WKE MAY 2024

PROJECT ID: 2984-26-73

WITH: N/A

COUNTY: MILWAUKEE

13

ORDER OF SHEETS

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

TOTAL SHEETS = 260



N

DESIGN DESIGNATION

A.A.D.T.	2023	=	1,750
A.A.D.T.	2044	=	1,950
D.H.V.		=	
D.D.		=	
T.		=	4.0%
DESIGN SPEED		=	35 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

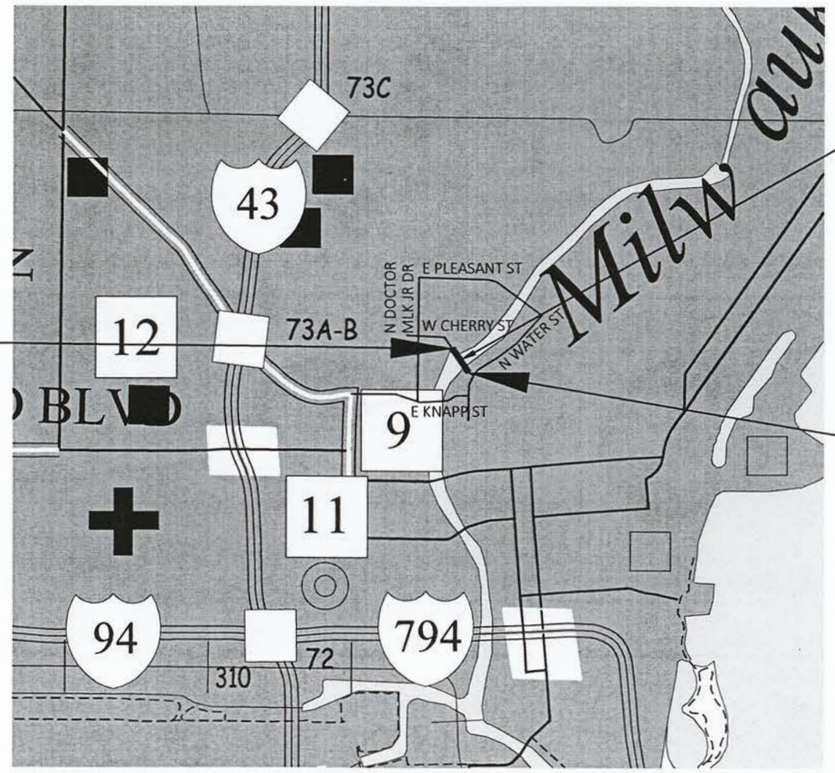
C MILWAUKEE, CHERRY ST

MILWAUKEE RIVER BRIDGE P40-0864

LOCAL STREET
MILWAUKEE COUNTY

STATE PROJECT NUMBER
2984-26-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-26-73	WISC 2024353	1



STRUCTURE P-40-0864

BEGIN PROJECT
STA 0+81.23
Y=389,305.7079
X= 2,558,120.5467

END PROJECT
STA 4+00.23

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.060 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 1983(97) IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO CITY OF MILWAUKEE LOCAL DATUM, CONVERSION TO NGVD 1929+580.60.

ACCEPTED FOR
CITY OF MILWAUKEE
Date 2/29/24
COMMISSIONER OF PUBLIC WORKS

ORIGINAL PLANS PREPARED BY
AECOM

WISCONSIN PROFESSIONAL ENGINEER
WILLIAM R SCHILLING
E-35841-006
WAUKESHA, WI

DATE: 3/1/2024
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KSINGH
Designer	AECOM
Project Manager	GREG HAFEMAN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BRIAN BOOTHBY

APPROVED FOR THE DEPARTMENT
DATE: 03/01/24
(Signature)

E

FILE NAME : C:\PWWORKING\USWI\DMS02004\010101-TI.DWG PLOT DATE : 2/28/2024 9:31 AM PLOT BY : LANCELLE, JESSICA PLOT NAME :

UTILITY CONTACTS

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
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METRO NORTH SERVICE CENTER
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CELL: 262-483-1532
ANGELA.WEBB@WE-ENERGIES.COM

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INFRASTRUCTURE SERVICES DIVISION
(PARKING RESTRICTIONS)
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ELEE@MILWAUKEE.GOV

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MILWAUKEE, WI 53205

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DAVID LOCHER
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DLOCHER@MCTS.ORG

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WISCONSIN DEPARTMENT OF TRANSPORTATION - SE REGION
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GREG.HAFEMAN@DOT.WI.GOV

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

GENERAL NOTES:

1. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
2. EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.
3. RESHAPE, RESTORE, AND FINISH ALL PREVIOUSLY GRASSED AREAS DISTURBED OUTSIDE THE NORMAL CONSTRUCTION LIMITS AT NO EXPENSE TO THE DEPARTMENT.
4. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY EXPENSE TO THE DEPARTMENT. FIELD REVIEW PRIOR TO THE START OF WORK.
5. VOLUMES FOR EXCAVATION COMMON INCLUDE REMOVAL OF EXISTING CONCRETE PAVEMENT, ASPHALT, AND BASE COURSE TO THE PROPOSED SUBGRADE.
6. WHEN THE QUANTITY OF ITEMS OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.
7. STATIONING, DISTANCES AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
8. ALL CURB AND GUTTER RADII ARE MEASURE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.
9. CURB AND GUTTER GRADES ARE TO THE FLANGE LINE UNLESS OTHERWISE NOTED.
10. VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND EXISTING PLACEMENT ELEVATIONS.
11. ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

SECTION 2 SHEETS ORDER

GENERAL NOTES
TYPICAL EXISTING SECTIONS
TYPICAL PROPOSED SECTIONS
REMOVAL PLAN
PLAN DETAILS
EROSION CONTROL
PAVEMENT MARKINGS
TRAFFIC CONTROL PLAN
DETOUR PLAN
ALIGNMENT LAYOUT

ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L OR	CENTER OR CONSTRUCTION LINE
CPCS	CULVERT PIPE CORRUGATED STEEL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NOR	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPUND CURVE
PI	PRIVATE INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN IFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COURSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

2

STRUCTURAL

S01	GENERAL PLAN AND ELEVATION
S02	GENERAL NOTES
S03	ESTIMATED QUANTITIES
S04	BASCULE SPAN TYPICAL SECTIONS
S05	APPROACH SPAN AT BENT B TYPICAL SECTIONS
S06	APPROACH SPAN TYPICAL SECTIONS
S07	FRAMING PLAN
S08	STEEL GRID DECK PLAN
S09	STEEL GRID DECK DETAILS
S10	LONGITUDINAL STRINGER REPLACEMENT
S11	BASCULE SPAN FLOORBEAM 1
S12	BASCULE SPAN FLOORBEAM 2
S13	BASCULE SPAN FLOORBEAM 3
S14	BASCULE SPAN FLOORBEAM 4
S15	BASCULE SPAN FLOORBEAM 5
S16	LATERAL BRACING
S17	CENTER BREAK DETAILS
S18	ROADWAY REAR BREAK AND BENT C DETAILS
S19	REAR AND LONGITUDINAL SIDEWALK BREAK DETAILS 1
S20	REAR AND LONGITUDINAL SIDEWALK BREAK DETAILS 2
S21	CLEARANCE DIAGRAM FOR REAR BREAK
S22	SIDEWALK PLAN
S23	SIDEWALK DETAILS 1
S24	SIDEWALK DETAILS 2
S25	SIDEWALK DETAILS 3
S26	SIDEWALK DETAILS 4
S27	SIDEWALK HATCH DOOR
S28	CENTER LOCK PLATFORM
S29	TWO-LINE ALUMINUM RAILING
S30	BASCULE GIRDER REPAIRS
S31	LOADING GIRDER REPAIRS
S32	MACHINERY DECK COLUMN BASE REPAIR DETAILS
S33	TEMPORARY BASCULE GIRDER SUPPORTS 1
S34	TEMPORARY BASCULE GIRDER SUPPORTS 2
S35	WEST COUNTERWEIGHT REPAIR AND ADJUSTMENT DETAILS
S36	EAST COUNTERWEIGHT REPAIR AND ADJUSTMENT DETAILS
S37	EAST BASCULE PIER MACHINERY LEVEL PLAN
S38	WEST BASCULE PIER MACHINERY LEVEL PLAN
S39	BASCULE PIER PIT LEVEL PLAN
S40	WEST BASCULE PIER INTERIOR WALL REPAIRS 1
S41	WEST BASCULE PIER INTERIOR WALL REPAIRS 2
S42	EAST BASCULE PIER INTERIOR WALL REPAIRS 1
S43	EAST BASCULE PIER INTERIOR WALL REPAIRS 2
S44	BASCULE PIER FENCE DETAILS
S45	ACCESS HATCH, LADDER AND RAILING REPAIR DETAILS
S46	WEST BASCULE PIER EXTERIOR WALL REPAIRS
S47	EAST BASCULE PIER EXTERIOR WALL REPAIRS
S48	ABUTMENT REPAIRS
S49	FENDER PIER & MACHINERY ENCLOSURE REPAIRS
S50	FENDER PIER REPAIR DETAILS
S51	WEST APPROACH SPAN FIXED DECK PLAN
S52	BASCULE PIER APPROACH SPAN CROSS SECTION
S53	BASCULE PIER LONGITUDINAL DECK SECTIONS
S54	BASCULE PIER SECTIONS - SOUTHWEST FASCIA GIRDER
S55	BASCULE PIER SECTIONS - SOUTHEAST FASCIA GIRDER
S56	BASCULE PIER SECTIONS - NORTHEAST FASCIA GIRDER
S57	BASCULE PIER SECTIONS - NORTHWEST FASCIA GIRDER
S58	NORTHWEST FASCIA GIRDER AND ABUTMENT DETAILS
S59	BEARING REPLACEMENT DETAILS
S60	NW TRAFFIC GATE PLATFORM
S61	SE TRAFFIC GATE PLATFORM
S62	TRAFFIC GATE STANDARD RAILING DETAILS
S63	NORTHWEST APPROACH RETAINING WALL REPAIRS
S64	NORTHEAST APPROACH RETAINING WALL REPAIRS
S65	SOUTHWEST APPROACH RETAINING WALL REPAIRS
S66	SOUTHEAST APPROACH RETAINING WALL REPAIRS
S67	NORTHEAST CONTROL HOUSE PLANS
S68	NORTHEAST CONTROL HOUSE ELEVATION REPAIR DETAILS
S69	SOUTHWEST CONTROL HOUSE PLANS
S70	SOUTHWEST CONTROL HOUSE ELEVATION REPAIR DETAILS
S71	NAME PLATE

CIVIL

-	TITLE SHEET
-	GENERAL NOTES
-	SHEET INDEX
-	OVERVIEW SHEET
-	TYPICAL SECTIONS
-	REMOVAL PLANS
-	PAVING DETAILS
-	CURB RAMP DETAILS
-	EROSION CONTROL
-	MARKING PLANS
-	TRAFFIC CONTROL
-	VEHICLE DETOUR
-	BICYCLE PEDESTRIAN DETOUR
-	MISCELLANEOUS QUANTITIES
-	PLAN AND PROFILE
-	TEMPORARY SIGNING
-	EARTHWORK DATA
-	CROSS SECTIONS

ARCHITECTURAL

A01	INDEX AND PROJECT INFO
A02	ABBREVIATIONS
A03	SYMBOL LEGEND
A04	MATERIAL LEGEND
A05	WEST BRIDGE HOUSE - LOWER LEVEL
A06	WEST BRIDGE HOUSE - MAIN LEVEL
A07	WEST BRIDGE HOUSE - UPPER LEVEL AND ROOF
A08	WEST BRIDGE HOUSE - ELEVATIONS
A09	WEST BRIDGE HOUSE - ELEVATIONS
A10	WEST BRIDGE HOUSE - SECTIONS
A11	EAST BRIDGE HOUSE - LOWER LEVEL
A12	EAST BRIDGE HOUSE - MAIN LEVEL
A13	EAST BRIDGE HOUSE - UPPER LEVEL AND ROOF
A14	EAST BRIDGE HOUSE - UPPER LEVEL CEILING FRAMING
A15	EAST BRIDGE HOUSE - ELEVATIONS
A16	EAST BRIDGE HOUSE - ELEVATIONS
A17	EAST BRIDGE HOUSE - SECTIONS
A18	EXTERIOR DETAILS
A19	DOOR DETAILS
A20	WINDOW DETAILS
A21	ROOF DETAILS
A22	ROOF DETAILS
A23	ROOF DETAILS

HVAC

H1	EAST BRIDGE HOUSE HVAC PLANS
H2	WEST BRIDGE HOUSE HVAC PLANS
H3	HVAC GENERAL NOTES, LEGEND & SCHEDULES

PLUMBING

P1	PIER PLUMBING DEMOLITION PLANS
P2	PIER PLUMBING PLANS
P3	PLUMBING GENERAL NOTES, LEGEND & SCHEDULES

MECHANICAL

M1	MECHANICAL NOTES
M2	MACHINERY DEMOLITION
M3	MACHINERY LAYOUT
M4	MACHINERY SECTIONS (1 OF 3)
M5	MACHINERY SECTIONS (2 OF 3)
M6	MACHINERY SECTIONS (3 OF 3)
M7	MACHINERY DETAILS (1 OF 3)
M8	MACHINERY DETAILS (2 OF 3)
M9	MACHINERY DETAILS (3 OF 3)
M10	CENTER LOCK DEMOLITION
M11	CENTER LOCK ASSEMBLY
M12	CENTER LOCK DETAILS (1 OF 3)
M13	CENTER LOCK DETAILS (2 OF 3)
M14	CENTER LOCK DETAILS (3 OF 3)
M15	HELL BLOCK ASSEMBLY & DEMOLITION
M16	HEEL BLOCK DETAILS

ELECTRICAL

E01	ELECTRICAL INDEX OF DRAWINGS
E02	ELECTRICAL GENERAL NOTES
E03	ELECTRICAL SYMBOL AND LEGEND
E04	ELECTRICAL GENERAL PLAN AND ELEVATION
E05	UTILITY SERVICE connection plan
E06	COMMUNICATION weST PLAN
E07	COMMUNICATION EAST PLAN
E08	CUC PLANS BRIDGE
E09	CUC AND POWER DETAILS
E10	EAST TOWER POWER PLANS
E11	WEST TOWER POWER PLANS
E12	EAST TOWER LIGHTING LEVEL PLANS
E13	WEST TOWER LIGHTING LEVEL PLANS
E14	CONTROL HOUSE SECTIONS
E15	WEST & EAST BASCULE PIER POWER PLANS
E16	WEST & EAST BASCULE PIER LIGHTING PLANS
E17	ORNAMENTAL LIGHTING ELEVATION
E18	LIGHTING SCHEDULE DETAILS
E19	SINGLE LINE - 480V CIRCUIT
E20	SINGLE LINE - 208/120V CIRCUIT
E21	ELECTRICAL PANEL SCHEDULES
E22	CONTROL POWER SCHEMATIC
E23	TRAFFIC SIGNALS SCHEMATIC
E24	TRAFFIC GATES SCHEMATIC
E25	CENTER LOCKS SCHEMATIC
E26	WEST SPAN DRIVE SCHEMATIC
E27	EAST SPAN DRIVE SCHEMATIC
E28	FAR UPSTREAM (NE) SPAN MOTOR & DRIVE SCHEMATIC
E29	FAR DOWNSTREAM (NW) SPAN MOTOR & DRIVE SCHEMATIC
E30	NEAR UPSTREAM (SE) SPAN MOTOR & DRIVE SCHEMATIC
E31	NEAR DOWNSTREAM (SW) SPAN MOTOR & DRIVE SCHEMATIC
E32	NAVIGATIONAL LIGHTS SCHEMATIC
E33	INCLINOMETER CABINET, LIMITS & TIMING SCHEDULE
E34	BRIDGE CONTROL CONSOLE
E35	DRIVE CABINETS
E36	PLC AND COMMUNICATIONS CABINETS
E37	MOTOR STARTER CABINET
E38	GROUNDING RISER

ELECTRICAL- CONT'D

E39	SUBMARINE CABLE DETAILS
E40	TRAFFIC GATES/SIGNALS DETAILS
E41	WEST SPAN DRIVE SCHEMATIC
E42	CONDUIT BLOCK DIAGRAM
E43	CONDUIT SCHEDULE 1
E44	CONDUIT SCHEDULE 2
E45	CONDUIT SCHEDULE 3
E45	CONDUIT SCHEDULE 3
E46	CONDUIT SCHEDULE 4
E47	CONDUIT SCHEDULE 5
E48	CONDUIT SCHEDULE 6
E49	CONDUIT SCHEDULE 7
E50	CHERRY ST. BRIDGE COMMUNICATIONS
E51	CHERRY ST. BRIDGE COMMUNICATIONS
E52	CHERRY ST. BRIDGE COMMUNICATIONS
E53	SUBMARINE CABLE TERMINAL CABINET & DETAILS
E54	REMOTE COMM. FROM THE KNAPP ST. BRIDGE
E55	STATE ST. BRIDGE REMOTE CONTROL CONSOLE
E56	STATE ST. BRIDGE REMOTE CONTROL CONSOLE BACK PLATE
E57	STATE ST. BRIDGE REMOTE CONTROL CONSOLE LADDER
E58	STATE ST. BRIDGE REMOTE CONTROL CONSOLE LADDER
E59	WELLS ST. BRIDGE REMOTE CONTROL CONSOLE AT KNAPP ST.
E60	EAST TOWER FIRE ALARM SYSTEM RISER
E61	BRIDGE FUNCTIONAL SEQUENCE
E62	STREET LIGHTING GENERAL NOTES 1 OF 2
E63	STREET LIGHTING GENERAL NOTES 2 OF 2
E64	STREET LIGHTING WEST PLAN
E65	STREET LIGHTING EAST PLAN
E66	AS BUILT GUIDE LINE DETAIL
E67	LEGEND
E68	LUMINAIRE DESCRIPTION & CABLE, CIRCUIT & UNIT ID
E69	CONDUIT PULLBOX TO POLE
E70	PULL BOX INSTALL IN PAVEMENT OR GRASS
E71	CONCRETE LIGHT BASE TYPE 1
E72	WATERTIGHT MULTIPORT CONNECTION WIRING
E73	ELECTRICAL DETAILS MOUNT LIGHT POLES
E74	ELECTRICAL HANDHOLE WIRING DETAIL
E75	TYPICAL SCHEMATIC AND TAGGING DETAIL
E76	BOLT DOWN ALUMINUM POLE DETAIL
E77	TRANSFORMER BASE DETAIL
E78	CUC BRIDGE APPROACH (SHEET 1 0F 4)
E79	CUC BRIDGE APPROACH (SHEET 2 0F 4)
E80	CUC BRIDGE APPROACH (SHEET 3 0F 4)
E81	CUC BRIDGE APPROACH (SHEET 4 0F 4)
E82	CUC APPROACH DETAILS
E83	COMMUNICATION HARDWARE POLE MOUNTED

2

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	SHEET INDEX	SHEET 3 E



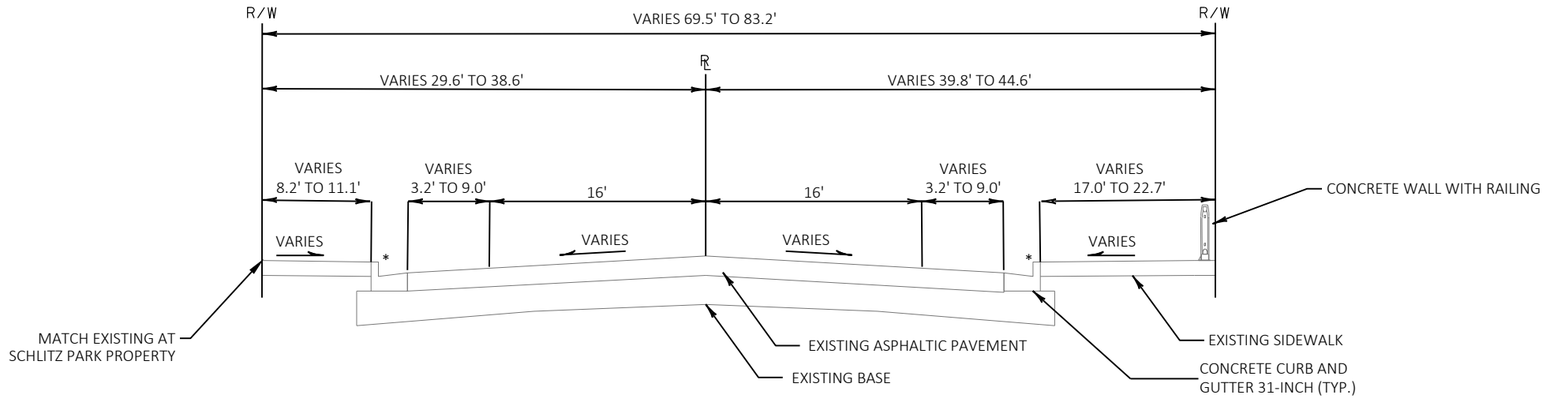
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LAYOUT NAME - 025100-01

PLOT DATE : 1/30/2024 2:32 PM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : ##########

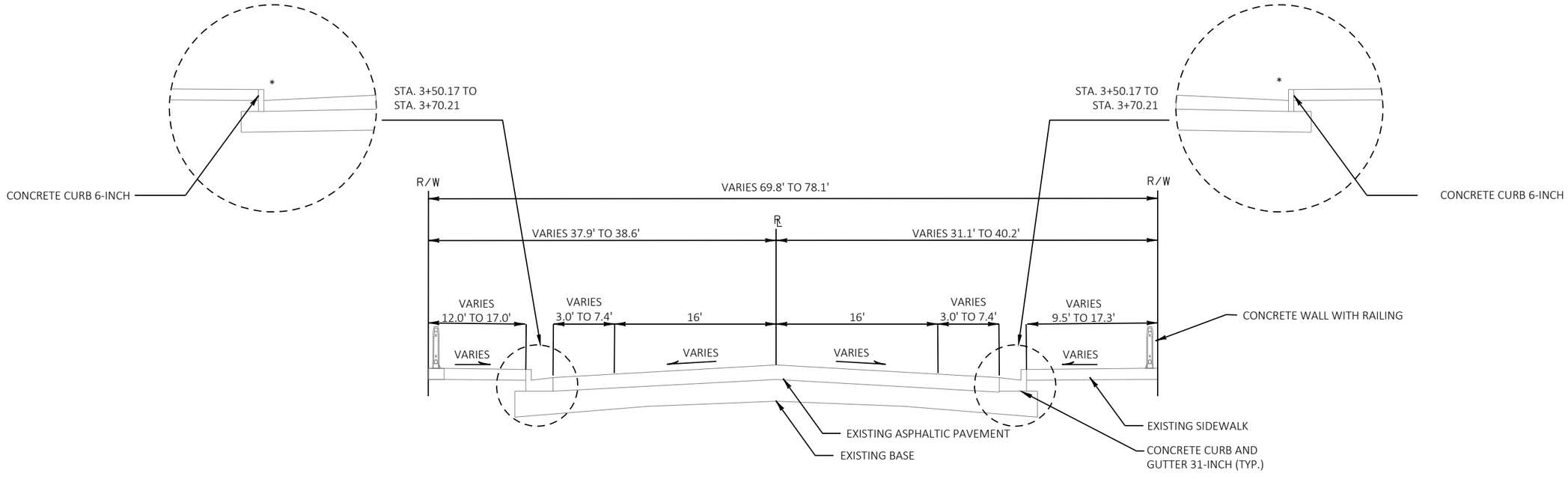
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* CURB HEIGHT TRANSITIONS FROM 7.5-INCH (ON BRIDGE) TO STANDARD 6-INCH CURB HEIGHT (IN ROADWAY)



EXISTING TYPICAL SECTION

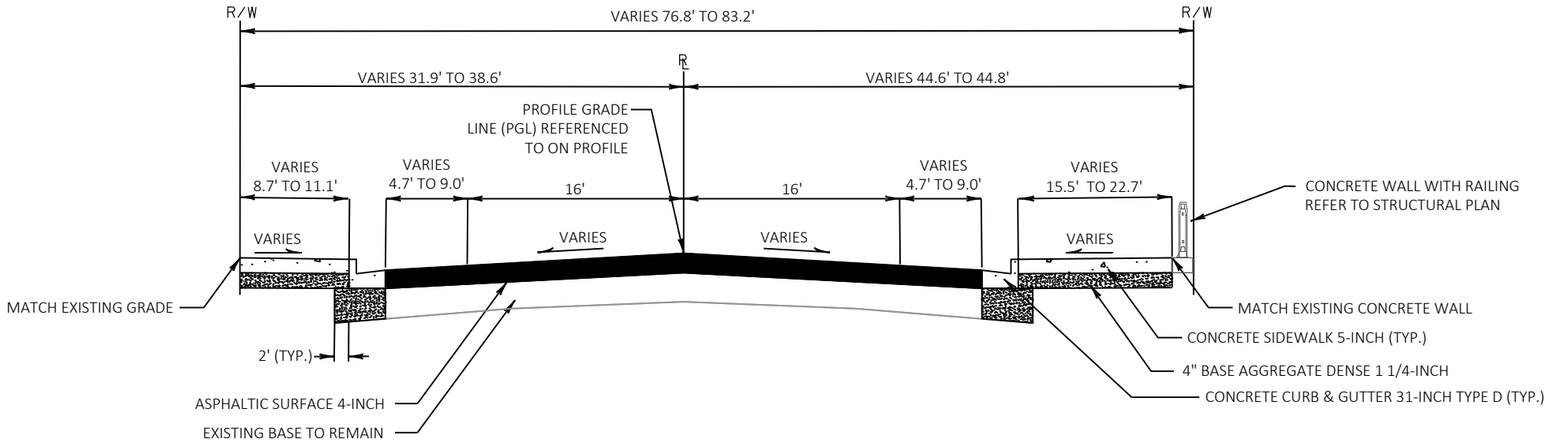
STA. 0+81.23 TO STA. 1+35.55
LOOKING SOUTHEAST



EXISTING TYPICAL SECTION

STA. 3+50.17 TO STA. 4+00.23
LOOKING SOUTHEAST

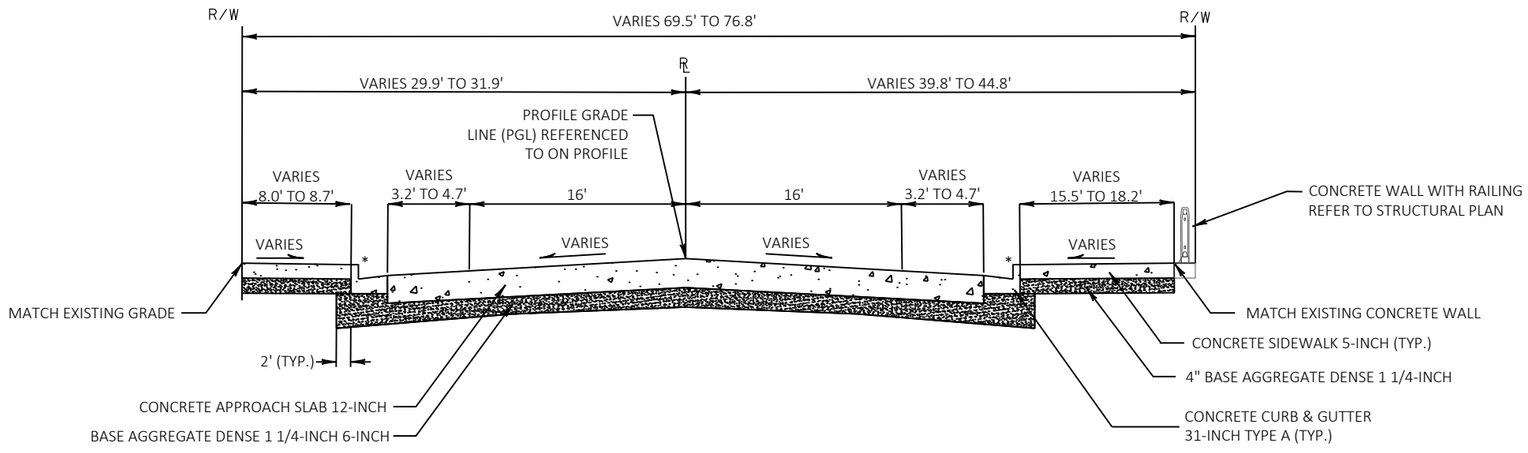
PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET 5	E



FINISHED TYPICAL SECTION

STA. 0+81.23 TO STA. 1+20.55
LOOKING SOUTHEAST

* TRANSITION CURB HEIGHT FROM 7.5-INCH (ON BRIDGE) TO STANDARD 6-INCH CURB HEIGHT (IN ROADWAY) PAID FOR AS "CONCRETE CURB & GUTTER 31-INCH"

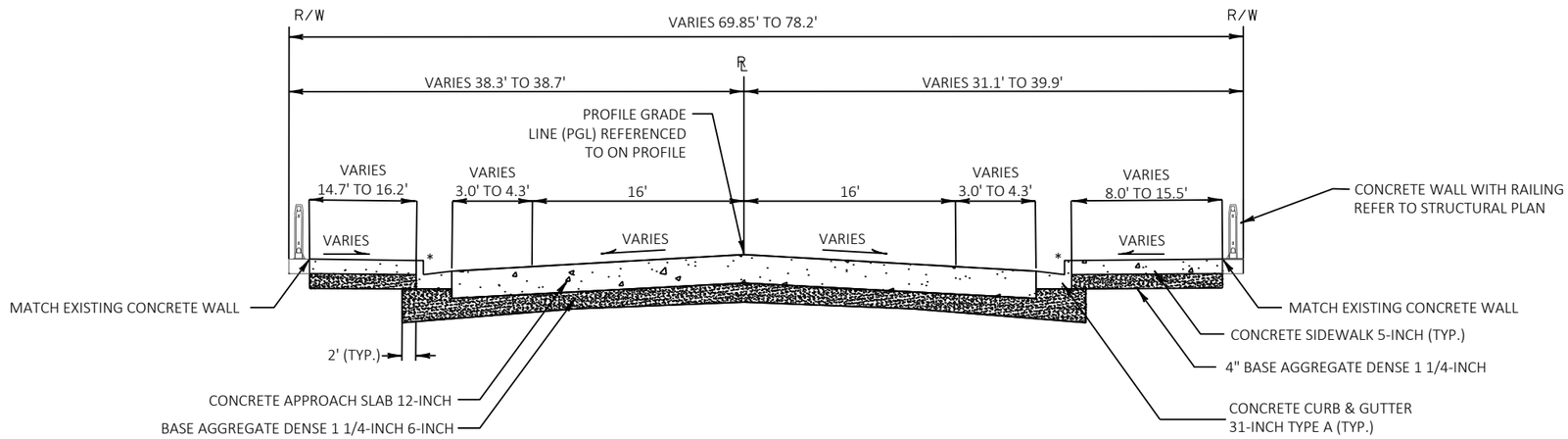


FINISHED TYPICAL SECTION

STA. 1+20.55 TO STA. 1+35.55

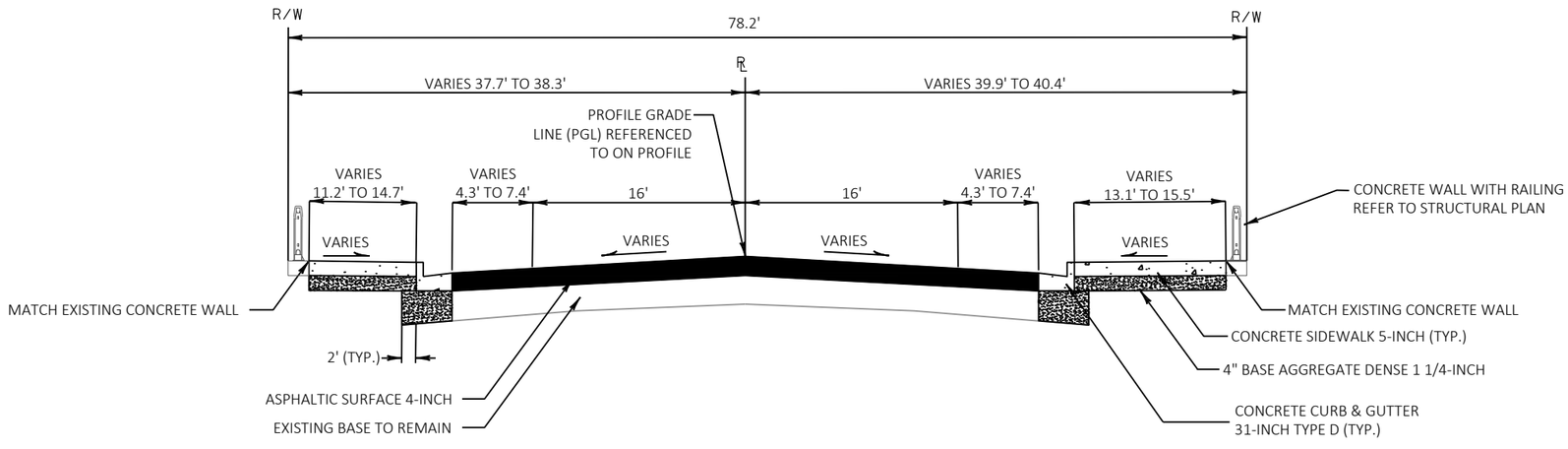
PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET 6	E

* TRANSITION CURB HEIGHT FROM 7.5-INCH (ON BRIDGE) TO STANDARD 6-INCH CURB HEIGHT (IN ROADWAY) PAID FOR AS "CONCRETE CURB & GUTTER 31-INCH"



FINISHED TYPICAL SECTION

STA. 3+50.17 TO STA. 3+65.17

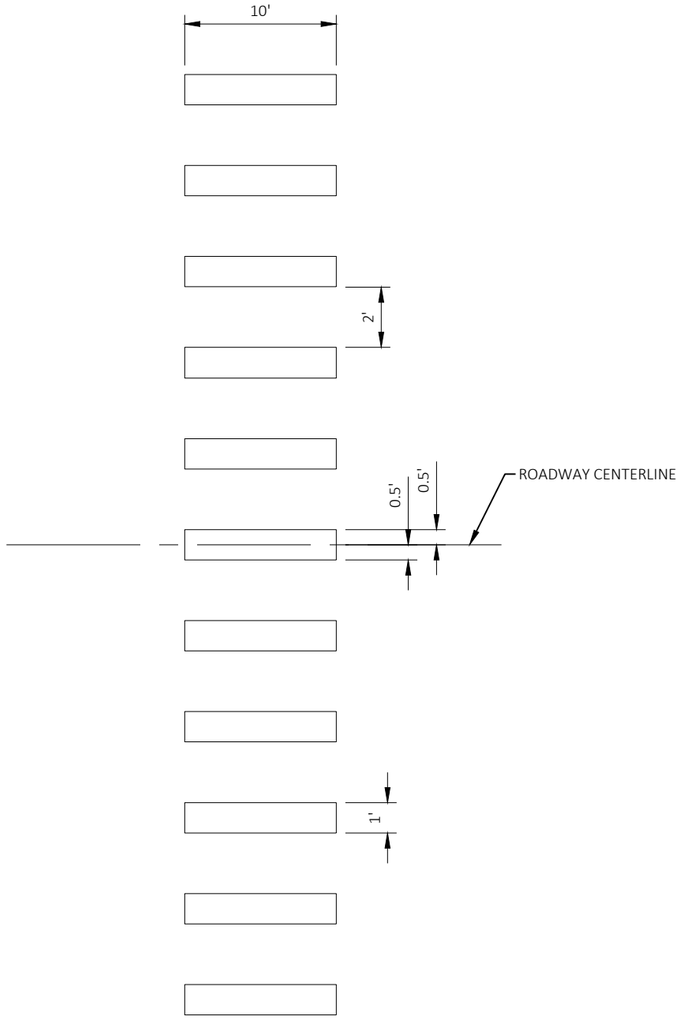


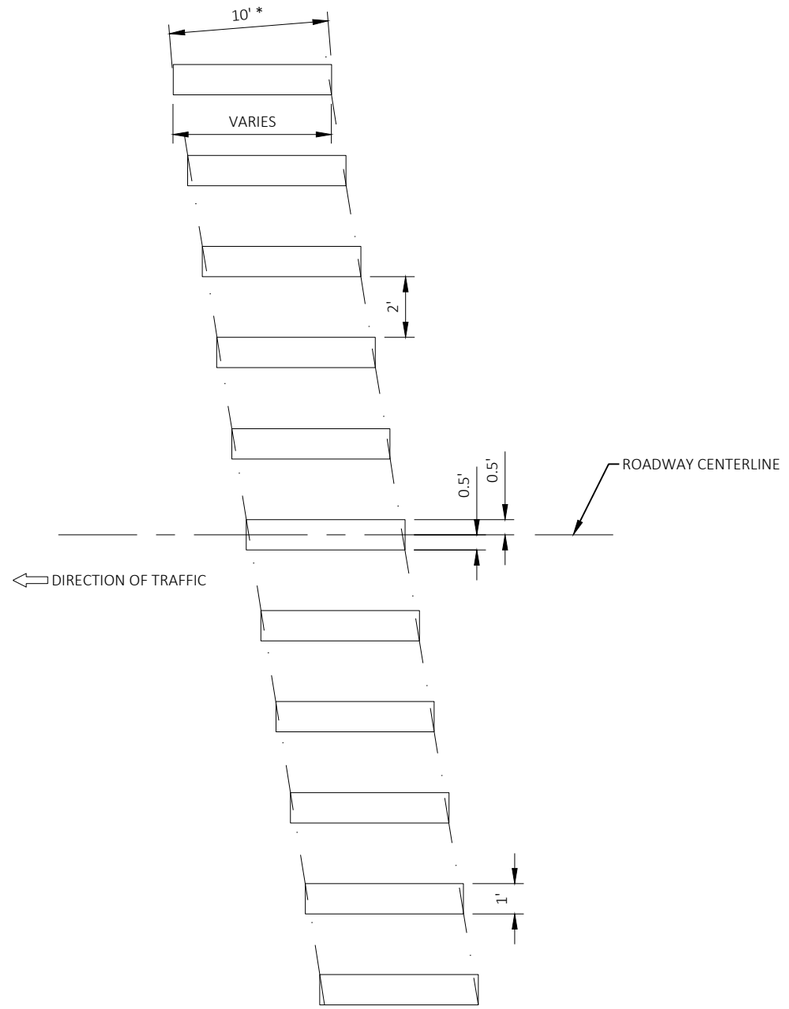
FINISHED TYPICAL SECTION

STA. 3+65.17 TO STA. 4+00.23

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	TYPICAL SECTION	SHEET 7	E

2





NOTES:
* UNLESS OTHERWISE NOTED ON PLANS

PAVEMENT MARKINGS SHOULD BE PARALLEL TO DIRECTION OF TRAVEL EVEN WHEN CROSSWALK IS SKEWED

CONTINENTAL CROSSWALK SHALL BE PAID FOR UNDER THE PAY ITEM "MARKING STOP LINE EPOXY 12-INCH"

CONTINENTAL CROSSWALK DETAIL

ANGLED CROSSWALK DETAIL

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET 8	E

2

2

LEGEND

- RIGHT-OF-WAY (R/W)
- SAW-CUT ASPHALT / SAW-CUT CONCRETE
- ASPHALTIC SURFACE MILLING
- REMOVING CONCRETE SIDEWALk
- REMOVING PAVEMENT & CURB AND GUTTER
- REMOVING DRIVEWAY

0 15 30 Feet

MOVE SIGNS (SEE MARKING PLAN SHEET);
REMOVE, REFURBISH, AND REINSTALL PEDESTRIAN LIGHT POLES
(SEE STRUCTURE PLANS SHEET E4);
REMOVING CONCRETE BASES

MOVE SIGN AND SUPPORT
(SEE MARKING PLAN SHEET)

MILWAUKEE RIVER

MOVE AND REMOVE SIGNS (SEE MARKING PLAN SHEET);
REMOVE AND REPLACE TRAFFIC SIGNAL (SEE STRUCTURE PLANS E4, E56, AND E57);

REMOVE AND SALVAGE FIRE HYDRANT

MOVE SIGNS AND SUPPORT
(SEE MARKING PLAN SHEET)

CONC. DOCK WALL

CONC. WALL W/ RAILING

R/W

W. CHERRY STREET

E. CHERRY STREET

SEE BRIDGE PLANS – P–40–0864

STA.1+35.55 TO STA.3+50.17

1+00 2+00 3+00 4+00

SEWER

COMBINED SEWER

OHW

TREE PROTECTION FENCE

TREE TO REMAIN

REMOVE AND RELOCATE BUS STOP (BY OTHERS)

REMOVE, REFURBISH, AND REINSTALL PEDESTRIAN LIGHT POLES
(SEE STRUCTURE PLANS SHEET E4);
REMOVING CONCRETE BASES

MOVE SIGNS (SEE MARKING PLAN SHEET)

MOVE AND REMOVE SIGNS (SEE MARKING PLAN SHEET);
NEW TRAFFIC SIGNAL (SEE STRUCTURE PLANS E4, E56, AND E57);

SAW CUT 1-FOOT INSIDE OF CONCRETE WALL ON ALL SIDES;
CONCRETE WALL TO REMAIN IN PLACE

OH ELECTRIC UTILITY
(CITY OF MILWAUKEE)

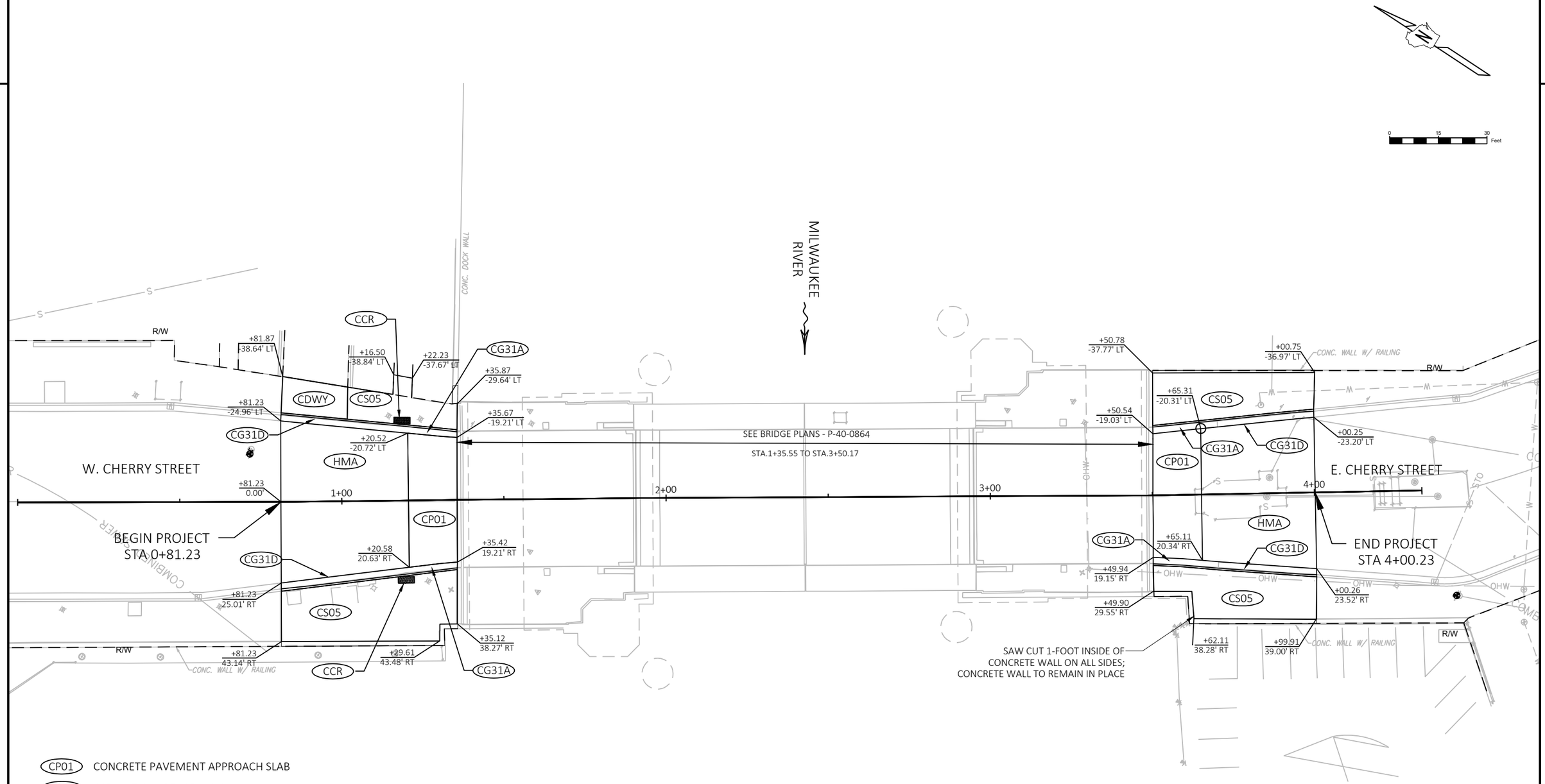
PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	REMOVAL PLANS	SHEET 9	E

FILE NAME : C:\PWWORKING\USWI\DMS02004\021101-RM.DWG
LAYOUT NAME - 021101-01

PLOT DATE : 3/11/2024 11:55 AM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2



CP01 CONCRETE PAVEMENT APPROACH SLAB

HMA ASPHALTIC SURFACE 4-INCH

CS05 CONCRETE SIDEWALK 5-INCH

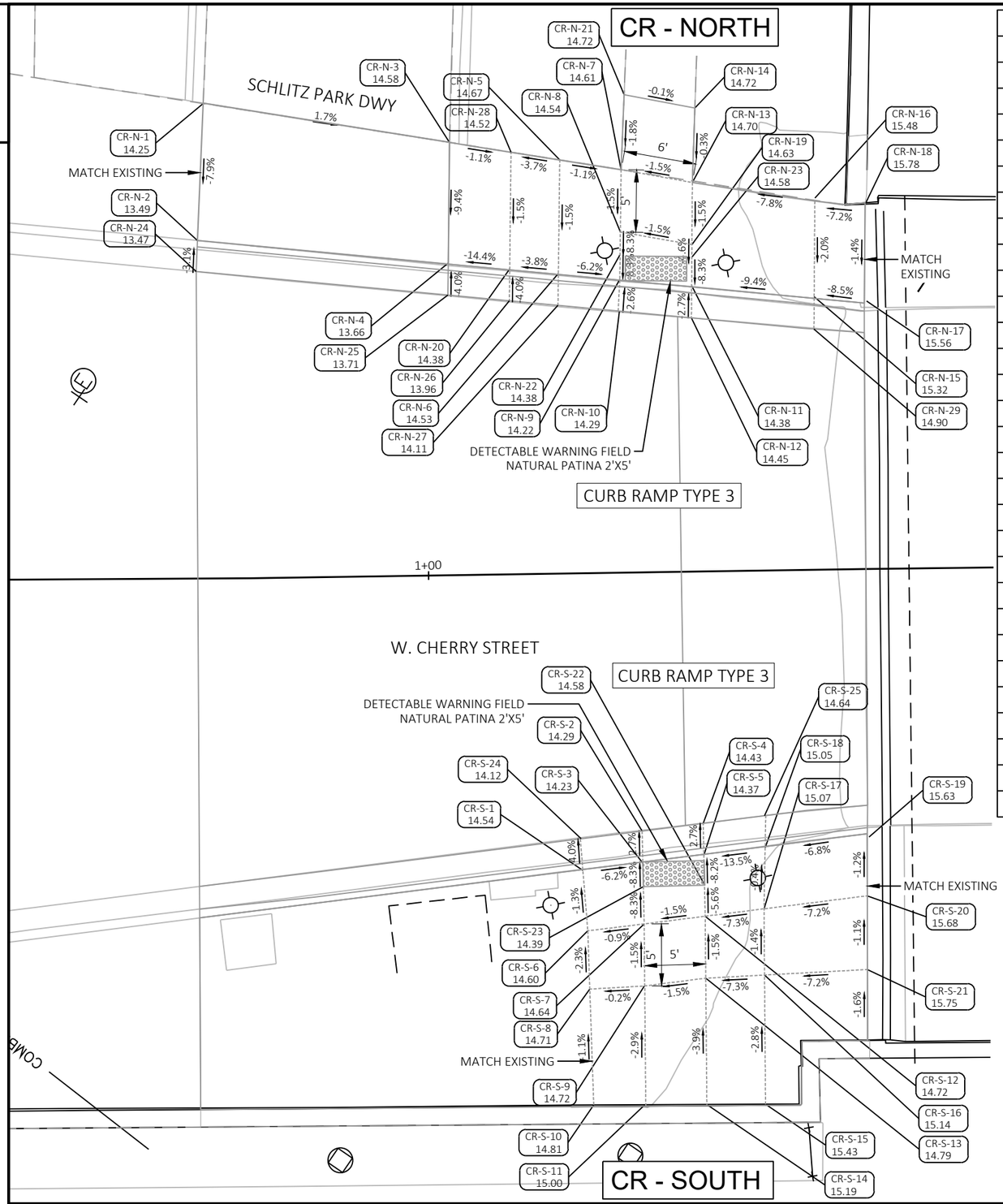
CG31A CONCRETE CURB & GUTTER 31-INCH TYPE A

CG31D CONCRETE CURB & GUTTER 31-INCH TYPE D

CDWY CONCRETE DRIVEWAY 7-INCH HES

CCR CONCRETE CURB RAMP TYPE 3

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	PAVING DETAILS	SHEET 10 E



CR-NORTH					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
CR-N-1	0+81.87	38.60' LT	14.25	389327.06	2558152.72
CR-N-2	0+81.35	27.47' LT	13.49	389321.17	2558143.26
CR-N-3	1+02.24	35.18' LT	14.58	389308.71	2558161.40
CR-N-4	1+01.99	25.37' LT	13.66	389303.28	2558153.23
CR-N-5	1+11.18	33.62' LT	14.67	389300.51	2558165.27
CR-N-6	1+10.93	24.39' LT	14.53	389295.41	2558157.58
CR-N-7	1+16.15	32.75' LT	14.61	389295.94	2558167.43
CR-N-8	1+16.02	27.68' LT	14.54	389293.14	2558163.20
CR-N-9	1+15.91	23.85' LT	14.22	389291.02	2558160.01
CR-N-10	1+15.84	21.26' LT	14.29	389289.58	2558157.85
CR-N-11	1+21.75	23.22' LT	14.38	389285.88	2558162.85
CR-N-12	1+21.69	20.62' LT	14.45	389284.44	2558160.70
CR-N-13	1+21.93	31.61' LT	14.70	389290.56	2558169.82
CR-N-14	1+22.23	37.67' LT	14.72	389293.81	2558174.94
CR-N-15	1+31.70	22.19' LT	15.32	389277.16	2558167.74
CR-N-16	1+31.87	30.20' LT	15.48	389281.62	2558174.39
CR-N-17	1+35.88	21.78' LT	15.56	389273.44	2558169.85
CR-N-18	1+35.87	29.64' LT	15.78	389277.96	2558176.28
CR-N-19	1+21.82	26.57' LT	14.63	389287.75	2558165.64
CR-N-20	1+06.97	24.82' LT	14.38	389298.89	2558155.66
CR-N-21	1+16.50	38.84' LT	14.72	389299.17	2558172.60
CR-N-22	1+15.97	25.84' LT	14.38	389292.12	2558161.66
CR-N-23	1+21.80	25.54' LT	14.58	389287.18	2558164.77
CR-N-24	0+81.23	24.96' LT	13.47	389319.84	2558141.12
CR-N-25	1+01.92	22.77' LT	13.71	389301.84	2558151.07
CR-N-26	1+06.90	22.23' LT	13.96	389297.45	2558153.50
CR-N-27	1+10.86	21.80' LT	14.11	389293.97	2558155.42
CR-N-28	1+07.22	34.31' LT	14.52	389304.14	2558163.56
CR-N-29	1+31.64	19.56' LT	14.90	389275.69	2558165.55

CR-SOUTH					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
CR-S-1	1+12.18	24.15' RT	14.54	389266.44	2558118.60
CR-S-2	1+17.05	21.02' RT	14.29	389264.26	2558123.97
CR-S-3	1+17.07	23.61' RT	14.23	389262.75	2558121.86
CR-S-4	1+22.02	20.47' RT	14.43	389260.51	2558127.28
CR-S-5	1+22.04	23.07' RT	14.37	389259.00	2558125.17
CR-S-6	1+12.50	29.06' RT	14.60	389263.35	2558114.78
CR-S-7	1+17.10	28.57' RT	14.64	389259.88	2558117.83
CR-S-8	1+12.59	33.80' RT	14.71	389260.55	2558110.96
CR-S-9	1+17.05	33.61' RT	14.72	389257.01	2558113.68
CR-S-10	1+12.77	43.21' RT	14.81	389254.98	2558103.37
CR-S-11	1+16.95	43.26' RT	15.00	389251.54	2558105.73
CR-S-12	1+22.07	28.02' RT	14.72	389256.13	2558121.14
CR-S-13	1+22.03	33.05' RT	14.79	389253.26	2558117.00
CR-S-14	1+21.96	43.31' RT	15.19	389247.41	2558108.58
CR-S-15	1+26.74	43.36' RT	15.43	389243.47	2558111.28
CR-S-16	1+26.82	32.87' RT	15.14	389249.45	2558119.91
CR-S-17	1+26.86	27.49' RT	15.07	389252.51	2558124.33
CR-S-18	1+27.03	22.51' RT	15.05	389255.24	2558128.50
CR-S-19	1+35.48	21.79' RT	15.63	389248.74	2558133.95
CR-S-20	1+35.27	26.56' RT	15.68	389246.17	2558129.93
CR-S-21	1+35.18	32.55' RT	15.75	389242.80	2558124.98
CR-S-22	1+22.08	25.50' RT	14.58	389257.57	2558123.20
CR-S-23	1+17.08	25.53' RT	14.39	389261.64	2558120.30
CR-S-24	1+12.08	21.57' RT	14.12	389268.01	2558120.66
CR-S-25	1+27.02	19.92' RT	14.64	389256.74	2558130.62

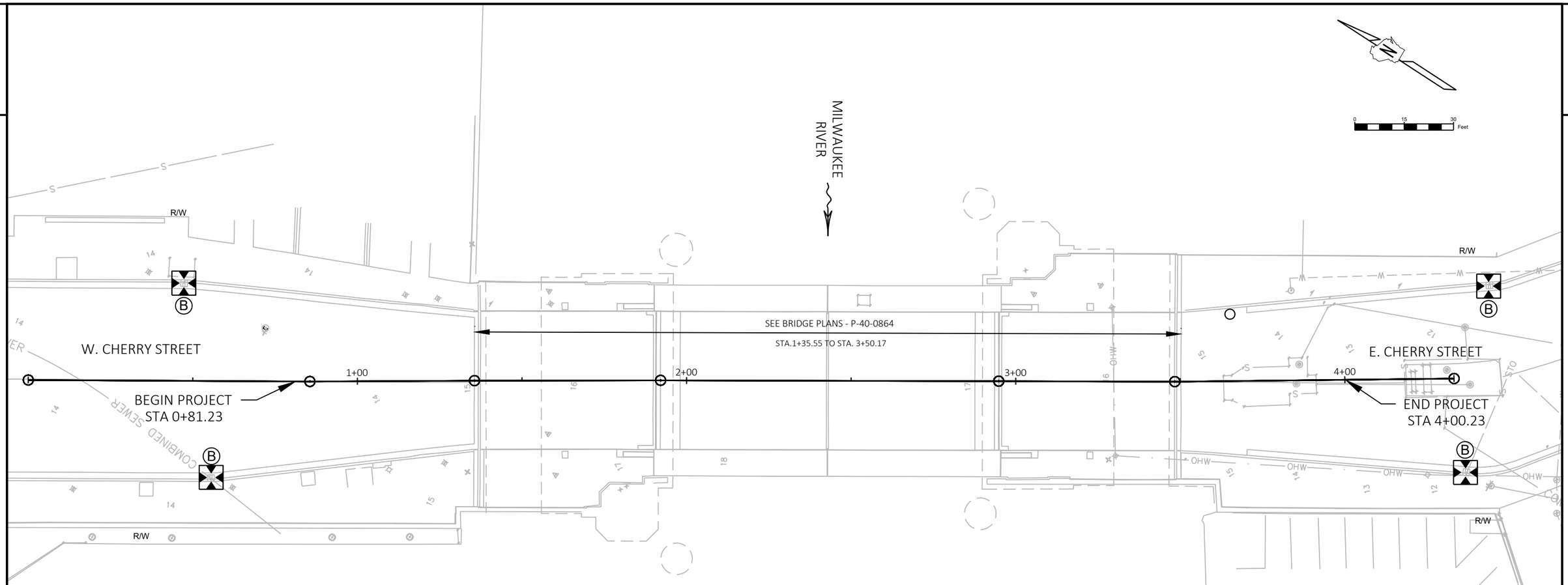
NOTES

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL NOT EXCEED 4.0%.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%
6. SIDEWALK AND CURB RAMP RUNNING SLOPE SHALL NOT EXCEED 8.33% (12H:1V).

PROJECT NO: 2964-26-73	HWY: LOCAL STR	COUNTY: MILWAUKEE	CURB RAMP DETAIL	SHEET 11	E

FILE NAME : C:\PWWORKING\USWI\DMS02004\021301-CR.DWG
LAYOUT NAME - Plan 1 IN 20 FT
PLOT DATE : 2/29/2024 4:23 PM
PLOT BY : LANCELLE, JESSICA
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

2

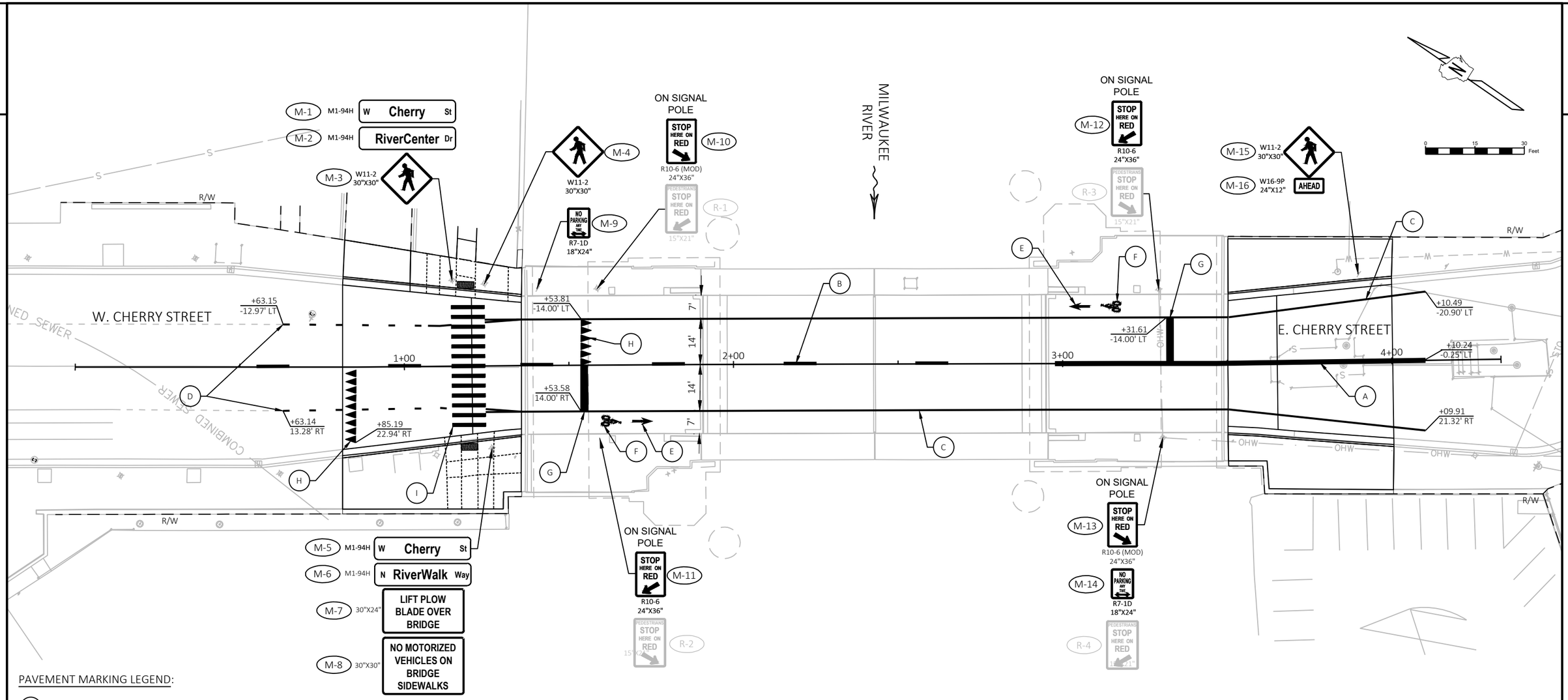


LEGEND

Ⓑ INLET PROTECTION, TYPE B

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET 12	E

2



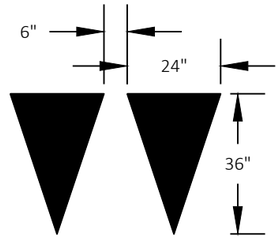
PAVEMENT MARKING LEGEND:

- (A) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- (B) MARKING LINE EPOXY 4-INCH (DASHED YELLOW) (10 FT LINE 30 FT SKIP)
- (C) MARKING LINE EPOXY 4-INCH (WHITE)
- (D) MARKING LINE EPOXY 4-INCH (DASHED WHITE) (2 FT LINE 6 FT SKIP)
- (E) MARKING ARROW EPOXY
- (F) MARKING SYMBOL EPOXY
- (G) MARKING STOP LINE EPOXY 24-INCH (WHITE)
- (H) MARKING YIELD LINE EPOXY 36-INCH
- (I) MARKING STOP LINE EPOXY 12-INCH

SIGNING LEGEND:

- (M-X) SIGN NUMBER (MOVING SIGNS TYPE II)
- (R-X) SIGN NUMBER (REMOVING SIGNS TYPE II)

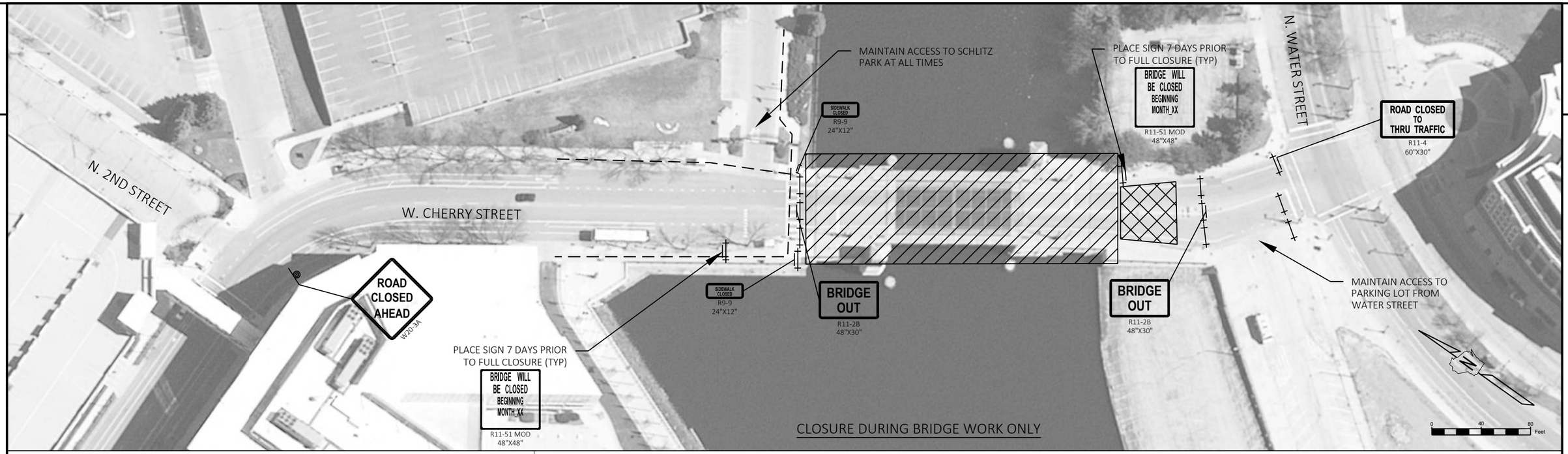
NOTES:
MOVE SIGNS TYPE II AND REPLACE IN EXISTING LOCATION AFTER LIGHTING HAS BEEN COMPLETED, UNLESS OTHERWISE NOTED



YIELD LINE DETAIL

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	MARKING PLANS	SHEET 13	E

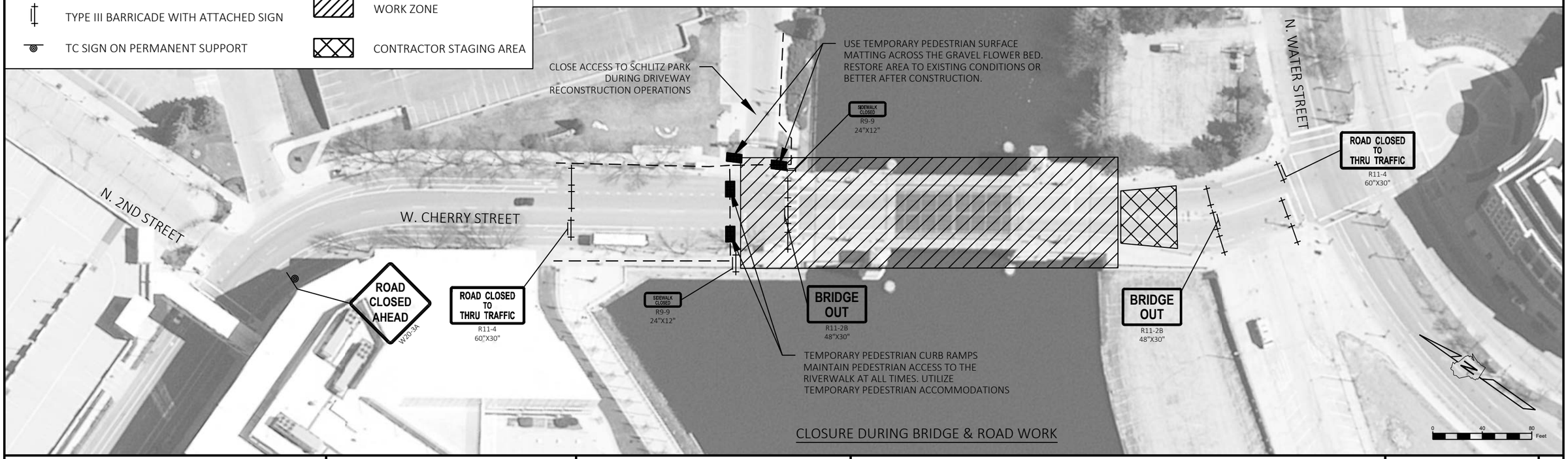
2



CLOSURE DURING BRIDGE WORK ONLY

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TC SIGN ON PERMANENT SUPPORT
- PEDESTRIAN FLOW
- WORK ZONE
- CONTRACTOR STAGING AREA



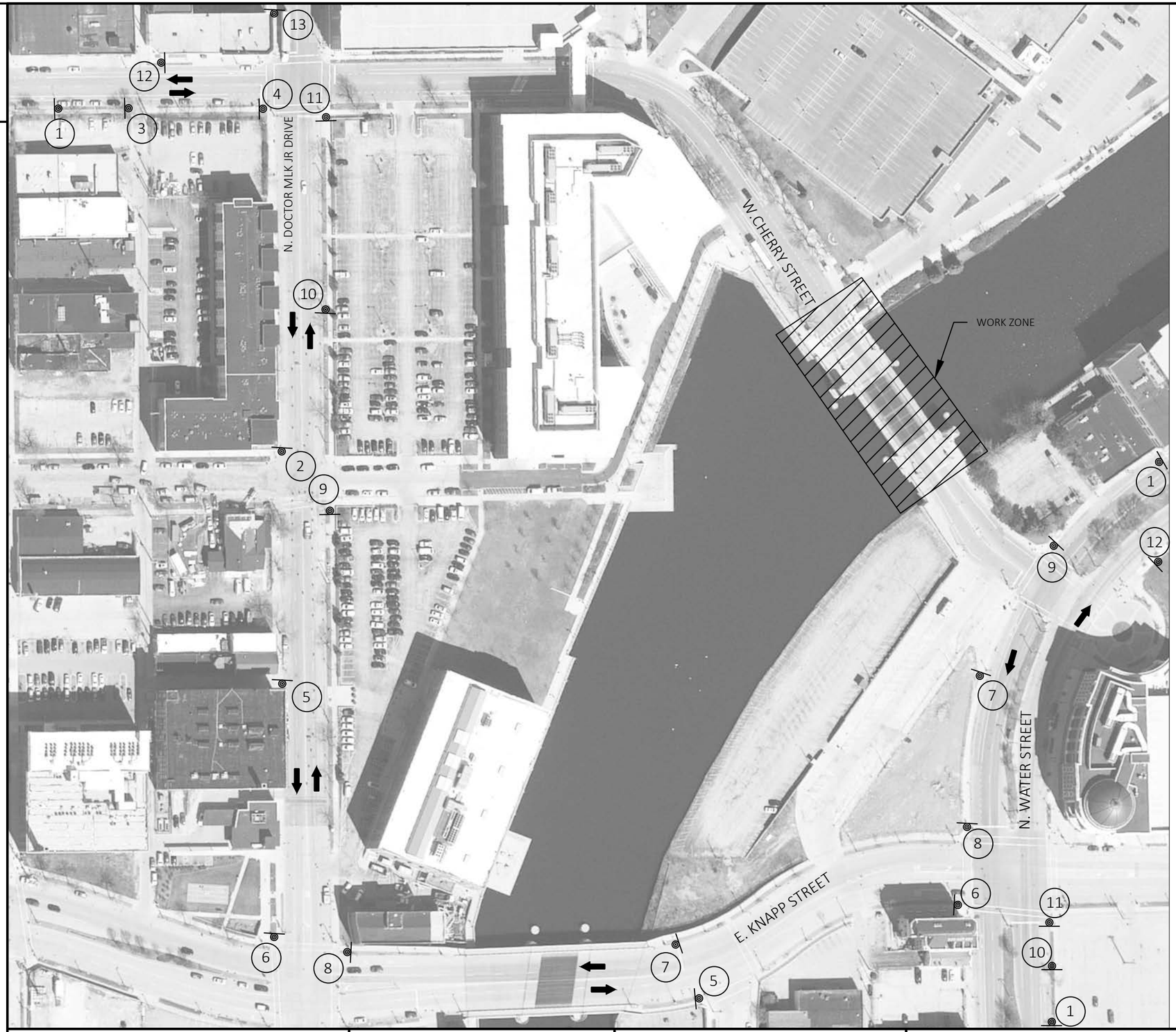
CLOSURE DURING BRIDGE & ROAD WORK

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	TRAFFIC CONTROL	SHEET 14	E

FILE NAME : C:\PWWORKING\USWI\DMS02004\025100-TC.DWG
LAYOUT NAME - 025100-01

PLOT DATE : 2/26/2024 2:54 PM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42



2

DETOUR AHEAD W4D-2A — 1

DETOUR (M4-8 24"X12") / EAST (M3-2 24"X12") / CHERRY ST (M1-94 12"X48") / M6-1 21"X21" — 2

DETOUR (M4-8 24"X12") / EAST (M3-2 24"X12") / CHERRY ST (M1-94 12"X48") / M5-1R 21"X21" — 3

DETOUR (M4-8 24"X12") / EAST (M3-2 24"X12") / CHERRY ST (M1-94 12"X48") / M6-1 21"X21" — 4

DETOUR (M4-8 24"X12") / EAST (M3-2 24"X12") / CHERRY ST (M1-94 12"X48") / M5-1L 21"X21" — 5

DETOUR (M4-8 24"X12") / EAST (M3-2 24"X12") / CHERRY ST (M1-94 12"X48") / M6-1 21"X21" — 6

DETOUR (M4-8 24"X12") / WEST (M3-4 24"X12") / CHERRY ST (M1-94 12"X48") / M5-1R 21"X21" — 7

DETOUR (M4-8 24"X12") / WEST (M3-4 24"X12") / CHERRY ST (M1-94 12"X48") / M6-1 21"X21" — 8

DETOUR (M4-8 24"X12") / WEST (M3-4 24"X12") / CHERRY ST (M1-94 12"X48") / M6-1 21"X21" — 9

DETOUR (M4-8 24"X12") / WEST (M3-4 24"X12") / CHERRY ST (M1-94 12"X48") / M5-1L 21"X21" — 10

DETOUR (M4-8 24"X12") / WEST (M3-4 24"X12") / CHERRY ST (M1-94 12"X48") / M6-1 21"X21" — 11

END DETOUR (M4-8A 24"X18") — 12

EAST (M3-2 24"X12") / CHERRY ST (M1-94 12"X48") / DETOUR AHEAD W4D-2A — 13

N

0 75 125 Feet

LEGEND

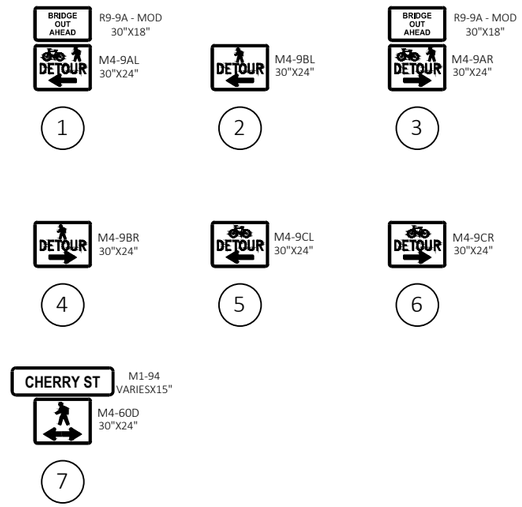
- (X) SIGN NUMBER
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TC SIGN ON PERMANENT SUPPORT
- TC DIRECTION OF TRAFFIC
- WORK ZONE
- CONTRACTOR STAGING AREA

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	VEHICLE DETOUR	SHEET 15	E

FILE NAME : C:\PWWORKING\USWI\DMS02004\025100-TC.DWG
LAYOUT NAME - 025100-02

PLOT DATE : 2/20/2024 10:07 AM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : ##########

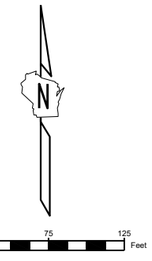




LEGEND

- (X) SIGN NUMBER
- TC SIGN ON PERMANENT SUPPORT
- TYPE II BARRICADE WITH ATTACHED SIGN
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TC DIRECTION OF TRAFFIC
- WORK ZONE
- CONTRACTOR STAGING AREA
- PEDESTRIAN DETOUR
- BICYCLE DETOUR

NOTE:
UTILIZE TEMPORARY PEDESTRIAN CURB RAMPS AND TEMPORARY PEDESTRIAN BARRICADES TO MAINTAIN RIVERWALK TRAFFIC AT ALL TIMES THROUGH THE CONSTRUCTION ZONE.
REVISE PEDESTRIAN CURB RAMP LOCATIONS, AS APPROVED BY THE ENGINEER, DURING MAINLINE AND DRIVEWAY PAVING OPERATIONS.
REFER TO SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION".



PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	BICYCLE-PEDESTRIAN DETOUR	SHEET 16	E

Estimate Of Quantities

2984-26-73

Line	Item	Item Description	Unit	Total	Qty
0002	203.0211.S	Abatement of Asbestos Containing Material (structure) 001. P-40-864	EACH	1.000	1.000
0004	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 001. P-40-864	EACH	1.000	1.000
0006	204.0100	Removing Concrete Pavement	SY	173.000	173.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	370.000	370.000
0010	204.0130	Removing Curb	LF	150.000	150.000
0012	204.0150	Removing Curb & Gutter	LF	141.000	141.000
0014	204.0155	Removing Concrete Sidewalk	SY	289.000	289.000
0016	204.0195	Removing Concrete Bases	EACH	8.000	8.000
0018	204.9060.S	Removing (item description) 001. Poles	EACH	4.000	4.000
0020	204.9090.S	Removing (item description) 001. Aerial Cable	LF	175.000	175.000
0022	205.0100	Excavation Common	CY	193.000	193.000
0024	206.1001	Excavation for Structures Bridges (structure) 001. P-40-864	EACH	1.000	1.000
0026	210.1500	Backfill Structure Type A	TON	180.000	180.000
0028	211.0101	Prepare Foundation for Asphaltic Paving (project) 001. 2984-26-73	EACH	1.000	1.000
0030	213.0100	Finishing Roadway (project) 001. 2984-26-73	EACH	1.000	1.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	145.000	145.000
0034	415.0410	Concrete Pavement Approach Slab	SY	45.000	45.000
0036	455.0605	Tack Coat	GAL	26.000	26.000
0038	465.0105	Asphaltic Surface	TON	87.000	87.000
0040	502.0100	Concrete Masonry Bridges	CY	276.000	276.000
0042	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 001. 5/8-Inch	LF	22.000	22.000
0044	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 002. 1-Inch	LF	197.000	197.000
0046	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 003. 3-Inch	LF	216.000	216.000
0048	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 004. 2-Inch	LF	187.000	187.000
0050	502.3200	Protective Surface Treatment	SY	920.000	920.000
0052	502.4106	Adhesive Anchors 3/4-inch	EACH	190.000	190.000
0054	502.4204	Adhesive Anchors No. 4 Bar	EACH	640.000	640.000
0056	502.4205	Adhesive Anchors No. 5 Bar	EACH	104.000	104.000
0058	502.4206	Adhesive Anchors No. 6 Bar	EACH	20.000	20.000
0060	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	59,540.000	59,540.000
0062	506.2610	Bearing Pads Elastomeric Laminated	EACH	26.000	26.000
0064	506.7050.S	Removing Bearings (structure) 001. P-40-864	EACH	24.000	24.000
0066	509.1500	Concrete Surface Repair	SF	527.000	527.000
0068	509.9025.S	Epoxy Injection Crack Repair	LF	959.000	959.000
0070	509.9026.S	Cored Holes 2-Inch Diameter	EACH	16.000	16.000
0072	516.0500	Rubberized Membrane Waterproofing	SY	54.000	54.000
0074	517.0601	Painting Epoxy System (structure) 001. P-40-864	EACH	1.000	1.000
0076	517.0901.S	Preparation and Coating of Top Flanges (structure) 001. P-40-864	EACH	1.000	1.000
0078	517.1010.S	Concrete Staining (structure) 001. P-40-864	SF	7,624.000	7,624.000
0080	517.1801.S	Structure Repainting Recycled Abrasive (structure) 001. P-40-864	EACH	1.000	1.000
0082	517.4501.S	Negative Pressure Containment and Collection of Waste Materials (structure) 001. P-40-864	EACH	1.000	1.000
0084	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0086	531.8990	Anchor Assemblies Poles on Structures	EACH	8.000	8.000
0088	601.0331	Concrete Curb & Gutter 31-Inch	LF	208.000	208.000
0090	602.0410	Concrete Sidewalk 5-Inch	SF	2,651.000	2,651.000
0092	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	20.000	20.000
0094	602.0865	Concrete Driveway HES 7-Inch	SY	24.000	24.000
0096	606.0100	Riprap Light	CY	133.000	133.000
0098	616.0700.S	Fence Safety	LF	100.000	100.000

Estimate Of Quantities

2984-26-73

Line	Item	Item Description	Unit	Total	Qty
0100	618.0100	Maintenance and Repair of Haul Roads (project) 001. 2984-26-73	EACH	1.000	1.000
0102	619.1000	Mobilization	EACH	1.000	1.000
0104	624.0100	Water	MGAL	2.200	2.200
0106	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0108	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0110	628.7010	Inlet Protection Type B	EACH	4.000	4.000
0112	631.0300	Sod Water	MGAL	1.000	1.000
0114	631.1000	Sod Lawn	SY	10.000	10.000
0116	638.2102	Moving Signs Type II	EACH	16.000	16.000
0118	638.2602	Removing Signs Type II	EACH	4.000	4.000
0120	642.5401	Field Office Type D	EACH	1.000	1.000
0122	643.0410	Traffic Control Barricades Type II	DAY	3,750.000	3,750.000
0124	643.0420	Traffic Control Barricades Type III	DAY	3,224.000	3,224.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	3,660.000	3,660.000
0128	643.0900	Traffic Control Signs	DAY	26,794.000	26,794.000
0130	643.5000	Traffic Control	EACH	1.000	1.000
0132	644.1440	Temporary Pedestrian Surface Matting	SF	300.000	300.000
0134	644.1601	Temporary Pedestrian Curb Ramp	DAY	80.000	80.000
0136	644.1810	Temporary Pedestrian Barricade	LF	90.000	90.000
0138	646.1020	Marking Line Epoxy 4-Inch	LF	921.000	921.000
0140	646.5020	Marking Arrow Epoxy	EACH	2.000	2.000
0142	646.5220	Marking Symbol Epoxy	EACH	2.000	2.000
0144	646.6020	Marking Stop Line Epoxy 12-Inch	LF	130.000	130.000
0146	650.5000	Construction Staking Base	LF	100.000	100.000
0148	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	208.000	208.000
0150	650.6501	Construction Staking Structure Layout (structure) 001. P-40-864	EACH	1.000	1.000
0152	650.8501	Construction Staking Electrical Installations (project) 001. 2984-26-73	EACH	1.000	1.000
0154	650.9000	Construction Staking Curb Ramps	EACH	2.000	2.000
0156	650.9911	Construction Staking Supplemental Control (project) 001. 2984-26-73	EACH	1.000	1.000
0158	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	60.000	60.000
0160	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	550.000	550.000
0162	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	16.000	16.000
0164	654.0105	Concrete Bases Type 5	EACH	10.000	10.000
0166	655.0610	Electrical Wire Lighting 12 AWG	LF	384.000	384.000
0168	655.0620	Electrical Wire Lighting 8 AWG	LF	3,088.000	3,088.000
0170	656.0201	Electrical Service Meter Breaker Pedestal (location) 001. West Abutment	EACH	2.000	2.000
0172	656.0201	Electrical Service Meter Breaker Pedestal (location) 002. East Abutment	EACH	2.000	2.000
0174	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	6.000	6.000
0176	657.0322	Poles Type 5-Aluminum	EACH	6.000	6.000
0178	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	6.000	6.000
0180	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	4.000	4.000
0182	690.0150	Sawing Asphalt	LF	97.000	97.000
0184	690.0250	Sawing Concrete	LF	538.000	538.000
0186	715.0502	Incentive Strength Concrete Structures	DOL	1,862.000	1,862.000
0188	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0190	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	7,800.000	7,800.000
0192	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	15,000.000	15,000.000
0194	SPV.0025	Special 001. Concrete Removal And Replacement At Machinery Floor	CF	362.000	362.000
0196	SPV.0025	Special 002. Counterweight Concrete Modification	CF	26.000	26.000
0198	SPV.0025	Special 003. Waterline Concrete Surface Repair	CF	22.000	22.000

2984-26-73

Line	Item	Item Description	Unit	Total	Qty
0200	SPV.0060	Special 001. Bascule Girder Stiffener Angle Repairs	EACH	41.000	41.000
0202	SPV.0060	Special 002. Loading Girder Base Repairs	EACH	2.000	2.000
0204	SPV.0060	Special 003. Bascule Girder Trunnion Web Stiffener Replacements	EACH	24.000	24.000
0206	SPV.0060	Special 004. Uplift Column Base Repairs	EACH	9.000	9.000
0208	SPV.0060	Special 005. Stiffener Replacements At Pinion Bearing Support	EACH	8.000	8.000
0210	SPV.0060	Special 006. Ladder And Railing Repairs	EACH	2.000	2.000
0212	SPV.0060	Special 007. Rivet Removal And Replacement	EACH	500.000	500.000
0214	SPV.0060	Special 008. Heel Block Refurbishment	EACH	4.000	4.000
0216	SPV.0060	Special 009. Machinery Enclosures	EACH	2.000	2.000
0218	SPV.0060	Special 010. Access Hatch	EACH	4.000	4.000
0220	SPV.0060	Special 011. Architectural Exterior Bridge Led Lighting	EACH	1.000	1.000
0222	SPV.0060	Special 012. Operator House Refurbishment	EACH	2.000	2.000
0224	SPV.0060	Special 013. Operator House Hvac	EACH	2.000	2.000
0226	SPV.0060	Special 014. Plumbing Systems	EACH	1.000	1.000
0228	SPV.0060	Special 015. Field Verification Survey	EACH	1.000	1.000
0230	SPV.0060	Special 016. Submarine Cable	EACH	1.000	1.000
0232	SPV.0060	Special 017. Temporary Support For Bascule Leaves	EACH	2.000	2.000
0234	SPV.0060	Special 018. Nameplate	EACH	1.000	1.000
0236	SPV.0060	Special 019. Counterweight Calculations And Span Balancing	EACH	1.000	1.000
0238	SPV.0060	Special 020. Timber Fender Removal	EACH	1.000	1.000
0240	SPV.0060	Special 021. Fender Pier Repairs	EACH	1.000	1.000
0242	SPV.0060	Special 022. Span Drive Machinery Refurbishment	EACH	1.000	1.000
0244	SPV.0060	Special 023. Center Lock Machinery	EACH	1.000	1.000
0246	SPV.0060	Special 024. Trunnion And Trunnion Bearing Refurbishment	EACH	1.000	1.000
0248	SPV.0060	Special 025. Bridge Electrical Work	EACH	1.000	1.000
0250	SPV.0060	Special 026. Span Drives And Motors	EACH	1.000	1.000
0252	SPV.0060	Special 027. Control Console - Cherry Street	EACH	1.000	1.000
0254	SPV.0060	Special 028. PLC Controls - Cherry Street	EACH	1.000	1.000
0256	SPV.0060	Special 029. PLC And Communication Modifications - Knapp Street (Bridge B-40-62)	EACH	1.000	1.000
0258	SPV.0060	Special 030. Lightning And Surge Suppression	EACH	1.000	1.000
0260	SPV.0060	Special 031. Traffic Gates And Signals	EACH	4.000	4.000
0262	SPV.0060	Special 032. Power Distribution And Motor Control Center	EACH	1.000	1.000
0264	SPV.0060	Special 033. Limits And Sensors	EACH	1.000	1.000
0266	SPV.0060	Special 034. Training, Manuals And Spare Parts	EACH	1.000	1.000
0268	SPV.0060	Special 035. Auxiliary Electrical Equipment	EACH	1.000	1.000
0270	SPV.0060	Special 036. Bent C Structural Steel Repairs	EACH	2.000	2.000
0272	SPV.0060	Special 037. Tree Protection	EACH	1.000	1.000
0274	SPV.0060	Special 038. Marking Yield Line Epoxy 36-inch	EACH	15.000	15.000
0276	SPV.0060	Special 039. Adjusting Sanitary Manhole Covers	EACH	2.000	2.000
0278	SPV.0060	Special 040. Luminaires Utility LED	EACH	6.000	6.000
0280	SPV.0060	Special 041. Salvage Existing Traffic Signal and Lighting Equipment	EACH	4.000	4.000
0282	SPV.0060	Special 042. Utility Line Opening (ULO)	EACH	10.000	10.000
0284	SPV.0060	Special 043. Milwaukee Light Base Type 1	EACH	4.000	4.000
0286	SPV.0060	Special 044. Equipment Grounding Electrode	EACH	12.000	12.000
0288	SPV.0060	Special 045. Installing City Furnished Poles Type 31-AL-BD	EACH	2.000	2.000
0290	SPV.0060	Special 046. Install Conduit Into Existing CUC Manhole	EACH	1.000	1.000
0292	SPV.0060	Special 047. Submersible Multitap 3-Port Pre-Insulated Connector	EACH	2.000	2.000
0294	SPV.0060	Special 048. Fiberglass/Polymer Concrete Pull Box (13"X 24" X 24")	EACH	4.000	4.000
0296	SPV.0060	Special 049. Remove, Refurbish, and Reinstall Pedestrian Light Poles	EACH	4.000	4.000
0298	SPV.0085	Special 001. Bridge Structural Steel	LB	330,820.000	330,820.000

2984-26-73

Line	Item	Item Description	Unit	Total	Qty
0300	SPV.0085	Special 002. Non-Structural Steel Ballast	LB	78,640.000	78,640.000
0302	SPV.0085	Special 003. Structural Steel Repair, Field Discovered Conditions Repaired as Directed	LB	10,500.000	10,500.000
0304	SPV.0090	Special 001. Two-Line Aluminum Railing	LF	357.000	357.000
0306	SPV.0090	Special 002. Pedestrian Railing Rehabilitation	LF	875.000	875.000
0308	SPV.0090	Special 003. Traffic Gate Railing	LF	70.000	70.000
0310	SPV.0090	Special 004. Marine Dock Fender	LF	564.000	564.000
0312	SPV.0090	Special 005. Fence Chain Link Polymer-Coated 10-FT, P-40-864	LF	130.000	130.000
0314	SPV.0090	Special 006. Steel Pipe Railing	LF	65.000	65.000
0316	SPV.0090	Special 007. Urethane Injection Crack Repair	LF	52.000	52.000
0318	SPV.0090	Special 008. Electrical Cable Type 4#8/1#8 XLP	LF	1,200.000	1,200.000
0320	SPV.0090	Special 009. Marking Stop Line Epoxy 24-inch	LF	28.000	28.000
0322	SPV.0090	Special 010. 2-Duct Conduit Cement Encased Rigid Nonmetallic Conduit DB-60	LF	100.000	100.000
0324	SPV.0090	Special 011. Liquidtight Flexible Nonmetallic 1 ½-Inch Conduit	LF	40.000	40.000
0326	SPV.0165	Special 001. Steel Grid Floor 5-Inch	SF	4,101.000	4,101.000
0328	SPV.0165	Special 002. Concrete Fill For Grid Deck	SF	1,430.000	1,430.000
0330	SPV.0165	Special 003. Fiberglass Sidewalk Floor Plates	SF	1,892.000	1,892.000

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

REMOVALS

STAGE	LOCATION	STA	STA	SIDE	204.0100 REMOVING CONCRETE PAVEMENT SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	690.0250 SAWING CONCRETE LF	690.0150 SAWING ASPHALT LF
	WEST ABUTMENT	0+85.56	1+35.51		99	200	80	80	143	290	50
	EAST ABUTMENT	3+50.11	4+00.23		74	170	70	61	146	248	47
PROJECT 2984-26-73 TOTAL					173	370	150	141	289	538	97

PREPARE FOUNDATION FOR ASPHALTIC PAVING

LOCATION	211.0101 PREPARE FOUNDATION FOR ASPHALTIC PAVING 2984-26-73 EACH
PROJECT	1
PROJECT 2984-26-73 TOTAL	1

3

FINISHING ROADWAY

LOCATION	213.0100 FINISHING ROADWAY 2984-26-73 EACH
PROJECT	1
PROJECT 2984-26-73 TOTAL	

PAVING ITEMS

STAGE	LOCATION	STA	STA	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	602.0865 CONCRETE DRIVEWAY HES 7-INCH SY	602.0410 CONCRETE SIDEWALK 5-INCH SF	465.0105 ASPHALTIC SURFACE TON	455.0605 TACK COAT GAL	624.0100 WATER MGAL
	WEST ABUTMENT	0+85.56	1+35.51	73	23	24	1326	47	14	1.1
	EAST ABUTMENT	3+50.11	4+00.23	72	22	---	1325	40	12	1.1
PROJECT 2984-26-73 TOTAL				145	45	24	2,651	87	26	2.2

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

EARTHWORK

DIVISION	FROM/TO STATION	205.0100 EXCAVATION COMMON (CY) (1) CUT (2)	205.0100 EXCAVATION COMMON (CY) (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
CHERRY EAST	0+81.35/1+35.57	83	0	69	14	0	0	14	14	0	
CHERRY WEST	0+81.35/1+35.57	110	0	72	38	0	0	38	38	0	
TOTAL COMMON EXC		193		141	52	0	0	52	52	0	

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.25

DEPENDING ON SELE **EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR**

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

CONCRETE CURB & GUTTER

LOCATION	STA	STA	SIDE	601.0331 CONCRETE CURB & GUTTER 31-INCH TYPE A LF	601.0331 CONCRETE CURB & GUTTER 31-INCH TYPE D LF
WEST ABUTMENT	0+81.23	1+20.58	LT & RT	---	78
	1+20.58	1+35.67	LT & RT	30	---
EAST ABUTMENT	3+50.11	3+65.31	LT & RT	30	---
	3+65.31	4+00.23	LT & RT	---	70
PROJECT 2984-26-73 TOTAL				60	148

DETECTABLE WARNING FIELDS

LOCATION	SIDE	OFFSET	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
WEST ABUTMENT	1+10	LT	10
	1+18	RT	10
PROJECT 2984-26-73 TOTAL			20

FENCE SAFETY

LOCATION	616.0700.S FENCE SAFETY LF
UNDISTRIBUTED	100
PROJECT 2984-26-73 TOTAL	100

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT	618.0100** MAINTENANCE AND REPAIR OF HAUL ROADS EACH
2984-26-73	1
PROJECT 2984-26-73 TOTAL	1

**CATEGORY 0030

EROSION CONTROL MOBILIZATION

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
2984-26-73	4	2
PROJECT 2984-26-73 TOTAL	**4**	**2**

EROSION CONTROL

LOCATION	STATION	OFFSET	628.7010 INLET PROTECTION TYPE B EACH
WEST ABUTMENT	0+45	LT	1
	0+55	RT	1
EAST ABUTMENT	4+35	RT	1
	4+45	LT	1
PROJECT 2984-26-73 TOTAL			**4**

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

LANDSCAPING

STATION	631.1000 SOD LAWN SY	631.0300 SOD WATER MGAL
WEST ABUTMENT (UNDISTRIBUTED)	10	1
PROJECT 2984-26-73 TOTAL	**10**	**1**

3

PERMANENT SIGNING

SIGN #	CODE	MESSAGE	W	X	H	638.2602 REMOVING SIGNS TYPE II EACH	638.2102 MOVING SIGNS TYPE II EACH	MOUNTING	SIGN MOUNTED ON SAME POST AS #
M-1	M1-94H	W CHERRY ST	VARIES	X	18	-	1	PEDESTRIAN LIGHT POLE	
M-2	M1-94H	RIVERCENTER DR	VARIES	X	18	-	1	PEDESTRIAN LIGHT POLE	M-1
M-3	W11-2	PEDESTRIAN CROSSING SYMBOL	30	X	30	-	1	PEDESTRIAN LIGHT POLE	M-1
M-4	W11-2	PEDESTRIAN CROSSING SYMBOL	30	X	30	-	1	PEDESTRIAN LIGHT POLE	-
M-5	M1-94H	W CHERRY ST	VARIES	X	18	-	1	PEDESTRIAN LIGHT POLE	
M-6	M1-94H	N RIVERWALK WAY	VARIES	X	18	-	1	PEDESTRIAN LIGHT POLE	M-5
M-7	CUSTOM	LIFT PLOW BLADE OVER BRIDGE	30	X	24	-	1	PEDESTRIAN LIGHT POLE	M-5
M-8	CUSTOM	NO MOTORIZED VEHICLES ON BRIDGE SIDEWALKS	30	X	30	-	1	PEDESTRIAN LIGHT POLE	M-5
M-9	R7-1D	NO PARKING ANY TIME - DOUBLE ARROW	18	X	24	-	1	POST	-
M-10	R10-6 (MOD)	STOP HERE ON RED (ARROWS) - DOWN TO THE RIGHT	24	X	36	-	1	TRAFFIC SIGNAL	
R-1	CUSTOM	PEDESTRIANS STOP HERE ON RED (ARROWS) - DOWN TO THE LEFT	15	X	21	1	-	TRAFFIC SIGNAL	M-10
M-11	R10-6	STOP HERE ON RED (ARROWS)	24	X	36	-	1	TRAFFIC SIGNAL	
R-2	CUSTOM	PEDESTRIANS STOP HERE ON RED (ARROWS) - DOWN TO THE RIGHT	15	X	21	1	-	TRAFFIC SIGNAL	M-11
M-12	R10-6	STOP HERE ON RED (ARROWS)	24	X	36	-	1	TRAFFIC SIGNAL	
R-3	CUSTOM	PEDESTRIANS STOP HERE ON RED (ARROWS) - DOWN TO THE RIGHT	15	X	21	1	-	TRAFFIC SIGNAL	M-12
M-13	R10-6 (MOD)	STOP HERE ON RED (ARROWS) - DOWN TO THE RIGHT	24	X	36	-	1	TRAFFIC SIGNAL	
M-14	R7-1D	NO PARKING ANY TIME - DOUBLE ARROW	18	X	24	-	1	TRAFFIC SIGNAL	M-13
R-4	CUSTOM	PEDESTRIANS STOP HERE ON RED (ARROWS) - DOWN TO THE LEFT	15	X	21	1	-	TRAFFIC SIGNAL	M-13
M-15	W11-2	PEDESTRIAN CROSSING SYMBOL	30	X	30	-	1	POST	
M-16	W16-9P	AHEAD PLAQUE	24	X	12	-	1	POST	M-15
PROJECT 2984-26-73 TOTAL						4	16		

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

TRAFFIC CONTROL

LOCATION	DAYS IN SERVICE	643.0410 TRAFFIC CONTROL BARRICADES TYPE II NO.	643.0410 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 DAY	644.1601 TEMPORARY PEDESTRIAN CURB RAMP NO.	644.1601 DAY	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF	644.1440 TEMPORARY PEDESTRIAN SURFACE MATTING SF
ADVANCED BRIDGE CLOSURE	7	-	-	2	14	-	-	2	14	-	-	-	-
AT BRIDGE - BRIDGE WORK	265	1	265	10	2650	12	3180	6	1,590	-	-	-	-
AT BRIDGE - ROADWAY WORK	40	1	40	14	560	12	480	7	280	2	80	90	300
VEHICLE DETOUR	265	-	-	-	-	-	-	76	20,140	-	-	-	-
BIKE-PED DETOUR	265	13	3445	-	-	-	-	18	4,770	-	-	-	-
PROJECT 2984-26-73 TOTAL			**3,750**		**3,224**		**3,660**		**26,794**		**80**	**90**	**300**

3

TRAFFIC CONTROL

PROJECT	643.5000 TRAFFIC CONTROL EACH
2984-26-73	1
PROJECT 2984-26-73 TOTAL	1

PAVEMENT MARKING ITEMS

STATION	-	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH YELLOW SOLID LF	646.1020 YELLOW 10 FT LINE 30 FT GAP LF	646.1020 MARKING LINE EPOXY 4-INCH WHITE SOLID LF	646.1020 WHITE 2 FT LINE 6 FT GAP LF	646.5020 MARKING ARROW EPOXY EA	646.5220 MARKING SYMBOL EPOXY EA	646.6020 MARKING STOP LINE EPOXY 12-INCH WHITE LF	SPV.0060.038 MARKING YIELD LINE EPOXY 36-INCH EA	SPV.0090.009 MARKING STOP LINE EPOXY 24-INCH LF
0+63	-	1+35	WEST ABUTMENT	---	20	57	25	---	---	130	9	---
1+35	-	3+50	BRIDGE	105	40.5	430	---	2	2	---	6	28
3+50	-	4+00	EAST ABUTMENT	122	---	120	---	---	---	---	---	---
PROJECT 2984-26-73 TOTAL				**227**	**61**	**608**	**25**	**2**	**2**	**130**	**15**	**28**
					288		**633**					

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

CONSTRUCTION STAKING

STATION	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.8501** CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS 2984-26-73 EACH	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 2984-26-73 EACH
PROJECT	-	-	1	-	1
WEST ABUTMENT	50	108	-	2	-
EAST ABUTMENT	50	100	-	-	-
PROJECT 2984-26-73 TOTAL	**100**	**208**	**1**	**2**	**1**

**CATEGORY 0030

3

TREE PROTECTION

STATION	LOCATION	SPV.0060.037 TREE PROTECTION EACH
0+85	WEST ABUTMENT	1
PROJECT 2984-26-73 TOTAL		**1**

UTILITY ITEMS

LOCATION	STATION	OFFSET	**SPV.0060.039 ADJUSTING SANITARY MANHOLE COVERS EACH	SPV.0060.042 UTILITY LINE OPENING (ULO) EACH
EAST ABUTMENT	3+85.00	1' RT	1	-
	3+86.00	3' LT	1	-
PROJECT			-	10
PROJECT 2984-26-73 TOTAL			**2**	**10**

**CATEGORY 0030

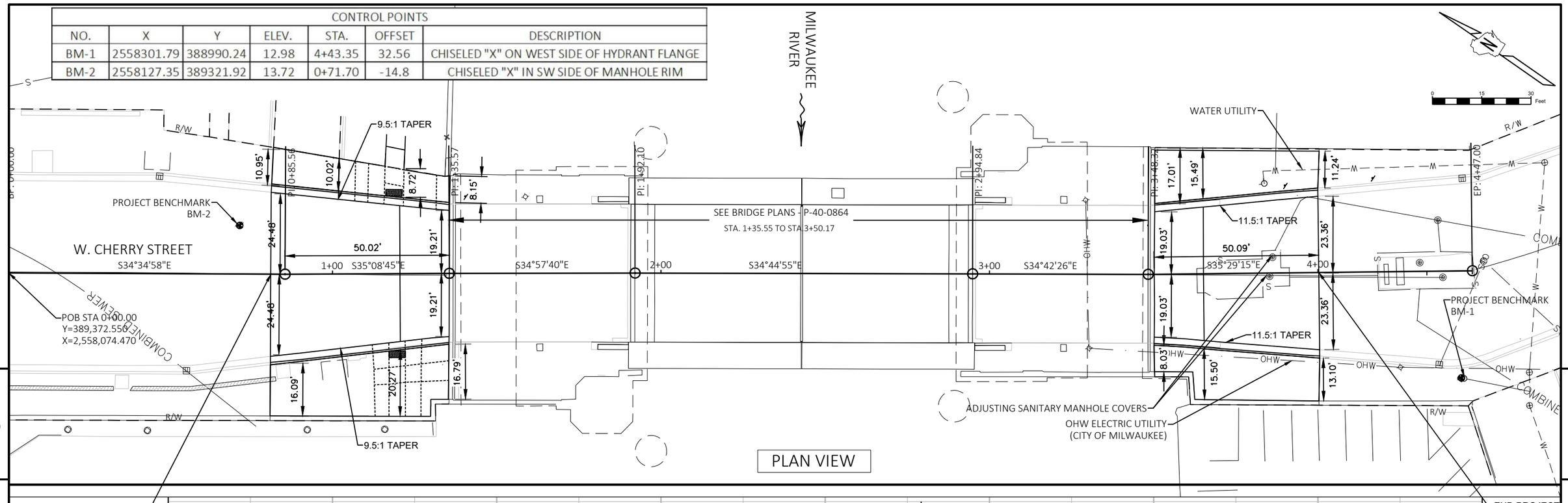
**ALL LIGHTING ITEMS CATEGORY 0030

3

3

	ITEM #	DESCRIPTION	UNIT	WEST ABUTMENT QTY	EAST ABUTMENT QTY	LIGHTING QUANT. TOTAL
**	204.0195	REMOVING CONCRETE BASES	EACH	6	2	8
**	204.9060.S	REMOVING POLES	EACH	2	2	4
**	204.9090.S	REMOVING AERIAL CABLE	L.F.	-	175	175
**	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	L.F.	60	-	60
**	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	L.F.	230	320	550
**	653.0164	PULL BOXES NON-CONDUCTIVE 24x42-Inch	EACH	10	8	16
**	654.0105	CONCRETE BASES TYPE 5	EACH	7	3	10
**	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	L.F.	192	192	384
**	655.0620	ELECTRICAL WIRE LIGHTING 8 AWG	L.F.	982	2106	3088
**	656.0201.001	ELECTRICAL SERVICE METER BREAKER PEDESTAL WEST ABUTMENT	EACH	1	1	2
**	656.0201.002	ELECTRICAL SERVICE METER BREAKER PEDESTAL EAST ABUTMENT	EACH	1	1	2
**	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	3	3	6
**	657.0322	POLES TYPE 5-ALUMINUM	EACH	3	3	6
**	657.0610	LUMINAIRE ARMS SIGNAL MEMBER 4 1/2-INCH CLAMP 6-FT	EACH	3	3	6
**	659.5000.S	LAMP, BALLAST, LED, SWITCH DISPOAL BY CONTRACTOR	EACH	2	2	4
**	SPV.0060.040	LUMINAIRES UTILITY LED	EACH	3	3	6
**	SPV.0060.041	SALVAGE EXISTING TRAFFIC SIGNAL AND LIGHTING EQUIPMENT	EACH	2	2	4
**	SPV.0060.043	MILWAUKEE LIGHT BASE TYPE 1	EACH	-	-	4
**	SPV.0060.044	EQUIPMENT GROUNDING ELECTRODE	EACH	-	-	12
**	SPV.0060.045	INSTALLING CITY FURNISHED POLES TYPE 31-AL-BD	EACH	-	-	2
**	SPV.0060.046	INSTALLING CONDUIT INTO EXISTING CUC MANHOLE	EACH	-	-	1
**	SPV.0060.047	SUBMERSIBLE MULTITAP 3-PORT PRE-INSULATED CONNECTOR	EACH	-	-	2
**	SPV.0060.048	FIBERGLASS/POLYMER CONCRETE PULL BOX (13”X 24” X 24”)	EACH	2	2	4
**	SPV.0060.049	REMOVE, REFURBISH, AND REINSTALL PEDESTRIAN LIGHT POLES	EACH	4	-	4
**	SPV.0090.008	ELECTRICAL CABLE TYPE 4#8/1#8 XLP	LF	-	-	1200
**	SPV.0090.010	2-DUCT CONDUIT CEMENT ENCASED RIGID NONMETALLIC CONDUIT DB-60	LF	-	-	100
**	SPV.0090.011	LIQUIDTIGHT FLEXIBLE NONMETALLIC 1 ½-INCH CONDUIT	LF	-	-	40

CONTROL POINTS						
NO.	X	Y	ELEV.	STA.	OFFSET	DESCRIPTION
BM-1	2558301.79	388990.24	12.98	4+43.35	32.56	CHISELED "X" ON WEST SIDE OF HYDRANT FLANGE
BM-2	2558127.35	389321.92	13.72	0+71.70	-14.8	CHISELED "X" IN SW SIDE OF MANHOLE RIM

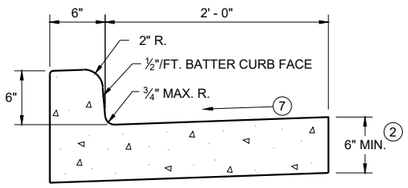


PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET 28	E

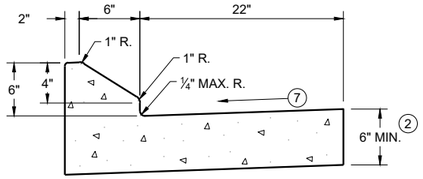
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LAYOUT NAME - 050101-01
PLOT DATE : 2/28/2024 3:14 PM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

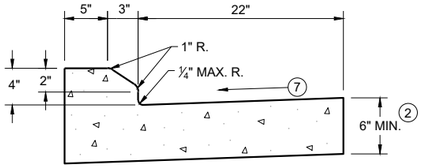
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D18-04	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09B04-12	PULL BOX
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-15A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C20-02	YIELD MARKING
15C29-08A	BICYCLE LANE MARKING
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



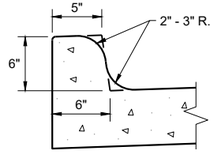
TYPES A (1) & D



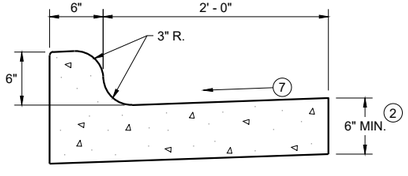
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

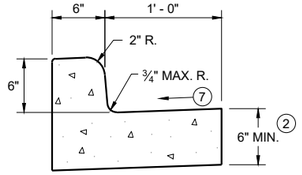


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



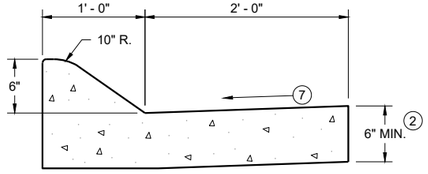
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

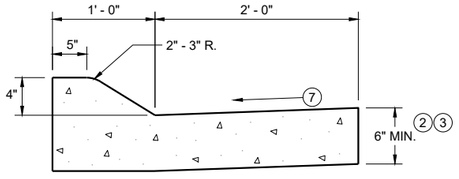


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

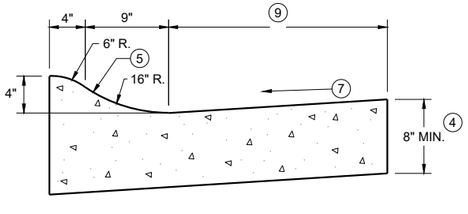


6" SLOPED CURB TYPES A (1) & D



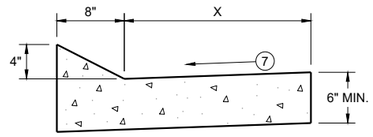
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

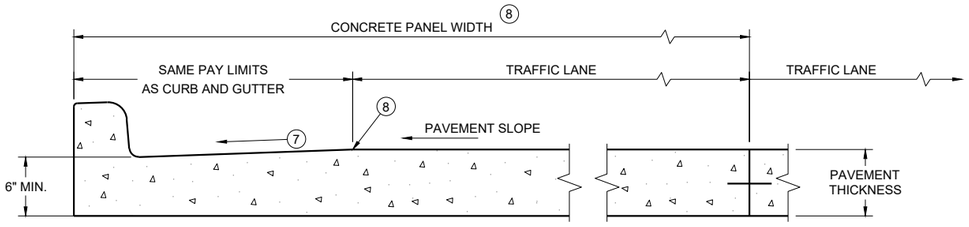


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

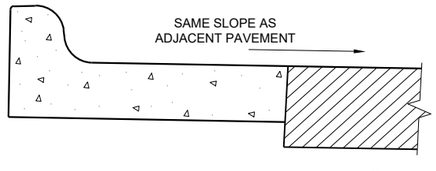
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

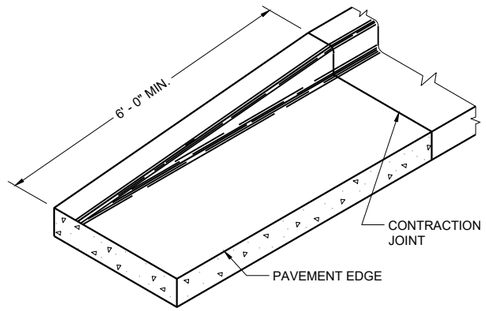
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

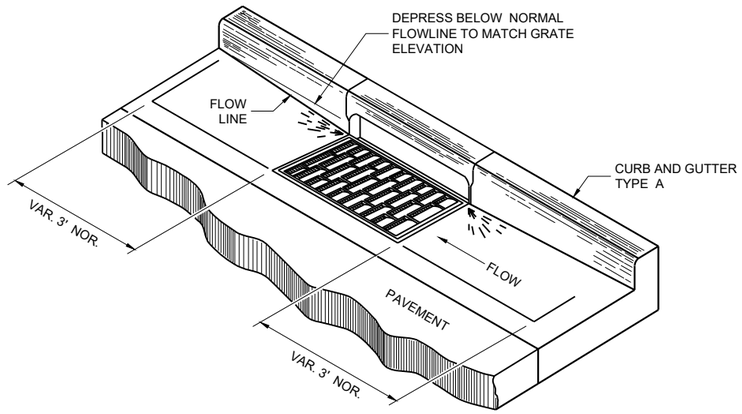
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

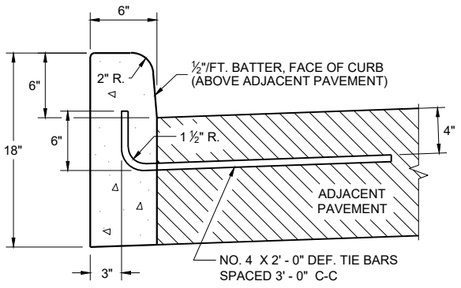
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

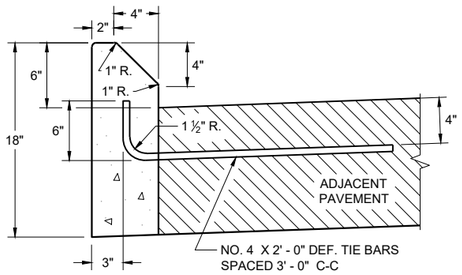
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

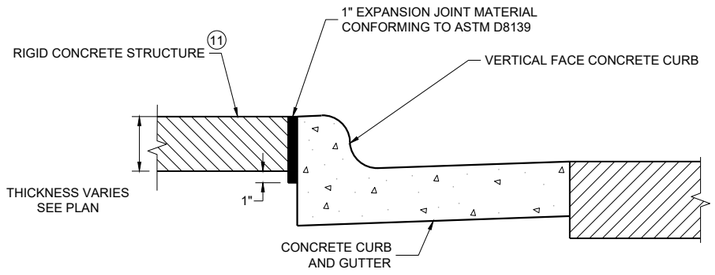


TYPES A (1) & D

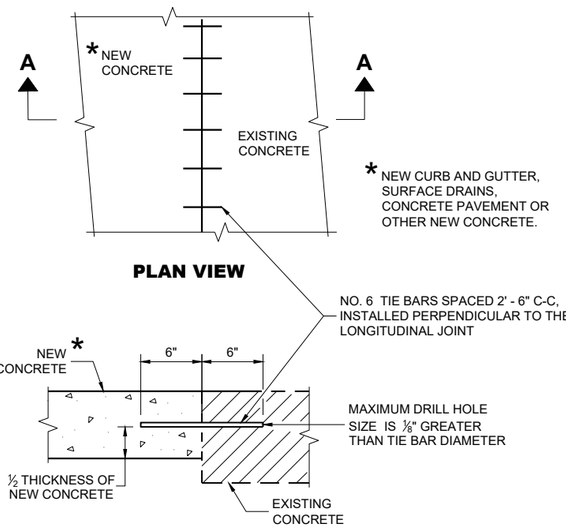


TYPES G (1) & J

CONCRETE CURB



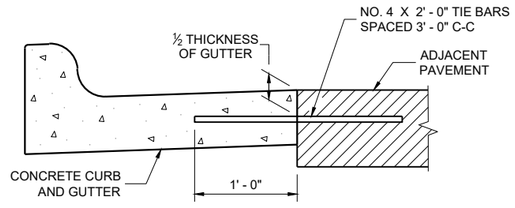
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



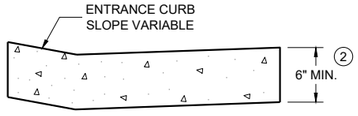
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

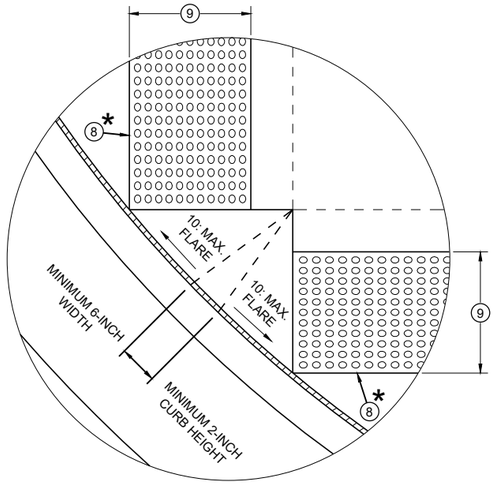
APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

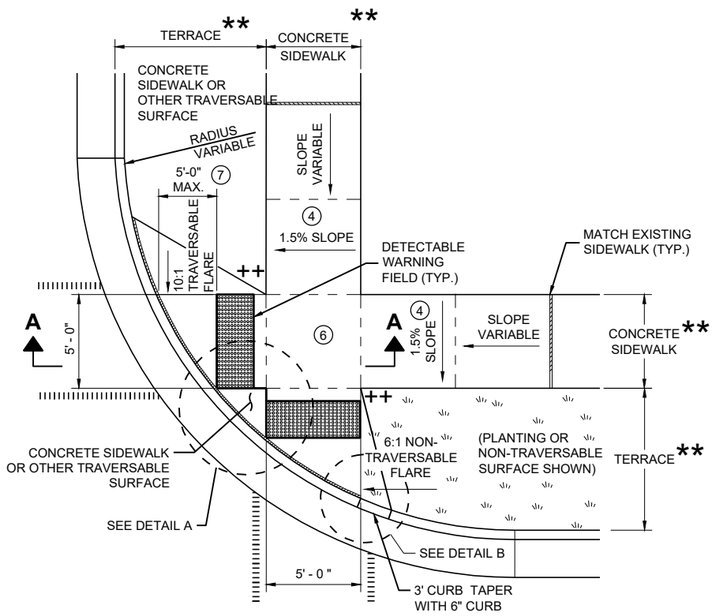
6

SDD 08D01-23b

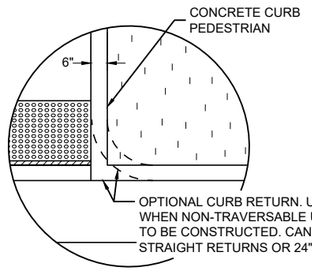
SDD 08D01-23b



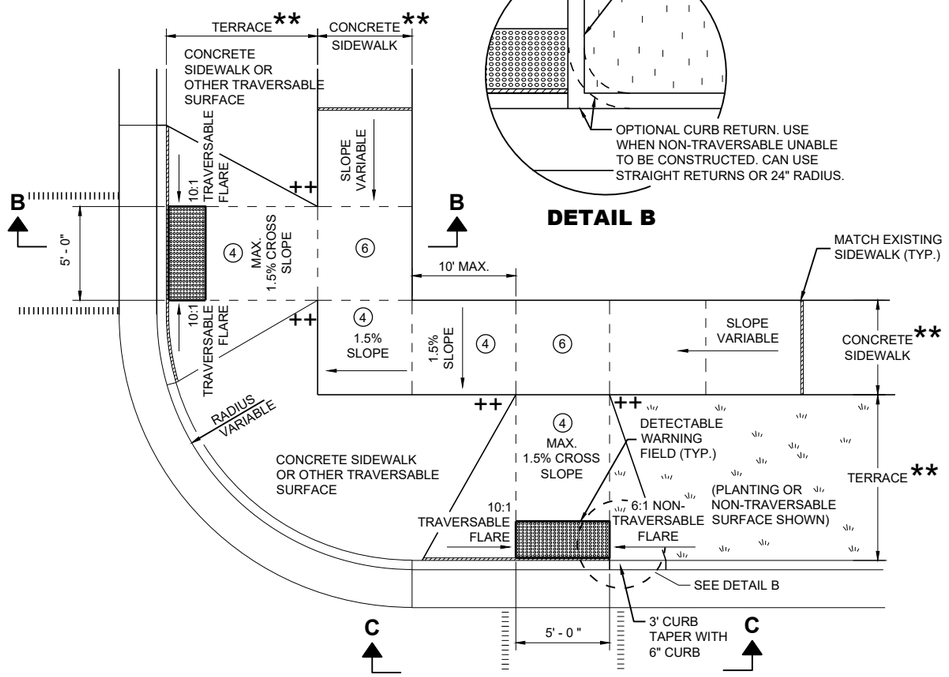
DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

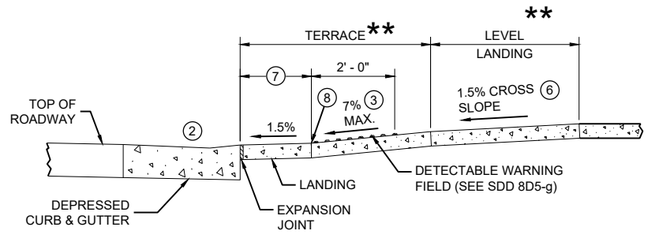
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

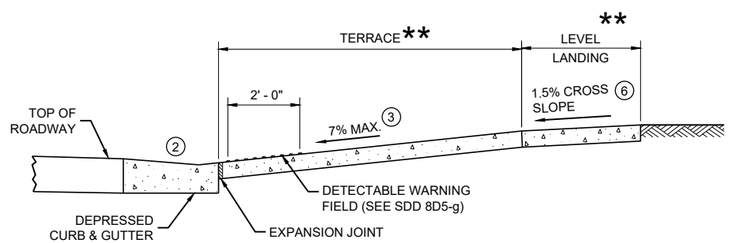


SECTION A - A FOR TYPE 2

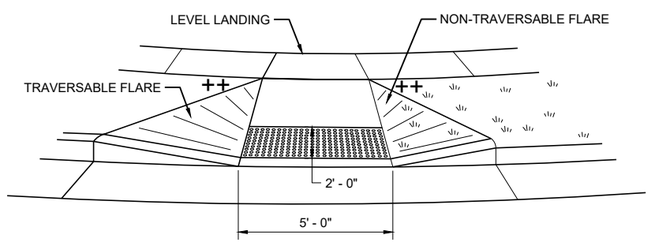
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



SECTION B - B FOR TYPE 3



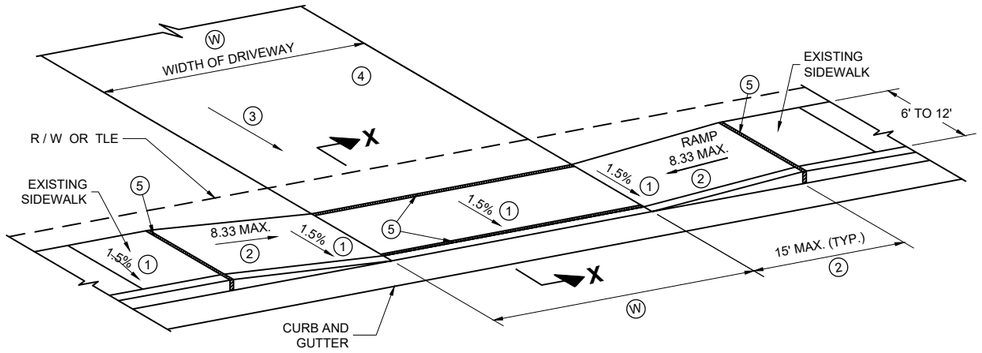
VIEW C - C FOR TYPE 3

LEGEND

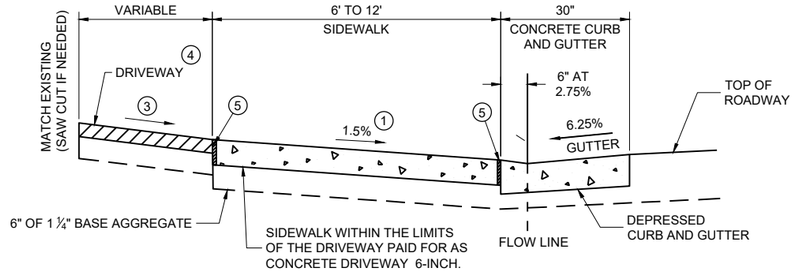
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

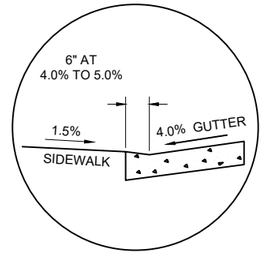
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



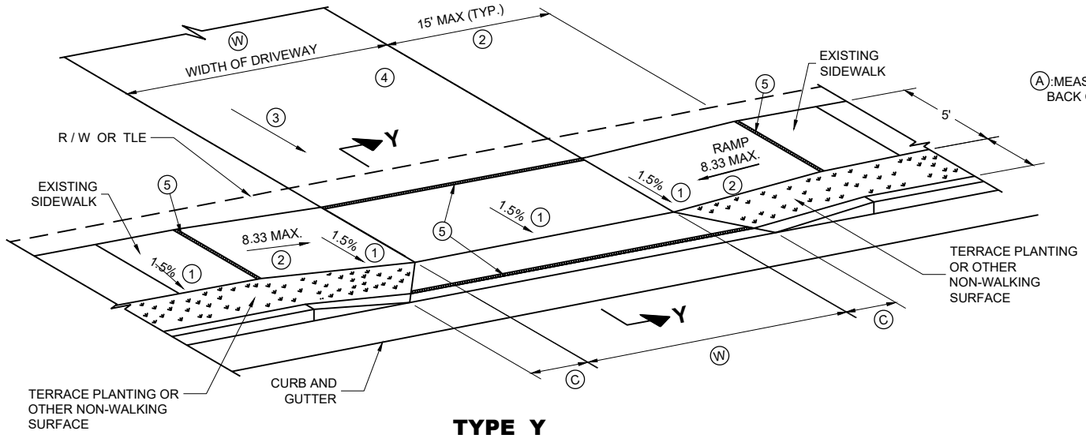
TYPE X
SIDEWALK ABUTS CURB AND GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X - X



SECTION X - X
4% GUTTER SLOPE



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

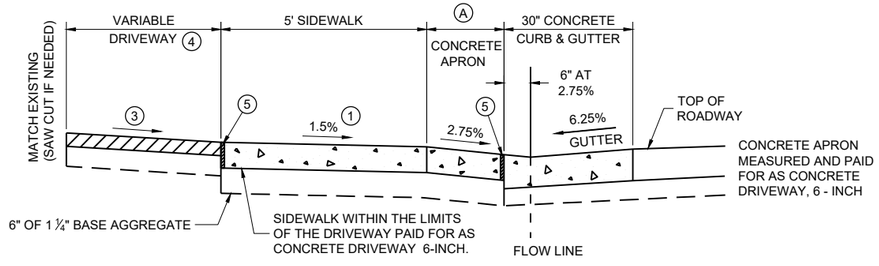
Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

16' MIN. - 35' MAX. COMMERCIAL (CE)

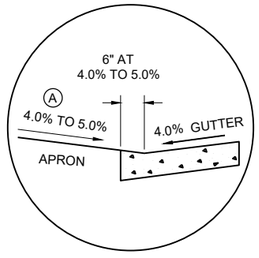
Ⓐ:MEASURE FROM BACK OF CURB

TABLE Y

Ⓐ FEET	Ⓒ FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'



NOTE: SIDEWALK MY BE DEPRESSED IN DRIVEWAY AREAS



SECTION Y - Y
4% GUTTER SLOPE

SECTION Y - Y
DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER
(URBAN AND SUBURBAN)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

Ⓦ IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

④ DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

⑤ ½" EXPANSION JOINT FILLER

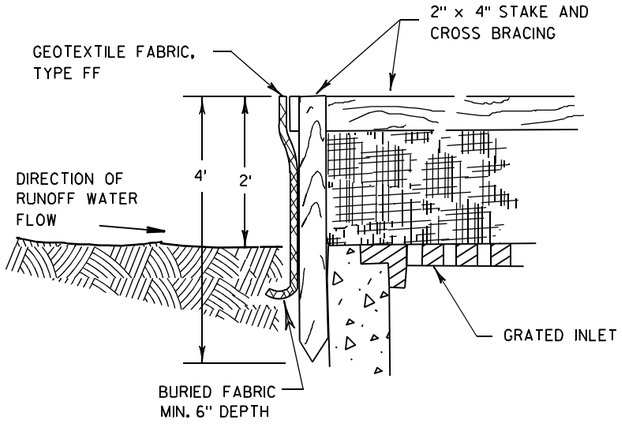
DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y

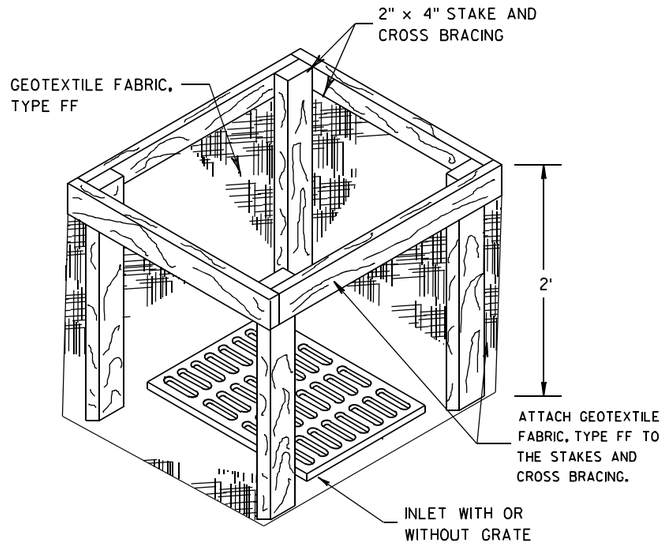
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

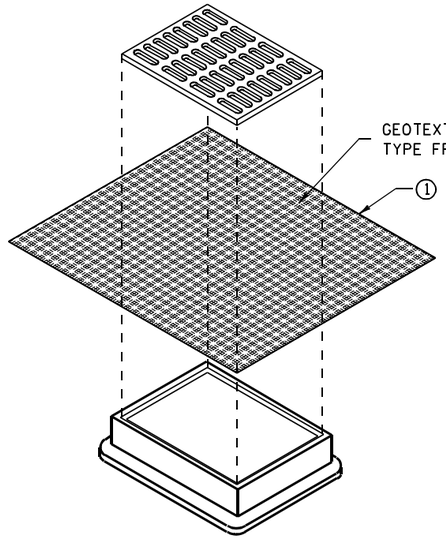
FHWA

6
SDD 08D18-04



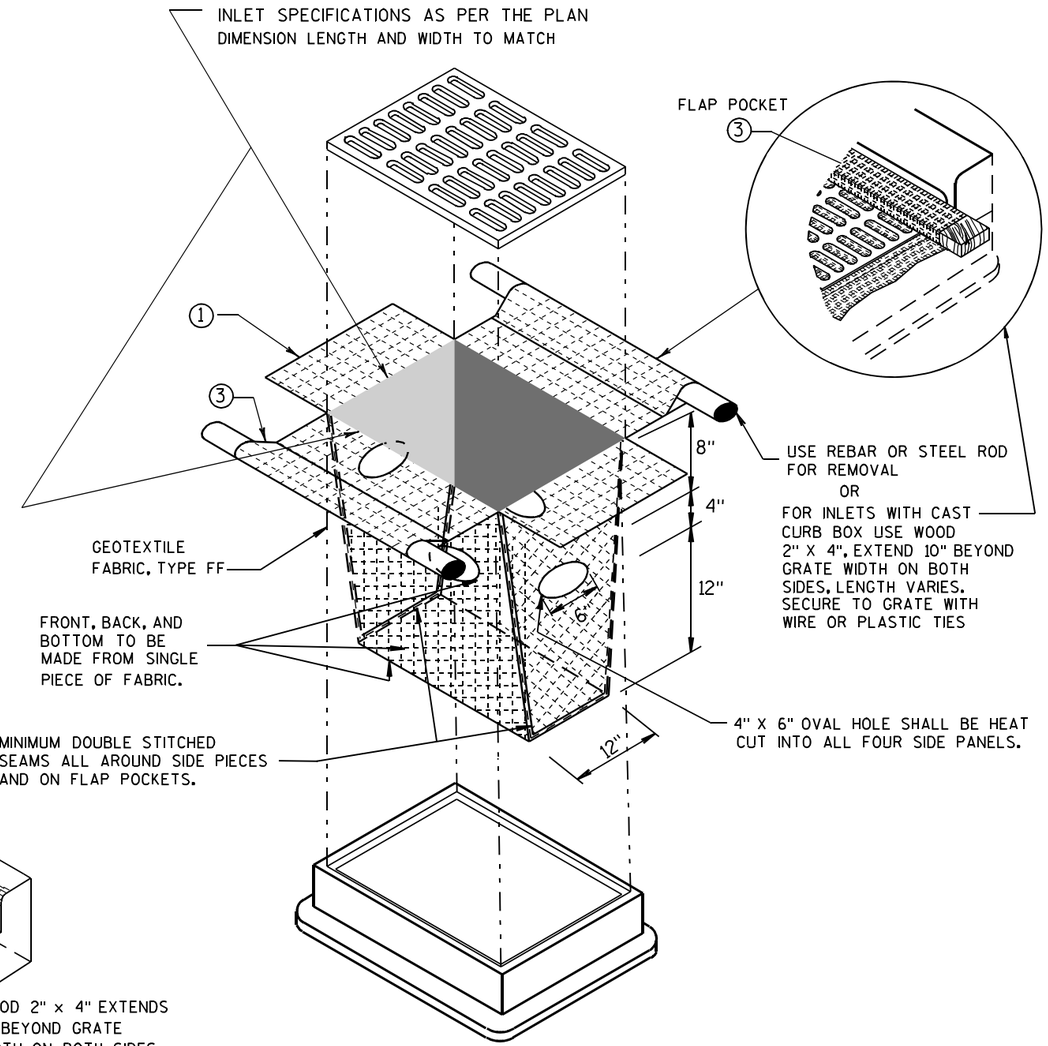


INLET PROTECTION, TYPE A



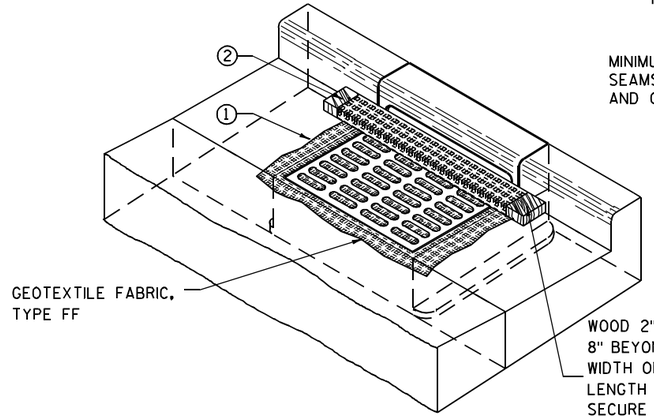
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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.

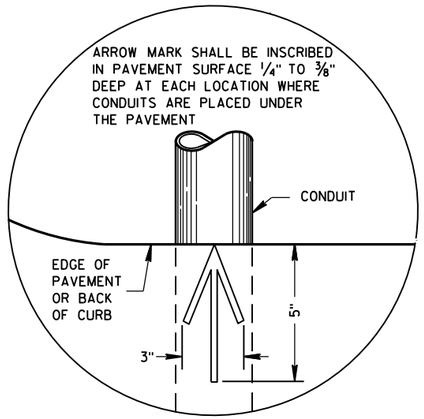
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

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DEPARTMENT OF TRANSPORTATION

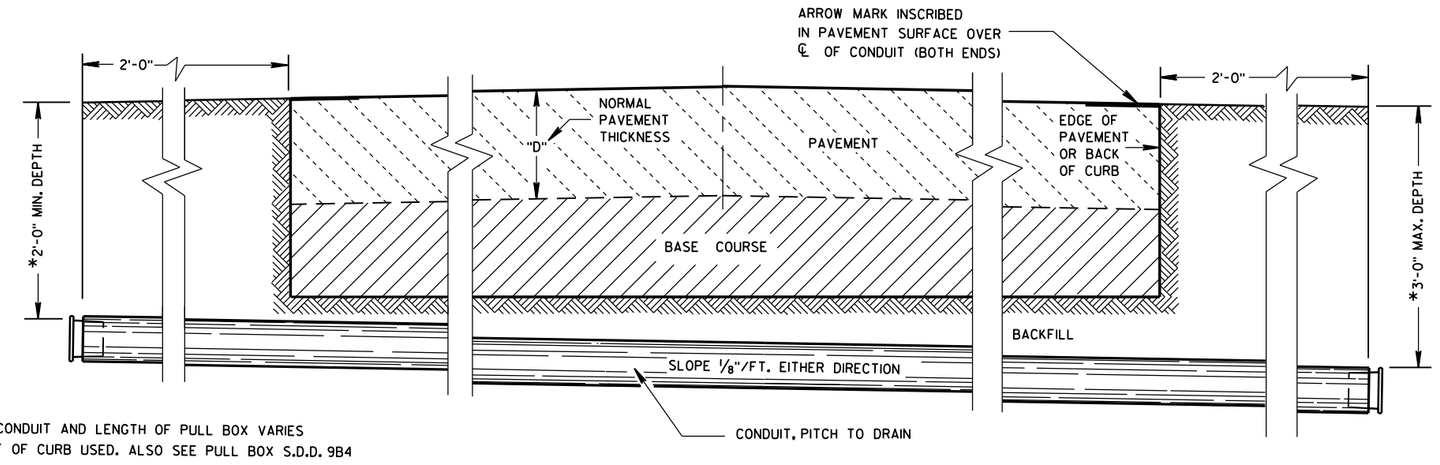
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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.).

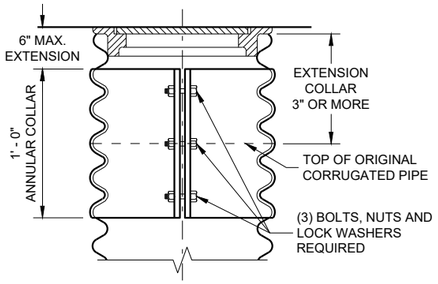
TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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.

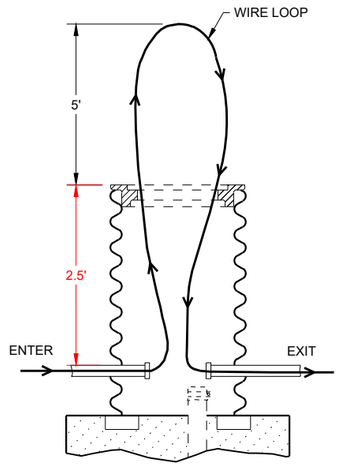
CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

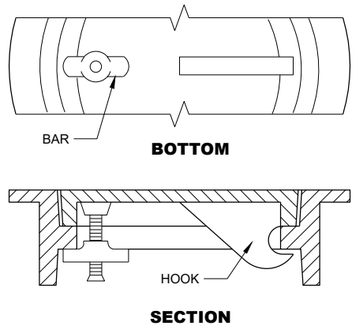
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 35
FHWA



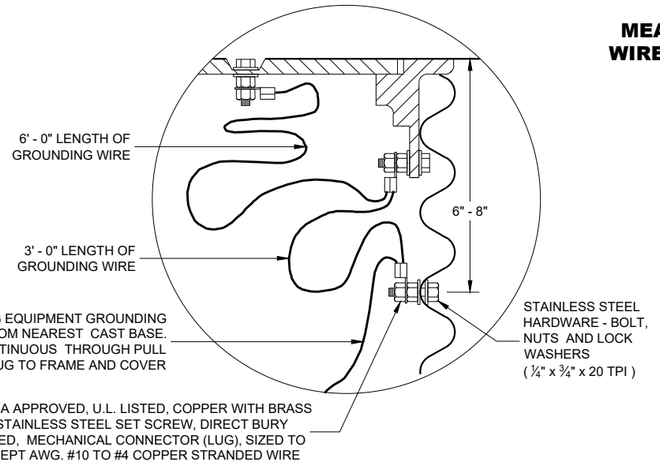
CORRUGATED PIPE EXTENDER



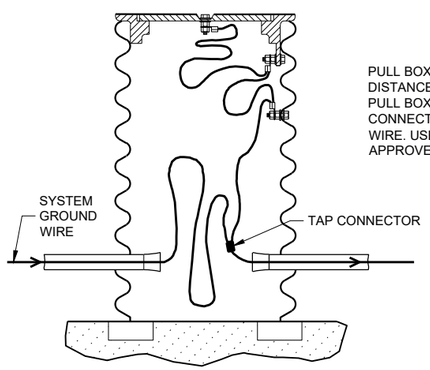
MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



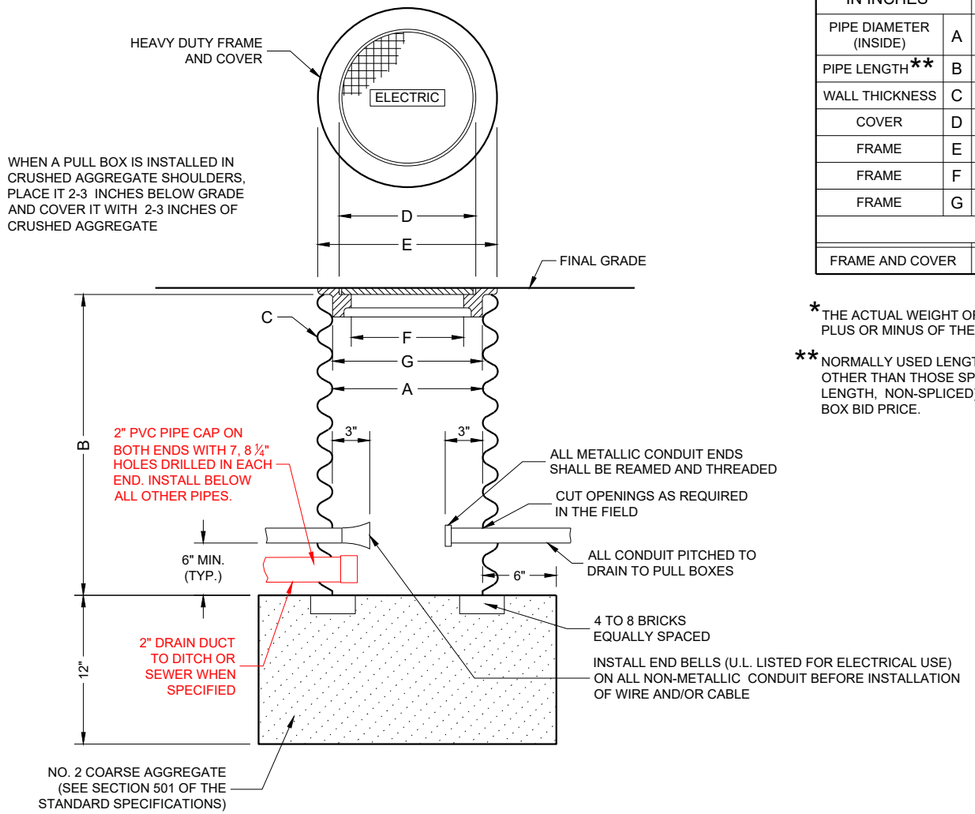
ALTERNATE COVER (LOCKING)
TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH**	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 ¼	10 ¼	10 ¼	16 ¼	16 ¼	16 ¼	22 ¼	22 ¼	22 ¼
FRAME	E	14 ½	14 ½	14 ½	20 ½	20 ½	20 ½	26 ½	26 ½	26 ½
FRAME	F	8 ½	8 ½	8 ½	14 ½	14 ½	14 ½	20 ½	20 ½	20 ½
FRAME	G	11 ½	11 ½	11 ½	17 ½	17 ½	17 ½	23 ½	23 ½	23 ½
WEIGHT IN POUNDS*										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

*THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

**NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

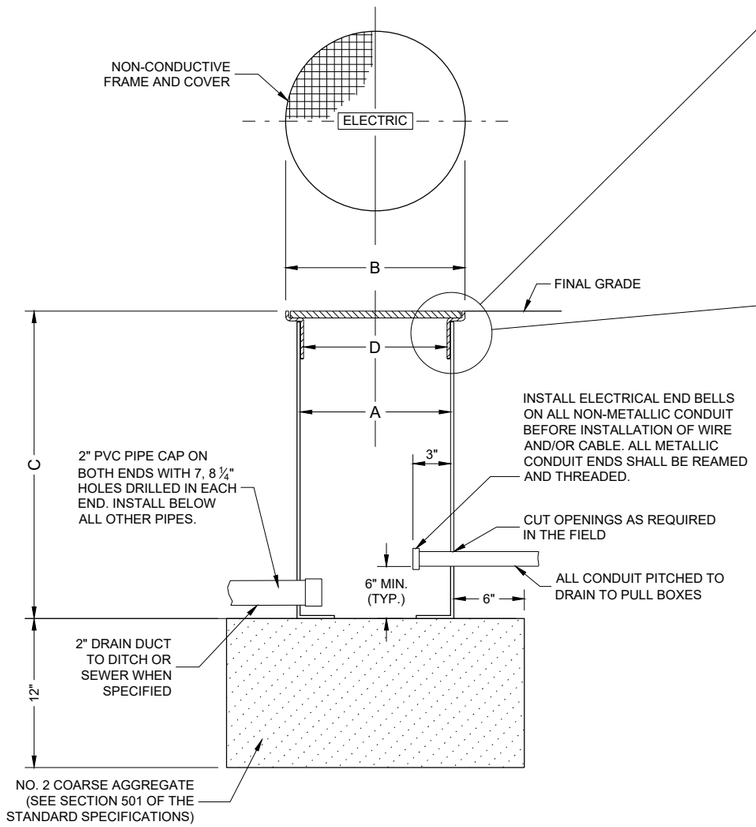
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

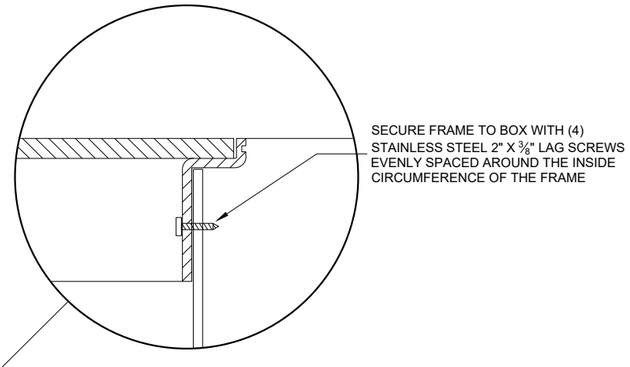
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

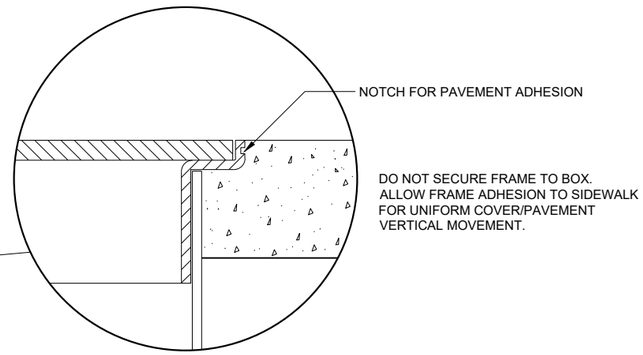
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



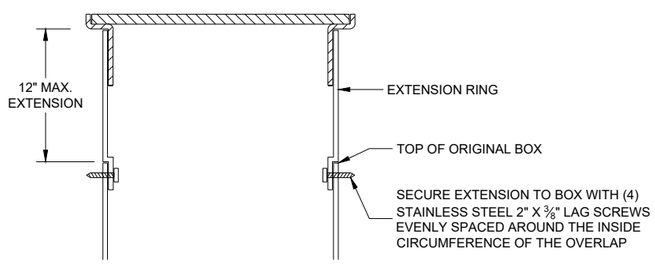
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

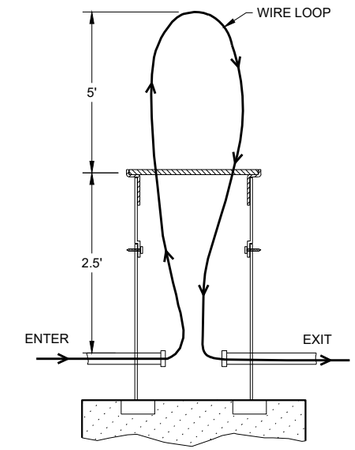
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

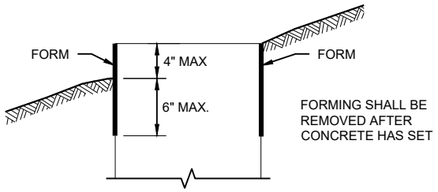
APPROVED
May 2022
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

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SDD 09B16 - 02
SDD 09B16 - 02

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

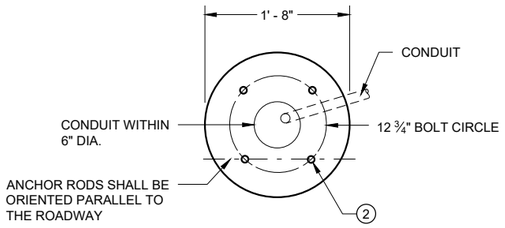
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

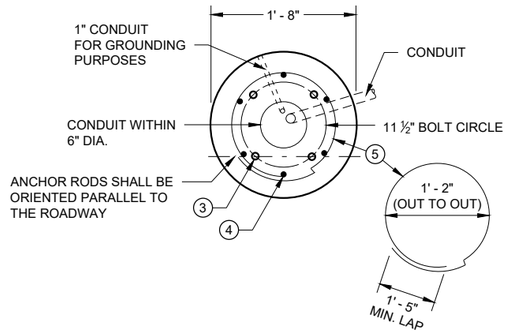
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

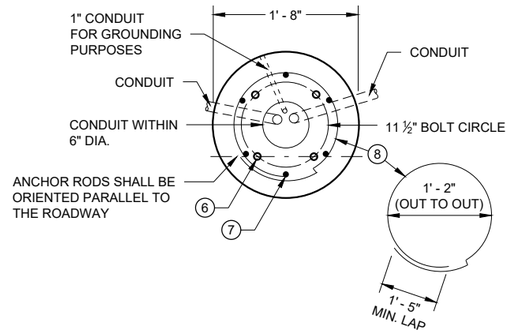
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

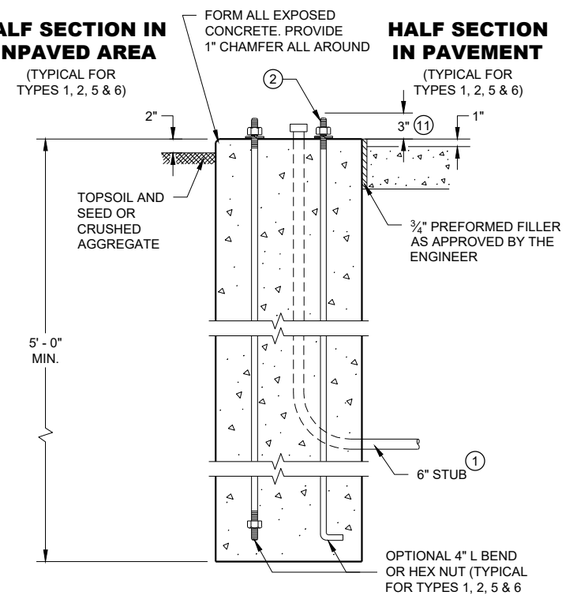
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

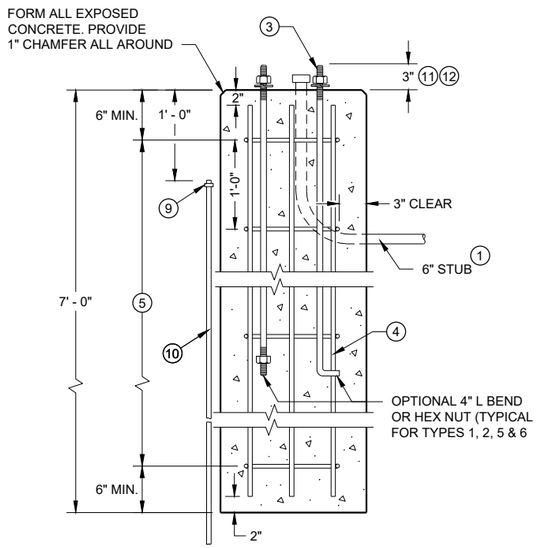
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

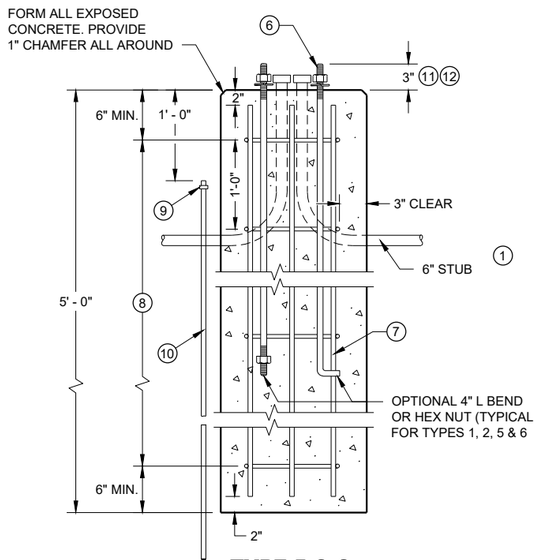
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

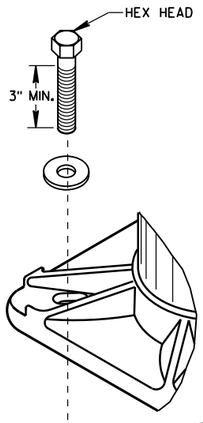
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

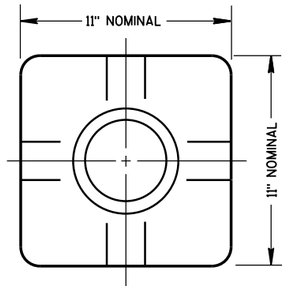
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

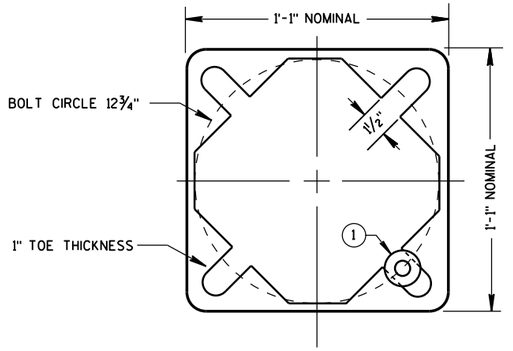
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

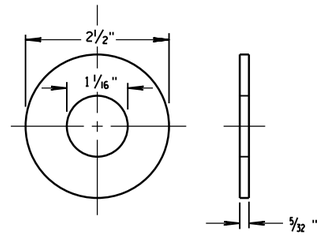




TOP VIEW
(PEDESTAL BASE)

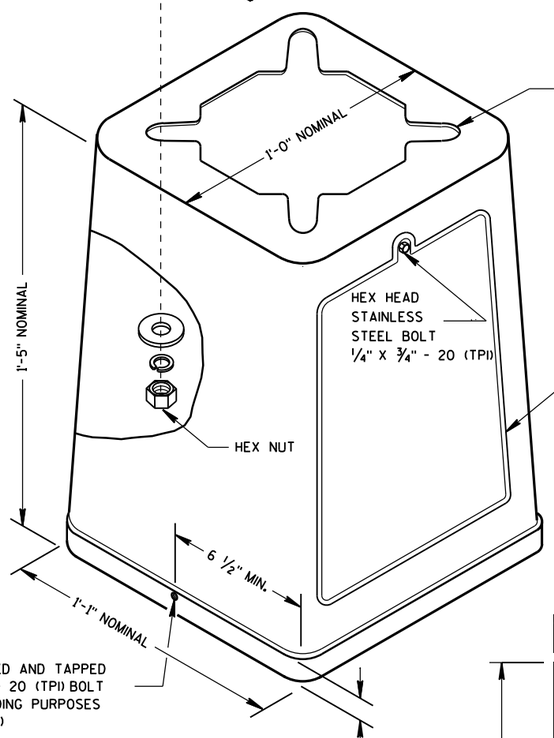


BOTTOM VIEW
(PEDESTAL BASE)

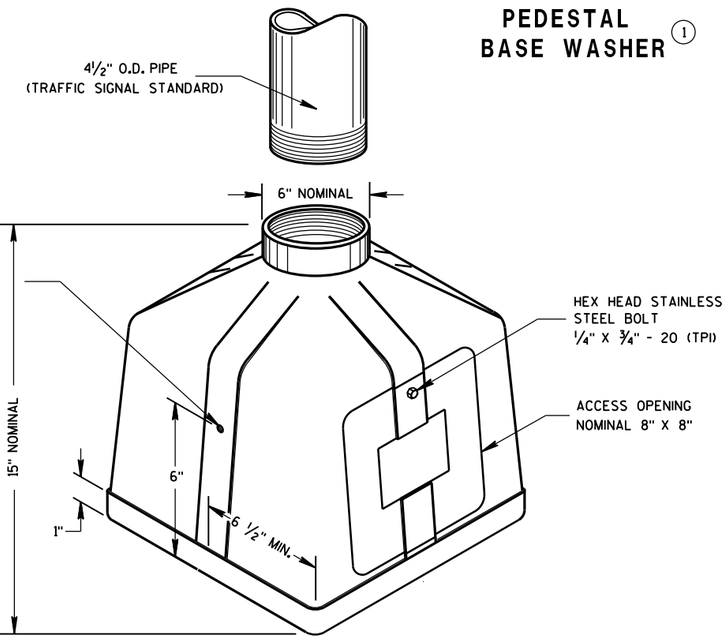


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

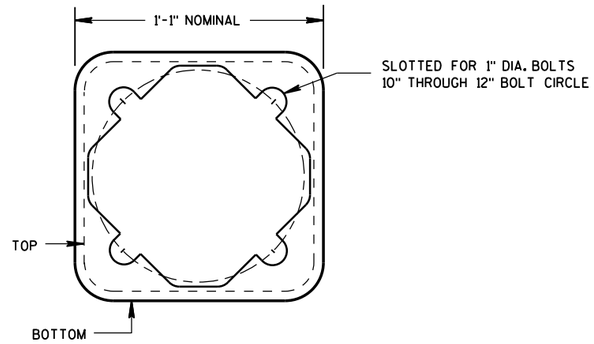


ISOMETRIC VIEW

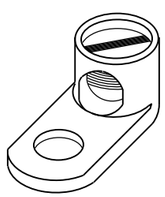


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

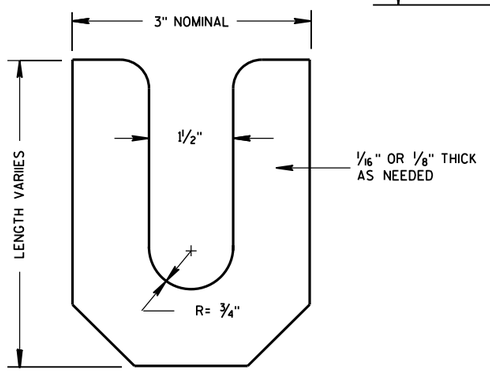


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

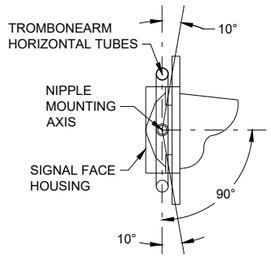
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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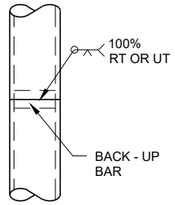


SECTION A-A

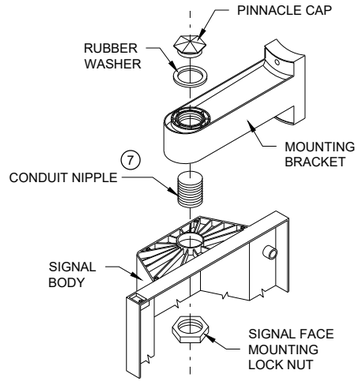
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.

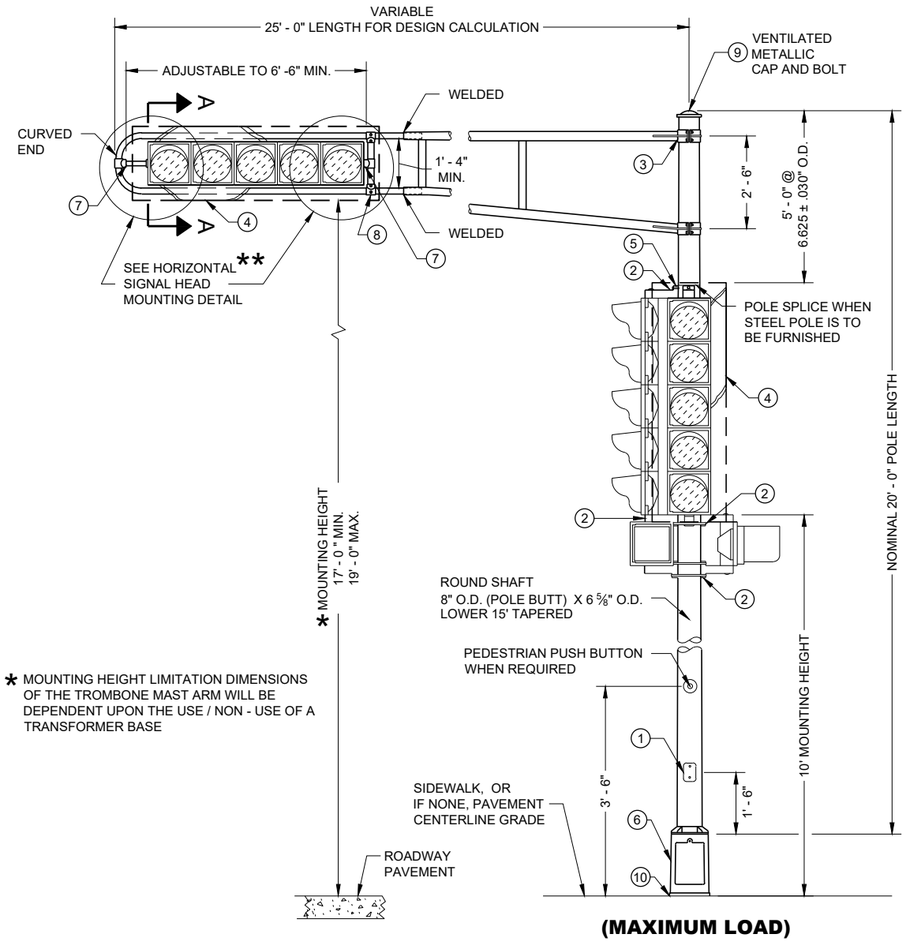


POLE SPLICE DETAIL



SIGNAL FACE MOUNTING DETAIL

(BANDED)



* MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE / NON - USE OF A TRANSFORMER BASE

(MAXIMUM LOAD)

GENERAL NOTES

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

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING,PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) ASREQUIRED, TO PLUMB THE SIGNAL FACES.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

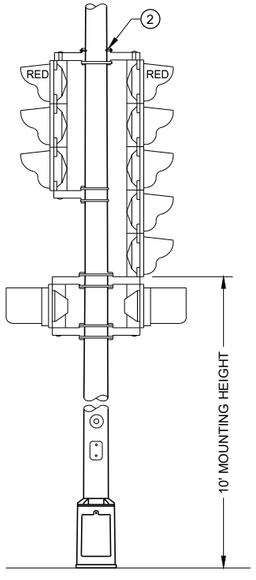
(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOTINTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUTIS THE SLIDING TYPE.

