

PROJECT ID 2984-12-75
WITH: N/A
COUNTY MILWAUKEE

WKE
FEBRUARY 2025
ORDER OF SHEETS

SECTION NO. 1	TITLE
SECTION NO. 2	TYPICAL SECTIONS AND DETAILS
SECTION NO. 3	ESTIMATE OF QUANTITIES
SECTION NO. 3	MISCELLANEOUS QUANTITIES
SECTION NO. 4	RIGHT OF WAY PLAT
SECTION NO. 5	PLAN AND PROFILE
SECTION NO. 6	STANDARD DETAIL DRAWINGS
SECTION NO. 7	SIGN PLATES
SECTION NO. 8	STRUCTURE PLANS
SECTION NO. 9	COMPUTER EARTHWORK DATA



TOTAL SHEETS = 76

DESIGN DESIGNATION

A.D.T. (2016)	=	10,059
A.D.T. (2058)	=	10,803
D.H.V.	=	967
D.	=	54%
T.	=	N/A
DESIGN SPEED	=	30 M.P.H.
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

COUNTY LINE	---
TOWNSHIP OR RANGE LINE	----
SECTION LINE	-----
CORPORATE OR CITY LIMITS	-----
PROPERTY LINE	-----
STANDARD BENCH MARK	●
EXISTING RIGHT OF WAY LINE	— R/W —
PROPOSED SEWER LATERAL	— (SIZE) —
BASE OF SURVEY LINE	—
CONCRETE WALK/DWY. REMOVAL	XXXXXX
LIMITS OF CONCRETE PAVEMENT REMOVAL	XXXXXX
CATCH BASIN OR INLET	□
EXISTING	□
PROPOSED	⊕

COMBUSTIBLE FLUIDS UNDER PRESSURE	⚠
RAILROADS	—+—+—+—+—+—+—+—+—+—
FENCE	—X—X—X—X—X—X—X—X—X—X—
FIRE & POLICE CALL BOX	⊕
LIGHT POLE	●
POWER POLE	⊕
TELEPHONE OR TELEGRAPH POLE	⊕
TRAFFIC SIGNAL	⊕
TRAFFIC SIGNAL CONTROL BOX	⊕
HYDRANT	⊕
GAS OR WATER GATE VALVE	⊕
MANHOLES - SEWER	○
UTILITY (TYPE)	□
TREES - EXISTING	⊕
TO BE REMOVED	⊗

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MILWAUKEE, N HOLTON ST PHASE 3

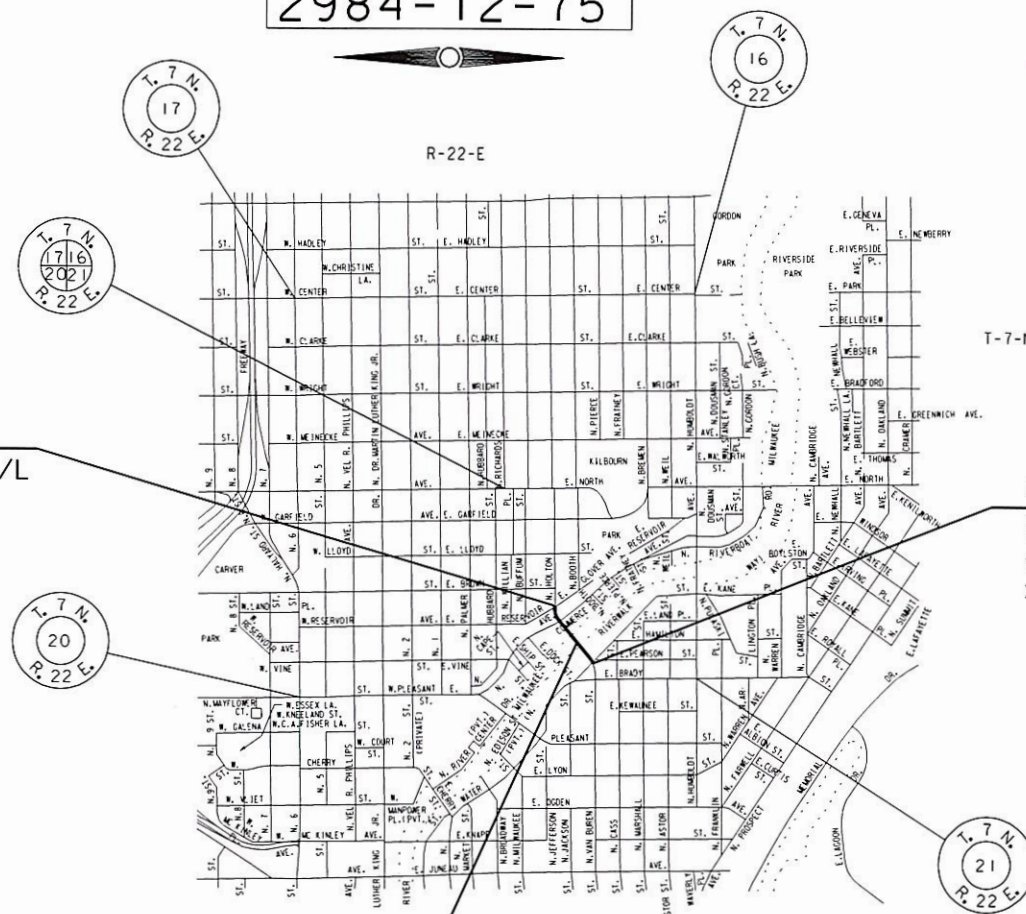
BR OVER MILW RVR, COMMERCE, WATER

P-40-0875

LOCAL STREET
MILWAUKEE COUNTY

STATE PROJECT NUMBER

2984-12-75



END PROJECT
STA. 21+50.0, T/L

BEGIN PROJECT
STA. 11+80.44, T/L
Y. = 304,990.31
X. = 607,600.78

STRUCTURE P-40-0875

LAYOUT

SCALE: 1 INCH = 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.184 MI (URBAN)

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE CITY OF MILWAUKEE DATUM.

TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO NATIONAL GEODESIC VERTICAL DATUM OF 1929, ADD 580.603 TO ELEVATIONS SHOWN ON THIS PLAN.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-12-75	WISC 2025316	1

Accepted For
City of Milwaukee

10/29/24
(Date)
Commissioner of Public Works

Original Plans Prepared By



10/28/2024
(Date)
City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	CITY OF MILWAUKEE
SURVEYOR	CITY OF MILWAUKEE
DESIGNER	GREGORY HAFEMAN
PROJECT MANAGER	
DISTRICT EXAMINER	AMY TAETSCH
DISTRICT SUPERVISOR	
C.O. EXAMINER	

APPROVED FOR DISTRICT OFFICE
10/29/2024
DATE: (Signature)
(SIGNATURE)

GENERAL NOTES

- 1. ALL ELEVATIONS ARE REFERENCED TO CITY OF MILWAUKEE DATUM.
- 2. THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- 3. STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.
- 4. EROSION CONTROL BMP'S ARE SHOWN AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER NECESSARY.
- 5. TRAFFIC CONTROL DEVICES ARE SHOWN AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S TRAFFIC CONTROL PLAN AND BY THE ENGINEER. TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE OR UNTIL THE ENGINEER DETERMINES THAT THE TRAFFIC CONTROL DEVICE IS NO LONGER NECESSARY.

STANDARD ABBREVIATIONS

ASPH.	- ASPHALT
B.M.	- BENCH MARK
CTR.	- CENTER
C/L	- CENTER LINE
COMB.	- COMBINED
CONC.	- CONCRETE
C.W.	- CONCRETE WALK
COR.	- CORNER
C	- CURB
ELEV.	- ELEVATION
ENT.	- ENTRANCE
EXIST.	- EXISTING
F	- FLANGE
G	- GUTTER, OR GAS
HYD.	- HYDRANT
LT	- LEFT
MMSD	- MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
NB	- NORTHBOUND
P/L	- PROPERTY LINE
PGL	- PROFILE GRADE LINE
R OR RAD.	- RADIUS
RET.	- RETAINING
RT	- RIGHT
R/W	- RIGHT OF WAY
SB	- SOUTHBOUND
TEL	- AMERITECH
TES	- TRAFFIC ENGINEERING, AND ELECTRICAL SERVICES
T/L	- TRANSIT LINE
V.T. OR VT	- VARIABLE THICKNESS
WEP	- WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

- General Notes
- Utility Contacts
- Project Overview
- Erosion Control
- Utilities
- Street Lighting
- Traffic Control and Construction Staging
- Alignment
- Alignment Layout Survey Control

UTILITY CONTACTS

AT&T WISCONSIN
JAY BULANEK
435 S. 95TH STREET
MILWAUKEE, WI 53214
PHONE: 414-491-2855
EMAIL: JB5175@att.com

TELEPORT COMMUNICATIONS AMERICA, LLC (AT&T LNS)
JASON STERENBERG
5101 THATCHER ROAD
DOWNERS GROVE, IL 60515
PHONE: 708-240-9085
EMAIL: jsterenberg@networkconnex.com

CHARTER / SPECTRUM
JOHN JORGENSEN
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-277-4112
MOBILE: 414-688-0350
EMAIL: john.jorgensen@charter.com

VERIZON BUSINESS (MCI)
RANDY CICATELLO
15725 W. RYERSON ROAD
NEW BERLIN, WI 53151
PHONE: 262-232-1323
EMAIL: randy.cicatello@verizon.com

CITY OF MILWAUKEE, SEWERS
ZAFAR YOUSUF
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-2467
EMAIL: zyousu@milwaukee.gov

WE ENERGIES - ELECTRIC
BRIAN DRESSLER
500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: 608-219-2820
EMAIL: Brian.dressler@we-energies.com
We Energies Electric Dispatch # 1-800-662-4797

CITY OF MILWAUKEE, WATER WORKS
MWW CONTROL CENTER (24/7 CONTACT)
841 N. BROADWAY, ROOM 409
MILWAUKEE, WI 53202
PHONE: 414-286-3710

WE ENERGIES - GAS
BRIAN DRESSLER
500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: 608-219-2820
EMAIL: Brian.dressler@we-energies.com
We Energies Gas Dispatch # 1-800-261-5325

LUMEN TECHNOLOGIES
BRAHIM GADDOUR
3235 INTERTECH DRIVE, SUITE 600
BROOKFIELD, WI 53045
PHONE: 414-704-1026
EMAIL: brahim.gaddour@lumen.com

OTHER CONTACTS

CITY OF MILWAUKEE, COMMUNICATIONS
DPW COMMUNICATIONS DISPATCH
BRYAN M. PAWLAK
1440 WEST CANAL STREET
MILWAUKEE, WI 53233
PHONE: 414-286-5970

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
MICHAEL LEE
260 W. SEEBOTH STREET
MILWAUKEE, WI 53204
PHONE: 414-617-1429
EMAIL: mlee@mmsd.com

CITY OF MILWAUKEE, STREET LIGHTING
NEAL KARWEIK
1540 WEST CANAL STREET
MILWAUKEE, WI 53233
PHONE: 414-286-5943
MOBILE: 414-708-4245
EMAIL: nkarwe@milwaukee.gov

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607

ROB MERRY
CHIEF SURVEYOR
PHONE: 262-953-4289
CELL: 920-912-1036
EMAIL: rmerry@sewrpc.org

CITY OF MILWAUKEE, UTILITY COORDINATOR
AHMAD BAYOUD
CONSTRUCTION UTILITY COORDINATOR
841 NORTH BROADWAY, RM 710
PHONE : 414-708-0645
EMAIL: abayou@milwaukee.gov

ANDY TRAEGER
CONSTRUCTION COORDINATOR
PHONE: 262-953-4296
CELL: 262-853-8463
EMAIL: atraeger@sewrpc.org

MILWAUKEE COUNTY TRANSIT SYSTEM
1942 N. 17TH STREET
MILWAUKEE, WI 53205

ARMON SENSABAUGH
TRANSPORTATION COORDINATOR (DETOURS)
PHONE: 414-343-1728
EMAIL: asensabaugh@mcts.org

WISCONSIN DEPT. OF NATURAL RESOURCES
RYAN PAPPAS
1027 W. ST. PAUL AVENUE
MILWAUKEE, WI 53233
PHONE: 414-750-7495
EMAIL: ryan.pappas@wisconsin.gov

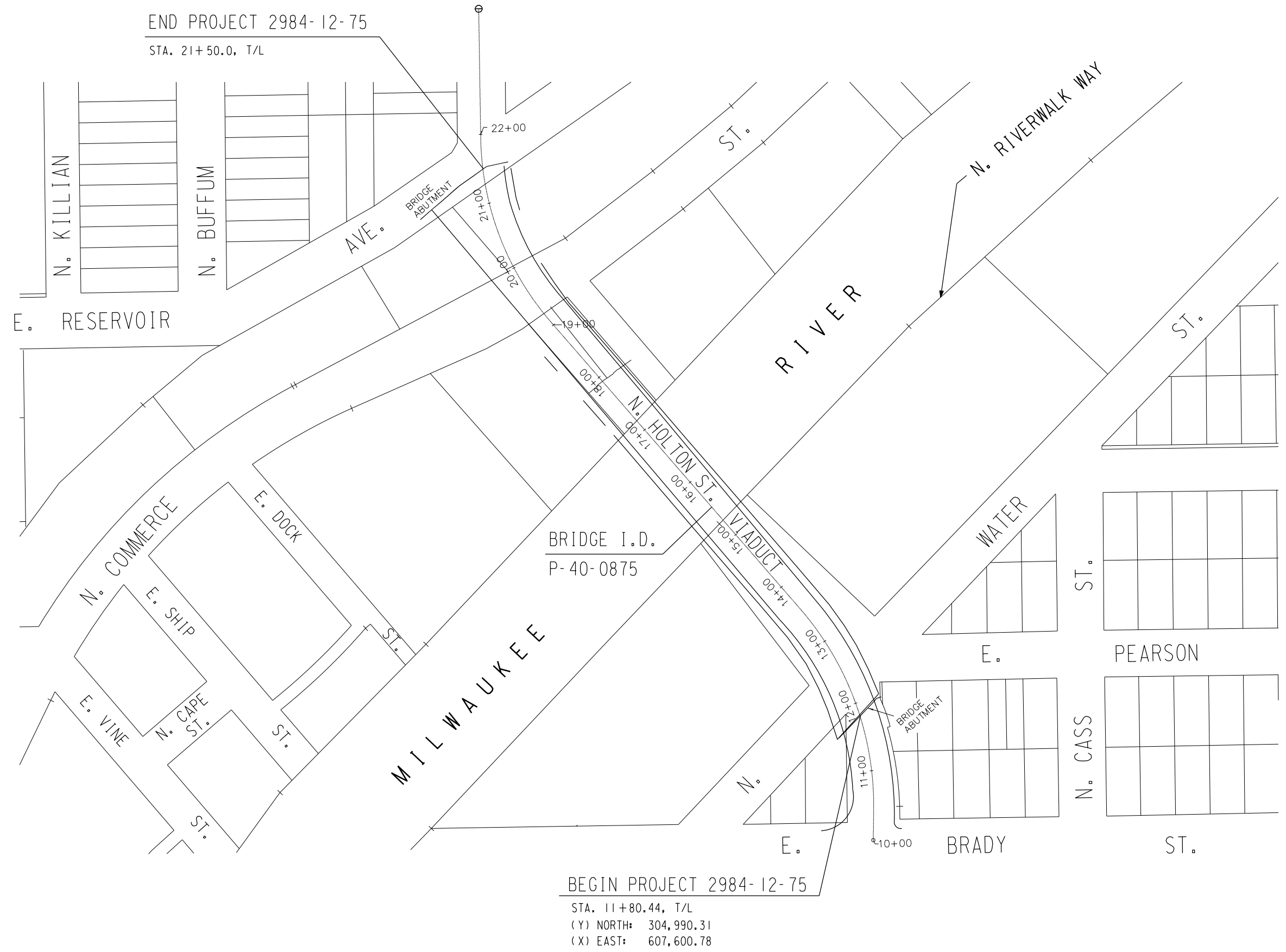
DAVID LOCHER
TRANSPORTATION MANAGER (BUS STOPS)
PHONE: 414-343-1727
EMAIL: dlocher@mcts.org

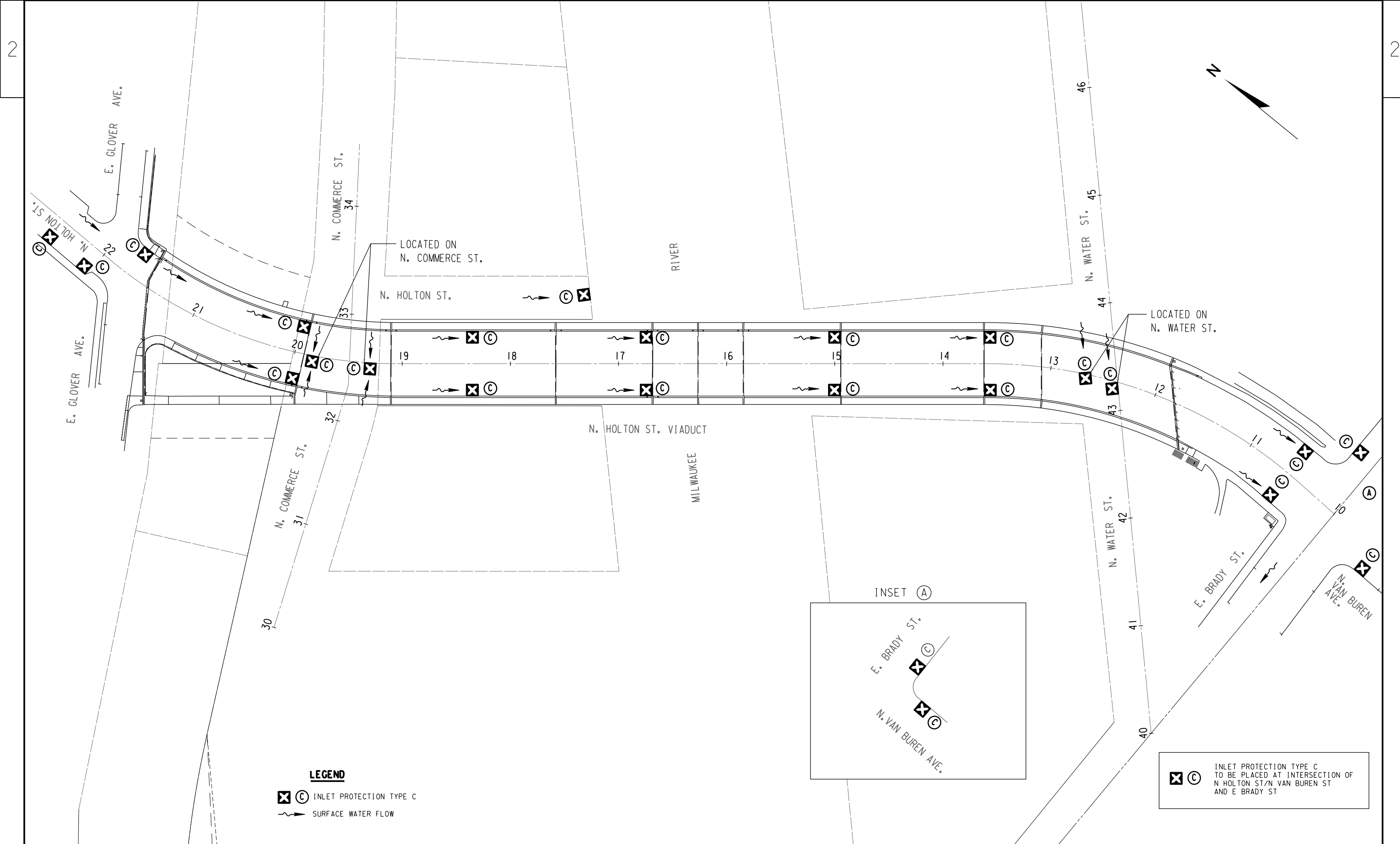
JESUS OCHOA
PLANNING MANAGER
PHONE: 414-344-4550 ext. 3591
EMAIL: jochoa@mcts.org

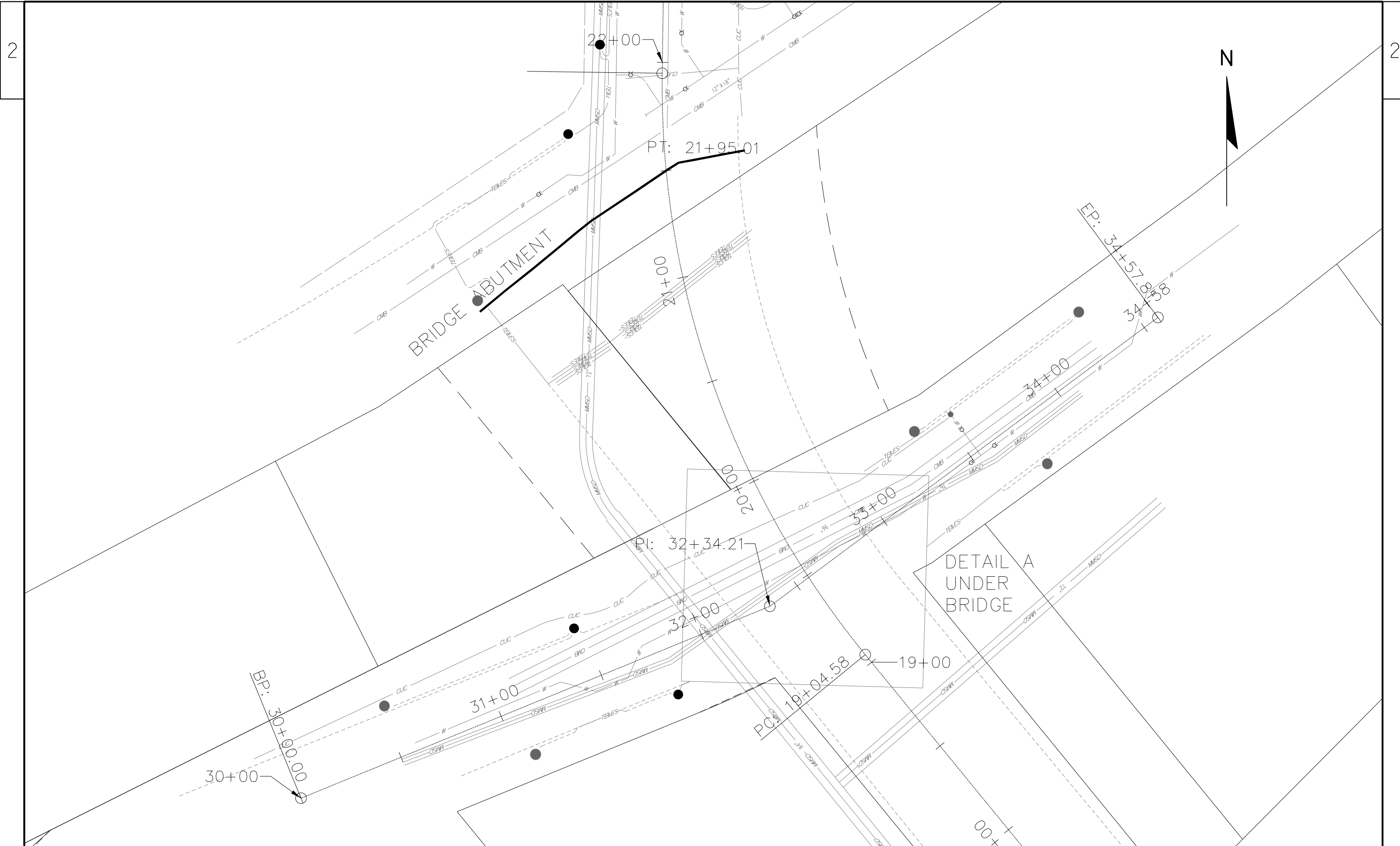
DIGGERSHOTLINE

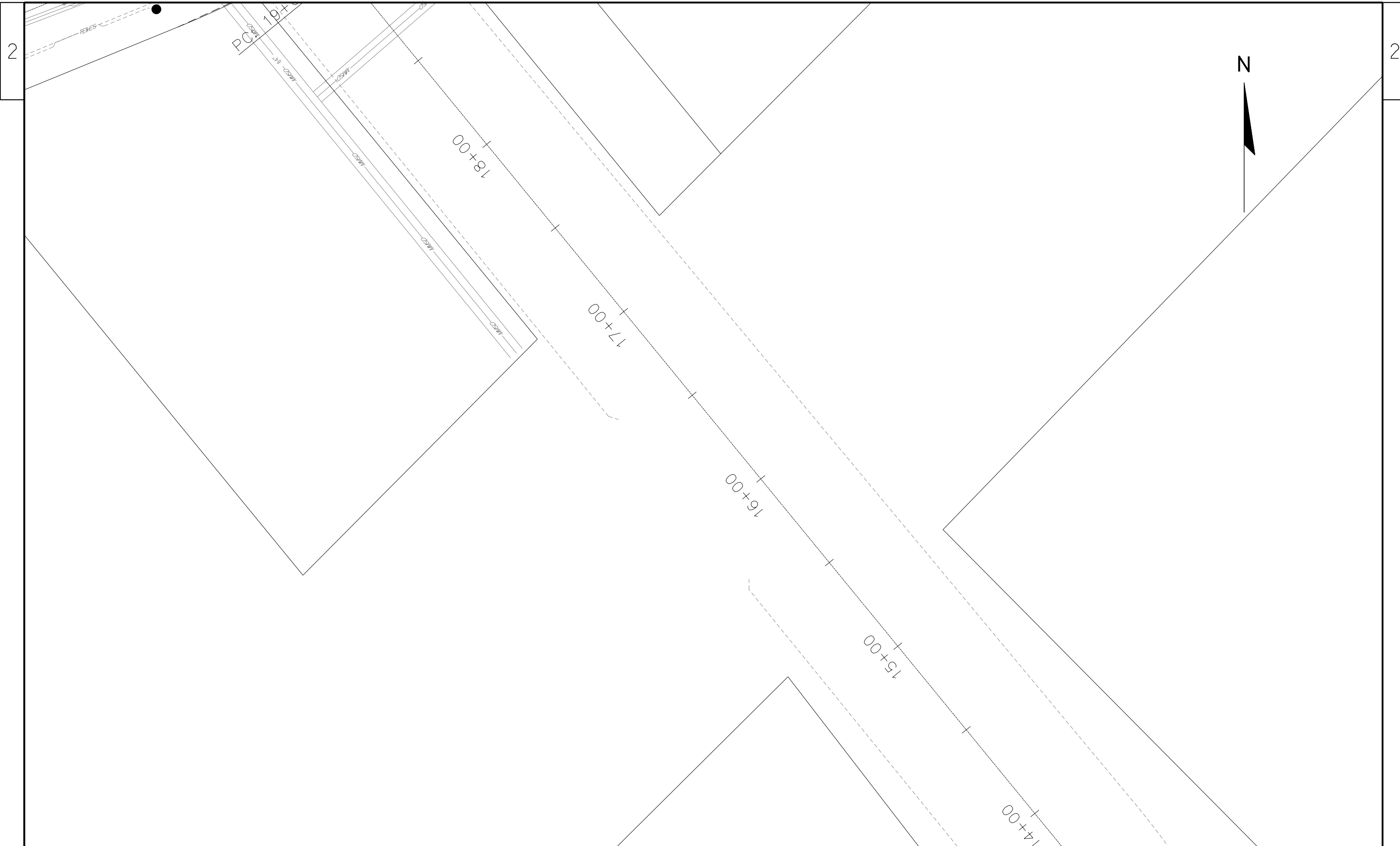
Dial 811 or (800) 242-8511

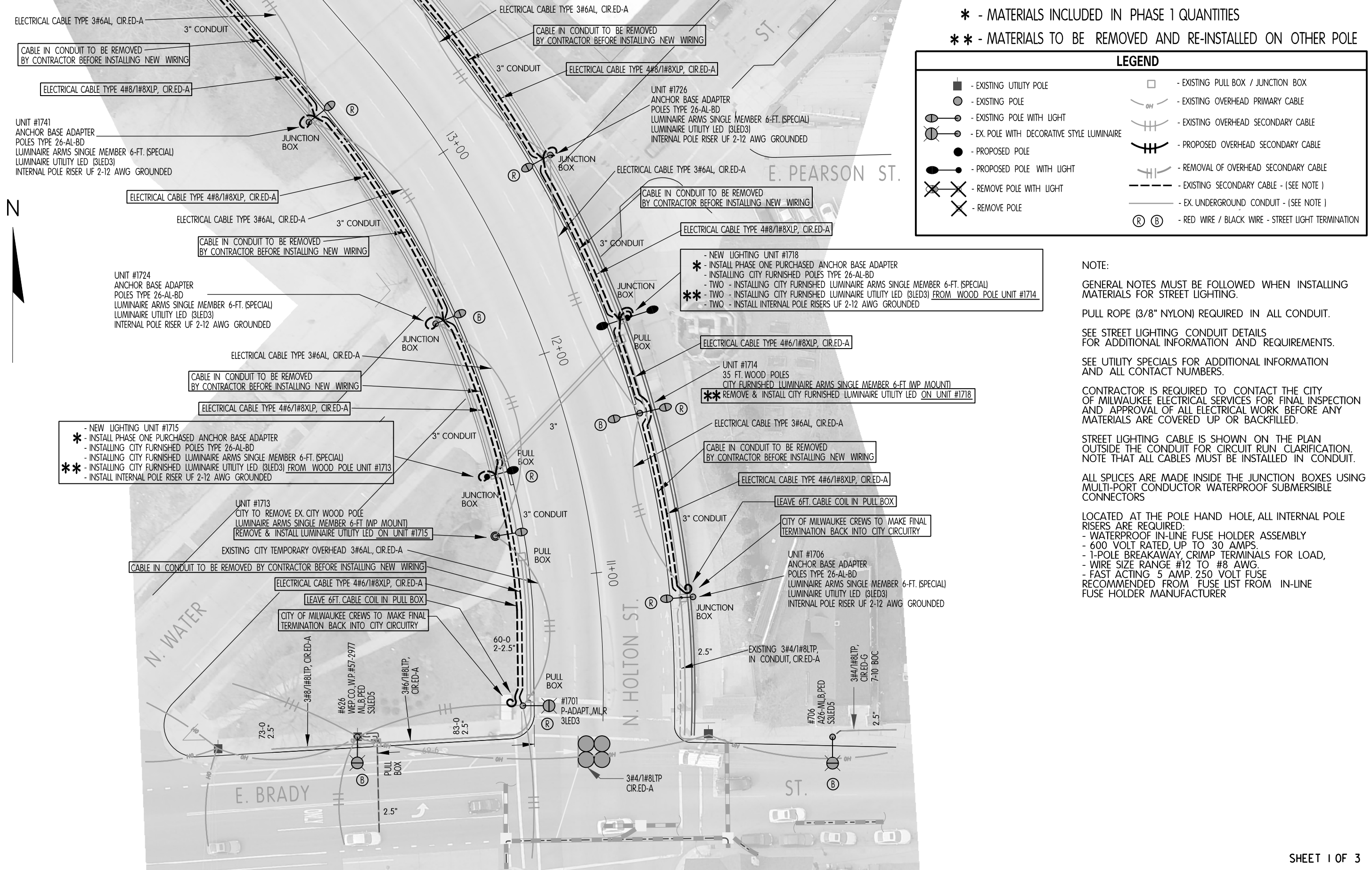
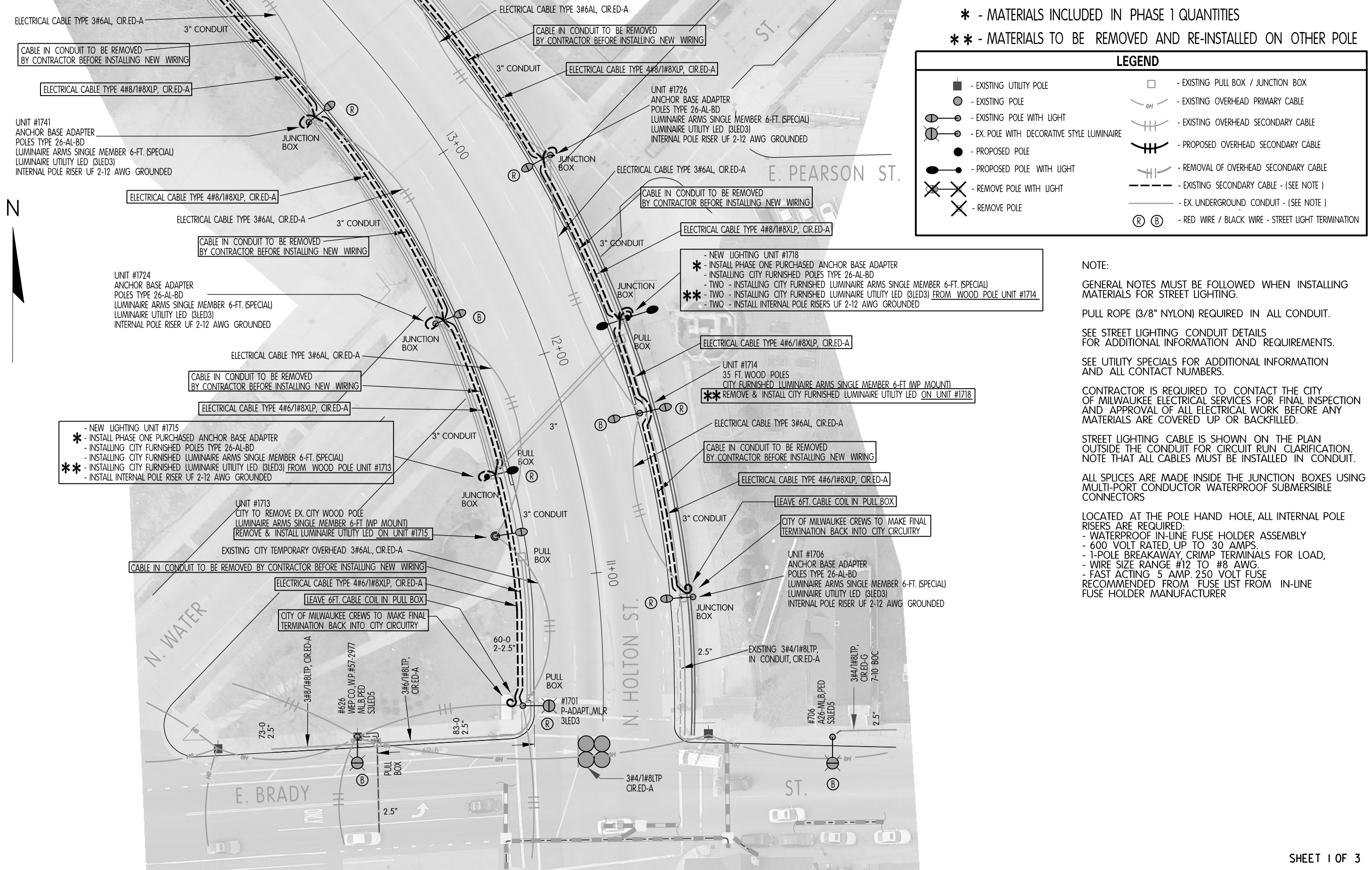
www.DiggersHotline.com

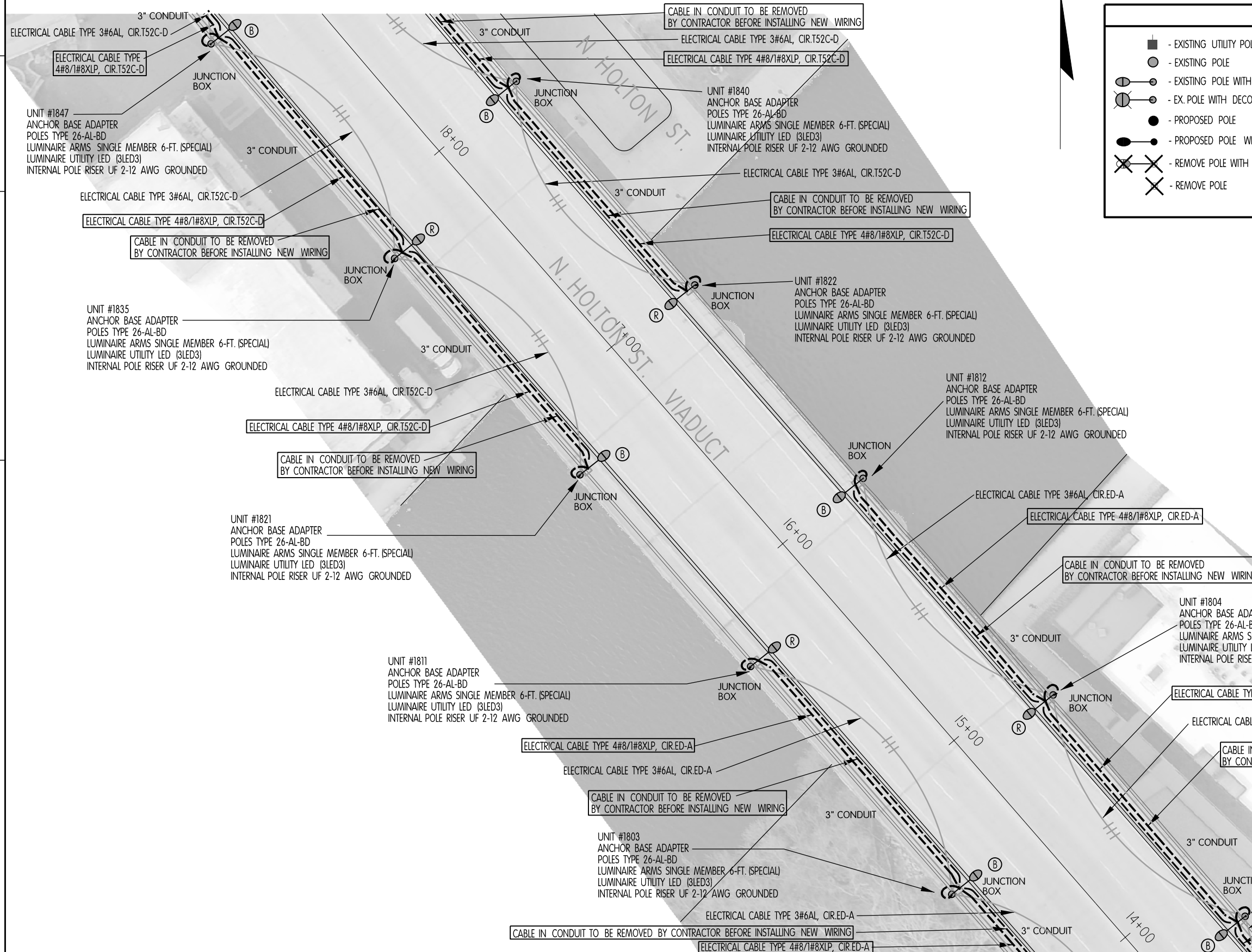












* - MATERIALS INCLUDED IN PHASE 1 QUANTITIES

LEGEND

	- EXISTING UTILITY POLE		- EXISTING PULL BOX / JUNCTION BOX
	- EXISTING POLE		- EXISTING OVERHEAD PRIMARY CABLE
	- EXISTING POLE WITH LIGHT		- EXISTING OVERHEAD SECONDARY CABLE
	- EX. POLE WITH DECORATIVE STYLE LUMINAIRE		- PROPOSED OVERHEAD SECONDARY CABLE
	- PROPOSED POLE		- REMOVAL OF OVERHEAD SECONDARY CABLE
	- PROPOSED POLE WITH LIGHT		- EXISTING SECONDARY CABLE - (SEE NOTE)
	- REMOVE POLE WITH LIGHT		- EX. UNDERGROUND CONDUIT - (SEE NOTE)
	- REMOVE POLE		- RED WIRE / BLACK WIRE - STREET LIGHT TERMINATION

NOTE:

GENERAL NOTES MUST BE FOLLOWED WHEN INSTALLING MATERIALS FOR STREET LIGHTING.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

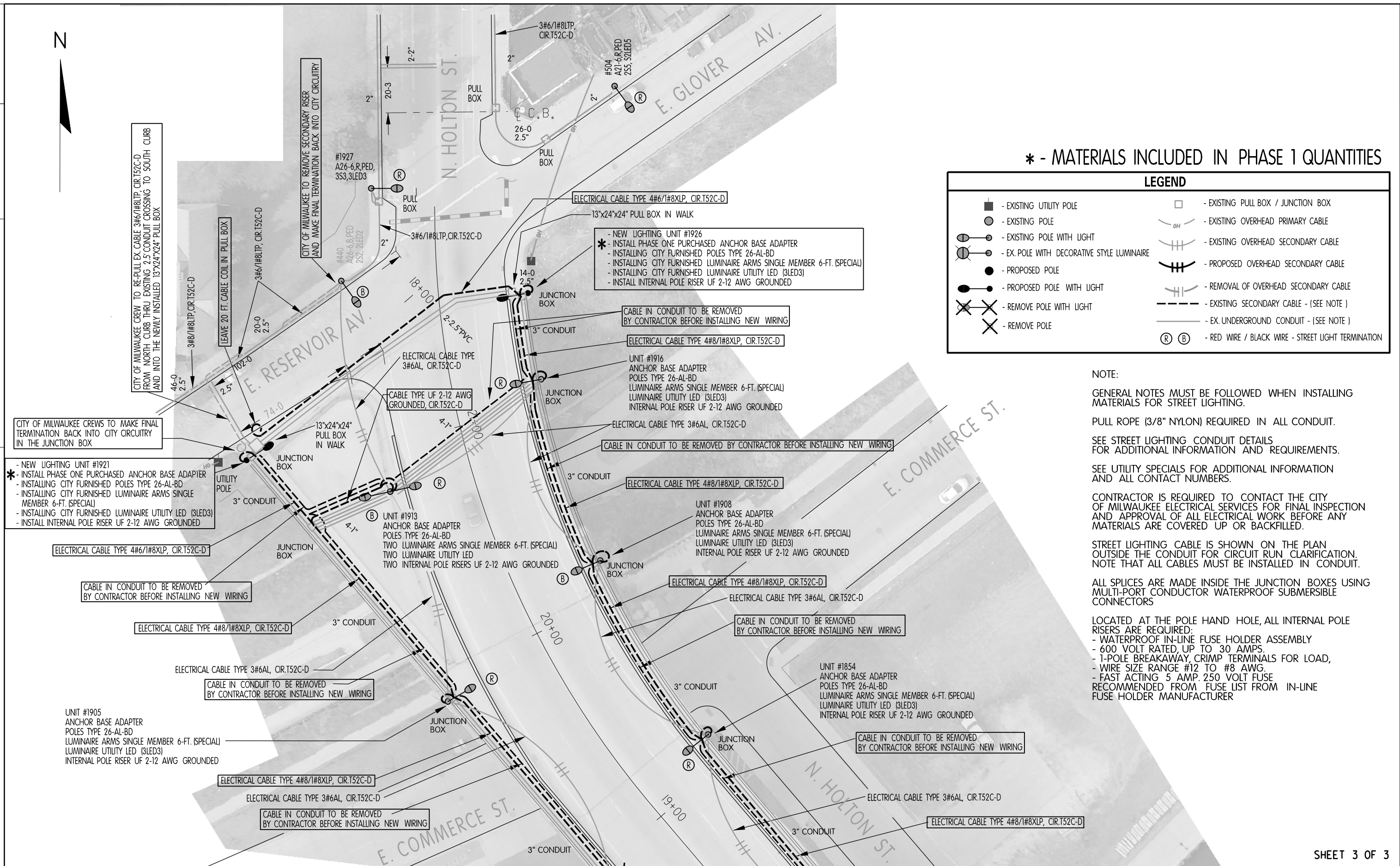
CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

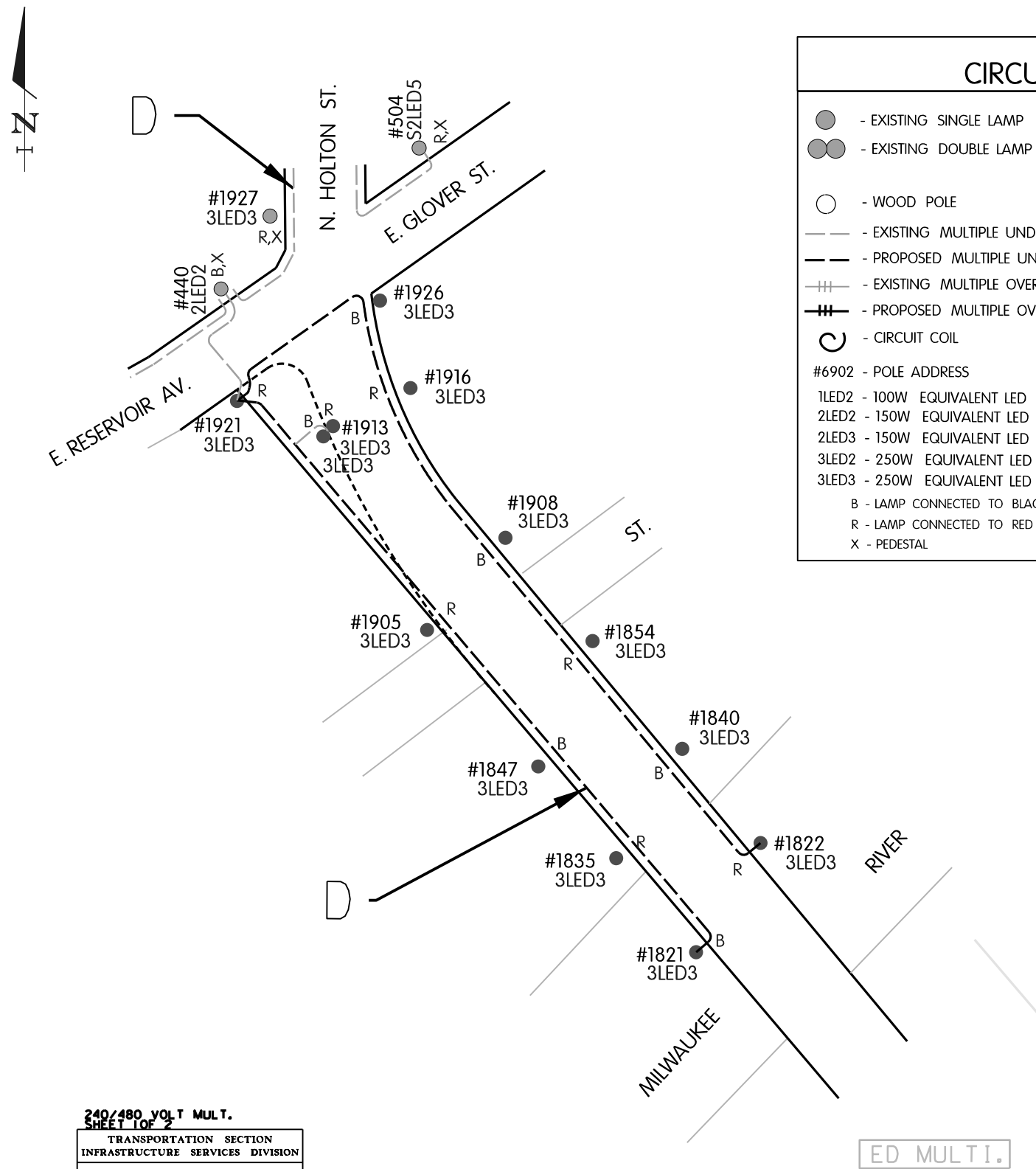
STREET LIGHTING CABLE IS SHOWN ON THE PLAN OUTSIDE THE CONDUIT FOR CIRCUIT RUN CLARIFICATION. NOTE THAT ALL CABLES MUST BE INSTALLED IN CONDUIT.

