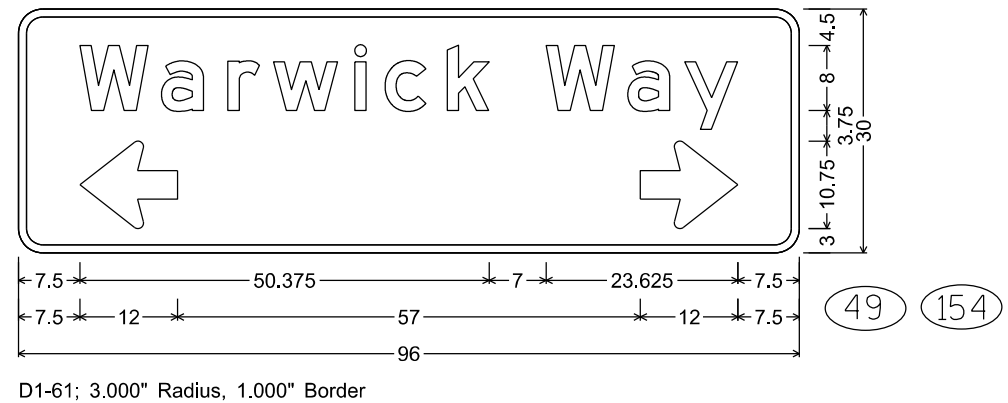
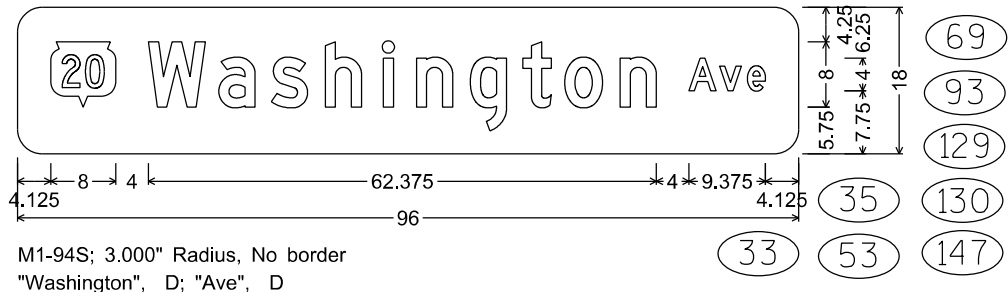
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4	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

STANDARD SIGN
W012-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/28/16 PLATE NO. W012-1D.2



NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - E except as noted

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DESIGN DATA

LIVE LOAD:
ORIGINAL BOX DESIGN LOADING HS20

MATERIAL PROPERTIES:

CONCRETE MASONRY f'c = 3,500 psi
BAR STEEL REINFORCEMENT fy = 60,000 psi

TRAFFIC DATA

AADT (2024) = 40500
AADT (2044) = 44800
DESIGN SPEED = 45 MPH

LEGEND

(X) INDICATES WINGWALL NUMBER

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- EXISTING STRUCTURE DIMENSIONS ARE BASED ON THE EXISTING STRUCTURE PLANS.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS NOTED OTHERWISE.
- ALL STATIONS AND ELEVATIONS ARE IN FEET.
- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-51-16" SHALL BE THE EXISTING GROUND LINE.
- BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- AT THE BACK FACE OF THE WALLS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE WALL CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
- NEW NAME PLATE TO SHOW ORIGINAL CONSTRUCTION DATE: 1963

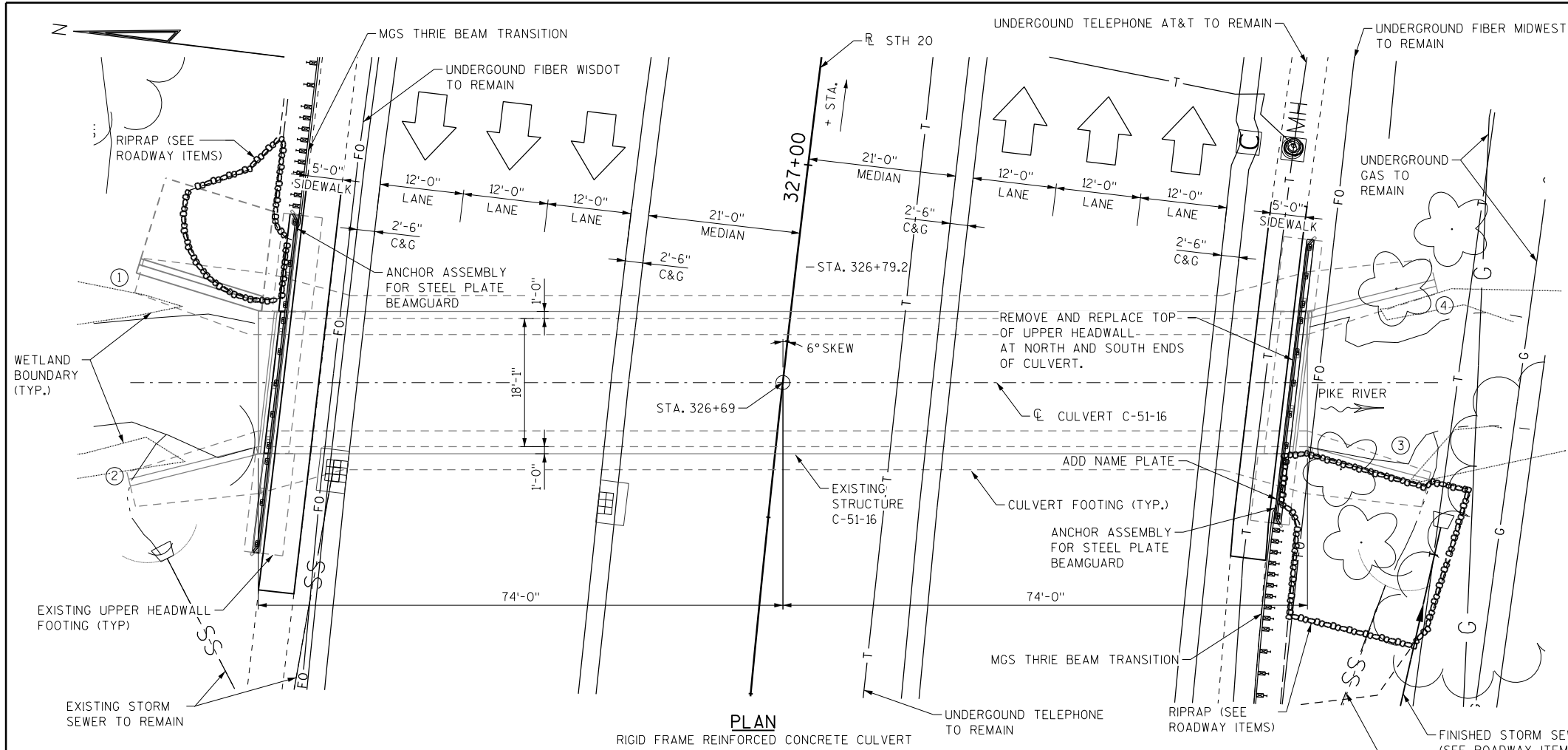
STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:

