wke FEB 13, 2024

PROJECT ID 2984-12-74

WITH: N/A

ORDER OF SHEETS

TOTAL: 100

15

COUNTY MILWAUKEE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MILWAUKEE, N HOLTON ST PHASE II

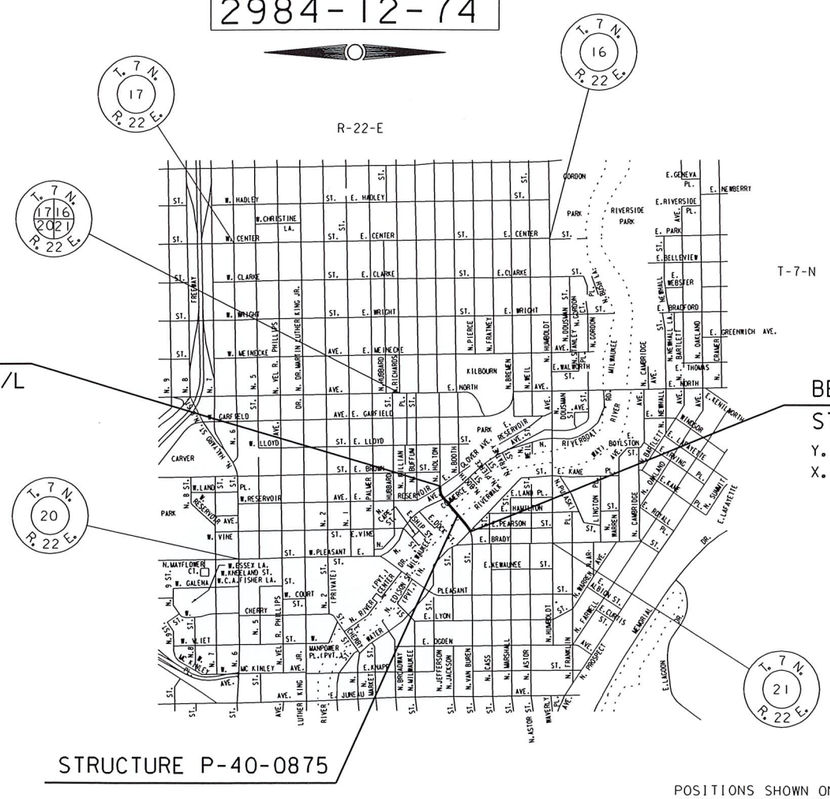
BR OVER MILW RVR, COMMERCE, WATER

P-40-0875

LOCAL STREET
MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-12-74	WISC 2024227	1

STATE PROJECT NUMBER
2984-12-74



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

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 (P.L.)
- STANDARD BENCH MARK
- EXISTING RIGHT OF WAY LINE (R/W)
- PROPOSED SEWER LATERAL (SIZE)
- BASE OF SURVEY LINE
- CONCRETE WALK/DWY. REMOVAL
- LIMITS OF CONCRETE PAVEMENT REMOVAL (X X X X X X)
- CATCH BASIN OR INLET — EXISTING — PROPOSED

- COMBUSTIBLE FLUIDS UNDER PRESSURE (CAUTION)
- RAILROADS
- FENCE (TYPE)
- 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

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, NAD 83-2011 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 GEODEDIC VERTICAL DATUM OF 1929, ADD 580.603 TO ELEVATIONS SHOWN ON THIS PLAN.

Accepted For
City of Milwaukee

10/26/2023 (Date)

Commissioner of Public Works

Original Plans Prepared By

WISCONSIN
KEVIN J. MUHS
46391-6
MILWAUKEE, WI
PROFESSIONAL ENGINEER
10/25/2023

(Date) City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

SURVEYOR	CITY OF MILWAUKEE
DESIGNER	CITY OF MILWAUKEE
PROJECT MANAGER	GREGORY HAFEMAN
DISTRICT EXAMINER	
DISTRICT SUPERVISOR	BRIAN BOOTHBY
C.O. EXAMINER	

APPROVED FOR DISTRICT OFFICE

DATE: 10/30/2023 (SIGNATURE)

E

FILENAME: W:\STR\BO113\2024 PHASE 2\MAJOR PROJECTS\TITLE.DGN

PLOT DATE:

REVISED DATE: 12-08-2022 BY JC

GENERAL NOTES

1. ALL ELEVATIONS ARE REFERENCED TO CITY OF MILWAUKEE DATUM.
2. THERE MAY BE 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.
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.

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. 0R VT	- VARIABLE THICKNESS
WEP	- WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

UTILITY CONTACTS

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

CHARTER / SPECTRUM
CHARLES BRASILE
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-908-4822
MOBILE: 414-430-5812
EMAIL: charles.brasile@charter.com

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

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

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

WE ENERGIES - ELECTRIC
MITCHELL COMER
500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: 920-205-0937
EMAIL: Mitchell.comer@we-energies.com
We Energies Electric Dispatch # 1-800-662-4797

WE ENERGIES - GAS
MITCHELL COMER
500 S. 116TH STREET
WEST ALLIS, WI 53214
PHONE: 920-205-0937
EMAIL: Mitchell.comer@we-energies.com
We Energies Gas Dispatch # 1-800-261-5325

OTHER CONTACTS

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

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

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

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

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

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

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
ROB MERRY
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
PHONE: 262-953-4289
CELL: 920-912-1036
EMAIL: rmerry@sewrpc.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

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

2

END PROJECT 2984-12-74

STA. 21+50.0, T/L

N

N. KILLIAN AVE.

N. BUFFUM ST.

E. RESERVOIR AVE.

BRIDGE ABUTMENT

22+00

21+00

20+00

19+00

18+00

17+00

16+00

15+00

14+00

13+00

12+00

11+00

10+00

N. HOLTON ST. VIADUCT

RIVER

N. RIVERWALK WAY

WATER ST.

E. PEARSON ST.

N. CASS ST.

E. BRADY ST.

BRIDGE I.D.
P-40-0875

N. COMMERCE ST.

E. DOCK ST.

E. SHIP ST.

N. CAPE ST.

E. VINE ST.

MILWAUKEE

BEGIN PROJECT 2984-12-74

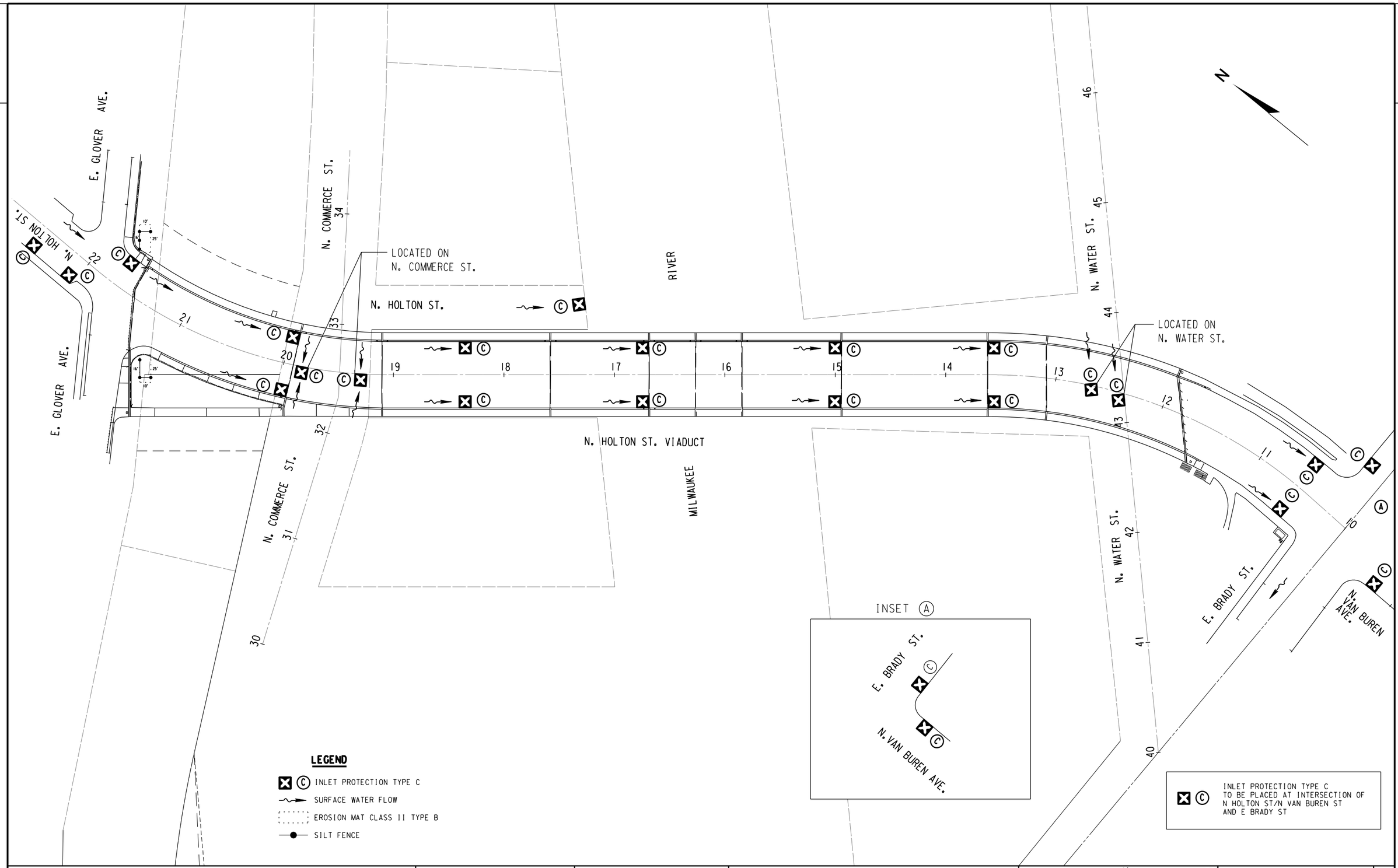
STA. 11+80.44, T/L
(Y) NORTH: 304,990.31
(X) EAST: 607,600.78

STATE PROJECT NUMBER 2984-12-74	HWY: N HOLTON ST	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SCALE FEET 0' 150'	SHEET NO: 4	E

FILENAME: W:\STR\B0113\2024 PHASE 2\MAJOR PROJECTS\OVERVIEW.DGN

REVISED DATE: 12-08-2022 BY JC

2



STATE PROJECT NUMBER 2984-12-74	HWY: N HOLTON ST	COUNTY: MILWAUKEE	EROSION CONTROL	SCALE FEET 0' 80'	SHEET NO: 5	E

FILENAME: W:\STR\BOI13\2024 PHASE 2\MAJOR PROJECTS\EROSION CONTROL.DGN

REVISED DATE: 08-30-2023 BY SLB

STAGE 1

E. GLOVER AVE.

N. HOLTON ST.

E RESERVOIR AVE.

N. COMMERCE ST.

RIVER

N. WATER ST.

N. HOLTON ST. VIADUCT

MILWAUKEE

E. BRADY ST.

N. VAN BUREN AVE.

DISTANCE TBD BY ENGINEER

1000'

200'

200'

5 DRUM TAPER

TCR

LEGEND

W20-3 ROAD CLOSED AHEAD 48" X48" — 1

W20-1 ROAD WORK AHEAD 48" X48" — 2

R11-2 BRIDGE CLOSED 48" X30" — 3

R11-2 (MOD) BRIDGE OUT 1000 ft 48" X30" — 4

W01-7 24" X12" — 5

R3-2 24" X24" — 6

R3-1 36" X36" — 7

R9-9 SIDEWALK CLOSED 24" X12" — 8

M4-9-L DETOUR 30"X24" — 9

M4-9-R DETOUR 30X24 — 10

R011-2 LANE CLOSED 48" X30" — 11

W5-1 ROAD NARROWS 48" X48" — 12

CLOSE ONE SIDEWALK AT A TIME, MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES — 13

WORK AREA

FLEXIBLE TUBULAR MARKERS 25' SPACING

DRUMS WITH ONE WARNING LIGHT TYPE C 25' SPACING

TRAFFIC CONTROL BARRICADES TYPE II WITH ONE WARNING LIGHT TYPE A AND ATTACHED TRAFFIC CONTROL SIGNS

TRAFFIC CONTROL BARRICADES TYPE III WITH TWO WARNING LIGHTS TYPE A

TRAFFIC CONTROL BARRICADES TYPE III WITH TWO WARNING LIGHTS TYPE A AND ATTACHED TRAFFIC CONTROL SIGNS

TRAFFIC FLOW DIRECTION

TEMPORARY PEDESTRIAN BARRICADE

TCR TEMPORARY CURB RAMP

* ONE SIDE WALK CLOSED AT A TIME

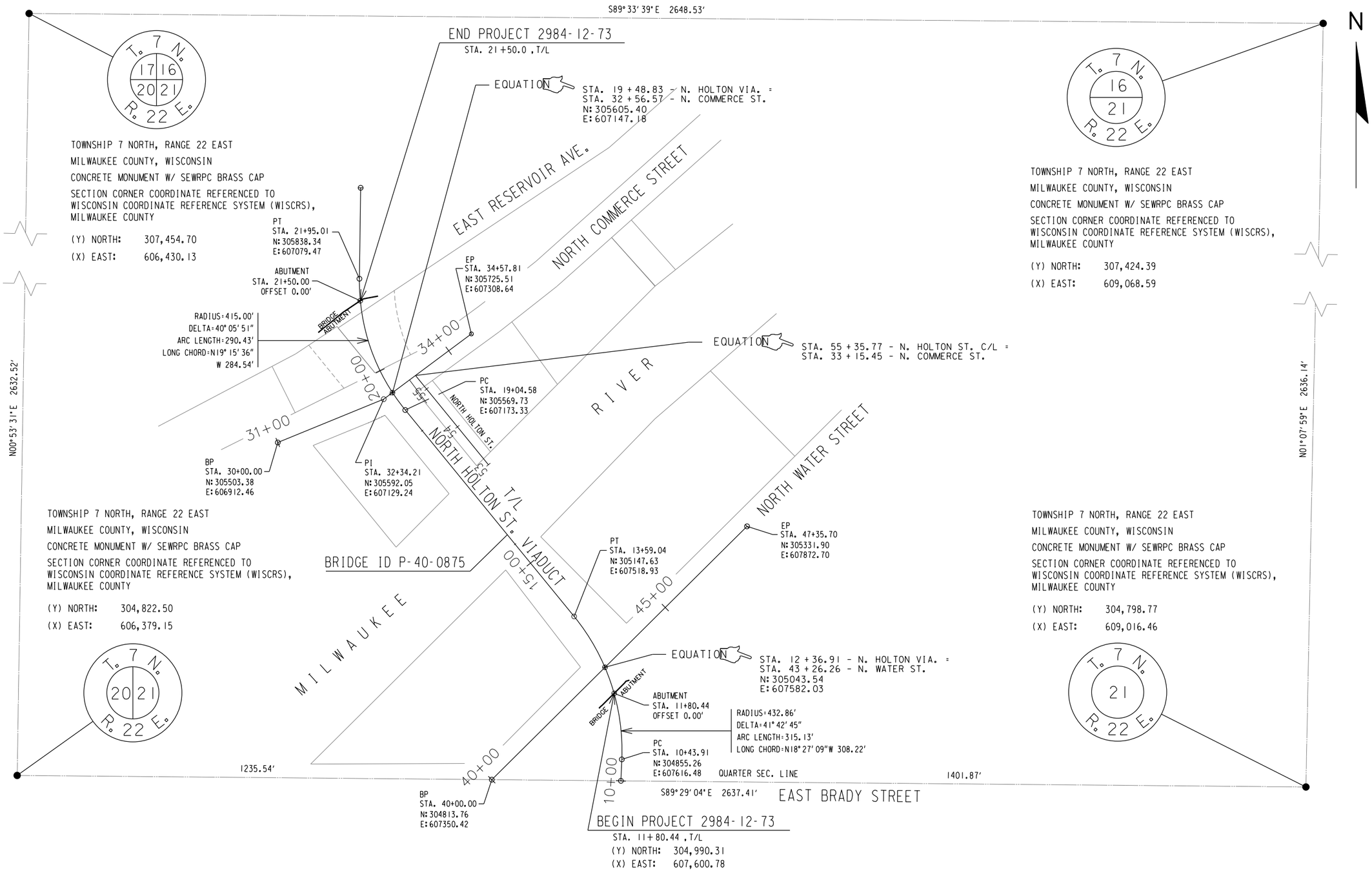
SHEET 1 OF 1

STATE PROJECT NUMBER 2984-12-74 - -	HWY: N HOLTON ST	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SCALE FEET 0' 80'	SHEET NO: 6	E

FILENAME: W:\STR\B0113\2024 PHASE 2\MAJOR PROJECTS\TC OVERVIEW STAGE 1.DGN

REVISED DATE: 10-16-2023 BY SLB

2



STATE PROJECT NUMBER 2984-12-74	HWY: N HOLTON ST	COUNTY: MILWAUKEE	ALIGNMENT PLAN	SCALE FEET 0' 200'	SHEET NO: 7	E

FILENAME: W:\STR\B0113\2024 PHASE 2\MAJOR PROJECTS\ALIGNMENT.DGN

REVISED DATE: 10-18-2023 BY SB

WISCRS CONTROL POINT
STA 23+00, 35' RT
N: 305,942.89
E: 607,110.86

WISCRS CONTROL POINT
STA 22+00, 35' RT
N: 305,842.84
E: 607,114.50

WISCRS CONTROL POINT
PT: STA 21+95.01, 35' RT
N: 305,837.85
E: 607,114.44

WISCRS CONTROL POINT
STA 34+55, 105' LT
N: 305,808.08
E: 607,243.74

BENCHMARK:
CHISTLE X ON TOP
OF EAST PARAPET
NEAR STA 21+54
ELEV.: 86.937'

WISCRS CONTROL POINT
STA 21+00, 35' RT
N: 305,751.50
E: 607,123.20

WISCRS CONTROL POINT
STA 21+50, 35' RT
N: 305,796.67
E: 607,116.09

WISCRS CONTROL POINT
STA 20+00, 35' RT
N: 305,665.22
E: 607,153.27

WISCRS CONTROL POINT
STA 33+00, 105' LT
N: 305,715.51
E: 607,119.31

BENCHMARK:
CHISTLE X LOCATED
ON NE CORNER OF
MARSUPIAL BRIDGE
N: 305,679.10
E: 607,089.70
ELEV.: 39.486'

BENCHMARK:
CHISTLE X LOCATED
ON NE CORNER OF
CONC WALL / RAILING
N: 305,661.10
E: 607,046.40
ELEV.: 39.960'

WISCRS CONTROL POINT
STA 31+20, 95' LT
N: 305,636.73
E: 606,987.65

WISCRS CONTROL POINT
STA 30+00, 30' RT
N: 305,475.61
E: 606,923.80

WISCRS CONTROL POINT
STA 33+85, 105' LT
N: 305,766.26
E: 607,187.48

WISCRS CONTROL POINT
STA 34+50, 27' RT
N: 305,703.83
E: 607,324.79

WISCRS CONTROL POINT
STA 34+00, 27' RT
N: 305,669.37
E: 607,278.37

WISCRS CONTROL POINT
STA 33+50, 27' RT
N: 305,639.60
E: 607,238.22

WISCRS CONTROL POINT
STA 55+08, 18' RT
N: 305,630.41
E: 607,225.89

BENCHMARK:
CHISTLE X ON TOP
OF EAST PARAPET
NEAR STA 19+10
ELEV.: 78.884'

WISCRS CONTROL POINT
STA 55+00, 18' RT
N: 305,624.19
E: 607,230.94

WISCRS CONTROL POINT
STA 54+00, 18' RT
N: 305,546.76
E: 607,294.18

WISCRS CONTROL POINT
PC: STA 19+04.58, 35' RT
N: 305,591.92
E: 607,200.39

WISCRS CONTROL POINT
STA 18+00, 35' RT
N: 305,510.95
E: 607,266.61

WISCRS CONTROL POINT
STA 32+00, 30' RT
N: 305,551.37
E: 607,108.96

WISCRS CONTROL POINT
STA 19+00, 35' RT
N: 305,588.39
E: 607,203.24

WISCRS CONTROL POINT
INTERSECT POINT
STA 19+48.48, 35' RT
N: 305,624.61
E: 607,176.48

WISCRS CONTROL POINT
STA 53+20, 18' RT
N: 305,484.74
E: 607,344.76

BENCHMARK:
CHISTLE X ON TOP
OF EAST PARAPET
NEAR STA 17+58
ELEV.: 73.698'

BENCHMARK:
CHISTLE X LOCATED
ON CONC.LIGHT FIXTURE
BASE LOCATED NEAR
STA 53+22
ELEV.: 67.335'

WISCRS CONTROL POINT
STA 17+00, 35' RT
N: 305,433.60
E: 607,330.00

WISCRS CONTROL POINT
STA 16+00, 35' RT
N: 305,356.23
E: 607,393.36

WISCRS CONTROL POINT
STA 15+00, 35' RT
N: 305,278.86
E: 607,456.68

BENCHMARK:
CHISTLE X ON TOP
OF EAST PARAPET
NEAR STA 14+95
ELEV.: 64.735'

WISCRS CONTROL POINT
STA 14+00, 35' RT
N: 305,201.48
E: 607,520.02

WISCRS CONTROL POINT
STA 44+00, 28'LT
N: 305115.35
E: 607614.64

WISCRS CONTROL POINT
PT: STA 13+59.04, 35' RT
N: 305,169.84
E: 607,545.97

WISCRS CONTROL POINT
STA 45+00, 28'LT
N: 305185.79
E: 607685.61

BENCHMARK:
TYP T(1) MTD @
SE CORNER OF E. PEARSON ST. &
N. WATER ST.
NW BOLT, HR: 1990, CLOW
ELEV.: 40.49'

BENCHMARK:
CHISTLE T ON TOP OF
SE CORNER OF SOUTH
RETAINING WALL
NEAR STA 43+48
ELEV.: 37.37'

BENCHMARK:
CHISTLE X ON TOP
OF EAST PARAPET
NEAR STA 12+00
ELEV.: 54.784'

WISCRS CONTROL POINT
INTERSECT POINT
STA 12+36.91, 35' RT
N: 305,057.35
E: 607,614.21

WISCRS CONTROL POINT
STA 12+00, 35' RT
N: 305,020.01
E: 607,628.32

WISCRS CONTROL POINT
STA 11+00, 35' RT
N: 304,914.38
E: 607,650.08

WISCRS CONTROL POINT
PC: STA 10+43.9, 35' RT
N: 304,853.80
E: 607,651.51

WISCRS CONTROL POINT
STA 10+00, 35' RT
N: 304,809.97
E: 607,649.65

WISCRS CONTROL POINT
STA 43+26.26, 28'LT
N: 305063.41
E: 607562.27

WISCRS CONTROL POINT
STA 43+00, 28'LT
N: 305044.93
E: 607543.62

WISCRS CONTROL POINT
STA 42+50, 28'LT
N: 305009.63
E: 607508.15

WISCRS CONTROL POINT
STA 42+00, 28'LT
N: 304974.48
E: 607472.67

WISCRS CONTROL POINT
STA 13+00, 35' RT
N: 305,117.86
E: 607,582.93

CITY OF MILWAUKEE STANDARD BENCHMARK 46
N. VAN BUREN ST. / N. HOLTON ST.
S. E. BRADY ST. (NW CORNER)
39' NORTH OF CURB & 48.5' WEST OF
WEST CURB LINE OF N. VAN BUREN ST.
LOCATED IN TRIANGLE REGION)
ELEVATION: 46.564'

BENCHMARK:
CHISTLE T ON TOP OF
NORTH RETAINING WALL
NEAR STA 43+14.30
ELEV.: 37.39'

N. HOLTON ST.

N. HOLTON ST. VIADUCT

E. GLOVER AVE.

N. COMMERCE ST.

N. WATER ST.

E. BRADY ST.

N. VAN BUREN AVE.

MILWAUKEE RIVER

STATE PROJECT NUMBER 2984-12-74	HWY: N HOLTON ST	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT SURVEY CONTROL	SCALE FEET 0' 80	SHEET NO: 8	E

FILENAME: W: STR BOI13 2024 PHASE 2 MA OR PRO ECTS S R E CONTROL.DGN

REVISED DATE: 10-18-2023 BY SDB

Estimate Of Quantities

2984-12-74

Line	Item	Item Description	Unit	Total	Qty
0002	201.0210	Grubbing	SY	60.000	60.000
0004	203.0220	Removing Structure (structure) 001. P-40-875	EACH	1.000	1.000
0006	203.0330	Debris Containment (structure) 001. P-40-875	EACH	1.000	1.000
0008	204.0110	Removing Asphaltic Surface	SY	56.000	56.000
0010	204.0155	Removing Concrete Sidewalk	SY	195.000	195.000
0012	206.1001	Excavation for Structures Bridges (structure) 001. P-40-875	EACH	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	200.000	200.000
0016	213.0100	Finishing Roadway (project) 001. 2984-12-74	EACH	1.000	1.000
0018	305.0125	Base Aggregate Dense 1 1/4-Inch	CY	10.000	10.000
0020	320.0145	Concrete Base 8-Inch	SY	56.000	56.000
0022	465.0110	Asphaltic Surface Patching	TON	20.000	20.000
0024	502.0100	Concrete Masonry Bridges	CY	12.000	12.000
0026	502.0200	Concrete Masonry Bridges HES	CY	8.000	8.000
0028	502.3101	Expansion Device	LF	150.000	150.000
0030	502.3200	Protective Surface Treatment	SY	120.000	120.000
0032	502.3215	Protective Surface Treatment Reseal	SY	2,320.000	2,320.000
0034	502.4104	Adhesive Anchors 1/2-inch	EACH	6.000	6.000
0036	502.4204	Adhesive Anchors No. 4 Bar	EACH	16.000	16.000
0038	502.4205	Adhesive Anchors No. 5 Bar	EACH	263.000	263.000
0040	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	7,600.000	7,600.000
0042	506.0105	Structural Steel Carbon	LB	84,000.000	84,000.000
0044	506.2610	Bearing Pads Elastomeric Laminated	EACH	7.000	7.000
0046	506.6000	Bearing Assemblies Expansion (structure) 001. P-40-875	EACH	1.000	1.000
0048	506.7050.S	Removing Bearings (structure) 001. P-40-875	EACH	8.000	8.000
0050	509.0301	Preparation Decks Type 1	SY	36.000	36.000
0052	509.0302	Preparation Decks Type 2	SY	12.000	12.000
0054	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	410.000	410.000
0056	509.1000	Joint Repair	SY	60.000	60.000
0058	509.1500	Concrete Surface Repair	SF	206.000	206.000
0060	509.2000	Full-Depth Deck Repair	SY	2.000	2.000
0062	509.2100.S	Concrete Masonry Deck Repair	CY	31.000	31.000
0064	509.9020.S	Epoxy Crack Sealing	LF	95.000	95.000
0066	509.9025.S	Epoxy Injection Crack Repair	LF	48.000	48.000
0068	509.9026.S	Cored Holes 2-Inch Diameter	EACH	2.000	2.000
0070	511.1200	Temporary Shoring (structure) 001. P-40-875	SF	575.000	575.000
0072	516.0500	Rubberized Membrane Waterproofing	SY	30.000	30.000
0074	517.0601	Painting Epoxy System (structure) 001. P-40-875	EACH	1.000	1.000
0076	517.0901.S	Preparation and Coating of Top Flanges (structure) 001. P-40-875	EACH	1.000	1.000
0078	517.1801.S	Structure Repainting Recycled Abrasive (structure) 001. P-40-875	EACH	1.000	1.000
0080	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 001. P-40-875	EACH	1.000	1.000
0082	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0084	602.0410	Concrete Sidewalk 5-Inch	SF	1,750.000	1,750.000
0086	604.0500	Slope Paving Crushed Aggregate	SY	170.000	170.000
0088	619.1000	Mobilization	EACH	1.000	1.000
0090	625.0100	Topsoil	SY	60.000	60.000
0092	628.1504	Silt Fence	LF	75.000	75.000
0094	628.1520	Silt Fence Maintenance	LF	75.000	75.000
0096	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0098	628.1910	Mobilizations Emergency Erosion Control	EACH	5.000	5.000

Estimate Of Quantities

2984-12-74

Line	Item	Item Description	Unit	Total	Qty
0100	628.2023	Erosion Mat Class II Type B	SY	60.000	60.000
0102	628.7015	Inlet Protection Type C	EACH	24.000	24.000
0104	630.0120	Seeding Mixture No. 20	LB	2.000	2.000
0106	630.0500	Seed Water	MGAL	5.000	5.000
0108	642.5201	Field Office Type C	EACH	1.000	1.000
0110	643.0300	Traffic Control Drums	DAY	840.000	840.000
0112	643.0410	Traffic Control Barricades Type II	DAY	448.000	448.000
0114	643.0420	Traffic Control Barricades Type III	DAY	1,736.000	1,736.000
0116	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	12.000	12.000
0118	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	8.000	8.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	3,920.000	3,920.000
0122	643.0715	Traffic Control Warning Lights Type C	DAY	840.000	840.000
0124	643.0900	Traffic Control Signs	DAY	2,016.000	2,016.000
0126	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0128	643.5000	Traffic Control	EACH	1.000	1.000
0130	646.1020	Marking Line Epoxy 4-Inch	LF	25.000	25.000
0132	646.2020	Marking Line Epoxy 6-Inch	LF	20.000	20.000
0134	646.3020	Marking Line Epoxy 8-Inch	LF	5.000	5.000
0136	650.6501	Construction Staking Structure Layout (structure) 001. P-40-875	EACH	1.000	1.000
0138	650.9911	Construction Staking Supplemental Control (project) 001. 2984-12-74	EACH	1.000	1.000
0140	652.0125	Conduit Rigid Metallic 2-Inch	LF	3.000	3.000
0142	652.0135	Conduit Rigid Metallic 3-Inch	LF	24.000	24.000
0144	690.0250	Sawing Concrete	LF	150.000	150.000
0146	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 001. P-40-875	EACH	1.000	1.000
0148	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	3,000.000	3,000.000
0150	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	7,200.000	7,200.000
0152	SPV.0025	Special 501. Deep Concrete Surface Repair	CF	22.000	22.000
0154	SPV.0025	Special 505. Non-Shrink Grout	CF	24.000	24.000
0156	SPV.0035	Special 540. Stone Removal	CY	9.000	9.000
0158	SPV.0060	Special 010. Temporary No Parking Signs	EACH	12.000	12.000
0160	SPV.0060	Special 030. Pedestrian Protection Enclosure	EACH	1.000	1.000
0162	SPV.0060	Special 508. Temporary Shoring for Piers 9,10,11,12 and North Abutment Repair	EACH	1.000	1.000
0164	SPV.0060	Special 509. Temporary Supports P-40-875	EACH	2.000	2.000
0166	SPV.0060	Special 594. Junction Box 14" x 8" x 6"	EACH	1.000	1.000
0168	SPV.0060	Special 595. Junction Box 14" x 14" x 12"	EACH	2.000	2.000
0170	SPV.0060	Special 597. Protecting Utilities	EACH	1.000	1.000
0172	SPV.0085	Special 540. Stairway Structural Steel	LB	12,600.000	12,600.000
0174	SPV.0090	Special 501. Remove, Repair, Paint and Reinstall Existing Steel Railing	LF	180.000	180.000
0176	SPV.0090	Special 505. Stairway Railing and Protective Screening	LF	330.000	330.000
0178	SPV.0090	Special 530. Rehabilitation of Chain Link Fence	LF	16.000	16.000
0180	SPV.0180	Special 530. Abutment Seat Cleaning and Sealing	SY	10.000	10.000

3

GRUBBING

CATEGORY 0010

LOCATION	201.0210 GRUBBING SY
N. HOLTON STREET	60
TOTAL	60

REMOVALS

CATEGORY 0010

LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0155 REMOVING CONCRETE SIDEWALK SY
N. HOLTON STREET	56	195
TOTALS	56	195

FINISHING ROADWAY

CATEGORY 0010

LOCATION	213.0100 FINISHING ROADWAY PROJECT 2984-12-74 EACH
N. HOLTON STREET	1
TOTAL	1

MOBILIZATION

CATEGORY 0010

LOCATION	619.1000 MOBILIZATION EACH
PROJECT 2984-12-74	1
TOTAL	1

3

PAVING ITEMS

CATEGORY 0010

LOCATION	305.0125 BASE AGGREGATE DENSE 1-1/4 INCH CY	320.0145 CONCRETE BASE 8-INCH SY	465.0110 ASPHALTIC SURFACE PATCHING TON	602.0410 CONCRETE SIDEWALK 5-INCH SF
N. HOLTON STREET	10	56	20	1750
TOTALS	10	56	20	1,750

SAWING CONCRETE

CATEGORY 0010

LOCATION	690.0250 SAWING CONCRETE LF
UNDISTRIBUTED	150
TOTAL	150

LANDSCAPE ITEMS

CATEGORY 0010

LOCATION	625.0100 TOPSOIL SY	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL
N. HOLTON STREET	60	2	5
TOTALS	60	2	5

3

EROSION CONTROL ITEMS

CATEGORY 0010

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2023 EROSION MAT CLASS II TYPE B SY	628.7015 INLET PROTECTION TYPE C EACH
N. HOLTON STREET	75	75	60	24
TOTALS	75	75	60	24

MOBILIZATIONS EROSION CONTROL

CATEGORY 0010

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 2984-12-74	1	5
TOTALS	1	5

FIELD OFFICE

CATEGORY 0010

LOCATION	642.5201 FIELD OFFICE TYPE C EACH
PROJECT 2984-12-74	1
TOTAL	1

3

TRAFFIC CONTROL ITEMS

CATEGORY 0010

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II EACH	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	643.0420 CONTROL BARRICADES TYPE III EACH	643.0420 CONTROL BARRICADES TYPE III DAY	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II (UNDISTRIBUTED) EACH
PROJECT 2984-12-74	56	15	840	8	448	31	1736	12	8	70	3920	15	840	36	2016	5
TOTALS			840		448		1,736	12	8		3,920		840		2,016	5

(1) All Drums have one Type C Steady Burn Light.
(2) All Type II Barricades have one Type A Flashing Light.
(3) All Type III Barricades have two Type A Flashing Lights.

3

TRAFFIC CONTROL

CATEGORY 0010

LOCATION	643.5000 TRAFFIC CONTROL EACH
PROJECT 2984-12-74	1
TOTAL	1

PAVEMENT MARKING

CATEGORY 0010

LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (WHITE) LF	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.2020 MARKING LINE EPOXY 6-INCH (WHITE) LF	646.3020 MARKING LINE EPOXY 8-INCH (YELLOW) LF
UNDISTRIBUTED	15	10	20	5
TOTALS	25		20	5

PEDESTRIAN PROTECTION ENCLOSURE

CATEGORY 0020

LOCATION	SPV.0060.030 PEDESTRIAN PROTECTION ENCLOSURE EACH
N. HOLTON STREET	1
TOTAL	1

3

TEMPORARY NO PARKING SIGNS

CATEGORY 0010

LOCATION	SPV.0060.010 TEMPORARY NO PARKING SIGNS EACH
UNDISTRIBUTED	12
TOTAL	12

CONSTRUCTION STAKING

LOCATION	CATEGORY 0020 650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT P-40-0875 EACH	CATEGORY 0010 650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (2984-12-74) EACH
N. HOLTON STREET	1	1
TOTALS	1	1

BIRD DETERRENT

CATEGORY 0020

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

LEGEND

REMOVING CONCRETE SIDEWALK
CONCRETE SIDEWALK 5-INCH

REMOVING ASPHALTIC SURFACE
ASPHALTIC SURFACE
CONCRETE BASE 8-INCH
BASE AGGREGATE DENSE 1¼-INCH

P.T. STA. 21+95.01

15'-0"

10'-0"

EXPANSION JOINT

N. END OF BRIDGE DECK
STA. 21+50.00

5'-0"

1'-0"

T/L HOLTON
STREET VIADUCT

3'-10"

EXTENSION OF C/L

EXISTING METAL
RAILING TO REMAIN

CAUTION
OVERHEAD

RETAINING
WALL

1901 N COMMERCE ST
354-1291-000
CITY OF MILWAUKEE

1890 N COMMERCE ST
354-1742-000
RUSS KLISCH LLC

1895 N COMMERCE ST
354-1033-000
CITY OF MILWAUKEE

N. COMMERCE ST.

N. HOLTON ST.

E. GLOVER AVE.

E. RESERVOIR AVE.

R/W

TE&ES

CMB

COM

MMSD

CUC

TV

FO

21 +50

20

20 +50

19

P.C. STA. 19+04.58

5

5

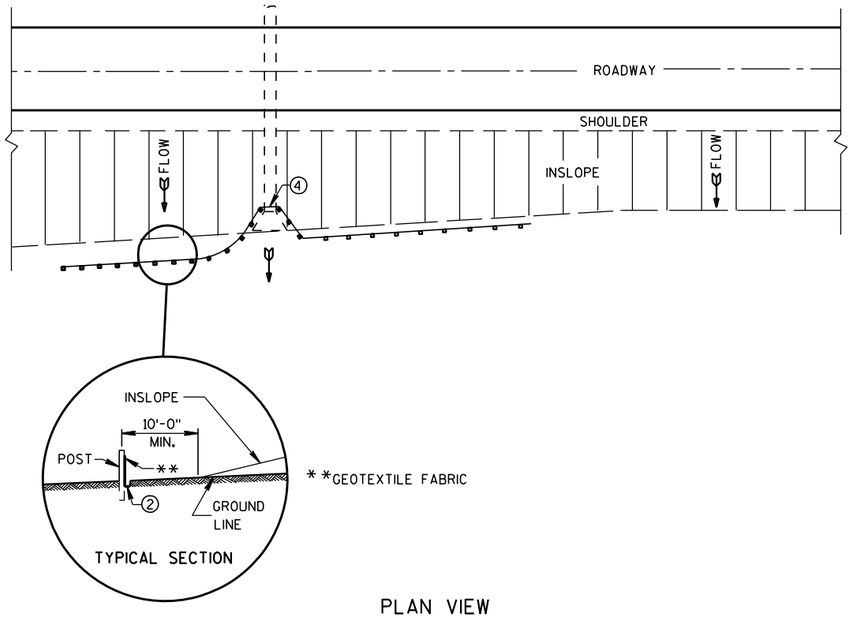
STATE PROJECT NUMBER 2984-12-74 - -	HWY: N. HOLTON ST.	COUNTY: MILWAUKEE	PLAN	SCALE FEET 0 20	SHEET NO: E

FILENAME: DGNFILENAME

REVISED DATE: 09-01-2023 BY SDB

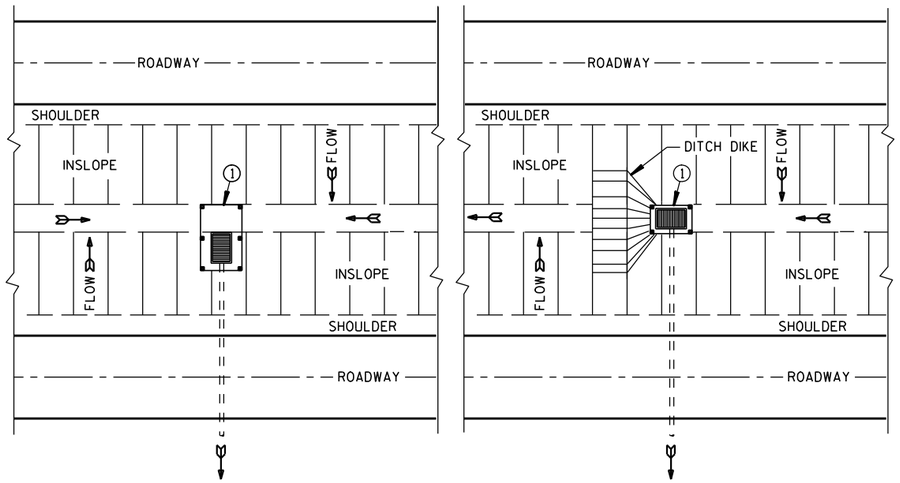
Standard Detail Drawing List

08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
13C15-08A	CONCRETE BASE
13C15-08B	CONCRETE BASE
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
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



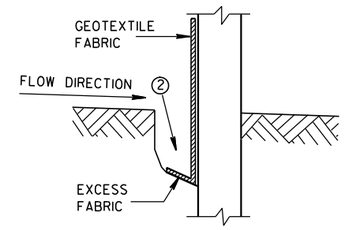
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

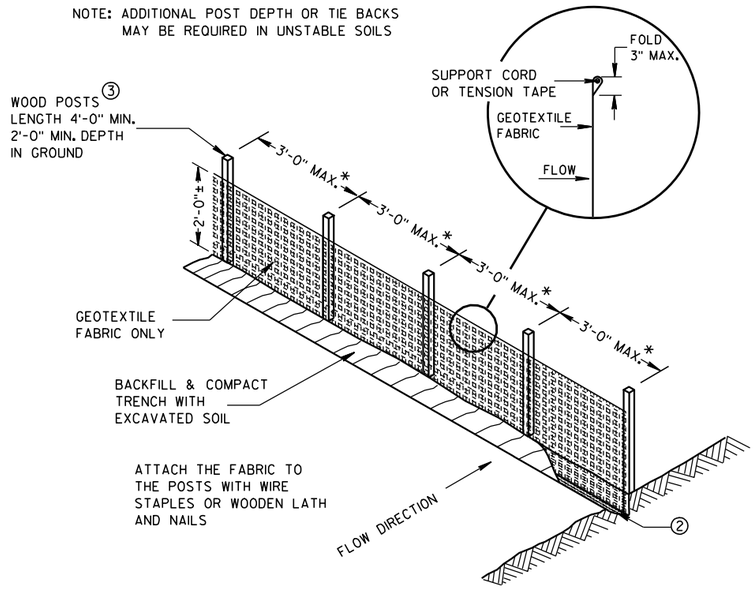
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

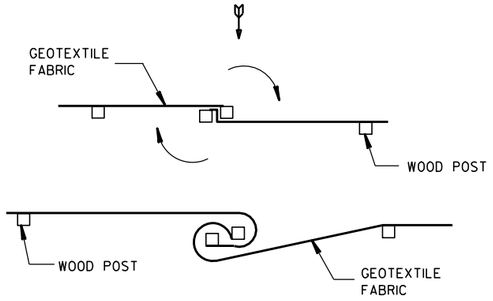


TRENCH DETAIL

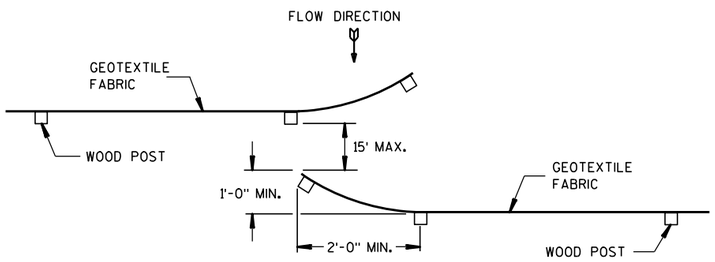


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

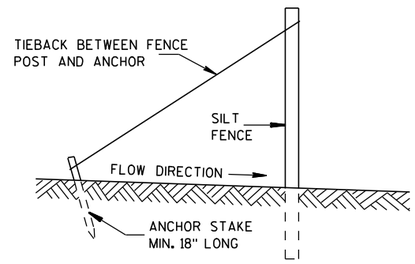


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

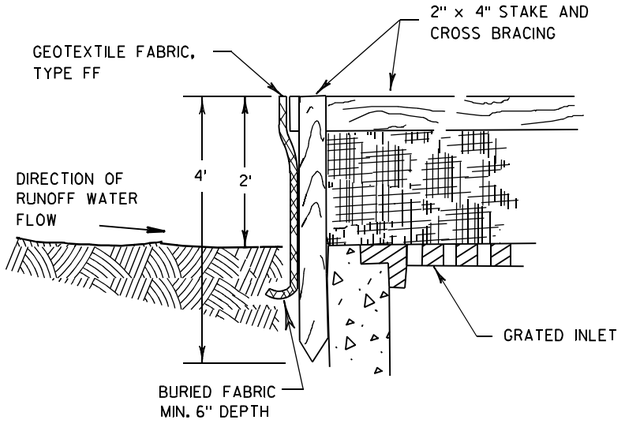
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

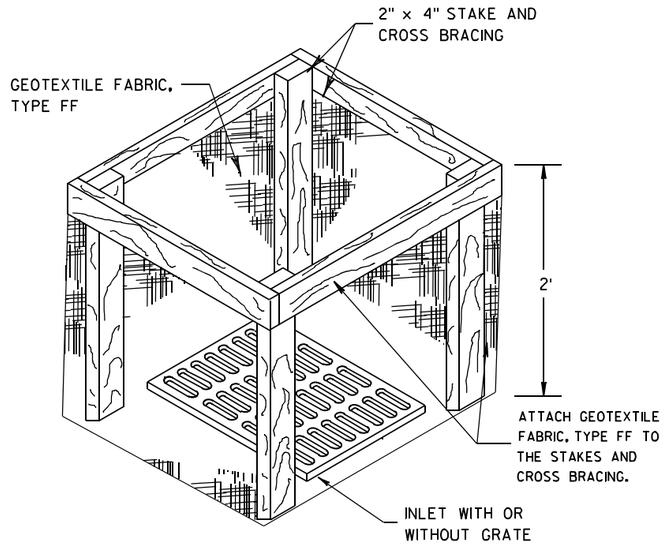
6

S.D.D. 8 E 9-6

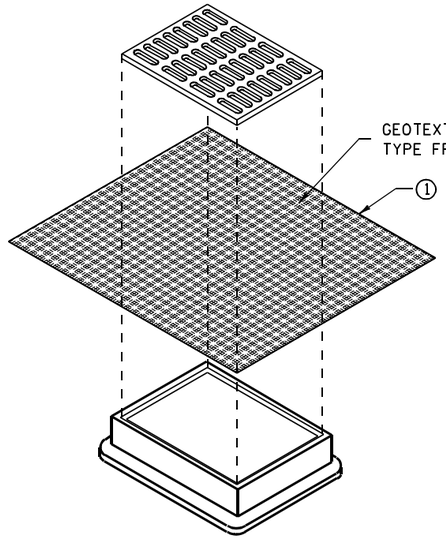
6

S.D.D. 8 E 9-6



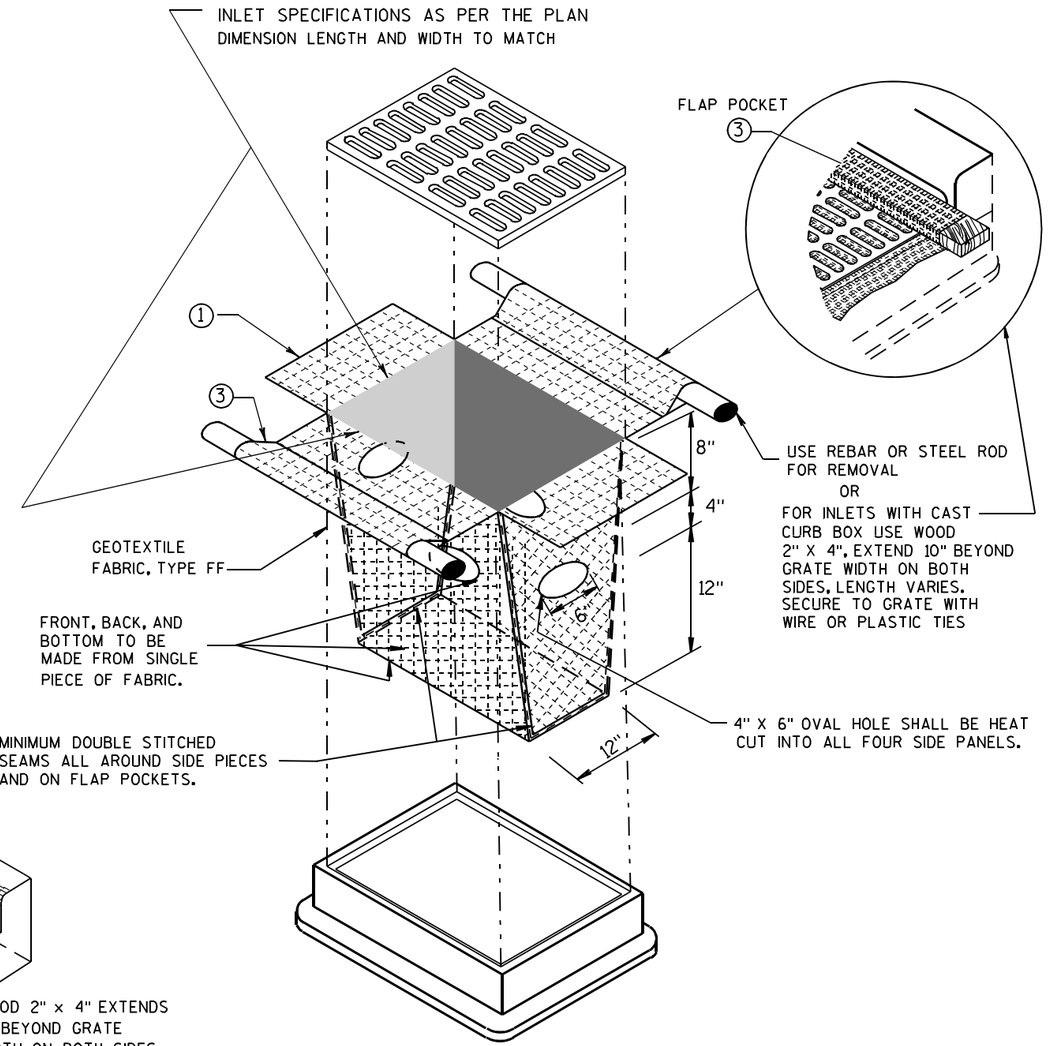


INLET PROTECTION, TYPE A



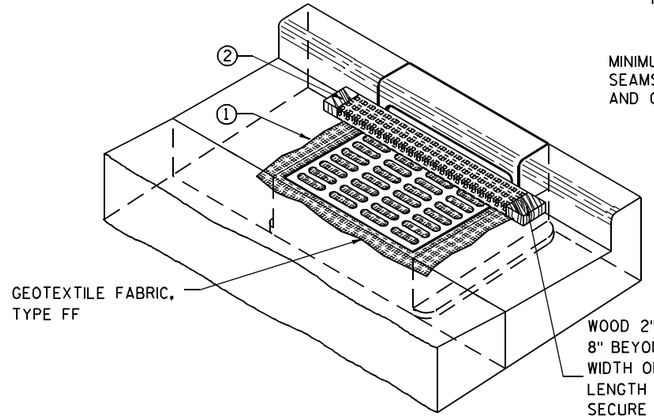
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

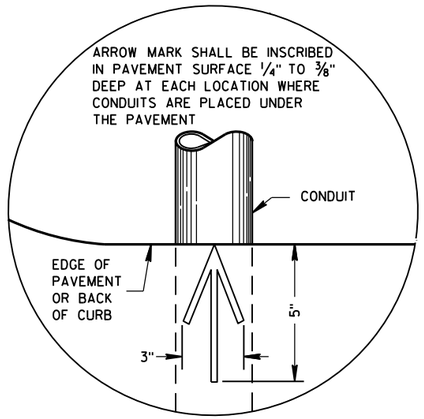
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

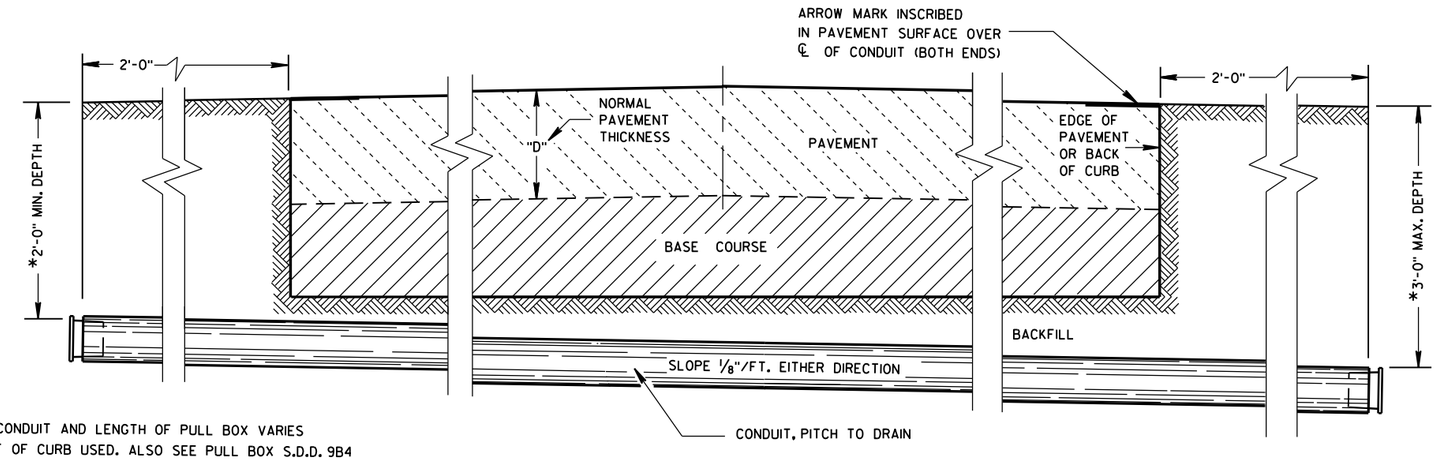
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

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

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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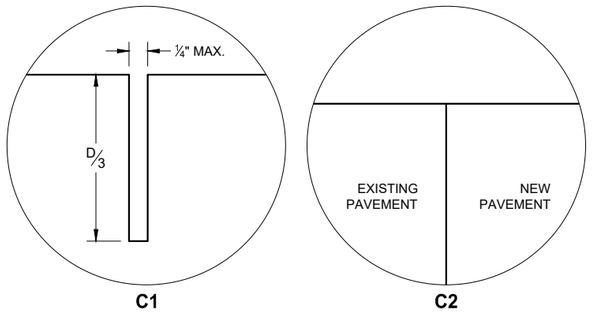
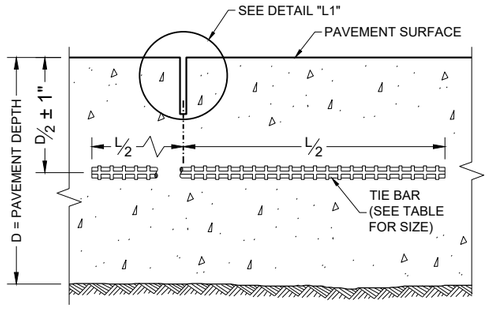
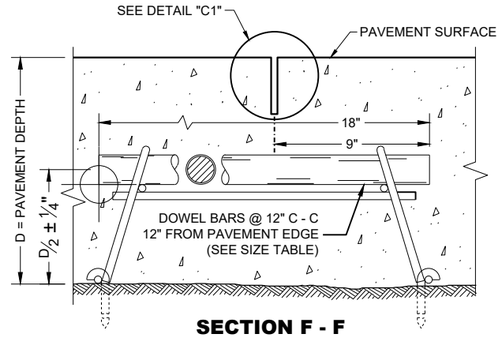
S.D.D. 9 B 2-10



TRANSVERSE JOINTS



SECTION C - C
SAWED JOINT



SECTION F - F
CONTRACTION JOINT

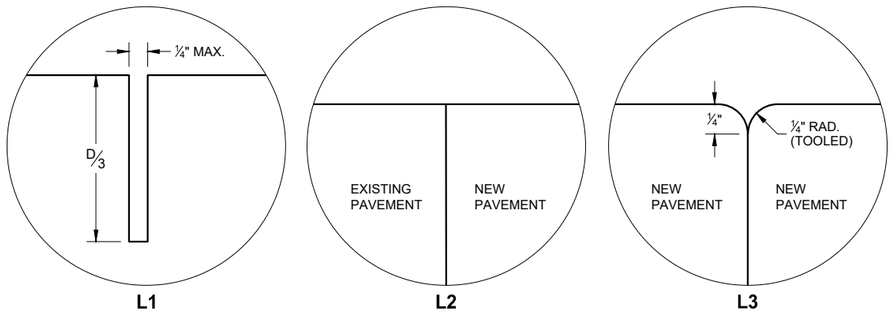
GENERAL NOTES

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

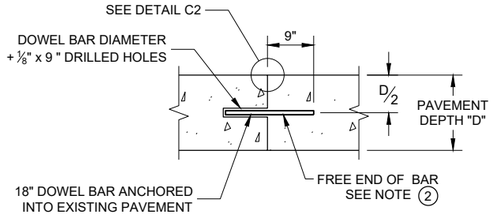
PROVIDE A MIMIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

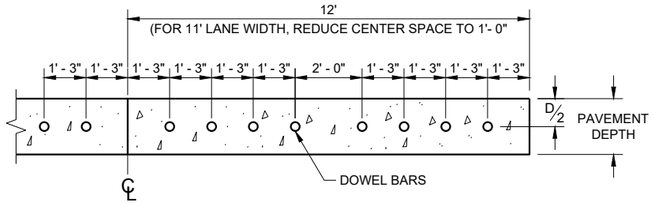
(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



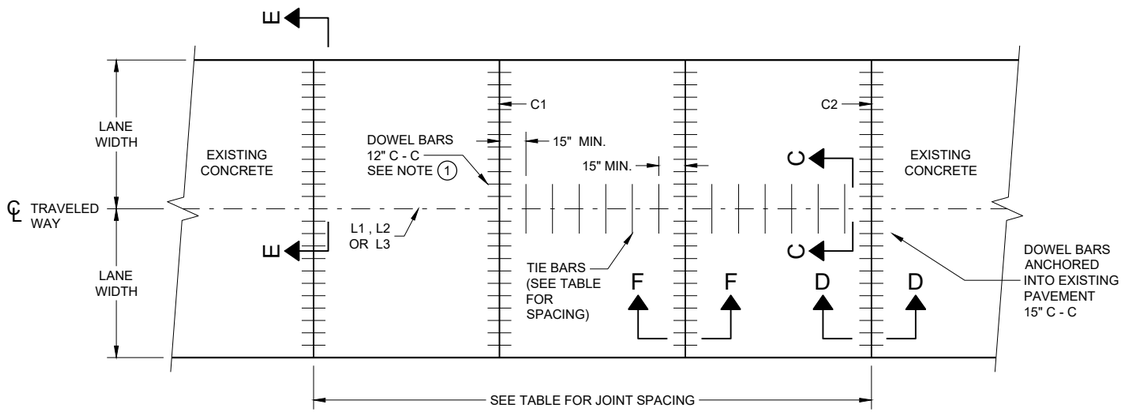
LONGITUDINAL JOINTS



SECTION D - D



SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

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

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

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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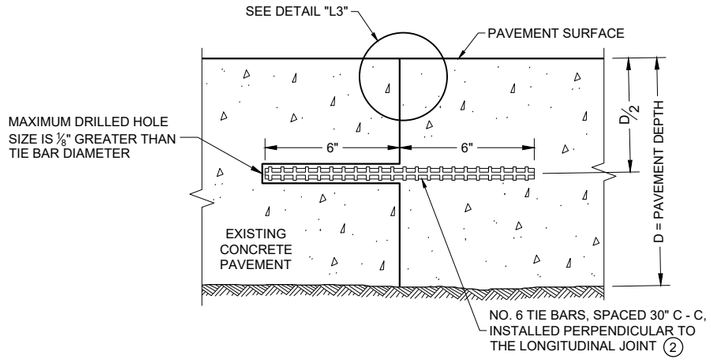
SDD 13C15 - 08a
SDD 13C15 - 08a

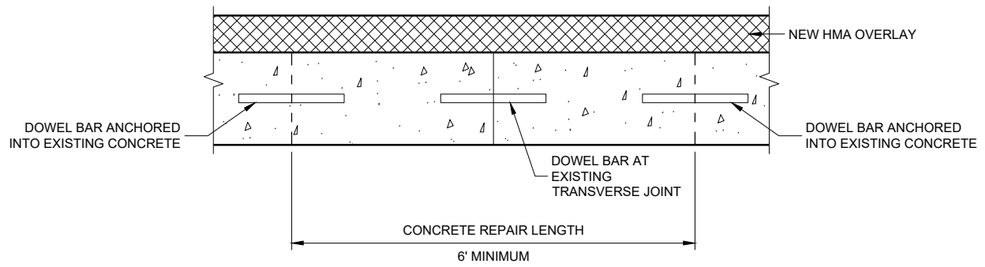
GENERAL NOTES

1. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
2. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
3. PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

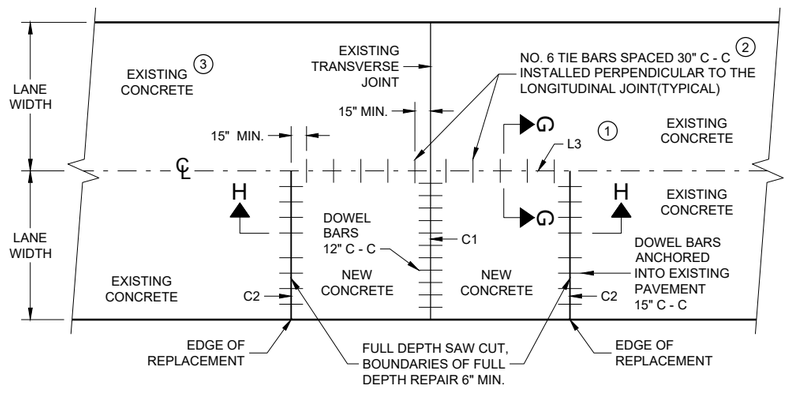


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H - H



PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS 20

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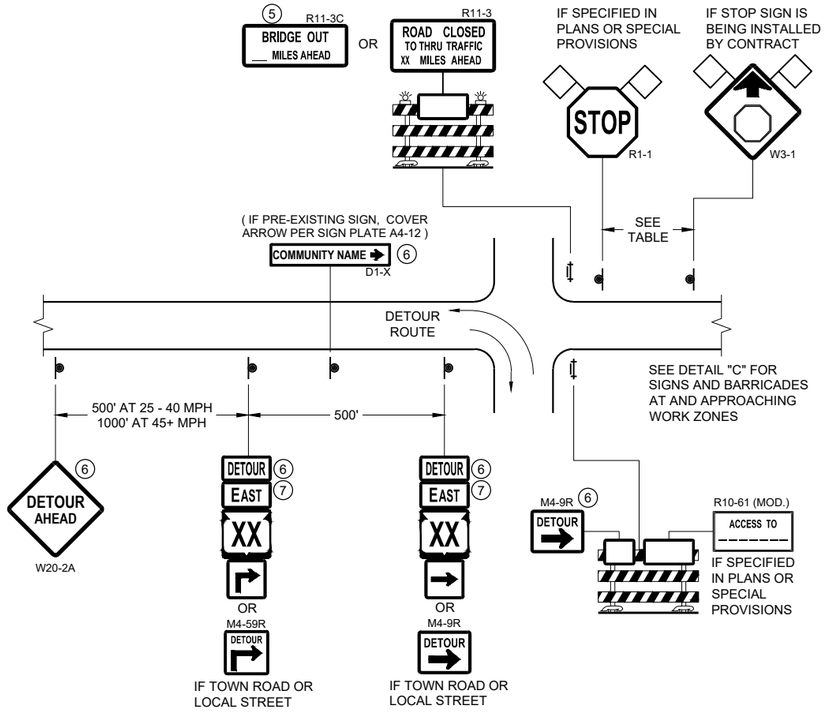
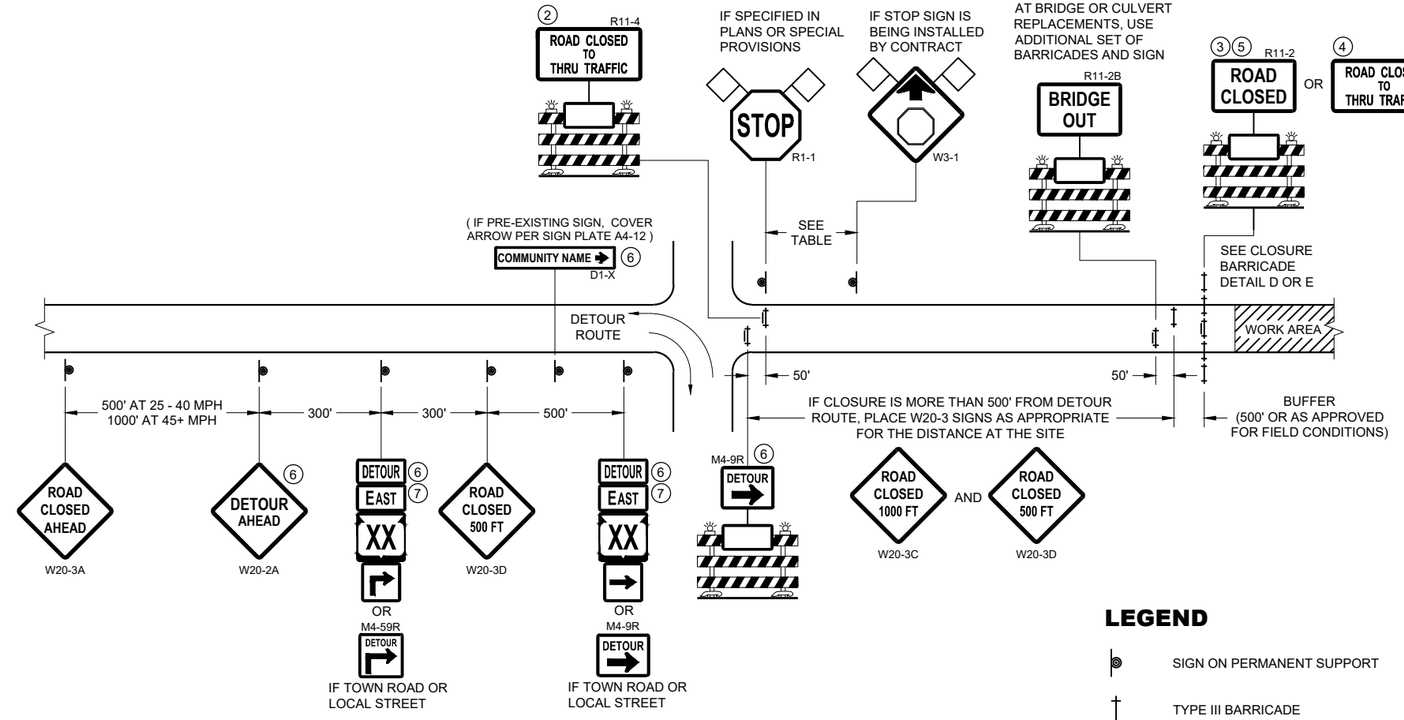


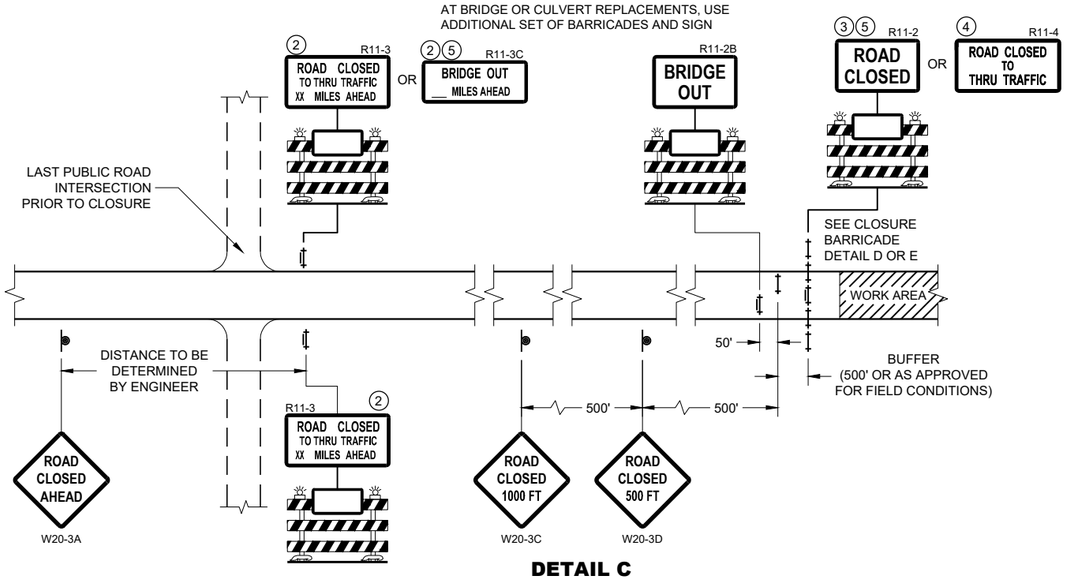
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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 X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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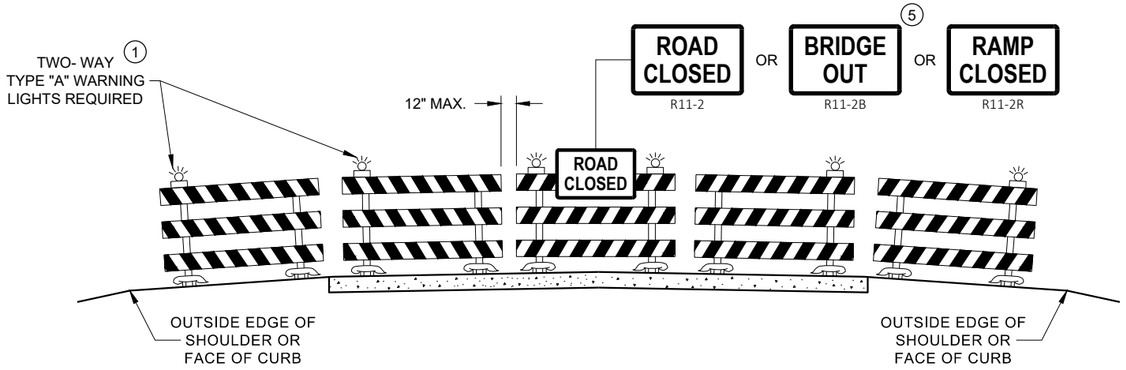
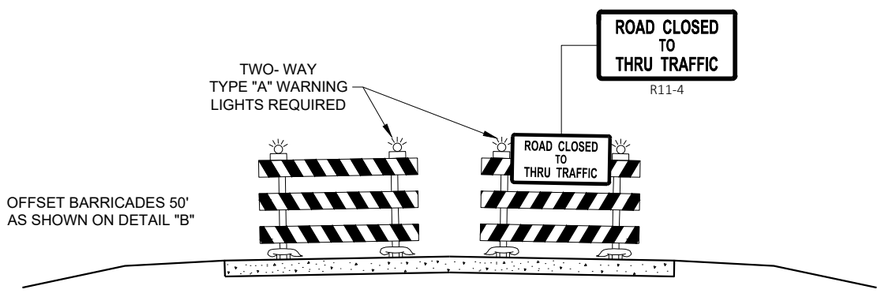
SDD 15C02 - 09a



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
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 09b

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SDD 15C02 - 09b

GENERAL NOTES

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

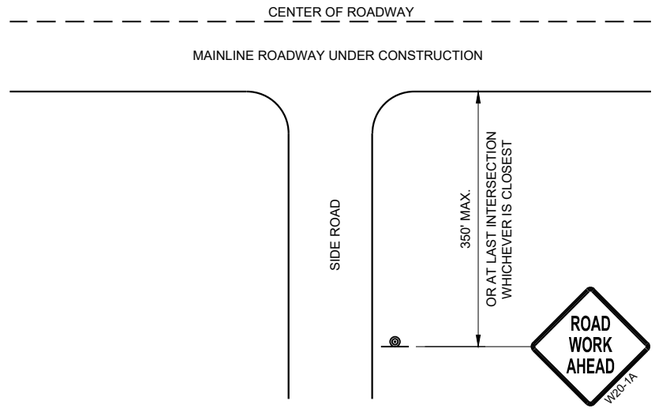
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

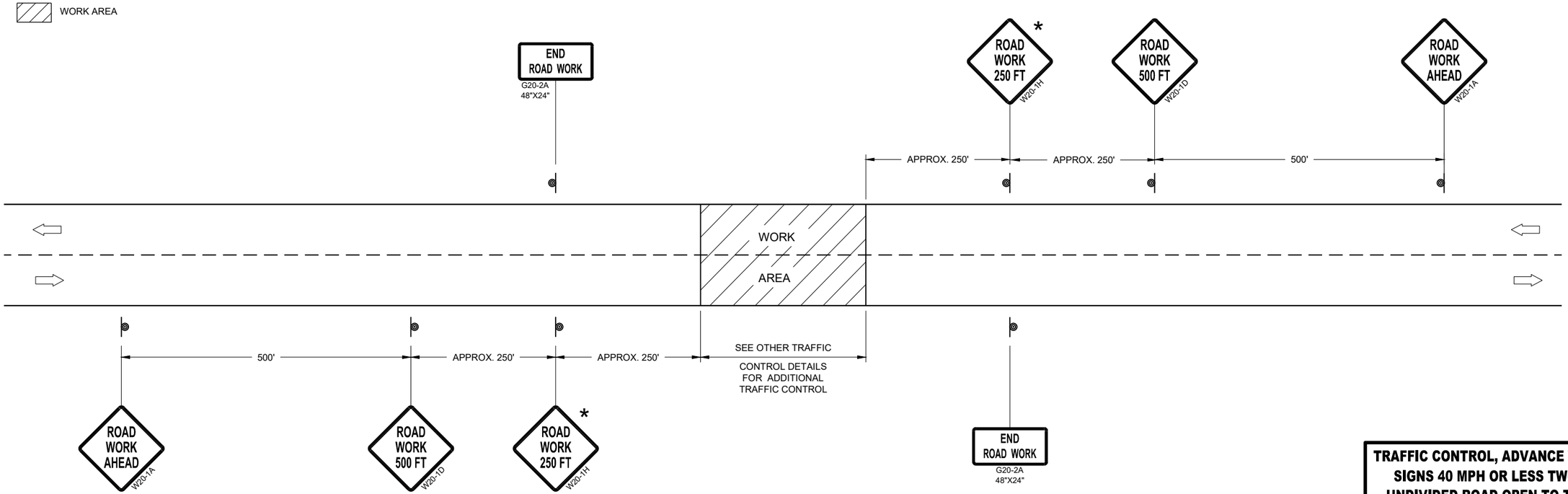
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



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 ENGINEE

FHWA

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SDD 15C05 - 05

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

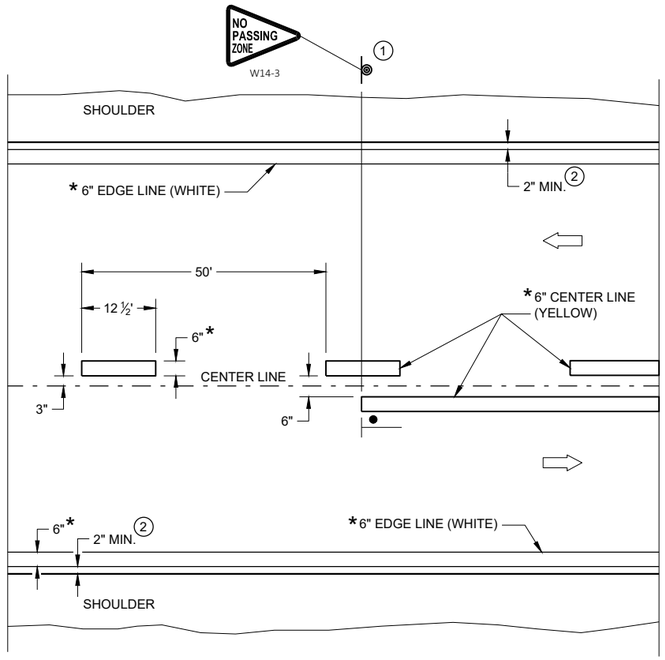
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

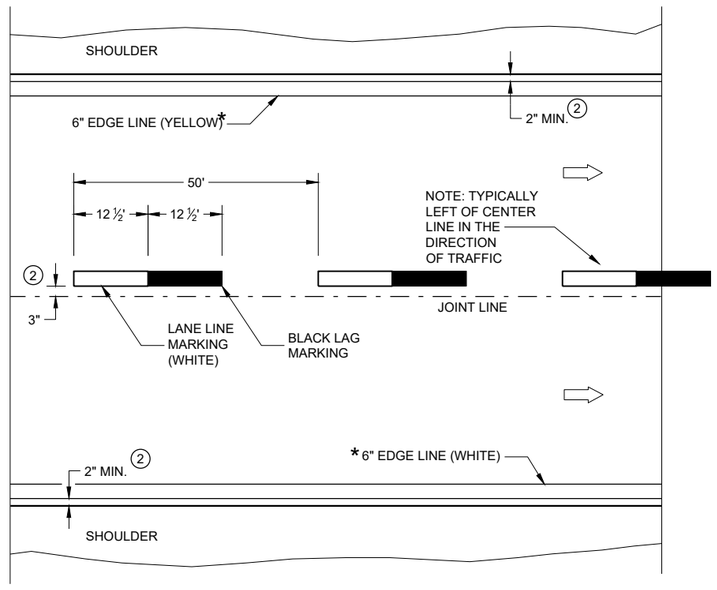
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M ENGINEER

FHWA

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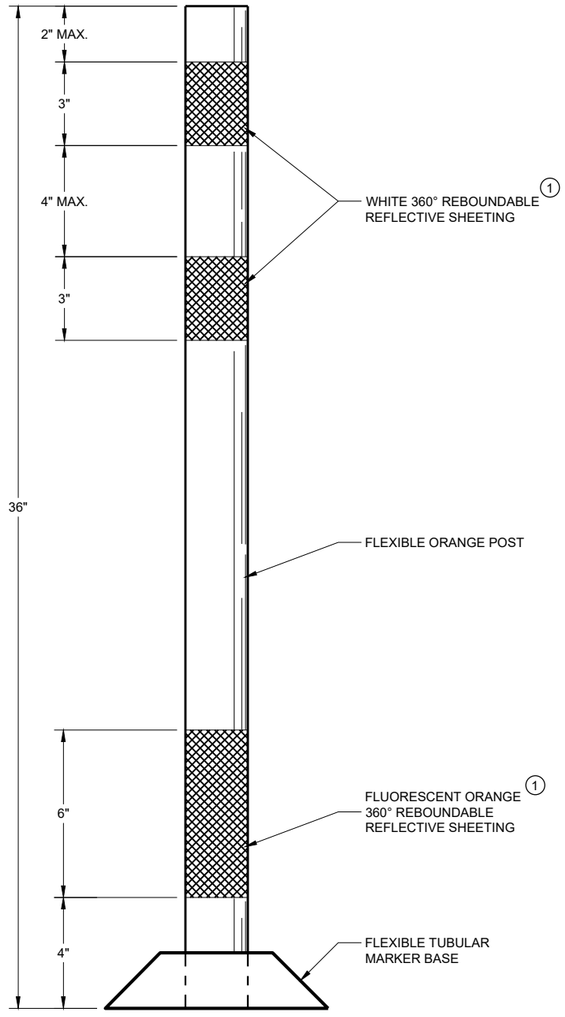
SDD 15C08-23a



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 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

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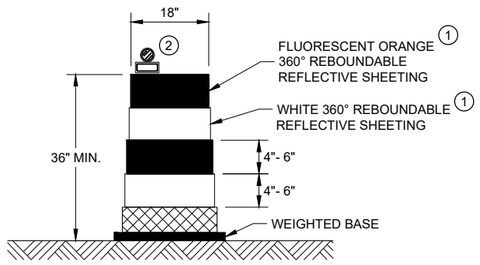
SDD 15C11 - 10a

SDD 15C11 - 10a

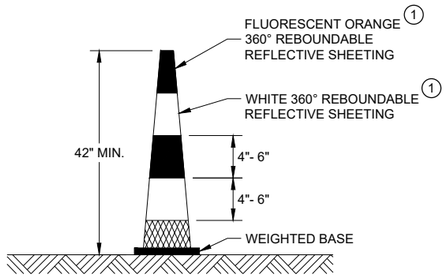
GENERAL NOTES

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.