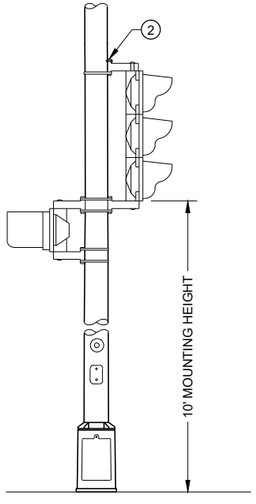
(9) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

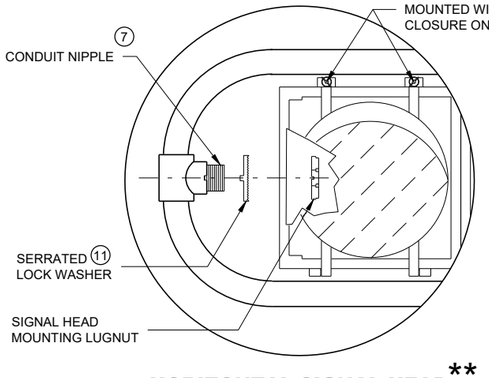
(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

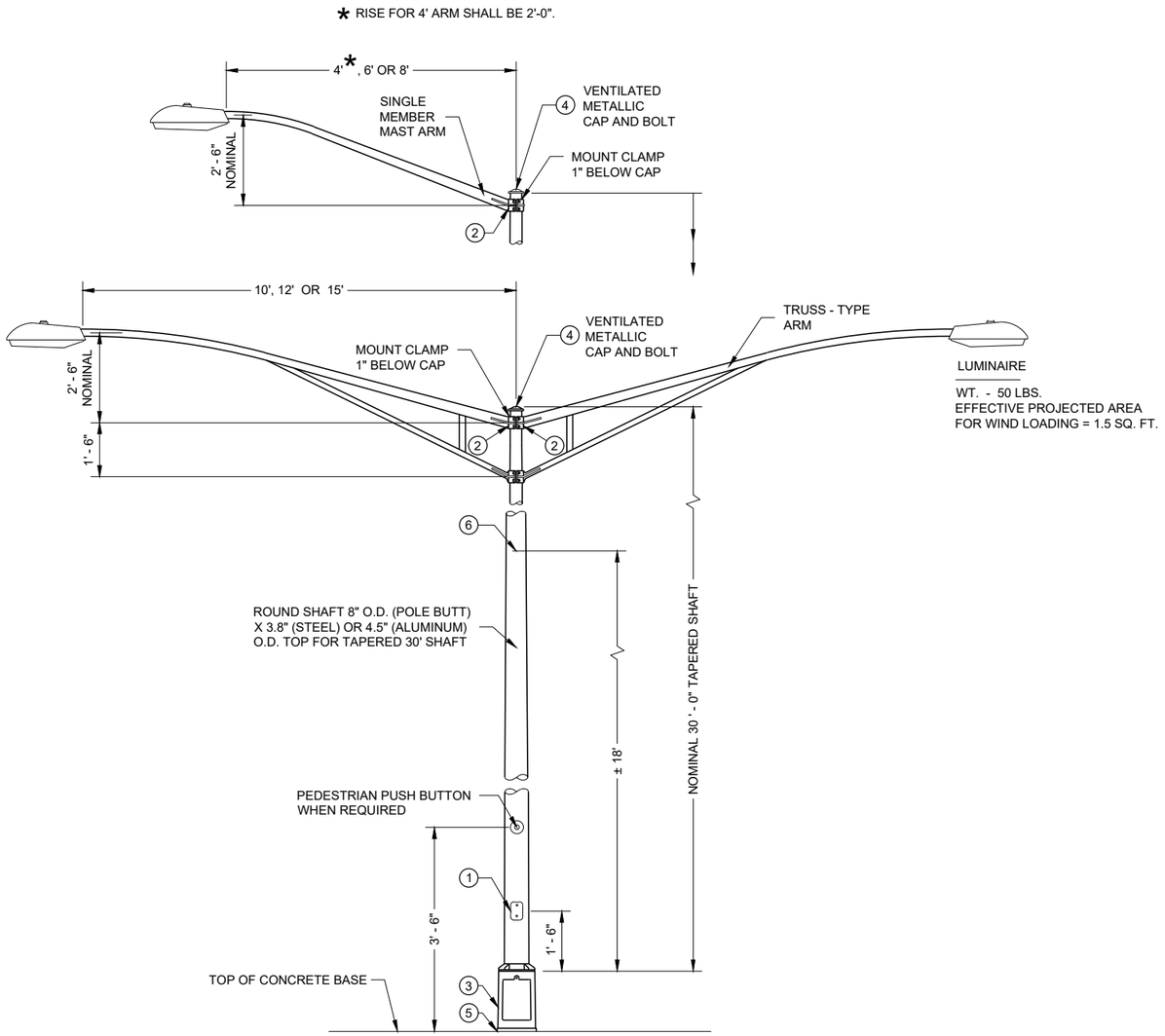
** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

TYPE 2 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 09E01 - 15a



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

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

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

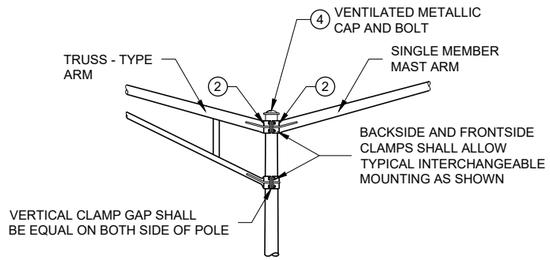
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

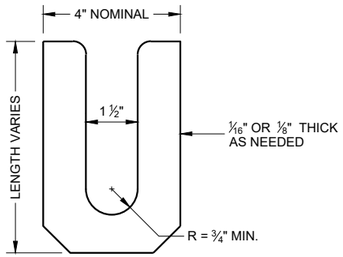
(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



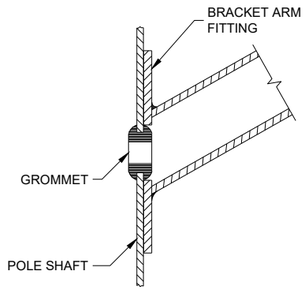
INTERCHANGEABLE MOUNTING DETAIL

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

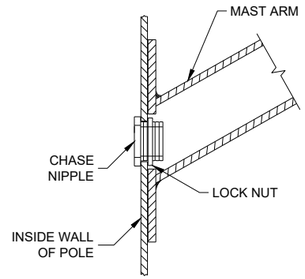
SDD 09E01 - 15d
6



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

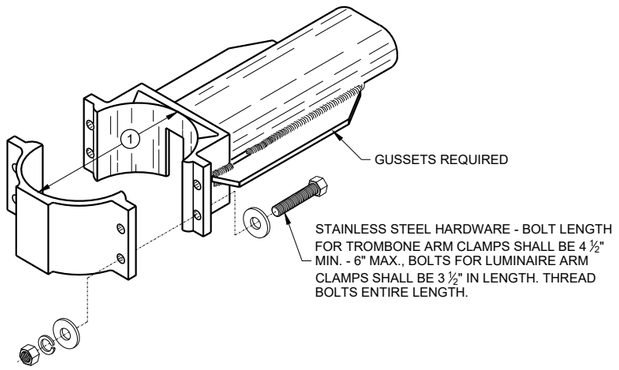
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

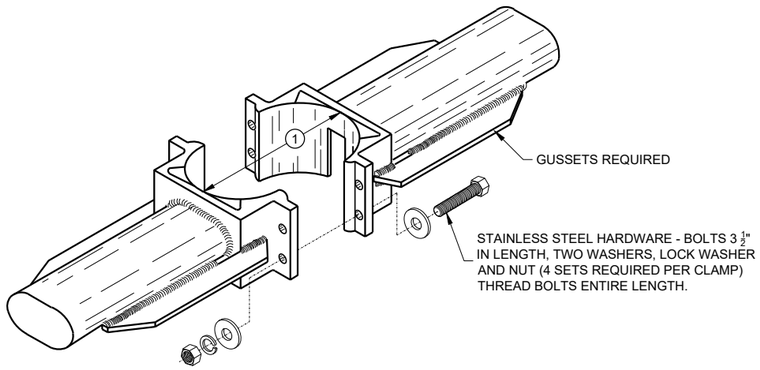
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

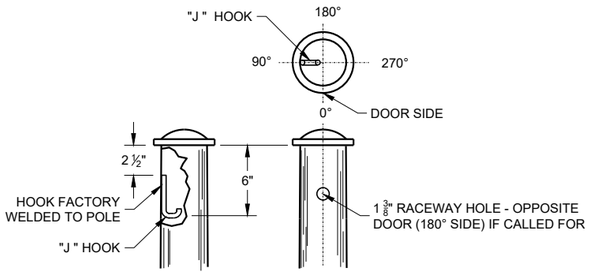
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



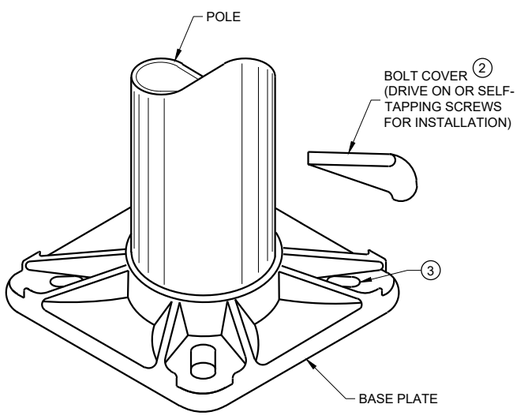
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



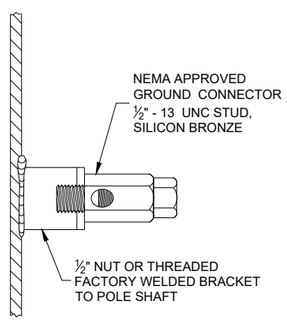
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

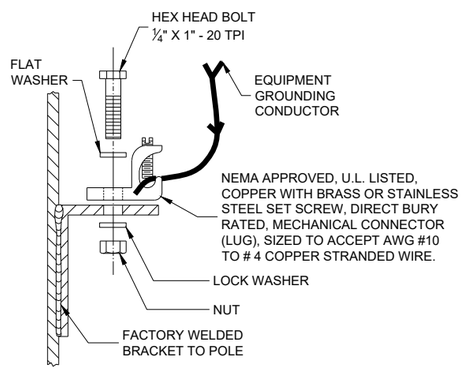


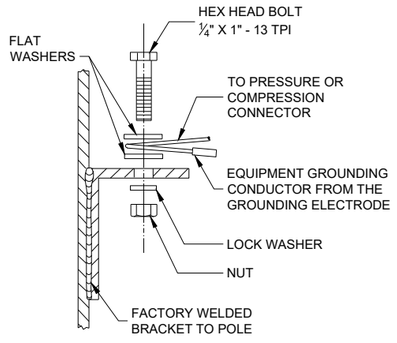
TYPICAL "J" HOOK LOCATION



BASE PLATE







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

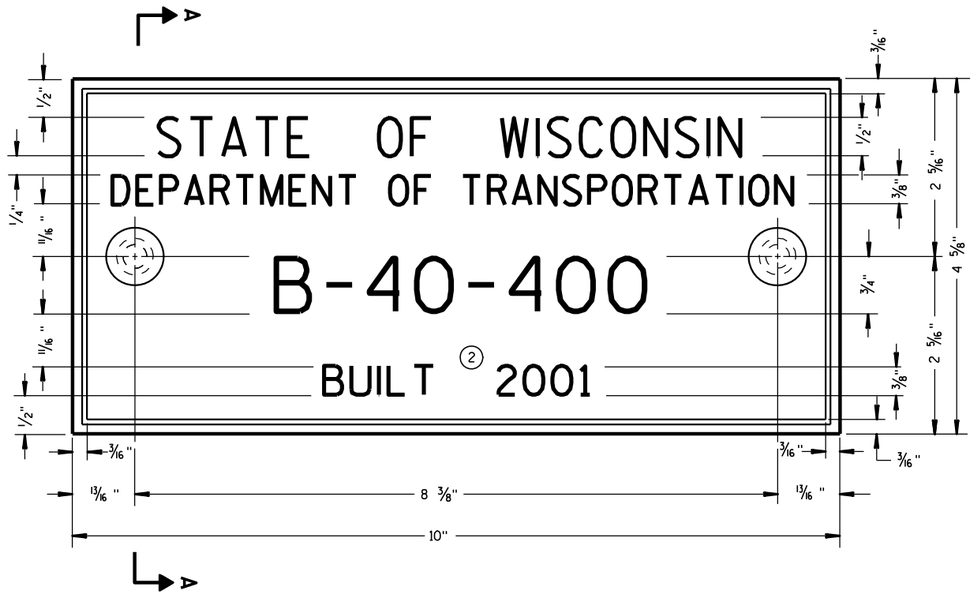
HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 42

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TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

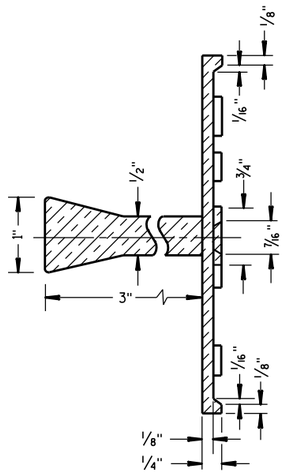
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

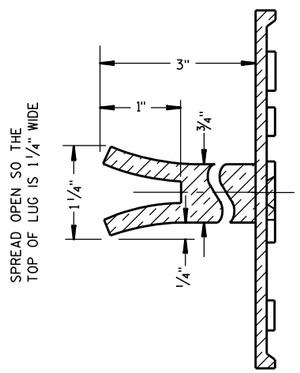
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

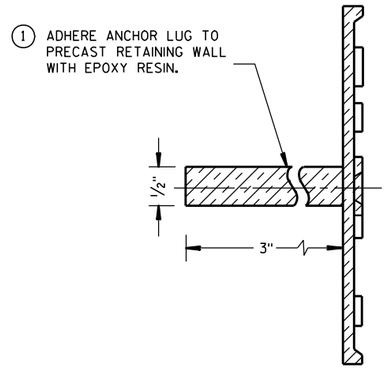
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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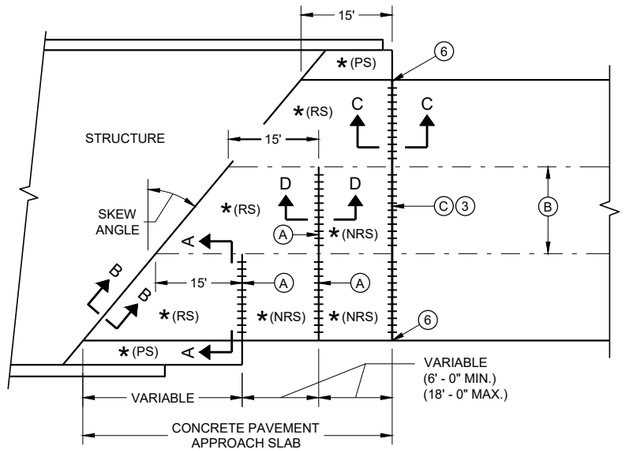
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

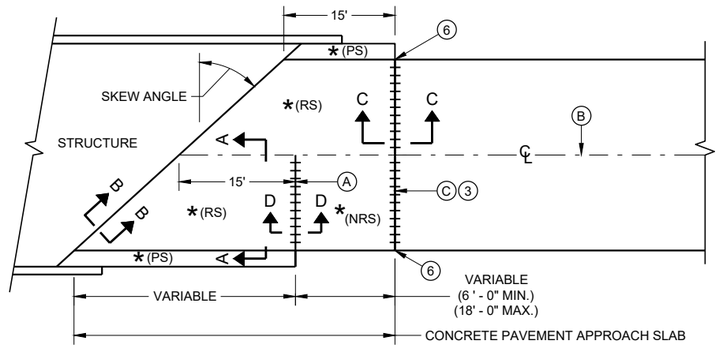
FHWA

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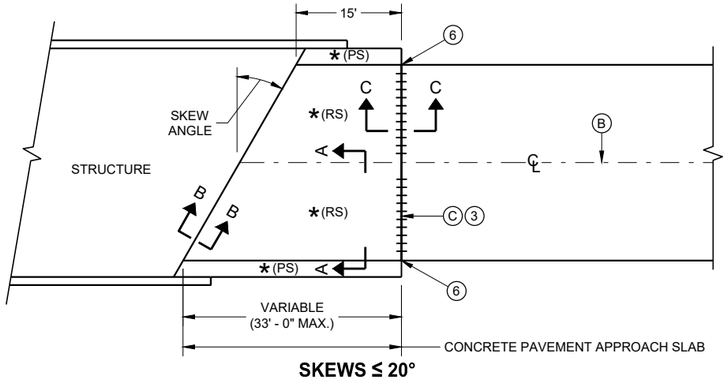
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

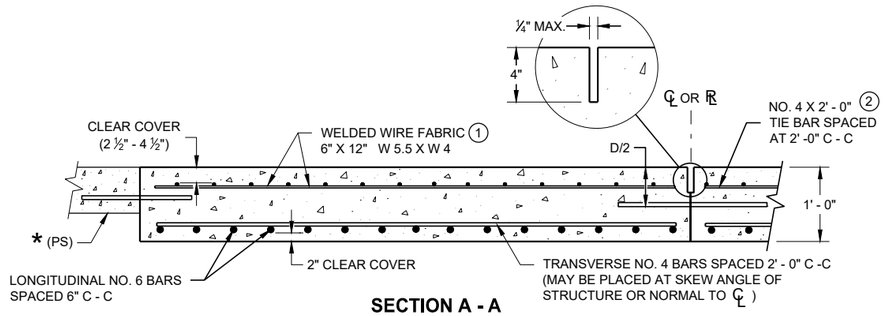
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

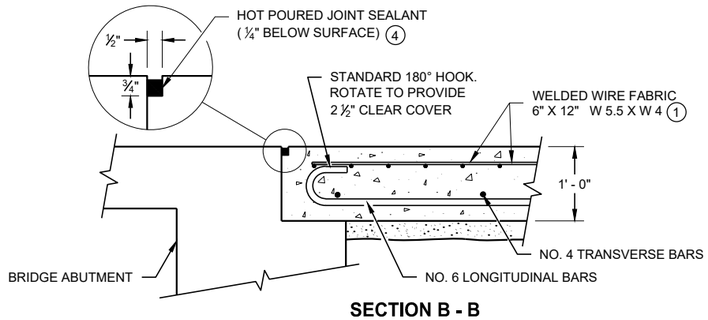
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

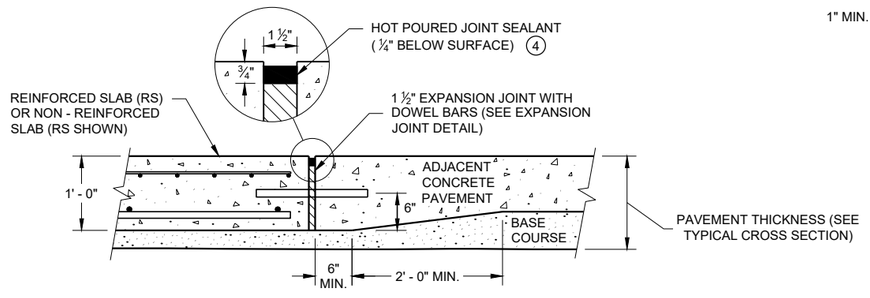
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

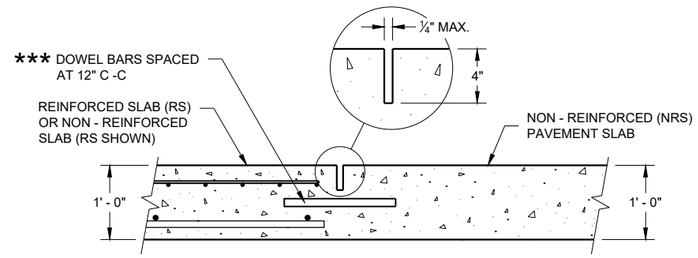
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

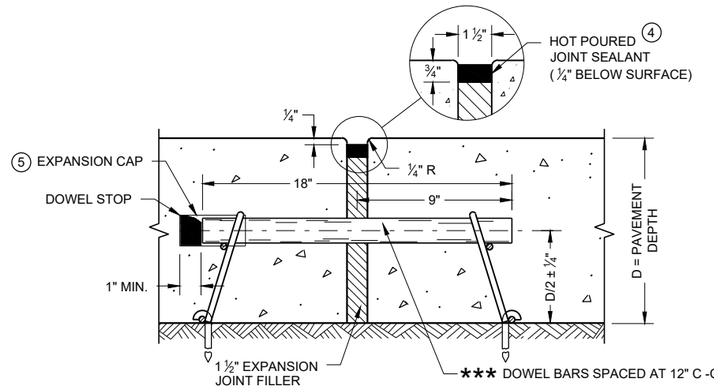
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

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DEPARTMENT OF TRANSPORTATION

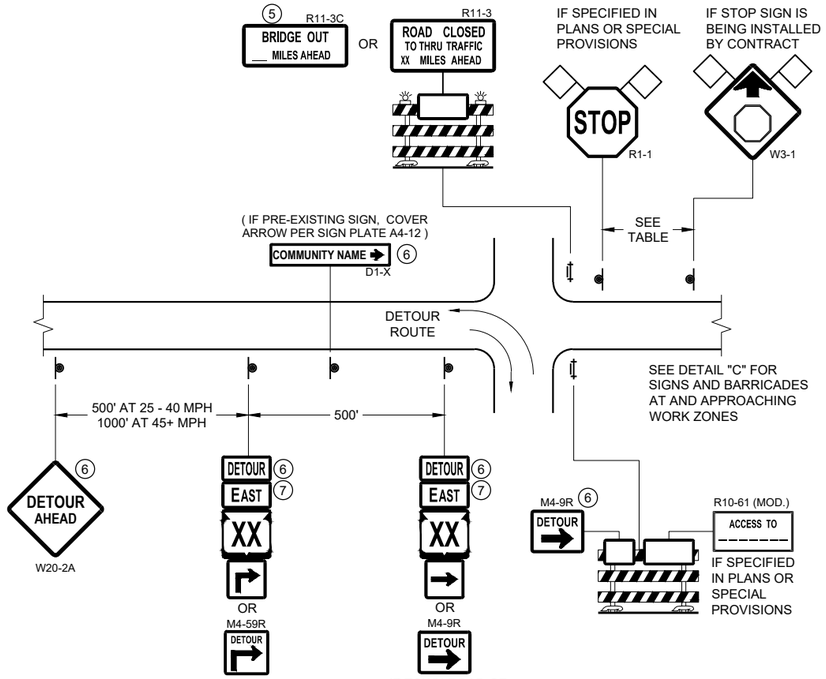
APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISOR

FHWA

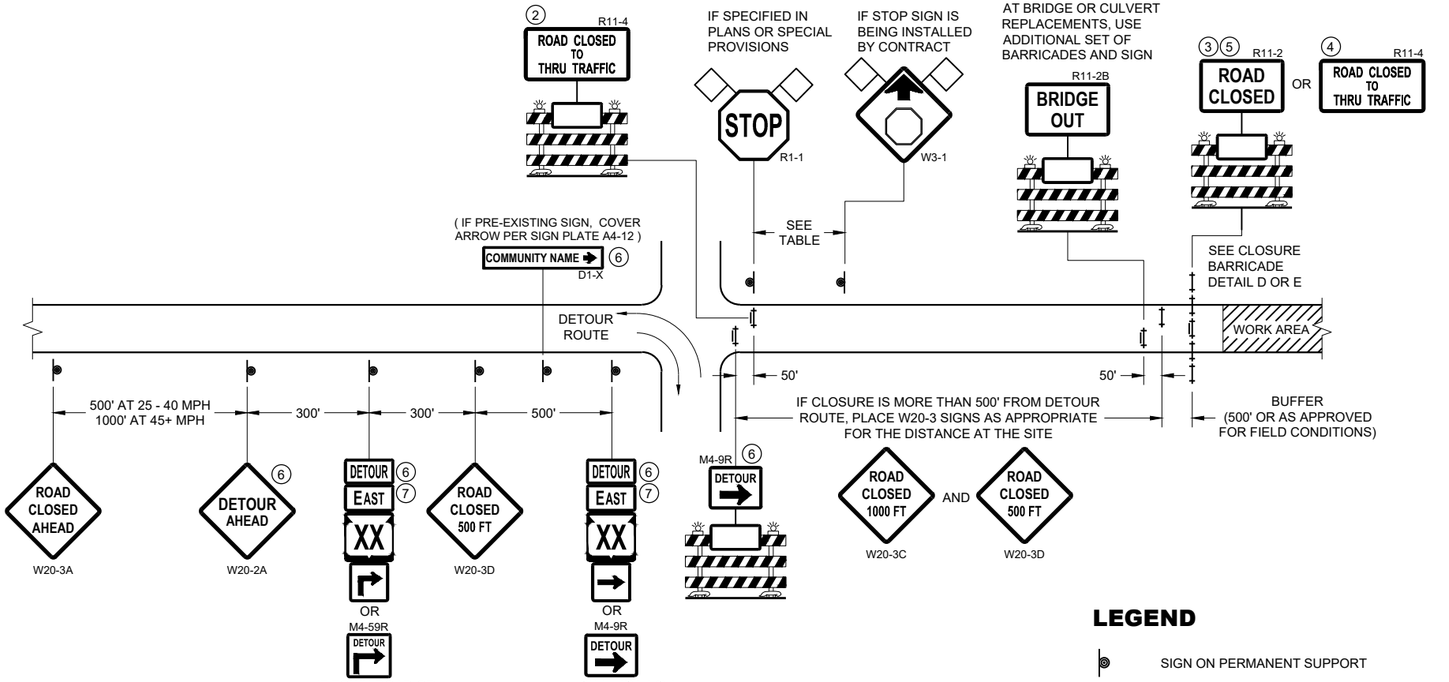
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SDD 13B02 - 09a



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

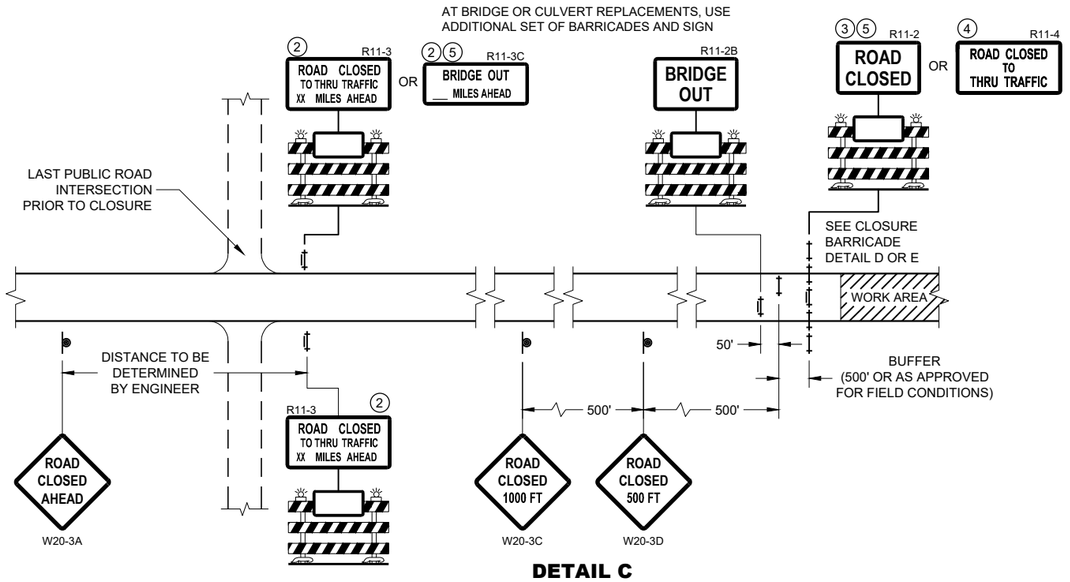


DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

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



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15C02 - 09a

SDD 15C02 - 09a

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

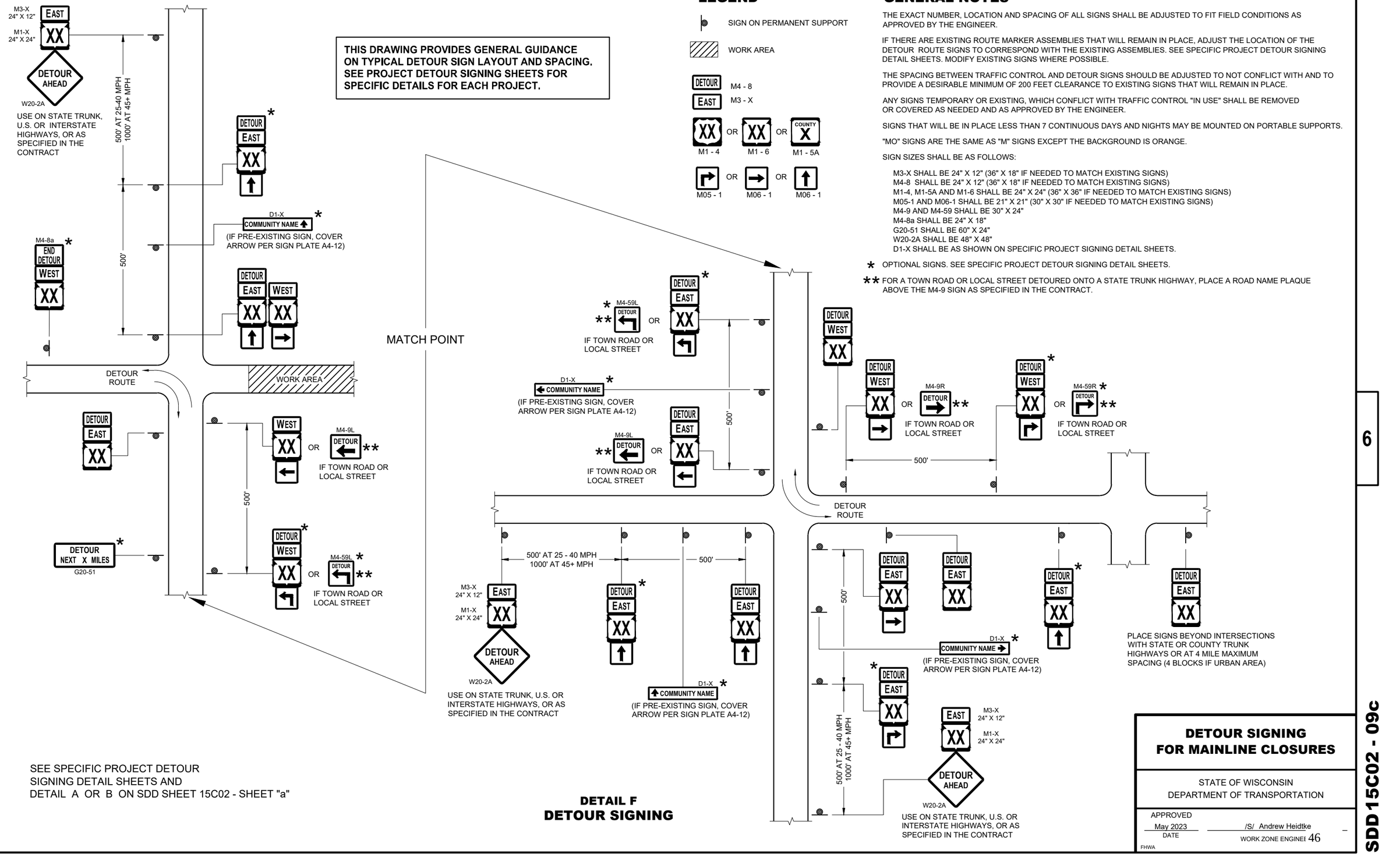
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

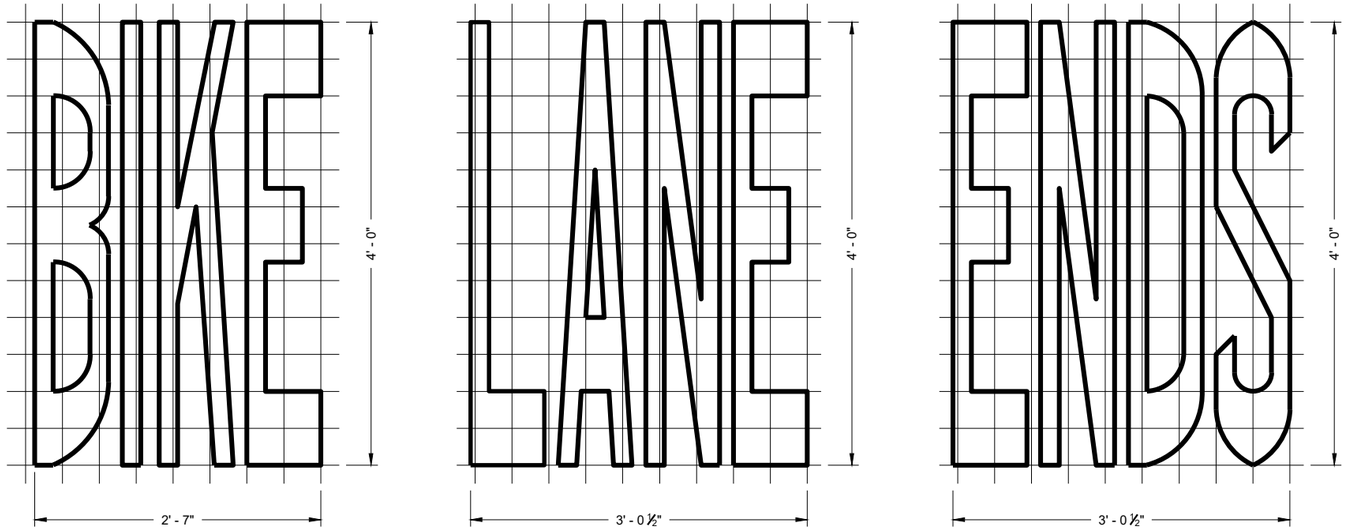
APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

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SDD 15C02 - 09c

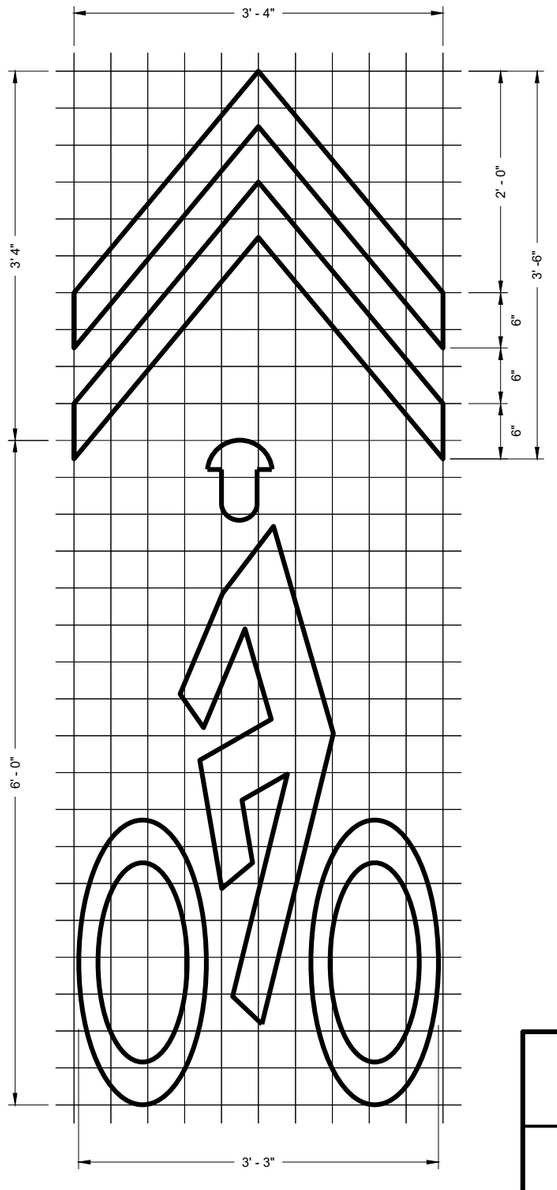
SDD 15C7-e Pavement Marking For Bike Lanes

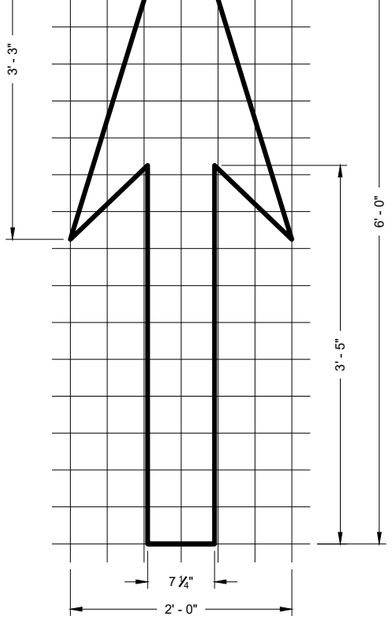


BIKE LANE WORDS

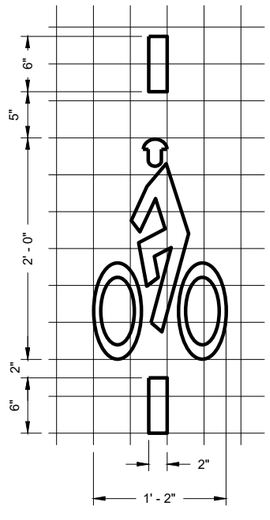
GENERAL NOTES

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

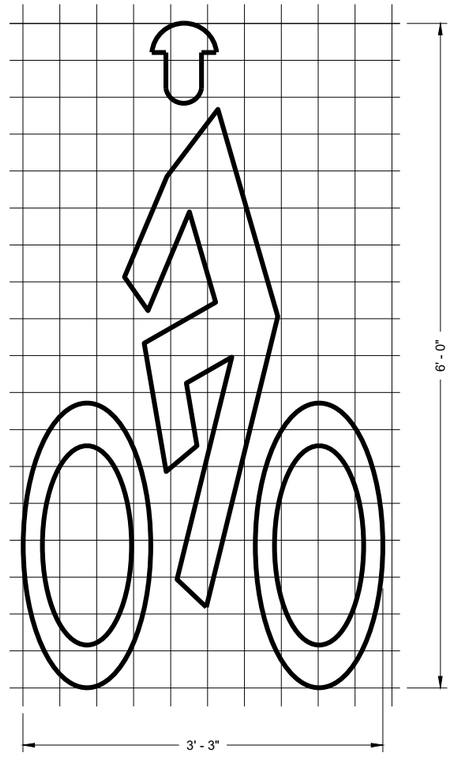




BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL

BIKE LANE SYMBOL FOR SHARED LANE

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

6

SDD 15C07 - 15e

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.

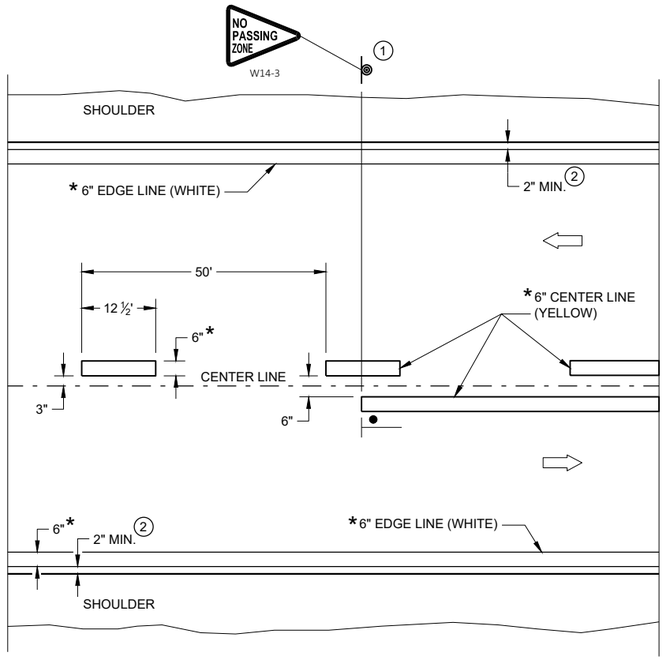
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

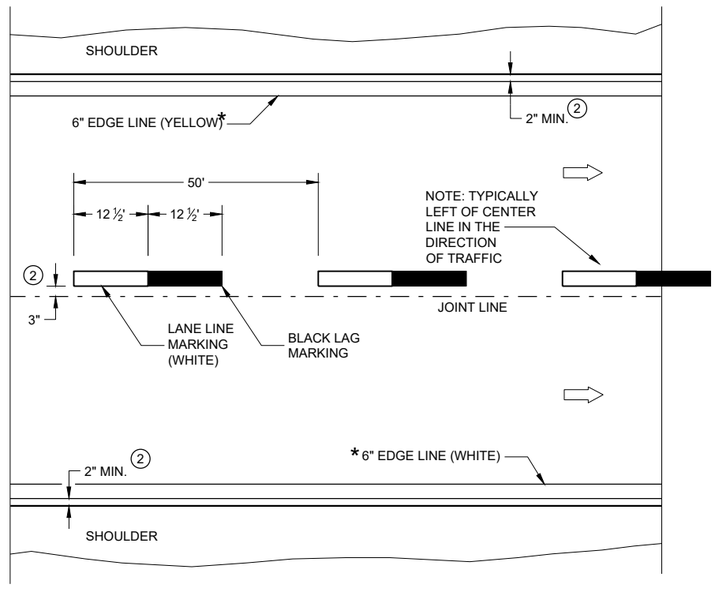
"T" MARKING

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

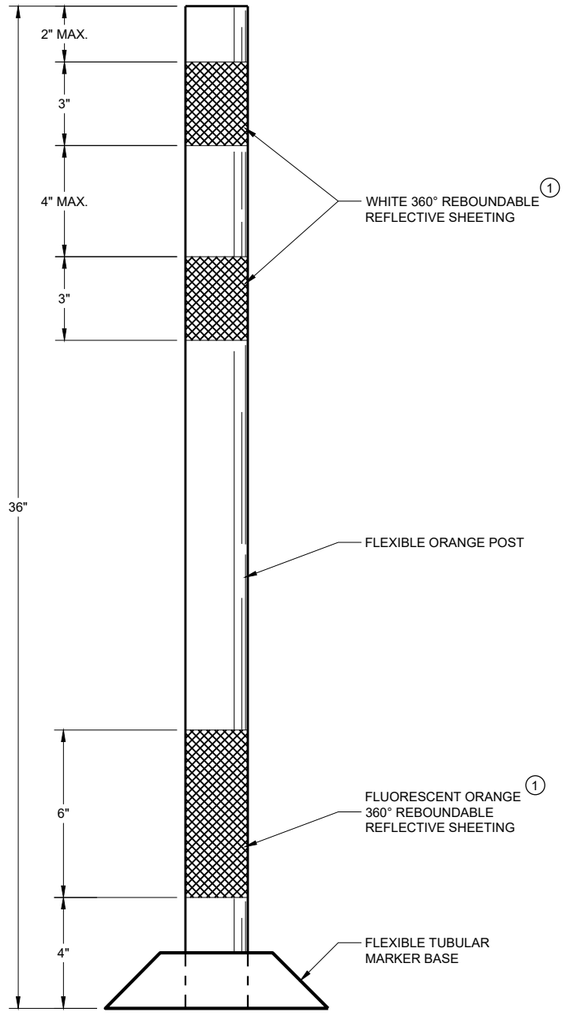
May 2023
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M ENGINEER

FHWA

6

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.

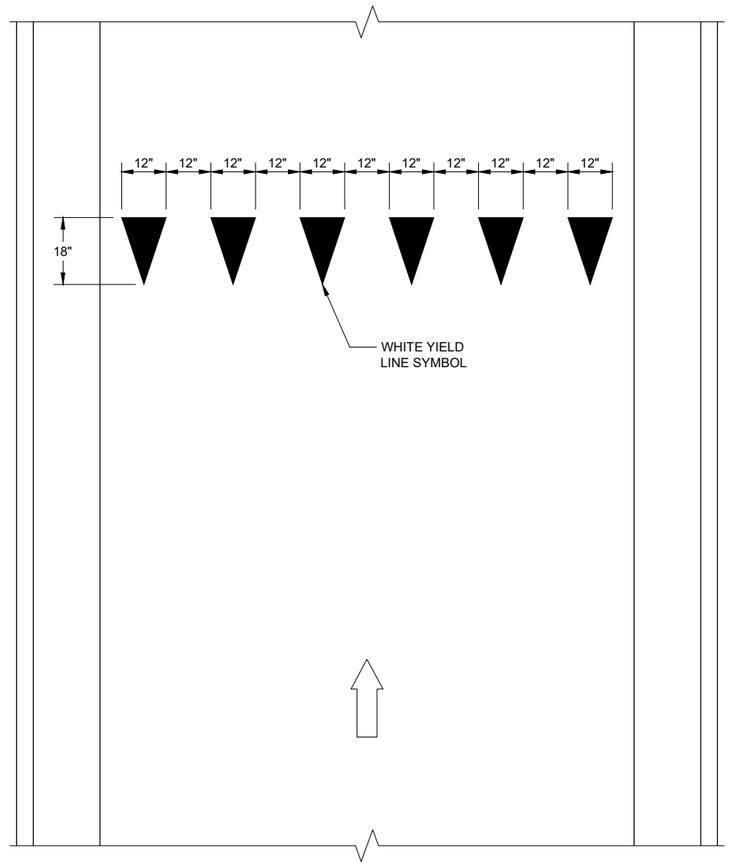
CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 15C11 - 10a

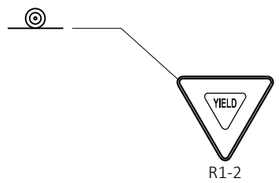


YIELD LINE

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL



R1-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-81-2016
DATE

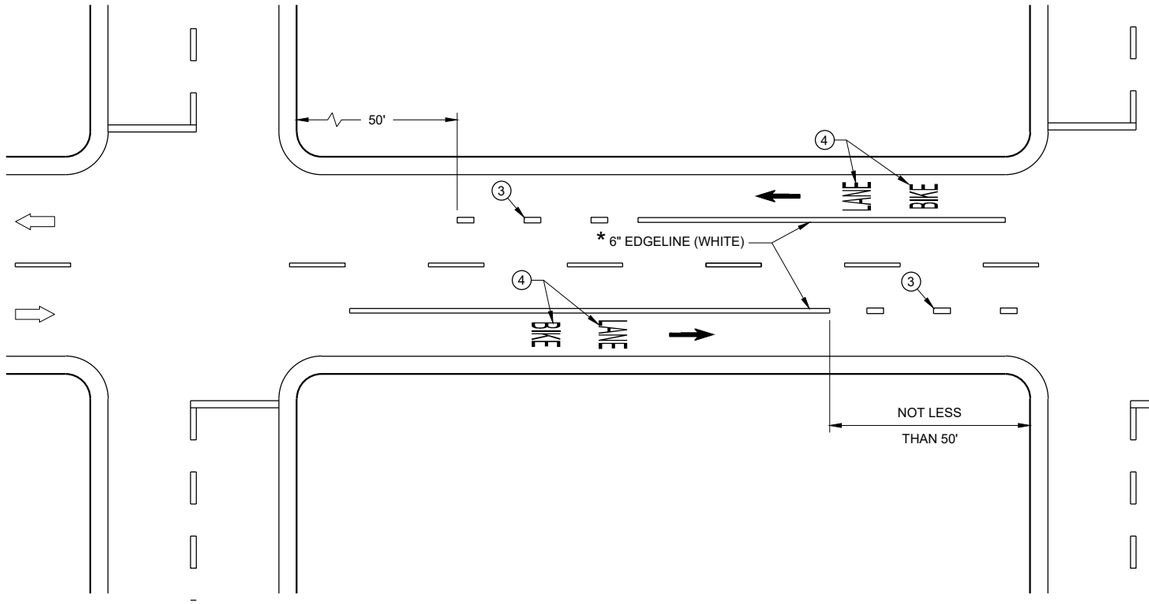
/S/ Matthew R. Rauch
STATE SIGNING AND MAR ENGINEER

FHWA

6

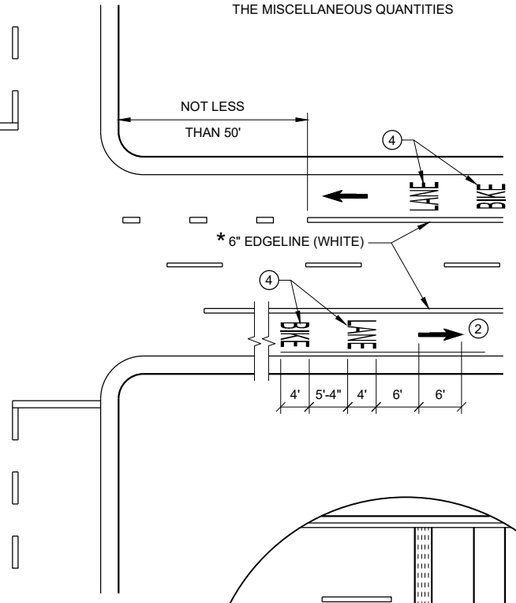
SDD 15C20 - 02

SDD 15C20 - 02



DESIGNATED BIKE LANE - NO PARKING

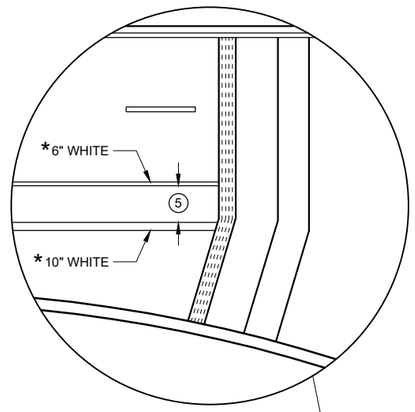
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



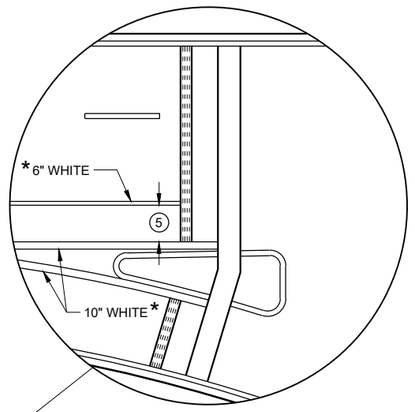
GENERAL NOTES

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
4. BIKE SYMBOLS OR WORDS MAY BE USED.
5. BIKE ACCOMMODATION IS TYPICAL 5 FEET WIDE AND MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT ≥ 45 MPH.
6. OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FOOT WIDE TURN LANE).
7. REFER TO CONTRACT PLANS FOR LANE WIDTH.

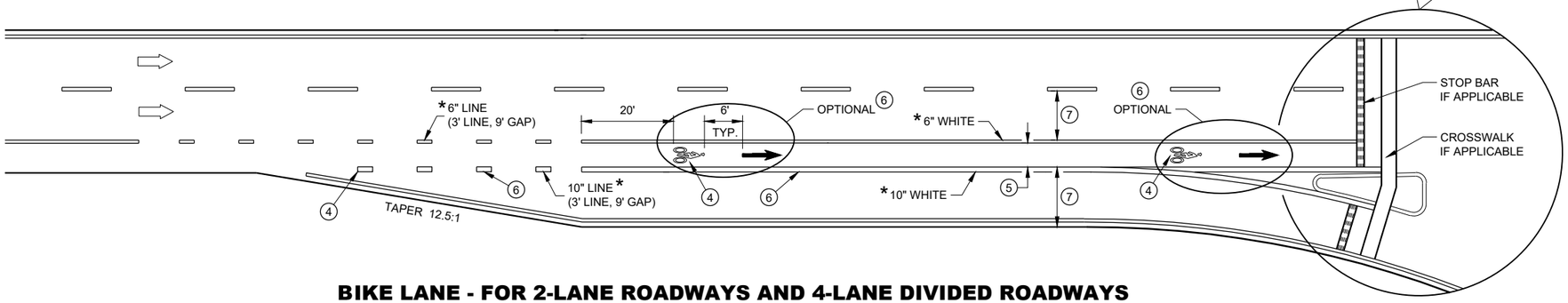
DIRECTION OF TRAVEL



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS
(4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)

BIKE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER
FHWA

6
SDD 15C29-08a

GENERAL NOTES

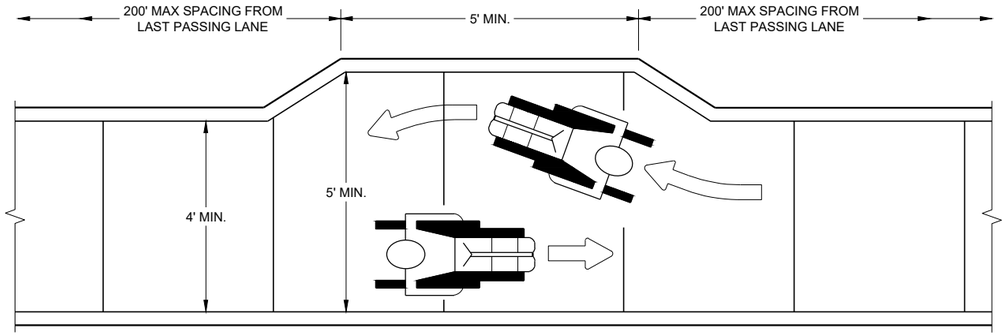
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

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

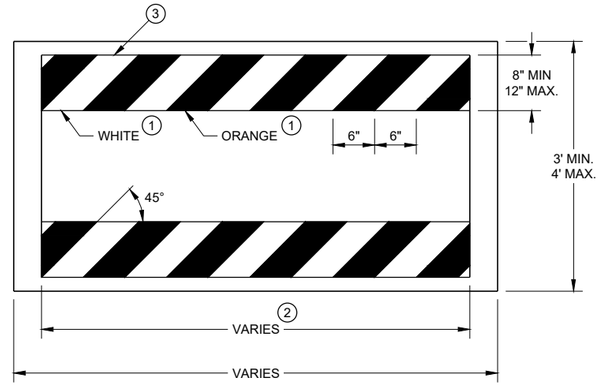
(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

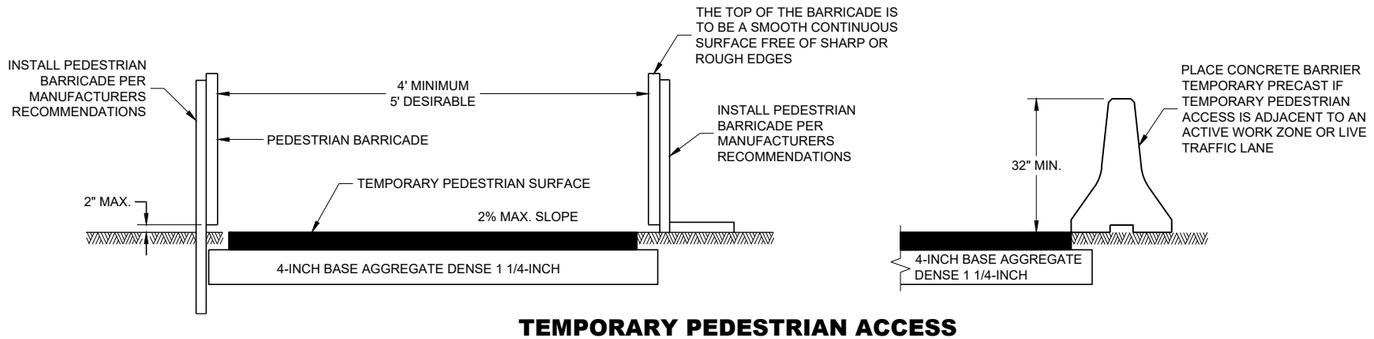
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



NARROW SIDEWALK PASSING DETAIL



TEMPORARY PEDESTRIAN BARRICADE*



TEMPORARY PEDESTRIAN ACCESS

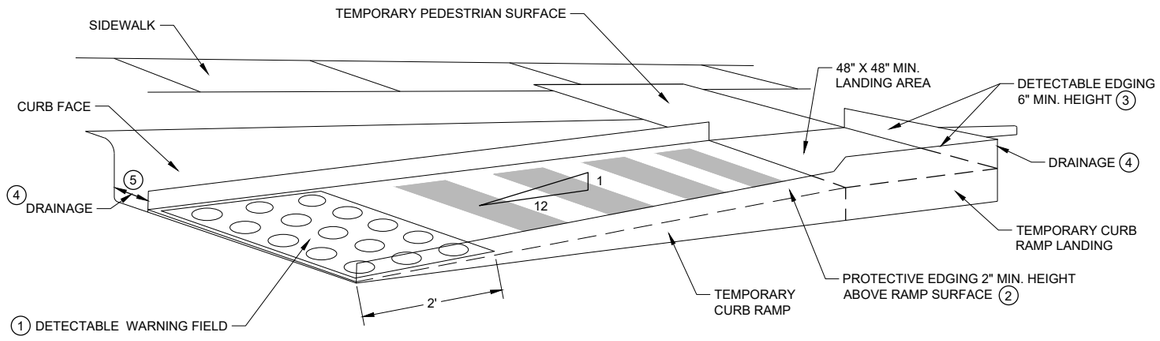
6

6

SDD 15D30 - 09a

SDD 15D30 - 09a

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



PERSPECTIVE VIEW

GENERAL NOTES

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.

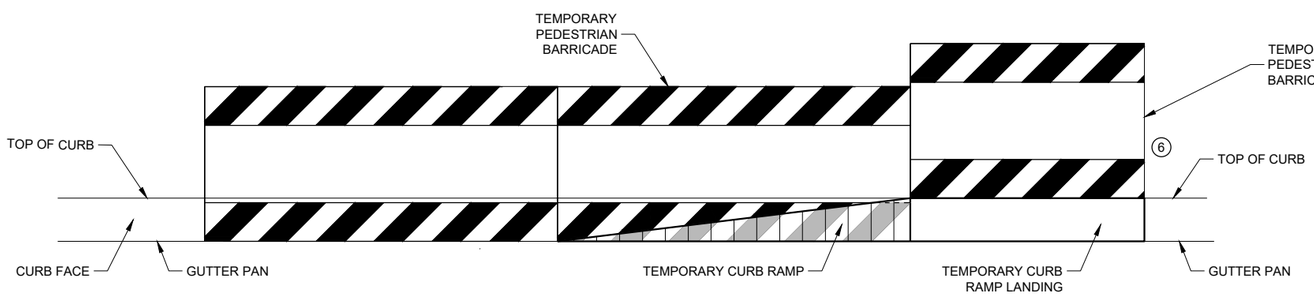
(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

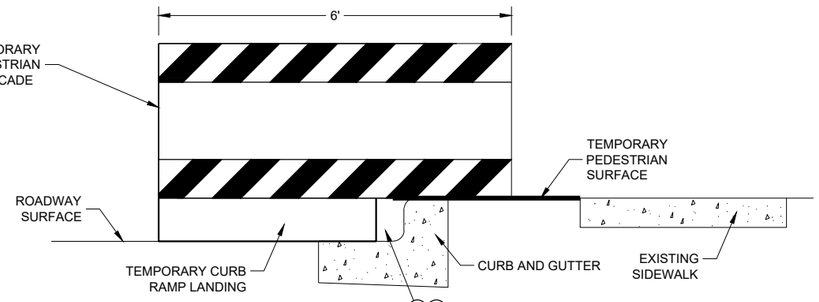
(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.

(6) IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



FRONT VIEW



SIDE VIEW

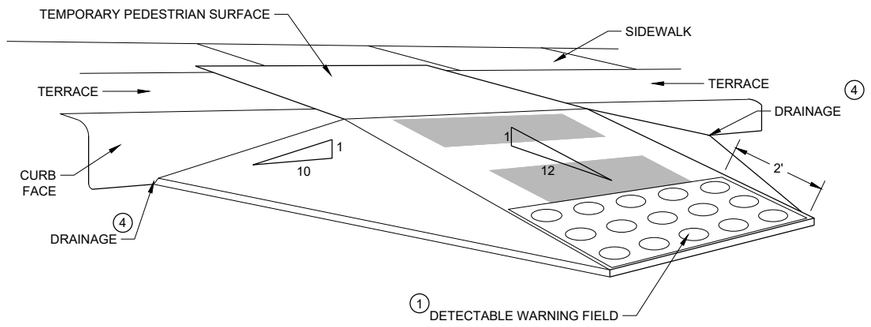
TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

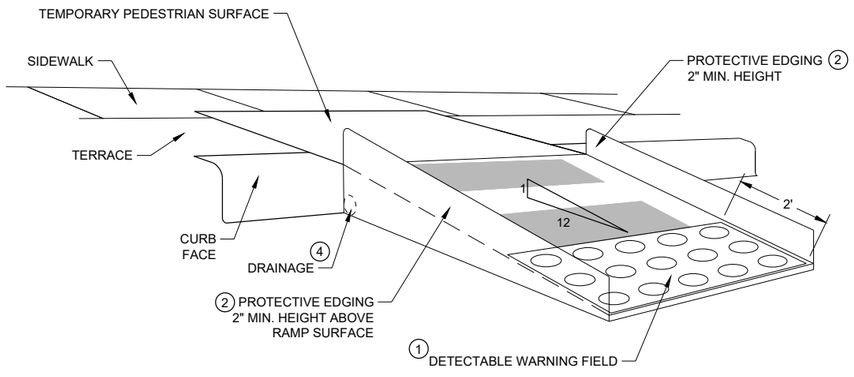
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09b



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

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

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

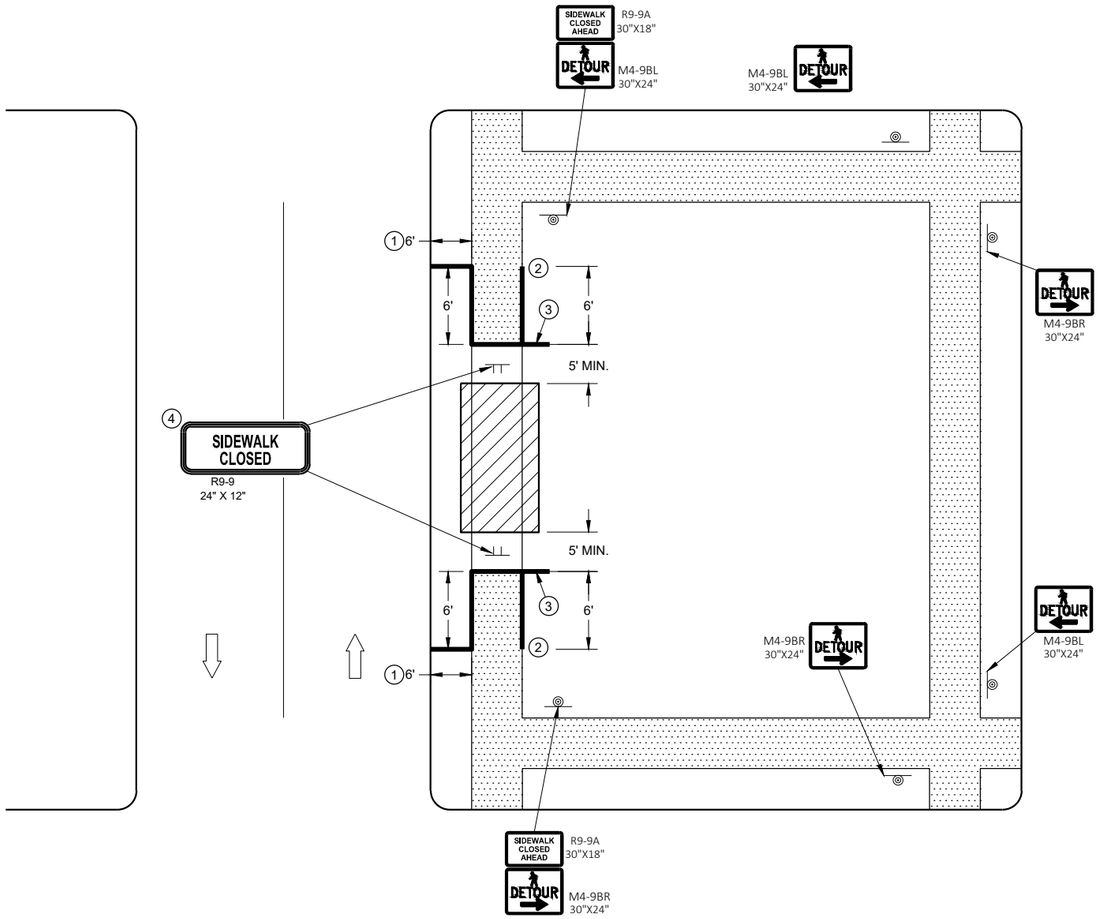
(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC



GENERAL NOTES

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

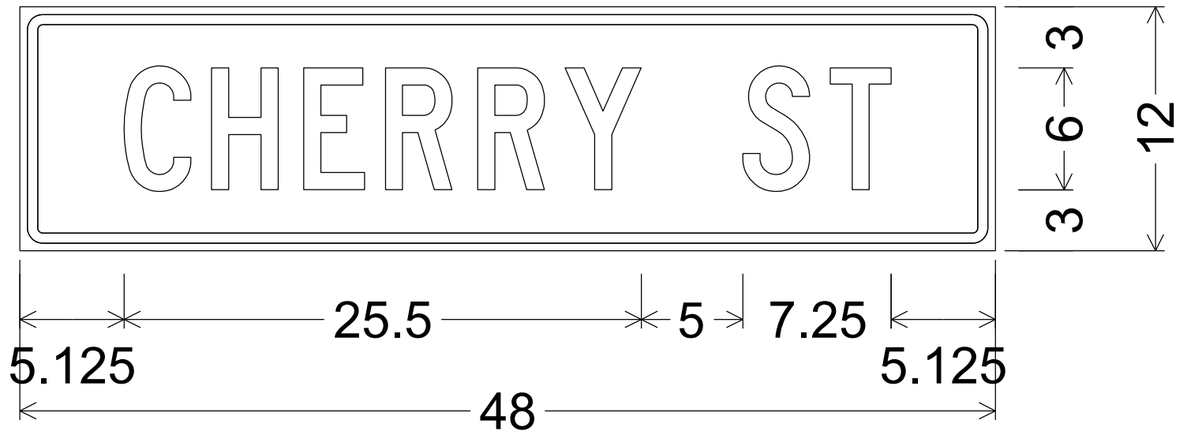
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30 - 09f

NOTES

1. Fixed Message Sign Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



1.125" Radius, 0.500" Border, 0.375" Indent

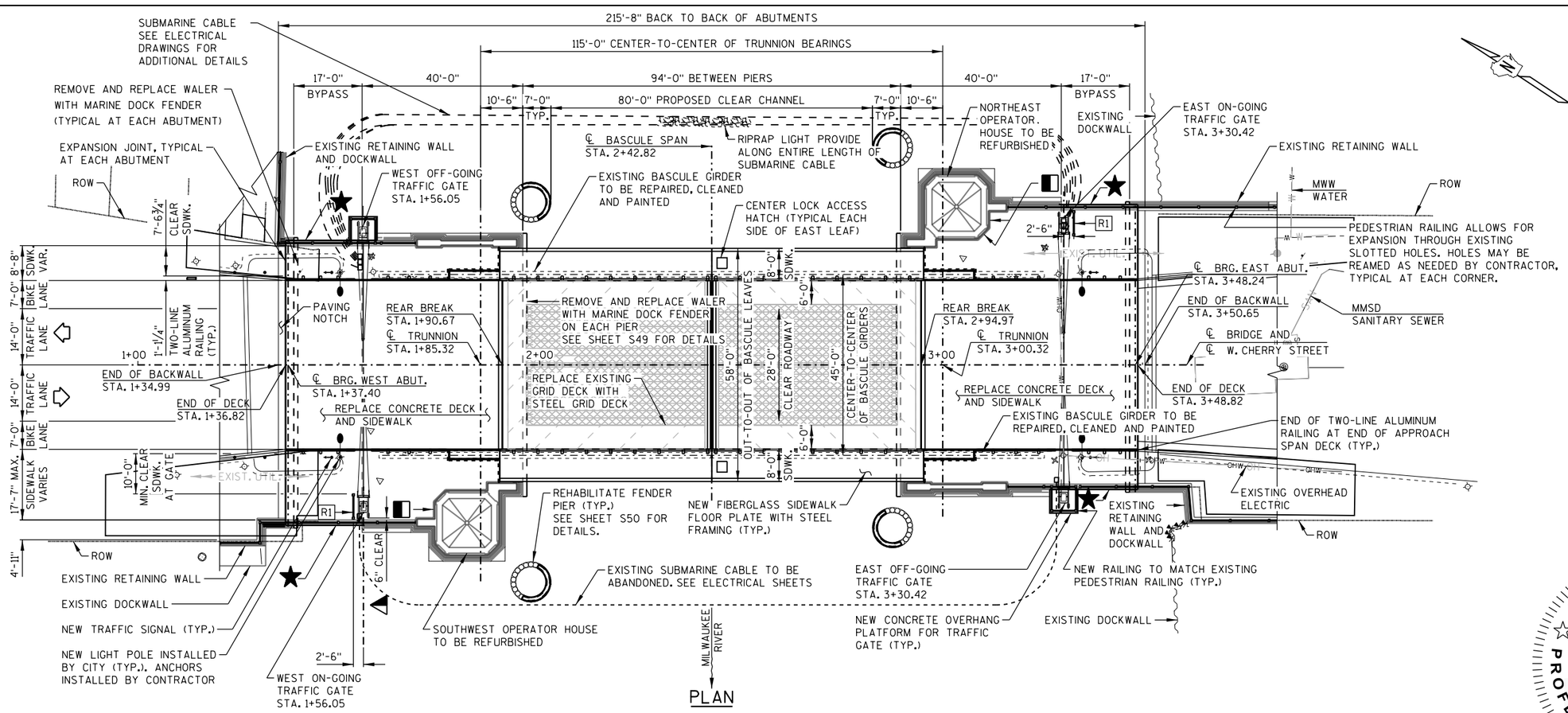
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PLOT DATE: 3/27/2024 PLOT TIME: 9:36:27 AM
BATCH PRINT SHEET 1 OF 71

STATE PROJECT NUMBER

2984-26-73

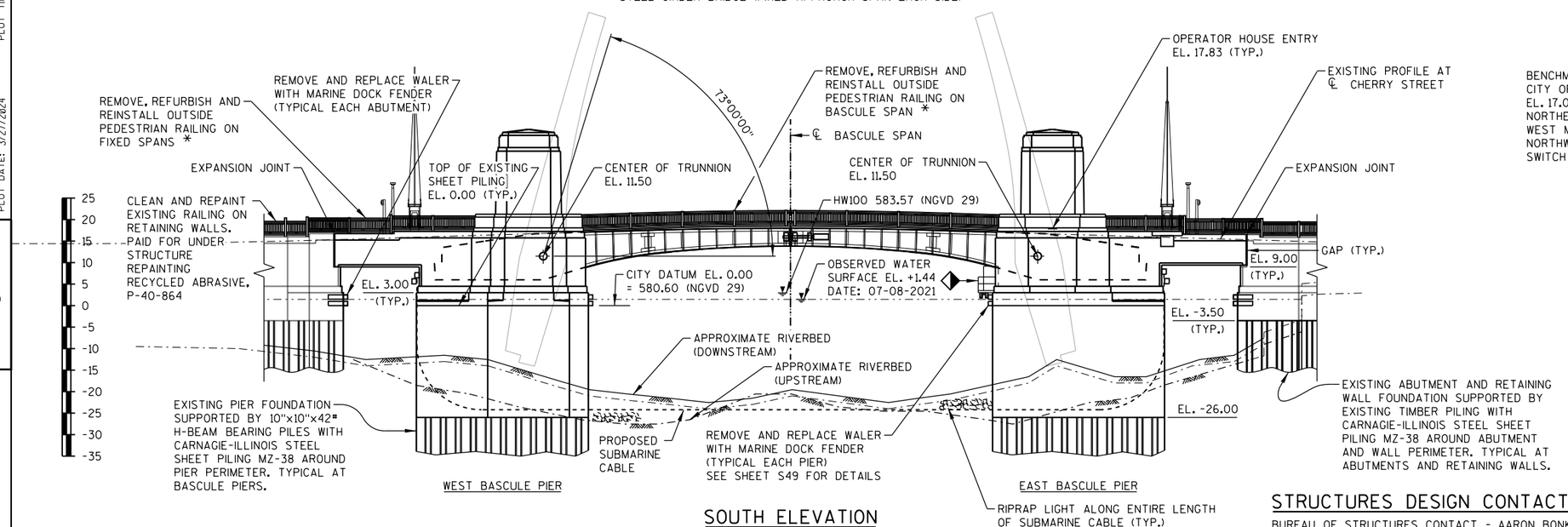
LEGEND

- REMOVE, REFURBISH AND REINSTALL EXISTING PLAQUES AND INSTALL NEW PLAQUES COST INCLUDED IN PAY ITEM "NAMEPLATE"
- LOCATE GATE SUCH THAT CLEARANCE BETWEEN GATE COUNTERWEIGHT AND RAILING IN THE CLOSED POSITION IS NO MORE THAN 6" AND PROVIDE A MINIMUM OF 3" CLEARANCE DURING OPERATION.
- REPLACE CONCRETE FASCIA GIRDER
- REMOVE MMSD SEWERAGE STATION, PLATFORM, AND PILES SUPPORTING MMSD STATION. COST INCLUDED IN PAY ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-40-864
- R1 6'-3" PEDESTRIAN RAILING. NEW RAILING MATCH EXISTING PEDESTRIAN RAILING. SEE SHEET S62 FOR ADDITIONAL DETAILS.
- OPEN STEEL GRID DECK
- HALF-FILLED STEEL GRID DECK
- * COST INCLUDED IN PAY ITEM "PEDESTRIAN RAILING REHABILITATION"



PLAN

DOUBLE-LEAF BASCULE BRIDGE (CENTER SPAN)
STEEL GIRDER BRIDGE (FIXED APPROACH SPAN EACH SIDE)



SOUTH ELEVATION

(LOOKING NORTH)
(LOOKING UPSTREAM NORMAL TO MILWAUKEE RIVER)

STRUCTURES DESIGN CONTACTS

BUREAU OF STRUCTURES CONTACT - AARON BONK (608) 261-0261
CONSULTANT CONTACT - SANKET DHATKAR (312) 373-6562

BENCHMARK NO. 106
CITY OF MILWAUKEE STANDARD BENCHMARK
EL. 17.043 CITY DATUM
NORTHEAST CORNER OF OLD WORLD 3RD STREET AND WEST MCKINLEY AVENUE
NORTHWEST CORNER OF WISCONSIN ELECTRIC COMPANY'S SWITCH HOUSE

WISCONSIN PROFESSIONAL ENGINEER
SANKET DHATKAR
50049-6
CHICAGO
ILLINOIS
03/28/2024
SHEETS S1 THRU S71

NO.	DATE	REVISION	BY

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 03/28/24
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE P-40-864

WEST CHERRY STREET OVER THE MILWAUKEE RIVER

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	MILWAUKEE

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	GTS	DESIGN CK'D.	SD	DRAWN BY	GTS	PLANS CK'D.	SD

GENERAL PLAN AND ELEVATION

SHEET S01 OF S71
57

8

8

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PLOT DATE: 3/27/2024 PLOT TIME: 9:13:50 AM BATCH PRINT SHEET 2 OF 71

BASCULE SPAN - STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL SHALL BE AASHTO M270 OR ASTM A709 GRADE 50 UNLESS NOTED OTHERWISE.
2. SHOP CONNECTIONS TO BE WELDED OR BOLTED AS SHOWN ON THE PLANS. PROVIDE ALL GALVANIZED BOLTED CONNECTIONS WITH ⅞" DIAMETER ASTM A-325 BOLTS, IN SLIP CRITICAL CONNECTIONS, UNLESS NOTED OTHERWISE ON THE PLANS.
3. EXERCISE CARE WHILE REMOVING THE EXISTING RIVETS AND INSTALLING NEW BOLTS NOT TO DAMAGE THE EXISTING STEEL AND RIVET HOLES. REPLACE ANY DAMAGE CAUSED AT NO ADDITIONAL COST TO THE DEPARTMENT.
4. WELDING NOT SHOWN ON THE PLANS WILL NOT BE PERMITTED, EXCEPT BY WRITTEN PERMISSION FROM THE ENGINEER AND WITH AN APPROVED WELD PROCEDURE PROVIDED BY THE CONTRACTOR.
5. FIELD WELDING WILL NOT BE PERMITTED UNLESS SHOWN ON THE PLANS OR AUTHORIZED IN WRITING BY THE ENGINEER.
6. PROVIDE A MINIMUM RADIUS OF 1" AT ALL INTERIOR AND RE-ENTRANT CUTS, UNLESS NOTED OTHERWISE ON THE PLANS, AND NOTE ON THE SHOP DRAWINGS WHERE THEY OCCUR.
7. GALVANIZE AND PAINT ALL NEW STRUCTURAL STEEL UNLESS OTHERWISE NOTED AND PAINT IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE COLOR OF THE FINISH COAT FOR NEW AND EXISTING STRUCTURAL STEEL SHALL BE FEDERAL COLOR AMS-STD 16314.
8. GRIND OR PLANE ALL FLAME CUT EDGES OF PLATES THAT WILL BE PAINTED TO REMOVE THE HARDENED SURFACE CAUSED BY THE FLAME. REMOVAL OF THIS SURFACE IS NECESSARY TO OBTAIN A PROPER BLASTED SURFACE FOR THE ADHESION OF THE PAINT.
9. FOR BENT PLATES, CONFORM TO ASTM A143 TO PREVENT EMBRITTLEMENT CAUSED BY THE GALVANIC PROCESS.
10. GALVANIZED PARTS THAT ARE TO BE SHOP ASSEMBLED WITH BOLTS SHALL BE GALVANIZED BEFORE SHOP ASSEMBLY.

STRUCTURAL REPAIR WORK SCOPE

1. REMOVE AND REPLACE ANY RIVETS CONNECTING THE BOTTOM FLANGE ANGLES TO THE BASCULE GIRDER WEBS AND RIVETS CONNECTING THE BOTTOM FLANGE ANGLES TO THE BUILT-UP PLATE SECTIONS WHICH EXHIBIT SIGNIFICANT LOSS OF MATERIAL WITH HIGH STRENGTH BOLTS. BUTTON HEAD BOLTS WILL BE REQUIRED IN LOCATIONS VISIBLE TO THE PUBLIC TO MATCH THE APPEARANCE OF A RIVET FROM ONE DIRECTION.
2. IN AREAS OF THE BASCULE GIRDER STIFFENERS WHERE THE CORROSION IS MORE ADVANCED, CAUSING MAJOR SECTION LOSS OF THE STIFFENER AT ITS BASE, CUTOFF THESE STIFFENER BASES AND REPLACE WITH PIECES OF ANGLES. USE RIVET HOLES FOR CONNECTION WITH NEW HIGH STRENGTH BOLTS. PROVIDE SPLICE BETWEEN THE EXISTING AND NEW ANGLES. SPLICE THE OUTSTANDING LEGS OF THE ANGLES WITH FULL PENETRATION WELDS.
3. FILL ANY NEW OR EXISTING HOLES WITH HIGH STRENGTH BOLTS.
4. ALL BEAMS SHALL BE JACKED SIMULTANEOUSLY FOR BEARING REPLACEMENT.
5. REMOVE AND REPLACE STEEL ROADWAY GRID INCLUDING FILLED PORTION ABOVE FLOORBEAM 5. PROVIDE STEEL GRID DECK FLOOR WITH HALF-FILLED AND OPEN AREAS AS SHOWN ON THE PLANS.
6. REMOVE AND REPLACE ROADWAY STRINGERS, FLOORBEAMS 1 THROUGH 5, LATERAL BRACINGS, CENTER BREAK, REAR ROADWAY BREAK, REAR AND LONGITUDINAL SIDEWALK BREAKS, SIDEWALK BRACKETS AND MACHINERY SUPPORTS.
7. REPLACE ACCESS HATCHES, MACHINERY ENCLOSURE.
8. CLEAN AND PAINT ALL EXISTING STRUCTURAL STEEL UNLESS OTHERWISE NOTED AND PAINT IN ACCORDANCE WITH THE SPECIAL PROVISION. CLEAN AND COAT EXISTING STEEL GIRDER/STRINGER TOP FLANGES IN ACCORDANCE WITH SPECIAL PROVISION "PREPARATION AND COATING OF TOP FLANGES, P-40-864."
9. CLEAN AND PAINT ALL EXISTING PEDESTRIAN RAILING UNLESS OTHERWISE NOTED IN ACCORDANCE WITH THE SPECIAL PROVISION "PEDESTRIAN RAILING REHABILITATION". THE COLOR OF THE FINISH COAT FOR PEDESTRIAN RAILING SHALL MATCH THE COLOR NUMBER 27038 (BLACK) ACCORDING TO FEDERAL STANDARD NUMBER 595.
10. BALANCE BASCULE LEAVES.
11. REPLACE EXPANSION JOINTS ON APPROACH SPAN DECKS AND SIDEWALKS.
12. REPLACE BEARINGS AT APPROACH SPANS WITH ELASTOMERIC BEARINGS.
13. PERFORM CONCRETE CRACK AND SURFACE REPAIRS ON SUBSTRUCTURES.

DESIGN SPECIFICATIONS

AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, 17TH EDITION.

AASHTO LRFD MOVABLE HIGHWAY BRIDGE DESIGN SPECIFICATIONS 7TH EDITION 2015 AND INTERIMS THROUGH 2016, FOR MECHANICAL AND ELECTRICAL DESIGN.

AASHTO STANDARD SPECIFICATIONS FOR MOVABLE HIGHWAY BRIDGES, 5TH EDITION, FOR STRUCTURAL DESIGN

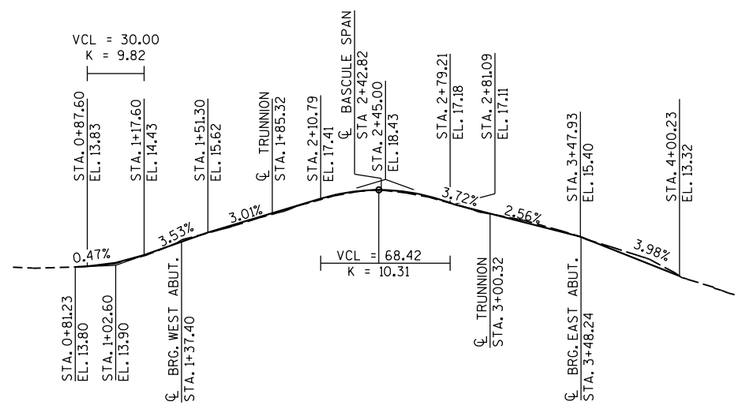
GENERAL NOTES BASCULE SPAN AND APPROACH SPANS

1. DO NOT SCALE THE DRAWINGS.
2. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED. ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE CITY OF MILWAUKEE DATUM. EL. 0.00 = EL. 580.60 (NGVD 29).
3. DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND NOT "AS BUILT" DIMENSIONS. THE EXISTING STRUCTURE (P-40-864) IS A THREE SPAN BASCULE BRIDGE WITH A CLEAR ROADWAY WIDTH OF 42 FEET AND AN OVERALL LENGTH OF APPROXIMATELY 208 FEET AND IS TO BE REHABILITATED AS SHOWN IN THESE PLANS.
4. IF THERE IS A CONFLICT BETWEEN THE STANDARD SPECIFICATIONS AND THE PLANS OR SPECIAL PROVISIONS, THE PLANS OR SPECIAL PROVISIONS SHALL GOVERN.
5. IN THE EVENT THAT THERE IS A DISCREPANCY IN THE PLANS AND SPECIAL PROVISIONS, BRING IT TO THE ATTENTION OF THE ENGINEER FOR HIS INTERPRETATION AND HIS DECISION SHALL GOVERN.
6. IF AN ITEM IS LISTED OR DESCRIBED IN THE SPECIAL PROVISIONS AND IS NOT SPECIFICALLY SHOWN ON THE PLANS, CONSIDER IT AS A PART OF THE WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED. IF IT IS NOT OBVIOUS AS TO WHICH BID ITEM IT BELONGS, CONSULT THE ENGINEER FOR INTERPRETATION, AND HIS DECISION SHALL GOVERN.
7. LOCATE AND WORK AROUND ALL UTILITIES THAT MAY BE ATTACHED OR EMBEDDED UNLESS NOTED OTHERWISE.
8. DEFINE ALL CONCRETE REMOVALS BY A 1" DEEP SAW CUT AROUND THE PERIMETER.
9. CLEAN, STRAIGHTEN, AND INCORPORATE EXISTING REINFORCING STEEL INTO NEW WORK, WHERE APPLICABLE AND EXTEND 24 BAR DIAMETERS INTO NEW WORK UNLESS SPECIFIED OTHERWISE.
10. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
11. THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
12. BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
13. COST OF FORMING INSET AREAS AND INSET LINES IN CONCRETE OF PIERS AND ABUTMENTS WILL BE CONSIDERED AS INCLUDED IN UNIT COST BID FOR BID ITEM "CONCRETE MASONRY BRIDGES".
14. FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPES I, II, OR III OR M213.
15. ELASTOMERIC BEARINGS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
16. VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURE DESIGN SECTION FOR REVIEW.
17. APPLY PROTECTIVE SURFACE TREATMENT TO EXPOSED SURFACES OF THE DECK, CURB, AND SIDEWALKS, EDGE OF DECK AND UNDERSIDE OF DECK TO THE LIMITS SHOWN IN THE PLANS.
18. MATERIALS, EQUIPMENT, ETC. SHALL NOT BE STOCKPILED ON THE BRIDGE DECK WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
19. THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE AS SHOWN ON SHEET S71 IN ACCORDANCE WITH SECTION 502.3.11 AND 506.3.33 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1940.
20. BAR CHAIRS FOR REINFORCING WITH OPENINGS LESS THAN 2" HIGH, EXCEPT AT THE BOTTOM OF DECK SLAB, ARE NOT ACCEPTABLE AND ARE NOT ALLOWED IN ANY APPLICATIONS. IN ADDITION, BAR CHAIRS MUST BE STRONG ENOUGH TO SUPPORT THE WEIGHT OF WORKERS WALKING ON THEM WITHOUT INDUCING PERMANENT DEFORMATIONS OR BREAKING.
21. APPLY CONCRETE STAINING TO ALL EXPOSED SURFACES OF BASCULE PIER WALLS AND RETAINING WALLS AS SHOWN ON THE PLANS. PROVIDE COLOR OF THE CONCRETE STAINING IN ACCORDANCE WITH THE SPECIAL PROVISION.
22. IF CONTRACTOR PROPOSES TO USE BARGES SUPPORTED BY SPUD POLES DRIVEN INTO THE RIVERBED FOR CONSTRUCTION, THE CONTRACTOR SHALL AVOID SPUDDING OF BARGES IS AREAS WITH HIGH LEVELS OF SEDIMENT CONTAMINATION. IT WOULD BE PREFERRED FOR BARGES TO REMAIN IN ONE LOCATION DURING THE ENTIRETY OF THE PROJECT. IF THIS IS NOT FEASIBLE, BARGE MOVEMENTS AND ASSOCIATED SPUDDING/RE-SPUDDING MUST BE MINIMIZED TO THE GREATEST PRACTICABLE EXTENT TO LIMIT POTENTIAL MIGRATION OF CONTAMINATED RIVER BED SEDIMENTS. IF SPUDDING/RE-SPUDDING OF BARGES IS OCCURRING, THE CONTRACTOR MUST MONITOR SPUD DEPTH WHEN LOWERED TO MINIMIZE PENETRATION INTO THE STREAMBED. WHEN REPEATEDLY SPUDDING IN THE SAME LOCATION MONITOR SPUDS TO ENSURE THEY ARE NOT ROUTINELY SINKING DEEPER THAN PREVIOUSLY NOTED. IF THEY ARE, MOVE LOCATIONS AND CONTINUE TO MONITOR. CONTRACTOR MUST MAINTAIN SPUDS AT THE LOWEST POSSIBLE DEPTH WHILE MOVING AFTER RAISING SPUDS TO KEEP ANY ADHERED STREAMBED MATERIAL AS CLOSE TO THE BOTTOM AS POSSIBLE. CONTRACTOR MUST NOT DRAG SPUDS ON THE STREAMBED WHILE MOVING BARGES. CONTRACTOR MUST RAISE SPUDS SLOWLY TO PREVENT EXCAVATION OF THE STREAMBED BY SUCTION AND ALLOW TIME FOR ANY ADHERED STREAMBED MATERIAL TO RELEASE OFF THE SPUDS PRIOR TO MOVING. RECORD WHEN AND WHERE SPUDS WERE DROPPED WITH DEPTHS DURING CONSTRUCTION. BARGE SPUDDING/RE-SPUDDING THAT IMPACTS THE STREAM BED IS CONSIDERED AN IN-WATER DISTURBANCE, AND MUST ADHERE TO IN-STREAM DISTURBANCE TIMEOUT PERIOD, WITH NO WORK OCCURRING BETWEEN MARCH 1ST TO JUNE 15TH, WITH BOTH DATES INCLUSIVE OF THIS TIMEOUT PERIOD. BEFORE BEGINNING THE PROJECT, THE CONTRACTOR MUST COORDINATE WITH DOT AND DNR TO DETERMINE APPROPRIATE LOCATIONS FOR BARGE SPUDDING NEAR THE BRIDGE TO AVOID AREAS WITH HIGH LEVELS OF SEDIMENT CONTAMINATION.
23. COST OF REMOVAL OF EXISTING BRIDGE ELEMENTS AS SHOWN ON THE PLANS, MMSD STATION, PLATFORMS AND PILES SUPPORTING THE MMSD STATION PLATFORM, ANY OTHER REMOVAL ELEMENTS THAT ARE SHOWN ON THE PLANS BUT NOT COVERED BY ANY SPECIAL PROVISIONS IS INCLUDED IN PAY ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS, P-40-864."
24. WHERE PORTIONS OF THE EXISTING STRUCTURES AND MACHINERY SHALL REMAIN IN SERVICE, THE CONTRACTOR SHALL PERFORM REMOVAL WORK IN A MANNER AS TO LEAVE THE REMAINING STRUCTURE AND MACHINERY UNDAMAGED, SECURED FROM THEFT AND VANDALISM, PROTECTED FROM THE WEATHER ELEMENTS AND KEPT IN A PROPER OPERATING CONDITION.
25. THE CONTRACTOR SHALL UTILIZE THE REQUIRED CONSTRUCTION PROCEDURES TO ENSURE THAT ALL STRUCTURAL MEMBERS ARE SQUARE DURING THE INSTALLATION OF THE LATERAL BRACING FOR THE ROADWAY STRINGERS, SIDEWALK STRINGERS, AND FLOORBEAMS.
26. THE CONTRACTOR MUST PERFORM ALL WORK WITH CARE SUCH THAT ALL MATERIALS WHICH ARE TO REMAIN IN PLACE WILL NOT BE DAMAMGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, THE DAMAGED MATERIALS MUST BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL EXPENSE TO THE DEPARTMENT.
27. FLAME CUTTING OF EXISTING STRUCTURAL STEEL MEMBERS WHICH ARE TO REMAIN IN PLACE IS NOT ALLOWED.
28. REMOVAL OF EXISTING BRIDGE STRUCTURAL STEEL SHALL BE DONE IN A MANNER AND SEQUENCE CONSISTENT WITH THE REHABILITATION OF THE BRIDGE, WHILE PROTECTING ANY RIVER TRAFFIC.
29. SEAL CRACKS 1/16" OR LARGER USING AN EPOXY INJECTION SYSTEM. USE URETHANE INJECTION SYSTEM IN LIEU OF EPOXY INJECTION TO SEAL ANY CRACKS THAT ARE WET AT THE TIME OF INJECTION.

CONSTRUCTION SPECIFICATIONS

AWS BRIDGE WELDING CODE D1.5, LATEST EDITION.

AWS STRUCTURAL WELDING CODE-STEEL D1.1, LATEST EDITION.



PROPOSED PROFILE GRADE LINE - CHERRY STREET

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS 20
INVENTORY RATING = HS 25
OPERATING RATING = HS 41
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS

MATERIAL PROPERTIES:

CONCRETE SUPERSTRUCTURE.....f'c = 4,000 PSI
CONCRETE SUBSTRUCTURE.....f'c = 3,500 PSI
BAR STEEL REINFORCEMENT.....fy = 60,000 PSI
STRUCTURAL STEEL.....fy = 50,000 PSI
ROADWAY GRID.....fy = 50,000 PSI

TRAFFIC DATA:

ADT = 1,750 (2023)
= 1,950 (2044)
RDS = 30 MPH

HYDRAULIC DATA

Q100	14,800 CFS
HW100	EL. 583.57 (NGVD)
ROADWAY OVERTOPPING	N/A
SCOUR CRITICA CODE	3

LEGEND:

- EXISTING LINE
- PROPOSED LINE
- PROPOSED HIDDEN LINE
- EXISTING RIVET/BOLT
- PROPOSED BOLT

STATE PROJECT NUMBER

2984-26-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY GTS | PLANS CK'D. SD

GENERAL NOTES

SHEET S02 OF S71
58

8

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STATE PROJECT NUMBER

2984-26-73

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	SUBSTRUCTURE								SUPERSTRUCTURE			TOTAL
			NW RETAINING WALL	SW RETAINING WALL	WEST ABUTMENT	WEST BASCULE PIER	EAST BASCULE PIER	EAST ABUTMENT	NE RETAINING WALL	SE RETAINING WALL	WEST APPROACH SPAN	BASCULE SPAN	EAST APPROACH SPAN	
203.0211.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL P-40-864	EACH												1
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-40-864	EACH												1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES P-40-864	EACH												1
210.1500	BACKFILL STRUCTURE TYPE A	TON			90			90						180
502.0100	CONCRETE MASONRY BRIDGES	CY			24	49	49	24			64		66	276
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 5/8-INCH	LF										22		22
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 1-INCH	LF										197		197
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 2-INCH	LF									101		86	187
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 3-INCH	LF										216		216
502.3200	PROTECTIVE SURFACE TREATMENT	SY									460		460	920
502.4106	ADHESIVE ANCHORS 3/4-INCH	EACH				28	34					128		190
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	2	9	5	176	180	4	6	14	122		122	640
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH			52			52						104
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH									10		10	20
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	20	100	2,840	630	600	2,830	30	90	26,200		26,200	59,540
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH			13			13						26
506.7050.S	REMOVING BEARINGS, P-40-864	EACH			12			12						24
509.1500	CONCRETE SURFACE REPAIR	SF	12	106	27	64	185	12	24	97				527
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	10	15	95	244	467	103	10	15				959
509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	2	2	2	2	2	2	2	2				16
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY			27			27						54
517.0601	PAINTING EPOXY SYSTEM P-40-864	EACH												1
517.0901.S	PREPARATION AND COATING OF TOP FLANGES, P-40-864	EACH												1
517.1010.S	CONCRETE STAINING, P-40-864	SF	27	1,672		1,625	1,801		1,268	1,231				7,624
517.1801.S	STRUCTURE REPAINTING RECYCLED ABRASIVE, P-40-864	EACH												1
517.4501.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS, P-40-864	EACH												1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH												1
531.8990	ANCHOR ASSEMBLIES POLES ON STRUCTURES	EACH									4		4	8
606.0100	RIPRAP LIGHT	CY										133		133
650.6501	CONSTRUCTION STAKING STRUCTURE LAYOUT P-40-864	EACH												1
SPV.0025.001	CONCRETE REMOVAL AND REPLACEMENT AT MACHINERY FLOOR	CF				181	181							362
SPV.0025.002	COUNTERWEIGHT CONCRETE MODIFICATION	CF										26		26
SPV.0025.003	WATERLINE CONCRETE SURFACE REPAIR	CF			4	12		3		3				22
SPV.0060.001	BASCULE GIRDER STIFFENER ANGLE REPAIRS	EACH										41		41
SPV.0060.002	LOADING GIRDER BASE REPAIRS	EACH				1	1							2
SPV.0060.003	BASCULE GIRDER TRUNNION WEB STIFFENER REPLACEMENTS	EACH										24		24
SPV.0060.004	UPLIFT COLUMN BASE REPAIRS	EACH				5	4							9
SPV.0060.005	STIFFENER REPLACEMENTS AT PINION BEARING SUPPORT	EACH				4	4							8
SPV.0060.006	LADDER AND RAILING REPAIRS	EACH				1	1							2
SPV.0060.007	RIVET REMOVAL AND REPLACEMENT	EACH										500		500
SPV.0060.008	HEEL BLOCK REFURBISHMENT	EACH				2	2							4
SPV.0060.009	MACHINERY ENCLOSURES	EACH				1	1							2
SPV.0060.010	ACCESS HATCH	EACH				1	1					2		4
SPV.0060.011	ARCHITECTURAL EXTERIOR BRIDGE LED LIGHTING	EACH												1
SPV.0060.012	OPERATOR HOUSE REFURBISHMENT	EACH												2
SPV.0060.013	OPERATOR HOUSE HVAC	EACH												2
SPV.0060.014	PLUMBING SYSTEMS	EACH												1
SPV.0060.015	FIELD VERIFICATION SURVEY	EACH												1
SPV.0060.016	SUBMARINE CABLE	EACH												1
SPV.0060.017	TEMPORARY SUPPORT FOR BASCULE LEAVES	EACH										2		2
SPV.0060.018	NAMEPLATE	EACH												1
SPV.0060.019	COUNTERWEIGHT CALCULATIONS AND SPAN BALANCING	EACH												1
SPV.0060.020	TIMBER FENDER REMOVAL	EACH												1
SPV.0060.021	FENDER PIER REPAIRS	EACH												1
SPV.0060.022	SPAN DRIVE MACHINERY REFURBISHMENT	EACH										1		1
SPV.0060.023	CENTER LOCK MACHINERY	EACH										1		1
SPV.0060.024	TRUNNION AND TRUNNION BEARING REFURBISHMENT	EACH												1
SPV.0060.025	BRIDGE ELECTRICAL WORK	EACH												1
SPV.0060.026	SPAN DRIVES AND MOTORS	EACH												1
SPV.0060.027	CONTROL CONSOLE - CHERRY STREET	EACH												1
SPV.0060.028	PLC CONTROLS - CHERRY STREET	EACH												1
SPV.0060.029	PLC AND COMMUNICATION MODIFICATIONS - KNAPP STREET (BRIDGE B-40-62)	EACH												1
SPV.0060.030	LIGHTNING AND SURGE SURPRESSION	EACH												1
SPV.0060.031	TRAFFIC GATES AND SIGNALS	EACH												4
SPV.0060.032	POWER DISTRIBUTION AND MOTOR CONTROL CENTER	EACH												1
SPV.0060.033	LIMITS AND SENSORS	EACH												1
SPV.0060.034	TRAINING, MANUALS AND SPARE PARTS	EACH												1
SPV.0060.035	AUXILIARY ELECTRICAL EQUIPMENT	EACH												1
SPV.0060.036	BENT C STRUCTURAL STEEL REPAIRS	EACH										2		2
SPV.0085.001	BRIDGE STRUCTURAL STEEL	LB				480	480				8,930	312,000	8,930	330,820
SPV.0085.002	NON-STRUCTURAL STEEL BALLAST	LB										78,640		78,640
SPV.0085.003	STRUCTURAL STEEL REPAIR, FIELD DISCOVERED CONDITIONS REPAIRED AS DIRECTED BY ENGINEER	LB										10,500		10,500
SPV.0090.001	TWO-LINE ALUMINUM RAILING	LF									74	209	74	357
SPV.0090.002	PEDESTRIAN RAILING REHABILITATION	LF	126	151					127	106	86.00	193	86	875
SPV.0090.003	TRAFFIC GATE RAILING	LF									35		35	70
SPV.0090.004	MARINE DOCK FENDER	LF			145	137	137	145						564
SPV.0090.005	FENCE CHAIN LINK POLYMER-COATED 10-FT. P-40-864	LF				65	65							130
SPV.0090.006	STEEL PIPE RAILING	LF				18	47							65
SPV.0090.007	URETHANE INJECTION CRACK REPAIR	LF	1	1	5	13	24	6	1	1				52
SPV.0165.001	STEEL GRID FLOOR 5-INCH	SF										4,101		4,101
SPV.0165.002	CONCRETE FILL FOR GRID DECK	SF										1,430		1,430
SPV.0165.003	FIBERGLASS SIDEWALK FLOOR PLATES	SF										1,892		1,892

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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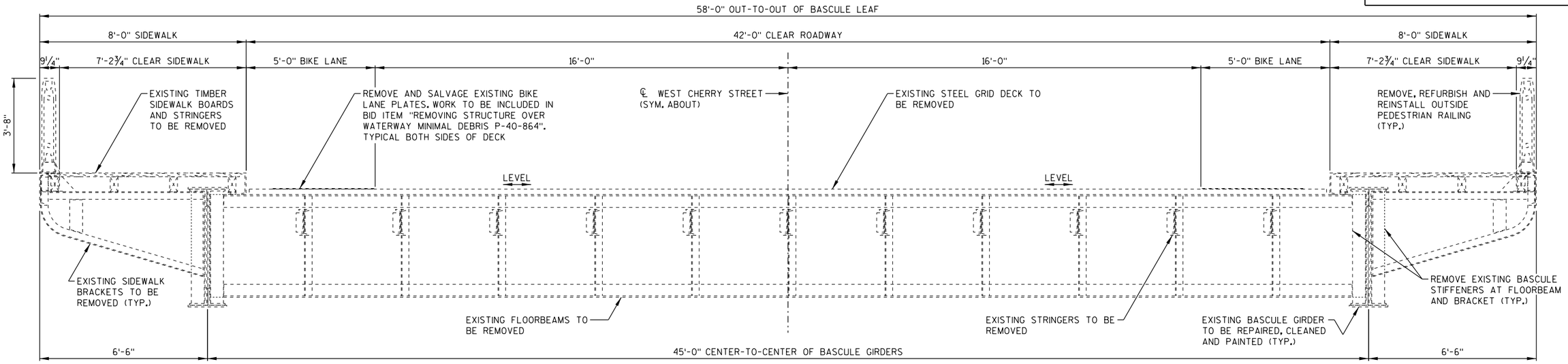
ESTIMATED QUANTITIES

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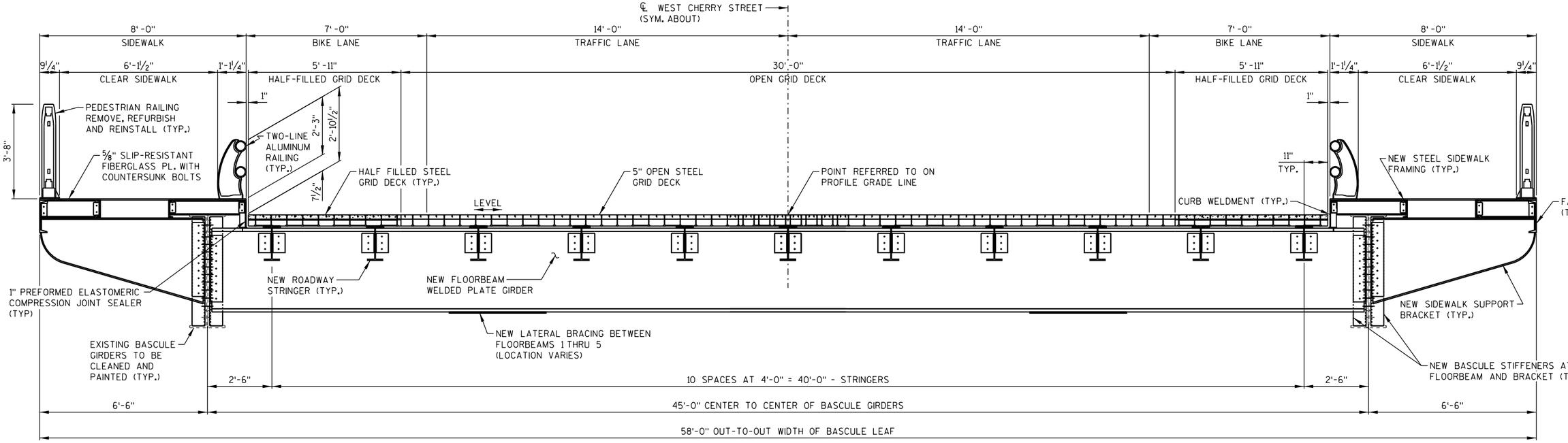
STATE PROJECT NUMBER

2984-26-73



EXISTING TYPICAL SECTION THRU BASCULE SPAN

WEST LEAF LOOKING UPSTATION (EAST LEAF MIRRORED)



PROPOSED TYPICAL SECTION THRU BASCULE SPAN

WEST LEAF LOOKING UPSTATION (EAST LEAF MIRRORED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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BASCULE SPAN TYPICAL SECTIONS

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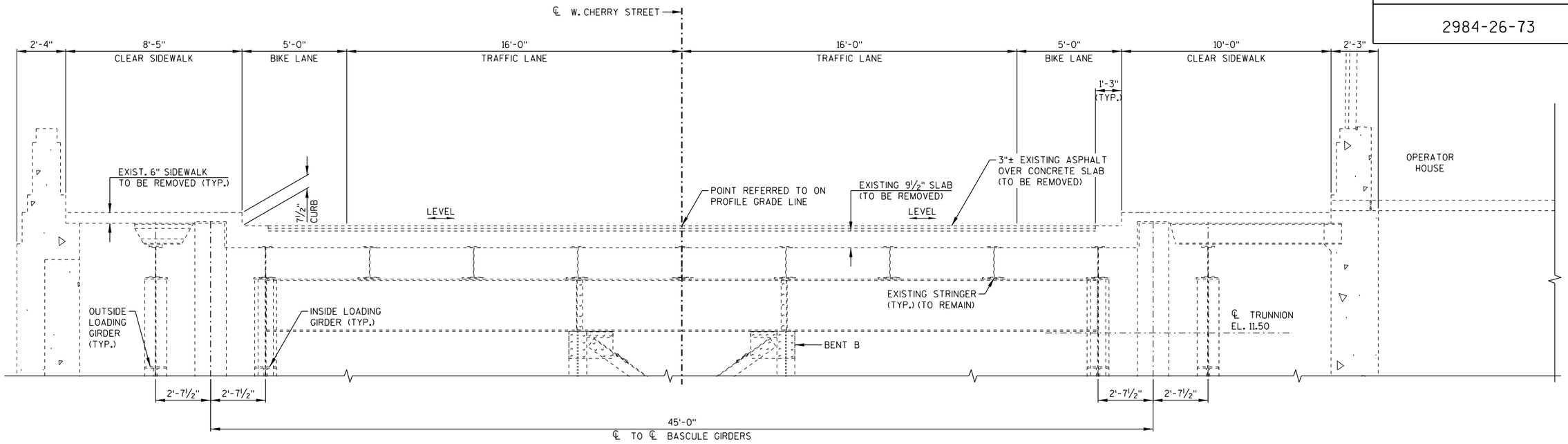
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STATE PROJECT NUMBER

2984-26-73

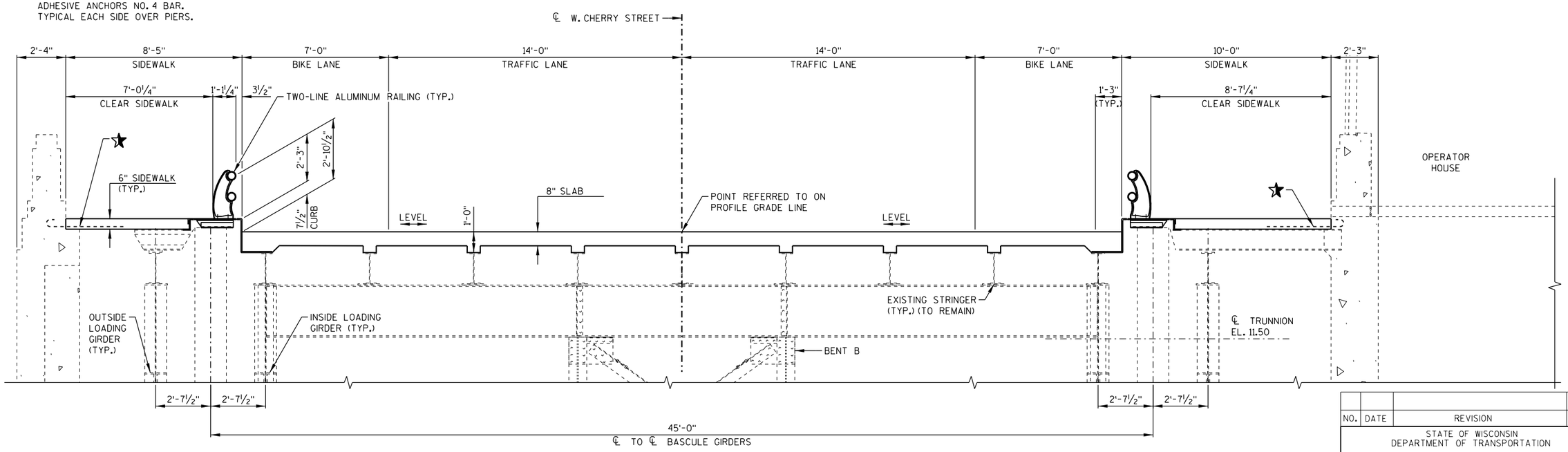


LEGEND

★ EXISTING ⅜"Φ DOWELS AT 6" CTRS. SALVAGE EXISTING REINFORCEMENT, CLEAN AND REINCORPORATE INTO NEW CONCRETE. SUPPLEMENT WITH ADHESIVE ANCHORS NO. 4 BAR. TYPICAL EACH SIDE OVER PIERS.

EXISTING TYPICAL SECTION THRU BASCULE PIER AT BENT B

(WEST PIER SHOWN, LOOKING EAST. EAST PIER SIMILAR, LOOKING WEST)



PROPOSED TYPICAL SECTION THRU BASCULE PIER AT BENT B

(WEST PIER SHOWN, LOOKING EAST. EAST PIER SIMILAR, LOOKING WEST)

8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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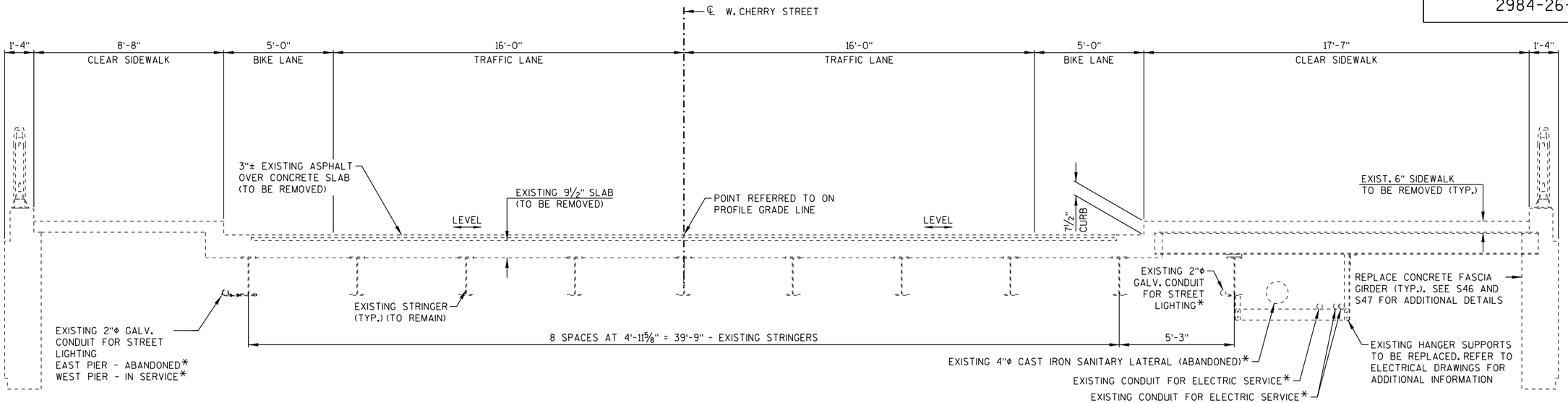
APPROACH SPAN AT BENT B TYPICAL SECTIONS

SHEET S05 OF S71
61

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BATCH PRINT SHEET 6 OF 71

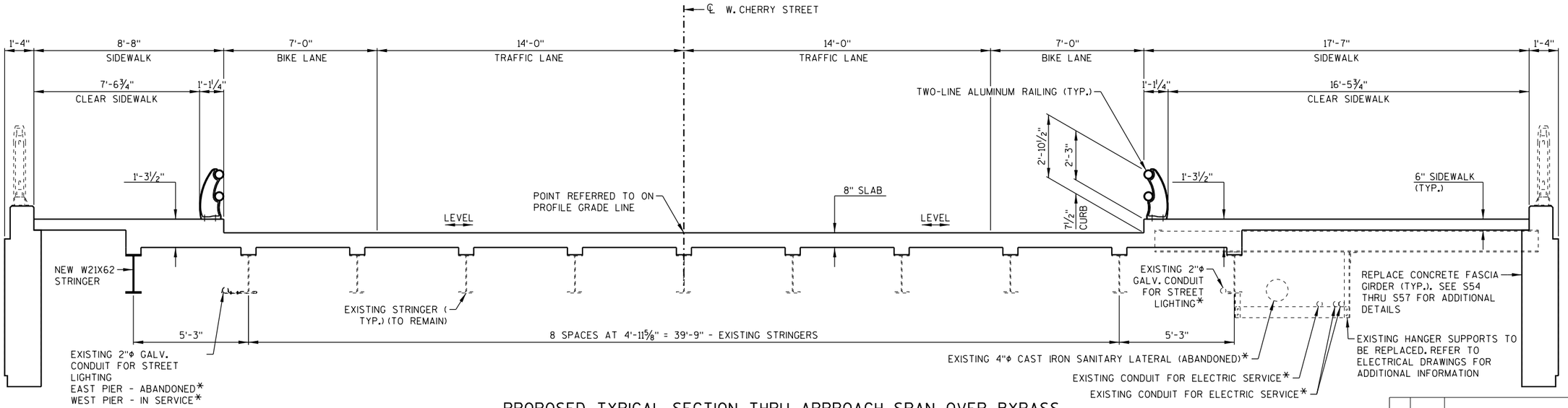
STATE PROJECT NUMBER

2984-26-73



EXISTING TYPICAL SECTION THRU APPROACH SPAN OVER BYPASS

(WEST APPROACH SPAN SHOWN, LOOKING EAST, EAST APPROACH SPAN SIMILAR, LOOKING WEST)



PROPOSED TYPICAL SECTION THRU APPROACH SPAN OVER BYPASS

(WEST APPROACH SPAN SHOWN, LOOKING EAST. EAST APPROACH SPAN SIMILAR, LOOKING WEST)

* ALL EXISTING CONDUITS, BOTH IN SERVICE AND ABANDONED TO BE REMOVED. REMOVAL COST FOR CONDUITS RELATED TO ELECTRIC SERVICE AND STREET LIGHTING IS INCLUDED IN PAY ITEM "BRIDGE ELECTRICAL WORK." REMOVAL COST OF ABANDONED SANITARY LATERAL IS INCLUDED IN PAY ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-40-864." NEW CONDUITS WILL BE PROVIDED FOR ALL ELECTRICAL WORK. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

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STRUCTURE P-40-864

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APPROACH SPAN TYPICAL SECTIONS

SHEET S06 OF S71
62

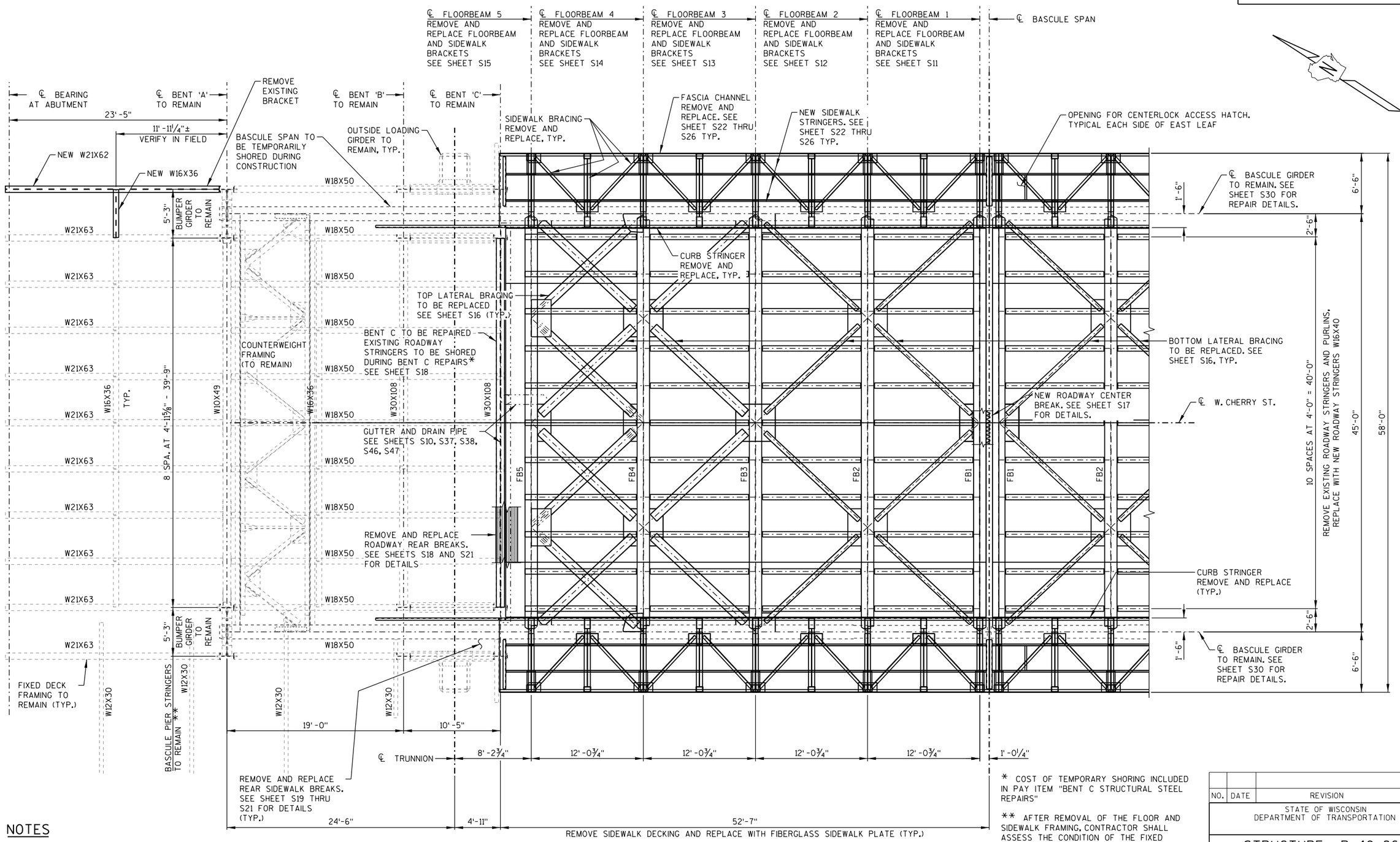
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STATE PROJECT NUMBER

2984-26-73



NOTES

1. SEE SHEETS S51 THRU S53 FOR WEST APPROACH SPAN DECK FRAMING PLAN AND DETAILS.
2. SEE SHEETS S19 THRU S27 FOR SIDEWALK DETAILS.
3. SEE SHEET S62 FOR RAILING DETAILS.
4. SEE SHEET S16 FOR LATERAL BRACING DETAILS.

PROPOSED STEEL FRAMING PLAN

(REPAIRS REQUIRED ON BOTH LEAVES, WEST LEAF SHOWN, PROPOSED FRAMING ON EAST LEAF SIMILAR, OPPOSITE HAND)

* COST OF TEMPORARY SHORING INCLUDED IN PAY ITEM "BENT C STRUCTURAL STEEL REPAIRS"

** AFTER REMOVAL OF THE FLOOR AND SIDEWALK FRAMING, CONTRACTOR SHALL ASSESS THE CONDITION OF THE FIXED ROADWAY STRINGERS TO DETERMINE THE EXTENT OF THE DETERIORATION AND PROVIDE REQUIRED REPAIR LCOATIONS AND REPAIR DETAILS TO THE ENGINEER FOR REVIEW AND APPROVAL. COST SHALL BE INCLUDED WITH PAY ITEM "STRUCTURAL STEEL REPAIR, FIELD DISCOVERED CONDITIONS REPAIRED AS DIRECTED BY ENGINEER."

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STRUCTURE P-40-864

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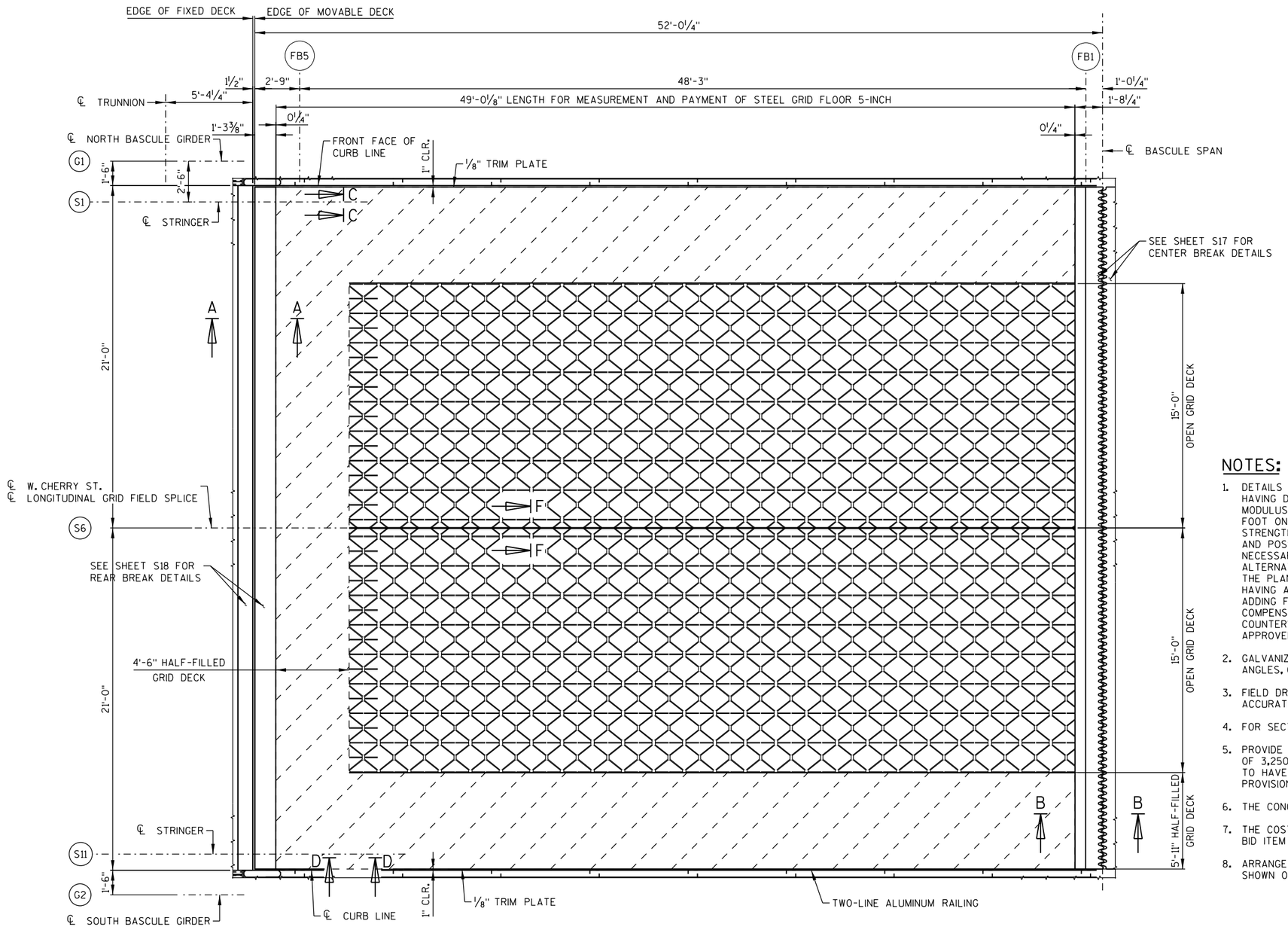
FRAMING PLAN

SHEET S07 OF S71
63

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PLOT DATE: 3/27/2024 PLOT TIME: 9:14:41 AM
BATCH PRINT SHEET 8 OF 71



PLAN OF STEEL GRID

(WEST LEAF SHOWN, EAST LEAF SIMILAR OPPOSITE HAND)

NOTES:

1. DETAILS OF THE ROADWAY GRID SHOWN ARE BASED ON A WELDED 5-INCH 4-WAY TYPE HAVING DIAGONAL ELEMENTS. PROVIDE A 5⅜" GRID THAT HAS A MINIMUM SECTION MODULUS OF 4.65 CUBIC INCHES PER FOOT ON THE TOP AND 4.64 CUBIC INCHES PER FOOT ON THE BOTTOM BASED ON 50% OF DIAGONAL BARS BEING ACTIVE. AN EQUIVALENT STRENGTH 5⅜" RIVETED GRID SYSTEM MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW AND POSSIBLE APPROVAL. SUBMIT ALL REQUIRED CHANGES TO DETAILS THAT ARE NECESSARY. ANY RESULTING INCREASES IN COSTS OF OTHER ITEMS DUE TO THE ALTERNATE GRID WILL NOT BE COMPENSATED. THE COUNTERWEIGHT MATERIAL SHOWN ON THE PLANS TO BE ADDED TO EACH BASCULE LEAF AND PAID FOR IS BASED ON THE GRID HAVING AN UNIT WEIGHT OF 18.5 POUNDS PER SQUARE FOOT PRIOR TO GALVANIZING AND ADDING FOR CONNECTION DETAILS. THE CONTRACTOR IS RESPONSIBLE AT NO ADDITIONAL COMPENSATION FOR DESIGNING, FURNISHING AND INSTALLING ALL ADDITIONAL COUNTERWEIGHT NECESSARY IF AN ALTERNATE HEAVIER RIVETED GRID SYSTEM IS APPROVED AND USED.
2. GALVANIZE ALL PARTS OF STEEL FLOOR GRID (GRID, TRIM BARS, JOINT BARS, EDGE ANGLES, CONNECTION PLATES, FORM PANS AND FASTENERS).
3. FIELD DRILL HOLES IN BOLT DOWN PLATES AND IN NEW STRINGER FLANGES AFTER ACCURATE GRID LAYOUT HAS BEEN PERFORMED.
4. FOR SECTION VIEWS, SEE SHEET S09.
5. PROVIDE LIGHTWEIGHT CONCRETE FILL IN THE ROADWAY GRID HAVING A MINIMUM STRENGTH OF 3,250 PSI AT 7 DAYS AND A 28 DAY STRENGTH OF 4,000 PSI. THE CONCRETE FILL IS TO HAVE A MINIMUM STRENGTH OF 3,000 PSI PRIOR TO A BRIDGE OPENING. SEE SPECIAL PROVISIONS.
6. THE CONCRETE FILL SHALL HAVE A MAXIMUM SIZE OF AGGREGATE OF 3/8".
7. THE COST OF THE ⅜" CONNECTION PLATES ATTACHED TO THE GRID IS INCLUDED UNDER BID ITEM "STEEL GRID FLOOR 5-INCH".
8. ARRANGE GRID PANELS SUCH THAT CONNECTION DETAILS AT FLOORBEAMS WILL BE AS SHOWN ON SHEET S09.

LEGEND:

NEW STEEL GRID FLOOR 5-INCH

NEW STEEL GRID FLOOR 5-INCH WITH HALF CONCRETE FILL FOR GRID DECK

ESTIMATED WEIGHT FOR THE NEW GRID IS AS FOLLOWS:

1. 5" STEEL GRID WITHOUT CONCRETE FORM PAN 18.5 PSF (PRIOR TO GALVANIZING)
2. 5" STEEL GRID WITH CONCRETE FORM PAN, CONNECTION PLATES, AND ALL HARDWARE 19.8 PSF (PRIOR TO GALVANIZING)
3. WEIGHT OF CONCRETE IN HALF-FILLED PORTION 24.9 PSF
4. GALVANIZING OF STEEL GRID 6% ADDED

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STRUCTURE P-40-864

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STEEL GRID DECK PLAN

SHEET S08 OF S71
64

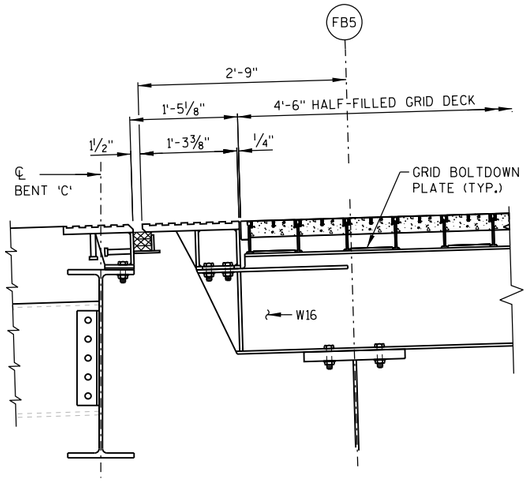
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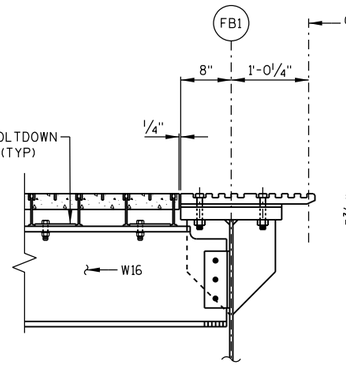
STATE PROJECT NUMBER

2984-26-73



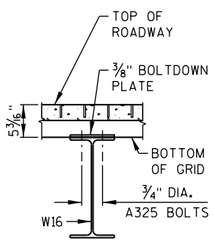
SECTION A-A

SEE REAR BREAK DETAILS SHEET S18

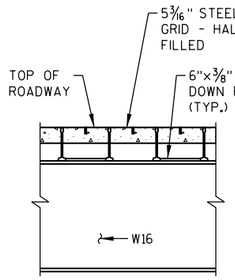


SECTION B-B

SEE CENTER BREAK DETAILS SHEET S17

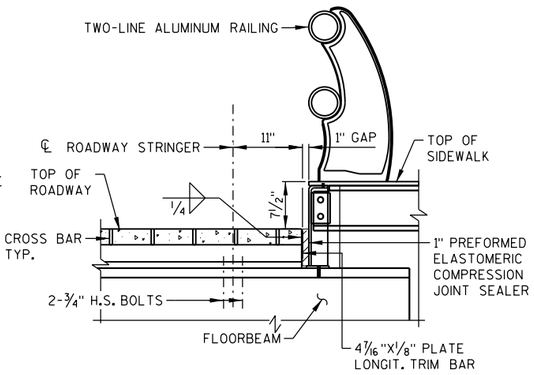


SECTION C-C

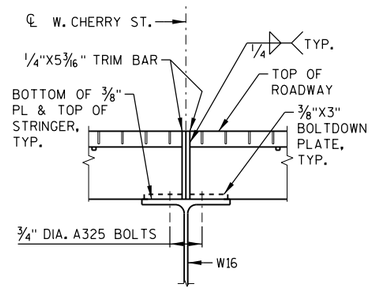


SECTION D-D

AT LINE (S11)

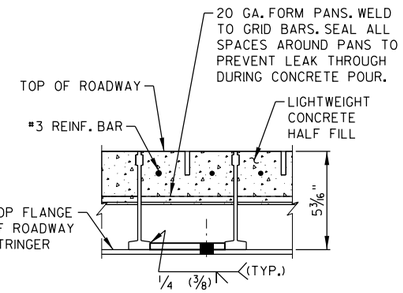


SECTION E-E



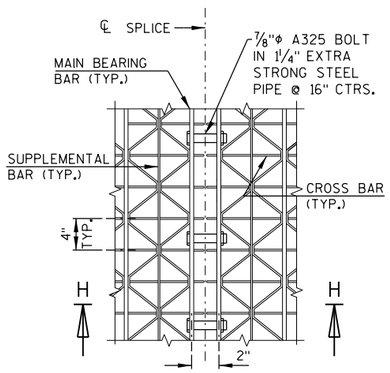
SECTION F-F

AT LINE (S6)

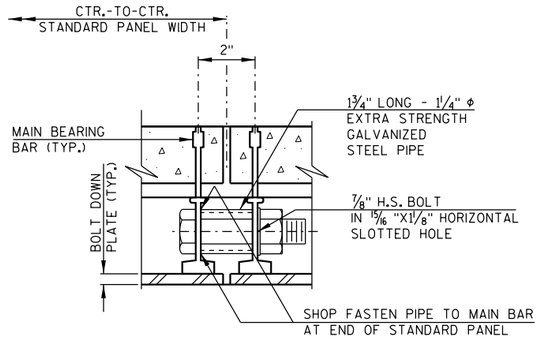


TYPICAL CONNECTION PLATE DETAIL

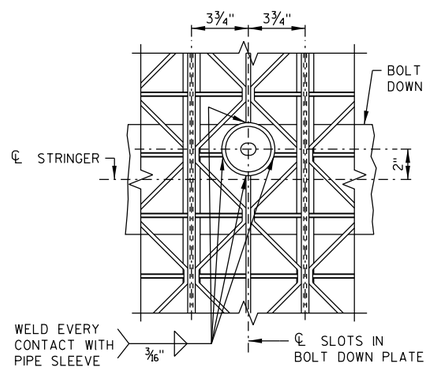
(HALF-FILLED GRID DECK SHOWN, OPEN GRID DECK SIMILAR)



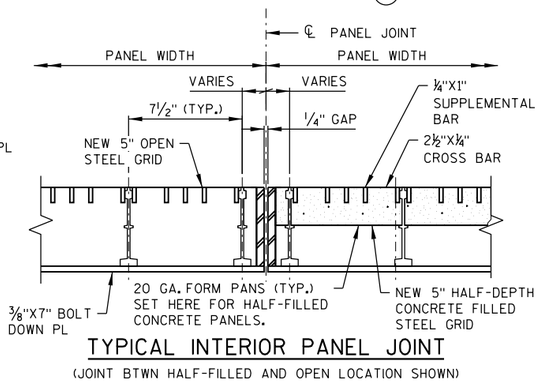
HALF-FILLED STEEL GRID AT TRANSVERSE SPLICE



SECTION H-H

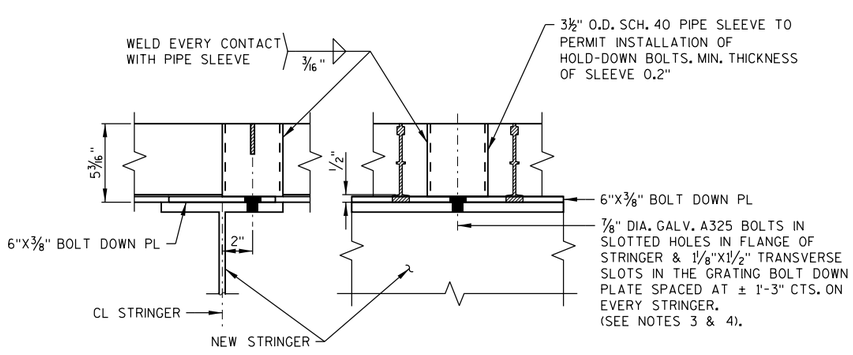


PLAN
PIPE SLEEVE & BOLT DOWN PLATE

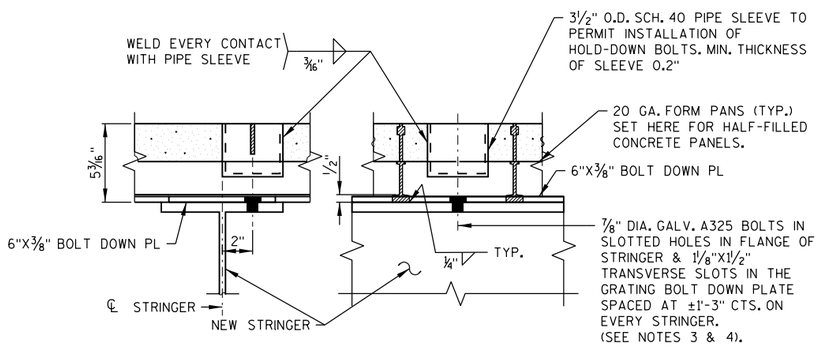


TYPICAL INTERIOR PANEL JOINT

(JOINT BTWN HALF-FILLED AND OPEN LOCATION SHOWN)



TYPICAL OPEN GRATING BOLT DOWN DETAIL



TYPICAL HALF-DEPTH CONCRETE FILLED GRATING BOLT DOWN DETAIL

NOTES:

1. ALL GRATING ELEMENTS SHALL BE SERRATED ON THEIR TOP SURFACES.
2. FOR ADDITIONAL NOTES AND SECTION CALLOUTS SEE SHEET S08.
3. GRATING HOLD DOWN BOLTS SHALL BE PRETENSIONED IN ACCORDANCE WITH SECTION 506 OF THE STANDARD SPECIFICATIONS.
4. BOLT ASSEMBLY TO INCLUDE GALVANIZED PLATE WASHERS 2¼"X1¾"X⅝".
5. FIELD DRILL HOLES IN BOLT DOWN PLATES IN NEW STRINGER FLANGES AFTER ACCURATE GRID LAYOUT HAS BEEN PERFORMED.
6. THE COST OF REMOVAL OF THE EXISTING GRID IS INCLUDED WITH BID ITEM "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-40-864".

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STRUCTURE P-40-864

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STEEL GRID DECK DETAILS

SHEET S09 OF S71

65

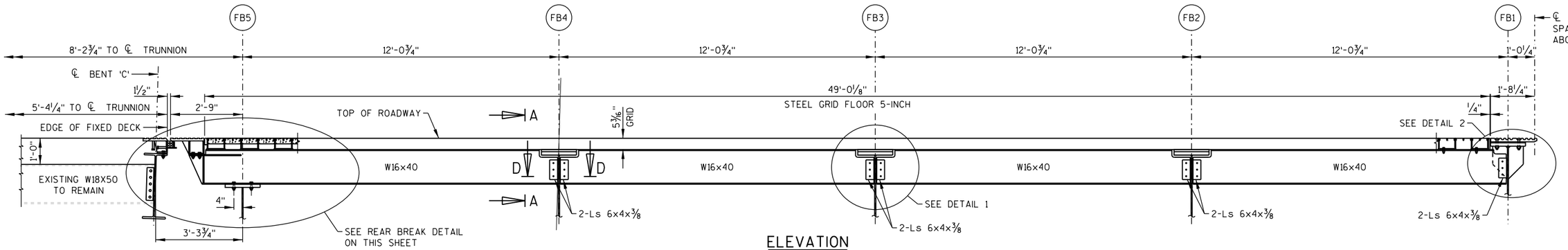
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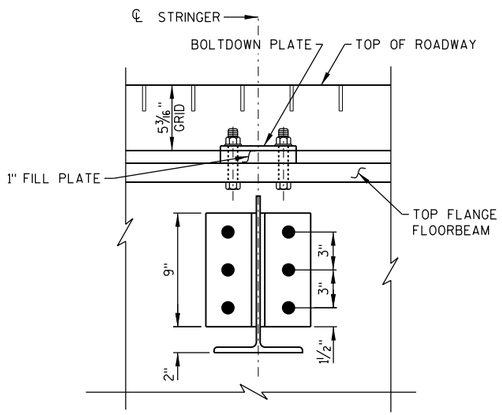
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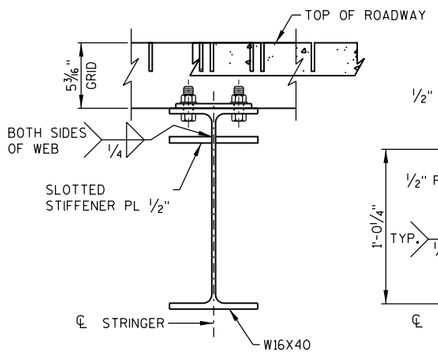


ELEVATION

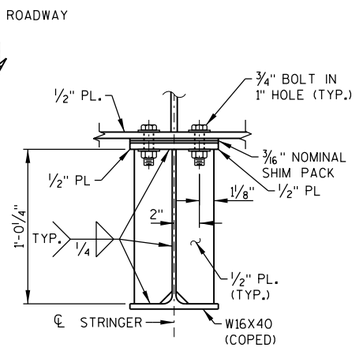
PROFILE GRADE NOT SHOWN FOR CLARITY
WEST LEAF SHOWN LOOKING NORTH, EAST LEAF OPPOSITE HAND



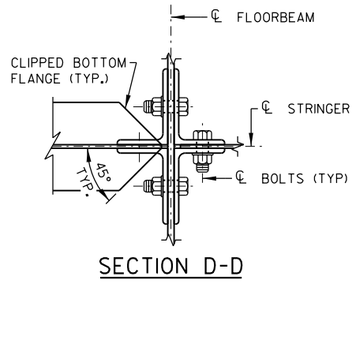
SECTION A-A



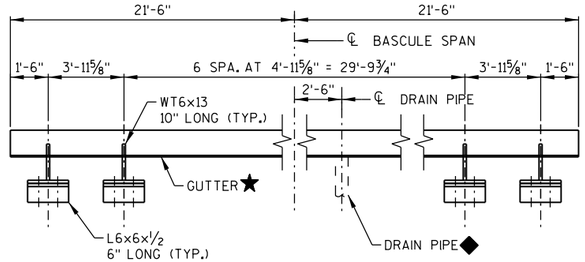
SECTION B-B



SECTION C-C

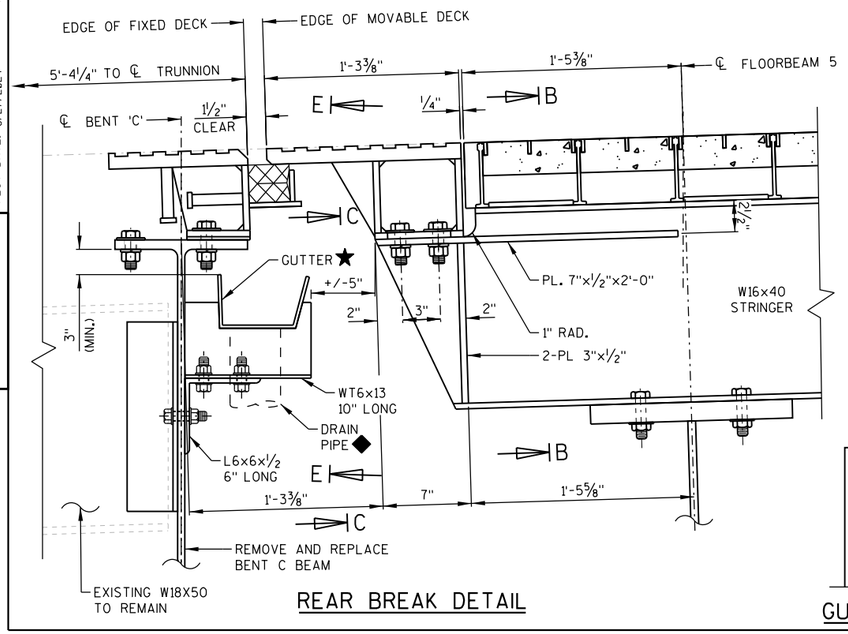


SECTION D-D

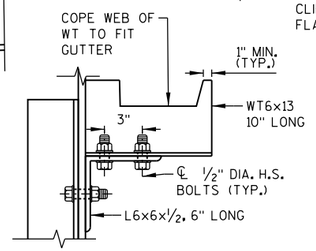


SECTION E-E

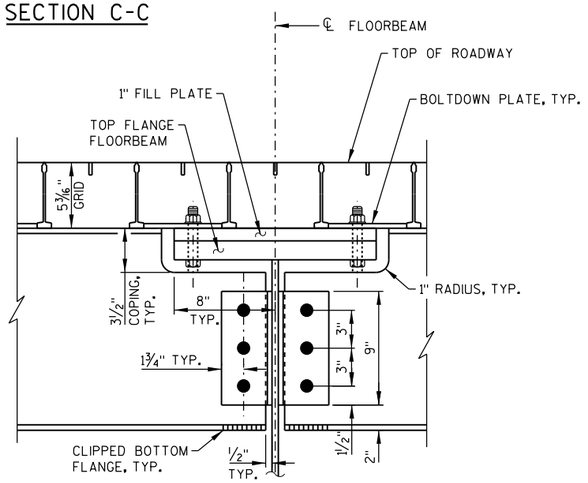
(GUTTER ASSEMBLY BELOW REAR BREAK - ELEVATION VIEW)



REAR BREAK DETAIL



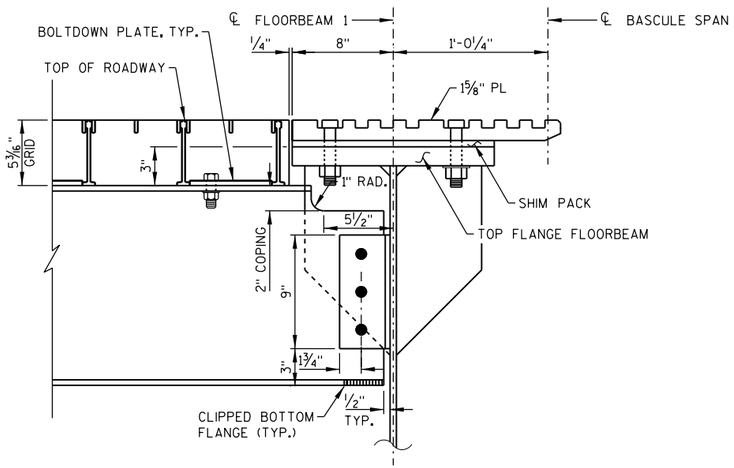
GUTTER SUPPORT DETAIL



DETAIL 1

★ GALVANIZED STEEL GUTTER 7-INCH, IN EACH BASCULE PIER. SLOPE TO DRAIN 0.5% MIN. SHAPE SHOWN FOR REFERENCE ONLY. ACTUAL SHAPE TO BE DETERMINED BY MANUFACTURER. ATTACH GUTTER BY PLACING IT WITHIN COPED SECTION OF WT6x13. FIELD VERIFY CLEARANCES AND ADJUST THE GUTTER PLACEMENT AS NECESSARY. COST OF GUTTER AND SUPPORT ASSEMBLY INCLUDED IN "BRIDGE STRUCTURAL STEEL".

◆ 4" ϕ PVC DRAIN PIPE, APPROXIMATE LENGTH OF 25'-0" IN EACH BASCULE PIER. SEE SHEET S37 AND S38 FOR APPROXIMATE LOCATION. COST INCLUDED IN "BRIDGE STRUCTURAL STEEL".



DETAIL 2

NOTES:

1. SEE SHEET S17 FOR ADDITIONAL CENTER BREAK DETAILS.
2. SEE SHEETS S18 TO S21 FOR ADDITIONAL REAR BREAK DETAILS.
3. STRINGERS AND CONNECTION ELEMENTS ARE HOT-DIP GALVANIZED AND PAINTED.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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LONGITUDINAL STRINGER REPLACEMENT

SHEET S10 OF S71
66

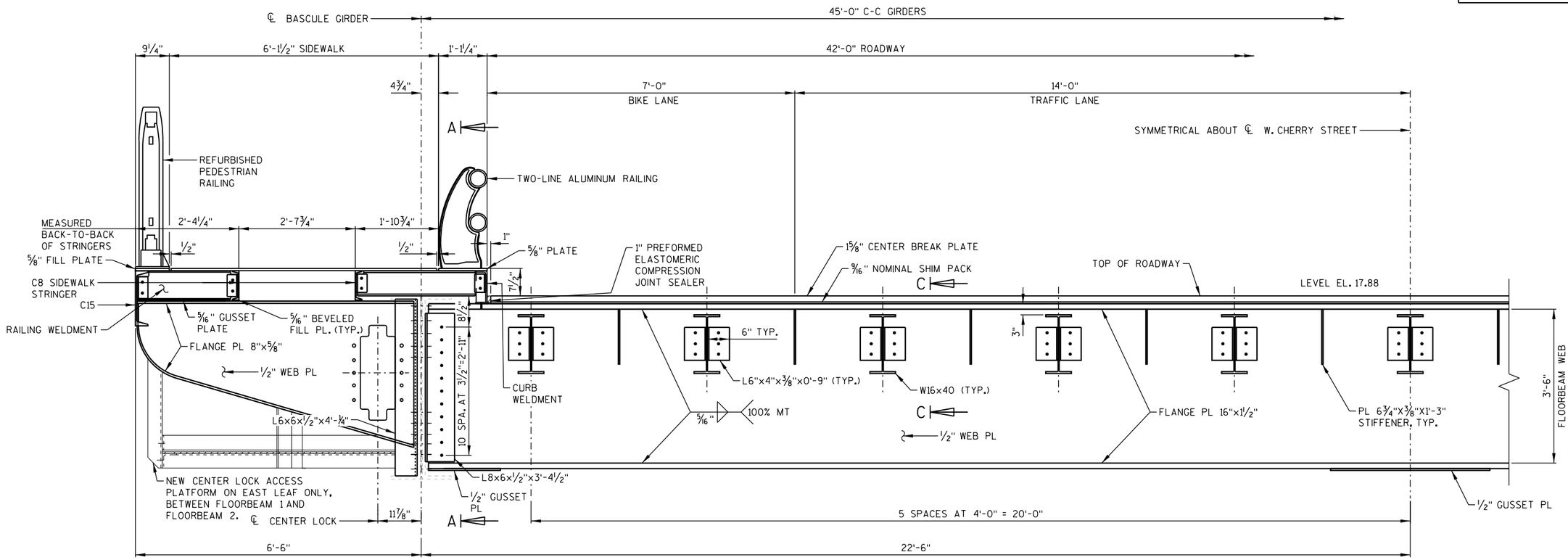
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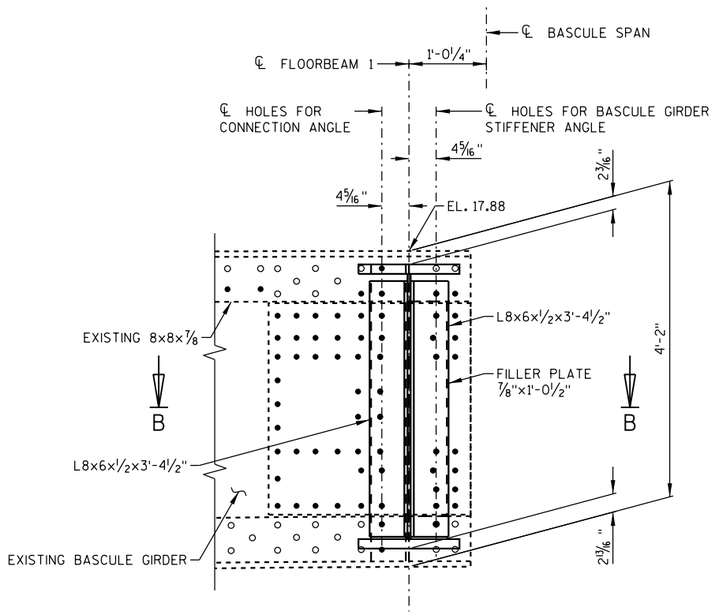
STATE PROJECT NUMBER

2984-26-73

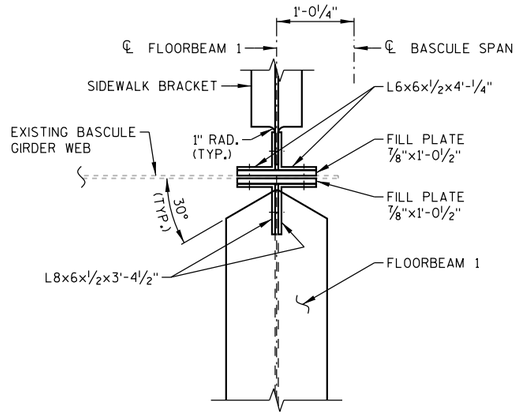


FLOORBEAM 1

LOOKING TOWARD CL OF BASCULE SPAN

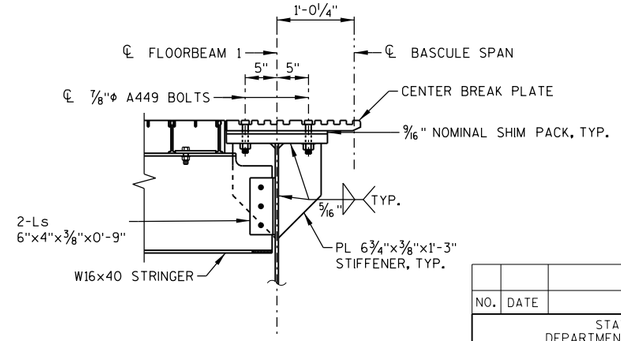


SECTION A-A



SECTION B-B

(TOP AND BOTTOM FLANGES)



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

BASCULE SPAN FLOORBEAM 1

SHEET S11 OF S71
67

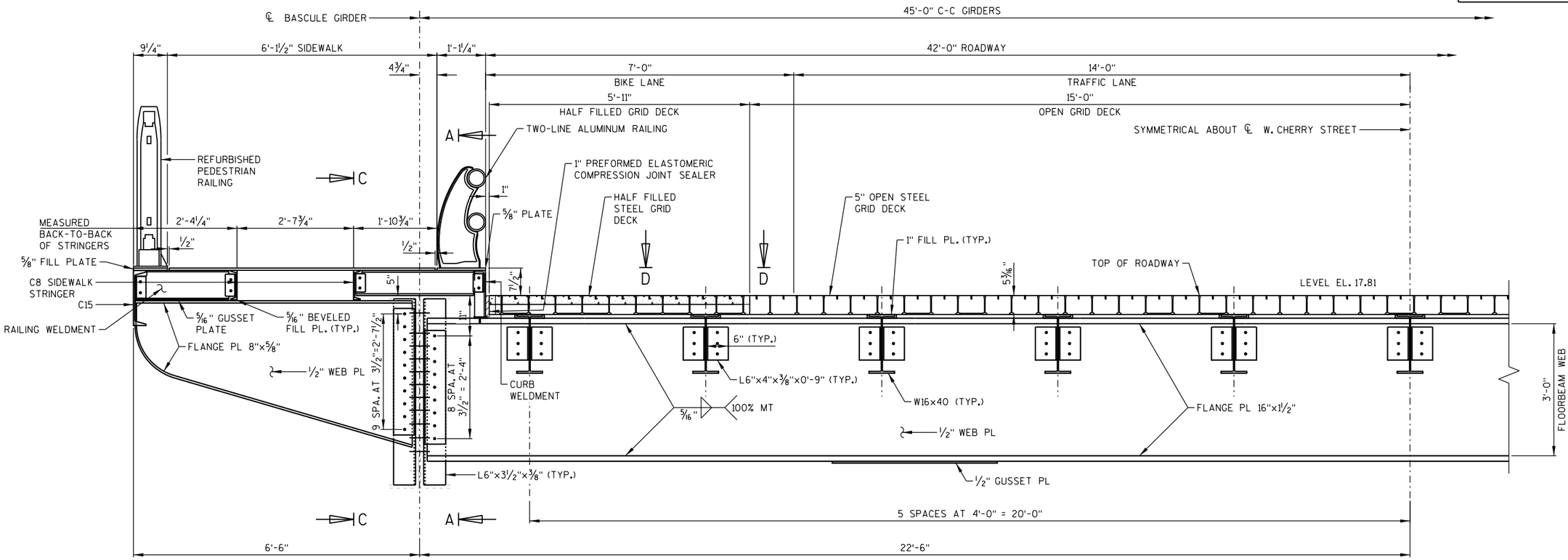
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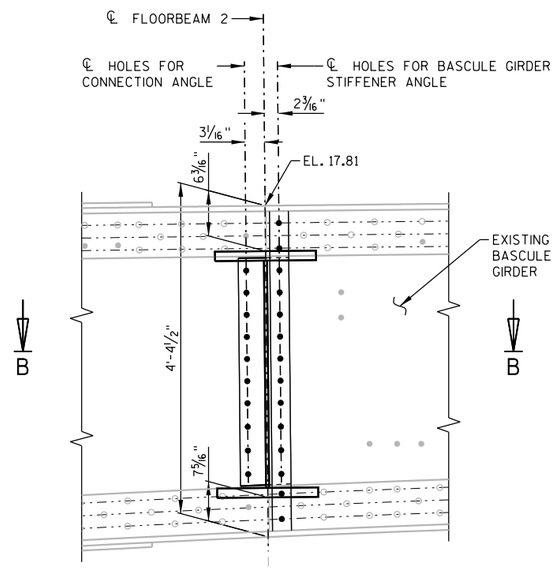
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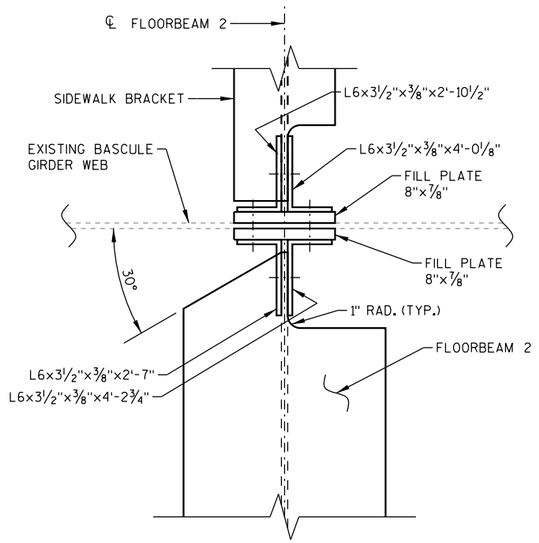
2984-26-73



FLOORBEAM 2

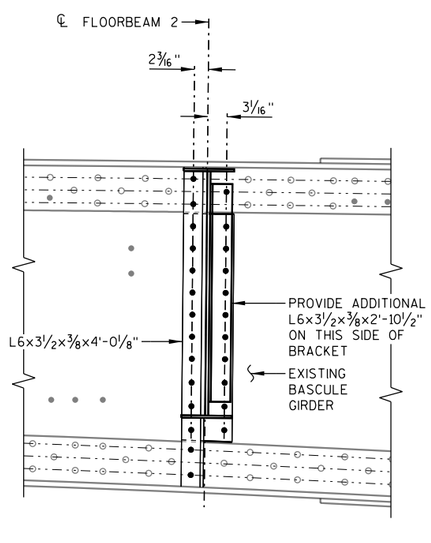


SECTION A-A

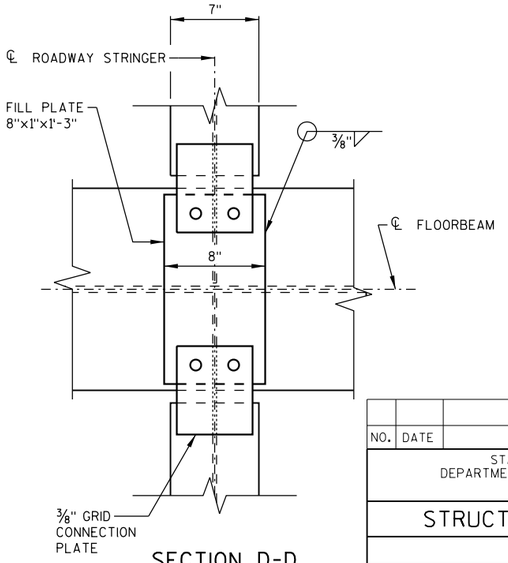


SECTION B-B

(TOP AND BOTTOM FLANGES)



SECTION C-C



SECTION D-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

BASCULE SPAN FLOORBEAM 2

SHEET S12 OF S71

68

8

8

STATE PROJECT NUMBER

2984-26-73

℄ BASCULE GIRDER — 45'-0" C-C GIRDERS

9¼" | 6'-1½" SIDEWALK | 4¾" | 1'-1¼" | 42'-0" ROADWAY

7'-0" BIKE LANE | 14'-0" TRAFFIC LANE

5'-11" HALF FILLED GRID DECK | 15'-0" OPEN GRID DECK

SYMMETRICAL ABOUT ℄ W. CHERRY STREET

REFURBISHED PEDESTRIAN RAILING

TWO-LINE ALUMINUM RAILING

1" PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER

HALF FILLED STEEL GRID DECK

5" OPEN STEEL GRID DECK

1" FILL PL. (TYP.)

MEASURED BACK-TO-BACK OF STRINGERS

2'-4¼" | 2'-7¾" | 1'-10¾" | ½" | ½" | 1"

⅝" FILL PLATE

C8 SIDEWALK STRINGER

C15

RAILING WELDMENT

⅝" GUSSET PLATE

⅝" BEVELED FILL PL. (TYP.)

FLANGE PL 8"×⅝"

½" WEB PL

⅝" PLATE

5" | 7½" | 11" | 5⅜"

TOP OF ROADWAY — LEVEL EL. 17.60

9 SPA. AT 3½"=2'-7½" | 11 SPA. AT 3½" = 3'-2½"

CURB WELDMENT

6" TYP.

L6"×4"×⅜"×0'-9" (TYP.)

W16×40 (TYP.)

⅝" | 100% MT

½" WEB PL

FLANGE PL 16"×1½"

3'-9" FLOORBEAM WEB

L6"×3½"×⅜" (TYP.)

½" GUSSET PL

⅜" GUSSET PL

5 SPACES AT 4'-0" = 20'-0"

6'-6" | 22'-6"

FLOORBEAM 3

℄ FLOORBEAM 3

℄ HOLES FOR CONNECTION ANGLE | ℄ HOLES FOR BASCULE GIRDER STIFFENER ANGLE

2⅜" | 3⅛" | 6⅜" | EL. 17.60

EXISTING BASCULE GIRDER

4'-11⅞"

4⅞"

B | B

SECTION A-A

SIDEWALK BRACKET

L6×3½"×⅜"×2'-10½"

L6×3½"×⅜"×4'-9¼"

EXISTING BASCULE GIRDER WEB

FILL PLATE 8"×⅞"

30°

FILL PLATE 8"×⅞"

1" RAD. (TYP.)

L6×3½"×⅜"×3'-5½"

L6×3½"×⅜"×4'-9¼"

FLOORBEAM 3

SECTION B-B

(TOP AND BOTTOM FLANGES)

℄ FLOORBEAM 3

2⅜" | 3⅛"

L6×3½×⅜×4'-9¼"

PROVIDE ADDITIONAL L6×3½×⅜×2'-10½" ON THIS SIDE OF BRACKET

EXISTING BASCULE GIRDER

SECTION C-C

7"

℄ ROADWAY STRINGER

FILL PLATE 8"×1"×1'-3"

⅜"

8"

℄ FL

⅜" GRID CONNECTION PLATE (TYP.)

SECTION D-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

BASCULE SPAN FLOORBEAM 3

SHEET S13 OF S71

69

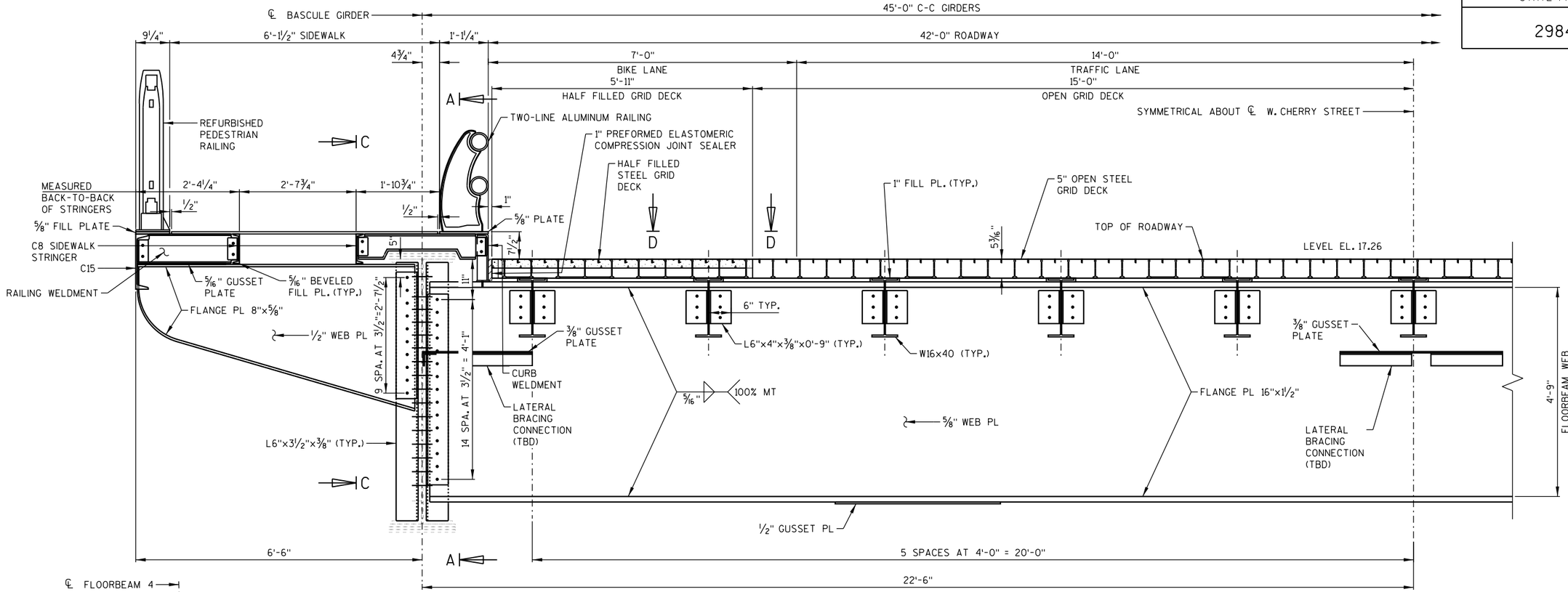
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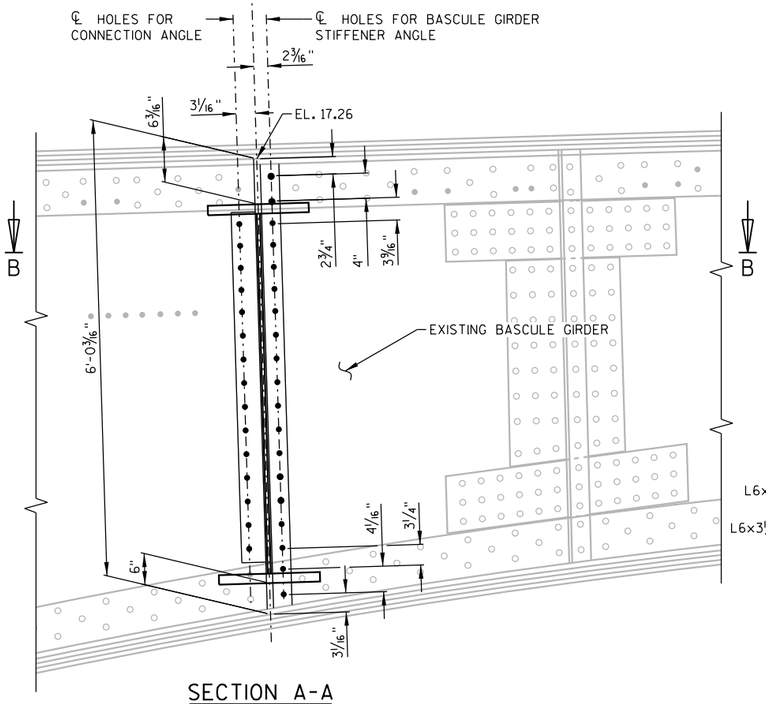
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STATE PROJECT NUMBER

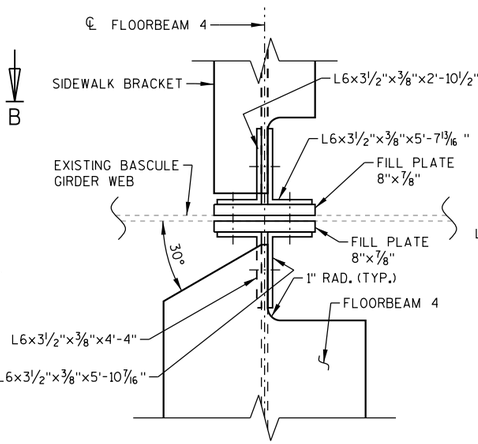
2984-26-73





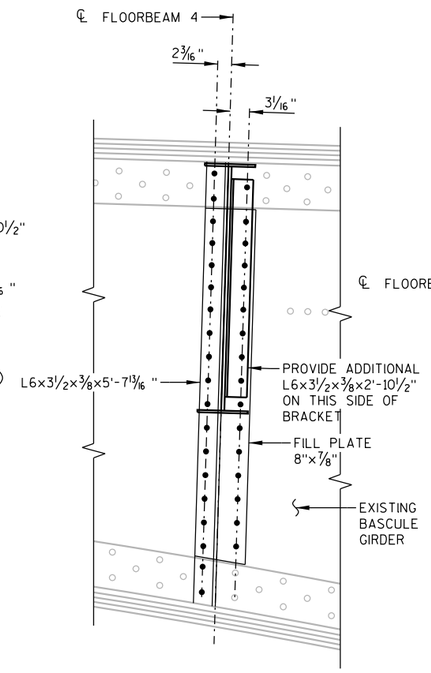
SECTION A-A

FLOORBEAM 4

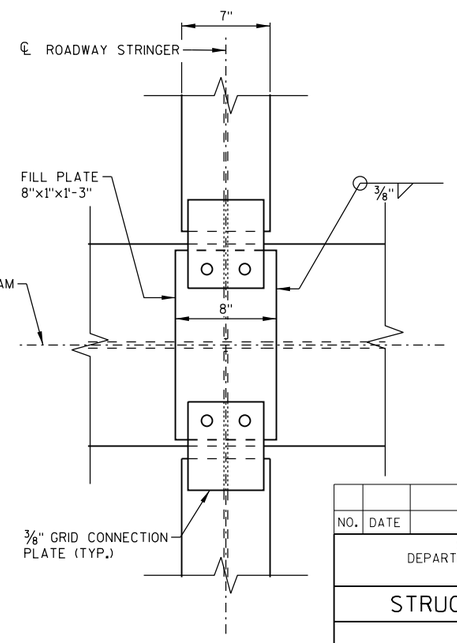


SECTION B-B

(TOP AND BOTTOM FLANGES)



SECTION C-C



SECTION D-D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

BASCULE SPAN FLOORBEAM 4

SHEET S14 OF S71

70

8

8

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PLOT DATE: 3/27/2024 PLOT TIME: 9:15:46 AM
BATCH PRINT SHEET 15 OF 71

STATE PROJECT NUMBER

2984-26-73

℄ BASCULE GIRDER — 45'-0" C-C GIRDERS

9¼" — 6'-1½" SIDEWALK — 1'-1¼" — 42'-0" ROADWAY

4¾" — 7'-0" BIKE LANE — 14'-0" TRAFFIC LANE

SYMMETRICAL ABOUT ℄ W. CHERRY STREET

REFURBISHED PEDESTRIAN RAILING

TWO-LINE ALUMINUM RAILING

HALF FILLED STEEL GRID DECK

MEASURED BACK-TO-BACK OF STRINGERS — 2'-4¼" — 2'-7¾" — 1'-10¾"

½" — ½" — 1" — ⅝" PLATE — CURB WELDMENT

⅝" FILL PLATE

C8 SIDEWALK STRINGER — 5" — 7½"

C15

1" PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER

5⅜" — TOP OF ROADWAY — LEVEL EL. 16.89

RAILING WELDMENT

⅝" GUSSET PLATE — ⅝" BEVELED FILL PL. (TYP.)

FLANGE PL 8"x⅝"

½" WEB PL

9 SPA. AT 3½"=2'-7½"

2'-4½"

W16x40

1" FILL PL

1½" FILL PL (TYP.)

½" FILL PL (TYP.)

½" GUSSET PL

W16x40 (TYP.)

L6"x3½"x⅜" (TYP.)

16 SPA. AT 3½" = 4'-8"

⅝" — 100% MT

⅝" WEB PL

FLANGE PL 16"x1½"

5'-3" FLOORBEAM WEB

½" GUSSET PL

½" GUSSET PL

5 SPACES AT 4'-0" = 20'-0"

6'-6" — 22'-6"

A — A

FLOORBEAM 5

℄ FLOORBEAM 5

℄ HOLES FOR CONNECTION ANGLE — ℄ HOLES FOR BASCULE GIRDER STIFFENER ANGLE

3⅛"

2⅜" — EL. 16.89

B — B

1'-11¼"

8'-5⅝"

1'-0⅛"

EXISTING BASCULE GIRDER

SECTION A-A

℄ FLOORBEAM 5

SIDEWALK BRACKET

L6x3½"x⅜"x2'-10½"

EXISTING BASCULE GIRDER WEB

L6x3½"x⅜"x8'-4⅜"

FILL PLATE 7½"x⅞"

30°

FILL PLATE 7½"x⅞"

1" RAD. (TYP.)

L6x3½"x⅜"x5'-2½"

L6x3½"x⅜"x8'-4⅜"

FLOORBEAM 5

SECTION B-B

(TOP AND BOTTOM FLANGES)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS — PLANS CK'D. GTS

BASCULE SPAN FLOORBEAM 5

SHEET S15 OF S71
71

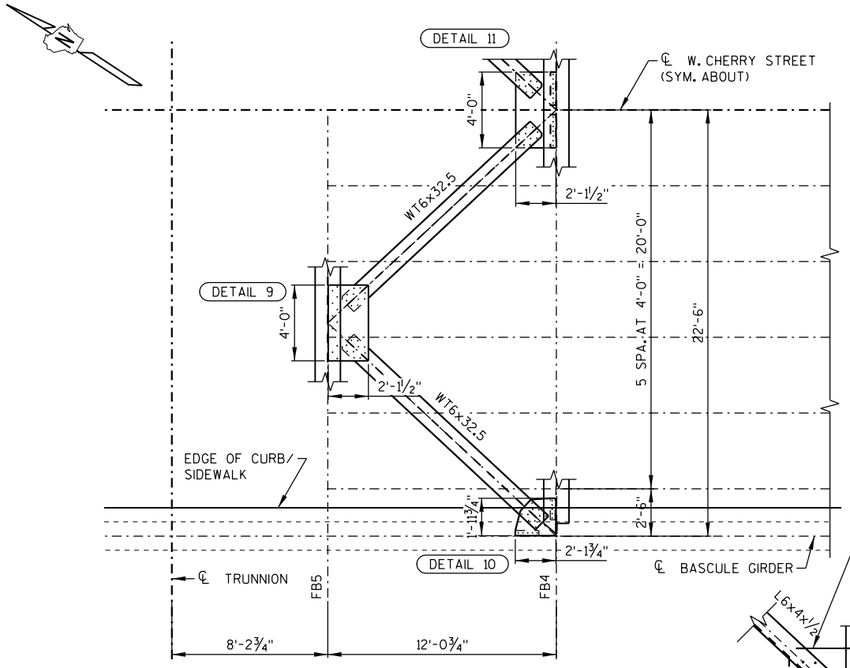
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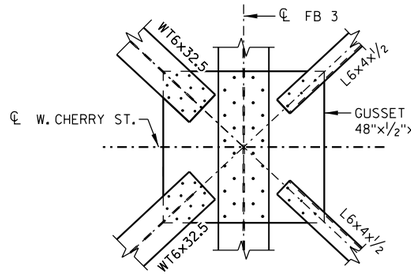
STATE PROJECT NUMBER

2984-26-73

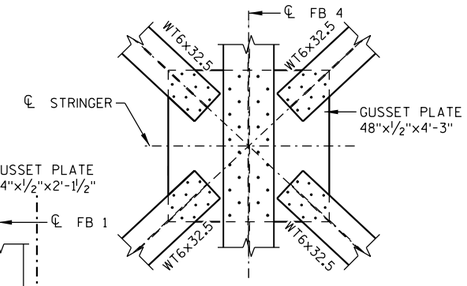


TOP LATERAL BRACING PLAN

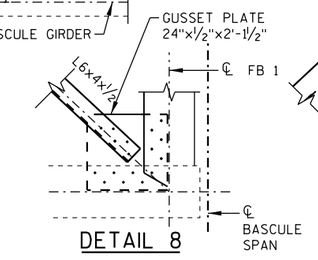
(WEST LEAF SHOWN, EAST LEAF SIMILAR OPPOSITE HAND)



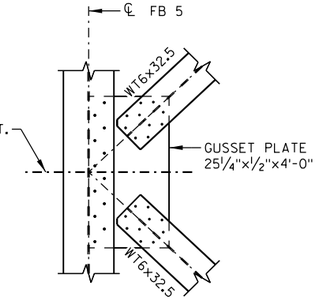
DETAIL 1



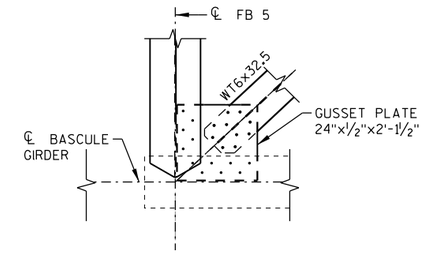
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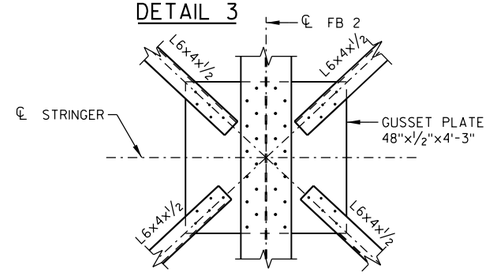
DETAIL 8



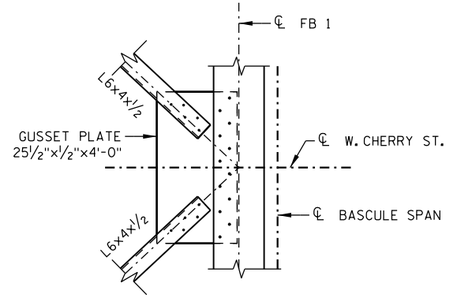
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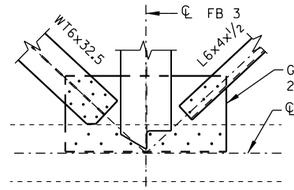
DETAIL 4



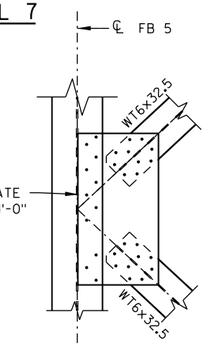
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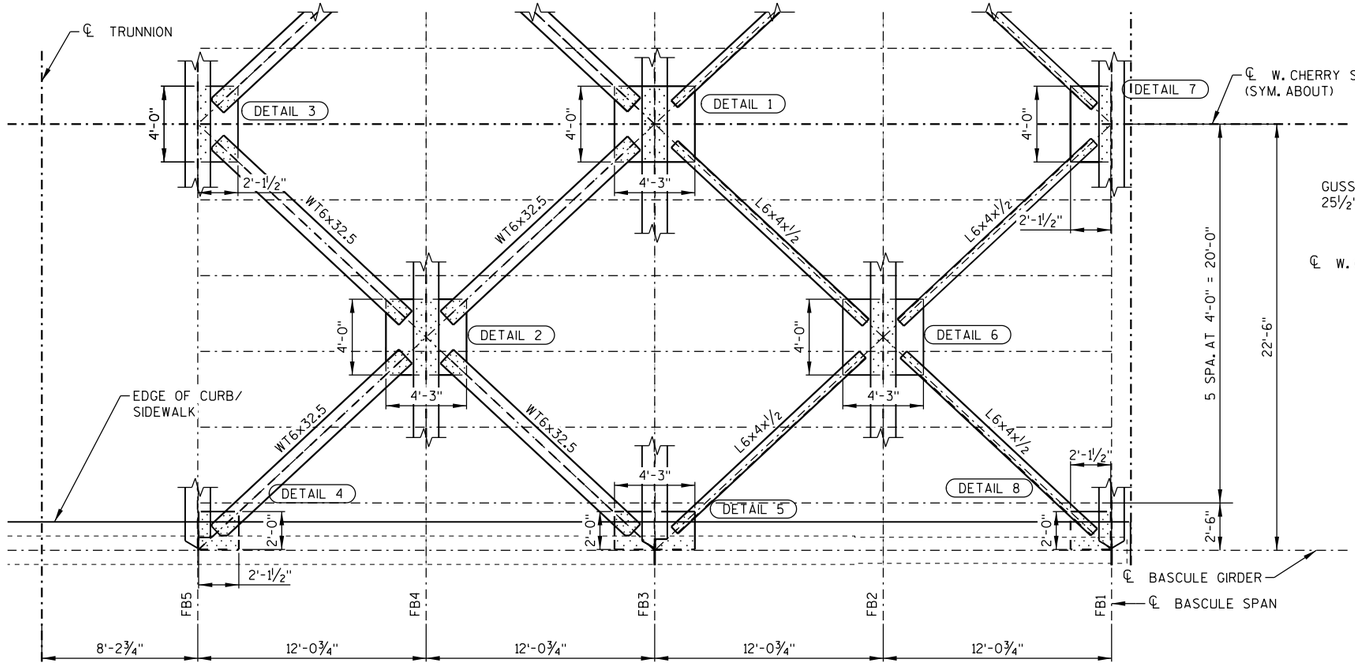
DETAIL 7



DETAIL 5

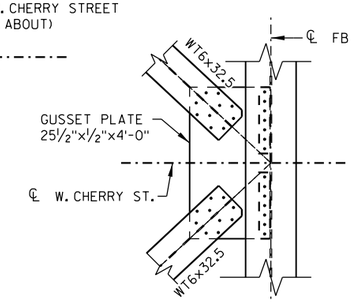


DETAIL 9

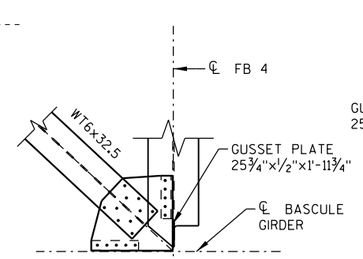


BOTTOM LATERAL BRACING PLAN

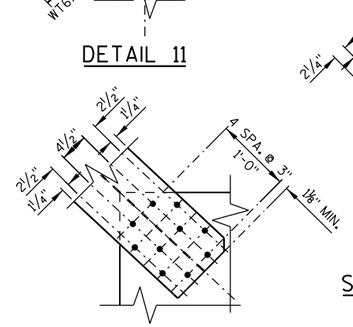
(WEST LEAF SHOWN, EAST LEAF SIMILAR OPPOSITE HAND)



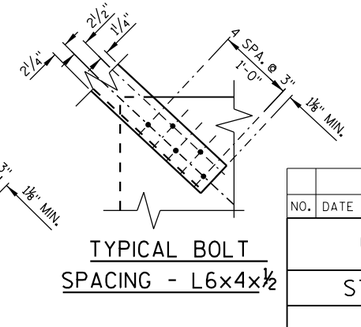
DETAIL 11



DETAIL 10



TYPICAL BOLT SPACING - WT6x32.5



TYPICAL BOLT SPACING - L6x4x½

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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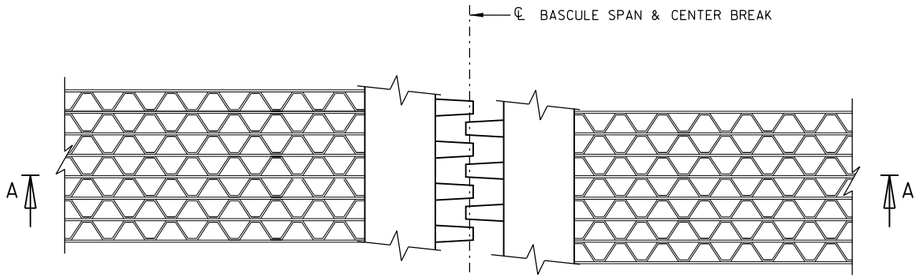
LATERAL BRACING

SHEET S16 OF S71
72

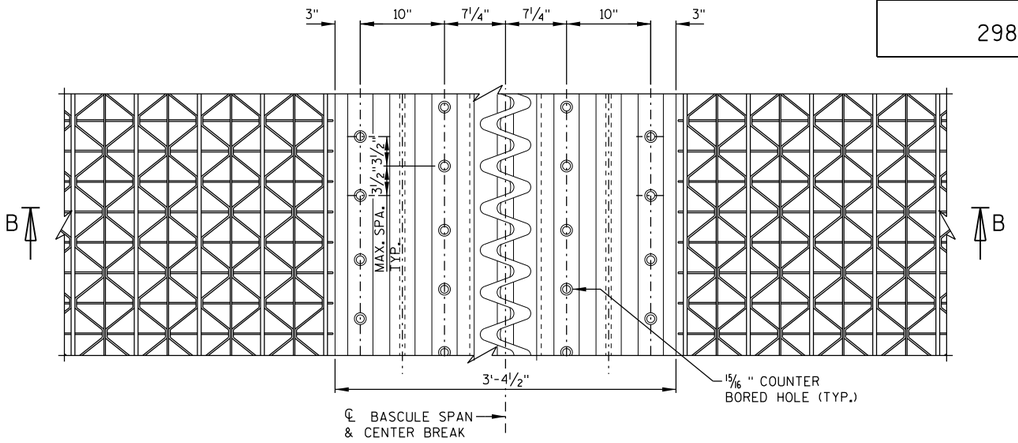
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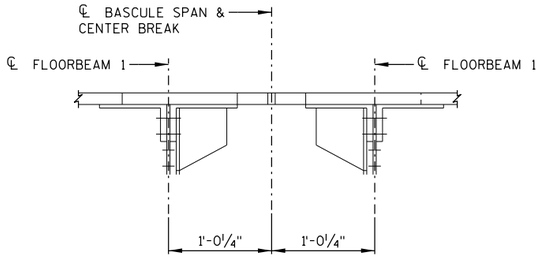
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PLOT DATE: 3/27/2024 PLOT TIME: 9:16:02 AM BATCH PRINT SHEET 17 OF 71



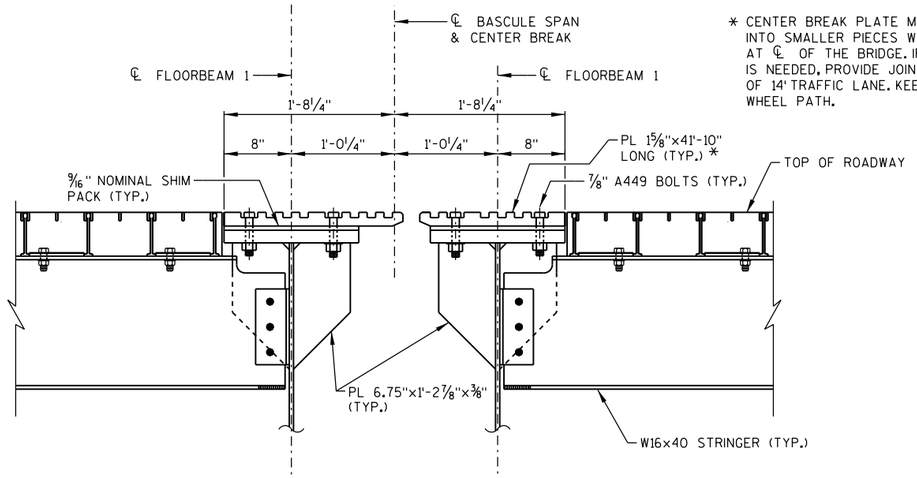
EXISTING CENTER BREAK PLAN



NEW CENTER BREAK PLAN

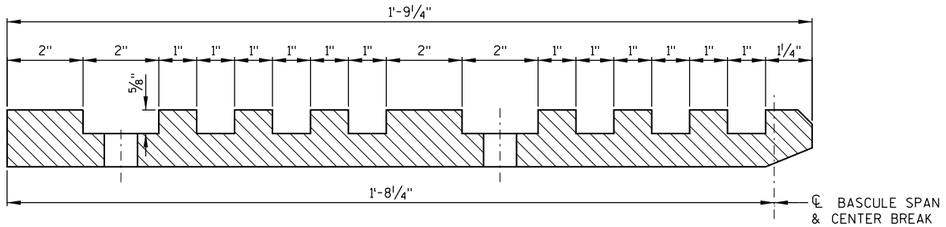


SECTION A-A

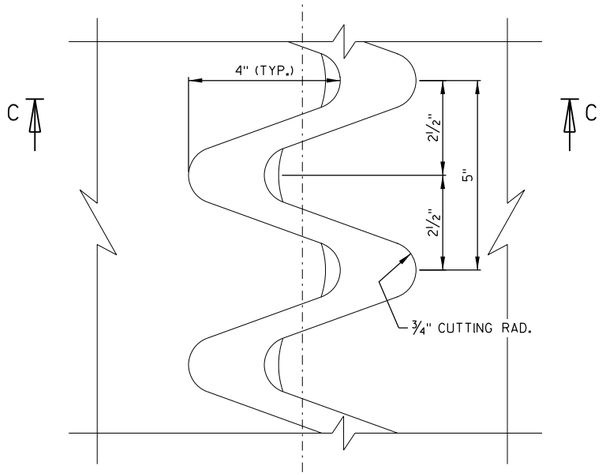


* CENTER BREAK PLATE MAY BE SEGMENTED INTO SMALLER PIECES WITH JOINTS LOCATED AT ℄ OF THE BRIDGE. IF ADDITIONAL JOINT IS NEEDED, PROVIDE JOINT AT THE MIDDLE OF 14' TRAFFIC LANE. KEEP JOINTS OUT OF WHEEL PATH.

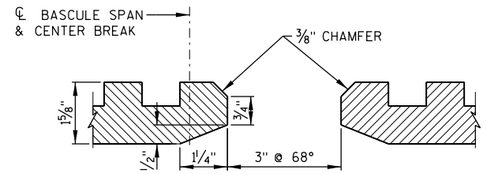
SECTION B-B



CENTER BREAK PLATE SECTION



TOOTH DETAIL



SECTION C-C

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STATE OF WISCONSIN
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STRUCTURE P-40-864

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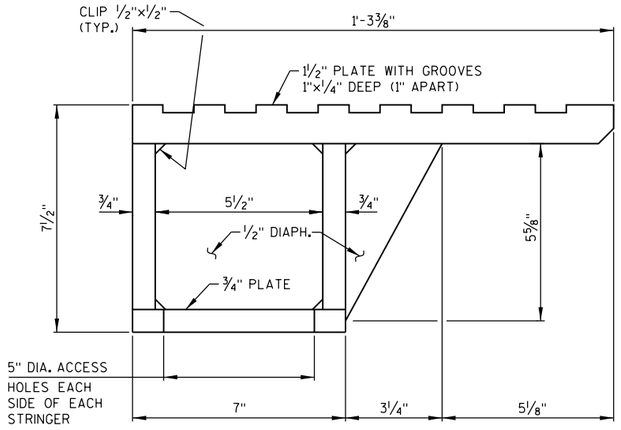
CENTER BREAK DETAILS

SHEET S17 OF S71
73

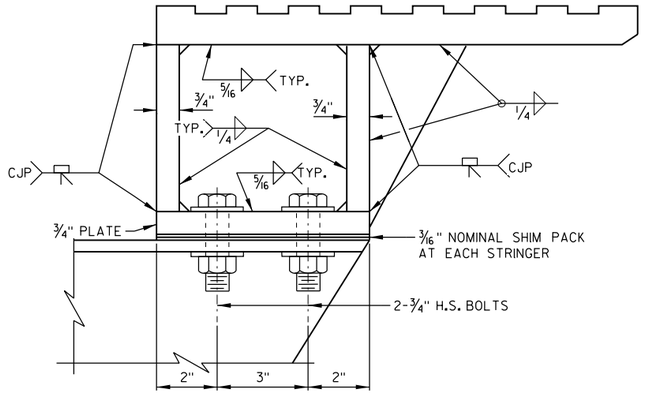
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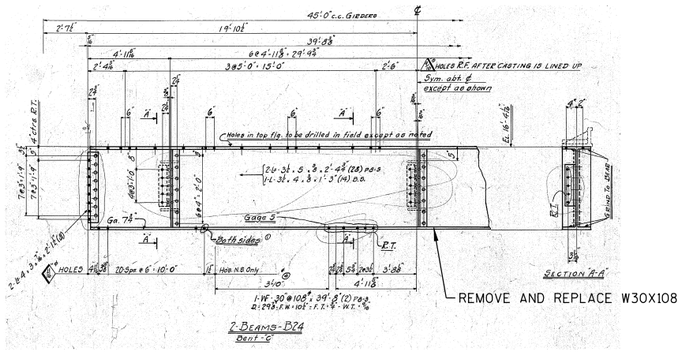
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PLOT TIME: 9:09:43 AM
BATCH PRINT SHEET 1 OF 1



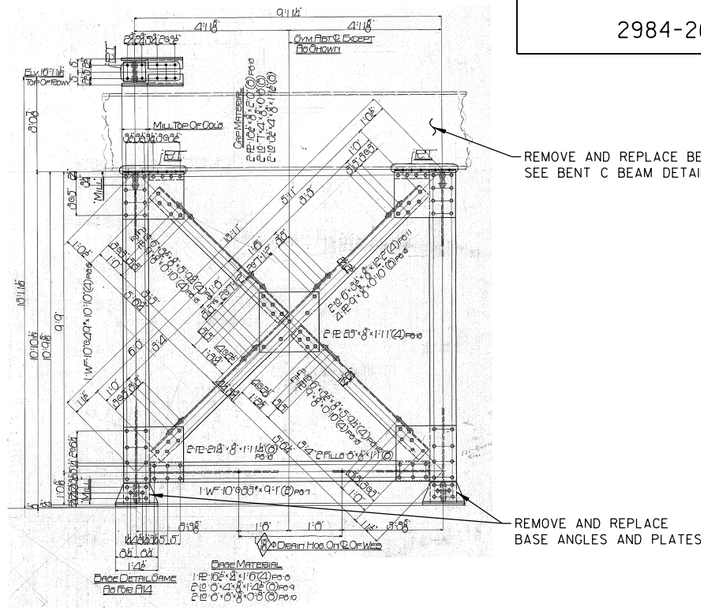
REAR BREAK DETAIL



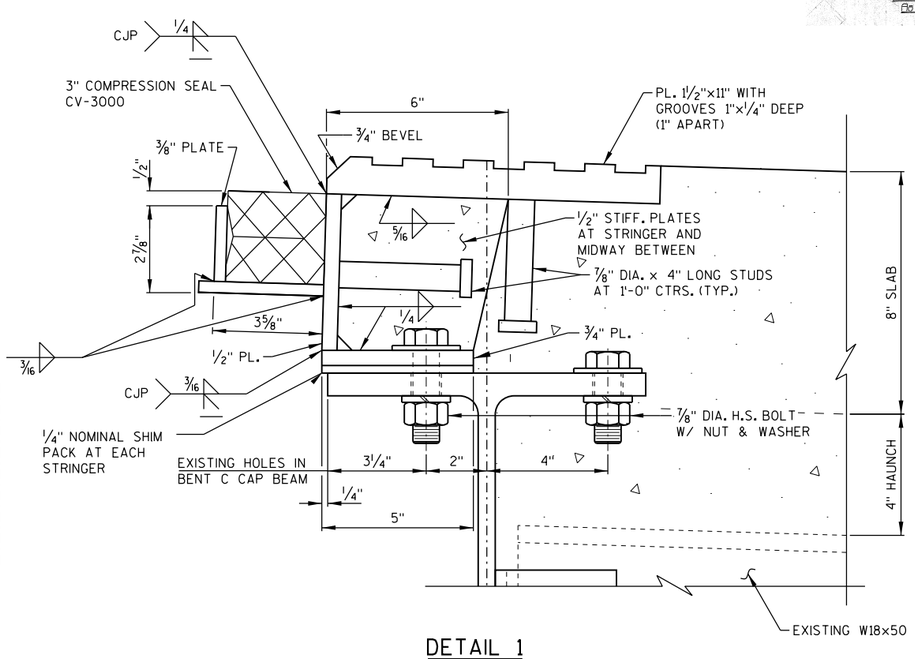
REAR BREAK WELD DETAIL



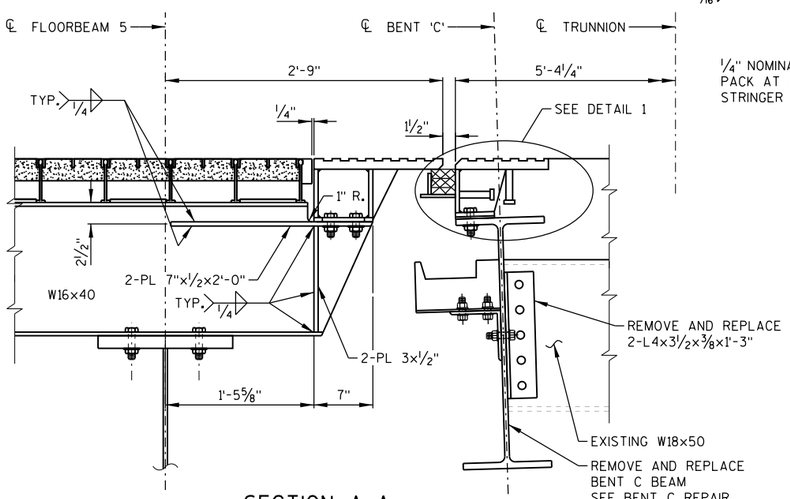
BENT C BEAM DETAIL



BENT C REPAIR DETAILS

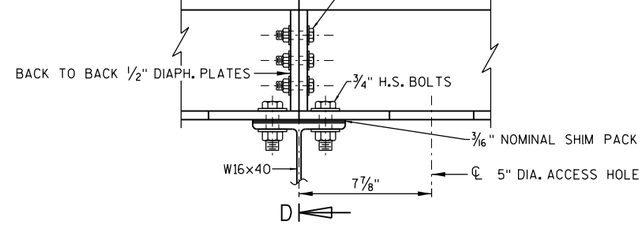


DETAIL 1



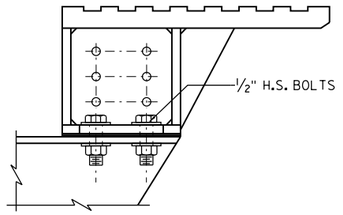
SECTION A-A

(PROPOSED REAR ROADWAY BREAK)



REAR BREAK SPLICE DETAIL

(OPTIONAL)



SECTION D-D

NOTES:

1. PERFORM DETAILED FIELD MEASUREMENTS TO VERIFY DIMENSIONS AND CLEARANCE BETWEEN ALL MOVABLE AND FIXED PORTIONS OF THE BRIDGE PRIOR TO PLACING ORDER FOR MATERIAL OR FABRICATING ROADWAY REAR BREAK ELEMENTS.
2. CJP = COMPLETE JOINT PENETRATION
3. REMOVE AND REPLACE DETERIORATED PORTIONS OF BENT C AS SHOWN. REFER TO 1940 ORIGINAL WEST CHERRY STREET BASCULE BRIDGE SHOP DRAWINGS FOR ANY DETAILS OF BENT C NOT SHOWN ON THESE PLANS.
4. PROVIDE TEMPORARY SHORING UNDERNEATH EACH ROADWAY STRINGER BEFORE REMOVING CAP BEAM.
5. COST OF BENT C REPAIRS AND TEMPORARY SHORING REQUIRED FOR THESE REPAIRS IS INCLUDED IN PAY ITEM "BENT C STRUCTURAL STEEL REPAIRS."