AARON BONK, PE
(608) 261-0261

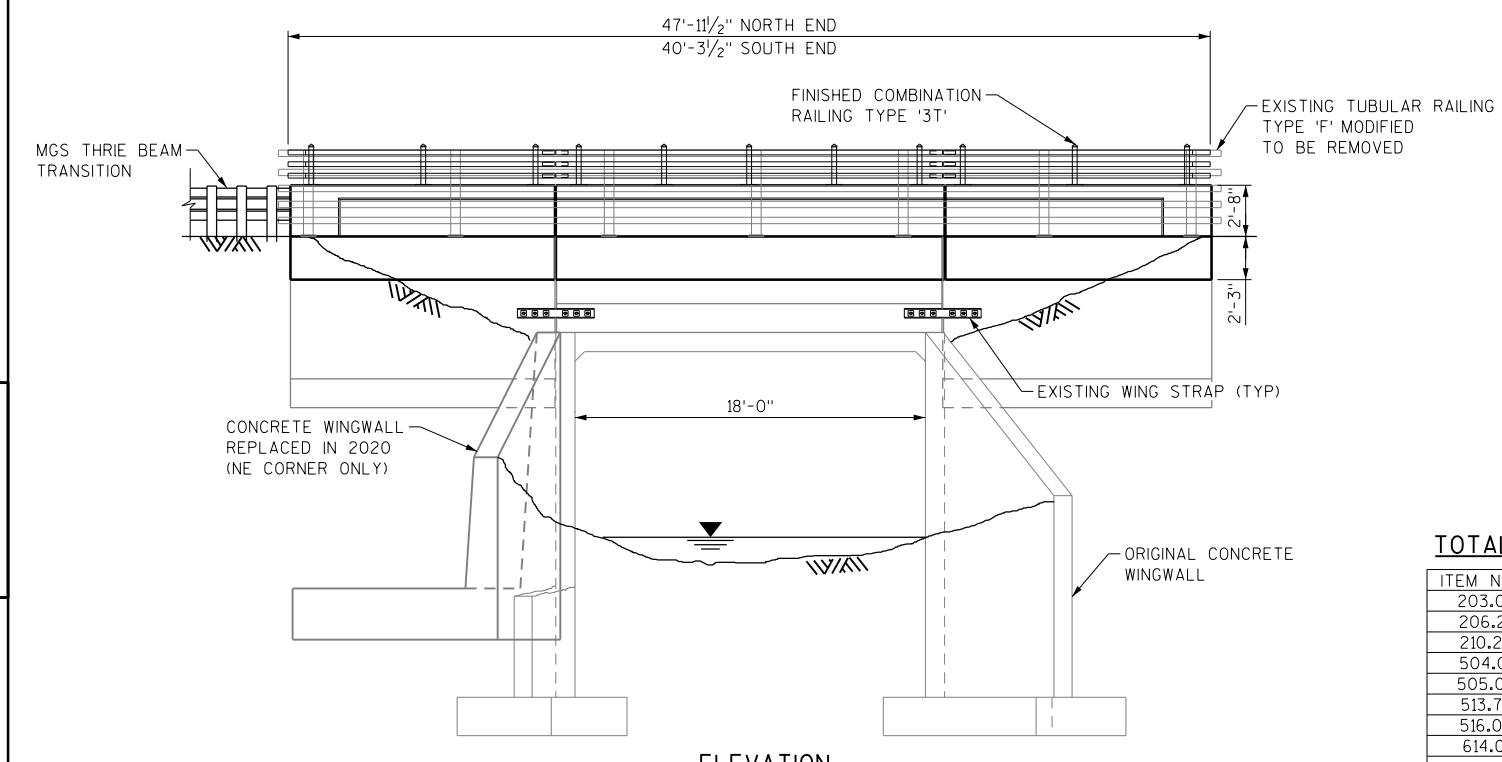
CONSULTANT:

WILLIAM J. ZIPPEL, PE, SE
ALFRED BENESCH & CO.
1300 W CANAL ST, SUITE 150
MILWAUKEE, WI 53233
(414) 308-1321



PLAN

RIGID FRAME REINFORCED CONCRETE CULVERT



ELEVATION

LOOKING SOUTH AT UPSTREAM END

EXISTING STRUCTURE

THE EXISTING STRUCTURE IS A THREE SIDED RIGID FRAME CAST IN PLACE CONCRETE CULVERT WITH AN 18FT CLEAR OPENING AND PARALLEL HEADWALLS AND WINGS ADDED ABOVE THE CULVERT ENDS.



