FEB 2017

ORDER OF SHEETS

Section No. 1

Section No. 2

Section No. 7 Section No. 8

COUNTY:

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT STATE PROJECT PROJECT CONTRACT 2703-00-71 WISC 2017023

PLAN OF PROPOSED IMPROVEMENT

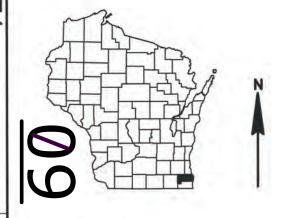
MEMORIAL DRIVE

BRIDGE OVER ROOT RIVER (P-51-0705)

LOCAL STREET RACINE COUNTY

> STATE PROJECT NUMBER 2703-00-71

> > R-23-E



Typical Sections and Details

Estimate of Quantities Miscellaneous Quantitles

Computer Earthwork Data

Right of Way Plat Plan and Profile Standard Detail Drawings

Sign Plates

Section No. 9 Cross Sections

TOTAL SHEETS = 60

Structure Plans

DESIGN DESIGNATION

A.A.D.T. 2037 = 13,100 A.A.D.T. D.H.V. = 1,559 D.D. = 59/41 = 5.6% DESIGN SPEED = 35MPH = 2,550,438 ESALS

CONVENTIONAL SYMBOLS

CORPORATE LIMITS PROPERTY LINE LIMITED HIGHWAY EASEMENT EXISTING RIGHT OF WAY PROPOSED OR NEW R/W LINE SLOPE INTERCEPT REFERENCE LINE

.-- 623---EXISTING CULVERT PROPOSED CULVERT (Box or Pipe) COMBUSTIBLE FLUIDS

MARSH AREA WETLAND BOUNDARY WOODED OR SHRUB AREA

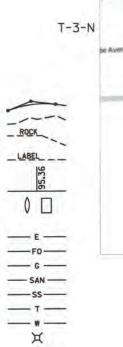


PROFILE

POWER POLE TELEPHONE POLE

STRUCTURE P-51-0705

STA. 102+15 TO 103+78



END PROJECT 2703-00-71 STA. 104+02.88 T-3-N BEGIN PROJECT 2703-00-71 STA. 101+90.24 Y=184,706.76 12th Street (WI 32) R-23-E 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.040 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, RACINE COUNTY, NAD83 (2015), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR City Engineer

ORIGINAL PLANS PREPARED BY GREEF 125 S. B4TH STREET, SUITE MILWAUKEE, WI 53214

SCONSI STEVEN T. SCHOWALTER 37305 LISBON.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PREPARED BY GRAEF Surveyor GRAEF

MANAGEMENT CONSULTANT C.O. EXAMINER

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE BACKFILLED WITH GRANULAR BACKFILL. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

ALL RADIUS DIMENSIONS FOR CURB & GUTTER ARE GIVEN TO THE FLANGE. ALL ELEVATIONS ALONG CURB & GUTTER ARE GIVEN TO THE FLANGE. OFFSETS NOTED ARE TO THE FLANGE OR EDGE OF LANE IF NO CURB, UNLESS OTHERWISE NOTED.

THE LOCATION OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

HMA PAVEMENT, TYPE WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

2" OF 12.5mm HMA PAVEMENT 4 MT 58-28 S AS THE UPPER LAYER

SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CONCRETE JOINTS SHALL MATCH ABUTTING PAVEMENT AND CURB AND GUTTER JOINTS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

ALL DISTURBED AREAS WITHIN 200' OF THE ROOT RIVER SHALL BE TEMPORARILY SEEDED WITHIN ONE DAY OF THE WORK.

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER

INDEX OF TYPICAL SECTION AND DETAIL SHEETS

PROJECT OVERVIEW TYPICAL SECTIONS CONSTRUCTION DETAILS PLAN DETAILS FROSION CONTROL LIGHTING PLAN PERMANENT SIGNING AND PAVEMENT MARKING PLAN DETOUR PLANS

STANDARD ABBREVIATIONS

APRON END WALL AGGREGATE BASE AGGREGATE DENSE BAD ВМ BENCH MARK C&G CURB AND GUTTER CENTER OR CONSTRUCTION LINE CONC CONCRETE CULVERT PIPE СРСМ CULVERT PIPE CORRUGATED METAL CULVERT PIPE REINFORCED CONCRETE
CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CPRC CPRCHE CSCP CORRUGATED STEEL CULVERT PIPE CSPA CORRUGATED STEEL PIPE ARCH CSD CY CONCRETE SURFACE DRAIN CUBIC-YARD DEGREE OF CURVE △ DISCH DISCHARGE FE FIELD ENTRANCE HERCP HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE HMA HOT MIX ASPHALT INV INVERT LENGTH OF CURVE LHF LEFT HAND FORWARD LT MIN LEFT MINIMUM MATCHLINE NB NORTHBOUND NC NORMAL CROWN NTS NOT TO SCALE PAVT PAVEMENT PB PC PULL BOX POINT-OF-CURVE PCC POINT OF COMPOUND CURVE PRIVATE ENTRANCE POINT OF INTERSECTION
PERMANENT LIMITED EASEMENT PI PLE POINT OF VERTICAL CURVE
POINT OF VERTICAL INTERSECTION PVC PVI POINT OF VERTICAL TANGENT PVT RADIUS OF CURVE R/I REFERENCE LINE RIGHT OF WAY R/W RAD RADIUS REVERSE CROWN APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE RCAFW RCHESS REINFORCED CONCRETE HORIZONTAL ELLIPTICAL STORM SEWER REINFORCED CONCRETE PIPE - STORM SEWER REQD REQUIRED RIGHT HAND FORWARD RHF R0 RUN OFF LENGTH SALVAGED SALV SIGNAL BASE SB SDD STANDARD DETAIL DRAWING SE SF STA SUPER ELEVATION SQUARE FOOT STATION SQUARE YARD TANGENT LENGTH

CITY OF RACINE

CITY HALL, ROOM 304 730 WASHINGTON AVENUE RACINE, WI 53403

MR. JOHN ROONEY CITY ENGINEER JOHN.ROONEY@CITYOFRACINE.ORG

DESIGN CONTACT

GRAEF MR. STEVE SCHOWALTER HONEY CREEK CORPORATE CENTER 125 S. 84TH STREET, SUITE 401 MILWAUKEE, WI 53212 (414) 266-9246 STEVEN.SCHOWALTER@GRAEF-USA.COM

DEPT. OF NATURAL RESOURCES

WISCONSIN DEPT. OF NATURAL RESOURCES MR. CRAIG WEBSTER 141 NW BARSTOW STREET WAUKESHA, WI 53187 (262) 574-2141 CRAIG.WEBSTER@WISCONSIN.GOV

UTILITIES

RACINE WASTEWATER UTILITY MR. ALLAN WHEELER 2310 CENTER STREET RACINE, WI 53403 (262) 636-9528 AL.WHEELER@CITYOFRACINE.ORG

RACINE WATER UTILITY MR. CHAD REGALIA 100 HUBBARD STREET RACINE, WI 53402 (262) 497-4611 CHAD.REGALIA@CITYOFRACINE.ORG

TIME WARNER CABLE MR. STEVE STORM
1320 N. DR. MARTIN LUTHER KING JR. DRIVE MILWAUKEE, WI 53212 (414) 908-4789 STEVE.STORM@TWCABLE.COM

WE ENERGIES - GAS & ELECTRIC SEND ALL CORRESPONDENCE TO: MR. LATROY BRUMFIELD, PROJECT MANAGER 333 W. EVERETT STREET - A299 MILWAUKEE, WI 53203 (414) 221-5617 LATROY.BRUMFIELD@WE-ENERGIES.COM

WE ENERGIES - GAS MR. CHRIS DEGRAVE 7815 NORTHWESTERN AVENUE RACINE, WI 53406 (262) 886-7018 CHRIS.DEGRAVE@WE-ENERGIES.COM

WE ENERGIES - ELECTRIC MR. JOSH MOUNT 500 S. 116TH STREET WEST ALLIS, WI 53214 (414) 215-2053 JOSH.MOUNT@WE-ENERGIES.COM



www.DiggersHotline.com

PROJECT NO: 2703-00-71 HWY: MEMORIAL DRIVE

TC.

TLE

COUNTY: RACINE

TOP OF CURB

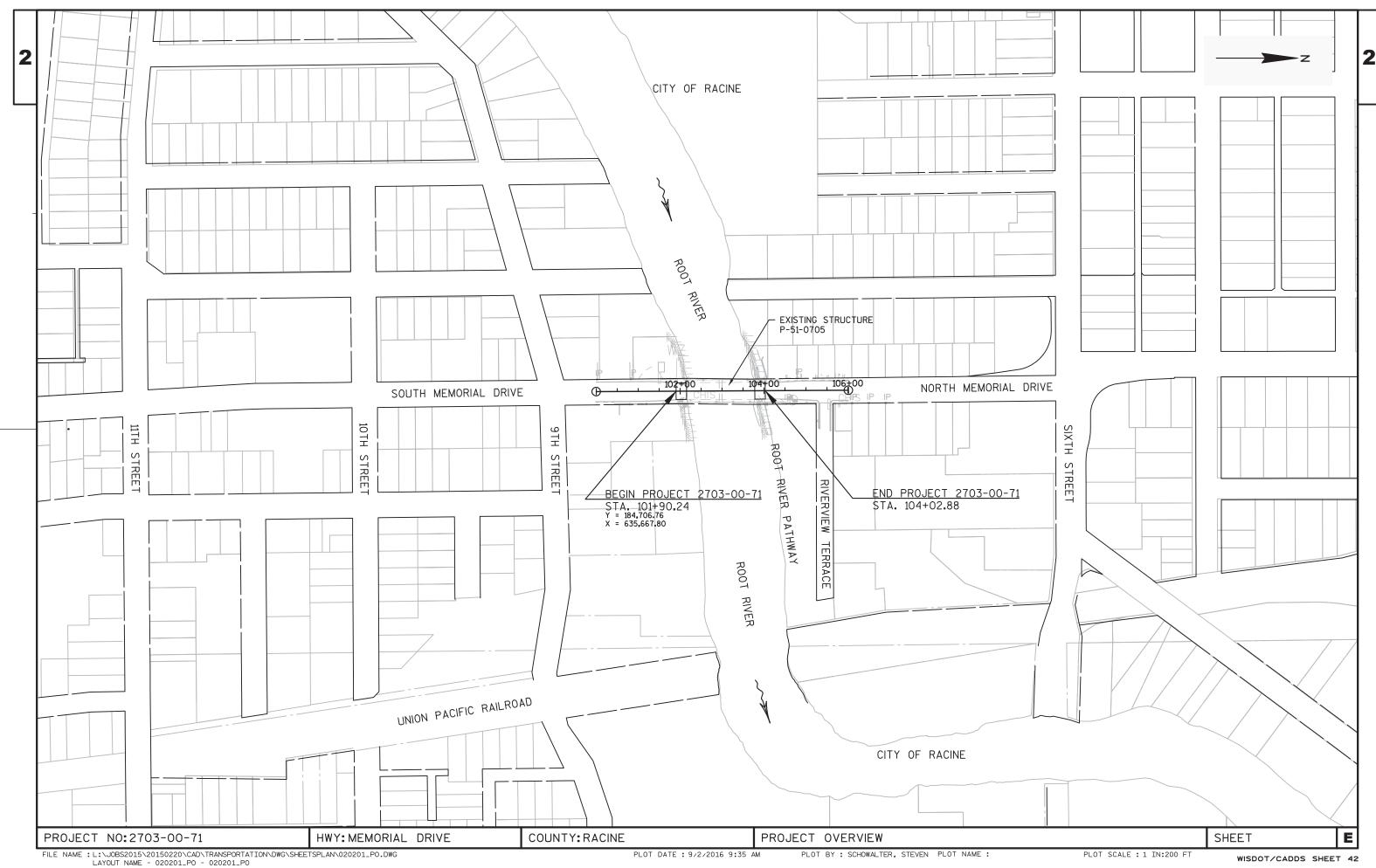
TEMPORARY LIMITED EASEMENT

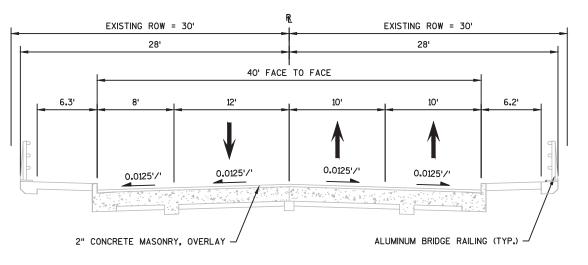
GENERAL NOTES

PLOT SCALE : 1 IN:200 FT

SHEET

E





TYPICAL EXISTING SECTION STA. 102+15 TO STA. 103+78

PROJECT NO:2703-00-71

HWY: MEMORIAL DRIVE

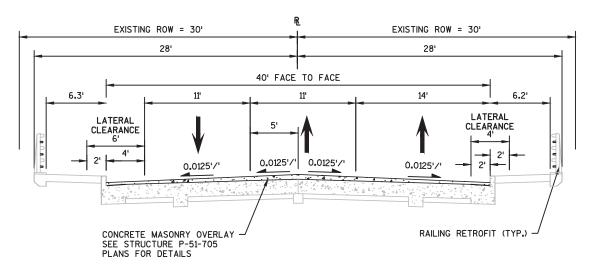
COUNTY: RACINE

TYPICAL EXISTING SECTIONS

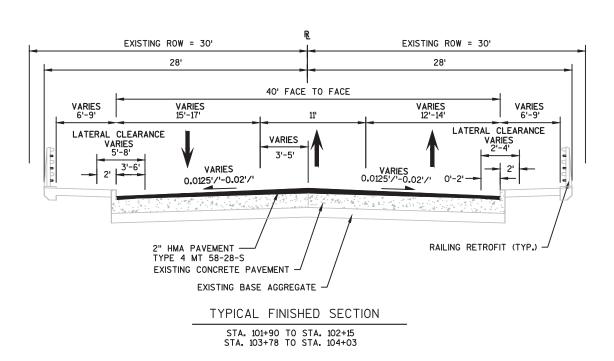
SHEET

E

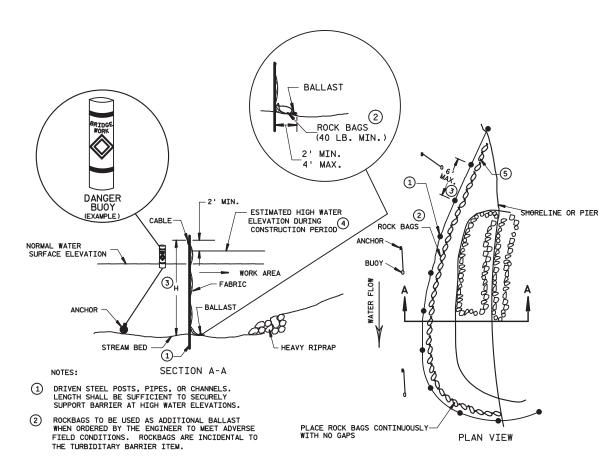
2



TYPICAL FINISHED SECTION
STA. 102+15 TO STA. 103+78



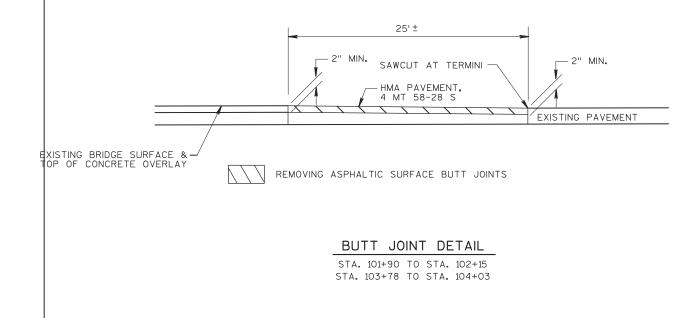
PROJECT NO:2703-00-71 HWY:MEMORIAL DRIVE COUNTY:RACINE TYPICAL FINISHED SECTION SHEET

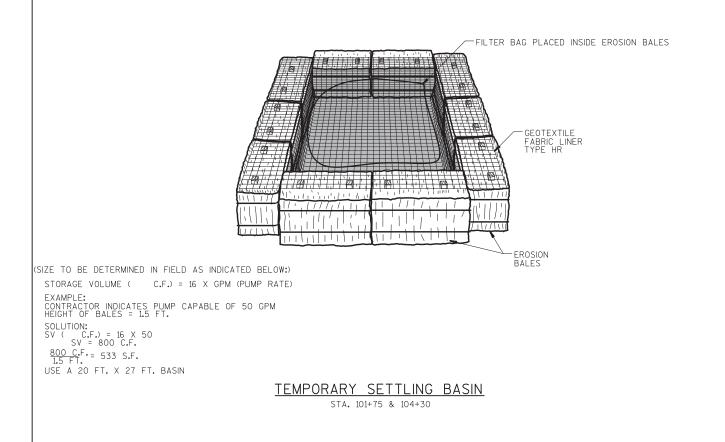


- (3) WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- 4 ELEVATION VALUE TO BE ESTABLISHED BY THE CONTRACTOR BASED ON THE TIME OF YEAR AND DURATION OF THE ACTIVITY.
- (5) CONCRETE BARRIER TO BE USED IN PLACE OF ROCKBAGS AS A FLOW DEFLECTOR WHEN REQUIRED TO MEET ADVERSE FIELD CONDITIONS. TEMPORARY CONCRETE BARRIER IS INCIDENTAL TO THE TURBIDITARY BARRIER ITEM.