DRUM

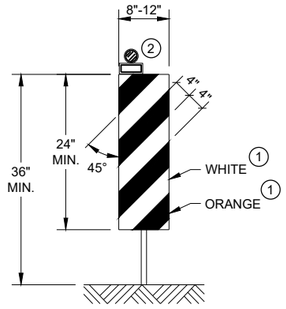
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

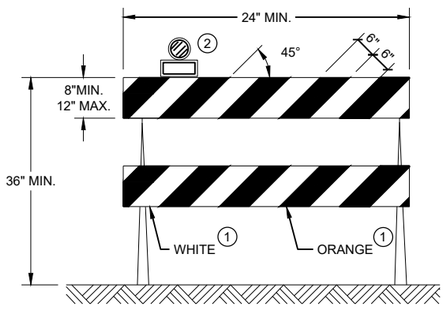
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



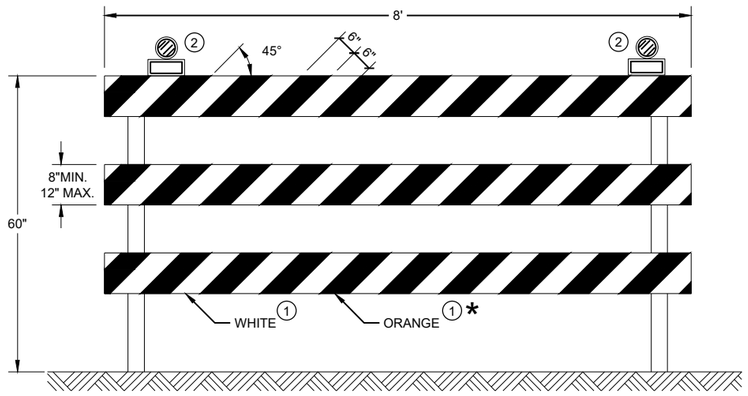
VERTICAL PANEL

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.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 10b
SDD 15C11 - 10b

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.

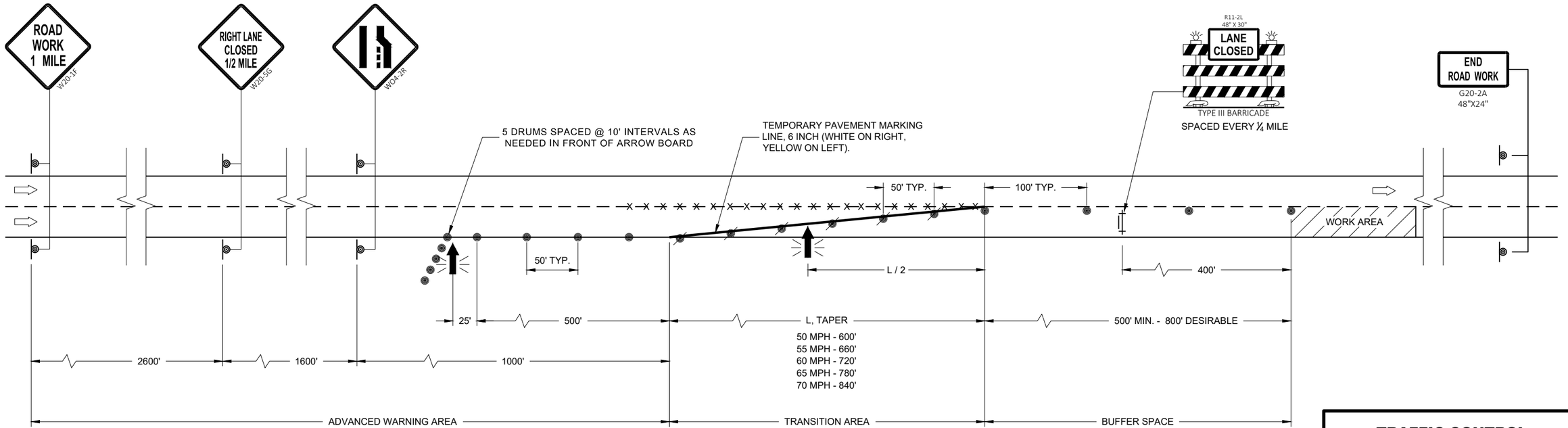
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D12 - 11a

6

SDD 15D12 - 11a

STRUCTURE P-40-875
N. HOLTON ST. VIADUCT OVER MILWAUKEE RIVER

STATE PROJECT NUMBER

2984-12-74

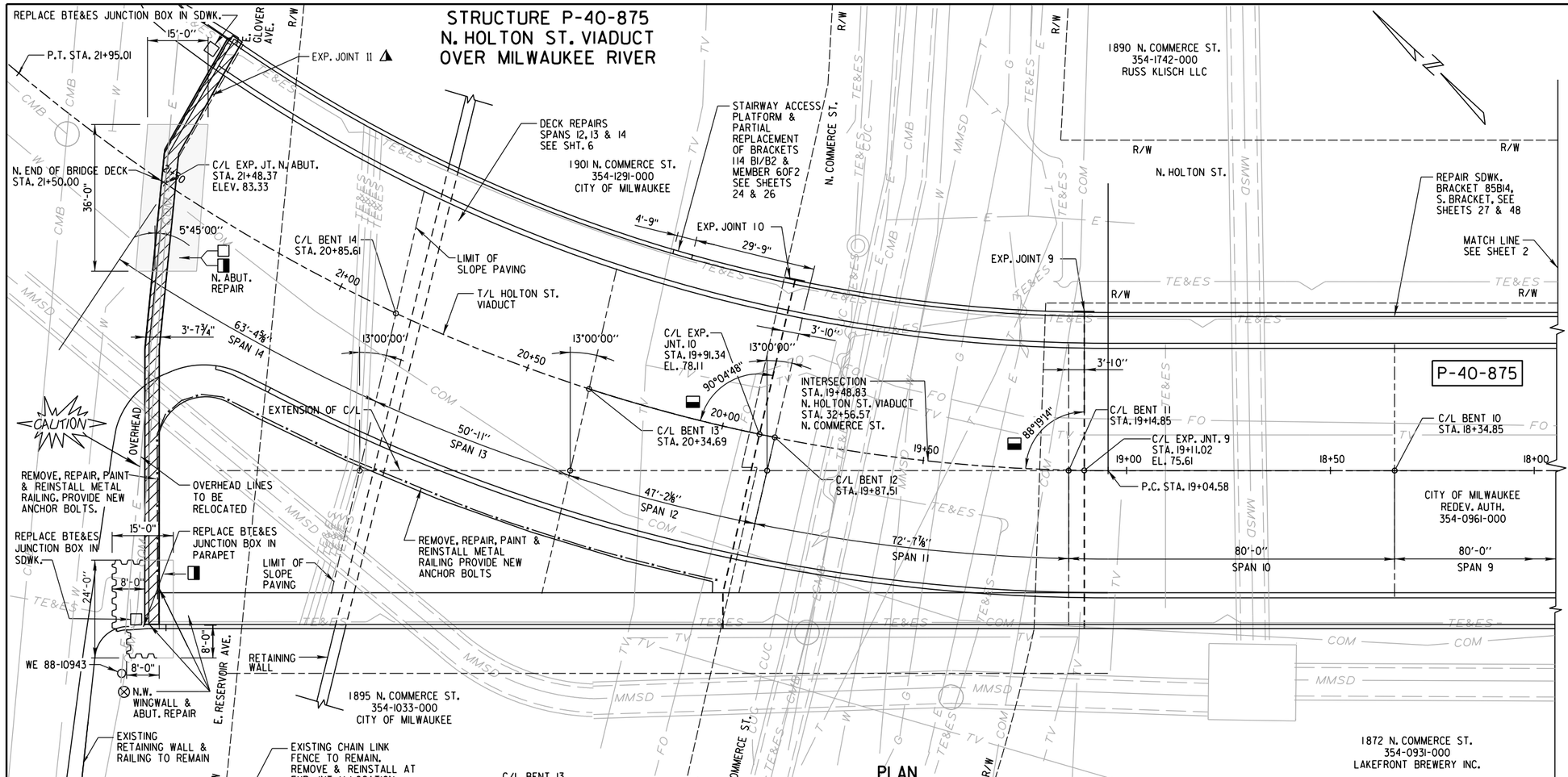
NOTES:

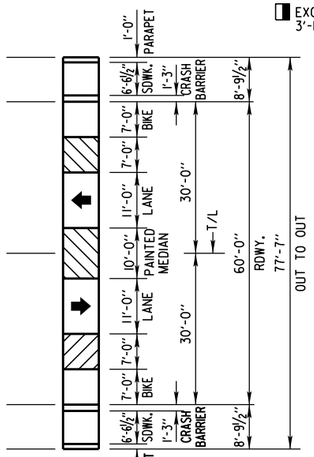
LIST OF DRAWINGS CAN BE FOUND ON SHEET 4 "CROSS SECTIONS"

EXISTING UTILITIES TO REMAIN.

LEGEND:

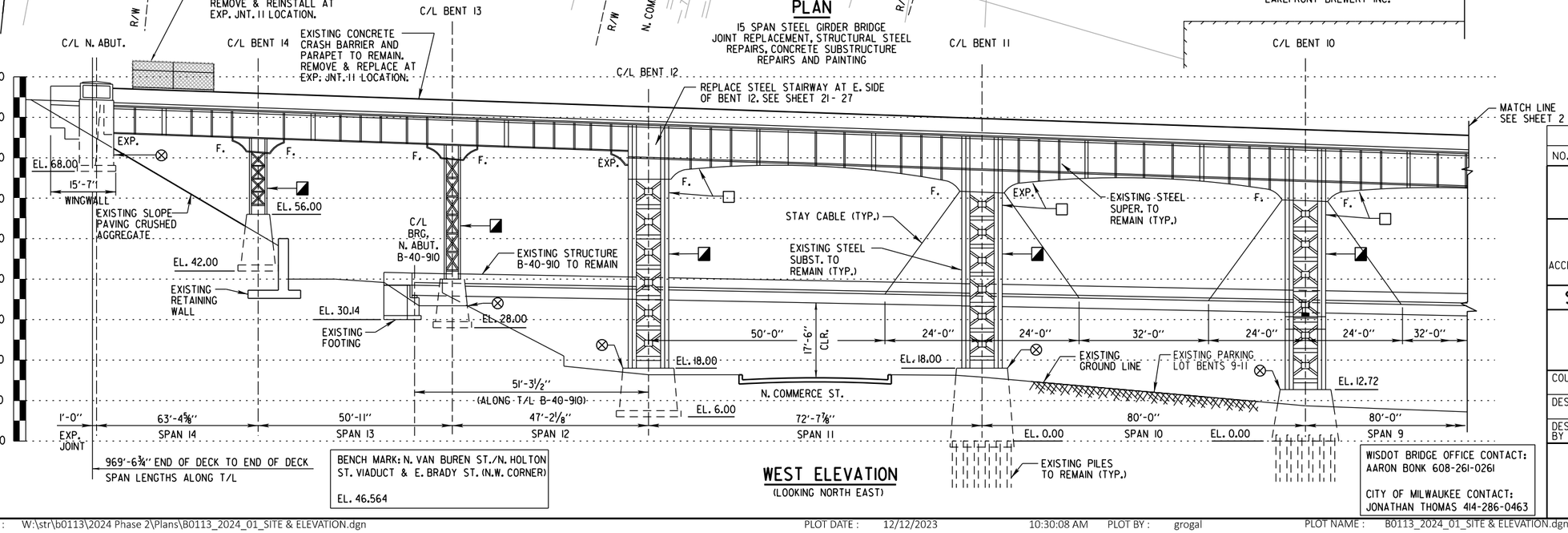
- STRIP SEAL EXPANSION JOINT REPLACEMENT
- ANGLES MEASURED FROM TARGET TO T/L AT LOCATION OF INTERSECTION, TYP.
- INDICATES AREAS OF REPAIR/REPLACEMENT TO ABUTMENT AND WINGWALLS
- CONCRETE SUBSTRUCTURE REPAIRS
- TEMPORARY SHORING
- PAINT BENT
- STRUCTURAL STEEL REPAIRS TO BENT AND/OR SUPERSTRUCTURE
- EXCAVATION AREA 3'-18' BELOW GRADE





PLAN

15 SPAN STEEL GIRDER BRIDGE
JOINT REPLACEMENT, STRUCTURAL STEEL REPAIRS, CONCRETE SUBSTRUCTURE REPAIRS AND PAINTING



BENCH MARK: N. VAN BUREN ST./N. HOLTON ST. VIADUCT & E. BRADY ST. (N.W. CORNER)

EL. 46.564

WEST ELEVATION
(LOOKING NORTH EAST)

WISDOT BRIDGE OFFICE CONTACT:
AARON BONK 608-261-0261

CITY OF MILWAUKEE CONTACT:
JONATHAN THOMAS 414-286-0463

WISCONSIN
JONATHAN D. THOMAS E-42372 MILWAUKEE, WI
PROFESSIONAL ENGINEER
12/12/2023

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 SDR 12/12/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE P-40-875

N. HOLTON ST. OVER MILWAUKEE RIVER

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JPH	HMD	SDB/GJR	JPH/HMD

SITE PLAN AND ELEVATION (1 OF 3)

SHEET 1 OF 72
28

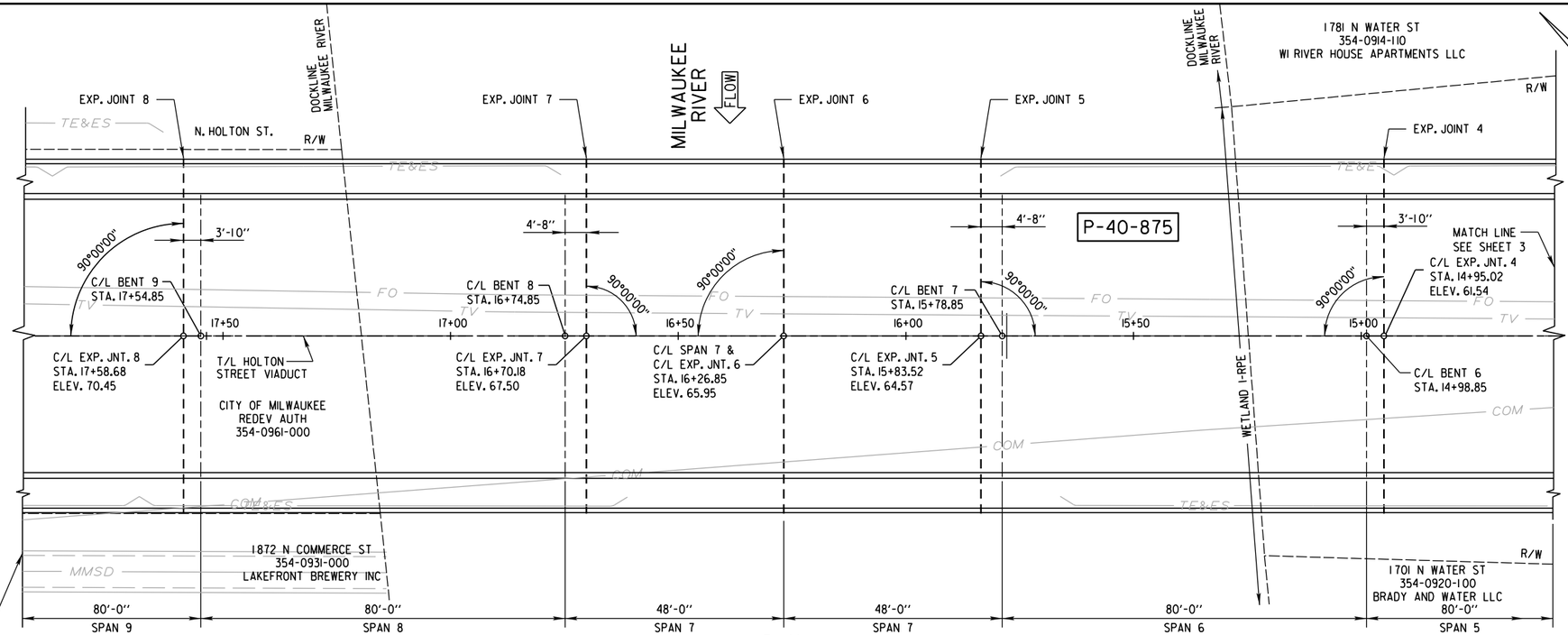
REVISED: 12-05-2023 GJR

8

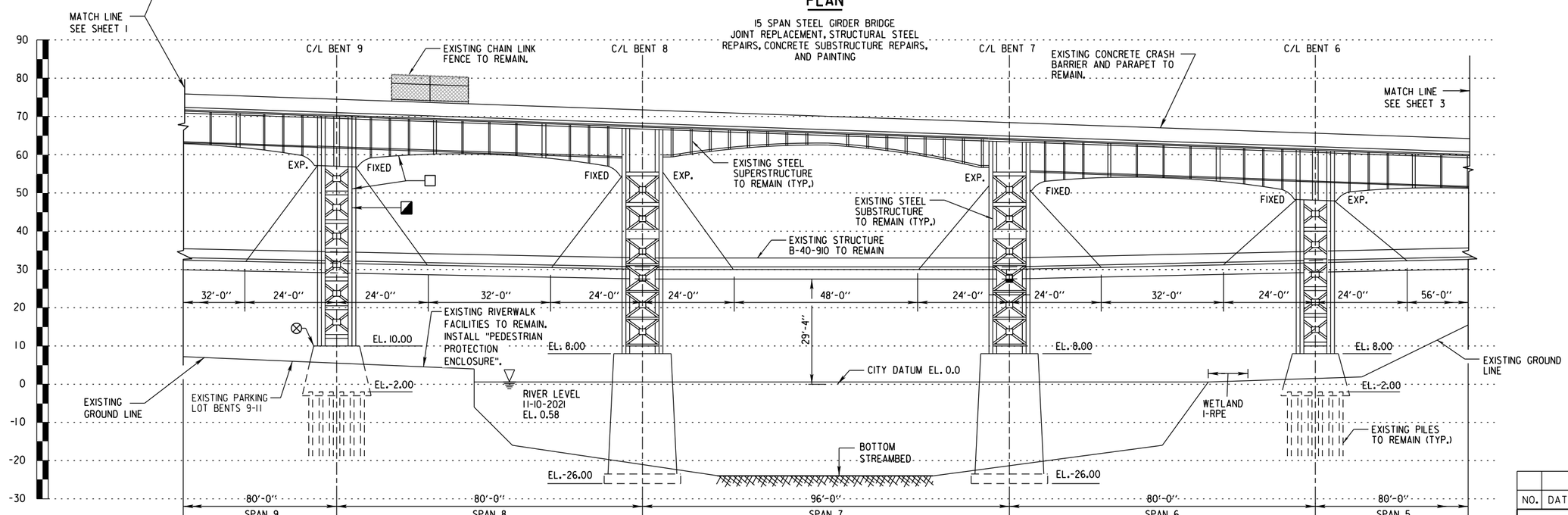
8

STATE PROJECT NUMBER

2984-12-74



PLAN



WEST ELEVATION

(LOOKING NORTH EAST)

LEGEND:

- ☐ STRUCTURAL STEEL REPAIRS TO BENT AND/OR SUPERSTRUCTURE
- ◪ PAINT BENT
- ⊗ CONCRETE SUBSTRUCTURE REPAIRS

REVISED: 12-05-2023 GJR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY GJR | PLANS CK'D. JPH

SITE PLAN AND ELEVATION (2 OF 3)

SHEET 2 OF 72

29

FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_02_SITE & ELEVATION.dgn PLOT DATE : 12/12/2023 10:30:42 AM PLOT BY : grogal PLOT NAME : B0113_2024_02_SITE & ELEVATION.dgn

STATE PROJECT NUMBER

2984-12-74

1781 N WATER ST
354-0914-110
WI RIVER HOUSE APARTMENTS LLC

1701 N WATER ST
354-0920-100
BRADY AND WATER LLC

703 E PEARSON ST
354-0750-100
BRADYPUMPHOUSE LLC

1711 N VAN BUREN ST
354-0815-000
CITY OF MILWAUKEE

77'-7" OUT TO OUT
60'-0" ROWY.
T/L 30'-0"
8'-9½" | 1'-0" PARAPET | 6'-6½" SDWK. | 1'-3" CRASH BARRIER
7'-0" BIKE | 11'-0" LANE | 10'-0" PAINTED MEDIAN | 11'-0" LANE | 7'-0" BIKE

P-40-875

EXP. JOINT 3 | EXP. JOINT 2 | EXP. JOINT 1

C/L BENT 5 STA. 14+85.85
C/L BENT 4 STA. 13+61.85
C/L EXP. JNT. 3 STA. 13+62.45 ELEV. 56.83
C/L EXP. JNT. 2 STA. 13+09.14 ELEV. 54.92
C/L BENT 2 STA. 12+57.59
C/L BENT 3 STA. 13+09.74
C/L BENT 1 STA. 12+11.23
P.T. STA. 13+59.04

90°00'00" | 90°00'00" | 83°36'26" | 84°32'14" | 84°33'00" | 6°21'38"

0'-7¼" | 0'-7¼" | 1'-0"

14+50 | 14+00 | 13+50 | 13+00 | 12+50 | 12+00 | 11+50 | 11+00 | 10+50

T/L HOLTON STREET VIADUCT

MATCH LINE SEE SHEET 2

INTERSECTION
STA. 12+36.91
N. HOLTON ST. VIADUCT
STA. 43+26.26
N. WATER ST.

POINT OF MINIMUM VERTICAL CLEARANCE

C/L EXP. JT. S. ABUT. STA. 11+81.44 ELEV. 50.80

S. END OF BRIDGE DECK STA. 11+80.44

P.C. STA. 10+43.91

N. WATER ST. | OVERHEAD | OVERHEAD | 33'-0" | 33'-0" | 19'-6" | 23'-6"

80'-0" SPAN 5 | 57'-0" SPAN 4 | 52'-1¼" SPAN 3 | 52'-1¾" SPAN 2 | 46'-4¼" SPAN 1 | 29'-9½" SPAN X

R/W

PLAN

15 SPAN STEEL GIRDER BRIDGE
JOINT REPLACEMENT, STRUCTURAL STEEL REPAIRS,
CONCRETE SUBSTRUCTURE REPAIRS, AND PAINTING

EXISTING CHAIN LINK FENCE TO REMAIN.

C/L BENT 5 | C/L BENT 4 | C/L BENT 3 | C/L BENT 2 | C/L BENT 1 | C/L S ABUT.

MATCH LINE SEE SHEET 2

EXISTING CONCRETE CRASH BARRIER AND PARAPET TO REMAIN.

POINT OF MINIMUM VERTICAL CLEARANCE

EXISTING STEEL SUPERSTRUCTURE TO REMAIN (TYP.)

EXISTING STEEL SUBSTRUCTURE TO REMAIN (TYP.)

C/L BRG SOUTH ABUT. B-40-910

EXISTING STRUCTURE B-40-910 TO REMAIN

EXISTING FOOTING

FIXED | EXP.

EL. 39.00 | EL. 39.00 | EL. 32.00 | EL. 29.00 | EL. 28.00 | EL. 25.00 | EL. 24.50 | EL. 37.50 | EL. 37.50 | EL. 29.00 | EL. 33.50

12'-3" MIN. AT FACE OF RETAINING WALL

NORTH WATER ST.

32'-0" WING WALL

56'-0" | 20'-7¼" (ALONG T/L B-40-910)

80'-0" SPAN 5 | 57'-0" SPAN 4 | 52'-1¼" SPAN 3 | 52'-1¾" SPAN 2 | 46'-4¼" SPAN 1 | 29'-9½" SPAN X | 1'-0" EXP. JOINT

EL. 2.0

EXISTING GROUND LINE | EXISTING PILES TO REMAIN (TYP.)

969'-6¾" END OF DECK TO END OF DECK ALONG T/L

WEST ELEVATION

(LOOKING NORTH EAST)

LEGEND:

ANGLES MEASURED FROM TARGET TO T/L AT LOCATION OF INTERSECTION, TYP.

REVISED: 10-09-2023 BY GJR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY GJR | PLANS CK'D. JPH

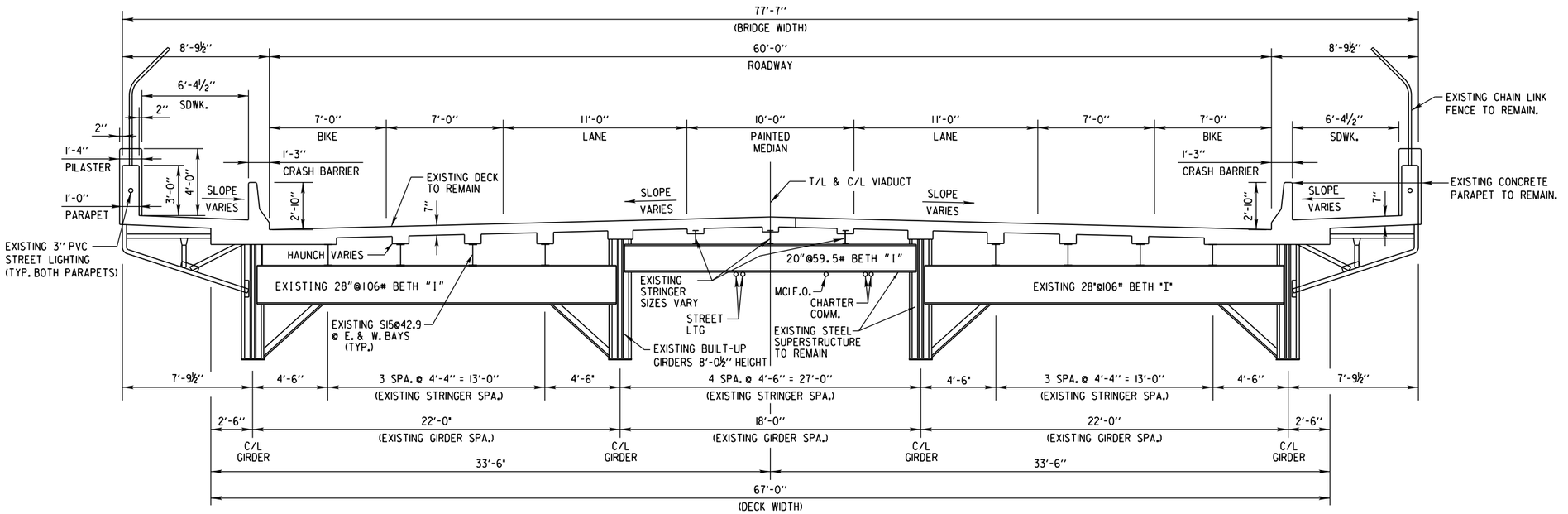
SITE PLAN AND ELEVATION (3 OF 3)

SHEET 3 OF 72
30

FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_03_SITE & ELEVATION.dgn
PLOT DATE : 12/12/2023 10:31:16 AM PLOT BY : grogal
PLOT NAME : B0113_2024_03_SITE & ELEVATION.dgn

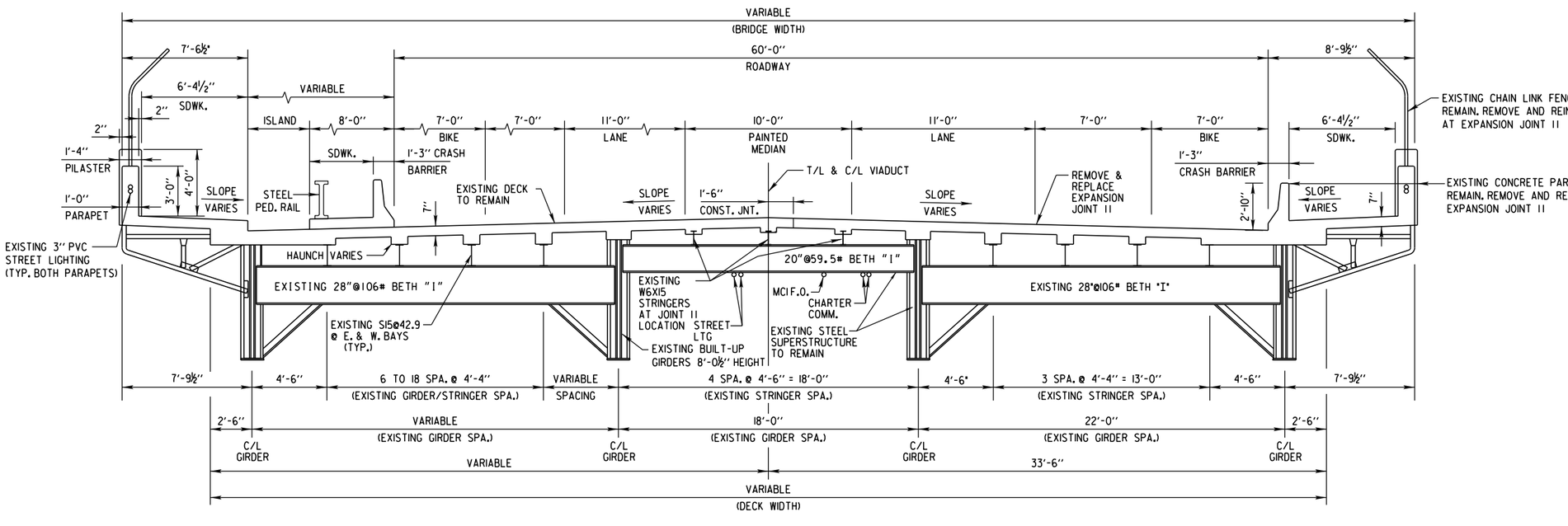
STATE PROJECT NUMBER

2984-12-74



TYPICAL CROSS SECTION

(FIXED SPANS 8-10)
(LOOKING NORTH)



TYPICAL CROSS SECTION

(FIXED SPANS 11-14)
(LOOKING NORTH)

LIST OF DRAWINGS

REVISED: 12-05-2023 GJR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY GJR | PLANS CK'D. JPH

CROSS SECTIONS

SHEET 4 OF 72
31

ESTIMATE OF QUANTITIES

ITEM NO.	BID ITEM	UNIT	N. ABUT.	SUPER.	SUBST.	TOTAL
203.0220	REMOVING STRUCTURE P-40-875	EACH		1		1
203.0330	DEBRIS CONTAINMENT P-40-875	EACH		1		1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES P-40-875	EACH	1			1
210.1500	BACKFILL STRUCTURE TYPE A	TON	200			200
502.0100	CONCRETE MASONRY BRIDGES	CY	8	1	3	12
502.0200	CONCRETE MASONRY BRIDGES HES	CY	8			8
502.3101	EXPANSION DEVICE	LF		150		150
502.3200	PROTECTIVE SURFACE TREATMENT	SY		100	20	120
502.3215	PROTECTIVE SURFACE TREATMENT RESEAL	SY		2,320		2,320
502.4104	ADHESIVE ANCHORS 1/2-INCH	EACH		6		6
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	16			16
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	263			263
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,410	4,640	550	7,600
506.0105	STRUCTURAL STEEL CARBON	LB	2,150	5,380	76,470	84,000
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	7			7
506.6000	BEARING ASSEMBLIES EXPANSION P-40-875	EACH	1			1
506.7050.S	REMOVING BEARINGS P-40-875	EACH	8			8
509.0301	PREPARATION DECKS TYPE 1	SY		36		36
509.0302	PREPARATION DECKS TYPE 2	SY		12		12
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF		410		410
509.1000	JOINT REPAIR	SY		60		60
509.1500	CONCRETE SURFACE REPAIR	SF	105	7	94	206
509.2000	FULL DEPTH DECK REPAIR	SY		2		2
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY		31		31
509.9020.S	EPOXY CRACK SEALING	LF	95			95
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF			48	48
509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	1		1	2
511.1200	TEMPORARY SHORING P-40-875	SF	575			575
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	30			30
517.0601	PAINTING EPOXY SYSTEM P-40-875	EACH		1		1
517.0901.S	PREPARATION AND COATING OF TOP FLANGES P-40-875	EACH		1		1
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE P-40-875	EACH		1		1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS P-40-875	EACH		1		1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH		1		1
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	170			170
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF		3		3
652.0135	CONDUIT RIGID METALLIC 3-INCH	LF		24		24
SPV.0025.501	DEEP CONCRETE SURFACE REPAIR	CF			22	22
SPV.0025.505	NON-SHRINK GROUT	CF	24			24
SPV.0035.540	STONE REMOVAL	CY	9			9
SPV.0060.508	TEMPORARY SHORING FOR PIERS 9,10,11,12 AND NORTH ABUTMENT REPAIR	EACH			1	1
SPV.0060.509	TEMPORARY SUPPORTS P-40-875	EACH	2			2
SPV.0060.594	JUNCTION BOX 14"X8"X6"	EACH		1		1
SPV.0060.595	JUNCTION BOX 14"X14"X12"	EACH		2		2
SPV.0060.597	PROTECTING UTILITIES	EACH		1		1
SPV.0085.540	STAIRWAY STRUCTURAL STEEL	LB			12,600	12,600
SPV.0090.501	REMOVE, REPAIR, PAINT AND REINSTALL EXISTING STEEL RAILING	LF		180		180
SPV.0090.505	STAIRWAY RAILING AND PROTECTIVE SCREENING	LF			330	330
SPV.0090.530	REHABILITATION OF CHAIN LINK FENCE	LF		16		16
SPV.0180.530	ABUTMENT SEAT CLEANING AND SEALING	SY	10			10
	NON-BID ITEMS					
	PREFORMED JOINT FILLER					
	NON-BITUMINOUS JOINT FILLER					
	PLASTIC OR ZINC SHEETS 1/8-INCH					
	POLYETHYLENE SHEETS					
	TEFLON PADS					

REVISED DATE: 10-09-2023 BY CJR

8

GENERAL NOTES

ALL STATIONS AND ELEVATIONS ARE IN FEET.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM: 580.6 NGVD.

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.

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

BEVEL EXPOSED CONCRETE EDGES ¾" UNLESS OTHERWISE NOTED.

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

SPACES EXCAVATED AND NOT OCCUPIED BY NEW CONSTRUCTION SHALL BE BACKFILLED WITH BID ITEM 210.1500 "BACKFILL STRUCTURE TYPE A".

JOINT FILLER SHALL CONFORM TO AASHTO DESIGNATION M 153 TYPE I, II, OR III, OR AASHTO DESIGNATION M213.

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

SEE ROADWAY PLANS FOR EXISTING AND PROPOSED UTILITY LOCATIONS.

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

ALL EXISTING STEEL SHALL BE SANDBLASTED AND PAINTED UNDER BID ITEMS 517.0901.S "PREPARATION AND COATING OF TOP FLANGES P-40-875", 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."

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

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

ALL CONCRETE REMOVALS SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF NEW CONCRETE AT JOINT REPAIR, INCLUDING THE TOP, INSIDE AND OUTSIDE FACES OF PARAPETS AND CRASH BARRIERS.

THE 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".

EXISTING CONDUIT IN PARAPET TO REMAIN IN PLACE EXCEPT AT EXPANSION JOINT REPLACEMENT. CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION DURING CONSTRUCTION AND REPAIR ANY DAMAGED WIRING OR CONDUIT AT NO EXPENSE TO THE DEPARTMENT.

INSTALLATION OF EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS, HARDWARE, AND ANY GROUTING AND WELDING SHALL BE PAID FOR AT THE LF PRICE AS BID ITEM 502.3101 "EXPANSION DEVICE".

REMOVAL OF EXISTING EXPANSION JOINT AND STEEL IS INCLUDED WITH THE BID ITEM 509.1000 "JOINT REPAIR".

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

USE GALVANIZED ⅞" DIAMETER ASTM A-325 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 A MINIMUM RADIUS OF 1" AT ALL INTERIOR AND RE-ENTERANT CUTS, UNLESS NOTED OTHERWISE ON THE PLANS.

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

DRAWINGS 21 THRU 72 INCLUDE STRUCTURAL STEEL ERECTION DRAWINGS, FROM 1926 AND 1987. DETAILED FABRICATION DRAWINGS ARE ON FILE WITH THE CITY OF MILWAUKEE.

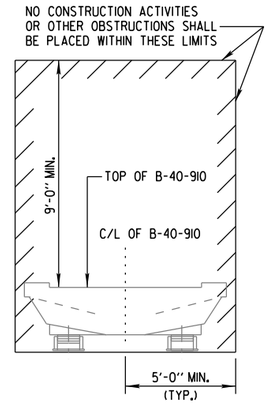
REMOVALS WILL BE MADE AS INDICATED ON THE DRAWINGS. ALL REMOVALS WILL BE COMPLETE AND INCLUDE ALL FOREIGN OBJECTS SUCH AS BRACKETS, HANGER, ABANDONED CONDUIT, ETC. THAT IS NOT NEEDED STRUCTURALLY, WHETHER MENTIONED OR NOT AND REMOVED AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

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

ALL STRUCTURAL STEEL AREAS IN CONTACT WITH NEW CONCRETE ARE TO BE CLEANED AND PRIME PAINT COATED IN ACCORDANCE WITH THE BID ITEM 517.0901.S "PREPARATION AND COATING OF TOP FLANGES P-40-875". ALL RUSTED AND CORRODED AREAS WITHIN 4" OF THE STRUCTURAL STEEL WITHIN CONCRETE ARE TO BE CLEANED, PRIME PAINT COATED, AND RECEIVE ONE FINISH PAINT COAT.

PAINTING LIMITS SHALL BE FROM THE TOP OF THE CONCRETE SUBSTRUCTURE TO THE ELEVATION OF THE BOTTOM FLANGE OF THE MAIN STEEL GIRDERS.



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.

STATE PROJECT NUMBER

2984-12-74

DESIGN DATA

DEAD LOAD

CONCRETE = 150 PCF
FWS = 20 PSF

LIVE LOAD

TAKEN FROM HSI, 06/06/2023
INVENTORY RATING: HS-19
OPERATING RATING: HS-26
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = N/A

MATERIAL PROPERTIES:

CONCRETE SUPERSTRUCTURE	f'c = 4,000 PSI
CONCRETE SUBSTRUCTURE	f'c = 3,500 PSI
BAR STEEL REINFORCEMENT	Fy = 60,000 PSI
NEW STEEL BEAMS/SHAPES (ASTM A709)	Fy = 36,000 PSI

TRAFFIC DATA

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

BRIDGE CONSTRUCTION NOTES

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

PROPOSED IMPROVEMENTS

THE NORTH HOLTON STREET VIADUCT REHABILITATION PHASE II SPECIFIC REPAIRS ARE AS FOLLOWS: STRUCTURAL STEEL REPAIRS TO BENTS 9 THRU 12 INCLUDING STEEL COLUMN, CROSS BRACING (LATERAL AND TRANSVERSE); STRUCTURAL STEEL AND GIRDER REPAIRS INCLUDE REPAIR AND/OR REPLACEMENT OF STRUCTURAL MEMBERS; CONCRETE SUBSTRUCTURE REPAIRS TO BENTS 9-14 AND NORTH ABUTMENT AND WINGWALLS; CONCRETE SUBSTRUCTURE REPAIRS INCLUDE CRACK, SPALL, AND DELAMINATION REPAIR; PAINTING OF BENTS 9-14; NEW EXPANSION JOINT AT NORTH ABUTMENT; REPLACEMENT OF STEEL STAIRCASE AT EAST SIDE OF BENT 12. DECK REPAIRS FROM SPAN 12 TO SPAN 14. REPLACEMENT OF NORTH ABUTMENT EXPANSION BEARINGS. SLOPE PAVING REPAIR.

UTILITIES

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

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

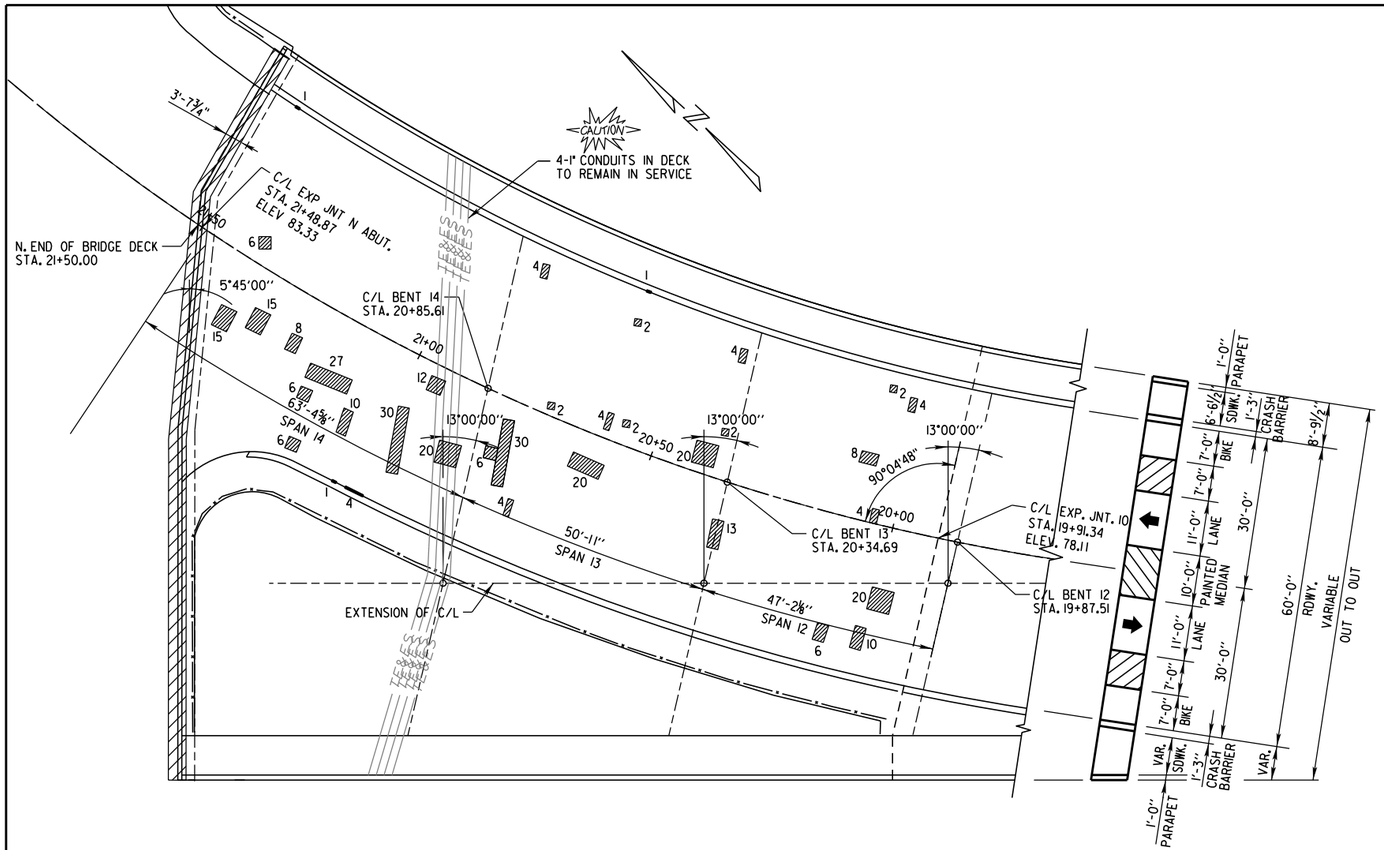
STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

ESTIMATE OF QUANTITIES

SHEET 5 OF 72
32

STATE PROJECT NUMBER
2984-12-74



TOP OF DECK REPAIR PLAN

SPAN 12 - SPAN 14

REVISED DATE: 12-05-2023 GJR

8

NOTE

USE CAUTION FOR CONCRETE REMOVALS TO PREVENT DAMAGE TO REINFORCING STEEL. SEE STANDARD SPECIFICATION SECTIONS 203, 502 & 509 FOR PROPER CONSTRUCTION METHODS.

DECK REPAIR AND CONCRETE SURFACE REPAIR LOCATIONS AS DIRECTED BY THE ENGINEER.

FOR PREPARATION OF DECKS TYPE 1 & 2:
S.F. OF AREAS ARE GIVEN ON TOP OF DECK REPAIR PLAN FOR PREPARATION OF DECKS TYPE 1.
AREA FOR PREPARATION OF DECKS TYPE 2 IS ESTIMATED TO BE ONE-THIRD (1/3) OF PREPARATION OF DECKS TYPE 1 AREA.

TYPE 2 LOCATIONS TO BE DETERMINED AS DIRECTED BY THE ENGINEER AFTER TYPE 1 REMOVALS ARE UNDERWAY.

AREAS OF FULL-DEPTH DECK REPAIR TO BE DETERMINED AS DIRECTED BY THE ENGINEER AFTER TYPE 2 REMOVALS ARE UNDERWAY.

PROTECTIVE SURFACE TREATMENT RESEAL SHALL BE APPLIED TO THE EXISTING DECK, SIDEWALK, CRASH BARRIER, AND PARAPET. SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "PROTECTIVE SURFACE TREATMENT RESEAL".

4-1" CONDUITS SHOWN IN DECK ARE TO REMAIN IN SERVICE.

SPAN LENGTH DIMENSIONS ARE ALONG T/L.

DECK REPAIR AND CONCRETE SURFACE REPAIR LOCATIONS AS DIRECTED BY THE ENGINEER.

LEGEND

- PREPARATION DECK AREA (TYPE 1 AND/OR TYPE 2) (SF)
- CRASH BARRIER CONCRETE SURFACE REPAIR (SF)
- EXP. JOINT REPAIR SEE SHEETS 7-11

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY	HMD	PLANS CK'D.	JPH

TOP OF DECK REPAIR PLAN SPANS 12-14

SHEET 6 OF 72
33

8

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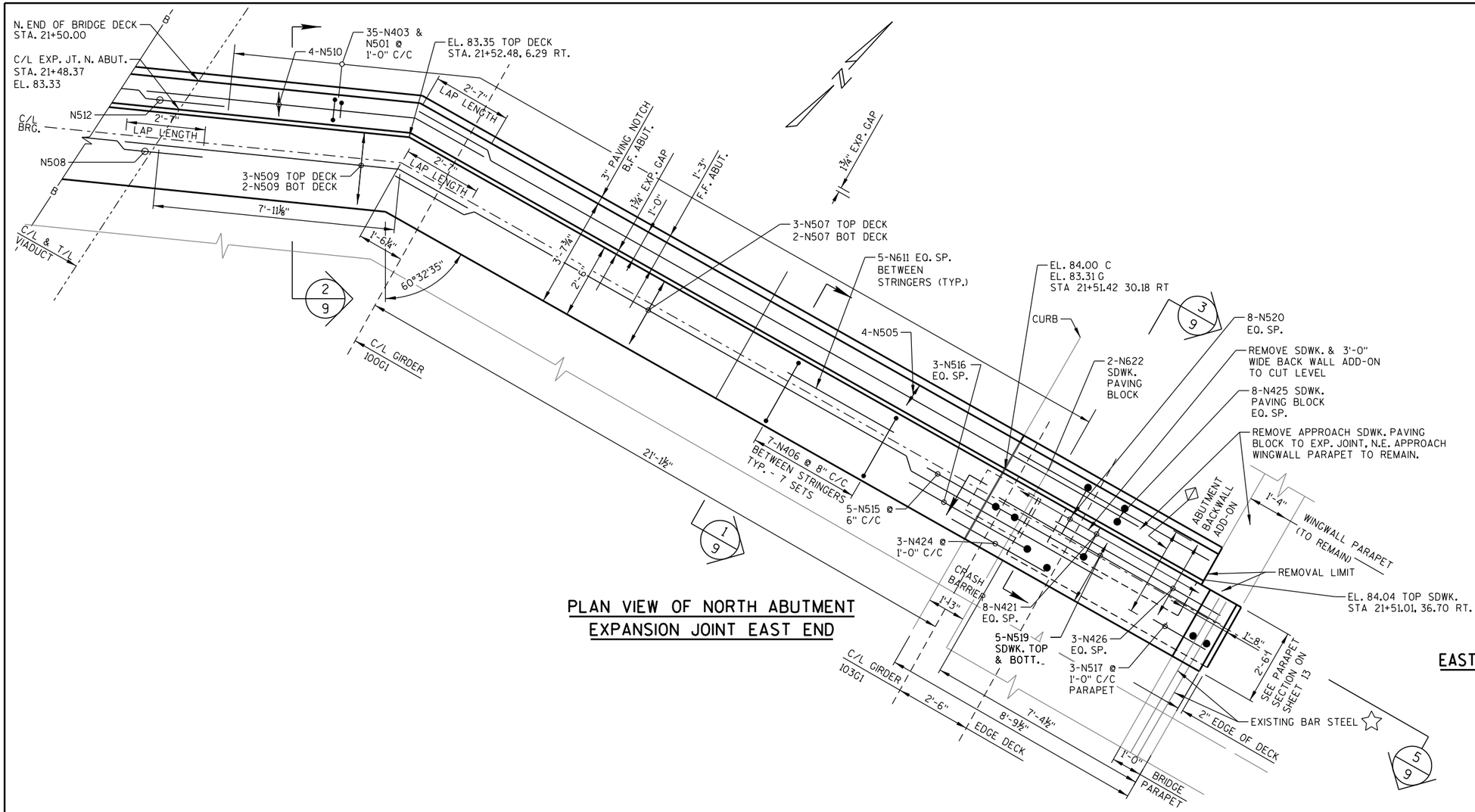

PLAN VIEW OF NORTH ABUTMENT EXPANSION JOINT EAST END

EAST END

REVISED DATE: 12-05-2023 GJR

8

NOTE

AT EXP. JNT. #11 LOCATED AT THE NORTH ABUTMENT, 1 CONDUIT IN EAST CONCRETE PARAPET, 2 CONDUITS IN WEST CONCRETE PARAPET.

ELECTRICAL BOXES IN APPROACH WALKS AND WINGWALL PARAPETS AT BOTH EAST AND WEST SIDE (4 TOTAL). EAST AND WEST APPROACH WALK BOXES AND WEST PARAPET BOX TO BE REPLACED (3 TOTAL).

KEY:

◇ 3'-0" ABUTMENT REMOVE TO BACK WALL CUT LEVEL.

☆ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

◑ STRIKE OFF AND LEAVE ROUGH.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE P-40-875

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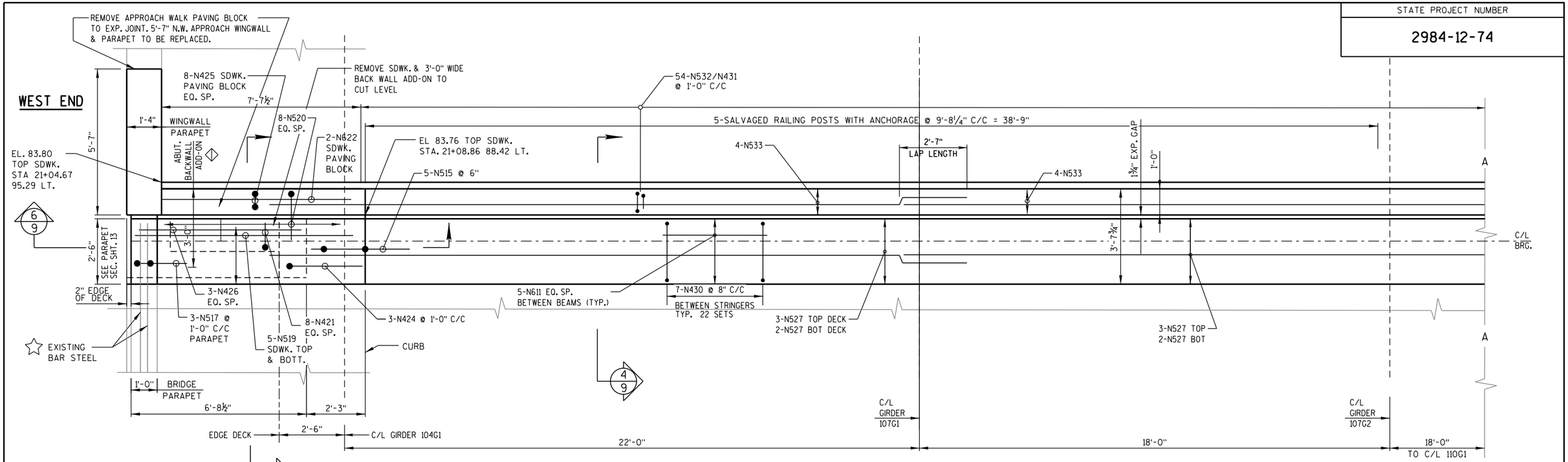
NORTH ABUTMENT EXPANSION JOINT PLAN EAST END

SHEET 7 OF 72
34

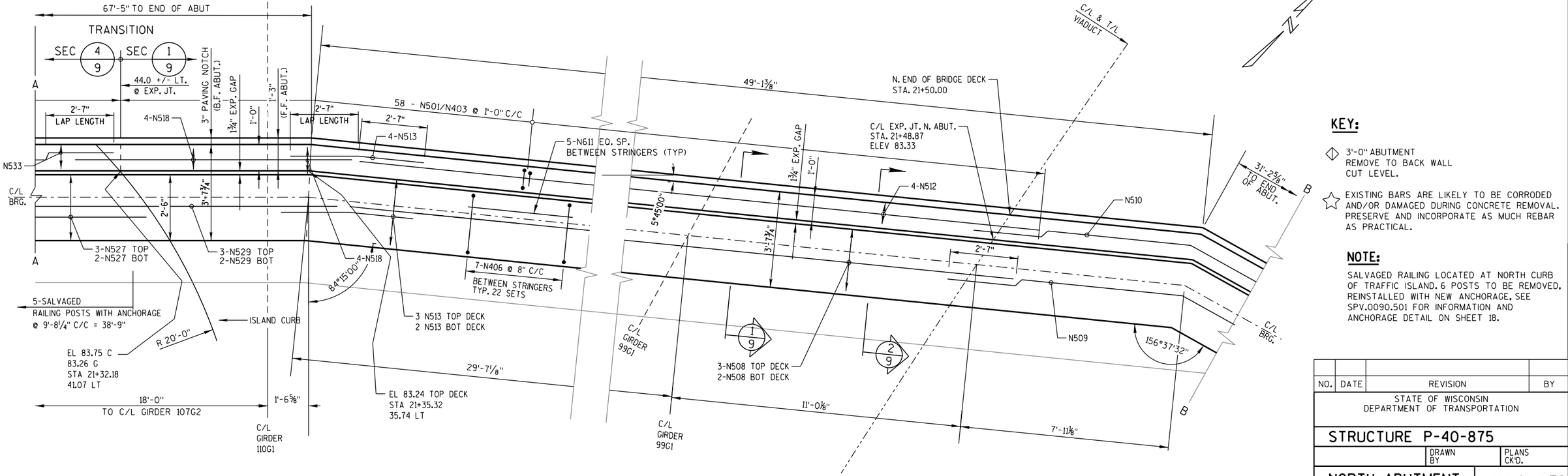
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_07_NORTH ABUTMENT EXPANSION JOINT PLAN EAST END.dgn PLOT DATE : 12/12/2023 10:31:19 AM PLOT BY : grogal PLOT NAME : B0113_2024_07_NORTH ABUTMENT EXPANSION JOINT PLAN EAST END

STATE PROJECT NUMBER

2984-12-74



PLAN VIEW OF NORTH ABUTMENT EXPANSION JOINT WEST END



PLAN VIEW OF NORTH ABUTMENT EXPANSION JOINT MIDDLE

KEY:

◇ 3'-0" ABUTMENT REMOVE TO BACK WALL CUT LEVEL.

☆ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

NOTE:

SALVAGED RAILING LOCATED AT NORTH CURB OF TRAFFIC ISLAND. 6 POSTS TO BE REMOVED, REINSTALLED WITH NEW ANCHORAGE, SEE SPV.0090.501 FOR INFORMATION AND ANCHORAGE DETAIL ON SHEET 18.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY | PLANS CK'D.

NORTH ABUTMENT EXP. JOINT PLAN WEST & MIDDLE

SHEET 8 OF 72
35

REVISED DATE: 10-26-2023 BY GJR

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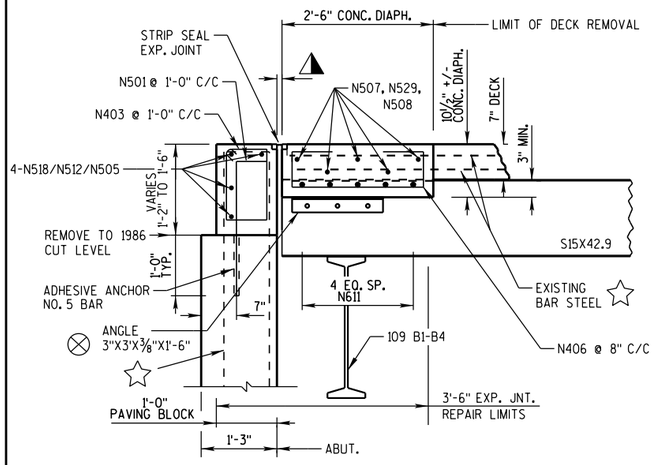
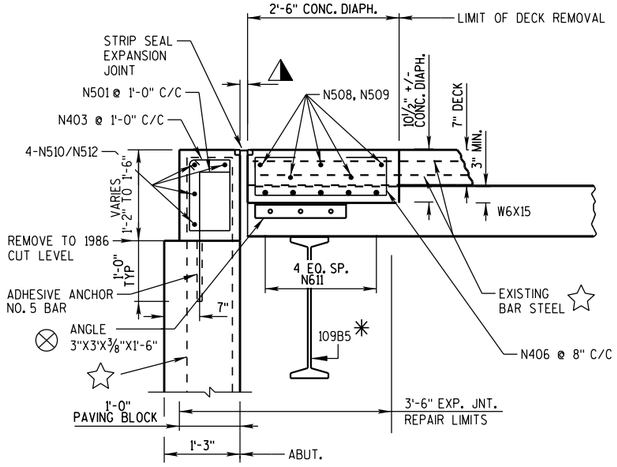


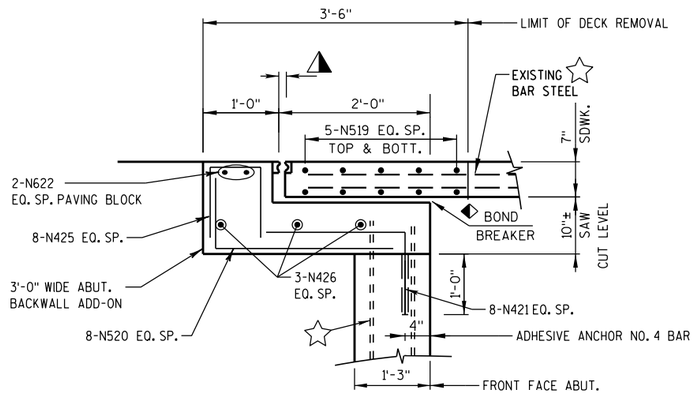
SECTION 1/7 8

NORTH ABUTMENT OUTER BETWEEN GIRDERS 100G1 AND 103G1 AND BETWEEN GIRDERS 99G1 TO 110G1



SECTION 2/7 8

NORTH ABUTMENT INNER BAY BETWEEN GIRDERS 100G1 AND 99G1



SECTION AT SIDEWALK 3/7 8

LEGEND

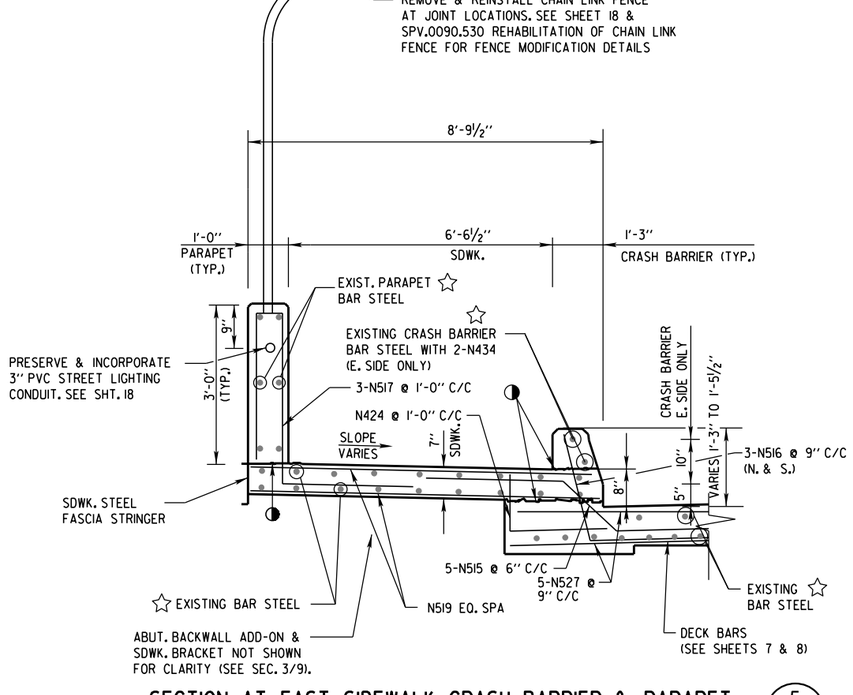
- ✳ MEMBER 1095B TO BE REPLACED.
- ☆ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.
- ⊗ LOCATIONS DETERMINED BY ENGINEER (SEE NOTE "A").
- ◧ PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT ADD-ON. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".
- △ SALVAGED RAILING WITH 6½" POST AND 9¼"x10½" BASE PLATE AND 4-¾"X12" ANCHOR BOLTS. SEE SPV.0090.501 (SEE SHEETS 8 AND 18).
- ◭ SET JOINT OPENING TO 1¾" NORMAL TO JOINT.
- ◑ STRIKE OFF AND LEAVE ROUGH.