LIST OF DRAWINGS

- GENERAL PLAN & ELEVATION
- NORTH WALL DETAILS
- SOUTH WALL DETAILS
- COMBINATION RAILING TYPE "3T" DETAILS

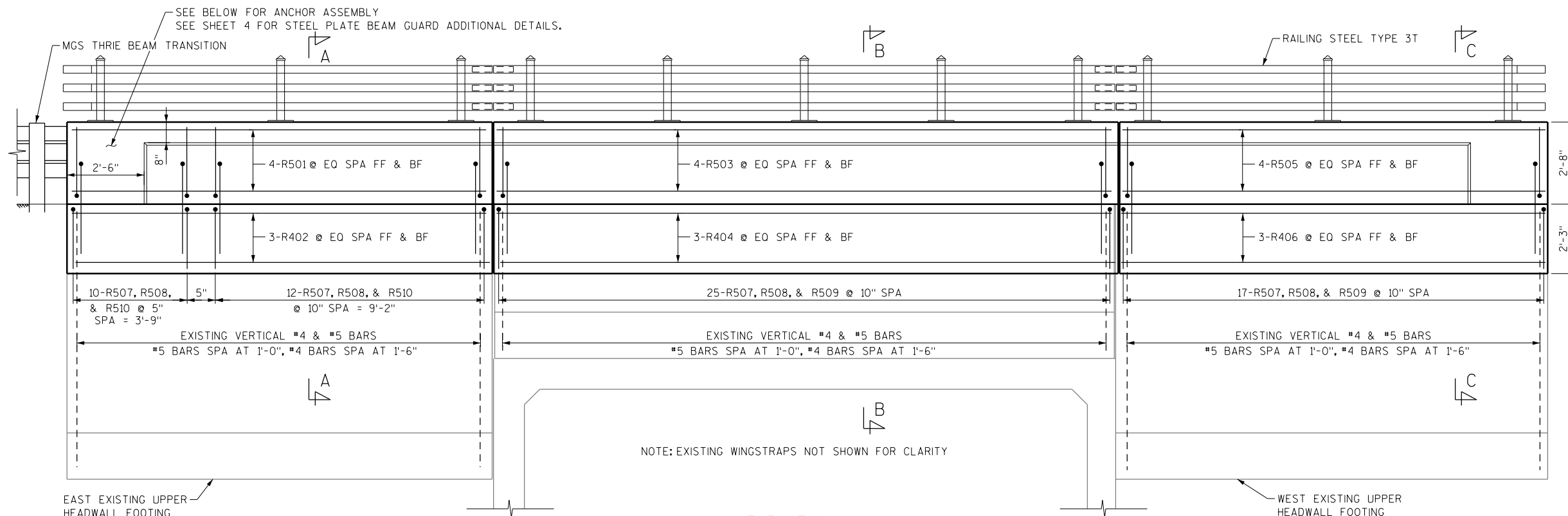
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS C-51-16	EACH	1
206.2001	EXCAVATION FOR STRUCTURES CULVERTS C-51-16	EACH	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	122
504.0100	CONCRETE MASONRY CULVERTS	CY	16
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2987
513.7093	RAILING STEEL TYPE 3T	LF	88
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	29
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2
	NON-BID ITEMS		
	JOINT FILLER - 1", 1/2"		
	NAME PLATE		

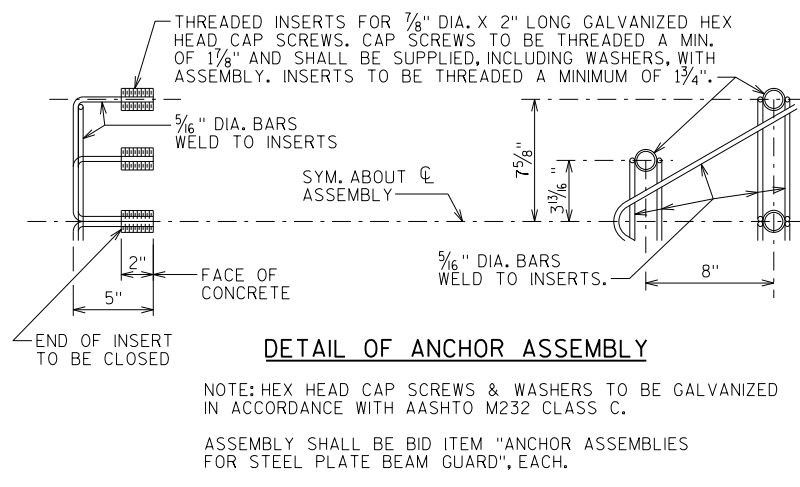
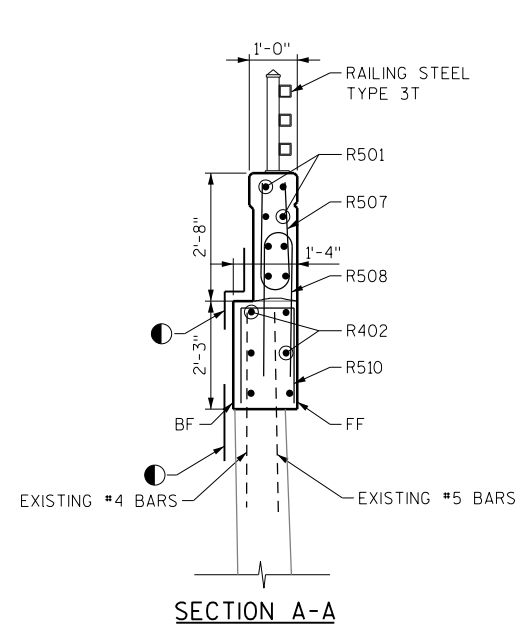
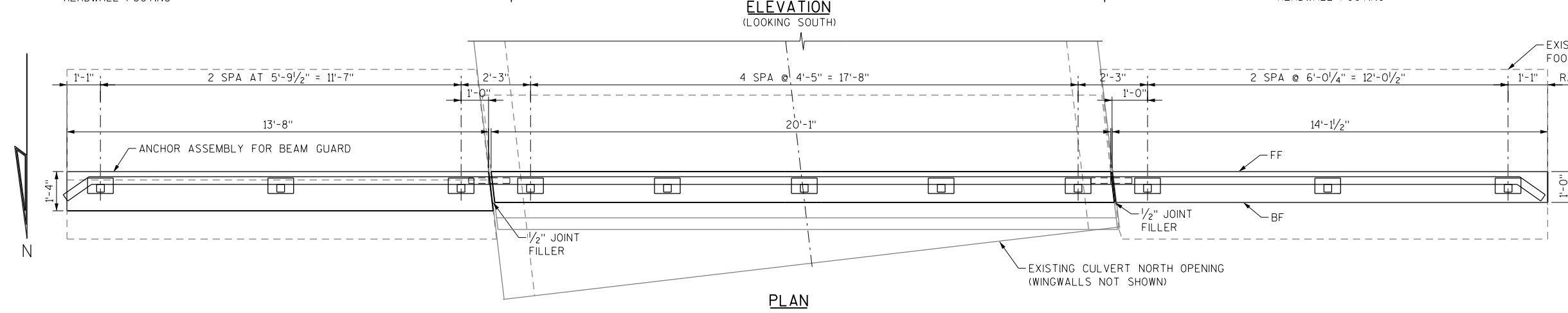
NO.	DATE	REVISION	BY
Alfred Benesch & Company 1300 West Canal Street, Suite 150 Milwaukee, Wisconsin 53233 414-308-1310 Job No. 20298.01			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED SDR 08/30/23 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE C-51-16			
STH 20 OVER PIKE RIVER			
COUNTY	RACINE	TOWN	MOUNT PLEASANT
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	JAP	DESIGN CK'D.	WJZ
DRAWN BY	BJW	PLANS CK'D.	WJZ
GENERAL PLAN & ELEVATION			SHEET 1 OF 4