TURBIDITY BARRIER DETAIL

HWY: MEMORIAL DRIVE





FILE NAME : L:\JOBS2015\20150220\CAD\TRANSPORTATION\DWG\SHEETSPLAN\021001_CD.DWG

PROJECT NO: 2703-00-71

COUNTY: RACINE

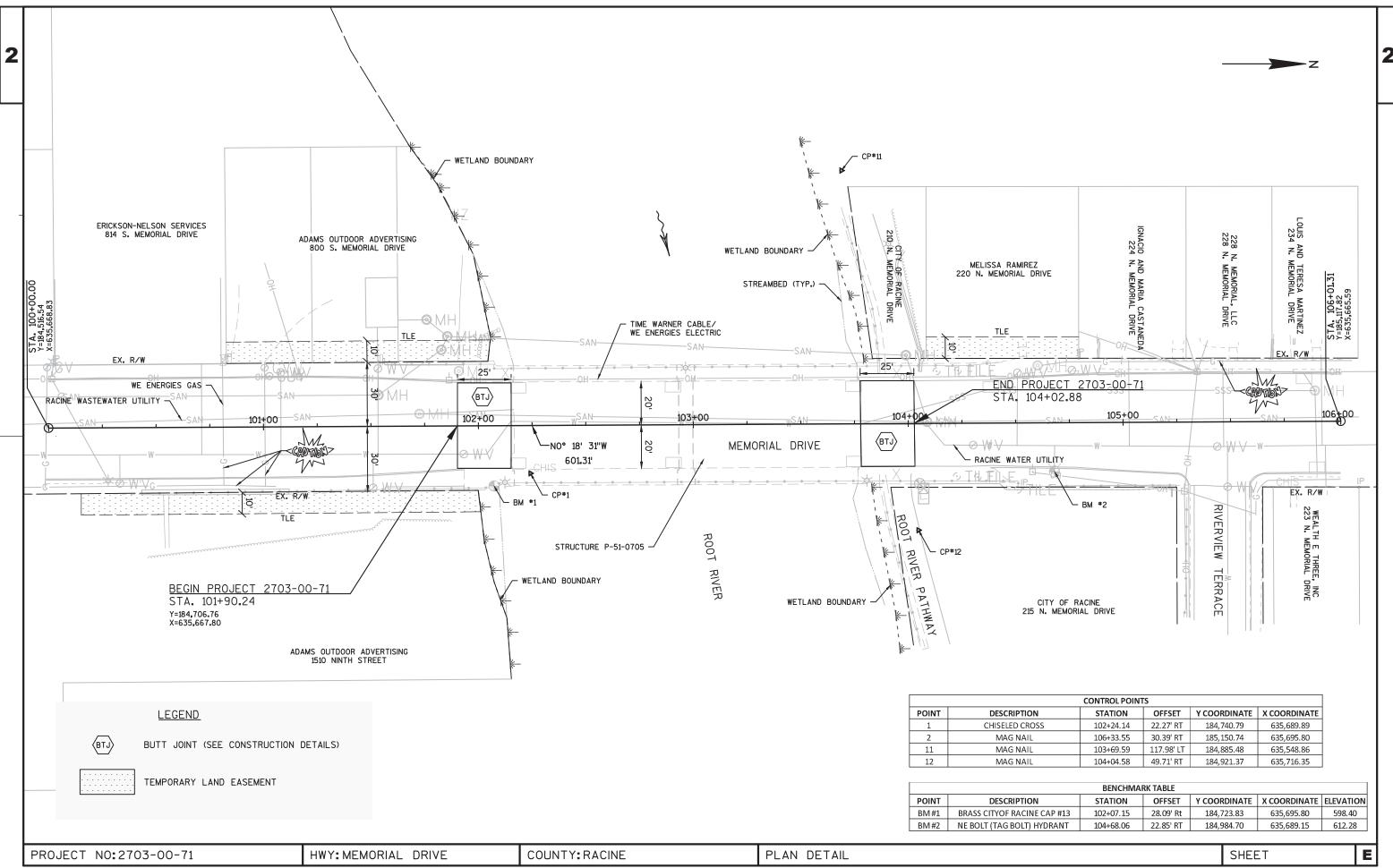
CONSTRUCTION DETAILS

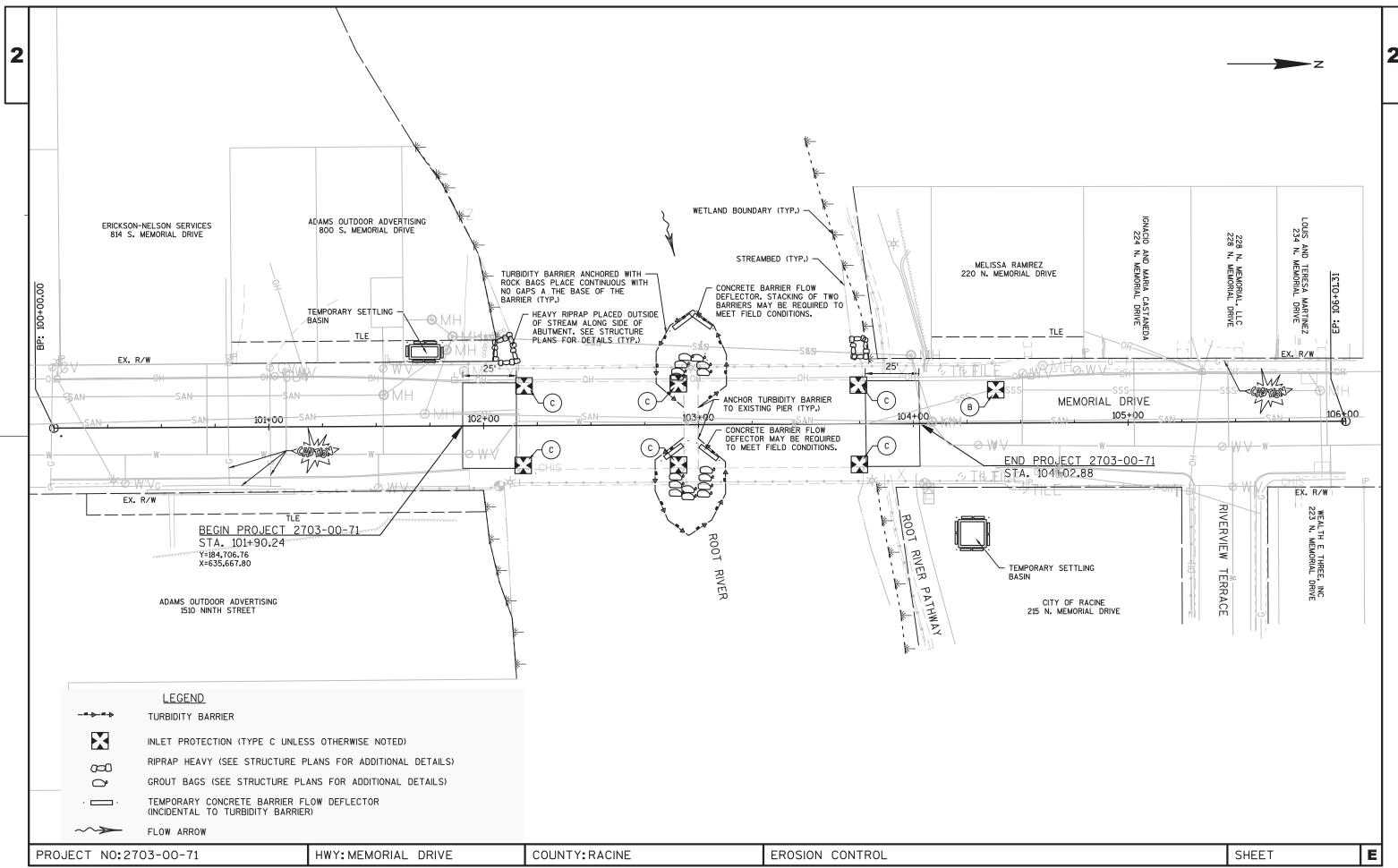
SHEET

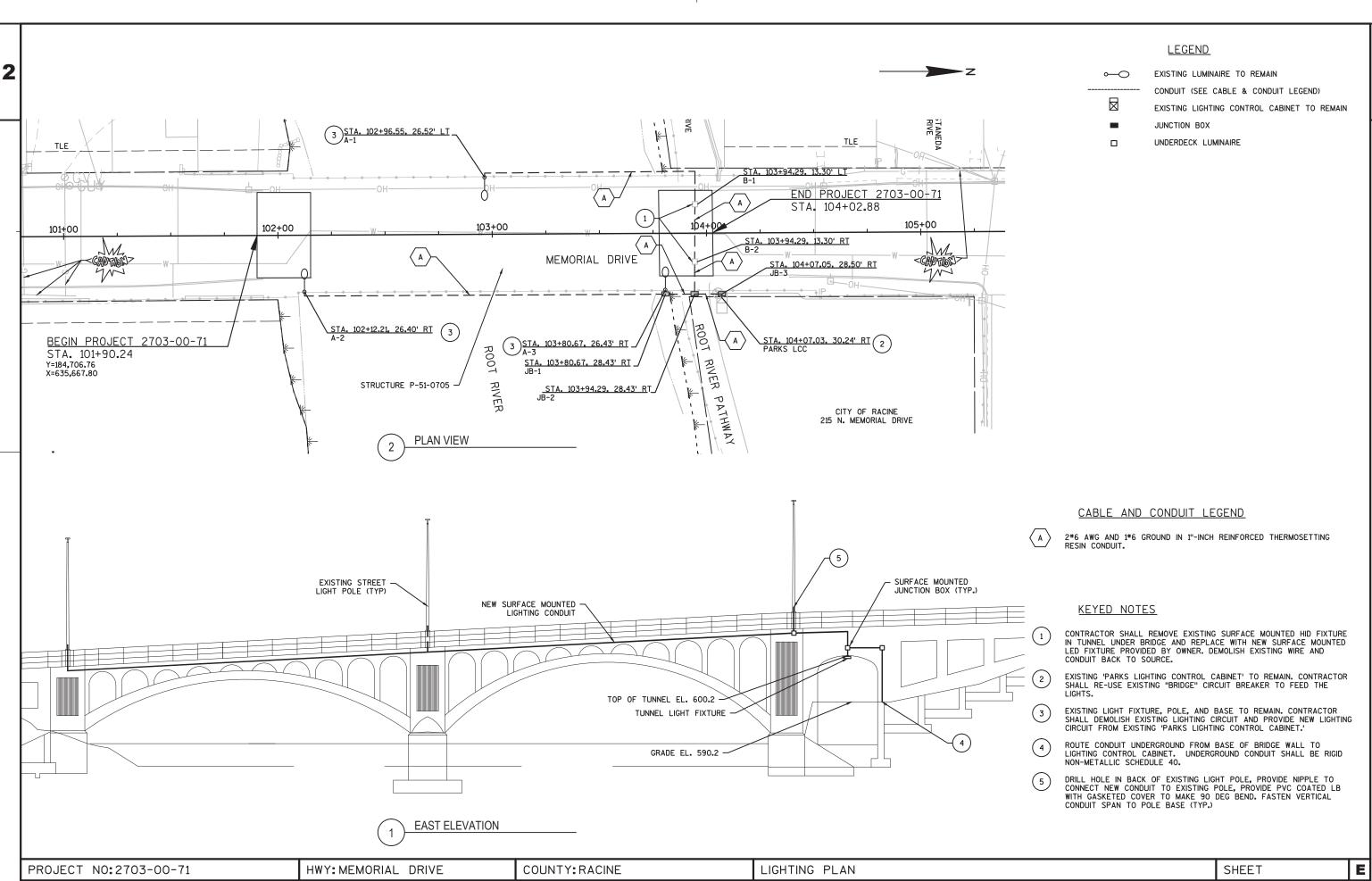
PLOT SCALE : 1 IN:40 FT

1 IN:40 FT WISDOT/CADDS SHEET 42

E







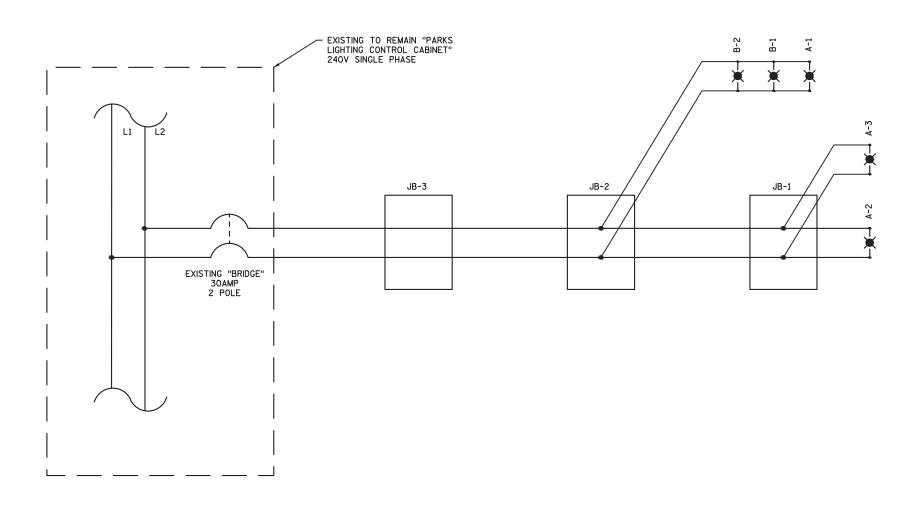
<u>LEGEND</u>

LIGHT FIXTURE

☐ JUNCTION BOX

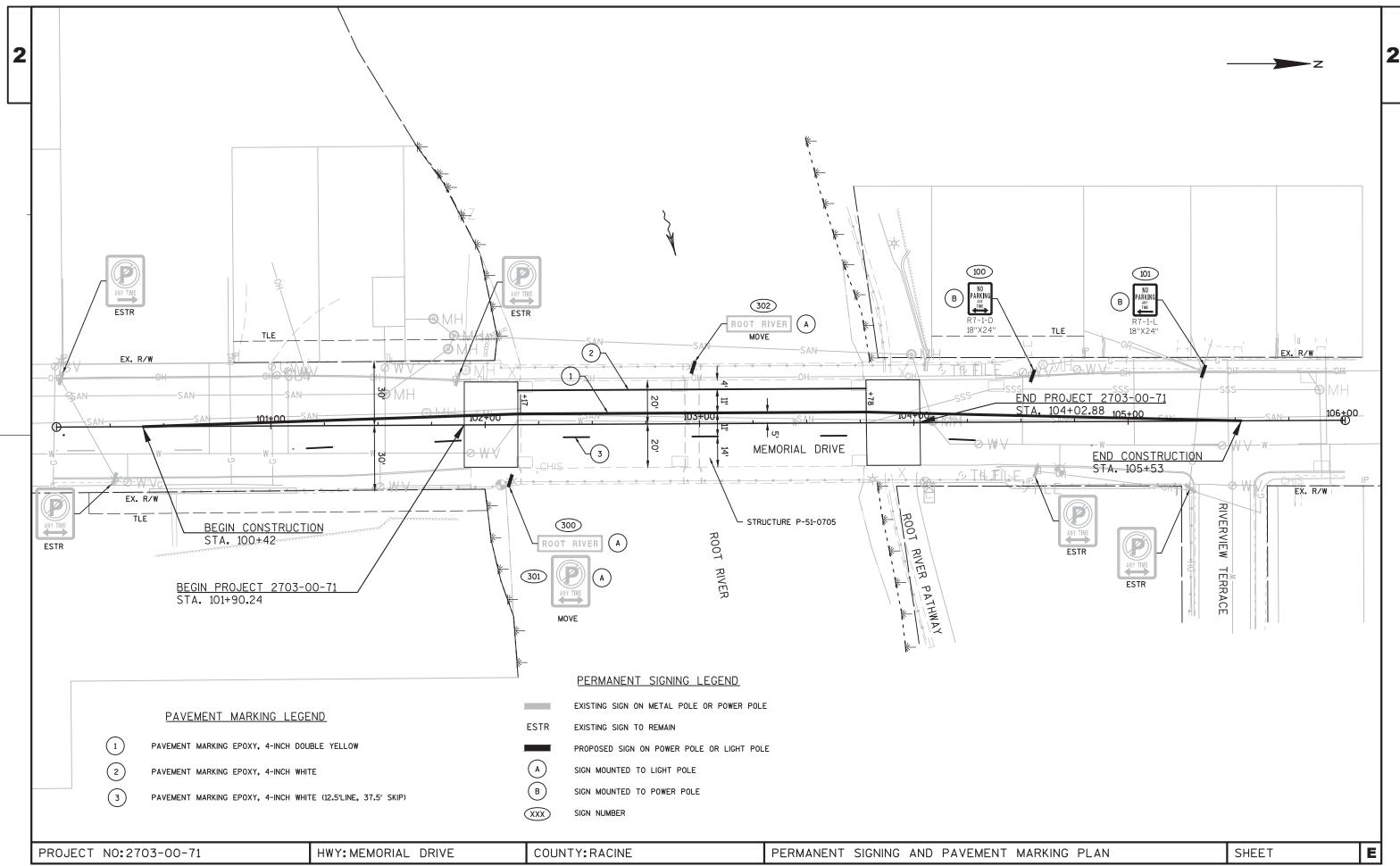
GENERAL NOTES

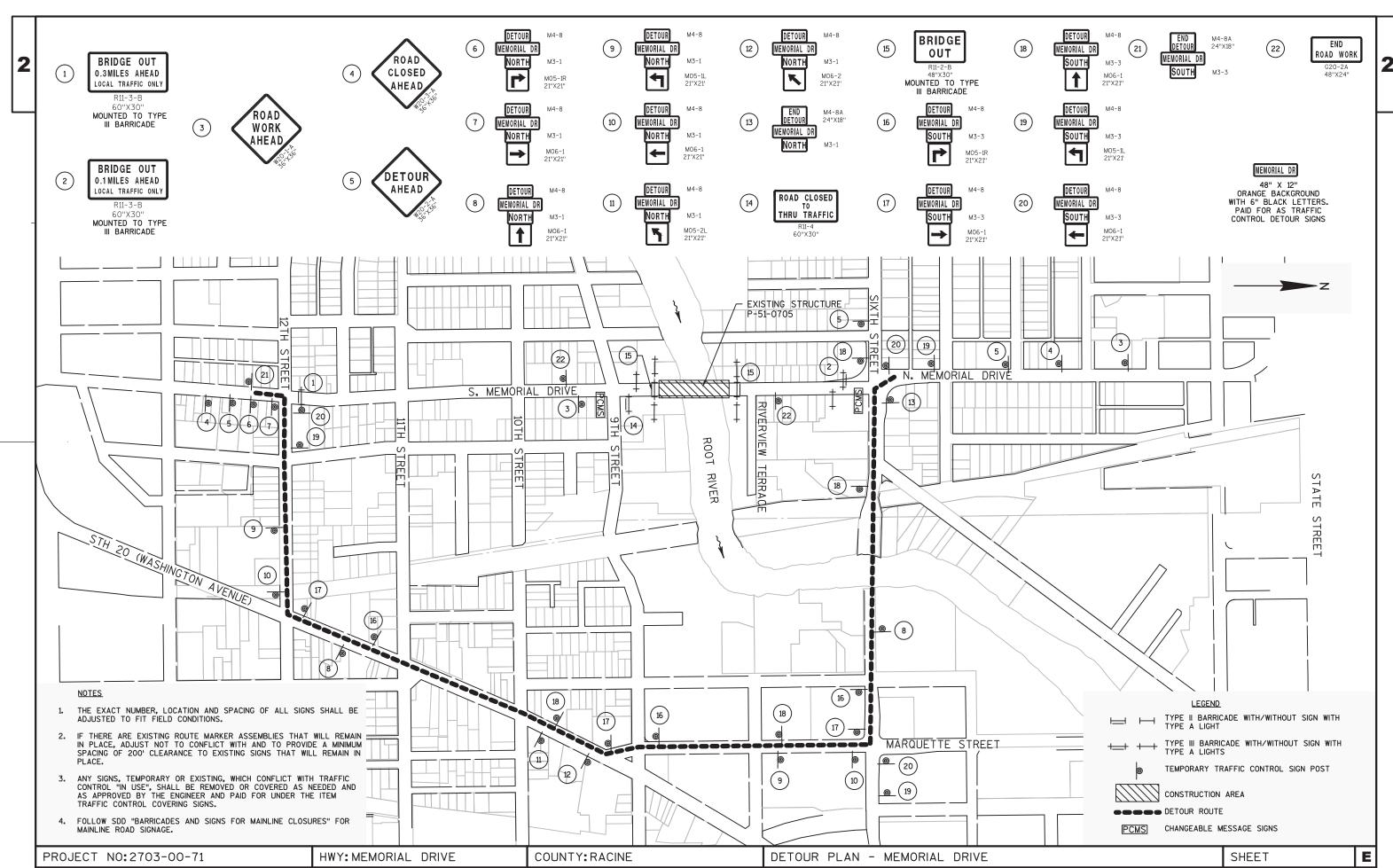
- 1. GROUND WIRE REQUIRED, NOT SHOWN.
- 2. REFER TO LIGHTING PLAN FOR ADDITIONAL INFORMATION.