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STRUCTURE P-40-864

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ROADWAY REAR BREAK AND BENT C DETAILS

SHEET S18 OF S71
74

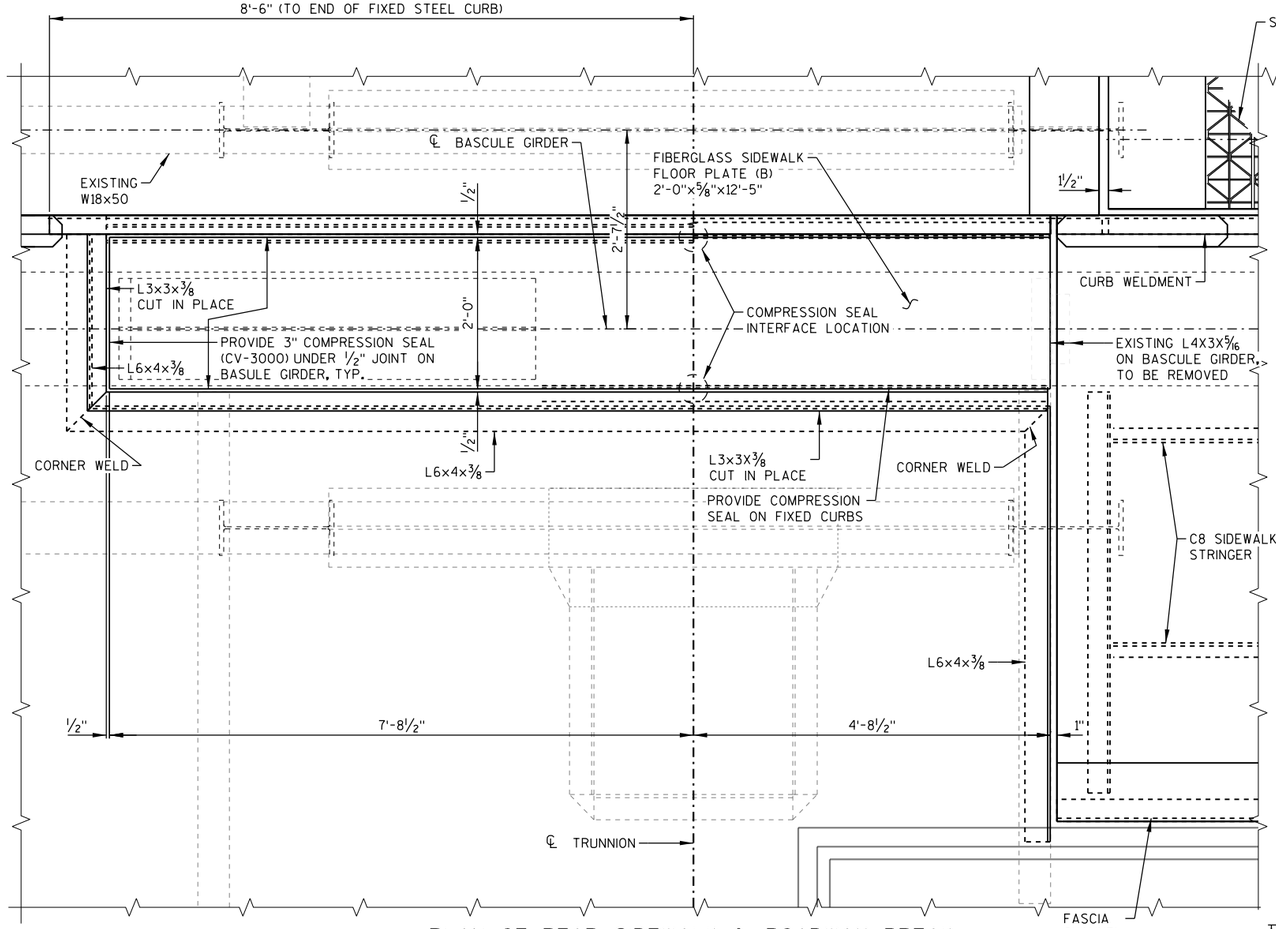
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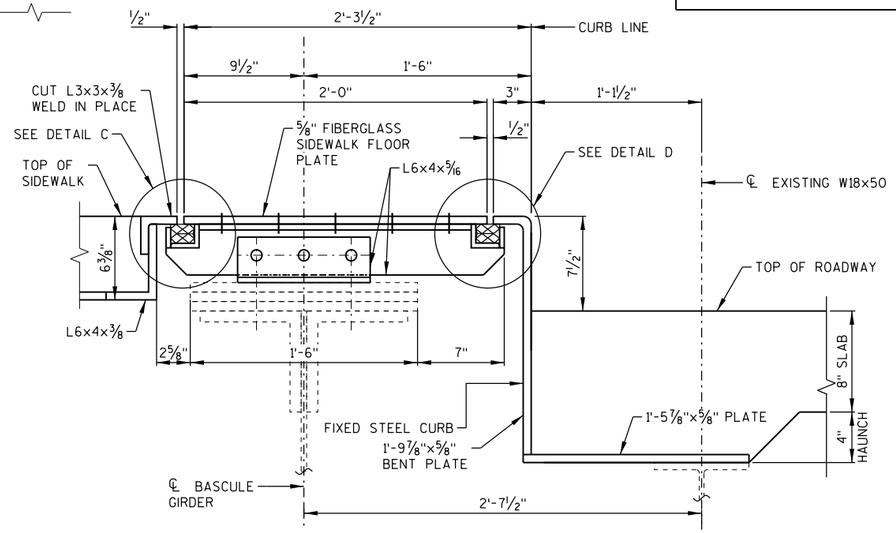
STATE PROJECT NUMBER

2984-26-73

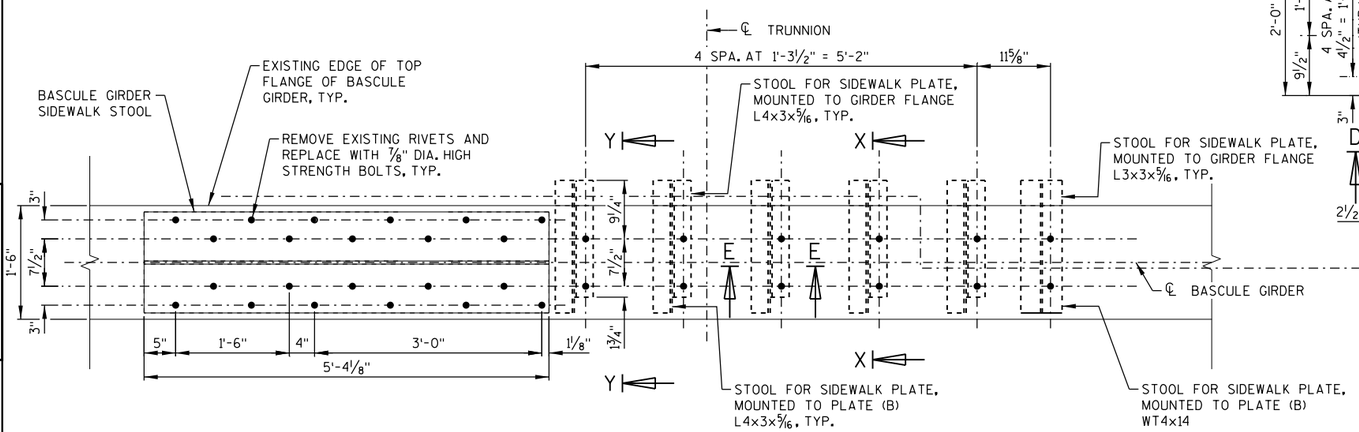


PLAN OF REAR SIDEWALK & ROADWAY BREAK

(SOUTH WEST QUADRANT SHOWN, REMAINING QUADRANTS SIMILAR)

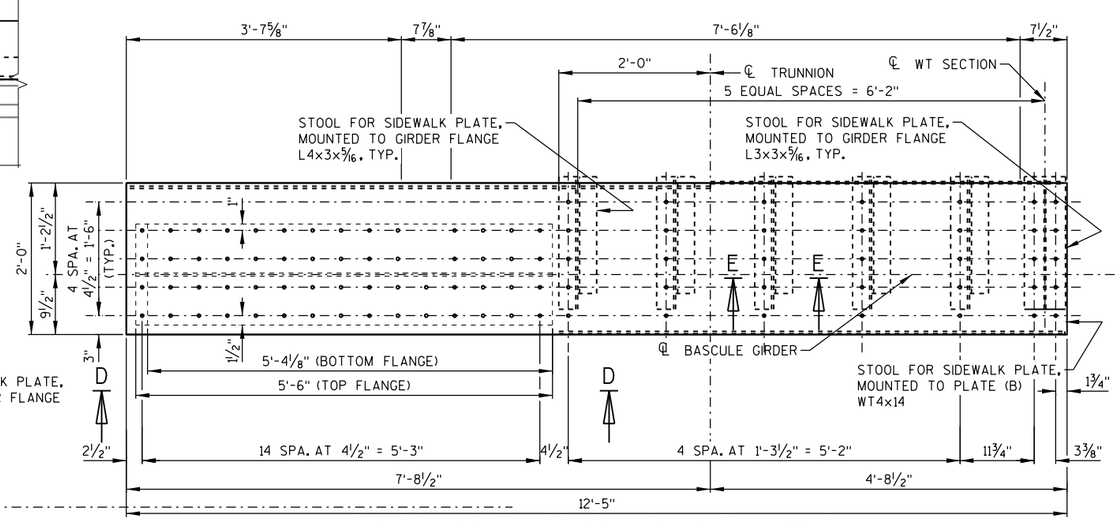


SECTION Y-Y



TOP FLANGE OF GIRDER HOLE LAYOUT FOR SIDEWALK PLATE STOOLS

(4 PLACES REQUIRED)



FIBERGLASS PLATE (B) AND HOLE LAYOUT

(4 PLACES REQUIRED)
WITH 9/16" DIA. HOLES CTSK. FOR 1/2" DIA. FL. HD CAP SCREWS

NOTES

1. SEE SHEET S20 FOR MORE SECTIONS AND DETAILS.
2. SEE NOTES ON SHEET S20.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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REAR AND LONGIT. SIDEWALK BREAK DETAILS 1

SHEET S19 OF S71
75

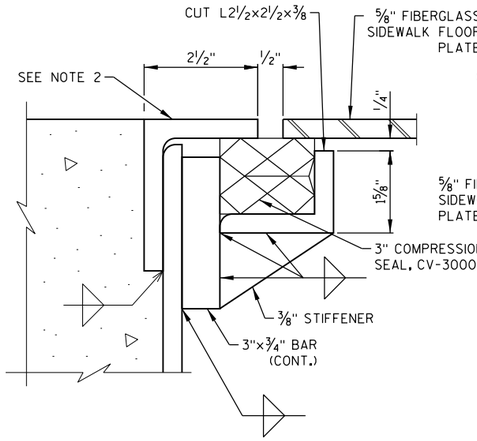
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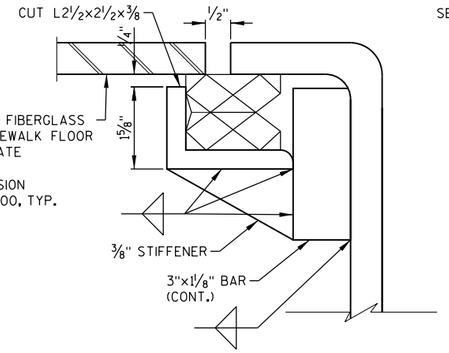
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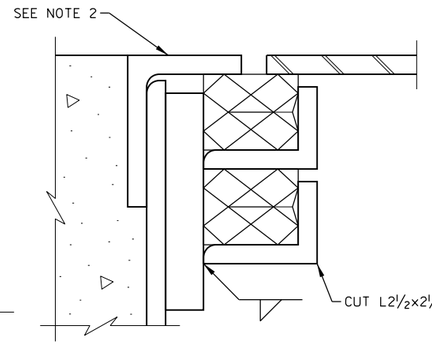
2984-26-73



DETAIL A

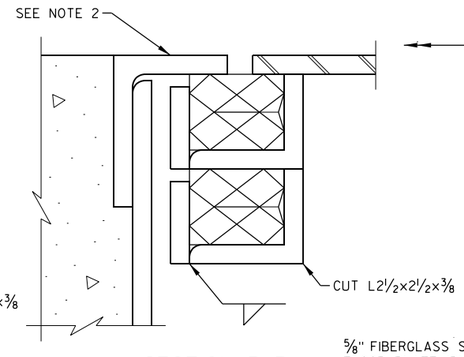


DETAIL B



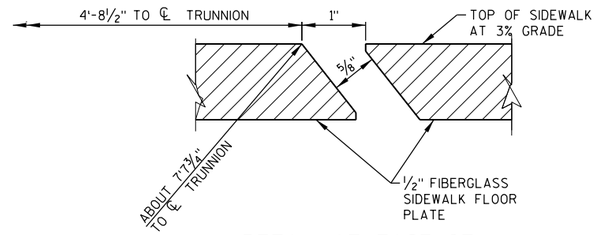
SECTION A-A

DETAILS NOT SHOWN ARE SIMILAR AT OTHER LOCATIONS

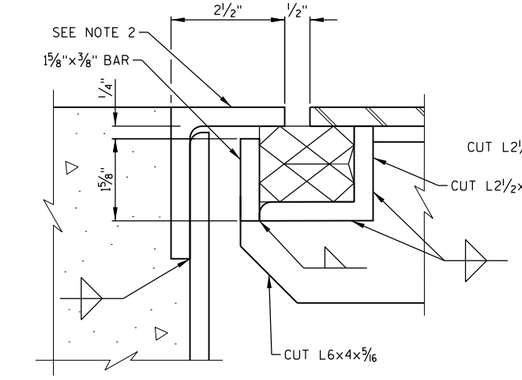


SECTION B-B

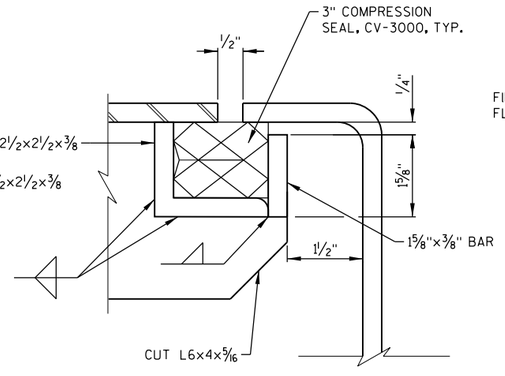
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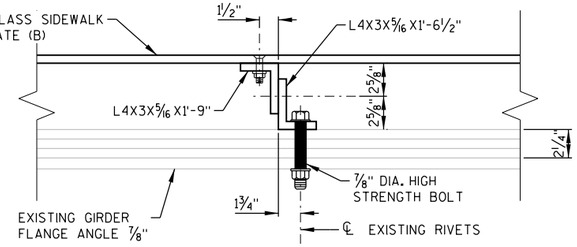
DETAIL AT FACE OF SIDEWALK AT REAR BREAK



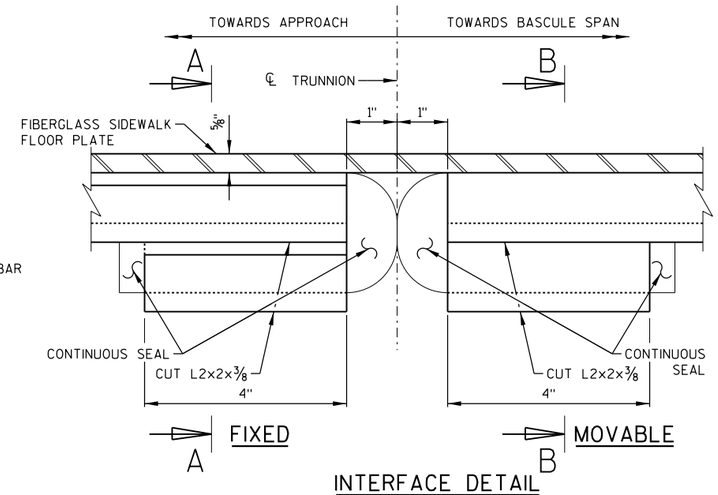
DETAIL C



DETAIL D

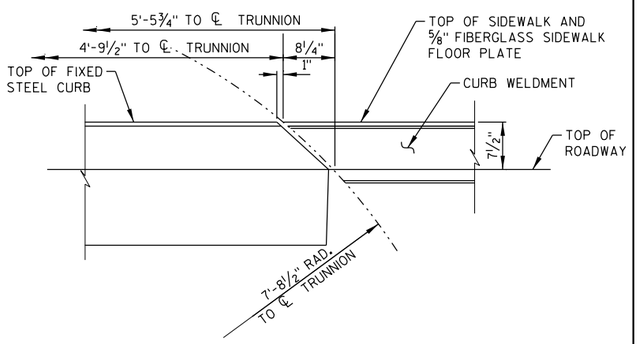


SECTION E-E (TYPICAL)

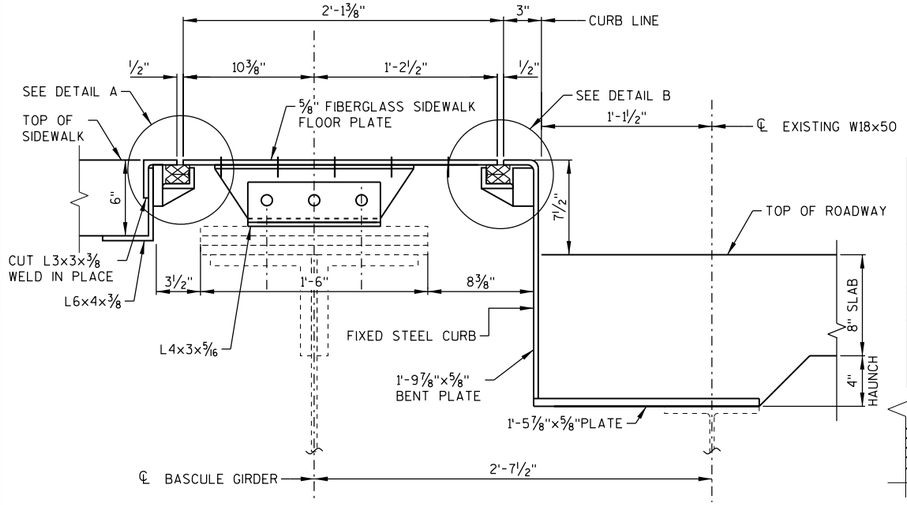


INTERFACE DETAIL

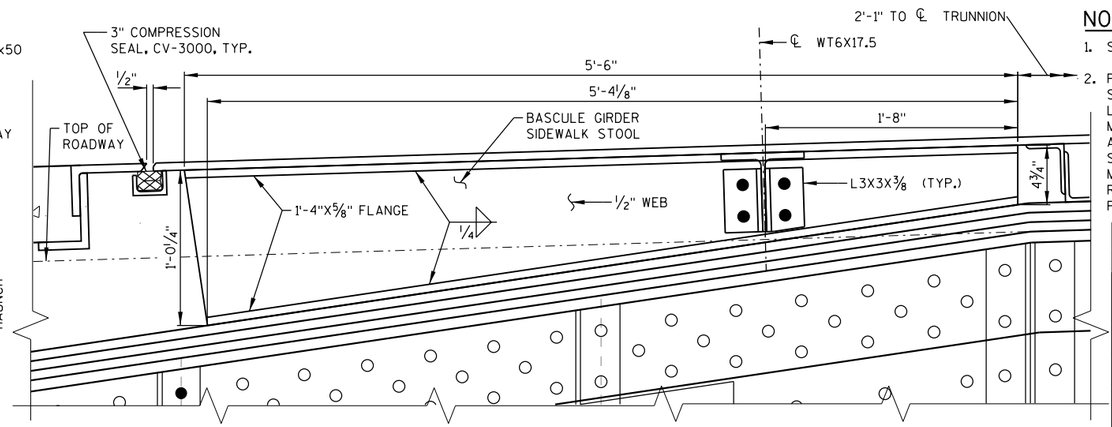
DETAILS NOT SHOWN ARE SIMILAR AT OTHER LOCATIONS



DETAIL AT FACE OF CURB AT REAR BREAK



SECTION X-X



SECTION D-D

NOTES

1. SEE SHEET S19 FOR LOCATIONS OF SECTION X-X
2. PROVIDE SLIP RESISTANT SURFACE ON TOP WALKING SURFACES OF EMBEDDED STEEL COMPONENTS (ALL LOCATIONS). USE SLIPNOT GRADE 2, STEEL AS MANUFACTURED BY W.S. MOLNAR CO., OR ALGRIP, STEEL AS MANUFACTURED BY ROSS TECHNOLOGY CORP. APPLY SLIP RESISTANT SURFACE PRIOR TO GALVANIZING PER MANUFACTURERS INSTRUCTIONS. THE COST OF SLIP RESISTANT SURFACES IS CONSIDERED INCLUDED AS PART OF THE PAY ITEM "BRIDGE STRUCTURAL STEEL".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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REAR AND LONGIT. SIDEWALK BREAK DETAILS 2

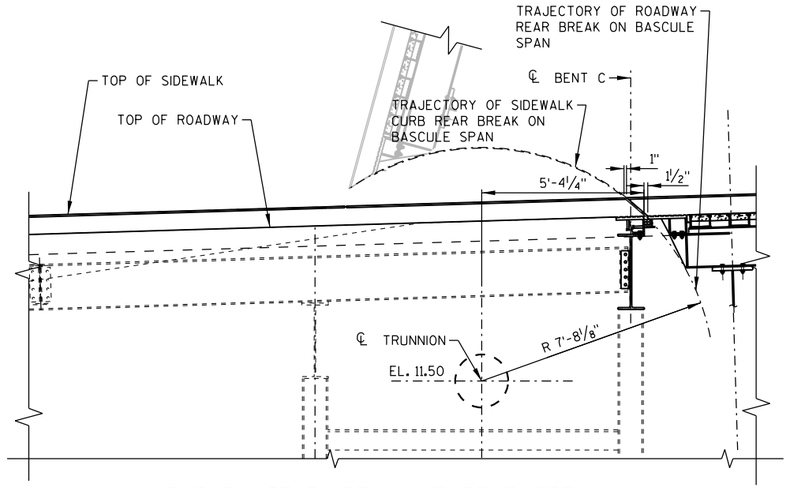
SHEET S20 OF S71

76

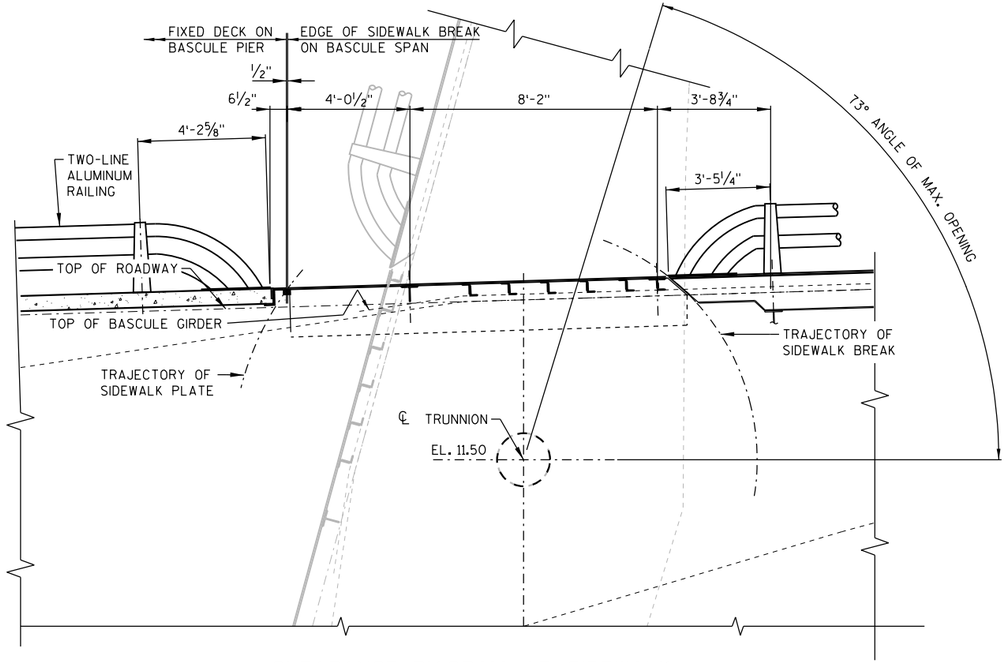
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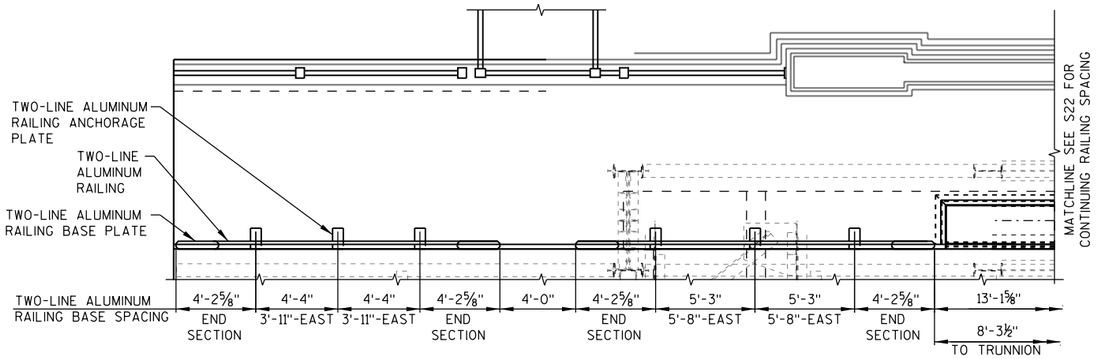
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PLOT DATE: 3/27/2024 PLOT TIME: 9:16:40 AM BATCH PRINT SHEET 21 OF 71



CLEARANCE DIAGRAM AT REAR BREAK

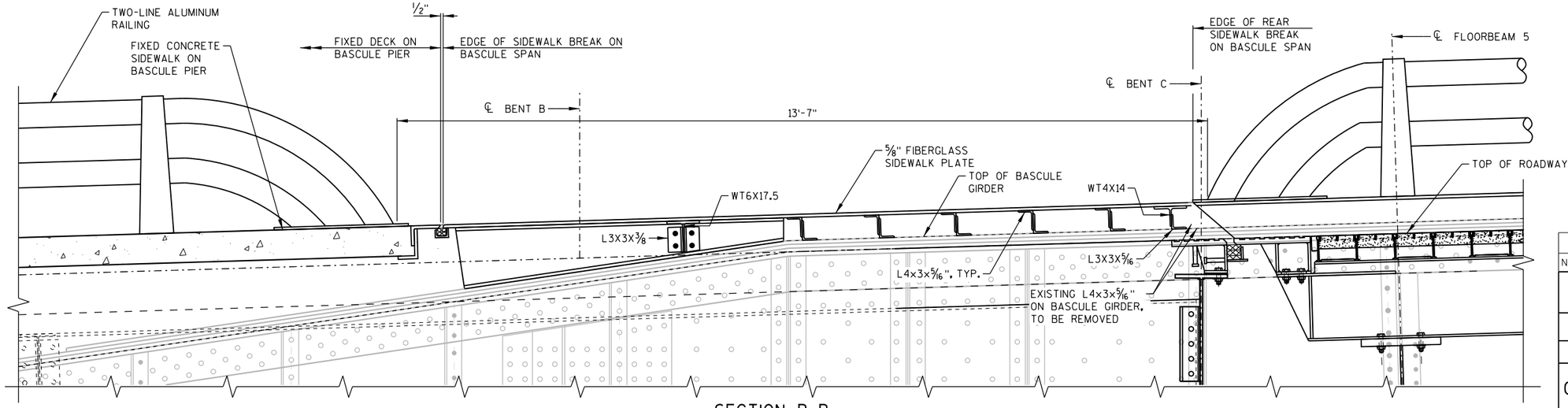


CLEARANCE DIAGRAM AT SIDEWALK



SIDEWALK PLAN VIEW BEHIND TRUNNION

(WEST SPACING SHOWN, EAST SIMILAR EXCEPT SHOWN)



SECTION B-B

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STRUCTURE P-40-864

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CLEARANCE DIAGRAM FOR REAR BREAK

SHEET S21 OF S71
77

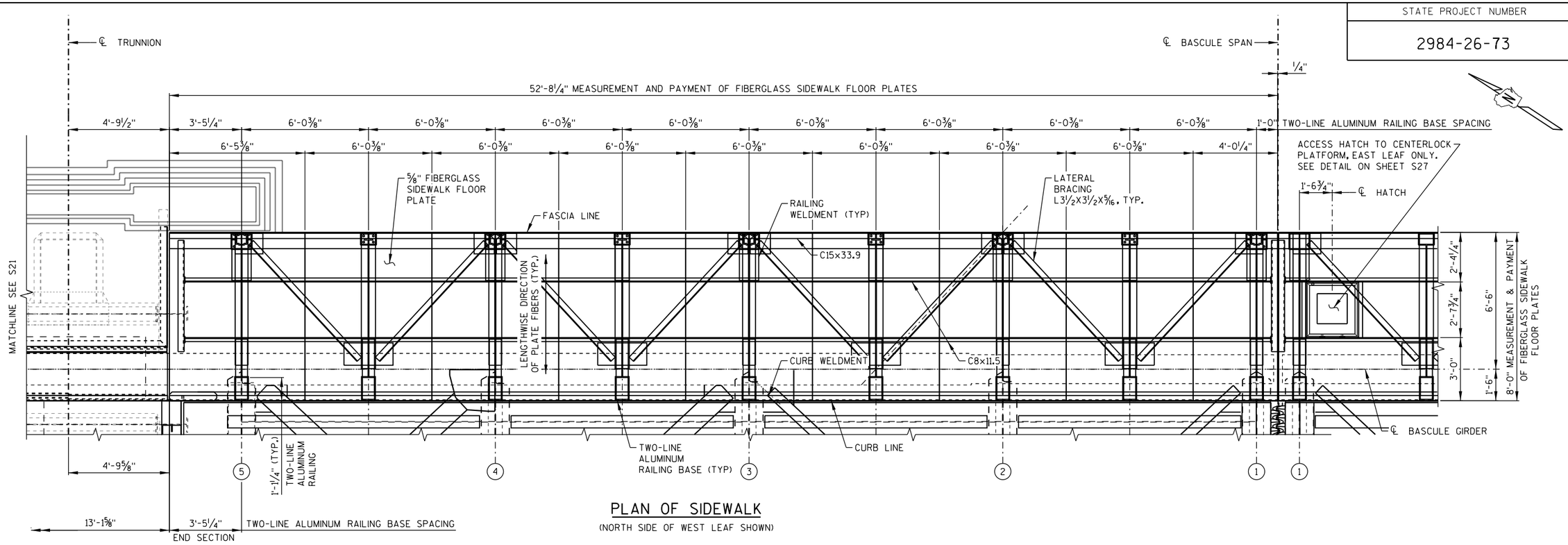
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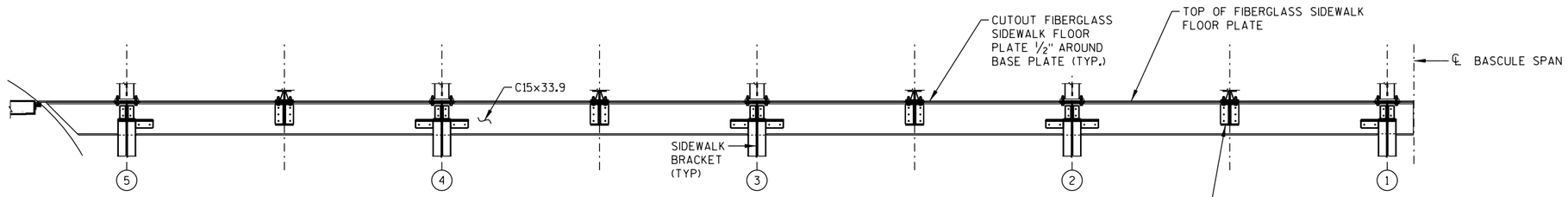
STATE PROJECT NUMBER

2984-26-73

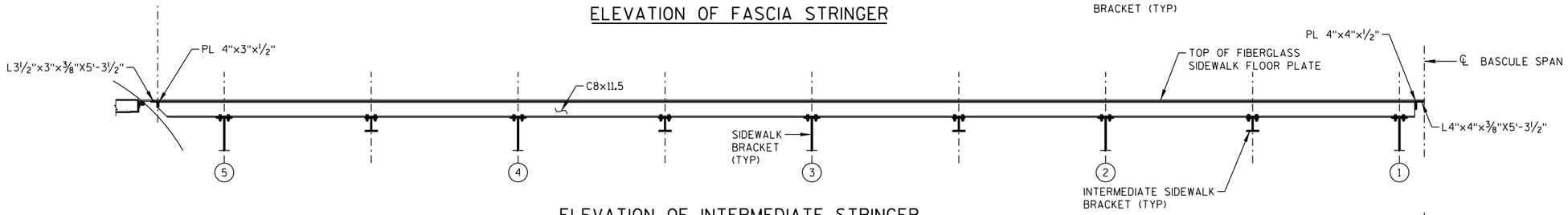


PLAN OF SIDEWALK

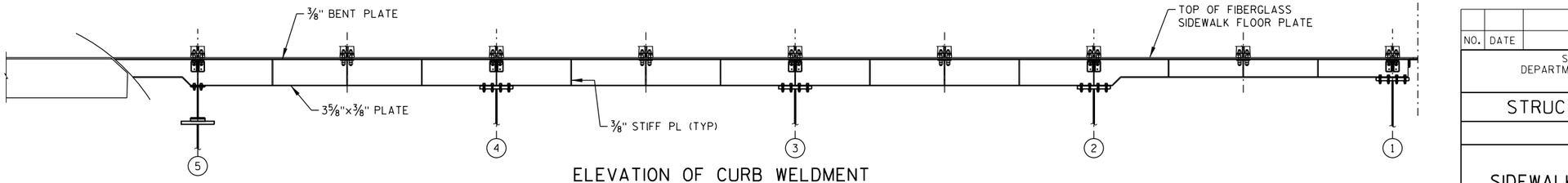
(NORTH SIDE OF WEST LEAF SHOWN)



ELEVATION OF FASCIA STRINGER



ELEVATION OF INTERMEDIATE STRINGER



ELEVATION OF CURB WELDMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

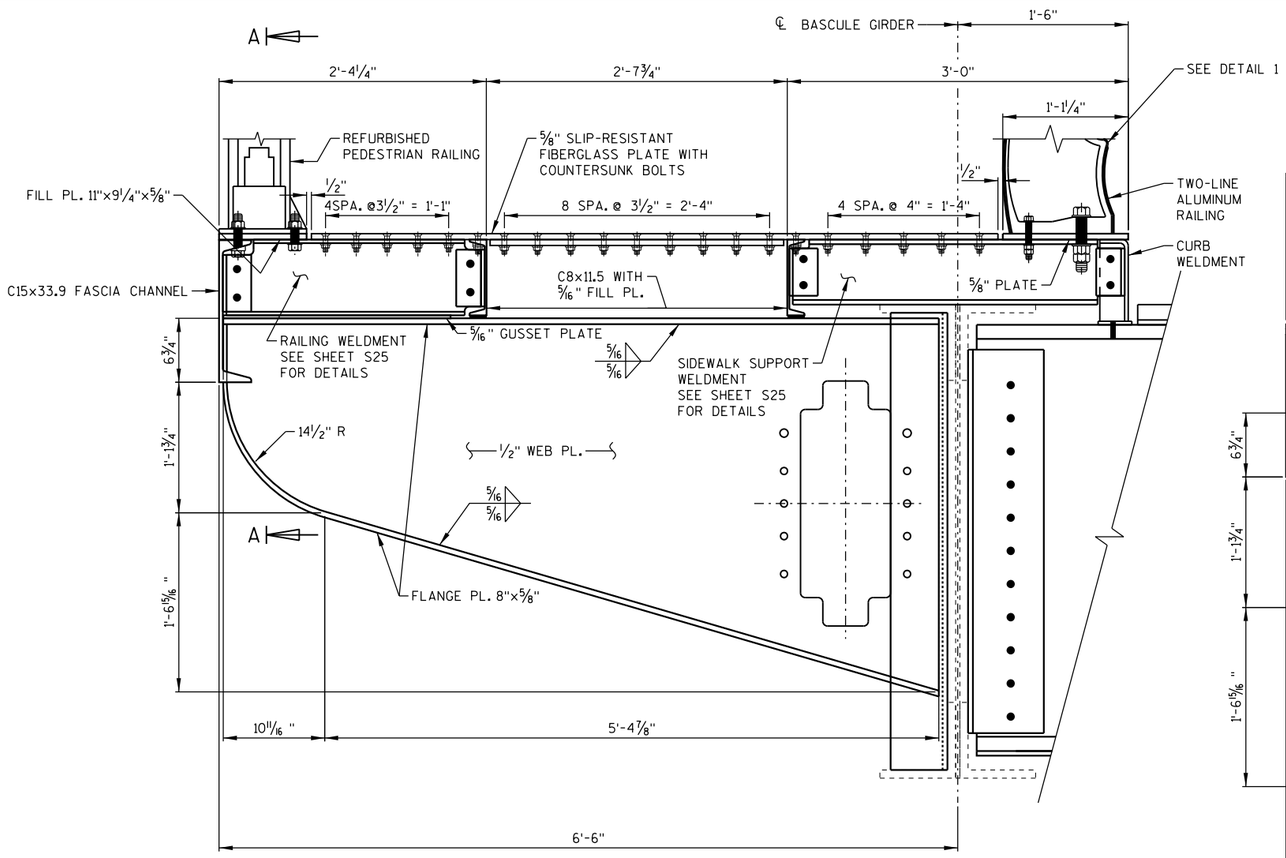
SIDEWALK PLAN

SHEET S22 OF S71
78

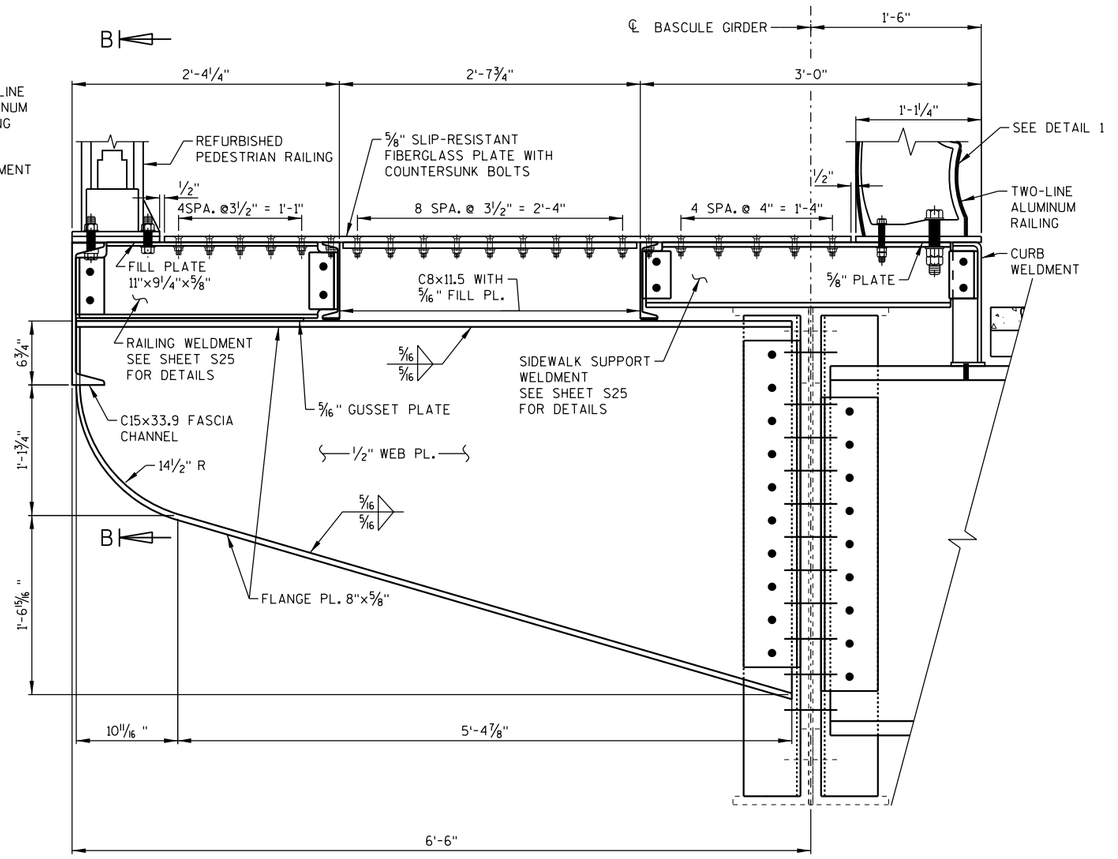
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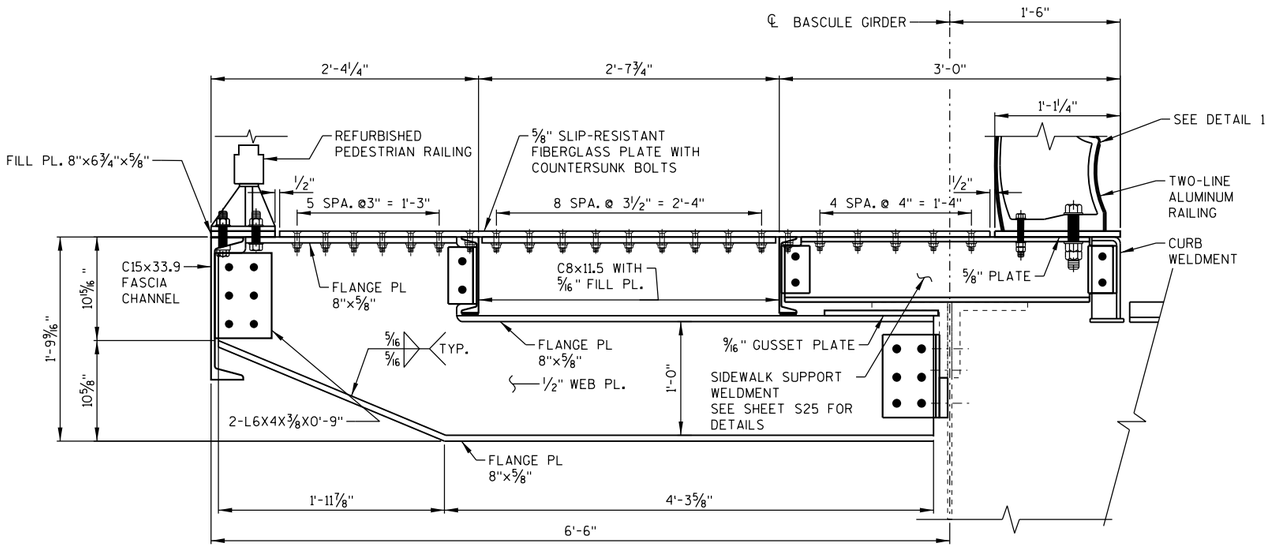
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PLOT DATE: 3/27/2024 PLOT TIME: 9:16:58 AM BATCH PRINT SHEET 23 OF 71



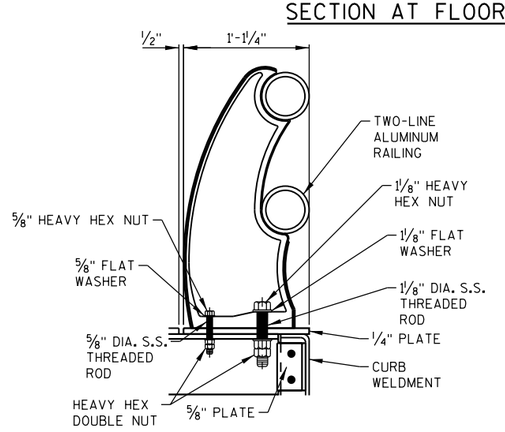
SECTION AT FLOORBEAM 1



SECTION AT FLOORBEAM 2



TYPICAL INTERMEDIATE SIDEWALK SUPPORT



DETAIL 1

NOTES:

1. SEE SHEET S25 FOR SECTION A-A AND SECTION B-B.
2. SEE SHEETS S11 THRU S15 FOR SIDEWALK BRACKET FLANGE COPING.
3. SEE SHEET S26 FOR PLAN VIEW OF ALUMINUM RAILING CONNECTION PLATE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

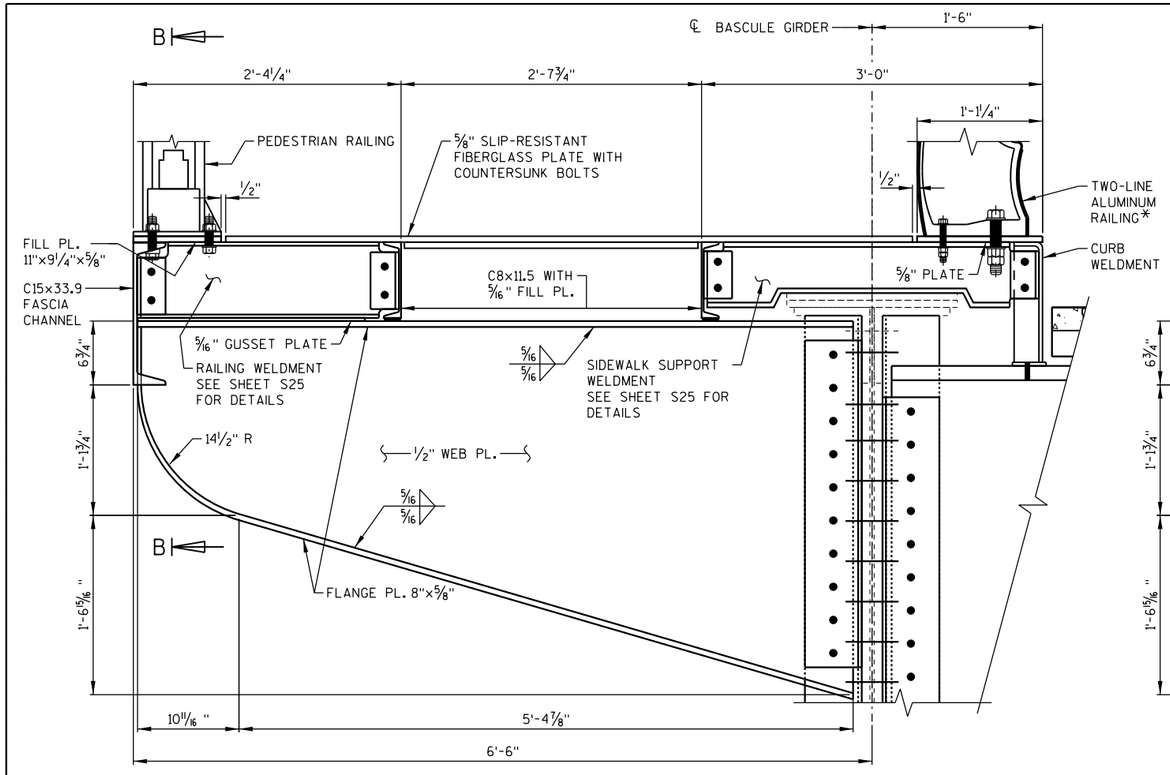
SIDEWALK DETAILS 1

SHEET S23 OF S71
79

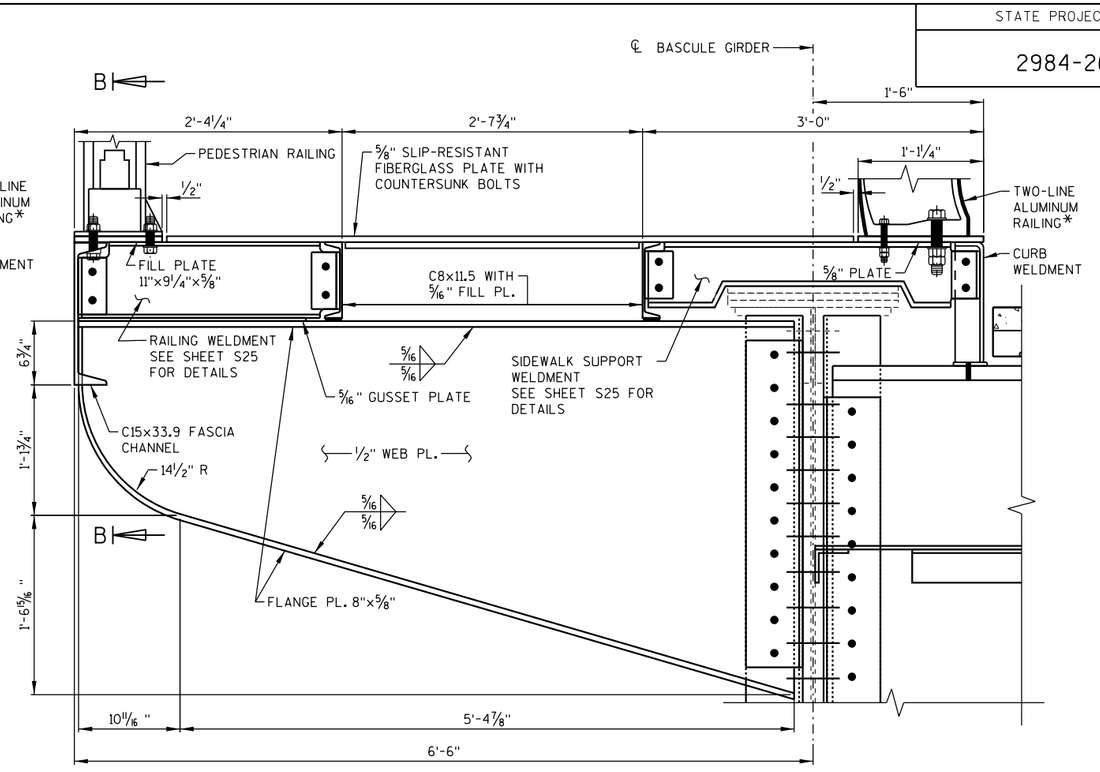
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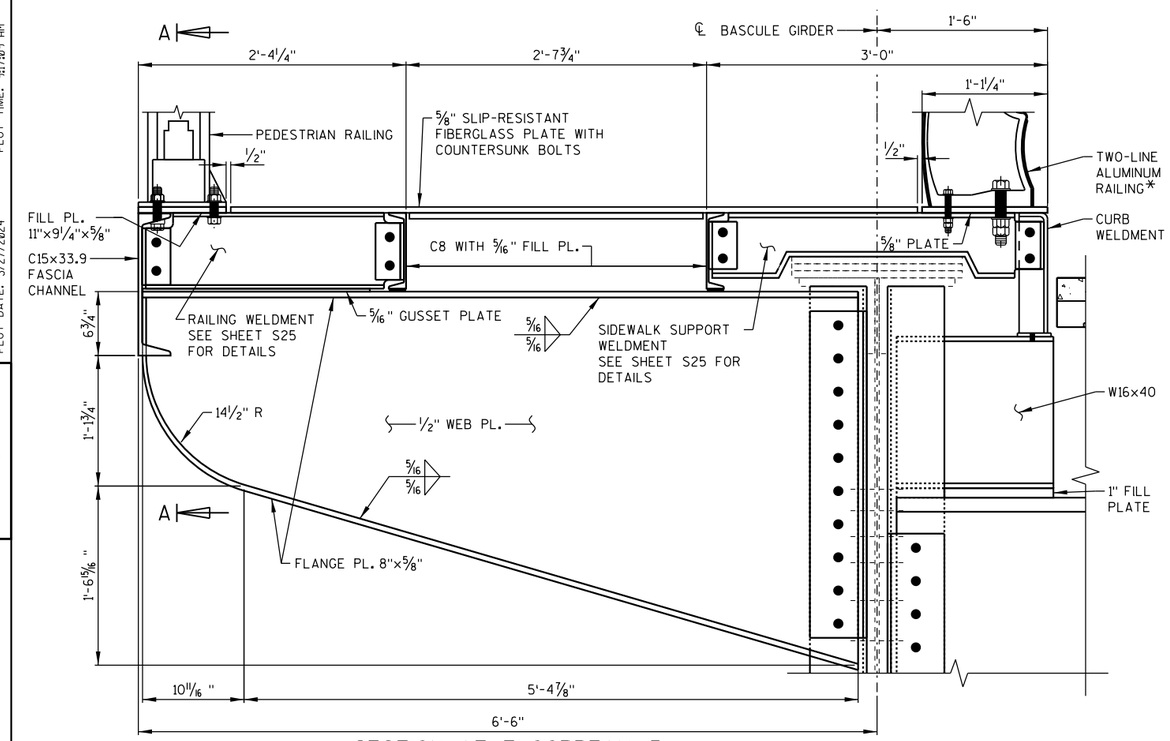
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PLOT DATE: 3/27/2024 PLOT TIME: 9:17:09 AM
BATCH PRINT SHEET 24 OF 71



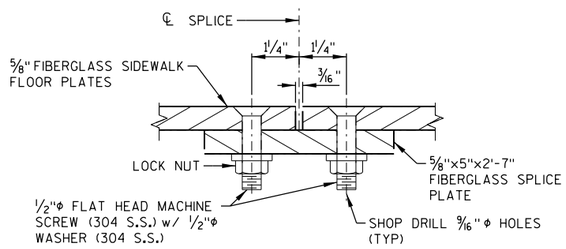
SECTION AT FLOORBEAM 3



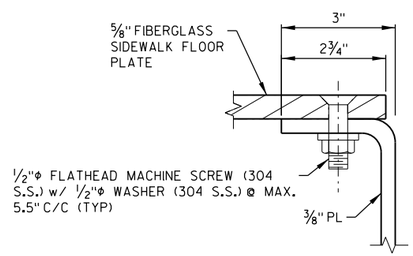
SECTION AT FLOORBEAM 4



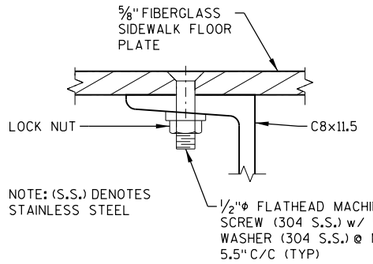
SECTION AT FLOORBEAM 5



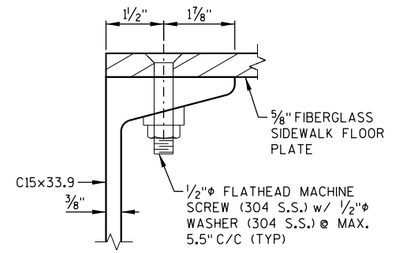
FIBERGLASS SIDEWALK FLOOR PLATE SPLICE DETAIL BETWEEN STRINGERS



FIBERGLASS SIDEWALK FLOOR PLATE CONNECTION DETAIL AT CURB WELDMENT



FIBERGLASS SIDEWALK FLOOR PLATE CONNECTION DETAIL AT STRINGERS



FIBERGLASS SIDEWALK FLOOR PLATE CONNECTION DETAIL AT FASCIA CHANNEL

* SEE DETAIL 1 ON SHEET S23

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

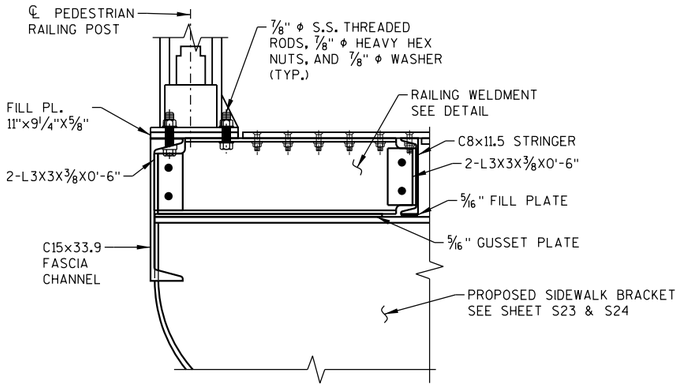
SIDEWALK DETAILS 2

SHEET S24 OF S71
80

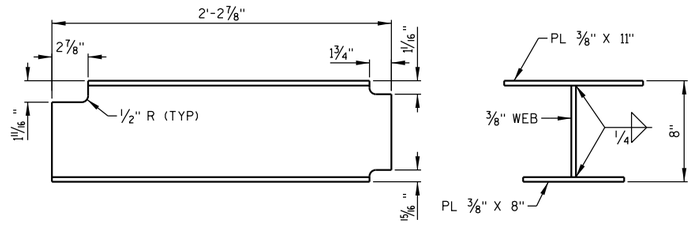
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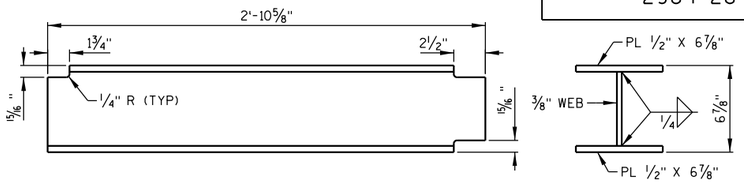
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PLOT DATE: 3/27/2024
PLOT TIME: 9:17:20 AM
BATCH PRINT SHEET 25 OF 71



RAILING CONNECTION AT FLOORBEAM

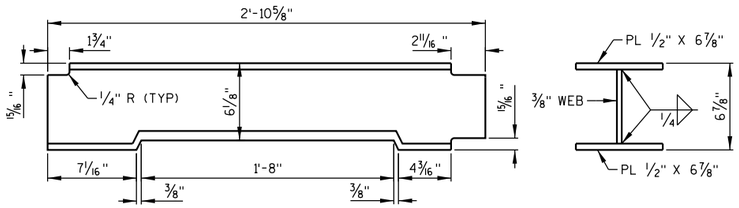


RAILING WELDMENT



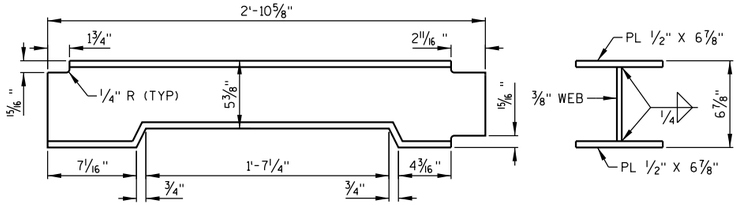
SIDEWALK SUPPORT WELDMENT

(AT FB1, FB2, AND INTERMEDIATE SUPPORT BETWEEN FLOORBEAM 1 AND 2)



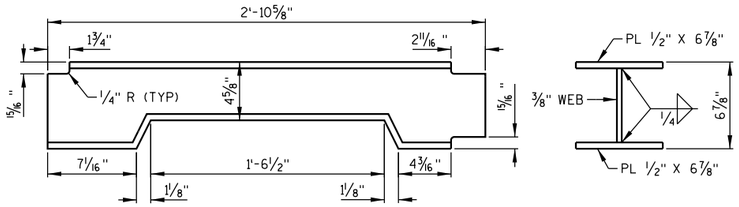
SIDEWALK SUPPORT WELDMENT

(AT INTERMEDIATE SUPPORT BETWEEN FLOORBEAM 2 AND 3)



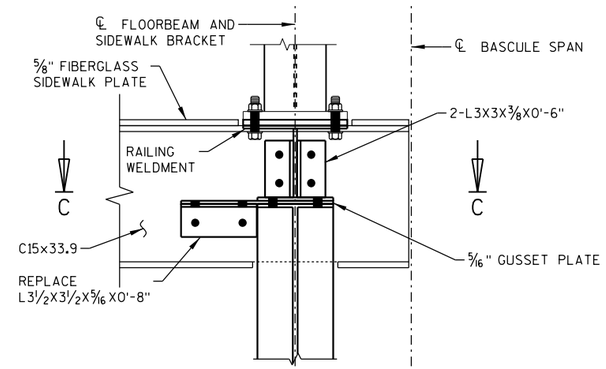
SIDEWALK SUPPORT WELDMENT

(AT FB3)



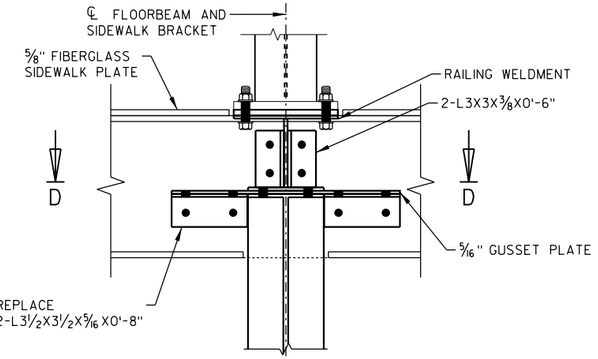
SIDEWALK SUPPORT WELDMENT

(AT FB4, FB5, AND INTERMEDIATE SUPPORTS BETWEEN FLOORBEAM 3 AND 5)



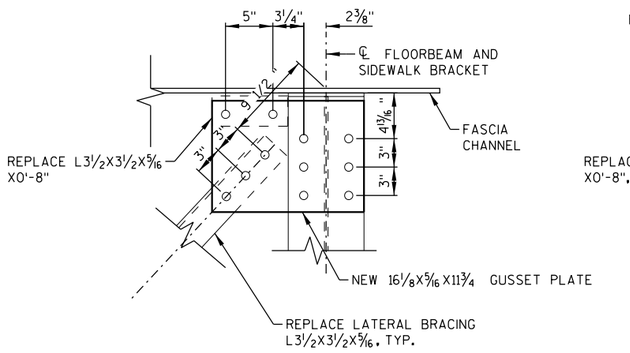
SECTION A-A

(FLOORBEAM 1 SHOWN, FLOORBEAM 5 OPPOSITE HAND, SEE SHEET S22 SIDEWALK PLAN)



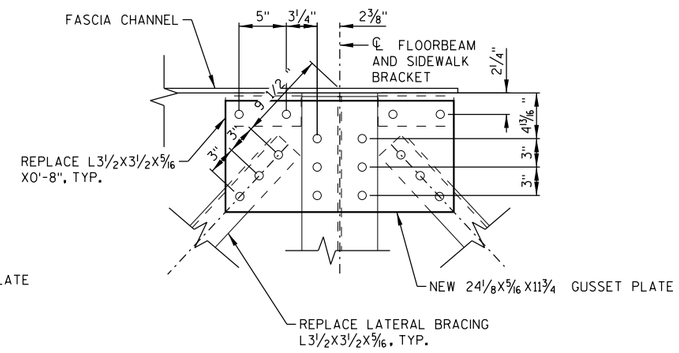
SECTION B-B

(AT FLOORBEAM 2, 3 AND 4)

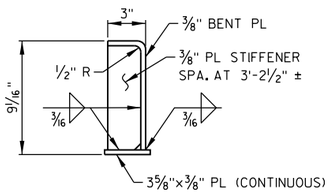


SECTION C-C

(FLOORBEAM 1 SHOWN, FLOORBEAM 5 OPPOSITE HAND)

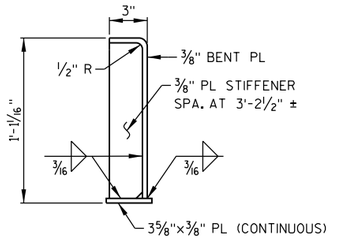


SECTION D-D



CURB WELDMENT

(IN FRONT OF FB2 AND BEHIND FB5)



CURB WELDMENT

(BETWEEN FB2 AND FB5)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

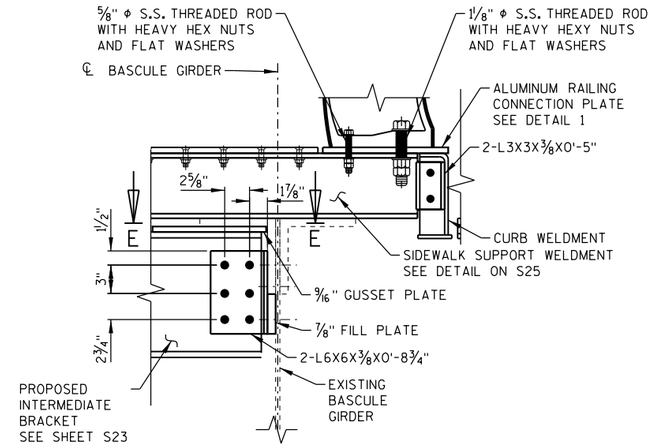
DRAWN BY SS | PLANS CK'D. GTS

SIDEWALK DETAILS 3

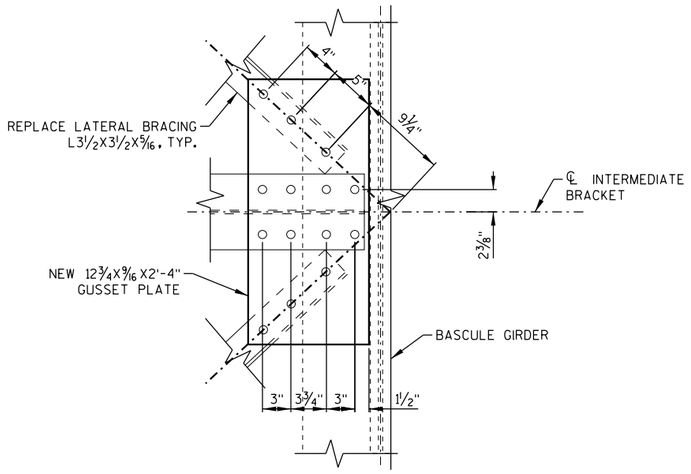
SHEET S25 OF S71
81

8

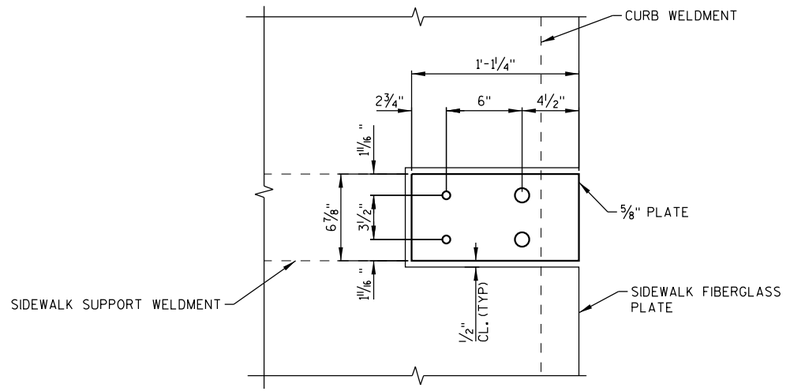
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LATERAL BRACING AND ALUMINUM RAILING CONNECTION AT INTERMEDIATE SIDEWALK SUPPORT



SECTION E-E



DETAIL 1
PLAN VIEW

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PLOT DATE: 3/27/2024 PLOT TIME: 9:17:28 AM BATCH PRINT SHEET 26 OF 71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY	SS	PLANS CK'D.	GTS

SIDEWALK DETAILS 4

SHEET S26 OF S71

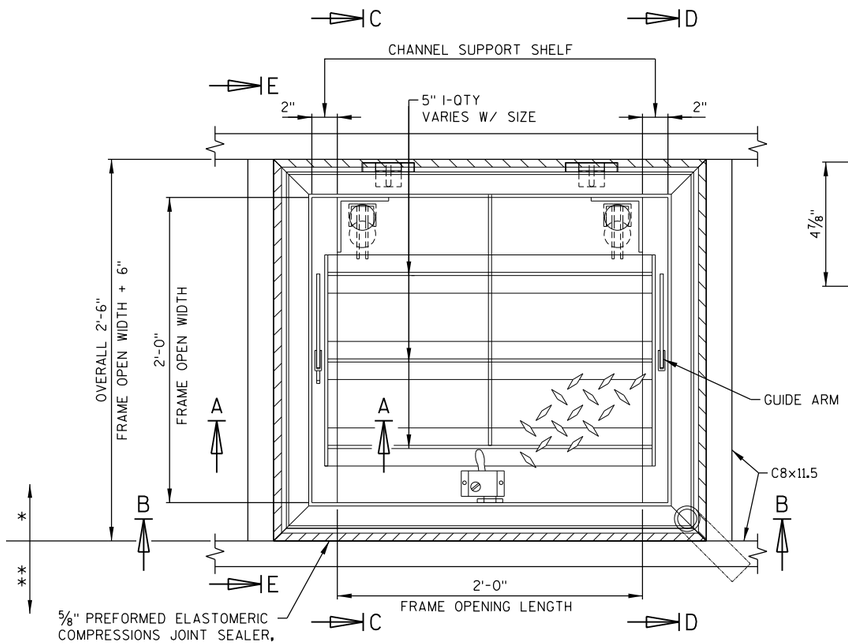
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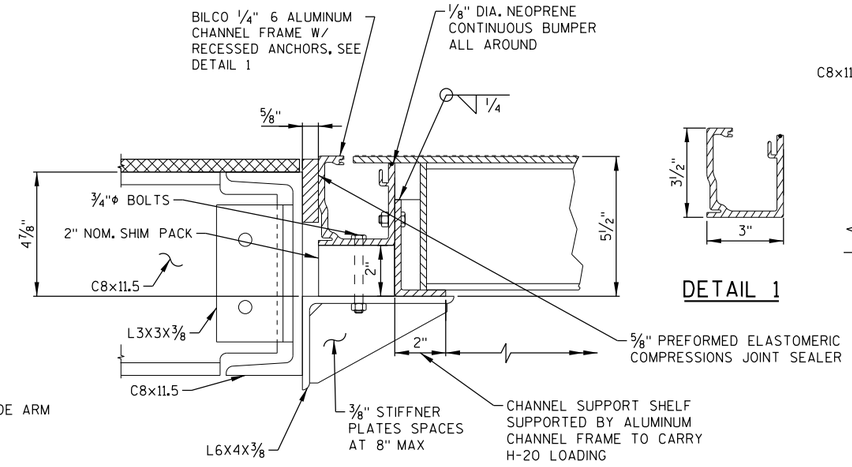
* TOWARDS PEDESTRIAN RAILING

** TOWARDS BASCULE GIRDER AND ALUMINUM RAILING



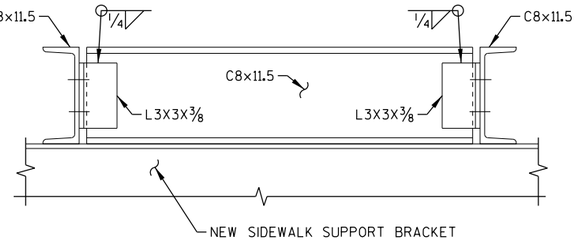
PLAN

BILCO TYPE J-1ALH20 SIDEWALK DOOR

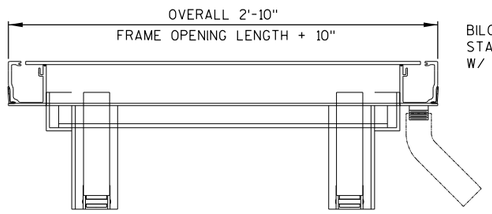


SECTION A-A

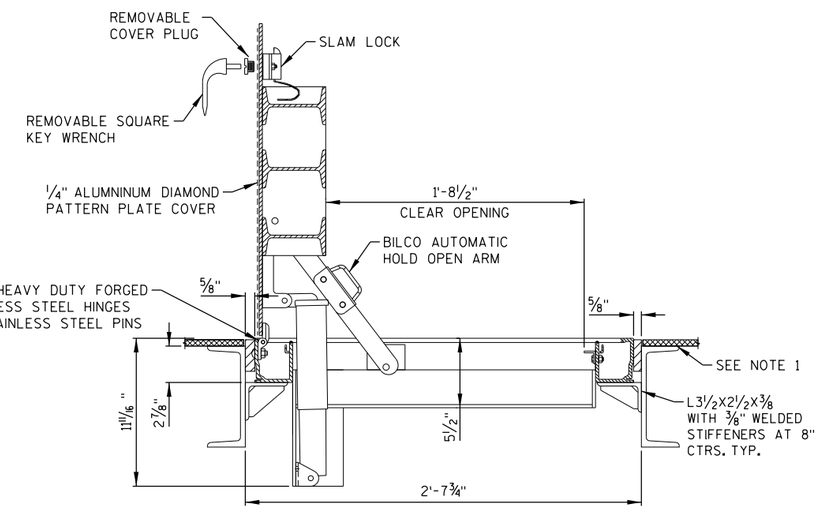
DETAIL 1



SECTION E-E

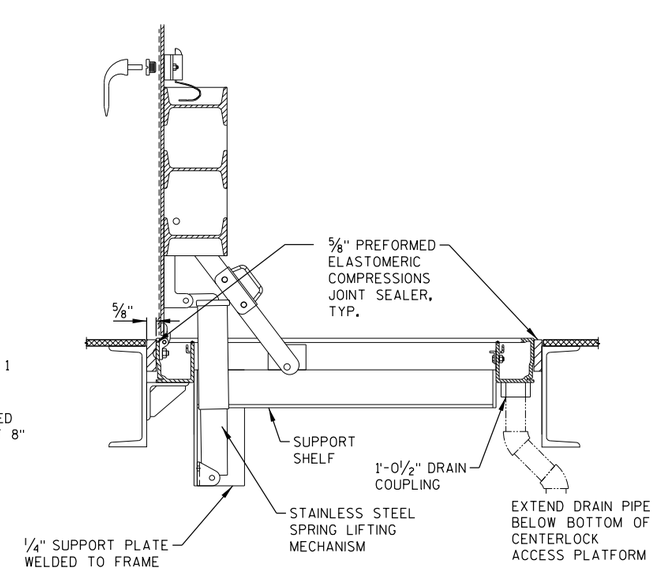


SECTION B-B



SECTION C-C

WITH COVER OPEN
(AWAY FROM BASCULE GIRDER)



SECTION D-D

NOTES

1. COPE TOP FLANGE OF C8x11.5 AS REQUIRED TO ACCOMODATE HATCH. WELD L3X3X1/2 ON OPPOSITE SIDE OF WEB. EXTEND 6" MIN BEYOND COPES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY GTS | PLANS CK'D. GTS

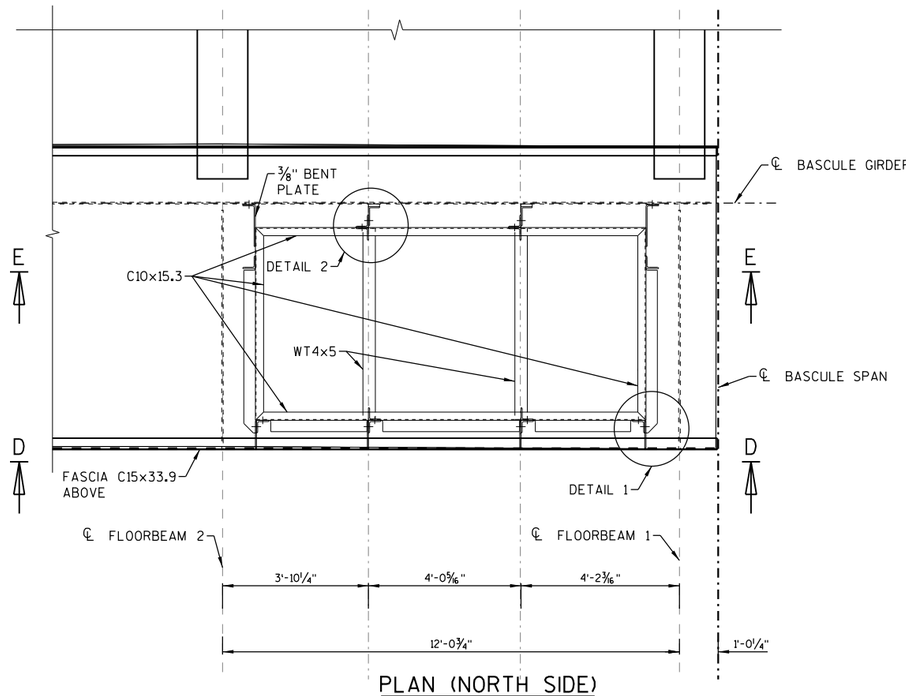
SIDEWALK HATCH DOOR

SHEET S27 OF S71
83

8

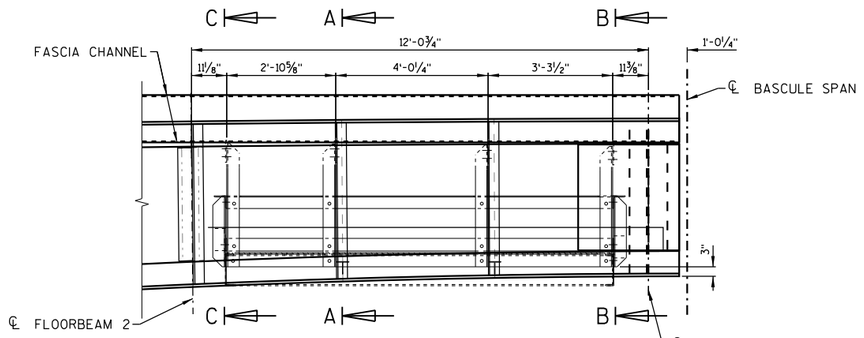
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BATCH PRINT SHEET 27 OF 71
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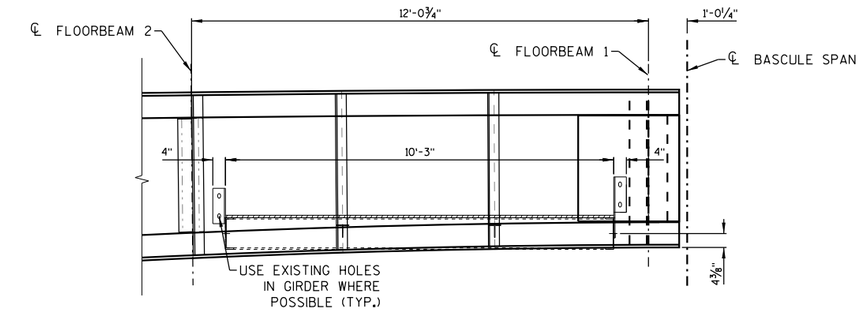


PLAN (NORTH SIDE)

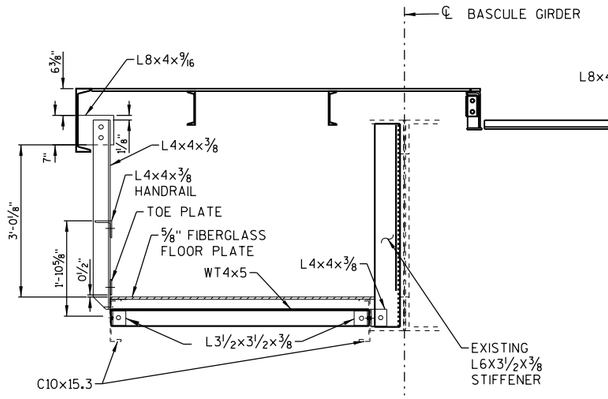
EAST BASCULE LEAF, NORTH SIDE SHOWN,
SOUTH SIDE SIMILAR, OPPOSITE HAND



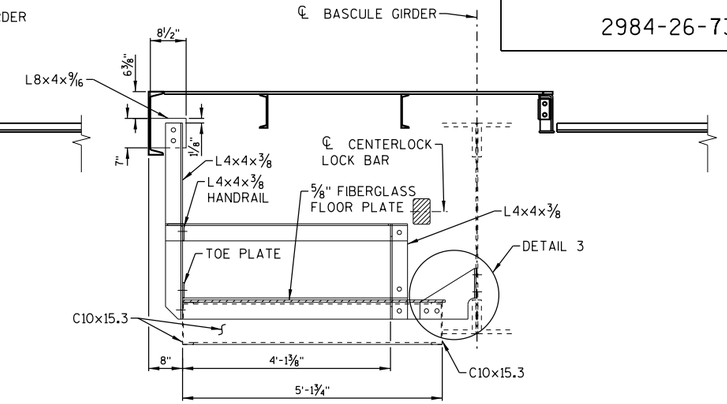
SECTION D-D



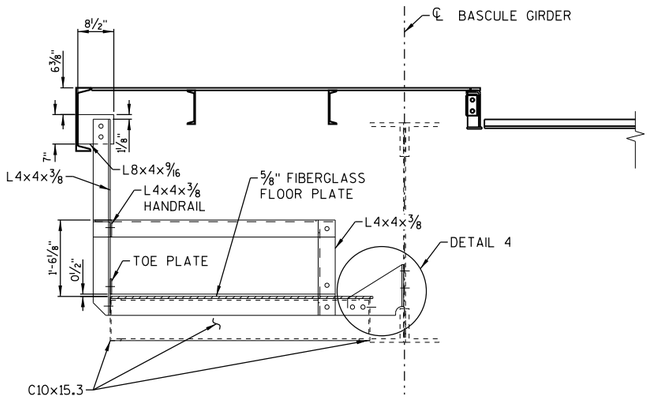
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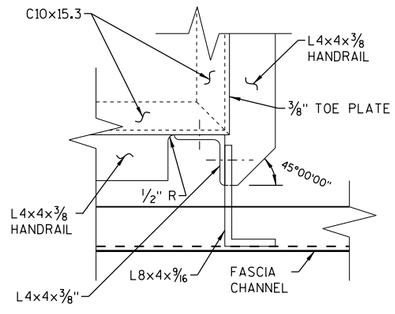
SECTION A-A



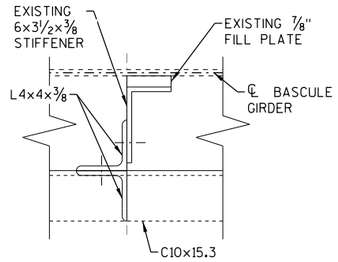
SECTION B-B



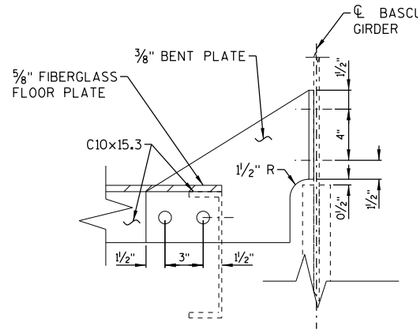
SECTION C-C



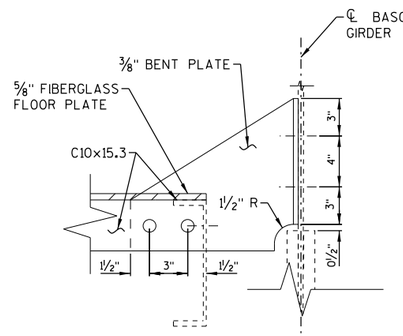
DETAIL 1



DETAIL 2



DETAIL 3



DETAIL 4

NOTES

1. ALL CENTERLOCK ACCESS PLATFORM STEEL, AND CONNECTIONS IS INCLUDED IN THE PAY ITEM "BRIDGE STRUCTURAL STEEL".
2. THE COST OF FIBERGLASS FLOOR PLATE IS INCLUDED IN THE PAY ITEM "FIBERGLASS SIDEWALK FLOOR PLATES"
3. TWO PLATFORMS ARE REQUIRED. ONE ON EACH SIDE OF THE EAST BASCULE LEAF.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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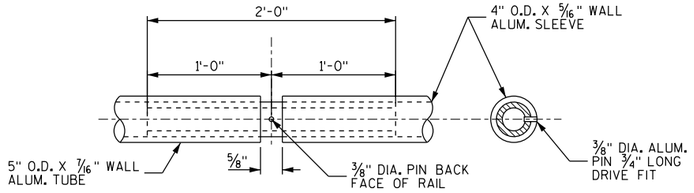
CENTER LOCK PLATFORM

SHEET S28 OF S71
84

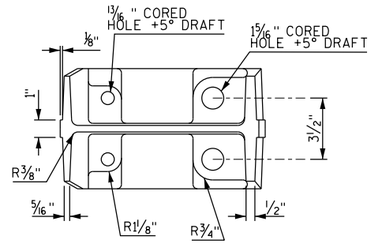
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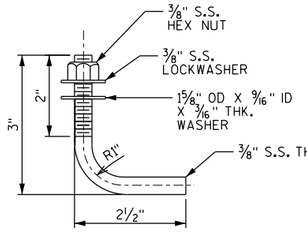
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PLOT DATE: 3/27/2024 PLOT TIME: 9:17:55 AM BATCH PRINT SHEET 29 OF 71



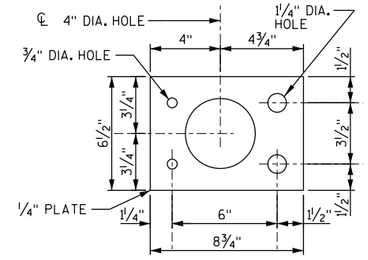
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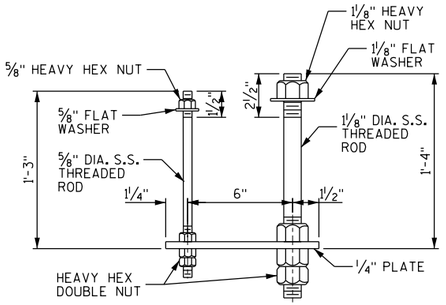


SECTION B-B

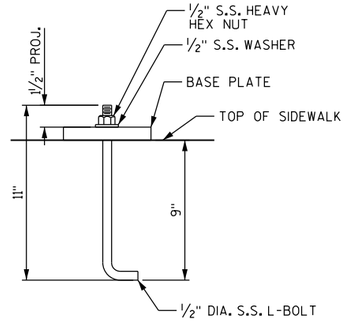


3/8" DIA RAILING BOLT

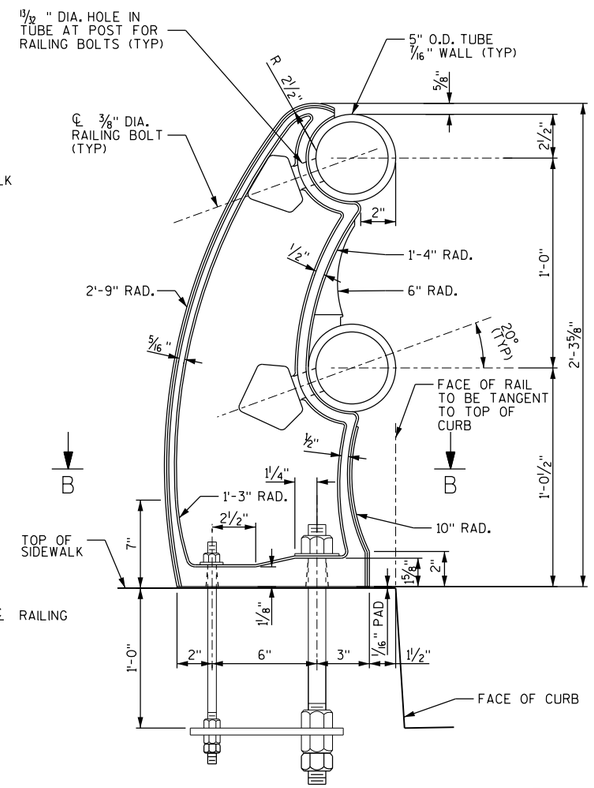


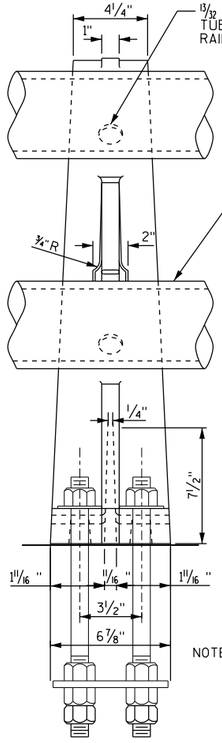


ANCHORAGE DETAIL

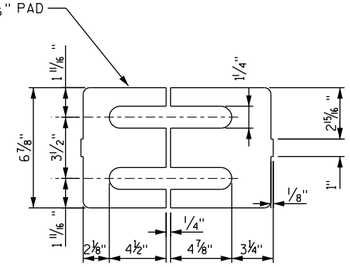


BASE PLATE ANCHOR BOLT DETAIL
AT END POSTS

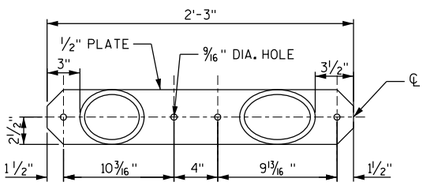




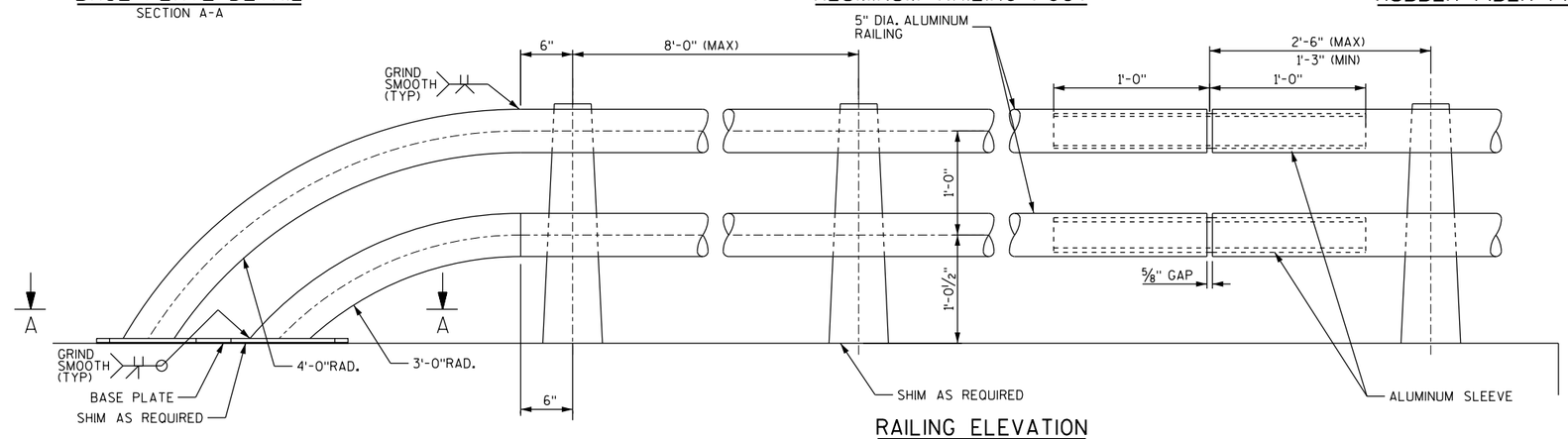
NOTE: PREFORMED PADS SHALL CONSIST OF COTTON FIBERS BONDED WITH NATURAL OR SYNTHETIC RUBBER. WEIGHT OF FIBER SHALL BE APPROX. 50% OF THE TOTAL WEIGHT OF THE PAD. ULTIMATE BREAKDOWN LIMIT OF THE PAD UNDER COMPRESSIVE LOADING SHALL BE AT LEAST 10,000 P.S.I.



RUBBER FIBER PAD



BASE PLATE DETAIL
SECTION A-A



ALUMINUM RAILING POST

RAILING ELEVATION

NOTES

THIS RAILING IS BASED ON THE AASHTO CRASH TESTED BR2 TYPE A ALUMINUM RAILING.

ELECTRODES FOR WELDING SHALL CONFORM TO AWS A5.10, ALLOY ER.

ALL WELDS TO BE SMOOTH AND FREE FROM SHARP EDGES AND/ OR BURRS.

POST TO BE ALUMINUM ALLOY PERMANENT CASTING CONFORMING TO AASHTO DESIGNATION M193 (ASTM B 108, ALLOY A 444).

RAILS AND SPLICE SLEEVES SHALL BE ASTM B221, ALLOY 6061-T6.

ALL POSTS SHALL BE SET NORMAL TO THE PGL. RAILS SHALL BE ATTACHED TO A MINIMUM OF 4 POSTS.

ALL RAILS SHALL BE FREE FROM SHARP EDGES OR BURRS THAT COULD CAUSE INJURY.

HOLES FOR BOLTS IN RAILS ARE TO BE FIELD DRILLED TO ENSURE PROPER FIT.

RAILINGS SHALL BE FABRICATED TO ACCOUNT FOR LONGITUDINAL VERTICAL CURVE IN DECK.

SEE SHEET S26 FOR ANCHORING POSTS TO STEEL PLATES

RAIL TO POST HARDWARE

RAILING BOLT ASSEMBLY MATERIALS SHALL BE AS FOLLOWS:

STAINLESS STEEL THREADED RODS SHALL BE ASTM A276 TYPE 304, ANNEALED COLD FINISHED. MIN. TENSILE STRENGTH SHALL BE 90 KSI.

STAINLESS STEEL HEX NUTS AND WASHERS SHALL BE ASTM A276 TYPE 300 SERIES.

ANCHOR HARDWARE

ALL THREADED RODS SHALL BE STAINLESS STEEL ASTM A276 TYPE 300 OR 400 SERIES WITH A MIN. TENSILE STRENGTH OF 90 KSI, MIN. YIELD STRENGTH OF 35 KSI AND MIN ELONGATION OF 15% IN 2 INCHES.

ALL HEAVY HEX NUTS AND WASHERS SHALL BE STAINLESS STEEL U.N.O.

NEOPRENE PADS SHALL HAVE A NOMINAL DUROMETER HARDNESS OF 60±5.

SHIM MATERIALS SHALL BE ASTM B209, ALLOY 1100-0.

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STRUCTURE P-40-864

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TWO-LINE ALUMINUM RAILING

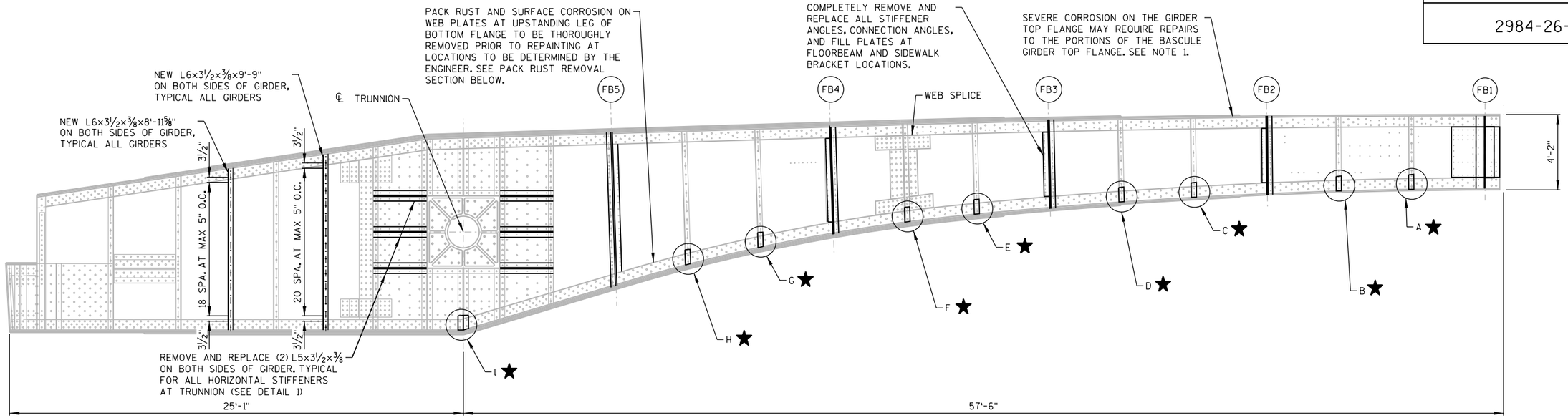
SHEET S29 OF S71
85

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PLOT DATE: 3/27/2024 PLOT TIME: 9:18:04 AM BATCH PRINT SHEET 30 OF 71

STATE PROJECT NUMBER
2984-26-73



PACK RUST REMOVAL:

REMOVE PACK RUST WHEN PRACTICABLE DURING REHABILITATION WORK USING ONE OF THE METHODS MENTIONED BELOW:

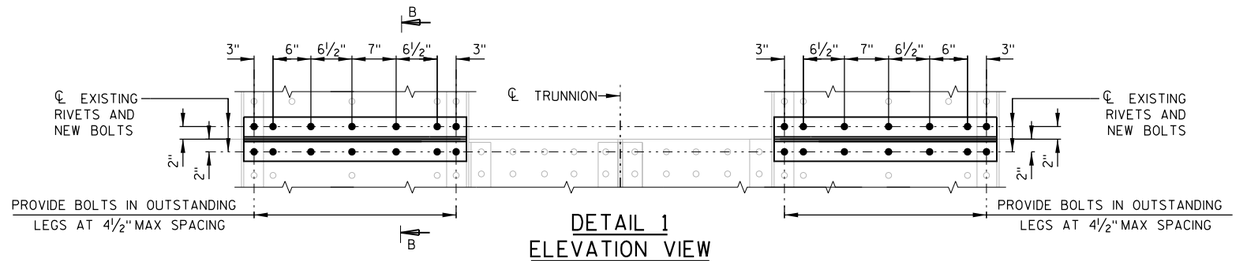
1. MECHANICAL REMOVAL USING HAND TOOLS OR LIGHT DUTY POWER TOOLS;
2. BLASTING WITH ULTRA-HIGH PRESUURE (UHP) WATERJET;
3. COMBINED HEATING AND IMPACT FROM PNEUMATIC RIVET BUSTER OR HAMMER, USING SACRIFICIAL PLATE TO PREVENT DAMAGE TO THE EXISTING STEEL

PREVENT CREVICE CORROSION IN REHABILITATION WORK BY FILLET SEALING WHEN MEMBERS ARE NOT DISASSEMBLED. WHEN EXISTING MEMBERS CAN NOT BE DISSACEMBLED, OR WHEN PACK RUST CAN NOT BE REMOVED, CONSIDER THE USE OF PENETRATING SEALER TO IMPROVE THE RPOTECTION OF CREVICES AND OTHER CORROSION-PRONE DETAILS.
AREAS AFFECTED WITH DISTORTION CAN BE REPAIRED USING FOLLOWING TECHNIQUES:
AREAS AFFECTED BY DISTORTION GREATER THEN ⅛" CAN BE STRAIGHTENED USING MECHANICAL METHODS. THE MECHANICAL STRAIGHTENING OF DISTORTED MEMBERS CAN BE ACCOMPLISHED USING TIMBER BRACING, JACKS, CABLES AND WINCHES BETWEEN THE MEMBERS TO PUSH OR PULL THE DISTORTED ELEMENT BACK TO ITS ORIGINAL CONFIGURATION. AFTER STRAIGHTENING, THE CONFIGURATION OF THE DISTORTED ELEMENTS SHOULD BE MEET THE TOLERANCESSPECIFIED FOR NEW FABRICATION IN THE CURRENT WISDOT STANDARD SPECIFICATIONS. AFTER STRAIGHTENING OPERATIONS ARE COMPLETED, WELDED CONNECTIONS IN THE DISTORTED AREA MUST BE INSPECTED AND WELDS SHOULD BE NONDESTRUCTIVELY TESTED USING MAGNETIC PARTICLE OR DYE PENETRATION TESTING AT LOCATIONS WHERE VISIBLE EVIDENCE OF DAMAGE EXISTS. IF CRACKS ARE FOUND AFTER STRAIGTHENING, FURTHER RETROFITTING OF THE MEMBER WILL BE NECESSARY.

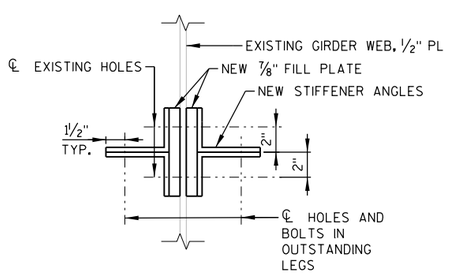
COST OF THESE REPAIRS WILL BE INCIDENTAL TO "BRIDGE STRUCTURAL STEEL" PAY ITEM.

NOTES:

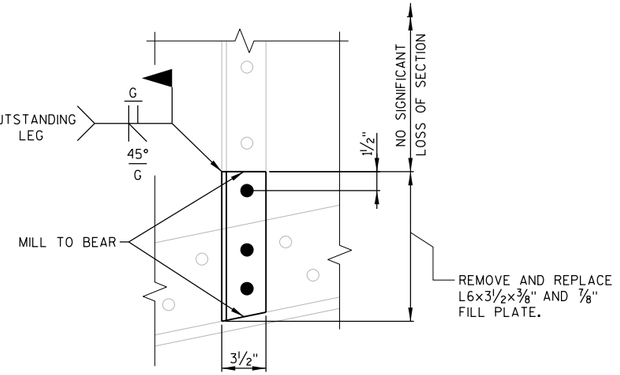
1. AFTER REMOVAL OF THE FLOOR AND SIDEWALK FRAMING, CONTRACTOR SHALL ASSESS THE CONDITION OF THE BASCULE GIRDER TOP FLANGE TO DETERMINE THE EXTENT OF THE DETERIORATION AND PROVIDE REQUIRED REPAIR LOCATIONS AND REPAIR DETAILS TO THE ENGINEER FOR REVIEW AND APPROVAL. COST SHALL BE INCLUDED WITH PAY ITEM "STRUCTURAL STEEL REPAIR. FIELD DISCOVERED CONDTIONS REPAIRED AS DIRECTED BY ENIGNEER."
2. BLAST CLEAN AND PAINT ALL EXPOSED SURFACES.
3. REPLACE DETERIORATED RIVETS IN GIRDER BOTTOM FLANGES WITH HIGH STRENGTH BOLTS AT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
4. FIELD DRILL HOLES IN NEW STRUCTURAL MEMBERS USING THE EXISTING RIVET HOLES AS A TEMPLATE AND ATTACH USING HIGH STRENGTH BOLTS.
5. FILL ANY NEW OR EXISTING HOLES WITH HIGH STRENGTH BOLTS.



DETAIL 1
ELEVATION VIEW
TYPICAL DETAIL AT HORIZONTAL STIFFENER REPAIR



SECTION B-B



DETAIL 2
TYPICAL DETAIL AT VERTICAL STIFFENER REPAIR

LEGEND:

★ REMOVE DETERIORATED PORTION OF EXISTING STIFFENERS AT LOCATIONS INDICATED AND AS DETERMINED BY THE ENGINEER (SEE DETAIL 2) COST SHALL BE INCLUDED WITH PAY ITEM "BASCULE GIRDER STIFFENER ANGLE REPAIR."

	EAST BASCULE GIRDERS				WEST BASCULE GIRDERS			
	NORTHEAST		SOUTHEAST		NORTHWEST		SOUTHWEST	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
A	X		X				X	X
B	X	X	X	X			X	
C	X	X	X	X			X	X
D	X	X	X	X			X	X
E	X	X		X				X
F	X	X		X			X	X
G		X		X			X	X
H		X			X		X	
I					X	X	X	X

WELD PROCEDURE:

1. WELDING SHALL BE DONE ACCORDING TO THE REQUIREMENTS OF THE ANSI/AASHTO/AWS D-1.5 BRIDGE WELDING CODE. PROPOSED DETAILS AND PROCEDURES FOR FIELD WELDING OF STRUCTURAL STEEL SHALL BE APPROVED BY THE ENGINEER BEFORE WELDING BEGINS.
2. ALL WELDERS, WELDING OPERATORS, AND TACKERS SHALL BE QUALIFIED BY TEST ACCORDING TO
3. THE AWS D-1.5 BRIDGE WELDING CODE. TESTING SHALL BE ADMINISTERED AND CERTIFIED BY A CERTIFIED WELDING INSPECTOR (CWI) OR EQUIVALENT ACCEPTABLE TO THE ENGINEER. THE ENGINEER MAY ACCEPT EVIDENCE OF PREVIOUS QUALIFICATION FOR WELDERS UNDER THE APPLICABLE WELDING SPECIFICATIONS.
3. SHOP AND FIELD WELDING SHALL BE PERFORMED USING WELDING PROCEDURE SPECIFICATIONS APPROVED BY THE ENGINEER WITH SHIELDED METAL ARC WELDING (SMAW), SUBMERGED ARC WELDING (SAW), GAS METAL ARC WELDING (GMAW), OR FLUX CORED ARC WELDING (FCAW) CONSUMABLES PERMITTED BY THE AWS D-1.5 BRIDGE WELDING CODE. WELDERS SHALL BE QUALIFIED ACCORDING TO THE AWS D-1.5 BRIDGE WELDING CODE.
4. ALL WELDS TO BE INSPECTED BY A CERTIFIED WELD INSPECTOR. SUBMIT INSPECTION REPORT TO THE ENGINEER FOR APPROVAL.
5. TEST WELDS IN A NON-DESTRUCTIVE MANNER BY THE MAGNETIC PARTICLE METHOD ACCORDING TO ASTM E709, UTILIZING THE YOKE METHOD. SUBMIT TEST REPORT TO THE ENGINEER FOR APPROVAL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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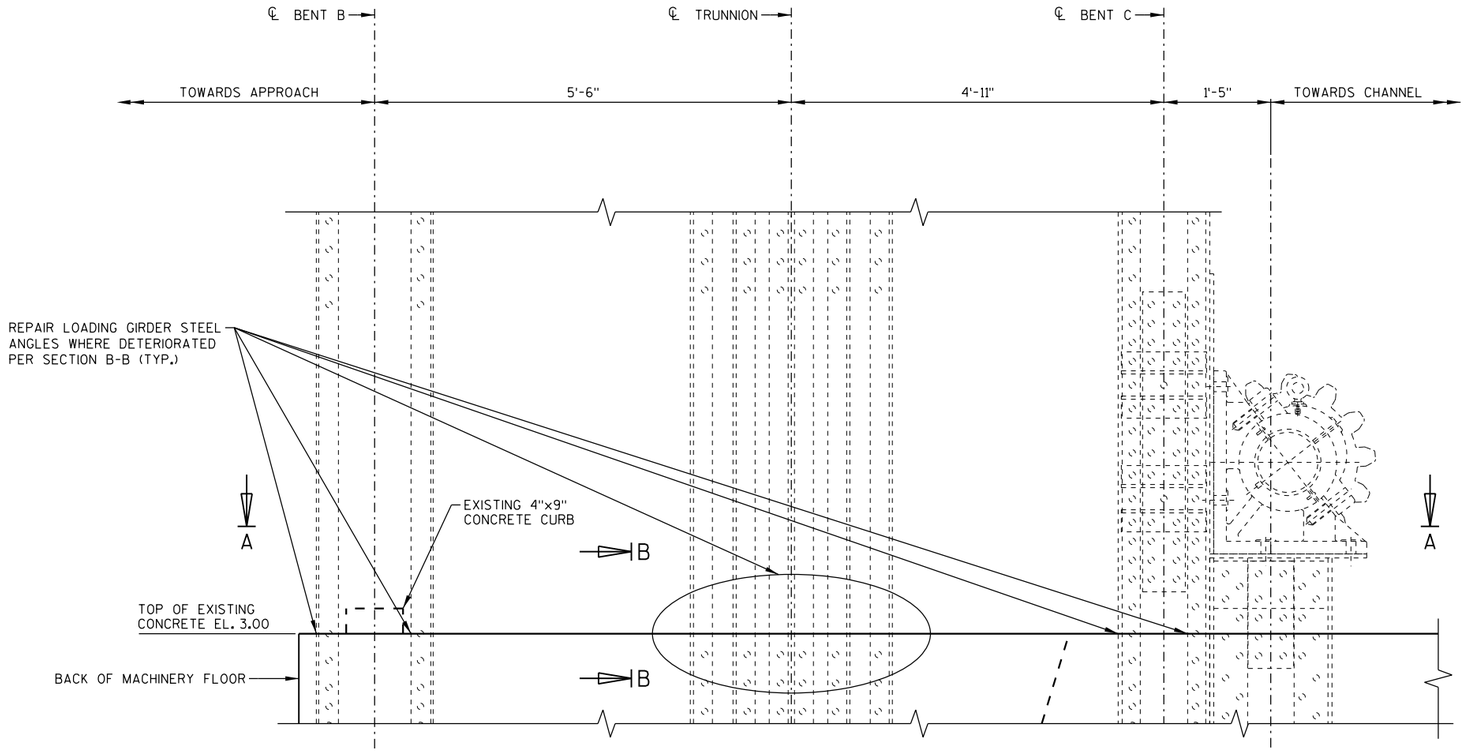
BASCULE GIRDER REPAIRS

SHEET S30 OF S71
86

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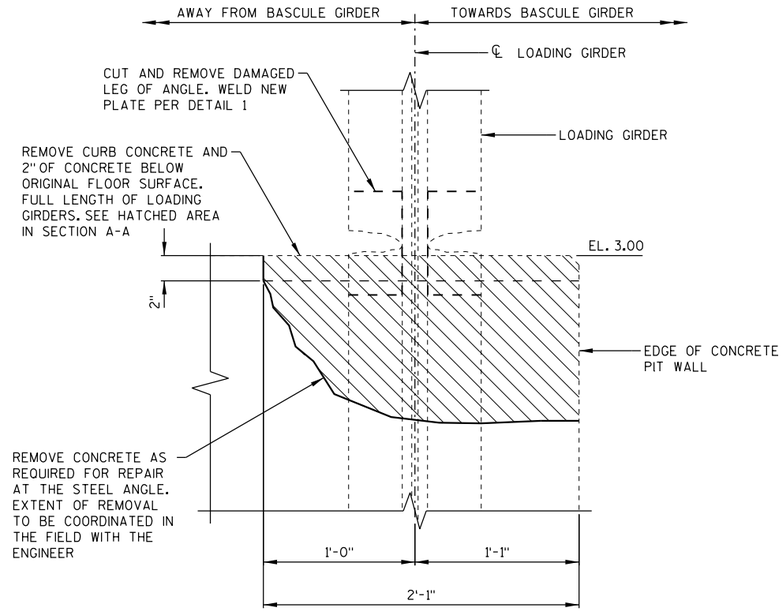
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PLOT DATE: 3/27/2024 PLOT TIME: 9:18:13 AM BATCH PRINT SHEET 31 OF 71



ELEVATION - LOADING GIRDER BASE REPAIR

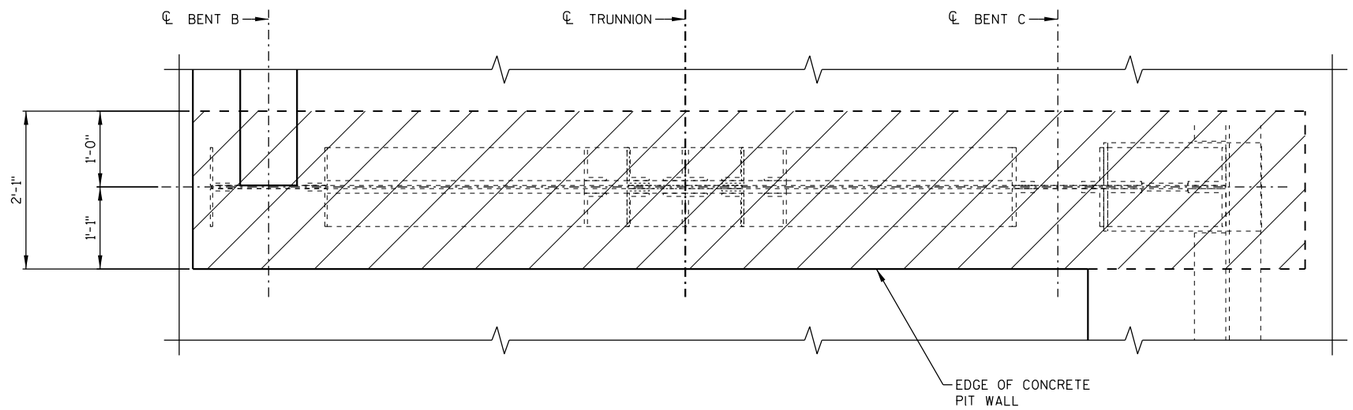
EXTENT OF REPAIR TO BE DETERMINED BY THE ENGINEER IN THE FIELD



SECTION B-B

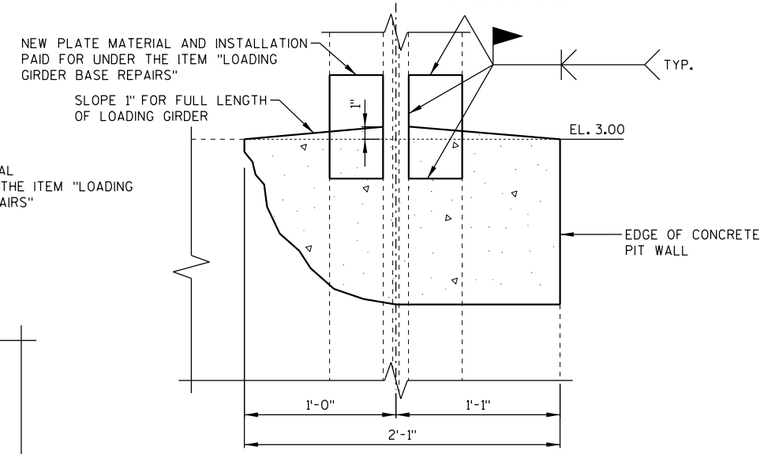
LEGEND:

CONCRETE REMOVAL PAID FOR UNDER THE ITEM "LOADING GIRDER BASE REPAIRS"



SECTION A-A

INSIDE LOADING GIRDER SHOWN, OUTSIDE LOADING GIRDER SIMILAR



DETAIL 1

NOTES:

REMOVE CONCRETE AT THE AREAS INDICATED. FIELD ENGINEER TO INSPECT THE EXPOSED STEEL AREAS AND DETERMINE WHETHER ADDITIONAL CONCRETE REMOVAL IS REQUIRED BEYOND THE DEPTH SPECIFIED HEREIN.

PERFORM CONCRETE REMOVAL WORK WITH CARE TO PRESERVE EXISTING REINFORCING STEEL. CLEAN AND REINCORPORATE EXISTING REINFORCING STEEL INTO NEW WORK. REPLACE ANY EXISTING CORRODED REINFORCEMENT WITH NEW REINFORCEMENT BARS. COST INCIDENTAL TO PAY ITEM "LOADING GIRDER BASE REPAIRS".

CONCRETE REMOVAL AND REPLACEMENT NEEDED FOR REPAIRS ON THIS SHEET IS PAID FOR UNDER THE ITEM "LOADING GIRDER BASE REPAIRS."

SEE WELDING PROCEDURE AND NOTES ON SHEET S30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE P-40-864

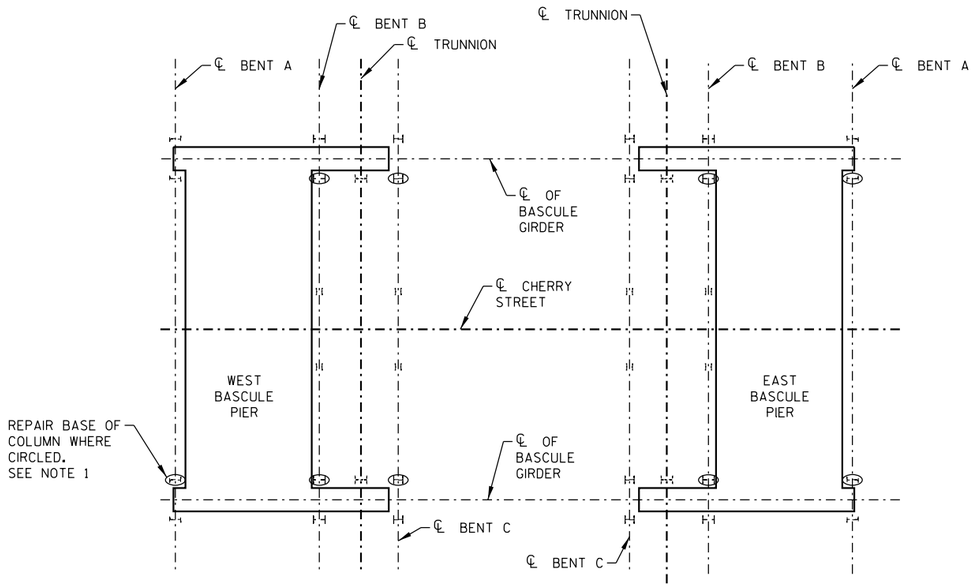
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LOADING GIRDER REPAIRS

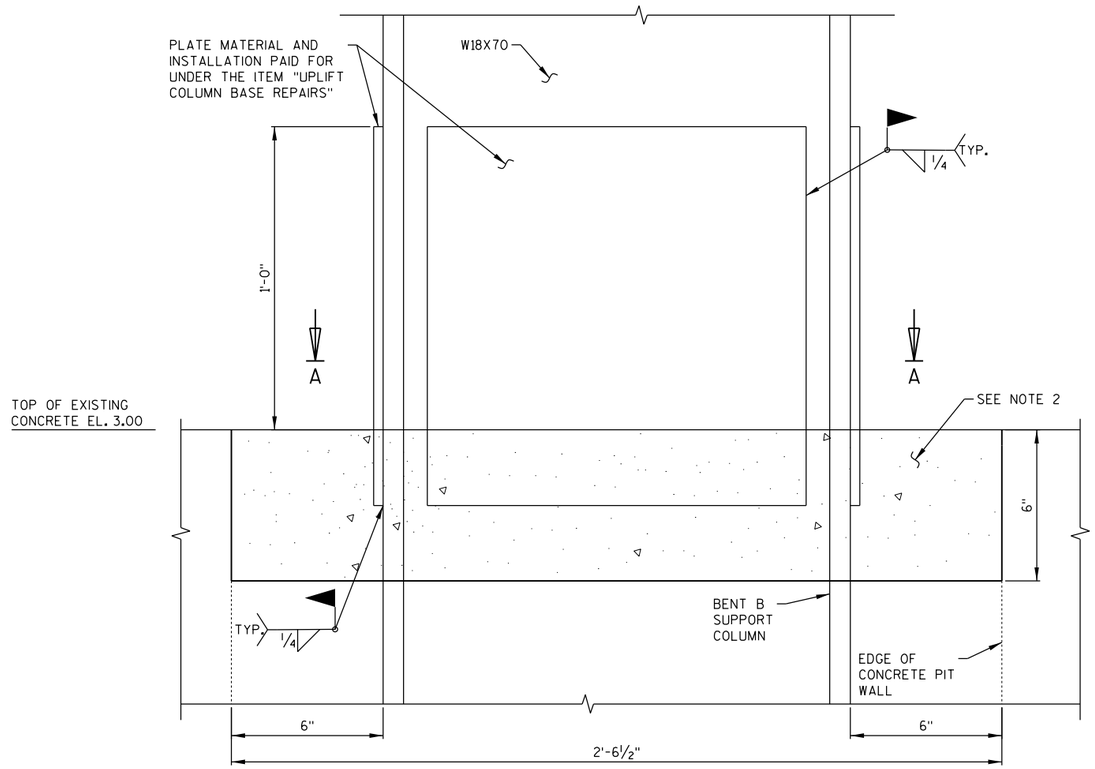
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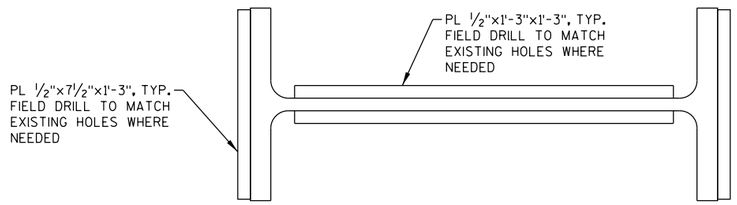


KEY PLAN



ELEVATION - UPLIFT COLUMN BASE REPAIR

9 LOCATIONS OF REPAIR NEEDED



SECTION A-A

NOTES

1. CONTRACTOR SHALL ASSESS THE CONDITION OF THE EXISTING COLUMN BASES TO DETERMINE THE EXTENT OF THE DETERIORATION AND PROVIDE REQUIRED REPAIR LOCATIONS AND REPAIR DETAILS TO THE ENGINEER FOR REVIEW AND APPROVAL. COST SHALL BE INCLUDED WITH PAY ITEM "UPLIFT COLUMN BASE REPAIRS."
2. WELDED PATCH PLATE REPAIRS AT VERTICAL COLUMNS AND DIAGONAL MEMBERS AT THEIR CONCRETE PENETRATION LOCATIONS ARE PAID FOR UNDER THE ITEM "UPLIFT COLUMN BASE REPAIRS."
3. REMOVAL AND REPLACEMENT OF CONCRETE TO FACILITATE THE STEEL REPAIR WORK IS INCLUDED IN THE ITEM "CONCRETE REMOVAL AND REPLACEMENT AT MACHINERY FLOOR."
4. ANY EXISTING RIVETS WITHIN THE PLATE REPAIR AREA SHALL BE REPLACED WITH HIGH STRENGTH BOLTS. THESE SHALL BE PAID FOR UNDER THE ITEM "UPLIFT COLUMN BASE REPAIRS."
5. SEE WELDING PROCEDURE AND NOTES ON SHEET S30.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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MACHINERY DECK COLUMN BASE REPAIR DETAILS

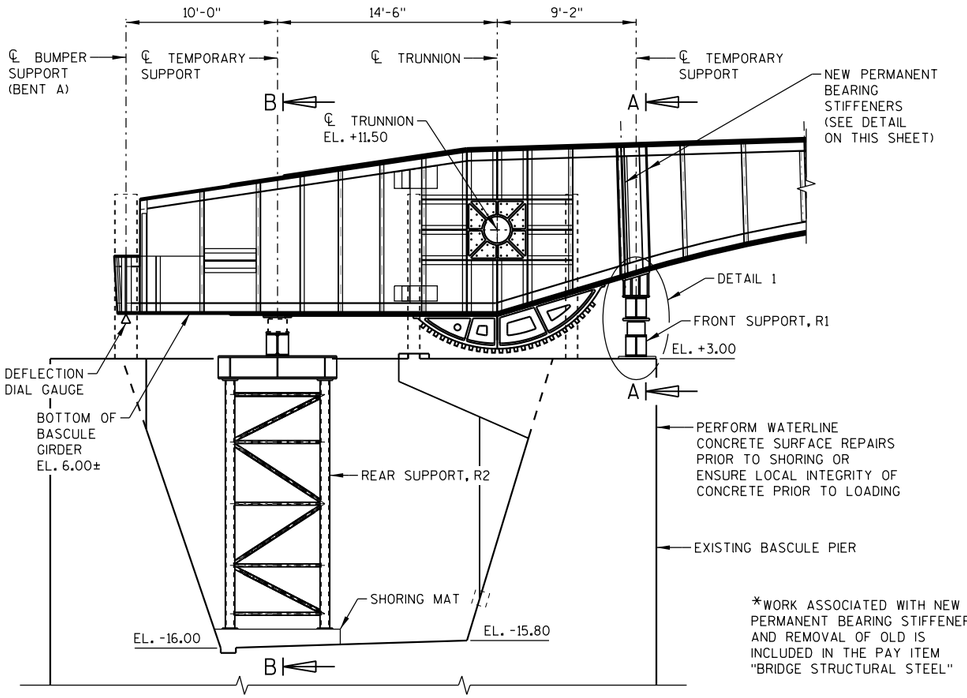
SHEET S32 OF S71

88

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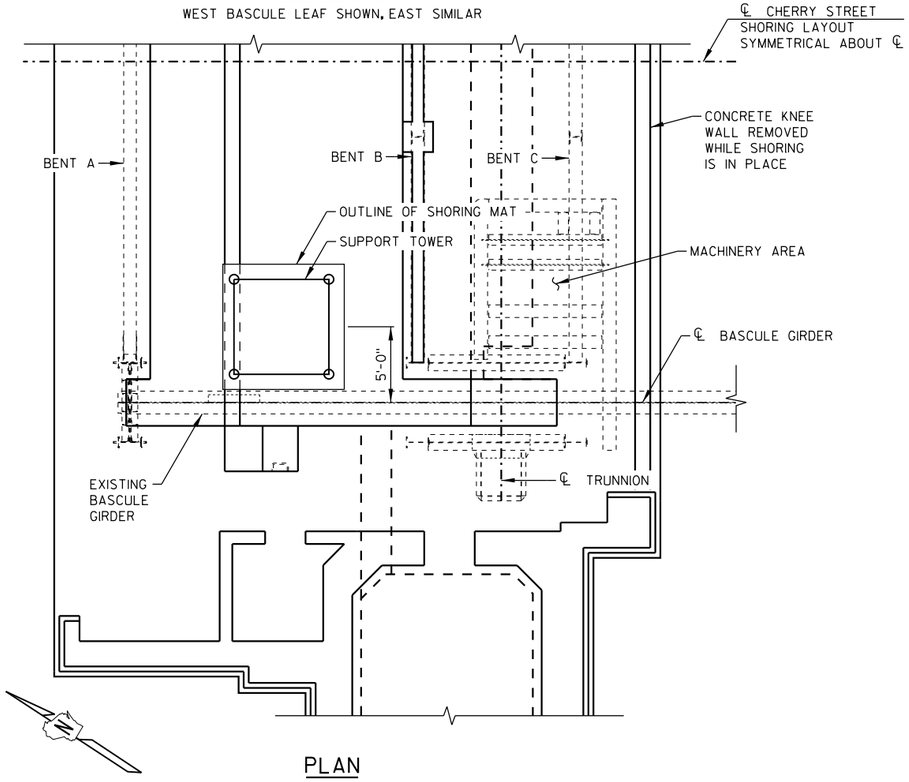
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BATCH PRINT SHEET 33 OF 71



ELEVATION

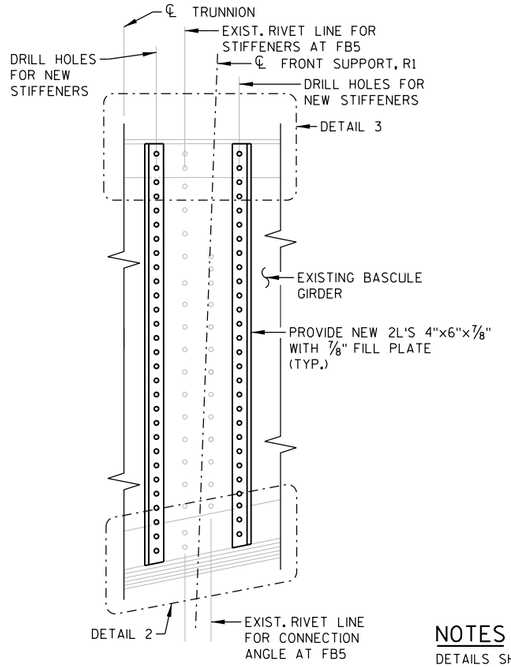
WEST BASCULE LEAF SHOWN, EAST SIMILAR

*WORK ASSOCIATED WITH NEW PERMANENT BEARING STIFFENERS AND REMOVAL OF OLD IS INCLUDED IN THE PAY ITEM "BRIDGE STRUCTURAL STEEL"

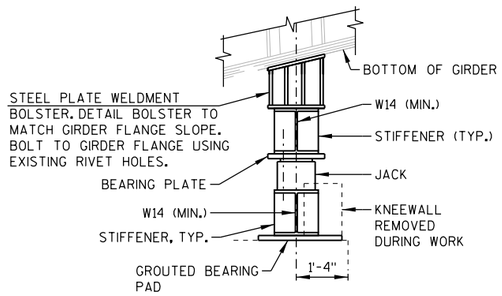


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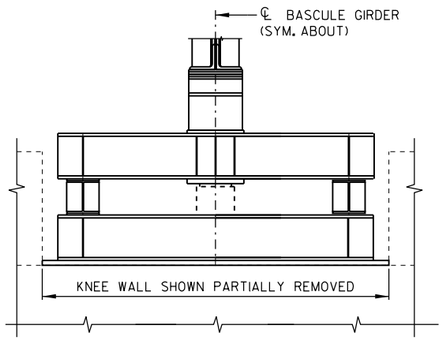
SOUTHWEST QUADRANT SHOWN, OTHERS SIMILAR



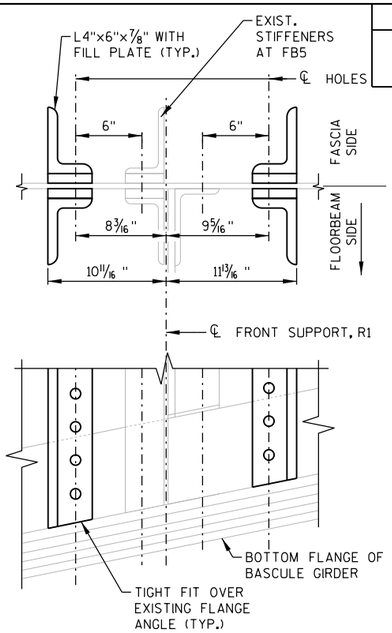
BEARING STIFFENER DETAIL *



DETAIL 1



SECTION A-A



DETAIL 2

(BOTTOM FLANGE SHOWN, TOP FLANGE DETAIL SIMILAR)

NOTES

DETAILS SHOWN ARE CONCEPTUAL BASED ON SIMILAR PREVIOUS MILWAUKEE TRUNNION BASCULE BRIDGE REHABILITATIONS. FINAL DESIGN AND DETAILS ARE TO BE PROVIDED BY THE CONTRACTOR. SEE SPECIAL PROVISIONS. ADDITIONAL SUPPORT POINTS MAY BE REQUIRED.

THE APPROXIMATE WEIGHT OF ONE BASCULE LEAF IN THE EXISTING CONDITION IS 690 KIPS. THIS IS BASED ON ORIGINAL BALANCE CALCULATIONS PROVIDED IN THE ORIGINAL MILWAUKEE BRIDGE COMPANY SHOP DRAWINGS. THE APPROXIMATE FINAL WEIGHT OF ONE BASCULE LEAF AFTER REHABILITATION IS 760 KIPS.

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

FOLLOWING IS A POTENTIAL SEQUENCE FOR TRUNNION REFURBISHMENT AND STRUCTURAL REHABILITATION WHILE TEMPORARILY SUPPORTING THE BASCULE GIRDERS

SUBMIT CONTRACTOR PERFORMED DESIGN AND SHOP DRAWINGS OF THE TEMPORARY SUPPORTING SYSTEM FOR THE ENGINEER'S REVIEW.

REMOVE CONCRETE DECK SLAB OVER BASCULE PIER.

REMOVE FRONT KNEE WALL ON PIER TO MAKE ROOM FOR FRONT SUPPORT.

REMOVE MACHINERY.

REPAIR EXISTING CONCRETE AND PROVIDE GROUT PADS AT POINTS OF SUPPORT WHERE REQUIRED.

INSTALL NEW BEARING STIFFENERS ON GIRDERS AT FRONT AND REAR SUPPORT POINTS.

INSTALL TEMPORARY SUPPORTS UNDER BASCULE GIRDERS.

REMOVE HEEL BLOCK COMPONENTS AT GIRDER TAILS TO PROVIDE SPACE FOR RAISING SPAN. JACK BASCULE SPAN AND INSTALL TEMPORARY SUPPORTS BETWEEN GIRDERS AND TOWERS. SUPPORT GIRDERS ON TEMPORARY SUPPORTS AND SHIMS. REMOVE LOAD FROM JACKS.

DURING JACKING PROVIDE MEANS TO PREVENT LATERAL MOVEMENT OF BASCULE GIRDERS BEFORE JACKING. APPLY JACKING LOAD IN STAGES AND EQUALIZE AMOUNT OF LIFT ON BOTH GIRDERS SIMULTANEOUSLY. MONITOR DEFLECTION OF GIRDERS UTILIZING DIAL GAUGES. DIFFERENTIAL DEFLECTION BETWEEN GIRDERS SHALL NOT EXCEED 1/8-INCH AT ANY TIME. THE TOTAL LIFT SHOULD ONLY BE THE AMOUNT SUFFICIENT TO UNLOAD THE TRUNNION BEARINGS TO ALLOW THE WORK.

PERFORM REQUIRED MECHANICAL WORK ON TRUNNION BEARINGS AND STRUCTURAL WORK ON BASCULE LEAVES. MAINTAIN LATERAL STABILITY OF BASCULE GIRDERS WITH TEMPORARY BRACING BETWEEN THEM, OR BY SYSTEMATICALLY REMOVING AND REPLACING FLOORBEAMS AND LATERAL BRACING COMPONENTS IN STAGES. PERFORM COUNTERWEIGHT CONCRETE REPAIRS, INSTALL COUNTERWEIGHT BLOCKS, AND COMPLETE MACHINERY INSTALLATION.

SET BASCULE LEAF BACK ON TRUNNION BEARINGS LEAVING SHORING TOWERS IN PLACE.

COMPLETE FINAL ALIGNMENT OF THE MACHINERY SYSTEM AND MAKE OPERATIONAL, INCLUDING THE BRAKES.

REMOVE THE SHORING SYSTEM AND COMPLETE THE TESTING OF SPAN OPERATION AND BRIDGE BALANCE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE P-40-864

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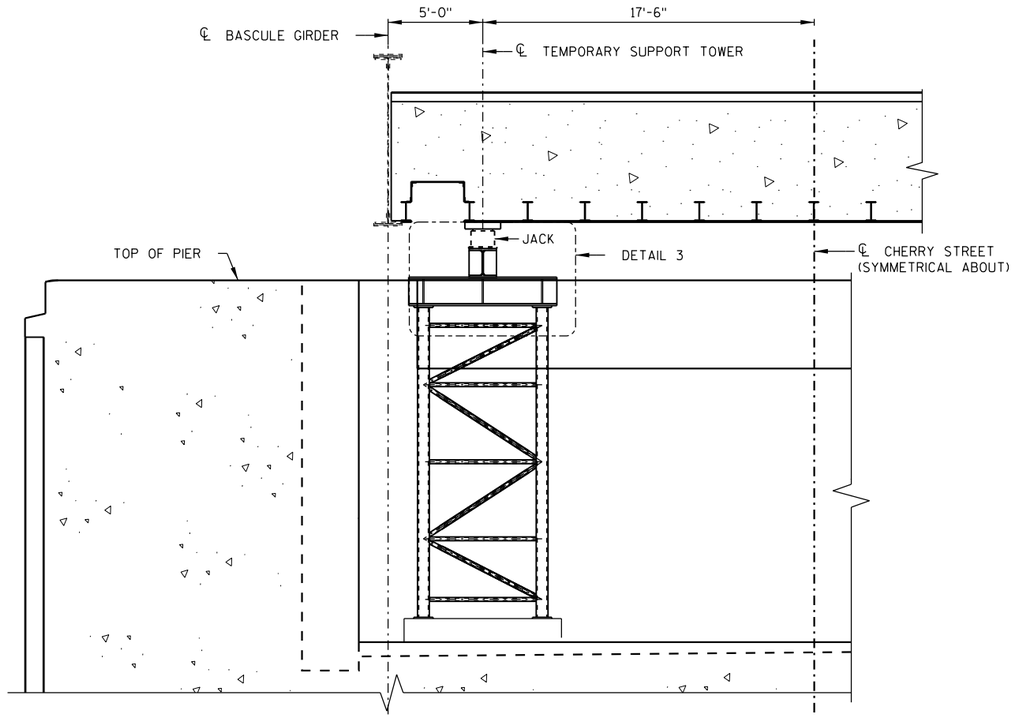
TEMPORARY BASCULE GIRDER SUPPORTS 1

SHEET S33 OF S71
89

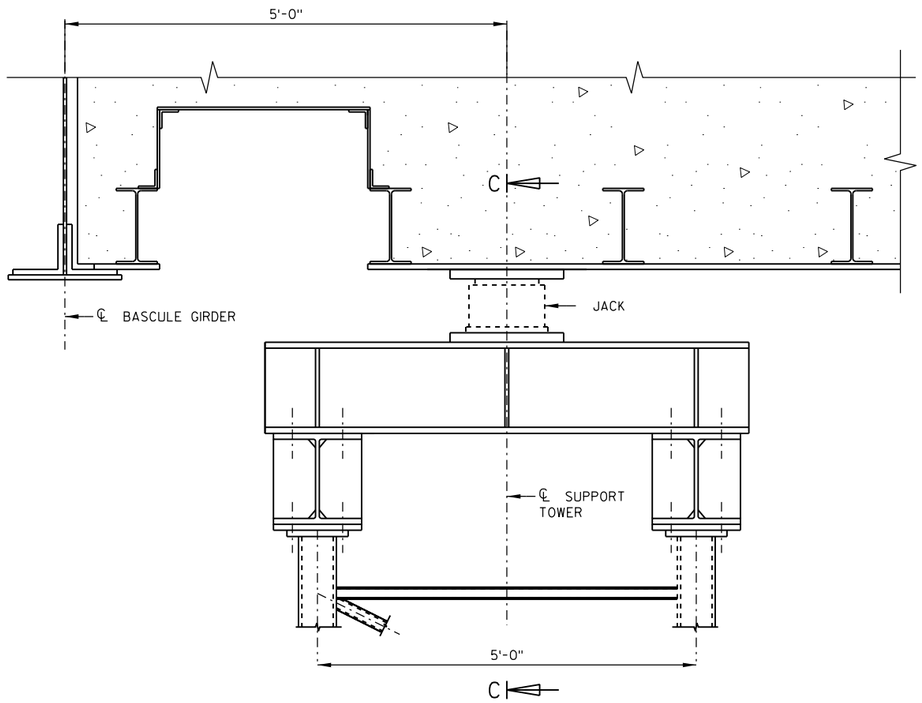
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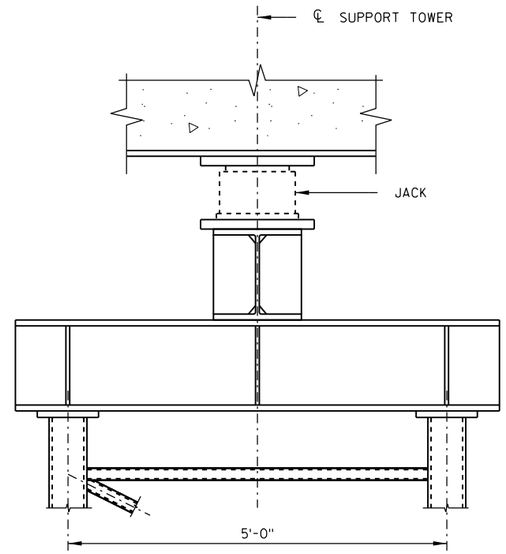
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BATCH PRINT SHEET 34 OF 71



SECTION B-B



DETAIL 3



SECTION C-C

NOTES

SEE SHEET S33 FOR LOCATION OF SECTION B-B.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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TEMPORARY BASCULE GIRDER SUPPORTS 2

SHEET S34 OF S71

90

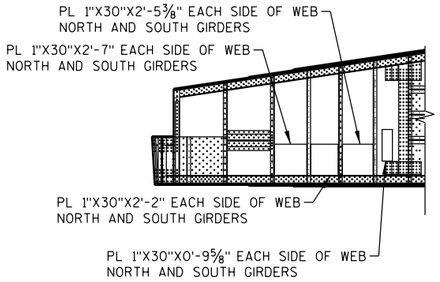
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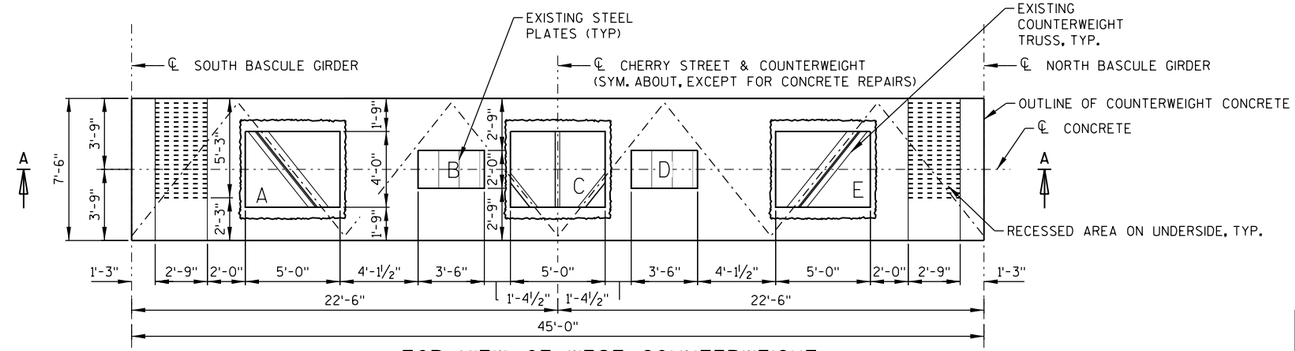
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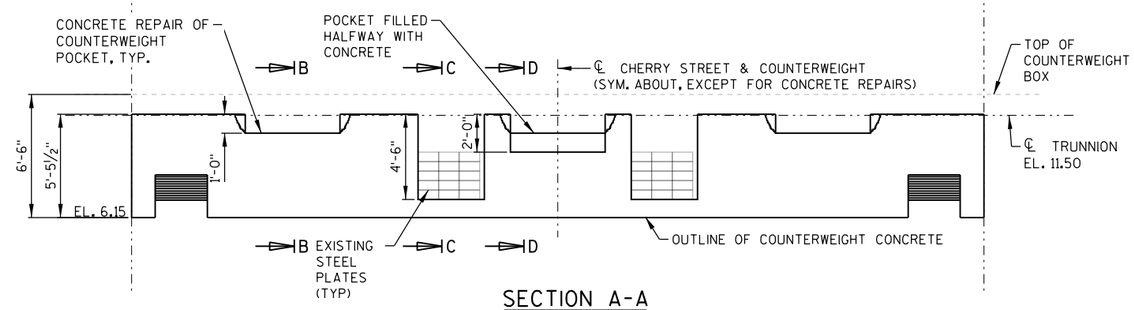


BASCULE GIRDER - SIDE VIEW

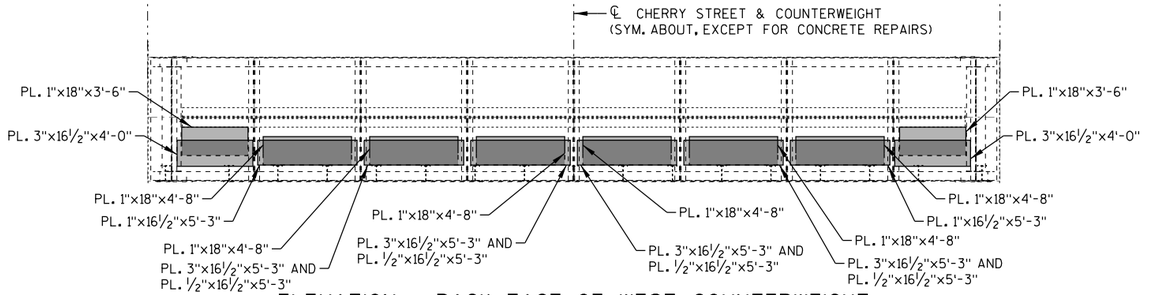
(CONNECT THESE PLATES ON EITHER SIDE OF GIRDERS USING THREADED ANCHOR RODS AS SHOWN ON SHEET S36 AND PROVIDE LOCK NUTS ON BOTH SIDES OF THE WEB)



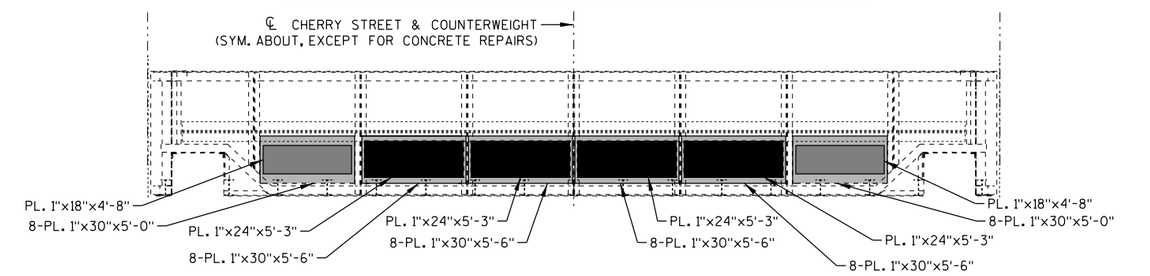
TOP VIEW OF WEST COUNTERWEIGHT



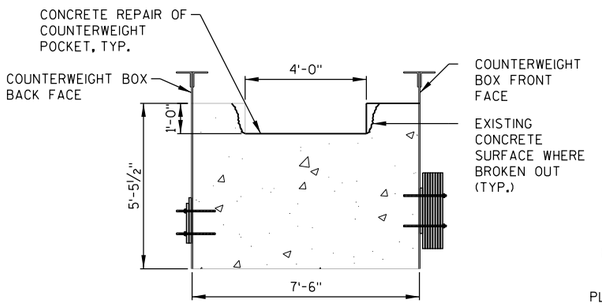
SECTION A-A



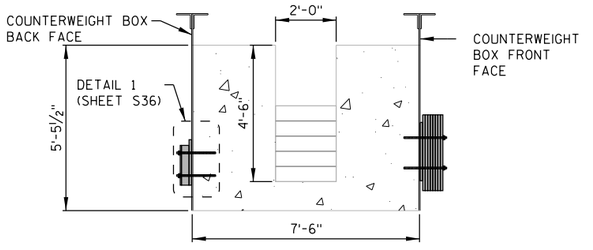
ELEVATION - BACK FACE OF WEST COUNTERWEIGHT



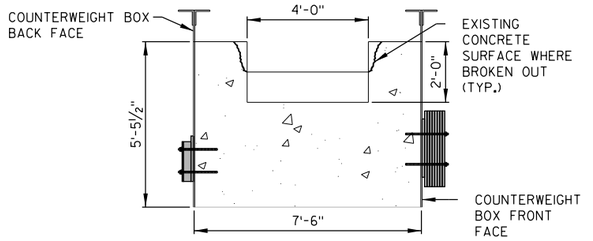
ELEVATION - FRONT FACE OF WEST COUNTERWEIGHT



SECTION B-B



SECTION C-C



SECTION D-D

	WEIGHT OF STEEL PLATES (BACK OF CTWT) (LBS)	WEIGHT OF STEEL PLATES (FRONT OF CTWT) (LBS)	COUNTERWEIGHT REPAIR CONCRETE (CFT)
EAST LEAF	18,770	18,360	5
WEST LEAF	9,360	28,420	21
TOTAL	28,130	46,780	26

NOTES FOR WEST AND EAST COUNTERWEIGHT REPAIRS

PERFORM CONCRETE REPAIRS AS INDICATED TO RESTORE ORIGINAL DIMENSIONS OF THE COUNTERWEIGHT POCKETS.

PROVIDE ALL EQUIPMENT AND LABOR NECESSARY FOR MAKING ADJUSTMENTS TO COUNTERWEIGHT BALANCE BLOCK CONFIGURATION TO THE SATISFACTION OF THE ENGINEER.

PLACE CONCRETE BALANCE BLOCKS AND STEEL BALANCE PLATES IN COUNTERWEIGHT POCKETS BASED ON COUNTERWEIGHT CALCULATIONS THAT ACCOUNT FOR ACTUAL WEIGHTS OF COMPONENTS TO BE REMOVED AND ADDED TO THE BASCULE LEAVES.

THE BALANCE BLOCK ARRANGEMENT SHOWN IN THE COUNTERWEIGHT ADJUSTMENT TABLE IS BASED ON THE FOLLOWING ESTIMATED WEIGHTS
- REMOVAL OF EXISTING GRID DECK AND SUPPORTING PURLINS = 17.4 PSF
- REMOVAL OF TIMBER SIDEWALK = 12 PSF
- NEW GALVANIZED GRID DECK INCLUDING CONNECTION PLATES, SPLICE MATERIAL AND ATTACHMENTS = 19.8 PSF
- CONCRETE FILL FOR GRID DECK = 115 PCF
- FIBERGLASS SIDEWALK PLATE = 6.3 PSF

DETERMINE ACTUAL WEIGHTS OF COMPONENTS BEING REMOVED AND INSTALLED AND UTILIZE THEM IN AN INDEPENDENT MATHEMATICAL BALANCE CALCULATION TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AS DESCRIBED IN THE SPECIAL PROVISIONS.

ADJUST NUMBER AND LOCATION OF BALANCE BLOCKS AND STEEL BALANCE PLATES IN COUNTERWEIGHT POCKETS OR ATTACHED AS SHOWN ON THE PLANS BASED ON INFORMATION OBTAINED DURING STRAIN-GAUGE BALANCE TESTING.

CONTRACTOR TO ADJUST STEEL PLATE SIZES TO SUIT SITE CONSTRAINTS. ADDITIONAL ANCHORAGE MAY BE REQUIRED TO ACCOMMODATE DIFFERENT PLATE SIZES.

PROOF TEST ONE ANCHOR PER STEEL PLATE LOCATION TO 1,000 LBS OF TENSILE LOAD.

VOIDS THAT ARE ENCOUNTERED IN THE COUNTERWEIGHT CONCRETE DURING PREPARATION FOR POST-INSTALLED ANCHORS SHOULD UTILIZE EXCESS ADHESIVE MATERIAL UNTIL VOIDS ARE FILLED. VOIDS LARGER THAN 2X ANCHOR DIAMETER SHOULD BE REEVALUATED AND REPORTED TO THE ENGINEER BEFORE PROCEEDING.

COST OF FURNISHING, CLEANING AND PAINTING, PLACING, ADJUSTING/RE-ADJUSTING NEW STEEL PLATES IS INCLUDED IN PAY ITEM "NON-STRUCTURAL STEEL BALLAST." COST OF CONCRETE BLOCKS AND CONCRETE REPAIRS ON COUNTERWEIGHT IS INCLUDED IN PAY ITEM "COUNTERWEIGHT CONCRETE MODIFICATION." SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.

SEE S36 FOR ADDITIONAL DETAILS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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WEST COUNTERWEIGHT REPAIR AND ADJUSTMENT DETAILS

SHEET S35 OF S71
91

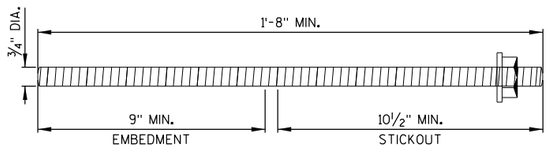
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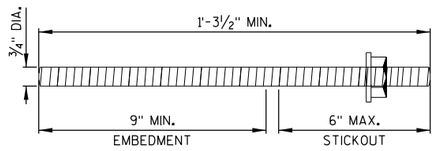
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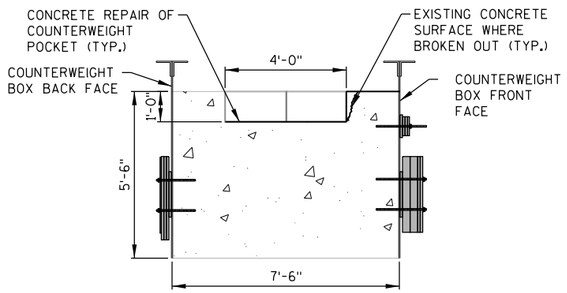
FRONT THREADED ANCHOR ROD DETAIL

(GALVANIZE THREADED ROD, WASHER, AND LOCK NUT)

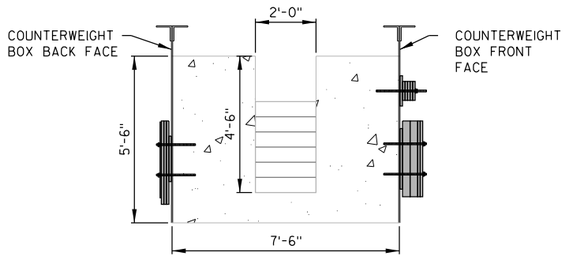


BACK THREADED ANCHOR ROD DETAIL

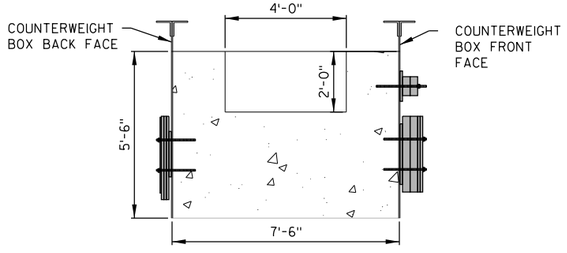
(GALVANIZE THREADED ROD, WASHER, AND LOCK NUT)



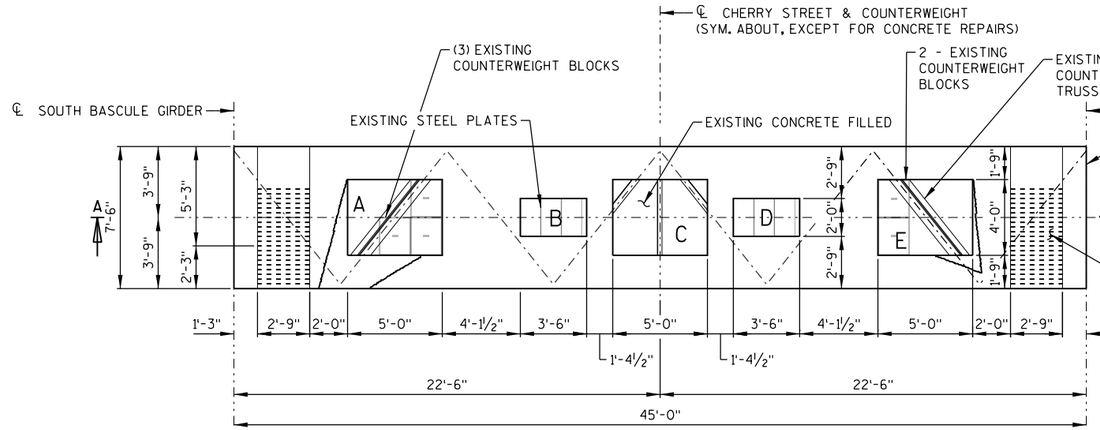
SECTION B-B



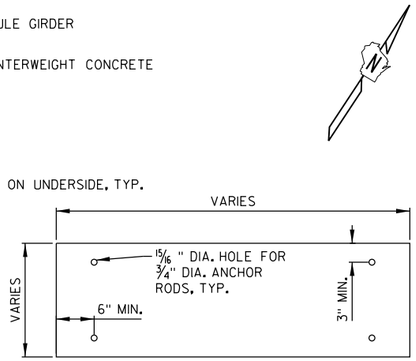
SECTION C-C



SECTION D-D

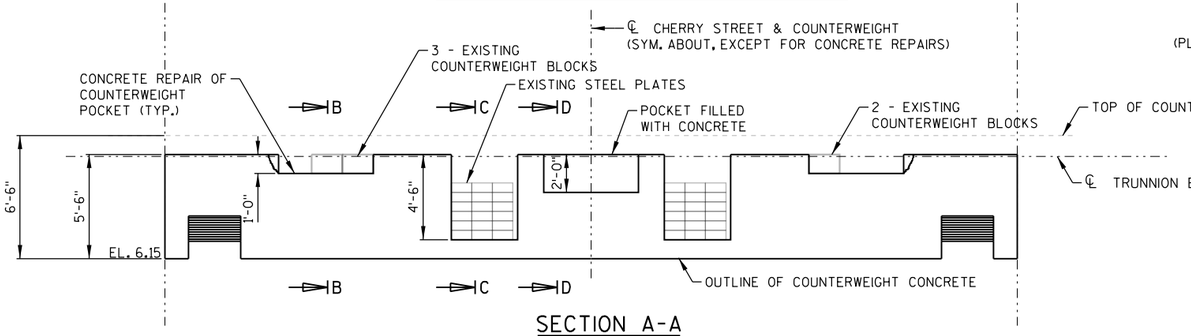


TOP VIEW OF EAST COUNTERWEIGHT

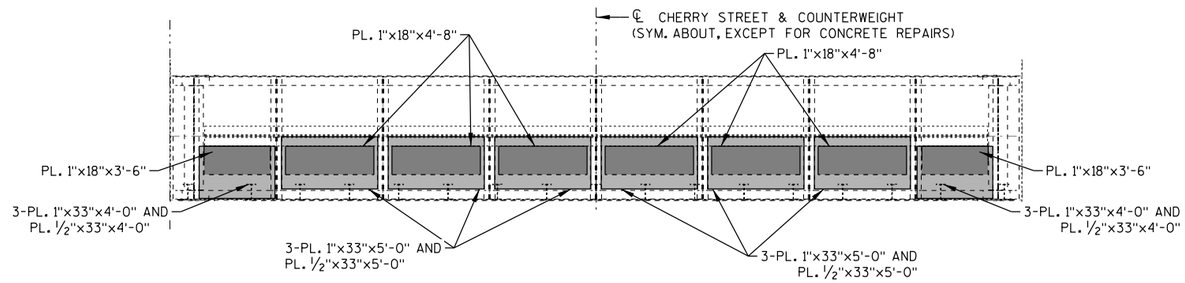


STEEL PLATE DETAIL

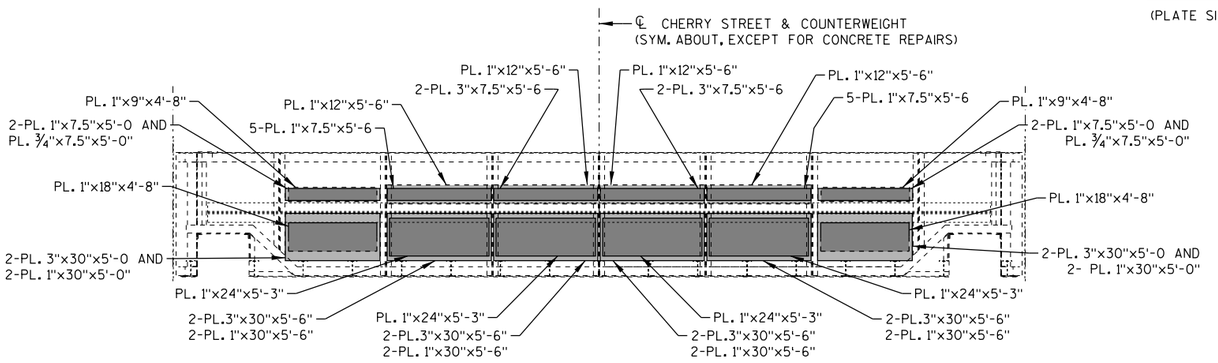
(PLATE SIZE AND PLACEMENT VARIES, SEE ELVATION VIEWS)
(PLATES TO BE PAINTED WITH APPROVED 3 COAT PAINT SYSTEM)



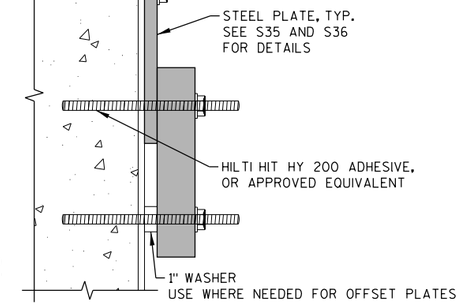
SECTION A-A



ELEVATION - BACK FACE OF EAST COUNTERWEIGHT



ELEVATION - FRONT FACE OF EAST COUNTERWEIGHT



DETAIL 1

TYPICAL PLATE ATTACHMENT DETAIL

(PLATE SIZE AND PLACEMENT VARIES, SEE ELVATION VIEWS)

NOTES

SEE SHEET S35 FOR ADDITIONAL DETAILS AND NOTES.

NO.	DATE	REVISION	BY

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STRUCTURE P-40-864

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EAST COUNTERWEIGHT REPAIR AND ADJUSTMENT DETAILS

SHEET S36 OF S71

92

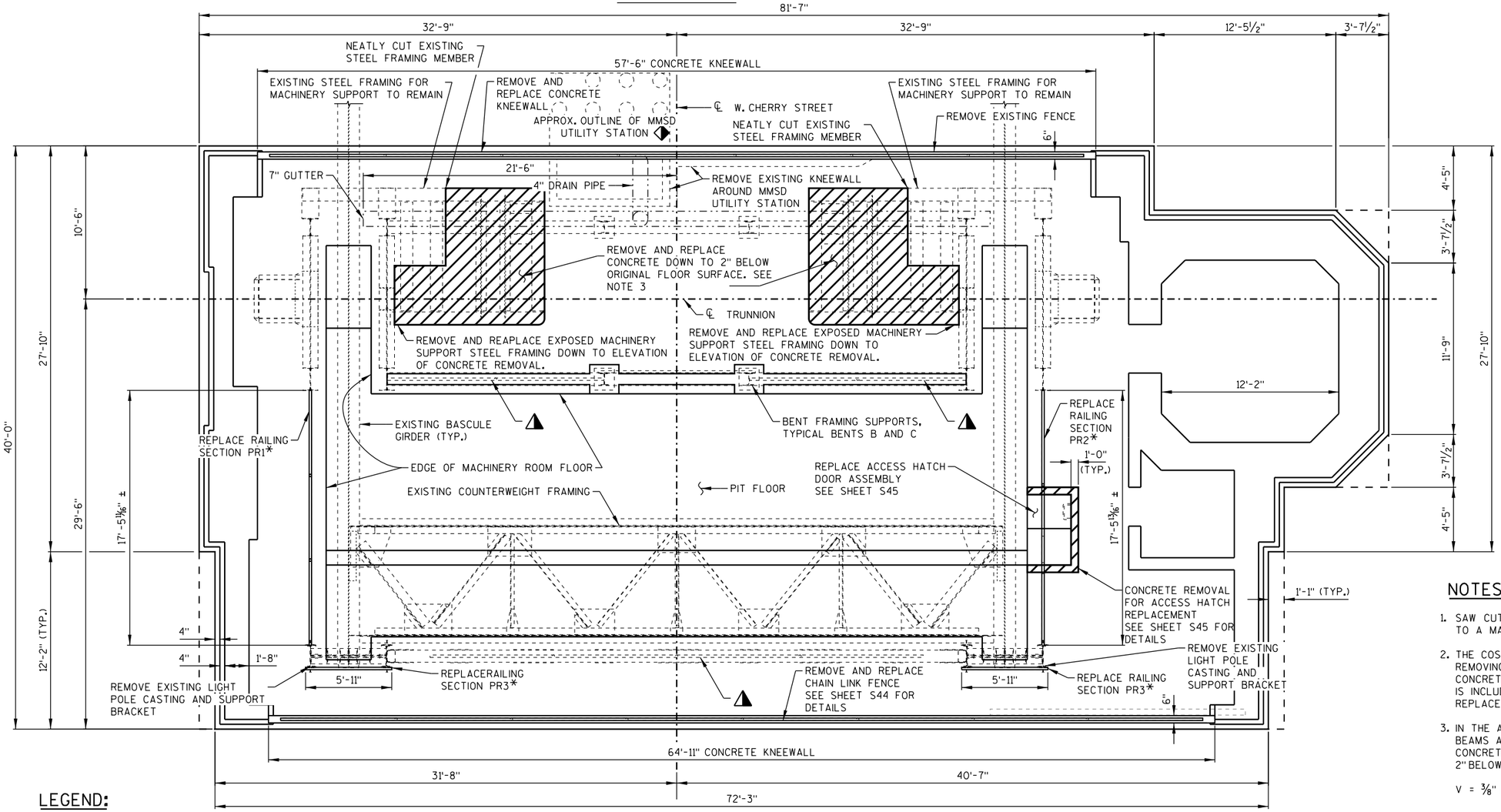
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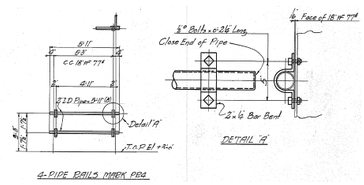
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PLOT DATE: 3/27/2024 PLOT TIME: 9:10:53 AM
BATCH PRINT SHEET 1 OF 1

STATE PROJECT NUMBER
2984-26-73

CHANNEL SIDE



PLAN OF BASCULE PIER AT MACHINERY LEVEL



PIPE RAILING SECTION (PR3)

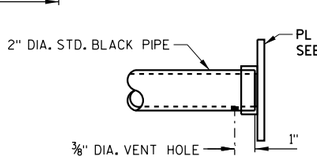
LEGEND:

- ◭ CLEAN AND PAINT SERVICE RAILING
- ◈ EXISTING MMSD STATION TO BE REMOVED.
- ▨ CONCRETE REMOVAL, AND REPLACEMENT
- * COST INCLUDED WITH PAY ITEM "STEEL PIPE RAILING"

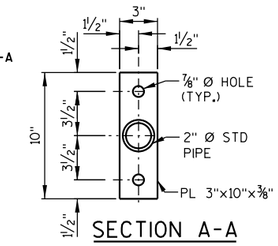
NOTES:

1. SAW CUT PERIMETERS OF ALL CONCRETE REMOVAL AREAS TO A MAX. DEPTH OF 1"
2. THE COST OF SAW CUTTING, REMOVING CONCRETE, REMOVING MACHINERY SUPPORT STEEL ABOVE THE CONCRETE REMOVAL ELEVATION, AND REPLACING CONCRETE IS INCLUDED IN THE ITEM "CONCRETE REMOVAL AND REPLACEMENT AT MACHINERY FLOOR"
3. IN THE AREAS OF THE EXISTING MACHINERY SUPPORT BEAMS AND BOTH SIDES OF THE LOADING GIRDERS, REMOVE CONCRETE BETWEEN PLATFORM BEAMS TO AN ELEVATION 2" BELOW THE ORIGINAL FLOOR SURFACE.

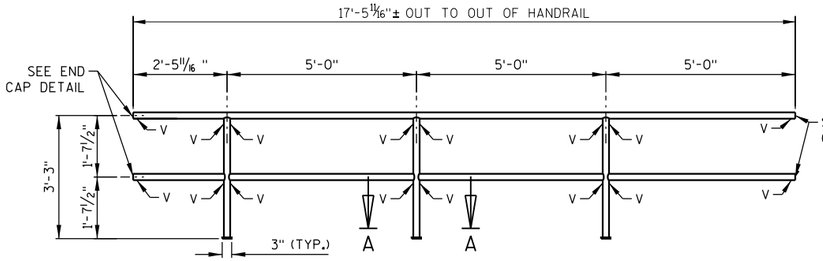
   V = ⅜" DIA. DRILLED VENT HOLE 1" FROM JOINT.



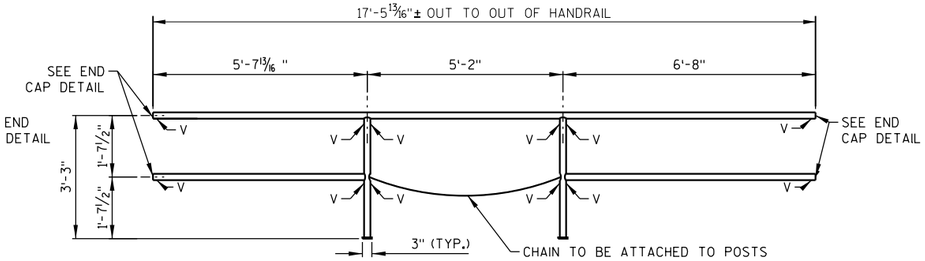
END CAP DETAIL



SECTION A-A



PIPE RAILING SECTION (PR1)



PIPE RAILING SECTION (PR2)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

EAST BASCULE PIER MACHINERY LEVEL PLAN

SHEET S37 OF S71
93

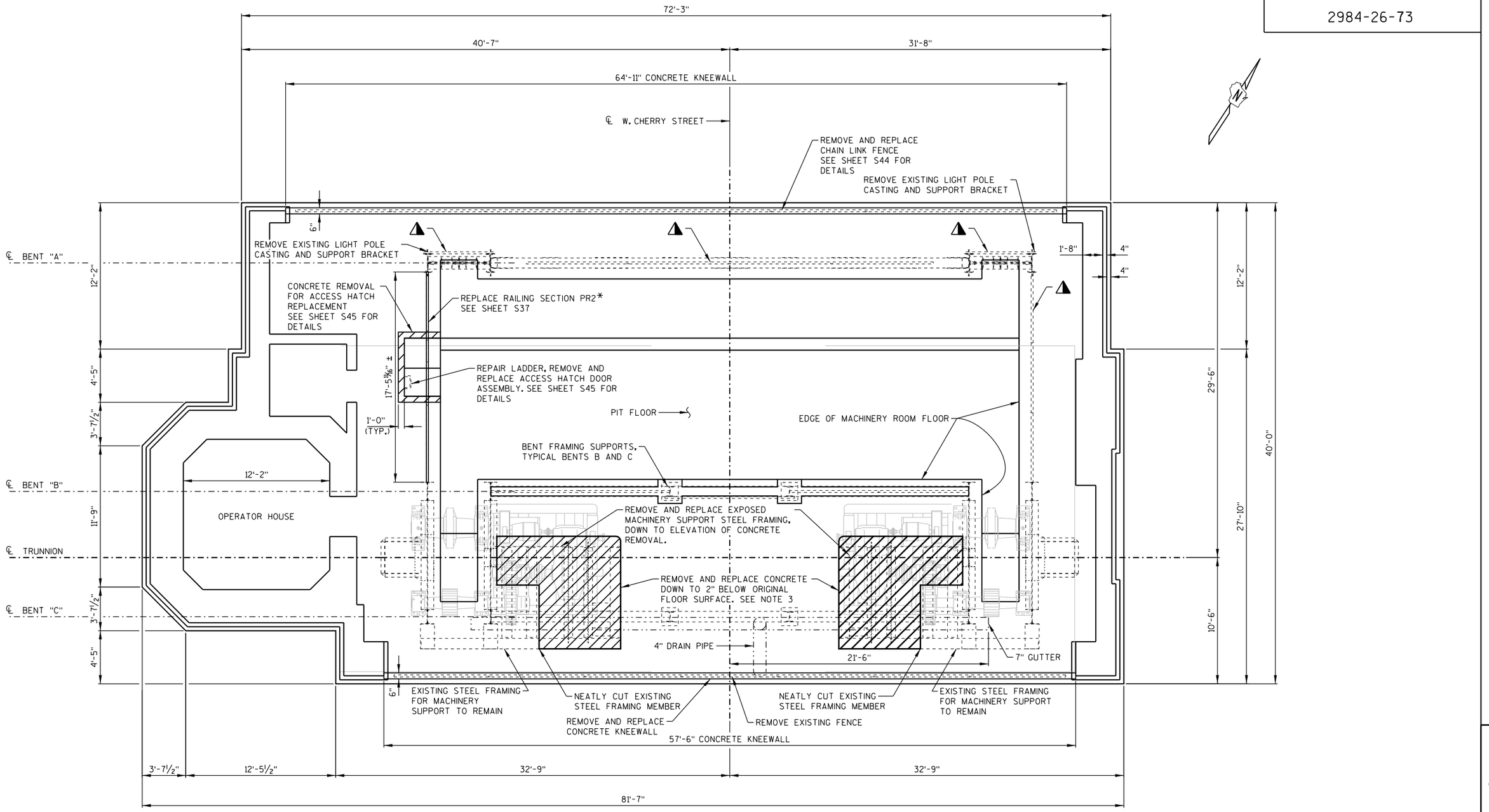
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PLOT DATE: 3/27/2024 PLOT TIME: 9:19:16 AM
BATCH PRINT SHEET 38 OF 71

STATE PROJECT NUMBER

2984-26-73



LEGEND:

- ◭ CLEAN AND PAINT SERVICE RAILING
- ▨ CONCRETE REMOVAL, AND REPLACEMENT
- * COST INCLUDED WITH PAY ITEM "STEEL PIPE RAILING"

CHANNEL SIDE

PLAN OF BASCULE PIER AT MACHINERY LEVEL

NOTES:

1. SAW CUT PERIMETERS OF ALL CONCRETE REMOVAL AREAS TO A MAX DEPTH OF 1".
2. THE COST OF SAW CUTTING, REMOVING CONCRETE, REMOVING MACHINERY SUPPORT STEEL ABOVE THE CONCRETE REMOVAL ELEVATION, AND REPLACING CONCRETE IS INCLUDED IN THE ITEM "CONCRETE REMOVAL AND REPLACEMENT AT MACHINERY FLOOR."
3. IN THE AREAS OF THE EXISTING MACHINERY SUPPORT BEAMS AND BOTH SIDES OF THE LOADING GIRDERS, REMOVE CONCRETE BETWEEN THE PLATFORM BEAMS TO AN ELEVATION 2" BELOW THE ORIGINAL FLOOR SURFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

WEST BASCULE PIER MACHINERY LEVEL PLAN

SHEET S38 OF S71

94

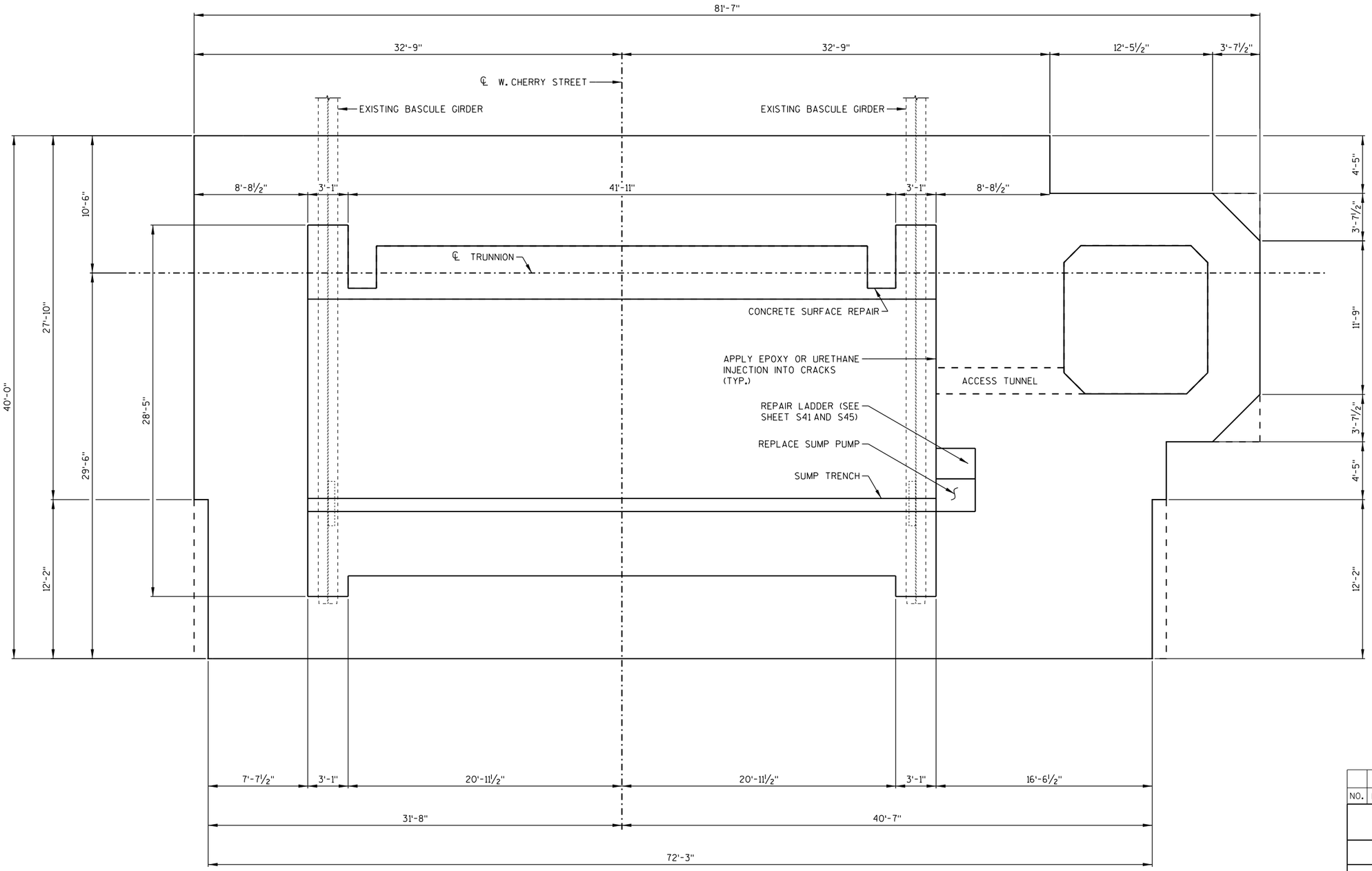
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PLOT DATE: 3/27/2024 PLOT TIME: 9:19:25 AM
BATCH PRINT SHEET 39 OF 71

STATE PROJECT NUMBER
2984-26-73

CHANNEL SIDE



PLAN OF BASCULE PIER AT PIT LEVEL

(EAST PIER SHOWN, WEST PIER SIMILAR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY	SS	PLANS CK'D.	GTS

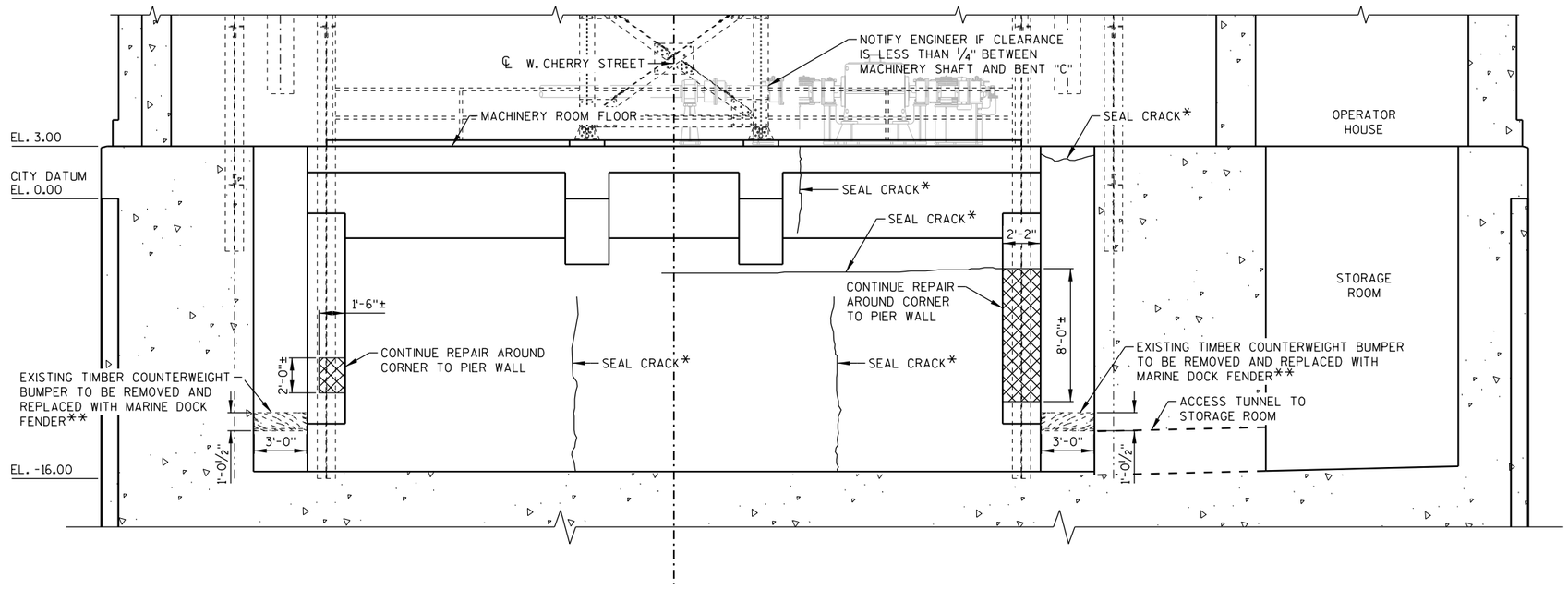
BASCULE PIER
PIT LEVEL PLAN

SHEET S39 OF S71
95

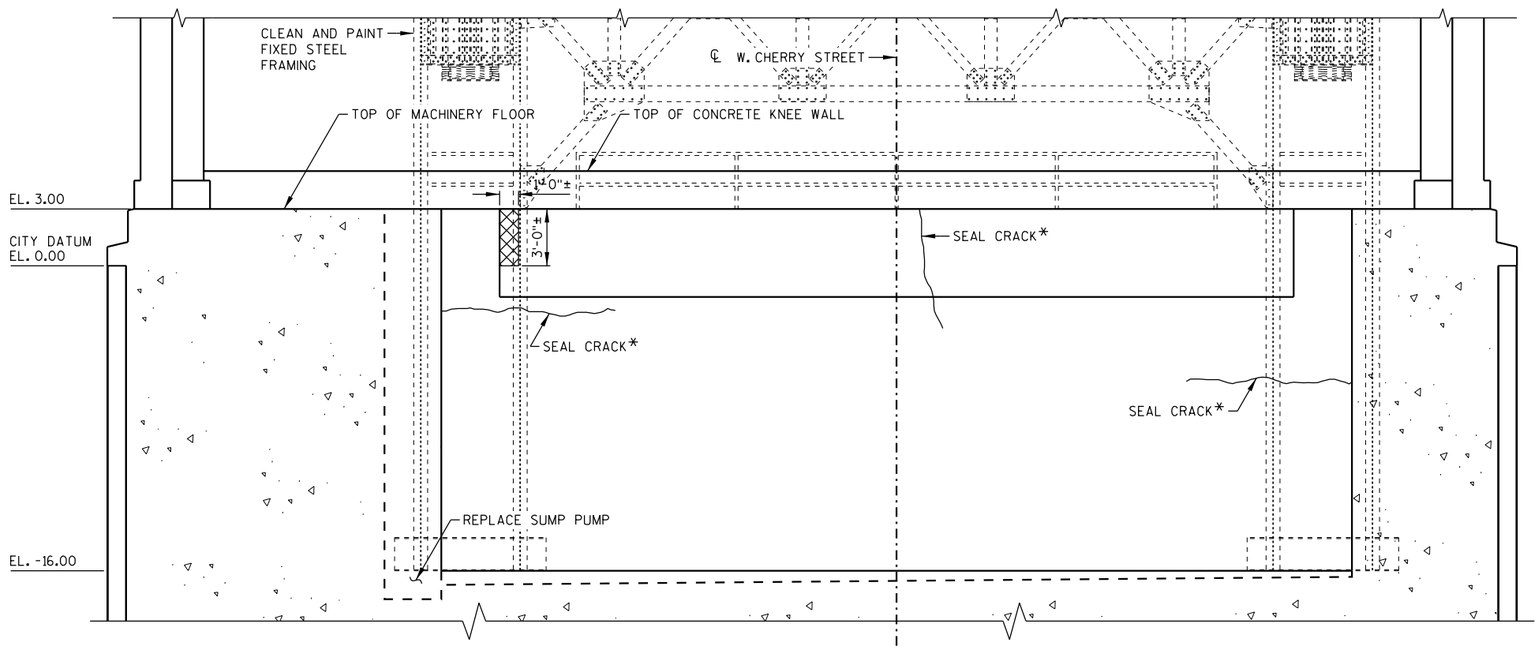
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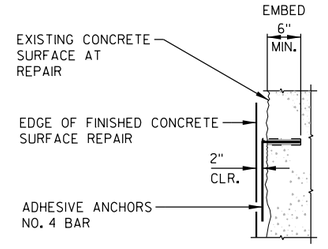
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PLOT DATE: 3/27/2024 PLOT TIME: 9:19:34 AM BATCH PRINT SHEET 40 OF 71



SECTION THROUGH WEST BASCULE PIER LOOKING EAST AT EAST WALL



ELEVATION OF WEST BASCULE PIER LOOKING WEST AT WEST WALL



ADHESIVE ANCHOR DETAIL

ANCHORS SHALL BE APPROVED FOR USE IN CRACKED CONCRETE.