8

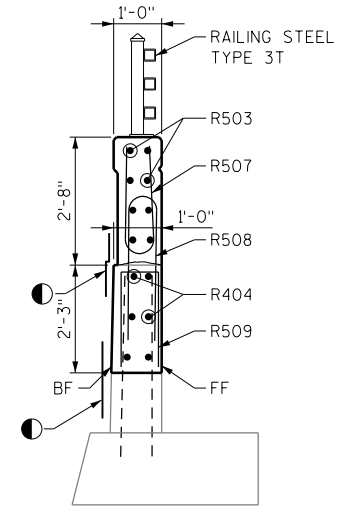
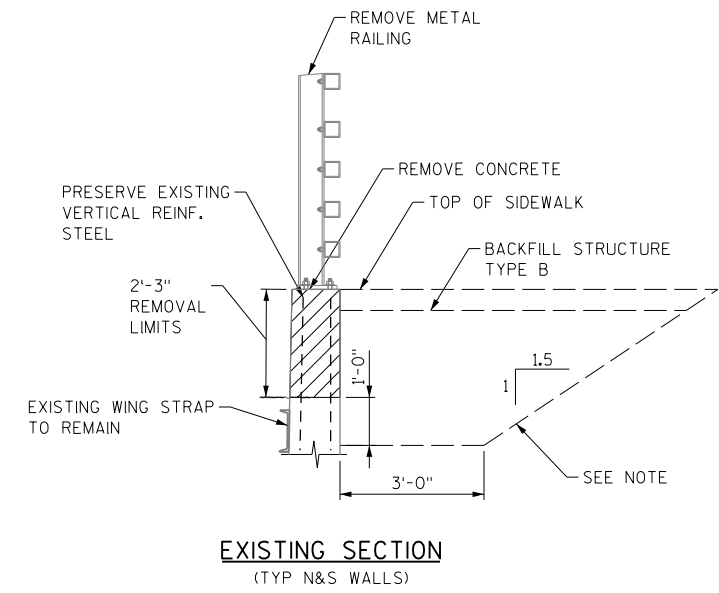
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SCALE = 1:20



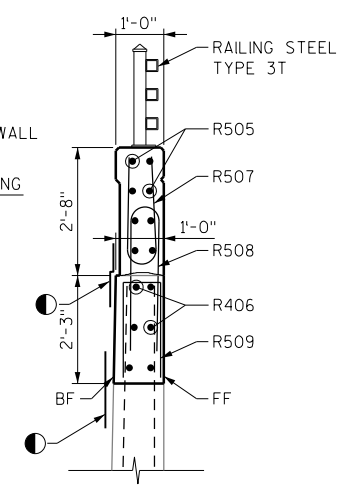
NOTE: EXISTING WINGSTRAPS NOT SHOWN FOR CLARITY



NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



SECTION B-B

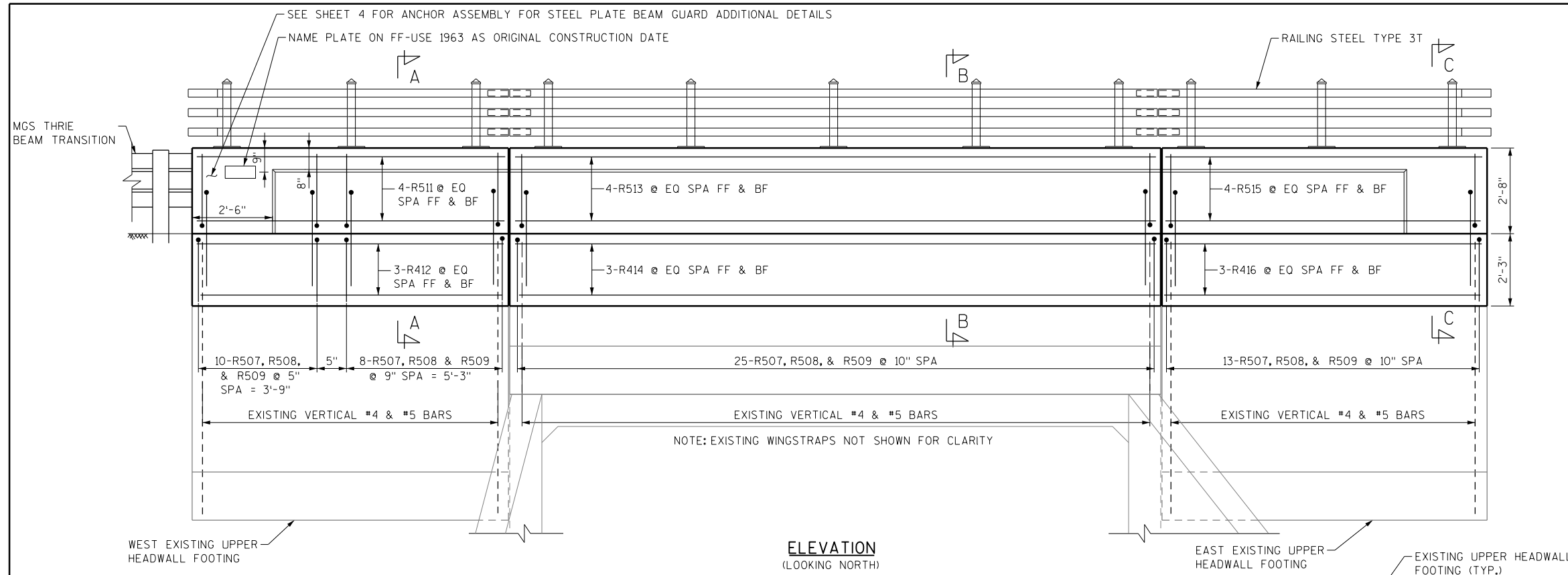


SECTION C-C

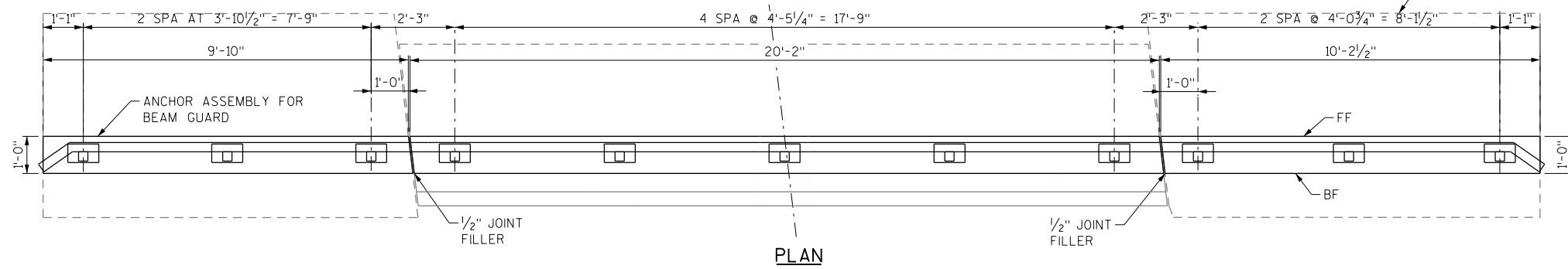
NOTE:
BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

LEGEND:
FF INDICATES FRONT FACE
BF INDICATES BACK FACE
● 18" RUBBERIZED MEMBRANE WATERPROOFING

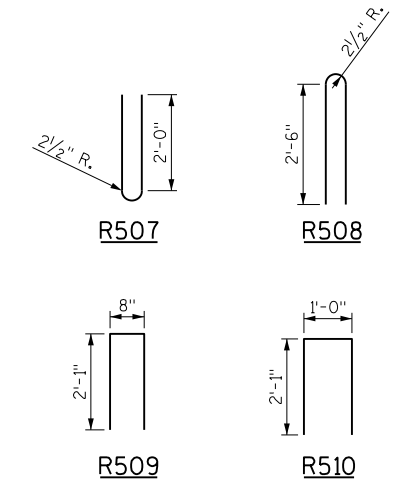
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		C-51-16	
DRAWN BY		PLANS CK'D.	
BGS		WJZ	
NORTH WALL DETAILS			SHEET 2 OF 4



ELEVATION
(LOOKING NORTH)



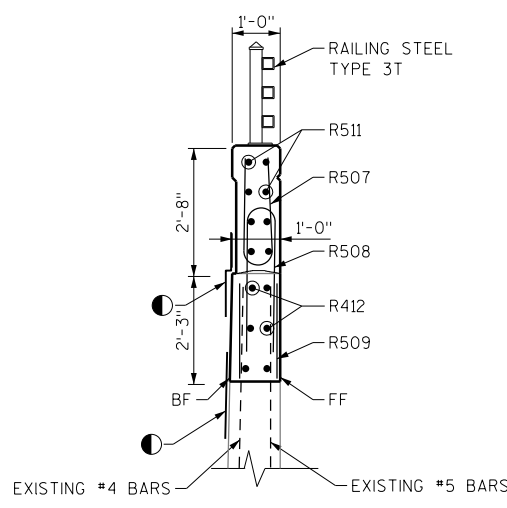
PLAN



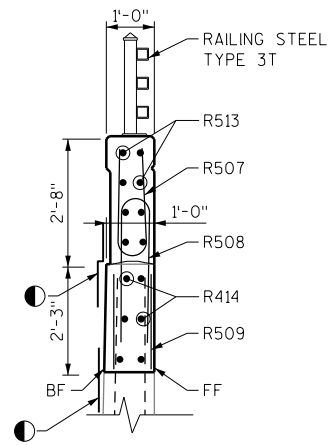
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D	LENGTH	BENT BAR BUNDLED	BAR SERIES	2987 # COATED -- # UNCOATED	
R501	X	8	13'-3"				N WALL, E WING, HORIZONTAL BARS IN PARAPET
R402	X	6	13'-3"				N WALL, E WING, HORIZONTAL BARS IN WALL
R503	X	8	19'-9"				N WALL, CENTER SECTION, HORIZONTAL BARS IN PARAPET
R404	X	6	19'-9"				N WALL, CENTER SECTION, HORIZONTAL BARS IN WALL
R505	X	8	13'-8"				N WALL, W WING, HORIZONTAL BARS IN PARAPET
R506	X	6	13'-8"				N WALL, W WING, HORIZONTAL BARS IN WALL
R507	X	120	4'-9"	X			VERTICAL PARAPET UPPER
R508	X	120	5'-9"	X			VERTICAL PARAPET LOWER
R509	X	98	4'-7"	X			VERTICAL WALL
R510	X	22	4'-11"	X			VERTICAL WALL AT N WALL E WING
R511	X	8	9'-6"				S WALL, W WING, HORIZONTAL BARS IN PARAPET
R412	X	6	9'-6"				S WALL, W WING, HORIZONTAL BARS IN WALL
R513	X	8	19'-10"				S WALL, CENTER SECTION, HORIZONTAL BARS IN PARAPET
R414	X	6	19'-10"				S WALL, CENTER SECTION, HORIZONTAL BARS IN WALL
R515	X	8	9'-10"				S WALL, E WING, HORIZONTAL BARS IN PARAPET
R416	X	6	9'-10"				S WALL, E WING, HORIZONTAL BARS IN WALL

