MAY 2025

Section No.

Section No.

ORDER OF SHEETS

Typical Sections and Details Estimate of Quantities Miscellaneous Quantities

Right of Way Plat Plan and Profile Standard Detail Drawings

Structure Plans

WOODED OR SHRUB AREA

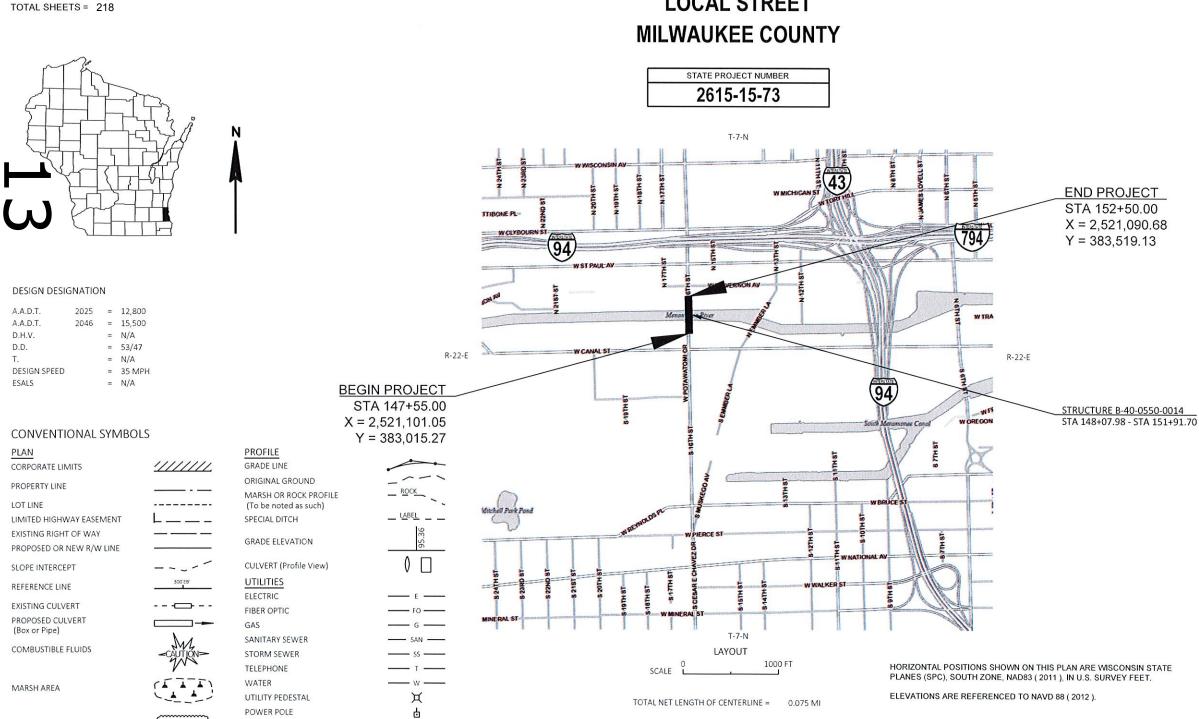
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

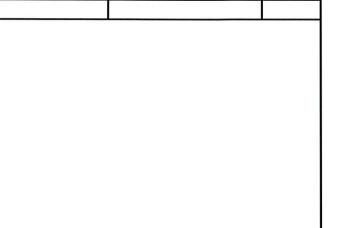
PLAN OF PROPOSED IMPROVEMENT

C MILWAUKEE – 16TH STREET

OVER MENOMONEE RIVER B-40-550-14

LOCAL STREET





STATE PROJECT

2615-15-73

FEDERAL PROJECT

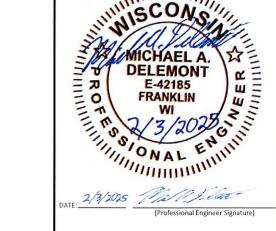
CONTRACT

1

PROJECT

WISC 2025469





STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

REPARED BY MEAD & HUNT, INC HARDESTY & HANOVER, LLC AMY TAETSCH

PPROVED FOR THE DEPARTMENT 2/4/2025

TELEPHONE POLE

UTILITIES CONTACTS

CITY OF MILWAUKEE - CITY UNDERGROUND CONDUIT

KAREN ROGNEY

841 NORTH BROADWAY, RM. 920 MILWAUKEE, WI 53202

PHONE: (414) 286-3243 KROGNE@MILWAUKEE.GOV

CITY OF MILWAUKEE - COMMUNICATIONS

TREMEL REMBERT 1440 WEST CANAL STREET MILWAUKEE, WI 53233 PHONE: (414) 286-3686

CITY OF MILWAUKEE - SEWERS

ZAFAR YOUSUF

841 NORTH BROADWAY, RM. 822

MILWAUKEE, WI 53202 PHONE: (414) 286-2467 ZYOUSU@MILWAUKEE.GOV

WE ENERGIES - ELECTRIC

ELECTRIC UTILITY SERVICES MANAGER NICK SCHAFER, DAAR ENGINEERING, INC

518 WEST CHERRY STREET MILWAUKEE, WI 53212 PHONE: (262) 748-4994

WE ENERGIES - ELECTRIC

NICK.SCHAFER@DAARCORP.COM

BRIAN DRESSLER

500 SOUTH 116TH STREET WEST ALLIS, WI 53214

PHONE: (608) 219-2820

BRIAN.DRESSLER@WE-ENERGIES.COM

OTHER CONTACTS

WISCONSIN DEPARTMENT OF TRANSPORTATION

SIGNALS

JARRETT GATES

141 NW BARSTOW STREET WAUKESHA, WI 53188

PHONE: (262) 548-5894 JARRETT.GATES@DOT.WI.GOV

CITY OF MILWAUKEE

STREET LIGHTING (ENGINEERING)

DENIS KOZELEK

841 NORTH BROADWAY, RM. 920 MILWAUKEE, WI 53202

PHONE: (414) 286-3252 DKOZEL@MILWAUKEE.GOV

CITY OF MILWAUKEE STREET LIGHTING (FIELD)

NEAL KARWEIK

1540 WEST CANAL STREET MILWAUKEE, WI 53233

PHONE: (414) 286-5943 MOBILE: (414) 708-4245 NKARWE@MILWAUKEE.GOV

CITY OF MILWAUKEE

UTILITY COORDINATOR MOHAMMAD ABULUGHOD 841 NORTH BROADWAY, RM. 702

MILWAUKEE, WI 53202 PHONE: (414) 286-2767

MOBILE: (414) 708-3085 MABULU@MILWAUKEE.GOV

WISCONSIN DEPT. OF TRANSPORTATION

GREG HAFEMAN SOUTHEAST REGION

141 NW BARSTOW STREET WAUKFSHA, WI 53188

EMAIL: GREG.HAFEMAN@DOT.WI.GOV

CONSULTANT DESIGN

PHONE: (262) 548-8677

JOHN GIMBI FTTF HARDESTY & HANOVER, LLC 1501 BROADWAY NEW YORK, NY 10036 PHONE: (646) 428-8511

EMAIL: JGIMBLETTE@HARDESTYHANOVER.COM

WISCONSIN DEPT. OF TRANSPORTATION

BRENDA RUFNGER

SOUTHEAST REGION ENVIRONMENTAL ANALYSIS 141 NW BARSTOW STREET

WALIKESHA WI 53188 PHONE: (262) 548-6709

EMAIL: BRENDA.RUENGER@DOT.WI.GOV

WISCONSIN DEPT. OF NATURAL RESOURCES

RYAN PAPPAS

DNR REGIONAL COORDINATOR 1027 WEST SAINT PAUL AVENUE MILWAUKEE, WI 53233-2641

PHONE: (920) 893-8529 EMAIL: RYAN.PAPPAS@WISCONSIN.GOV

SEWRPC CONTACT

ROB MFRRY **CHIEF SURVEYOR** P.O. BOX 1607 WAUKESHA, WI 53187

PHONE: (262) 953-4289 EMAIL: RMERRY@SEWRPC.ORG

CITY OF MILWAUKEE

MILWAUKEE. WI 53202

MILWAUKEE COUNTY TRANSIT SYSTEM

DAVID LOCHER

PHONE: (414) 343-1727

ANGELA VICKIO

P.O. BOX 35

PHONE: (414) 527-0232

EMAIL: ANGELA.VICKIO@WISCONSIN.GOV

P.O. BOX 1607 WAUKESHA, WI 53187 PHONE: (262) 953-4296

JONATHAN THOMAS STRUCTURAL DESIGN MANAGER 841 NORTH BROADWAY

PHONE: (414) 286-0463

EMAIL: JDTHOMA@MILWAUKEE.GOV

MANAGER OF ENHANCED TRANSIT 1942 NORTH 17TH STREET MILWALIKEE WI 53205

EMAIL: DLOCHER@MCTS.ORG

WISCONSIN DEPT. OF NATURAL RESOURCES

HANK AARON STATE TRAIL MANAGER, INTERIM

MILWAUKEE, WI 53201

SEWRPC CONTACT

ANDY TRAFGER CONSTRUCTION COORDINATOR

EMAIL: ATRAEGER@SEWRPC.ORG

INSIDE DIAMETER ID INV INVFRT JΤ JOINT ΙT LEFT

CL OR C/L

CONC

CPCPF

CPCSPC

CPRC

C & G

EL OR ELEV

DHV

FXC

INL

FXIST

FL OR F/L

CP

CP

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

ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

DETERMINES THE MEASURE IS NO LONGER NECESSARY.

ANNUAL AVERAGE DAILY TRAFFIC

CULVERT PIPE CORRUGATED POLYETHYLENE

CULVERT PIPE REINFORCED CONCRETE

CULVERT PIPE CORRUGATED STEEL POLYMER COATED

QUADRANT OF THE PROJECT AT ALL TIMES.

STANDARD ABBREVIATIONS

BENCH MARK

CENTER LINE

CONCRETE

DIAMETER

ELEVATION

FXISTING

INLET

FLOW LINE

FXCAVATION

CONTROL POINT

CURB AND GUTTER

DESIGN HOUR VOLUME

CULVERT PIPE

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

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS

APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER

CONTRACTOR SHALL MAINTAIN ACCESS TO THE CITY OF MILWAUKEE FACILITIES LOCATED IN THE NORTHEAST

AND SOUTHEAST QUADRANTS OF THE PROJECT AT ALL TIMES. CONTRACTOR SHALL MAINTAIN ACCESS TO THE

MARQUETTE UNIVERSITY STAIR TOWER AND THE MMSD DEEP TUNNEL FACILITY LOCATED IN THE SOUTHWEST

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

WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND

MH MANHOLE MLOR M/I MATCH LINE NORMAL CROWN NORTHBOUND NR

OD OUTSIDE DIAMETER PAVT PAVEMENT POINT OF CURVATURE PC. POINT OF INTERSECTION PΙ

PT POINT OF TANGENCY RL OR R/L REFERENCE LINE REQD REQUIRED RT RIGHT R/W RIGHT OF WAY RDWY ROADWAY SHOULDER SHLDR

SW SIDEWALK SB SOUTHBOUND SPECS SPECIFICATIONS SDD STANDARD DETAIL DRAWINGS

STATION

SSPC STORM SEWER PIPE COMPOSITE SSCPE STORM SEWER PIPE CORRUGATED POLYETHYLENE STORM SEWER PIPE CORRUGATED POLYPROPYLENE SSCPP

TEMP TEMPORARY TC TOP OF CURB TRUCKS (PERCENT OF)

TYP TYPICAL UNITED STATES HIGHWAY USH VAR VARIABLE

VC VPC VERTICAL POINT OF CURVATURE VPI VERTICAL POINT OF INTERSECTION

VERTICAL CURVE

VPT VERTICAL POINT OF TANGENCY

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES PROJECT OVERVIEW PAVEMENT MARKING DETOUR - VEHICULAR **DETOUR - PEDESTRIAN** ALIGNMENT PLAN



PROJECT NO: 2615-15-73 HWY: 16TH STREET Y:\SHARED\PROJECTS\05962-SOUTH 16TH STREET BRIDGE\500-TECHNICAL\510-CAD\26151503\SHEETS\020101-GN.DWG FILE NAME :

COUNTY: MILWAUKEE

3/12/2025 11:09 AM

GENERAL NOTES PLOT BY:

DEREK JACOBSON

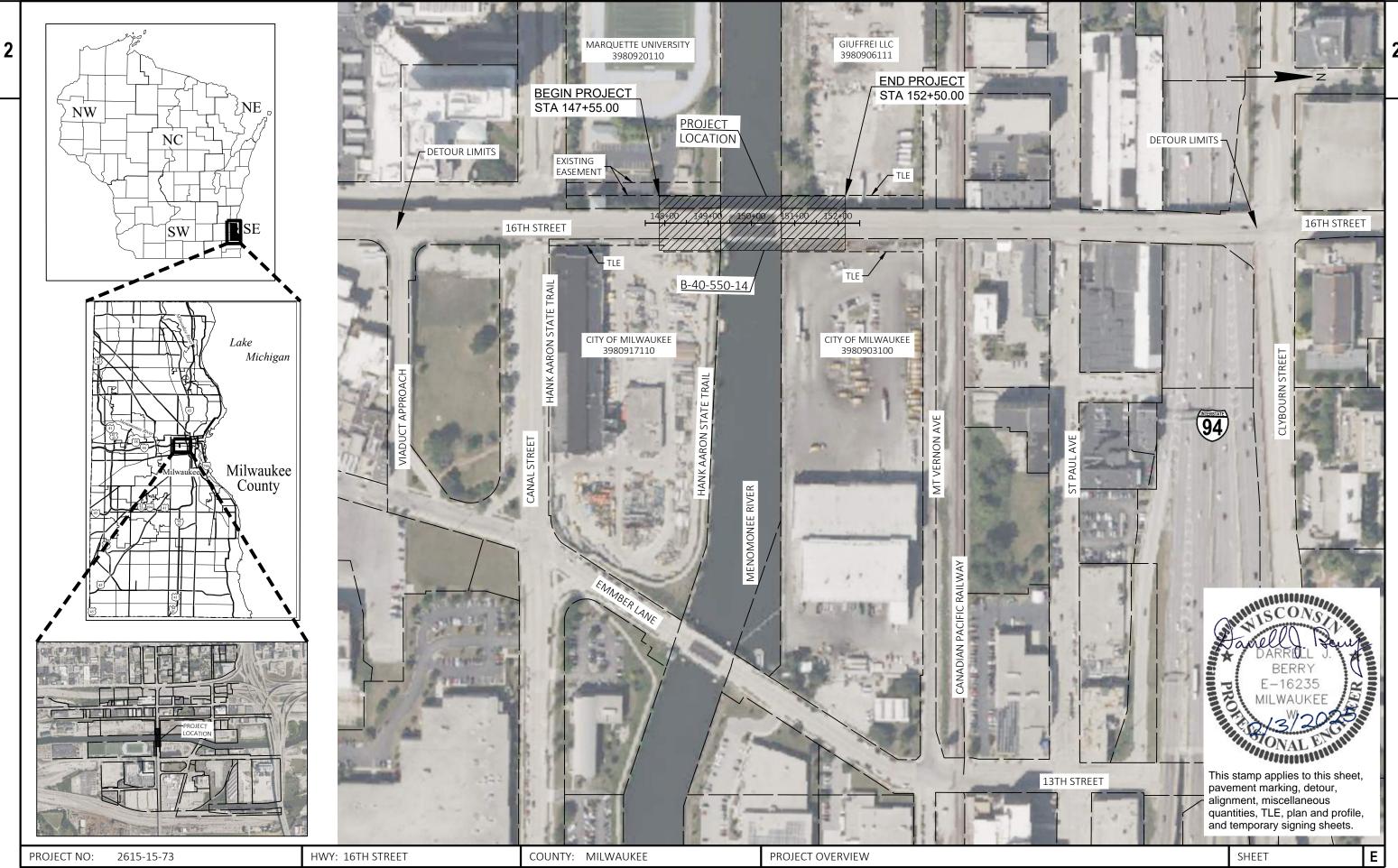
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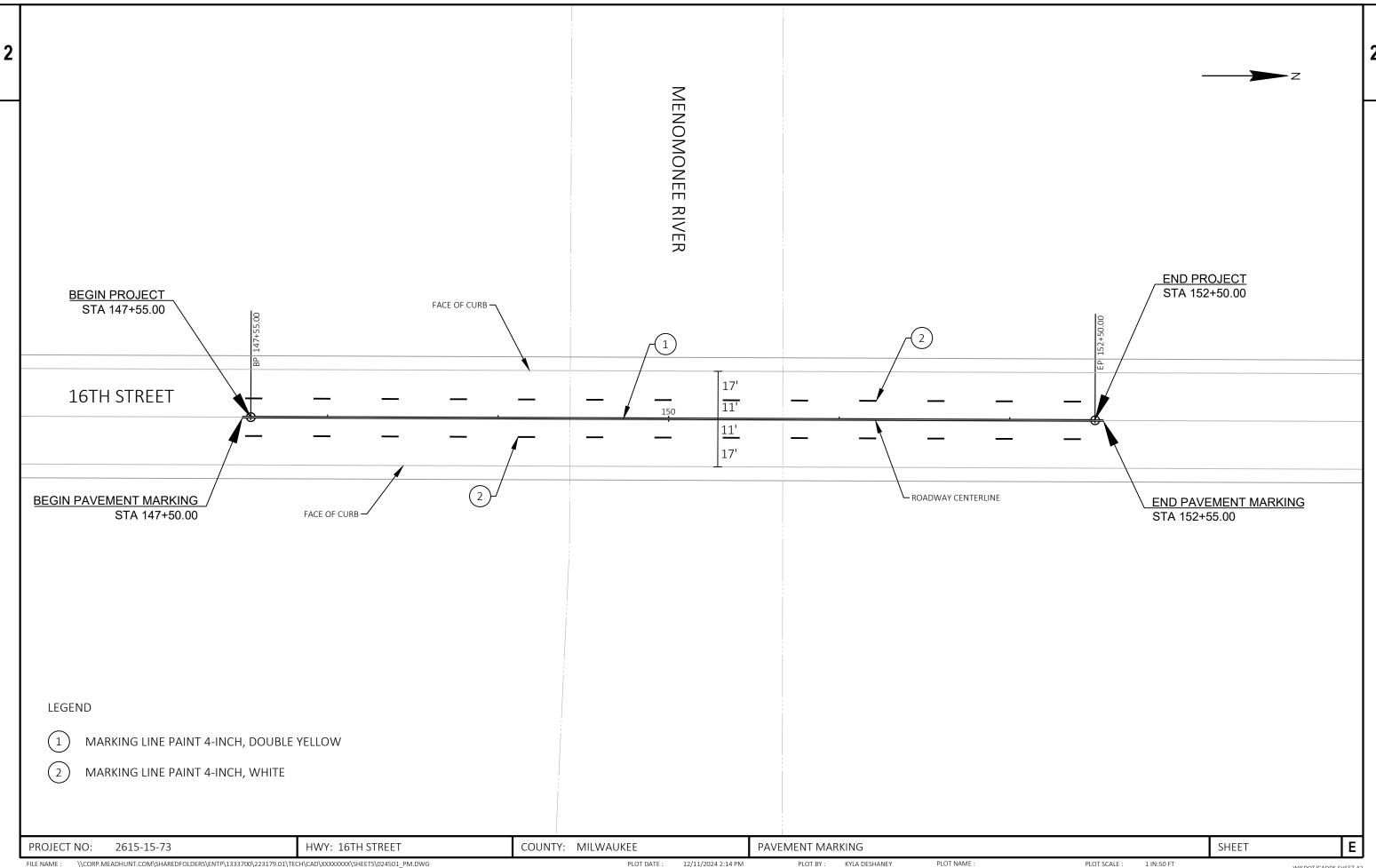
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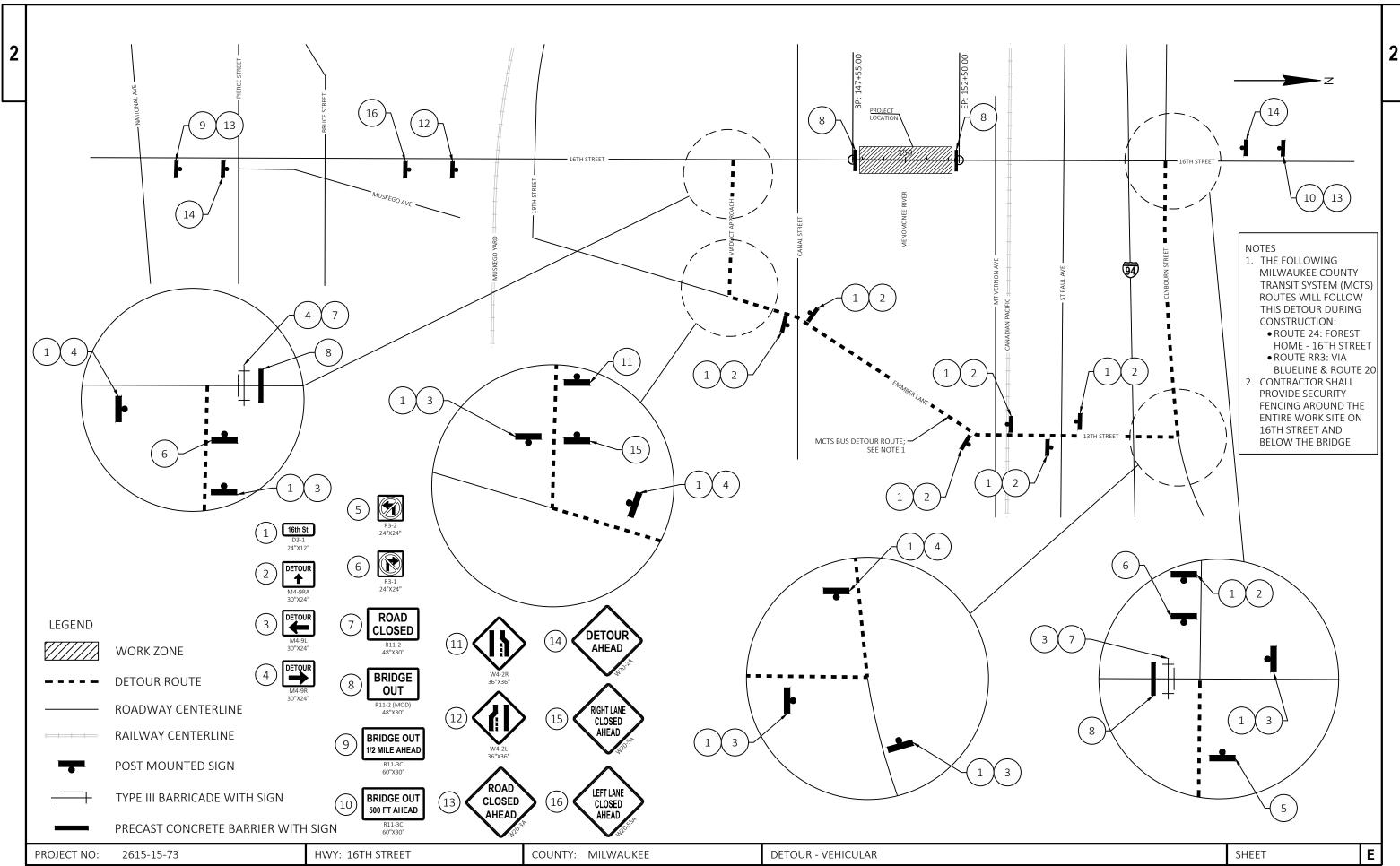
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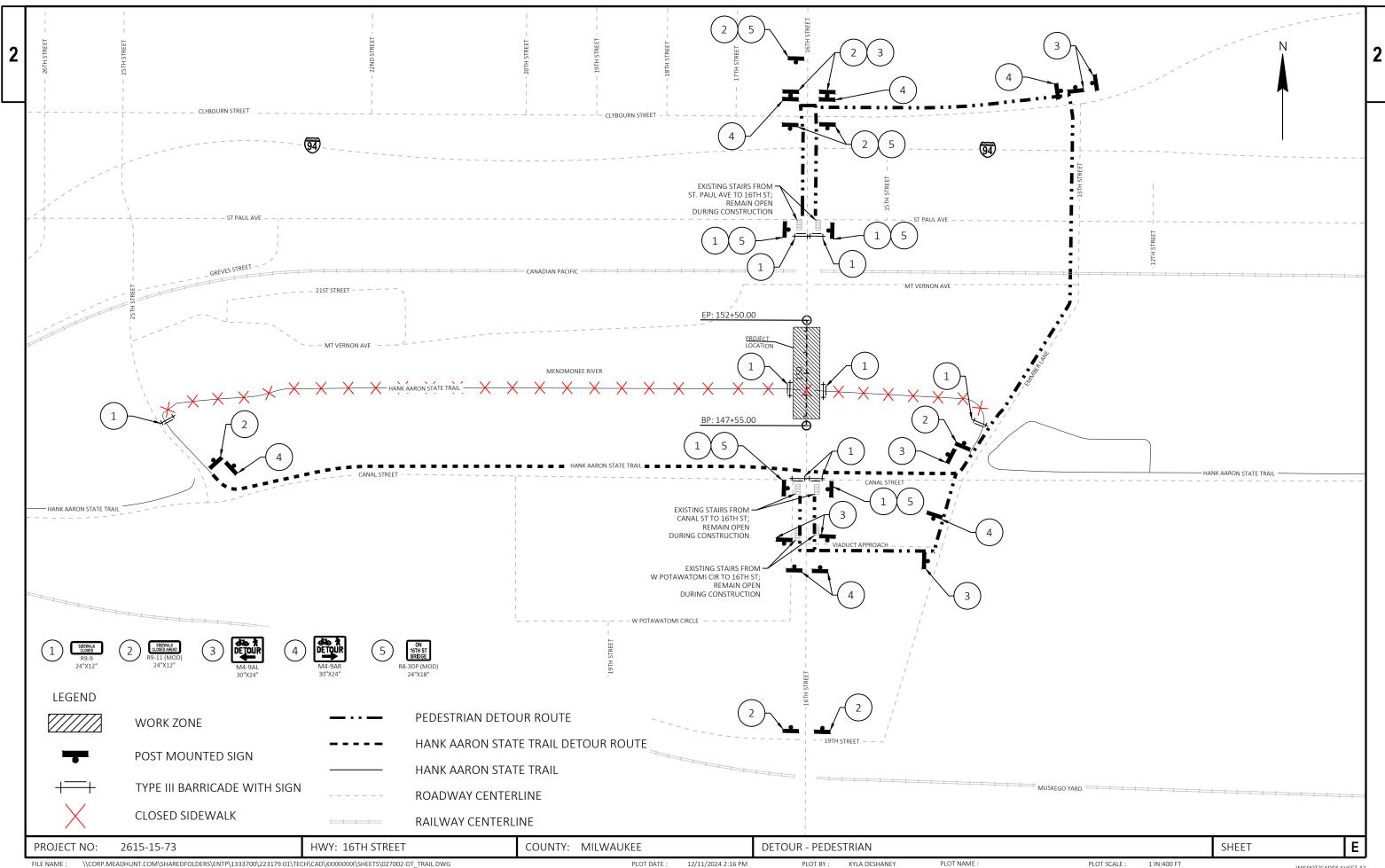
SHEET

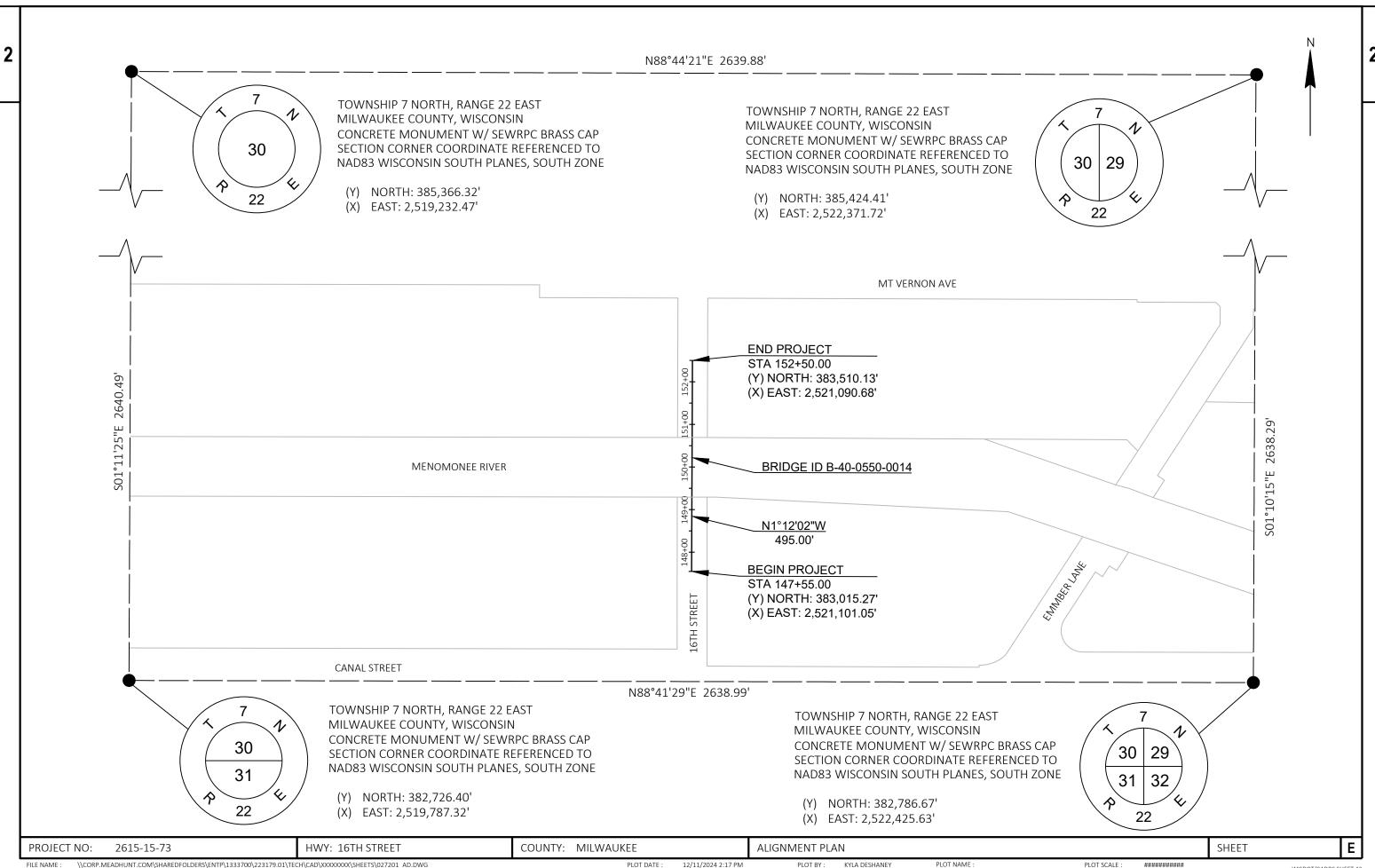
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2015 15 Assertance of Assertance Containing Material (online) 11,844-550-14 EACH 1,000 1,						2615-15-73	
200.000 Removing Standards Over Waterway Minimard Behris (standards) (1.6.40.560.14 1.000 1.00	Line	Item	Item Description	Unit	Total	Qty	
20, 20, 20, 20, 20, 20, 20, 20, 20, 20,	002	203.0211.S	Abatement of Asbestos Containing Material (structure) 01. B-40-550-14	EACH	1.000	1.000	
2 20.01 Service Se	004	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-40-550-14	EACH	1.000	1.000	
2 20.01 Service Se	006	203.0330	Debris Containment (structure) 01. B-40-550-14	EACH	1.000	1.000	
2	80	204.0170		LF	70.000	70.000	
Section Sect	10	205.0506.S	Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON	2.000	2.000	
Section	12	210.2500	Backfill Structure Type B	TON	460.000	460.000	
1	14	502.0100	Concrete Masonry Bridges	CY	146.000	146.000	
1	16	502.3101	Expansion Device	LF	346.000	346.000	
91 St. 24285 Adhesive Anchore No. 5 Bar EACH \$508.000 \$508.000 92 502.4285 Achesive Anchore No. 6 Bar EACH \$20.000 92 502.5080 Protective Custing Clear GAL \$6.00 8.000 3 505.5080 Reside Refinitional Control Programment St. Coated Structures EB. 27.108.000 7.108.000 3 505.5080 Beaning Assemblies Food (arctural) 16.44-50-14 EACH 17.08.000 7.108.000 305.5080 Beaning Assemblies Expansion (atructure) 01. B4-05-014 EACH 12.000 12.000 305.5080 Beaning Assemblies Expansion (atructure) 01. B4-05-014 EACH 12.000 12.000 305.5080 Senting Structure (atructure) 01. B4-05-014 EACH 4.000 10.000 305.5080 Senting Structure (atructure) 01. B4-05-014 EACH 4.000 4.000 305.5081 Senting Exposition Assemblies (atructure) 01. B4-05-014 EACH 1.000 1.000 317.5081 Parking Exposition Assemblies (atructure) 01. B4-05-014 EACH 1.000 1.000	18		Protective Surface Treatment	SY	3,223.000	3,223.000	
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3 59.9.9025.5 Epoxy Injection Crack Repair LF 98.000 98.000 2 514.0460 Floo Drains Type H EACH 4.000 4.000 3 517.0801 Post Type H EACH 4.000 4.000 3 517.0801 Printing Epoxy System (structure) 01.8-0-59-14 EACH 1.000 1.000 5 517.18015 Shucture Repaining Recycled Abrasive (structure) 01.8-10-550-14 EACH 1.000 1.000 5 517.48015 Shucture Repaining Recycled Abrasive (structure) 01.8-10-550-14 EACH 1.000 1.000 5 517.8018 Negative Pressure Consistent and Collection of Waste Materials (structure) 01.8-10-50-14 EACH 1.000 1.000 5 517.8018 None Type Type Type Assistance (structure) 01.8-10-50-14 EACH 1.000 1.000 5 517.8018 None Type Type Type Assistance (structure) 01.8-10-50-14 EACH 1.000 1.000 5 618.0027 Anchor Assemblies Poles on Structures EACH 1.000 5.000 60.034125 Concrete Barrier Temporar	36		·				
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4 644.1810 Temporary Pedestrian Barricade LF 64.000 64.000	00		**				
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b 646.1005 Marking Line Paint 4-inch LF 1,270.000 1,270.000	94						
	96	646.1005	Marking Line Paint 4-Inch	LF	1,270.000	1,270.000	

261		

Line Item Item Description Unit Total Qty 0098 650.6501 Construction Staking Structure Layout (structure) 01. B-40-550-14 EACH 1.000 1.000 0100 652.0225 Conduit Rigid Metallic 2-Inch LF 60.000 60.000 0102 653.0225 Conduit Rigid Monatelalic Schedule 40 2-Inch LF 728.000 728.000 0104 653.0220 Junction Boxes 18x6x6-Inch EACH 5.000 5.000 0108 655.0610 Electrical Wire Lighting 12 AWG LF 500.000 50.000 0110 657.0322 Poles Type 5-Aluminum EACH 5.000 5.000 0112 657.0515 Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT EACH 5.000 5.000 0114 659.1125 Luminaires Utility LED C EACH 5.000 5.000 0116 659.5000.5 Lamp, Ballast, LED, Switch Disposal by Contractor EACH 6.000 6.000 0120 ASP.1TOG On-the-Job Training Apprentice at \$5.00/HR HRS 7,000.000<	
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0130 SPV.0060 Special 343. Submersible Multitap 4-Port Pre-Insulated Connector EACH 20.000 20.000	
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SPV.0060 Special 425. Installing Conduit into Existing Manhole EACH 2.000 2.000	
0134 SPV.0060 Special 430. Underdeck Utility Structure B-40-550-14, City Underground Conduit EACH 1.000 1.000	
0136 SPV.0060 Special 508. Temporary Shoring of Structure EACH 1.000 1.000	
0138 SPV.0060 Special 509. Temporary Support for Utilities B-40-550-14 EACH 1.000 1.000	
0140 SPV.0060 Special 522. Salvaging Bascule Gear Set and Constructing Rack and Pinion Exhibits EACH 1.000 1.000	
0142 SPV.0060 Special 523. Removing, Repairing and Reinstalling Bridge Operator's House as an EACH 1.000 1.000 Exhibit	
0144 SPV.0060 Special 524. Interpretive Exhibit Sign Support EACH 1.000 1.000	
0146 SPV.0060 Special 525. Install Historical Marker Plaque EACH 2.000 2.000	
0148 SPV.0060 Special 526. Connecting Downspout to Existing Sewer EACH 2.000 2.000	
0150 SPV.0060 Special 527. Floor Drains Type H Modified EACH 4.000 4.000	
0152 SPV.0060 Special 544. Center Shear Transfer Device EACH 4.000 4.000	
0154 SPV.0060 Special 545. Balancing Bascule Bridge Leaf EACH 2.000 2.000	
0156 SPV.0060 Special 550. Rivet Replacement with High Strength Bolts EACH 1,930.000 1,930.000	
0158 SPV.0060 Special 566. Trunnion Shaft Machining EACH 16.000 16.000	
0160 SPV.0060 Special 567. Refurbish Trunnions and Trunnion Bearings EACH 8.000 8.000	
0162 SPV.0060 Special 571. North Operating Machinery Demolition EACH 1.000 1.000	
0164 SPV.0060 Special 572. South Operating Machinery Demolition EACH 1.000 1.000	
0166 SPV.0060 Special 573. Span Lock Machinery Demolition EACH 1.000 1.000	
0168 SPV.0060 Special 574. Electrical Demolition EACH 1.000 1.000	
0170 SPV.0060 Special 587. Remove Timber Fender Systems B-40-550-14 EACH 2.000 2.000	
0172 SPV.0060 Special 588. Remove Timber Dolphins B-40-550-14 EACH 4.000 4.000	
0174 SPV.0060 Special 597. Protecting Utilities EACH 1.000 1.000	
0176 SPV.0060 Special 881. Inline 5A Fast Acting Fuse with Holder EACH 15.000 15.000	
0178 SPV.0085 Special 510. Bridge Structural Steel LB 468,344.000 468,344.000	
0180 SPV.0085 Special 513. Structural Steel Repair LB 223,613.000 223,613.000	
0182 SPV.0085 Special 550. Non-Structural Steel Ballast LB 499,923.000 499,923.000	
0184 SPV.0090 Special 305. Electrical Cable Type 4#8/1#8 XLP LF 2,804.000 2,804.000	
0186 SPV.0090 Special 550. Marine Dock Fender LF 253.000 253.000	

	603-CONCRETE	BARRIFR			<u> </u>	516-FENCE	ı	
	OSS CONTONETE	603.8000 TEMPORAY PRECAST	603.8125 TEMPORAY PRECAST			204.0170 REMOVING FENCE	616.0207 FENCE CHAIN LINK 7-FT	616.0329 GATES CHAIN LINK (20 FT)
		DELIVERED	INSTALLED	CATEGORY	LOCATION	LF	LF	EACH
CATEGORY	LOCATION	LF	LF		FENCE FOR TLE NW			
0010	16TH STREET	224	224	0010	QUADRANT ALONG W MT VERNON AVE	70	50	1
	TOTAL 0010	224	224		TOTAL 0010	70	50	1

618-MISC

618.0100.01 **MAINTENANCE** AND REPAIR OF **HAUL ROADS** (PROJECT) (01.2615-15-73) **CATEGORY** LOCATION EACH 0030 16TH STREET TOTAL 0030

619-MOBILIZATION

CATEGORY

MOBILIZATION EACH

619.1000

0010 16TH STREET TOTAL 0010

LOCATION

628-INLET PROTECTION

			628.7010	628.7015
			TYPE B	TYPE C
CATEGORY	STATION	LOCATION	EACH	EACH
0010	148+15	16TH STREET		2
0010	151+85	16TH STREET		2
0010	148+27	PARCEL 3980917110	1	
		TOTAL 0010	1	4

Ε COUNTY: MILWAUKEE SHEET PROJECT NO: 2615-15-73 HWY: 16TH STREET MISCELLANEOUS QUANTITIES

3

		<u>6</u>	43-TRAFFIC	CONTROL				
			TRAFFIC CONTROL					<u>TEMPORARY</u>
		643.	0300	643.	643.0420		0900	644.1810
		DRUMS BARRICADES TYPE III		PE III SIGNS		PEDESTRIAN BARRICADE		
CATEGORY	LOCATION	EACH	DAY	EACH	DAY	EACH	DAY	LF
0010	16TH STREET	15.00	9,000	6.00	3,600	42.00	25,200	
0010	VIADUCT APPROACH	10.00	6,000			8.00	4,800	
0010	CANAL ST					4.00	2,400	
0010	EMMBER LN					17.00	10,200	
0010	ST PAUL AVE					4.00	2,400	
0010	CLYBOURN ST					11.00	6,600	
0010	HANK AARON STATE TRAIL					8.00	4,800	64
	TOTAL 0010	15,000 3,600		500	56,	400	64	

646-PAVEMENT MARKING

643.0300 **MARKING LINE** PAINT 4-INCH

CATEGORY	STATION	TO	STATION	OFFSET	LOCATION	LF	REMARKS
0010	147+50.00	-	152+55.00	R/L	16TH STREET	1,010	DOUBLE YELLOW
0010	147+50.00	-	152+55.00	RT	16TH STREET	130	10' SKIPS WHITE
0010	147+50.00	-	152+55.00	LT	16TH STREET	130	10' SKIPS WHITE
					TOTAL 0010	1,270	_

<u>UNDISTRIBUTED</u>

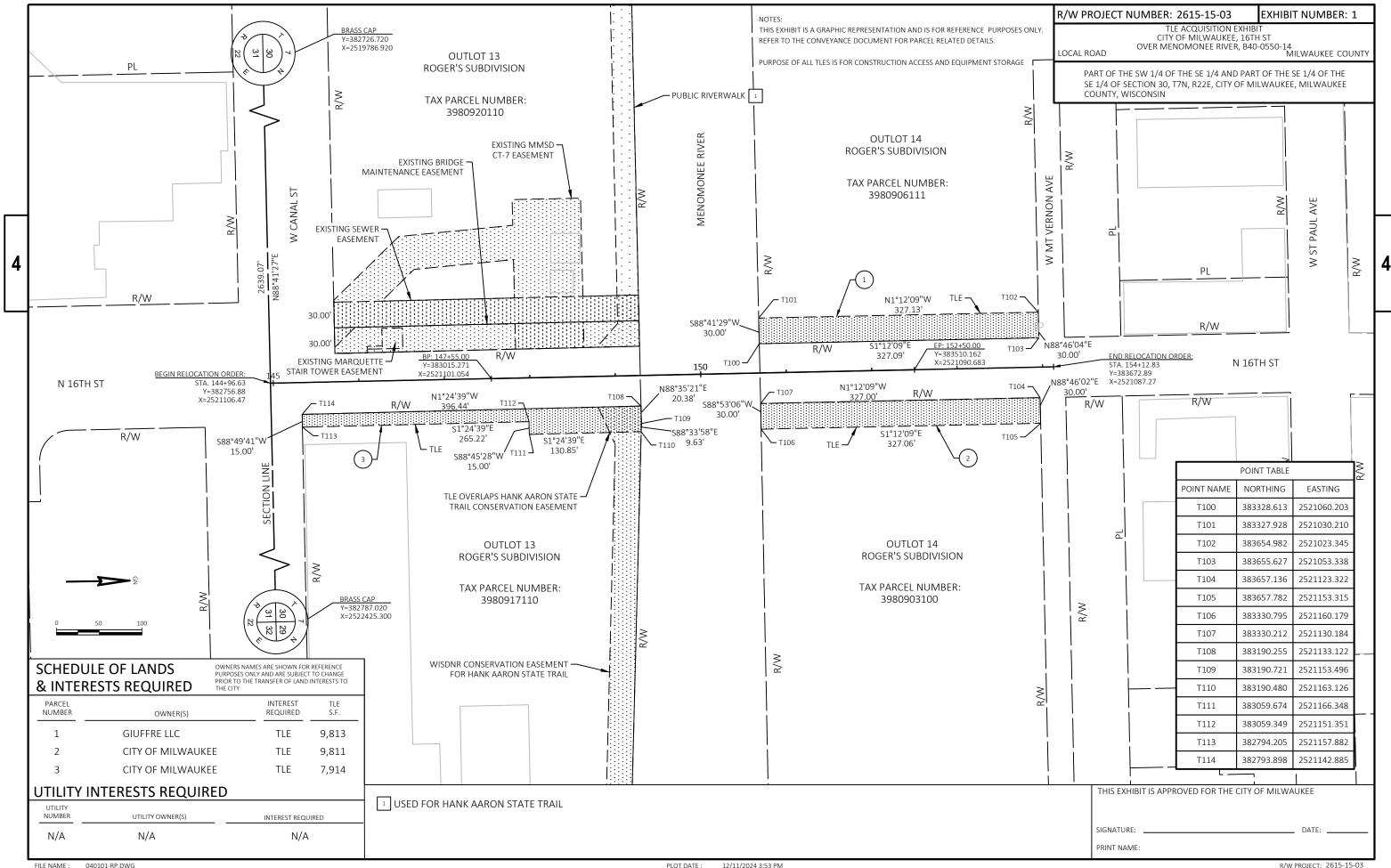
624.0100 625.0100 627.0200

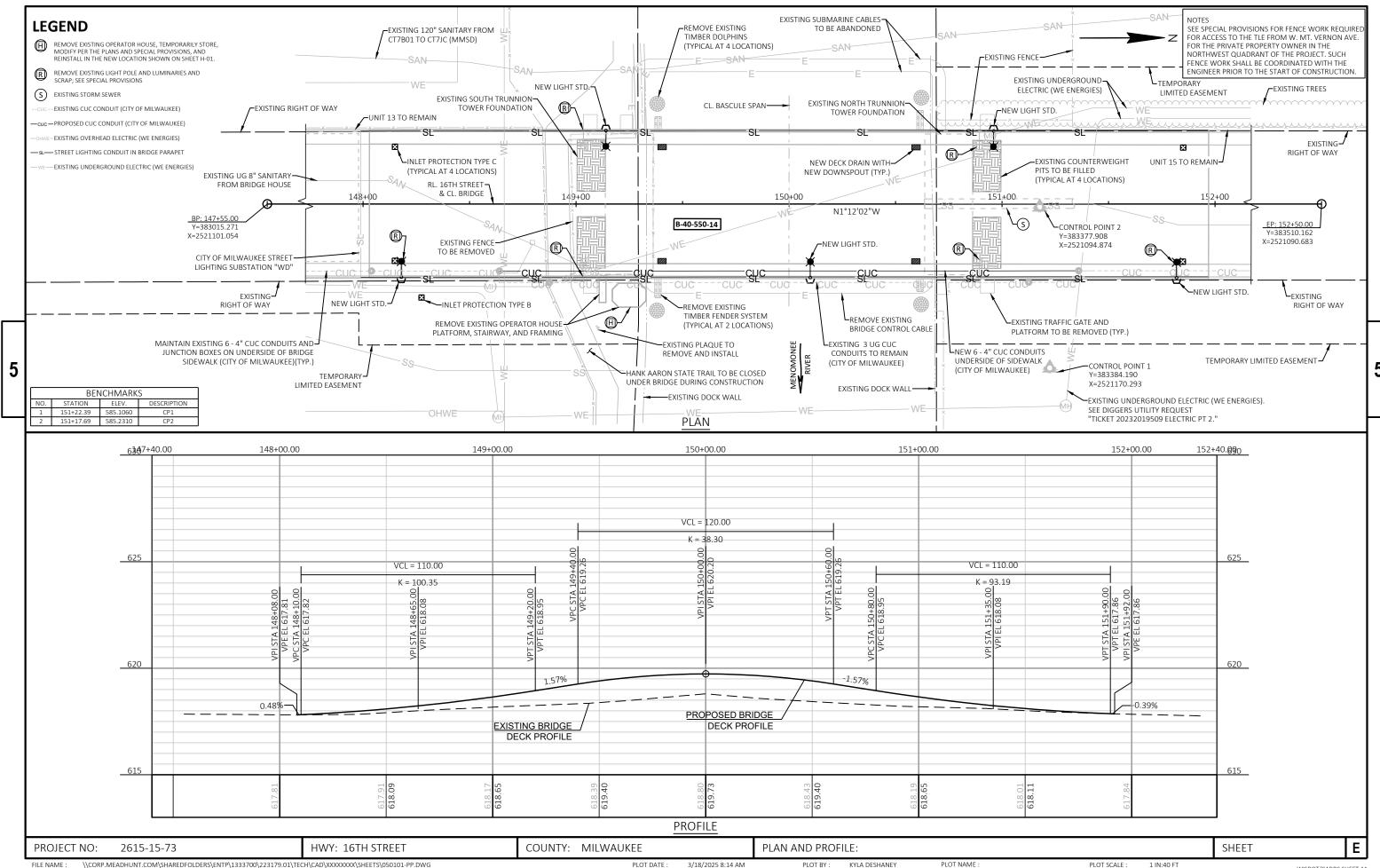
		WATER	TOPSOIL	MULCHING	FERTILIZER TYPE A	SEEDING MIXTURE NO. 40
CATEGORY	LOCATION	MGAL	SY	SY	CWT	LB
0010	HANK AARON STATE TRAIL	1	70	70	0.5	3
	TOTAL 0010	1	70	70	0.5	3

SHEET E COUNTY: MILWAUKEE PROJECT NO: 2615-15-73 HWY: 16TH STREET MISCELLANEOUS QUANTITIES

629.0205

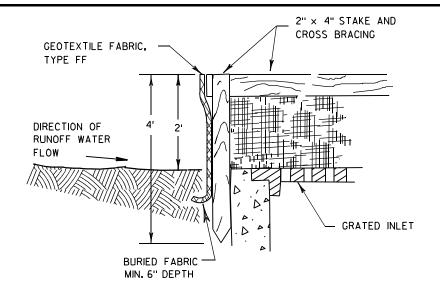
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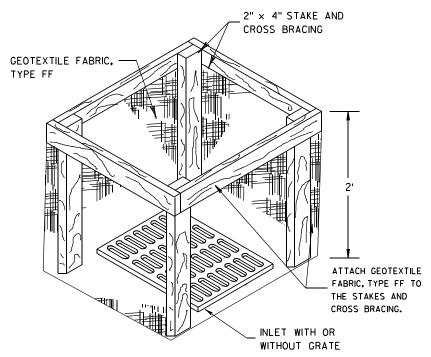




Standard Detail Drawing List

08E10-02 08E11-02	INLET PROTECTION TYPE A, B, C AND D TURBIDITY BARRIER
	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	
12A03-10	
14B07-16A	
	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15D12-13A	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE





INLET PROTECTION, TYPE A

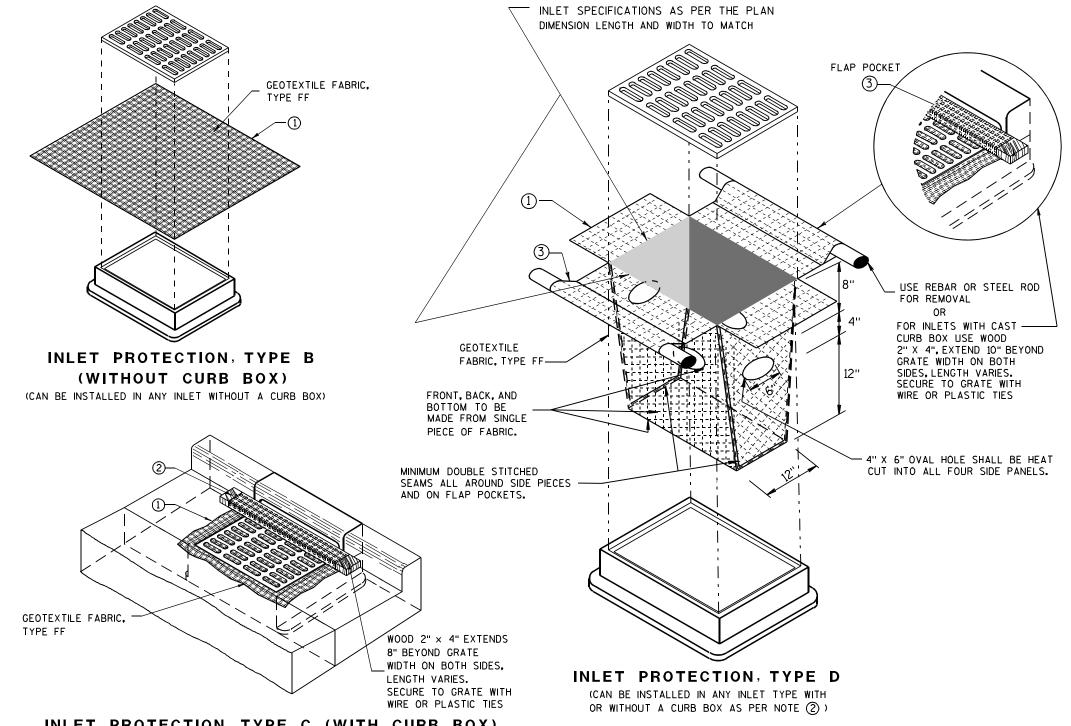
GENERAL NOTES

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

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

6

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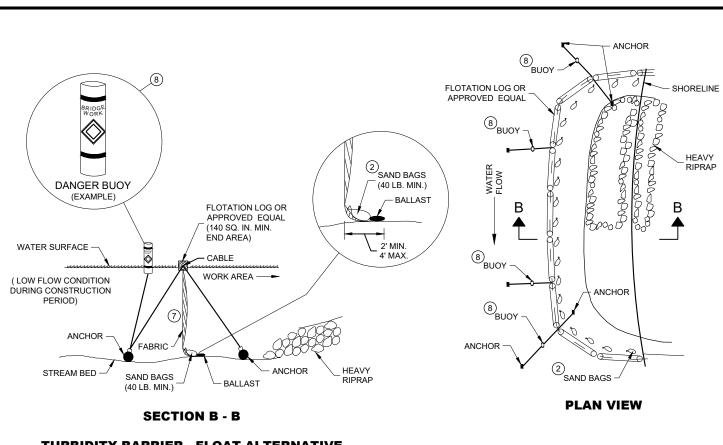
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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

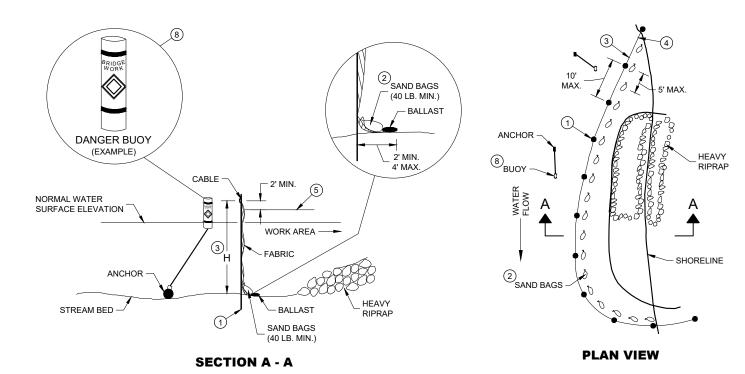
APPROVED

/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER

10/16/02



TURBIDITY BARRIER - FLOAT ALTERNATIVE CAUTION - SEE NOTE 6



TURBIDITY BARRIER - STANDARD POST INSTALLATION

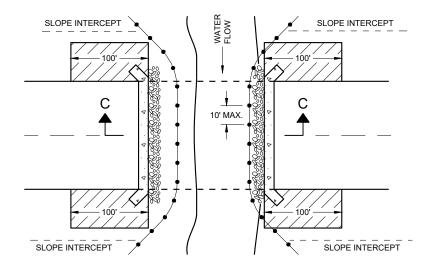
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

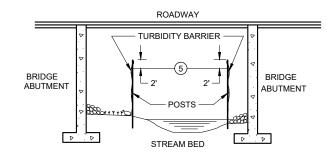
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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
- (2) SAND BAGS 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 FEET, 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
- (5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- (6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK 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 /S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT
ENGINEER 6/4/02 DATE

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.

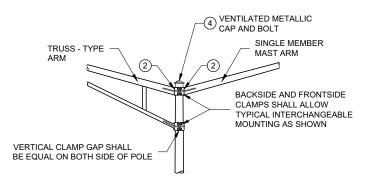
TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

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 ½ 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

- 1 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- 2 GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ½" HOLE IN POLE SHAFT FOR WIRING.
- $\ensuremath{\ensuremath{\mathfrak{G}}}$ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- (4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" 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.

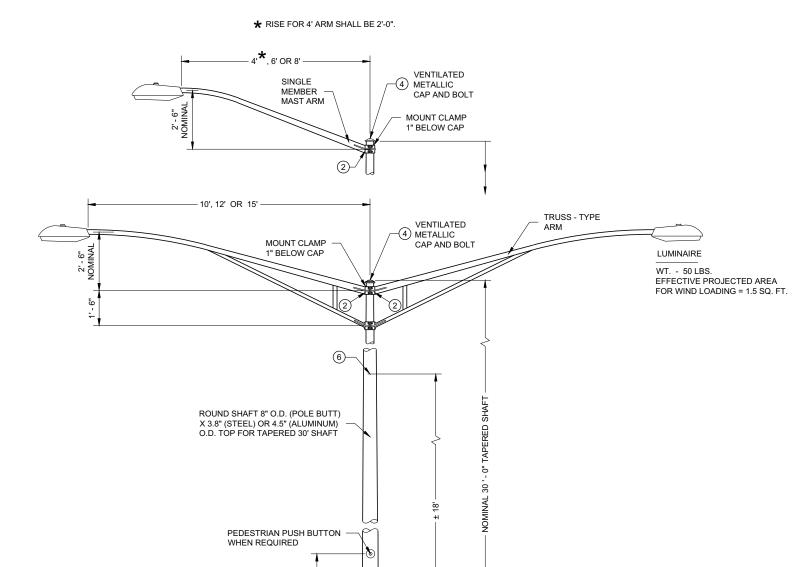


INTERCHANGEABLE MOUNTING DETAIL

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

09E0

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

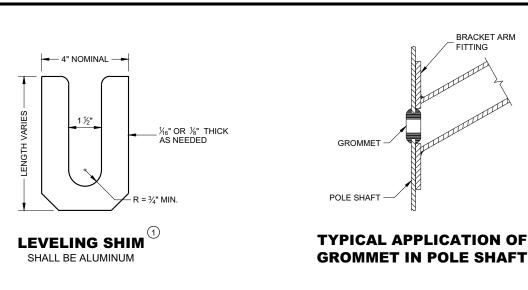
3 5

TOP OF CONCRETE BASE -



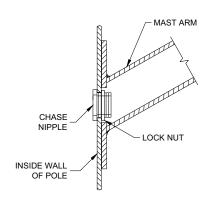






GUSSETS REQUIRED

BOLTS ENTIRE LENGTH



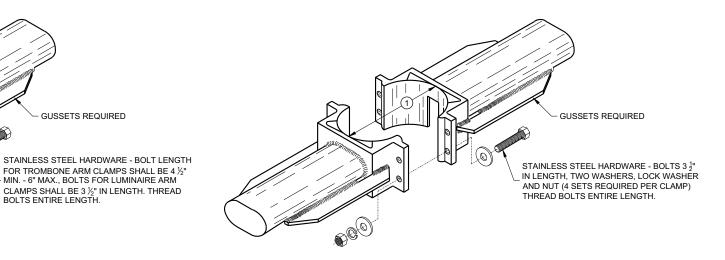
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

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
- 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

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

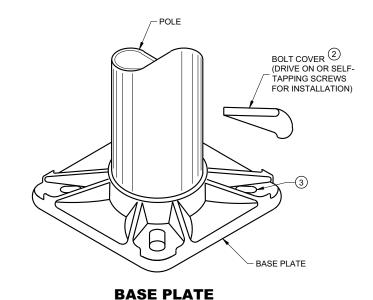


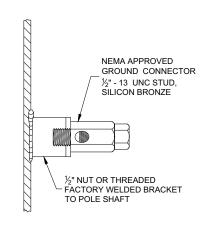
"J " HOOK DOOR SIDE HOOK FACTORY 1 g" RACEWAY HOLE - OPPOSITE WELDED TO POLE DOOR (180° SIDE) IF CALLED FOR

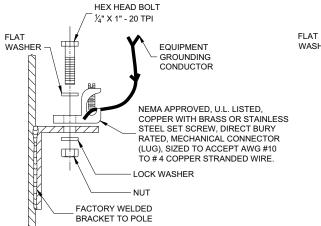
TYPICAL "J" HOOK LOCATION

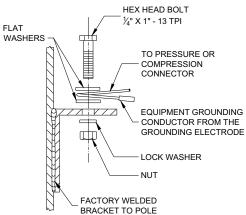
TYPICAL TROMBONE MAST ARM AND SINGLE **LUMINAIRE MAST ARM MOUNTING CLAMP**

TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS









TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

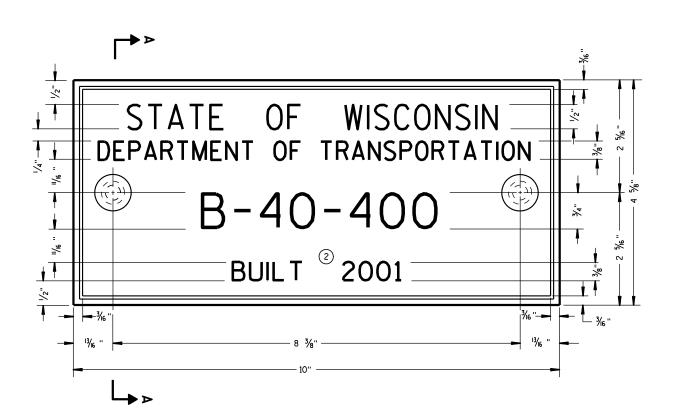
HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED November 2018 DATE

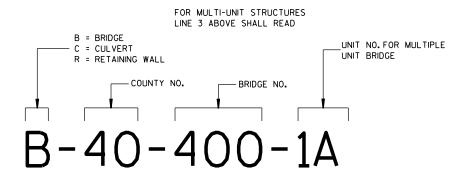
/S/ Ahmet Demirbilel STATE ELECTRICAL ENGINEER





TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



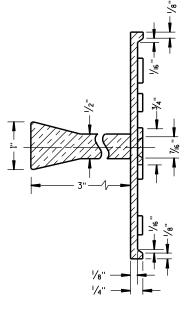
NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

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.

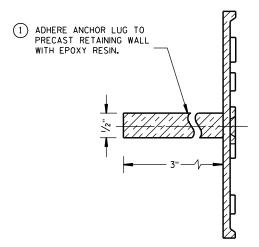
- 1 EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SPREAD OPEN SO THE TOP OF LUG IS 11/4" WIDE

SECTION A-A

ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

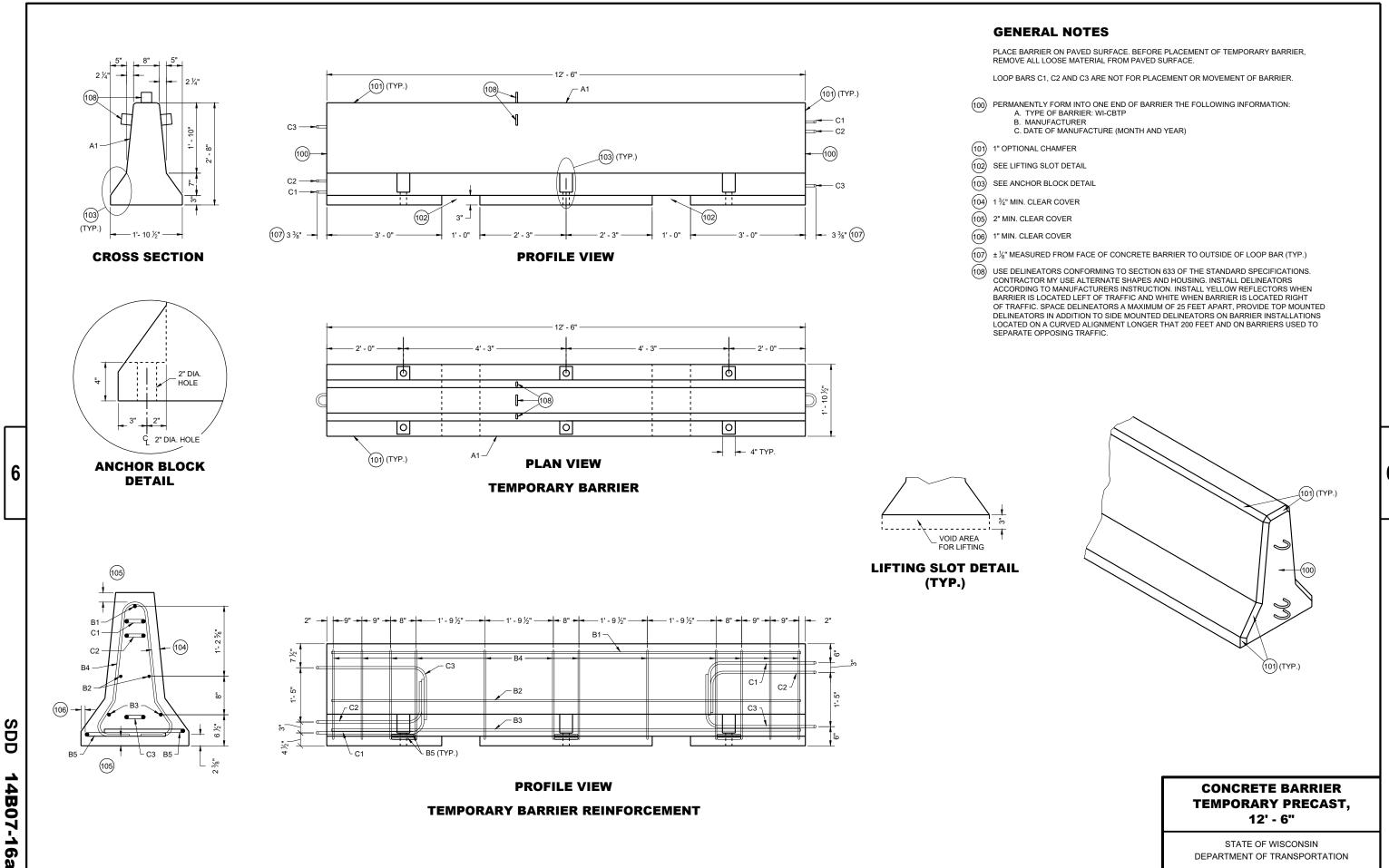
APPROVED

3/26/IO /S/ Scot Becker

DATE CHIEF STRUCTURAL DEVELOPMENT ENGINEER

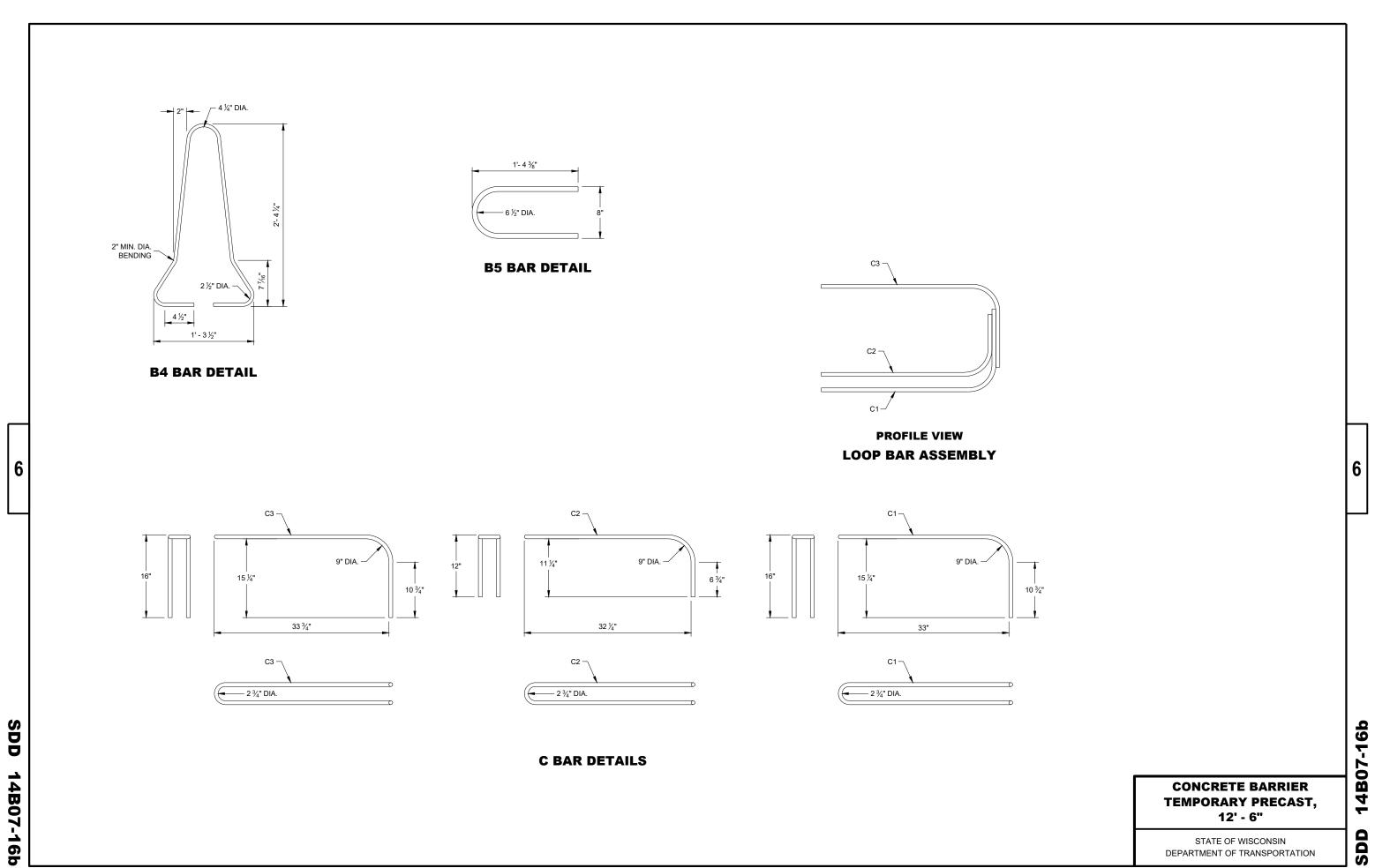
.D.D. 12 A

3-10

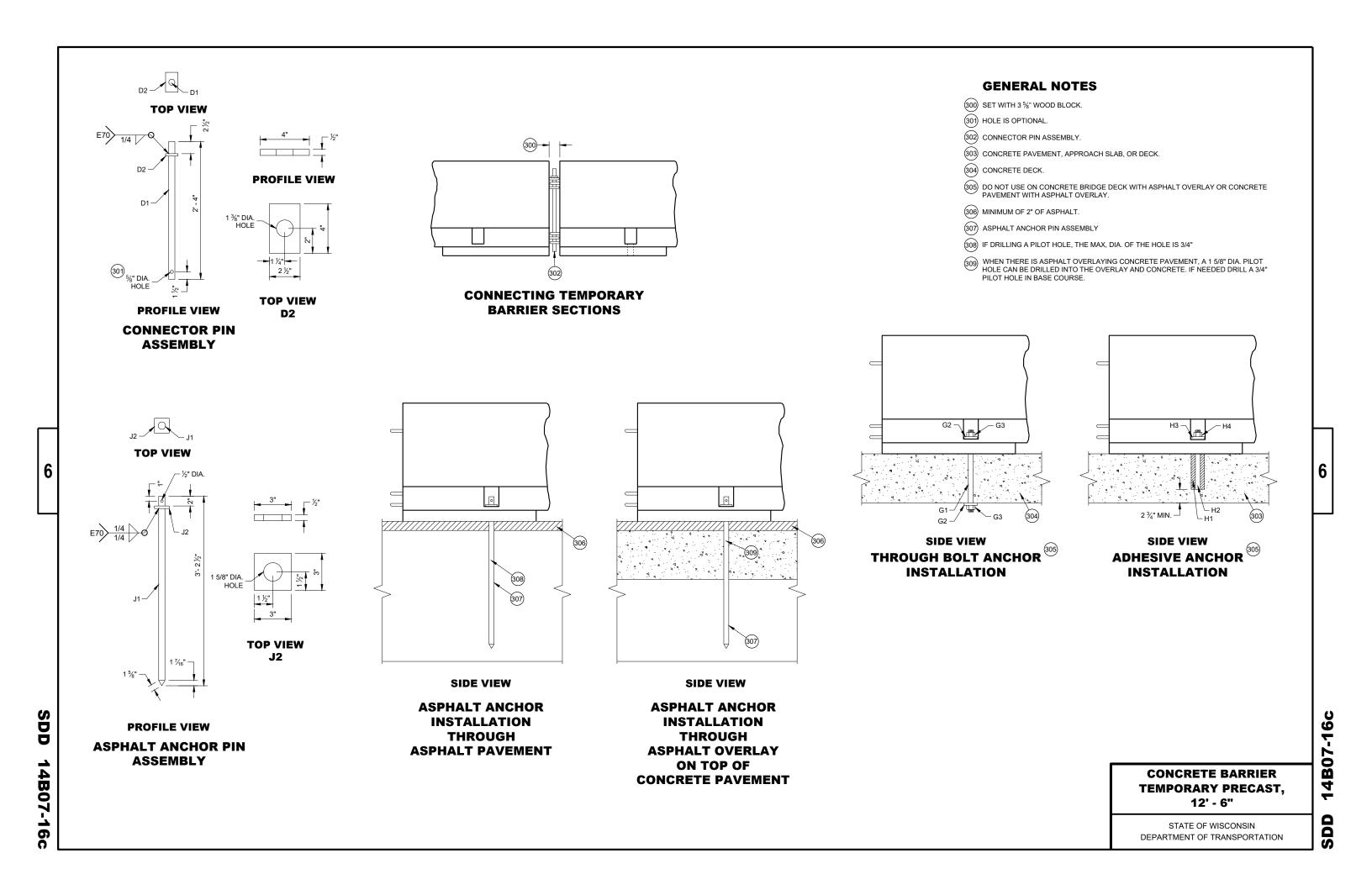


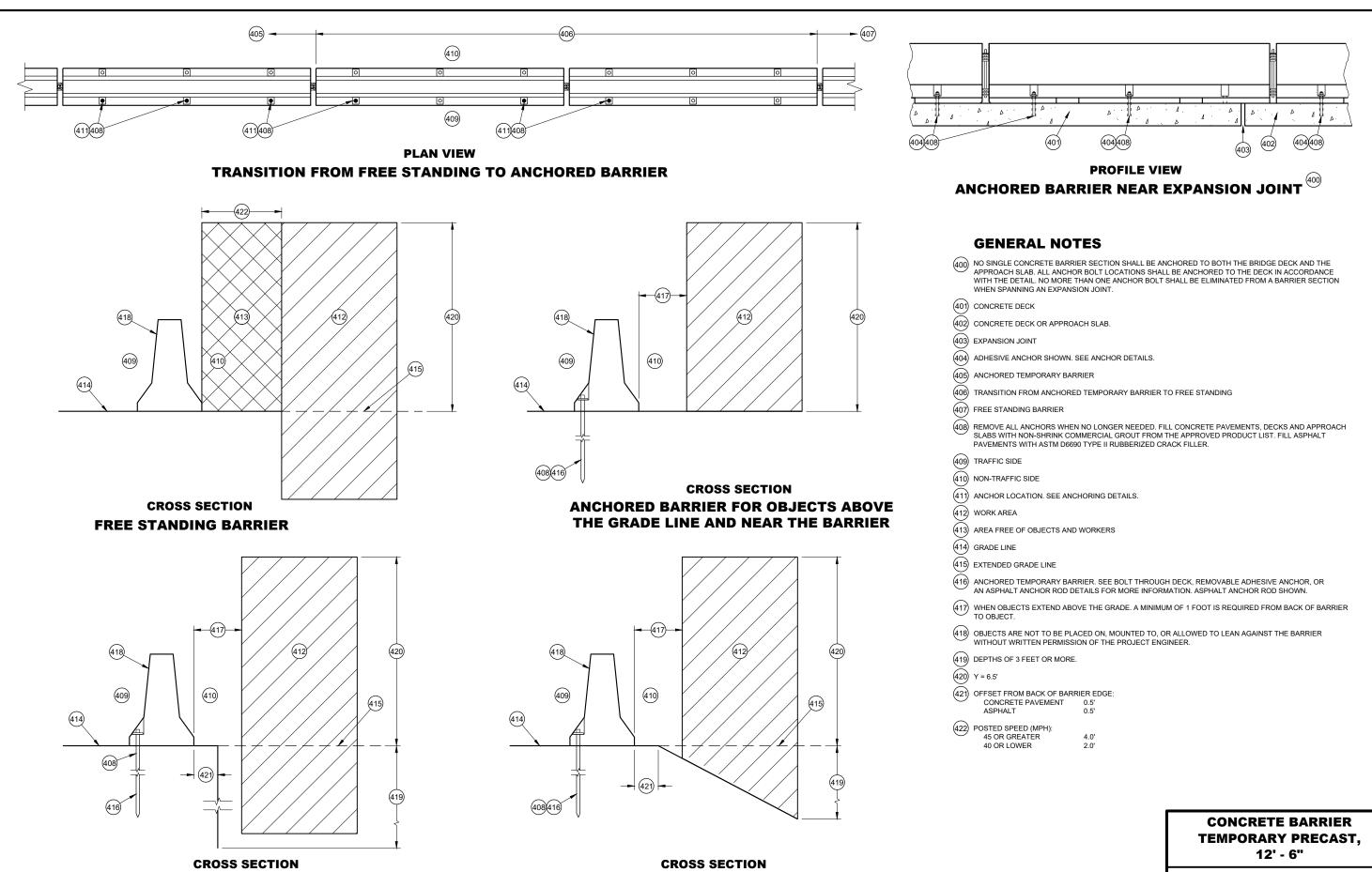
14B07-16a

SD



DEPARTMENT OF TRANSPORTATION





ANCHORED BARRIER NEAR A SLOPE

SDD

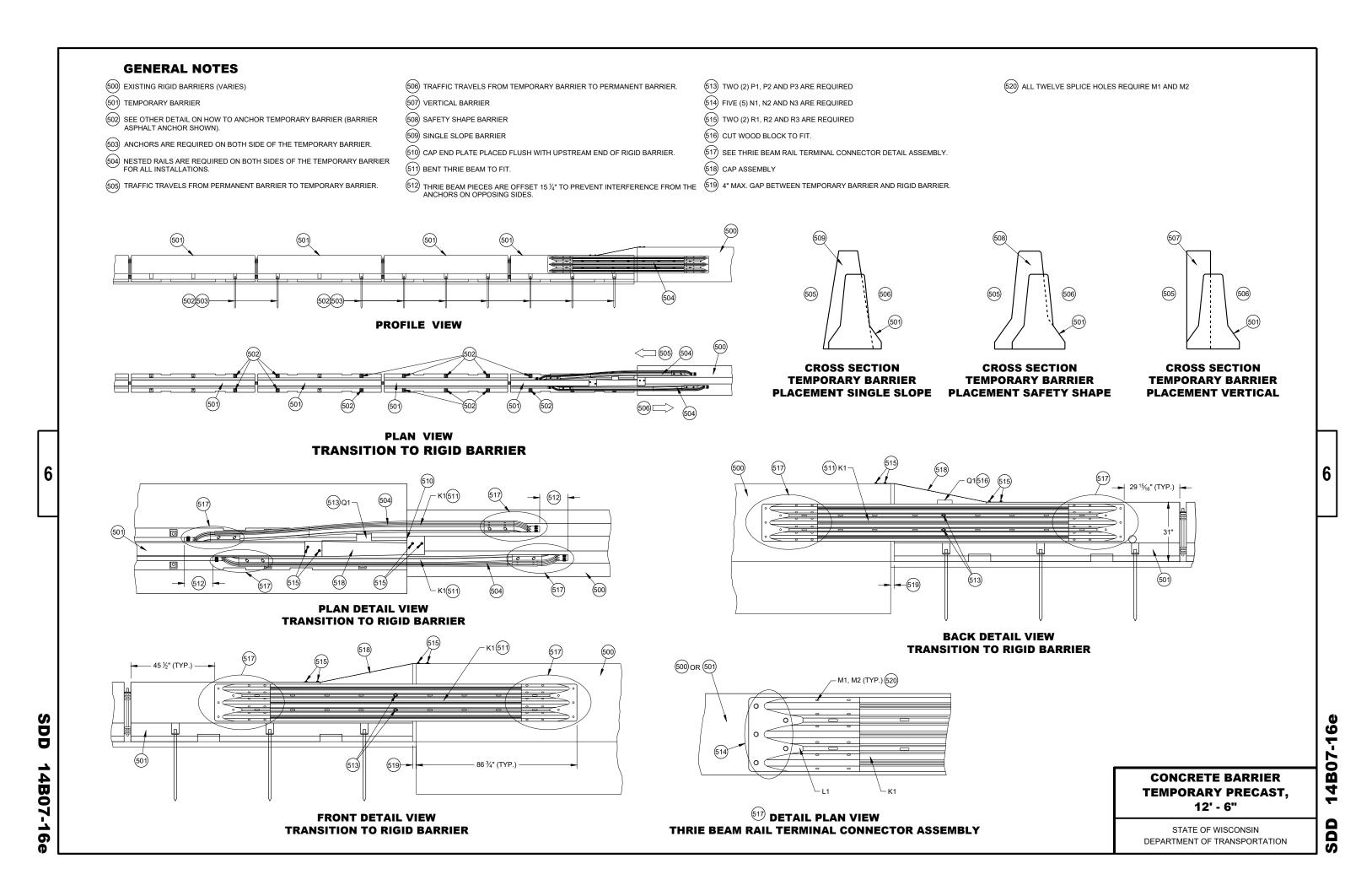
14B07-16d

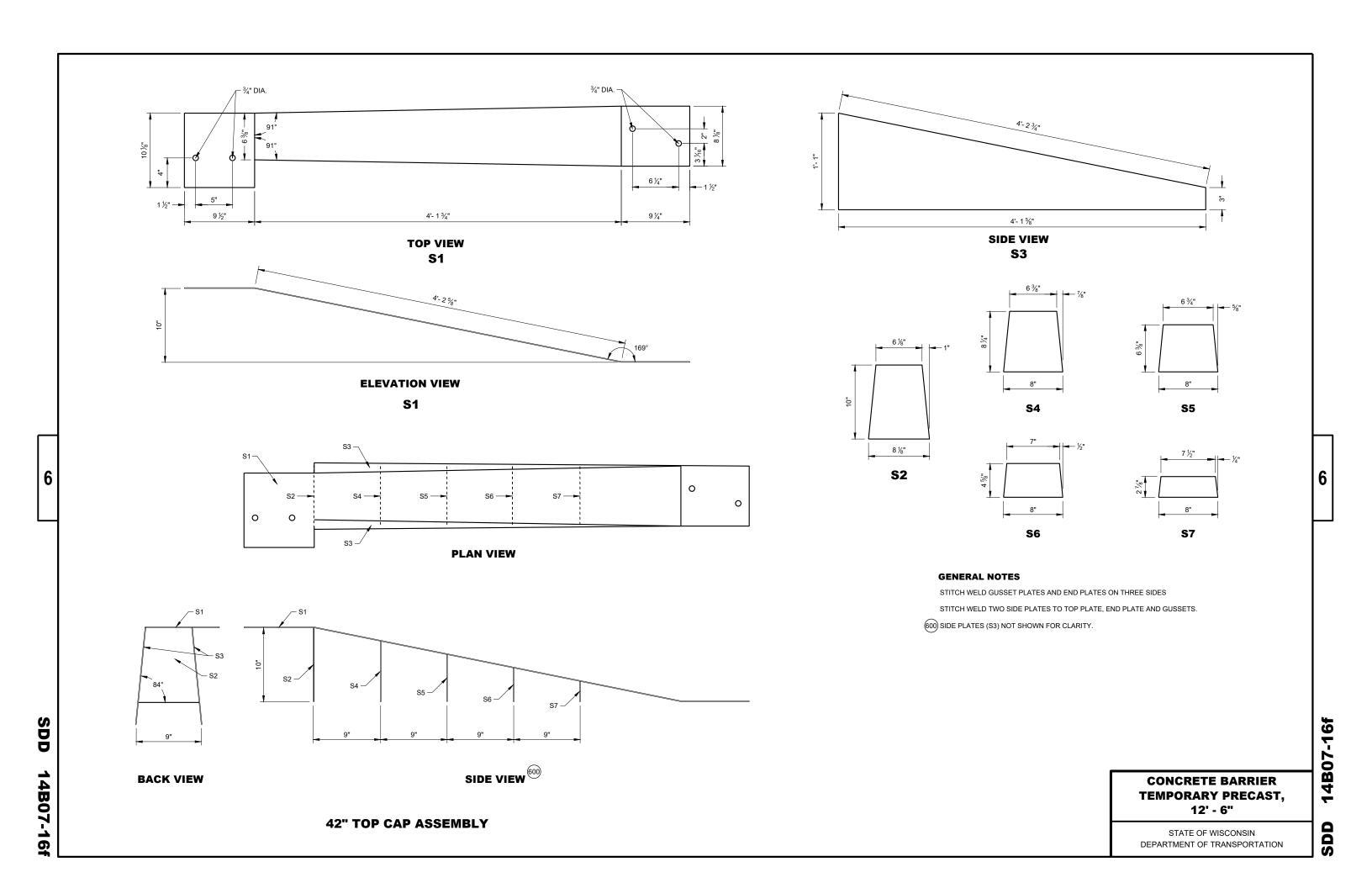
ANCHORED BARRIER NEAR VERTICAL DROP OFF

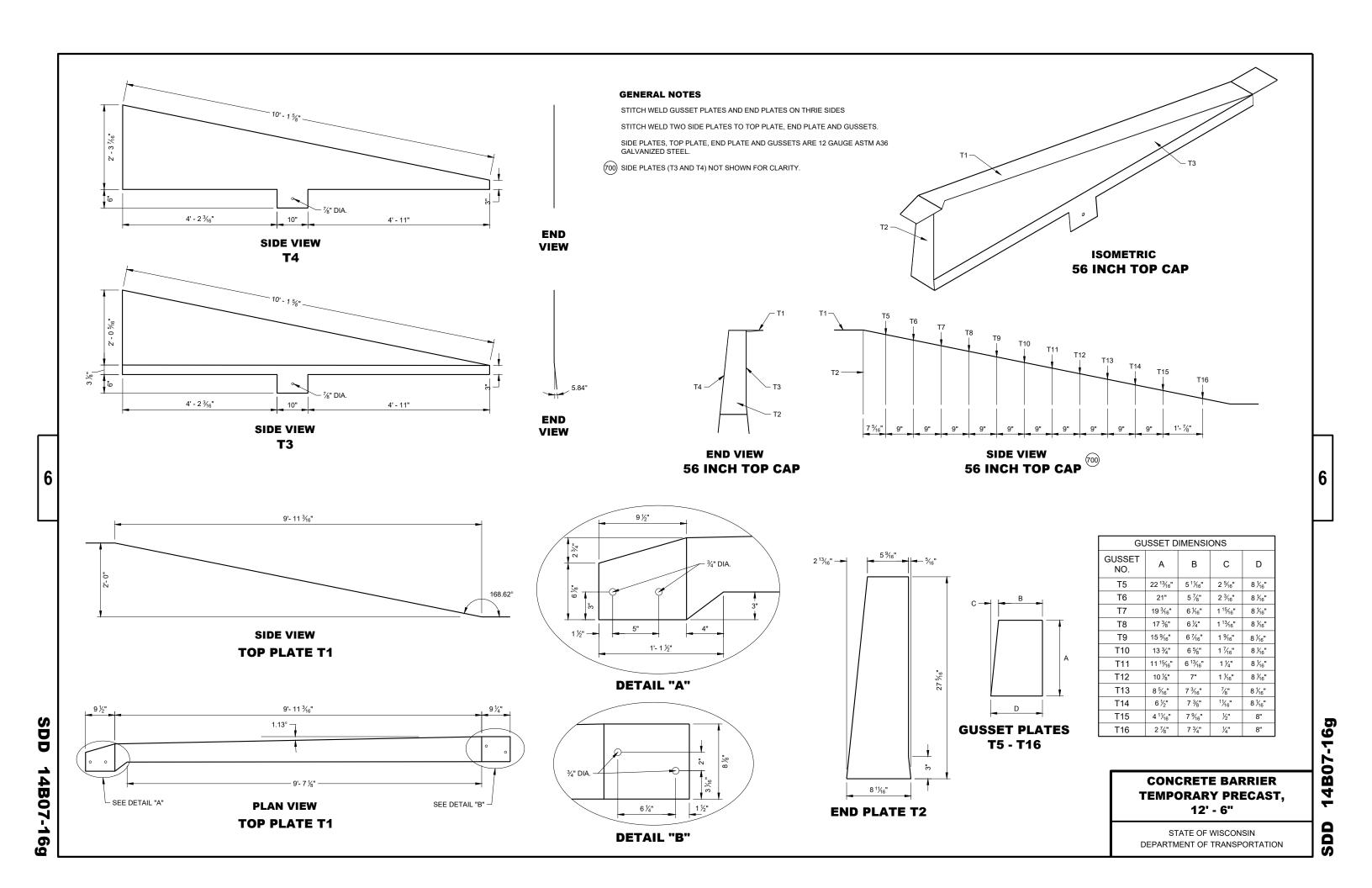
4B07-464

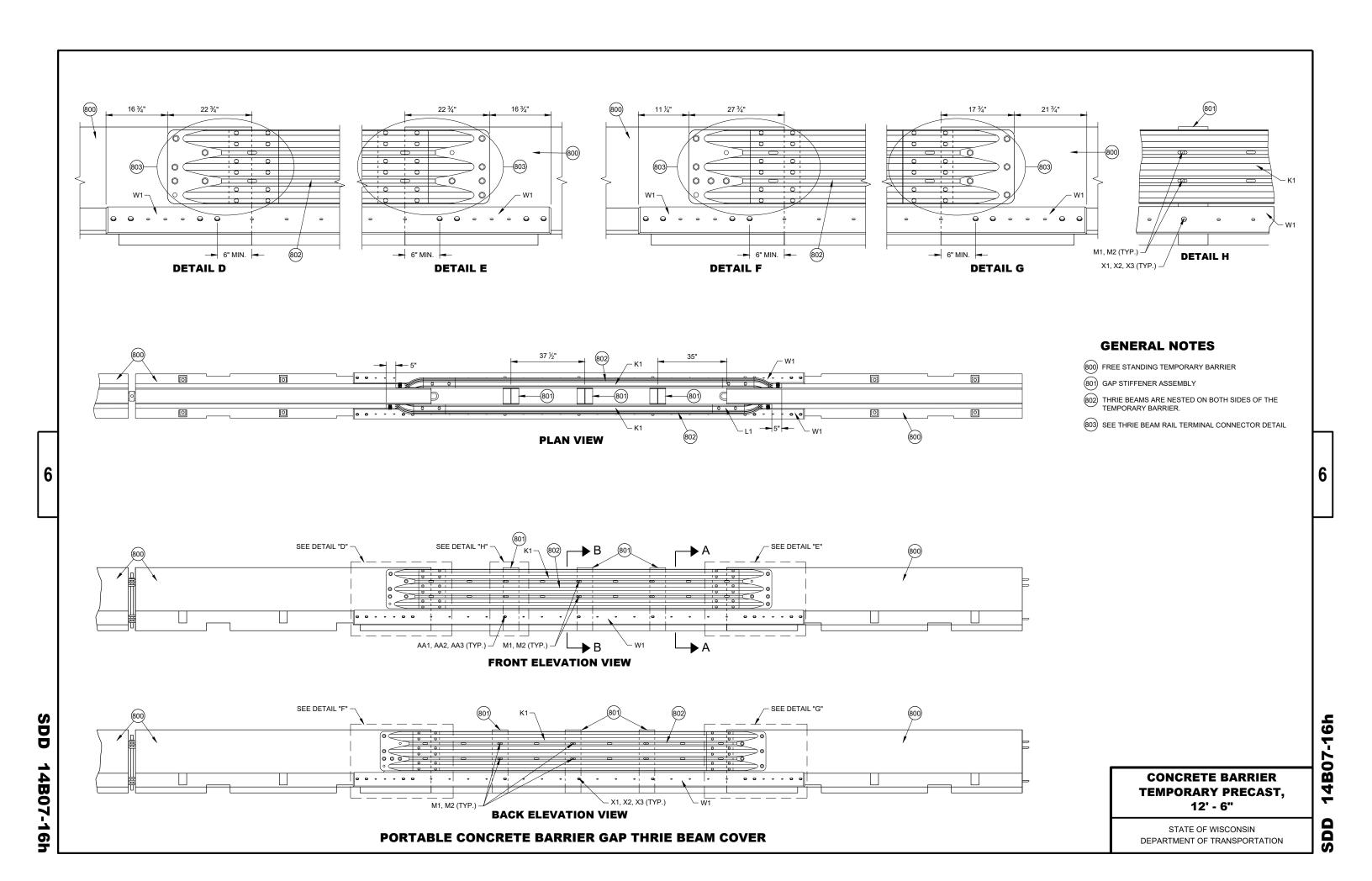
DD 14B

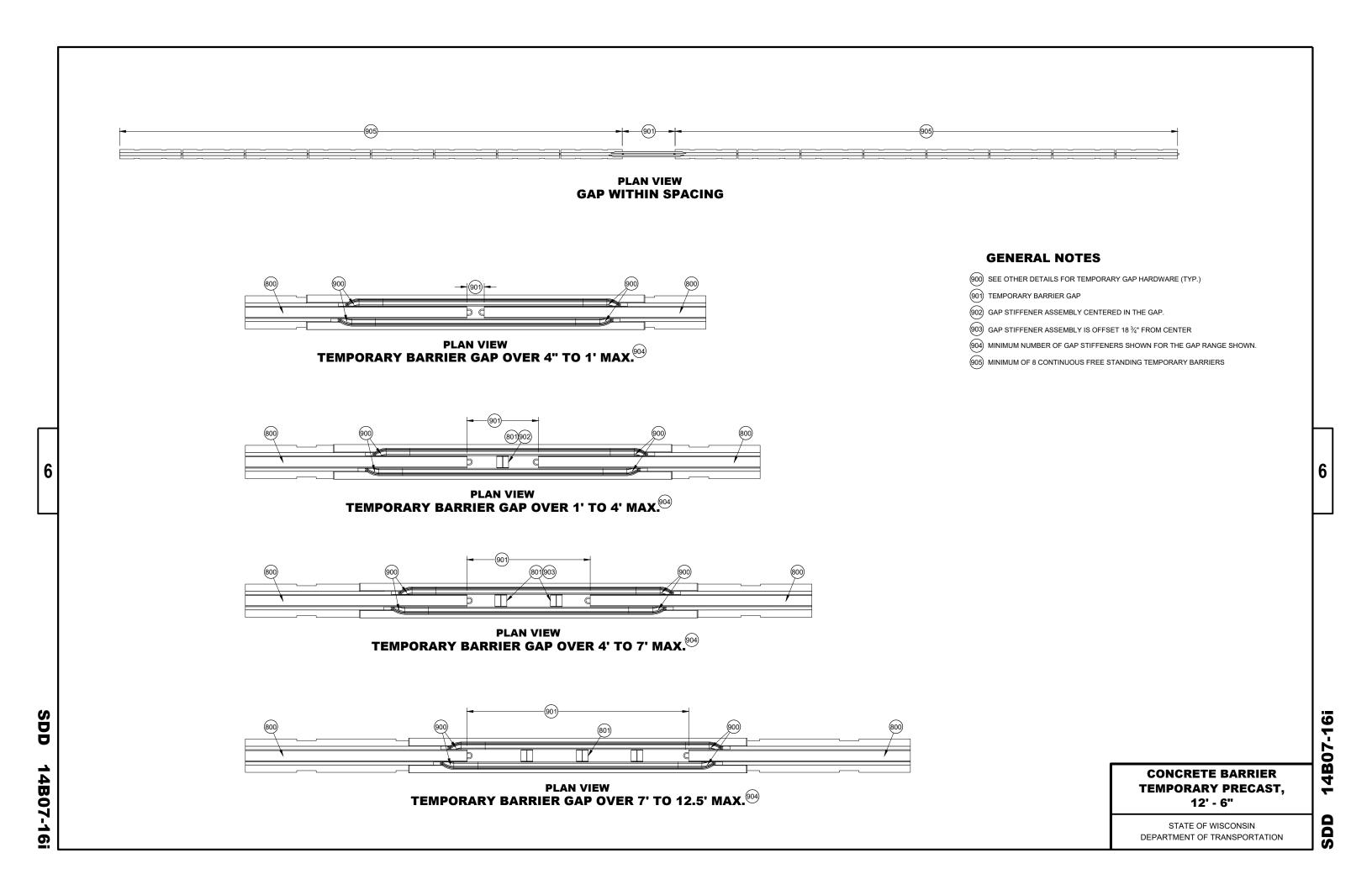
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