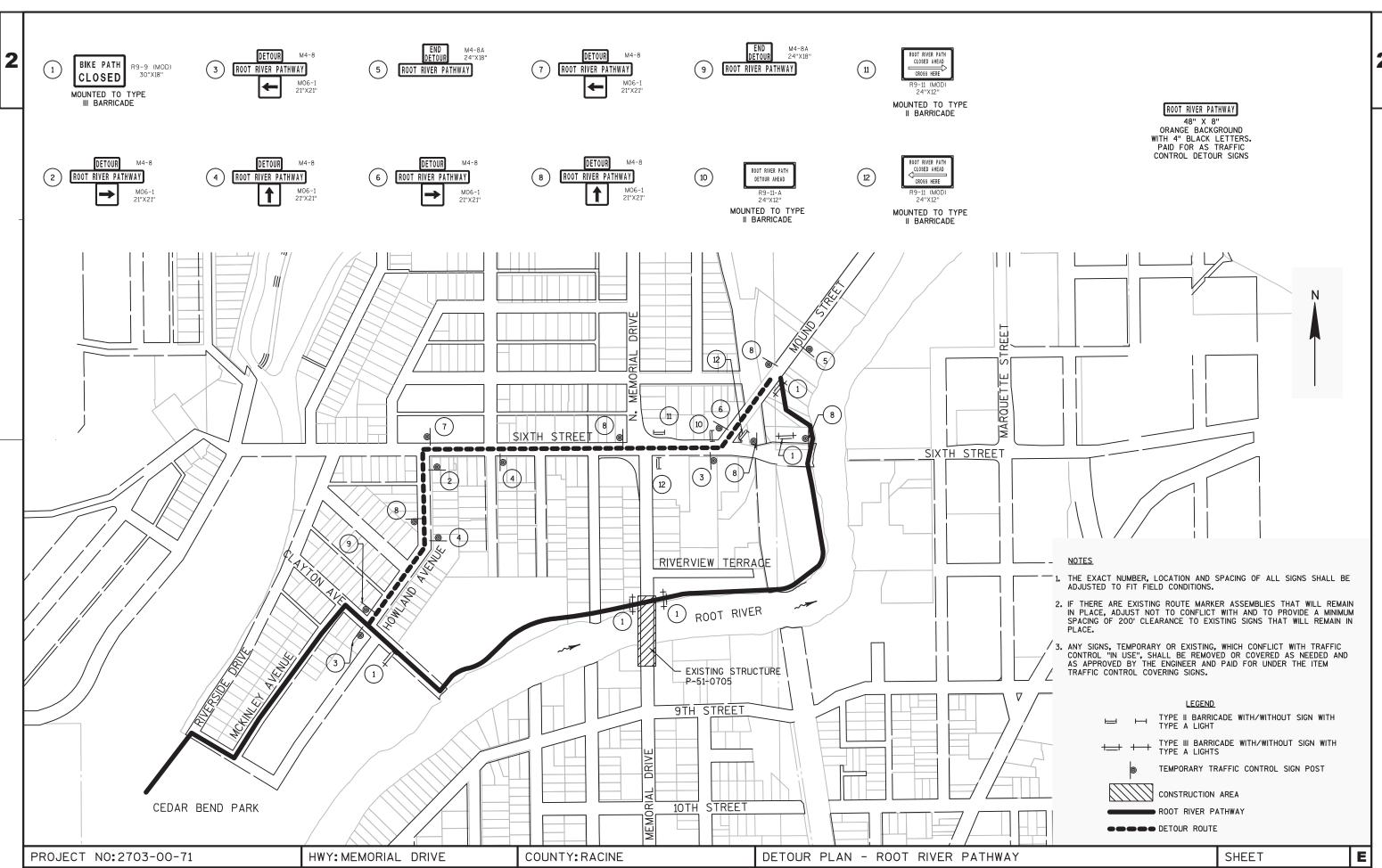


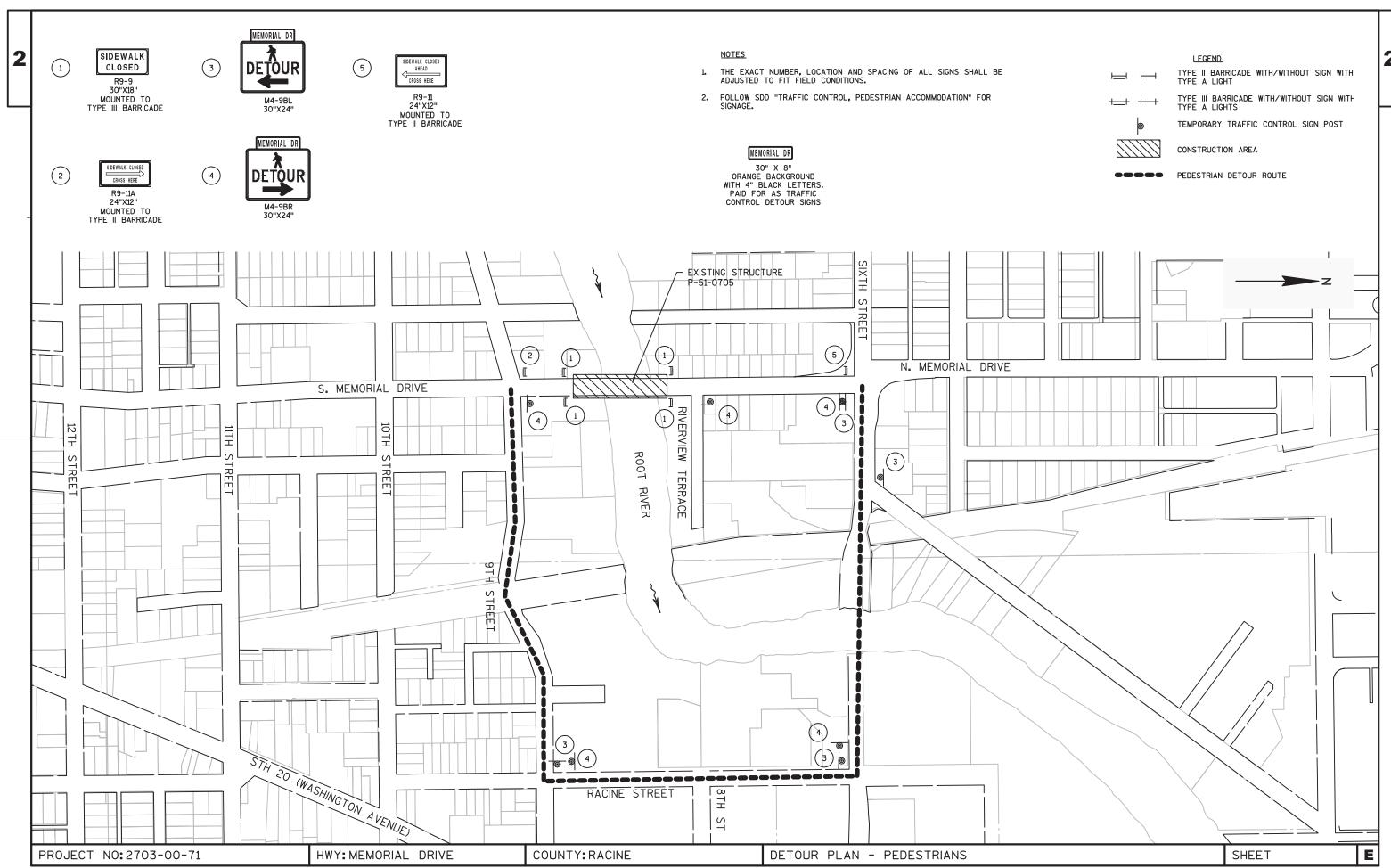
LIGHTING SYSTEM WIRING DIAGRAM

PROJECT NO:2703-00-71 HWY:MEMORIAL DRIVE COUNTY:RACINE LIGHTING PLAN SHEET **E**









Page 1

					2703-00-71
Line	Item	Item Description	Unit	Total	Qty
0010	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 102+15.63	LS	1.000	1.000
0020	204.0115	Removing Asphaltic Surface Butt Joints	SY	222.000	222.000
0030	213.0100	Finishing Roadway (project) 01. 2703-00-71	EACH	1.000	1.000
0040	455.0605	Tack Coat	GAL	22.000	22.000
0050	460.6224	HMA Pavement 4 MT 58-28 S	TON	26.000	26.000
0060	502.0100	Concrete Masonry Bridges	CY	2.000	2.000
0070	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 01. 2 1/4-Inch	LF	244.000	244.000
0800	502.3200	Protective Surface Treatment	SY	676.000	676.000
0090	502.4205	Adhesive Anchors No. 5 Bar	EACH	48.000	48.000
0100	505.0400	Bar Steel Reinforcement HS Structures	LB	490.000	490.000
0110	509.0301	Preparation Decks Type 1	SY	444.000	444.000
0120	509.0302	Preparation Decks Type 2	SY	218.000	218.000
0130	509.1200	Curb Repair	LF	117.000	117.000
0140	509.1500	Concrete Surface Repair	SF	837.000	837.000
0150	509.2000	Full-Depth Deck Repair	SY	44.000	44.000
0160	509.2500	Concrete Masonry Overlay Decks	CY	64.000	64.000
0170	509.9005.S	• •	SY	676.000	676.000
0180	509.9025.S		LF	163.000	163.000
0190		Cored Holes 2-Inch Diameter	EACH	10.000	10.000
0200		Structure Overcoating Cleaning and Priming (structure) 01. P-51-0705		1.000	1.000
0210	517.4000.S	Containment and Collection of Waste Materials (structure) 01. P-51-0705	LS	1.000	1.000
0220	606.0300	Riprap Heavy	CY	12.000	12.000
0230	619.1000	Mobilization	EACH	1.000	1.000
0240	625.0100	Topsoil	SY	13.000	13.000
0250	628.1104	Erosion Bales	EACH	58.000	58.000
0260	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0270	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0280	628.2004	Erosion Mat Class I Type B	SY	13.000	13.000
0290	628.6005	Turbidity Barriers	SY	193.000	193.000
0300	628.7010	Inlet Protection Type B	EACH	1.000	1.000
0310	628.7015	Inlet Protection Type C	EACH	6.000	6.000
0320	628.7570	Rock Bags	EACH	250.000	250.000
0330	629.0210	Fertilizer Type B	CWT	0.300	0.300
0340	630.0140	Seeding Mixture No. 40	LB	5.200	5.200
0350	630.0200	Seeding Temporary	LB	10.400	10.400
0360	637.2210	Signs Type II Reflective H	SF	6.000	6.000
0300	037.2210	Signs Type II Reliective II	SF	0.000	0.000

Page	2

					2703-00-71
Line	Item	Item Description	Unit	Total	Qty
0370	638.2102	Moving Signs Type II	EACH	3.000	3.000
0380	642.5001	Field Office Type B	EACH	1.000	1.000
0390	643.0100	Traffic Control (project) 01. 2703-00-71	EACH	1.000	1.000
0400	643.0410	Traffic Control Barricades Type II	DAY	880.000	880.000
0410	643.0420	Traffic Control Barricades Type III	DAY	1,408.000	1,408.000
0420	643.0705	Traffic Control Warning Lights Type A	DAY	3,696.000	3,696.000
0430	643.0900	Traffic Control Signs	DAY	1,584.000	1,584.000
0440	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0450	643.1050	Traffic Control Signs PCMS	DAY	176.000	176.000
0460	643.2000	Traffic Control Detour (project) 01. 2703-00-71	EACH	1.000	1.000
0470	643.3000	Traffic Control Detour Signs	DAY	14,494.000	14,494.000
0480	645.0120	Geotextile Type HR	SY	74.000	74.000
0490	646.0106	Pavement Marking Epoxy 4-Inch	LF	1,283.000	1,283.000
0500	646.0600	Removing Pavement Markings	LF	640.000	640.000
0510	650.6500	Construction Staking Structure Layout (structure) 01. P-51-0705	LS	1.000	1.000
0520	650.8500	Construction Staking Electrical Installations (project) 01. 2703-00-71	LS	1.000	1.000
0530	650.9910	Construction Staking Supplemental Control (project) 01. 2703-00-71	LS	1.000	1.000
0540	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	10.000	10.000
0550	653.0208	Junction Boxes 8x8x8-Inch	EACH	3.000	3.000
0560	655.0625	Electrical Wire Lighting 6 AWG	LF	1,344.000	1,344.000
0570	690.0150	Sawing Asphalt	LF	80.000	80.000
0580	715.0502	Incentive Strength Concrete Structures	DOL	500.000	500.000
0590	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	400.000	400.000
0600	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	400.000	400.000
0610	SPV.0035	Special 01. Scour Repair Grout Bags	CY	112.000	112.000
0620	SPV.0060	Special 01. Rail Post Anchorage Repair	EACH	1.000	1.000
0630	SPV.0060	Special 02. Embedded Galvanic Anodes	EACH	717.000	717.000
0640		Special 01. Bridge Railing Modification	LF	763.000	763.000
0650	SPV.0090	Special 02. Conduit Reinforced Thermosetting Resin 1-Inch		405.000	405.000
0660	SPV.0105	Special 01. Removal of Existing Lighting Conductors	LS	1.000	1.000
0670	SPV.0105	Special 02. Removal and Replace Tunnel Light Fixtures		1.000	1.000
0680	SPV.0105	Special 03. Work in Existing Lighting Control Cabinet	LS	1.000	1.000
0000	01 7.0100	Special Co. Work in Existing Lighting Control Cabinet	_0	1.000	1.000

		12/06/2016 1	11:52:11	П
3	Estimate Of Quantities	Page 3	3	3

2703-00-71

	REI	NOVING ASPHAL	TIC SURFACE I	BUTT JOINTS							FINISHING ROADWAY	213.0100	
CATEGORY	STREET	STATION	TO STA	TION	204.0115 SY					0010	PROJECT PROJECT 2703-00-71	EACH 1	
0010	MEMORIAL DRIVE	101+90 103+78		2+15 I+03	111 111						PROJECT TOTAL	1.1	
			PROJECT	TOTAL	222								
							ASF	PHALTIC PAVEMENT	r				
									460.6224 HMA PAVEMENT	455.0605 TACK COAT			
					CATEGORY	STREET	STATION	TO STATION	4 MT 58-28 S TON	GAL			
				•	0010	MEMORIAL DRIVE	17+65 21+35	- 21+35 - 26+35	13 13	11 11			
				-		PROJECT TOTALS		25,133	26	22	-		
	CATEGORY 0010	PROJECT 2	ATION 2703-00-71 PROJECT TOTA	619.10 EACH 1 L 1							CATEGORY STREET 0010 UNDISTRIBUTE PROC	625.0100 SY ED 13 JECT TOTAL 13	
		TEMPO	RARY SETTLING	628.1104	645.012 ES GEOTEXTI	(LE					EROSION CO	ONTROL MOBILIZATIONS 628.1905 MOBILIZATIONS	628.1910 Mobilizations
	RY STREE	T F	ROM TO	EACH	TYPE H SY	R				CATECORY	LOCATION	EROSION CONTROL	EMERGENCY EROSION CONTROL
CATEGO		CLULL W		58	55					CATEGORY	LOCATION	EACH	EACH
0010	UNDISTRIE	2802	ROJECT TOTALS	58	55					0010	PROJECT 2703-00-71	1	2

TRLIT PROTECTION SERVICE SERVI		STREET DISTRIBUTED PROJECT		· —				CATEGO 0016		TURBIDITY BARRIERS LOCATION ROOT RIVER TOTAL	628.6005 SY 193	
CATEGORY STREET	DRY ST MEMORI	TREET IAL DRIVE	628.7010 INLET PROTECTION TYPE B EACH	INLET PROTECTION TYPE C EACH 6				CATE	GORY	STREET Undistributed	250	
SIGN NO. LOCATION STATION OFFSET SIGN CODE MESSAGE SIZE SF EACH REMARKS						629.0210 FERTILIZER	630.0140 SEEDING MIXTURE	SEEDING				
CATEGORY NO. LOCATION STATION OFFSET SIGN CODE MESSAGE SIZE SF EACH REMARKS 0010 100 MEMORIAL DRIVE 104+55 23' LT R7-1-D NO PARKING ANYTIME 18 X 24 3.0 - MOUNTED TO POWER POLE 101 MEMORIAL DRIVE 105+35 24' LT R7-1-L NO PARKING ANYTIME 18 X 24 3.0 - MOUNTED TO POWER POLE 300 MEMORIAL DRIVE 102+12 27' RT - ROOT RIVER 1 MOUNTED TO POWER POLE 301 MEMORIAL DRIVE 102+12 27' RT - NO PARKING ANYTIME 1 MOUNTED TO POWER POLE 302 MEMORIAL DRIVE 102+97 27' LT - ROOT RIVER 1 MOUNTED TO POWER POLE			-		ISTRIBUTED	0.3	LB 5.2	10.4	-			
					ISTRIBUTED PROJECT TOTA	0.3 ALS 0.3	LB 5.2	10.4 10.4 637.2210 SIGNS TYPE II REFLECTIVE	MOVING SIGNS			

TRAFFIC CONTROL

	FIELD OFFICE TYPE	ь
CATEGORY	LOCATION	642.5001 EACH
0010	PROJECT 2703-00-71	1
	PROJECT TOTAL	1

			643.0100 TRAFFIC CONTROL PROJECT 2703-00-71	643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS		643.1050 TRAFFIC CONTROL SIGNS PCMS		
CATEGORY	STREET	DAYS	EACH	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	NO.	CYCLES	EACH	EACH	DAYS
0010	MEMORIAL DRIVE UNDISTRIBUTED	88	1	10	880	16	1,408	42	3,696	18	1,584	2	i	2	2	176
	PROJECT TOTAL				880		1,408		3,696		1,584			2	1	176

TRAFFIC CONTROL DETOUR

				TRAFFIC CONTROL DETOUR	TRAFFIC	.3000 CONTROL R SIGNS
CATEGORY	PROJECT	STREET	DAYS	EACH	EACH	DAYS
0010	2703-00-71	MEMORIAL DRIVE	88	0.34	124	10,912
		MEMORIAL DRIVE PEDESTRIAN	88	0.33	24	2,112
		ROOT RIVER PATHWAY	30	0.33	49	1,470
		PROJECT TOTAL		1		14,494

PAVEMENT MARKING

			PRO	JECT TOTAL	1.	283	640
0010	MEMORIAL DRIVE	100+46		105+53	257	1,026	640
CATEGORY	STREET	L	OCATIO	N	LF	LF	LF
					4-INCH WHITE	4-INCH YELLOW	MARKIN
					EPOXY	EPOXY	REMOVI
					646.	0106	646.06

CONSTRUCTION STAKING MAINLINE ITEMS

CATEGORY	ITEM	QUANTITY	UNIT	DESCRIPTION
0020	650.6500	1	LS	CONSTRUCTION STAKING STRUCTURE LAYOUT (P-51-0705)
0010	650.8500	1	LS	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (ID 2703-00-71)
0010	650.9910	1	LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (ID 2703-00-71)

PROJECT NO: 2703-00-71 HWY: MEMORIAL DRIVE COUNTY: RACINE MISCELLANEOUS QUANTITIES SHEET E

STREET LIGHTING WIRING AND CONDUIT

CATEGORY	DESCRIPTION FROM	STATION	DIRECTIO	N LOCATION	DESCRIPTION TO	STATION	DIRECTIO	N LOCATION	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.	SPV.0090.02 CONDUIT REINFORCED THERMOSETTING RESIN 1-INCH L.F.	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG L.F.
0010	A-1	102+96.55	LT	26.52	B-1	103+94.29	LT	13.3	(6)	130	399
	B-1	103+94.29	LT	13.3	B-2	103+94.29	RT	13.3	4	25	84
	B-2	103+94.29	RT	13.3	JB-2	103+94.29	RT	28.43		15	54
	A-2	103+94.29	RT	28.43	JB-1	421+80.0	LT	0.5	-	185	564
	A-3	421+80.0	LT	0.5'	JB-1	423+15.0	LT	2.1'	*	10	39
	JB-1	423+15.0	LT	2.1'	JB-2	424+49.9	LT	3.3'		18	63
	JB-2	424+49.9	LT	3.3'	JB-3	425+84.9	LT	4.4'		8	33
	JB-3	425+84.9	LT	4.4'	GRADE	427+20.0	LT	5.0		14	51
	GRADE	427+20.0	LT	5.0'	PARKS LCC	428+55.0	LT	5.0'	10	*	57
							PROJECT	TOTAL	10	405	1,344

JUNCTION BOXES

653.0208 JUNCTION BOXES 8X8X8-INCH DESCRIPTION DIRECTION LOCATION CATEGORY STATION EACH 0010 JB-1 103+80.67 28.4 JB-2 RT 103+94.29 28.4 JB-3 104+07.05 RT 28.5 PROJECT TOTAL