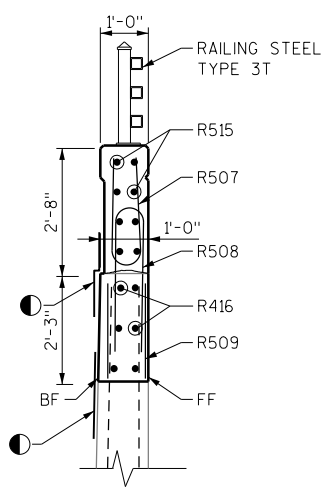
LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



SECTION A-A



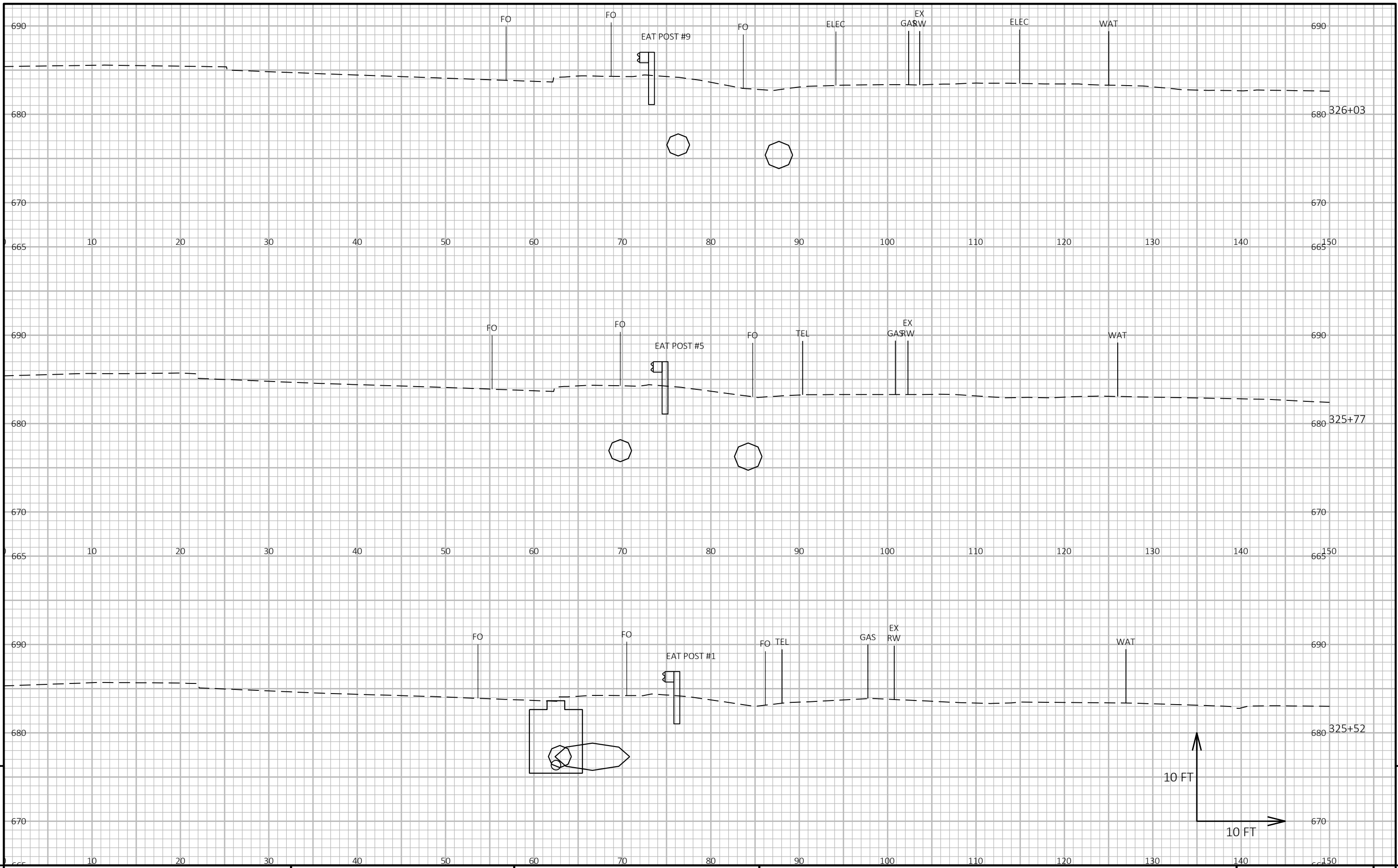
SECTION B-B



SECTION C-C

LEGEND:
FF INDICATES FRONT FACE
BF INDICATES BACK FACE
● 18" RUBBERIZED MEMBRANE WATERPROOFING

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		C-51-16	
DRAWN BY BGS		PLANS CKD. WJZ	
SOUTH WALL DETAILS			SHEET 3 OF 4