NOTES

DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.

SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.

LEGEND

CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM

** COST OF TIMBER BUMPER REMOVAL INCLUDED WITH PAY ITEM "TIMBER FENDER REMOVAL" AND COST OF REPLACEMENT BUMPER INCLUDED WITH PAY ITEM "MARINE DOCK FENDER"

NO.	DATE	REVISION	BY

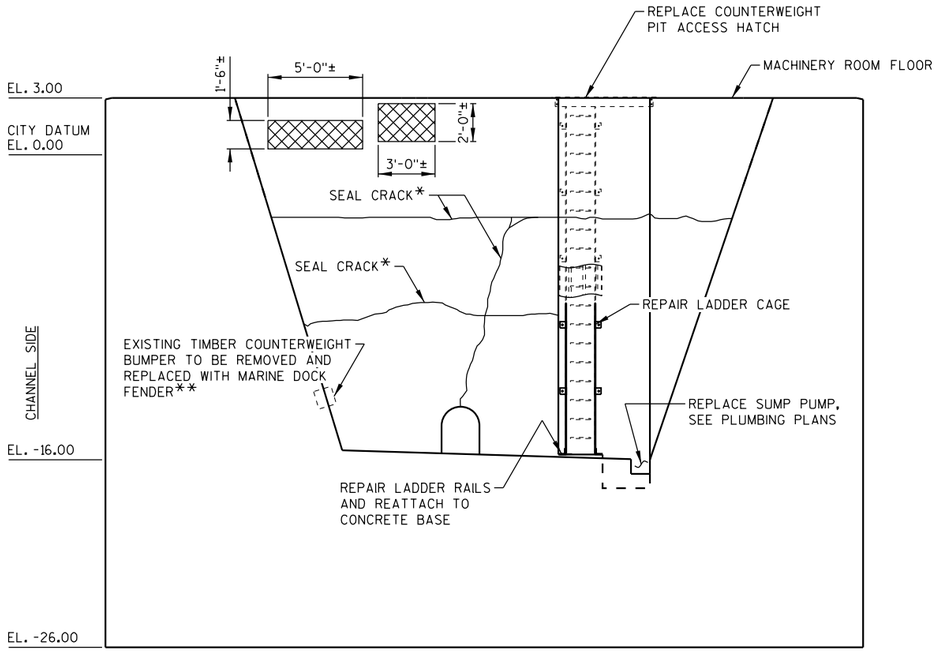
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

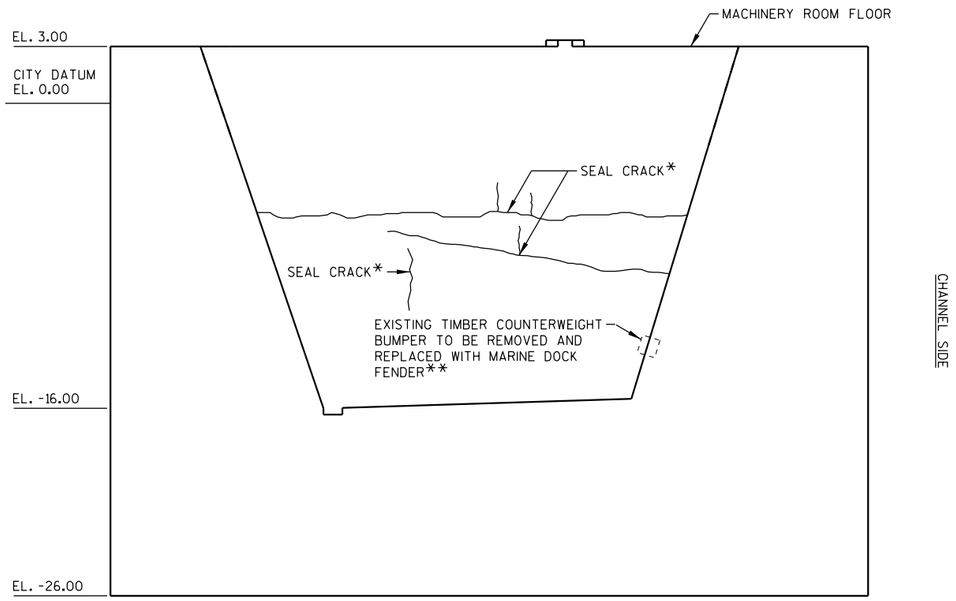
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WEST BASCULE PIER INTERIOR WALL REPAIRS 1

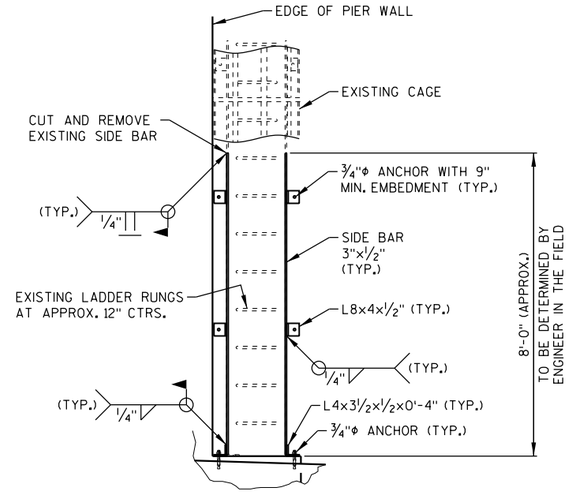
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PLOT DATE: 3/27/2024 PLOT TIME: 9:19:43 AM
BATCH PRINT SHEET 41 OF 71



ELEVATION OF WEST BASCULE PIER
LOOKING SOUTH AT SOUTH WALL



ELEVATION OF WEST BASCULE PIER
LOOKING NORTH AT NORTH WALL



LADDER REPAIR DETAIL

PAINT NEW STEEL TO MATCH THE PROPOSED BRIDGE COLOR SHOWN ON SHEET S02 GENERAL NOTES.
SEE S45 FOR REPAIR DETAILS.

NOTES

DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.

SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.

LEGEND

CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM

** COST OF TIMBER BUMPER REMOVAL INCLUDED WITH PAY ITEM "TIMBER FENDER REMOVAL" AND COST OF REPLACEMENT BUMPER INCLUDED WITH PAY ITEM "MARINE DOCK FENDER"

NO.	DATE	REVISION	BY

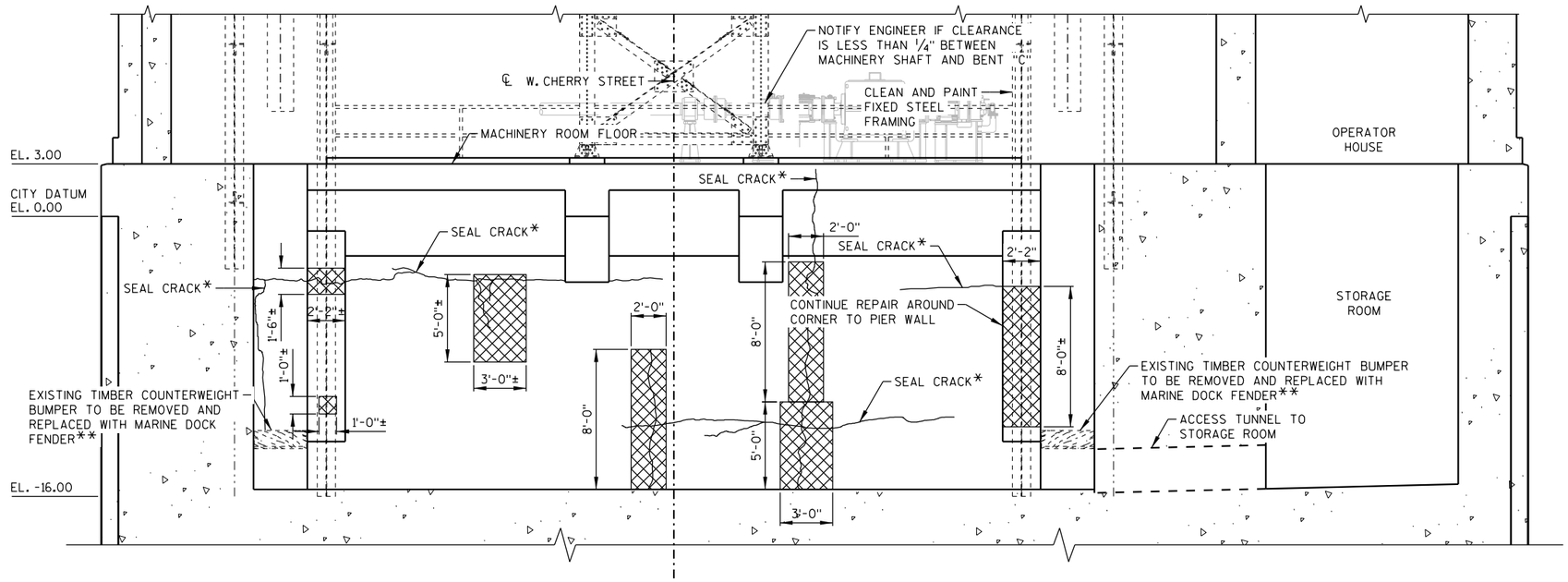
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

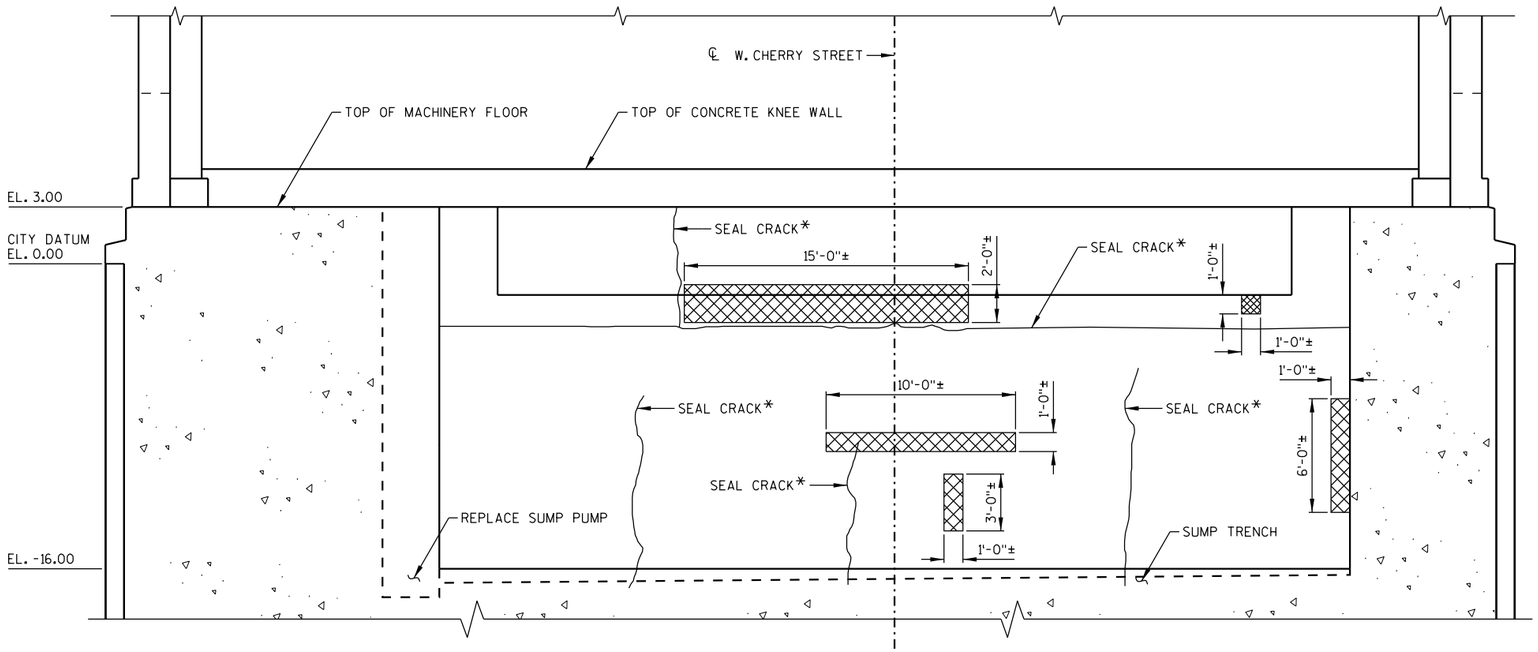
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WEST BASCULE PIER INTERIOR WALL REPAIRS 2

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PLOT DATE: 3/27/2024 PLOT TIME: 9:19:51 AM
BATCH PRINT SHEET 42 OF 71



SECTION THROUGH EAST BASCULE PIER
LOOKING WEST AT WEST WALL



SECTION THROUGH EAST BASCULE PIER
LOOKING EAST AT EAST WALL

NOTES

DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.

SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.

LEGEND

CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM

** COST OF TIMBER BUMPER REMOVAL INCLUDED WITH PAY ITEM "TIMBER FENDER REMOVAL" AND COST OF REPLACEMENT BUMPER INCLUDED WITH PAY ITEM "MARINE DOCK FENDER"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

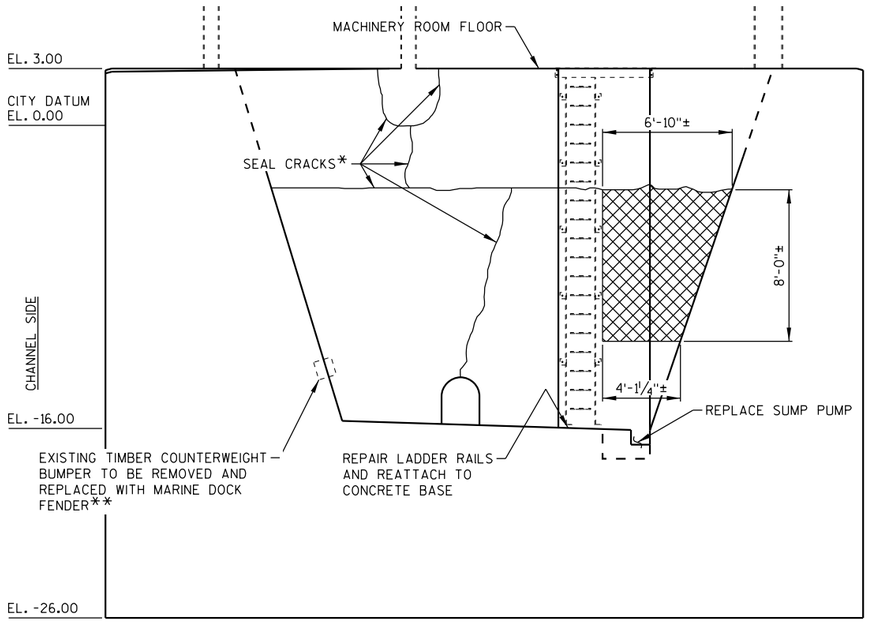
EAST BASCULE PIER INTERIOR WALL REPAIRS 1

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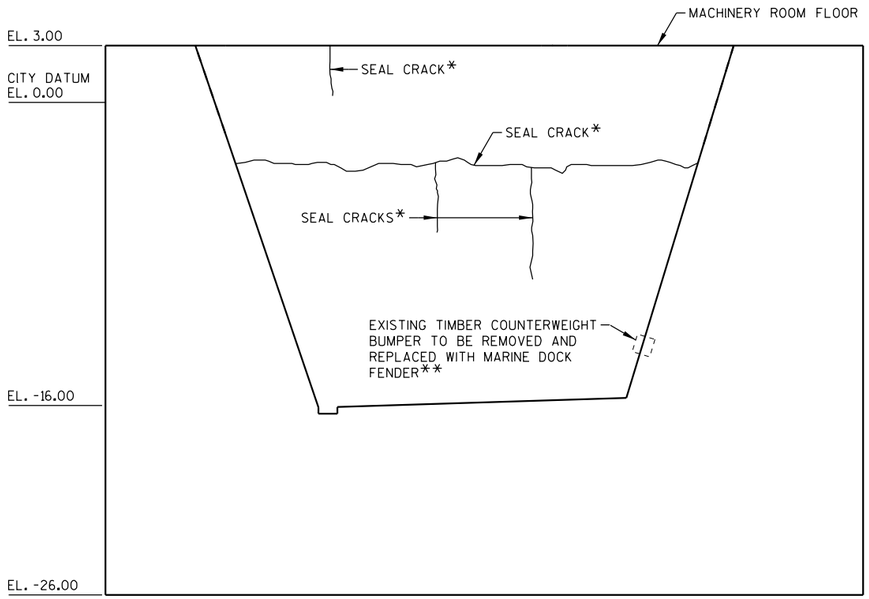
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PLOT DATE: 3/27/2024 PLOT TIME: 9:19:59 AM BATCH PRINT SHEET 43 OF 71

STATE PROJECT NUMBER
2984-26-73



ELEVATION OF EAST BASCULE PIER
LOOKING NORTH AT NORTH WALL



CHANNEL SIDE

ELEVATION OF EAST BASCULE PIER
LOOKING SOUTH AT SOUTH WALL

NOTES

DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.

SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.

LEGEND

CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM

** COST OF TIMBER BUMPER REMOVAL INCLUDED WITH PAY ITEM "TIMBER FENDER REMOVAL" AND COST OF REPLACEMENT BUMPER INCLUDED WITH PAY ITEM "MARINE DOCK FENDER"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY	SS	PLANS CK'D.	GTS

EAST BASCULE PIER
INTERIOR WALL
REPAIRS 2

SHEET S43 OF S71
99

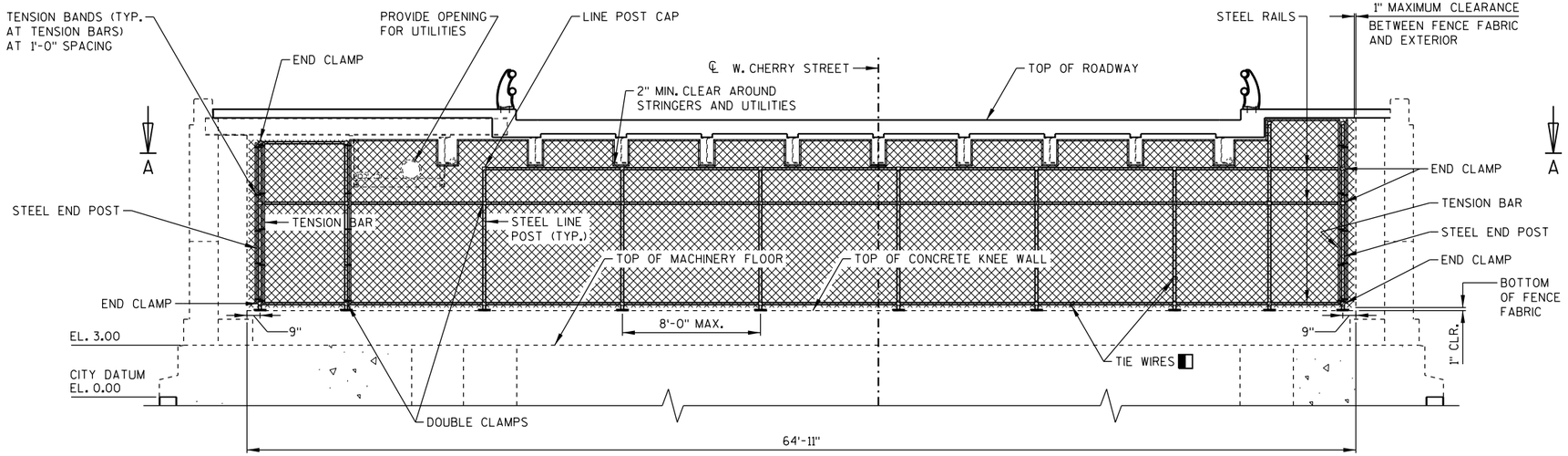
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BATCH PRINT SHEET 44 OF 71

STATE PROJECT NUMBER

2984-26-73

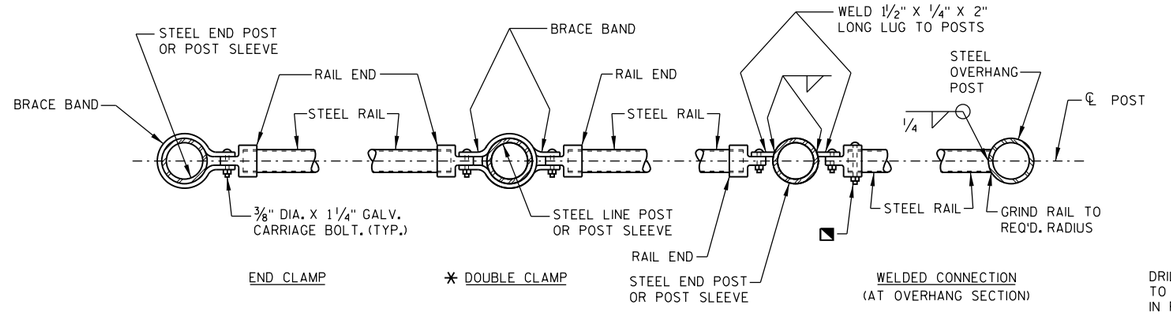


CROSS SECTION THROUGH PIER

LOOKING TOWARD ABUTMENT

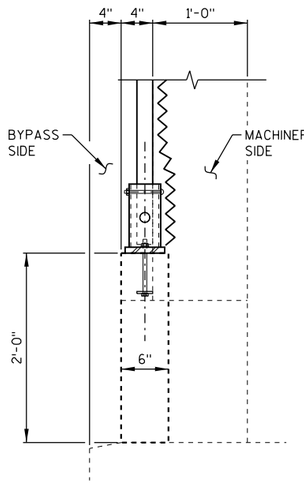
FENCE MEMBER SIZE & WEIGHT

STEEL FENCE MEMBER	OUTSIDE DIAMETER (INCHES)	WEIGHT (LB/FT)
RAILS	1.660	2.27
END POST	2.875	5.80
OVERHANG POST	2.875	5.80
LINE POST	2.375	3.65
POST SLEEVE	4.000	9.12



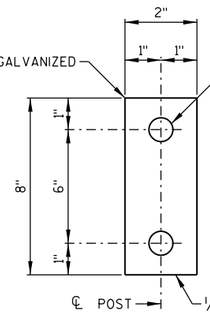
SECTION A-A

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



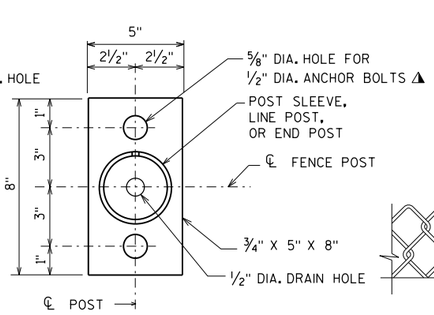
SECTION THRU FENCE

SCALE: 5:1

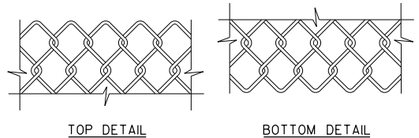


ANCHOR PLATE

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

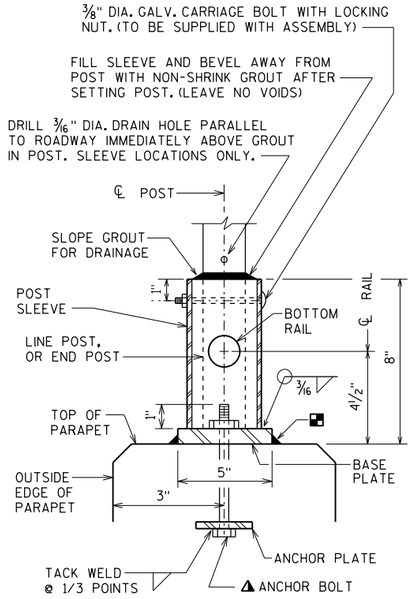


BASE PLATE



FENCE FABRIC

FENCE FABRIC WOVEN OF 9-GAGE WIRE IN 1-INCH DIAMOND PATTERN MESH WITH BOTH THE TOP AND BOTTOM SELVAGES KNUCKLED.



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.

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 BRIDGE SPECIAL PROVISION "FENCE CHAIN LINK POLYMER-COATED 10-FT. P-40-864".

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

THE BID ITEM SHALL BE "FENCE CHAIN LINK POLYMER-COATED 10-FT. P-40-864".

COMPLETE ANY REQUIRED WELDING OF COMPONENTS BEFORE GALVANIZING.

POST 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 HORIZONTALLY ALONG THE C/L OF THE POST.

WORK THIS SHEET WITH SHEET S37 AND S38.

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.

✳ ALTERNATE TO DOUBLE CLAMP: USE LINE RAIL CLAMP (BOULEVARD) OR 180° BRACE BAND, WHICH MAY BE USED WHEN THE POSTS ARE EITHER BOLTED TO THE POST SLEEVES OR DIRECTLY WELDED TO THE BASE PLATE.

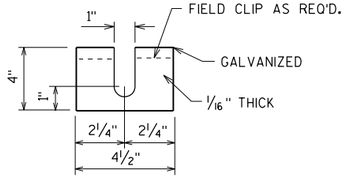
◭ ½" DIA. X 6⅞" LONG GALVANIZED HEX BOLT WITH NUT & WASHER. ☆

☆ 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.

◧ ATTACH FABRIC TO RAILS, AND TO POSTS WITHOUT TENSION BANDS, WITH TIE WIRES (ROUND, 9-GAGE) SPACED AT 1'-0".

◪ BOLT RAIL TO RAIL END TO SECURE OVERHANG SECTION. ALTERNATE IS TO WELD RAIL DIRECTLY TO END POST.

MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 20'-0". LOCATE SPLICES NEAR ¼ POINT OF POST SPACING.



POST SHIM DETAILS

SHIMS REQUIRED ONLY WHEN END POSTS AND LINE POSTS ARE WELDED TO BASE PLATES. PROVIDE 4 SHIMS PER POST. USE WHERE REQUIRED FOR ALIGNMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

BASCULE PIER FENCE DETAILS

SHEET S44 OF S71
100

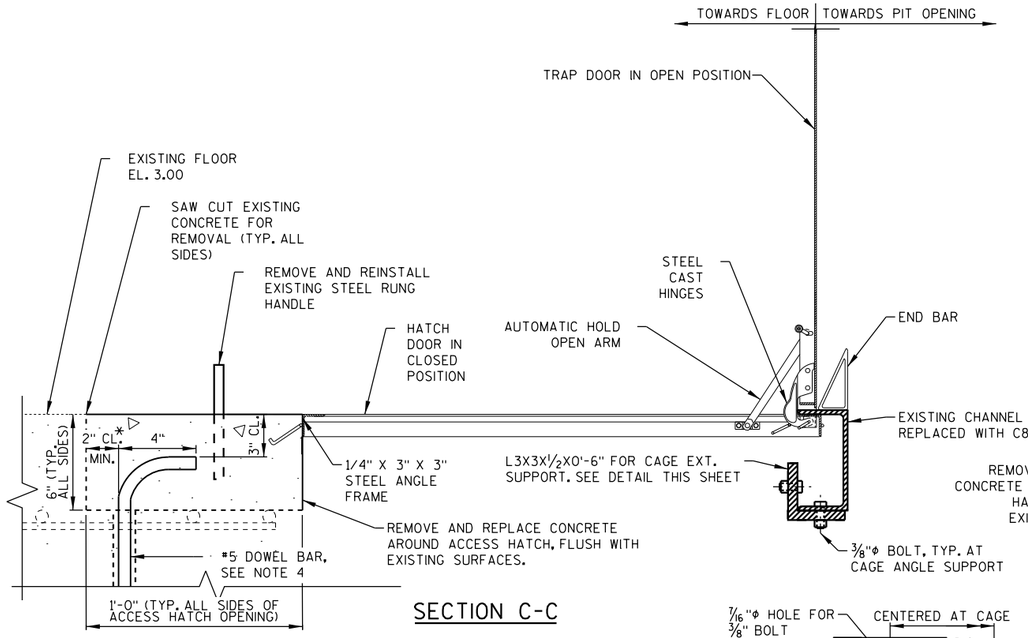
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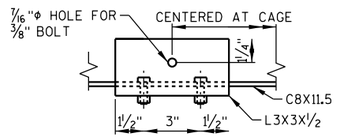
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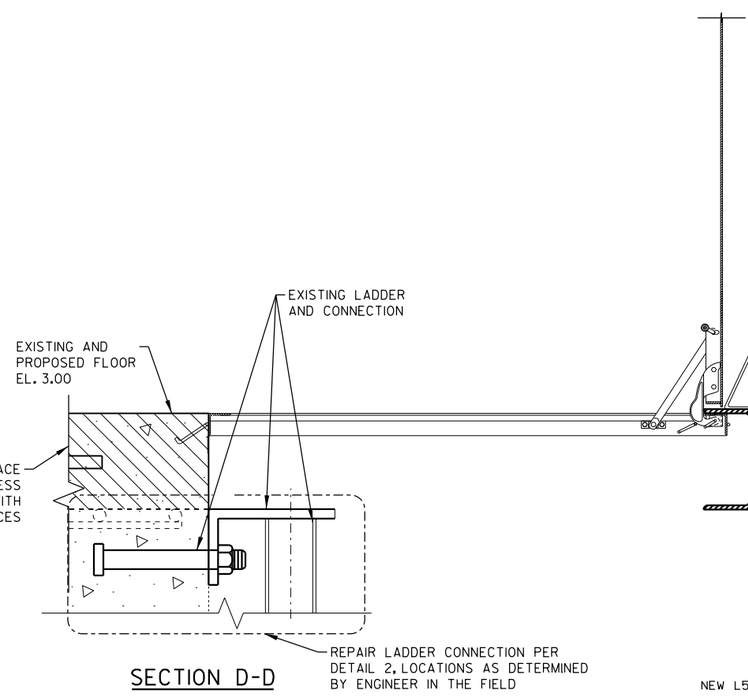
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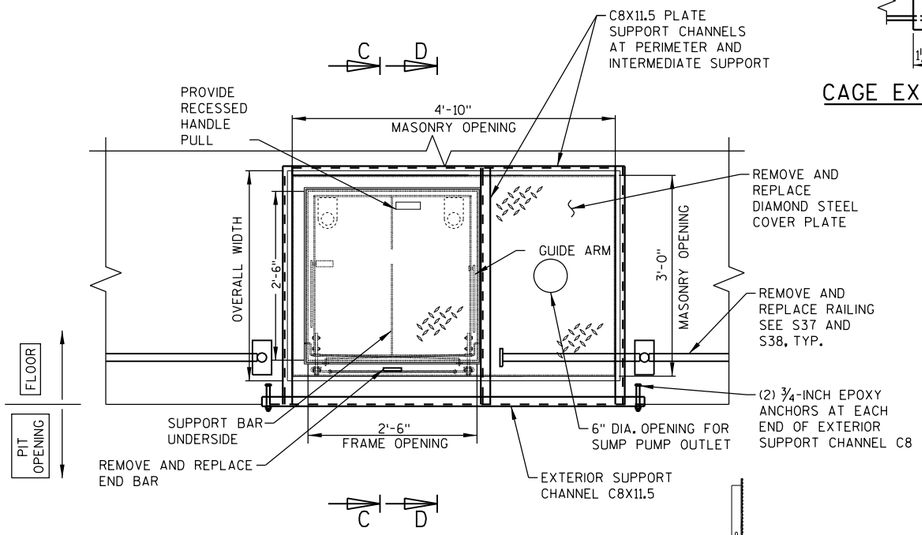
SECTION C-C

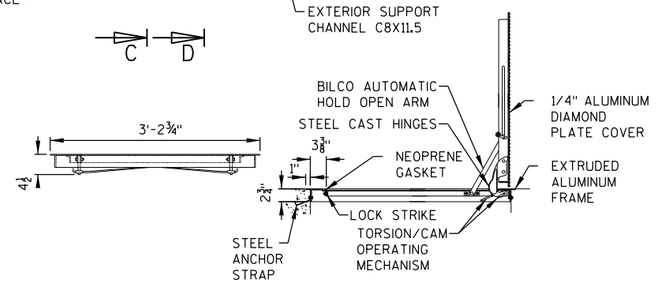


CAGE EXT. SUPPORT DETAIL



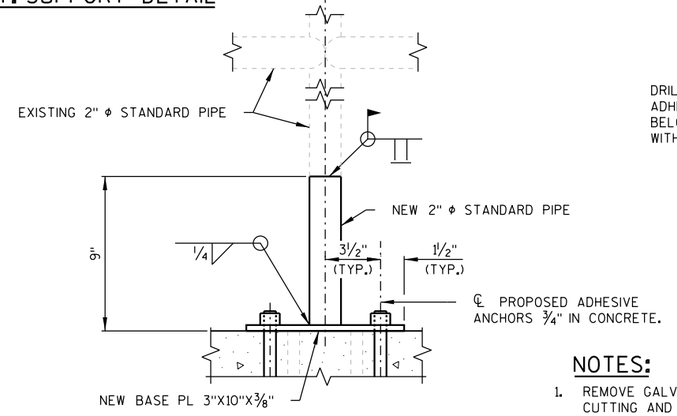
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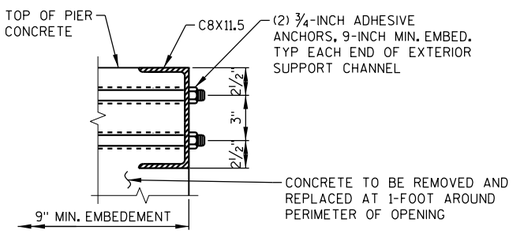
DETAIL FOR ACCESS HATCH REPLACEMENT IN PIER

DETAIL SHOWS NEW HATCH AT EAST PIER
EAST PIER AND WEST PIER HATCH SIMILAR

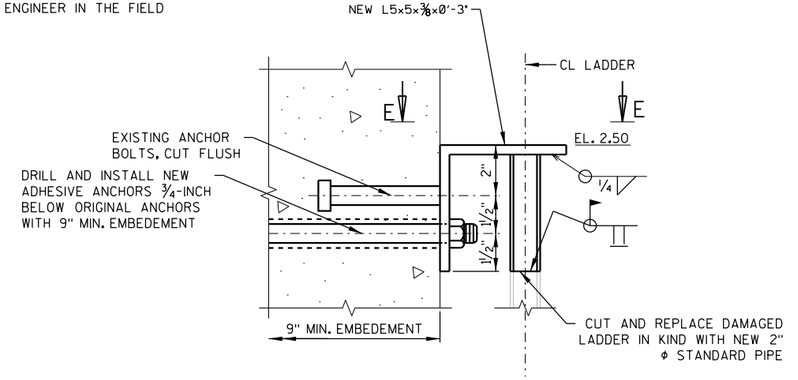


RAILING BASE REPAIR DETAIL

(SEE NOTE 7)



HATCH SUPPORT CHANNEL DETAIL



DETAIL 2 - LADDER CONNECTION REPAIR

EXTENT OF LADDER REPAIRS TO BE DETERMINED BY ENGINEER IN THE FIELD.

NOTES:

1. REMOVE GALVANIZED FINISH FROM REPAIR AREA PRIOR TO CUTTING AND WELDING
2. PROVIDE COLD APPLIED TOUCH UP GALVANIZING TO THE EFFECTED AREAS AFTER COMPLETING REPAIR
3. LOCATION AND EXTENT OF RAILING REPAIRS IS SUBJECT TO MODIFICATION AT THE ENGINEER'S DISCRETION

⚠ POST REPAIR LOCATION (SEE SHEETS S37 AND S38 FOR LOCATIONS).

4. COST OF REMOVAL AND REPLACEMENT OF COVER PLATE AND SUPPORT ASSEMBLY IS INCLUDED IN PAY ITEM "BRIDGE STRUCTURAL STEEL."
5. COST OF LADDER AND RAILING REPAIRS IS INCLUDED IN PAY ITEM "LADDER AND RAILING REPAIRS".
6. COST OF ACCESS HATCH WILL BE COVERED UNDER PAY ITEM "ACCESS HATCH".
7. CONTRACTOR SHALL ASSESS THE CONDITION OF THE EXISTING RAILING TO DETERMINE THE EXTENT OF THE DETERIORATION AND PROVIDE REQUIRED REPAIR LOCATIONS AND REPAIR DETAILS TO THE ENGINEER FOR REVIEW AND APPROVAL. COST SHALL BE INCLUDED WITH PAY ITEM "LADDER AND RAILING REPAIRS."

* REMOVE CONCRETE TO LOCATE EXISTING REINFORCING BARS, DRILL AND SET ANCHORS TO MISS EXISTING REINFORCEMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY	SS	PLANS CK'D.	GTS

ACCESS HATCH, LADDER, AND RAILING REPAIR DETAILS

SHEET S45 OF S71
101

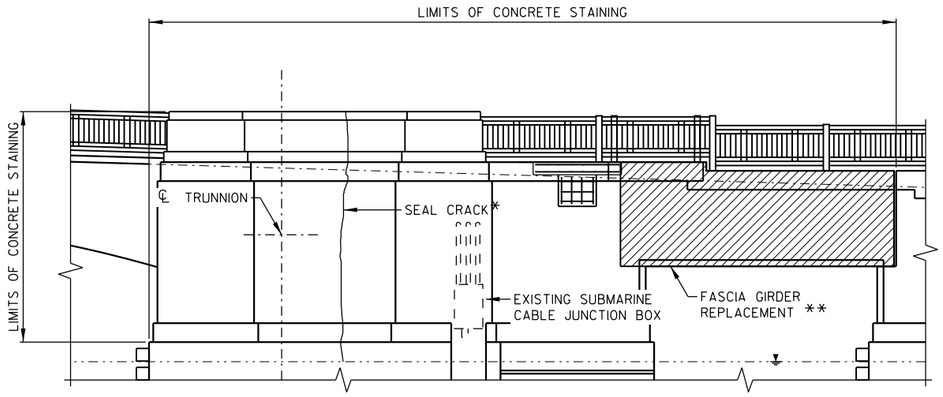
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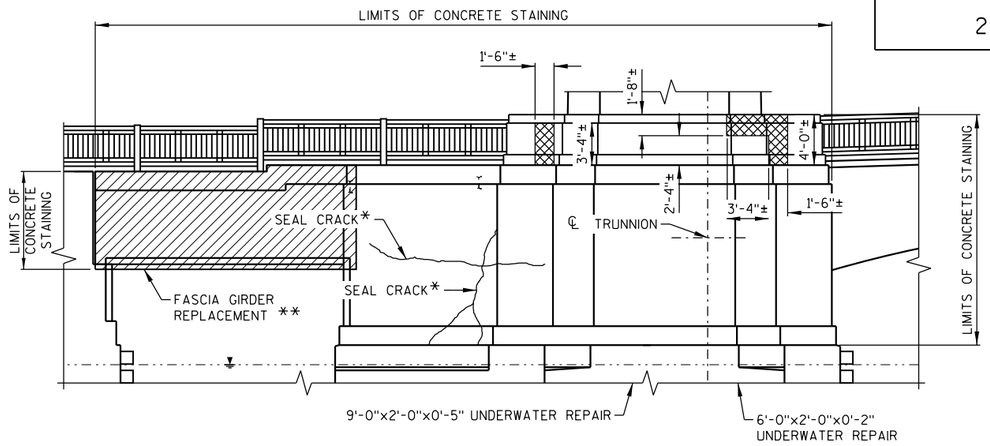
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STATE PROJECT NUMBER

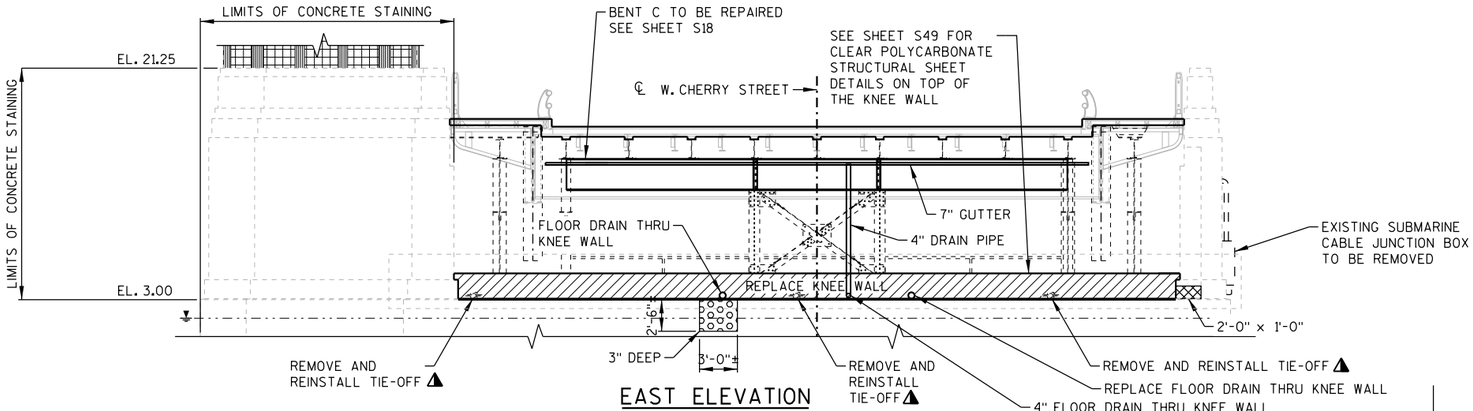
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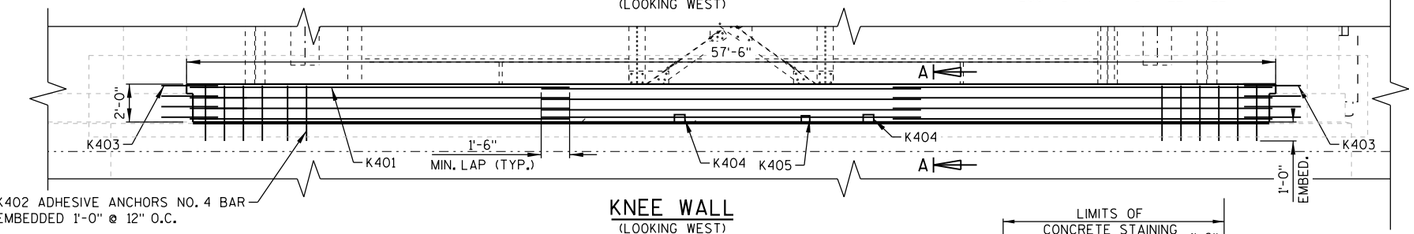
NORTH ELEVATION
(LOOKING SOUTH)



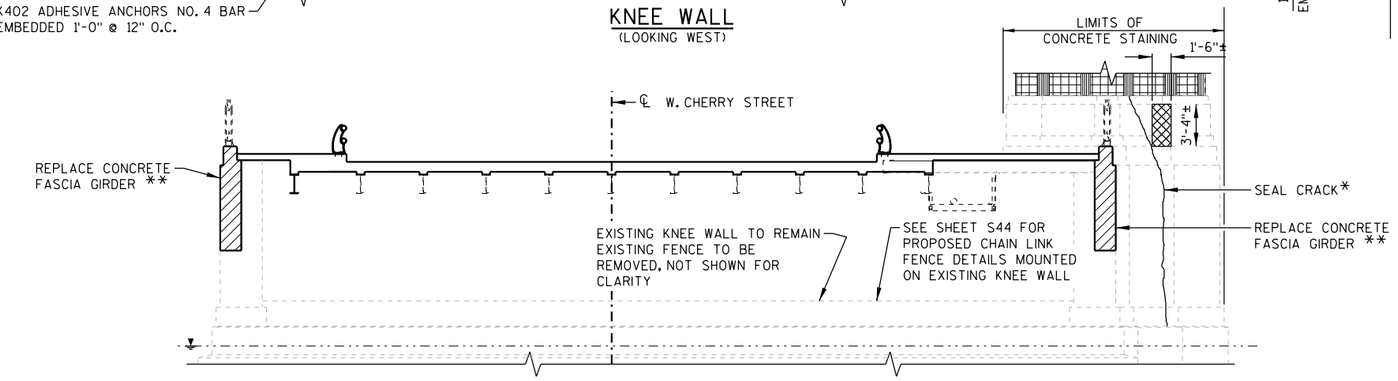
SOUTH ELEVATION
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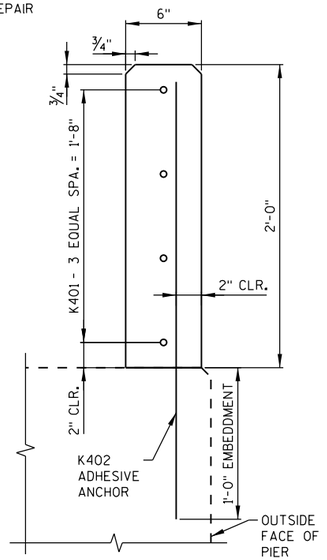
EAST ELEVATION
(LOOKING WEST)



KNEE WALL
(LOOKING WEST)



WEST ELEVATION
(LOOKING EAST)



SECTION A-A

LEGEND

- CONCRETE SURFACE REPAIR AREA
- CONCRETE REMOVAL AND REPLACEMENT REPAIR AREA
- * SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM
- ** SEE SHEETS S54 TO S59 FOR DETAILS
- WATERLINE CONCRETE SURFACE REPAIR AREA
- ⚠ REMOVE EXISTING TIE-OFF PRIOR TO REMOVING THE CONCRETE KNEE WALL. REFURBISH AND REINSTALL TIE-OFF ONTO NEW CONCRETE WALL USING NEW ANCHORS. PAINT TIE-OFF THE SAME COLOR AS THE STRUCTURAL STEEL. COST INCIDENTAL TO PAY ITEM "CONCRETE MASONRY BRIDGES"

NOTES

DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.

SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.

PROVIDE CONCRETE STAINING IN ONE OF THE FOLLOWING COLORS AS SELECTED BY THE ENGINEER.
1. FEDERAL COLOR 13522
2. FEDERAL COLOR 33448

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

WEST BASCULE PIER EXTERIOR WALL REPAIRS

SHEET S46 OF S71
102

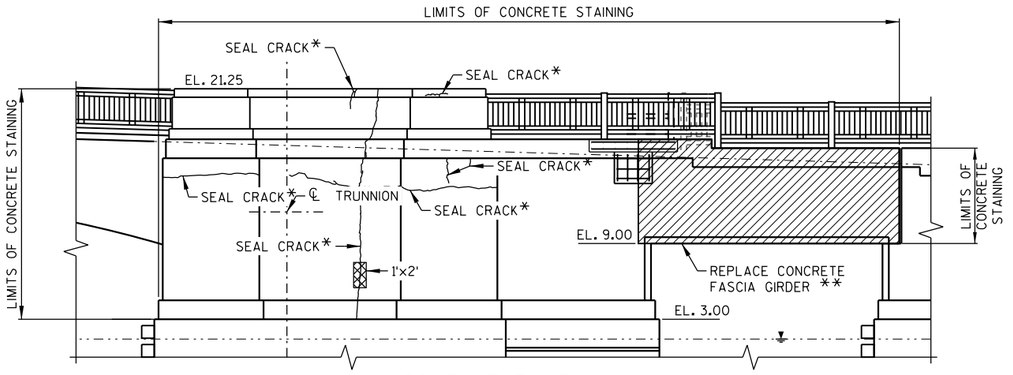
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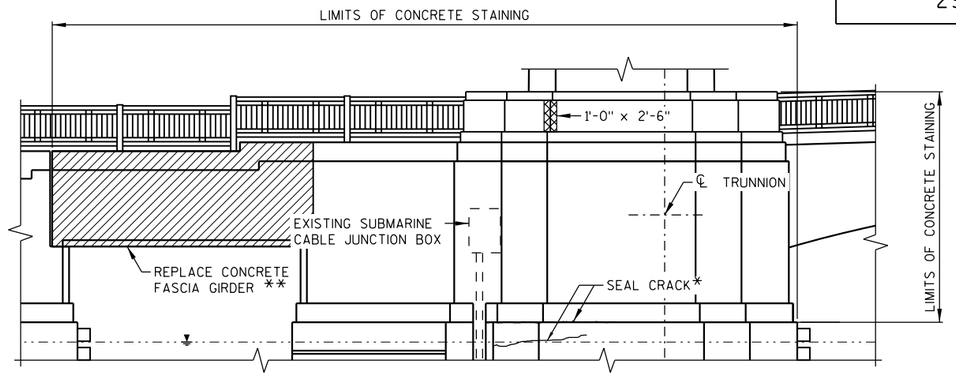
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STATE PROJECT NUMBER

2984-26-73



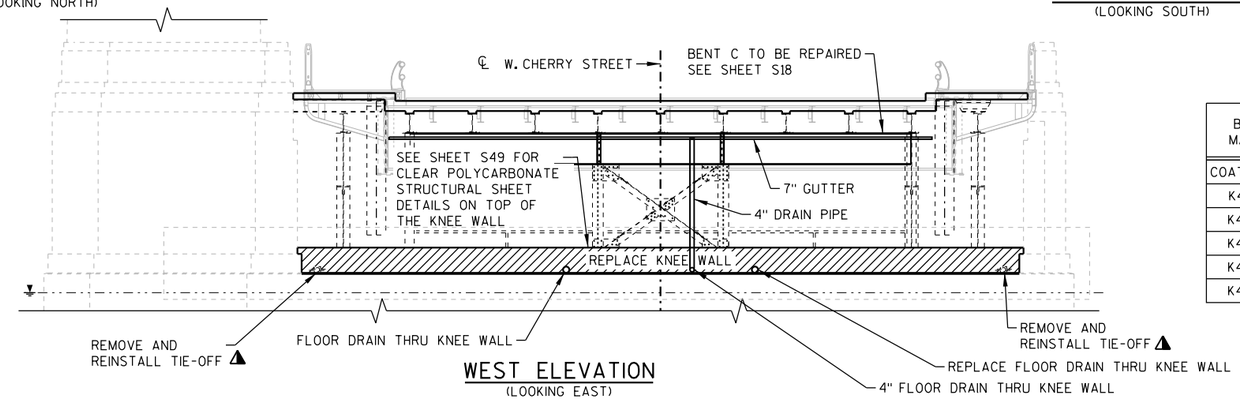
SOUTH ELEVATION
(LOOKING NORTH)



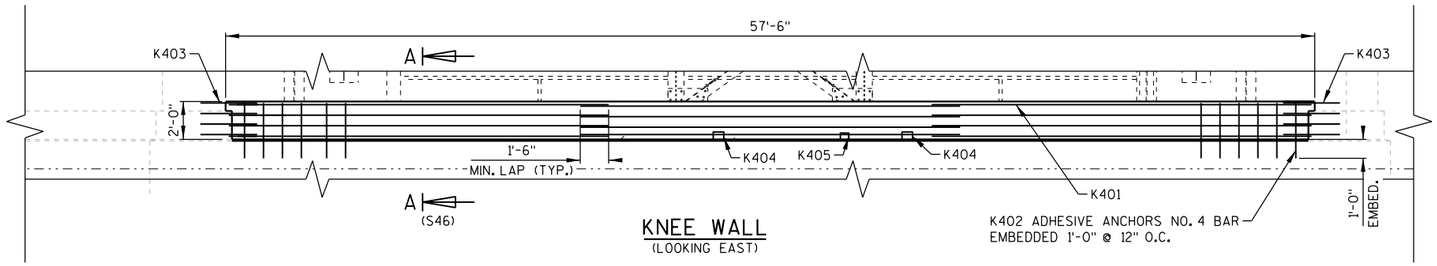
NORTH ELEVATION
(LOOKING SOUTH)

LEGEND

- CONCRETE SURFACE REPAIR AREA
- CONCRETE REMOVAL AND REPLACEMENT REPAIR AREA
- * SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM
- ** SEE SHEETS S54 TO S59 FOR DETAILS
- WATERLINE CONCRETE SURFACE REPAIR AREA
- ⚠ REMOVE EXISTING TIE-OFF PRIOR TO REMOVING THE CONCRETE KNEE WALL. REFURBISH AND REINSTALL TIE-OFF ONTO NEW CONCRETE WALL USING NEW ANCHORS. PAINT TIE-OFF THE SAME COLOR AS THE STRUCTURAL STEEL. COST INCIDENTAL TO PAY ITEM "CONCRETE MASONRY BRIDGES"



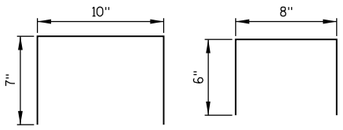
WEST ELEVATION
(LOOKING EAST)



KNEE WALL
(LOOKING EAST)

BILL OF BARS (EAST & WEST KNEE WALLS)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 580 LBS
K401	24	20'-0"			KNEE WALL, HORIZ.
K402	112	2'-10"			ADHESIVE ANCHORS - INTO PIER
K403	16	3'-0"			KNEE WALL, HORIZ.
K404	4	1'-10"	X		DRAIN PIPE, HORIZ.
K405	2	1'-6"	X		DRAIN PIPE, HORIZ.



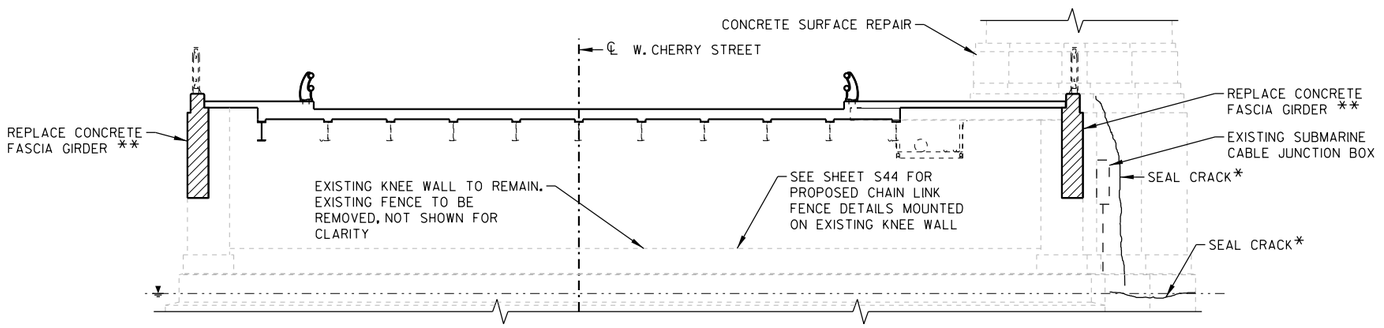
K404 K405

NOTES

DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.

SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.

PROVIDE CONCRETE STAINING IN ONE OF THE FOLLOWING COLORS AS SELECTED BY THE ENGINEER.
1. FEDERAL COLOR 13522
2. FEDERAL COLOR 33448



EAST ELEVATION
(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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EAST BASCULE PIER EXTERIOR WALL REPAIRS

SHEET S47 OF S71
103

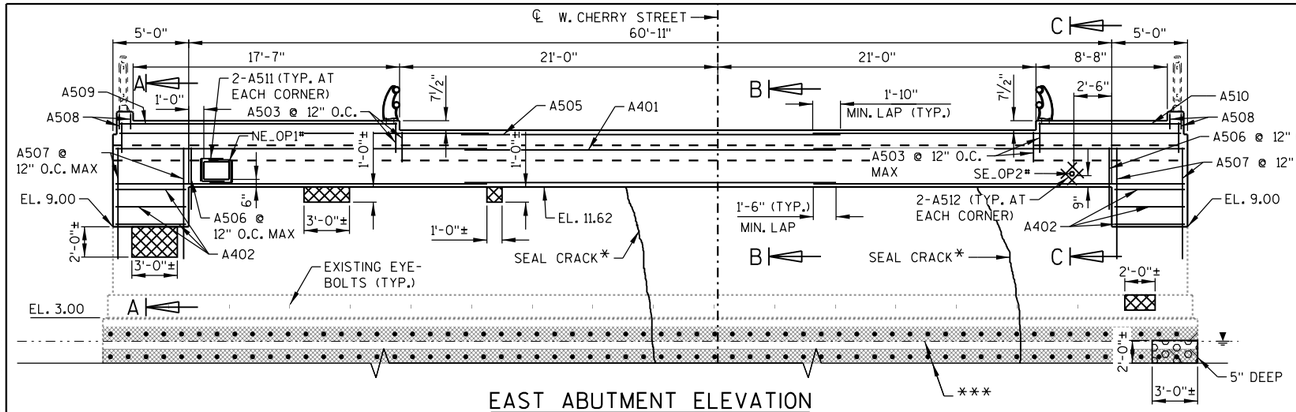
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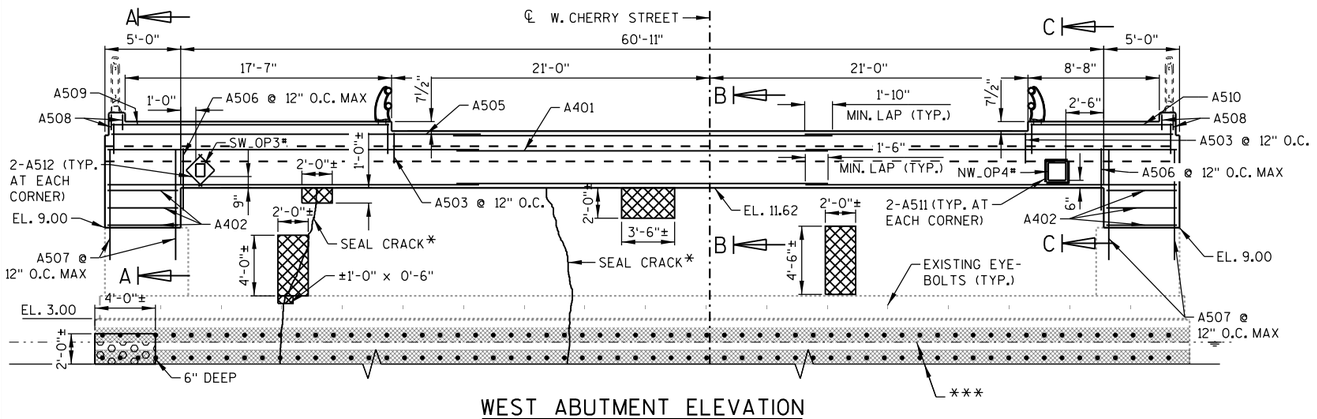
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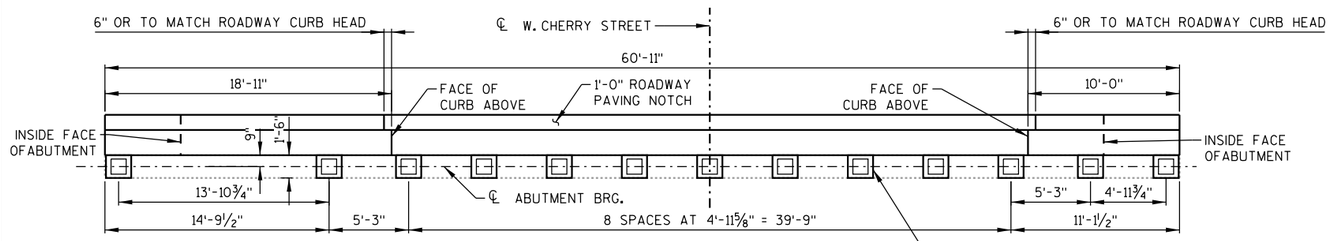
EAST ABUTMENT ELEVATION

(LOOKING EAST, BEARING PEDESTALS NOT SHOWN FOR CLARITY)



WEST ABUTMENT ELEVATION

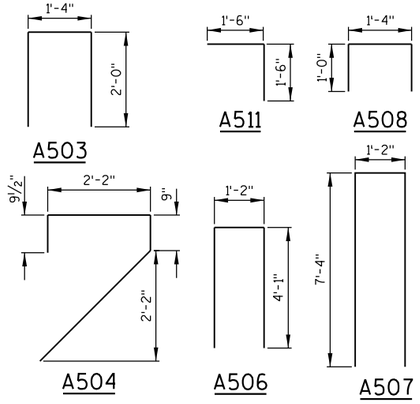
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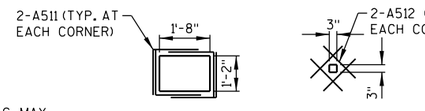


ABUTMENT PLAN

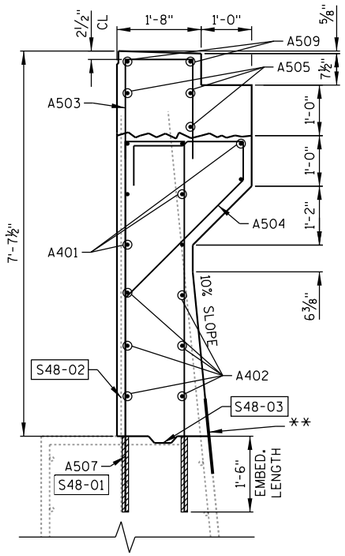
BILL OF BARS (EAST AND WEST ABUTMENTS)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 4940 LBS
A401	48	24'-6"			TOP OF WALL, HORIZ.
A402	24	4'-8"			TOP OF WALL, HORIZ.
A503	144	5'-5"	X		TOP OF WALL, STIRRUP
A504	144	6'-6"	X		TOP OF WALL, STIRRUP
A505	18	24'-9"			TOP OF WALL, HORIZ.
A506	124	9'-1"	X		TOP OF WALL, STIRRUP
A507	24	15'-7"	X		TOP OF WALL, STIRRUP
A508	8	3'-4"	X		TOP OF WALL NEAR PED. RAILING, STIRRUP
A509	4	18'-4"			SIDEWALK, HORIZ.
A510	4	9'-5"			SIDEWALK, HORIZ.
A511	16	2'-0"	X		TOP OF WALL, AROUND OPENINGS
A512	16	1'-0"			TOP OF WALL, AROUND OPENINGS

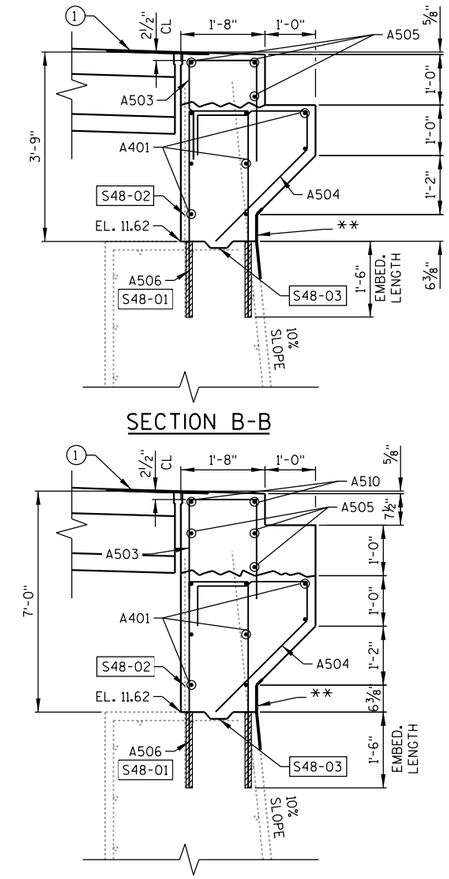




ABUTMENT WALL OPENINGS



SECTION A-A



SECTION B-B

SECTION C-C

ABUTMENT NOTES:

1. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.
2. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.
3. SEE ELECTRICAL DRAWINGS FOR NUMBER, SIZE, LOCATION AND ORIENTATION OF CONDUITS PASSING THROUGH ABUTMENT OPENINGS.
4. OPENINGS AROUND CONDUITS WILL BE GROUTED AFTER PLACING THE CONDUITS. COST INCIDENTAL TO CONCRETE MASONRY BRIDGES.
5. CONSTRUCTION JOINT - POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE IS IN PLACE (STRIKE OFF AND LEAVE ROUGH)

① GALVANIZED SIDEWALK COVER PLATE
⅜" x 2'-0" x L.
L = SIDEWALK WIDTH - 3"
SEE SHEET S58 FOR COVER PLATE DETAILS NOT SHOWN ON THIS SHEET.

LEGEND

- CONCRETE SURFACE REPAIR AREA
- DENOTES NEW EPDM RUBBER WALER
- * SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM
- ** RUBBERIZED MEMBRANE WATERPROOFING
- *** REMOVE EXISTING WALERS, RUBBING BARS AND CUT EXISTING ANCHORS FLUSH WITH ABUTMENT FACE. INSTALL NEW EPDM WALERS AND NEW EPOXY GROUTED ANCHOR BOLTS. SPACE NEW ANCHORS TO MISS EXISTING LOCATIONS. INSTALL NEW WALERS AFTER ABUTMENT CONCRETE REPAIR WORK IS COMPLETED.
- ▪ SEE ABUTMENT WALL OPENINGS FOR PROPOSED CODUITS
- WATERLINE CONCRETE SURFACE REPAIR AREA
- S48-01 REINFORCEMENT INSTALLED WITH ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" MIN. VARY DEPTH TO MAINTAIN 2" CLEAR COVER AS NEEDED.
- S48-02 EXISTING REINFORCEMENT TO REMAIN IN PLACE
- S48-03 KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

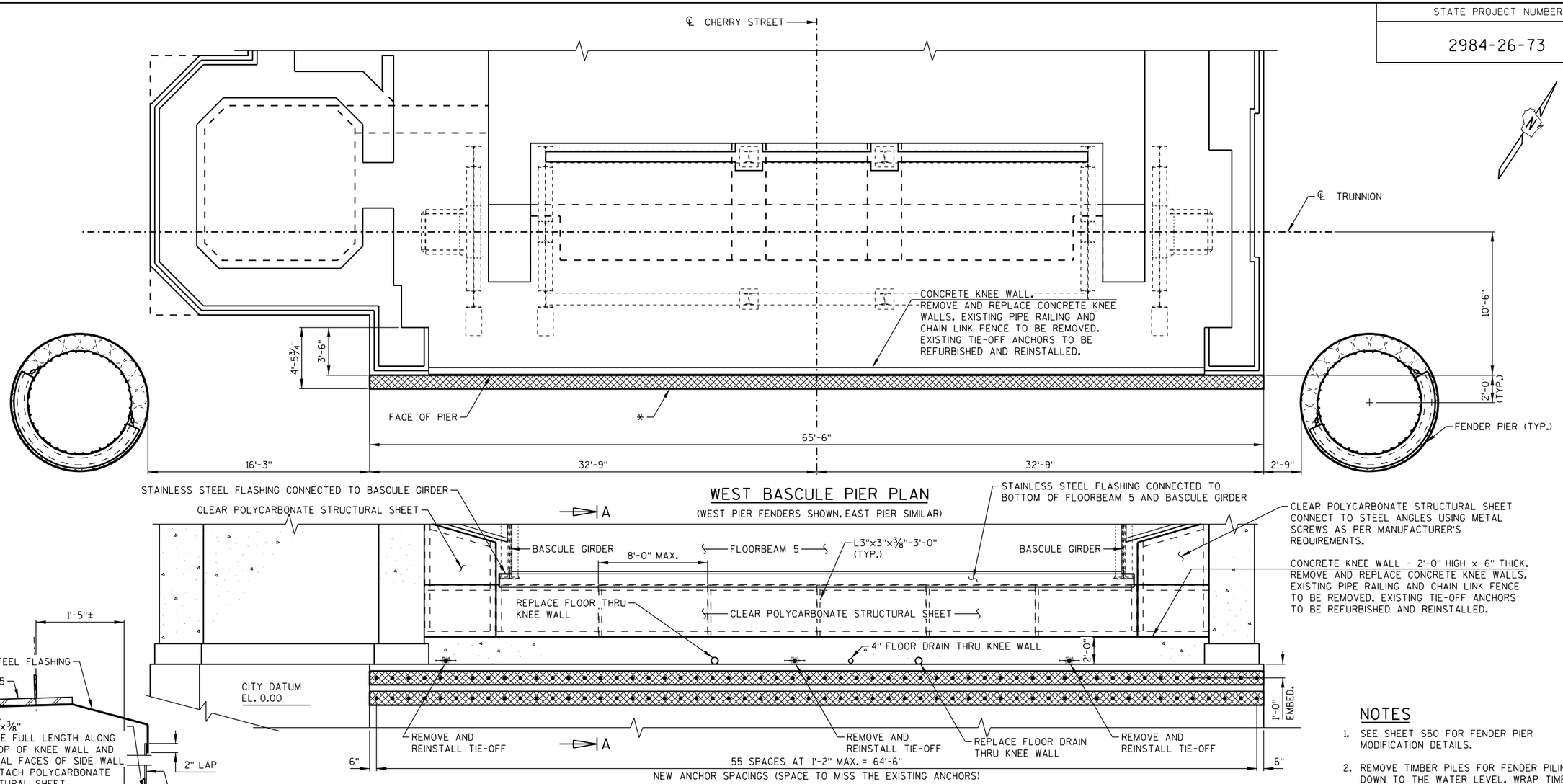
STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

ABUTMENT REPAIRS

SHEET S48 OF S71
104

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PLOT DATE: 3/27/2024 PLOT TIME: 9:20:55 AM
BATCH PRINT SHEET 49 OF 71

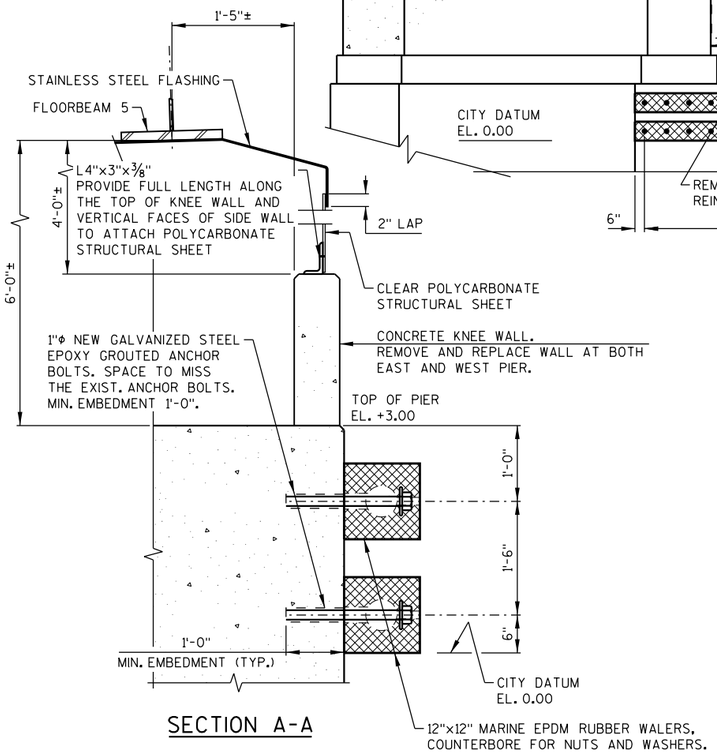


WEST BASCULE PIER PLAN

(WEST PIER FENDERS SHOWN, EAST PIER SIMILAR)

BASCULE PIER ELEVATION

LOOKING FROM CHANNEL



SECTION A-A

NOTES

1. SEE SHEET S50 FOR FENDER PIER MODIFICATION DETAILS.
2. REMOVE TIMBER PILES FOR FENDER PILING DOWN TO THE WATER LEVEL. WRAP TIMBER PILE ASSEMBLY WITH GALVANIZED CABLE BELOW THE CUTOFF LINE.
3. INSTALL EPDM RUBBER WALERS AS SHOWN ON THE PLANS ON THE CHANNEL SIDE OF EACH BASCULE PIER AND ON THE FRONT FACE OF ABUTMENTS (S48).
4. THE COST OF DRILLED AND GROUTED ANCHORS IS INCLUDED IN THE PAY ITEM "MARINE DOCK FENDER."

LEGEND

DENOTES NEW EPDM RUBBER WALER.

* REMOVE EXISTING WALERS, RUBBING BARS AND CUT EXISTING ANCHORS FLUSH WITH PIER FACE. INSTALL NEW EPDM WALERS AND NEW EPOXY GROUTED ANCHOR BOLTS. SPACE NEW ANCHORS TO MISS EXISTING LOCATIONS. INSTALL NEW WALERS AFTER BASCULE PIER CONCRETE REPAIR WORK IS COMPLETED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY	SS	PLANS CK'D.	GTS

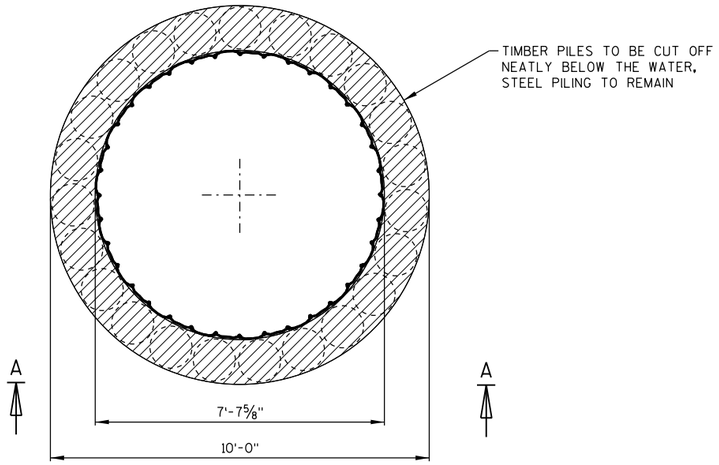
FENDER PIER AND MACHINERY ENCLOSURE REPAIRS

SHEET S49 OF S71
105

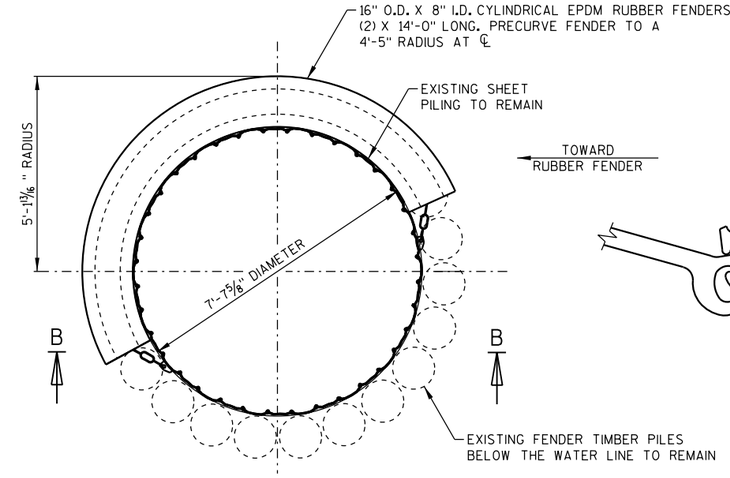
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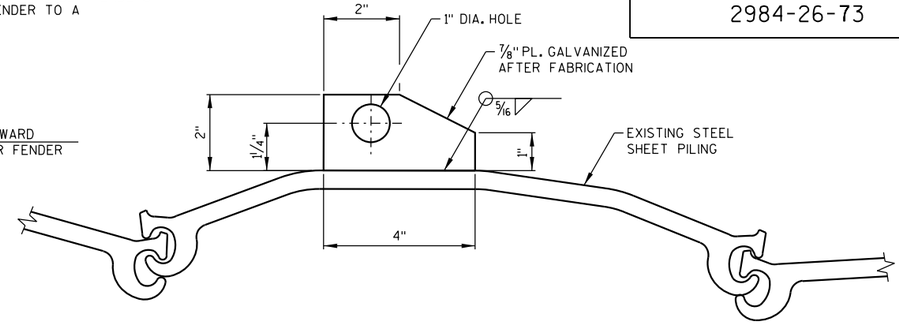
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PLOT DATE: 3/27/2024 PLOT TIME: 9:21:03 AM BATCH PRINT SHEET 50 OF 71



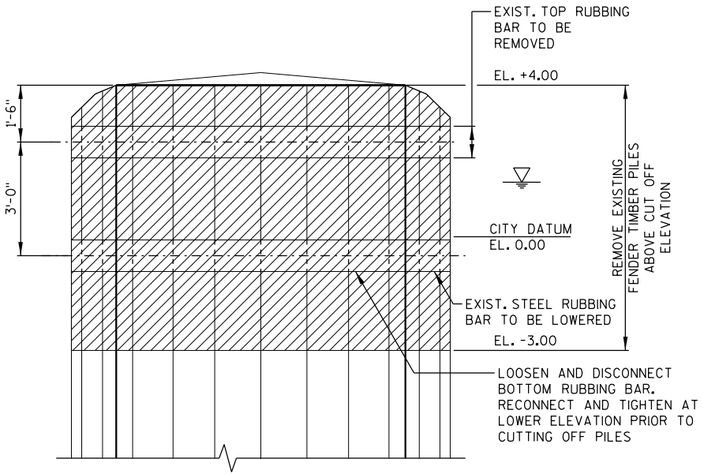
FENDER PIER PARTIAL REMOVAL



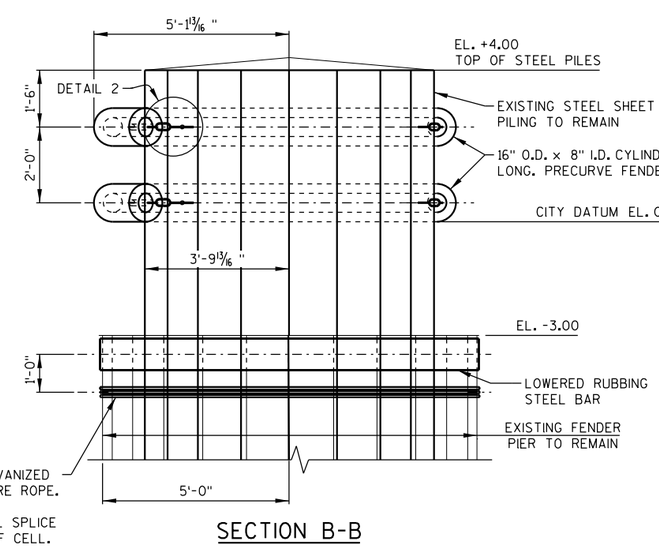


ATTACHING LUG DETAIL - 1

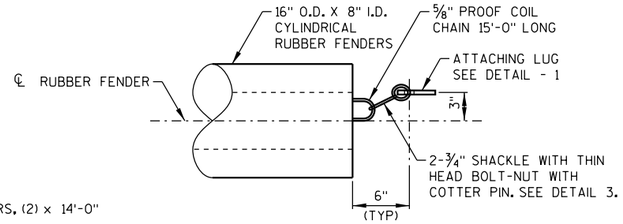
FENDER PIER MODIFICATION



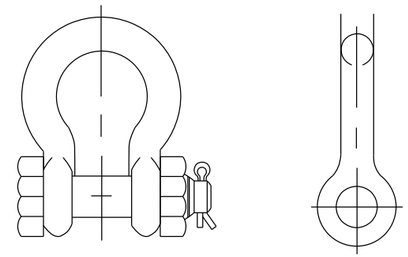
SECTION A-A



SECTION B-B



DETAIL - 2



DETAIL - 3

NOTE

ALL NEW STEEL PARTS TO BE HOT-DIP GALVANIZED.

LEGEND

DENOTES ITEMS TO BE REMOVED

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

FENDER PIER REPAIR DETAILS

SHEET S50 OF S71
106

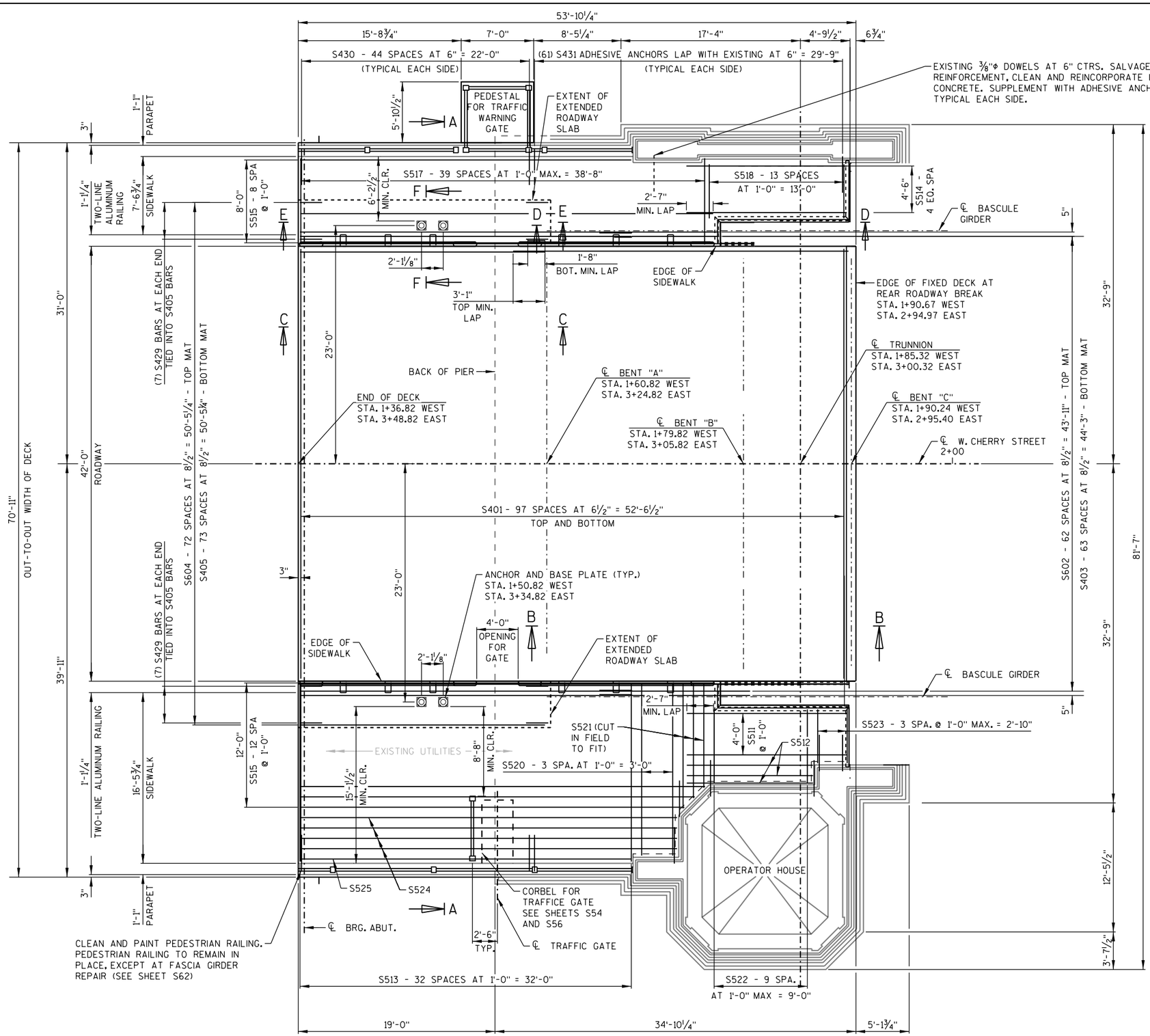
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PLOT DATE: 3/27/2024
PLOT TIME: 9:21:13 AM
BATCH PRINT SHEET 51 OF 71

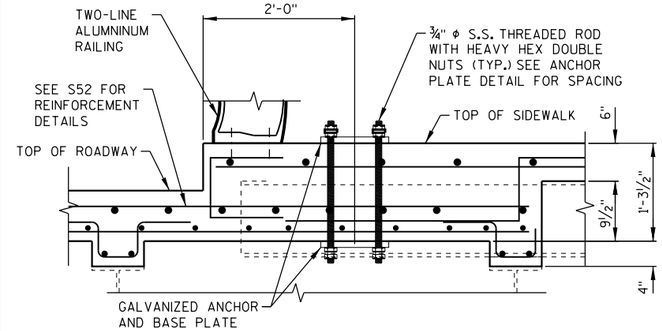
STATE PROJECT NUMBER

2984-26-73



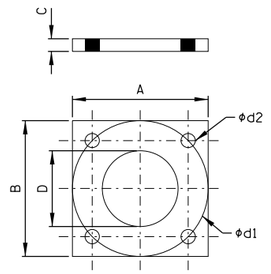
FIXED DECK PLAN - WEST APPROACH SPAN

(WEST APPROACH SHOWN, EAST SIMILAR)



SECTION F-F

CHANNEL SIDE



ANCHOR AND BASE PLATE DETAILS

(ALL ANCHOR AND BASE PLATES TO BE HOT DIPPED GALVANIZED)

ANCHOR AND BASE PLATES

A	B	C	D	d1	d2
12½"	12½"	1"	6"	11"	1"

NOTES

FOR SECTIONS A-A SEE SHEET S52 FOR MORE DETAILS.

FOR SECTIONS B-B, C-C, D-D, AND E-E SEE SHEET S53 FOR MORE DETAILS.

PREPARE AND COAT TOP FLANGES OF STRINGERS.

SEE SHEET S52 FOR BILL OF BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

WEST APPROACH SPAN FIXED DECK PLAN

SHEET S51 OF S71
107

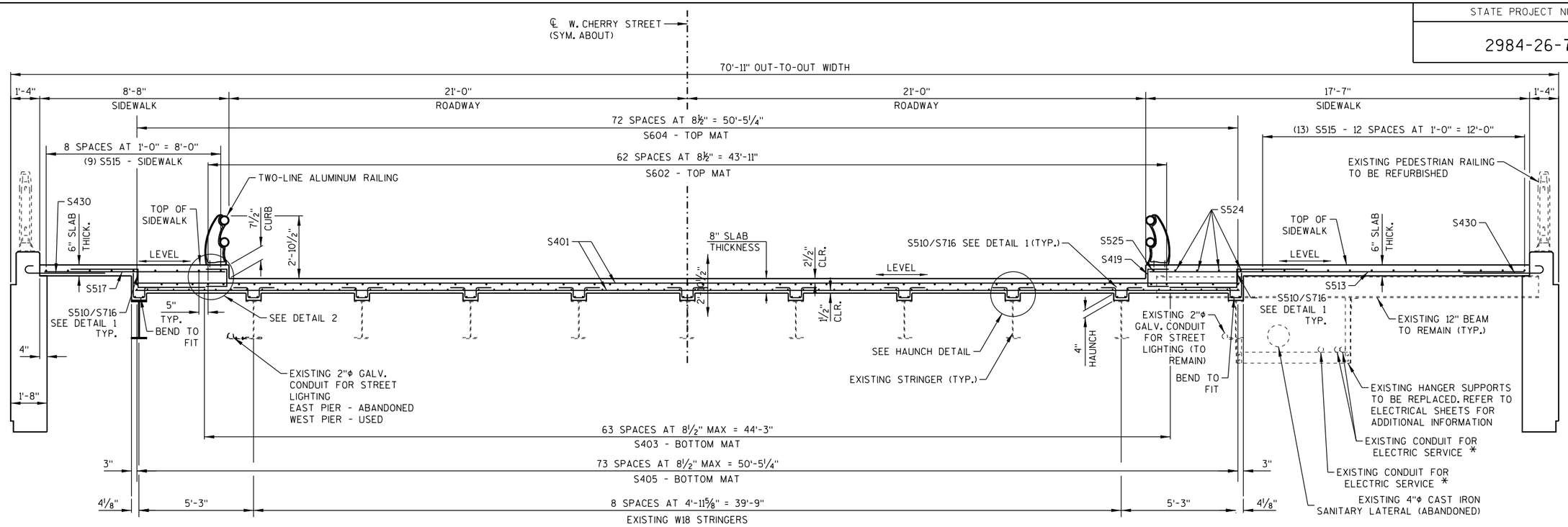
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PLOT DATE: 3/27/2024 PLOT TIME: 9:21:22 AM
BATCH PRINT SHEET 52 OF 71

STATE PROJECT NUMBER

2984-26-73



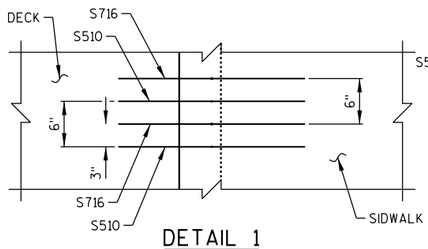
BILL OF BARS (WEST FIXED DECK, EAST SIMILAR)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 23,760 LBS
S401	196	50'-7"			DECK TOP & BOTTOM, TRANS.
S602	63	32'-8"			DECK TOP, LONG.
S403	64	31'-9"			DECK BOTTOM, LONG.
S604	72	23'-8"			DECK TOP, LONG.
S405	73	23'-8"			DECK BOTTOM, LONG.
S406	60	2'-9"	X		DECK - AT BENT A, VERT.
S507	2	44'-5"			DECK - AT BENT A, TRANS.
S408	60	4'-1"	X		DECK - AT DIAPHRAGM, VERT.
S509	7	44'-5"			DECK - AT DIAPHRAGM, TRANS.
S510	162	6'-9"	X		SIDEWALK - AT DECK JOINT, VERT.
S511	5	15'-6"			SOUTH SIDEWALK, LONG.
S512	3	12'-3"			SOUTH SIDEWALK, LONG.
S513	32	17'-3"			SOUTH SIDEWALK, TRANS.
S514	5	15'-5"			NORTH SIDEWALK, LONG.
S515	22	39'-11"			SIDEWALK, LONG.
S716	162	6'-8"	X		SIDEWALK - AT DECK JOINT, VERT.
S517	40	8'-4"			NORTH SIDEWALK, TRANS.
S518	14	5'-2"			NORTH SIDEWALK, TRANS.
S419	162	2'-7"	X		SIDEWALK - AT DECK JOINT, TRANS.
S520	4	16'-8"			SOUTH SIDEWALK, TRANS.
S521	3	12'-1"			SOUTH SIDEWALK, TRANS.
S522	10	7'-1"			SOUTH SIDEWALK, TRANS.
S523	4	5'-2"			SOUTH SIDEWALK, TRANS.
S524	4	36'-5"			SOUTH SIDEWALK, LONG.
S525	1	32'-0"			SOUTH SIDEWALK, LONG.
S426	536	2'-5"	X		DECK - HAUNCH STIRRUP, VERT.
S427	18	31'-9"			DECK - HAUNCH, LONG.
S428	22	23'-8"			DECK - HAUNCH, LONG.
S429	56	3'-10½"	X		SIDEWALK - AT S405 BARS
S430	90	4'-2"	X		SIDEWALK - AT FASCIA GIRDER
S431	122	2'-0"			ADHESIVE ANCHORS - INTO PIER

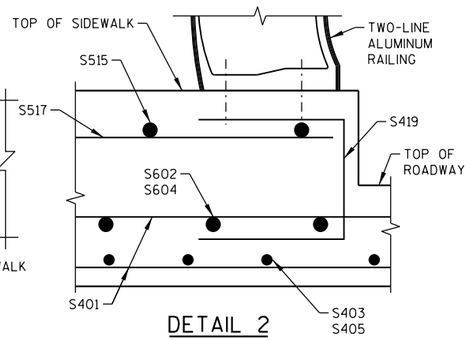
SECTION A-A

CROSS SECTION THROUGH APPROACH SPAN OVER BYPASS

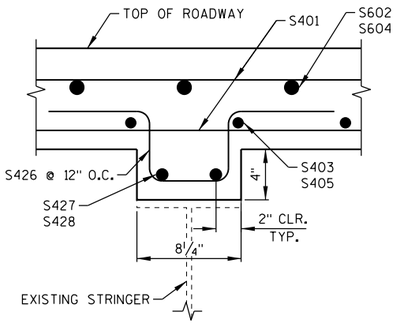
WEST APPROACH SPAN SHOWN, LOOKING EAST. EAST APPROACH SPAN SIMILAR, LOOKING WEST
WARNING GATE PLATFORM AND CORBEL DETAILS NOT SHOWN FOR CLARIFY SEE SHEETS S54 THR S57, S60, AND S61



DETAIL 1
S510/S716 SPACING DIAGRAM



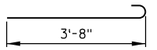
DETAIL 2



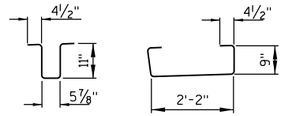
HAUNCH DETAIL

LEGEND

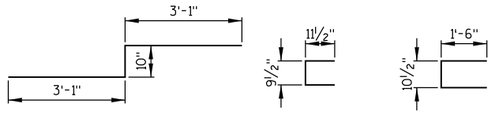
* EXISTING CONDUITS TO BE REWORKED. REFER TO ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.



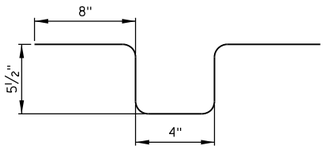
S430



S406 S408



S510/S716 S419 S429



S426

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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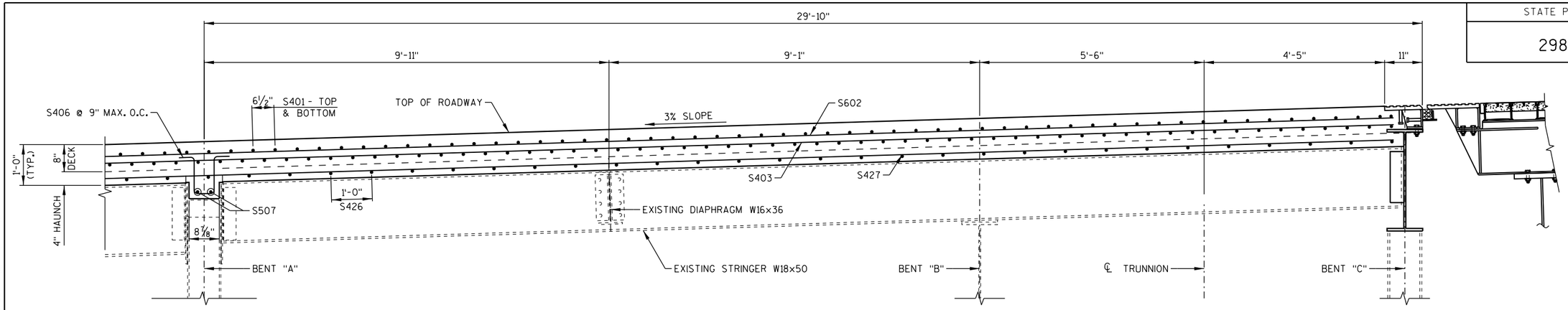
BASCULE PIER APPROACH SPAN CROSS SECTION

SHEET S52 OF S71
108

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PLOT DATE: 3/27/2024 PLOT TIME: 9:21:32 AM
BATCH PRINT SHEET 53 OF 71

STATE PROJECT NUMBER

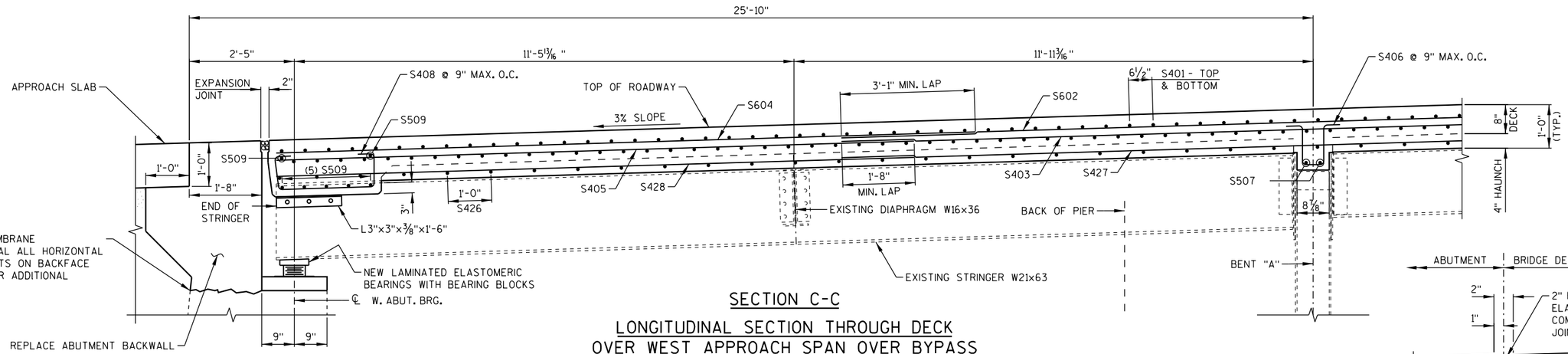
2984-26-73



SECTION B-B

LONGITUDINAL SECTION THROUGH DECK OVER WEST BASCULE PIER

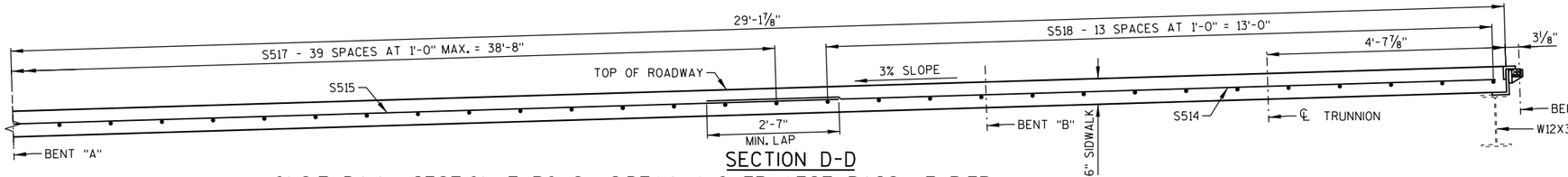
(WEST APPROACH SHOWN, EAST APPROACH SIMILAR)



SECTION C-C

LONGITUDINAL SECTION THROUGH DECK OVER WEST APPROACH SPAN OVER BYPASS

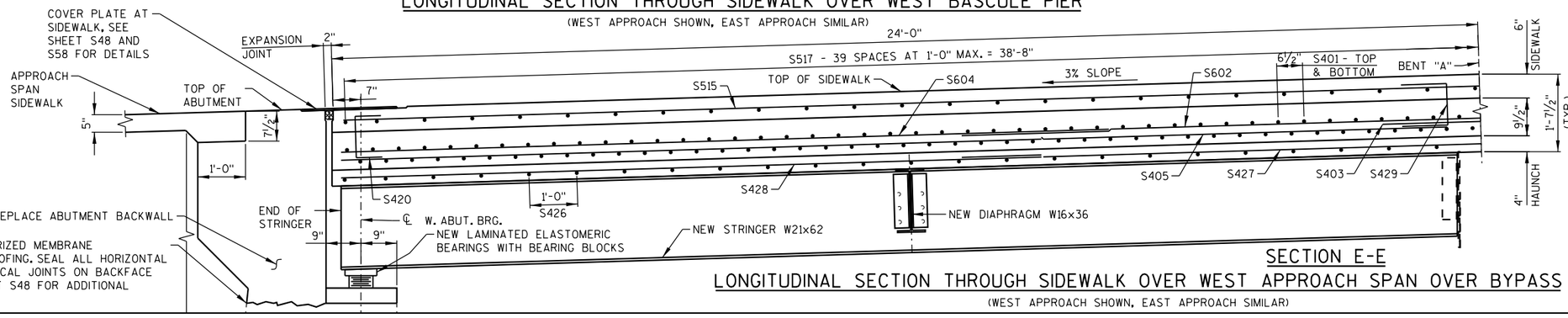
(WEST APPROACH SHOWN, EAST APPROACH SIMILAR)



SECTION D-D

LONGITUDINAL SECTION THROUGH SIDEWALK OVER WEST BASCULE PIER

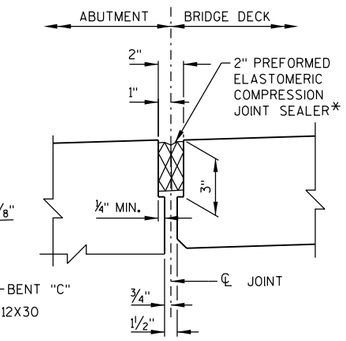
(WEST APPROACH SHOWN, EAST APPROACH SIMILAR)



SECTION E-E

LONGITUDINAL SECTION THROUGH SIDEWALK OVER WEST APPROACH SPAN OVER BYPASS

(WEST APPROACH SHOWN, EAST APPROACH SIMILAR)



EXPANSION JOINT DETAIL

* MANUFACTURER MUST LABEL TOP OF SEAL SEE SPECIFICATIONS FOR ADDITIONAL DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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BASCULE PIER LONGITUDINAL DECK SECTIONS

SHEET S53 OF S71

109

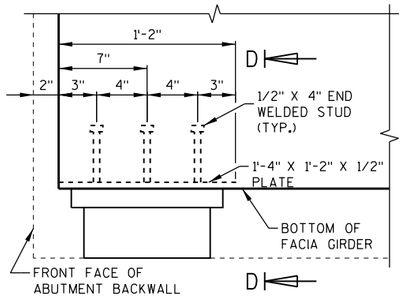
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PLOT DATE: 3/27/2024 PLOT TIME: 9:21:41 AM BATCH PRINT SHEET 54 OF 71

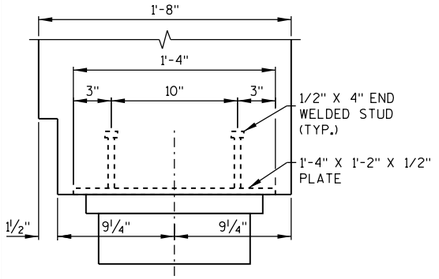
STATE PROJECT NUMBER

2984-26-73

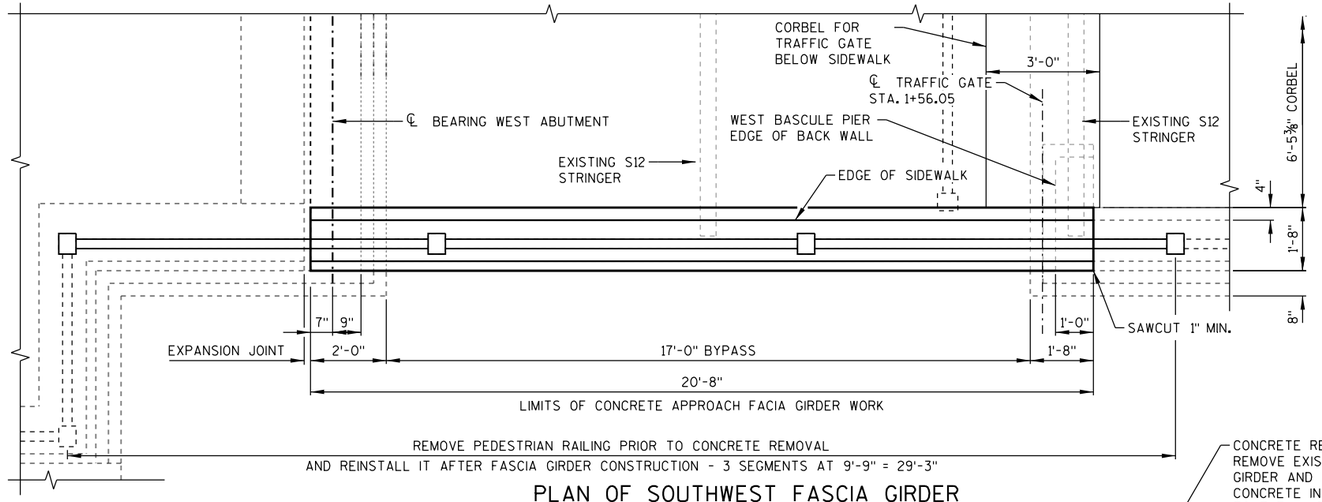


DETAIL A

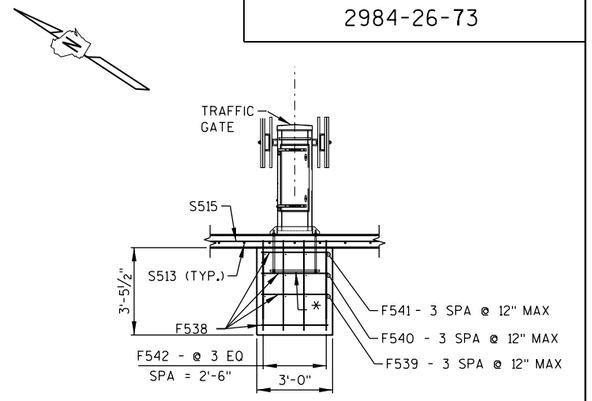
(SEE SHEEET S59 FOR BEARING DETAILS)



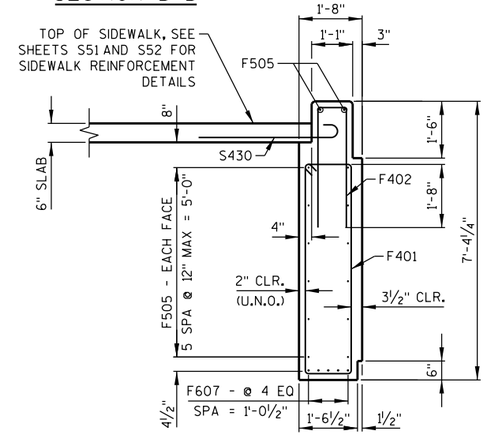
SECTION D-D



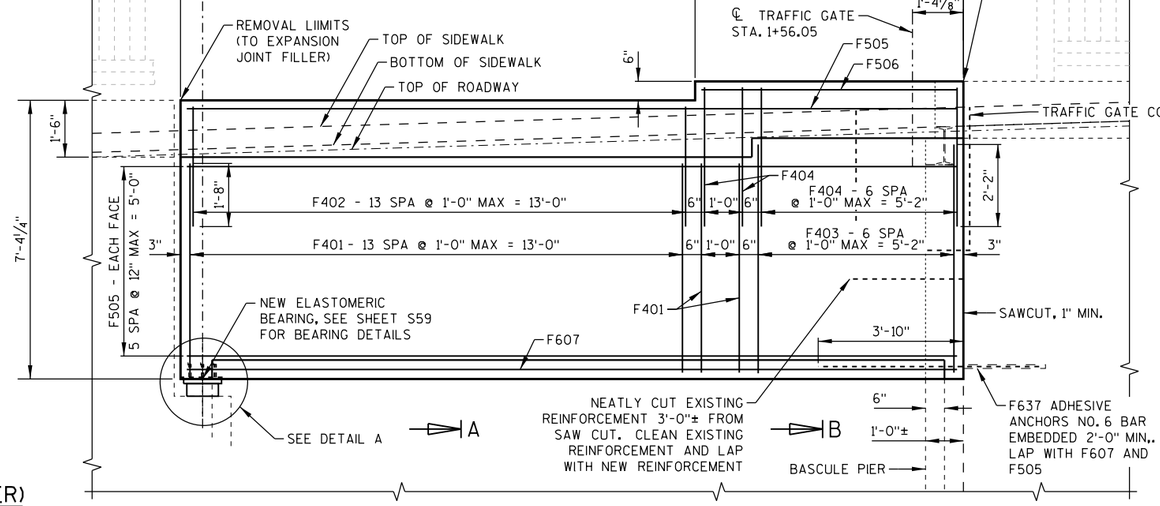
PLAN OF SOUTHWEST FASCIA GIRDER



SECTION C-C



SECTION A-A



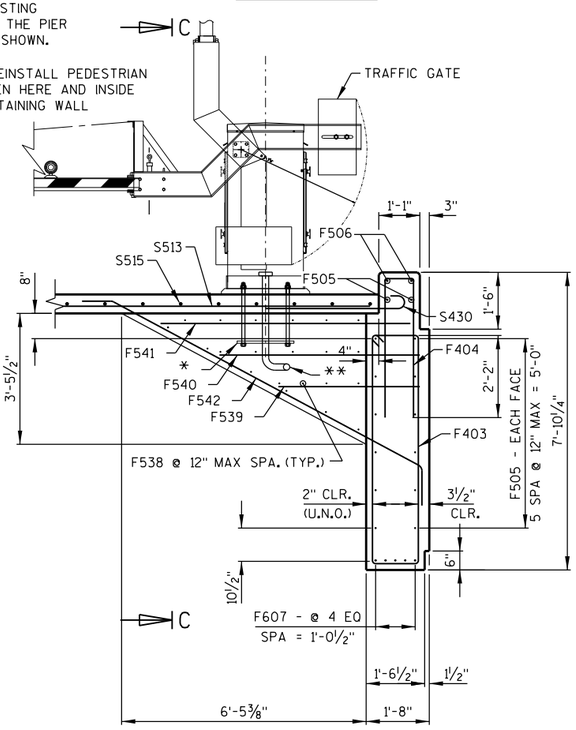
ELEVATION OF SOUTHWEST FASCIA GIRDER

LOOKING NORTH AT OUTSIDE FACE OF GIRDER

CONCRETE FASCIA GIRDER REPLACEMENT

CONCRETE REMOVAL LIMITS, REMOVE EXISTING FASCIA GIRDER AND EXISTING CONCRETE INTO THE PIER TO THE LIMITS SHOWN.

REMOVE AND REINSTALL PEDESTRIAN RAILING BETWEEN HERE AND INSIDE CORNER AT RETAINING WALL



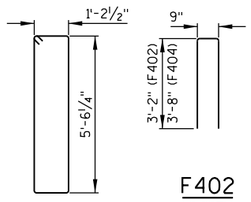
SECTION B-B

* GATE PLATFORM ANCHOR PLATE. GENERAL DETAILS ARE SHOWN. ANCHOR PLATE SHALL BE MODIFIED AS PER MANUFACTURER'S REQUIREMENTS FOR ACTUAL TRAFFIC GATE BASE.

** CONDUIT ORIENTATION VARIES. SEE ELECTRICAL DRAWINGS FOR NUMBER, SIZE AND ORIENTATION OF CONDUITS.

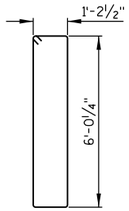
BILL OF BARS (SOUTHWEST FASCIA GIRDER)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 1140 LBS
F401	16	14'-0'	X		STIRRUP (SHORT X/S), VERT.
F402	14	7'-1"	X		STIRRUP TOP (SHORT X/S), VERT.
F403	7	15'-0"	X		STIRRUP (TALL X/S), VERT.
F404	9	8'-1"	X		STIRRUP TOP (TALL X/S), VERT.
F505	14	20'-4"			GIRDER, LONG.
F506	2	6'-9"			GIRDER TOP (TALL X/S), LONG.
F607	5	20'-4"			GIRDER BOTTOM, LONG.
F637	19	5'-10"			ADHESIVE ANCHOR - INTO PIER
F538	20	2'-8"			CORBEL, LONG.
F539	4	3'-8"			CORBEL, TRANS.
F540	4	5'-3"			CORBEL, TRANS.
F541	4	6'-7"			CORBEL, TRANS.
F542	4	10'-10"	X		CORBEL - DIAGONAL, TRANS.

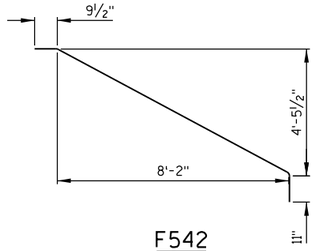


F401

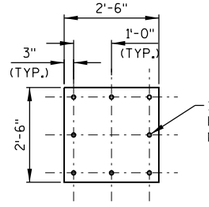
F402 AND F404



F403



F542



GATE PLATFORM ANCHOR PLATE*

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

BASCULE PIER SECTIONS-SOUTHWEST FASCIA GIRDER

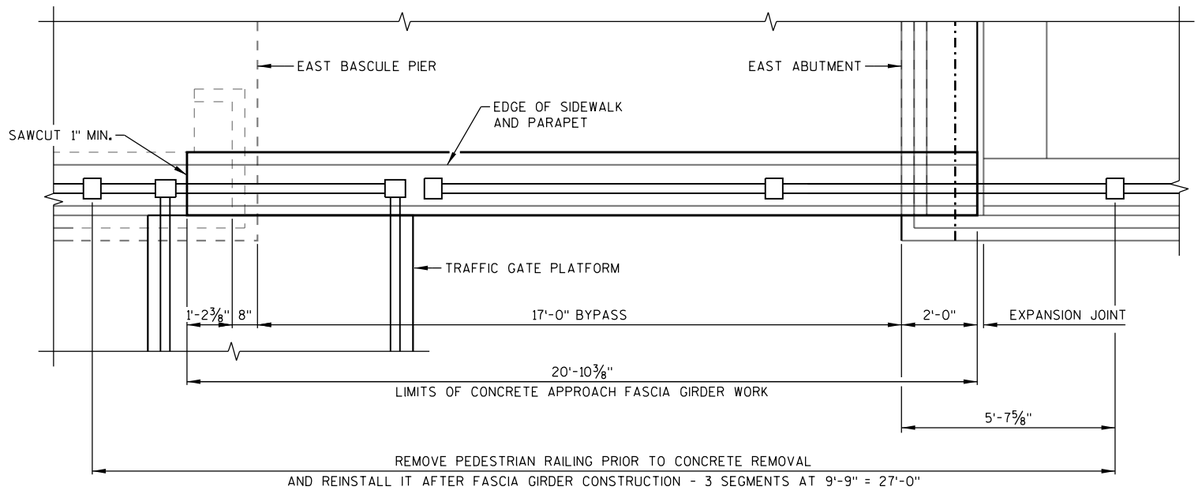
SHEET S54 OF S71

110

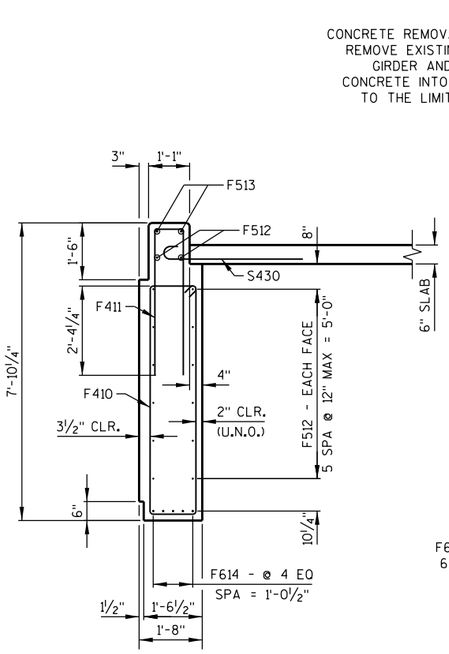
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FILE NAME: pw://aecom-na-pw.bentley.com:AECOM_USA_Wisconsin/Documents/60659410-Cherry Street Rehab/900-CAD GIS/910_CAD/20_SHEETS/STRUCTURAL/S55_Bascule Pier Sections - Southeast Fascia Girder
PLOT DATE: 3/27/2024
PLOT TIME: 9:21:50 AM
BATCH PRINT SHEET 55 OF 71

STATE PROJECT NUMBER

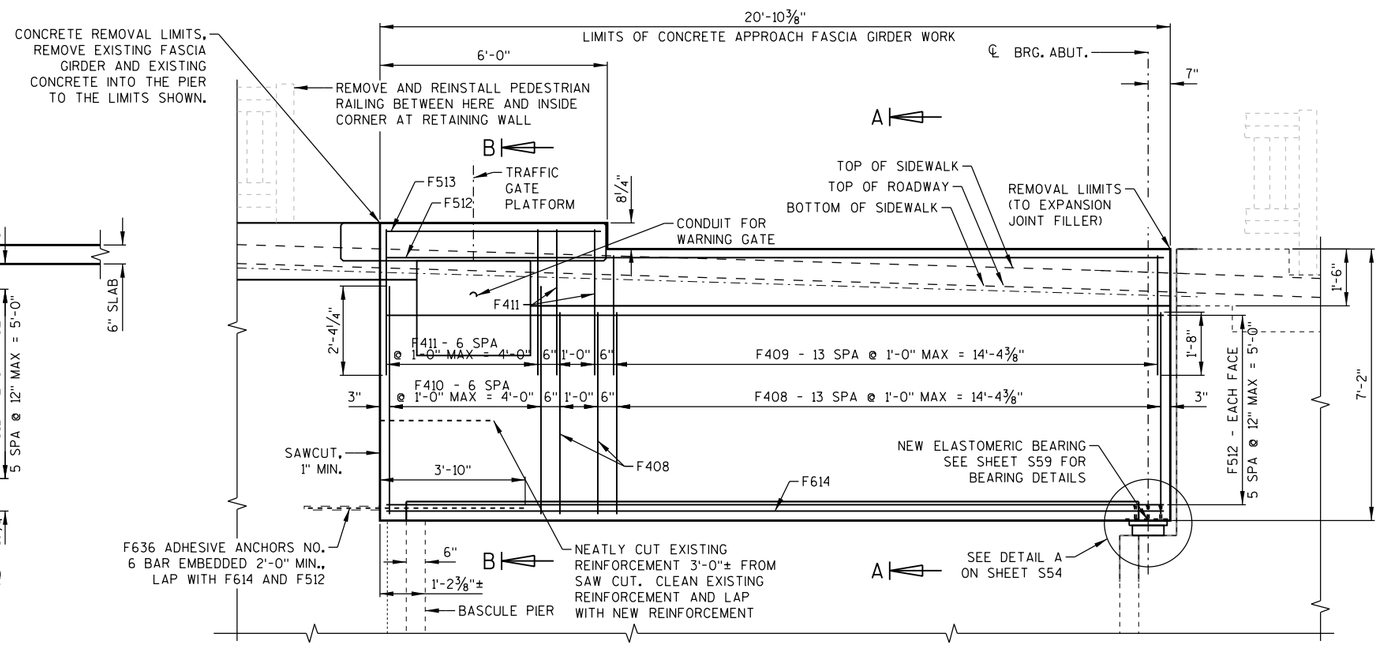
2984-26-73



PLAN OF SOUTHEAST FASCIA GIRDER

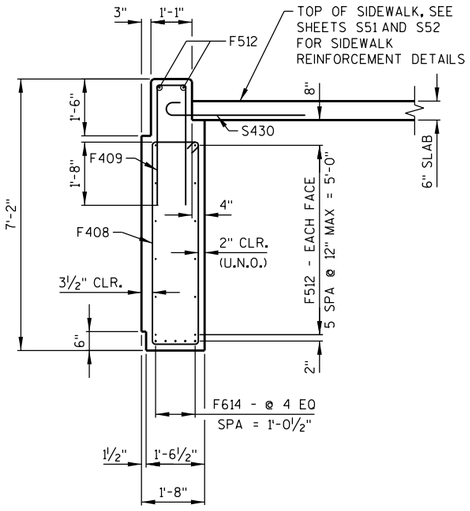


SECTION B-B



ELEVATION OF SOUTHEAST FASCIA GIRDER

LOOKING NORTH AT OUTSIDE FACE OF GIRDER

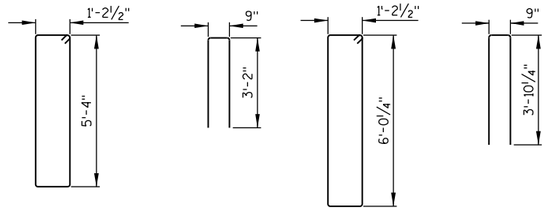


SECTION A-A

BILL OF BARS (SOUTHEAST FASCIA GIRDER)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 970 LBS
F408	16	13'-7"	X		STIRRUP (SHORT X/S), VERT.
F409	14	7'-1"	X		STIRRUP TOP (SHORT X/S), VERT.
F410	7	15'-0"	X		STIRRUP (TALL X/S), VERT.
F411	9	8'-6"	X		STIRRUP TOP (TALL X/S), VERT.
F512	14	20'-6"			GIRDER, LONG.
F513	2	5'-8"			GIRDER TOP (TALL X/S), LONG.
F614	5	20'-6"			GIRDER BOTTOM, LONG.
F636	19	5'-10"			ADHESIVE ANCHOR - INTO PIER

CONCRETE FASCIA GIRDER REPLACEMENT



F408 F409 F410 F411

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

BASCULE PIER SECTIONS-SOUTHEAST FASCIA GIRDER

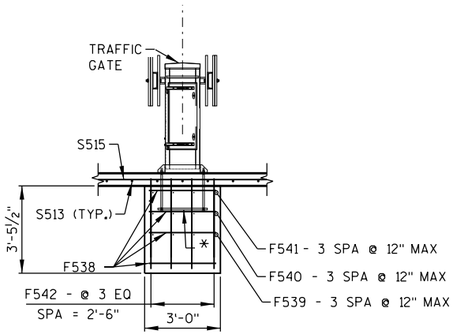
SHEET S55 OF S71

111

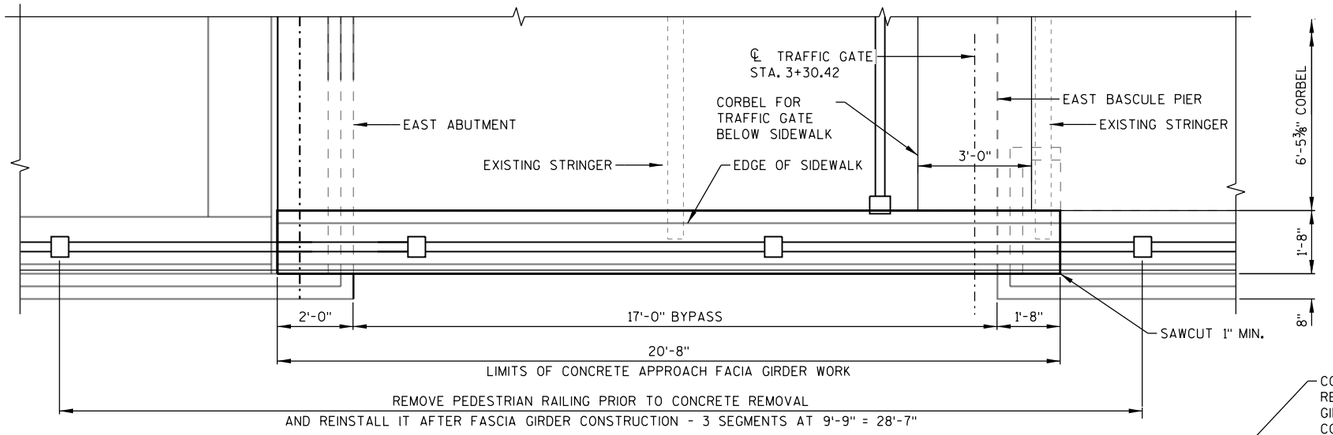
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PLOT DATE: 3/27/2024
PLOT TIME: 9:21:59 AM
BATCH PRINT SHEET 56 OF 71

STATE PROJECT NUMBER

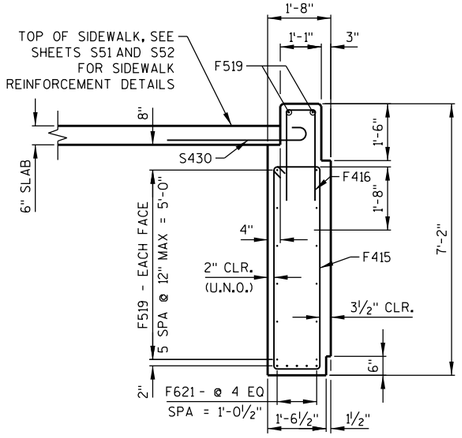
2984-26-73



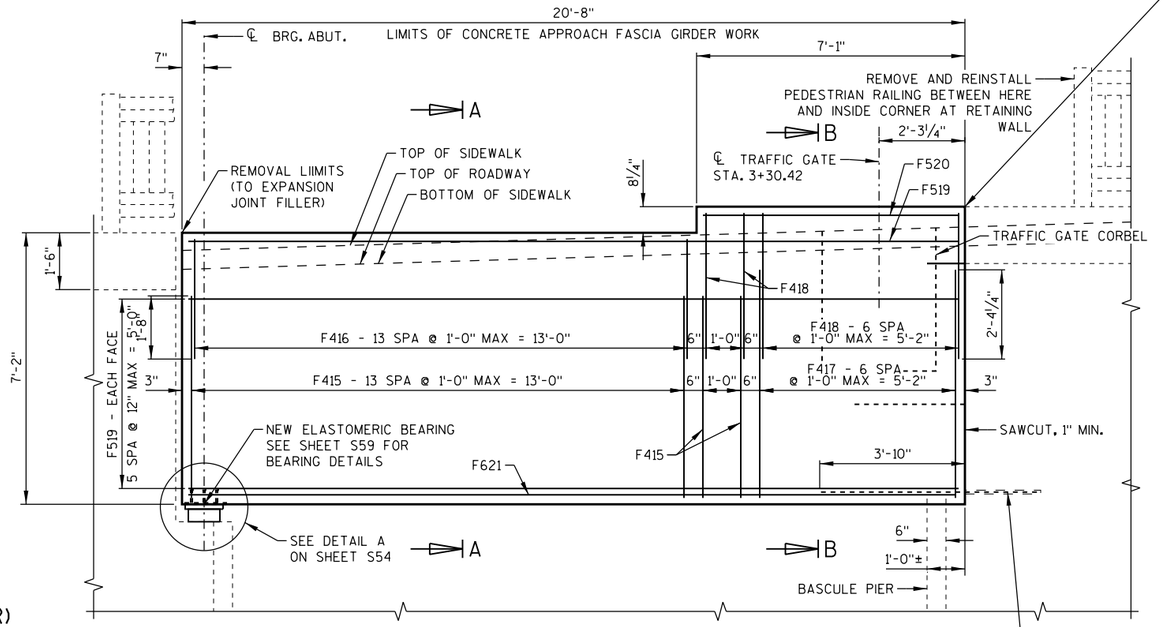
SECTION C-C



PLAN OF NORTHEAST FASCIA GIRDER



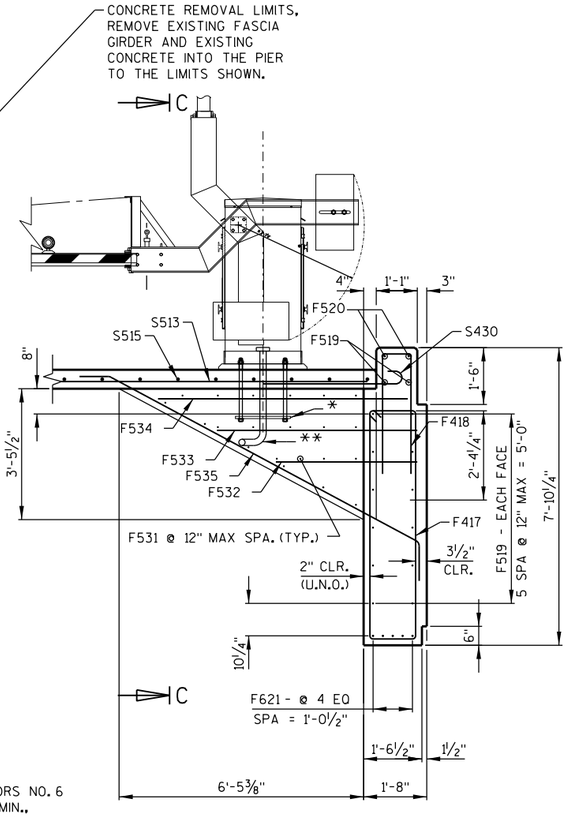
SECTION A-A



ELEVATION OF NORTHEAST FASCIA GIRDER

LOOKING SOUTH AT OUTSIDE FACE OF GIRDER

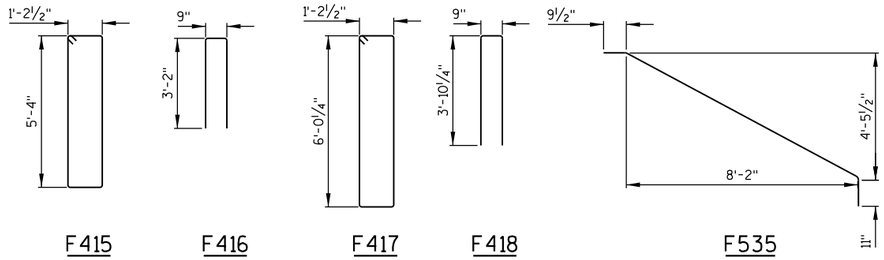
CONCRETE FASCIA GIRDER REPLACEMENT



SECTION B-B

BILL OF BARS (NORTHEAST FASCIA GIRDER)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 1160 LBS
F415	16	13'-7"	X		STIRRUP (SHORT X/S), VERT.
F416	14	7'-1"	X		STIRRUP TOP (SHORT X/S), VERT.
F417	7	15'-0"	X		STIRRUP (TALL X/S), VERT.
F418	9	8'-6"	X		STIRRUP TOP (TALL X/S), VERT.
F519	14	20'-4"			GIRDER, LONG.
F520	2	6'-9"			GIRDER TOP (TALL X/S), LONG.
F621	5	20'-4"			GIRDER BOTTOM, LONG.
F630	19	5'-10"			ADHESIVE ANCHOR - INTO PIER
F531	20	2'-8"			CORBEL, LONG.
F532	4	3'-8"			CORBEL, TRANS.
F533	4	5'-3"			CORBEL, TRANS.
F534	4	6'-7"			CORBEL, TRANS.
F535	4	10'-10"	X		CORBEL - DIAGONAL, TRANS.



* GATE PLATFORM ANCHOR PLATE, SEE SHEET S54 FOR DETAILS.

** CONDUIT ORIENTATION VARIES. SEE ELECTRICAL DRAWINGS FOR NUMBER, SIZE AND ORIENTATION OF CONDUITS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

BASCULE PIER SECTIONS-NORTHEAST FASCIA GIRDER

SHEET S56 OF S71
112

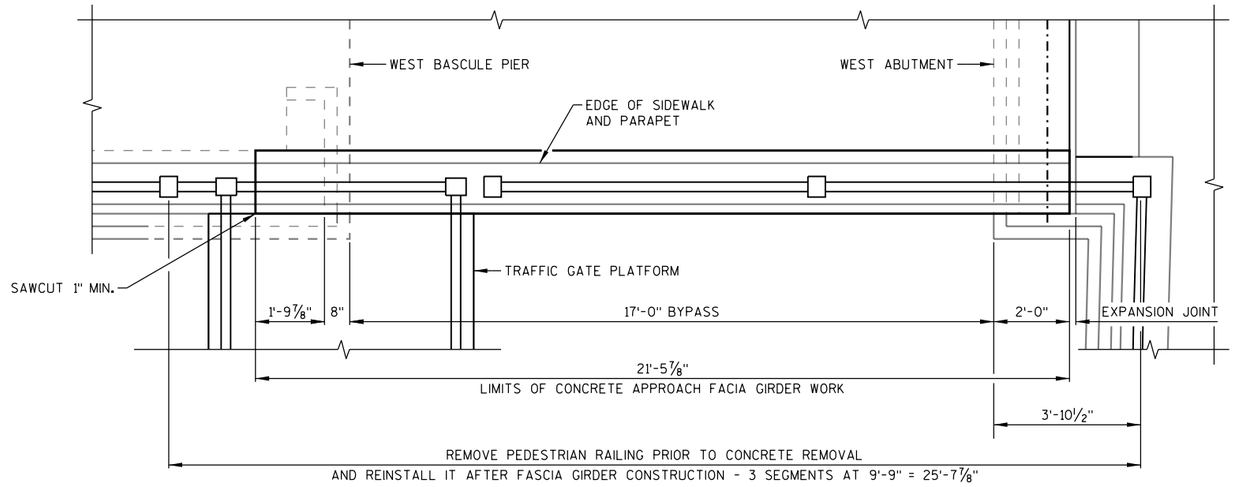
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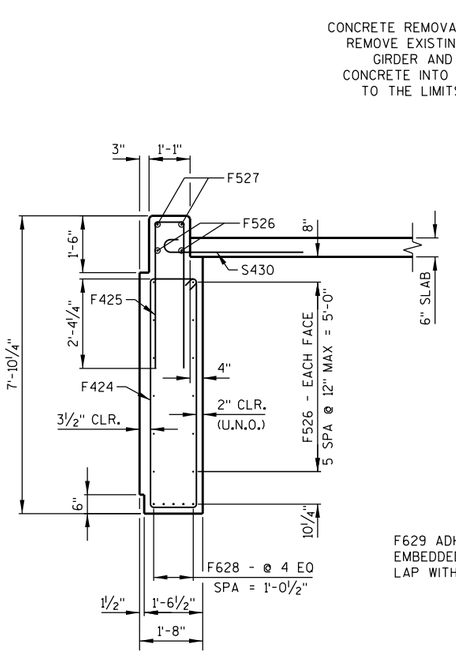
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BATCH PRINT SHEET 57 OF 71

STATE PROJECT NUMBER

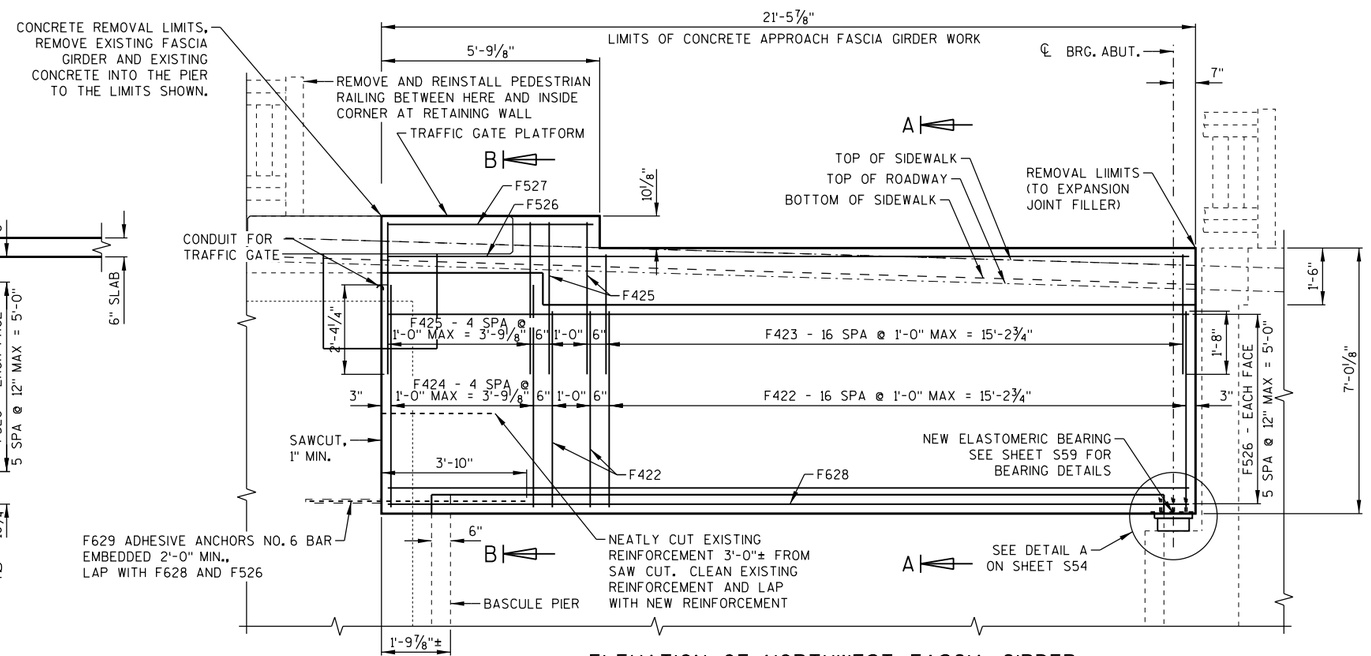
2984-26-73



PLAN OF NORTHWEST FASCIA GIRDER

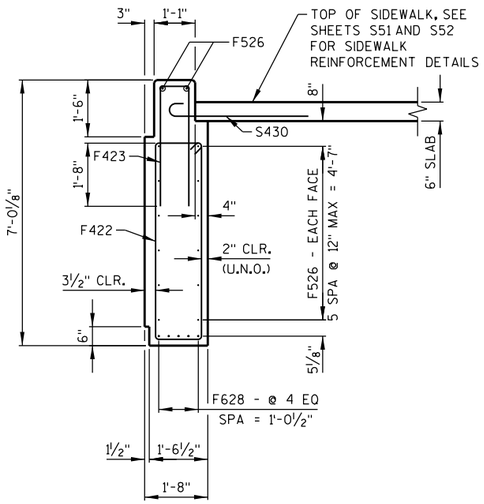


SECTION B-B



ELEVATION OF NORTHWEST FASCIA GIRDER

LOOKING NORTH AT OUTSIDE FACE OF GIRDER

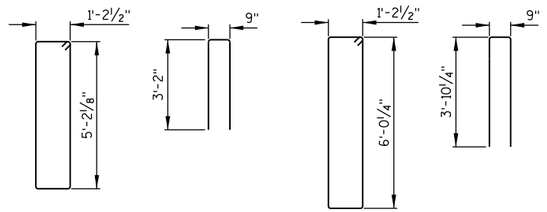


SECTION A-A

BILL OF BARS (NORTHWEST FASCIA GIRDER)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 990 LBS
F422	19	13'-4"	X		STIRRUP (SHORT X/S), VERT.
F423	17	7'-1"	X		STIRRUP TOP (SHORT X/S), VERT.
F424	5	15'-0"	X		STIRRUP (TALL X/S), VERT.
F425	7	8'-1"	X		STIRRUP TOP (TALL X/S), VERT.
F526	14	21'-1"			GIRDER, LONG.
F527	2	5'-5"			GIRDER TOP (TALL X/S), LONG.
F628	5	15'-7"			GIRDER BOTTOM, LONG.
F629	19	5'-10"			ADHESIVE ANCHORS - INTO PIER

CONCRETE FASCIA GIRDER REPLACEMENT



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

BASCULE PIER SECTIONS-NORTHWEST FASCIA GIRDER

SHEET S57 OF S71

113

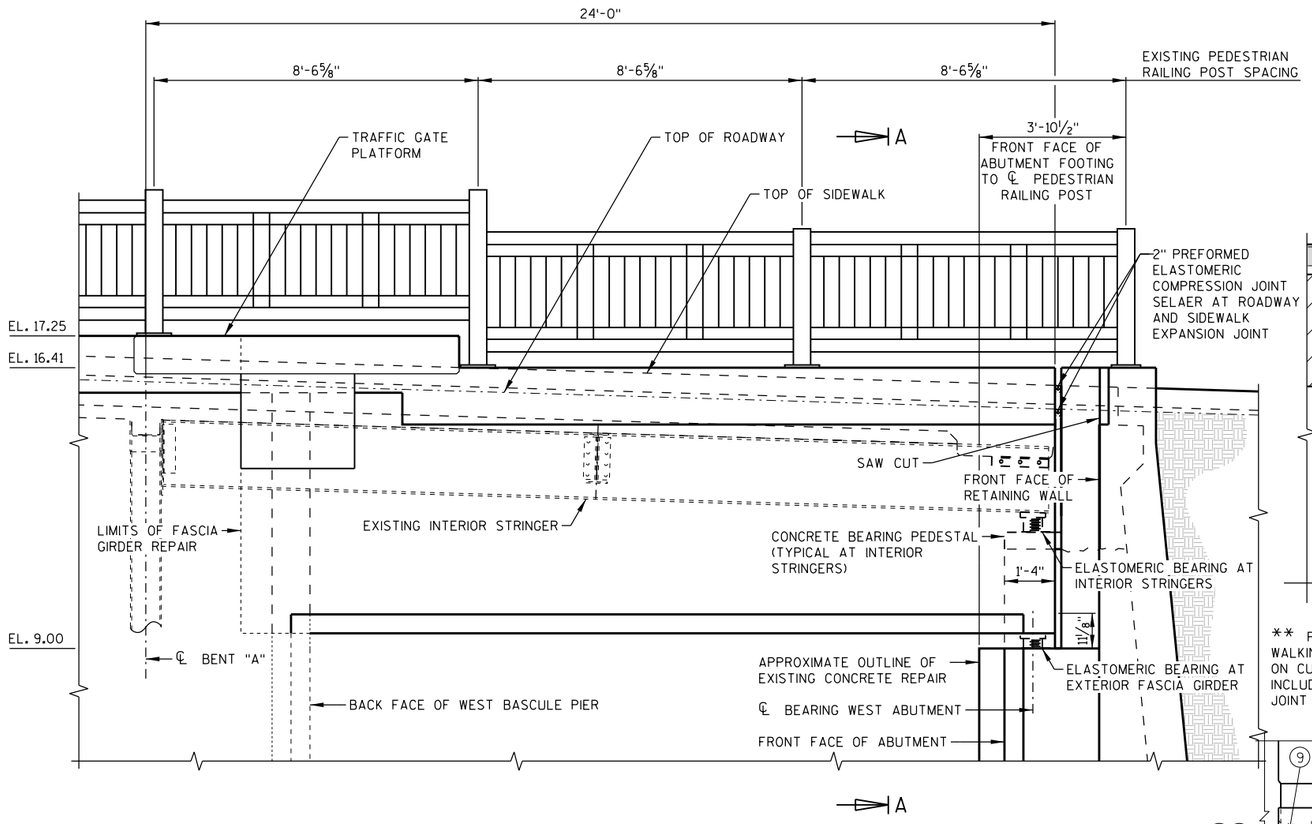
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BATCH PRINT SHEET 58 OF 71

STATE PROJECT NUMBER

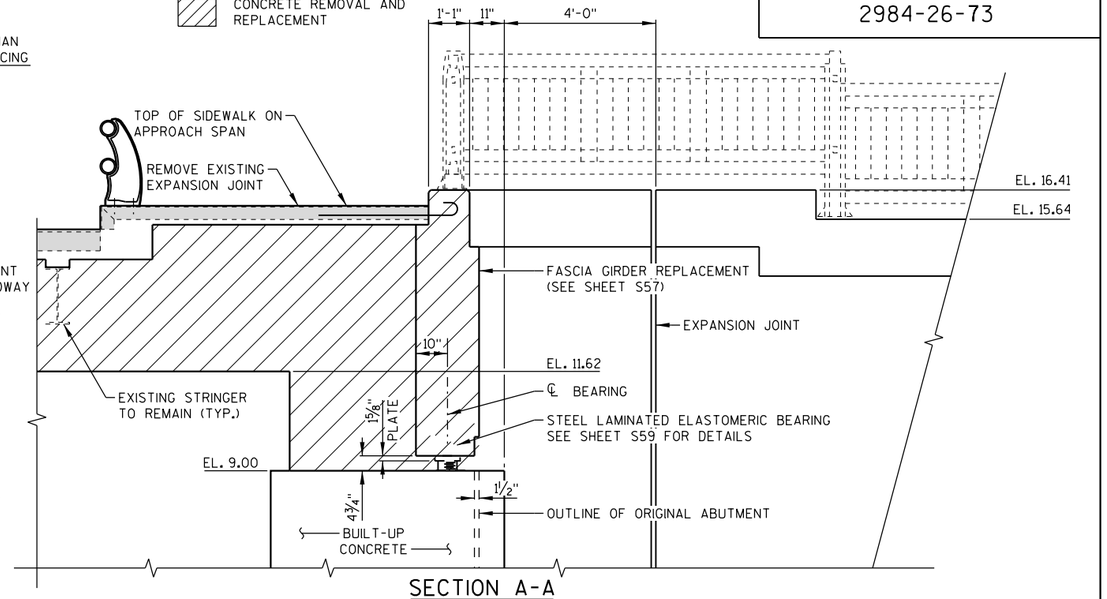
2984-26-73



ELEVATION OF NORTHWEST FASCIA GIRDER

LEGEND

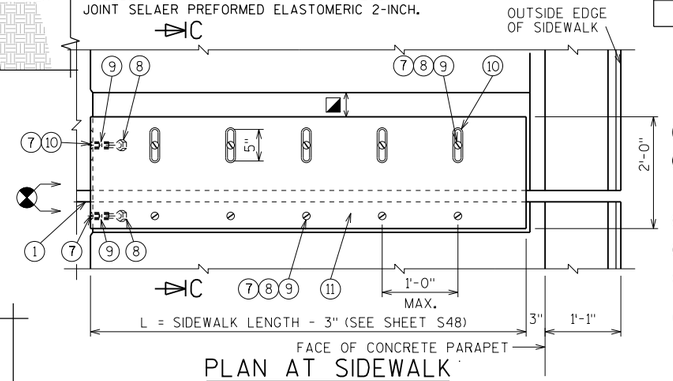
CONCRETE REMOVAL AND REPLACEMENT



SECTION A-A

** PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE IN SHADED AREA ONLY (NOT ON CURB FACE). COST OF ENTIRE COVER ASSEMBLY INCLUDED IN THE PAY ITEM FOR COMPRESSION JOINT SELAER PREFORMED ELASTOMERIC 2-INCH.

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



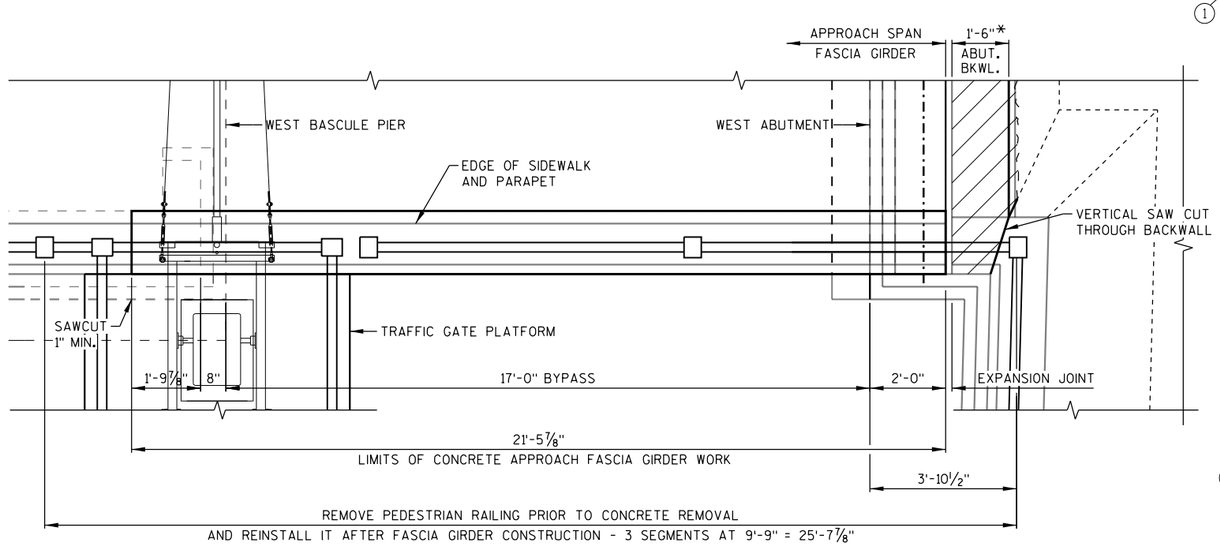
PLAN AT SIDEWALK

BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

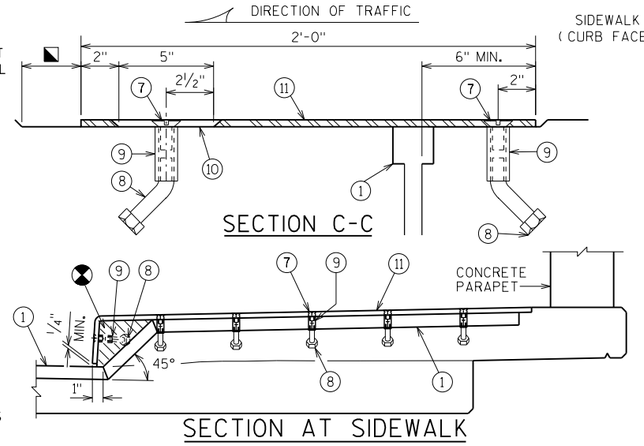
JOINT OPENING DIMENSION ALONG SKEW PLUS ½".

LEGEND

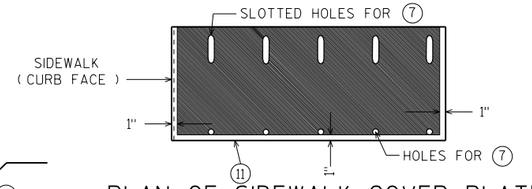
1. 2" JOINT OPENING FOR 2" COMPRESSION JOINT SEALER
7. ¾"Φ X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾"Φ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. ¾"Φ X 2¼" GALVANIZED THREADED COUPLING.
10. 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
11. SIDEWALK COVER PLATE ⅜" X 2'-0" X LIMITS SHOWN. BEND DOWN FACE OF SIDEWALK WITH HOLES FOR NO. 7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.



PLAN OF NORTHWEST FASCIA GIRDER * SEE SHEET S48 FOR ABUTMENT REPAIR DETAILS



SECTION AT SIDEWALK



PLAN OF SIDEWALK COVER PLATE WITH SLIP-RESISTANT SURFACE**

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

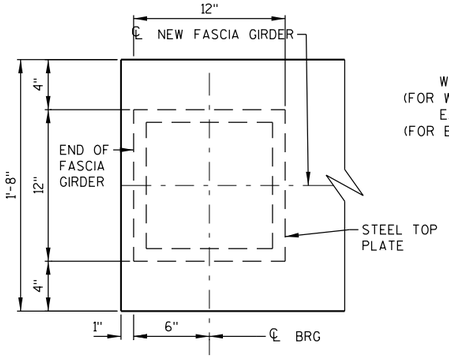
NORTHWEST FASCIA GIRDER AND ABUTMENT DETAILS

SHEET S58 OF S71
114

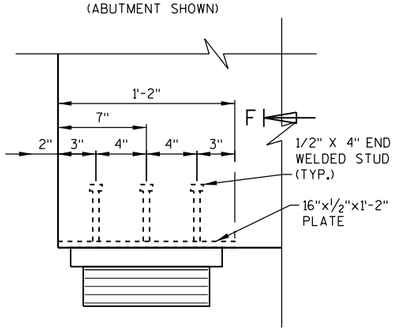
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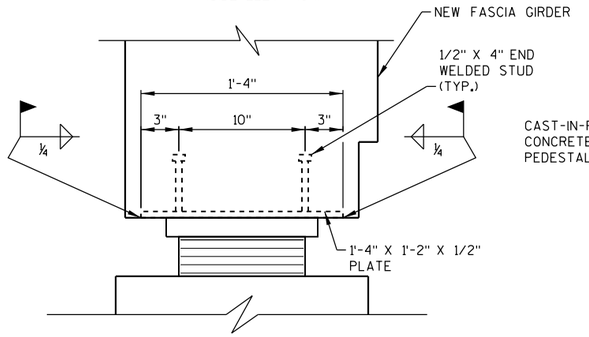
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PLOT DATE: 3/27/2024 PLOT TIME: 9:22:25 AM
BATCH PRINT SHEET 59 OF 71



PLAN VIEW
(ABUTMENT SHOWN)

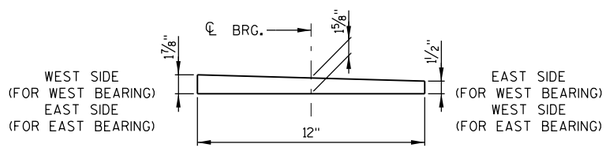


SECTION THRU ELASTOMERIC BEARING
(SIDE ELEVATION)

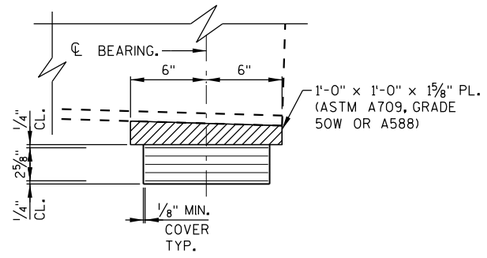


FRONT ELEVATION

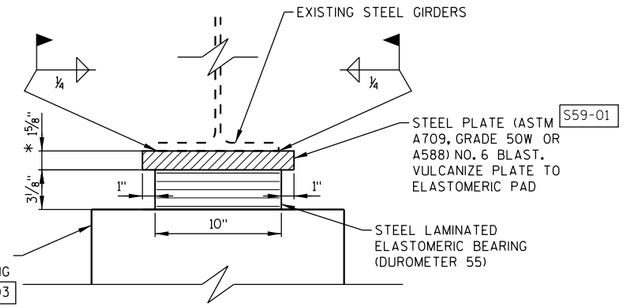
EXPANSION BEARING REPLACEMENT
(REQUIRED AT FASCIA GIRDER LOCATIONS,
EAST AND WEST ABUTMENTS, TOTAL = 4)



TAPERED PLATE DIAGRAM
(PROVIDE 1 5/8" THICK TOP PLATE WITHOUT TAPER FOR ALL FASCIA GIRDER LOCATIONS)



SECTION THRU ELASTOMERIC BEARING
(SIDE ELEVATION)



FRONT ELEVATION

EXPANSION BEARING REPLACEMENT
(REQUIRED AT STRINGER LOCATIONS,
EAST AND WEST ABUTMENTS, TOTAL = 20)

BEARING NOTES:

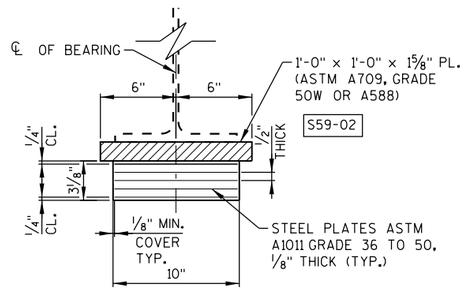
ALL MATERIAL USED FOR BEARINGS SHALL BE PAID AT THE UNIT BID PRICE FOR "BEARING PADS ELASTOMERIC LAMINATED".
REMOVAL OF THE EXISTING BEARINGS SHALL BE PAID AT THE UNIT BID PRICE FOR "REMOVING BEARINGS P-40-864".

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

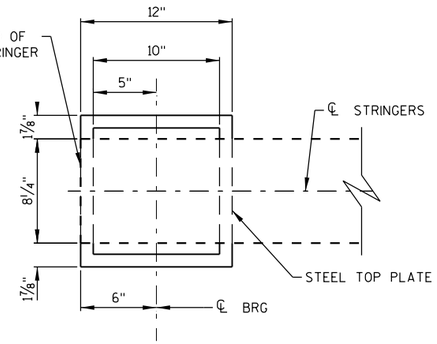
ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF STRINGER/FASCIA GIRDER AND ℄ OF BEARING.

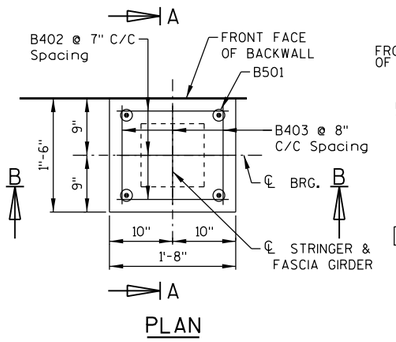
ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATED PROCESS.



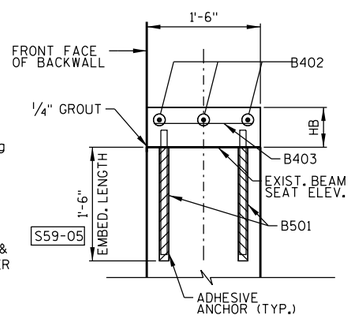
SECTION THRU ELASTOMERIC BEARING
(FRONT ELEVATION)



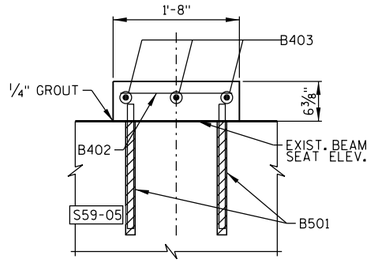
PLAN VIEW
(ABUTMENT SHOWN)



PLAN



SECTION A-A



SECTION B-B

BEARING PEDESTAL DETAILS

BILL OF BARS (BEARING PEDESTALS)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 330 LBS
B501	104	1'-10"			ADHESIVE ANCHORS - INTO ABUTMENT
B402	78	1'-4"			BEARING PEDESTAL, HORIZ.
B403	78	1'-2"			BEARING PEDESTAL, HORIZ.

LEGEND

S59-01 WELD STEEL PLATE DIRECTLY TO EXISTING BOTTOM FLANGE. PLATES WELDED TO EXISTING BEAMS THAT ARE PART OF THE EXISTING BEARINGS TO BE REMOVED. GRIND SMOOTH WELD THAT ATTACHED EXISTING BEARING TOP PLATE TO BOTTOM FLANGE.

S59-02 VULCANIZE TOP PLATE TO ELASTOMERIC PAD. SEE TAPERED PLATE DIAGRAM FOR DEPTH.

S59-03 NEW CAST-IN-PLACE CONCRETE BEARING BLOCKS LOCATED UNDER EACH GIRDER AT THE EAST AND WEST ABUTMENTS. REMOVE EXISTING ROCKER BEARINGS. NEW ANCHOR BOLTS TO EXTEND INTO CAST-IN-PLACE CONCRETE BEARING BLOCKS. ONLY CUT BOLTS WHEN REQUIRED TO MAINTAIN 2" CLEAR DISTANCE TO CONCRETE SURFACE.

S59-04 WELD STEEL PLATE DIRECTLY TO THE BOTTOM OF STEEL PLATE EMBEDDED AT THE BOTTOM FACE OF FASCIA GIRDER

S59-05 REINFORCEMENT INSTALLED WITH ADHESIVE ANCHORS NO. 5 BAR. EMBED 1'-6" MIN. VARY DEPTH TO MAINTAIN 2" CLEAR COVER AS NEEDED.

BEARING PEDESTAL NOTES:

SEE SHEET S48 FOR ADDITIONAL ABUTMENT REPAIRS NOT SHOWN ON THIS SHEET.

ADJUST BAR STEEL TO MISS ANCHOR BOLTS AS REQUIRED.

HB=HEIGHT OF BEARING BLOCK. HB SHALL BE A MINIMUM OF 6 3/8". REMOVAL OF THE EXISTING CONCRETE WILL BE REQUIRED AT LOCATIONS WHERE THE EQUATION YIELDS A VALUE LESS THAN 6 3/8". IF MORE THAN 1/2 OF THE PERIPHERAL AREA OF AN EXISTING REBAR IS EXPOSED THEN THE ADJACENT CONCRETE IS TO BE REMOVED TO PROVIDE A MINIMUM OF 1-INCH CLEARANCE AROUND THE BAR. DETERMINE HB AS FOLLOWS:

HB = EXISTING BEARING HEIGHT - Z (PROPOSED BRG. HEIGHT) @ CL

Z = 4 3/4" INTERIOR STRINGERS
Z = 4 3/4" FASCIA GIRDERS

*DO NOT INCLUDE EXISTING TOP BEARING PLATE, WHICH IS TO BE REMOVED.

THE ANTICIPATED VALUE OF HB IS:
STRINGERS = 6 3/8"
FASCIA GIRDERS = 6 3/8"

BEARING PEDESTALS ARE COVERED BY THE CONCRETE MASONRY, BAR STEEL, & MASONRY ANCHOR BID ITEMS. PRECAST BEARING BLOCKS MAY BE SUBSTITUTED BY THE CONTRACTOR WITH THE PRIOR APPROVAL OF THE ENGINEER. PAYMENT FOR THE PRECAST BEARING BLOCKS SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE CONCRETE MASONRY BRIDGES.

STATE PROJECT NUMBER

2984-26-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY GTS | PLANS CK'D.

BEARING REPLACEMENT DETAILS

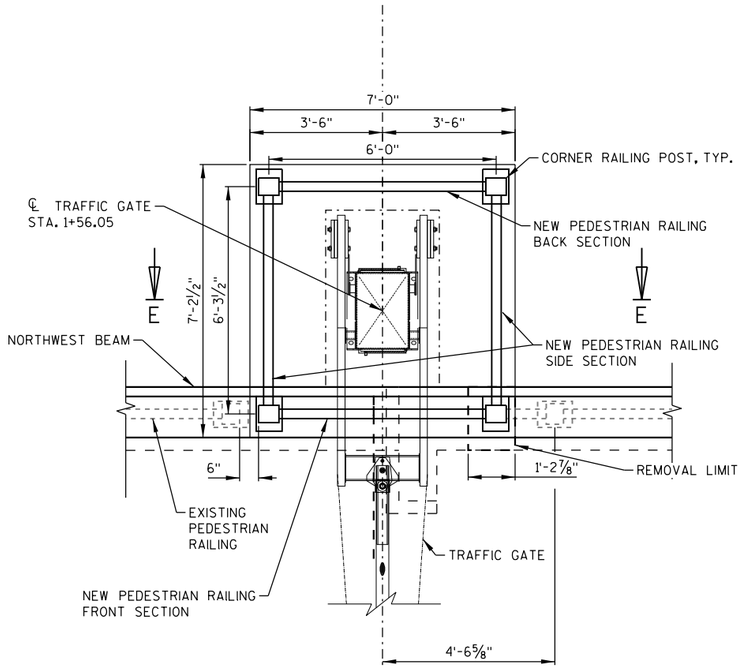
SHEET S59 OF S71
115

8

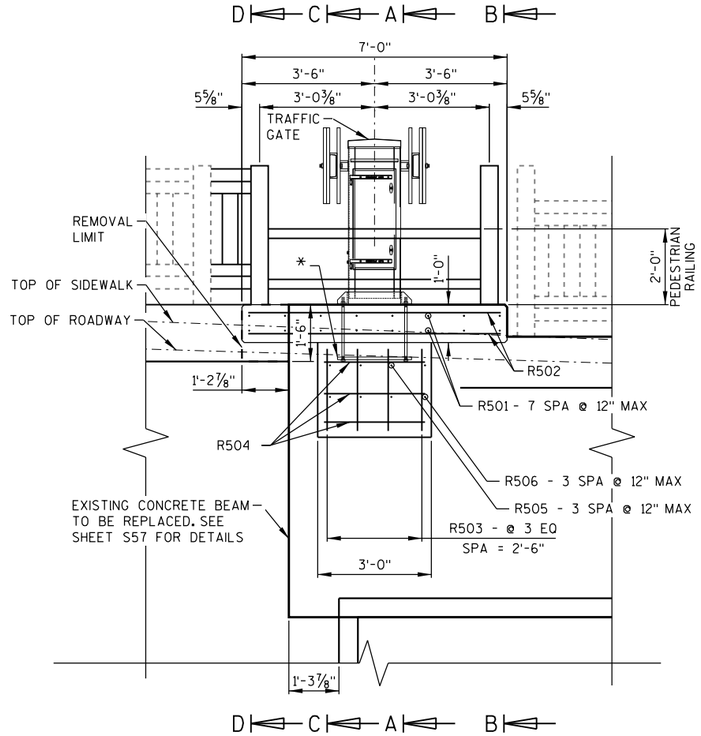
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PLOT DATE: 3/27/2024
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BATCH PRINT SHEET 60 OF 71

STATE PROJECT NUMBER

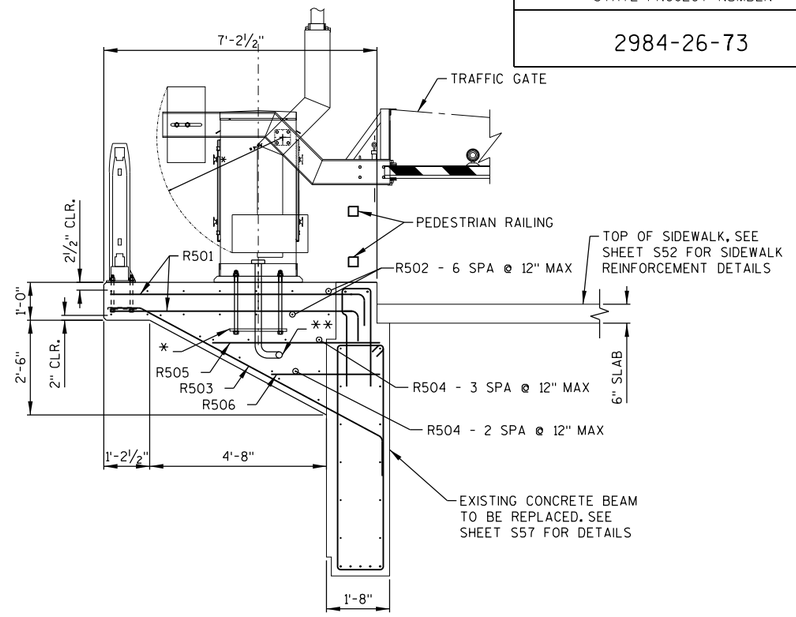
2984-26-73



TRAFFIC GATE PLATFORM PLAN



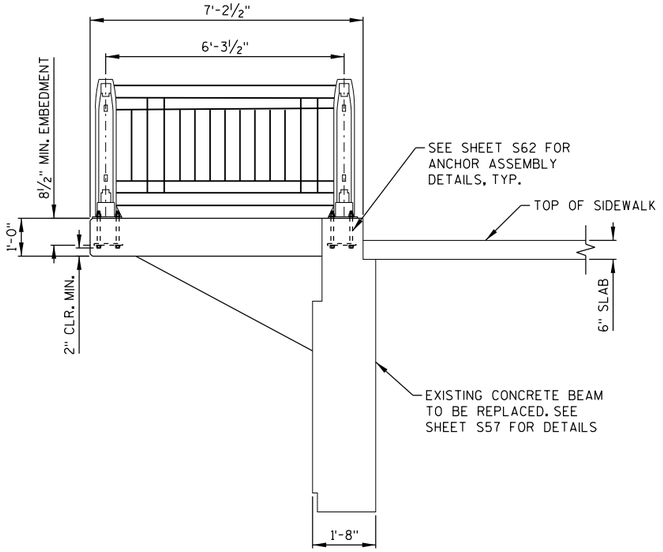
SECTION E-E



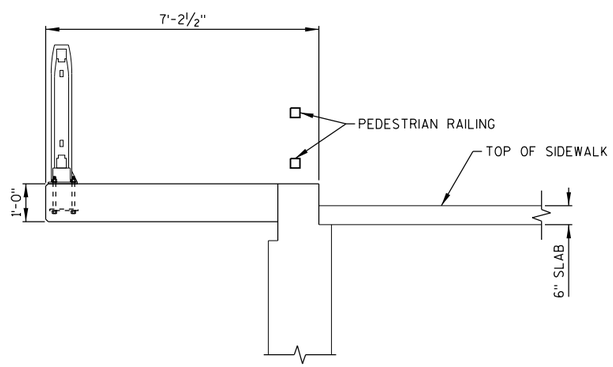
TRAFFIC GATE PLATFORM DETAILS
SECTION A-A

* GATE PLATFORM ANCHOR PLATE, SEE SHEET S54 FOR DETAILS.

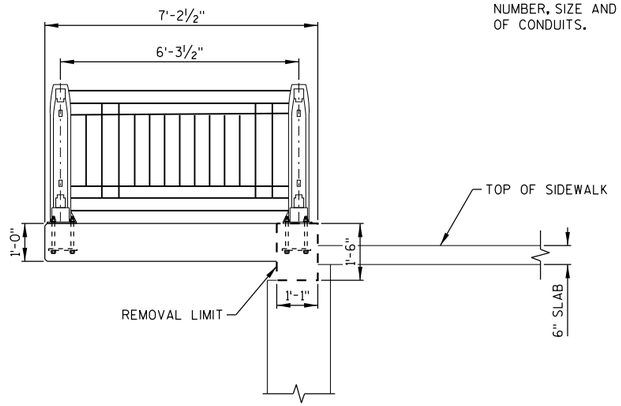
** CONDUIT ORIENTATION VARIES. SEE ELECTRICAL DRAWINGS FOR NUMBER, SIZE AND ORIENTATION OF CONDUITS.



TRAFFIC GATE PLATFORM DETAILS
SECTION B-B



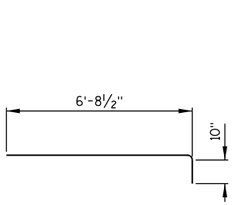
TRAFFIC GATE PLATFORM DETAILS
SECTION C-C



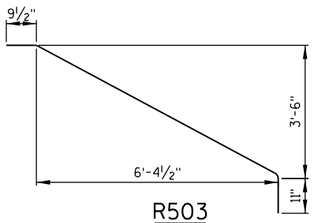
TRAFFIC GATE PLATFORM DETAILS
SECTION D-D

NOTES:

SEE S62 FOR PEDESTRIAN RAILING DETAILS



R501



R503

BILL OF BARS (NW TRAFFICE GATE PLATFORM)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 310 LBS
R501	16	7'-5"	X		SLAB. TRANS.
R502	14	6'-8"			SLAB, LONG.
R503	4	8'-10"	X		DIAG. BAR IN PEDESTAL, TRANS.
R504	7	2'-8"			PEDESTAL, LONG.
R505	4	4'-6"			PEDESTAL, TRANS.
R506	4	2'-11"			PEDESTAL, TRANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

NW TRAFFIC GATE PLATFORM

SHEET S60 OF S71
116

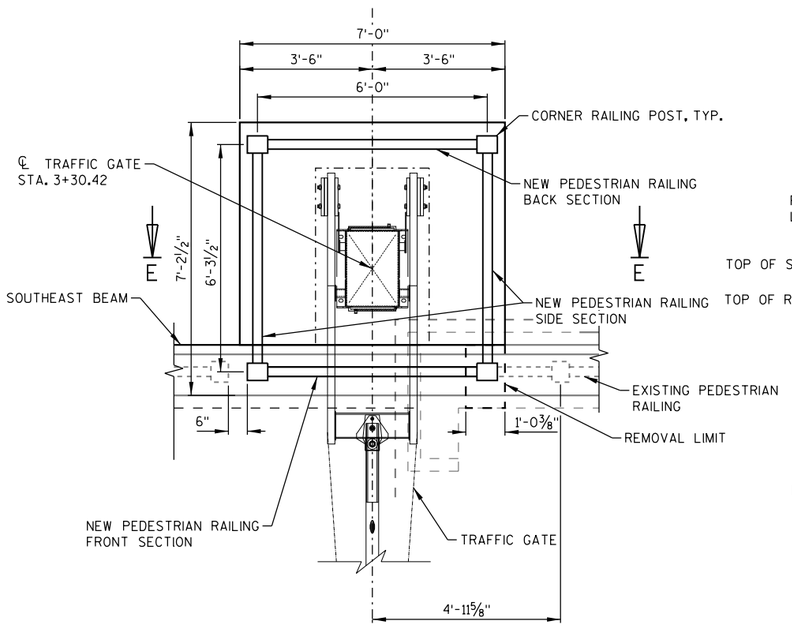
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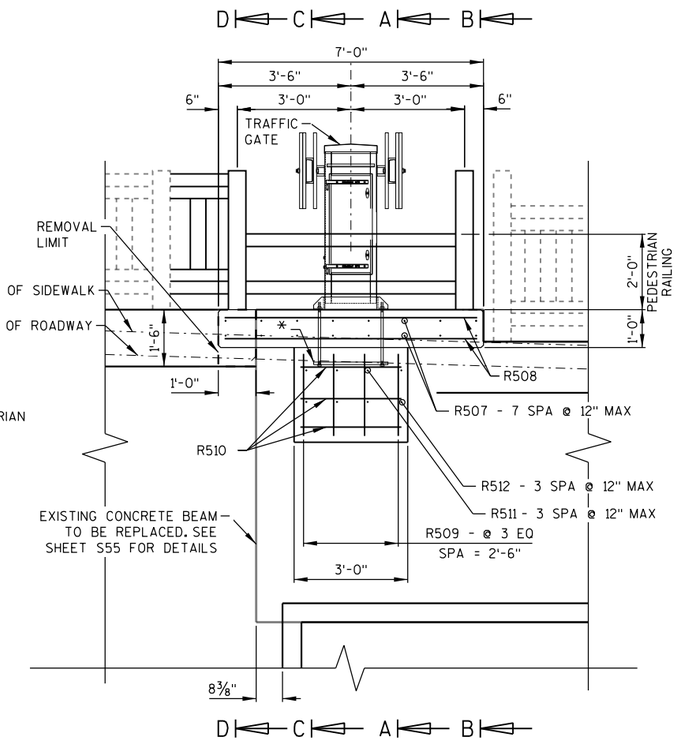
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BATCH PRINT SHEET 61 OF 71

STATE PROJECT NUMBER

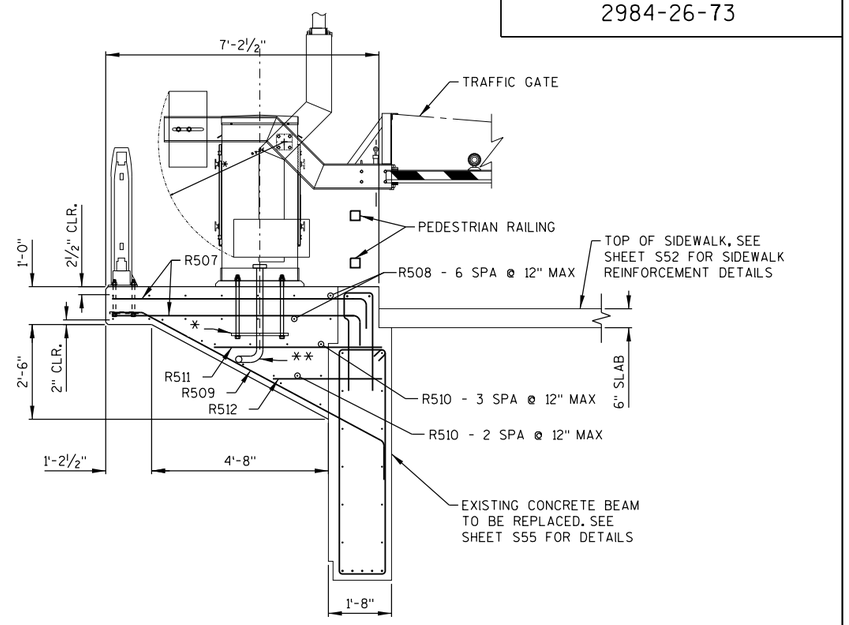
2984-26-73



TRAFFIC GATE PLATFORM PLAN



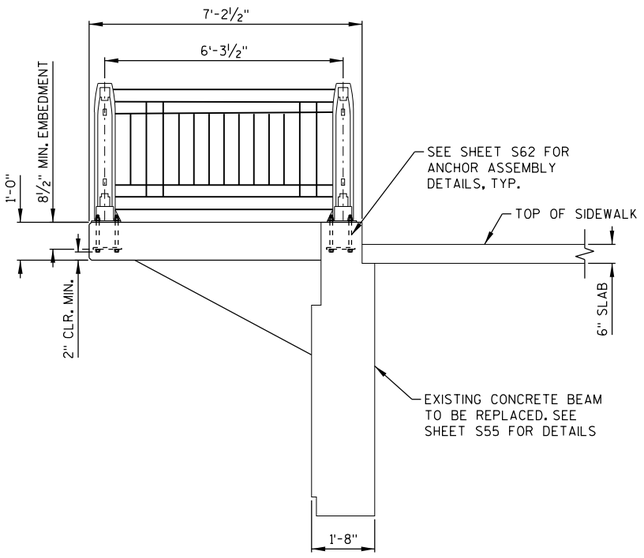
SECTION E-E



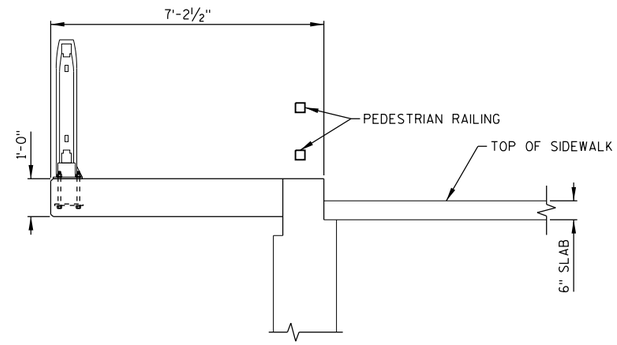
TRAFFIC GATE PLATFORM DETAILS
SECTION A-A

* GATE PLATFORM ANCHOR PLATE, SEE SHEET S54 FOR DETAILS.

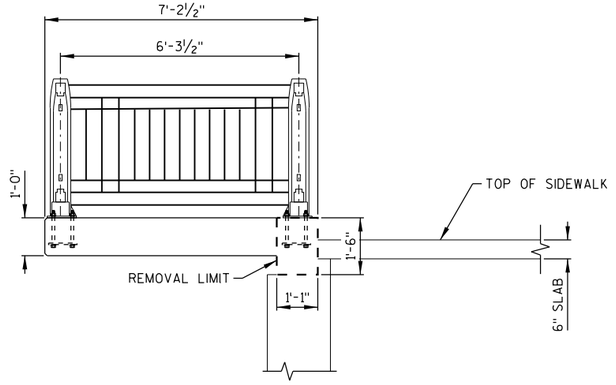
** CONDUIT ORIENTATION VARIES. SEE ELECTRICAL DRAWINGS FOR NUMBER, SIZE AND ORIENTATION OF CONDUITS.