NOTE:

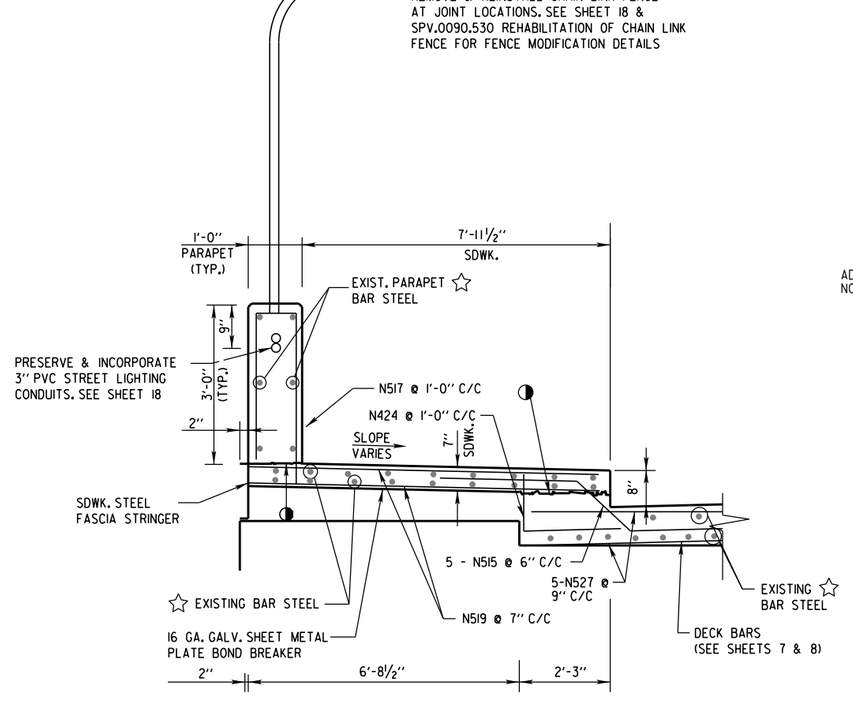
A. DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A709 GRADE 36. BOLTS ARE ¾" DIA. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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

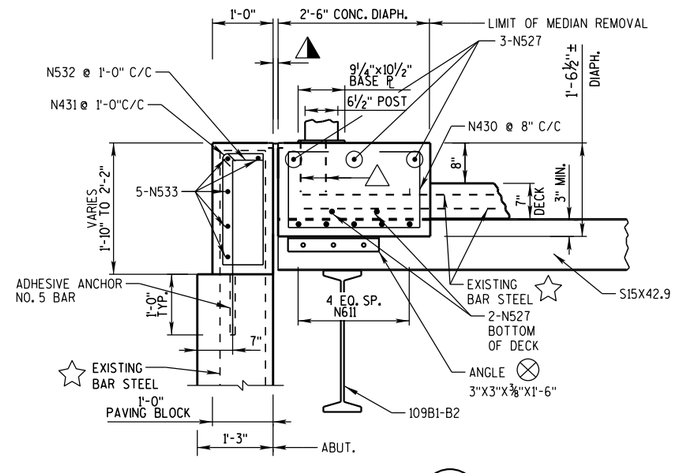
C. ALL DIAPHRAGM SUPPORT HARDWARE SHALL BE INCIDENTAL TO "CONCRETE MASONRY DECK REPAIR".



SECTION AT EAST SIDEWALK, CRASH BARRIER & PARAPET 5/7



SECTION AT WEST SIDEWALK & PARAPET 6/8



SECTION AT ISLAND 4/8

WEST BAYS BETWEEN GIRDERS 104G1, 107G1, 107G2 AND 110G1

NO.	DATE	REVISION	BY

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STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

NORTH ABUTMENT EXPANSION JOINT SECTION

SHEET 9 OF 72
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REVISED DATE: 12-05-2023 GJR

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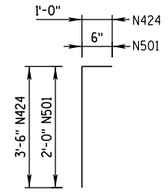
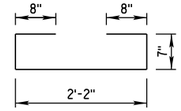
BILL OF BARS - NORTH ABUTMENT EXPANSION JOINT

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
N501	X	93	2'-5"	X		PAVING BLOCK VERT. ANCHORS - EAST END
N403	X	93	3'-10"	X		PAVING BLOCK VERT. - EAST END
N505	X	4	22'-0"			PAVING BLOCK HORIZ. - EAST END
N406	X	203	4'-4"	X		DECK JOINT VERT. STIRRUPS - EAST, MIDDLE & WEST ENDS
N507	X	5	22'-0"			DECK JOINT HORIZ. - EAST END
N508	X	5	41'-9"			DECK JOINT HORIZ. - MIDDLE
N509	X	5	11'-10"	X		DECK JOINT HORIZ. - EAST END
N510	X	4	11'-7"	X		PAVING BLOCK HORIZ. - EAST END
N611	X	145	4'-0"			DECK JOINT HORIZ. BTWN. GIRD./STRINGERS - EAST, MIDDLE & WEST ENDS
N512	X	4	42'-1"			PAVING BLOCK HORIZ. - MIDDLE
N513	X	9	6'-0"	X		DECK JOINT HORIZ. SPLICE - MIDDLE & WEST END
N515	X	10	6'-3"	X		DECK - TIE BAR
N516	X	3	3'-2"	X		VERT. TIE BAR DECK - EAST SIDE CRASH BARRIER
N517	X	6	7'-3"	X		PARAPET VERT. TIE BAR SDWK. - EAST. MIDDLE & WEST ENDS
N518	X	4	10'-0"			PAVING BLOCK HORIZ. - WEST END
N519	X	20	8'-5"			SDWK. HORIZ. TOP & BOTTOM - EAST, MIDDLE & WEST ENDS
N520	X	16	3'-2"	X		SDWK. VERT. TIE BAR - EAST, MIDDLE & WEST ENDS
N421	X	16	2'-7"	X		SDWK. VERT. TIE BAR - EAST, MIDDLE & WEST ENDS
N622	X	4	7'-2"			SDWK. PAVING BLOCK HORIZ. - EAST, MIDDLE & WEST ENDS
N424	X	6	4'-5"	X		BOTTOM HORIZ. SDWK. DECK OVERHANG - EAST, MIDDLE & WEST ENDS
N425	X	16	2'-8"	X		SDWK. VERT. PAVING BLOCK TIE BAR - EAST, MIDDLE & WEST ENDS
N426	X	6	7'-2"			SDWK. HORIZ. BACKWALL ADD-ON - EAST, MIDDLE & WEST ENDS
N527	X	10	31'-9"			DECK JOINT HORIZ. CURB - MIDDLE & WEST END
N529	X	5	12'-3"			DECK JOINT HORIZ. - WEST END
N430	X	84	5'-8"	X		DECK JOINT VERT. STIRRUPS CURB AREA - MIDDLE & WEST END
N431	X	54	5'-0"	X		PAVING BLOCK VERT. CURB - MIDDLE & WEST END
N532	X	54	3'-3"	X		PAVING BLOCK VERT. ANCHORS CURB - MIDDLE & WEST END
N533	X	10	28'-7"			PAVING BLOCK HORIZ. CURB - MIDDLE & WEST END
N534	X	2	2'-3"			HORIZ. DOWEL CRASH BARRIER - EAST END



N501, N424

N403



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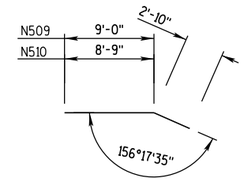
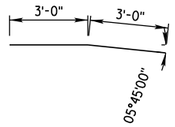


N509, N510



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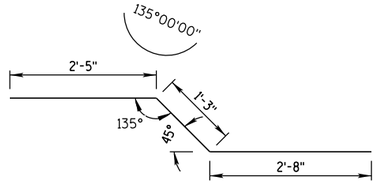

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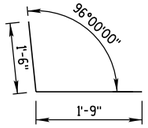

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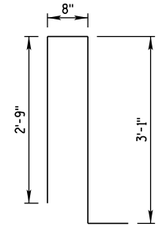

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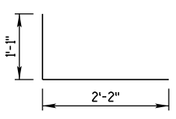

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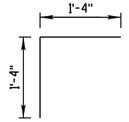

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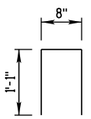

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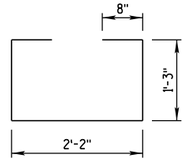

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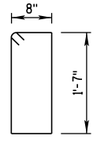

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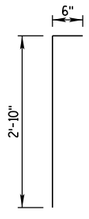

N532

REVISED DATE: 10-09-2023 BY GJR

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

NORTH ABUTMENT EXPANSION JOINT BILL OF BARS

SHEET 10 OF 72
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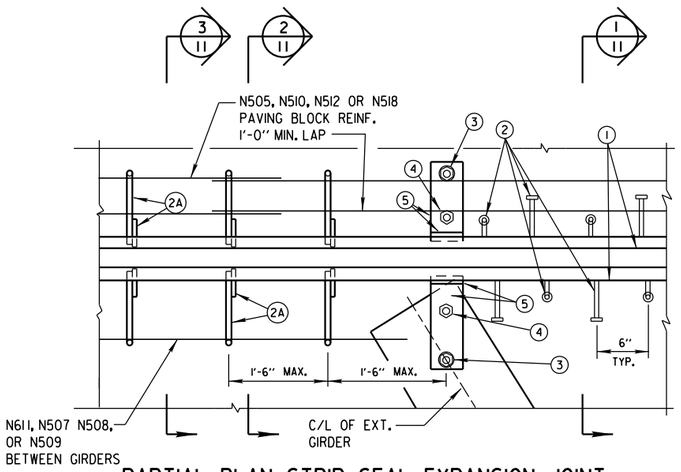
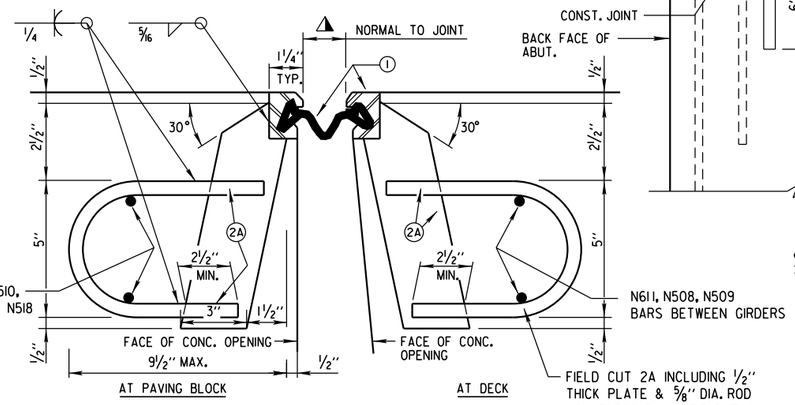


PARTIAL PLAN STRIP SEAL EXPANSION JOINT

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

SIDEWALK COVER PLATE TABLE

LOCATION	LENGTH	CURB	PARAPET/ RAILING POST
*1, N.W. W.SIDE	7'-8½"	NO	YES (NOTCH PLATE FOR 1'-4" PARAPET)
*2, N.E.	7'-9½"	YES	YES (NOTCH PLATE FOR 1'-4" PARAPET)
*3, N.W. E.SIDE	12'-2" TO 12'-11"	YES (RADIAL SKEW)	NO
*4, N.W. CENTER	39'-4"	NO	YES (12" WIDE PLATE)

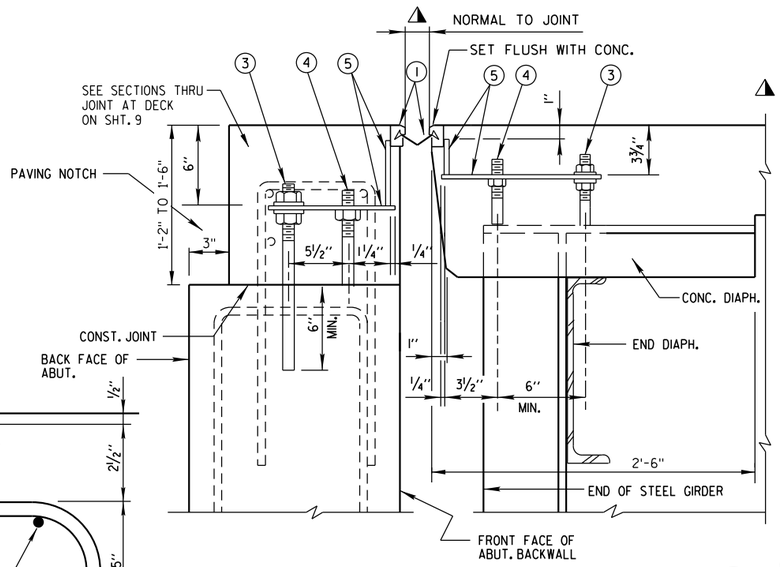


SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN GIRDERS

2 / 11

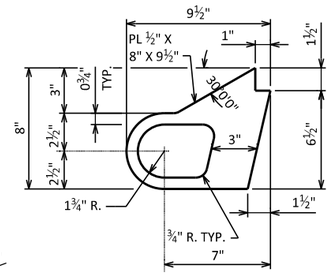
FIELD CUT 2A INCLUDING ½" THICK PLATE & ⅝" DIA. ROD AS NECESSARY IN FIELD. TACK WELD ⅝" ROD TO REINFORCE REMAINING SECTION.



SECTION THRU JOINT AT ABUTMENT

NORMAL TO C/L SUBSTRUCTURE

3 / 11



ALTERNATE STRIP SEAL ANCHOR

LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) AND STEEL EXTRUSIONS. SET JOINT OPENING AT 1¾".
2. STUDS ⅝" DIA. x 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
2A. ½" THICK ANCHOR PLATE WITH ⅝" DIA. ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE. WELD ANCHOR PLATE TO NO. 1 AT 1'-6" CENTERS BETWEEN GIRDERS.
3. ¾" DIA. THREADED ROD WITH 2 NUTS AND PLATE WASHERS. FOR STEEL GIRDERS, WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾" DIA. THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" x ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1½" DIA. HOLE FOR NO. 3 AND 1" DIA. HOLE FOR NO. 4.
7. ¾" DIA. X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SIEZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" DIA. X 4" GALVANIZED HEX HEAD BEND. BEND 45°.
9. ¾" DIA. X 2¼" GALVANIZED THREADED COUPLING.
10. SIDEWALK COVER PLATE
    ⅜" X 2'-0" WIDE X LIMITS SHOWN AT LOCATIONS *1-*3.
    ⅜" X 1'-0" WIDE X LIMITS SHOWN AT LOCATION *4.
    BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7.
    GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.
11. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

JOINT OPENING DIM. ALONG SKEW PLUS ½".

NOTES

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

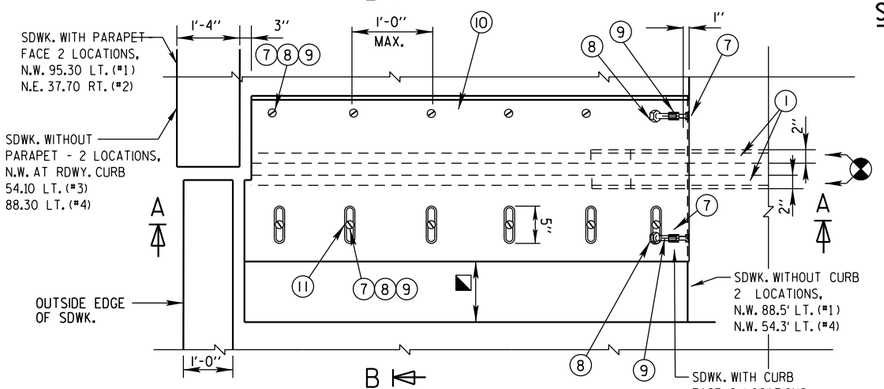
AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

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

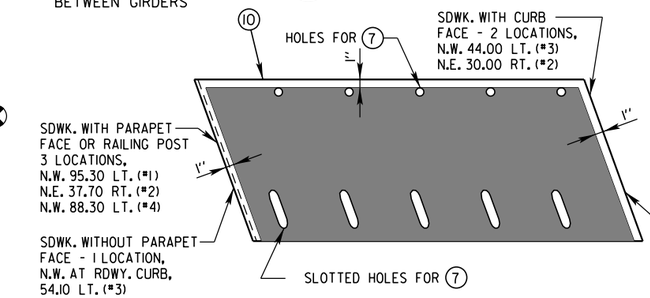
SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT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

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

ALL MATERIAL IN THE EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID AT THE UNIT PRICE BID FOR 502.3101 "EXPANSION DEVICE", LF.

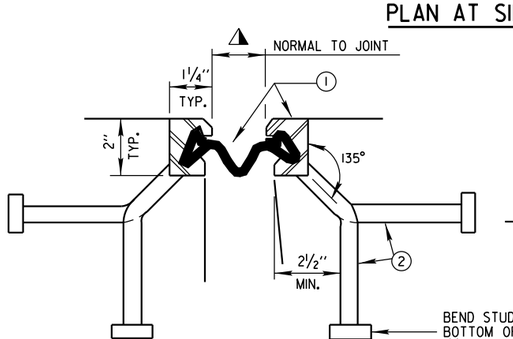


PLAN AT SIDEWALK



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE

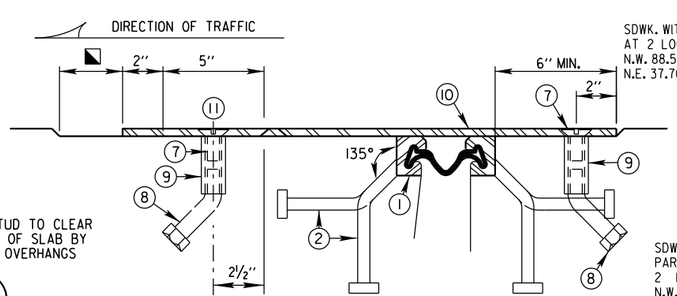
PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE).



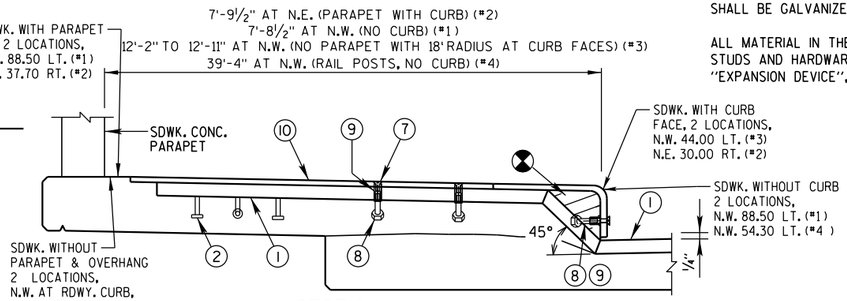
SECTION THRU JOINT

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

1 / 11



SECTION B-B



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

EXPANSION JOINT DETAILS

SHEET 11 OF 72

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REVISED DATE: 08-31-2023 BY GJR

8

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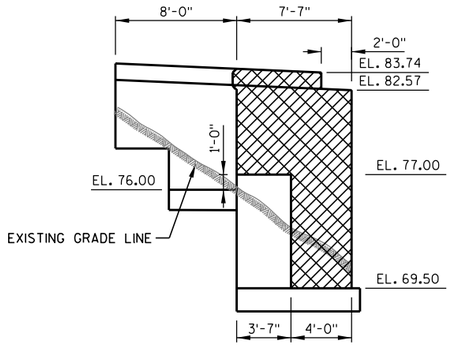
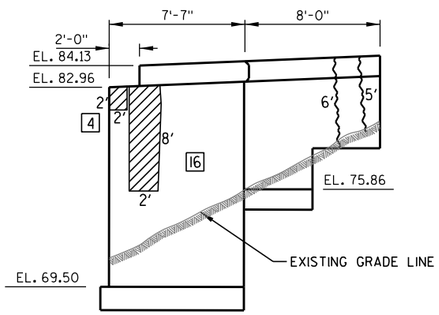
STATE PROJECT NUMBER

2984-12-74



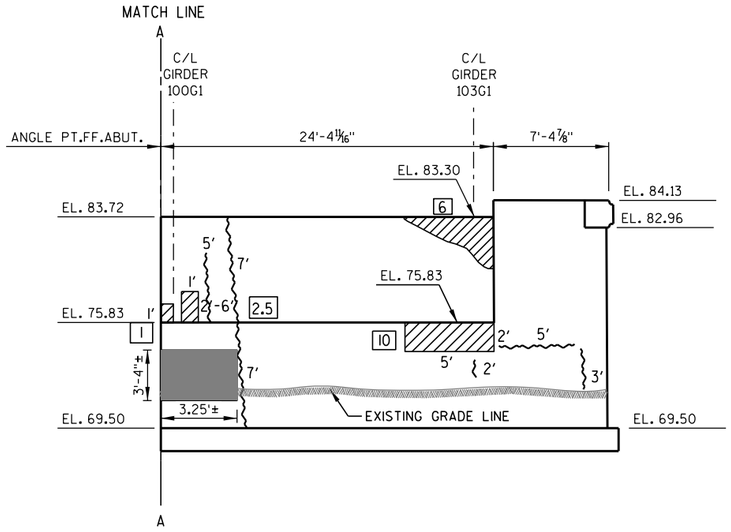
NORTHWEST WINGWALL ELEVATION

(LOOKING EAST)



NORTHEAST WINGWALL ELEVATION

(LOOKING WEST)



NORTH ABUTMENT ELEVATION EAST END FRONT FACE

(LOOKING NORTH)

KEY

- X' — EPOXY INJECTION CRACK REPAIR (X LF)
- STONE REPLACEMENT AREA. SEE SHEETS 15 & 16
- CONCRETE SURFACE REPAIR AREA (X SF.)
- CONCRETE REPLACEMENT SEE SHEETS 13 & 14

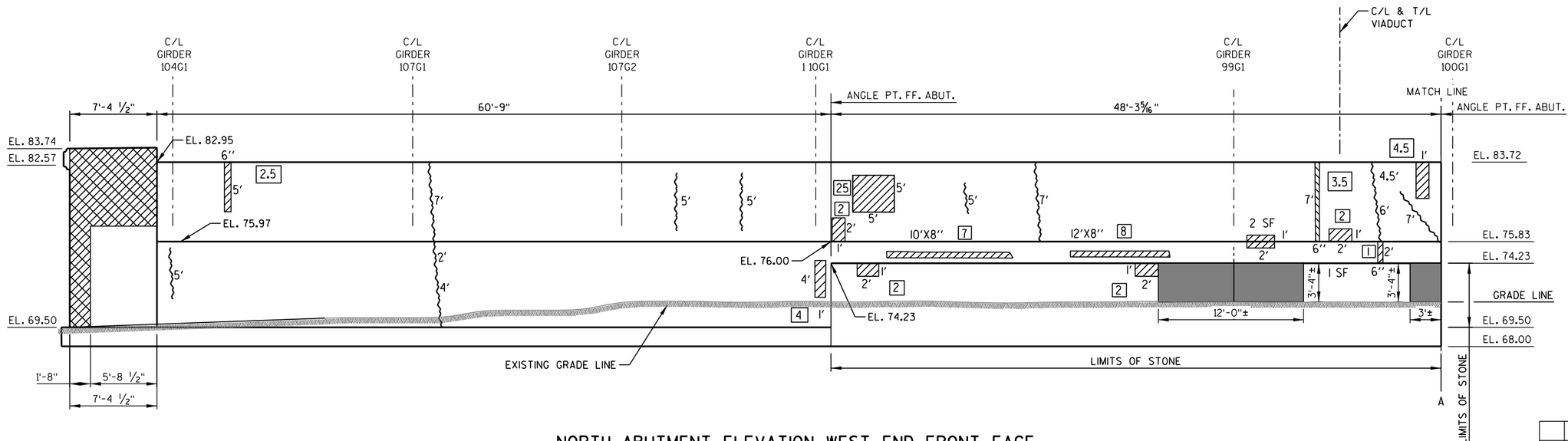
NOTE

AREAS OF REPAIR TO BE DETERMINED IN THE FIELD BY ENGINEER.

BID ITEM 509.9025.S "EPOXY INJECTION CRACK REPAIR" TO BE USED ON CRACKS GREATER THAN 0.06 INCHES IN WIDTH.

TOP OF ABUTMENT BACK WALL TO BE REMOVED FOR EXPANSION JOINT REPLACEMENT. SEE SHEET 7-9 FOR REMOVAL LIMITS.

GRADE LINE TO BE RESTORED TO MATCH EXISTING GRADE LINE FOLLOWING ALL REPAIR WORK AT NORTH ABUTMENT AND WINGWALLS.



NORTH ABUTMENT ELEVATION WEST END FRONT FACE

(LOOKING NORTH)

REVISED: 08-28-2023 BY EMC

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY GJR | PLANS CK'D. JPH

NORTH ABUTMENT CONCRETE REPAIRS

SHEET 12 OF 72

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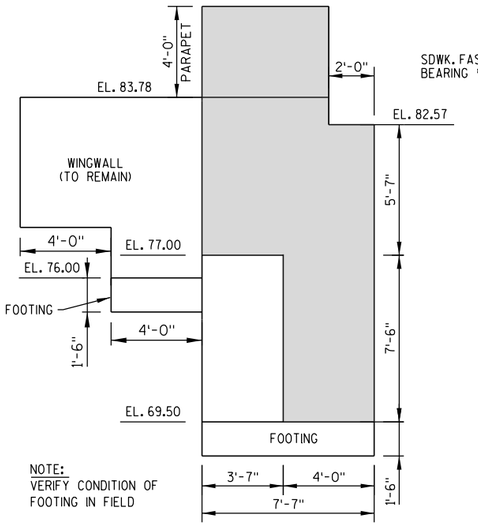
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_12_NORTH ABUTMENT CONCRETE REPAIRS.dgn PLOT DATE : 12/12/2023 10:31:26 AM PLOT BY : grogal PLOT NAME : B0113_2024_12_NORTH ABUTMENT CONCRETE REPAIRS.dgn

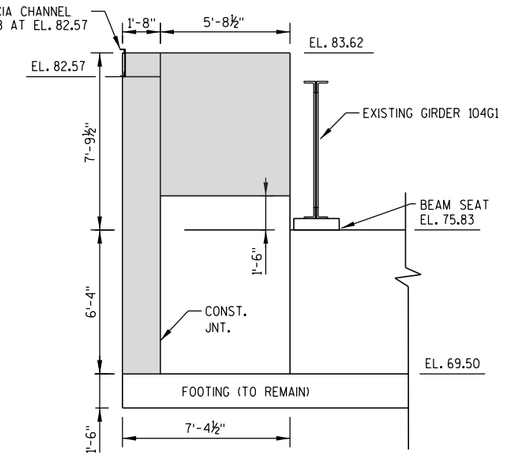
STATE PROJECT NUMBER

2984-12-74



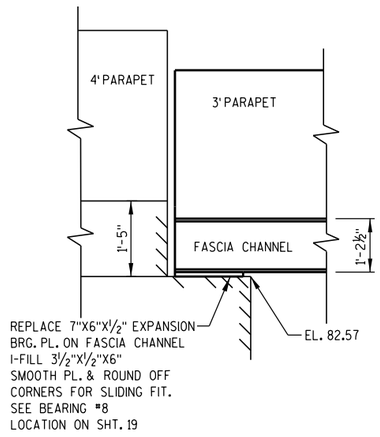
NORTHWEST WINGWALL ELEVATION

(LOOKING EAST)



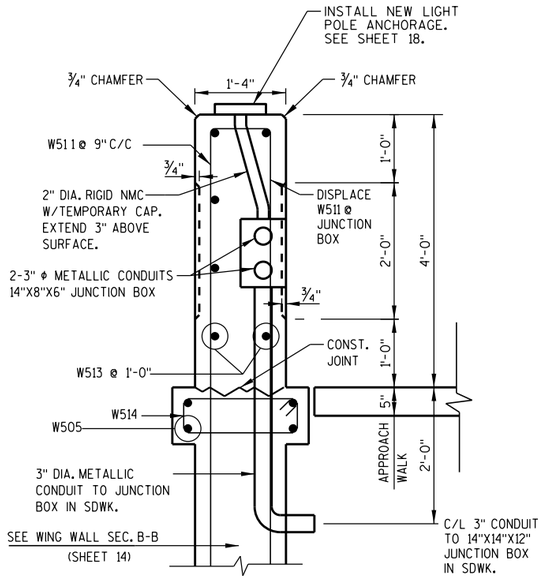
NORTH ABUTMENT ELEVATION - FRONT FACE

(WEST END LOOKING NORTH)



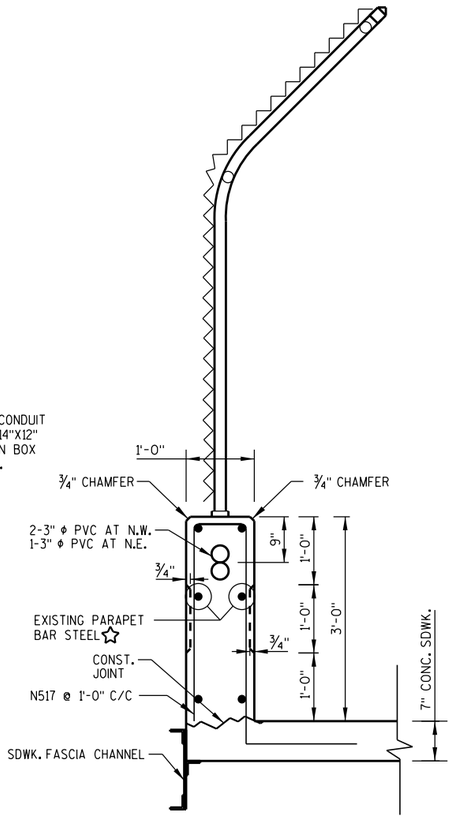
SIDEWALK CHANNEL BEARING DETAIL

LOOKING EAST



4' PARAPET SECTION

SEE SHEET 8 FOR LOCATION

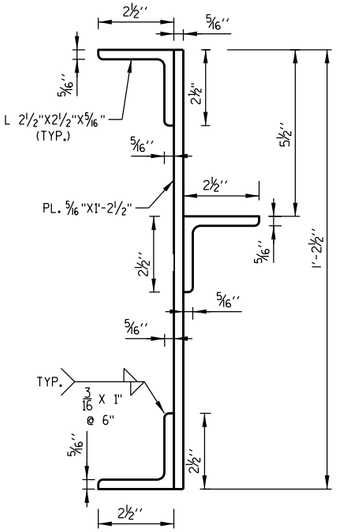


3' PARAPET SECTION

SEE SHEETS 7 & 8 FOR LOCATION

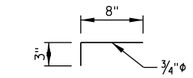
KEY

- CONCRETE REMOVAL AREA
- EXISTING CONCRETE TO REMAIN

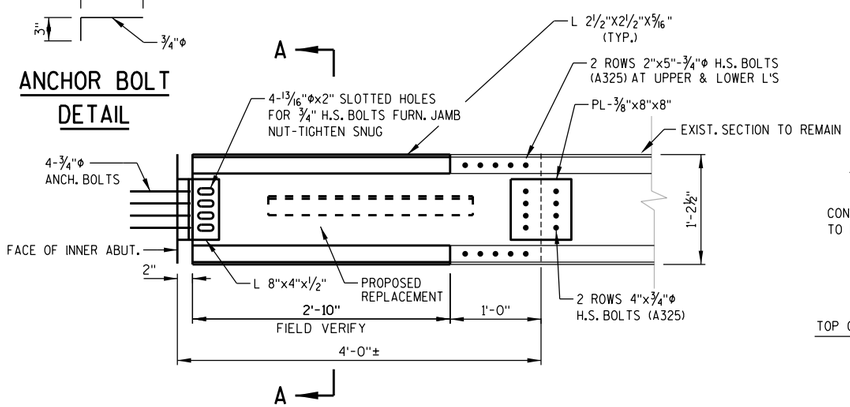


FASCIA SECTION A-A

3'-10" OVERALL LENGTH

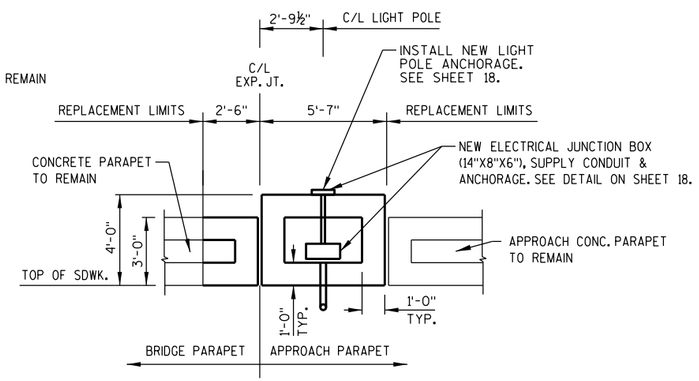


ANCHOR BOLT DETAIL



SIDEWALK FASCIA CHANNEL REPLACEMENT AT ABUTMENT

(N.W. SIDE)



CONCRETE PARAPET ELEVATION

EAST ELEVATION LOOKING WEST

LEGEND

☆ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

NOTE:

TEMPORARY SHORING IS REQUIRED FOR EXCAVATION. SEE LOCATION ON SHEET 1.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY	PLANS CK'D.
HMD	JPH

NORTH ABUTMENT WINGWALL AND DETAILS

SHEET 13 OF 72
40

REVISED: 11-01-2023 BY GJR

8

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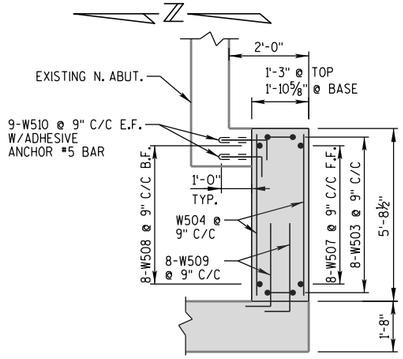
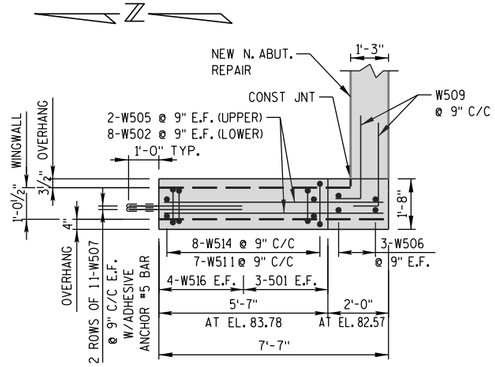
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_13_NORTH ABUTMENT WINGWALL & DETAILS.dgn PLOT DATE : 12/12/2023 10:31:26 AM PLOT BY : grogal PLOT NAME : B0113_2024_13_NORTH ABUTMENT WINGWALL & DETAILS.dgn

STATE PROJECT NUMBER

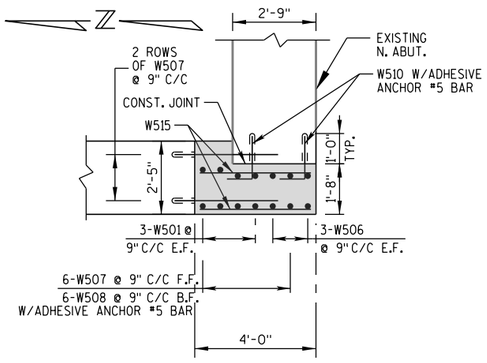
2984-12-74



NORTH ABUTMENT PLAN



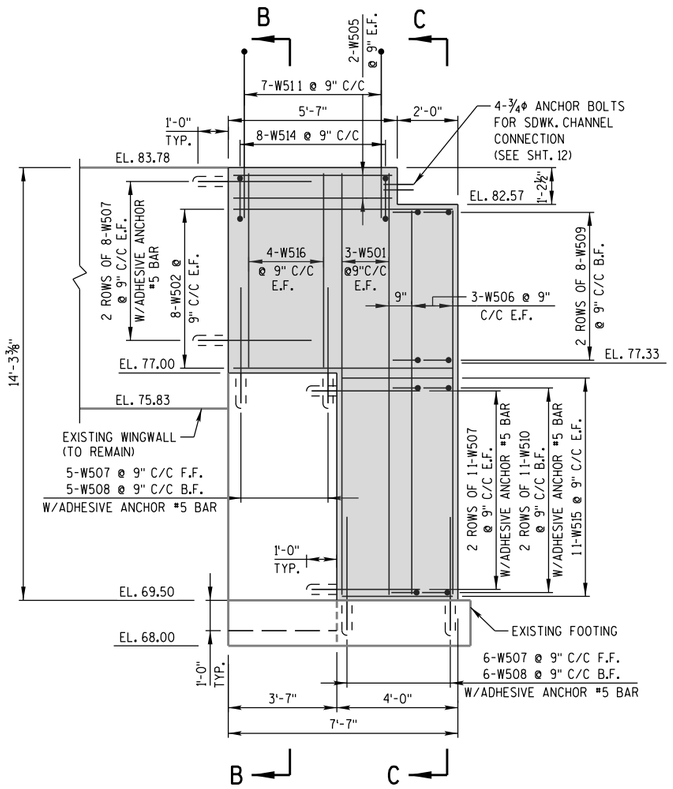
WINGWALL PLAN AT TOP



WINGWALL PLAN AT BASE

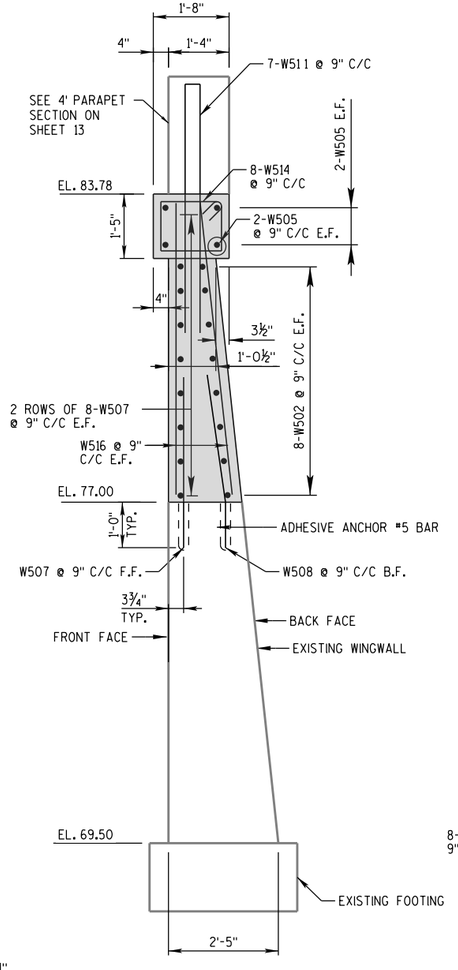
(EL. 69.50)

BILL OF BARS NORTH ABUTMENT						
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
W501	X	6	13'-11"			WINGWALL VERT. E.F.
W502	X	16	7'-3"			WINGWALL HORIZ. E.F. (UPPER)
W503	X	8	14'-5"	X		N. ABUT. REPAIR VERT. STIRRUP
W504	X	18	5'-4"			ABUT. HORIZ. E.F.
W505	X	4	5'-3"			WINGWALL HORIZ. E.F.
W506	X	6	12'-9"			WINGWALL VERT. E.F.
W507	X	57	3'-9"			DOWELS-HORIZ./VERT. WINGWALL/N.
W508	X	19	3'-6"	X		DOWELS-VERT. B.F. ABUT./WINGWALL
W509	X	16	3'-6"	X		DOWELS-N. ABUT. REPAIR W. SIDE
W510	X	40	1'-11'	X		DOWELS-N. ABUT./WINGWALL
W511	X	7	11'-5"	X		PARAPET VERT. DOWEL AT 4 FT PARAPET
W513	X	8	5'-3"			PARAPET HORIZ. E.F.
W514	X	8	5'-6"	X		WINGWALL TOP CAP STIRRUP
W515	X	22	3'-8"			WINGWALL HORIZ. E.F. (LOWER)
W516	X	8	6'-5"			WINGWALL VERT. E.F.



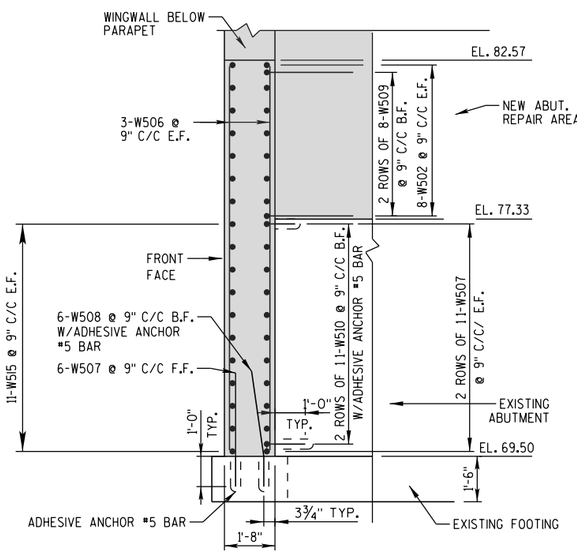
NORTHWEST WINGWALL ELEVATION

(LOOKING EAST)



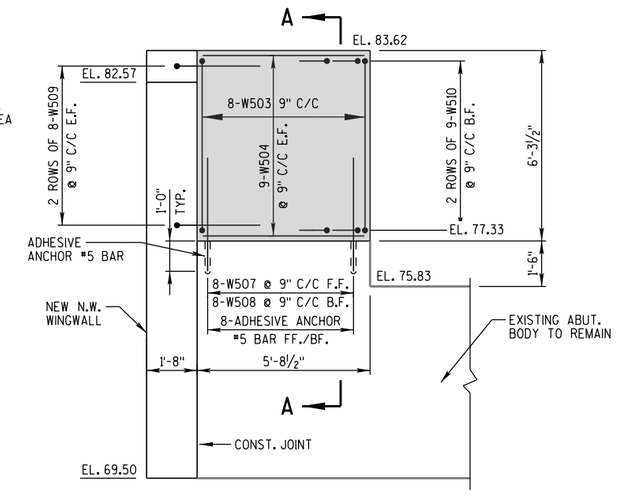
WINGWALL SECTION B-B

(LOOKING NORTH)



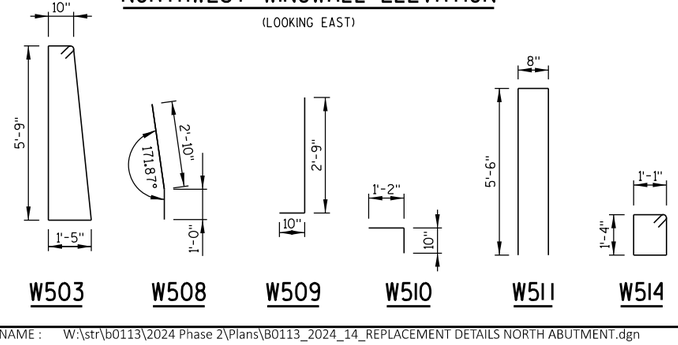
WINGWALL SECTION C-C

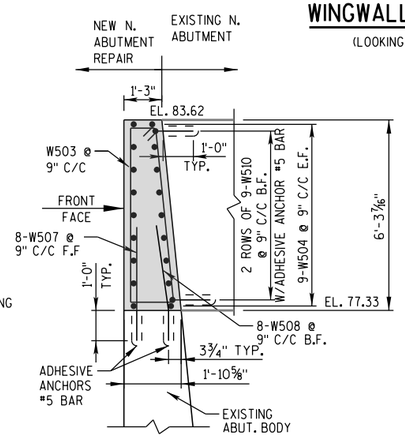
(LOOKING NORTH)



NORTH ABUTMENT ELEVATION- FRONT FACE

(WEST END LOOKING NORTH)





N. ABUT SECTION A-A

(LOOKING WEST)

NOTE:

EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL.

#5 BAR ADHESIVE ANCHOR
MINIMUM EDGE DISTANCE = 3¾"

KEY:

= NEW CONCRETE

= EXISTING CONCRETE

E.F. = EACH FACE

B.F. = BACK FACE

F.F. = FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY GJR | PLANS CK'D. JPH

REPLACEMENT DETAILS NORTH ABUTMENT

SHEET 14 OF 72
41

REVISED: 10-09-2023 BY GJR

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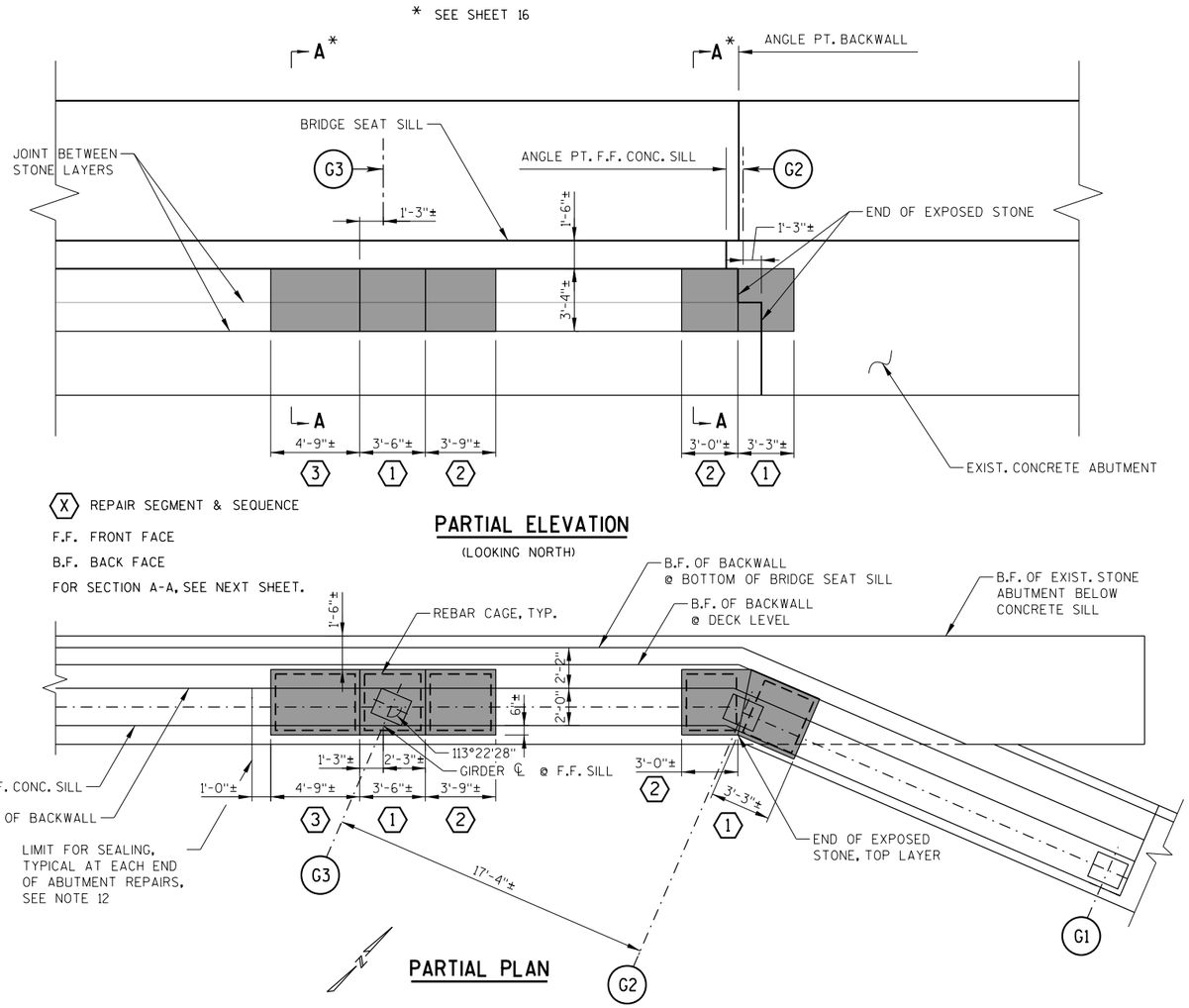
STATE PROJECT NUMBER
2984-12-74



X REPAIR SEGMENT & SEQUENCE

F.F. FRONT FACE

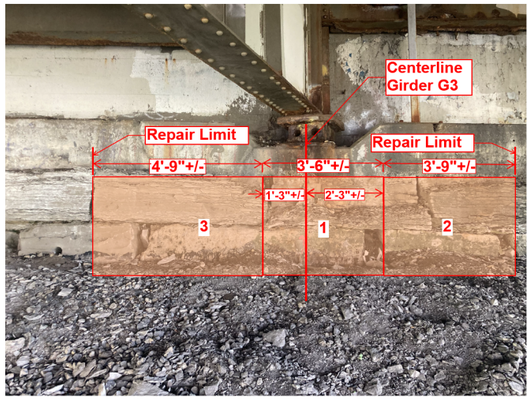
B.F. BACK FACE

FOR SECTION A-A, SEE NEXT SHEET.

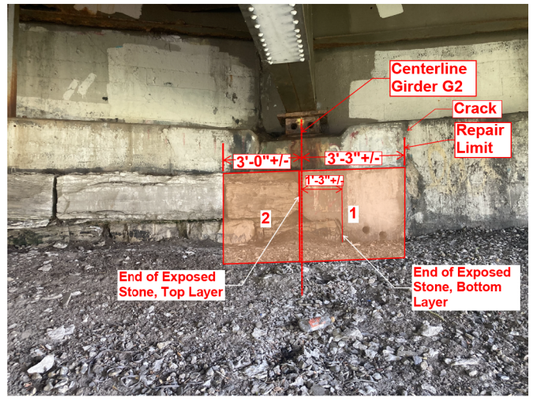
PARTIAL ELEVATION

(LOOKING NORTH)

PARTIAL PLAN



ELEVATION AT GIRDER G3



ELEVATION AT GIRDER G2

CONSTRUCTION NOTES

1. THE ABUTMENT REPAIRS DETAILED IN THIS SHEET SHALL BE PERFORMED IN CONJUCTION WITH THE PROPOSED BEARING REPLACEMENTS, DECK JOINT REPLACEMENT AND STEEL REPAIRS, DETAILED ELSEWHERE IN THE PLANS, AT OR IN THE VICINITY OF THE ABUTMENT REPAIRS.
2. THE ABUTMENT REPAIRS SHALL BE PERFORMED ONLY AFTER THE GIRDERS ARE SUPPORTED BY THE TEMPORARY SUPPORT SYSTEM FOR THE STRUCTURE'S DEAD LOAD (ESTIMATED SERVICE DEAD LOAD REACTION = 80 KIPS MAX.) AND ANY CONSTRUCTION LOADS PLANNED OR ANTICIPATED BY THE CONTRACTOR. REFER TO SPECIAL PROVISION FOR TEMPORARY SUPPORTS P-40-875.
3. TRAFFIC (LIVE LOAD) AND HEAVY CONSTRUCTION LOAD OR EQUIPMENT SHALL NOT BE PLACED WITHIN THE LIMITS SHOWN IN "TRAFFIC RESTRICTIONS" WHILE THE GIRDER IS SUPPORTED ON TEMPORARY SUPPORT AND UNTIL THE ABUTMENT REPAIR IS COMPLETED, THE GIRDER IS SEATED ON THE NEW REPLACEMENT BEARING AND THE TEMPORARY SUPPORT IS REMOVED.
4. THE ABUTMENT REPAIRS SHALL BE PERFORMED IN SEGMENTS, ONE SEGMENT AT A TIME, AND IN SEQUENCE AS INDICATED IN THIS SHEET. THE ABUTMENT REPAIRS INVOLVE REMOVAL OF EXISTING STONE AND THEN PLACEMENT OF REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE AND NON-SHRINK GROUT.
5. FOR STONE REMOVAL, REFER TO SPECIAL PROVISION FOR STONE REMOVAL.
6. REINFORCING STEEL AND CONCRETE SHALL BE PROVIDED ACCORDING TO STANDARD SPECS 505 AND 502.
7. NON-SHRINK GROUT SHALL BE PROVIDED ACCORDING TO SPECIAL PROVISION FOR NON-SHRINK GROUT.
8. WORK ON THE ADJACENT SEGMENT SHALL NOT BEGIN UNTIL THE CONCRETE AND GROUT ATTAIN A MINIMUM 2500 PSI STRENGTH OR 24 HOURS AFTER GROUT IS PLACED, WHICHEVER OCCURS LATER.
9. REPEAT ABOVE STEPS FOR ALL SEGMENTS AT A GIVEN GIRDER LOCATION.
10. INSTALL THE REPLACEMENT BEARING AND RESEAT THE GIRDER ON THE BRIDGE SEAT AFTER THE CONCRETE AND GROUT IN THE LAST POURED SEGMENT ATTAIN A MINIMUM 3500 PSI STRENGTH OR 4 DAYS AFTER LAST SEGMENT WAS POURED, WHICHEVER OCCURS LATER.
11. REMOVE TEMPORARY SUPPORT AFTER GIRDER IS SEATED ON THE NEW BEARING AND THE BRIDGE SEAT.
12. CLEAN AND SEAL TOP & FRONT SURFACES OF THE BRIDGE SEAT SILL AND THE EXPOSED TOP SURFACE OF THE NEWLY PLACED GROUT WITHIN THE REPAIR LIMITS. REFER TO SPECIAL PROVISION FOR ABUTMENT SEAT CLEANING AND SEALING.
13. RESTORE EXISTING STRUCTURE IN KIND IF ANY COMPONENTS WEREMODIFIED OR REMOVED TO INSTALL TEMPORARY SUPPORTS AND/OR PERFORM THE ABUTMENT REPAIRS. COST SHALL BE INCIDENTAL TO BID ITEMS RELATED TO STONE REPLACEMENT WORK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY SH | PLANS CK'D. VP

NORTH ABUTMENT STONE REPLACEMENT DETAILS - 1

SHEET 15 OF 72
42

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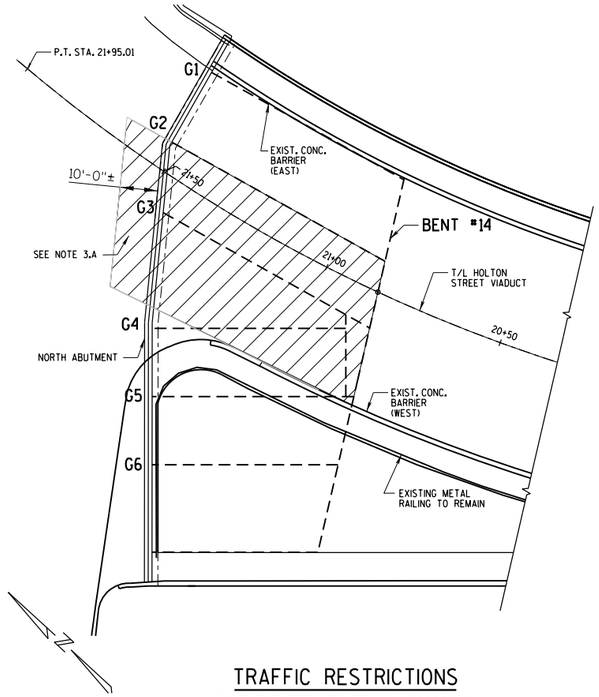
8

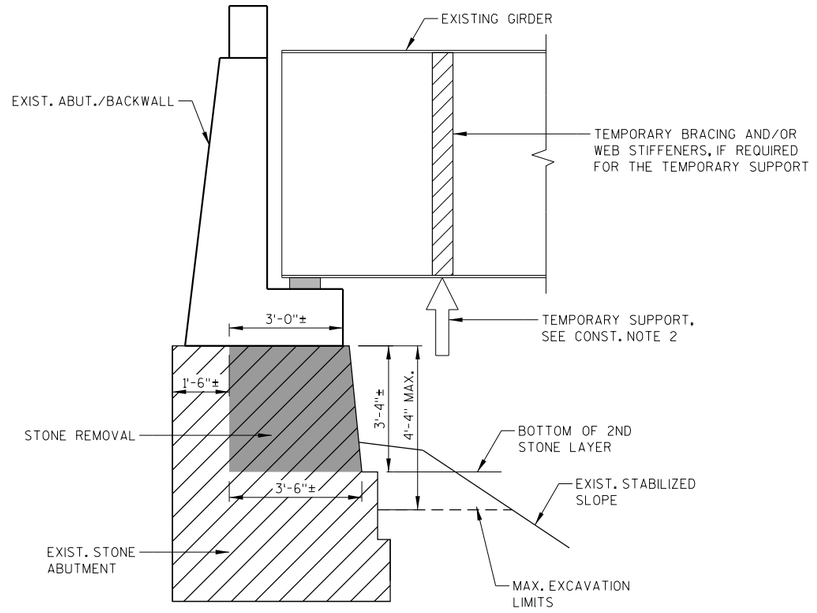
STATE PROJECT NUMBER

2984-12-74

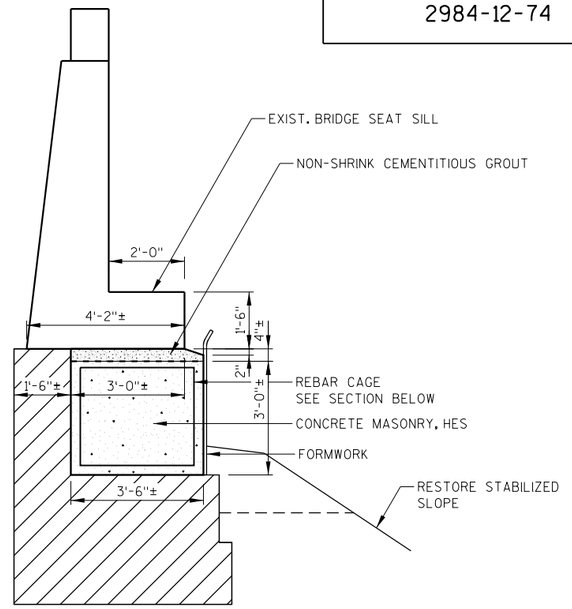


TRAFFIC RESTRICTIONS

(ABUTMENT REPAIRS BELOW GIRDER G3)



SECTION A-A - REMOVAL



SECTION A-A - PROPOSED

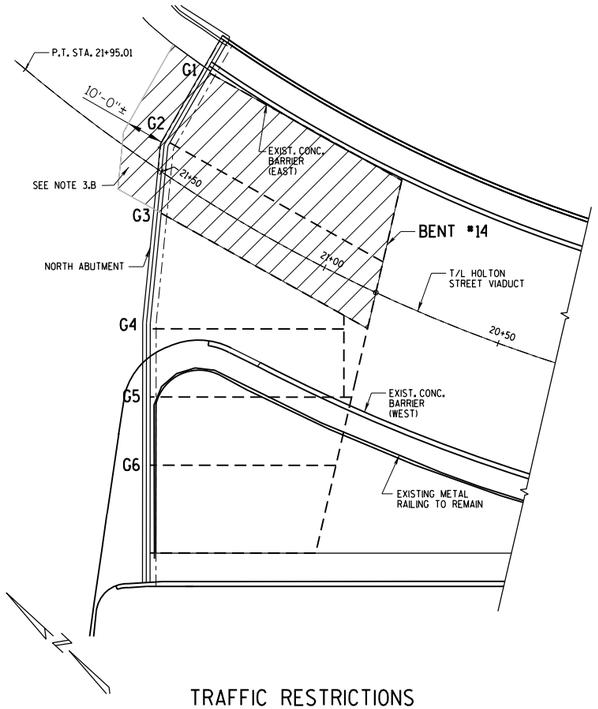
(GIRDER AND TEMPORARY SUPPORT NOT SHOWN FOR CLARITY)

NOTES

1. ABUTMENT REPAIR IS PERMITTED ONLY AT ONE GIRDER LOCATION AT A TIME.
2. ABUTMENT REPAIRS TO BE PERFORMED ONLY AFTER SUPPORTING THE GIRDER ON TEMPORARY SUPPORT AND RELIEVING THE ABUTMENT BRIDGE SEAT OF ANY LOAD FROM THE SUPERSTRUCTURE.
3. TRAFFIC RESTRICTIONS

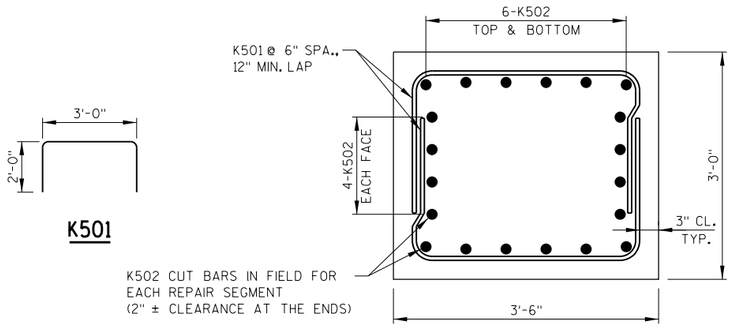
   A. FOR ABUTMENT REPAIRS BELOW GIRDER G3, NO LIVE LOAD OR HEAVY EQUIPMENT SHALL BE PLACED IN AN AREA BOUNDED BY GIRDER G2, BENT#14, THE WEST CONCRETE BARRIER AND A MINIMUM 10 FEET BEHIND THE NORTH ABUTMENT.

   B. FOR ABUTMENT REPAIRS BELOW GIRDER G2, NO LIVE LOAD OR HEAVY EQUIPMENT SHALL BE PLACED IN AN AREA BOUNDED BY GIRDER G3, BENT#14, THE EAST CONCRETE BARRIER AND A MINIMUM 10 FEET BEHIND THE NORTH ABUTMENT.
4. NOMINAL CONSTRUCTION LOADING UPTO 20 PSF MAY BE PERMITTED IN THIS AREA PROVIDED THE TEMPORARY SUPPORT OF THE GIRDER IS DESIGNED FOR SUCH ADDITIONAL LOADING.
5. THE DIMENSIONS FOR EXISTING ABUTMENT ARE TAKEN FROM THE 1926 ORIGINAL RECORD PLANS.
6. BARS FOR REPLACEMENT SECTION AT GIRDER G2 MAY REQUIRE FIELD BENDING. REPAIR COATING ON CUT AND/OR FIELD BENT BARS ACCORDING TO SECTION 505.2.4.3 OF THE STANDARD SPECIFICATIONS PRIOR TO PLACEMENT.



TRAFFIC RESTRICTIONS

(ABUTMENT REPAIRS BELOW GIRDER G2)



K501

REBAR CAGE, SECTION

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
K501	X	82	6'-9"	X	STIRRUPS
K502	X	20	25'-0"		HORIZONTAL BARS

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY SH | PLANS CK'D. VP

NORTH ABUTMENT STONE REPLACEMENT DETAILS - 2

SHEET 16 OF 72

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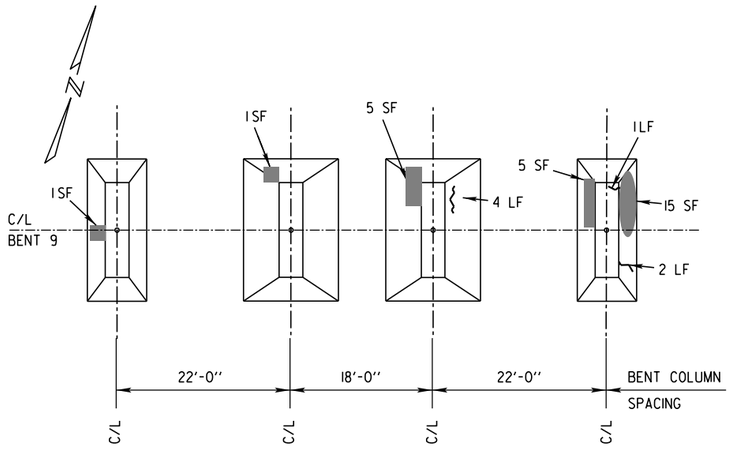
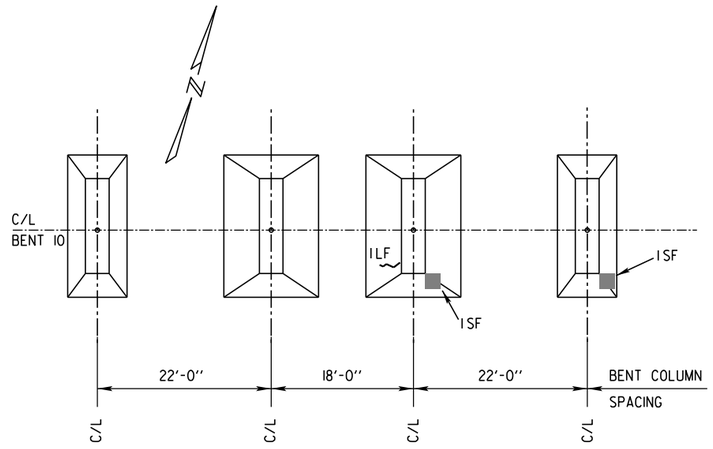
STATE PROJECT NUMBER

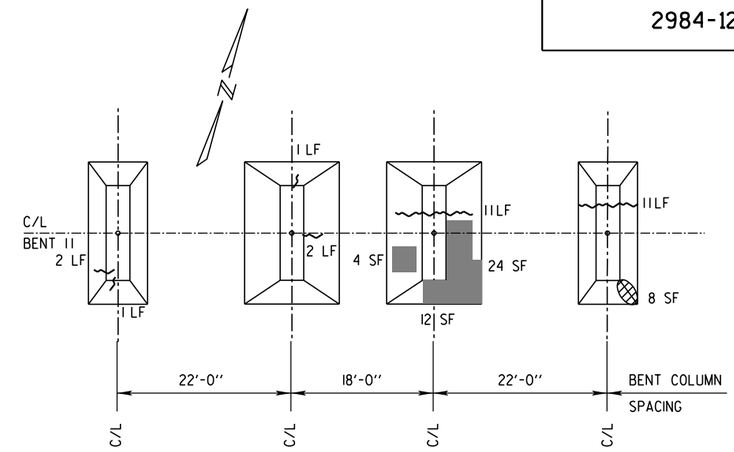
2984-12-74



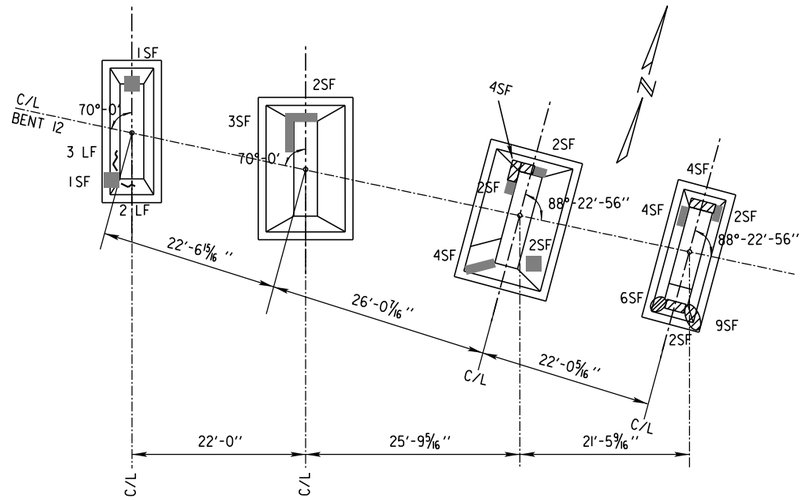
BENT 9
(PLAN VIEW)



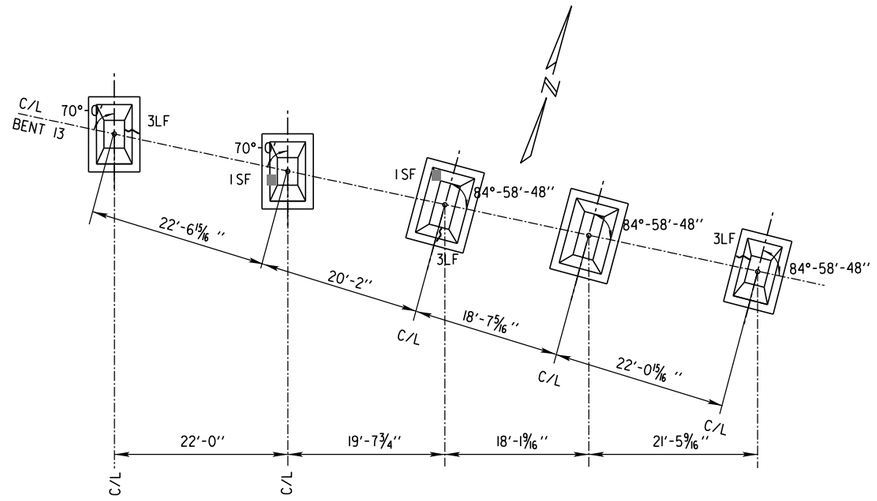
BENT 10
(PLAN VIEW)



BENT 11
(PLAN VIEW)



BENT 12
(PLAN VIEW)



BENT 13
(PLAN VIEW)

KEY

X' — EPOXY INJECTION CRACK REPAIR (X LF) AT BENTS 9-13

CONCRETE SURFACE REPAIR (X SF)

DEEP CONCRETE SURFACE REPAIR (X SF)
(SPV.0025.501)

NOTE

AREAS OF REPAIR TO BE DETERMINED BY ENGINEER IN THE FIELD.