SAWING ASPHALT

			690.0150
CATEGORY	STREET	LOCATION	LF
0010	MEMORIAL DRIVE	101+90	40
	MEMORIAL DRIVE	104+03	40
		PROJECT TOTAL	80

REMOVAL & EXISTING LIGHTING ITEMS

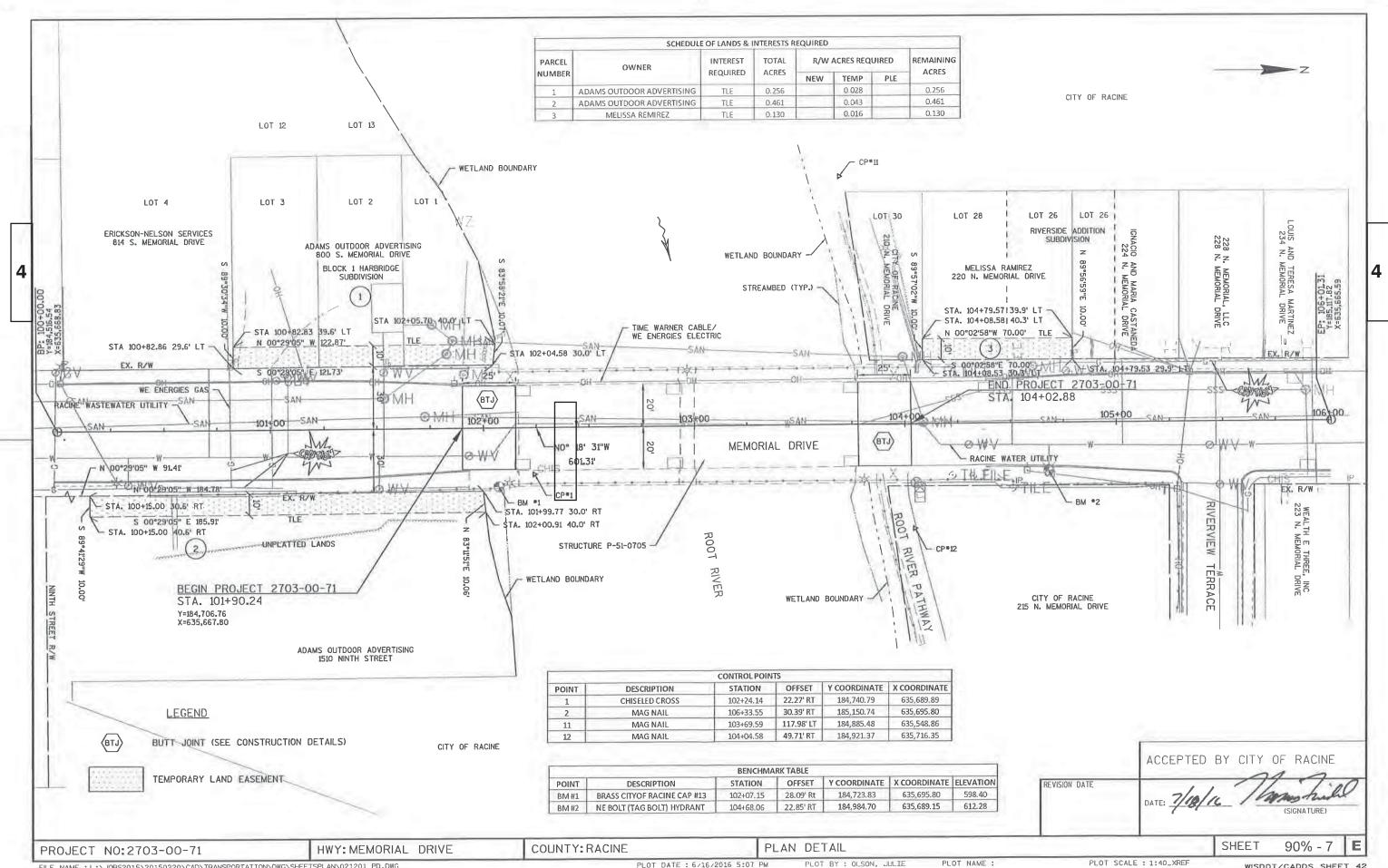
SPV.0105.01 SPV.0105.02 SPV.0105.03

REMOVAL OF EXISTING REMOVE AND REPLACE WORK IN EXISTING

LIGHTING CONDUCTORS TUNNEL LIGHT FIXTURES LIGHTING CONTROL CABINET

CATEGORY	STREET	LS	LS	LS
0010	MEMORIAL DRIVE	1	1	1
	PROJECT TOTAL	1	•	1

PROJECT NO:2703-00-71 HWY:MEMORIAL DRIVE COUNTY:RACINE MISCELLANEOUS QUANTITIES SHEET **E**



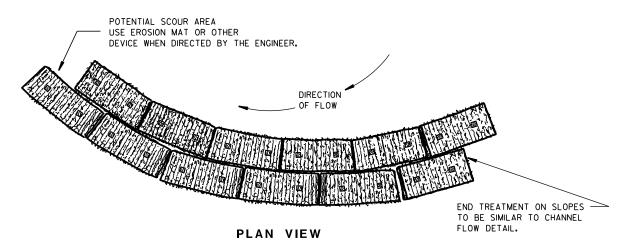
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Standard Detail Drawing List

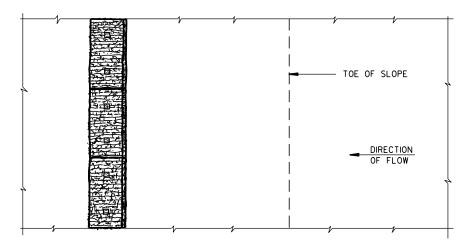
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBI DI TY BARRI ER
09B02-09	CONDUI T
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-04B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15D20-03	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL PEDESTRIAN ACCOMMODATION

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.

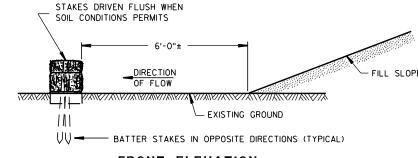
TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF **EROSION BALES / TEMPORARY** DITCH CHECKS

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Connestro
CHIEF ROADWAY DEVELOPMENT ENGINEER

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INLET PROTECTION, TYPE A

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

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 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 A, B, C, AND D

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02

/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER 6

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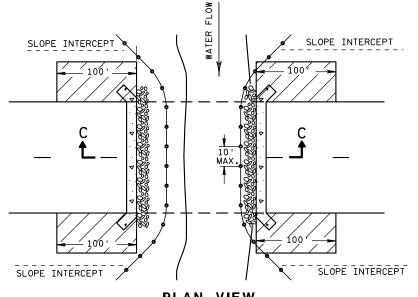
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GENERAL NOTES

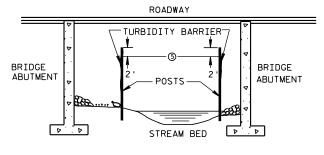
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- 2 SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- (3) WHEN BARRIER HEIGHT, H. EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- (4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- (5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.
- (6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- (7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- (8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

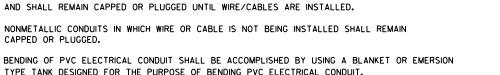
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

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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.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM

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

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

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES

SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

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 REIN-STALLED 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

GENERAL NOTES

AND 36 INCHES MAXIMUM.

OF THE ENGINEER.

CAPPED OR PLUGGED.

MINIMUM AND 36 INCHES MAXIMUM.

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.

BOTTOM OF ¼" HOLE PVC CONDUIT-CONDUIT TRENCH FOR DRAINAGE NO. 2 COARSE AGGREGATE FILL —1'-0" DIA. OR SQUARE —>

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

BOTTOM OF

CONDUIT TRENCH

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

DRAIN SUMP FOR METALLIC CONDUIT

1'-0" DIA. OR SQUARE ──➤

METALLIC CONDUIT-

1" DIA. X 6"

NIPPLE

NO. 2 COARSE

AGGREGATE FILL

ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4" TO 3/8"

DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER

PLAN VIEW

ARROW MARK

CONDUIT

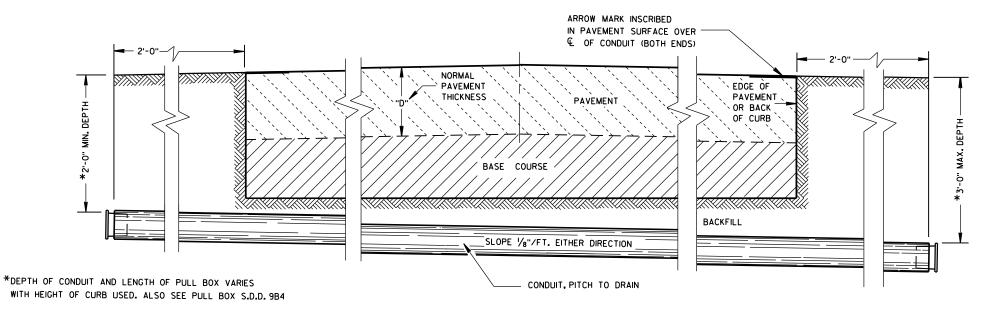
THE PAVEMENT

EDGE OF

PAVEMENT OR BACK

OF CURB

DRAIN SUMP FOR PVC CONDUIT



SIDE ELEVATION DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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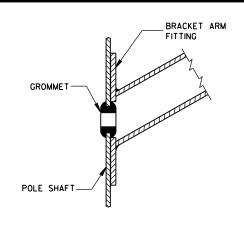
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APPROVED /S/ Ahmet Demirbilek June. 2015 DATE STATE ELECTRICAL ENGINEER

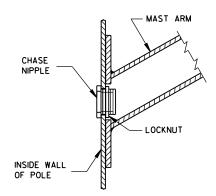
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TYPICAL APPLICATION OF **GROMMET IN POLE SHAFT**

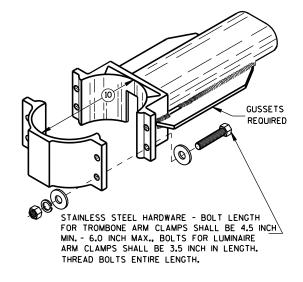


TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

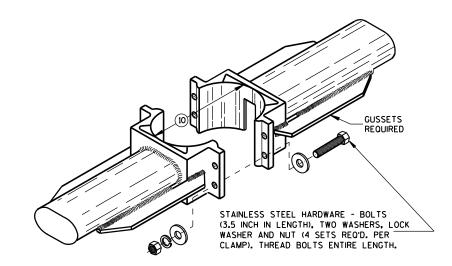
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

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

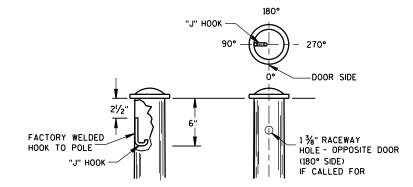
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



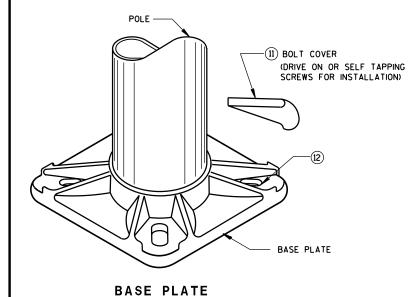
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP

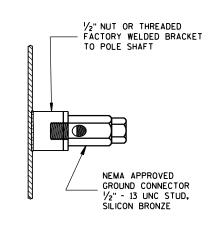


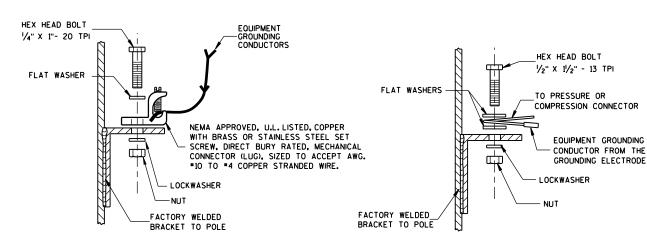
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



TYPICAL "J" HOOK LOCATION







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

HARDWARE DETAILS FOR POLE MOUNTINGS

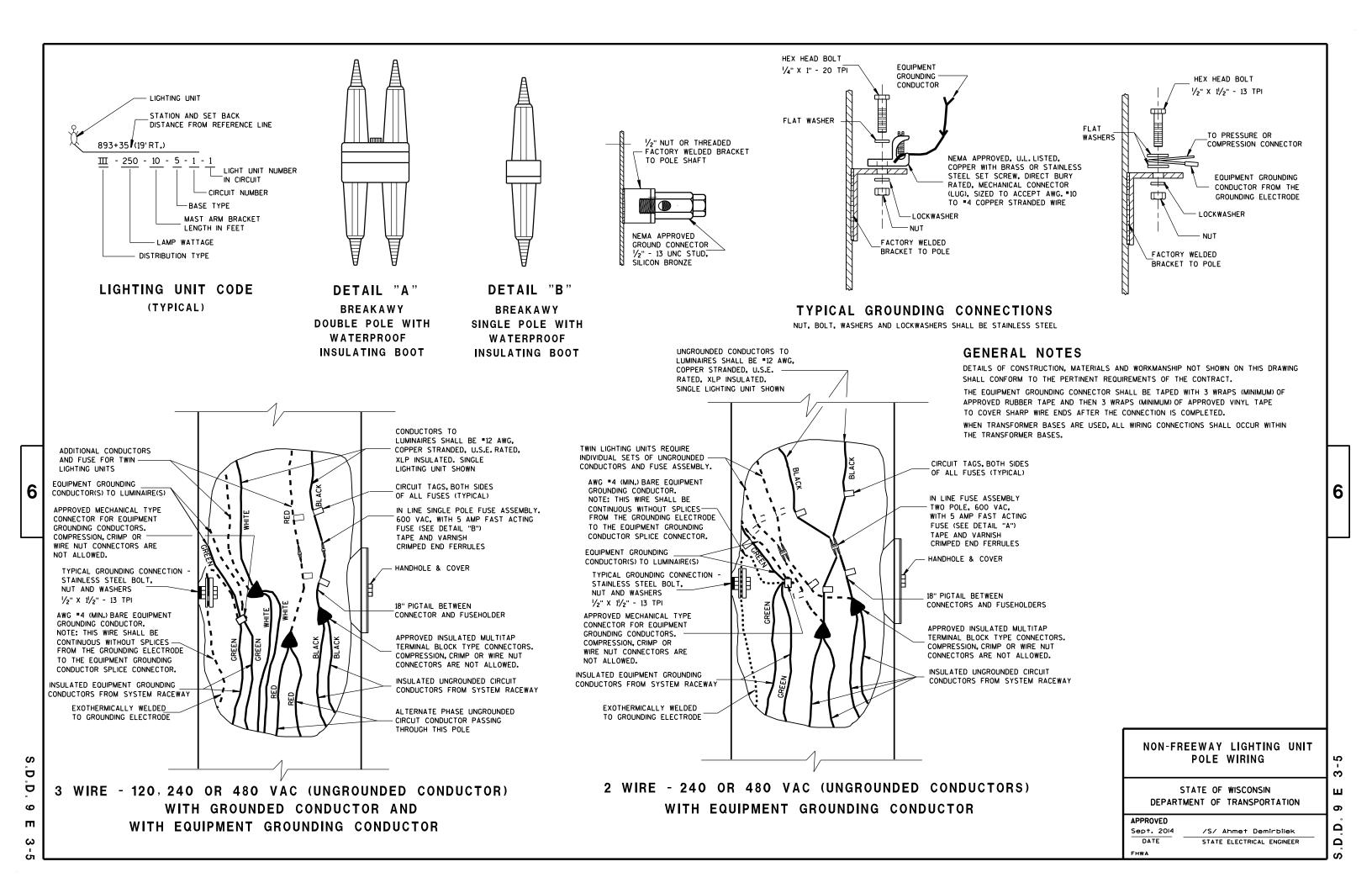
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED	
Feb. 2015	/S/ Ahmet Demirbilek
DATE	STATE ELECTRICAL ENGINEER
FHWA	

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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

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 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.

"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, 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". (30" X 15" 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
- THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 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.
- "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

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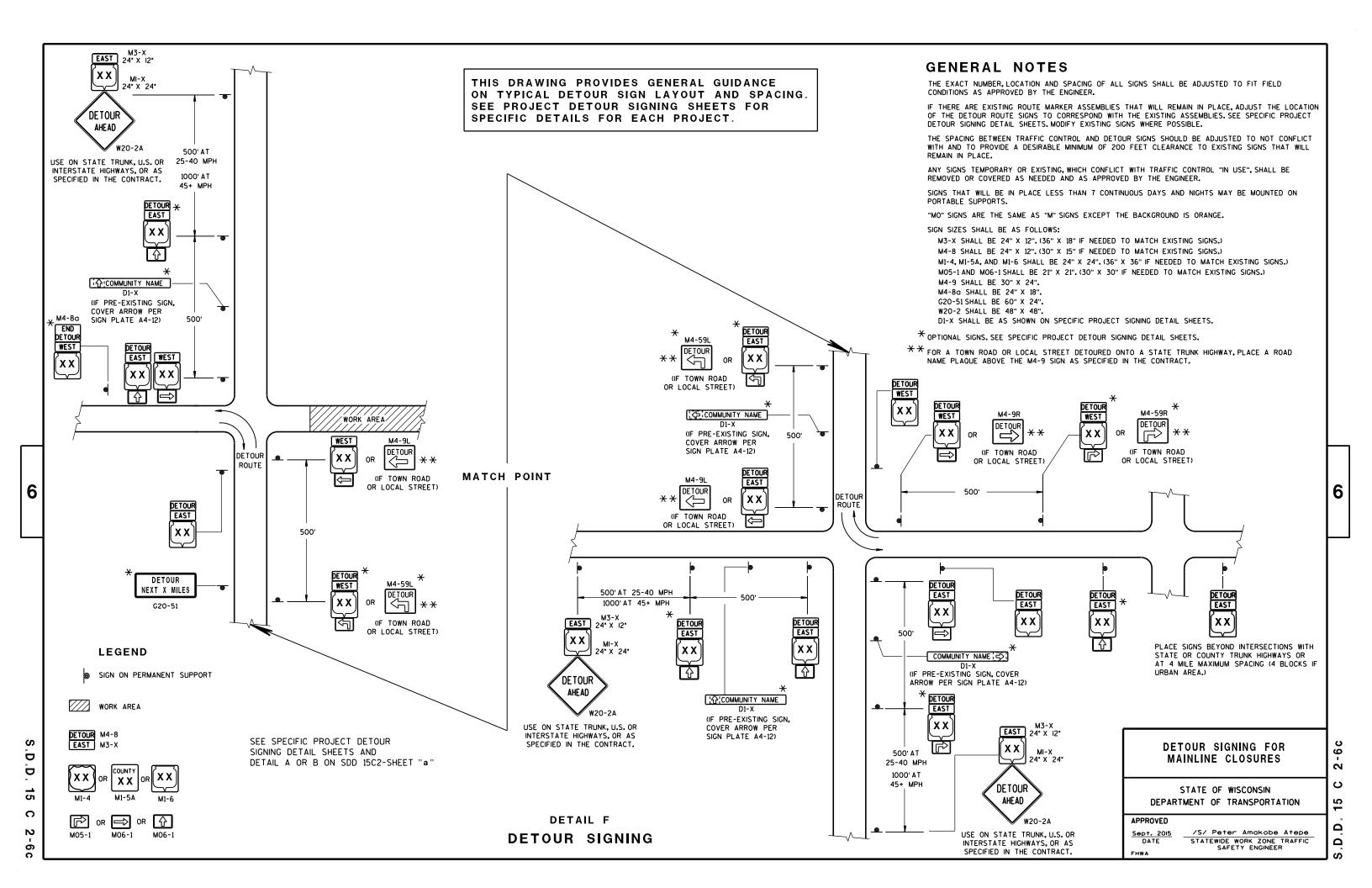
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

/S/ Peter Amakobe Atepe

STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



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

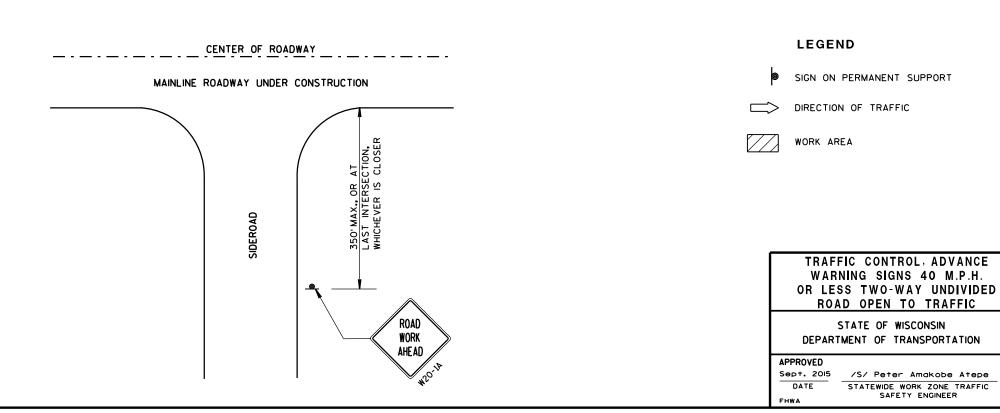
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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