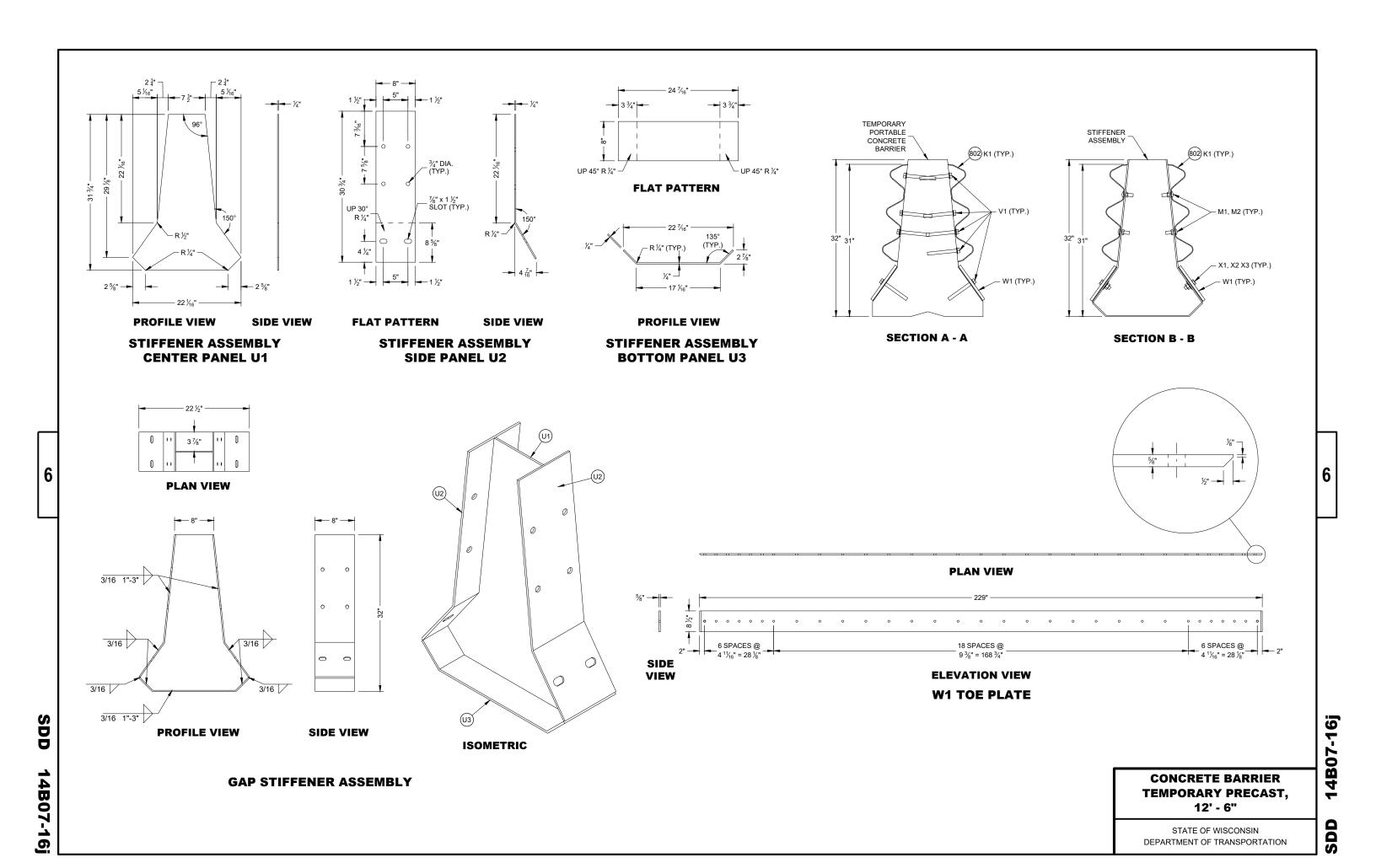










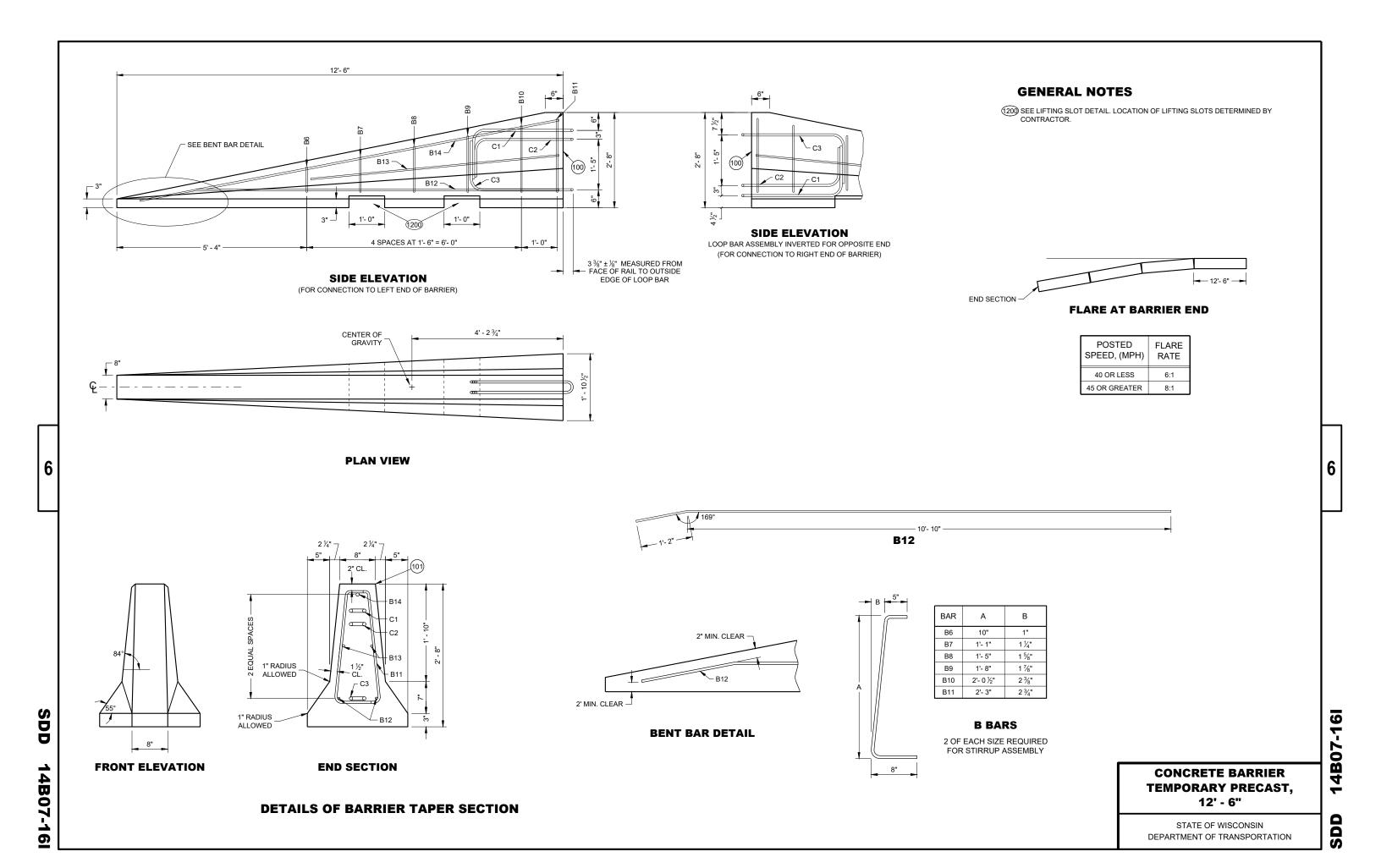


BEAM K1

14B07-16k SDD

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

12' - 6"



PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5∕8" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	³¼" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⁵ ∕8" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 4B07-16m

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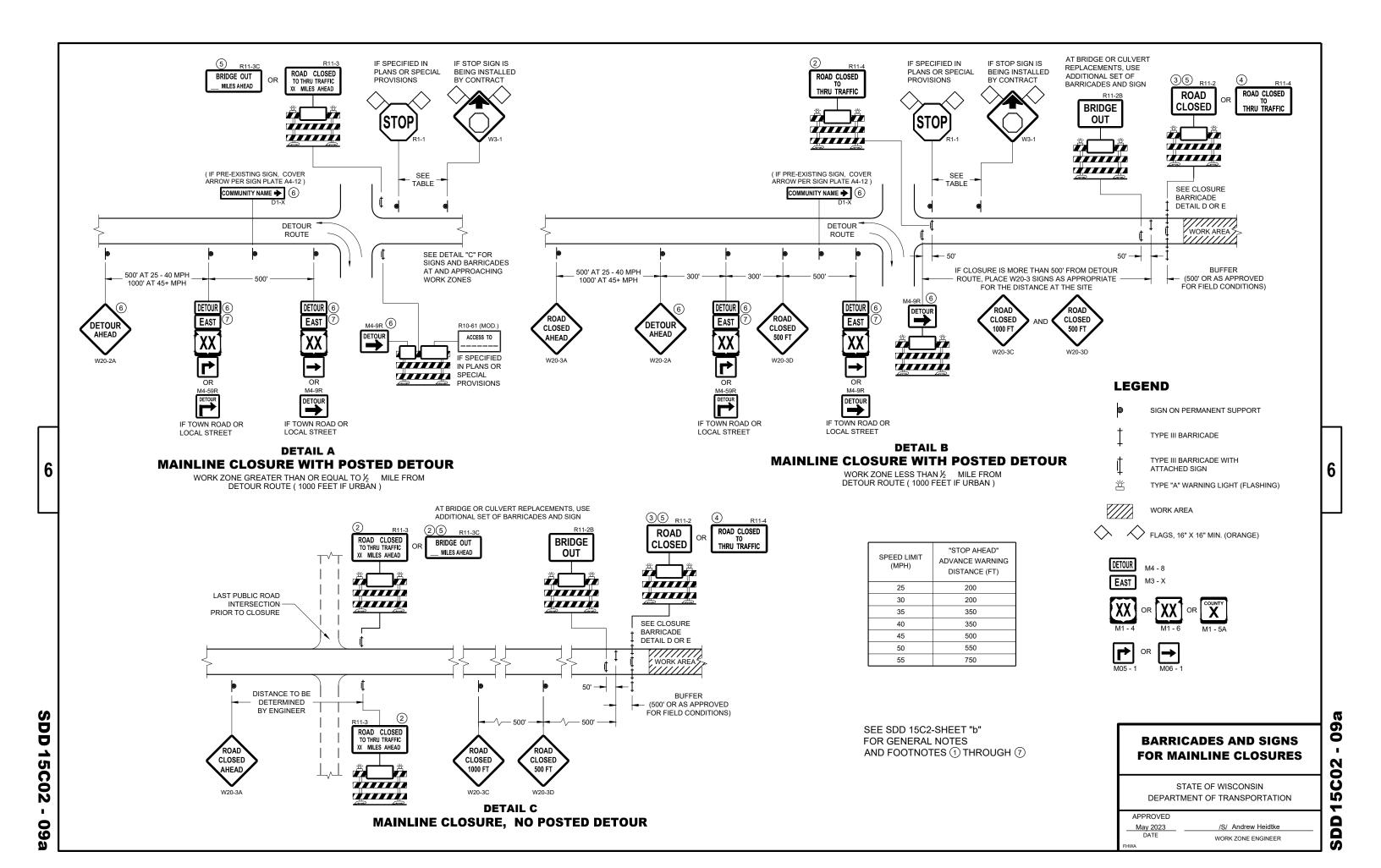
PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
Х3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

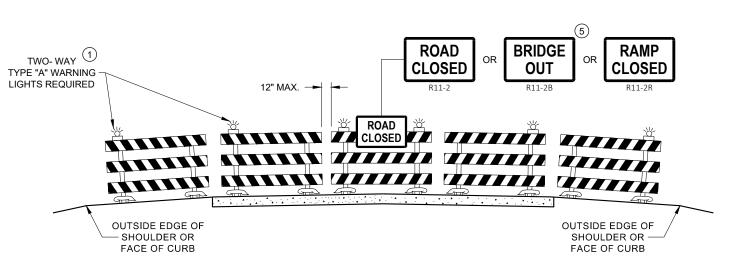
CONCRETE BARRIER TEMPORARY PRECAST. 12' - 6"

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

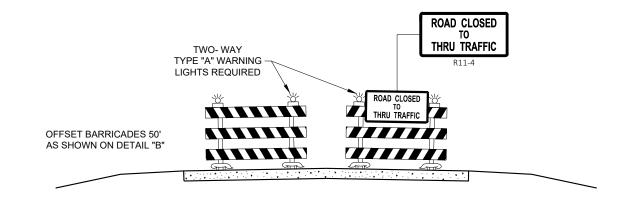
APPROVED

S





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

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"

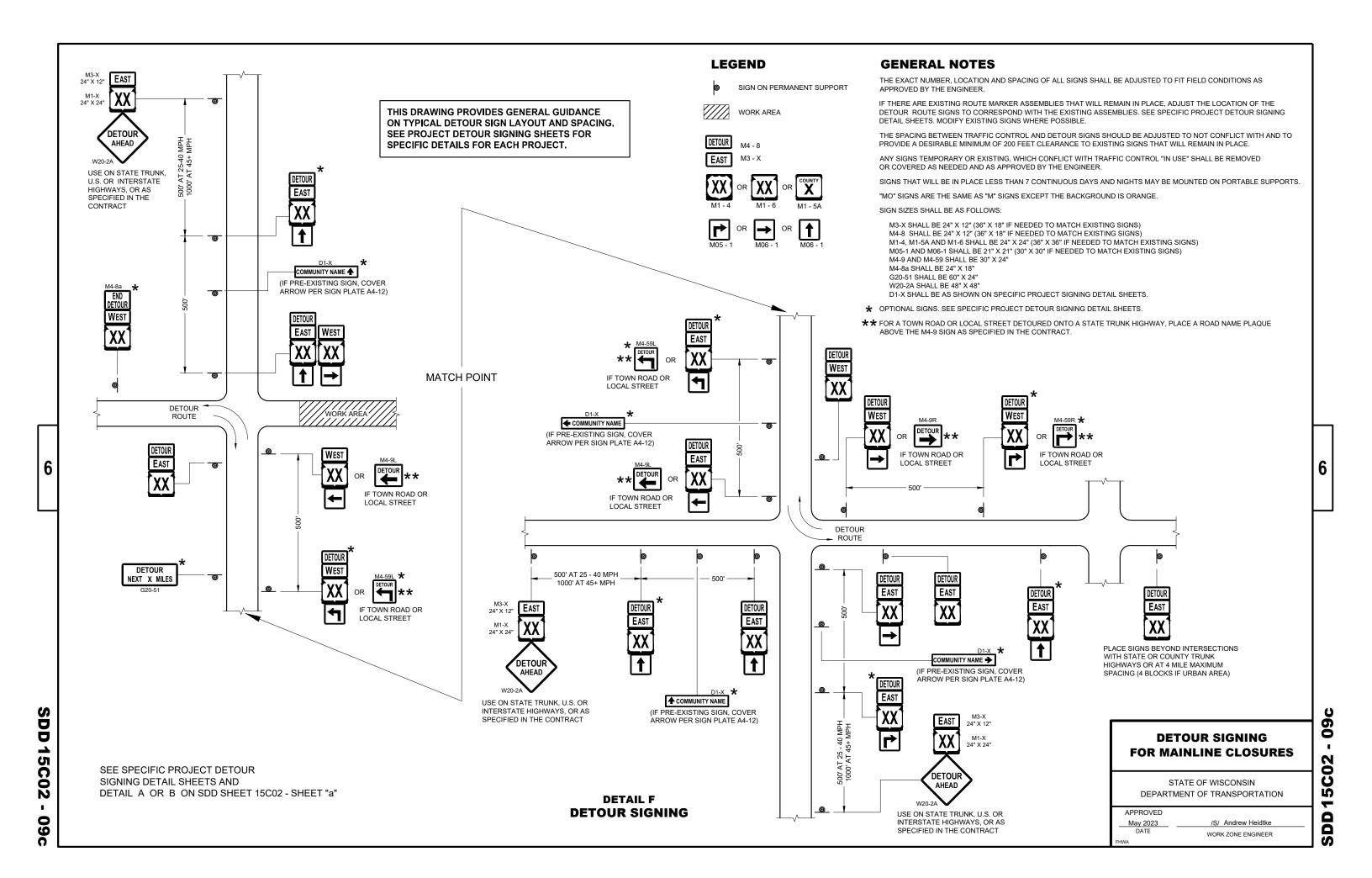
- TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT **SPACING**
- THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- (3) FOR ROAD CLOSURE <u>WITHOUT</u> 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
- "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

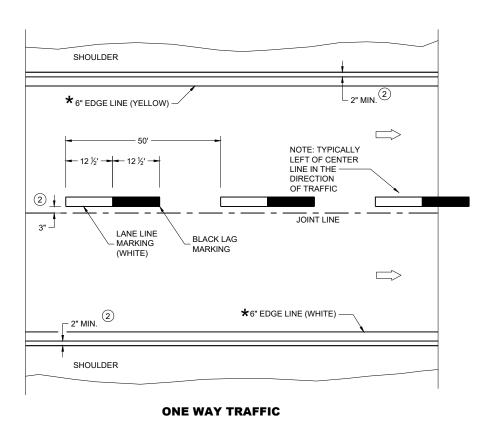
BARRICADES AND SIGNS FOR **VARIOUS CLOSURES**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2023 DATE WORK ZONE ENGINEER

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PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL **PAVEMENT MARKINGS**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

May 2023 DATE

/S/ Jeannie Silver Statewide Pavement Marking Engineer

6

SDD

C08-23 Ŋ SD

15C08-23a

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 $50\,\mathrm{FEET}$.

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 SLICH AS A CROSSOVER MANELIVER.

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

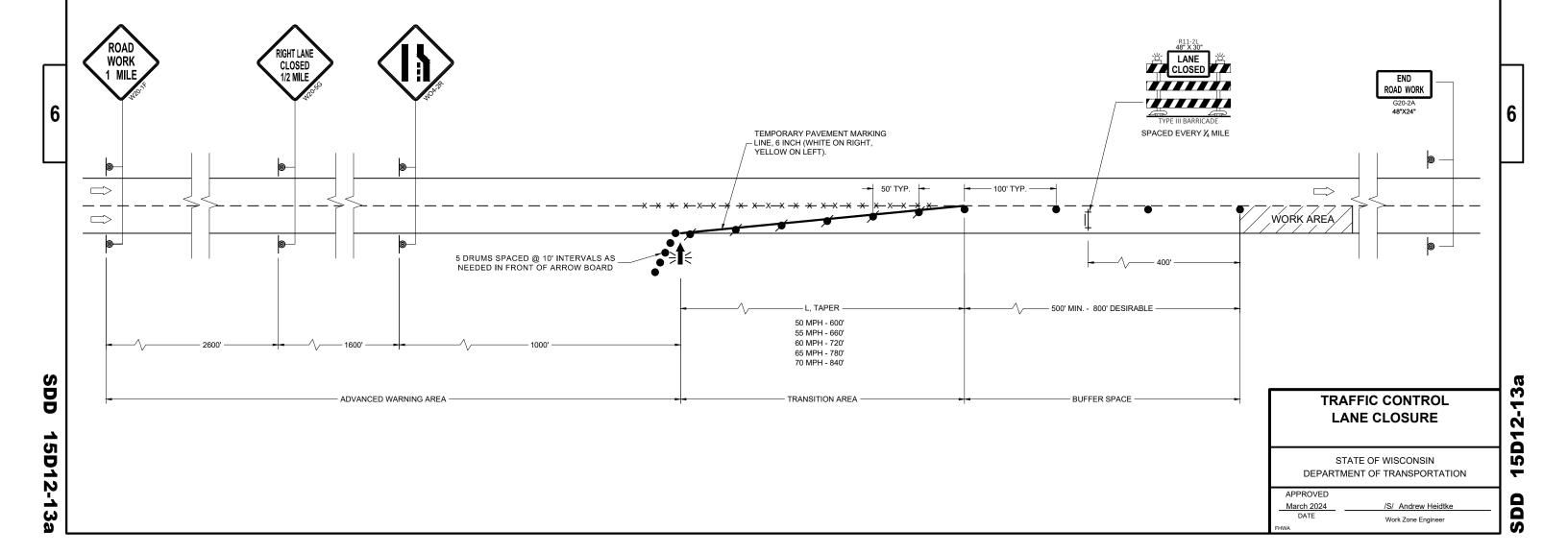
TYPE III BARRICADE WITH ATTACHED SIGN

→ ★ ★ REMOVING PAVEMENT MARKINGS

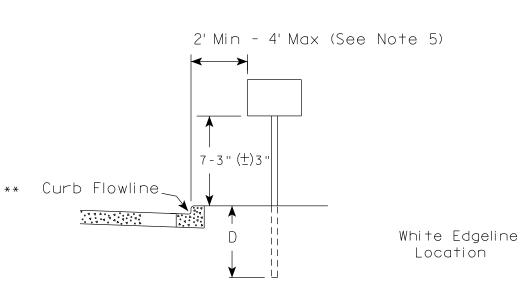
□ DIRECTION OF TRAFFIC

WORK AREA

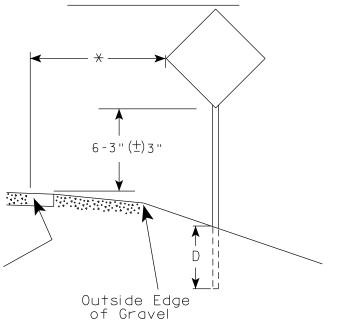
FLASHING ARROW BOARD







RURAL AREA (See Note 2)



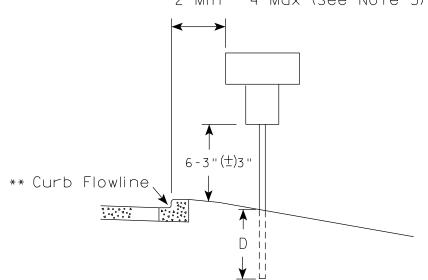
GENERAL NOTES

- 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" (\pm) 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" (\pm) 3".

- 3. For expressways and freeways, mounting height is 7'- 3" (\pm) 3" or 6'-3" (\pm) 3" depending upon existence of a sub-sign.
- 4. Minimum mounting height for signs mounted on traffic signal poles is 5' 3'' ($\frac{+}{-}$) 3''.
- 5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 6. Folding signs shall be mounted at a height of 5'-3'' (\pm) 3'' or as directd by the Engineer.

2' Min - 4' Max (See Note 5)



White Edgeline
Location

Outside Edge
of Gravel

POST EMBEDMENT DEPTH

Area of Sign	
Installation	D
(Sq.Ft.)	(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.

PLOT BY : mscj9h

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Rawh

For State Traffic Engineer

DATE 12/6/23 PLATE NO. _A4-3.23

Ε

PROJECT NO: HWY: COUNTY: SHEET NO:



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



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

HWY:



PLAN VIEW

COUNTY:

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. A4-3B.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

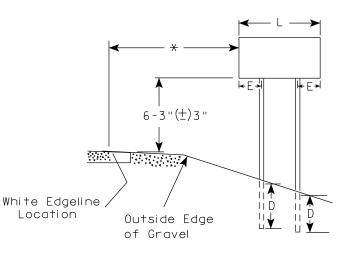
PLOT NAME :

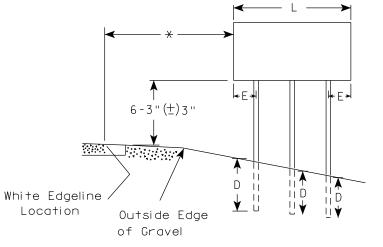
PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

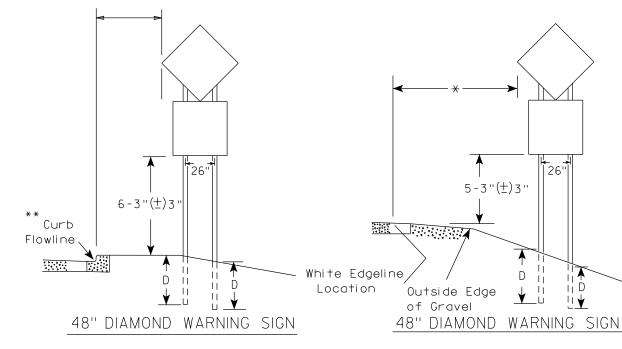
APPROVED

WISDOT/CADDS SHEET 42





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



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

HWY:

SIGN SHAPE OTHER THAN	DIAMOND
(THREE POSTS REQUIR	RED)
L	Е
Greater than 108" to 144"	12''

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" (±) 3" or 6'-3" (±) 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'' (\pm) 3'' or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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.
- $\times \times \times$ See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

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 R Rauch
For State Traffic Engineer

DATE 12/6/23

PLATE NO. <u>A4-4.16</u>

Ε

CUEET NO.

SHEET NO:

FILE NAME : C:\CAEfiles\Project\tr_stdplate\A44.dgn

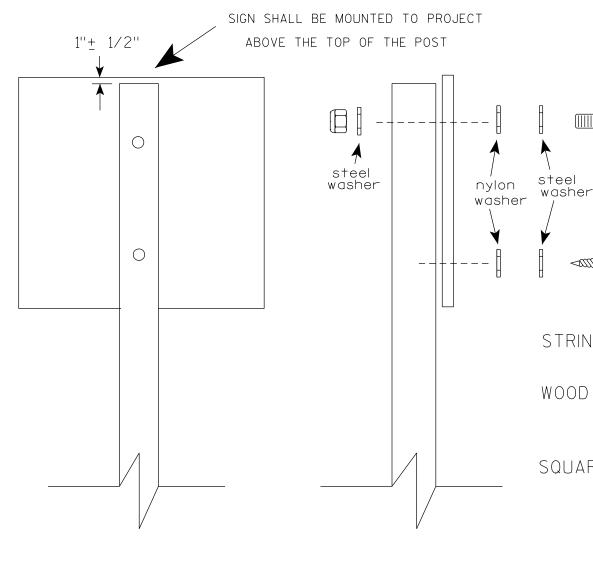
PROJECT NO:

COUNTY:

PLOT DATE: 6-DEC 2023 11:31

PLOT NAME :

PLOT BY : mscj9h



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either:

- a. Hot dip galvanized in accordance with ASTM Designation: A 153. Class D. or SC 3
- b. Electro-galvanized in accordance with ASTM Designation: B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts

WOOD POSTS $(4'' \times 6'')$

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN) 3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN) 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 1/32 " (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 Matther

≠or State Traffic Engineer

SHEET NO:

DATE 4/1/2020

PLATE NO. <u>A4-8.9</u>

PLOT DATE: 01-APRIL-2020

PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN

PROJECT NO:



PROJECT NO: HWY: COUNTY: SHEET NO: FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE: 05-FEB-2015 17:09 PLOT BY: mscsja PLOT NAME : PLOT SCALE: 13.659812:1.000000

DATE 2/05/15

PLATE NO. <u>A4-9.9</u>

For State Traffic Engineer



BANDING



SINGLE SIGN





WASHER PLACEMENT



HWY:

WASHERS (ALL POSTS) -

1-1/4" O.D. X³/₈" I.D. X¹/₁₆" STEEL 1-1/4" O.D. $\times \frac{3}{8}$ " I.D. \times .080 NYLON FOR ALL TYPE H SIGNS

CHANNEL

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.
- 4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

DATE 6/10/19

PLATE NO. A5-9.4

Ε

State Traffic Engineer

COUNTY:

PLOT NAME :

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42

PROJECT NO:

VIEW FROM TOP

GENERAL NOTES

- 1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
- 2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
- 3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS.

 SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
- 4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY 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 $1^{1}/_{4}$ " O.D. X $3/_{8}$ " I.D. X $1/_{16}$ "
- 8. NYLON WASHERS SHALL BE $1^{1}/_{4}$ " O.D. X $3/_{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

 \rightarrow LAG BOLTS SHALL BE $\frac{3}{8}$ " X $\frac{2}{2}$ "

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

Manher R

APPROVED

DATE 4/19/2022 PLATE NO. A5-10.3

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A510.dgn

PROJECT NO:

PLOT DATE: 19-APRIL 2022 11:55

SIGN

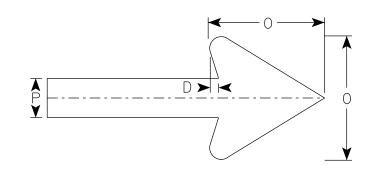
PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

Ε

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

- 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. M4-9AL is the same as M4-9AR except the arrow is reversed.



Arrow Detail

			1			ı						1	1														1 4500
SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	V	W	Х	Y	Z	Area sq. ft.
1																											
25	30	24	1 1/2	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 1/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	6	3 3/4	2	2	1 1/8	11 3/4	7	6	2		7 1/8	1	6 1/2	2 1/2	4 3/8	3 1/4				5.00
3																											
4																											
5																											

COUNTY:

M4-9AR

STANDARD SIGN M4-9A L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew & Rauch

For State Traffic Engineer

DATE <u>2/9/2023</u> PLATE NO. <u>M4-9A.3</u>

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M49A.dgn

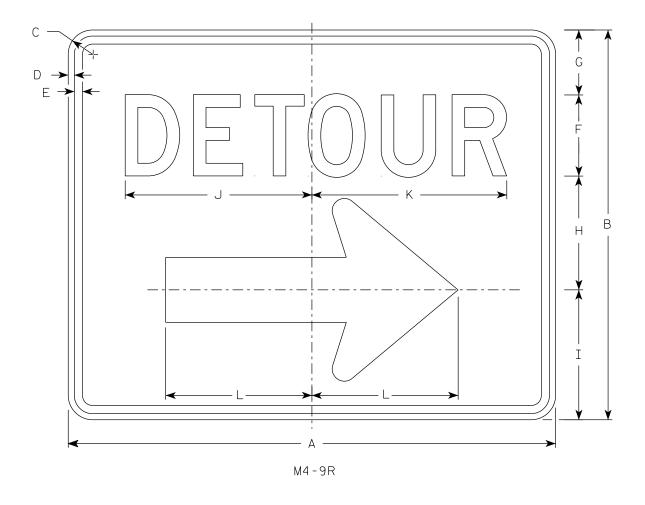
PROJECT NO:

HWY:

PLOT DATE: 9-FEB 2023 11:32

PLOT BY : dotc4c

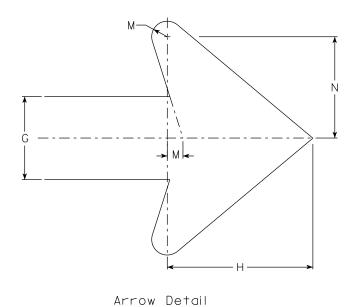
PLOT NAME :



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

Background - Orange 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.
- 4. M4-9L is the same as M4-9R except the arrow is reversed.



SIZE	А	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 1/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 1/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 1/8													5.00
4	48	36	1 1/8	1/2	5/8	8	6	10 1/2	11 5/8	20 %	20 1/2	13 1/4	1 1/8	6 %													12.0
5	48	36	1 1/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 1/8													12.0

COUNTY:

STANDARD SIGN M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthe

Forstate Traffic Engineer

8/2023 PLATE NO. M4-9R.6

DATE <u>2/9/2023</u>

SHEET NO:

Ε

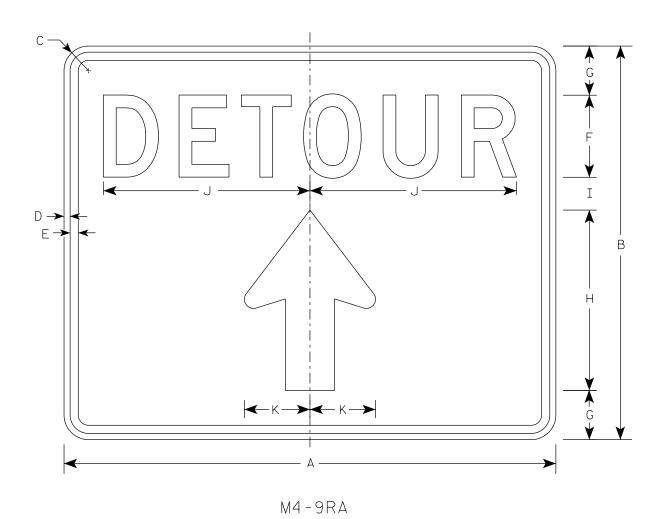
HWY:

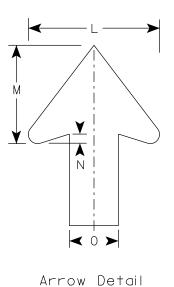
PROJECT NO:

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

Background - Orange Message - Black

3. Message Series - D





K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.
4	8	6	1/2	3												5.00

1 1/2 3/8 1/2 12 5/8 30 24 5 3 11 2 3/8 12 5/8 2M 30 1 1/2 1/2 5 3 2 4 6 1/2 3 5.00 24 11 8 4

COUNTY:

STANDARD SIGN M4-9RA

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

For State Traffic Engineer

SHEET NO:

DATE 2/9/2023 PLATE NO. M4-9RA.3

PROJECT NO:
FILE NAME: C:\CAEfiles\Projects\tr_stdplate\M49RA.dgn

HWY:

SIZE

PLOT DATE: 9-FEB 2023 4:19

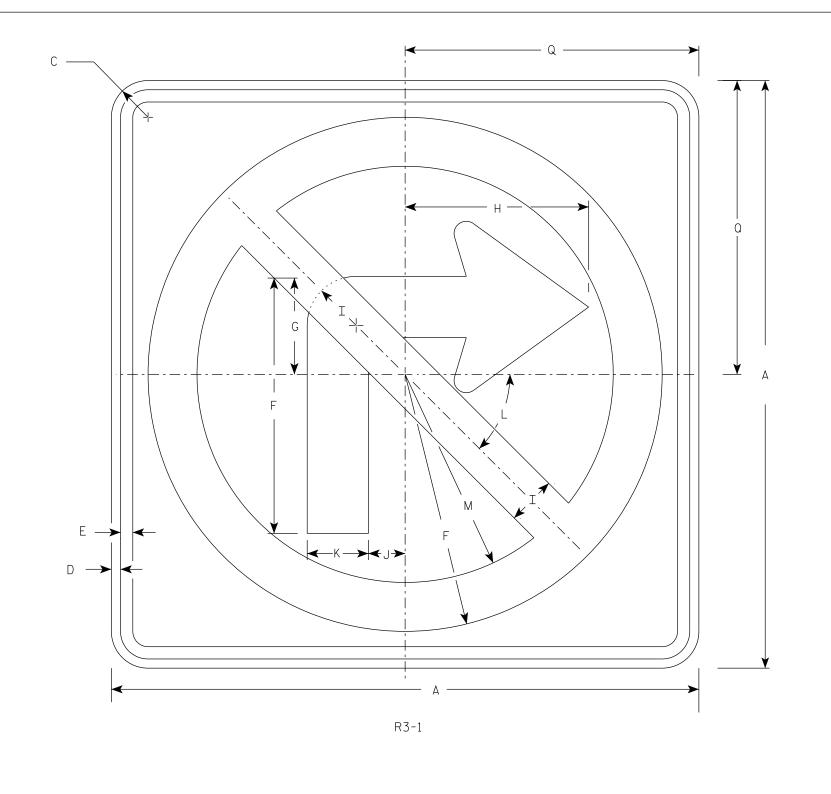
PLOT BY : dotc4c

PLOT NAME :

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42

1

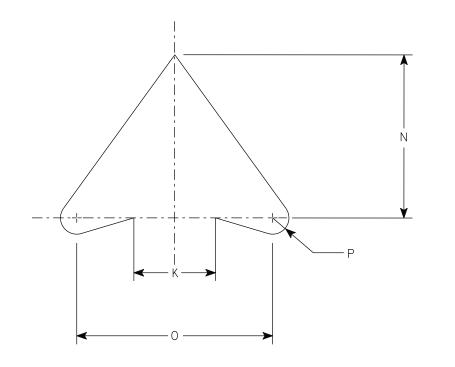
DAIL



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

Background - White Message - See note 3

3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M N	0	Р	Q	R	S	Т	U	٧	W	X	Υ	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2 5	6	1/2	12										4.0
25	24		1 1/2	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45 °	8 1/2 5	6	1/2	12										4.0
2M	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4 7 1/2	9	3/4	18										9.0
3	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4 7 1/2	9	3/4	18										9.0
4	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4 7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17 10	12	1	24										16.0

COUNTY:

STANDARD SIGN R3-1

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

PPROVED

Matthew R Laure

For State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-1.6

FILE NAME : C:\CAEfiles\Projects\tr-stdplate\R31.dgn

HWY:

PROJECT NO:

PLOT DATE: 9-JULY 2024 1:51

PLOT BY : mscj9h

PLOT NAME :

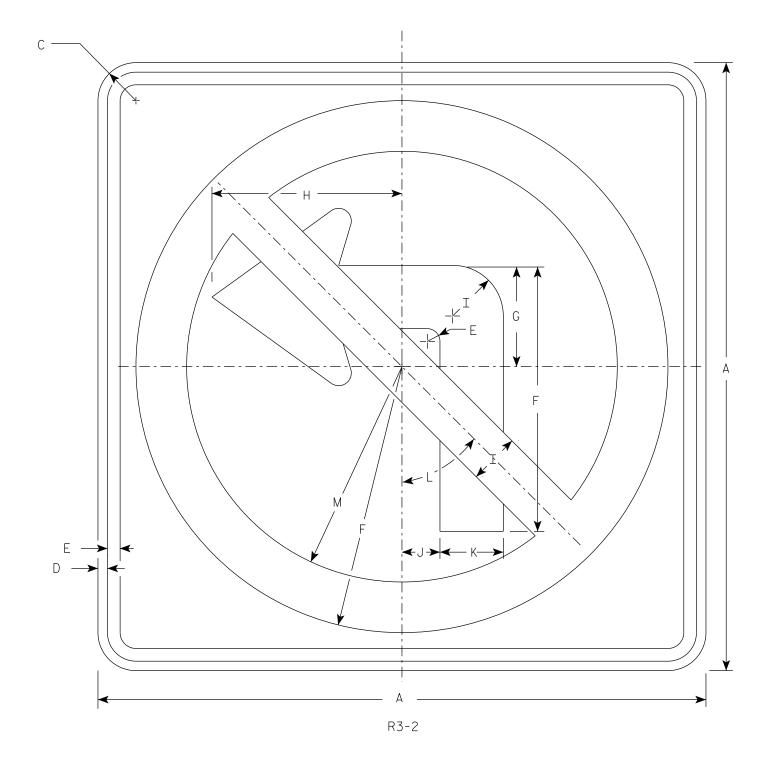


- 1. Sign is Type II Type H Reflective
- 2. Color:

Background - White

Message - See note 3

3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



N N N N

ARROW DETAIL

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
25	24		1 1/2	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		2 1/4	5/8	3/4	15 ¾	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		2 1/4	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

COUNTY:

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED Matthew & & Forstate Traffic Engineer

DATE <u>2/2/23</u>

PLATE NO. <u>R3-2.11</u>

Ε

FILE NAME : C::CAEfiles\Projects\tr_stdpldate\R32.dgn

PROJECT NO:

HWY:

PLOT DATE: 9-JULY 2024 2:11

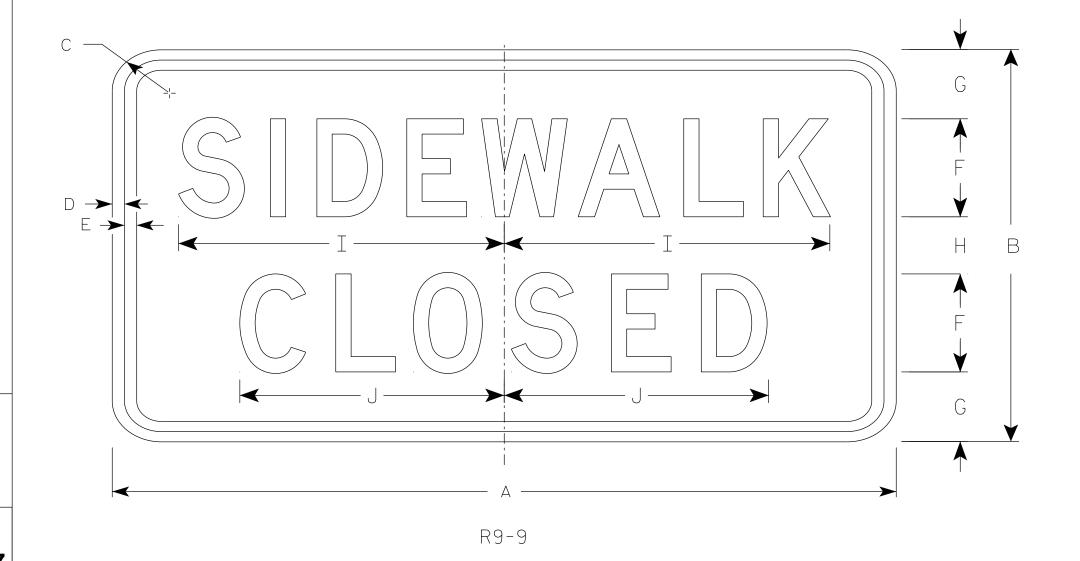
PLOT BY: mscj9h

PLOT NAME :

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

Background - White Message - Black

- 3. Message Series C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.



SIZE	А	В	С	D	E	F	G	Н	I	J	K	L	М	Ν	0	Р	Q	R	S	Т	U	V	W	X	Y	Z	Area sq. ft.
1																											
25	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 1/2	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

COUNTY:

STANDARD SIGN R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

SHEET NO:

DATE <u>1/24/24</u>

PLATE NO. <u>R9-9.7</u>

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R99.dgn

HWY:

PROJECT NO:

PLOT DATE: 24-JAN 2024 11:55

PLOT BY: mscj9h

PLOT NAME :

PLOT SCALE: \$\$.....plotscale.....\$\$WISDOT/CADDS SHEET 42

1

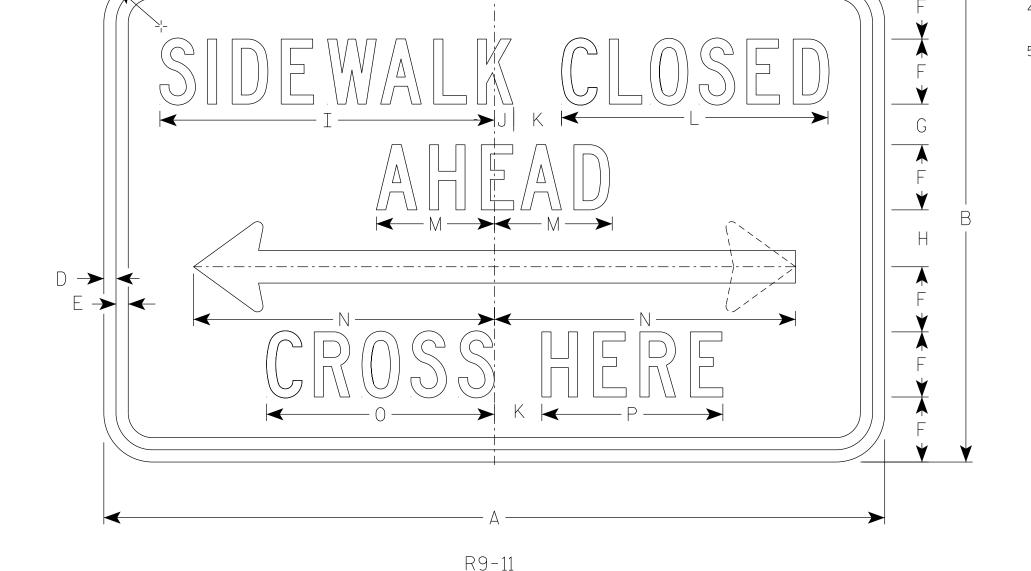
- 1. Sign is Type II Type H Reflective
- 2. Color:

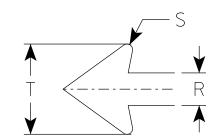
Background - White Message - Black

- 3. Message Series C except Size 1 is Series D
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.
- 5. R9-11 D (double arrow)

R9-11L (left arrow)

R9-11R (right arrow)





SIZE	А	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	Q	R	S	Т	U	V	W	X	Y	Z	Area sq. ft.
1																											
25	24	12	1 1/2	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2M	24	12	1 1/2	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
3	30	15	1 1/2	3/8	1/2	2	1 1/2	1 1/2	13	3/4	2	10 1/4	4 5/8	12 3/8	8 1/8	6 1/8		1 1/4	1/4	3 %							3.125
4																											

COUNTY:

STANDARD SIGN R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

SHEET NO:

DATE 1/24/24

PLATE NO. <u>R9-11.5</u>

Ε

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R911.dgn

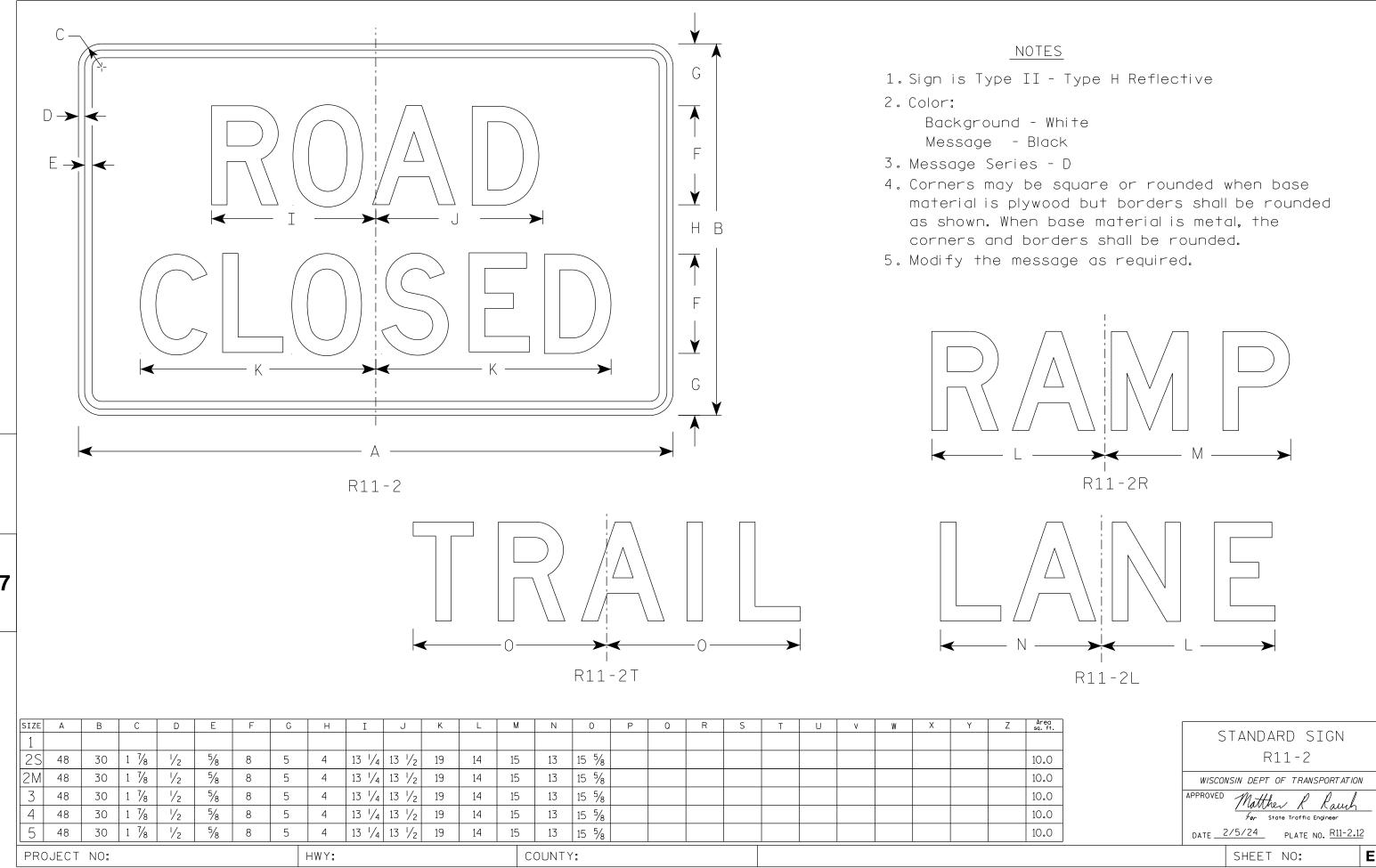
HWY:

PROJECT NO:

PLOT DATE: 24-JAN 2024 12:18

PLOT BY: mscj9h

PLOT NAME :



FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn

PLOT DATE: 5-FEB 2024 2:10

PLOT BY: mscj9h

PLOT NAME :

- 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.

C —		
	G F H B F G G	
R	l1-2B	

SIZE	А	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	Q	R	S	Т	U	V	W	X	Y	Z	Area sq. ft.
1																											
25	48	30	1 1/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 1/8																10.0
2M	48	30	1 1/8	1/2	5/8	8	5	4	19 ¾	9 3/4	9 1/8																10.0
3	48	30	1 1/8	1/2	5/8	8	5	4	19 ¾	9 3/4	9 1/8																10.0
4	48	30	1 1/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 1/8																10.0
5	48	30	1 1/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 1/8																10.0

STANDARD SIGN R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

SHEET NO:

DATE 2/5/24 PLATE NO. R11-2B.3

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R112B.dgn

PROJECT NO:

PLOT DATE : 5-FEB 2024 2:20

PLOT BY : mscj9h

WISDOT/CADDS SHEET 42



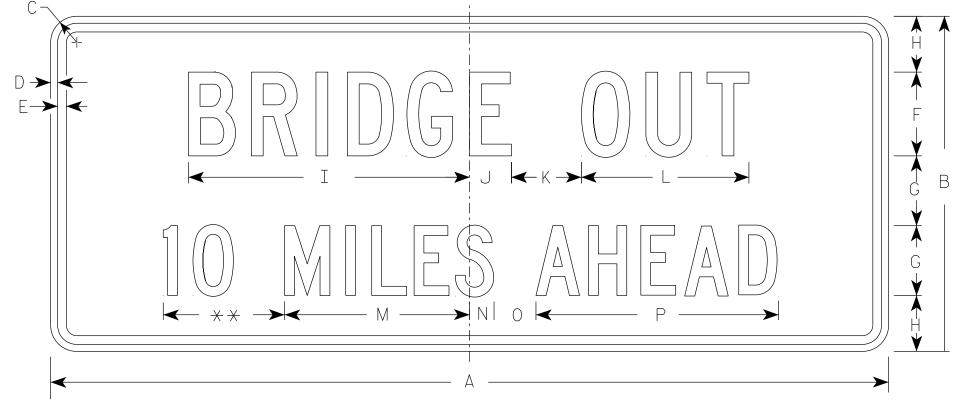
- 1. Sign is Type II Type H Reflective
- 2. Color:

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.
- 5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

** See Note 5

SIZE Α В D Q R U 36 15 1 1/2 1/25/8 2 1/2 13 1/4 2 1/4 3 1 1/2 2 10 3/4 7 1/8 3.75 1 1/8 5/8 13 1/4 1 3/4 $17 \frac{3}{8}$ 11 1/8 10.0 60 24 1/2 5 20 1/8 3 5 12 2M 1 1/8 5/8 60 24 13 1/4 1 3/4 $17 \frac{3}{8}$ 1/2 20 1/8 3 5 12 $11 \frac{7}{8}$ 10.0 3 4

STANDARD SIGN R11-3C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther & Lauch
For State Traffic Engineer

DATE <u>2/5/24</u>

PLATE NO. R11-3C.4

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R113C.dgn

PROJECT NO:

PLOT DATE : 5-FEB 2024 2:52

PLOT BY: mscj9h

WISDOT/CADDS SHEET 42

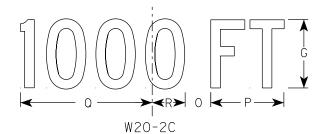
Ε

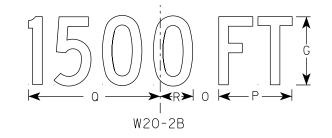


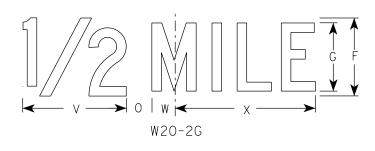
- 1. Sign is Type II Type F Reflective
- 2. Color:

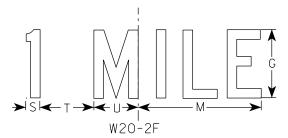
- 3. Message Series See note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Line 1 is Series D.
 Line 2 is Series D for AHEAD and
 Series C for all other distances.

S N O P
W20-2D









SIZE	А	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.
	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 1/8	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
25	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 1/8	2 5/8	7 1/2	13 ½	3 3/8	1 1/2	6	4 5/8	10	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 ¾	20	15 1/2	12	1 1/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 1/8	2 5/8	7 1/2	13 ½	3 3/8	1 1/2	6	4 5/8	10	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 1/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 1/8	2 5/8	7 1/2	13 ½	3 3/8	1 1/2	6	4 5/8	10	2 3/8	14 3/8			16.0

COUNTY:

STANDARD SIGN W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R

DATE 1/10/2024 PLATE NO. W20-2.7

SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN

PROJECT NO:

PLOT DATE: 10-JAN 2024 11:36

PLOT BY : dotc4c

PLOT NAME :

PLOT SCALE: \$\$.....plo†scale.....\$\$WISDOT/CADDS SHEET 42

W20-2A

HWY:



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

- 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.

1
W20-3D
$\begin{array}{c c} \hline & & & \\ \hline $
W20-3B
W20-3G

W20-3A

HWY:

SIZE	А	В	С	D	Е	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	Х	Y Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 1/8	12 1/2	11	9	6	10 1/8	2 1/2	1 1/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4 1 3/4	9.0
25	48		3	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 %	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 %	1 1/8	6	4 5/8	14 3/8 2 3/8	16.0
2M	48		3	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 %	12	8	13 1/2	3 3/8	2 %	7 1/2	10 %	1 1/8	6	4 5/8	14 3/8 2 3/8	16.0
3	48		3	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	12	8	13 1/2	3 3/8	2 %	7 1/2	10 %	1 1/8	6	4 5/8	14 3/8 2 3/8	16.0
4	48		3	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 %	12	8	13 1/2	3 3/8	2 %	7 1/2	10 %	1 1/8	6	4 5/8	14 3/8 2 3/8	16.0
5	48		3	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	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 1/8	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

For State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

SHEET NO:

HEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W203.DGN

PROJECT NO:

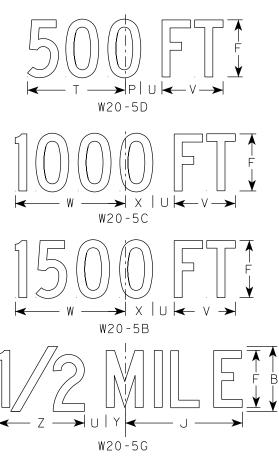
COUNTY: PLOT DATE: 10-JAN 2024 12:02

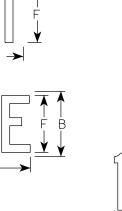
PLOT BY : dotc4c

PLOT NAME :

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

- 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.





→ Q ← R → ← S → ← T →
W20-5E

W20-5F

SIZE	А	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	٧	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	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 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
25	48	8	3	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 1/8	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	3	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 1/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10	16.0
3	48	8	3	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 1/8	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	3	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 1/8	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	3	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 1/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10	16.0

COUNTY:

W20-5A

HWY:

STANDARD SIGN W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

DATE 3/27/24 PLATE NO. <u>W20-5.12</u>

> Ε SHEET NO:

FILE NAME: C:\CAEfiles\Projects\tr_stdplate\W205.dgn

PROJECT NO:

W20-56A

W20-55A

PLOT DATE: 27-MAR 2024 4:01

PLOT BY: mscj9h

PLOT NAME :

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

- 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 symbolis reversed along the vertical centerline.

	D E
A	F F
Α, \\\	F I J G
	C C

W04-2R

SIZE	Α	В	С	D	E	F	G	Н	I	J	K	L	М	Ν	0	Р	Q	R	S	Т	U	V	W	X	Υ	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
25	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	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

 $\frac{f_{or}}{f_{or}}$ State Traffic Engineer

DATE 1/25/2024 PLATE NO. WO4-2.2

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W042.dgn

PROJECT NO:

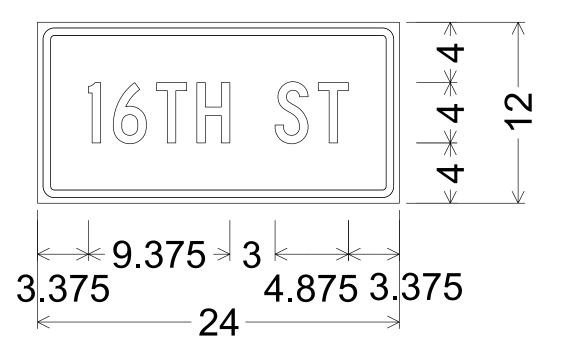
PLOT DATE: 25-JAN 2024 9:07

PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

- 1. Fixed Message sign is Type II Type F Reflective
- 2. Color:

3. Message Series - C



1.125" Radius, 0.500" Border, 0.375" Indent

PROJECT NO: 2615-15-73

HWY: 16TH ST

COUNTY: MILWAUKEE

TEMPORARY SIGNING

PLOT NAME :

PLOT SCALE: \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 42

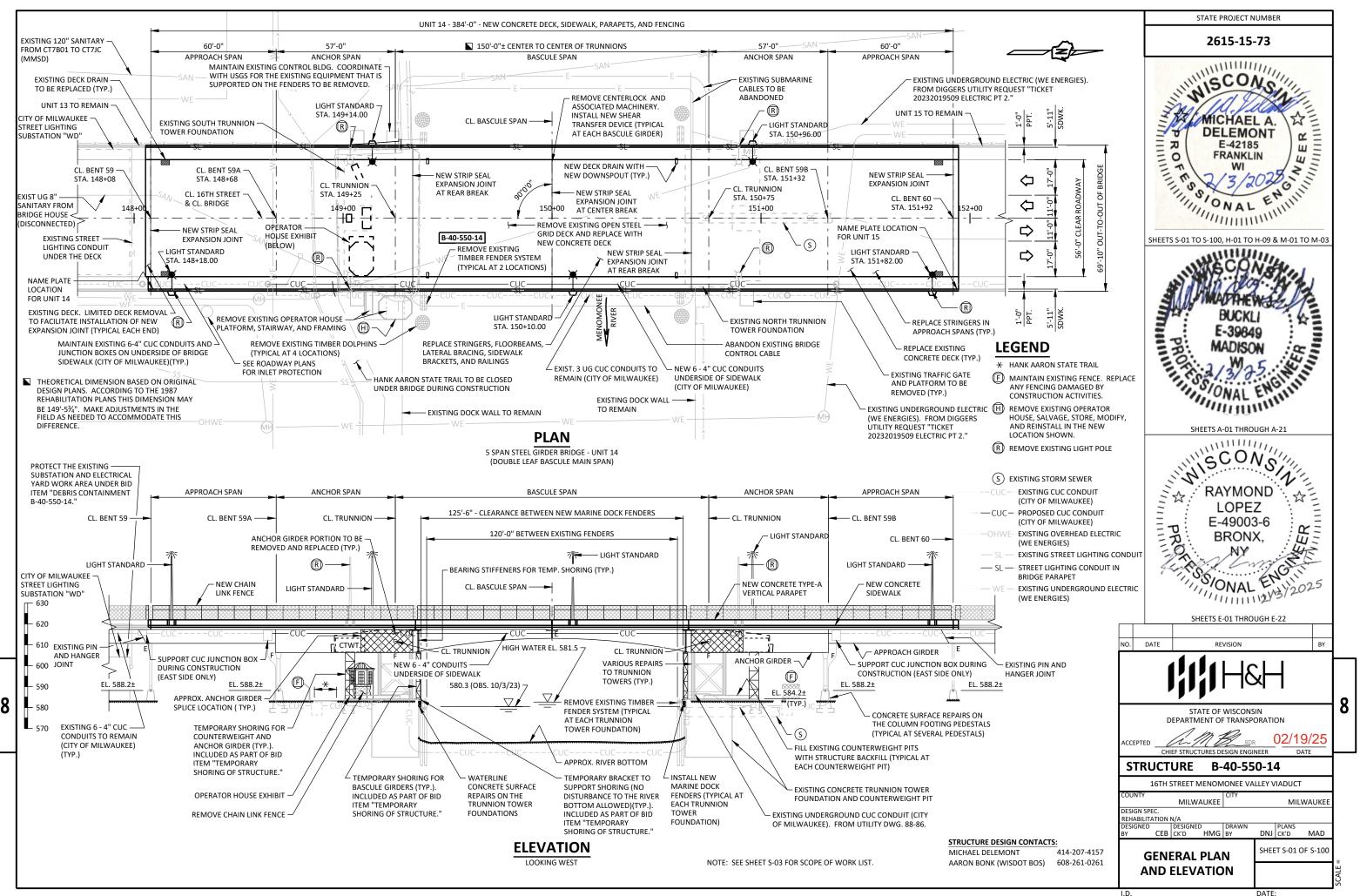
SHEET NO:

FILE NAME : C:\CAEfiles\Projects\tr_d2_2307ao24.DGN

PLOT DATE: 26-NOV 2024 2:38

PLOT BY: mscj9h

.



MICHAEL A.

DELEMONT
E-42185
FRANKLIN
WI
ONAL
EMILITATION

SHEETS S-01 TO S-100, H-01 TO H-09 & M-01 TO M-03

S-58 SOUTH TRUNNION TOWER STEEL REPAIR - SECTION 1

S-59 SOUTH TRUNNION TOWER STEEL REPAIR - SECTION 2

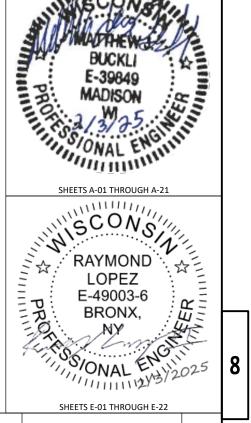
LIST	Γ OF DRAWINGS		
S-01	GENERAL PLAN AND ELEVATION	S-60	SOUTH TRUNNION TOWER STEEL REPAIR - SECTION 3
S-02	LIST OF DRAWINGS	S-61	SOUTH TRUNNION TOWER CONCRETE REPAIR PLAN
S-03	GENERAL NOTES AND PROFILE	S-62	SOUTH TRUNNION TOWER CHANNEL SIDE CONCRETE REPAIRS
S-04	TOTAL ESTIMATED QUANTITITES	S-63	SOUTH EAST PIT CONCRETE REPAIRS
S-05	TYPICAL SECTION AT BASCULE SPAN	S-64	SOUTH WEST PIT CONCRETE REPAIRS
S-06	TYPICAL SECTION AT TRUNNION TOWER	S-65	SOUTH CONCRETE ENCASEMENT WALL DETAILS (1 OF 4)
S-07	TYPICAL SECTION AT ANCHOR SPAN	S-66	SOUTH CONCRETE ENCASEMENT WALL DETAILS (2 OF 4)
S-08	TYPICAL SECTION AT BENT 59B	S-67	SOUTH CONCRETE ENCASEMENT WALL DETAILS (3 OF 4)
S-09	FRAMING PLAN	S-68	SOUTH CONCRETE ENCASEMENT WALL DETAILS (4 OF 4)
S-10	ANCHOR GIRDER REPAIR DETAILS I	S-69	NORTH MACHINERY LEVEL REMOVAL PLAN
S-11	ANCHOR GIRDER REPAIR DETAILS II	S-70	NORTH TRUNNION TOWER STEEL REPAIR - FRONT
S-12	STEEL DETAILS ANCHOR SPAN I	S-71	NORTH TRUNNION TOWER STEEL REPAIR - REAR
S-13	STEEL DETAILS ANCHOR SPAN II	S-72	NORTH TRUNNION TOWER STEEL REPAIR - SECTION 1
S-14	LOADING GIRDER DETAILS I	S-73	NORTH TRUNNION TOWER STEEL REPAIR - SECTION 2
S-15	LOADING GIRDER DETAILS II	S-74	NORTH TRUNNION TOWER STEEL REPAIR - SECTION 3
S-16	ANCHOR SPAN END FLOORBEAM DETAILS	S-75	NORTH TRUNNION TOWER CONCRETE REPAIR PLAN
S-17	MISCELLANEOUS ANCHOR SPAN STEEL DETAILS	S-76	NORTH TRUNNION TOWER CHANNEL SIDE CONCRETE REPAIRS
S-18	BASCULE GIRDER REPAIR DETAILS I	S-77	NORTH TRUNNION TOWER SECTION VIEWS
S-19	BASCULE GIRDER REPAIR DETAILS II	S-78	NORTH EAST PIT CONCRETE REPAIRS
S-20	CENTER SHEAR TRANSFER DEVICE	S-79	NORTH WEST PIT CONCRETE REPAIRS
S-21	CENTER SHEAR TRANSFER DEVICE DETAILS	S-80	NORTH CONCRETE ENCASEMENT WALL DETAILS (1 OF 4)
S-22	SOUTH COUNTERWEIGHT MODIFICATIONS	S-81	NORTH CONCRETE ENCASEMENT WALL DETAILS (2 OF 4)
S-23	NORTH COUNTERWEIGHT MODIFICATIONS	S-82	NORTH CONCRETE ENCASEMENT WALL DETAILS (3 OF 4)
S-24	FLOORBEAM 1 DETAILS	S-83	NORTH CONCRETE ENCASEMENT WALL DETAILS (4 OF 4)
S-25	FLOORBEAM 2 DETAILS	S-84	TRUNNION TOWER STEEL REPAIR DETAILS 1
S-26	FLOORBEAM 3 DETAILS	S-85	TRUNNION TOWER STEEL REPAIR DETAILS 2
S-27	FLOORBEAM 4 DETAILS	S-86	TRUNNION TOWER STEEL REPAIR DETAILS 3
S-28	FLOORBEAM 5 DETAILS	S-87	TRUNNION TOWER STEEL REPAIR DETAILS 4
S-29	FLOORBEAM 6 DETAILS	S-88	MEMBER D30 REPLACEMENT DETAILS
S-30	FLOORBEAM 7 DETAILS	S-89	MEMBER A24, B24 & C24 REPLACEMENT DETAILS
S-31	LATERAL BRACING BASCULE SPAN	S-90	MEMBER J22 & H22A REPLACEMENT DETAILS
S-32	LATERAL BRACING BASCULE SPAN DETAILS	S-91	MEMBER C4, E4, D4 & G4 REPLACEMENT DETAILS
S-33	STEEL DETAILS BASCULE SPAN	S-92	MEMBER C2 AND C3 REPAIR DETAILS
S-34	ROADWAY STRINGERS BASCULE SPAN	S-93	BENT 59A STEEL REPAIRS
S-35	INTERIOR SIDEWALK STRINGERS BASCULE SPAN	S-94	BENT 59A CONCRETE REPAIRS
S-36	EXTERIOR SIDEWALK STRINGERS BASCULE SPAN	S-95	BENT 59B STEEL REPAIRS
S-37	DECK PLAN SOUTH	S-96	BENT 59B CONCRETE REPAIRS
S-38	DECK PLAN NORTH	S-97	BENT 59A & 59B DETAILS
S-39	DECK SECTION AT BASCULE SPAN AND DECK ELEVATIONS	S-98	BENT 59A REPAIR DETAILS
S-40	BASCULE SPAN DECK DETAILS	S-99	BENT 59B REPAIR DETAILS
S-41	DECK SECTION AT ANCHOR SPAN	S-100	TEMPORARY SHORING PLAN
S-42	ANCHOR SPAN DECK ELEVATIONS		
S-43	STRIP SEAL EXPANSION JOINT (1 OF 3)	A-01	TYPICAL SECTION THROUGH APPROACH SPANS
S-44	STRIP SEAL EXPANSION JOINT (2 OF 3)	A-02	APPROACH SPAN FRAMING PLANS
S-45	STRIP SEAL EXPANSION JOINT (3 OF 3)	A-03	END FLOORBEAM REPAIR DETAILS
S-46	STRIP SEAL EXPANSION JOINT DETAILS	A-04	ROADWAY STRINGER DETAILS
S-47	COVER PLATE DETAILS	A-05	SIDEWALK STRINGER DETAILS
S-48	DECK BILL OF BARS	A-06	BEARING DETAILS
S-49	BASCULE SPAN DRAINAGE PLAN	A-07	BEARING DETAILS CONTINUED
S-50	FLOOR DRAIN TYPE 'H'	A-08	APPROACH SPAN DECK PLANS
S-51	PARAPET "A" AT LIGHT STANDARD	A-09	DECK SECTION
S-52	PARAPET "A" AT JUNCTION BOX	A-10	DECK ELEVATIONS
S-53	CONDUIT DETAILS		STRIP SEAL EXPANSION JOINT
S-54	FENCING DETAILS		EXPANSION DEVICE
S-55	SOUTH MACHINERY LEVEL REMOVAL PLAN	A-13	FLOOR DRAIN TYPE 'H' MODIFIED
S-56	SOUTH TRUNNION TOWER STEEL REPAIR - FRONT	A-14	
S-57	SOUTH TRUNNION TOWER STEEL REPAIR - REAR	A-15	END BENT ELEVATIONS
CEO	COLITH TRUINING NI TOWER STEEL BERAID SECTION 1	۸ 1 6	DOTTOM CTRLIT DEDI ACEMENT DETAILS

A-16 BOTTOM STRUT REPLACEMENT DETAILS

A-17 BENT 59 PEDESTAL REPAIRS

A-19	UNDER DECK CONDUIT SUPPORT
A-20	JUNCTION BOX SUPPORT DETAIL
A-21	MARINE DOCK FENDER
H-01	INTERPRETIVE EXHIBIT PLAN
H-02	OPERATOR HOUSE RELOCATION CONCEPT
H-03	EXISTING OPERATOR HOUSE DETAILS
H-04	OPERATOR HOUSE FRAMING DETAILS
H-05	OPERATOR HOUSE REPAIR DETAILS
H-06	OPERATOR HOUSE EXHIBIT FOUNDATION
H-07	INTERPRETIVE SIGN
H-08	RACK EXHIBIT
H-09	PINION EXHIBIT
M-01	MACHINERY REMOVAL PLAN
M-02	TRUNNION REPAIR
M-03	TRUNNION REPAIR DETAILS
E-01	ELECTRICAL NOTES
E-02	ELECTRICAL REMOVAL
E-03	ELECTRICAL REMOVAL PLAN 1
E-04	ELECTRICAL REMOVAL PLAN 2
E-05	ELECTRICAL REMOVAL PLAN 3
E-06	ELECTRICAL REMOVAL PLAN 4
E-07	ELECTRICAL REMOVAL PLAN 5
E-08	ELECTRICAL REMOVAL PLAN 6
E-09	ELECTRICAL REMOVAL PLAN 7
E-10	CITY UNDERGROUND CONDUIT (CUC) BRIDGE INSTALLATION
E-11	CITY UNDERGROUND CONDUIT (CUC) BRIDGE MOUNTING DETAILS 1
E-12	CITY UNDERGROUND CONDUIT (CUC) BRIDGE MOUNTING DETAILS 2
E-13	STREET LIGHTING PLAN
E-14	STREET LIGHTING GENERAL NOTES 1
E-15	STREET LIGHTING GENERAL NOTES 2
E-16	STREET LIGHTING GUIDELINES
E-17	STREET LIGHTING DESCRIPTION
E-18	STREET LIGHTING DETAILS 1
E-19	STREET LIGHTING DETAILS 2
E-20	STREET LIGHTING DETAILS 3
	STREET LIGHTING DETAILS 4
E-21	

A-18 BENT 60 PEDESTAL REPAIRS A-19 UNDER DECK CONDUIT SUPPORT



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** BY DNJ/DSD CK'D MAD SHEET S-02 OF S-100 LIST OF DRAWINGS

8

- CONVERSION OF THE MOVABLE BASCULE SPAN TO A FIXED DECK SYSTEM INCLUDING REMOVAL OF THE OPEN STEEL GRID DECK AND REPLACING WITH A NEW CONCRETE DECK (UTILIZING LIGHTWEIGHT CONCRETE)
- NEW STRIP SEAL EXPANSION JOINTS
- REPLACEMENT OF INDICATED STEEL MEMBERS
- MISCELLANEOUS STEEL REPAIRS
- CONCRETE SURFACE REPAIRS
- REMOVAL OF MACHINERY AND ACCESS WALKWAYS
- REMOVAL OF THE EXISTING FENDER SYSTEM
- INSTALLATION OF A NEW MARINE DOCK FENDER SYSTEM
- CLEANING AND PAINTING OF ALL NEW AND EXISTING STEEL
- REPAIR AND RELOCATION OF THE OPERATOR'S HOUSE AS AN EXHIBIT
- NEW SIGN AND RELOCATION OF GEAR SETS AS PART OF INTERPRETIVE EXHIBIT
- NEW DECK DRAINS
- TRUNNION REHABILITATION
- REMOVAL OF MOVABLE BRIDGE ELECTRICAL SYSTEM
- NEW STREET LIGHTING ON DECK
- NEW CUC CONDUIT SYSTEM

GENERAL NOTES

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

ELEVATIONS SHOWN ARE BASED ON NAVD88 (2012) DATUM. ELEVATIONS TAKEN FROM EXISTING PLANS WERE CONVERTED FROM MILWAUKEE CITY DATUM BY ADDING 580.2±. CONVERTED ELEVATIONS ARE APPROXIMATE AND NOTED AS +

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

LITHIZE EXISTING REINFORCEMENT WHERE SHOWN. CLEAN STRAIGHTEN AND EXTEND. EXISTING BAR STEEL REINFORCEMENT 24 BAR DIAMETERS INTO NEW CONSTRUCTION

ALL CONCRETE REMOVAL AREAS SHALL BE DEFINED BY A 1-INCH DEEP SAWCUT, UNLESS SPECIFIED OTHERWISE

GENERAL NOTES (CONTINUED)

VARIATIONS TO THE NEW PROFILE GRADE LINE OVER 1/4-INCH MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW

CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE EXISTING STEEL FRAMING THAT IS TO REMAIN. IF EXISTING MEMBERS TO REMAIN ARE DAMAGED DURING REMOVAL OR CONSTRUCTION OPERATIONS, REPLACE THE DAMAGED MEMBER IN KIND AT NO COST. IF EXISTING CORROSION OR A DEFECT IS DETERMINED BY THE ENGINEER TO REQUIRE REPAIR OR REPLACEMENT OF THAT EXISTING MEMBER. THAT WORK WILL BE PAID AS "STRUCTURAL STEEL REPAIR"

WHERE EXISTING MEMBERS OR PORTIONS OF MEMBERS TO BE REMOVED ARE WELDED TO MEMBERS TO REMAIN, CAREFULLY GRIND EXISTING WELDS TO BE REMOVED AND AVOID DAMAGE TO EXISTING MEMBERS TO REMAIN. GRIND ALL ROUGH EDGES SMOOTH. DO NOT PLASMA CUT OR TORCH ON OR NEAR EXISTING STEEL TO REMAIN. DO NOT REMOVE ANY PORTION OF EXISTING MEMBERS TO REMAIN UNLESS EXPLICITLY SHOWN ON THE

ENSURE THAT GIRDER FLANGE PLATES, GIRDER WEB PLATES, FLANGE SPLICE PLATES, FLOOR BEAMS, STRINGERS, ROLLED BEAMS, FLANGE COVER PLATES, AND PLATES AND ANGLES CONNECTING FLOOR BEAMS TO GIRDERS CONFORM TO ZONE 2 TOUGHNESS REQUIREMENTS FOR LONGITUDINAL CHARPY V-NOTCH TESTS SPECIFIED IN ASTM A709

PERFORM METALLURGICAL TESTING OF THE EXISTING STEEL IN ORDER TO DEVELOP PROPER WELD PROCEDURES FOR ANY WELDING TO EXISTING STEEL

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

ANY EXCAVATION NECESSARY TO COMPLETE THE CONCRETE SURFACE REPAIRS AT THE TRUNNION TOWER FOUNDATIONS OR PIER FOUNDATION PEDESTALS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE SURFACE REPAIR"

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE INSIDE AND TOP FACES OF THE PARAPETS, SIDEWALK, CURB, ENTIRE EXPOSED TOP OF DECK.

ALL NEW STEEL TO BE PAINTED UNDER BID ITEM "PAINTING EPOXY SYSTEM B-40-550-14."

ALL EXISTING STEEL TO BE CLEANED AND PAINTED UNDER BID ITEMS "PREPARATION AND COATING OF TOP FLANGES B-40-550-14," "STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-550-14," AND "NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-550-14."

THE COLOR OF THE FINISH EPOXY PAINT SYSTEM TOP COAT SHALL BE BLUE (AMS STANDARD COLOR NO. 25240) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

GENERAL NOTES (CONTINUED)

ALL SHOP AND FIELD CONNECTIONS SHALL BE MADE WITH $\frac{7}{8}$ " DIAMETER A325 HIGH STRENGTH BOLTS UNLESS OTHERWISE SHOWN OR NOTED.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1929.

DETAILS SHOWN FOR TEMPORARY SHORING OF THE SUPERSTRUCTURE ARE CONCEPTUAL ONLY. FINAL DESIGN AND DETAILS ARE TO BE PROVIDED BY THE CONTRACTOR PER THE SPECIAL PROVISIONS. ADDITIONAL SUPPORT POINTS MAY BE REQUIRED

SHORING OF THE BASCULE LEAVES IS TO ALLOW FOR WORK ON THE TRUNNIONS WITH THEM UNLOADED AND TO PROVIDE A SUPPORTING SYSTEM WHILE THE LEAVES ARE IN AN LINBALANCED STATE DUE TO REMOVAL OF COMPONENTS BEING REPLACED

BASCULE GIRDERS ARE CURRENTLY IN A SLIGHTLY OPEN POSITION. AFTER TRUNNION REHABILITATION WORK, THE BASCULE GIRDERS ARE TO BE SET SO THE TOP FLANGES ARE LEVEL AFTER DEAD LOAD DEFLECTION.

THE REMOVALS INCLUDED IN THE BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-40-550-14" ARE THE CONCRETE DECK, DECK DRAINS, LIGHT POLES. CENTER AND REAR BREAKS, STEEL GRID DECK, PURLINS, STRINGERS, SIDEWALK BRACKETS FLOORBEAMS, LATERAL BRACING, PORTION OF ANCHOR GIRDERS TO BE REPLACED, LOADING GIRDERS; ACCESS PLATFORMS AND ASSOCIATED FRAMING, STAIRWAYS AND HATCHES; SUBSTRUCTURE STEEL MEMBERS TO BE REPLACED, CONCRETE REMOVAL FOR BENT REPAIRS, HANDRAIL, CHAIN LINK FENCE, AND CONCRETE REMOVAL AT THE COUNTERWEIGHT PITS

THE COST OF FIELD DISCOVERED STEEL REPAIRS IS INCLUDED IN THE BID ITEM "STRUCTURAL STEEL REPAIR" AND IS QUANTIFIED AS 1% OF THE TOTAL NEW REPAIR STEEL.

EXERCISE CARE WHILE REMOVING EXISTING RIVETS AND INSTALLING NEW BOLTS NOT TO DAMAGE THE EXISTING STEEL AND RIVET HOLES. REPLACE ANY DAMAGE CAUSED AT NO ADDITIONAL COST TO THE DEPARTMENT

WE ENERGIES - ELECTRIC HAS A MENOMONEE RIVER CROSSING EAST OF BRIDGE.

WE ENERGIES - ELECTRIC HAS A MENOMONEE RIVER CROSSING DIAGONALLY UNDER THE

DESIGN DATA

2615-15-73

STATE PROJECT NUMBER

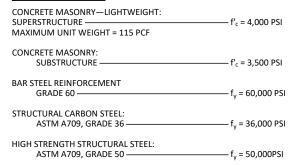
LIVE LOAD:

DESIGN LOADING: HS-20 INVENTORY RATING: HS-18 OPERATING RATING:

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 217 (KIPS)

NEW COMPONENTS ON THE STRUCTURE ARE DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT. THE BRIDGE LOAD RATING DOES NOT INCLUDE THE FUTURE WEARING SURFACE.

MATERIAL PROPERTIES:



HYDRAULIC DATA

100-YEAR FREQUENCY:

Q₁₀₀= 16,300 C.F.S. (SEWRPC) V₁₀₀= 7.57 F.P.S. (SEWRPC) HW₁₀₀= EL. 581.5 (NAVD88) WATERWAY AREA = 2,154 SQ. FT. DRAINAGE AREA = 133.8 SQ. MI. ROADWAY OVERTOPPING = N/A

SCOUR CRITICAL CODE = 8 10-YEAR FREQUENCY:

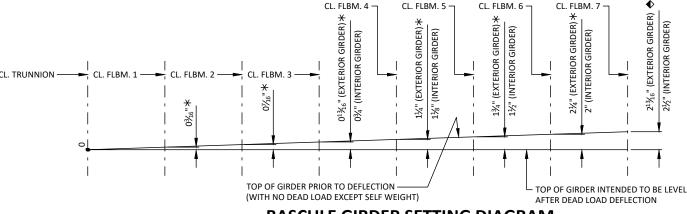
Q₁₀= 9,420 C.F.S 4 68 F P S

TRAFFIC DATA

16TH STREET

12,800 (2025) 15,500 (2046) 35 MPH

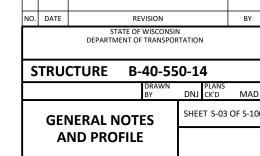
V10= HW10= EL. 580.4 (NAVD88)

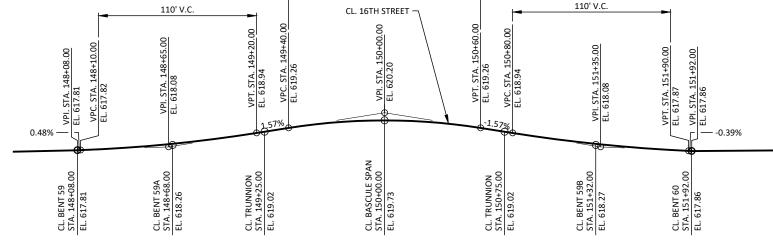


BASCULE GIRDER SETTING DIAGRAM

SOUTH LEAF SHOWN, NORTH LEAF OPPOSITE HAND

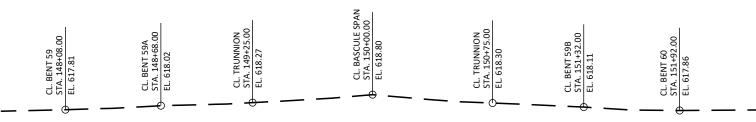
- ◆ DEAD LOAD DEFLECTION VALUE USED TO SET GIRDERS AFTER TRUNNION REHABILITATION
- * EXPECTED DEAD LOAD DEFLECTION (NOT INCLUDING SELF WEIGHT OF BASCULE GIRDER)





120' V.C.