BID ITEM 509.9025.S "EPOXY INJECTION CRACK REPAIR" TO BE USED ON CRACKS GREATER THAN 0.06 INCHES IN WIDTH.

BID ITEM SPV.0025.501 "DEEP CONCRETE SURFACE REAPIR" TO BE USED ON SPALLED AREAS WITH DEPTH EQUAL OR GREATER THAN 6 INCHES.

REVISED: 12-05-2023 GJR

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY	HMD	PLANS CK'D.	JPH

PIERS 9-14
CONCRETE REPAIRS

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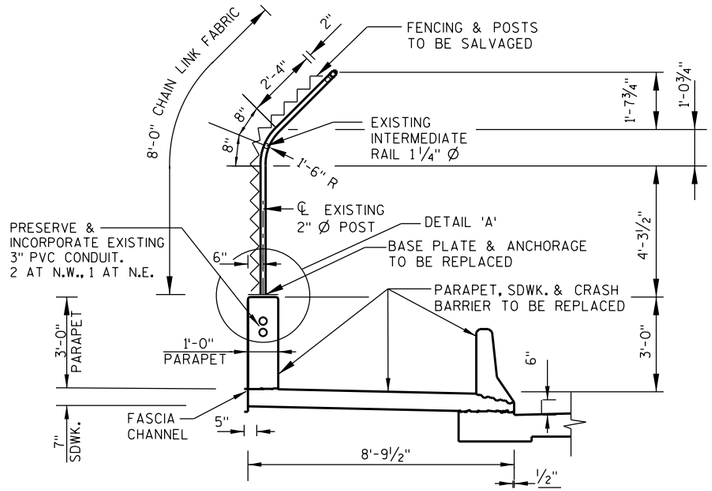
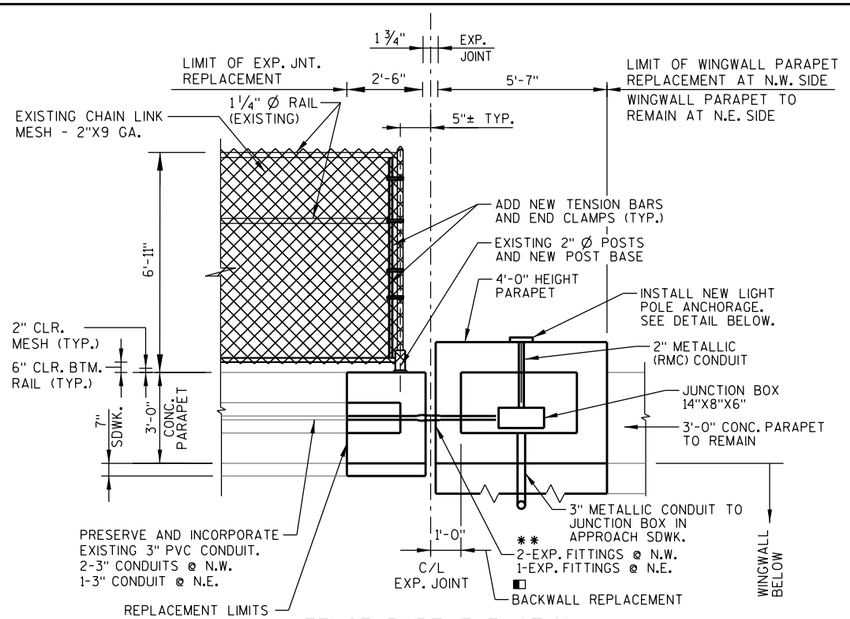
FILE NAME: W:\str\b0113\2024 Phase 2\Plans\B0113_2024_17_PIERS 9-14 CONCRETE REPAIRS.dgn PLOT DATE : 12/12/2023 10:31:28 AM PLOT BY : grogal PLOT NAME : B0113_2024_17_PIERS 9-14 CONCRETE REPAIRS.dgn

STATE PROJECT NUMBER

2984-12-74

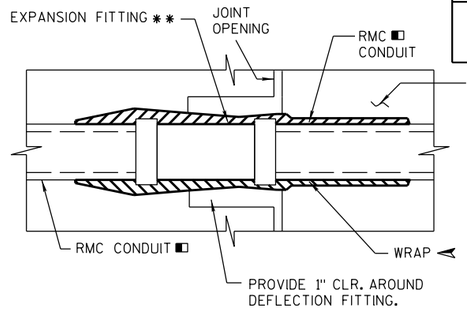


SECTION THRU FENCE ON PARAPET

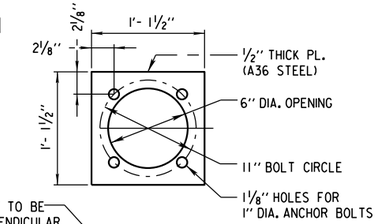


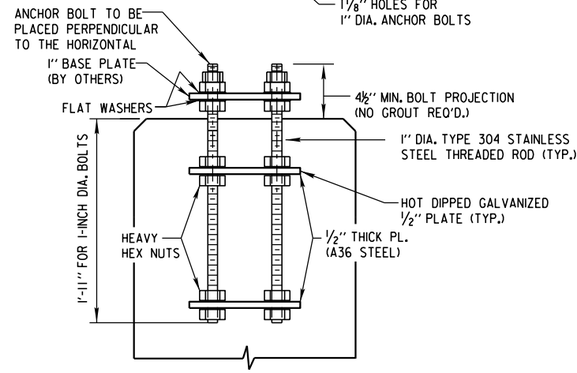
FENCE PART ELEVATION

(INSIDE FACE AT N.W., LOOKING WEST)

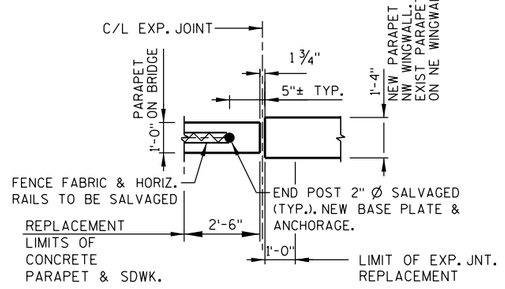


DEFLECTION/EXPANSION FITTING DETAIL

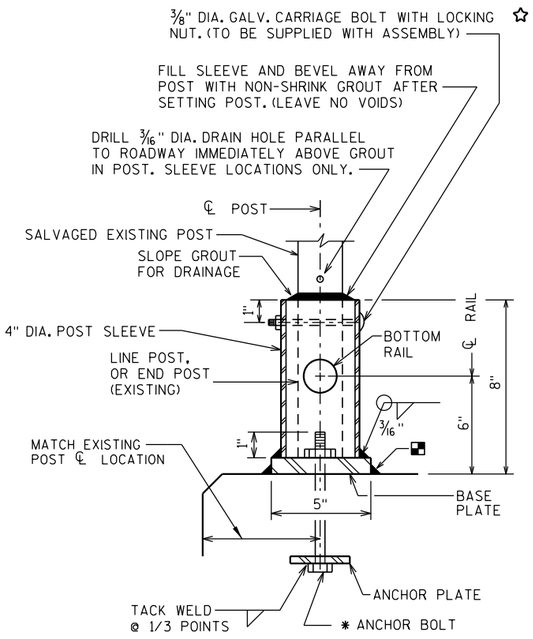




LIGHT POLE ANCHORAGE DETAIL



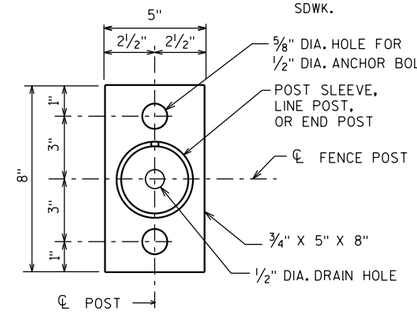
FENCE PLAN



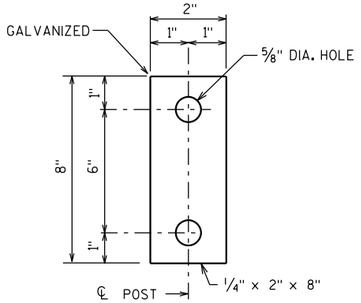
DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

NOTE: IN LIEU OF USING THE POST SLEEVE, THE FENCE POST MAY BE WELDED TO THE BASE PLATE.

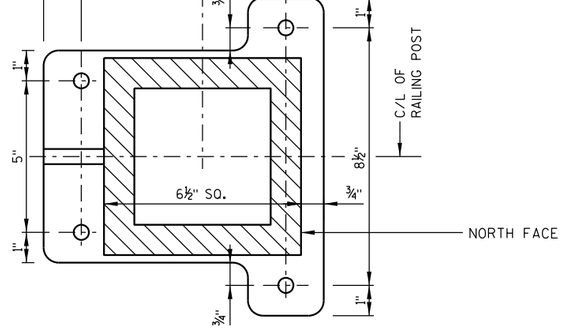


BASE PLATE



ANCHOR PLATE

☆ NOTE: ANCHOR PLATE NOT REQUIRED WHEN ADHESIVE ANCHORS ARE USED.



PLAN OF RAILING POST BASE PLATE AT NORTHWEST ISLAND CURB

(SEE SHEET 8 FOR LOCATION)

LEGEND

◧ CAULK AROUND PERIMETER OF BASE PLATE AND FILL PORTION OF SLOTTED HOLE AROUND ANCHOR BOLT IN SHIM WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

* ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

☆ ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ½-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

◧ USE 3" DIA. RIGID METALLIC (RMC) CONDUIT AT FITTINGS. PROVIDE RMC FOR ENTIRE LENGTH ON EACH SIDE OF JOINT OPENINGS UNLESS NOTED OTHERWISE.

** DEFLECTION/EXPANSION FITTING REQUIREMENTS:
- UP TO 1¾" CONDUIT CONTRACTION OR EXPANSION AND UP TO 30 DEGREES OF ANGULAR MISALIGNMENT IN ANY DIRECTION WITH BONDING JUMPER.

◅ SPONGE RUBBER WRAP TO BE AASHTO M153, TYPE I OR EQUIVALENT ¼" MINIMUM THICKNESS. PROVIDE WRAP FOR THE ENTIRE LENGTH OF THE FITTING OR AS SHOWN. SPONGE RUBBER WRAP INCIDENTAL TO BID ITEM 652.0135 "CONDUIT RIGID METALLIC 3-INCH".

NOTES

CONDUITS SHALL BE EMBEDDED 2" CLEAR.

CONDUIT FITTINGS, CONDUIT BENDS, ADAPTER FITTINGS AND EXP. FTG. INCIDENTAL TO CONDUIT WORK. CONDUIT PAID WITH BID ITEMS 652.0125 "CONDUIT RIGID METALLIC 2-INCH" AND 652.0135 CONDUIT RIGID METALLIC 3-INCH.

CONDUIT BENDS SHALL CONFORM TO THE NATIONAL ELECTRIC CODE.

PROVIDE JUNCTION BOXES ACCORDING TO SPECIFICATIONS. JUNCTION BOXES PAID WITH BID ITEM SPV.0060.594 "JUNCTION BOX 14"X8"X6" ".

SALVAGE POSTS AND FENCING PAID WITH BID ITEM SPV.0090.530 "REHABILITATION OF CHAIN LINK FENCE".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY SB | PLANS CK'D. JPH

FENCING AND CONDUIT DETAILS

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REVISED: 12-08-2023 GJR

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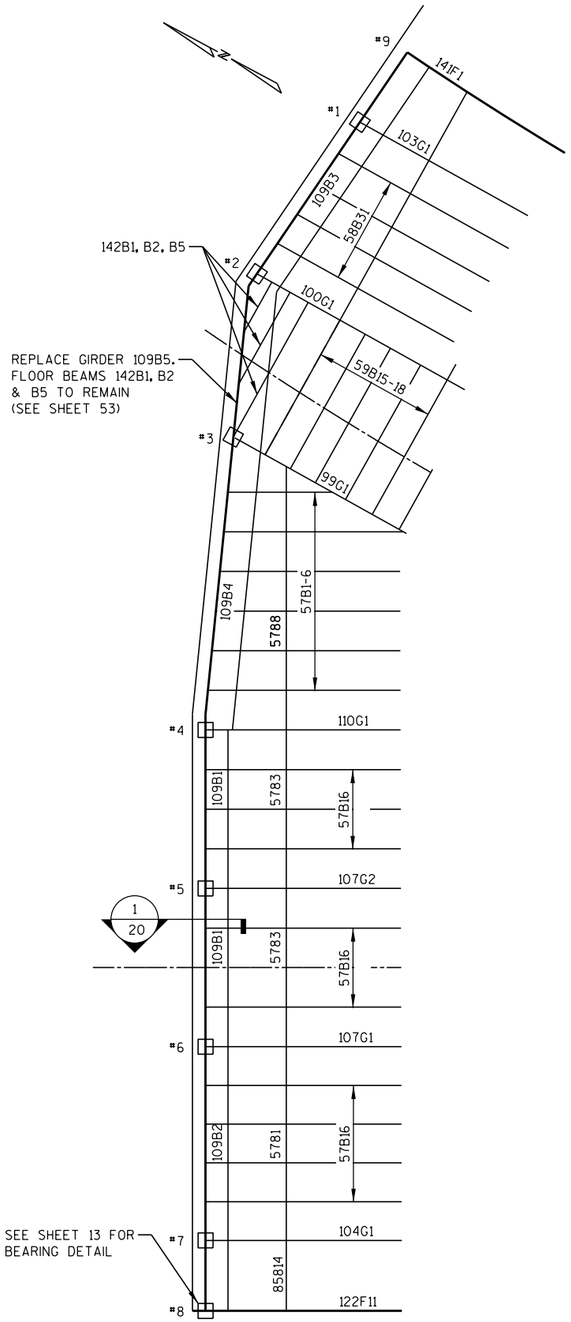
STATE PROJECT NUMBER

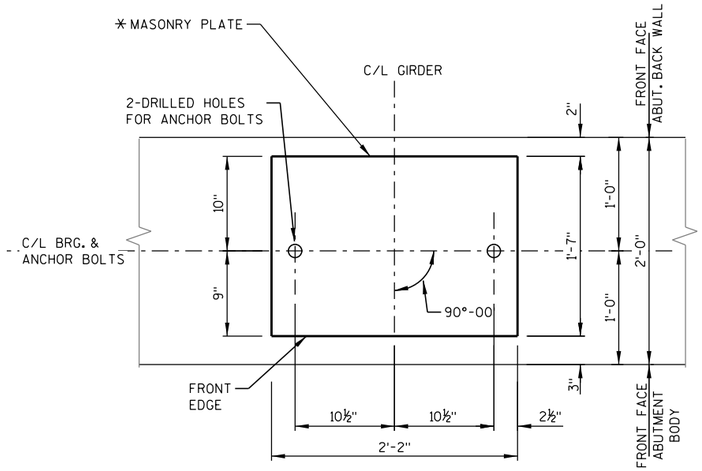
2984-12-74



NORTH ABUTMENT BEARING REPLACEMENT PLAN

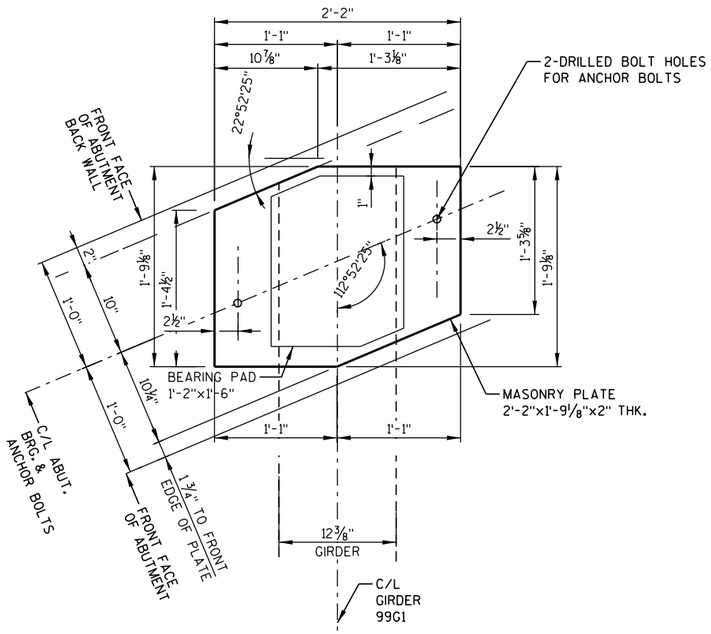
KEY

- □ = REPLACE BEARING
- # = LOCATION
- ✳ = SEE BEARING SHEET 20



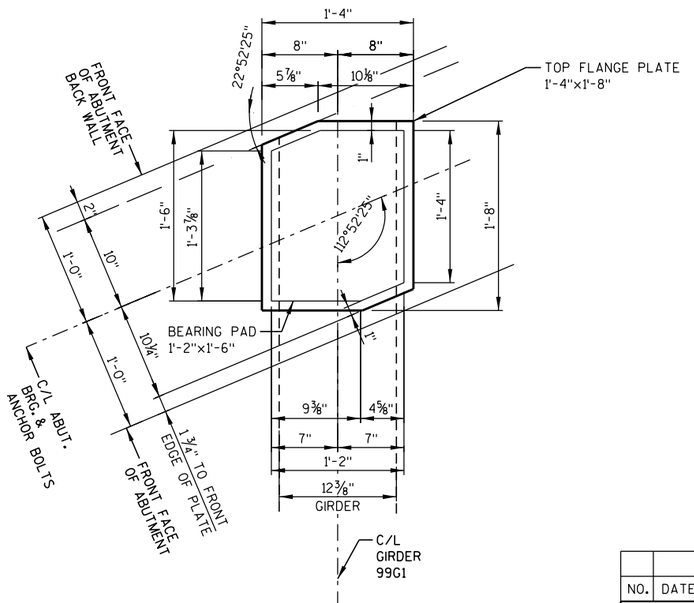
PLAN OF MASONRY AND SHIM PLATES

(AT LOCATIONS 1, 2 AND 4-7)



PLAN OF MASONRY PLATE

(AT LOCATION 3)



PLAN OF FLANGE PLATE AND BEARING PAD

(AT LOCATION 3)

REVISED: 08-10-2023 BY GJR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE P-40-875

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NORTH ABUTMENT BEARING AND GIRDER DETAILS

SHEET 19 OF 72
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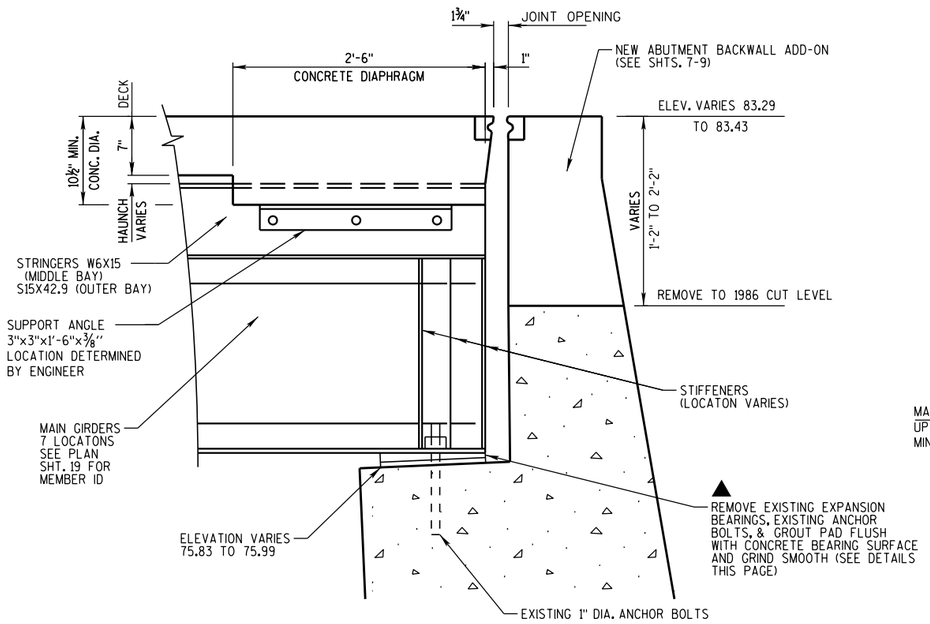
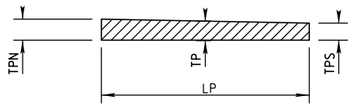
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_19_NORTH ABUTMENT BEARING AND GIRDER DETAILS.dgn PLOT DATE : 12/12/2023 10:31:29 AM PLOT BY : grogal PLOT NAME : B0113_2024_19_NORTH ABUTMENT BEARING AND GIRDER DETAILS.dg

STATE PROJECT NUMBER

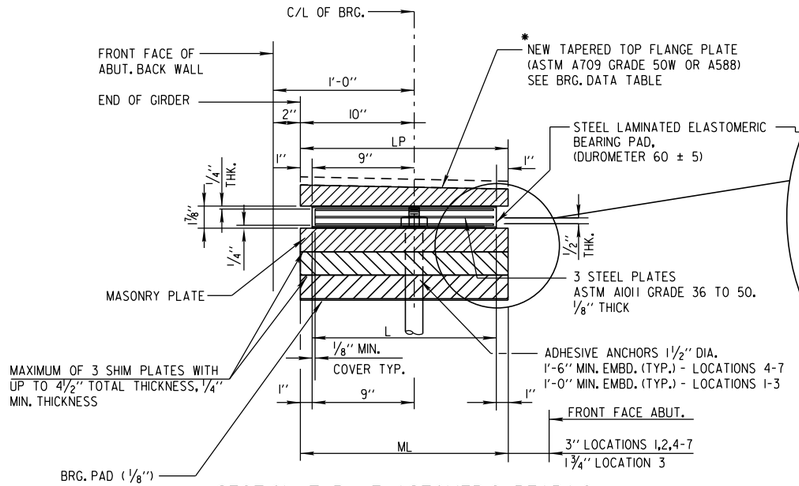
2984-12-74



SECTION 1/19 (ALL BAYS)

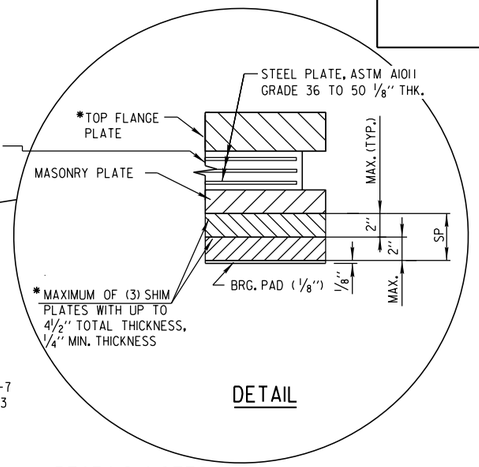


TAPERED PLATE DIAGRAM

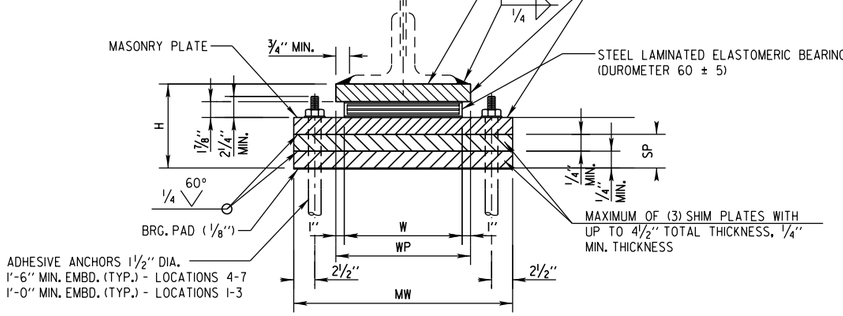


SECTION THRU ELASTOMERIC BEARING

(LOOKING EAST, ALONG C/L GIRDER)



DETAIL



FRONT ELEVATION

(LOOKING NORTH)

LEGEND

- ✱ SEE BEARING DATA TABLE
- ▲ REMOVAL OF EXISTING GROUT PAD REQUIRED TO INSTALL BEARINGS TO ACCOMODATE BEARING ASSEMBLIES. INSTALL NEW GROUT PAD BELOW BEARING ASSEMBLIES.
- ⊗ SEE PLAN OF LOCATION 3 FLANGE PLATE AND ELASTOMERIC BEARING ON SHEET 19

BEARING DATA TABLE

LOCATION	BOTTOM FLANGE WIDTH (inches)	TOTAL BEARING HEIGHT H (inches)	TOTAL ELASTOMER THICKNESS (INCHES)	NUMBER OF PLATES REQUIRED	LONGITUDINAL LENGTH OF BEARING L (MIN.) (INCHES)	HOTIZONTAL WIDTH OF BEARING W (INCHES)	LONGITUDINAL LENGTH OF TOP PLATE LP (MIN.) (INCHES)	HORIZONTAL WIDTH TOP OF PLATE WP (INCHES)	THICKNESS OF TOP PLATE			END OF GIRDER TO C/L BRG. D (INCHES)	LONGITUDINAL LENGTH OF MASONRY PLATE ML (INCHES)	HORIZONTAL WIDTH OF MASONRY PLATE MW (INCHES)	MASONRY PLATE THICKNESS (INCHES)	STEEL SHIM PLATE THICKNESS SP (INCHES)	ANCHOR BOLT LENGTH (INCHES)
									TPS (INCHES)	TP (INCHES)	TPN (INCHES)						
1	12 5/16	6 1/4	1 7/8	3	17	14	19	16	3/4	1 1/32	1 5/16	10	19	26	2	2 3/8	21
2	12 3/8	8 3/4	1 7/8	3	17	14	19	16	3/4	1 1/32	1 5/16	10	19	26	2	4	21
3	12 3/8	9 1/4	1 7/8	3	18	14	20	16	3/4	1 1/32	1 5/16	10	21 1/8	26	2	6	24
4	12 5/16	3 1/4	1 7/8	3	17	14	19	16	3/4	1 3/32	1 7/16	10	19	26	1/4	0	24
5	12 5/16	3 1/4	1 7/8	3	17	14	19	16	3/4	1 3/32	1 7/16	10	19	26	1/4	0	24
6	12 5/16	3 1/4	1 7/8	3	17	14	19	16	3/4	1 3/32	1 7/16	10	19	26	1/4	0	24
7	12 5/16	3 1/4	1 7/8	3	17	14	19	16	3/4	1 3/32	1 7/16	10	19	26	1/4	0	24

BEARING NOTES

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE GREATER THAN 85° F.

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W OR A588. (PAINTED)

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, EPOXY ANCHORS, ANCHOR BOLTS, STEEL PLATES, AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED", EACH.

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

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ANCHOR BOLTS FOR BEARINGS SHALL BE THREADED 3", PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE AS SPECIFIED FOR 1 1/2" DIA. BOLTS. PROJECT ANCHOR BOLTS, MASONRY PLATE AND SHIM PLATE THICKNESS + 2 1/4", ABOVE TOP OF CONCRETE.

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS MASONRY PLATE FOR BEARINGS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY & SHIM PLATES SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS C.

NEW ELASTOMERIC BEARINGS TO BE PLACED AT ALL GIRDER LOCATIONS AT NORTH ABUTMENT. SEE REPLACEMENT PLAN ON SHEET 19.

BURN EXISTING ANCHOR BOLTS OFF FLUSH WITH BEAM SEAT.

REMOVE RIVETS HOLDING EXISTING BEARING ASSEMBLY TO BOTTOM FLANGE OF GIRDER. GRIND AFFECTED AREAS SMOOTH.

WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

SEE PLANS ON SHEET 19 FOR ADDITIONAL MASONRY PLATE AND FLANGE PLATE DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY GJR | PLANS CK'D. JPH/JES

BRG. REPLACEMENT DETAILS NORTH ABUTMENT

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47

REVISED: 08-10-2023 BY GJR

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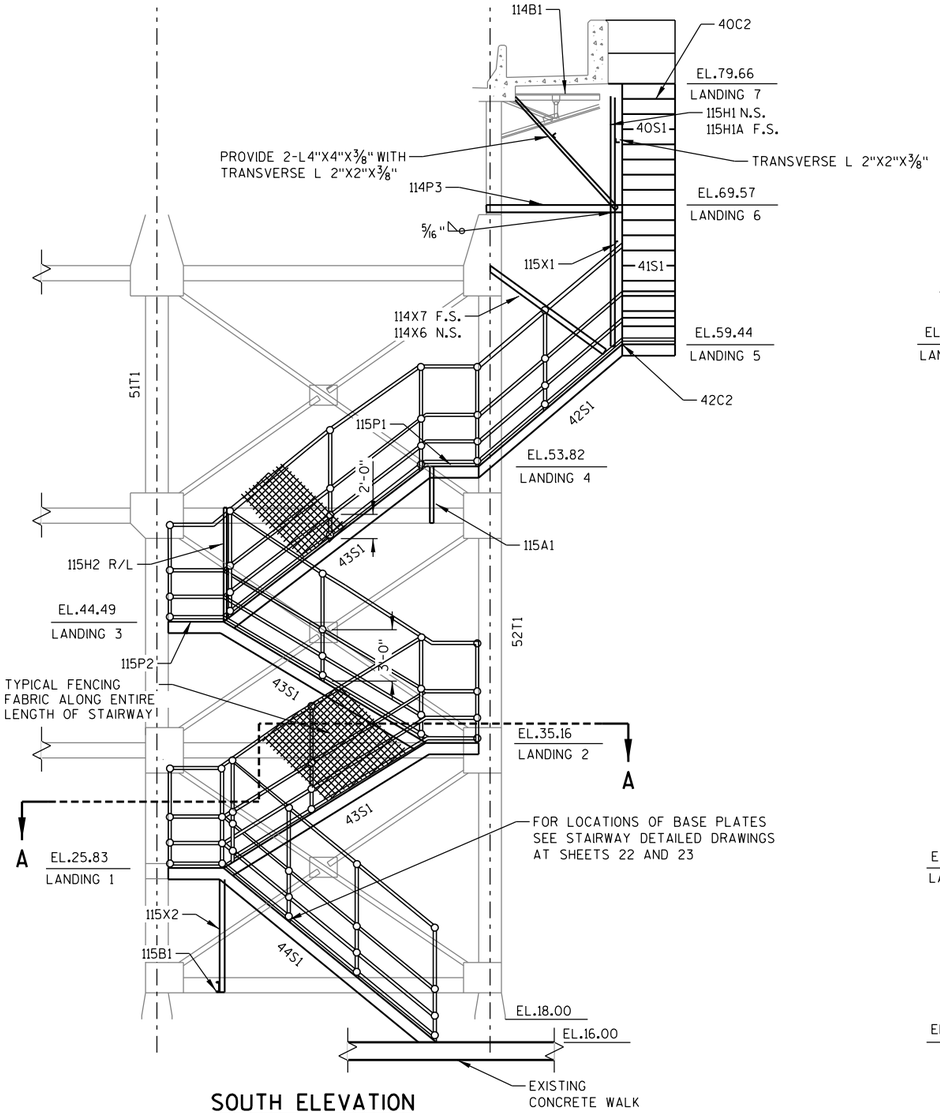
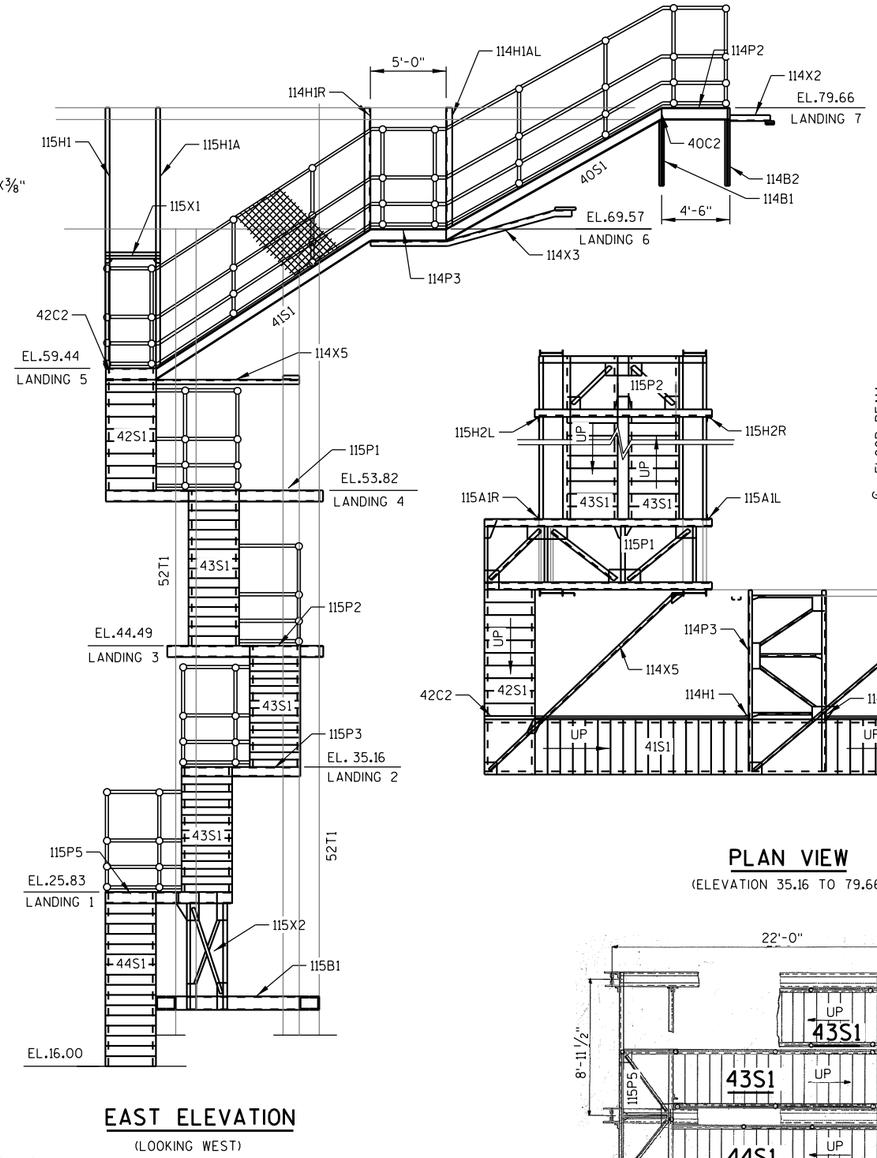
STATE PROJECT NUMBER

2984-12-74



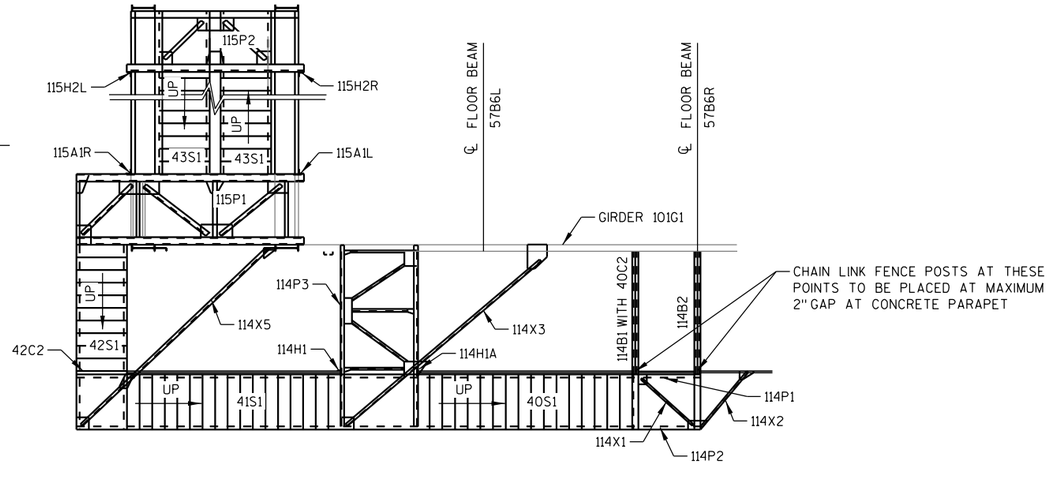
SOUTH ELEVATION

(LOOKING NORTH)



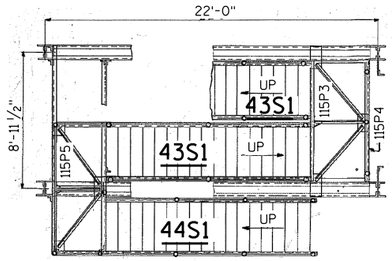
EAST ELEVATION

(LOOKING WEST)



PLAN VIEW

(ELEVATION 35.16 TO 79.66)



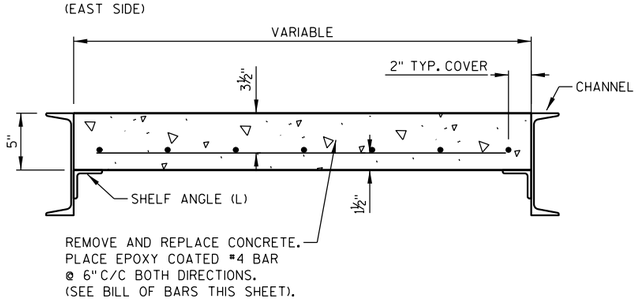
SECTION A-A

STEEL STAIRWAY AT BENT 12

(EAST SIDE)

BILL OF BARS - STAIRWAY LANDINGS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
L401	X	17	8'- 2"			TRANS. BARS AT LANDING 1
L402	X	8	3'- 5"			LONGIT. BARS AT LANDING 1
L403	X	16	7'- 6"			TRANS. BARS AT LANDING 2
L404	X	8	3'- 5"			LONGIT. BARS AT LANDING 2
L405	X	15	7'- 0"			TRANS. BARS AT LANDING 3
L406	X	8	3'- 5"			LONGIT. BARS AT LANDING 3
L407	X	18	8'- 6"			TRANS. BARS AT LANDING 4
L408	X	8	3'- 3"			LONGIT. BARS AT LANDING 4
L409	X	7	3'- 0"			TRANS. BARS AT LANDING 5
L410	X	10	4'- 3"			LONGIT. BARS AT LANDING 5
L411	X	7	3'- 0"			TRANS. BARS AT LANDING 6
L412	X	10	4'- 5"			LONGIT. BARS AT LANDING 6
L413	X	7	3'- 0"			TRANS. BARS AT LANDING 7
L414	X	10	4'- 3"			LONGIT. BARS AT LANDING 7



TYPICAL DETAIL AT LANDINGS

NOTE:

SEE SHEETS 22 - 27 FOR ADDITIONAL STAIRWAY DETAILS.

FOR PROTECTIVE SCREENING AND RAILING DETAILS, SEE SHEET 27.

FOR BENT 12 FRAMING, SEE SHEET 33.

ALL MATERIAL IN STAIRWAY INCLUDING SHIM PLATES, STEEL PLATES, STEEL MEMBERS, ANCHOR BOLTS, & STEEL BOLTS SHALL BE PAID FOR AT THE UNIT PRICE FOR "STAIRWAY STRUCTURAL STEEL", LB.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY	PLANS CK'D.
HMD	JPH

STAIR TOWER REPLACEMENT

SHEET 21 OF 72
48

REVISED: 08-24-2023 BY GJR

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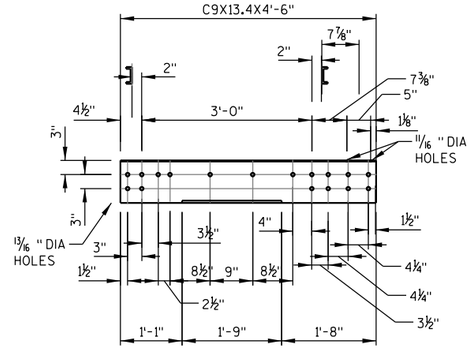
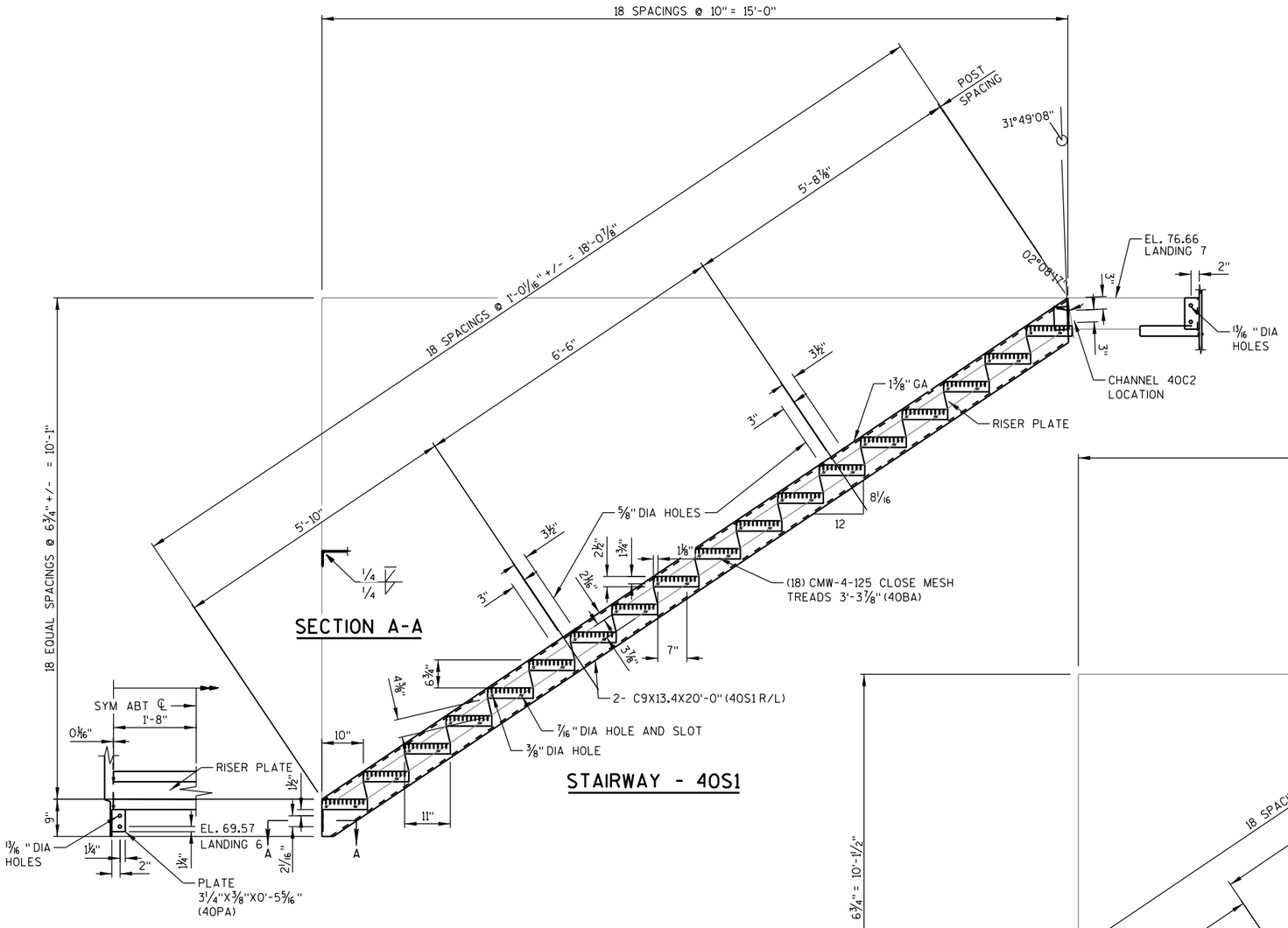
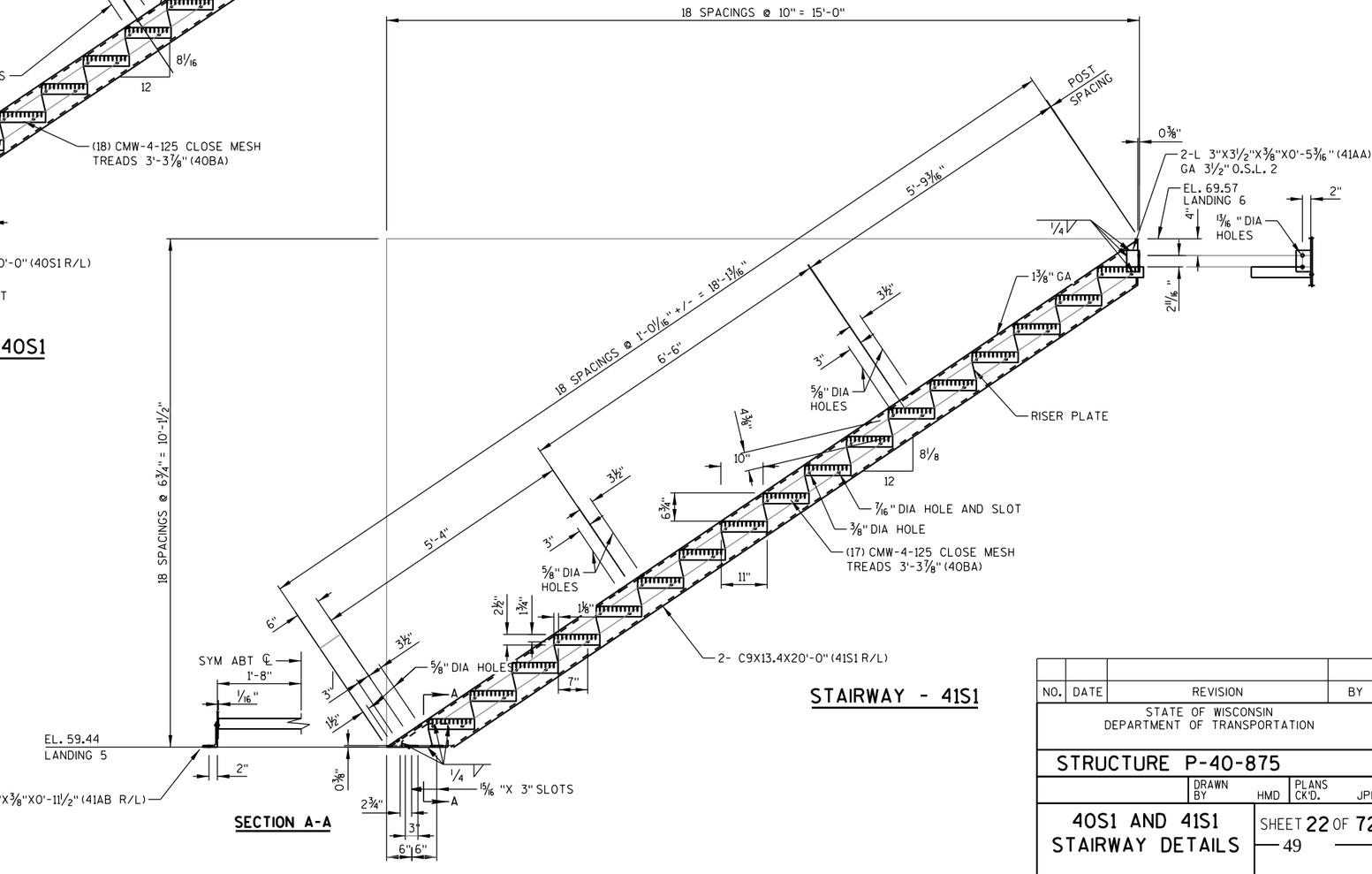
STATE PROJECT NUMBER
2984-12-74



CHANNEL 40C2

LOCATED AT 114B1





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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

40S1 AND 41S1 STAIRWAY DETAILS

SHEET 22 OF 72
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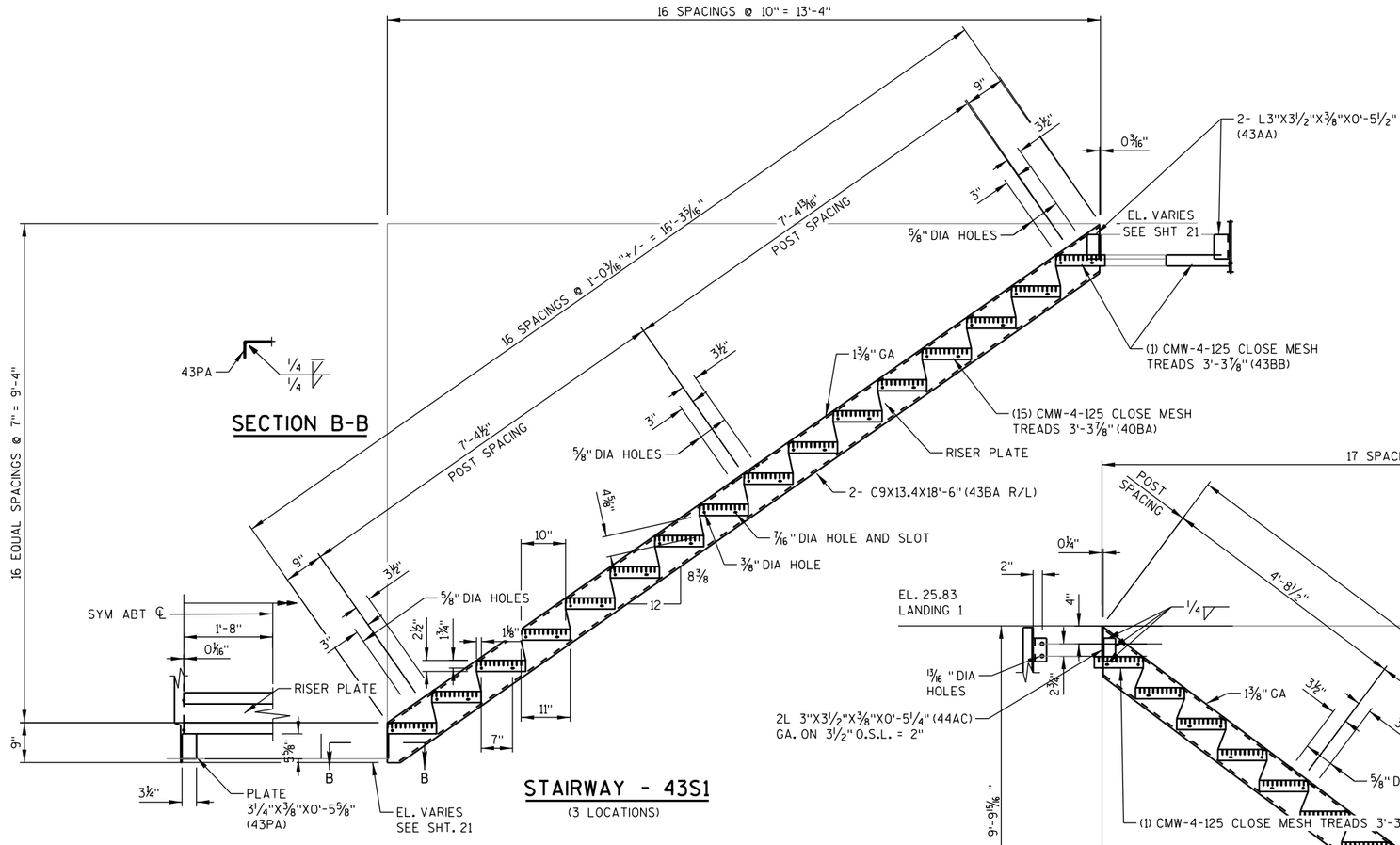
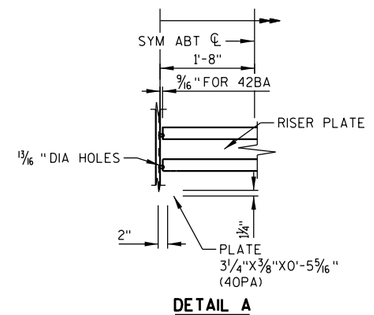
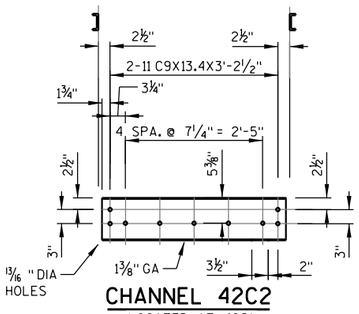
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_22_40S1 & 41S1 STAIRWAY DETAILS.dgn
PLOT DATE : 12/12/2023 10:31:34 AM PLOT BY : grogal
PLOT NAME : B0113_2024_22_40S1 & 41S1 STAIRWAY DETAILS.dgn

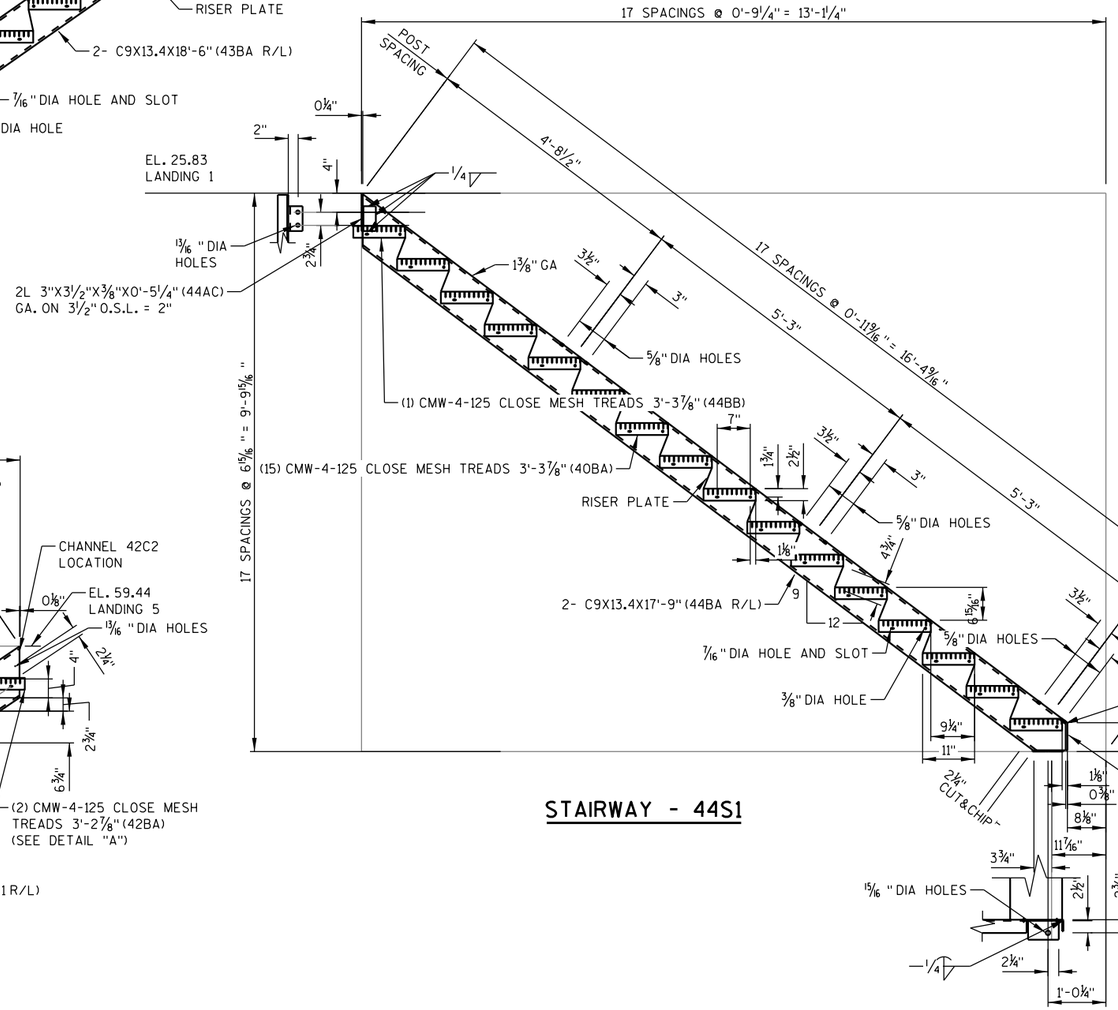
STATE PROJECT NUMBER

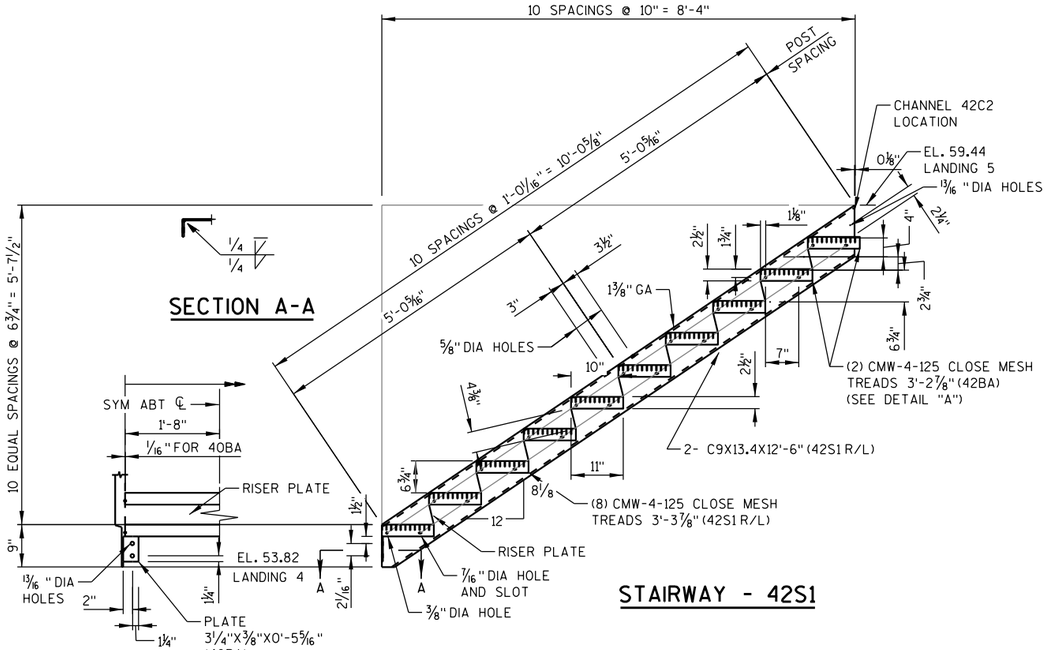
2984-12-74











NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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42S1, 43S1 AND 44S1 STAIRWAY DETAILS

SHEET 23 OF 72

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STATE PROJECT NUMBER

2984-12-74

NOTE:
SHADED MEMBERS
TO REMAIN

GIRDER 101G1

SEE SHEET 57 FOR
MOUNTING LOCATION

SECTION AA

114B1

NOTE:
SHADED MEMBERS
TO REMAIN

GIRDER 101G1

SEE SHEET 57 FOR
MOUNTING LOCATION

114B2

(LOCATED AT C/L FLOOR BEAM 57B6R)

SEC. BB

SEC. DD

SEC. CC

SECTION "XX"

114P3

114X3

114H1R

114H1AL

114P3, 114X3, 114H1R, 114H1AL

114P1

114X1

114P2

114X2

114P1, 114P2, 114X1, 114X2

114X5

114X6

114X7

NOTE: NO REAMING

REVISED: 08-31-2023 BY GJR

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

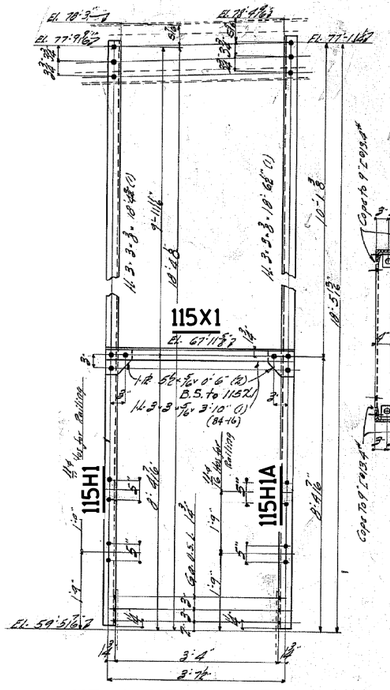
DRAWN BY HMD | PLANS CK'D. JPH

114 MEMBER DETAILS

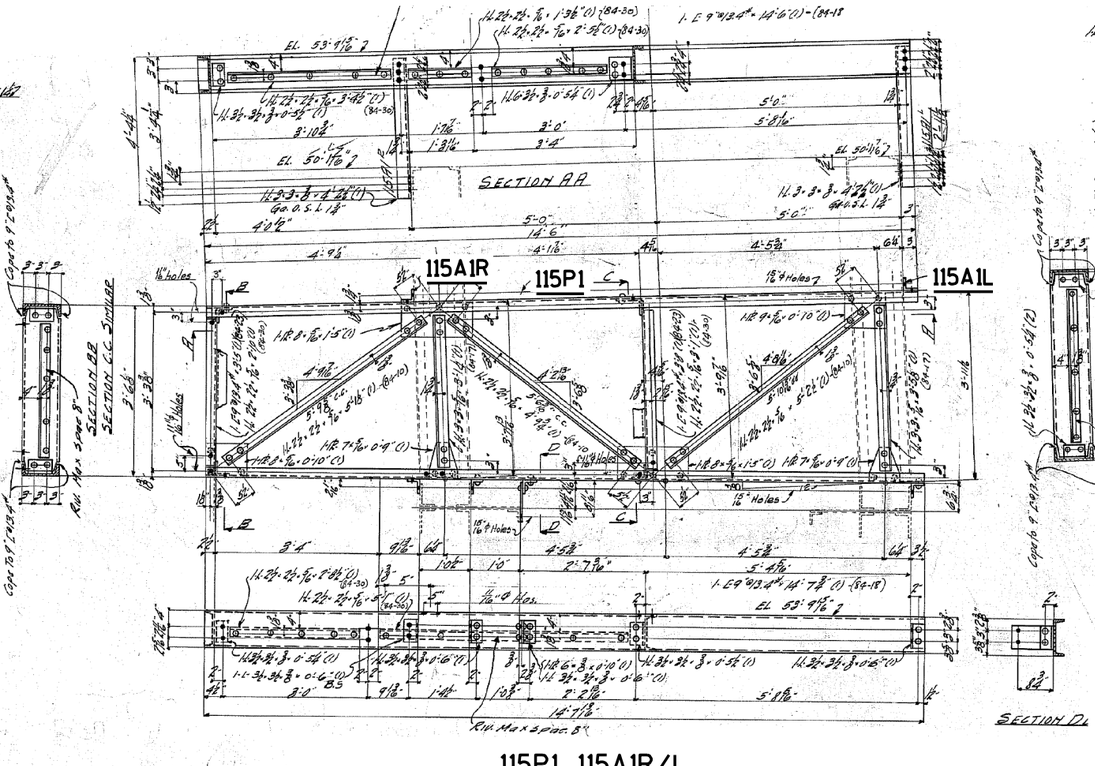
SHEET 24 OF 72
51

STATE PROJECT NUMBER

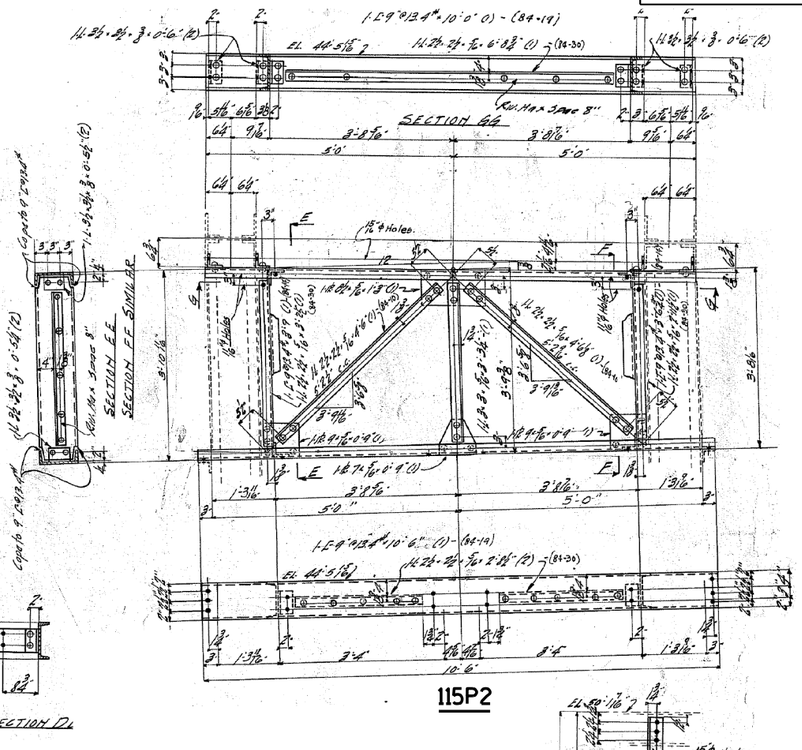
2984-12-74

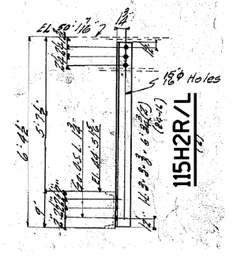


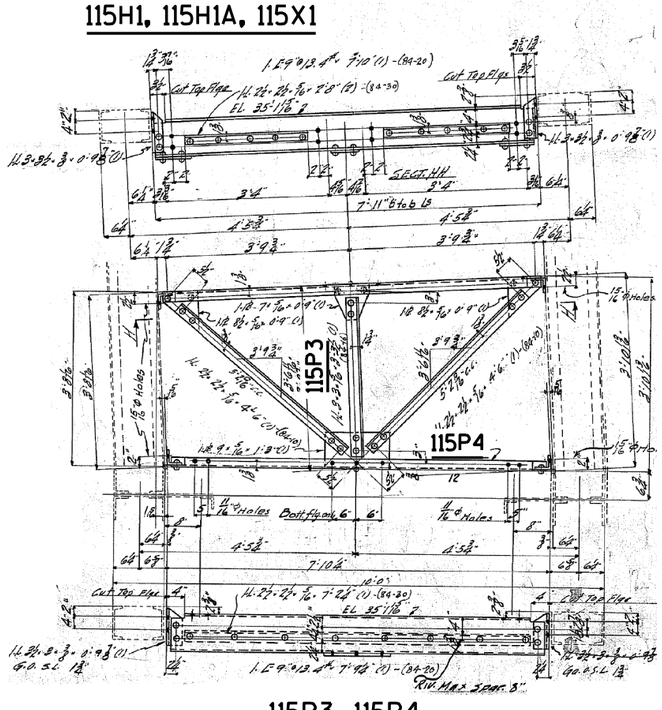
115H1, 115H1A, 115X1



115P1, 115A1R/L







115P3, 115P4

REVISED: 08-24-2023 BY GJR

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

115 MEMBER DETAILS

SHEET 25 OF 72

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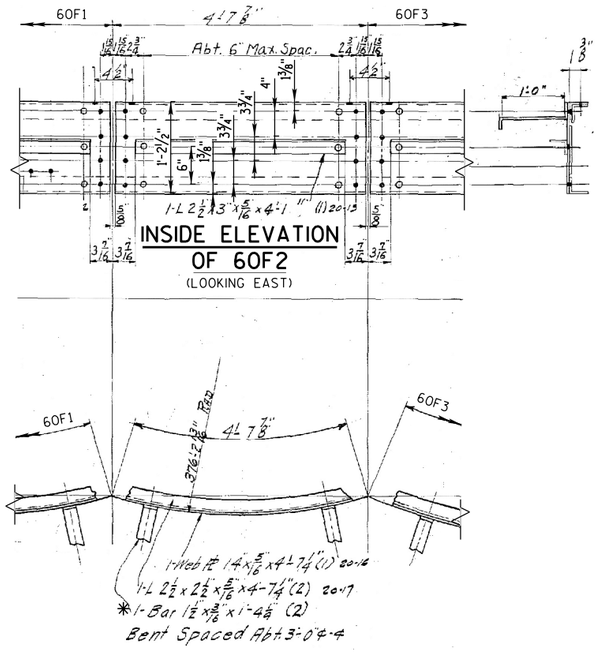
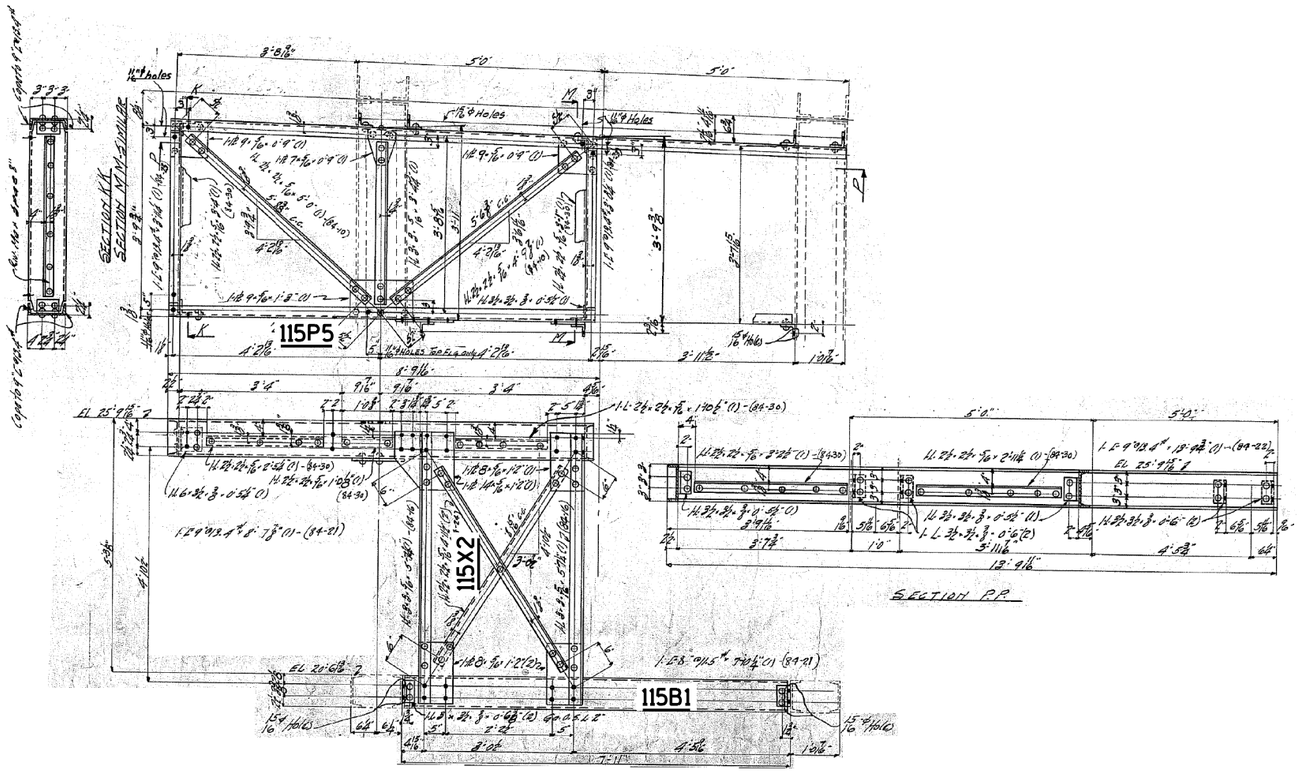
STATE PROJECT NUMBER

2984-12-74



PLAN VIEW FASCIA STRINGER 60F2



115P5, 115X2, 115B1

LEGEND

* MEMBER 60F2 TO BE REPLACED AS FOLLOWS: REMOVE ¾" RIVETS HOLDING 60F2 MEMBER TO THE 2-BENT FLAT BARS 1½"X⅜"X 1'-4¼" @ 3'-0" C/C (TO REMAIN IN WALK) EMBEDDED IN THE EXISTING 7" REINFORCED CONCRETE WALK. MOUNT THE NEW MEMBER 60F2 TO THE BENT FLAT BARS USING SELF TAPPING ¾" STRUCTURAL BOLTS.