ALL SPLICES ARE MADE INSIDE THE JUNCTION BOXES USING MULTI-PORT CONDUCTOR WATERPROOF SUBMERSIBLE CONNECTORS

LOCATED AT THE POLE HAND HOLE, ALL INTERNAL POLE RISERS ARE REQUIRED:

- WATERPROOF IN-LINE FUSE HOLDER ASSEMBLY
 - 600 VOLT RATED, UP TO 30 AMPS.
 - 1-POLE BREAKAWAY, CRIMP 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





CIRCUIT LEGEND

- - EXISTING SINGLE LAMP
- - EXISTING DOUBLE LAMP
- - PROPOSED SINGLE LAMP
- - PROPOSED DOUBLE LAMP

- - WOOD POLE
- - EXISTING MULTIPLE UNDERGROUND CIRCUIT
- - PROPOSED MULTIPLE UNDERGROUND CIRCUIT
- - EXISTING MULTIPLE OVERHEAD CIRCUIT
- - PROPOSED MULTIPLE OVERHEAD CIRCUIT
- - CIRCUIT COIL

#6902 - POLE ADDRESS

- 1LED2 - 100W EQUIVALENT LED LUMINAIRE WITH TYPE 2 LIGHT DISTRIBUTION
- 2LED2 - 150W EQUIVALENT LED LUMINAIRE WITH TYPE 2 LIGHT DISTRIBUTION
- 2LED3 - 150W EQUIVALENT LED LUMINAIRE WITH TYPE 3 LIGHT DISTRIBUTION
- 3LED2 - 250W EQUIVALENT LED LUMINAIRE WITH TYPE 2 LIGHT DISTRIBUTION
- 3LED3 - 250W EQUIVALENT LED LUMINAIRE WITH TYPE 3 LIGHT DISTRIBUTION

B - LAMP CONNECTED TO BLACK WIRE

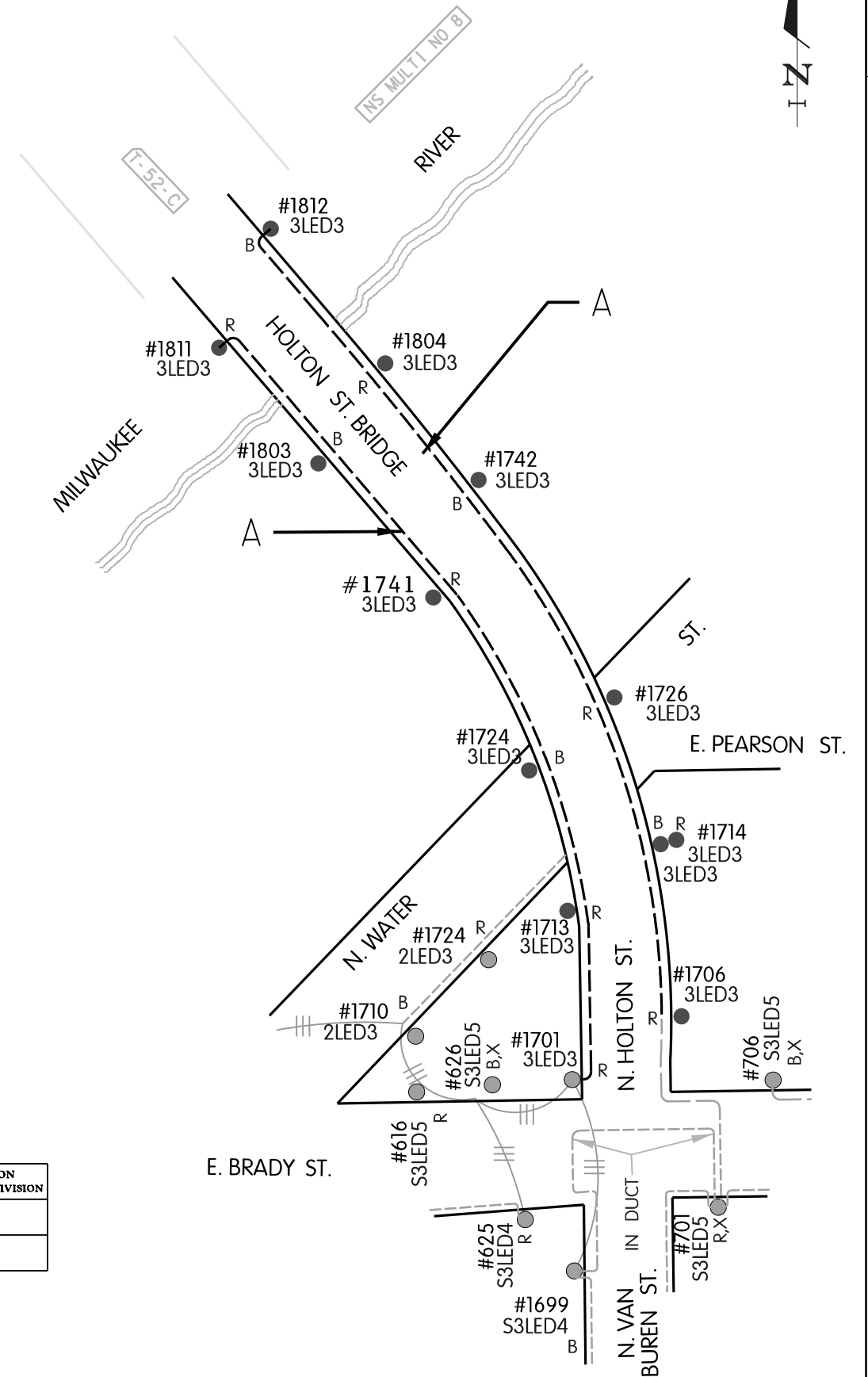
R - LAMP CONNECTED TO RED WIRE

X - PEDESTAL

240/480 VOLT MULT.
SHEET 1 OF 2TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION

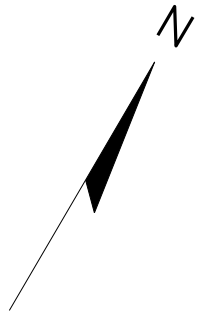
T-52-C A, B, C, D

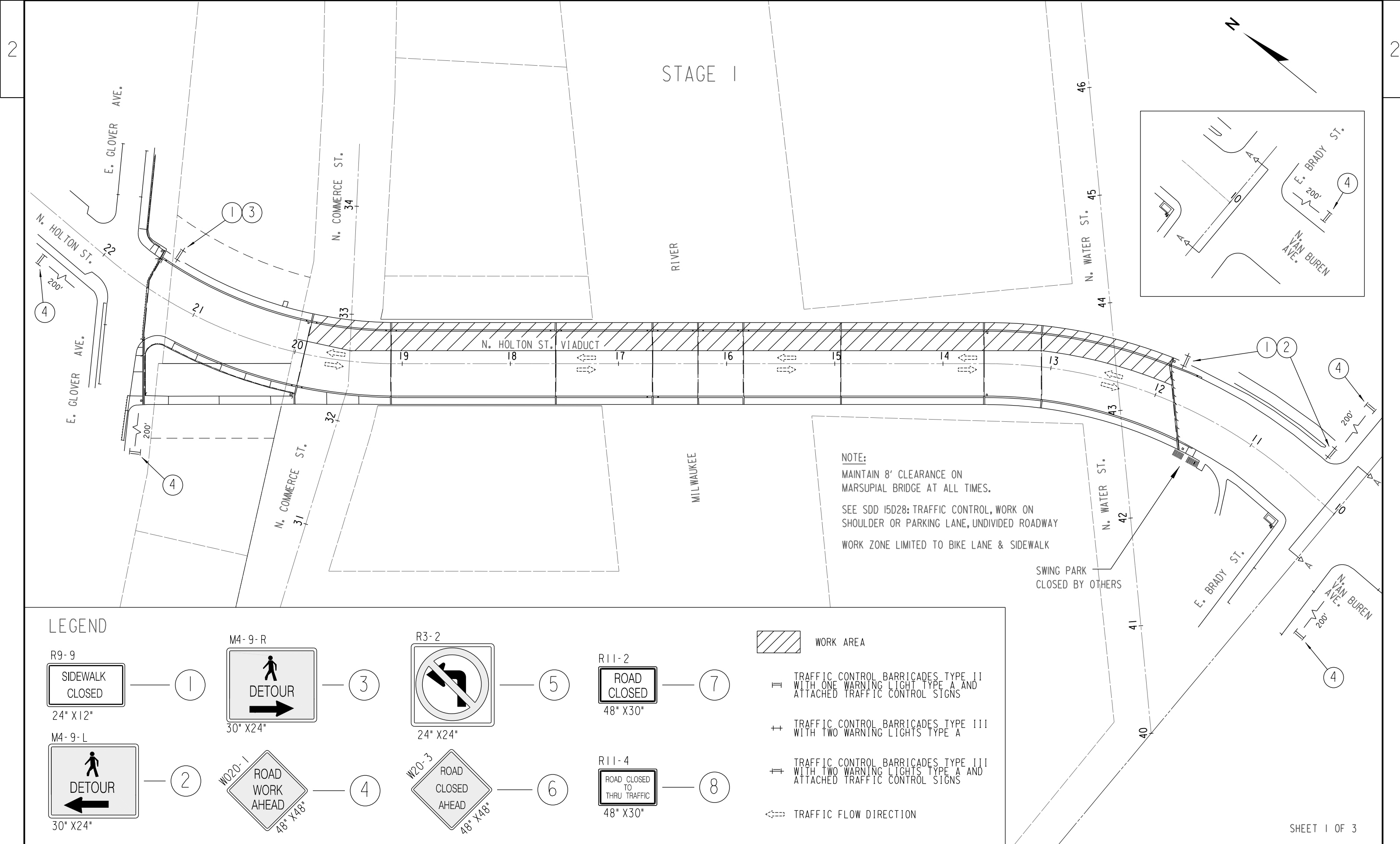
CIRCUITS

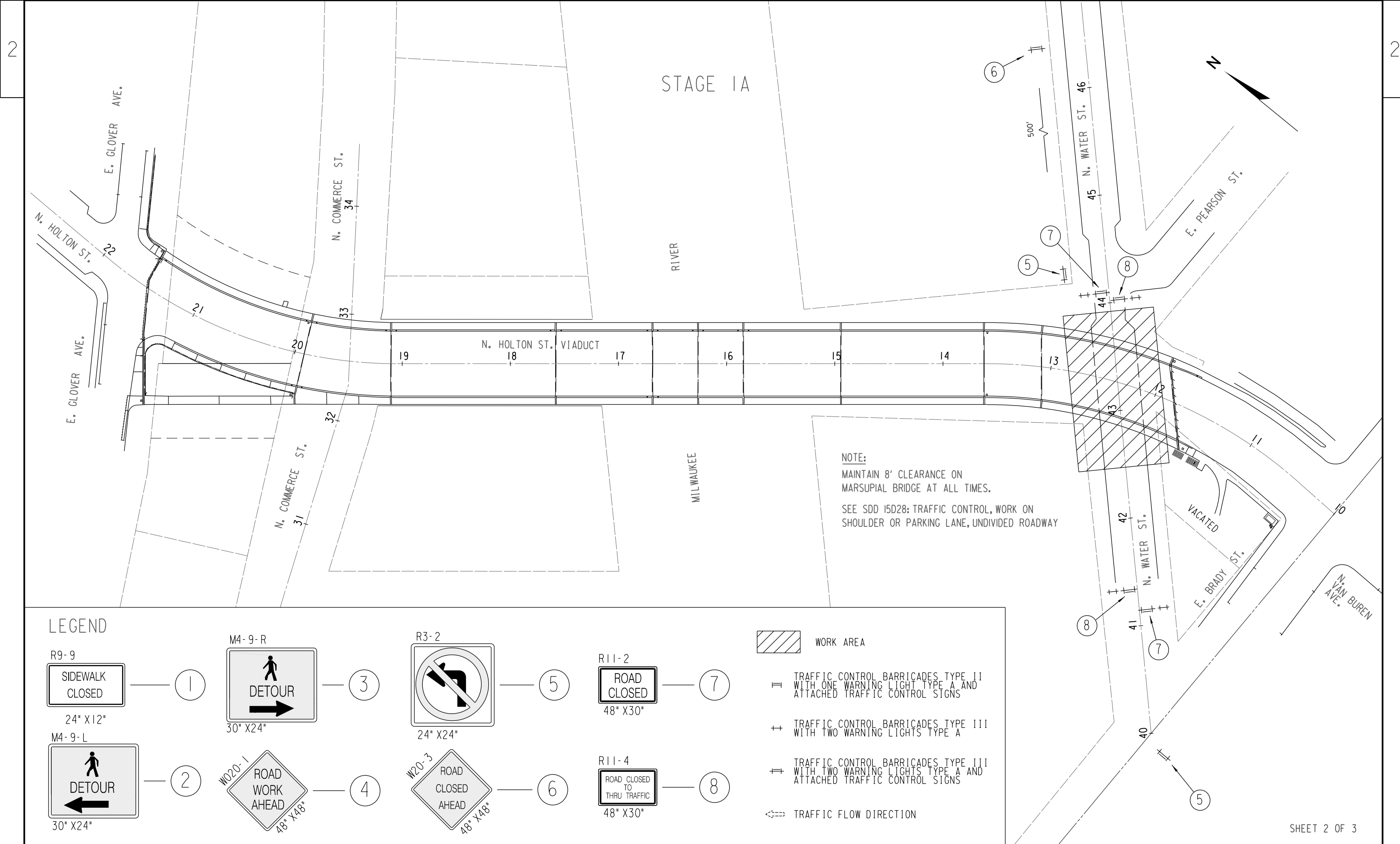
240/480 VOLT MULT.
SHEET 3 OF 4TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION

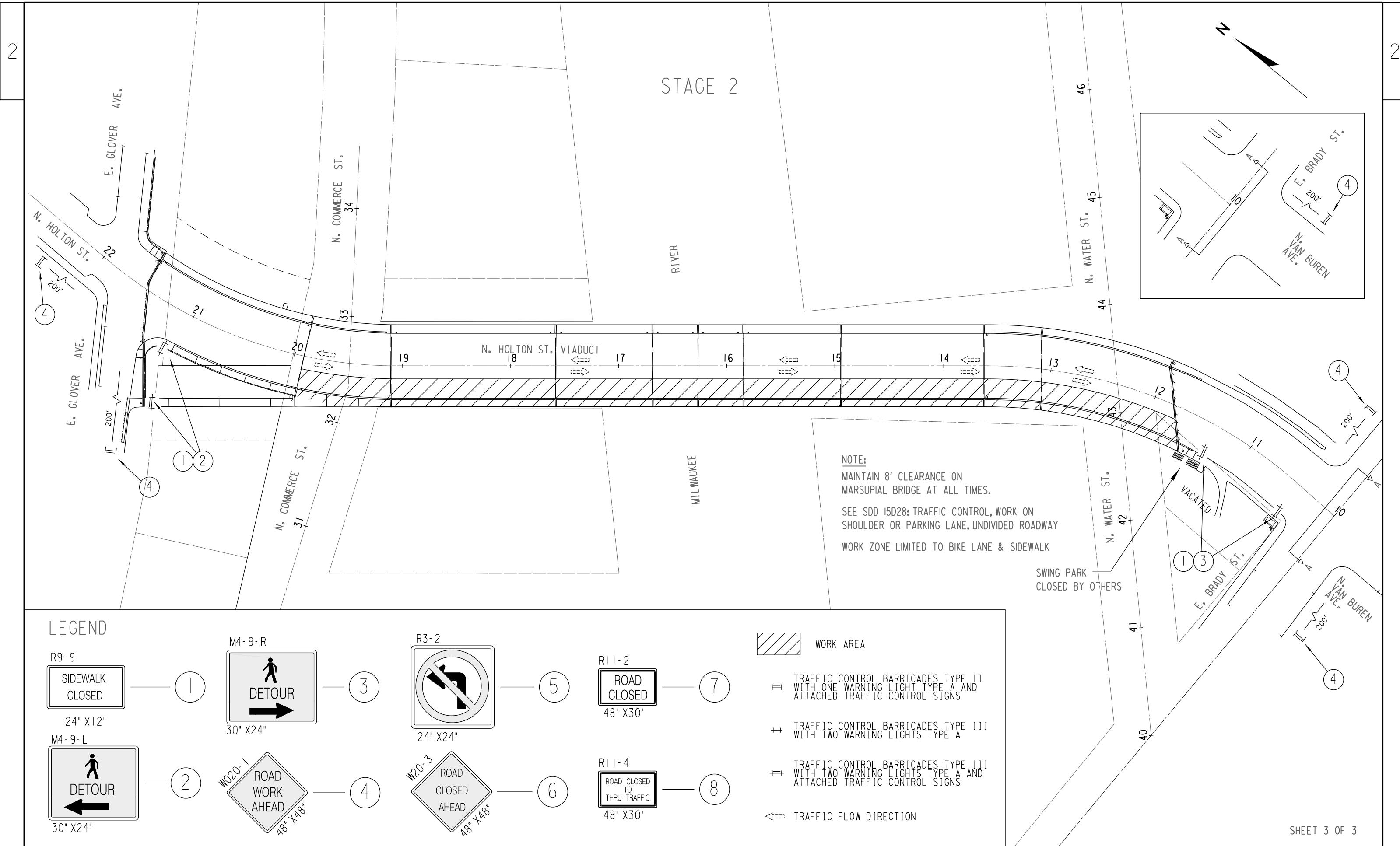
ED A, G

CIRCUITS









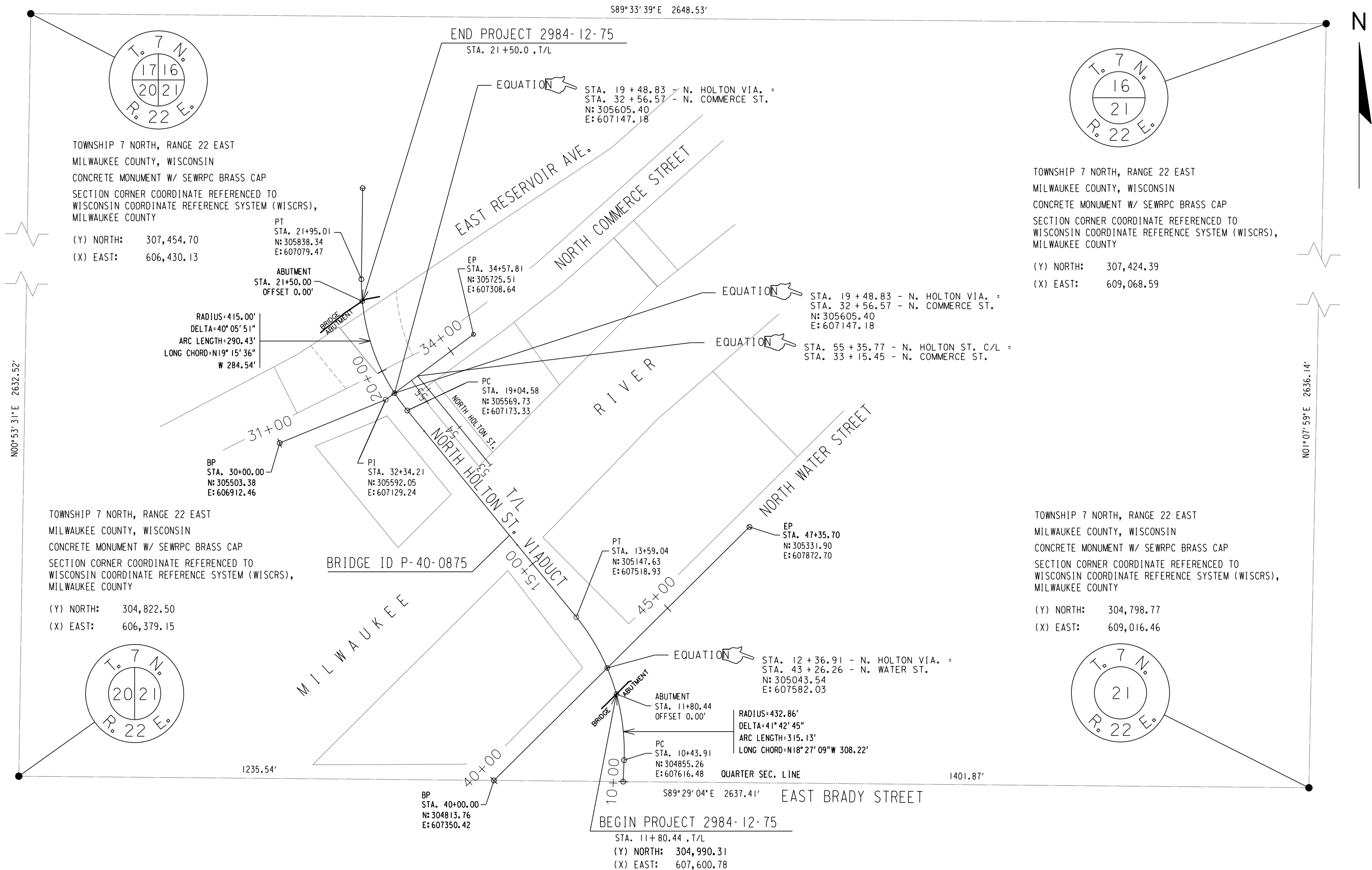
NOTE:
MAINTAIN 8' CLEARANCE ON
MARSUPIAL BRIDGE AT ALL TIMES.

SEE SDD 15D28: TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

WORK ZONE LIMITED TO BIKE LANE & SIDEWALK

LEGEND

<div>R9-9 SIDEWALK CLOSED 24" X12"</div>	<div>M4-9-R DETOUR 30" X24"</div>	<div>R3-2 NO RIGHT TURN 24" X24"</div>	<div>R11-2 ROAD CLOSED 48" X30"</div>	<div>WORK AREA</div>	<div>TRAFFIC CONTROL BARRICADES TYPE I I WITH ONE WARNING LIGHT TYPE A AND ATTACHED TRAFFIC CONTROL SIGNS</div>
<div>M4-9-L DETOUR 30" X24"</div>	<div>W020-1 ROAD WORK AHEAD 48" X48"</div>	<div>W20-3 ROAD CLOSED AHEAD 48" X48"</div>	<div>R11-4 ROAD CLOSED TO THRU TRAFFIC 48" X30"</div>	<div>TRAFFIC CONTROL BARRICADES TYPE I I I WITH TWO WARNING LIGHTS TYPE A</div>	<div>TRAFFIC CONTROL BARRICADES TYPE I I I WITH TWO WARNING LIGHTS TYPE A AND ATTACHED TRAFFIC CONTROL SIGNS</div>
				<div>TRAFFIC FLOW DIRECTION</div>	



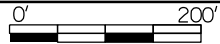
STATE PROJECT NUMBER 2984-12-75

HWY: N HOLTON ST

COUNTY: MILWAUKEE

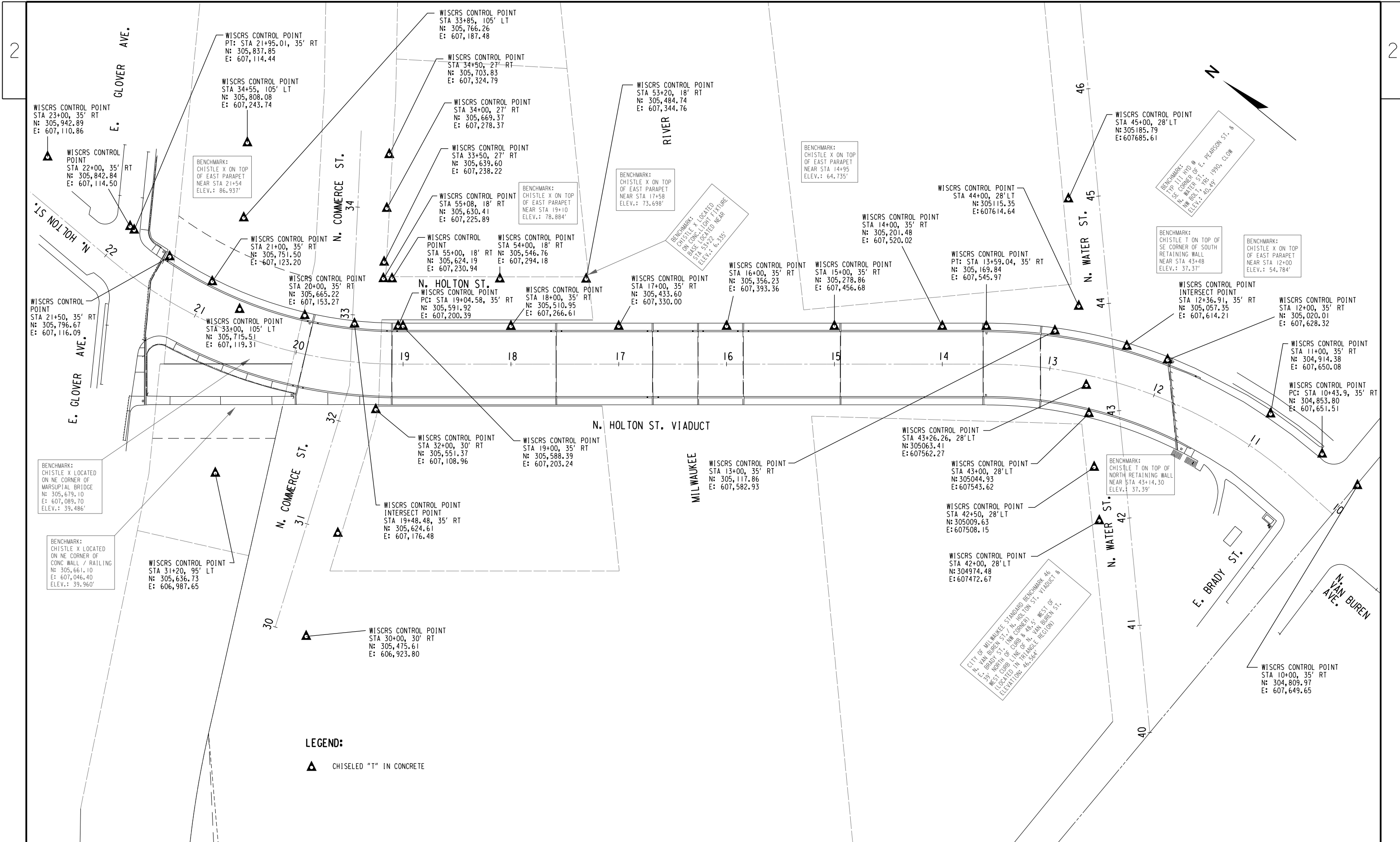
ALIGNMENT PLAN

SCALE FEET



SHEET NO:

E



Estimate Of Quantities

2984-12-75

Line	Item	Item Description	Unit	Total	Qty
0002	203.0270	Removing Structure Over Waterway Debris Capture (structure) 001. P-40-875	EACH	1.000	1.000
0004	204.0155	Removing Concrete Sidewalk	SY	9.000	9.000
0006	506.0105	Structural Steel Carbon	LB	8,000.000	8,000.000
0008	517.0601	Painting Epoxy System (structure) 001. P-40-875	EACH	1.000	1.000
0010	517.1801.S	Structure Repainting Recycled Abrasive (structure) 001. P-40-875	EACH	1.000	1.000
0012	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 001. P-40-875	EACH	1.000	1.000
0014	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0016	602.0410	Concrete Sidewalk 5-Inch	SF	81.000	81.000
0018	619.1000	Mobilization	EACH	1.000	1.000
0020	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0022	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000
0024	628.7015	Inlet Protection Type C	EACH	24.000	24.000
0026	642.5201	Field Office Type C	EACH	1.000	1.000
0028	643.0410	Traffic Control Barricades Type II	DAY	500.000	500.000
0030	643.0420	Traffic Control Barricades Type III	DAY	515.000	515.000
0032	643.0705	Traffic Control Warning Lights Type A	DAY	1,530.000	1,530.000
0034	643.0900	Traffic Control Signs	DAY	1,305.000	1,305.000
0036	643.5000	Traffic Control	EACH	1.000	1.000
0038	655.0305	Cable Type UF 2-12 AWG Grounded	LF	50.000	50.000
0040	674.0300	Remove Cable	LF	2,400.000	2,400.000
0042	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 001. P-40-875	EACH	1.000	1.000
0044	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,700.000	2,700.000
0046	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	9,000.000	9,000.000
0048	SPV.0060	Special 310. Removing Poles	EACH	1.000	1.000
0050	SPV.0060	Special 320. Installing City Furnished Poles Type 26-AL-BD	EACH	4.000	4.000
0052	SPV.0060	Special 330. Install Phase One Purchased Anchor Base Adapter	EACH	4.000	4.000
0054	SPV.0060	Special 342. Submersible Multitap 3 Port Pre-Insulated Connector	EACH	60.000	60.000
0056	SPV.0060	Special 343. Submersible Multitap 4 Port Pre-Insulated Connector	EACH	6.000	6.000
0058	SPV.0060	Special 345. Installing City Furnished Luminaire Arms Single Member 6-Ft. (Special)	EACH	5.000	5.000
0060	SPV.0060	Special 371. Installing City Furnished Luminaire Utility LED	EACH	2.000	2.000
0062	SPV.0060	Special 516. Temporary Shoring for Pier 7 and 8 repairs	EACH	1.000	1.000
0064	SPV.0060	Special 597. Protecting Utilities	EACH	1.000	1.000
0066	SPV.0090	Special 314. Remove Aerial Cable	LF	2,280.000	2,280.000
0068	SPV.0090	Special 321. Electrical Cable Type 4#8/1#8 XLPE	LF	1,800.000	1,800.000
0070	SPV.0090	Special 322. Electrical Cable Type 4#6/1#8 XLPE	LF	600.000	600.000
0072	SPV.0090	Special 571. Concrete Haunches Removal	LF	5,650.000	5,650.000

CATEGORY 0010	
	619.1000
LOCATION	MOBILIZATION EACH
PROJECT 2984-12-75	1
TOTAL	1

CATEGORY 0010	
	628.7015
	INLET
	PROTECTION
	TYPE C
LOCATION	EACH
<hr/>	
N. HOLTON STREET	24
<hr/>	
TOTALS	24

CATEGORY 0010		
	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
LOCATION		
PROJECT 2984-12-75	1	5
TOTALS	1	5

CATEGORY 0010	642.5201
	FIELD
	OFFICE
	TYPE C
LOCATION	EACH
PROJECT 2984-12-75	1
TOTAL	1

TRAFFIC CONTROL ITEMS

		643.0410		643.0420		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0900	
		TRAFFIC CONTROL BARRICADES TYPE II		CONTROL BARRICADES TYPE III				TRAFFIC CONTROL SIGNS	
LOCATION	DAYS	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY
STAGE 1	50	5	250	3	150	11	550	11	550
STAGE 1A	15	-	-	11	165	22	330	7	105
STAGE 2	50	5	250	4	200	13	650	13	650
TOTALS		500		515		1,530		1,305	

- (1) All Type II Barricades have one Type A Flashing Light.
- (2) All Type III Barricades have two Type A Flashing Lights.

TRAFFIC CONTROL

	643.5000
	TRAFFIC
	CONTROL
LOCATION	EACH
PROJECT 2984-12-75	1
TOTAL	1

BIRD DETERRENT

	999.2000.S
	INSTALLING AND
	MAINTAINING BIRD
	DETERRENT SYSTEM
	P-40-0875
LOCATION	EACH
N. HOLTON STREET	1
TOTAL	1

REMOVAL OF TEMPORARY STREET LIGHTING

ALL ITEMS CATEGORY 0010

Std.Bid Item No.	Description	Unit	Quantity
204.0155	REMOVING CONCRETE SIDEWALK	SY	9
602.0410	CONCRETE SIDEWALK 5-INCH	SF	81
SPV.0060.310	REMOVING POLES	EACH	1
SPV.0090.314	REMOVE AERIAL CABLE	LF	2,280

**(THESE QUANTITIES DO NOT INCLUDE THE MATERIALS IN/ON THE BRIDGE)
SUCH AS: CONDUIT, AND LIGHT POLE ANCHORAGE**

PERMANENT STREET LIGHTING

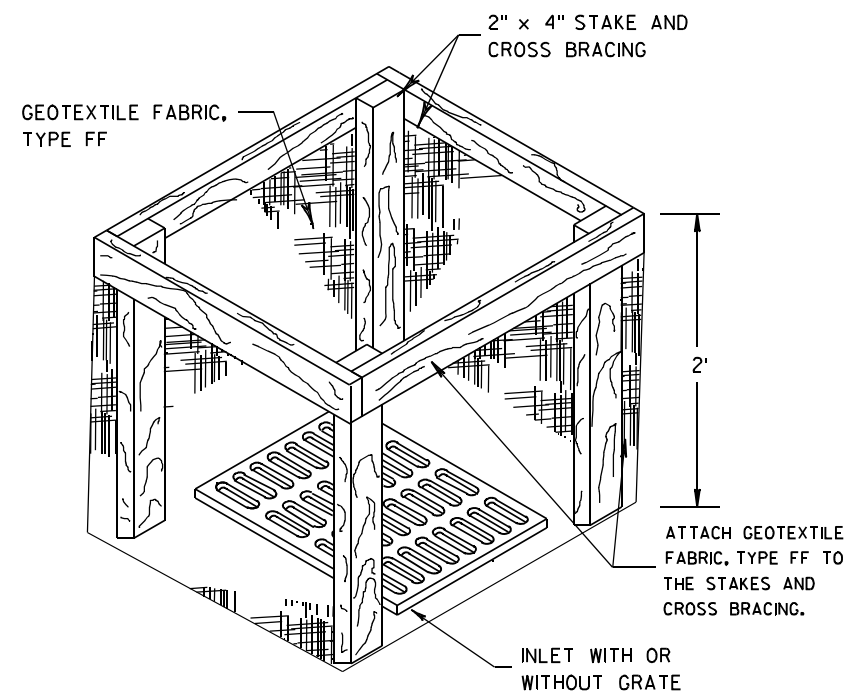
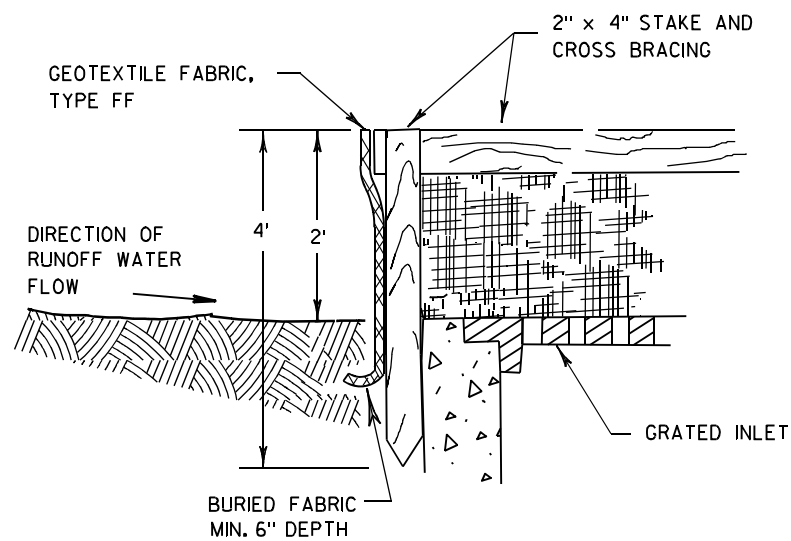
ALL ITEMS CATEGORY 0010

Std.Bid Item No.	Description	Unit	Quantity
655.0305	CABLE TYPE UF 2-12 AWG GROUNDED	LF	50
674.0300	REMOVE CABLE	LF	2,400
SPV.0060.320	INSTALLING CITY FURNISHED POLES TYPE 26-AL-BD	EACH	4
SPV.0060.330	INSTALL PHASE ONE PURCHASED ANCHOR BASE ADAPTER	EACH	4
SPV.0060.342	SUBMERSIBLE MULTITAP 3 PORT PRE-INSULATED CONNECTOR	EACH	60
SPV.0060.343	SUBMERSIBLE MULTITAP 4 PORT PRE-INSULATED CONNECTOR	EACH	6
SPV.0060.345	INSTALLING CITY FURNISHED LUMINAIRE ARMS SINGLE MEMBER 6-Ft (SPECIAL)	EACH	5
SPV.0060.371	INSTALLING CITY FURNISHED LUMINAIRE UTILITY LED	EACH	2
	Total Number of Luminaire Utility LED (3LED3) = 2		
SPV.0090.321	ELECTRICAL CABLE TYPE 4#8/1#8 XLP	LF	1,800
SPV.0090.322	ELECTRICAL CABLE TYPE 4#6/1#8 XLP	LF	600

**(THESE QUANTITIES DO NOT INCLUDE THE MATERIALS IN/ON THE BRIDGE)
SUCH AS: CONDUIT, AND LIGHT POLE ANCHORAGE**

Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-13A	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE



INLET PROTECTION, TYPE A

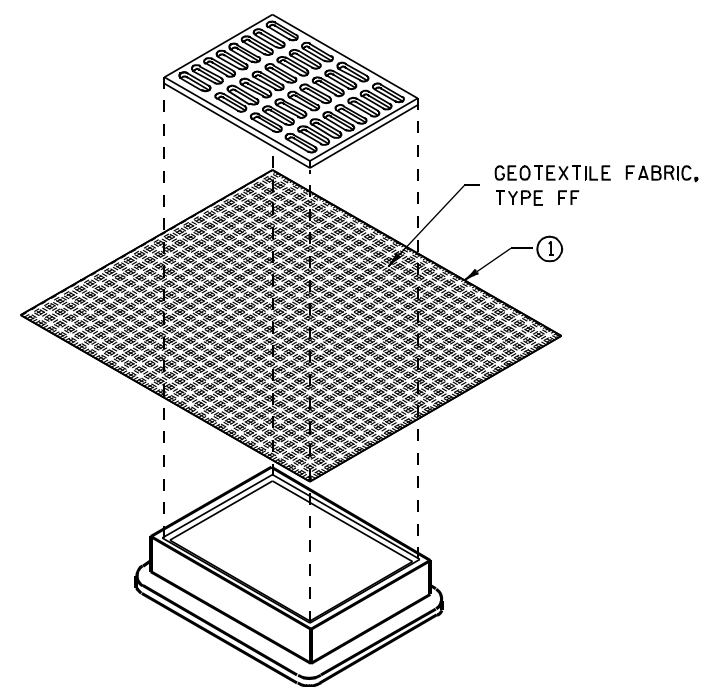
GENERAL NOTES

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 SUBSTITUTED.