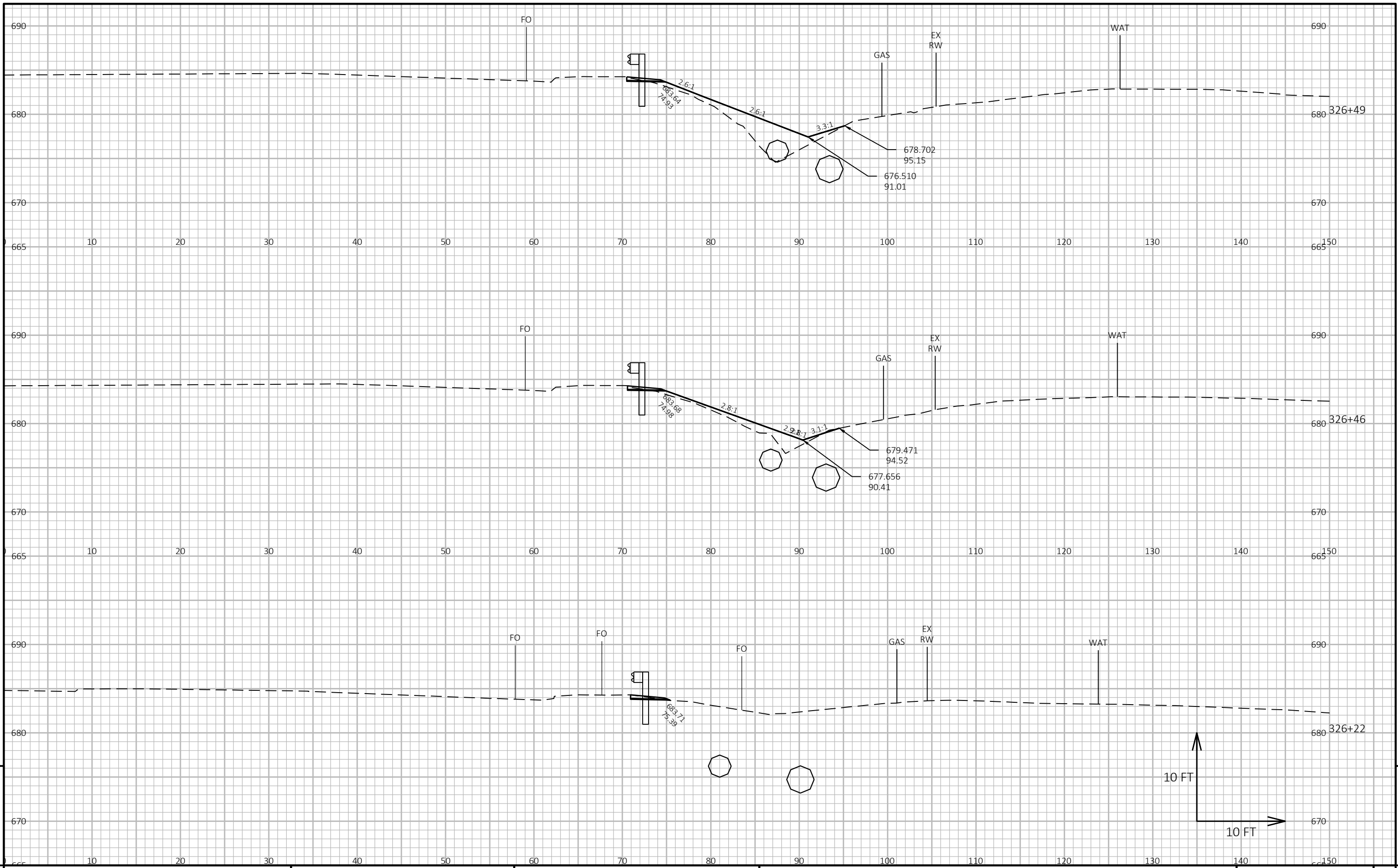
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9

PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	CROSS SECTIONS: STH 20 GUARDRAIL	SHEET	E
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FILE NAME : Y:\MILWAUKEE\202005\20298.01\ENG_DOCS\22501570\SHEETSPLAN\090201_XS.DWG PLOT DATE : 2/27/2023 11:20 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 01



9

9

PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	CROSS SECTIONS: STH 20 GUARDRAIL	SHEET	E
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FILE NAME : Y:\MILWAUKEE\202005\20298.01\ENG_DOCS\22501570\SHEETSPLAN\090201_XS.DWG PLOT DATE : 2/27/2023 11:20 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 02



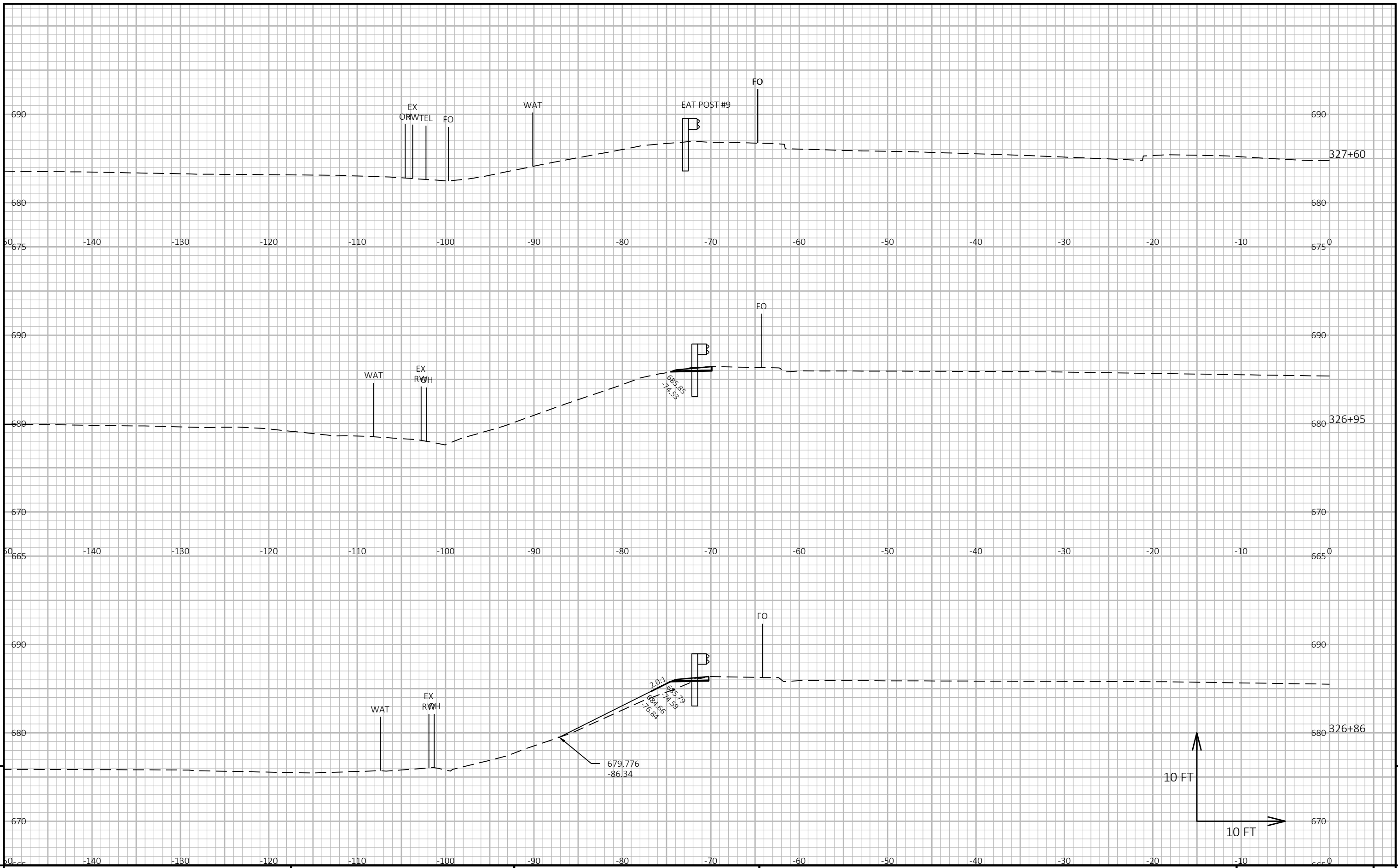
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PROJECT NO: 2250-15-70 HWY: STH 20 COUNTY: RACINE CROSS SECTIONS: STH 20 GUARDRAIL SHEET E