PROFILE GRADE LINE FOR 16TH STREET



EXISTING PROFILE GRADE LINE FOR 16TH STREET

SHEET S-03 OF S-100

2615-15-73

TOTAL ESTIMATED QUANTITIES

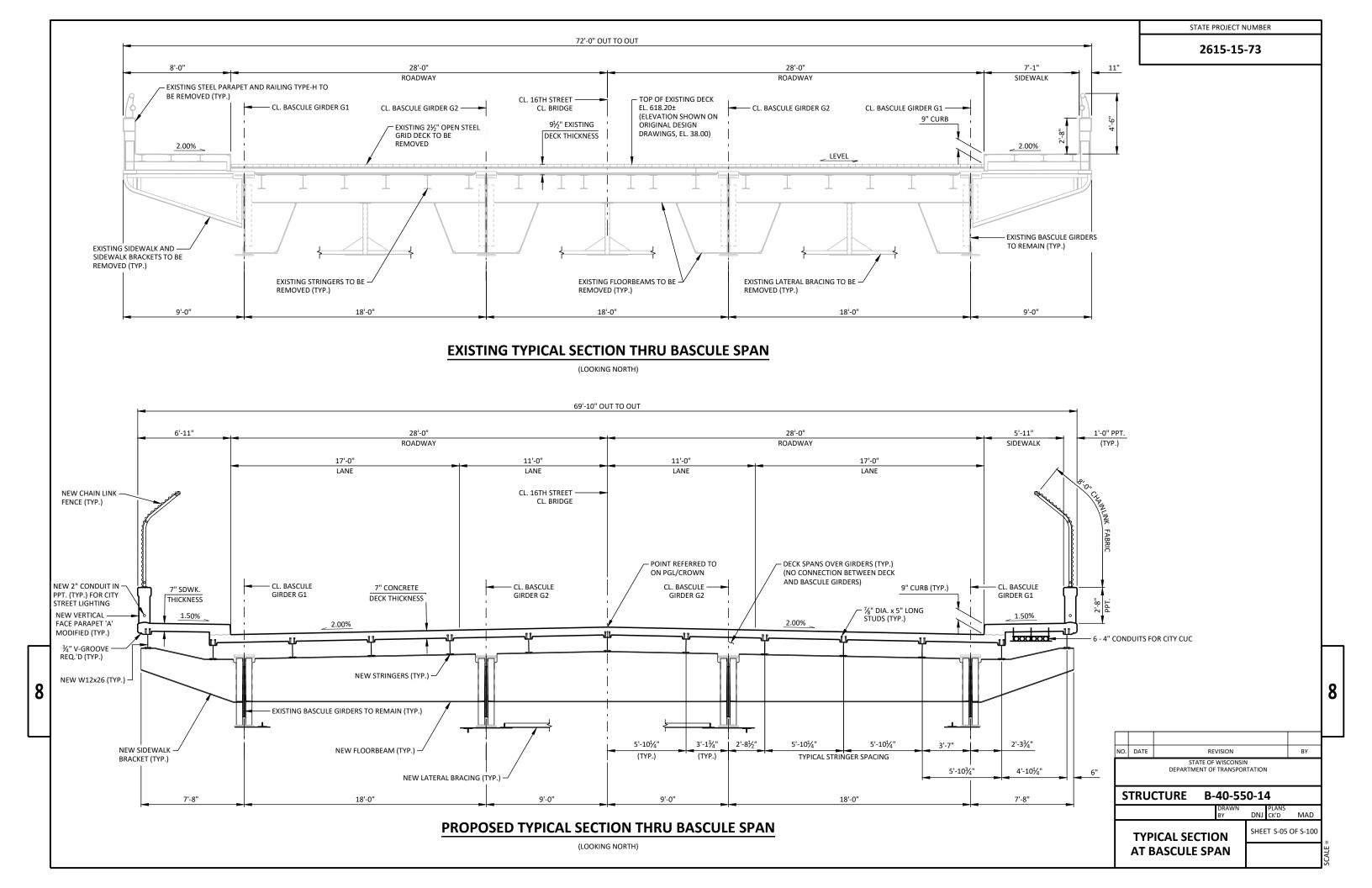
BID ITEM NUMBER	BID ITEM	UNIT	BENT 59	SOUTH APPROACH SPAN	BENT 59A	SOUTH ANCHOR SPAN	SOUTH TRUNNION TOWER	BASCULE SPAN	NORTH TRUNNION TOWER	NORTH ANCHOR SPAN	BENT 59B	NORTH APPROACH SPAN	BENT 60	TOTALS
203.0211.5	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-40-550-14	EACH												1
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-40-550-14	EACH											<u> </u>	1
203.0330 205.0506.S	DEBRIS CONTAINMENT B-40-550-14 EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL	TON					1		1				 	2
210.2500	STRUCTURE BACKFILL TYPE B	TON					136		324				 	460
502.0100	CONCRETE MASONRY BRIDGES	CY			0.2		72.9		72.9		0.2			146
502.3101	EXPANSION DEVICE	LF		68		70		70		70		68		346
502.3200	PROTECTIVE SURFACE TREATMENT	SY		537		467		1,214		467		538		3,223
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH					246		262				ļ!	508
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH		-	2		66		66		2			132
502.6500 505.0600	PROTECTIVE COATING CLEAR BAR STEEL REINFORCEMENT HS COATED STRUCTURES	GAL LB	2	28,310	2	46,560	4,090	74,250	4,040	46,560	2	28,370	2	8 232,180
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH		20,310		40,300	4,030	7,108	4,040	40,300		20,370	 	7,108
506.5000	BEARING ASSEMBLIES FIXED B-40-550-14	EACH		24				,				12		36
506.6000	BEARING ASSEMBLIES EXPANSION B-40-550-14	EACH										12		12
509.1000	JOINT REPAIR	SY		20								21		41
509.1500	CONCRETE SURFACE REPAIR	SF	14		3		4		65		11		9	106
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF		2	10		29		34		23		<u> </u>	98
509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH			1		1	_	1		1		 '	4
514.0460	FLOOR DRAINS TYPE H	LF EACH	OE	+			07	4	งา				74	222
514.2625 517.0601	DOWNSPOUT 6-INCH PAINTING EPOXY SYSTEM B-40-550-14	EACH	85	+			82		82				/4	323
517.0901.S	PREPARATION AND COATING OF TOP FLANGES B-40-550-14	EACH		1										1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-40-550-14	EACH												1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-40-550-14	EACH												1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH												1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH		1		1		1		1		1		5
616.0208	FENCE CHAIN LINK 8-FT	LF		130		114		300		114		130	<u> </u>	788
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF		12		12		12		12		12	<u> </u>	60
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF		118		102		288		102		118	<u> </u>	728
653.0220 653.0222	JUNCTION BOXES 18X6X6-INCH JUNCTION BOXES 18X12X6-INCH	EACH EACH		1		1		1		1		1	 	5
655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF		100		100		100		100		100	 	500
657.0322	POLES TYPE 5-ALUMINUM	EACH		1		1		1		1		1		5
657.0615	LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	EACH		1		1		1		1		1		5
659.1125	LUMINAIRES UTILITY LED C	EACH		1		1		1		1		1		5
659.5000.S	LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR	EACH		1		2				2		1		6
SPV.0025.502	WATERLINE CONCRETE SURFACE REPAIR	CF					88		88				<u> </u>	176
SPV.0035.501	CONCRETE MASONRY BRIDGES LIGHTWEIGHT	CY		123.8		219.9		254.1		219.9		124.2	ļ'	942
SPV.0060.342 SPV.0060.343	SUBMERSIBLE MULTITAP 3-PORT PRE-INSULATED CONNECTOR SUBMERSIBLE MULTITAP 4-PORT PRE-INSULATED CONNECTOR	EACH EACH		10		4		4		4		10	 	20 20
SPV.0060.343	INSTALLING CONDUIT INTO EXISTING MANHOLE	EACH		10								10	 	20
SPV.0060.430	UNDERDECK UTILITY STRUCTURE B-40-550-14, CITY UNDERGROUND CONDUIT	EACH		† - †								1	 	1
SPV.0060.508	TEMPORARY SHORING OF STRUCTURE	EACH												1
SPV.0060.509	TEMPORARY SUPPORT FOR UTILITIES B-40-550-14	EACH												1
SPV.0060.522	SALVAGING BASCULE GEAR SET AND CONSTRUCTING RACK AND PINION EXHIBITS	EACH												1
SPV.0060.523	REMOVING, REPAIRING AND REINSTALLING BRIDGE OPERATOR'S HOUSE AS AN EXHIBIT	EACH											<u> </u>	1
SPV.0060.524	INTERPRETIVE EXHIBIT SIGN SUPPORT INSTALL HISTORICAL MARKER PLAQUE	EACH											ļ'	1
SPV.0060.525 SPV.0060.526	CONNECTING DOWNSPOUT TO EXISTING SEWER	EACH EACH	1	+									1	2
SPV.0060.526 SPV.0060.527	FLOOR DRAINS TYPE H MODIFIED	EACH	1	2									2	4
SPV.0060.527	CENTER SHEAR TRANSFER DEVICE	EACH		 				4						4
SPV.0060.545	BALANCING BASCULE BRIDGE LEAF	EACH						2						2
SPV.0060.550	RIVET REPLACEMENT WITH HIGH STRENGTH BOLTS	EACH			33	242	116	1,164	100	242	33			1,930
SPV.0060.566	TRUNNION SHAFT MACHINING	EACH					8		8				<u> </u>	16
SPV.0060.567	REFURBISH TRUNNIONS AND TRUNNION BEARINGS	EACH		1			4		4				 '	8
SPV.0060.571	NORTH OPERATING MACHINERY DEMOLITION	EACH EACH		1			4		1				 '	1
SPV.0060.572 SPV.0060.573	SOUTH OPERATING MACHINERY DEMOLITION	EACH		+			1	1						1
SPV.0060.573	SPAN LOCK MACHINERY DEMOLITION ELECTRICAL DEMOLITION	EACH		+				1					 	1
SPV.0060.574	REMOVE TIMBER FENDER SYSTEMS B-40-550-14	EACH		1			1		1					2
SPV.0060.588	REMOVE TIMBER DOLPHINS B-40-550-14	EACH					2		2					4
SPV.0060.597	PROTECTING UTILITIES	EACH												1
SPV.0060.881	INLINE 5A FAST ACTING FUSE WITH HOLDER	EACH		3		3		3		3		3		15
SPV.0085.510	BRIDGE STRUCTURAL STEEL	LB		14,765		121,279	60.000	195,482	64.100	121,279	4 222	14,765	774	468,344
SPV.0085.513	STRUCTURAL STEEL REPAIR	LB		4,200	629	8,033	60,239	72,695	64,188	8,033	1,396	4,200	 	223,613
SPV.0085.550	NON-STRUCTURAL STEEL BALLAST	LB LF		770		E67		499,923 468		100		001	 	499,923
SPV.0090.305 SPV.0090.550	ELECTRICAL CABLE TYPE 4#8/1#8 XLP MARINE DOCK FENDER	LF		770		567	125	408	128	198		801	 	2804 253
31 V.0030.330	WARRIE DOCK I LIDEK	LF		+			123		140				 	233
	NON-BID ITEMS			1										
	FILLER	SIZE	1	1							1			1/2", 3/4"
	· · · · · · · · · · · · · · · · · · ·													

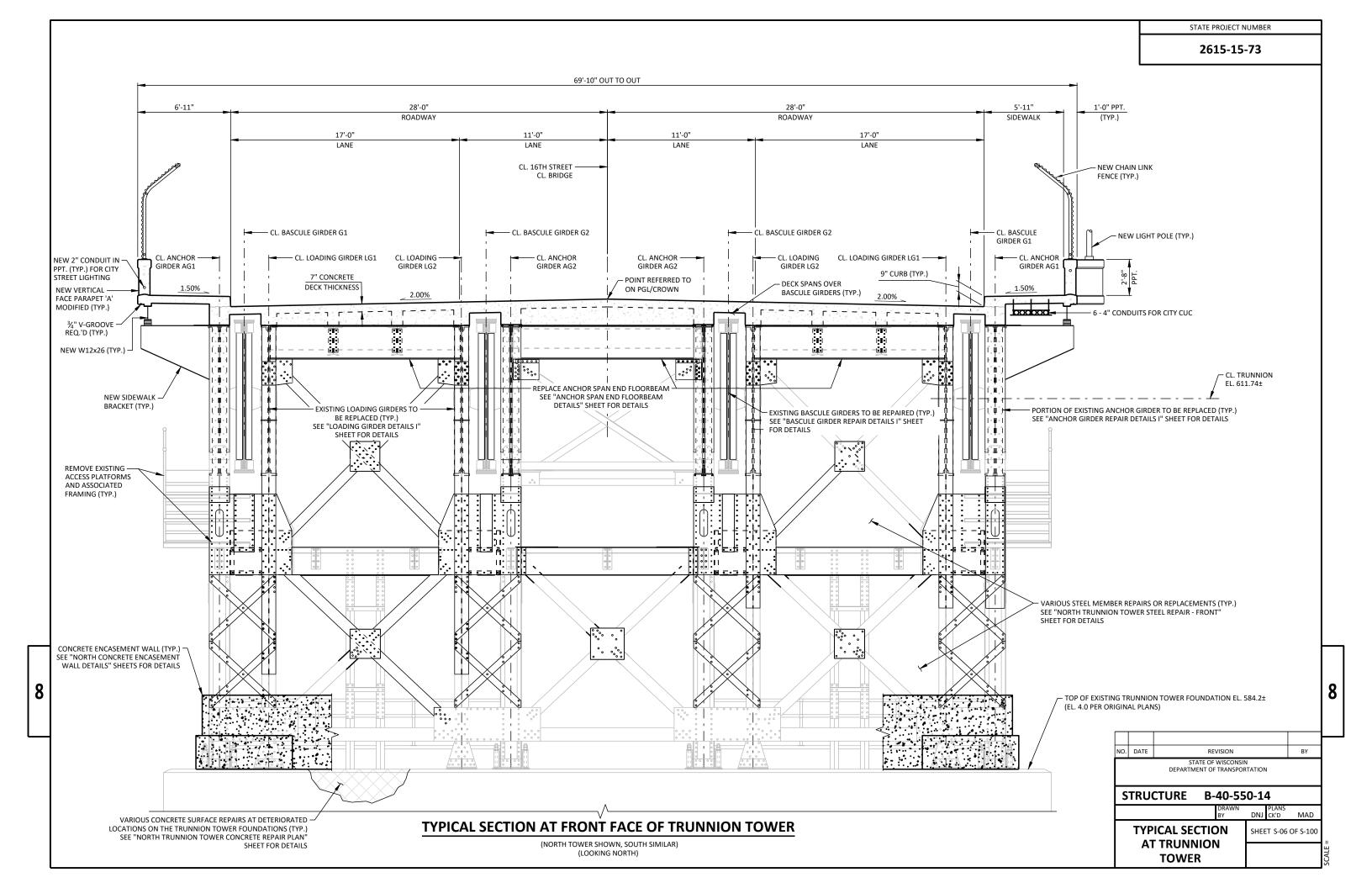
DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

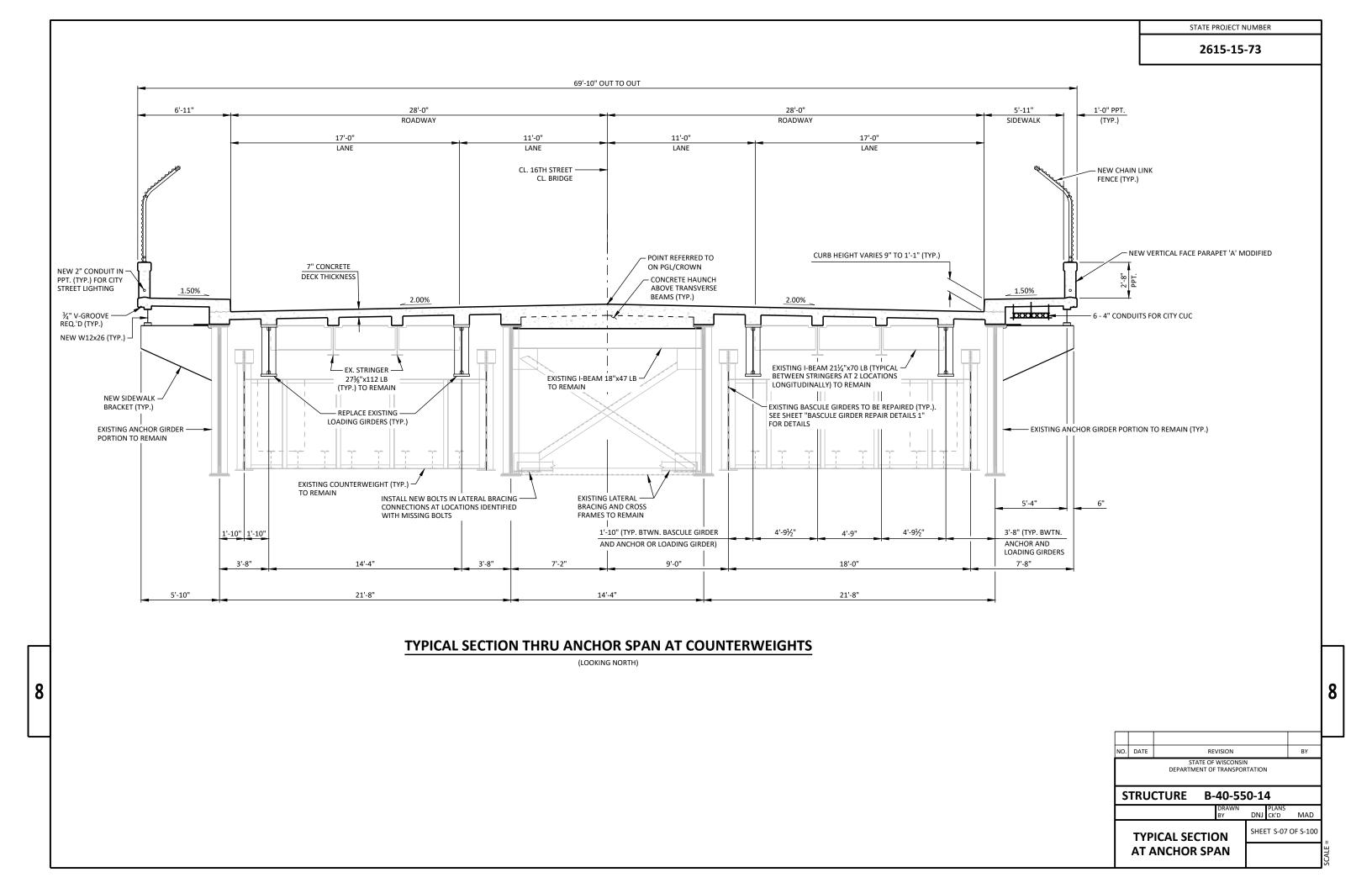
STRUCTURE B-40-550-14 PLANS DNJ CK'D MAD