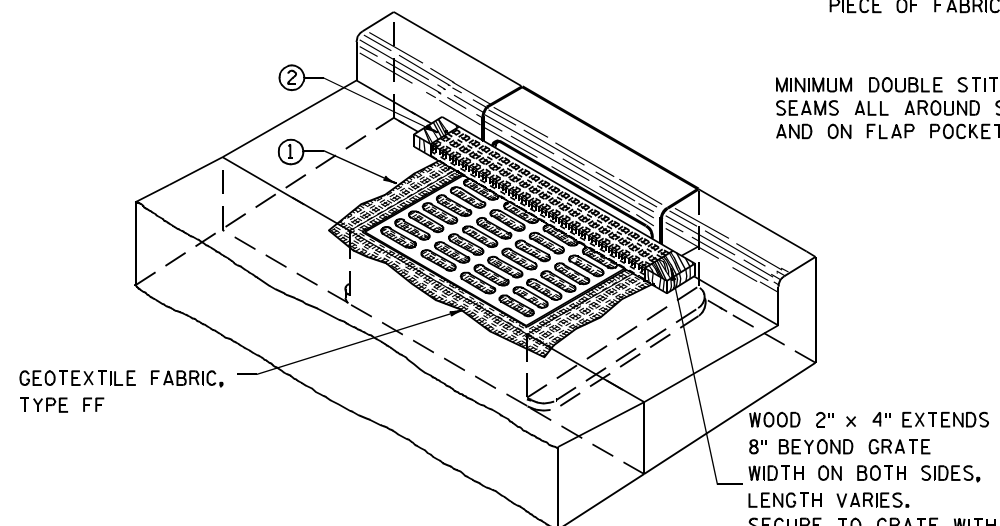
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

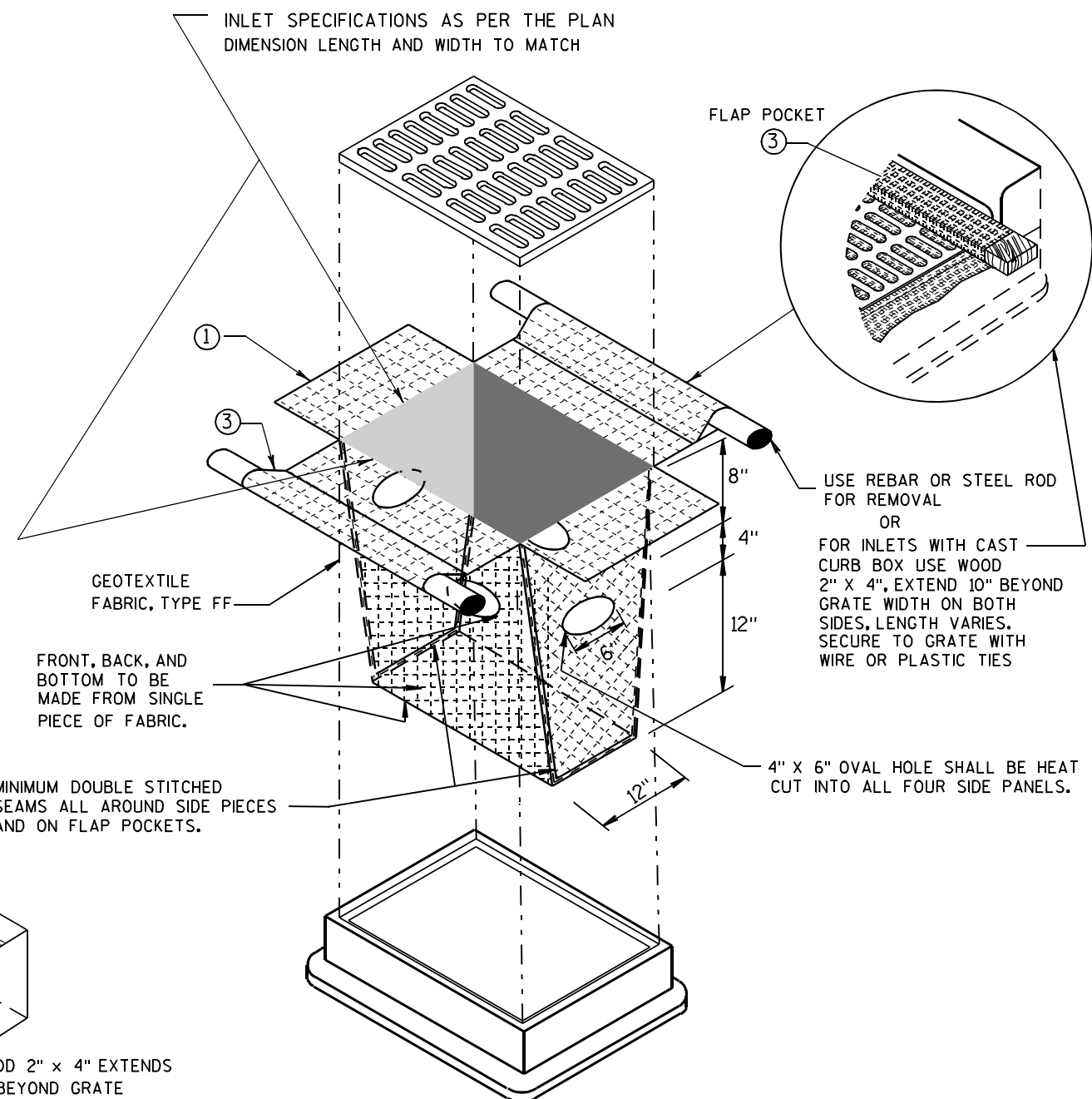
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

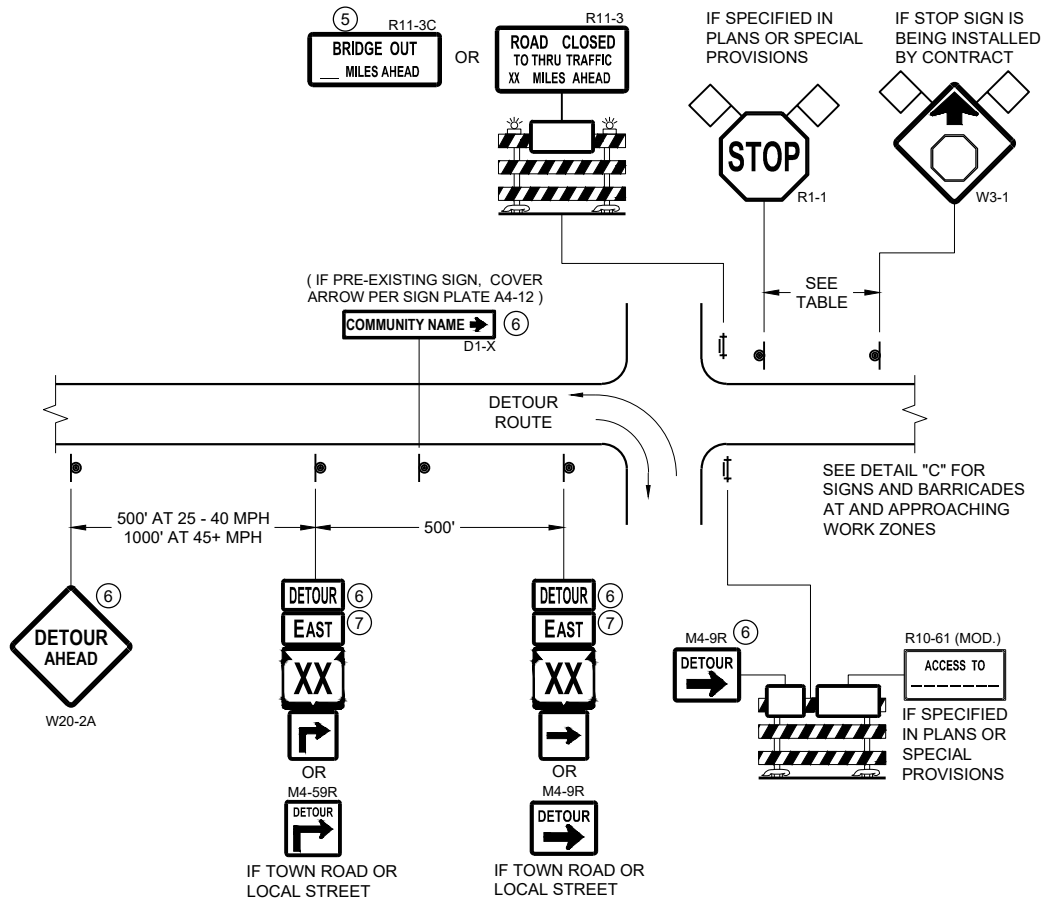
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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



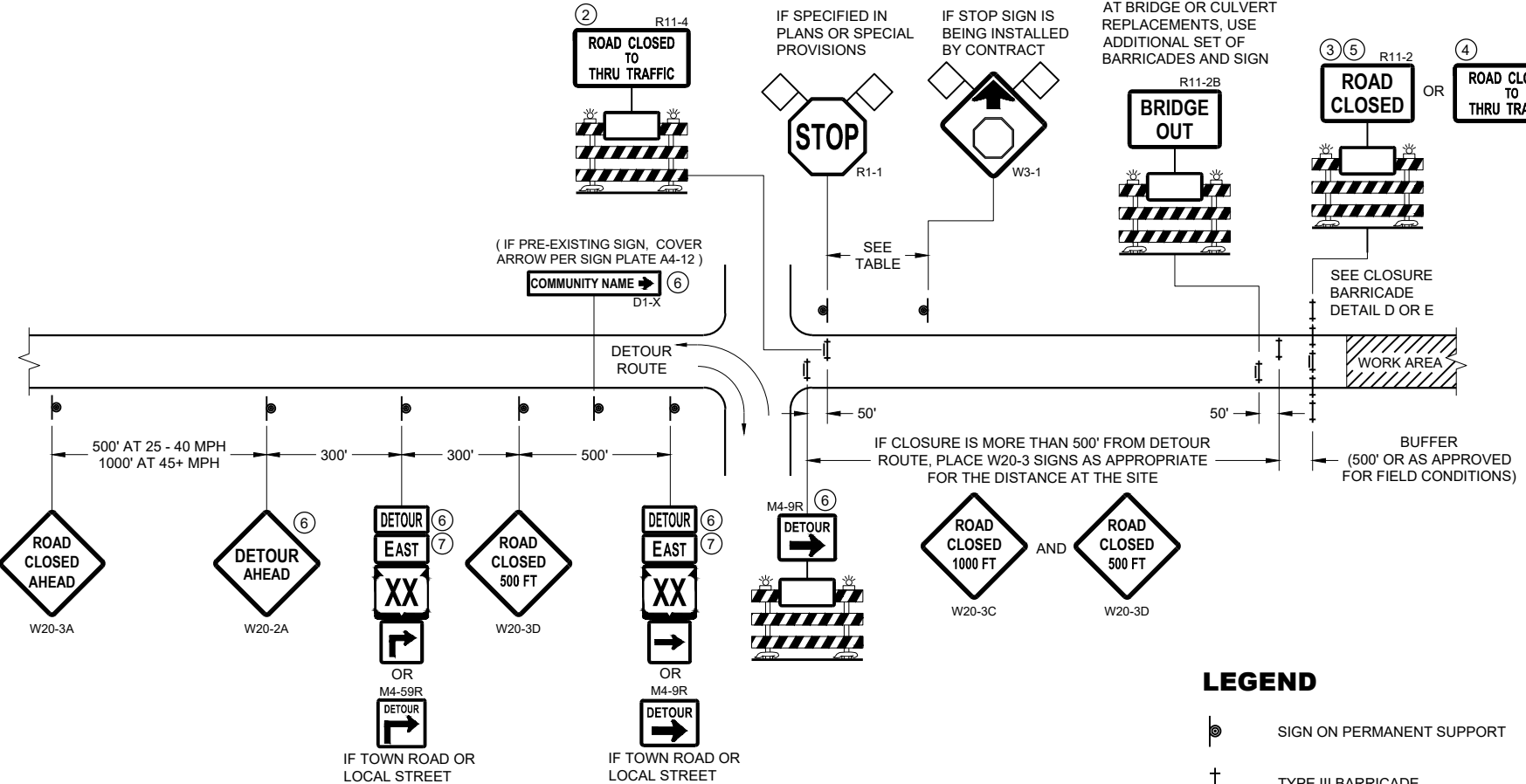
INLET PROTECTION, TYPE D

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

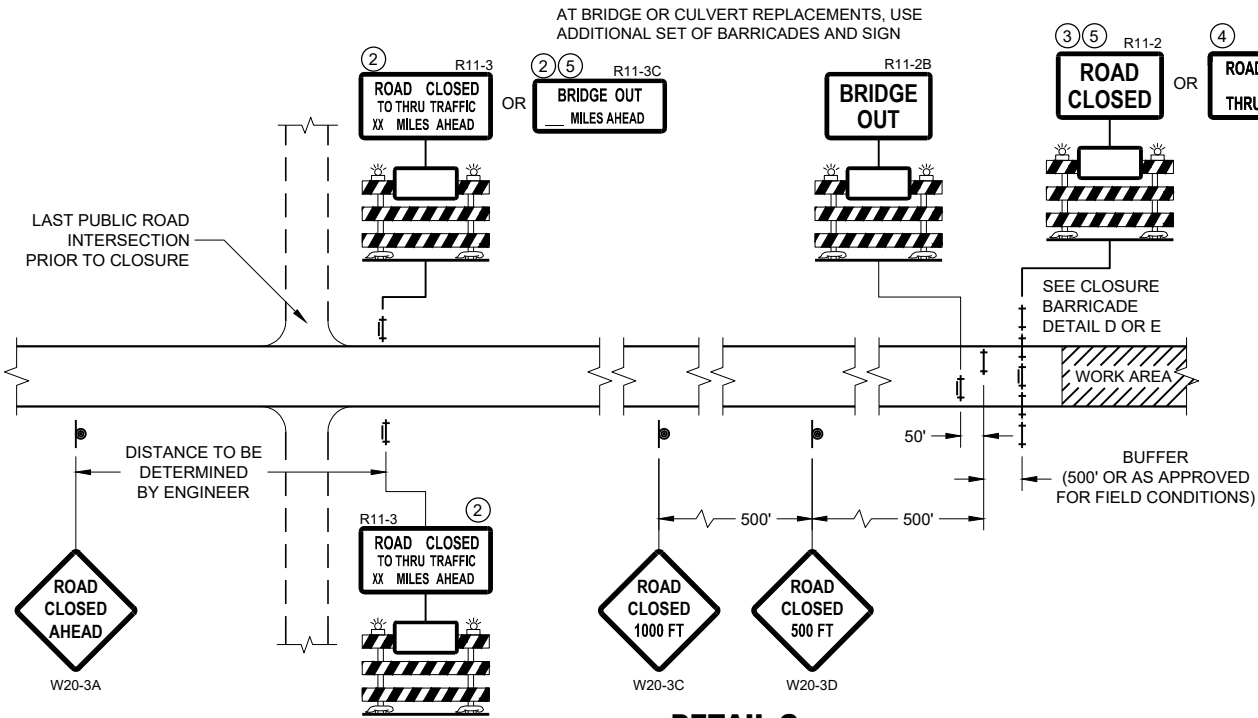
INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

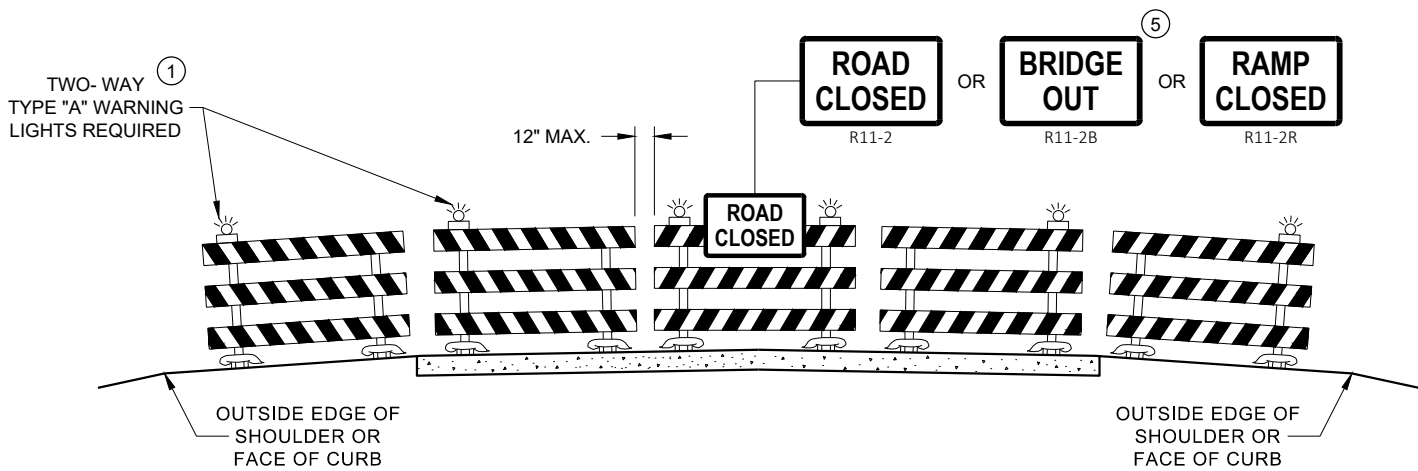
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

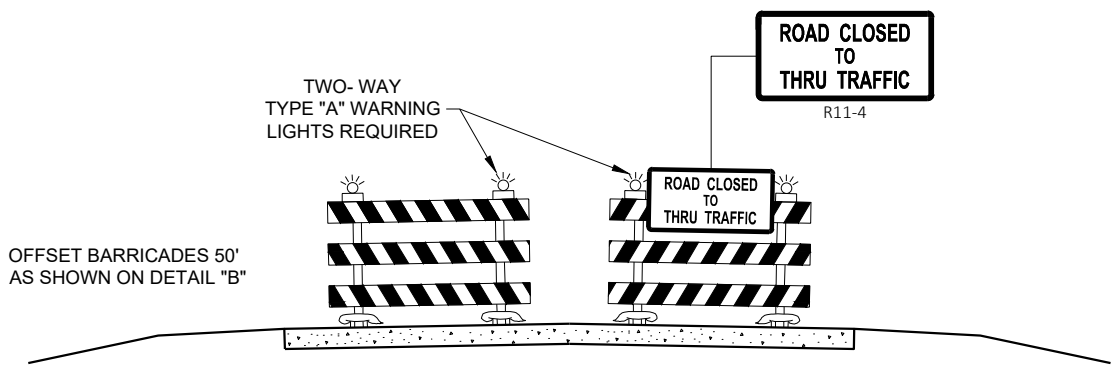
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.




ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

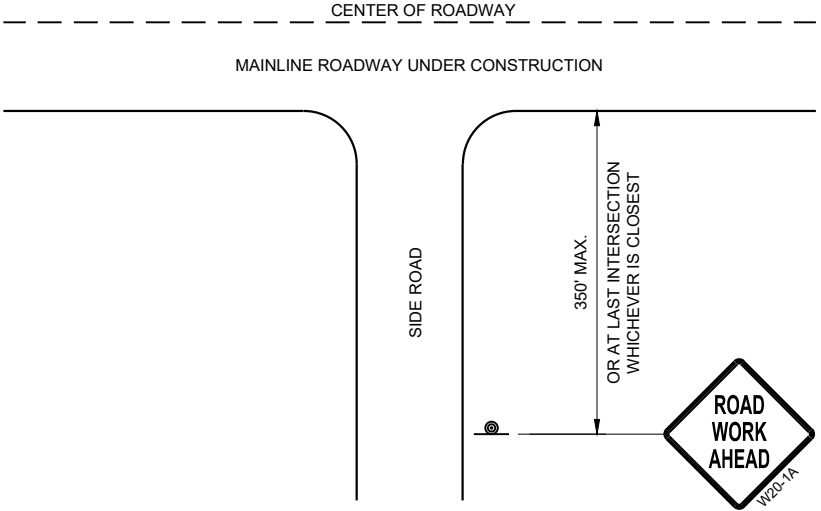
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

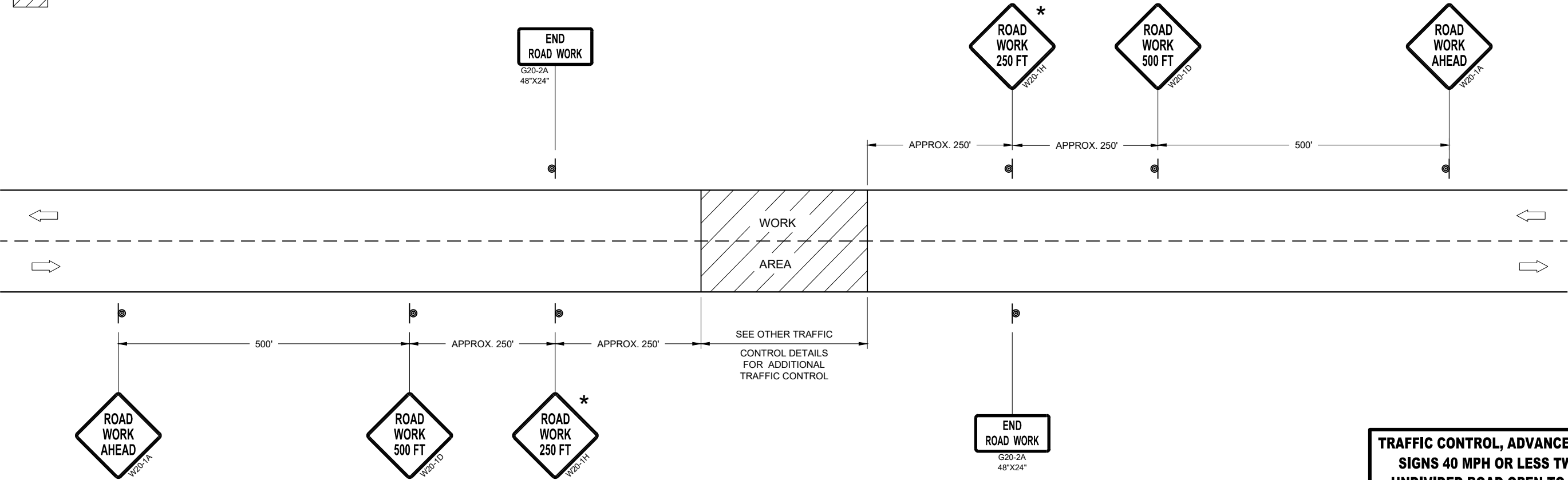
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



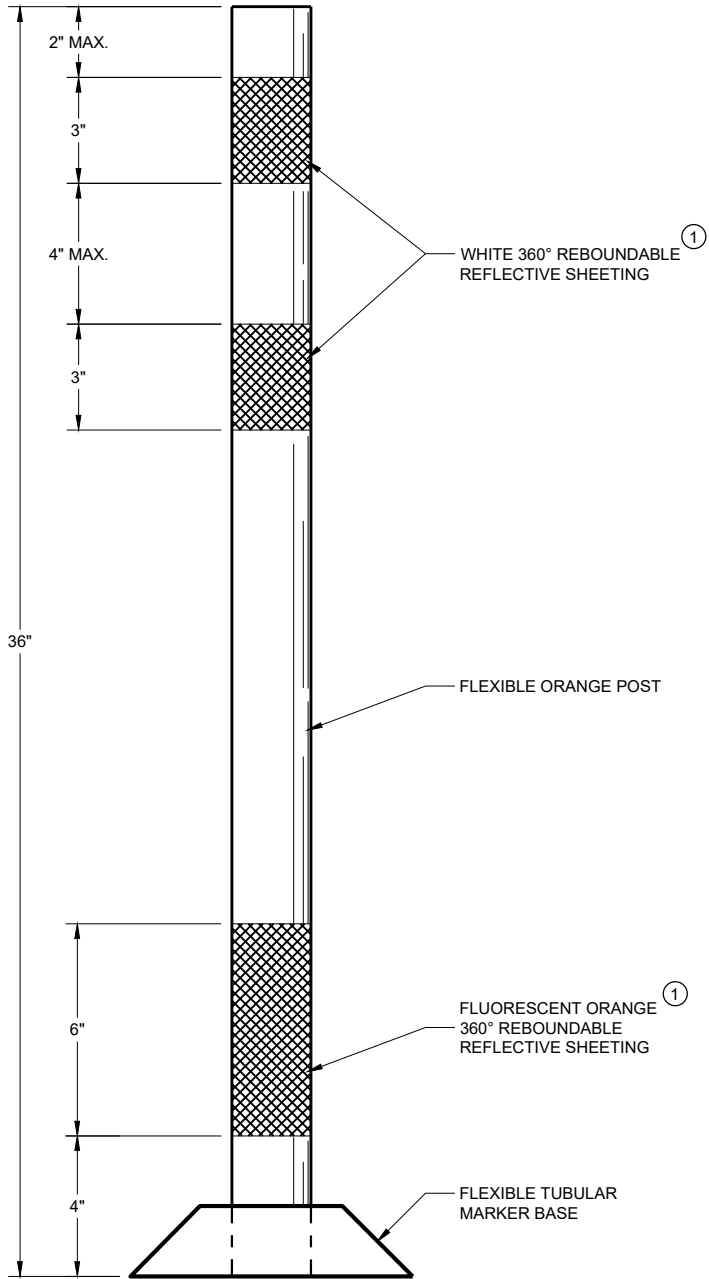
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



FLEXIBLE TUBULAR
MARKER POST
WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

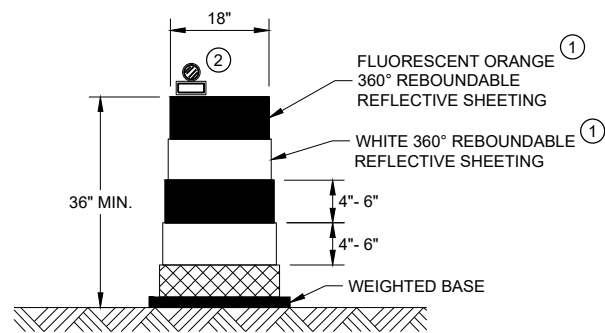
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

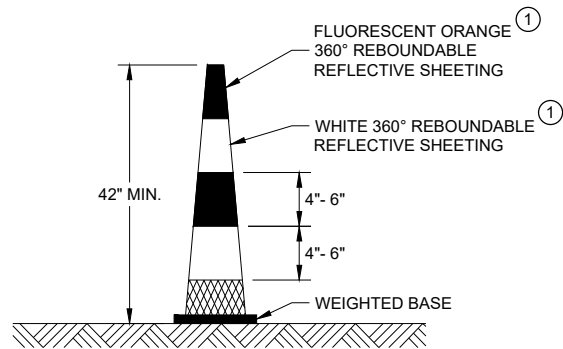
APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



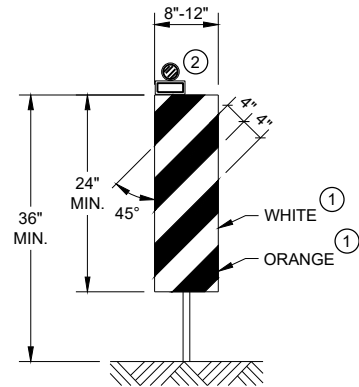
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



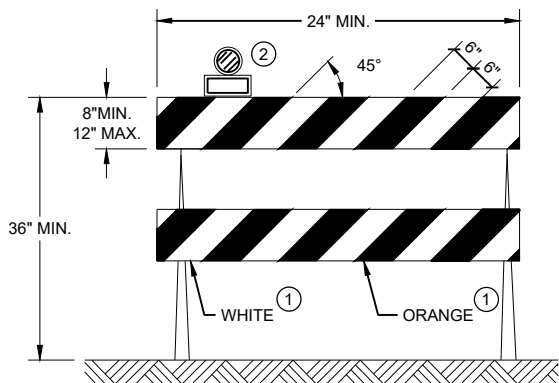
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



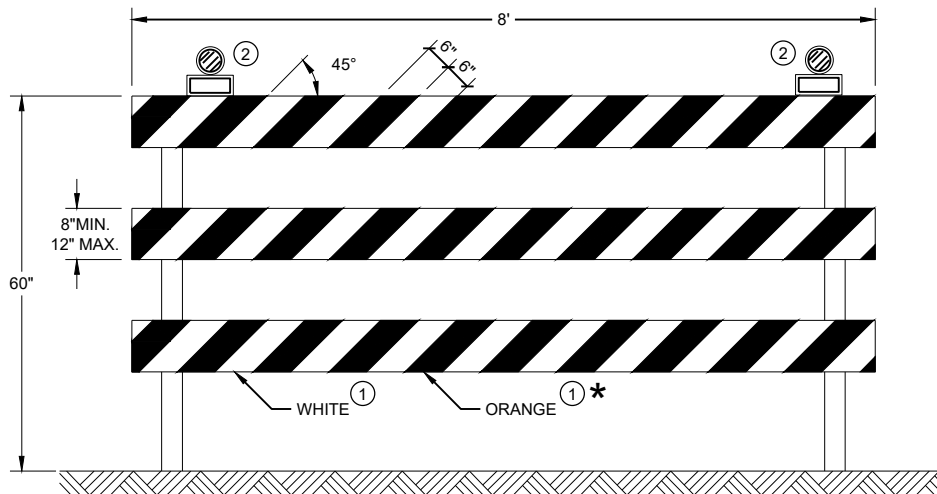
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

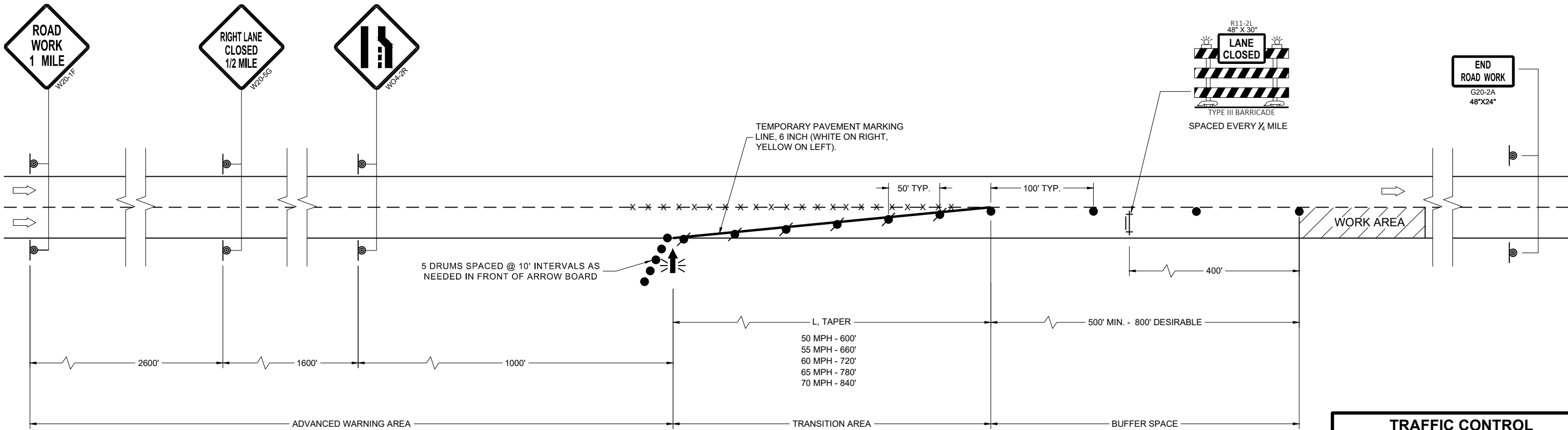
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

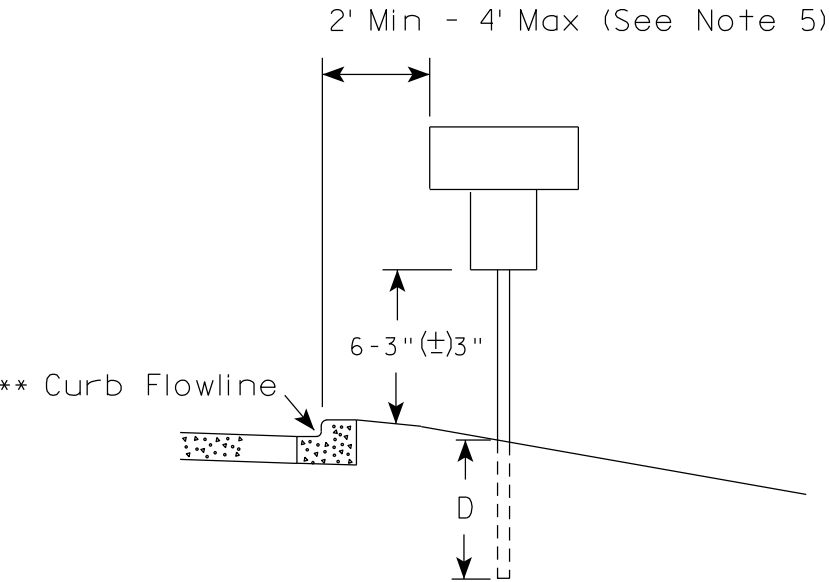
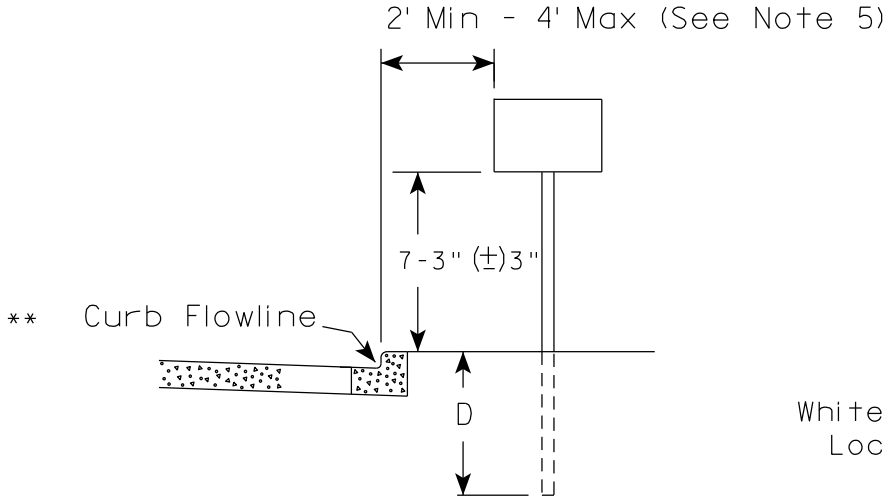
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



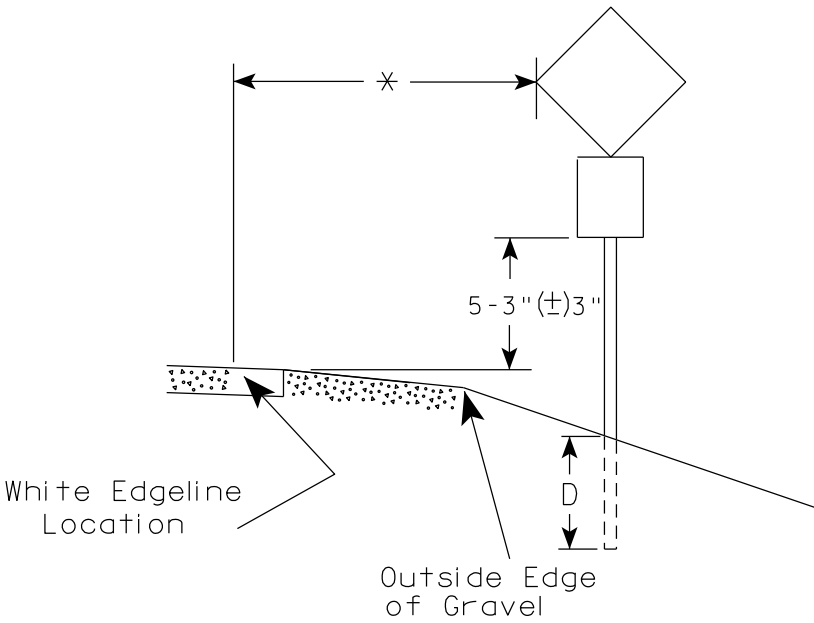
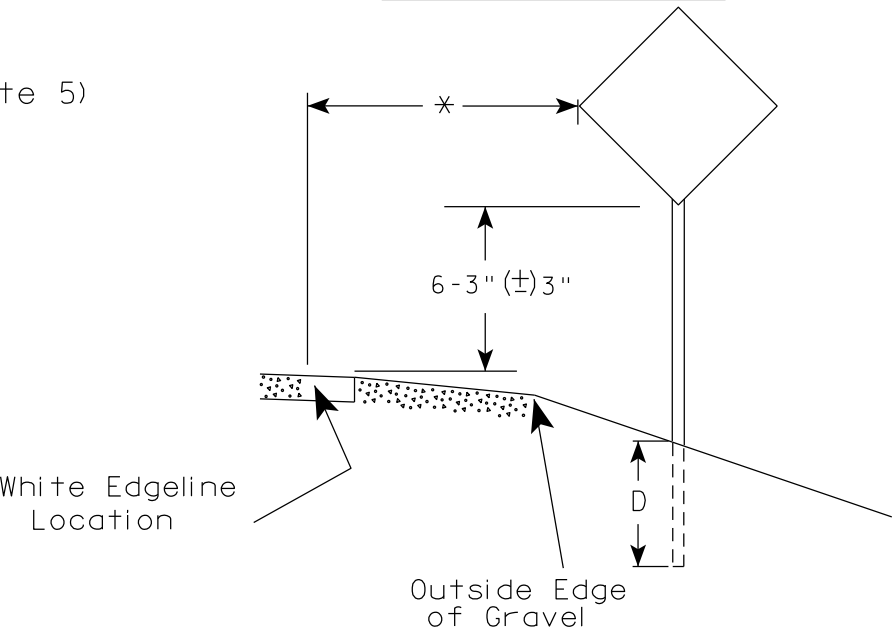
TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2024 DATE	/S/ Andrew Heidtke Work Zone Engineer

FHWA

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

GENERAL NOTES


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

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

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

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:

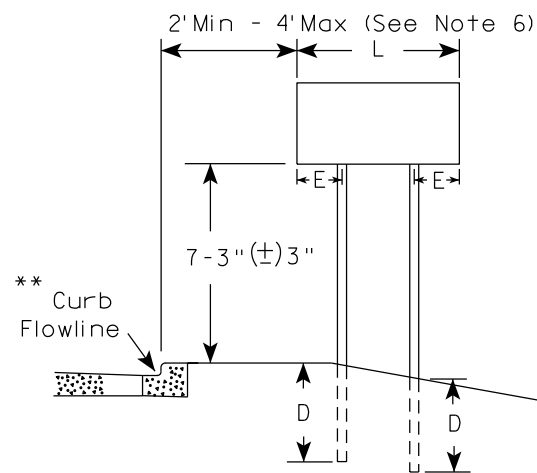
HWY:

COUNTY:

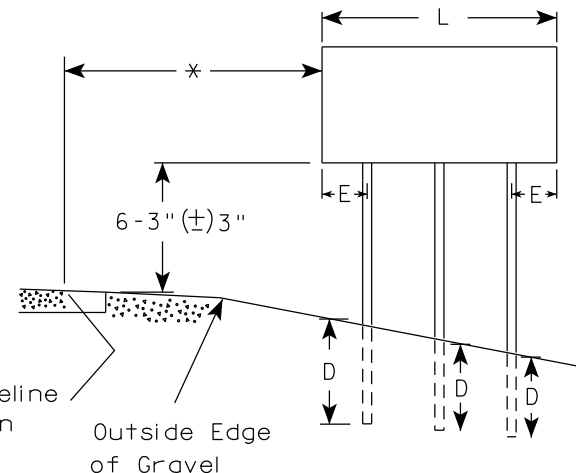
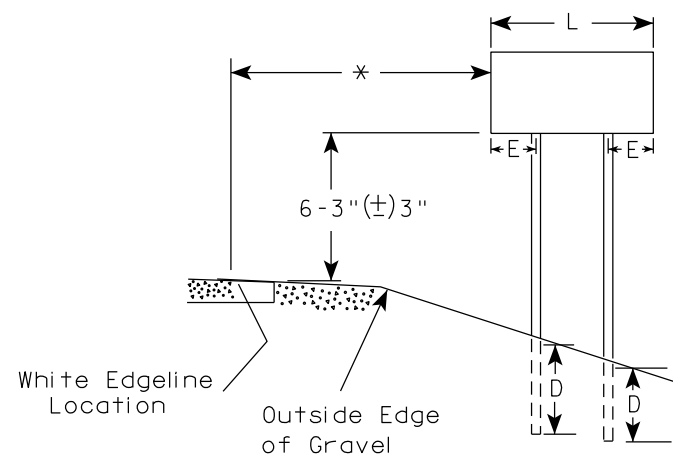
SHEET NO:

E

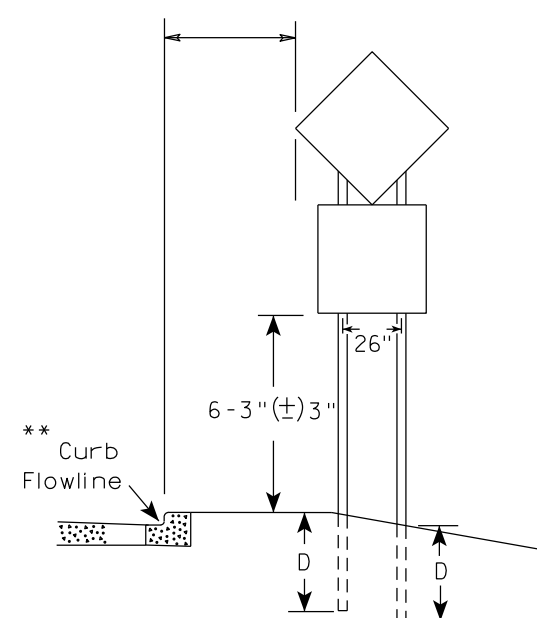
URBAN AREA



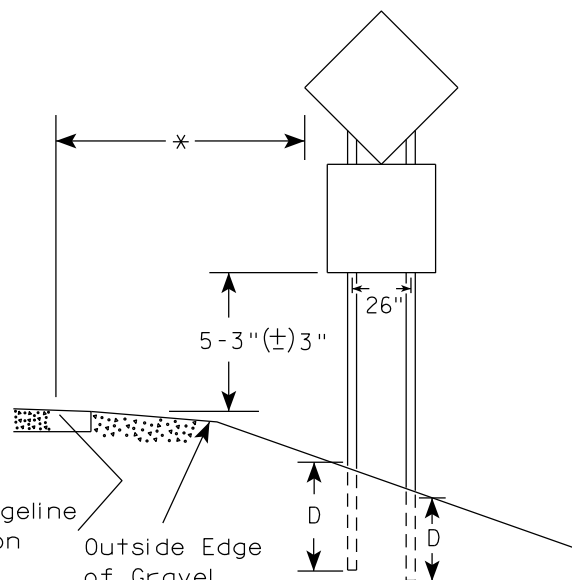
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

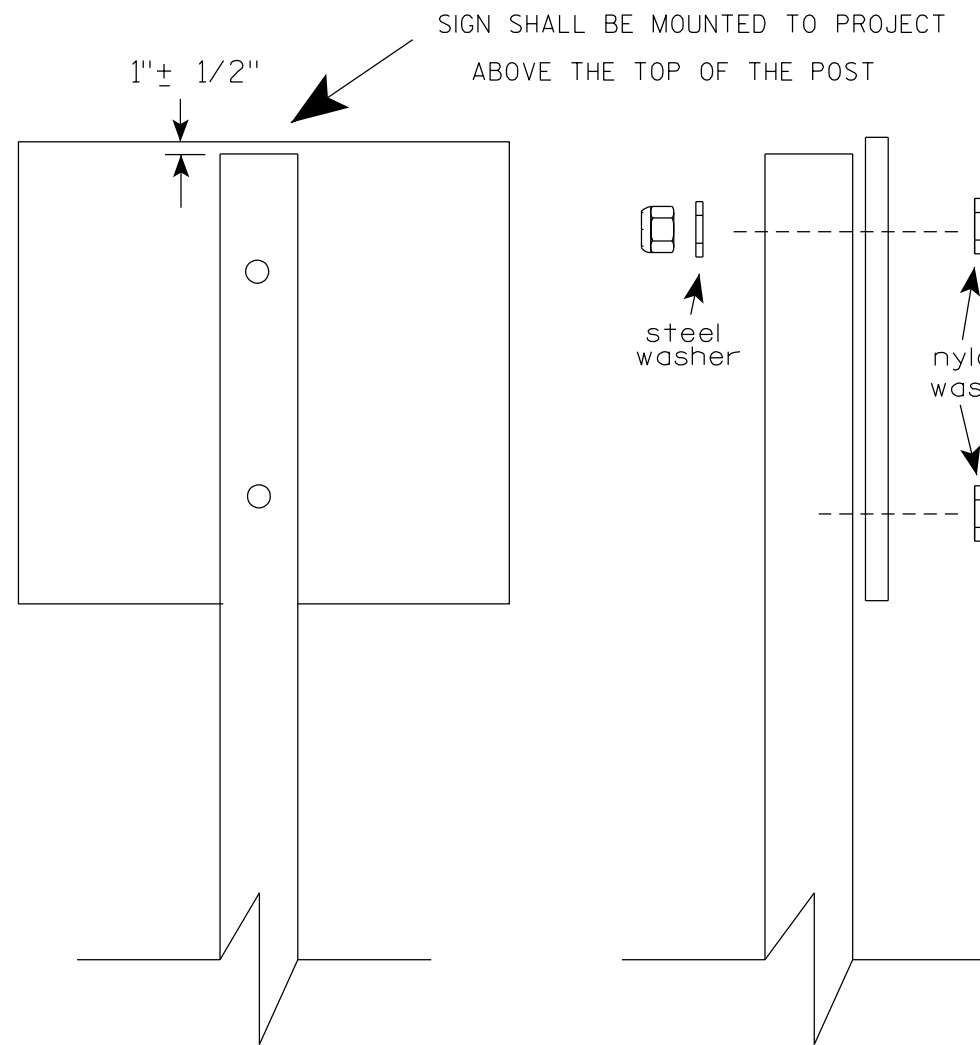
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16



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.