TRAFFIC GATE PLATFORM DETAILS
SECTION B-B

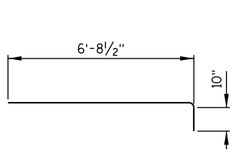


TRAFFIC GATE PLATFORM DETAILS
SECTION C-C

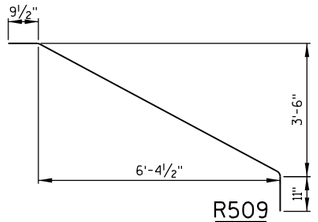


TRAFFIC GATE PLATFORM DETAILS
SECTION D-D

NOTES:
SEE S62 FOR PEDESTRIAN RAILING DETAILS



R507



R509

BILL OF BARS (SE TRAFFICE GATE PLATFORM)

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 310 LBS
R507	16	7'-5"	X		SLAB. TRANS.
R508	14	6'-8"			SLAB, LONG.
R509	4	8'-10"	X		DIAG. BAR IN PEDESTAL, TRANS.
R510	7	2'-8"			PEDESTAL, LONG.
R511	4	4'-6"			PEDESTAL, TRANS.
R512	4	2'-11"			PEDESTAL, TRANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY MEO | PLANS CK'D. GTS

SE TRAFFIC GATE PLATFORM

SHEET S61 OF S71
117

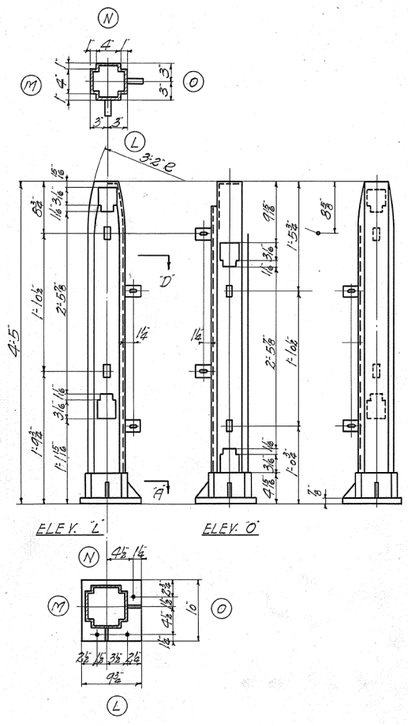
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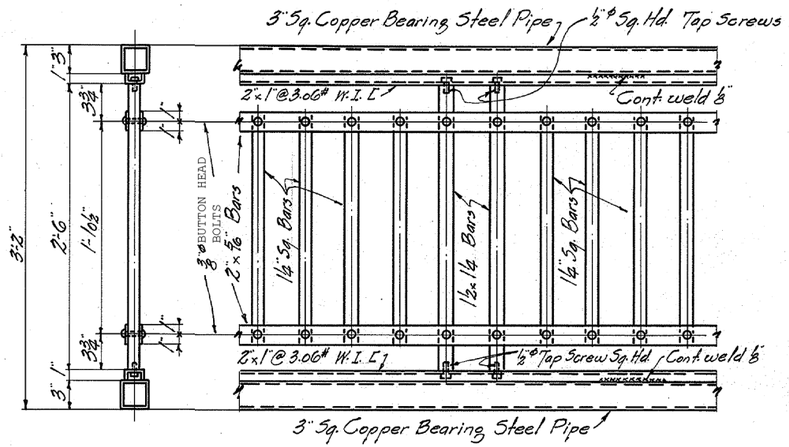
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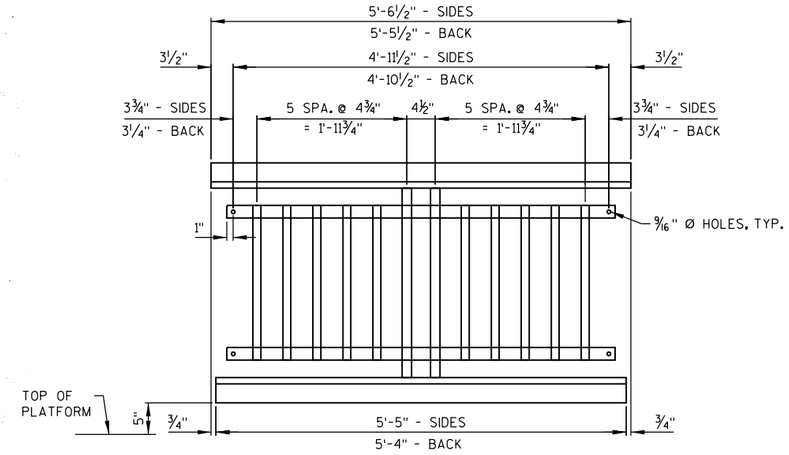
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BATCH PRINT SHEET 62 OF 71

STATE PROJECT NUMBER

2984-26-73



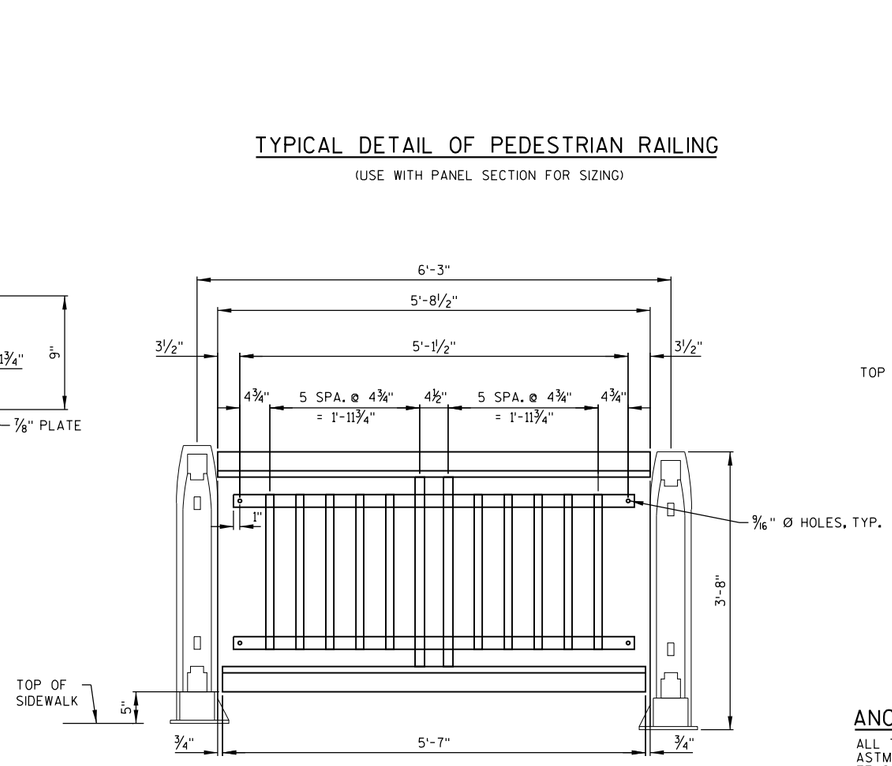




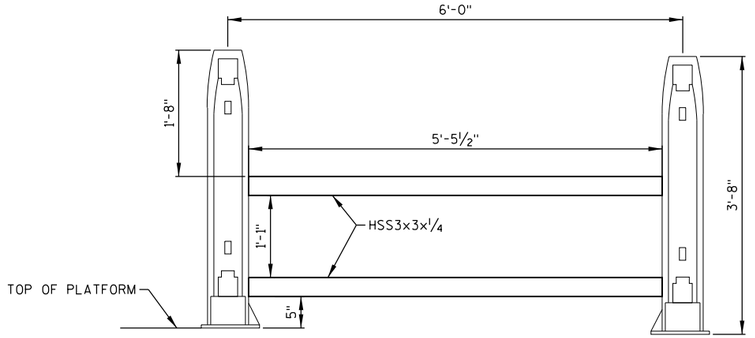
PANEL SECTION

TYPICAL DETAIL OF PEDESTRIAN RAILING

(USE WITH PANEL SECTION FOR SIZING)

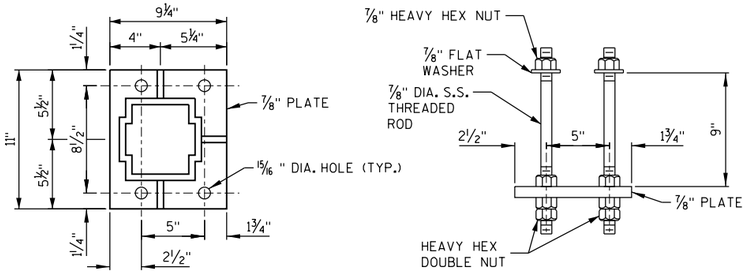


R1 RAILING SECTION



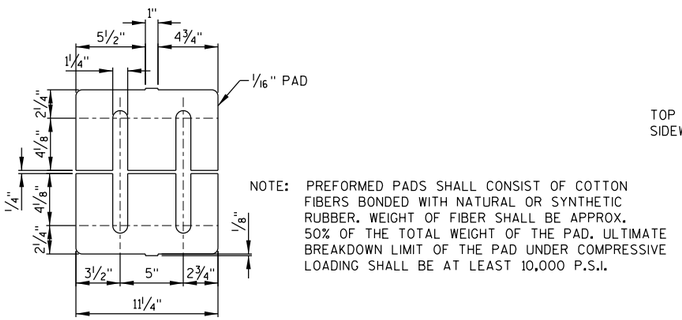
FRONT PANEL SECTION

TYPICAL CORNER RAILING POST



ANCHORAGE DETAIL

(COST OF ANCHORAGE ASSEMBLY IS INCLUDED WITH RESPECTIVE RAILING PAY ITEMS)



NOTE: PREFORMED PADS SHALL CONSIST OF COTTON FIBERS BONDED WITH NATURAL OR SYNTHETIC RUBBER. WEIGHT OF FIBER SHALL BE APPROX. 50% OF THE TOTAL WEIGHT OF THE PAD. ULTIMATE BREAKDOWN LIMIT OF THE PAD UNDER COMPRESSIVE LOADING SHALL BE AT LEAST 10,000 P.S.I.

RUBBER FIBER PAD

NOTES FOR TRAFFIC GATE STANDARD RAILING

⅜" BUTTON HEAD BOLTS TO BE USED WITH NUTS ON THE OUTSIDE.

CONTRACTOR TO PROVIDE FABRICATED RAILING POST PER ORIGINAL SHOP DRAWINGS.

SEE S60 & S61 FOR MORE DETAILS

ANCHOR HARDWARE

ALL THREADED RODS SHALL BE STAINLESS STEEL ASTM A276 TYPE 300 OR 400 SERIES WITH A MIN. TENSILE STRENGTH OF 90 KSI, MIN. YIELD STRENGTH OF 35 KSI AND MIN ELONGATION OF 15% IN 2 INCHES.

ALL HEAVY HEX NUTS AND WASHERS SHALL BE STAINLESS STEEL U.N.O.

NEOPRENE PADS SHALL HAVE A NOMINAL DUROMETER HARDNESS OF 60±5.

SHIM MATERIALS SHALL BE ASTM B209, ALLOY 1100-0.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

TRAFFIC GATE STANDARD RAILING DETAILS

SHEET S62 OF S71

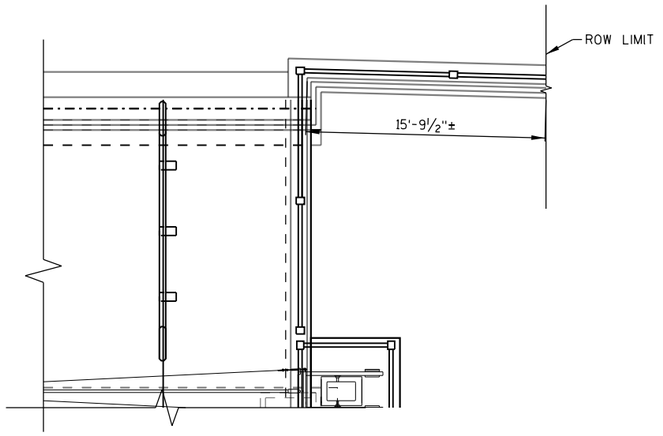
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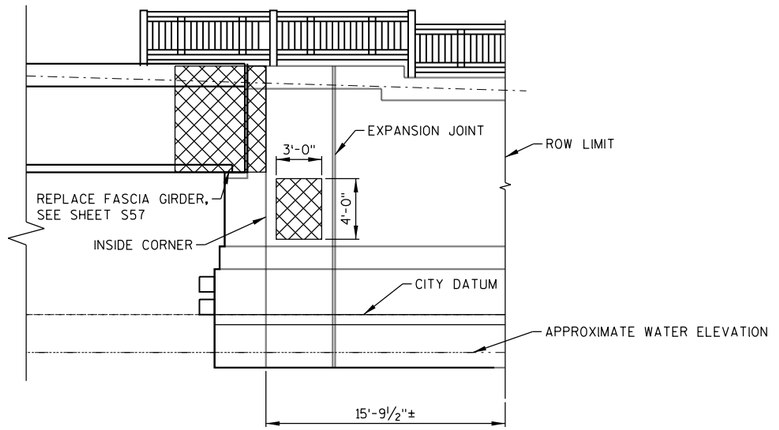
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BATCH PRINT SHEET 63 OF 71

STATE PROJECT NUMBER
2984-26-73

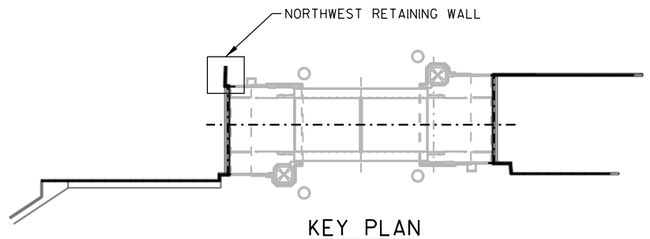


PLAN



UNFOLDED ELEVATION

(LOOKING WEST)



KEY PLAN

NOTES:

1. PERFORM ALL WORK SHOWN ON THIS SHEET BY ACCESSING REPAIR LOCATIONS VIA WATER WAY.
2. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIRS ARE APPROXIMATE.
3. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMANING THE CONCRETE SURFACE REPAIR.

LEGEND:

CONCRETE SURFACE REPAIRS

EPOXY OR URETHANE CRACK INJECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

NORTHWEST RETAINING WALL REPAIRS

SHEET S63 OF S71

119

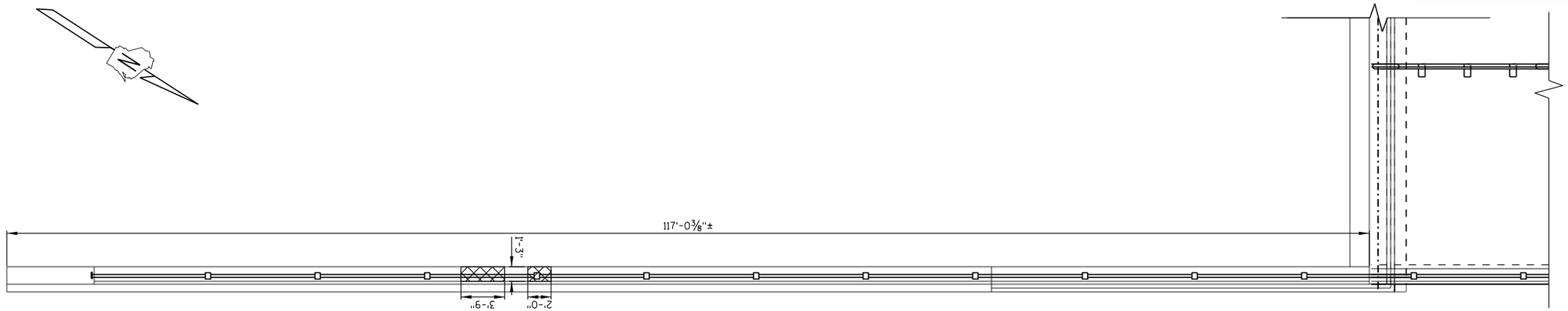
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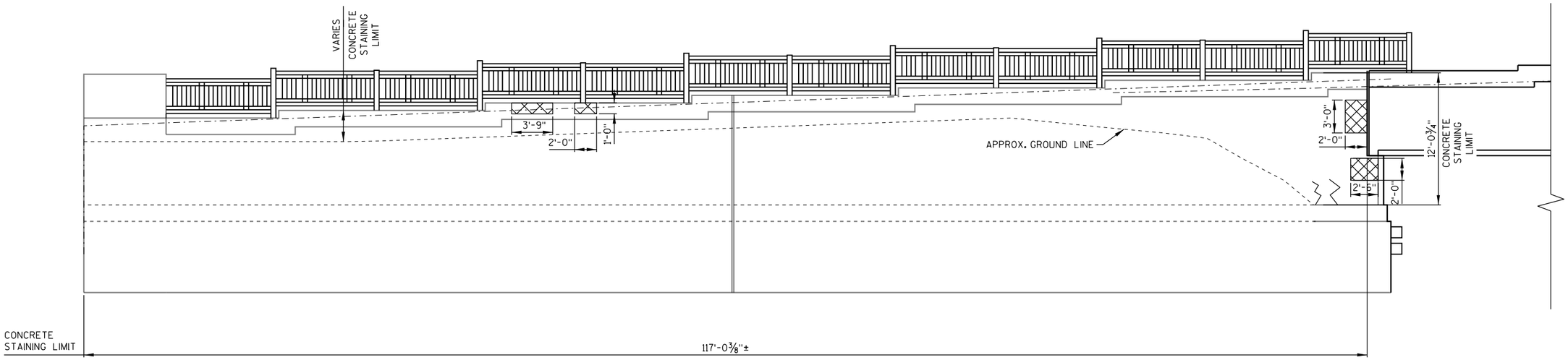
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BATCH PRINT SHEET 64 OF 71

STATE PROJECT NUMBER

2984-26-73

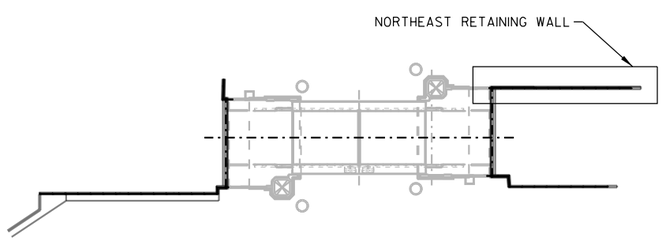


PLAN



ELEVATION

(LOOKING SOUTH)



KEY PLAN

NOTES:

1. PROVIDE CONCRETE STAINING IN ONE OF THE FOLLOWING COLORS AS SELECTED BY THE ENGINEER.
   1. FEDERAL COLOR 13522
   2. FEDERAL COLOR 33448
2. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIRS ARE APPROXIMATE.
3. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMANING THE CONCRETE SURFACE REPAIR.
4. PROVIDE CONCRETE STAINING ON EXPOSED WALL SURFACE ABOVE THE GROUND LINE

LEGEND:

CONCRETE SURFACE REPAIRS

EPOXY OR URETHANE CRACK INJECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

NORTHEAST RETAINING WALL REPAIRS

SHEET S64 OF S71

120

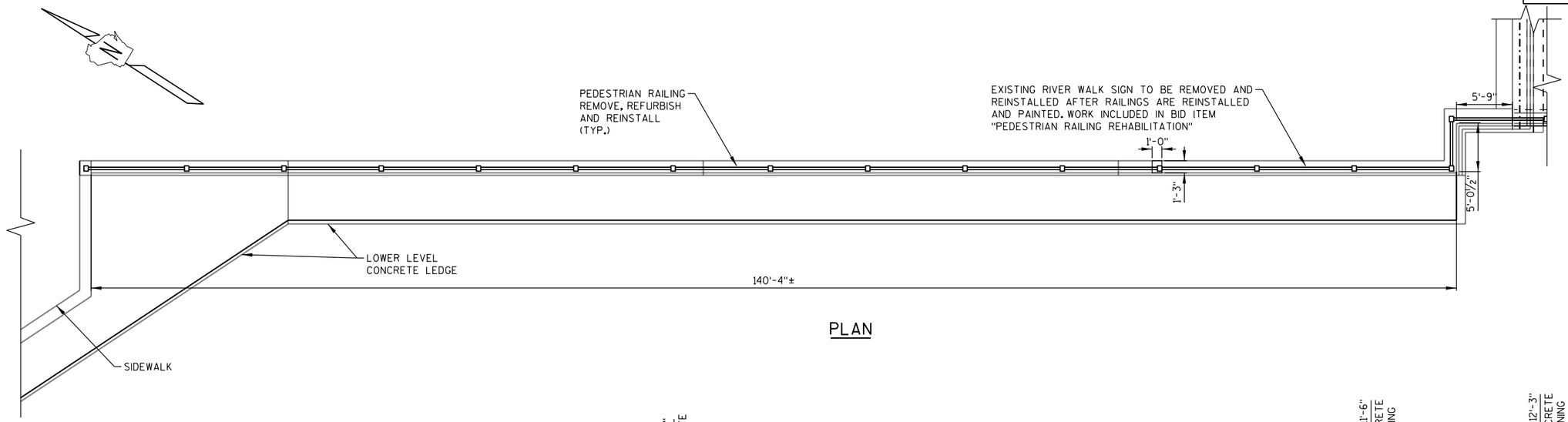
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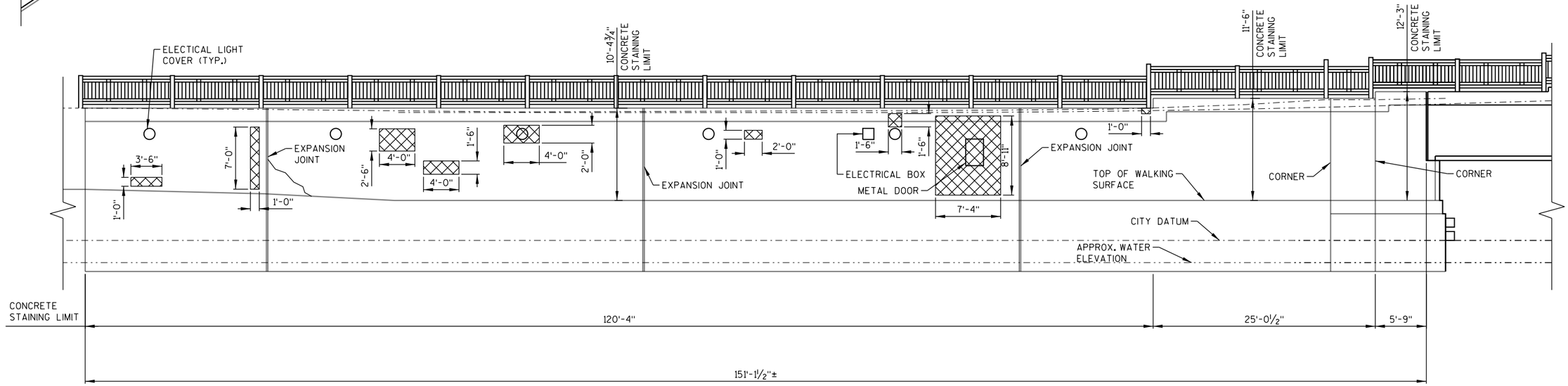
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PLOT DATE: 3/27/2024 PLOT TIME: 9:23:32 AM
BATCH PRINT SHEET 65 OF 71

STATE PROJECT NUMBER

2984-26-73



PLAN



UNFOLDED ELEVATION

(LOOKING NORTH)

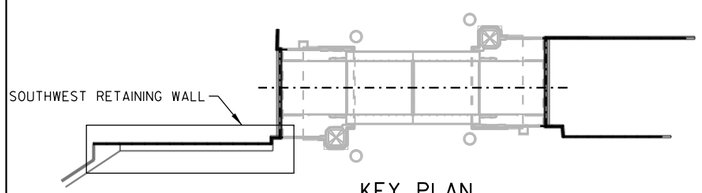
NOTES:

1. PROVIDE CONCRETE STAINING IN ONE OF THE FOLLOWING COLORS AS SELECTED BY THE ENGINEER
   1. FEDERAL COLOR 13522
   2. FEDERAL COLOR 33448
2. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIRS ARE APPROXIMATE.
3. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMANING THE CONCRETE SURFACE REPAIR.

LEGEND:

CONCRETE SURFACE REPAIRS

EPOXY OR URETHANE CRACK INJECTION



KEY PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

SOUTHWEST RETAINING WALL REPAIRS

SHEET S65 OF S71

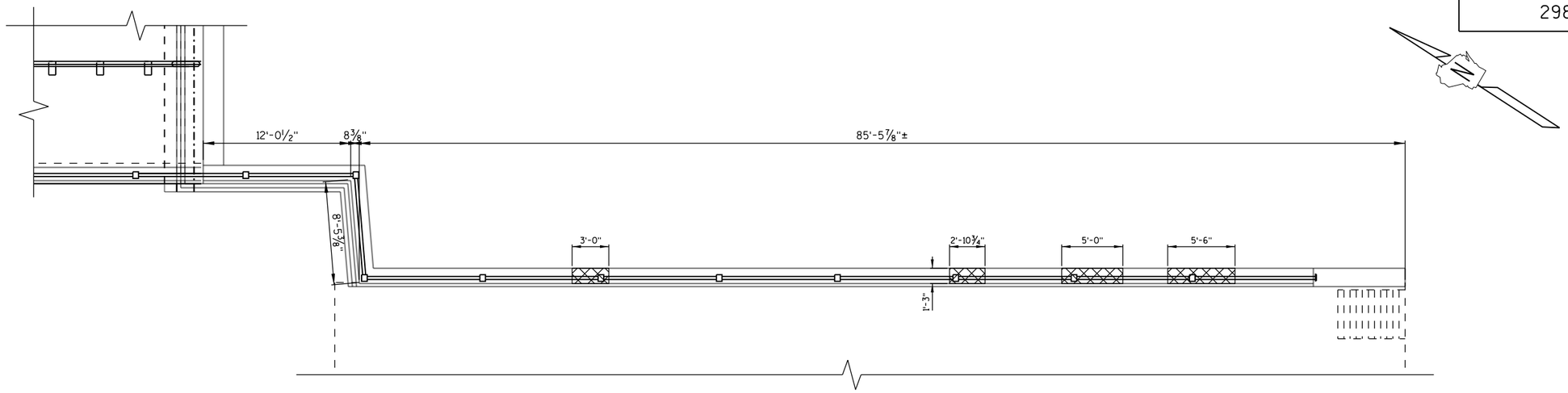
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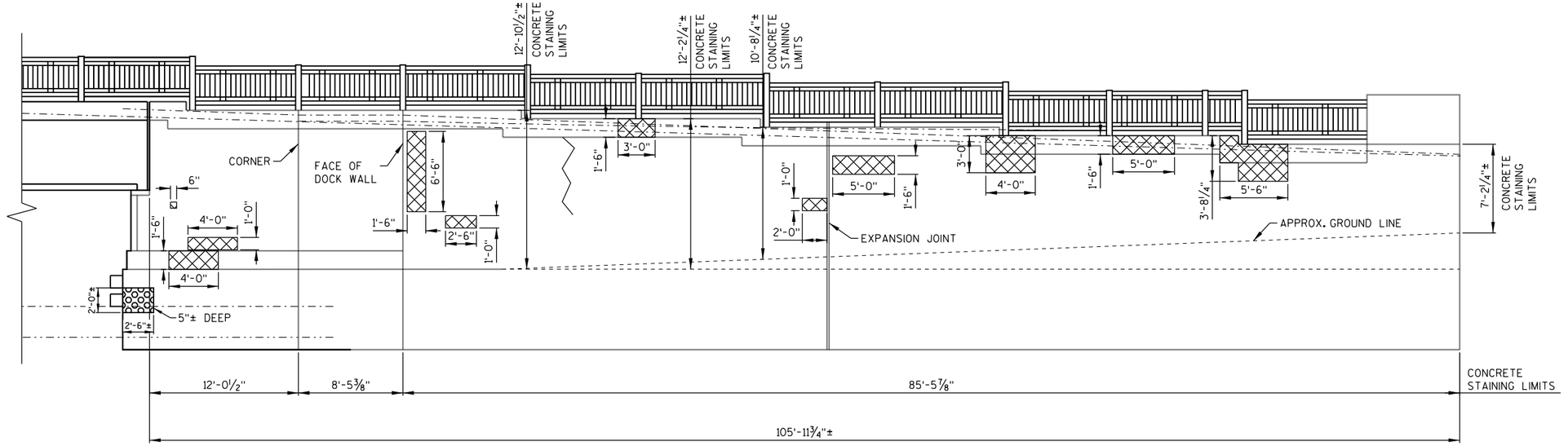
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STATE PROJECT NUMBER
2984-26-73



PLAN



UNFOLDED ELEVATION

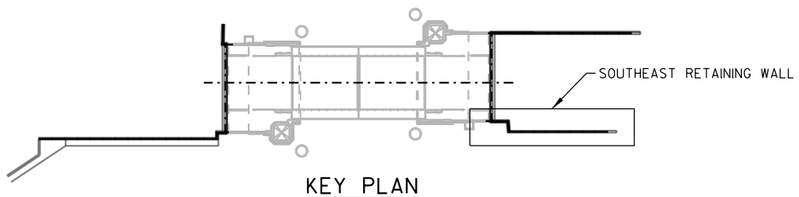
(LOOKING NORTH)

NOTES:

1. PROVIDE CONCRETE STAINING IN ONE OF THE FOLLOWING COLORS AS SELECTED BY THE ENGINEER.
   1. FEDERAL COLOR 13522
   2. FEDERAL COLOR 33448
2. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIRS ARE APPROXIMATE.
3. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. ALL EXPOSED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMANING THE CONCRETE SURFACE REPAIR.

LEGEND

- CONCRETE SURFACE REPAIR AREA
- * SEAL CRACKS USING AN EPOXY OR URETHANE INJECTION SYSTEM
- WATERLINE CONCRETE SURFACE REPAIR AREA



KEY PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY	SS	PLANS CK'D.	GTS

SOUTHEAST RETAINING WALL REPAIRS

SHEET S66 OF S71

122

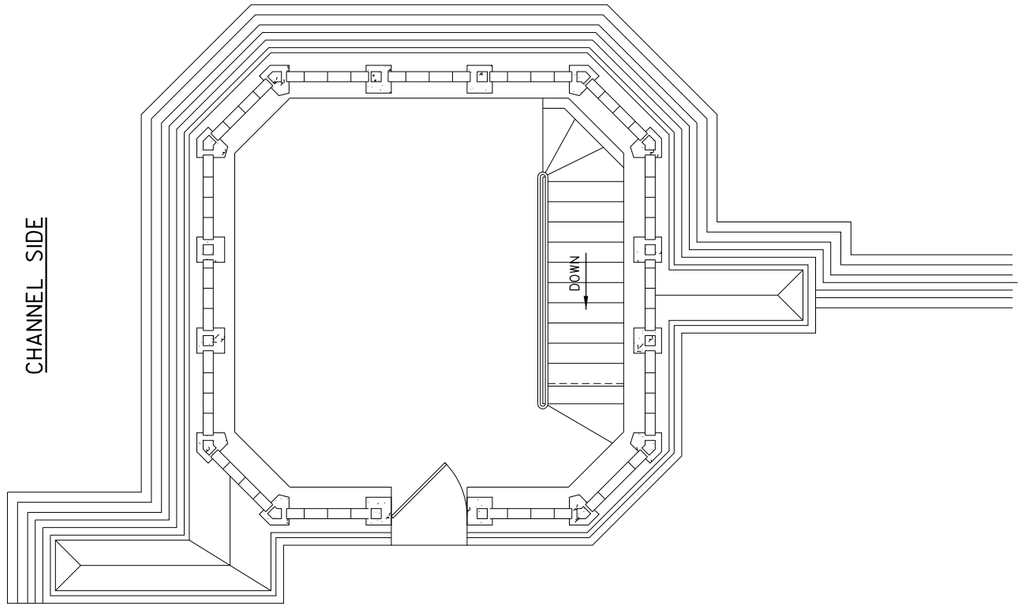
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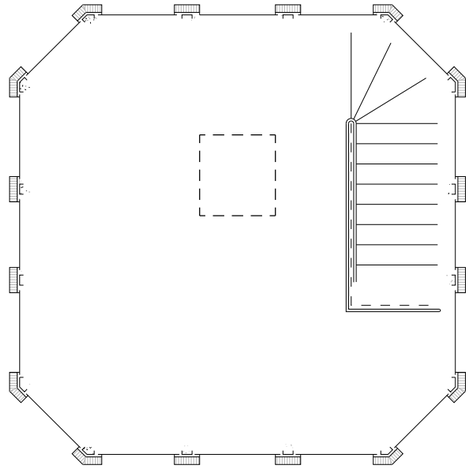
STATE PROJECT NUMBER
2984-26-73

CHANNEL SIDE



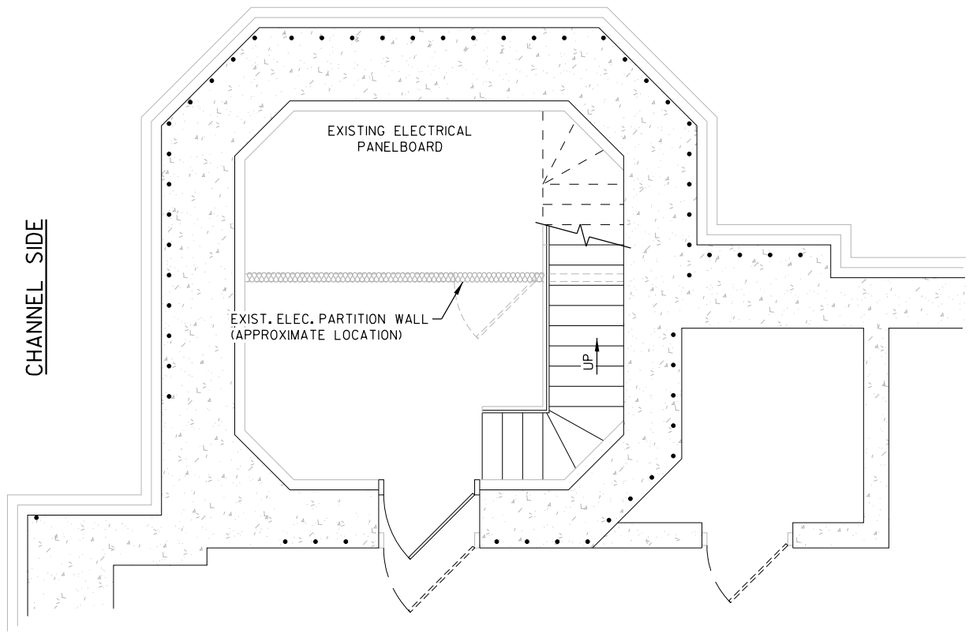
ENTRY LEVEL PLAN
EL. 17.83

CHANNEL SIDE



CONTROL LEVEL PLAN
EL. 28.83

CHANNEL SIDE



MACHINERY LEVEL PLAN
EL. 3.00

LEGEND

CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM

NOTES

1. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.
2. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. REMOVE SECTIONS OF CORRODED REINFORCEMENT EXHIBITING A REDUCTION IN BAR DIAMETER GREATER THAN 1/8"± AND REPLACE REMOVED SECTION WITH NEW BAR. ALL EXPOSED AND CORRODED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.
3. REINFORCING BARS ARE TO HAVE 2" MIN. COVER. BARS MAY BE BENT OR CUT IN THE FIELD TO FIT IF NECESSARY.
4. CARE SHALL BE TAKEN TO PREVENT VOIDS IN THE CONCRETE DURING POURING.
5. REPAIR AREAS SHOWN ARE CONCEPTUAL AND FOR REFERENCE ONLY. ACTUAL REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PROVIDE ADEQUATE ACCESS FOR THE REPAIR AREA DETERMINATION AND INSPECTION.
6. ALL REPAIR AREAS SHALL BE DEFINED BY A 1/2" SAW CUT.
7. SUPPLEMENTAL BAR REINFORCEMENT IS PAID FOR UNDER BID ITEM "BAR STEEL REINFORCEMENT HS STRUCTURES." ADHESIVE ANCHORS ARE PAID UNDER THE BID ITEM "ADHESIVE ANCHORS NO. 4 BAR."

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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NORTHEAST CONTROL HOUSE PLANS

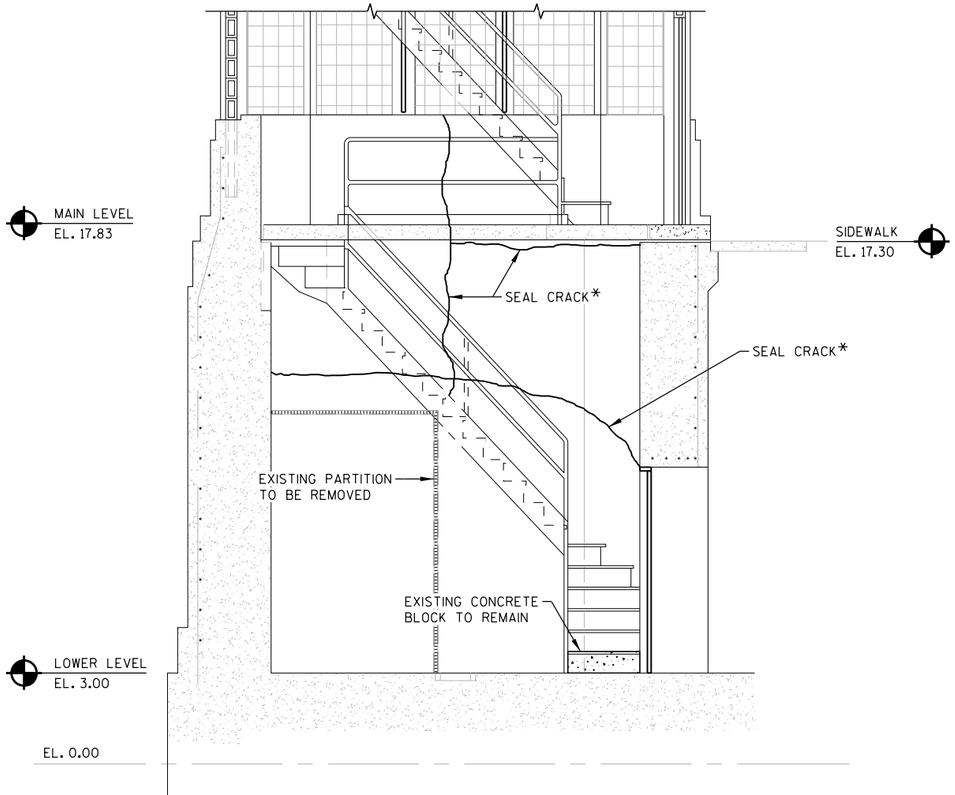
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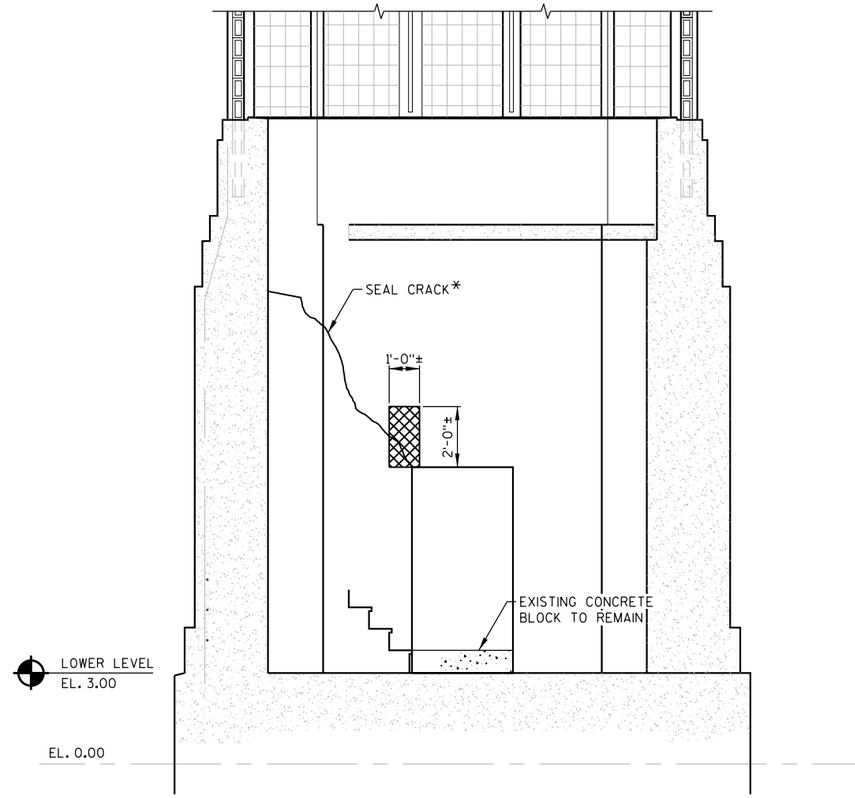
LEGEND

- CONCRETE SURFACE REPAIR AREA
- * SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM



SECTION THRU OPERATOR HOUSE AT MACHINERY LEVEL
INTERIOR WALL CONCRETE REPAIR

(LOOKNG WEST)



SECTION THRU OPERATOR HOUSE AT MACHINERY LEVEL
INTERIOR WALL CONCRETE REPAIR

NOTES

1. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.
2. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. REMOVE SECTIONS OF CORRODED REINFORCEMENT EXHIBITING A REDUCTION IN BAR DIAMETER GREATER THAN 1/8"± AND REPLACE REMOVED SECTION WITH NEW BAR. ALL EXPOSED AND CORRODED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.
3. REINFORCING BARS ARE TO HAVE 2" MIN. COVER. BARS MAY BE BENT OR CUT IN THE FIELD TO FIT IF NECESSARY.
4. CARE SHALL BE TAKEN TO PREVENT VOIDS IN THE CONCRETE DURING POURING.
5. REPAIR AREAS SHOWN ARE CONCEPTUAL AND FOR REFERENCE ONLY. ACTUAL REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PROVIDE ADEQUATE ACCESS FOR THE REPAIR AREA DETERMINATION AND INSPECTION.
6. ALL REPAIR AREAS SHALL BE DEFINED BY A 1/2" SAW CUT.
7. SUPPLEMENTAL BAR REINFORCEMENT IS PAID FOR UNDER BID ITEM "BAR STEEL REINFORCEMENT HS STRUCTURES." ADHESIVE ANCHORS ARE PAID UNDER THE BID ITEM "ADHESIVE ANCHORS NO. 4 BAR."

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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NORTHEAST CONTROL HOUSE ELEVATION REPAIR DETAILS

SHEET S68 OF S71

124

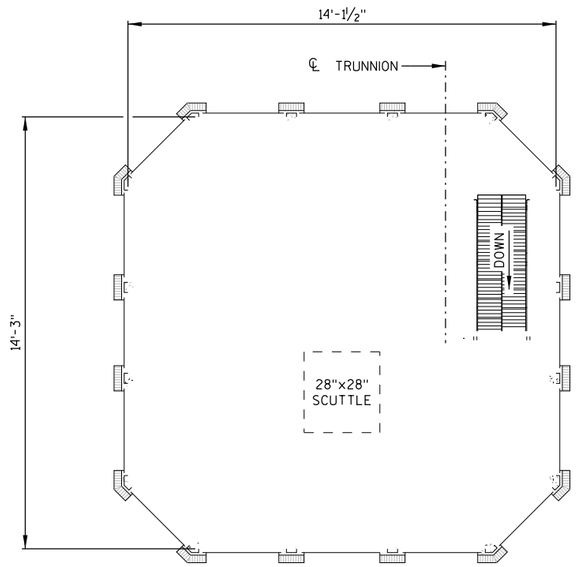
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STATE PROJECT NUMBER

2984-26-73



CONTROL LEVEL PLAN
EL. 28.83

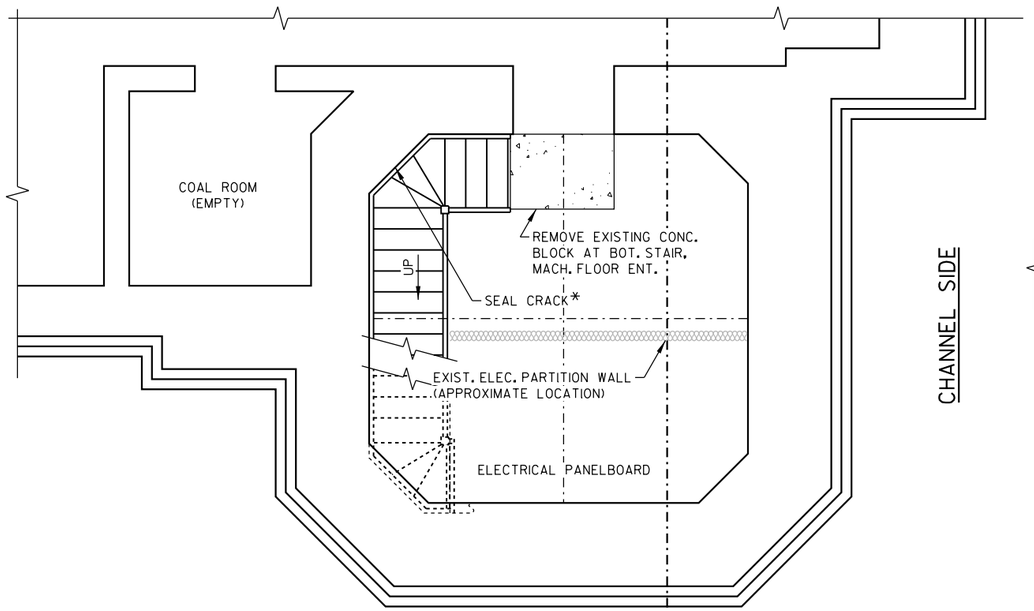
NOTES

1. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.
2. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. REMOVE SECTIONS OF CORRODED REINFORCEMENT EXHIBITING A REDUCTION IN BAR DIAMETER GREATER THAN 1/8"± AND REPLACE REMOVED SECTION WITH NEW BAR. ALL EXPOSED AND CORRODED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.
3. REINFORCING BARS ARE TO HAVE 2" MIN. COVER. BARS MAY BE BENT OR CUT IN THE FIELD TO FIT IF NECESSARY.
4. CARE SHALL BE TAKEN TO PREVENT VOIDS IN THE CONCRETE DURING POURING.
5. REPAIR AREAS SHOWN ARE CONCEPTUAL AND FOR REFERENCE ONLY. ACTUAL REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PROVIDE ADEQUATE ACCESS FOR THE REPAIR AREA DETERMINATION AND INSPECTION.
6. ALL REPAIR AREAS SHALL BE DEFINED BY A 1/2" SAW CUT.
7. SUPPLEMENTAL BAR REINFORCEMENT IS PAID FOR UNDER BID ITEM "BAR STEEL REINFORCEMENT HS STRUCTURES." ADHESIVE ANCHORS ARE PAID UNDER THE BID ITEM "ADHESIVE ANCHORS NO. 4 BAR."

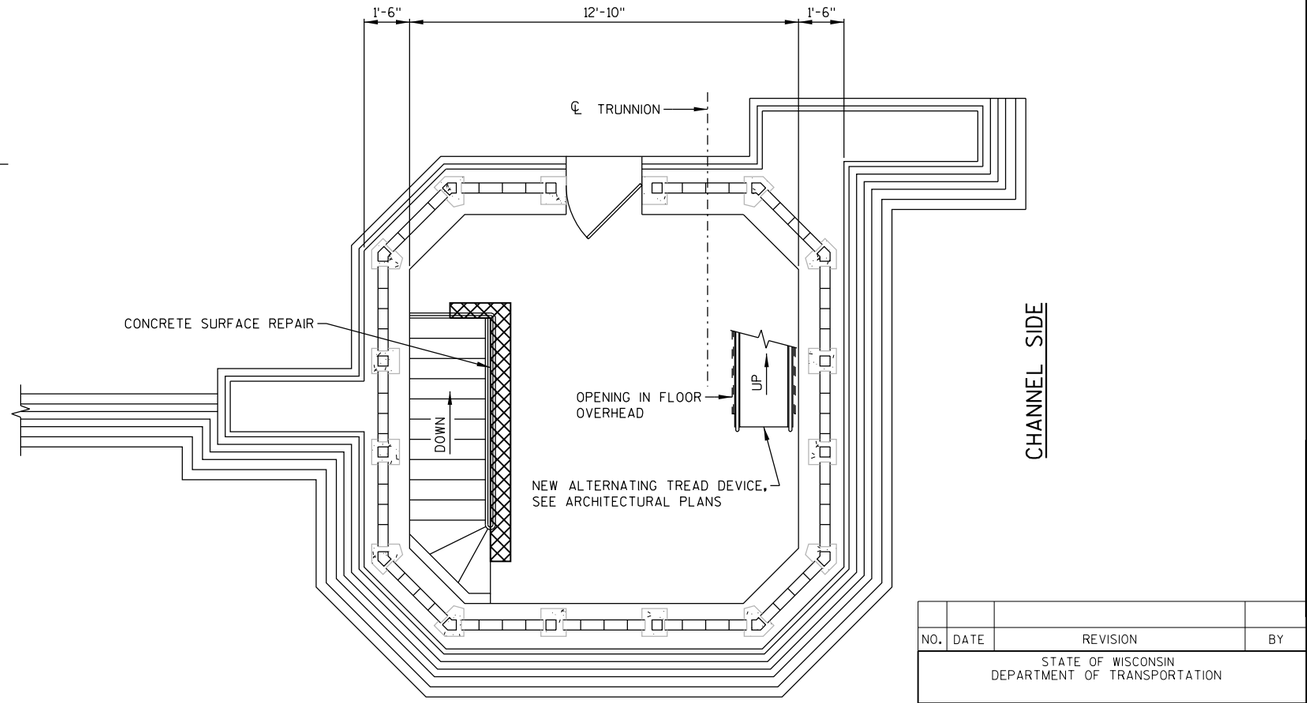
LEGEND

CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM



OPERATOR HOUSE
MACHINERY ROOM LEVEL
EL. 3.00



ENTRY LEVEL PLAN
EL. 17.83

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

SOUTHWEST CONTROL HOUSE PLANS

SHEET S69 OF S71
125

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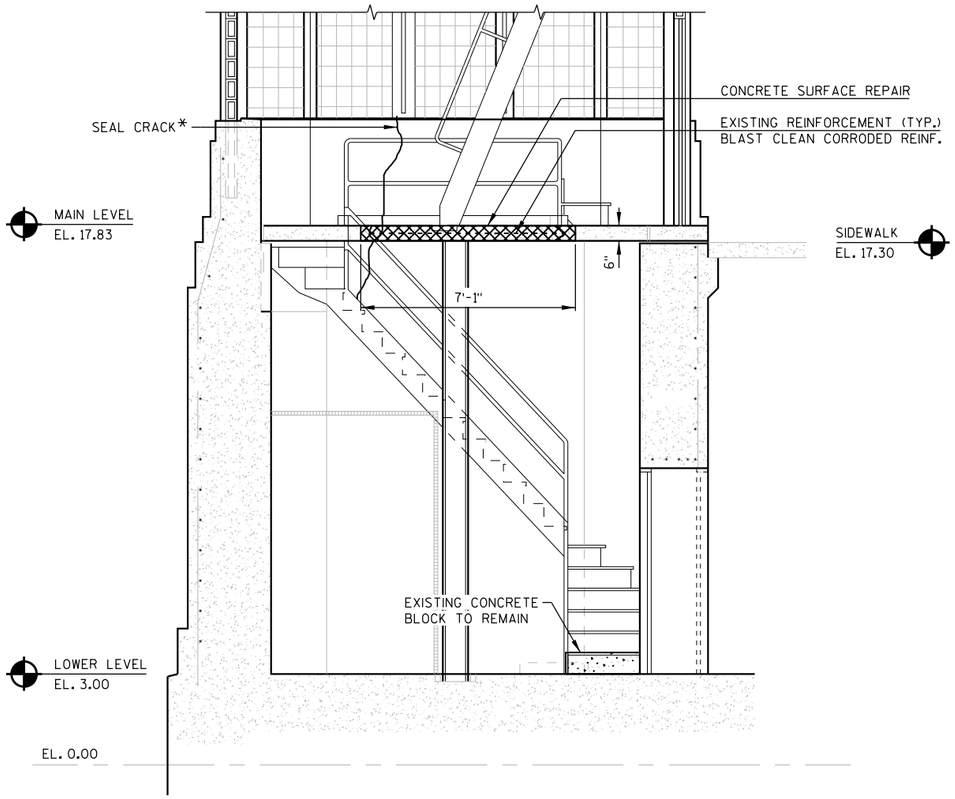
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PLOT DATE: 3/27/2024 PLOT TIME: 9:24:13 AM
BATCH PRINT SHEET 70 OF 71

STATE PROJECT NUMBER
2984-26-73

LEGEND

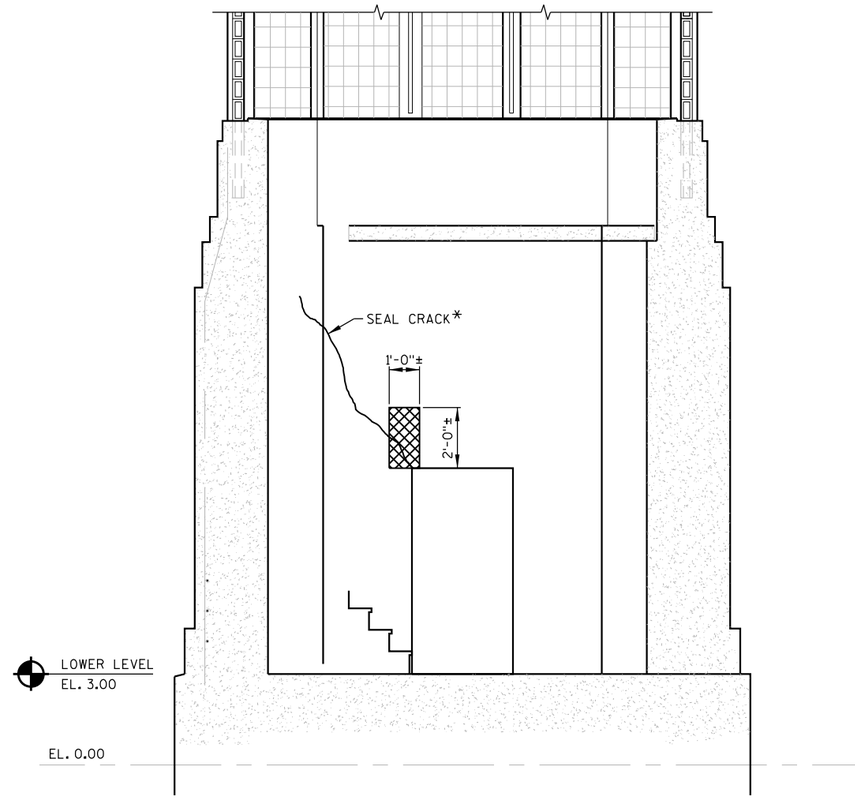
CONCRETE SURFACE REPAIR AREA

* SEAL CRACKS 1/16" OR LARGER USING AN EPOXY OR URETHANE INJECTION SYSTEM



SECTION THRU OPERATOR HOUSE AT MACHINERY LEVEL
INTERIOR WALL CONCRETE REPAIR

(LOOKNG WEST)



SECTION THRU OPERATOR HOUSE AT MACHINERY LEVEL
INTERIOR WALL CONCRETE REPAIR

NOTES

1. DIMENSIONS SHOWN FOR CONCRETE SURFACE REPAIR AREAS ARE APPROXIMATE.
2. SOME LOCATIONS SELECTED FOR CONCRETE SURFACE REPAIRS EXHIBIT SIGNIFICANT SPALLING AND EXPOSED REBAR. REMOVE SECTIONS OF CORRODED REINFORCEMENT EXHIBITING A REDUCTION IN BAR DIAMETER GREATER THAN 1/8"± AND REPLACE REMOVED SECTION WITH NEW BAR. ALL EXPOSED AND CORRODED REBAR IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PERFORMING THE CONCRETE SURFACE REPAIR.
3. REINFORCING BARS ARE TO HAVE 2" MIN. COVER. BARS MAY BE BENT OR CUT IN THE FIELD TO FIT IF NECESSARY.
4. CARE SHALL BE TAKEN TO PREVENT VOIDS IN THE CONCRETE DURING POURING.
5. REPAIR AREAS SHOWN ARE CONCEPTUAL AND FOR REFERENCE ONLY. ACTUAL REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PROVIDE ADEQUATE ACCESS FOR THE REPAIR AREA DETERMINATION AND INSPECTION.
6. ALL REPAIR AREAS SHALL BE DEFINED BY A 1/2" SAW CUT.
7. SUPPLEMENTAL BAR REINFORCEMENT IS PAID FOR UNDER BID ITEM "BAR STEEL REINFORCEMENT HS STRUCTURES." ADHESIVE ANCHORS ARE PAID UNDER THE BID ITEM "ADHESIVE ANCHORS NO. 4 BAR."

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

DRAWN BY SS | PLANS CK'D. GTS

SOUTHWEST CONTROL HOUSE ELEVATION REPAIR DETAILS

SHEET S70 OF S71

126

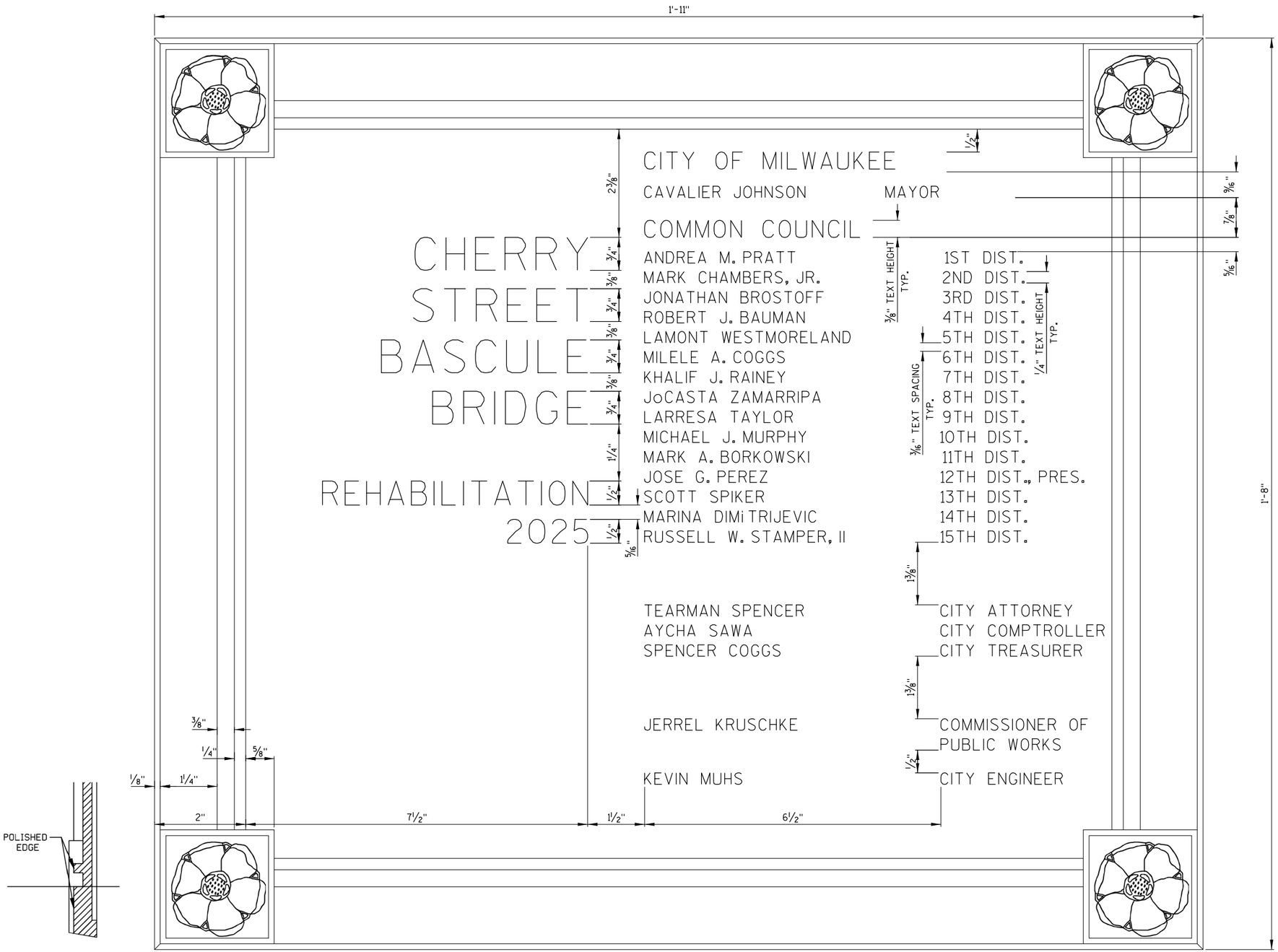
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PLOT DATE: 3/27/2024 PLOT TIME: 9:24:21 AM BATCH PRINT SHEET 71 OF 71

STATE PROJECT NUMBER

2984-26-73



SPECIFICATION FOR NAME PLATE - ONE (1) REQUIRED:

CONFORM TO 506.2.4 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION AND AS HEREIN MODIFIED.
MATERIAL: CAST BRONZE
BORDER STYLE: SINGLE-LINE BEVELED EDGE
LETTER STYLE: BLOCK
BACKGROUND TEXTURE: LEATHERETTE
BACKGROUND COLOR: MEDIUM STATUARY-MAT
FINISH: LETTER FACES AND RAISED LINE OF BORDER TO BE POLISHED.
REMAINING SURFACES LACQUERED TO COLOR ABOVE.
GIVE ENTIRE FACE TWO (2) CLEAR CHEMICAL COATINGS.
MOUNTING: AS SHOWN
FURNISH THREE (3) COPIES OF RUBBING FOR APPROVAL BEFORE CASTING.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-864

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NAME PLATE

SHEET S71 OF S71
127

8

8

STATE PROJECT NUMBER
2984-26-73

INDEX

Sheet Number	Sheet Name
A01	INDEX AND PROJECT INFO
A02	ABBREVIATIONS
A03	SYMBOL LEGEND
A04	MATERIAL LEGEND
A05	WEST BRIDGE HOUSE - LOWER LEVEL
A06	WEST BRIDGE HOUSE - MAIN LEVEL
A07	WEST BRIDGE HOUSE - UPPER LEVEL AND ROOF
A08	WEST BRIDGE HOUSE - ELEVATIONS
A09	WEST BRIDGE HOUSE - ELEVATIONS
A10	WEST BRIDGE HOUSE - SECTIONS
A11	EAST BRIDGE HOUSE - LOWER LEVEL
A12	EAST BRIDGE HOUSE - MAIN LEVEL
A13	EAST BRIDGE HOUSE - UPPER LEVEL AND ROOF
A14	EAST BRIDGE HOUSE - UPPER LEVEL CEILING FRAMING
A15	EAST BRIDGE HOUSE - ELEVATIONS
A16	EAST BRIDGE HOUSE - ELEVATIONS
A17	EAST BRIDGE HOUSE - SECTIONS
A18	EXTERIOR DETAILS
A19	DOOR DETAILS
A20	WINDOW DETAILS
A21	ROOF DETAILS
A22	ROOF DETAILS
A23	ROOF DETAILS

PROJECT DATA

OWNER	
	CITY OF MILWAUKEE
LOCATION	
MUNICIPALITY:	MILWAUKEE
COUNTY:	MILWAUKEE
STATE:	WISCONSIN
APPLICABLE BUILDING CODES	
	WISCONSIN COMMERCIAL BUILDING CODE 2015 IBC AS MODIFIED BY CHAPTERS SPS 361-366
CONSTRUCTION CLASSIFICATION	
	IIB (IBC)
OCCUPANCY GROUP	
	S-2 (STORAGE)
PROJECT TYPE	
	RENOVATION
NUMBER OF STORIES	
	2 ABOVE GRADE, 1 BELOW
BLDG GROSS AREA (SQ FT)	
	689 SF WEST BRIDGE HOUSE; 693 SF EAST BRIDGE HOUSE

8

8

WISCONSIN
KEVIN
DABROWSKI
A-13185
MILWAUKEE
WI
03/01/2024
ARCHITECT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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INDEX AND PROJECT INFO

SHEET A01 OF A23

128

ABBREVIATIONS

STATE PROJECT NUMBER
2984-26-73

A

@	at
A/C	air condition
A/E	Architect/Engineer
ACC	accessible
ACT	acoustical ceiling tile
ADDL	additional
ADDM	addendum
AFC	above finished counter
AFF	above finished floor
AFG	above finished grade
AFS	above finished slab
ALT	alternate
ALUM	aluminum
APPD	approved
AP	acoustic panel
APPROX	approximate
ASC	above suspended ceiling
ARCH	Architectural/ Architect
AV	Audio Visual

B

BD	board
BLDG	building
BLKG	blocking/ block
BLT	borrowed light
BLW	below
BPL	base plate
BO	bottom of
BOD	basis of design
BOS	bottom of steel
BRG	bearing
BUR	built-up roofing

C

C	channel
CA	construction administration
CAB	cabinet
CB	catch basin
CB	construction bulletin
CD	construction documents
CF/CI	contractor furnished, contractor installed
CFMF	cold form metal framing
CF/OI	contractor furnished, owner installed
CF/VI	contractor furnished, vendor installed
CG	corner guard
CIP	cast-in-place concrete
CJ	control joint
CNJ	construction joint
COMP	composite
CORR	corridor
CR	card reader
CTR	center

C (continued)

CNTR	counter
CL	centerline
CLG	ceiling
CLR	clear
CM	construction management
CMU	concrete masonry unit
CO	cleanout
COL	column
CONC	concrete
CORR	corridor
CONT	continuous
CPT	carpet
CSWK	casework
CT	ceramic tile
CTB	ceramic tile base

D

DD	design development
DEMO	demolition
DEPT	department
DF	drinking fountain
DIA	diameter
DIAG	diagonal
DIM	dimension
DISP	dispenser
DR	door
DR FR	door frame
DTL	detail
DN	down
DS	downspout
DW	dishwasher
DWG	drawing

E

E	east
EIFS	exterior insulation & finish system
EL	elevation
EJ	expansion joint
ELEC	electric, electrical
ELEV	elevator
EMBED	embedded
ENCL	enclosure
EPS	expanded polystyrene board
EQ	equal
EQUIP	equipment
ETR	existing to remain
EXIST	existing
EXP	expand, expansion
EXT	exterior

F

F	filler
FA	fire alarm
FA	fluid applied
FAB	fabric
FB	floor box
FC	file cabinet
FD	floor drain
FE	fire extinguisher
FEC	fire extinguisher cabinet
FF	finished floor
FHC	fire hose cabinet
FIXT	fixture
FLR	floor
FO	finished opening
FP	fire protection
FP	fireproof
FR	fire retardant/ resistant
FRP	fiberglass reinforced panel/ polyester/ plastic
FRT	fire resistant treated
FT	feet, foot
FTG	footing

G

GA	gauge
GALV	galvanized
GB	grab bar
GC	general contractor
GFCI	ground fault circuit interrupter
GL	glass
GLT	glass tile
GLU LAM	glue laminated wood
GR	grade, grading
GT	grout
GWB	gypsum wall board
GYP BD	gypsum board

H

HB	hose bibb
HC	hollow core
HCP	handicapped
HDWD	hardwood
HM	hollow metal
HORIZ	horizontal
HGT	height
HVAC	heating,ventilating & air conditioning
HSS	hollow structural shape
HW	hot water

I

ID	inside diameter
INSUL	insulation
IN	inch(es)
INCL	include
INFO	information
INT	interior

J

JAN	janitor
J/BOX	junction box
JS	janitor sink
JT	joint

L

L	angle
L	length/ long
LAB	laboratory
LAM	laminate
LAV	lavatory
LBS	Pound(S)
LF	linear foot
LH	left hand
LKR	locker
LL	live load

M

MACH	machine
MATL	material
MAX	maximum
MB	marker board
MC	modular carpet tile
MECH	mechanical
MED	medium
MEP	mechanical, electrical, plumbing.
MEZZ	mezzanine
MFR	manufacturer
MICRO	microwave oven
MIN	minimum, minute
MISC	miscellaneous
MJ	movement joint
MO	masonry opening
MS	mop sink
MTL	metal

N

N	north
NA	not applicable
NIC	not in contract
NO	number
NM	nominal
NS	no scale
NTS	not to scale

O

OC	on center
OCC	occupancy
OD	Drain (overflow)
OD	outside diameter
OF/CI	owner furnished, contractor installed
OF/OI	owner furnished, owner installed
OF/VI	owner furnished, vendor installed
OH DR	overhead coiling door
OPH	opposite hand
OPP	opposite
OPNG	opening
OSHA	occupational safety and health association

P

PCF	pounds per cubic foot
PERF	perforated
PLAM	plastic laminate
PLYWD	plywood
PLBG	plumbing
PLF	pounds per linear foot
PNL	panel
PREFAB	prefabricated
PREFIN	prefinished
PSF	pounds per square foot
PSI	pounds per square inch
PT	paint, painted
PTN	partition
PVC	polyvinyl chloride

Q

QT	quarry tile
QTB	quarry tile base
QTY	quantity

R

R	radius
RB	resilient base
RCP	reflected ceiling plan
RD	roof drain
REBAR	reinforcing steel bars
REC	recess
REF	reference
REF	refrigerator
RF	resilient flooring
REINF	reinforced/ reinforcing/ reinforcment
REQ	required
REV	revision
RFS	room finish schedule
RH	right hand
RM	room
RO	rough opening

S

S	south
SAN	sanitary
SC	sealed concrete
SCHED	schedule
SC	solid core
SD	schematic design
SF	square foot
SHT	sheet
SHWR	shower
SIM	similar
SPEC	specification
SPKR	speaker
SS	solid surface
SSG	structural silicone glazed
SST	stainless steel
ST	stain, stair
STD	standard
STL	steel
STN	stone
STNB	stone base
STRUCT	structure, structural
SV	sheet vinyl
SVT	solid vinyl tile

T

T&M	time & materials
T&G	tongue and groove
TB	tackboard
TBD	to be determined
TEMP	temperature
TER	terrazzo
TERB	terrazzo base
TFF	top of finish floor
TLT	toilet
TO	top of
TOB	top of beam
TOC	top of concrete
TOJ	top of joist
TOPO	topography
TOS	top of slab, top of steel
TP	toilet partitions
TS	tube steel
TSTAT	thermostat
TYP	typical

U

UIO	unless inicated otherwise
UL	underwriters laboratory
UV	ultraviolet

V

VCT	vinyl composition tile
VEND	vending machine
VERT	vertical
VEST	vestibule
VF/CI	vendor furnished, contractor installed
VF/OI	vendor furnished, owner installed
VF/VI	vendor furnished, vendor installed
VNR	veneer
VIF	verify in field

W

W	west
W	width
W/	with
W/O	without
WC	water closet, wall covering
WD	wood
WDB	wood base
WDV	wood veneer
WH	water heater
WP	wall protection, workpoint
WT	window treatment

X

XPS	extruded polystyrene board

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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ABBREVIATIONS

SHEET A02 OF A23

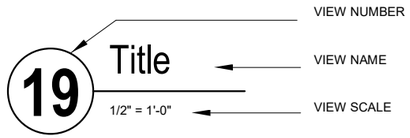
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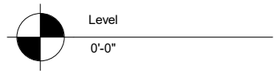
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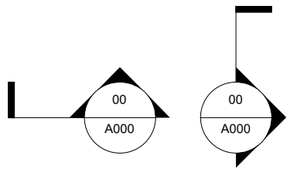
CALLOUTS



VIEW NUMBER
VIEW NAME
VIEW SCALE



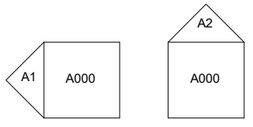
ELEVATION MARKER



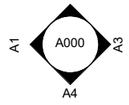
BUILDING OR WALL SECTION



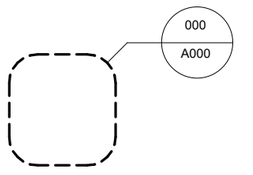
DETAIL SECTION



BUILDING ELEVATION



INTERIOR ELEVATIONS



CALLOUT

TAGS



BUILDING ASSEMBLY



PARTITION TYPE



DOOR



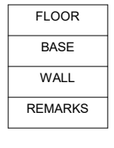
KEYNOTE



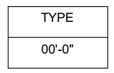
REVISION



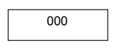
WINDOW



FINISHES



CEILING



ROOM



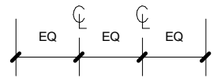
STOREFRONT TYPE

GRAPHICS

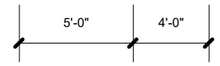


NORTH ARROW

DIMENSION REFERENCES



TO OBJECT CENTER

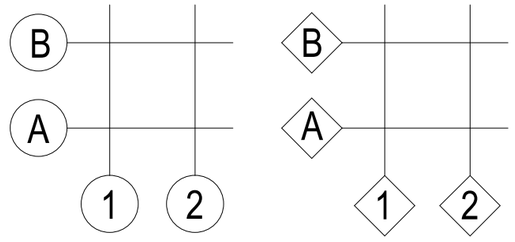


TO OBJECT FACE
OR OTHER GEOMETRY

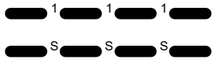
CONSTRUCTION PHASES



GRID AND GRID IDENTIFICATION



RATED WALLS



FIRE RATED (NUMBER INDICATES HR)

SMOKE RATED

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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SYMBOL LEGEND

SHEET A03 OF A23

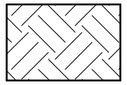
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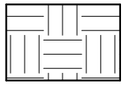
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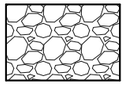
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ARCHITECTURAL MATERIAL LEGEND

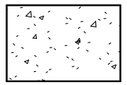
EARTHWORK

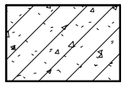

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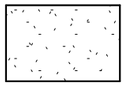

ENGINEERED FILL


GRAVEL

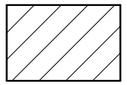
CONCRETE

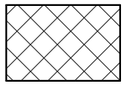

CAST-IN-PLACE

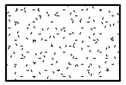

PRECAST


GROUT

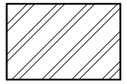
MASONRY

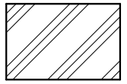

BRICK


CMU


STONE

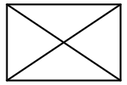
METAL

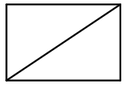

STEEL

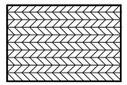

ALUM

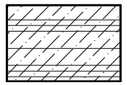
WOOD

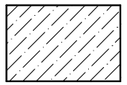

FINISH


ROUGH

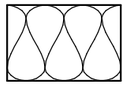

BLOCKING

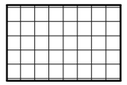

PLYWOOD


OSB


PARTICLE BOARD

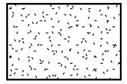
INSULATION


BATT


RIGID


SPRAY

FINISHES


GYPSUM WALL BOARD

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY KD | PLANS CK'D. JP

MATERIAL LEGEND

SHEET A04 OF A23

131

STATE PROJECT NUMBER

2984-26-73

SEE ENGINEERING DRAWINGS FOR PLANS AND INFORMATION ON ALL SPACES OUTSIDE OF THE OPERATOR HOUSE

DEMOLISH EXISTING HOLLOW METAL DOOR AND 5" FRAME. INSTALL FRP DOOR WITH ALUMINUM FRAME AND NEW HARDWARE.

1
A10

FASCIA CHANNEL LINE

2'-8"X6'-0"

3' - 0"
V.I.F.

3'-0"X6'-8"

3' - 4"
V.I.F.

UP
21R

COAL BIN

STEAM CLEAN EXISTING STEEL STAIR ASSEMBLY. INSTALL EPOXY ON TREADS. PAINT ALL METAL STAIR COMPONENTS, TYP.

STEAM CLEAN AND PAINT ALL EXISTING STEEL PIPE RAILINGS.

2'-8"X6'-8"

EXISTING ASBESTOS PARTITION AND CEILING ASSEMBLY TO BE REMOVED UNDER SPECIAL PROVISIONS ARTICLE 3 - ITEM 203.0211.S.

REMOVE EXISTING DOOR, FRAME AND VENT.

INTERIOR NOTE: STEAM CLEAN CEILING, WALLS, AND FLOOR. PAINT CEILING AND WALLS. PATCH FLOOR HOLES FLUSH, INSTALL EPOXY FLOORING WITH RESILIENT WALLBASE.

PLAN AT ELEV. +3'-0"

SCALE: 1/4" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY KD | PLANS CK'D. JP

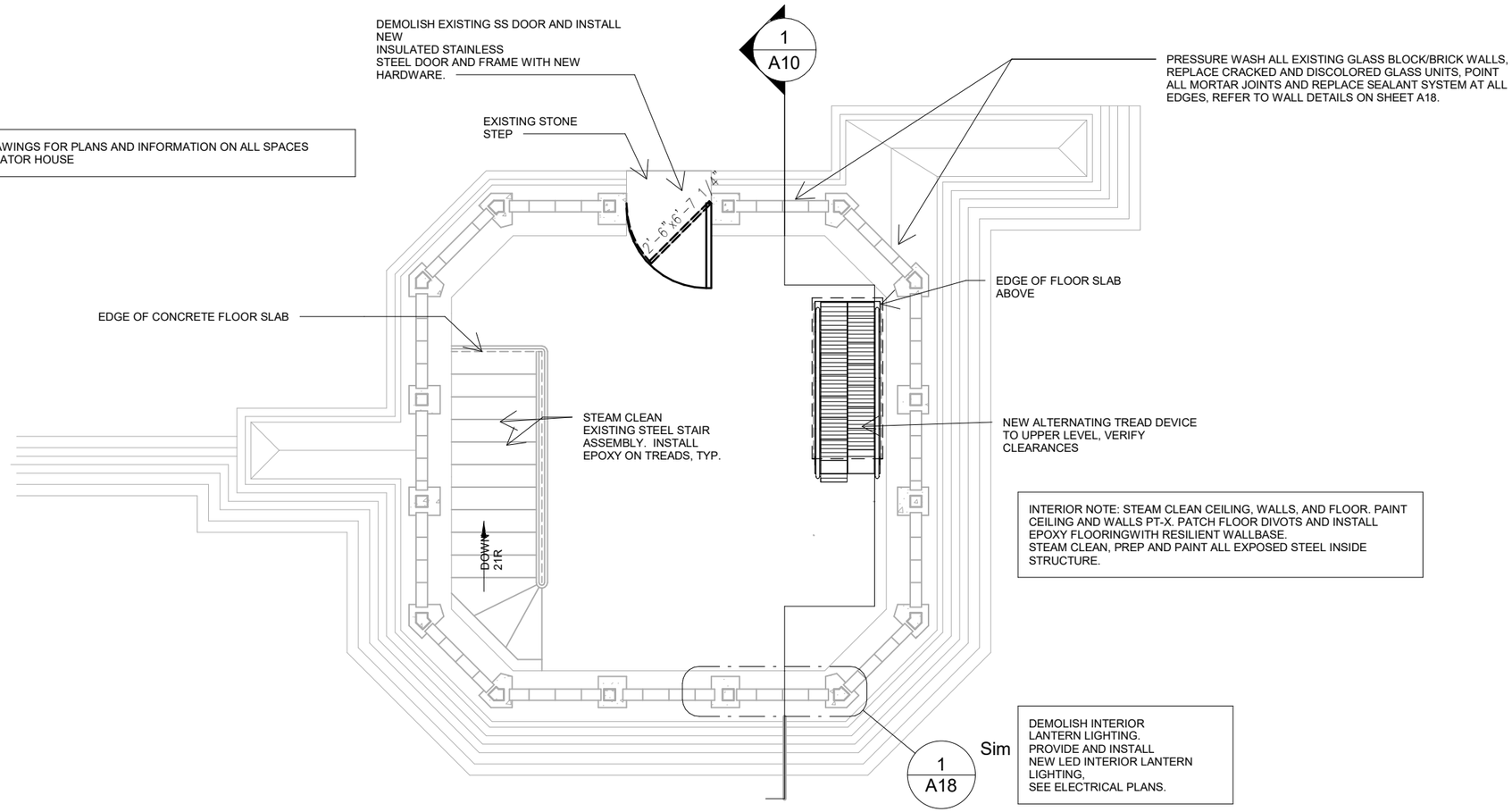
WEST BRIDGE HOUSE
- LOWER LEVEL

SHEET A05 OF A23

STATE PROJECT NUMBER

2984-26-73

SEE ENGINEERING DRAWINGS FOR PLANS AND INFORMATION ON ALL SPACES OUTSIDE OF THE OPERATOR HOUSE



STREET FLOOR PLAN. EL. 17'-10"

SCALE: 1/4" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

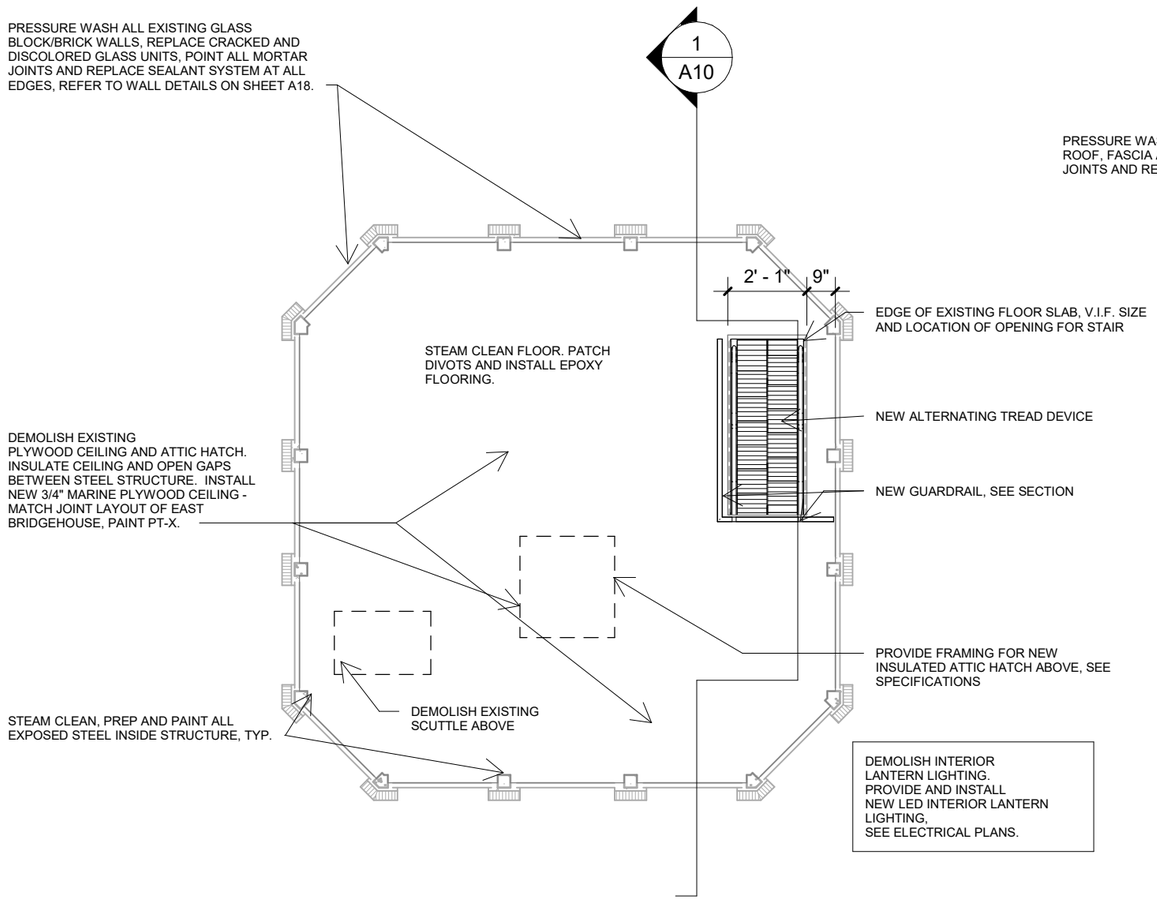
DRAWN BY KD | PLANS CK'D. JP

WEST BRIDGE HOUSE
- MAIN LEVEL

SHEET A06 OF A23

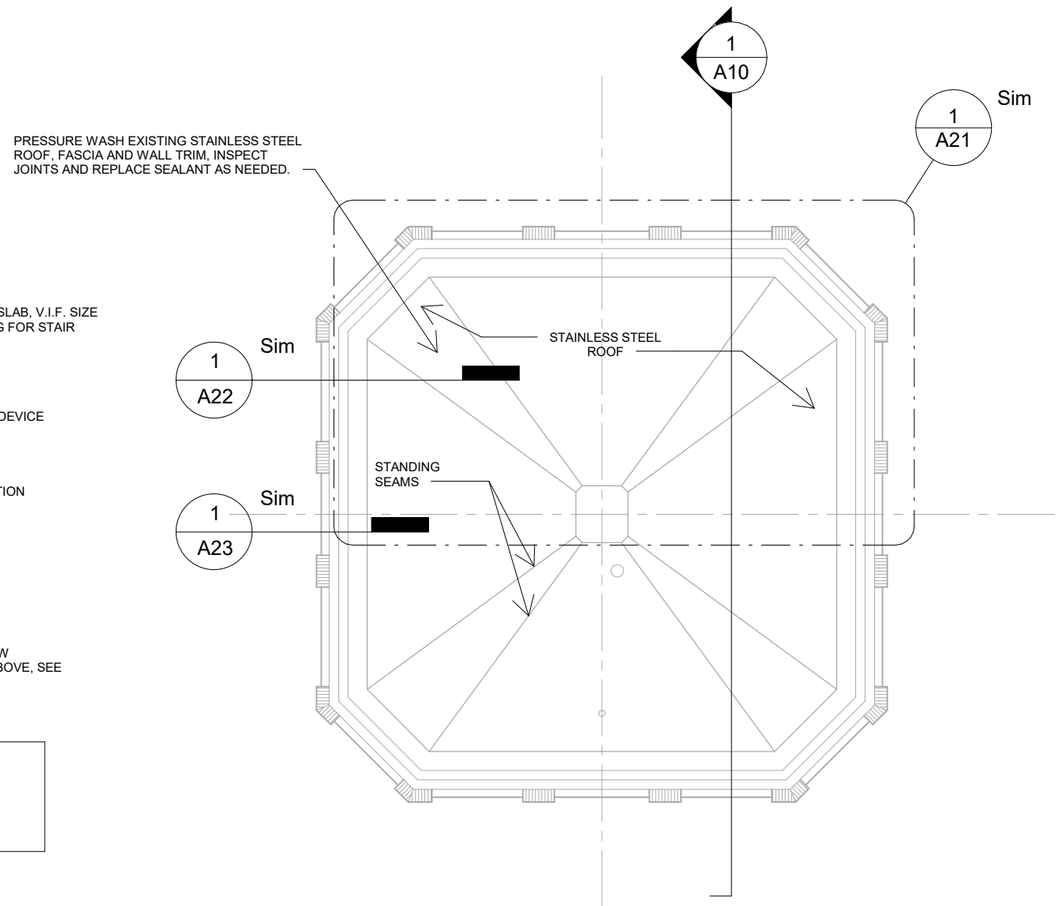
133

STATE PROJECT NUMBER
2984-26-73



CONTROL RM. PLAN EL. 28'-10 1/4"

SCALE: 1/4" = 1' - 0"



ROOF PLAN

SCALE: 1/4" = 1' - 0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

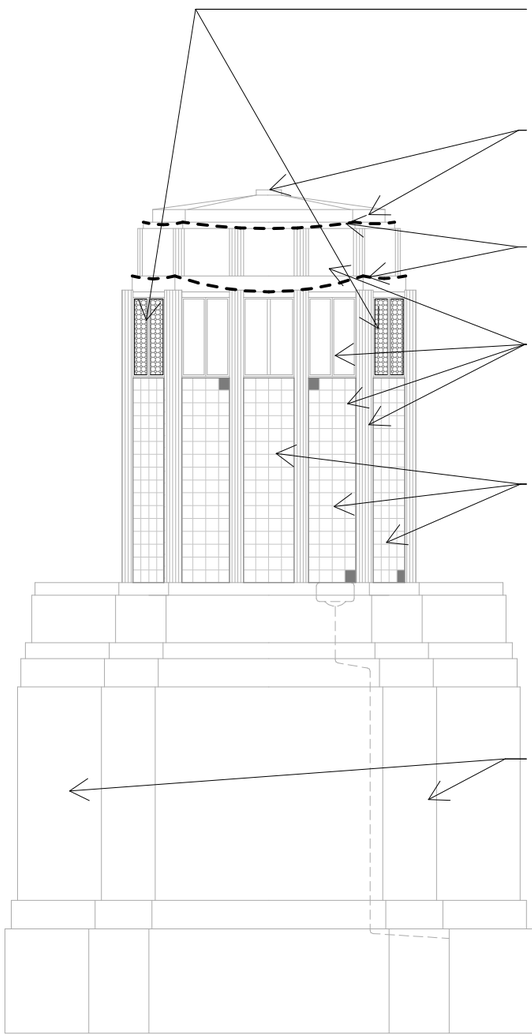
DRAWN BY	KD	PLANS CK'D.	JP

WEST BRIDGE HOUSE - UPPER LEVEL AND ROOF

SHEET A07 OF A23

134

STATE PROJECT NUMBER
2984-26-73



INSTALL INTERIOR OPERABLE INSECT SCREENS AT CORNER WINDOW UNITS, TYP. SEE WINDOW DETAILS.

PRESSURE WASH EXISTING STAINLESS STEEL ROOF, FASCIA AND WALL TRIM, INSPECT JOINTS AND REPLACE SEALANT AS NEEDED.

REMOVE ALL HALO ROPE LIGHTING COMPONENTS.

POWER WASH ALL EXTERIOR TOWER WALLS: STAINLESS STEEL PIERS AND FASCIA, ALUMINUM WINDOWS AND GLASS BRICK/BLOCK, TYP. REMOVE AND REPLACE ALL SEALANT JOINTS.

UPPER LEVEL
28' - 10"

REMOVE AND REPLACE ANY BROKEN GLASS BRICK/BLOCK TO MATCH. EXISTING DAMAGED BRICKS SHADED HALFTONE. TUCKPOINT ENTIRE AREA OF GLASS BRICK/BLOCK FACADES.

MAIN LEVEL
17' - 10"

STAIN ALL EXPOSED CONCRETE BASCULE PIERS AND ABUTMENTS AND AREAS INDICATED ONSTRUCTURAL DRAWINGS. STAIN UP TO UNDERSIDE OF SIDEWALK BENEATH BRIDGE DECK.

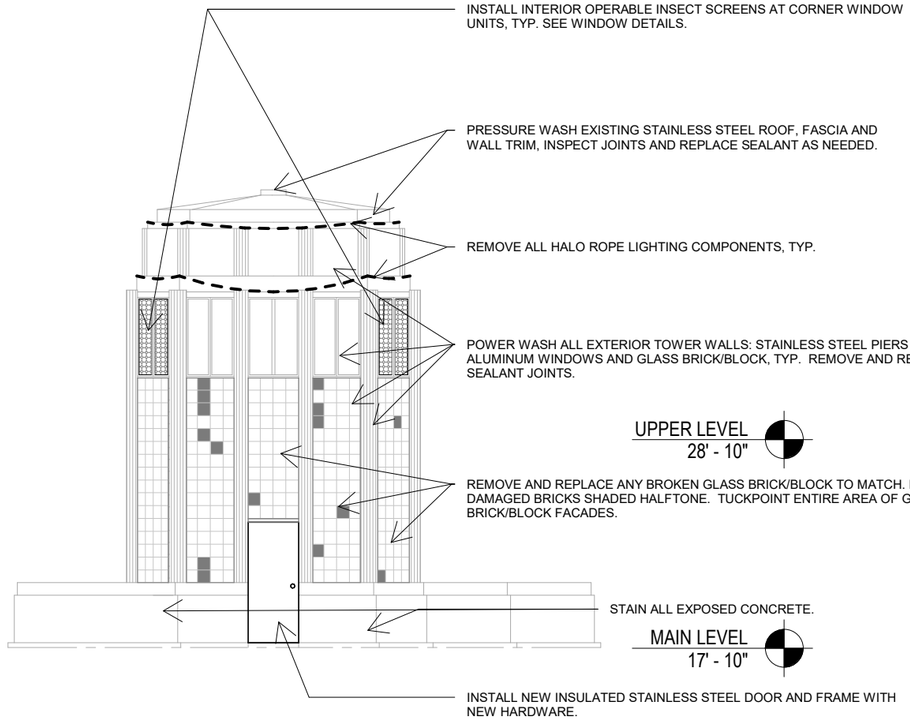
LOWER LEVEL
3' - 0"

DATUM 0.0
0' - 0"

WATER LEVEL
-2' - 6"

RIVER ELEVATION

SCALE: 1/8" = 1' - 0"



INSTALL INTERIOR OPERABLE INSECT SCREENS AT CORNER WINDOW UNITS, TYP. SEE WINDOW DETAILS.

PRESSURE WASH EXISTING STAINLESS STEEL ROOF, FASCIA AND WALL TRIM, INSPECT JOINTS AND REPLACE SEALANT AS NEEDED.

REMOVE ALL HALO ROPE LIGHTING COMPONENTS, TYP.

POWER WASH ALL EXTERIOR TOWER WALLS: STAINLESS STEEL PIERS AND FASCIA, ALUMINUM WINDOWS AND GLASS BRICK/BLOCK, TYP. REMOVE AND REPLACE ALL SEALANT JOINTS.

UPPER LEVEL
28' - 10"

REMOVE AND REPLACE ANY BROKEN GLASS BRICK/BLOCK TO MATCH. EXISTING DAMAGED BRICKS SHADED HALFTONE. TUCKPOINT ENTIRE AREA OF GLASS BRICK/BLOCK FACADES.

STAIN ALL EXPOSED CONCRETE.

MAIN LEVEL
17' - 10"

INSTALL NEW INSULATED STAINLESS STEEL DOOR AND FRAME WITH NEW HARDWARE.

NOTE: PROVIDE MOCKUPS OF AMS-STD-595 COLORS FOR FINAL SELECTION:
CONCRETE: **13522** AND **33448**
BRIDGE STEEL: **16314**

STREET ELEVATION

SCALE: 1/8" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

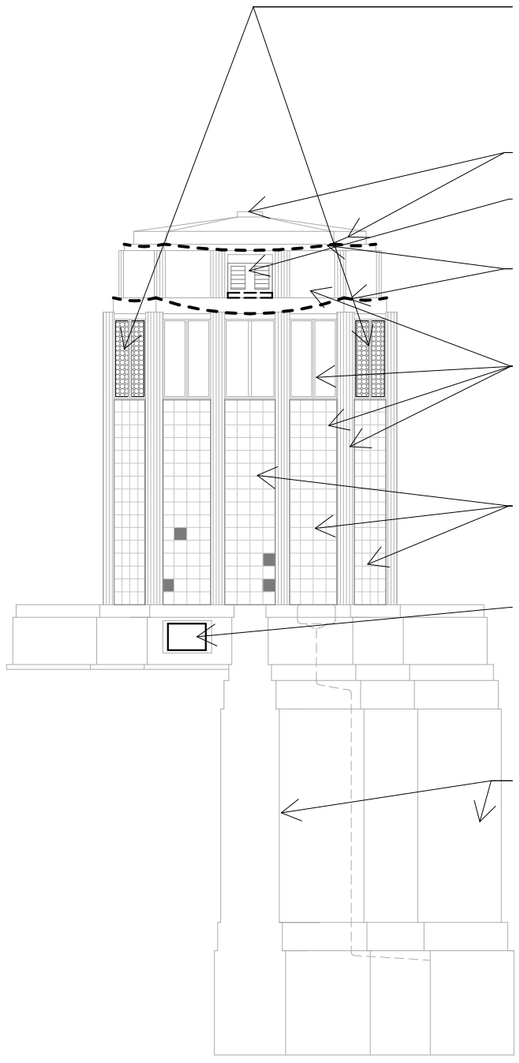
DRAWN BY KD | PLANS CK'D. JP

WEST BRIDGE HOUSE
- ELEVATIONS

SHEET A08 OF A23

STATE PROJECT NUMBER

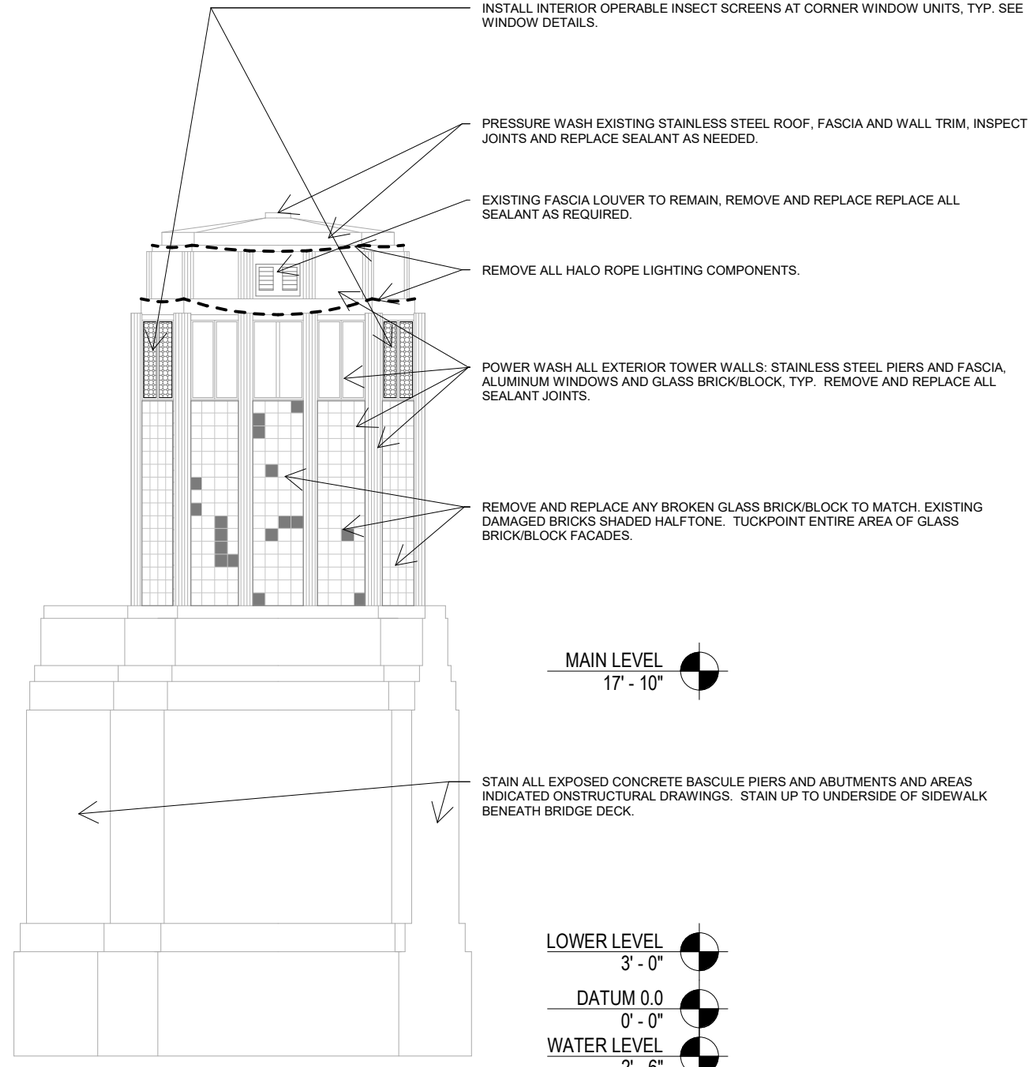
2984-26-73



NORTHWEST ELEVATION

SCALE: 1/8" = 1' - 0"

NOTE: PROVIDE MOCKUPS OF AMS-STD-595 COLORS FOR FINAL SELECTION:
CONCRETE: **13522** AND **33448**
BRIDGE STEEL: **16314**



SOUTHEAST ELEVATION

SCALE: 1/8" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

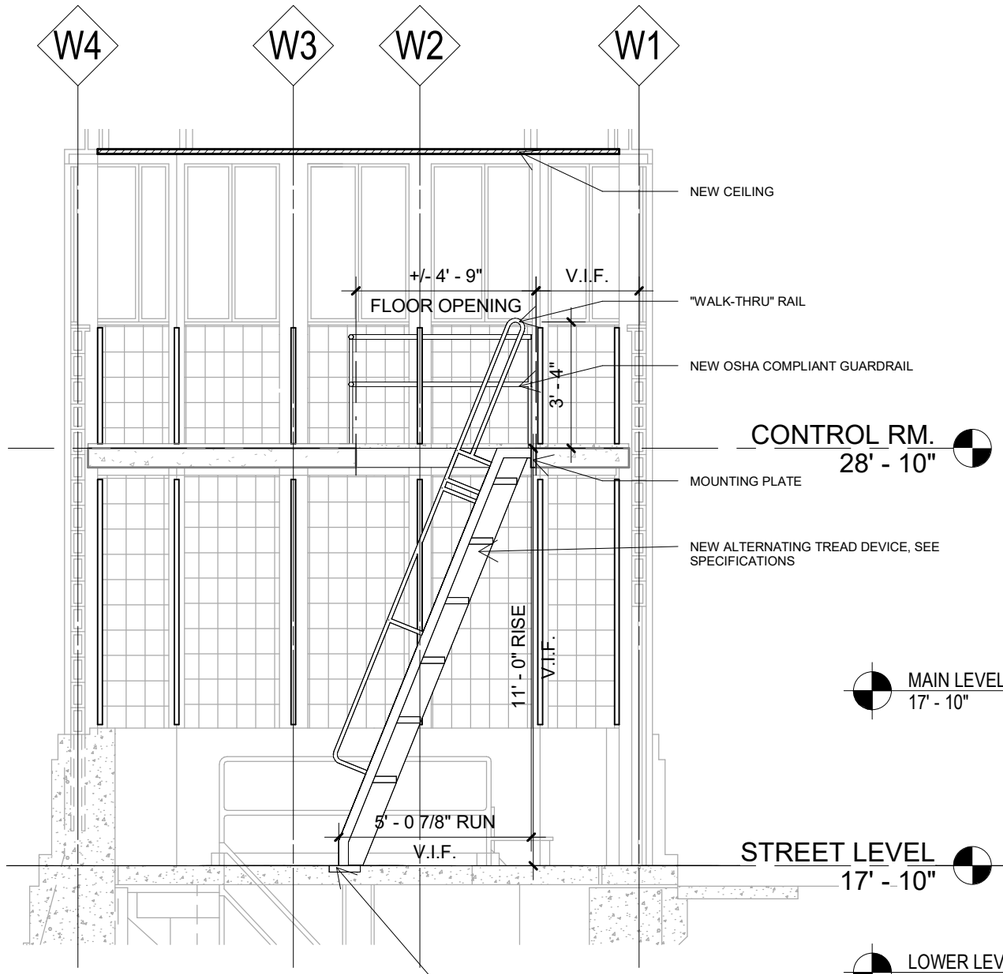
STRUCTURE P-40-0864

DRAWN BY KD | PLANS CK'D. JP

WEST BRIDGE HOUSE - ELEVATIONS

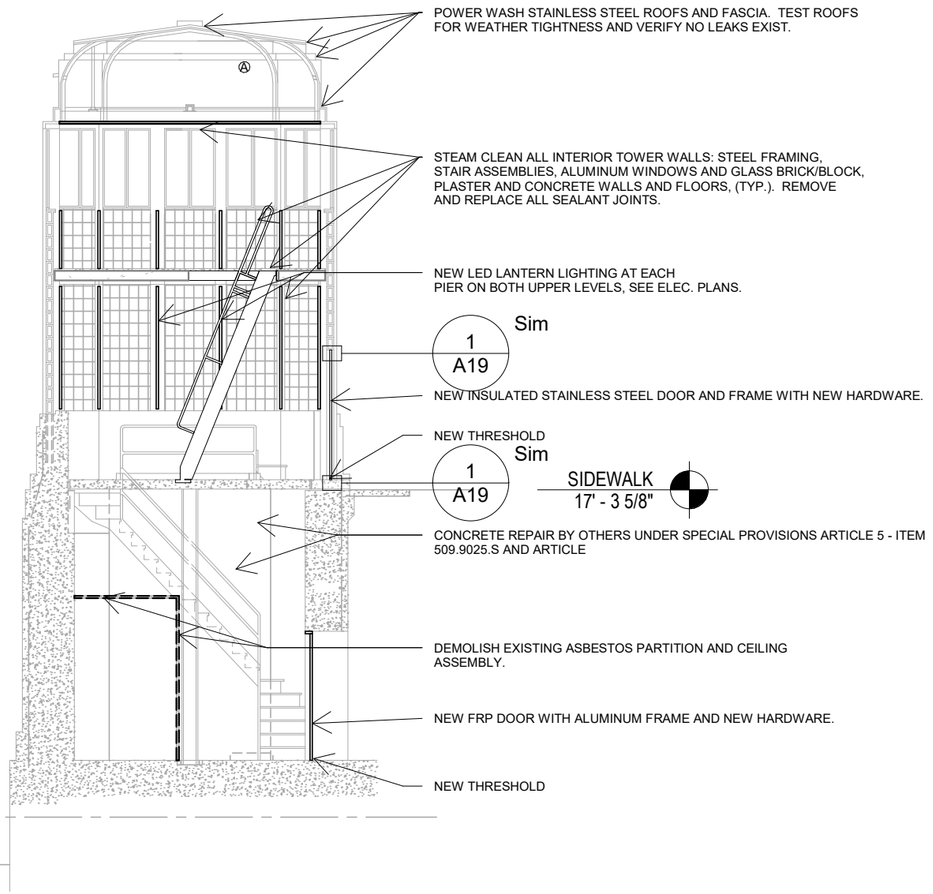
SHEET A09 OF A23

STATE PROJECT NUMBER
2984-26-73



1 ENLARGED SECTION

1/4" = 1'-0"



SECTION 1 THROUGH WEST HOUSE

SCALE: 1/8" = 1' - 0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY KD | PLANS CK'D. JP

WEST BRIDGE HOUSE - SECTIONS

SHEET A10 OF A23

137

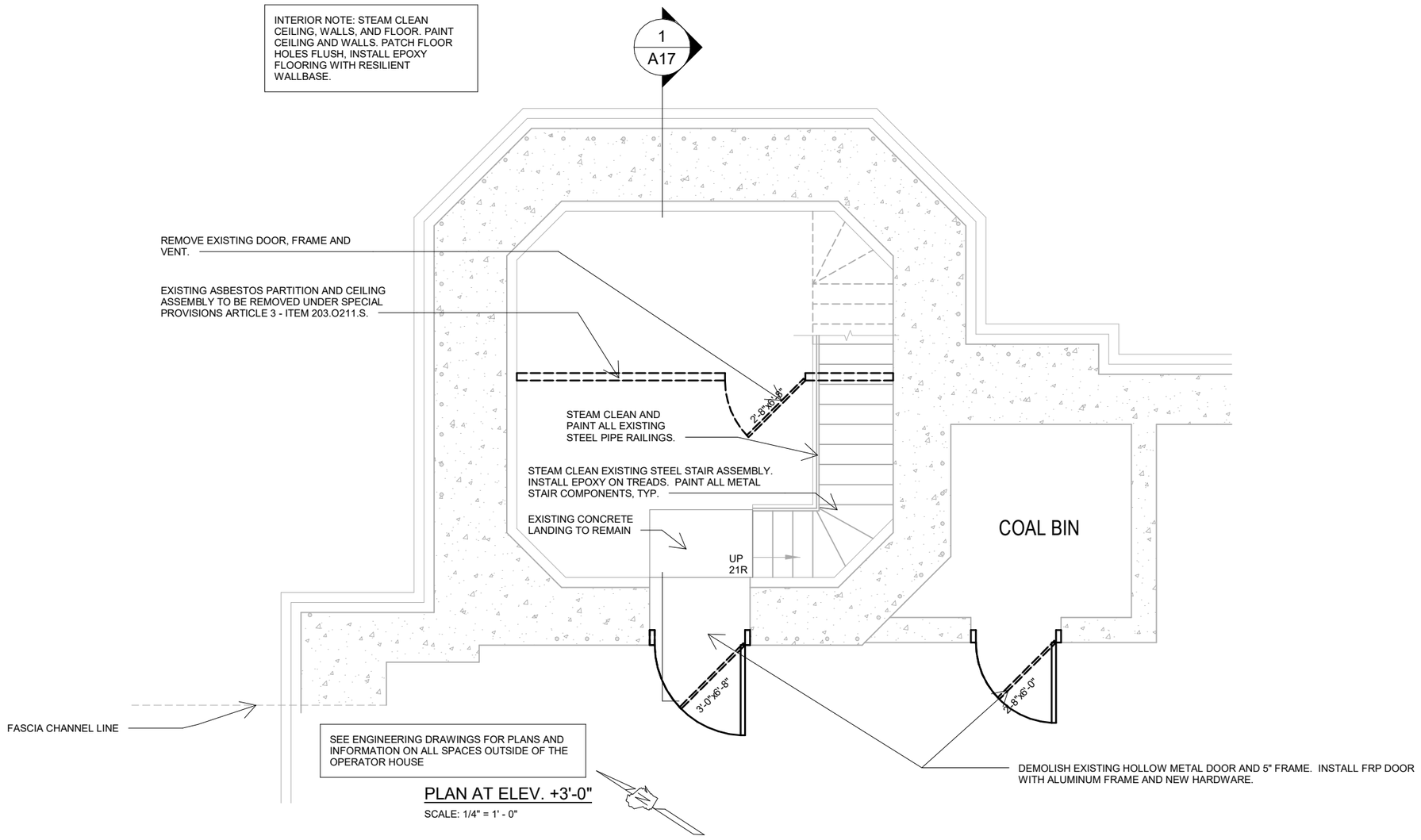
8

8

STATE PROJECT NUMBER

2984-26-73

INTERIOR NOTE: STEAM CLEAN CEILING, WALLS, AND FLOOR. PAINT CEILING AND WALLS. PATCH FLOOR HOLES FLUSH, INSTALL EPOXY FLOORING WITH RESILIENT WALLBASE.



PLAN AT ELEV. +3'-0"

SCALE: 1/4" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

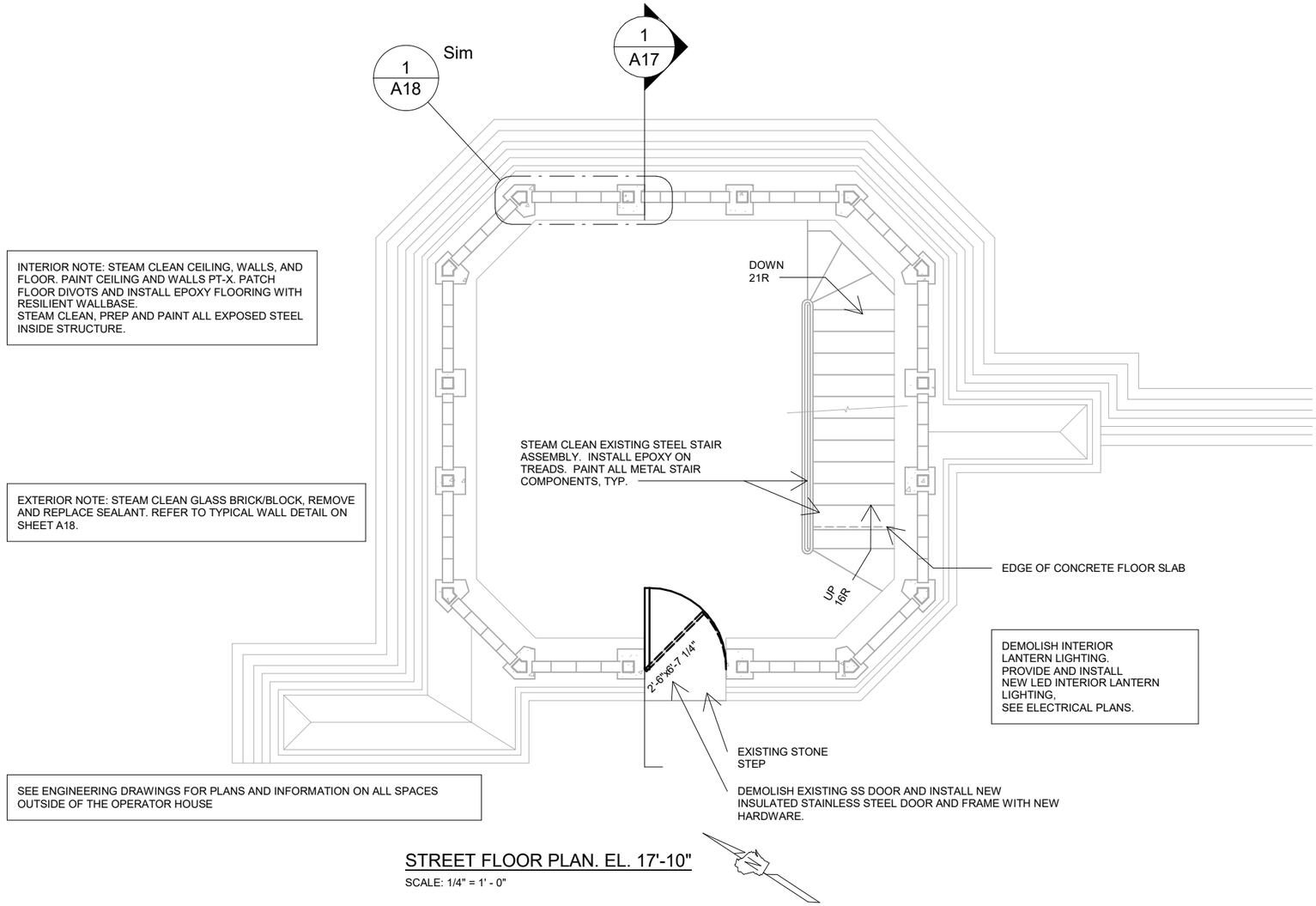
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EAST BRIDGE HOUSE - LOWER LEVEL

SHEET A11 OF A23

STATE PROJECT NUMBER

2984-26-73



STREET FLOOR PLAN. EL. 17'-10"

SCALE: 1/4" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

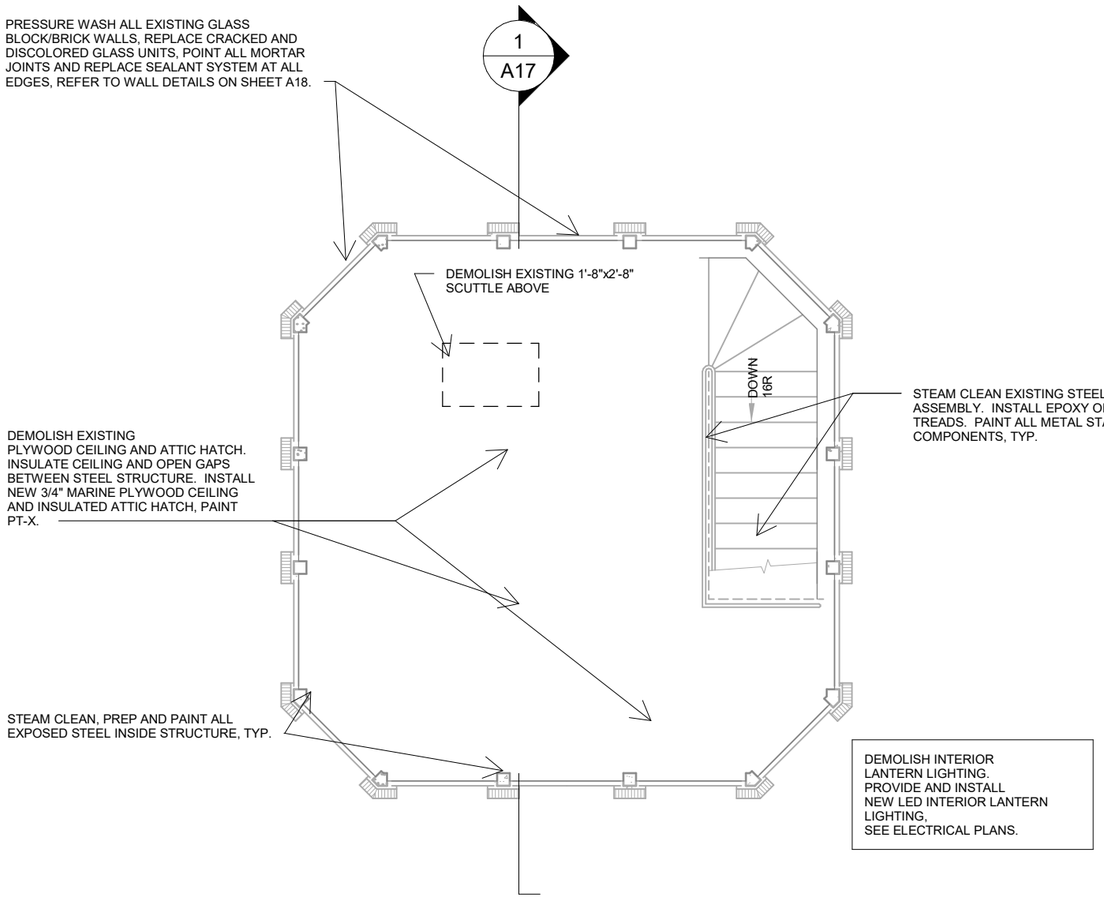
STRUCTURE P-40-0864

DRAWN BY KD | PLANS CK'D. JP

EAST BRIDGE HOUSE - MAIN LEVEL

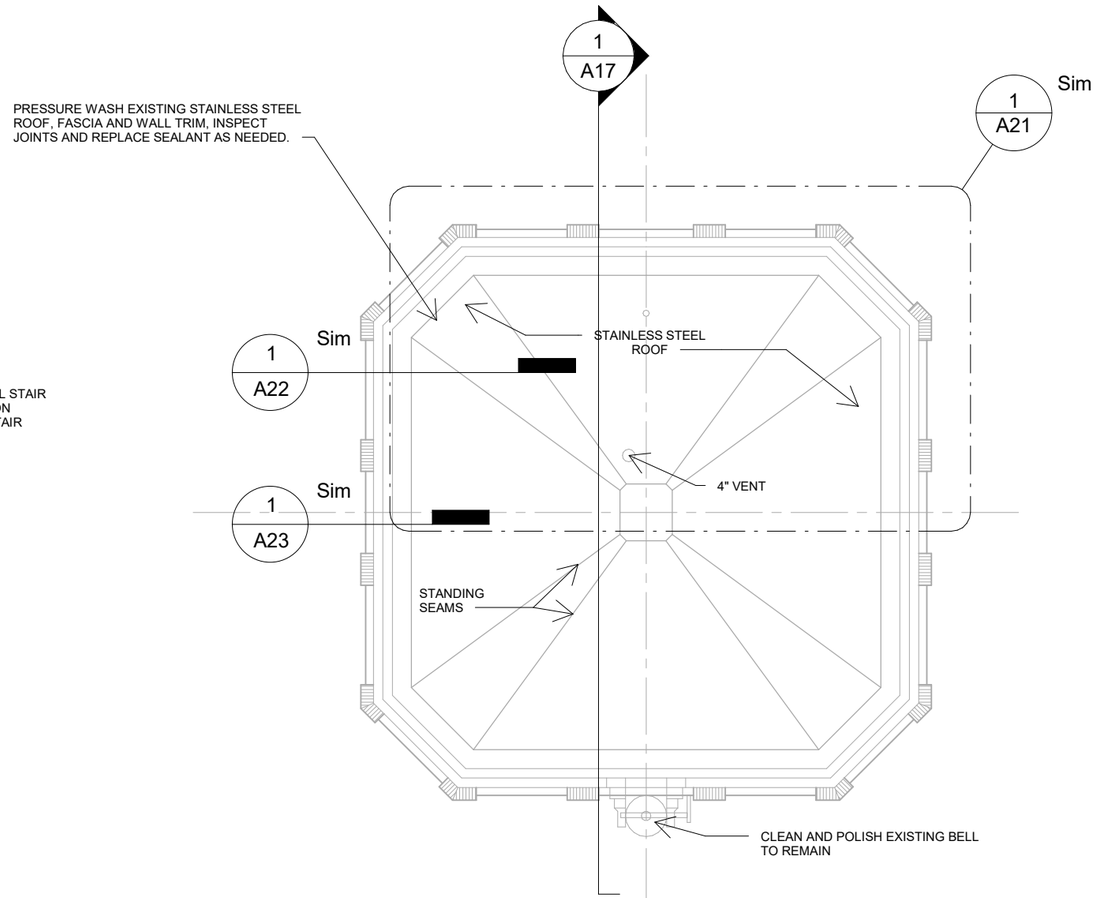
SHEET A12 OF A23

STATE PROJECT NUMBER
2984-26-73



CONTROL RM. PLAN EL. 28'-10 1/4"

SCALE: 1/4" = 1' - 0"



ROOF PLAN

SCALE: 1/4" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

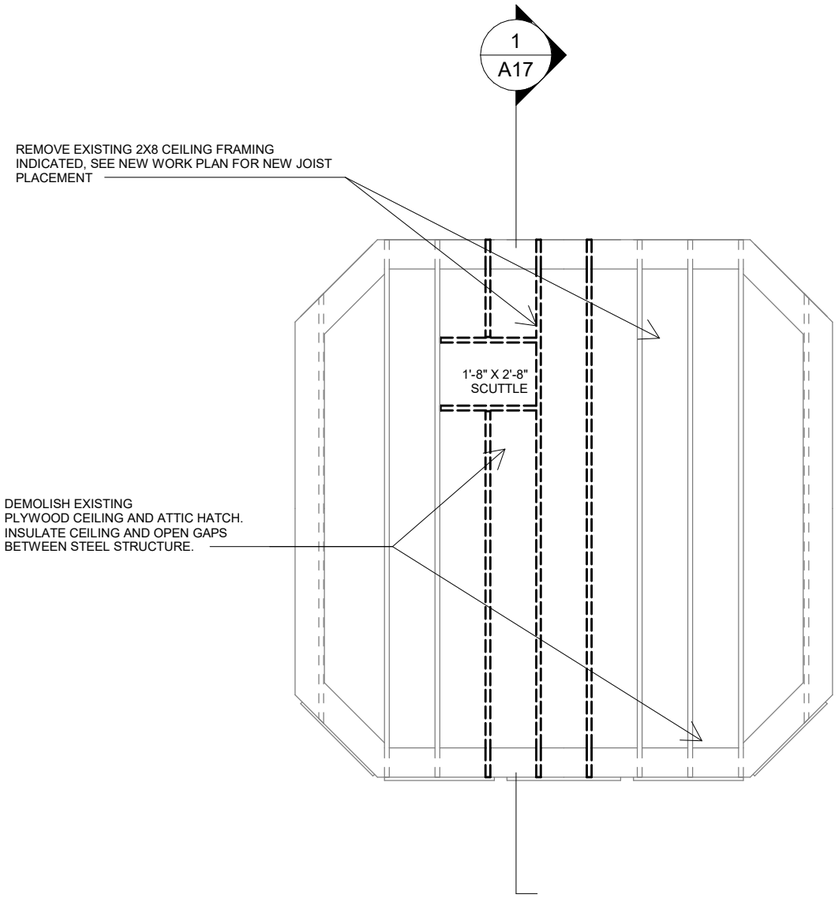
DRAWN BY KD | PLANS CK'D. JP

EAST BRIDGE HOUSE - UPPER LEVEL AND ROOF

SHEET A13 OF A23

STATE PROJECT NUMBER

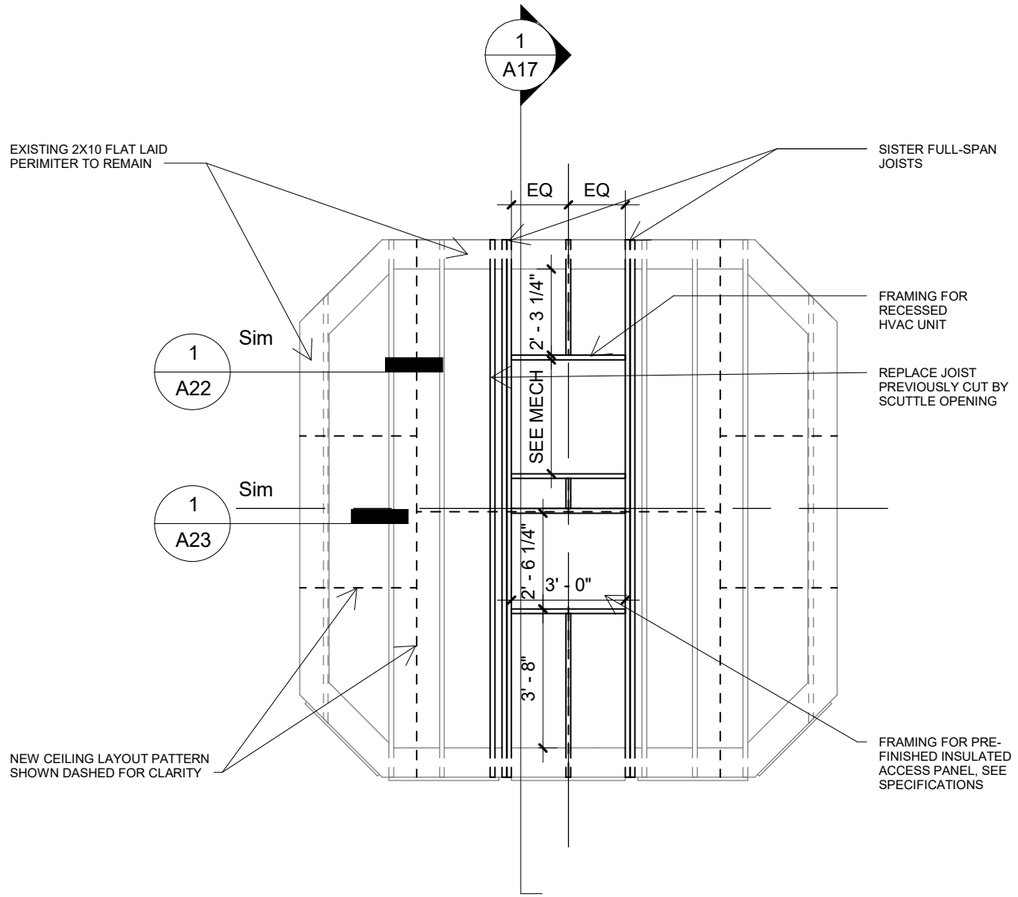
2984-26-73



ALL JOISTS SHOWN ASSUMED TO BE EXISTING, CONTRACTOR TO VERIFY ACTUAL CONDITIONS IN FIELD

CONTROL RM. CEILING FRAMING DEMO PLAN

SCALE: 1/4" = 1' - 0"



CONTROL RM. CEILING FRAMING PLAN

SCALE: 1/4" = 1' - 0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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EAST BRIDGE HOUSE - UPPER LEVEL CEILING FRAMING

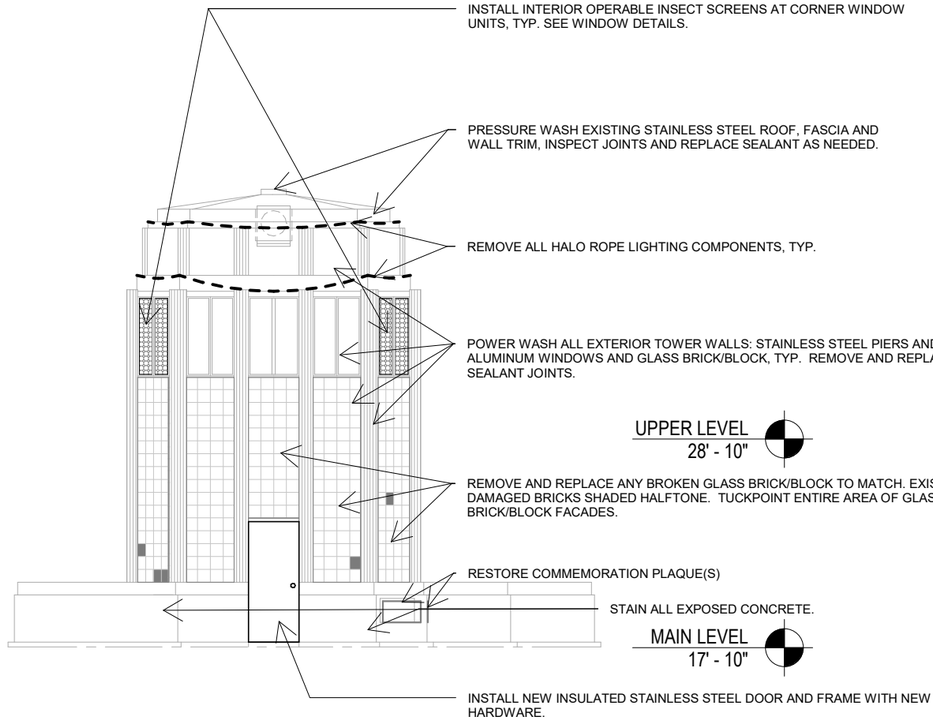
SHEET A14 OF A23

141

8

8

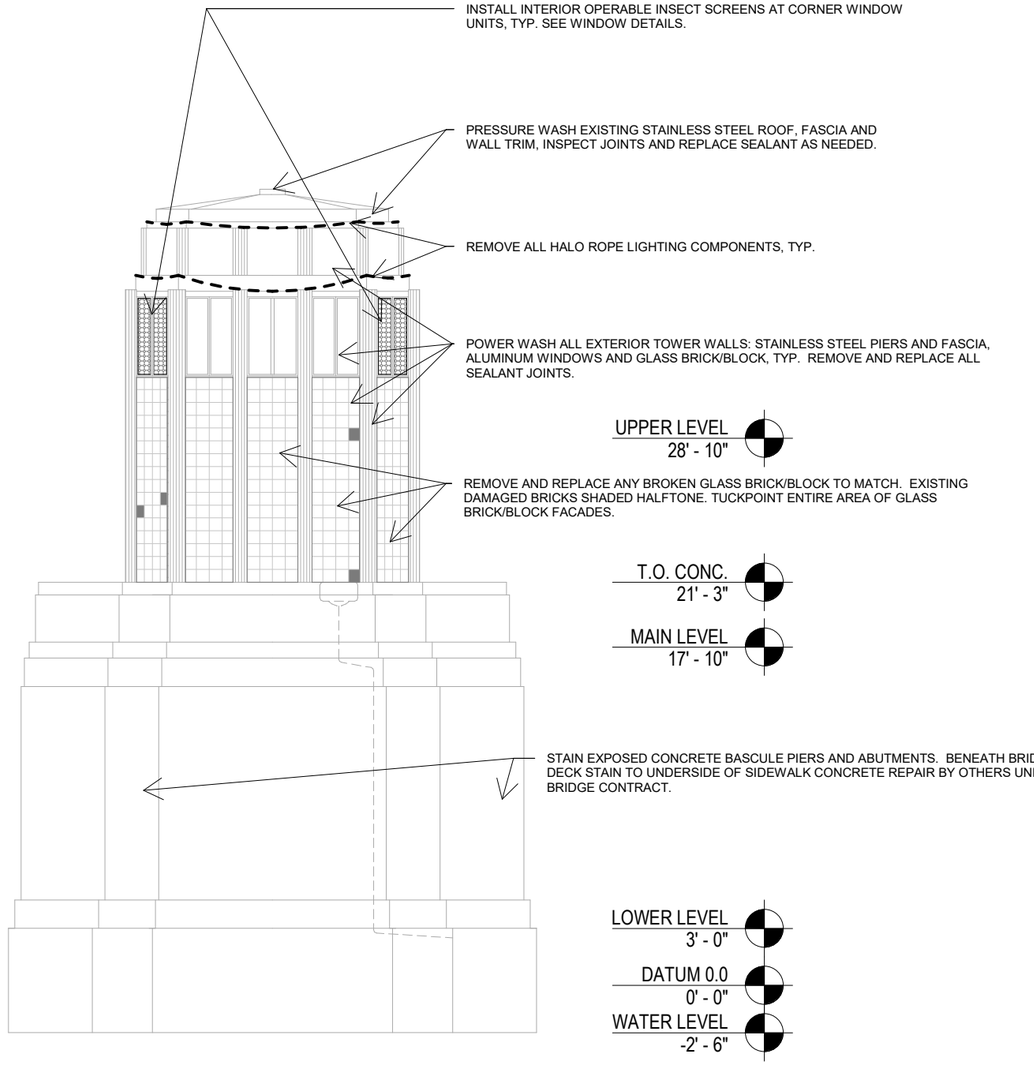
STATE PROJECT NUMBER
2984-26-73



NOTE: PROVIDE MOCKUPS OF AMS-STD-595 COLORS FOR FINAL SELECTION:
CONCRETE: **13522** AND **33448**
BRIDGE STEEL: **16314**

STREET ELEVATION

SCALE: 1/8" = 1' - 0"



RIVER ELEVATION

SCALE: 1/8" = 1' - 0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

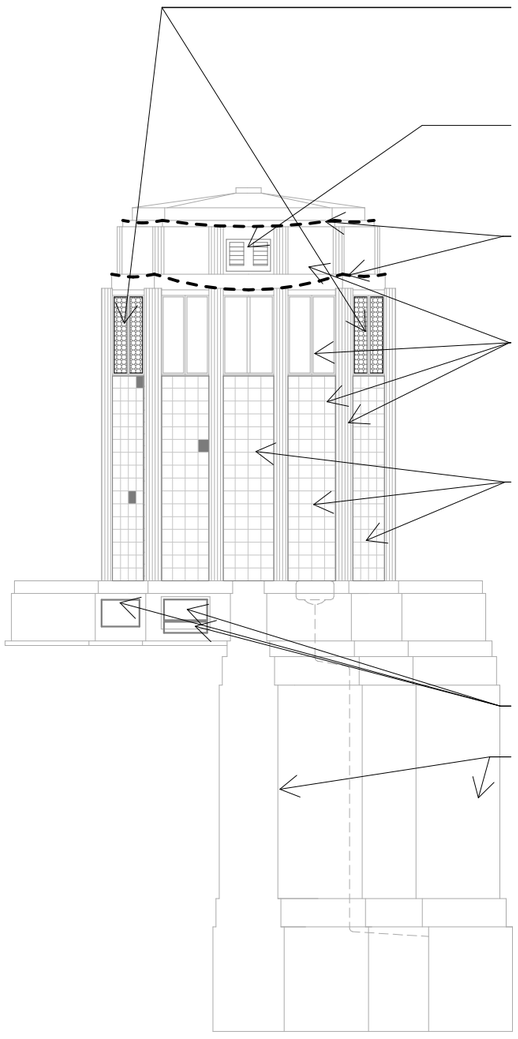
DRAWN BY KD | PLANS CK'D. JP

EAST BRIDGE HOUSE - ELEVATIONS

SHEET A15 OF A23

STATE PROJECT NUMBER

2984-26-73



INSTALL INTERIOR OPERABLE INSECT SCREENS AT CORNER WINDOW UNITS, TYP. SEE WINDOW DETAILS.

EXISTING FASCIA LOUVER TO REMAIN, REMOVE AND REPLACE REPLACE ALL SEALANT AS REQUIRED.

REMOVE ALL HALO ROPE LIGHTING COMPONENTS, TYP.

POWER WASH ALL EXTERIOR TOWER WALLS: STAINLESS STEEL PIERS AND FASCIA, ALUMINUM WINDOWS AND GLASS BRICK/BLOCK, TYP. REMOVE AND REPLACE ALL SEALANT JOINTS.

UPPER LEVEL 28' - 10"

REMOVE AND REPLACE ANY BROKEN GLASS BRICK/BLOCK TO MATCH. EXISTING DAMAGED BRICKS SHADED HALFTONE. TUCKPOINT ENTIRE AREA OF GLASS BRICK/BLOCK FACADES.

T.O. CONC. 21' - 3"

MAIN LEVEL 17' - 10"

RESTORE COMMEMORATION PLAQUE(S)

STAIN ALL EXPOSED CONCRETE BASCULE PIERS AND ABUTMENTS AND AREAS INDICATED ONSTRUCTURAL DRAWINGS. STAIN UP TO UNDERSIDE OF SIDEWALK BENEATH BRIDGE DECK.

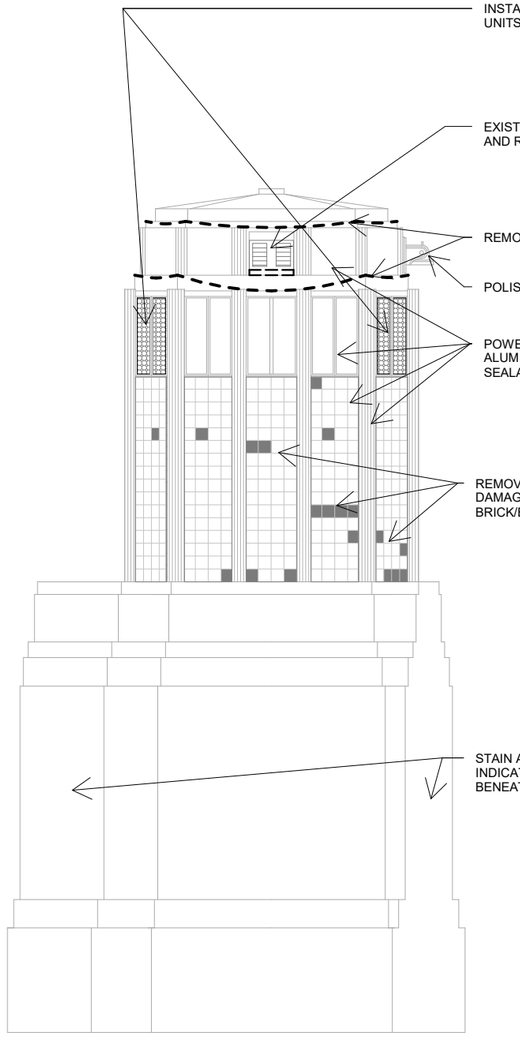
LOWER LEVEL 3' - 0"

DATUM 0.0 0' - 0"

WATER LEVEL -2' - 6"

SOUTHEAST ELEVATION

SCALE: 1/8" = 1' - 0"



INSTALL INTERIOR OPERABLE INSECT SCREENS AT CORNER WINDOW UNITS, TYP. SEE WINDOW DETAILS.

EXISTING FASCIA LOUVER TO REMAIN, INSTALL NEW DRAIN PAN BENEATH LOUVER AND REPLACE ALL SEALANT.

REMOVE ALL HALO ROPE LIGHTING COMPONENTS, TYP.

POLISH TOWER BELL

POWER WASH ALL EXTERIOR TOWER WALLS: STAINLESS STEEL PIERS AND FASCIA, ALUMINUM WINDOWS AND GLASS BRICK/BLOCK, TYP. REMOVE AND REPLACE ALL SEALANT JOINTS.

UPPER LEVEL 28' - 10"

REMOVE AND REPLACE ANY BROKEN GLASS BRICK/BLOCK TO MATCH. EXISTING DAMAGED BRICKS SHADED HALFTONE. TUCKPOINT ENTIRE AREA OF GLASS BRICK/BLOCK FACADES.

T.O. CONC. 21' - 3"

MAIN LEVEL 17' - 10"

STAIN ALL EXPOSED CONCRETE BASCULE PIERS AND ABUTMENTS AND AREAS INDICATED ONSTRUCTURAL DRAWINGS. STAIN UP TO UNDERSIDE OF SIDEWALK BENEATH BRIDGE DECK.

LOWER LEVEL 3' - 0"

DATUM 0.0 0' - 0"

WATER LEVEL -2' - 6"

NORTHWEST ELEVATION

SCALE: 1/8" = 1' - 0"

NOTE: PROVIDE MOCKUPS OF AMS-STD-595 COLORS FOR FINAL SELECTION:
CONCRETE: **13522** AND **33448**
BRIDGE STEEL: **16314**

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY KD | PLANS CK'D. JP

EAST BRIDGE HOUSE - ELEVATIONS

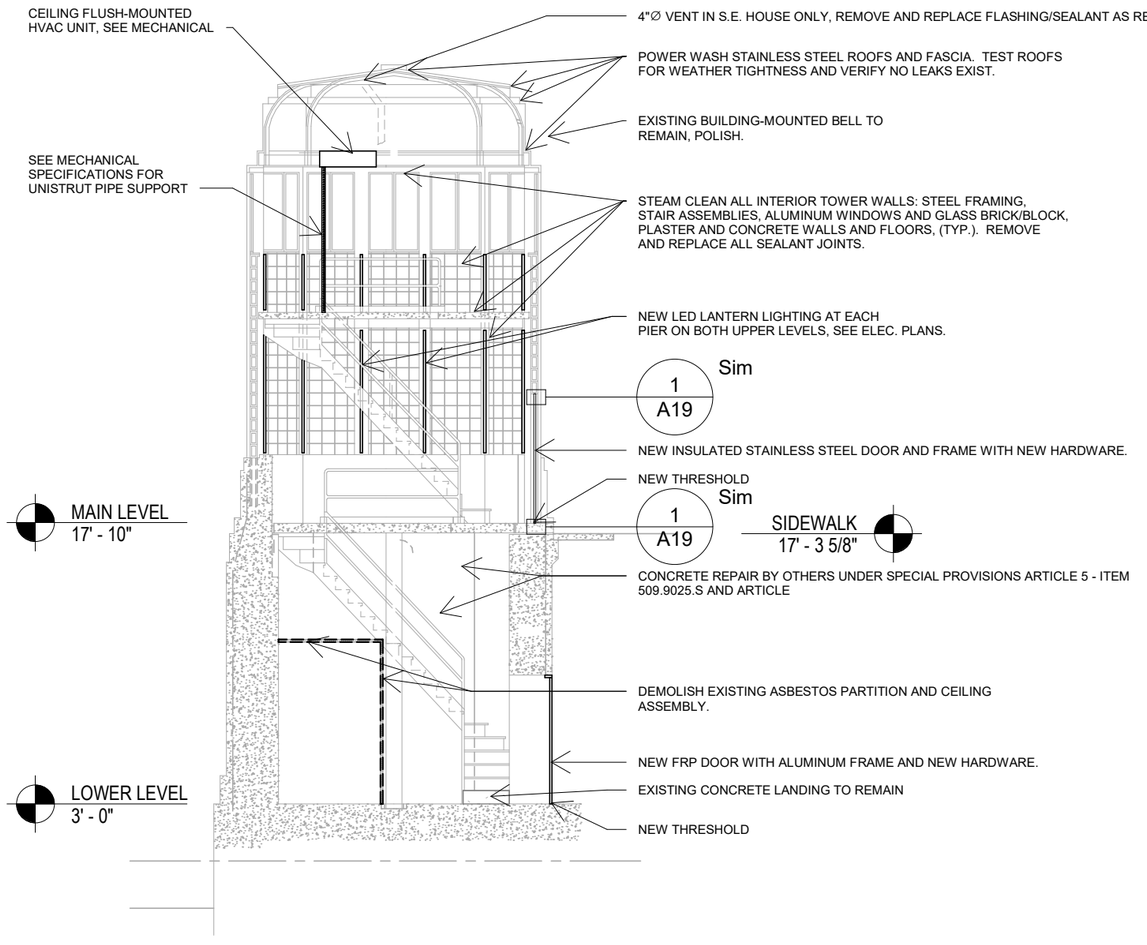
SHEET A16 OF A23

143

8

8

STATE PROJECT NUMBER
2984-26-73



SECTION 1 THROUGH EAST HOUSE

SCALE: 1/8" = 1' - 0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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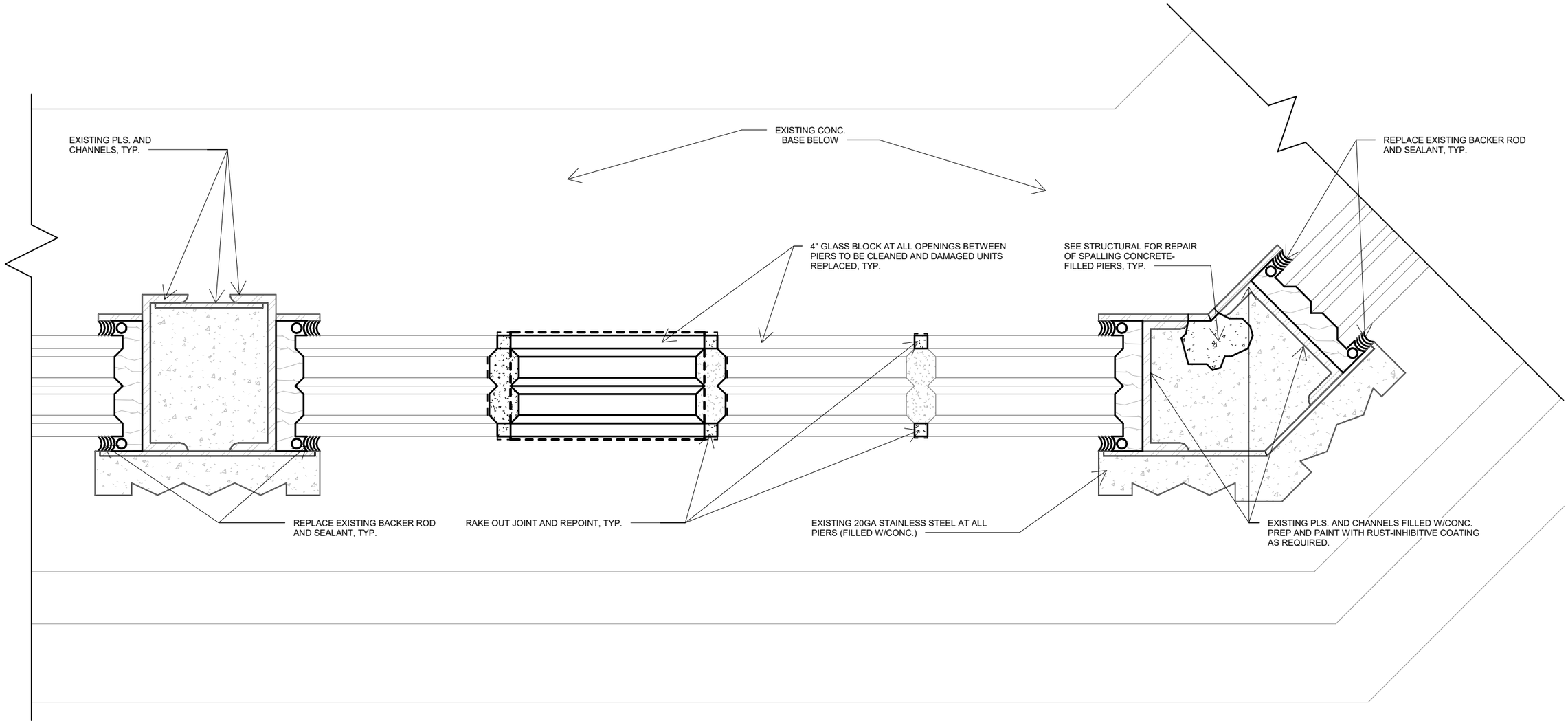
EAST BRIDGE HOUSE - SECTIONS

SHEET A17 OF A23

144

STATE PROJECT NUMBER

2984-26-73



8

8

1 TYPICAL WALL DETAIL

Scale: 3" = 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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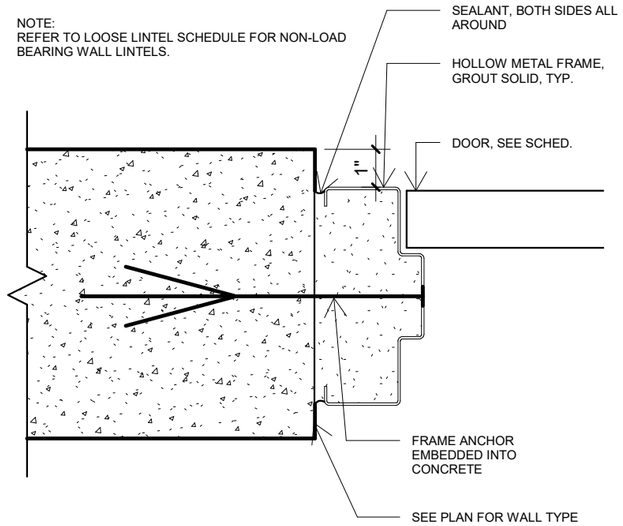
EXTERIOR DETAILS

SHEET A18 OF A23

145

STATE PROJECT NUMBER

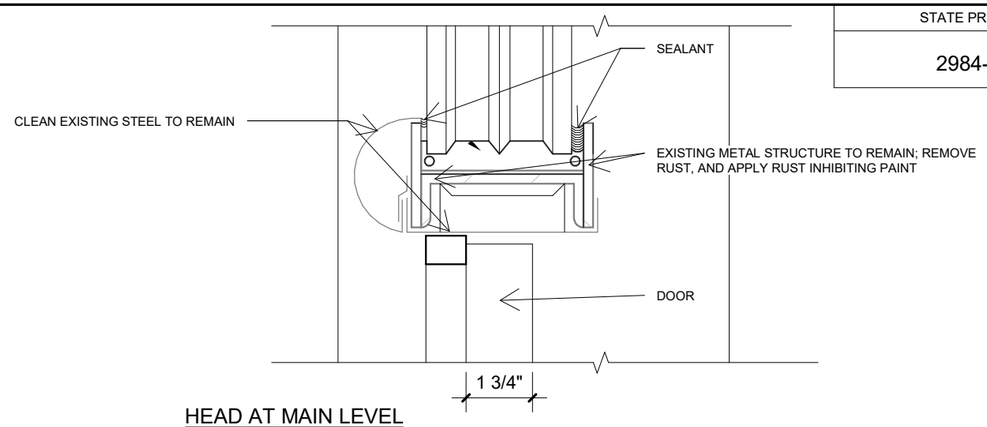
2984-26-73



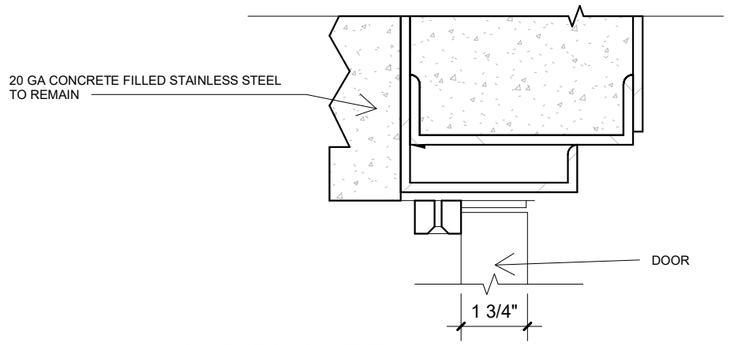
DOORS TO BE LOCATED 4" FROM NEAREST WALL, UNLESS DIMENSIONED OTHERWISE.

2 HM JAMB @ CAST IN PLACE CONCRETE

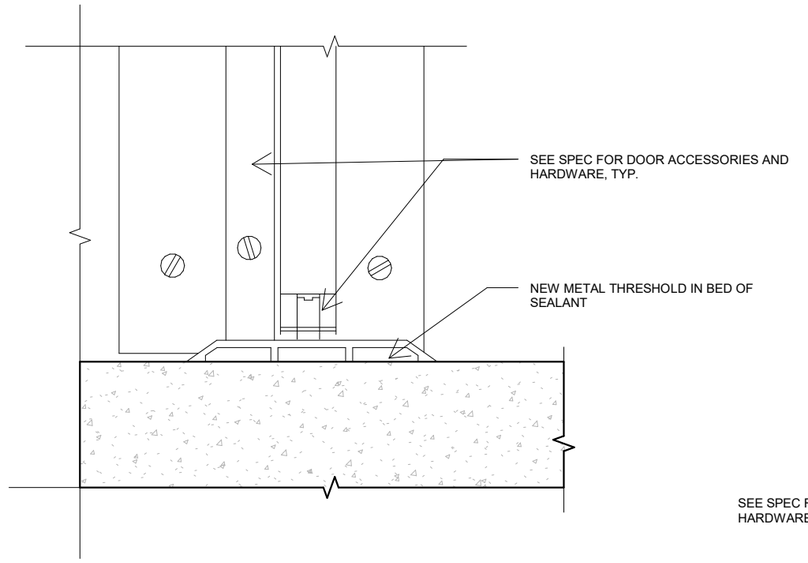
Scale: 3" = 1'-0"



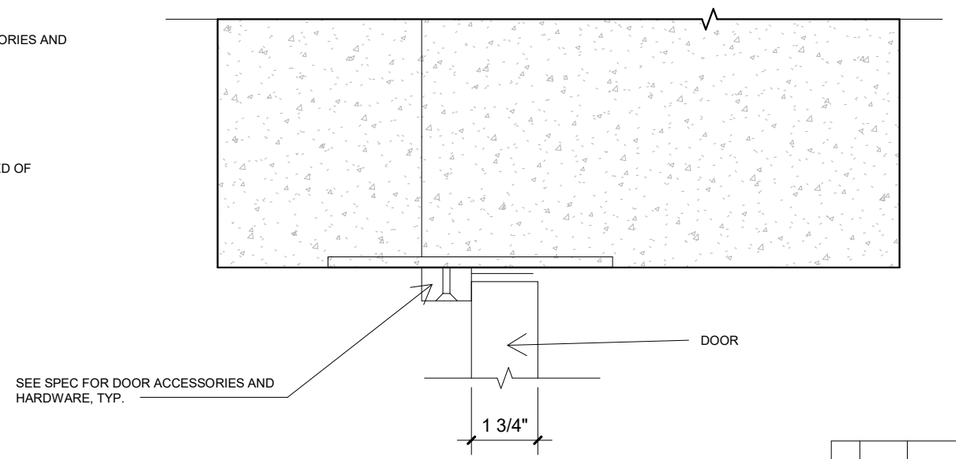
HEAD AT MAIN LEVEL



JAMB AT MAIN LEVEL



SILL



JAMB AT LOWER LEVEL

1 DOOR DETAILS

Scale: 3" = 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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DOOR DETAILS

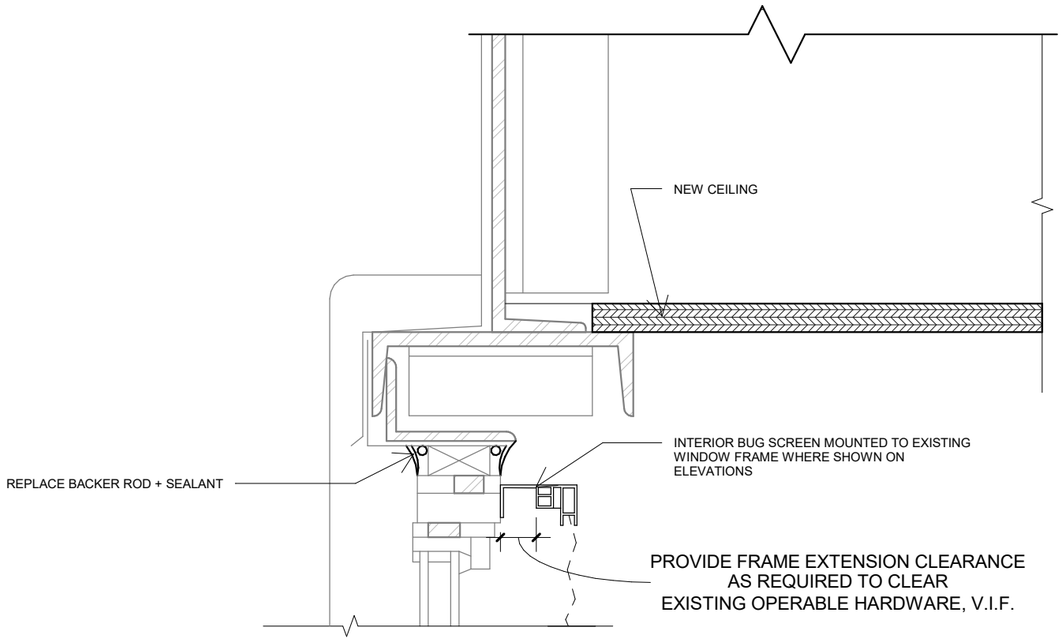
SHEET A19 OF A23

146

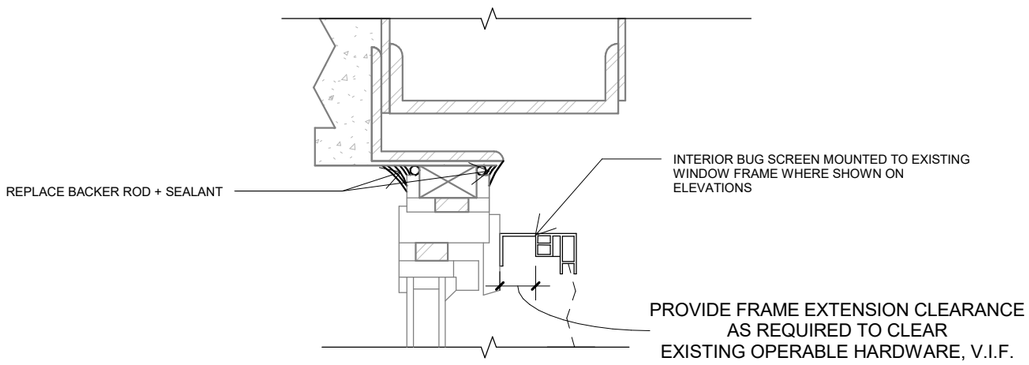
8

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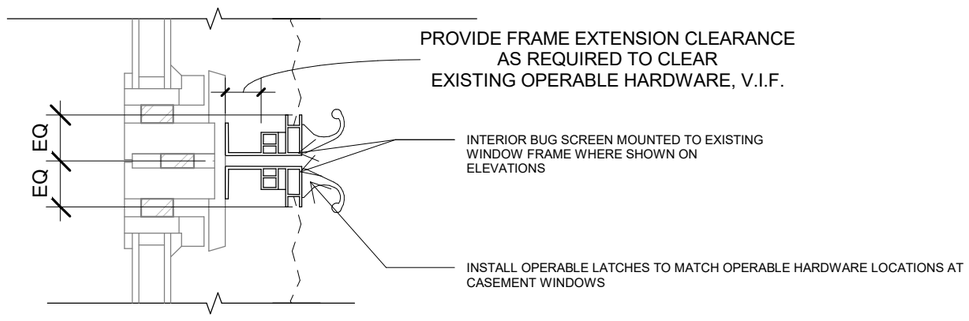
STATE PROJECT NUMBER
2984-26-73



WINDOW HEAD



WINDOW JAMB - OUTSIDE



WINDOW JAMB - INSIDE

8

8

1 WINDOW DETAILS

Scale: 3" = 1'-0"

NO.	DATE	REVISION	BY

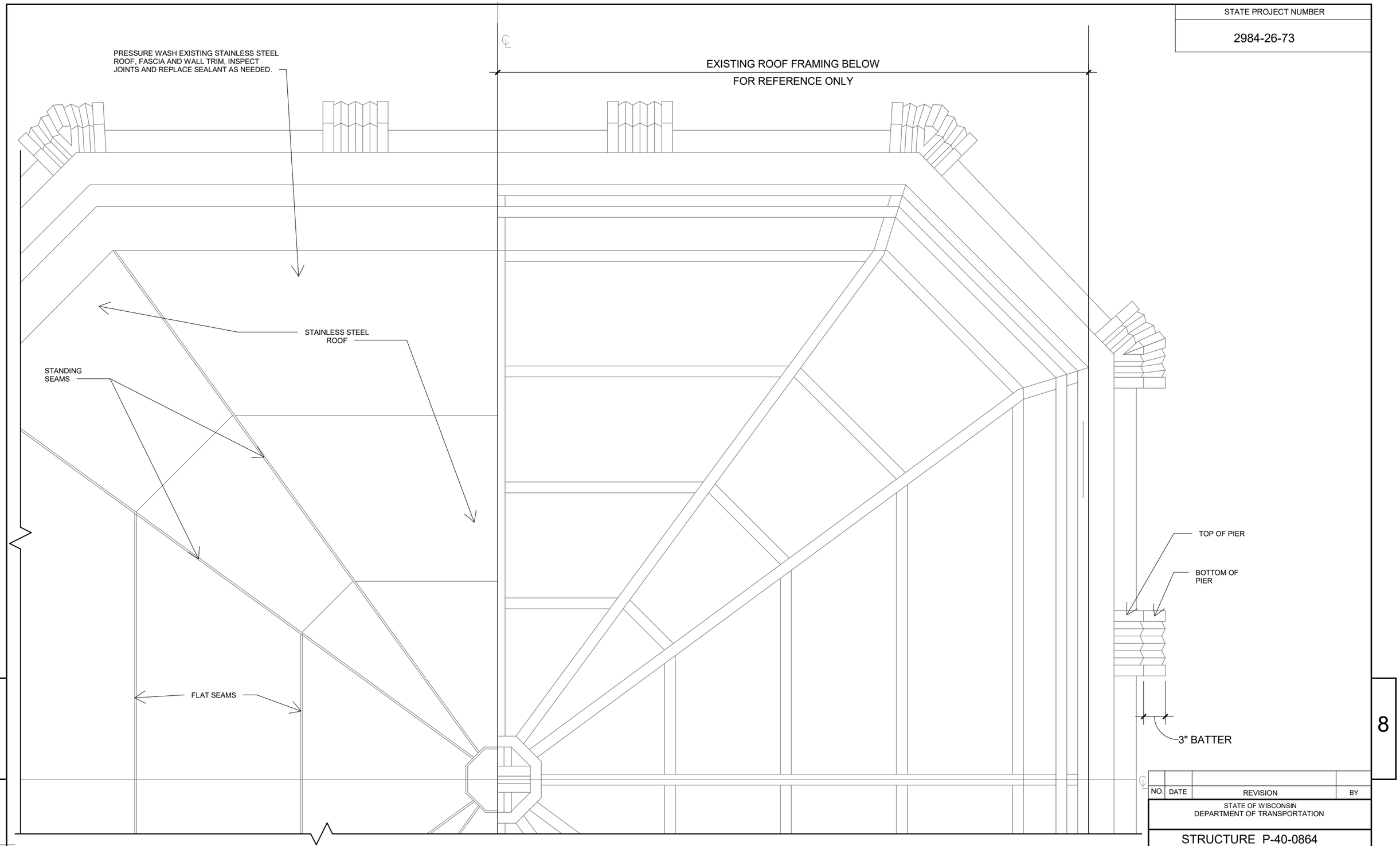
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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WINDOW DETAILS

STATE PROJECT NUMBER
2984-26-73



8

8

1 ENLARGED ROOF PLAN

1" = 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY	KD	PLANS CK'D.	JP

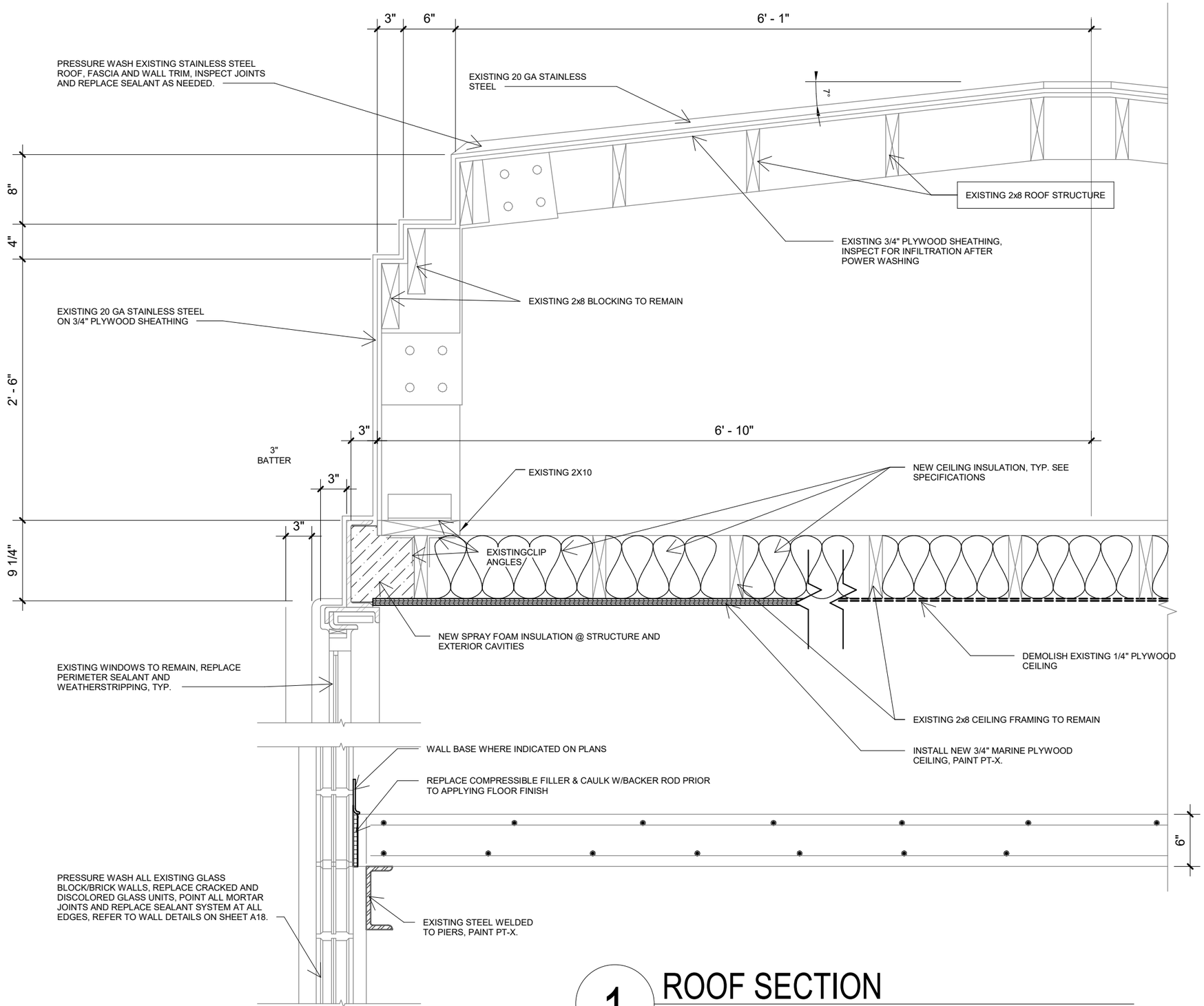
ROOF DETAILS

SHEET A21 OF A23

148

STATE PROJECT NUMBER

2984-26-73



1 ROOF SECTION

Scale: 1" = 1'-0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

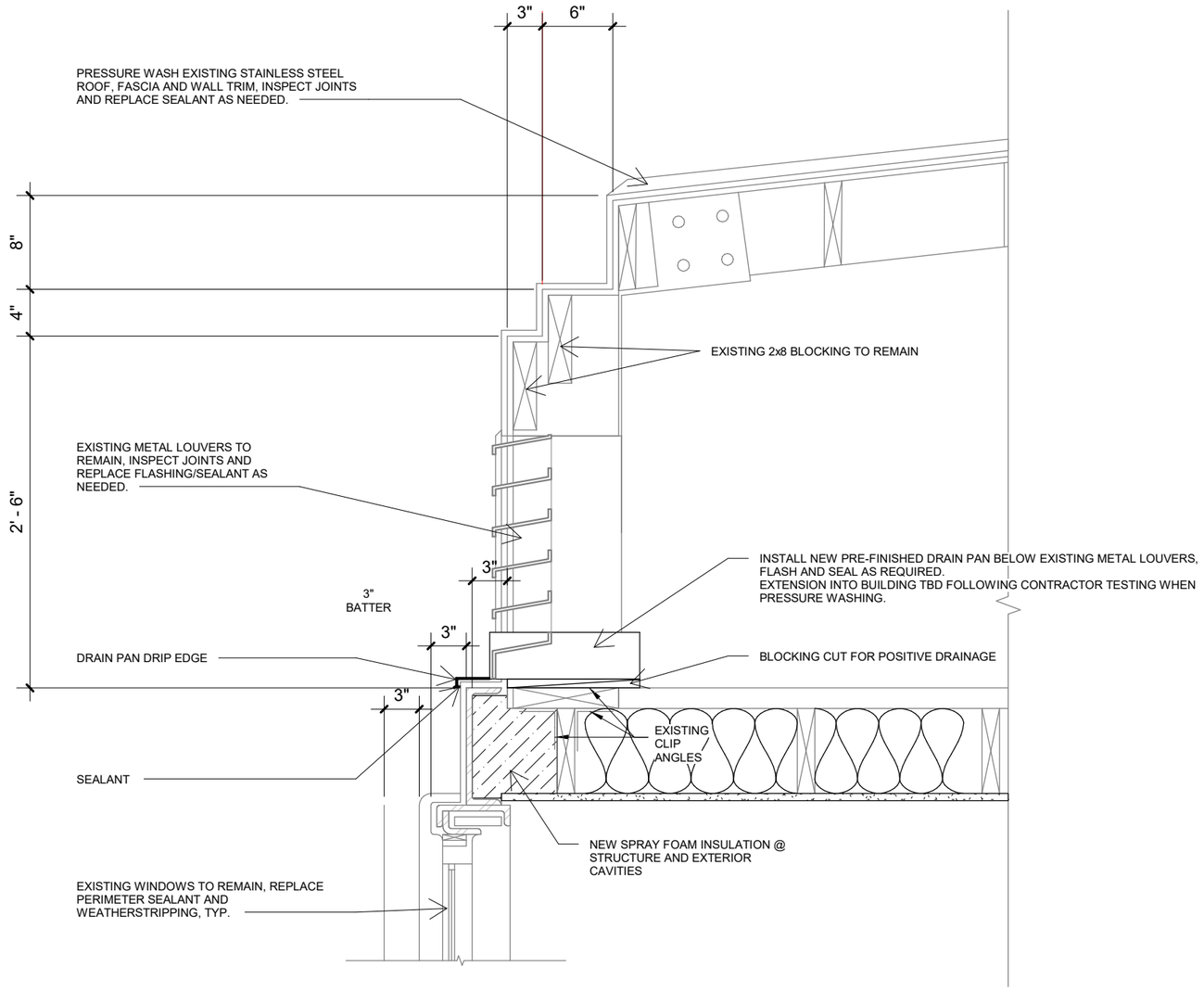
DRAWN BY KD | PLANS CK'D. JP

ROOF DETAILS

SHEET A22 OF A23

149

STATE PROJECT NUMBER
2984-26-73



1 ROOF SECTION AT LOUVERS

Scale: 1" = 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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ROOF DETAILS

SHEET A23 OF A23

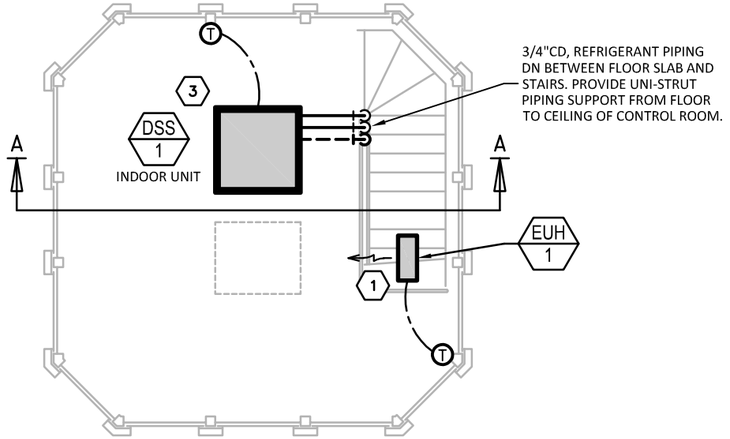
150

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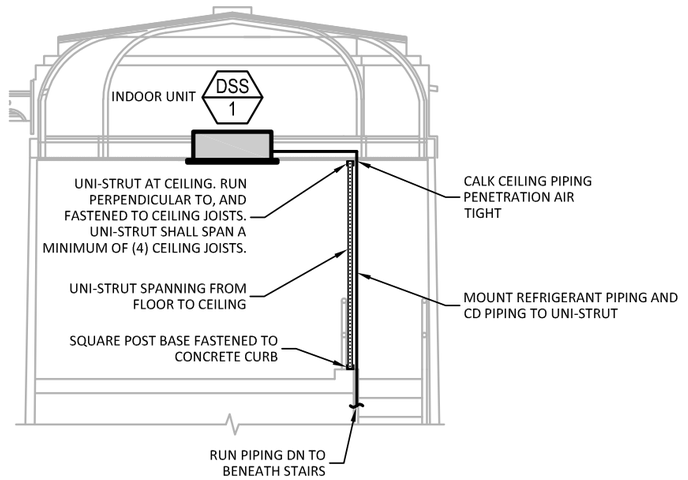
STATE PROJECT NUMBER

2984-26-73



CONTROL ROOM LEVEL HVAC PLAN

SCALE: 3/16" = 1'-0"



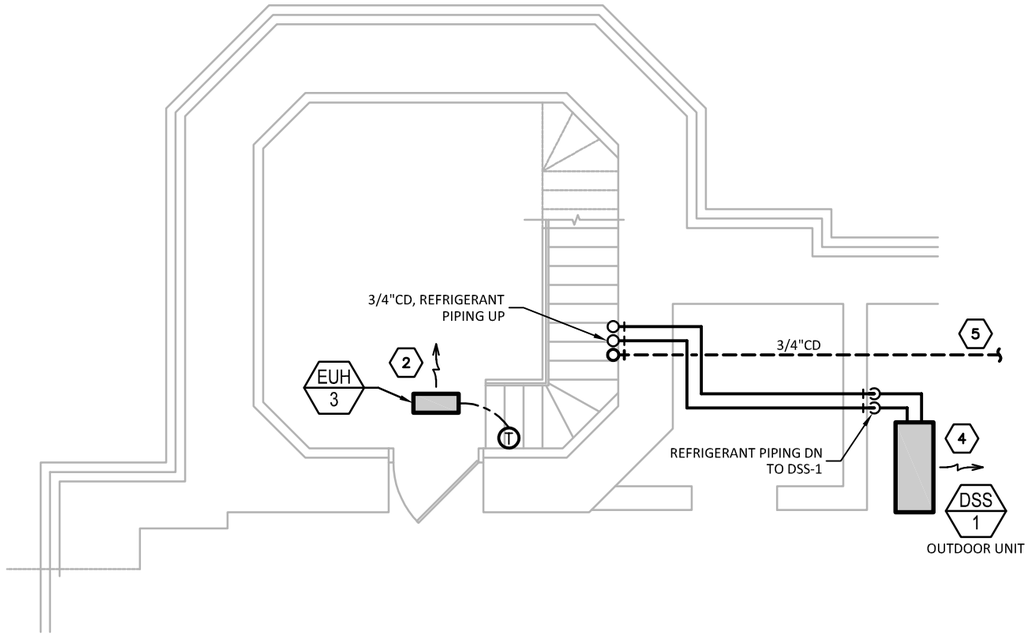
A

CONTROL ROOM LEVEL HVAC SECTION

SCALE: 3/16" = 1'-0"

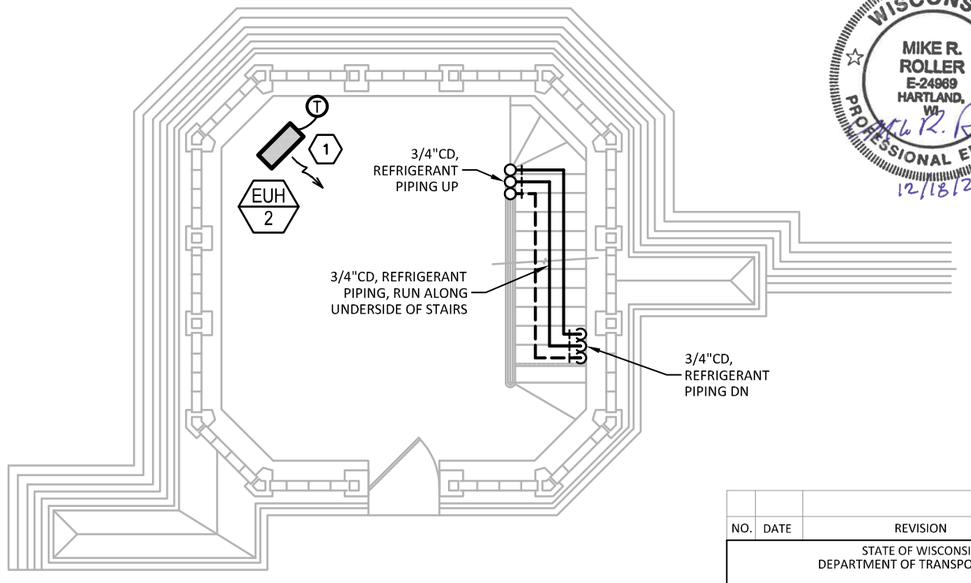
KEY NOTES (KN)

1	MOUNT ELECTRIC UNIT HEATER 6" BELOW CEILING. FIELD VERIFY EXACT LOCATION.
2	MOUNT ELECTRIC UNIT HEATER ABOVE DOOR. BOTTOM OF HEATER SHALL BE AT A HEIGHT OF 8'-8"AFF. FIELD VERIFY EXACT LOCATION.
3	NEW DUCTLESS SPLIT SYSTEM INDOOR UNIT TO BE RECESSED IN CEILING. FIELD VERIFY EXACT LOCATION.
4	MOUNT NEW DUCTLESS SPLIT SYSTEM OUTDOOR UNIT ON SNOW STAND SECURELY FASTENED TO CONCRETE DECK. FIELD VERIFY EXACT LOCATION. SIZE AND INSTALL REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.
5	ROUTE NEW 3/4"CD HIGH OVER WALKWAY AND ELBOW DOWN AND TERMINATE ALONG CONCRETE PIER AT AN ELEVATION OF 4.00'. FIELD VERIFY EXACT LOCATION.



MACHINARY ROOM LEVEL HVAC PLAN

SCALE: 3/16" = 1' - 0"



ENTRY LEVEL HVAC PLAN

SCALE: 3/16" = 1'-0"

WISCONSIN
MIKE R. ROLLER
E-24989
HARTLAND, WI
PROFESSIONAL ENGINEER
12/18/2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY MRB | PLANS CK'D. MRR

EAST BRIDGE HOUSE HVAC PLANS

SHEET H1 OF H3

151

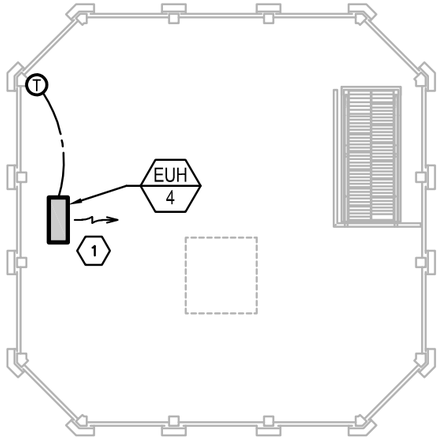
8

8

STATE PROJECT NUMBER

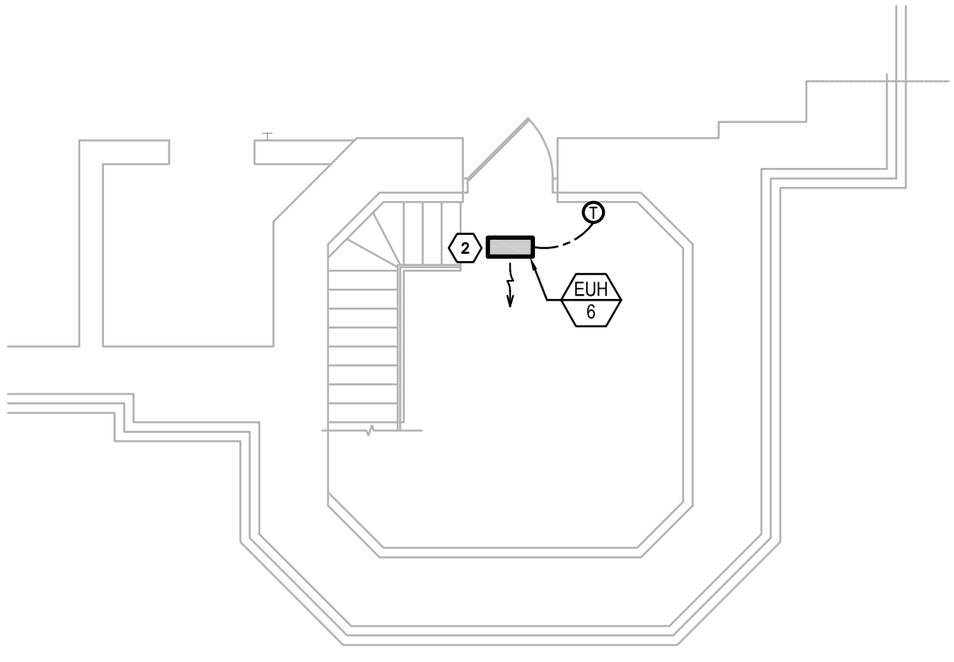
2984-26-73

KEY NOTES	KN
1	MOUNT ELECTRIC UNIT HEATER 6" BELOW CEILING. FIELD VERIFY EXACT LOCATION.
2	MOUNT ELECTRIC UNIT HEATER ABOVE DOOR. BOTTOM OF HEATER SHALL BE AT A HEIGHT OF 8'-8"AFF. FIELD VERIFY EXACT LOCATION.