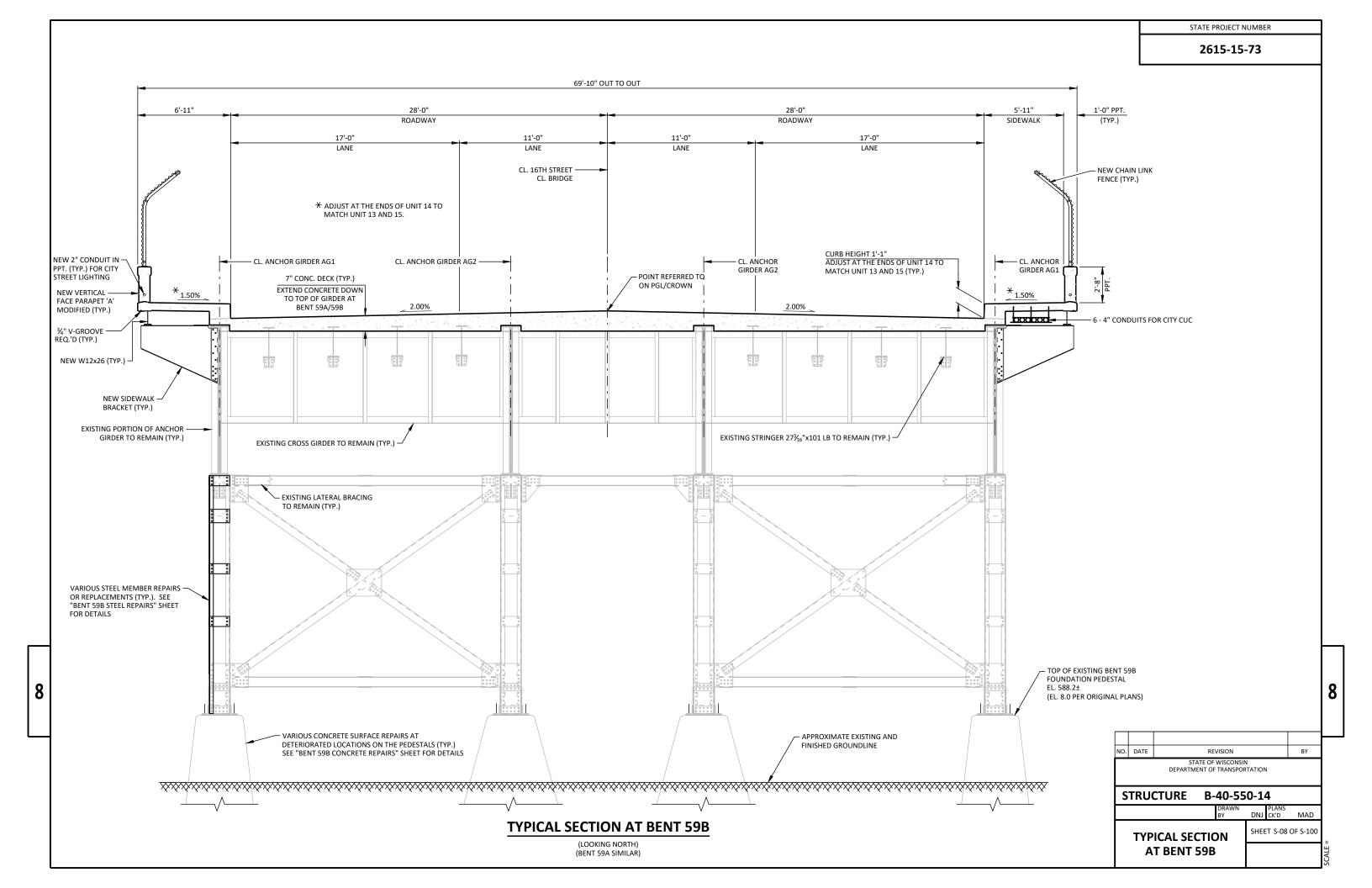
TOTAL ESTIMATED QUANTITIES

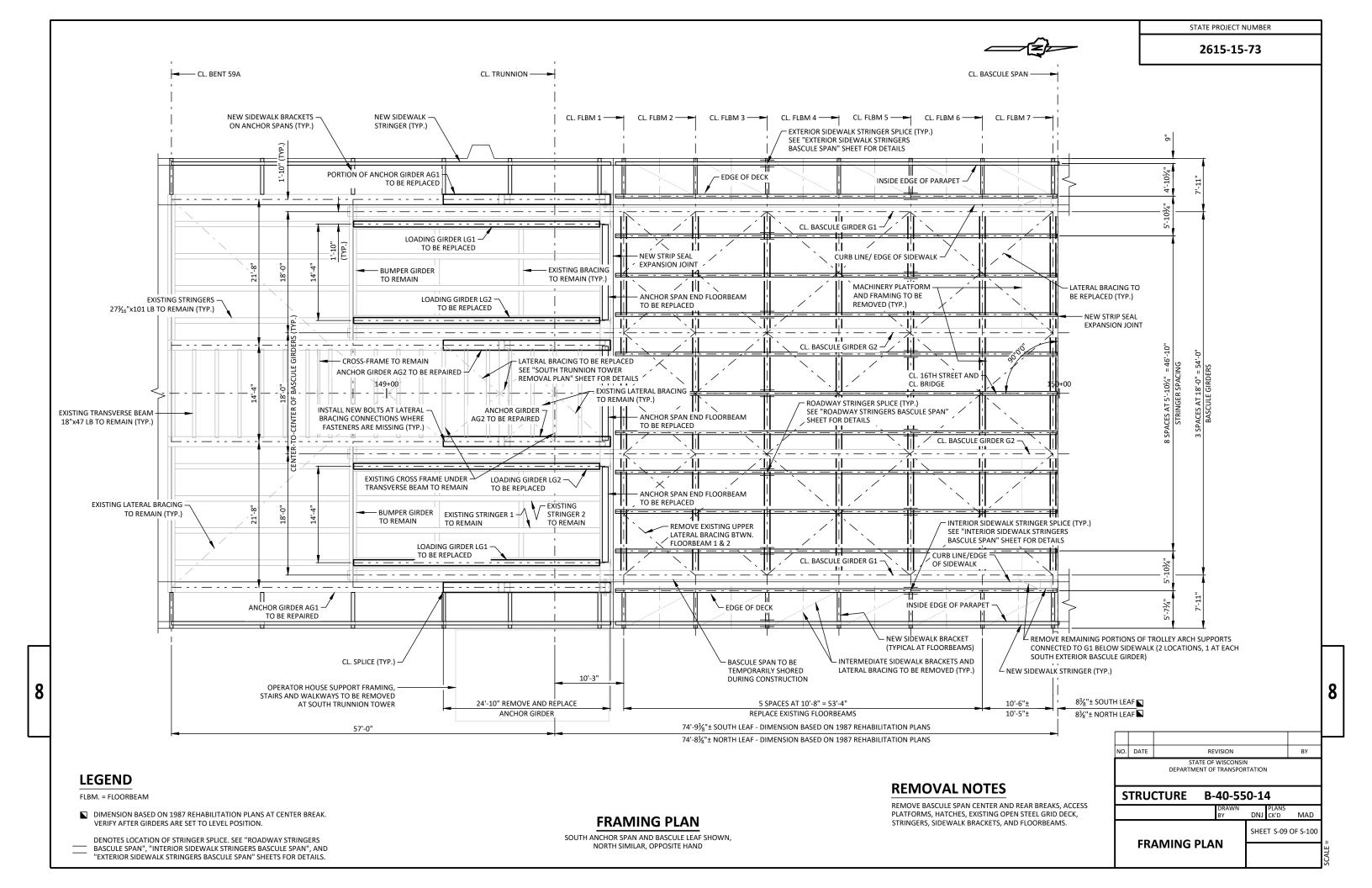
SHEET S-04 OF S-100

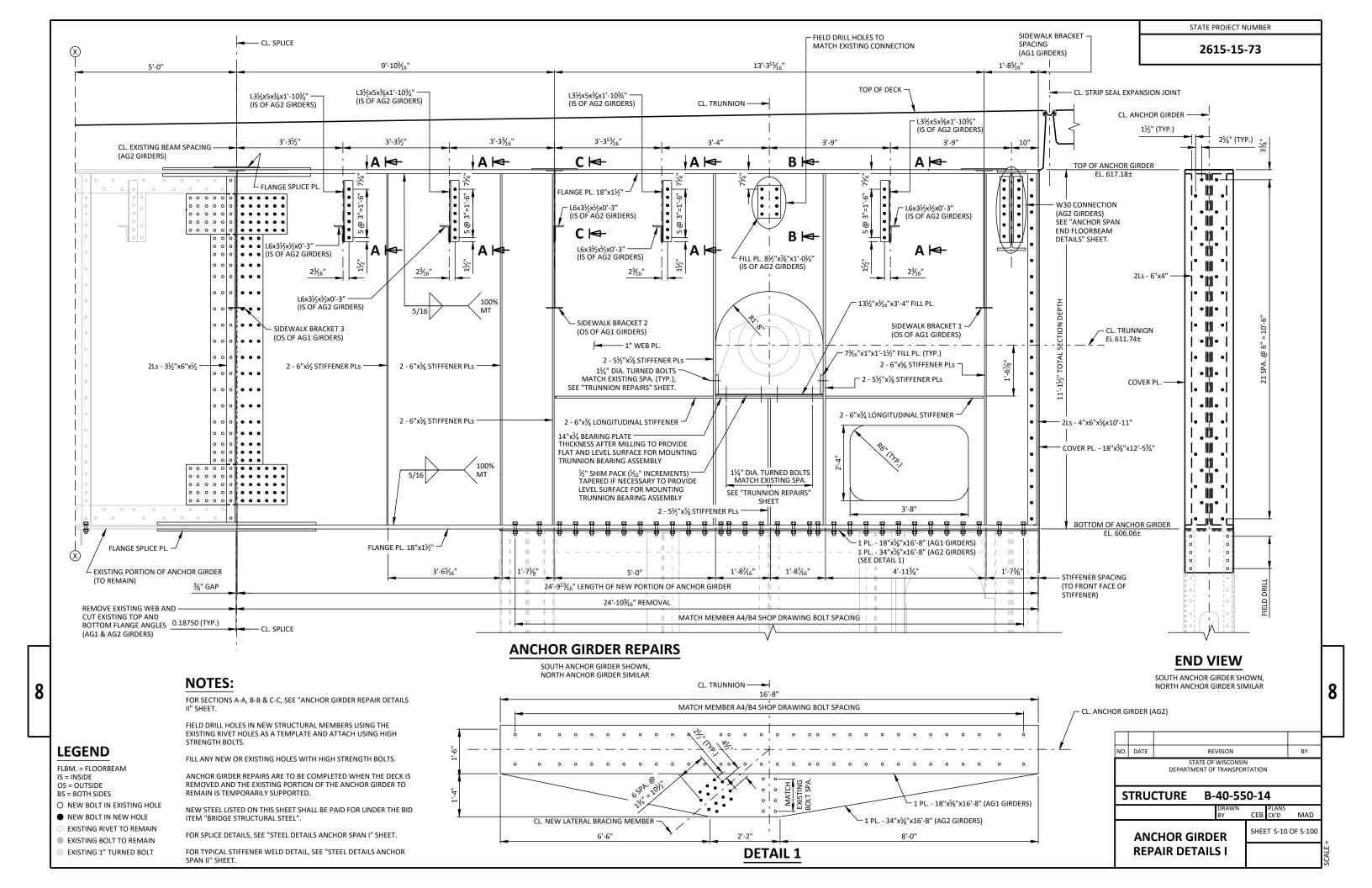


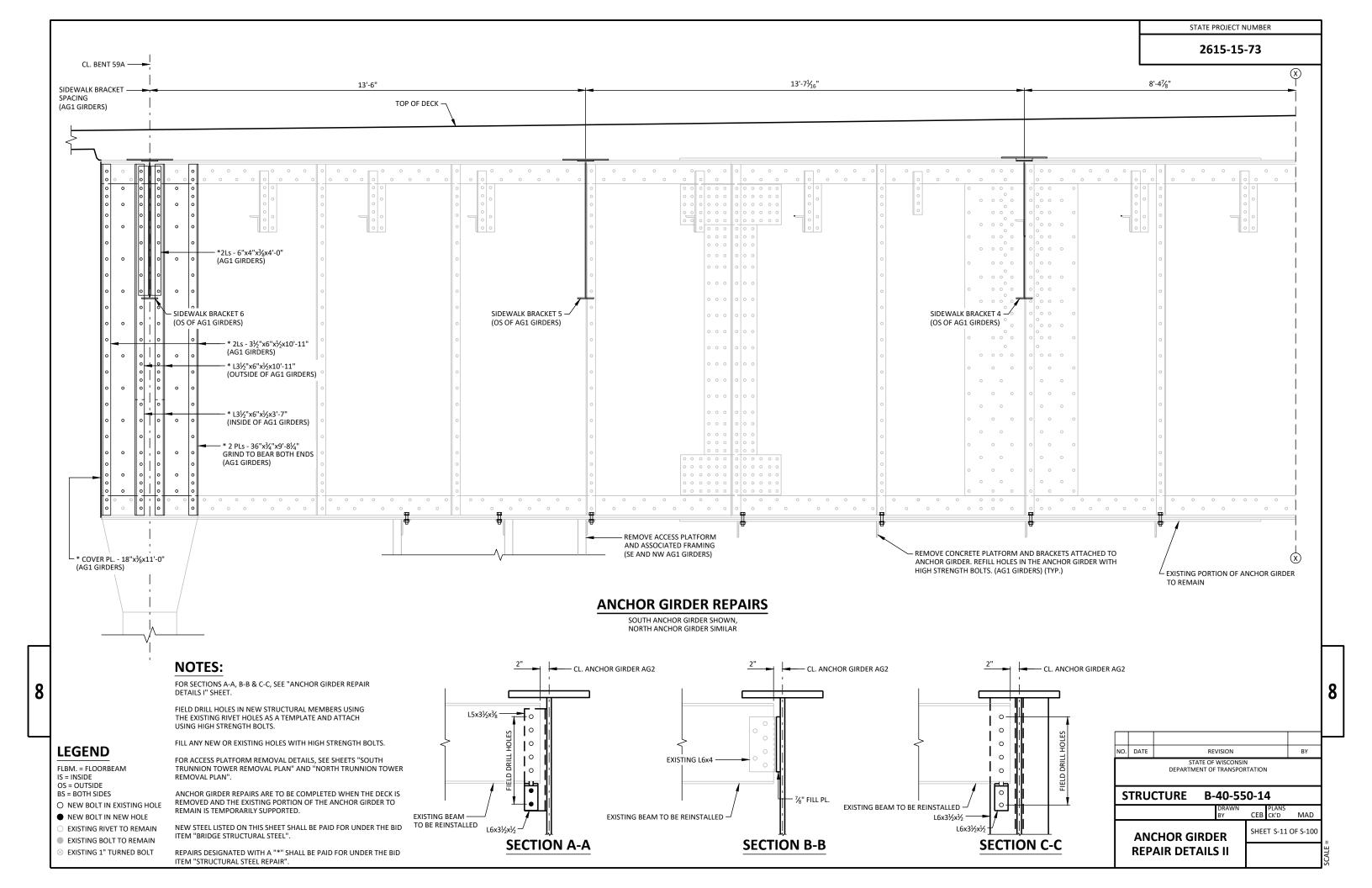


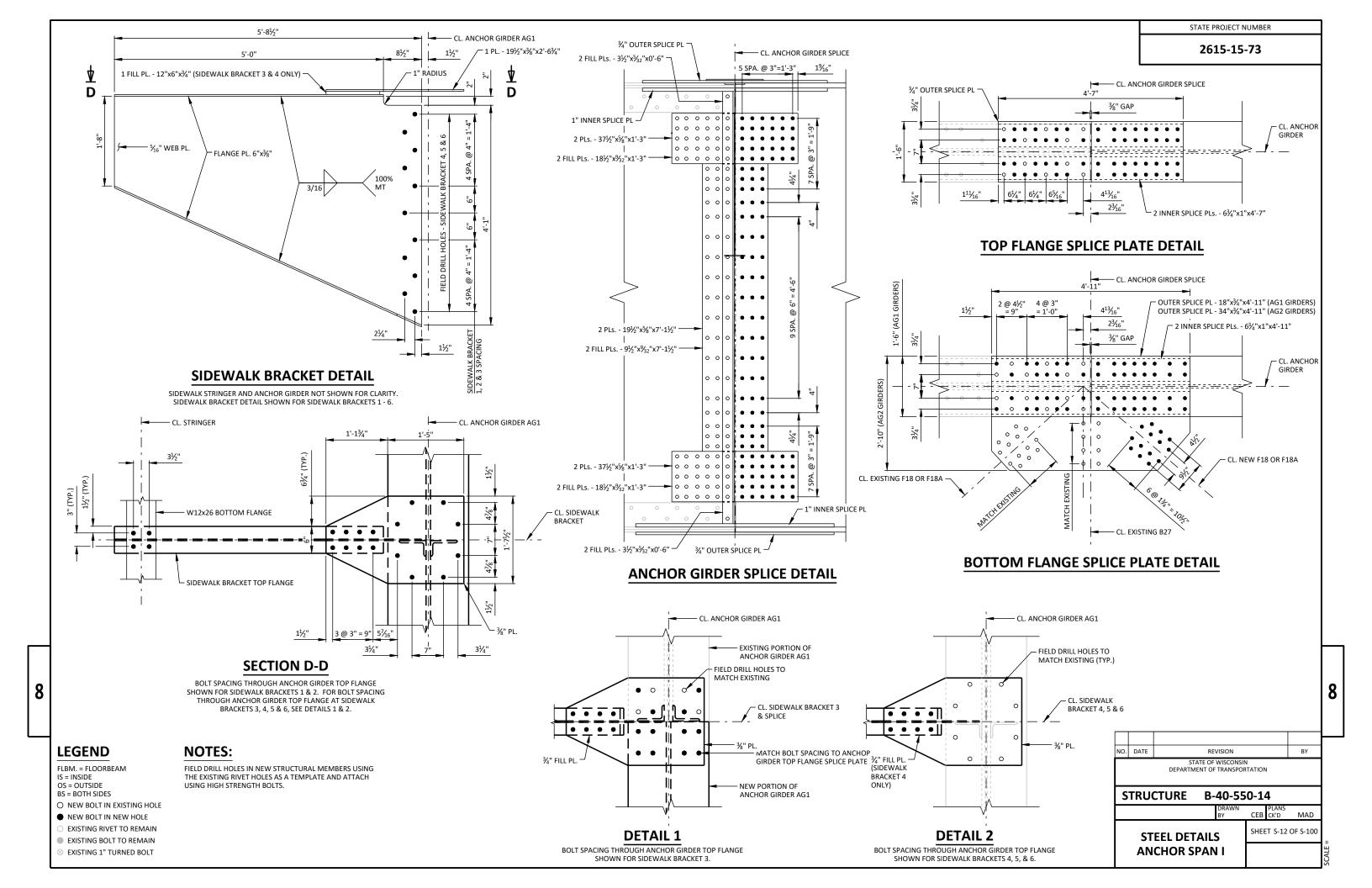


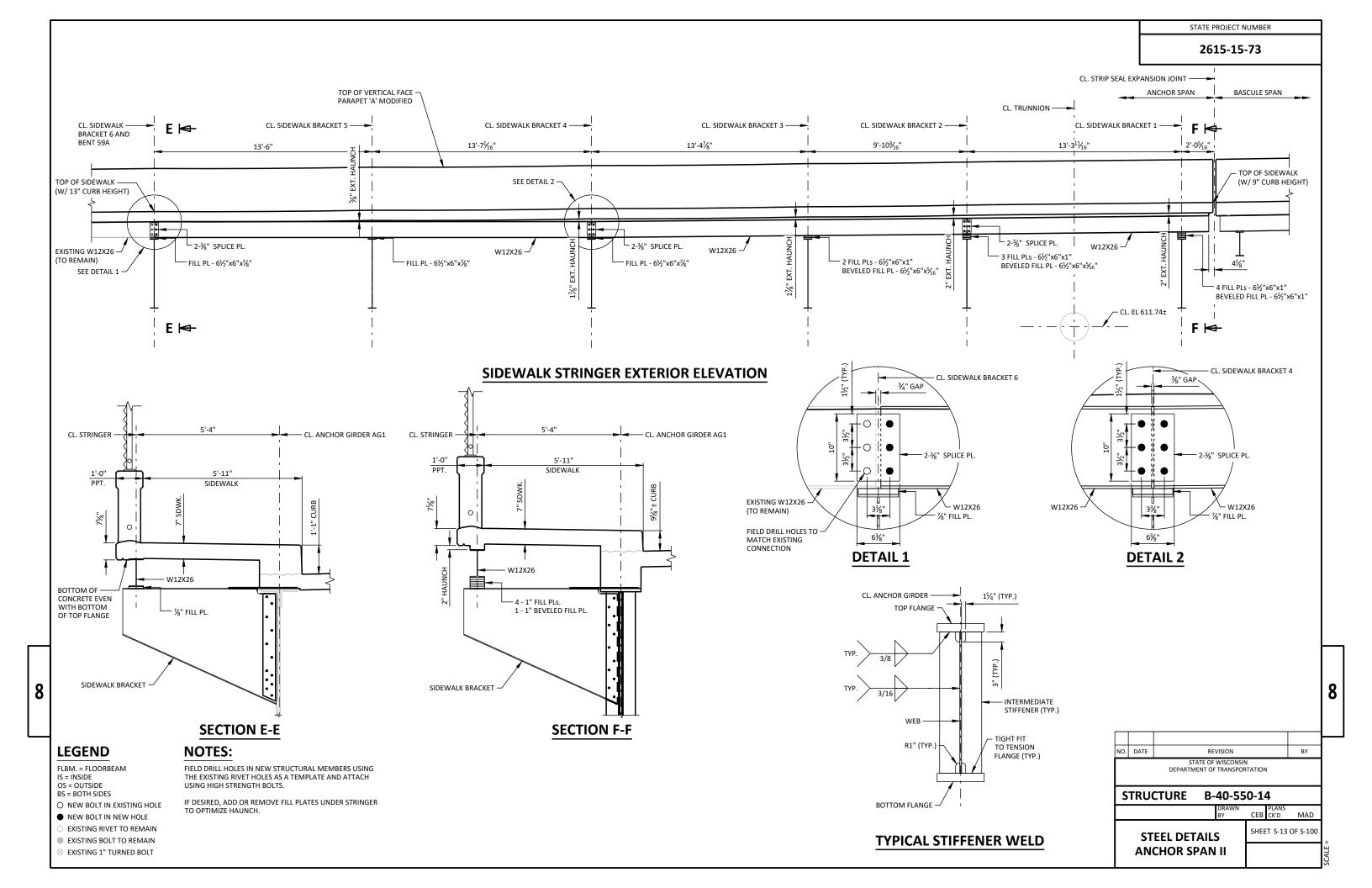


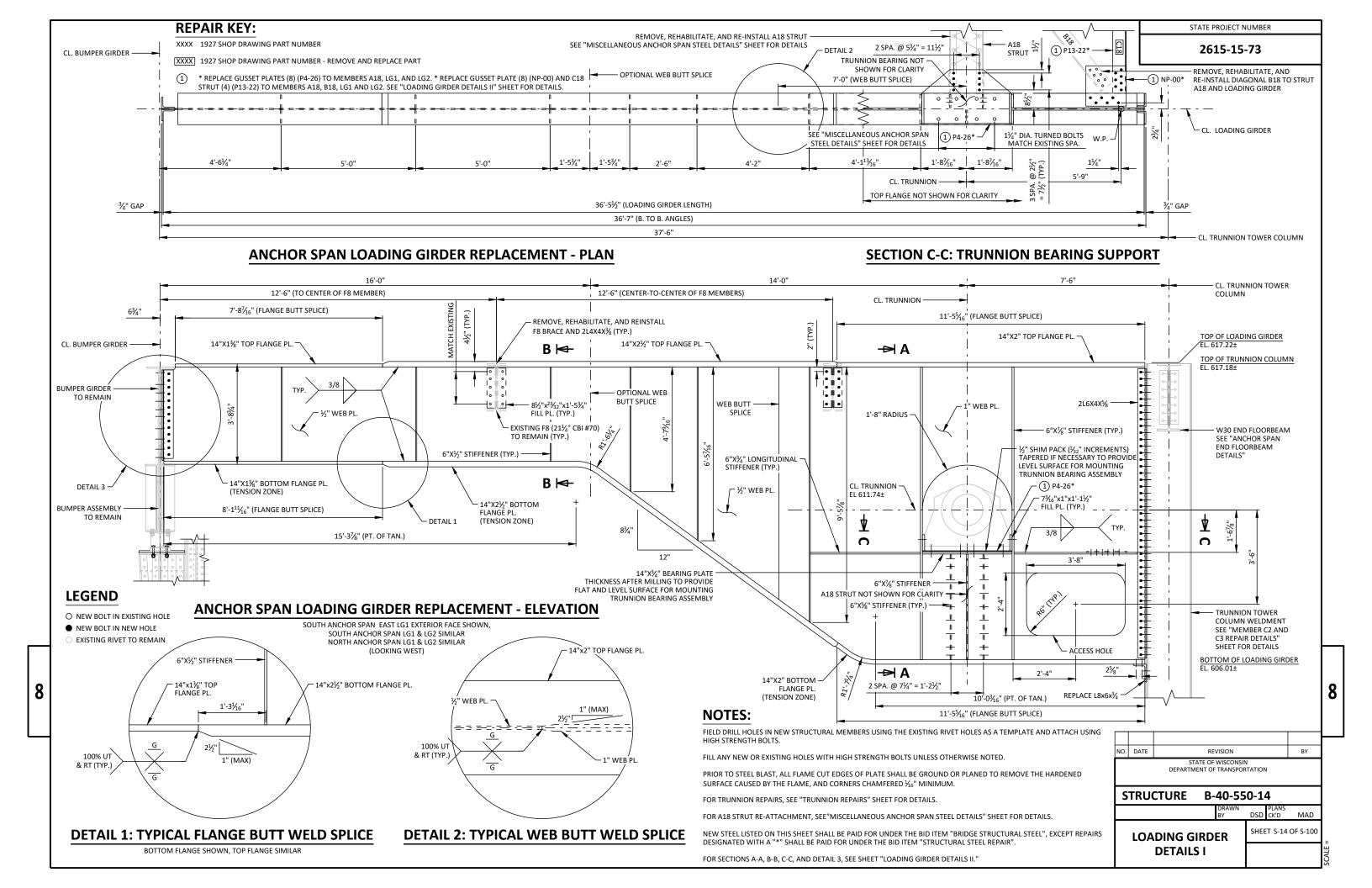


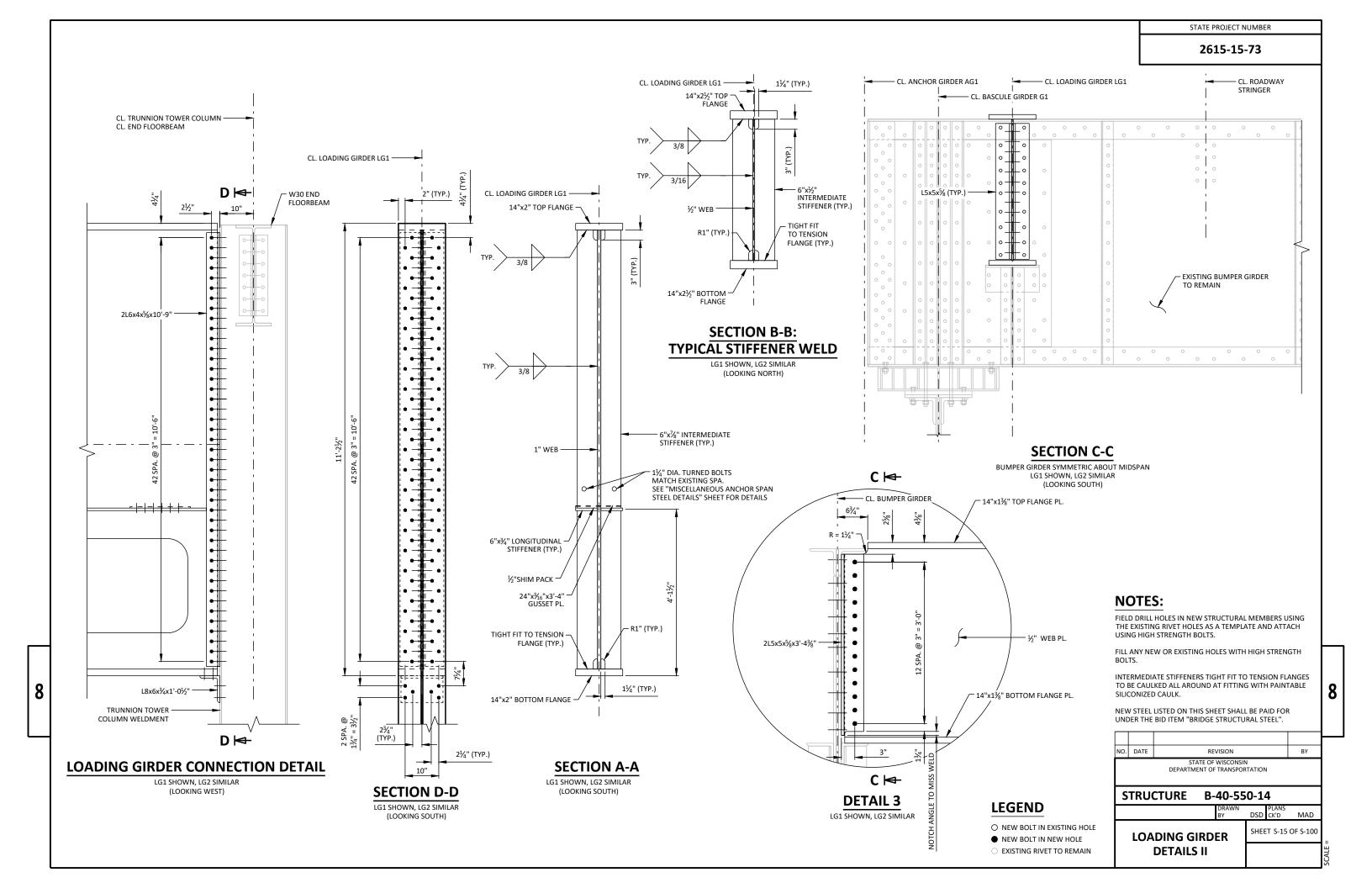


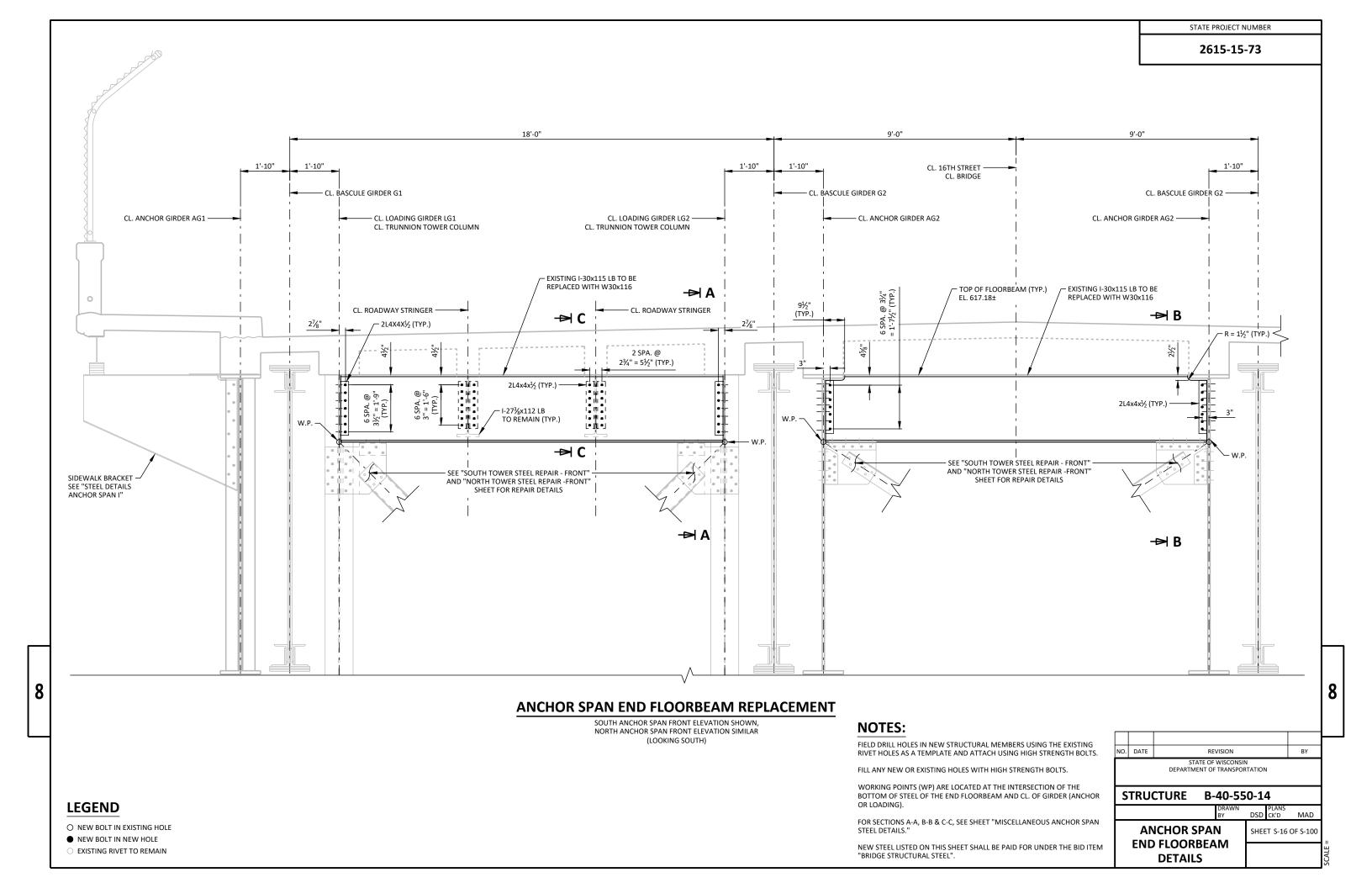


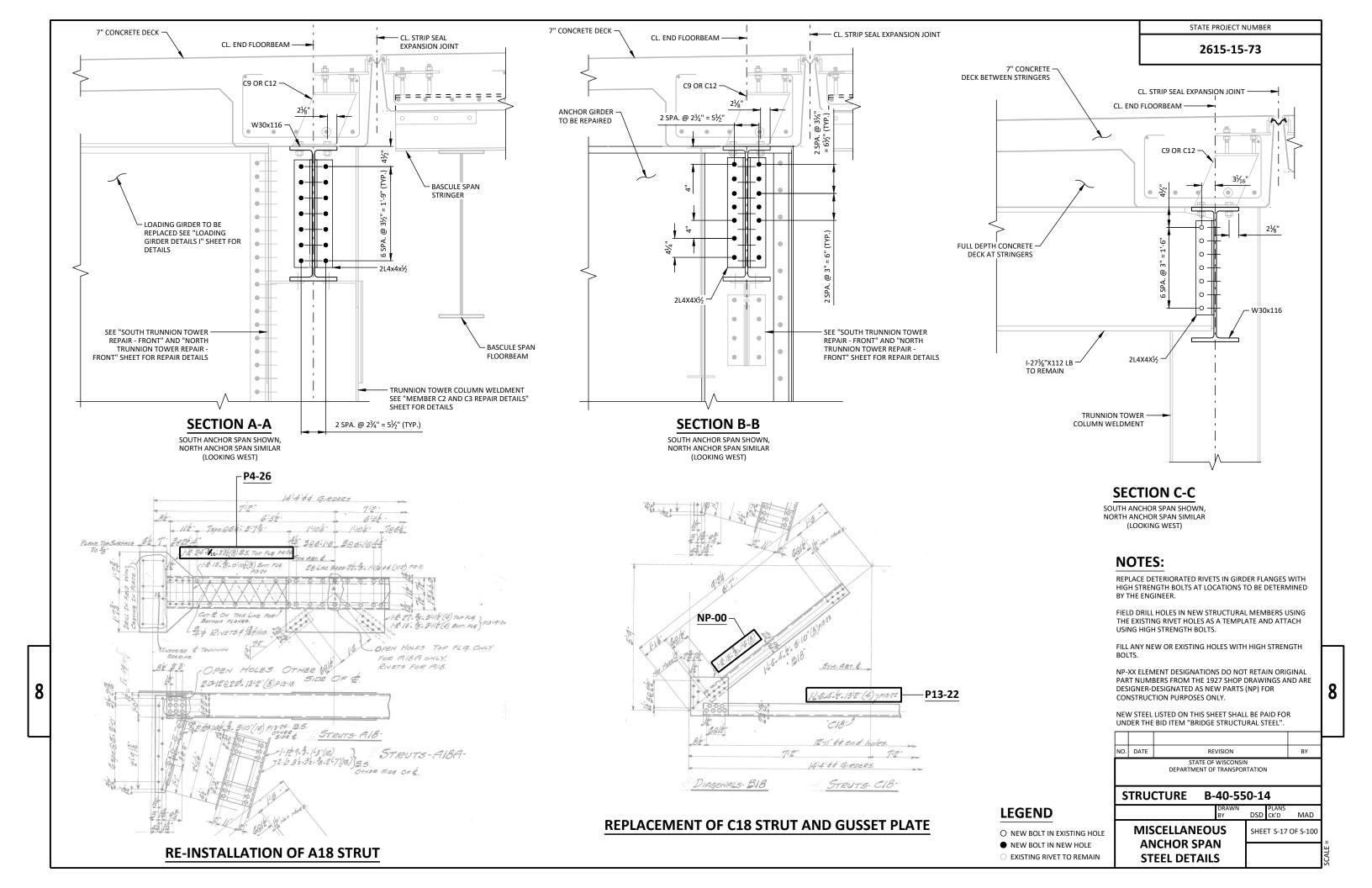


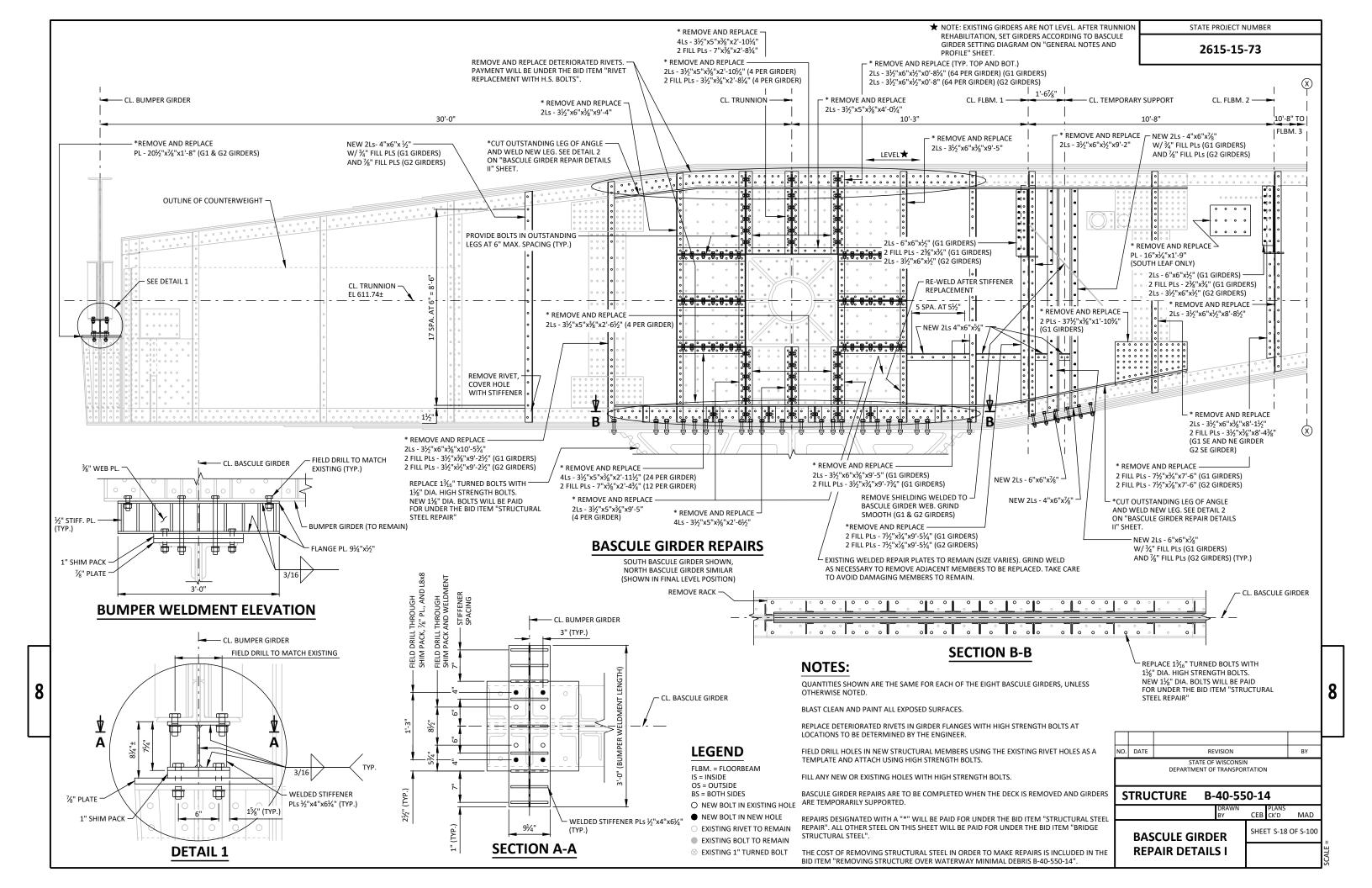


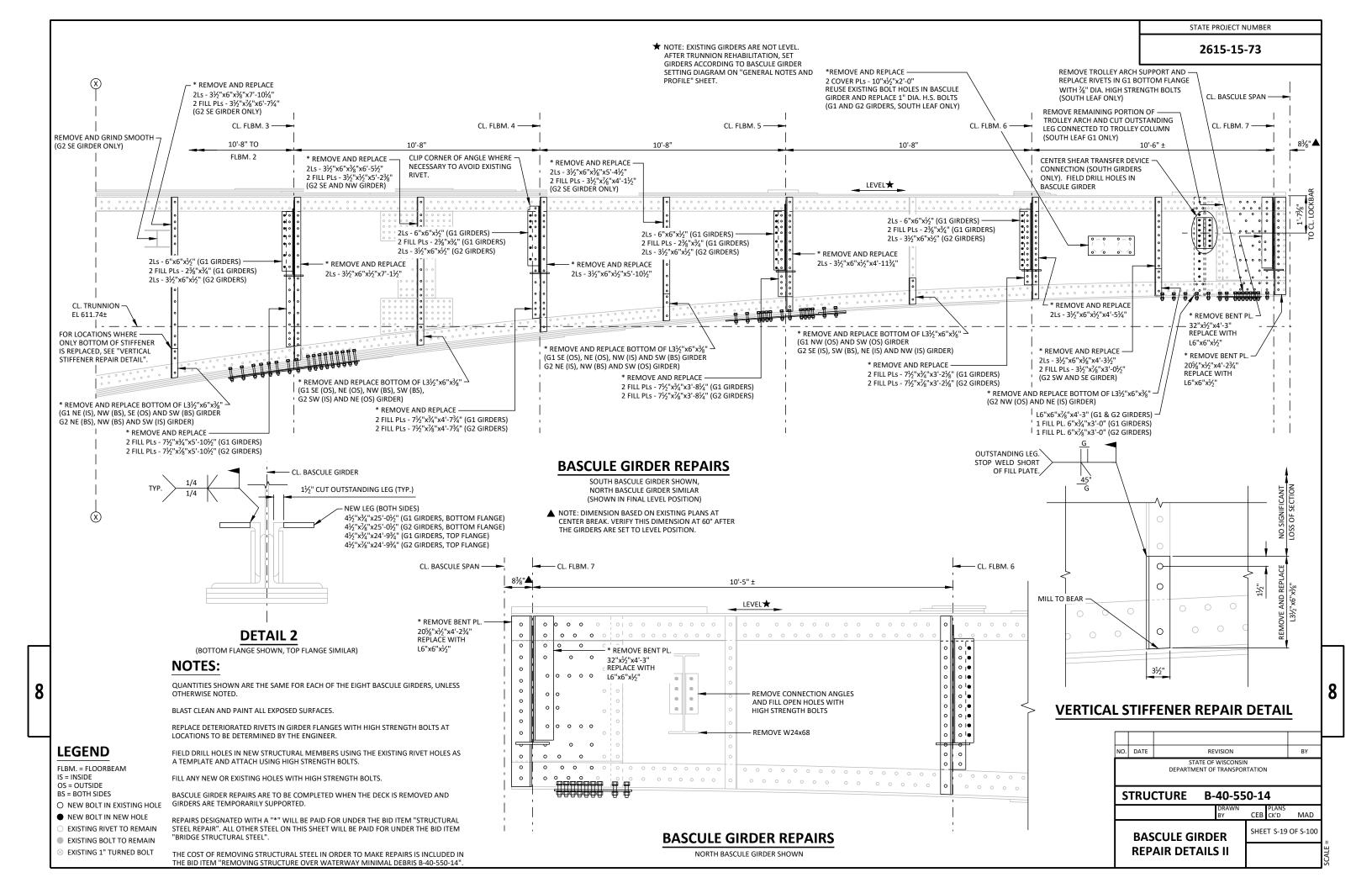


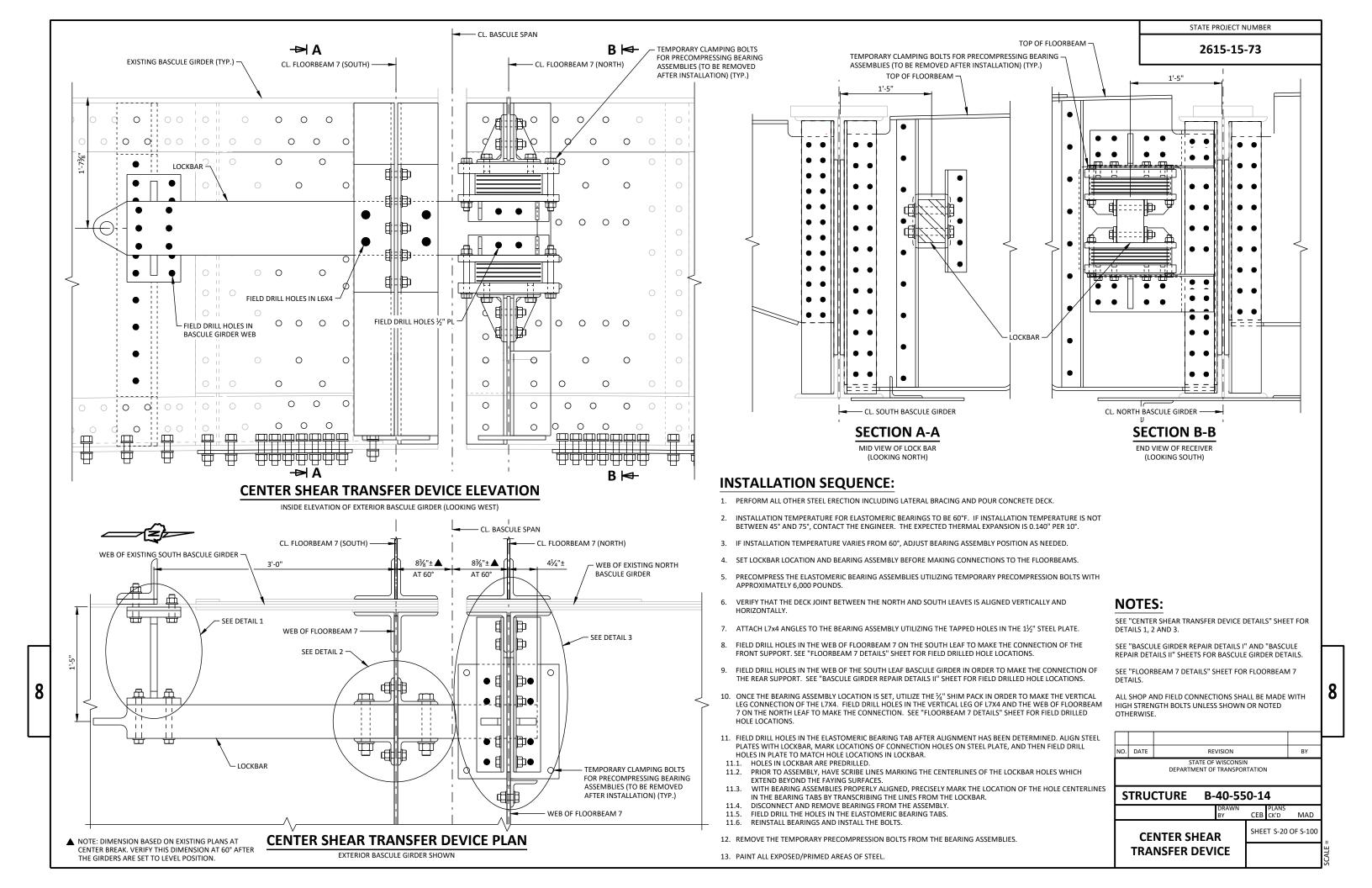


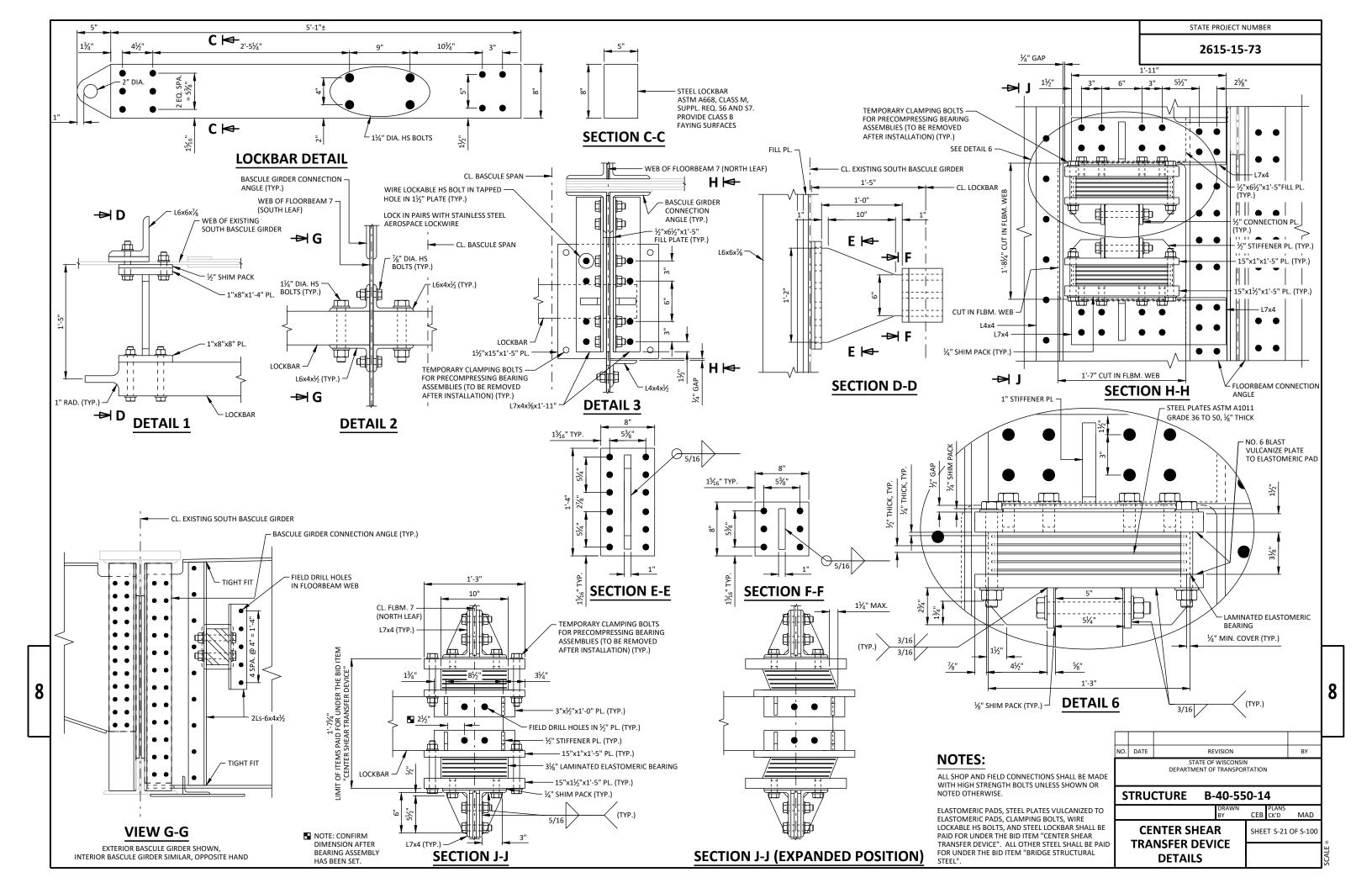


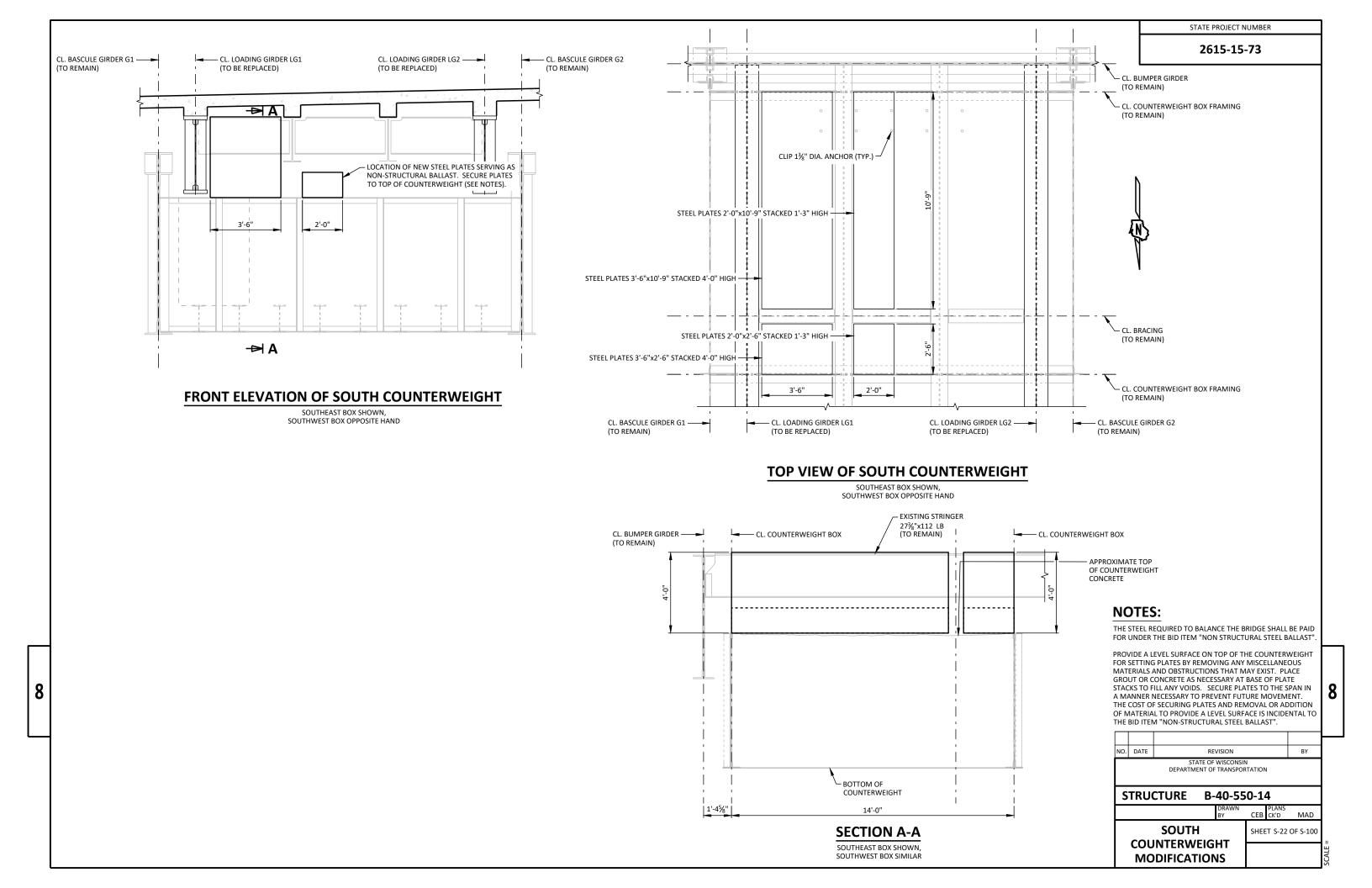


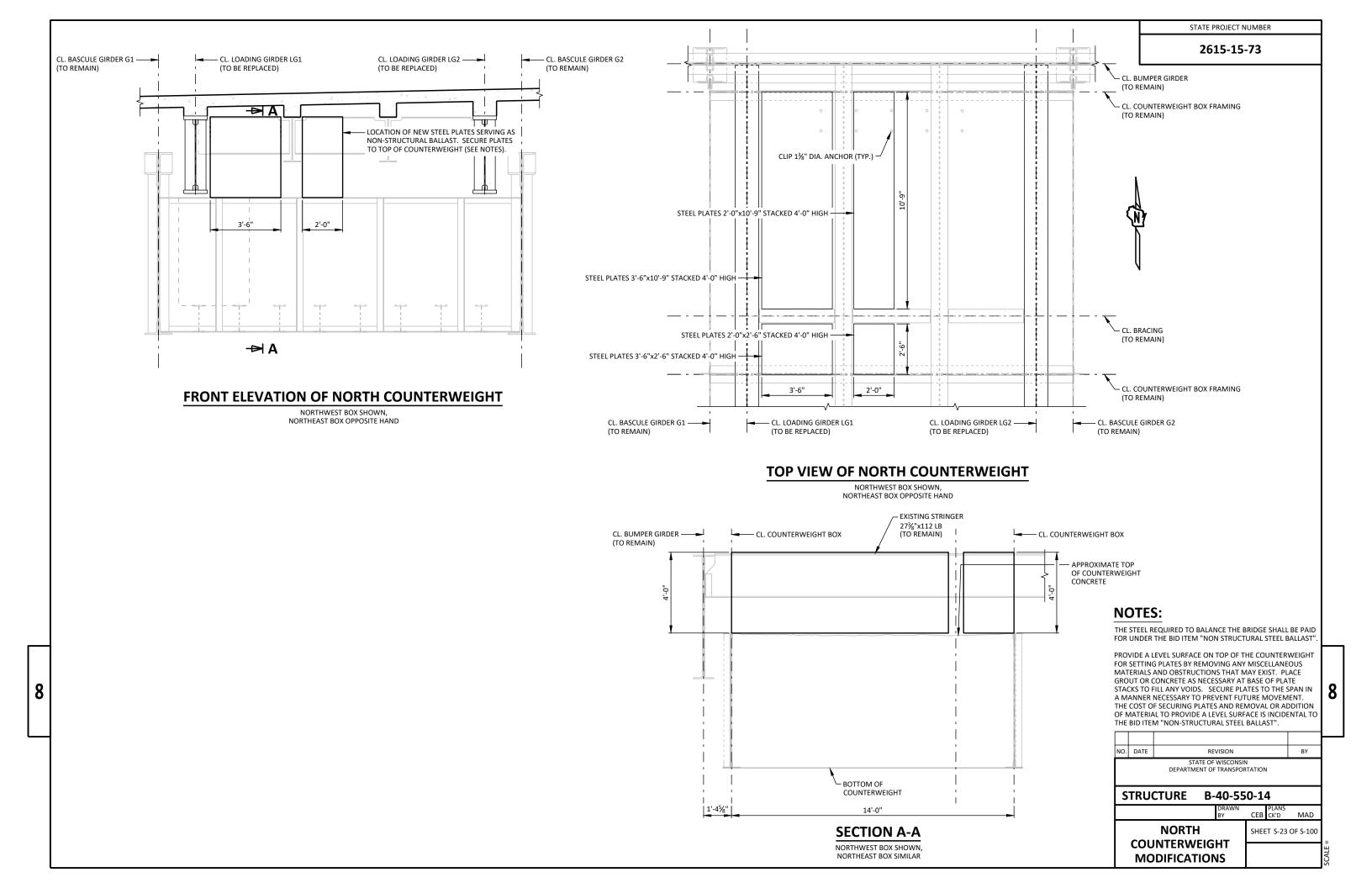


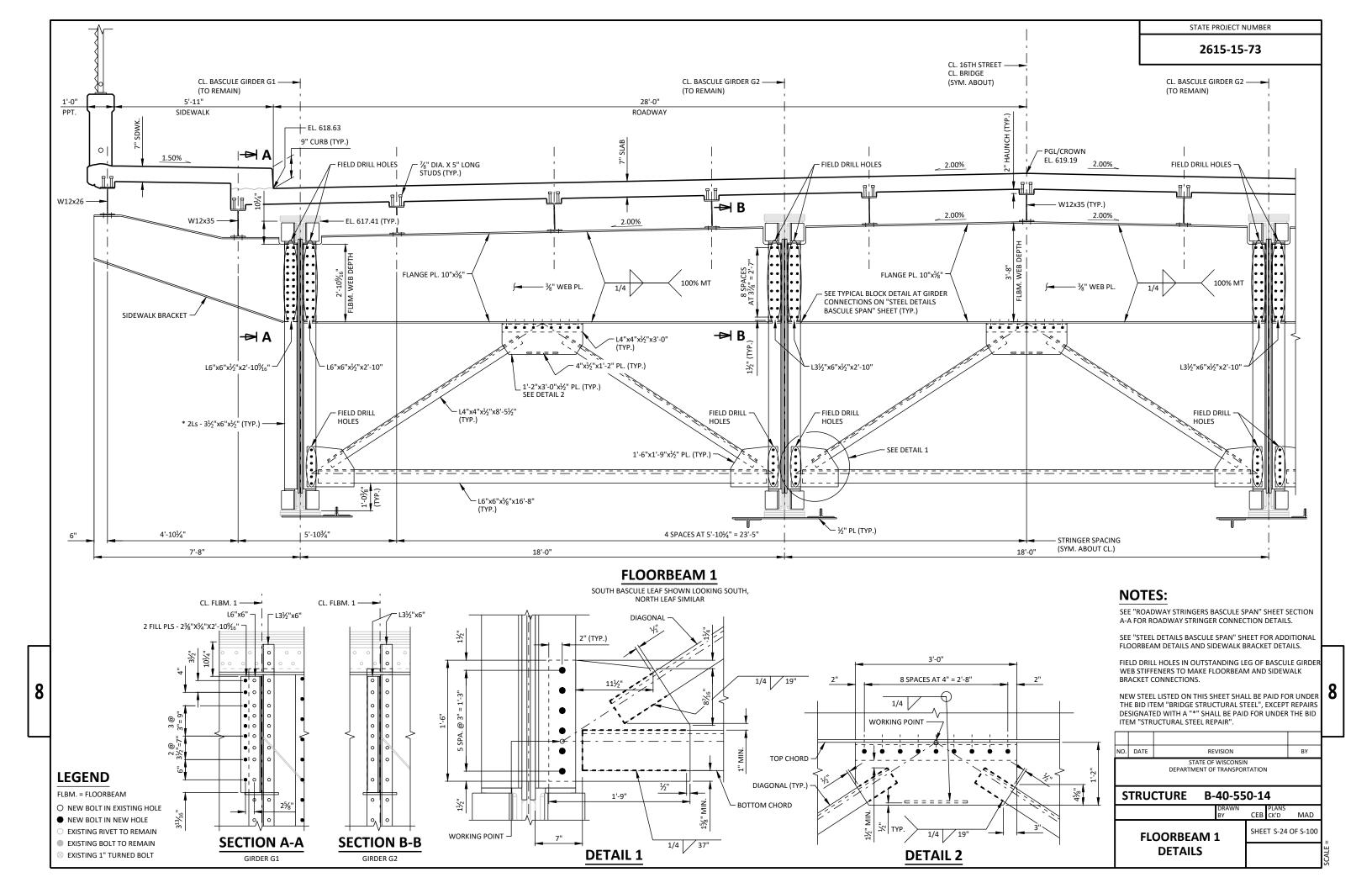


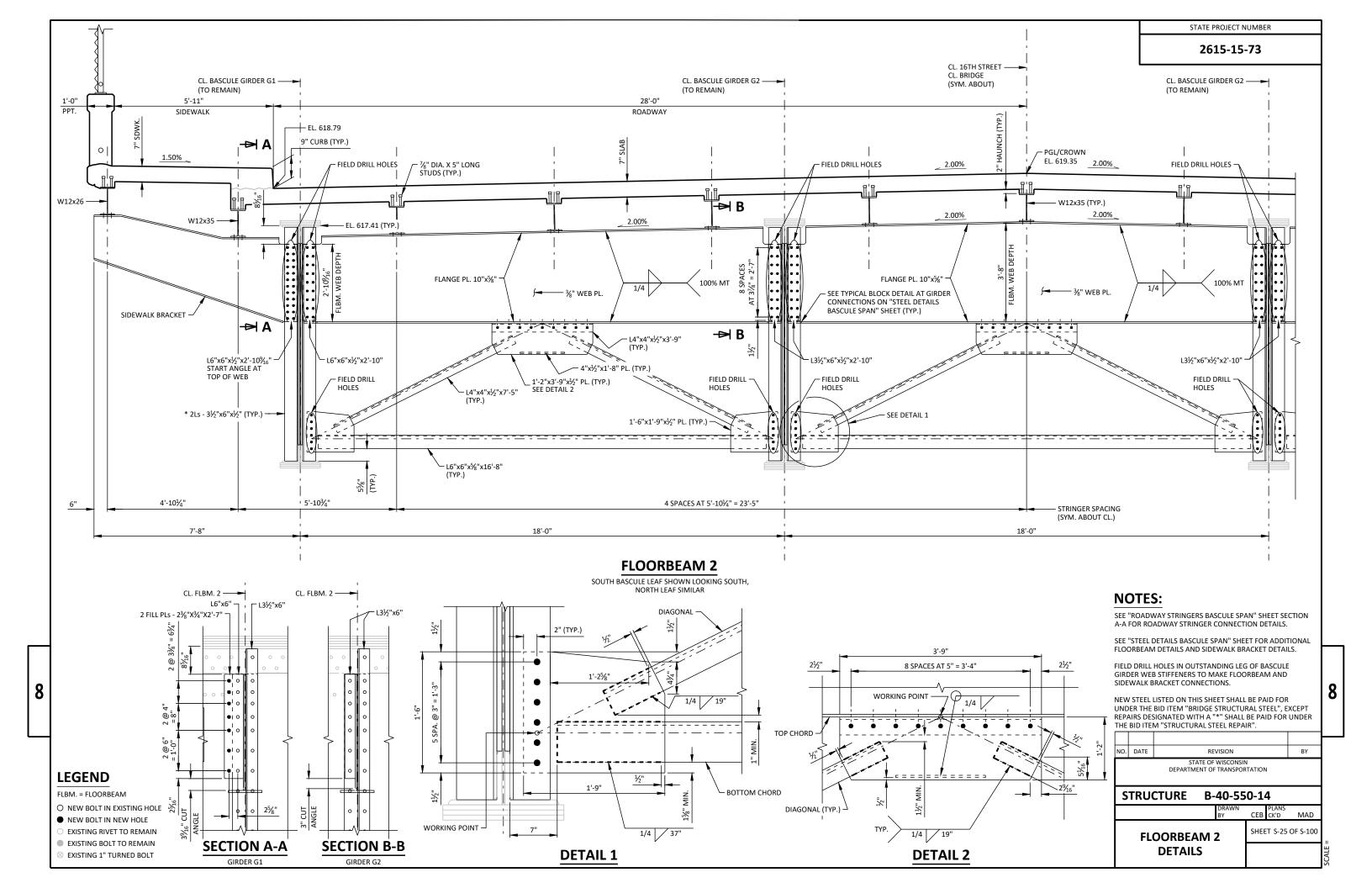


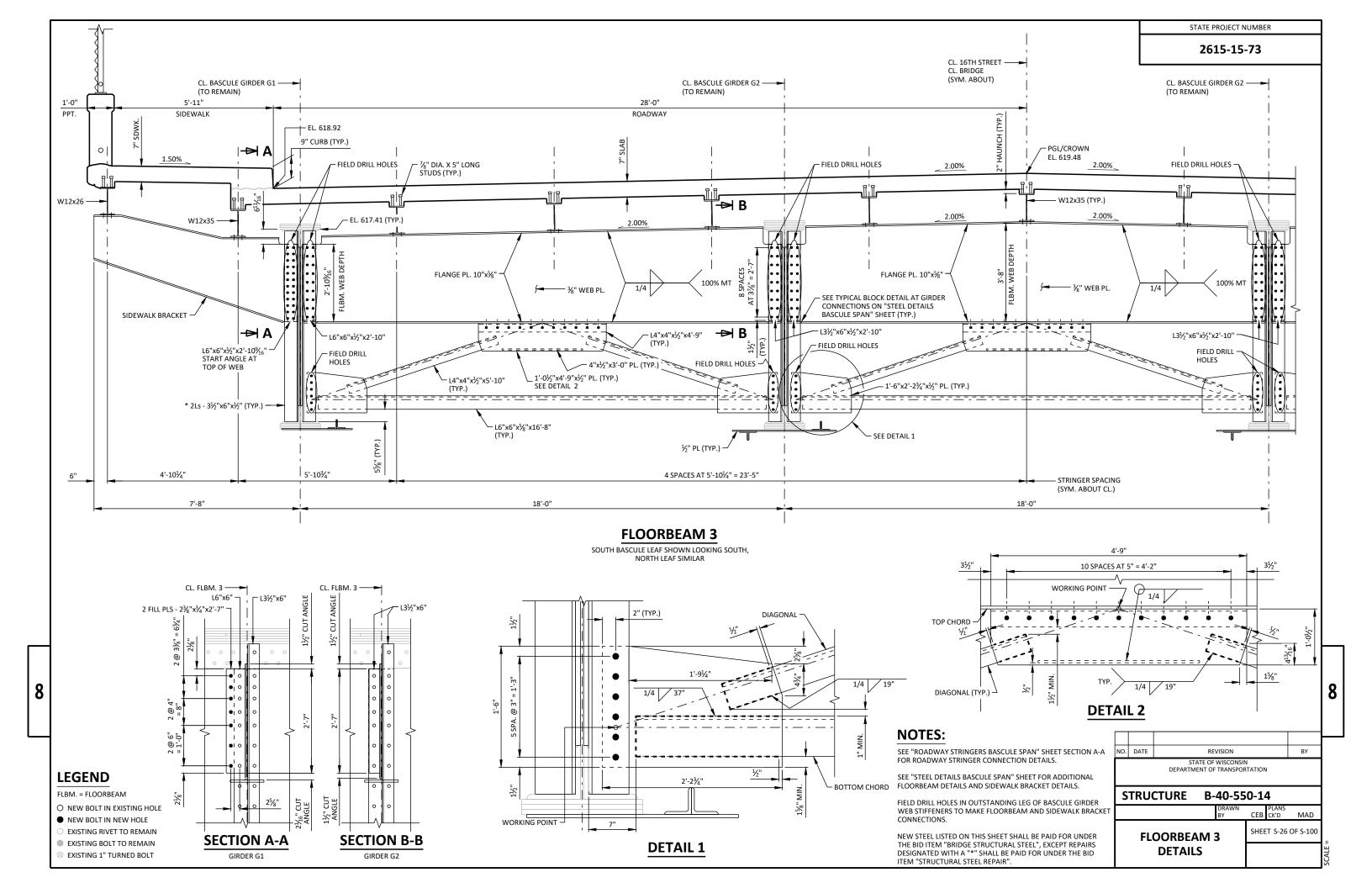


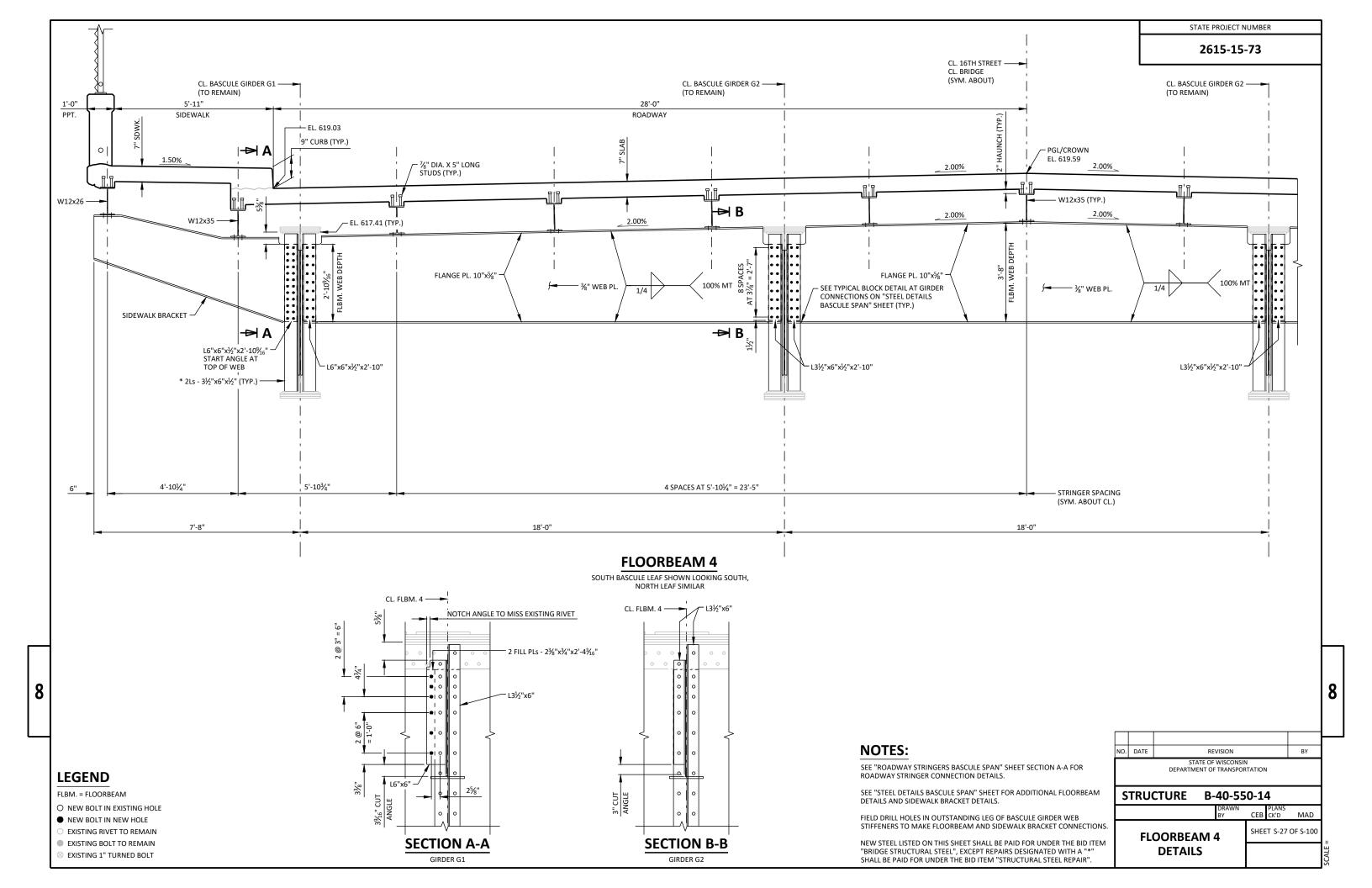


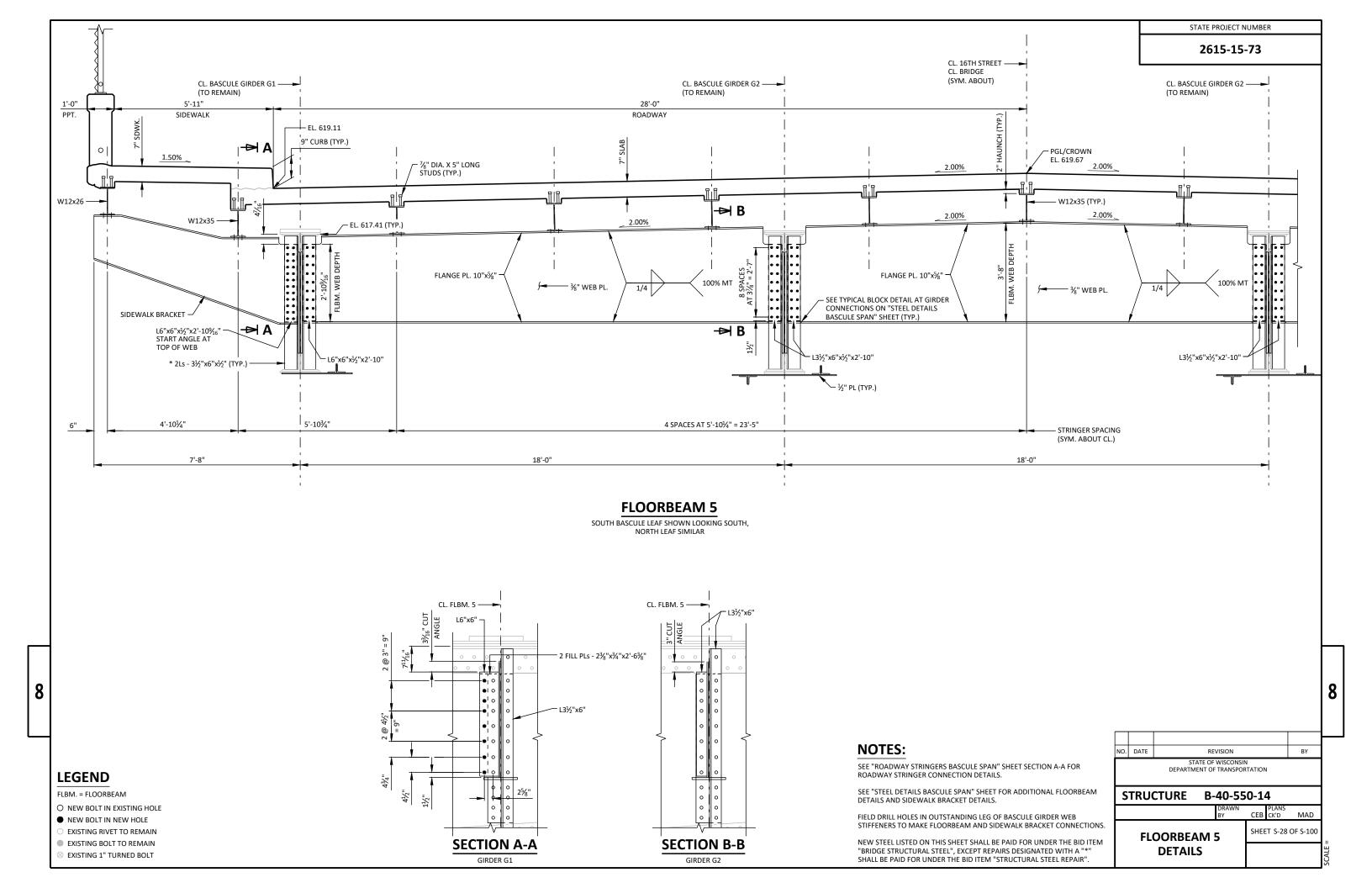


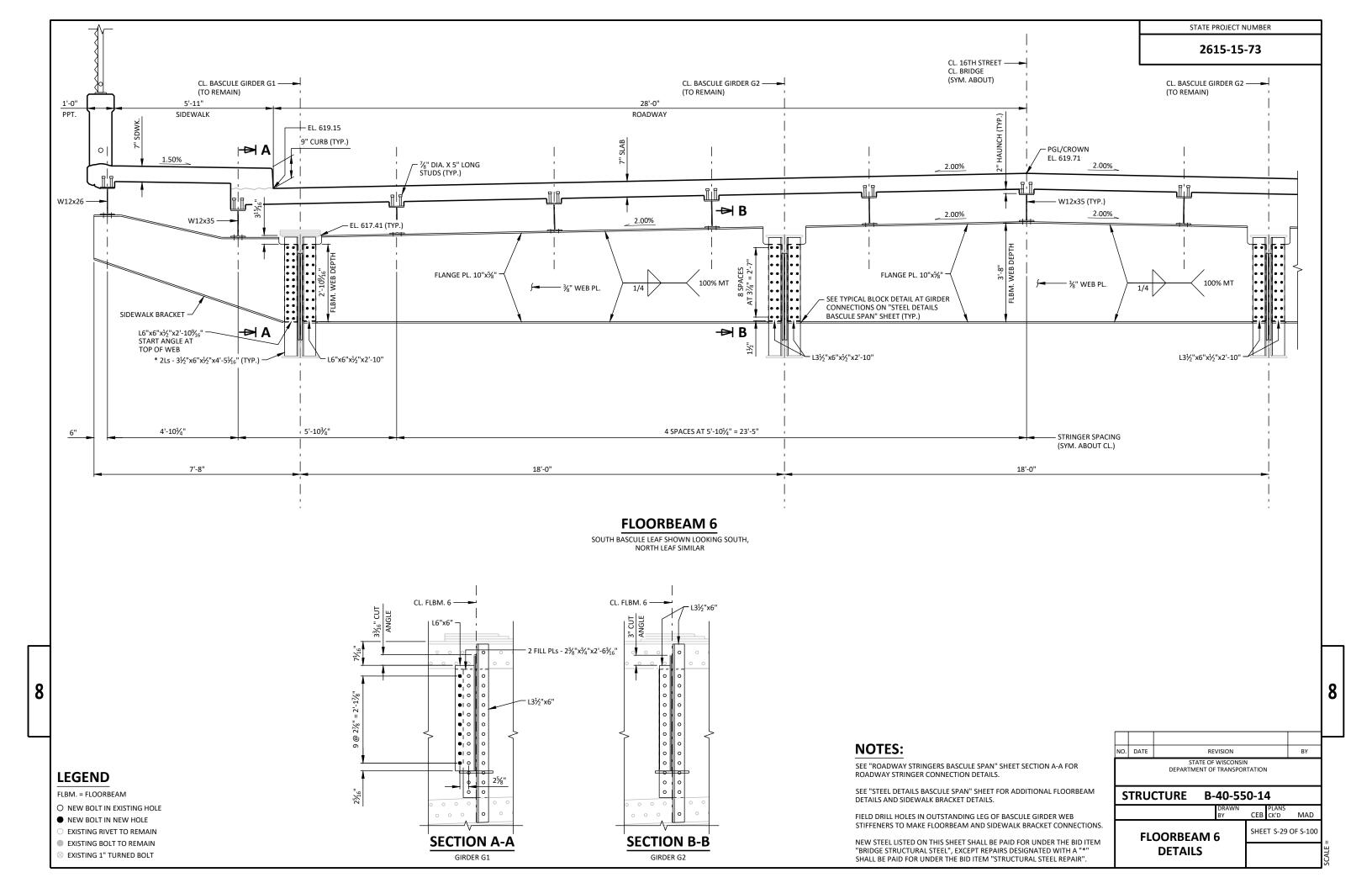


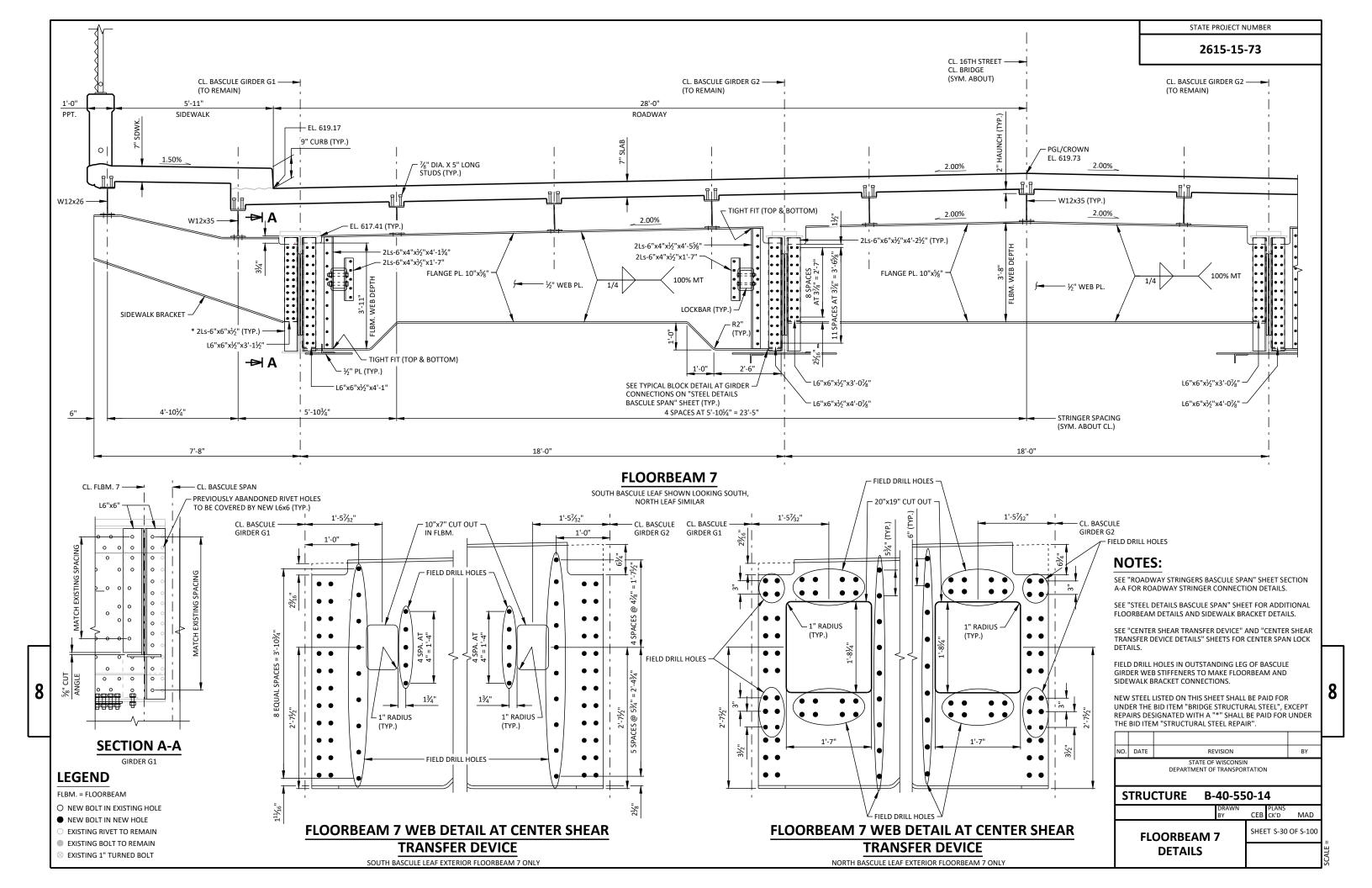


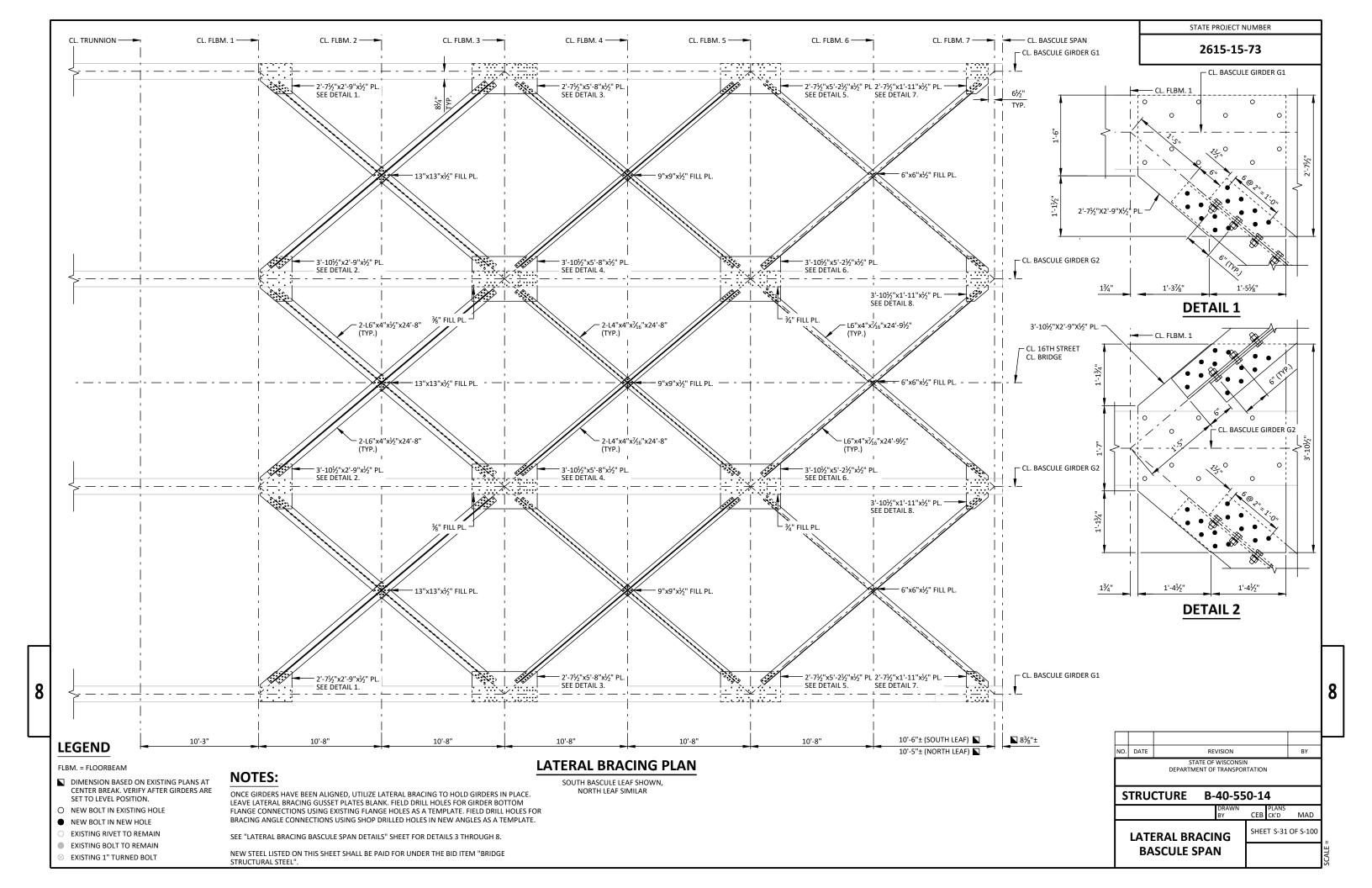


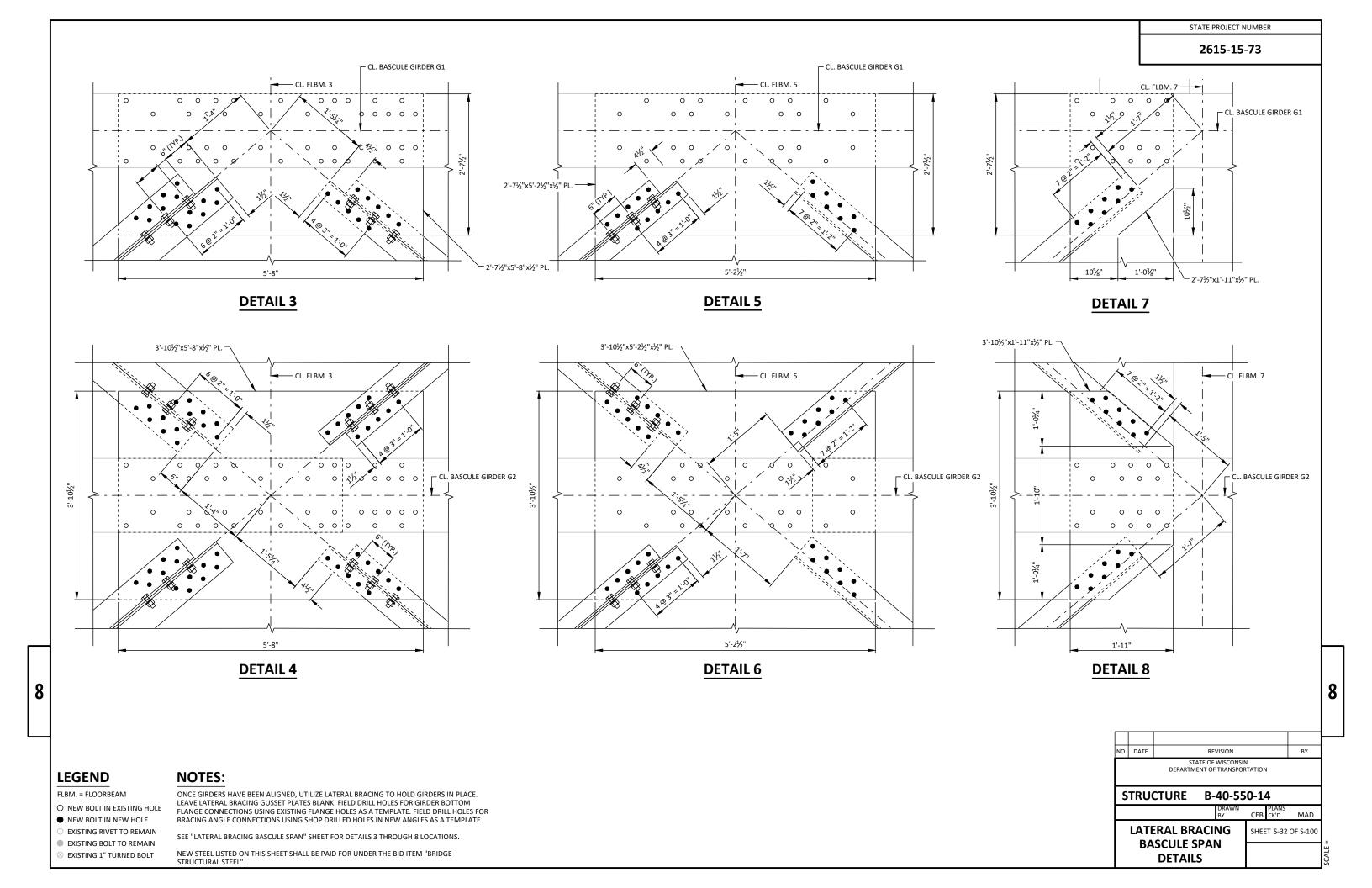


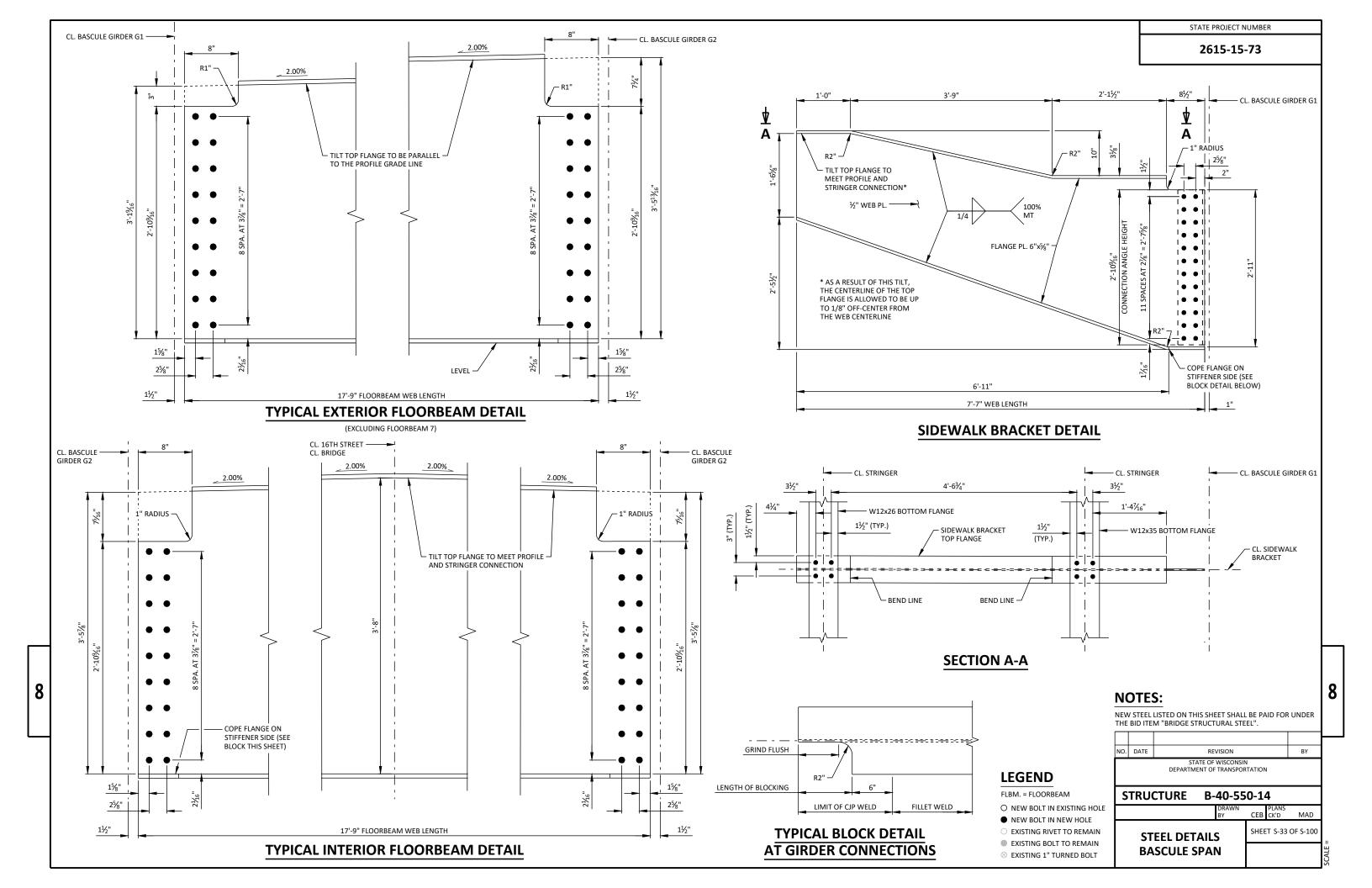


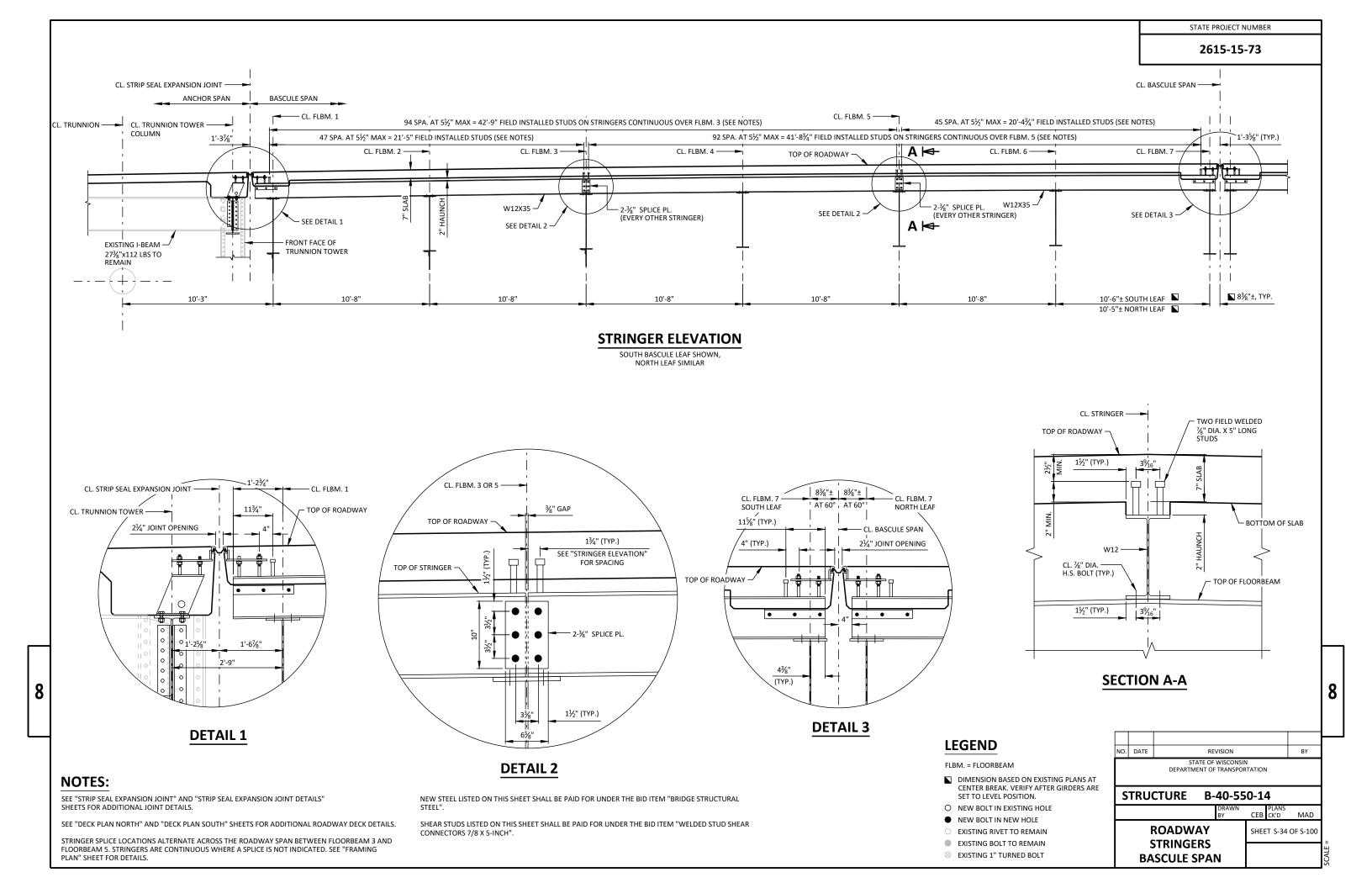


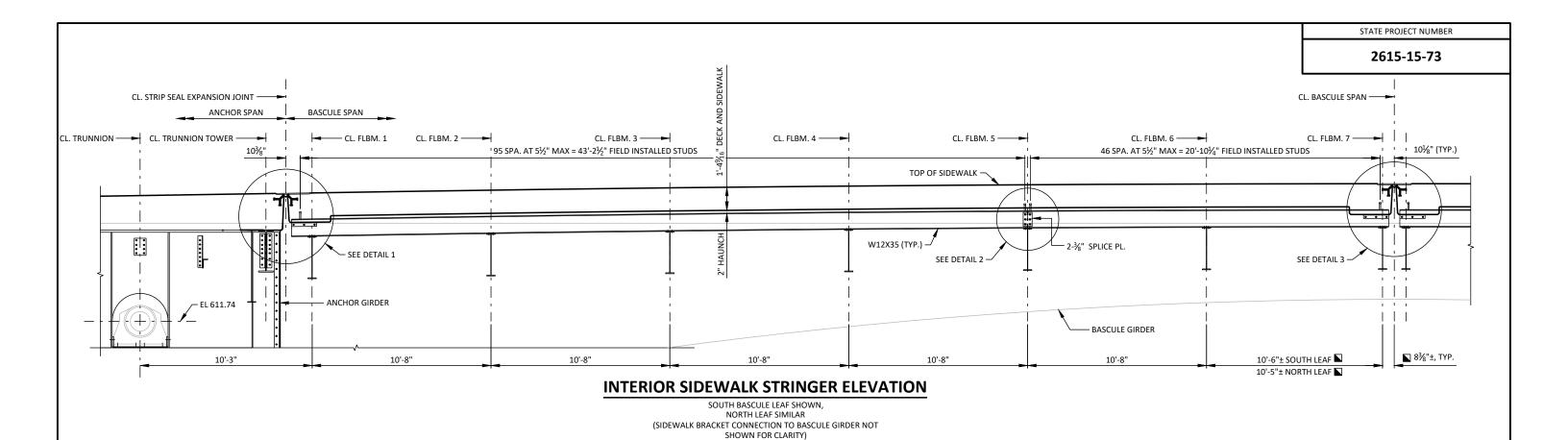


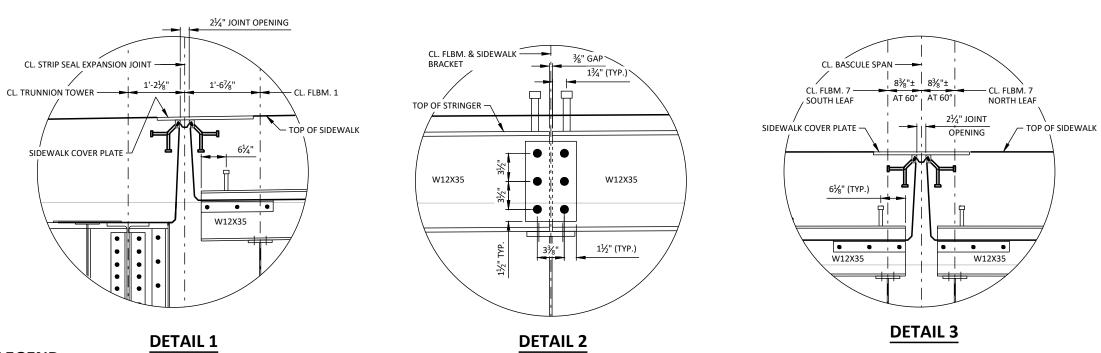












LEGEND

FLBM. = FLOORBEAM

DIMENSION BASED ON EXISTING PLANS AT CENTER BREAK. VERIFY AFTER GIRDERS ARE SET TO LEVEL POSITION.

O NEW BOLT IN EXISTING HOLE

NEW BOLT IN NEW HOLE

EXISTING RIVET TO REMAINEXISTING BOLT TO REMAIN

⊗ EXISTING 1" TURNED BOLT

NOTES:

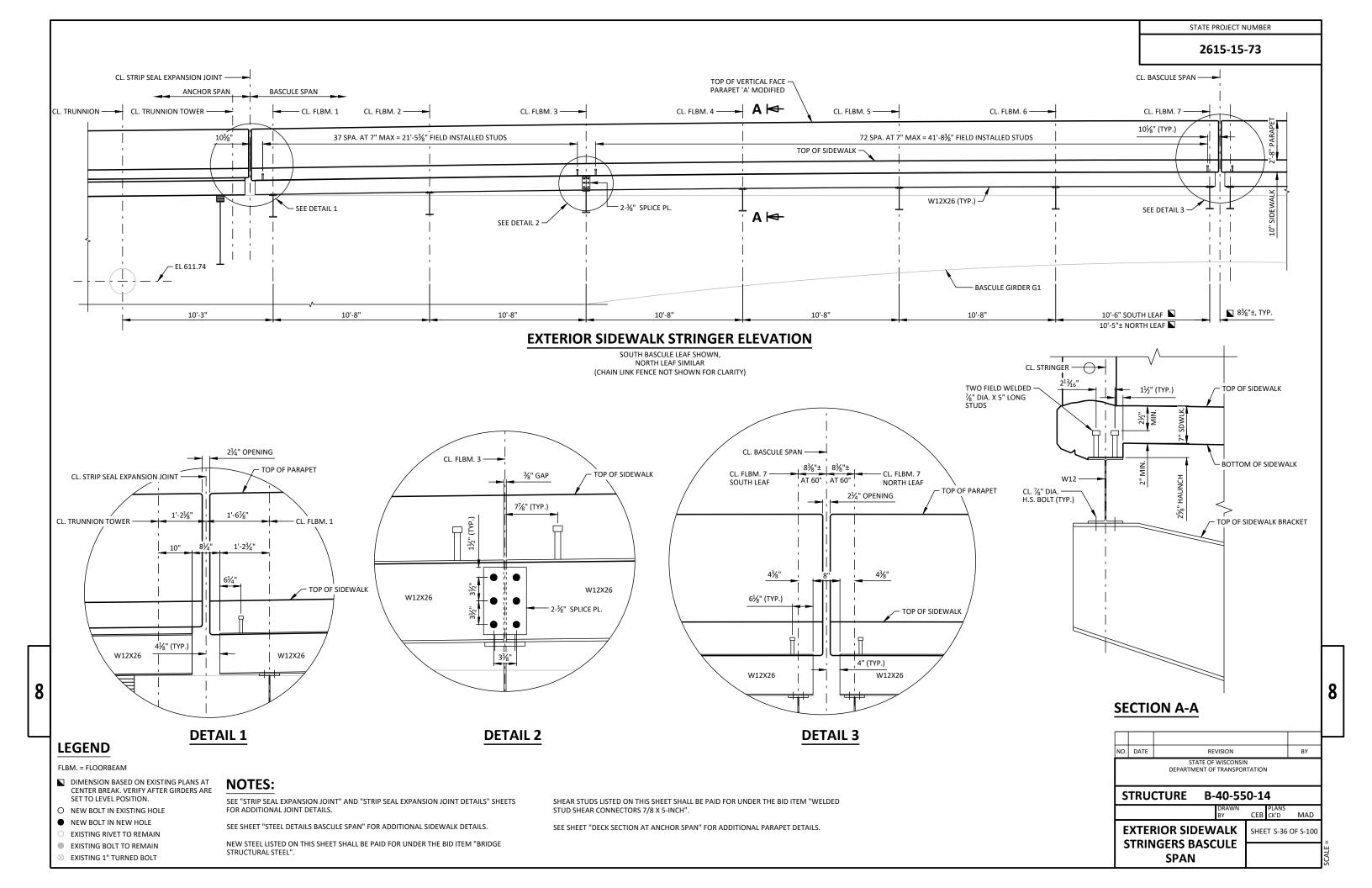
SEE "STRIP SEAL EXPANSION JOINT" AND "STRIP SEAL EXPANSION JOINT DETAILS" SHEETS FOR ADDITIONAL JOINT DETAILS.

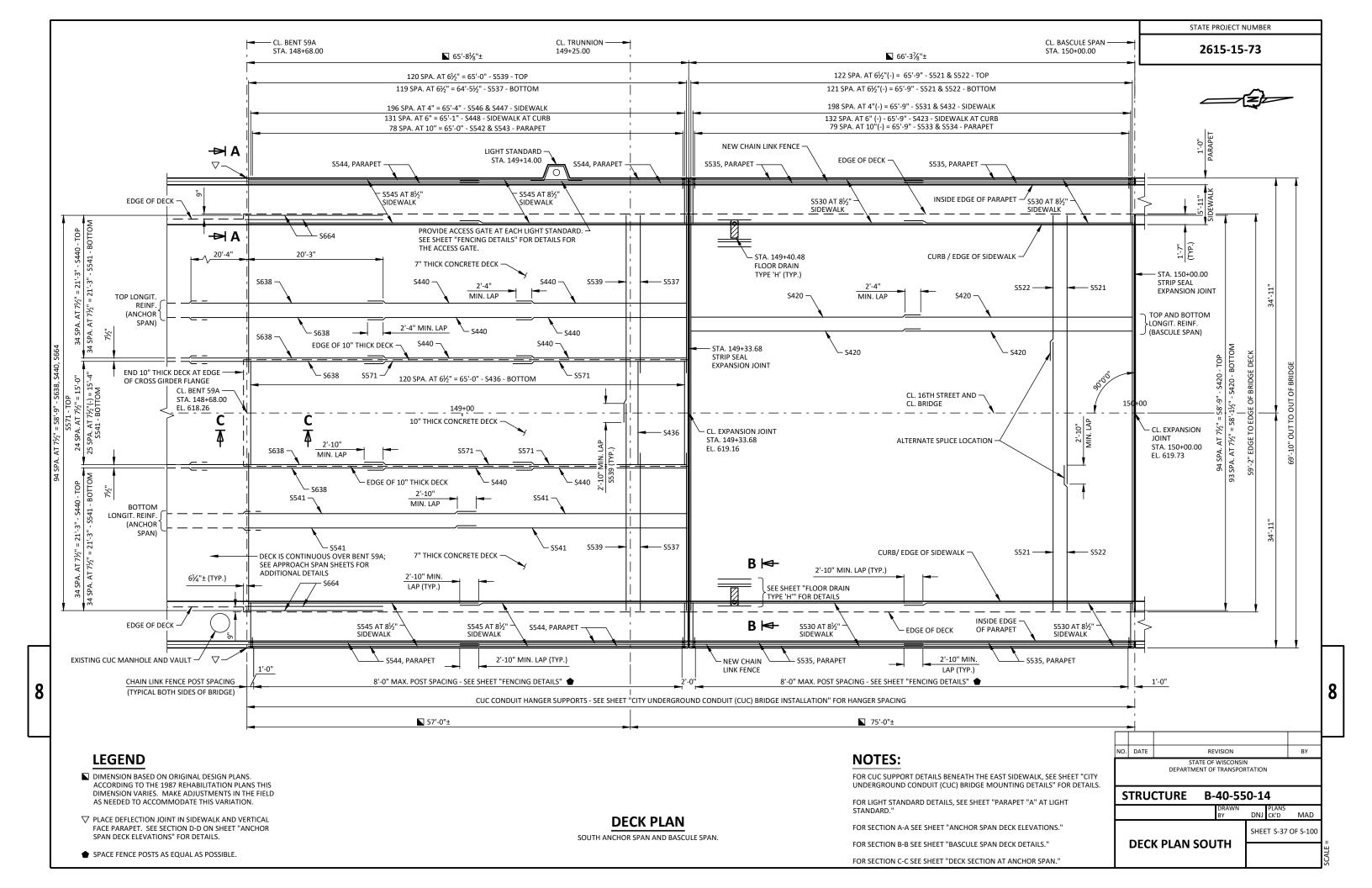
SEE SHEET "STEEL DETAILS BASCULE SPAN" FOR ADDITIONAL SIDEWALK DETAILS.

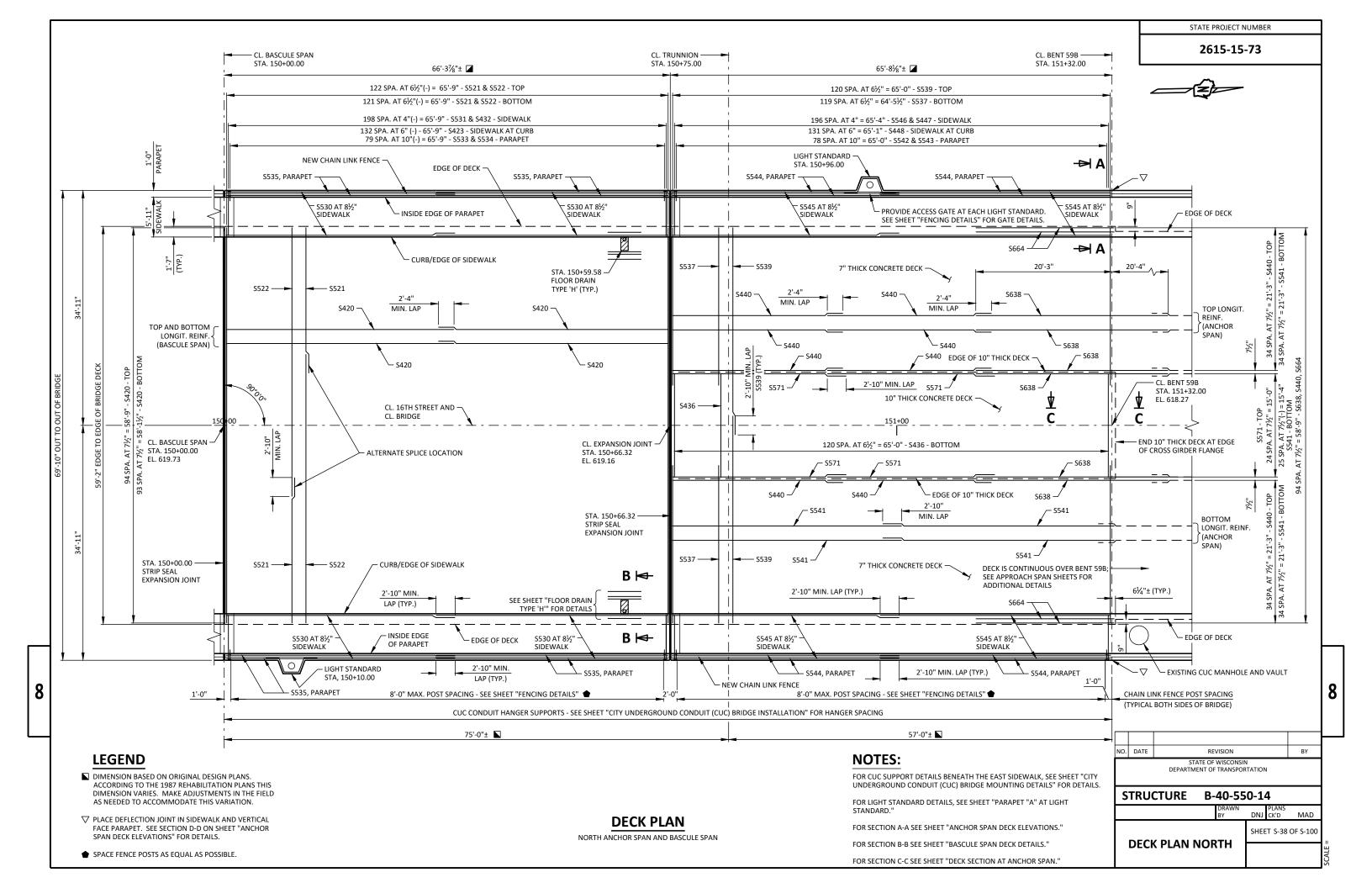
NEW STEEL LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "BRIDGE STRUCTURAL STEEL".

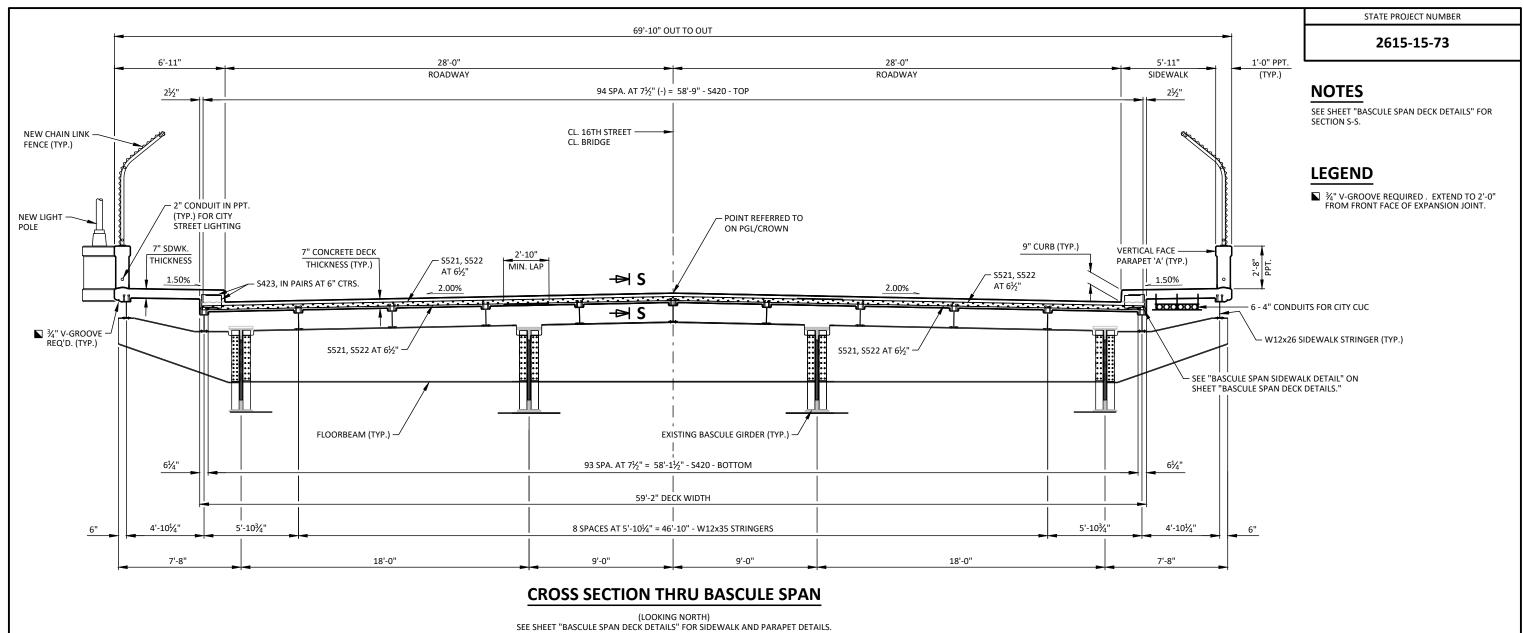
SHEAR STUDS LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH".

NO.	NO. DATE REVISION BY										
		-		WISCONSII TRANSPOR		N					
S	TRU	CTURE	B-	40-55	0-1	4					
				DRAWN BY	CEB	PLANS CK'D	MAD				
INTERIOR SIDEWALK STRINGERS BASCULE						T S-35	OF S-100	.			
3	IKIN	IGERS E SPAN		ULE				SCALE =			







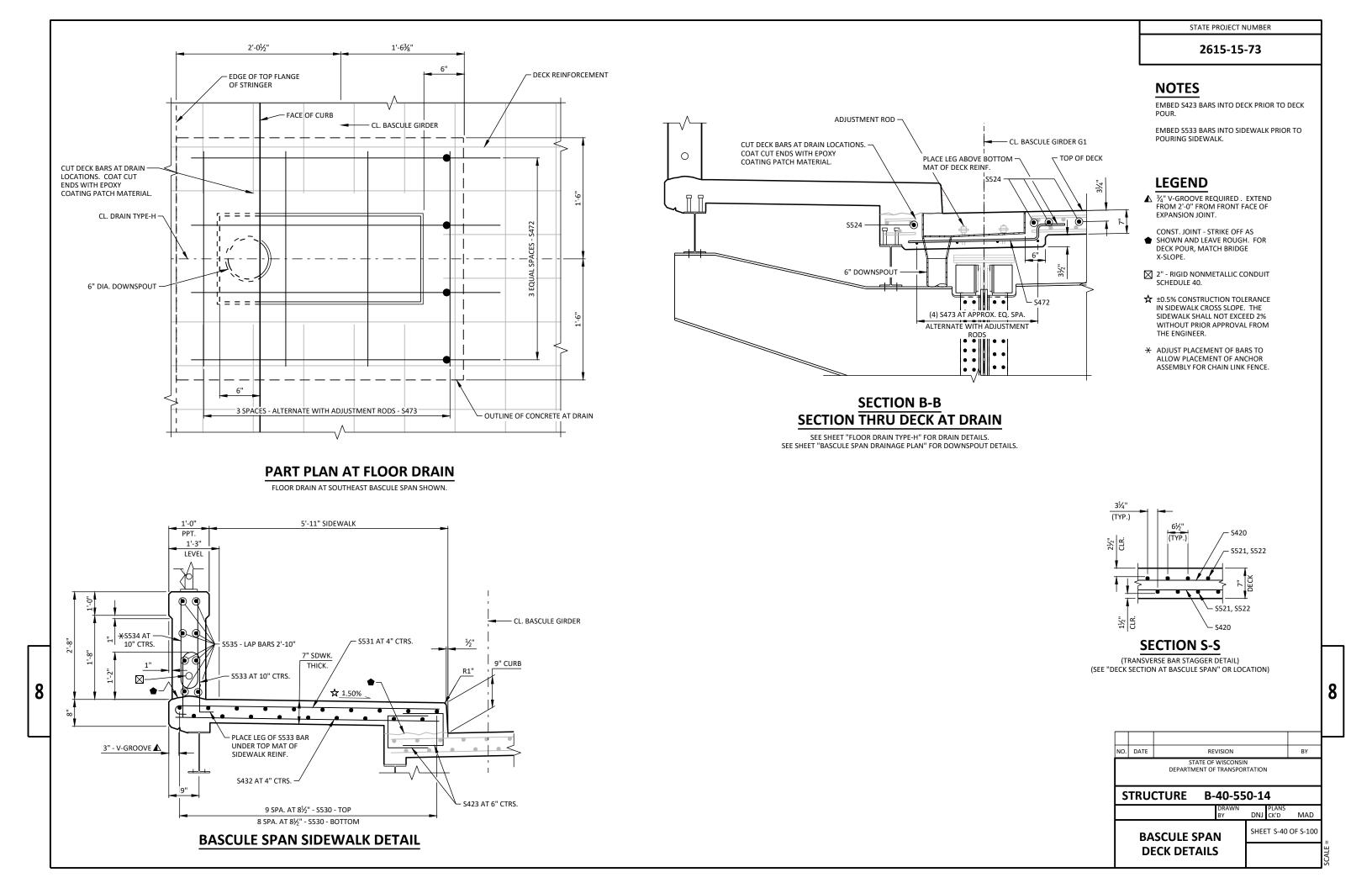


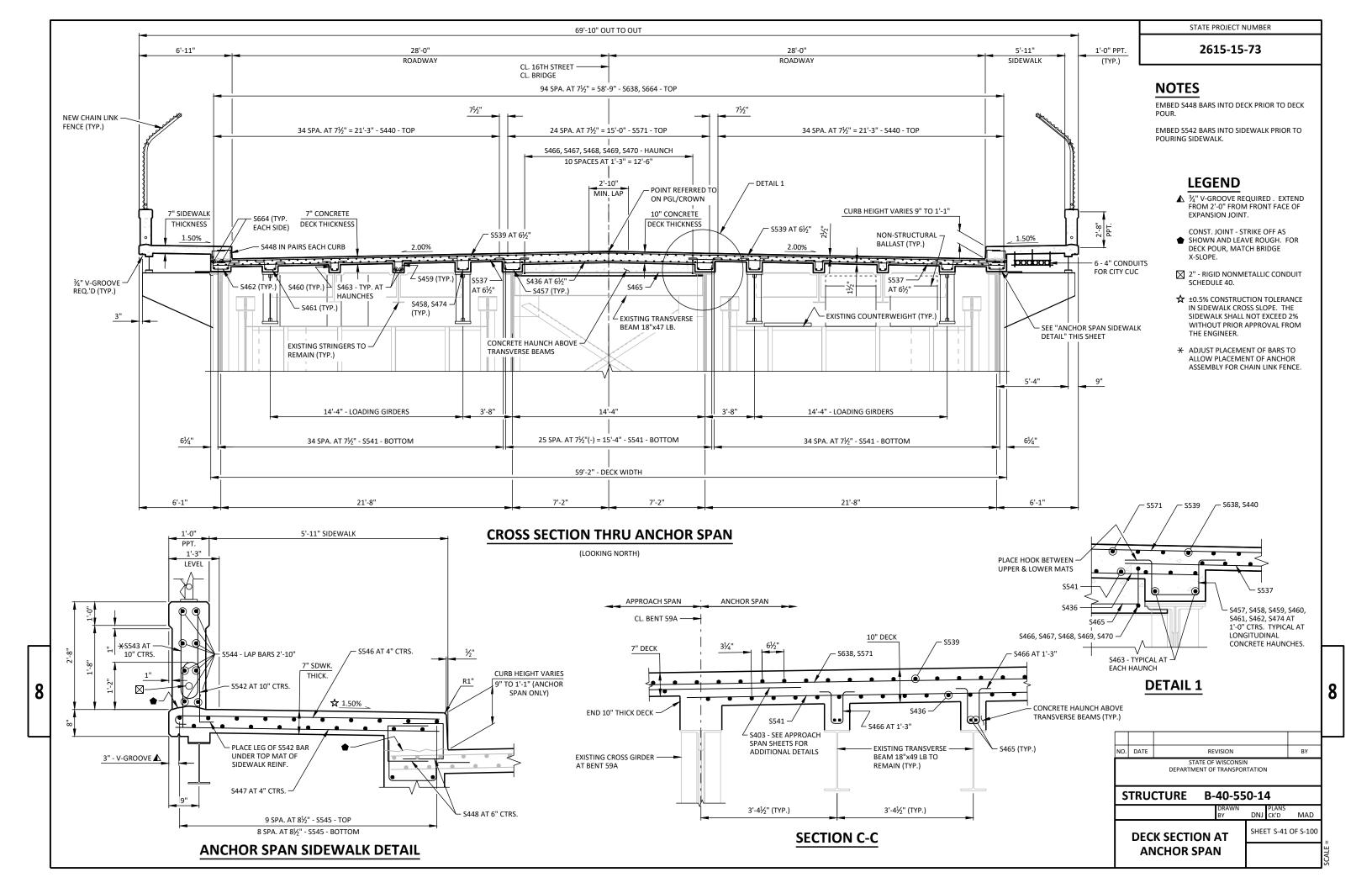
TOP OF DECK ELEVATIONS

LOCATIONS		SOUTH LEAF							NORTH LEAF						
EGCATIONS	FLOORBEAM 1	FLOORBEAM 2	FLOORBEAM 3	FLOORBEAM 4	FLOORBEAM 5	FLOORBEAM 6	FLOORBEAM 7	SPAN	Floorbeam 7	Floorbeam 6	Floorbeam 5	Floorbeam 4	Floorbeam 3	Floorbeam 2	Floorbeam :
WEST SIDEWALK OUTSIDE EDGE	619.46	619.62	619.76	619.87	619.94	619.99	620.01	620.01	620.01	619.99	619.94	619.87	619.76	619.62	619.46
WEST TOP OF CURB	619.38	619.54	619.67	619.78	619.86	619.90	619.92	619.92	619.92	619.90	619.86	619.78	619.67	619.54	619.38
WEST FLOW LINE	618.63	618.79	618.92	619.03	619.11	619.15	619.17	619.17	619.17	619.15	619.11	619.03	618.92	618.79	618.63
WEST BASCULE GIRDER G1	618.65	618.81	618.94	619.05	619.13	619.17	619.19	619.19	619.19	619.17	619.13	619.05	618.94	618.81	618.65
STRINGER 1	618.72	618.88	619.02	619.12	619.20	619.25	619.26	619.26	619.26	619.25	619.20	619.12	619.02	618.88	618.72
STRINGER 2	618.83	619.00	619.13	619.24	619.32	619.36	619.38	619.38	619.38	619.36	619.32	619.24	619.13	619.00	618.83
STRINGER 3	618.95	619.11	619.25	619.36	619.43	619.48	619.50	619.50	619.50	619.48	619.43	619.36	619.25	619.11	618.95
WEST BASCULE GIRDER G2	619.01	619.17	619.30	619.41	619.49	619.53	619.55	619.55	619.55	619.53	619.49	619.41	619.30	619.17	619.01
STRINGER 4	619.07	619.23	619.37	619.47	619.55	619.60	619.61	619.61	619.61	619.60	619.55	619.47	619.37	619.23	619.07
PGL/STRINGER 5	619.19	619.35	619.48	619.59	619.67	619.71	619.73	619.73	619.73	619.71	619.67	619.59	619.48	619.35	619.19
STRINGER 6	619.07	619.23	619.37	619.47	619.55	619.60	619.61	619.61	619.61	619.60	619.55	619.47	619.37	619.23	619.07
EAST BASCULE GIRDER G2	619.01	619.17	619.30	619.41	619.49	619.53	619.55	619.55	619.55	619.53	619.49	619.41	619.30	619.17	619.01
STRINGER 7	618.95	619.11	619.25	619.36	619.43	619.48	619.50	619.50	619.50	619.48	619.43	619.36	619.25	619.11	618.95
STRINGER 8	618.83	619.00	619.13	619.24	619.32	619.36	619.38	619.38	619.38	619.36	619.32	619.24	619.13	619.00	618.83
STRINGER 9	618.72	618.88	619.02	619.12	619.20	619.25	619.26	619.26	619.26	619.25	619.20	619.12	619.02	618.88	618.72
EAST BASCULE GIRDER G1	618.65	618.81	618.94	619.05	619.13	619.17	619.19	619.19	619.19	619.17	619.13	619.05	618.94	618.81	618.65
EAST FLOW LINE	618.63	618.79	618.92	619.03	619.11	619.15	619.17	619.17	619.17	619.15	619.11	619.03	618.92	618.79	618.63
EAST TOP OF CURB	619.38	619.54	619.67	619.78	619.86	619.90	619.92	619.92	619.92	619.90	619.86	619.78	619.67	619.54	619.38
EAST SIDEWALK OUTSIDE EDGE	619.46	619.62	619.76	619.87	619.94	619.99	620.01	620.01	620.01	619.99	619.94	619.87	619.76	619.62	619.46

D. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** DNJ CK'D MAD **DECK SECTION AT** SHEET S-39 OF S-100

BASCULE SPAN AND DECK ELEVATIONS





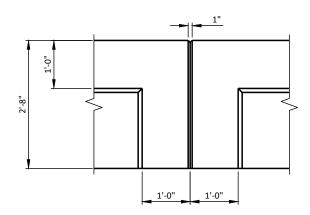
LOCATIONS	CL. EXPANSION JOINT	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	CL. BENT 59B
STATION	150+66.32	150+72.89	150+79.46	150+86.02	150+92.59	150+99.16	151+05.73	151+12.30	151+18.86	151+25.43	151+32.00
WEST SIDEWALK OUTSIDE EDGE	619.43	619.36	619.29	619.23	619.16	619.10	619.05	619.00	618.96	618.92	618.88
WEST TOP OF CURB	619.35	619.28	619.21	619.14	619.08	619.02	618.97	618.92	618.87	618.83	618.80
WEST FLOW LINE	618.60	618.50	618.39	618.29	618.19	618.10	618.02	617.93	617.85	617.78	617.71
LOADING GIRDER LG1	618.66	618.55	618.45	618.35	618.25	618.16	618.07	617.99	617.91	617.84	617.77
STRINGER 1	618.75	618.65	618.54	618.44	618.35	618.25	618.17	618.08	618.01	617.93	617.86
STRINGER 2	618.85	618.74	618.64	618.54	618.44	618.35	618.26	618.18	618.10	618.03	617.96
LOADING GIRDER LG2	618.94	618.84	618.74	618.63	618.54	618.45	618.36	618.28	618.20	618.12	618.06
ANCHOR GIRDER AG2	619.02	618.91	618.81	618.71	618.61	618.52	618.43	618.35	618.27	618.20	618.13
PGL / CL. BRIDGE	619.16	619.06	618.95	618.85	618.75	618.66	618.58	618.49	618.41	618.34	618.27
ANCHOR GIRDER AG2	619.02	618.91	618.81	618.71	618.61	618.52	618.43	618.35	618.27	618.20	618.13
LOADING GIRDER LG2	618.94	618.84	618.74	618.63	618.54	618.45	618.36	618.28	618.20	618.12	618.06
STRINGER 2	618.85	618.74	618.64	618.54	618.44	618.35	618.26	618.18	618.10	618.03	617.96
STRINGER 1	618.75	618.65	618.54	618.44	618.35	618.25	618.17	618.08	618.01	617.93	617.86
LOADING GIRDER LG1	618.66	618.55	618.45	618.35	618.25	618.16	618.07	617.99	617.91	617.84	617.77
EAST FLOW LINE	618.60	618.50	618.39	618.29	618.19	618.10	618.02	617.93	617.85	617.78	617.71
EAST TOP OF CURB	619.35	619.28	619.21	619.14	619.08	619.02	618.97	618.92	618.87	618.83	618.80
EAST SIDEWALK OUTSIDE EDGE	619.43	619.36	619.29	619.23	619.16	619.10	619.05	619.00	618.96	618.92	618.88

2615-15-73 - FILL WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. - ½" PLASTIC OR ZINC PLATE. -PROVIDE NECESSARY HOLES FOR UTILITIES. "v" groove Δ **SECTION E-E** - CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH. FOR DECK POUR, MATCH BRIDGE X-SLOPE. **SECTION A-A** SHOWING DEFLECTION JOINT IN PARAPET AND SIDEWALK. FOR LOCATION OF SECTION A-A, SEE SHEETS "DECK PLAN SOUTH" AND "DECK PLAN NORTH."

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF ½" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION A-A BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

TOP OF DECK ELEVATIONS - SOUTH ANCHOR SPAN

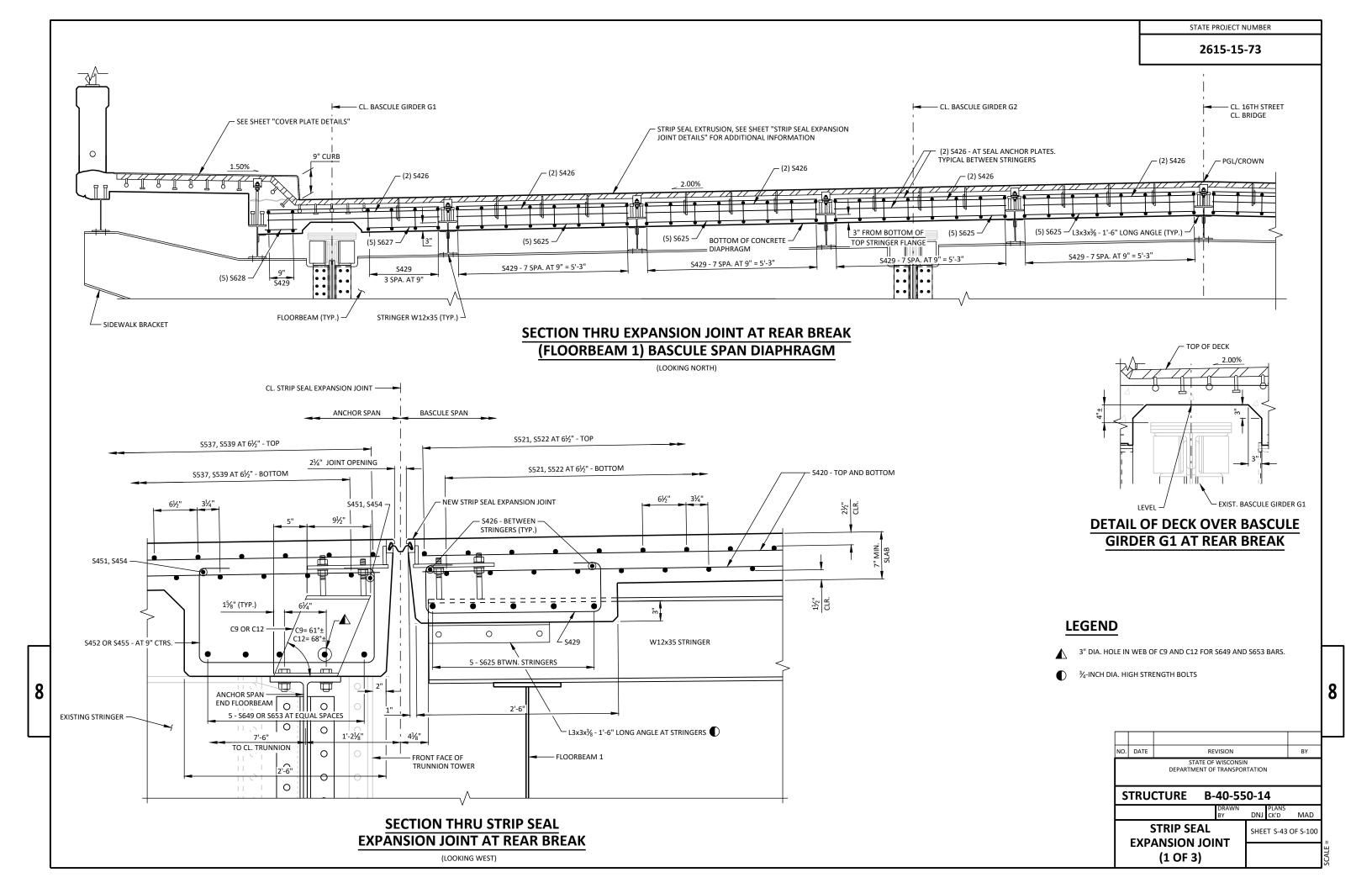
LOCATIONS	CL. BENT 59A	0.1 SPAN	0.2 SPAN	0.3 SPAN	0.4 SPAN	0.5 SPAN	0.6 SPAN	0.7 SPAN	0.8 SPAN	0.9 SPAN	CL. EXPANSION JOINT
STATION	148+68.00	148+74.57	148+81.14	148+87.70	148+94.27	149+00.84	149+07.41	149+13.97	149+20.54	149+27.11	149+33.68
WEST SIDEWALK OUTSIDE EDGE	618.87	618.91	618.95	619.00	619.05	619.10	619.16	619.23	619.29	619.36	619.43
WEST TOP OF CURB	618.78	618.82	618.87	618.91	618.96	619.02	619.08	619.14	619.21	619.28	619.35
WEST FLOW LINE	617.70	617.77	617.85	617.93	618.01	618.10	618.19	618.29	618.39	618.50	618.60
LOADING GIRDER LG1	617.76	617.83	617.91	617.99	618.07	618.16	618.25	618.35	618.45	618.55	618.66
STRINGER 1	617.85	617.93	618.00	618.08	618.17	618.25	618.35	618.44	618.54	618.65	618.75
STRINGER 2	617.95	618.02	618.10	618.18	618.26	618.35	618.44	618.54	618.64	618.74	618.85
LOADING GIRDER LG2	618.04	618.12	618.19	618.27	618.36	618.44	618.54	618.63	618.74	618.84	618.94
ANCHOR GIRDER AG2	618.12	618.19	618.27	618.35	618.43	618.52	618.61	618.71	618.81	618.91	619.02
PGL / CL. BRIDGE	618.26	618.33	618.41	618.49	618.57	618.66	618.75	618.85	618.95	619.06	619.16
ANCHOR GIRDER AG2	618.12	618.19	618.27	618.35	618.43	618.52	618.61	618.71	618.81	618.91	619.02
LOADING GIRDER LG2	618.04	618.12	618.19	618.27	618.36	618.44	618.54	618.63	618.74	618.84	618.94
STRINGER 2	617.95	618.02	618.10	618.18	618.26	618.35	618.44	618.54	618.64	618.74	618.85
STRINGER 1	617.85	617.93	618.00	618.08	618.17	618.25	618.35	618.44	618.54	618.65	618.75
LOADING GIRDER LG1	617.76	617.83	617.91	617.99	618.07	618.16	618.25	618.35	618.45	618.55	618.66
EAST FLOW LINE	617.70	617.77	617.85	617.93	618.01	618.10	618.19	618.29	618.39	618.50	618.60
EAST TOP OF CURB	618.78	618.82	618.87	618.91	618.96	619.02	619.08	619.14	619.21	619.28	619.35
EAST SIDEWALK OUTSIDE EDGE	618.87	618.91	618.95	619.00	619.05	619.10	619.16	619.23	619.29	619.36	619.43

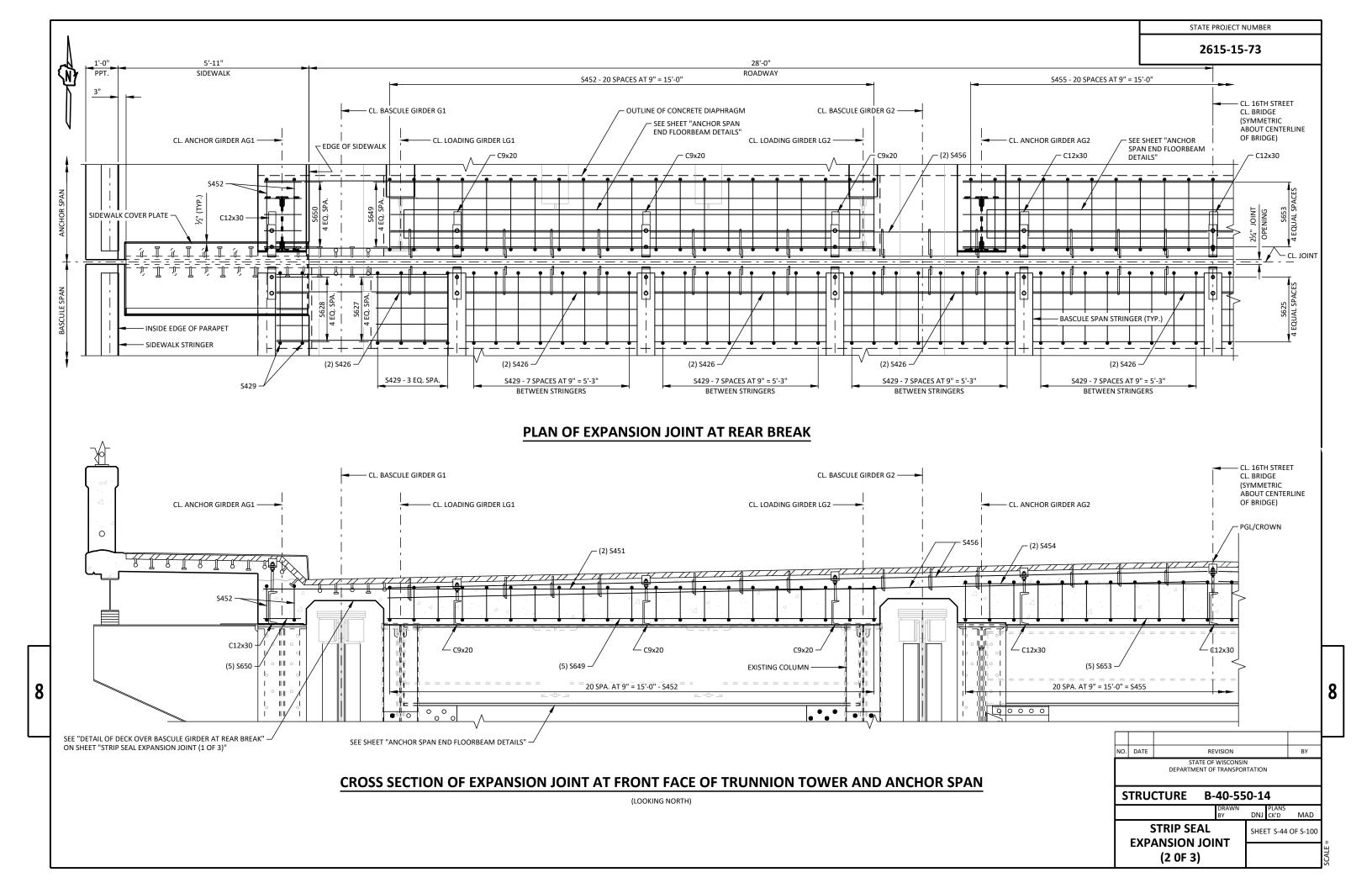


PARAPET DETAIL AT DEFLECTION JOINT AND EXPANSION JOINTS

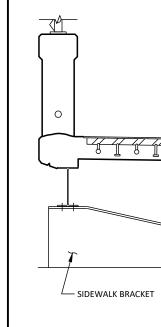
> NO. DATE STATE OF WISCONSIN
> DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** DNJ CK'D MAD SHEET S-42 OF S-100 **ANCHOR SPAN DECK ELEVATIONS**

STATE PROJECT NUMBER

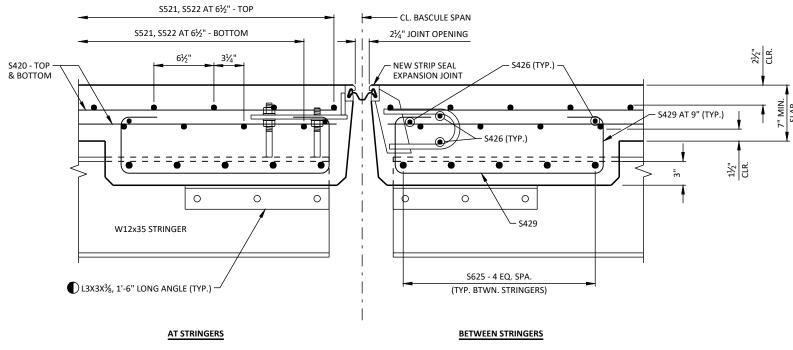




STATE PROJECT NUMBER 2615-15-73 – CL. 16TH STREET CL. BRIDGE — CL. BASCULE GIRDER G2 (SYMMETRIC ABOUT STRIP SEAL EXTRUSION, SEE SHEET "STRIP SEAL EXPANSION JOINT DETAILS" FOR ADDITIONAL INFORMATION CENTERLINE OF BRIDGE) (2) S426 - AT SEAL ANCHOR PLATES. TYPICAL BETWEEN STRINGERS - (2) S426 - PGL/CROWN - (2) S426 /- (2) S426 3" FROM BOTTOM OF ∠ (5) S625 TOP FLANGE OF STRINGER ∠_{(5) S625} BOTTOM OF CONCRETE DIAPHRAGM S429 - 7 SPA. AT 9" = 5'-3" TYPICAL BETWEEN STRINGERS TYPICAL BETWEEN STRINGERS TYPICAL BETWEEN STRINGERS TYPICAL BETWEEN STRINGERS _ (LOOKING NORTH) - S429 AT 9" (TYP.) **LEGEND** → ¾-INCH DIA. HIGH STRENGTH BOLTS NO. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** DNJ CK'D MAD **STRIP SEAL** SHEET S-45 OF S-100 **EXPANSION JOINT** (3 OF 3)



SECTION THRU EXPANSION JOINT AT CENTER BREAK



CL. BASCULE GIRDER G1

· L3x3x $\frac{1}{8}$, $\frac{1}{1}$ '-6" LONG ANGLE (TYP.) $\frac{1}{1}$

S429 - 7 SPA. AT 9" = 5/-3"

FLOORBEAM (TYP.) -

TYPICAL BETWEEN STRINGERS

/- (2) S426

STRINGER W12x35 (TYP.)

∠_{(5) S625}

9" CURB

- SEE SHEET "COVER PLATE DETAILS"

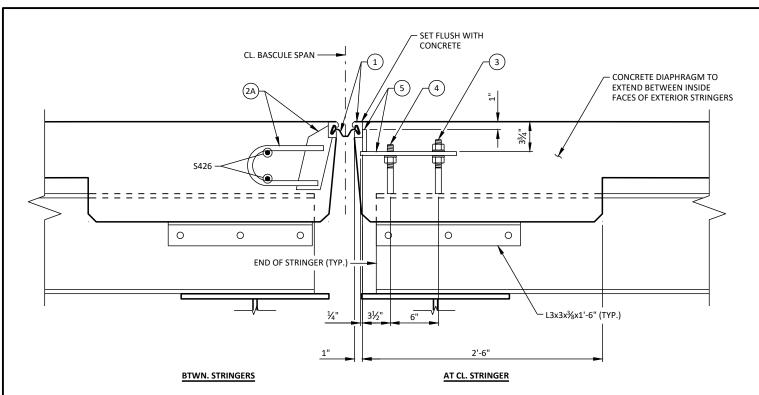
SECTION THRU STRIP SEAL EXPANSION JOINT AT CENTER BREAK

2615-15-73

LEGEND

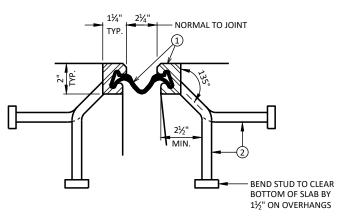
- 1) NEOPRENE STRIP SEAL (4 INCH) AND STEEL EXTRUSIONS.
- 2 STUDS ¾" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.

- (4) 3/4" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- (5) FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA.
- $3\!\!\!/\!\!\!/$ " DIA. X $11\!\!\!/\!\!\!/$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS $1\!\!\!/\!\!\!/_6$ " BELOW PLATE SURFACE.
- (8) 3/4" DIA. X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- 9 ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
- 1 X 5 SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- SIDEWALK COVER PLATE $\frac{3}{2}$ " X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.



SECTION THRU JOINT AT CENTER BREAK

NORMAL TO CL. SUPERSTRUCTURE
STRIP SEAL JOINT COMPONENTS INDICATED IN THE LEGEND APPLY TO THE CENTER BREAK AND REAR BREAKS.

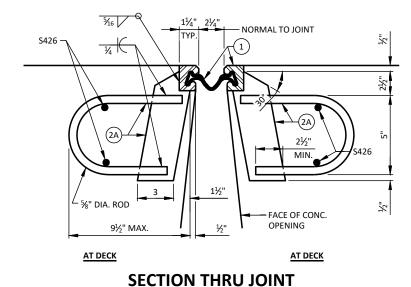


1¾" R. 1½"

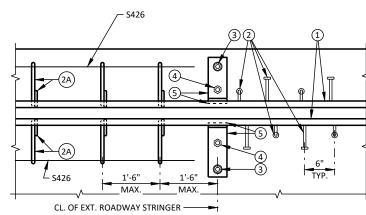
ALTERNATE STRIP SEAL ANCHOR

SECTION THRU JOINT

BASCULE GIRDER TO EDGE OF DECK AND AT PARAPETS AND SIDEWALKS



ROADWAY TRAFFIC AREA BETWEEN EXTERIOR ROADWAY STRINGERS



PART PLAN AT CENTER BREAK

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING OR GALVANIZING REQUIREMENTS. IF USED, ANCHOR PLATES SHALL BE PROVIDED 3" FROM EACH SIDE OF THE FIELD SPLICE. DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

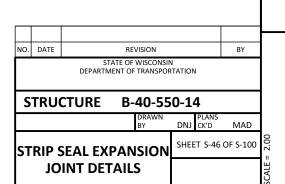
AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FARRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

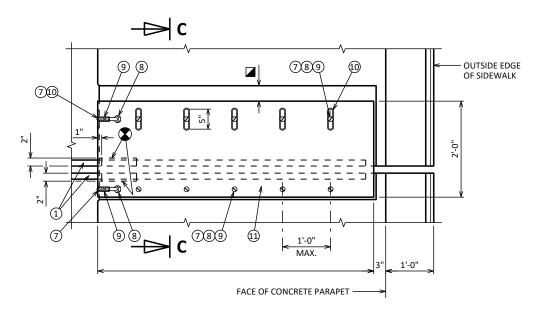
ANCHOR SYSTEM NO. 8 AND NO. 9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID AT THE UNIT PRICE BID FOR "EXPANSION DEVICE."

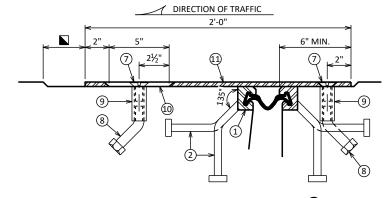


STATE PROJECT NUMBER

2615-15-73



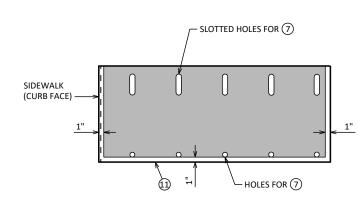
PLAN AT SIDEWALK



SECTION C-C

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

■ JOINT OPENING DIMENSION ALONG SKEW PLUS ½".



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY.

APPROVED SLIP-RESISTANT APPLIED SURFACES FOR STEEL PLATES								
PRODUCT	MANUFACTURER	CONTACT AT						
SLIPNOT GRADE 2, STEEL	W. S. MOLNAR COMPANY	1-800-SLIPNOT						
ALGRIP, STEEL	ROSS TECHNOLOGY CORP.	1-800-345-8170						

NO. DATE REVISION BY

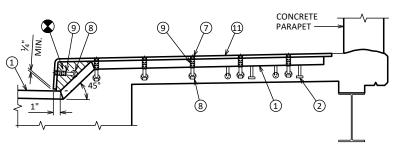
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-550-14

DRAWN
BY
DNJ
CK'D
MAD

SHEET S-47 OF S-100
E
DETAILS

8



SECTION AT SIDEWALK

BILL OF BARS - SOUTH BASCULE SPAN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS TOTAL WEIGHT = 36,950 L						
S420	378	34' - 4"			DECK - TOP AND BOTTOM	LONGIT
S521	245	40' - 0"			DECK - TOP AND BOTTOM	TRANS
S522	245	21' - 8"			DECK - TOP AND BOTTOM	TRANS
S423	532	2' - 5"	Х		DECK - AT CURB	VERT
S524	8	5' - 0"			DECK AT DECK DRAIN	LONGIT
S625	90	5' - 4"			EXP. JOINT - DIAPHRAGM - BOTTOM	TRANS
S426	80	5' - 4"			EXP. JOINT - DIAPHRAGM - TOP	TRANS
S627	10	2' - 3"			EXP. JOINT - DIAPHRAGM AT REAR BREAK	TRANS
S628	10	1' - 0"			EXP. JOINT - DIAPHRAGM AT REAR BREAK	TRANS
S429	156	3' - 9"	Х		EXP. JOINT - STIRRUP	VERT
S530	76	34' - 7"			SIDEWALK - TOP AND BOTTOM	LONGIT
S531	398	7' - 2"	Х		SIDEWALK - TOP	TRANS
S432	398	6' - 7"			SIDEWALK - BOTTOM	TRANS
S533	160	4' - 4"	Х		SIDEWALK - AT PARAPET	VERT
S534	160	4' - 9"	Х		PARAPET	VERT
S535	32	34' - 7"			PARAPET	LONGIT
S472	8	4' - 1"	Х		DECK AT DECK DRAIN	VERT
S473	8	2' - 8"			DECK AT DECK DRAIN	HORIZ

BILL OF BARS - SOUTH ANCHOR SPAN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATE	D BARS				TOTAL WEIGHT =	46,210 LBS
S436	121	15' - 6"			DECK - BOTTOM - CENTER BAY	TRANS
S537	240	23' - 6"			DECK - BOTTOM - OUTSIDE BAYS	TRANS
S638	95	40' - 7"			DECK - TOP - OVER BENT 59A	LONGI
S539	242	30' - 11"			DECK - TOP	TRANS
S440	140	25' - 11"			DECK - TOP	LONGI
S541	192	34' - 5"			DECK - TOP & BOTTOM	LONGI
S542	158	4' - 4"	Х		SIDEWALK - AT PARAPET	VER
S543	158	4' - 9"	Х		PARAPET	VER
S544	32	34' - 4"			PARAPET	LONGI
S545	76	34' - 4"			SIDEWALK - TOP & BOTTOM	LONGI
S546	394	7' - 2"	Х		SIDEWALK - TOP	TRANS
S447	394	6' - 7"			SIDEWALK - BOTTOM	TRANS
S448	528	2' - 7"	Х	Δ	DECK - AT CURB	VER
S649	10	15' - 0"		_	EXP. JOINT - DIAPH OUTSIDE BAYS - BOTTOM	TRANS
S650	10	1' - 2"			EXP. JOINT - DIAPH EXT. ANCH. GIRD BOTTOM	TRANS
S451	4	18' - 11"			EXP. JOINT - DIAPH OUTSIDE BAYS - TOP	TRANS
S452	46	4' - 7"	Х		EXP. JOINT - STIRRUP - OUTSIDE BAYS & A.G.1	VER
S653	5	15' - 6"			EXP. JOINT - DIAPH CENTER BAY - BOTTOM	TRANS
S454	2	15' - 6"			EXP. JOINT - DIAPH CENTER BAY - TOP	TRANS
S455	21	4' - 11"	Х		EXP. JOINT - STIRRUP - CENTER BAY	VER
S456	4	25' - 5"			EXP. JOINT - EXTRUSION	TRANS
S457	124	3' - 11"	Х	Δ	HAUNCH - HAT BAR - AG2	VER
S458	72	3' - 9"	Х	Δ	HAUNCH - HAT BAR - LG2	VER
S459	112	3' - 0"	Х	Δ	HAUNCH - HAT BAR - STRINGER 2	VER
S460	100	2' - 11"	X	Δ	HAUNCH - HAT BAR - STRINGER 1	VER
S461	72	3' - 1"	Х	Δ	HAUNCH - HAT BAR - LG1	VER
S462	72	3' - 5"	X	Δ	HAUNCH - HAT BAR - AG1	VER ⁻
S463	48	32' - 5"			HAUNCH - BOTTOM	LONGI
S664	4	20' - 7"			DECK - TOP	LONGI
S465	36	12' - 6"			HAUNCH - BOTTOM - TRANSVERSE BEAM	TRANS
S466	55	2' - 1"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VER ⁻
S467	44	2' - 5"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VER ⁻
S468	33	2' - 9"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VER ⁻
S469	33	3' - 1"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VER ⁻
S470	33	3' - 5"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VER.
S571	50	26' - 2"			DECK - TOP - CENTER BAY	LONGI
S474	52	2' - 5"	X	Δ	HAUNCH - HAT BAR - LG2	VER:

BILL OF BARS - NORTH BASCULE SPAN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS TOTAL WEIGHT = 36,950 LBS						
S420	378	34' - 4"			DECK - TOP AND BOTTOM	LONGIT
S521	245	40' - 0"			DECK - TOP AND BOTTOM	TRANS
S522	245	21' - 8"			DECK - TOP AND BOTTOM	TRANS
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S524	8	5' - 0"			DECK AT DECK DRAIN	LONGIT
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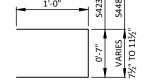
BILL OF BARS - NORTH ANCHOR SPAN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS TOTAL WEIGHT = 46,210 LB						= 46,210 LBS
S436	121	15' - 6"			DECK - BOTTOM - CENTER BAY	TRANS
S537	240	23' - 6"			DECK - BOTTOM - OUTSIDE BAYS	TRANS
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S448	528	2' - 7"	Х	Δ	DECK - AT CURB	VERT
S649	10	15' - 0"			EXP. JOINT - DIAPH OUTSIDE BAYS - BOTTOM	TRANS
S650	10	1' - 2"			EXP. JOINT - DIAPH EXT. ANCH. GIRD BOTTOM	TRANS
S451	4	18' - 11"			EXP. JOINT - DIAPH OUTSIDE BAYS - TOP	TRANS
S452	46	4' - 7"	Х		EXP. JOINT - STIRRUP - OUTSIDE BAYS & A.G.1	VERT
S653	5	15' - 6"			EXP. JOINT - DIAPH CENTER BAY - BOTTOM	TRANS
S454	2	15' - 6"			EXP. JOINT - DIAPH CENTER BAY - TOP	TRANS
S455	21	4' - 11"	Х		EXP. JOINT - STIRRUP - CENTER BAY	VERT
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S459	112	3' - 0"	Х	Δ	HAUNCH - HAT BAR - STRINGER 2	VERT
S460	100	2' - 11"	Х	Δ	HAUNCH - HAT BAR - STRINGER 1	VERT
S461	72	3' - 1"	Х	Δ	HAUNCH - HAT BAR - LG1	VERT
S462	72	3' - 5"	Х	Δ	HAUNCH - HAT BAR - AG1	VERT
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S465	36	12' - 6"			HAUNCH - BOTTOM - TRANSVERSE BEAM	TRANS
S466	55	2' - 1"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VERT
S467	44	2' - 5"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VERT
S468	33	2' - 9"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VERT
S469	33	3' - 1"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VERT
S470	33	3' - 5"	Х		HAUNCH - HAT BAR - TRANSVERSE BEAM	VERT
S571	50	26' - 2"			DECK - TOP - CENTER BAY	LONGIT
S474	52	2' - 5"	Х	Δ	HAUNCH - HAT BAR - LG2	VERT

BAR SERIES TABLE

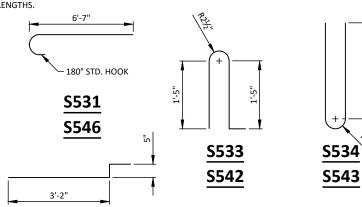
BAR MARK	NO. REQ'D.	LENGTH					
S448	4 SERIES OF 132	2'-5½" TO 2'-9½"					
S457	4 SERIES OF 62	3'-0" TO 4'-10"					
S458	4 SERIES OF 36	3'-1" TO 4'-4"					
S459	4 SERIES OF 56	2'-2" TO 3'-10"					
S460	4 SERIES OF 50	2'-2" TO 3'-8"					
S461	4 SERIES OF 36	2'-6" TO 3'-8"					
S462	4 SERIES OF 36	2'-11" TO 3'-11"					
S474	4 SERIES OF 26	2'-2" TO 2'-9"					

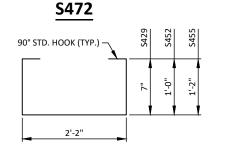


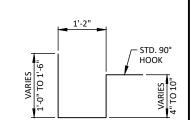
STATE PROJECT NUMBER

2615-15-73

Δ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH
AND SHOULD ONLY BE USED FOR BAR WEIGHT
CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL



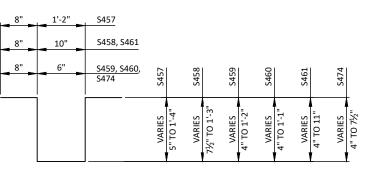




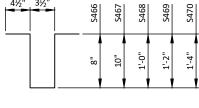
S462

8

S429, S452, S455



S457, S458, S459, S460, S461, S474



S466, S467, S468, S469, S470 NO. DATE REVISION BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

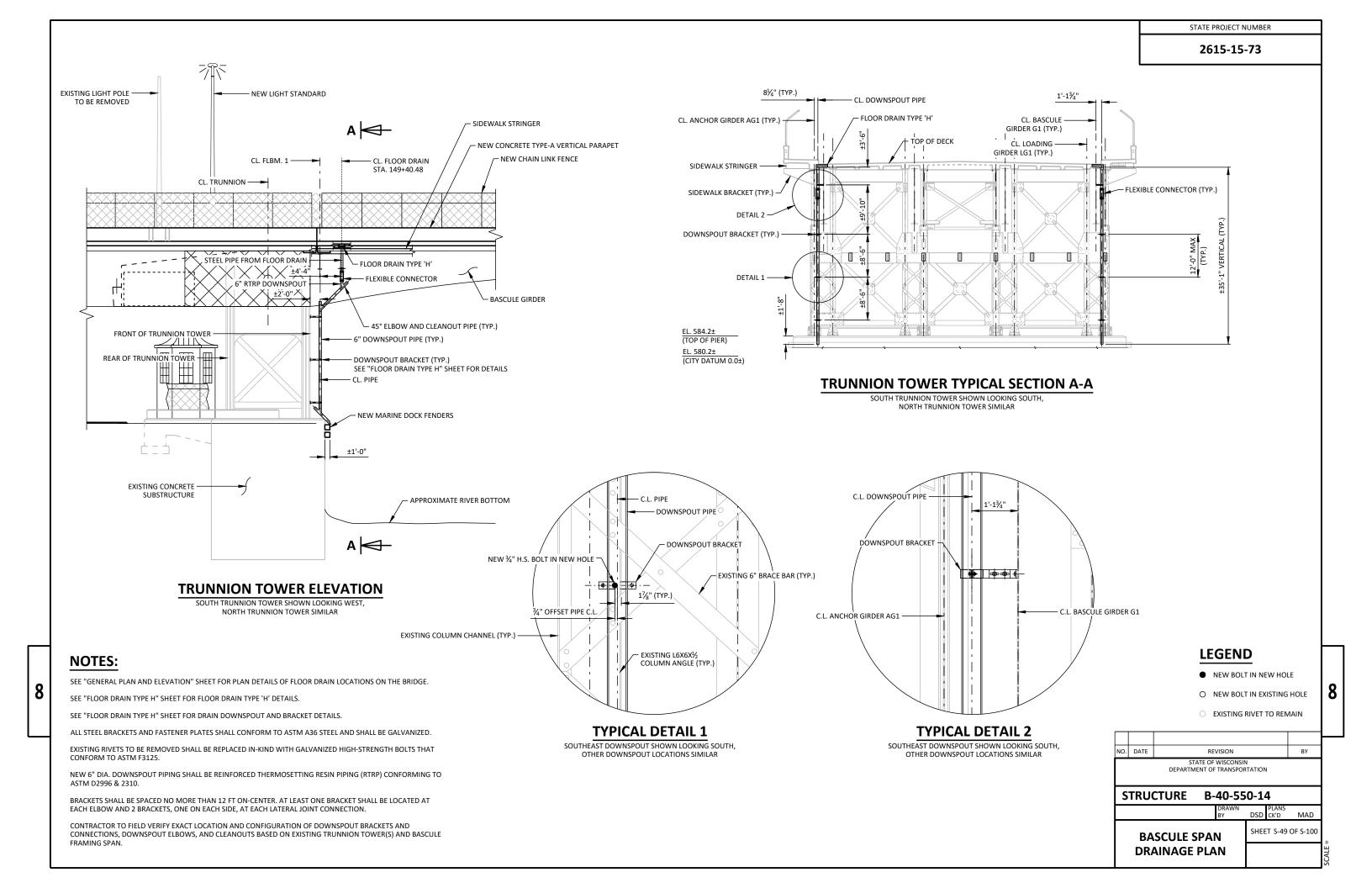
STRUCTURE B-40-550-14

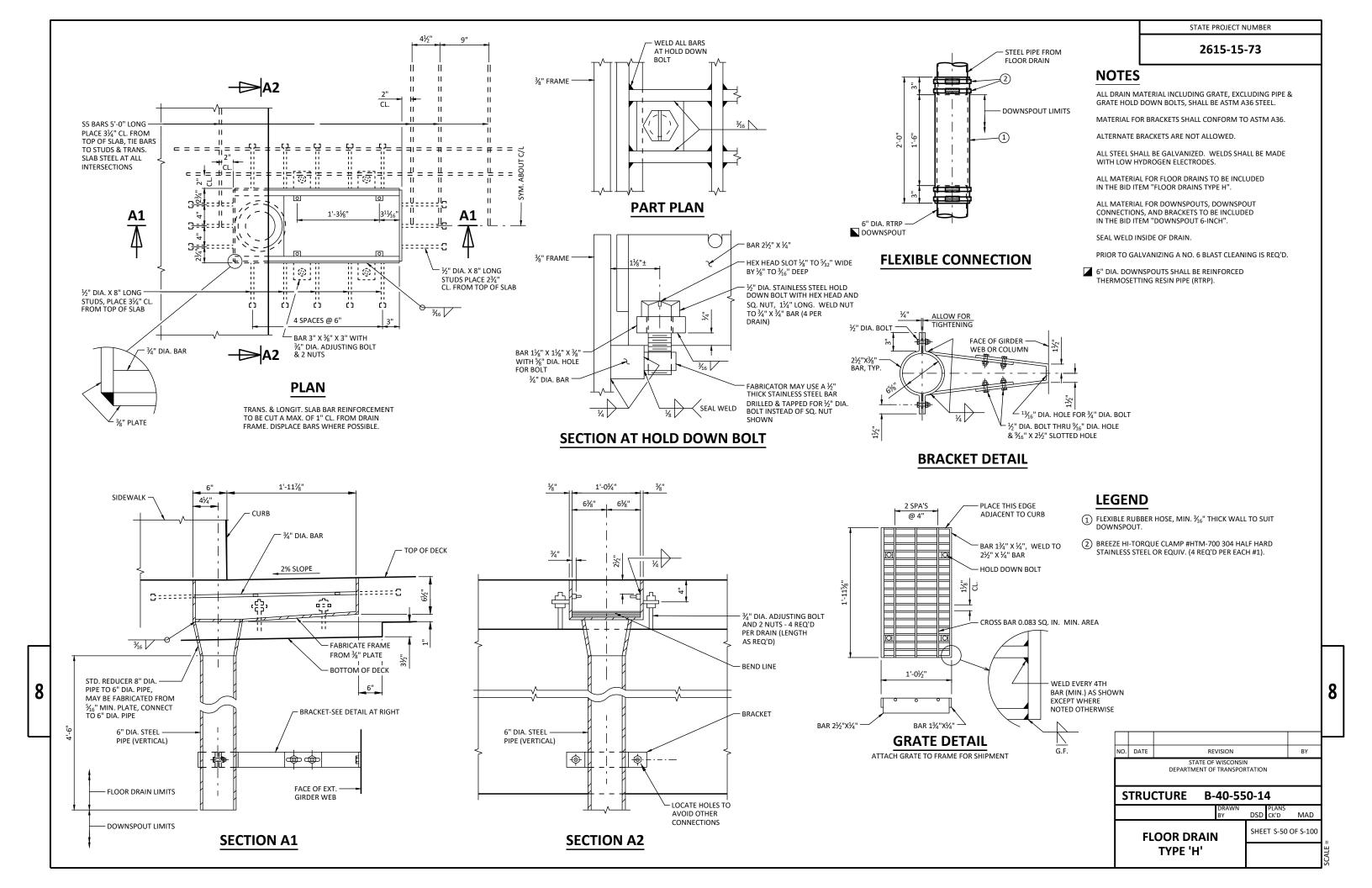
DRAWN BY DNJ PLANS BY DNJ PLANS CK'D MAD

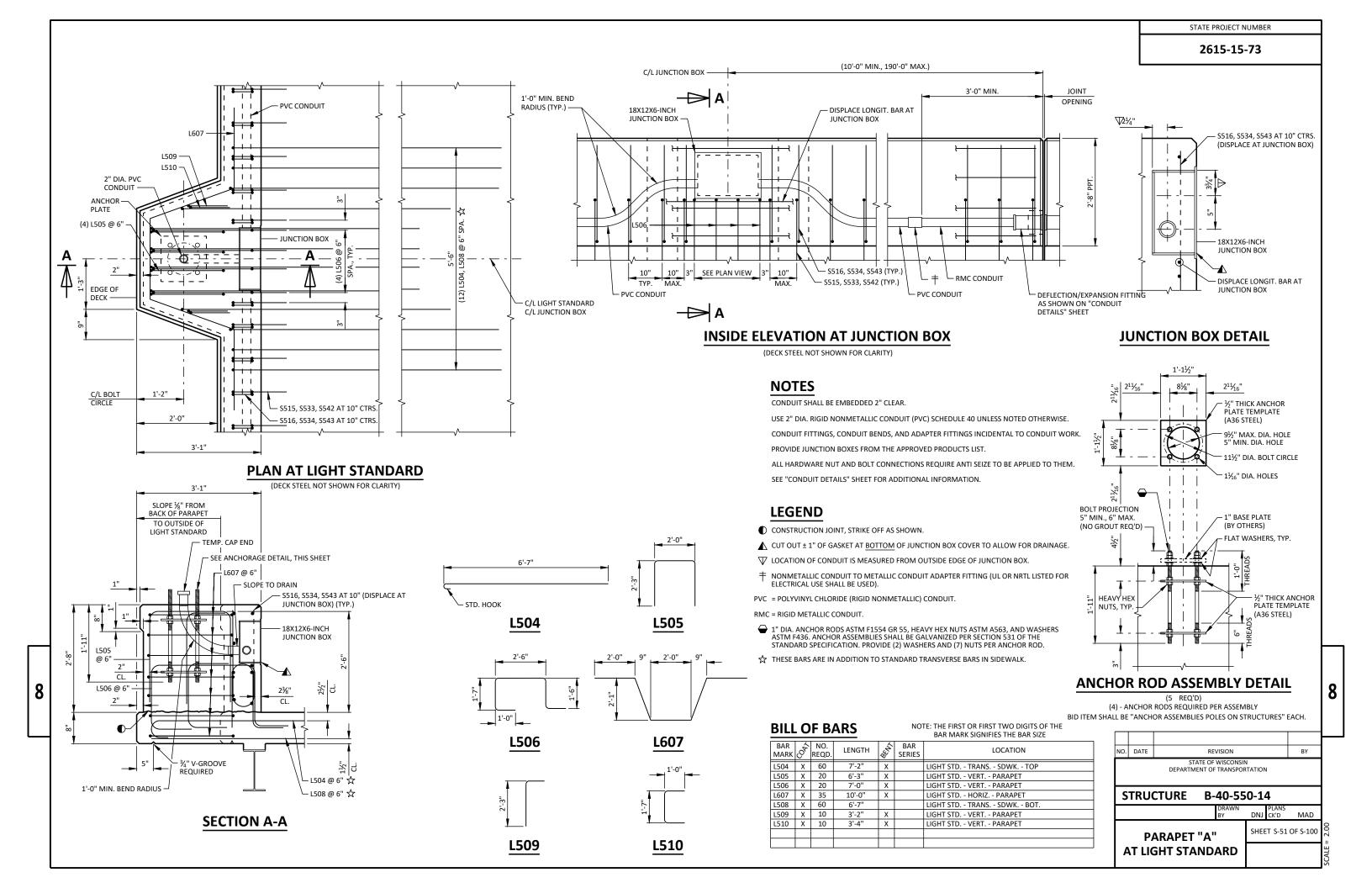
DECK BILL OF BARS

DNJ CK'D MAD

SHEET S-48 OF S-100

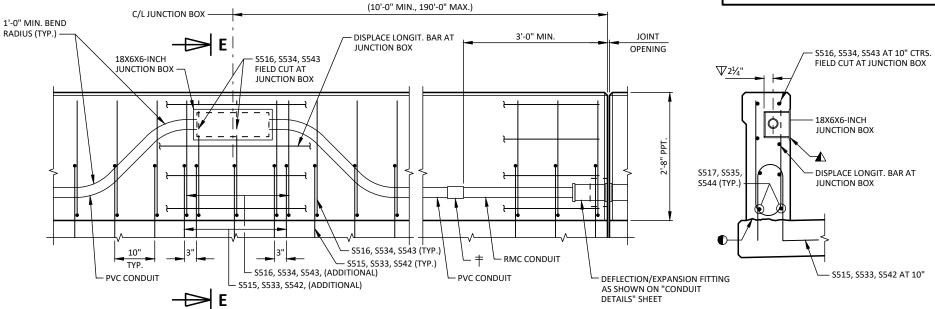








SECTION E-E



INSIDE ELEVATION AT JUNCTION BOX

(DECK STEEL NOT SHOWN FOR CLARITY)

NOTES

CONDUIT SHALL BE EMBEDDED 2" CLEAR.

USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) SCHEDULE 40 UNLESS NOTED OTHERWISE.

CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

PROVIDE JUNCTION BOXES FROM THE APPROVED PRODUCTS LIST.

SEE "CONDUIT DETAILS" SHEET FOR ADDITIONAL INFORMATION.

FOR JUNCTION BOX LOCATIONS, SEE SHEET "STREET LIGHTING PLAN" IN THE ELECTRICAL PLANS.

LEGEND

OCONSTRUCTION JOINT, STRIKE OFF AS SHOWN.

⚠ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

igwedge location of conduit is measured from outside edge of junction box.

† NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).

PVC = POLYVINYL CHLORIDE (RIGID NONMETALLIC) CONDUIT.

RMC = RIGID METALLIC CONDUIT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-550-14

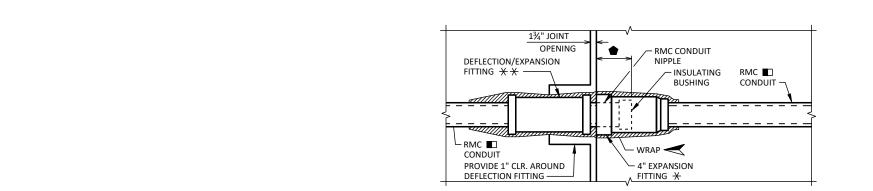
| DRAWN | PLANS | PLANS

PARAPET "A"
AT JUNCTION BOX

NO. DATE

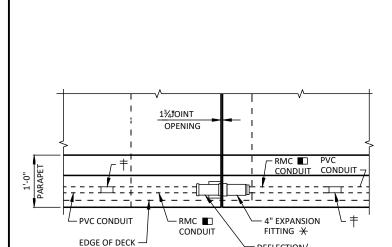
8

2615-15-73



DEFLECTION/EXPANSION AND 4" EXPANSION FITTING

THIS DETAIL ACCOMMODATES A MAXIMUM OF 4" TOTAL MOVEMENT AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION. BOND JUMPER NOT SHOWN FOR CLARITY.



OUTSIDE ELEVATION OF PARAPET

DEFLECTION/EXPANSION

TOP OF

DECK —

CONDUIT CONDUIT

FITTING XX

21/4" JOINT OPENING

CONDUIT CONDUIT 7

PLAN OF PARAPET

- DEFLECTION/ EXPANSION FITTING XX

LEGEND

- USE 2" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR 3'-0" MIN. ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.
- † NONMETALLIC CONDUIT TO METALLIC CONDUIT ADAPTER FITTING (UL OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED).
- SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE 1 OR EQUIVALENT 1/4" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO "CONDUIT RIGID METALLIC 2-INCH".
- POSITION MOVABLE END OF CONDUIT INSIDE EXPANSION FITTING, SUCH THAT IT WILL HAVE THE SAME ALLOWANCE FOR MOVEMENT (EXPANSION/CONTRACTION) AS THE EXPANSION DEVICE SET IN PLACE IN THE DECK BELOW IT. TAKE CARE TO INSTALL EXPANSION FITTING AND CONDUIT EXACTLY PARALLEL TO BRIDGE MOVEMENT.
- ★ EXPANSION FITTING REQUIREMENTS:
 4" TOTAL MOVEMENT WITH BONDING JUMPER
- ★ ★ DEFLECTION/EXPANSION FITTING REQUIREMENTS:
 - UP TO ¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30° OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER

NOTES

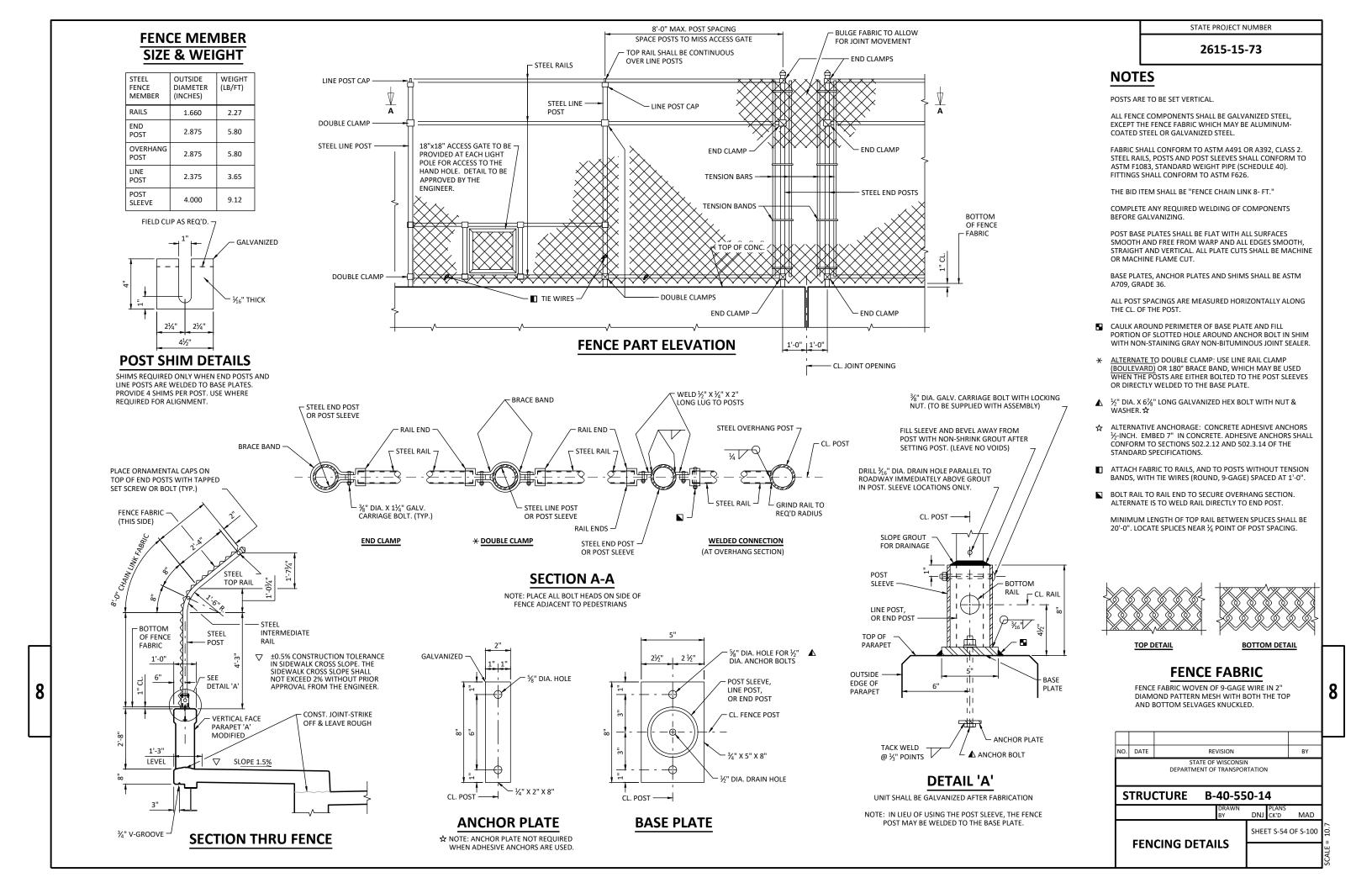
CONDUIT SHALL BE EMBEDDED 2" CLEAR.