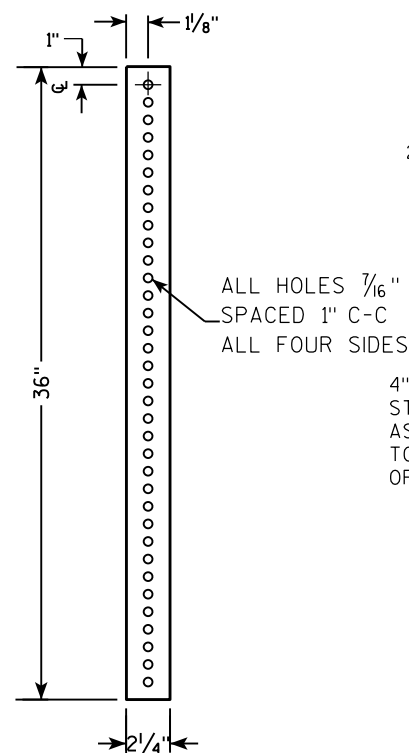
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

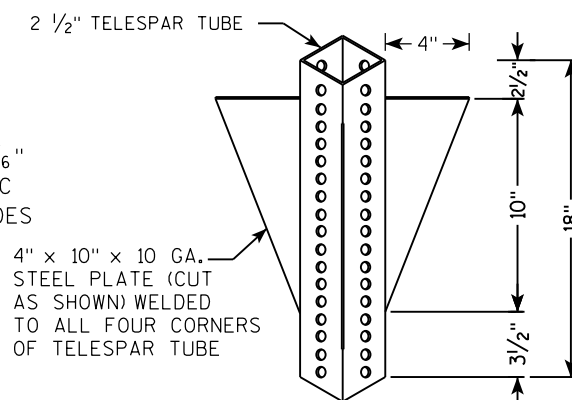
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



TECHNICAL DRAWING OF A SIGN POST ASSEMBLY.

Side View Labels:

- SIGN
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- 2" STEEL TUBULAR SQUARE UPPER SECTION
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 2 1/2" GRAVEL OR DIRT
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- 2 1/4" SQUARE X 36"

Cross Section Labels:

- TELESCOPE PIECES FLUSH AT TOP
- 13"
- 18"
- 36"
- 18" DIA SCHEDULE 40 PVC BOX-OUT

Vertical Dimension:

- LENGTH SHOWN ON MISC. QTY'S

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

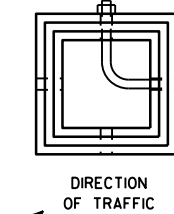
Side View Dimensions:

- Overall height: LENGTH SHOWN ON MISC. QTYS
- Top section: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Telescope pieces: TELESCOPE PIECES FLUSH AT TOP
- Vertical dimensions from ground line: 36", 18", 12"
- Ground level: Indicated by a hatched line with downward arrows labeled 'A'.

End View Details:

- Top: SIGN
- Fasteners: SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- Upper section: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Holes: ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C
- Material: ALL FOUR SIDES $\frac{3}{8}$ " ZINC PLATED CORNER
- Fasteners: $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- Anchor depth: 1"
- Fasteners: $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- Soil stabilizing sleeve: 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- Post section: 2 1/4" SQUARE X 36"

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

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

PROJECT NO:

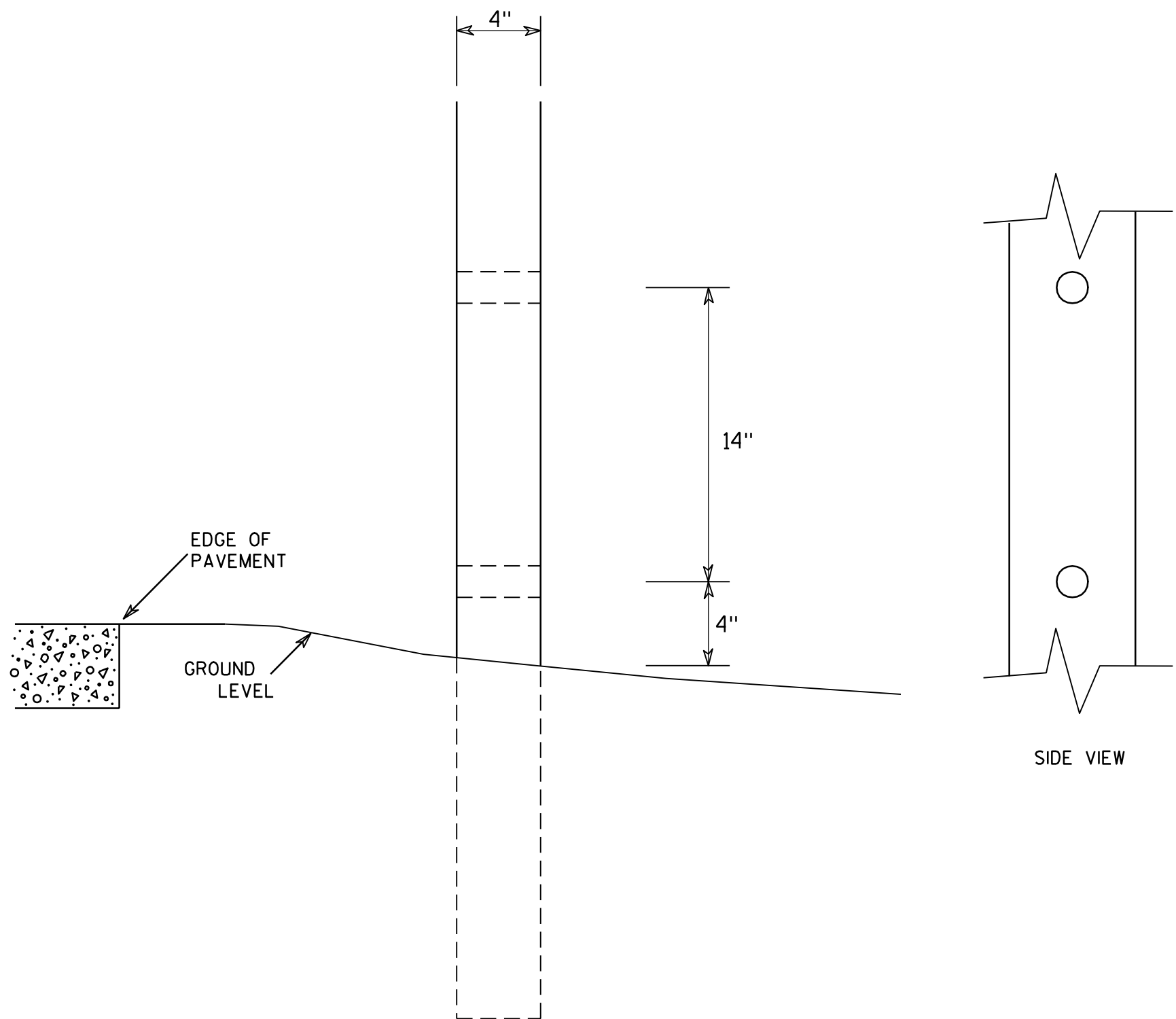
HWY:

COUNTY:

SHEET NO:

E

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST
MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

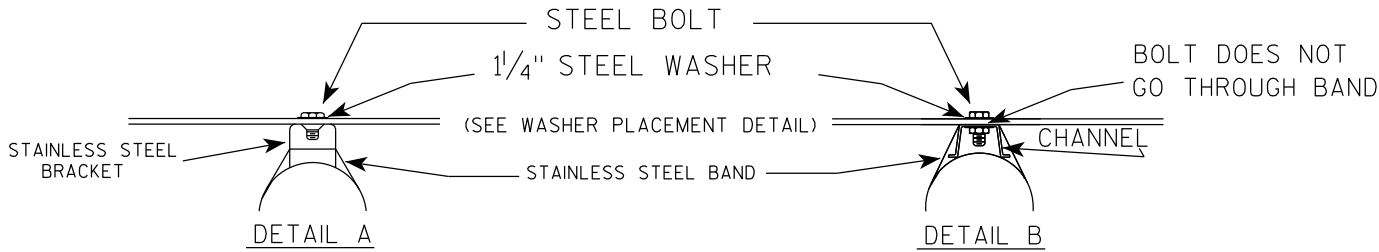
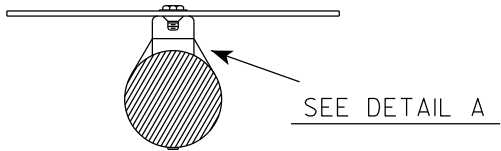
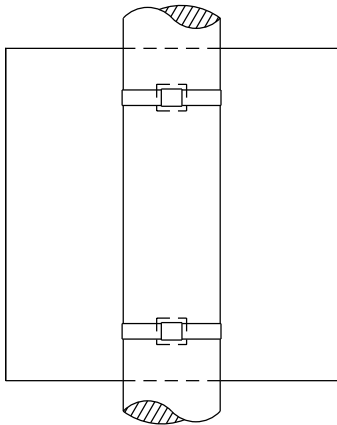
COUNTY:

SHEET NO:

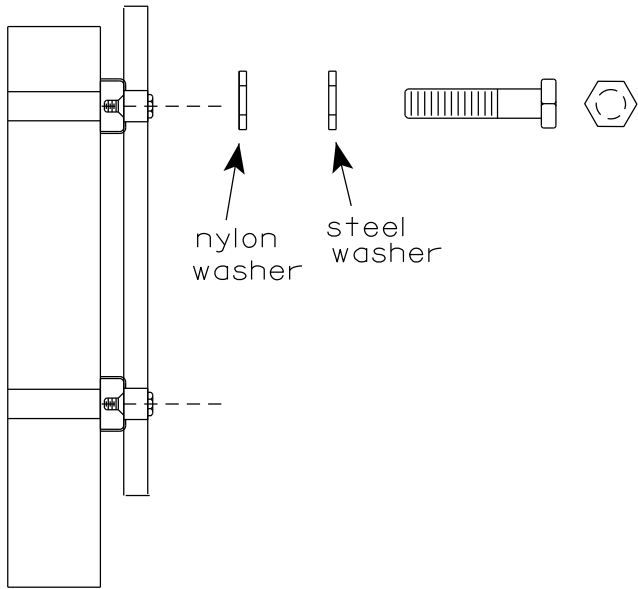
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

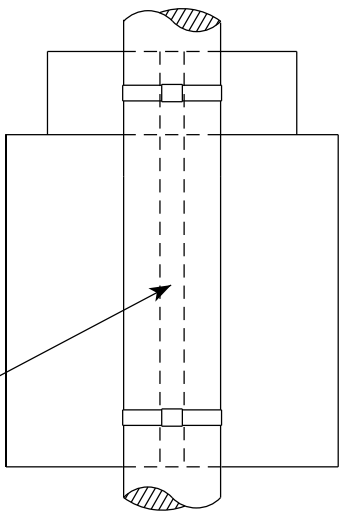


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



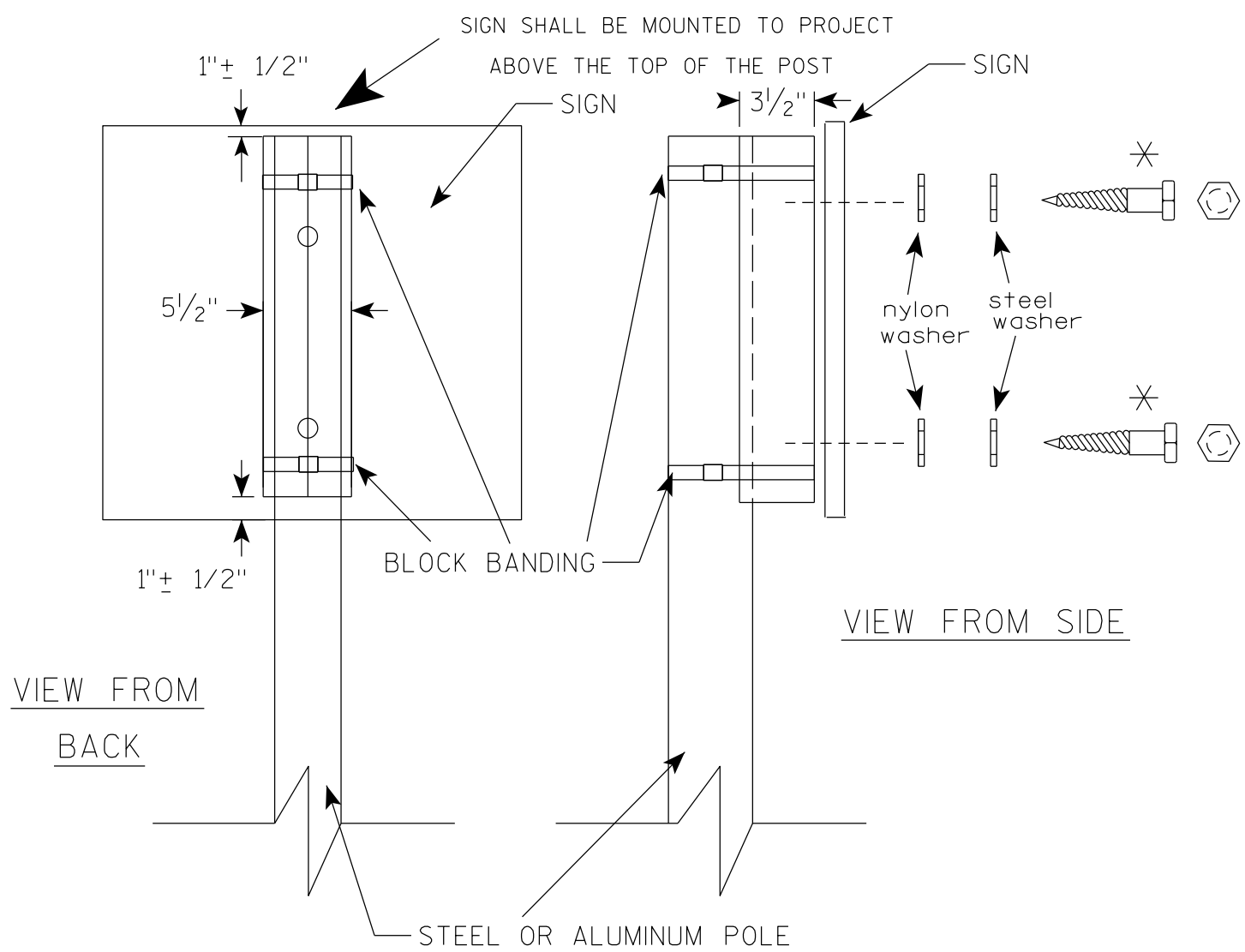
SEE DETAIL B

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

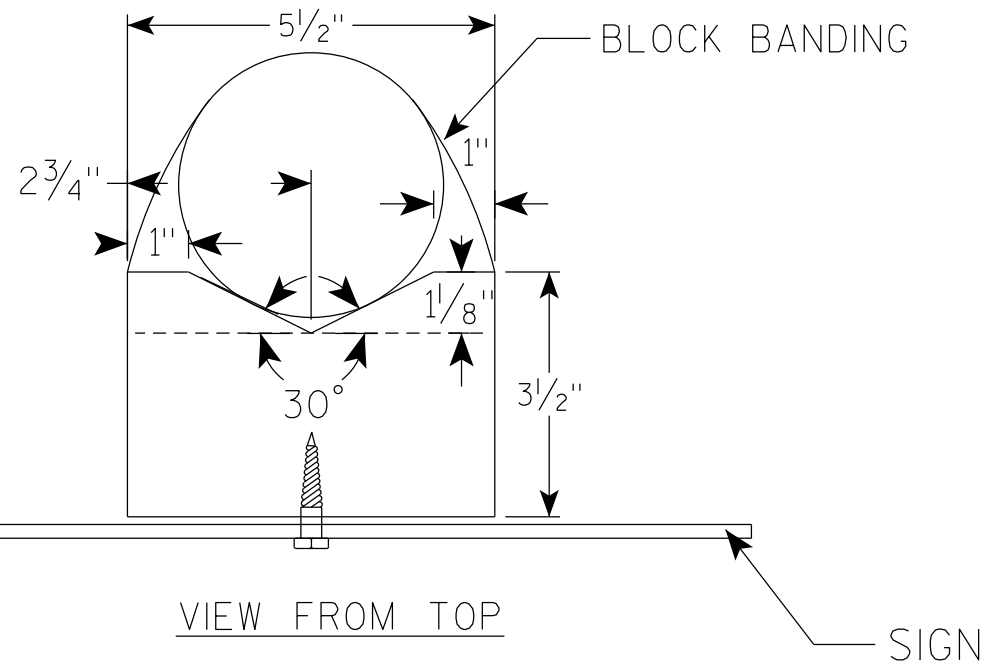
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



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 NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

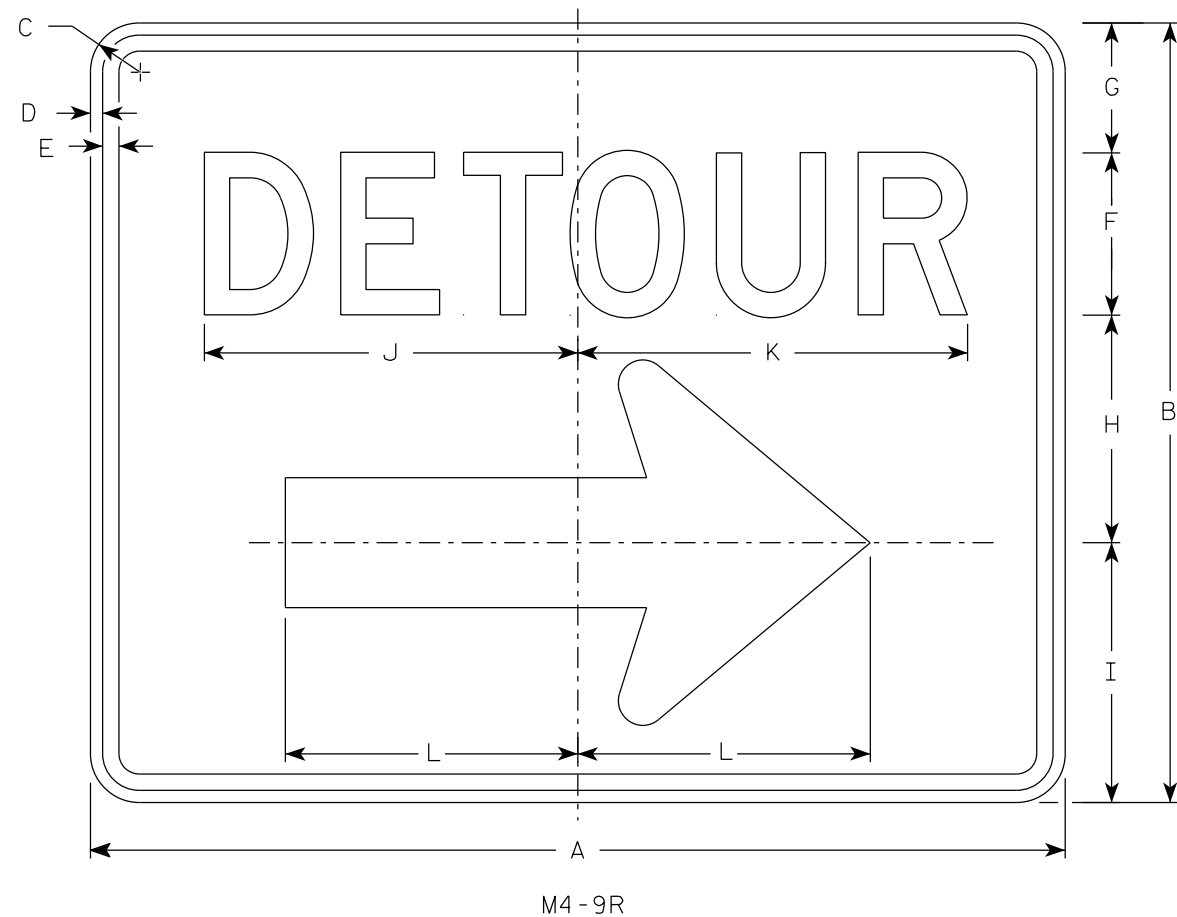
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

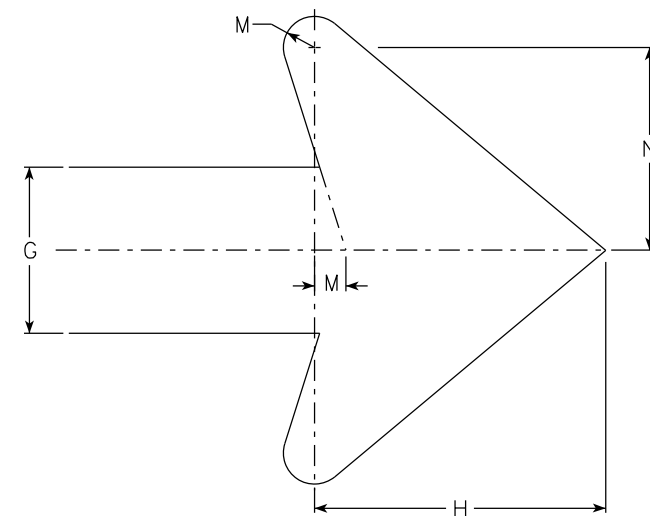
SHEET NO:

E



NOTES

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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
2M	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/2	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 7/8	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 7/8													12.0
5	48	36	1 7/8	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 7/8													12.0

STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9R.6

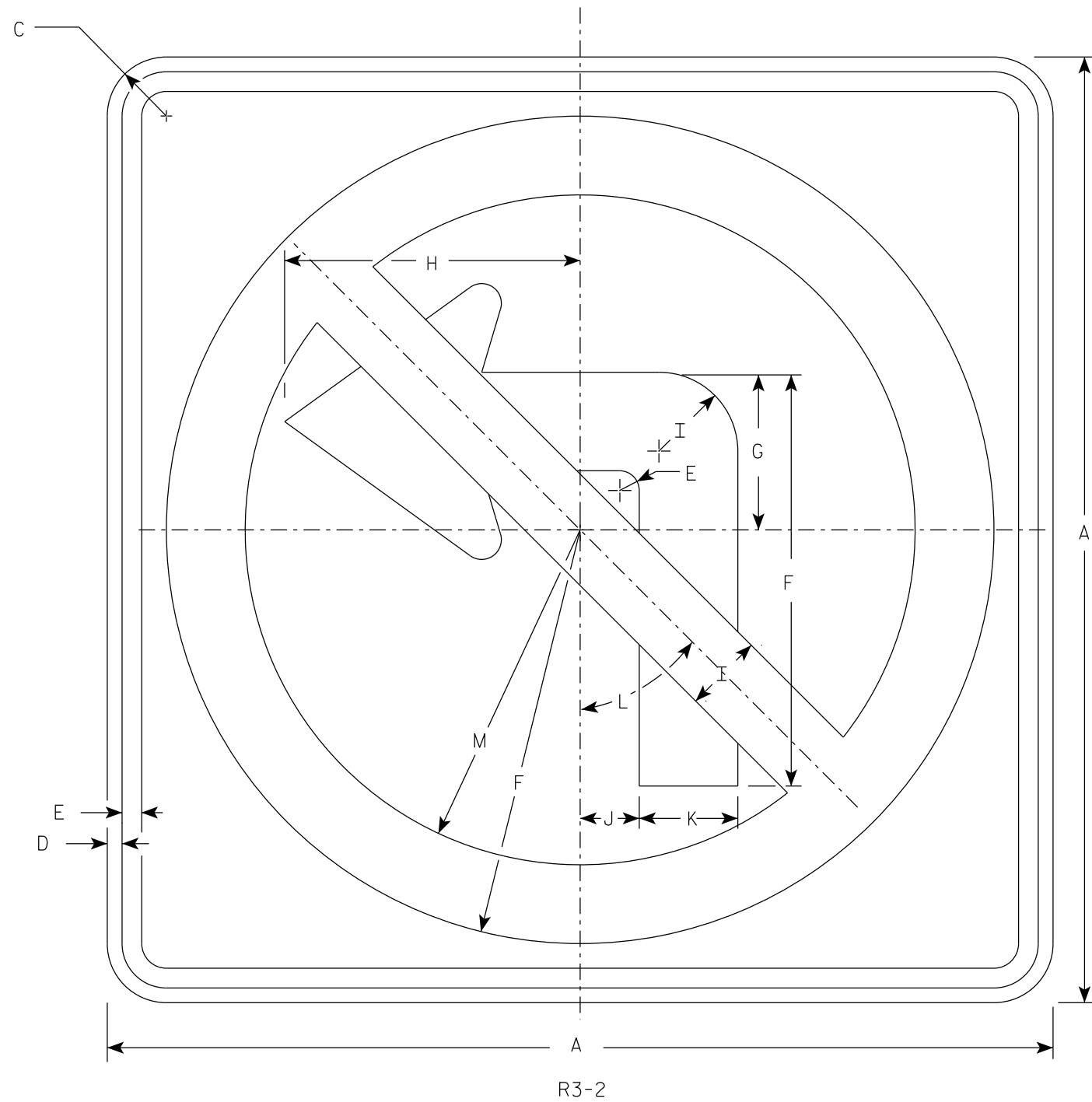
PROJECT NO:

HWY:

COUNTY:

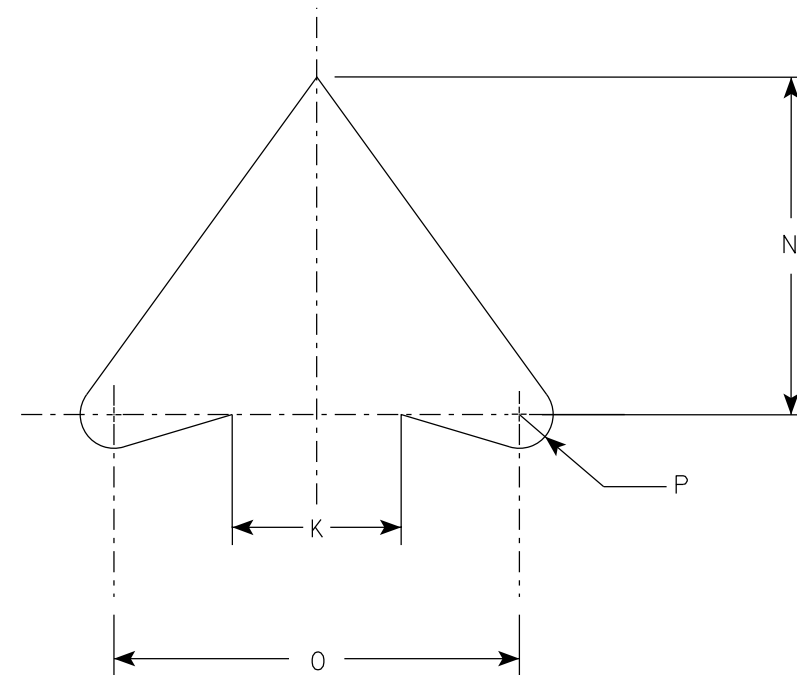
SHEET NO:

E



NOTES

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.

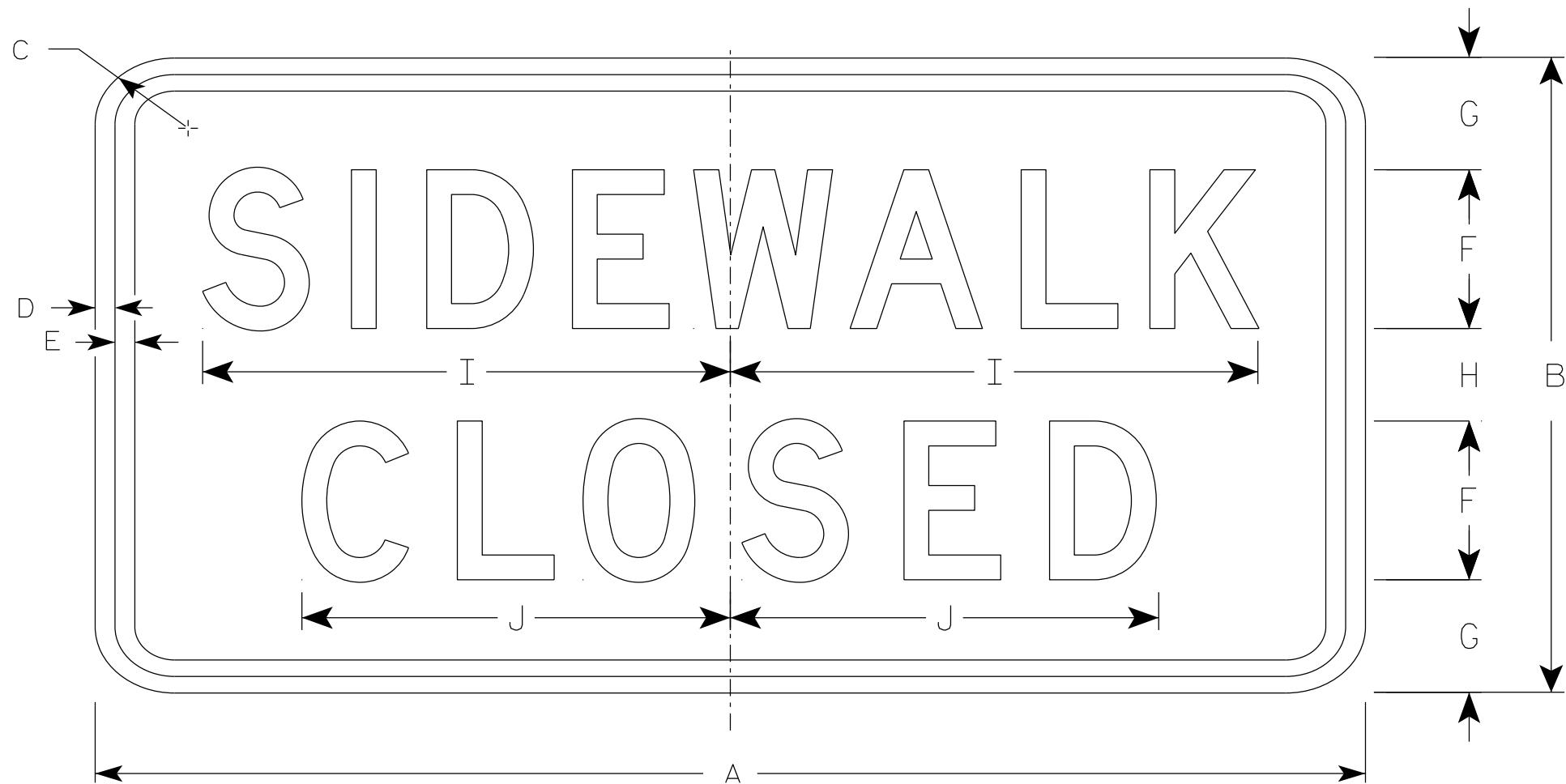


ARROW DETAIL

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

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



R9-9

NOTES

- 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.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	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																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

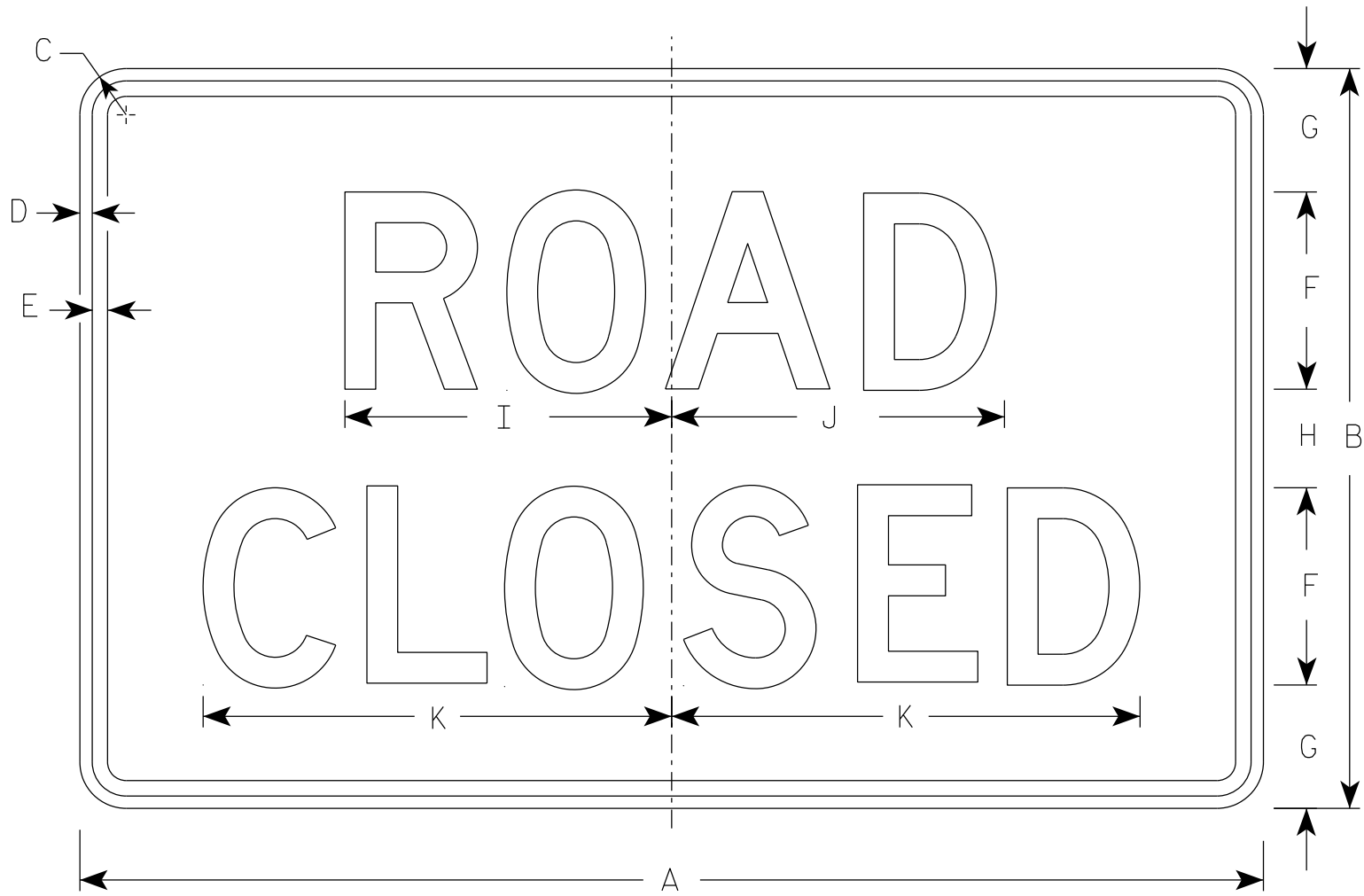
E

STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

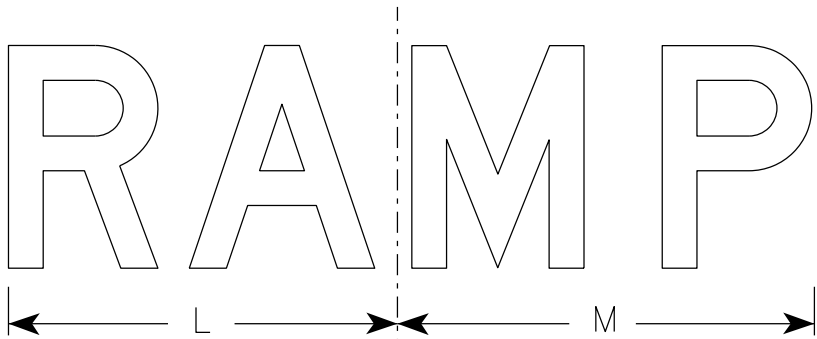
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

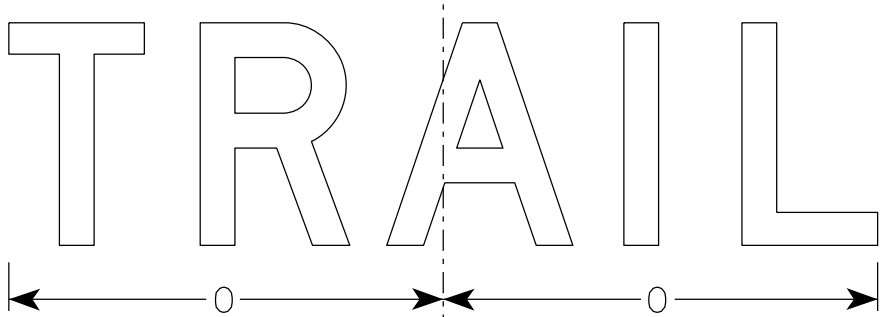


R11-2

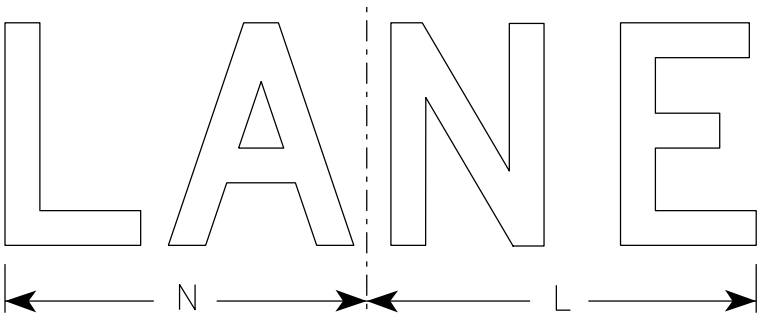
- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



R11-2R



R11-2T



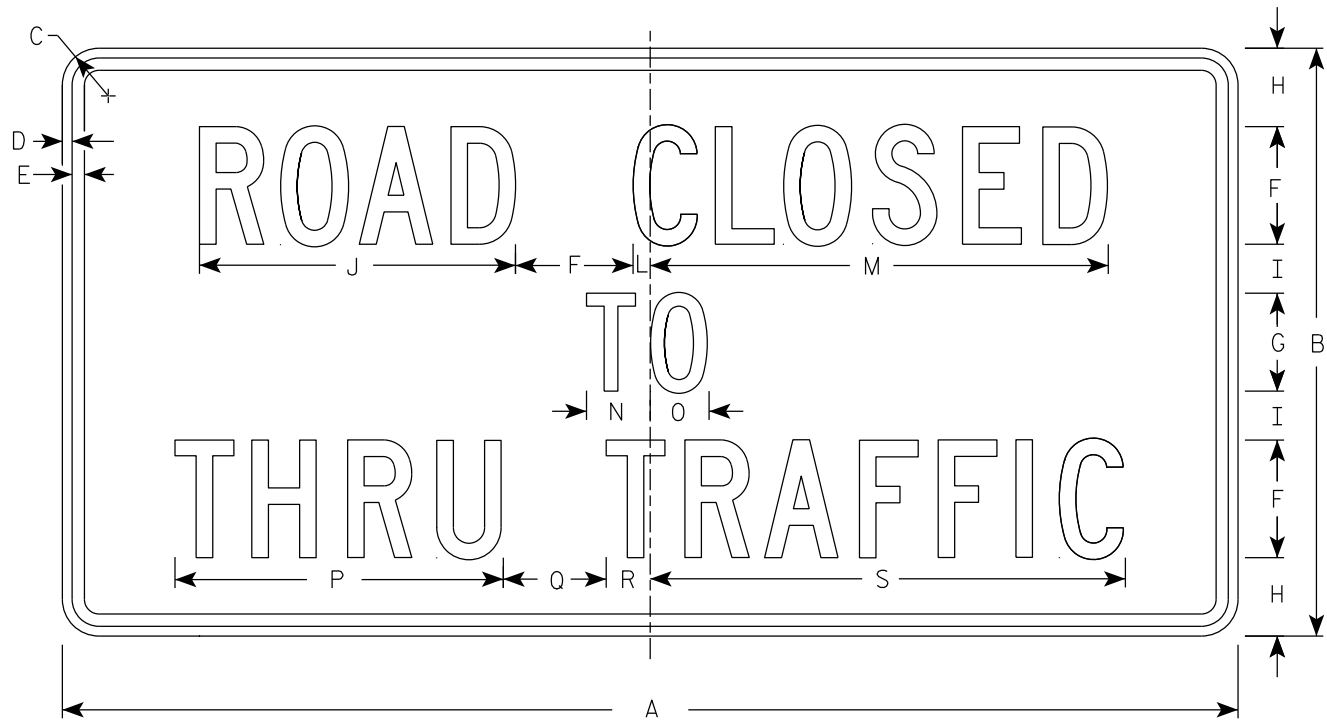
R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/5/24	PLATE NO. R11-2.12

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



R11-4

NOTES

- 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.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

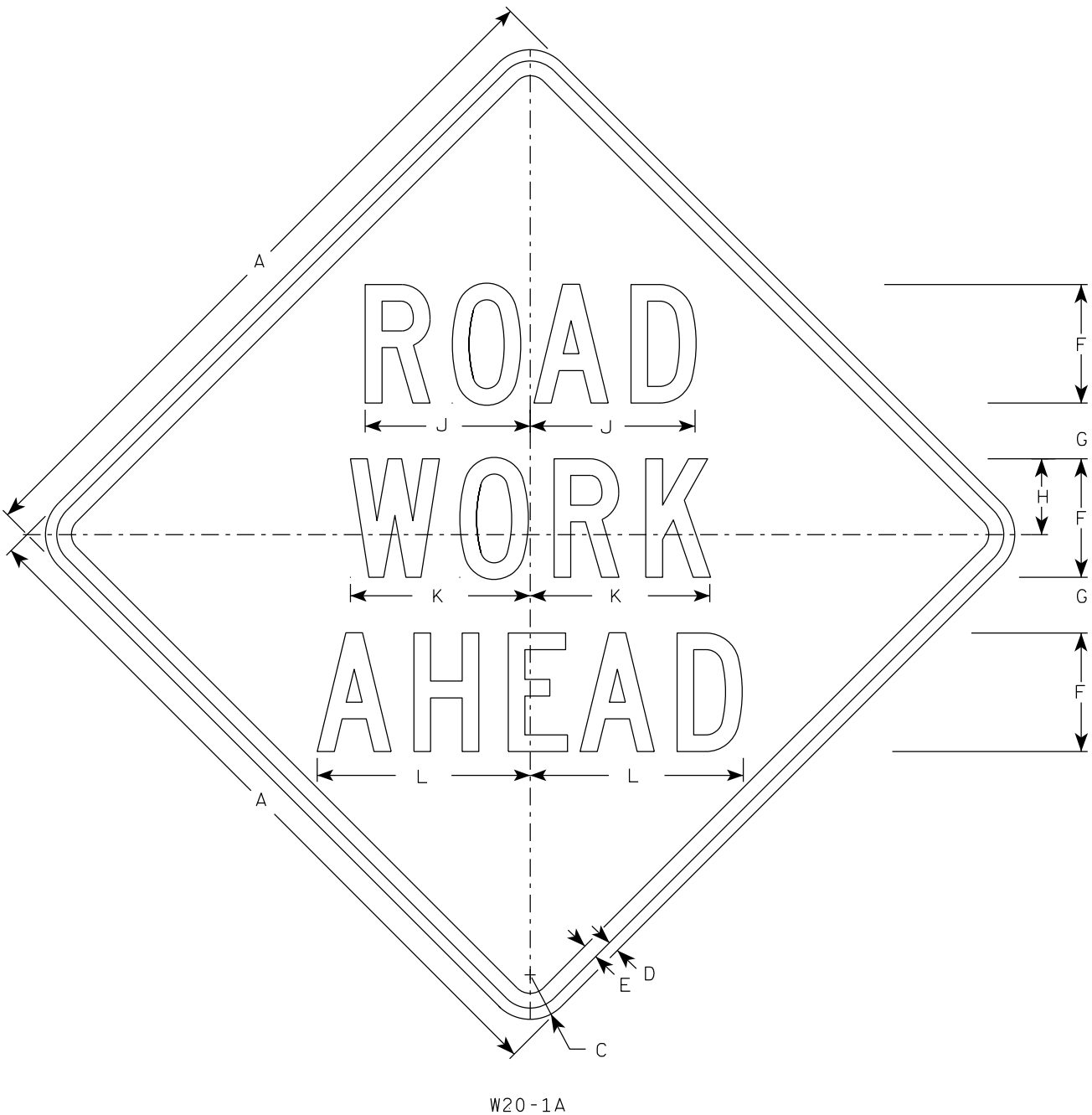
PROJECT NO:

HWY:

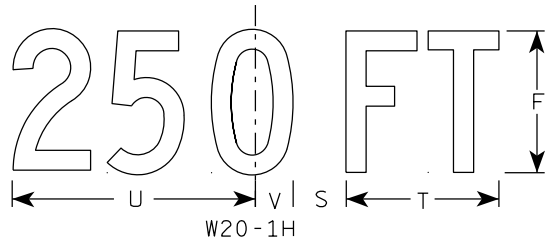
COUNTY:

SHEET NO:

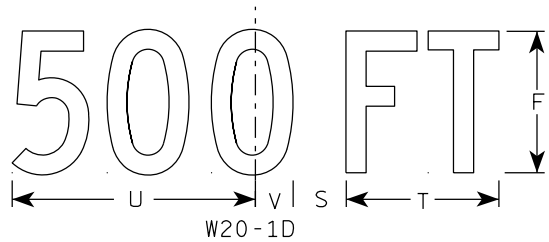
E



W20-1A



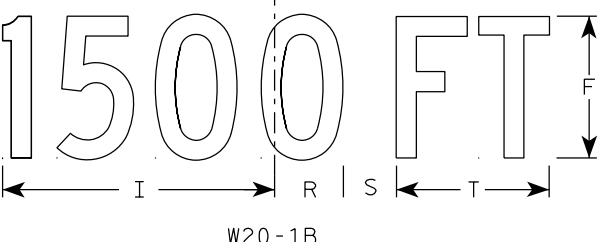
W20-1H



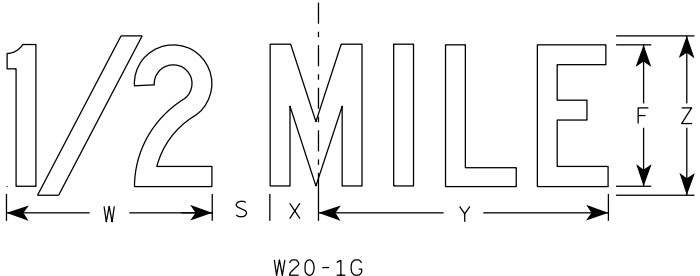
W20-1D



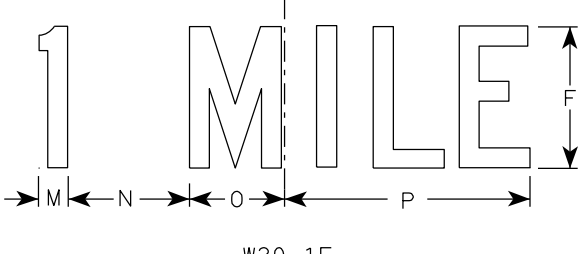
W20-1C



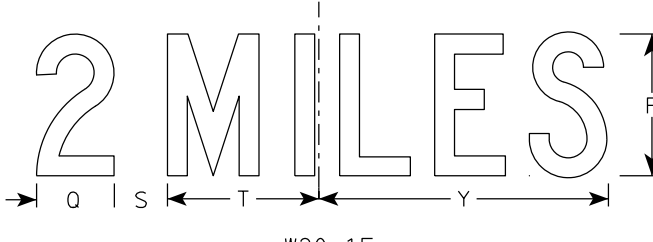
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

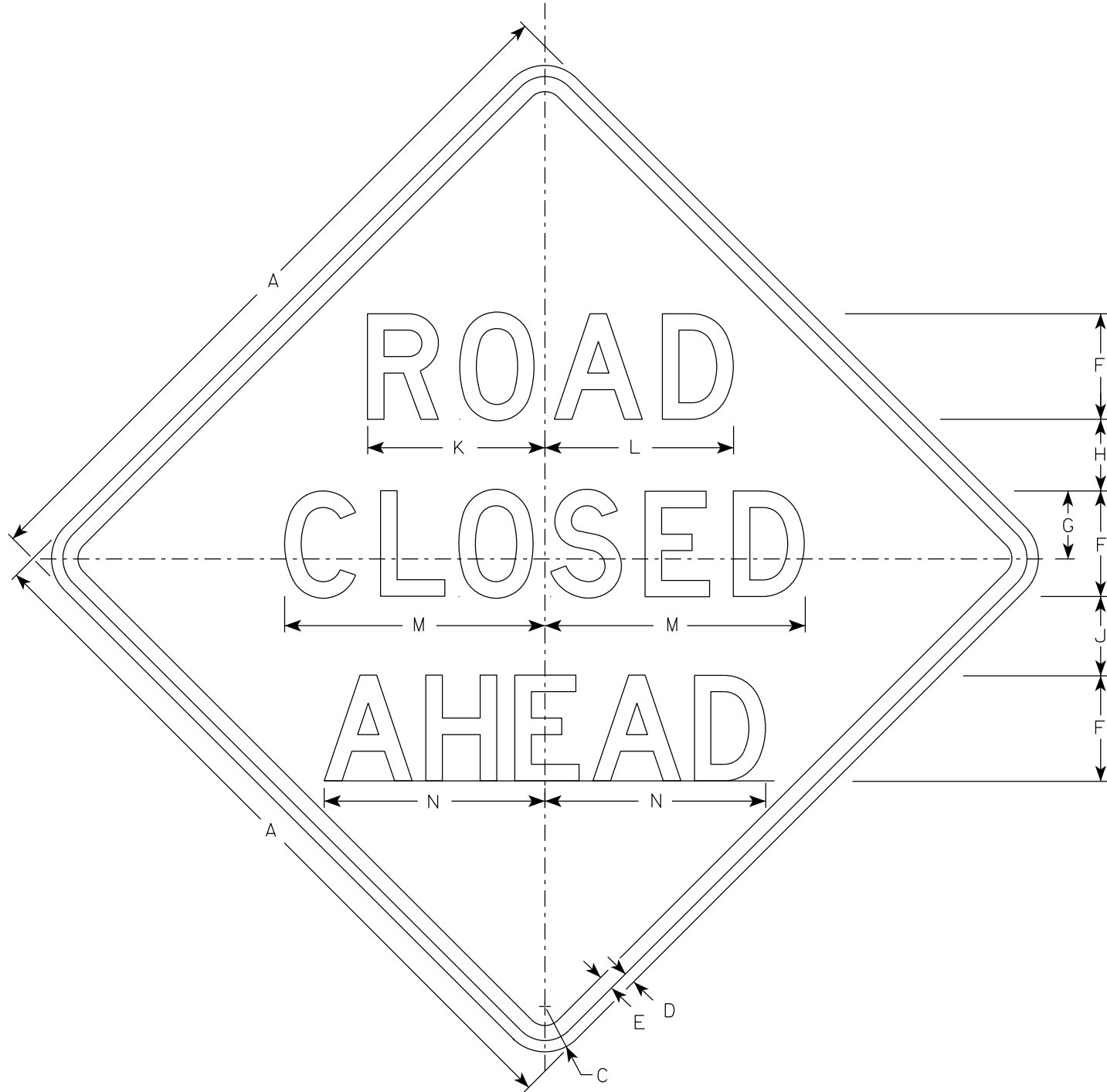
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13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

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

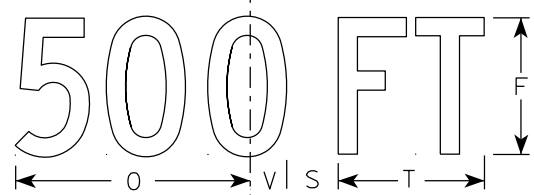
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

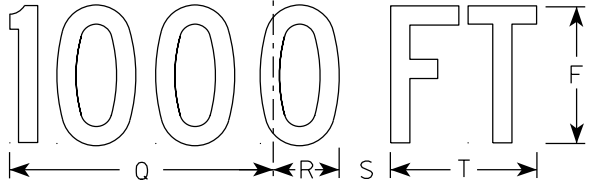
DATE 1/10/2024 PLATE NO. W20-1.12



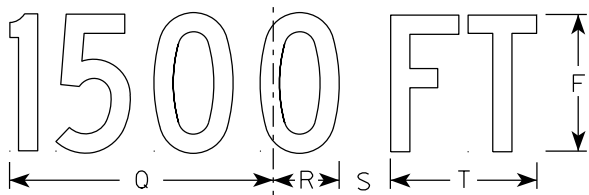
W20-3A



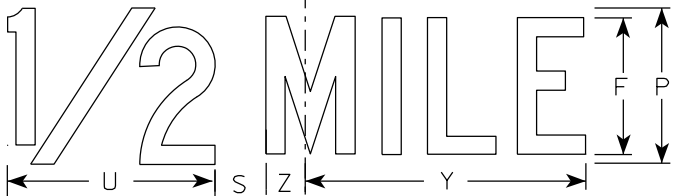
W20-3D



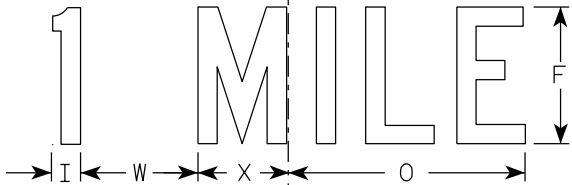
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

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

STANDARD SIGN
W20-3A, B, C, D, F & G

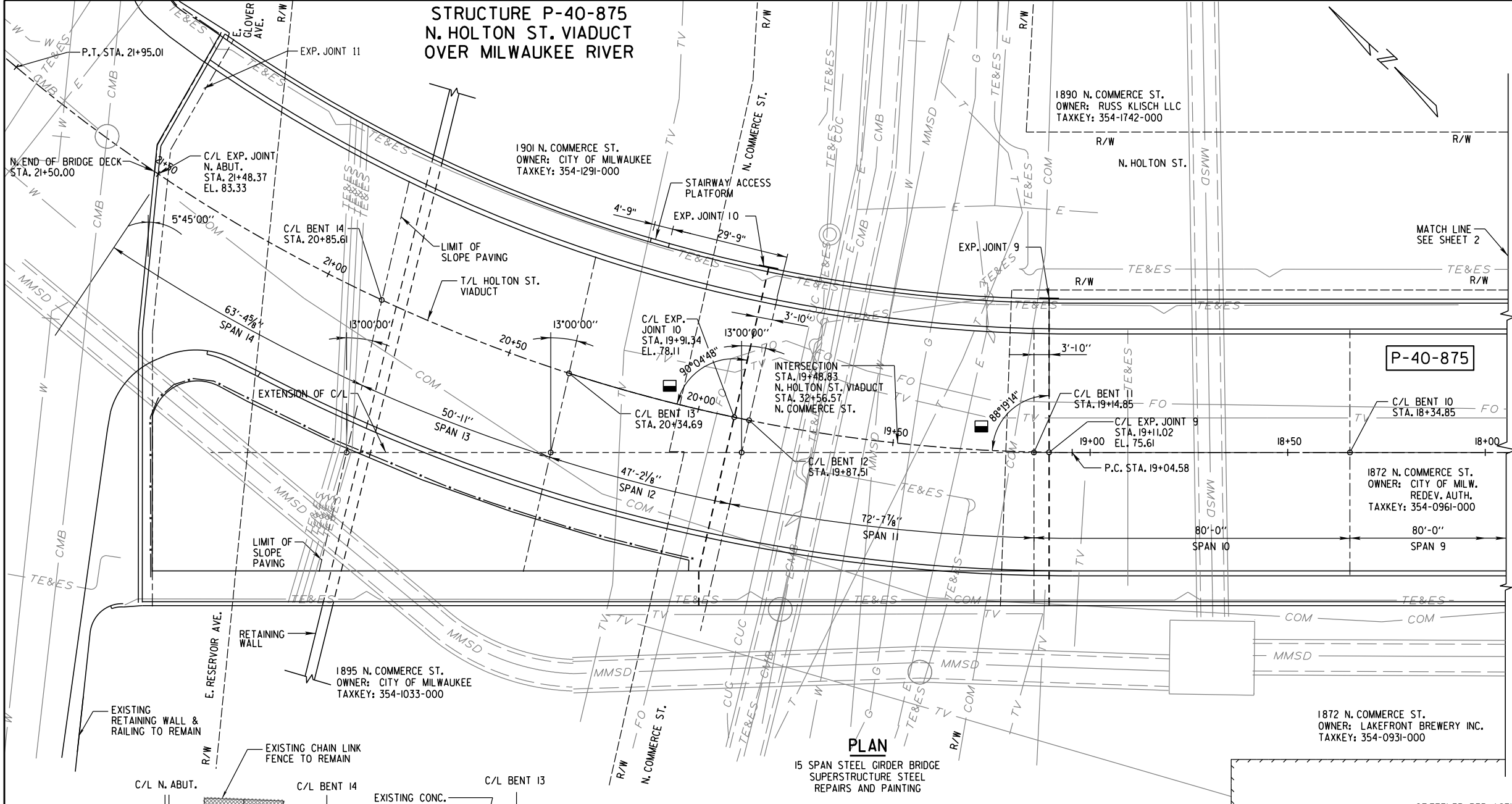
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

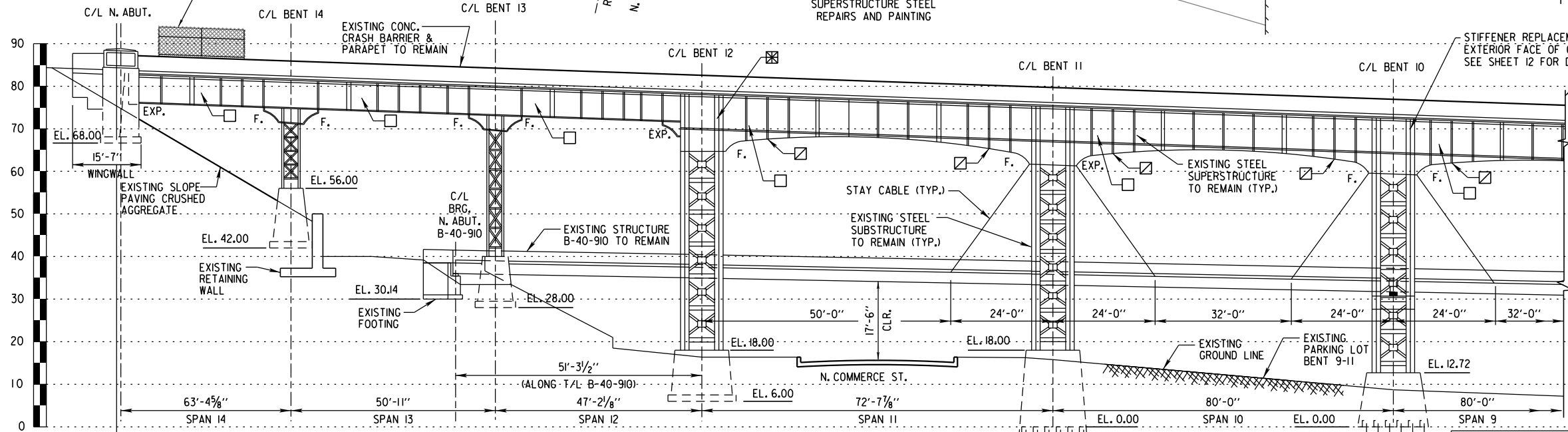
DATE 1/10/2024 PLATE NO. W20-3.8

REVISED: 12-09-2024 BY GJR

8



PLAN
15 SPAN STEEL GIRDER BRIDGE
SUPERSTRUCTURE STEEL
REPAIRS AND PAINTING



WEST ELEVATION
(LOOKING NORTH EAST)

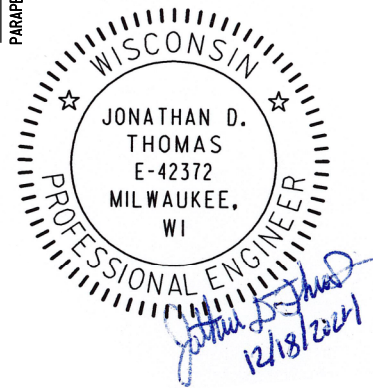
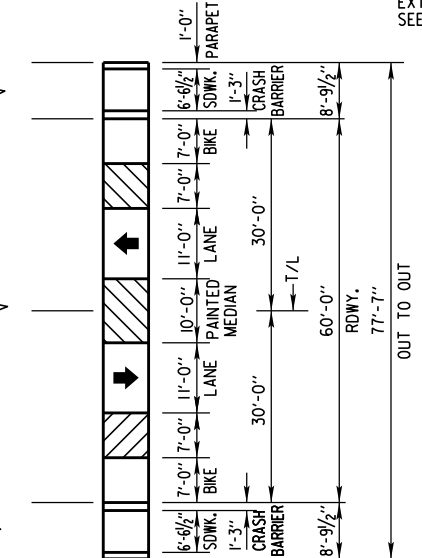
NOTES

LIST OF DRAWINGS CAN BE FOUND
ON SHEET 4 "CROSS SECTIONS (1 OF 2)"

EXISTING UTILITIES TO REMAIN.

LEGEND

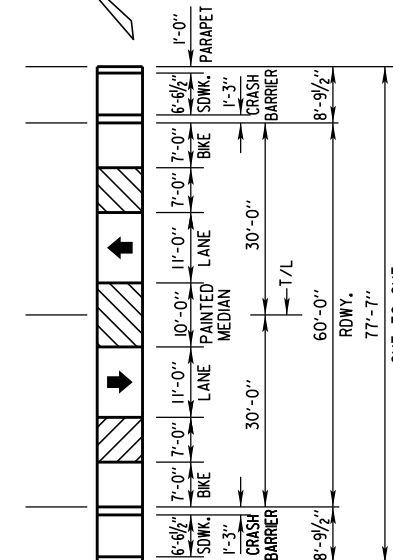
- ANGLES MEASURED FROM TARGET TO T/L AT LOCATION OF INTERSECTION, TYP.
- STRUCTURAL STEEL REPAIRS AND PAINTING TO SUPERSTRUCTURE STEEL
- STIFFENER REPAIRS SEE SHEET 12 FOR REPAIRS TABLE AND DETAILS
- NEW SPLICE PLATES AT BOTH EAST AND WEST EXTERIOR GIRDERS SEE SHEET 13



NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY CITY OF MILWAUKEE DEPARTMENT OF PUBLIC WORKS INFRASTRUCTURE SERVICES DIVISION			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	12/19/24	SDR	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE P-40-875			
N. HOLTON ST. OVER MILWAUKEE RIVER			
COUNTY	MILWAUKEE	TOWN/CITY/VILLAGE	MILWAUKEE
DESIGN SPEC.	REHABILITATION N/A		
DESIGNED BY	HMD	DESIGN CK'D.	JDT
DRAWN BY	GJR	PLANS CK'D.	HMD/JDT
SITE PLAN AND ELEVATION (1 OF 3)		SHEET 1 OF 31	

8

WISDOT BRIDGE OFFICE CONTACT:
AARON BONK 608-261-0261
CITY OF MILWAUKEE CONTACT:
JONATHAN THOMAS 414-286-0463



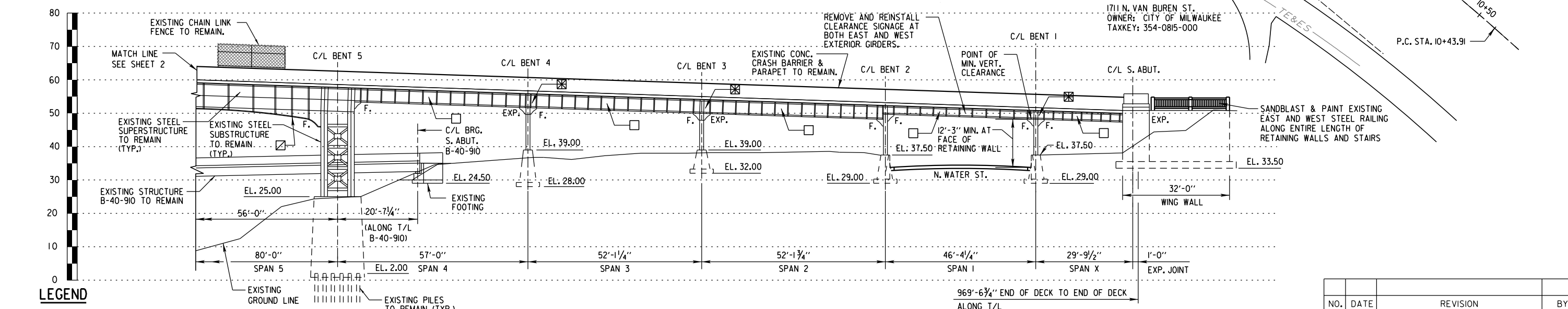
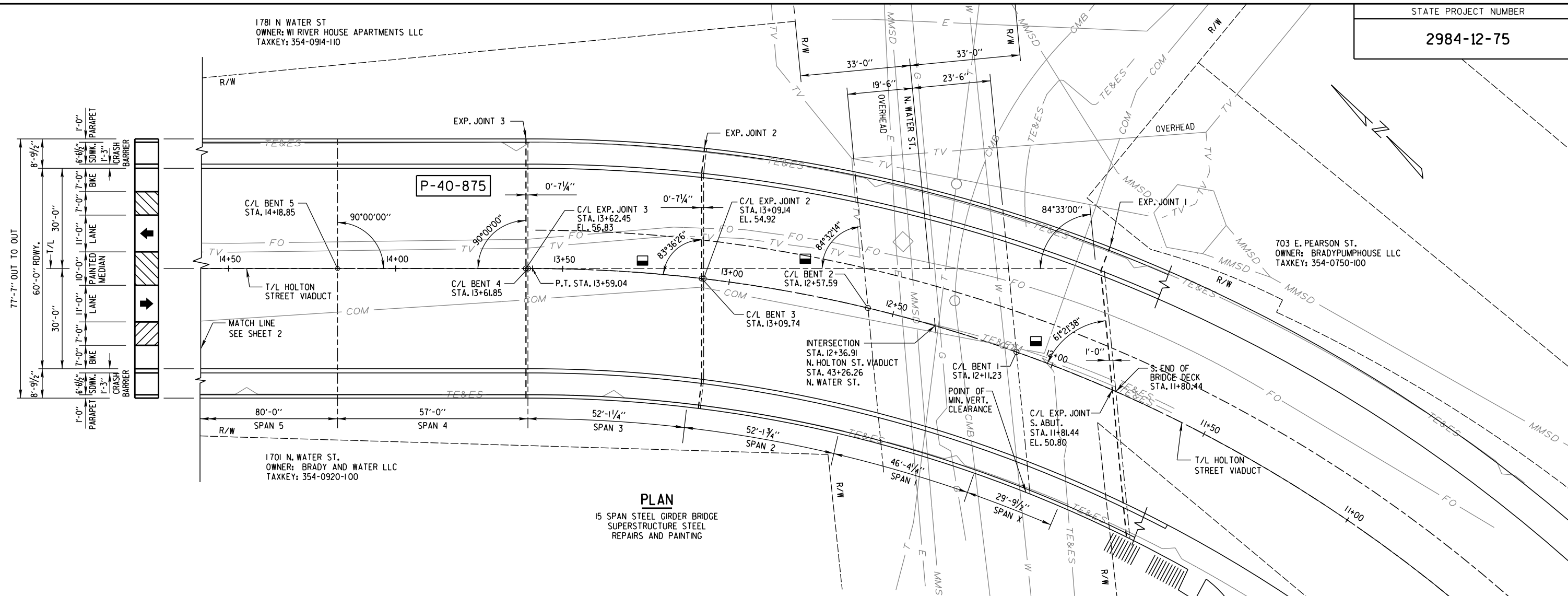
15 SPAN STEEL GIRDER BRIDGE
SUPERSTRUCTURE STEEL
REPAIRS AND PAINTING



13

WEST ELEVATION
(LOOKING NORTH EAST)

- | | | | |
|--|------|---------------|------------------------|
| | | | |
| NO. | DATE | REVISION | BY |
| STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION | | | |
| STRUCTURE P-40-875 | | | |
| | | DRAWN
BY | GJR PLANS
CK'D. HMD |
| SITE PLAN AND
ELEVATION
(2 OF 3) | | SHEET 2 OF 31 | |



LEGEND

- ANGLES MEASURED FROM TARGET TO T/L AT LOCATION OF INTERSECTION, TYP.
- STRUCTURAL STEEL REPAIRS AND PAINTING TO SUPERSTRUCTURE STEEL
- STIFFENER REPAIRS SEE SHEET 12 FOR REPAIRS TABLE AND DETAILS
- NEW SPLICE PLATE AT BOTH EAST AND WEST EXTERIOR GIRDERS SEE SHEET 13

WEST ELEVATION
(LOOKING NORTH EAST)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY GJR		PLANS CK'D. HMD	
SITE PLAN AND ELEVATION (3 OF 3)		SHEET 3 OF 31	

LIST OF DRAWINGS

1. SITE PLAN AND ELEVATION (1 OF 3)
2. SITE PLAN AND ELEVATION (2 OF 3)
3. SITE PLAN AND ELEVATION (3 OF 3)
4. CROSS SECTIONS (1 OF 2)
5. CROSS SECTIONS (2 OF 2)
6. TOTAL ESTIMATED QUANTITIES
7. FRAMING PLAN SPANS X THRU 3
8. FRAMING PLAN SPANS 4 THRU 6
9. FRAMING PLAN SPAN 7
10. FRAMING PLAN SPANS 8 THRU 10
11. FRAMING PLAN SPANS 11 THRU 14
12. 20G1 MEMBER AND STIFFENERS REPAIR DETAILS
13. 22G1R MEMBER AND EXTERIOR GIRDER REPAIR DETAILS
14. 91B1, 91B3, 91B6 & 91B16 SIDEWALK BRACKET DETAILS
15. 91B22L, 85B12R, 85B14 & 85B16R SIDEWALK BRACKET DETAILS
16. ELEVATIONS BENT 7 (N/S)
17. ELEVATIONS BENT 8 (N/S)
18. 27T1R/L MEMBER DETAILS (1 OF 2)
19. 27T1R/L MEMBER DETAILS (2 OF 2)
20. 29T1R/L MEMBER DETAILS
21. 31T1R/L MEMBER DETAILS (1 OF 2)
22. 31T1R/L MEMBER DETAILS (2 OF 2)
23. 33T1R/L MEMBER DETAILS (1 OF 2)
24. 33T1R/L MEMBER DETAILS (2 OF 2)
25. 128B2 AND 138B3 MEMBER DETAILS
26. 129G2R/L AND 129 MEMBER DETAILS
27. 131C3, 131C1 AND 131C1A MEMBER DETAILS
28. 27T1R/L REPAIR DETAILS
29. 29T1R REPAIR DETAILS
30. 31T1R/L AND 33T1R REPAIR DETAILS
31. 131C3, 131C1 AND 131C1A REPAIR DETAILS

TYPICAL CROSS SECTION

(FIXED SPANS 11-14)
(LOOKING NORTH)

CENTER BAY STRINGERS

JOINT NUMBER AND LOCATION	SOUTH OF BENT CENTER LINE			NORTH OF BENT CENTER LINE		
	WEST STRINGER	MID STRINGER	EAST STRINGER	WEST STRINGER	MID STRINGER	EAST STRINGER
JOINT 2 AT PIER 3	W6X15	W6X15	W6X15	W6X15	W6X15	W6X15
JOINT 3 AT PIER 4	W6X15	W6X15	W6X15	W8X13	W10X12	W8X13
JOINT 4 AT PIER 6	W10X12	W12X14	W10X12	W10X12	W12X14	W10X12
JOINT 8 AT PIER 9	W10X12	W12X14	W10X12	W10X12	W12X14	W10X12
JOINT 9 AT PIER 11	W8X13	W10X12	W8X13	W8X13	W10X12	W8X13
JOINT 10 AT PIER 12	W8X13	W10X12	W8X13	W6X15	W6X15	W6X15

WEST AND EAST BAYS: 15X42.9 I (TYPICAL)

WEST, CENTER AND EAST BAY STRINGERS

JOINT NUMBER AND LOCATION	SOUTH OF BENT CENTER LINE			NORTH OF BENT CENTER LINE		
	WEST BAY STRINGERS	MID BAY STRINGERS	EAST BAY STRINGERS	WEST BAY STRINGERS	MID BAY STRINGERS	EAST BAY STRINGERS
JOINT 5 AT PIER 7	W18X54.7	W10X12 W12X14	W18X54.7	W12X35	W14X30 W18X35	W12X35
JOINT 6 AT C/L SPAN 7	W12X35	W14X30 W18X35	W12X35	W12X35	W14X30 W18X35	W12X35
JOINT 7 AT PIER 8	W12X35	W14X30 W18X35	W12X35	W18X54.7	W10X12 W12X14	W18X54.7

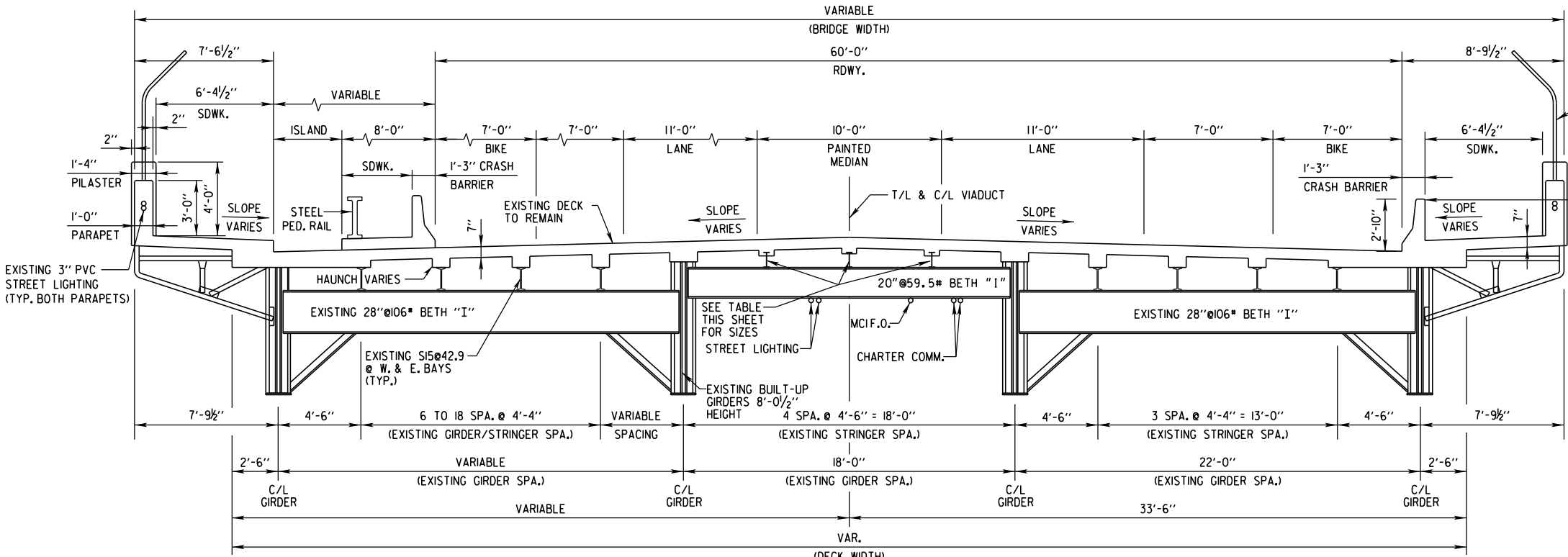
NOTES

SANDBLAST AND PAINT ALL
SUPERSTRUCTURE STEEL.
EXISTING UTILITIES TO
REMAIN AND BE PROTECTED.

STRUCTURE P-40-875

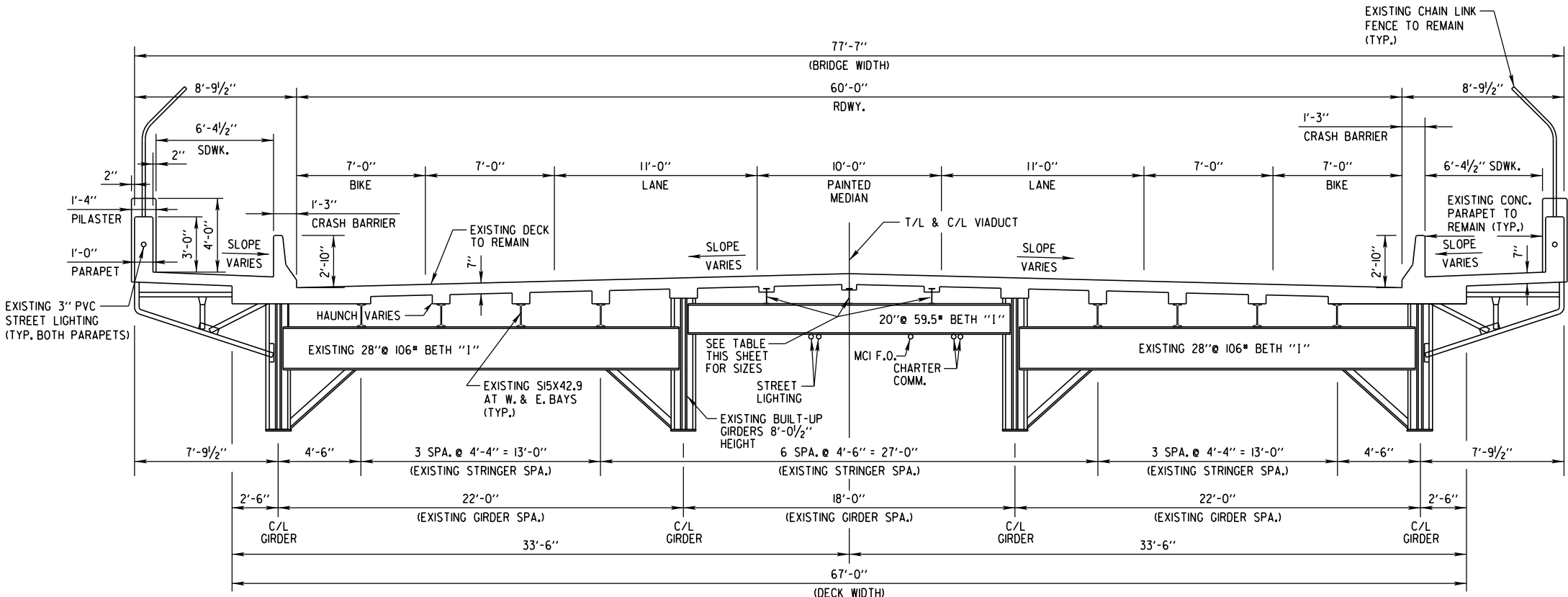
CROSS SECTIONS
(1 OF 2)

SHEET 4 OF 31



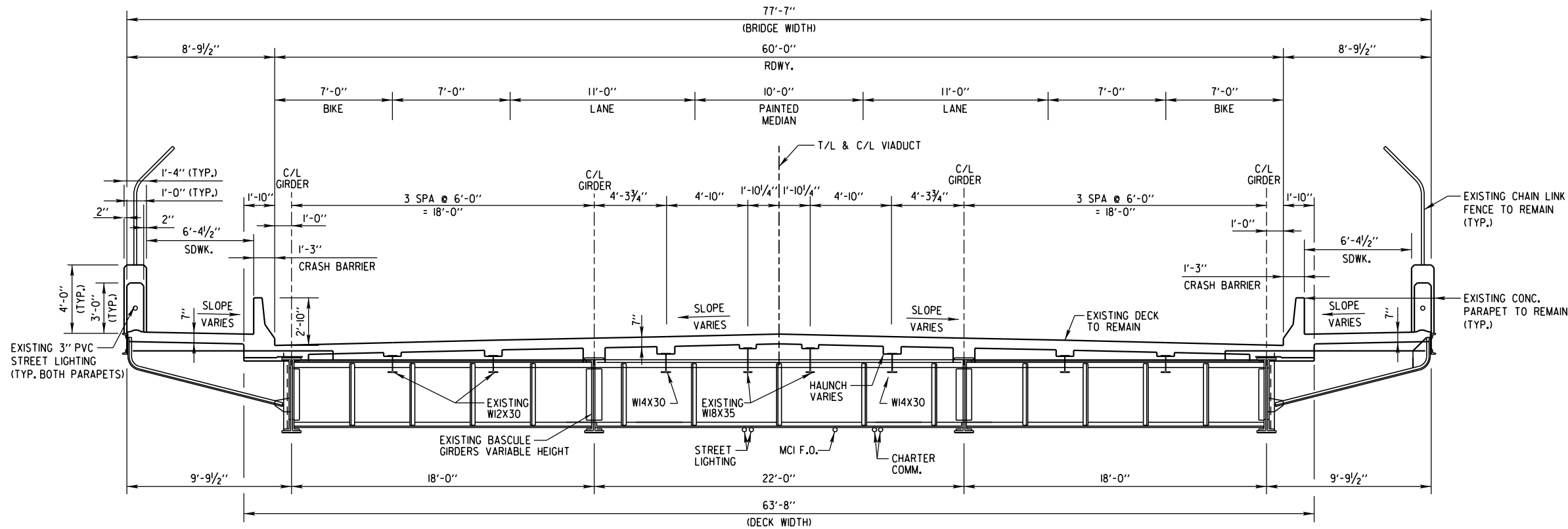
TYPICAL CROSS SECTION

(FIXED SPANS 11-14)
(LOOKING NORTH)

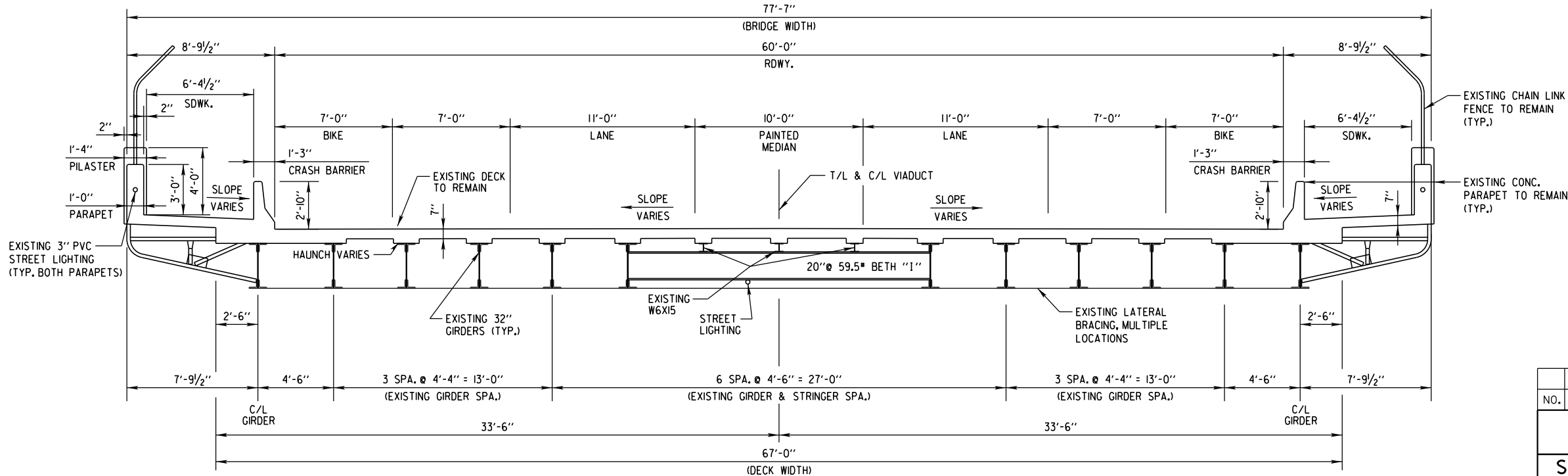


TYPICAL CROSS SECTION

(FIXED SPANS 2-6, 8-10)
(LOOKING NORTH)



TYPICAL CROSS SECTION
(BASCULE SPAN 7)
(LOOKING NORTH)



TYPICAL CROSS SECTION
(FIXED SPANS X AND I)
(LOOKING NORTH)

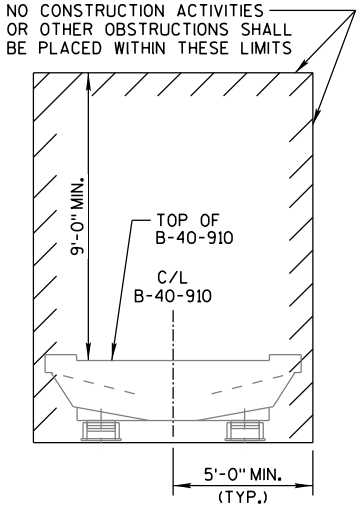
NOTES

SANDBLAST AND PAINT ALL
SUPERSTRUCTURE STEEL
EXISTING UTILITIES TO
REMAIN AND BE PROTECTED.

NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
CROSS SECTIONS (2 OF 2)			SHEET 5 OF 31

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SUPER.	SUBST.	TOTAL
203.0270	REMOVING STRUCTURE OVER WATERWAY DEBRIS CAPTURE P-40-875	EACH	1		1
506.0105	STRUCTURAL STEEL CARBON	LB	4,450	3,550	8,000
517.0601	PAINTING EPOXY SYSTEM P-40-875	EACH	1		1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE P-40-875	EACH	1		1
519.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS P-40-875	EACH	1		1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1		1
SPV.0060.516	TEMPORARY SHORING FOR PIER 7 AND 8 REPAIRS	EACH		1	1
SPV.0060.597	PROTECTING UTILITIES	EACH	1		1
SPV.0090.571	CONCRETE HAUNCH REMOVAL	LF	7,900		7,900
	NON-BID ITEMS				
	POLYETHYLENE SHEETS				



MINIMUM CONSTRUCTION
CLEARANCE ENVELOPE
NORMAL TO B-40-910

TEMPORARY MINIMUM CLEARANCE OF 9'-0" SHALL BE MAINTAINED ABOVE STRUCTURE B-40-910 AT ALL TIMES. LIMITED SHORT TERM CLOSURES MAY BE ALLOWED WITH APPROVAL OF ENGINEER.

GENERAL NOTES

ALL STATIONS AND ELEVATIONS ARE IN FEET.

ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM: 580.60 NGVD.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

DRAWINGS SHALL NOT BE SCALED.

ROADWAY ALIGNMENTS, STATIONING AND BASE MAPPING ARE BASED ON A FIELD SURVEY AND ARE TO BE USED FOR INFORMATIONAL PURPOSES ONLY. STATIONING SHOWN DOES NOT CORRELATE WITH PRIOR PLANS.

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

SEE ROADWAY PLANS FOR EXISTING AND PROPOSED UTILITY LOCATIONS.

EXISTING ABUTMENTS AND PIERS ARE TO REMAIN IN PLACE AS SHOWN AND INCORPORATED INTO NEW CONSTRUCTION.

EXISTING STRUCTURE P-40-875 IS A 15-SPAN STEEL GIRDER BRIDGE WITH AN OVERALL LENGTH OF 969'-6¾" AND TYPICAL WIDTH OF 77'-7".

WELDING NOT SHOWN ON PLANS WILL NOT BE PERMITTED, EXCEPT BY WRITTEN PERMISSION FROM THE ENGINEER AND WITH APPROVED WELD PROCEDURE BY THE CONTRACTOR.

USE GALVANIZED 7/8" DIAMETER ASTM A325 BOLTS FOR ALL CONNECTIONS, UNLESS NOTED OTHERWISE ON THE PLANS.

EXERCISE CARE WHILE REMOVING EXISTING BOLTS OR RIVETS AND INSTALLING NEW BOLTS. DO NOT DAMAGE EXISTING STEEL OR BOLT HOLES. ANY DAMAGE WILL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST.

PROVIDE MINIMUM RADIUS OF 1" AT ALL INTERIOR AND RE-ENTRANT CUTS, UNLESS NOTED OTHERWISE ON PLANS.

ALL NEW OR EXISTING HOLES IN STEEL NOT BEING USED ARE TO BE FILLED WITH HIGH STRENGTH, GALVANIZED BOLTS PRIOR TO STRUCTURAL PAINTING.

REMOVALS WILL BE MADE AS INDICATED ON DRAWINGS. ALL REMOVALS WILL BE COMPLETE AND INCLUDE ALL FOREIGN OBJECTS SUCH AS BRACKETS, HANGER, ABANDONED CONDUIT, ETC. THAT IS NOT NEEDED STRUCTURALLY, WHETHER MENTIONED OR NOT AND REMOVED AS DIRECTED BY THE ENGINEER IN THE FIELD.

STRUCTURAL STEEL REPAIRS AND MODIFICATIONS WILL BE MADE AS INDICATED PER PLANS.

PAINT FOR STEEL TO MATCH AMS STANDARD NO. 595A COLOR NO. 20318.

ALL NEW STEEL MEMBERS SHALL BE PAINTED UNDER BID ITEM 517.0601 "PAINTING EPOXY SYSTEM P-40-875".