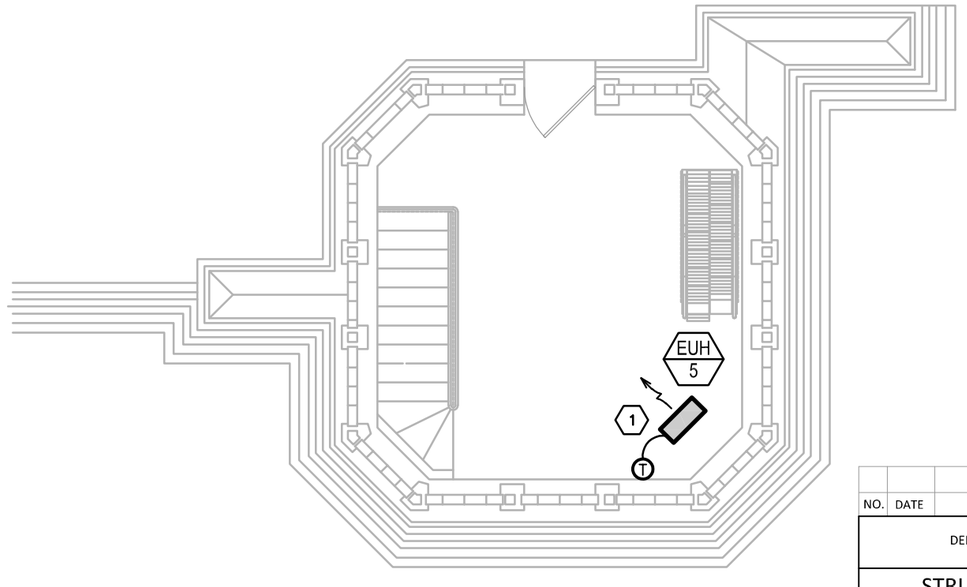
CONTROL ROOM LEVEL HVAC PLAN

SCALE: 3/16" = 1'-0"



MACHINARY ROOM LEVEL HVAC PLAN

SCALE: 3/16" = 1'-0"



ENTRY LEVEL HVAC PLAN

SCALE 3/16" = 1'-0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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WEST BRIDGE HOUSE HVAC PLANS

SHEET H2 OF H3

152

STATE PROJECT NUMBER

2984-26-73

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL REQUIRED OFFSETS FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND SHALL MAINTAIN APPROPRIATE CLEARANCES.
2. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK AND PROJECT CONDITIONS. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
5. ALL CONTROL WIRING SHALL BE RUN IN CONDUIT.
6. KEY NOTES PERTAIN ONLY TO THE DRAWING THEY ARE LOCATED ON.
7. ALL CUTTING AND PATCHING OF EXISTING STRUCTURE TO ACCOMMODATE NEW HVAC IS BY MECHANICAL CONTRACTOR.
8. THE MANUFACTURERS LISTED IN THE SCHEDULES ARE SELECTED AS THE "BASIS OF DESIGN". OTHER MANUFACTURERS ARE LISTED IN THE SPECIFICATIONS.

LEGEND

	NEW HVAC EQUIPMENT
	NEW DUCTWORK
	EXISTING MECHANICAL COMPONENT
	DEMOLISHED MECHANICAL COMPONENT
	AIR FLOW INDICATOR
T	THERMOSTAT
	CONTROL WIRE
	PIPE ELBOW / TEE DOWN
	PIPE ELBOW / TEE UP
AFF	ABOVE FINISHED FLOOR
CD	CONDENSATE DRAIN
DN	DOWN

DUCTLESS SPLIT SYSTEM

MARK	MANUFACTURER	TYPE	REFRIGERANT	COOLING CAPACITY (BTUH)	HEATING CAPACITY (BTUH)	INDOOR UNIT					OUTDOOR UNIT						REMARKS
						MODEL	AMPS	VOLTS / PHASE	DIMENSIONS (W x D x H)	OPERATING WEIGHT	MODEL	MCA	MOCP	VOLTS / PHASE	DIMENSIONS (W x D x H)	OPERATING WEIGHT	
DSS-1	LG	CEILING CASSETTE	R-410A	36,000	40,000	LCN369HV	1.0	208-230 / 1	36"x36"x12"	60 LBS	LUU360HHV	32	40	208-230 / 1	38"x16"x55"	200 LBS	1, 2, 3, 4, 5

1. PROVIDE STARTER AND DISCONNECT.
2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
3. PROVIDE WALL MOUNTED WIRED THERMOSTAT.
4. PROVIDE LOW AMBIENT WIND BAFFLE TO PERMIT OPERATION DOWN TO 0°F.
5. PROVIDE SNOW STAND FOR OUTDOOR UNIT.

ELECTRIC UNIT HEATERS

MARK	MANUFACTURER	MODEL	KW	CFM	MOTOR		ELECTRICAL		OPERATING WEIGHT	REMARKS
					HP	RPM	AMPS	VOLTS / PH		
EUH-1	Q-MARK	MUH-07-8	7.5	650	1/30	1,600	36.0	208V / 1Ø	38 LBS	1, 2
EUH-2	Q-MARK	MUH-07-8	7.5	650	1/30	1,600	36.0	208V / 1Ø	38 LBS	1, 2
EUH-3	Q-MARK	MUH-07-8	7.5	650	1/30	1,600	36.0	208V / 1Ø	38 LBS	1, 2
EUH-4	Q-MARK	MUH-07-8	7.5	650	1/30	1,600	36.0	208V / 1Ø	38 LBS	1, 2
EUH-5	Q-MARK	MUH-07-8	7.5	650	1/30	1,600	36.0	208V / 1Ø	38 LBS	1, 2
EUH-6	Q-MARK	MUH-07-8	7.5	650	1/30	1,600	36.0	208V / 1Ø	38 LBS	1, 2

1. PROVIDE FACTORY MOUNTED AND WIRED INTEGRAL DISCONNECT SWITCH.
2. PROVIDE WITH REMOTE ALL MOUNTED WIRED THERMOSTAT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY MRB | PLANS CK'D. MRR

HVAC GENERAL NOTES, LEGEND & SCHEDULES

SHEET H3 OF H3

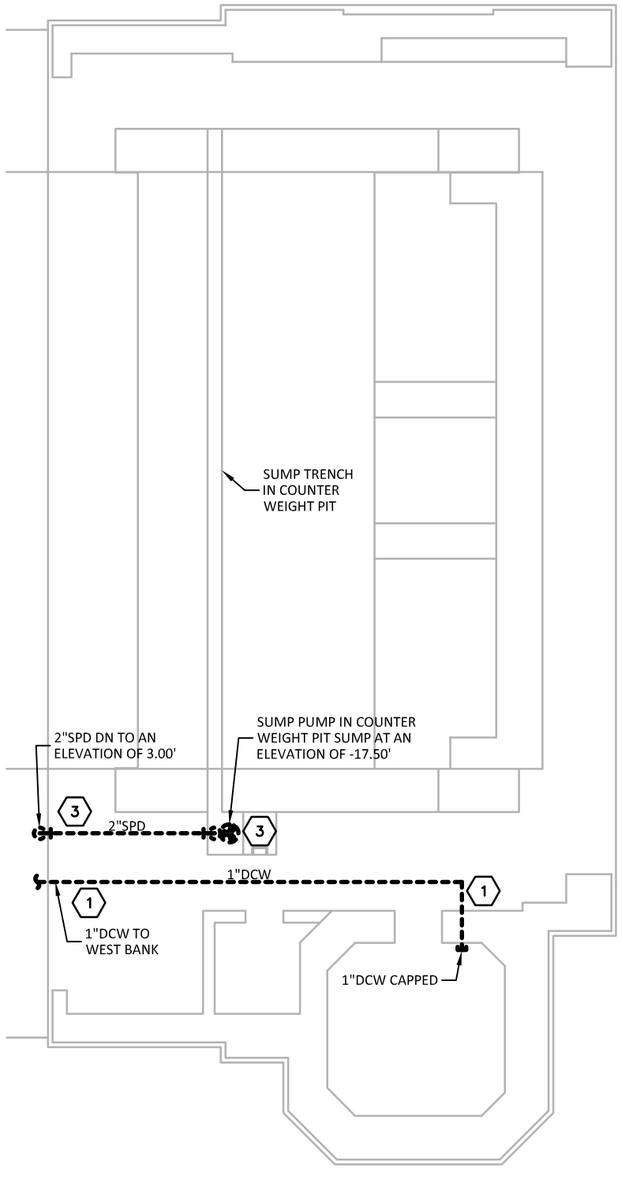
153

STATE PROJECT NUMBER

2984-26-73

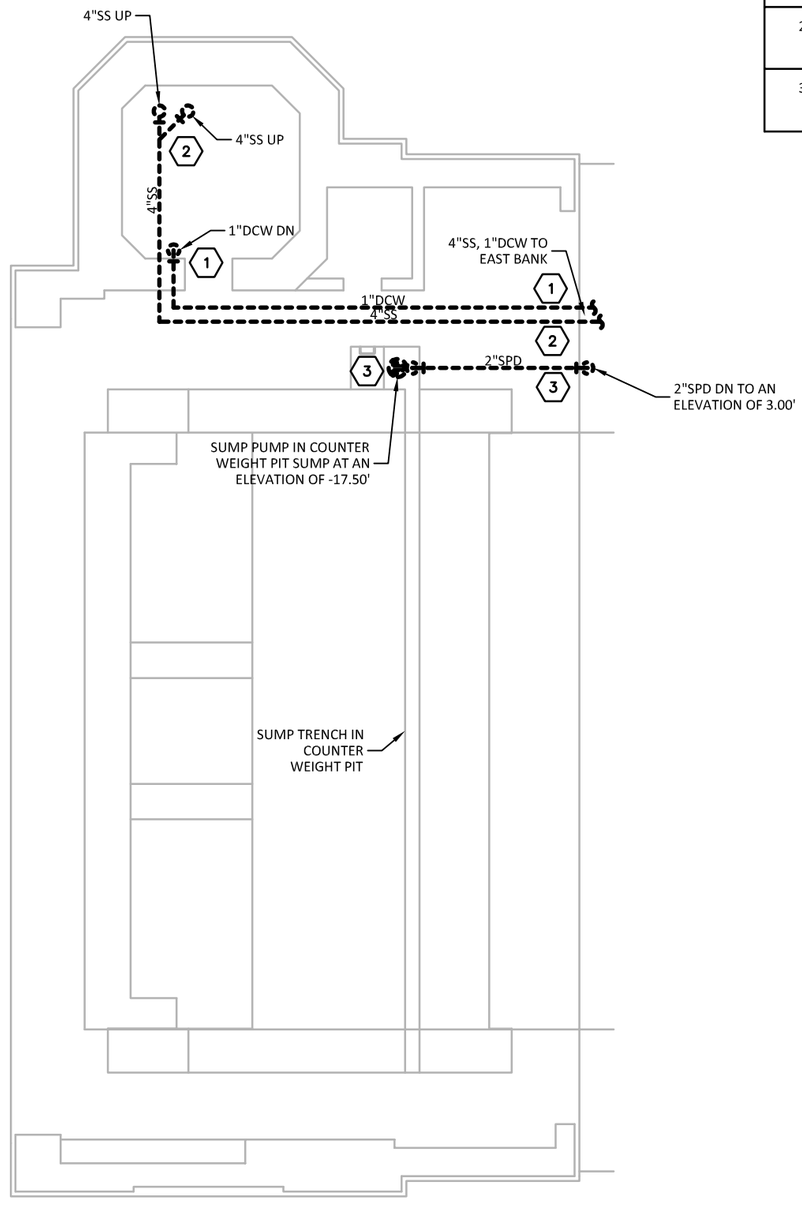
KEY NOTES

KN	
1	REMOVE ALL DCW PIPING FROM OPERATOR HOUSE TO RIVER BANK. PATCH WALL OPENINGS TO MATCH EXISTING.
2	REMOVE ALL SS PIPING FROM OPERATOR HOUSE TO RIVER BANK. PATCH ALL WALL AND FLOOR OPENINGS TO MATCH EXISTING.
3	REMOVE EXISTING SUMP PUMP ALONG WITH ALL ASSOCIATED PIPING, WIRING AND CONTROL. ALL TO BE REPLACED WITH NEW.



WEST PIER PLUMBING DEMOLITION PLAN (EL. OF 3.00')

SCALE: 3/32" = 1'-0"



EAST PIER PLUMBING DEMOLITION PLAN (EL. OF 3.00')

SCALE: 3/32" = 1'-0"

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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PIER PLUMBING DEMOLITION PLANS

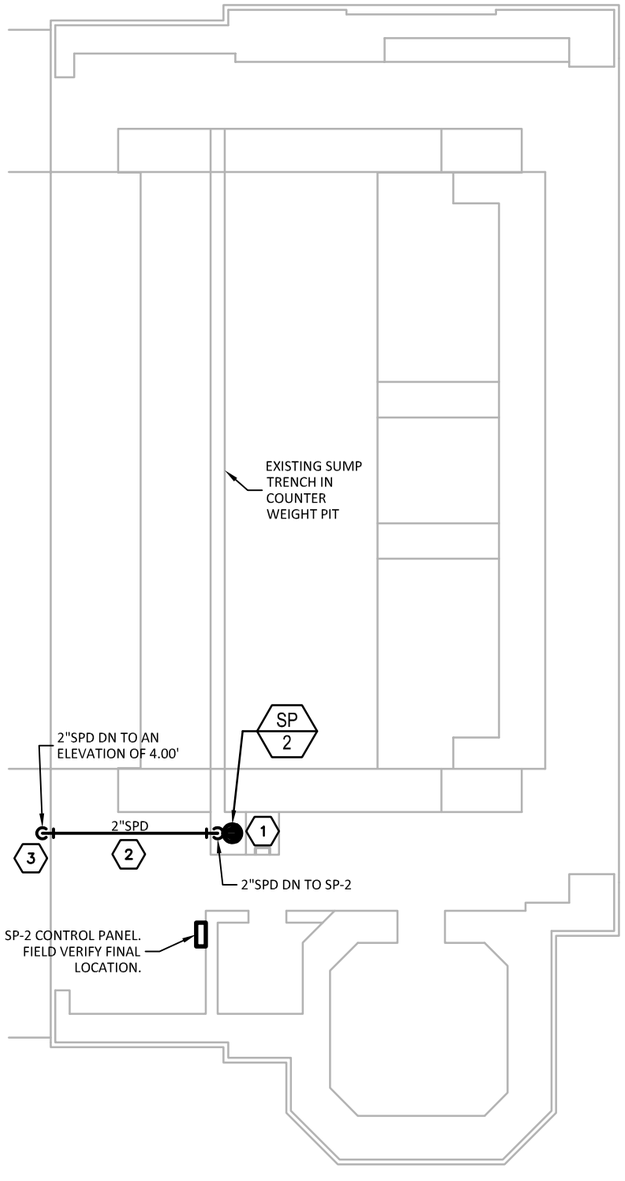
SHEET P1 OF P3

154

STATE PROJECT NUMBER
2984-26-73

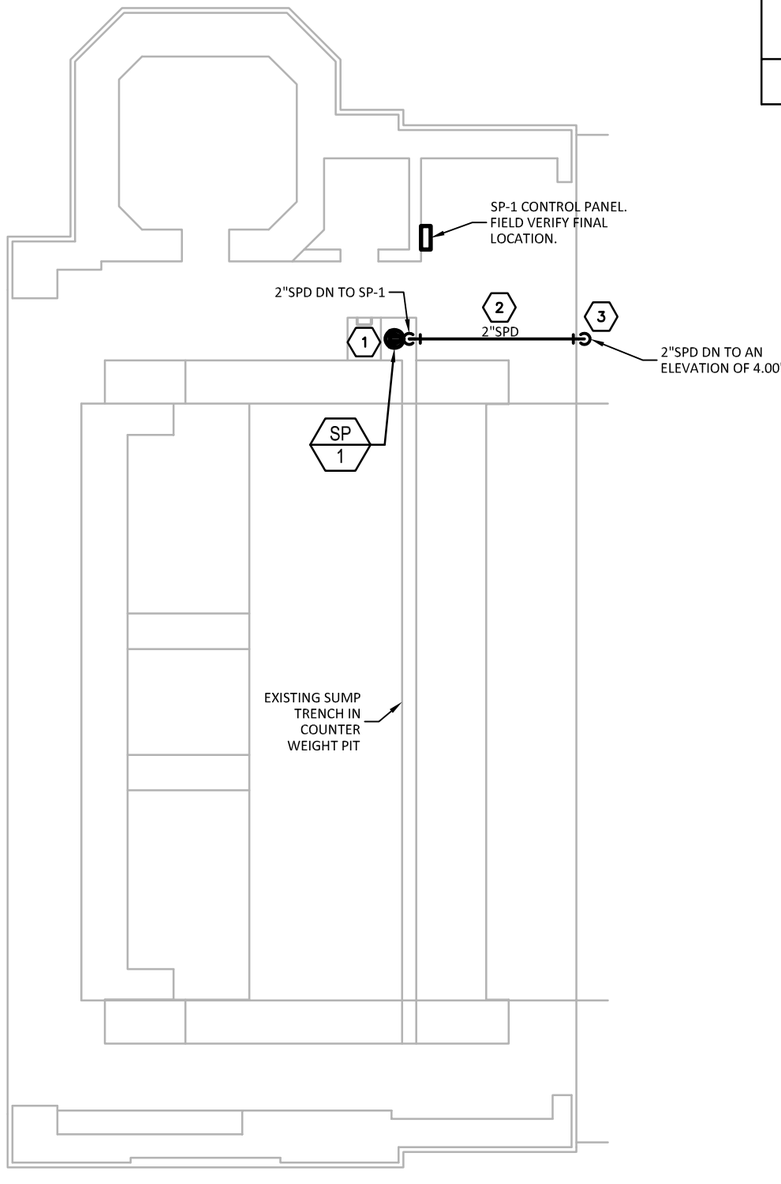
KEY NOTES (KN)

1	MOUNT NEW SUMP PUMP IN EXISTING COUNTER WEIGHT PIT SUMP AT AN ELEVATION OF -17.5'. FIELD VERIFY EXACT LOCATION.
2	ROUTE NEW 2"SPD PIPING UP OVER WALKWAY AT AN APPROXIMATE ELEVATION OF 10.00' (SIMILAR TO THE EXISTING INSTALLATION).
3	TERMINATE 2"SPD ALONG CONCRETE PIER WALL AT AN ELEVATION OF 4.00'. FIELD VERIFY EXACT LOCATION.



WEST PIER PLUMBING PLAN (EL. OF 3.00')

SCALE: 3/32" = 1'-0"



EAST PIER PLUMBING PLAN (EL. OF 3.00')

SCALE: 3/32" = 1'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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PIER PLUMBING PLANS

SHEET P2 OF P3

155

8

8

STATE PROJECT NUMBER

2984-26-73

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL REQUIRED OFFSETS FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL INSTALL MATERIAL AND EQUIPMENT TO CONFORM TO THE STRUCTURE, EQUIPMENT CONNECTIONS AND SHALL MAINTAIN APPROPRIATE CLEARANCES.
2. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, FEDERAL AND STATE REGULATIONS, AND ALL REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE FULL EXTENT OF WORK AND PROJECT CONDITIONS. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
5. KEY NOTES PERTAIN ONLY TO THE DRAWING THEY ARE LOCATED ON.
6. ALL CUTTING AND PATCHING OF EXISTING STRUCTURE TO ACCOMMODATE NEW PLUMBING IS BY PLUMBING CONTRACTOR.
7. THE MANUFACTURERS LISTED IN THE SCHEDULES ARE SELECTED AS THE "BASIS OF DESIGN". OTHER MANUFACTURERS ARE LISTED IN THE SPECIFICATIONS.

LEGEND

	NEW PLUMBING EQUIPMENT
	EXISTING PLUMBING COMPONENT
	DEMOLISHED PLUMBING COMPONENT
DCW	NEW DOMESTIC COLD WATER
X-DCW	EXISTING DOMESTIC COLD WATER
SS	NEW SANITARY SEWER
X-SS	EXISTING SANITARY SEWER
V	NEW SANITARY VENT
X-V	EXISTING SANITARY VENT
ST	NEW STORM SEWER
X-ST	EXISTING STORM SEWER
	PIPE ELBOW/TEE DOWN
	PIPE ELBOW/TEE UP
AFF	ABOVE FINISHED FLOOR
DN	DOWN
SPD	SUMP PUMP DISCHARGE

SUMP PUMPS

MARK	MANUFACTURER	SYSTEM TYPE	MODEL	PUMP TYPE	MATERIAL	GPM (EACH)	HEAD (FT WC)	MOTOR				REMARKS
								HP	RPM	VOLTS	PHASE	
SP-1	WEIL	SIMPLEX	2426	SUBMERSIBLE	CAST IRON	25	35	1 1/2	1,750	208	3	1, 2, 3
SP-2	WEIL	SIMPLEX	2426	SUBMERSIBLE	CAST IRON	25	35	1 1/2	1,750	208	3	1, 2, 3

1. PROVIDE WEIL MODEL 8117 REMOTE CONTROL PANEL WITH TYPE 4X STAINLESS STEEL OUTER ENCLOSURE.
2. PROVIDE WEIL MODEL 8224 DIAPHRAM LEVEL CONTROL SWITCH.
3. PROVIDE HIGH WATER ALARM ACTIVATED BY WEIL MODEL 8224 DIAPHRAM CONTROL SWITCH.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY MRB | PLANS CK'D. MRR

PLUMBING GEN. NOTES, LEGEND & SCHEDULES

SHEET P3 OF P3

156

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PLOT DATE: 3/12/2024 PLOT TIME: 2:29:45 PM BATCH PRINT SHEET 1 OF 16

MACHINERY NOTES

1. SCOPE OF WORK (INCLUDED BUT NOT LIMITED TO):
   - REMOVE AND DISPOSE OF THE EXISTING SPEED REDUCERS, MOTORS, AND BRAKES.
   - INSTALL NEW PRIMARY DIFFERENTIAL SPEED REDUCER, FLOATING SHAFTS, BEARING SUPPORTS, MOTORS AND BRAKES.
   - REHABILITATE THE EXISTING OPEN GEARING AND BEARING BUSHINGS WITH NEW BUSHINGS, LINERS, SHIMS, AND TURNED STUDS/BOLTS.
   - REHABILITATE THE TRUNNION BEARINGS WITH NEW BUSHINGS, LINERS, SHIMS, AND TURNED BOLTS.
   - FABRICATE AND INSTALL NEW STEEL SUPPORTS FOR THE EXISTING OPEN GEARING, NEW REDUCERS, SUPPORT BEARINGS, MOTORS AND BRAKES.
   - REMOVE THE EXISTING CENTER LOCK SYSTEM INCLUDING REDUCER, MOTOR, SUPPORTS, SHAFTS, COUPLINGS, OPEN GEARING, BEARINGS, ALL CENTER LOCK HOUSINGS, LOCK BAR, AND ASSOCIATED HARDWARE.
   - FABRICATE AND INSTALL NEW CUSHIONLOK LOCKS WITH ELECTRO-MECHANICAL OPERATOR.
   - REMOVE ALL THE EXISTING HEEL ASSEMBLIES INCLUDING SUPPORT ANGLES, PLATES, OAK WOOD BLOCK, AND FABREEKA PAD AND BOLTS.
   - FABRICATE AND INSTALL NEW HEEL ASSEMBLIES WITH NEW LIVE LOAD SHOES, STRIKE SUPPORT WELDMENT, AND SHIMS.
   - POLISH SHAFT JOURNALS UNTIL ALL CORROSION IS REMOVED AND MEASUREMENT FOR FIT WITH MATCHING BEARINGS AND GEARINGS.
2. FASTENERS:

   WHERE REQUIRED, PROVIDE TURNED BOLTS IN ACCORDANCE WITH THE TYPICAL TURNED BOLT DETAIL. ALL HIGH STRENGTH FASTENERS FOR BOLTING WILL BE 7/8" DIA. H.S. BOLTS UNLESS OTHERWISE NOTED.

3. PAINT:

   SHOP PAINT ALL NEW FERROUS MACHINERY AND SUPPORT WELDMENTS IN ACCORDANCE WITH THE SPECIFICATIONS AND PLANS. MOUNTING SURFACES ARE TO BE PRIME COATED ONLY. ALL PAINTING IS INCIDENTAL TO LUMP SUM BID ITEM PAINTING EPOXY SYSTEM P-40-830.

4. SHIMS:

   PROVIDE TYPE 316 STAINLESS STEEL SHIMS FOR ALIGNING ALL MACHINERY COMPONENTS. SHIM PACKS ARE TO BE 1/2" NOMINAL THICKNESS, UNLESS OTHERWISE SPECIFIED. PROVIDE SHIM PACK WITH ADJUSTMENT VARIATIONS OF .005".

5. INSTALLATION AND ALIGNMENT EQUIPMENT:

   PROVIDE ALL EQUIPMENT REQUIRED TO INSTALL THE MACHINERY TO THE SPECIFIED TOLERANCES SHOWN ON THE PLANS AND IN THE SPECIFICATIONS, INCLUDING; SPECIAL SURVEYING, JACKING FRAMES, JIGS, LEVELING SCREWS, ETC. SUBMIT DETAILED PROCEDURES OUTLINING THE ASSEMBLY AND INSTALLATION OF THE MACHINERY, FOR APPROVAL, PRIOR TO FABRICATION.

6. BID ITEM NOTES:
   - UNLESS SO SPECIFIED ELSEWHERE, THE FOLLOWING ITEMS SHALL BE INCIDENTAL TO THE BID ITEM COVERING THE MACHINERY OF WHICH THEY ARE ASSOCIATED:

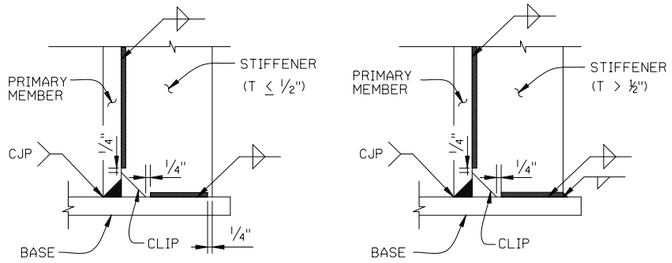
TURNED BOLTS, NUTS, WASHERS	SHIM PACKS AND HARDWARE
DOWEL PINS	EPOXY GROUT
TEMPORARY FASTENERS	LUBRICATION
LIFTING EYE BOLTS	LUBE FITTINGS
GALVANIZING/PAINTING	TEMPORARY SUPPORTS

   - SPECIFIC ITEMS ARE SHOWN TO ESTABLISH CONFIGURATION AND RATING REQUIREMENTS. COMPONENTS ARE BASED ON CATALOG DATA CURRENT AT THE TIME THE PLANS WERE PREPARED. ITEMS OF EQUAL OR GREATER QUALITY AND RATING MAY BE SUBSTITUTED WITH APPROVAL OF THE ENGINEER. IF OTHER ITEMS ARE APPROVED FOR USE, MAKE ALL REVISIONS NECESSARY TO ACCOMMODATE THEM AT NO ADDITIONAL COST TO THE CITY.
   - UNLESS OTHERWISE NOTED, QUANTITIES SHOWN ARE FOR TWO BASCULE LEAVES, OR TOTAL FOR THE PROJECT.
   - ALL DIMENSIONS SHOWN ARE TAKEN FROM THE ORIGINAL DRAWINGS OR FIELD MEASUREMENTS AND ARE FOR REFERENCE AND BIDDING PURPOSE ONLY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD DURING 'FIELD VERIFICATION SURVEY' BEFORE SUBMITTING SHOP DRAWINGS.

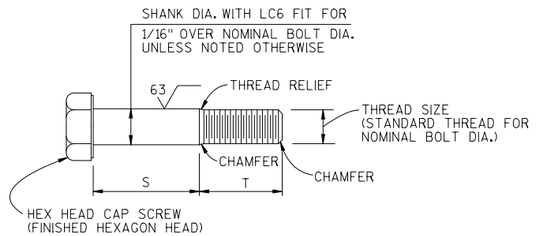
7. THE CONTRACTOR IS REQUIRED TO REVIEW ALL ELECTRICAL, MECHANICAL, HVAC, AND STRUCTURAL DRAWINGS AND SPECIFICATIONS AS PART OF THEIR INSTALLATION COORDINATION. MECHANICAL EQUIPMENT INSTALLATION SHALL BE COORDINATED WITH THE STRUCTUAL AND ELECTRICAL INSTALLERS TO AVOID INTERFERENCES. FIELD ADJUST MECHANICAL EQUIPMENT INSTALLATION AS REQUIRED.

MACHINERY WELDMENT NOTES

1. CLIP STIFFENERS AS NECESSARY TO AVOID OVERLAP OF WELDS OR CLEAR FILLET WELDS BY A MINIMUM OF 1/4".
2. WHERE CJP IS NOT REQUIRED, MILL ALL VERTICAL PLATES TO BEAR ON HORIZONTAL PLATES PRIOR TO WELDING.
3. WHERE MACHINING IS REQUIRED, STRESS RELIEVE ALL WELDMENTS AFTER WELDING AND BEFORE MACHINING. SURFACE WELDS MAY BE PERFORMED AFTER STRESS RELIEF AND MACHINING.
4. PERFORM NON-DESTRUCTIVE TESTING ON ALL WELDS IN ACCORDANCE WITH THE MACHINERY TECHNICAL SPECIAL PROVISIONS.
5. BREAK ALL SHARP EDGES.
6. GALVANIZE ALL WELDMENTS SUPPORTING MACHINERY USING THE HOT DIP PROCESS PER ASTM A123. GALVANIZE AFTER WELDING, STRESS RELIEF, AND MACNING. MASK SURFACES MACHINED TO CONTACT MACHINERY BASES OR MOVING PARTS TO PREVENT GALVANIZING (CONNECTION TO STRUCTURAL BEAM TO REMAIN GALVANIZED). RE-MACHINE AS NECESSARY TO REMOVE EXCESS GALVANIZING AND CORRECT FLATNESS OF ANY SURFACES THAT DISTORTED DURING GALVANIZING. SHIP WITH SINGLE COAT OF PAINT. AFTER INSTALLATION, CLEAN EXPOSED SURFACES OF GALVANIZED WELDMENTS AND APPLY SECOND COAT OF TWO COAT PAINTING SYSTEM PER THE TECHNICAL SPECIAL PROVISIONS.



TYPICAL MACHINERY WELDMENT DETAILS



S = SHANK LENGTH, GRIP LESS NOMINAL SHIM THICKNESS

T = SUFFICIENT FOR DOUBLE NUTS PLUS NOMINAL SHIM THICKNESS

TYPICAL TURNED BOLT DETAIL

MATERIAL: BOLT- ASTM A449
NUTS- ASTM A563
WASHERS- ASTM F436

FIT AND SURFACE FINISHES

(UNLESS OTHERWISE SPECIFIED)

SURFACE	FIT	FINISH
MACHINERY BASE ON STEEL	--------	250
MACHINERY PARTS IN FIXED CONTACT	--------	125
SHAFT JOURNALS	RC6	8
JOURNAL BUSHINGS	RC6	16
SOLID BUSHING IN BASE (TO 1/4" WALL)	FN1	63
SOLID BUSHING IN BASE (OVER 1/4" WALL)	FN2	63
SPLIT BUSHING IN BASE	LC1	125
HUBS ON SHAFTS (UP TO 2" DIAMETER)	FN2	32
HUBS ON SHAFTS (OVER 2" DIAMETER)	FN2	63
KEY AND KEYWAYS SIDE-SIDE	LC4	63
KEY AND KEYWAYS TOP-BOTTOM	LC11	63
TEETH OF OPEN SPUR GEARS	--------	125
PERMANENT DOWELS	FN4	32

MACHINERY TOLERANCE

(UNLESS OTHERWISE SPECIFIED)

X	< 1/16"
X/X, X.X	< 1/32"
X.XX	< 0.020"
X.XXX	< 0.005"
ANGLES	< 1/2°
BREAK ALL EDGES 0.015"	

ACRONYMS:

(AISI)	AMERICAN IRON AND STEEL INSTITUTE
(ASTM)	AMERICAN SOCIETY FOR TESTING & MATERIALS
(CJP)	COMPLETE JOINT PENETRATION
(CL)	CENTERLINE
(DIA)	DIAMETER
(ES)	EACH SIDE
(HS)	HIGH STRENGTH
(MIN)	MINIMUM
(MISC)	MISCELLANEOUS
(PL)	PLATE
(PLCS)	PLACES
(QTY)	QUANTITY
(SS)	STAINLESS STEEL
(TYP)	TYPICAL

SYMBOL LEGEND

XXX — SIGNIFIES THAT THE ACTUAL OR CERTIFIED DIMENSION OF THE MATING COMPONENT IS TO BE USED TO DETERMINE THE EXACT VALUE.

XX.XX — MAXIMUM SURFACE ROUGHNESS (RA) PER ANSI/ ASME B46.1, IN MICROINCHES. IMPLIES FLATNESS REQUIREMENT AS DEFINED IN THE SPECIFICATIONS.

(XXX) — REFERENCE DIMENSION INDICATING THAT THE DIMENSION IS SHOWN ONLY FOR INFORMATION AND IS DEFINED ELSEWHERE IN THE PLANS OR SPECIFICATIONS.

8

WISCONSIN
BRADLEY ROBERT KOPPING
E-44714
TAMPA, FL
PROFESSIONAL ENGINEER
3/12/24

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

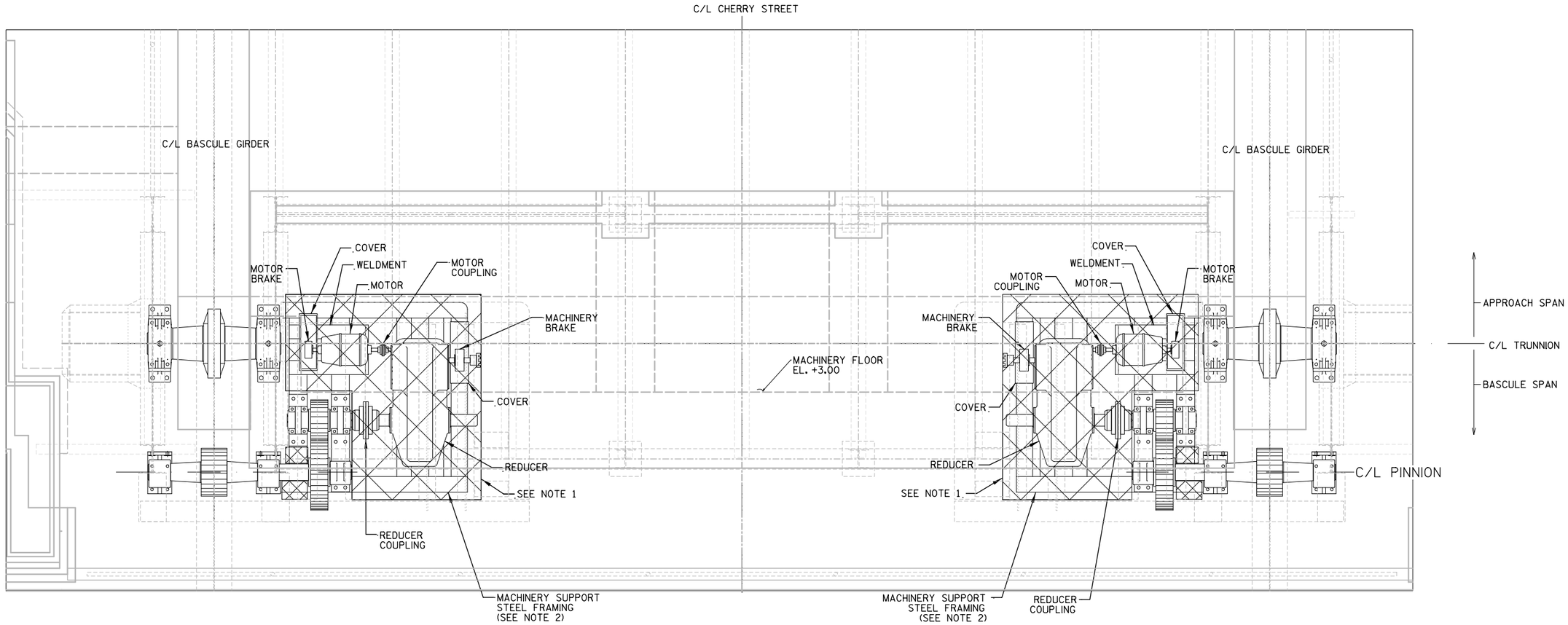
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MECHANICAL NOTES

SHEET M1 OF M16
157

STATE PROJECT NUMBER

2984-26-73



EXISTING DRIVE MACHINERY LAYOUT - PLAN VIEW

(WEST PIER SHOWN, EAST PIER SIMILAR)

NOTES:

1. REMOVE AND DISPOSE OF EXISTING MACHINERY IN THE CROSSHATCH SECTION INCLUDING EXISTING AUXILIARYMACHINERY, WELDMENTS, BRAKES, COUPLINGS, REDUCERS, COVERS, AND MOTORS, ETC.
2. SEE STRUCTURAL SHEETS FOR THE PARTIAL REMOVAL OF EXISTING MACHINERY SUPPORT STEEL FRAMING THAT IS EMBEDDED IN THE CONCRETE FLOOR.
3. SEE ELECTRICAL SHEETS AND SPECIFICATIONS FOR REMOVAL AND DISPOSAL OF EXISTING ELECTRICAL COMPONEMTS, CONDUIT, AND WIRING.

8

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STRUCTURE P-40-0864

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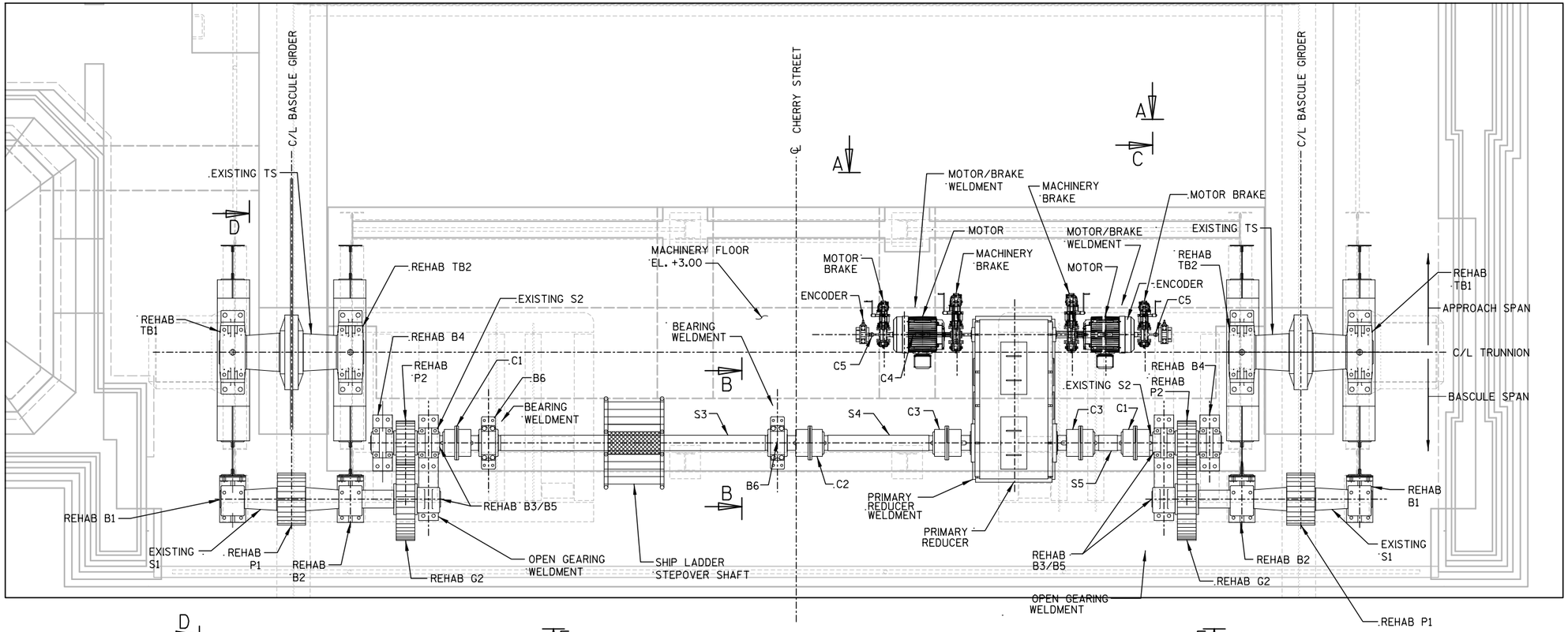
MACHINERY DEMOLITION

SHEET M2 OF M16

158

STATE PROJECT NUMBER

2984-26-73



DRIVE MACHINERY LAYOUT - PLAN VIEW

(EAST PIER SHOWN, WEST PIER MIRROR IMAGE)
(ALL DRIVE MACHINERY COMPONENTS SHOWN ARE NEW, UNLESS NOTED OTHERWISE)
(BRAKE, OPEN GEARING COVERS AND MACHINERY ROOM ENCLOSURE, NOT SHOWN)

8

8

ABBREVIATION CHART

P = PINION	B = BEARING
S = SHAFT	C = COUPLING
T = TRUNNION	G = GEAR

NOTES:

1. FOR SECTION A-A & B-B SEE SHEET NUMBER M04.
2. FOR SECTION C-C & D-D SEE SHEET NUMBER M05.
3. FOR SECTION E-E SEE SHEET NUMBER M06.
4. SEE STRUCTURAL SHEETS FOR MACHINERY ROOM ENCLOSURE ASSEMBLY AND DETAILS.
5. SEE ELECTRICAL SHEETS FOR MOTOR AND ENCODER DETAILS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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MACHINERY LAYOUT

SHEET M3 OF M16

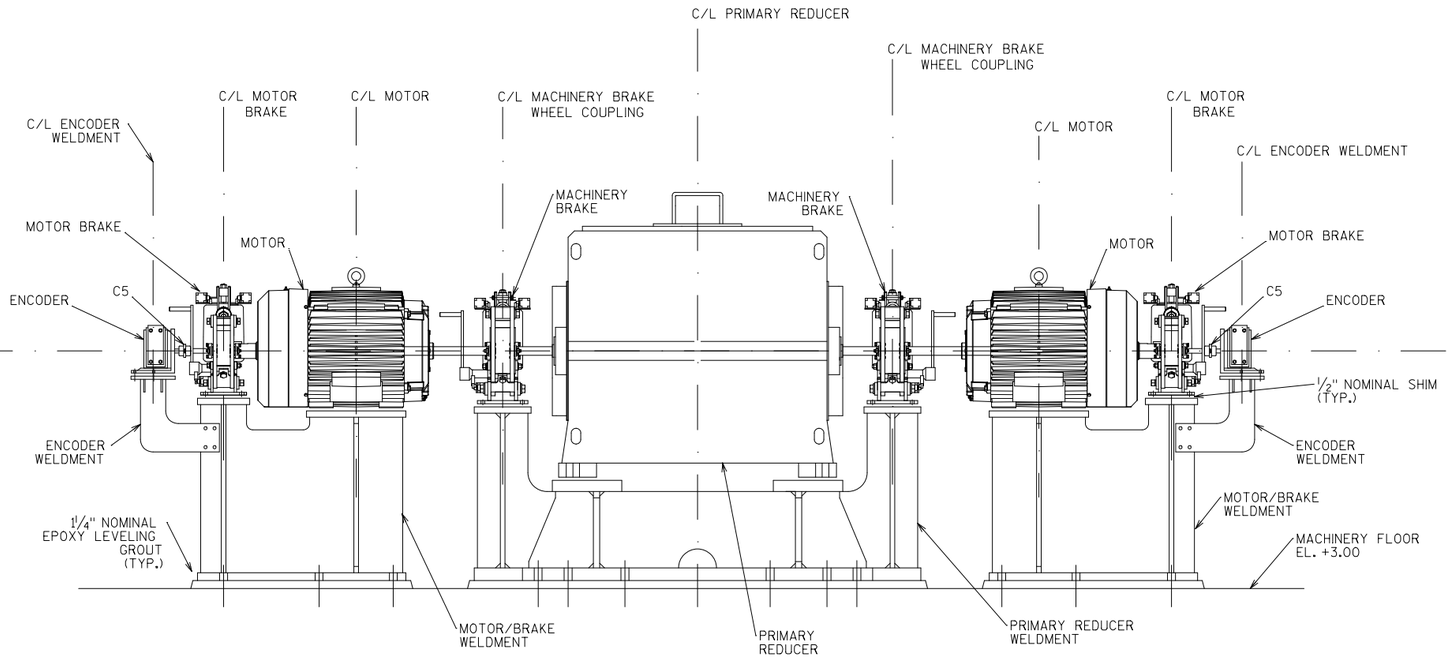
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STATE PROJECT NUMBER

2984-26-73

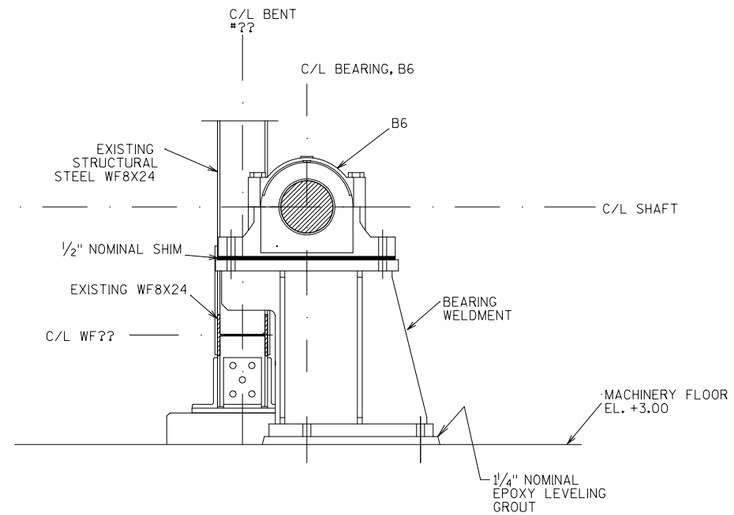
ABBREVIATION CHART

B = BEARING	P = PINION
C = COUPLING	S = SHAFT
G = GEAR	T = TRUNNION



SECTION A-A

(BRAKE COVERS NOT SHOWN)
(ALL COMPONENTS SHOWN ARE NEW, UNLESS NOTED OTHERWISE)



SECTION B-B

(ALL COMPONENTS SHOWN ARE NEW, UNLESS NOTED OTHERWISE)

8

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NOTES:

1. FOR LOCATION OF SECTION A-A & B-B, SEE SHEET NUMBER M03.

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STRUCTURE P-40-0864

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MACHINERY SECTIONS (1 OF 3)

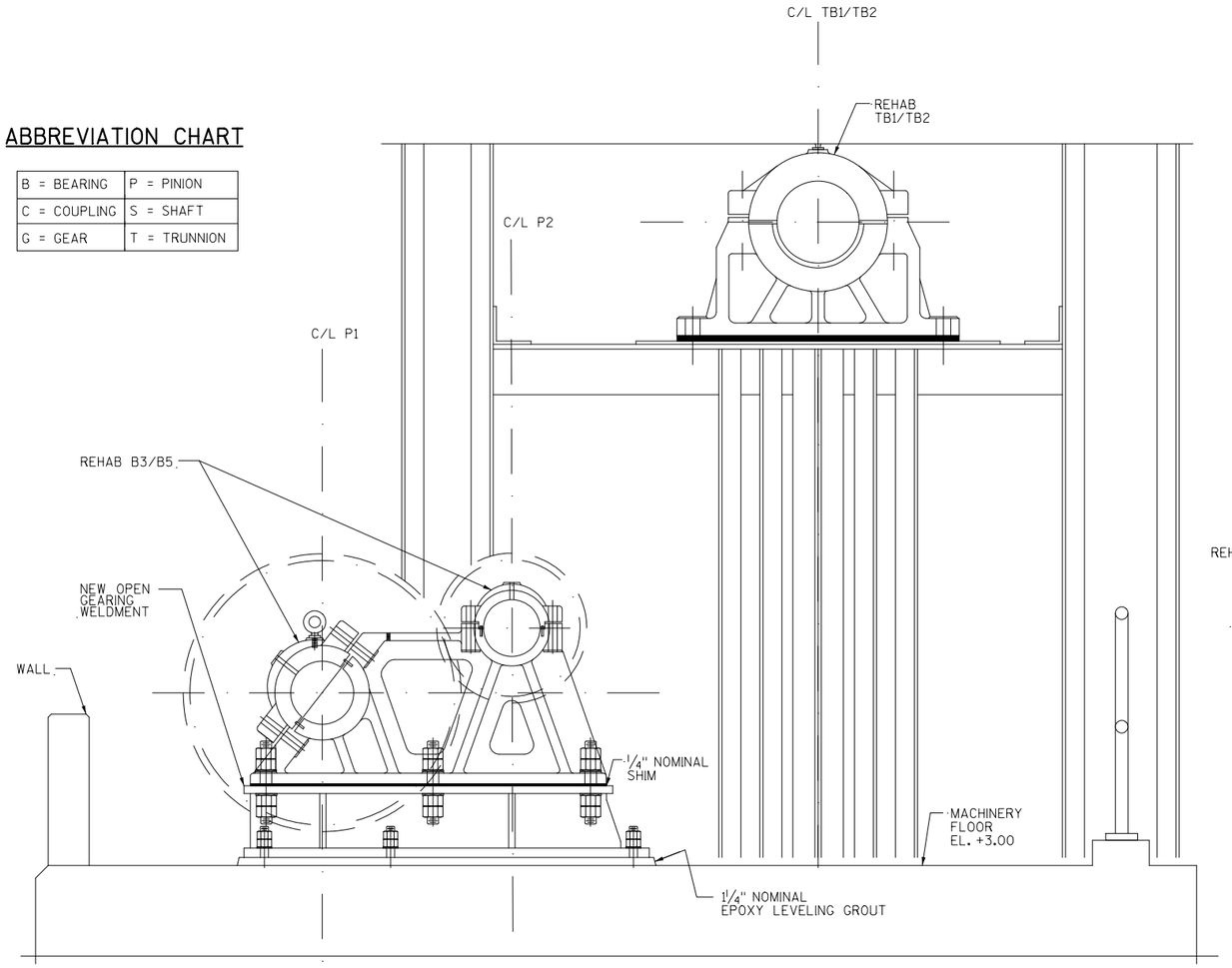
SHEET M4 OF M16

160

STATE PROJECT NUMBER
2984-26-73

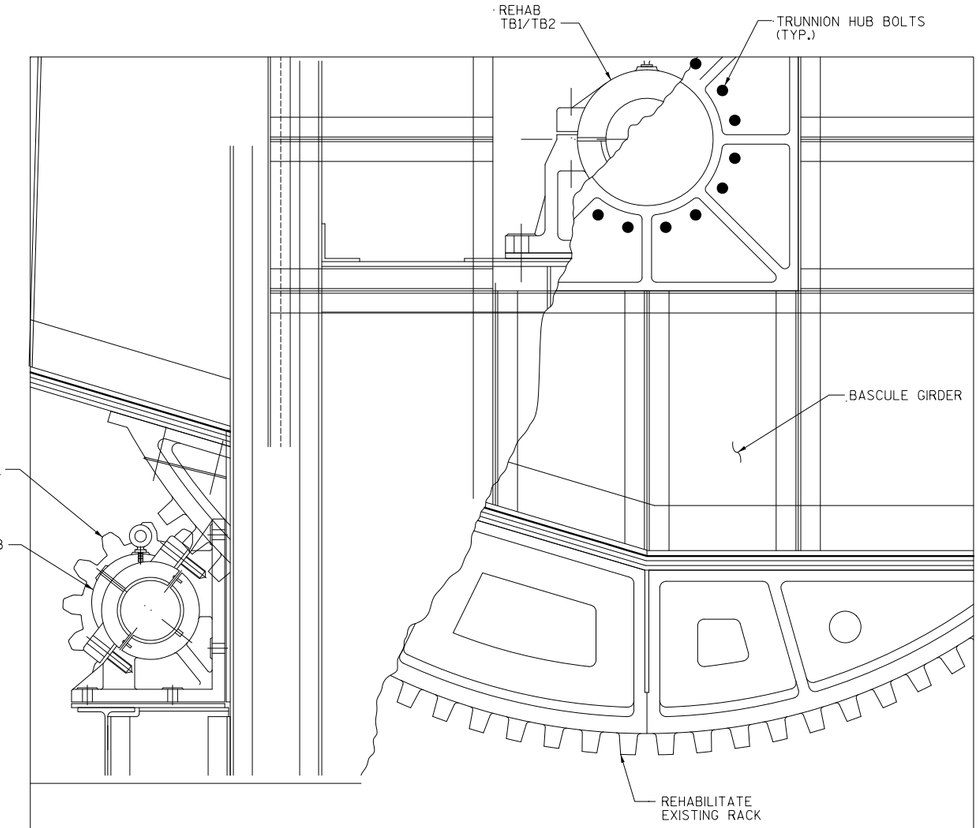
ABBREVIATION CHART

B = BEARING	P = PINION
C = COUPLING	S = SHAFT
G = GEAR	T = TRUNNION



SECTION C-C

(OPEN GEARING COVERS NOT SHOWN)



SECTION D-D

(OPEN GEARING COVERS NOT SHOWN)

BEARING TABLE			
MARK	BEARING O.D. (IN)	BEARING I.D. (IN)	BEARING LENGTH (IN)
B3/B5	9	8	12
B4	10	9	12
B1/B2	10 1/2	9 1/2	10 1/2
TRUNNION	14 1/2	13	14 1/4
* SEE NOTE 2			

NOTES:

1. FOR LOCATION OF SECTION C-C AND D-D, SEE SHEET NUMBER M03.
2. REPLACE DETERIORATED TURNED BOLTS ATTACHING RACK GEAR TO GIRDER FLANGE. LOCATIONS AS DIRECTED BY THE ENGINEER. APPROXIMATELY 80 PCS. TO BE REPLACED.
3. REMOVE ROTARY CAM LIMIT SWITCH FROM NORTH EAST & SOUTH WEST TRUNNION SHAFTS. COORDINATE WITH ELECTRICAL WORK.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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MACHINERY SECTIONS (2 OF 3)

SHEET M5 OF M16

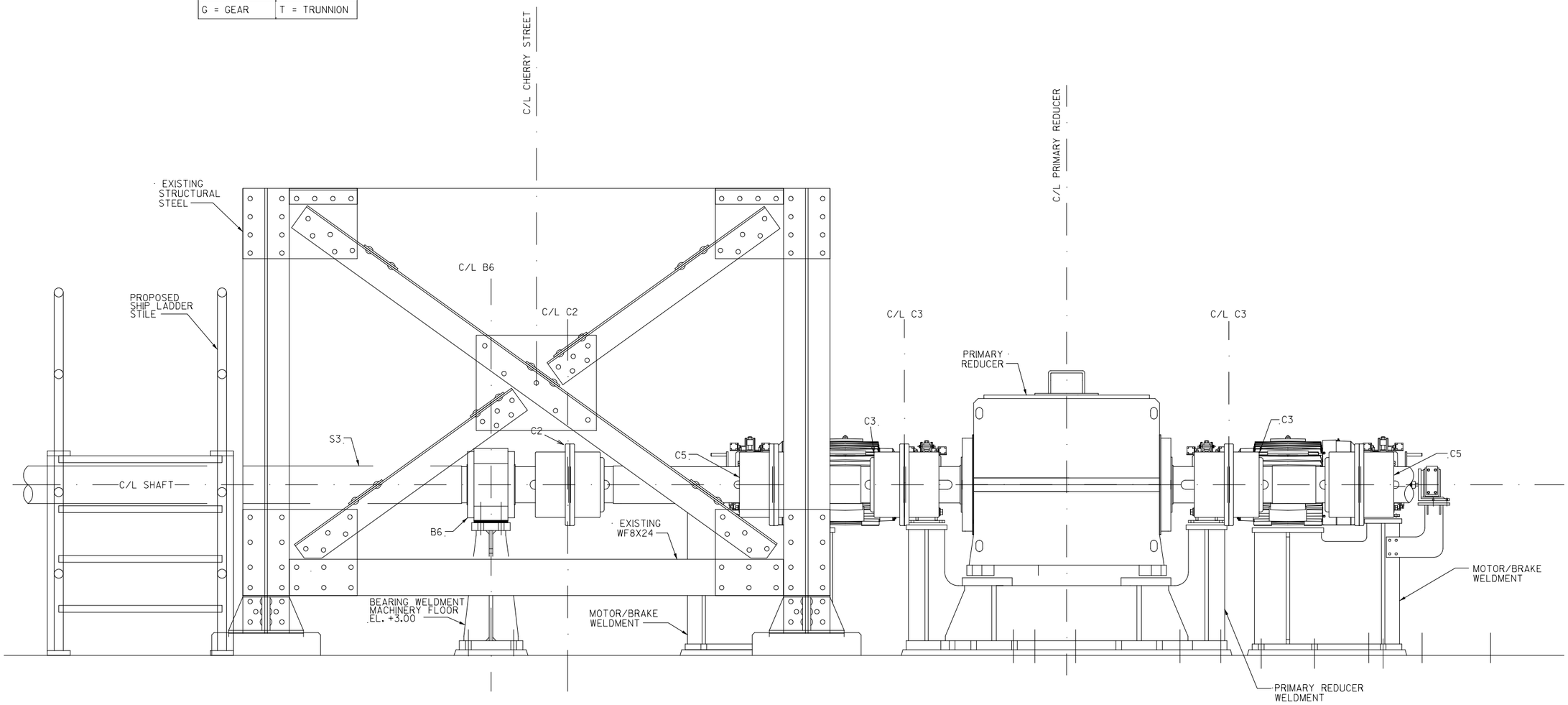
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STATE PROJECT NUMBER
2984-26-73

ABBREVIATION CHART

B = BEARING	P = PINION
C = COUPLING	S = SHAFT
G = GEAR	T = TRUNNION



SECTION E-E

(BRAKE COVERS NOT SHOWN)
(ALL COMPONENTS SHOWN ARE NEW, UNLESS NOTED OTHERWISE)

NOTES:

FOR LOCATION OF SECTION E-E, SEE SHEET NUMBER M03.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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MACHINERY SECTIONS (3 OF 3)

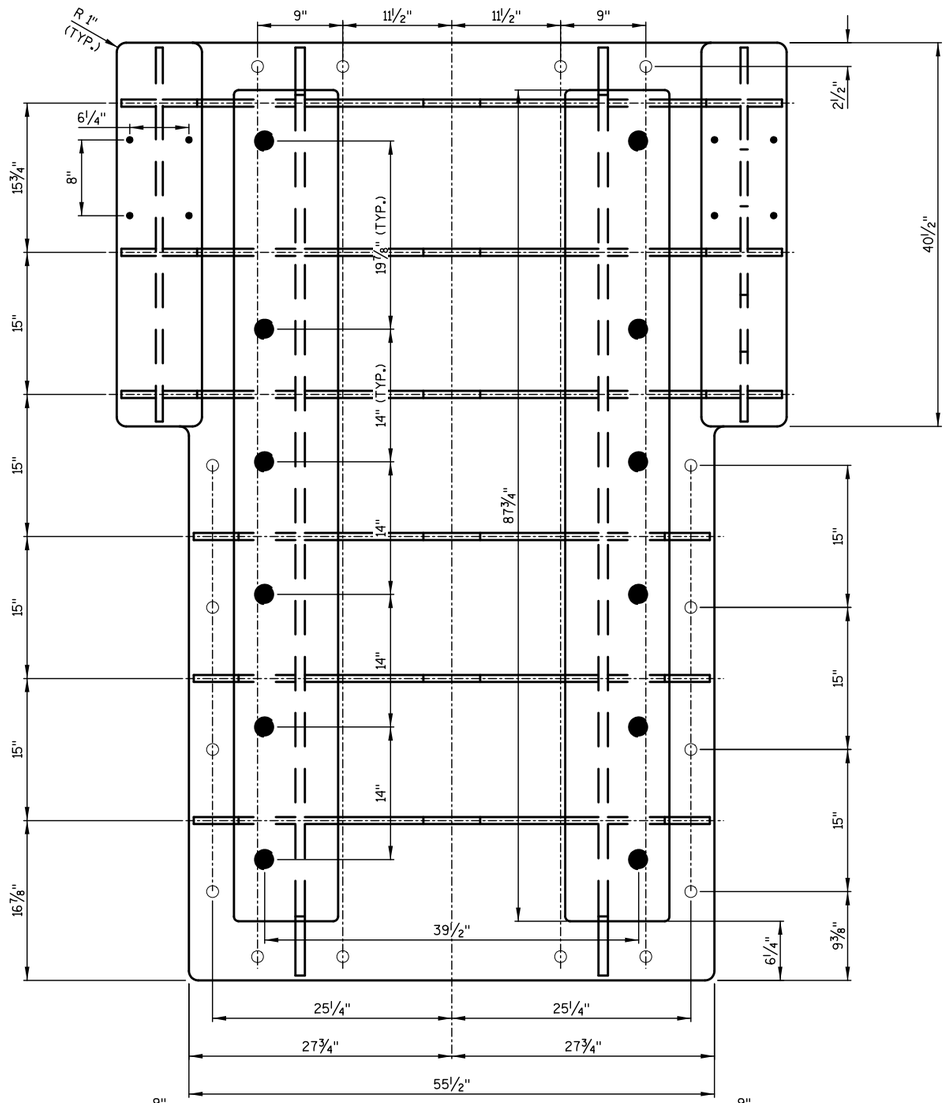
SHEET M6 OF M16
162

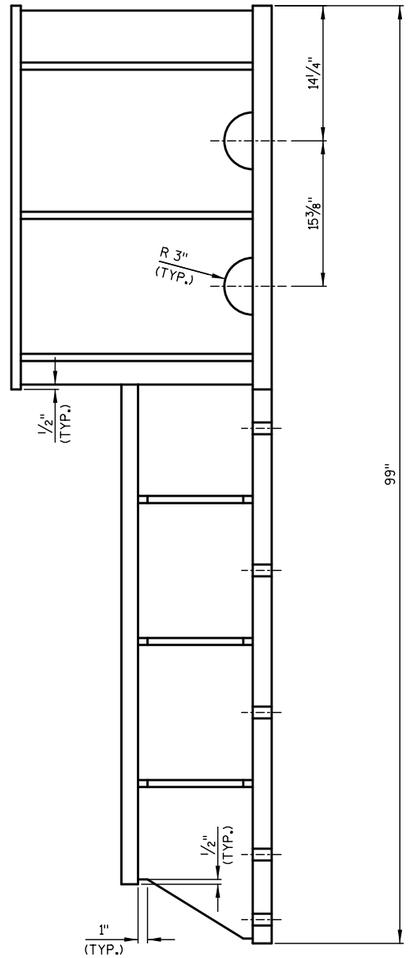
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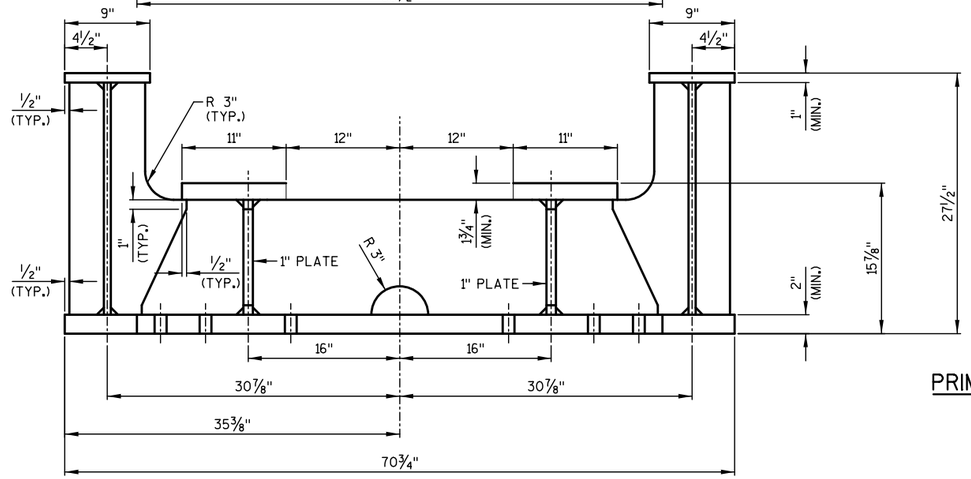
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STATE PROJECT NUMBER

2984-26-73







PRIMARY REDUCER WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: 2

NOTES:

1. ALL PLATES CONNECTED BY 5/16" FILLET WELDS EACH SIDE, UNLESS NOTED OTHERWISE.
2. ALL STIFFENERS ARE TO BE 3/4" THICK PLATE, UNLESS NOTES OTHERWISE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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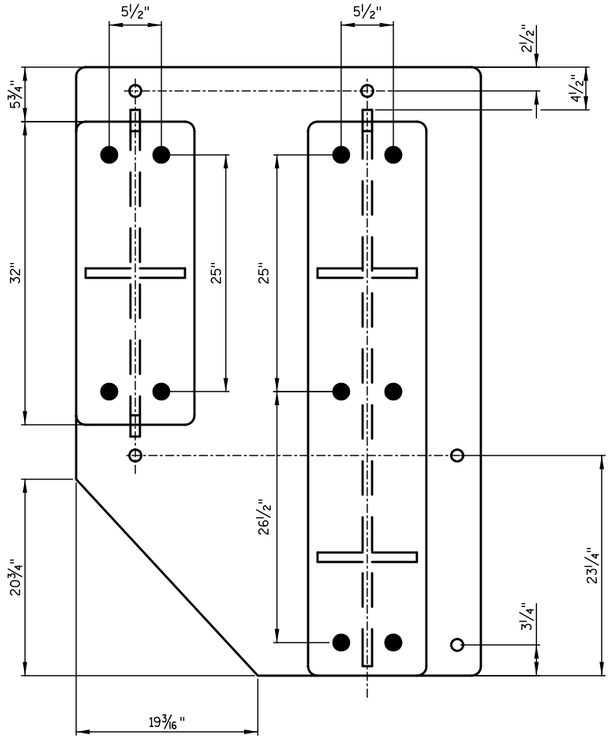
MACHINERY DETAILS (1 OF 3)

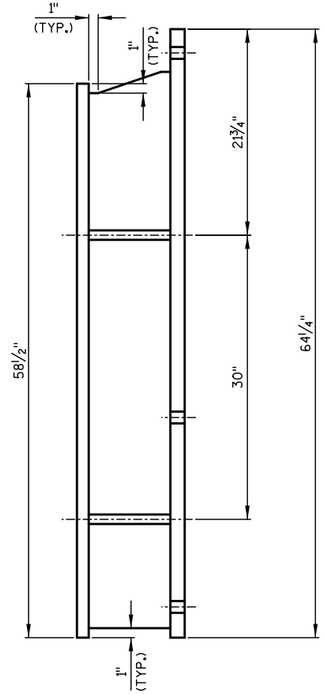
SHEET M7 OF M16
163

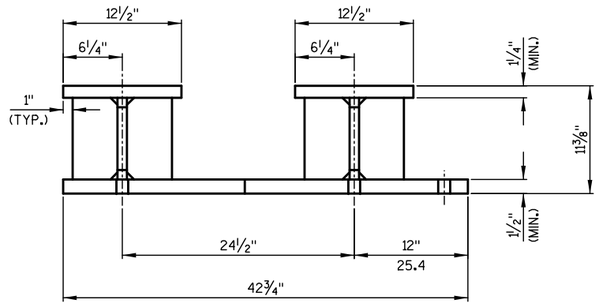
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STATE PROJECT NUMBER
2984-26-73







OPEN GEARING WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: (2) RIGHT-HAND, (2) LEFT-HAND

NOTES:

1. ALL PLATES CONNECTED BY 5/16" FILLET WELDS EACH SIDE, UNLESS NOTED OTHERWISE.
2. ALL STIFFENERS ARE TO BE 3/4" THICK PLATE, UNLESS NOTES OTHERWISE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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MACHINERY DETAILS
(2 OF 3)

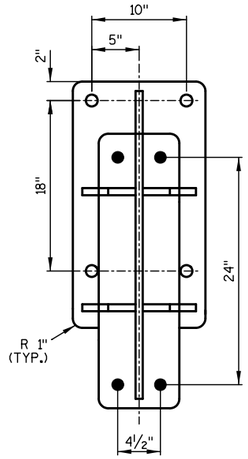
SHEET M8 OF M16
164

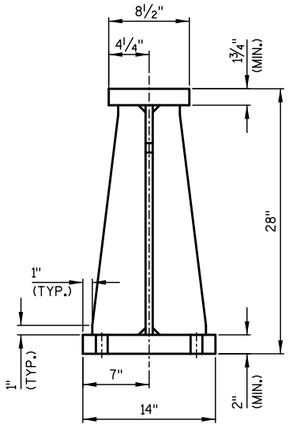
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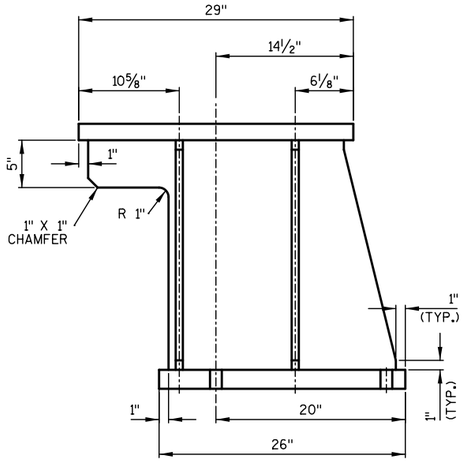
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2984-26-73

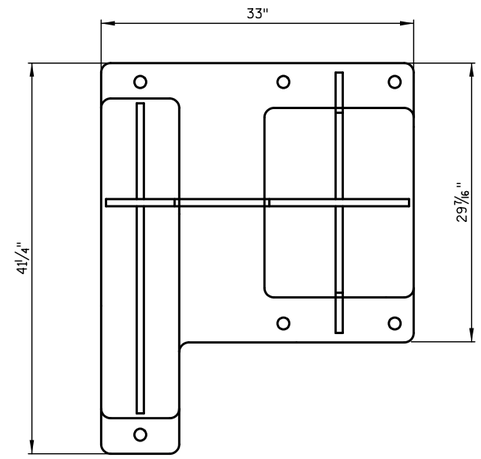


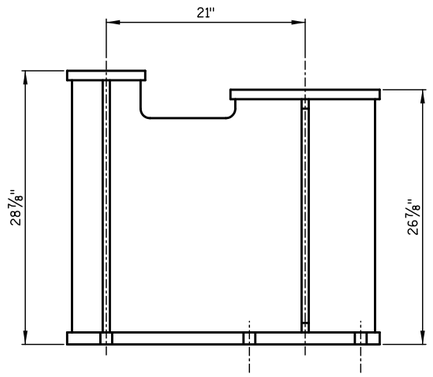


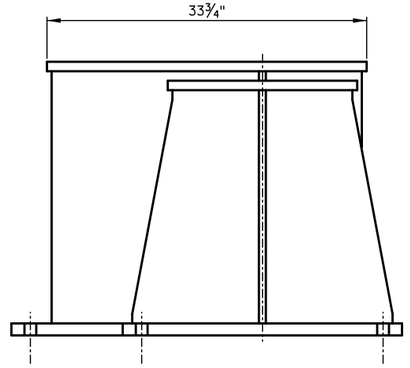


BEARING WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: 4

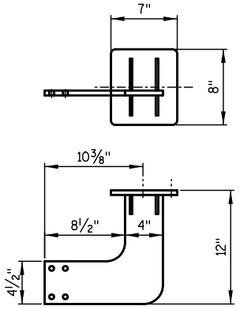






MOTOR/BRAKE WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: (2) RIGHT-HAND, (2) LEFT-HAND



ENCODER WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: (2) RIGHT-HAND, (2) LEFT-HAND

NOTES:

1. ALL PLATES CONNECTED BY 5/16" FILLET WELDS EACH SIDE, UNLESS NOTED OTHERWISE.
2. ALL STIFFENERS ARE TO BE 3/4" THICK PLATE, UNLESS NOTES OTHERWISE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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MACHINERY DETAILS (3 OF 3)

SHEET M9 OF M16

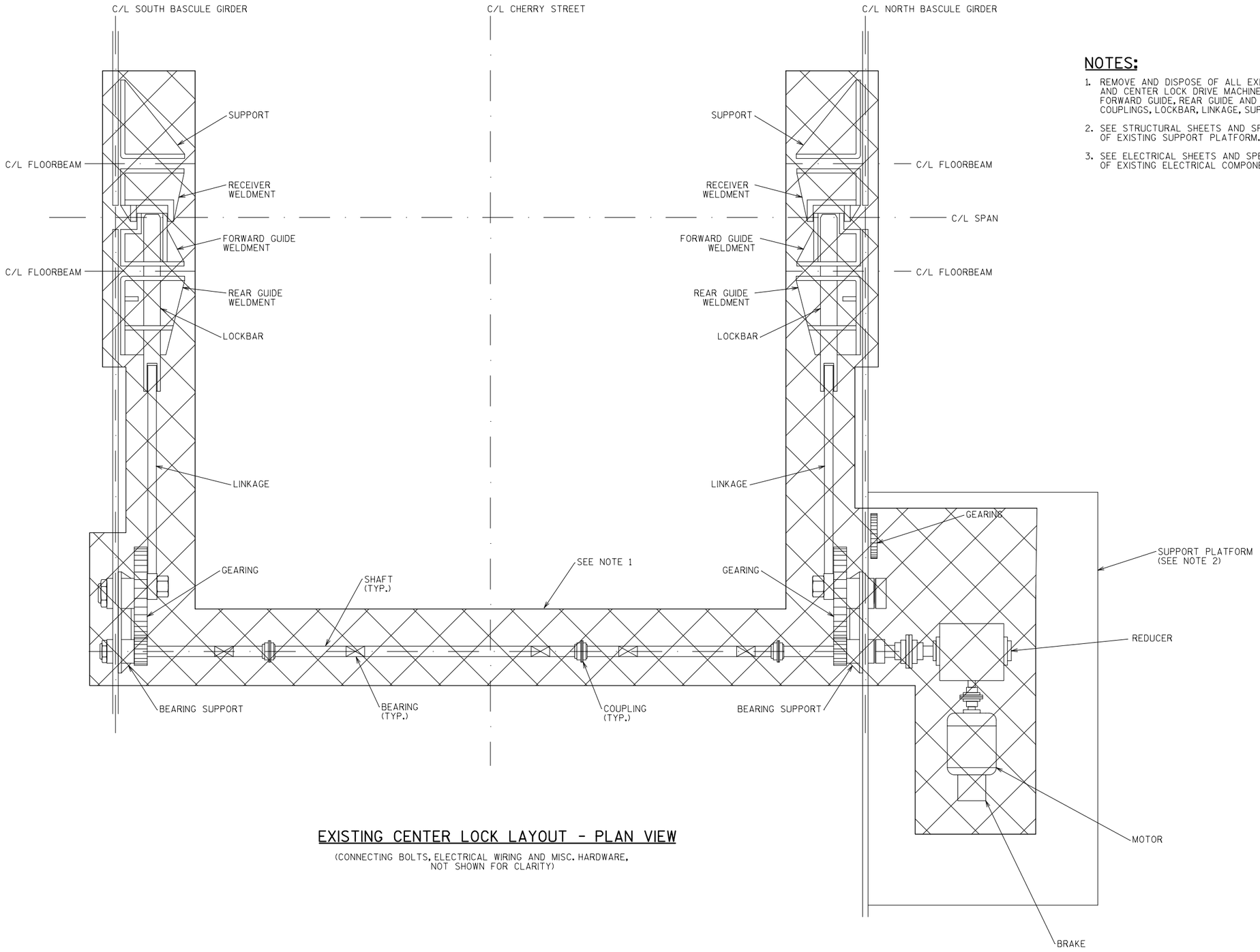
165

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STATE PROJECT NUMBER

2984-26-73



EXISTING CENTER LOCK LAYOUT - PLAN VIEW

(CONNECTING BOLTS, ELECTRICAL WIRING AND MISC. HARDWARE, NOT SHOWN FOR CLARITY)

NOTES:

1. REMOVE AND DISPOSE OF ALL EXISTING AUXILIARY CENTER LOCK MACHINERY AND CENTER LOCK DRIVE MACHINERY SHOWN IN THE HATCHED AREAS INCLUDING FORWARD GUIDE, REAR GUIDE AND RECEIVER WELDMENTS, BEARINGS, SHAFTS, COUPLINGS, LOCKBAR, LINKAGE, SUPPORTS, REDUCERS, MOTOR, GEARING AND ETC.
2. SEE STRUCTURAL SHEETS AND SPECIFICATIONS FOR REMOVAL AND DISPOSAL OF EXISTING SUPPORT PLATFORM.
3. SEE ELECTRICAL SHEETS AND SPECIFICATIONS FOR REMOVAL AND DISPOSAL OF EXISTING ELECTRICAL COMPONENTS, CONDUIT, AND WIRING.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

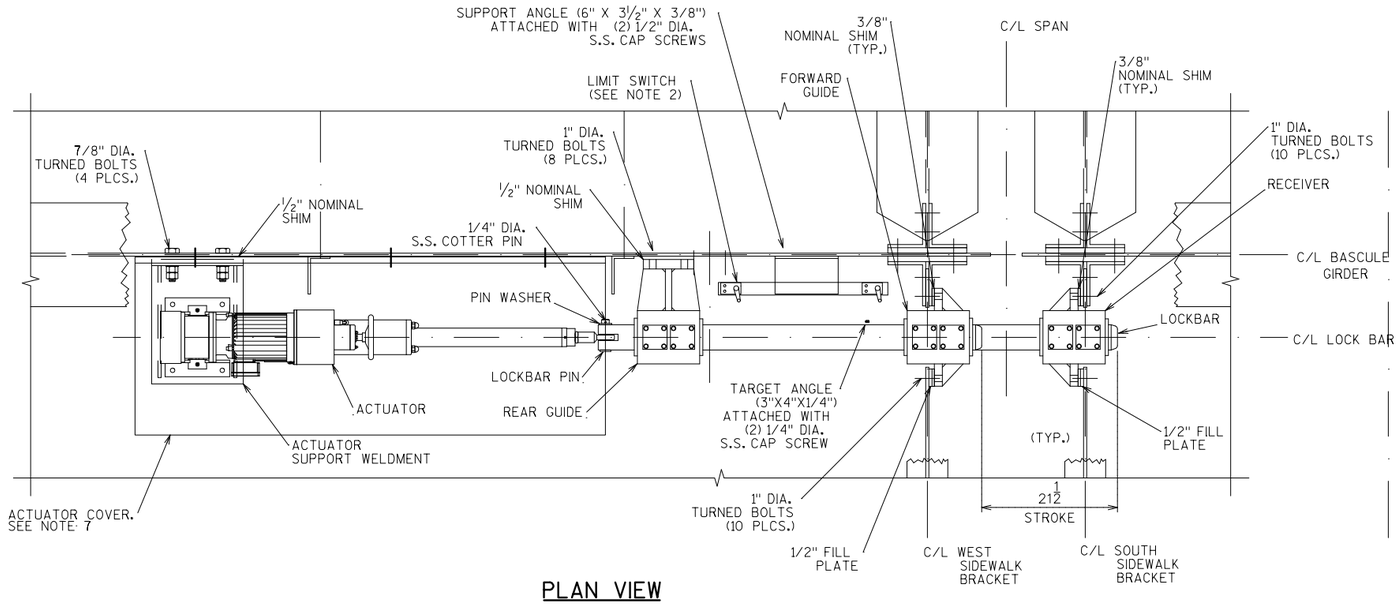
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CENTER LOCK DEMOLITION

SHEET M10 OF M16

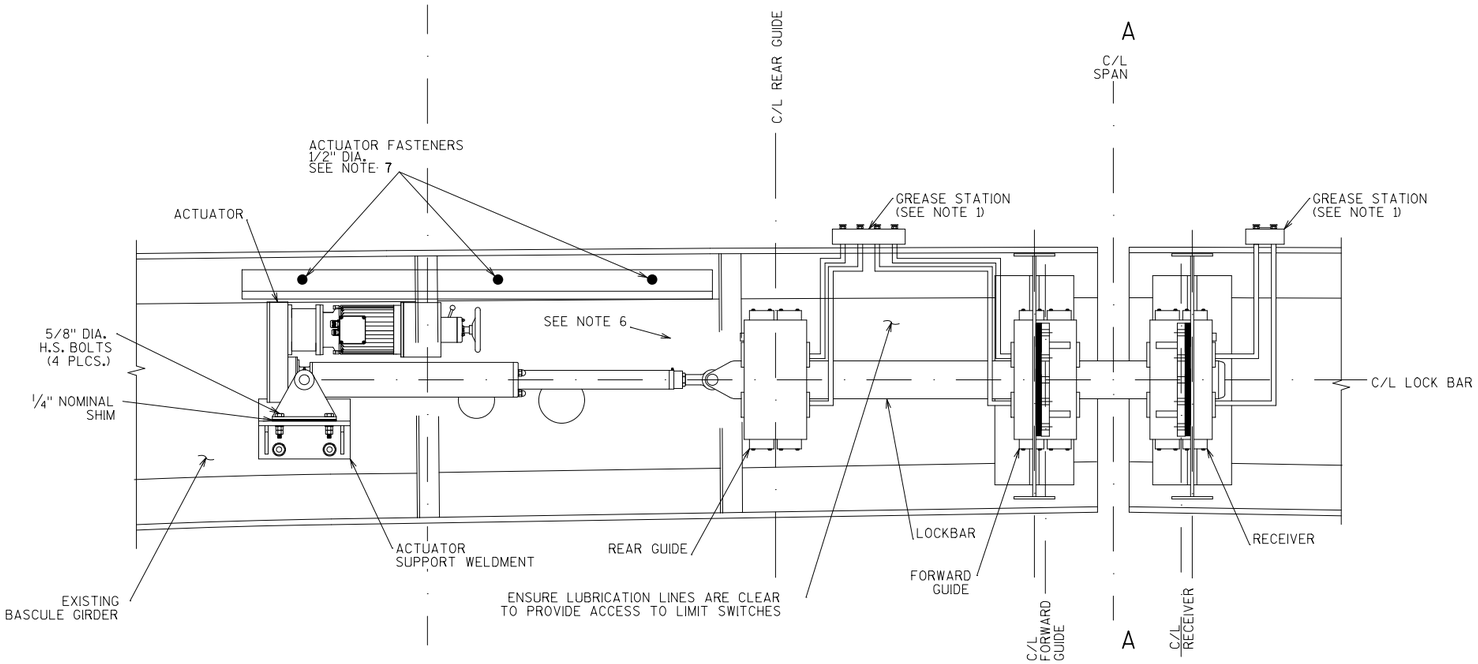
STATE PROJECT NUMBER

2984-26-73



PLAN VIEW

(NORTH CENTER LOCK SHOWN, SOUTH CENTER LOCK SIMILAR
LUBRICATION LINES NOT SHOWN)



CENTER LOCK ASSEMBLY - ELEVATION VIEW

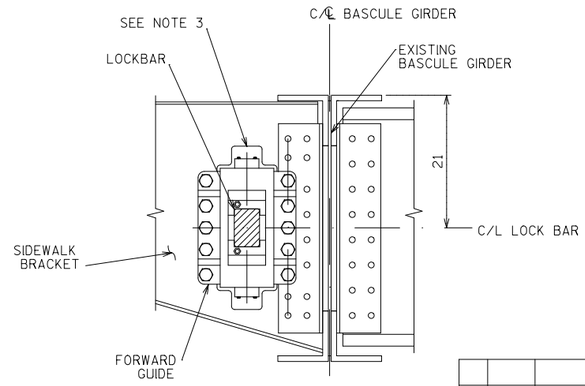
(NORTH CENTER LOCK SHOWN, SOUTH CENTER LOCK SIMILAR)
(ALL CENTER LOCK COMPONENTS SHOWN
ARE NEW, UNLESS NOTED OTHERWISE)

NOTES:

1. PIPE LUBRICATION LINES TO THE LOCATION CHOSEN BY THE ENGINEER FOR MAINTENANCE ACCESS. LOCATION TO BE AT SIDEWALK LEVEL. PROVIDE LUBRICATION STATIONS AT THE END OF ALL LUBRICATION LINES. ALL LUBRICATION LINES AND MOUNTING HARDWARE ARE TO BE TYPE 316 S.S.
2. PROVIDE (2) LEVER ARM LIMIT SWITCHES FOR EACH CENTER LOCK ASSEMBLY AND ATTACH THE LIMIT SWITCHES TO A U-BRACKET FOR ADJUSTABILITY. ALL MOUNTING MATERIALS AND HARDWARE IS TO BE TYPE 316 S.S.
3. ELECTRICAL WIRING LINES ARE NOT SHOWN FOR CLARITY.
4. SEE STRUCTURAL SHEETS FOR THE CUTOUT IN THE SOUTH AND NORTH SIDEWALK BRACKETS PLATES TO ALLOW THE NEW CUSHIONLOK'S TO CLEAR.
5. PROVIDE TRUNNION MOUNTED ACTUATOR WITH THE FOLLOWING REQUIREMENTS:
   -MINIMUM 4400 LBF THRUST
   -BALL SCREW WITH MINIMUM 1.4 IN/SEC LINEAR VELOCITY
   -MOTOR BRAKE WITH MANUAL HAND RELEASE
   -MANUAL HANDWHEEL FOR OPERATION WITH INTERLOCK ON MANUAL HAND RELEASE TO PREVENT MOTOR OPERATION WITH BRAKE RELEASED
   -TROPICAL PROOF CORROSION PROTECTION PACKAGE
   -SPHERICAL BEARING ROD END
   -TRUNNION MOUNTING SUPPORTS
   -NO INTERNAL LIMIT SWITCHES
6. PLUG ALL EXISTING HOLES WITH H.S. BUTTON HEAD BOLTS THAT ARE NOT USED IN THE NEW CONSTRUCTION.
7. ACTUATOR COVER - MAKE FROM ALUMINUM OR SS. COVER TO BE FORMED AROUND ANY STRUCURAL COMPONENTS. FASTEN TO BASCUTE GIRDER WITH SS HARDWARE.

PROPOSED CONSTRUCTION SEQUENCE:

1. REMOVE EXISTING CENTER LOCKS PER THE CENTER LOCK DEMOLITION SHEET.
2. CHECK THE CUTOUT HOLES IN THE NORTH AND SOUTH SIDEWALK BRACKET PLATES TO CLEAR THE NEW CUSHIONLOK'S.
3. USING TEMPORARY BOLTS AND UNDER SIZE HOLES LOCATE NEW FORWARD AND REAR GUIDES AND RECEIVER. SHIM SUCH THAT THERE IS NO BINDING WHEN DRIVING LOCKBAR AFTER TIGHTENING TEMPORARY BOLTS. THE LOCKBAR SHOULD SLIDE FREELY IN GUIDES AND RECEIVER WITHOUT THE ASSISTANCE OF THE NEW ACTUATOR. USE TOOLS PROVIDED BY CENTER LOCK MANUFACTURER TO ENGAGE LOCKBAR INTO GUIDES AND RECEIVER.
4. DRILL FINAL TURNED BOLTS FOR NEW FORWARD AND REAR GUIDE AND RECEIVER. REMOVE ONE TEMPORARY BOLT AT A TIME WHEN DRILLING FOR FINAL TURNED BOLTS.
5. INSTALL NEW ACTUATOR SUPPORT WELDMENT AND ACTUATOR.
6. INSTALL NEW TARGET ANGLES, LIMIT SWITCHES AND LIMIT SWITCHES MOUNTING HARDWARE.
7. WIRE AND TEST NEW ACTUATOR AND LIMIT SWITCHES.



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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CENTER LOCK ASSEMBLY

SHEET M11 OF M16

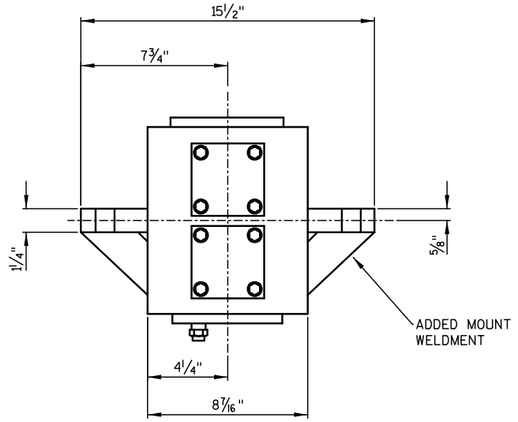
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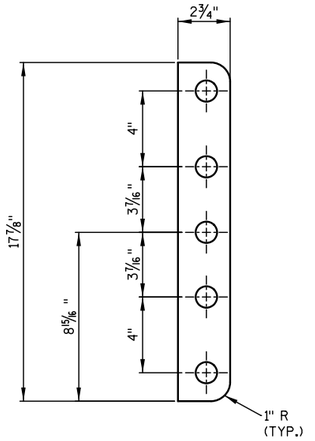
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STATE PROJECT NUMBER

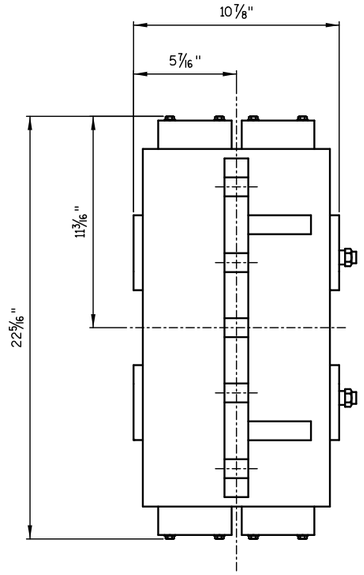
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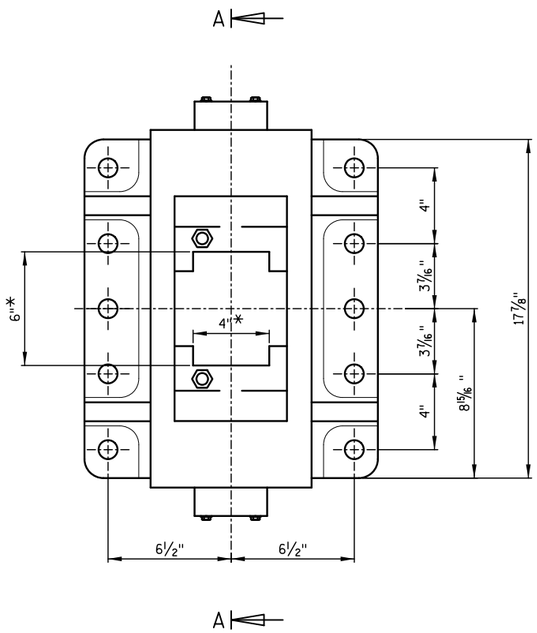




1/2" THICK FILL PLATE

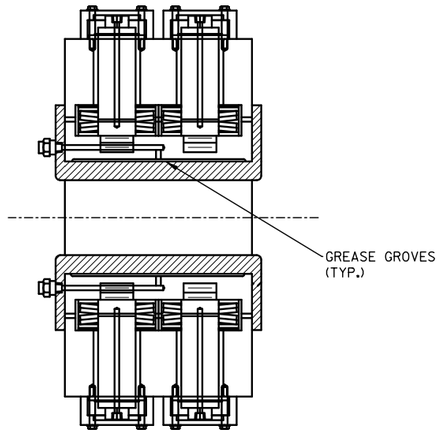
MATERIAL: TYPE 316 S.S.
QTY: 4
(FORWARD GUIDE AND RECEIVER)





FORWARD GUIDE AND RECEIVER

(EARLE CUSHIONLOK)
QTY: (2) FORWARD GUIDES, (2) RECEIVERS



SECTION A-A

NOTES:

1. INTERNAL SURFACES OF THE RECEIVER AND GUIDE SHOES SHALL HAVE 32 MICROINCH FINISH MAX.

2. TOLERANCE PER CUSHIONLOK MANUFACTURER'S RECOMMENDATION FOR A 4" X 6" LOCKBAR.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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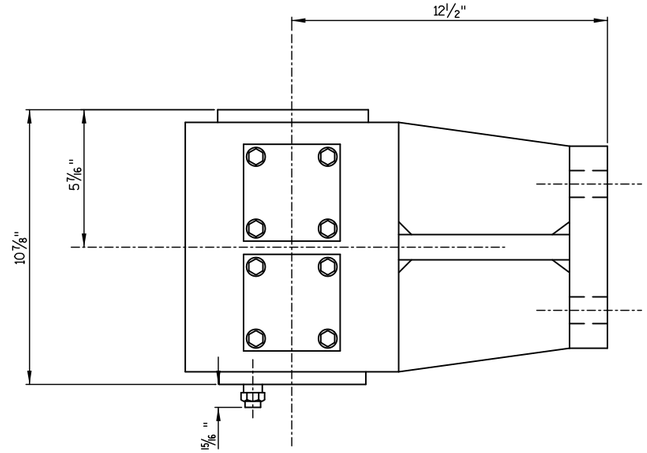
CENTER LOCK DETAILS (1 OF 3)

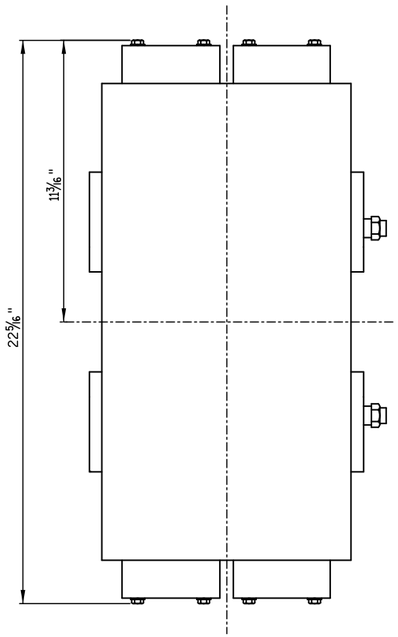
SHEET M12 OF M16

168

STATE PROJECT NUMBER

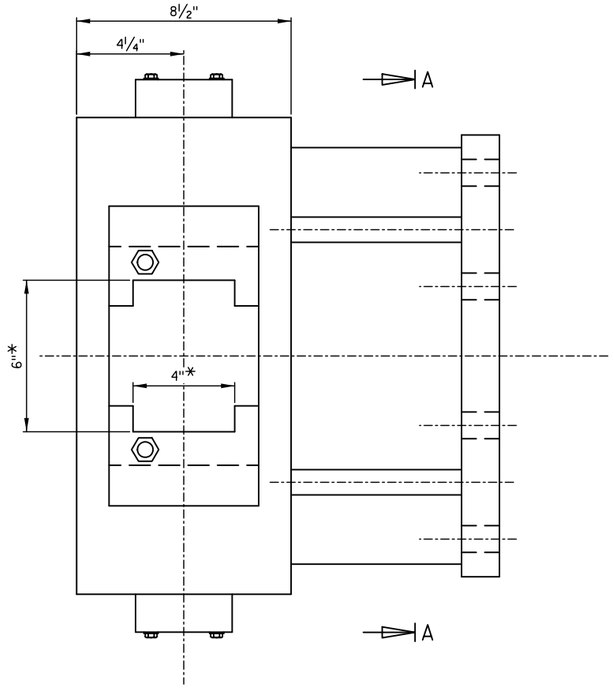
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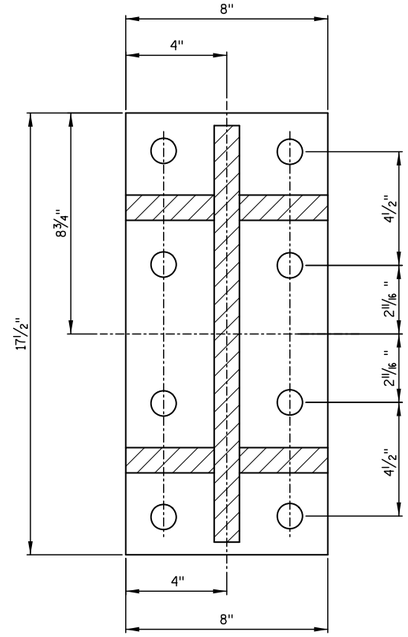
REAR GUIDE

(EARLE CUSHIONLOK)
QTY: 2



NOTES:

* 1. SEE RELATED NOTES ON SHEET NUMBER M12.



SECTION A-A

8

8

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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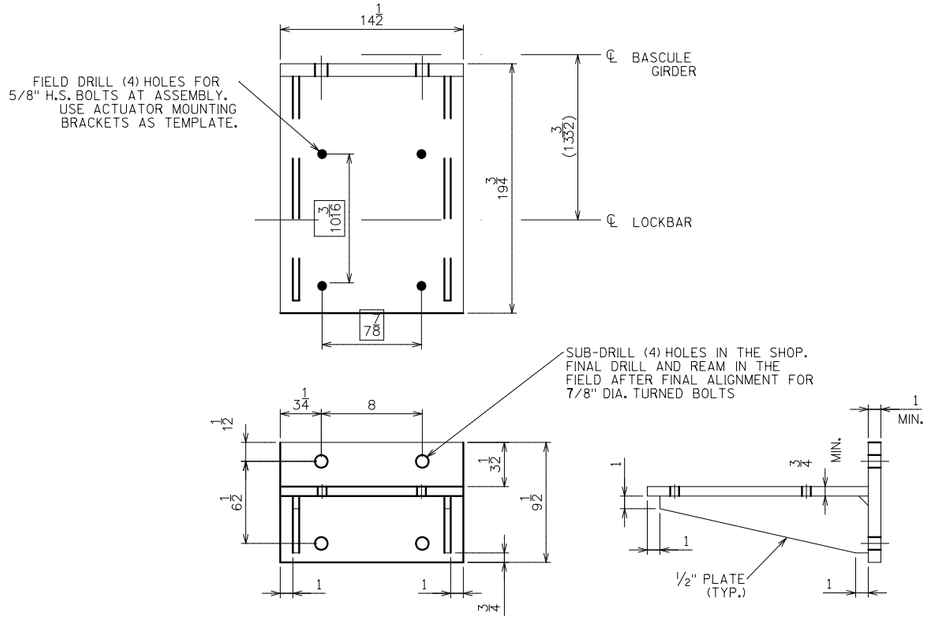
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SHEET M13 OF M16

169

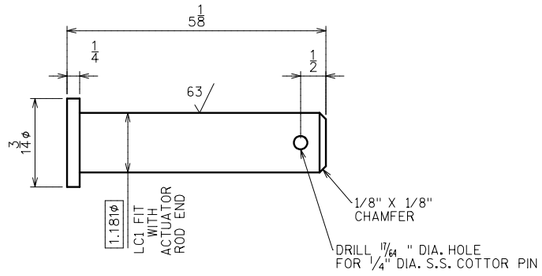
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2984-26-73



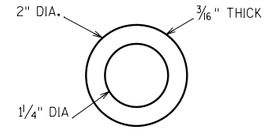
ACTUATOR SUPPORT WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: 2



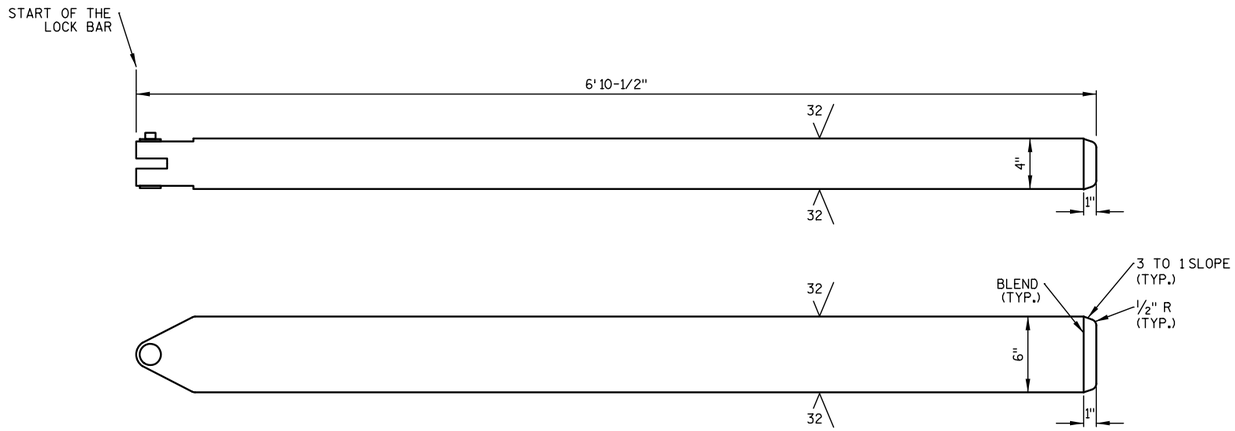
LOCKBAR PIN

MATERIAL: AISI 4140
QTY: 2



PIN WASHER

MATERIAL: TYPE 316 S.S.
QTY: 2



LOCK BAR

MATERIAL: ASTM A668 CLASS M
QTY: 2

NOTES:

1. TOLERANCE PER CUSHIONLOK MANUFACTURER'S RECOMMENDATION FOR THE LOCK BAR.
2. LOCK BAR CONNECTION TO MATCH ACTUATOR.

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STRUCTURE P-40-0864

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CENTER LOCK DETAILS (3 OF 3)

SHEET M14 OF M16

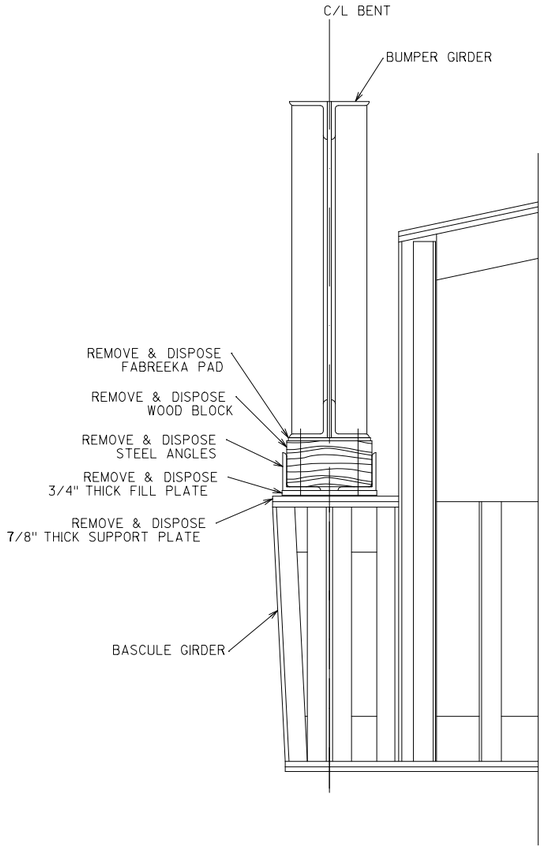
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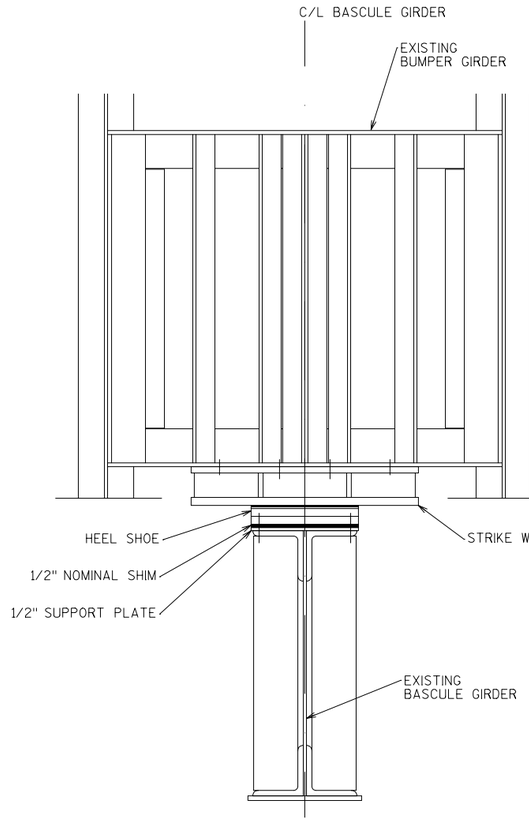
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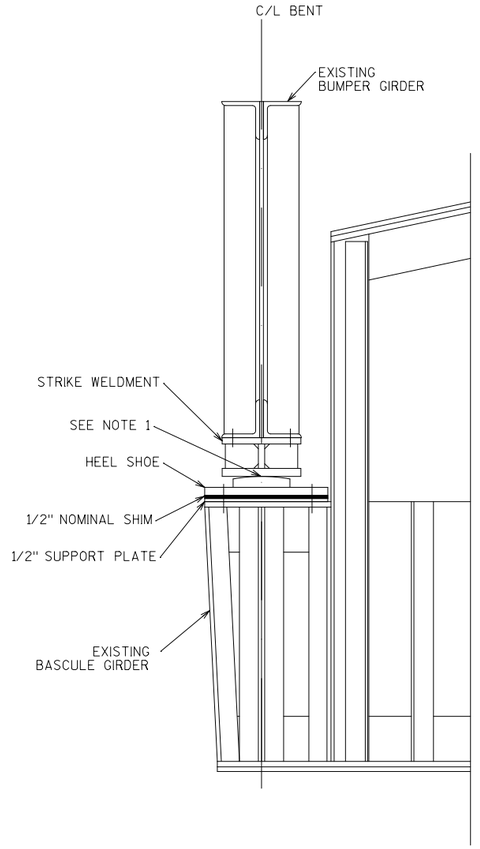
2984-26-73



EXISTING HEEL BLOCK ASSEMBLY - ELEVATION VIEW

QTY: 4 ASSEMBLIES





HEEL BLOCK ASSEMBLY - ELEVATION VIEW

(ALL HEEL BLOCK COMPONENTS SHOWN ARE NEW, UNLESS NOTED OTHERWISE)
QTY: 4 ASSEMBLIES

NOTES:

1. PROVIDE FULL CONTACT ALONG 90 PERCENT OF THE WIDTH OF THE NEW HEEL SHOE. PROVIDE TAPERED SHIMS AS REQUIRED TO ACHIEVE THE SPECIFIED CONTACT. CONTACT WILL BE CONSIDERED FULL IF A 0.002" INCH FEELER GAUGE CANNOT BE INSERTED BETWEEN THE NEW HEEL SHOE AND STRIKE WELDMENT.

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STRUCTURE P-40-0864

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HEEL BLOCK ASSEMBLY & DEMOLITION

SHEET M15 OF M16

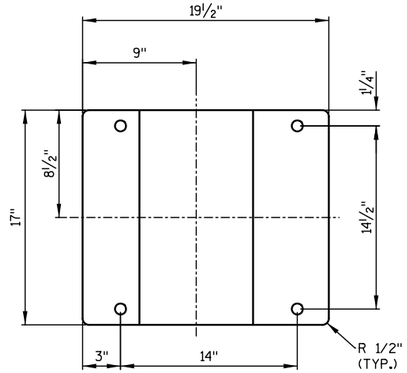
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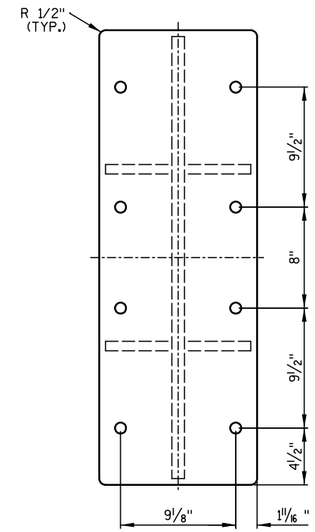
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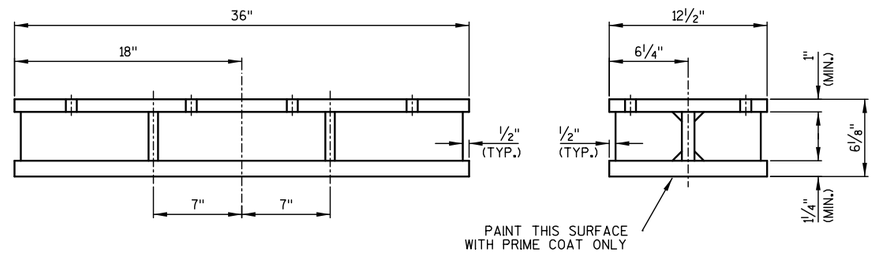
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HEEL SHOE

MATERIAL: ASTM A709 GRADE 50
QTY: 4





STRIKE WELDMENT

MATERIAL: ASTM A709 GRADE 50
QTY: 4

NOTES:

1. ALL PLATES CONNECTED BY 5/16" FILLET WELDS EACH SIDE, UNLESS NOTED OTHERWISE.
2. ALL STIFFENERS ARE TO BE 3/4" THICK PLATE, UNLESS NOTES OTHERWISE.

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STRUCTURE P-40-0864

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HEEL BLOCK DETAILS

SHEET M16 OF M16

172

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BATCH PRINT SHEET 1 OF 83

STATE PROJECT NUMBER

2984-26-73

INDEX OF DRAWINGS

SHEET	DESCRIPTION
E01	ELECTRICAL INDEX OF DRAWINGS
E02	ELECTRICAL GENERAL NOTES
E03	ELECTRICAL SYMBOLS AND LEGEND
E04	ELECTRICAL GENERAL PLAN AND ELEVATION
E05	UTILITY SERVICE CONNECTION PLAN
E06	COMMUNICATION WEST PLAN
E07	COMMUNICATION EAST PLAN
E08	CUC PLAN BRIDGE
E09	CUC DETAILS
E10	EAST TOWER POWER PLANS
E11	WEST TOWER POWER PLANS
E12	EAST TOWER LIGHTING LEVEL PLANS
E13	WEST TOWER LIGHTING LEVEL PLANS
E14	CONTROL HOUSE SECTIONS
E15	WEST & EAST BASCULE PIER POWER PLANS
E16	WEST & EAST BASCULE PIER LIGHTING PLANS
E17	ORNAMENTAL LIGHTING ELEVATION
E18	LIGHTING SCHEDULE DETAILS
E19	SINGLE LINE - 480V CIRCUIT
E20	SINGLE LINE - 208/120V CIRCUIT
E21	ELECTRICAL PANEL SCHEDULES
E22	CONTROL POWER SCHEMATIC
E23	TRAFFIC SIGNALS SCHEMATIC
E24	TRAFFIC GATES SCHEMATIC
E25	CENTER LOCKS SCHEMATIC
E26	WEST SPAN DRIVE SCHEMATIC
E27	EAST SPAN DRIVE SCHEMATIC
E28	FAR UPSTREAM (NE) SPAN MOTOR & DRIVE SCHEMATIC
E29	FAR DOWNSTREAM (NW) SPAN MOTOR & DRIVE SCHEMATIC
E30	NEAR UPSTREAM (SE) SPAN MOTOR & DRIVE SCHEMATIC
E31	NEAR DOWNSTREAM (SW) SPAN MOTOR & DRIVE SCHEMATIC
E32	NAVIGATIONAL LIGHTS SCHEMATIC
E33	INCLINOMETER CABINET, LIMITS & TIMING SCHEDULE
E34	BRIDGE CONTROL CONSOLE
E35	DRIVE CABINETS
E36	PLC AND COMMUNICATIONS CABINETS
E37	MOTOR STARTER CABINET
E38	GROUNDING RISER
E39	SUBMARINE CABLE DETAILS
E40	TRAFFIC GATES/SIGNALS DETAILS

INDEX OF DRAWINGS

SHEET	DESCRIPTION
E41	WEST SPAN DRIVE SCHEMATIC
E42	CONDUIT BLOCK DIAGRAM
E43	CONDUIT SCHEDULE 1
E44	CONDUIT SCHEDULE 2
E45	CONDUIT SCHEDULE 3
E46	CONDUIT SCHEDULE 4
E47	CONDUIT SCHEDULE 5
E48	CONDUIT SCHEDULE 6
E49	CONDUIT SCHEDULE 7
E50	CHERRY ST. BRIDGE COMMUNICATIONS
E51	CHERRY ST. BRIDGE COMMUNICATIONS
E52	CHERRY ST. BRIDGE COMMUNICATIONS
E53	SUBMARINE CABLE TERMINAL CABINET AND DETAILS
E54	REMOTE COMM. FROM THE KNAPP ST. BRIDGE
E55	STATE ST. BRIDGE REMOTE CONTROL CONSOLE
E56	STATE ST. BRIDGE REMOTE CONTROL CONSOLE BACK PLATE
E57	STATE ST. BRIDGE REMOTE CONTROL CONSOLE LADDER
E58	STATE ST. BRIDGE REMOTE CONTROL CONSOLE LADDER
E59	WELLS ST. BRIDGE REMOTE CONTROL CONSOLE AT KNAPP ST.
E60	EAST TOWER FIRE ALARM SYSTEM RISER
E61	BRIDGE FUNCTIONAL SEQUENCE
E62	STREET LIGHTING GENERAL NOTES (1 OF 2)
E63	STREET LIGHTING GENERAL NOTES (2 OF 2)
E64	STREET LIGHTING WEST PLAN
E65	STREET LIGHTING EAST PLAN
E66	AS BUILT GUIDE LINE DETAIL
E67	LEGEND
E68	LUMINAIRE DESCRIPTION & CABLE, CIRCUIT & UNIT ID
E69	CONDUIT PULLBOX TO POLE
E70	PULL BOX INSTALL IN PAVEMENT OR GRASS
E71	CONCRETE LIGHT BASE TYPE 1
E72	WATERTIGHT MULTIPORT CONNECTION WIRING
E73	ELECTRICAL DETAILS MOUNT LIGHT POLES
E74	ELECTRICAL HANDHOLE WIRING DETAIL
E75	TYPICAL SCHEMATIC AND TAGGING DETAIL
E76	BOLT DOWN ALUMINUM POLE DETAIL
E77	TRANSFORMER BASE DETAIL
E78	CUC BRIDGE APPROACH (SHEET 1 OF 4)
E79	CUC BRIDGE APPROACH (SHEET 2 OF 4)
E80	CUC BRIDGE APPROACH (SHEET 3 OF 4)
E81	CUC BRIDGE APPROACH (SHEET 4 OF 4)
E82	CUC APPROACH DETAILS
E83	COMMUNICATION HARDWARE POLE MOUNTED

WISCONSIN
CARLOS TURCIOS
E-49410
TAMPA
FL
3/27/2024
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY	HG	PLANS CK'D.	LT

ELECTRICAL INDEX OF DRAWINGS

SHEET E1 OF E83
173

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8

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GENERAL NOTES:

A. SUBMIT ALL CONTROL SYSTEM RELATED SUBMITTALS AND WORK TO THE ENGINEER FOR APPROVAL. REVIEW AND APPROVAL INCLUDES ALL SYSTEM INTEGRATION, SHOP & FIELD TESTING, PLC SYSTEMS, AND DRIVE SYSTEMS. REFER TO PLANS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS. PROVIDE SUBMITTALS THAT INCLUDE ALL MATERIALS, DATA SHEETS, AND DRAWINGS AS REQUIRED BY THE CONTRACT DOCUMENTS. MATERIALS SHALL NOT BE PURCHASED UNTIL THE RELATED SUBMITTAL IS APPROVED BY THE ENGINEER.

B. CONFORM TO ALL NEC, UL, IEEE, NEMA, AND AASHTO CODES, STANDARDS AND PRACTICES.

C. ELECTRICAL DEVICES AND EQUIPMENT ARE SHOWN SYMBOLICALLY ON THE PLANS. THE USE OF SYMBOLS AND NOTATIONS (OR THE OMISSION THEREOF) DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING A SAFE, COMPLETE AND FULLY FUNCTIONAL SYSTEM. FIELD LOCATE DEVICES AND EQUIPMENT TO FACILITATE ACCESSIBILITY WITH RESPECT TO OPERATIONS AND MAINTENANCE CONDITIONS.

D. ALL MOUNTING HARDWARE SHALL BE 300 SERIES STAINLESS STEEL. ALL EXTERIOR BOXES SHALL BE NEMA 4X. ALL INTERIOR BOXES AND CABINETS SHALL BE NEMA 1 OR AS SHOWN ON THE PLANS.

E. MINIMUM CONDUIT SIZE IS 3/4". USE RIGID GALVANIZED STEEL CONDUIT FOR CONDUIT IN THE LOWER, ENTRY, AND OPERATOR'S LEVEL ROOMS. USE OF THINWALL EMT IS ALLOWED FOR LIGHTING AND RECEPTACLE CIRCUITS THAT ARE INSTALLED BEHIND FINISHED DRYWALL. USE PVC COATED RIGID GALVANZIED STEEL CONDUIT FOR ALL EXTERIOR CONDUIT THAT IS LOCATED OUTSIDE THE THREE ROOMS LISTED ABOVE. USE PVC SCHEDULE 40 FOR CONCRETE EMBEDDED AND INSTALLED IN A TRENCH AND IN COUNTERWEIGHT PITS.

F. ALL WIRES SHALL BE XHHW UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE IS #14 AWG FOR CONTROL AND #10 AWG FOR POWER. USE CAT 5E FOR DATA, AND RG-11 OR RG-59 FOR COAX. PROVIDE AND INSTALL SPECIALIZED CABLES AS RECOMMENDED BY EQUIPMENT MANUFACTURERS.

G. INSTALL A COMPLETE GROUNDING AND BONDING SYSTEM FOR ALL NEW EQUIPMENT AND DEVICES PER NEC 250.

H. PULL BOXES SHALL BE UTILIZED FOR CONTINUOUS PULLING OF WIRES, NO SPLICING ALLOWED. JUNCTION BOXES SHALL BE UTILIZED TO BRING WIRES INTO AND TERMINATE ONTO TERMINAL BLOCKS. WIRE NUTS AND COMPRESSION SPLICES ARE NOT PERMITTED. DO NOT EXCEED 3-90 DEGREE CONDUIT BENDS WITHOUT PROVIDING A PULL BOX.

I. CORE, SLEEVE, AND PROPERLY SEAL ALL HOLES REQUIRED IN FLOORS AND/OR WALLS OF OPERATOR HOUSES AS REQUIRED FOR ROUTING OF CONDUITS.

J. FURNISH EQUIPMENT THAT IS U.L. LISTED AND LABELED, AS APPLICABLE.

K. CONTROL LOGIC DRAWINGS HAVE BEEN DEVELOPED TO INCLUDE PLC AND RELAY LOGIC TO CONTROL THE BRIDGE. PRIOR TO DEVELOPING THE LOGIC AT THE PLC SOFTWARE AND RELAY LOGIC LEVELS, THE CONTRACTOR IS REQUIRED TO DO A PRELIMINARY REVIEW OF THE CONTROL LOGIC DRAWINGS E22 THROUGH E32 AND PROVIDE THE ENGINEER WITH COMMENTS IF NECESSARY. THE CONTROL LOGIC AS PROVIDED UNDER THESE DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COORDINATING WITH THE ENGINEER FOR ANY REVISIONS OR OMMISSONS NOT FOUND DURING THE PRELIMINARY SHOP DRAWINGS REVIEW AND DURNING THE EQUIPMENT PROCUREMENT PROCESS. ANY HARDWARE OMISSIONS NOT FOUND DURING THE PRELIMINARY CONTROL SYSTEM LOGIC REVIEW, SHALL BE INCLUDED IN THE HARDWARE COMISSIONING PROCESS AT NO ADDTIONAL COST TO THE OWNER.

L. THE CONTRACTOR IS REQUIRED TO REVIEW ALL ELECTRICAL, MECHANICAL, HVAC, AND STRUCTURAL DRAWINGS AND SPECIFICATIONS AS PART OF THEIR INSTALLATION COORDINATION. ELECTRICAL EQUIPMENT INSTALLATION SHALL BE COORDINATED WITH THE STRUCTURAL AND MECHANICAL INSTALLERS TO AVOID INTERFERENCES. FIELD ADJUSTED ELECTRICAL EQUIPMENT INSTALLATION AS REQUIRED.

DEMOLITION NOTES:

1. UNLESS SPECIFICALLY NOTED ON THESE ELECTRICAL DRAWINGS, REMOVE THE FOLLOWING HARDWARE IN ALL SECTIONS OFTHE BRIDGE. THE REMOVAL OF HARDWARE SHALL INCLUDE THE REMOVAL OF ALL ASSOCIATED WIREWAYS, CONDUITS, CONDUCTORS, JUCTION BOXES, PULL BOXES, ALL THE WAY DOWN TO THEIR SOURCES. EXERCISE CARE WHEN REMOVING HARDWARE SUPPORT. REPAIR/PATCH WHERE NEEDED. ANY DAMAGE CAUSED DURING THE REMOVAL PROCESS SHALL BE REPAIRED AS REQUIRED. THE LIST BELOW DOES NOT INCLUDE ALL COMPONENTS OR ANCILLIARY COMPONENTS. THE CONTRACTOR SHALL WALK THE SITE PRIOR TO BIDDING AND INSPECT FOR ITEMS TO BE REMOVED. PAYMENT FOR REMOVAL OF ALL ELECTRICAL COMPONENTS SHALL BE INCLUDED IN THE "REMOVING STRUCTURE OVER THE WATERWAY MINIMAL DEBRIS" SECTION.

A. LIGHT FIXTURES AND LIGHT SWITCHES
B. EMERGENCY LIGHT
C. SMOKE DETECTORS
D. RECEPTACLES
E. DISCONNECTS INCLUDING SERVICE DISCONNECTS
F. POWER DISTRIBUTION PANELS
G. GROUNDING CONDUCTORS
H. TRAFFIC GATES
I. TRAFFIC LIGHTS
J. MMSD TO WATER MONITORING LINE
K. NAVIGATIONAL LIGHTS
L. CONTROL CONSOLE
M. MOTORS
N. DISTRIBUTION GEAR
O. TRANSFORMER
P. SPEAKERS / HORNS
Q. NORTH SUBMARINE CABLE.
R. ALL SUBMARINE TERMINATION CABINETS
S. MONITORING AND CONTROL DEVICES
T. ROTARY CAMS
U. CONCRETE EMBEDDED CONDUITS SHALL BE CLEANED AND PREPARED FOR RE-USE TO THE EXTENT POSSIBLE.
V. WATER MONITORING SAMPLING SYSTEM POWER DISTRICUTION HARDWARE ALL THE WAY AND INCLUDING ASSOCIATED UTILITY POWER SERVICE HARDWARE.
W. SOUTH SUBMARINE CABLE TO BE ABANDONED. CAP SOUTH SUBMARINE CABLE 12 INCHES ABOVE HIGH TIE WATER LEVEL.
X. FOUR STREET LIGHT POLES INCLUDING, OVERHEAD/AERIAL POWER CABLES BETWEEN POLES, POLE MOUNTED TRAFFIC LIGHTS, POLE MOUNTED TRAFFIC SIGNS, LIGHT FIXTURES AND POLE BASES. COORDINATE POWERSOURCES WITH THE CITY.
Y. LIGHTNING PROTECTION SYSTEM HARDWARE.

ELECTRICAL SCOPE OF WORK

TASK E-1: ELECTRICAL WORK:

1. UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL PLANS AND DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.
2. FURNISH AND INSTALL ALL CONDUITS, CONDUCTORS, COAX, DATA, AND POWER CABLES, INTERCONNECTIONS, JUNCTION AND PULL BOXES, STAINLESS STEEL FASTENERS, AND RELATED INCIDENTAL ITEMS REQUIRED FOR A FULLY OPERATIONAL CONTROL SYSTEM.
3. PROVIDE SUBMITTALS AS REQUIRED IN ELECTRICAL GENERAL NOTES, DRAWINGS, AND SPECIAL PROVISIONS.
4. FURNISH AND INSTALL NEW LIGHTING, RECEPTACLES, CABLES, CONDUITS, AND MISCELLANEOUS ELECTRICAL EQUIPMENT IN BRIDGE OPERATOR HOUSE, MACHINERY ROOMS, AND BASCULE PIERS TO REPLACE ALL EXISTING EQUIPMENT.
5. FURNISH AND INSTALL LOCAL DISCONNECT SWITCHES FOR EACH SPAN MOTOR, BRAKE AND CENTER LOCK, PUMP OR DEVICE THAT REQUIRES A DISCONNECT PER NEC.
6. FURNISH AND INSTALL POWER AND LIGHTING DISTRIBUTION PANELBOARDS AND DISTRIBUTION TRANSFORMERS.
7. FURNISH AND INSTALL ARCHITECTURAL ACCENT LIGHTING FOR THE MOVABLE SPAN AND OPERATOR'S HOUSE.

TASK E-2: NEW ELECTRICAL SERVICE:

1. FURNISH AND INSTALL NEW METER SOCKETS, MAIN DISCONNECTS AND AN AUTOMATIC TRANSFER SWITCH.
2. EXISTING 240V EAST AND WEST SERVICES HARDWARE IS TO BE REMOVED IN COORDINATION WITH LOCAL UTILITY.
3. NEW 277/480V SERVICE TO BE PROVIDED AT A NEW LOCATION IN COORDINATION WITH THE LOCAL UTILITY. THE CONTRACTOR SHALL INCLUDE IN THE POWER SERVICE UPGRADE ALL HARDWARE AND THE REQUIRED PERMITS AS NEEDED.

TASK E-3: SUBMARINE CABLE

1. FURNISH, TEST AND INSTALL NEW POWER SUBMARINE CABLES AS SHOWN IN PLANS.
2. PROVIDE TERMINATION CABINETS WITH TERMINAL BLOCKS, HEATERS, AND CONNECTIONS TO ALL REQUIRED DEVICES.
3. ROUTE SUBMARINE CABLES BETWEEN THE TWO BASCULE PIERS.
4. OBTAIN ALL NECESSARY PERMITS.

TASK E-4: TRAFFIC CONTROL DEVICES

1. FURNISH, INSTALL AND TEST FOUR NEW TRAFFIC GATES AS SHOWN ON THE PLANS.
2. FURNISH AND INSTALL NEW FLASHING RED SIGNALS AND SIGNS AS SHOWN ON THE PLANS.

TASK E-5: MOTOR CONTROL CABINET:

1. FURNISH, INSTALL AND TEST A NEW NEMA 12 MOTOR CONTROL CABINET WITH FLANGE MOUNTED DISCONNECT.
2. PROVIDE MINIMUM NEMA SIZE 1 RATED STARTERS.

TASK E-6: SPAN DRIVES

1. MAIN SPAN MOTORS - FURNISH, INSTALL AND TEST FOUR (4) 40HP DC MOTORS, FURNISH AND INSTALL ENCODER COUPLED TO BACK SIDE OF MOTOR. MOTORS SHALL BE SUPPLIED AND TESTED BY THE DRIVE MANUFACTURER.
2. MAIN SPAN DRIVES - FURNISH AND INSTALL FOUR (4) VARIABLE SPEED DC REGENERATIVE DRIVES WITH CLOSED LOOP ENCODER CONTROL.
3. INSTALL EACH DRIVE IN A NEMA 12 CABINET WITH A FLANGE MOUNTED DISCONNECT AND VENTILATION AS NEEDED.
4. FURNISH A KEYPAD, E-STOP, DRIVE FAULT & READY INDICATOR LIGHTS ON CABINET DOOR.
5. FURNISH AND INSTALL DRIVE ISOLATION TRANSFORMERS FOR EACH DRIVE.

TASK E-7: PLC CABINET FOR LOCAL CONTROL

1. FURNISH AND INSTALL A NEW PLC CABINET FOR LOCAL CONTROL OF CHERRY STREET BRIDGE.
2. PROGRAM, TEST AND INTEGRATE THE CONTROL SYSTEM TO OPERATE AS DESCRIBED IN THE SPECIAL PROVISIONS AND FUNCTION BLOCK SEQUENCE IN THE PLANS.
3. PROGRAM THE PLC USING LADDER LOGIC.
4. DOCUMENT ALL RUNGS, CONTACTS, COILS AND FUNCTION BLOCKS IN THE PROGRAM.
5. FURNISH, INSTALL, PROGRAM, AND TEST A TOUCH SCREEN GRAPHIC TERMINAL FOR INFORMATION AND DIAGNOSTICS.

TASK E-8: CONSOLE

1. FURNISH, INSTALL AND TEST A NEW NEMA 12 CONSOLE WITH STAINLESS STEEL TOP.
2. THE CABINET INCLUDES ALL WIRING AND DEVICES SHOWN IN PLANS.
3. INSTALL INDUSTRIAL GRADE OIL TIGHT SWITCHES, LIGHTS AND DEVICES.

TASK E-9: LIGHTNING AND SURGE PROTECTION

1. FURNISH AND INSTALL A COMPLETE LIGHTNING PROTECTION SYSTEM.
2. FURNISH AND INSTALL TRANSIENT VOLTAGE SURGE PROTECTION FOR ELECTRICAL SERVICE, MOTORS, AND CONTROL EQUIPMENT.

STATE PROJECT NUMBER

2984-26-73

TASK E-10: REMOTE CONTROL SYSTEM

1. REMOVE AND REPLACE THE EXISTING PLC AND PLC ASSOCIATED HARDWARE AT EAST KNAPP TENDER HOUSE CONTROL ROOM CONSOLE USED TO CONTROL THE EXISTING STATE BRIDGE. PROVIDE THE REQUIRED PROGRAMMING AND CONFIGURATION TO REMOTE CONTROL THE CHERRY ST. AND STATE ST. BRIDGE. FOR THE CCTV REMOTE MONITORING AND CONTROL, PROVIDE A 2-WAY NEW SELECTOR SWITCH FOR "STATE BRIDGE CONTROL / CHERRY ST. BRIDGE CONTROL. PROVIDE ADDITIONAL HARDWARE TO VIEW AND CONTROL THE REMOTE CCTV SYSTEM AT THE EXISTING KNAPP ST. CCTV MONITORING SYSTEM.
2. COORDINATE WITH THE OWNER FOR COMMUNICATION PATH (FIBER OPTIC CABLES) AVAILABILITY FOR REMOTE BRIDGE CONTROL.
3. INSTALL A NEW I.P. ADDRESSABLE COMMUNICATION SYSTEM AT EAST KNAPP ST. BRIDGE. FURNISH AND INSTALL COMMUNICATION EQUIPMENT AT EACH BRIDGE TO TRANSMIT/RECEIVE AUDIO, VIDEO AND PLC DATA BETWEEN THE BRIDGES OVER THE FIBER OPTIC SYSTEM.
4. FURNISH, INSTALL, MOUNT AND ADJUST A PUBLIC ADDRESS SYSTEM CONSISTING OF A MASTER PUSH-TO-TALK MICROPHONE SYSTEM AND A PAGING/PARTY SYSTEM WITH STATIONS AS SHOWN IN THE PLANS. PROVIDE P.A. SYSTEM THAT INCLUDES ALL INCIDENTALS, REQUIRED FOR A FULLY OPERATIONAL, NOISE FREE AND INTEGRATED SYSTEM.
5. UPGRADE EAST KNAPP ST. BRIDGE AS SHOWN ON PLANS.
6. PROGRAM AND TEST A TOUCH SCREEN GRAPHIC TERMINAL AND PLC PER PLANS AND SPECS.

TASK E-11: AUXILIARY EQUIPMENT

1. FURNISH AND INSTALL FIRE ALARM AND SECURITY SYSTEMS. EACH SYSTEM SHALL BE COMPLETE WITH CONTROL PANELS, DETECTORS, SENSORS, SECURITY KEYPADS, WIRING AND OTHER INCIDENTALS.
2. NAVIGATION LIGHTS - FURNISH AND INSTALL (4) FOUR RED/GREEN LED CENTER CHANNEL NAVIGATION LIGHTS ON SWING ARMS AT THE TIPS OF EACH SPAN.
3. PIER LIGHTS - FURNISH AND INSTALL LED PIER LIGHTS.
4. ELECTRONIC "AIR" HORN - FURNISH AND INSTALL A NEW ELECTRONIC "AIR" HORN.
5. FURNISH AND INSTALL NEW SUMP PUMPS FOR EACH COUNTERWEIGHT PIT, WITH START/STOP CONTROL PANEL.

TASK E-12: LIMITSAND SENSORS

1. FURNISH, INSTALL, TEST AND ADJUST TWO (2) SPAN POSITION CAM LIMITS AND TWO (2) SEATED PLUNGER LIMITS.
2. FURNISH, INSTALL, TEST AND ADJUST TWO (2) SPAN POSITION INCLINOMETERS IN A NEMA 4X CABINET AS SHOWN IN THE PLANS.
3. FURNISH, INSTALL, TEST AND ADJUST NEW CENTER LOCKS LIMIT SWITCHES AS SHOWN IN PLANS.
4. INSTALL ALL LIMITS WITH 3-AXIS ADJUSTABILITY USING STAINLESS STEEL HARDWARE.
5. LIMITS FOR BRAKES ARE INCLUDED WITH NEW BRAKE PAY ITEMS.

TASK E-13: TESTING TRAINING MANUAL AND SPARE

1. DEMONSTRATE THE FUNCTION OF THE ENTIRE ELECTRICAL CONTROL AND DRIVE SYSTEM AT MANUFACTURERS SHOP. SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS.
2. DEMONSTRATE THE OPERATION OF THE BRIDGE AT A PARTIAL ACCEPTANCE TEST IN THE PRESENCE OF THE ENGINEER AND/OR HIS REPRESENTATIVES.
3. PROVIDE OPERATOR TRAINING FOR BRIDGE OPERATORS.
4. PROVIDE MAINTENANCE TRAINING FOR MAINTENANCE PERSONNEL.
5. FURNISH COMPLETE OPERATION AND MAINTENANCE MANUALS.
6. PROVIDE SPARE PARTS AS LISTED IN THE SPECIFICATIONS.

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ELECTRICAL GENERAL NOTES

SHEET E2 OF E83
174

8

8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:15:03 PM BATCH PRINT SHEET 3 OF 83

STATE PROJECT NUMBER

2984-26-73

ELECTRICAL SYMBOLS

CIRCUIT BREAKER
CB
#AF
#AT
2P
#AF = Amp Frame Size
#AT = Amp Trip Rating
2P = Two Pole
3 Pole unless noted

OVERLOAD RELAY

COIL M = MOTOR STARTER
MF = MOTOR FORWARD
MR = MOTOR REVERSE
CR = CONTROL RELAY
LC = LIGHTING CONTACTOR
IR = CURRENT RELAY
PE = PHOTE ELECTRIC RELAY
L = LATCHING RELAY
U = UNLATCHING RELAY

TDENL
TIMER COIL

CR-XX
RELAY/CONTACTOR/STARTER CONTACTS
N.O. = NORMALLY OPEN

CR-XX
N.C. = NORMALLY CLOSED

NAV., TRAFFIC OR WARNING LIGHTS

SPEAKER, HORN

PA, INTERCOM SPEAKER

FUSE

TX
TRANSFORMER, VOLTAGE, or PT

TRANSFORMER, CURRENT, CT

VS
SWITCH SELECTOR
AS = Ammeter Sw.
VS = Voltmeter Sw.

V VOLTMETER

A AMMETER

W WATTMETER

WHITE XENON STROBE

MICROPHONE

LOUD SPEAKER

AIR HORN

LIGHTING FIXTURE, FLUORESCENT
A-C-a
A = TYPE
C = CIRCUIT NO.
a = SWITCHED LEG

EMERGENCY LAMP PACK WITH BATTERY

PANELBOARD
NHLP
FHLP
MDP
N = Near Side
F = Far Side
H = House
L = Low Voltage 208V
P = Panelboard

MDP-N
Main Distribution Panel, 480V
N = Near Side

DUPLEX RECEPTACLE
WP-C-G
120 VAC, 20A
WP = Weather Proof
C = Circuit No.
G = GFI
DP = Duplex Indoor

SINGLE RECEPTACLE
C-C
240 VAC, 30A
C = Circuit No.

WALL SWITCH
Sc
125 VAC, 20 A
2 = 2 Pole
3 = 3 Way
C = Switched Leg

HEATER RECEPTACLE

JB
BOX, CABINET
JB = Junction Box (w/TB'S)
PB = Pull Box (No TB'S)
TC = Termination Cabinet

WARNING BELL

LIMIT SWITCHES
LS
Plunger Type
CAM
Rotary CAM Type
LS
Lever Type

LP CONDUIT

GROUND

NEUTRAL

SWITCHED LEG

HOT

WIRING
EXTERNAL
INTERNAL
Shielded Pair
Twisted Pair
Outer Shield
Connected
Not connected

UG
UNDERGROUND CONDUIT
Buried conduit per NEC depths

1 PHASE WIRING

3 PHASE WIRING

E
Proposed Electrical Conduit

H
HANDHOLE

S
SUBMARINE CABLE

EUH
ELECTRIC UNIT HEATER

R
INDICATING LIGHT
R = Red
G = Green
Y = Yellow
A = Amber
B = Blue
W = White

SWITCHES
0X
2 POSITION SELECTOR SWITCH

00X
3 OR MORE POSITION SELECTOR SWTICH

SPRING RETURN INDICATION

X00
NORMALLY OPEN CONTACT

SW4
2 POSITION TOGGLE SWITCH

PUSH BUTTON, MOMENTARY
NORMALLY CLOSED
NORMALLY OPEN

PUSH BUTTON, MAINTAINED
Normally Closed
Push-To-Open

FOOT SWITCH

TIMER RELAY CONTACTS
N.O., Close on Energization
N.C., Open on Energization

LIMIT SWITCHES
N.C. IN Closed POSITION
N.C. HELD Open
N.O. IN Open POSITION
N.O. HELD Closed

TEMPERATURE SWITCH
N.C. OPEN ON HIGH TEMP.

GROUND

A3
SS
SURGE SUPPRESSOR

DO-XXX
PLC DIGITAL OUTPUT

PLC DIGITAL INPUT
DI-XXX

DISCONNECT SWITCH

SUMP PUMP

3 PHASE SUMP PUMP RECEPTACLE

M
UTILITY SERVICE METER

SUMP PUMP PUSH BUTTON

ABBREVIATIONS

A, AMP	AMPERES
BP	BYPASS
C.	CONDUIT, CONTACTOR
CAM	ROTARY CAM LIMIT SWITCH
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CD	CONTROL DESK
CL	CLEARANCE LIGHT
CP	CONTROL PANEL
CR	CONTROL RELAY
D, DN	DOWN
DISC	DISCONNECT
DR	DOOR
E.G.	EARTH GROUND
ESTOP	EMERGENCY STOP
F	FAR
FC	FULLY CLOSED (SPAN)
FL	FLASHING LIGHTS
FO	FULLY OPEN (SPAN)
F/O	FIBER OPTIC
FOC	FAR ON-COMING
FOG	FAR OFF-GOING
FU	FUSE
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
G, GND	GROUND
GL	GAUGE LIGHT
GONG	GONG
GRN, GN	GREEN
HOA	HAND-OFF-AUTO SWITCH
HORN	HORN
HMI	HUMAN MACHINE INTERFACE
HP	HORSEPOWER, HEAT PUMP
IL	INDICATOR LIGHT
JB	JUNCTION BOX
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LC	LIGHTING CONTACTOR
LGT, LGTS	LIGHT, LIGHTS
LP	LIGHTING PANEL
LS	LIMIT SWITCH
MS	MOTOR CONTACTOR STARTER
MCC	MOTOR CONTROL CENTER
MD	MAIN DISCONNECT SWITCH
MIC	MICROPHONE
MTR	MOTOR
NAV	NAVIGATION
N	NEAR
NC	NEARLY CLOSED, NORMALLY CLOSED
NO	NEARLY OPEN, NORMALLY OPEN
NOC	NEAR ON-COMING
NOG	NEAR OFF-GOING
OL	OVERLOAD
PA/IC	PUBLIC ADDRESS/INTERCOM
PB	PUSH BUTTON, PULL BOX (NO TB'S)
PBOARD	PANELBOARD
PE	PHOTO-EYE
PL	PIER LIGHT, PULL, PILOT LIGHT
PRGS	PVC-COATED RGS CONDUIT
PTZ	PAN-TILT-ZOOM
RECPT	RECEPTACLE
RED	RED LIGHT
RES	RESISTOR BANK
RGS	RIGID GALVANIZED STEEL
SIG	SIGNAL
SL	SPAN LOCK
SPKR	SPEAKER
SS	SELECTOR SWITCH, SURGE SUPPRESSOR
SUB	SUBMARINE
T	TIMER
TB	TERMINAL BLOCK
TC	TERMINATION CABINET
TG	TRAFFIC GATE
TL	TRAFFIC LIGHT, TAIL LOCK
TS	TRAFFIC SIGNAL
T-STAT	THERMOSTAT SWITCH
UG	UNDERGROUND
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLTS
W	WATTS, WIRE
XDCR	TRANSDUCER
XFMR	TRANSFORMER
Y	YELLOW
ZI	POSITION INDICATOR
ZT	POSITION TRANSMITTER

A/B/C Suffix added to indicate additional devices with same function.

LOCATION LEGEND

C CONTROL CONSOLE

P PLC CABINET

M COMBINATION MOTOR STARTER

D DRIVE

I INCLINOMETER CABINET

P SURGE SUPPRESSOR TB PLC CABINET

SS SURGE SUPPRESSOR

F FIELD TERMINATION CABINET

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ELECTRICAL SYMBOL AND LEGEND

SHEET E3 OF E83
175

8

8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:15:11 PM BATCH PRINT SHEET 4 OF 83

STATE PROJECT NUMBER

2984-26-73

SUBMARINE CABLE SBC-1 (CONTROLS) & SUBMARINE SPARE CONDUIT SBC-2 (CONTROLS) NOTES 6 & 7

SUBMARINE CABLES SBP-1 & SBP-2 (POWER) NOTE 7

SUBMARINE CABLE SBS (SERVICE) NOTE 7

SPARE HDPE CONDUIT

17'-0" APPROACH

17'-0" BYPASS

115'-0" CENTER-TO-CENTER OF TRUNNION BEARINGS

94'-0" BETWEEN PIERS

EXISTING RETAINING WALL

BIKE SIDEWALK LANE

TRAFFIC LANE

TRAFFIC LANE

BIKE LANE

SIDEWALK

NEW TRAFFIC SIGNAL

NEW ROADWAY LIGHT POLE. NOTE 5

NEW OFF-GOING GATE (TYP) NOTE 4

NEW ON-COMING GATE (TYP) NOTE 4

CONTROL FAR SIDE SUBMARINE CABLE TERMINATION CABINET

POWER FAR SIDE SUBMARINE CABLE TERMINATION CABINET

SERVICE FAR SIDESUBMARINE CABLE TERMINATION CABINET

PEDESTRIAN LIGHT POLE. REMOVE, REFURBISH AND REINSTALL (TYP OF 4)

REMOVE EXISTING SUBMARINE CABLE TERMINATION CABINET. REFER TO DEMOLITION NOTES 1& 1R ON SHEET E02.

EXISTING SOUTH SUBMARINE CABLE TO BE ABANDONED ON THE BOTTOM OF THE RIVER. REFER TO DEMOLITION NOTES 1& 1W ON SHEET E02.

SOUTHWEST OPERATOR HOUSE

NEW FENDER LIGHT FHLP-7

NEW PIER LIGHT FHLP-7

NEW FENDER LIGHT FHLP-7

REAR BREAK

℄ BASCULE SPAN

NEW CLEARANCE LIGHT 3 FHLP-7

AIR HORN

NEW CLEARANCE LIGHT 1 NHLP-7

NOTE 3

NOTE 1

8'-0" SDWK.

58'-0" OUT-TO-OUT OF BASCULE LEAVES

42'-0" CLEAR ROADWAY

45'-0" CENTER-TO-CENTER OF BASCULE GIRDERS

NEW CLEARANCE LIGHT 4

NEW CLEARANCE LIGHT 2 NHLP-7

MILWAUKEE RIVER

NEW FENDER LIGHT FHLP-7

NEW FENDER LIGHT NHLP-7

NEW PIER LIGHT NHLP-7

NEW PIER LIGHT NHLP-7

NEW OFF-COMING GATE (TYP) NOTE 2

NORTHEAST OPERATOR HOUSE

SPARE HDPE CONDUIT

BYPASS

APPROACH

SUBMARINE CABLE SBS (SERVICE) NOTE 7

EXISTING RETAINING WALL

CONTROL NEAR SIDE SUBMARINE CABLE TERMINATION CABINET

POWER NEAR SIDE SUBMARINE CABLE TERMINATION CABINET

SERVICE NEAR SIDE SUBMARINE CABLE TERMINATION CABINET

NEW ON-GOING GATE (TYP)

NOTE 2

NEW ROADWAY LIGHT POLE. NOTE 5

NEW TRAFFIC SIGNAL

℄ BRIDGE AND W. CHERRY STREET

NEW TRAFFIC SIGNAL

NEW ROADWAY LIGHT POLE. NOTE 5

EXISTING RETAINING WALL

REMOVE EXISTING SUBMARINE CABLE TERMINATION CABINET. CUT AND CAP EXISTING SUB-CABLES 12-INCHES BELOW CABINETS.

PLAN

DOUBLE-LEAF BASCULE BRIDGE

NOTES:

1. CLEARANCE LIGHT RECEPTACLE IS NOT SHOWN SUPPLY POWER FROM NHLP-9.
2. TRAFFIC GATES LT&REC ARE NOT SHOWN SUPPLY POWER FROM NHLP-11.
3. CLEARANCE LIGHT RECEPTACLE IS NOT SHOWN SUPPLY POWER FROM FHLP-9.
4. TRAFFIC GATES LT&REC ARE NOT SHOWN SUPPLY POWER FROM FHLP-11
5. NEW ROADWAY LIGHT POLE FURNISHED BY CITY INSTALLED BY THE CONTRACTOR. ANCHORS INSTALLED BY CONTRACTOR. REFER TO SHEETS E64 & E65 FOR ADDITIONAL INFORMATION.
6. TERMINATE AND CAP CONDUIT SBC-2 BELOW TERMINATION CABINET(S). CONDUIT SBC-2 IS A SPARE CONDUIT FOR FUTURE USE. PROVIDE THE REQUIRED SUPPORT.
7. REMOVE EXISTING SUBMARINE CABLES TO ACCOMODATE FOR THE NEW SUBMARINE CABLES INSTALLATION. REFER TO DEMOLITION NOTES ON SHEET E2.

REMOVE EXISTING SUBMARINE CABLE TERMINATION CABINET.

CENTER OF TRUNNION

CENTER OF TRUNNION

REMOVE EXISTING SUBMARINE CABLE TERMINATION CABINET.

℄ BASCULE SPAN

CITY DATUM EL. 0.00 = 580.60 (NGVD29)

APPROXIMATE WATER ELEVATION

CONTROLS, POWER & SERVICE FAR SIDE SUBMARINE CABLE TERMINATION CABINETS REFER TO SHEET E53 FOR DETAIL ELEVATION.

WEST BASCULE PIER

EAST BASCULE PIER

CONTROLS, POWER & SERVICE NEAR SIDE SUBMARINE CABLE TERMINATION CABINETS (SOUTH) REFER TO SHEET E53 FOR DETAIL ELEVATION.

ELEVATION

(LOOKING NORTH)
(NORMAL TO MILWAUKEE RIVER)

SUBMARINE CABLES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

ELECTRICAL GENERAL PLAN AND ELEVATION

SHEET E4 OF E83

176

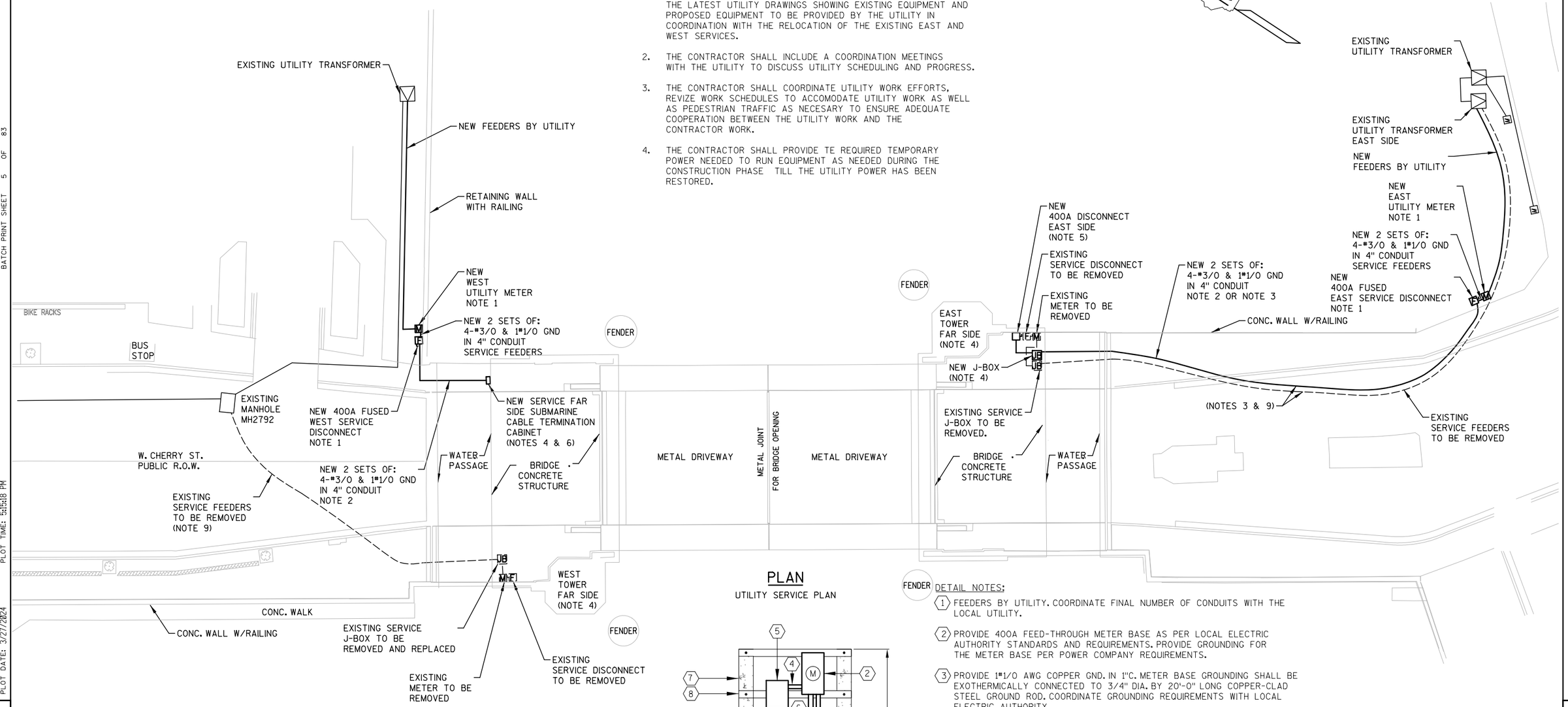
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PLOT DATE: 3/27/2024
PLOT TIME: 5:15:18 PM
BATCH PRINT SHEET 5 OF 83

STATE PROJECT NUMBER

2984-26-73

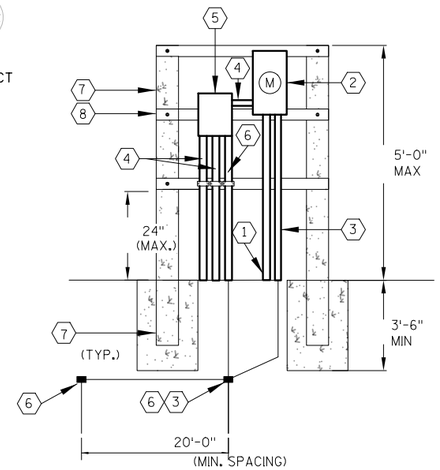
GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY TO OBTAIN THE LATEST UTILITY DRAWINGS SHOWING EXISTING EQUIPMENT AND PROPOSED EQUIPMENT TO BE PROVIDED BY THE UTILITY IN COORDINATION WITH THE RELOCATION OF THE EXISTING EAST AND WEST SERVICES.
2. THE CONTRACTOR SHALL INCLUDE A COORDINATION MEETINGS WITH THE UTILITY TO DISCUSS UTILITY SCHEDULING AND PROGRESS.
3. THE CONTRACTOR SHALL COORDINATE UTILITY WORK EFFORTS, REVIZE WORK SCHEDULES TO ACCOMODATE UTILITY WORK AS WELL AS PEDESTRIAN TRAFFIC AS NECESARY TO ENSURE ADEQUATE COOPERATION BETWEEN THE UTILITY WORK AND THE CONTRACTOR WORK.
4. THE CONTRACTOR SHALL PROVIDE TE REQUIRED TEMPORARY POWER NEEDED TO RUN EQUIPMENT AS NEEDED DURING THE CONSTRUCTION PHASE TILL THE UTILITY POWER HAS BEEN RESTORED.



PLAN

UTILITY SERVICE PLAN



SERVICE DISCONNECT AND METER ELEVATION DETAIL

(TYPICAL FOR WEST AND EAST SIDE)

DRAWING NOTES:

1. NEW SERVICE DISCONNECT AND METER MOUNTED IN A UNISTRUT. REFER TO THIS SHEET FOR ELEVATION DETAIL, COORDINATE WITH UTILITY FOR EXACT LOCATION.
2. TRENCH AND PATCH ROAD TO INSTALL CONDUIT AS REQUIRED. INSTALL CONDUITS IN COORDINATION WITH DECK WORK. REFER TO STRUCTURAL DRAWINGS. FIELD COORDINATE CONDUIT FINAL ROUTING.
3. THE CONTRACTOR SHALL COORDIANTE WITH THE UTILITY FOR ALLOWANCE TO REUSE THE EXISTING CONDUITS FROM THE BRIDGE TO THE NEW METER LOCATION.
4. REFER TO SHEET E04 FOR MAIN BRIDGE ELECTRICAL GENERAL PLAN AND ELEVATION AND ADDITIONAL INFORMATION.
5. REFER TO SHEET E5 FOR LOCATION.
6. REFER TO SHEET E53 FOR SUBMARINE CABLE TERMINAL CABINET INSTALLATION DETAIL.

DETAIL NOTES:

1. FEEDERS BY UTILITY. COORDINATE FINAL NUMBER OF CONDUITS WITH THE LOCAL UTILITY.
2. PROVIDE 400A FEED-THROUGH METER BASE AS PER LOCAL ELECTRIC AUTHORITY STANDARDS AND REQUIREMENTS. PROVIDE GROUNDING FOR THE METER BASE PER POWER COMPANY REQUIREMENTS.
3. PROVIDE 1#1/0 AWG COPPER GND. IN 1"C. METER BASE GROUNDING SHALL BE EXOTHERMICALLY CONNECTED TO 3/4" DIA. BY 20'-0" LONG COPPER-CLAD STEEL GROUND ROD. COORDINATE GROUNDING REQUIREMENTS WITH LOCAL ELECTRIC AUTHORITY.
4. TWO SETS OF: 4#3/0 AWG & 1#1/0 AWG GND IN 4"C.
5. MAIN SERVICE ENTRANCE RATED DISCONNECT, NEMA 3R, 400A, 480V, 3P, 22KAIC, FUSED AT 400A.
6. PROVIDE #1/0 STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" SCH. 40 PVC CONDUIT ATTACHED TO RACK SUPPORT. BOND GROUNDING ELECTRODE CONDUCTOR TO TOP OF GROUND RODS VIA THE EXOTHERMIC WELDING PROCESS. PROVIDE CONNECTION TO GROUND RODS USING #1/0 AWG BARE COPPER CONDUCTOR. PROVIDE MINIMUM TWO 3/4" DIA. BY 10'-0" LONG COPPER-CLAD STEEL GROUND RODS, SPACE ADJACENT CONNECTED GROUND RODS MINIMUM 20' APART. PROVIDE NEUTRAL GROUND BOND IN THE MAIN SERVICE DISCONNECT ONLY.
7. 6" X 6" X 8'-0" CONCRETE POSTS AS REQUIRED. PLACE CONCRETE 6" ALL AROUND AND 6" UNDER ALL CONCRETE SUPPORT POSTS.
8. 3/8" X 8" 316L SS UNISTRUT. BOLT COMPLETELY THROUGH CONCRETE POSTS (TYP.). BOND ALL UNISTRUT WITH #4 STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR. BONDING JUMPERS SHALL BE INSTALLED ON ALL FLATSTOCK AND CONNECTED TO THE RACK GROUNDING SYSTEM.
9. CUT AND CAP CONDUITS 18" FROM ABUTMENT WALL. REMOVE CONDUITS AT BRIDGE APPROACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY	HG	PLANS CK'D.	LT

UTILITY SERVICE CONNECTION PLAN

SHEET E5 OF E83
177

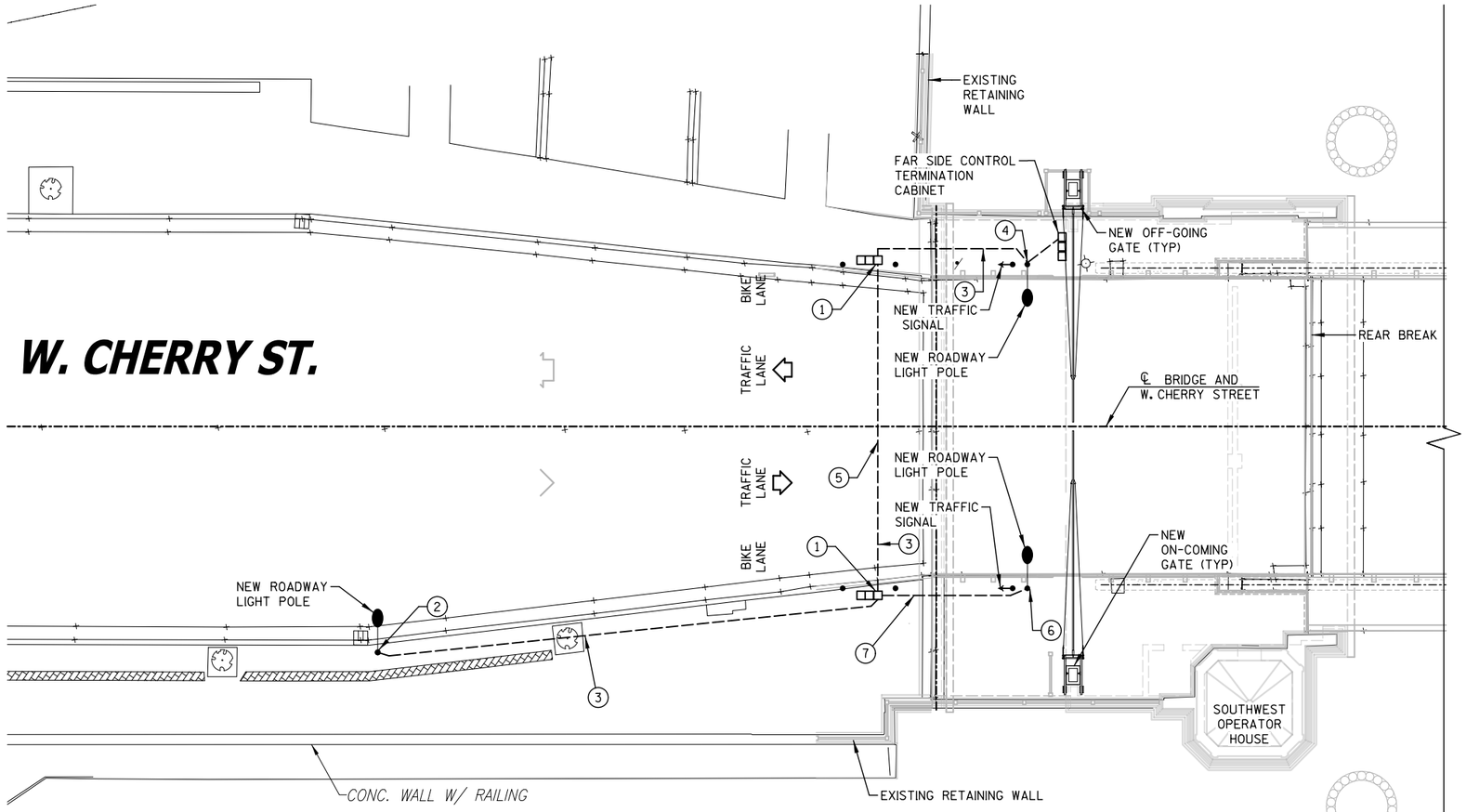
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PLOT DATE: 3/27/2024 PLOT TIME: 5:15:26 PM BATCH PRINT SHEET 6 OF 83

STATE PROJECT NUMBER

2984-26-73



WEST PLAN

DOUBLE-LEAF BASCULE BRIDGE

REFERENCE NOTES:

1. CONTRACTOR PROVIDE & INSTALL 13"X24"X24" PULL BOX (**).
2. POLE MOUTED OUTDOOR CABINET WITH A MANAGED ETHERNET SWITCH AND POWER SUPPLY, CAMERA #6, THERMAL-CAMERA #6.
3. INSTALL A 1" CONDUIT WITH TWO CAT-6A CONDUCTORS (ONE SPARE) AND ONE 1" CONDUIT WITH A 120V CIRCUIT, TERMINATE CONDUITS AND CONDUCTORS AT FAR SIDE CONTROLS TERMINATION CABINET.
4. POLE MOUNTED OUTDOOR CABINET WITH A MANAGED ETHERNET SWITCH AND POWER SUPPLY, SPEAKER #8 AND MICROPHONE #8.
5. THREE CAT-6A (ONE SPARE) CONDUCTORS IN A 1-1/2" CONDUIT AND ONE 1" CONDUIT WITH 120V CIRCUIT. ROUTE CONDUIT WITH CAT-6A TO FAR SIDE CONTROL TERMINATION CABINET. ROUTE CONDUIT WITH 120V CIRCUIT TO POWER SOURCE. FIELD COORDINATE EXACT CONDUIT ROUTING.
6. POLE MOUNTED OUTDOOR CABINET WITH A MICROPHONE.
7. INSTALL A 1" CONDUIT WITH TWO CAT-6A CONDUCTORS (ONE SPARE) AND ONE 1" CONDUIT WITH A 120V CIRCUIT.

GENERAL NOTES:

1. REFER TO SHEETS E-50 FOR COMMUNICATIONS DIAGRAM.
2. ITEMS REFERENCE NOTES THAT END WITH (**) ARE ITEMS IN CATEGORY 0030.
3. REFER TO SHEET E64 FOR STREET LIGHTING WEST PLAN.
4. DURING THE SHOP DRAWINGS SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A DRAWING WITH ALL POLE MOUNTED CCTV HARDWARE AS INDICATED ON REFERENCE NOTES 2 AND 3 OF THIS SHEET. THE DRAWING SHALL SHOW ELEVATION OF EQUIPMENT INCLUDED PROPOSED MOUNTING METHODS AND MOUNTING HARDWARE. POLE SHALL BE DRILLED TO ACCOMODATE CONDUCTORS COMMING FROM THE INTERIOR OF THE POLE TO WHERE THE EQUIPMENT IS LOCATED. ALL POLE MOUNTED AND HARDWARE SHALL BE COORDINATED WITH THE CCTV SUPPLIER FOR PROPER INSTALLATION OF THE HARDWARE. NO CONDUCTORS SHALL BE EXPOSED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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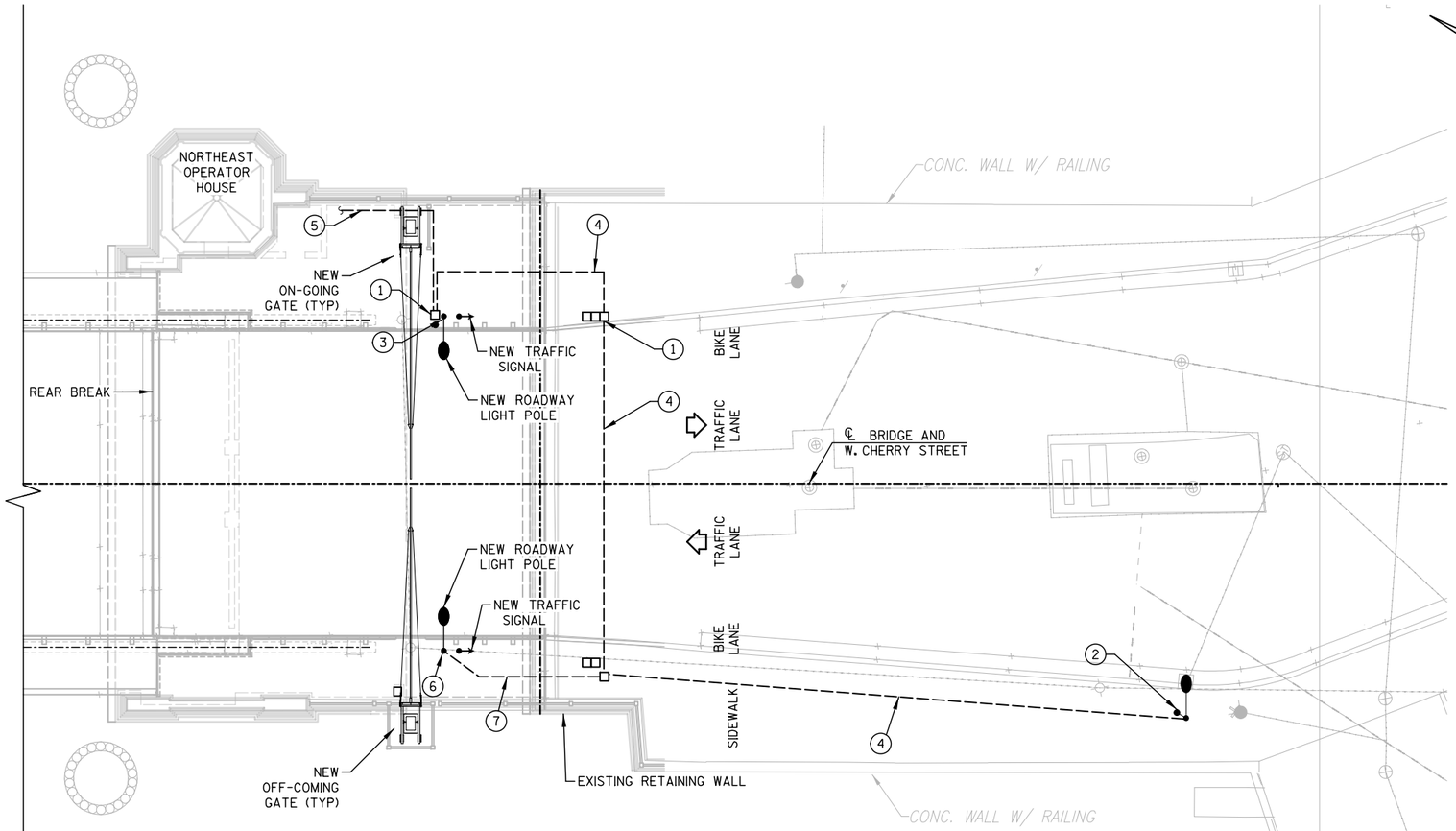
COMMUNICATION
WEST PLAN

SHEET E6 OF E83
178

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EAST PLAN

DOUBLE-LEAF BASCULE BRIDGE

GENERAL NOTES:

1. REFER TO SHEETS E-50 FOR COMMUNICATIONS DIAGRAM.
2. ITEMS REFERENCE NOTES THAT END WITH (**) ARE ITEMS IN CATEGORY 0030.
3. REFER TO SHEET E65 FOR STREET LIGHTING WEST PLAN.
4. DURING THE SHOP DRAWING SUBMITTAL, THE CONTRACTOR SHALL PROVIDE A DRAWING WITH ALL POLE MOUNTED CCTV HARDWARE AS INDICATED ON REFERENCE NOTES 2 AND 3 OF THIS SHEET. THE DRAWING SHALL SHOW ELEVATIONS OF EQUIPMENT, INCLUDING PROPOSED MOUNTING METHODS AND MOUNTING HARDWARE. POLE SHALL BE DRILLED TO ACCOMODATE CONDUCTORS COMING FROM THE INTERIOR OF THE POLE TO WHERE EQUIPMENT IS LOCATED. ALL POLE MOUNTED HARDWARE SHALL BE COORDINATED WITH THE CCTV SUPPLIER FOR PROPER INSTALLATION OF THE HARDWARE. NO CONDUCTOR SHALL BE EXPOSED.

REFERENCE NOTES:

1. CONTRACTOR PROVIDE & INSTALL 13"X24"X24" PULL BOX (**).
2. POLE MOUNTED OUTDOOR CABINET WITH A MANAGED ETHERNET SWITCH AND POWER SUPPLY, CAMERA #1, THERMAL CAMERA #1.
3. POLE MOUNTED OUTDOOR CABINET WITH MANAGED ETHERNET SWITCH AND POWER SUPPLY, SPEAKER #3 AND MICROPHONE #3.
4. TWO CAT-6A CABLES (ONE SPARE) IN A 1" CONDUIT AND ONE 1" CONDUIT WITH 120V CIRCUIT, FIELD COORDINATE EXACT CONDUIT ROUTING.
5. THREE CAT-6A (ONE SPARE) IN A 1-1/2" CONDUIT AND ONE 1" CONDUIT WITH 120V CIRCUIT, ROUTE CONDUIT WITH CAT-5A CABLES TO CONTROL CCTV/PA SYSTEM CABINET. TERMINATE POWER CONDUIT AT POWER SOURCES.
6. POLE MOUNTED OUTDOOR CABINET WITH A MICROPHONE.
7. INSTALL A 1" CONDUIT WITH TWO CAT-6A CONDUCTORS (ONE SPARE) AND ONE 1" CONDUIT WITH A 120V CIRCUIT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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COMMUNICATION EAST PLAN

SHEET E7 OF E83
179

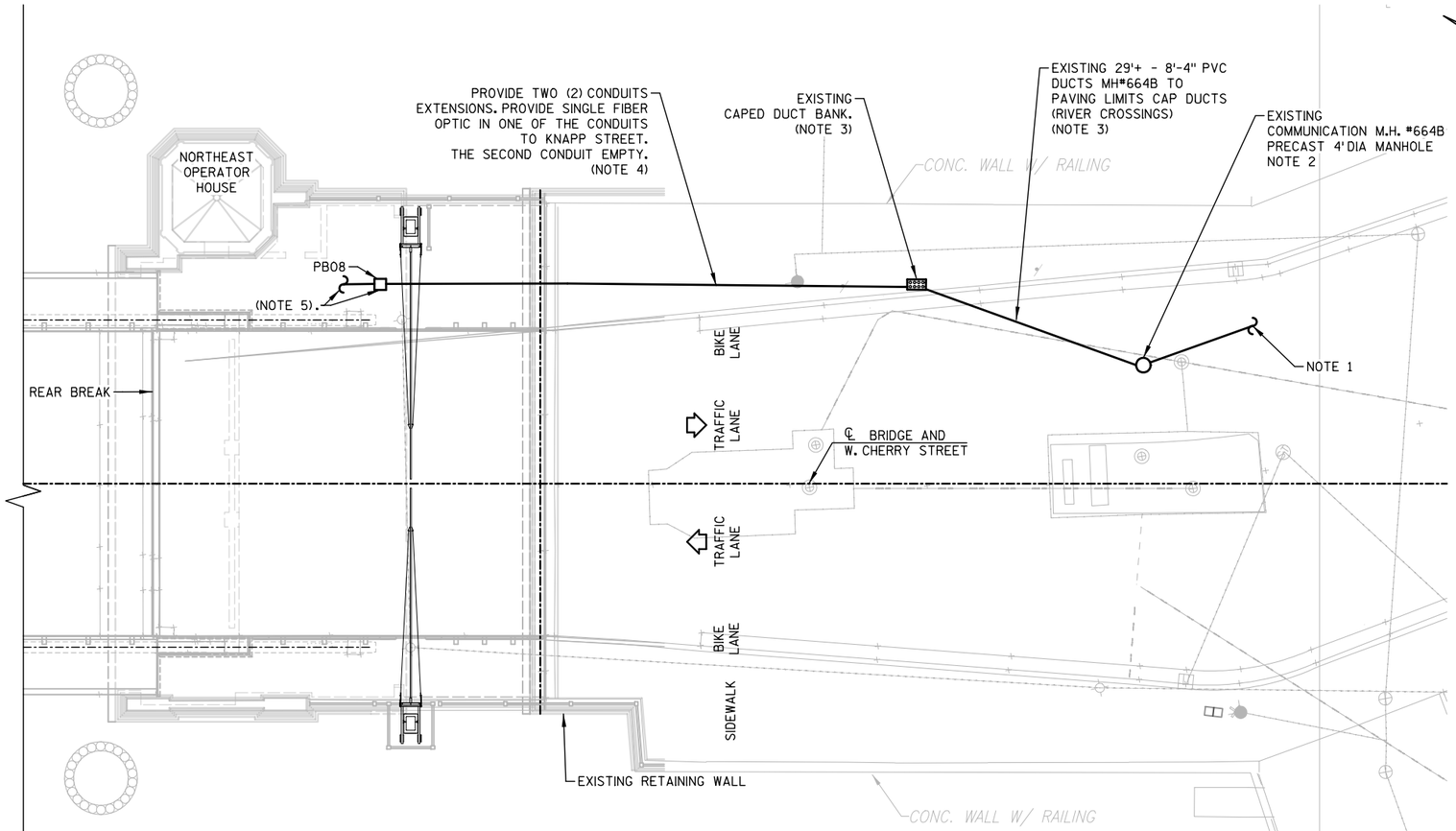
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STATE PROJECT NUMBER

2984-26-73



EAST PLAN

DOUBLE-LEAF BASCULE BRIDGE

GENERAL NOTE:

1. ROUTE FOR CONDUITS ARE SHOWN FOR REFERENCE PURPOSES ONLY.THE CONTRACTOR SHALL FIELD COORDINATE EXACT ROUTING OF THE CONDUITS ON STRUCTURAL ELEMENTS INCLUDING THRU WALLS.

REFERENCE NOTES:

1. PROVIDE FIBER OPTIC CABLE THRU EXISTING COMMUNICATION NETWORK TO KNAPP STREET AS SHOWN ON SHEETS E78 THRU E81.
2. CONTRACTOR TO COORDINATE EXACT LOCATION OF MH 664B WITH THE CITY OF MILKWAUKEE.
3. CONTRACTOR TO COORDINATE EXACT LOCATION OF EXISTING 8-4" CONDUITS TERMINATED AT PAVING LIMITS WITH THE CITY OF MILKWAUKEE. TRACE AND FIELD COORDINATE EXACT CONDUIT LOCATION. CONTRACTOR TO AND TRENCH EXISTING PAVEMENT, LOCATE EXISTING CAPPED CONDUITS , REMOVE CAP.
4. PROVIDE AND EXTENSION FITTING, AND EXTEND THE TWO (2) NORTHERN MOST EXISTING CONDUITS INTO THE BRIDGE COMMUNICATION JUNCTION BOX SHOWN ON SHEET E10 KEY NOTES 13 AND 14. PATCH ROAD IN KIND WITH EXISTING ROAD. REFER TO WISCONSIN DOT STANDARD SPECIFICATIONS SECTION 651 - GENERAL REQUIREMNETS FOR ELECTRICAL WORK FOR ADDITIONAL INFORMATION.
5. REFER TO SHEET E10 FOR ROUTING AND ADDITIONAL INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

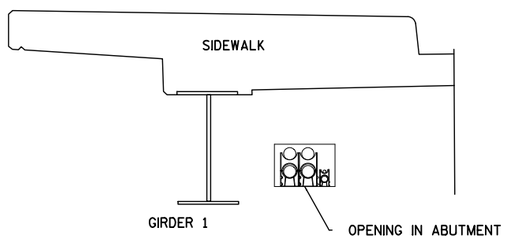
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CUC PLANS
BRIDGE

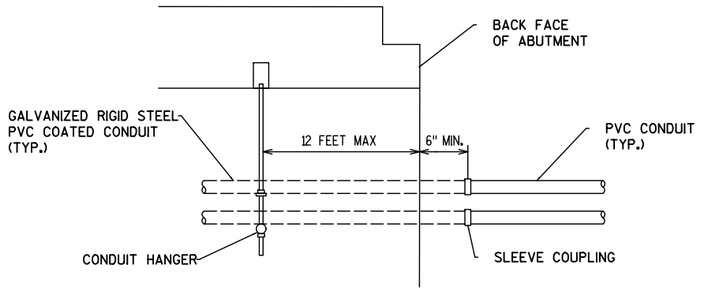
SHEET E8 OF E83
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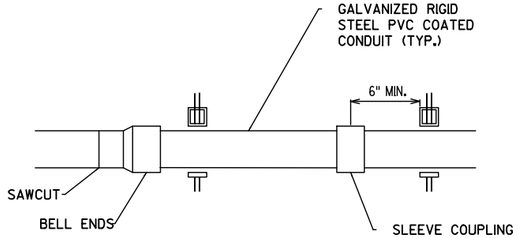
LOOKING NORTHEAST



LOOKING SOUTH

CITY COMMUNICATION AND POWER HANGER PACKAGE THROUGH ABUTMENT

N.T.S.

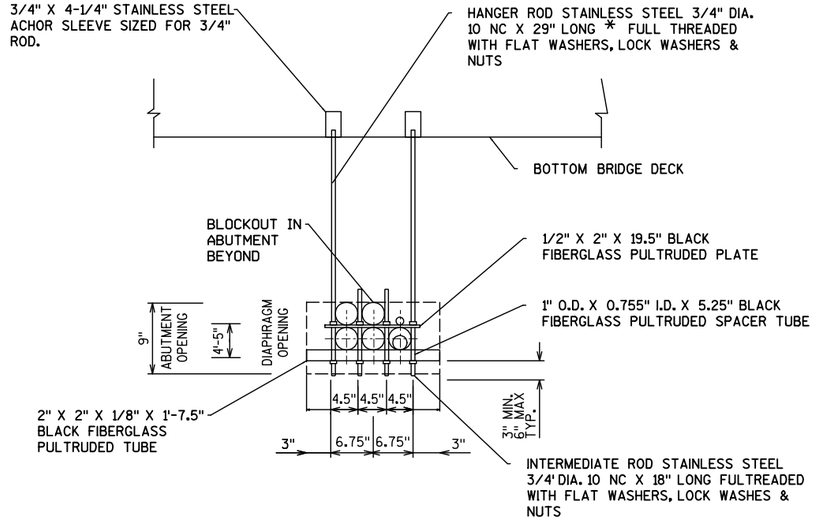


CLEARANCE FOR SLEEVE COUPLINGS AND BELL ENDS

N.T.S.