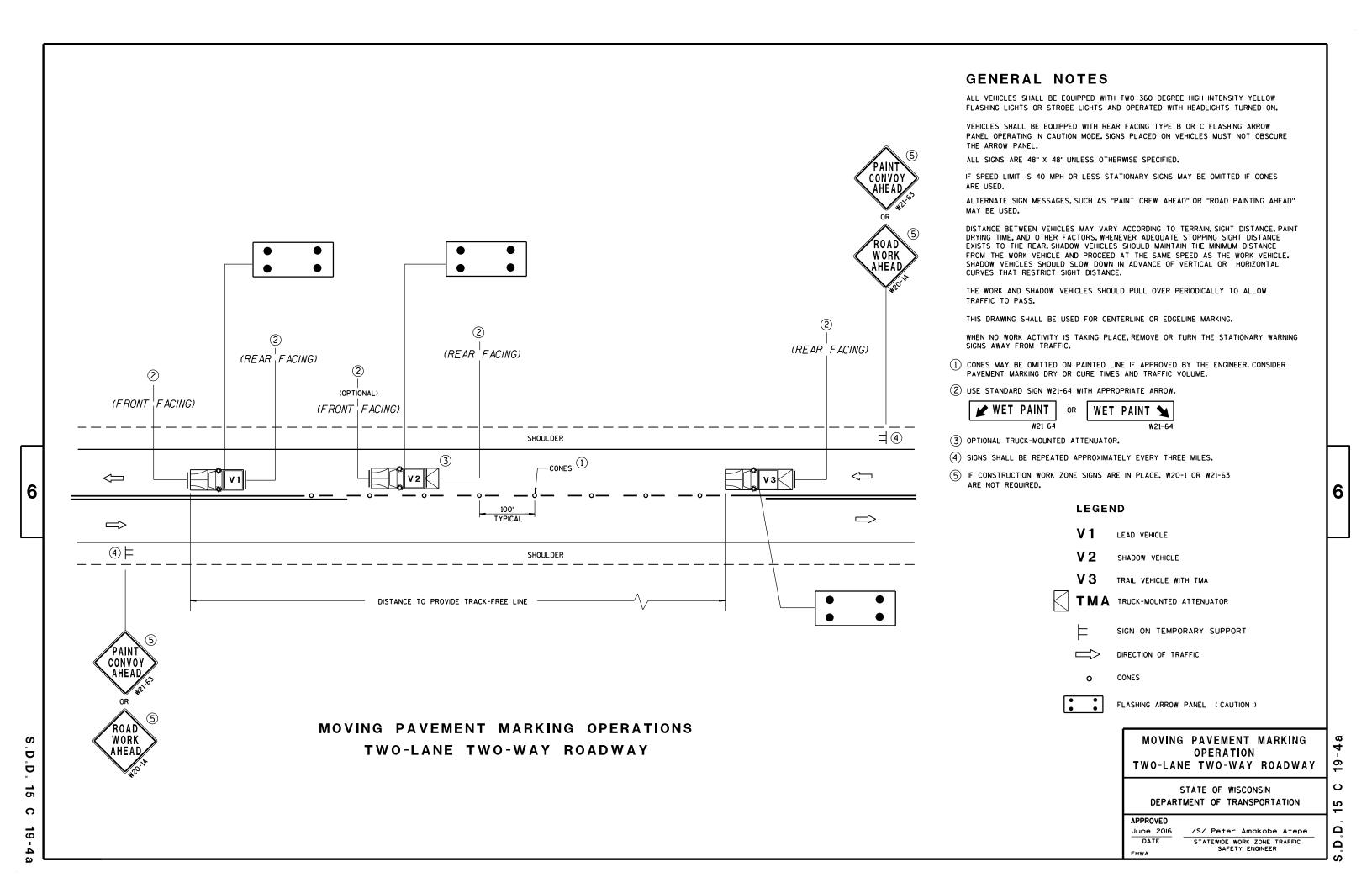
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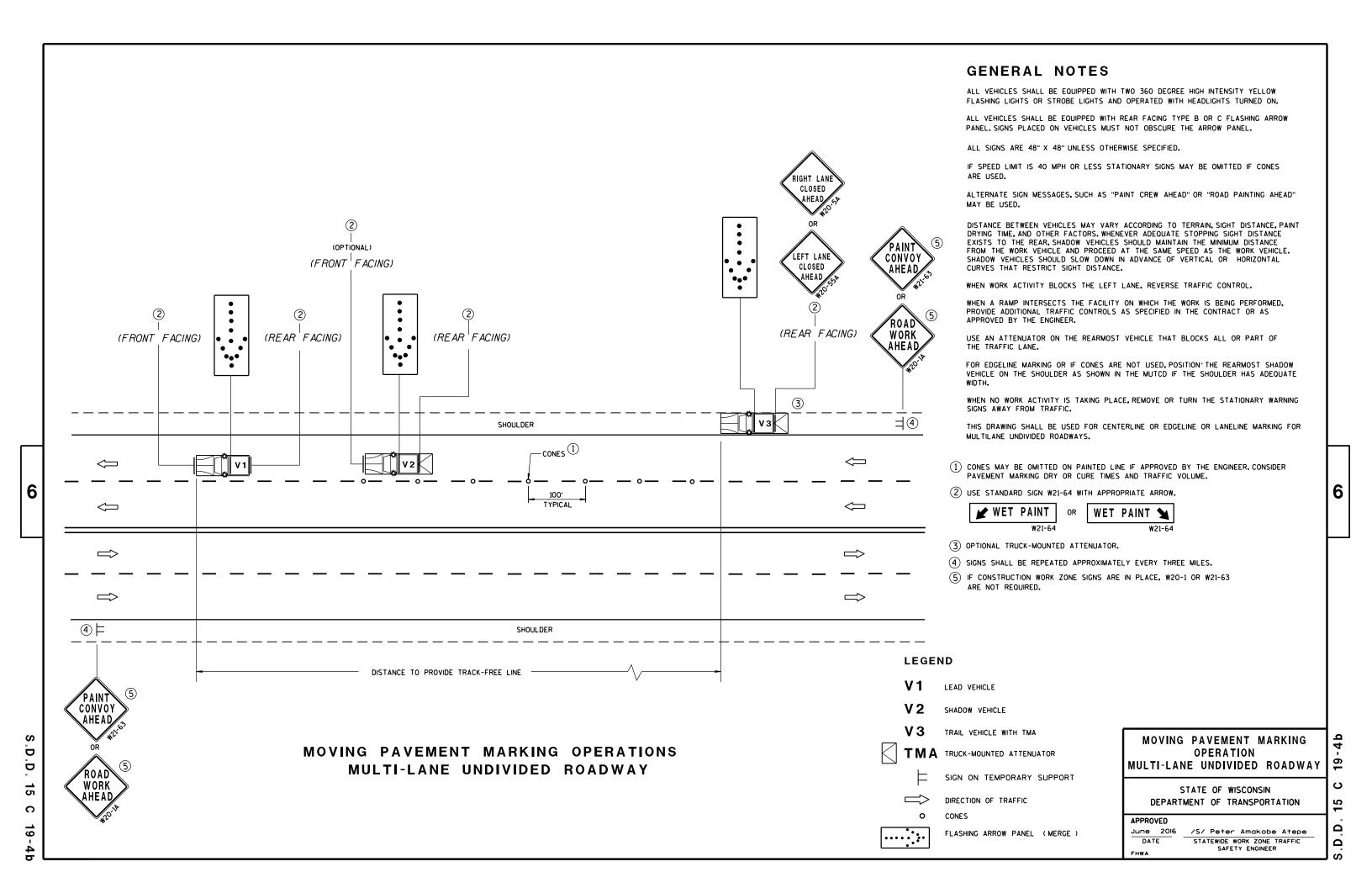
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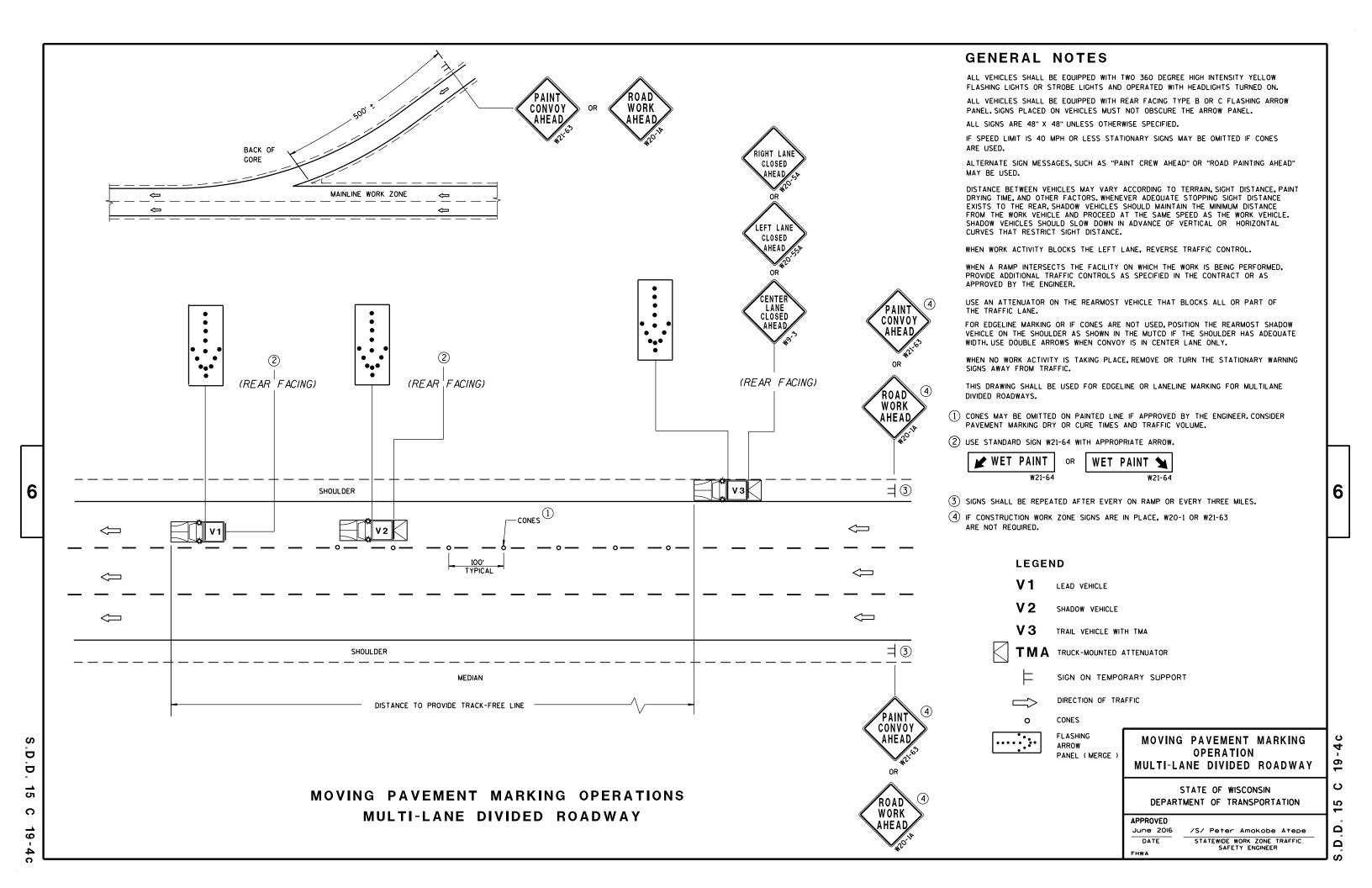
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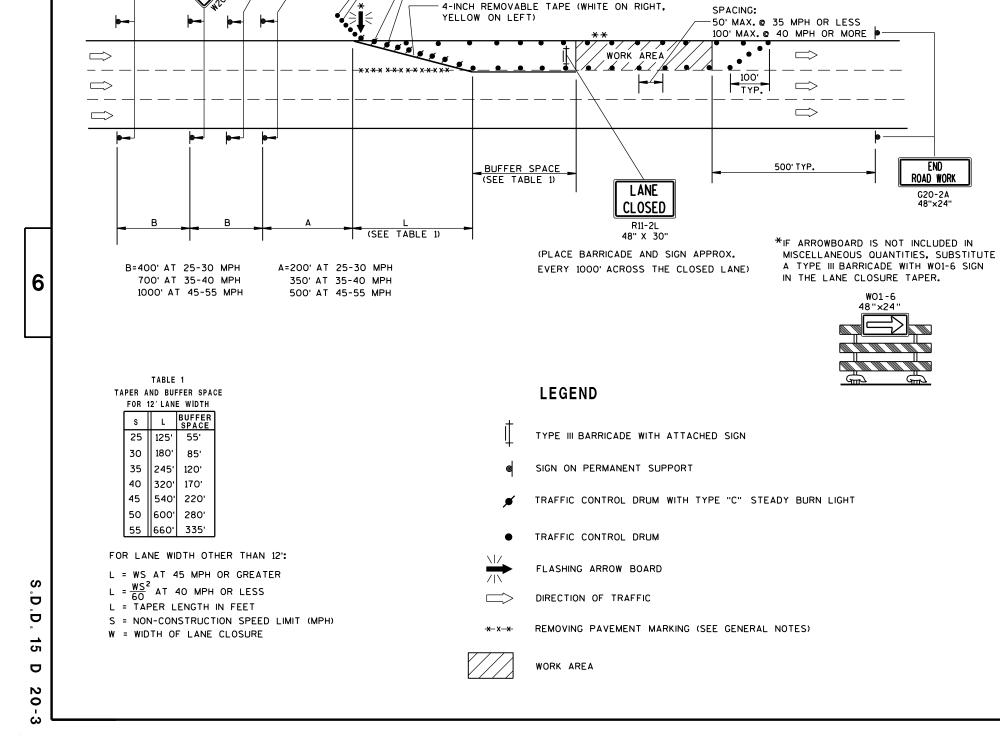












(5) DRUMS SPACED @ 10'

INTERVALS AS NEEDED IN

FRONT OF ARROW BOARD

25'@ 35 MPH OR LESS

50'@ 40 MPH OR MORE

TEMPORARY PAVEMENT MARKING.

SPACING:

ROAD WORK

NEXT___MILES

G20-1

60" X 24"

CLOSED

AHEAD

AHEAD

GENERAL NOTES

**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE

ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL

W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF

IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC

TRAFFIC, IN ADVANCE OF THE WORK AREA.

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.

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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 PORTABLE SUPPORTS.

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.

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W2O-1, G2O-1 AND G2O-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

BARRICADES IN A CLOSED LANE 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.

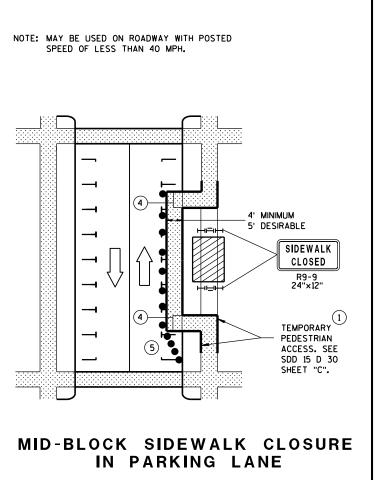
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
DATE
STATE TRAFFIC ENGINEER OF DESIGN

S.D.D. 15 D 2



NOTE: LAYOUT SAME AS ABOVE. 4' MINIMUM 5' DESIRABLE SIDEWALK CLOSED RQ-Q TEMPORARY PEDESTRIAN ACCESS. SEE SDD 15 D 30 SHEET "C". SIDEWALK DIVERSION

6

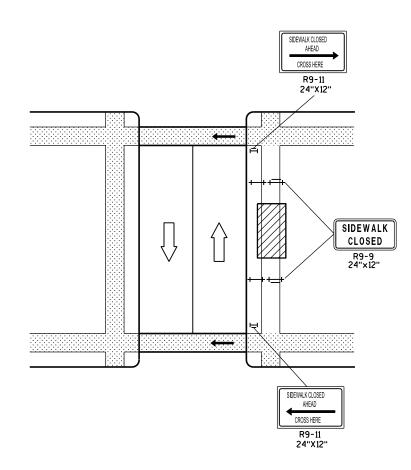
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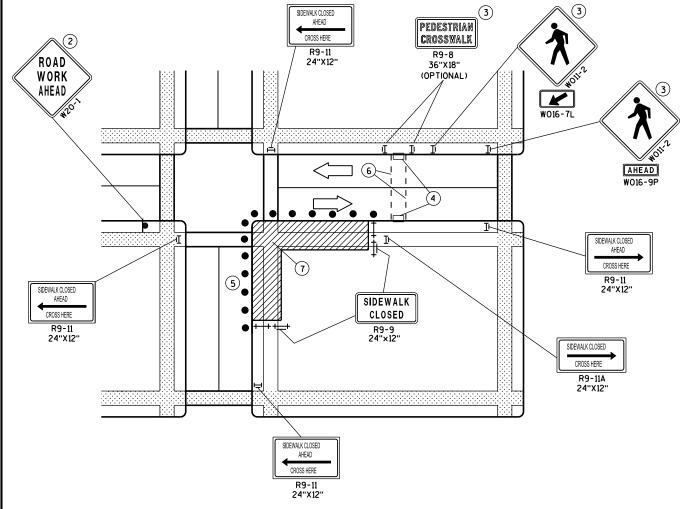
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MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

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

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

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

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

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

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

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

- 1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.
- (2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- (3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- (4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".
- (5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- (6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- (7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN

LEGEND

SIGN ON PERMANENT SUPPORT

UNDER PEDESTRIAN TRAFFIC

TRAFFIC TRAFFIC CONTOL DRUM

DIRECTION OF

WORK AREA PEDESTRIAN

CHANNELIZATION DEVICE

TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A. LOW-INTENSITY FLASHING)

TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION က 0 က Ω Ω

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PARALLEL TO CURB

D

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GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION. ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

- (1) CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".
- (2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- 3 DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- (4) CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
- (5) CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- (6) THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
- 7 DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- (8) LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- (9) CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- (10) 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.

DEPARTMENT OF TRANSPORTATION

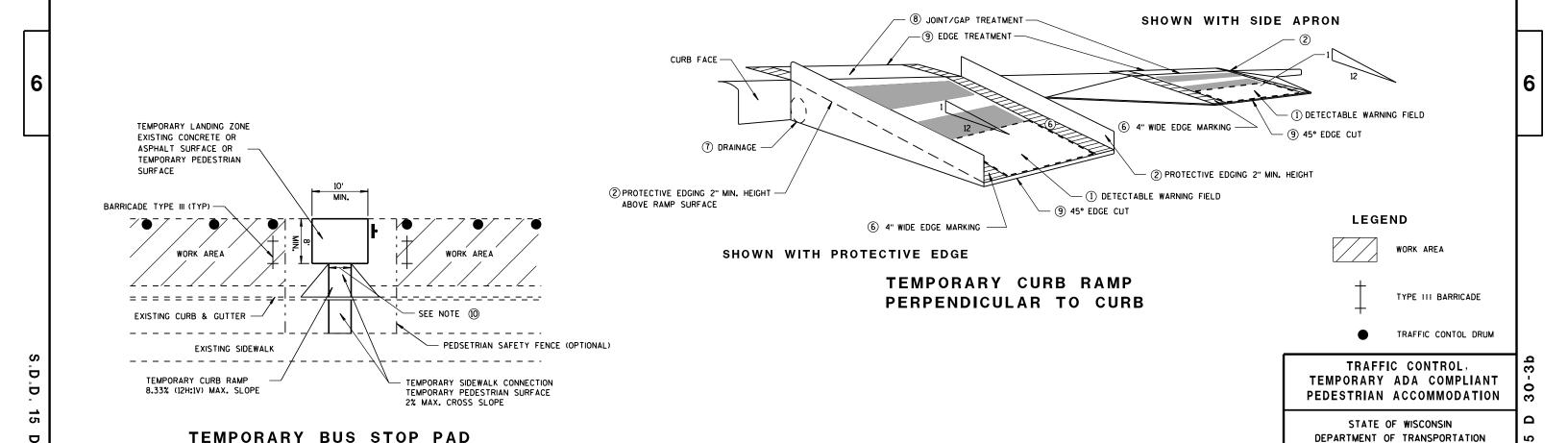
/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC

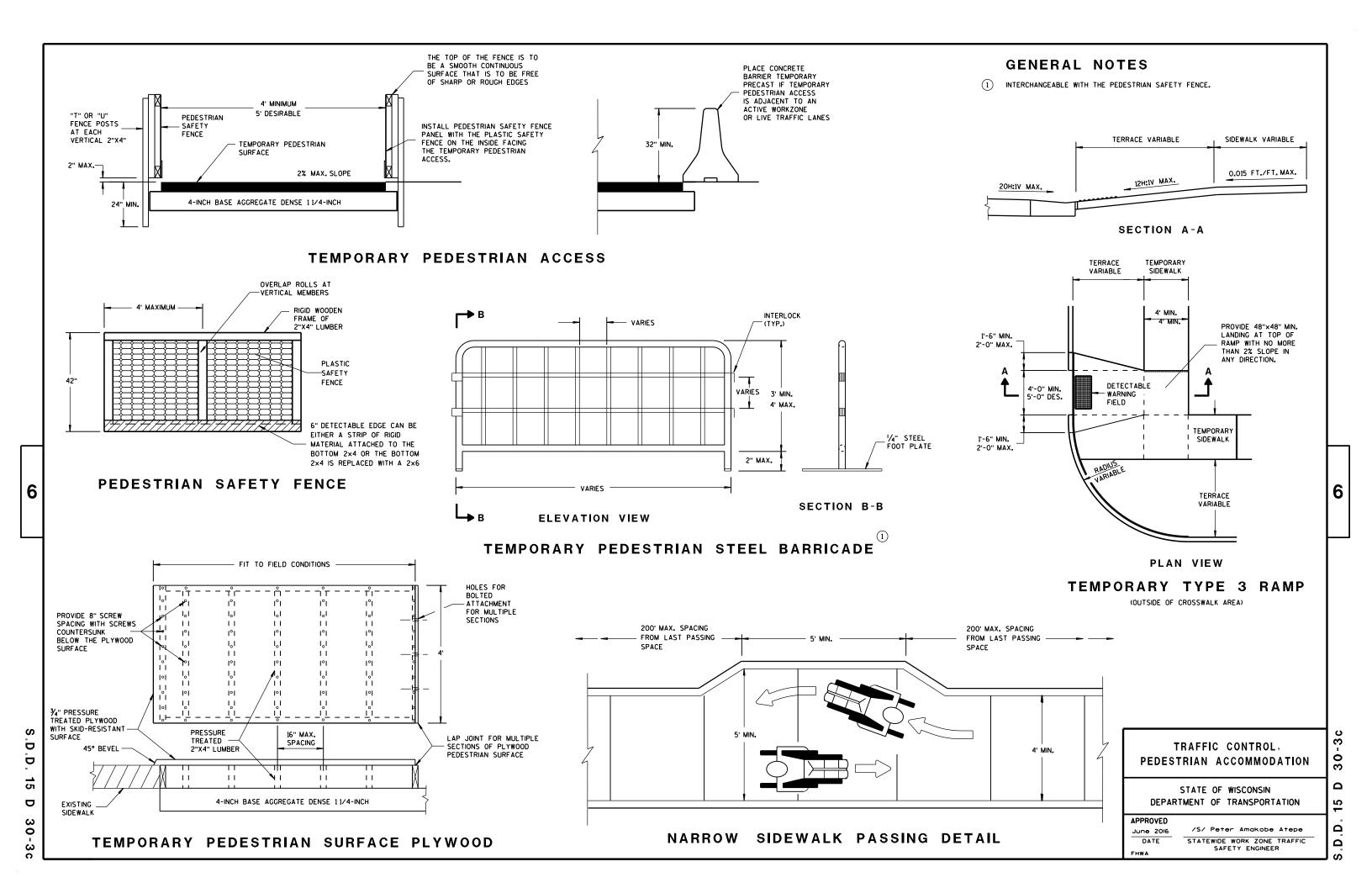
SAFETY ENGINEER

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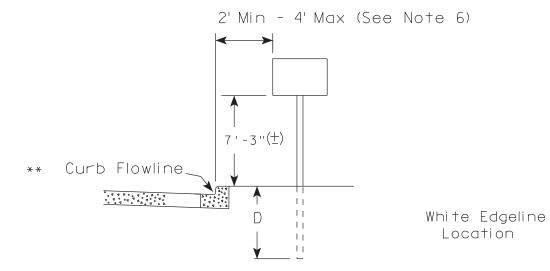
APPROVED

June 2016

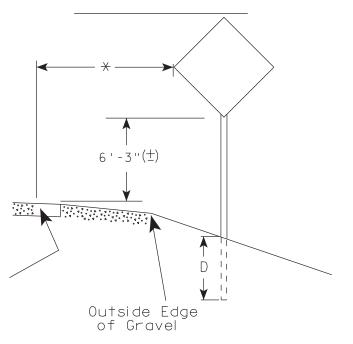




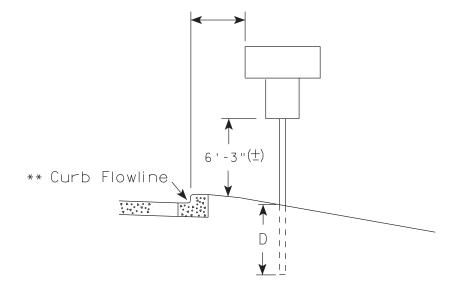
urban area



RURAL AREA (See Note 2)



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



White Edgeline
Location

Outside Edge
of Gravel

** 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.

GENERAL NOTES

- 1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on barrier wall, see A4-10 sign plate.
- 3. For expressways and freeways, mounting height is 7'- 3" (\pm) or 6'-3" (\pm) depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is $5'-3''(\pm)$.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. The (\pm) tolerance for mounting height is 3 inches.
- 8. Folding signs shall be mounted at a height of 5'-3'' (\pm) or as directd by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

D
(Min)
4'
5'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

Matther R Rauch
For State Traffic Engineer

DATE <u>11/12/14</u>

PROJECT NO: 2703-00-71

HWY: MEMORIAL DRIVE

COUNTY: RACINE

SIGN DETAILS

PLOT DATE: 12-NOV-2014 14:03

PLOT NAME :

PLATE NO. __A4-3.19

GENERAL NOTES

- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways. mounting height is 7'-3'' (±) or 6'-3'' (±) depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height is 3 inches.
- 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3'' (±) or 6'-3'' (±) per urban or rural detail respectively.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3'' (\pm). The Chevron sign (W1-8). Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).
- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

RURAL AREA (See Note 3) 2'Min - 4'Max (See Note 6) FFA 6'-3"(±) 6'-3"(±) D

White Edgeline

Outside Edae

of Gravel

Location

2' Min - 4' Max (See Note 6) 6'-3"(±) Curb Flowline. -11

-11

48" DIAMOND WARNING SIGN

URBAN AREA

₩E#

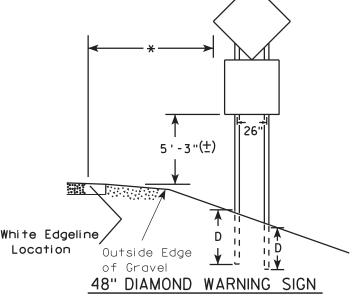
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7'-3"(±)

Curb

700 M

Flowline



Outside Edge

of Gravel

	SIGN SHAPE OTHER THAN (TWO POSTS REQUIRED		
	L	E	
***	Greater than 48" Less than 60"	12"	
	60" to 120"	L/5	L

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

White Edgeline,

Location

SIGN SHAPE OTHER THAN (FOUR POSTS REQUIRE	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS WISCONSIN DEPT OF TRANSPORTATION

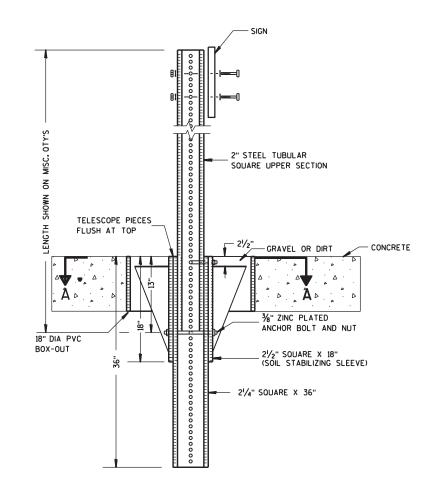
APPROVED Matther For State Traffic Engineer

SHEET NO:

PLATE NO. A4-4.13 DATE 11/12/14

HWY: MEMORIAL DRIVE COUNTY: RACINE PROJECT NO: 2703-00-71 SIGN DETAILS 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.

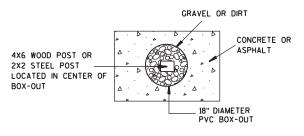


ELEVATION VIEW

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

ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer DATE 1/27/14 PLATE NO. <u>A4-3B.1</u>

PROJECT NO: 2703-00-71

HWY: MEMORIAL DRIVE

COUNTY: RACINE

SIGN DETAILS

SHEET NO:

APPROVED

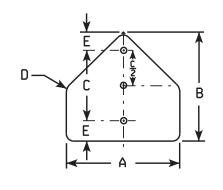
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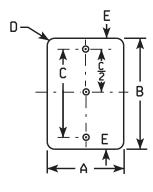
PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

WISDOT/CADDS SHEET 42

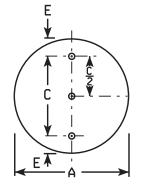


	TYPE 6												
Α	В	С	D	Ε	Area Sq. Ft	THICK NESS	Mounting Holes						
30	30		13//8		4.68	.080	2						
36	36	26	15/8	5	6.75	.100	2						
48	48	32	1 1/8	8	12.0	.125	3						



7

TYPE 7												
В	С	D	Ε	Area Sq. Ft.	THICK NESS	Mounting Holes						
18	15	1 1/2	1 1/2	1.5	.080	2						
24	20	1 1/2	2	2.0	.080	2						
36	24		6	3.0	.100	2						
48	32	1 1/2	8	4.0	.125	3						
21	18	1 1/2	1 1/2	2.19	.080	2						
24	20	1 ½	2	3.0	.080	2						
36	24	1 1/2	6	4.5	.100	2						
54	36	21/2	9	6.75	.080	3						
60	40	1 1/2	10	8.75	.080	3						
72	52	1 ½	10	10.5	.080	3						
30	22	1 1/2	4	5.0	.080	2						
36	24	1 1/2	6	6.0	.100	2						
39	27	1 1/2	6	6.5	.080	3						
45	32		6	7 . 5	.080	3						
48	32	1 1/8	8	8.0	.125	3						
57	37	1 %	10	9.5	.080	3						
48	32	1 %	8	12.0	.125	3						
36	24	1 %	6	7.5	.100	2						
54	36	2 1/4	9	12.75	.100	3						
57	37	1 %	10	14.25	.100	3						
39	27	1 1/8	10	13.0	.125	3						
45	32	1 1/8	10	14.0	.125	3						
57	37	3	6	19.0	.125	3						
	18 24 36 48 21 24 36 54 60 72 30 36 39 45 48 57 48 57 48 57 48 57 48 54	18 15 24 20 36 24 48 32 21 18 24 20 36 24 54 36 60 40 72 52 30 22 36 24 39 27 45 32 57 37 48 32 36 24 54 36 57 37 39 27 45 36 57 37 39 27 45 36	18 15 1 ½ 24 20 1½ 36 24 1½ 48 32 1½ 21 18 1½ 24 20 1½ 36 24 1½ 54 36 2½ 60 40 1½ 72 52 1½ 30 22 1½ 39 27 1½ 45 32 1½ 48 32 1½ 48 32 1½ 48 32 1½ 48 32 1½ 57 37 1½ 54 36 2¼ 57 37 1½ 57 37 1½ 57 37 1½ 39 27 1½ 39 27 1½ 39 27 1½ 39 1½ 1½ 39 27 1½ 39 27 1½	B C D E 18 15 1½ 1½ 2 24 20 1½ 6 48 32 1½ 8 21 18 1½ 1½ 24 20 1½ 2 36 24 1½ 6 54 36 2½ 9 60 40 1½ 10 72 52 1½ 10 30 22 1½ 6 39 27 1½ 6 45 32 1½ 6 48 32 1½ 8 57 37 1½ 8 36 24 1½ 6 48 32 1½ 8 57 37 1½ 8 36 24 1½ 8 57 37 1½ 8 36 24 1½ 9 54 36 2¼ 9 57 <td< td=""><td>B C D E Area Sq. Ft. Sq. Ft. 18 15 1 ½ 2 1 ½ 1½ 1½ 1.5 1.5 24 20 1 ½ 2 2 2.0 36 24 1 ½ 36 3.0 48 32 1 ½ 88 4.0 21 18 1 ½ 1½ 2 2.19 24 20 1 ½ 2 3.0 36 24 1 ½ 6 4.5 54 36 2 ½ 9 6.75 6.75 60 40 1 ½ 10 8.75 72 52 1 ½ 10 10.5 30 22 1 ½ 6 6.0 39 27 1 ½ 6 6.0 39 27 1 ½ 6 6.5 48 32 1 ½ 8 8 57 37 1 ½ 8 8 48 32 1 ½ 8 12.0 36 24 1 ½ 8 7.5 48 32 1 ½ 8 12.75</td><td>B C D E Area Sq. Ft. NESS THICK NESS 18 15 1 ½ 1½ 1½ 1.5 .080 24 20 1½ 2 2 2.0 .080 36 24 1½ 6 3.0 .100 48 32 1½ 8 4.0 .125 21 18 1½ 1½ 2 2.19 .080 24 20 1½ 2 2 3.0 .080 36 24 1½ 6 4.5 .100 54 36 2½ 9 6.75 .080 60 40 1½ 10 8.75 .080 72 52 1½ 10 10.5 .080 30 22 1½ 4 5.0 .080 30 22 1½ 6 6.0 .100 39 27 1½ 6 6.5 .080 45 32 1½ 8 8 8.0 .125 57 37 1½ 8 8 8.0 .125 57 37 1½ 8 9 12.0 .125 36 24 1½ 8 6 7.5 .100 54 36 24 1½ 8 6 7.5</td></td<>	B C D E Area Sq. Ft. Sq. Ft. 18 15 1 ½ 2 1 ½ 1½ 1½ 1.5 1.5 24 20 1 ½ 2 2 2.0 36 24 1 ½ 36 3.0 48 32 1 ½ 88 4.0 21 18 1 ½ 1½ 2 2.19 24 20 1 ½ 2 3.0 36 24 1 ½ 6 4.5 54 36 2 ½ 9 6.75 6.75 60 40 1 ½ 10 8.75 72 52 1 ½ 10 10.5 30 22 1 ½ 6 6.0 39 27 1 ½ 6 6.0 39 27 1 ½ 6 6.5 48 32 1 ½ 8 8 57 37 1 ½ 8 8 48 32 1 ½ 8 12.0 36 24 1 ½ 8 7.5 48 32 1 ½ 8 12.75	B C D E Area Sq. Ft. NESS THICK NESS 18 15 1 ½ 1½ 1½ 1.5 .080 24 20 1½ 2 2 2.0 .080 36 24 1½ 6 3.0 .100 48 32 1½ 8 4.0 .125 21 18 1½ 1½ 2 2.19 .080 24 20 1½ 2 2 3.0 .080 36 24 1½ 6 4.5 .100 54 36 2½ 9 6.75 .080 60 40 1½ 10 8.75 .080 72 52 1½ 10 10.5 .080 30 22 1½ 4 5.0 .080 30 22 1½ 6 6.0 .100 39 27 1½ 6 6.5 .080 45 32 1½ 8 8 8.0 .125 57 37 1½ 8 8 8.0 .125 57 37 1½ 8 9 12.0 .125 36 24 1½ 8 6 7.5 .100 54 36 24 1½ 8 6 7.5						



	TYPE 8													
Α	В	С	Ε	Area Sq.Ft.	THICK NESS	Mounting Holes								
30		24	3	4.91	.080	2								
36		26	5	7.07	.100	2								
48	_	32	8	12.5	.125	3								

NOTES

1. All sign blanks shall have $\frac{1}{16}$ " Diameter mounting holes.

	TYPE 9												
Α	В	С	D	Ε	Area Sq. Ft.	THICK NESS	Mounting Holes						
48	24	20	1 %	2	8.0	.125	2						

STANDARD LAYOUT OF ALUMINUM SIGN BLANKS

SHEET 2 OF 3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

DATE 10/13/14

PLATE NO. <u>A5-3.22</u>

PROJECT NO: 2703-00-71

HWY: MEMORIAL DRIVE

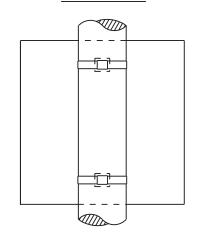
COUNTY: RACINE

SIGN DETAILS

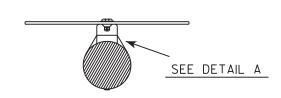
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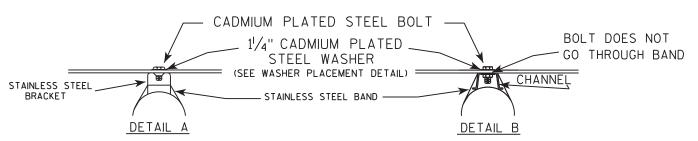
SHEET NO:

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SINGLE SIGN



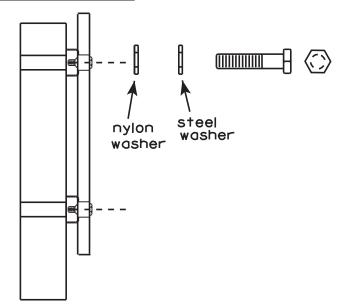


"J" ASSEMBLY CHANNEL SEE TYPICAL PANEL INSTALLATION SHEET SEE DETAIL B

GENERAL NOTES

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

WASHER PLACEMENT



WASHERS (ALL POSTS) -

1-1/4" O.D. X3/8" I.D. X1/16" STEEL 1-1/4" O.D. X3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

DATE _ 8/16/13

For State Traffic Engineer PLATE NO. A5-9.3

PROJECT NO: 2703-00-71

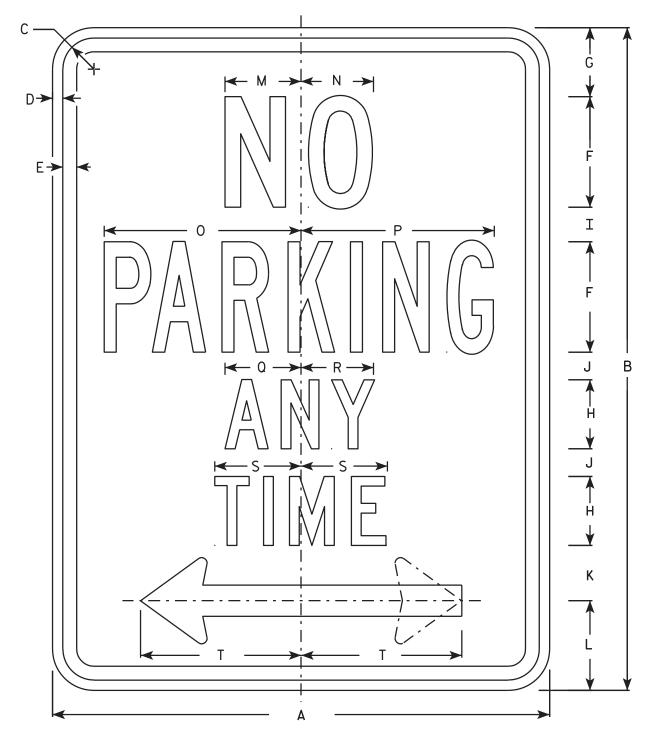
HWY: MEMORIAL DRIVE

COUNTY: RACINE

SIGN DETAILS

PLOT BY: mscsia

PLOT SCALE: 33.740899:1.000000



NOTES

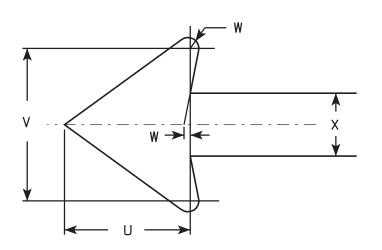
- 1. Sign is Type II Type H Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - White Message - Red

- 3. Message Series See Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1, 3 and 4 are series C, line 2 is series B.
- 6. R7-1D (double arrow)

R7-1L (left arrow)

R7-1R (right arrow)



R7-1

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	Ν	0	Р	0	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 %	2	1 /8	5/8	1 1/2	2 1/2	2	2	4 1/8	4 1/8	2 1/4	2 1/8	2 1/2	3 %	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 %	3 1/8	5 %	2 1/4	2 %	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5		·												·					·								

STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

PROVED

Matthew Rauch

For State Traffic Engineer

DATE 3/31/2011

1 PLATE NO. R7-1.9
SHEET NO:

PROJECT NO: 2703-00-71

FILE NAME: C:\Users\PROJECTS\tr_stdplate\R71.DGN

HWY: MEMORIAL DRIVE

COUNTY: RACINE

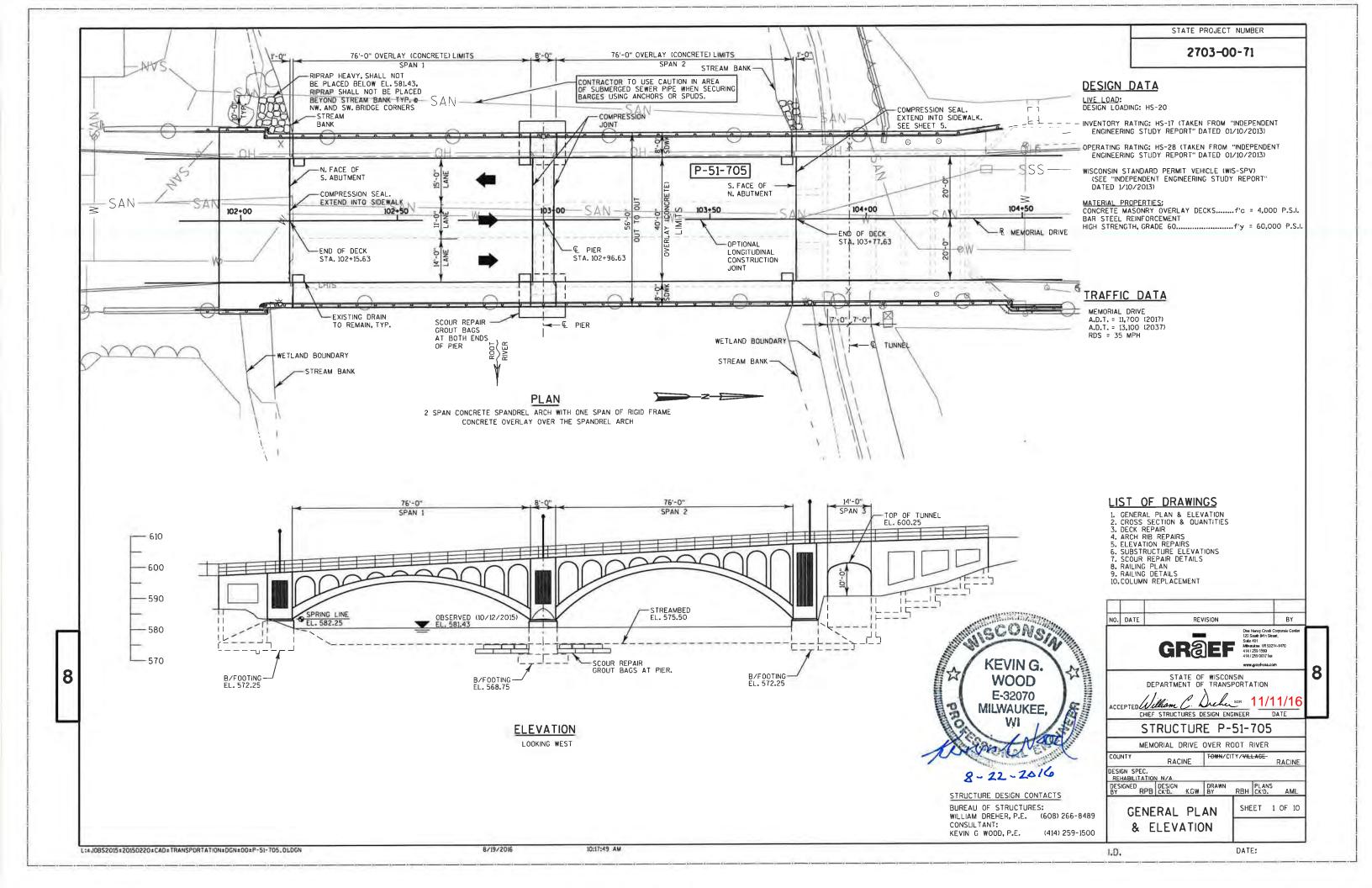
SIGN DETAILS

PLOT BY: mscsja

PLOT NAME :

PLOT SCALE: 3.476110:1.000000

WISDOT/CADDS SHEET 42



GENERAL NOTES

2703-00-71

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE 8'-O" LENGTH OF THE DECK OVER THE PIER DOES NOT RECEIVE A CONCRETE OVERLAY.

ALL CONCRETE REMOVAL NOT COVERED WITH A CONCRETE OVERLAY SHALL BE DEFINED BY A 1" DEEP SAW CUT.

AT "CURB REPAIR" EXPOSE EXISTING REINFORCEMENT A MINIMUM OF 11/2" CLEAR.

EXISTING FLOOR DRAINS TO REMAIN IN PLACE. REMOVE TOP OF DECK IN DRAIN AREA AS DIRECTED BY THE FIELD ENGINEER TO ALLOW PLACING AND SLOPING OF 2" MINIMUM CONCRETE OVERLAY AROUND THE RIM OF THE DRAIN.

REMOVE DEBRIS FROM AND CLEAN EXISTING DRAINS ON THE BRIDGE. WORK IS INCIDENTAL TO "PREPARATION DECKS TYPE 1."

ANY EXCAVATION REQUIRED TO COMPLETE THE OVERLAY OR JOINT REPAIRS AT ABUTMENTS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE NEW CONCRETE OVERLAY.

REMOVE ANY/ALL LOOSE CONCRETE AT ABUTMENTS AND PIER UNDER BID ITEM "CONCRETE SURFACE REPAIR". SURFACES SHALL BE BLAST CLEANED AND ANY EXPOSED STEEL SHALL BE BRUSH CLEANED PRIOR TO THE CONCRETE SURFACE REPAIRS BEING COMPLETED. REPAIR AREAS SHALL BE DETERMINED BY THE FIELD ENGINEER.ONLY CONCRETE ABOVE THE WATER SURFACE IS TO BE REPAIRED.

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AREAS ARE BASED ON THE PLANS AND AS DETERMINED BY THE ENGINEER. DECK PREPARATION AND FULL-DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY OVERLAY DECKS".

THE EXISTING STRUCTURE, P-51-705, IS A 3 SPAN CONCRETE OPEN SPANDREL ARCH STRUCTURE WITH AN OVERALL WIDTH OF 56'-0" AND AN END-OF-DECK TO END-OF-DECK LENGTH OF 160'-0". THE ENTIRE DECK SURFACE IS TO BE PREPARED FOR A NEW CONCRETE OVERLAY. THREE COLUMNS NEAR THE PIER ARE TO BE REMOVED.

PROFILE GRADE LINE SHALL BE DETERMINED IN THE FIELD BASED ON A MINIMUM OVERLAY THICKNESS OF 2" PLACED ABOVE THE DECK SURFACE AFTER SURFACE PREPARATION. EXPECTED AVERAGE OVERLAY THICKNESS IS $2\frac{1}{2}$ ", IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN $\frac{1}{2}$ " CONTACT THE STRUCTURES DESIGN SECTION.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

EXISTING UTILITIES ATTACHED TO THE BRIDGE ARE TO REMAIN IN PLACE AND IN-SERVICE. SEE PROJECT SPECIFICATIONS.

THE EXISTING CONCRETE OVERLAY SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "REMOVING CONCRETE MASONRY DECK OVERLAY" (EXCEPT THE 8-FEET ABOVE THE PIER).

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWINGS FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION. NO GUARANTEE OR WARRANTY IS MADE THAT THE INFORMATION IS ALL INCLUSIVE OR TOTALLY ACCURATE, THEREFORE, THE CONTRACTOR SHALL MAKE ITS OWN DETERMINATION OF THE ACTUAL CONDITIONS TO BE ENCOUNTERED.

CONCRETE FOR COLUMN REPLACEMENT SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

PLACE GEOTEXTILE FABRIC TYPE HR BENEATH RIPRAP HEAVY.

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.

ONLY CRACKS IN PIER SHALL RECEIVE EPOXY CRACK INJECTION.

GALVANIC ANODES ARE TO BE INSTALLED IN THE SIDEWALK, ARCH, FLOOR BEAM, COLUMN, AND PREPARATION DECKS TYPE 2 REPAIR AREAS.

THE PAINT COLOR FOR THE LIGHT POLE BASES SHALL BE COORDINATED WITH THE CITY OF RACINE.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-51-705

PLANS CK'D. AML SHEET 2 OF 10

CROSS SECTION & QUANTITIES

BY

DRAWINGS SHALL NOT BE SCALED.

PIER TOTAL ITEM NO. UNIT ABU SUPER 203.0600.S REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS, STATION 102+15.63 LS CONCRETE MASONRY BRIDGES 502.0100 Compression joint sealer preformed elastomeric 2 1/4-inch 244 244 502 3200 PROTECTIVE SURFACE TREATMENT SY 676 676 502.4205 ADHESIVE ANCHORS NO. 5 BAR 48 48 505.0400 BAR STEEL REINFORCEMENT HS STRUCTURES LB 490 490 509.030 PREPARATION DECKS TYPE SY 444 444 SY 509.0302 PREPARATION DECKS TYPE 2 218 218

509.1200 CURB REPAIR 117 117 509.1500 CONCRETE SURFACE REPAIR SF 82 75 629 837 509.2000 FULL-DEPTH DECK REPAIR SY 44 44 509.2500 CONCRETE MASONRY OVERLAY DECKS CY 64 64 509.9005.3 REMOVING CONCRETE MASONRY DECK OVERLAY P-51-705 676 676 163 509.9025.3 EPOXY INJECTION CRACK REPAIR 163 10 509 9026 9 10 CORED HOLES 2-INCH DIAMETER 517.3000.S STRUCTURE OVERCOATING CLEANING AND PRIMING P-51-705 LS 517.4000.S CONTAINMENT AND COLLECTION OF WASTE MATERIALS P-51-705 RIPRAPHEAVY 606.0300 CY 12 645.0120 GEOTEXTILE FABRIC TYPE HE 19 SPV 0035 0 SCOUR REPAIR GROUT BAGS 112 SPV.0060.01 RAIL POST ANCHORAGE REPAIR 717 SPV.0060.02 EMBEDDED GALVANIC ANODES EAC BRIDGE RAILING MODIFICATION 308 763 SPV.0090.01 LF 231 213

EXISTING SANITARY SEWER PIPE

PIER

EXISTING WATER PIPE

-ROUTE OUT 1/4" × 3/8" DEEP AT JOINT. FILL IN WITH LOW VISCOSITY CRACK SEALER PER THE APPROVED LIST. (INCIDENTAL TO "CONCRETE MASONRY OVERLAY

LONGITUDINAL CONSTRUCTION JOINT DETAIL

BENCH MARKS

21/2" AVERAGE OVERLAY THICKNESS 56'-0" OUT TO OUT 40'-0" OVERLAY (CONCRETE) LIMITS 15'-0" 14'-0" 8'-0' SIDEWALK LANE LANE LANE SIDEWALK STAINLESS STEEL CABLE TO BE ADDED BETWEEN EXISTING POSTS TO DECREASE CLEAR SPACING R MEMORIAL DRIVE -> REMOVE EXISTING 2" CONCRETE OVERLAY PER BID ITEM "REMOVING CONCRETE "CONCRETE -FLOOR SURFACE I REPAIR" BEAM MASONRY DECK OVERLAY". THERE IS NO CONCRETE REMOVAL OVER THE PIER. 1.25% PROPOSED OVERLAY 1.25% PROPOSED .25% EXISTING OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

16'-0'

NEAR MIDSPAN

SURFACE MOUNTED CONDUIT FOR LIGHTS, SEE LIGHTING PLAN FYISTING — ∆RCH SPANDREL COLUMN

10:17:49 AM

NO. STATION OFFSET DESCRIPTION Y COORIDINATE X COORDINATE ELEV. BM#1 102+07.15 BRASS CITY OF RACINE CAP #13 635,695.80 28.09' RT 184.723.83 598.40 BM#2 104+68.06 22.85'RT NE BOLT (TAG BOLT) HYDRANT 184.984.70 635,689,15 612.28