ALL EXISTING STEEL SHALL BE SANDBLASTED AND PAINTED UNDER BID ITEMS 517.1801.S "STRUCTURE REPAINTING RECYCLED ABRASIVE P-40-875" AND 517.4501.S "NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS P-40-875."

PAINTING LIMITS SHALL BE FROM ELEVATION OF BOTTOM FLANGE OF MAIN STEEL GIRDERS TO UNDERSIDE OF DECK.

REMOVE EXISTING NON FUNCTIONAL ARCHITECTURAL LIGHT FIXTURES, AND CORRESPONDING CONDUITS MOUNTED AT STEEL MEMBERS BETWEEN BENTS 5 THRU 13.

CONCRETE HAUNCH REMOVALS ARE MEASURED ALONG EACH SIDE ADJACENT TO GIRDERS, AND STRINGERS. EXTERIOR GIRDERS CONCRETE HAUNCH REMOVAL IS AT INSIDE FLANGE.

BRIDGE REHABILITATION
CONSTRUCTION NOTES

EXISTING BRIDGE PLANS ARE ON FILE:
CITY OF MILWAUKEE, INFRASTRUCTURE SERVICES DIVISION
STRUCTURAL PLANNING & DESIGN UNIT
FRANK P. ZEIDLER MUNICIPAL BUILDING
841 N. BROADWAY, ROOM 907
MILWAUKEE, WI 53202
PHONE (414) 286-0463

SCOPE OF WORK

THE NORTH HOLTON STREET VIADUCT REHABILITATION PHASE III SPECIFIC REPAIRS ARE AS FOLLOWS:

STRUCTURAL STEEL REPAIRS TO SUPERSTRUCTURE INCLUDING, BUT NOT LIMITED TO, REPAIRS TO MAIN GIRDERS AND STIFFENERS.

BOLTING PLATES TO WEBS AND FLANGES OF SUPERSTRUCTURE STEEL.

SIDEWALK BRACKET REPAIRS AND/OR REPLACEMENT.

STRUCTURAL STEEL REPAIRS TO SUBSTRUCTURE INCLUDING, BUT NOT LIMITED TO: TOWER LEGS, COLUMNS, GUSSET PLATES AND BRACINGS.

SANDBLASTING, CLEANING AND PAINTING ALL STEEL ACROSS ENTIRE LENGTH OF VIADUCT FROM SOUTH ABUTMENT TO NORTH ABUTMENT AND FROM BOTTOM FLANGE OF GIRDERS TO UNDERSIDE OF DECK, AS WELL AS SUBSTRUCTURE REPAIRS.

CONCRETE HAUNCH REMOVAL AT UNDERSIDE OF DECK WHERE NOTED.

DESIGN DATA

MATERIAL PROPERTIES

NEW STRUCTURAL STEEL BEAMS/SHAPES (ASTM A709) ... F_y = 36,000 PSI

DEAD LOAD

CONCRETE = 150 PCF
FWS = 20 PSF

LIVE LOAD

TAKEN FROM HSI, 08/19/2024
INVENTORY RATING: HS=18
OPERATING RATING: HS=25
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = N/A

TRAFFIC DATA

A.D.T. (2018) = 9,300 VEHICLES/DAY
A.D.T. (2035) = 12,579 VEHICLES/DAY
R.D.S. = 30 MPH

UTILITIES

EXISTING UTILITIES ARE TO BE KEPT IN SERVICE AND PROTECTED DURING THE REHABILITATION PROJECT. SEE PROJECT SPECIAL PROVISION FOR DETAILS ON UTILITY WORK.

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

EXISTING CONDUITS MOUNTED TO THE UNDERSIDE OF THE SUPERSTRUCTURE SHALL REMAIN IN PLACE AND BE PROTECTED DURING CONSTRUCTION. SEE PROJECT SPECIFICATIONS.

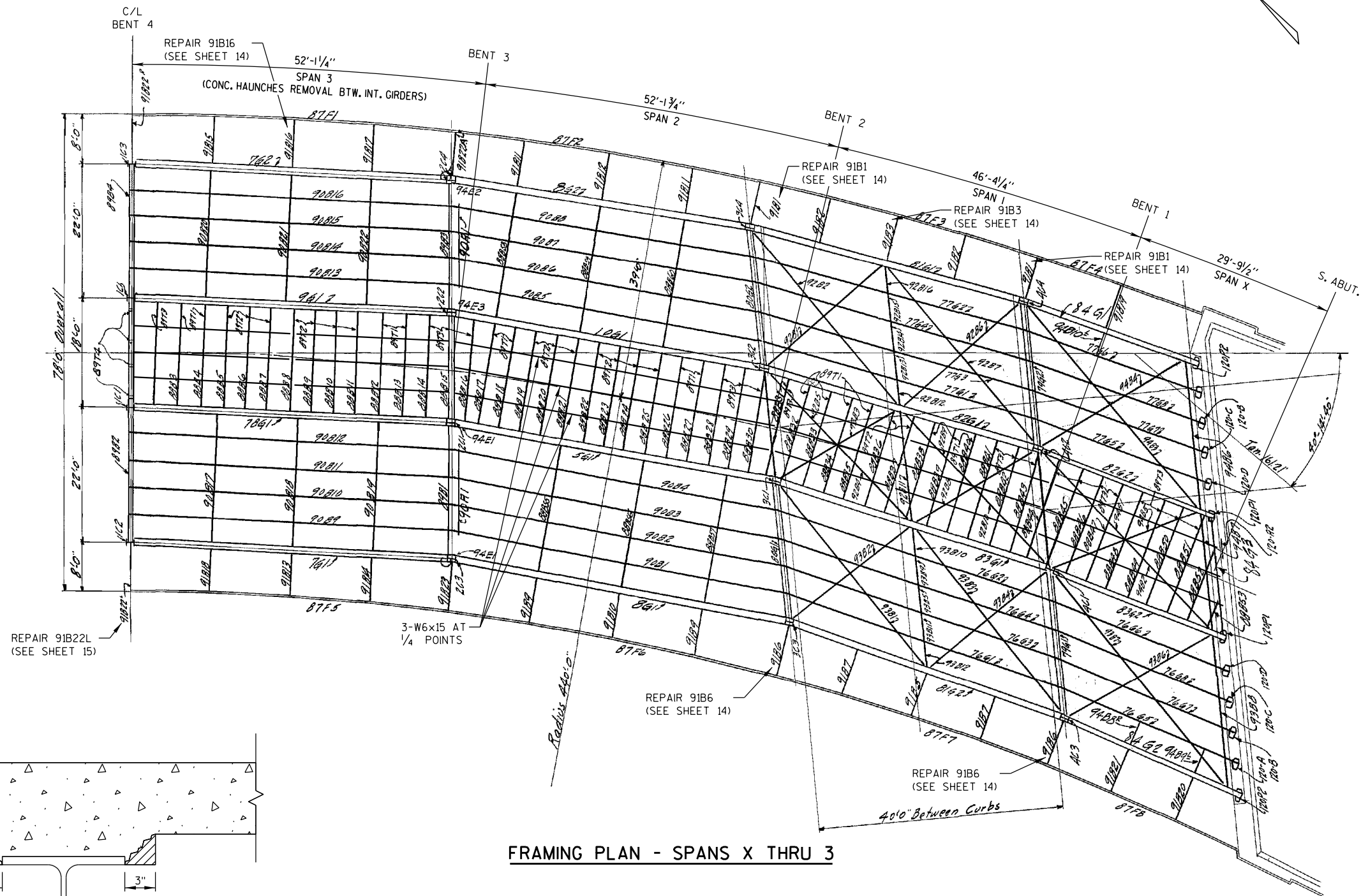
EXISTING LIGHT FIXTURES AND/OR CONDUITS MOUNTED AT SUPERSTRUCTURE, OR SUBSTRUCTURE MAY BE REMOVED WHILE WORK IS TAKING PLACE, THEN THEY NEED TO BE REINSTALLED. THIS IS INCIDENTAL TO BID ITEM SPV.0060.597 "PROTECTING UTILITIES".

SEE ROADWAY PLANS FOR EXISTING UTILITY LOCATIONS.

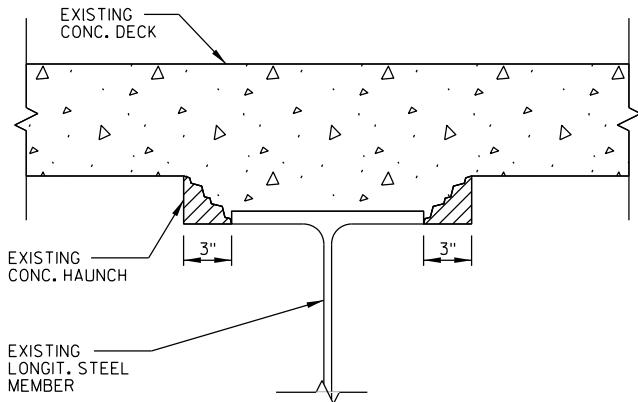
STATE PROJECT NUMBER

2984-12-75

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
		DRAWN BY GJR	PLANS CK'D. HMD
TOTAL ESTIMATED QUANTITIES		SHEET 6 OF 31	



FRAMING PLAN - SPANS X THRU 3



TYPICAL HAUNCH REMOVAL DETAIL

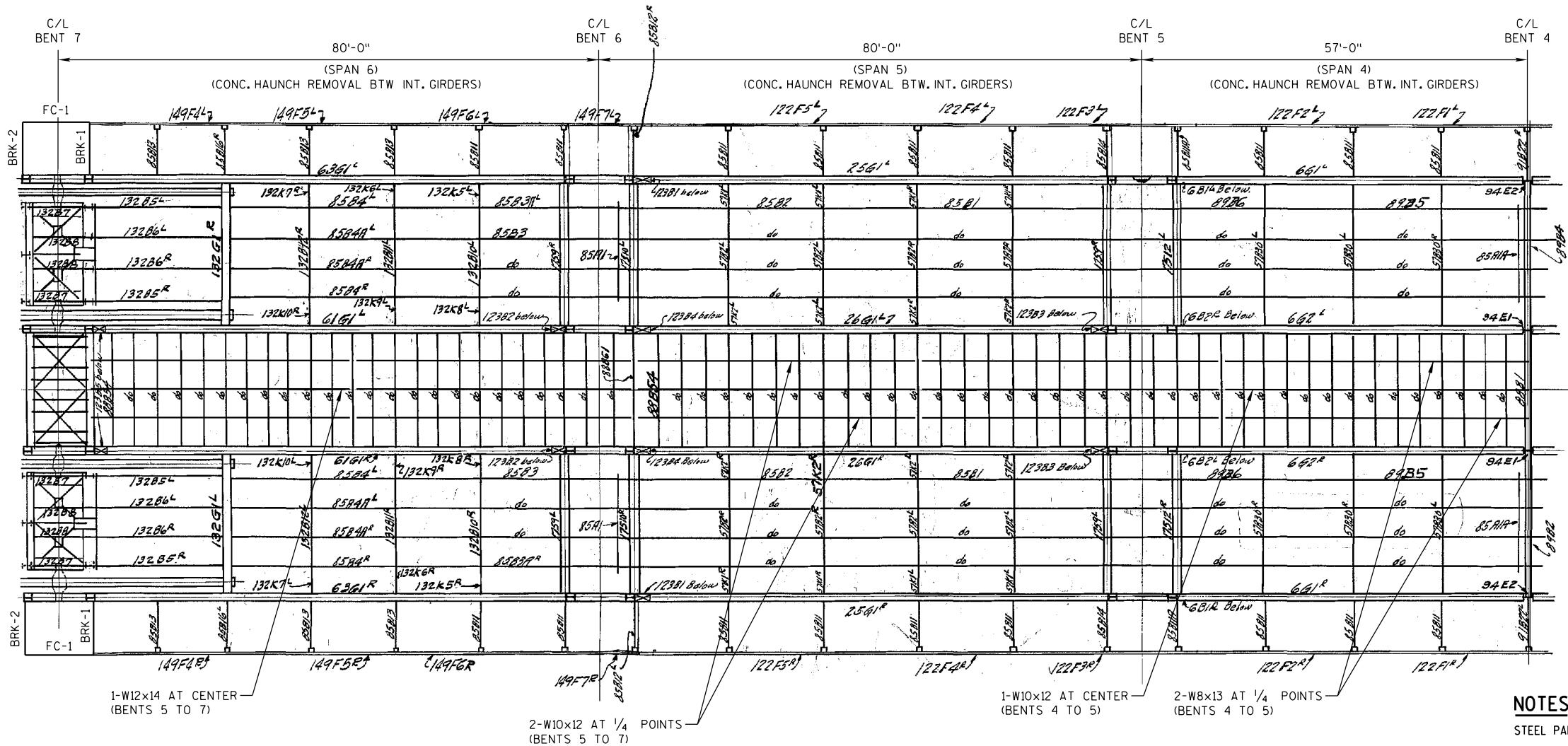
LEGEND

 = HAUNCH REMOVAL

NOTES

- STEEL PART NUMBERS BASED ON 1926 PLANS.
- CONC. HAUNCH REMOVAL AT BOTH SIDES OF INTERIOR GIRDERS AND STRINGERS.
- SANDBLAST AND PAINT ALL SUPERSTRUCTURE STEEL.
- EXISTING UTILITIES NOT SHOWN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
FRAMING PLAN SPANS X THRU 3			SHEET 7 OF 31

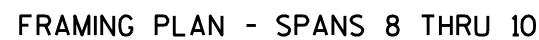


FRAMING PLAN - SPANS 4 THRU 6

NOTES

- STEEL PART NUMBERS BASED ON 1926 PLANS.
- CONC. HAUNCH REMOVAL AT BOTH SIDES OF INTERIOR GIRDERS AND STRINGERS.
- SANDBLAST AND PAINT ALL SUPERSTRUCTURE STEEL.
- EXISTING UTILITIES NOT SHOWN.

NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
		STRUCTURE P-40-875	
		DRAWN BY GJR	PLANS CK'D. HMD
		FRAMING PLAN SPANS 4 THRU 6	SHEET 8 OF 31



STEEL PART NUMBERS BASED ON 1926 PLANS.

CONC. HAUNCH REMOVAL AT BOTH SIDES OF INTERIOR
GIRDERS, STRINGERS AND INSIDE FLANGES OF
EXTERIOR GIRDERS.

SANDBLAST AND PAINT ALL SUPERSTRUCTURE
STEEL.

REMOVE AND REINSTALL EXISTING NETTING.

EXISTING UTILITIES NOT SHOWN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
		DRAWN BY	PLANS CK'D.
		GJR	HM
FRAMING PLAN SPANS 8 THRU 10		SHEET 10 OF 3	

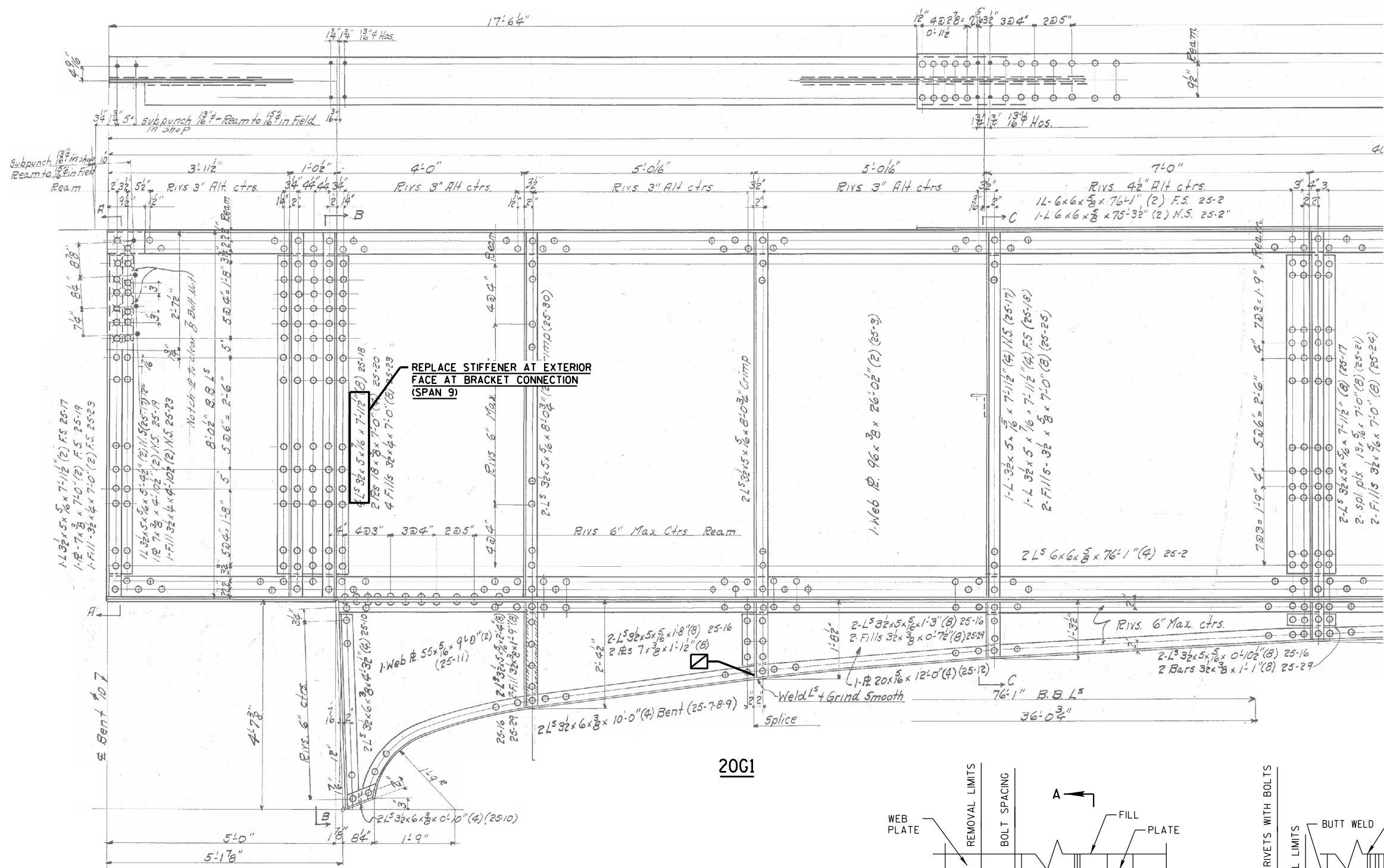


FRAMING PLAN - SPANS 11 THRU 14

NOTES

- STEEL PART NUMBERS BASED ON 1926 PLANS.
- CONC. HAUNCH REMOVAL AT BOTH SIDES OF INTERIOR GIRDERS, STRINGERS, AND INSIDE FLANGES OF EXTERIOR GIRDERS.
- SANDBLAST AND PAINT ALL SUPERSTRUCTURE STEEL.
- EXISTING UTILITIES NOT SHOWN.

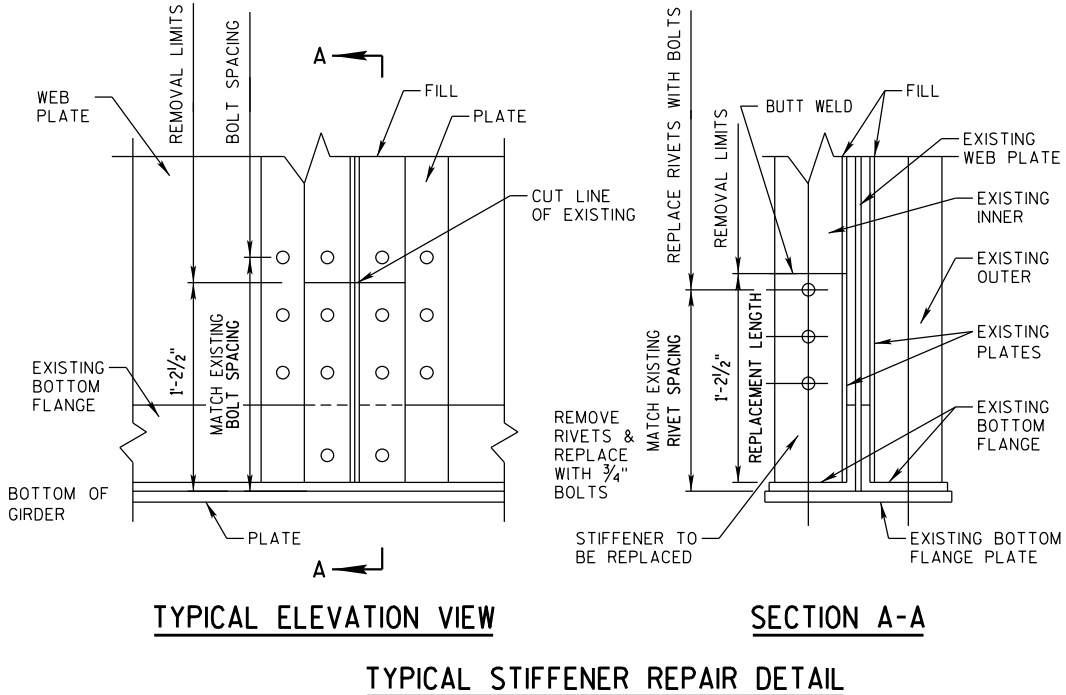
NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE P-40-875				
DRAWN BY		GJR	PLANS CK'D.	HMD
FRAMING PLAN SPANS 11 THRU 14				SHEET 11 OF 31



20G1

STIFFENER REPAIRS TABLE

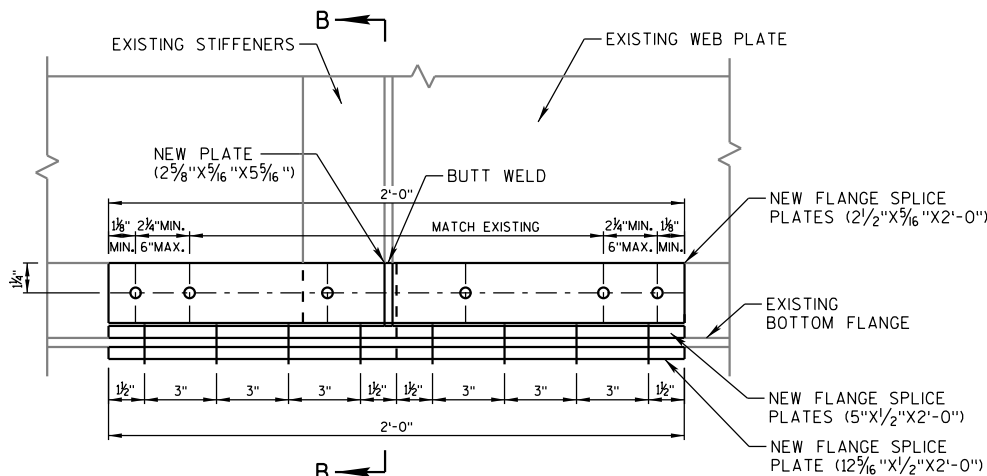
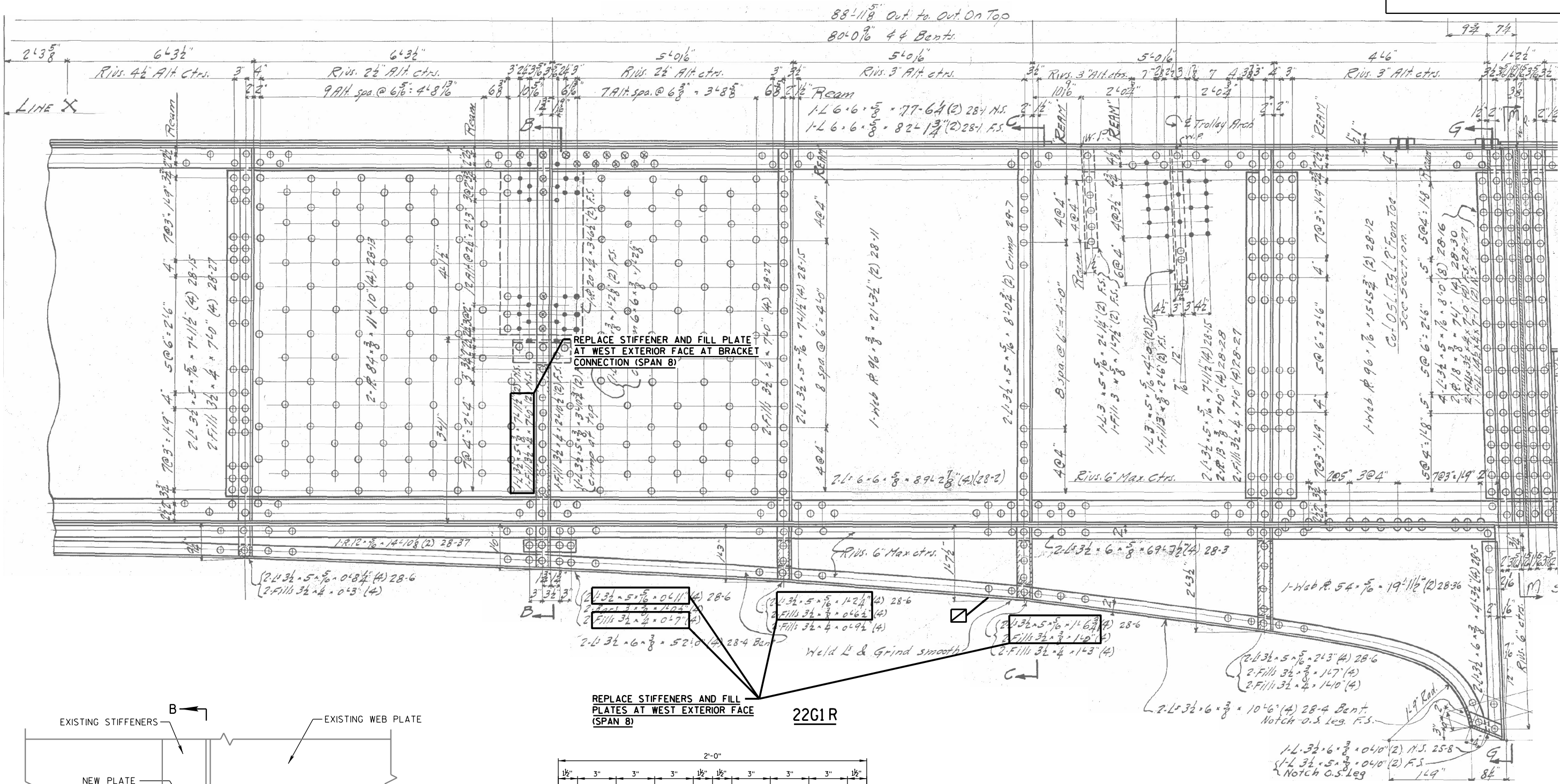
STIFFENER LOCATION AT GIRDER	SPAN NUMBER	BOTTOM REPAIR LIMITS	MEMBER SIZE	DESCRIPTION & LOCATION
84G1 (EAST GIRDER)	X	1'-2 1/2"	L 3"X3 1/2"X3/8"	VERTICAL STIFFENER AT OUTSIDE FACE
8G1 (WEST GIRDER)	2	1'-2 1/2"	L 3 1/2"X5"X3/8"	VERTICAL STIFFENER AT OUTSIDE FACE
	2	1'-2 1/2"	L 3 1/2"X5"X3/8"	Z-BAR AT OUTSIDE FACE
8G2 (EAST GIRDER)	2	1'-2 1/2"	L 3 1/2"X5"X3/8"	VERTICAL STIFFENER AT OUTSIDE FACE
	2	1'-2 1/2"	L 3 1/2"X5"X3/8"	Z-BAR AT OUTSIDE FACE
7G2 (EAST GIRDER)	3	1'-2 1/2"	L 3"X5"X3/8"	VERTICAL STIFFENER AT OUTSIDE FACE
	3	1'-2 1/2"	2 PLS 14"X5/8"	Z-BAR AT OUTSIDE FACE
7G1 (WEST GIRDER)	3	1'-2 1/2"	L 3"X5"X3/8"	VERTICAL STIFFENER AT OUTSIDE FACE
	3	1'-2 1/2"	2 PLS 14"X5/8"	Z-BAR AT OUTSIDE FACE
65G1	11	1'-2 1/2"	L 5 1/2"X5"X3/8"	Z-BAR AT INSIDE FACE
	11		4-BOLTS	MISSING RIVETS AT STIFFENER AT INSIDE FACE



LEGEND

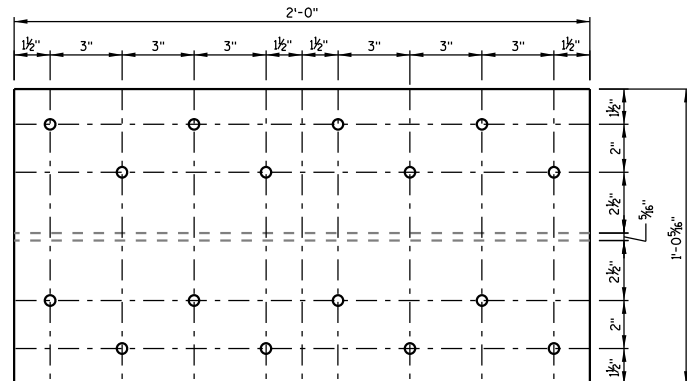
EXTERIOR GIRDER REPAIRS
SEE SHEET 13 FOR DETAILS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		HMD	PLANS CK'D. HMD
20G1 MEMBER AND STIFFENERS REPAIR DETAILS		SHEET 12 OF 31	

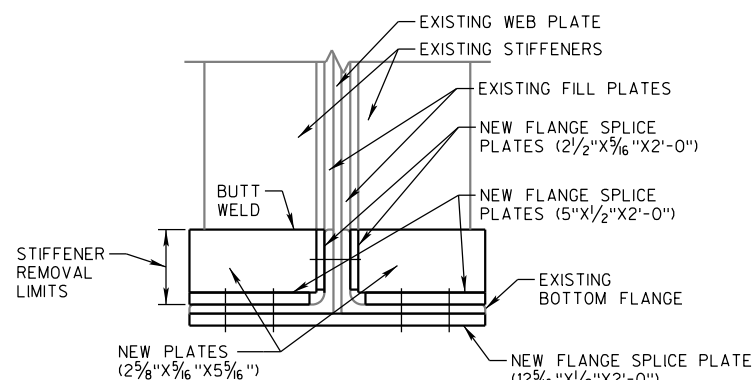


ELEVATION VIEW AT EXTERIOR GIRDER LOCATIONS

(NEW SPlice PLATES SHOULD BE BENT TO ACCOUNT FOR EXISTING SKEW ALONG GIRDER)

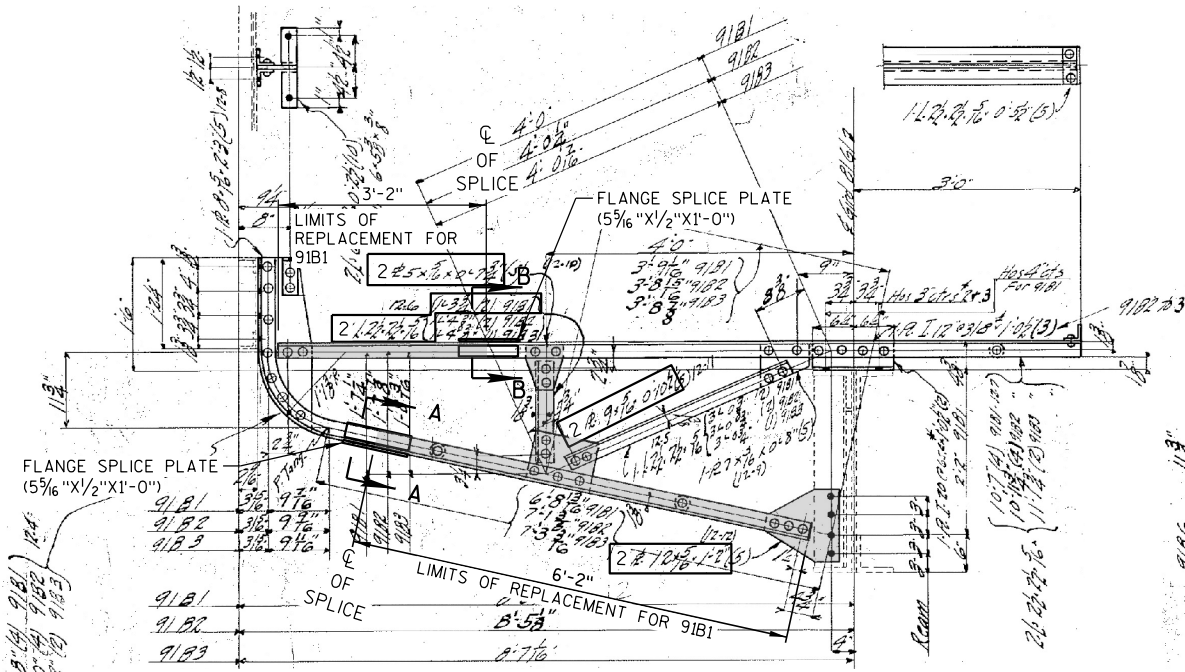


BOTTOM FLANGE SPlice PLATE

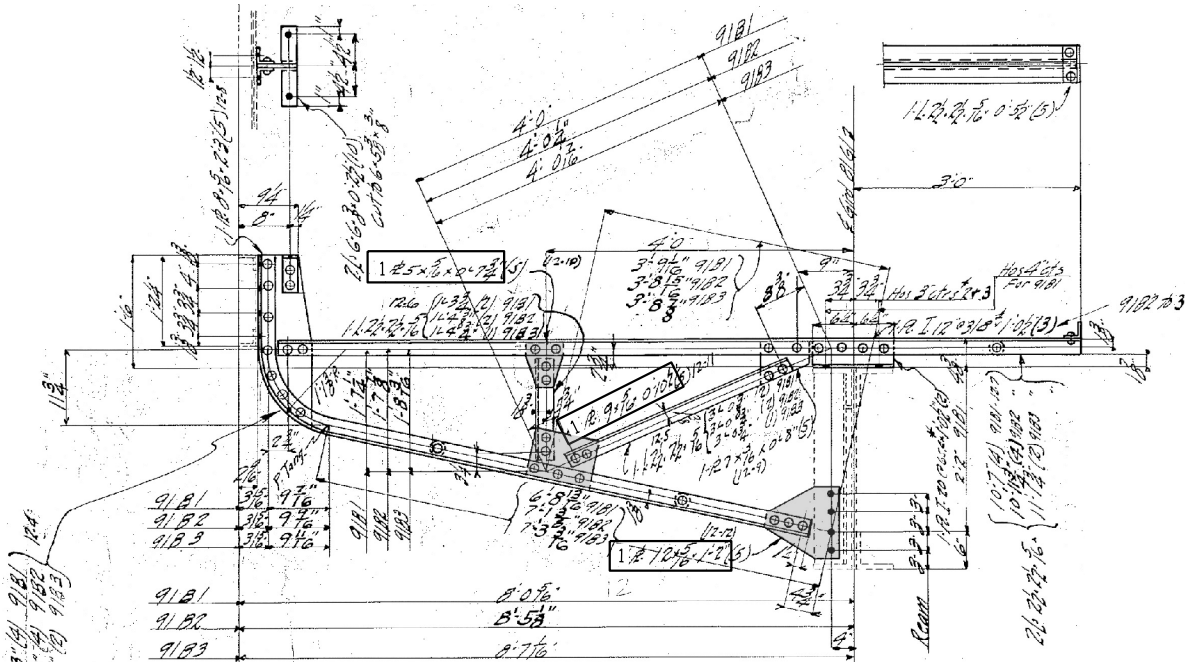


SECTION B-B

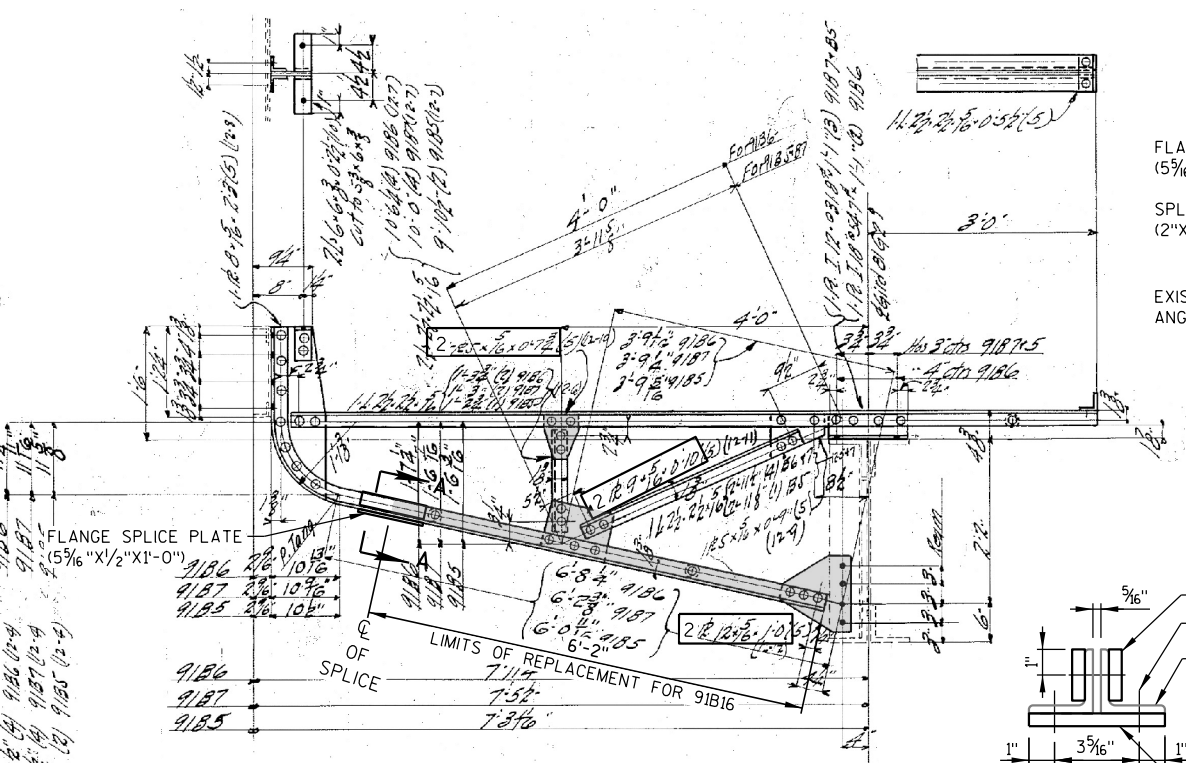
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		HMD	PLANS CK'D. HMD
22G1R MEMBER AND EXTERIOR GIRDER REPAIR DETAILS		SHEET 13 OF 31	



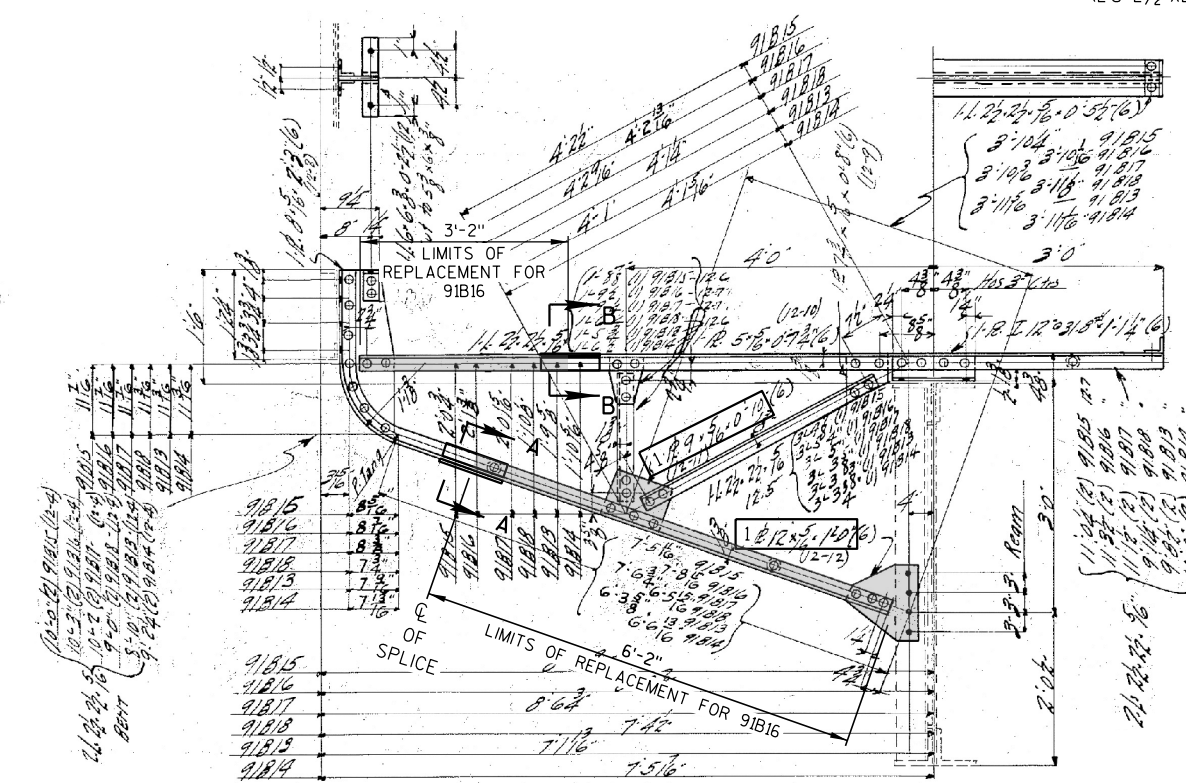
SIDEWALK BRACKETS 91B1 THRU 91B3
(REPAIRS TO (2) 91B1)



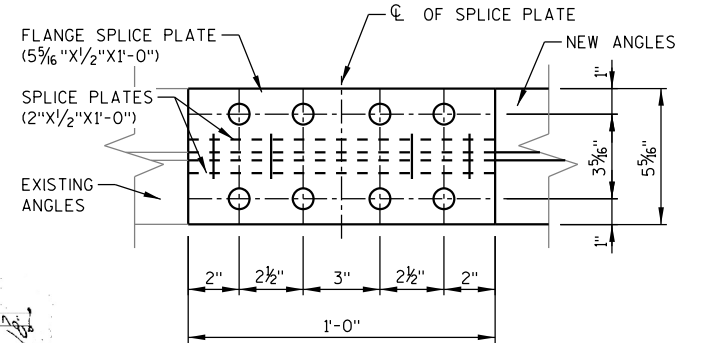
SIDEWALK BRACKETS 91B1 THRU 91B3
(REPAIRS TO 91B3)



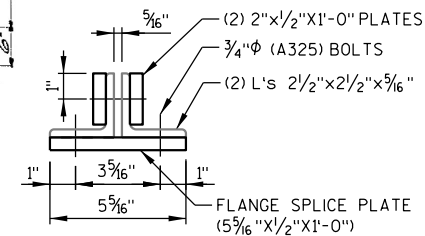
SIDEWALK BRACKETS 91B5 THRU 91B7
(REPAIRS TO (2) 91B6)



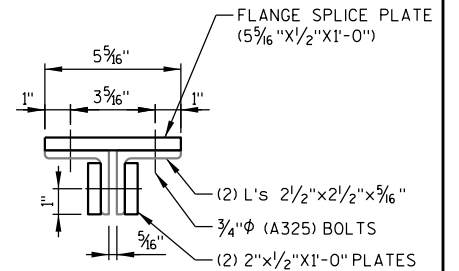
SIDEWALK BRACKETS 91B13 THRU 91B18
(REPAIRS TO 91B16)