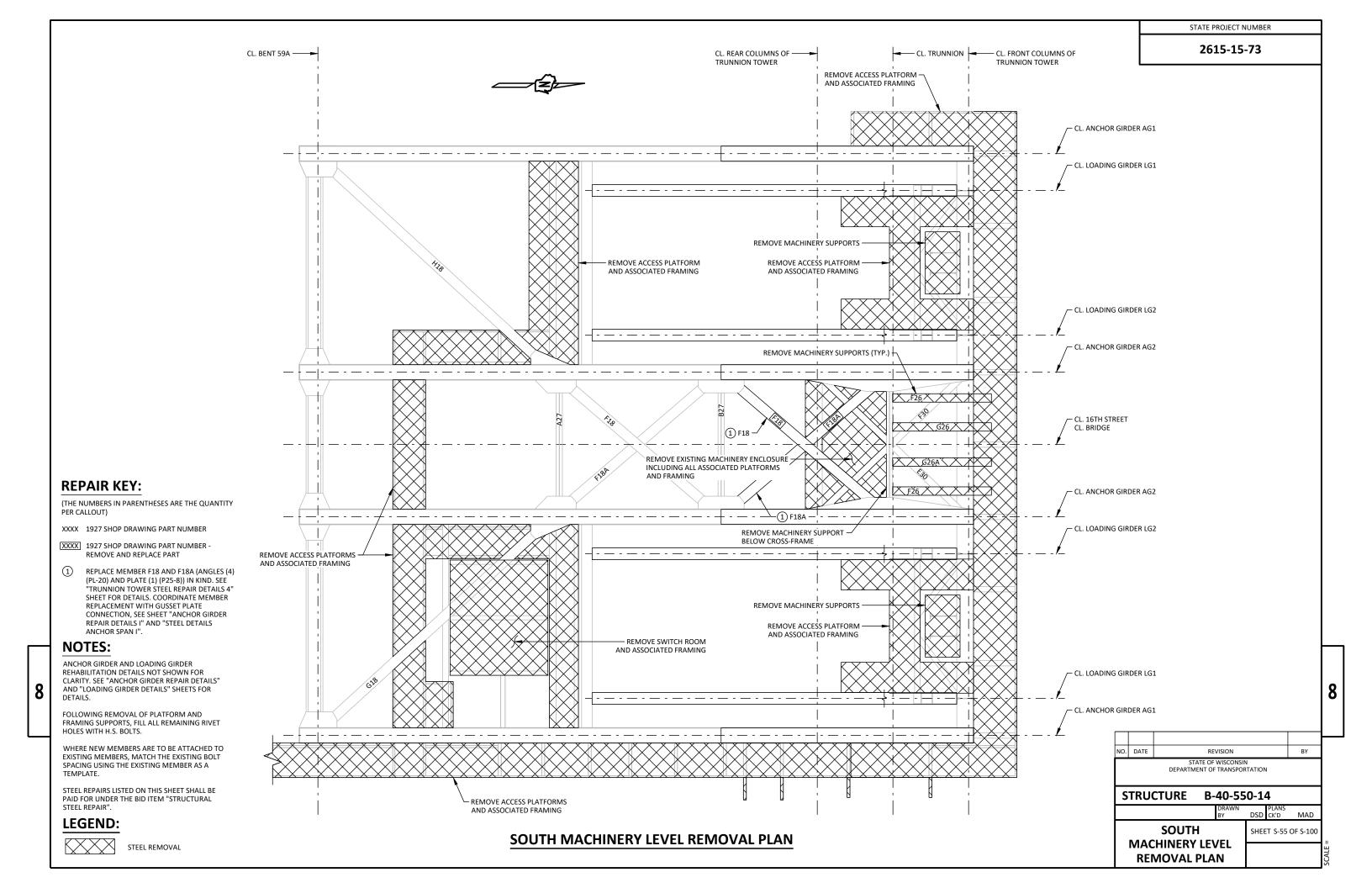
USE 2" DIA. RIGID NONMETALLIC CONDUIT (PVC) UNLESS NOTED OTHERWISE.

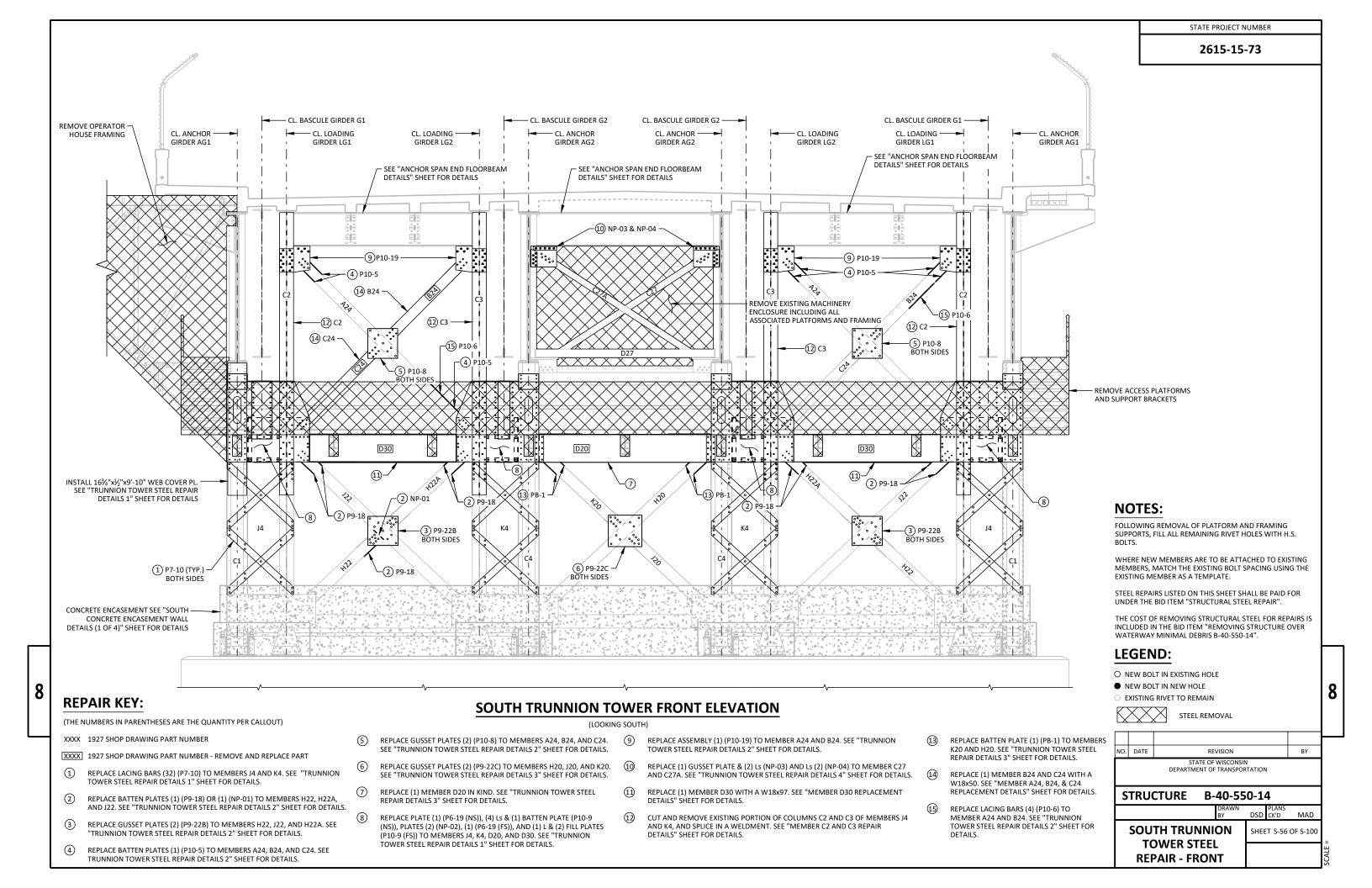
CONDUIT FITTINGS, CONDUIT BENDS, AND ADAPTER FITTINGS INCIDENTAL TO CONDUIT WORK.

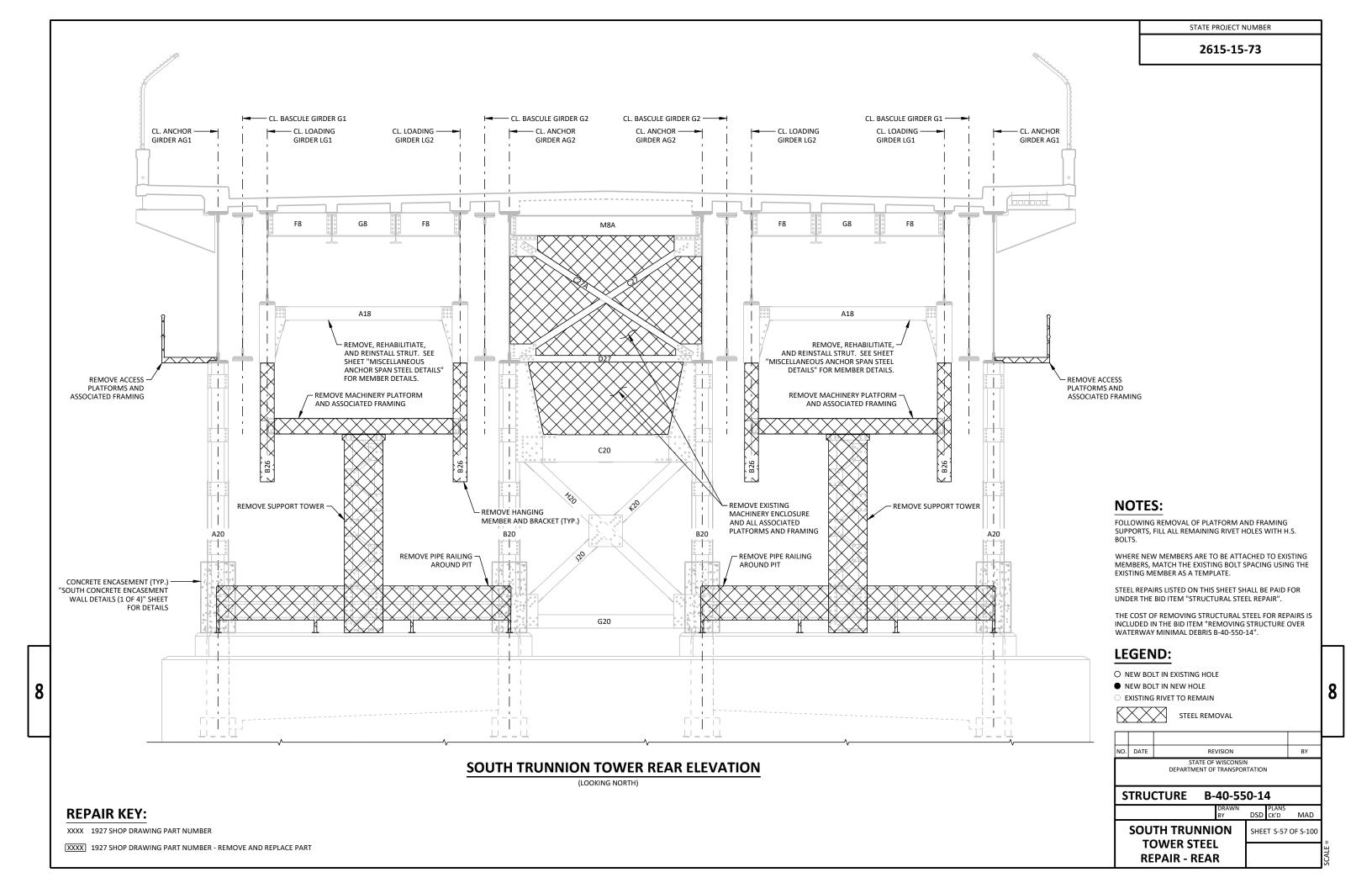
CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

NO. DATE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** DNJ CK'D SHEET S-53 OF S-100 **CONDUIT DETAILS**

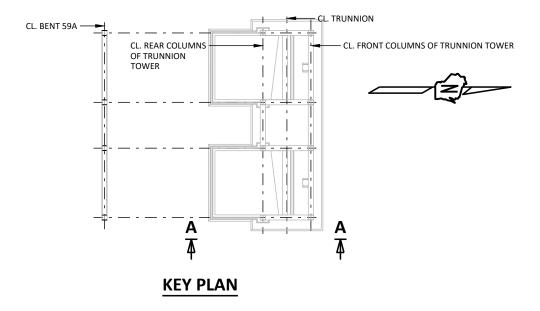








2615-15-73



NOTES:

FOLLOWING REMOVAL OF PLATFORM AND FRAMING SUPPORTS, FILL ALL REMAINING RIVET HOLES WITH H.S. BOLTS.

WHERE NEW MEMBERS ARE TO BE ATTACHED TO EXISTING MEMBERS, MATCH THE EXISTING BOLT SPACING USING THE EXISTING MEMBER AS A TEMPLATE.

STEEL REPAIRS LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "STRUCTURAL STEEL REPAIR".

THE COST OF REMOVING STRUCTURAL STEEL FOR REPAIRS IS INCLUDED IN THE BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-40-550-14".

LEGEND:

O NEW BOLT IN EXISTING HOLE

NEW BOLT IN NEW HOLEEXISTING RIVET TO REMAIN

STEEL REMOVAL

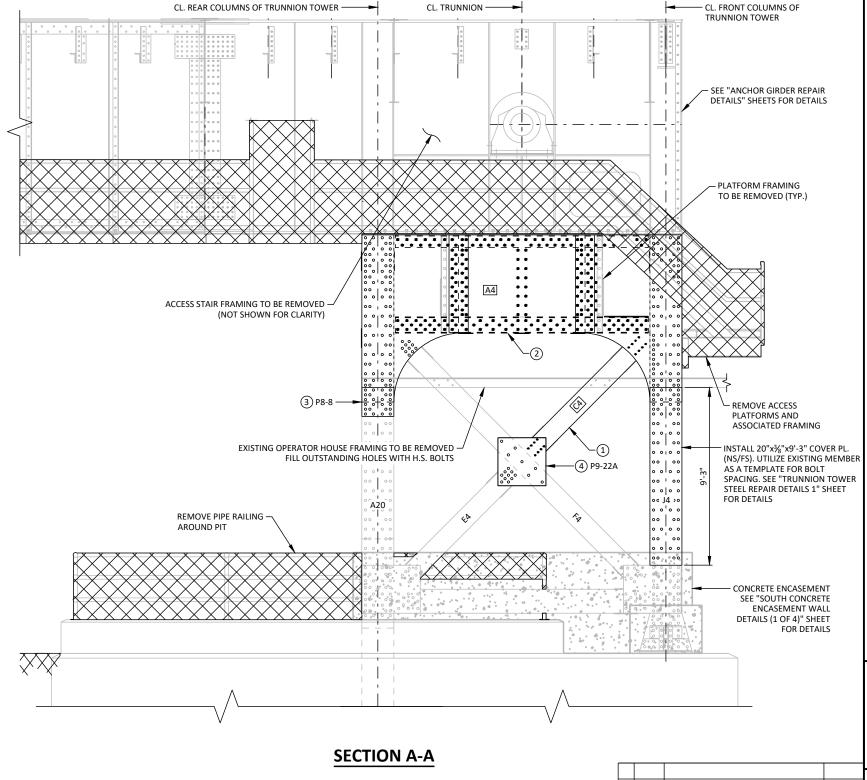
REPAIR KEY:

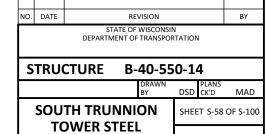
(THE NUMBERS IN PARENTHESES ARE THE QUANTITY PER CALLOUT)

XXXX 1927 SHOP DRAWING PART NUMBER

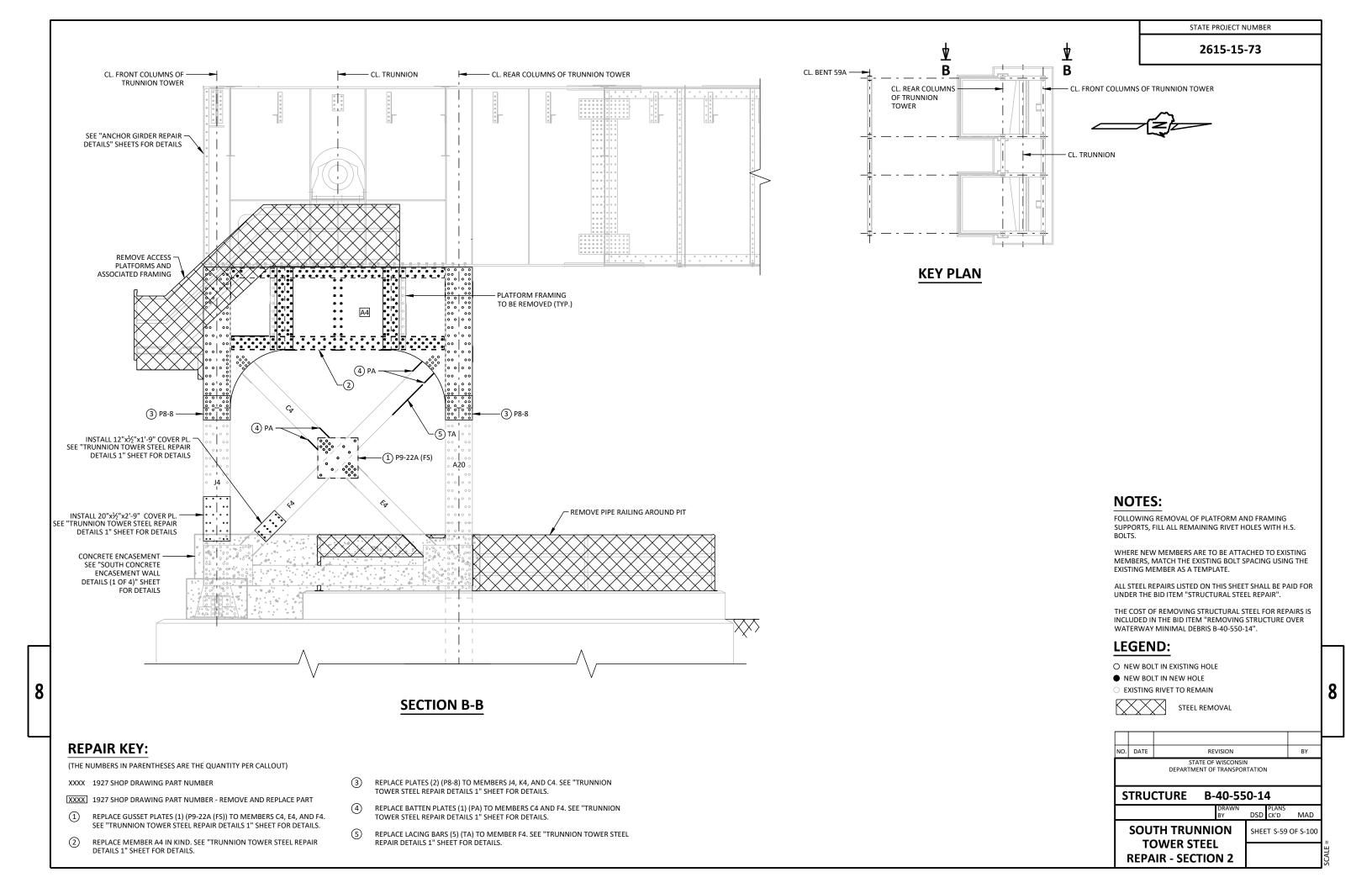
XXXXX 1927 SHOP DRAWING PART NUMBER - REMOVE AND REPLACE PART

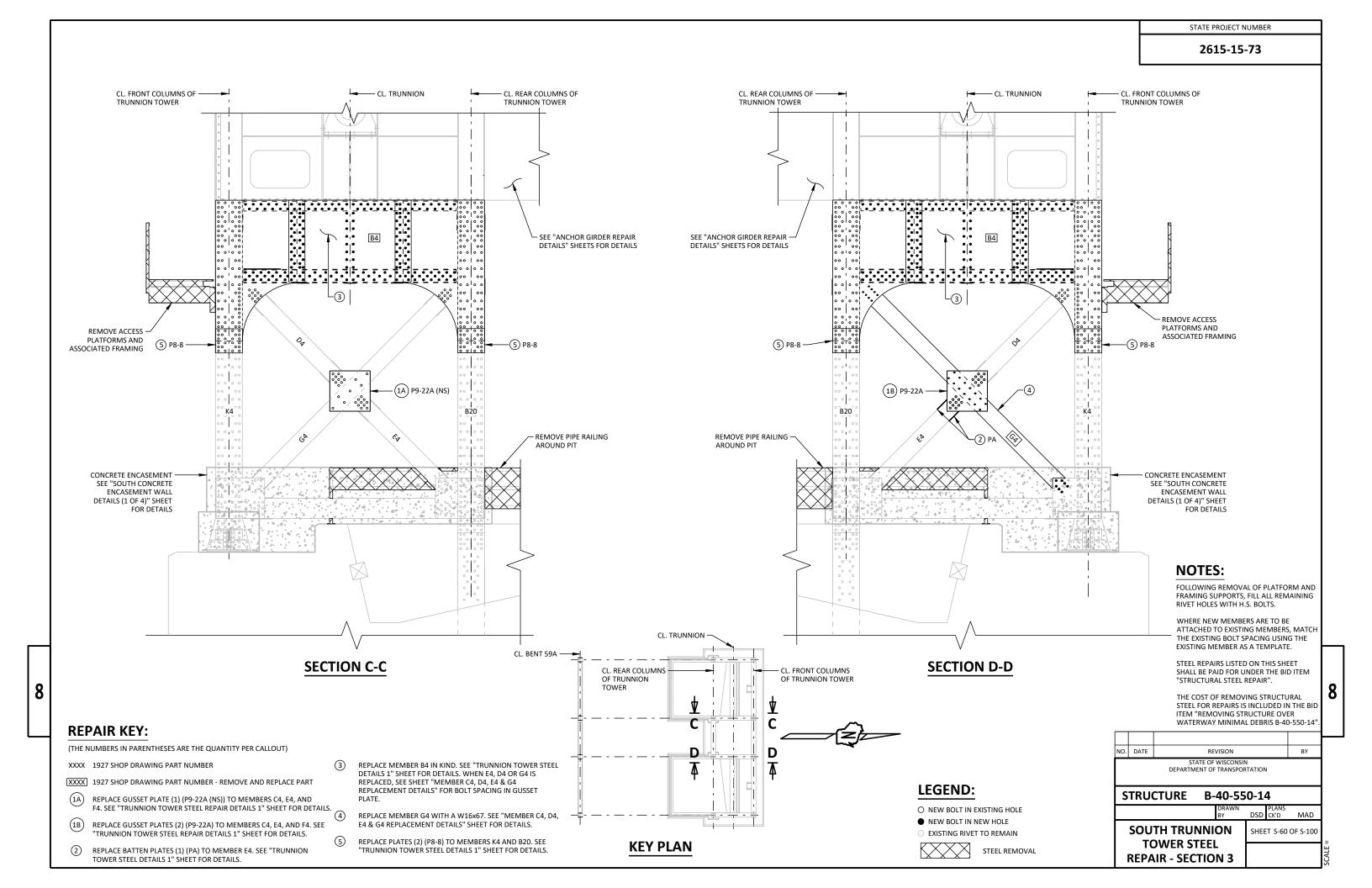
- (1) REPLACE MEMBER C4 WITH A W16x67. SEE "MEMBER C4, D4, E4 & G4 REPLACEMENT DETAILS" SHEET FOR DETAILS.
- ② REPLACE MEMBER A4 IN KIND. SEE "TRUNNION TOWER STEEL REPAIR DETAILS 1" SHEET FOR DETAILS.
- 3 REPLACE PLATES (2) (P8-8) TO MEMBERS J4, K4, AND C4. SEE "TRUNNION TOWER STEEL REPAIR DETAILS 1" SHEET FOR DETAILS.
- (4) REPLACE GUSSET PLATES (2) (P9-22A) TO MEMBERS C4, E4, AND F4. SEE "TRUNNION TOWER STEEL REPAIR DETAILS 1" SHEET FOR DETAILS.

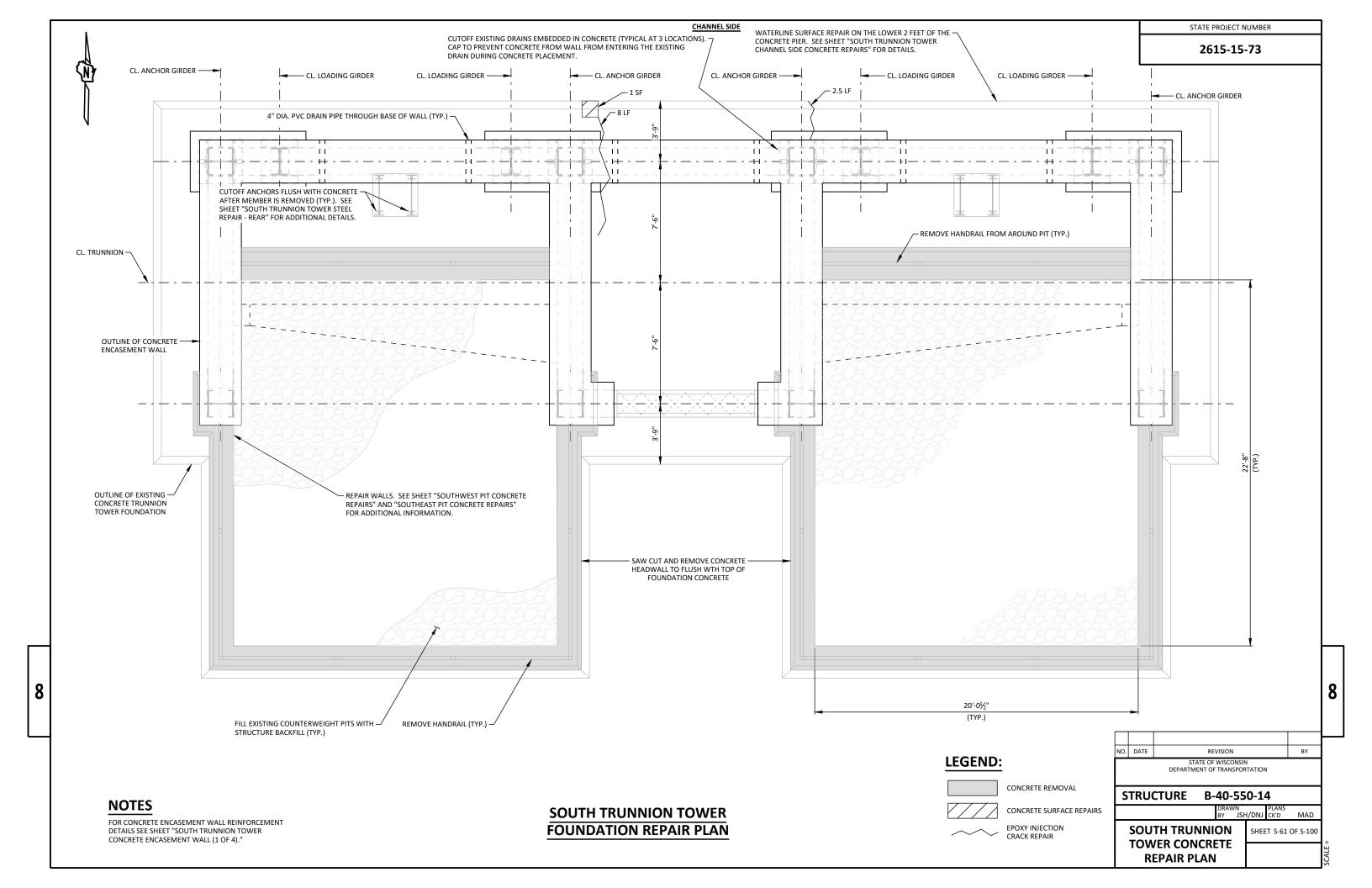


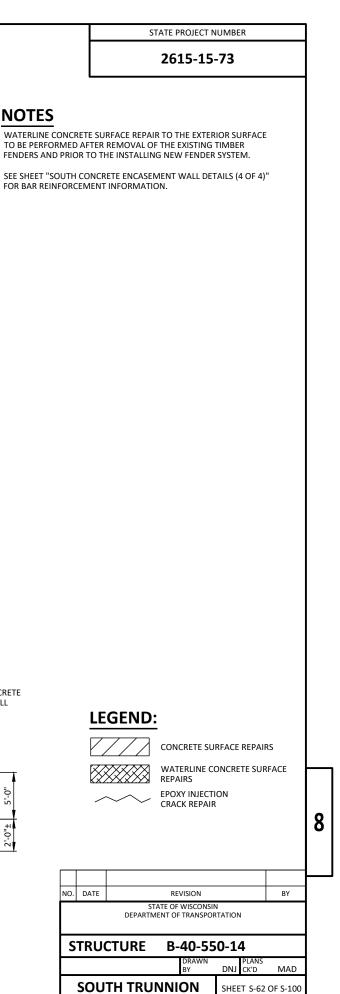


REPAIR - SECTION 1









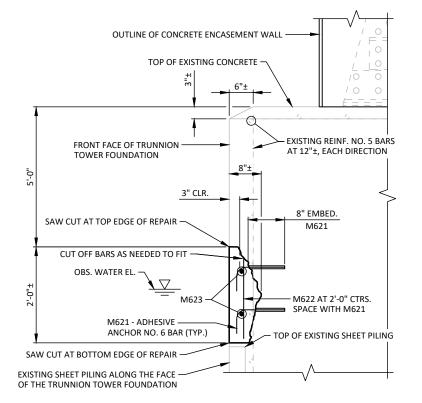
SHEET S-62 OF S-100

TOWER CHANNEL SIDE

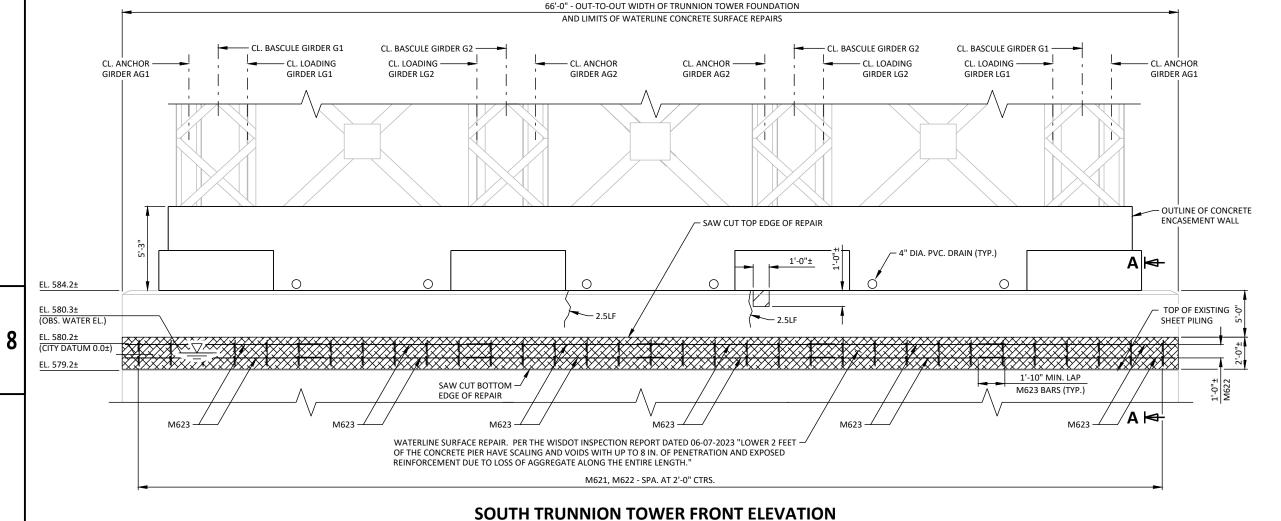
CONCRETE REPAIRS

NOTES

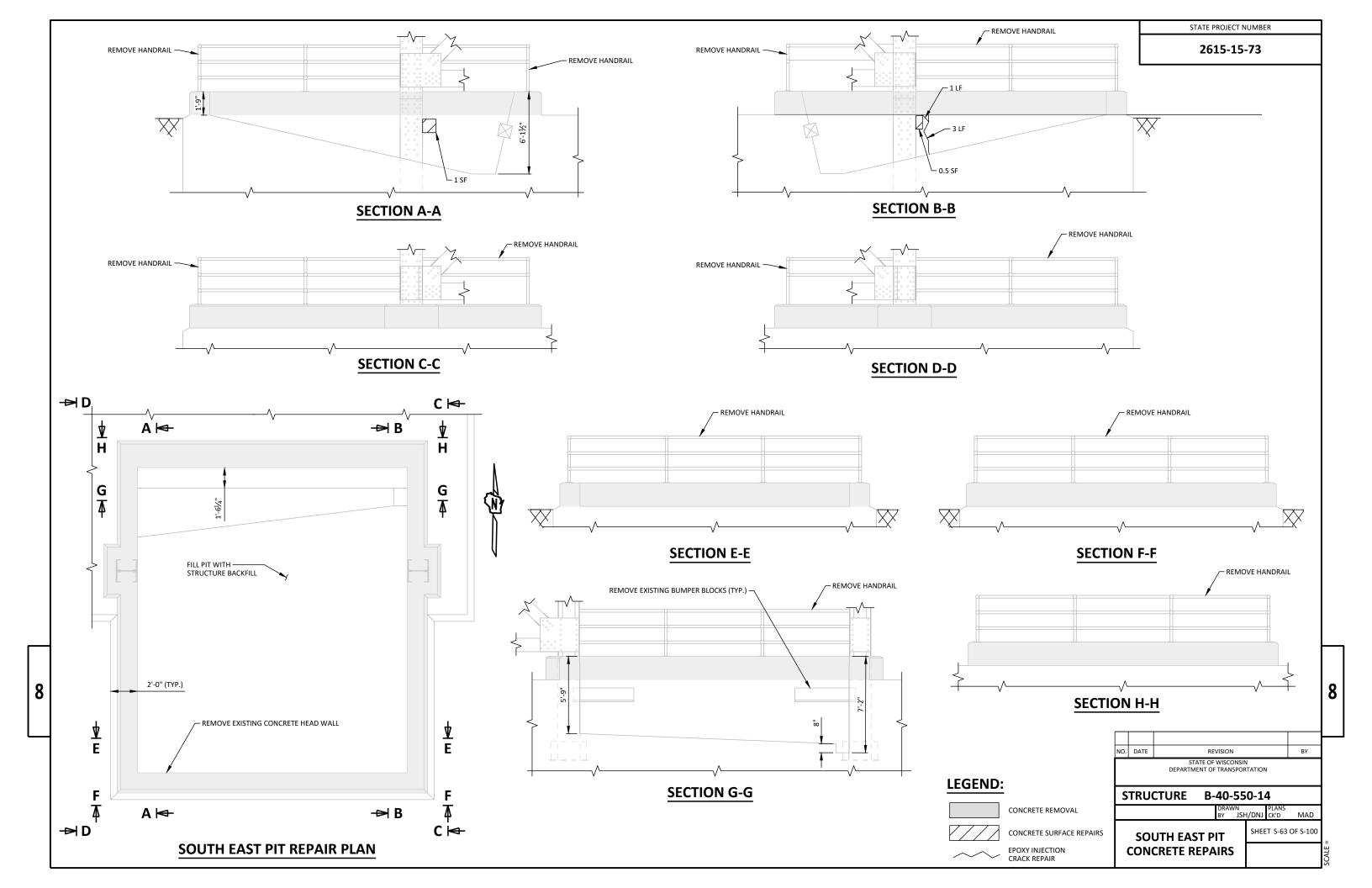
TO BE PERFORMED AFTER REMOVAL OF THE EXISTING TIMBER

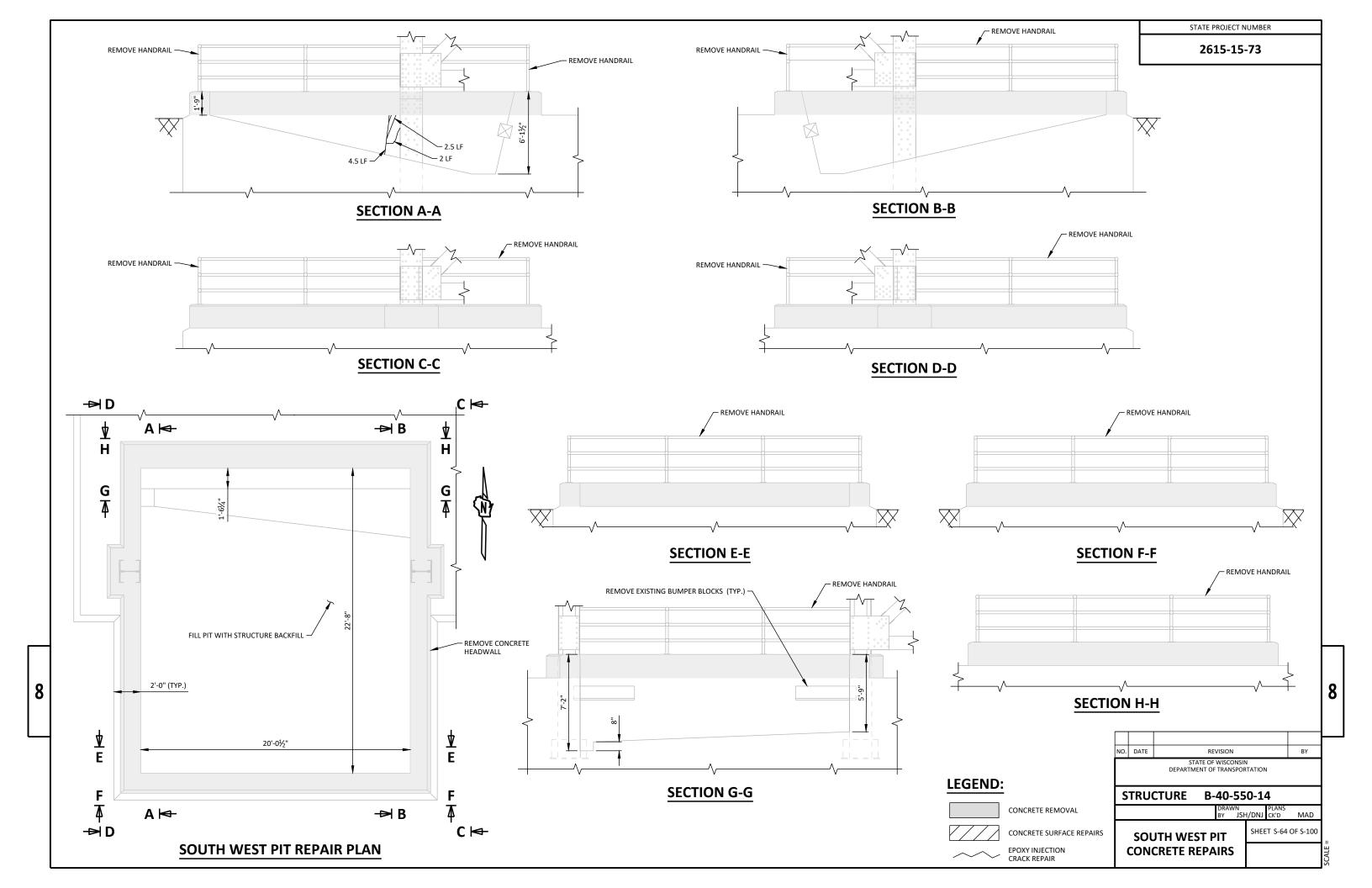


SECTION A-A



(REINFORCEMENT FOR ENCASEMENT WALL NOT SHOWN FOR CLARITY)







2615-15-73

NOTES

BLAST CLEAN AND PAINT EXISTING STEEL MEMBERS TO REMAIN WITH A 3-COAT SYSTEM PRIOR TO PLACING THE ENCASEMENT WALL.

FOR SECTIONS A-A, B-B & F-F, SEE SHEET "SOUTH CONCRETE ENCASEMENT WALL DETAILS (2 OF 4)."

FOR SECTIONS D-D, E-E & G-G SEE SHEET "SOUTH CONCRETE ENCASEMENT WALL DETAILS (3 OF 4)."

SECTION C-C THIS SHEET.

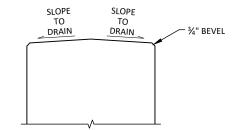
SLOPE TOP OF WALL TO DRAIN.

BEVEL EXPOSED EDGES OF CONCRETE 3/4".

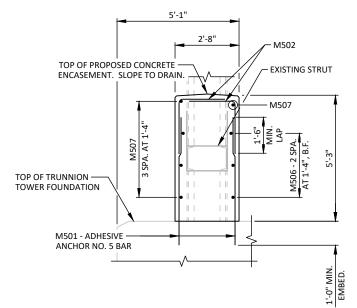
COST OF PVC DRAIN PIPES IS INCLUDED IN THE BID ITEM "CONCRETE MASONRY BRIDGES."

B.F. = BACK FACE

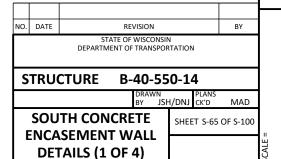
E.F. = EACH FACE F.F. = FRONT FACE

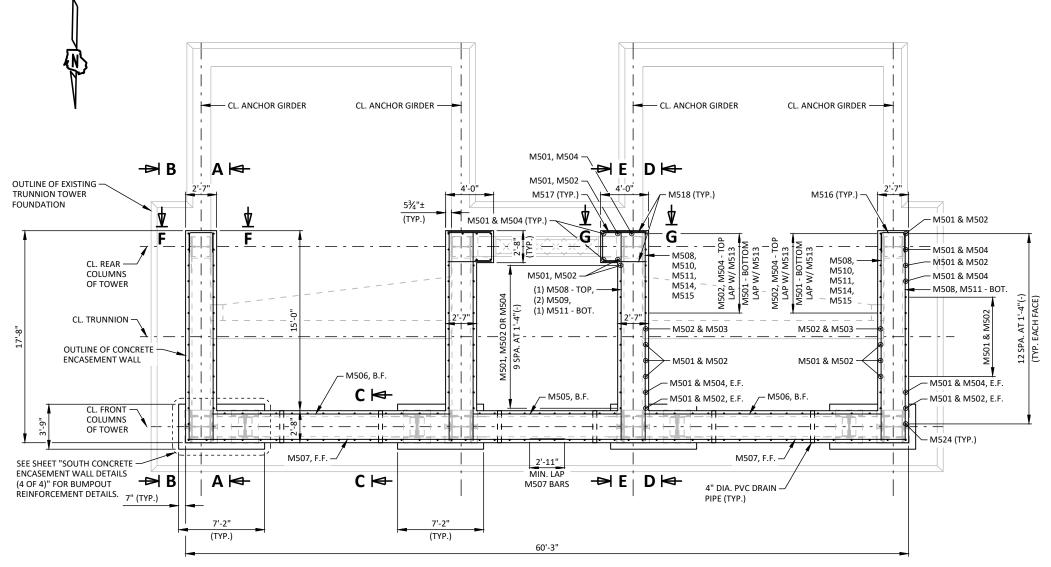


TOP OF WALL DETAIL

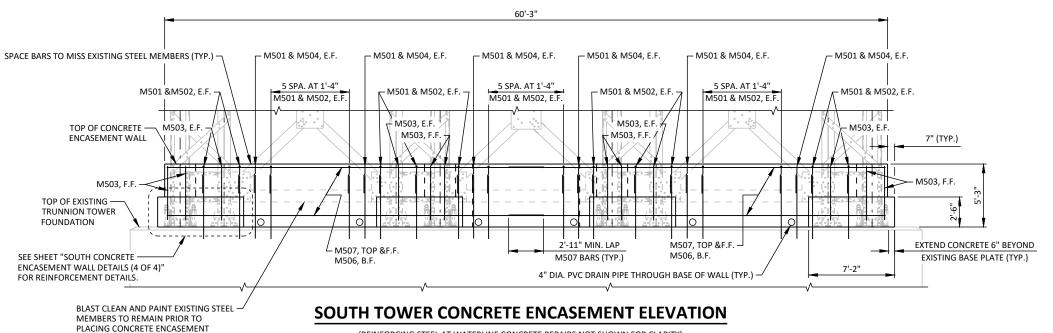


SECTION C-C

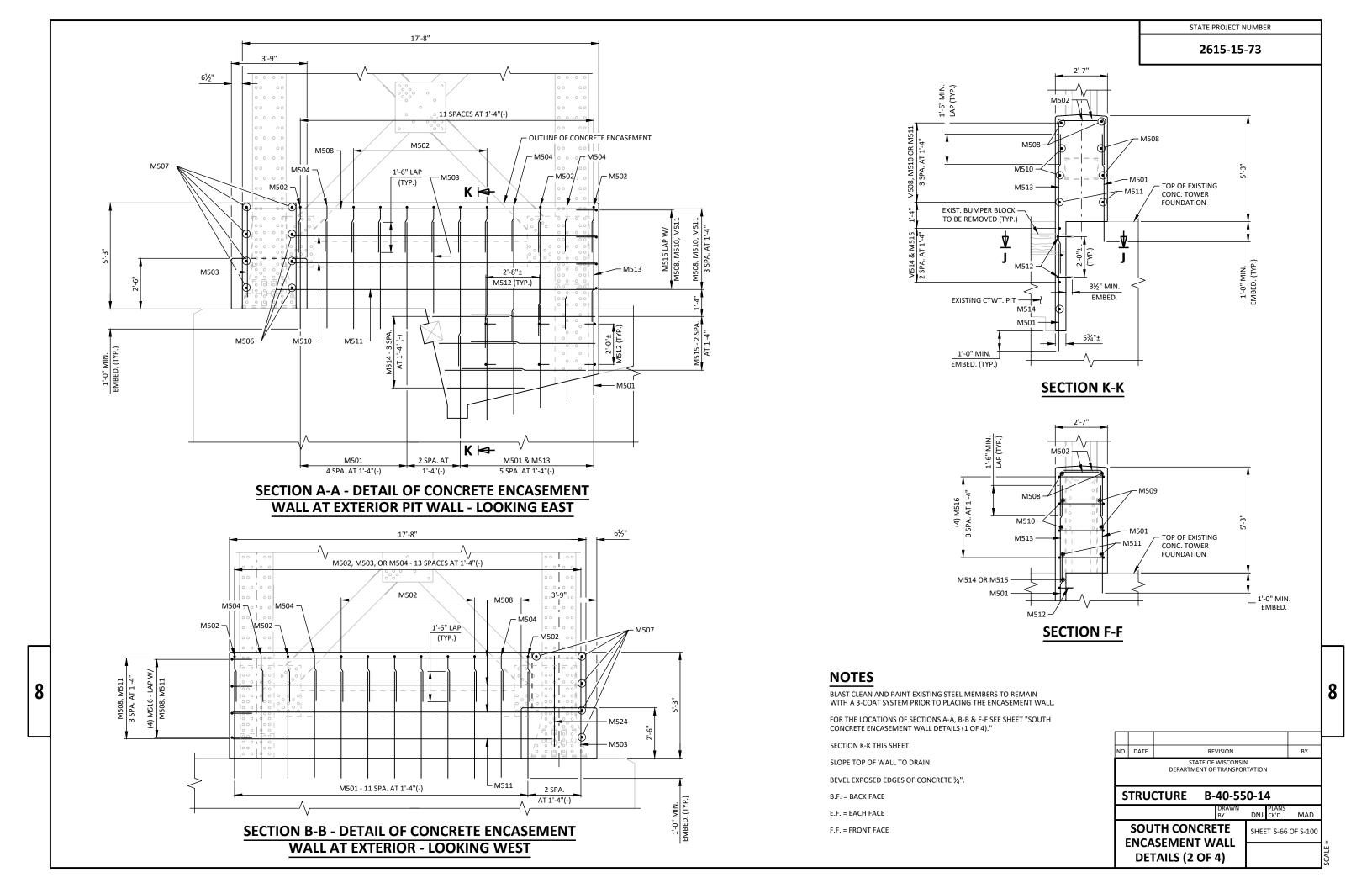


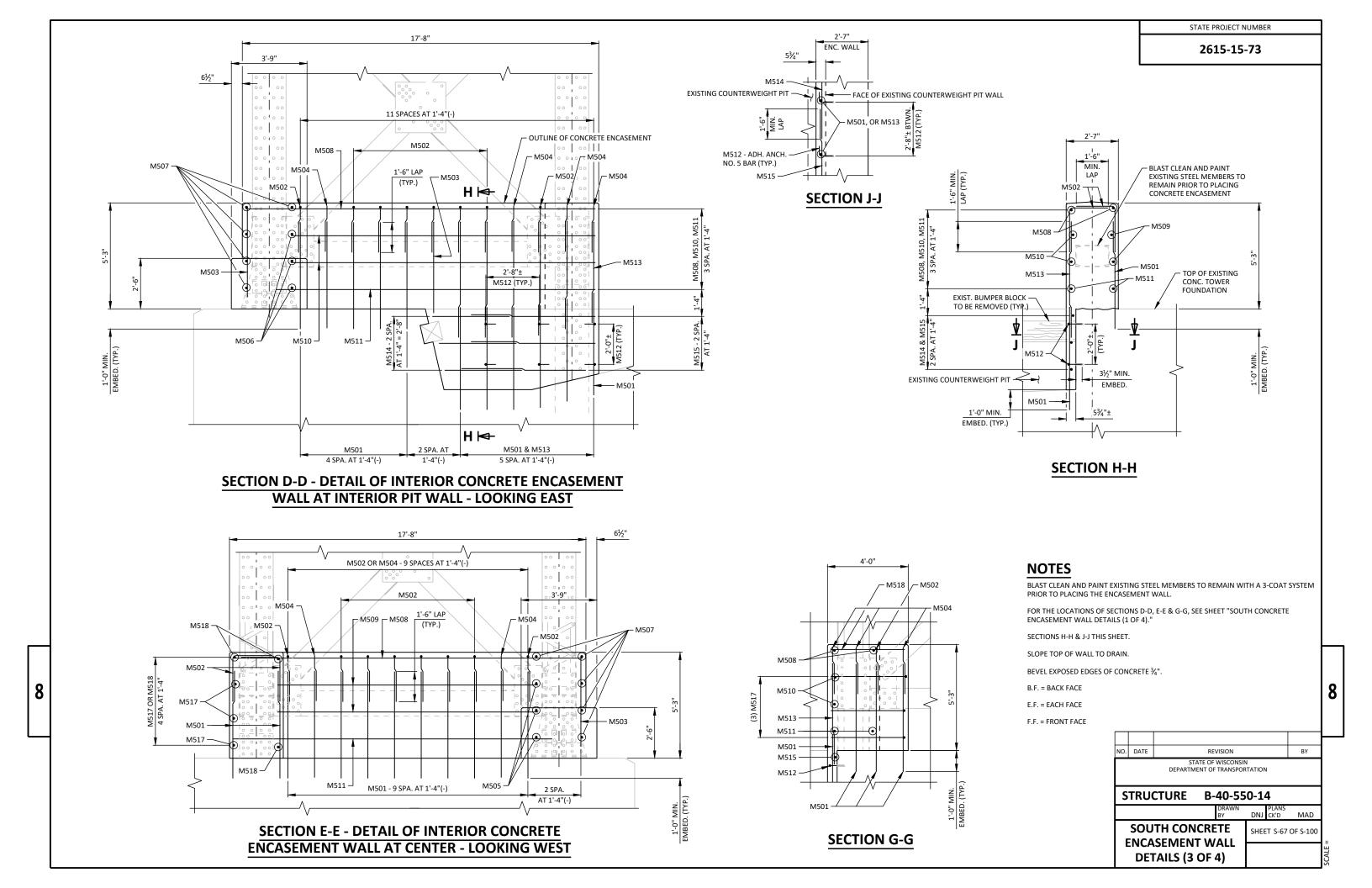


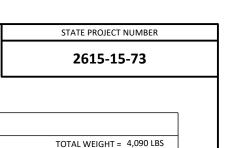
SOUTH TOWER CONCRETE ENCASEMENT PLAN



(REINFORCING STEEL AT WATERLINE CONCRETE REPAIRS NOT SHOWN FOR CLARITY)







HORIZ.

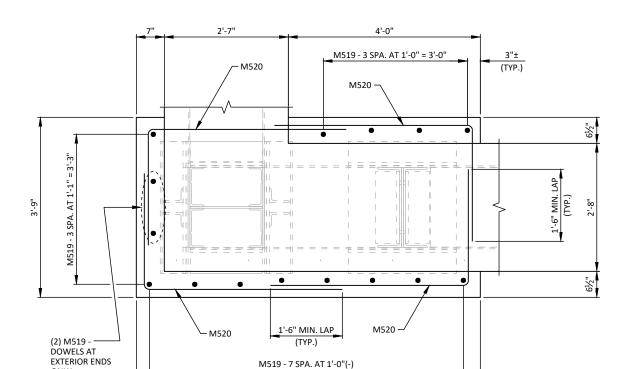
VERT.

VERT.

VERT.

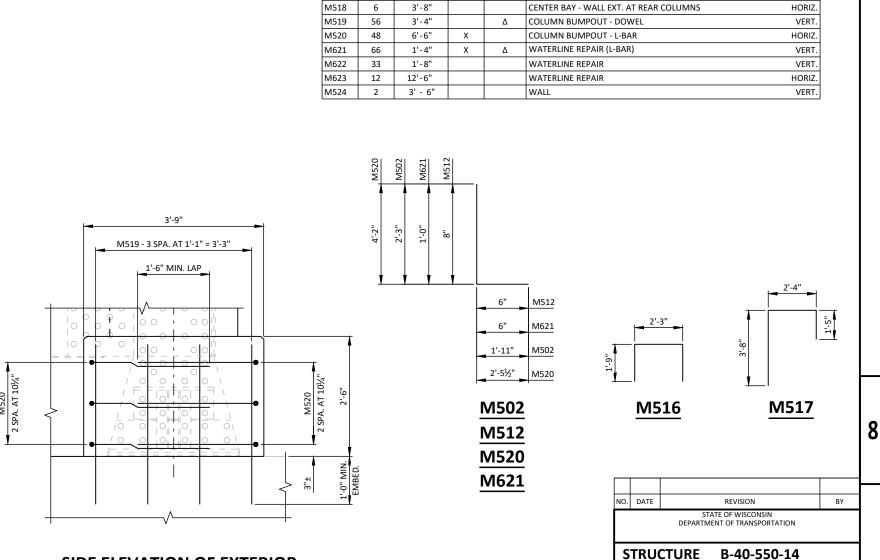
HORIZ.

VERT.



PLAN OF EXTERIOR COLUMN BUMPOUT

7'-2"



BILL OF BARS

166

128

20

42

3

6

10

12

4

8

8

24

24

14

12

6

LENGTH

5'-4"

4'-0"

4'-10"

2'-3"

12'-3"

19'-8"

31'-5"

17'-4"

12'-11"

15'-1"

15'-10"

1'-0"

6'-11"

3'-10"

6'-2"

5'-6"

7'-2"

BAR NO. MARK REQ'D

COATED

BARS M501

M502

M503

M504

M505

M506

M507

M508

M509

M510

M511

M512

M513

M514

M515

M516

M517

SIDE ELEVATION OF EXTERIOR

COLUMN BUMPOUT

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

LOCATION

WALL - DOWEL

WALL - TOP

WALL - TOP

TRANSVERSE WALL - BOTTOM - CENTER BAY

LONGIT. WALL - TOP AND EXTERIOR FACES

TRANSVERSE WALL - FRONT FACE

LONGIT. WALL - CENTER BAY SIDES

LONGIT. WALL - PIT FACE SIDES

PIT WALL FACE (LAP WITH M501)

LONGIT. WALL - U-BAR AT END OF WALL

PIT WALL FACE - DOWEL

PIT WALL FACE

PIT WALL FACE

TRANSVERSE WALL - BOTTOM - OUTSIDE BAYS

LONGIT. WALL - BOTTOM - EXTERIOR AND CENTER BAY

U-BAR - CENTER BAY - WALL EXT. AT REAR COLUMNS

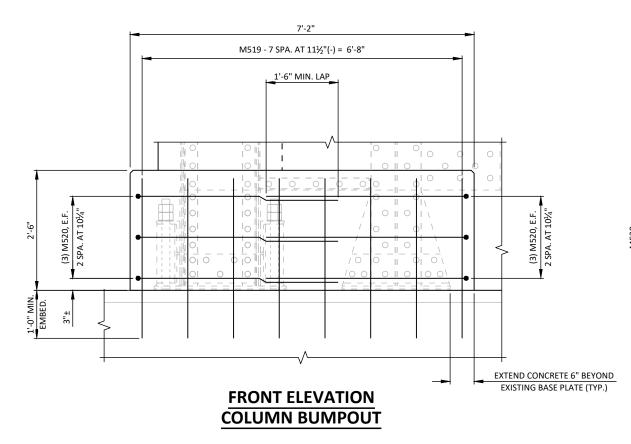
SOUTH CONCRETE

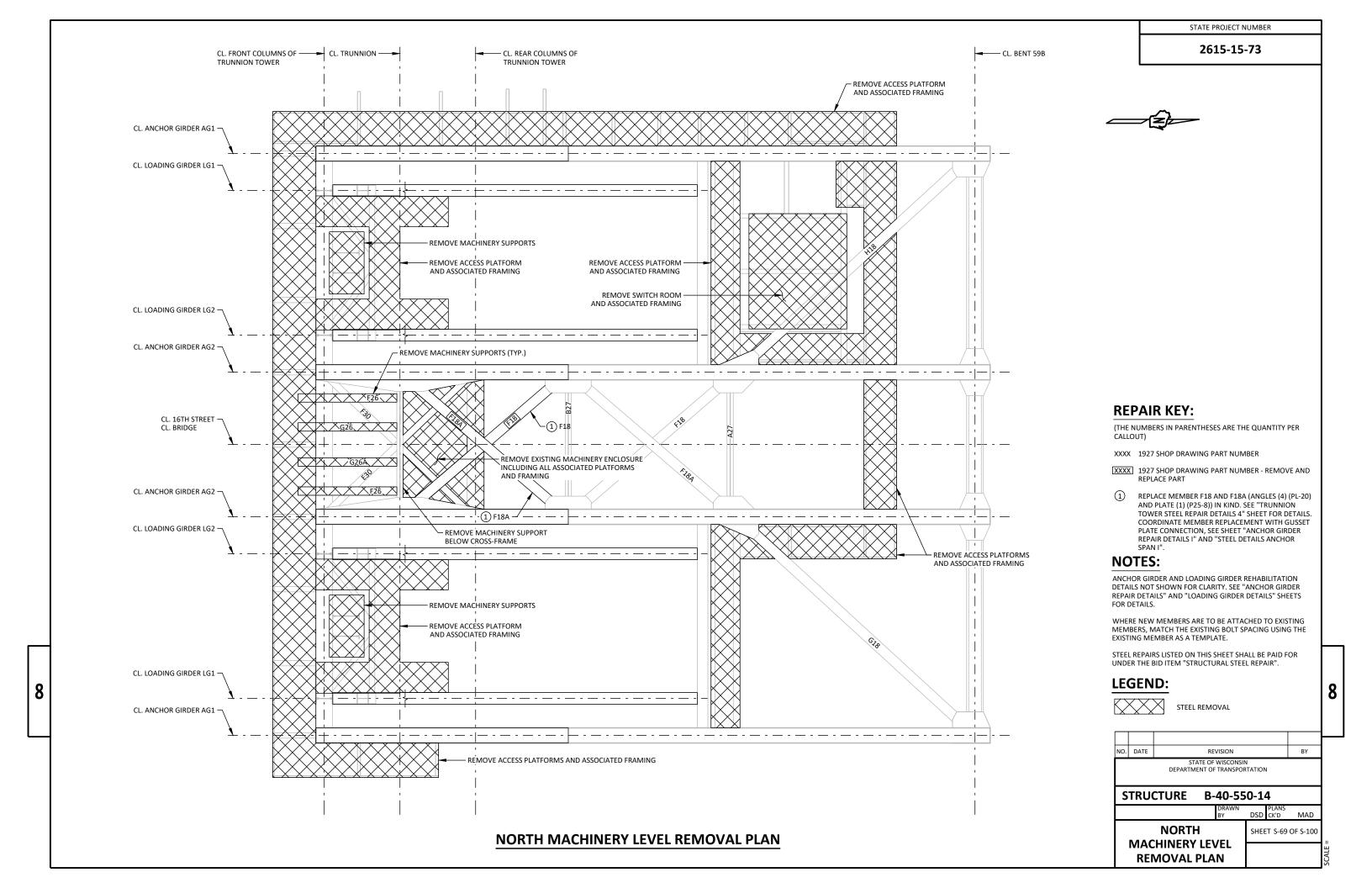
ENCASEMENT WALL DETAILS (4 OF 4)

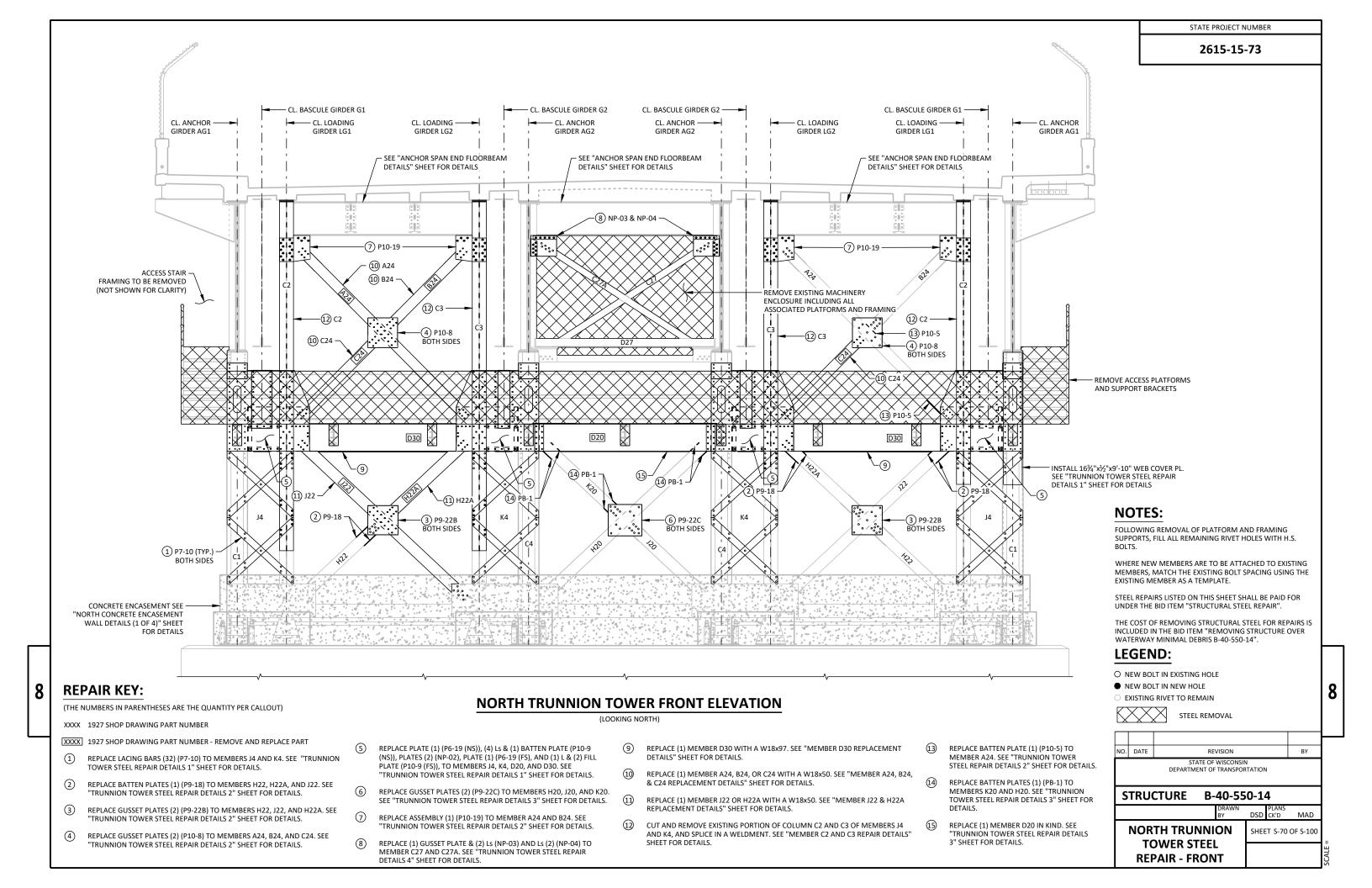
SHEET S-68 OF S-100

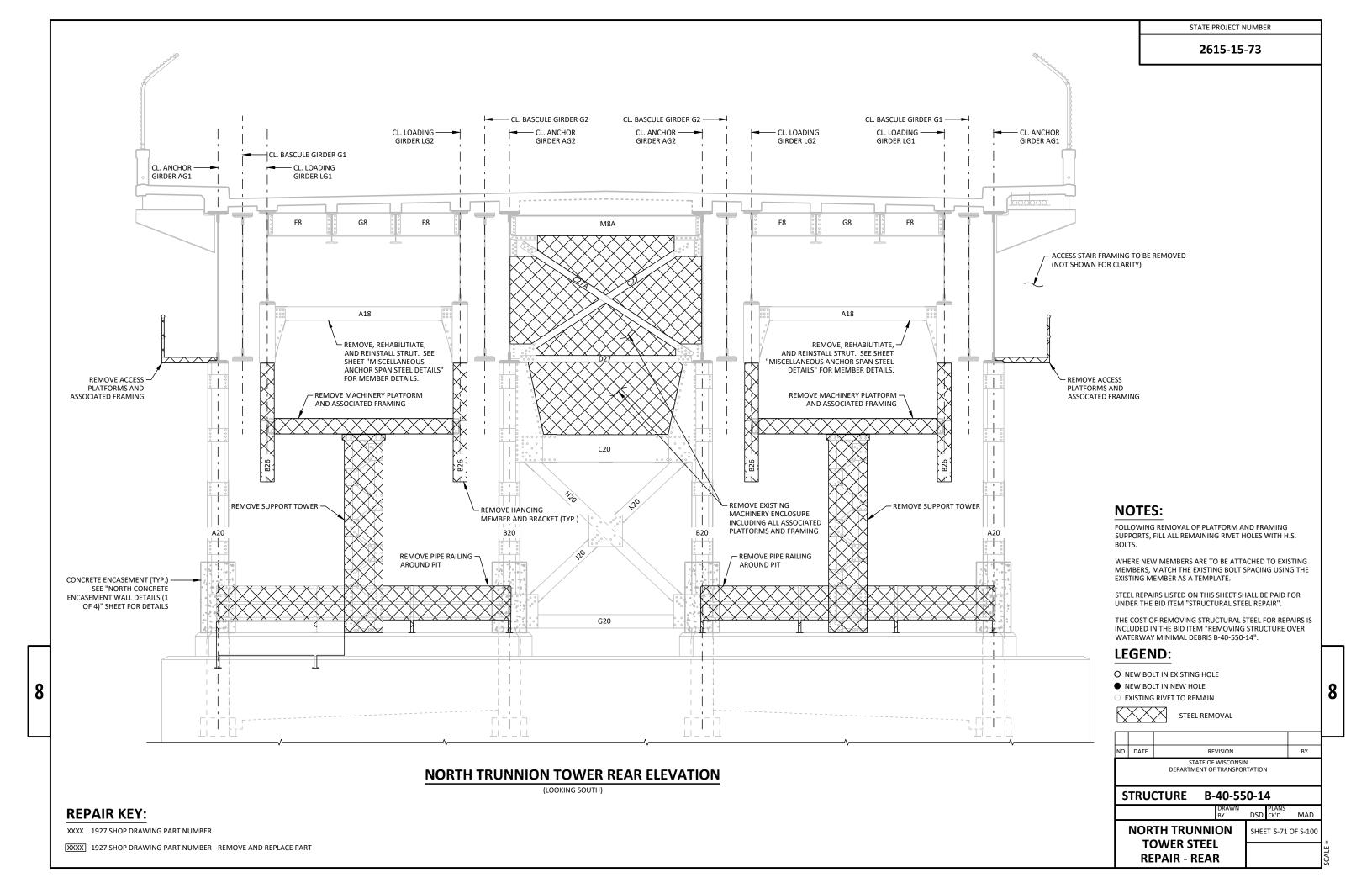
WALL

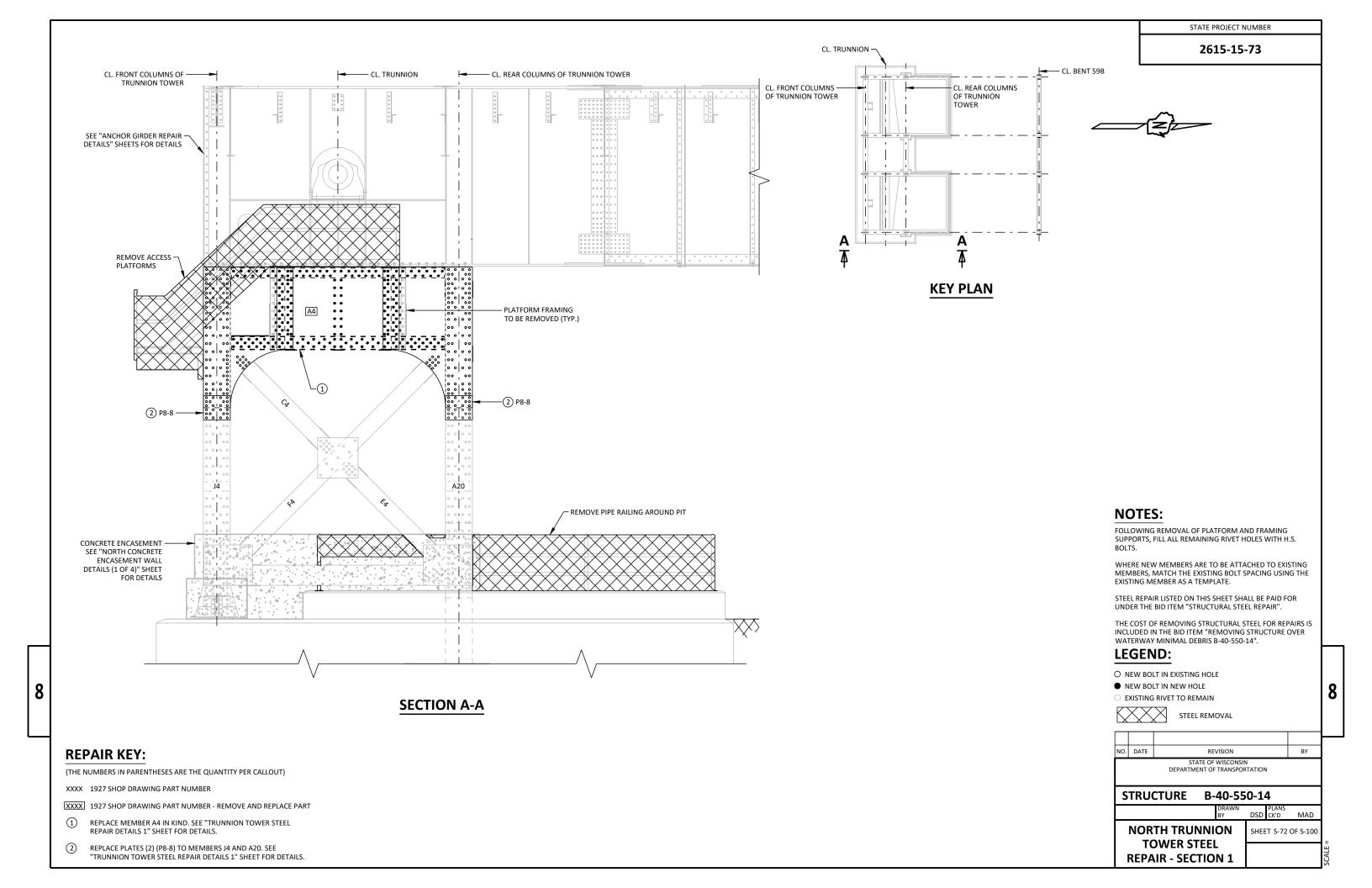
BENT

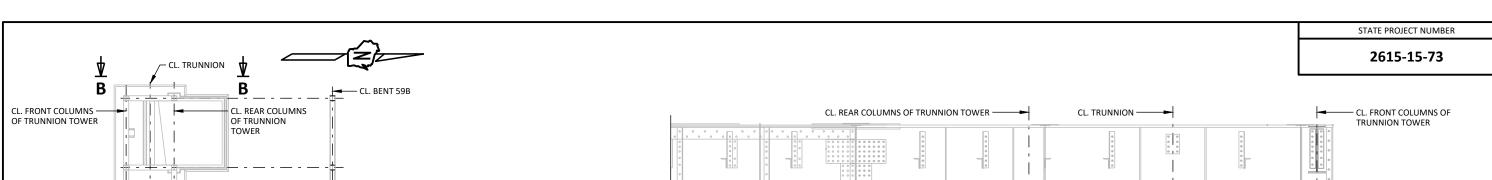












KEY PLAN

NOTES:

FOLLOWING REMOVAL OF PLATFORM AND FRAMING SUPPORTS, FILL ALL REMAINING RIVET HOLES WITH H.S. ROLTS

WHERE NEW MEMBERS ARE TO BE ATTACHED TO EXISTING MEMBERS, MATCH THE EXISTING BOLT SPACING USING THE EXISTING MEMBER AS A TEMPLATE.

STEEL REPAIRS LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "STRUCTURAL STEEL REPAIR".

THE COST OF REMOVING STRUCTURAL STEEL FOR REPAIRS IS INCLUDED IN THE BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-40-550-14".

LEGEND:

O NEW BOLT IN EXISTING HOLE

NEW BOLT IN NEW HOLE

O EXISTING RIVET TO REMAIN

STEEL REMOVAL

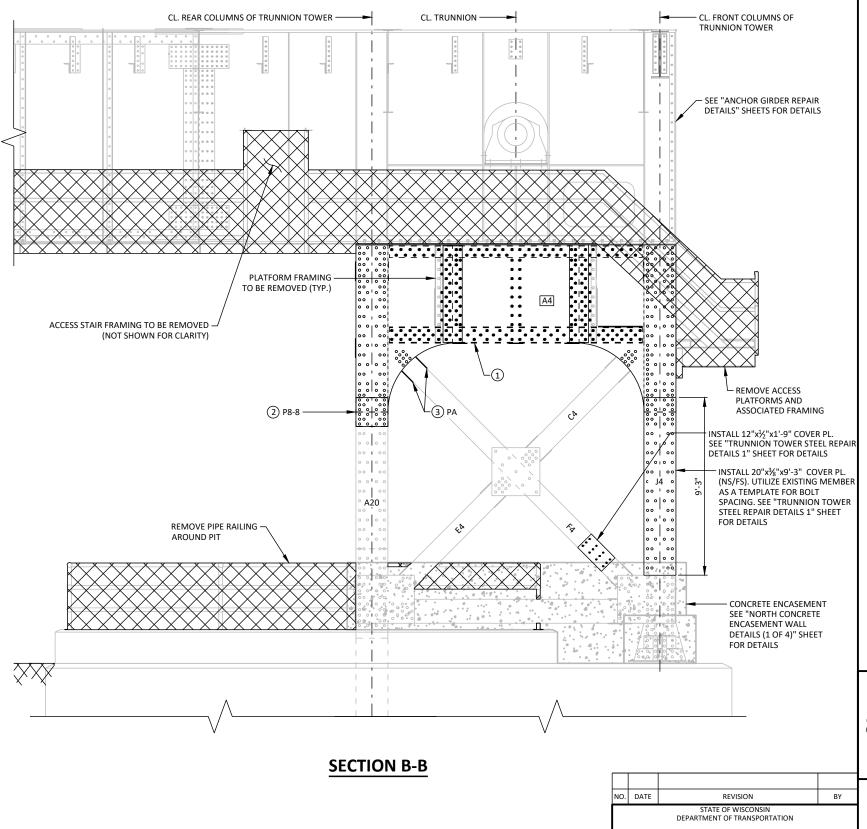
REPAIR KEY:

(THE NUMBERS IN PARENTHESES ARE THE QUANTITY PER CALLOUT)

XXXX 1927 SHOP DRAWING PART NUMBER

XXXX 1927 SHOP DRAWING PART NUMBER - REMOVE AND REPLACE PART

- (1) REPLACE MEMBER A4 IN KIND. SEE "TRUNNION TOWER STEEL REPAIR DETAILS 1" SHEET FOR DETAILS.
- REPLACE PLATES (2) (P8-8) TO MEMBERS J4 AND A20. SEE "TRUNNION TOWER STEEL REPAIR DETAILS 1" SHEET FOR DETAILS.
- 3 REPLACE PLATES (1) (PA) TO MEMBER F4. SEE "TRUNNION TOWER STEEL REPAIR DETAILS 1" SHEET FOR DETAILS.



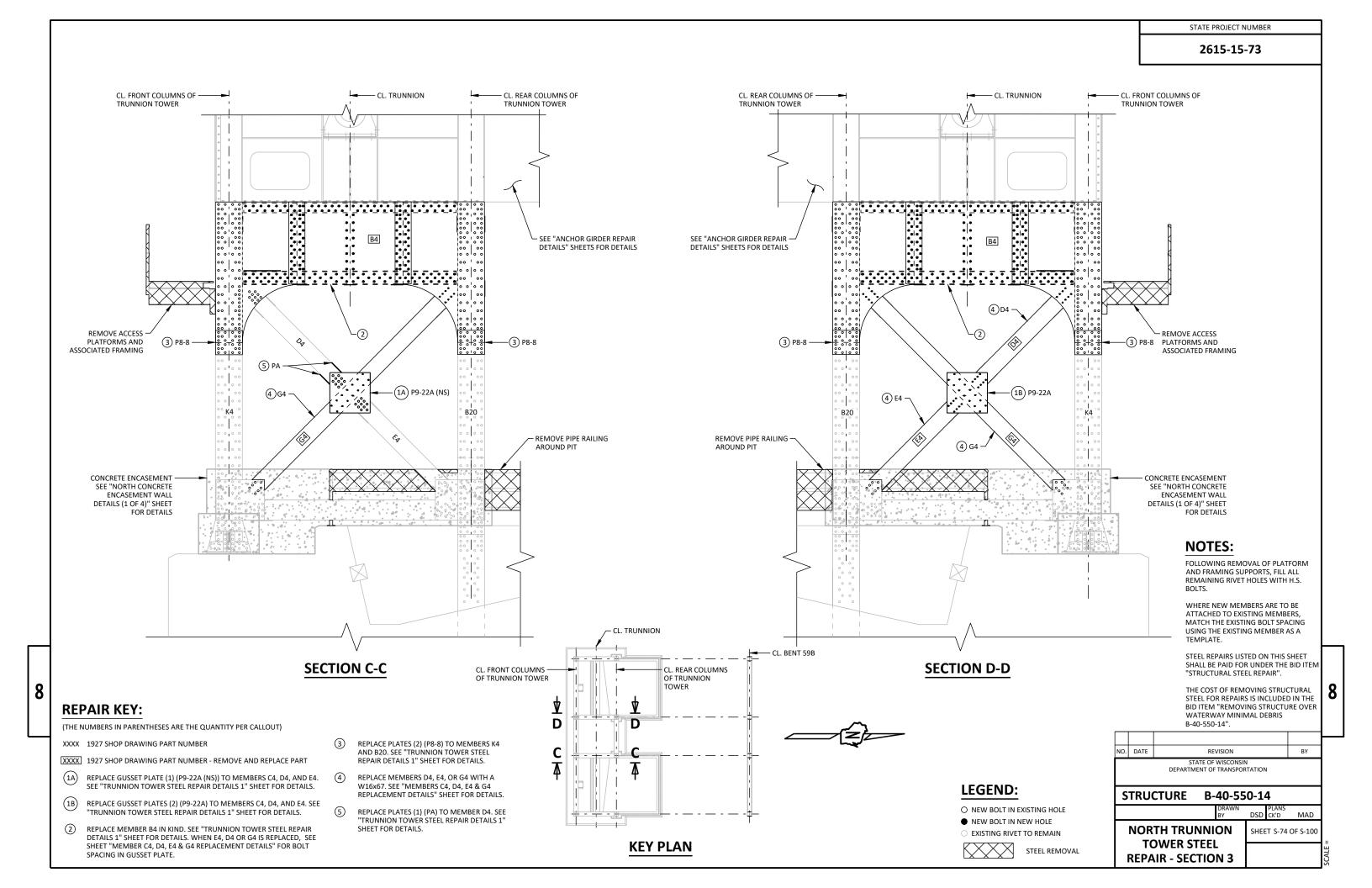
STRUCTURE B-40-550-14

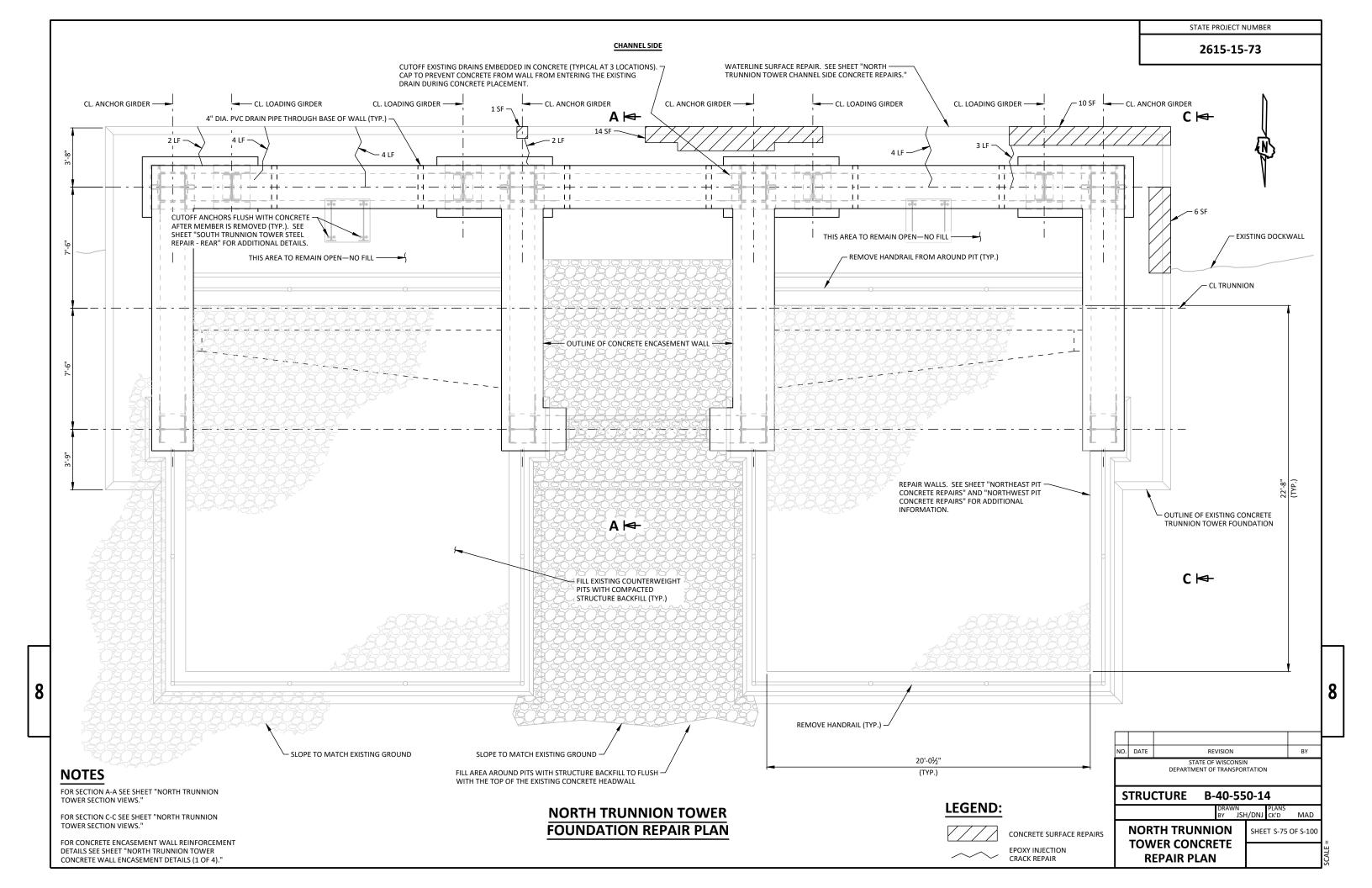
NORTH TRUNNION

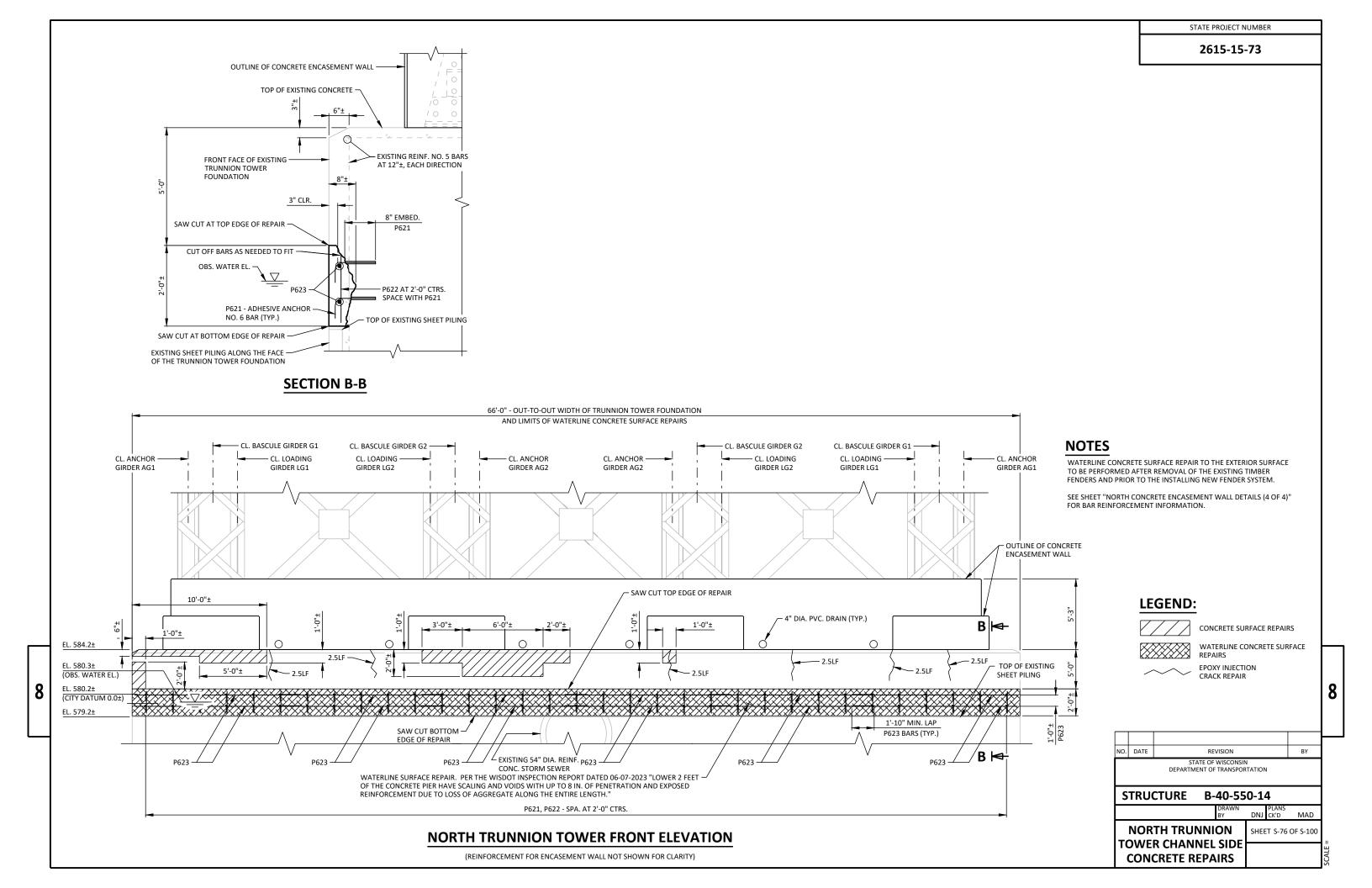
TOWER STEEL REPAIR - SECTION 2

DSD CK'D

SHEET S-73 OF S-100

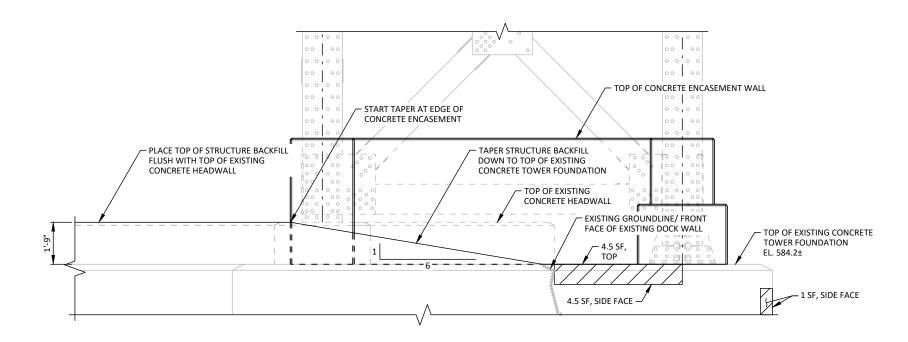






STATE PROJECT NUMBER

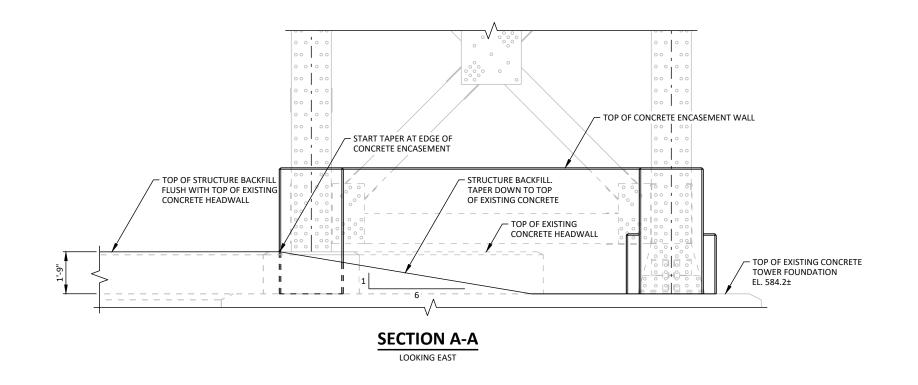
2615-15-73



SECTION C-C LOOKING EAST

NOTES

FOR LOCATION OF SECTION A-A AND SECTION C-C SEE SHEET "NORTH TRUNNION TOWER CONCRETE REPAIR PLAN."