☆ ALTERNATIVE ANCHORAGE: CONCRETE ADHESIVE ANCHORS ½-INCH. EMBED 7" IN CONCRETE. ADHESIVE ANCHORS SHALL CONFORM TO SECTIONS 502.2.12 AND 502.3.14 OF THE STANDARD SPECIFICATIONS.

USE A TOTAL OF 4 ANCHORS. LOCATION TO BE DETERMINED BY ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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60F2 AND 115 MEMBER DETAILS

SHEET 26 OF 72
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REVISED: 08-31-2023 BY GJR

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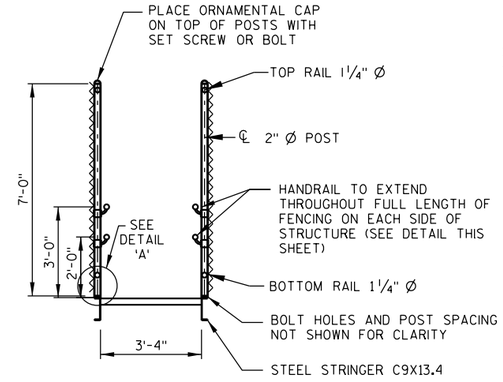
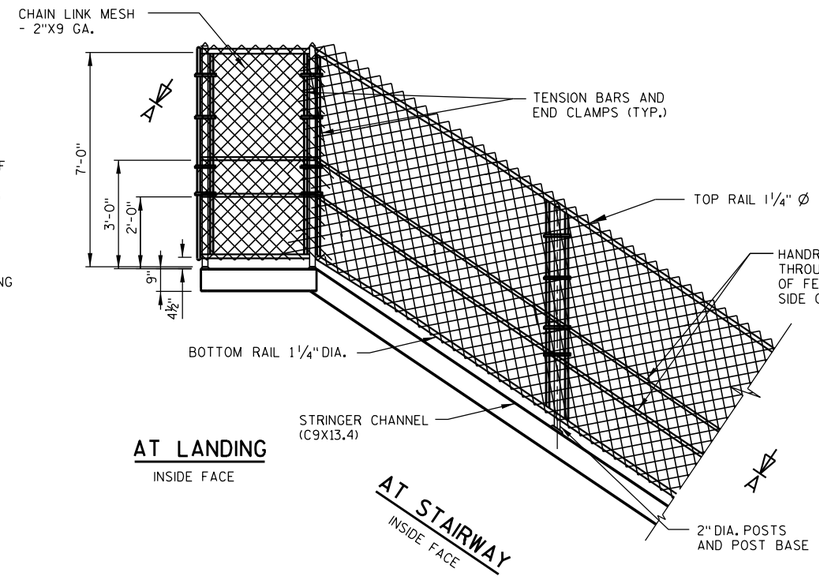
STATE PROJECT NUMBER

2984-12-74



SECTION THRU FENCE



AT LANDING

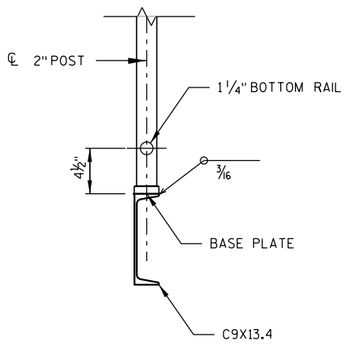
INSIDE FACE

AT STAIRWAY

INSIDE FACE

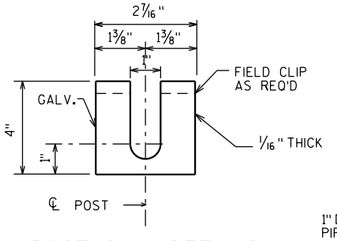
FENCE PART ELEVATION

INSIDE FACE



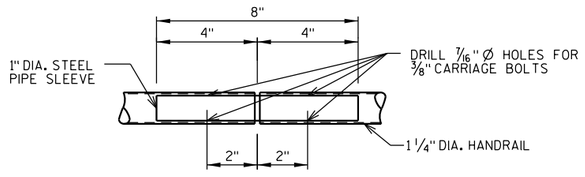
DETAIL 'A'

UNIT SHALL BE GALVANIZED AFTER FABRICATION

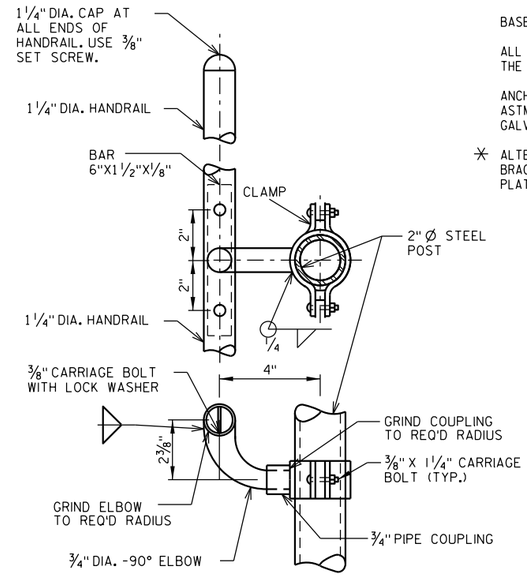


POST SHIM DETAILS

PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT



HANDRAIL SPLICE DETAIL



HANDRAIL DETAILS

NOTES

POSTS ARE TO BE SET VERTICAL.

ALL FENCE COMPONENTS SHALL BE GALVANIZED STEEL WITH A COLORED POLYMER COATING ON THE OUTSIDE.

FABRIC SHALL CONFORM TO ASTM F668, CLASS 2B. STEEL RAILS, POSTS AND POST SLEEVES SHALL CONFORM TO ASTM F1083, STANDARD WEIGHT PIPE (SCHEDULE 40). FITTINGS SHALL CONFORM TO ASTM F626. SEE THE "BRIDGE SPECIAL PROVISIONS" FOR ADDITIONAL DETAILS.

THE COLOR OF THE POLYMER-COATING FOR THIS STRUCTURE SHALL BE BLACK IN ACCORDANCE WITH ASTM F934.

THE BID ITEM SHALL BE "STAIRWAY RAILING AND PROTECTIVE SCREENING SPV.0090.505, LF".

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

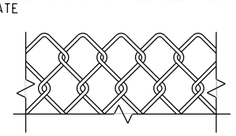
POSTS BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

BASE PLATES, ANCHOR PLATES AND SHIMS SHALL BE ASTM A709, GRADE 36.

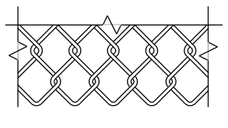
ALL POST SPACINGS ARE MEASURED ALONG SUPPORTING MEMBER ALONG C/L OF THE POST.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR ASTM 307. IF 307 IS USED, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

⁎ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180 BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE WELDED TO THE BASE PLATE



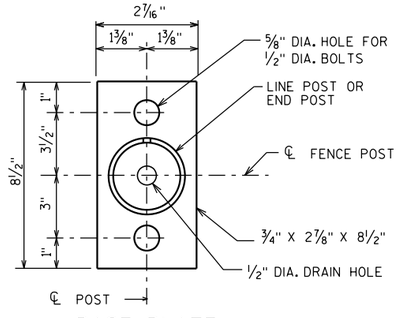
TOP DETAIL



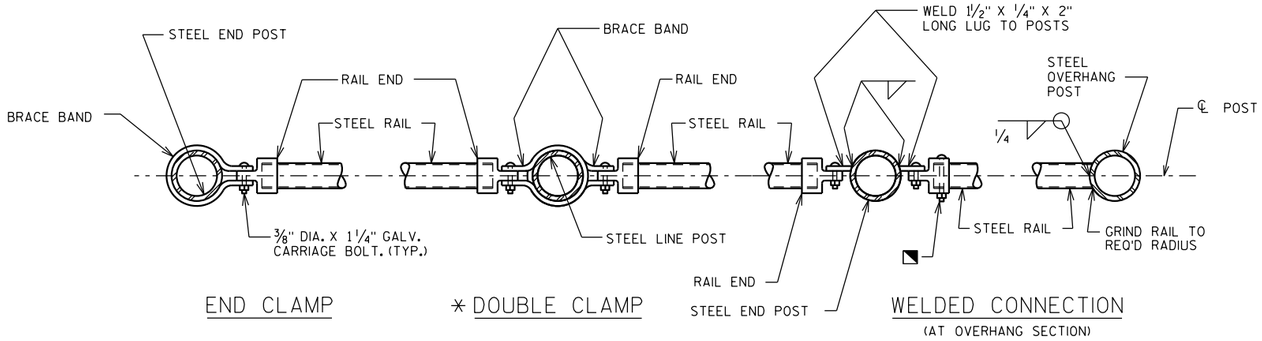
BOTTOM DETAIL

FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 2" DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.



BASE PLATE



END CLAMP

⁎ DOUBLE CLAMP

WELDED CONNECTION

(AT OVERHANG SECTION)

SECTION A-A

NOTE: PLACE ALL BOLT HEADS ON SIDE OF FENCE ADJACENT TO PEDESTRIANS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

STAIRWAY FENCING AND RAILING DETAILS

SHEET 27 OF 72

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REVISED DATE: 12-05-2023 GJR

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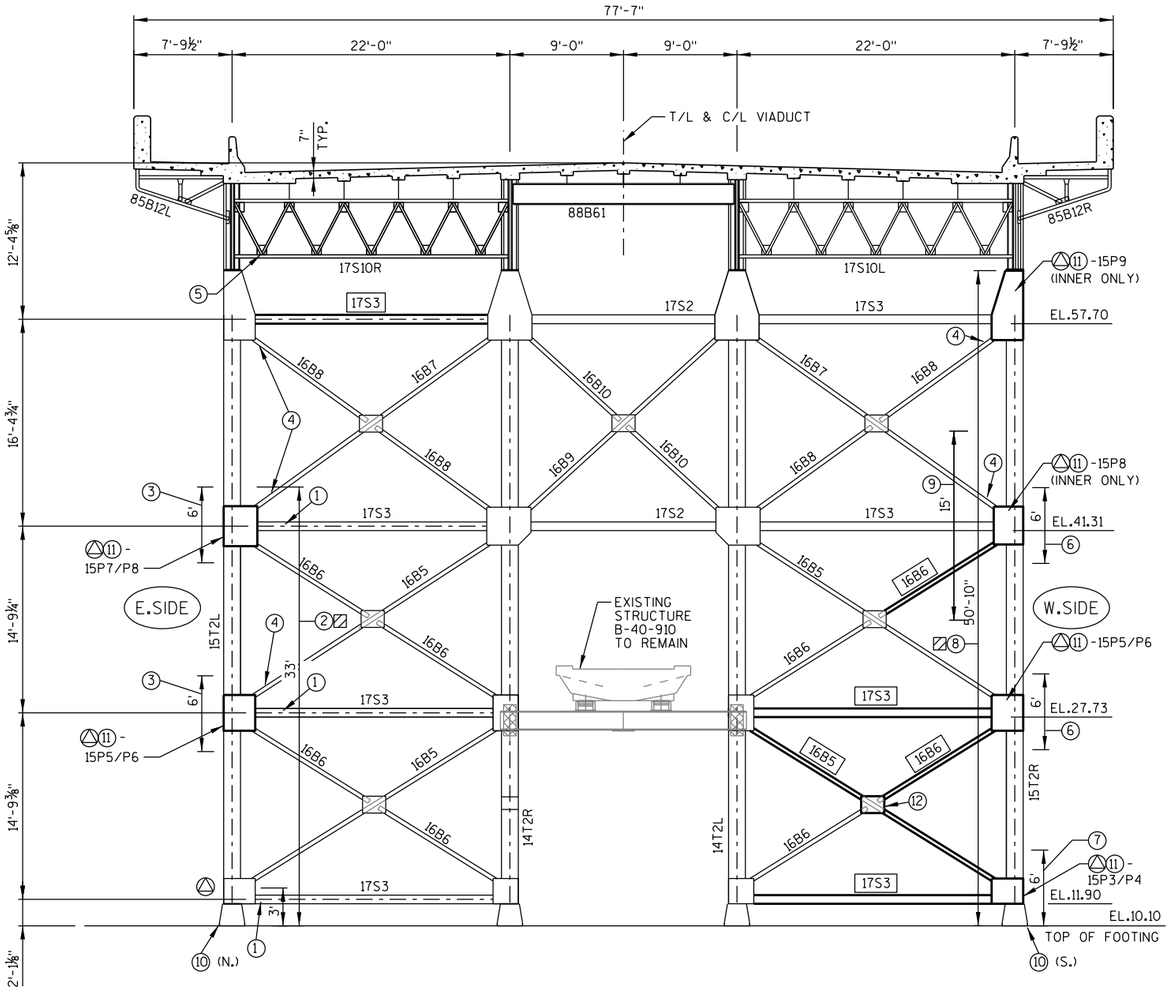
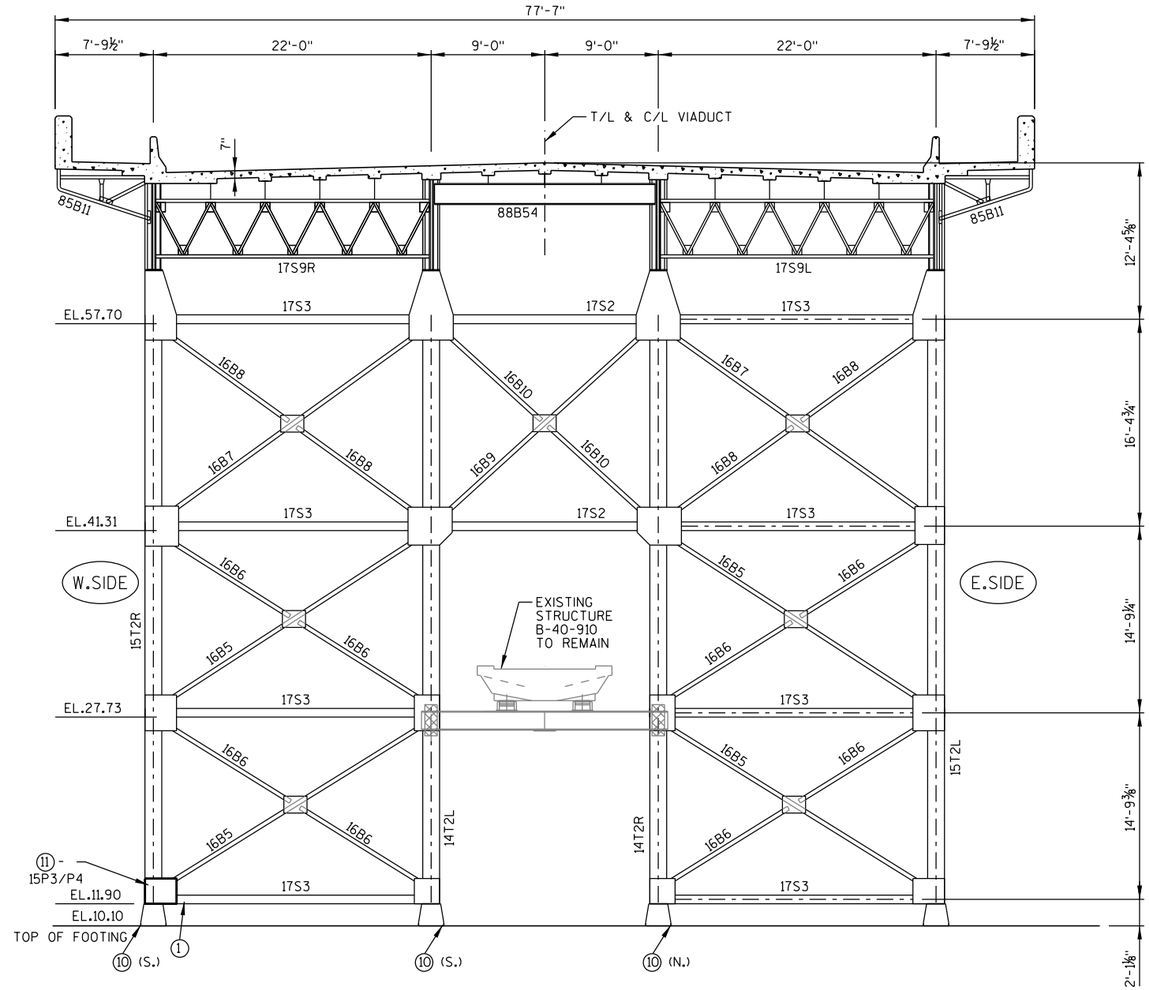
STATE PROJECT NUMBER

2984-12-74



BENT 9 - NORTH ELEVATION (F.S.)

(LOOKING SOUTH)



BENT 9 - SOUTH ELEVATION (N.S.)

(LOOKING NORTH)

KEY:

XXXX 1926 SHOP DRAWING PART NUMBER - REMOVE AND REPLACE PART

XXXX 1926 SHOP DRAWING PART NUMBER

(1) REPLACE 3' MEMBER 17S3. SEE SHT. 38, DETAIL 3 (4 LOCATIONS).

(2) ADD FLANGE PLATES TO MEMBER 15T2L. ▨
2-(INNER & OUTER) 5"X½"X33'-0" (OVERALL LENGTH EACH LOCATION)
AT S.W. SEE SHTS. 36 AND 61.

(3) ADD FLANGE PLATE TO MEMBER 15T2L.
2-(INNER)) 5"X½"X6'-0" AT N.W. ADD WEB PLATE TO
MEMBER 15T2L. 1-5¼"X½"X6'-0" W. FACE, SEE SHTS. 36 AND 61.

(4) REPLACE BATTEN PLATE (16P1) AT MEMBER 16B5(1 EACH), 16B7(2 EACH),
16B8(2 EACH). 8½"X⅝"X12", SEE SHT. 39.

(5) ADD FLANGE PLATES TO MEMBER 17S10R.
2-(TOP & BOTTOM) 4"X½"X1'-6" AT W. SEE SHT. 38, DETAILS 1 AND 2.

(6) ADD FLANGE PLATE TO MEMBER 15T2R.
2-(INNER) 5"X½"X6'-0" N.E. AND N.W. ADD WEB PLATE
TO MEMBER 15T2R. 1-5¼"X½"X6'-0" E. FACE. SEE SHTS. 36 AND 62.

(7) ADD FLANGE PLATE TO MEMBER 15T2R.
1-(OUTER) 1'-0"X½"X6'-0" AT N. SEE SHTS. 36 AND 62.

(8) ADD FLANGE PLATES TO MEMBER 15T2R. ▨
2-(INNER & OUTER) 5"X½"X50'-10" (OVERALL LENGTH EACH LOCATION)
AT S.E. SEE SHTS. 36 AND 62, DETAILS 4 AND 5.

(9) ADD FLANGE PLATE TO MEMBER 15T2R.
1-(INNER) 5"X½"X15'-0" AT S.W. SEE SHTS. 36 AND 62.

(10) REPLACE ANCHOR NUTS 1½" AT AB4, AB4A, (N./S. NUT LOCATION).
SEE SHTS. 35 AND 36.

(11) -XX REPLACE GUSSET PLATES (15P3, 15P4, 15P5
15P6, 15P7, 15P8, AND 15P9),(INNER AND/OR OUTER)
TO MEMBERS 15T2R/L AND 16&17 MEMBERS (F.S./N.S.)
SEE SHT. 36.

(12) REPLACE GUSSET PLATE (16P2) INNER AND OUTER
TO MEMBER 16B5/B6. SEE SHT. 39.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

ALL PLATES ½" THICK (EXCEPT AS NOTED).

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

△: ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

▨: FABRICATE AND INSTALL IN MORE THAN ONE PEICE TO FACILITATE INSTALLATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

NORTH AND SOUTH ELEVATIONS BENT 9

SHEET 28 OF 72
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REVISED DATE: 12-04-2023 BY GJR

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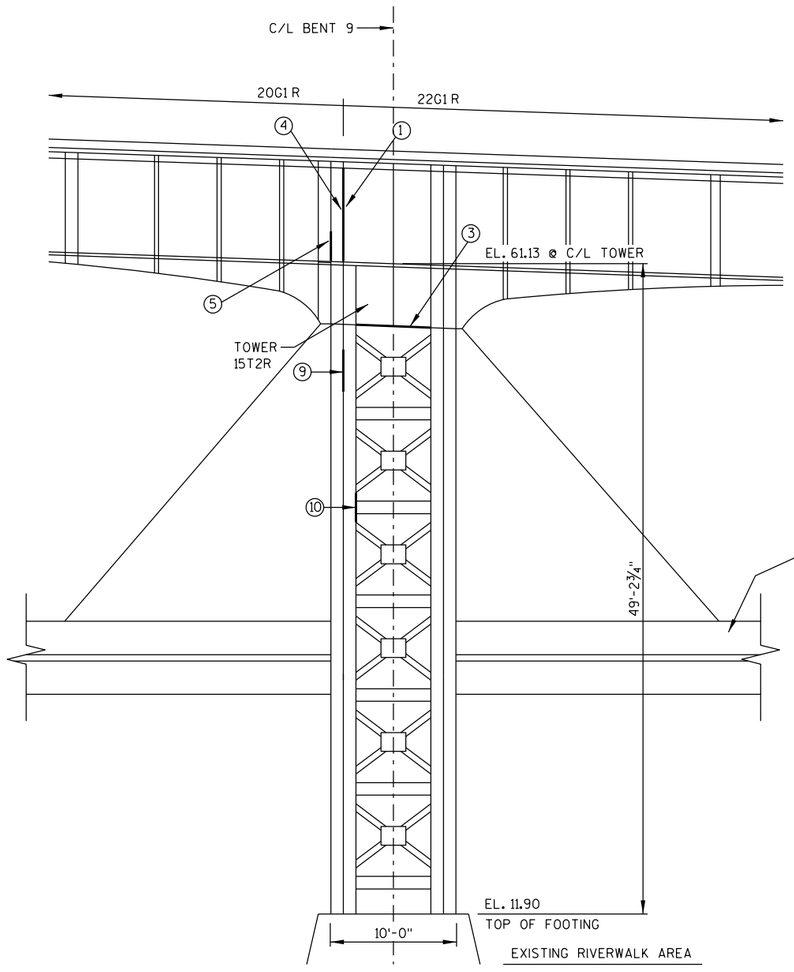
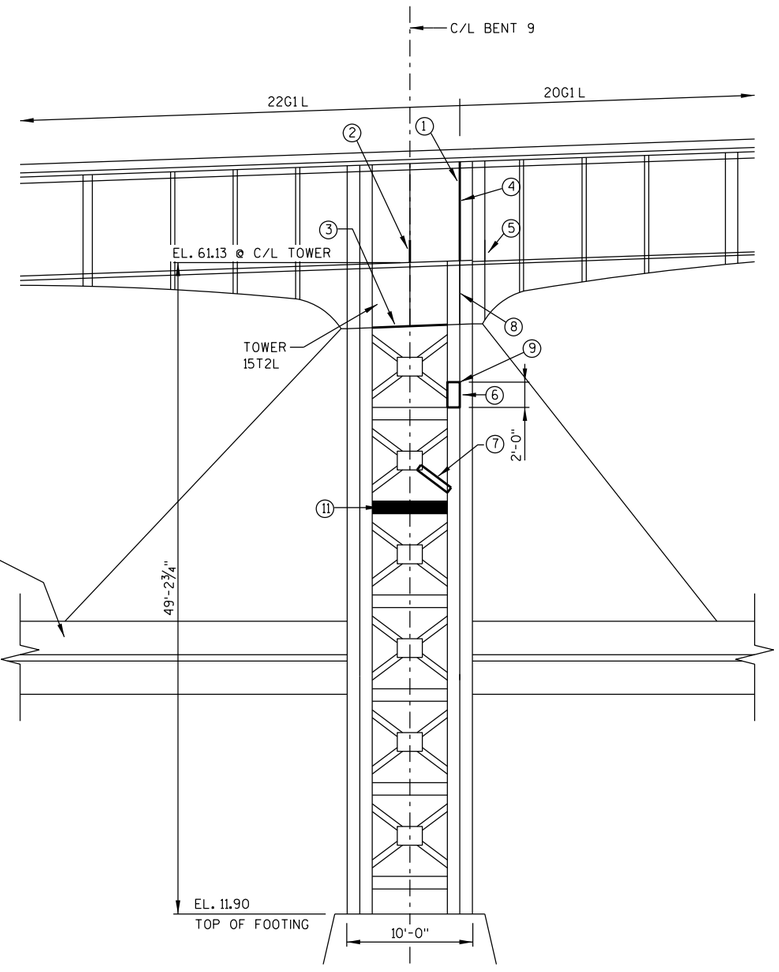
STATE PROJECT NUMBER
2984-12-74



BENT 9 - WEST ELEVATION

(LOOKING EAST)



BENT 9 - EAST ELEVATION

(LOOKING WEST)

KEY:

① REPLACE INNER STIFFENER (22S1) TO MEMBER 22G1R/L
1-Z BAR 3 5/16"X5 1/16"X3/8"X7'-11 1/2". SEE SHT. 46.

② REPLACE LOWER 1'-2 1/2" OF EAST SIDE STIFFENERS TO
MEMBER 22G1 L (INNER) (22S2), 2 TOTAL. SEE SHT. 46.

③ ADD BOT. FLANGE PLATE (15P10) TO MEMBER 15T2R/L
2-1'-0 1/2"X1 1/2"X6'-0". SEE DETAIL 1 SHT. 36 AND 59.

④ REPLACE FULL HEIGHT STIFFENERS (20S1) (INNER)
2-L3 1/2"X5"X7/16"X7'-11 1/2" TO MEMBERS 20G1 R/L SEE SHT. 47.

⑤ REPLACE LOWER 1'-2 1/2" OF STIFFENERS (INNER)
2-L3 1/2"X5"X7/16"X1'-2 1/2" TO MEMBERS 20G1 R/L, SEE SHT. 47.

⑥ ADD WEB PLATES (2) TO 15T2L (INNER AND OUTER) (15P11)
2-8 1/2"X1/2"X2'-0" TO EAST SIDE TOWER 15T2L. SEE SHT. 36 AND 59.

⑦ REPLACE (1) - C6"@10.5#X4'-6 1/2" AT TOWER 15T2L
SEE SHT. 36.

⑧ ADD PLATE (15P12) TO STIFFENER TO MEMBER 15T2L
1-5"X1/2"X4'-5¾". SEE SHT. 36 AND 59.

⑨ ADD FLANGE PLATES (15F14) TO MEMBERS 15T2R/L
2-6"X1/2"X3'-0". SEE SHT. 36 AND 59.

⑩ ADD PLATE (15P13) TO SOUTH SIDE OF L3X3 OF MEMBER 15T2R
1-3"X1/2"X1'-6". SEE SHT. 36 AND 59.

⑪ REPLACE (1) C8"@13.75#X7'-10" AND
L3 1/2"X3 1/2"X3/8"X5'-10 1/2". SEE SHT. 36.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

ALL PLATES 1/2" THICK (EXCEPT AS NOTED).

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

WEST AND EAST ELEVATIONS BENT 9

SHEET 29 OF 72
56

REVISED DATE: 12-04-2023 BY GJR

8

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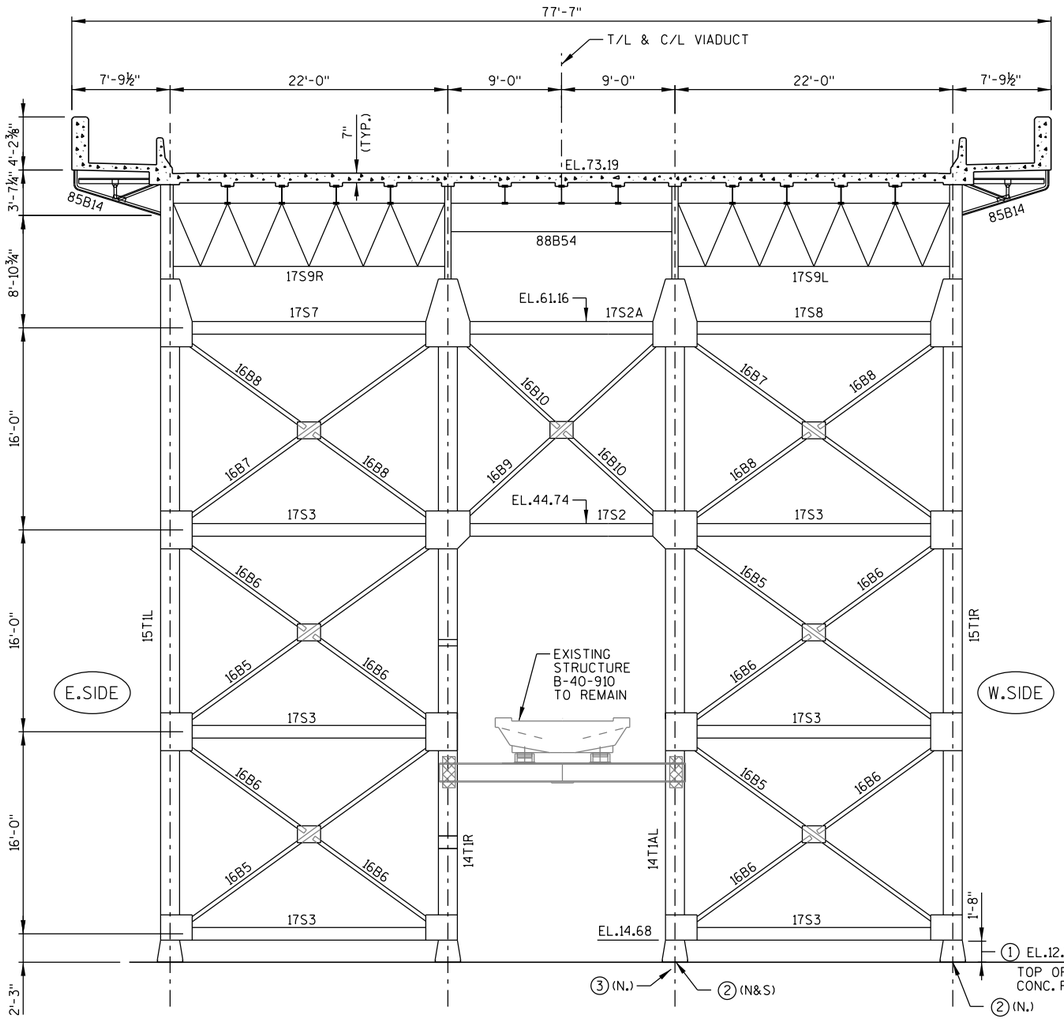
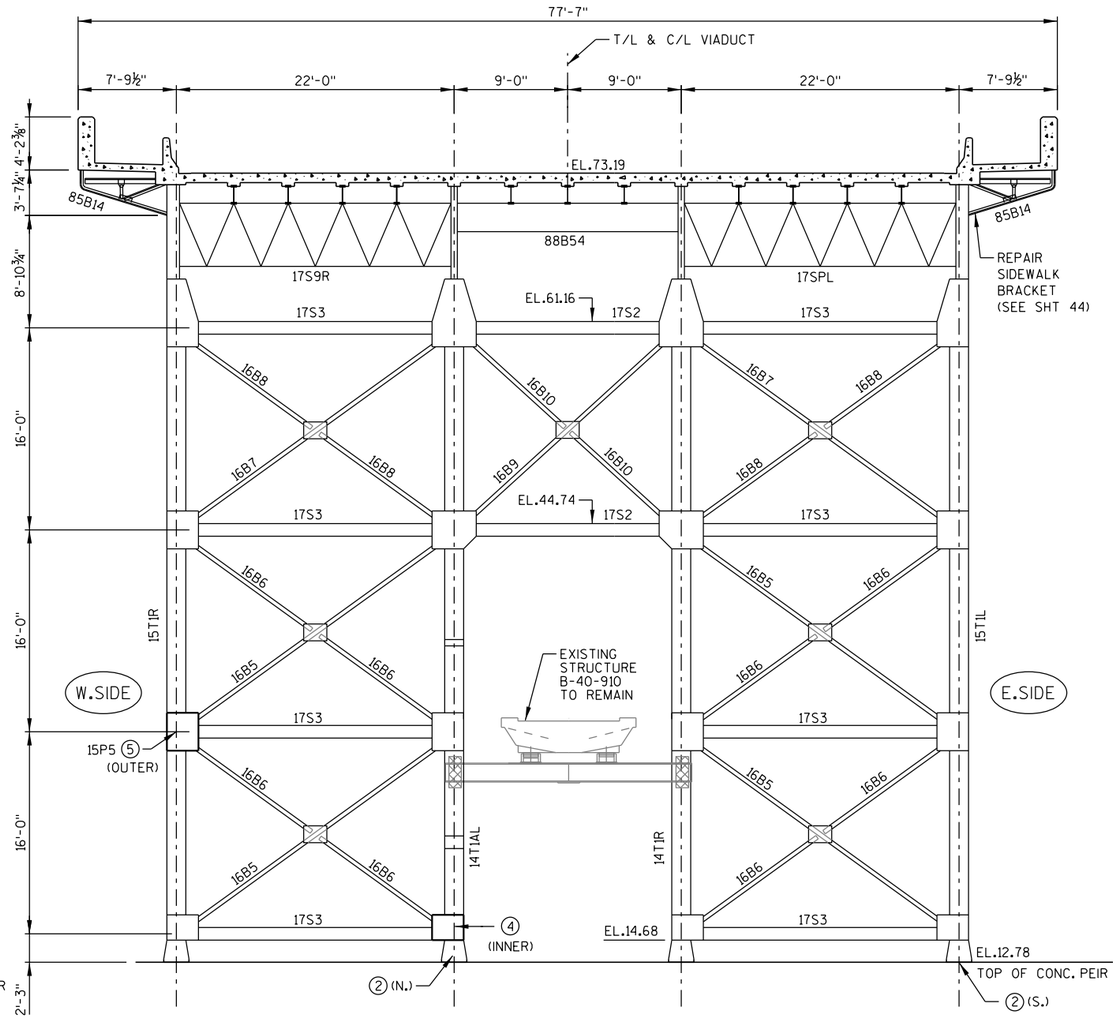
STATE PROJECT NUMBER

2984-12-74



BENT 10 - NORTH ELEVATION (F.S.)

(LOOKING SOUTH)



BENT 10 - SOUTH ELEVATION (N.S.)

(LOOKING NORTH)

KEY:

XXXX 1926 SHOP DRAWING PART NUMBER - REMOVE AND REPLACE PART

XXXX 1926 SHOP DRAWING PART NUMBER

① ADD (2) FLANGE PLATES TO MEMBER 15T1R (INSIDE, OUTSIDE) S.E. 5"X½"X1'-8". SEE SHT. 37 AND 60.

② REPLACE ANCHOR NUTS 1½" AT AB4, AB4A, (N./S. NUT LOCATION). SEE SHTS. 35 AND 37 FOR DETAILS.

③ ADD N. SIDE BASE PLATE, (14P3). SEE SHT. 35 FOR DETAILS.

④ REPLACE GUSSET PLATE (14P4) (INNER) TO MEMBER 14T1AL. SEE SHT. 35 FOR DETAILS.

⑤ REPLACE GUSSET PLATE (15P5) (OUTER) TO MEMBER 15T1R, 17S3, 16B5/B6. SEE SHT. 37 FOR DETAILS.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

ALL PLATES ½" THICK (EXCEPT AS NOTED).

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

NORTH AND SOUTH ELEVATIONS BENT 10

SHEET 30 OF 72

57

REVISED DATE: 12-04-2023 BY GJR

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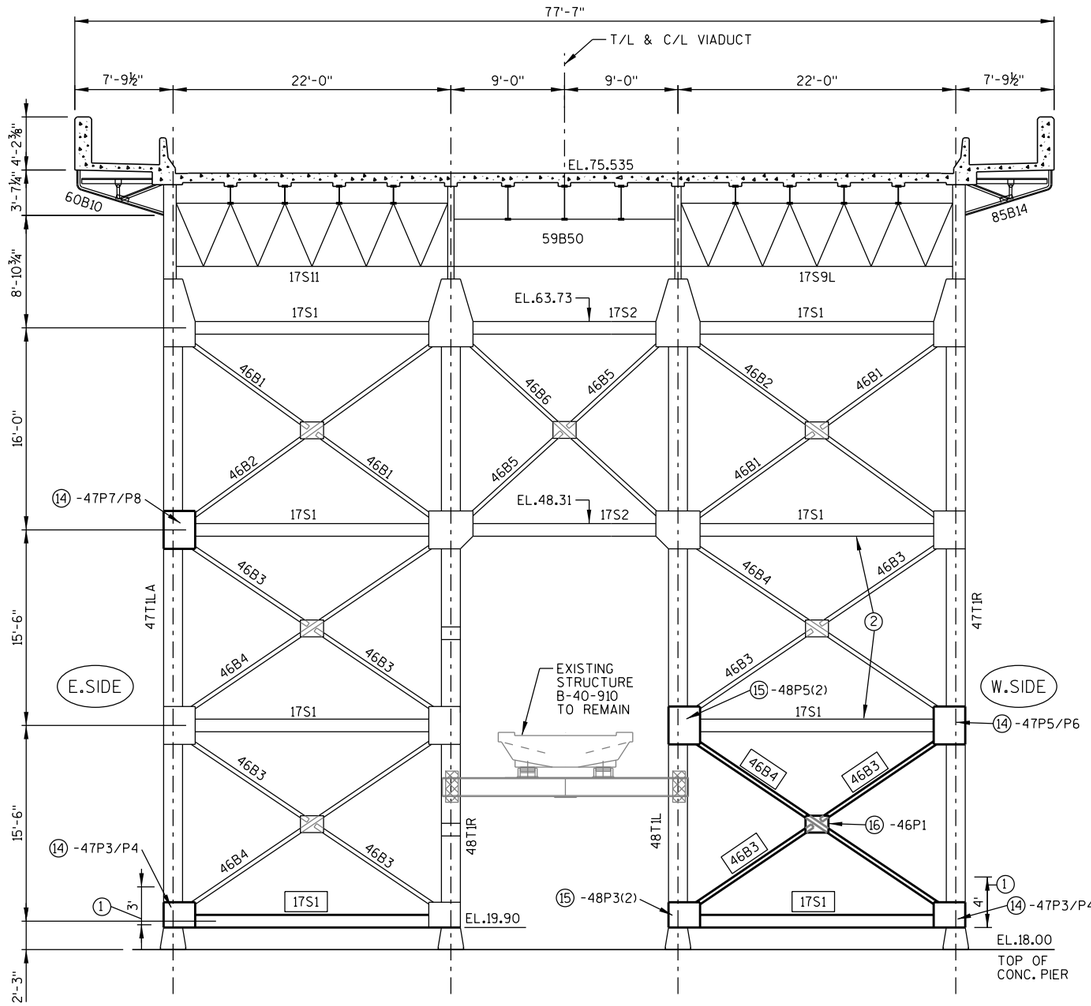
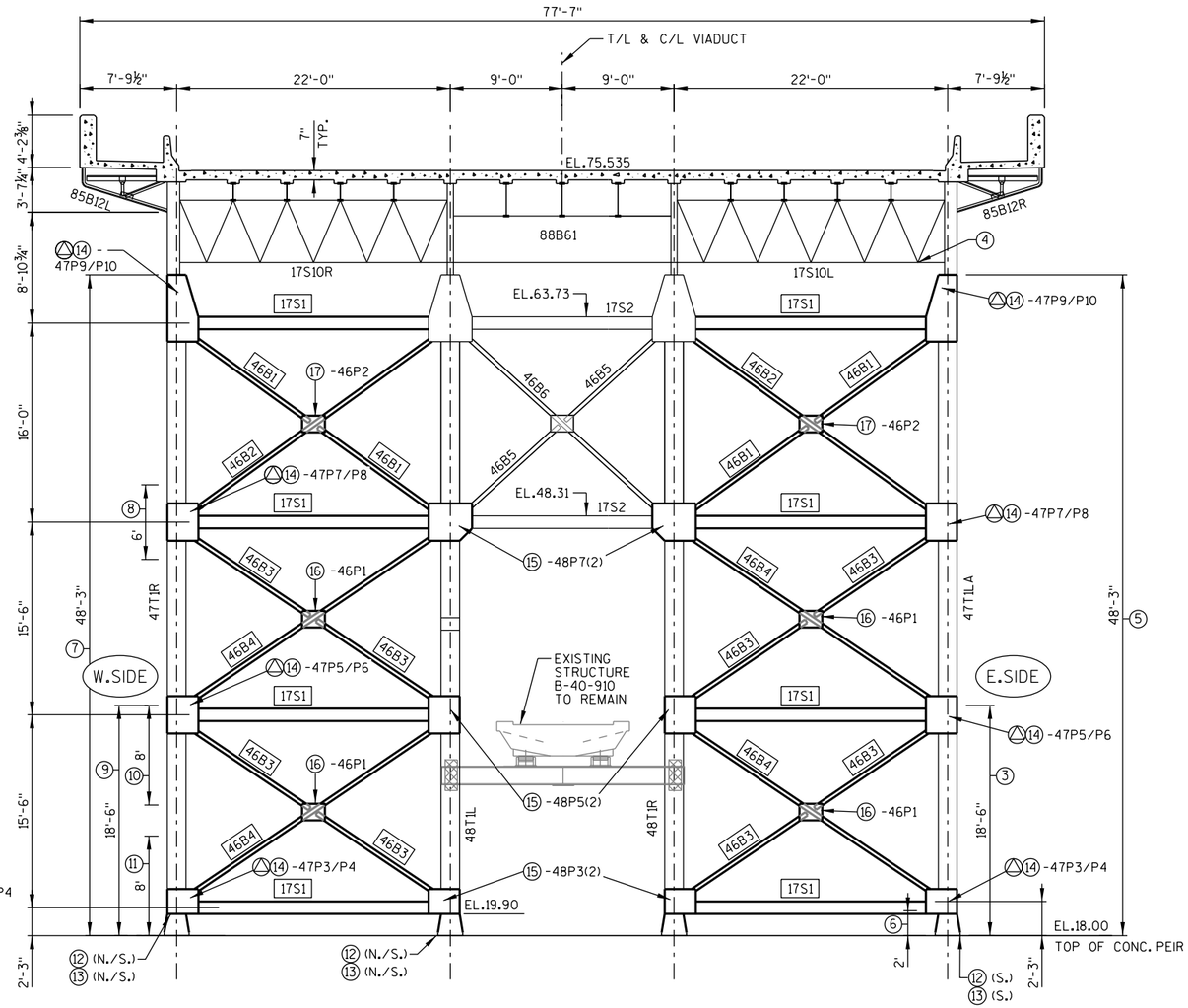
STATE PROJECT NUMBER

2984-12-74



BENT 11 - NORTH ELEVATION (F.S.)

(LOOKING SOUTH)



BENT 11 - SOUTH ELEVATION (N.S.)

(LOOKING NORTH)

KEY:

XXXX 1926 SHOP DRAWING PART NUMBER - REMOVE AND REPLACE PART

XXXX 1926 SHOP DRAWING PART NUMBER

(1) ADD FLANGE PLATE (INNER) TO S.W. FLANGE TO 47T1R/LA
1-5"X½"X3'-0" (47T1LA) 1-5"X½"X4'-0" (47T1R).
SEE SHTS. 40 AND 63.

(2) REPLACE 10 TOTAL LACING BARS TO MEMBERS 17S1 F.S. AT 2 LOCATIONS. SEE SHT. 38.

(3) ADD WEB PLATE (OUTER) TO MEMBER 47T1LA
(1) 5"X½"X18'-6". SEE SHTS. 40 AND 64.

(4) REPLACE GUSSET PLATE (LOWER END) (17P1) TO MEMBER 17S10L.
SEE SHT. 38.

(5) ADD FLANGE PLATES (INNER & OUTER) FULL HEIGHT TO S.W. AND N.W. AT MEMBER 47T1LA.
(4) 5"X½"X48'-3" (OVERALL LENGTH EACH LOCATION).
SEE SHTS. 40 AND 64.

(6) ADD FLANGE PLATE (INNER) TO N.E. AT MEMBER 47T1LA
(1) 5"X½"X2'-0". SEE SHTS. 40 AND 64.

(7) ADD FLANGE PLATES (INNER & OUTER) TO S.E. AT MEMBER 47T1R (2) 5"X½"X48'-3" (OVERALL LENGTH EACH LOCATION).
SEE SHTS. 40 AND 65.

(8) ADD FLANGE PLATE (INNER) TO S.W. AND N.E. AT MEMBER 47T1R
(1) 5"X½"X6'-0". SEE SHTS. 40 AND 65.

(9) ADD FLANGE PLATES (INNER) TO S.W. AND N.E. AT MEMBER 47T1R
(2) 5"X½"X18'-6". SEE SHTS. 40 AND 65.

(10) ADD FLANGE PLATE (OUTER) TO SOUTH FACE AT MEMBER 47T1R
(1) 5"X½"X8'-0". SEE SHTS. 40 AND 65.

(11) ADD FLANGE PLATE (INNER) TO N.W. TO MEMBER 47T1R
(1) 5"X½"X8'-0". SEE SHTS. 40 AND 65.

(12) ADD N./S. SIDE BASE PLATE (47P1, 48P1). SEE SHTS. 40 AND 41.

(13) REPLACE ANCHOR NUTS 1½" AT AB4, AB4A, (N.S. NUT LOCATIONS)
SEE SHTS. 40 AND 41.

(14) -XX REPLACE GUSSET PLATES (47P3, 47P4, 47P5, 47P6, 47P7, 47P8, 47P9, 47P10) (INNER AND OUTER) TO MEMBERS 47T1R/LA AND 17/46 MEMBERS (N.S./F.S.) SEE SHT. 40.

(15) -XX REPLACE GUSSET PLATES (48P3, 48P5, 48P7) (INNER AND OUTER) TO MEMBERS 48T1R/L AND 17/46 MEMBERS (N.S./F.S.).
SEE SHT. 41.

(16) -XX REPLACE GUSSET PLATES (46P1) (INNER AND OUTER) TO MEMBERS 46B3 AND 46B4. SEE SHT. 49.

(17) -XX REPLACE GUSSET PLATES (46P2) (INNER AND OUTER) TO MEMBERS 46B1 AND 46B2. SEE SHT. 49.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

ALL PLATES ½" THICK (EXCEPT AS NOTED).

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

△: ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

NORTH AND SOUTH ELEVATIONS BENT 11

SHEET 31 OF 72
58

REVISED DATE: 12-04-2023 BY GJR

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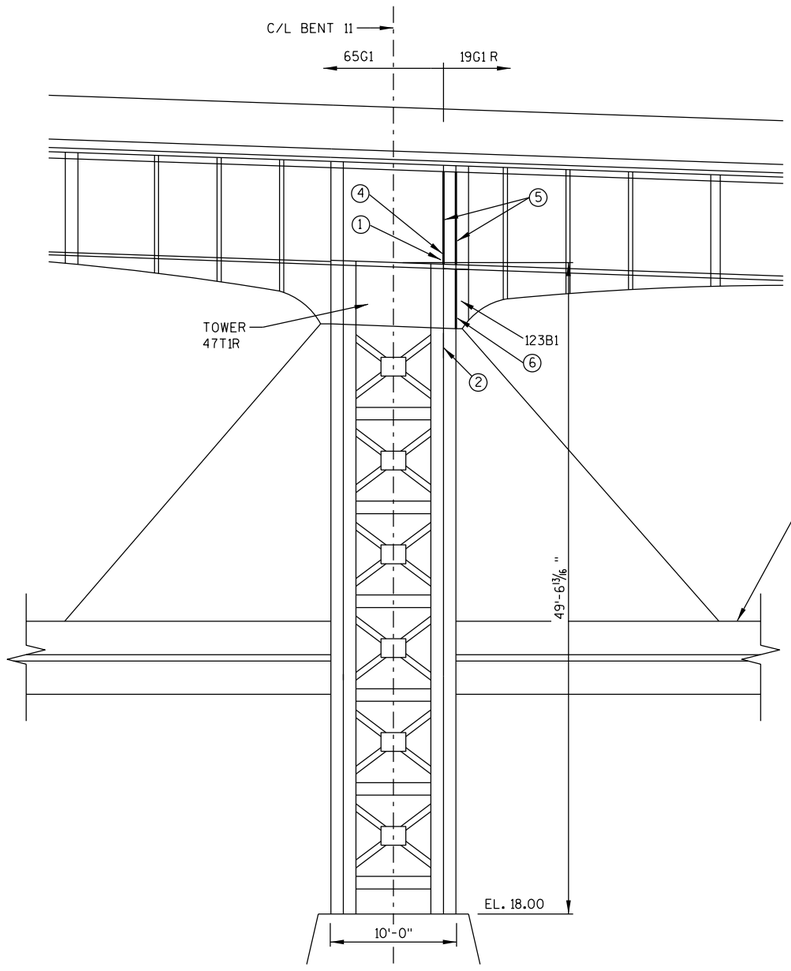
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_31_NORTH AND SOUTH ELEVATIONS BENT 11.dgn PLOT DATE : 12/12/2023 10:31:47 AM PLOT BY : grogal PLOT NAME : B0113_2024_31_NORTH AND SOUTH ELEVATIONS BENT 11.dgn

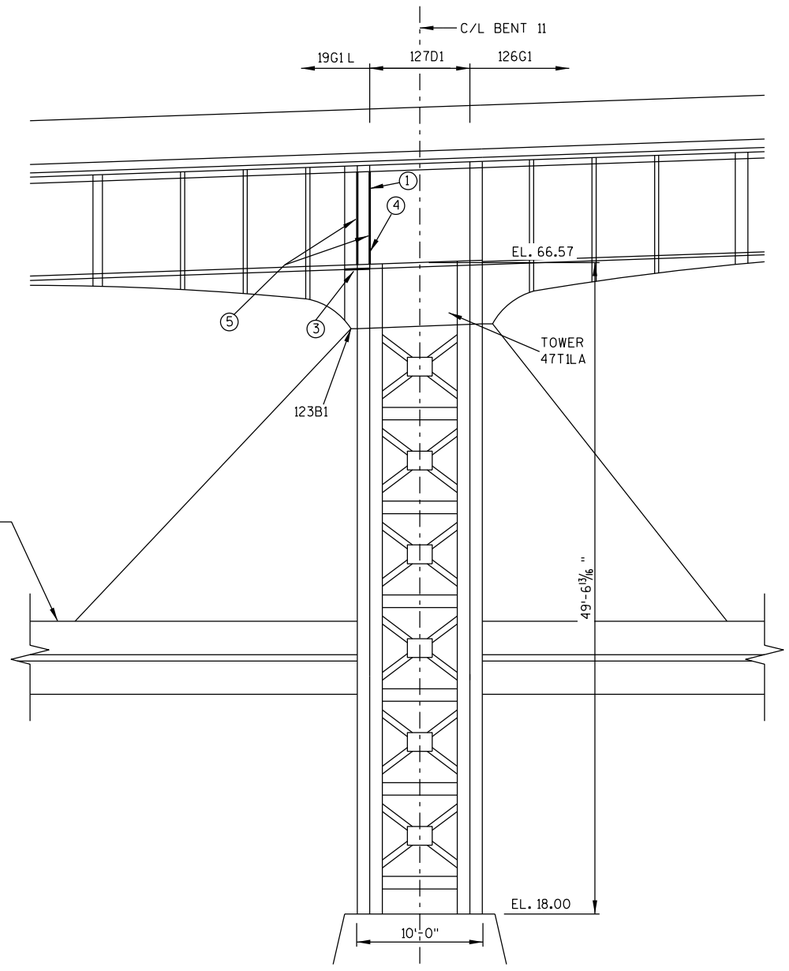
STATE PROJECT NUMBER

2984-12-74



BENT 11 - WEST ELEVATION

(LOOKING EAST)



BENT 11 - EAST ELEVATION

(LOOKING WEST)

EXISTING STRUCTURE B-40-910 TO REMAIN

KEY:

① REPLACE (OUTER) W./E. SIDE STIFFENERS (65S1, FULL HEIGHT), (127D1, LOWER 1'-2½") TO MEMBERS 65G1 AND 127D1. SEE SHTS. 55 AND 56.

② ADD FLANGE PLATE TO MEMBER 47T1R (47P12), N.W. FLANGE, 1-6"X½"X2'-0". SEE SHT. 40.

③ REPLACE INNER (2) AND OUTER (2) EXPANSION JOINT BOLTS (94E4). BOLTS MOUNT TO MEMBERS 47T1LA, 123B-1, AND 19G1L. SEE SHT. 54.

④ REPLACE LOWER 1'-2½" OF STIFFENERS TO MEMBERS 19G1R/L (OUTER) (19S1), SEE SHT. 54.

⑤ REPLACE INNER STIFFENERS TO MEMBERS 19G1R/L (19S2). SEE SHT. 54.

⑥ REPLACE LOWER STIFFENERS (OUTER) AT MEMBER 123B1 ATTACHED TO MEMBER 47T1R (WEST SIDE).
(1) L3½"X6"X3'-4¾"X⅜"
(1) L3½"X6"X2'-4"X⅜"
SEE DETAIL SHT. 54.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

ALL PLATES ½" THICK (EXCEPT AS NOTED).

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

REVISED DATE: 12-04-2023 BY GJR

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

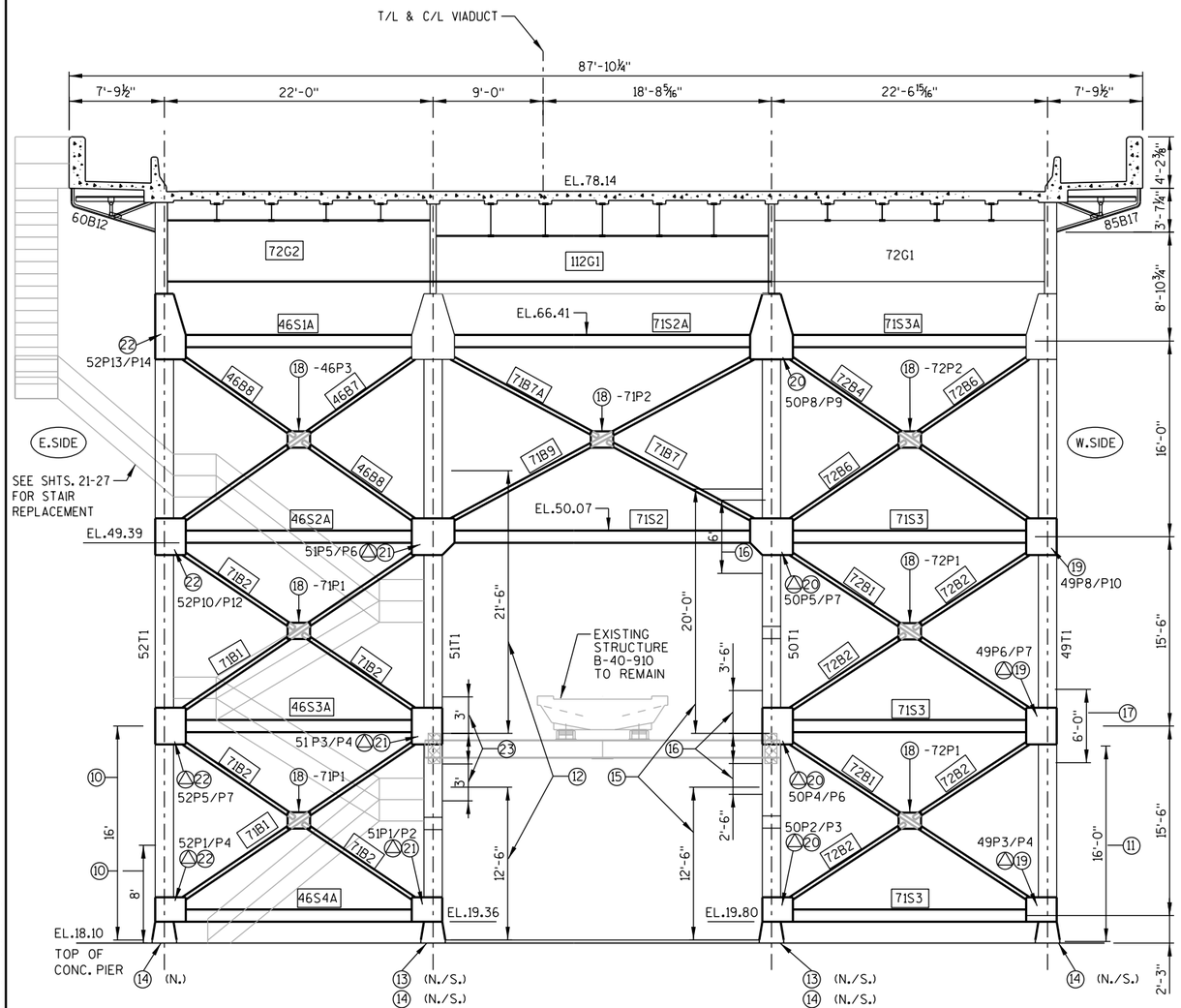
WEST AND EAST ELEVATIONS BENT 11

SHEET 32 OF 72

59

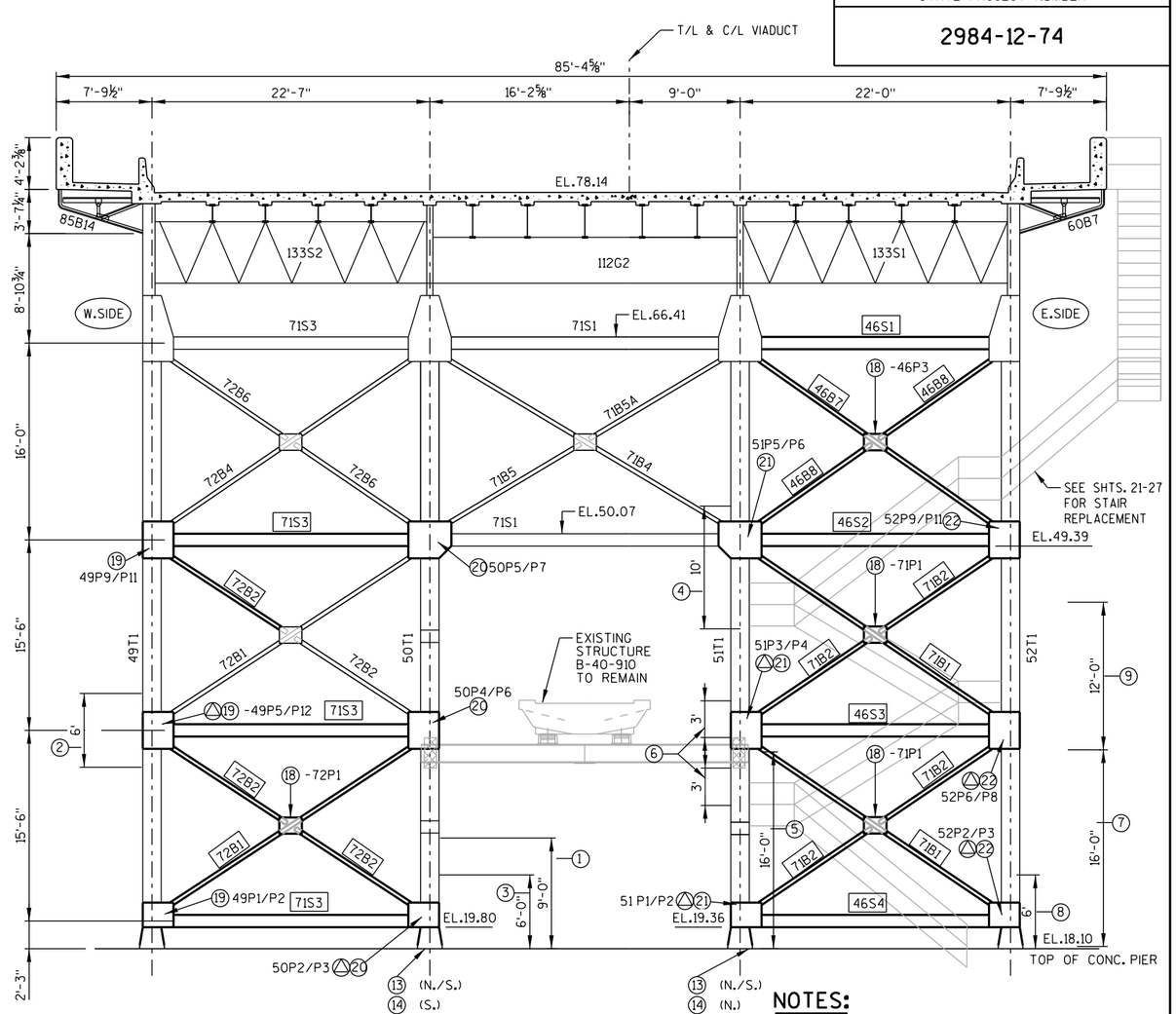
STATE PROJECT NUMBER

2984-12-74



BENT 12 - NORTH ELEVATION (F.S.)

(LOOKING SOUTH)



BENT 12 - SOUTH ELEVATION (N.S.)

(LOOKING NORTH)

KEY:

XXXX 1926 SHOP DRAWING PART NUMBER
REMOVE AND REPLACE PART

XXXX 1926 SHOP DRAWING PART NUMBER

① ADD FLANGE PLATE TO MEMBER 50T1
1-(INNER) 5"X½"X9'-0" AT S.W. SEE SHTS 43 AND 68.

② ADD FLANGE PLATE TO MEMBER 49T1
1-(OUTER) 1'-0½"X½"X6'-0" AT S. SEE SHTS 42 AND 66.

③ ADD FLANGE PLATES TO MEMBER 50T1
2-(OUTER) 1'-0½"X½"X6'-0" AT S./N. SEE SHTS 43 AND 68.

④ ADD FLANGE PLATES TO MEMBER 51T1
2-(INNER) 5"X½"X10'-0" AT N.E/S.E. SEE SHTS 44 AND 70.

⑤ ADD FLANGE PLATES TO MEMBER 51T1
1-(INNER) 5"X½"X16'-0" AT N.E.
1-(OUTER) 5"X½"X16'-0" AT N.E.
SEE SHTS 44 AND 70.

⑥ ADD FLANGE PLATES TO MEMBER 51T1
2-(INNER) 5"X½"X3'-0" AT S.E.
SEE SHTS 44 AND 70.

⑦ ADD FLANGE PLATES TO MEMBER 52T1
2-(INNER) 5"X½"X16'-0" AT S.E, S.W.
1-(OUTER) 1'-0½"X½"X16'-0" AT SOUTH FACE.
SEE SHTS 45 AND 72.

⑧ ADD FLANGE PLATES TO MEMBER 52T1
2-(INNER) 5"X½"X6'-0" AT N.E, N.W.
1-(OUTER) 1'-0½"X½"X6'-0" AT N. SEE SHTS 45 AND 72.

⑨ ADD FLANGE PLATES TO MEMBER 52T1
2-(INNER) 5"X½"X12'-0" AT N.W., S.W.
2-(OUTER) 5"X½"X12'-0" AT N.W., S.W. SEE SHTS 45 AND 72.

⑩ ADD FLANGE PLATES TO MEMBER 52T1
1-(INNER) 5"X½"X16'-0" (S.W.),
1-(OUTER) 5"X½"X16'-0" (S.W.),
2-(INNER) 5"X½"X8'-0" (N.W. & N.E.). SEE SHTS 45 AND 71.

⑪ ADD FLANGE PLATE TO MEMBER 49T1
1-(INNER) 5"X½"X16'-0" AT N.E.
1-(OUTER) 1'-0½"X½"X16'-0" AT N. FACE, SEE SHTS 42 AND 66.

⑫ ADD FLANGE PLATES TO MEMBER 51T1
1-(INNER) 5"X½"X12'-6" (S.W.)
1-(OUTER) 5"X½"X12'-6" (S.W.)
1-(INNER) 5"X½"X21'-6" (S.W.)
1-(OUTER) 5"X½"X21'-6" (S.W.). SEE SHTS 44 AND 69.

⑬ ADD N./S. BASE SIDE PLATES (50P10, 51P7)
SEE SHTS 43 AND 44.

⑭ REPLACE ANCHOR NUTS 1½" AT AB4, AB4A,
(N/S NUT LOCATION) SEE SHTS 42-45.

⑮ ADD FLANGE PLATES TO MEMBER 50T1
2-(OUTER) 1'-0½"X½"X12'-6" AT S./N.
4-(INNER) 5"X½"X12'-6" AT N.E., N.W., S.E. & S..W
2-(OUTER) 1'-0½"X½"X20'-0" AT S./N.
4-(INNER) 5"X½"X20'-0" AT N.E., N.W., S.E. & S.W.
SEE SHTS 43 AND 67.

⑯ ADD WEB PLATES TO MEMBER 50T1
1-5"X½"X2'-6" AT WEST (INSIDE FACE)
1-5"X½"X3'-6" AT WEST (INSIDE FACE)
1-5"X½"X6'-0" AT WEST (INSIDE FACE)
3 LOCATIONS. SEE SHTS 43 AND 67.

⑰ ADD FLANGE PLATE TO MEMBER 49T1
1-(INNER) 5"X½"X6'-0" AT (NW) SEE SHTS 42 AND 66.

⑱ -XX REPLACE GUSSET PLATES (46P3, 71P1, 71P2, 72P1, 72P2),
(INNER AND/OR OUTER) TO MEMBERS 46B7/B8, 71B1/B2/B7/
B7A/B9 AND 72B4/B6. SEE SHTS 49-51.

⑲ -XX REPLACE AND/OR REINSTALL EXISTING GUSSET PLATES
(49P1, 49P2, 49P3, 49P4, 49P5, 49P6, 49P7, 49P8, 49P9, 49P10, 49P11, 49P12),
(INNER AND/OR OUTER) TO MEMBERS 49T1 (N.S./F.S.).
SEE SHT 42.

⑳ -XX REPLACE AND/OR REINSTALL EXISTING GUSSET PLATES
(50P2-P9), (INNER AND/OR OUTER) TO MEMBERS 50T1 (N.S/F.S).
SEE SHT 43.

㉑ -XX REPLACE AND/OR REINSTALL EXISTING GUSSET PLATES
(51P1-P6) (INNER AND/OR OUTER) TO MEMBERS 51T1 (N.S/F.S).
SEE SHT 44.

㉒ -XX REPLACE AND/OR REINSTALL EXISTING GUSSET PLATES
(52P1-14) (INNER AND/OR OUTER) TO MEMBERS 52T1 (N.S./F.S.).
SEE SHT 45.

㉓ ADD FLANGE PLATES TO MEMBER 51T1
6-(INNER) 5"X½"X3'-0" (N.E., N.W. & S.E.)
SEE SHTS 44 AND 69.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

REMOVE AND REINSTALL GUSSET PLATES AT NOTES 20-24 LOCATIONS.

ALL GUSSET PLATES TO BE REINSTALLED ARE PAINTED WITH GREY PRIMER AND USE NEW A325 BOLTS.