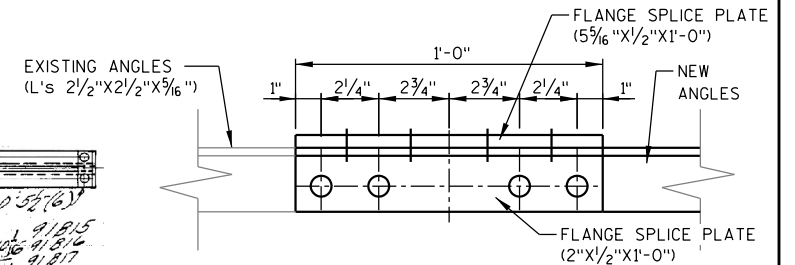
FLANGE SPlice PLATE DETAIL



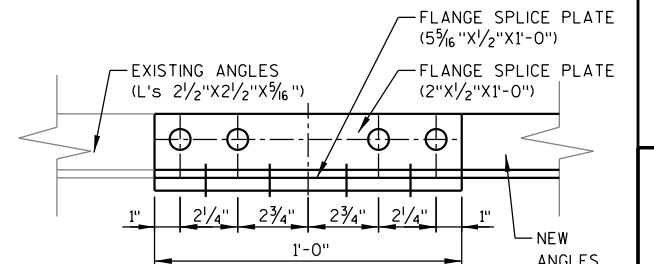
SECTION A-A



SECTION B-B



TOP SPlice PLATE DETAIL

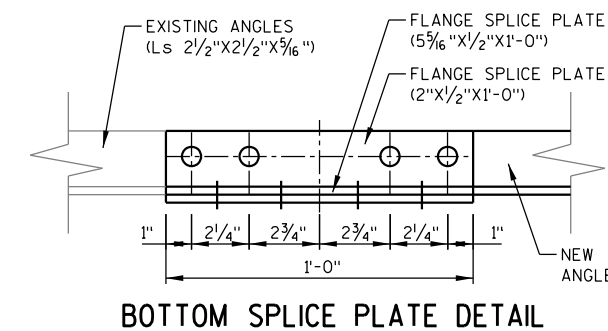
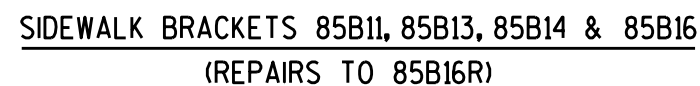
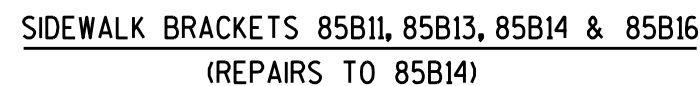
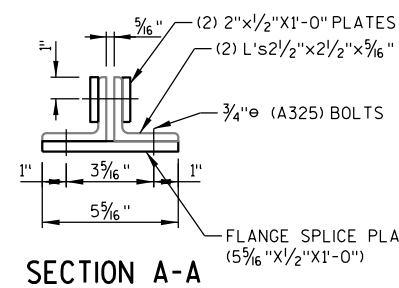


BOTTOM SPlice PLATE DETAIL

LEGEND

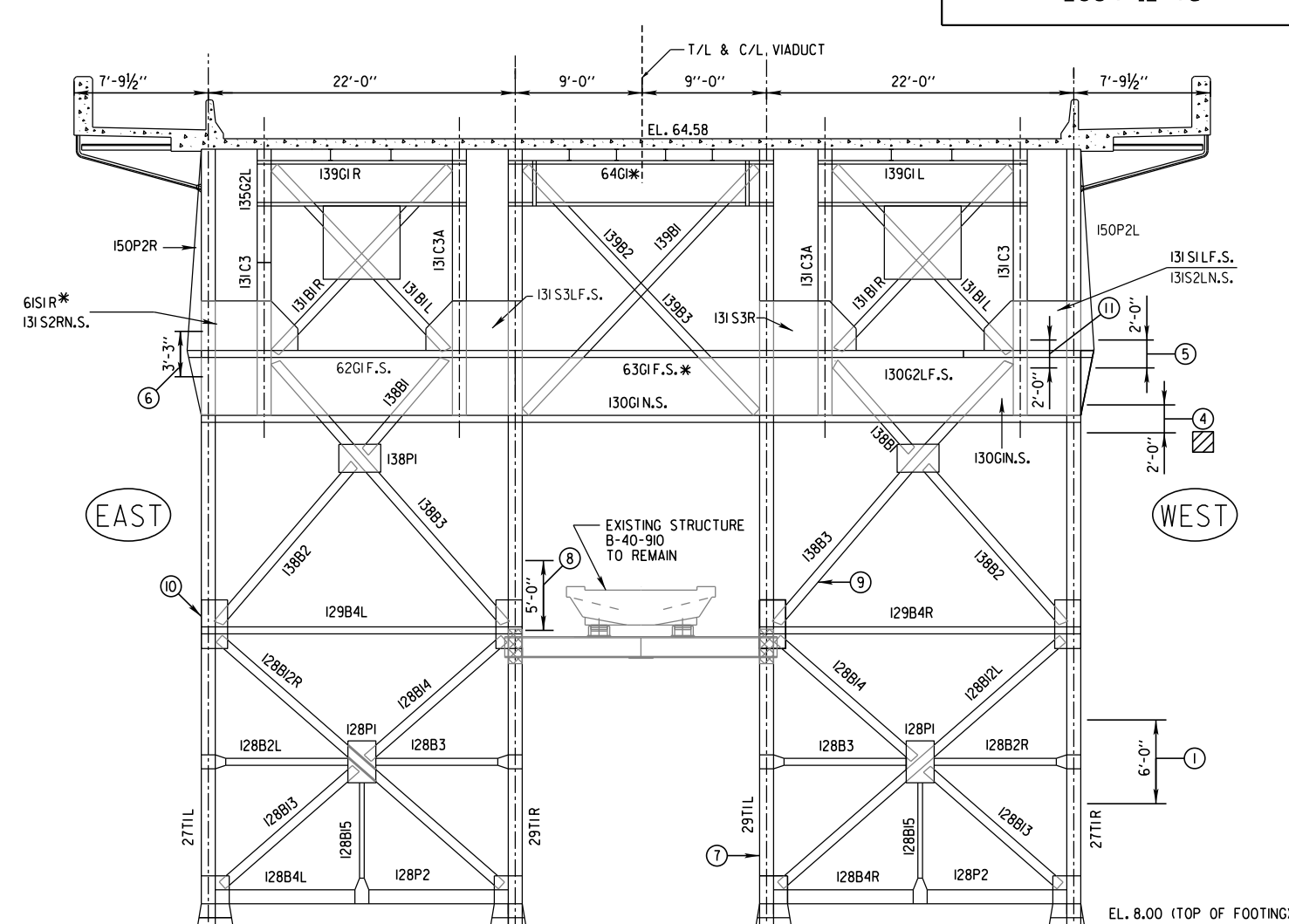
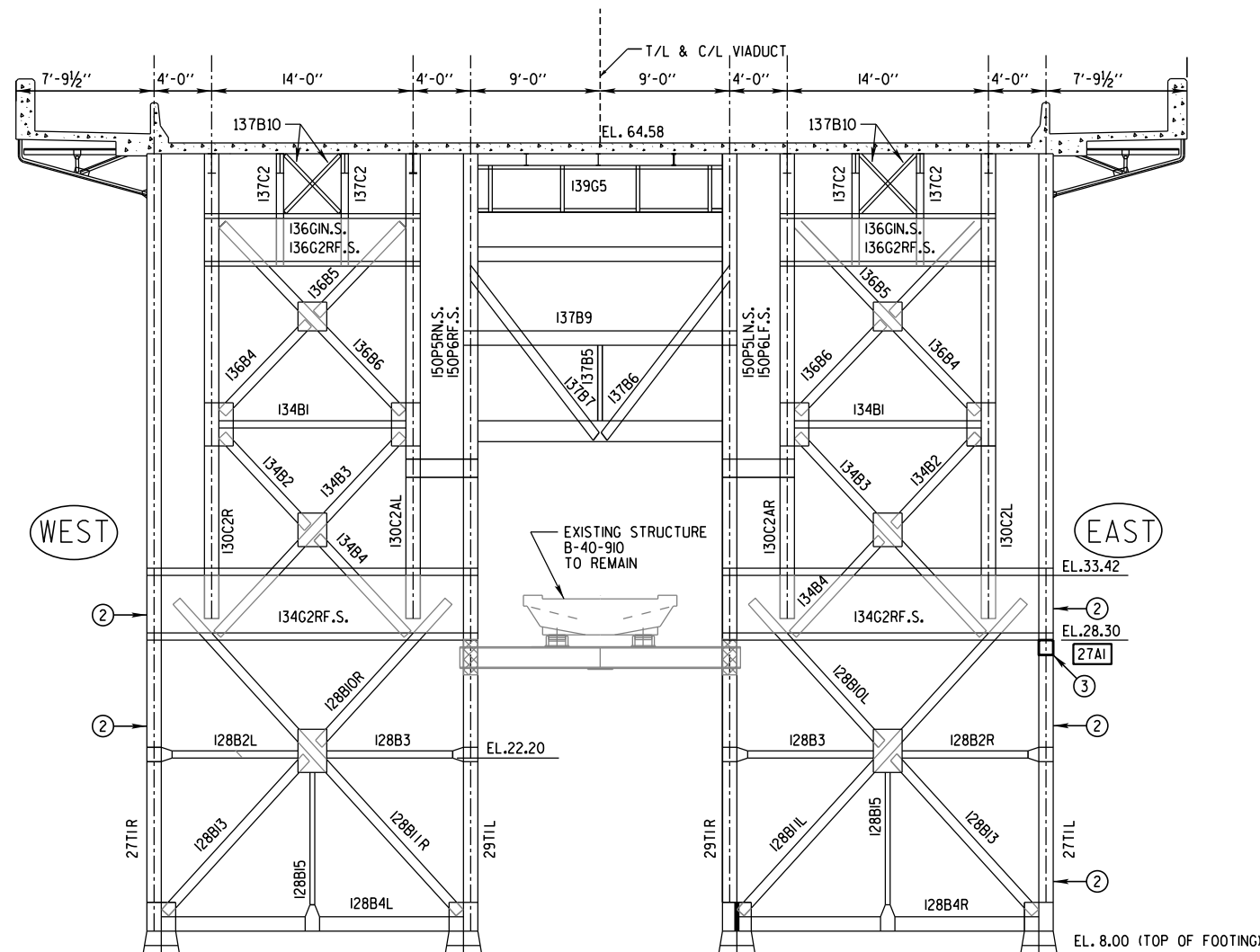
- : MEMBERS TO BE REPAIRED OR REPLACED
- : REPLACED MEMBER DIMENSIONS

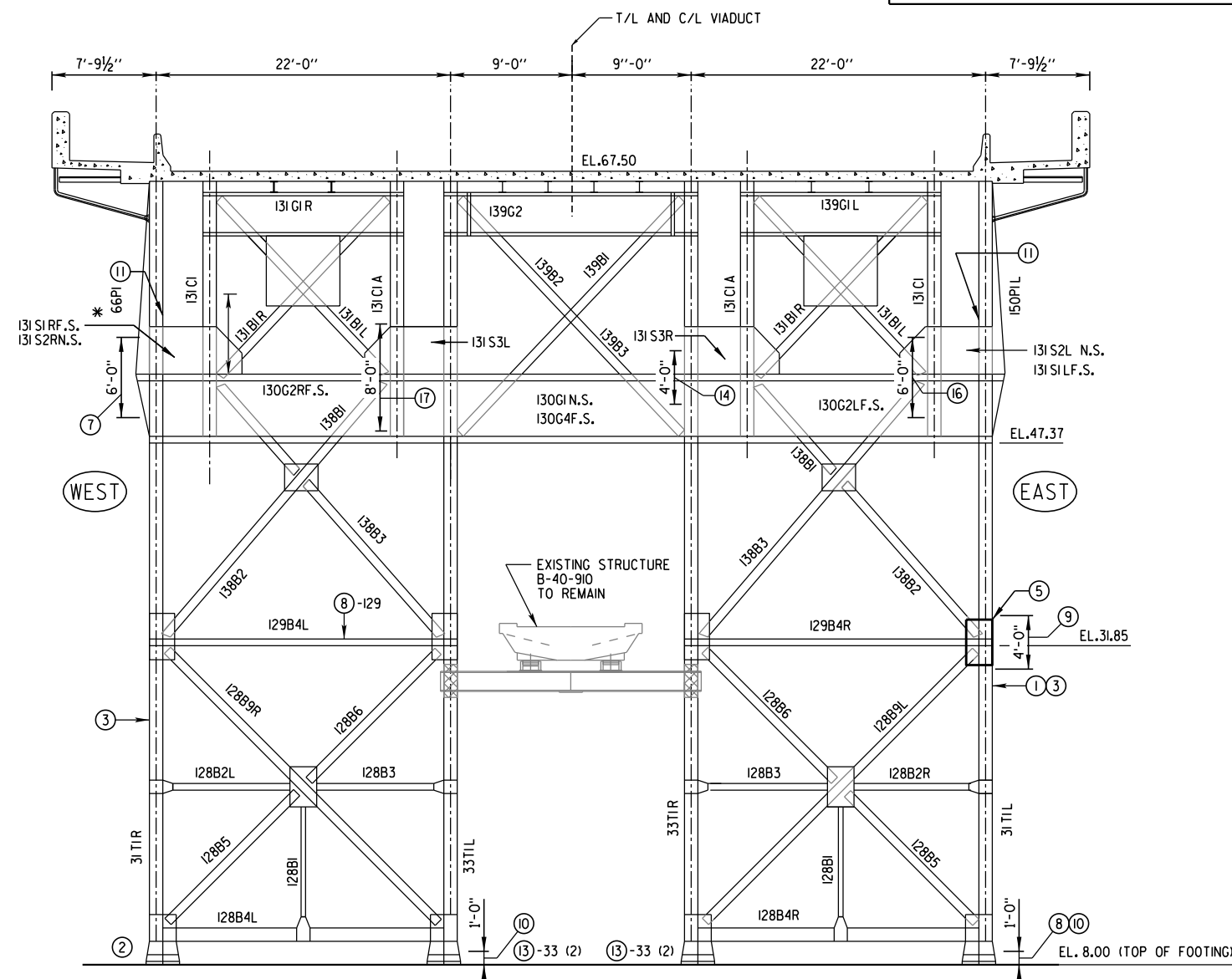
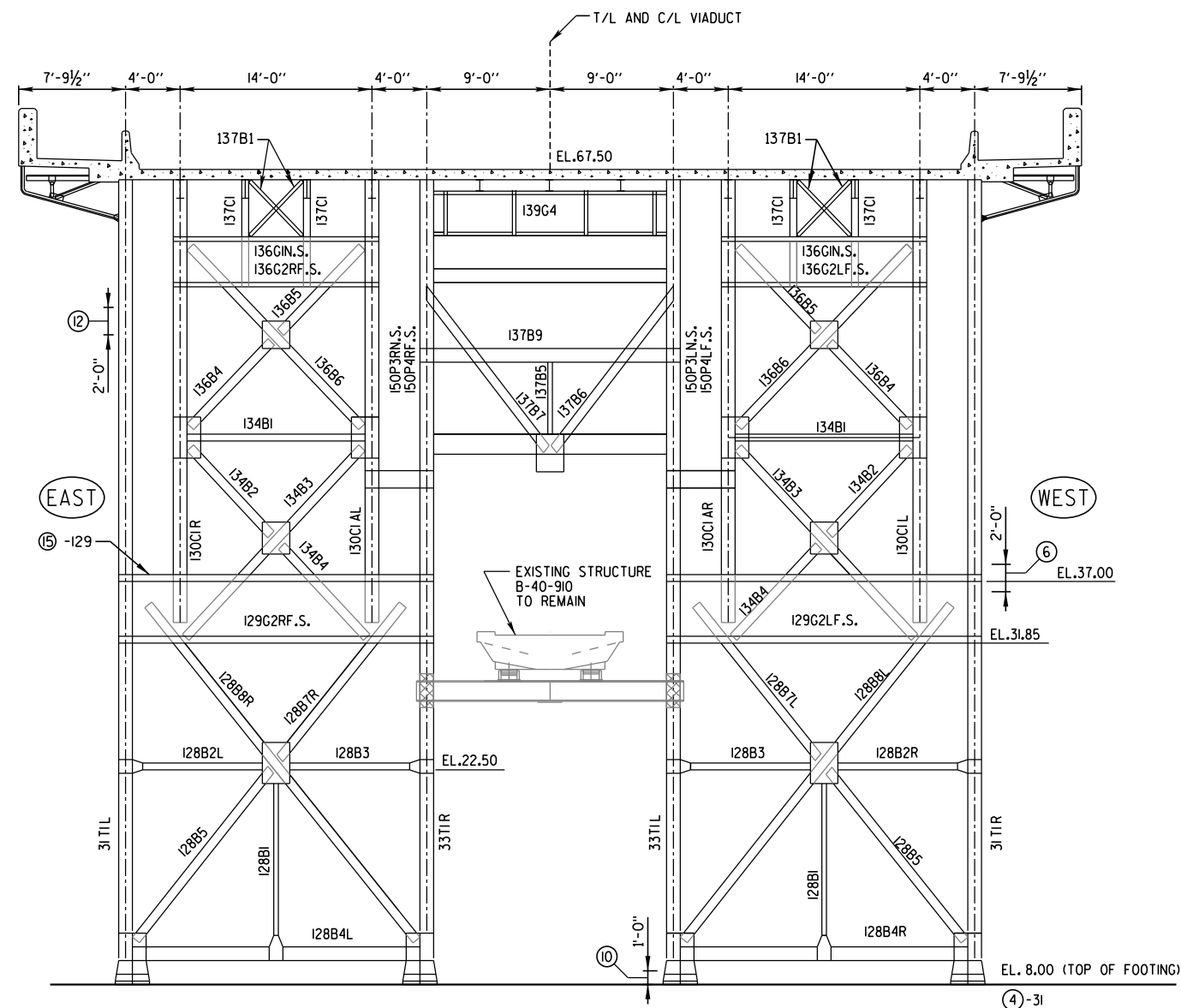
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		HMD	PLANS CK'D. HMD
91B1, 91B3, 91B6 & 91B16 SIDEWALK BRACKET DETAILS		SHEET 14 OF 31	



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HM
91B22L,85B12R,85B14 & 85B16R SIDEWALK BRACKET DETAILS		SHEET 15 OF 3	

☐ : MEMBERS TO BE REPAIRED OR REPLACED
☐ : REPLACED MEMBER DIMENSIONS





NOTE ① SHEET 16.
ADD NEW OUTER FLANGE
PLATE (12 1/2"X1 1/2"X6'-0") TO
NORTH FLANGES OF 27T1R.
SEE SHEET 28 FOR DETAILS.

NOTE ② SHEET 16.
- REPLACE (1) GUSSET PLATE
(27P4) AT 4TH LEVEL.
- REPLACE DIAGONAL BRACING
CHANNEL AT 3RD AND 4TH
LEVELS (9'-2").
- REPLACE (2) DIAGONAL BRACING
CHANNELS AT 4TH LEVEL (4'-0 1/2").
- REPLACE (3) GUSSET PLATES
(27P1, 27P2, 27P3)
AT 1ST, 3RD AND 4TH LEVELS.
- REPLACE DIAGONAL BRACING
CHANNEL AT 4TH LEVEL (9'-2").

NOTE ③ SHEET 16.
REPLACE 27A1

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
27T1R/L MEMBER DETAILS (1 OF 2)			SHEET 18 OF 31

NOTE ④ SHEET 16. ———
ADD NEW INNER FLANGE
PLATE (5"X1/2"X2'-0") TO N.W.
FLANGE OF 27T1R.
SEE SHEET 28 FOR DETAILS.

NOTE ⑥ SHEET 16.
REMOVE EXISTING WEB PLATES
AT BOTH FACES AND ADD NEW
(2) WEB FILL PLATES.
(7 1/2" X 3/16" X 3'-3") AND (2) WEB
PLATES (12 1/4" X 1/2" X 3'-3") TO 27TIL.
SEE SHEET 28 FOR DETAILS.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HM
27T1 R/L MEMBER DETAILS (2 OF 2)		SHEET 19 OF 3	

NOTE ⑧ SHEET 16.
ADD (2) WEB FILL PLATES (7½"x5/8"x5'-0")
AND (2) WEB PLATES (12¼"x½"x5'-0") TO
EAST AND WEST FACES OF 29T1R.
SEE SHEET 29 FOR DETAILS.

NOTE ⑦ SHEET 16.

REPLACE
DIAGONAL
BRACING

REPLACE 29P1
(22"x3/8"x2'-5½")

NO.	DATE	REVISION	BY
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY	GJR	PLANS CK'D.	HMD
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29T1 R/L
MEMBER DETAILS

SHEET 20 OF 31

REVISION DATE: 12-17-2024 BY GJR

8

NEW OUTER
PLATE 31P3

NEW INNER
PLATE 31P4

GRIND BEVEL IN ADJACENT ANGLE
LEGS AND PLATES 31P3 AND 31P4
WELD WITH PARTIAL JOINT
PENETRATION GROOVE WELD AT
VERTICAL AND HORIZONTAL LEGS
OF PLATE.
NOTE ④ SHEET 17.

NOTE ② SHEET 17.
31A1

NOTE ⑧ SHEET 17.
ADD NEW INNER FLANGE
PLATE (5"x1/2"x1'-0") TO
S.E. FLANGE OF 31TIL. SEE SHEET 30 FOR DETAILS.

NOTE ⑩ SHEET 17.
ADD (2) FLANGE PLATES
(4"x1/2"x1'-0") TO
STIFFENER ANGLE.

NOTE ③ SHEET 17.
31P1 AND 31P2

(REPLACE 3RD LEVEL
GUSSET PLATE AT WEST
AND EAST TOWERS).

NOTE ① SHEET 17.
ADD WEB PLATES
(7"x1/2"x1'-6")
(2) AT W. ELEV. AT EAST TOWER.
(2) AT E. ELEV. AT EAST TOWER.

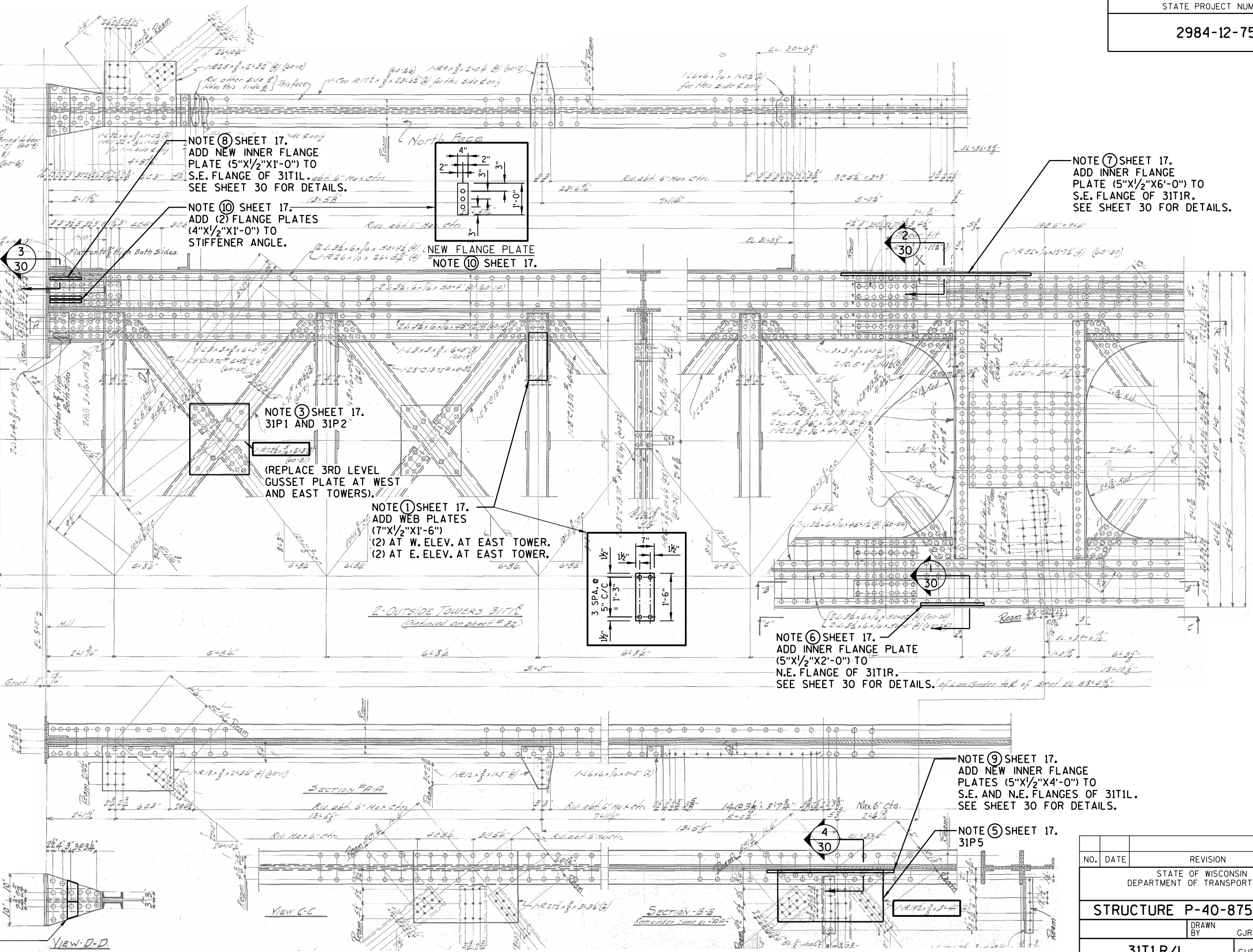
NEW FLANGE PLATE
NOTE ⑩ SHEET 17.

NOTE ⑦ SHEET 17.
ADD INNER FLANGE
PLATE (5"x1/2"x6'-0") TO
S.E. FLANGE OF 31TIR.
SEE SHEET 30 FOR DETAILS.

NOTE ⑥ SHEET 17.
ADD INNER FLANGE PLATE
(5"x1/2"x2'-0") TO
N.E. FLANGE OF 31TIR.
SEE SHEET 30 FOR DETAILS.

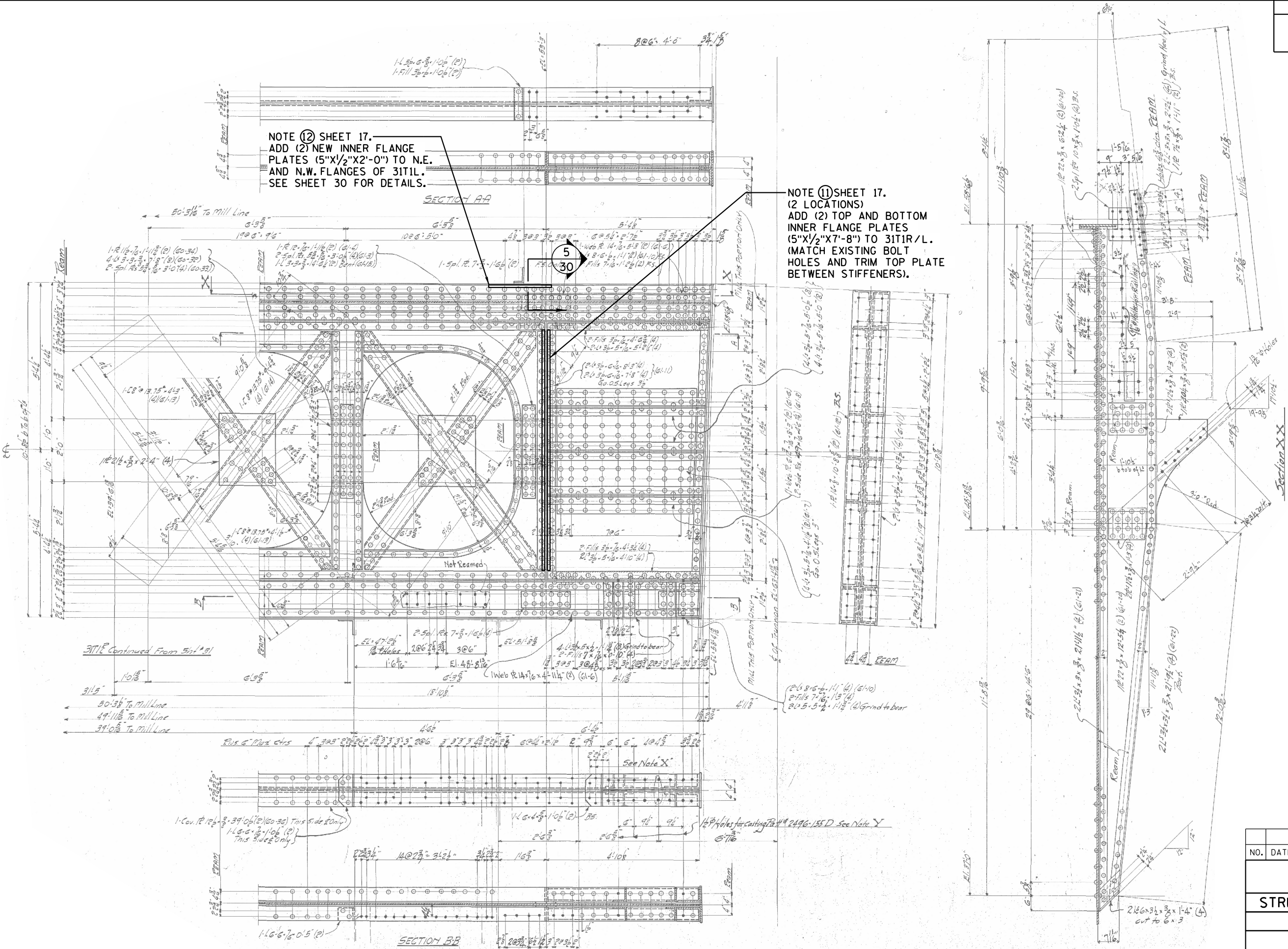
NOTE ⑨ SHEET 17.
ADD NEW INNER FLANGE
PLATES (5"x1/2"x4'-0") TO
S.E. AND N.E. FLANGES OF 31TIL.
SEE SHEET 30 FOR DETAILS.

NOTE ⑤ SHEET 17.
31P5

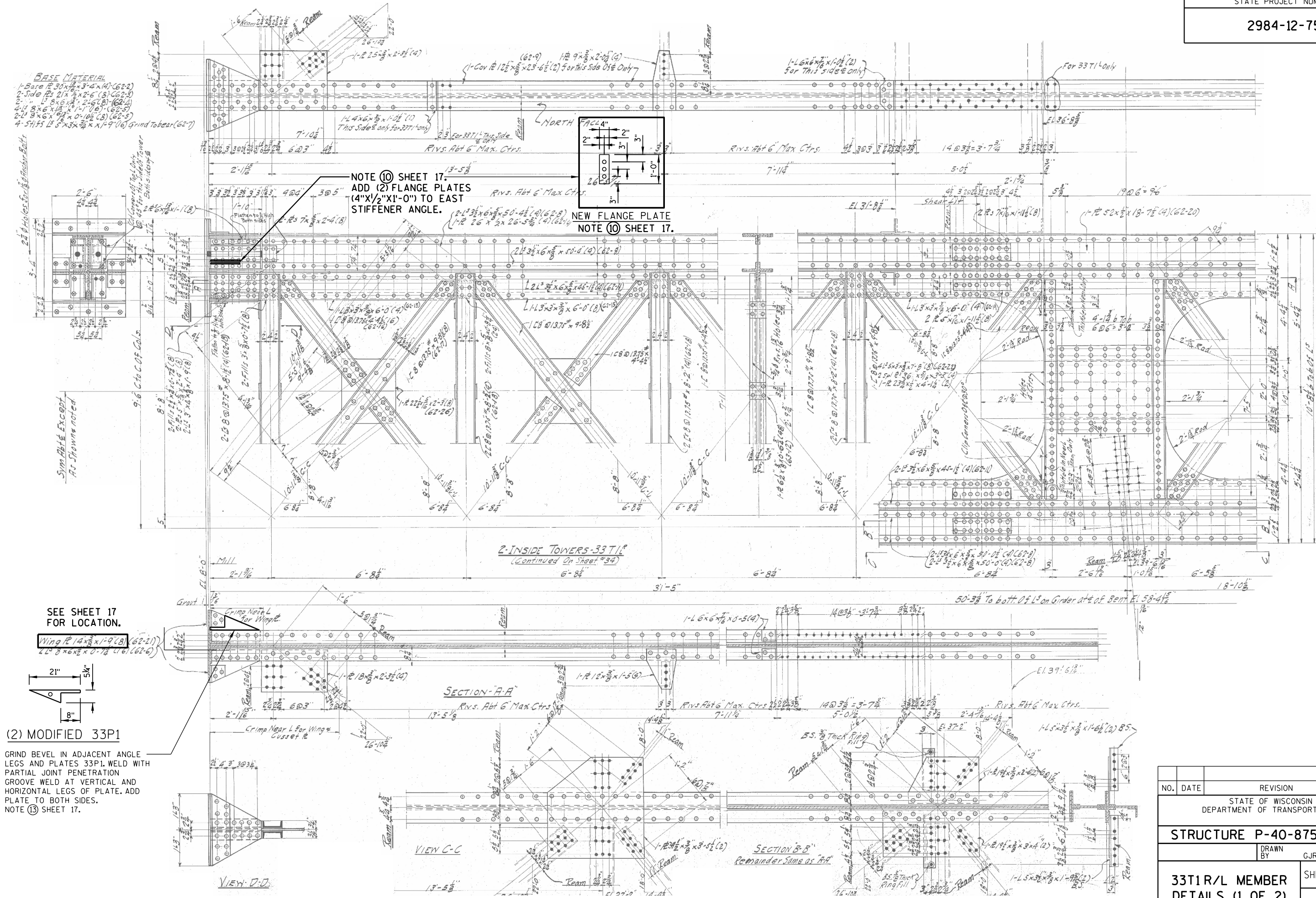


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
31T1R/L MEMBER DETAILS (1 OF 2)		SHEET 21 OF 31	

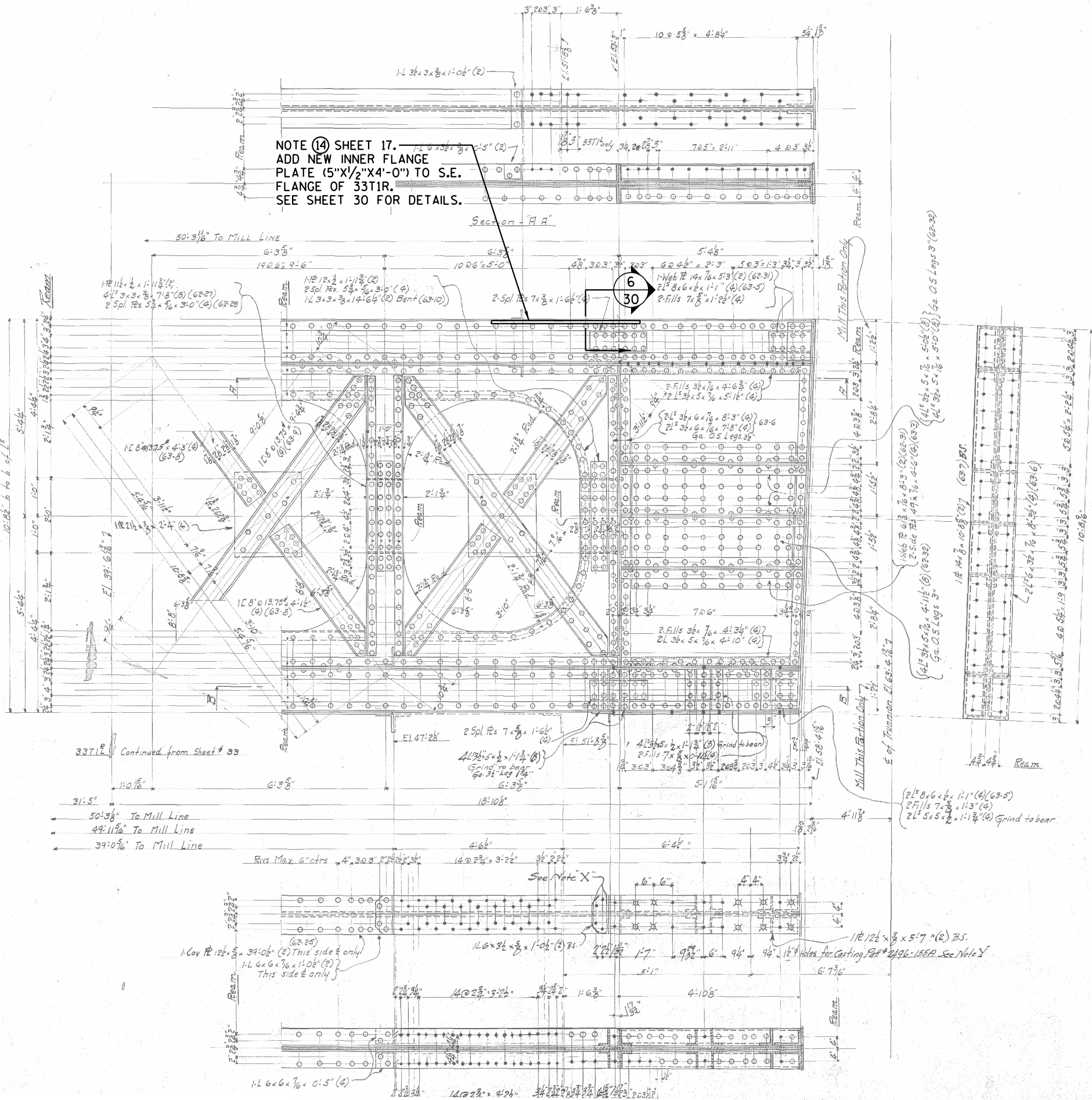
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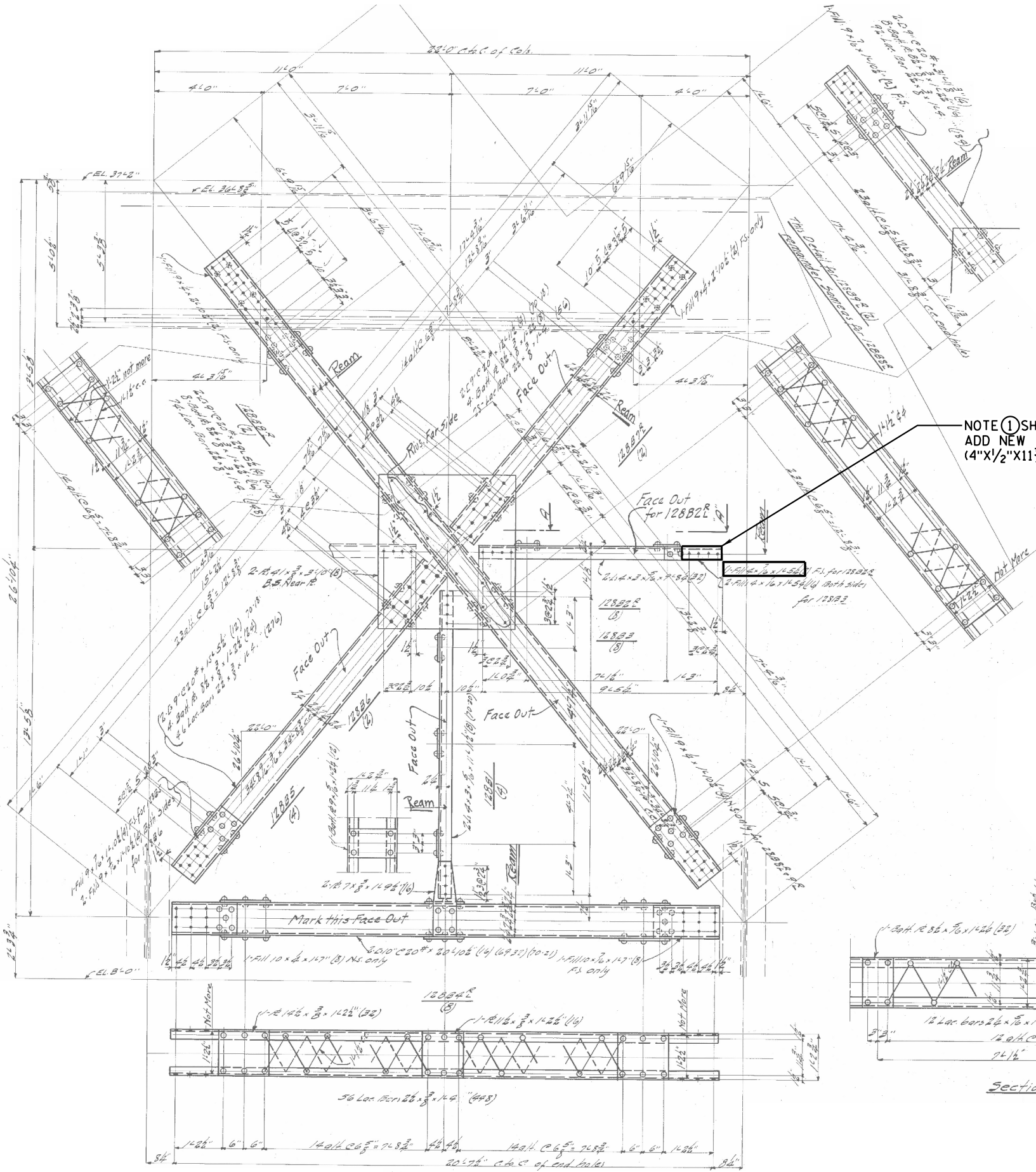
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
31T1 R/L MEMBER DETAILS (2 OF 2)			SHEET 22 OF 31



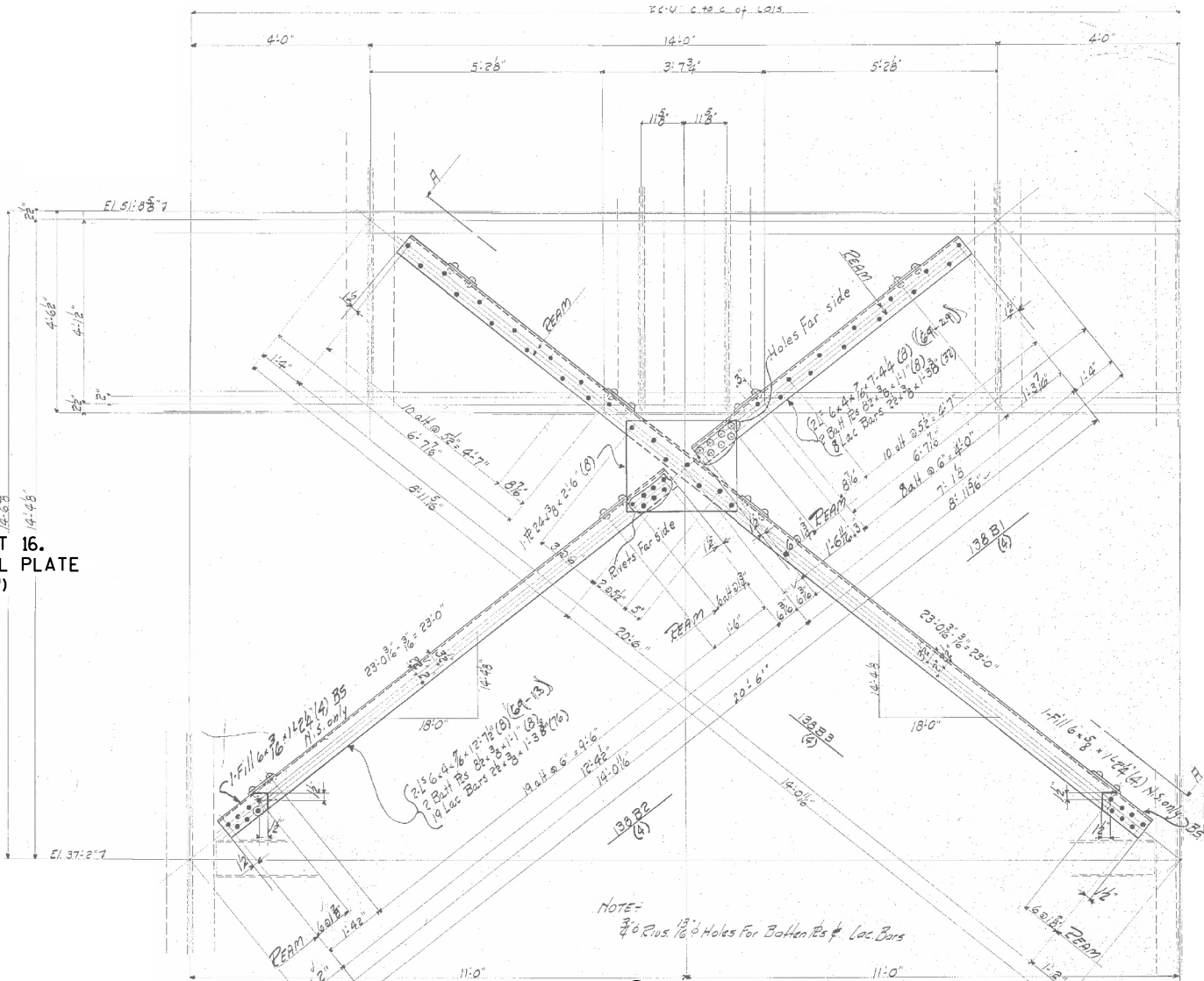
NO.	DATE	REVISION	BY
1	12-09-2024	1.0	GJR
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CKD. HMD
33T1R/L MEMBER DETAILS (1 OF 2)			SHEET 23 OF 31



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
33T1R/L MEMBER DETAILS (2 OF 2)		SHEET 24 OF 31	



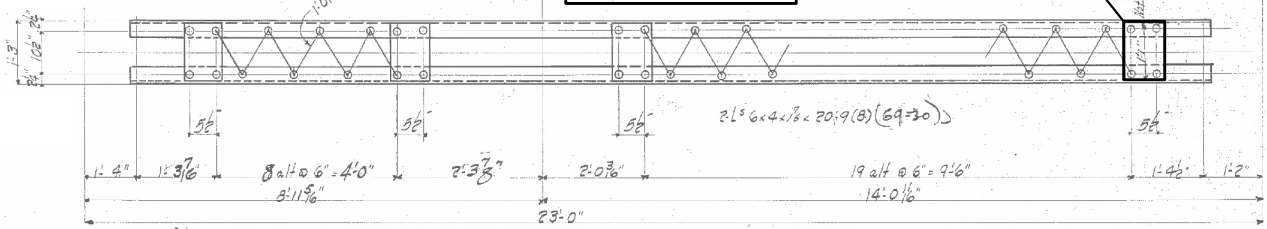
NOTE ① SHEET 16.
ADD NEW FILL PLATE
(4"x1/2"x11 3/4")



NOTE ② SHEET 16.