CONCRETE SURFACE REPAIRS

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

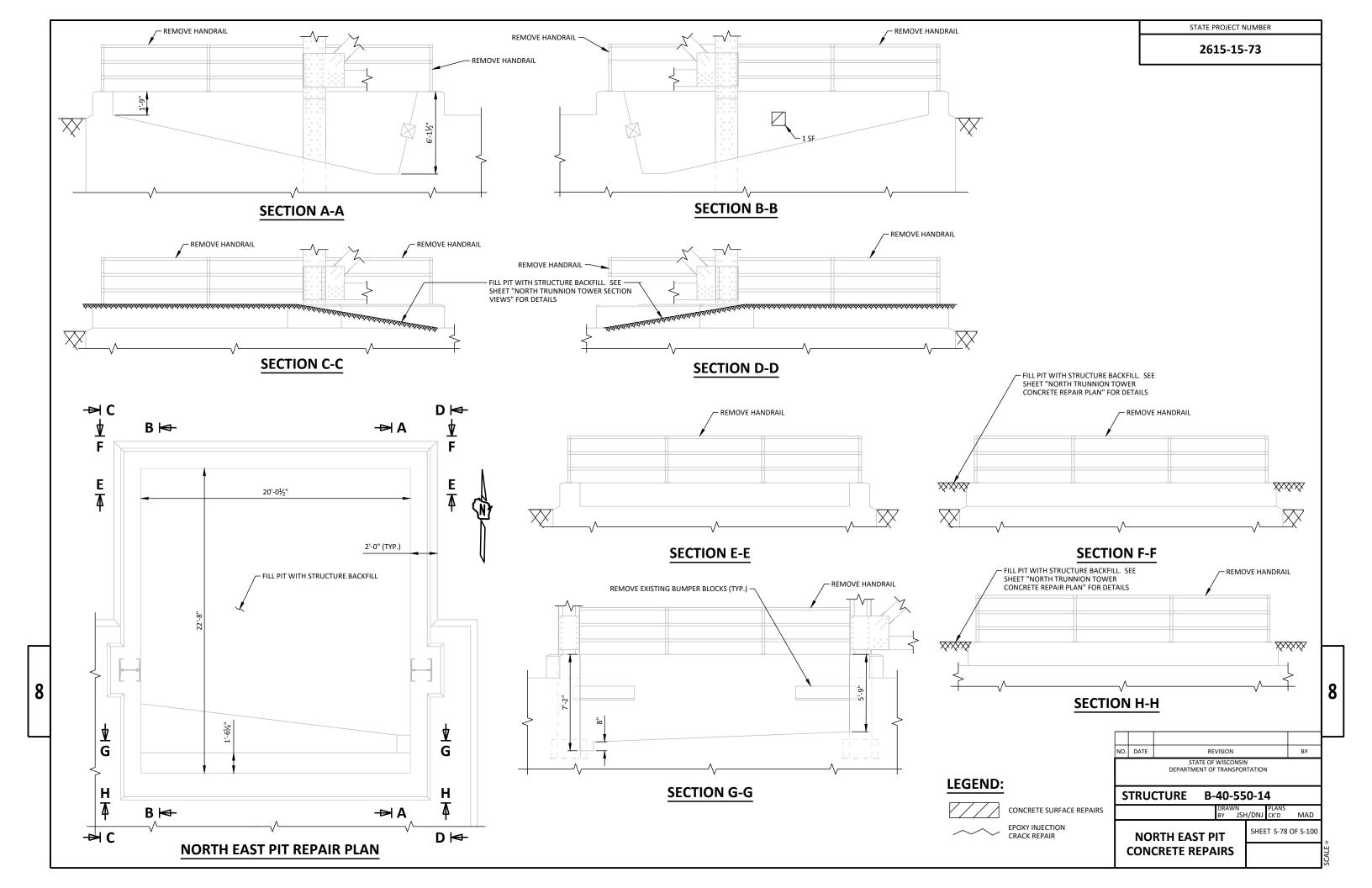
STRUCTURE B-40-550-14

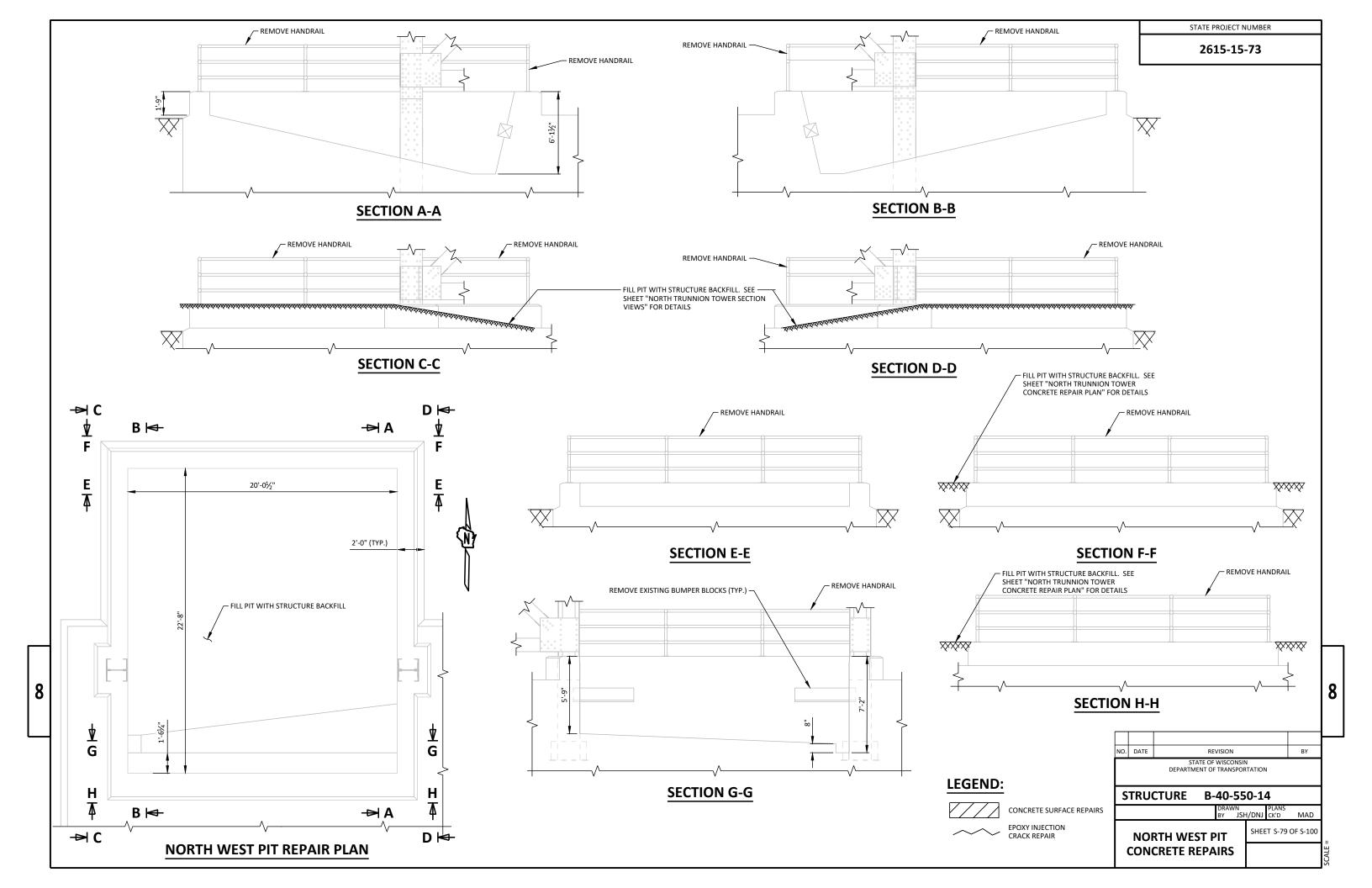
DRAWN DNJ CK'D MAD

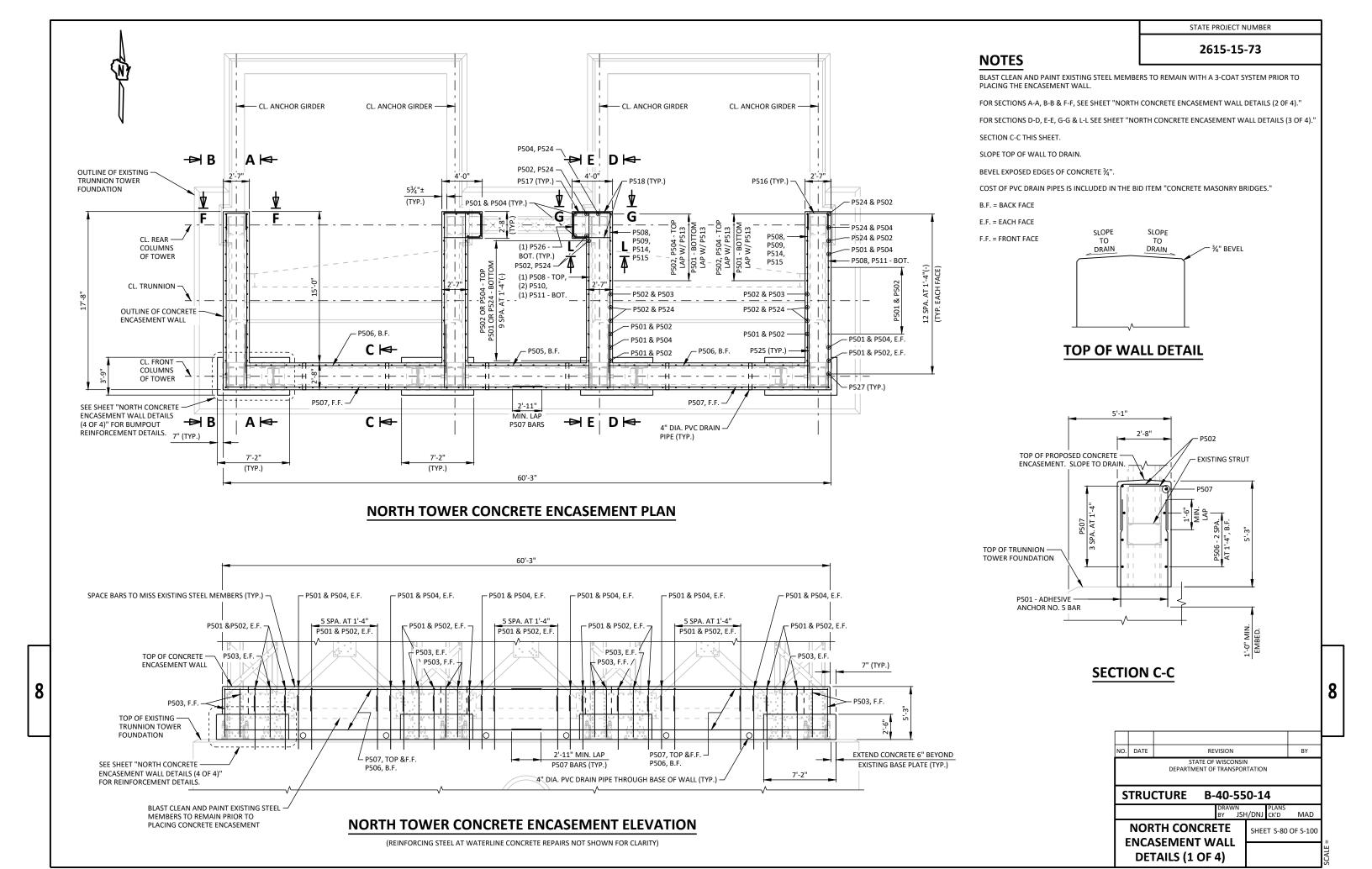
RTH TRUNNION SHEET S-77 OF S-100

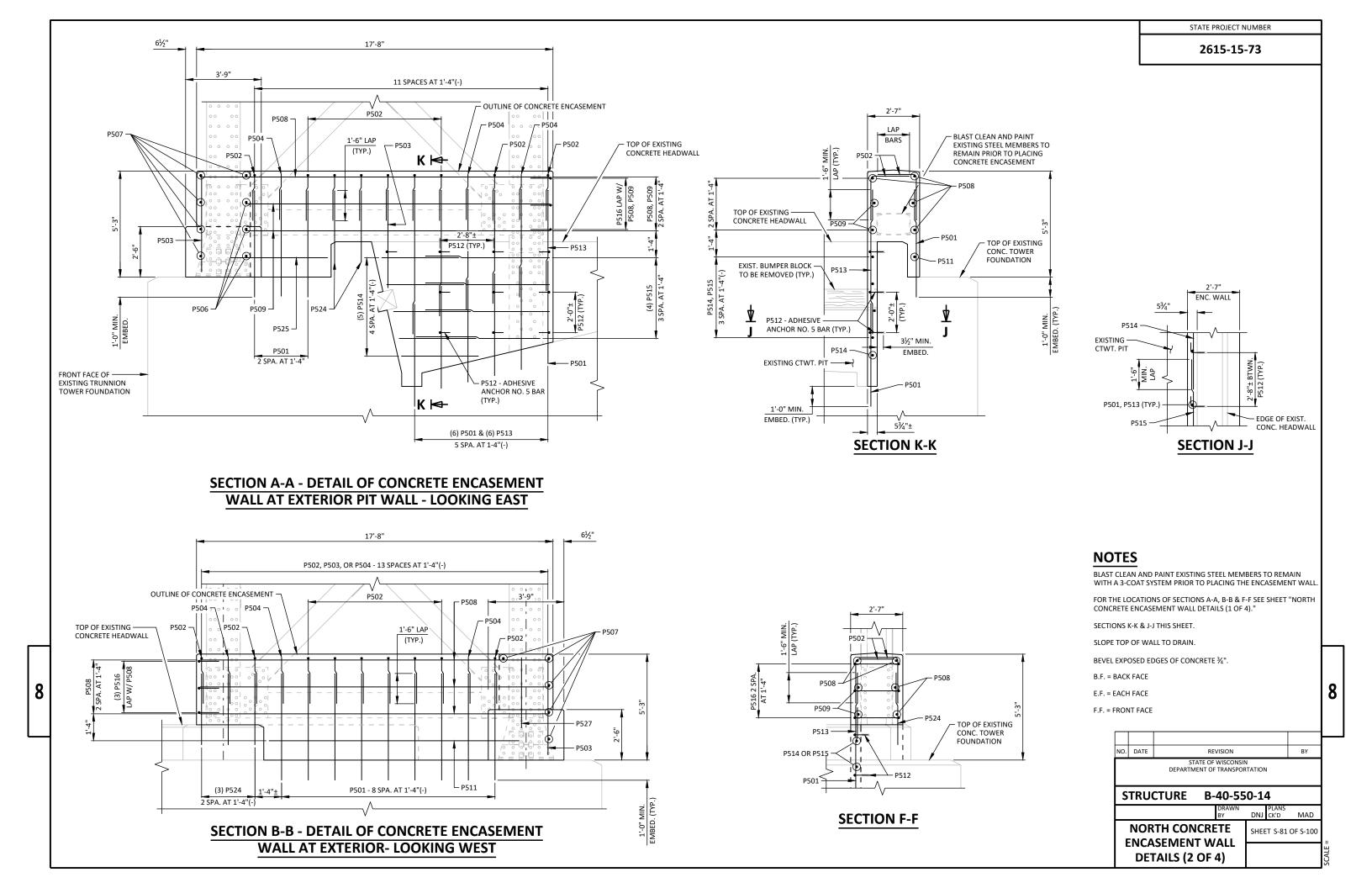
NORTH TRUNNION
TOWER SECTION
VIEWS
SHEET S-77 OF S-100

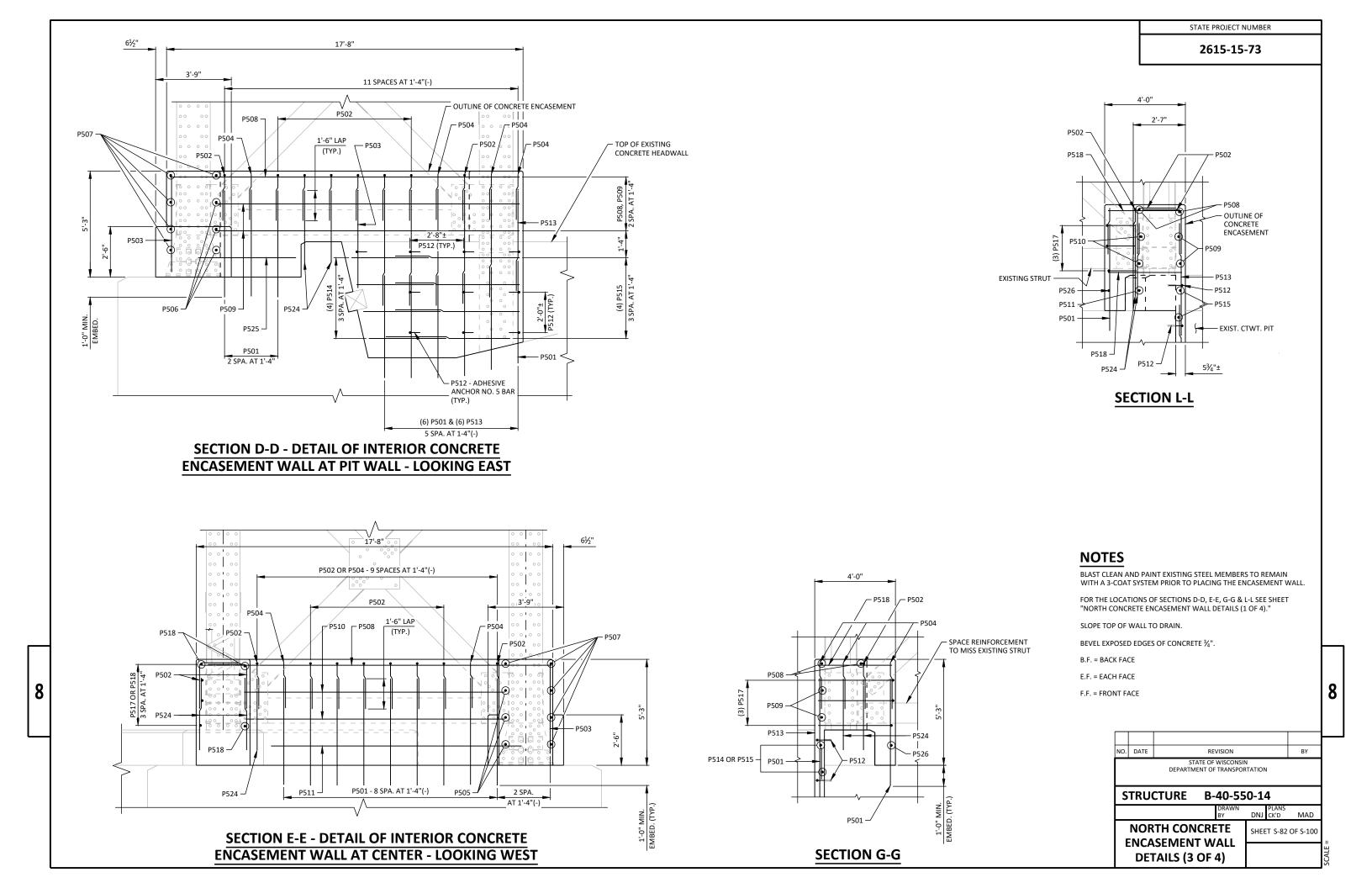
MAD OF S-100

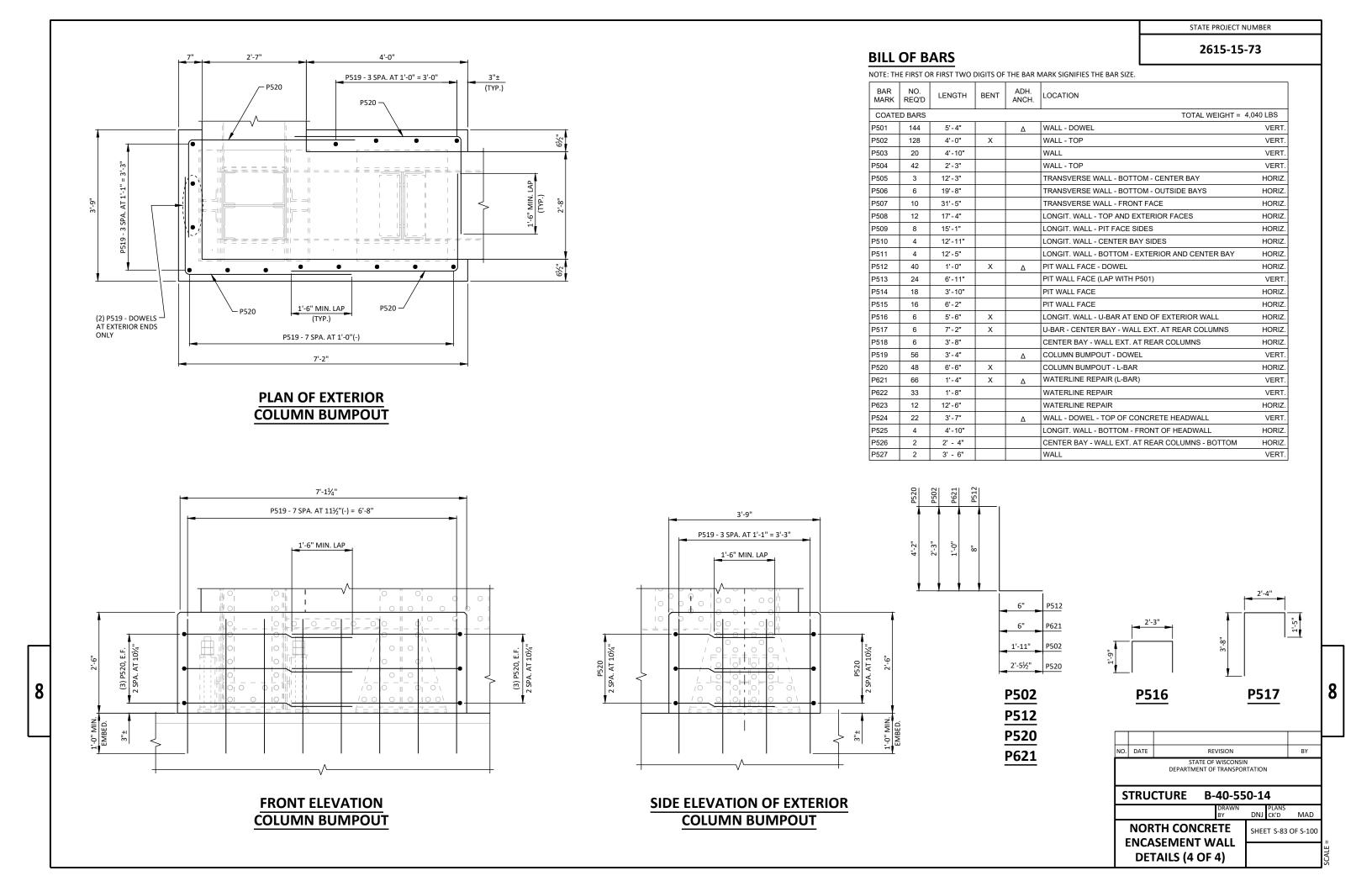


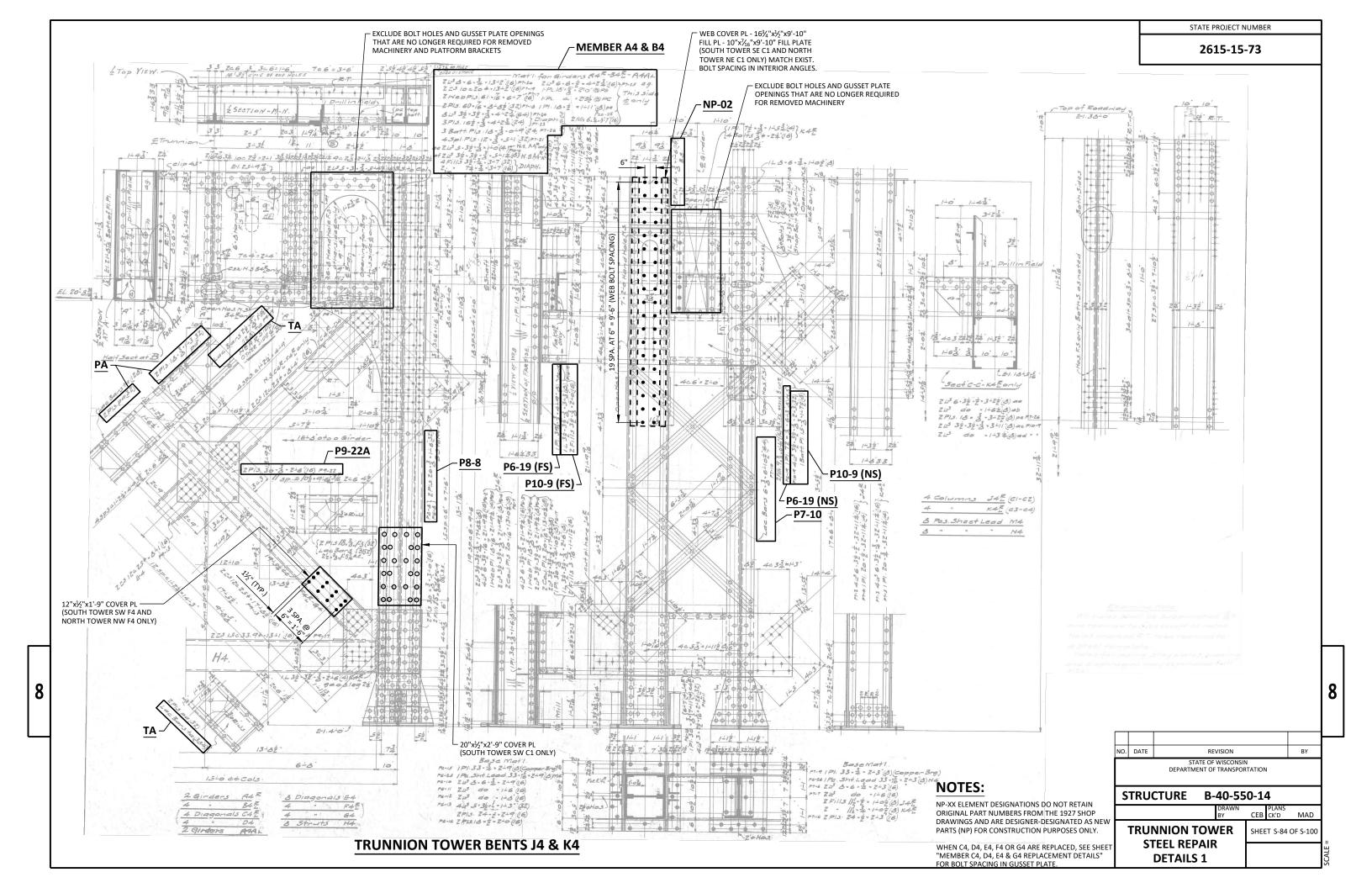


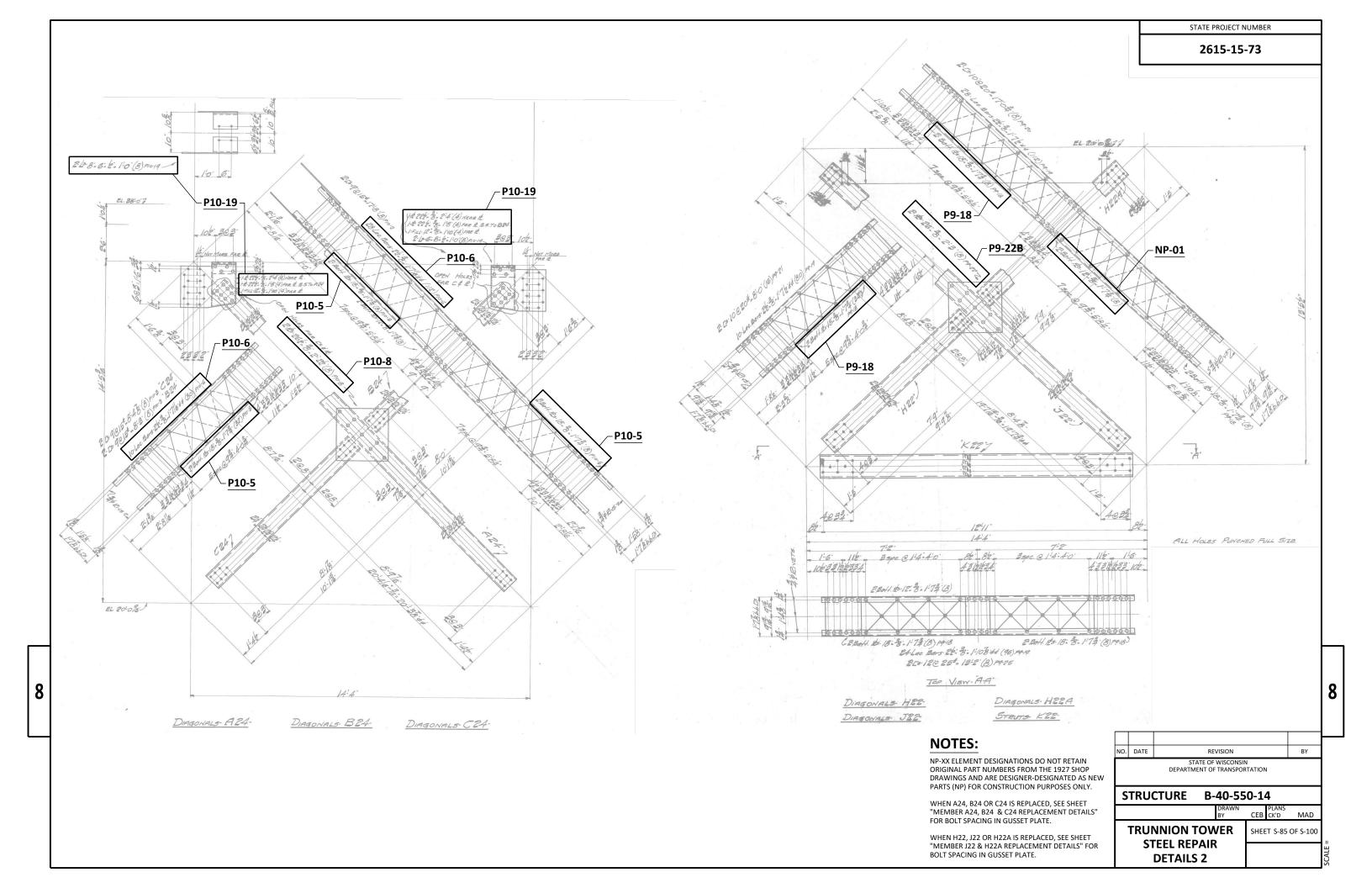


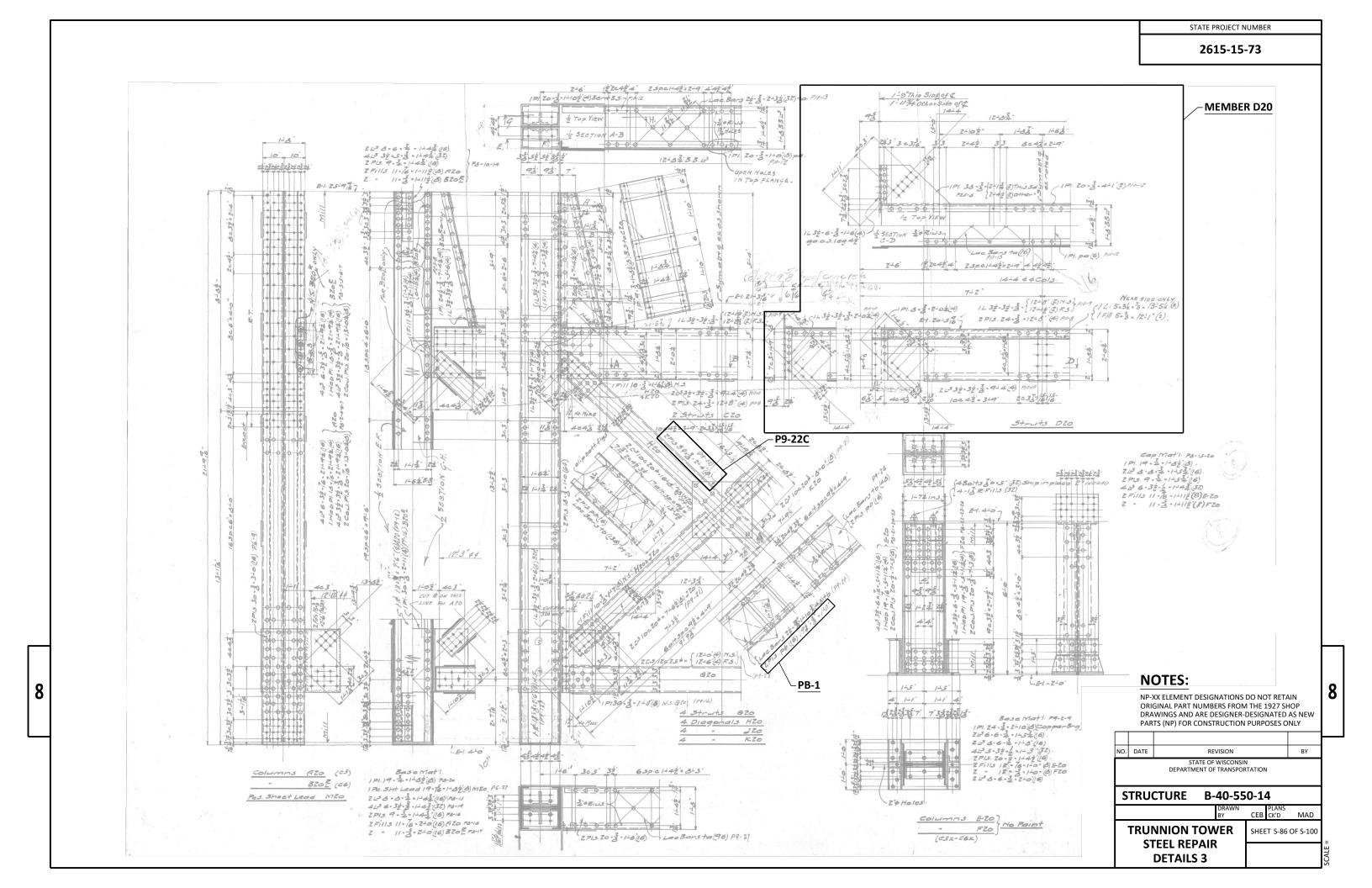




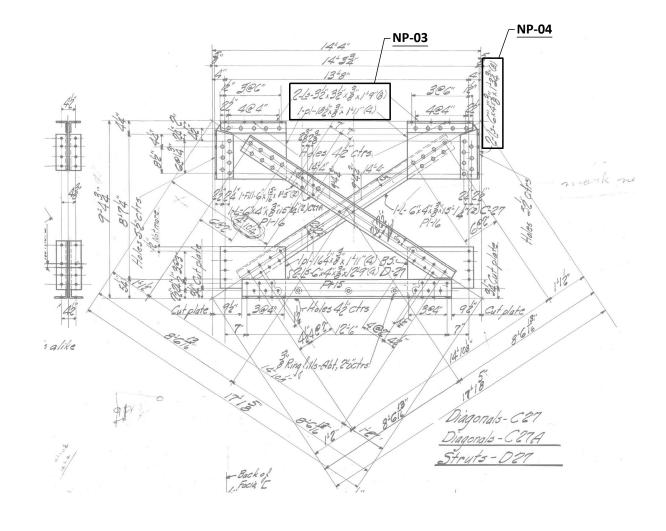


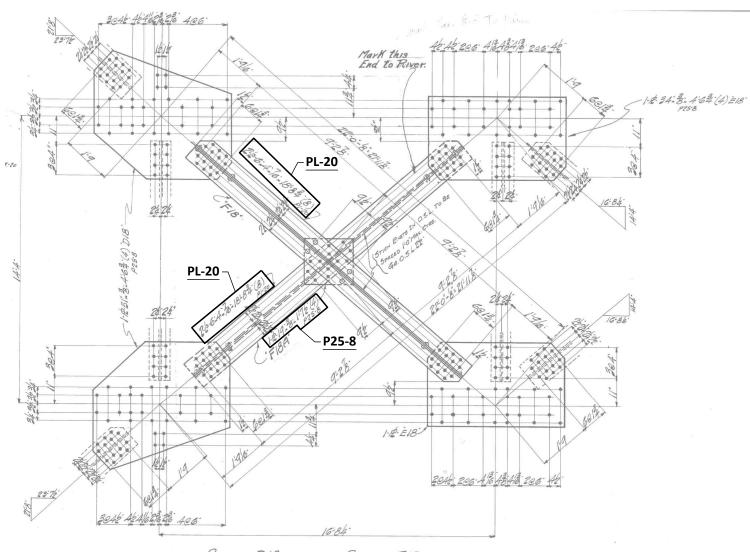












PLATES DIS PLATES EIS DIAGONALS FISA

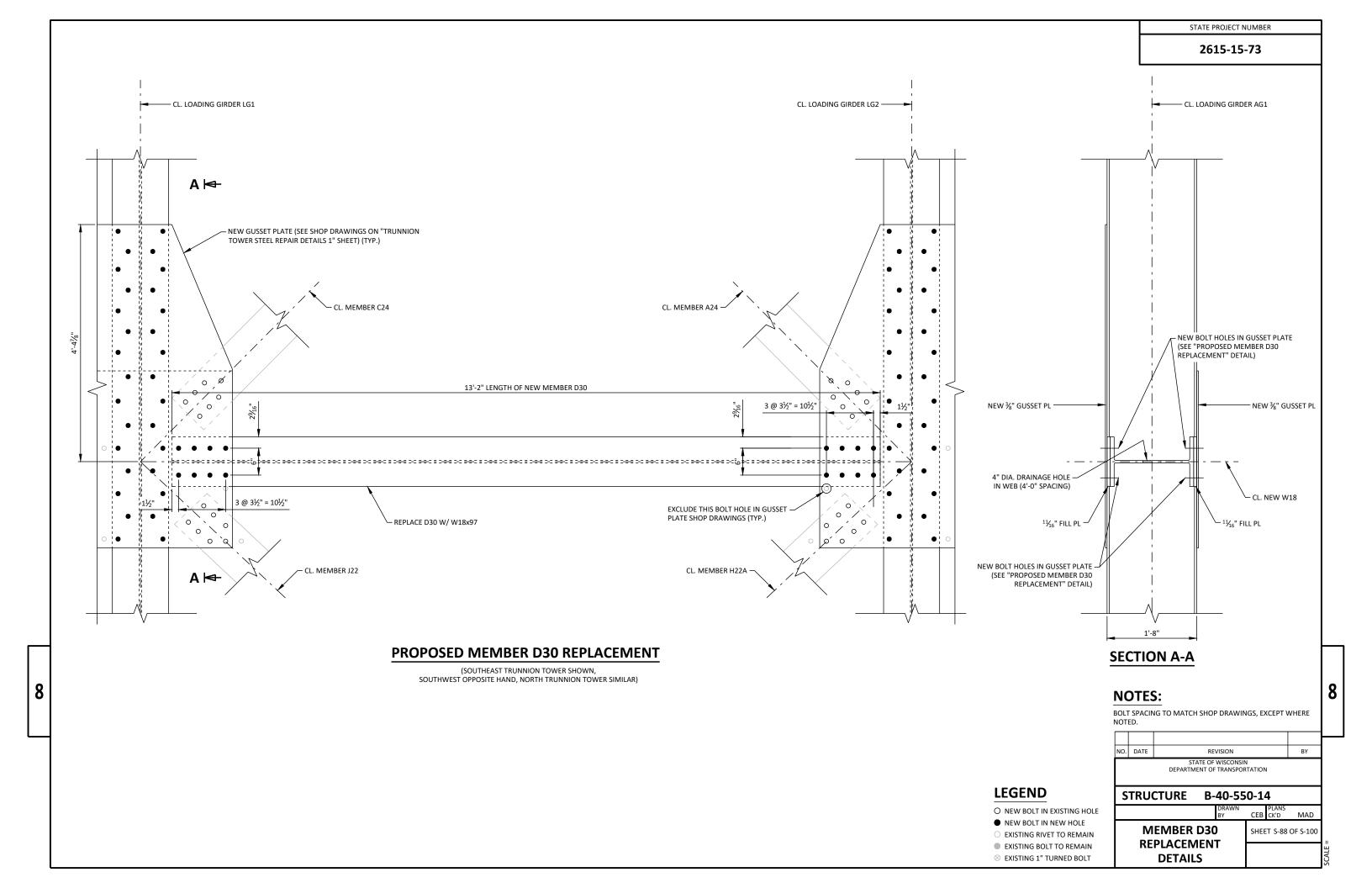
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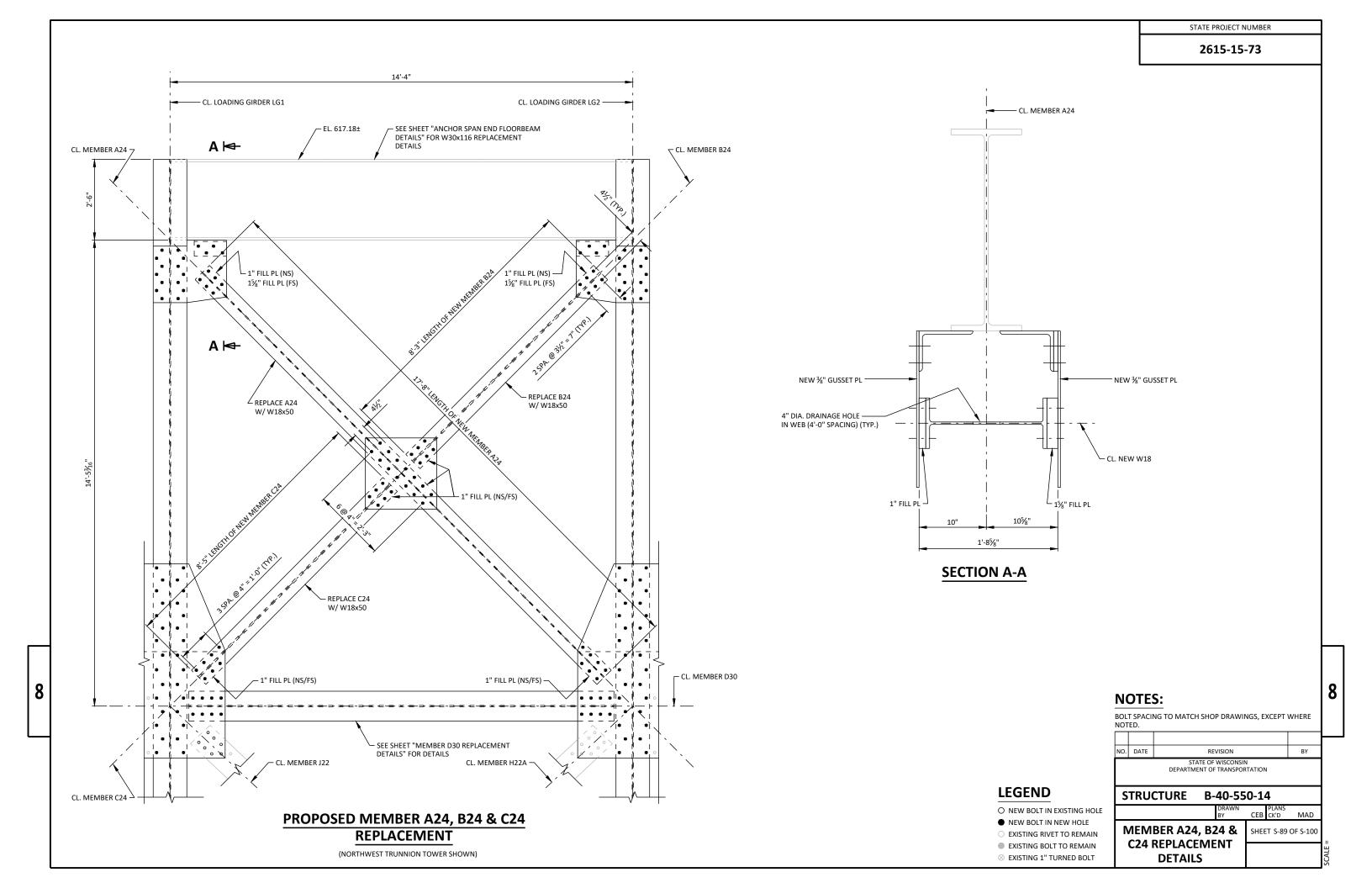
NOTES:

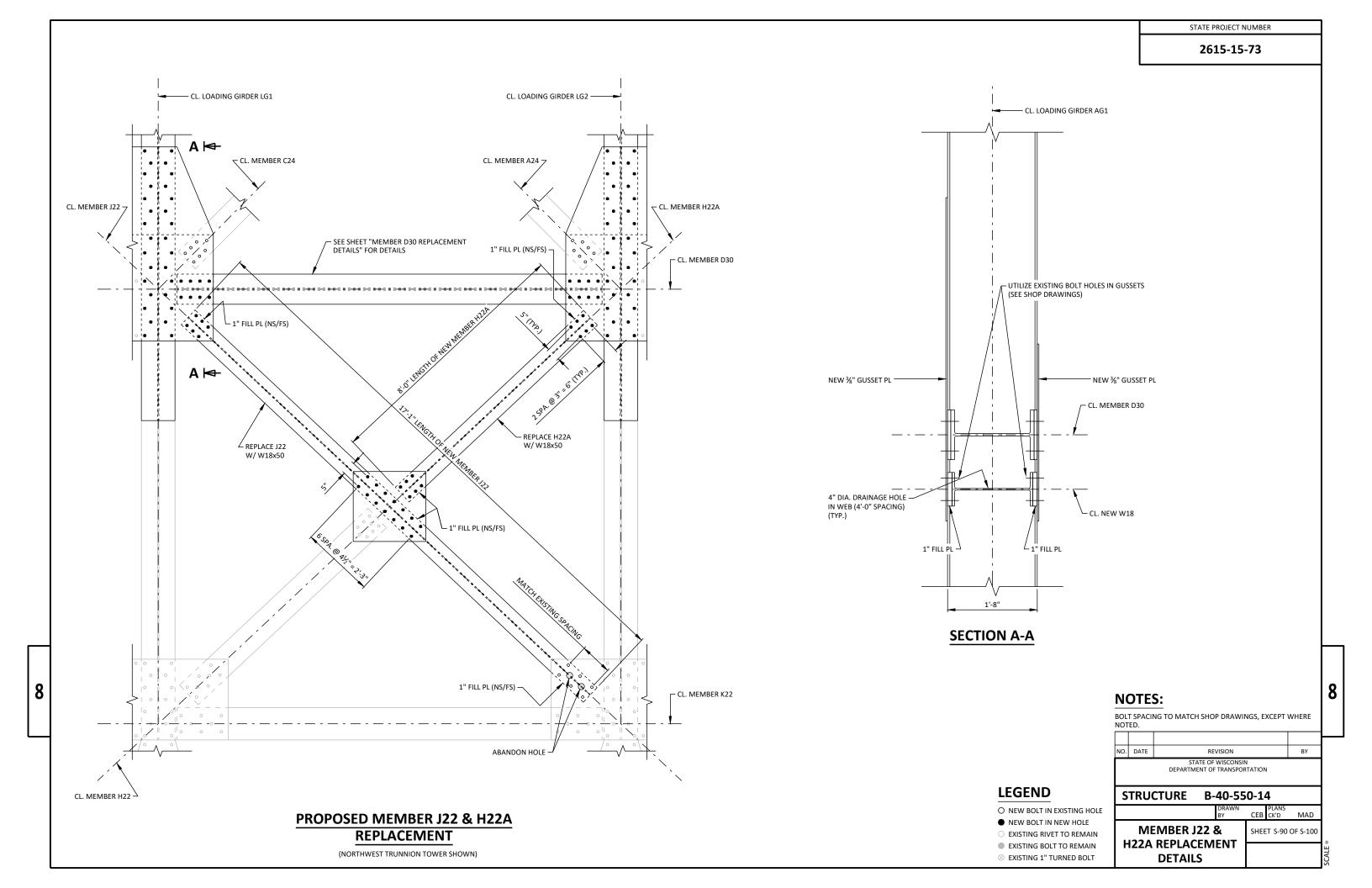
NP-XX ELEMENT DESIGNATIONS DO NOT RETAIN
ORIGINAL PART NUMBERS FROM THE 1927 SHOP
DRAWINGS AND ARE DESIGNER-DESIGNATED AS NEW
PARTS (NP) FOR CONSTRUCTION PURPOSES ONLY

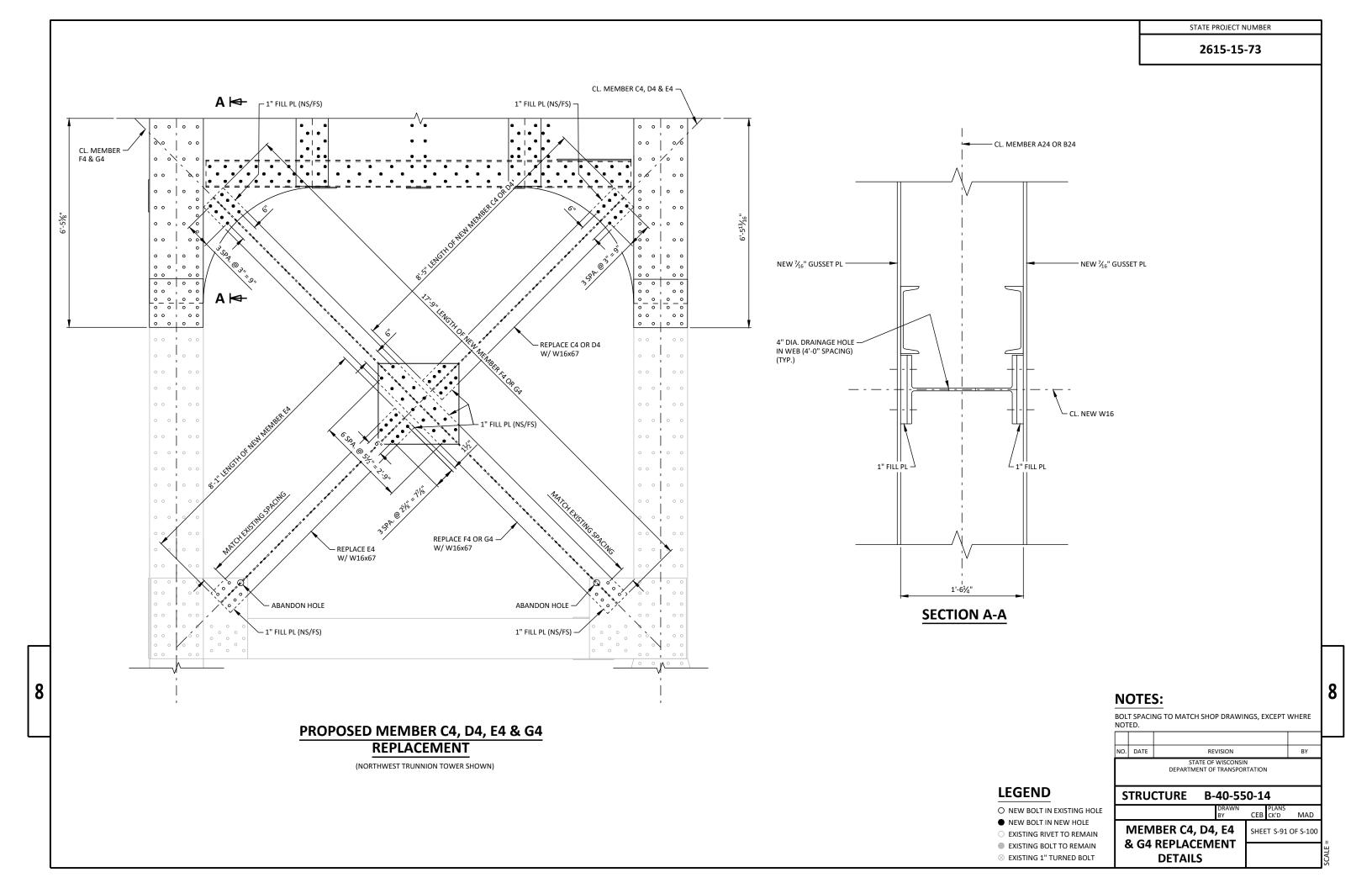
NO.	DATE		REVISION								
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION										
S	TRU	CTURE	В-	40-55	0-14	4					
				DRAWN BY	CEB	PLANS CK'D	MAD				
•		NNION T			SHEET S-87 OF S-100						
	•	TEEL REP DETAILS									

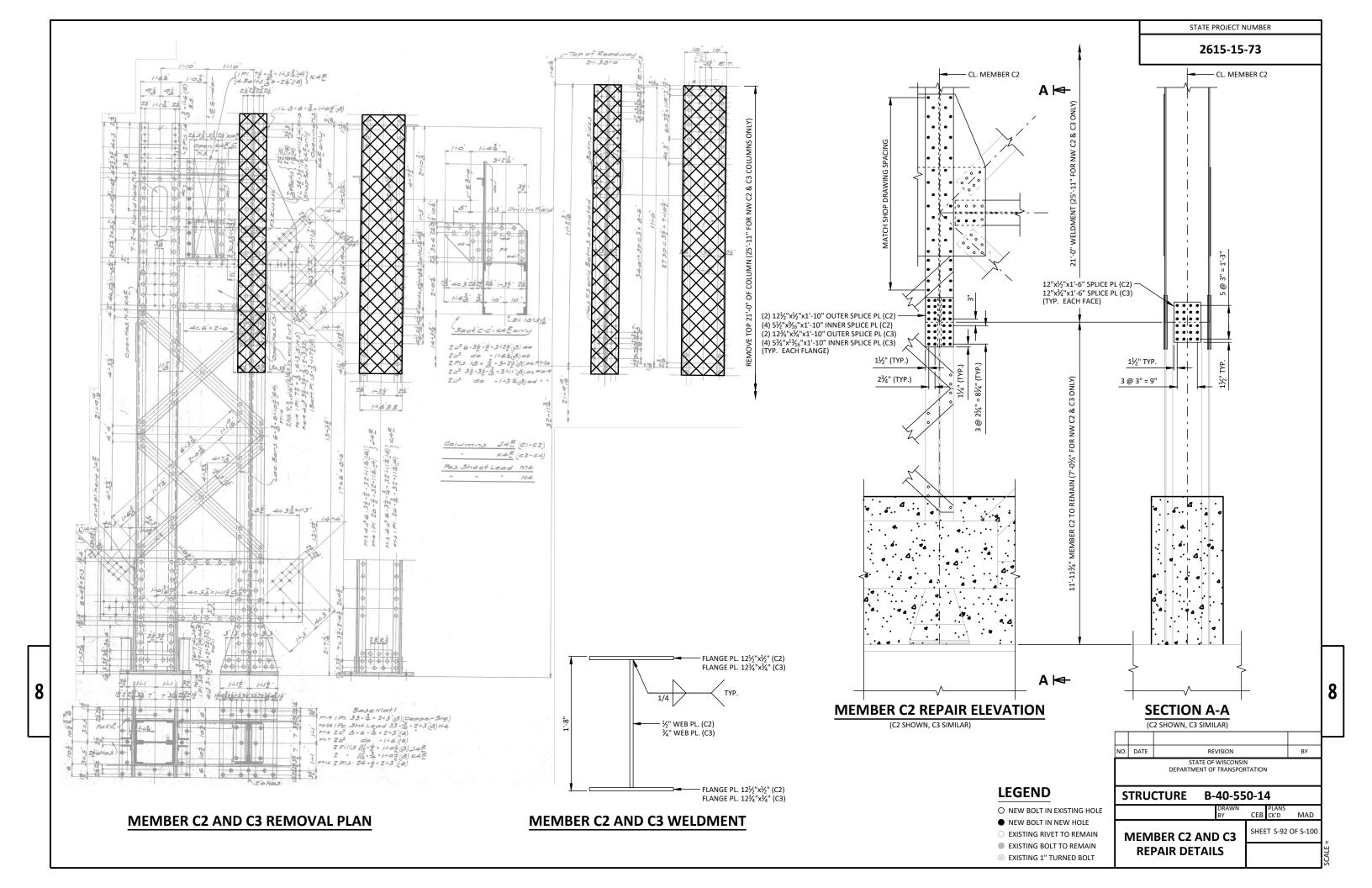
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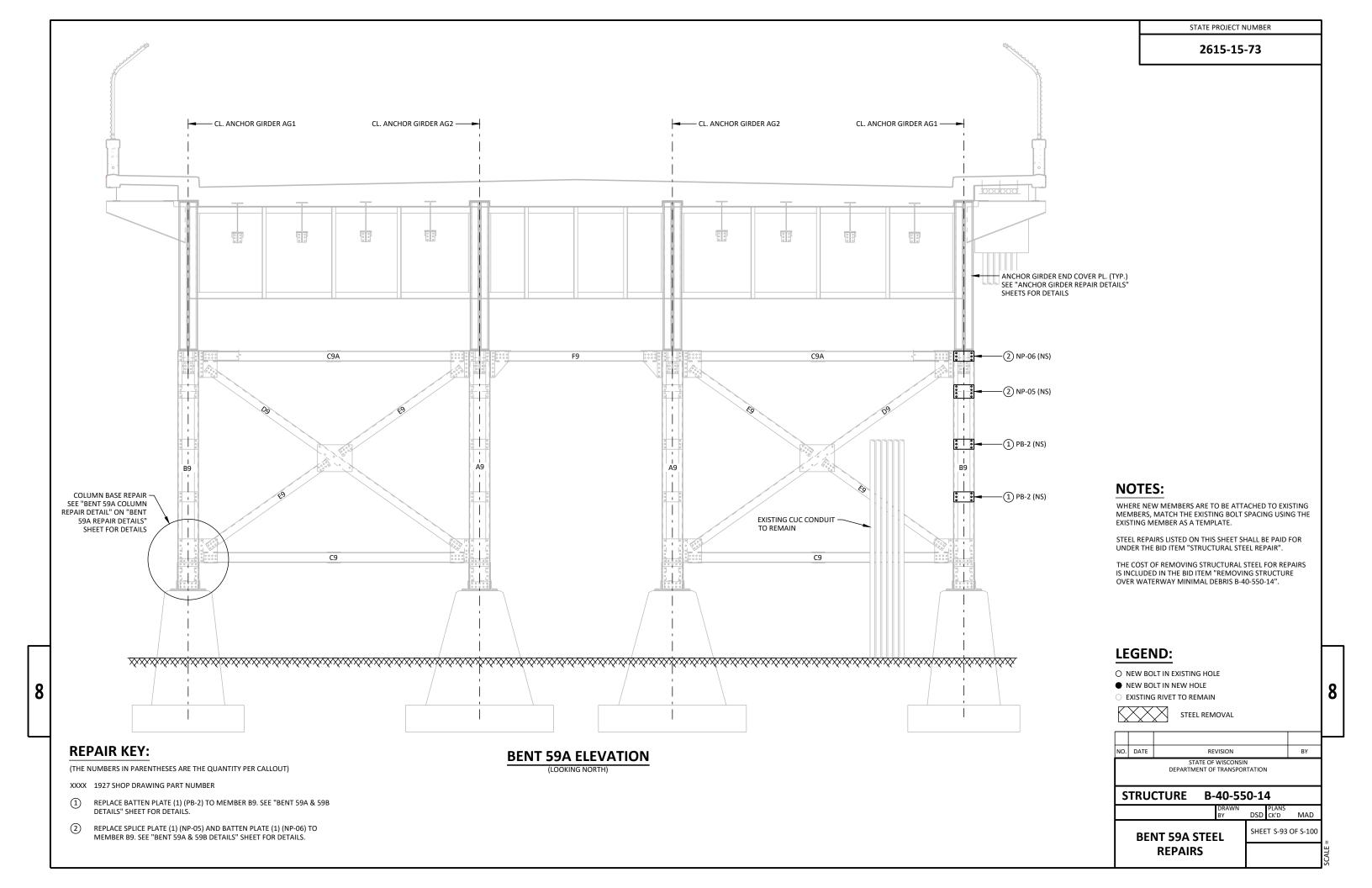


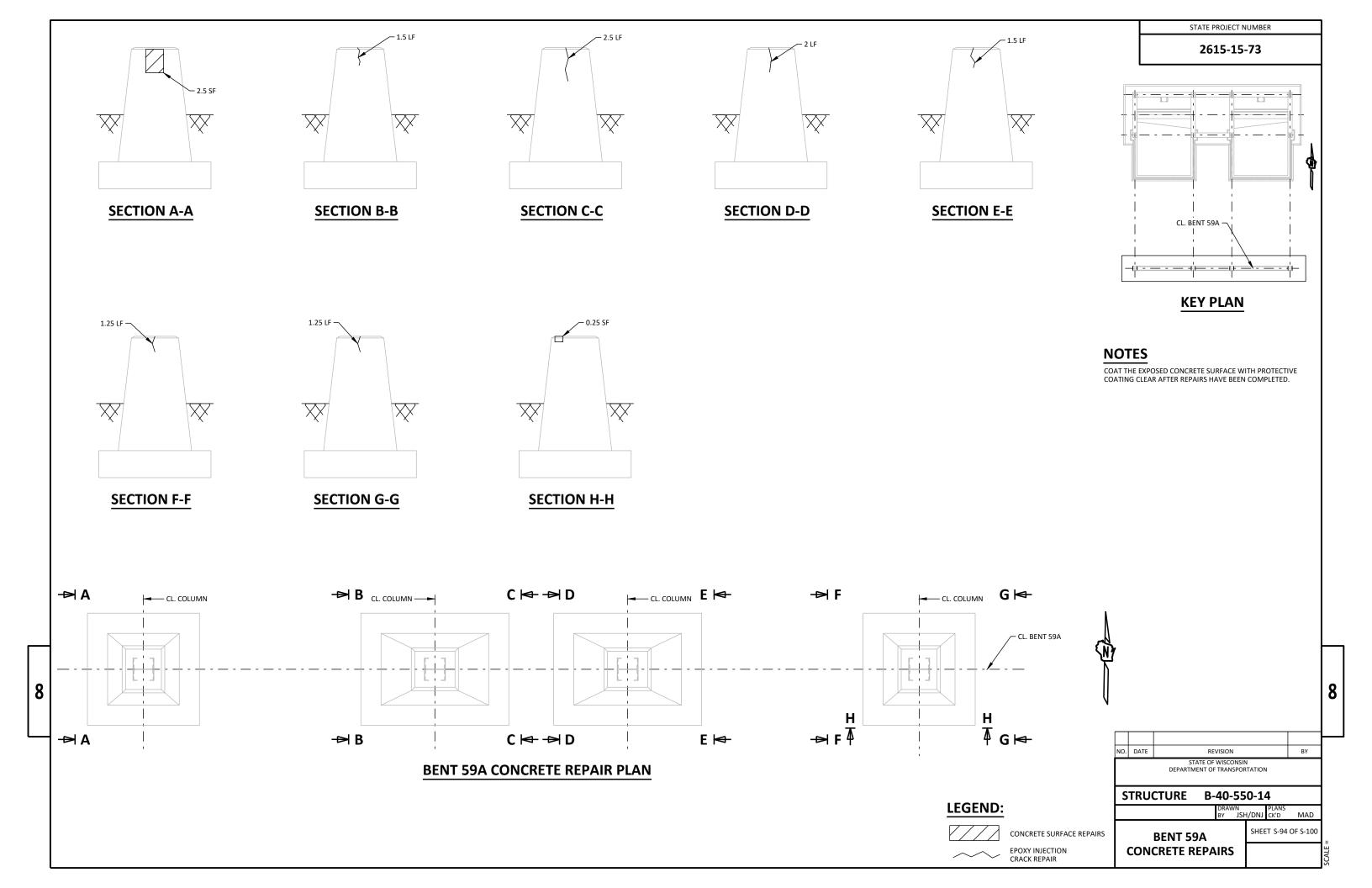


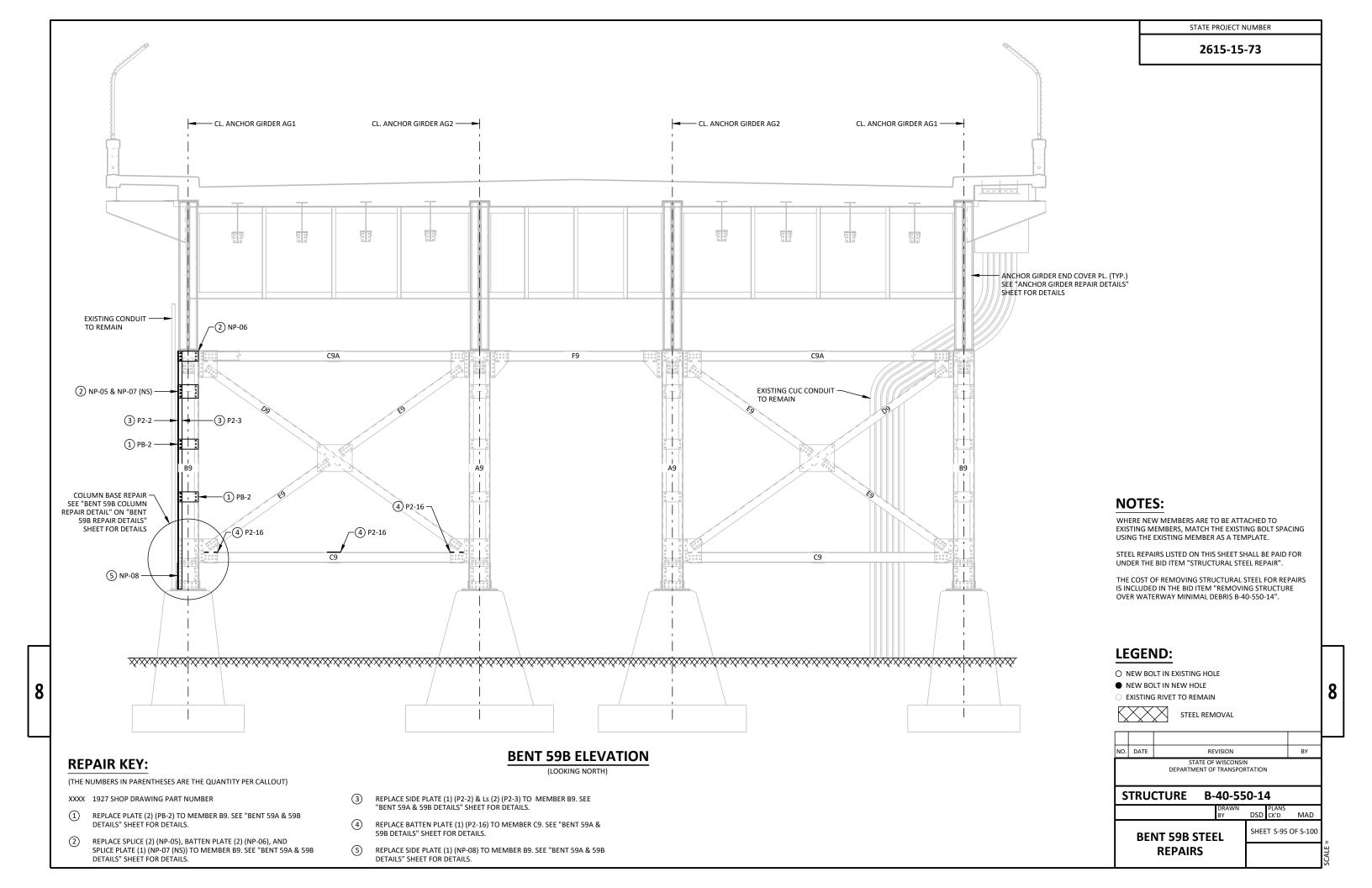


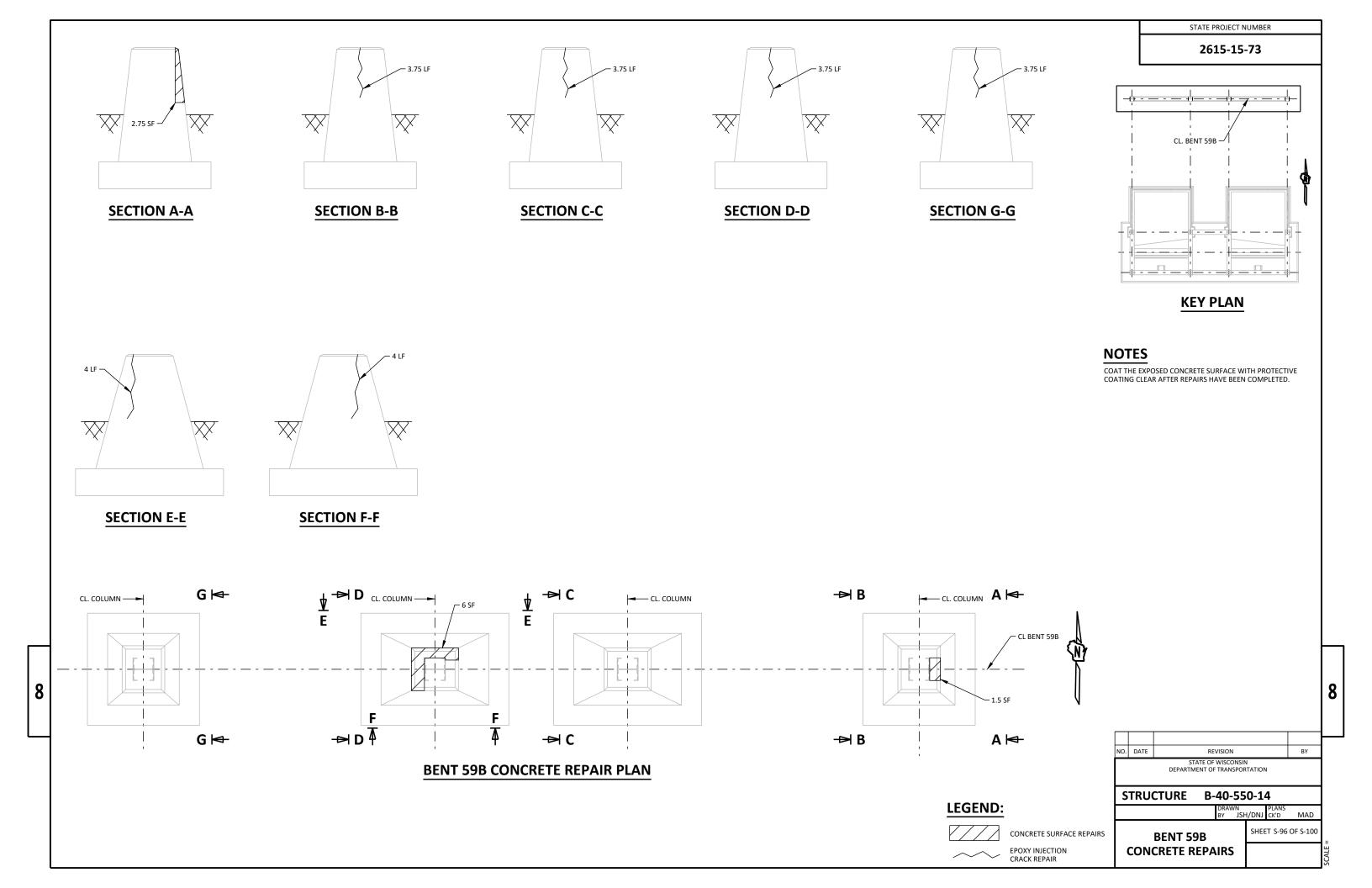


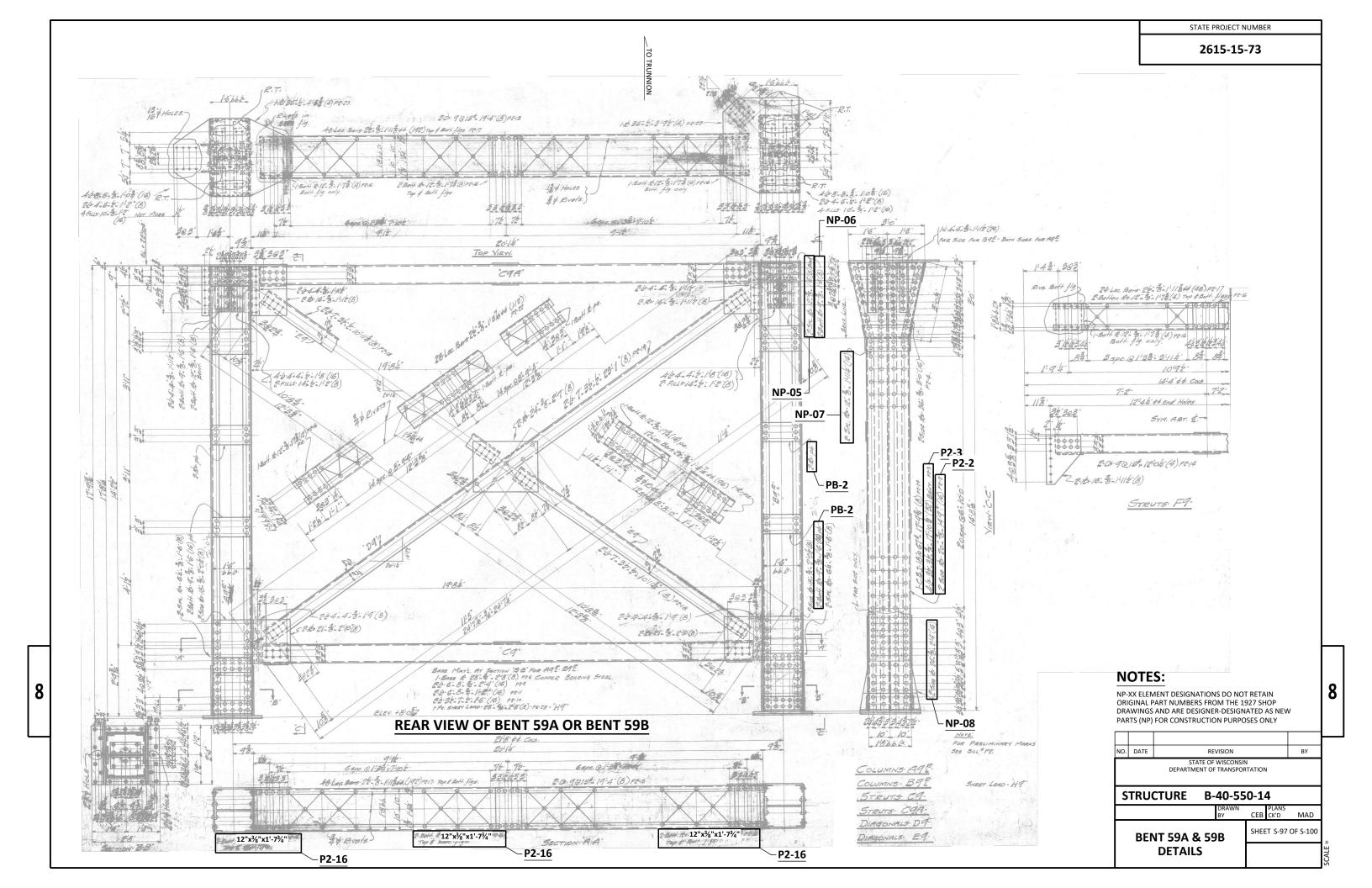


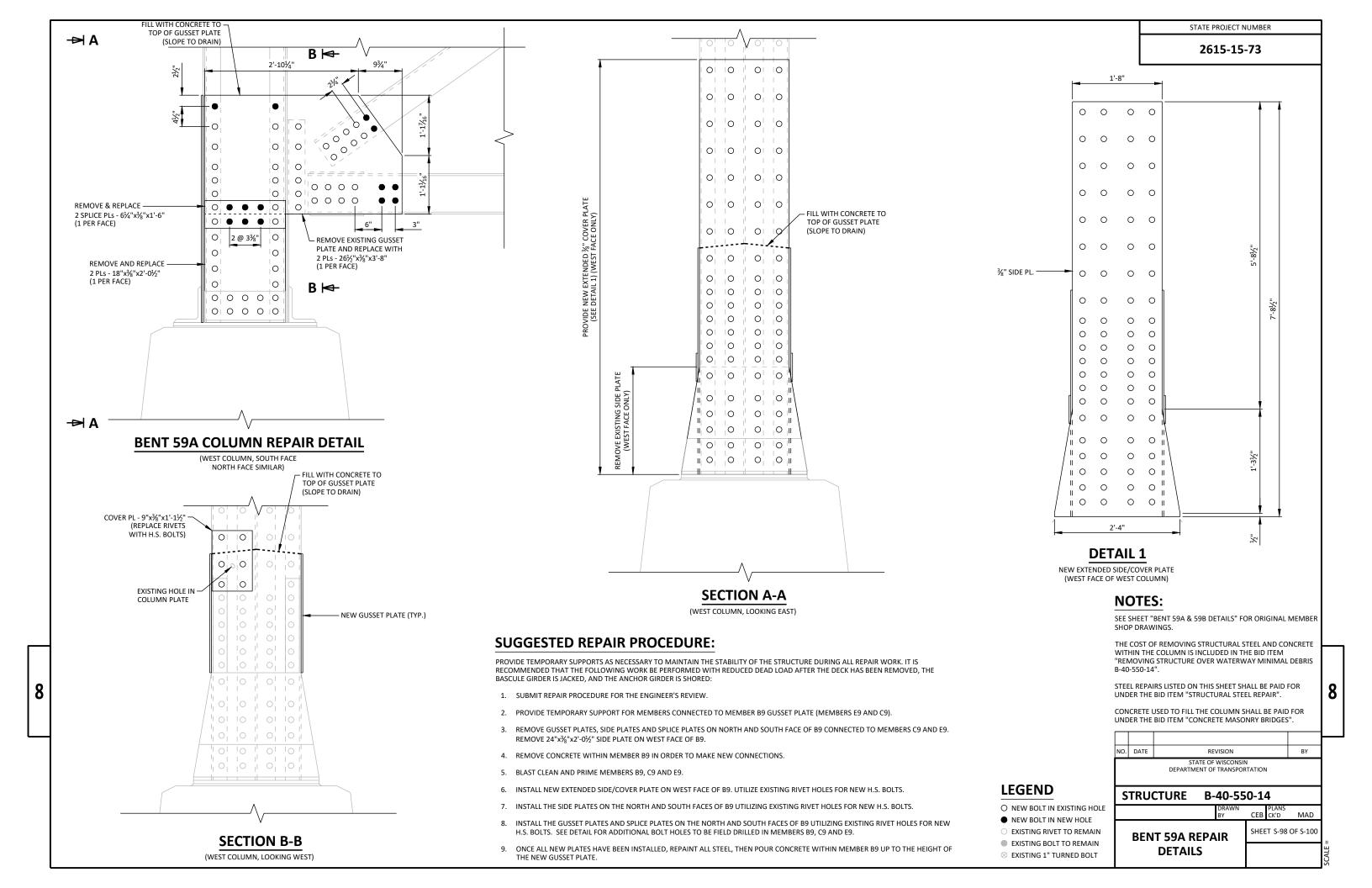


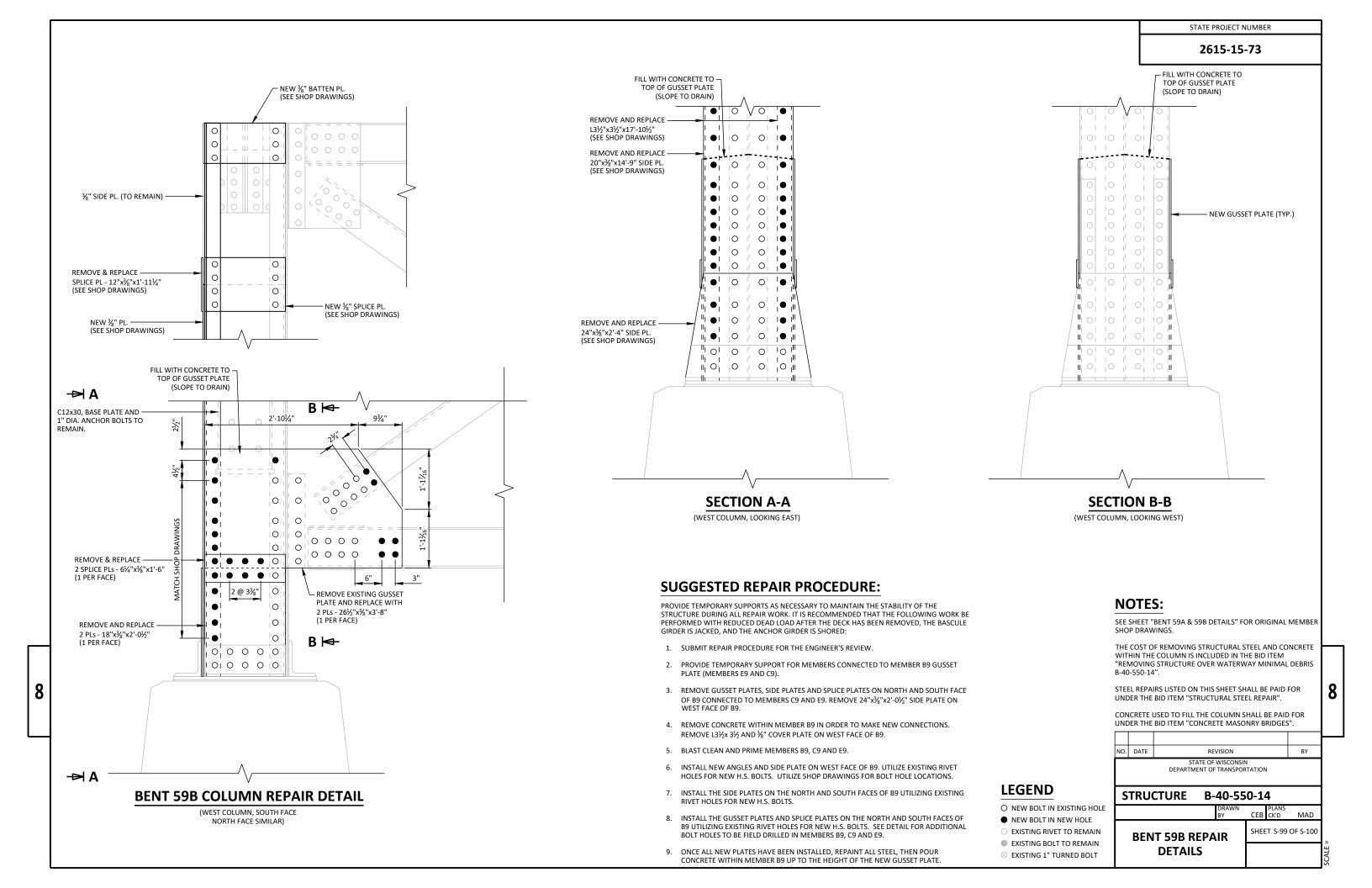


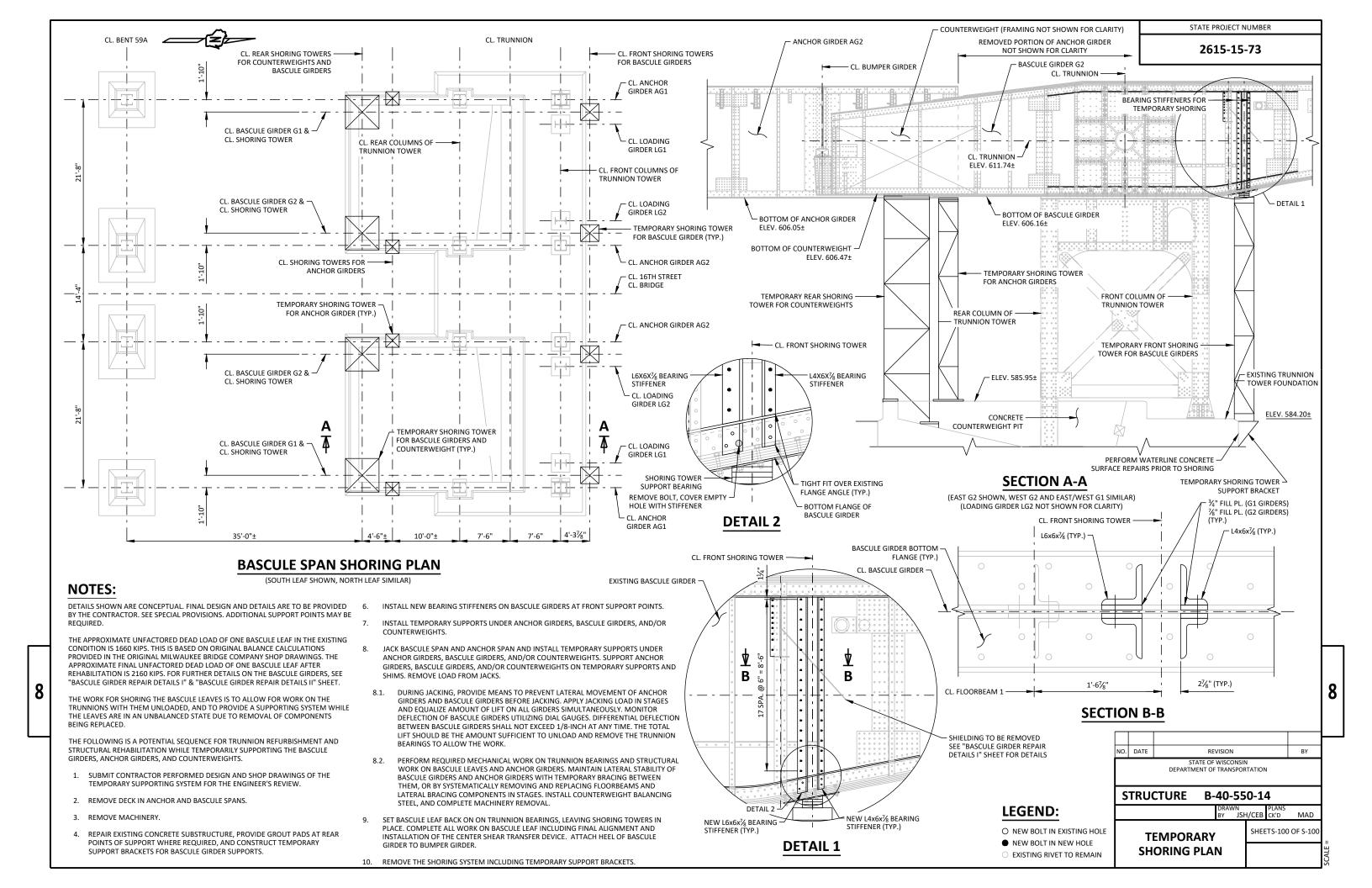


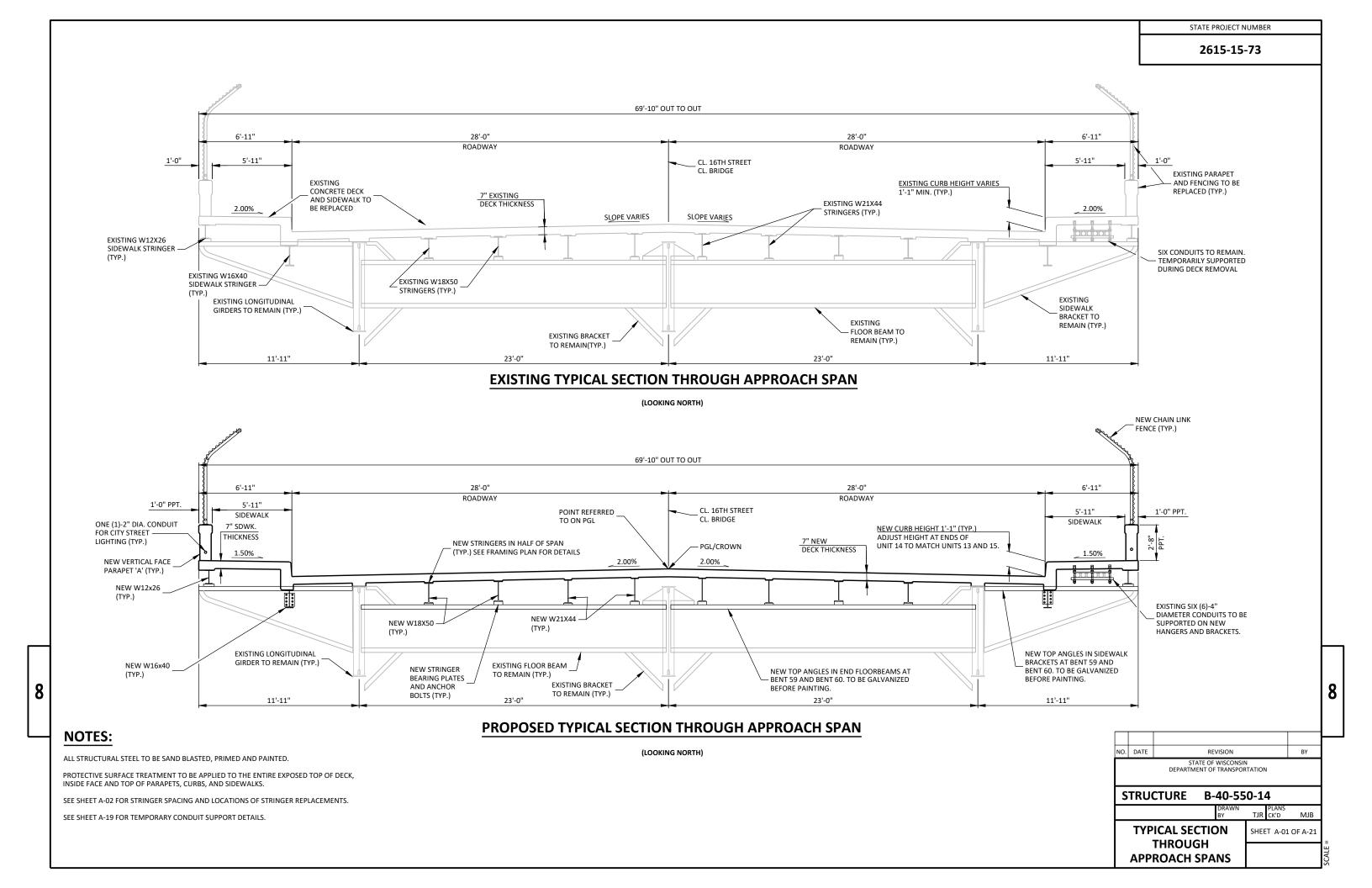


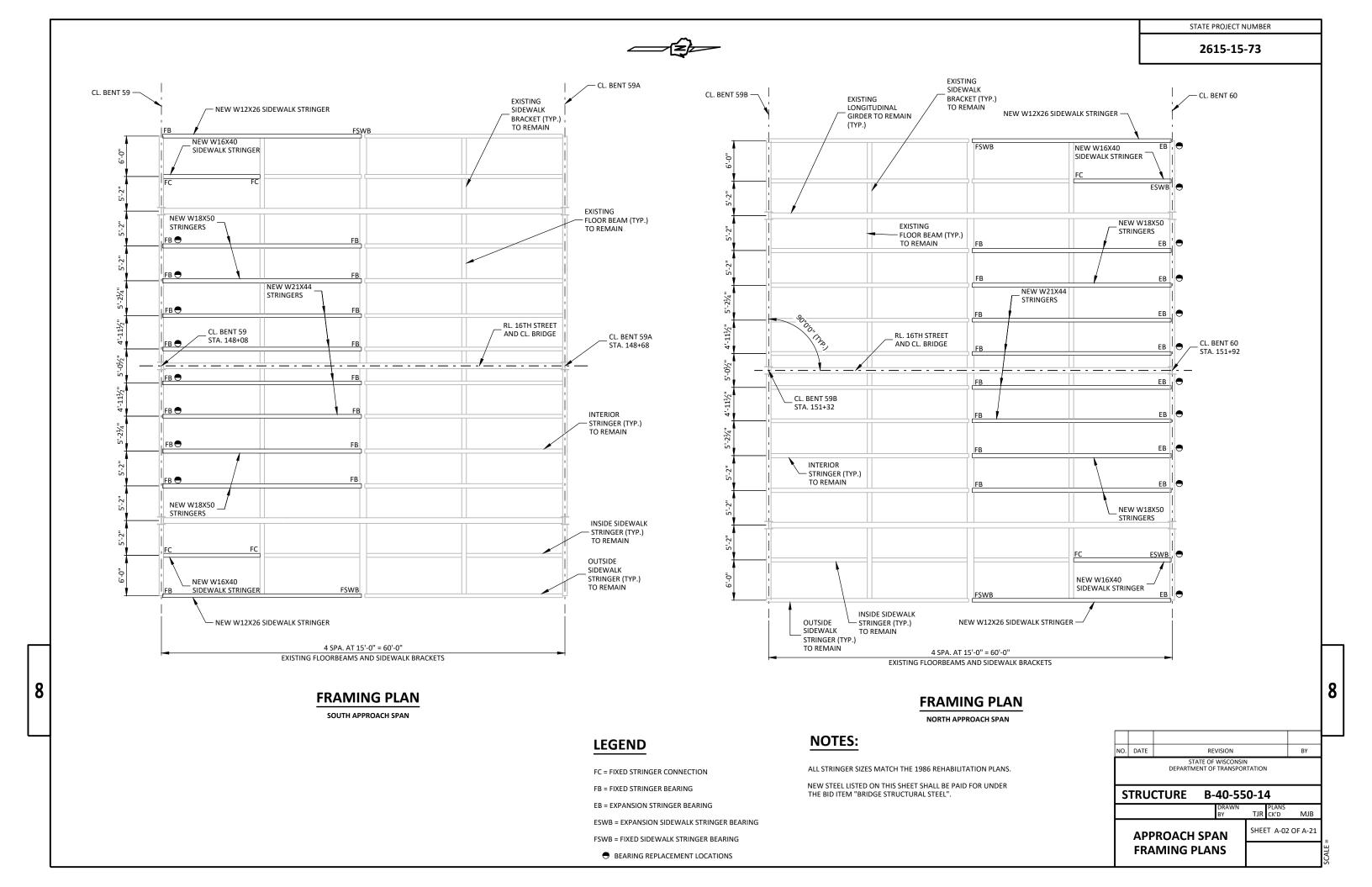






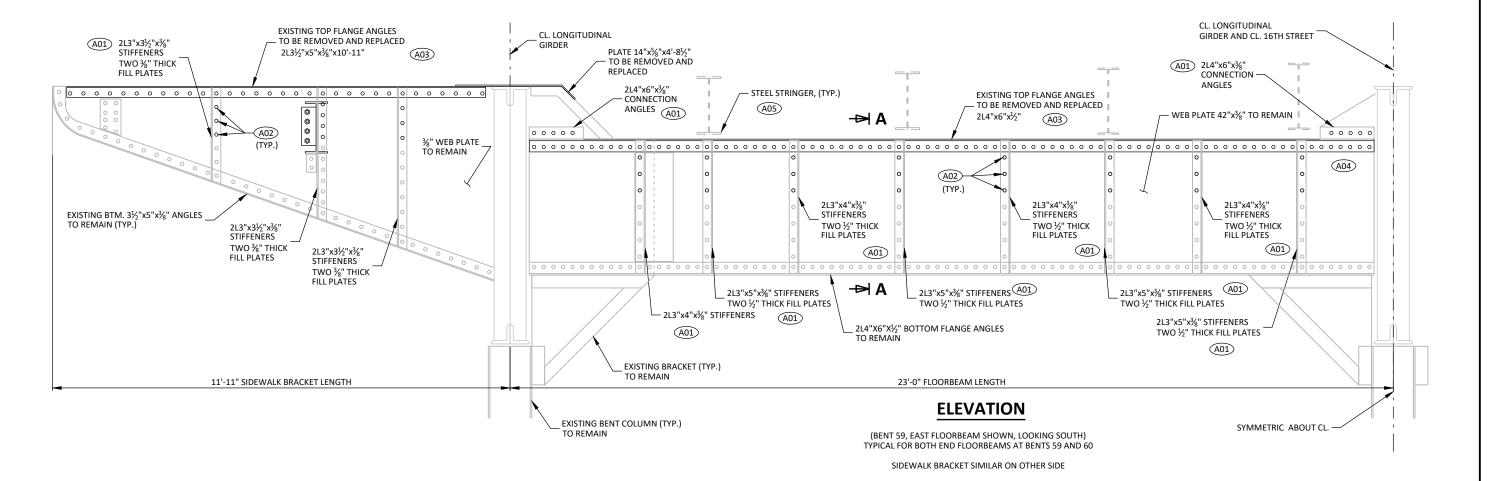






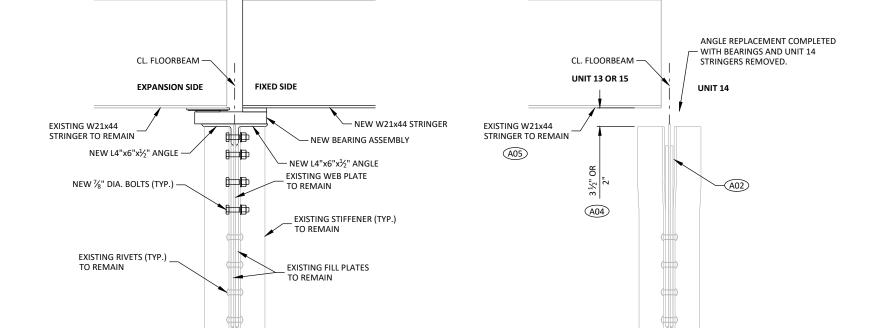
STATE PROJECT NUMBER

2615-15-73



SECTION A-A

(PROPOSED METHOD)



SECTION A-A

NOTES:

ALL STRUCTURAL STEEL TO BE SAND BLASTED, PRIMED AND PAINTED.

NO SEPARATE PAYMENT FOR GALVANIZING NEW STEEL. THE COST OF GALVANIZING SHALL BE INCLUDED IN THE BID PRICE FOR "STRUCTURAL STEEL REPAIR".

STEEL REPAIRS LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "STRUCTURAL STEEL REPAIR".

THE COST OF REMOVING STRUCTURAL STEEL FOR REPAIRS IS INCLUDED IN THE BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-40-550-14".

FILL ANY NEW OR EXISTING HOLES WITH %" HIGH STRENGTH BOLTS

PER EXISTING PLANS ALL RIVETS ARE $\frac{7}{8}$ " DIA. WITH $^{15}\!\!/_{6}$ " DIA.

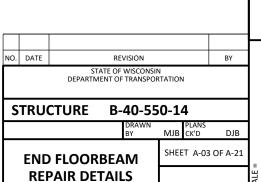
DETAILED HOLE LOCATIONS IN MEMBERS ARE NOT SHOWN ON ORIGINAL PLANS. ALL REPLACEMENT STEEL MEMBERS TO BE MATCH DRILLED TO THE EXISTING MEMBERS.

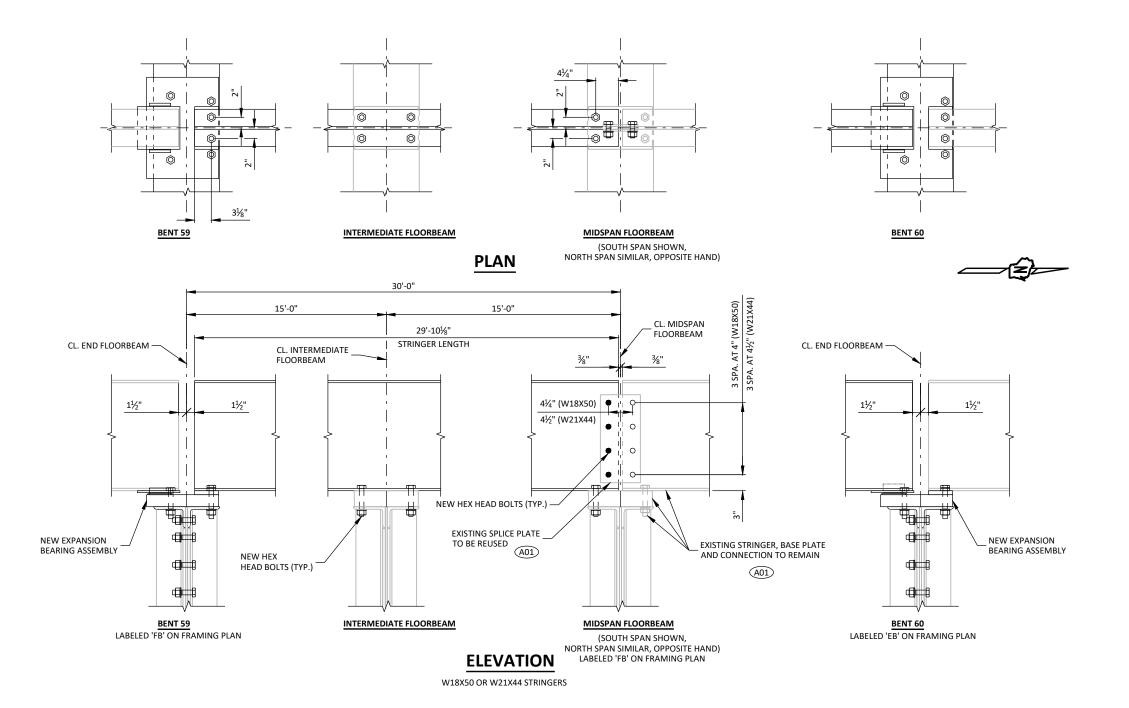
- A01 STIFFENERS, FILL PLATES AND CONNECTION ANGLES TO BE REUSED WHERE POSSIBLE. IF DAMAGED DURING REMOVAL OR CONSTRUCTION OPERATIONS THEY SHALL BE REPLACED IN
- TOP RIVETS ANTICIPATED TO BE REMOVED TO ALLOW FOR WEDGING AWAY OF STIFFENERS FOR TOP ANGLE REPLACEMENT. AT THE CONTRACTOR'S OPTION ALL RIVETS IN THE STIFFENERS MAY BE REMOVED TO ALLOW FOR REPLACEMENT OF THE TOP FLANGE ANGLES.
- A03 NEW TOP FLANGE ANGLES SHALL BE HOT-DIP GALVANIZED, THEN SHOP PRIMER PAINTED PRIOR TO INSTALLATION. THESE ANGLES SHALL THEN BE PAINTED AS PART OF THE STRUCTURE PAINTING AS SPECIFIED FOR OTHER STRUCTURAL STEEL.