NOTES:

1. A BELLED END OR COUPLING SHOULD BE NO CLOSER THAN 6" ON EITHER SIDE OF A SUPPORT AS SHOWN ABOVE. A TAPE MEASURE CAN BE USED TO PREDETERMINE THESE LOCATIONS AND THE CONDUITS CAN BE SAW CUT TO THE PROPER LENGTH BEFORE IT IS THREADED THROUGH THE HANGERS AS SHOWN ABOVE.
2. ABUTMENT OPENING SHALL BE ADJUSTED AS SHOWN ON THIS SHEET.
3. HANGERS TO SUPPORT CONDUIT SHALL BE PROVIDED AT EVERY 12-FEET THROUGH OUT THE OF THE EXPOSED CONDUIT.
4. ALL EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL PVC COATED

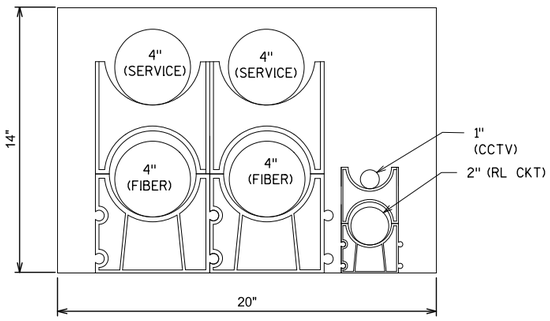


TYPICAL DUCT CITY COMMUNICATION AND POWER HANGER PACKAGE

N.T.S.

* THE CONTRACTOR SHALL FIELD VERIFY HANGER LENGTHS IN ORDER TO AVOID CONFLICTS WITH DIAPHRAGM CROSSING.

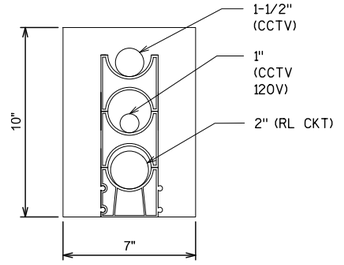
NOTE:
NORTHEAST ABUTMENT SHOWN. TYPICAL FOR ALL OTHER ABUTMENT SECTION. FIELD MODIFY AS REQUIRED.



NORTH EAST ABUTMENT

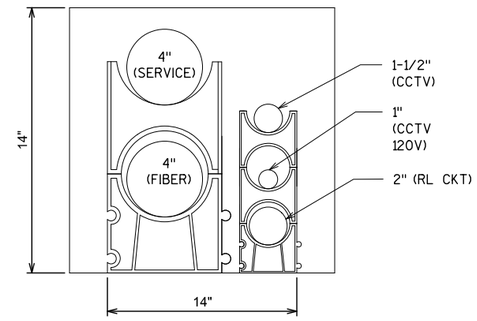
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NOTE:
CONDUIT SPACERS SHALL BE AS MANUFACTURED BY CALON, MODEL SNAP-LOC RO EQUAL, SIZED AS REQUIRED.



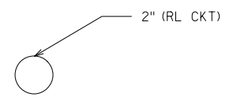
SOUTH WEST ABUTMENT

N.T.S.



NORTH WEST ABUTMENT

N.T.S.



SOUTH EAST ABUTMENT

N.T.S.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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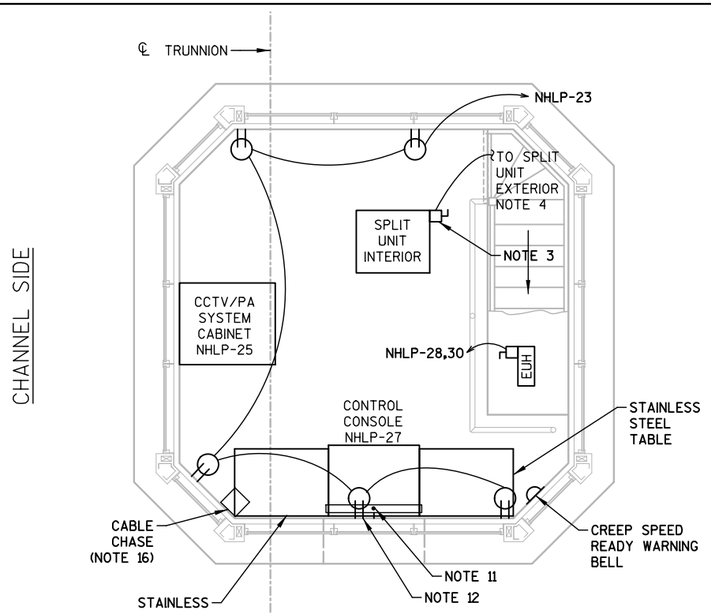
CUC AND POWER DETAILS

SHEET E9 OF E83
181

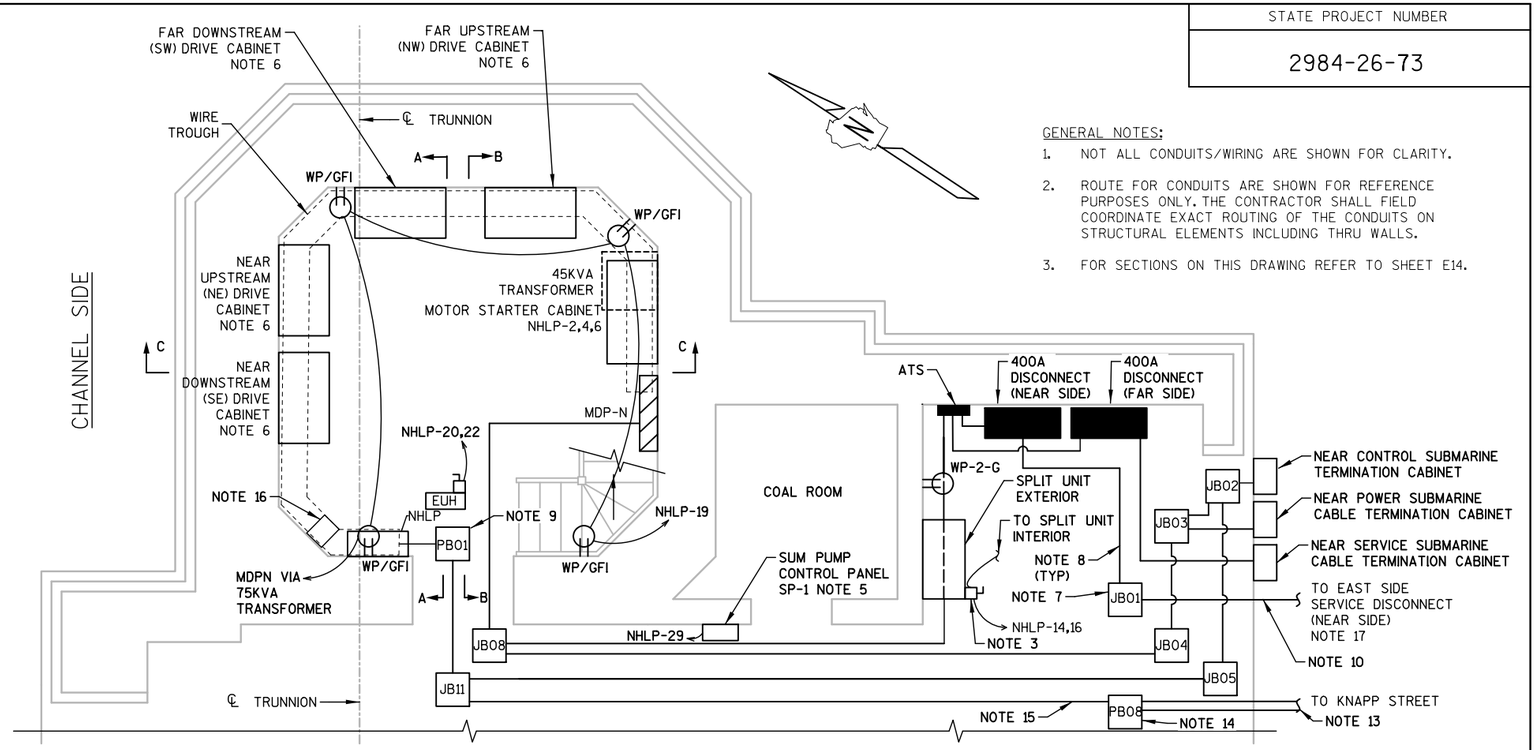
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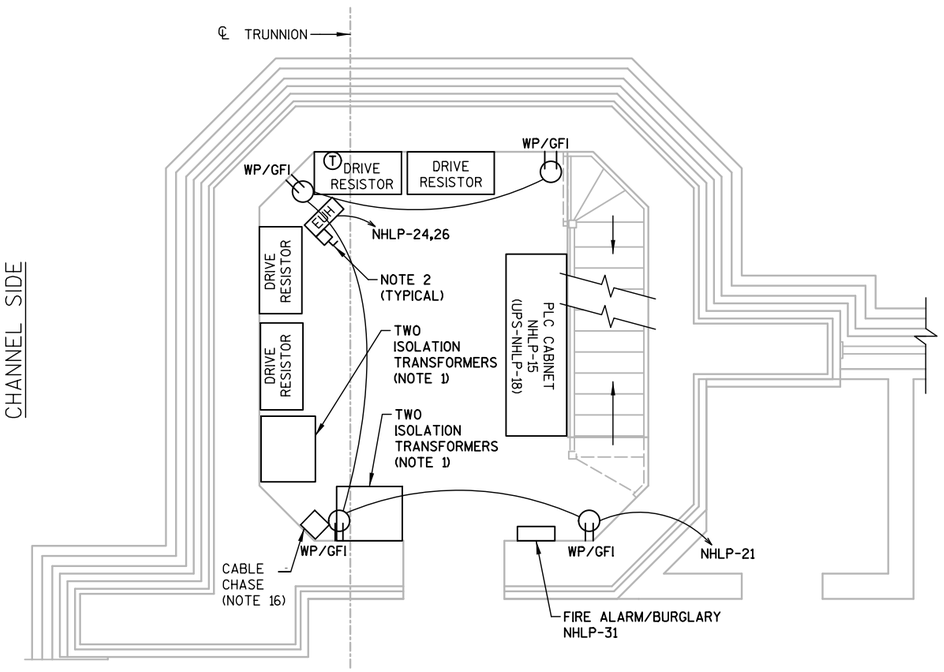
OPERATOR HOUSE CONTROL ROOM LEVEL ELECTRICAL PLAN



OPERATOR HOUSE MACHINERY ROOM LEVEL ELECTRICAL PLAN

GENERAL NOTES:

1. NOT ALL CONDUITS/WIRING ARE SHOWN FOR CLARITY.
2. ROUTE FOR CONDUITS ARE SHOWN FOR REFERENCE PURPOSES ONLY. THE CONTRACTOR SHALL FIELD COORDINATE EXACT ROUTING OF THE CONDUITS ON STRUCTURAL ELEMENTS INCLUDING THRU WALLS.
3. FOR SECTIONS ON THIS DRAWING REFER TO SHEET E14.



OPERATOR HOUSE ENTRY LEVEL ELECTRICAL

NOTES:

1. TWO (2) DRIVE ISOLATION TRANSFORMERS WALL STACKED. PROVIDE THE REQUIRED MOUNTIG HARWARE.
2. FACTORY MOUNTED AND WIRED INTEGRAL DISCONNECT PROVIDED BY EQUIPMENT MANUFACTURER.
3. DISCONNECT AND STARTER PROVIDED BY EQUIPMENT MANUFACTURER.
4. INTERIOR UNIT IS FED FROM OUDOOR UNIT.
5. FIELD VERIFY FINAL LOCATION.
6. CKTS FOR SERVICE DRIVES RECEPTACLES & LTG ARE NOT SHOWN SUPPLY POWER FROM NHLP-13.
7. PROVIDE A SERVICE JUNCTION BOX AT APROXIMATE LOCATION OF THE EXISTING JUNCTION BOX TO BE REMOVED.
8. SUPPORT CONDUIT AT CEILING.
9. PROVIDE A 24-INCH SQUARE BY 18" PULL BOX CEILING MOUNTED.
10. COORDINATE POWER AND GROUNDING CONDUIT AND CONDUCTORS ROUTING WITH THE UTILITY.
11. PROVIDE A CEILING MOUNTED MONITOR HARDWARE. FIELD COORDINATE THE EXACT LOCATION.
12. PROVIDE A WALL OR CEILING MOUNTED RECEPTACLE FOR CCTV MONITOR. FIELD COORDINATE EXACT LOCATION.
13. PROVIDE TWO 4" CONDUIT EXTENTION FROM EXISTING CAPPED DUCT BANK. PROVIDE THE REQUIRED HARDWARE TO SECURE CONDUIT. PROVIDE SINGLE FIBER OPTIC TO KNAPP ST BRIDGE. REFER TO SHEETS E8 FOR ROUTING AND ADDITIONAL INFORMATION.
14. PROVIDE A CEILING MOUNTED 18" X 18" X 16" NEMA 4X PULL BOX WITH SCREW COVER. PROVIDE THE REQUIRED HARDAWARE TO MOUNT BOX.
15. PROVIDE A 1-1/2 CONDUIT TO CABLE CHASE IN THE ELECTRICAL ROOM. RUN FIBER OPTIC CABLE THRU CHASE UP TO THE CCTV/PA SYSTEM CABINET IN THE ELECTRICAL ROOM. PROVIDE THE REQUIRED HARDWARE TO SECURE CONDUIT.
16. REMOVE EXISTING WIRE CHASE UP TO THE CONTROL ROOM. PROVIDE NEW STEEL CHASE 8" X 8" X LENGTH AS REQUIRED. EXTEND CEILING CONCRETE OPENING AS REQUIRED. EXTEND NEW CHASE TO NEW WIRE WAY.
17. REFER TO SHEET E05 FOR SERVICE FUSE DISCONECT LOCATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

EAST TOWER POWER PLANS

SHEET E10 OF E83
182

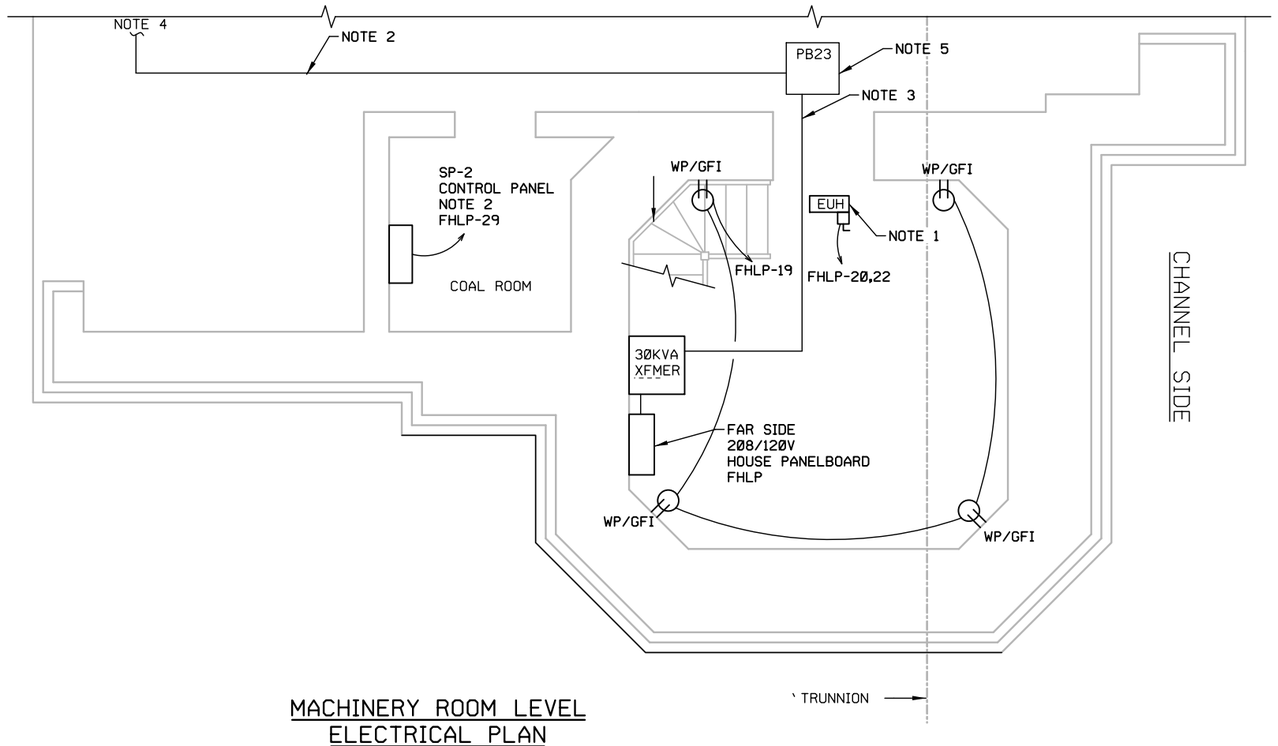
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BATCH PRINT SHEET 11 OF 83

STATE PROJECT NUMBER

2984-26-73



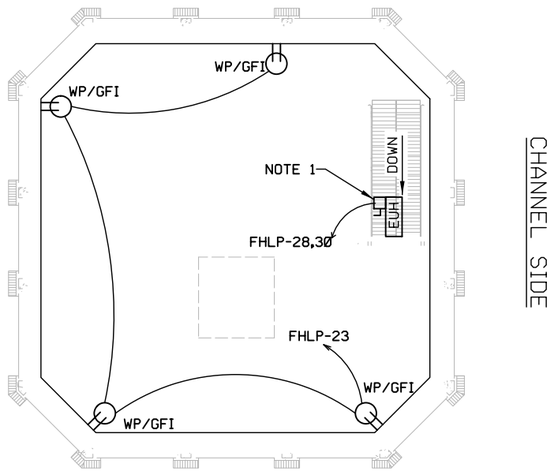
MACHINERY ROOM LEVEL
ELECTRICAL PLAN

GENERAL NOTE:

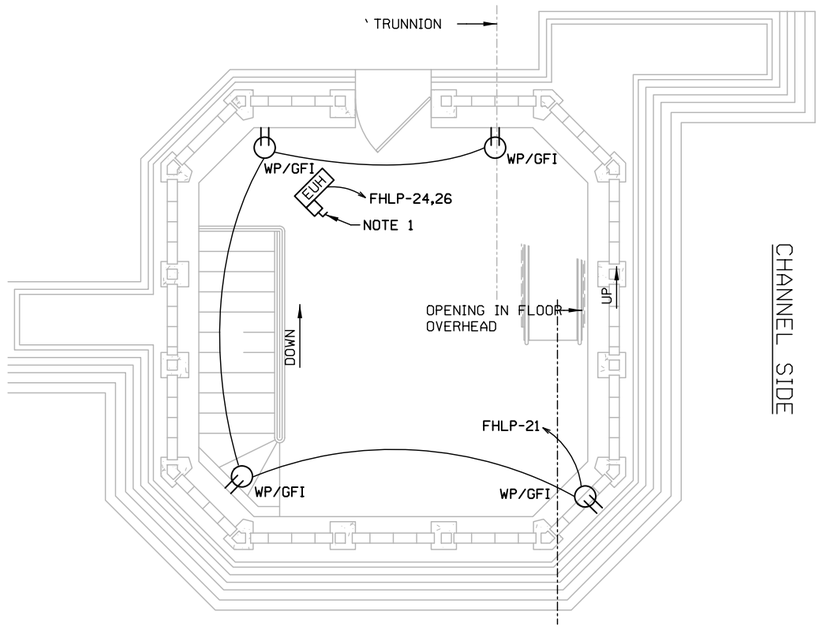
1. NO ALL CONDUITS/WIRING ARE SHOWN FOR CLARTY PURPOSES.

NOTES:

1. FACTORY MOUNTED AND WIRED INTEGRAL DISCONNECT PROVIDED BY EQUIPMENT MANUFACTURER.
2. SUPPORT CONDUIT AT CEILING.
3. RUN CONDUIT THRU WALL ABOVE THE DOOR AS REQUIRED.
4. RUN CONDUIT CEILING MOUNTED TO FAR SIDE SERVICE TERMINATION CABINET. SEE DRAWING E04 FOR TERMINATION CABINET LOCATION.
5. ONLY BOXES RELATED TO CONNECTIONS IN THIS DRAWING ARE SHOWN. REFER TO SHEET E11 FOR ADIITIONAL BOXES LOCATIONS AND INFORMATION.



CONTROL ROOM LEVEL
ELECTRICAL PLAN



ENTRY LEVEL
ELECTRICAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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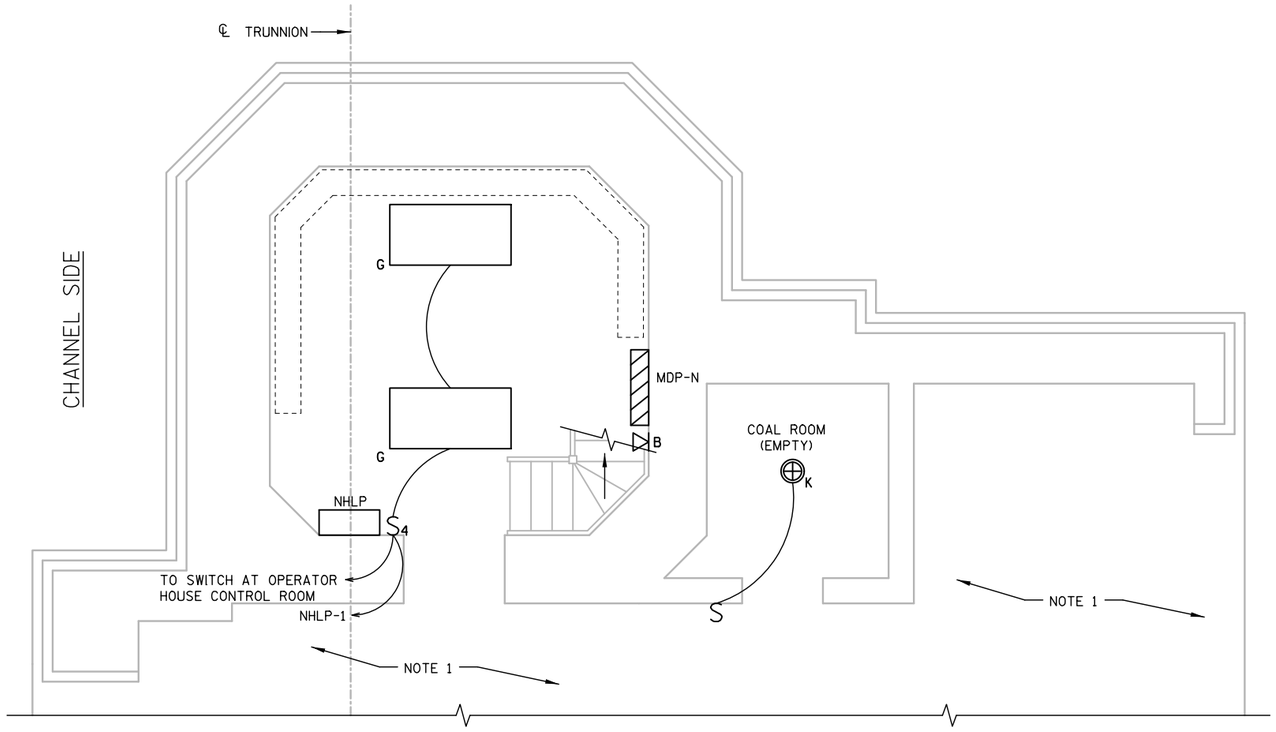
WEST TOWER
POWER PLANS

SHEET E11 OF E83
183

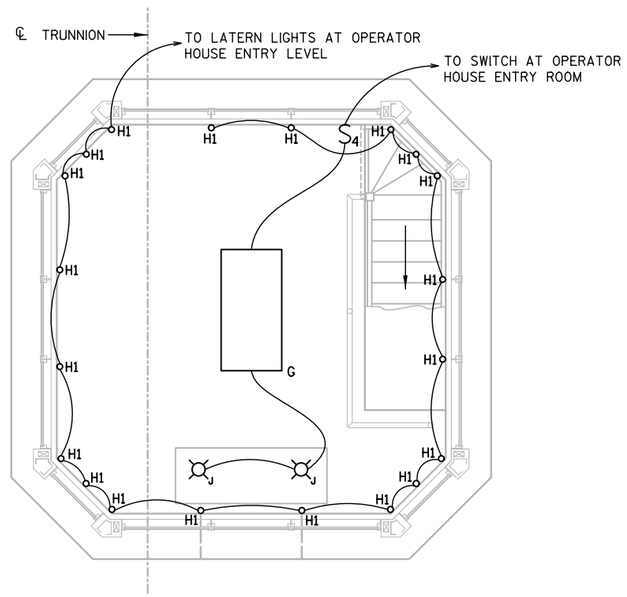
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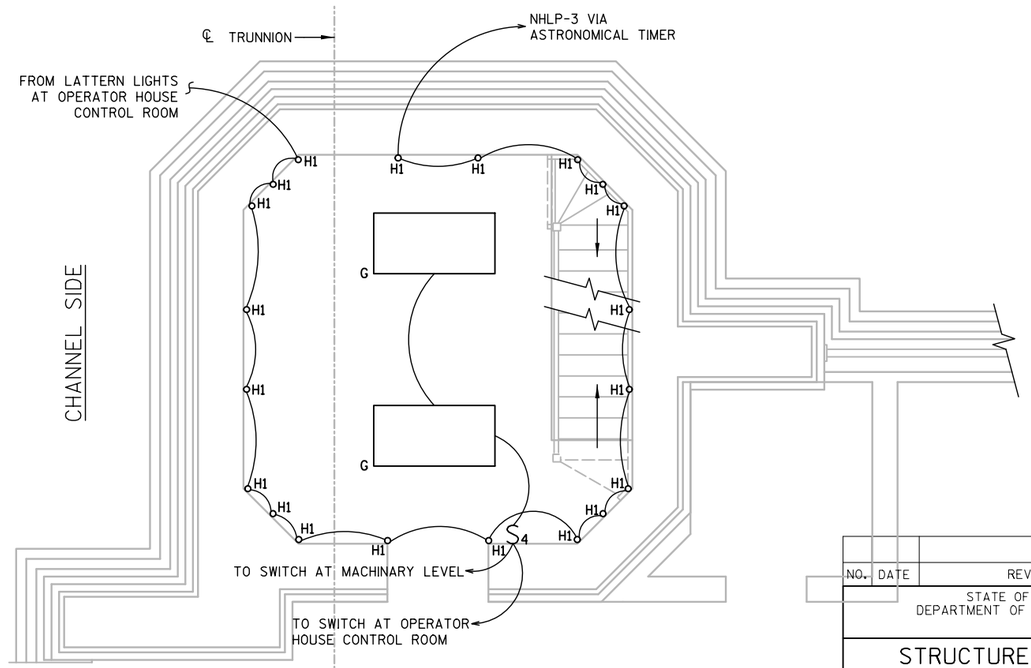
1. REFER TO SHEET E16 FOR LIGHTING IN THIS AREA.



OPERATOR HOUSE
MACHINERY ROOM LEVEL
ELECTRICAL PLAN



OPERATOR HOUSE
CONTROL ROOM LEVEL
ELECTRICAL PLAN



OPERATOR HOUSE
ENTRY LEVEL
ELECTRICAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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EAST TOWER
LIGHTING LEVEL
PLANS

SHEET E12 OF E83
184

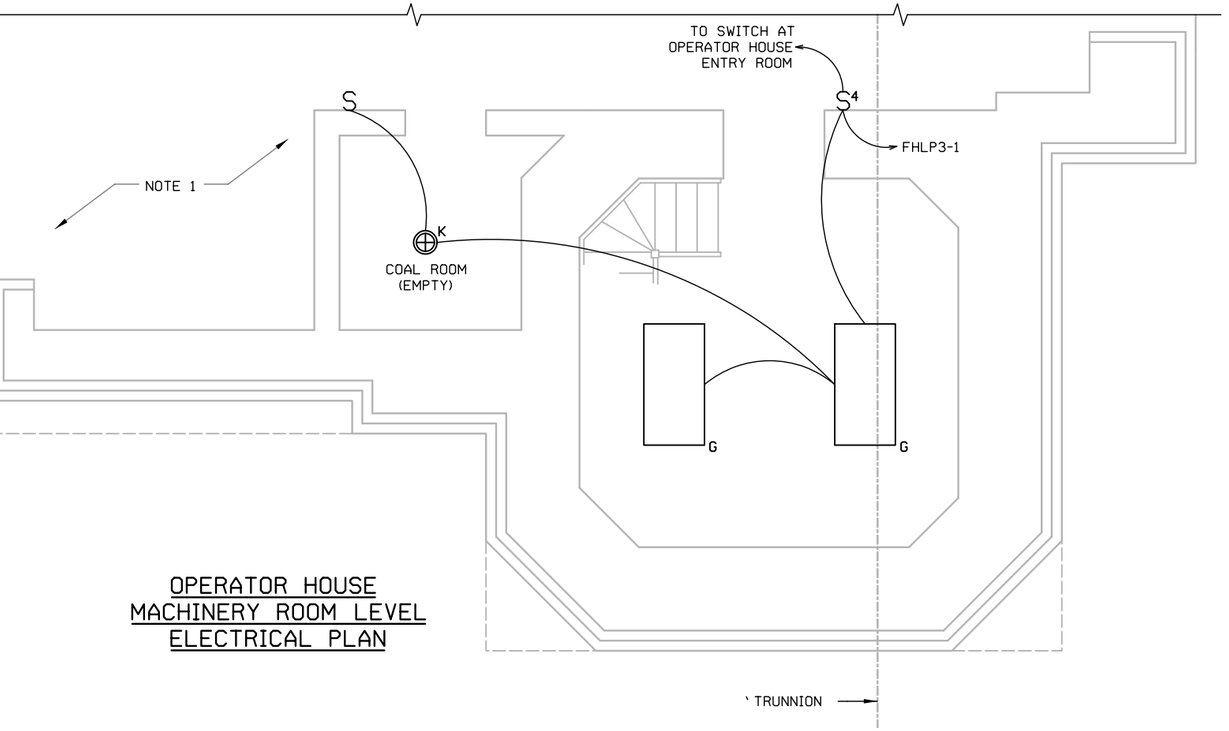
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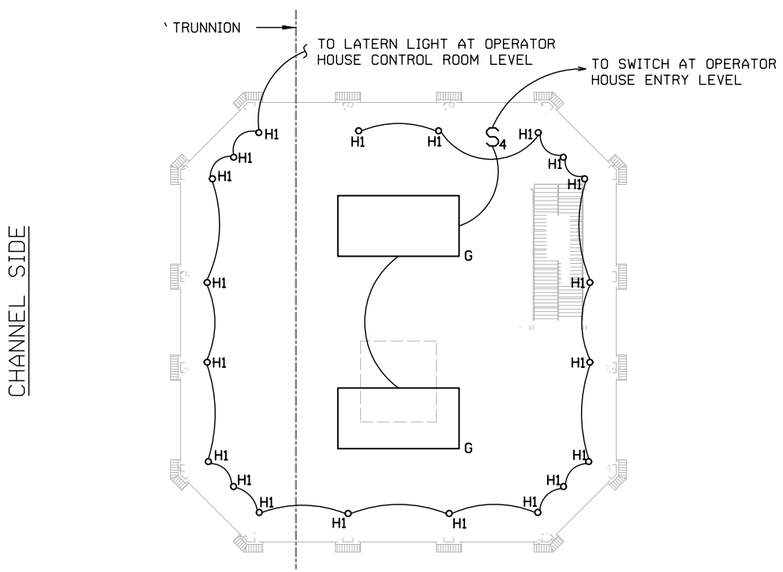
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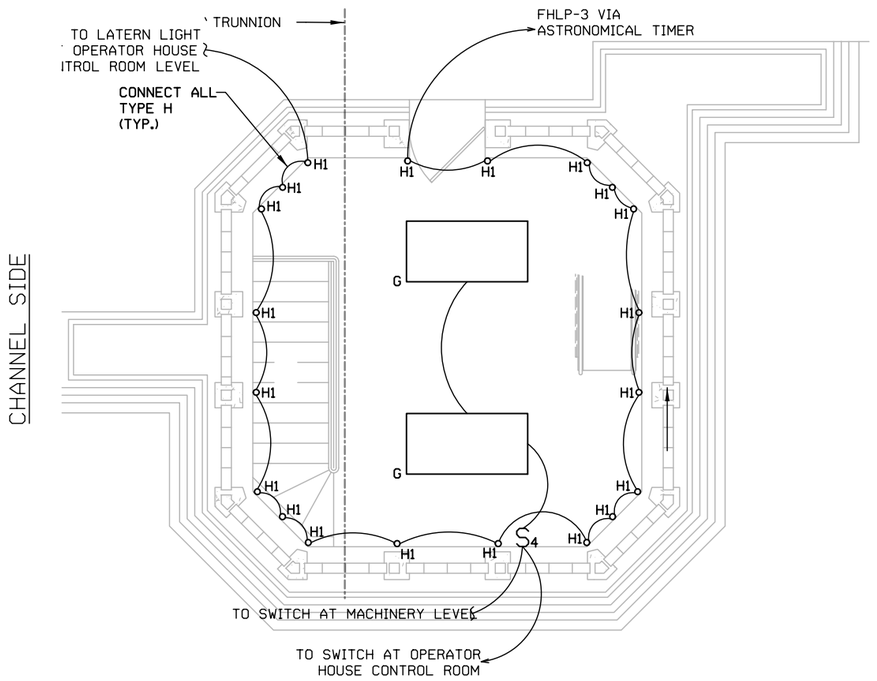
1. REFER TO SHEET E16 FOR LIGHTING IN THIS AREA.



OPERATOR HOUSE
MACHINERY ROOM LEVEL
ELECTRICAL PLAN



OPERATOR HOUSE
CONTROL ROOM LEVEL
ELECTRICAL PLAN



OPERATOR HOUSE
ENTRY LEVEL
ELECTRICAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

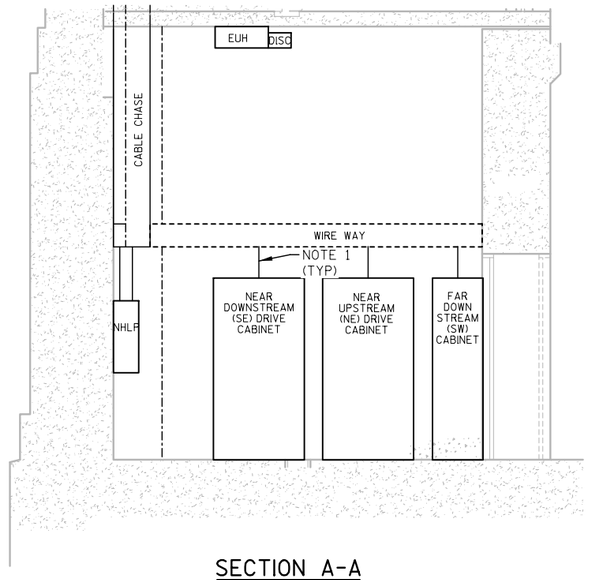
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WEST TOWER
LIGHTING LEVEL
PLANS

SHEET E13 OF E83
185

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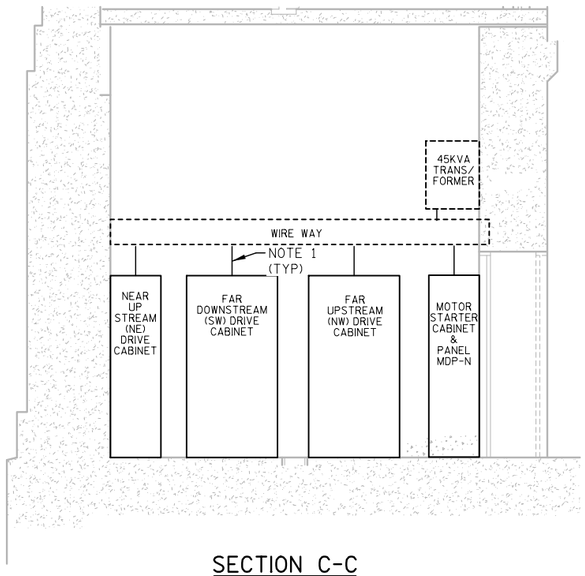
SECTION A-A
(SEE SHEET E10)

GENERAL NOTES:

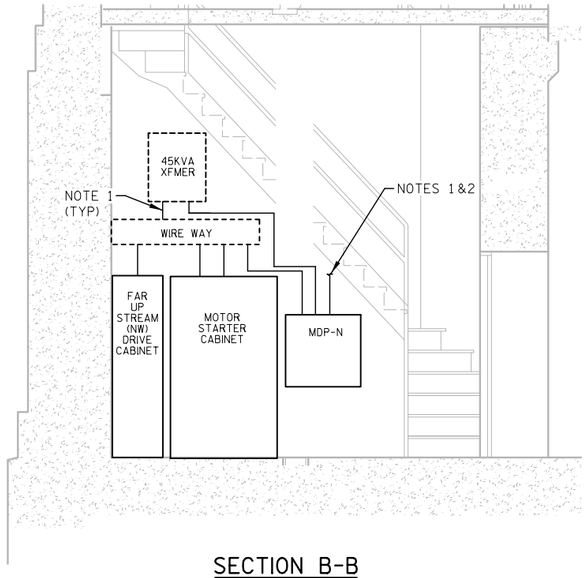
1. NOT ALL CONDUITS ARE SHOWN FOR CLARITY.

KEYED NOTES:

1. REFER TO SINGLE LINE ON SHEETS E19 FOR CONDUITS AND WIRING AND SHEET E10 FOR ROUTING.
2. TO ATS LOCATED NEXT TO COAL ROOM. REFER TO SHEET E10 FOR LOCATION. FIELD COORDINATE EXACT CONDUIT ROUTING.



SECTION C-C
(SEE SHEET E10)



SECTION B-B
(SEE SHEET E10)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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CONTROL HOUSE SECTIONS

SHEET E14 OF E83
186

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STATE PROJECT NUMBER

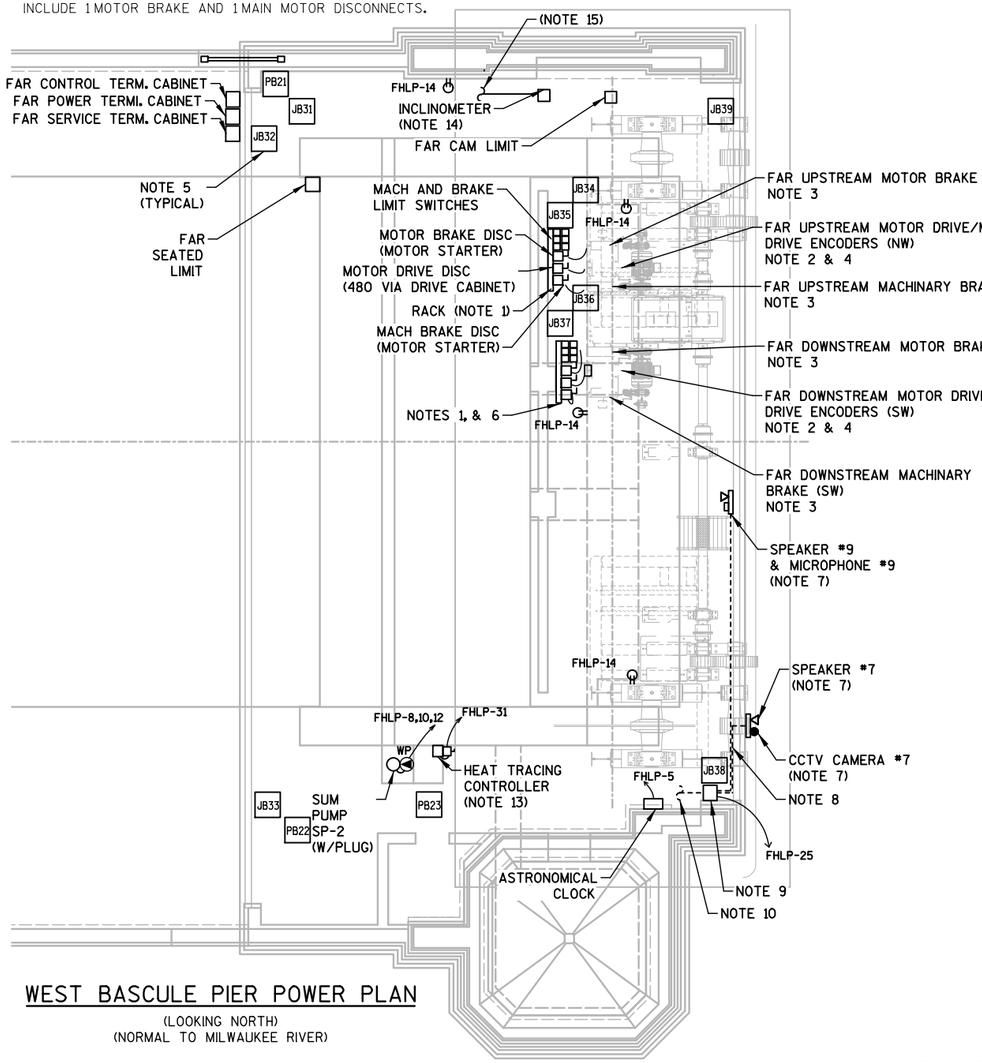
2984-26-73

NOTES:

1. INSTALL DISCONNECTS SWITCHES AGAINST BACK RAIL ON STAINLESS STEEL RACK.
2. REFER TO SINGLE LINE DIAGRAM SHEET E19 FOR CONNECTIONS OF MOTOR DRIVES.
3. REFER TO SINGLE LINE DIAGRAM SHEET E20 FOR CONNECTIONS OF MACHINERY BRAKE MOTORS.
4. REFER TO MECHANICAL DRAWINGS FOR CONNECTION OF MOTOR DRIVE ENCODERS.
5. ALL LOCATIONS ARE APPOXIMATE. INSTALL BOXES TO AVOID CONFLICTS AND PROVIDE ACCESIBILITY. FIELD COORDINATE EXACT LOCATION. PROVIDE THE REQUIRED SUPPORT. REFER TO SHEET E42 FOR CONDUCTOR AND CONDUITS SIZES.
6. DISCONNECT LABELS NOT SHOWN FOR CLARITY. DISCONNECTS INCLUDE 1 MOTOR BRAKE AND 1 MAIN MOTOR DISCONNECTS.

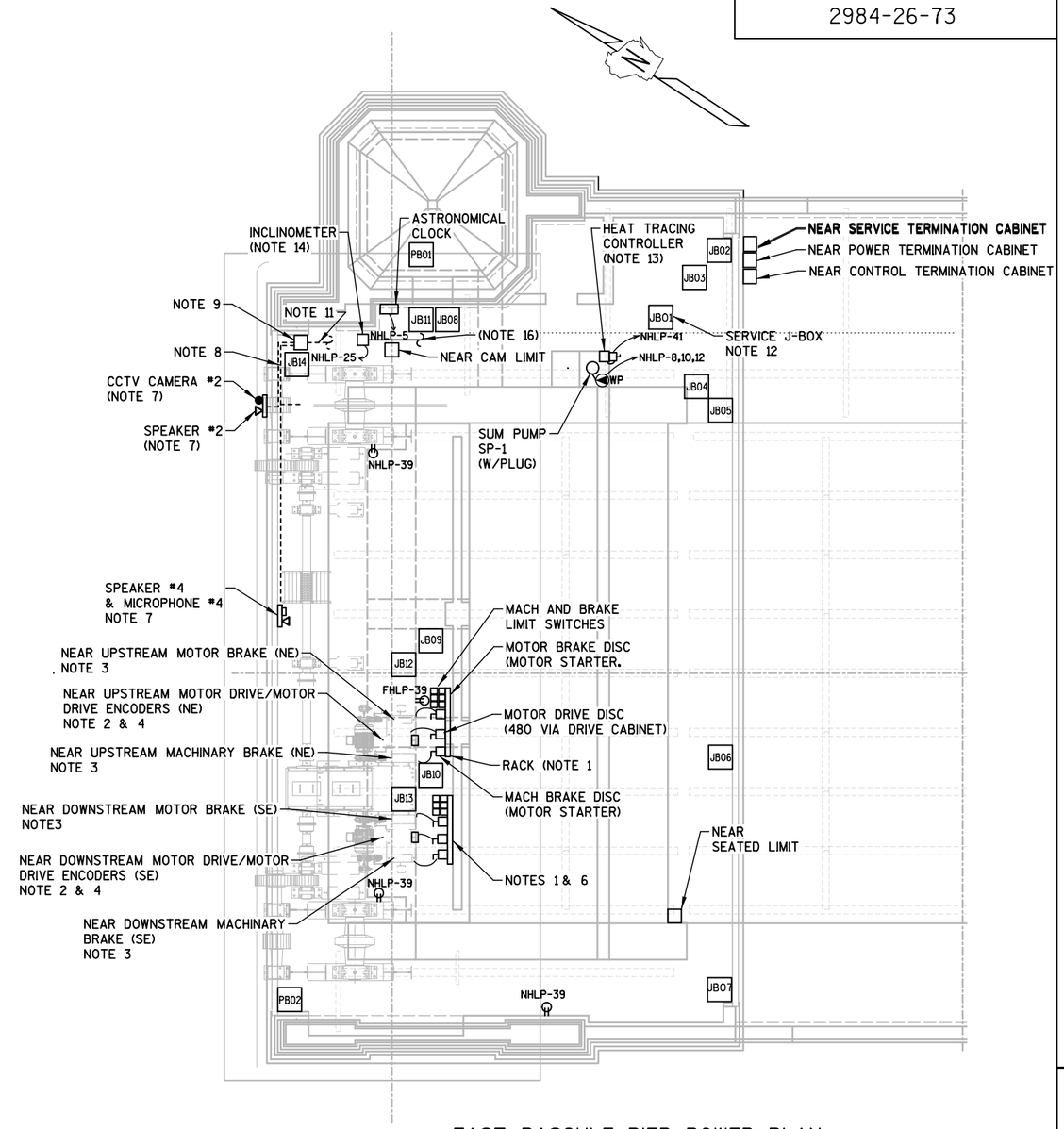
GENERAL NOTES:

1. ALL RECEPTACLES SHOWN ON THIS DRAWINGS SHALL BE WEATHER PROOF, GFI TYPE. PROVIDE THE REQUIRED SUPPORT AS REQUIRED. FIELD COORDINATE RECEPTACLE EXACT LOCATIONS AND FINAL CONDUIT AND CONDUCTORS ROUTING.
2. CONDUIT AND CONDUCTOR FOR END MONITORING DEVICES (SWITCHES, CAMLOCK ETC) NOT SHOWN. FIELD COORDINATE EXACT ROUTING. REFER TO SHEETS E43 THRU E49 FOR SCHEMATICS AND CONDUIT AND CONDUCTORS SCHEDULES.



WEST BASCULE PIER POWER PLAN

(LOOKING NORTH)
(NORMAL TO MILWAUKEE RIVER)



EAST BASCULE PIER POWER PLAN

(LOOKING NORTH)
(NORMAL TO MILWAUKEE RIVER)

7. MOUNT HARDWARE ON A UNISTRUT RACK BOLTED TO THE WALL (SIMILAR TO TERMINATION CABINETS).
8. FOUR CAT-6A CONDUCTORS IN A 1-1/2" CONDUIT.
9. OUTDOOR CABINET WITH MANAGED ETHERNET SWITCH AND POWER SUPPLY.
10. TWO CAT-6A (ONE SPARE) IN 1" CONDUIT AND ONE 1" CONDUIT WITH A 120 V CIRCUIT. TERMINATE CAT-6A CONDUIT TO TERMINATION CABINET. TERMINATE CONDUIT AT POWER SOURCES.
11. TWO CAT-6A (ONE SPARE) IN 1" CONDUIT AND ONE 1" CONDUIT WITH A 120 V CIRCUIT. TERMINATE CAT-6A CONDUIT AT CONTROL ROOM CCTV/PA CABINET. TERMINATE CONDUIT AT POWER SOURCES.
12. NEW SERVICE ENTRANCE SERVICE J-BOX AT LOCATION OF EXISTING SERVICE ENTRANCE J-BOX TO BE DEMOLISH. VERIFY IN FIELD.
13. FIELD COORDINATETHE EXACT LOCATION OF THE HEAT TRACING CONTROLLER. PROVIDE THE REQUIRED MOUNTING HARDWARE. INSTALL HEAT TAPE AROUND SUM PUMP DISCHARGE LINE AS PER THE PROPOSED MANUFACTURERS INSTALLATION REQUIREMENTS.
14. PROVIDE THE REQUIRED SUPPORT. FIELD COORDINATE EXACT LOCATION.
15. PROVIDE A 3/4" CONDUITWITH ONE #16 AND TWISTED PAIR CONDUCTOR. TERMINATE CONDUIT AND CONDUCTOR AT TERMINATION CABINET.
16. PROVIDE A 3/4" CONDUIT WITH ONE #16 AND TWISTED PAIR CONDUCTOR . TERMINATE CONDUIT AND CONDUCTOR AT PL CABINET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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WEST & EAST BASCULE PIER POWER PLANS

SHEET E15 OF E83
187

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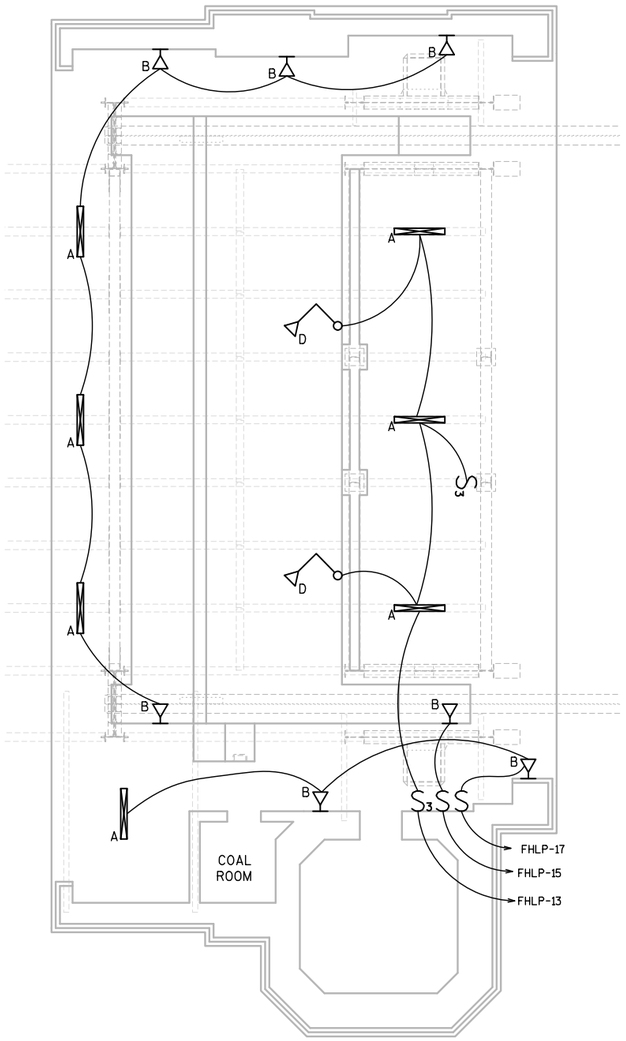
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STATE PROJECT NUMBER

2984-26-73

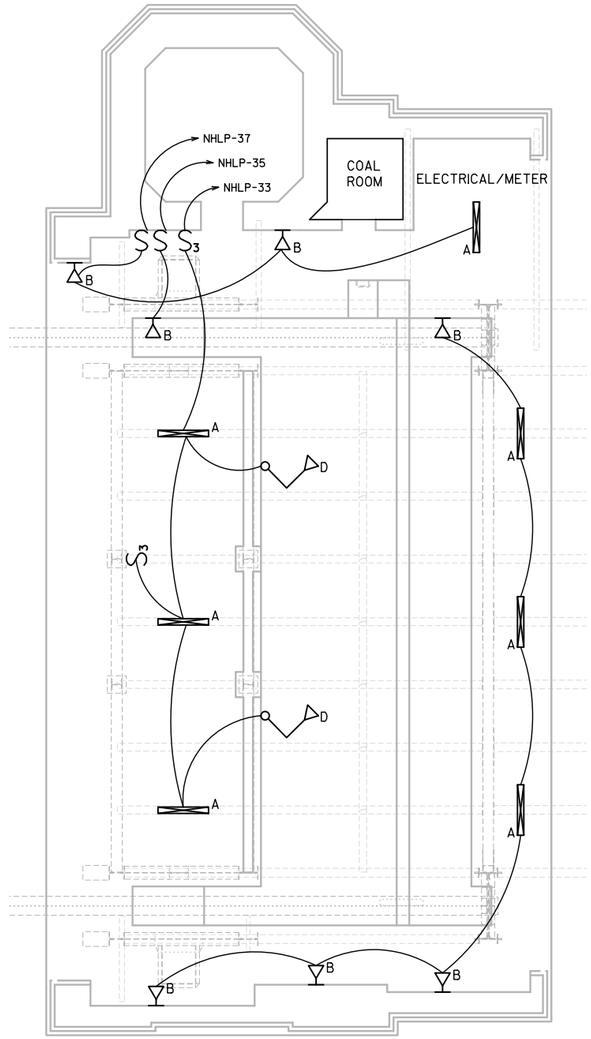
GENERAL NOTE:

1. WHERE IS APPLICABLE SUPPORT LIGHT FIXTURES FROM CEILING SUSPENDED GALVANIZED STAIN CHAINS. PROVIDE THE ANCHORS AND THE ADDITIONAL HARDWARE NEEDED TO SUPPORT THE CHAINS.



WEST BASCULE PIER LIGHTING PLAN

(LOOKING NORTH)
(NORMAL TO MILWAUKEE RIVER)



EAST BASCULE PIER LIGHTING PLAN

(LOOKING NORTH)
(NORMAL TO MILWAUKEE RIVER)

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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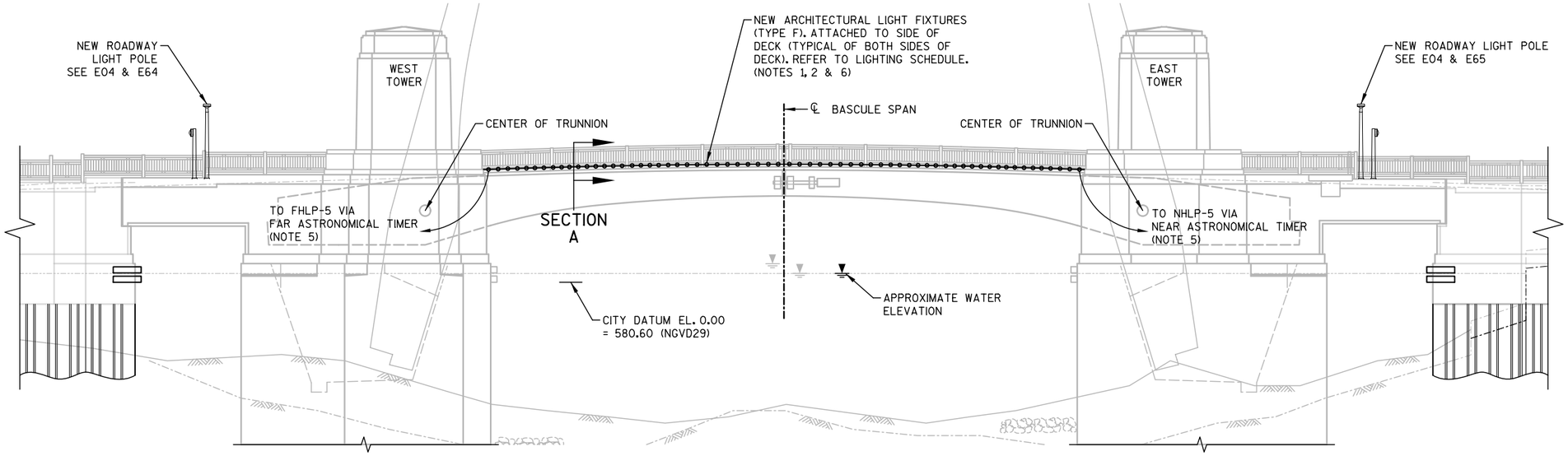
WEST & EAST BASCULE PIER LIGHTING PLANS

SHEET E16 OF E83

188

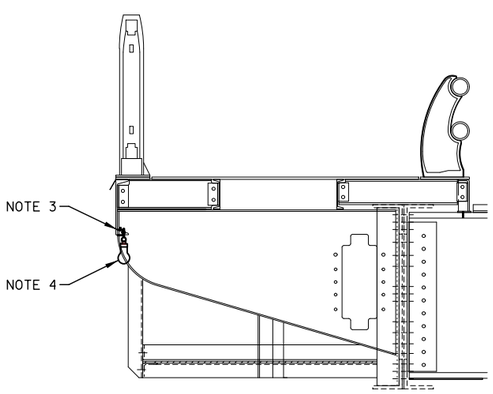
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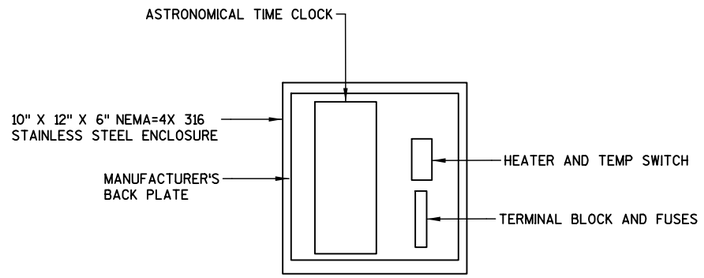


ORNAMENTAL LIGHTING ELEVATION PLAN

(LOOKING NORTH)
(NORMAL TO MILWAUKEE RIVER)



SECTION A



ASTRONOMICAL TIME CLOCK CABINET

NOTE: VERIFIY ENCLOSURE DIMENSIONS WITH HOUSED EQUIPMENT.

NOTES:

1. FIELD COORDINATE THE EXACT NUMBER OF STRING LIGHTS. FOR POWER SOURCES REFER TO PANEL SCHEDULES.
2. FOLLOW FACTORY RECOMMENDATION FOR ALL ORNAMENTAL INSTALLATION.
3. GALVANIZED BEAM CLAMP WITH THREADED HOLE ON THE SIDE TO ACCEPT LIGHT BULB BRACKET SUPPORT.
4. CUSTOM INDUSTRIAL GRADE STRING-LIGHT. PROVIDE A HEAVY DUTY OVER-MOLDED BLACKMEDIUM BASE CRUSH LIGHT MOUNTING BRACKET PER LIGHT FIXTURE INCLUDING PROOF NAVYSOCKETS WITH PHENOLIC BASE, SOLID CONTACT, SEALING LIP, EXTERNAL BRASS GROUNDING RING, SPACED 1.5-FEET ON CENTER. REFER TO LIGHTING SCHEDULE FOR MORE INFORMATION.
5. REFER TO SHEET E15 FOR LOCATION.
6. CONTRACTOR SHALL FIELD COORDINATE EXACT LIGHT STRING LENGTH WITH LIGHT STRING SUPPLIER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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ORNAMENTAL LIGHTING ELEVATION

SHEET E17 OF E83
189

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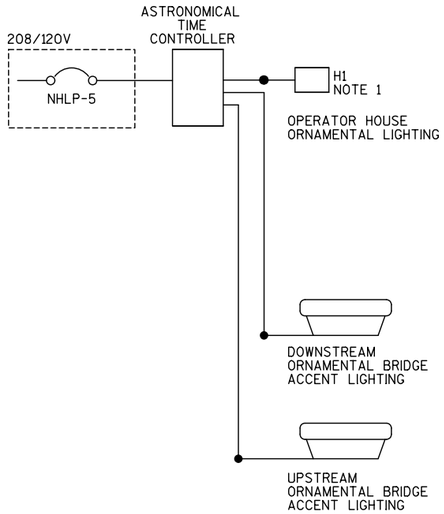
2984-26-73

LIGHTING FIXTURE SCHEDULE

SYMBOL	DECRIPTION	VOLTS	LAMP TYPE	LAMP LOAD (WATTS)	MOUNTING	NOTES
A	1' X 4' VANDAL AND IMPACT RESISTANT, POLYCARBONATE LENS, IP65 LED LUMINAIRE BEGHELLI #BS100LED-4-HT-MO-WT40-120	120	LED	50	CEILING SURFACE	
B	TWR1 CORRIDOR WALL VANDAL AND IMPACT RESISTANT, POLYCARBONATE LENS, IP65 LED LUMINAIRE TGS #WPS-65W-40K-U-D-BAA	120	LED	65	WALL SURFACE	
D	VANDAL AND IMPACT RESISTANT, POLYCARBONATE LENS, IP65 LED LED AREA LUMINAIRE DIALIGHT #AL-U-5-W-N-2-7-D-Y-W-G	120	LED	60	STRUTURE SURFACE	
F1	CUSTOM HEAVY DUTY STRING LIGHT. 12/3 BLACK SOW BLACK CABLE WITH MILITARY SPECS SOCKETS. 30 SOCKETS SPACED OUT AT 1.5 FEET ON CENTER. COORDINATE FINAL NUMBER OF SOCKETS AND BLUNT CABLE WITH SUPPLIER.	120	LED	1875	BOTTOM OF FASCIA SURFACE	1
G	2'x4' LED LUMINAIRE HE WILLIAMS #LP-24-L50/840-DIM-UNV	120	LED	———	CEILING SURFACE	
H	4' LED NARROW STRIP LUMINAIRE WILLIAMS # 75R-4-LXX/840-(L12)-DIM-UNV	120	LED	10.8	WALL SURFACE	
H1	2' LED NARROW STRIP LUMINAIRE WILLIAMS #75R-2-LXX/840-(L12)-DIM-UNV	120	LED	19.7	WALL SURFACE	

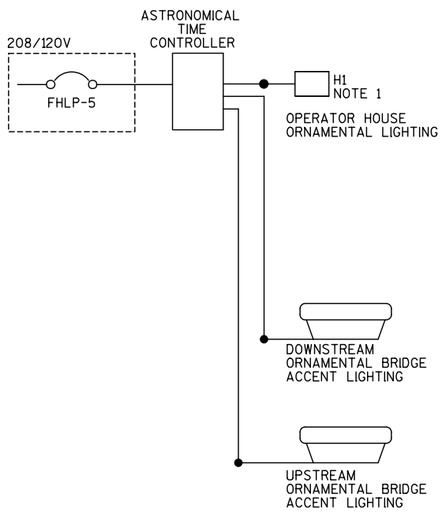
NOTES:

1. COORDINATE TOTAL INSTALLED LINEAR FEET OF COVE WITH INSTALLED LENGTH OF EACH SEGMENT. SUPPLIMENT WITH ALTERNATE LENGTHS AS NEEDED TO RESULT IN CONTINUOUS LIGHTING AESTHETIC.
2. COORDINATE PENDANT LENGTHS ON FIELD TO AVOID INETERFERENCE OBSTACLES AND MAINTAINING MOUNTING HEIGHT UNIFORMITY.
3. PROVIDE FACING(S) & CHEVRON(S) AS INDICATED BY SHADING AND ARROWS ON PLAN.



NEAR SIDE ORNAMENTAL LIGHTING WIRING DIAGRAM

N.T.S.



FAR SIDE ORNAMENTAL LIGHTING WIRING DIAGRAM

N.T.S.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

LIGHTING SCHEDULE DETAILS

SHEET E18 OF E83

190

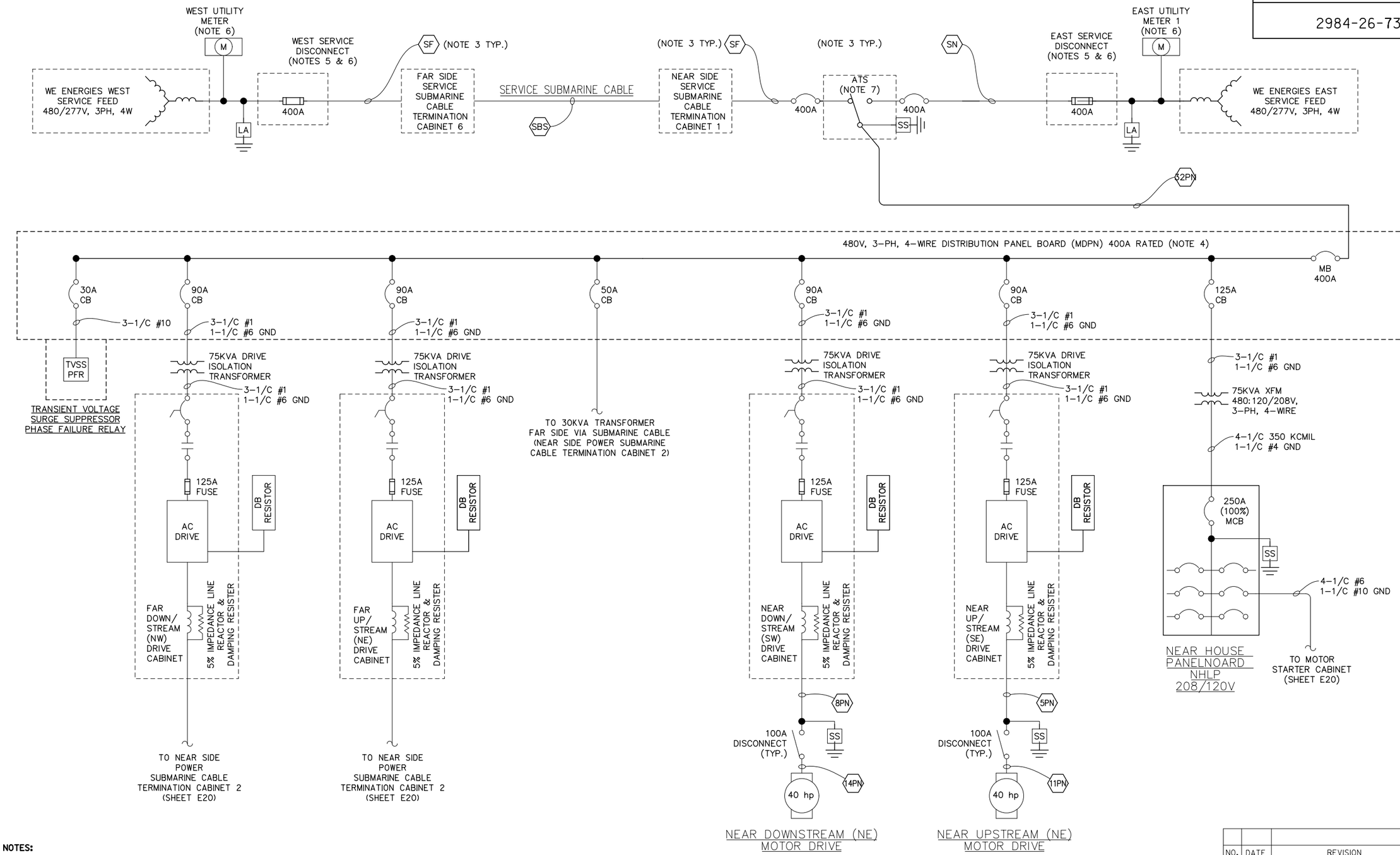
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PLOT DATE: 3/27/2024
PLOT TIME: 5:17:48 PM
BATCH PRINT SHEET 19 OF 83

STATE PROJECT NUMBER

2984-26-73



NOTES:

1. HORSEPOWER AND CIRCUIT BREAKER RATINGS SHOWN ARE NOMINAL.
2. REFER TO POWER PANEL SCHEDULES ON SHEET E14 FOR DISTRIBUTION PANELS ADDITIONALREQUIREMENTS.
3. ALL CONDUCTORS TO BE RATED 90 DEG. CELSIUS PER NEC TABLE 310.16 (2020 EDITION).
4. PROVIDE A SIGN ON EACH MDP INDICATING "WARNING - MAIN FEEDER FROM FED FROM DUAL SOURCE OF POWER"
5. PROVIDE 400A RATED DISCONNECT, NEMA-4X RATED.
6. FIELD COORDINATE FINAL LOCATION OF UTILITY SERVICE METER, SERVICE DISCONNECT AND ASSOCIATED SERVICE CONDUCTORS WITH WE ENERGIES.
7. AUTOMATICALLY SWITCHED NEUTRAL AT ATS.
8. REFER TO SHEETS E39 THRU E44 FOR CONDUIT SCHEDULES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

SINGLE LINE 480V CIRCUIT

SHEET E19 OF E83
191

8

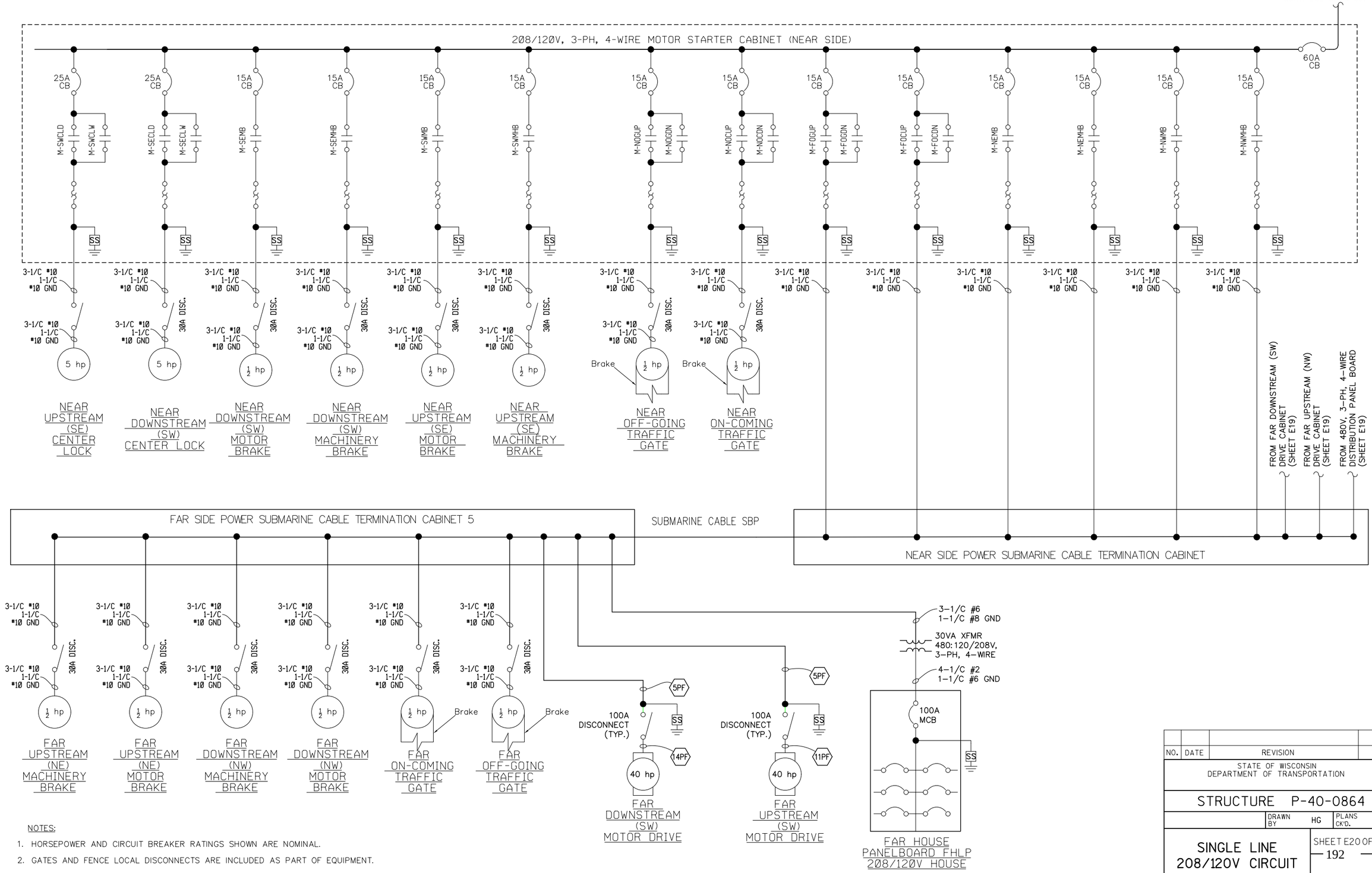
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PLOT DATE: 3/27/2024 PLOT TIME: 5:17:54 PM
BATCH PRINT SHEET 20 OF 83

STATE PROJECT NUMBER

2984-26-73

Continued on Sheet E15



NOTES:

1. HORSEPOWER AND CIRCUIT BREAKER RATINGS SHOWN ARE NOMINAL.
2. GATES AND FENCE LOCAL DISCONNECTS ARE INCLUDED AS PART OF EQUIPMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

SINGLE LINE
208/120V CIRCUIT

SHEET E20 OF E83
192

8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:17:59 PM BATCH PRINT SHEET 21 OF 83

FED FROM: ATS

MAIN DISTRIBUTION PANEL "MDP-N"

RATED VOLTAGE: 480/277V, 3PH, 4W — AIC RATING 22KAIC

NEMA-4X, STEEL, LOCKABLE DISTRIBUTION PANEL

BUS RATING: 400A — FEED: TOP

MAIN CIRCUIT BREAKER: 400A (2)

LOAD (VOLT AMPS) LTG	REC	OTHER	CKT NO.	WIRE SIZE PHASE	COND. SIZE	LOAD SERVED	CB AMP/P	PHASE A	B	C	CB AMP/P	LOAD SERVED	WIRE SIZE PHASE	COND. SIZE	CKT NO.	LOAD (VOLT AMPS) LTG	REC	OTHER
		15000	1					X	-	-					2			15000
		15000	3	(1)	(1)	NEAR UPSTREAM (SE) MOTOR DRIVE	90/3	-	X	-	90/3	FAR UPSTREAM (SW) MOTOR DRIVE	(1)	(1)	4			15000
		15000	5					-	-	X					6			15000
		15000	7					X	-	-					8			15000
		15000	9	(1)	(1)	NEAR DOWNSTREAM (SE) MOTOR DRIVE	90/3	-	X	-	90/3	FAR DOWNSTREAM (SW) MOTOR DRIVE	(1)	(1)	10			15000
		15000	11					-	-	X					12			15000
976	1620	11524	13			NEAR SIDE HOUSE		X	-	-		FAR SIDE HOUSE			14	876	1620	2765
434	1800	14304	15	(1)	(1)	PANELBOARD "NHLP"	125/3	-	X	-	50/3	PANELBOARD "FHLP"	(1)	(1)	16	649	1080	2665
975	1440	10196	17			VIA 75KVA XFMER		-	-	X		VIA 30KVA XFMER			18	450	1080	2910
			19			SPACE		X	-	-		SPACE			20			
			21			SPACE		-	X	-		SPACE			22			
			23			SPACE		-	-	X		SPACE			24			
			25			SPACE		X	-	-		SPACE			26			
			27			SPACE		-	X	-		SPACE			28			
			29			SPACE		-	-	X	20/1	SPARE			30			
			31			SPACE		X	-	-	20/1	SPARE			32			
			33			SPARE	20/1	-	X	-	20/1	SPARE			34			
			35			SPARE	20/1	-	-	X	20/1	SPARE			36			
			37			SPARE	20/1	X	-	-					38			
			39			SPARE	20/1	-	X	-	30/3	SPD	10		40			
			41			SPARE	20/1	-	-	X					42			
2385	4860	126024	NOTES (1) SEE ONE-LINE DIAGRAM (2) 100% RATED													1975	3780	98339
SUB TOTALS																SUB TOTALS		

PHASE LOADING

LTG	REC	OTHER		CONNECTED KVA TOTALS	4.36	8.64	224.36
1852	3240	74289	PHASE A	DEMAND FACTOR	1.00	NEC	1.00
1083	2880	76969	PHASE B	ADJUSTED KVA TOTALS	4.36	8.64	224.36
1425	2520	73106	PHASE C	TOTAL CONNECTED KVA	237.36		
A	B	C		TOTAL ADJUSTED KVA	237.36		
79381	80932	77051	TOTALS	THREE PHASE VOLTAGE	480		
				TOTAL PANEL ADJUSTED AMPERAGE	286		

FED FROM: 480V, 3-PH, 4-WIRE DISTRIBUTION PANEL BOARD VIA 45KVA TRANSFORMER

NEAR SIDE HOUSE PANELBOARD "NHLP"

RATED VOLTAGE: 208/120V, 3PH, 4W — AIC RATING 22KAIC

NEMA-12, STEEL, LOCKABLE DISTRIBUTION PANEL

BUS RATING: 400A — FEED: TOP

MAIN CIRCUIT BREAKER: 250A

LOAD (VOLT AMPS) LTG	REC	OTHER	CKT NO.	WIRE SIZE PHASE	COND. SIZE	LOAD SERVED	CB AMP/P	PHASE A	B	C	CB AMP/P	LOAD SERVED	WIRE SIZE PHASE	COND. SIZE	CKT NO.	LOAD (VOLT AMPS) LTG	REC	OTHER
126			1	#12	3/4"	LTS, NEAR MACH/ENTRY/CTRL	20/1	X	-	-					2			4311
84			3	#12	3/4"	LTS, NEAR ENTRY/CONTROL	20/1	-	X	-	60/3	MOTOR STARTER CABINET	(1)	(1)	4			4311
210		120	5	#12	3/4"	ASTRONOMICAL TIMER	20/1	-	-	X					6			4311
400			7	#12	3/4"	LTS,PIER,DOLPHIN,CLEAR (2)	20/1	X	-	-					8			793
	360		9	#12	3/4"	REC, CLEARANCE	20/1	-	X	-	20/3	SUM PUMP SP-1	3#10 & 1 #10G	3/4"	10			793
200	360		11	#12	3/4"	LT & REC, TRAFFIC GATES	20/1	-	-	X					12			793
200	720		13	#12	3/4"	LTS/RECS, DRIVES (2)	20/1	X	-	-	40/2	SPLIT SYSTEM	2#8 & 1 #10G	3/4"	14			3328
		2000	15	#12	3/4"	PLC (2)	20/1	-	X	-					16			3328
		1875	17	#12	3/4"	ORNAMENTAL LIGHTS	20/1	-	-	X	20/1	UPS (2)	#12	3/4"	18			1000
	900		19	#12	3/4"	REC, NEAR MACH ROOM	20/1	X	-	-	20/2	ELECTRICAL HEATER, MACHINERY LEVEL	2#12&1 #12G	3/4"	20			936
	720		21	#12	3/4"	REC, NEAR ENTRY LEVEL	20/1	-	X	-					22			936
	1080		23	#12	3/4"	REC, NEAR CTRL RM	20/1	-	-	X	20/2	ELECTRICAL HEATER, ENTRY LEVEL	2#12&1 #12G	3/4"	24			936
		720	25	#12	3/4"	CCTV/PA SYST.	20/1	X	-	-					26			936
		2000	27	#12	3/4"	CONTROL CONSOLE	20/1	-	X	-	20/2	ELECTRICAL HEATER, CONTROL ROOM	2#12&1 #12G	3/4"	28			936
		125	29	#12	3/4"	SP-1 CONTROL PANEL	20/1	-	-	X					30			936
		500	31	#12	3/4"	FIRE ALARM PANEL/BULGLARY	20/1	X	-	-	20/1	SPARE			32			
350			33			LTS, EAST BASCULE	20/1	-	X	-	20/1	SPARE			34			
565			35			LTS, EAST BASCULE	20/1				20/1	SPARE			36			
250			37			LTS, EAST BASCULE	20/1				20/1	SPARE			38			
	720		39			RECS, EAST BASCULE	20/1				20/1	SPARE			40			
		100	41	#10	3/4"	HEAT TRACING	20/1				20/1	SPARE			42			
			43			SPARE	20/1				20/1	SPARE			44			
			45			SPARE	20/1				20/1	SPARE			46			
			47			SPARE	20/1	-	-	X	20/1	SPACE			48			
			49			SPARE	20/1	X	-	-					50			
			51			SPACE		-	X	-	30/3	SPD	10		52			
			53			SPACE		-	-	X					54			
2385	4860	7440	NOTES: (1) REFER TO SINGLE LINE ON SHEET E13 (2) LOAD IN SPECIFIC CIRCUIT NUMBER TO BE CONSISTED WITH SCHEMATICS DO NOT CHANGE.													0	0	28584
SUB TOTALS																SUB TOTALS		

PHASE LOADING

LTG	REC	OTHER		CONNECTED KVA TOTALS	2.39	4.86	36.02
976	1620	11524	PHASE A	DEMAND FACTOR	1.00	NEC	1.00
434	1800	14304	PHASE B	ADJUSTED KVA TOTALS	2.39	4.86	36.02
975	1440	10196	PHASE C	TOTAL CONNECTED KVA	43.27		
A	B	C		TOTAL ADJUSTED KVA	43.27		
14120	16538	12611	TOTALS	THREE PHASE VOLTAGE	208		
				TOTAL PANEL ADJUSTED AMPERAGE	120		

FED FROM: 480V, 3-PH, 4-WIRE DISTRIBUTION PANEL BOARD VIA 15KVA TRANSFORMER

FAR SIDE HOUSE PANELBOARD "FHLP"

RATED VOLTAGE: 208/120V, 3PH, 4W — AIC RATING

NEMA-12, STEEL, LOCKABLE DISTRIBUTION PANEL

BUS RATING: 125A — FEED: TOP

MAIN CIRCUIT BREAKER: 60A

LOAD (VOLT AMPS) LTG	REC	OTHER	CKT NO.	WIRE SIZE PHASE	COND. SIZE		CB AMP/P	PHASE A	B	C	CB AMP/P	LOAD SERVED	WIRE SIZE PHASE	COND. SIZE	CKT NO.	LOAD (VOLT AMPS) LTG	REC	OTHER
126			1	#12	3/4"	LTS, FAR MACH/ENTRY/CTRL	20/1	X	-	-		SPACE			2			
84			3	#12	3/4"	LTS, FAR ENTRY/CONTROL	20/1	-	X	-		SPACE			4			
		120	5	#12	3/4"	ASTRONOMICAL TIMER	20/1	-	-	X		SPACE			6			
400			7	#12	3/4"	LTS,PIER,DOLPHIN,CLEAR	20/1	X	-	-					8			793
	360		9	#12	3/4"	REC, CLEARANCE	20/1	-	X	-	20/3	SUM PUMP SP-2	3#10 & 1 #10G	3/4"	10			793
200	360		11	#12	3/4"	LT & REC, TRAFFIC GATES	20/1	-	-	X					12			793
350			13			LTS, WEST BASCULE	20/1	X	-	-	20/1	RECS, WEST BASCULE	#12	3/4'	14		720	
565			15			LTS, WEST BASCULE	20/1	-	X	-		SPACE			16			
250			17			LTS, WEST BASCULE	20/1	-	-	X		SPACE			18			
	900		19	#12	3/4"	REC, FAR MACH ROOM	20/1	X	-	-	20/2	ELECTRICAL HEATER, FAR MACHINERY LEVEL	2#12&1 #12G	3/4"	20			936
	720		21	#12	3/4"	REC, FAR ENTRY LEVEL	20/1	-	X	-					22			936
	720		23	#12	3/4"	REC, FAR CTRL RM	20/1	-	-	X	20/2	ELECTRICAL HEATER, FAR ENTRY LEVEL	2#12&1 #12G	3/4"	24			936
			25			SPACE		X	-	-					26			936
			27			SPACE		-	X	-	20/2	ELECTRICAL HEATER, FAR CONTROL ROOM	2#12&1 #12G	3/4"	28			936
		125	29	#12	3/4"	SP-2 CONTROL PANEL	20/1	-	-	X					30			936
		100	31	#10	3/4"	HEAT TRACING	20/1	X	-	-	20/1	SPARE			32			
			33			SPARE	20/1	-	X	-	20/1	SPARE			34			
			35			SPARE	20/1				20/1	SPARE			36			
			37			SPARE	20/1				20/1	SPARE			38			
			39			SPARE	20/1				20/1	SPARE			40			
			41			SPARE	20/1				20/1	SPARE			42			
			43			SPACE						SPACE			44			
			45			SPACE						SPACE			46			
			47			SPACE		-	-	X	20/1	SPACE			48			
			49			SPACE		X	-	-					50			
			51			SPACE		-	X	-	30/3	SPD	10		52			
			53			SPACE		-	-	X					54			
1975	3060	345	NOTES:													0	720	7994
SUB TOTALS																SUB TOTALS		

PHASE LOADING

LTG	REC	OTHER		CONNECTED KVA TOTALS	1.98	3.78	8.34
876	1620	2765	PHASE A	DEMAND FACTOR	1.00	NEC	1.00
649	1080	2665	PHASE B	ADJUSTED KVA TOTALS	1.98	3.78	8.34
450	1080	2910	PHASE C	TOTAL CONNECTED KVA	14.09		
A	B	C		TOTAL ADJUSTED KVA	14.09		
5261	4394	4440	TOTALS	THREE PHASE VOLTAGE	208		
				TOTAL PANEL ADJUSTED AMPERAGE	39		

NO.	DATE	REVISION	BY

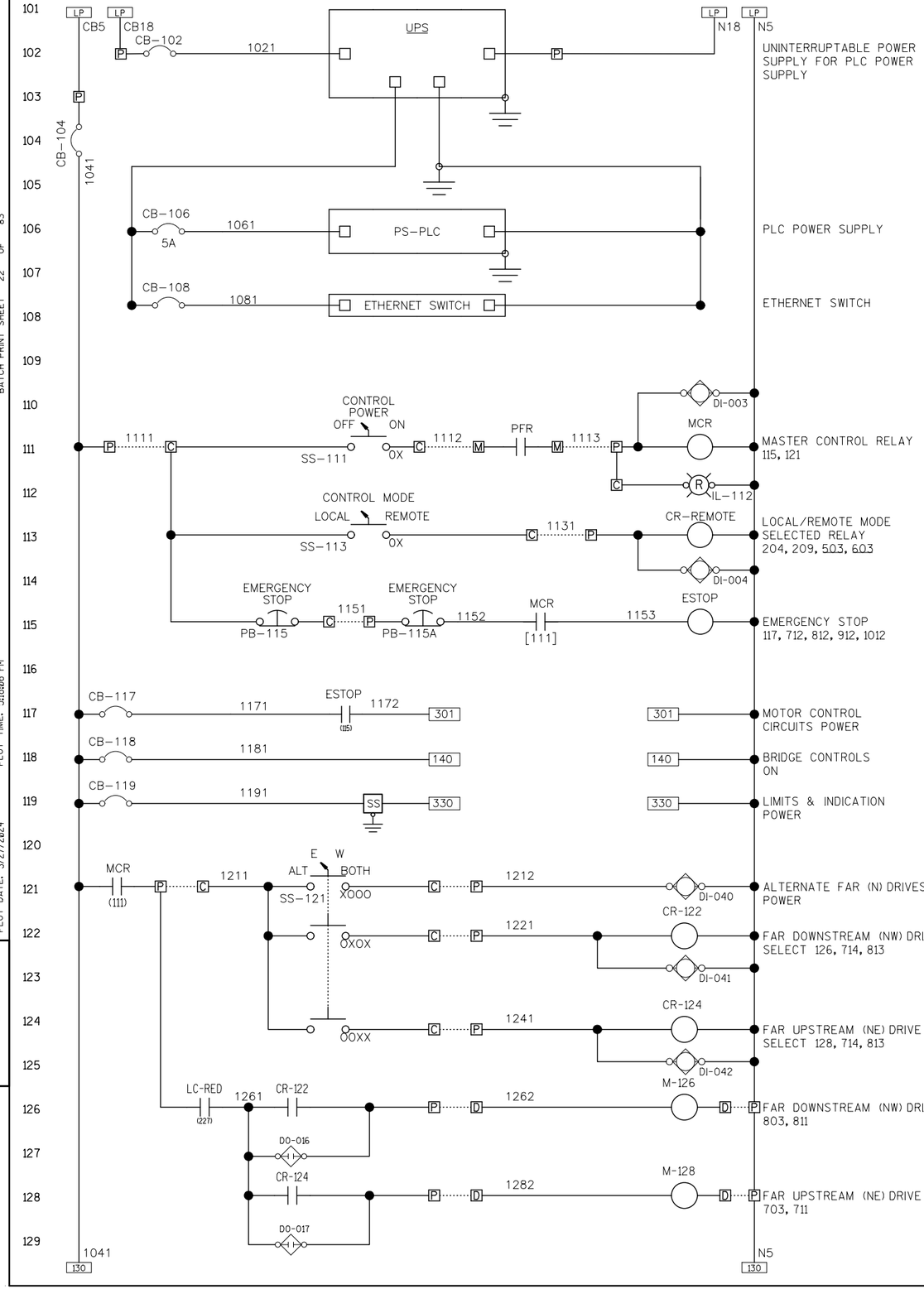
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

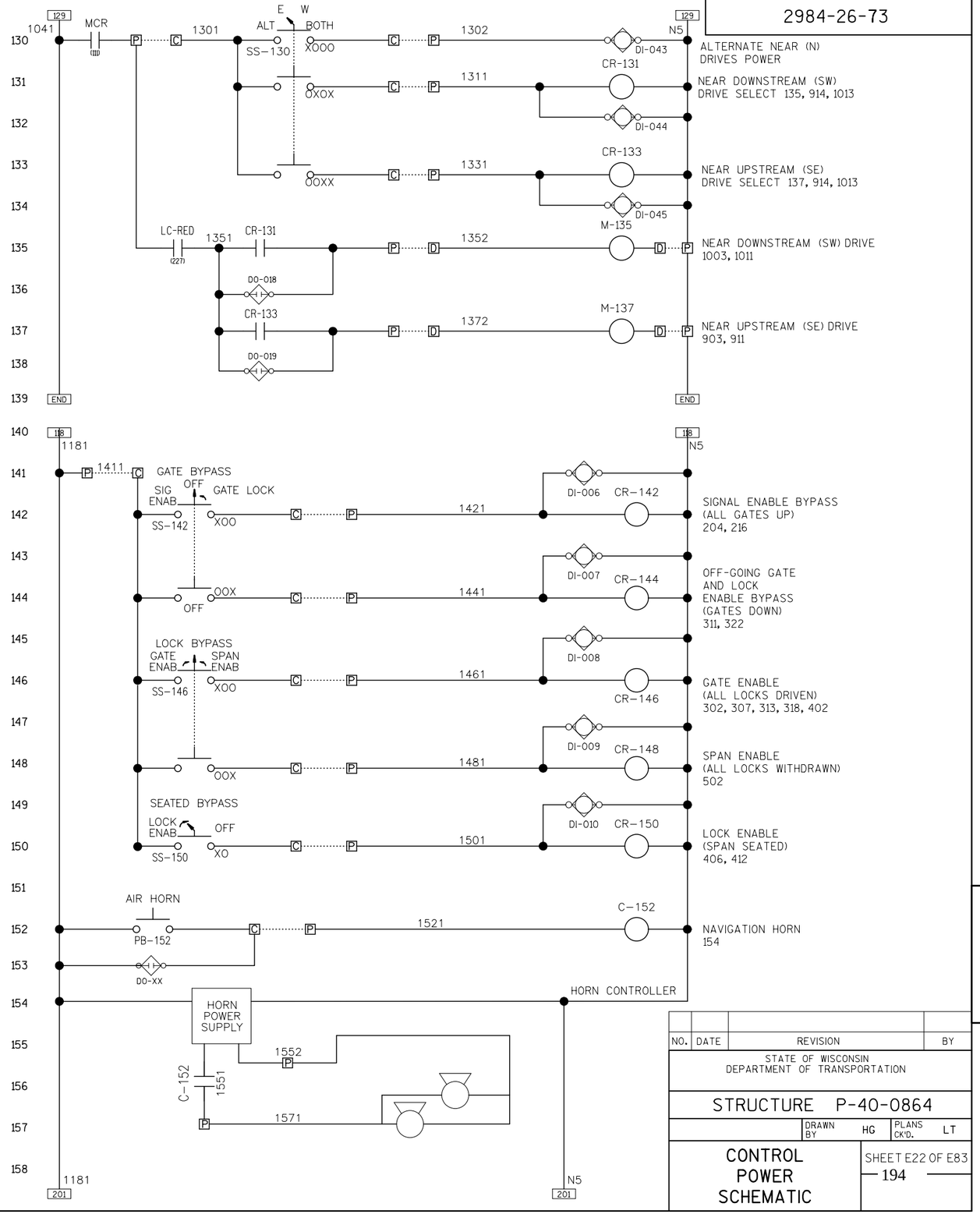
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DRAWN BY HG — PLANS CK'D. LT

ELECTRICAL PANEL SCHEDULES

SHEET E21 OF E83





NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY	HG	PLANS CK'D.	LT

CONTROL POWER SCHEMATIC

SHEET E22 OF E83
194

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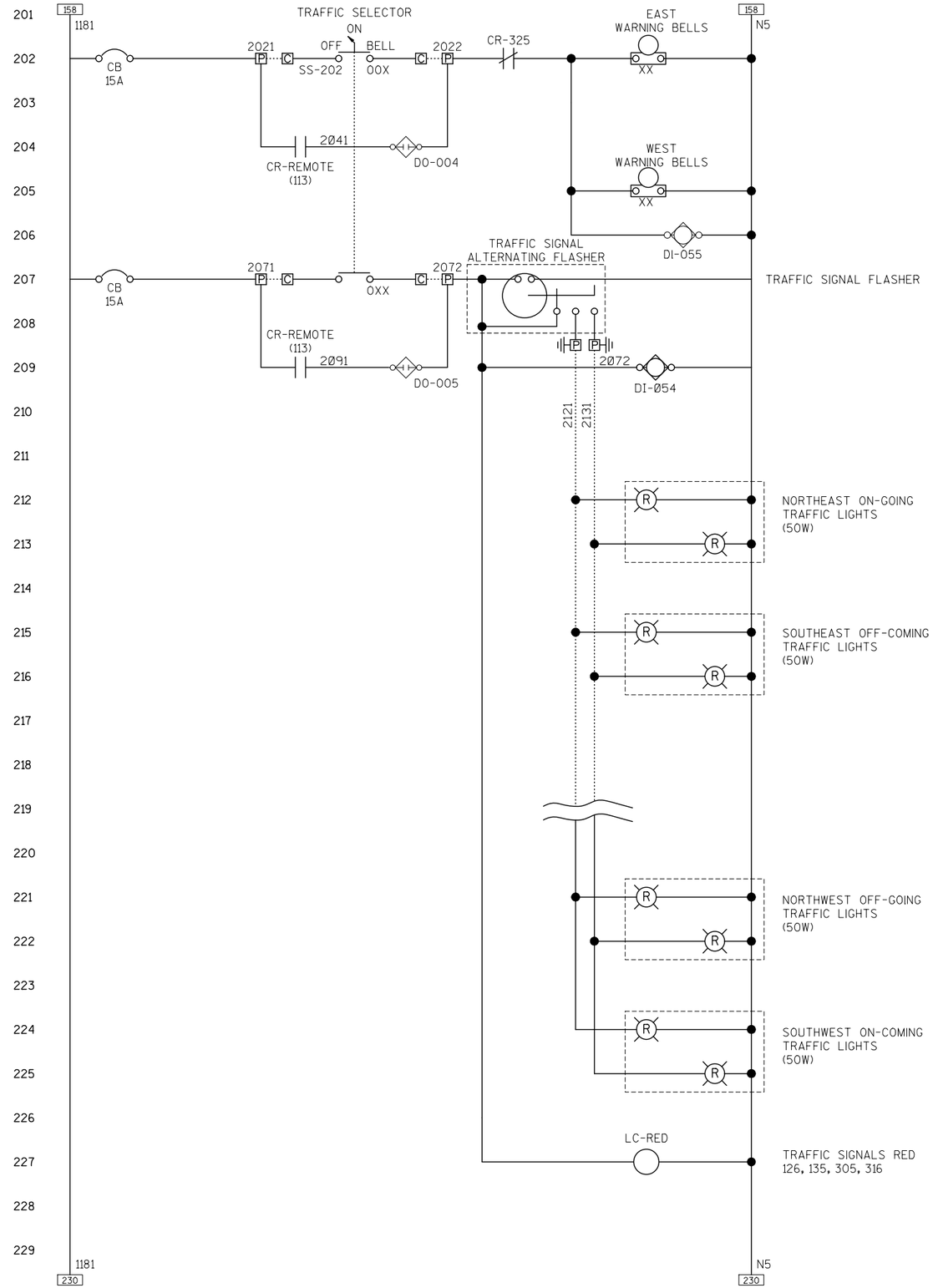
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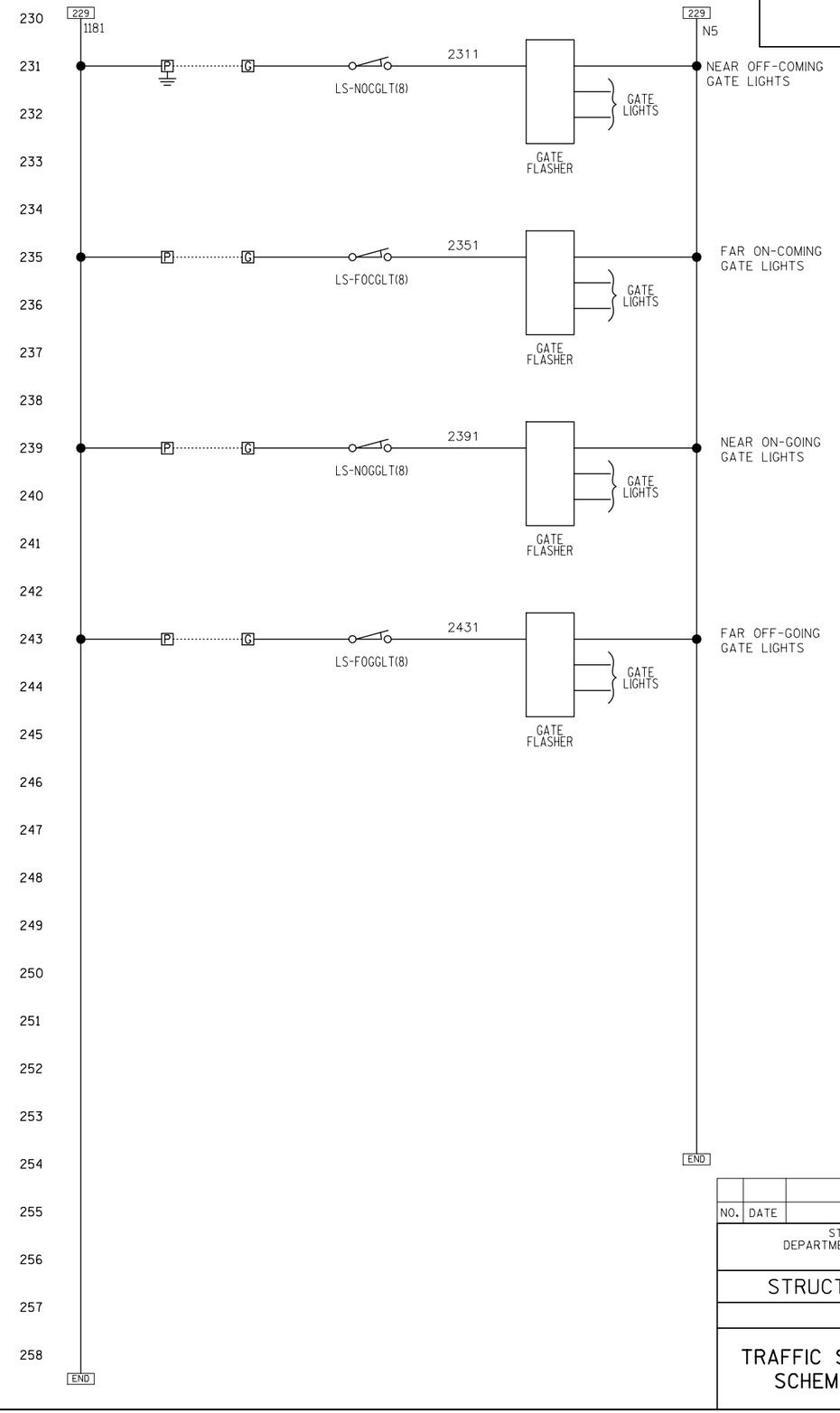
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BATCH PRINT SHEET 23 OF 83

STATE PROJECT NUMBER

2984-26-73





NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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TRAFFIC SIGNALS
SCHEMATIC

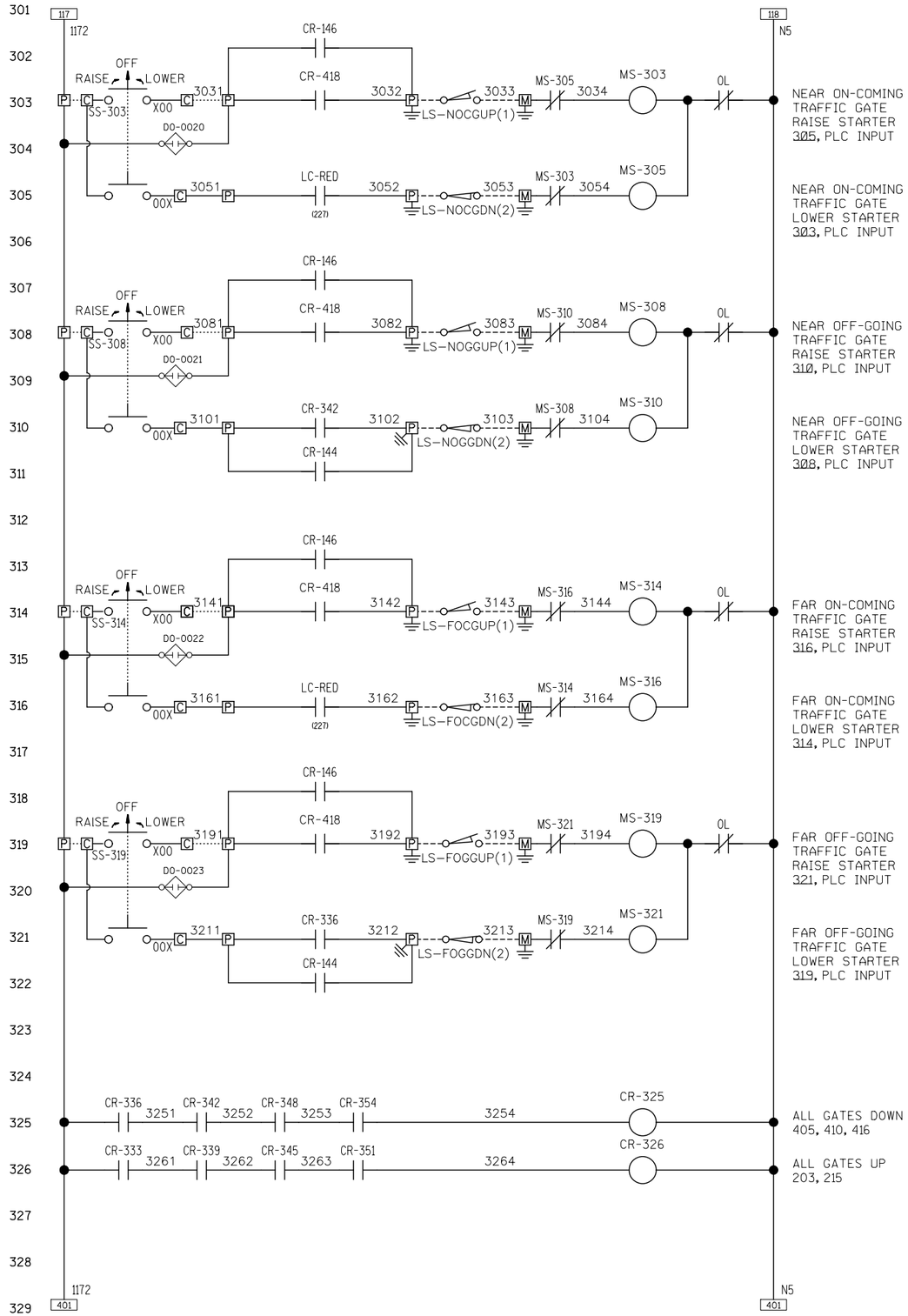
SHEET E23 OF E83
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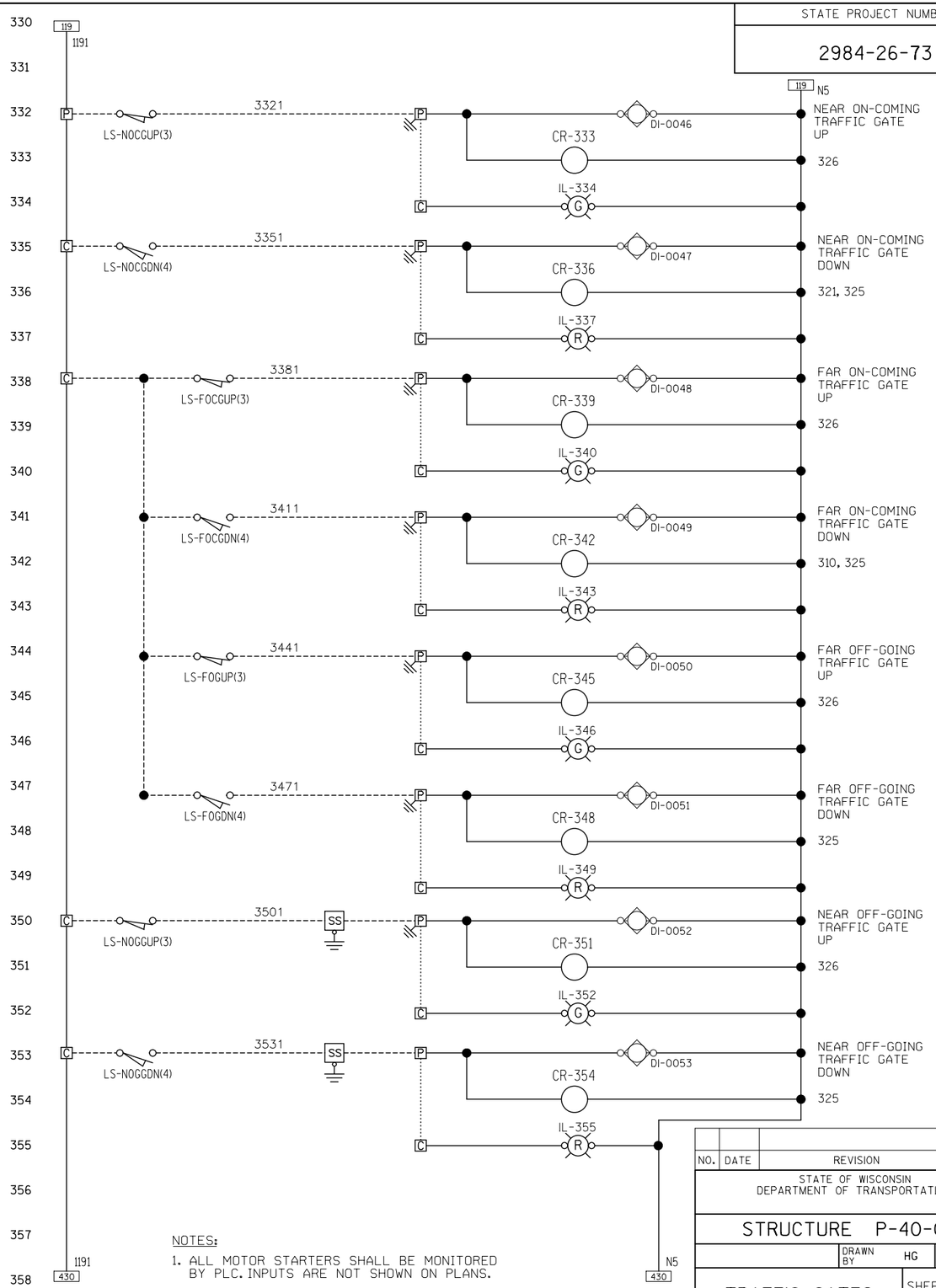
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PLOT DATE: 3/27/2024
PLOT TIME: 5:18:17 PM
BATCH PRINT SHEET 24 OF 83

STATE PROJECT NUMBER

2984-26-73





NOTES:

1. ALL MOTOR STARTERS SHALL BE MONITORED BY PLC. INPUTS ARE NOT SHOWN ON PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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TRAFFIC GATES SCHEMATIC

SHEET E24 OF E83

196

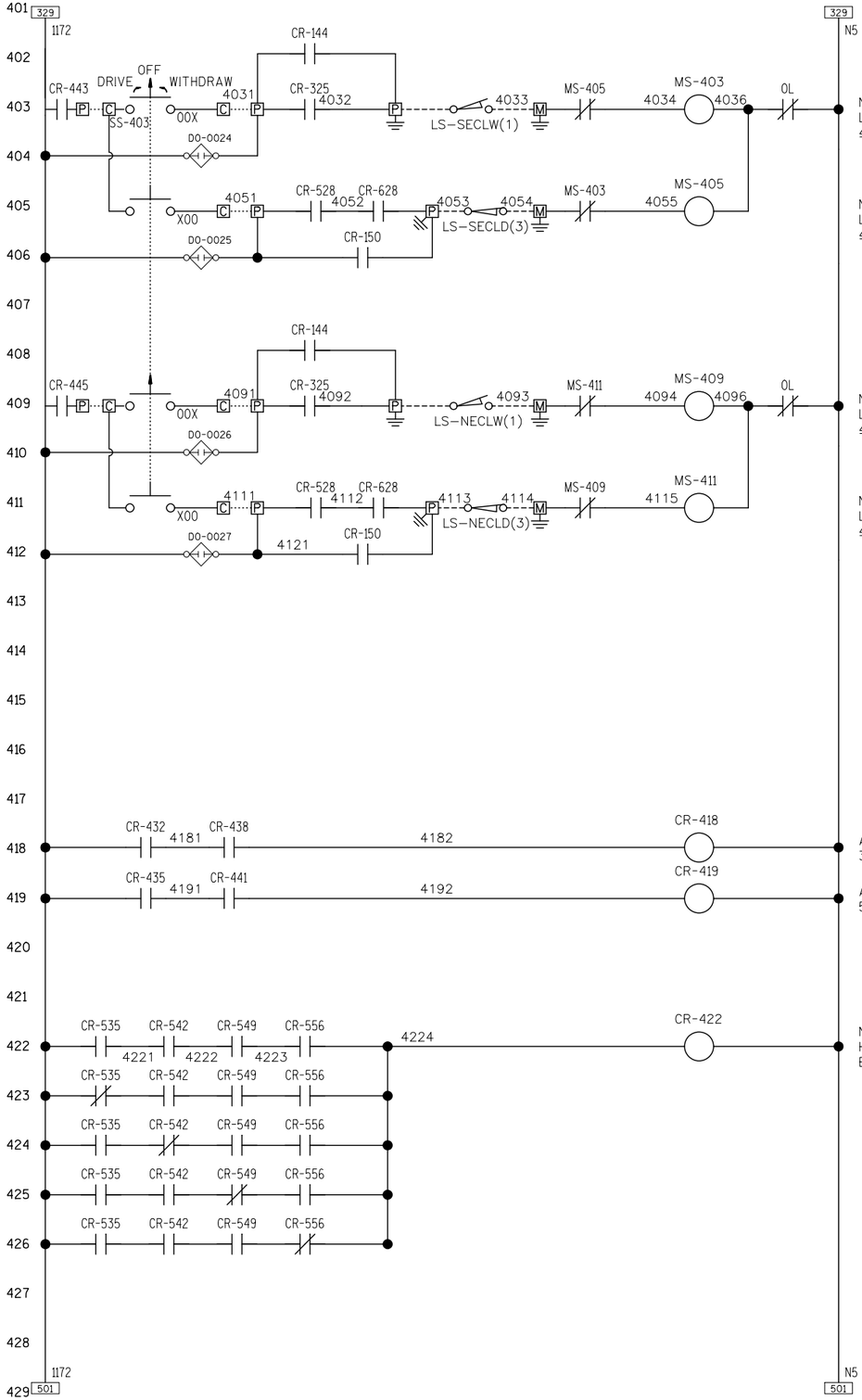
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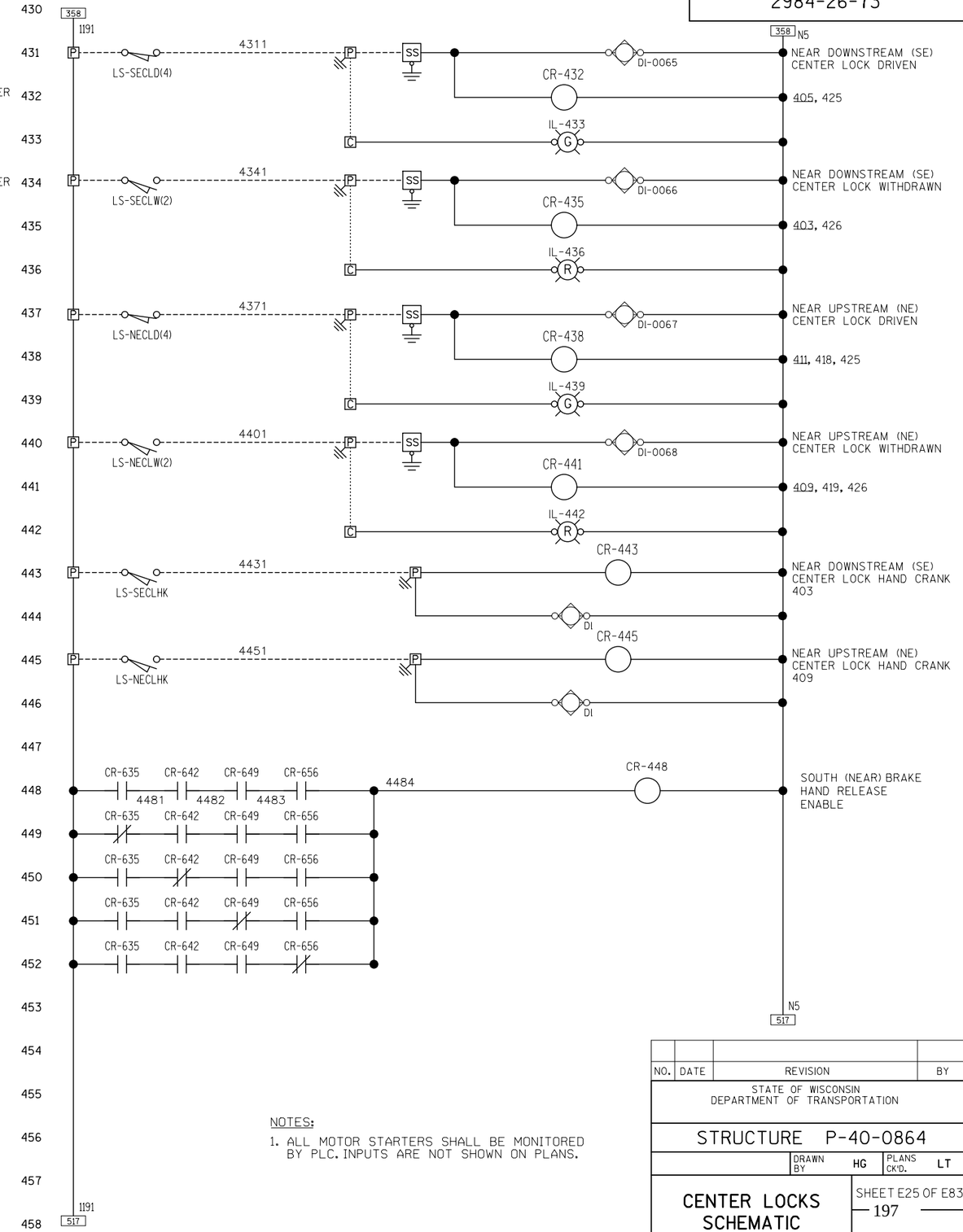
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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:23 PM BATCH PRINT SHEET 25 OF 83

STATE PROJECT NUMBER

2984-26-73





NOTES:

1. ALL MOTOR STARTERS SHALL BE MONITORED BY PLC. INPUTS ARE NOT SHOWN ON PLANS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CENTER LOCKS SCHEMATIC

SHEET E25 OF E83
197

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8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:29 PM BATCH PRINT SHEET 26 OF 83

STATE PROJECT NUMBER

2984-26-73

8

501 429 1172 CR-148 5021 CR-419 CR-REMOTE (113) CR-422 5031 MACHINERY BRAKE SET RELEASE SS-503 0X CR-535 M-NWMHB OL 5032 CR-542 M-NEMHB OL 429 N5
502 NW MACHINERY BRAKE PLC INPUT
503 NE MACHINERY BRAKE PLC INPUT
504 DO-0028
505 NWD-PTORQ NED-PTORQ 5061 CR-549 5051 M-NWMB OL
506 CR-556 M-NEMB OL
507 DO-0029
508 LOWER 3 2 1 OFF RAISE 1 2 3 SS-506 0000XXX 5081 CR-510 5082 CR-519 5083 CR-508
NW MOTOR BRAKE PLC INPUT
NE MOTOR BRAKE PLC INPUT
RAISE 514, 706, 806
509 DO-0030
510 XXX0000 5101 CR-508 5102 CR-528 5103 CR-510
LOWER 515, 707, 807
511 DO-0031
WARNING BELL
512 XX000XX 5121 CR-512
SLOW 709, 809
513 DO-0032
514 X00000X 5141 CR-508 5142 CR-522 5143 CR-514
FAST 710, 810
515 DO-0033 CR-510 5151 CR-525
516 1172 601 1172 601 N5

517 458 1191 458 N5
518 LS-NFO(1) 5181 SS DI-0069 CR-519
FULLY OPEN
519 508, 804, 805
520 IL-520 R
RED INDICATION ON CONSOLE
521 LS-NNO(2) 5211 SS DI-0070 CR-522
NEAR OPEN
522
523 IL-523 W
WHITE INDICATION ON CONSOLE
524 LS-NNC(3) 5241 SS DI-0071 CR-525
NEAR CLOSED
525
526 IL-526 A
AMBER INDICATION ON CONSOLE
527 LS-NFC(4) 5271 SS DI-0072
FULLY CLOSED
528 LS-NFC(2) 5281 SS DI-0072 CR-528
LEAF SEATED
529 IL-529 G
404, 411, 608, 708
1191 530 N5 530
GREEN INDICATION ON CONSOLE

529 1191 529 N5
530 LS-NWMHBSET 5301 SS DI-0073
FAR UPSTREAM (NW) MACH BRAKE SET
531
532 LS-NWMHBREL 5321 SS DI-0074 CR-533 558
FAR UPSTREAM (NW) MACH BRAKE RELEASE
533
534 LS-NWMHBHREL 5341 SS DI-0075 CR-535 502
FAR UPSTREAM (NW) MACH BRAKE HAND RELEASE
535
536
537 LS-SWMHBSET 5371 SS DI-0076
FAR DOWNSTREAM (SW) MACH BRAKE SET
538
539 LS-SWMHBREL 5391 SS DI-0077 CR-540 558
FAR DOWNSTREAM (SW) MACH BRAKE RELEASE
540
541 SWMHBHREL 5411 SS DI-0078 CR-542 503
FAR DOWNSTREAM (SW) MACH BRAKE HAND RELEASE
542
543
544 LS-NWMBSET 5441 SS DI-0079
FAR UPSTREAM (NW) MOTOR BRAKE SET
545
546 LS-NWMBREL 5461 SS DI-0080 CR-547 505
FAR UPSTREAM (NW) MOTOR BRAKE RELEASE
547
548 LS-NWMBHREL 5481 SS DI-0081 CR-549 505
FAR UPSTREAM (NW) MOTOR BRAKE HAND RELEASE
549
550
551 LS-SWMBSET 5511 SS DI-0082
FAR DOWNSTREAM (SW) MOTOR BRAKE SET
552
553 LS-SWMBREL 5531 SS DI-0083 CR-554 558
FAR DOWNSTREAM (SW) MOTOR BRAKE RELEASE
554
555 LS-NEMBHREL 5551 SS DI-0084 CR-556 506
FAR DOWNSTREAM (NW) MOTOR BRAKE HAND RELEASE
556
557
558 CR-533 5581 CR-540 5582 CR-547 5583 CR-554 5584 IL-553 R
ALL FAR (N) BRAKES RELEASED
1191 617 N5 617

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG PLANS CK'D. LT

WEST SPAN DRIVE SCHEMATIC

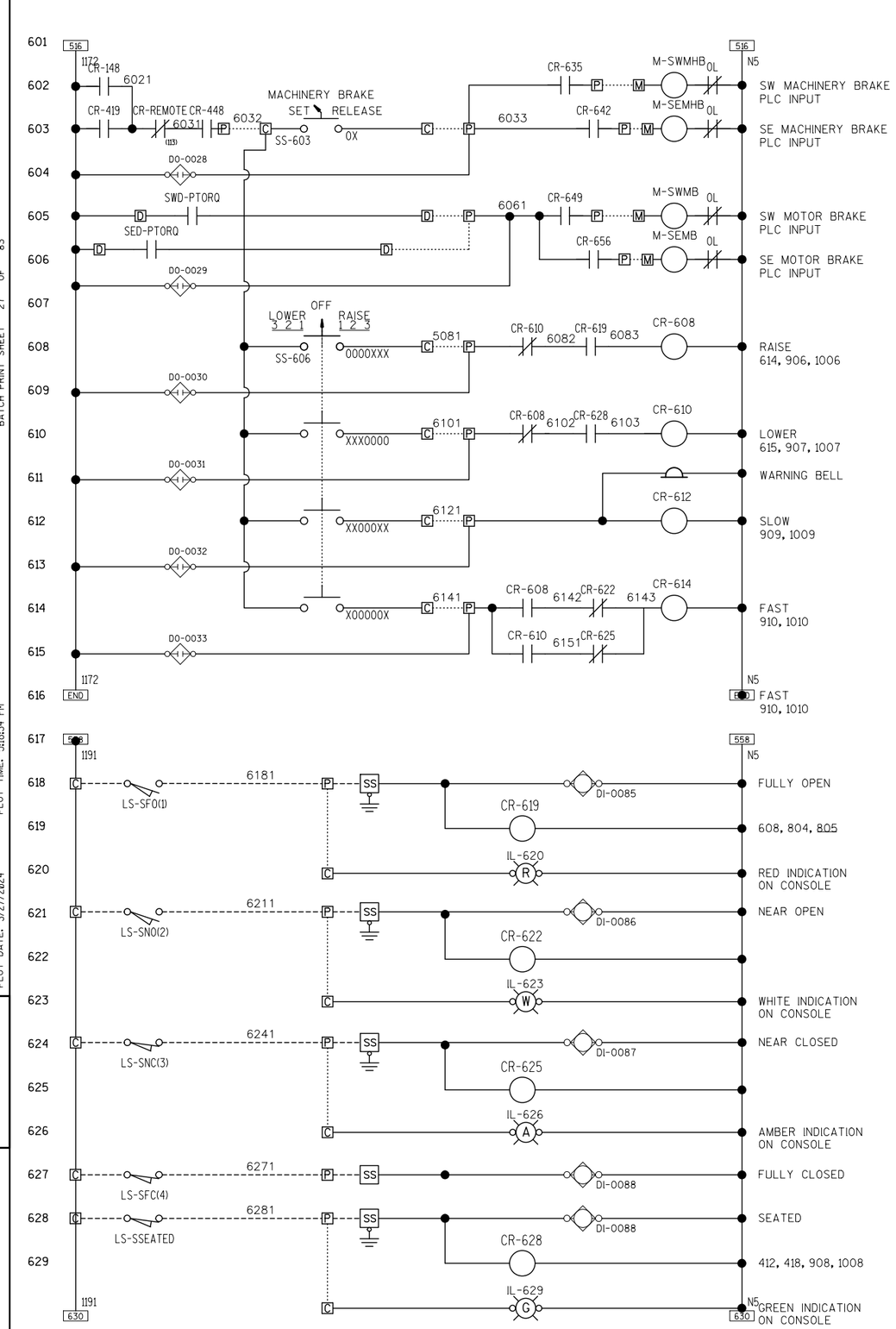
SHEET E26 OF E83
198

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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:34 PM BATCH PRINT SHEET 27 OF 83

STATE PROJECT NUMBER

2984-26-73



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

EAST SPAN
DRIVE SCHEMATIC

SHEET E27 OF E83
199

8

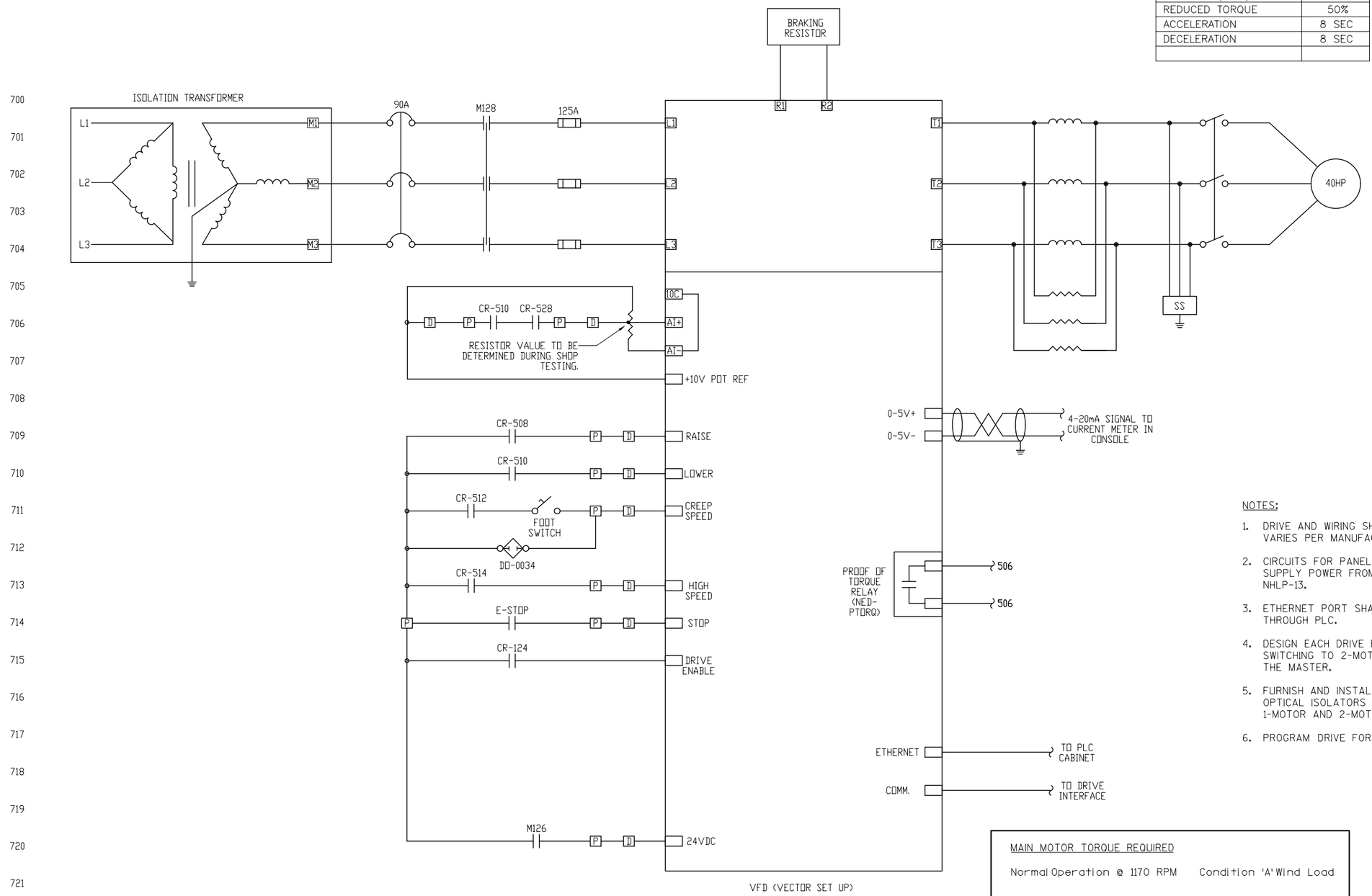
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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:39 PM BATCH PRINT SHEET 28 OF 83

STATE PROJECT NUMBER
2984-26-73

KEY DRIVE PARAMETERS

DESCRIPTION	SETTING
SPEED 1 (DEFAULT)	10%
SPEED 2 (SLOW)	25%
SPEED 3 (FAST)	100%
REDUCED TORQUE	50%
ACCELERATION	8 SEC
DECELERATION	8 SEC



NOTES:

1. DRIVE AND WIRING SHOWN AS REPRESENTATIVE, ACTUAL WIRING VARIES PER MANUFACTURER AND DRIVE.
2. CIRCUITS FOR PANEL LIGHT AND RECEPTACLE ARE NOT SHOWN. SUPPLY POWER FROM THESE CIRCUITS FROM A SEPARATE SOURCE; NHLP-13.
3. ETHERNET PORT SHALL BE USED TO MONITOR AND SET UP DRIVE THROUGH PLC.
4. DESIGN EACH DRIVE FOR 1-MOTOR OPERATION WITH CAPABILITY OF SWITCHING TO 2-MOTOR MASTER/SLAVE OPERATION. NORTH DRIVE IS THE MASTER.
5. FURNISH AND INSTALL ADDITIONAL RELAYS, CONVERTERS, AND OPTICAL ISOLATORS NECESSARY TO CONTROL AND INTERLOCK 1-MOTOR AND 2-MOTOR OPERATIONS.
6. PROGRAM DRIVE FOR 3 SPEED POINTS: FAST, SLOW, AND CREEP.

MAIN MOTOR TORQUE REQUIRED

Normal Operation @ 1170 RPM	Condition 'A' Wind Load
Starting Torque	91.0 ft-lbs.
Accelerating Torque	52.8 ft-lbs.
Running Torque	98.9 ft-lbs.
Dynamic Braking	83.7 ft-lbs.
Normal Operation @ 583 RPM	**Condition 'C' Wind Load**
Starting Torque	131.2 ft-lbs.
Accelerating Torque	149.6 ft-lbs.
Running Torque	146.3 ft-lbs.
Dynamic Braking	119.6 ft-lbs.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

FAR UPSTREAM (NE) SPAN MOTOR & DRIVE SCHEMATIC

SHEET E28 OF E83

200

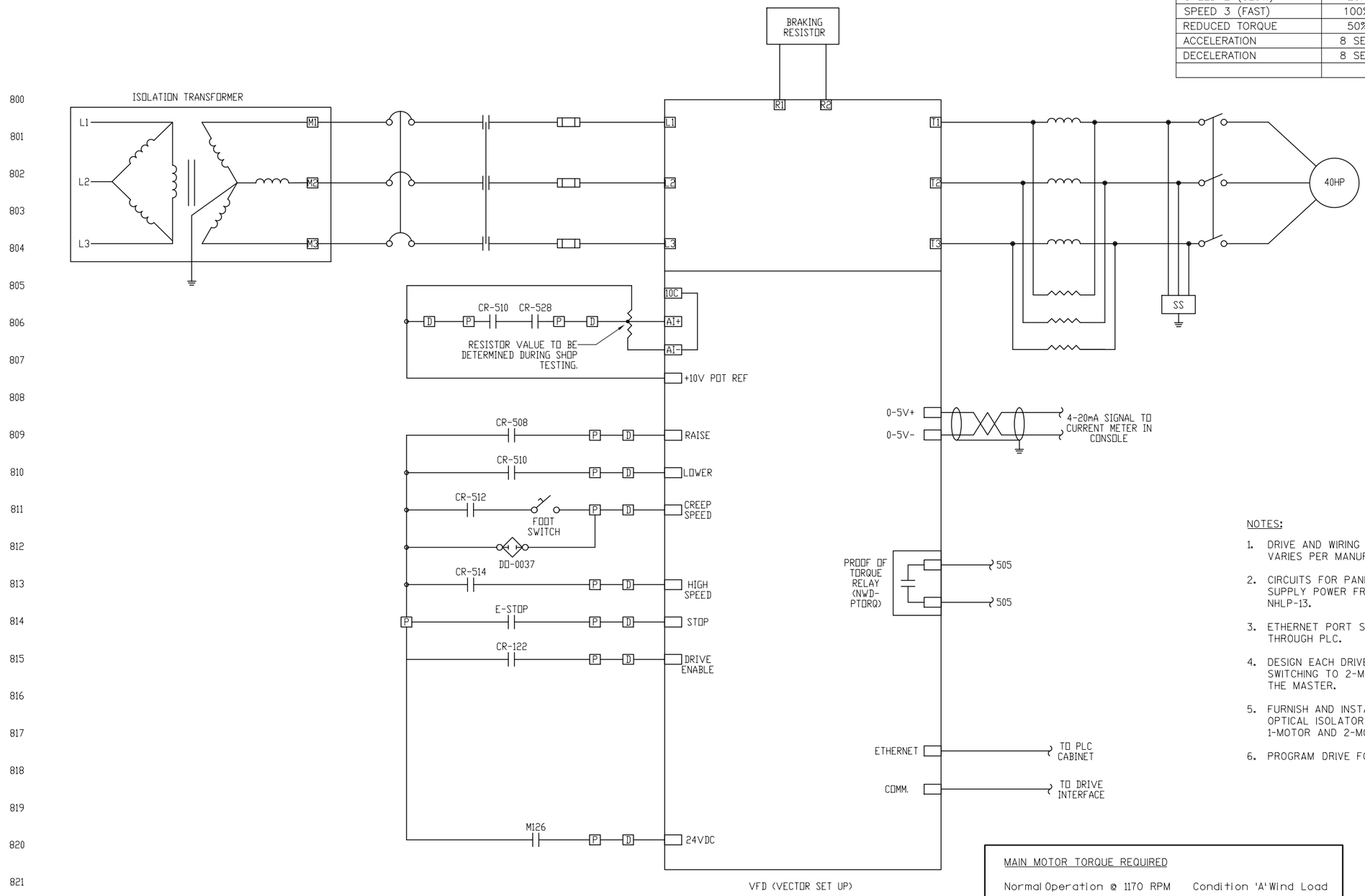
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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:45 PM BATCH PRINT SHEET 29 OF 83

STATE PROJECT NUMBER

2984-26-73

KEY DRIVE PARAMETERS

DESCRIPTION	SETTING
SPEED 1 (DEFAULT)	10%
SPEED 2 (SLOW)	25%
SPEED 3 (FAST)	100%
REDUCED TORQUE	50%
ACCELERATION	8 SEC
DECELERATION	8 SEC



NOTES:

1. DRIVE AND WIRING SHOWN AS REPRESENTATIVE, ACTUAL WIRING VARIES PER MANUFACTURER AND DRIVE.
2. CIRCUITS FOR PANEL LIGHT AND RECEPTACLE ARE NOT SHOWN. SUPPLY POWER FROM THESE CIRCUITS FROM A SEPARATE SOURCE; NHLP-13.
3. ETHERNET PORT SHALL BE USED TO MONITOR AND SET UP DRIVE THROUGH PLC.
4. DESIGN EACH DRIVE FOR 1-MOTOR OPERATION WITH CAPABILITY OF SWITCHING TO 2-MOTOR MASTER/SLAVE OPERATION. NORTH DRIVE IS THE MASTER.
5. FURNISH AND INSTALL ADDITIONAL RELAYS, CONVERTERS, AND OPTICAL ISOLATORS NECESSARY TO CONTROL AND INTERLOCK 1-MOTOR AND 2-MOTOR OPERATIONS.
6. PROGRAM DRIVE FOR 3 SPEED POINTS: FAST, SLOW, AND CREEP.

MAIN MOTOR TORQUE REQUIRED

Normal Operation @ 1170 RPM	Condition 'A' Wind Load
Starting Torque	91.0 ft-lbs.
Accelerating Torque	52.8 ft-lbs.
Running Torque	98.9 ft-lbs.
Dynamic Braking	83.7 ft-lbs.
Normal Operation @ 583 RPM	**Condition 'C' Wind Load**
Starting Torque	131.2 ft-lbs.
Accelerating Torque	149.6 ft-lbs.
Running Torque	146.3 ft-lbs.
Dynamic Braking	119.6 ft-lbs.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

FAR DOWNSTREAM (NW) SPAN MOTOR & DRIVE SCHEMATIC

SHEET E29 OF E83

201

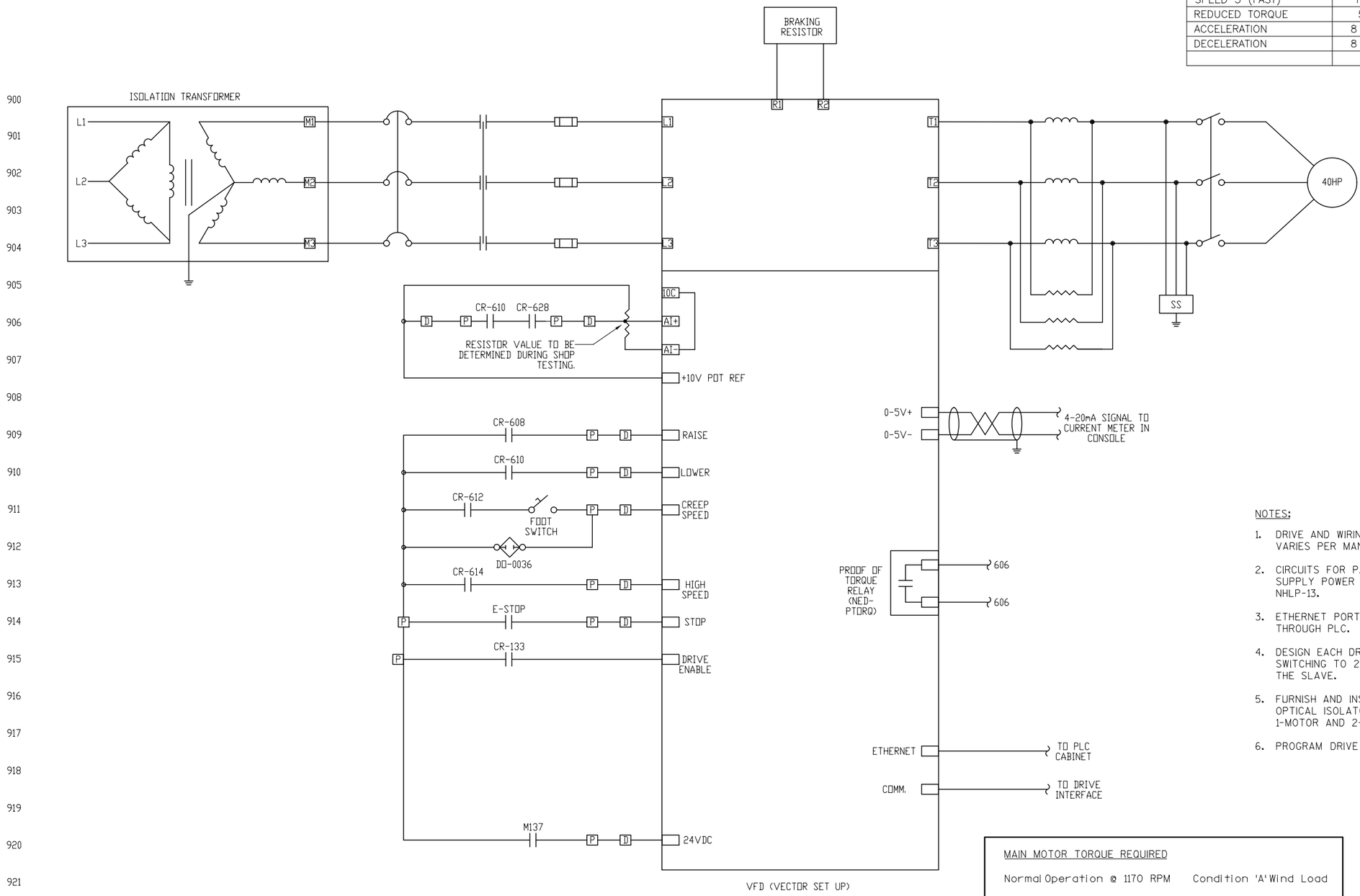
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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:58 PM BATCH PRINT SHEET 30 OF 83

STATE PROJECT NUMBER

2984-26-73

KEY DRIVE PARAMETERS

DESCRIPTION	SETTING
SPEED 1 (DEFAULT)	10%
SPEED 2 (SLOW)	25%
SPEED 3 (FAST)	100%
REDUCED TORQUE	50%
ACCELERATION	8 SEC
DECELERATION	8 SEC



NOTES:

1. DRIVE AND WIRING SHOWN AS REPRESENTATIVE, ACTUAL WIRING VARIES PER MANUFACTURER AND DRIVE.
2. CIRCUITS FOR PANEL LIGHT AND RECEPTACLE ARE NOT SHOWN. SUPPLY POWER FROM THESE CIRCUITS FROM A SEPARATE SOURCE; NHLP-13.
3. ETHERNET PORT SHALL BE USED TO MONITOR AND SET UP DRIVE THROUGH PLC.
4. DESIGN EACH DRIVE FOR 1-MOTOR OPERATION WITH CAPABILITY OF SWITCHING TO 2-MOTOR MASTER/SLAVE OPERATION. SOUTH DRIVE IS THE SLAVE.
5. FURNISH AND INSTALL ADDITIONAL RELAYS, CONVERTERS, AND OPTICAL ISOLATORS NECESSARY TO CONTROL AND INTERLOCK 1-MOTOR AND 2-MOTOR OPERATIONS.
6. PROGRAM DRIVE FOR 3 SPEED POINTS: FAST, SLOW, AND CREEP.

MAIN MOTOR TORQUE REQUIRED

Normal Operation @ 1170 RPM	Condition 'A' Wind Load
Starting Torque	91.0 ft-lbs.
Accelerating Torque	52.8 ft-lbs.
Running Torque	98.9 ft-lbs.
Dynamic Braking	83.7 ft-lbs.
Normal Operation @ 583 RPM	Condition 'C' Wind Load
Starting Torque	131.2 ft-lbs.
Accelerating Torque	149.6 ft-lbs.
Running Torque	146.3 ft-lbs.
Dynamic Braking	119.6 ft-lbs.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

NEAR UPSTREAM (SE) SPAN MOTOR & DRIVE SCHEMATIC

SHEET E30 OF E83

202

8

8

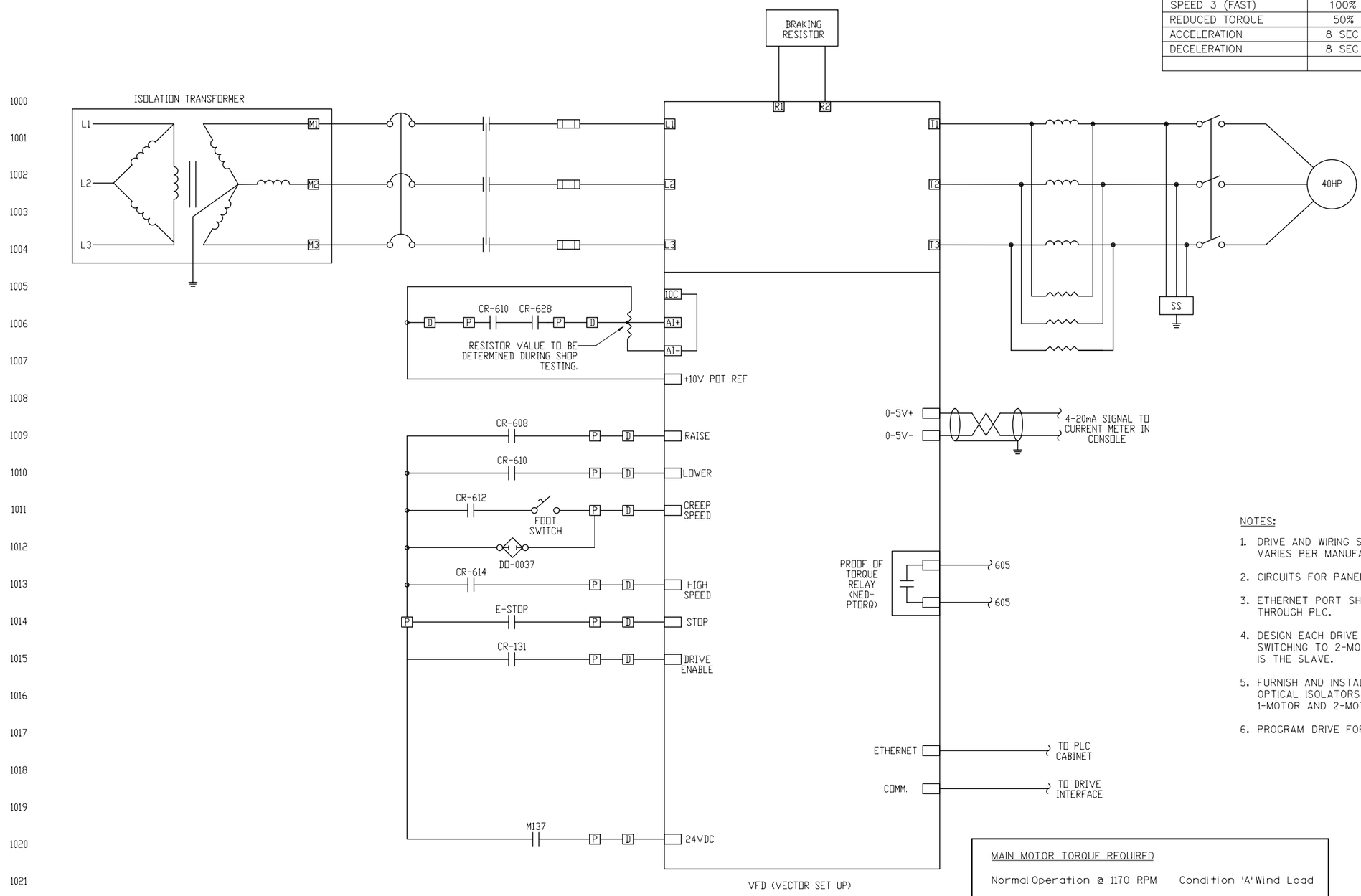
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PLOT DATE: 3/27/2024 PLOT TIME: 5:18:56 PM BATCH PRINT SHEET 31 OF 83

STATE PROJECT NUMBER

2984-26-73

KEY DRIVE PARAMETERS

DESCRIPTION	SETTING
SPEED 1 (DEFAULT)	10%
SPEED 2 (SLOW)	25%
SPEED 3 (FAST)	100%
REDUCED TORQUE	50%
ACCELERATION	8 SEC
DECELERATION	8 SEC



NOTES:

1. DRIVE AND WIRING SHOWN AS REPRESENTATIVE, ACTUAL WIRING VARIES PER MANUFACTURER AND DRIVE.
2. CIRCUITS FOR PANEL LIGHT AND RECEPTACLE ARE NOT SHOWN.
3. ETHERNET PORT SHALL BE USED TO MONITOR AND SET UP DRIVE THROUGH PLC.
4. DESIGN EACH DRIVE FOR 1-MOTOR OPERATION WITH CAPABILITY OF SWITCHING TO 2-MOTOR MASTER/SLAVE OPERATION. SOUTH DRIVE IS THE SLAVE.
5. FURNISH AND INSTALL ADDITIONAL RELAYS, CONVERTERS, AND OPTICAL ISOLATORS NECESSARY TO CONTROL AND INTERLOCK 1-MOTOR AND 2-MOTOR OPERATIONS.
6. PROGRAM DRIVE FOR 3 SPEED POINTS: FAST, SLOW, AND CREEP.

MAIN MOTOR TORQUE REQUIRED

Normal Operation @ 1170 RPM	Condition 'A' Wind Load
Starting Torque	91.0 ft-lbs.
Accelerating Torque	52.8 ft-lbs.
Running Torque	98.9 ft-lbs.
Dynamic Braking	83.7 ft-lbs.
Normal Operation @ 583 RPM	**Condition 'C' Wind Load**
Starting Torque	131.2 ft-lbs.
Accelerating Torque	149.6 ft-lbs.
Running Torque	146.3 ft-lbs.
Dynamic Braking	119.6 ft-lbs.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

NEAR DOWNSTREAM (SW) SPAN MOTOR & DRIVE SCHEMATIC

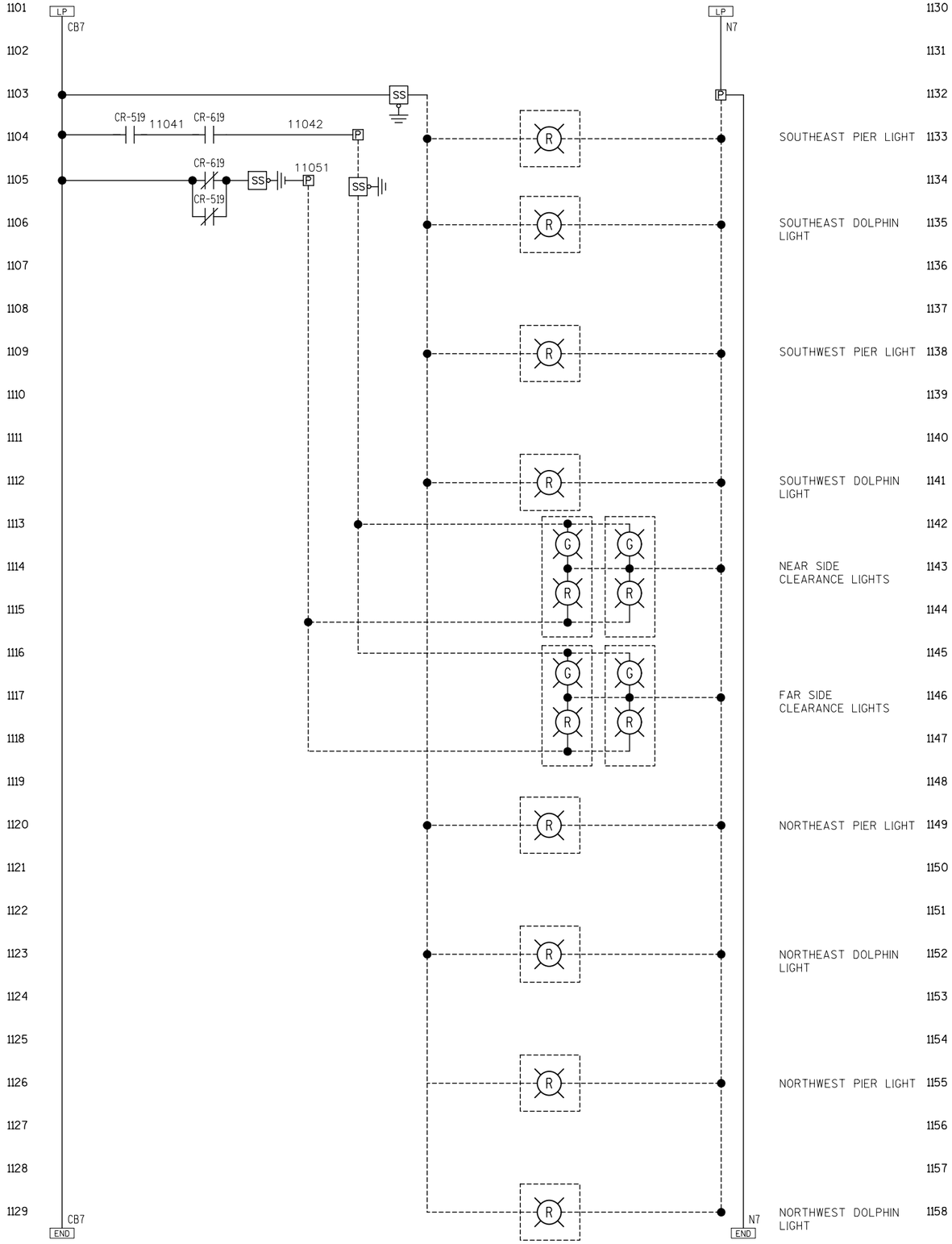
SHEET E31 OF E83

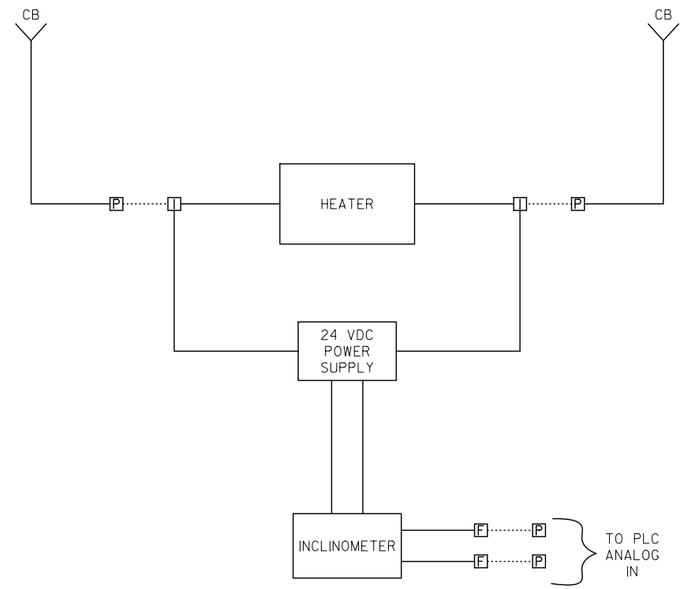
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PLOT DATE: 3/27/2024 PLOT TIME: 5:19:01 PM
BATCH PRINT SHEET 32 OF 83





TYPICAL INCLINOMETER CIRCUIT
NEAR SHOWN, FAR SIDE SIMILAR

STATE PROJECT NUMBER

2984-26-73

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

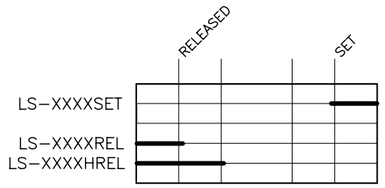
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NAVIGATIONAL LIGHTS SCHEMATIC

SHEET E32 OF E83
204

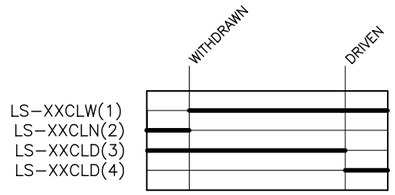
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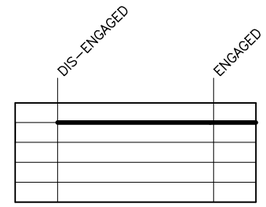
BRAKES

LS-NWMHBSET	LS-SWMHBSET
LS-NWMHBREL	LS-SWMHBREL
LS-NWMHBHREL	LS-SWMHBHREL
LS-NWMBSET	LS-SWMBSET
LS-NWMBREL	LS-SWMBREL
LS-NWMBHREL	LS-SWMBHREL
LS-NEMHBSET	LS-SEMHBSET
LS-NEMHBREL	LS-SEMHBREL
LS-NEMHBHREL	LS-SEMHBHREL
LS-NEMBSET	LS-SEMBSET
LS-NEMBREL	LS-SEMBREL
LS-NEMBHREL	LS-SEMBHREL



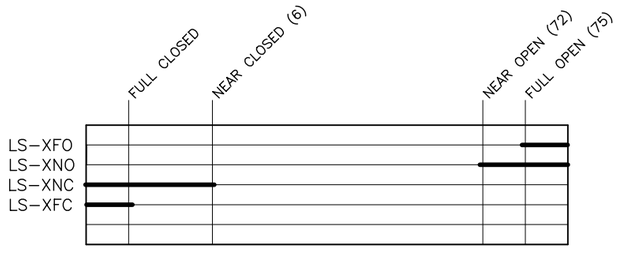
CENTER LOCKS

LS-NECLW	LS-SECLD
LS-SWCLW	LS-NECLD



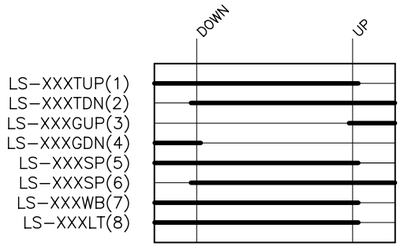
CENTER LOCK HAND CRANK

LS-NECLHK
LS-SECLHK



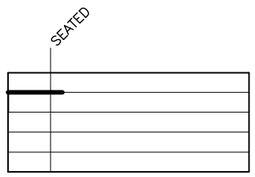
CAM SPAN POSITION LIMIT

LS-NFC	LS-SFC
LS-NNC	LS-SNC
LS-NNO	LS-SNO
LS-NFO	LS-SFO



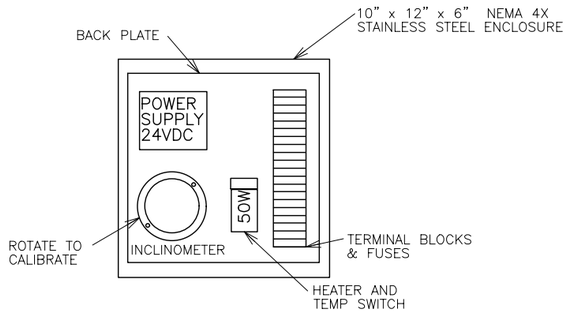
TRAFFIC GATES

LS-NOC	LS-FOC
LS-NOG	LS-FOG



SEATED PLUNGER

LS-ESEATED
LS-WSEATED



INCLINOMETER CABINET

(TYPICAL)

NOTES:

1. BRAKE, BARRIER AND TRAFFIC GATE LIMIT SWITCHES ARE FURNISHED AS AN INTEGRAL PART OF THE EQUIPMENT. ALL OTHER SWITCHES HAVE BEEN LOCATED ON PLANS AS A GENERAL LOCATION FOR THE CONTRACTOR. THE CONTRACTOR SHOULD FIELD COORDINATE THE FINAL LOCATION AND PROVIDE THE REQUIRED MOUNTING SUPPORTS.
2. INSTALL INCLINOMETER CABINET IN MACHINERY ROOM ATTACHED TO SOUTH BASCULE GIRDER. FABRICATE BRACKETS TO ATTACH TO STIFFENERS ON GIRDER.
3. WIRE THE INCLINOMETER IN SERIES WITH METER ON CONSOLE AND PLC ANALOG INPUT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

INCLINOMETER CABINET, LIMITS & TIMING SCHEDULE

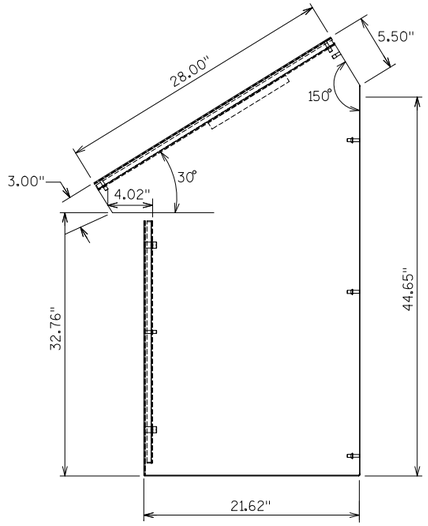
SHEET E33 OF E83
205

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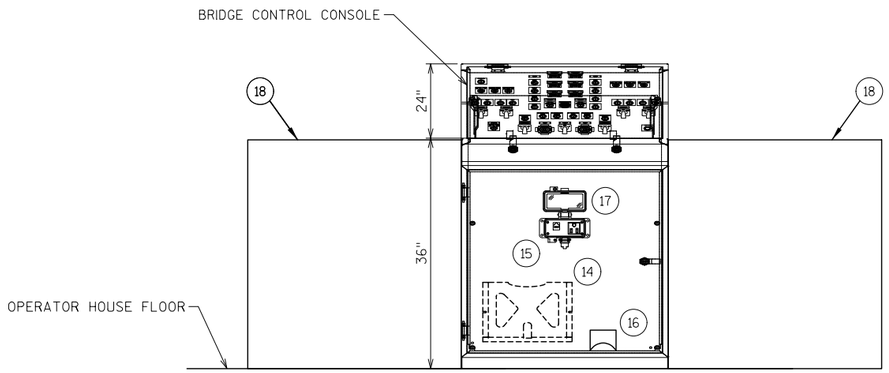
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PLOT DATE: 3/27/2024 PLOT TIME: 5:19:12 PM BATCH PRINT SHEET 34 OF 83

STATE PROJECT NUMBER
2984-26-73



BRIDGE CONTROL CONSOLE
RIGHT SIDE VIEW

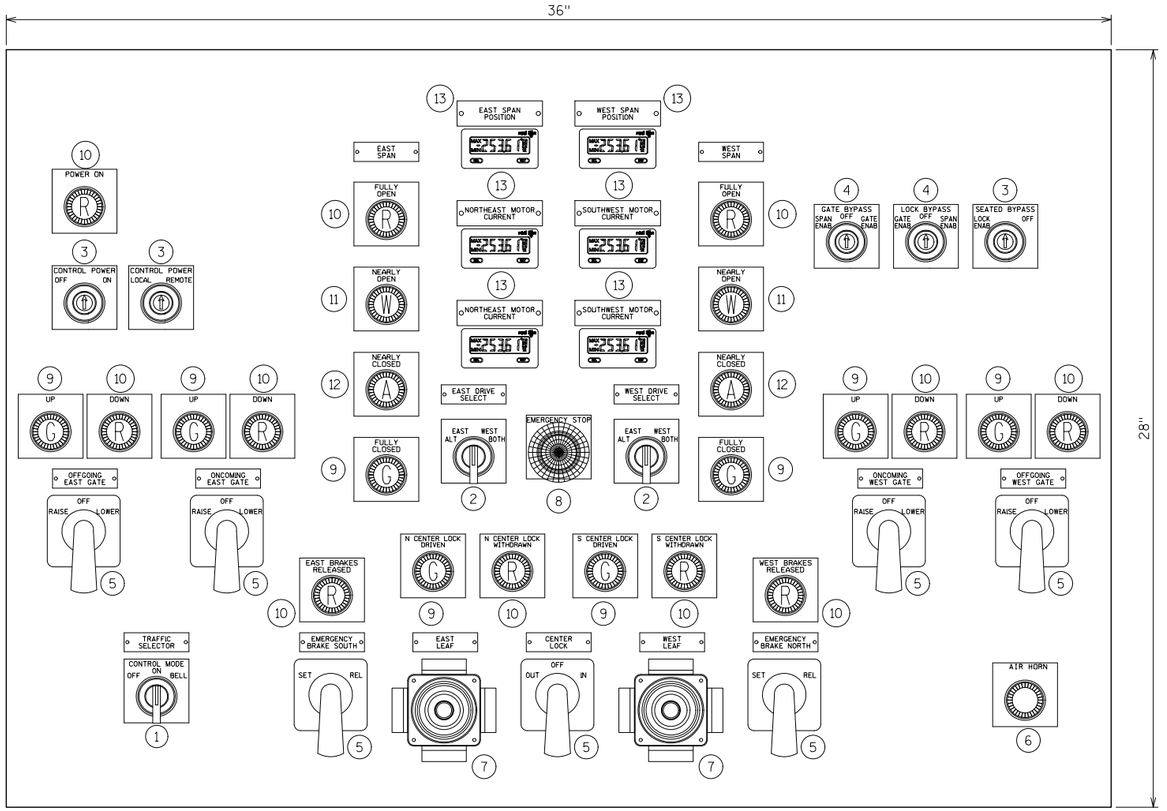


BRIDGE CONTROL CONSOLE
FRONT VIEW

ITEM	QTY.	DESCRIPTION
1	1	30.5 MM SEL. SWITCH, 3 POSITION MAINTAINED, LEVER ARM
2	2	30.5 MM SEL. SWITCH, 4 POSITION MAINTAINED, LEVER ARM
3	3	30.5 MM SEL. SW., 2 POS., KEYED REMOVAL IN OFF
4	2	30.5 MM SEL. SW., 3 POS., KEYED REMOVAL CENTER
5	7	3 POS SPRING RET. CENTER PISTOL GRIP
6	1	30.5 MM MOMENTARY EXTENDED HEAD P.B. - BLACK
7	2	JOYSTICK 3-0-3 SPRING RET CENTER
8	1	30.5 MM 2 POS. MAINTAINED LARGE MUSHROOM HEAD P.B. - RED
9	8	30.5 MM INDICATOR LIGHT PUSH-TO-TEST - GREEN LED
10	11	30.5 MM INDICATOR LIGHT PUSH-TO-TEST - RED LED
11	2	30.5 MM INDICATOR LIGHT PUSH-TO-TEST - WHITE LED
12	2	30.5 MM INDICATOR LIGHT PUSH-TO-TEST - AMBER LED
13	6	PROCESS METER 4 1/2 DIGIT LCD RED, 4-20 MA INPUT
14	1	CONTROL CONSOLE
15	1	INTERNAL DOOR MOUNTED DATA POCKET
16	1	FOOT SWITCH
17	1	PROGRAMMING/POWER PORT
18	1	36"W X 36"H X 24"D TYPE 304 STAINLESS STEEL TABLE. (NOTE 4)

NOTES:

1. PROVIDE BLACK LETTERING WITH WHITE BACKGROUND FOR NAME PLATES. SECURE NON P.B./SS WITH SCREWS.
2. MANUFACTURE CONSOLE TOP OUT OF 10 GAUGE STAINLESS STEEL WITH A BRUSHED FINISH.
3. PRIOR TO PURCHASING THE CONTROL CONSOLE, THE CONTRACTOR SHALL INCLUDE A DRAWING WITH THE PROPOSED COMPONENTS LAID OUT AS SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL RE-SIZE THE CONTROL CONSOLE AS REQUIRED TO FIT ALL COMPONENT ON THE CONTROL CONSOLE.
4. STEEL TABLE SHALL BE AS MANUFACTURED BY REGENCY MODEL 600EBT2436D.



BRIDGE CONTROL CONSOLE
TOP - ENLARGED VIEW

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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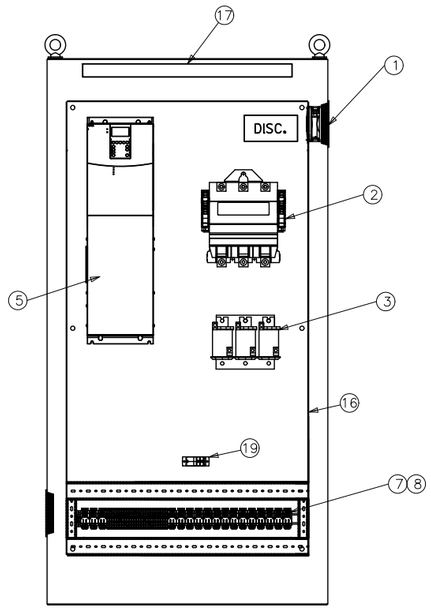
BRIDGE CONTROL CONSOLE

SHEET E34 OF E83
206

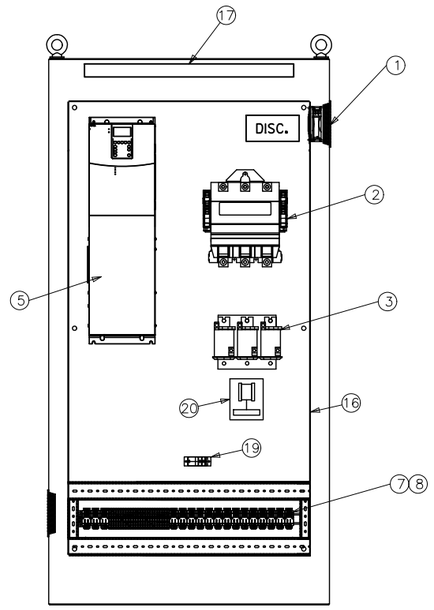
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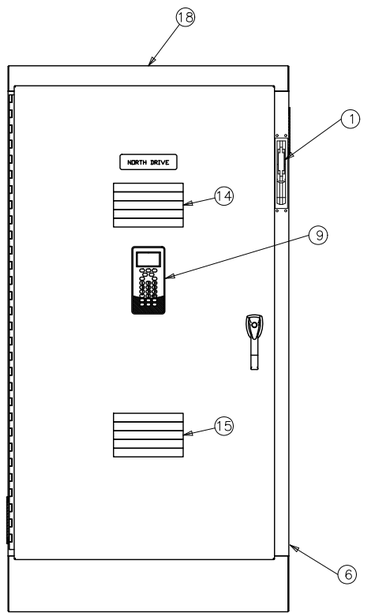
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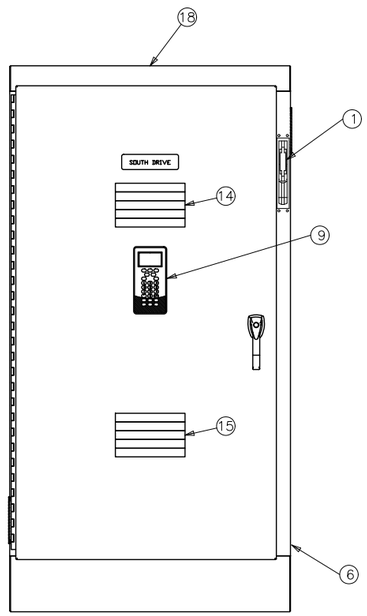


FAR DRIVE CABINETS
(TYPICAL FOR NORTH & SOUTH)



NEAR DRIVE CABINETS
(TYPICAL FOR EAST & WEST)





NOTES:

1. EACH DRIVE CABINET AND ITS COMPONENTS SHALL BE SIZED TO MEET THE MOTOR TORQUE REQUIREMENTS.
2. CABINET DIMENSIONS ARE APPROXIMATE. SIZE CABINETS FOR COMPONENTS INSTALLED. VERIFY CABINET SIZES WILL FIT IN ROOM.
3. QUANTITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY QUANTITIES FOR A FULLY FUNCTIONING CONTROL SYSTEM.
4. ADD SIDE PANELS AS NEEDED FOR TERMINALS AND CONTROL RELAYS.

DRIVES

ITEM	QTY	DESCRIPTION
1	5	FLANGE MOUNTED DISCONNECT
2	4	DRIVE CONTACTOR NEMA SIZE 4 CONTACTOR
3	4	5% IMPEDANCE LINE REACTOR
4	4	DYNAMIC BRAKING RESISTORS
5	4	AC DRIVE
6	4	NEMA 12 CABINET WITH FLANGE MOUNTED DISC
7	LOT	TERMINAL BLOCK
8	LOT	INTERPOSING RELAYS
9	4	DRIVE INTERFACE
10	8	NEMA FVNR STARTERS
11	6	NEMA FVR STARTERS
12	14	MOTOR PROTECTION BREAKERS
13	14	TVSS (NOT USED)
14	4	INTAKE FILTER/GRILL 120VAC FAN (290 CFM) PROVIDE THERMOSTAT
15	4	EXHAUST FILTER/GRILL
16	4	ENCLOSURE MANUFACTURER'S BACK PLATE
17	4	14 INCH LONG LED LIGHT. PROVIDE DOOR OPEN ACTIVATION LIGHT SWITCH
18	4	72" HIGH X 36" WIDE X 20" DEEP ENCLOSURE
19	2	GROUNDING BAR
20	2	DAMPING RESISTOR

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

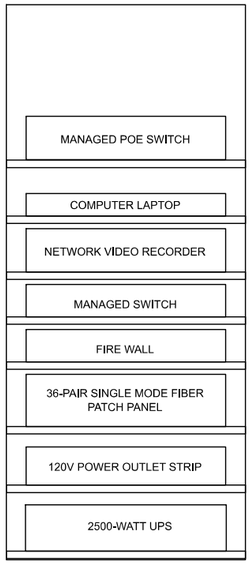
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DRIVE CABINETS

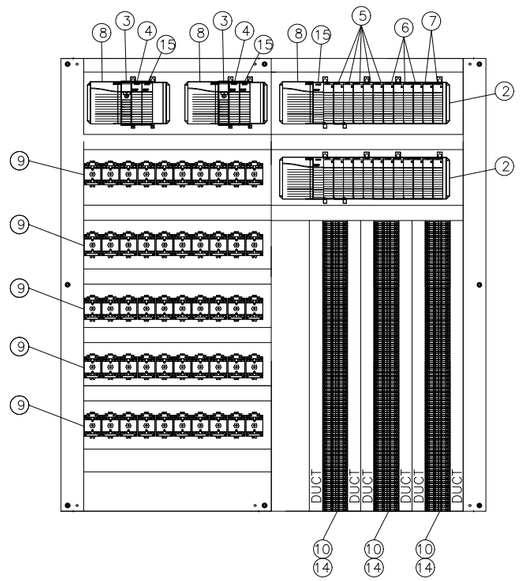
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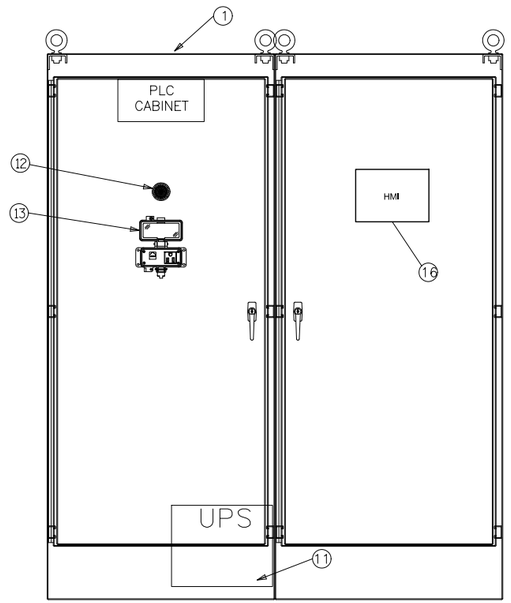
STATE PROJECT NUMBER
2984-26-73



COMMUNICATIONS SERVER CABINET



PLC CABINET



NOTES:

1. CABINET DIMENSIONS ARE APPROXIMATE. SIZE CABINETS FOR COMPONENTS INSTALLED. VERIFY CABINET SIZES WILL FIT IN ROOM.
2. QUANTITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FURNISH ALL NECESSARY QUANTITIES FOR A FULLY FUNCTIONING CONTROL SYSTEM.
3. ADD SIDE PANELS AS NEEDED FOR TERMINALS AND CONTROL RELAYS.
4. PROVIDE THE REQUIRE I/O MODULES INCLUDING SPECIALTY MODULES AS REQUIRED.
5. ONE I/O RACK SHOWN. TYPICAL OF TWO I/O RACKS.