△: ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

UTILITIES NOT SHOWN FOR CLARITY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

NORTH AND SOUTH ELEVATIONS BENT 12

SHEET 33 OF 72
60

REVISED DATE: 12-04-2023 BY GJR

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STATE PROJECT NUMBER
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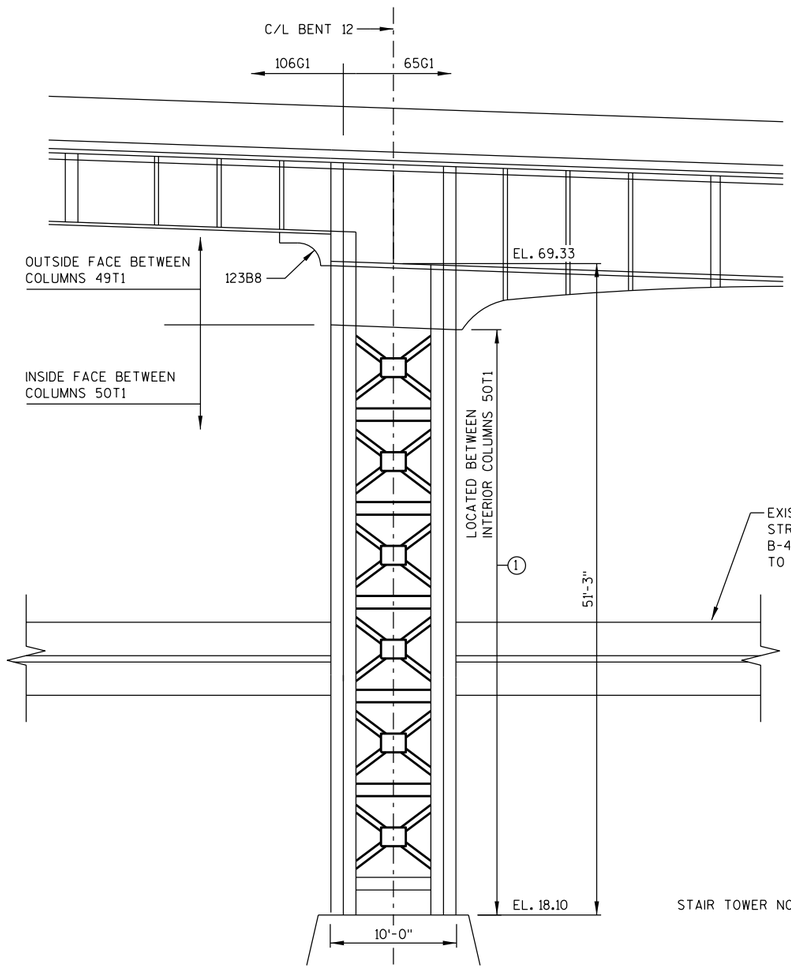
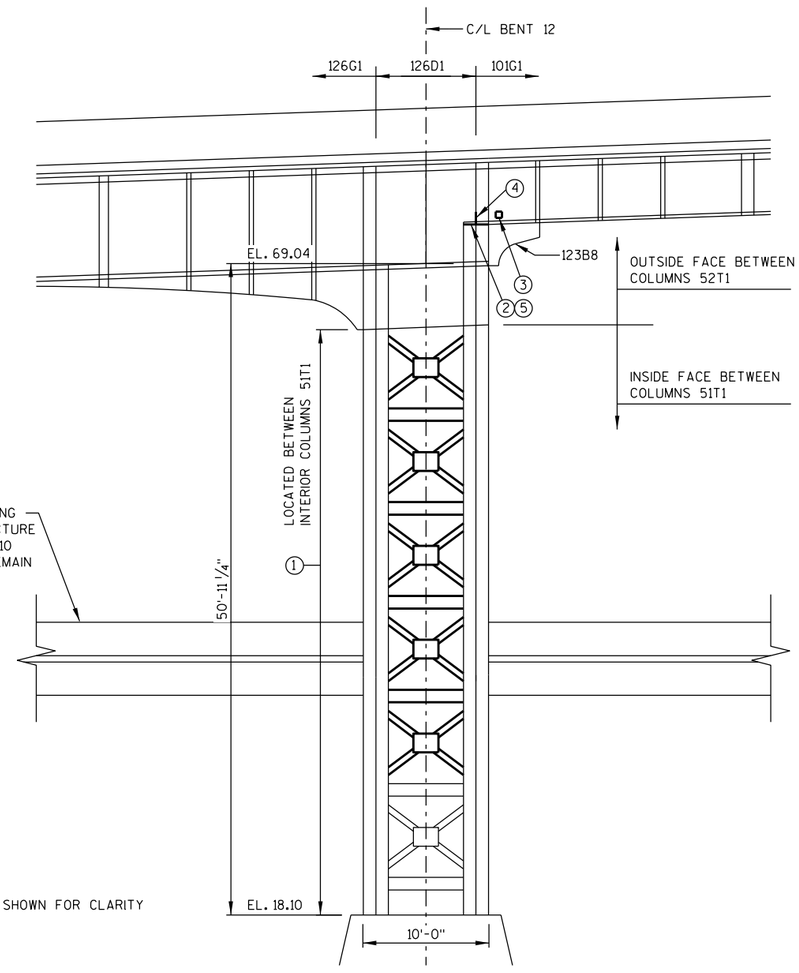


BENT 12 - WEST ELEVATION

(LOOKING EAST)

EXISTING STRUCTURE B-40-10 TO REMAIN

STAIR TOWER NOT SHOWN FOR CLARITY



BENT 12 - EAST ELEVATION

(LOOKING WEST)

KEY:

1. REPLACE AND/OR REINSTALL LONGITUDINAL CROSS BRACING (DIAGONALS, GUSSET PLATES AND HORIZONTALS) BETWEEN COLUMNS OF TOWERS 51T1 AND 50T1. REINSTALLED STEEL IS PAINTED WITH GREY PRIMER AND USE A325 BOLTS. SEE SHT. 43 AND 44. STEEL TO BE REPLACED IS SHOWN IN BOLD ABOVE.
2. REPLACE INNER AND OUTER BRG. SEAT AT MEMBER 126D1
   (2) L 3 1/2"X5"X 1/2"X1'-10 3/8". SEE SHT. 58.
3. ADD PLATE TO WEB TO MEMBER 101G1 6"X6"X 1/2".
   SEE DETAILS SHT. 57.
4. REPLACE 1'-2 1/2" OF VERTICAL STIFFENER AND Z BAR (OUTER)
   (1) L 3 1/2"X5 1/2"X1'-2 1/2"X 3/8" STIFFENER TO MEMBER 101G1. SEE SHT. 57.
   (1) Z BAR 3 5/16"X5 5/16"X1'-2 1/2"X 3/8" TO MEMBER 126D1. SEE SHT. 58.
5. REPLACE 3 OUTER EXPANSION BOLT ASSEMBLES, 3-94E12 CONNECTING MEMBERS 101G1, 126D1 AND 123B8. SEE SHT. 57.

NOTES:

SEE STRUCTURE B-40-910 PLANS FOR MODIFICATIONS TO ORIGINAL MEMBERS AND CONNECTIONS.

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

ALL PLATES 1/2" THICK (EXCEPT AS NOTED).

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

ADDITIONAL FILL PLATES REQUIRED AT FLANGE/WEB ADD-ON PLATE LOCATIONS AND CONNECTIONS.

UTILITIES AT BENT 12 ARE NOT SHOWN FOR CLARITY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

WEST AND EAST ELEVATIONS BENT 12

SHEET 34 OF 72

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REVISED DATE: 12-04-2023 BY GJR

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STATE PROJECT NUMBER

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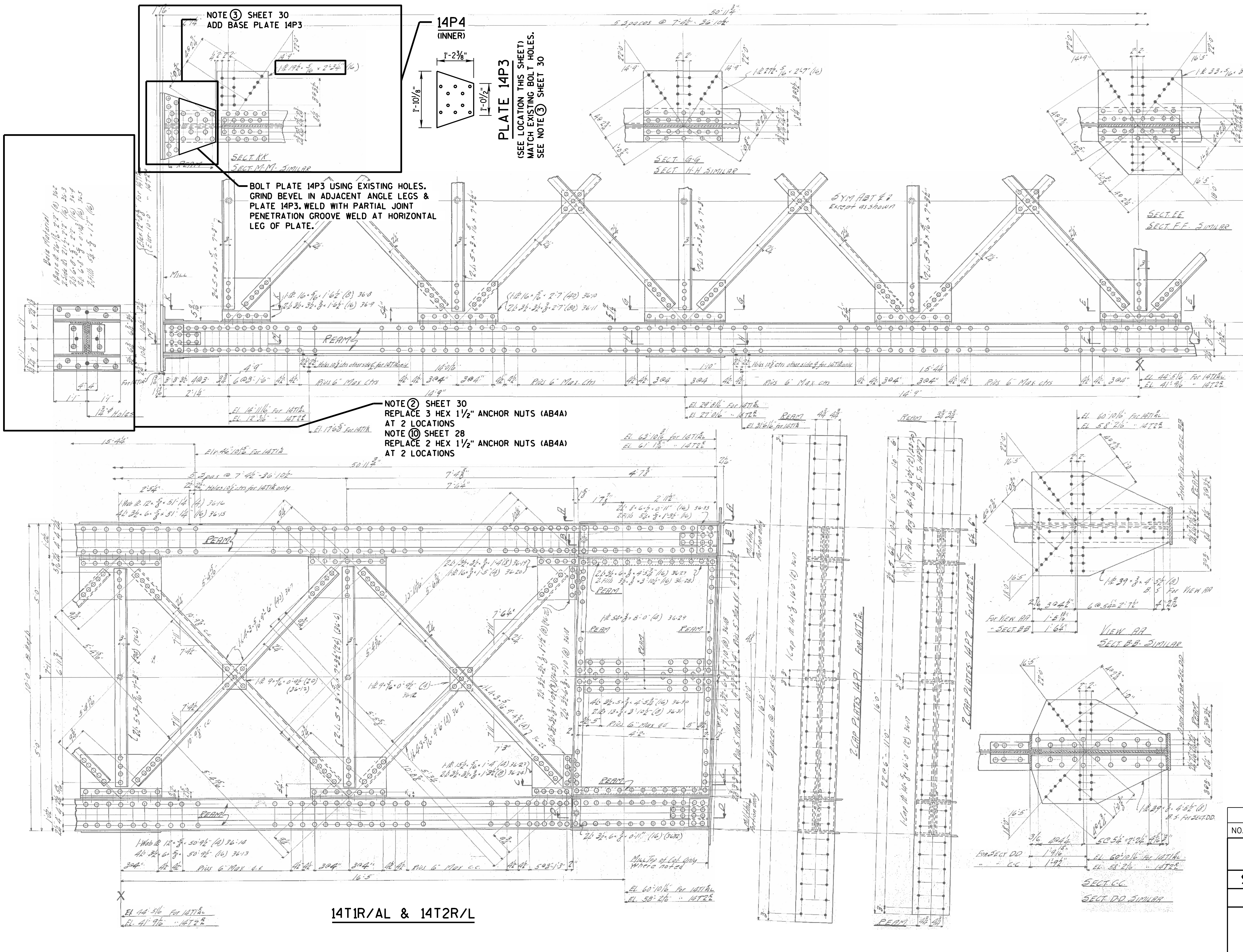
NOTE (3) SHEET 30
ADD BASE PLATE 14P3
14P4
(INNER)
1'-2⅜"
1'-10⅛"
1'-0½"
PLATE 14P3
(SEE LOCATION THIS SHEET)
MATCH EXISTING BOLT HOLES.
SEE NOTE (3) SHEET 30
BOLT PLATE 14P3 USING EXISTING HOLES.
GRIND BEVEL IN ADJACENT ANGLE LEGS &
PLATE 14P3. WELD WITH PARTIAL JOINT
PENETRATION GROOVE WELD AT HORIZONTAL
LEG OF PLATE.
NOTE (2) SHEET 30
REPLACE 3 HEX 1½" ANCHOR NUTS (AB4A)
AT 2 LOCATIONS
NOTE (10) SHEET 28
REPLACE 2 HEX 1½" ANCHOR NUTS (AB4A)
AT 2 LOCATIONS
SECT. G-G
SECT. H-H SIMILAR
SECT. E-E
SECT. F-F SIMILAR
MARK SOUTH FACE
VIEW AA
SECT. BB SIMILAR
SECT. CC
SECT. DD SIMILAR
14T1R/AL & 14T2R/L

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REVISED: 12-08-2023 BY GJR

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY JC | PLANS CK'D. JPH

14 MEMBER DETAILS

SHEET 35 OF 72

STATE PROJECT NUMBER

2984-12-74

15P3 (OUTER)

15P4 (INNER)

15P5 (OUTER)

15P7 (OUTER)

15P6 (INNER)

15P8 (INNER)

15P9 (OUTER)

NOTE ② SHEET 28
(2)-INNER & OUTER FLANGE PLATES TO 15T2L 5"X½"X33'-0", OVERALL LENGTH, EACH LOCATION SEE SHT. 61 DETAIL 2

NOTE ③ SHEET 28
1-WEB PLATE TO 15T2L (INSIDE)
5¼"X½"X6'-0"
1-INNER FLANGE PLATE TO N.W. FLG.
5"X½"X6'-0"
SEE SHT. 61 DETAILS 3-5

NOTE ③ SHEET 28
1-WEB PLATE TO 15T2L
5¼"X½"X6'-0"- SEE SHT. 61 DETAILS 4 & 5
1-INNER FLANGE PLATE TO N.W. FLG. OF 15T2L
5"X½"X6'-0"- SEE SHT. 61 DETAILS 1, 4, 5
NOTE ⑥ SHEET 28
1-WEB PLATE TO 15T2R
5¼"X½"X6'-0"- SEE SHT. 62 DETAILS 4 & 5
2-INNER FLANGE PLATES TO 15T2R
5"X½"X6'-0"- SEE SHT. 62 DETAILS 3-5

NOTE ⑧ SHEET 28.
(2)-INNER & OUTER FLANGE PLATES TO S.E. FLANGE OF 15T2R (5"X½"X50'-10" TOTAL LENGTH), EACH LOCATION (SEE SHEET 62; DETAILS 4,5)

NOTE ⑦ SHEET 28
1-OUTER FLANGE PLATE TO NORTH FLANGE OF 15T2R
1'-0"X½"X6'-0"
(SEE SHEET 62; DETAIL 2)

NOTE ⑥ SHEET 28
1-WEB PLATE TO 15T2R
5¼"X½"X6'-0" - SEE SHEET 62; DETAILS 4, 5
NOTE ⑥ SHEET 28
2-INNER FLANGE PLATES TO 15T2R
5"X½"X6'-0" - SEE SHEET 62; DETAILS 1, 4, 5

NOTE ⑨ SHEET 28
1-INNER FLANGE PLATE TO S.W. FLG. OF 15T2R
5"X½"X15'-0"
SEE SHEET 62; DETAILS 4, 5

NOTE ⑩ SHEET 28; REPLACE 3 HEX 1½" ANCHOR NUTS (AB4) AT 3 LOCATIONS

NOTE ⑩ SHEET 29
NEW FLANGE PLATES 15P13
2¼"X½"X1'-6"
(SEE SHEET 59; DETAIL 4)

NOTE ③ SHEET 29
(2) NEW OUTER BOTTOM FLANGE PLATES 15P10 TO 15T2R & 15T2L
1'-0½"X½"X6'-0" (SEE SHEET 59; DETAIL 1)

NOTE ⑥ SHEET 29
(2) NEW WEB PLATES 15P11 TO 15T2L 8½"X½"X2'-0"
(SEE SHEET 59; DETAILS 7 & 8)

NOTE ⑨ SHEET 29
(2) NEW FLANGE PLATES 15P14 EAST & WEST TO MEMBERS 15T2R/L
6"X½"X3'-0"
(SEE SHEET 59; DETAIL 3)

NOTE ⑧ SHEET 29
NEW PLATE 15P12 TO STIFFENER 15T2L
5"X½"X4'-5¾"
(SEE SHEET 59; DETAIL 2)

SEE NOTE ⑧ SHEET 28.
(2)-INNER & OUTER FLANGE PLATES TO S.E. FLANGE OF 15T2R (5"X½"X50'-10" TOTAL LENGTH), EACH LOCATION (SEE SHEET 62; DETAILS 4,5)

REPLACE CHANNEL 1-C6"@10.5"X4'-6½" TO TOWER 15T2L. SEE SHT 29 NOTE ⑦

REPLACE L3½"X3½"X⅞"X'Y5-10½" AND C8"@13¾"X 7'-10" SEE NOTE ⑪ SHEET 29

SEE NOTE ⑪ SHEET 29.

SYM. ABT ℄ EXCEPT AS SHOWN

15T2R/L

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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15T2R/L MEMBER DETAILS

SHEET 36 OF 72
63

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15P5
(OUTER)

NOTE (1) SHEET 30.
(2) INNER & OUTER FLANGE PLATES
TO S.E. FLANGES OF 15T1R 5"X1/2"X1'-8"
(SEE SHEET 60; DETAILS 1-4)

-NOTE (2) SHEET 30; REPLACE 2 HEX 1 1/2" ANCHOR NUTS (4B4) AT 2 LOCATIONS

15T1 R/L

REVISED: 12-08-2023 BY GJR

NOTES:

USE EXISTING BOLT SPACING
AT ALL GUSSET PLATE
REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES
WHERE APPLICABLE.

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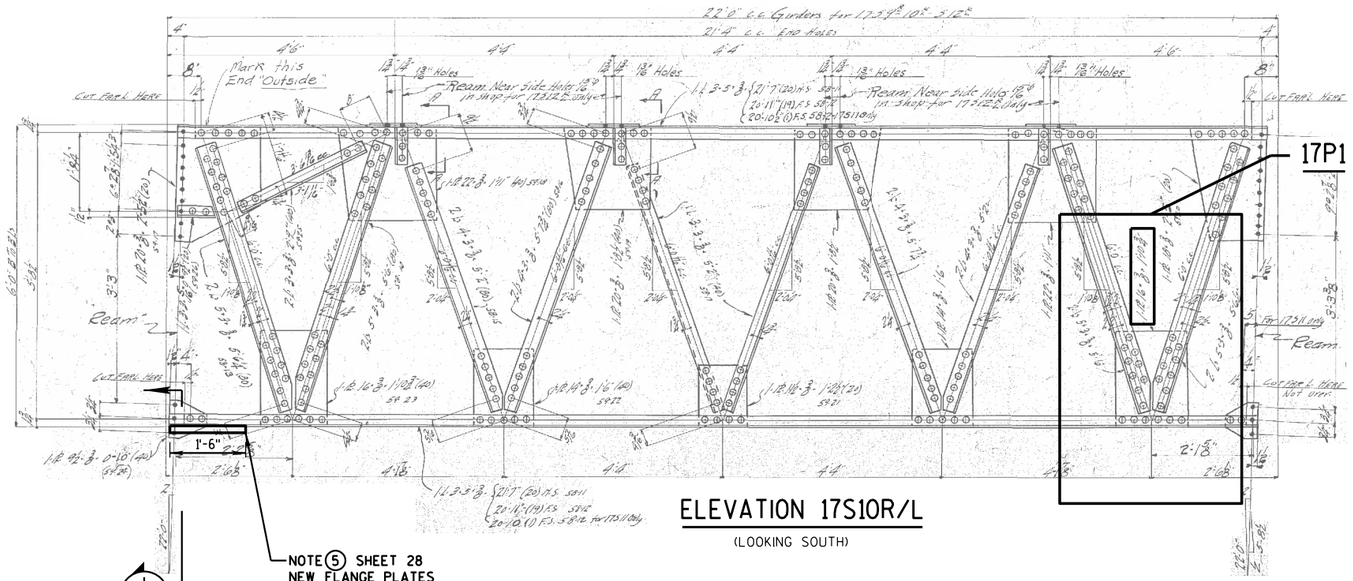
15T1 R/L MEMBER DETAILS

SHEET 37 OF 72
64

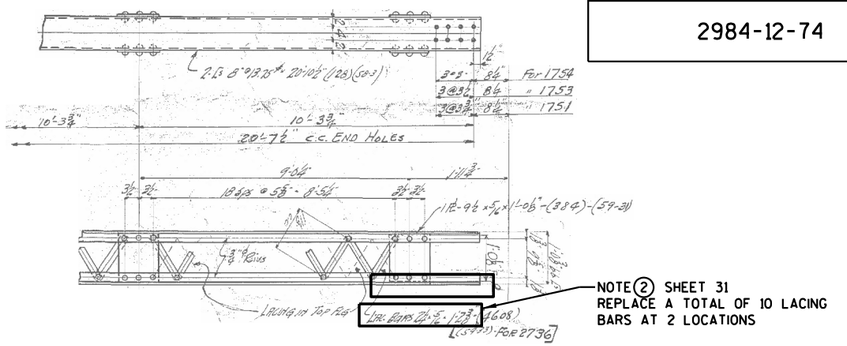
STATE PROJECT NUMBER

2984-12-74

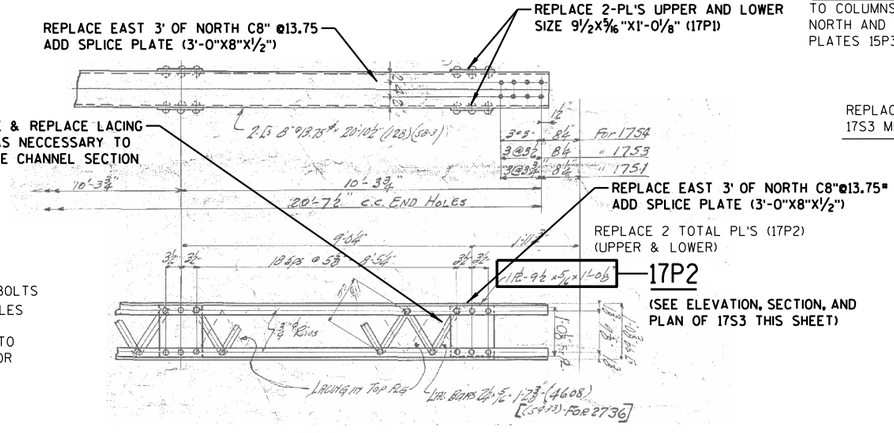


ELEVATION 17S10R/L

(LOOKING SOUTH)

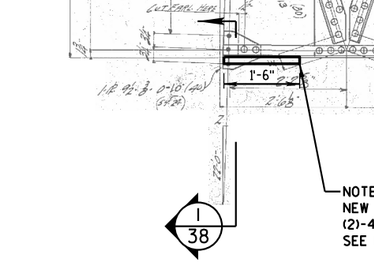


17S1 &17S3



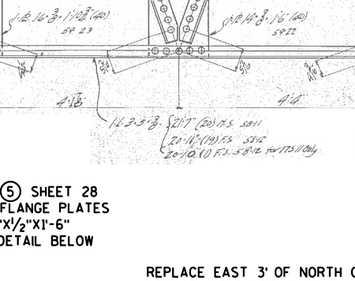
17S3

SECTION 1/38



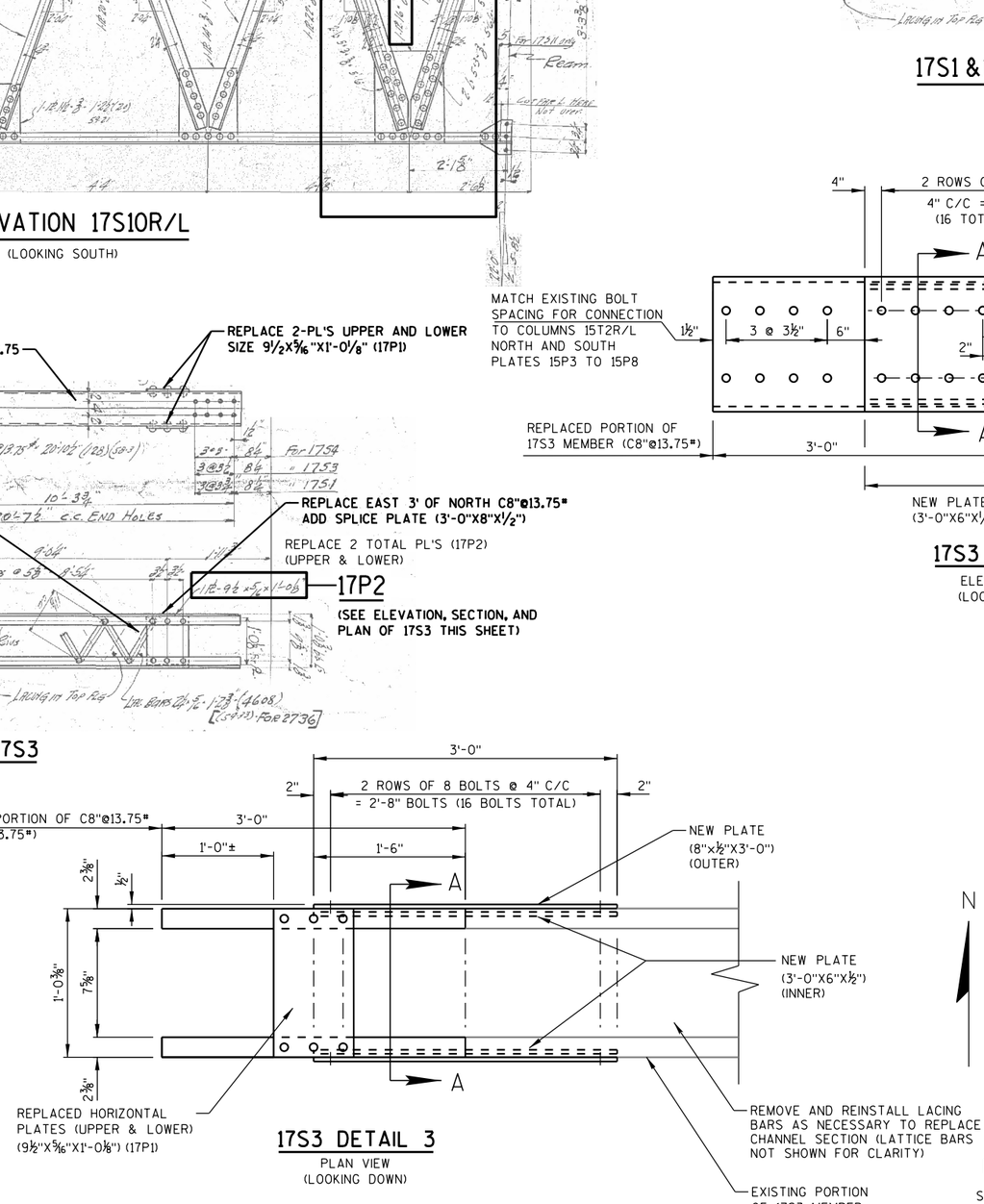
FLANGE PLATE DETAIL 1

NORTH ELEVATION OF NEW FLANGE PLATE
(LOOKING SOUTH)



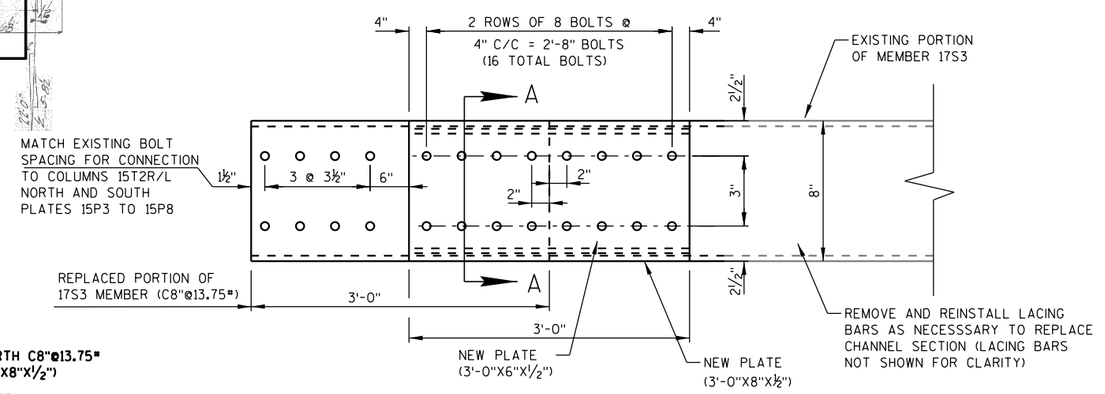
FLANGE PLATE DETAIL 2

BOTTOM VIEW OF NEW FLANGE PLATE
(LOOKING UP)



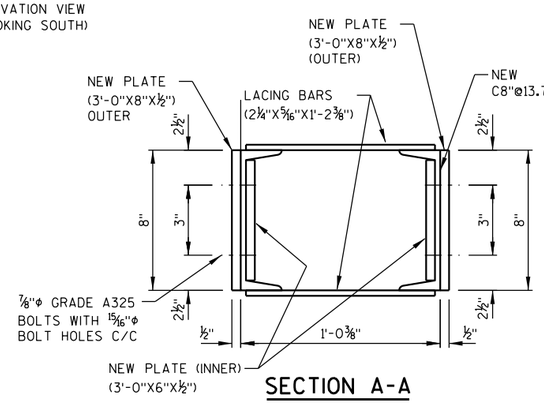
17S3 DETAIL 3

PLAN VIEW
(LOOKING DOWN)



17S3 DETAIL 3

ELEVATION VIEW
(LOOKING SOUTH)



SECTION A-A

N

NOTE:

SEE NOTE (1) SHEET 28
FOR LOCATION OF DETAILS.

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17 MEMBER DETAILS

SHEET 38 OF 72
65

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FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_38_17 MEMBER DETAILS.dgn PLOT DATE : 12/12/2023 10:32:02 AM PLOT BY : grogal PLOT NAME : B0113_2024_38_17 MEMBER DETAILS.dgn

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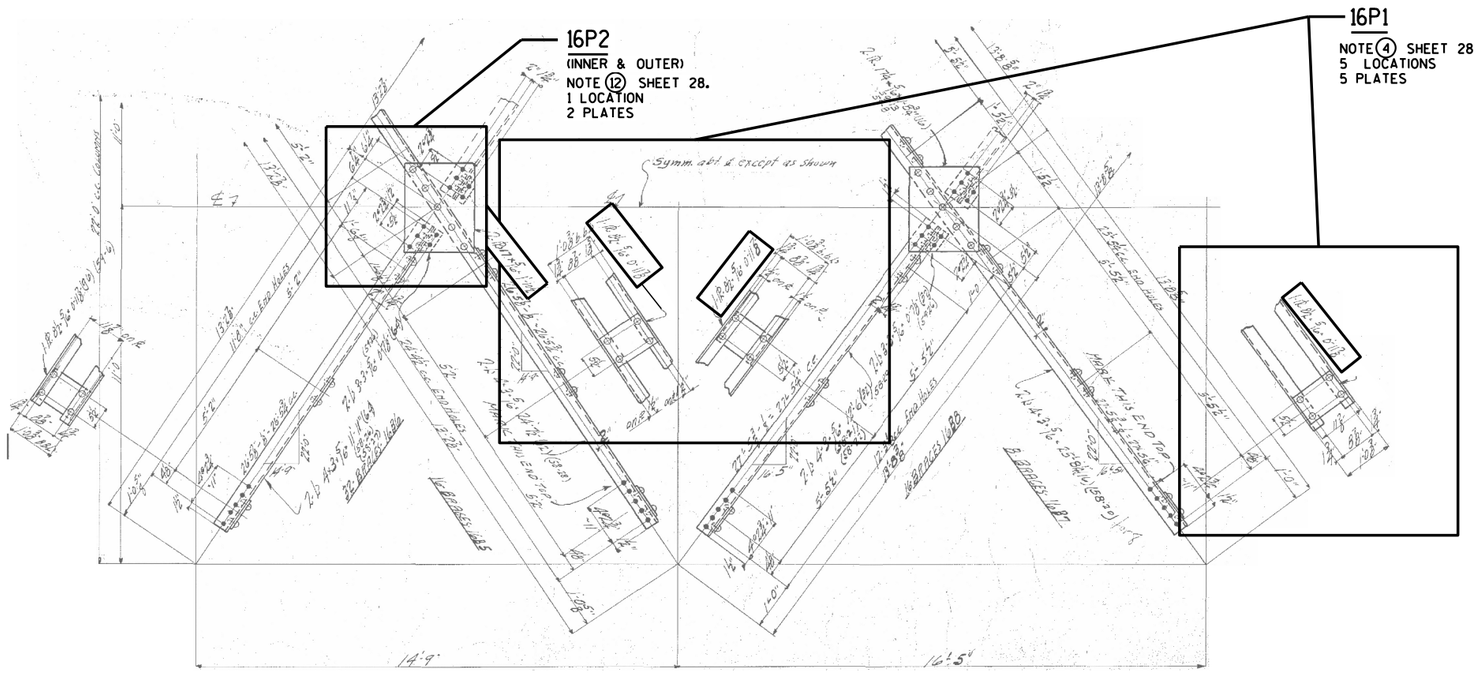

16B5&16B6

16B7&16B8

REVISED: 12-08-2023 BY GJR

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NO.	DATE	REVISION	BY

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16 MEMBER DETAILS

SHEET 39 OF 72
66

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NOTE (12) SHEET 31
ADD BASE PLATE 47P1
2 LOCATIONS

47P3
(OUTER)

47P4
(INNER)

PLATE 47P1
(SEE LOCATION THIS SHEET)
MATCH EXISTING BOLT HOLES.
SEE NOTE (12) SHEET 31

47P5
(OUTER)

47P7
(OUTER)

47P6
(INNER)

47P8
(INNER)

BOLT PLATE 47P1 USING EXISTING HOLES.
GRIND BEVEL IN ADJACENT ANGLE LEGS &
PLATE 47P1. WELD WITH PARTIAL JOINT
PENETRATION GROOVE WELD AT HORIZONTAL
LEG OF PLATE.

NOTE (11) SHEET 31
NEW INNER FLANGE PLATE
5"X1/2"X8'-0" TO 47T1R
(SEE SHEET 65; DETAIL 1, 2, 7

NOTE (7) SHEET 31
(2) NEW INNER & OUTER FLANGE
PLATES 5"X1/2"X48'-3" (OVERALL LENGTH
EACH LOCATION) TO 47T1R
(SEE SHEET 65; DETAILS 1-3)

NOTE (8) SHEET 31
NEW INNER FLANGE PLATES
AT SW AND NE
5"X1/2"X6'-0" TO 47T1R
(SEE SHEET 65; DETAIL 1 & 4)

PLATES CONT. TO HIGHER
ELEVATION; SEE DRAWING BELOW
NOTES (5) & (7); SHEET 31

MARK SOUTH FACE

NOTE (1) SHEET 31
NEW INNER FLANGE PLATE
5"X1/2"X4'-0" TO 47T1R
(SEE SHEET 63; DETAILS 3 & 4)

NOTE (1) SHEET 31
NEW INNER FLANGE PLATE
5"X1/2"X3'-0" TO 47T1LA
(SEE SHEET 63; DETAILS 1 & 2)

NOTE (6) SHEET 31
NEW INNER FLANGE PLATE
5"X1/2"X2'-0" TO 47T1LA
(SEE SHEET 64; DETAILS 2 & 3)

NOTE (13) SHEET 31;
REPLACE 3 HEX 1 1/2"
ANCHOR NUTS (AB4) AT
3 LOCATIONS

NOTE (3) SHEET 31
NEW WEB PLATE 5"X1/2"X18'-6"
TO WEST FACE OF 47T1LA
(SEE SHEET 64; DETAILS 1 & 2)

NOTE (9) SHEET 31
(2) NEW INNER FLANGE PLATES AT SW&NE
5"X1/2"X18'-6" TO 47T1R
(SEE SHEET 65; DETAILS 1, 2, 6)

NOTE (10) SHEET 31
NEW OUTER FLANGE PLATE AT SOUTH
5"X1/2"X8'-0" TO 47T1R
(SEE SHEET 65; DETAILS 1, 2, 5)

NOTE (2) SHEET 32
NEW FLANGE PLATE 47P12
6"X1/2"X2'-0" TO
N.W. FLANGE OF 47T1R
(SEE SHEET 59; DETAILS 5 & 6)

PLATES CONT. FROM BASE OF
COLUMN; SEE DRAWING ABOVE
NOTES (5) & (7); SHEET 31

NOTE (5) SHEET 31
(4) NEW INNER & OUTER FLANGE PLATES
5"X1/2"X48'-3" (OVERALL LENGTH EACH
LOCATION) TO 47T1LA (SEE SHEET 64;
DETAILS 1-4)

47T1 R/LA

47P9
(INNER)

47P10
(OUTER)

VIEW - KK
SECT M-M SIMILAR

SECTION - NN
SECTION - PP SIMILAR

NOTES:

USE EXISTING BOLT SPACING
AT ALL GUSSET PLATE
REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES
WHERE APPLICABLE.

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47 MEMBER DETAILS

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67

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PLATE 48P1

(SEE LOCATION THIS SHEET) MATCH EXISTING BOLT HOLES. SEE NOTE (12) SHEET 31

NOTE (12) SHEET 31
ADD BASE PLATE 48P1

BOLT PLATE 48P1 USING EXISTING HOLES. GRIND BEVEL IN ADJACENT ANGLE LEGS & PLATE 48P1. WELD WITH PARTIAL JOINT PENETRATION GROOVE WELD AT HORIZONTAL LEG OF PLATE.

48P3 (INNER & OUTER)

48P5 (INNER & OUTER)

48P7 (INNER & OUTER)

NOTE (13) SHEET 31:
REPLACE 2 HEX 1½" ANCHOR NUTS (AB4A) AT 2 LOCATIONS

48T1 R/L

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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48 MEMBER DETAILS

SHEET 41 OF 72
68

REVISED: 12-08-2023 BY GJR

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FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_41_48 MEMBER DETAILS.dgn PLOT DATE : 12/12/2023 10:32:14 AM PLOT BY : grogal PLOT NAME : B0113_2024_41_48 MEMBER DETAILS.dgn

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49P1 (INNER)

49P2 (OUTER)

49P3 (OUTER)

49P4 (INNER)

49P5 (INNER)

49P6 (OUTER)

49P7 (INNER)

49P8 (OUTER)

49P9 (INNER)

49P10 (INNER)

49P11 (OUTER)

49P12 (OUTER)

49T1

NOTE (11) SHEET 33
NEW INNER FLANGE PLATE TO NE FLANGE OF 49T1 5"X1/2"X16'-0"
(SEE SHEET 66; DETAILS 1, 3 & 6)
NEW OUTER FLANGE PLATE TO NORTH FACE OF 49T1 1'-0 1/2"X1/2"X16'-0"
(SEE SHEET 66; DETAILS 1, 3 & 8)

NOTE (2) SHEET 33
- (1) NEW OUTER FLANGE (SOUTHSIDE) PLATE 1'-0 1/2"X1/2"X6'-0" (SEE SHEET 66; DETAILS 2 & 5)
NOTE (17) SHEET 33
- (1) NEW INNER FLANGE (NW) PLATE 5"X1/2"X6'-0" (SEE SHEET 66; DETAILS 1, 3 & 7)

NOTE (14) SHEET 33
REPLACE 2 HEX 1 1/2" ANCHOR NUTS (AB4) AT 2 LOCATIONS

EL. 18.15

EL. 32.02

EL. 34.15

EL. 38.02

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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49 MEMBER DETAILS

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BOLT PLATE 50P10 USING EXISTING HOLES. GRIND BEVEL IN ADJACENT ANGLE LEGS & PLATE 50P10. WELD WITH PARTIAL JOINT PENETRATION GROOVE WELD AT HORIZONTAL LEG OF PLATE.

50P2 (OUTER)

50P3 (INNER)

50P4 (OUTER)

50P5 (INNER)

50P6 (OUTER)

50P7 (INNER)

50P8 (INNER)

50P9 (OUTER)

NOTE (13) SHEET 33
ADD BASE PLATE 50P10

NOTE (15) SHEET 33
(2) NEW OUTER FLANGE PLATES TO NORTH & SOUTH SIDES OF 50T1, 1'-0½"X½"X12'-6", & (4) NEW INNER FLANGE PLATES TO N.E., N.W., S.E. & S.W. FLANGES OF 50T1, 5"X½"X12'-6", (SEE SHEET 67; DETAILS 1, 2, 3 & 6)

NOTE (16) SHEET 33
NEW WEB PLATE TO 50T1 5"X½"X2'-6", WEST SIDE (SEE SHEET 67; DETAILS 1& 2)

NOTE (15) SHEET 33
(2) NEW OUTER FLANGE PLATES TO NORTH & SOUTH SIDES OF 50T1, 1'-0½"X½"X20'-0", & (4) NEW INNER FLANGE PLATES TO N.E., N.W., S.E. & S.W. FLANGES OF 50T1, 5"X½"X20'-0", (SEE SHEET 67; DETAILS 1, 2, 4 & 5)

NOTE (16) SHEET 33
NEW WEB PLATE TO 50T1 5"X½"X3'-6", WEST SIDE (SEE SHEET 67; DETAILS 1 & 2)

NOTE (16) SHEET 33
NEW WEB PLATE TO 50T1 5"X½"X6'-0", WEST SIDE (SEE SHEET 67; DETAILS 1 & 2)

NOTE (3) SHEET 33
(2) NEW OUTER FLANGE PLATES TO NORTH & SOUTH SIDES OF 50T1 1'-0½"X½"X6'-0" (SEE SHEET 68; DETAILS 1, 3 & 4)

NOTE (1) SHEET 33
NEW INNER FLANGE PLATE TO S.W. FLANGE OF 50T1 5"X½"X9'-0" (SEE SHEET 68; DETAILS 1, 2 & 4)

NOTE (14) SHEET 33
REPLACE 3 HEX 1½" ANCHOR NUTS (AB4A) AT 3 LOCATIONS

50T1

PLATE 50P10
(SEE LOCATION THIS SHEET)
MATCH EXISTING BOLT HOLES.
SEE NOTE (13) SHEET 33

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

△ = NOTE (1) SHEET 34.

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50 MEMBER DETAILS

SHEET 43 OF 72
70

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FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_43_50 MEMBER DETAILS.dgn PLOT DATE : 12/12/2023 10:32:19 AM PLOT BY : grogal PLOT NAME : B0113_2024_43_50 MEMBER DETAILS.dgn

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51P1 (OUTER)

51P2 (INNER)

PLATE 51P7
(SEE LOCATION THIS SHEET)
MATCH EXISTING BOLT HOLES.
SEE NOTE (13) SHEET 33

51P3 (OUTER)

51P4 (INNER)

51P5 (OUTER)

51P6 (INNER)

NOTE (13) SHEET 33
ADD PLATE 51P7

AT UPPER LEVELS

NOTE (12) SHEET 33
NEW INNER FLANGE PLATE TO S.W. FLANGE OF 51T1, 1-5"X½"X12'-6" &
NEW OUTER FLANGE PLATE TO S.W. FLANGE OF 51T1 1-5"X½"X12'-6".
(SEE SHEET 69; DETAILS 1, 2, 4, & 7)

NOTE (4) SHEET 33
(2) NEW INNER FLANGE PLATES TO N.E. & S.E. FLANGES OF 51T1 5"X½"X10'-0"
(SEE SHEET 70; DETAILS 1 & 2)

NOTE (12) SHEET 33
NEW INNER FLANGE PLATES TO S.W. FLANGE OF 51T1, 1-5"X½"X21'-6", & NEW OUTER FLANGE PLATE TO S.W. FLANGE OF 51T1, 1-5"X½"X21'-6".
(SEE SHEET 69; DETAILS 2, 3, 4 & 8)

NOTE (5) SHEET 33
NEW INNER FLANGE PLATE TO N.E. FLANGE OF 51T1, 5"X½"X16'-0" & NEW OUTER FLANGE PLATE TO N.E. FLANGE OF 51T1, 5"X½"X16'-0", (SEE SHEET 70; DETAILS 1, 4 & 6)

NOTE (23) SHEET 33
(6) NEW INNER FLANGE PLATES TO N.E., N.W. & S.E. FLANGES OF 51T1, 5"X½"X3'-0" (SEE SHEET 69; DETAILS 2, 4, 5 & 6)

NOTE (6) SHEET 33
(2) NEW INNER FLANGE PLATE TO SE FLANGE OF 51T1, 5"X½"X3'-0"
(SEE SHEET 70; DETAILS 1, 3 & 5)

NOTE (14) SHEET 33
REPLACE 3 HEX 1½" ANCHOR NUTS (AB4A) AT 3 LOCATIONS

BOLT PLATE 51P7 USING EXISTING HOLES. GRIND BEVEL IN ADJACENT ANGLE LEGS & PLATE 51P7. WELD WITH PARTIAL JOINT PENETRATION GROOVE WELD AT HORIZONTAL LEG OF PLATE.

51P7

51T1

EL. 18.15
EL. 27.86
EL. 30.86
EL. 30.65
EL. 34.52
EL. 34.15
EL. 37.52
EL. 41.49
EL. 51.49
EL. 56.02

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

△ = NOTE (1) SHEET 34.

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51 MEMBER DETAILS

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52P1 (OUTER)

52P2 (INNER)

52P3 (OUTER)

52P4 (INNER)

52P5 (OUTER)

52P6 (INNER)

52P7 (INNER)

52P8 (OUTER)

52P9 (INNER)

52P10 (OUTER)

52P11 (OUTER)

52P12 (INNER)

52P13 (INNER)

52P14 (OUTER)

52T1

NOTE (7) SHEET 33
(2) NEW INNER FLANGE PLATES TO S.W. & S.E. FLANGES OF 52T1 5"X½"X16'-0"
(SEE SHEET 72: DETAILS 1, 3 & 4)
(1) NEW OUTER FLANGE PLATE TO SOUTH FACE OF 52T1 1'-0½"X½"X16'-0"
(SEE SHEET 72: DETAILS 1, 4 & 8)

NOTE (8) SHEET 33
- (2) NEW INNER FLANGE PLATES TO N.W. & N.E. FLANGES OF 52T1 5"X½"X6'-0"
(SEE SHEET 72: DETAILS 1, 2, 4)
- (1) NEW OUTER FLANGE PLATE TO NORTH SIDE OF 52T1 1'-0½"X½"X6'-0"
(SEE SHEET 72: DETAILS 1, 4, 6)

NOTE (10) SHEET 33
- (1) NEW INNER FLANGE PLATE TO S.W. FLANGE OF 52T1 5"X½"X16'-0"
(SEE SHEET 71: DETAILS 1, 2 & 3)
- (1) NEW OUTER FLANGE PLATE TO S.W. FLANGE OF 52T1 5"X½"X16'-0"
(SEE SHEET 71: DETAILS 1,3 & 5)
- (2) NEW INNER FLANGE PLATES TO N.W. & N.E. FLANGES OF 52T1 5"X½"X8'-0"
(SEE SHEET 71: DETAILS 1, 3 & 4)

NOTE (9) SHEET 33
(2) NEW INNER FLANGE PLATES TO N.W. & S.W. FLANGES OF 52T1 5"X½"X12'-0"
(SEE SHEET 72: DETAILS 1, 4, 5)
(2) NEW OUTER FLANGE PLATES TO N.W. & S.W. FLANGES OF 52T1 5"X½"X12'-0"
(SEE SHEET 72: DETAILS 1, 4 & 7)

NOTE (14) SHEET 33
REPLACE 1 HEX 1½" ANCHOR NUT (AB4) AT 1 LOCATION

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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52 MEMBER DETAILS

SHEET 45 OF 72

72

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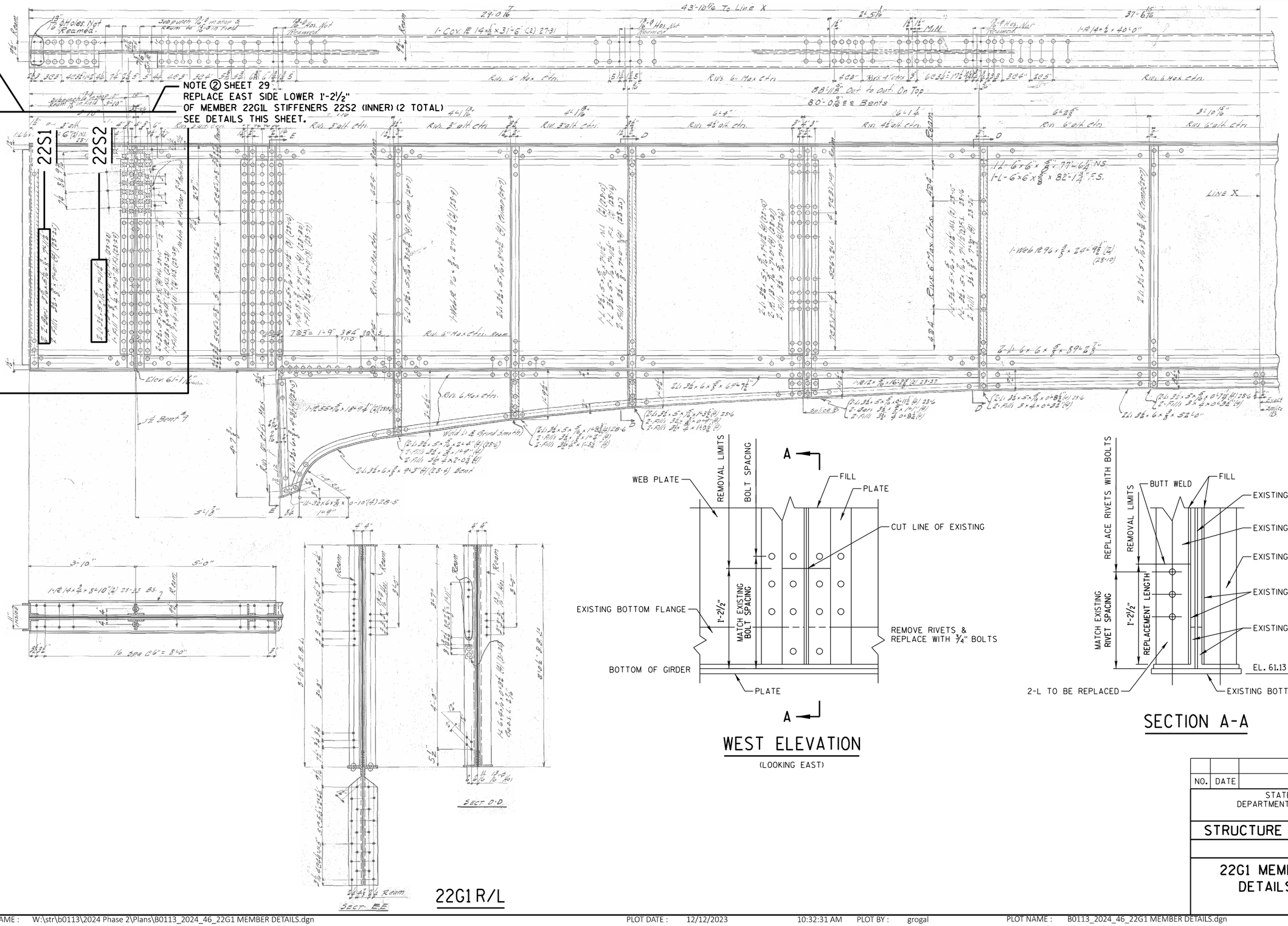
NOTE ① SHEET 29
REPLACE INNER STIFFENER 22S1
TO MEMBERS 22G1 R/L

NOTE ② SHEET 29
REPLACE EAST SIDE LOWER 1'-2½"
OF MEMBER 22G1L STIFFENERS 22S2 (INNER) (2 TOTAL)
SEE DETAILS THIS SHEET.

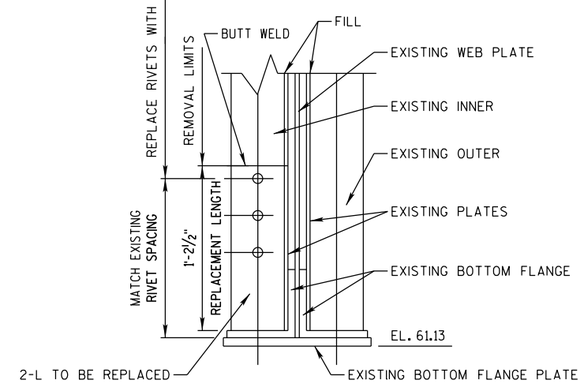
22S1

22S2



WEST ELEVATION

(LOOKING EAST)



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22G1 MEMBER DETAILS

SHEET 46 OF 72
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STATE PROJECT NUMBER

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REVISED: 08-11-2023 BY SLB

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SHEET 29; NOTE ④
REPLACE 1-FULL HEIGHT STIFFENER (INNER), 20S1, 1-L 3½"X5"X7/16"X7'-11½" TO MEMBERS 20G1 R/L

SHEET 29; NOTE ⑤
REPLACE LOWER 1'-2½" OF STIFFENERS 20S2 TO MEMBERS 20G1 R/L (INNER) 2-L 3½"X5"X7/16"X1'-2½"
SEE DETAILS FOR LOWER SECTION OF STIFFENER REPLACEMENT ON SHEET 46

20G1 R/L

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20G1 MEMBER DETAILS

SHEET 47 OF 72
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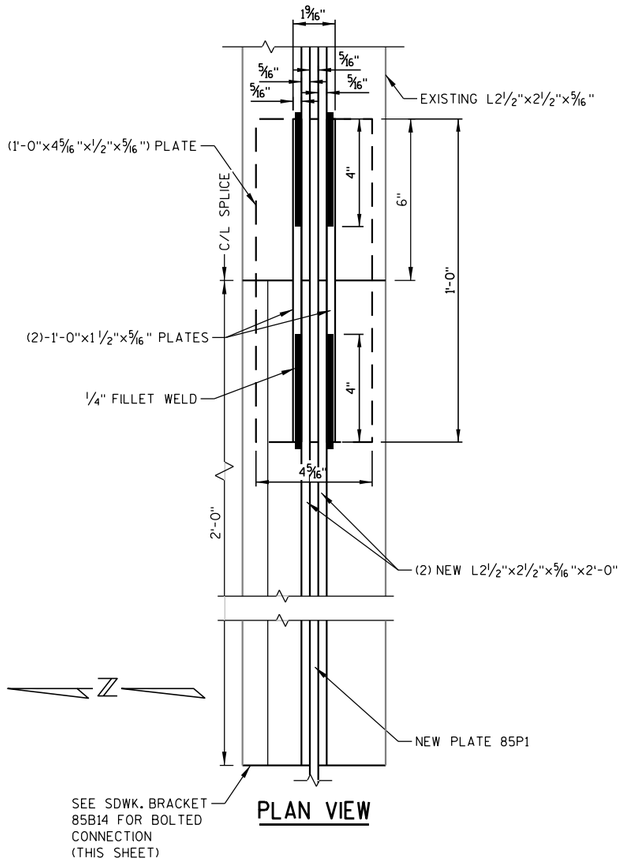
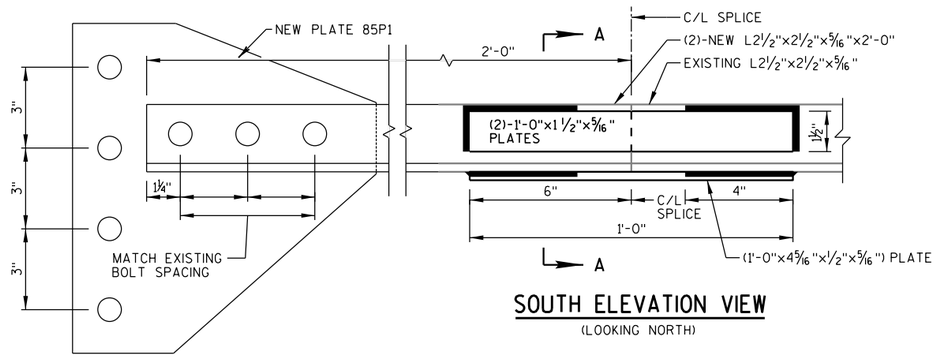
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_47_20G1 MEMBER DETAILS.dgn PLOT DATE : 12/12/2023 10:32:34 AM PLOT BY : grogal PLOT NAME : B0113_2024_47_20G1 MEMBER DETAILS.dgn

STATE PROJECT NUMBER

2984-12-74

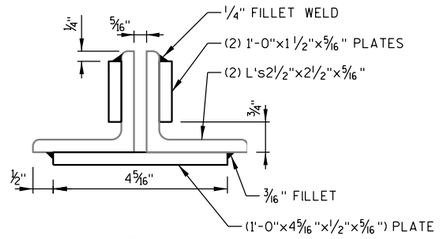


PLAN VIEW

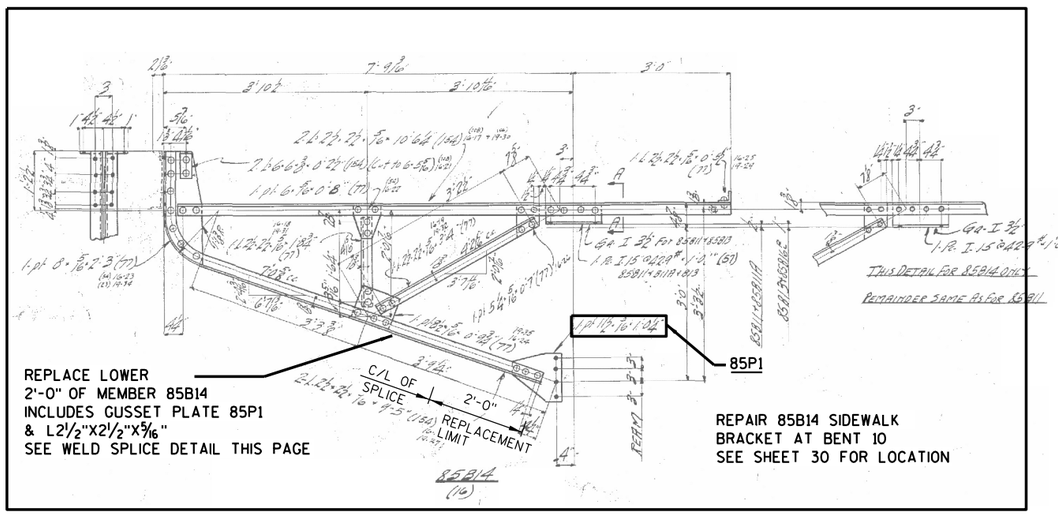


SOUTH ELEVATION VIEW

(LOOKING NORTH)



SECTION A-A



85B14

NORTH ELEVATION

(LOOKING SOUTH)

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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SIDEWALK BRACKET MEMBER DETAILS

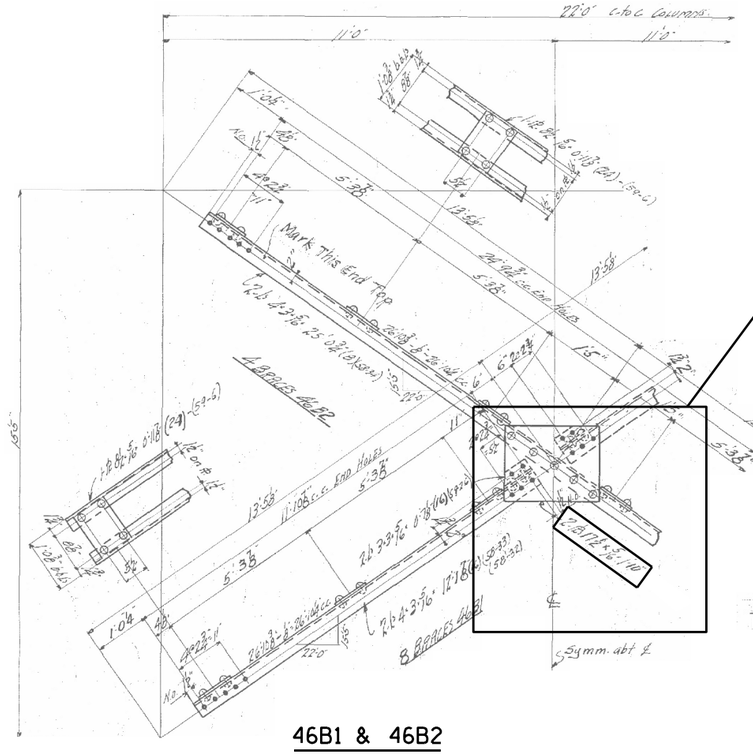
SHEET 48 OF 72

75

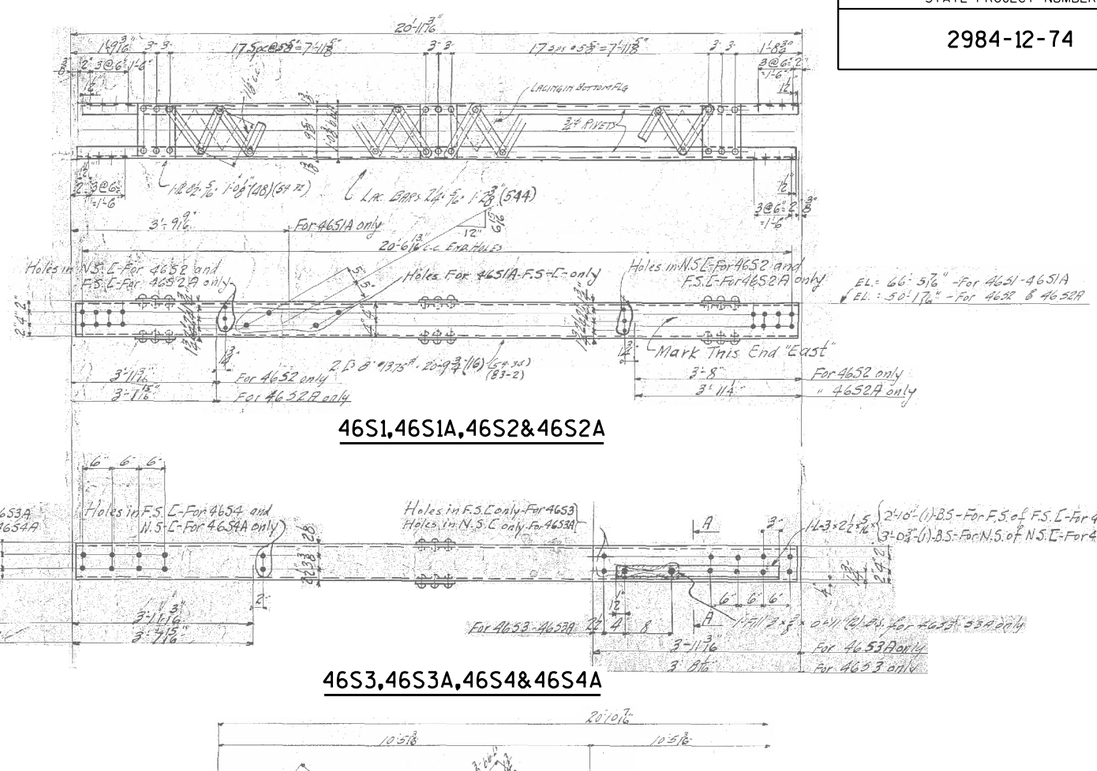
FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_48_SIDEWALK BRACKET MEMBER DETAILS.dgn PLOT DATE : 12/12/2023 10:32:37 AM PLOT BY : grogal PLOT NAME : B0113_2024_48_SIDEWALK BRACKET MEMBER DETAILS.dgn

STATE PROJECT NUMBER

2984-12-74

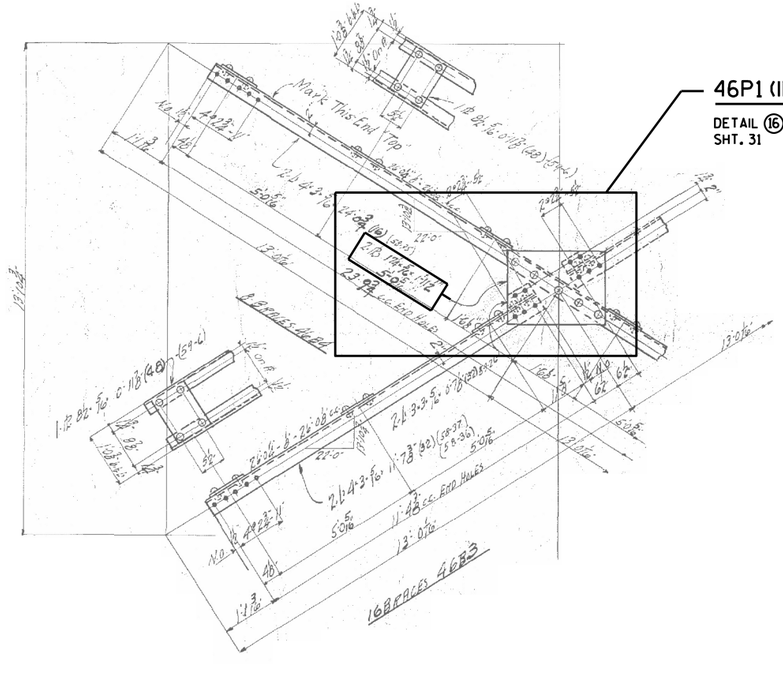


46B1 & 46B2

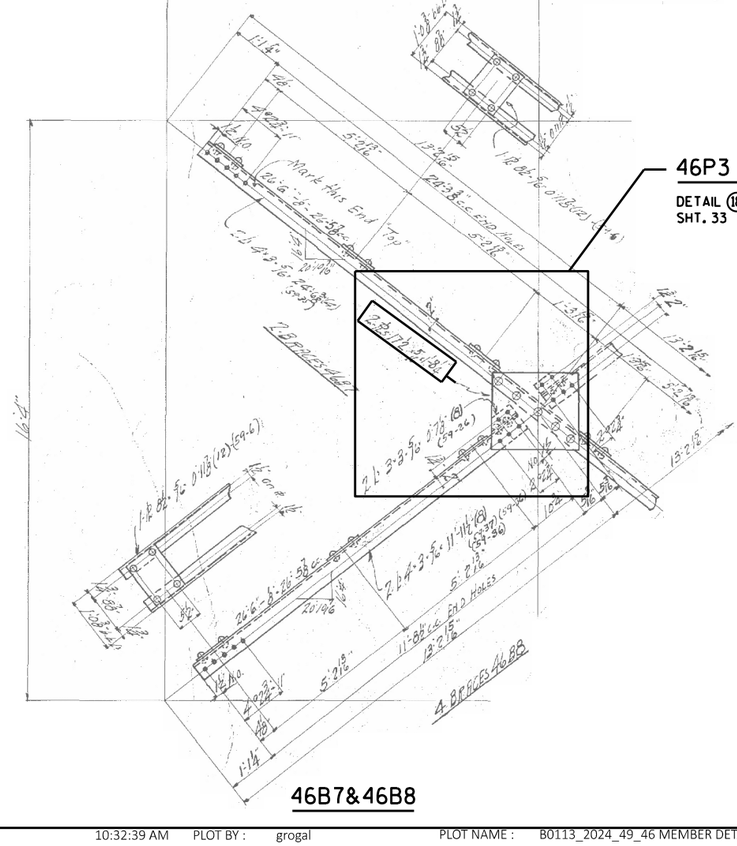


46S1,46S1A,46S2&46S2A

46S3,46S3A,46S4&46S4A



46B3&46B4



46B7&46B8

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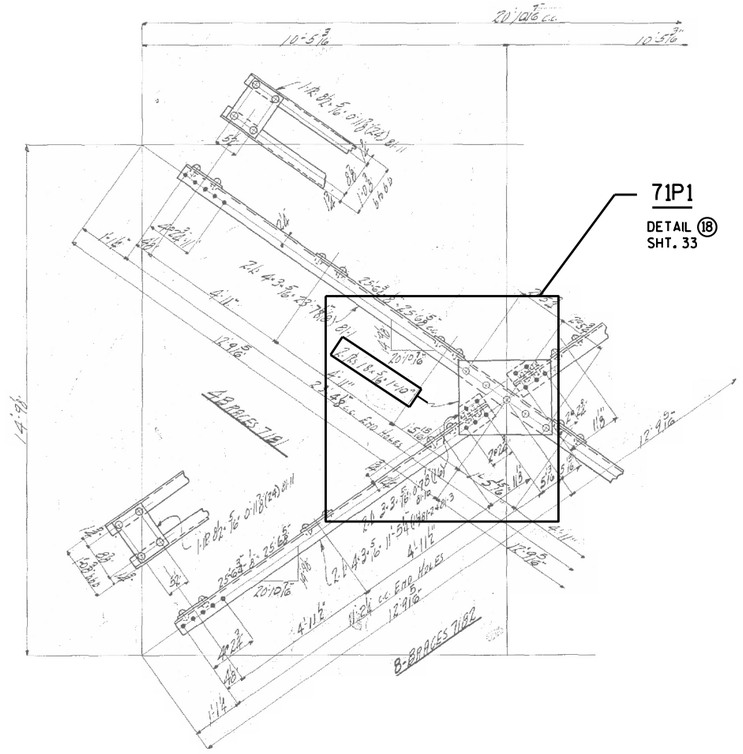
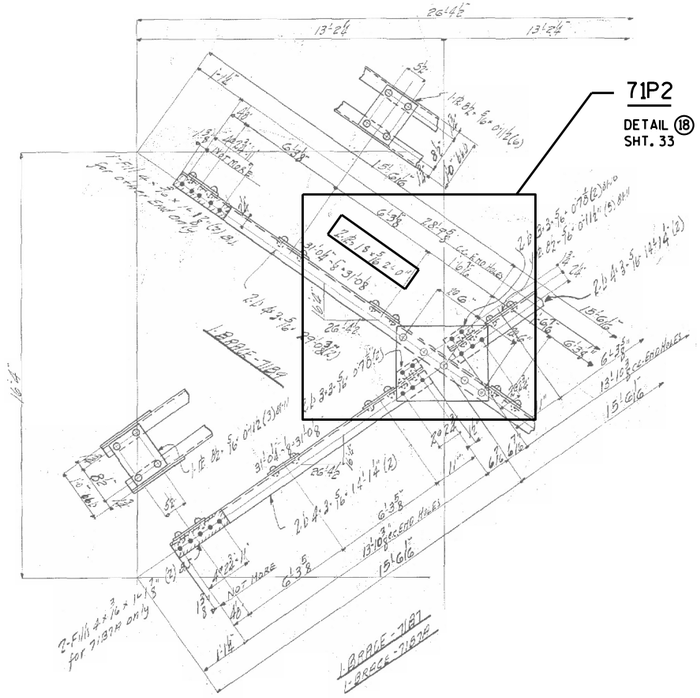
46 MEMBER DETAILS