- DISTANCE SHOWN IS BASED ON BEARING HEIGHTS TO ILLUSTRATE EXPECTED CLEARANCE FOR FLANGE ANGLE REPLACEMENT
- TEMPORARY SUPPORT OF STRINGERS IN UNITS 13 AND 15 IS REQUIRED DURING TOP FLANGE REPLACEMENT. TEMPORARY SUPPORT NOT SHOWN AND STRINGERS ARE VISUALLY SHOWN IN THE SUPPORTED CONDITION. TO BE INCLUDED IN THE BID ITEM "TEMPORARY SHORING OF STRUCTURE".

LEGEND

- NEW BOLT IN EXISTING HOLE
- EXISTING RIVET TO REMAIN





NOTES:

ALL STRINGER SIZES MATCH SIZES FROM 1986 REHABILITATION PLANS.

SEE FRAMING PLAN FOR LOCATION AND STRINGER SIZE.

NEW STEEL LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "BRIDGE STRUCTURAL STEEL".

HOLES IN BOTTOM FLANGE AT BEARINGS AND SPLICE PLATE AT CENTER FLOORBEAMS ARE SHOWN IN THE REHABILITATION PLANS AND ARE REPLICATED ON THIS

EITHER SHOP DRILLING OR FIELD DRILLING TO MATCH ARE ACCEPTABLE AND AT THE DISCRETION OF THE CONTRACTOR

SEE BEARING DETAILS SHEET FOR ADDITIONAL DETAILS ON BEARING PLATE SIZE AND CONNECTIONS

FILL ANY NEW OR EXISTING HOLES WITH %" DIA. HIGH STRENGTH BOLTS.

LEGEND:

A01 SPLICE PLATES, BASE PLATES AND EXISTING STEEL AS NOTED TO BE REUSED WHERE POSSIBLE.

NEW BOLT IN EXISTING HOLE

NEW BOLT IN NEW HOLE

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-550-14

DRAWN
BY

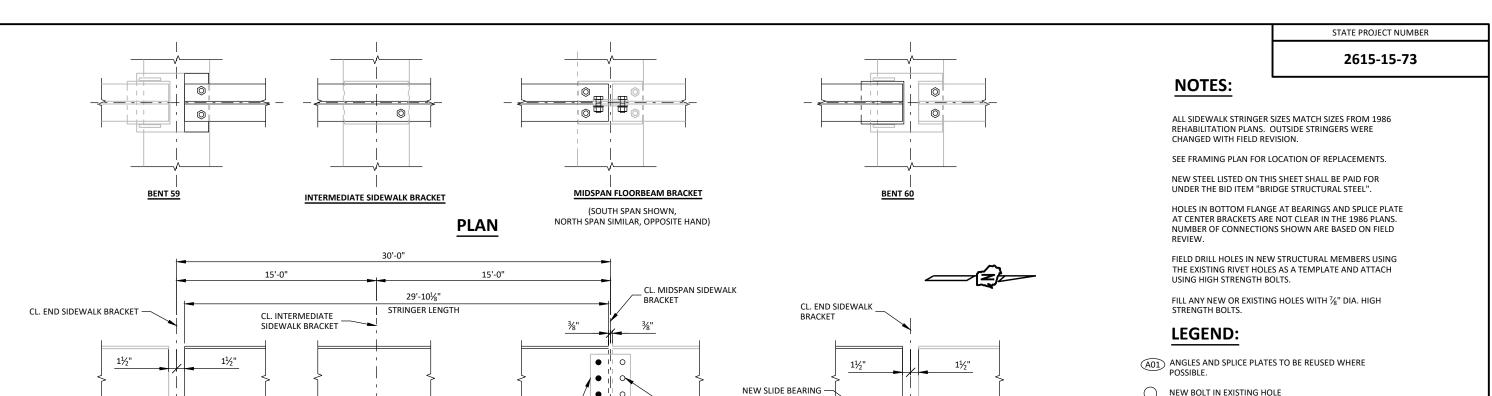
ROADWAY
STRINGER DETAILS

REVISION
BY

SHEET A-04 OF A-21

8

SCALE =



NEW HEX HEAD BOLTS (TYP.)

EXISTING STRINGER, BASE PLATE

AND CONNECTION TO REMAIN

(A01)

MIDSPAN FLOORBEAM BRACKET

(SOUTH SPAN SHOWN, NORTH SPAN SIMILAR, OPPOSITE HAND)

LABELED 'FSWB' ON FRAMING PLAN

EXPANSION BEARING

BENT 60

LABELED 'EB' ON FRAMING PLAN

ASSEMBLY TO BE REUSED

NEW BOLT IN EXISTING HOLE

NEW BOLT IN NEW HOLE

15'-0" CL. TO CL. OF BRACKETS CL. END SIDEWALK BRACKET — · CL. BRACKET @ EXP. JT. - COPE TOP FLANGE NEW L4X3X3/8 1'-0" LONG (TYP.) -(TYP.) - NEW L4X3X3/8 1'-0" LONG (TYP.) REMOVE RIVETS AND REPLACE WITH NEW HEX BOLTS NEW SLIDE PLATE REPLACE WITH NEW HEX BOLTS (TYP. THIS LOCATION) (TYP. THIS LOCATION) EXISTING SHELF ANGLE TO REMAIN A01 COPE FAR SIDE INTERMEDIATE FLOORBEAM BENT 59 BOTTOM FLANGE LABELED 'FC' ON FRAMING PLAN LABELED 'ESWB' ON FRAMING PLAN (SOUTH SPAN SHOWN, NORTH SPAN SIMILAR, OPPOSITE HAND) LABELED 'FC' ON FRAMING PLAN

ELEVATION

W16X40 INTERIOR SIDEWALK STRINGERS

EXISTING SPLICE PLATE TO BE REUSED

(A01)

ELEVATION

W12X26 EXTERIOR SIDEWALK STRINGERS

INTERMEDIATE SIDEWALK BRACKET

NEW SOLE PLATE

HEAD BOLTS (TYP.)

NEW HEX

BENT 59

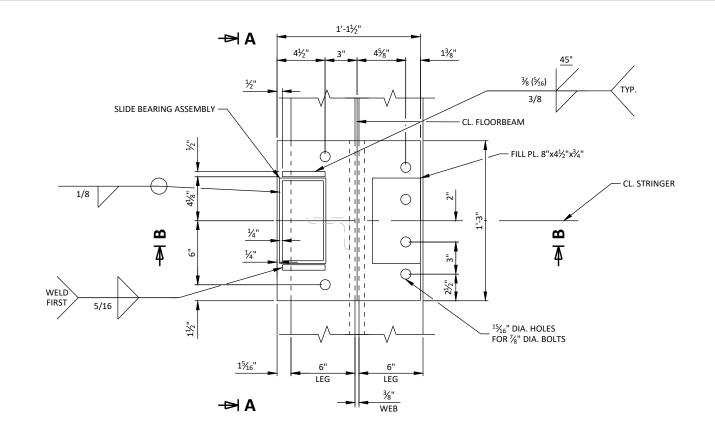
LABELED 'FB' ON FRAMING PLAN

EXPANSION BEARING

ASSEMBLY TO BE REUSED

NO. DATE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** MJB CK'D TJR SHEET A-05 OF A-21 **SIDEWALK** STRINGER DETAILS

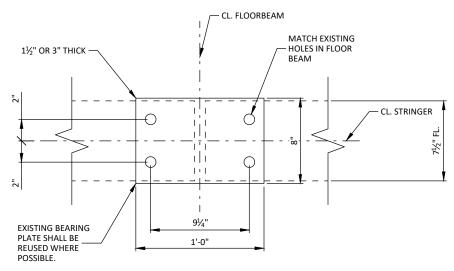




EXPANSION BEARING PLAN

LABELED 'EB' ON FRAMING PLAN

BEARING DIMENSIONS SYMMETRIC ABOUT CL. STRINGER



FIXED BEARING

LABELED 'FB' ON FRAMING PLAN
'FSWB' SIMILAR
FOR W18x50 AND W21X44 STRINGERS
(W18X50 SHOWN)

EXPANSION BEARING ELEMENT QUANTITIES:

ELEMENT	QUANTITY	THICKNESS
BASE PLATE	4	3/4"
BASE PLATE	4	21/4"
FILL PLATE	8	3/4"
SLIDE BEARING ASSEMBLY	18	N/A

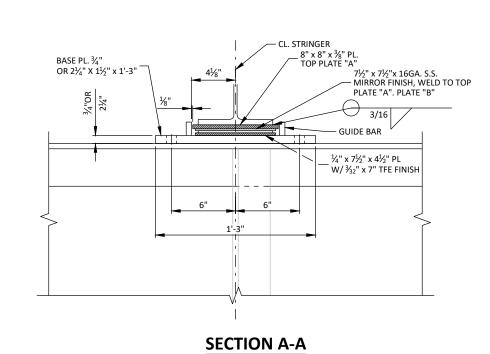
FIXED BEARING ELEMENT QUANTITIES:

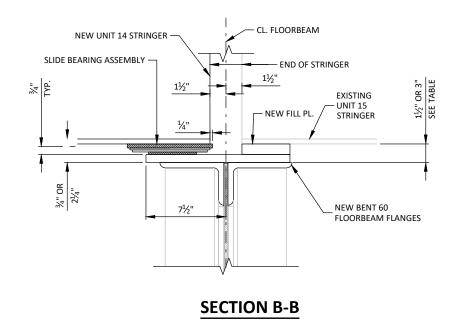
ELEMENT	QUANTITY	THICKNESS
BEARING PLATE	12	1½"
BEARING PLATE	12	3"

LEGEND

NEW BOLT IN EXISTING HOLE

NEW BOLT IN NEW HOLE





NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

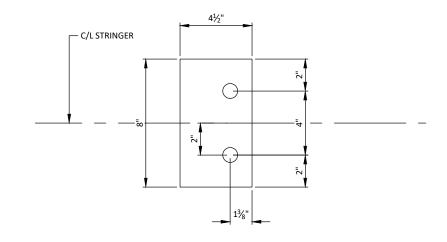
STRUCTURE B-40-550-14

DRAWN
BY
JLA CK'D MJB

SHEET A-06 OF A-21

8

TOP PLATE "A"



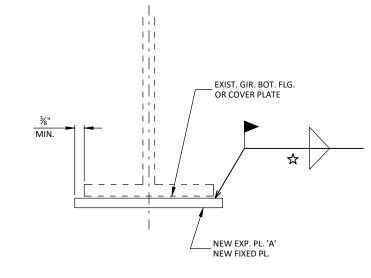
- ANSI 250 FINISH MOVEMENT - STEEL PLATE "B" ▲TEFLON SURFACE USE UNFILLED WITH MIN. 1/16" THICKNESS. PLACE WITH

TEFLON SURFACE ON PLATE "B"

SCRIVE MARKS IN DIRECTION OF

MOVEMENT

FILLER PLATE DETAIL



BEARING REPLACEMENT DETAILS

☆ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINED.	+ MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	³ / ₁₆ "
OVER ½" TO ¾"	1/4"
OVER 3/4" TO 11/2"	△ 5/16"
OVER 1½" TO 2¼"	△ 3/8"
OVER 21/4" TO 6"	△ ½"

‡ EXCEPT THAT THE WILD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 1/16"

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT C/L OF GIRDER AND C/L OF BEARING.

BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153, CLASS C.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 55, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING STAINLESS STEEL SHEET, TEFLON SURFACE, ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709

ALL MATERIAL IN BEARINGS SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-40-550-14", EACH.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

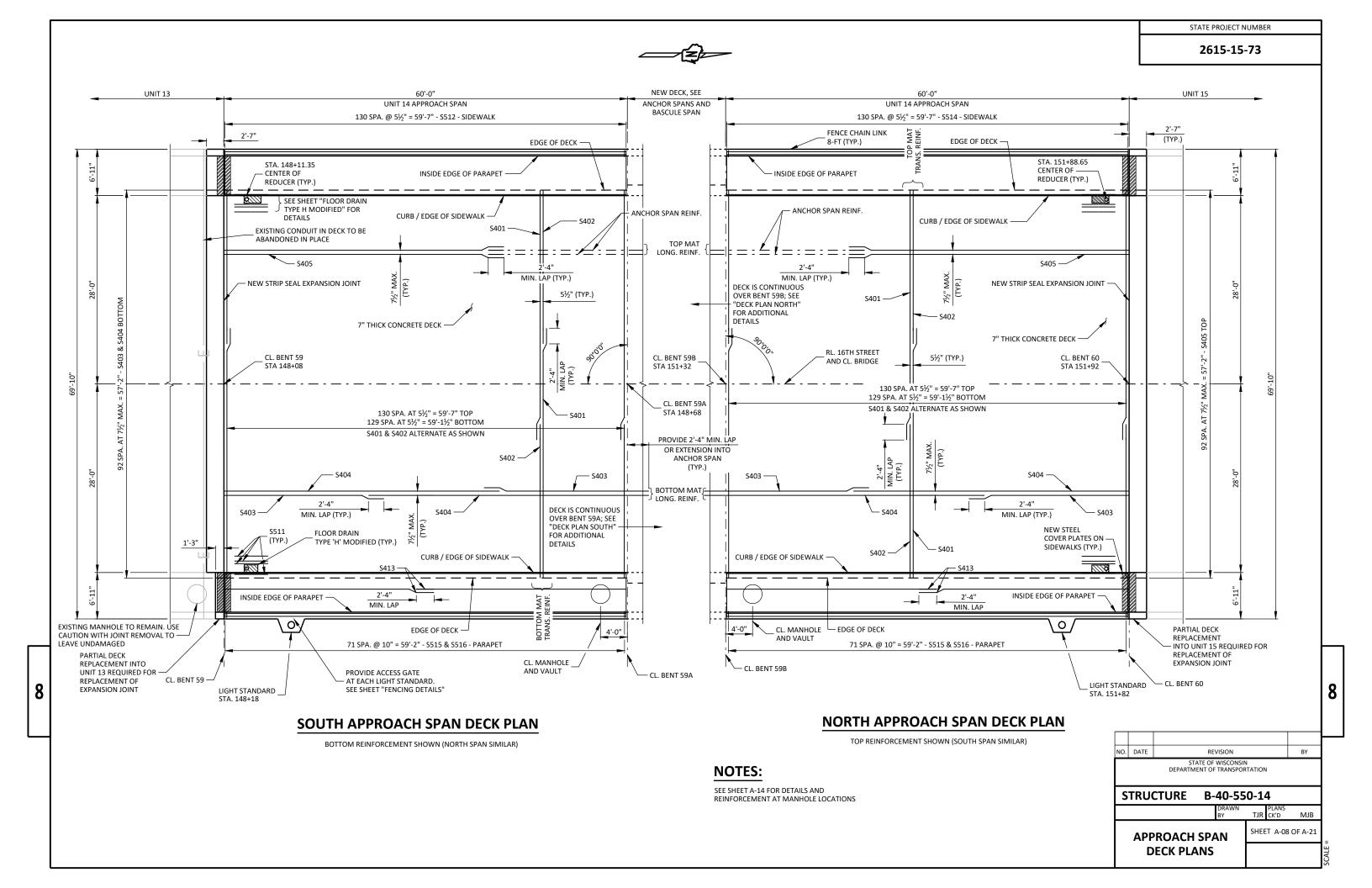
ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

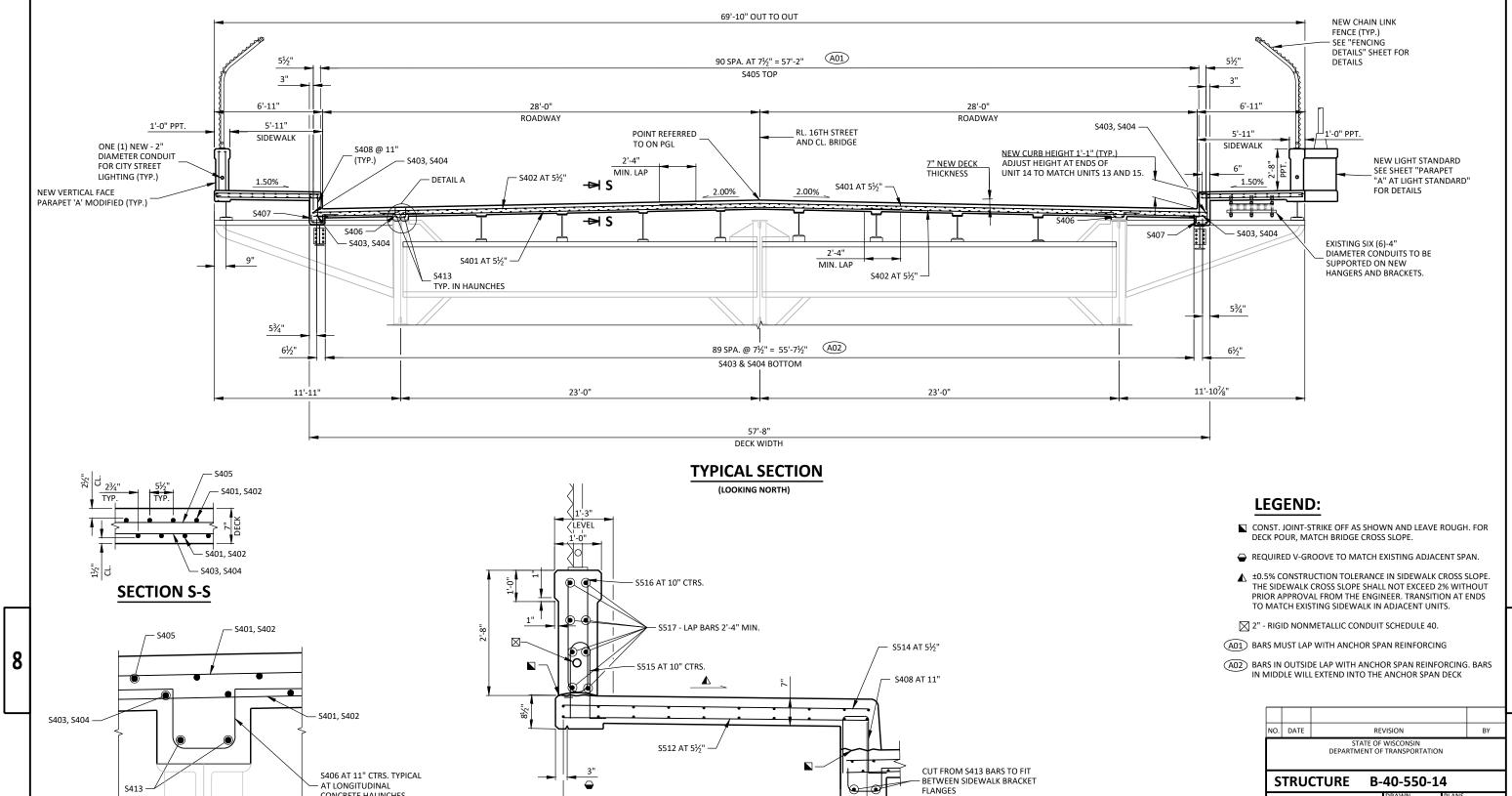
ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AN FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

▲ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING REQUIREMENTS FOUND IN THE STANDARD

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE, AND OTHER FOREIGN MATTER.

NO. DATE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** JLA CK'D SHEET A-07 OF A-21 **BEARING DETAILS CONTINUED**





9 SPA AT 9" MAX = 6'-5" S413 TOP AND BOTTOM

SECTION THROUGH SIDEWALK

11¾"

CONCRETE HAUNCHES

EXST. OUTSIDE

DETAIL A

LONGITUDINAL GIRDER

NOTES:

SEE "ANCHOR SPAN DECK ELEVATIONS" SHEET FOR DEFLECTION JOINT AN PARAPET JOINT DETAILS.

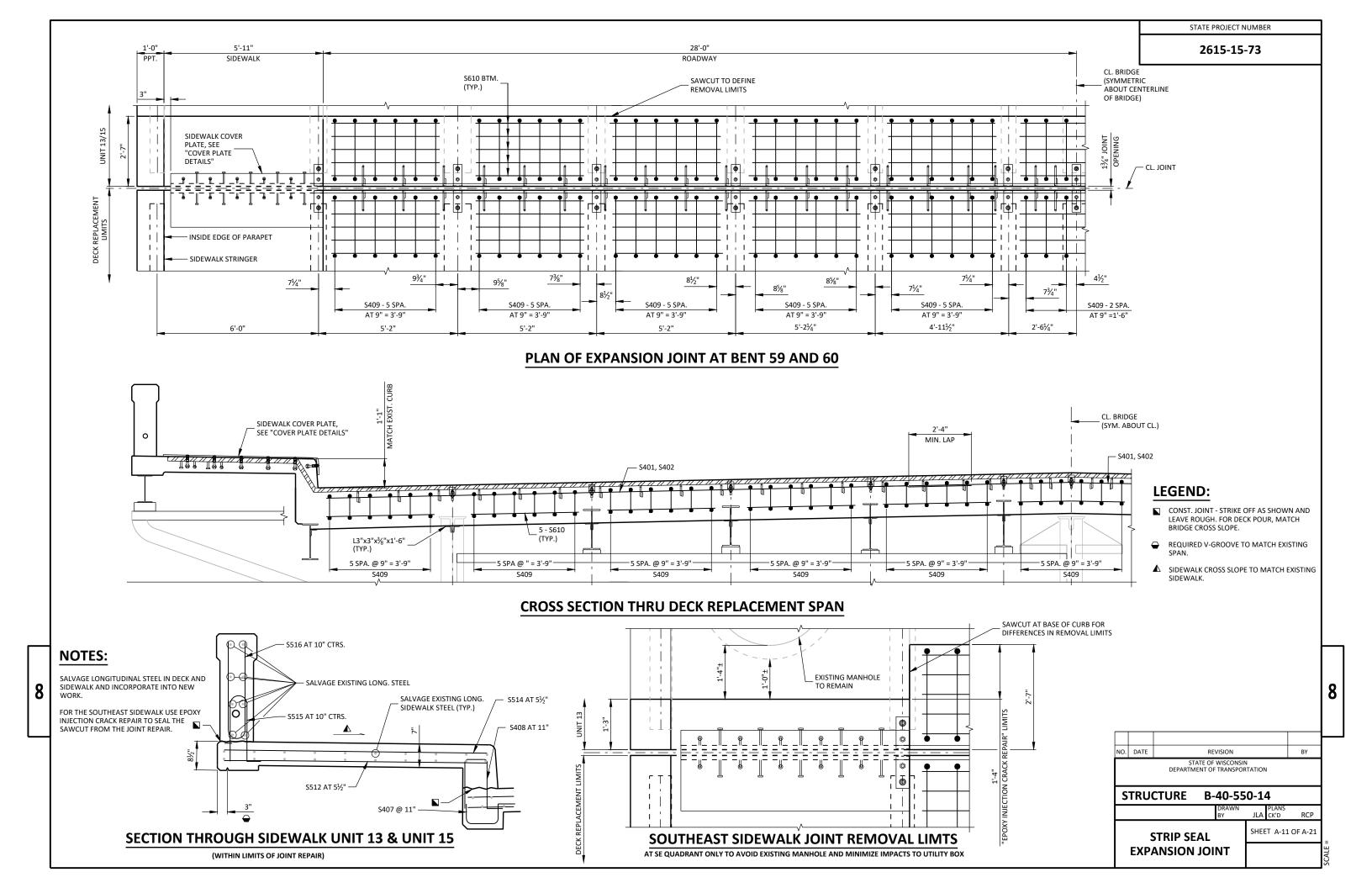
TOP OF DECK ELEVATIONS - SOUTH APPROACH

LOCATION	CL. BENT 59	½ ₀ PT.	²∕ ₁₀ PT.	³⁄₁₀ PT.	⁴⁄₁₀ PT.	5⁄ ₁₀ PT.	%₁₀ PT.	⅓ ₀ PT.	8∕ ₁₀ PT.	%₀ PT.	CL. BENT 59A
STATION	148+08.00	148+14.00	148+20.00	148+26.00	148+32.00	148+38.00	148+44.00	148+50.00	148+56.00	148+62.00	148+68.00
WEST SIDEWALK OUTSIDE EDGE	618.42	618.45	618.48	618.52	618.56	618.60	618.65	618.70	618.75	618.81	618.87
WEST TOP OF CURB	618.33	618.36	618.40	618.43	618.47	618.52	618.56	618.61	618.67	618.73	618.79
WEST CURB LINE	617.25	617.28	617.31	617.35	617.39	617.43	617.48	617.53	617.59	617.64	617.71
LONGITUDINAL GIRDER 1	617.35	617.38	617.41	617.45	617.49	617.53	617.58	617.63	617.69	617.74	617.81
STRINGER 1	617.45	617.48	617.52	617.55	617.59	617.64	617.68	617.73	617.79	617.85	617.91
STRINGER 2	617.56	617.59	617.62	617.66	617.70	617.74	617.79	617.84	617.89	617.95	618.01
STRINGER 3	617.66	617.69	617.72	617.76	617.80	617.84	617.89	617.94	618.00	618.05	618.12
STRINGER 4	617.76	617.79	617.82	617.86	617.90	617.94	617.99	618.04	618.10	618.15	618.21
PGL / CROWN	617.81	617.84	617.87	617.91	617.95	617.99	618.04	618.09	618.15	618.20	618.27
STRINGER 5	617.76	617.79	617.82	617.86	617.90	617.94	617.99	618.04	618.10	618.15	618.21
STRINGER 6	617.66	617.69	617.72	617.76	617.80	617.84	617.89	617.94	618.00	618.05	618.12
STRINGER 7	617.56	617.59	617.62	617.66	617.70	617.74	617.79	617.84	617.89	617.95	618.01
STRINGER 8	617.45	617.48	617.52	617.55	617.59	617.64	617.68	617.73	617.79	617.85	617.91
LONGITUDINAL GIRDER 3	617.35	617.38	617.41	617.45	617.49	617.53	617.58	617.63	617.69	617.74	617.81
EAST CURB LINE	617.25	617.28	617.31	617.35	617.39	617.43	617.48	617.53	617.59	617.64	617.71
EAST TOP OF CURB	618.33	618.36	618.40	618.43	618.47	618.52	618.56	618.61	618.67	618.73	618.79
EAST SIDEWALK OUTSIDE EDGE	618.42	618.45	618.48	618.52	618.56	618.60	618.65	618.70	618.75	618.81	618.87

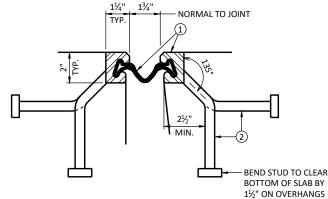
TOP OF DECK ELEVATIONS - NORTH APPROACH

LOCATION	CL. BENT 59B	⅓ ₁₀ PT.	²∕ ₁₀ PT.	³∕ ₁₀ PT.	∜ ₁₀ PT.	5⁄ ₁₀ PT.	%₁0 PT.	⅓ ₁₀ PT.	8∕ ₁₀ PT.	%₀ PT.	CL. BENT 60
STATION	151+32.00	151+38.00	151+44.00	151+50.00	151+56.00	151+62.00	151+68.00	151+74.00	151+80.00	151+86.00	151+92.00
WEST SIDEWALK OUTSIDE EDGE	618.88	618.82	618.76	618.71	618.66	618.62	618.58	618.55	618.51	618.49	618.47
WEST TOP OF CURB	618.79	618.73	618.68	618.63	618.58	618.54	618.50	618.46	618.43	618.40	618.39
WEST CURB LINE	617.71	617.65	617.59	617.54	617.50	617.45	617.41	617.38	617.35	617.32	617.30
LONGITUDINAL GIRDER 1	617.81	617.75	617.69	617.64	617.60	617.55	617.51	617.48	617.45	617.42	617.40
STRINGER 1	617.91	617.85	617.80	617.75	617.70	617.66	617.62	617.58	617.55	617.52	617.51
STRINGER 2	618.02	617.96	617.90	617.85	617.80	617.76	617.72	617.68	617.65	617.63	617.61
STRINGER 3	618.12	618.06	618.01	617.95	617.91	617.86	617.82	617.79	617.76	617.73	617.71
STRINGER 4	618.22	618.16	618.10	618.05	618.01	617.96	617.92	617.89	617.86	617.83	617.81
PGL / CROWN	618.27	618.21	618.15	618.10	618.06	618.01	617.97	617.94	617.91	617.88	617.86
STRINGER 5	618.22	618.16	618.10	618.05	618.01	617.96	617.92	617.89	617.86	617.83	617.81
STRINGER 6	618.12	618.06	618.01	617.95	617.91	617.86	617.82	617.79	617.76	617.73	617.71
STRINGER 7	618.02	617.96	617.90	617.85	617.80	617.76	617.72	617.68	617.65	617.63	617.61
STRINGER 8	617.91	617.85	617.80	617.75	617.70	617.66	617.62	617.58	617.55	617.52	617.51
LONGITUDINAL GIRDER 3	617.81	617.75	617.69	617.64	617.60	617.55	617.51	617.48	617.45	617.42	617.40
EAST CURB LINE	617.71	617.65	617.59	617.54	617.50	617.45	617.41	617.38	617.35	617.32	617.30
EAST TOP OF CURB	618.79	618.73	618.68	618.63	618.58	618.54	618.50	618.46	618.43	618.40	618.39
EAST SIDEWALK OUTSIDE EDGE	618.88	618.82	618.76	618.71	618.66	618.62	618.58	618.55	618.51	618.49	618.47

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** PLANS JLA CK'D SHEET A-10 OF A-21 **DECK ELEVATIONS**



- 1) NEOPRENE STRIP SEAL (4 INCH) AND STEEL EXTRUSIONS.
- 2 STUDS ½" DIA. X 6¾" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- 34° Dia. Threaded rod with 2 nuts and plate washers. Weld threaded rod to top flange or attach by bolting thru flange. On abutment side grout threaded rod into field
- NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.



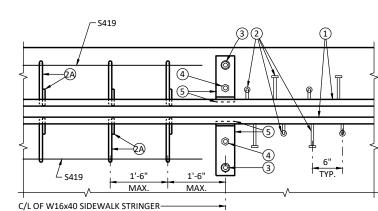
PART PLAN

LEGEND

- - $^{1}\!\!/\!\!$ " THICK ANCHOR PLATE WITH $^{5}\!\!/\!\!$ " DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
- (4) 3/4" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
- FABRICATE SUPPORT FROM 3" X $\frac{1}{2}$ " BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO

SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS, MEDIANS AND SIDEWALKS



DECK REPLACEMENT LIMITS

\$419

%" DIA. ROD

(TYP.)

EXIST. JOINT TO

BE REMOVED -

JOINT REPAIR-REMOVAL **EXPANSION JOINT AT BENT 59 & 60**

2'-7"±

REMOVAL LIMITS

2'-6"

NORMAL TO JOINT

2½"

- FACE OF CONC. OPENING

UNIT 13/15

EXIST. CONC. TO

BE REMOVED.

SALVAGE EXIST. LONGIT.

INTO NEW WORK

STEEL AND INCORPORATE

NORMAL TO C/L SUBSTRUCTURE

S401, S402 AT 5½" S401, S402 AT 51/5" 13/4" TOP & BOT. (TYP.) DESIGN OPENING EXISTING REINE. TO REMAIN (TYP.) (TYP.) S401, S402 S401, S402 5 - S610 AT EQ. SPA. ¬ - 5 - S610 AT EQ. SPA. S409 @ 9" — ── S409 @ 9" 0 0 0 0 ANGLE 3" X 3" X 3%" X 1'-6" ANGLE 3" X 3" X 38" X 1'-6"

2'-7"±

JOINT REPAIR LIMITS

- SET FLUSH WITH CONC

0

E = = = END OF STRINGER =

(TYP)

SECTION THRU STRIP SEAL

EXPANSION JOINT AT BENT 59 & 60 NORMAL TO C/L SUBSTRUCTURE

(5) 4

DECK REPLACEMENT LIMITS

0

MIN.

END OF STRINGER

CONCRETE DIAPHRAGM TO

FACES OF EXTERIOR GIRDERS

EXTEND BETWEEN INSIDE

STRIP SEAL REINFORCEMENT

NORMAL TO C/L SUBSTRUCTURE

SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN W16x40 SIDEWALK STRINGER

NOTES:

1½"

9½" MAX.

SEE BILL OF BARS FOR REINFORCING DETAILS

SEE "STRIP SEAL EXPANSION JOINT DETAILS" FOR ALTERNATE STRIP SEAL ANCHOR AND ADDITIONAL NOTES.

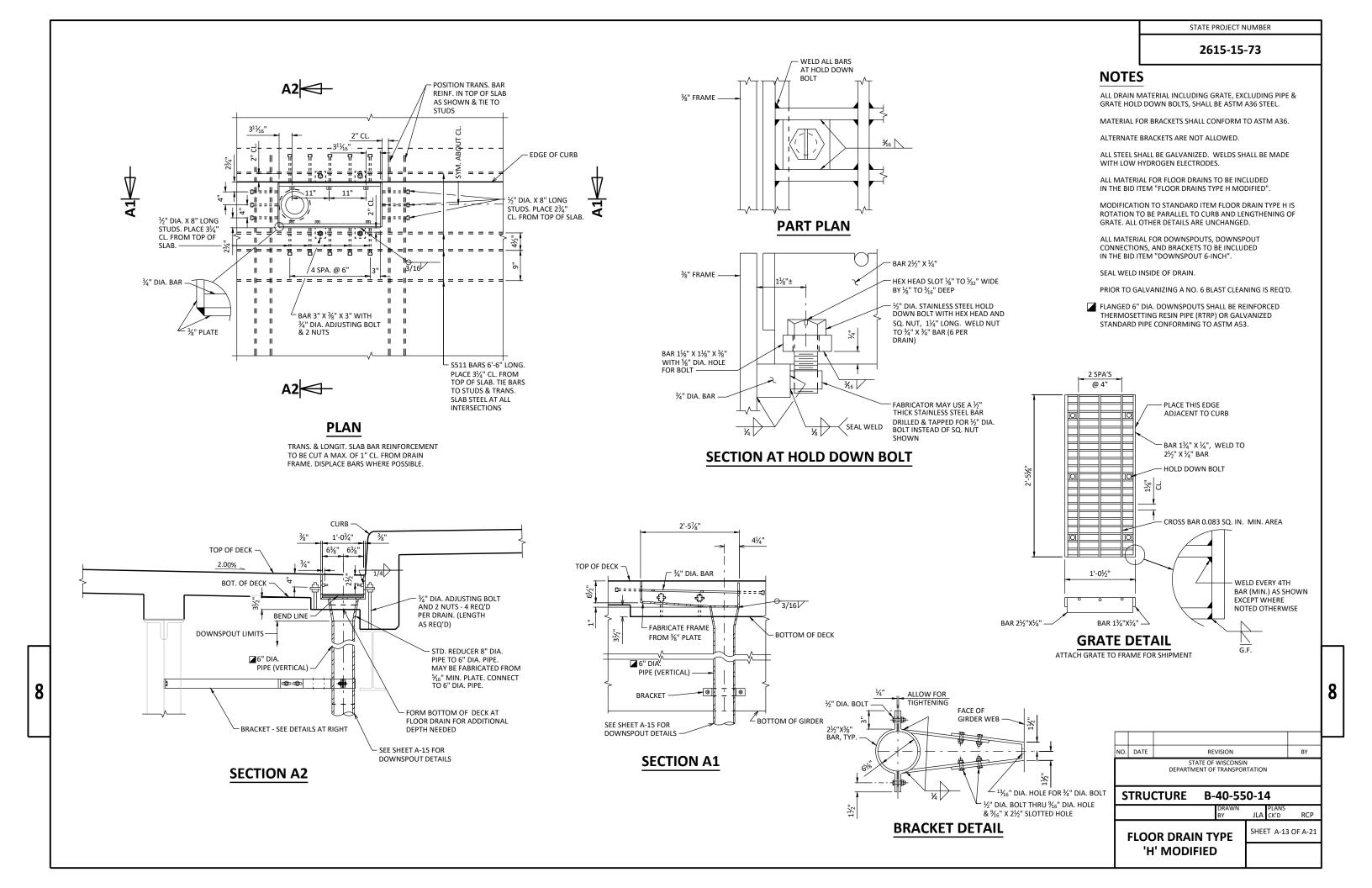
DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. BOLTS ARE 3/4" DIA. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL SUPPORT ANGLES SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563,

ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES LIGHTWEIGHT".

NO. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** JLA CK'D SHEET A-12 OF A-21 **EXPANSION DEVICE**

8



BILL OF BARS - SOUTH APPROACH SPAN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	Х	275	37'-0"			TRANSVERSE DECK
S402	Х	275	22'-8"			TRANSVERSE DECK
S403	Х	94	21'-8"			LONGITUDINAL BOTTOM DECK
S404	Х	94	40'-10"			LONGITUDINAL BOTTOM DECK
S405	Х	91	42'-4"			LONGITUDINAL TOP OF DECK
S406	Х	140	3'-2"	Х		EXTERIOR GIRDER HAT BAR
S407	Х	138	2'-0"	Х		W16X40 HAT BAR
S408	Х	138	3'-4"	Х		SIDEWALK TIE IN
S409	Х	132	4'-8"	Х		DIAPHRAGM STIRRUP
S610	Х	110	4'-0"			BOTTOM DIAPHRAGM
S511	Х	8	6'-6"			LONGITUDINAL DRAIN BARS
S512	Х	271	6'-7"			BOTTOM TRANSVERSE SIDEWALK
S413	х	96	31'-3"			LONGITUDINAL TOP & BOTTOM SIDEWALK AND HAUNCHES
S514	Х	271	7'-2"	Х		TOP TRANSVERSE SIDEWALK
S515	Х	151	4'-4"	Х		PARAPET VERT.
S516	Х	151	4'-9"	Х		PARAPET VERT.
S517	Х	32	31'-3"			PARAPET LONGITUDINAL
S518	Х	20	5'-2"			MANHOLE BARS
S419	Х	44	4'-0"			JOINT BETWEEN GIRDERS

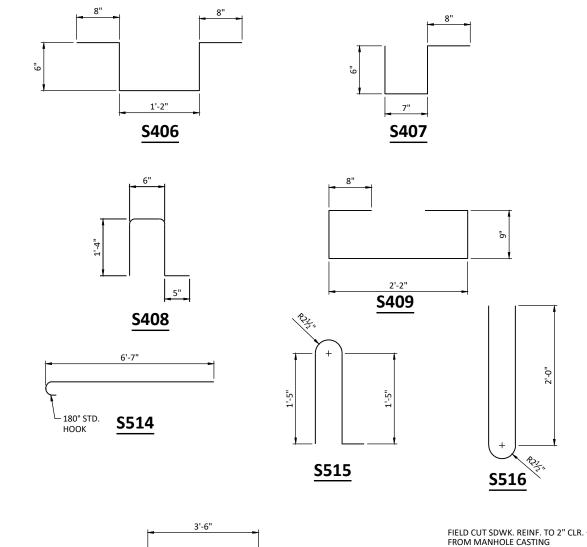
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

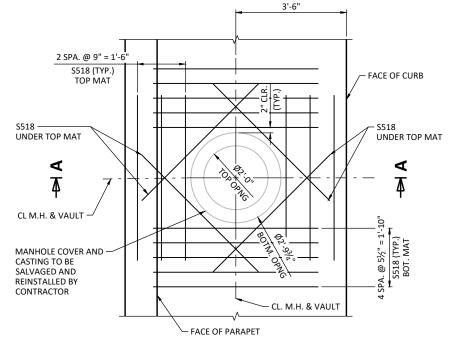
BILL OF BARS - NORTH APPROACH SPAN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

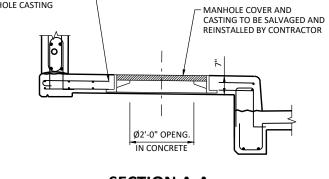
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	Х	275	37'-0"			TRANSVERSE DECK
S402	Х	275	22'-8"			TRANSVERSE DECK
S403	Х	94	21'-8"			LONGITUDINAL BOTTOM DECK
S404	Х	94	40'-10"			LONGITUDINAL BOTTOM DECK
S405	Х	91	42'-4"			LONGITUDINAL TOP OF DECK
S406	Х	140	3'-2"	Х		EXTERIOR GIRDER HAT BAR
S407	Х	140	2'-0"	Х		W16X40 HAT BAR
S408	Х	140	3'-4"	Х		SIDEWALK TIE IN
S409	Х	132	4'-8"	Х		DIAPHRAGM STIRRUP
S610	Х	110	4'-0"			BOTTOM DIAPHRAGM
S511	Х	8	6'-6"			LONGITUDINAL DRAIN BARS
S512	Х	274	6'-7"			BOTTOM TRANSVERSE SIDEWALK
S413	х	96	31'-3"			LONGITUDINAL TOP & BOTTOM SIDEWALK AND HAUNCHES
S514	Х	274	7'-2"	Х		TOP TRANSVERSE SIDEWALK
S515	Х	152	4'-4"	Х		PARAPET VERT.
S516	Х	152	4'-9"	Х		PARAPET VERT.
S517	Х	32	31'-3"			PARAPET LONGITUDINAL
S518	Х	20	5'-2"			MANHOLE BARS
S419	Х	44	4'-0"			JOINT BETWEEN GIRDERS

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.





MANHOLE REINFORCEMENT DETAIL



SECTION A-A FIBERGLASS UTILITY BOX NOT SHOWN

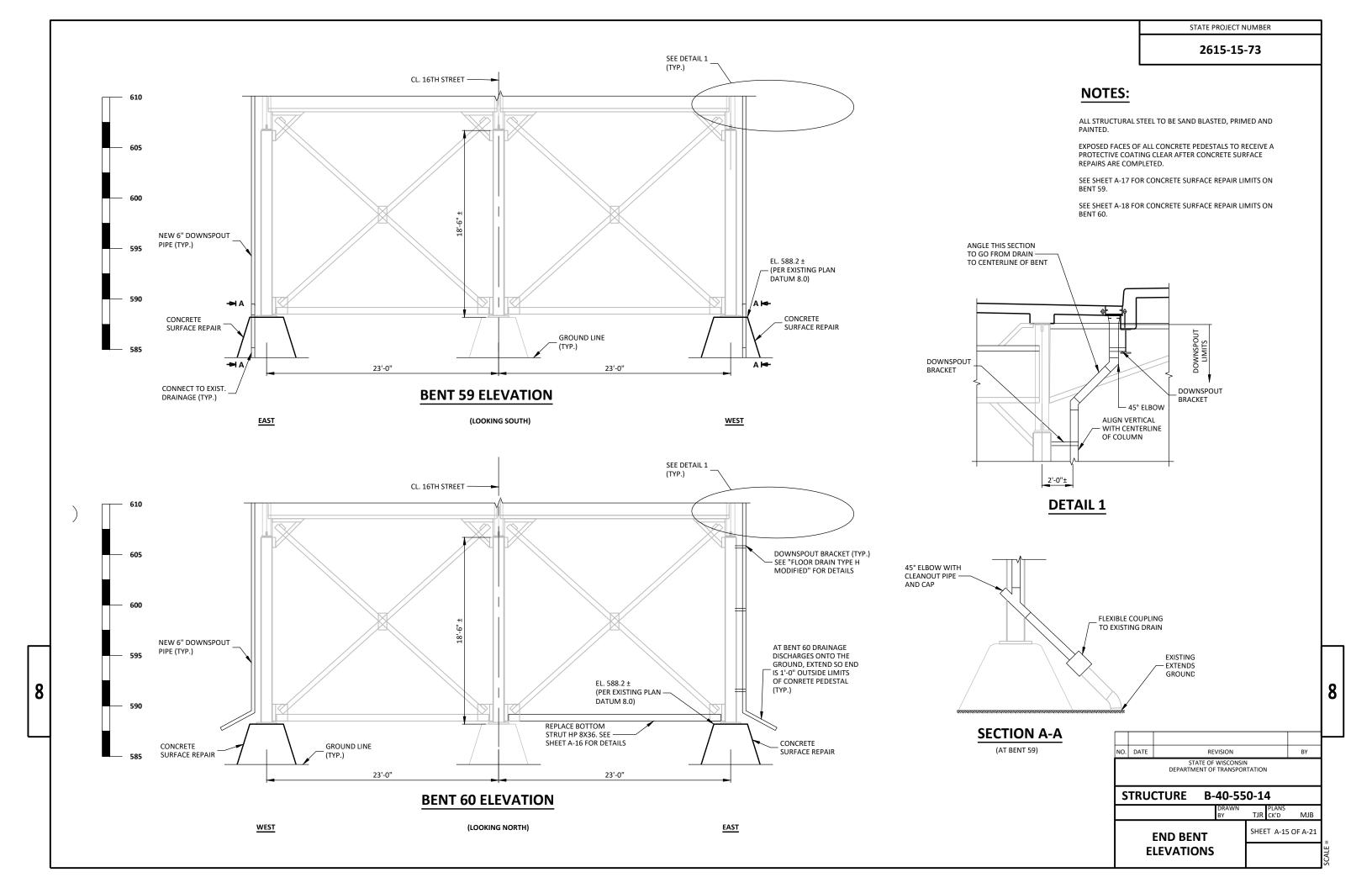
NO. DATE

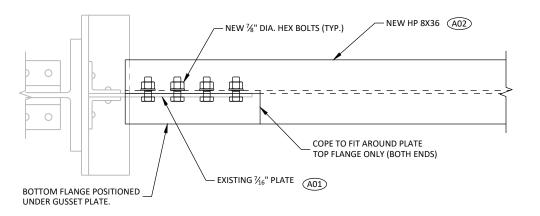
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14**

JLA CK'D SHEET A-14 OF A-21

REVISION

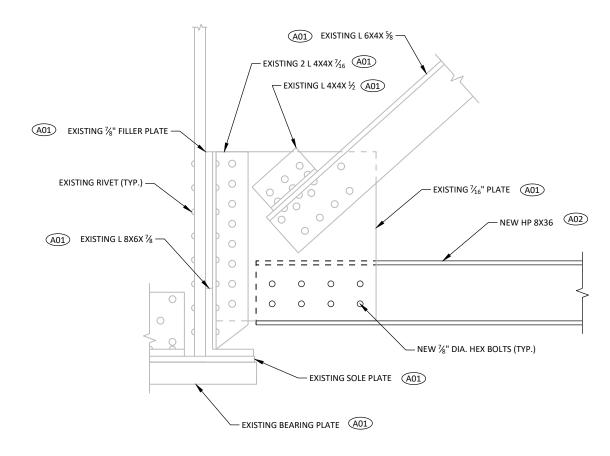
BILL OF BARS





LATERAL BRACE CONNECTION PLAN

(DIAGONAL BRACING AND CONNECTION NOT SHOWN FOR CLARITY)



LATERAL BRACE CONNECTION ELEVATION

NOTES:

PER EXISTING PLANS ALL RIVETS ARE $\frac{7}{8}$ " DIA.

NEW STEEL LISTED ON THIS SHEET SHALL BE PAID FOR UNDER THE BID ITEM "BRIDGE STRUCTURAL STEEL".

REPLACEMENT STRUT IS LOCATED AT EAST BAY OF BENT 60. SEE SHEET A-15 FOR DETAILED LOCATION.

DETAILED HOLE LOCATIONS IN MEMBERS ARE NOT SHOWN ON ORIGINAL PLANS. ALL REPLACEMENT STEEL MEMBERS TO BE MATCH DRILLED TO THE EXISTING MEMBERS.

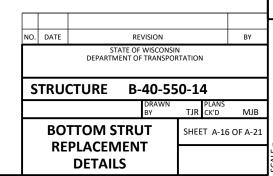
A01 ANGLES AND PLATES TO BE REUSED WHERE POSSIBLE.

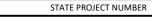
(A02) NEW LATERAL BRACING SHALL BE SHOP PRIMER PAINTED PRIOR TO INSTALLATION. THESE BEAMS SHALL THEN BE PAINTED AS PART OF THE OVERALL "PAINTING EPOXY SYSTEM B-40-550-14".

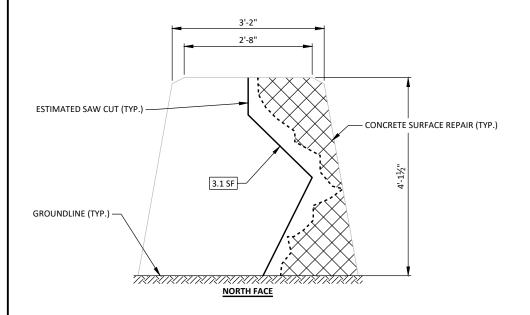
LEGEND:

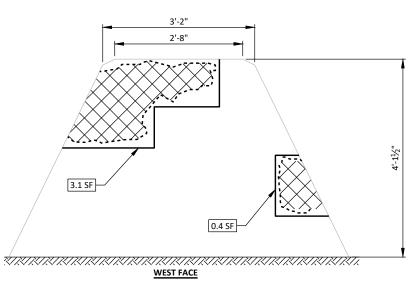
NEW BOLT IN EXISTING HOLE

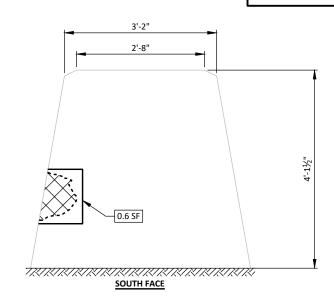
EXISTING RIVET TO REMAIN



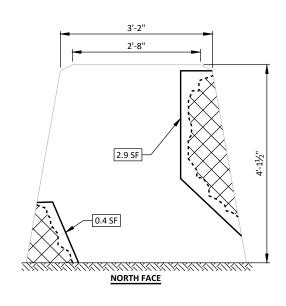


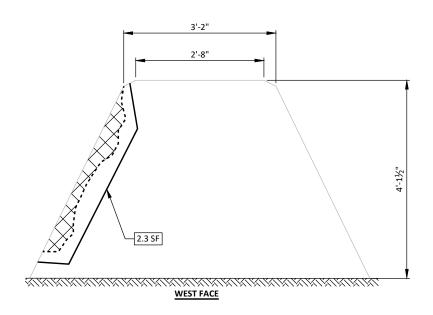


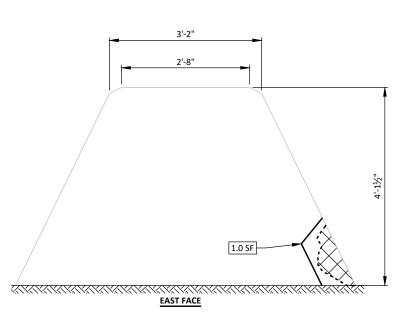




WEST PEDESTAL ELEVATION







EAST PEDESTAL ELEVATION

NOTES:

LIMITS OF CONCRETE SURFACE REPAIR ESTIMATED FROM DESIGN ENGINEERS INSPECTION ON 06/21/2023 AND BRIDGE INSPECTION REPORT DATED 5/22/2023. FINAL LIMITS OF REPAIR SHALL BE DETERMINED BY ENGINEER.

EXPOSED FACES OF ALL CONCRETE PEDESTALS TO RECEIVE A PROTECTIVE COATING CLEAR AFTER CONCRETE SURFACE REPAIRS ARE COMPLETED.

LEGEND:



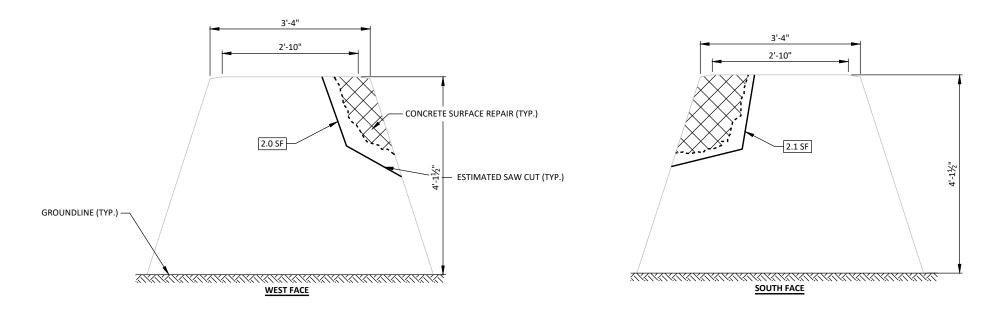
INDICATES CONCRETE SPALLING

X.X SF INDICATES ESTIMATED REPAIR QUANTITY

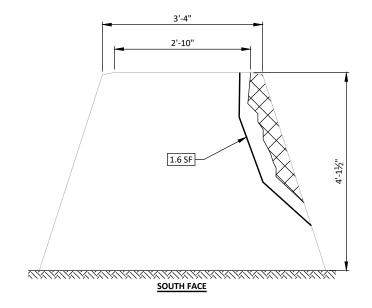
							l		
NO.	NO. DATE REVISION								
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION								
s	STRUCTURE B-40-550-14								
			DRAWN BY	TJR	PLANS CK'D	МЈВ			
	BEN	Г 59 РЕС	SHEET A-17 OF A-21						
		REPAIR				1			

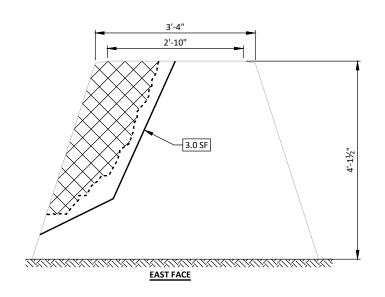
STATE PROJECT NUMBER

2615-15-73



WEST PEDESTAL ELEVATION





EAST PEDESTAL ELEVATION

NOTES:

LIMITS OF CONCRETE SURFACE REPAIR ESTIMATED FROM DESIGN ENGINEERS INSPECTION ON 06/21/2023 AND BRIDGE INSPECTION REPORT DATED 5/22/2023. FINAL LIMITS OF REPAIR SHALL BE DETERMINED BY ENGINEER.

EXPOSED FACES OF ALL CONCRETE PEDESTALS TO RECEIVE A PROTECTIVE COATING CLEAR AFTER CONCRETE SURFACE REPAIRS ARE COMPLETED.

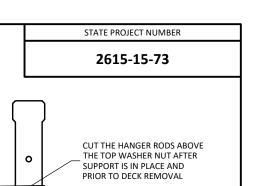
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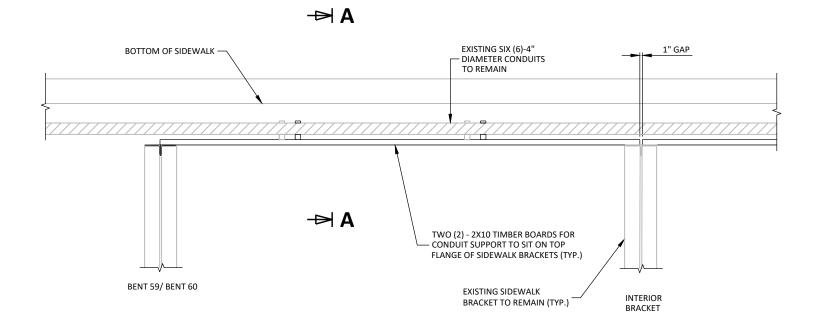


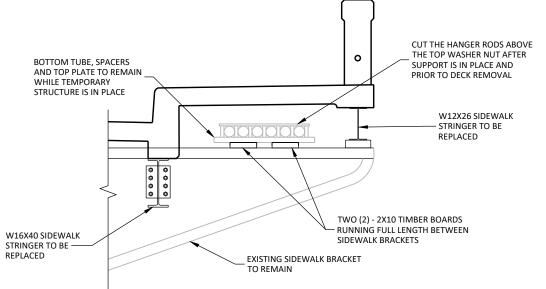
INDICATES CONCRETE SPALLING

X.X SF INDICATES ESTIMATED REPAIR QUANTITY

NO. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** TJR CK'D SHEET A-18 OF A-21 **BENT 60 PEDESTAL REPAIRS**

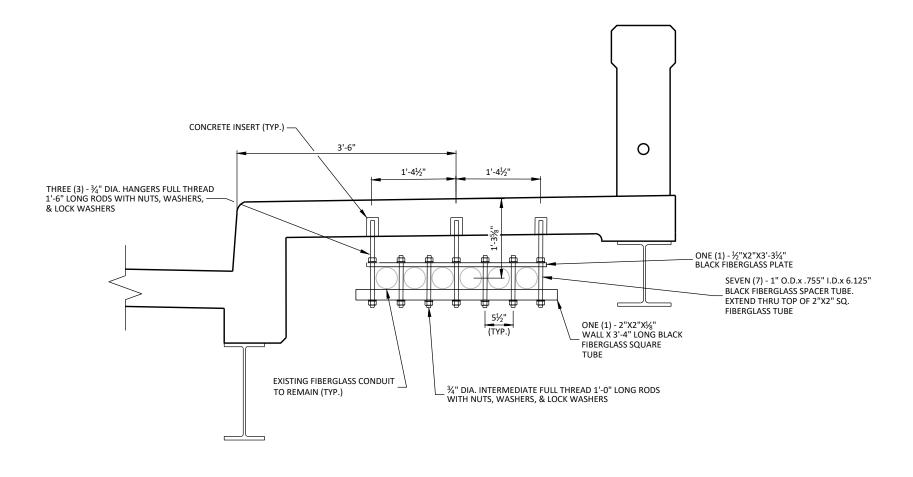






CONDUIT SUPPORT DURING CONSTRUCTION

SECTION A-A



PERMANENT SUSPENDED CONDUIT SUPPORT

UNDER SIDEWALK ON EAST SIDE

NOTES:

METHOD SHOWN IS ONE OPTION THAT WILL WORK. CONTRACTOR MAY PROPOSE AN ALTERNATIVE TO BE APPROVED BY THE ENGINEER PRIOR TO INCORPORATING.

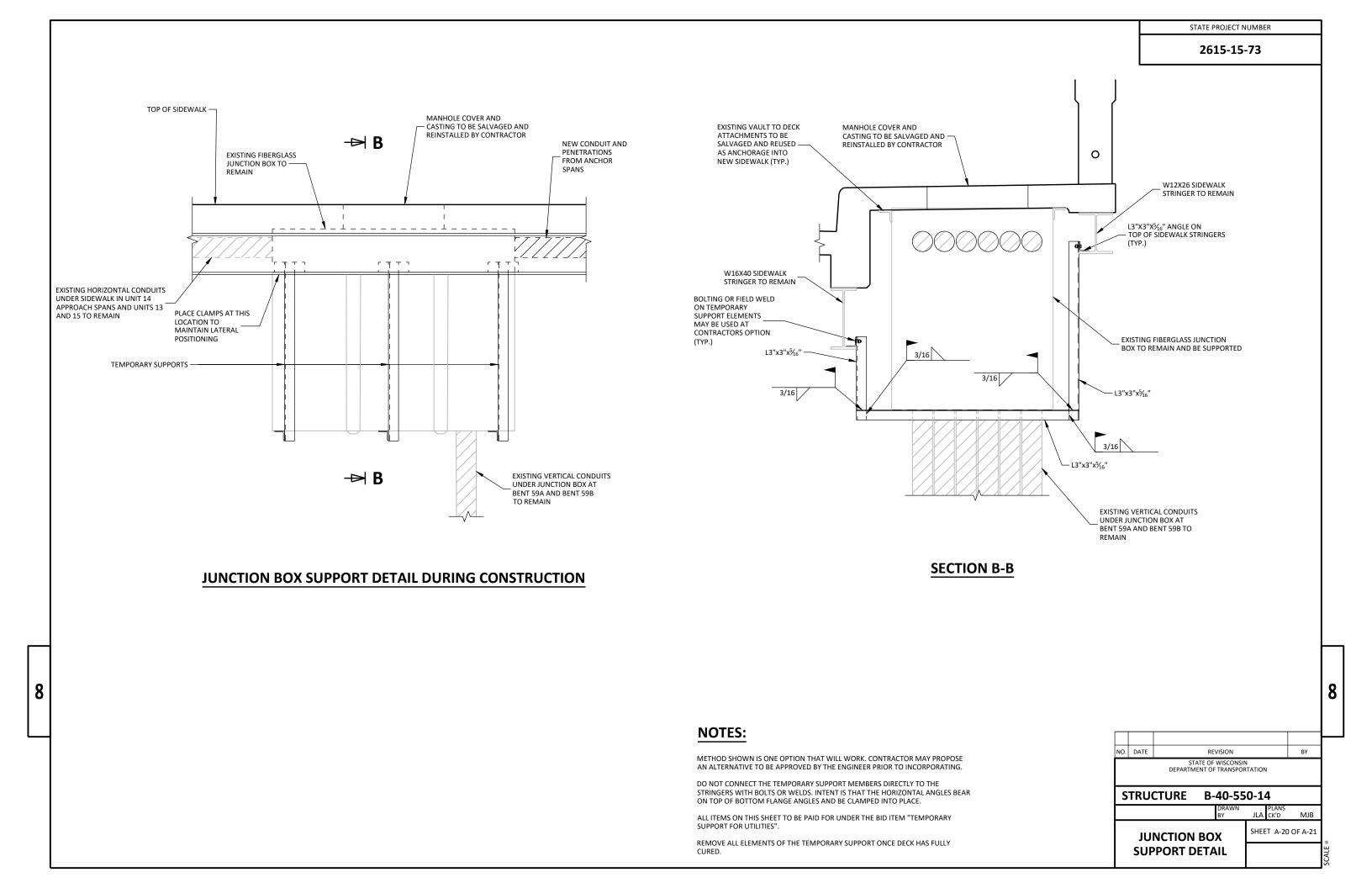
2X10 BOARDS ARE MINIMUM SUPPORT. PROVIDE ADDITIONAL LUMBER OR PLYWOOD SHIMS TO SUPPORT CONDUIT IN ITS CURRENT POSITION.

MATERIALS AND WORK FOR CONDUIT SUPPORT TO BE PAID FOR UNDER THE BID ITEM "TEMPORARY SUPPORT FOR UTILITIES".

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** JLA CK'D

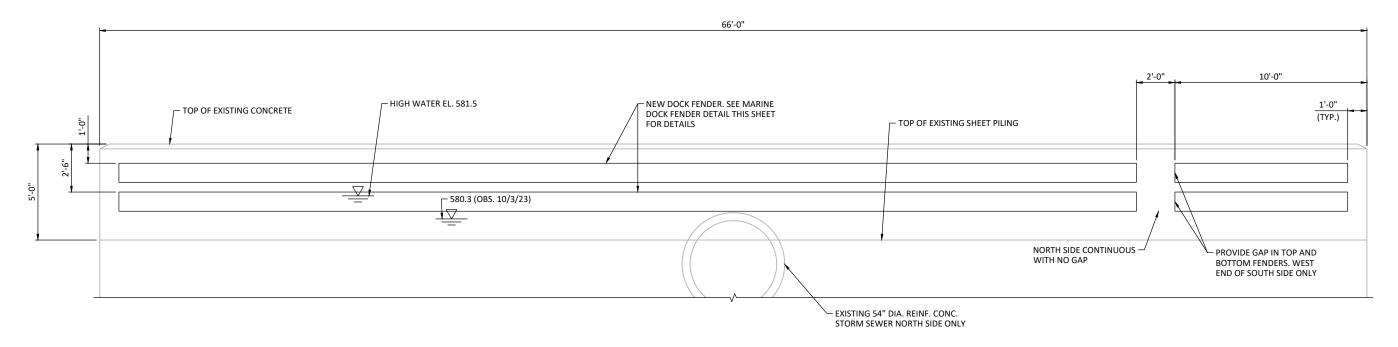
UNDER DECK CONDUIT SUPPORT

SHEET A-19 OF A-21



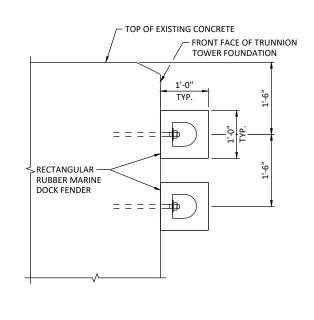
STATE PROJECT NUMBER

2615-15-73



TRUNNION TOWER FOUNDATION

LOOKING AT FACE, NORTH AND SOUTH SIDE SIMILAR EXCEPT WHERE NOTED

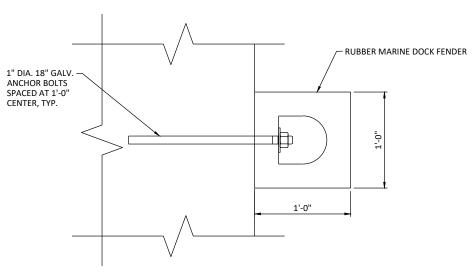


MARINE DOCK FENDER DETAIL

(AT TRUNNION TOWER FOUNDATIONS)

NOTES

IF STORM SEWER INTERFERES WITH FENDER INSTALLATION, MOVE FENDER AS DIRECTED BY ENGINEER.



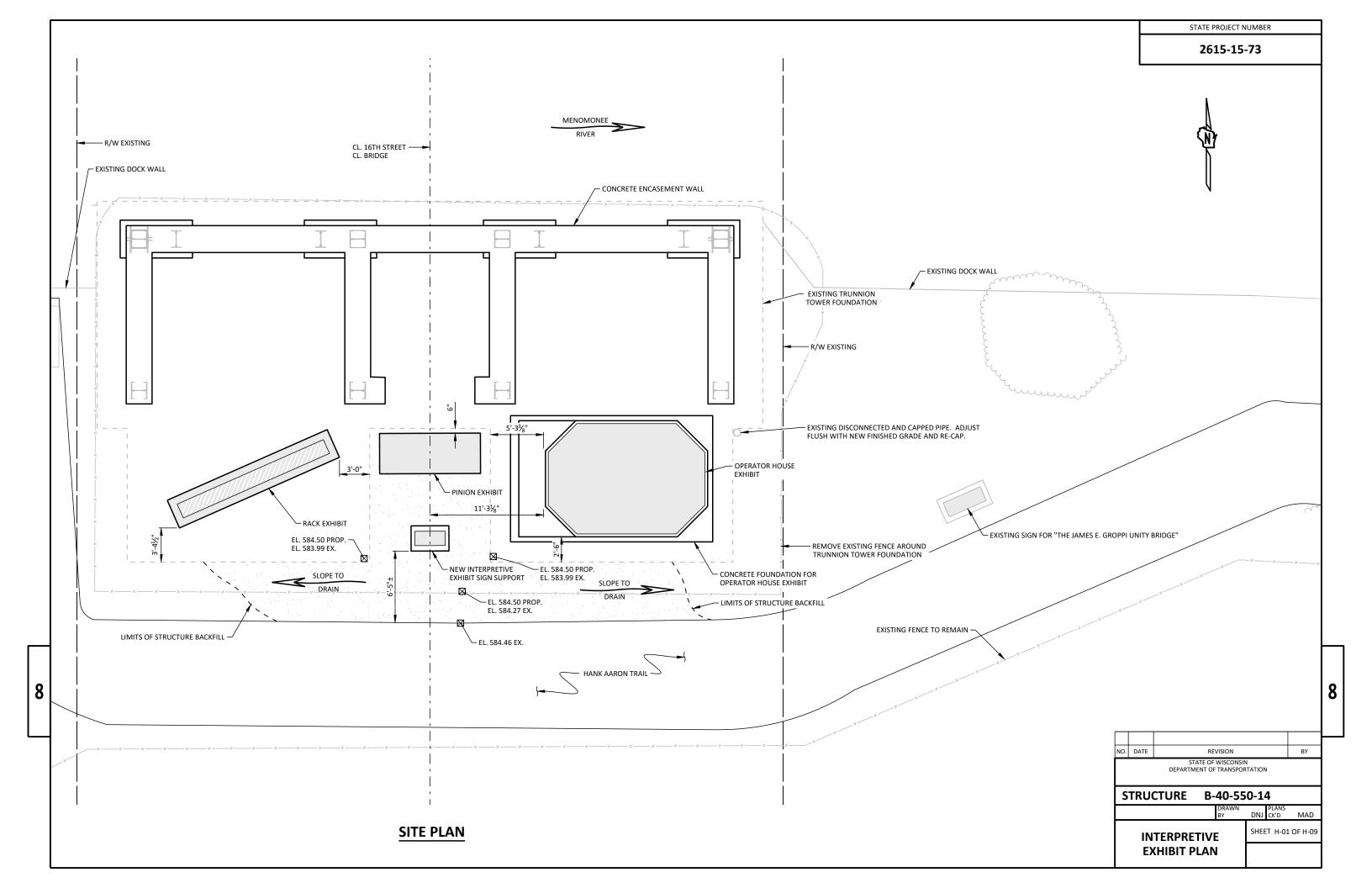
CONNECTION DETAIL

NO. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

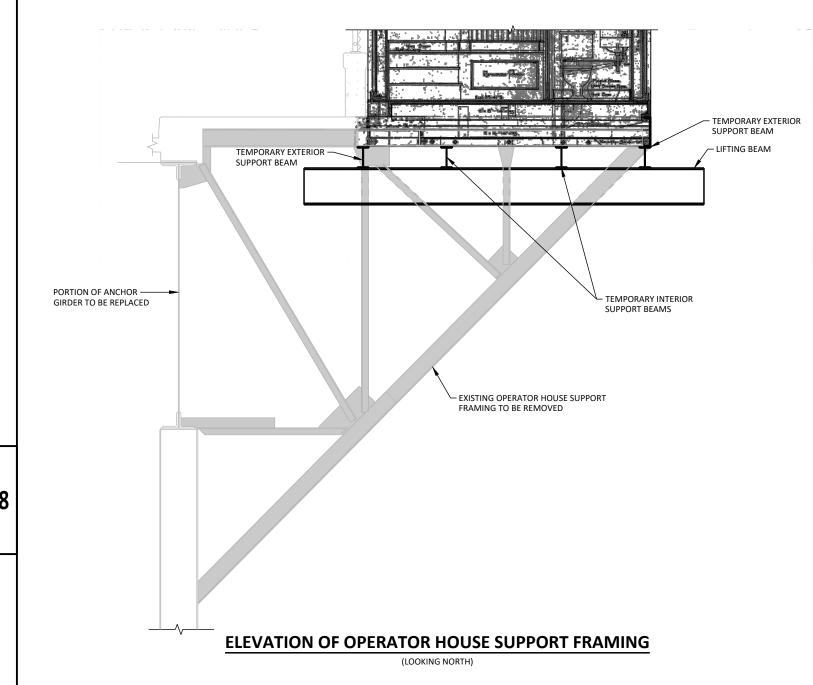
STRUCTURE B-40-550-14 JLA CK'D

> **MARINE DOCK FENDER**

SHEET A-21 OF A-21



- REMOVE ALL EXISTING ELECTRICAL CONDUITS AND UTILITIES CONNECTED TO THE OPERATOR HOUSE.
- PREPARE THE OPERATOR HOUSE FOR RELOCATION BY ADDING TEMPORARY BRACING, AND REMOVING WINDOWS, SIGNAL BELL, SIGNAL BALL, AND ANY OTHER ITEMS THAT MAY BE DAMAGED.
- INSTALL INTERIOR TEMPORARY SUPPORT BEAMS AND LIFTING BEAMS SUPPORTED BY A CRANE.
- SHIM TEMPORARY SUPPORT BEAMS TO SUPPORT EXISTING FLOOR FRAMING AND LIFT THE OPERATOR HOUSE TO UNLOAD SUPPORT FRAMING.
- REMOVE SECTIONS OF THE SUPPORT FRAMING TO ALLOW ADDITIONAL SUPPORT BEAM INSTALLATION. INSTALL EXTERIOR TEMPORARY SUPPORT BEAMS.
- SAW CUT TO REMOVE EXISTING CONCRETE, INSTALL NEW STRUCTURAL STEEL AROUND BASE, AND PERFORM
- CONCRETE SURFACE REPAIRS ON THE UNDERSIDE OF THE CONCRETE SLAB TO REMAIN.
- ADJUST/BALANCE LOAD AND SECURE THE OPERATOR HOUSE TO THE LIFTING FRAME.
- REMOVE REMAINING OPERATOR HOUSE SUPPORT FRAMING.
- 10. LIFT HOUSE FREE OF THE BRIDGE AND LOWER TO THE GROUND BELOW.
- 11. USE SKIDS/TROLLEYS TO TRANSPORT THE OPERATOR HOUSE TO THE TEMPORARY STORAGE LOCATION AND SECURE THE HOUSE TO PROTECT IT FROM WEATHER, OCCUPATION, VANDALISM, AND DAMAGE DUE TO CONTRACTOR OPERATIONS.
- 12. USE SKIDS/TROLLEYS TO TRANSPORT THE OPERATOR HOUSE TO THE NEW CONCRETE FOUNDATION.
 13. SEQUENTIALLY REMOVE LIFTING, INTERIOR AND EXTERIOR BEAMS.
- 14. LOWER THE OPERATOR HOUSE ONTO THE CONCRETE FOUNDATION AND SECURE.
- 15. PERFORM CONCRETE SURFACE REPAIRS AS REQUIRED.
- 16. RE-INSTALL SIGNAL BELL AND SIGNAL BALL ASSEMBLY.
- 17. INSTALL NEW DOOR AND NEW WINDOWS.
- 18. PERFORM REPAIRS, PAINT ALL STEEL, SEAL ALL OPENINGS, AND PERFORM ALL REMAINING WORK TO SECURE THE

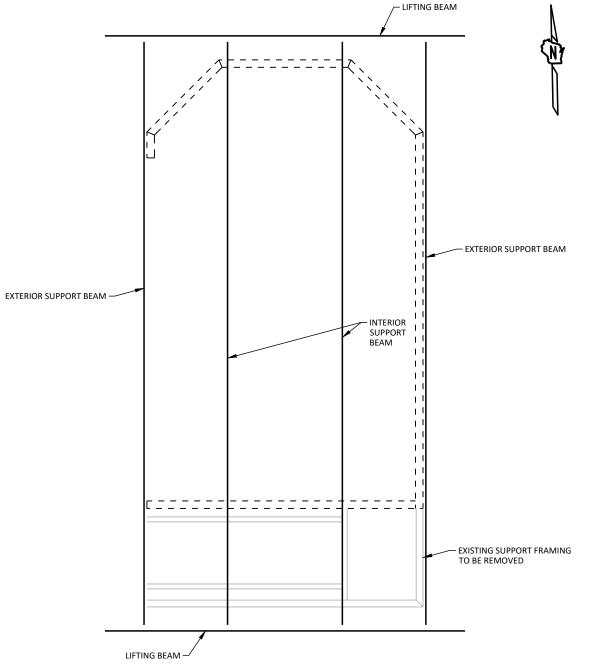


NOTES

STATE PROJECT NUMBER 2615-15-73

THESE DRAWINGS INCLUDE EXCERPTS FROM THE ORIGINAL DRAWINGS FROM 1927. THE ORIGINAL DRAWING FILES ARE ON FILE WITH THE CITY OF MILWAUKEE.

EXISTING MEMBER IDENTIFICATION IS TAKEN FROM THE ORIGINAL STRUCTURAL SHOP DRAWINGS FROM 1928. THE ORIGINAL DETAILED FABRICATION DRAWINGS ARE ON FILE WITH THE CITY OF MILWAUKEE.

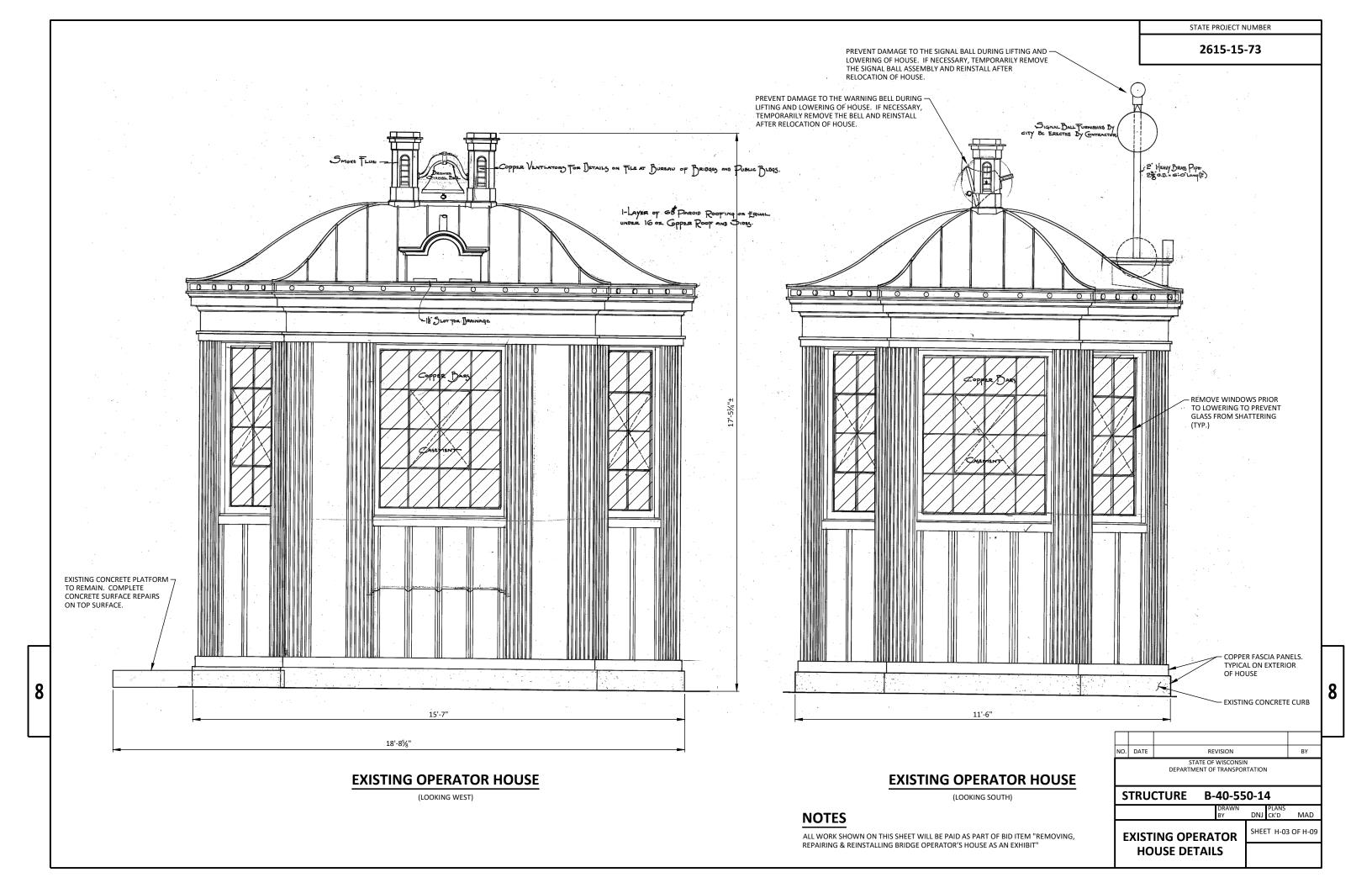


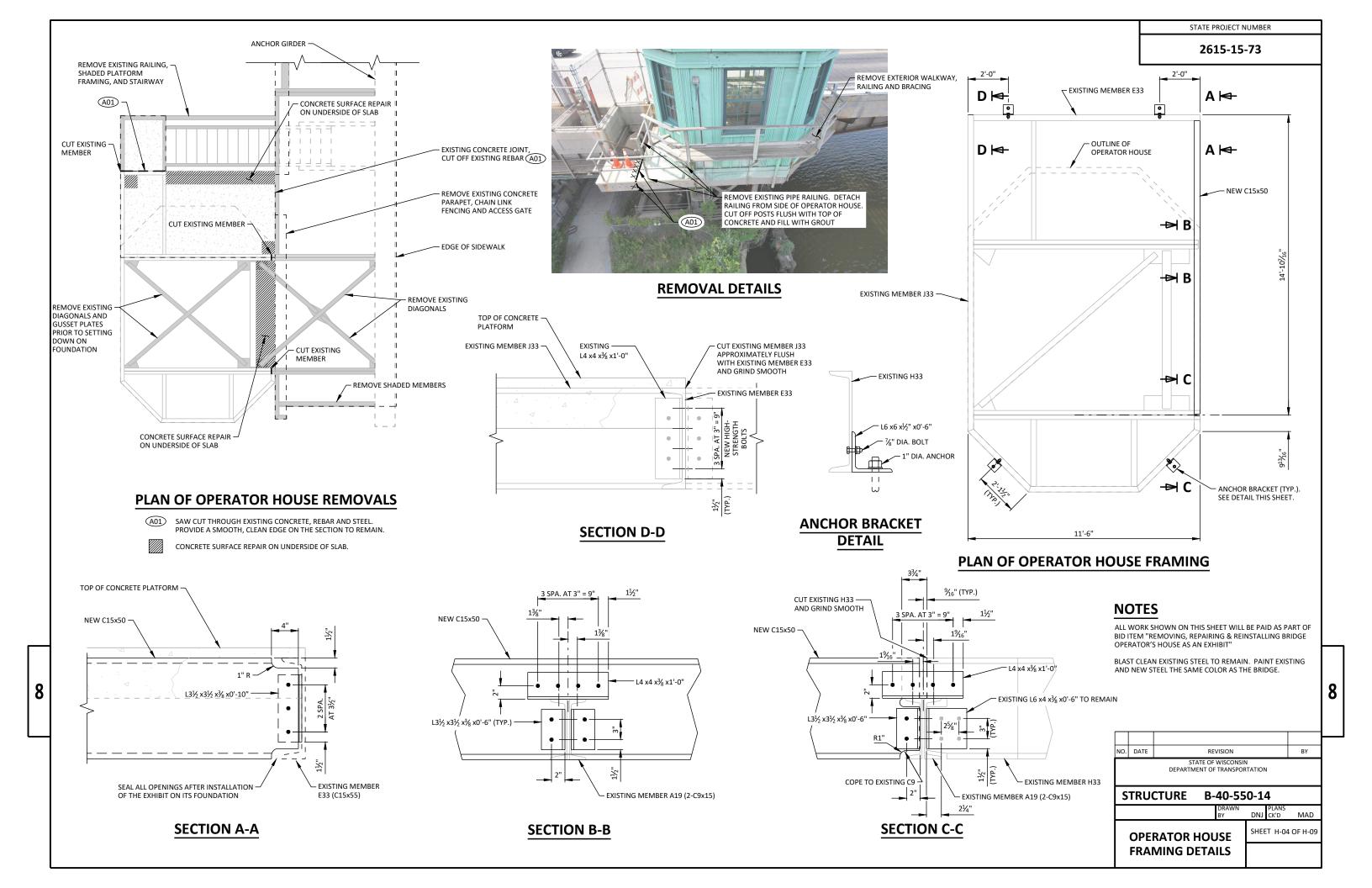
SUGGESTED TEMPORARY SUPPORT FRAMING PLAN CONCEPT

NOTES

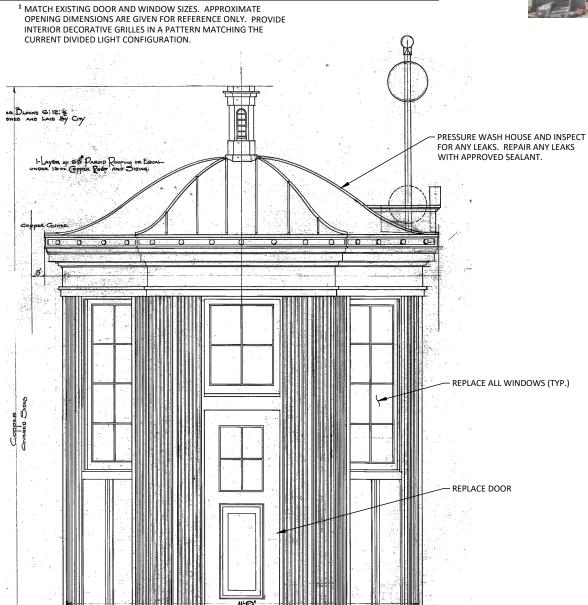
ALL WORK SHOWN ON THIS SHEET WILL BE PAID AS PART OF BID ITEM "REMOVING, REPAIRING & REINSTALLING BRIDGE OPERATOR'S HOUSE AS AN EXHIBIT"

					•			
NO.	BY							
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
S	STRUCTURE B-40-550-14							
			DRAWN BY	PLANS DNJ CK'D	MAD			
	OPE	RATOR HOU	SHEET H-02	2 OF H-09				
RE	LOC	ATION CON						





DOOR & WINDOW SCHEDULE							
ITEM	LOCATION	SIZE ¹	QUANTITY				
DOOR (SOLID, FRP.)	SOUTH ENTRY	APPROX. OPENING 32"W x 84"H	1				
WINDOW (PICTURE)	SOUTH WALL, OVER ENTRY DOOR	APPROX. OPENING 35½"W x 38"H	1				
WINDOW (SINGLE HUNG)	DIAGONAL WALL, SOUTHWEST	APPROX. OPENING 36"W x 60"H	1				
WINDOW (SINGLE HUNG)	WEST WALL, SOUTH	APPROX. OPENING 31"W x 60"H	1				
WINDOW (PICTURE)	WEST WALL, CENTER	APPROX. OPENING 44½"W x 60"H	1				
WINDOW (SINGLE HUNG)	WEST WALL, NORTH	APPROX. OPENING 31"W x 60"H	1				
WINDOW (SINGLE HUNG)	DIAGONAL WALL, NORTHWEST	APPROX. OPENING 36"W x 60"H	1				
WINDOW (SINGLE HUNG)	NORTH WALL	APPROX. OPENING 46"W x 68"H	1				
WINDOW (SINGLE HUNG)	DIAGONAL WALL, NORTHEAST	APPROX. OPENING 31½"W x 70½"H	1				
WINDOW (SINGLE HUNG)	EAST WALL	APPROX. OPENING 46"W X 68"H	1				
WINDOW (SINGLE HUNG)	DIAGONAL WALL, SOUTHEAST	APPROX. OPENING 31½"W X 70½"H	1				



SOUTH ELEVATION OF EXISTING OPERATOR HOUSE



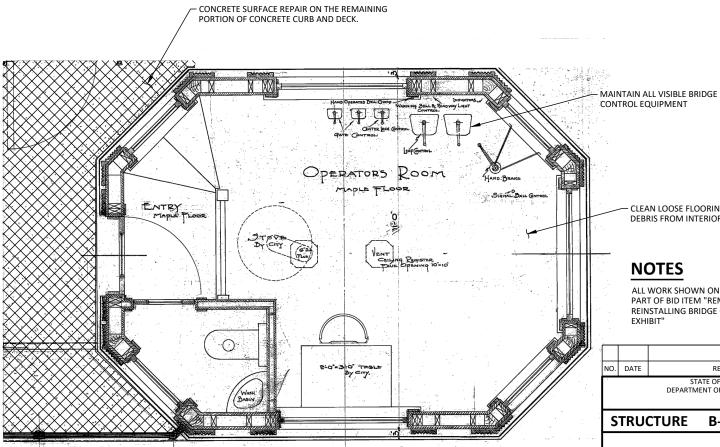
NORTH SIDE VIEW OF HOUSE (LOOKING SOUTH)

2615-15-73 REPLACE WINDOWS -REPLACE DOOR

SOUTH AND WEST SIDE VIEW OF HOUSE (LOOKING NORTHEAST)

OPERATOR HOUSE REPAIR DETAILS

* PROVIDE SECURITY SCREWS MADE FOR COPPER SIDING AND AN ADHESIVE COMPATIBLE WITH COPPER TO REDUCE THE RISK OF THEFT.



PLAN OF EXISTING OPERATOR HOUSE

ALL HOLES FROM EXISTING UTILITIES OR SIMILAR SHALL BE COVERED AND PATCHED.

NOTES

- CLEAN LOOSE FLOORING AND DEBRIS FROM INTERIOR OF HOUSE

ALL WORK SHOWN ON THIS SHEET WILL BE PAID AS PART OF BID ITEM "REMOVING, REPAIRING & REINSTALLING BRIDGE OPERATOR'S HOUSE AS AN EXHIBIT"

STATE PROJECT NUMBER

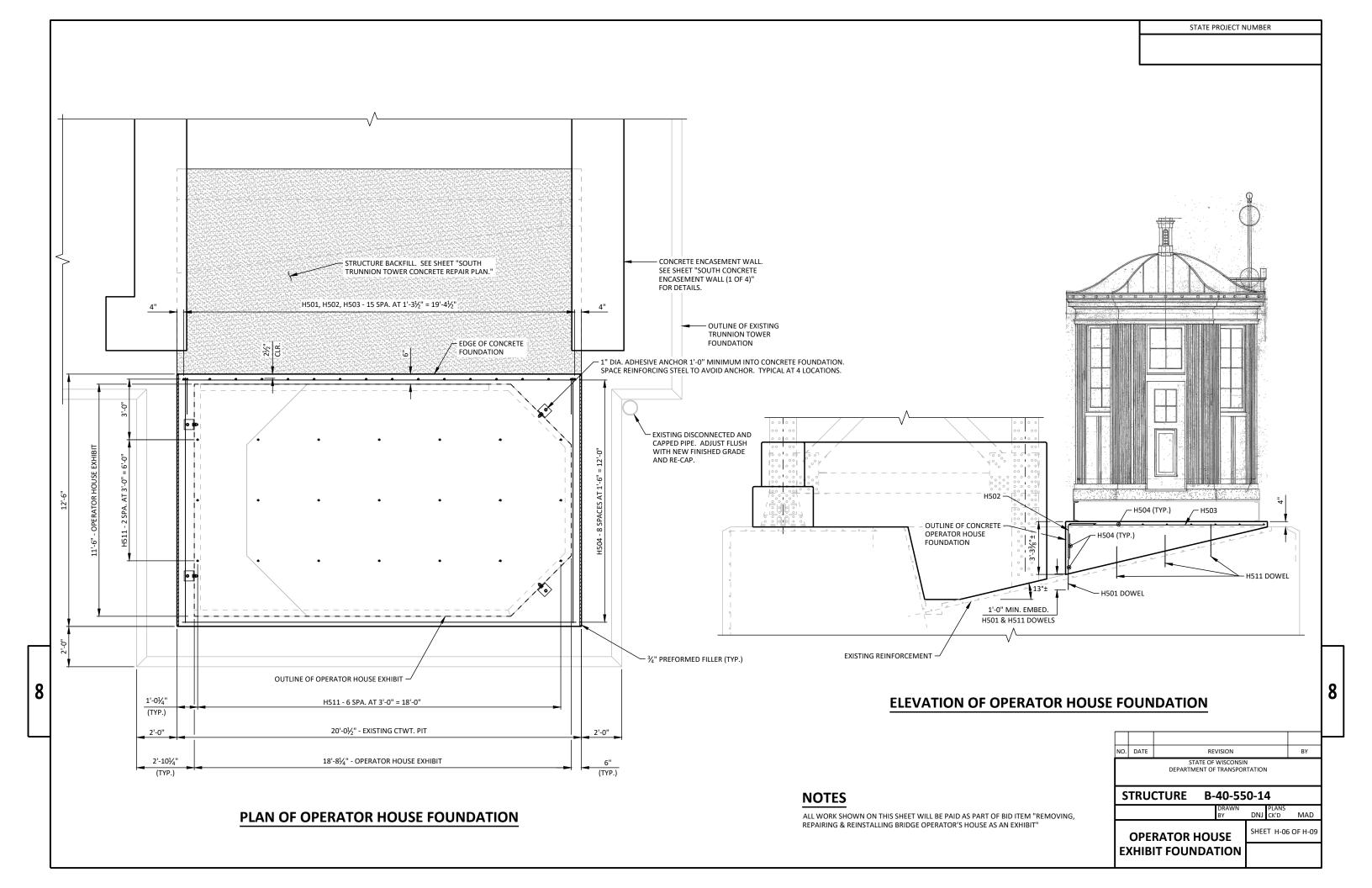
NO. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-550-14

DNJ CK'D MAD

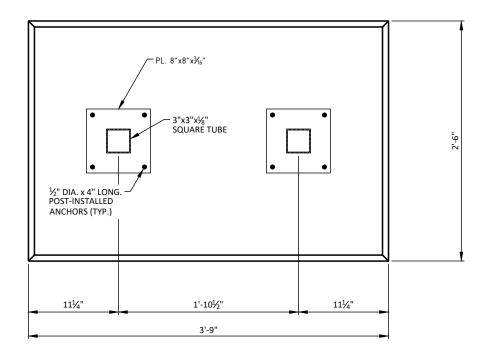
OPERATOR HOUSE REPAIR DETAILS

SHEET H-05 OF H-09

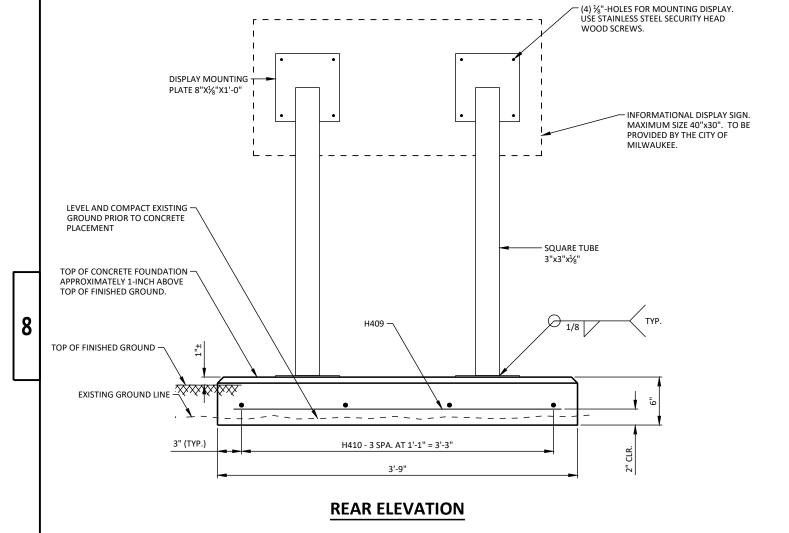


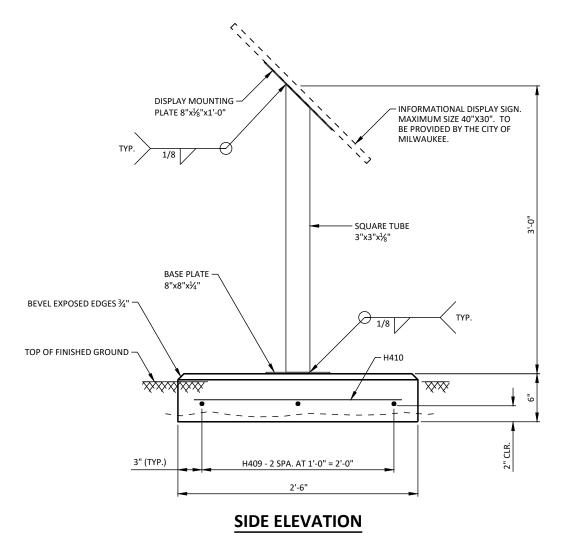
STATE PROJECT NUMBER

2615-15-73



PLAN OF INTERPRETIVE SIGN

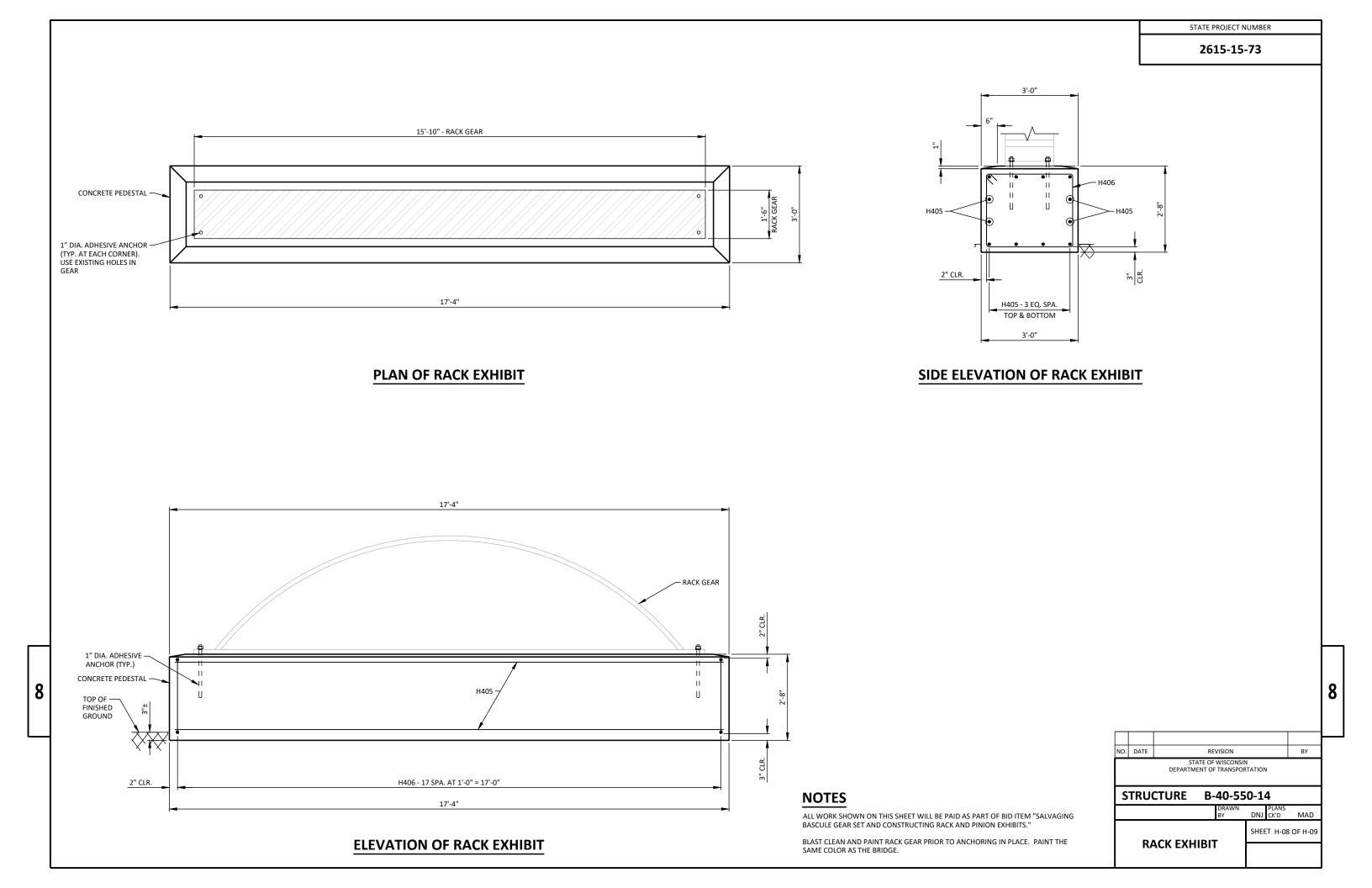




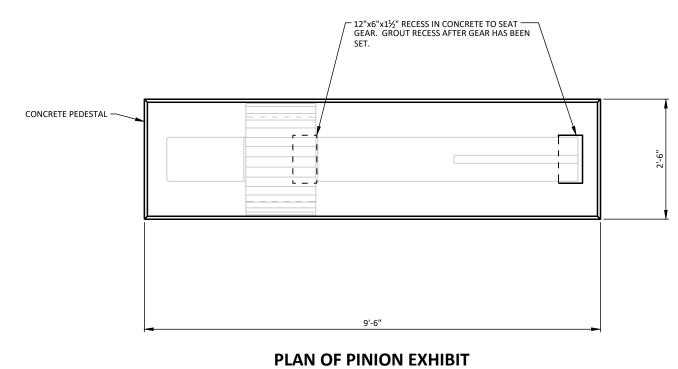
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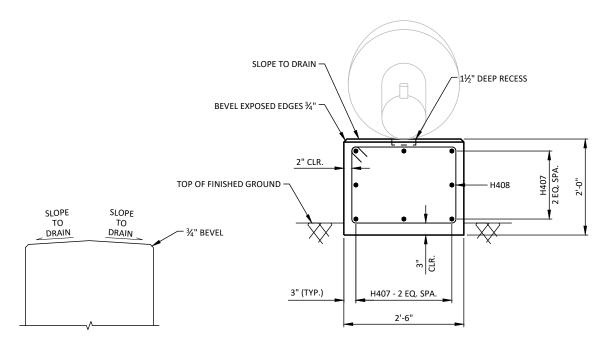
ALL WORK SHOWN ON THIS SHEET WILL BE PAID AS PART OF BID ITEM "INTERPRETIVE EXHIBIT SIGN SUPPORT."