SCOUR REPAIR GROUT-BAGS AT PIER

SURFACE MOUNTED

CONDUIT FOR LIGHTS, SEE LIGHTING PLAN

CONDUI

TOTAL ESTIMATED QUANTITIES

NON-BID ITEMS 2" FILLER

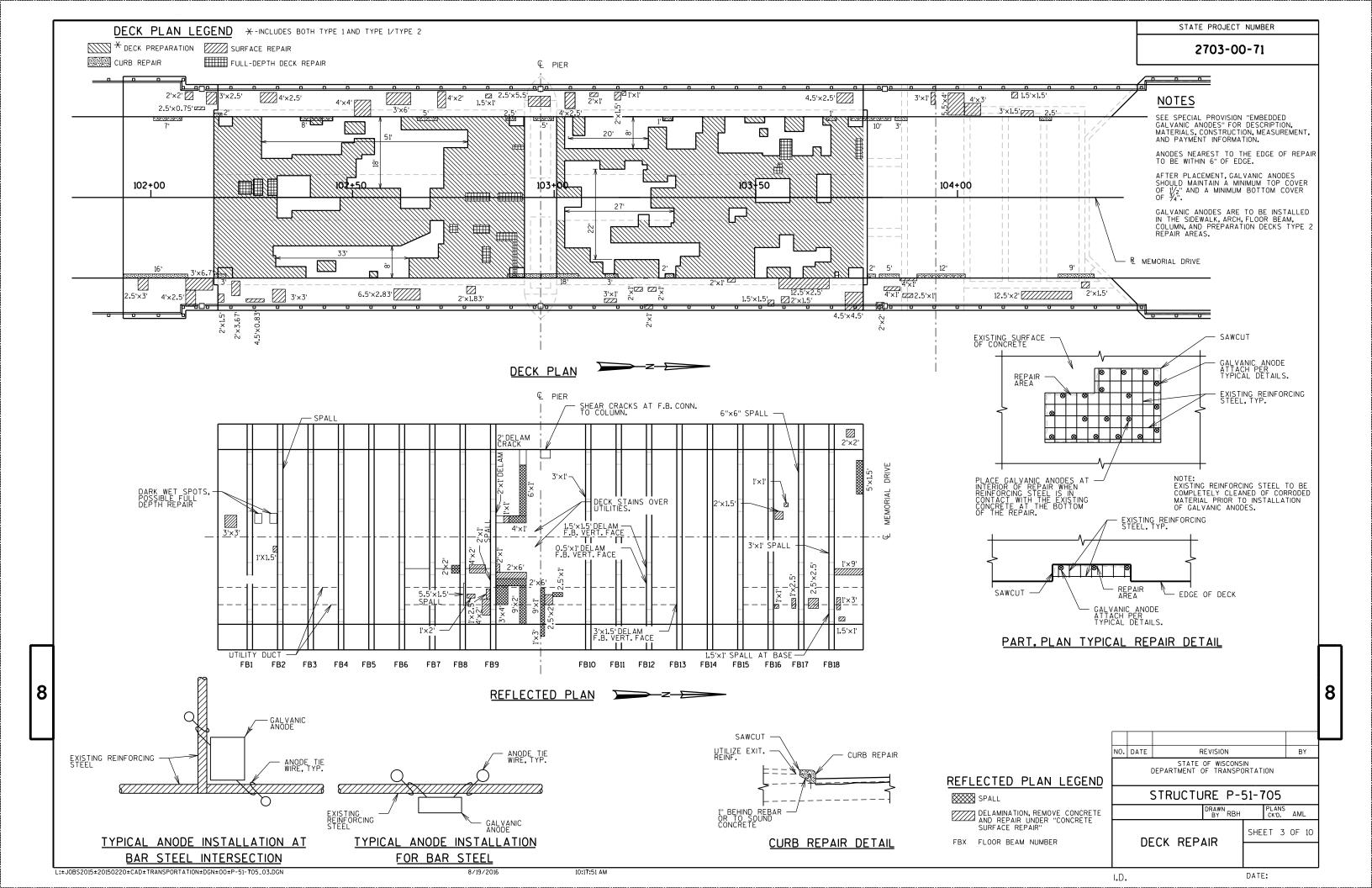
> CROSS SECTION LOOKING NORTH

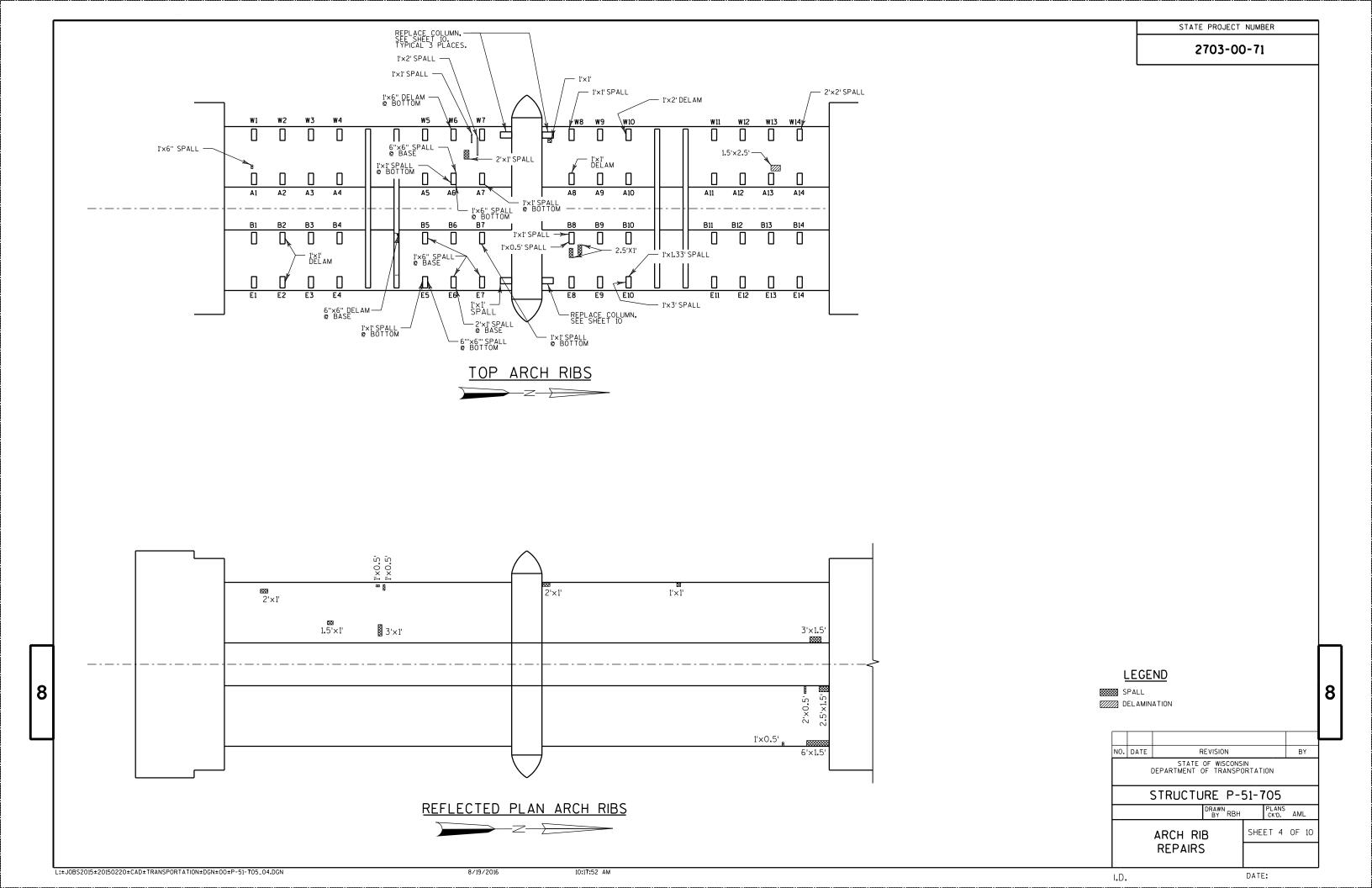
> > 8/19/2016

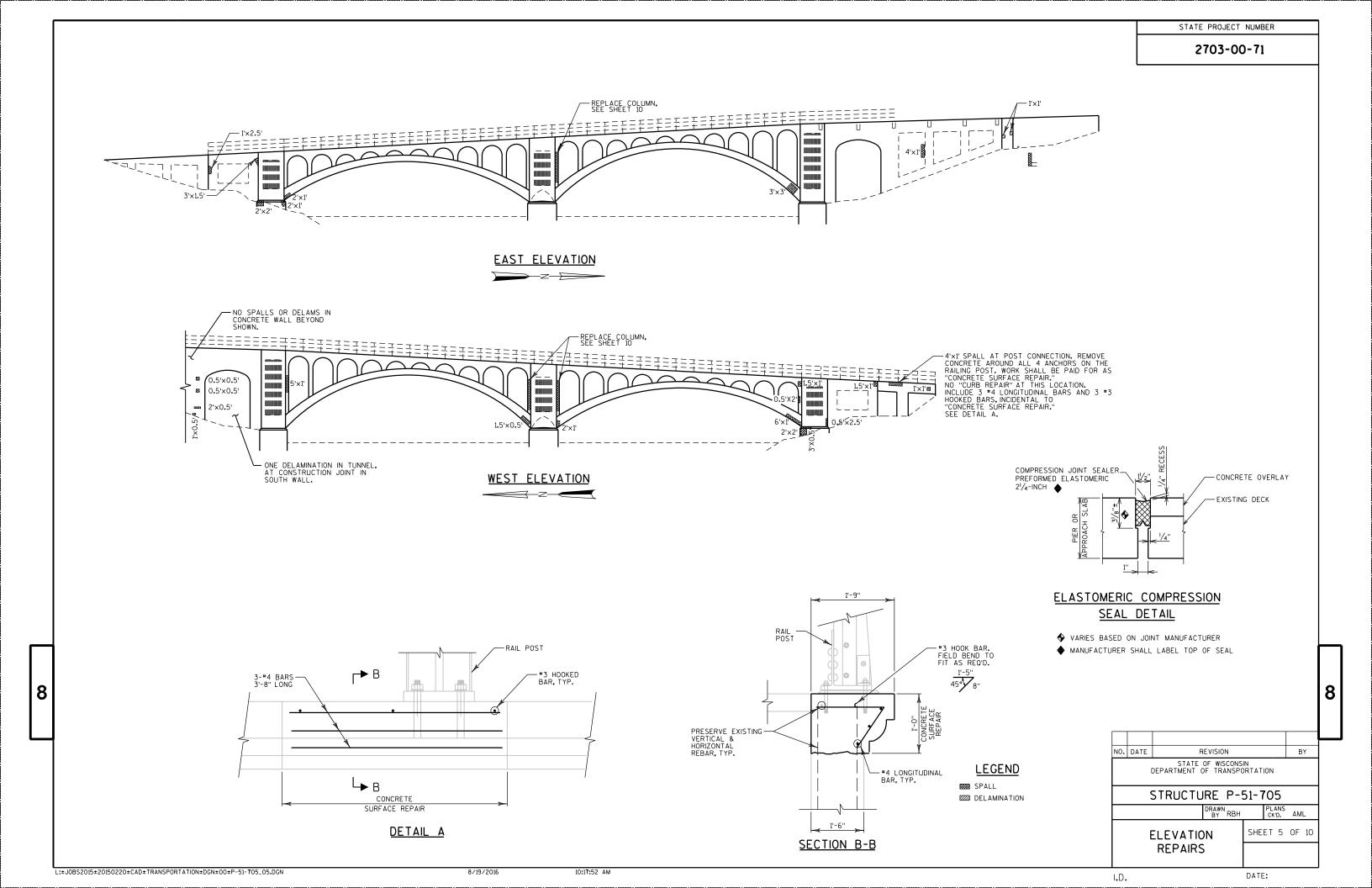
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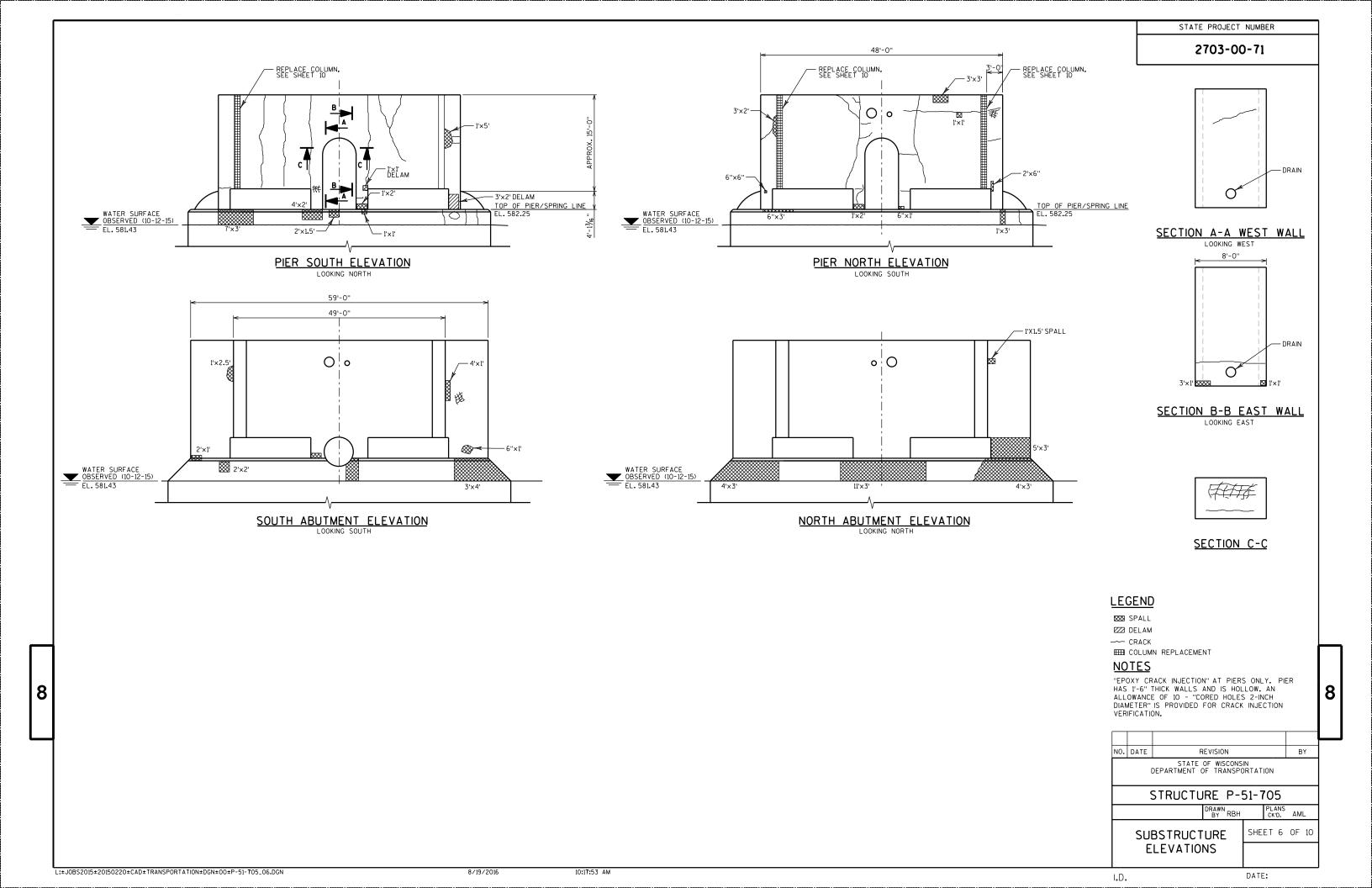
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DATE:









STATE PROJECT NUMBER

2703-00-71

NOTES

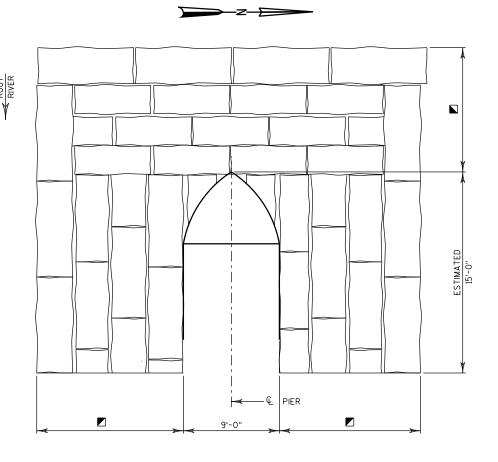
EXTENT OF SCOUR AT PIER IS FROM THE "UNDERWATER BRIDGE INSPECTION REPORT MEMORIAL DRIVE BRIDGE OVER THE ROOT RIVER, STRUCTURE P-51-705" DATED 6/16/2014 BY AYRES ASSOCIATES. ACTUAL EXTENT TO BE DETERMINED BY FIELD

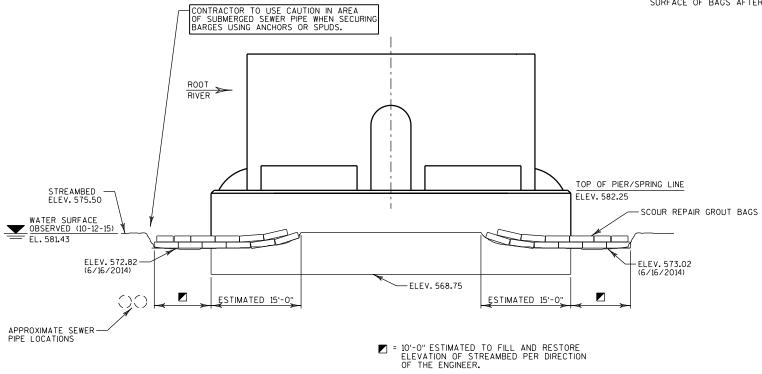
GROUT BAGS SHALL BE A MINIMUM OF 3'-0" WIDE X 4'-0" LONG X 1'-0' THICK, AND A MAXIMUM OF 3'-6" WIDE X 8'-0" LONG X 2'-6" THICK.

BAGS ARE TO BE PLACED SO THAT THERE IS NO GAP BETWEEN THE BAGS AND THE FOOTING.

STACK BAGS AS REQUIRED. JOINTS BETWEEN BAGS IN SUCCESSIVE ROWS AND TIERS SHALL BE STAGGERED. PIN ROWS TOGETHER WITH #5 BARS @ 4'-O" SPACING.

REMOVE MATERIAL THAT CONFLICTS WITH OR COULD DAMAGE GROUT BAGS. DIMENSIONS SHOWING LIMITS OF GROUT BAGS ARE MEASURED ALONG FINISHED SURFACE OF BAGS AFTER GROUTING.





PIER SOUTH FACE

LOOKING NORTH

SCOUR REPAIR PLAN AT PIER

TYP. AT UPSTREAM AND DOWNSTREAM ENDS OF PIER

8

NO. DATE REVISION BY STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION STRUCTURE P-51-705

PLANS CK'D. AML

SCOUR REPAIR DETAILS

I.D.

SHEET 7 OF 10

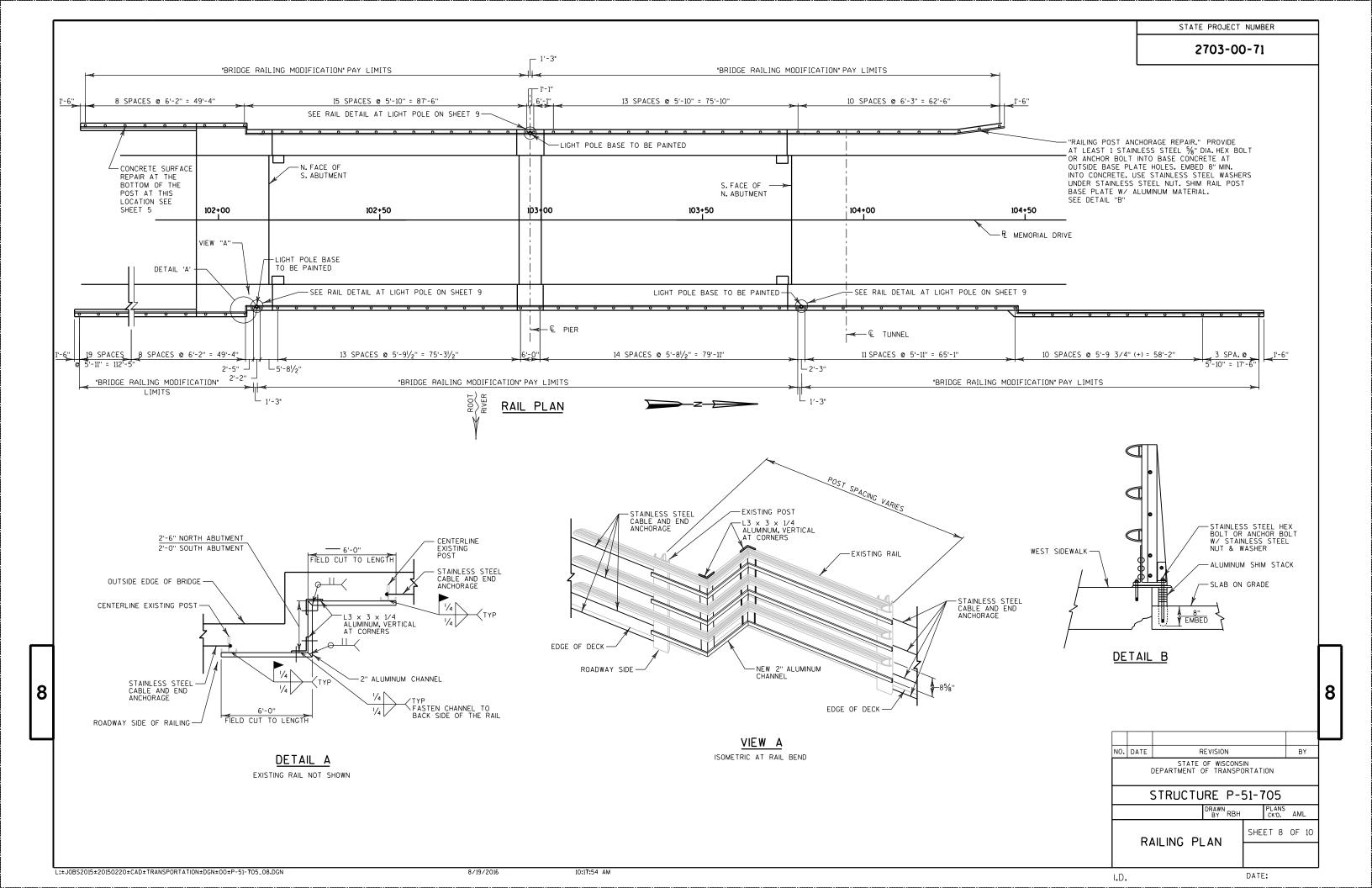
8

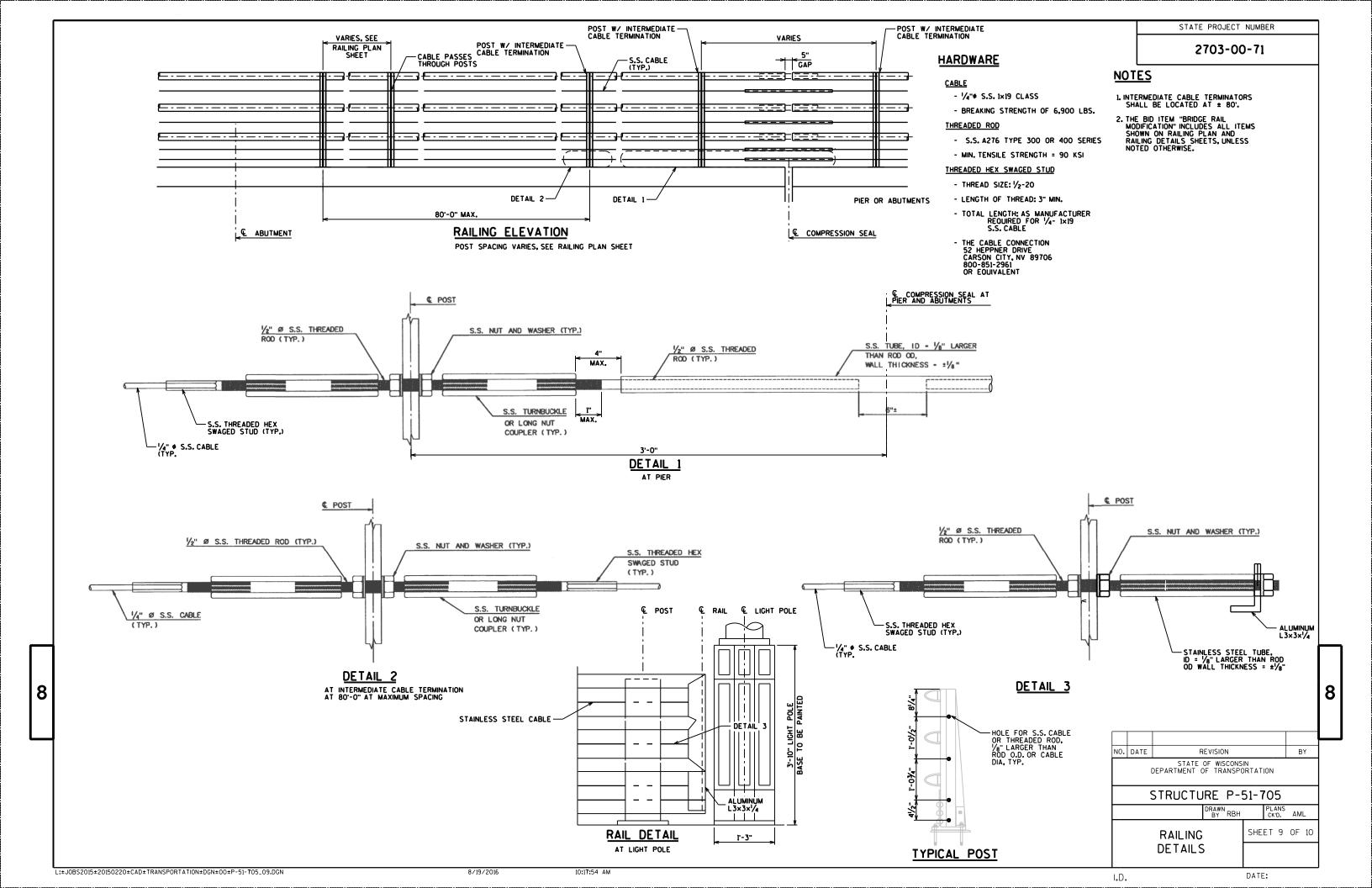
L:±JOBS2015±20150220±CAD±TRANSPORTATION±DGN±00±P-51-705_07.DGN

8/19/2016

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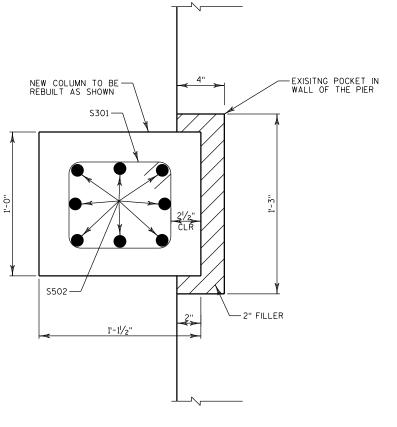
DATE:





STATE PROJECT NUMBER

2703-00-71

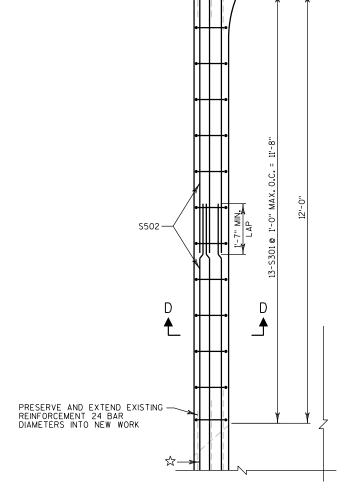


SECTION D THRU COLUMN

SUPERSTRUCTURE - BILL OF BARS

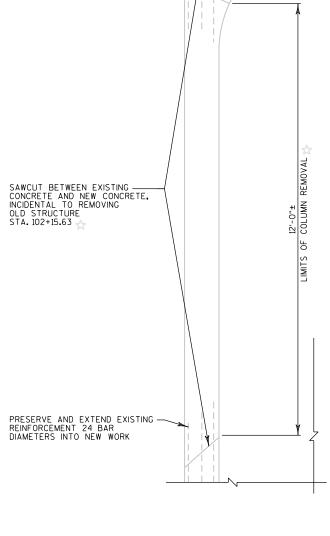
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
S301		39	3'-0"		Χ	COLUMN TIES
S502		48	9'-0"			COLUMN VERTICALS

THE FIRST DIGIT OR FIRST TWO DIGITS OF A BAR MARK INDICATES THE BAR SIZE. ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



SECTION THRU COLUMN

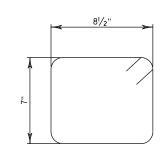
☆ ADHESIVE ANCHORS NO.5 BAR. EMBED 1'-0" INTO CONCRETE.



COLUMN REMOVAL

SEE SHEET 4 FOR COLUMN REMOVAL LOCATIONS.

☆ TEMPORARILY SUPPORT DECK/ FLOOR BEAM/SIDEWALK BRACKET DURING COLUMN REMOVAL AND RECONSTRUCTION.



<u>S301</u>

8

NO.	DATE	R	BY								
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION										
	STRUCTURE P-51-705										
			DRAWN BY RBH		PLANS CK'D.	AML					
		COLUMN	SHE	ET 10	OF 10						
	RE	PLACEM									

L:±JOBS2015±20150220±CAD±TRANSPORTATION±DGN±00±P-51-705_11.DGN

8

8/19/2016

10:17:59 AM

I.D.

DATE:

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

http://www.dot.wisconsin.gov