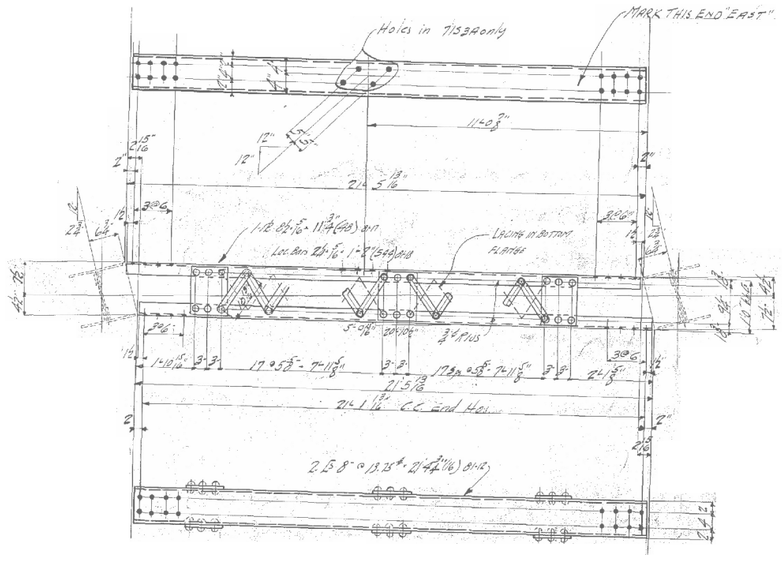
SHEET 49 OF 72
76



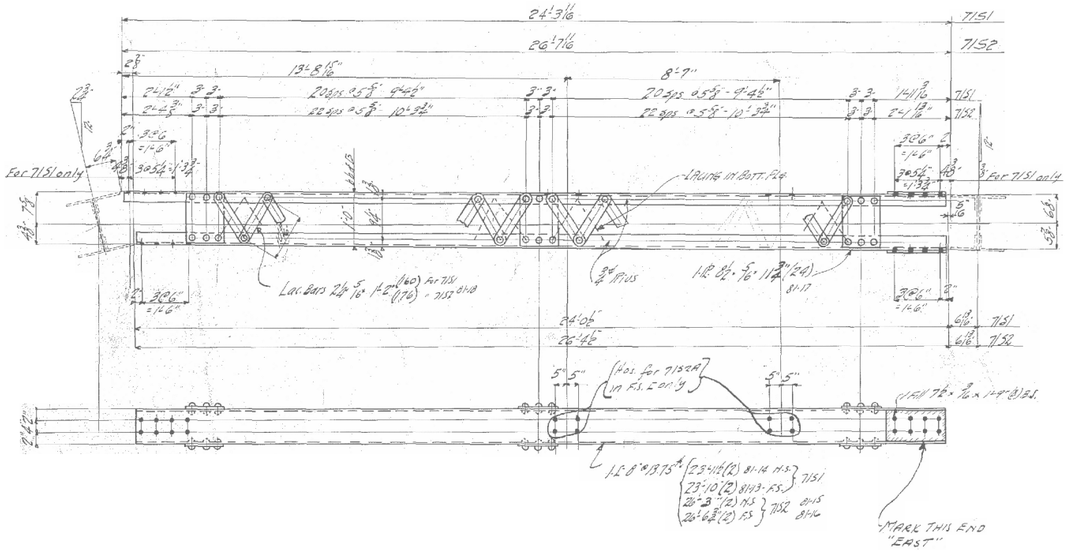
71B1 & 71B2



71B7, 71B7A & 71B9



71S3 & 71S3A



71S1, 71S2 & 71S2A

NO.	DATE	REVISION	BY

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71 MEMBER DETAILS

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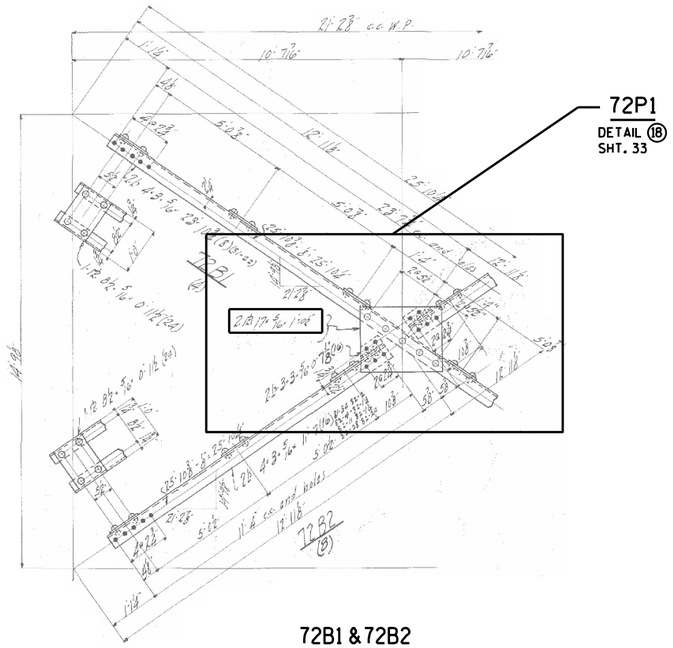
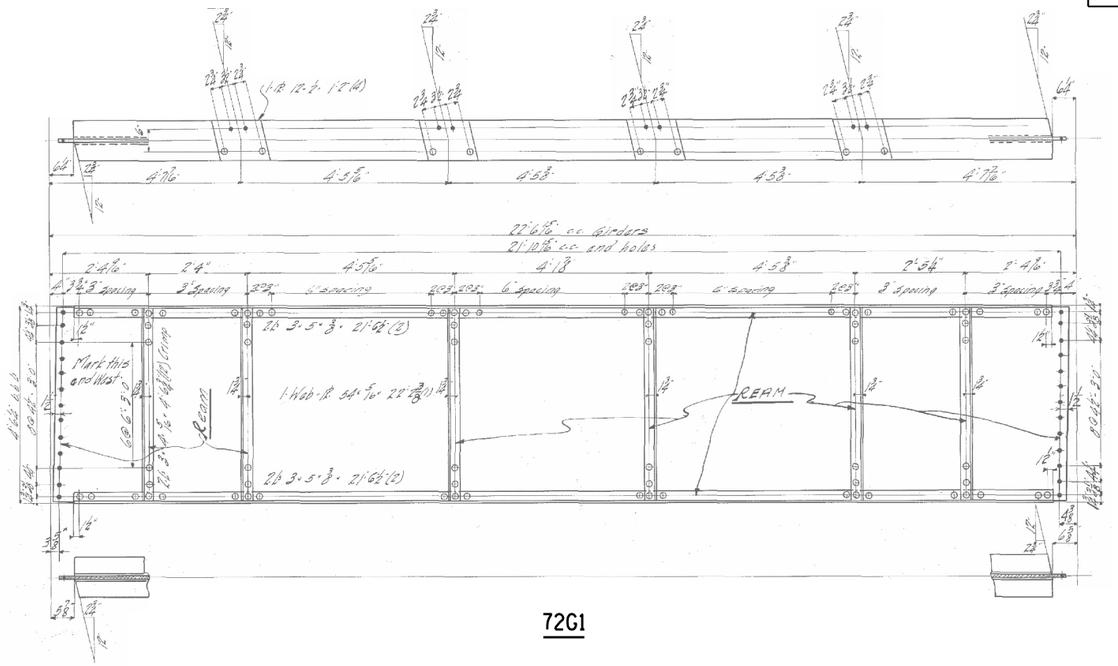
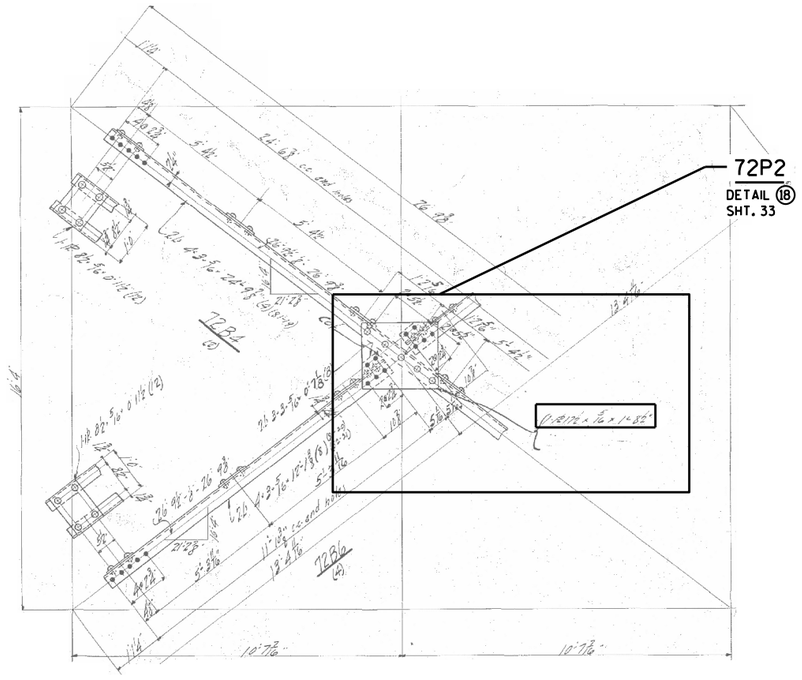


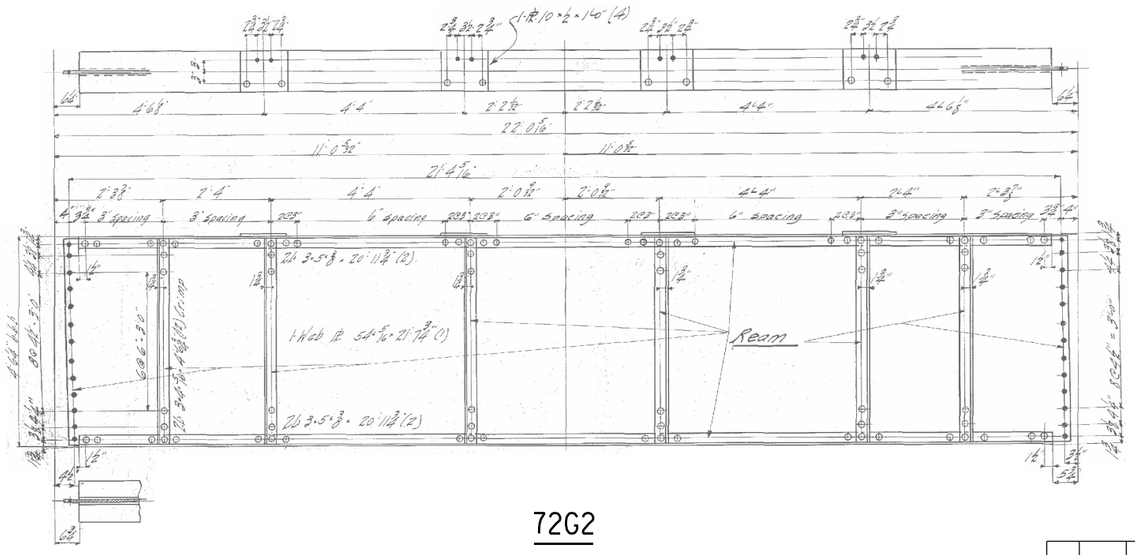
72B1 & 72B2



72G1



72B4&72B6



72G2

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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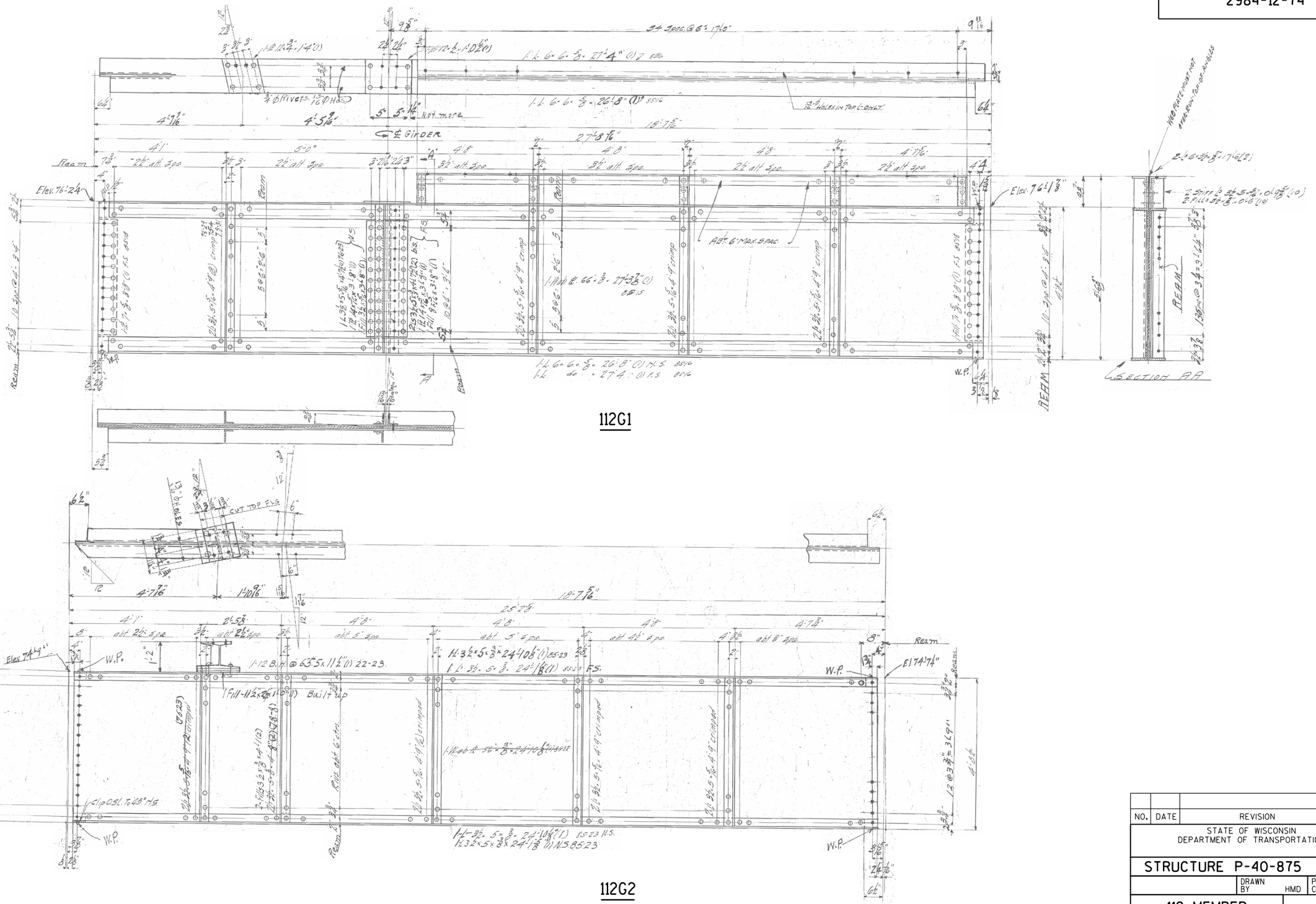
72 MEMBER DETAILS

SHEET 51 OF 72
78

FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_51_72 MEMBER DETAILS.dgn

PLOT DATE : 12/12/2023 10:32:47 AM PLOT BY : grogal

PLOT NAME : B0113_2024_51_72 MEMBER DETAILS.dgn



112G1

112G2

NO.	DATE	REVISION	BY

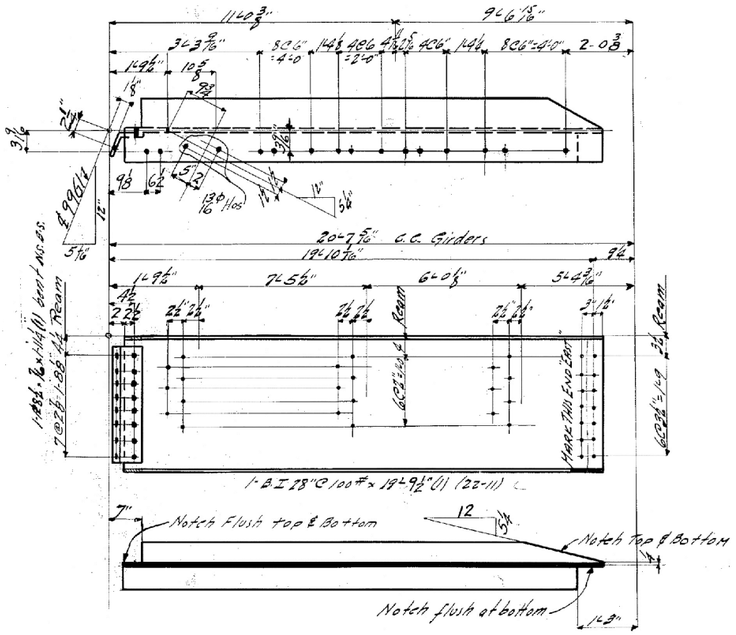
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

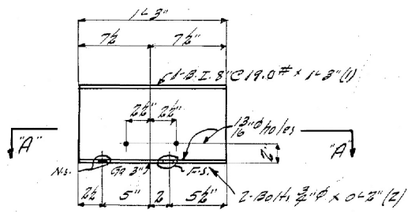
STRUCTURE P-40-875

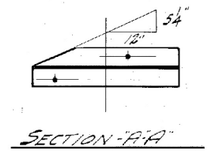
DRAWN BY HMD PLANS CK'D. JPH

112 MEMBER DETAILS

SHEET 52 OF 72
79

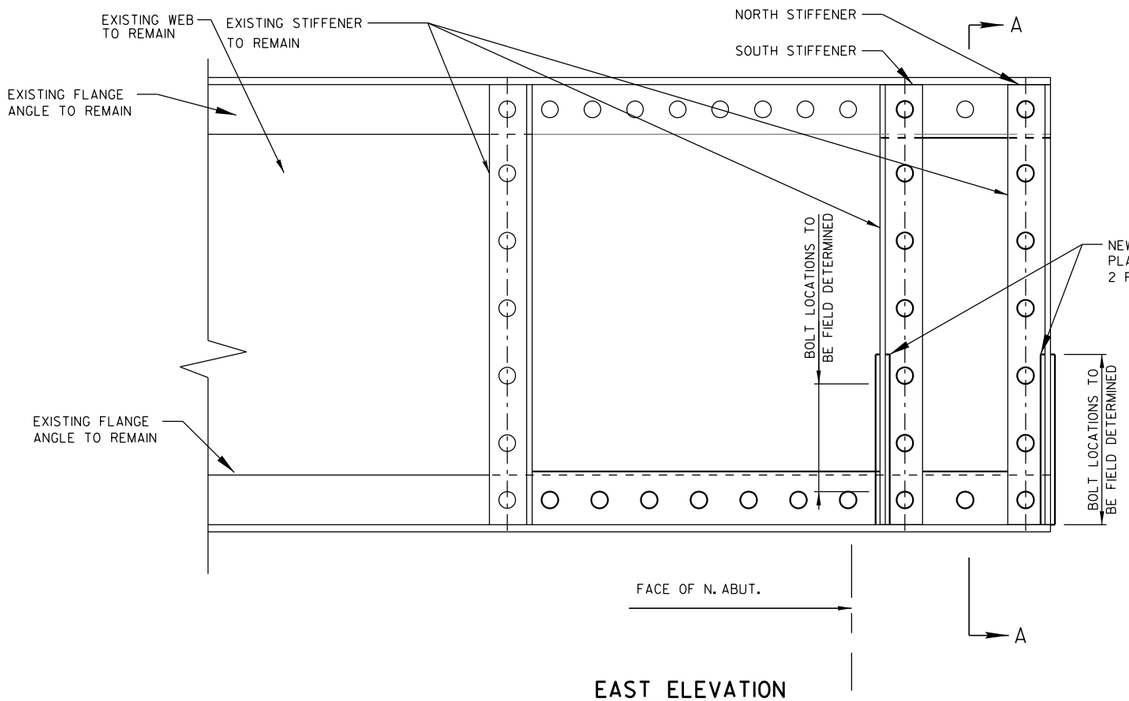




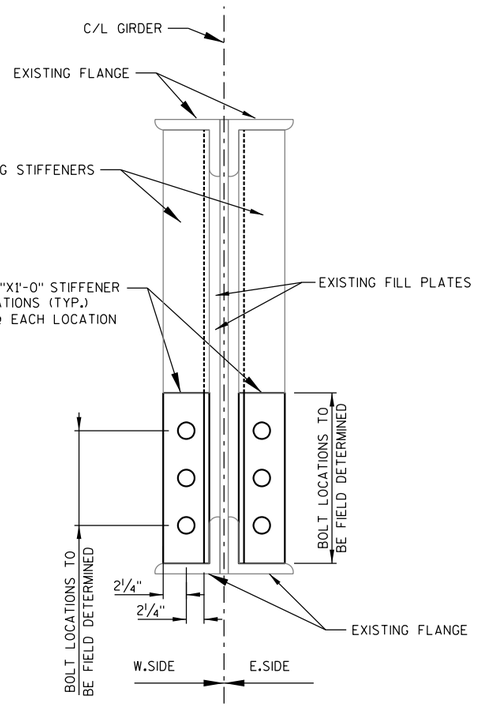


STEEL REPAIRS TO GIRDER STIFFENERS AT NORTH ABUTMENT		
GIRDER NUMBER	GIRDER NAME	REPAIR WORK
1	103G1	ADD 3/8" X 4 1/2" X 1'-0" PLATES TO BOTTOM OF N.W. STIFFENER
2	100G1	ADD 3/8" X 4 1/2" X 1'-0" PLATES TO BOTTOM OF S.W. AND S.E. STIFFENERS
3	99G1	ADD 3/8" X 4 1/2" X 1'-0" PLATES TO BOTTOM OF N.W. STIFFENER
4	110G1	ADD 3/8" X 4 1/2" X 1'-0" PLATES TO BOTTOM OF N.W. AND N.E. STIFFENERS
5	107G2	ADD 3/8" X 4 1/2" X 1'-0" PLATES TO BOTTOM OF S.W., N.W. AND S.E. STIFFENERS
6	107G1	ADD 3/8" X 4 1/2" X 1'-0" PLATES TO BOTTOM OF S.W., S.E. AND N.E. STIFFENERS

109B5



EAST ELEVATION
(WEST ELEVATION OPPOSITE HAND)



SECTION A-A

NOTES:

SEE SHEET 19 FOR LOCATION.

ALL STIFFENER REPAIRS ARE BOLTED CONNECTIONS USING 3/4" DIA. GRADE A325 BOLTS WITH 13/16 " DIA. HOLES. SEE TYPICAL DETAILS THIS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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109B5 MEMBER DETAILS

SHEET 53 OF 72
80

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NOTE ④ SHEET 32
REPLACE 1'-2½" OF STIFF. OUTER TO 19G1 R/L AT EAST AND WEST ELEVATIONS (19S1) SEE DETAIL ON SHEET 46

NOTE ⑤ SHEET 32
REPLACE (2) STIFF. FULL HEIGHT INNER TO 19G1 R/L AT EAST AND WEST ELEVATIONS (19S2)

NOTE ④ SHEET 32
REPLACE LOWER 1'-2½" OF OUTER STIFFENER TO GIRDERS 19G1 R/L (19S1) SEE DETAILS FOR LOWER SECTION OF STIFFENER REPLACEMENT ON SHEET 46

MEMBER 123-B1 ATTACHED TO MEMBER 47T1LA (WEST SIDE) 47T1R (EAST SIDE)

NOTE ⑥ SHEET 32
REPLACE LOWER STIFFENERS (OUTER) AT MEMBER 123-B1 ATTACHED TO MEMBER 47T1R (WEST SIDE)

NOTE ③ SHEET 32
REPLACE (2) INNER AND (2) OUTER EXPANSION JOINT BOLTS (94E4). SEE 94E4 DETAIL THIS PAGE. BOLTS MOUNT TO MEMBERS 47T1LA, 19G1L AND 123-B1 (WEST SIDE)

SYMM. ABOUT ℄ EXCEPT AS SHOWN

NOTE ③ SHEET 32
1-BOLT ⅞"ΦX0'-4" (24) 94E4
1-PC. GALV. PIPE
1"ΦX0'-1¼" (28) 94E4
1-WASHER 3"ΦX⅜" THICK (52)

94E4
(24)

SECTION EE

This detail for south end of Girder

19G1 R/L

SECT C-C

SECT. B-B

SAVE TEMPLATES

123-B1

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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19G1 MEMBER DETAILS

SHEET 54 OF 72
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65G1 R/L

65S1

NOTE ① SHEET 32
REPLACE FULL HEIGHT STIFF.
OUTER TO 65G1 AT
WEST ELEVATION

NOTE ① SHEET 32
REPLACE FULL HEIGHT
OUTER STIFFENER

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65G1 MEMBER DETAILS

SHEET 55 OF 72
82

FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_55_65G1 MEMBER DETAILS.dgn

PLOT DATE : 12/12/2023 10:33:02 AM PLOT BY : grogal

PLOT NAME : B0113_2024_55_65G1 MEMBER DETAILS.dgn

STATE PROJECT NUMBER

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NOTE ① SHEET 32
REPLACE 1'-2½" OF STIFFENER (OUTER) 127D1 AT EAST ELEVATION
SEE DETAILS FOR LOWER SECTION OF STIFFENER REPLACEMENT ON SHEET 46

NOTE ① SHT. 32
REPLACE 1'-2½" OF OUTER STIFFENER
SEE DETAILS FOR LOWER SECTION OF STIFFENER REPLACEMENT ON SHEET 46

126G1

127A1
(4)
No Paint.

127D1

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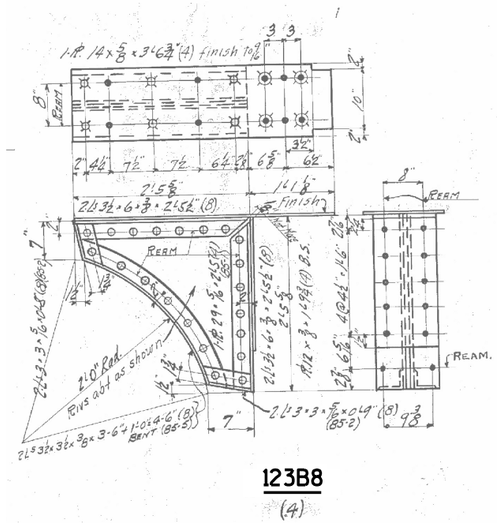
127D1 MEMBER DETAILS

SHEET 56 OF 72
83

FILE NAME : W:\str\b0113\2024 Phase 2\Plans\B0113_2024_56_127D1 MEMBER DETAILS.dgn PLOT DATE : 12/12/2023 10:33:06 AM PLOT BY : grogal PLOT NAME : B0113_2024_56_127D1 MEMBER DETAILS.dgn



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123B8
(4)

OUTSIDE EAST GIRDER BETWEEN BENTS 12 & 13 ON CURVE

INSIDE FACE, LOOKING EAST

NEW WEB PLATE 6"X½"X6" (SEE DETAIL THIS SHT.)

NOTE ④ SHEET 34
REPLACE 1'-2½" OF VERTICAL STIFFENER L3½"X5"X⅜"X1'-2½"
SEE DETAILS FOR LOWER SECTION OF STIFFENER REPLACEMENT ON SHEET 46

NOTE: BRACKET 123B8 BELOW

NOTE ⑤ SHEET 34 AND SHEET 58
REPLACE 3 OUTER EXPANSION BOLT ASSEMBLIES.

101G1

WEB PLATE DETAILS

(NEW WEB PLATE TO 101G1)

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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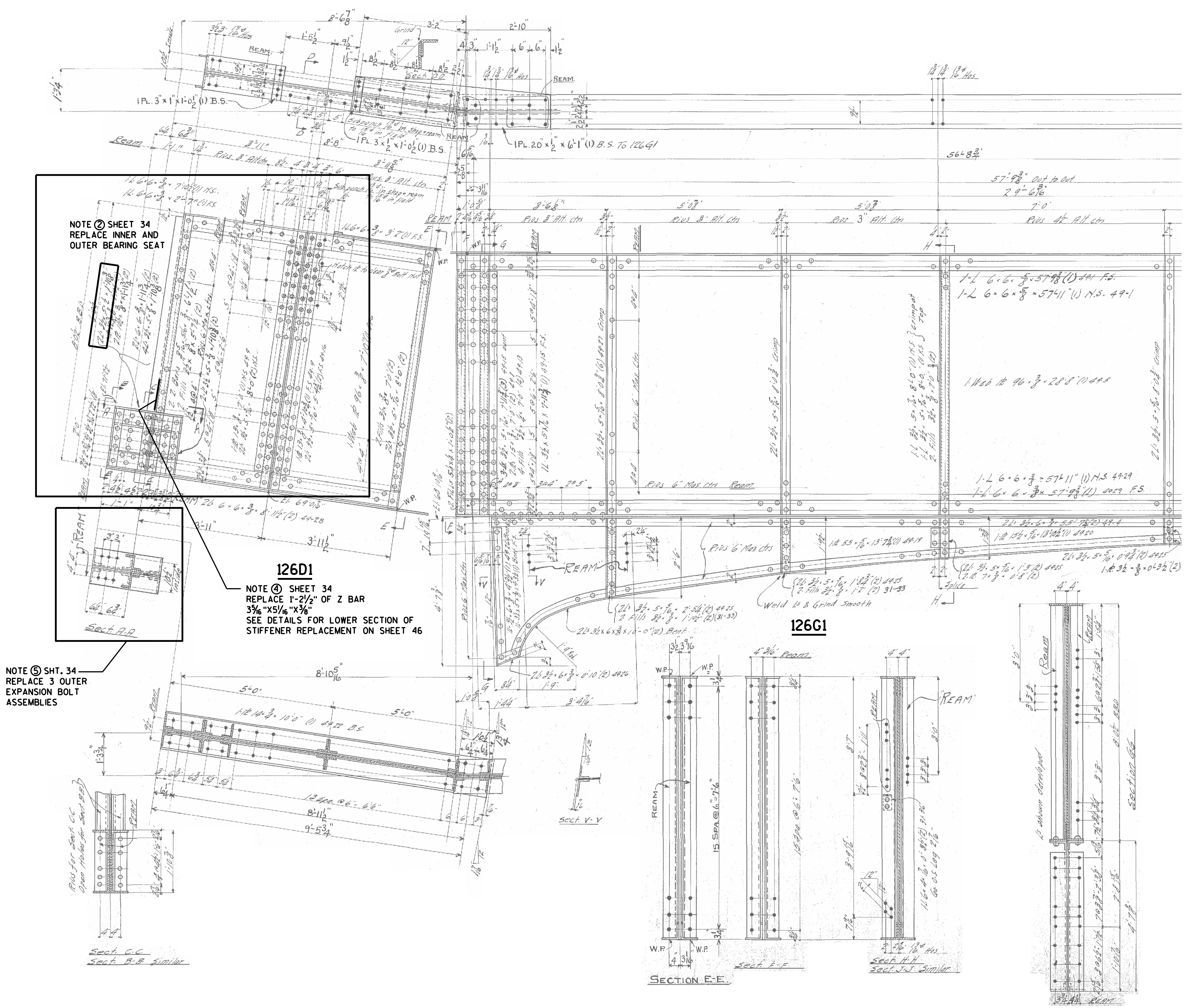
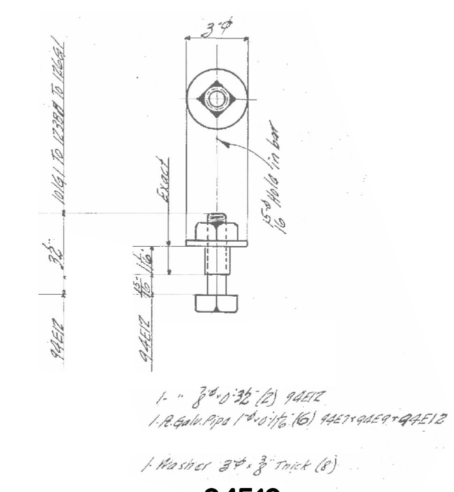
101G1 MEMBER DETAILS

SHEET 57 OF 72





REVISED: 12-04-2023 GJR

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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126G1 MEMBER DETAILS

SHEET 58 OF 72

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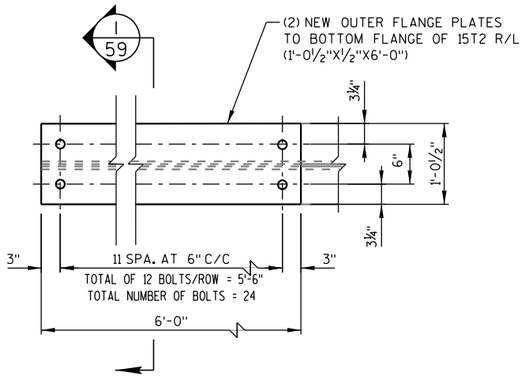
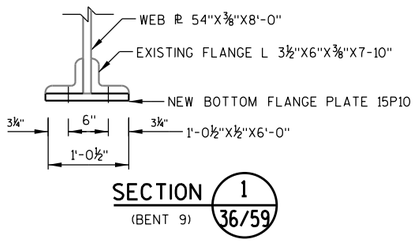


BOTTOM FLANGE PLATE DETAIL 1

(2) FLANGE PLATES 15P10
AT BOTTOM FLANGES OF 15T2 R/L
(BENT 9)
NOTE ③ SHEET 29



SECTION 1 / (BENT 9) 36/59

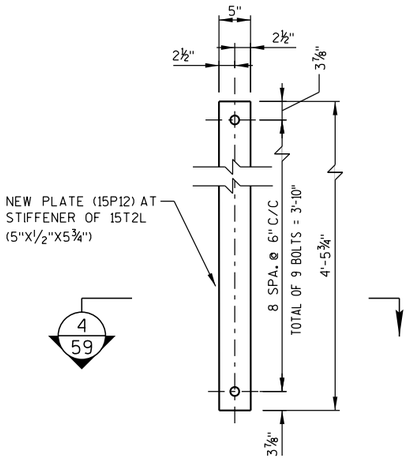
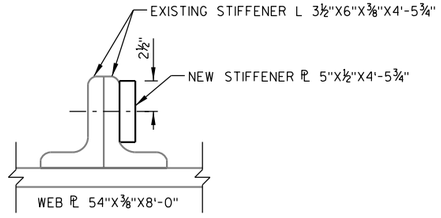
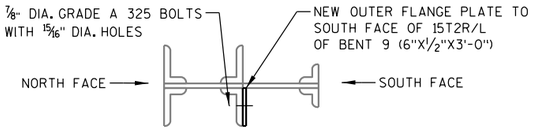


PLATE DETAIL 2

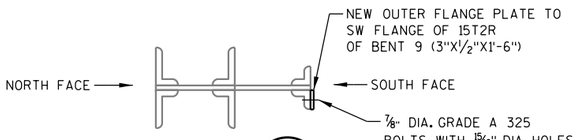
PLATE STIFFENER OF 15T2L
(BENT 9)
NOTE ⑧ SHEET 29



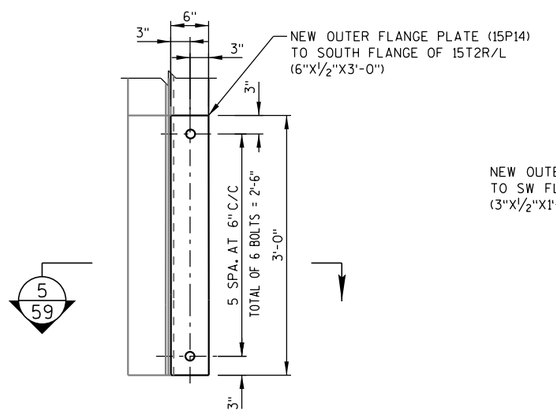
SECTION 4 / (BENT 9) 4/59



SECTION 5 / (BENT 9) 36/59

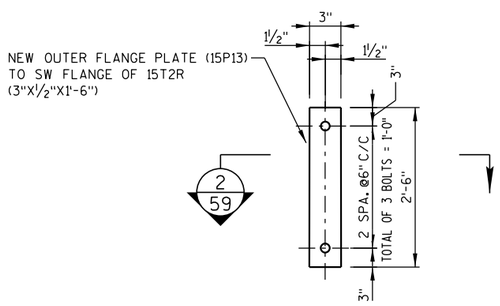


SECTION 2 / (BENT 9) 36/59



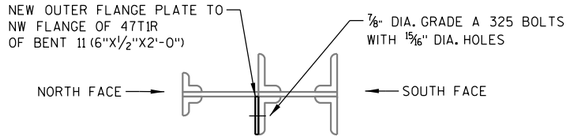
OUTER FLANGE PLATE DETAIL 3

OUTER FLANGE PLATE
AT SOUTH FLANGE OF 15T2R
(BENT 9)
NOTE ⑨ SHEET 29

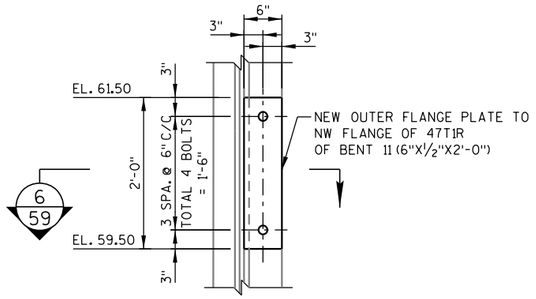


FLANGE PLATE DETAIL 4

NEW FLANGE PALTE TO SW
FLANGE OF 15T2R
(BENT 9)
NOTE ⑩ SHEET 29

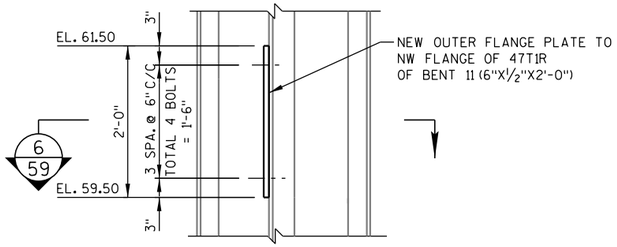


SECTION 6 / (BENT 11) 40/59



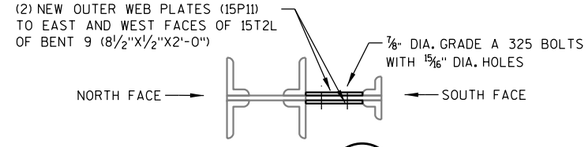
FLANGE PLATE DETAIL 5

OUTER FLANGE PLATE TO NW FLANGE
OF MEMBER 47T1R
(BENT 11)
NOTE ② SHEET 32

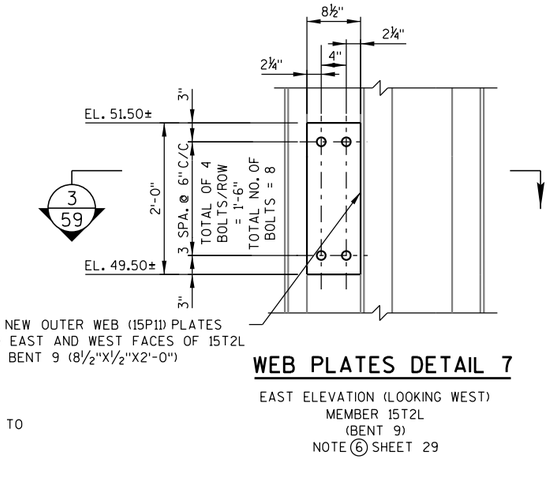


FLANGE PLATE DETAIL 6

WEST ELEVATION (LOOKING EAST)
MEMBER 47T1R
(BENT 11)

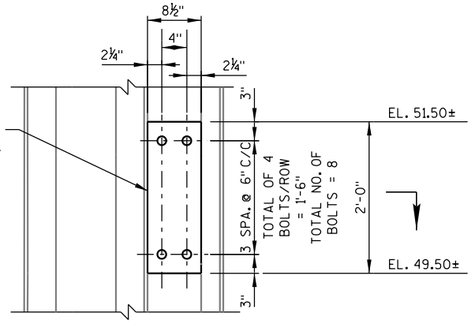


SECTION 3 / (BENT 9) 36/59



WEB PLATES DETAIL 7

EAST ELEVATION (LOOKING WEST)
MEMBER 15T2L
(BENT 9)
NOTE ⑥ SHEET 29



WEB PLATES DETAIL 8

WEST ELEVATION (LOOKING EAST)
MEMBER 15T2L
(BENT 9)
NOTE ⑥ SHEET 29

NOTE:

USE EXISTING BOLT SPACING AT ALL GUSSET
PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACE WHERE APPLICABLE.

STATE PROJECT NUMBER

2984-12-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

15T2R/L, 47T1R
E.&W. ELEVATION
MEMBER DETAILS

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STATE PROJECT NUMBER

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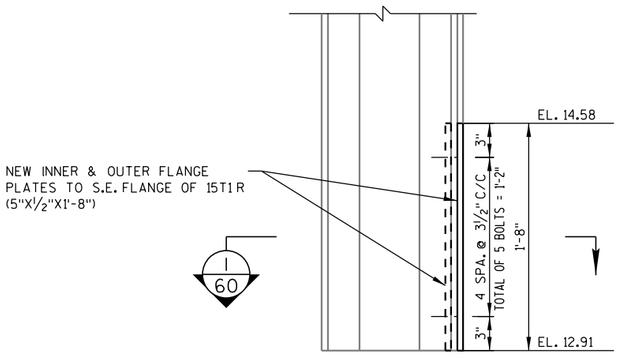
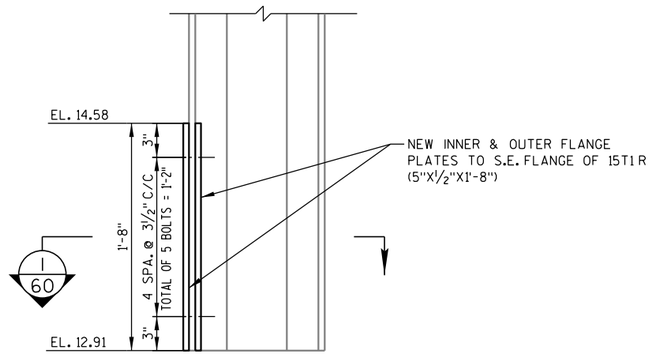


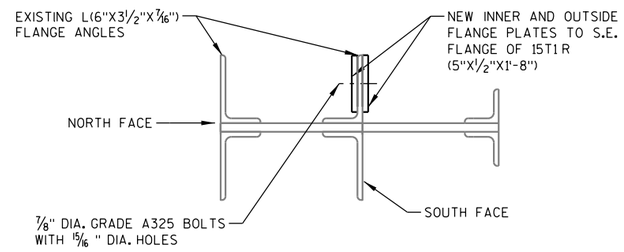
FLANGE PLATES DETAIL 1

WEST ELEVATION (LOOKING EAST)
MEMBER 15T1R
(BENT 10)

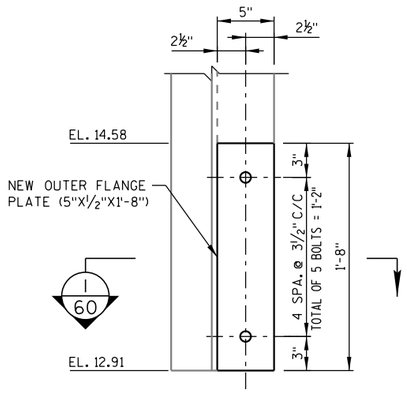


FLANGE PLATES DETAIL 3

EAST ELEVATION (LOOKING WEST)
MEMBER 15T1R
(BENT 10)

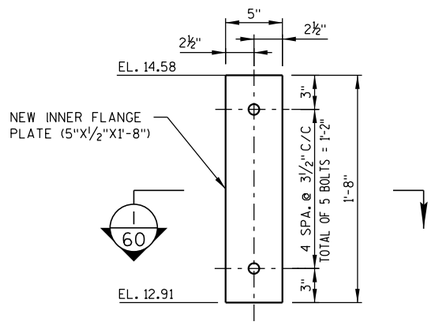


SECTION 1 / 37/60



OUTER FLANGE PLATE DETAIL 2

(1) OUTER FLANGE PLATE
AT SOUTHEAST FLANGE OF 15T1R
NOTE (1) SHEET 30



INNER FLANGE PLATE DETAIL 4

(1) INNER FLANGE PLATE
AT SOUTHEAST FLANGE OF 15T1R
NOTE (1) SHEET 30

NOTE:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATION.

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

NO.	DATE	REVISION	BY

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

DRAWN BY HMD | PLANS CK'D. JPH

15T1R MEMBER DETAILS

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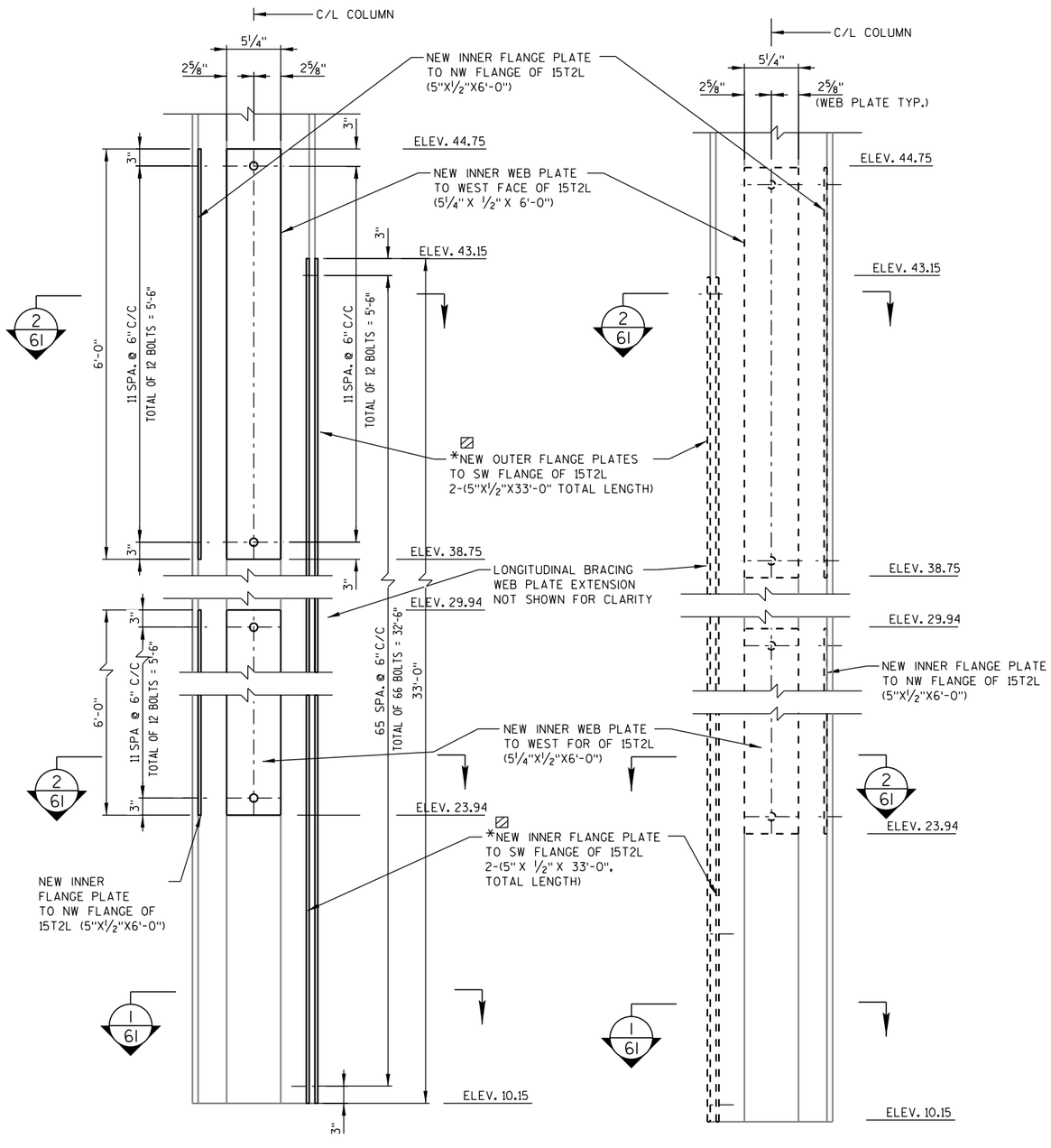
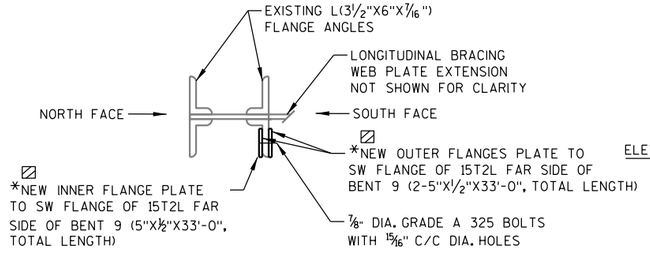


WEB & FLANGE PLATES DETAILS 5

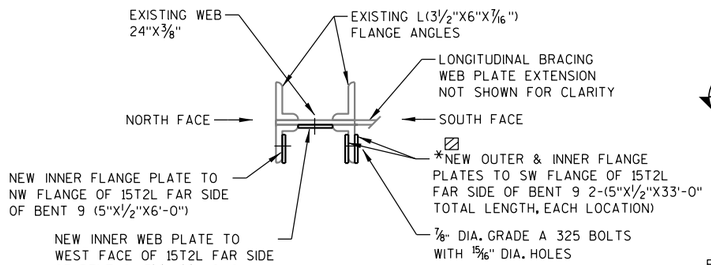
WEST ELEVATION (LOOKING EAST)
MEMBER 15T2L
(BENT 9)

WEB & FLANGE PLATES DETAILS 4

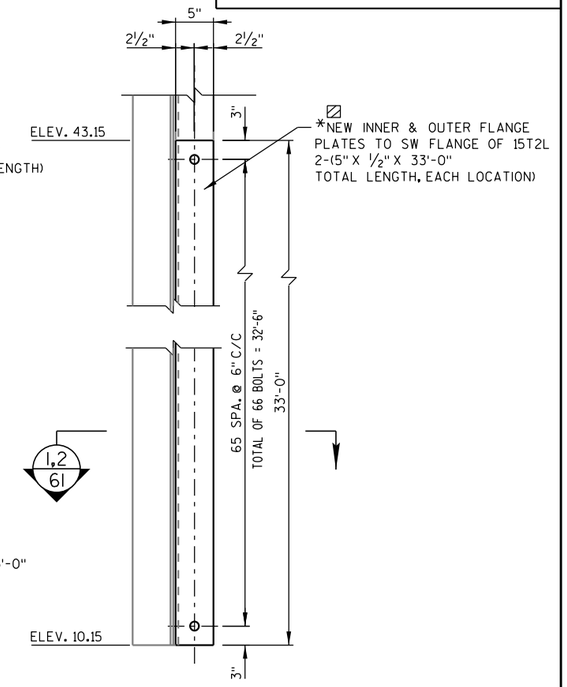
EAST ELEVATION (LOOKING WEST)
MEMBER 15T2L
(BENT 9)



SECTION 1 — 36/61

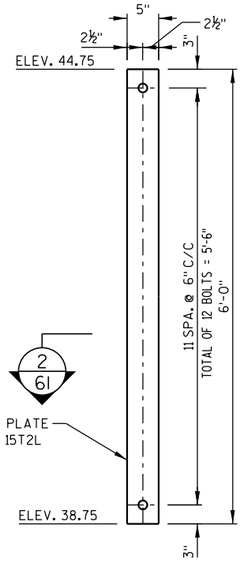


SECTION 2 — 36/61



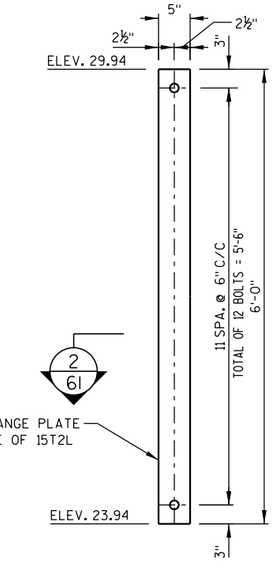
INNER & OUTER FLANGE PLATE DETAIL 2

(1) INNER & (1) OUTER FLANGE PLATES
AT SW FLANGE OF 15T2L



INNER FLANGE PLATE DETAIL 1

(1) INNER FLANGE PLATE
AT NW FLANGE OF 15T2L
(NOTE ④ SHEET 28)



INNER FLANGE PLATE DETAIL 3

(1) INNER FLANGE PLATE
AT NW FLANGE OF 15T2L
(NOTE ④ SHEET 28)

NOTE:

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

*-ELEVATION OF PLATE BUTT JOINTS TO BE DETERMINED BY ENGINEER IN THE FIELD.

▨: FABRICATE AND INSTALL IN MORE THAN ONE PIECE TO FACILITATE INSTALLATION.

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DRAWN BY HMD | PLANS CK'D. JPH

15T2L MEMBER DETAILS

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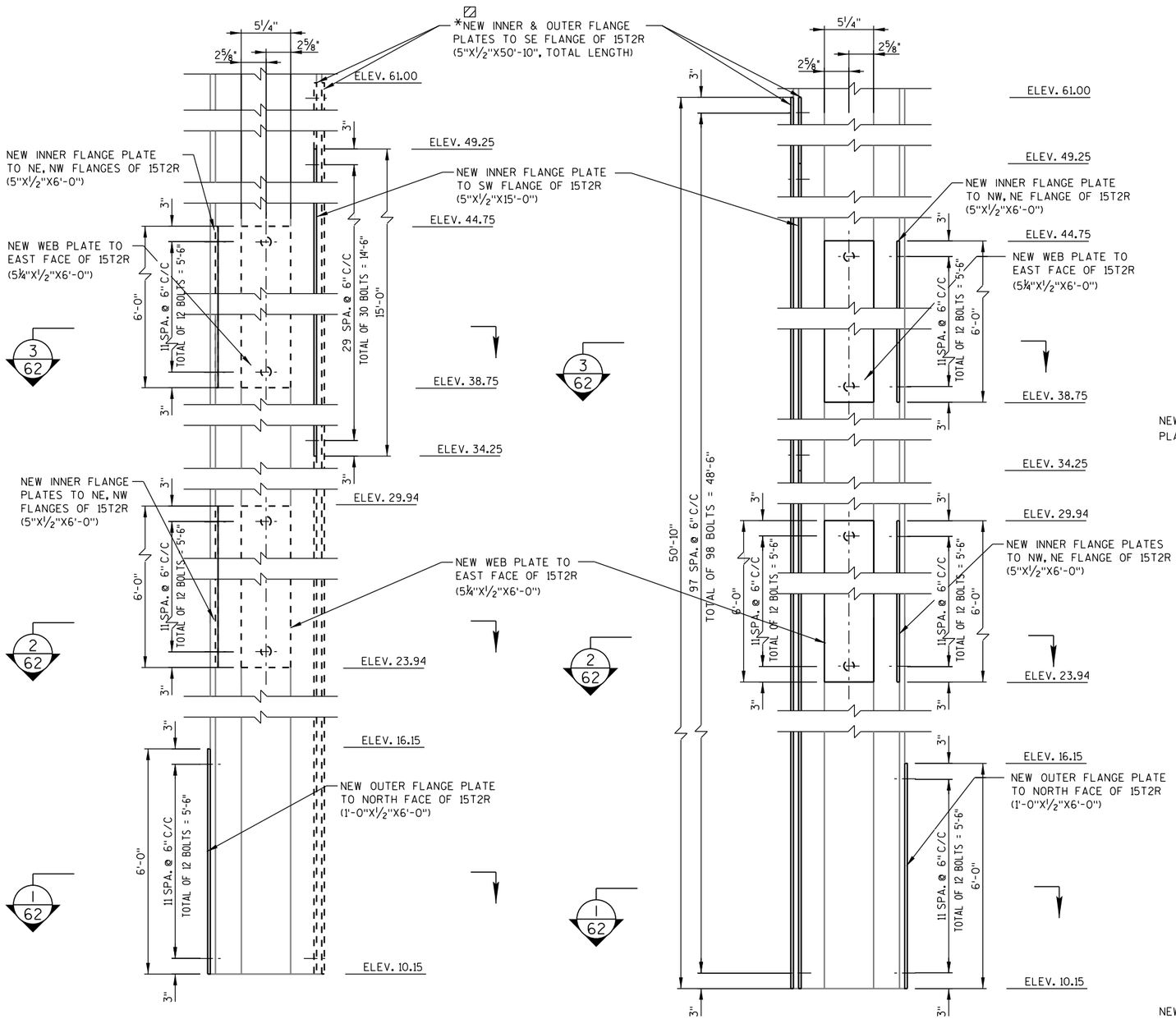
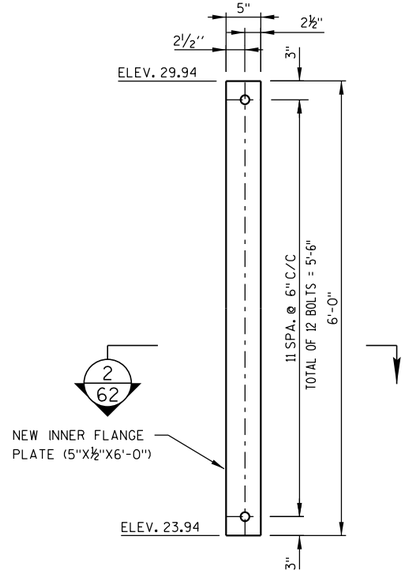


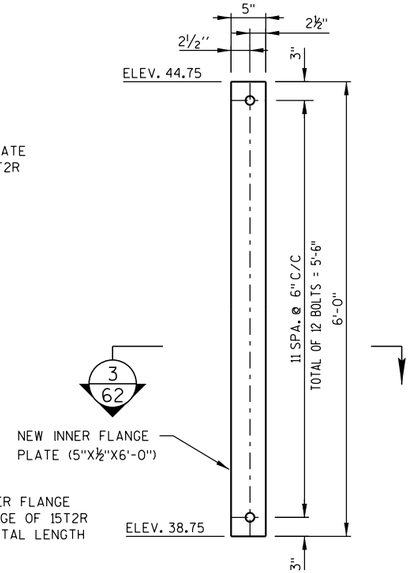
WEB & FLANGE PLATES DETAIL 4

WEB & FLANGE PLATES DETAILS 5



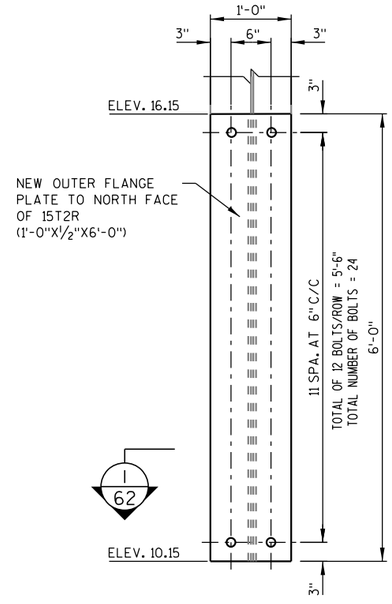
INNER FLANGE PLATE DETAIL 1

(2) INNER FLANGE PLATE
AT NW, NE FLANGE OF 15T2R
NOTE ⑥ SHEET 28



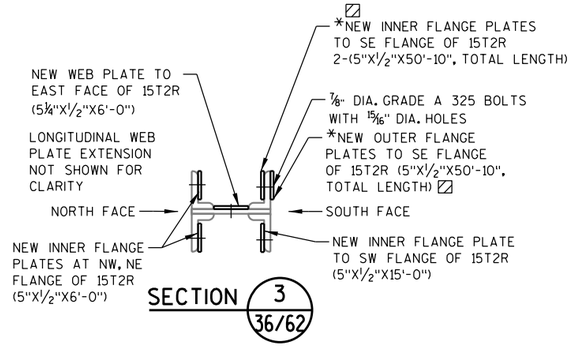
INNER FLANGE PLATE DETAIL 3

(2) INNER FLANGE PLATE
AT NW, NE FLANGE OF 15T2R
NOTE ⑥ SHEET 28



OUTER FLANGE PLATE DETAIL 2

(1) OUTER FLANGE PLATE
AT NORTH FLANGE OF 15T2R
NOTE ⑦ SHEET 28



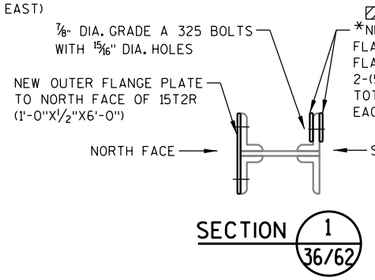
NOTES:

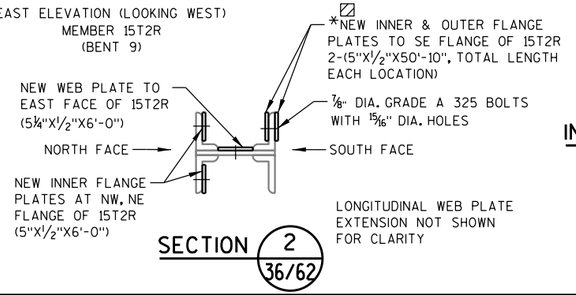
USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

*-ELEVATION OF PLATE BUTT JOINT TO BE DETERMINED BY ENGINEER IN THE FIELD.

⊠: FABRICATE AND INSTALL IN MORE THAN ONE PIECE TO FACILITATE INSTALLATION.





NO.	DATE	REVISION	BY

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STRUCTURE P-40-875

DRAWN BY	PLANS CK'D.
HMD	JPH

15T2R MEMBER DETAILS

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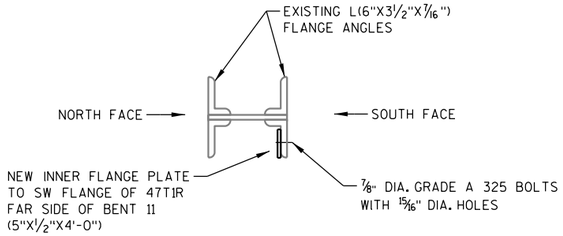
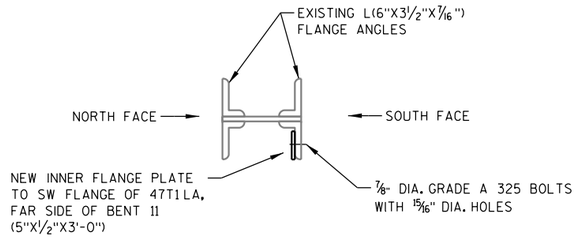
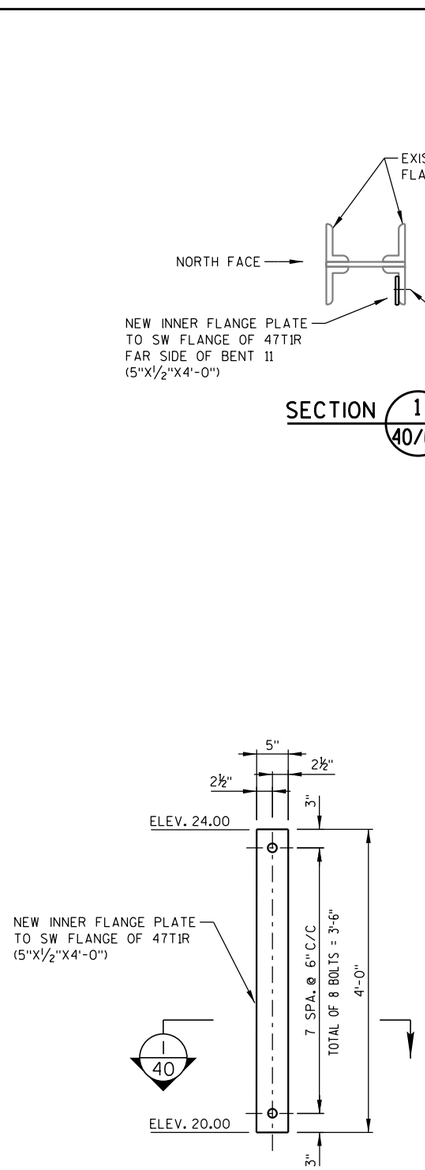


SECTION 1 / 40/63

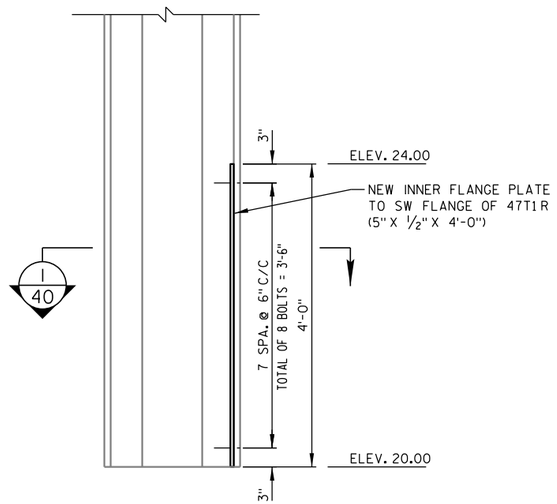


SECTION 2 / 40/63



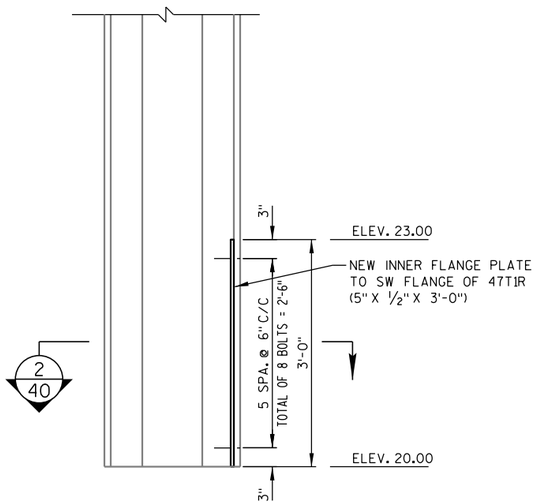
INNER FLANGE PLATE DETAIL 4

(1) INNER FLANGE PLATE
AT SW FLANGE OF 47T1R
AT FAR SIDE OF BENT 11
NOTE (1) SHEET 31



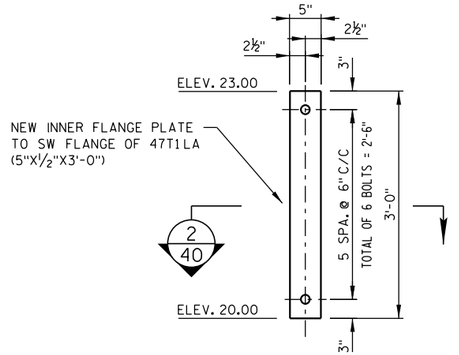
FLANGE PLATE DETAIL 3

WEST ELEVATION (LOOKING EAST)
MEMBER 47T1R
(BENT 11)



FLANGE PLATE DETAIL 2

WEST ELEVATION (LOOKING EAST)
MEMBER 47T1LA
(BENT 11)



INNER FLANGE PLATE DETAIL 1

(1) INNER FLANGE PLATE
AT SW FLANGE OF 47T1LA
AT FAR SIDE OF BENT 11
NOTE (1) SHEET 31

NOTE

MATCH EXISTING BOLT SPACING
WHERE APPLICABLE.