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LAYOUT NAME - 03



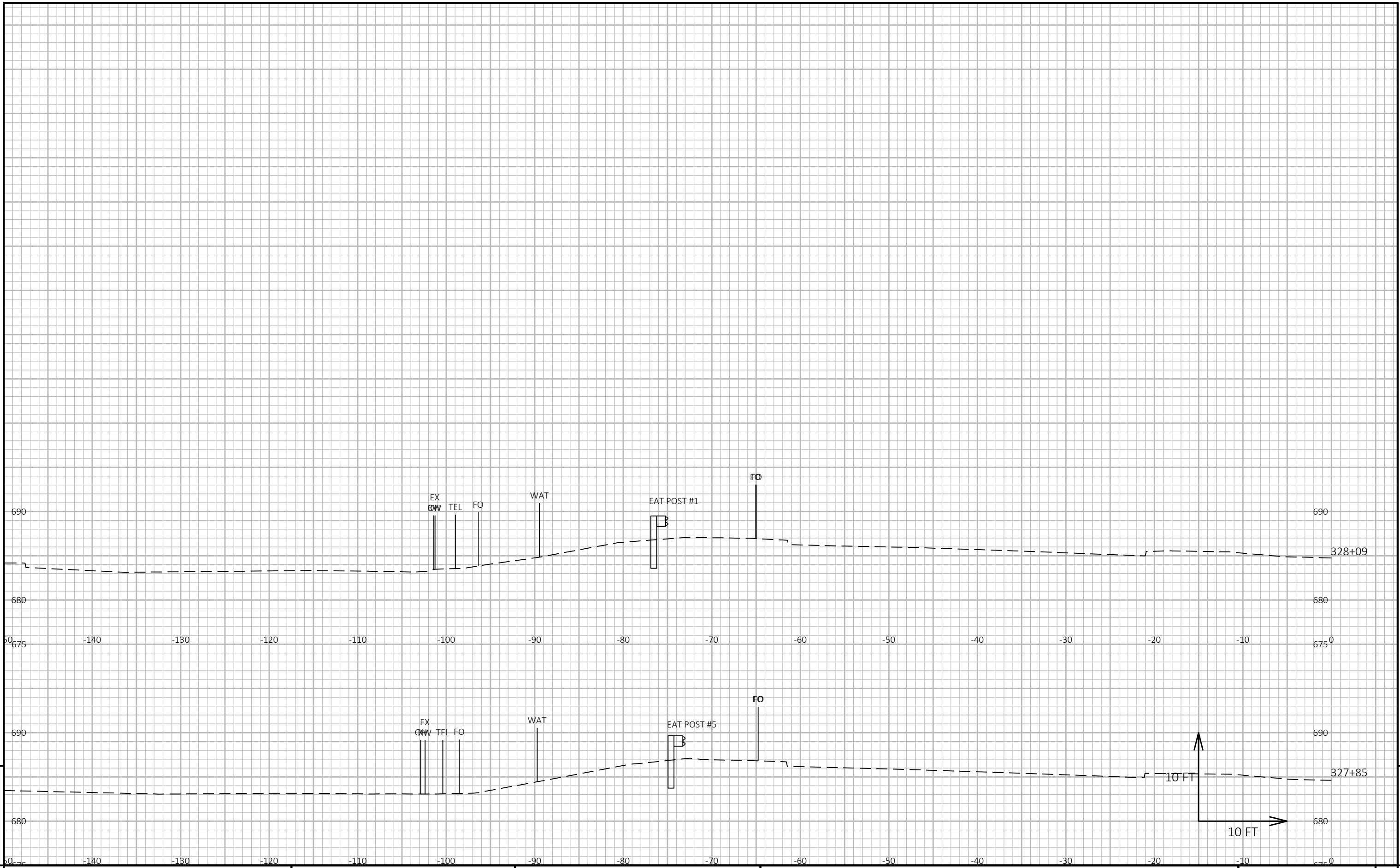
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PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	CROSS SECTIONS: STH 20 GUARDRAIL	SHEET	E
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FILE NAME : Y:\MILWAUKEE\202005\20298.01\ENG_DOCS\22501570\SHEETSPLAN\090201_XS.DWG PLOT DATE : 2/27/2023 11:20 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 04



9

9

PROJECT NO: 2250-15-70	HWY: STH 20	COUNTY: RACINE	CROSS SECTIONS: STH 20 GUARDRAIL	SHEET	E
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FILE NAME : Y:\MILWAUKEE\202005\20298.01\ENG_DOCS\22501570\SHEETSPLAN\090201_XS.DWG PLOT DATE : 2/27/2023 11:20 AM PLOT BY : DEITCH, AIDAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 05



Wisconsin Department of Transportation

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