NO.	DATE	RE	VISION			BY		
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
S	STRUCTURE B-40-550-14							
DRAWN PLANS BY DNJ CK'D MAD						MAD		
	INITE		SHEET	Г Н-07	OF H-09			
INTERPRETIVE SIGN								









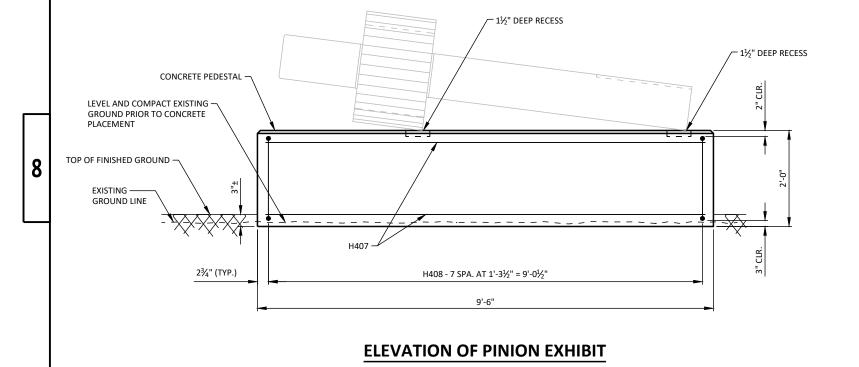
TOP OF EXHIBIT DETAIL

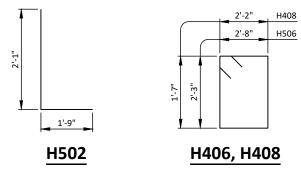
SIDE ELEVATION OF PINION EXHIBIT

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

NOTE. III	NOTE. THE FIRST ON FIRST TWO DIGITS OF THE BAN WARN SIGNIFIES THE BAN SIZE.							
BAR MARK	NO. REQ'D	LENGTH	BENT	ADH. ANCH.	LOCATION			
COATI	COATED BARS TOTAL WEIGHT = 920					920 LBS		
H501	16	3'-6"		Δ	OPERATOR HOUSE BASE - DOWEL		VERT.	
H502	16	3'-9"	Х		OPERATOR HOUSE BASE - L-BAR		VERT.	
H503	16	12'-2"			OPERATOR HOUSE BASE - TOP		LONGIT.	
H504	9	19'-7"			OPERATOR HOUSE BASE - TOP		TRANS.	
H405	12	17'-0"			RACK GEAR BASE		HORIZ.	
H406	18	10'-4"	Х		RACK GEAR BASE - STIRRUP		VERT.	
H407	8	9'-2"			PINION GEAR BASE		HORIZ.	
H408	8	8'-0"	Х		PINION GEAR BASE - STIRRUP		VERT.	
H409	3	3'-5"			SIGN BASE		HORIZ.	
H410	4	2'-2"			SIGN BASE		HORIZ.	
H511	21	2'-0"		Δ	OPERATOR HOUSE BASE - DOWEL		VERT.	

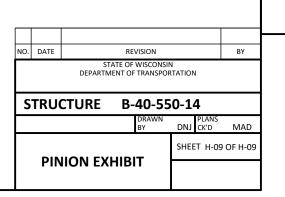


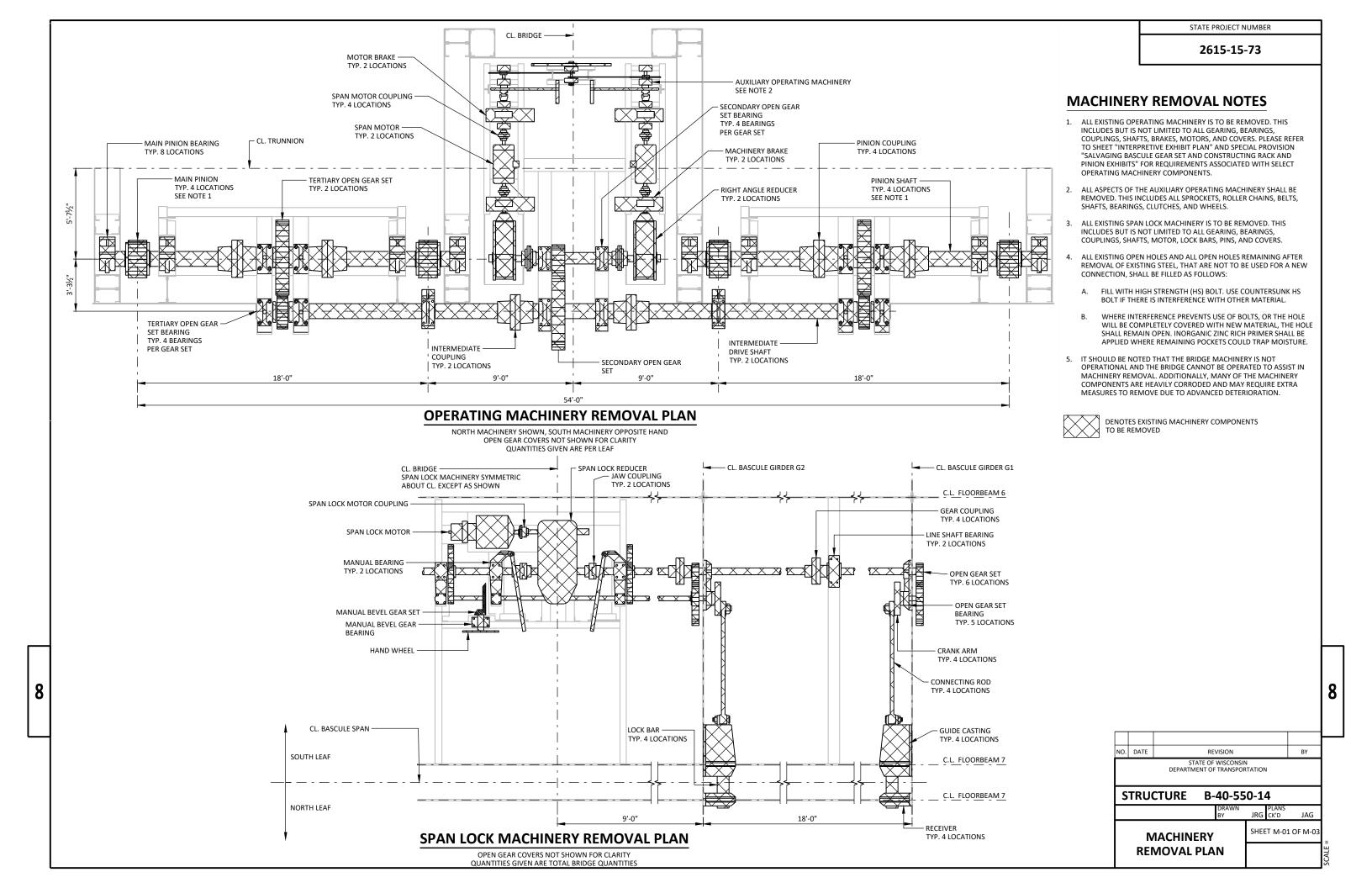


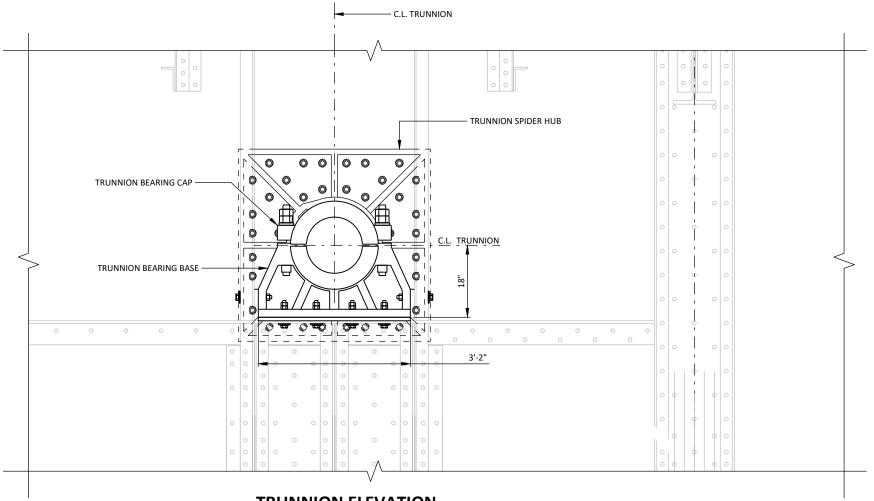
NOTES

ALL WORK SHOWN ON THIS SHEET WILL BE PAID AS PART OF BID ITEM "SALVAGING BASCULE GEAR SET AND CONSTRUCTING RACK AND PINION EXHIBITS."

BLAST CLEAN AND PAINT PINION GEAR AND SHAFT PRIOR TO ANCHORING IN PLACE. PAINT THE SAME COLOR AS THE BRIDGE.





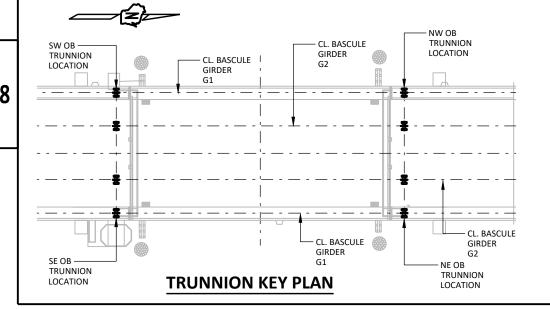


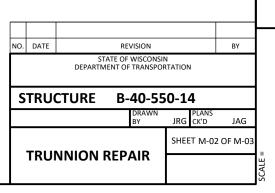
TRUNNION ELEVATION

NORTH WEST OB LOCATION SHOWN, SOUTH SIMILAR, OPPOSITE HAND (8) TRUNNION LOCATIONS TOTAL (16) TRUNNION BEARINGS TOTAL PLATFORM AND RAILINGS NOT SHOWN FOR CLARITY

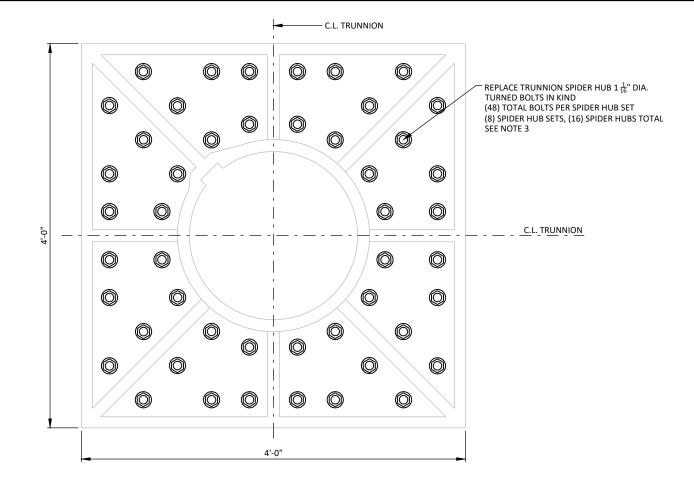
SUGGESTED TRUNNION REPAIR WORK SEQUENCE

- 1. PREPARE TRUNNION BEARINGS FOR JACKING OF BASCULE LEAF.
- UNLOAD TRUNNIONS BY JACKING AND SUPPORT OF BASCULE SPAN ON TEMPORARY SHORING. SEE SPECIAL PROVISION "TEMPORARY SHORING OF SUPERSTRUCTURE".
- 3. REMOVE TRUNNION BEARINGS FOR SHIPMENT TO SHOP, ABRASIVE BLASTING, CLEANING, AND MODIFICATION.
- CLEAN AND INSPECT TRUNNION JOURNAL SURFACES. IN COLLABORATION WITH ENGINEER, DETERMINE IF ACCEPTABLE AS IS OR IF FIELD MACHINING IS REQUIRED.
- 5. PROTECT TRUNNION JOURNAL SURFACES AND ABRASIVE BLAST AND CLEAN TRUNNION SHAFTS AND HUBS.
- 6. REPLACE TRUNNION HUB TURNED BOLTS WITH SECTION LOSS. SEE SHEET M-3
- MACHINE TRUNNION JOURNALS DEEMED UNACCEPTABLE UNDER ITEM 4. SEE SPECIAL PROVISION "REFURBISH TRUNNIONS AND TRUNNION BEARINGS" FOR MACHINING GUIDANCE.
- 8. CLEAN AND PAINT TRUNNION SHAFTS AND HUBS WITH THE SAME PAINT SYSTEM BEING USED ON ALL STRUCTURAL STEEL.
- MODIFY TRUNNION BEARINGS. ALL BEARINGS TO RECEIVE NEW BUSHINGS AND NEW LINERS. SEE SHEET M-3 FOR DETAILS.
- 10. CLEAN AND PAINT TRUNNION BEARING ASSEMBLIES WITH THE SAME PAINT SYSTEM BEING USED ON ALL STRUCTURAL STEEL.
- 11. REINSTALL TRUNNION BEARING BASES SO THAT TRUNNION SHAFTS SHARE A COMMON AXIS ACROSS THE BASCULE LEAF, ARE LEVEL WITHIN $\frac{1}{32}$ " ACROSS THEIR LENGTHS, FULLY BEAR ON THEIR RESPECTIVE BEARING BASES AND SHARE A COMMON ELEVATION TO COMPLEMENT THE ADJACENT APPROACH SPAN AND MATING BASCULE LEAF.
- 12. LUBRICATE TRUNNION JOURNALS WITH AN ANTI SEIZE COMPOUND PASTE THAT CREATES A LONG LASTING LUBRICATING SEAL BETWEEN MATED METAL SURFACES. SUBMIT PROPOSED ANTI SEIZE COMPOUND TO ENGINEER FOR APPROVAL.
- 13. LOWER BASCULE LEAF BY JACKING.
- 14. COMPLETE INSTALLATION OF MODIFIED TRUNNION BEARINGS.





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TRUNNION SPIDER HUB ELEVATION

TYPICAL TRUNNION SPIDER HUB SHOWN
TRUNNION SHAFT NOT SHOWN FOR CLARITY

GENERAL NOTES

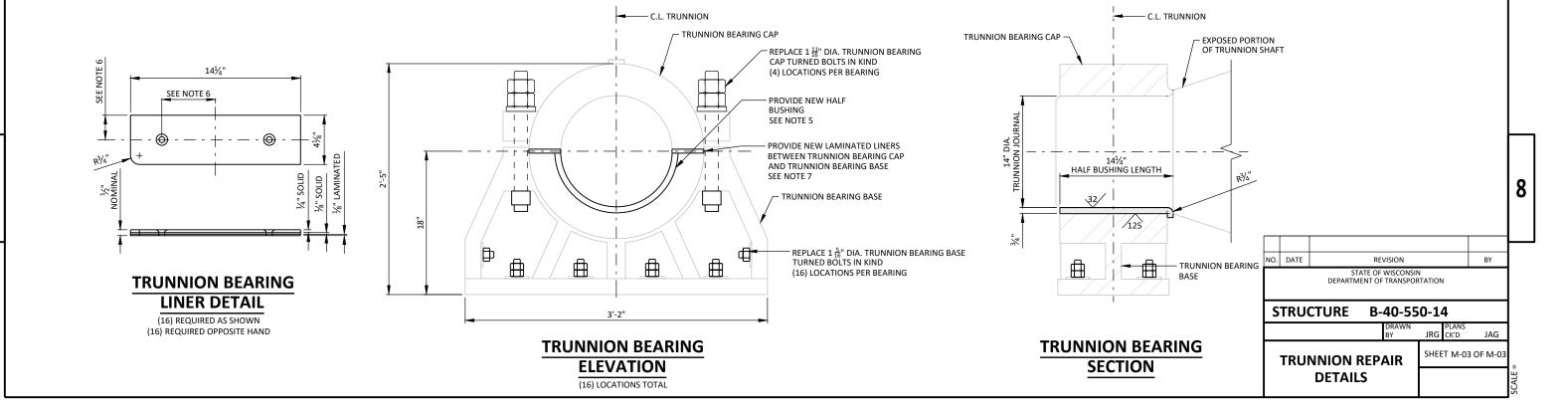
 NOMINAL DIMENSIONS SHOWN ON THIS SHEET ARE FROM THE 1928 SHOP DRAWINGS (MILWAUKEE BRIDGE COMPANY, MILWAUKEE, WI., CONTRACT NO. 3951) AND ARE PROVIDED FOR GENERAL REFERENCE.

TRUNNION SPIDER HUB REPAIR NOTES

- 2. AT A MINIMUM, THE WORK THAT SHALL OCCUR AT EACH OF THE SIXTEEN (16) TRUNNION SPIDER HUBS IS AS FOLLOWS. REPLACEMENT OF TURNED BOLTS, ABRASIVE BLASTING AND CLEANING, AND PAINTING.
- TRUNNION SPIDER HUB TURNED BOLTS SHALL BE REPLACED WHEN SECTION LOSS DUE TO CORROSION ON THE NUT OR HEAD IS GREATER THAN 10%. ANY NUT OR HEAD THAT IS NO LONGER HEXAGONAL SHALL BE REPLACED. ESTIMATED 75% OR THIRTY-SIX (36) OF FOURTY-EIGHT (48) SPIDER HUB BOLTS WILL REQUIRE REPLACEMENT PER SPIDER HUB SET FOR A TOTAL OF TWO HUNDRED EIGHTY-EIGHT (288) REPLACED TURNED POLTS.

TRUNNION BEARING REPAIR NOTES

- 4. AT A MINIMUM, THE WORK THAT SHALL OCCUR AT EACH OF THE SIXTEEN (16) TRUNNION BEARINGS IS AS FOLLOWS. REPLACEMENT OF CAP TURNED BOLTS, REPLACEMENT OF BASE TURNED BOLTS, REPLACEMENT OF HALF BUSHING, REPLACEMENT OF TRUNNION BEARING LINERS, ABRASIVE BLASTING AND CLEANING, AND PAINTING.
- . SEE SPECIFICATIONS FOR HALF BUSHING MATERIAL REQUIREMENTS. PROVIDE AN LC1 FIT BETWEEN THE INNER DIAMETER OF THE TRUNNION BEARING BASE AND THE OUTER DIAMETER OF THE NEW HALF BUSHING. PROVIDE AN RC6 FIT BETWEEN THE INNER DIAMETER OF THE NEW HALF BUSHING AND THE OUTER DIAMETER OF THE TRUNNION JOURNAL. CONSIDER FIELD SHAFT MACHINING WHEN DETERMINING THE RUNNING CLEARANCE FIT.
- 6. IT IS INTENDED THAT WITH THE NEW HALF BUSHINGS AND NEW LAMINATED BEARING LINERS THAT ANY CHANGES TO THE TRUNNION SHAFT DIAMETER CAN BE ACCOMMODATED. THE NEW HALF BUSHINGS WILL PROVIDE THE NOTED RUNNING CLEARANCE FIT WITH TRUNNION JOURNAL AND THE NEW LAMINATED BEARING LINERS WILL PROVIDE SIMILAR BETWEEN THE BEARING CAPS AND TOP OF TRUNNION JOURNAL. CONTRACTOR TO CONFIRM FIT BETWEEN BEARING CAPS AND TOP OF TRUNNION JOURNALS ONCE ALL BASCULE LEAF REHABILITATION IS COMPLETED AND THE TRUNNION BEARINGS ARE TAKING FULL BASCULE LEAF DEAD LOAD.
- 7. LOCATE COUNTERSUNK HOLES IN LINERS TO ALIGN WITH EXISTING HOLES IN TRUNNION BEARING BASE. COUNTERSUNK HEAD SHALL BE LOCATED IN $\frac{1}{4}$ " SOLID LINER.



- 2. MODIFICATIONS MAY BE REQUIRED FOR CONDUIT ROUTING, CONDUIT AND BOX SUPPORTS TO AVOID INTERFERENCE WITH EXISTING STRUCTURES AND OTHER EQUIPMENT. COST OF ALL MODIFICATION ITEMS SHALL BE
- 3. THE CONTRACTOR SHALL EXAMINE AND VERIFY ALL EXISTING AND GIVEN CONDITIONS AND DIMENSIONS WITH THOSE SHOWN ON THE CONTRACT DOCUMENTS. IF THE FIELD CONDITIONS AND DIMENSIONS DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN CHARGE. ALL FIELD CONDITIONS AND DIMENSIONS SHALL BE NOTED ON THE DRAWINGS AND SUBMITTED FOR
- 4. ELECTRICAL CONTRACTOR SHALL COORDINATE THE WORK WITH THE CITY OF MILWAUKEE STREET LIGHTING FIELD SUPERVISORS, STRUCTURAL AND UTILITY WORK DISCIPLINES.
- CONDUITS SHALL CROSS EXPANSION JOINTS IN STRUCTURES IN A DIRECTION PARALLEL TO THE STRUCTURE MOVEMENT. EXPANSION/DEFLECTION FITTINGS SHALL BE PROVIDED AT ALL EXPANSION JOINTS WHETHER OR NOT SHOWN ON THE PLANS DEFLECTION FITTINGS SHALL BE PROVIDED TO FOLLOW THE NATURAL CURVATURE OF THE STRUCTURE OR AT LOCATIONS WHEREVER ANGULAR MOVEMENT MAY BE ENCOUNTERED. THE CONTRACTOR SHALL USE EXPANSION FITTINGS AND EXPANSION/DEFLECTION FITTINGS PROVIDED BY THE SAME MANUFACTURER UTILIZED FOR PVC CONDUIT AND FIBERGLASS CONDUIT
- 6 FOR ROADWAY LIGHTING, GROUNDING SHALL BE IN ACCORDANCE WITH CITY OF MILWAUKEE DEPARTMENT OF PUBLIC WORKS STREET LIGHTING STANDARD DRAWINGS AND SPECIFICATIONS.
- 7. THE CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS THROUGH THE CITY OF MILWAUKEE FOR APPROVAL PRIOR TO FABRICATION.
- 8. ALL MATERIALS USED TO SUPPORT OR CONNECT NEW ELECTRICAL CONDUITS, JUNCTION BOXES, LUMINAIRES, ETC. INCLUDING ANCHOR BOLTS, U-BOLTS, NUTS AND WASHERS, SHALL BE STAINLESS STEEL, TYPE 304 OR BETTER, UNLESS NOTED OTHERWISE.
- 9. CABLES WHICH TERMINATE IN A BOX WITHOUT MAKING A CONNECTION TO A LAMPPOST OR OTHER ELECTRICAL EQUIPMENT SHALL BE CAPPED IN THE BOX WITH 3FT OF SLACK FOR EACH CONDUCTOR.
- 10. ALL CONDUCTORS SHALL BE INSTALLED WITH TAGS SHOWING CIRCUIT DESIGNATIONS IN ACCORDANCE WITH CITY OF MILWAUKEE DEPARTMENT OF PUBLIC WORKS STREET LIGHTING STANDARDS.
- 11. ALL EMPTY CONDUITS SHALL HAVE A PULL ROPE (3/8-INCH NYLON) INSTALLED. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR CONDUIT ITEMS
- 12. PULL OR JUNCTION BOXES INSTALLED SHALL NOT BE OF DISSIMILAR METAL TO THE METAL CONDUIT USED IN ANY ONE ELECTRICAL SYSTEM.
- 13. ALL WIRES WITHIN EACH JUNCTION BOX SHALL BE IDENTIFIED AND TAGGED
- 14. NECESSARY DRAIN OPENINGS & FITTINGS FOR PROPER DRAINAGE SHALL BE PROVIDED ON ALL LOWEST POINT OF BOXES. FLEXIBLE CONDUITS AND OTHER ELECTRICAL EQUIPMENT SUBJECT TO WATER ACCUMULATION.
- 15. NUMBER OF BENDS IN CONDUIT BETWEEN JUNCTION BOXES SHALL COMPLY WITH NATIONAL ELECTRICAL CODE.
- 16. COST OF CONDUIT FITTINGS AND SUPPORTS SHALL BE INCLUDED IN PRICE BID FOR CONDUIT.
- 17. CONDUIT SUPPORT SHALL BE PROVIDED WITHIN 3 FEET OF EACH JUNCTION (PULL) BOX AND FITTINGS. UNLESS OTHERWISE NOTED, NO EXPOSED CONDUIT SUPPORT SHALL BE MORE THAN 10 FEET APART
- 18. WALL MOUNTED CONDUITS, SURFACE MOUNTED PULL BOXES AND CAST IRON JUNCTION BOXES SHALL BE LOCATED NEAR THE TOP OF THE WALL OR COLUMN, UNLESS OTHERWISE NOTED.
- 19. COST OF ALL MOUNTING HARDWARE SHALL BE INCLUDED IN UNIT PRICE BID FOR CORRESPONDING ELECTRICAL ITEMS, UNLESS OTHERWISE NOTED.
- 20. ALL PROPOSED METHODS OF ATTACHMENT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL COST OF ALL ATTACHMENT AND SUPPORT MATERIALS AND THEIR INSTALLATION SHALL BE INCLUDED IN PRICE BID FOR ITEMS BEING ATTACHED. NO SEPARATE PAYMENT WILL BE MADE FOR THESE MATERIALS AND CONTRACTOR SHALL MAKE ADEQUATE ALLOWANCE IN THEIR BID PRICES.

ELECTRICAL GENERAL NOTES (CONT'D):

- 21. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT EXISTING INSTALLATIONS ARE NOT DISTURBED. ANY DAMAGE BY CONTRACTOR TO EXISTING FACILITIES OR EQUIPMENT SHALL BE CORRECTED BY REPLACEMENT OR RESTORATION BY THEM AT NO EXTRA COST
- 22. ANY EXISTING-TO-BE-REMOVED LED LUMINAIRES SHALL BE DISPOSED OF IN A LAWFUL MANNER AS REQUIRED.
- 23. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LIGHTING SYSTEM (INSIDE OR OUTSIDE OF CONTRACT LIMITS) THAT LOSES POWER DUE TO PROJECT'S CONSTRUCTION. ANY LIGHTING SYSTEM LOST SHALL BE RESTORED, AND PLIT BACK ON SERVICE TO THE SATISFACTION OF THE CITY OF MILWALKEE DEPARTMENT OF PUBLIC WORKS AT NO EXTRA COST.
- 24. ALL ANCHORS, NUTS, WASHERS, BOLTS, AND THREADED RODS TO BE SECURED TO STAINLESS STEEL ELECTRICAL EQUIPMENT SHALL BE
- 25. ALL ANCHORS, NUTS, WASHERS, BOLTS, AND THREADED RODS TO BE SECURED TO STRUCTURAL STEEL AND NON STAINLESS STEEL ELECTRICAL EQUIPMENT SHALL BE HOT-DIPPED GALVANIZED OR APPROVED EQUAL.
- 26. CONDUIT MOUNTED TO CONCRETE OR BLOCK WALLS SINGLY WILL USE MALLEABLE IRON ZINC COATED STAND OFFS AND MALLEABLE IRON ZINC
- 27. CONDUIT AND WIRES INSTALLED TO EXISTING EQUIPMENT TO REMAIN SHALL BE INVENTORIED BY THE CONTRACTOR. ANY CONDUITS AND WIRES THAT INTERFERE WITH PROPOSED WORK OR ARE DAMAGED THAT ARE NOT IDENTIFIED WITHIN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY PRIOR TO ANY WORK.
- 28. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REQUEST NEW OR ANY ALTERATION OF ELECTRICAL SERVICE WITH THE ACCOUNT EXECUTIVE
- 29. SHOP DRAWINGS AND SUBMITTALS SHALL PROVIDE DETAILED INFORMATION OF EVERY ASPECT OF THE PROPOSED WORK. SHOP DRAWINGS AND SUBMITTALS SHALL INCLUDED. BUT NOT BE LIMITED TO: CONDUIT, WIRING, FITTINGS, MISCELLANEOUS DEVICES, LUMINAIRES, LAMPPOSTS, PULLBOXES, GROUNDING DEVICES, TERMINALS, COMPLETE PANEL INTERNAL AND EXTERNAL LAYOUTS, MOUNTING DETAILS, CONDUIT ROUTING DETAILS, RISER AND WIRING DIAGRAMS, CONTROL SCHEMATICS
- 30. THE ELECTRICAL EQUIPMENT AND RACEWAY LAYOUTS SHOWN IN THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO SHOW A CONCEPTUAL LAYOUT. SCALES ARE APPROXIMATE AND NOT EVERY DETAIL OR EXACT LOCATION OF EQUIPMENT AND/OR CONDUIT IS SHOWN EXISTING CONDITIONS SHALL BE VERIFIED IN THE FIELD. WHILE MAJOR EQUIPMENT IS SHOWN, NOT EVERY DETAIL OR EXACT LOCATION OF ALL EQUIPMENT AND/OR CONDUIT MAY BE SHOWN. SIZES OF EQUIPMENT MAY VARY, DEPENDING ON THE SELECTED MANUFACTURER. THE CONTRACTOR SHALL FOLLOW THESE LAYOUTS AS CLOSELY AS POSSIBLE REALIZING THAT ACTUAL INSTALLATIONS MAY VARY SLIGHTLY DUE TO THE FIELD CONDITIONS AND STRUCTURAL-ROADWAY COORDINATION. THE CONTRACTOR SHALL VERIFY ALL THE DIMENSIONS RELATED TO ELECTRICAL FOLIPMENT INSTALLATION PRIOR TO PERFORMING THE ACTUAL INSTALLATION. ANY DEVIATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ANY DEVIATIONS IN PROPOSED CABLE AND CONDUIT ROUTINGS
- 31. ALL TEMPORARY WORKS AND SUPPORTS REQUIRED TO COMPLETE THE WORK SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE OTHER WORK ITEMS.
- 32. ALL ELECTRICAL COMPONENTS AND MATERIAL SHOWN ON THE CONTRACT DRAWINGS ARE NEW UNLESS OTHERWISE NOTED
- 33. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR THE REMOVAL AND INSTALLATION OF ELECTRICAL COMPONENTS, HANGERS, SUPPORTS, ETC. ALL PATCHING SHALL BE DONE AS TO LEAVE THE AREA IN ITS ORIGINAL CONDITION AS A MINIMUM OR AS OTHERWISE REQUIRED BY THE ENGINEER
- 34. PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE STAGING PLAN IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR ALL OTHER CONSTRUCTION THAT MAY AFFECT OPERATIONS OR SCHEDULE. SEE TEMPORARY TRAFFIC CONTROL PLANS SHEETS FOR DETAILS.
- 35. THE ELECTRICAL UTILITY COMPANY (WE ENERGIES) MUST BE NOTIFIED IN WRITING BY THE CONTRACTOR A MINIMUM OF 90 DAYS IN ADVANCE OF ANY WORK THAT WILL AFFECT THEIR ELECTRICAL FACILITIES. THE CONTRACTOR SHALL COORDINATE ALL OF HIS ACTIVITIES WITH THE WE

SCOPE OF WORK:

- DEMOLITION AND REMOVAL
- REMOVE AND DISPOSE OF THE FOLLOWING EXISTING EQUIPMENT:
- ALL POWER DISTRIBUTION EQUIPMENT INCLUDING DISCONNECT
- SWITCHES, POWER PANELS, DISTRIBUTION PANELS, ETC. EXISTING LIGHT STANDARDS INDICATED ON PLANS
- ALL ELECTRICAL CONTROL EQUIPMENT
- ALL ELECTRO-MECHANICAL MACHINERY
- ALL LIMIT SWITCHES & INSTRUMENTATION EQUIPMENT
- WARNING GATES
- BRIDGE TRAFFIC SIGNALS NAVIGATION LIGHTING
- ALL CONDUIT & WIRE
- ANY OTHER SUPERSEDED EQUIPMENT OR AS DIRECTED BY THE
- 2. INSTALLATION:
- FURNISH AND INSTALL THE FOLLOWING EQUIPMENT:
- NEW LIGHT STANDARDS INDICATED ON PLANS
- 2.2. CONDUIT & WIRE FOR NEW LIGHT STANDARDS

LIGHTING REMOVAL NOTES:

- 1 EXISTING LIGHTING SYSTEM REMOVAL SHALL BE COORDINATED WITH ALL WORK ZONES AND ALL STAGES OF CONSTRUCTION.
- 2. CONTRACTOR SHALL MAINTAIN & PROTECT ALL UTILITIES SHOWN ON THE DRAWINGS OF ALL DISCIPLINES OR FOUND IN THE FIELD, EXCEPT THE LIGHTING STANDARDS, BOXES & CONDUITS SHOWN SHALL BE DISCONNECTED, DEMOLISHED & REMOVED.
- 3. THE EXISTING SERVICE FEEDERS SHALL BE MAINTAINED IN OPERATION UNLESS OTHERWISE SHOWN. THE CITY OF MILWAUKEE STREET LIGHTING SHALL DE-ENERGIZE EXISTING CIRCUITS BEFORE THE CONTRACTOR
- 4. UNLESS OTHERWISE NOTED, ALL ELECTRICAL EQUIPMENT, ASSOCIATED CONDUIT, AND WIRING TO BE REMOVED SHALL BE COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR
- LAMPPOSTS WHICH ARE TO BE REMOVED UNDER THIS CONTRACT SHALL BE DISPOSED OF IN A LAWFUL MANNER.
- THE LOCATIONS OF EXISTING LAMPPOSTS, CONDUITS AND BOXES SHOWN ON THE DRAWINGS ARE BASED ON THE LATEST CONTRACT PLANS AS-BUILTS AND FIELD SURVEY, CONTRACTOR SHALL VERIFY THE EXISTING ELECTRICAL CONDITIONS BEFORE PERFORMING ELECTRICAL WORK.
- 7. ELECTRICAL WIRES ENCOUNTERED IN THE REMOVAL OF LAMPPOSTS SHALL BE REMOVED TO THE NEAREST ELECTRICAL SERVICE BOX. THIS WORK IS TO BE INCLUDED IN THE BID PRICE FOR THE LAMPPOST REMOVAL.
- 8. ALL EXISTING CABLES SHALL BE REMOVED FROM ANY ABANDONED
- THE PROJECT ENGINEER AND/OR CONTRACTOR SHALL KEEP THE STREET LIGHTING CONSTRUCTION SUPERVISORS INFORMED OF THE STATUS OF THE PROJECT, CONTACT MR. NEAL KARWEIK AT 414-286-5943 (OFFICE), 414-708-4245 (CELL). IF NEAL IS NOT AVAILABLE, THEN CONTACT THE CITY OF MILWAUKÈE STREET LIGHTING SHOP DISPATCHER AT 414-286-5944.

STATE PROJECT NUMBER

2615-15-73

ABBREVIATIONS:

A/AMP AMPERES

AMERICAN NATIONAL ANSI STANDARDS INSTITUTE

AVENUE

DEGREES CELSIUS

FOOT-CANDLE

G/GND GROUND

GROUND FAULT CIRCUIT **GFCI** INTERRUPTER

JB

JUNCTION BOX

LIGHTING LOAD/LINE

LLF LIGHT LOSS FACTOR

MIN

NEUTRAL

NON-METALLIC (CONDUIT) NM

NTS NOT TO SCALE

PULL BOX PB

PH PHASE

RIGID-METALLIC (CONDUIT)

S# SPARE (NUMBER)

SD STANDARD DRAWING

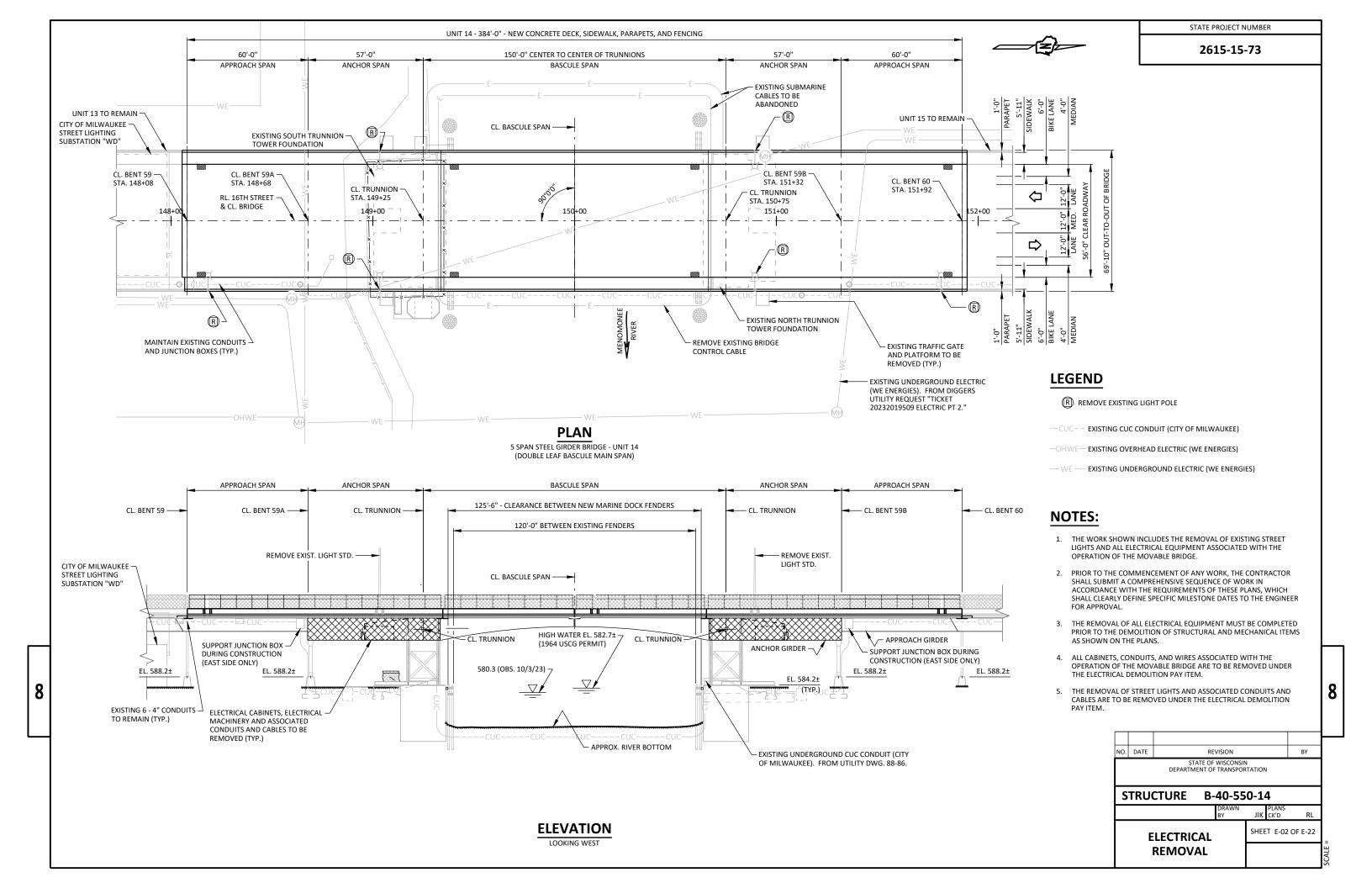
ST STREET STA STATION NUMBER

SCH SCHEDULE

TYPICAL TYP

> W WATT

NO. DATE STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** IIK CK'D SHEET E-01 OF E-22 **ELECTRICAL NOTES**





SOUTH SIDE CONDUIT REMOVAL



SOUTH SIDE CONDUIT REMOVAL



SOUTH SIDE CONDUIT REMOVAL



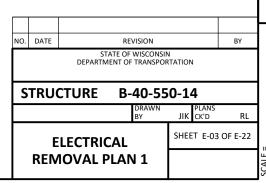
SOUTH SIDE CONDUIT REMOVAL

LEGEND



DENOTES EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED PRIOR TO DEMOLITION

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE SEQUENCE OF WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS, WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL.
- THE REMOVAL OF ALL ELECTRICAL EQUIPMENT MUST BE COMPLETED PRIOR TO THE DEMOLITION OF STRUCTURAL AND MECHANICAL ITEMS AS SHOWN ON THE PLANS.
- ALL CABINETS, CONDUITS, AND WIRES ASSOCIATED WITH THE OPERATION OF THE MOVABLE BRIDGE ARE TO BE REMOVED UNDER THE ELECTRICAL DEMOLITION PAY ITEM.





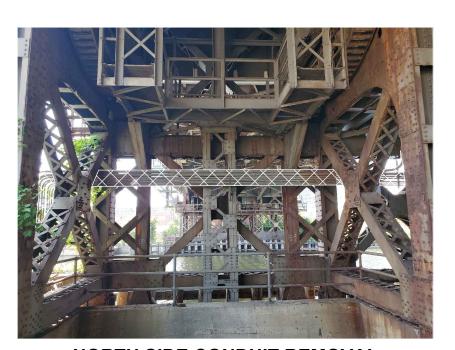
NORTH SIDE CONDUIT REMOVAL



NORTH SIDE CONDUIT REMOVAL

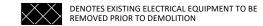


NORTH SIDE CONDUIT REMOVAL

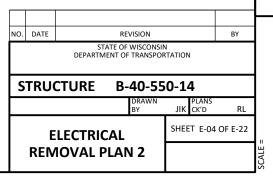


NORTH SIDE CONDUIT REMOVAL

LEGEND



- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE SEQUENCE OF WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS, WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL.
- THE REMOVAL OF ALL ELECTRICAL EQUIPMENT MUST BE COMPLETED PRIOR TO THE DEMOLITION OF STRUCTURAL AND MECHANICAL ITEMS AS SHOWN ON THE PLANS.
- ALL CABINETS, CONDUITS, AND WIRES ASSOCIATED WITH THE OPERATION OF THE MOVABLE BRIDGE ARE TO BE REMOVED UNDER THE ELECTRICAL DEMOLITION PAY ITEM.



LIGHT FIXTURE AND CONDUITS

JUNCTION BOX AND SWITCHES



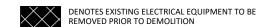
MACHINERY WALKWAY LIGHTING REMOVAL

LIGHT FIXTURE AND CONDUITS



MACHINERY WALKWAY LIGHTING REMOVAL

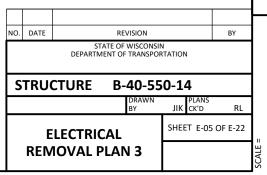
LEGEND





MACHINERY WALKWAY LIGHTING REMOVAL

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE SEQUENCE OF WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS, WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL.
- THE REMOVAL OF ALL ELECTRICAL EQUIPMENT MUST BE COMPLETED PRIOR TO THE DEMOLITION OF STRUCTURAL AND MECHANICAL ITEMS AS SHOWN ON THE PLANS.
- ALL CABINETS, CONDUITS, AND WIRES ASSOCIATED WITH THE OPERATION OF THE MOVABLE BRIDGE ARE TO BE REMOVED UNDER THE ELECTRICAL DEMOLITION PAY ITEM.



SWITCHBOARD ROOM REMOVAL



MACHINERY ROOM REMOVAL

(NORTH SIDE SIMILAR)

LEGEND

SINGLE PHASE SERVICE EQUIPMENT

DENOTES EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED PRIOR TO DEMOLITION

NOTES:

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE SEQUENCE OF WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS, WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL.
- THE REMOVAL OF ALL ELECTRICAL EQUIPMENT MUST BE COMPLETED PRIOR TO THE DEMOLITION OF STRUCTURAL AND MECHANICAL ITEMS AS SHOWN ON THE PLANS.
- ALL CABINETS, CONDUITS, AND WIRES ASSOCIATED WITH THE OPERATION OF THE MOVABLE BRIDGE ARE TO BE REMOVED UNDER THE ELECTRICAL DEMOLITION PAY ITEM.

STRUCTURE B-40-550-14

BRANN BY STRUCTURE B-40-550-14

BRANN BY JIK PLANS CK'D RL

SHEET E-06 OF E-22

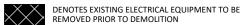
REMOVAL PLAN 4



NORTH SUBMARINE CABLE CABINET REMOVAL

FENDER NAVIGATION LIGHT REMOVAL (TYP.)







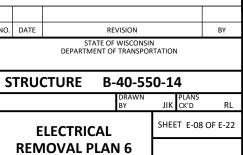
SOUTH SUBMARINE CABLE CABINET REMOVAL



MID-SPAN NAVIGATION LIGHT REMOVAL

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE SEQUENCE OF WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS, WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL.
- THE REMOVAL OF ALL ELECTRICAL EQUIPMENT MUST BE COMPLETED PRIOR TO THE DEMOLITION OF STRUCTURAL AND MECHANICAL ITEMS AS SHOWN ON THE PLANS.
- ALL CABINETS, CONDUITS, AND WIRES ASSOCIATED WITH THE OPERATION OF THE MOVABLE BRIDGE ARE TO BE REMOVED UNDER THE ELECTRICAL DEMOLITION PAY ITEM.
- 4. A TOTAL OF 4 MID-SPAN AND 6 FENDER LIGHTS ARE TO BE REMOVED.

NO.	DATE		REVISION		BY			
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
S	STRUCTURE B-40-550-14							
			DRAWN BY	JIK CK'D	RL			
ELECTRICAL REMOVAL PLAN 5				SHEET E-07	7 OF E-22			





SOUTH APPROACH ROADWAY LIGHT





SOUTH APPROACH TRAFFIC SIGNAL

LEGEND

DENOTES EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED PRIOR TO DEMOLITION

- PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE SEQUENCE OF WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS, WHICH SHALL CLEARLY DEFINE SPECIFIC MILESTONE DATES TO THE ENGINEER FOR APPROVAL.
- THE REMOVAL OF ALL ELECTRICAL EQUIPMENT MUST BE COMPLETED PRIOR TO THE DEMOLITION OF STRUCTURAL AND MECHANICAL ITEMS AS SHOWN ON THE PLANS.
- 3. ALL CABINETS, CONDUITS, AND WIRES ASSOCIATED WITH THE OPERATION OF THE MOVABLE BRIDGE ARE TO BE REMOVED UNDER THE ELECTRICAL
- 4. A TOTAL OF 4 TRAFFIC SIGNALS, 5 STREET LIGHTS AND 4 WARNING GATES ARE TO BE REMOVED.

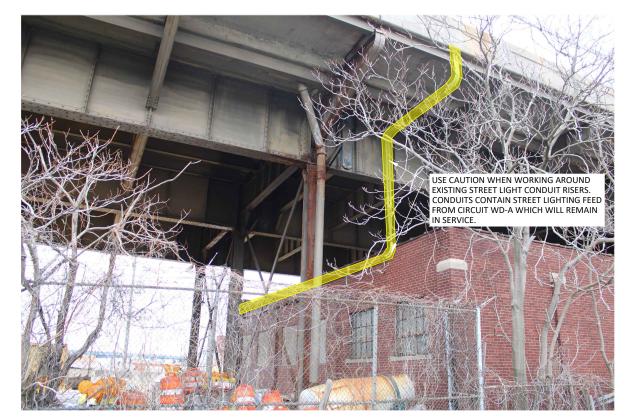


USE CAUTION WHEN WORKING AROUND EXISTING STREET LIGHT CONDUIT RISERS.
CONDUITS CONTAIN STREET LIGHTING FEED FROM CIRCUIT WO-D WHICH WILL REMAIN IN SERVICE.

USE CAUTION WHEN WORKING AROUND EXISTING STREET LIGHT CONDUIT RISERS.
CONDUITS CONTAIN STREET L

SOUTH APPROACH EAST SIDE

SOUTH APPROACH UNDERSIDE



SOUTH APPROACH WEST SIDE

STRUCTURE B-40-550-14

BY

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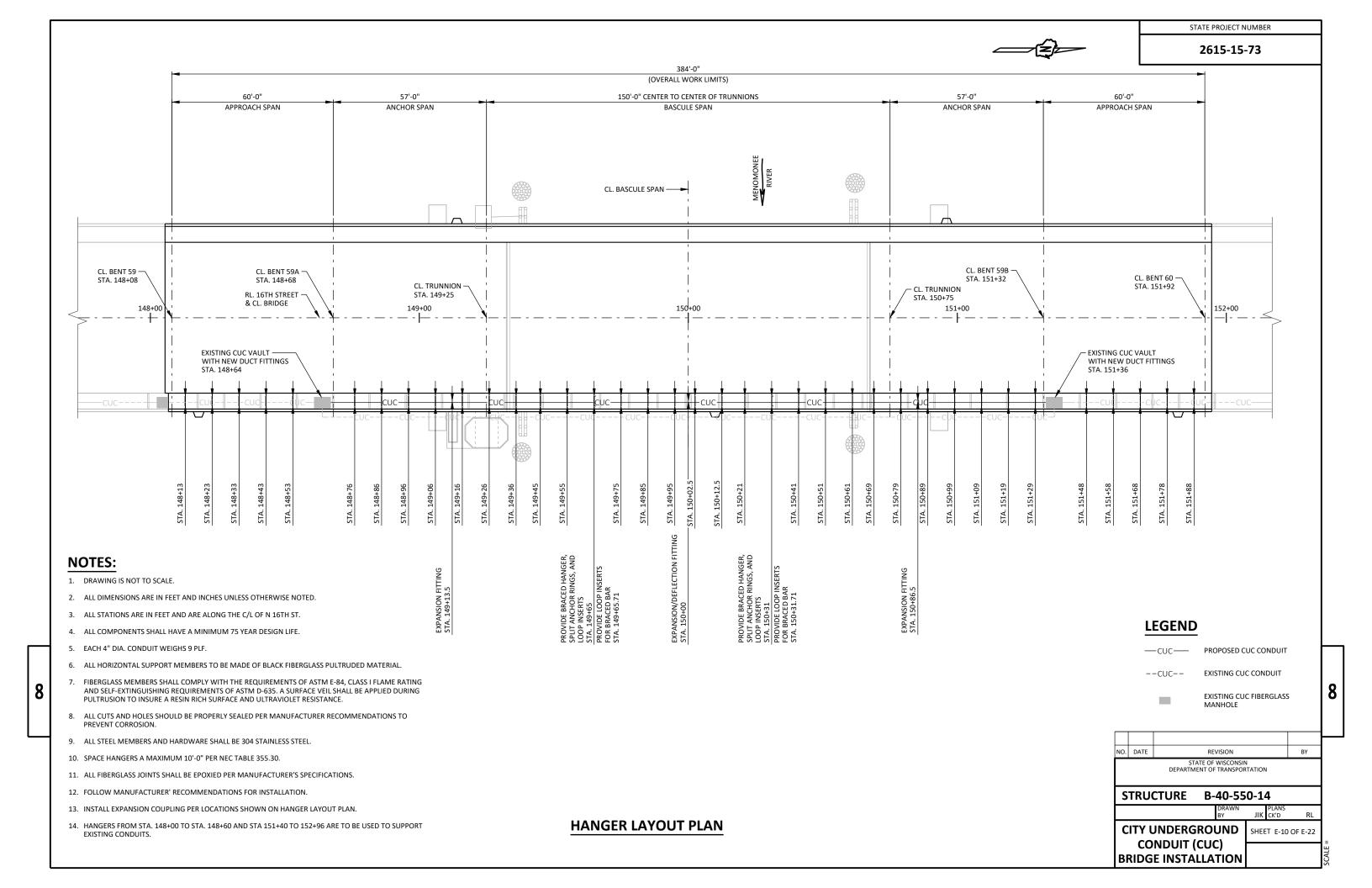
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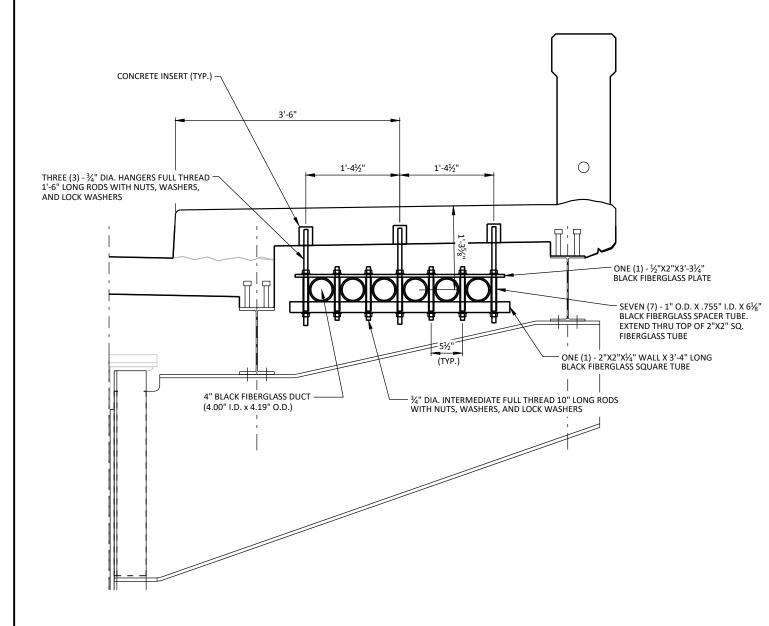
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SHEET E-09 OF E-22



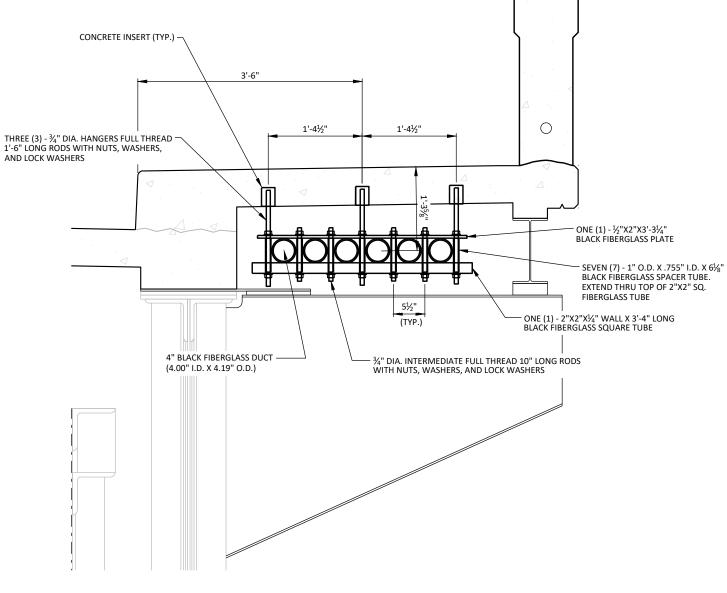
STATE PROJECT NUMBER

2615-15-73



PROPOSED TYPICAL SECTION THRU BASCULE SPAN

(LOOKING NORTH)

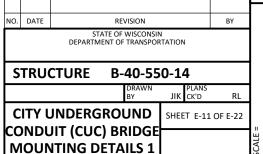


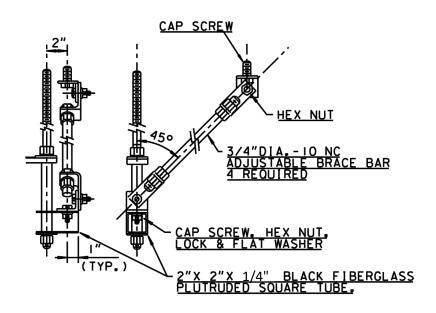
TYPICAL SECTION THRU ANCHOR SPAN AT COUNTERWEIGHTS

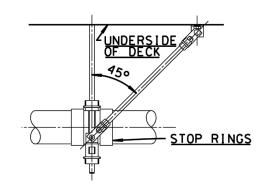
(LOOKING NORTH)

NOTES:

- 1. ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.
- FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84. CLASS I FLAME RATING
 AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635. A SURFACE VEIL SHALL BE APPLIED DURING
 PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.
- 3. ALL STEEL MEMBERS AND HARDWARE SHALL BE 304 STAINLESS STEEL.



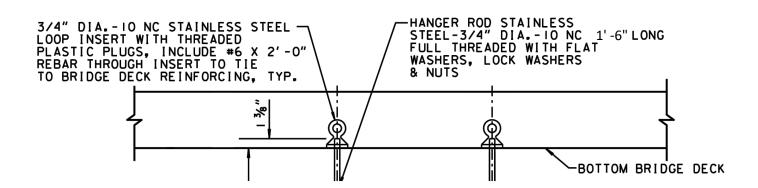




BRACED HANGERS

BRACED HANGER DETAIL

TYPICAL BRACED HANGER WITH STOP RINGS



TYPICAL LOOP INSERT

NOTES:

- 1. ALL HORIZONTAL SUPPORT MEMBERS TO BE MADE OF BLACK FIBERGLASS PULTRUDED MATERIAL.
- 2. FIBERGLASS MEMBERS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E-84. CLASS I FLAME RATING AND SELF-EXTINGUISHING REQUIREMENTS OF ASTM D-635. A SURFACE VEIL SHALL BE APPLIED DURING PULTRUSION TO INSURE A RESIN RICH SURFACE AND ULTRAVIOLET RESISTANCE.
- 3. ALL STEEL MEMBERS AND HARDWARE SHALL BE 304 STAINLESS STEEL.

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

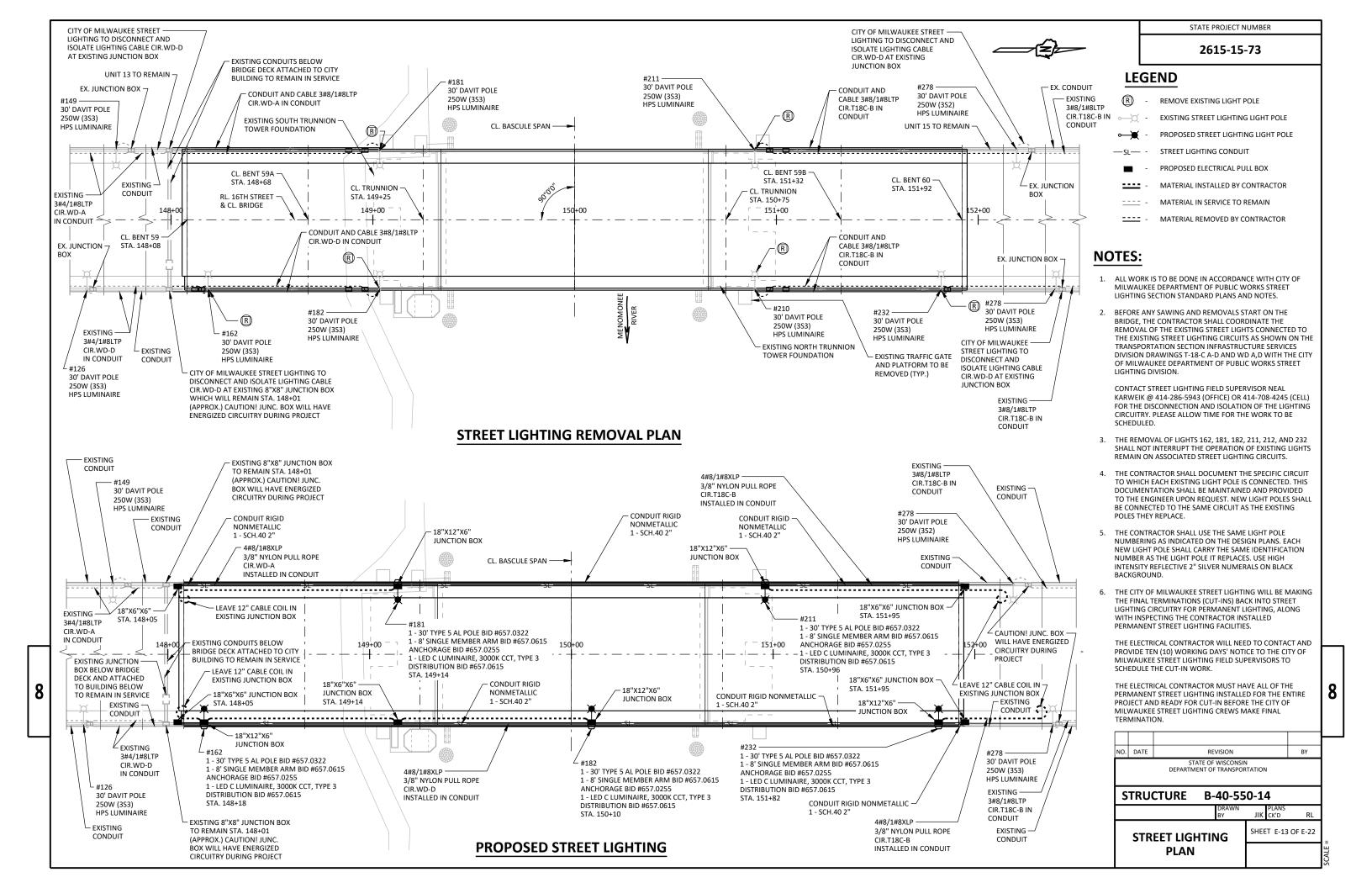
STDLICTURE PAGE 50.14

STRUCTURE B-40-550-14

| DRAWN | PLANS | BY JIK | CK'D

CITY UNDERGROUND CONDUIT (CUC) BRIDGE MOUNTING DETAILS 2

SHEET E-12 OF E-22



STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE"

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

STREET LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY STREET LIGHTING ENGINEERING.

- DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC.
 OF STREET LIGHTING FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE
 STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.
- LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW STREET LIGHTING, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.
- 4 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 12 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.
- DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

 IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.
- 6 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.
- 7 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.
- 8 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.
- 9 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.
- 10 BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.
- 11 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.
- PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.
- 13 ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. APPROVED LABEL FIRMLY ATTACHED.
- 14 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.
- 15 CONDUIT RUNS SHALL BE THE SAME SIZE CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX OR JUNCTION BOX OR PULL BOX TO CONCRETE BASE, OR BASE-TO-BASE ETC.).
- 16 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE STREET LIGHTING ENGINEER.

STREET LIGHTING GENERAL NOTES:

MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

- 18 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED. COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.
- 19 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 3 FT. TO 4 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.
- TYPICAL CONDUIT INSTALLATION FROM THE PULL BOX TO A DIRECT BURIED STREET LIGHT POLE IS AS FOLLOWS: USE A NYLON LIQUIDTIGHT CONNECTOR (UL APPROVED) TO CONNECT THE 1 1/2-INCH LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT LFNC-B (UL APPROVED) TO THE PULL BOX AND CONNECT TO STREET LIGHT POLE BY STUBBING UP A MINIMUM OF 6 INCHES OF THE LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC-B) INTO THE CABLE SLOT.
- 21 ALL CONDUITS AND JUNCTION BOXES EMBEDDED IN STRUCTURE SHALL BE PAID UNDER STRUCTURE PAY ITEMS. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EMBEDDED CONDUITS.
- 22 AT EVERY BRIDGE JOINT, EXPANSION/DEFLECTION FITTINGS MUST BE USED TO PREVENT DAMAGE TO CONDUIT AND LIGHTING CIRCUITS. THIS ITEM IS INCIDENTAL TO THE CONDUIT BID ITEM, AND SHALL BE PAID UNDER STRUCTURE PAY ITEMS.
- 3 THE SUPPORT CHANNELS FOR INSTALLATION OF CONDUITS, LUMINAIRES, JUNCTION BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL UNISTRUT P1000 SERIES OR APPROVED EQUAL, CHANNELS SHALL BE SLOTTED OR PERFORATED.
- 24 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX
- PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.
- PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.
- 27 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE, INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.
- 28 CONDUCTOR COLORS: 240/480, 1 PHASE BLACK (HOT) / WHITE (NEUTRAL) // RED (HOT) / GRAY (NEUTRAL) / GREEN (GROUND)
- 29 INSTALL COMMON GROUND CONDUCTOR IN CONDUIT WHERE MULTIPLE BRANCH CIRCUITS CONDUCTORS ARE INSTALLED IN SAME CONDUIT AND SPLICE THE GROUND CONDUCTOR WITH TAP CONNECTOR IN PULLBOX.
- PROVIDE MINIMUM WIRES / CONDUCTOR(S) SLACK AS NOTED BELOW:

PULL BOXES: SEE DETAIL 142

- CONNECTED WIRES TO LIGHT POLE IN PULL BOX MUST BE EXTENDED MINIMUM 3 FT. BEYOND TOP OF PULL BOX
- UNCONNECTED WIRES THAT BY PASS THROUGH PULL BOX MUST HAVE A MINIMUM OF 6 FT.
- SLACK COIL LEFT INSIDE PULL BOX

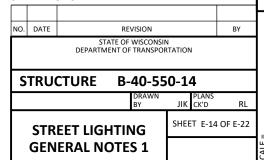
EMBEDDED JUNCTION BOXES IN PARAPIT WALL:

- CONNECTED WIRES IN JUNCTION BOX EXTEND MINIMUM 2 FT. BEYOND TOP OF JUNCTION BOX
- UNCONNECTED WIRES IN JUNCTION BOX LEAVE MINIMUM OF 4 FT. SLACK COIL IN JUNCTION BOX DISTRIBUTION CENTER/LOAD CENTER: EXTEND 10-FT.

BREAK AWAY TRANSFORMER BASE: EXTEND 2-FT.

- 31 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS
 DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.
- 32 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.
- ON ALL NEW STREET LIGHT POLES A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

SHEET 1 OF 9



STREET LIGHTING GENERAL NOTES:

- ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS
- ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM
- COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE, CONTACT ELECTRICAL SUPERVISOR STREET LIGHTING - NEAL KARWEIK (OFFICE 414-286-5943 (CELL) 414-708-4245 STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251 STREET LIGHTING - DISPATCHER @ 414-286-5944

TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148

TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK. STREET LIGHTING - NEAL KARWEIK (OFFICE) 414-286-5943 (CELL) 414-708-4245 STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251 STREET LIGHTING - DISPATCHER @ 414-286-5944

TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148 TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS FOR ALL WORK BEING DONE DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT, PROVIDE (PDF FORMAT) COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

CONTRACTOR TO DELIVER THE FOLLOWING REMOVED STREET LIGHTING MATERIALS: 39

-ALUMINUM AND WOOD POLES

-LUMINAIRE BRACKET ARMS

-LUMINAIRES

-BREAKAWAY TRANSFORMER PEDESTALS

-WIRING PEDESTALS (GREEN IN COLOR)

TO CITY OF MILWAUKEE STREET LIGHTING YARD AT 1540 W. CANAL ST. CALL RICO LOPEZ AT 414-286-5983 (CANAL OFFICE) OR 414-286-6123 (DPW FIELD OFFICE) OR DISPATCHER AT 414-286-5944

THREE (3) WORKING DAYS BEFORE TO COORDINATE DELIVERY OF MATERIALS

- CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE POLES, CONCRETE BASES, AND ABANDON WIRING.
- CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH THE SPECIAL PROVISIONS., UNLESS NOTED OTHERWISE.
- ONLY WHEN THE CITY OF MILWAUKEE IS FURNISHING MATERIALS FOR A PROJECT THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE STREET LIGHTING SHOP YARD CONTACT PERSON FOUR (4) WORKING DAYS BEFORE, AND WILL NEED TO PROVIDE THE EXACT QUANTITY OF MATERIALS NEEDED. THE ADVANCE NOTICE WILL ALLOW THE SHOP TO GATHER THE REQUEST ITEMS FOR THE CONTRACTOR TO PICK UP AND SIGN FOR TAKING POSSESSION OF THE MATERIALS.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MATERIALS THAT THEY TAKE POSSESSION OF AND FOR THE ANY RETURNING OF ANY UNUSED MATERIALS BACK TO THE SHOP IN GOOD CONDITION. IF ANY MATERIALS COME BACK DAMAGED OR BROKEN THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING THE BROKEN OR DAMAGED ITEMS.

STREET LIGHTING SHOP YARD CONTACT PERSON: NEAL KARWEIK 414-286-5943 (OFFICE) 414-708-4245 (CELL) ALL THE MATERIALS MUST BE EITHER PICKED OR DROPPED OFF ALL AT ONE TIME. THE STREET LIGHTING SHOP YARD HOURS FOR PICKING UP MATERIALS IS FROM 8AM TO 2PM: MONDAY THROUGH FRIDAY.

CONTRACTOR MUST BE OUT OF THE SHOP YARD BY 2PM NO LATER

STREET LIGHTING GENERAL NOTES:

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

UPON PROJECT COMPLETION, FOLLOW THE WISDOT REQUIREMENTS PER CMM 165.12 AS-BUILT PLANS, THE PROJECT ENGINEER AND/OR ELECTRICAL CONTRACTOR SHALL SUBMIT AN ELECTRONIC AS-BUILT PLAN, ANY CHANGES FROM THE AS-LET PLAN THAT WERE BUILT INTO THE PROJECT SHOULD BE RECORDED IN RED USING ADOBE ACROBAT PROFESSIONAL OR EQUIVALENT SOFTWARE, DO NOT SCAN FIELD NOTES TO CREATE THE DIGITAL AS-BUILT PLAN.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS, TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.

FOR EXAMPLE:

WORK COMPLETED:

AS-BUILT GUIDELINES:

REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION: AS-BUILT DRAWING SUPERVISOR: PROJECT MANAGER: CONTRACTOR LEADER: CONTRACTOR COMAPNY: **WORK STARTED:**

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED. DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")
- SHOW LOCATION AND ELEVATIONS ON CONDUIT AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH ALL OTHER REQUIRED AS-BUILT INFORMATION.

BY MAIL SEND TO: CITY OF MILWAUKEE INFRASTRUCTURE SERVICES DIVISION TRANSPORTATION SECTION - CONSTRUCTION CHIEF CONSTRUCTION ENGINEER TONY KOTECKI 841 NORTH BROADWAY, ROOM 701 MILWAUKEE, WISCONSIN 53202

BY EMAIL SEND TO: CITY OF MILWAUKEE INFRASTRUCTURE SERVICES DIVISION TRANSPORTATION SECTION - CONSTRUCTION CHIEF CONSTRUCTION ENGINEER TONY KOTECKI AKOTEC@MILWAUKEE.GOV

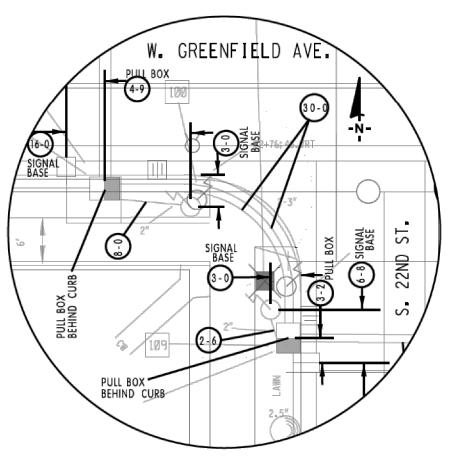
SHEET 2 OF 9 NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION **STRUCTURE B-40-550-14** JIK CK'D SHEET E-15 OF E-22 STREET LIGHTING **GENERAL NOTES 2**

GUIDELINES

CONTRACTOR TO LOCATE AND CLEARLY DIMENSION ALL OF THERE NEWLY INSTALLED CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND

RECORD RETENTION GUIDELINES:

- OTHER APPURTENANCES IN TWO (2) DIRECTIONS, SWING TIES SHOULD BE MADE FROM OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3'). ALL VERTICAL DISTANCES SHALL BE SHOWN TO THE NEAREST INCH (I.E. 24").
- SHOW LOCATION AND ELEVATIONS OF PIPES AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS WILL BE SUPPLIED WHERE REQUIRED FOR CLARITY.
- DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET.



FIELD RECORD EXAMPLE DETAIL

NOT TO SCALE

TYPICAL DIMENSIONING OF CONDUIT, PULL BOXES, AND CONCRETE BASES

MEASURING GUIDE LINES

IF CONDUIT IS NOT PLACED DIRECTLY BEHIND THE CURB IN THE ISLANDS & SIDE TERRACE AREAS, A MEASURED DISTANCE FROM THE FACE OF CURB TO THE CONDUIT WILL NEED TO

SUPERVISOR: PROJECT MANAGER:

CONTRACTOR LEADER:

WORK STARTED: .

WORK COMPLETED:

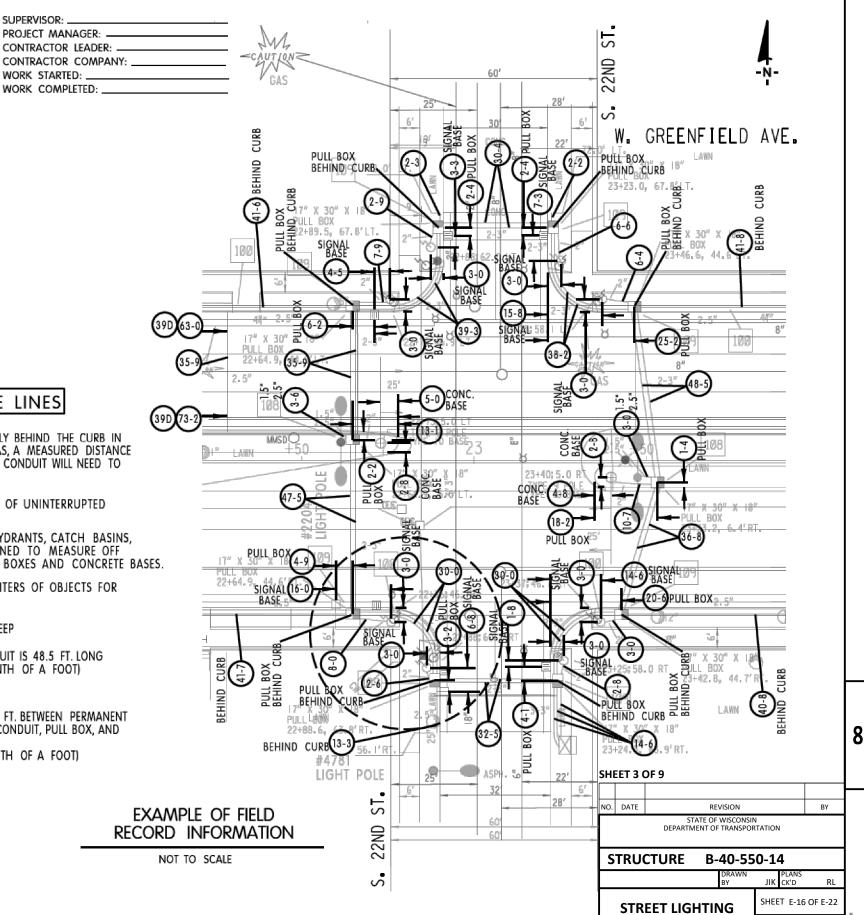
PROVIDE A MEASURED DISTANCE OF UNINTERRUPTED CONDUIT RUNS

USE PERMANENT OBJECTS LIKE HYDRANTS, CATCH BASINS, OR EVEN CURB FACE LINES EXTENED TO MEASURE OFF WHEN LOCATING CONDUIT, PULL BOXES AND CONCRETE BASES.

MEASURE TO OR FROM THE CENTERS OF OBJECTS FOR DISTANCE TAKING.

- MEANS = CONDUIT IS 39" DEEP
- MEANS = LENGTH OF CONDUIT IS 48.5 FT. LONG (MEASURED TO NEAREST TENTH OF A FOOT)

MEANS = DISTANCE OF 25.6 FT. BETWEEN PERMANENT OBJECT OR CURB FACE TO CONDUIT, PULL BOX, AND CONCRETE BASE (MEASURED TO NEAREST TENTH OF A FOOT)



NON-LED LUMINAIRE DESCRIPTION BREAKDOWN

IS 2 V

(C)=FULL CUT OFF, (V)=VERTICAL BURN

(I)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR

(S)=HIGH PRESSURE SODIUM, (M)=MERCURY VAPOR, (H)=METAL HALIDE, (RS)=HIGH PRESSURE SODIUM RETROFIT, (LS) LOW PRESSURE SODIUM

(0)=70W, (1)=100W, (2)=150W, (2)=175W ONLY WITH (M), (3)=250W, (3)=215W ONLY WITH (RS) (4)=400W, (4)=360W ONLY WITH (RS) (5)=200W

SCREW-IN LAMP LED LUMINAIRE DESCRIPTION BREAKDOWN (FOR DECORATIVE FIXTURES)

S 2 LED 3

(1)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR
(LED)=LIGHT EMITTING DIODE
(0)=36W, (1)=45W, (2)=54W, (3)=80W
(S)=SCREW IN LAMP

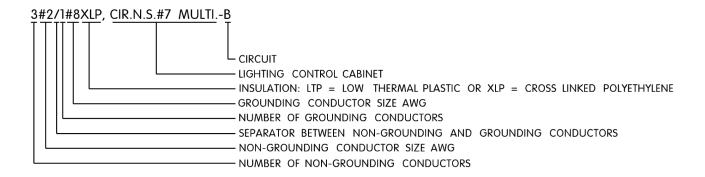
LED LUMINAIRE DESCRIPTION BREAKDOWN (COBRA STYLE FIXTURE)

LED 3

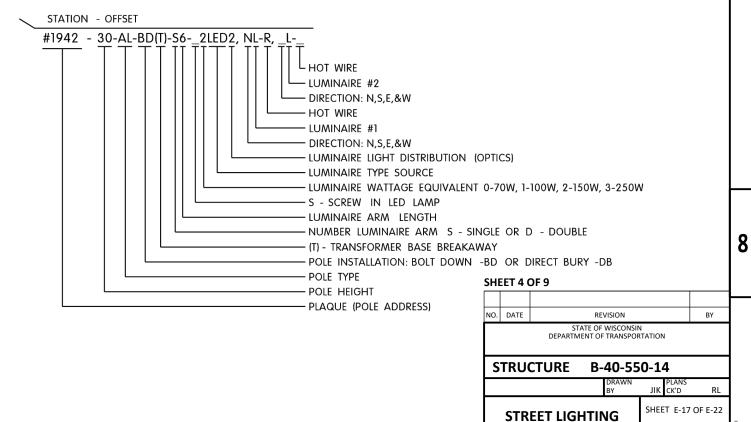
(I)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR (LED)=LIGHT EMITTING DIODE

(0)=36W, (1)=50W, (2)=90W, (3)=135W

LIGHTING CABLE & CIRCUIT IDENTIFICATION



LIGHTING UNIT IDENTIFICATION



DESCRIPTION

CIRCUIT MUST BE TAGGED AND IDENTIFIED INSIDE PULL BOX

POLARIS EDGE CONNECTOR (ISPB2)

MORRIS PRODUCTS SUBMERSIBLE INSULATED STREETLIGHTING CONNECTOR,

3 OR 4 PORT PRE-INSULATED CONNECTOR OR EQUAL. DESIGNED FOR USE IN BELOW GRADE BOXES DIRECT BURIAL AND SUBMERSIBLE CONDUCTORS RANGE FROM #2/0-#14 RATED FOR 600 VOLTS DUAL RATED FOR CU. OR AL. INSULATED WITH HIGH DIELECTRIC STRENGTH ABRASION AND CHEMICAL RESISTANT RUBBER SET SCREWS OR APPROVED EQUAL UL 486D LISTED FOR DIRECT BURIAL AND SUBMERSIBLE APPLICATIONS

2#12 AWG TYPE "UF" WITH GROUND CABLE WITHOUT SPLICES TO HAND HOLE ON POLE (PER LUMINAIRE)

DETAIL "A"

CONNECTIONS WITHIN PULL BOX NOT TO SCALE

NOTES:

WHEN WIRING A LUMINAIRE EITHER BLACK (HOT) WITH WHITE (NEUTRAL) GO TOGETHER RED (HOT) WITH GRAY (NEUTRAL) GO TOGETHER

ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

PULL ROPE SHALL BE INSTALLED IN ALL NEW CONDUITS.

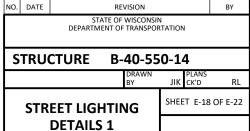
CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.

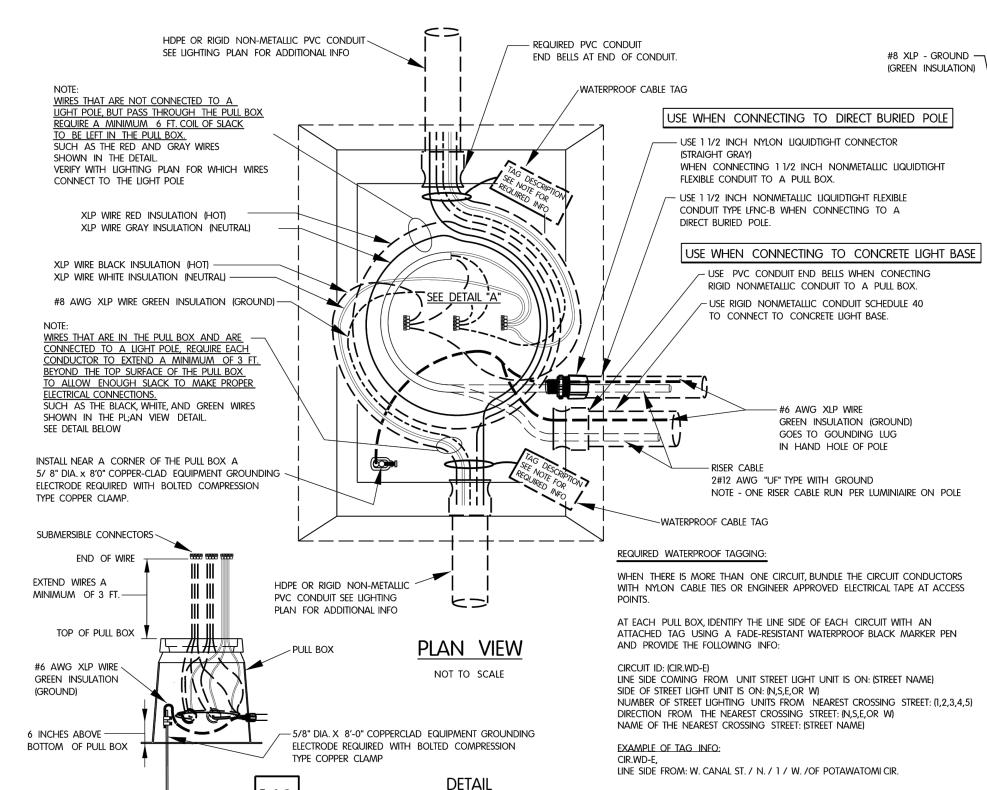
PROVIDE MINIMUM WIRE SLACK FOR PULL BOXES: 3-FT ONE WAY IN OR OUT

PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP MANAGERS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK. THESE NAMES AND NUMBERS CAN BE FOUND ON THE STREET LIGHTING GENERAL NOTES SHEET

SHEET 5 OF 9

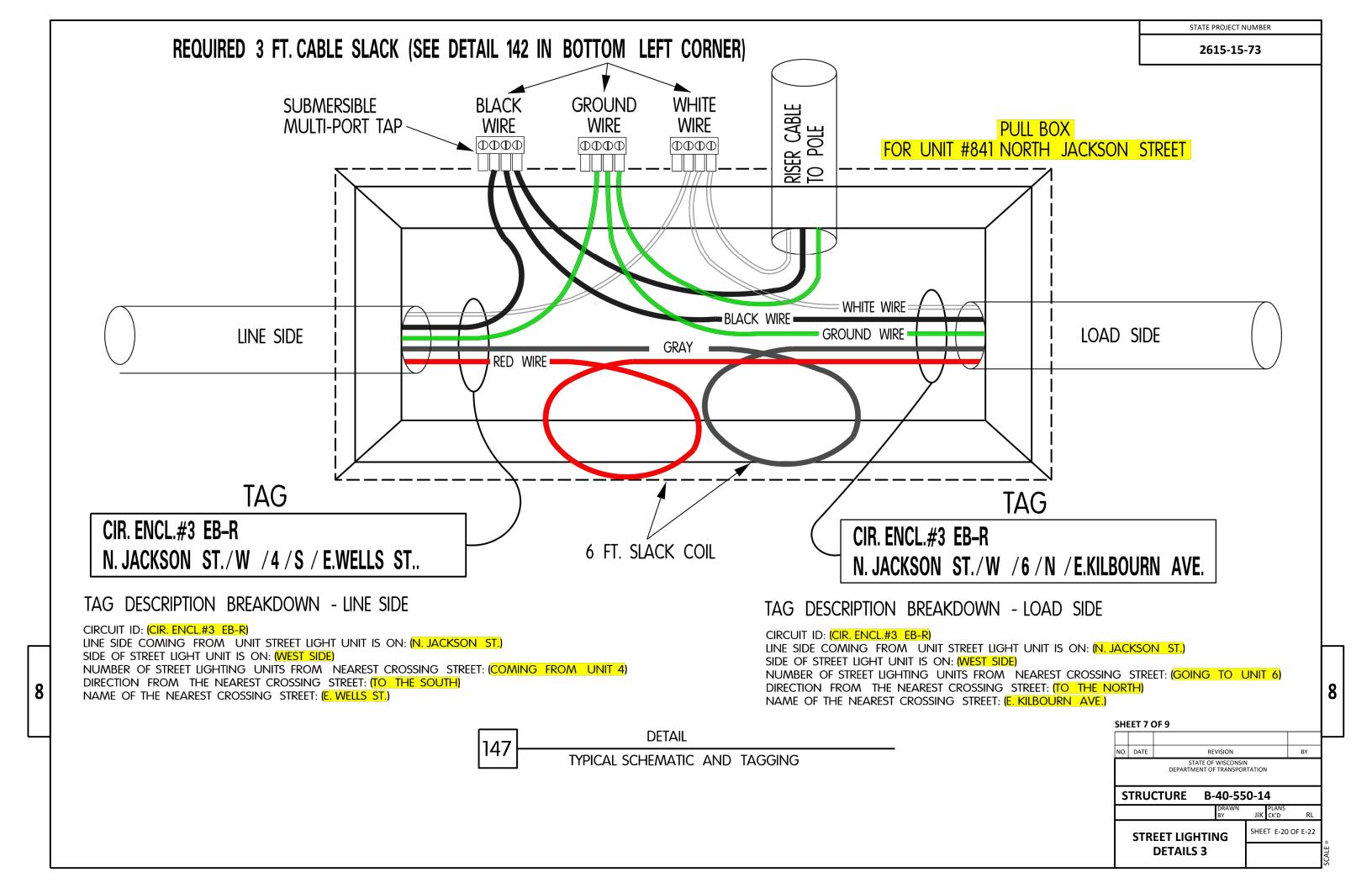




ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

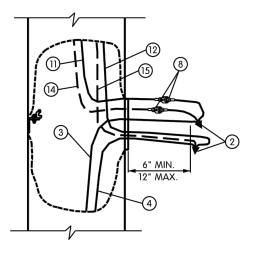
SPLICING CONDUCTORS WITHIN THE PULL BOX

TYPICAL WATERTIGHT MULTI-PORT CONNECTIONS

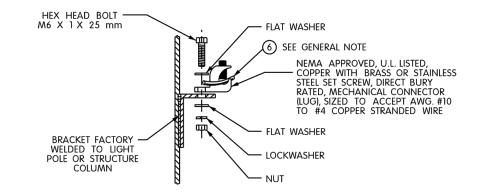


EQUIPMENT GROUNDING

CONDUCTOR SLACK



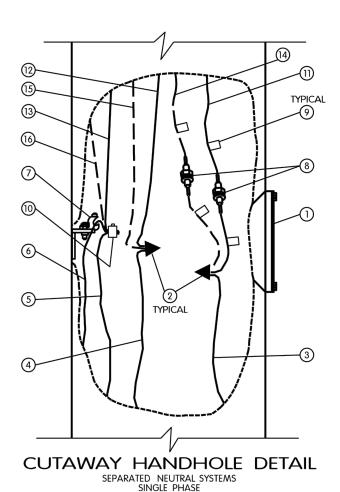
UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)



HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



- (1) HANDHOLE AND COVER
- (2) INSULATED SPLICE
- (3) SYSTEM UNGROUNDED LINE WIRE
- (4) SYSTEM GROUNDED LINE WIRE
- (5) SYSTEM GROUNDING LINE WIRE
- (6) GROUNDING ELECTRODE CONDUCTOR
- (7) HANDHOLE GROUNDING LUG
- (8) FUSE ASSEMBLY, IP OR 2P AS REQUIRED
- (9) CIRCUIT TAG (SEE GENERAL NOTE)
- REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
- (1) RISER UNGROUNDED POLE WIRE LUMINAIRE #1
- (12) RISER GROUNDED POLE WIRE LUMINAIRE #1
- (13) RISER EQUIPMENT GROUNDING POLE WIRE LUMINAIRE #1
- (14) RISER UNGROUNDED POLE WIRE LUMINAIRE #2
- (15) RISER GROUNDED POLE WIRE LUMINAIRE #2
- (16) RISER EQUIPMENT GROUNDING POLE WIRE LUMINAIRE #2



- 600 VOLT RATED, UP TO 30 AMPS 1-POLE BREAKAWAY, SET SCREW TERMINALS FOR LOAD, WIRE SIZE RANGE #12 TO #8 AWG
- FAST ACTING 5 AMP 250 VOLT FUSE RECOMMENDED FROM FUSE LIST FROM IN-LINE FUSE HOLDER MANUFACTURER

WATERPROOF IN-LINE **FUSE HOLDER ASSEMBLY**

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3 4 5 6 11	UNGROUNDED LINE WIRE GROUNDED LINE WIRE SYSTEM GROUNDING LINE WIRE GROUNDING ELECTRODE CONDUCTOR UNGROUNDED POLE WIRE GROUNDED POLE WIRE	BLACK OR RED WHITE OR GRAY GREEN GREEN * WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING,

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINIAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

CIRCUIT TAGS SHALL BE INSTALLED IN ALL THE PULL BOXES AND WHERE INDICATED ON THE PLANS AND SPECIAL PROVISIONS.

SHEET 8 OF 9

NO. DATE REVISION					BY		
	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION						
S	STRUCTURE B-40-550-14						
			DRAWN BY	JIK CK'D	RL		
	STR	EET LIG	SHEET E-2	1 OF E-22			
DETAILS 4							

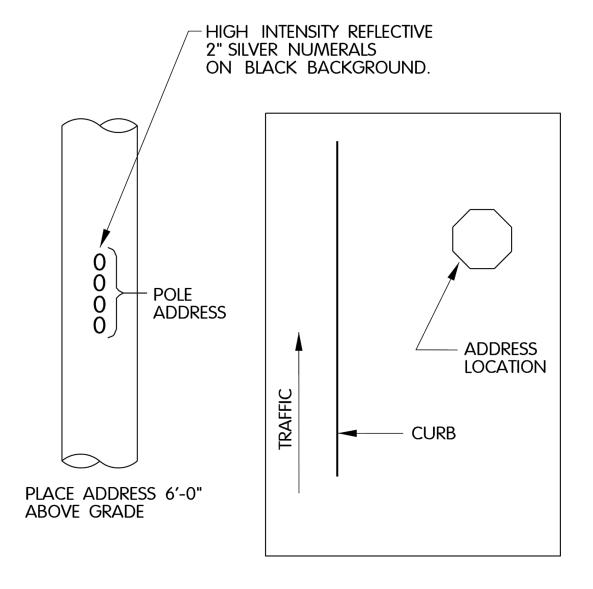
ELECTRICAL HANDHOLE WIRING **DETAIL**

NOT TO SCALE

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE TYPICAL CONDUCTOR SLACK AT HANDHOLES ON THIS SHEET.

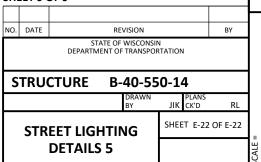
STATE PROJECT NUMBER

2615-15-73



CONTRACTOR FURNISHED AND INSTALLED

SHEET 9 OF 9



Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

http://www.dot.wisconsin.gov