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47T1R & 47T1LA
FAR SIDE
MEMBER DETAILS

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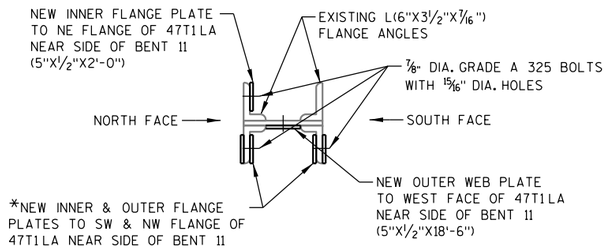
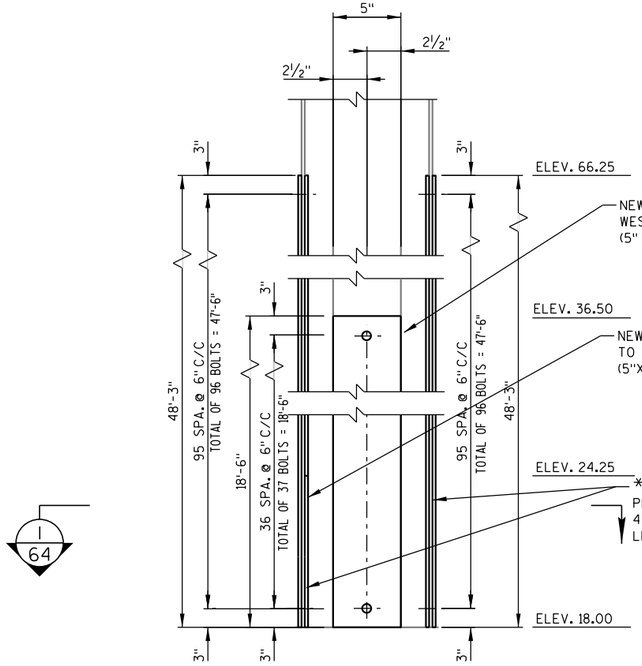
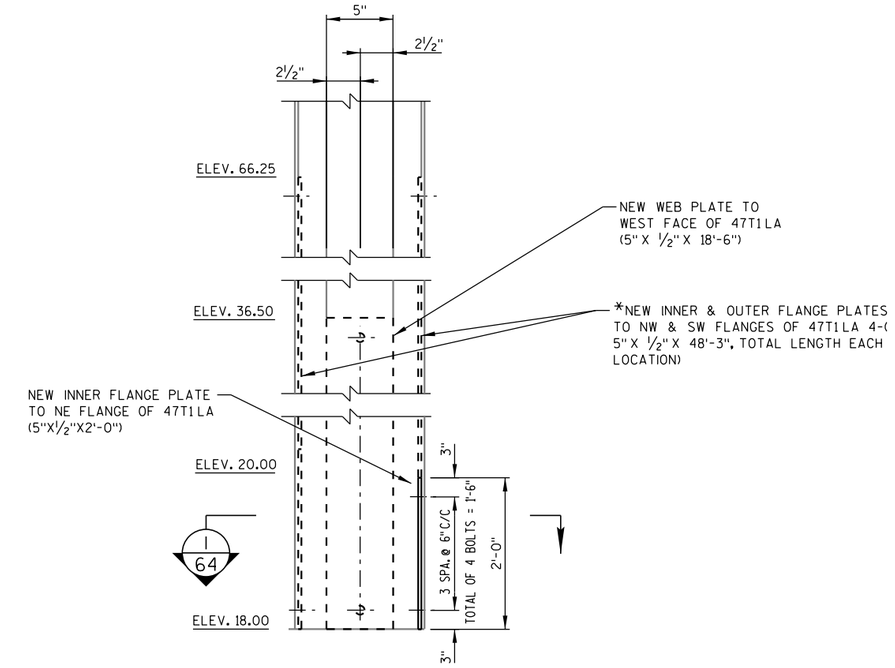


SECTION 1 / 40/64



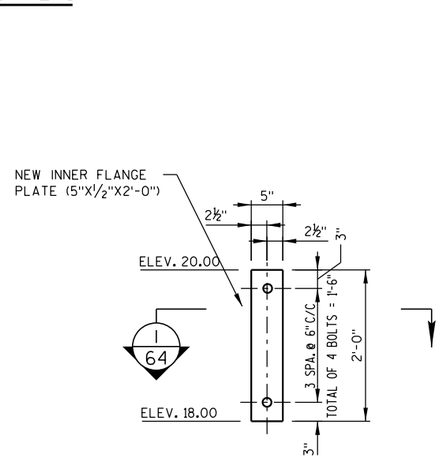
WEB AND FLANGE PLATE DETAIL 1

WEST ELEVATION (LOOKING EAST)
MEMBER 47T1LA
(BENT 11)



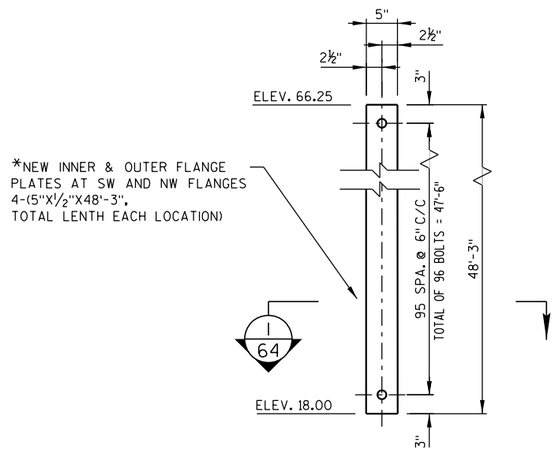
WEB AND FLANGE PLATE DETAIL 2

EAST ELEVATION (LOOKING WEST)
MEMBER 47T1LA
(BENT 11)



INNER FLANGE PLATE DETAIL 3

(1) INNER FLANGE PLATE
AT NE FLANGE OF 47T1LA
NOTE ⑥ SHEET 31



INNER AND OUTER FLANGE PLATE DETAIL 4

(4) INNER & OUTER FLANGE PLATES
AT NW AND SW FLANGES OF 47T1LA
NOTE ⑤ SHEET 31

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

*- ELEVATON OF PLATE BUTT JOINTS TO BE DETERMNED BY ENGINEER IN THE FIELD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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47T1LA NEAR SIDE MEMBER DETAILS

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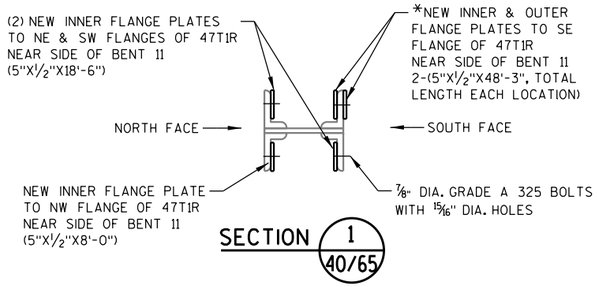
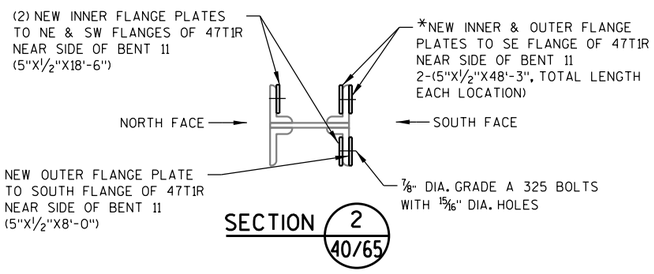
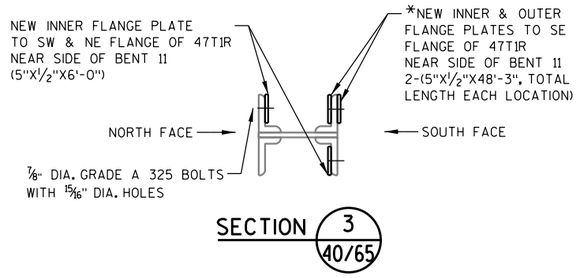
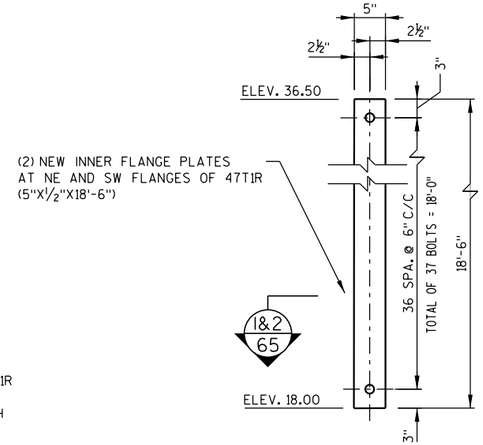


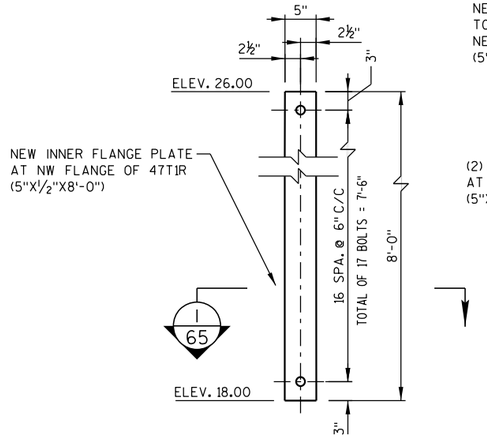






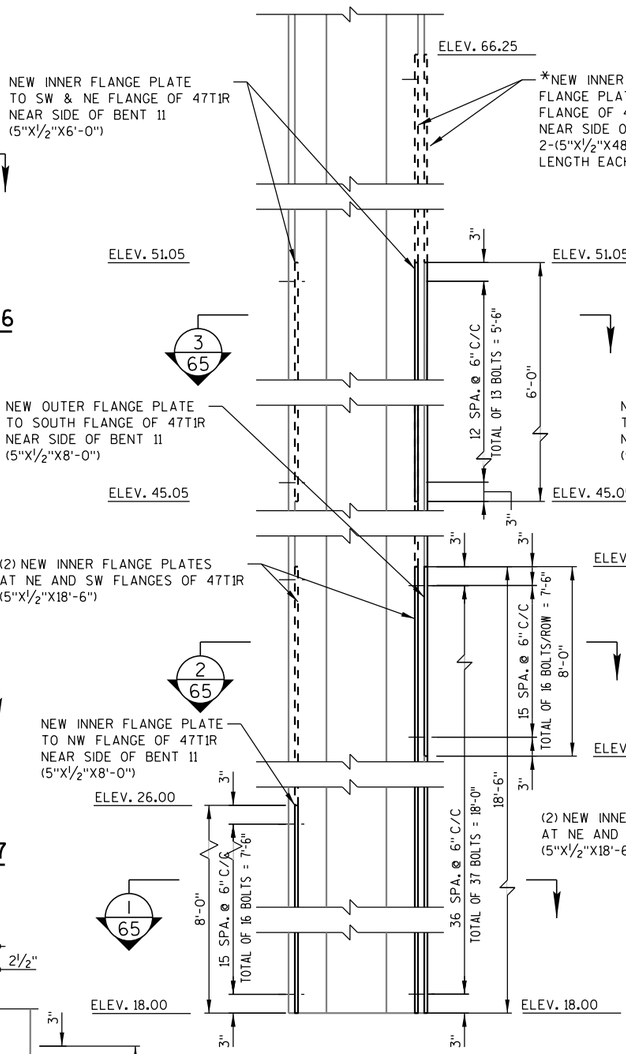
INNER FLANGE PLATE DETAIL 6

(2) INNER FLANGE PLATES AT NE AND SW FLANGES OF 47T1R NOTE (9) SHEET 31



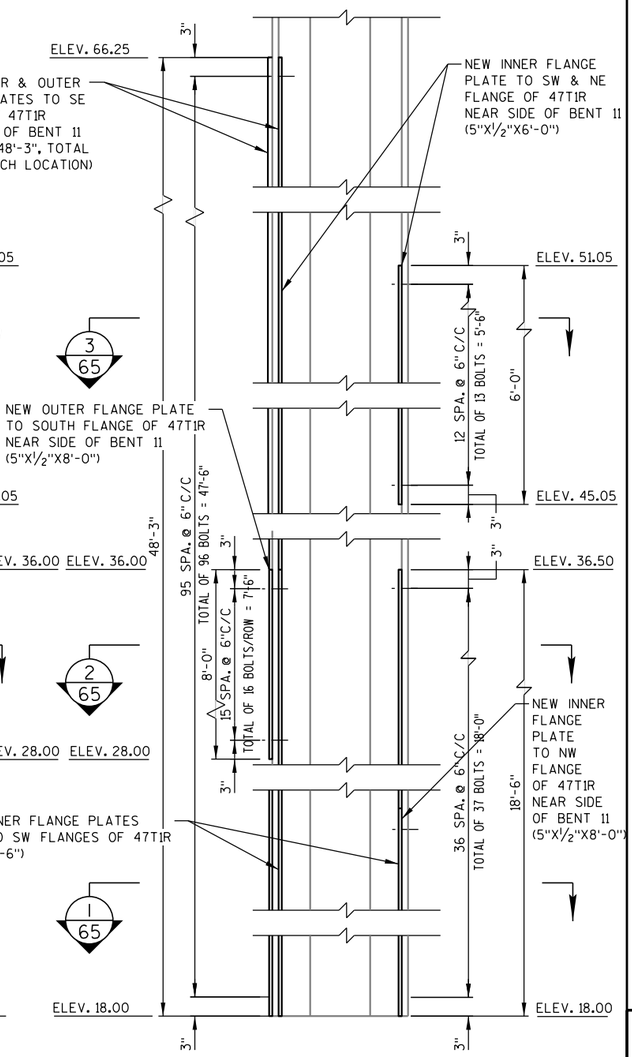
INNER FLANGE PLATE DETAIL 7

INNER FLANGE PLATE AT NW FLANGE OF 47T1R NOTE (11) SHEET 31



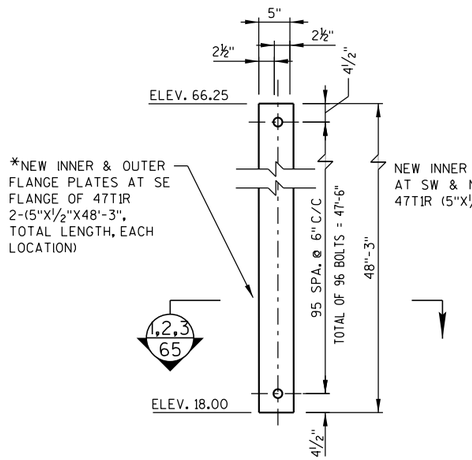
FLANGE PLATES DETAILS 1

WEST ELEVATION (LOOKING EAST)
MEMBER 47T1R
(BENT 11)



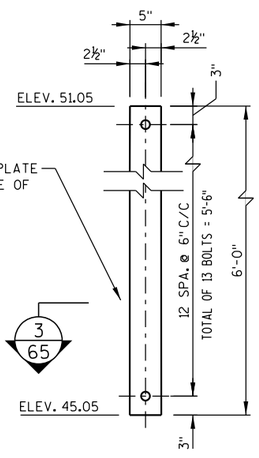
FLANGE PLATES DETAILS 2

EAST ELEVATION (LOOKING WEST)
MEMBER 47T1R
(BENT 11)



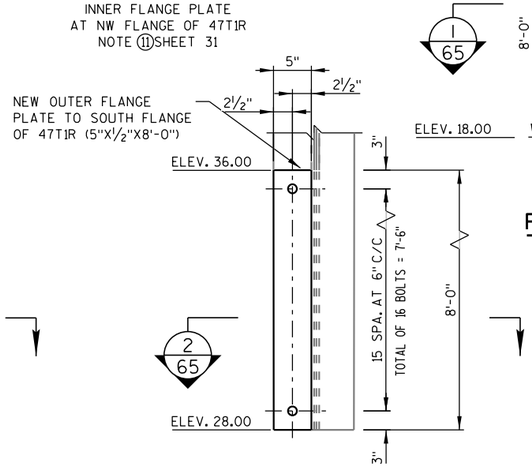
INNER & OUTER FLANGE PLATE DETAIL 3

INNER & OUTER FLANGE PLATE AT SE FLANGE OF 47T1R. NOTE (7) SHEET 31



INSIDE FLANGE PLATE DETAIL 4

INNER FLANGE PLATE AT SW & NW FLANGE OF 47T1R. NOTE (8) SHEET 31



OUTER FLANGE PLATE DETAIL 5

(1) OUTER FLANGE PLATE AT SOUTH FLANGE OF 47T1R. NOTE (10) SHEET 31

NOTE:

MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

*- ELEVATION OF PLATE BUTT JOINT TO BE DETERMINED BY ENGINEER IN THE FIELD.

NO.	DATE	REVISION	BY

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DRAWN BY HMD | PLANS CK'D. JPH

47T1R NEAR SIDE MEMBER DETAILS

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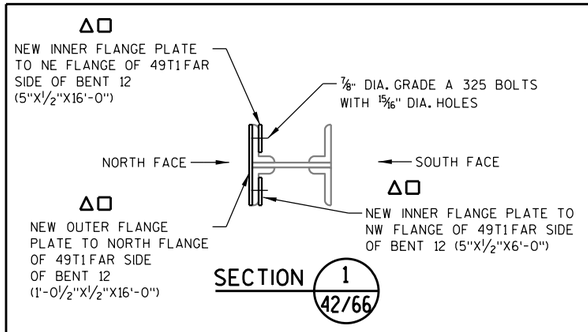
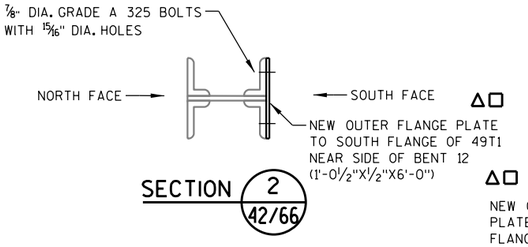
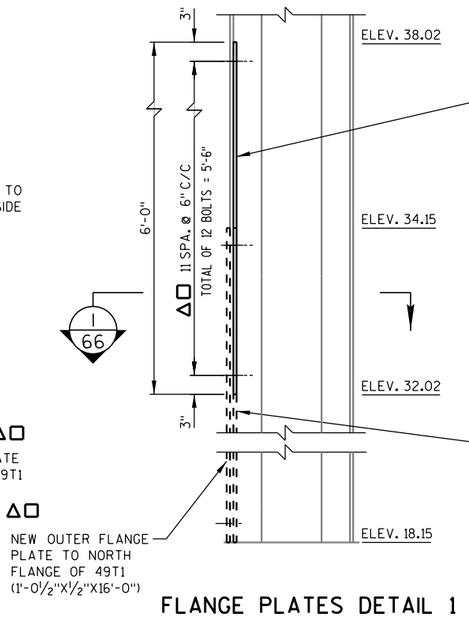
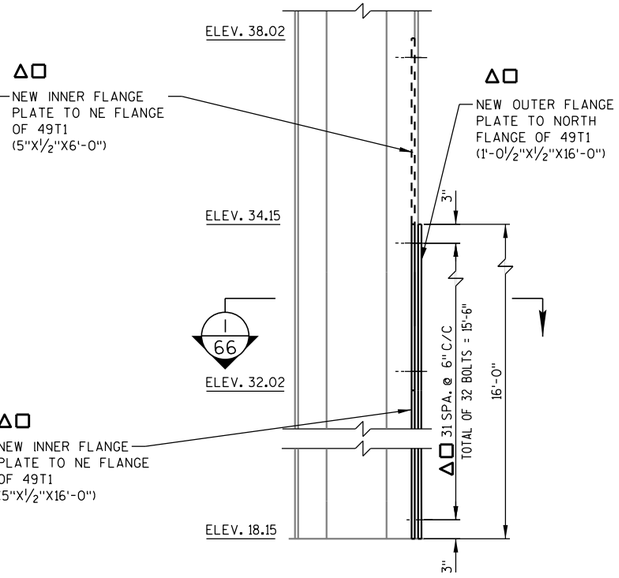






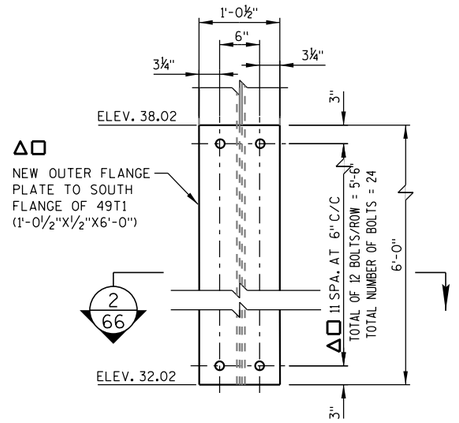
FLANGE PLATES DETAIL 1

WEST ELEVATION (LOOKING EAST)



FLANGE PLATES DETAIL 3

EAST ELEVATION (LOOKING WEST)



OUTER FLANGE PLATE DETAIL 5

SOUTH ELEVATION
(LOOKING NORTH)
OUTER FLANGE PLATE
AT SOUTH FLANGE OF 49T1
(BENT 12)
NOTE (2) SHEET 33

KEY:

△ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

□ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.

MIN. BOLT SPACING ≥ 2.625"
MAX BOLT SPACING ≤ 6"

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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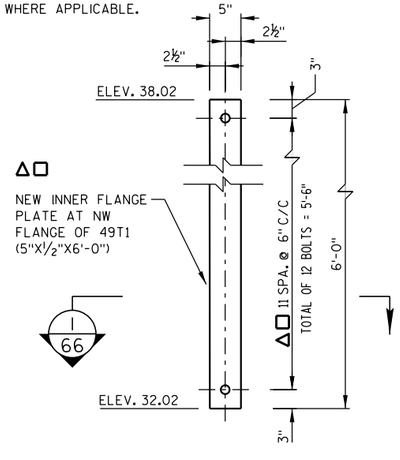
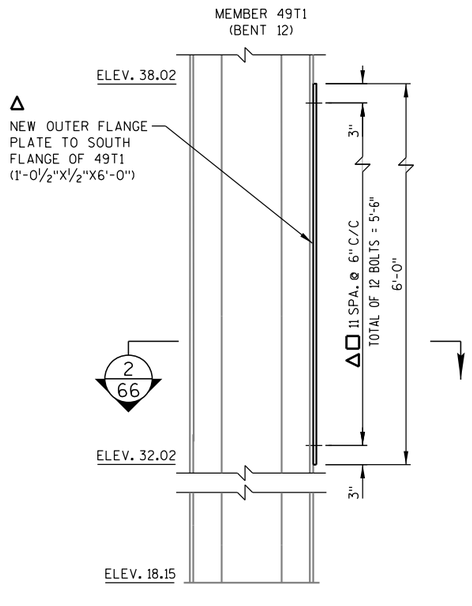


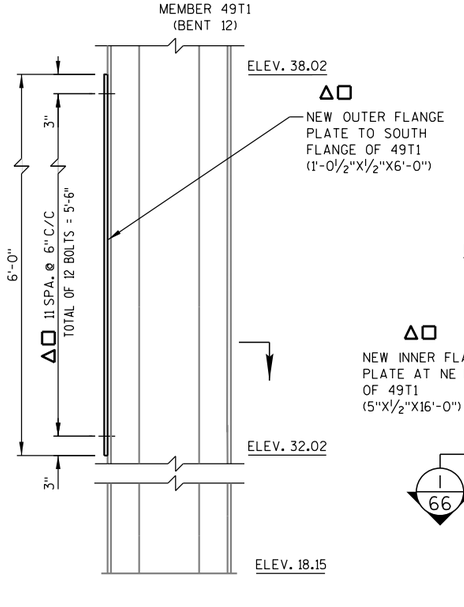
INNER FLANGE PLATE DETAIL 7

INNER FLANGE PLATE
AT NW FLANGE OF 49T1
(BENT 12)
NOTE (19) SHEET 33



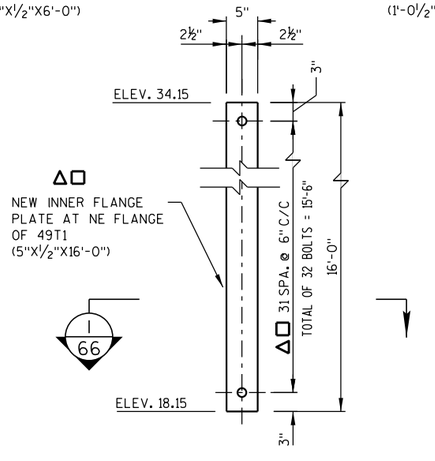
FLANGE PLATE DETAIL 2

WEST ELEVATION (LOOKING EAST)
MEMBER 49T1
(BENT 12)



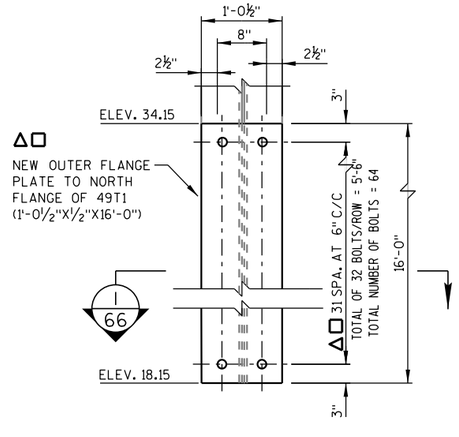
FLANGE PLATE DETAIL 4

EAST ELEVATION (LOOKING WEST)
MEMBER 49T1
(BENT 12)



INNER FLANGE PLATE DETAIL 6

INNER FLANGE PLATE
AT NE FLANGE OF 49T1
(BENT 12)
NOTE (11) SHEET 33



OUTER FLANGE PLATE DETAIL 8

OUTER FLANGE PLATE
AT NORTH FLANGE OF 49T1
(BENT 12)
NOTE (11) SHEET 33

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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49T1 FAR AND NEAR SIDES MEMBER DETAILS

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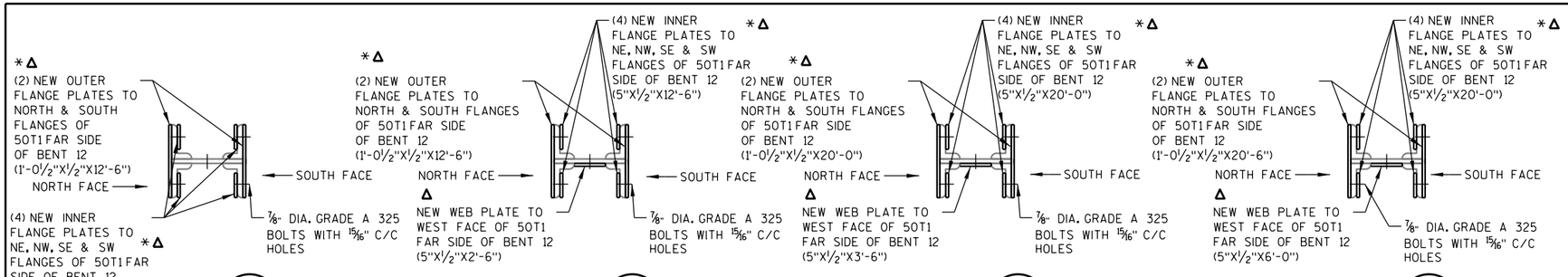
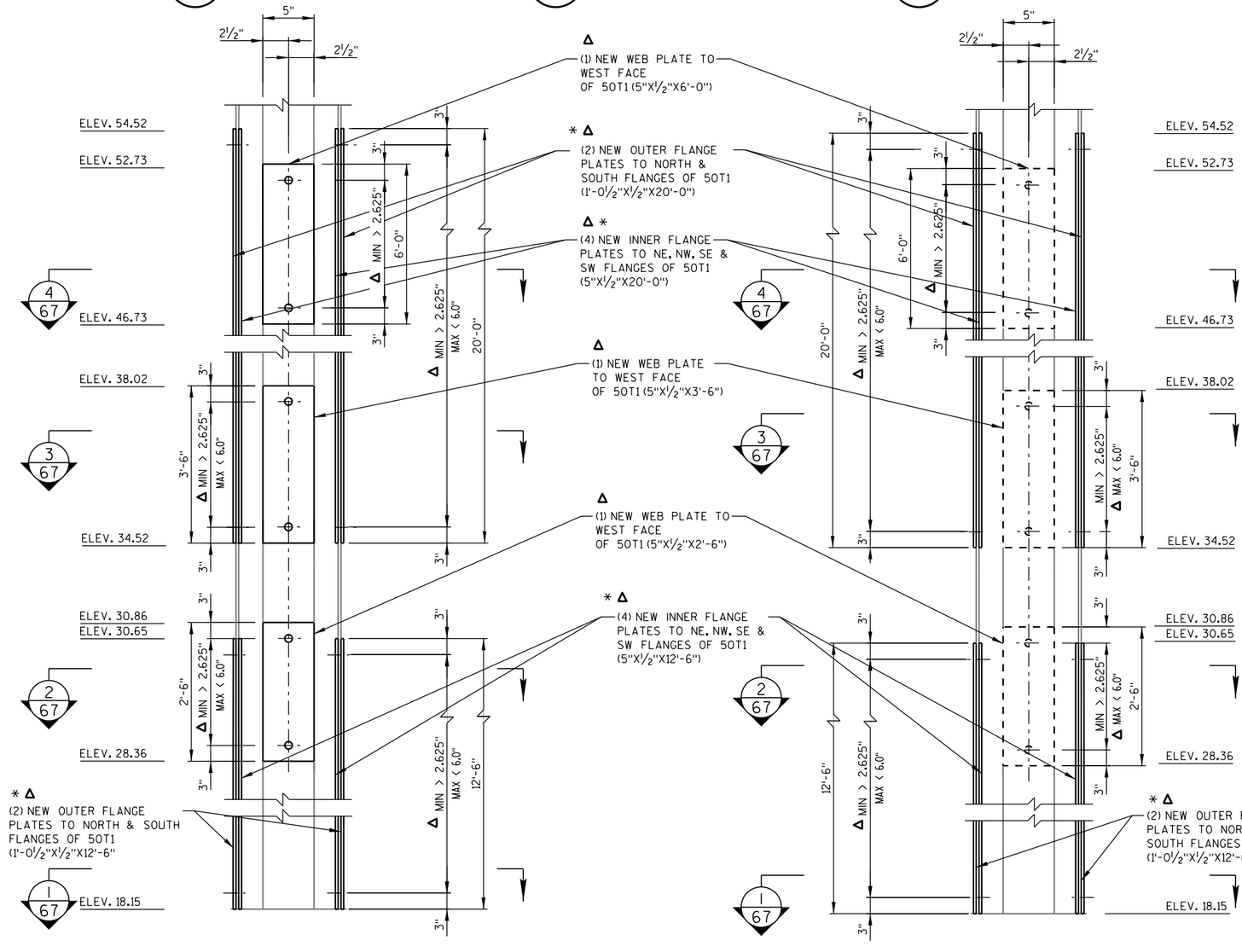


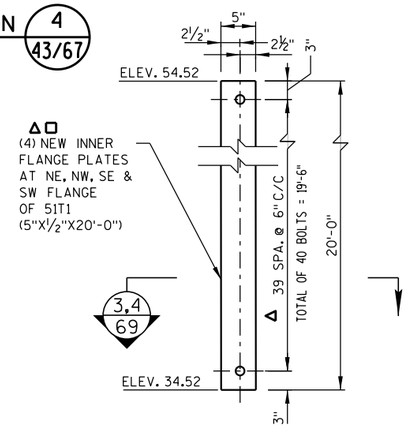


WEB AND FLANGE PLATE DETAIL 1

WEST ELEVATION (LOOKING EAST)
MEMBER 50T1
(BENT 12)

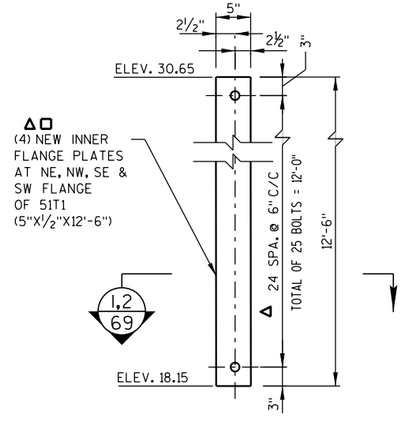
WEB AND FLANGE PLATE DETAIL 2

EAST ELEVATION (LOOKING WEST)
MEMBER 50T1
(BENT 12)



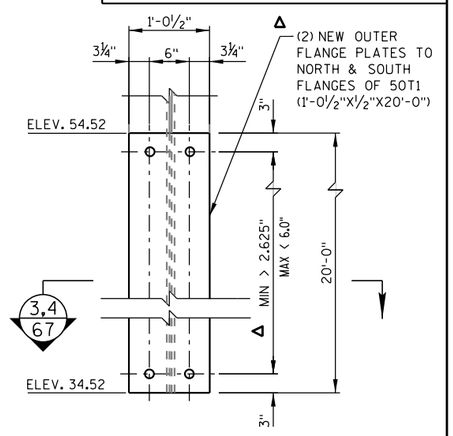
INNER FLANGE PLATE DETAIL 5

(4) INNER FLANGE PLATES
AT NE, NW, SE & SW FLANGES OF 50T1



INNER FLANGE PLATE DETAIL 6

(4) INNER FLANGE PLATES
AT NE, NW, SE & SW FLANGES OF 50T1
NOTE (17) SHEET 33



OUTER FLANGE PLATE DETAIL 4

(2) OUTER FLANGE PLATES
AT NORTH & SOUTH FLANGES OF 50T1

OUTER FLANGE PLATE DETAIL 3

(2) OUTER FLANGE PLATES
AT NORTH & SOUTH FLANGES OF 50T1
NOTE (17) SHEET 33

KEY:

△ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

□ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.

MIN BOLT SPACING ≥ 2.625"
MAX BOLT SPACING ≤ 6"

*- ELEVATION OF PLATE BUTT JOINT TO BE DETERMINED BY ENGINEER IN THE FIELD.

NO.	DATE	REVISION	BY

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HMD	JPH

50T1 FAR SIDE MEMBER DETAILS

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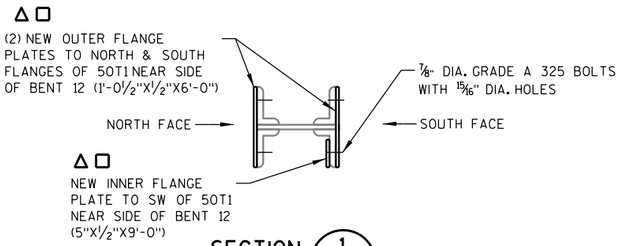

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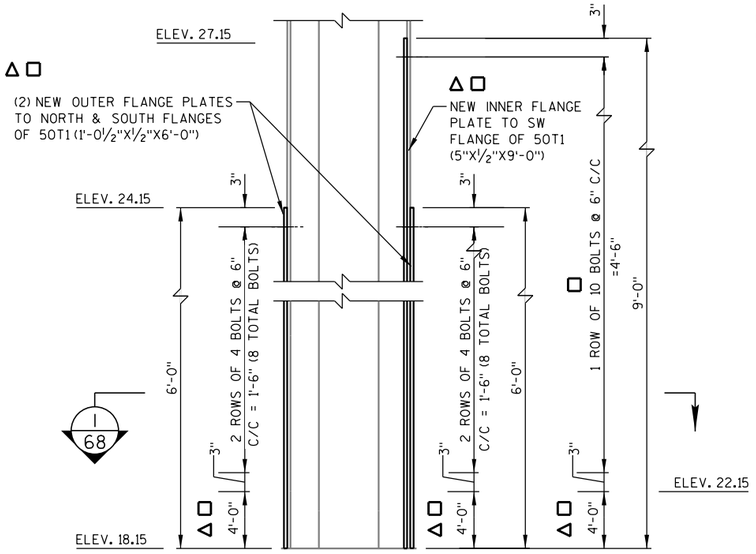
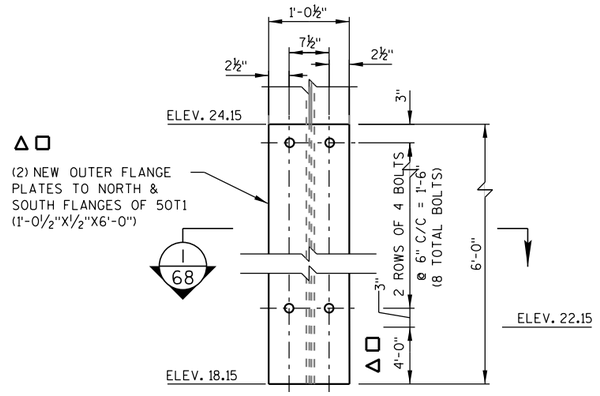


FLANGE PLATES DETAIL 4

WEST ELEVATION (LOOKING EAST)
MEMBER 50T1
(BENT 12)



OUTER FLANGE PLATE DETAIL 3

(2) OUTER FLANGE PLATES
AT NORTH & SOUTH FLANGES OF 50T1
(BENT 12)
NOTE ③ SHEET 33

KEY:

△ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

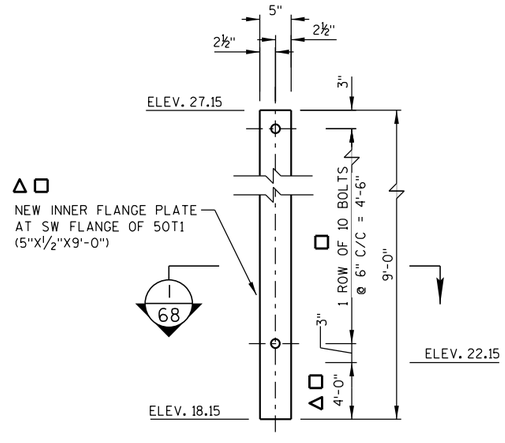
□ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.

* MIN BOLT SPACING ≥ 2.625"
MAX BOLT SPACING ≤ 6"

NOTES:

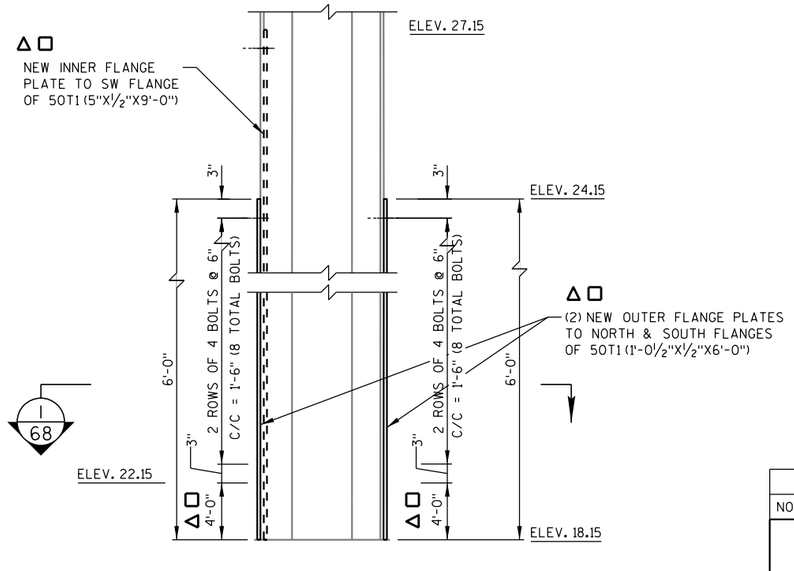
USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.



INNER FLANGE PLATE DETAIL 2

INNER FLANGE PLATE
AT SW FLANGE OF 50T1
(BENT 12)
NOTE ① SHEET 33



FLANGE PLATES DETAIL 1

EAST ELEVATION (LOOKING WEST)
MEMBER 50T1
(BENT 12)

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DEPARTMENT OF TRANSPORTATION

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DRAWN BY HMD | PLANS CK'D. JPH

50T1 NEAR SIDE MEMBER DETAILS

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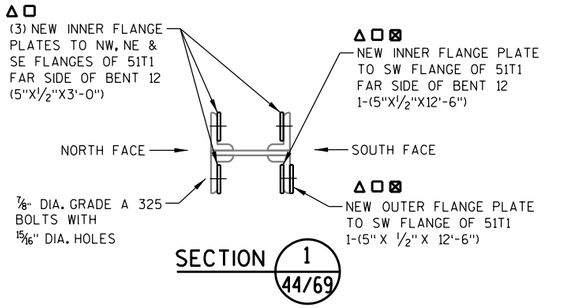
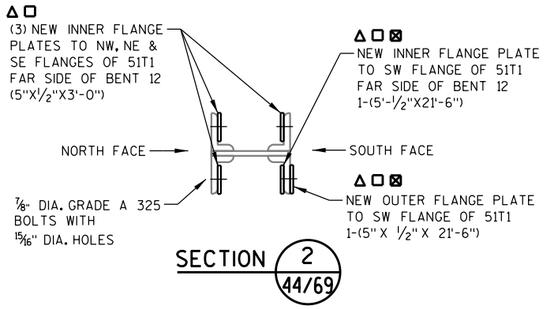
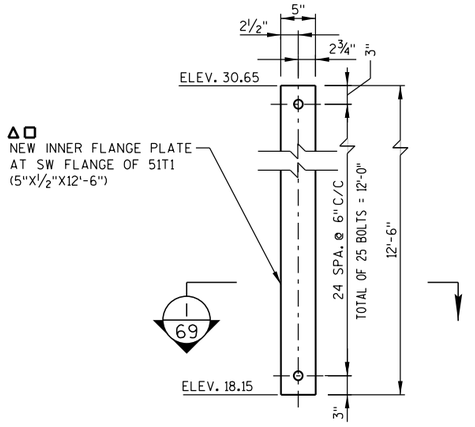


SECTION 1 44/69

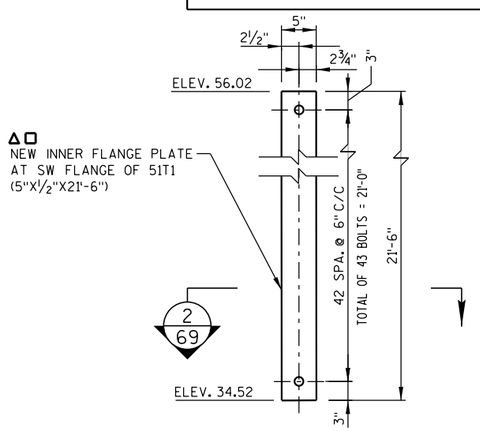


SECTION 2 44/69



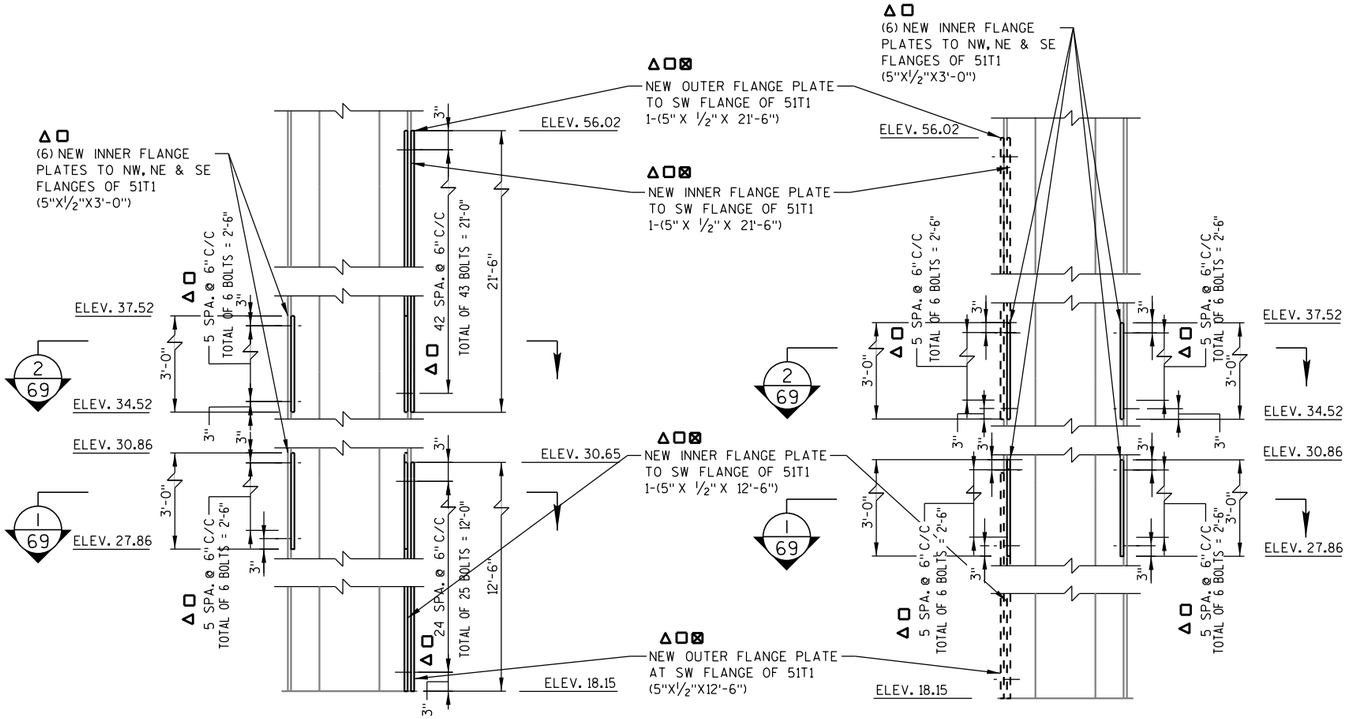
INNER FLANGE PLATE DETAIL 1

INNER FLANGE PLATE
AT SW FLANGE OF 51T1
NOTE (12) SHEET 33



INNER FLANGE PLATE DETAIL 3

INNER FLANGE PLATE
AT SW FLANGE OF 51T1
NOTE (12) SHEET 33

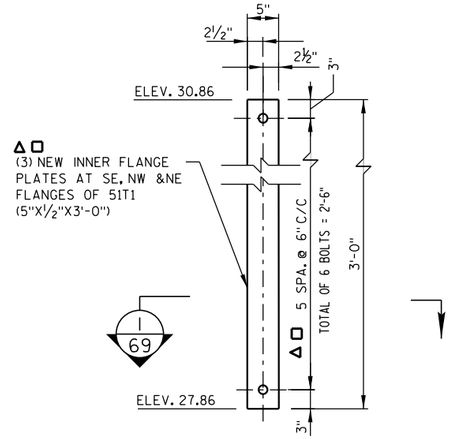


FLANGE PLATES DETAIL 2

WEST ELEVATION (LOOKING EAST)
MEMBER 51T1
(BENT 12)

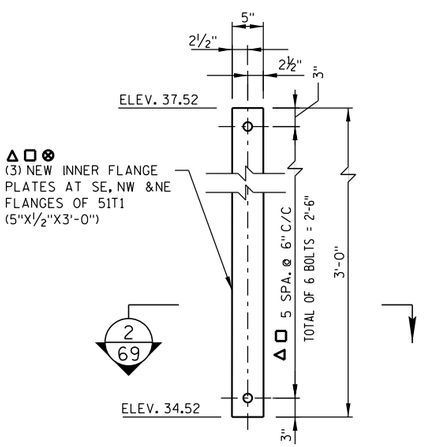
FLANGE PLATES DETAIL 4

EAST ELEVATION (LOOKING WEST)
MEMBER 51T1
(BENT 12)



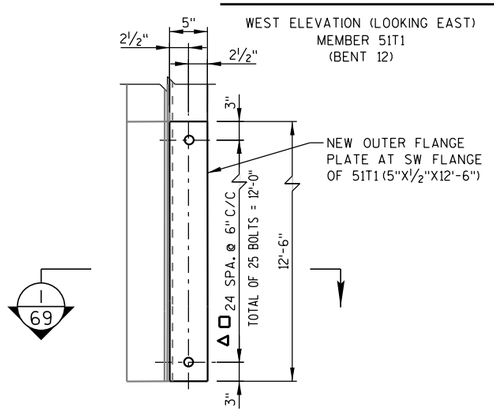
INNER FLANGE PLATES DETAIL 6

INNER FLANGE PLATES
AT NW, NE & SE FLANGES OF 51T1
NOTE (23) SHEET 33



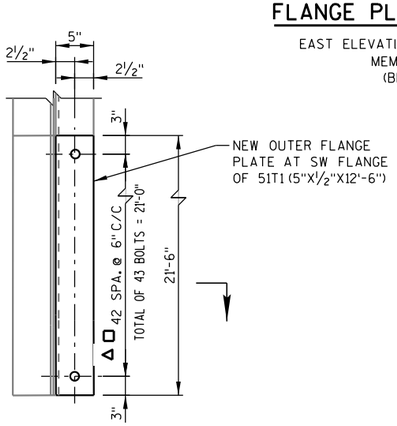
INNER FLANGE PLATES DETAIL 5

INNER FLANGE PLATE
AT NW, NE & SE FLANGE OF 51T1
NOTE (23) SHEET 33



OUTER FLANGE PLATE DETAIL 7

OUTER FLANGE PLATE
AT SW FLANGE OF 51T1
NOTE (12) SHEET 33



OUTER FLANGE PLATE DETAIL 8

OUTER FLANGE PLATE
AT SW FLANGE OF 51T1
NOTE (12) SHEET 33

KEY:

- △ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.
- □ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.
- ✳ =MIN. BOLT SPACING ≥ 2.625" MAX BOLT SPACING ≤ 6"
- ⊠ =ELEVATION OF PLATE BUTT JOINTS TO BE DETERMINED BY ENGINEER IN THE FIELD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-875

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51T1 FAR SIDE MEMBER DETAILS

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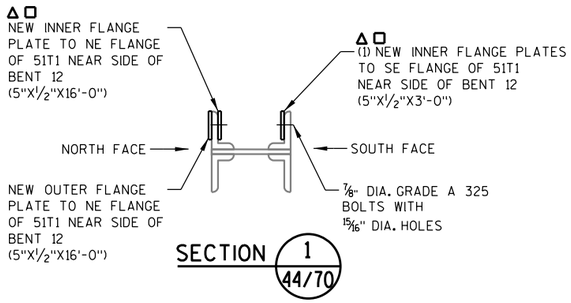

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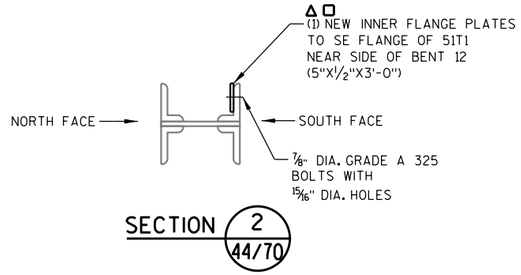
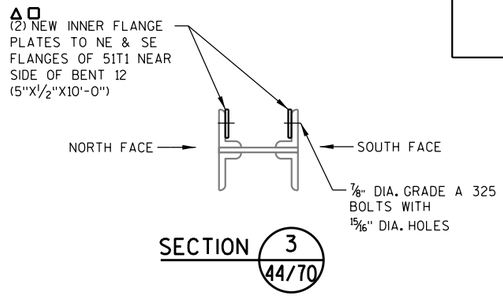
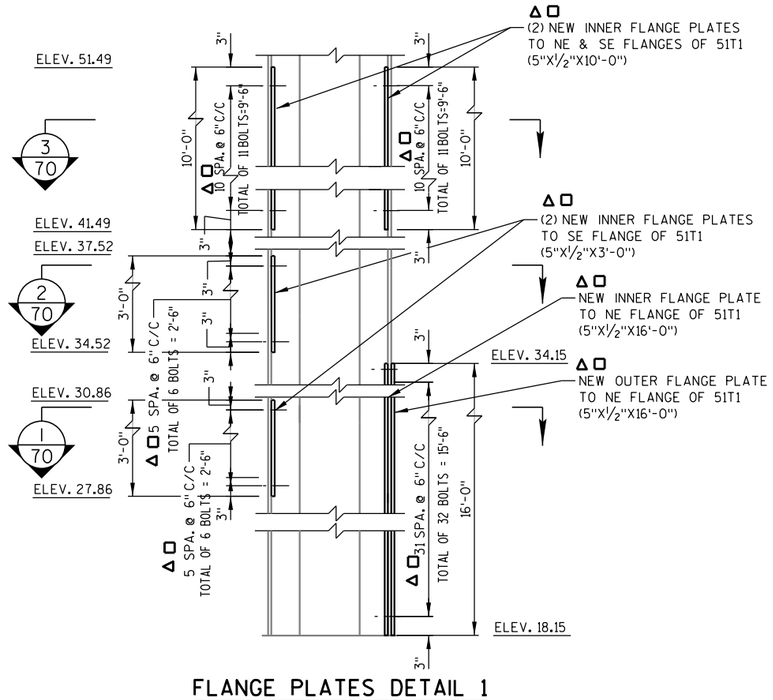


SECTION 2 44/70

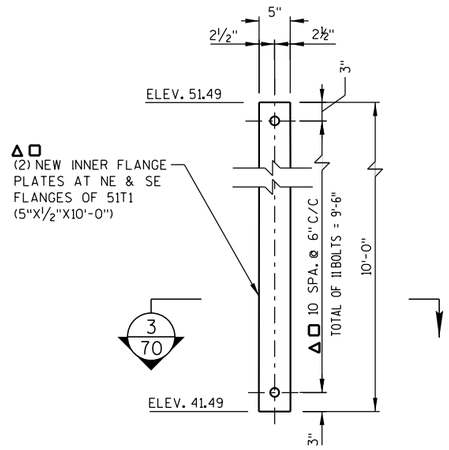


SECTION 3 44/70



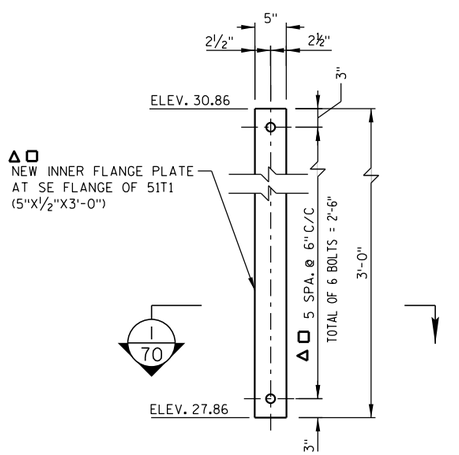
FLANGE PLATES DETAIL 1

EAST ELEVATION (LOOKING WEST)
MEMBER 51T1
(BENT 12)



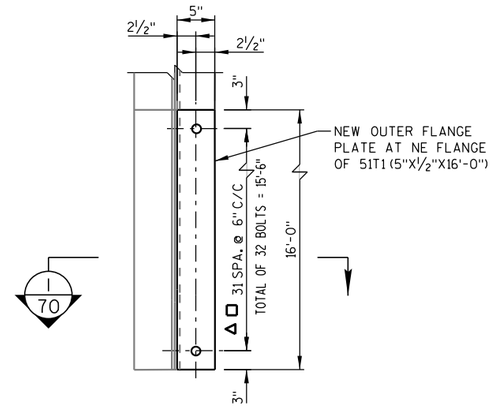
INNER FLANGE PLATE DETAIL 2

INNER FLANGE PLATES
AT NE & SE FLANGES OF 51T1
NOTE ④ SHEET 33



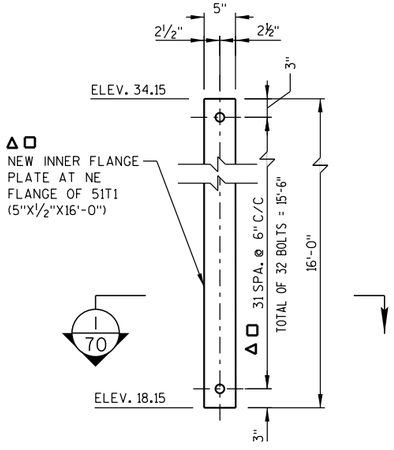
INNER FLANGE PLATES DETAIL 3

INNER FLANGE PLATE
AT SE FLANGE OF 51T1
NOTE ⑥ SHEET 33



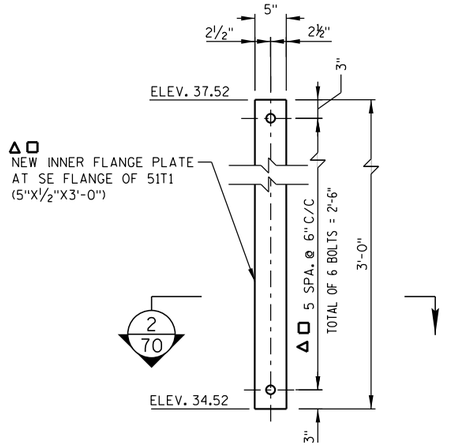
OUTER FLANGE PLATE DETAIL 6

OUTER FLANGE PLATE
AT NE FLANGE OF 51T1
NOTE ⑤ SHEET 33



INNER FLANGE PLATE DETAIL 4

INNER FLANGE PLATE
AT NE FLANGE OF 51T1
NOTE ⑤ SHEET 33



INNER FLANGE PLATES DETAIL 5

INNER FLANGE PLATE
AT SE FLANGE OF 51T1
NOTE ⑥ SHEET 33

KEY:

△ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

□ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.

✳ =MIN. BOLT SPACING ≥ 2.625"
MAX BOLT SPACING ≤ 6"

⊠ =ELEVATION OF PLATE BUTT JOINTS TO BE DETERMINED BY ENGINEER IN THE FIELD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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51T1 NEAR SIDE MEMBER DETAILS

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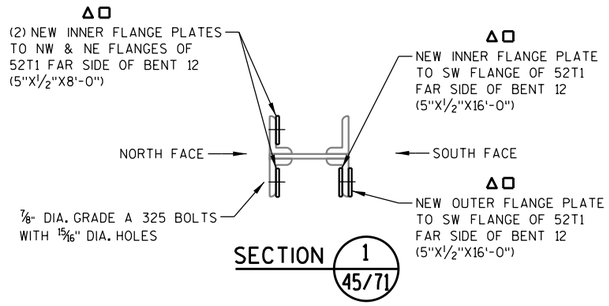
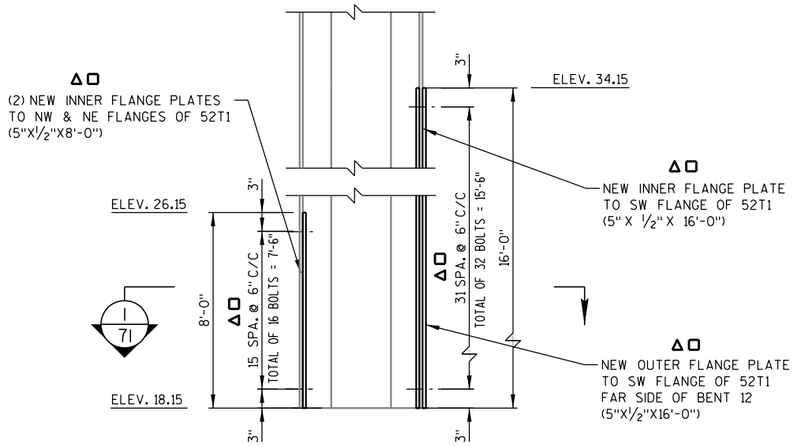
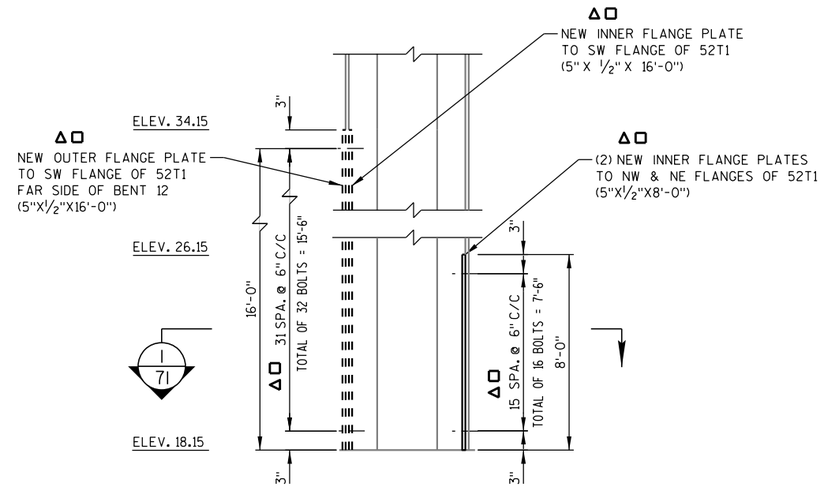




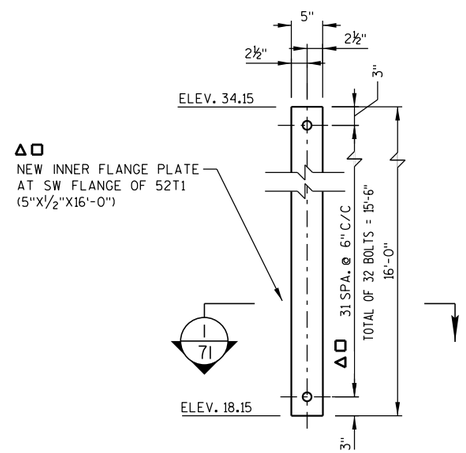
FLANGE PLATES DETAIL 1

WEST ELEVATION (LOOKING EAST)
MEMBER 52T1
(BENT 12)



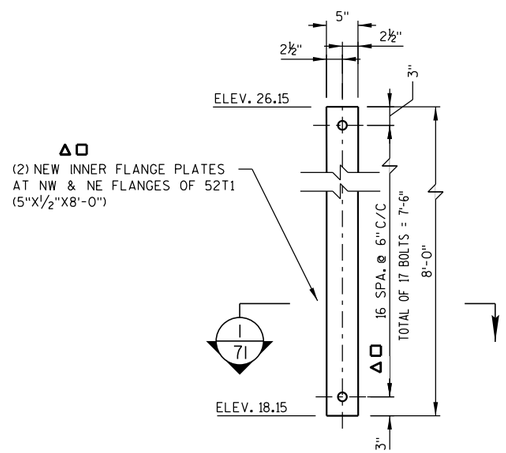
FLANGE PLATES DETAIL 3

EAST ELEVATION (LOOKING WEST)
MEMBER 52T1
(BENT 12)



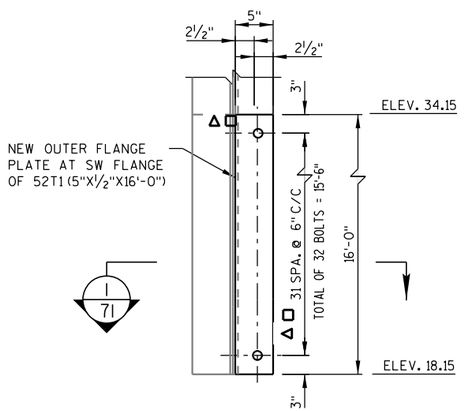
INNER FLANGE PLATE DETAIL 2

INNER FLANGE PLATE
AT SW FLANGE OF 52T1
(BENT 12)
NOTE ⑩ SHEET 33



INNER FLANGE PLATES DETAIL 4

INNER FLANGE PLATES
AT NW & NE FLANGES OF 52T1
(BENT 12)
NOTE ⑩ SHEET 33



OUTER FLANGE PLATE DETAIL 5

OUTER FLANGE PLATE
AT SW FLANGE OF 52T1
NOTE ⑩ SHEET 33

KEY:

△ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

□ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.

MIN BOLT SPACING ≥ 2.625"
MAX BOLT SPACING ≤ 6"

NOTES:

USE EXISTING BOLT SPACING AT ALL GUSSET PLATE REPLACEMENT LOCATIONS.

MATCH EXISTING BOLT SPACES WHERE APPLICABLE.

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52T1 FAR SIDE MEMBER DETAILS

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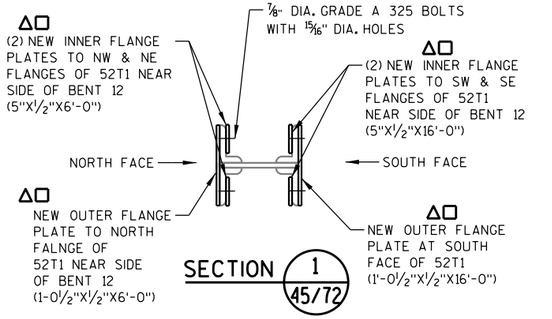
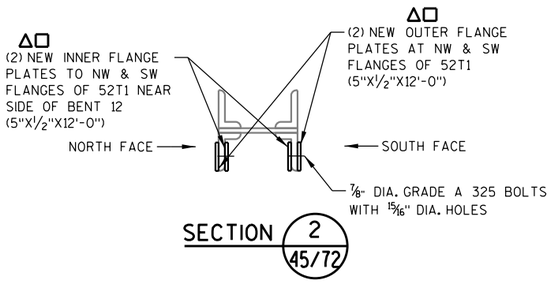
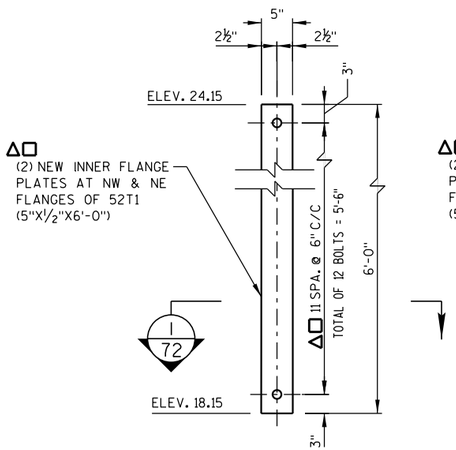
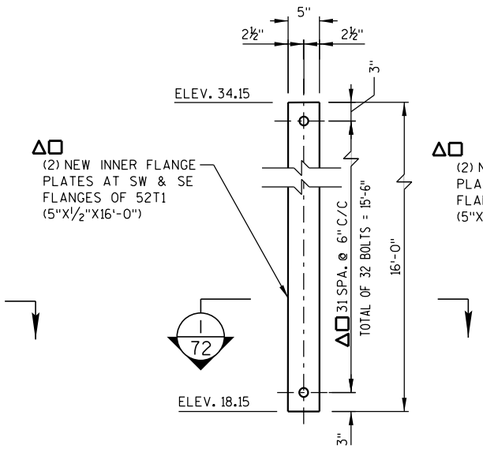






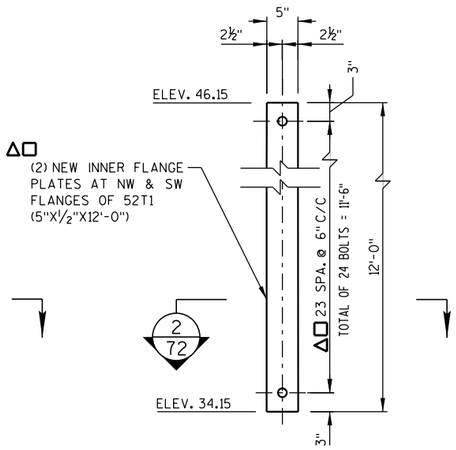
INNER FLANGE PLATE DETAIL 2

(2) INNER FLANGE PLATES
AT NW & NE FLANGES OF 51T1
(BENT 12)
NOTE ⑧ SHEET 33



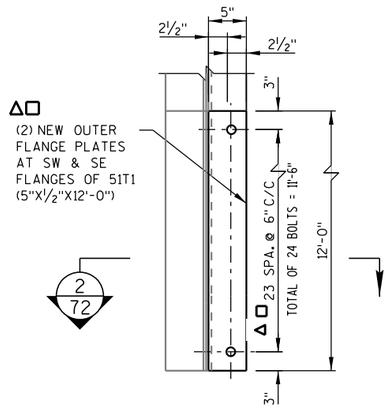
INNER FLANGE PLATE DETAIL 3

(2) INNER FLANGE PLATES
AT SW & SE FLANGES OF 51T1
(BENT 12)
NOTE ⑦ SHEET 33



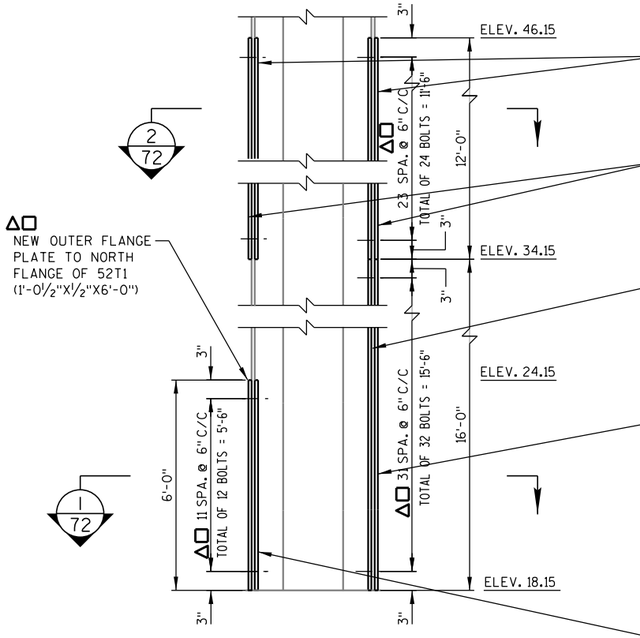
INNER FLANGE PLATES DETAIL 5

(2) INNER FLANGE PLATES
AT NW & SW FLANGES OF 52T1
(BENT 12)
NOTE ⑨ SHEET 33



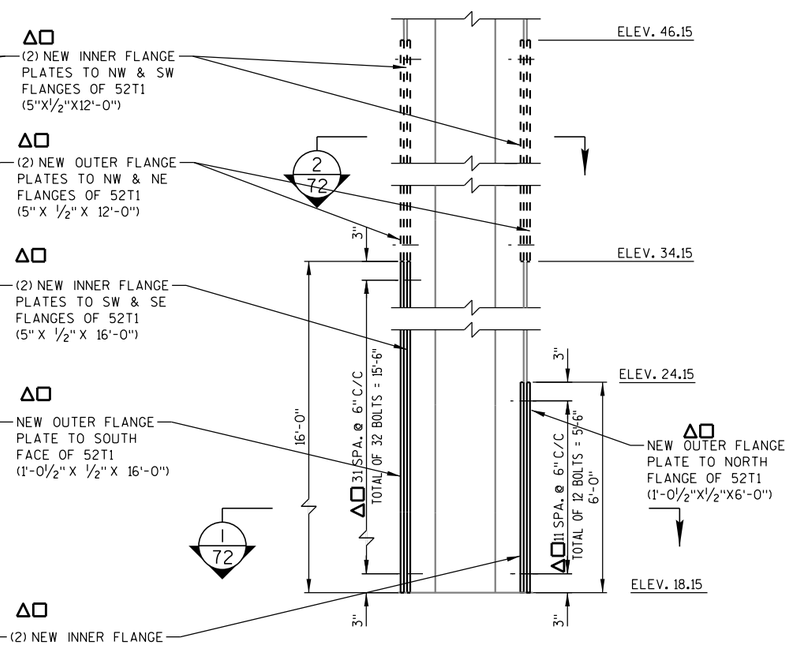
OUTER FLANGE PLATE DETAIL 7

(2) OUTER FLANGE PLATES
AT SW & SE FLANGES OF 52T1
NOTE ⑨ SHEET 33



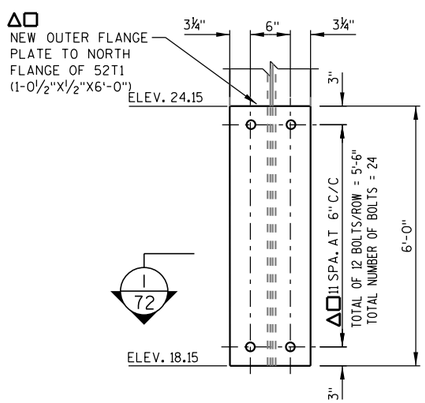
FLANGE PLATES DETAIL 1

WEST ELEVATION (LOOKING EAST)
MEMBER 51T1
(BENT 12)



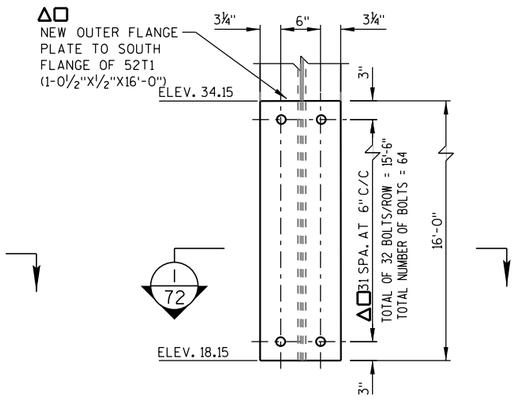
FLANGE PLATES DETAIL 4

EAST ELEVATION (LOOKING WEST)
MEMBER 52T1
(BENT 12)



OUTER FLANGE PLATE DETAIL 6

OUTER FLANGE PLATE
AT NORTH FLANGE OF 52T1
(BENT 12)
NOTE ⑧ SHEET 33



OUTER FLANGE PLATE DETAIL 8

OUTER FLANGE PLATE
AT SOUTH FLANGE OF 52T1
(BENT 12)
NOTE ⑦ SHEET 33

KEY:

Δ = MATCH EXISTING BOLT SPACING WHERE APPLICABLE.

□ = ALIGN BOLT HOLES WITH OUTSIDE FLANGE/GUSSET PLATE BOLT SPACING WHERE APPLICABLE.

* =MIN. BOLT SPACING ≥ 2.625"
MAX BOLT SPACING ≤ 6"

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52T1 NEAR SIDE MEMBER DETAILS

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