1 Batt Rs 24x36x1/2" (1-1)
8 Lac Bars 24x36x1/2" (1-1)

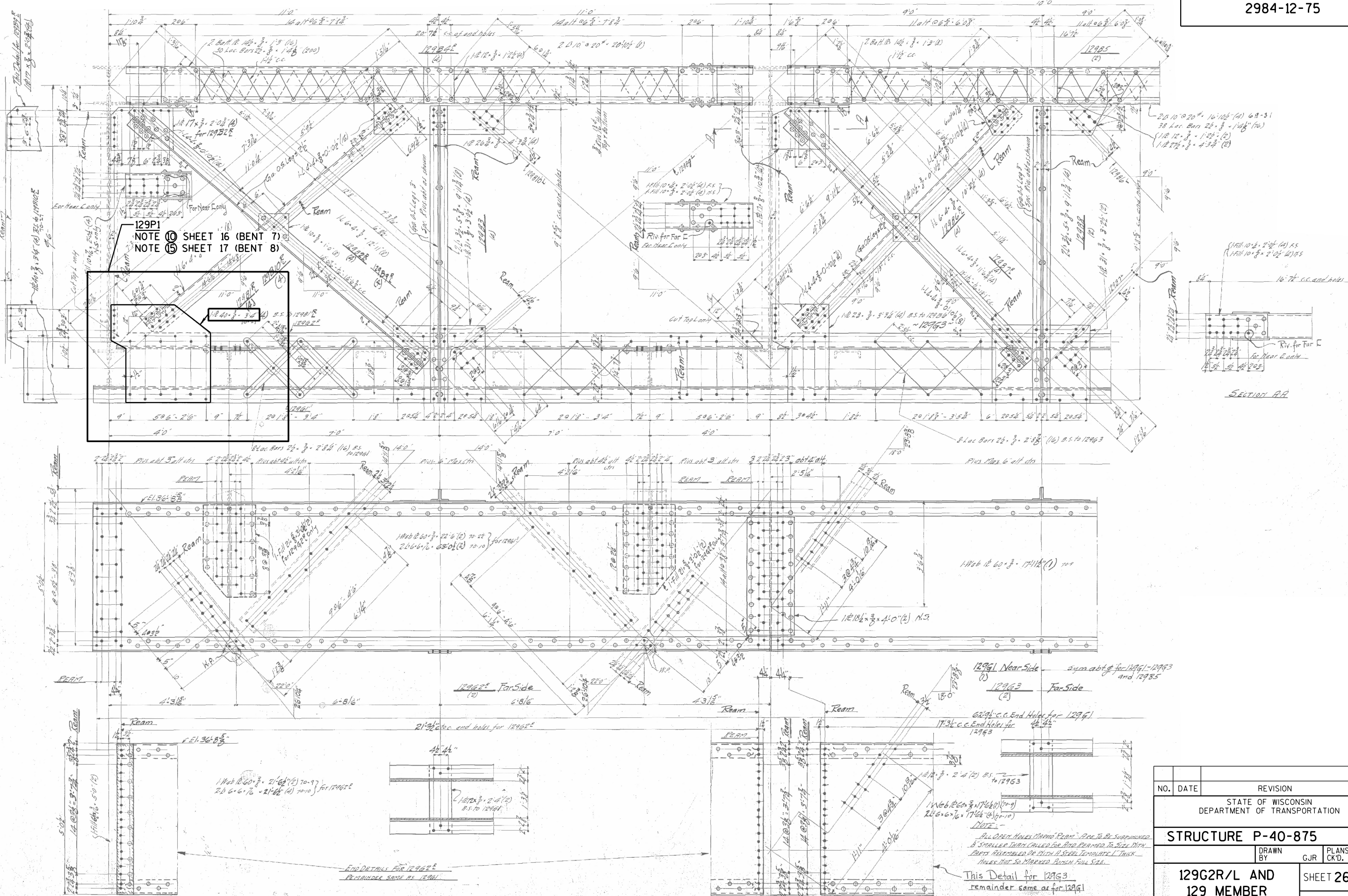
138P1



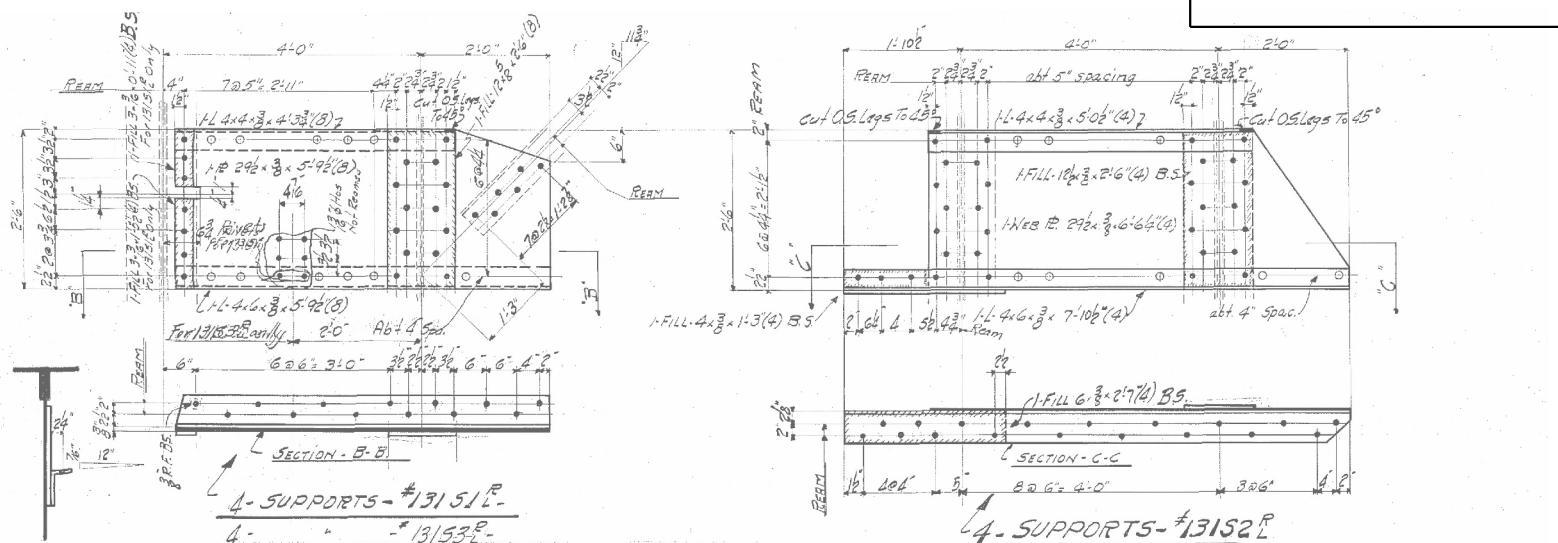
SECTION - A-A


138B3

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
128B2 AND 138B3 MEMBER DETAILS			SHEET 25 OF 31



NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
		STRUCTURE P-40-875	
		DRAWN BY GJR	PLANS CK'D. HMD
		129G2R/L AND 129 MEMBER DETAILS	SHEET 26 OF 31



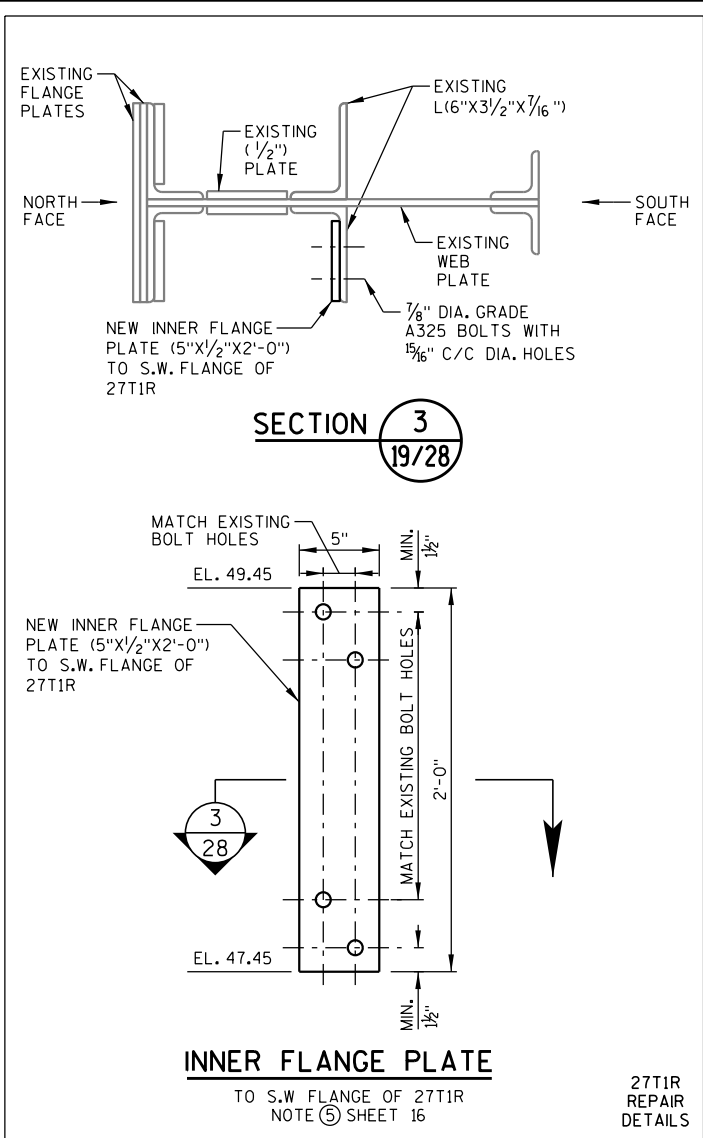
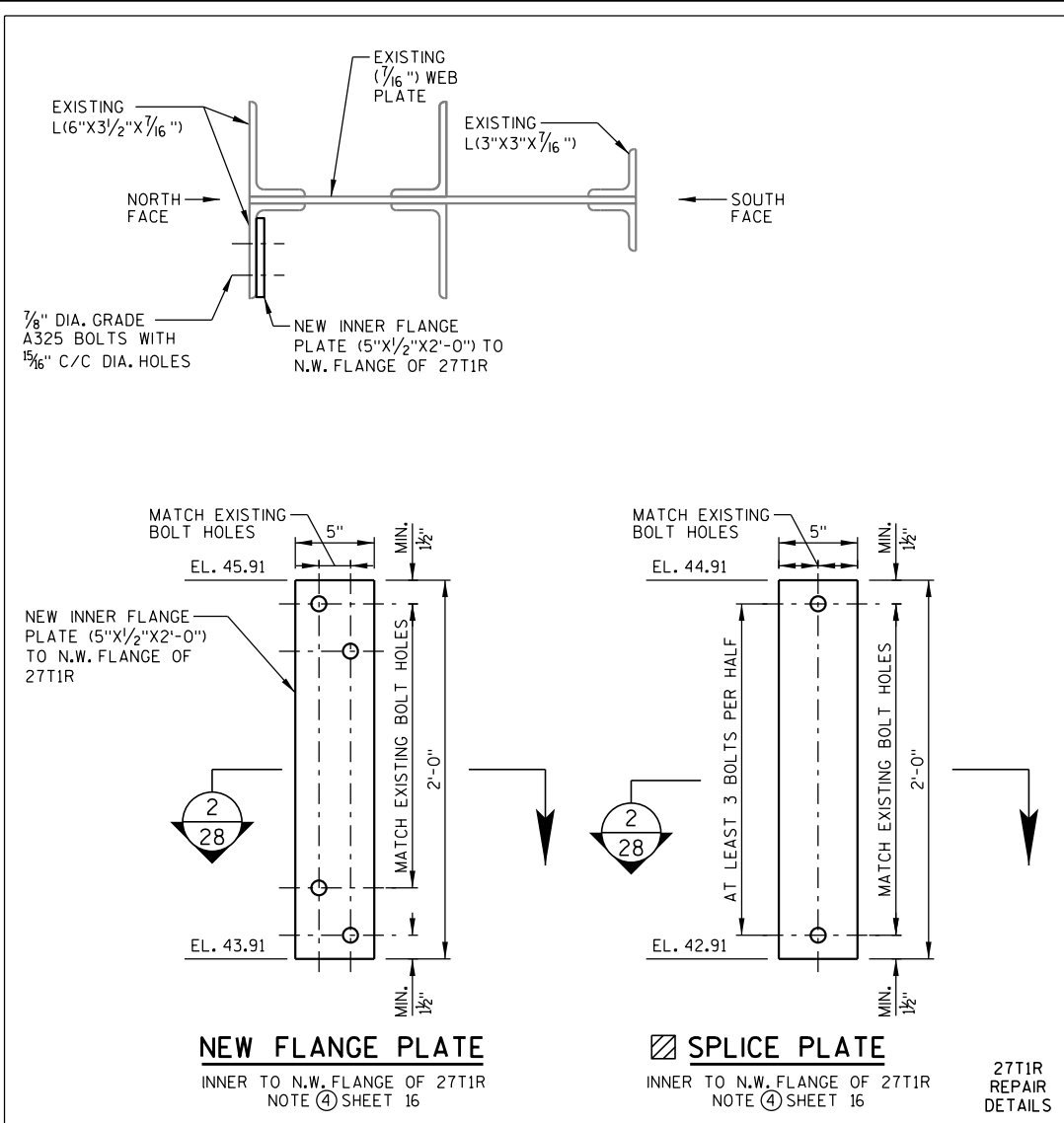
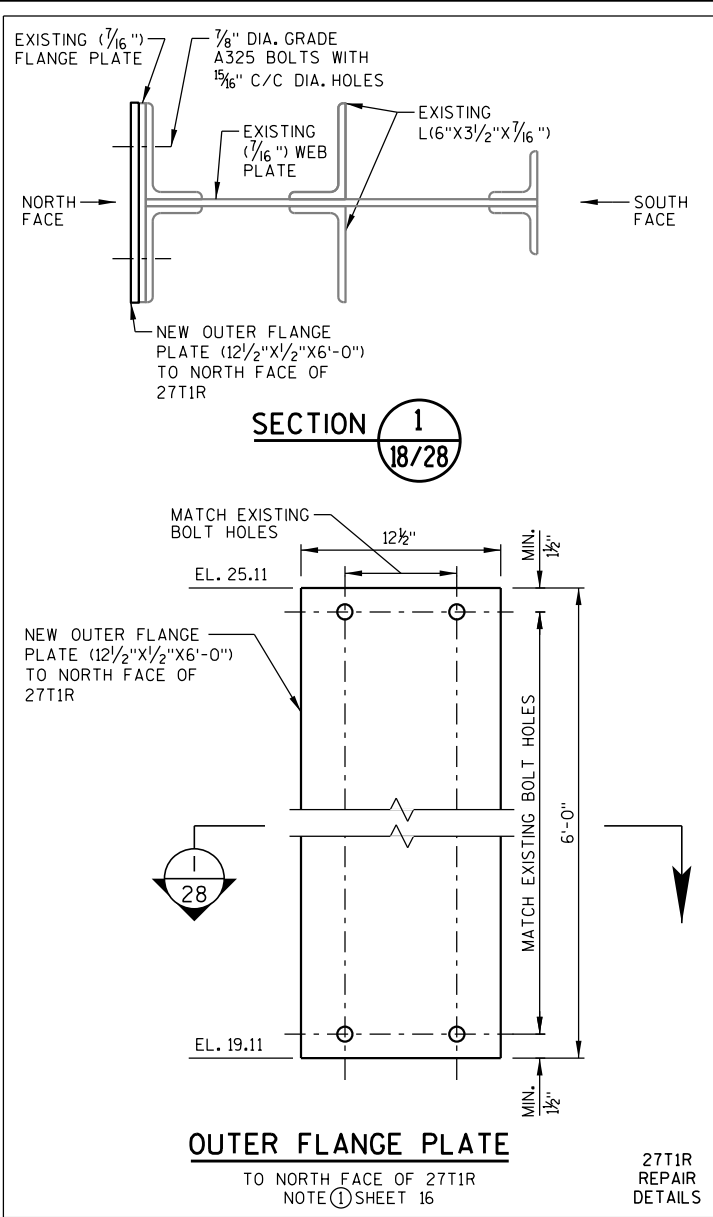
NOTE (16) SHEET 17. 
ADD NEW INNER FLANGE
PLATE (5"x1/2"x4'-0") TO N.W.
FLANGE OF 131C1 AND (2) NEW
WEB PLATES (7"x1/2"x6'-0")
TO WEB PLATES OF 131C1.
SEE SHEET 31 FOR DETAILS.
(BENT 8)

2- COLUMNS-#131C3
2- " #131C3A
4- " -#131C4E
(ON-BENT-#7)

2- COLUMNS- #131C1
2- " - #131C1A
4- " - #131C2^E
(ON-BENT #8)

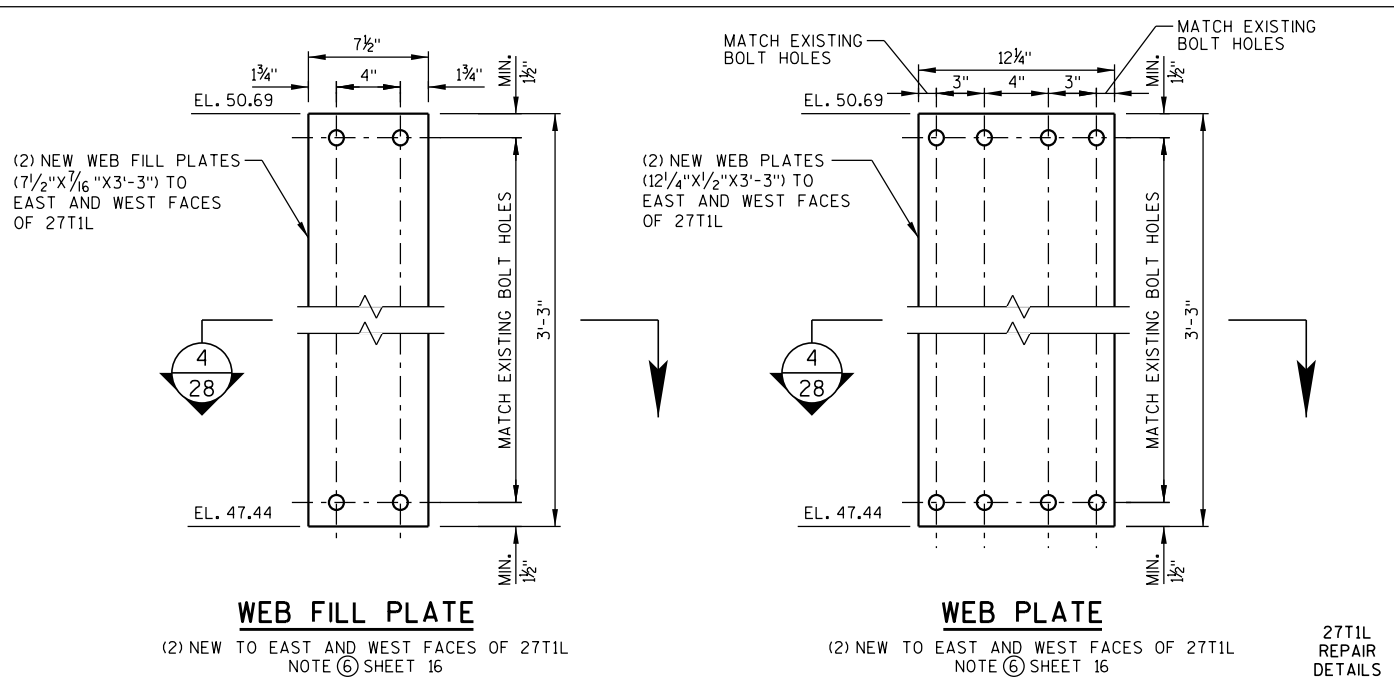
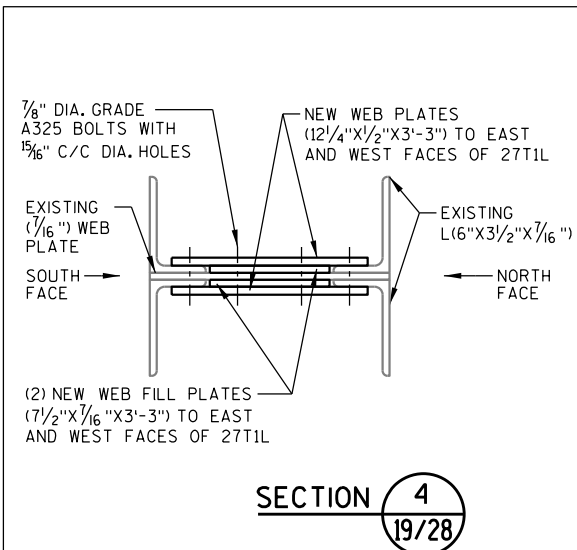
NOTE Y: Locate, drill and ream in field for turned bolts after casting is perfectly aligned.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
		DRAWN BY	PLANS CK'D.
		GJR	HM
131C3, 131C1 AND 131C1A MEMBER DETAILS		SHEET 27 OF 3	

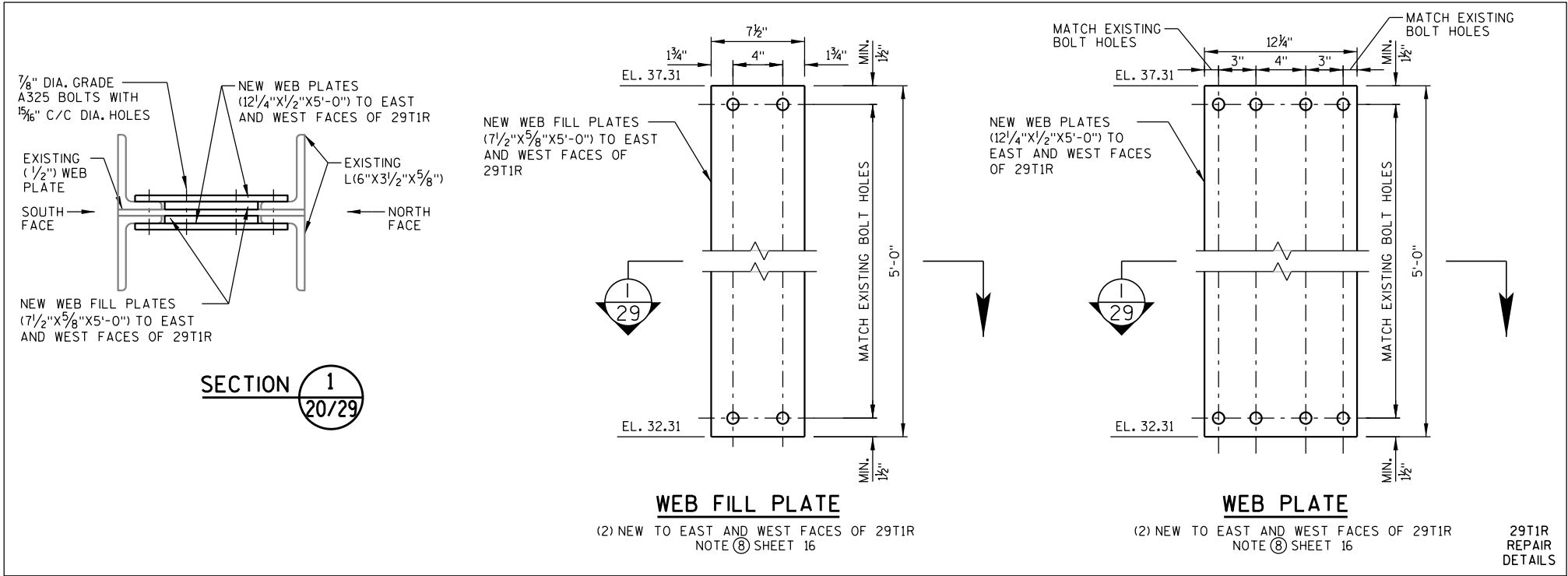


STATE PROJECT NUMBER

2984-12-75

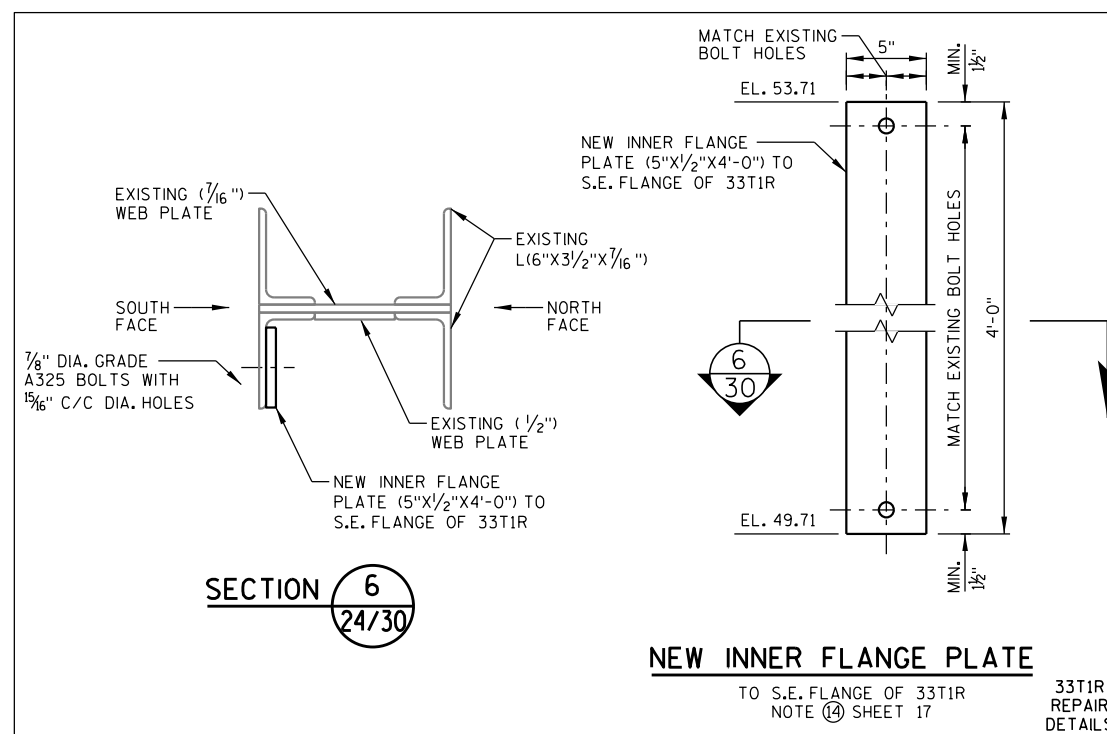
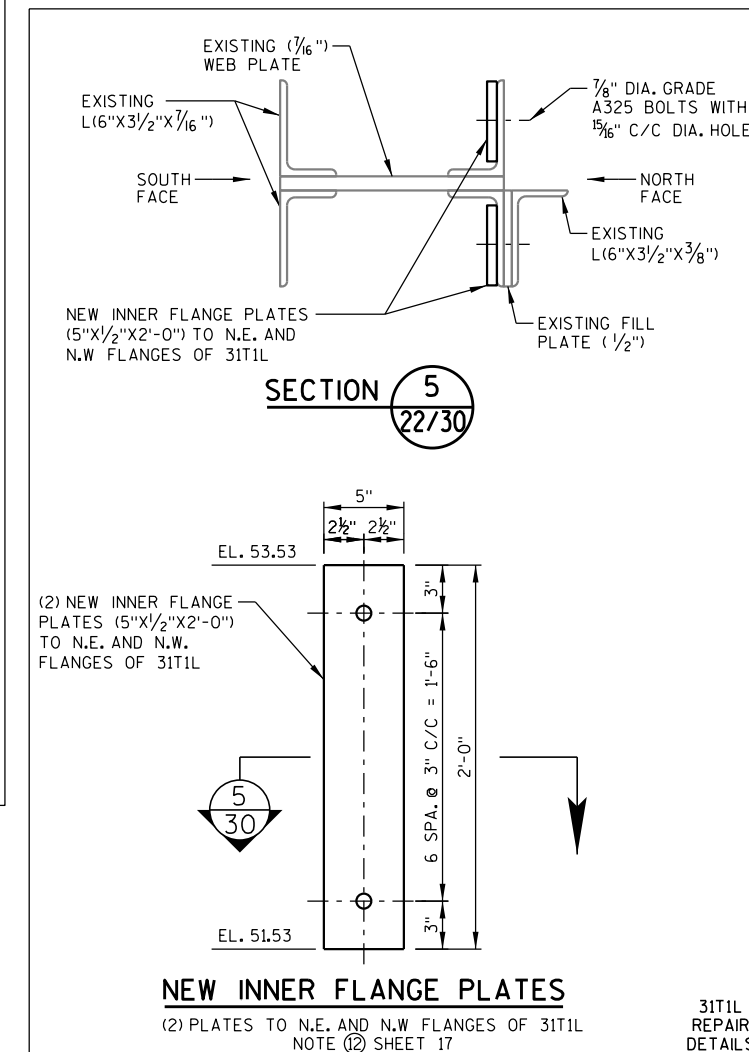
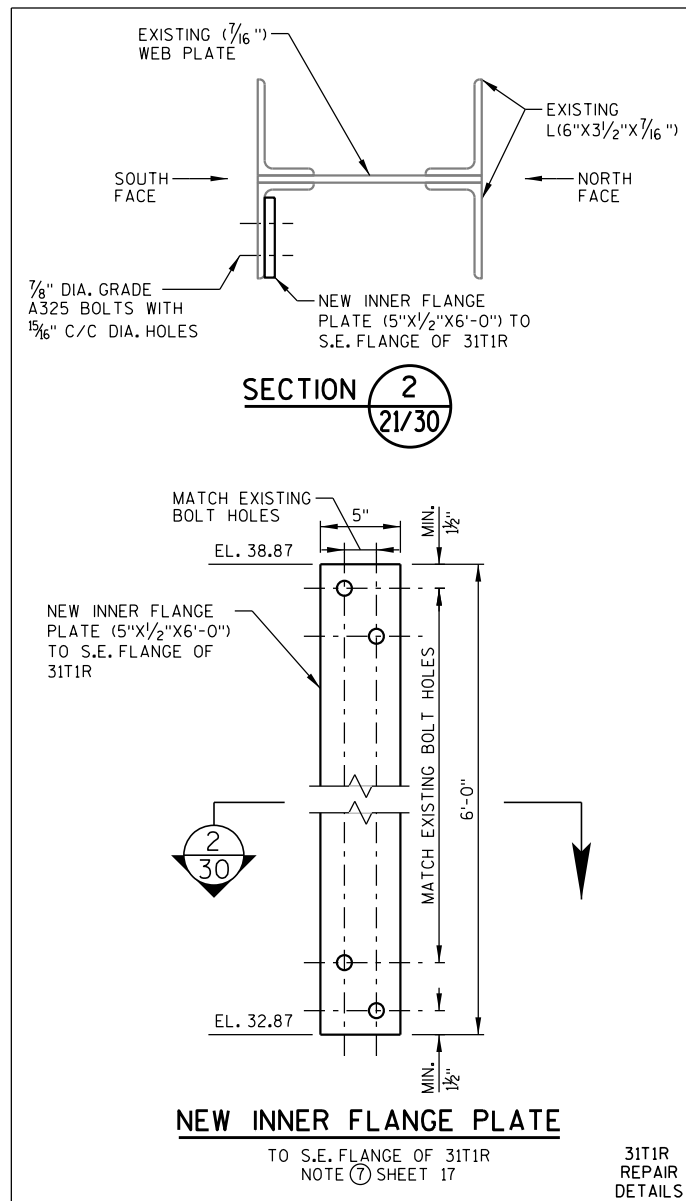


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
27T1R/L REPAIR DETAILS			SHEET 28 OF 31

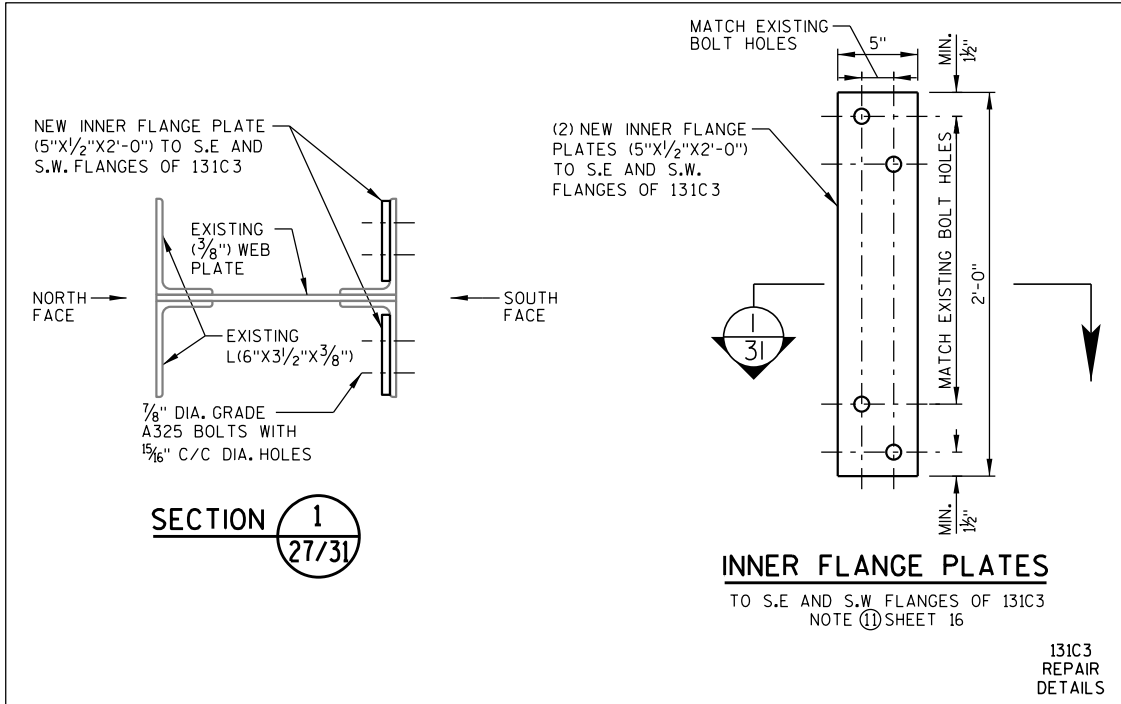
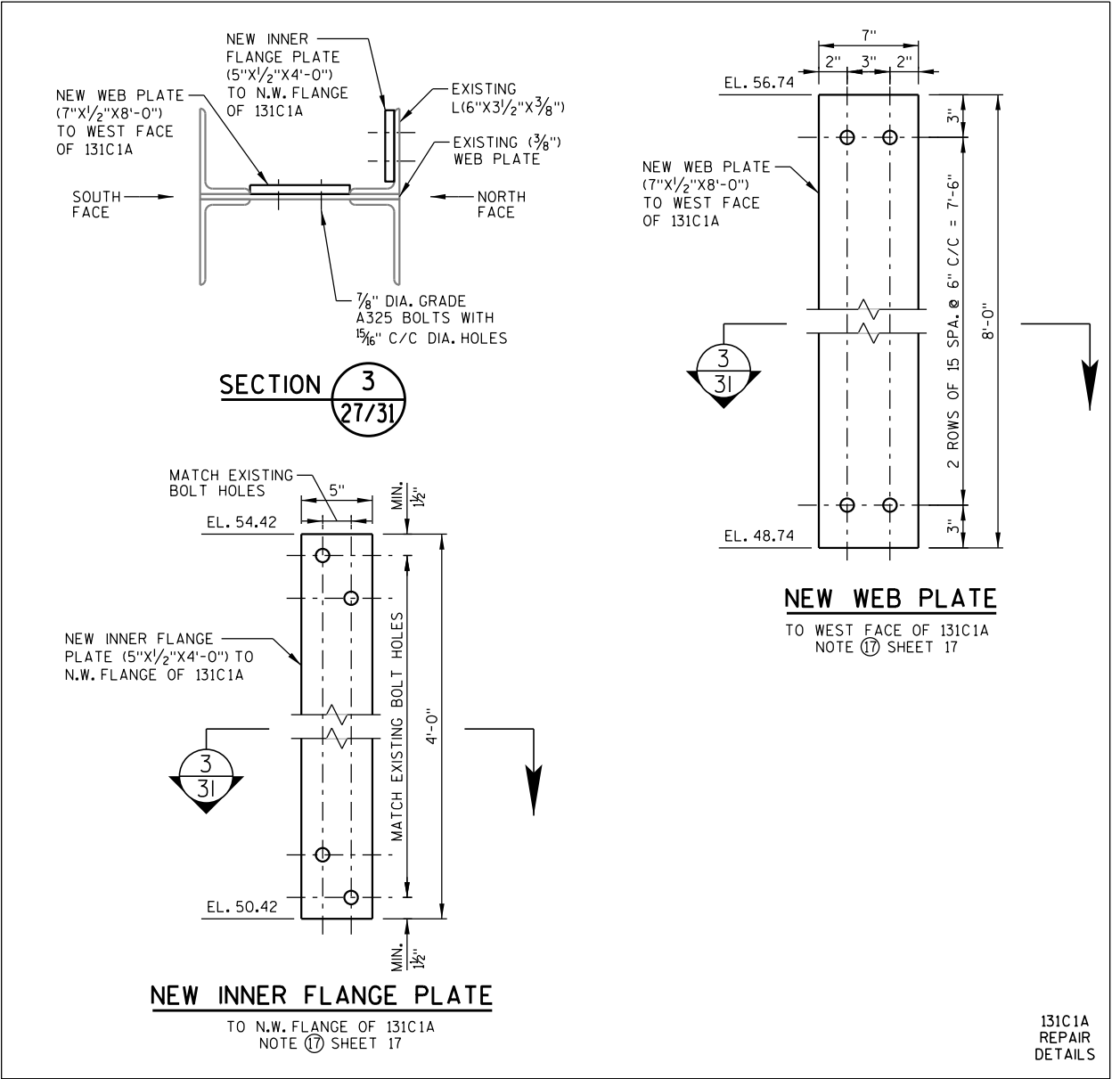
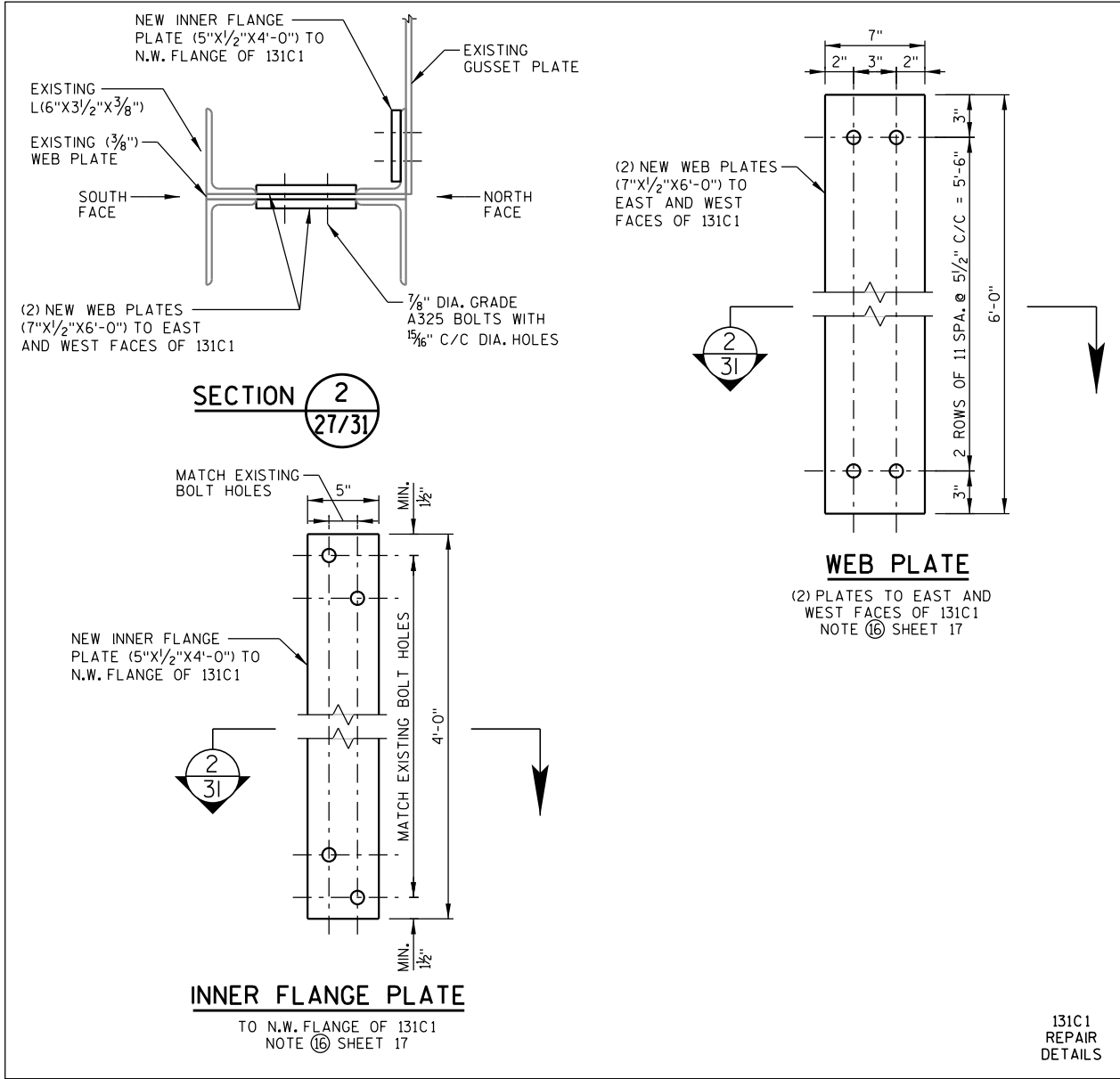


REVISED: 11-26-2024 BY GJR

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		GJR	PLANS CK'D. HMD
29T1R REPAIR DETAILS		SHEET 29 OF 31	



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
		DRAWN BY	GJR PLANS CK'D. HM
31T1 R/L AND 33T1 R REPAIR DETAILS		SHEET 30 OF 3	



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE P-40-875			
DRAWN BY		PLANS CK'D.	HMD
131C3, 131C1 AND 131C1A REPAIR DETAILS		SHEET 31 OF 31	

Notes



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