PLC

ITEM	QTY	DESCRIPTION
1	1	NEMA 12 FREE STANDING
2	4	RACK
3	2	PROCESSOR
4	2	ETHERNET
5	LOT	INPUT, 16 POINT, 120 VAC
6	LOT	OUTPUT, 16 POINT, 120 VAC
7	LOT	ANALOG INPUT, 4-20 mA
8	LOT	RACK POWER SUPPLY
9	LOT	INDUSTRIAL CONTROL RELAYS, 120 VAC, REV. CONTACTS
10	LOT	TERMINAL BLOCKS - SPRING CLAMP
11	1	UPS - SIZE TO PROVIDE 15 MINUTE BACK-UP AT 50% POWER
12	1	EMERGENCY STOP 2-POSITION MAINTAINED-RED JUMBO MUSHROOM
13	1	PROGRAMMING/POWER PORT
14	LOT	120 VAC SURGE SUPPRESSORS
15	4	DEVICE NET COMMUNICATIONS MODULE
16	1	15" HUMAN MACHINE INTERFACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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PLC AND COMCAMUNICATIONS CABINETS

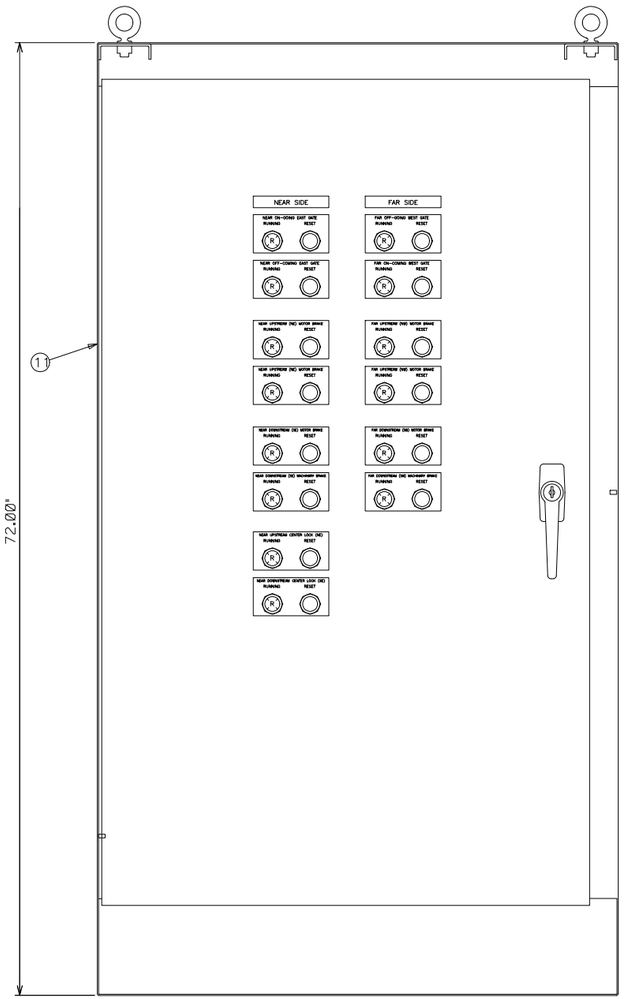
SHEET E36 OF E83

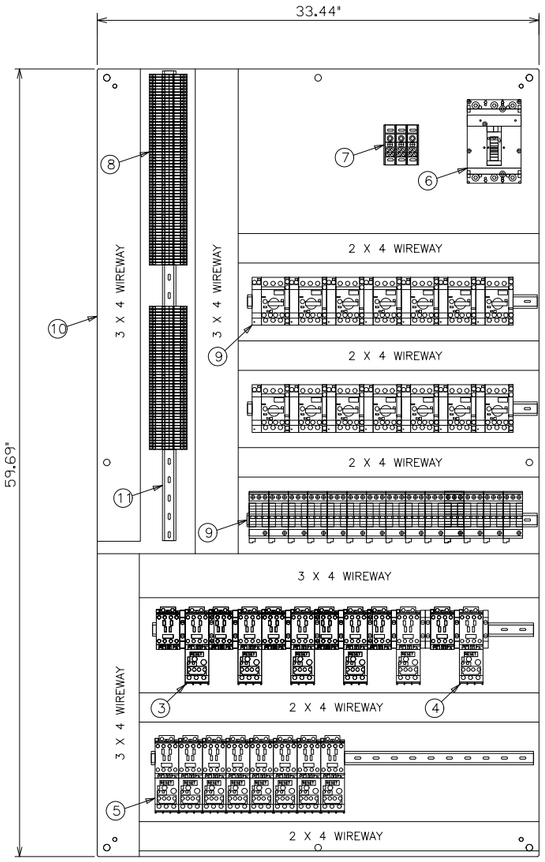
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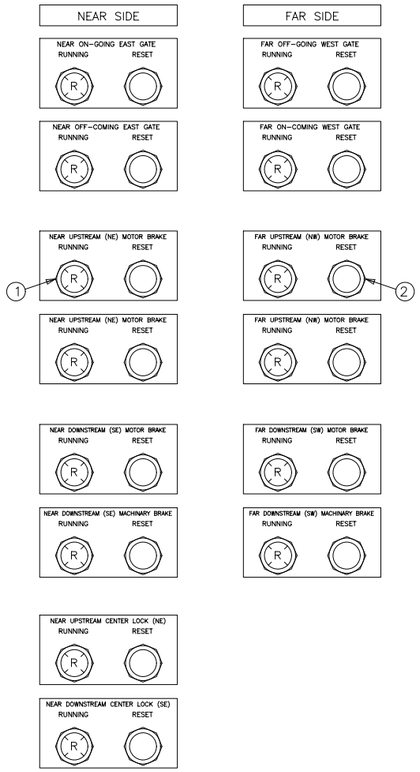
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DRIVES

ITEM	QTY	DESCRIPTION
1	14	30.5 MM INDICATOR LIGHT PUSH-TO-TEST RED LED
2	14	30.5 MM MOMENTRARY EXTENDED HEAD PUSH BUTTON BLACK
3	2	REVERSIBLE STATER SIZE 2
4	4	REVERSIBLE STATER SIZE 00
5	8	STARTER SIZE 00
6	1	60A, 3-POLE MAIN BREAKER
7	1	POWER DISTRIBUTION BLOCK
8	LS	TERMINAL BLOCK / SURGE SUPPRESSOR
9	LS	CONTROL RELAYS
10	LS	WIREWAYS
11	LS	DIN RAILS
12	1	LOCABLE MOTOR CONTROL CENTER ENCLOSURE (SIZE AS REQUIRED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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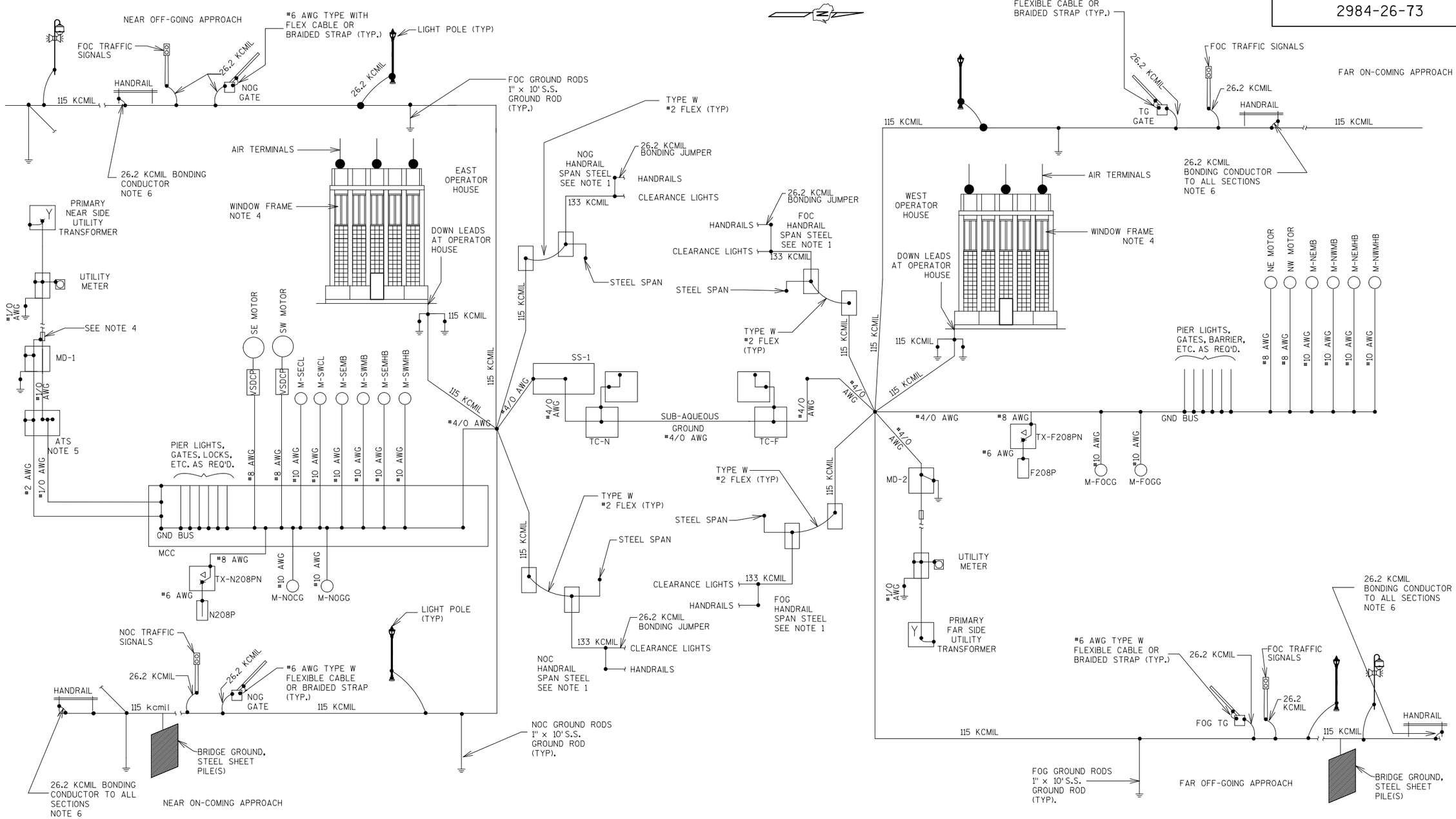
MOTOR STARTER CABINET

SHEET E37 OF E83

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PLOT DATE: 3/27/2024 PLOT TIME: 5:20:07 PM BATCH PRINT SHEET 38 OF 83

STATE PROJECT NUMBER

2984-26-73



NOTES:

1. SUBMIT ALL SHOP DRAWINGS BY CERTIFIED LIGHTNING PROFESSIONAL SHOWING DETAILS AND MATERIALS
2. USE EXOTHERMIC WELDING PROCESS FOR ALL CONNECTIONS. ANY DEVIATION FROM THIS REQUIREMENT SHALL BE FIRST APPROVED BY THE ENGINEER.
3. MAINTAIN GROUND CONDUCTOR CONTINUITY THROUGH PULL BOXES AND EXPANSION FITTINGS. ESTABLISH SEPARATE EQUIPMENT GROUNDING CONDUCTOR, #2 AWG (GREEN) ORIGINATING AT MCC FOR BONDING ALL PULL BOXES AND ACROSS EXPANSION FITTINGS FOR SERVICE ENTRANCE FEEDER CONDUIT.
4. CONTROL HOUSE PROTECTED BY A MINIMUM OF TWO AIR TERMINALS. BOND ALL METAL WINDOW FRAMES.
5. PROVIDE 3-POLE MTS TO SWITCH THE THREE PHASE CONDUCTORS AND THE NEUTRAL CONDUCTOR. THE GROUNDS FROM EACH UTILITY SERVICE ARE TO BE TIED TOGETHER PER THE UTILITY AND NEC REQUIREMENTS.
6. HANDRAILS ARE SEPARATED BY CONCRETE POST. BOND EACH SECTION SEPARATELY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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GROUNDING RISER

SHEET E38 OF E83

210

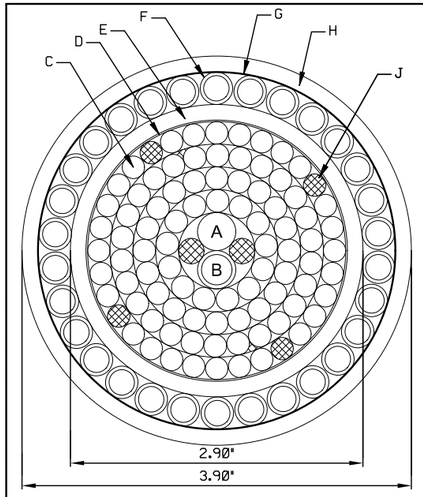
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STATE PROJECT NUMBER

2984-26-73



SBC–1 POWER SUBMARINE CABLE

A – 1 X TSP #14 AWG 7/W UNCOATED COPPER, SEPARATOR, .060" WALL MINERAL
FILLED XLPE INSULATION (PRINTED 1–ONE, 2–TWO), PAIRED, ALUM/POLYESTER
TAPE, #16 AWG STRANDED TC DRAIN WIRE, POLYESTER
TAPE ADHESIVE POLYESTER TAPE – 2,000 VOLTS

B – 1 X CAT 6A W/ TPE JACKET (BELDEN PN 2201ELV OR SIMILAR)

C – 80/C #12 AWG 7/W UNCOATED COPPER, SEPARATOR, .060" WALL
MINERAL FILLED XLPE INSULATION – 2,000 VOLTS

D – .008" FR RUBBER/FABRIC TAPE (DOUBLE LAPPED = .016" THICK)

E – .140" WALL SUNLIGHT AND WEATHER RESISTANT HDPE INNER JACKET

F – #4 BWG (.238") GALVANIZED STEEL WIRES COVERED WITH HDPE

G – .002" CORRUGATED BINDER TAPE

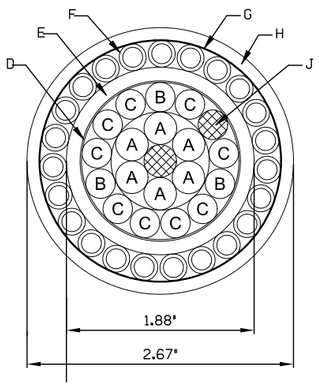
H – .140" WALL SUNLIGHT AND WEATHER RESISTANT HDPE OUTER JACKET

J – NON–HYRGOSCOPIC FILLERS, AS NECESSARY

NOTE: WEIGHT IN AIR – 10.5 LBS/FT
WEIGHT IN WATER – 5.4 LBS/FT
BEND RADIUS – 23.0 INCHES MIN.
VOLTAGE RATING – 2000 VOLTS
INSTALLATION LOAD – 7,000 LBF MAX (RECOMMENDED)
CABLE IN ACCORDANCE WITH CHERRY ST BRIDGE SPECIFICATION, SUBMARINE CABLE, ITEM SPV.0060.016

PROPOSED CONTROLS SUBMARINE CABLE SBC-1 AND SBC-2

(N.T.S.)



SBP–1 POWER SUBMARINE CABLE

A – 6/C #6 AWG 7/W UNCOATED COPPER, SEPARATOR, .070" WALL
MINERAL FILLED XLPE INSULATION – 2,000 VOLTS

B – 3/C #8 AWG 7/W UNCOATED COPPER, SEPARATOR, .070" WALL
MINERAL FILLED XLPE INSULATION – 2,000 VOLTS

C – 9/C #10 AWG 7/W UNCOATED COPPER, SEPARATOR, .060" WALL
MINERAL FILLED XLPE INSULATION – 2,000 VOLTS

D – .008" FR RUBBER/FABRIC TAPE (DOUBLE LAPPED = .016" THICK)

E – .110" WALL SUNLIGHT AND WEATHER RESISTANT HDPE INNER JACKET
MINERAL FILLED XLPE INSULATION – 2,000 VOLTS

F – #6 BWG (.203") GALVANIZED STEEL WIRES COVERED WITH HDPE

G – .002" CORRUGATED BINDER TAPE

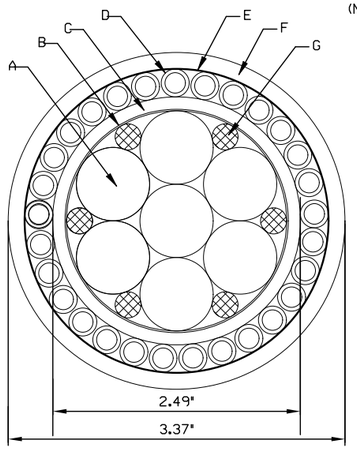
H – .110" WALL SUNLIGHT AND WEATHER RESISTANT HDPE OUTER JACKET

J – NON–HYRGOSCOPIC FILLERS, AS NECESSARY

NOTE: WEIGHT IN AIR – 5.6 LBS/FT
Weight in water – 3.1 lbs/ft
BEND RADIUS – 16.0 INCHES MIN.
VOLTAGE RATING – 2000 VOLTS
INSTALLATION LOAD – 5,000 LBF MAX (RECOMMENDED)
CABLE IN ACCORDANCE WITH CHERRY ST BRIDGE SPECIFICATION, SUBMARINE CABLE, ITEM SPV.0060.016

PROPOSED POWER SUBMARINE CABLE SBP-1

(N.T.S.)



SBS POWER SUBMARINE CABLE

A – 7/C #4/0 AWG 19/W UNCOATED COPPER, SEPARATOR, .090" WALL

B – .008" FR RUBBER/FABRIC TAPE (DOUBLE LAPPED = .016" THICK)

C – .110" WALL SUNLIGHT AND WEATHER RESISTANT HDPE INNER JACKET

D – #6 BWG (.203") GALVANIZED STEEL WIRES COVERED WITH HDPE

E – .002" CORRUGATED BINDER TAPE

F – .140" WALL SUNLIGHT AND WEATHER RESISTANT HDPE OUTER JACKET

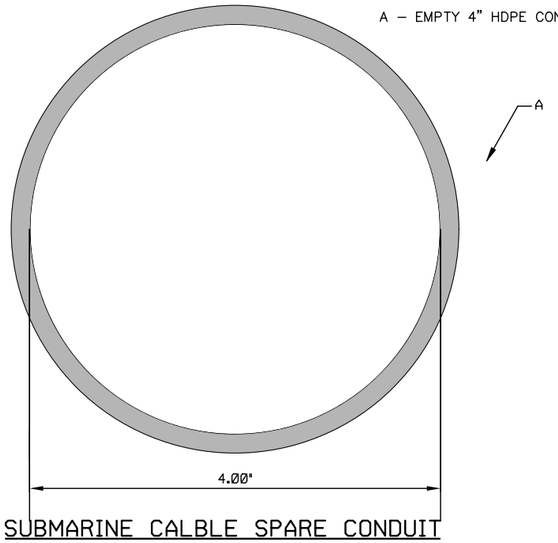
G – NON–HYRGOSCOPIC FILLERS, AS NECESSARY

NOTE: WEIGHT IN AIR – 10.9 LBS/FT
WEIGHT IN WATER – 7.0 LBS/FT
BEND RADIUS – 20.0 INCHES MIN.
VOLTAGE RATING – 2000 VOLTS
INSTALLATION LOAD – 6,000 LBF MAX (RECOMMENDED)
CABLE IN ACCORDANCE WITH CHERRY ST BRIDGE SPECIFICATION, SUBMARINE CABLE, ITEM SPV.0060.016

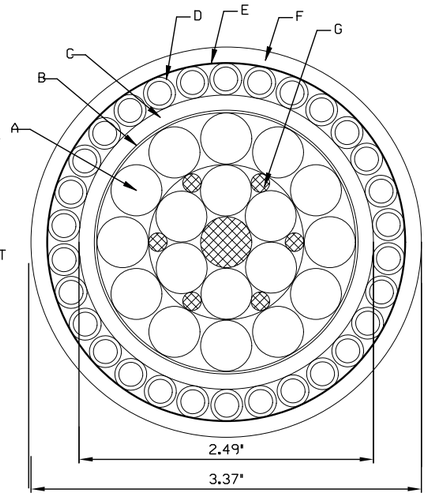
PROPOSED SERVICE SUBMARINE CABLE SBS

(N.T.S.)

A – EMPTY 4" HDPE CONDUIT



SUBMARINE CALBLE SPARE CONDUIT



(N.T.S.)

SBP–2 POWER SUBMARINE CABLE

A – 18/C #1 AWG 7/W UNCOATED COPPER, SEPARATOR, .090" WALL
MINERAL FILLED XLPE INSULATION – 2,000 VOLTS

B – .008" FR RUBBER/FABRIC TAPE (DOUBLE LAPPED = .016" THICK)

C – .140" WALL SUNLIGHT AND WEATHER RESISTANT HDPE INNER JACKET

D – #4 BWG (.238") GALVANIZED STEEL WIRES COVERED WITH HDPE

E – .002" CORRUGATED BINDER TAPE

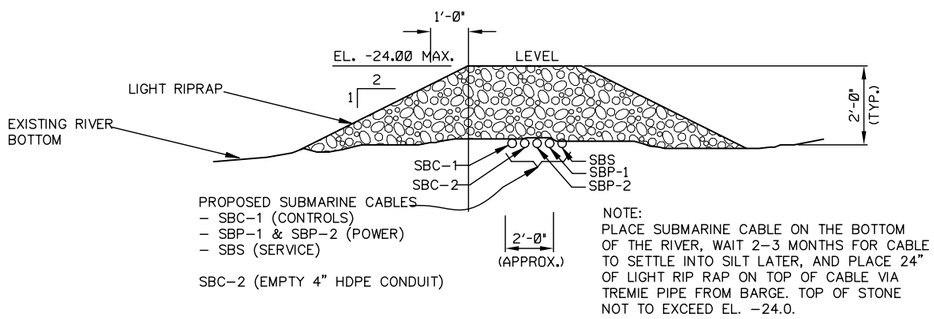
F – .140" WALL SUNLIGHT AND WEATHER RESISTANT HDPE OUTER JACKET

G – NON–HYRGOSCOPIC FILLERS, AS NECESSARY

NOTE: WEIGHT IN AIR – 13.3 LBS/FT
WEIGHT IN WATER – 8.1 LBS/FT
BEND RADIUS – 23.5 INCHES MIN.
VOLTAGE RATING – 2000 VOLTS
INSTALLATION LOAD – 7,000 LBF MAX (RECOMMENDED)
CABLE IN ACCORDANCE WITH CHERRY ST BRIDGE SPECIFICATION, SUBMARINE CABLE, ITEM SPV.0060.016

PROPOSED POWER SUBMARINE CABLE SBP-2

(N.T.S.)



PROPOSED SUBMARINE CABLES
– SBC–1 (CONTROLS)
– SBP–1 & SBP–2 (POWER)
– SBS (SERVICE)

SBC–2 (EMPTY 4" HDPE CONDUIT)

NOTE:
PLACE SUBMARINE CABLE ON THE BOTTOM OF THE RIVER, WAIT 2–3 MONTHS FOR CABLE TO SETTLE INTO SILT LATER, AND PLACE 24" OF LIGHT RIP RAP ON TOP OF CABLE VIA TREMIE PIPE FROM BARGE. TOP OF STONE NOT TO EXCEED EL. –24.0.

SUBMARINE CABLE DETAILS

(N.T.S.)

NOTES:

1. PRIOR TO BEGINNING WORK, FLOATING TURBIDITY BARRIER MUST BE IN PLACE. FLOATING TURBIDITY BARRIER (MIN. 10' DEPTH) WITH STRESS PLATES, 12" DIAMETER FLOAT AND ANCHOR POINTS EVERY 25' ARE REQUIRED. CONCRETE ANCHORS, 120 POUNDS, ARE TO BE USED EVERY 50' INITIALLY. AT THE PROJECT ENGINEER'S DISCRETION CONCRETE ANCHORS CAN BE DEPLOYED EVERY 25'.
2. PRIOR TO BEGINNING CONSTRUCTION, CHANNEL OBSTRUCTIONS MUST BE COORDINATED WITH THE APPLICABLE WATERWAY AGENCIES.
3. PROVIDE ALL GRADE 316 STAINLESS STEEL HARDWARE, SEE GENERAL NOTES.
4. ANCHOR BOLTS: FOR CONCRETE EPOXY TYPE, KELEKEN–GOLD "KELIBOND" RESIN BONDING SYSTEM OR APPROVED EQUAL.
5. EMBEDDEMENT DEPTH FOR ANCHOR BOLTS: AS RECOMMENDED BY BOLT MANUFACTURER.
6. FOR ROUTING DETAILS OF SUBCABLES SEE SUBCABLE PERMIT DRAWINGS AND GP&E.
7. INSTALL SUBMARINE CABLES IN SUCH A MANNER THAT SEDIMENT DISTURBANCE IS MINIMIZED. INCLUDE THE PROPOSED PROCEDURE FOR ACCOMPLISHING THIS IN THE EROSION CONTROL IMPLEMENTATION PLAN. SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.
8. CABLE DIMENSIONS SHOWN NOMINAL. SUBMIT SHOP DRAWINGS FOR APPROVAL.
9. REFER TO SHEET E49 FOR SUBMARINE CABLE TERMINATION CABINET DETAILS.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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SUBMARINE CABLE DETAILS

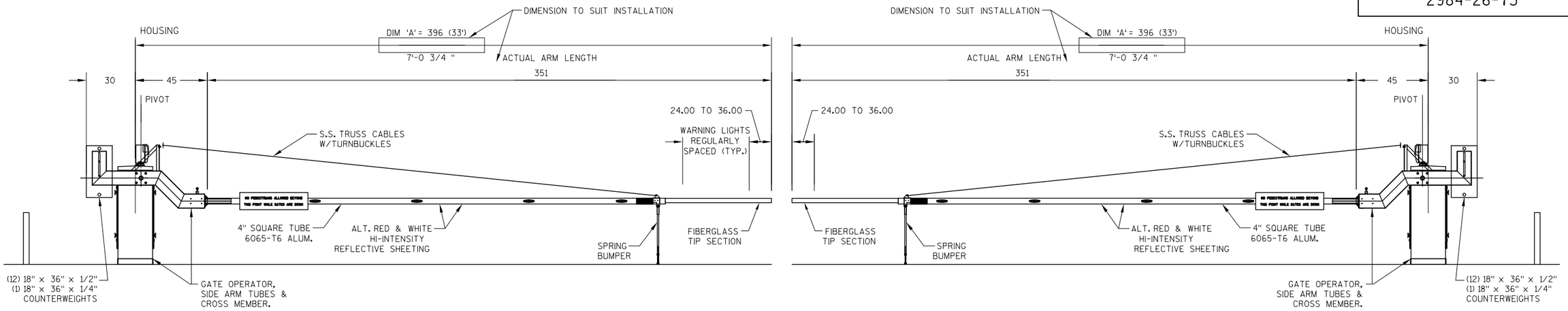
SHEET E39 OF E83
211

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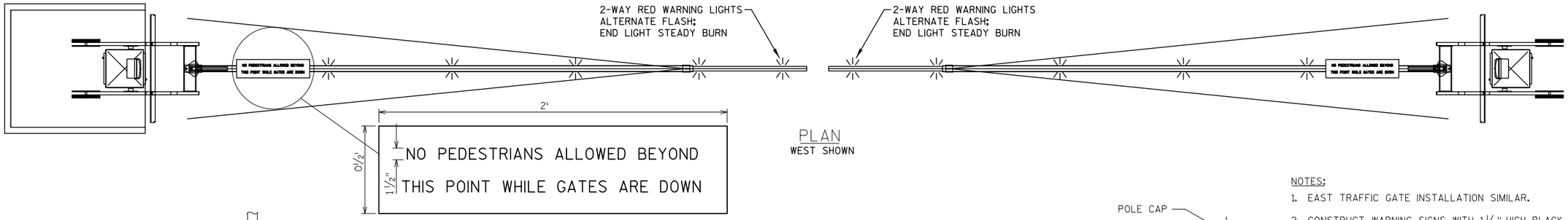
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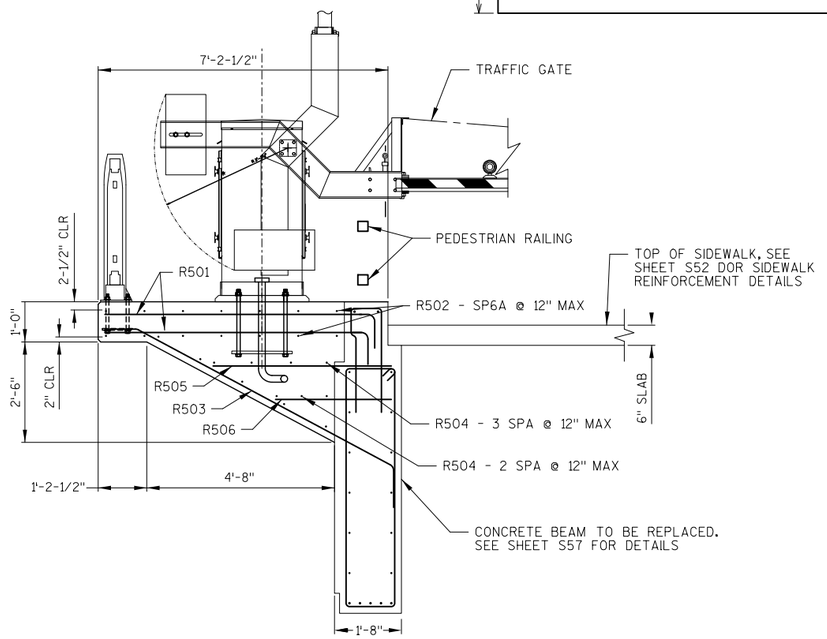
2984-26-73



ELEVATION
WEST SHOWN



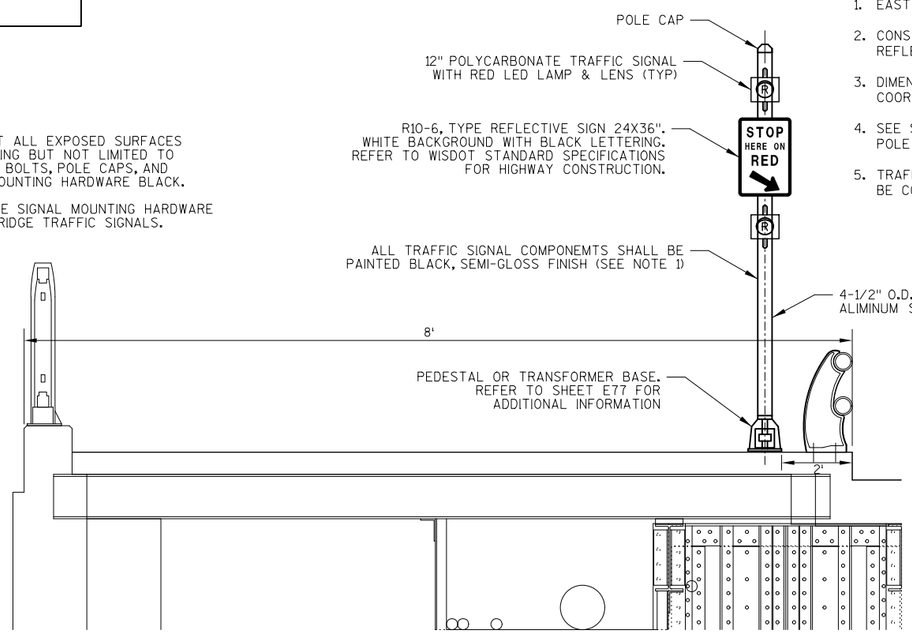
PLAN
WEST SHOWN



TRAFFIC GATE PLATFORM DETAILS
N.T.S.

*PAINT ALL EXPOSED SURFACES INCLUDING BUT NOT LIMITED TO POLES, BOLTS, POLE CAPS, AND ALL MOUNTING HARDWARE BLACK.

PROVIDE SIGNAL MOUNTING HARDWARE FOR BRIDGE TRAFFIC SIGNALS.



BRIDGE TRAFFIC SIGNAL POLE ASSEMBLY
N.T.S.

NOTES:

1. EAST TRAFFIC GATE INSTALLATION SIMILAR.
2. CONSTRUCT WARNING SIGNS WITH 1 1/2" HIGH BLACK LETTERS AND WHITE REFLECTORIZED BACKGROUND. INSTALL THE SIGNS WITH S.S. FASTENERS.
3. DIMENSIONS SHOWN ARE APPROXIMATE. FIELD VERIFY DIMENSIONS AND COORDINTTE WITH GATE MANUFACTURER.
4. SEE STRUCTURAL PLANS FOR TRAFFIC SIGNAL, TRAFFIC GATE, AND LIGHT POLE FOUNDATION DETAILS.
5. TRAFFIC SIGNAL PEDESTAL BASE ANCHORS SIZE AND DIMENSSIONS SHALL BE COORDINATED WITH TRAFFIC SIGNAL POLE BASE SUPPLIER.

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STRUCTURE P-40-0864

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TRAFFIC GATES/SIGNALS DETAILS

SHEET E40 OF E83
212

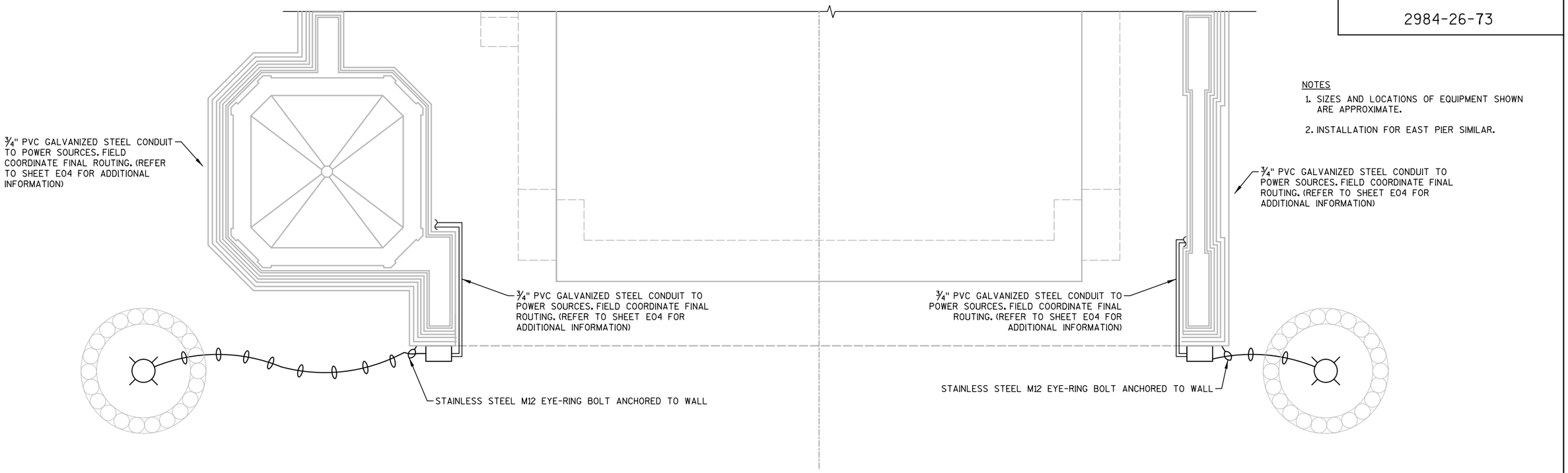
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PLOT TIME: 5:20:19 PM
BATCH PRINT SHEET 40 OF 83

STATE PROJECT NUMBER

2984-26-73

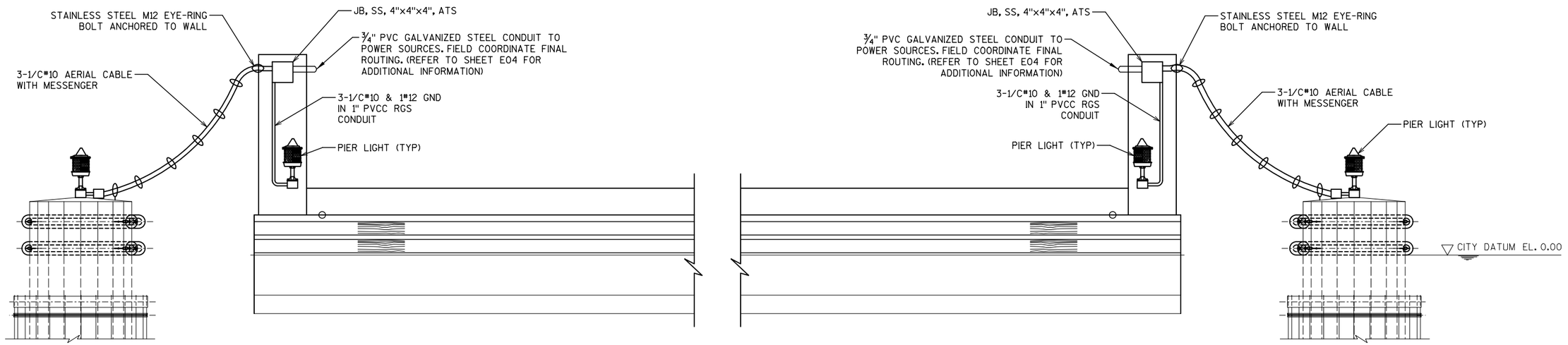


NOTES

1. SIZES AND LOCATIONS OF EQUIPMENT SHOWN ARE APPROXIMATE.
2. INSTALLATION FOR EAST PIER SIMILAR.

WEST PIER PLAN

N.T.S.



WEST PIER ELEVATION

N.T.S.

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STRUCTURE P-40-0864

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WEST SPAN DRIVE SCHEMATIC

SHEET E41 OF E83

213

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PLOT DATE: 3/27/2024
PLOT TIME: 5:20:30 PM
BATCH PRINT SHEET 42 OF 83

CONTROL SUBMARINE CABLE
POWER SUBMARINE CABLE
SERVICE SUBMARINE CABLE

STATE PROJECT NUMBER

2984-26-73

FAR OFF GOING TRAFFIC GATE AND WARNING BELL
LS-FOGWB
LS-FOGLT
LS-FOGGUP
LS-FOGGDW
JB44
PB21
FAR SIDE SUBMARINE CABLE CONTROL TERMINATION CABINET
FAR SIDE SUBMARINE CABLE POWER TERMINATION CABINET
FAR SIDE SUBMARINE CABLE SERVICE TERMINATION CABINET
TO WEST SIDE SERVICE 3-PHASE 4 WIRE 480/277V (NOTE 4)
JB31
JB32
FAR SEATED LIMIT SWITCH LS-WSEATED
INCLINOMETER
FAR CAM SPAN
FENDER LIGHT
JB41
CLERANCE LIGHT
PIER LIGHT
JB40
JB39
PB26
JB34
LS-NWMBSET
LS-NWMBHREL
LS-NWMBREL
LS-NWMHBSET
LS-NWMHBHREL
LS-NWMHBREL
JB35
UPSTREAM MOTOR BRAKE FAR
UPSTREAM MOTOR DRIVE FAR
UPSTREAM MACHINERY BRAKE FAR
JB36
LS-SWMBSET
LS-SWMBHREL
LS-SWMBREL
LS-SWMHBSET
LS-SWMHBHREL
LS-SWMHBREL
JB37
DOWNSTREAM MOTOR DRIVE FAR
DOWNSTREAM MACHINERY BRAKE FAR
PB23
JB38
ETH
OUTDOOR CABINET
30CF
(CAT-6A SEPARATED)
TRAFFIC SIGNAL AT DECK LEVEL
ROADWAY LIGHT AT DECK LEVEL
PB24
PB25
PB22
JB33
FAR SIDE (WEST) BASCULE PIER
FAR SIDE (WEST) MACHINARY ROOM LEVEL
FAR SIDE (WEST) CONTROL ROOM LEVEL
FAR SIDE (EAST) COAL ROOM
30KVA XFMER
FAR SIDE HOUSE PANEL FHLP
FAR ON-COMING TRAFFIC GATE AT DECK LEVEL
PB29
JB45
LS-FOCLT
LS-FOCGUP
LS-FOCGDW
JB43
PB27
JB42
PB28
CLEARANCE LIGHT
PIER LIGHT
FENDER LIGHT
JB19
JB20
PB02
PB03
JB18
LS-SECLD
LS-SECLW
LS-SECLHK

NEAR SIDE (EAST) CONTROL ROOM LEVEL
CCTV/PA SYSTEM CABINET
CONTROL CONSOLE
NEAR SIDE (EAST) ENTRY LEVEL
ISL XFMER
DRIVE RESISTOR
PLC CABINET
JB15
PB04
PB05
CABLE CHASE
NEAR SIDE (EAST) MACHINARY ROOM LEVEL
WIREWAY
NEAR UP STREAM DRIVE CABINET
FAR DOWN STREAM DRIVE CABINET
FAR UP STREAM DRIVE CABINET
75 KVA XFMER
MOTOR STARTER CABINET
NEAR DOWN STREAM DRIVE CABINET
NEAR SIDE HOUSE PANEL NHLP
NEAR SIDE 480/277V MDP-N
NEAR SIDE (EAST) COAL ROOM
NEAR SIDE (EAST) METER/ELECTRICAL
ATS
NEAR UP-STREAM CENTER LOCK
LS-NECLD
LS-NECLW
LS-NECLHK
OUTDOOR CABINET
NEAR CAM INCLINOMETER
JB11
JB08
JB14
JB12
JB09
JB13
JB10
LS-NEMHBSET
LS-NEMHBREL
LS-NEMBSET
LS-NEMBHREL
LS-NEMBREL
LS-SEMBSET
LS-SEMBHREL
LS-SEMBREL
LS-SEMHBSET
LS-SEMHBREL
LS-SEMHBREL
UPSTREAM MOTOR BRAKE NEAR
UPSTREAM MOTOR DRIVE NEAR
UPSTREAM MACHINERY BRAKE NEAR
DOWNSTREAM MOTOR BRAKE NEAR
DOWNSTREAM MOTOR DRIVE NEAR
DOWNSTREAM MACHINERY BRAKE NEAR
NEAR ON-GOING TRAFFIC GATE AND WARNING BELL
LS-NOGWB
LS-NOGLT
LS-NOGGUP
LS-NOGGDW
JB21
JB02
JB03
JB01
JB04
JB05
PB08
TO KNAPP STREET
PB06
PB07
NEAR SIDE SUBMARINE CABLE CONTROL TERMINATION CABINET
NEAR SIDE SUBMARINE CABLE POWER TERMINATION CABINET
NEAR SIDE SUBMARINE CABLE SERVICE TERMINATION CABINET
TO EAST SIDE SERVICE 3 PHASE 4 WIRE 480/277V (NOTE 4)
NEAR SEATED LIMIT SWITCH LS-ESEATED
NEAR SIDE (EAST) BASCULE PIER
JB06
JB22
JB07
LS-NOCLT
LS-NOCGUP
LS-NOCGDW
NEAR OFF-COMING TRAFFIC GATE

NOTES:

1. REFER TO SHEETS E43 TRU E49 FOR CONDUCTORS AND CONDUIT SIZES.
2. ONLY ELECTRICAL DEVICES THAT REQUIRE POWER AND/OR CONTROL FROM THE NEAR SIDE ARE SHOWN. REFER TO PLANS FOR ADDITIONAL ELECTRICAL DEVICES.
3. ELECTRICAL DEVICES AND EQUIPMENT ARE SHOWN SYMBOLICALLY ON THIS SCHEMATIC. THE USE OF SYMBOLS AND NOTATIONS (OR THE OMISION THEREFORE) DOES NOT RELIEVE THE CONTRACTOR TO FROM FURNISHING A SAFE, COMPLETE AND FULLY FUNCTIONAL SYSTEM. FIELD LOCATE DEVICES AND EQUIPMENT TO FACILITATE ACCESIBILITY WITH RESPECT TO OPERATIONS AND MAINTENANCE CONDITIONS.
4. REFER TO SHEET E05 FOR WEST AND EAST SERVICE METER/DISCONNECT LOCATION AND ADDITIONAL INFORMATION.

LEGEND:

#CN	#CF	CONDUCTORS AND CONDUIT REFERENCE NUMBERS: "CN" REFERS TO CONTROL CONDUCTORS & CONDUIT IN NEAR SIDE
#PN	#PF	"CF" REFERS TO CONDUCTORS & CONDUIT IN FAR SIDE. "PN" REFER TO POWER CONDUCTORS & CONDUIT IN NEAR SIDE.
SN	SF	"PF" REFERS TO CONDUCTORS & CONDUIT IN FAR SIDE. "SN" REFERS TO SERVICE CONDUCTORS & CONDUIT IN THE NEAR SIDE.
SBC	SBP SBS	"SF" REFERS TO SERVICE CONDUCTORS & CONDUIT IN THE FAR SIDE. "SBC" REFERS TO SUBMARINE CONTROL CABLE" "SBP" REFERS TO SUBMARINE POWER CABLE" "SBS" REFERS TO SUBMARINE SERVICE CABLE"
ETH		OUTDOOR CABINET WITH MANAGED ETHERNET SWITCH AND AND POWER SUPPLY.
#F		GROUP OF CONDUCTORS AS REFERENCED ABOVE IN A SHARED CONDUIT.
*PN		REFER TO ONE SINGLE LINE DIAGRAMS SHEETS E19 & E20 FOR RESPECTIVE ASSOCIATE POWER CONDUCTORS AND CONDUIT(S).
*CF		REFER TO SCHEMATICS SHEETS E22 THRU E32 FOR RESPECTIVE ASSOCIATE CONTROL CONDUCTORS AND CONDUIT(S).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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CONDUIT BLOCK DIAGRAM

SHEET E42 OF E83
214

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PLOT DATE: 3/27/2024 PLOT TIME: 5:28:35 PM BATCH PRINT SHEET 43 OF 83

FAR SIDE POWER CONDUCTORS AND CONDUITS (#PF)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																	
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1PF	4	#10	XHHW	208	3/4 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE OFF-GOING TRAFFIC GATE	T1	T2	T3	GND																
2PF	4	#10	XHHW	208	3/4 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE ON-COMING TRAFFIC GATE	T1	T2	T3	GND																
3PF	3	#8	XHHW	480	1"	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE 30 KVA TRANSFORMER DISCONNECT	T1	T2	T3																	
	1	#10							GND																			
4PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
5PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM MOTOR DRIVE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
6PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM MACHINERY MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
7PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
8PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM MOTOR DRIVE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
9PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM MACHINERY MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
10PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE UPSTREAM MOTOR BRAKE DISCONNECT	FAR SIDE UPSTREAM MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
11PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE UPSTREAM MOTOR DRIVE DISCONNECT	FAR SIDE UPSTREAM MOTOR DRIVE	T1	T2	T3																	
	1	#6							GND																			
12PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE UPSTREAM MACHINERY MOTOR BRAKE DISCONNECT	FAR SIDE UPSTREAM MACHINERY MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
13PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE DOWNSTREAM MOTOR BRAKE DISCONNECT	FAR SIDE DOWNSTREAM MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
14PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE DOWNSTREAM MOTOR DRIVE DISCONNECT	FAR SIDE DOWNSTREAM MOTOR DRIVE	T1	T2	T3																	
	1	#6							GND																			
15PF	3	#1	XHHW	480	1-1/2 "	PRGS	FAR SIDE DOWNSTREAM MACHINERY MOTOR BRAKE DISCONNECT	FAR SIDE DOWNSTREAM MACHINERY MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
16PF	3	#8	XHHW	480	1"	PRGS	FAR SIDE 30 KVA TRANSFORMER DISCONNECT	FAR SIDE 30 KVA TRANSFORMER (PRIMARY)	T1	T2	T3																	
	1	#10							GND																			
17PF	3	#1	XHHW	208	1-1/2 "	PRGS	FAR SIDE 30 KVA TRANSFORMER (SECONDARY)	FAR SIDE HOUSE PANEL "FHLP"	T1	T2	T3																	
	1	#6							GND																			
18PF	3	CAT 6A		120	1"	PRGS	FAR SIDE HOUSE PANEL "FHLP" (CKT FHLP-25)	FAR SIDE OUTDOOR CABINET WITH MANAGED ETHERNET SWITCH AND POWER SUPPLY	CB-25	N	G																	
19PF	3	#12	XHHW	120	3/4 "	PRGS	FAR SIDE HOUSE PANEL "FHLP" (PIER, CLEARANCE AND DOLPHIN LIGHTS, CKT FHLP-7)	JB26 (CKT FHLP-7)	CB-7	N	G																
20PF	3	#12	XHHW	120	3/4 "	PRGS	JB40 (CKT FHLP-7)	JB41 (CKT FHLP-7)	CB-7	N	G																	
21PF	3	#12	XHHW	120	3/4 "	PRGS	JB40 (CKT FHLP-7)	FAR NORTH PIER LIGHT (CKT FHLP-7)	CB-7	N	G																	
22PF	3	#12	XHHW	120	3/4 "	PRGS	PB26 (CKT FHLP-7)	FAR NORTH CLEARANCE LIGHT (CKT FHLP-7)	CB-7	N	G																	
23PF	3	#12	XHHW	120	AERIAL		JB32 (CKT FHLP-7)	JB33 (CKT FHLP-7)	CB-7	N	G																	
24PF	3	#12	XHHW	120	3/4 "	PRGS	JB33 (CKT FHLP-7)	FAR NORTH DOLPHIN LIGHT (CKT FHLP-7)	CB-7	N	G																	
25PF	3	#12	XHHW	120	3/4 "	PRGS	JB26 (CKT FHLP-7)	JB40 (CKT FHLP-7)	CB-7	N	G																	
26PF	3	#12	XHHW	120	3/4 "	PRGS	JB42 (CKT FHLP-7)	FAR SOUTH PIER LIGHT (CKT FHLP-7)	CB-7	N	G																	
27PF	3	#12	XHHW	120	3/4 "	PRGS	JB28 (CKT FHLP-7)	FAR SOUTH CLEARANCE LIGHT (CKT FHLP-7)	CB-7	N	G																	
28PF	3	#12	XHHW	120	AERIAL		JB42 (CKT FHLP-7)	JB43 (CKT FHLP-7)	CB-7	N	G																	
29PF	3	#12	XHHW	120	3/4 "	PRGS	JB43 (CKT FHLP-7)	FAR SOUTH DOLPHIN LIGHT (CKT FHLP-7)	CB-7	N	G																	

FAR SIDE CONTROL CONDUCTORS AND CONDUITS (#CF)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																			
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM (NW) MACHINERY BRAKE SET LIMIT SWITCH - LS-NWMHBSET	1191	5301	GND																	
2CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM (NW) MACHINERY BRAKE RELEASE LIMIT SWITCH - LS-NWMHBREL	1191	5321	GND																	

STATE PROJECT NUMBER

2984-26-73

NOTES:

1. LIGHTING AND RECEPTACLE CIRCUITS ARE NOT INCLUDED WITH THE CONDUIT/CABLES SCHEDULES.
2. SCHEDULES ARE BASED ON THE CONCEPTUAL CONTROL DIAGRAMS. THE CONTRACTOR SHALL UPDATE TO MATCH AND THE CONTROL SYSTEM INTEGRATOR'S DRAWINGS AND SHALL PROVIDE ALL CIRCUITS NECESSARY FOR A COMPLETE OPERATING SYSTEM.

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DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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CONDUIT SCHEDULE 1

8

8

FAR SIDE CONTROL CONDUCTORS AND CONDUITS (#CF)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																			
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
3CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM (NW) MACHINERY BRAKE HAND RELEASE LIMIT SWITCH - LS-NWMHBHREL	1191	5341	GND																	
4CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM (SW) MACHINERY BRAKE SET LIMIT SWITCH - LS-SWMHBSET	1191	5371	GND																	
5CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM (SW) MACHINERY BRAKE RELEASE LIMIT SWITCH - LS-SWMHBREL	1191	5391	GND																	
6CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM (SW) MACHINERY BRAKE HAND RELEASE LIMIT SWITCH - LS-SWMHBHREL	1191	5411	GND																	
7CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM (NW) MOTOR BRAKE SET LIMIT SWITCH - LS-NWMBSET	1191	5441	GND																	
8CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM (NW) MOTOR BRAKE RELEASE LIMIT SWITCH - LS-NWMBREL	1191	5461	GND																	
9CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE UPSTREAM (NW) MOTOR BRAKE HAND RELEASE LIMIT SWITCH - LS-NWMBHREL	1191	5481	GND																	
10CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM (SW) MOTOR BRAKE SET LIMIT SWITCH - LS-SWMBSET	1191	5511	GND																	
11CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM (SW) MOTOR BRAKE RELEASE LIMIT SWITCH - LS-SWMBREL	1191	5531	GND																	
12CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE DOWNSTREAM (SW) MOTOR BRAKE HAND RELEASW LIMIT SWITCH - LS-SWMBHREL	1191	5551	GND																	
13CF	4	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) OFF-GOING WARNING BELL LIMIT SWITCH - LS-FOGWB	1181	2021	2022	N5																
14CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) OFF-GOING GATE LIGHTS LIMIT SWITCH - LS-FOGLT	1181	2431	N5																	
15CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) OFF-GOING GATE UP LIMIT SWITCH - LS-FOGUP	1172	3191	GND	1172	3193	GND	1191	3441	GND												
16CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) OFF-GOING GATE DOWN LIMIT SWITCH - LS-FOGDW	1172	3211	GND	1172	3213	GND	1191	3471	GND												
17CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (W) SEATED PLUNGER LIMIT SWITCH - LS-ESEATED	1191	6281	GND																	
18CF	5	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) TRAFFIC SIGNAL	2071	2072	2121	2131	N5															
19CF	5	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (SW) TRAFFIC SIGNAL	2071	2072	2121	2131	N5															
20CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (SW) ON-COMING GATE LIGHTS LIMIT SWITCH - LS-FOGCLT	1181	2351	N5																	
21CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (SW) ON-COMING GATE UP LIMIT SWITCH - LS-FOCGUP	1172	3141	GND	1172	3143	GND	1191	3381	GND												
22CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (SW) ON-COMING GATE DOWN LIMIT SWITCH - LS-FOCGDW	1172	3161	GND	1172	3163	GND	1191	3411	GND												
23CF	4	#16	XHHW	24V DC	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	INCLINOMETER	2 TSP				2 TSP															
	2	#12	XHHW	120	3/4"	PRGS			SP	SP																		
24CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE CAM SPAN POSITION LIMIT SWITCH - (LS-WNO, LS-WNC, LS-WFO, LS-WFC)	1191	6181	6211	6241	6271	N5														
25CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) PIER LIGHT	SP	SP	SP																	
26CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (NW) CLERANCE LIGHT	11051	11042	N7	SP	SP	SP														
27CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	JB40 (NW DOLPHIN LIGHT)	SP	SP	SP																	
28CF	3	#12	XHHW	120	AERIAL		JB40 (NW DOLPHIN LIGHT)	JB41 (NW DOLPHIN LIGHT)	SP	SP	SP																	
29CF	3	#12	XHHW	120	3/4"	PRGS	JB41 (NW DOLPHIN LIGHT)	FAR SIDE (NW) DOLPHIN LIGHT	SP	SP	SP																	
30CF	2	CAT -6A		-	1"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE OUTDOOR CABINET WITH MANAGED ETHERNWT SWITCH AND POWER SUPPLY	COMM	SP																		
31CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (SW) PIER LIGHT	SP	SP	SP																	
32CF	6	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	FAR SIDE (SW) CLERANCE LIGHT	11051	11042	N7	SP	SP	SP														
33CF	3	#12	XHHW	120	3/4"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	JB34 (SW DOLPHIN LIGHT)	SP	SP	SP																	
34CF	3	#12	XHHW	120	AERIAL		JB42 (SW DOLPHIN LIGHT)	JB43 (SW DOLPHIN LIGHT)	SP	SP	SP																	
35CF	6	#12	XHHW	120	3/4"	PRGS	JB43 (SW DOLPHIN LIGHT)	FAR SIDE (SW) DOLPHIN LIGHT	11051	11042	N7	SP	SP	SP														

STATE PROJECT NUMBER

2984-26-73

NOTES:

1. LIGHTING AND RECEPTACLE CIRCUITS ARE NOT INCLUDED WITH THE CONDUIT/CABLES SCHEDULES.
2. SCHEDULES ARE BASED ON THE CONCEPTUAL CONTROL DIAGRAMS. THE CONTRACTOR SHALL UPDATE TO MATCH AND THE CONTROL SYSTEM INTEGRATOR'S DRAWINGS AND SHALL PROVIDE ALL CIRCUITS NECESSARY FOR A COMPLETE OPERATING SYSTEM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONDUIT SCHEDULE 2

SHEET E44 OF E83
216

8

8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:20:43 PM BATCH PRINT SHEET 44 OF 83

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PLOT DATE: 3/27/2024 PLOT TIME: 5:20:49 PM BATCH PRINT SHEET 45 OF 83

FAR SIDE CONDUCTORS IN SHARED CONDUIT AND/OR SAME PROPOSED ROUTING (#F)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1F	15	#12	XHHW	120	1"	PRGS	JB38	JB42	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	CB-7	N	G					
2F	15	#12	XHHW	120	1"	PRGS	JB39	JB38	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	CB-7	N	G					
	2	CAT-6A		-	1"	PGRS			COMM	SP																		
3F	12	#12	XHHW	120	1"	PRGS	JB39	JB40	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP								
4F	24	#12	XHHW	120	1-1/4"	PRGS	JB34	JB39	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP
									SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP		
	2	CAT-6A		120	1"	PRGS			COMM	SP																		
5F	18	#12	XHHW	120	1"	PRGS	JB24	JB36	1191	5371	GND	1191	5391	GND	1191	5411	GND	1191	5511	GND	1191	5531	GND	1191	5551	GND		
6F	102	#12	XHHW	120	2-1/2"	PRGS	JB31	JB34	1191	5301	GND	1191	5321	GND	1191	5341	GND	1191	5441	GND	1191	5461	GND	1191	5481	GND	1191	5371
			XHHW	120					GND	1191	5391	GND	1191	5411	GND	1191	5511	GND	1191	5531	GND	1191	5551	GND	SP	SP	SP	SP
			XHHW	120					SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP	1191	6181
			XHHW	120					6211	6241	6271	N5	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051
			XHHW	120					11042	N7	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7
			XHHW	120					SP	SP																		
	2	CAT-6A		120	1"	PRGS			COMM	SP																		
	4	#16	XHHW	24V DC	3/4"	PRGS			2 TSP			2 TSP																
7F	22	#12	XHHW	120	1"	PRGS	JB14	JB31	1181	2021	2022	N5	1181	2431	N5	1172	3191	GND	1172	3193	GND	1191	3441	GND	1172	3211	GND	1172
									3213	GND	1191	3471	GND															
8F	15	#12	XHHW	120	1"	PRGS	JB33	JB45 THRU PB2	1181	2351	N5	1172	3141	GND	1172	3143	GND	1191	3381	GND	1172	3161	GND	1172	3163	GND	1191	3411
									GND																			
9F	20	#12	XHHW	120	1"	PRGS	JB31	TRAFFIC SIGNAL AT DECK LEVEL	1181	2351	N5	1172	3141	GND	1172	3143	GND	1191	3381	GND	1172	3161	GND	1172	3163	GND	1191	3411
									GND	2071	2072	2121	2131	N5														
10F	155	#12	XHHW	120	3-1/2"	PRGS	FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	JB31	1191	5301	GND	1191	5321	GND	1191	5341	GND	1191	5441	GND	1191	5461	GND	1191	5481	GND	1191	5371
									GND	1191	5391	GND	1191	5411	GND	1191	5511	GND	1191	5531	GND	1191	5551	GND	SP	SP	SP	SP
									SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP	1191	6181
									6211	6241	6271	N5	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051
									11042	N7	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7
									SP	SP	1181	2021	2022	N5	1181	2431	N5	1172	3193	GND	1191	3441	GND	1172	3213	GND	1191	3471
									GND	1181	2351	N5	1172	3141	GND	1172	3143	GND	1191	3381	GND	1172	3163	GND	1191	3411	GND	2071
									1172	3161	GND	2072	2121	2131	N5	1191	6281	GND	2071	2072	2121	2131	N5					
	2	CAT-6A		120	1"	PRGS			COMM	SP																		
	4	#16	XHHW	24V DC	3/4"	PRGS			2 TSP			2 TSP																
11F	9	#1	XHHW	480	2-1/2"	PRGS	JB35	JB37	T1	T2	T3	T1	T2	T3	T1	T2	T3											
	3	#6							GND	GND	GND																	
12F	18	#1	XHHW	480	3"	PRGS	JB32	JB35	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3		
	6	#6							GND	GND	GND	GND	GND	GND														
13F	8	#10	XHHW	208	1-1/4"	PRGS	JB32	JB33	T1	T2	T3	GND	T1	T2	T3	GND												
	3	#8	XHHW	480					T1	T2	T3																	
	1	#10							GND																			
14F	8	#10	XHHW	208	1-1/4"	PRGS	FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	JB32	T1	T2	T3	GND	T1	T2	T3	GND												
	3	#8	XHHW	480	4"				T1	T2	T3																	
	1	#10							GND																			
	18	#1	XHHW	480		PRGS			T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3		
	6	#6							GND	GND	GND	GND	GND	GND														

CONTROL, POWER AND SERVICE SUBMARINE CABLES

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																			
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SBC-1	155	#12	-	120	SUBMARINE CABLE		FAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	NEAR SIDE CONTROL SUBMARINE CABLE TERMINATION CABINET	1191	5301	GND	1191	5321	GND	1191	5341	GND	1191	5441	GND	1191	5461	GND	1191	5481	GND	1191	5371
				120					GND	1191	5391	GND	1191	5411	GND	1191	5511	GND	1191	5531	GND	1191	5551	GND	SP	SP	SP	SP
				120					SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP	1191	6181
				120					6211	6241	6271	N5	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051
				120					11042	N7	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7
				120					SP	SP	1181	2021	2022	N5	1181	2431	N5	1172	3193	GND	1191	3441	GND	1172	3213	GND	1191	3471
				120					GND	1181	2351	N5	1172	3141	GND	1172	3143	GND	1191	3381	GND	1172	3163	GND	1191	3411	GND	2071
				120					1172	3161	GND	2072	2121	2131	N5	1191	6281	GND	2071	2072	2121	2131	N5					
	6	CAT-6A		120					COMM	COMM	COMM	COMM	SP	SP														
	4	#16	XHHW	24V DC					2 TSP			2 TSP																
SBP-1	8	#10	-	208	SUBMARINE CABLE		FAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	NEAR SIDE POWER SUBMARINE CABLE TERMINATION CABINET	T1	T2	T3	GND	T1	T2	T3	GND												
	3	#8		480					T1	T2	T3																	
	1	#10							GND																			
SBP-2	18	#1	-	480					T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3		
	6	#6							GND	GND	GND	GND	GND	GND														

STATE PROJECT NUMBER

2984-26-73

NOTES:

1. LIGHTING AND RECEPTACLE CIRCUITS ARE NOT INCLUDED WITH THE CONDUIT/CABLES SCHEDULES.
2. SCHEDULES ARE BASED ON THE CONCEPTUAL CONTROL DIAGRAMS. THE CONTRACTOR SHALL UPDATE TO MATCH AND THE CONTROL SYSTEM INTEGRATOR'S DRAWINGS AND SHALL PROVIDE ALL CIRCUITS NECESSARY FOR A COMPLETE OPERATING SYSTEM.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONDUIT SCHEDULE 3

SHEET E45 OF E83
217

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PRINTER DRIVER: c:\pwworking\usw1\dms01098\pdf.pltcfg
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PLOT DATE: 3/27/2024 PLOT TIME: 5:20:56 PM BATCH PRINT SHEET 46 OF 83

CONTROL, POWER AND SERVICE SUBMARINE CABLES

ID	CONDUCTORS NO.	CONDUCTORS AWG	CONDUCTORS INSUL	CONDUCTORS VOLT	CONDUIT SIZE	CONDUIT TYPE	ROUTING FROM	ROUTING TO	WIRE NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SBS	6	#4/0	-	480	SUBMARINE CABLE		FAR SIDE SERVCE SUBMARINE CABLE TERMINATION CABINET	NEAR SIDE SERVCE SUBMARINE CABLE TERMINATION CABINET	T1	T2	T3	T1	T2	T3														
	1	#2/0							GND																			

NEAR SIDE POWER CONDUCTORS AND CONDUITS (#PN)

1PN	4	#10	XHHW	208	3/4 "	PRGS	PANEL NHLP	NEAR SIDE ON-GOING TRAFFIC GATE	T1	T2	T3	GND																
2PN	4	#10	XHHW	208	3/4 "	PRGS	PANEL NHLP	NEAR SIDE OFF-COMING TRAFFIC GATE	T1	T2	T3	GND																
3PN	3	#1	XHHW	480	1-1/2"	PRGS	MDP-N	NEAR SIDE 75 KVA TRANSFORMER DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
4PN	3	#1	XHHW	480	1-1/2 "	PRGS	MDP-N	NEAR SIDE UPSTREAM MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
5PN	3	#1	XHHW	480	1-1/2 "	PRGS	MDP-N	NEAR SIDE UPSTREAM MOTOR DRIVE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
6PN	3	#1	XHHW	480	1-1/2 "	PRGS	MDP-N	NEAR SIDE UPSTREAM MACHINERY MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
7PN	3	#1	XHHW	480	1-1/2 "	PRGS	MDP-N	NEAR SIDE DOWNSTREAM MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
8PN	3	#1	XHHW	480	1-1/2 "	PRGS	MDP-N	NEAR SIDE DOWNSTREAM MOTOR DRIVE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
9PN	3	#1	XHHW	480	1-1/2 "	PRGS	MDP-N	NEAR SIDE DOWNSTREAM MACHINERY MOTOR BRAKE DISCONNECT	T1	T2	T3																	
	1	#6							GND																			
10PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE UPSTREAM MOTOR BRAKE DISCONNECT	NEAR SIDE UPSTREAM MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
11PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE UPSTREAM MOTOR DRIVE DISCONNECT	NEAR SIDE UPSTREAM MOTOR DRIVE	T1	T2	T3																	
	1	#6							GND																			
12PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE UPSTREAM MACHINERY MOTOR BRAKE DISCONNECT	NEAR SIDE UPSTREAM MACHINERY MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
13PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE DOWNSTREAM MOTOR BRAKE DISCONNECT	NEAR SIDE DOWNSTREAM MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
14PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE DOWNSTREAM MOTOR DRIVE DISCONNECT	NEAR SIDE DOWNSTREAM MOTOR DRIVE	T1	T2	T3																	
	1	#6							GND																			
15PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE DOWNSTREAM MACHINERY MOTOR BRAKE DISCONNECT	NEAR SIDE DOWNSTREAM MACHINERY MOTOR BRAKE	T1	T2	T3																	
	1	#6							GND																			
16PN	3	#1	XHHW	480	1-1/2 "	PRGS	NEAR SIDE 75 KVA TRANSFORMER DISCONNECT	NEAR SIDE 75 KVA TRANSFORMER (PRIMARY)	T1	T2	T3																	
	1	#6							GND																			
17PN	4	#1	XHHW	208	1-1/2 "	PRGS	NEAR SIDE 75 KVA TRANSFORMER (SECONDARY)	NEAR SIDE HOUSE PANEL "NHLP"	T1	T2	T3																	
	1	#6							GND																			
18PN	3	CAT 6A		120	1"	PRGS	NEAR SIDE HOUSE PANEL "NHLP" (CKT NHLP-17)	NEAR SIDE OUTDOOR CABINET WITH MANAGED ETHERNET SWITCH AND POWER SUPPLY	CB-25	N	GND																	
19PN	3	#12	XHHW	120	3/4 "	PRGS	NEAR SIDE HOUSE PANEL "NHLP" CKT NHLP-7 (PIER, CLEARANCE AND DOLPHIN LIGHTS)	JB26 (CKT NHLP-7)	CB-7	N	GND																
20PN	3	#12	XHHW	120	3/4 "	PRGS	JB04 (CKT NHLP-7)	JB15 (CKT NHLP-7)	CB-7	N	GND																	
21PN	3	#12	XHHW	120	3/4 "	PRGS	JB32 (CKT NHLP-7)	NEAR NORTH PIER LIGHT (CKT NHLP-7)	CB-7	N	GND																	
22PN	3	#12	XHHW	120	3/4 "	PRGS	JB32 (CKT NHLP-7)	NEAR NORTH CLEARANCE LIGHT (CKT NHLP-7)	CB-7	N	GND																	
23PN	3	#12	XHHW	120	AERIAL		JB16 (CKT NHLP-7)	JB15 (CKT NHLP-7)	CB-7	N	GND																	
24PN	3	#12	XHHW	120	3/4 "	PRGS	JB16 (CKT NHLP-7)	NEAR NORTH DOLPHIN LIGHT (CKT NHLP-7)	CB-7	N	GND																	
25PN	3	#12	XHHW	120	3/4 "	PRGS	JB18 (CKT NHLP-7)	PB02 (CKT NHLP-7)	CB-7	N	GND																	
26PN	3	#12	XHHW	120	3/4 "	PRGS	JB18 (CKT NHLP-7)	NEAR SOUTH PIER LIGHT (CKT NHLP-7)	CB-7	N	GND																	
27PN	3	#12	XHHW	120	3/4 "	PRGS	PB03 (CKT NHLP-7)	NEAR SOUTH CLEARANCE LIGHT (CKT NHLP-7)	CB-7	N	GND																	
28PN	3	#12	XHHW	120	AERIAL		JB19 (CKT NHLP-7)	JB18 (CKT NHLP-7)	CB-7	N	GND																	
29PN	3	#12	XHHW	120	3/4 "	PRGS	JB19 (CKT NHLP-7)	NEAR SOUTH DOLPHIN LIGHT (CKT NHLP-7)	CB-7	N	G																	
30PN	4	#10	XHHW	208	1"	PRGS	MOTOR STARTER CABINET JB17	NEAR SIDE UPSTREAM CENTER LOCK	T1	T2	T3	GND																
31PN	4	#10	XHHW	208	1"	PRGS	MOTOR STARTER CABINET JB20	NEAR SIDE DOWNSTREAM CENTER LOCK	T1	T2	T3	GND																

STATE PROJECT NUMBER

2984-26-73

NOTES:

1. LIGHTING AND RECEPTACLE CIRCUITS ARE NOT INCLUDED WITH THE CONDUIT/CABLES SCHEDULES.
2. SCHEDULES ARE BASED ON THE CONCEPTUAL CONTROL DIAGRAMS. THE CONTRACTOR SHALL UPDATE TO MATCH AND THE CONTROL SYSTEM INTEGRATOR'S DRAWINGS AND SHALL PROVIDE ALL CIRCUITS NECESSARY FOR A COMPLETE OPERATING SYSTEM.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONDUIT SCHEDULE 4

SHEET E46 OF E83
218

NEAR SIDE CONTROL CONDUCTORS AND CONDUITS (#CN)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																		
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE UPSTREAM (NE) MACHINERY BRAKE SET LIMIT SWITCH - LS-NEMHBSET	1191	6301	GND																
2CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE UPSTREAM (NE) MACHINERY BRAKE RELEASE LIMIT SWITCH - LS-NEMHBREL	1191	6321	GND																
3CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE UPSTREAM (NE) MACH BRAKE HAND RELEASE LIMIT SWITCH - LS-NEMHBHREL	1191	6341	GND																
4CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE DOWNSTREAM (SE) MACH BRAKE SET LIMIT SWITCH- LS-SEMHBSET	1191	6371	GND																
5CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE DOWNSTREAM (SE) MACH BRAKE RELEASE LIMIT SWITCH -LS-SEMHBREL	1191	6391	GND																
6CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE DOWNSTREAM (SE) MACH BRAKE HAND RELEASE LIMIT SWITCH-LS-SEMHBHREL	1191	6411	GND																
7CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE UPSTREAM (NE) MOTOR BRAKE SET LIMIT SWITCH - LS-NEMBSET	1191	6441	GND																
8CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE UPSTREAM (NE) MOTOR BRAKE RELEASE LIMIT SWITCH -LS-NEMBREL	1191	6461	GND																
9CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE UPSTREAM (NE) MOTOR BRAKE HAND RELEASE LIMIT SWITCH - LS-NEMBHREL	1191	6481	GND																
10CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE DOWNSTREAM (SE) MOTOR BRAKE SET LIMIT SWITCH - LS-SEMBSET	1191	6511	GND																
11CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE DOWNSTREAM (SE) MOTOR BRAKE RELEASE LIMIT SWITCH - LS-SEMBREL	1191	6531	GND																
12CN	3	#12	XHHW	120	3/4"	PRGS	CONSOLE	PLC THRU NEAR SIDE DOWNSTREAM (SE) MOTOR BRAKE HAND REL LIMIT SWITCH- LS-SEMBHREL	1191	6551	GND																
13CN	4	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU CONSOLE NEAR SIDE (NE) ON-GOIN WARNING BELL LIMIT SWITCH - LS-NOGWB	1181	2021	2022	N5															
14CN	3	#12	XHHW	120	3/4"	PRGS	PLC	GATES THRU NEAR SIDE (NE) ON-GOING GATE LIGHTS LIMIT SWITCH - LS-NOGLT	1181	2391	N5																
15CN	6	#12	XHHW	120	3/4"	PRGS	PLC	MCC THRU CONSOLE AND NEAR SIDE (NE) ON-GOING GATE UP LIMIT SWITCH - LS-NOGGUP	1172	3081	GND	1172	3083	GND	1191	3501	GND										
16CN	6	#12	XHHW	120	3/4"	PRGS	PLC	MCC THRU CONSOLE AND NEAR SIDE (NE) ON-GOING GATE DOWN LIMIT SWITCH - LS-NOGGDW	1172	3101	GND	1172	3103	GND	1191	3531	GND										
17CN	3	#12	XHHW	120	3/4"	PRGS	PLC	CONSOLE THRU NEAR SIDE (E) SEATED PLUNGER LIMIT SWITCH - LS-ESEATED	1191	5281	GND																
18CN	5	#12	XHHW	120	3/4"	PRGS	PLC-CONSOLE	CONSOLE - PLC THRU CONSOLE NEAR SIDE (NE) TRAFFIC SIGNAL	2071	2072	2121	2131	N5														
19CN	5	#12	XHHW	120	3/4"	PRGS	PLC-CONSOLE	CONSOLE - PLC T NEAR SIDE (SE) TRAFFIC SIGNAL	2071	2072	2121	2131	N5														
20CN	3	#12	XHHW	120	3/4"	PRGS	PLC	GATES THRU NEAR SIDE (SE) OFF-COMING GATE LIGHTS LIMIT SWITCH - LS-NOCGLT	1181	2311	N5																
21CN	6	#12	XHHW	120	3/4"	PRGS	PLC-CONSOLE-CONSOLE-PLC	MCC THRU NEAR SIDE (SE) OFF-COMING GATE UP LIMIT SWITCH - LS-NOCGUP	1172	3031	GND	1172	3033	GND	1191	3321	GND										
22CN	6	#12	XHHW	120	3/4"	PRGS	PLC-CONSOLE-CONSOLE-PLC	MCC THRU NEAR SIDE (SE) OFF-COMING GATE DOWN LIMIT SWITCH - LS-NOCGDW	1172	3051	GND	1172	3053	GND	1191	3351	GND										
23CN	4	#16	XHHW	24V DC	3/4"	PRGS	NHLP	INCLINOMETER	2 TSP			2 TSP															
	2	#12	XHHW	120	3/4"	PRGS			SP	SP																	
24CN	6	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU CONSOLE AND NEAR SIDE CAM POSITION LIMIT SWITCH (LS-ENO, LS-ENC, LS-EFO, LS-EFC)	1191	5181	5211	5241	5271	N5													
25CN	3	#12	XHHW	120	3/4"	PRGS	PLC	NEAR SIDE (NE) PIER LIGHT	SP	SP	SP																
26CN	6	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR SIDE (NE) CLERANCE LIGHT	11051	11042	N7																
27CN	3	#12	XHHW	120	3/4"	PRGS	PLC	JB32 (NE DOLPHIN LIGHT)	SP	SP	SP																
28CN	3	#12	XHHW	120	AERIAL		JB32 (NE DOLPHIN LIGHT)	JB33 (NE DOLPHIN LIGHT)	SP	SP	SP																
29CN	3	#12	XHHW	120	3/4"	PRGS	JB233 (NE DOLPHIN LIGHT)	NEAR SIDE (NE) DOLPHIN LIGHT	SP	SP	SP																
30CN	2	CAT-6A		-	1"	PRGS	CCTV/PA CABINET	NEAR SIDE OUTDOOR CABINET WITH MANAGED ETHERNET SWITCHAND POWER SUPPLY	COMM	SP																	
31CN	3	#12	XHHW	120	3/4"	PRGS	PLC	NEAR SIDE (SE) PIER LIGHT	SP	SP	SP																
32CN	6	#12	XHNW	120	3/4"	PRGS	PLC	PLC THRU NEAR SIDE (SE) CLERANCE LIGHT	11051	11042	N7	SP	SP	SP													
33CN	3	#12	XHNW	120	3/4"	PRGS	PLC	JB18 (SE DOLPHIN LIGHT)	SP	SP	SP																
34CN	3	#12	XHNW	120	AERIAL		PLC	JB18 (SE DOLPHIN LIGHT)	JB19 (SE DOLPHIN LIGHT)	SP	SP	SP																

STATE PROJECT NUMBER

2984-26-73

NOTES:

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8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONDUIT SCHEDULE 5

SHEET E47 OF E83
219

PRINTER DRIVER: c:\pwworking\uswi\dms01098\pdf.plt.cfg
PEN TABLE: pw://aecom-na-pw.bentley.com:AECOM_USA_Wisconsin/Documents/AECOM GLOBAL_NA/Workspace/Agency/WisDOT/v8i/WisDOT Bridge Ver A/Pen Tables/AE_WisDOT_structure.tbl
FILE NAME: pw://aecom-na-pw.bentley.com:AECOM_USA_Wisconsin/Documents/60659410-Cherry Street Rehab/900-CAD GIS/910_CAD/20_SHEETS/ELECTRICAL/E47
PLOT DATE: 3/27/2024 PLOT TIME: 5:21:02 PM
BATCH PRINT SHEET 47 OF 83

PRINTER DRIVER: c:\pwworking\uswi\dms01098\pdf.plt
PEN TABLE: pw://aecom-na-pw.bentley.com:AECOM_USA_Wisconsin/Documents/60659410-Cherry Street Rehab/900-CAD GIS/910_CAD/20_SHEETS/ELECTRICAL/E48
FILE NAME: pw://aecom-na-pw.bentley.com:AECOM_USA_Wisconsin/Documents/60659410-Cherry Street Rehab/900-CAD GIS/910_CAD/20_SHEETS/ELECTRICAL/E48
PLOT DATE: 3/27/2024
PLOT TIME: 5:21:09 PM
BATCH PRINT SHEET 48 OF 83

NEAR SIDE CONTROL CONDUCTORS AND CONDUITS (#CN)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
35CN	6	#12	XHHW	120	3/4"	PRGS	JB19 (SE DOLPHIN LIGHT)	NEAR SIDE (SE) DOLPHIN LIGHT	11051	11042	N7	SP	SP	SP														
36CN	3	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR UPSTREAM (NE) CENTER LOCK WITHDRAWN - LS-NECLD	1191	4371	GND																	
37CN	3	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR UPSTREAM (NE) CENTER LOCK WITHDRAWN - LS-NECLW	1191	4401	GND																	
38CN	3	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR UPSTREAM (NE) CENTER LOCK DRIVEN - LS-NECLHK	1191	4451	GND																	
39CN	3	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR DOWNSTREAM (SE) CENTER LOCK DRIVEN - LS-SECLD	1191	4311	GND																	
40CN	3	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR DOWNSTREAM (SE) CENTER LOCK WITHDRAWN - LS-SECLW	1191	4341	GND																	
41CN	3	#12	XHHW	120	3/4"	PRGS	PLC	PLC THRU NEAR DOWNSTREAM (SE) CENTER LOCK HAND CRANK - LS-SECLHK	1191	4431	GND																	
42CN	FIBER OPTIC				4"	-	PB08	KNAPP ST BRIDG	-																			
43CN	FIBER OPTIC				1-1/2"	-	CCTV/PA SYSTEM CABINE	PB08	-																			

NEAR SIDE CONDUCTORS IN SHARED CONDUIT AND/OR SAME PROPOSED ROUTING (#N)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS																
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1N	4	#10	XHHW	208	3/4 "	PRGS	JB06	JB07	T1	T2	T3	GND																
	21	#12	XHHW	120	1-1/4"	PRGS			1181	2311	N5	1172	3031	GND	1172	3033	GND	1191	3321	GND	1172	3051	GND	1172	3053	GND	1191	3351
									GND																			
2N	4	#10	XHHW	208	3/4 "	PRGS	JB05	JB06	T1	T2	T3	GND																
	29	#12	XHHW	120	1-1/4"	PRGS			1181	2311	N5	1172	3031	GND	1172	3033	GND	1191	3321	GND	1172	3051	GND	1172	3053	GND	1191	3351
									GND	2071	2072	2121	2131	N5	1191	5281	GND											
3N	213	#12	XHHW	120	3-1/2"	PRGS	JB12	JB05	1181	2311	N5	1172	3031	GND	1172	3033	GND	1191	3321	GND	1172	3051	GND	1172	3053	GND	1191	3351
									GND	2071	2072	2121	2131	N5	1191	5281	GND	2072	2121	2131	N5	1181	2021	2022	N5	1181	2391	N5
									1172	3081	GND	1172	3083	GND	1191	3501	GND	1172	3101	GND	1172	3103	GND	1191	3531	GND	1191	5301
									GND	1191	5321	GND	1191	5341	GND	1191	5441	GND	1191	5461	GND	1191	5481	GND	1191	5371	GND	1191
									5391	GND	1191	5411	GND	1191	5511	GND	1191	5531	GND	1191	5551	GND	SP	SP	SP	SP	SP	11051
									11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP	1191	6181	6211	6241
									6271	N5	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7
									SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP
									1181	2021	2022	N5	1181	2431	N5	1172	3193	GND	1191	3441	GND	1172	3213	GND	1191	3471	GND	1181
									2351	N5	1172	3141	GND	1172	3143	GND	1191	3381	GND	1172	3163	GND	1191	3411	GND	2071	1172	3161
									GND	2072	2121	2131	N5	1191	6281	GND	2071	2072	2121	2131	N5							
	2	CAT -6A		120	1"	PRGS			COMM	SP																		
	4	#16	XHHW	24V DC	3/4"	PRGS			2 TSP				2 TSP															
4N	16	#10	XHHW	208	1-1/4"	PRGS	JB08	JB04	T1	T2	T3	GND	T1	T2	T3	GND	T1	T2	T3	GND	T1	T2	T3	GND				
	3	#8	XHHW	480	4"	PRGS			T1	T2	T3																	
	1	#10							GND																			
	18	#1	XHHW	480					T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3		
	6	#6							GND	GND	GND	GND	GND	GND														
5N	9	#1	XHHW	480	3"	PRGS	JB09	JB10	T1	T2	T3	T1	T2	T3	T1	T2	T3											
	3	#6							GND	GND	GND																	
6N	18	#1	XHHW	480	3"	PRGS	JB08	JB09	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3					
	6	#6							GND	GND	GND	GND	GND	GND														
7N	18	#12	XHHW	120	1-1/4"	PRGS	JB12	JB13	1191	6371	GND	1191	6391	GND	1191	6411	GND	1191	6511	GND	1191	6531	GND	1191	6551	GND		
8N	36	#12	XHHW	120	1-1/4"	PRGS	JB11	JB12	1191	6371	GND	1191	6391	GND	1191	6411	GND	1191	6511	GND	1191	6531	GND	1191	6551	GND	1191	6301
									GND	1191	6321	GND	1191	6341	GND	1191	6441	GND	1191	6461	GND	1191	6481	GND				
9N	9	#12	XHHW	120	3/4"	PRGS	JB15	JB14	CB-7	N	GND	SP	SP	SP	SP	SP	SP											
10N	15	#12	XHHW	120	1"	PRGS	PB05	JB14	CB-7	N	GND	1191	4371	GND	1191	4401	GND	1191	4451	GND	11051	11042	N7					
	4	#10	XHHW	208	3/4"				T1	T2	T3	GND																
11N	39	#12	XHHW	120	1-1/2"	PRGS	JB14	JB11	SP	SP	SP	11051	11042	N7	SP	SP	SP	1191	4371	GND	1191	4401	GND	1191	4451	GND	SP	SP
									SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	1191	4311	GND	1191	4341	GND	1191	4431	GND	
12N	4	#10	XHHW	208	3/4"	PRGS	JB14	JB08	T1	T2	T3	GND																
	3	#12	XHHW	120					CB-7	N	GND																	
13N	4	#10	XHHW	208	1-1/4"	PRGS	JB20 & JB18	JB14	T1	T2	T3	GND																
	21	#12	XHHW	120					CB-7	N	GND	SP	SP	SP	11051	11042	N7	SP	SP	SP	1191	4311	GND	1191	4341	GND	1191	4431
									GND																			

STATE PROJECT NUMBER

2984-26-73

NOTES:

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8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONDUIT SCHEDULE 6

SHEET E48 OF E83
220

NEAR SIDE CONDUCTORS IN SHARED CONDUIT AND/OR SAME PROPOSED ROUTING (#N)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS															
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
14N	180	#12	XHHW	120	3"	PRGS	JB02	JB05	1181	2021	2022	N5	1181	2391	N5	1172	3081	GND	1172	3083	GND	1191	3501	GND	1172	3101	GND	1172
									3103	GND	1191	3531	GND	1191	5301	GND	1191	5321	GND	1191	5341	GND	1191	5441	GND	1191	5461	GND
									1191	5481	GND	1191	5371	GND	1191	5391	GND	1191	5411	GND	1191	5511	GND	1191	5531	GND	1191	5551
									GND	SP	SP	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP	SP	SP	11051	11042
									N7	SP	SP	1191	6181	6211	6241	6271	N5	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP
									SP	SP	SP	SP	11051	11042	N7	SP	SP	SP	11051	11042	N7	SP	SP	SP	SP	SP	SP	SP
									SP	SP	11051	11042	N7	SP	SP	1181	2021	2022	N5	1181	2431	N5	1172	3193	GND	1191	3441	GND
									1172	3213	GND	1191	3471	GND	1181	2351	N5	1172	3141	GND	1172	3143	GND	1191	3381	GND	1172	3163
									GND	1191	3411	GND	2071	1172	3161	GND	2072	2121	2131	N5	1191	6281	GND	2071	2072	2121	2131	N5
	2	CAT -6A		120	1"	PRGS			COMM	SP																		
	4	#16	XHHW	24V DC	3/4"	PRGS			2 TSP			2 TSP																

NEAR SIDE SERVICE CONDUCTORS AND CONDUIT (SN)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS															
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SN	6	#4/0	XHHW	480	4"	PRGS	NEAR SIDE 400A SERVICE NON FUSE DISCONNECT	NEAR SIDE AT ELECTRICAL AREA 400A DISCONNECT	T1	T2	T3	T1	T2	T3														
	1	#2/0	XHHW						GND																			

FAR SIDE SERVICE CONDUCTORS AND CONDUIT (SF)

ID	CONDUCTORS				CONDUIT		ROUTING		WIRE NUMBERS															
	NO.	AWG	INSUL.	VOLT	SIZE	TYPE	FROM	TO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SF	6	#4/0	XHHW	480	4"	PRGS	FAR SIDE 400A SERVICE NON FUSE DISCONNECT	FAR SIDE SUBMARINE CABLE SERVICE TERMINATION CABINET	T1	T2	T3	T1	T2	T3														
	1	#2/0	XHHW						GND																			

STATE PROJECT NUMBER

2984-26-73

NOTES:

1. LIGHTING AND RECEPTACLE CIRCUITS ARE NOT INCLUDED WITH THE CONDUIT/CABLES SCHEDULES.
2. SCHEDULES ARE BASED ON THE CONCEPTUAL CONTROL DIAGRAMS. THE CONTRACTOR SHALL UPDATE TO MATCH AND THE CONTROL SYSTEM INTEGRATOR'S DRAWINGS AND SHALL PROVIDE ALL CIRCUITS NECESSARY FOR A COMPLETE OPERATING SYSTEM.

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PLOT DATE: 3/27/2024 PLOT TIME: 5:21:16 PM
BATCH PRINT SHEET 49 OF 83

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONDUIT SCHEDULE 7

STATE PROJECT NUMBER

2984-26-73

SPEAKER 8
(NW ROADWAY)

MICROPHONE 8
(NW ROADWAY)

NETWORK
AUDIO BRIDGE

CABINET
(IP66, NEMA-4X)
POLE MOUNTED
(NW ROADWAY)

MANAGED POE
SWITCH

120V

PS

1-1/2" CONDUIT WITH
FOUR CAT 6A
CABLES
BELDEN 1EA002
(ONE SPARE)

CAT 6A CABLE
BELDEN 1EA002
(TYPICAL)

SIX CAT 6A CABLES
BELDEN 1EA002
(TWO SPARES)

FAR SIDE
CONTROLS
TERMINATION
CABINET

HANDHOLE

SPEAKER 3
(NE ROADWAY)

MICROPHONE 3
(NE ROADWAY)

NETWORK
AUDIO BRIDGE

CABINET
(IP66, NEMA-4X)
POLE MOUNTED
(NE ROADWAY)

MANAGED POE
SWITCH

PS

CAT 6A CABLE
BELDEN 1EA002
(TYPICAL)

NEAR
CONTROLS
TERMINATION
CABINET

HANDHOLE

SPEAKER 9
(FAR MACHINERY ROOM)

MICROPHONE 9
(FAR MACHINERY ROOM)

1-1/2" CONDUIT WITH
THREE CAT 6A
CABLES
BELDEN 1EA002
(ONE SPARE)

1" CONDUIT
WITH TWO
CAT 6A
CABLES
BELDEN 1EA002
(ONE SPARE)

CAMERA 2
(NEAR WATER WAY)

SPEAKER 2
(NEAR WATER WAY)

SEE SHEET
E51 FOR CONTINUATION

HANDHOLE

1-1/2" CONDUIT WITH
THREE CAT 6A
CABLES
BELDEN 1EA002
(ONE SPARE)

1-1/2" CONDUIT WITH
FOUR CAT 6A
CABLES
BELDEN 1EA002

NETWORK
AUDIO BRIDGE

CABINET
(IP66, NEMA-4X)
(FAR MACHINERY ROOM)

MANAGED POE
SWITCH

120V

PS

1" CONDUIT WITH
TWO CAT 6A
CABLES
BELDEN 1EA002
(ONE SPARE)

THERMAL-CAMERA 6
(SW ROADWAY)

THERMAL-
CAMERA 1
(SE ROADWAY)

CAMERA 6
(SW ROADWAY)

CAMERA 1
(SE ROADWAY)

SPEAKER 4
(NEAR MACHINERY ROOM)

MICROPHONE 4
(NEAR MACHINERY ROOM)

1-1/2" CONDUIT WITH
FOUR CAT 6A
CABLES
BELDEN 1EA002

CAT 6A CABLE
BELDEN 1EA002

MICROPHONE 6
(SW ROADWAY)

CAT 6A CABLES
BELDEN 1EA002

MANAGED POE
SWITCH

CABINET
(IP66, NEMA-4X)
(NEAR MACHINERY ROOM)

PS

120V

CABINET
(IP66, NEMA-4X)
POLE MOUNTED
(SE ROADWAY)

MANAGED POE
SWITCH

120V

PS

MANAGED POE
SWITCH

CABINET
(IP66, NEMA-4X)
POLE MOUNTED
(SW ROADWAY)

PS

120V

MICROPHONE
(SW DECK)

NETWORK
AUDIO BRIDGE

MANAGED POE
SWITCH

120V

MICROPHONE
(SE DECK)

NETWORK
AUDIO BRIDGE

MANAGED POE
SWITCH

1" CONDUIT WITH
TWO CAT 6A
CABLES
BELDEN 1EA002
(1 SPARE)

1" CONDUIT WITH
TWO CAT 6A
CABLES
BELDEN 1EA002
(1 SPARE)

1" CONDUIT WITH
TWO CAT 6A
CABLES
BELDEN 1EA002
(1 SPARE)

1" CONDUIT WITH
TWO CAT 6A
CABLES
BELDEN 1EA002
(1 SPARE)

HANDHOLE

HANDHOLE

HANDHOLE

HANDHOLE

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY LT | PLANS CK'D. LT

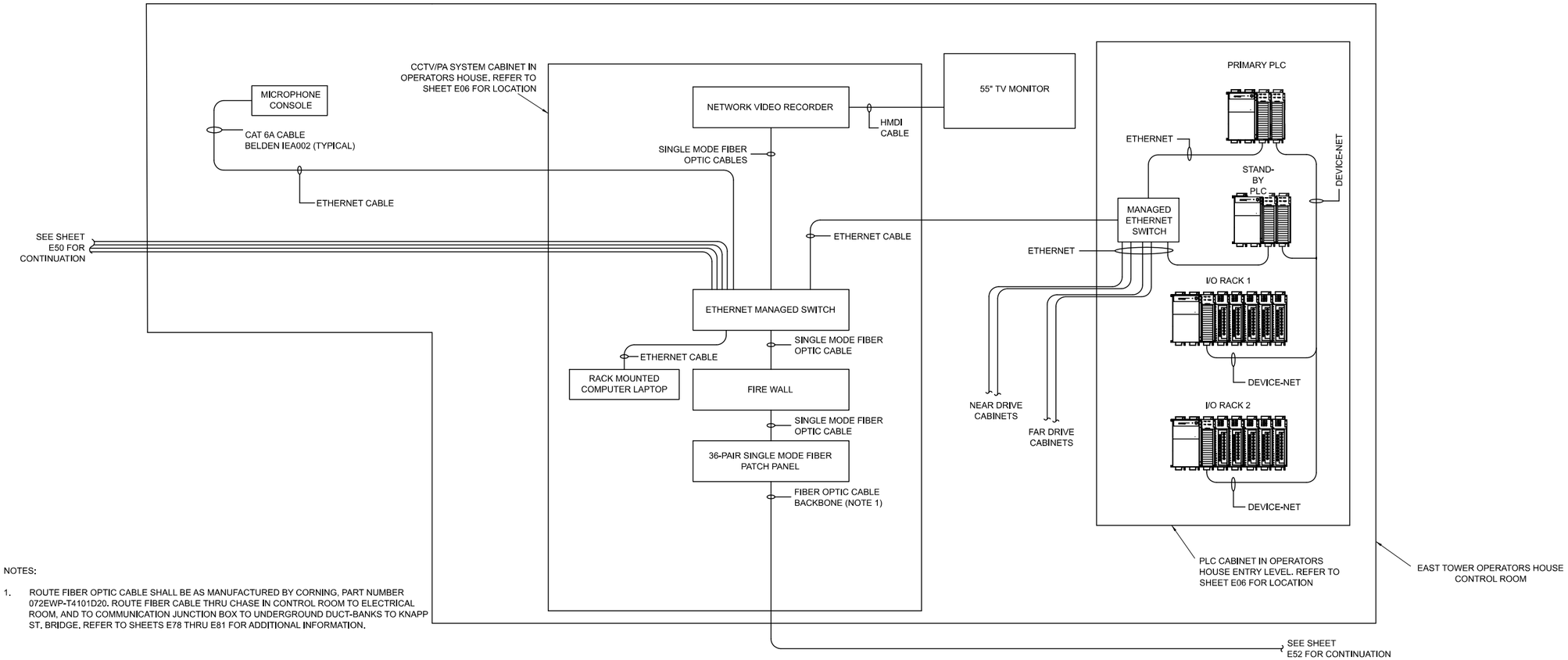
CHERRY ST. BRIDGE
COMMUNICATIONS

SHEET E50 OF E83
222

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PLOT DATE: 3/27/2024 PLOT TIME: 5:21:22 PM BATCH PRINT SHEET 50 OF 83

STATE PROJECT NUMBER

2984-26-73



NOTES:

1. ROUTE FIBER OPTIC CABLE SHALL BE AS MANUFACTURED BY CORNING, PART NUMBER 072EWP-T4101D20. ROUTE FIBER CABLE THRU CHASE IN CONTROL ROOM TO ELECTRICAL ROOM, AND TO COMMUNICATION JUNCTION BOX TO UNDERGROUND DUCT-BANKS TO KNAPP ST. BRIDGE. REFER TO SHEETS E78 THRU E81 FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CHERRY ST. BRIDGE
COMMUNICATIONS

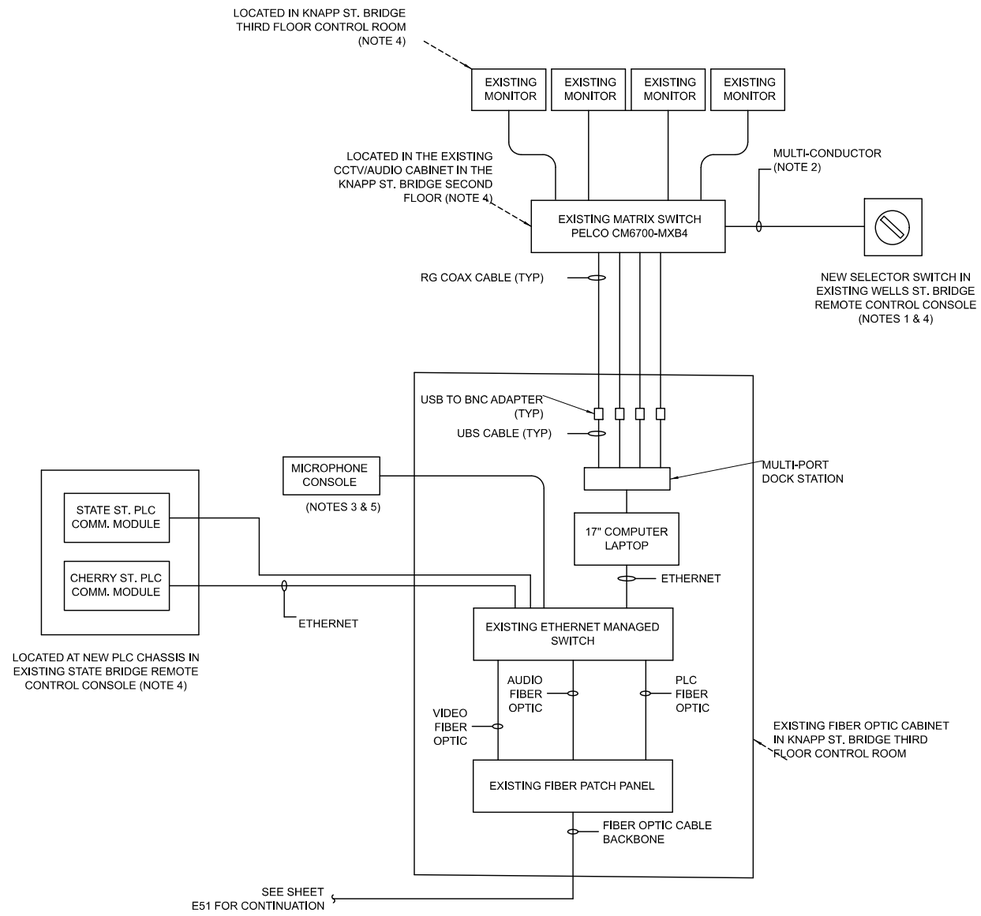
SHEET E51 OF E83
223

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8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:21:33 PM
BATCH PRINT SHEET 52 OF 83



NOTES:

1. REMOVE EXISTING 3 WAY SELECTOR SWITCH AND REPLACE IT WITH A 4-WAY SELECTOR SWITCH AB-800T-N17KF4C OR EQUAL. REPLACE EXISTING LEGEND WITH A NEW "OFF / STATE ST. / WELLS ST. / CHERRY ST." LABEL.

2. PROVIDE ADDITIONAL CONDUCTORS IN KIND WITH EXISTING FOR NEW CHERRY ST. CAMERA SELECTION. TERMINATE CONDUCTORS IN CAMERAS CONTROL SELECTION TERMINALS AT EXISTING MATRIX SWITCH.

3. CONFIGURE MICROPHONE CONSOLE TO COMMUNICATION WITH THE PA SYSTEM AT CHERRY ST.

4. REFER TO SHEET E55 FOR LOCATION.

5. COORDINATE FINAL LOCATION OF MICROPHONE CONSOLE IN EXISTING KNAPP ST. BRIDGE WITH KNAPP ST. BRIDGE OPERATOR.

KNAPP ST.
REMOTE COMMUNICATION SYSTEM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CHERRY ST. BRIDGE COMMUNICATIONS

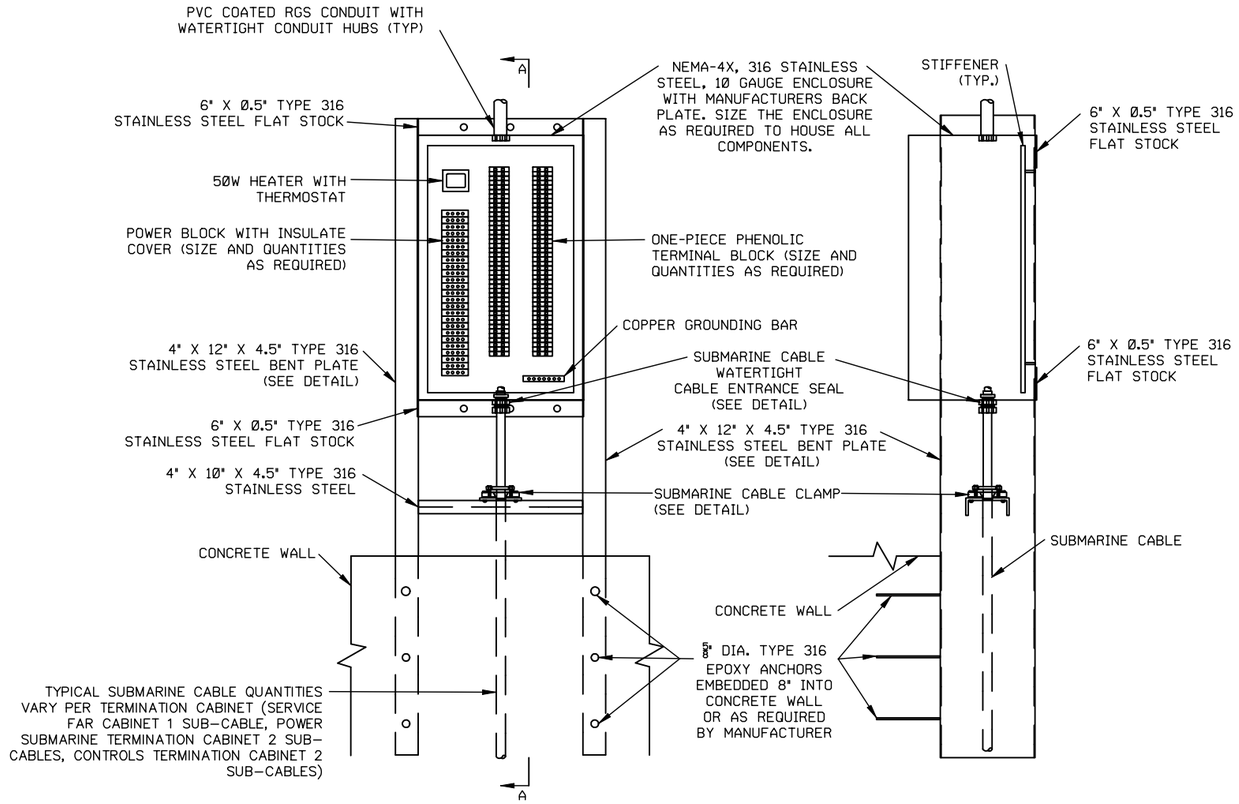
SHEET E52 OF E83
224

8

8

STATE PROJECT NUMBER

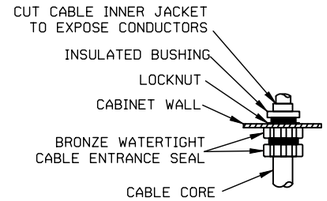
2984-26-73



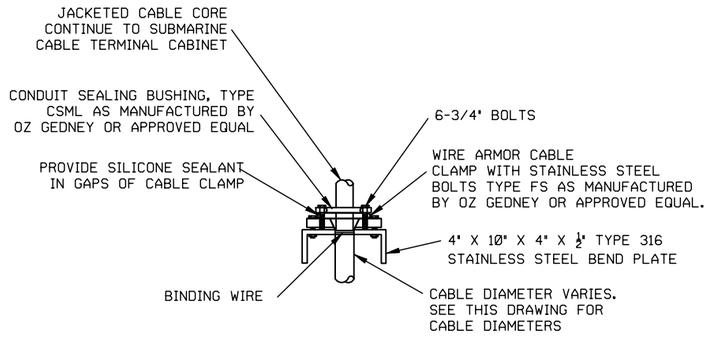
SUBMARINE CABLE TERMINAL CABINET

(TYPICAL OF 3 CABLE CABINETS)
N.T.S.

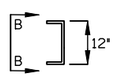
SECTION A-A



SUBMARINE CABLE WATERTIGHT CABLE ENTRANCE SEAL DETAIL



SUBMARINE CABLE SUPPORT DETAIL



BEND PLATE DETAIL



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

SUBMARINE CABLE TERMINAL CABINET & DETAILS

SHEET E53 OF E83

225

8

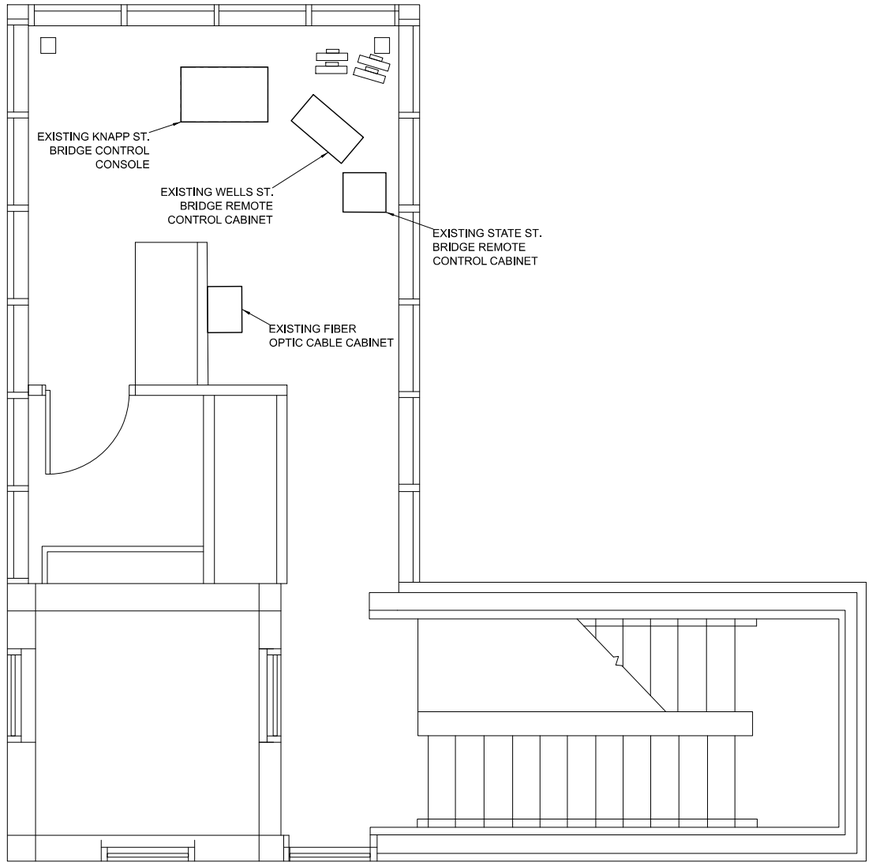
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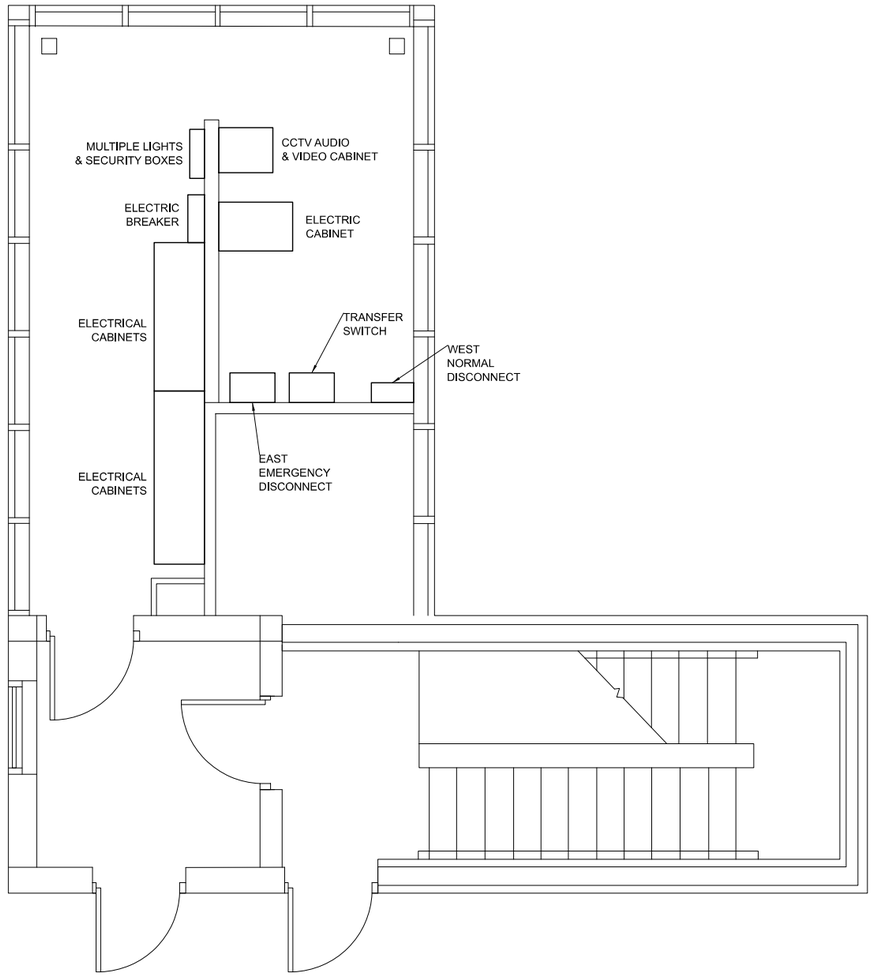
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PLOT DATE: 3/27/2024 PLOT TIME: 5:21:44 PM BATCH PRINT SHEET 54 OF 83

STATE PROJECT NUMBER

2984-26-73



EXISTING KNAPP ST. BRIDGE
THIRD FLOOR PLAN



EXISTING KNAPP ST. BRIDGE
SECOND FLOOR PLAN

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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REMOTE COMM.
FROM THE
KNAPP ST. BRIDGE

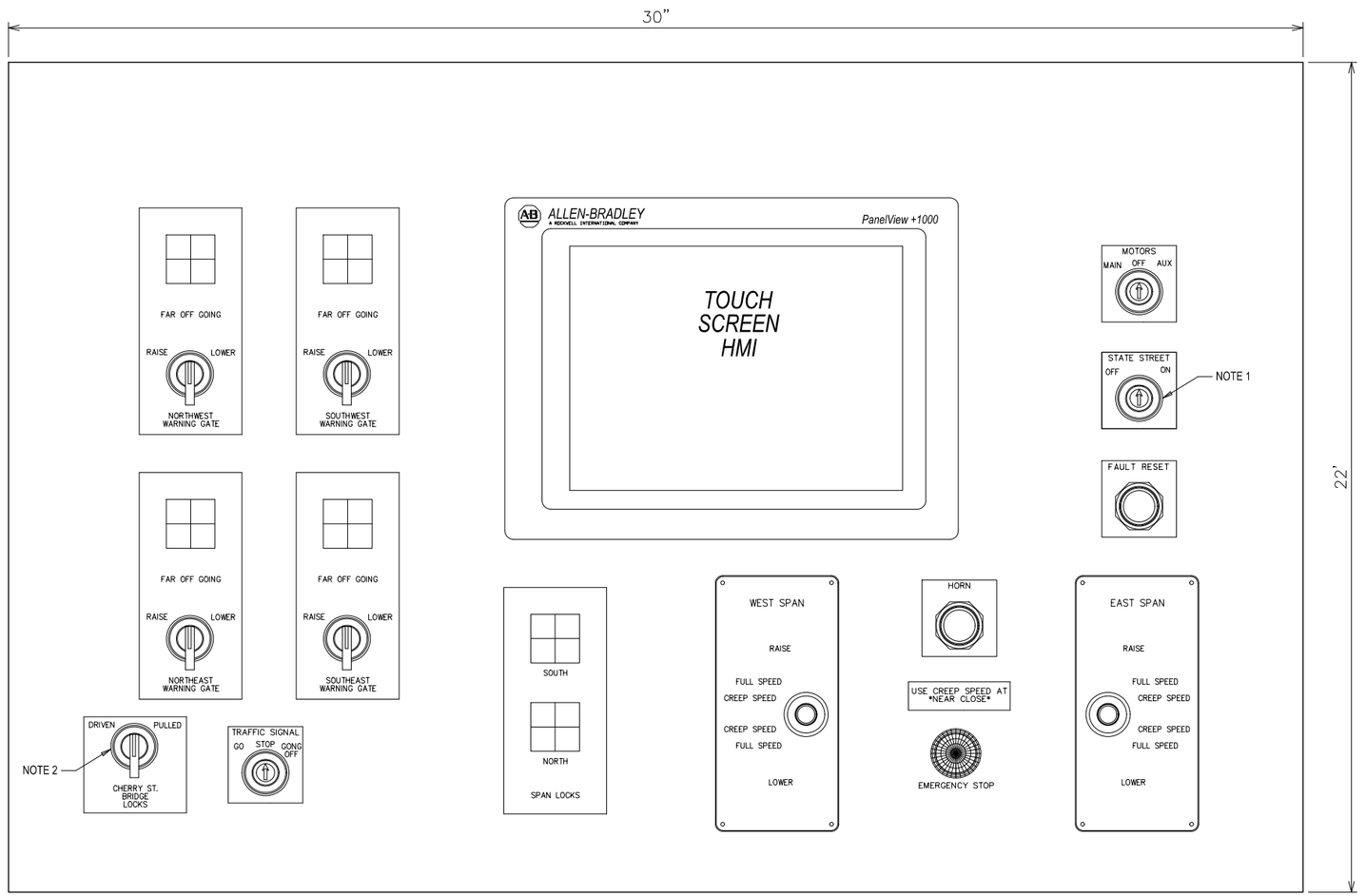
SHEET E54 OF E83
226

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PLOT DATE: 3/27/2024 PLOT TIME: 5:21:50 PM BATCH PRINT SHEET 55 OF 83

STATE PROJECT NUMBER
2984-26-73

NOTES:

1. REPLACE EXISTING STATE STREET TWO WAY KEY SELECTOR SWITCH WITH A THREE WAY KEY SELECTOR SWITCH, LABEL SWITCH "OFF/STATE STATE ST. BRIDGE/CHERRY ST. BRIDGE."
2. ADD A TWO WAY SELECTOR SWITCH FOR CHERRY ST. BRIDGE LOCKS CONTROL.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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STATE ST. BRIDGE REMOTE CONTROL CONSOLE

SHEET E55 OF E83

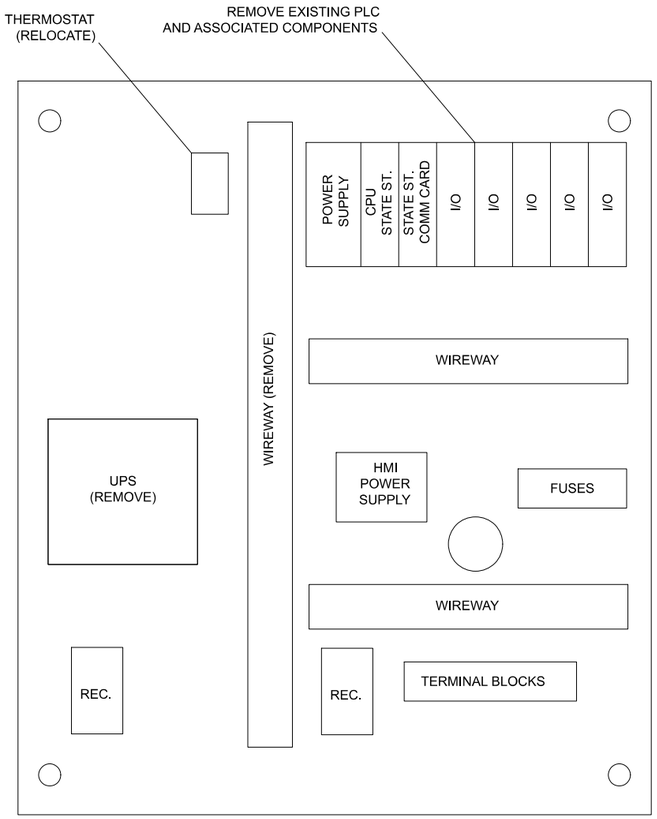
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BATCH PRINT SHEET 56 OF 83

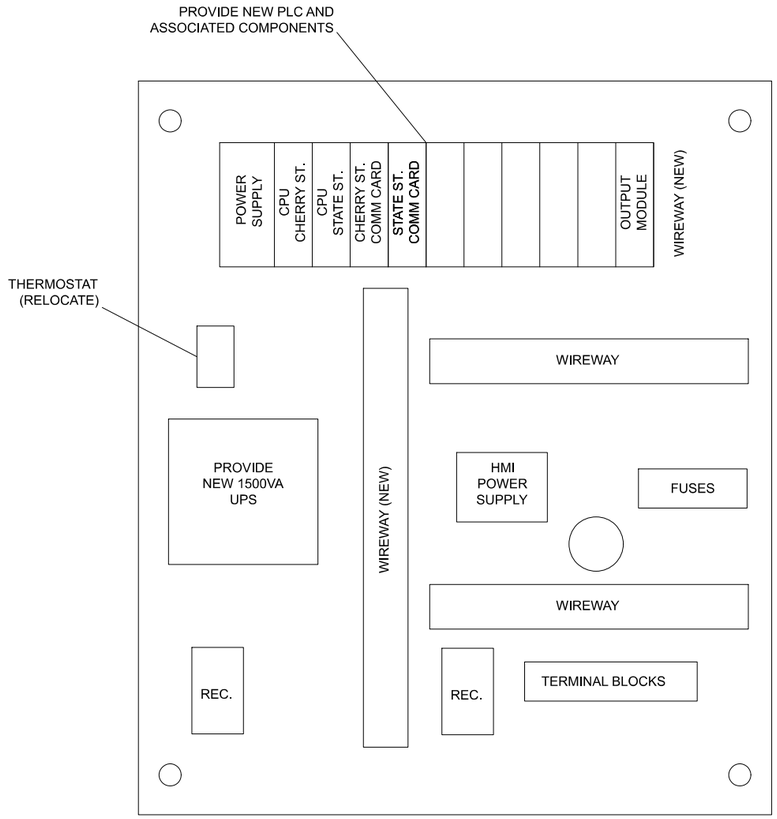
STATE PROJECT NUMBER
2984-26-73

GENERAL NOTES:

1. PRIOR TO ANY WORK THE CONTRACTOR SHALL COORDINATE ANY DOWN TIME WITH THE OWNER. PROVIDE A TENTATIVE SCHEDULE OF DOWN REMOTE OPERATIONS TIME TO THE OWNER.
2. THE CONTRACTOR SHALL SAVE THE EXISTING PLC CONTROL LADDER PROGRAM AND PROVIDE A COPY TO THE OWNER.
3. REMOVE EXISTING STATE ST. BRIDGE REMOTE CONTROL CONSOLE INTERIOR BACK PLATE .
4. MODIFY EXISTING BACK PLATE AS INDICATED (RELOCATE THERMOSTAT, REPLACE EXISTING PLC, PROVIDE NEW WIRE-WAYS, AND ADDITIONAL CONDUCTORS AS REQUIRED.
5. UPDATE EXISTING STATE ST. BRIDGE REMOTE CONTROL PLC PROGRAM AND UPLOAD TO NEW PLC CPU.
6. PROVIDE A NEW PLC PROGRAM FOR THE CHERRY ST BRIDGE REMOTE CONTROL AND UPLOAD PROGRAM TO NEW CPU. THE SEQUENCE OF OPERATIONS FOR REMOTE CONTROL OF THE CHERRY ST. SHALL BE SIMILAR TO THE SEQUENCE OPERATIONS FOR STATE. ST BRIDGE.



EXISITING STATE ST. BRIDGE
REMOTE CONSOLE BACK PLATE



MODIFIED STATE ST. BRIDGE
REMOTE CONSOLE BACK PLATE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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STATE ST. BRIDGE REMOTE CONTROL CONSOLE BACK PLATE

SHEET E56 OF E83

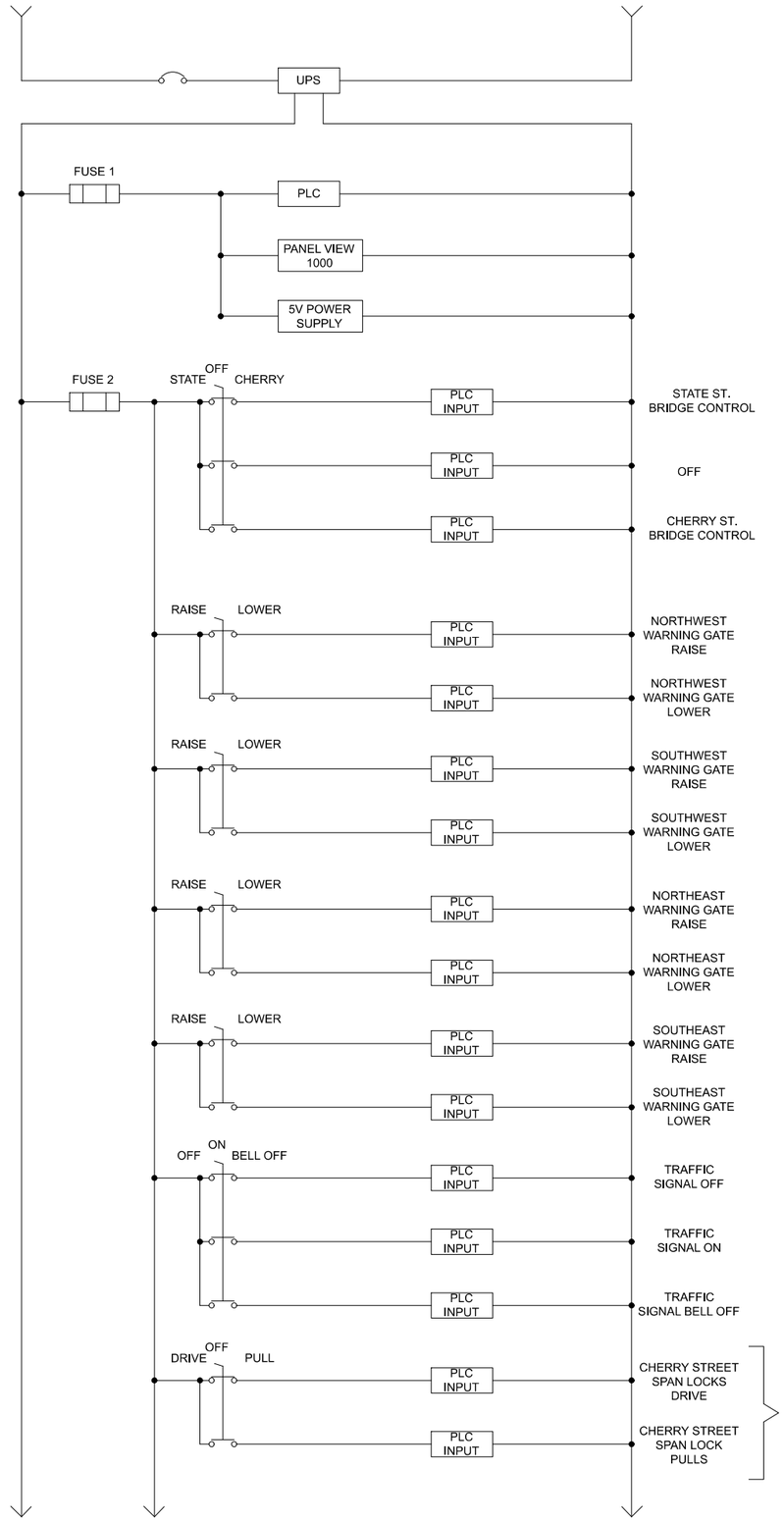
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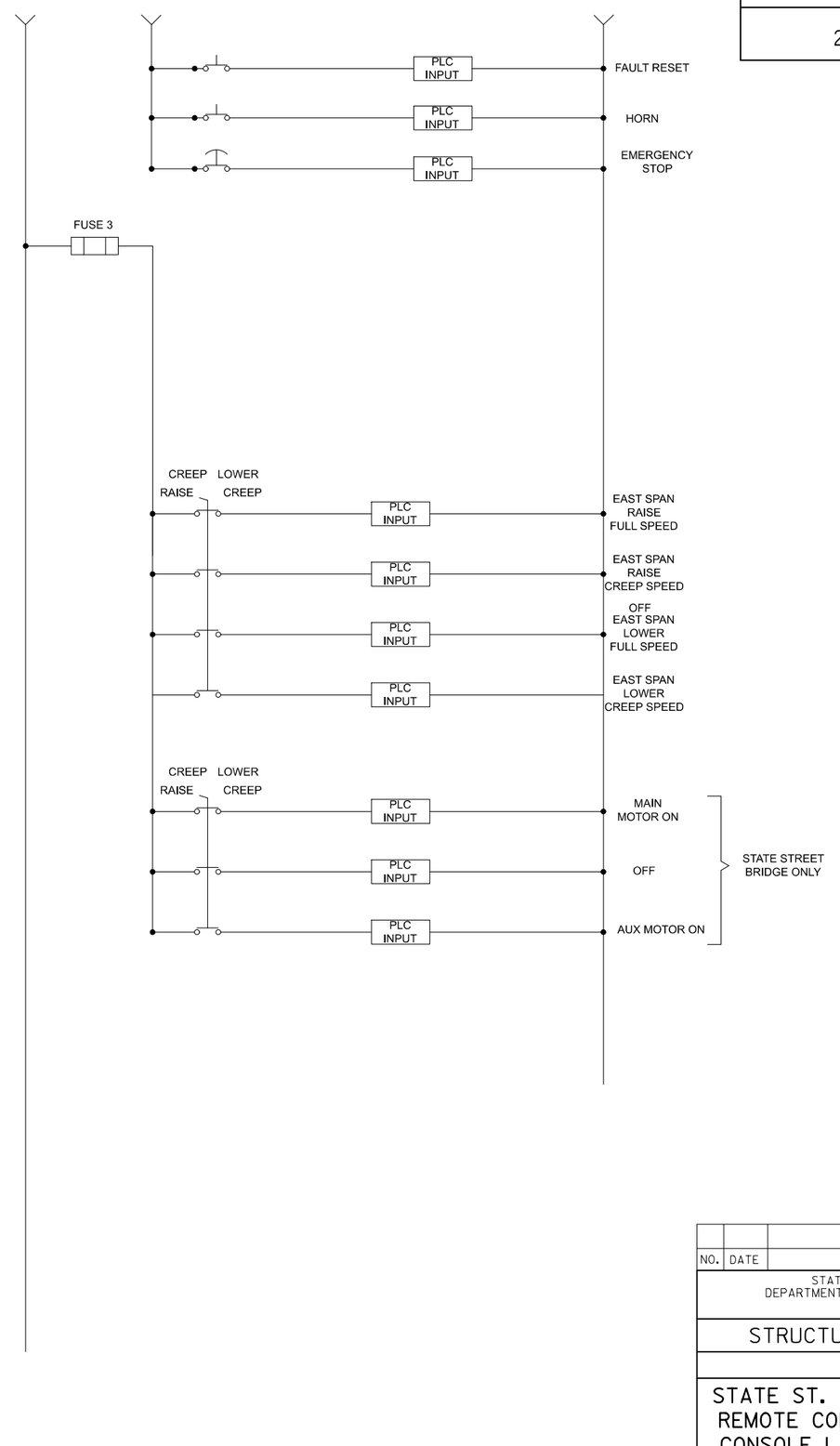
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PLOT DATE: 3/27/2024 PLOT TIME: 5:22:01 PM BATCH PRINT SHEET 57 OF 83

STATE PROJECT NUMBER

2984-26-73





8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

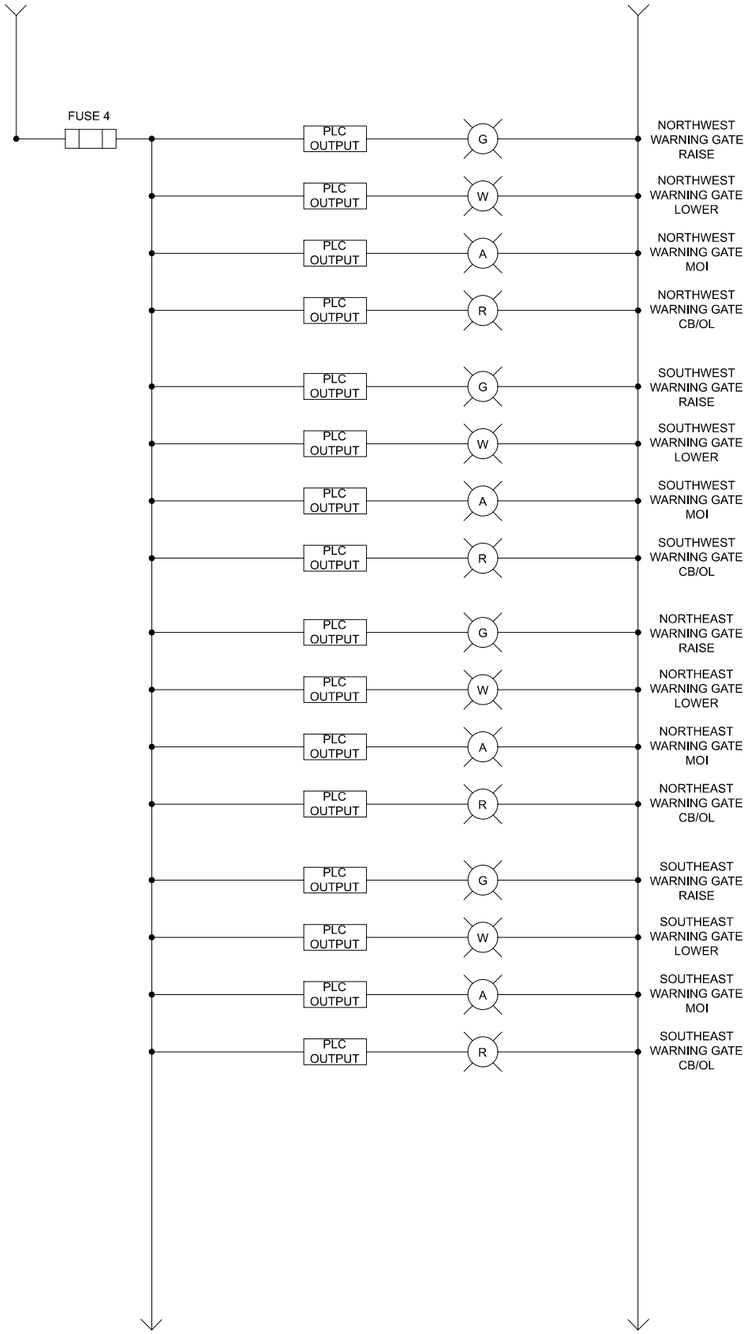
STATE ST. BRIDGE REMOTE CONTROL CONSOLE LADDER

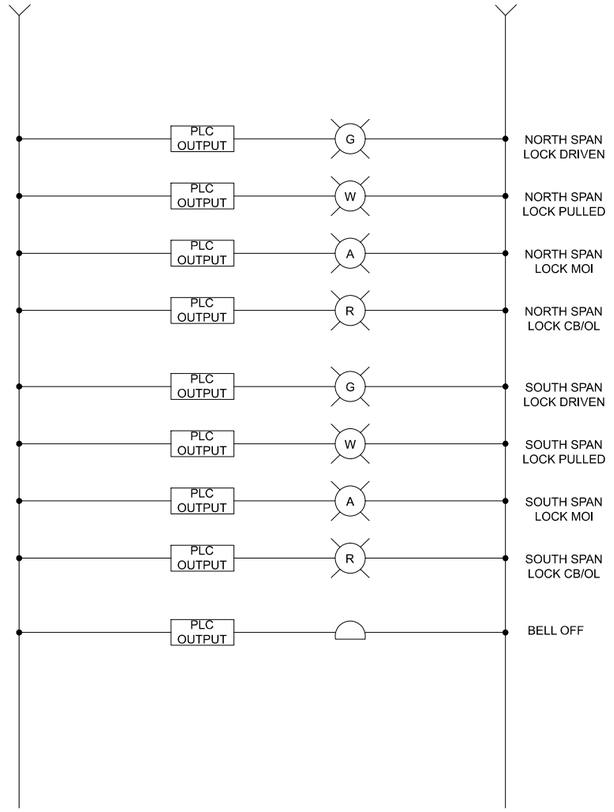
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229

STATE PROJECT NUMBER

2984-26-73





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PLOT DATE: 3/27/2024 PLOT TIME: 5:22:06 PM BATCH PRINT SHEET 58 OF 83

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

STATE ST. BRIDGE REMOTE CONTROL CONSOLE LADDER

SHEET E58 OF E83

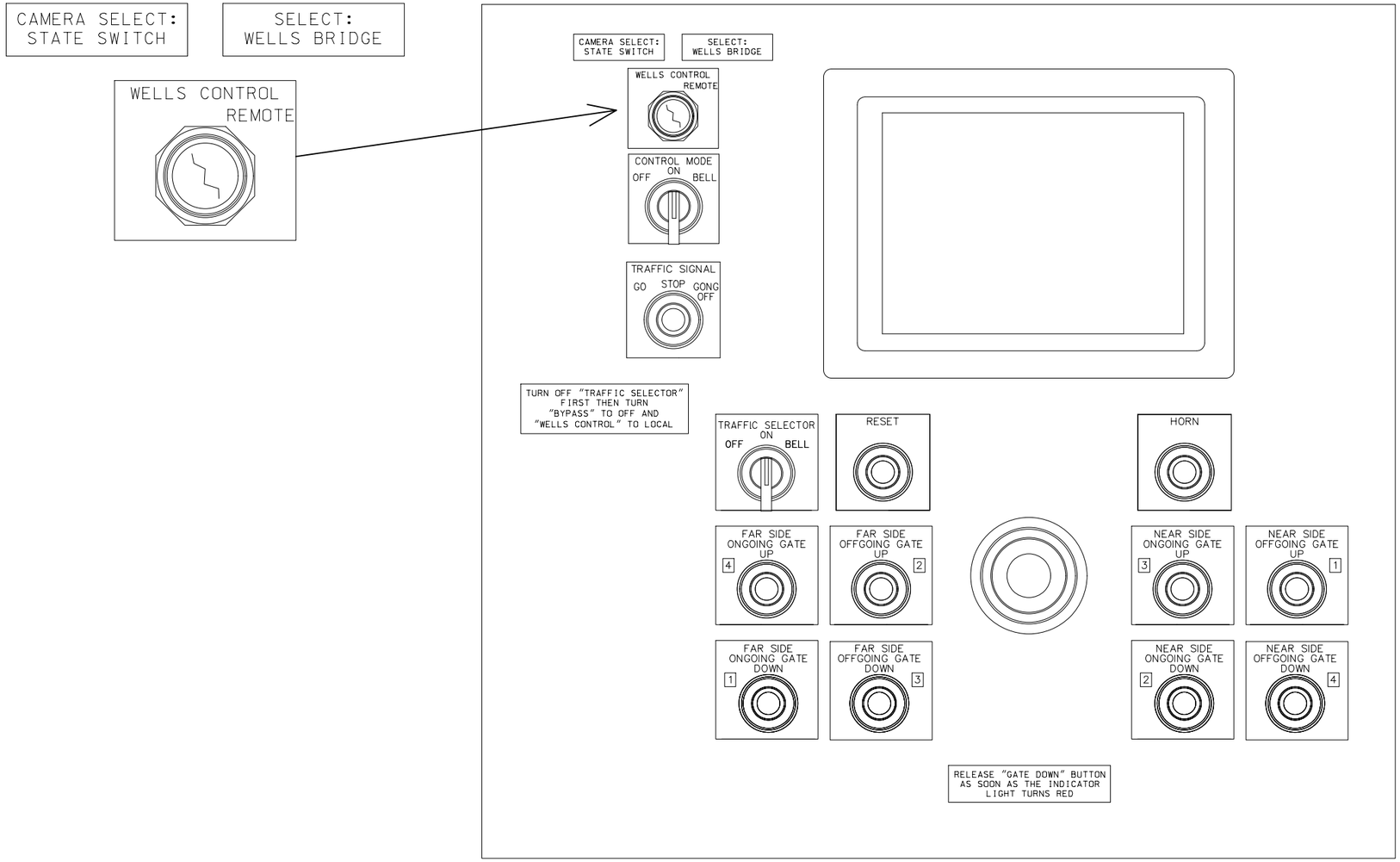
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PLOT DATE: 3/27/2024 PLOT TIME: 5:22:12 PM BATCH PRINT SHEET 59 OF 83

STATE PROJECT NUMBER
2984-26-73

GENERAL NOTES:

1. REPLACE EXISTING TWO WAY SELECTOR SWITCH WITH A THREE WAY SELECTOR SWITCH. LABEL SWITCH "LOCAL/WELLS ST./CHERRY ST.
2. PROVIDE THE REQUIRED CONDUITS AND CONDUCTORS AND WIRE THE NEW THREE WAY SWITCH TO THE EXISTING VIDEO CONTROL SYSTEM AND CONFIGURE THE EXISTING VIDEO CONTROL SYSTEM TO ALLOW THE VIEW THE LOCAL CCTV CAMERAS, REMOTE WELLS ST. BRIDGE CCTV CAMERAS AND CHERRY ST. CCTV CAMERAS THRU THE EXISTING CCTV MONITORS IN THE KNAPP ST. BRIDGE CONTROL ROOM.



EXISTING WELLS ST. BRIDGE
REMOTE CONSOLE
AT KNAPP ST.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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WELLS ST. BRIDGE REMOTE CONTROL CONSOLE AT KNAPP ST.

SHEET E59 OF E83

231

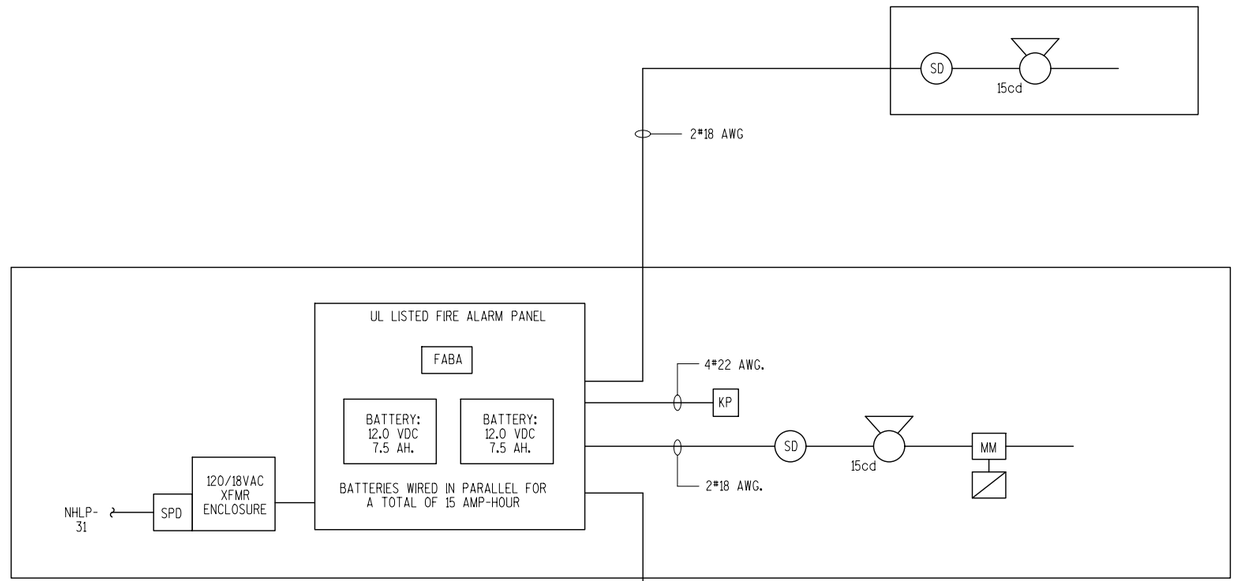
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STATE PROJECT NUMBER

2984-26-73



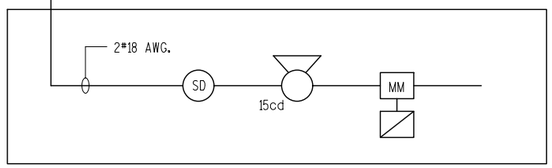
LEGEND			
PART #	SYMBOL	DESCRIPTION	MOUNTING
5193SD	(SD)	ADDRESSABLE SMOKE DETECTOR	OCTOGON OR ROUND BOX
5140MPS-1	⊘	MANUAL PULL STATION	SINGLE GANG 42" CENTER
4101SN	CR	CONTROL RELAY	SINGLE GANG
4193SN	MM	SINGLE ZONE MONITOR MODULE	SINGLE GANG
4939SN-WH	DC	ADDRESSABLE DOOR CONTACT	SURFACE
BK-PC2R	75cd	CEILING MOUNT HORN / STROBE	4"X4" BOX
BK-SR	15cd	WALL MOUNT STROBE ONLY	4"X4" BOX 80" BOTTOM
6160CR-2	KP	SYSTEM CONTROL KEYPAD	SINGLE GANG MAX 54"
V32FB	FABA	FIRE ALARM / BURG. ALARM CONTROL PANEL	MAX 72" TOP

NOTES:

1. USE 2#14 AWG FOR NOTIFICATION DEVICES, 2#18 AWG FOR SIRENS AND ADDRESSABLE DEVICES. CONTRACTOR TO REVISE CONDUCTOR SIZING AS PER MANUFACTURER RECOMMENDATIONS. INSTALLATION MUST MEET NFPA-72 AND NFPA-70 STANDARDS.
2. ALL CONDUCTOR RUNS IN A 3/4" MINIMUM.
3. DETECTORS MUST BE A MINIMUM OF 3-FEET AWAY FROM ANY HVAC SUPPLY OR RETURN VENTS.
4. DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEANUP OF ALL TRADES IS COMPLETE.

SEQUENCE OF OPERATION CHART

		Manual Pull	Smoke Detector	Door Contact			
Monitor Company	Alarm	X	X	X			
	Supervisory						
	Trouble						
Panel Operation	Alarm	X	X	X			
	Supervisory						
	Trouble						
	Burg. Alarm Notification			X			
	Fire Alarm Notification	X	X				



LOWER LEVEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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EAST TOWER
FIRE ALARM SYSTEM
RISER

SHEET E60 OF E83

8

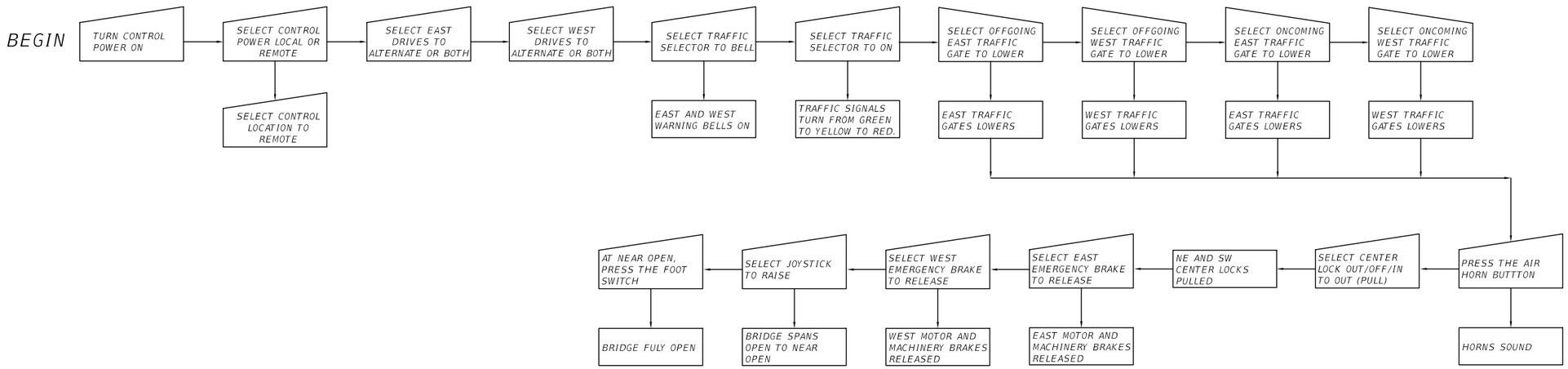
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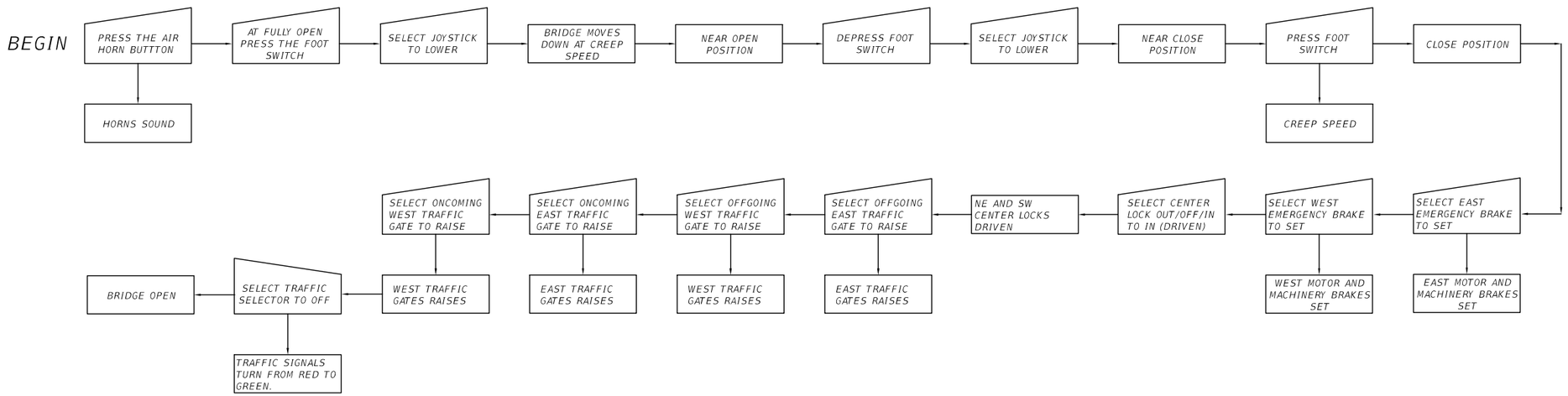
STATE PROJECT NUMBER

2984-26-73

RASING THE BRIDGE



LOWERING THE BRIDGE



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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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BRIDGE FUNCTIONAL SEQUENCE

SHEET E61 OF E83

233

STREET LIGHTING GENERAL NOTES:

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

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

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

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

1 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

3 LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW STREET LIGHTING, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

4 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 12 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

5 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE) IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

6 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

7 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

8 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

9 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.

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

11 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

12 PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

14 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

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

16 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE STREET LIGHTING ENGINEER.

STREET LIGHTING GENERAL NOTES:

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

18 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED. COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

19 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 3 FT. TO 4 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

20 TYPICAL CONDUIT INSTALLATION FROM THE PULL BOX TO A DIRECT BURIED STREET LIGHT POLE IS AS FOLLOWS: USE A NYLON LIQUIDTIGHT CONNECTOR (UL APPROVED) TO CONNECT THE 1 1/2-INCH LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT LFNC-B (UL APPROVED) TO THE PULL BOX AND CONNECT TO STREET LIGHT POLE BY STUBBING UP A MINIMUM OF 6 INCHES OF THE LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC-B) INTO THE CABLE SLOT.

21 ALL CONDUITS AND JUNCTION BOXES EMBEDDED IN STRUCTURE SHALL BE PAID UNDER STRUCTURE PAY ITEMS. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EMBEDDED CONDUITS.

22 AT EVERY BRIDGE JOINT, EXPANSION/DEFLECTION FITTINGS MUST BE USED TO PREVENT DAMAGE TO CONDUIT AND LIGHTING CIRCUITS. THIS ITEM IS INCIDENTAL TO THE CONDUIT BID ITEM, AND SHALL BE PAID UNDER STRUCTURE PAY ITEMS.

23 THE SUPPORT CHANNELS FOR INSTALLATION OF CONDUITS, LUMINAIRES, JUNCTION BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL UNISTRUT P1000 SERIES OR APPROVED EQUAL, CHANNELS SHALL BE SLOTTED OR PERFORATED.

24 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

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

26 PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

27 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE. INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.

28 CONDUCTOR COLORS: 240/480, 1 PHASE - BLACK (HOT) /WHITE (NEUTRAL) // RED (HOT) /GRAY (NEUTRAL) / GREEN (GROUND)

29 INSTALL COMMON GROUND CONDUCTOR IN CONDUIT WHERE MULTIPLE BRANCH CIRCUITS CONDUCTORS ARE INSTALLED IN SAME CONDUIT AND SPLICE THE GROUND CONDUCTOR WITH TAP CONNECTOR IN PULLBOX.

30 PROVIDE MINIMUM WIRES / CONDUCTOR(S) SLACK AS NOTED BELOW:
PULL BOXES: SEE DETAIL 142
- CONNECTED WIRES TO LIGHT POLE IN PULL BOX MUST BE EXTENDED MINIMUM 3 FT. BEYOND TOP OF PULL BOX
- UNCONNECTED WIRES THAT BY PASS THROUGH PULL BOX MUST HAVE A MINIMUM OF 6 FT. SLACK COIL LEFT INSIDE PULL BOX

EMBEDDED JUNCTION BOXES IN PARAPIT WALL :
- CONNECTED WIRES IN JUNCTION BOX EXTEND MINIMUM 2 FT. BEYOND TOP OF JUNCTION BOX
- UNCONNECTED WIRES IN JUNCTION BOX LEAVE MINIMUM OF 4 FT. SLACK COIL IN JUNCTION BOX

DISTRIBUTION CENTER/LOAD CENTER: EXTEND 10-FT.
BREAK AWAY TRANSFORMER BASE: EXTEND 2-FT.

31 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

32 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.

33 ON ALL NEW STREET LIGHT POLES A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 13-DEC-2023 07:02
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.13-2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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STREET LIGHTING GENERAL NOTES (1 OF 2)

SHEET E62 OF E83

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STREET LIGHTING GENERAL NOTES:

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

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

36 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - NEAL KARWEIK (OFFICE 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

37 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - NEAL KARWEIK (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

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

39 CONTRACTOR TO DELIVER THE FOLLOWING REMOVED STREET LIGHTING MATERIALS:
-ALUMINUM AND WOOD POLES
-LUMINAIRE BRACKET ARMS
-LUMINAIRES
-BREAKAWAY TRANSFORMER PEDESTALS
-WIRING PEDESTALS (GREEN IN COLOR)
TO CITY OF MILWAUKEE STREET LIGHTING YARD AT 1540 W. CANAL ST.
CALL RICO LOPEZ AT 414-286-5983 (CANAL OFFICE) OR 414-286-6123 (DPW FIELD OFFICE) OR DISPATCHER AT 414-286-5944
THREE (3) WORKING DAYS BEFORE TO COORDINATE DELIVERY OF MATERIALS

40 CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE POLES, CONCRETE BASES, AND ABANDON WIRING.

41 CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH THE SPECIAL PROVISIONS., UNLESS NOTED OTHERWISE.

42 ONLY WHEN THE CITY OF MILWAUKEE IS FURNISHING MATERIALS FOR A PROJECT THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE STREET LIGHTING SHOP YARD CONTACT PERSON FOUR (4) WORKING DAYS BEFORE, AND WILL NEED TO PROVIDE THE EXACT QUANTITY OF MATERIALS NEEDED. THE ADVANCE NOTICE WILL ALLOW THE SHOP TO GATHER THE REQUEST ITEMS FOR THE CONTRACTOR TO PICK UP AND SIGN FOR TAKING POSSESSION OF THE MATERIALS.

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

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

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

STREET LIGHTING GENERAL NOTES:

AS-BUILT GUIDELINES:

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

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

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.
FOR EXAMPLE:
REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

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

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

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

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

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

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

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

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel
REVISION DATE: 13-DEC-2023 07:03
APPROVED REVISION BY: RJBERTRAN
APPROVED REVISION DATE: DEC.13-2023

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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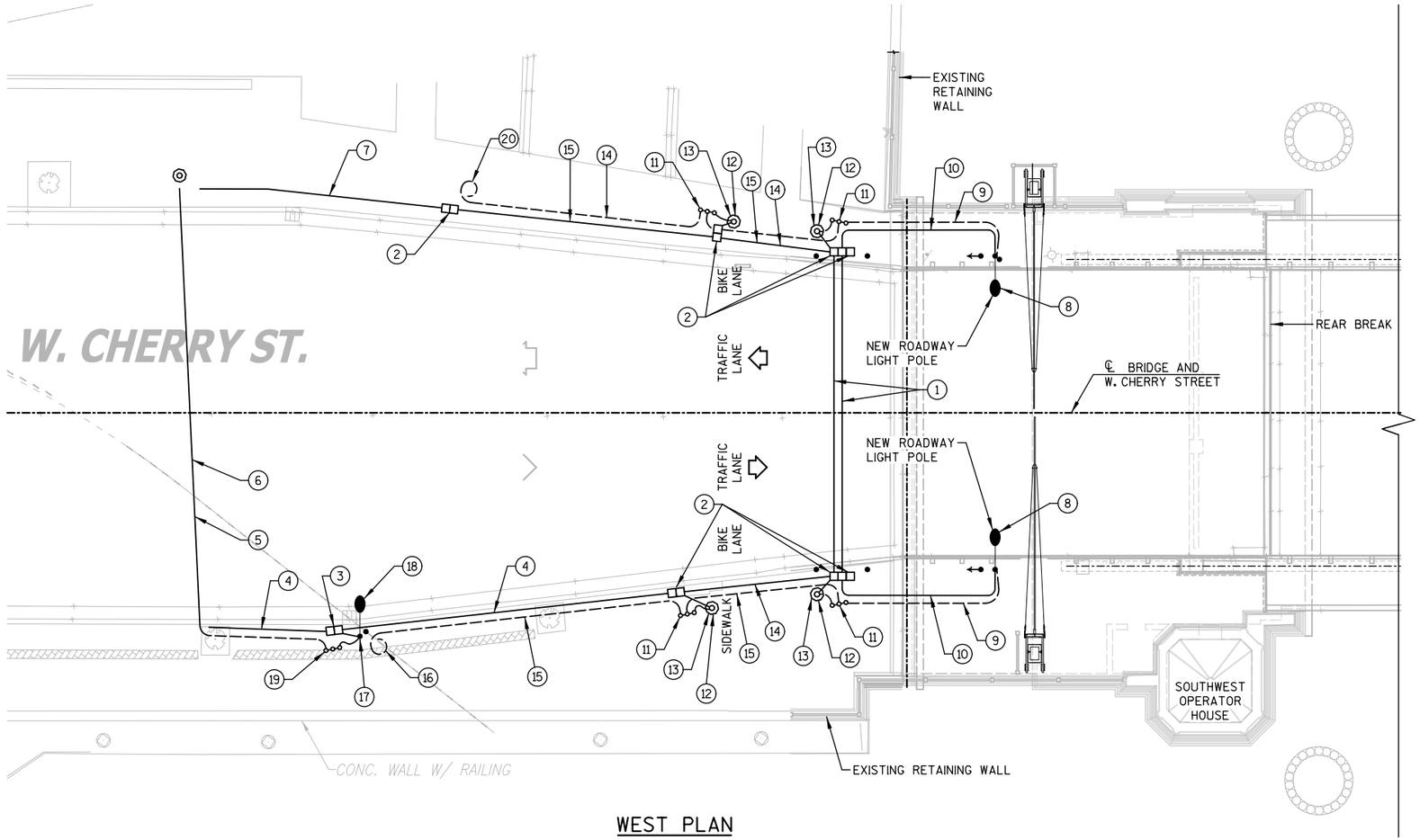
STREET LIGHTING GENERAL NOTES (2 OF 2)

SHEET E63 OF E83
235

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PLOT DATE: 3/27/2024 PLOT TIME: 5:22:51 PM BATCH PRINT SHEET 64 OF 83

STATE PROJECT NUMBER

2984-26-73



WEST PLAN

DOUBLE-LEAF BASCULE BRIDGE

GENERAL NOTES:

1. REFER TO SHEETS E62, E63 AND E66 THRU E77 FOR ADDITIONAL INFORMATION ON STREET LIGHTING.
2. ITEMS REFERENCE NOTES THAT END WITH (**) ARE ITEMS IN CATEGORY 0030.

REFERENCE NOTES:

(1) CONTRACTOR PROVIDE & INSTALL 3" PVC SCH. 80 CONDUIT (**).
(2) CONTRACTOR PROVIDE & INSTALL 13"X24"X24" PULL BOX (**).
(3) CITY TO INSTALL 13"X24"X24" PULL BOX.
(4) EX. 2.5" PVC.
(5) EX. 2" CONDUIT 62-0.
(6) EX. 3#8/1#8LTP CABLE CIR. T22C-E.
(7) EX. 2" CONDUIT.
(8) CONTRACTOR INSTALL CITY PROVIDE LIGHT POLE WITH TRANSFORMER BASE (**).
(9) CONTRACTOR PROVIDE & INSTALL IN CONDUIT 2#12UF WITH GROUND CABLE (**).
(10) CONTRACTOR PROVIDE & INSTALL 2" PVC CONDUIT (**).

REFERENCE NOTES CONT:

(11) CONTRACTOR PROVIDE & INSTALL POLARIS EDGE CONNECTORS IN PULL BOX (**).
(12) CONTRACTOR TO INSTALL NEW CONCRETE HARP BASE (**).
(13) CONTRACTOR TO REPOWER COAT HARP POLE UNIT & REINSTALL ON CONCRETE BASE (**).
(14) CONTRACTOR PROVIDE & INSTALL 3" PVC SCH. 40 CONDUIT (**).
(15) CONTRACTOR PROVIDE & INSTALL IN CONDUIT 4#8/1#8 XLP CABLE (**).
(16) CONTRACTOR TO LEAVE 6 FT. OF COILED CABLE IN PULL BOX.
(17) CITY TO MAKE FINAL TERMINATION OF COILED CABLE IN PULL BOX.
(18) CITY TO INSTALL BLACK 31FT. AL. POLE TRANSFORMER BASE MIL. LANTERN, S3LED4.
(19) POLARIS EDGE CONNECTORS (**).
(20) CONTRACTOR TO LEAVE 45 FT. OF COILED CABLE IN PULL BOX (**).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

STREET LIGHTING WEST PLAN

SHEET E64 OF E83
236

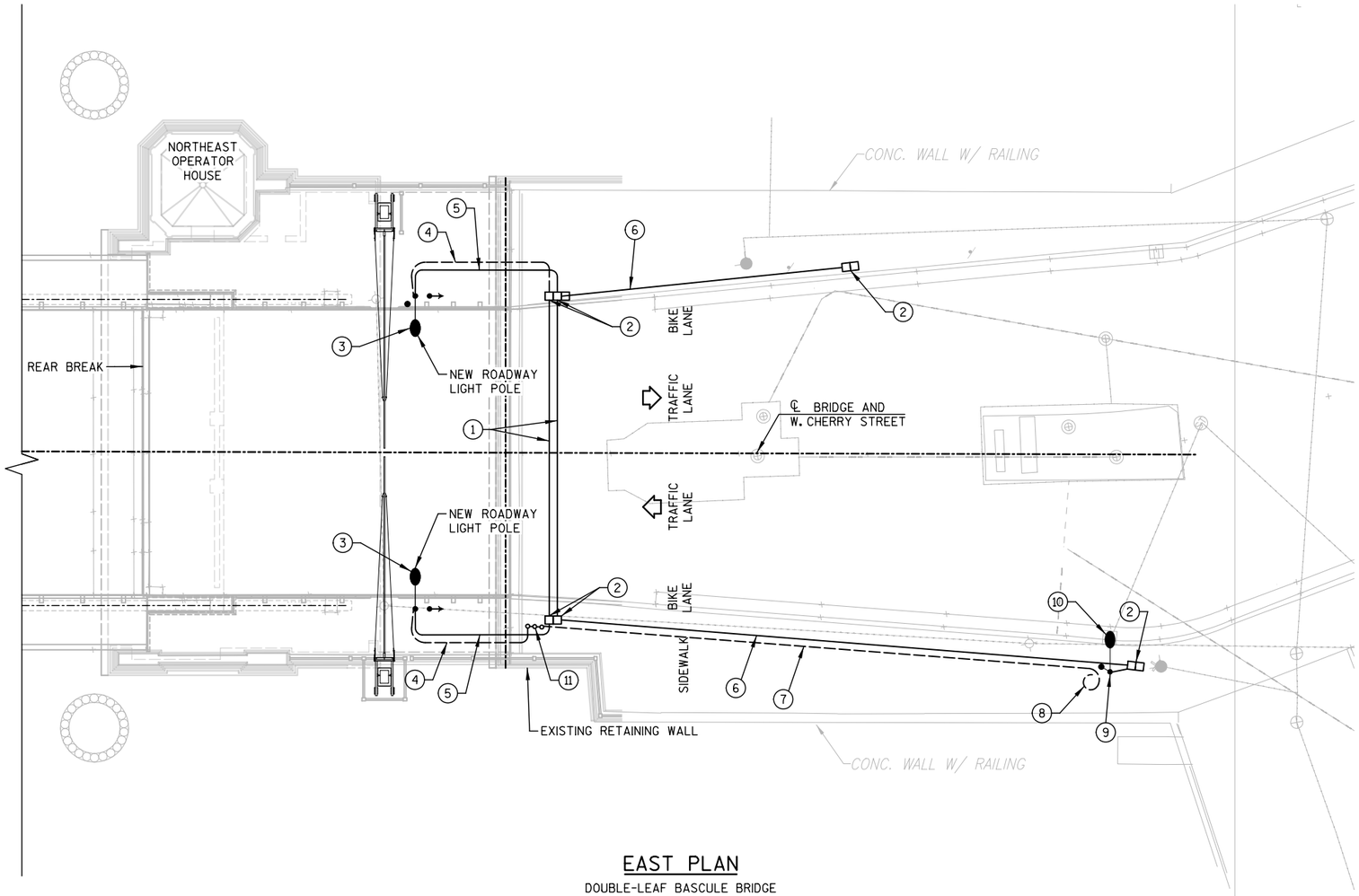
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PLOT DATE: 3/27/2024 PLOT TIME: 5:22:58 PM BATCH PRINT SHEET 65 OF 83

STATE PROJECT NUMBER

2984-26-73



EAST PLAN

DOUBLE-LEAF BASCULE BRIDGE

GENERAL NOTES:

1. REFER TO SHEETS E62, E63 AND E66 THRU E77 FOR ADDITIONAL INFORMATION ON STREET LIGHTING.
2. ITEMS REFERENCE NOTES THAT END WITH (**) ARE ITEMS IN CATEGORY 0030.

REFERENCE NOTES:

(1) CONTRACTOR PROVIDE & INSTALL 3" PVC SCH. 80 CONDUIT (**).
(2) CONTRACTOR PROVIDE & INSTALL 13"X24"X24" PULL BOX (**).
(3) CONTRACTOR INSTALL CITY PROVIDE LIGHT POLE WITH TRANSFORMER BASE (**).
(4) CONTRACTOR PROVIDE & INSTALL IN CONDUIT 2#12UF WITH GROUND CABLE (**).
(5) CONTRACTOR PROVIDE & INSTALL 2" PVC CONDUIT (**).
(6) CONTRACTOR PROVIDE & INSTALL 3" PVC SCH. 40 CONDUIT (**).

REFERENCE NOTES CONT:

(7) CONTRACTOR PROVIDE & INSTALL IN CONDUIT 4#8/1#8 XLP CABLE (**).
(8) CONTRACTOR TO LEAVE 6 FT. OF COILED CABLE IN PULL BOX (**).
(9) CITY TO MAKE FINAL TERMINATION OF COILED CABLE IN PULL BOX.
(10) CITY TO INSTALL BLACK 31 FT. CONCRETE POLE MIL. LANTERN, S3LED4.
(11) CONTRACTOR PROVIDE AND INSTALL POLARIS EDGE CONNECTORS IN PULL BOX (**).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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STREET LIGHTING EAST PLAN

SHEET E65 OF E83

237

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STATE PROJECT NUMBER

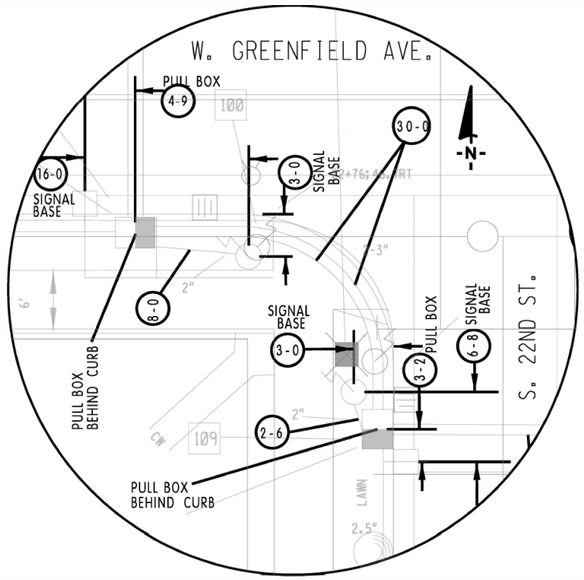
2984-26-73

USE RED INK TO DO AS-BUILTS

RECORD RETENTION GUIDELINES:

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

SUPERVISOR: _____
PROJECT MANAGER: _____
CONTRACTOR LEADER: _____
CONTRACTOR COMPANY: _____
WORK STARTED: _____
WORK COMPLETED: _____



FIELD RECORD EXAMPLE DETAIL NOT TO SCALE

TYPICAL DIMENSIONING OF CONDUIT, PULL BOXES, AND CONCRETE BASES

MEASURING GUIDE LINES

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

PROVIDE A MEASURED DISTANCE OF UNINTERRUPTED CONDUIT RUNS

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

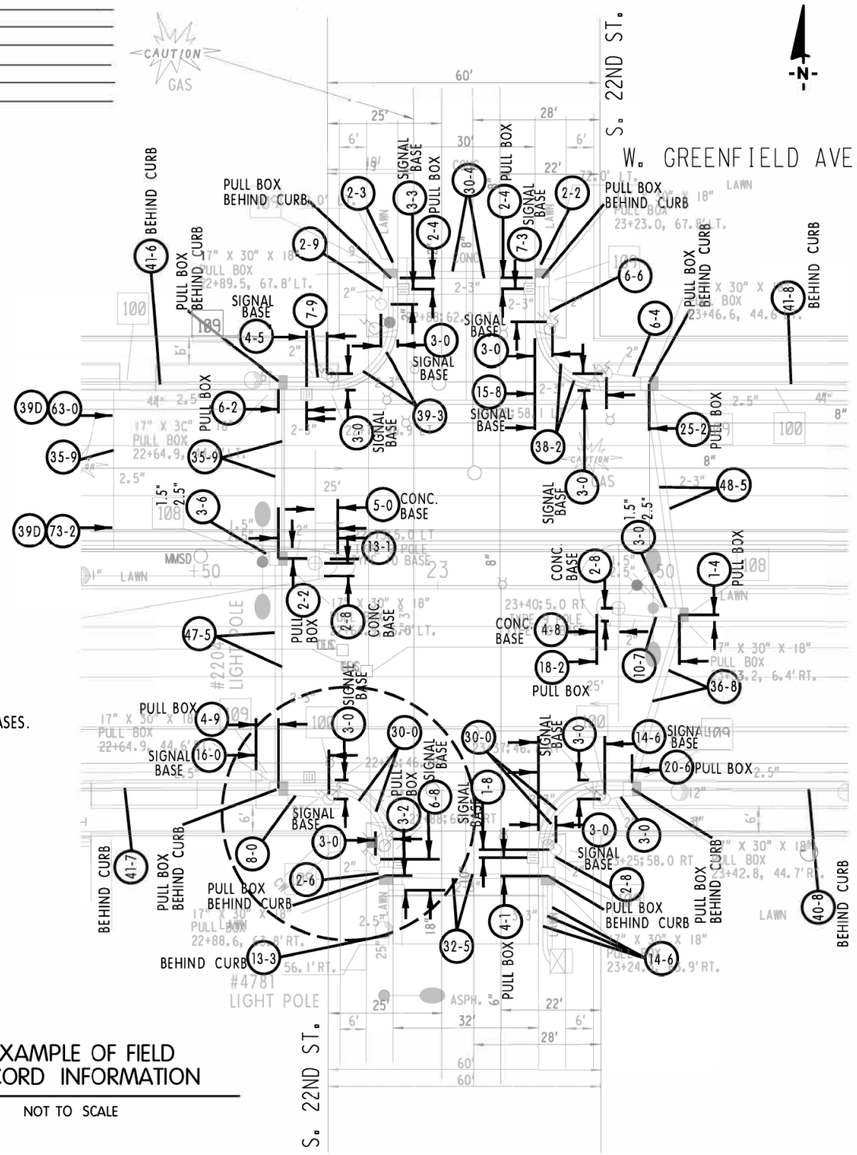
MEASURE TO OR FROM THE CENTERS OF OBJECTS FOR DISTANCE TAKING.

(39D) MEANS = CONDUIT IS 39" DEEP

(48-5) MEANS = LENGTH OF CONDUIT IS 48.5 FT. LONG (MEASURED TO NEAREST TENTH OF A FOOT)

OR

(25-6) MEANS = DISTANCE OF 25.6 FT. BETWEEN PERMANENT OBJECT OR CURB FACE TO CONDUIT, PULL BOX, AND CONCRETE BASE (MEASURED TO NEAREST TENTH OF A FOOT)



EXAMPLE OF FIELD RECORD INFORMATION

NOT TO SCALE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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AS BUILT GUIDE LINE DETAIL

SHEET E66 OF E83

238

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STATE PROJECT NUMBER

2984-26-73

LEGEND

- UTILITY POLE
- EXISTING S.L. WOOD POLE
- EX. POLE WITH COBRA STYLE LUMINAIRE
- EX. POLE WITH POST TOP DECORATIVE STYLE LUMINAIRE
- EX. POLE WITH DECORATIVE STYLE LUMINAIRE
- PROPOSED S.L. WOOD POLE
- PR. POLE WITH COBRA STYLE LUMINAIRE
- PR. POLE WITH POST TOP DECORATIVE STYLE LUMINAIRE
- PR. POLE WITH DECORATIVE STYLE LUMINAIRE
- PR. BRACKET ARM AND COBRA STYLE LUMINAIRE
- EX. POLE WITH LUMINAIRE REPLACEMENT
- REPLACE POLE AND BRACKET ARM, EX. LUMINAIRE IS TO BE TRANSFERED FROM OLD POLE
- REMOVE POLE
- REMOVE POLE COMPLETE
- EXISTING WALL PACK LUMINAIRE
- PROPOSED WALL PACK LUMINAIRE
- PROPOSED TRANSFORMER BREAKAWAY BASE ON CONCRETE BASE OR BRIDGE BLISTER
- EXISTING OVERHEAD PRIMARY CABLE
- EXISTING OVERHEAD SECONDARY CABLE
- PROPOSED TEMPORARY OVERHEAD PRIMARY CABLE
- PROPOSED TEMPORARY OVERHEAD SECONDARY CABLE
- REMOVAL OF TEMPORARY OVERHEAD CABLE
- PR. UNDERGROUND 240/480V SECONDARY CABLE - INSTALLED IN CONDUIT
- PR. UNDERGROUND 120V/20A OUTLET CIRCUIT - INSTALLED IN CONDUIT
- PR. UNDERGROUND CONDUIT
- EX. UNDERGROUND PRIMARY CABLE
- EX. UNDERGROUND SECONDARY CABLE
- EX. CONDUIT
- EX. OV20 SERIES LED BALLAST
- PR. OV20 SERIES LED BALLAST
- EX. MULTI-PORT CONDUCTOR WATERPROOF SUBMERSIBLE SPLICE
- PR. MULTI-PORT CONDUCTOR WATERPROOF SUBMERSIBLE SPLICE

- EXISTING PULL BOX
- EXISTING JUNCTION BOX
- REMOVE PULL BOX
- EXISTING LIGHTNING ARRESTOR
- EX. GROUND & TEST
- EX. GROUND ROD
- EXISTING PAD MOUNT STREET LIGHTING ENCLOSURE 240/480V 200A METERED
- EXISTING 120V 100A 1PH METERED OUTLET SERVICE CABINET
- EX. RED WIRE / BLACK WIRE - STREET LIGHT TERMINATION
- EX. RED WIRE / BLACK WIRE - OUTLET CIRCUIT TERMINATION
- SEE DETAIL NUMBER FOR ADDITIONAL INFORMATION

- PROPOSED PULL BOX
- PROPOSED JUNCTION BOX
- PROPOSED LIGHTNING ARRESTOR
- PROPOSED GROUND & TEST
- PROPOSED GROUND ROD
- PROPOSED PAD MOUNT STREET LIGHTING ENCLOSURE 240/480V 200A METERED
- PROPOSED 120V 100A 1PH METERED OUTLET SERVICE CABINET
- PROPOSED RED WIRE / BLACK WIRE - STREET LIGHT TERMINATION
- PROPOSED RED WIRE / BLACK WIRE - OUTLET CIRCUIT TERMINATION

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION

REVISION BY: dkozel — REVISION DATE: 17-MAR-2023 06:20
APPROVED REVISION BY: R.BERTRAN — APPROVED REVISION DATE: MAR 17-2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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LEGEND

SHEET E67 OF E83
239

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PLOT DATE: 3/27/2024 PLOT TIME: 5:23:13 PM
BATCH PRINT SHEET 67 OF 83

NON-LED LUMINAIRE DESCRIPTION BREAKDOWN

1 S 2 V

- (C)=FULL CUT OFF, (V)=VERTICAL BURN
- (1)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR
- (S)=HIGH PRESSURE SODIUM, (M)=MERCURY VAPOR, (H)=METAL HALIDE, (RS)=HIGH PRESSURE SODIUM RETROFIT, (LS) LOW PRESSURE SODIUM
- (0)=70W, (1)=100W, (2)=150W, (2)=175W ONLY WITH (M), (3)=250W, (3)=215W ONLY WITH (RS) (4)=400W, (4)=360W ONLY WITH (RS) (5)=200W

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

S 2 LED 3

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

LED LUMINAIRE DESCRIPTION BREAKDOWN (COBRA STYLE FIXTURE)

2 LED 3

- (1)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR
- (LED)=LIGHT EMITTING DIODE
- (0)=36W, (1)=50W, (2)=90W, (3)=135W

LIGHTING CABLE & CIRCUIT IDENTIFICATION

3#2/1#8XLP, CIR.N.S.#7 MULTI.-B

- CIRCUIT
- LIGHTING CONTROL CABINET
- INSULATION: LTP = LOW THERMAL PLASTIC OR XLP = CROSS LINKED POLYETHYLENE
- GROUNDING CONDUCTOR SIZE AWG
- NUMBER OF GROUNDING CONDUCTORS
- SEPARATOR BETWEEN NON-GROUNDING AND GROUNDING CONDUCTORS
- NON-GROUNDING CONDUCTOR SIZE AWG
- NUMBER OF NON-GROUNDING CONDUCTORS

LIGHTING UNIT IDENTIFICATION

STATION - OFFSET

#1942 - 30-AL-BD(T)-S6-_2LED2, NL-R, _L-

- HOT WIRE
- LUMINAIRE #2
- DIRECTION: N,S,E,&W
- HOT WIRE
- LUMINAIRE #1
- DIRECTION: N,S,E,&W
- LUMINAIRE LIGHT DISTRIBUTION (OPTICS)
- LUMINAIRE TYPE SOURCE
- LUMINAIRE WATTAGE EQUIVALENT 0-70W, 1-100W, 2-150W, 3-250W
- S - SCREW IN LED LAMP
- LUMINAIRE ARM LENGTH
- NUMBER LUMINAIRE ARM S - SINGLE OR D - DOUBLE
- (T) - TRANSFORMER BASE BREAKAWAY
- POLE INSTALLATION: BOLT DOWN -BD OR DIRECT BURY -DB
- POLE TYPE
- POLE HEIGHT
- PLAQUE (POLE ADDRESS)

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION

REVISION BY: dkozel — REVISION DATE: 12-DEC-2022 09:34
APPROVED REVISION BY: R.BERTRAN — APPROVED REVISION DATE: DEC.12-2022

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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LUMINAIRE DESCRIPTION&CABLE CIRCUIT & UNIT ID

SHEET E68 OF E83
240

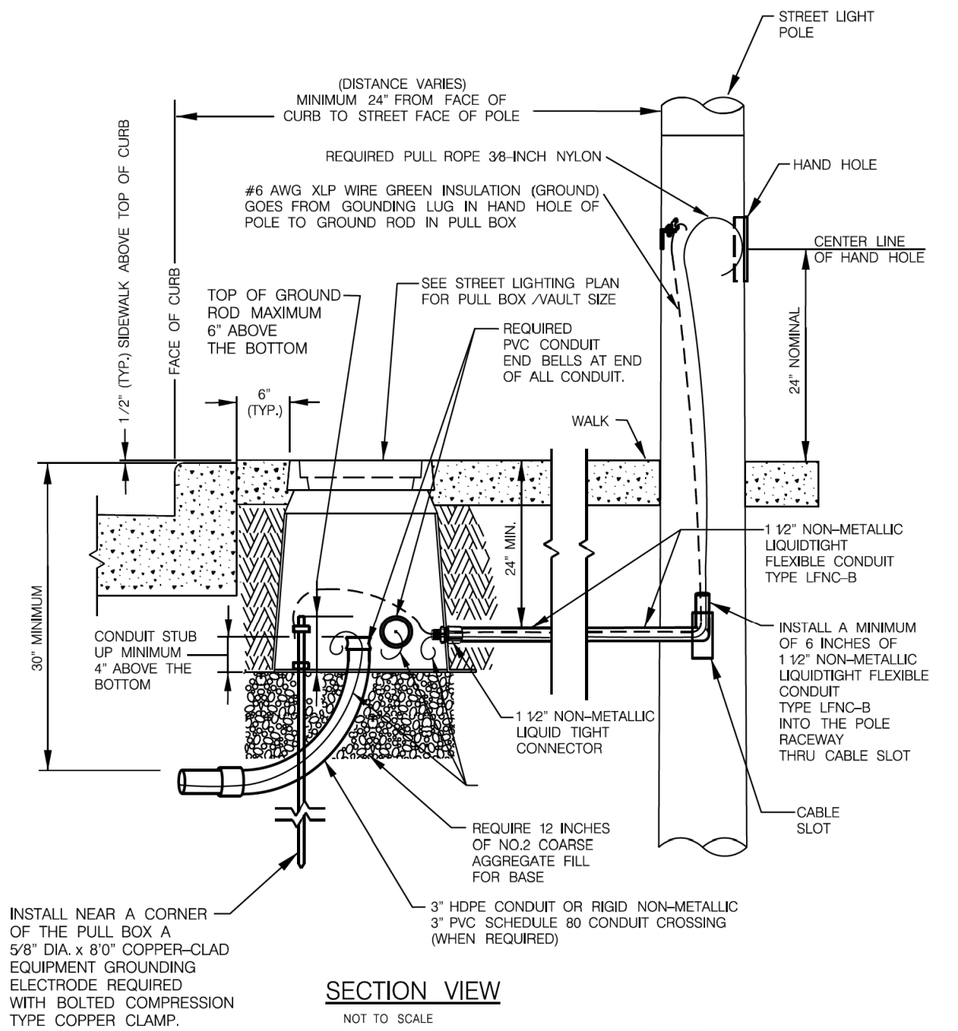
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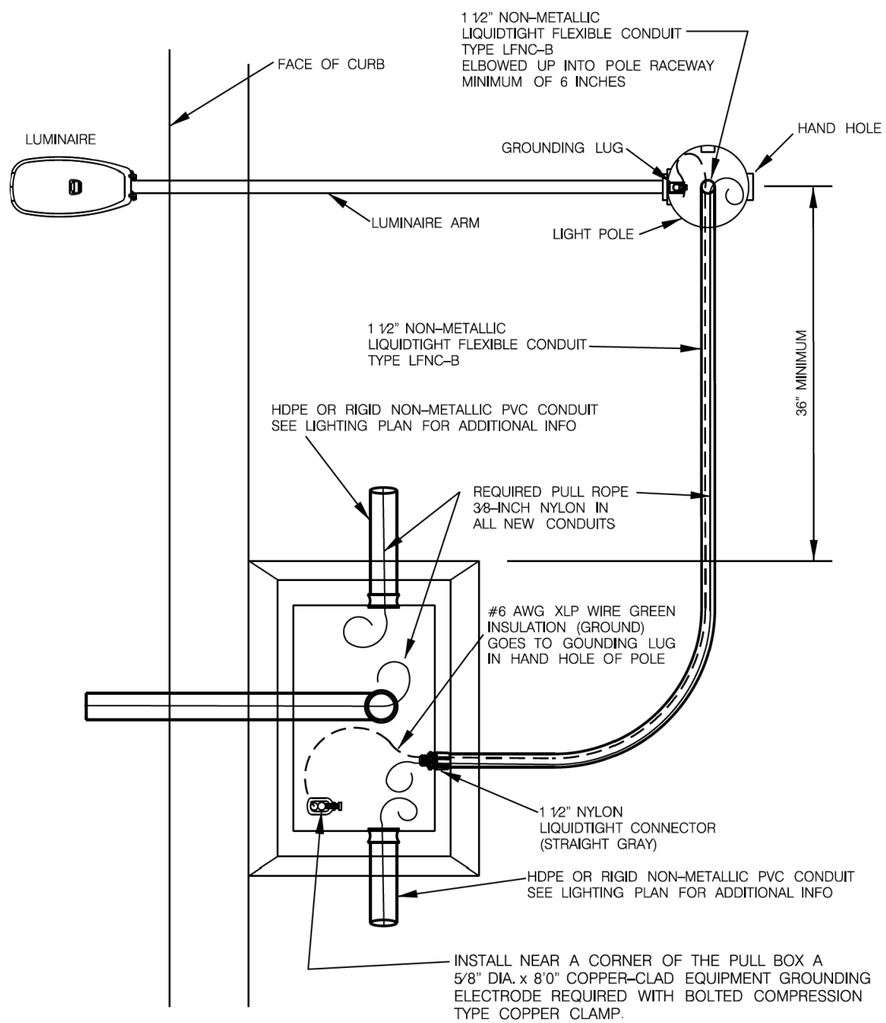
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PLOT DATE: 3/27/2024
PLOT TIME: 5:23:27 PM
BATCH PRINT SHEET 69 OF 83

STATE PROJECT NUMBER
2984-26-73



SECTION VIEW

NOT TO SCALE



PLAN VIEW

NOT TO SCALE

108 DETAIL VERSION

TYPICAL CONDUIT INSTALLATION FROM PULL BOX /VAULT TO DIRECT BURIED POLE

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

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-DEC-2023 10:37
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.14-2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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CONDUIT PULLBOX TO POLE

SHEET E69 OF E83
241

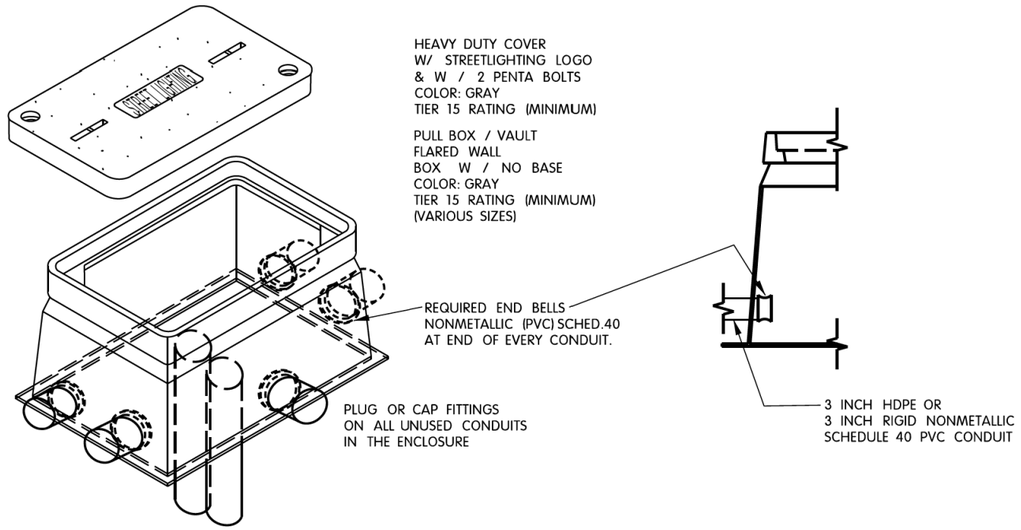
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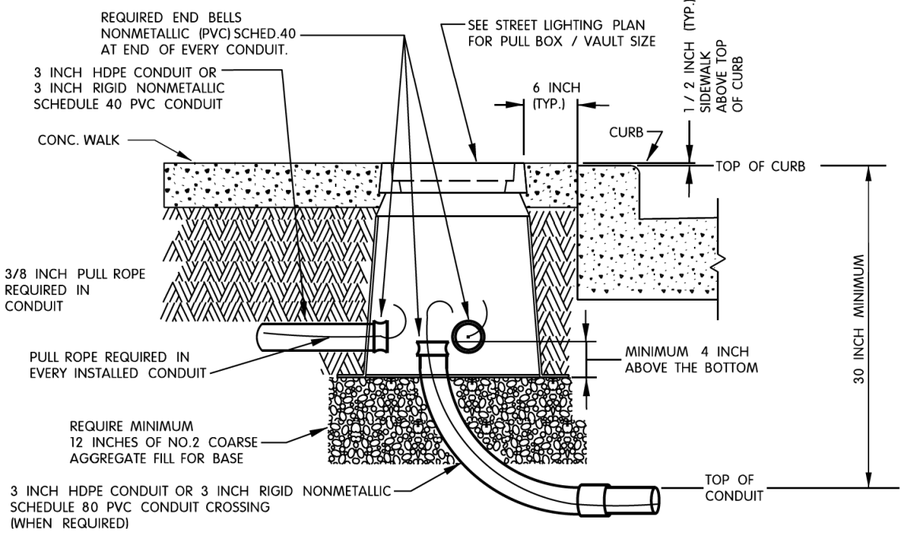
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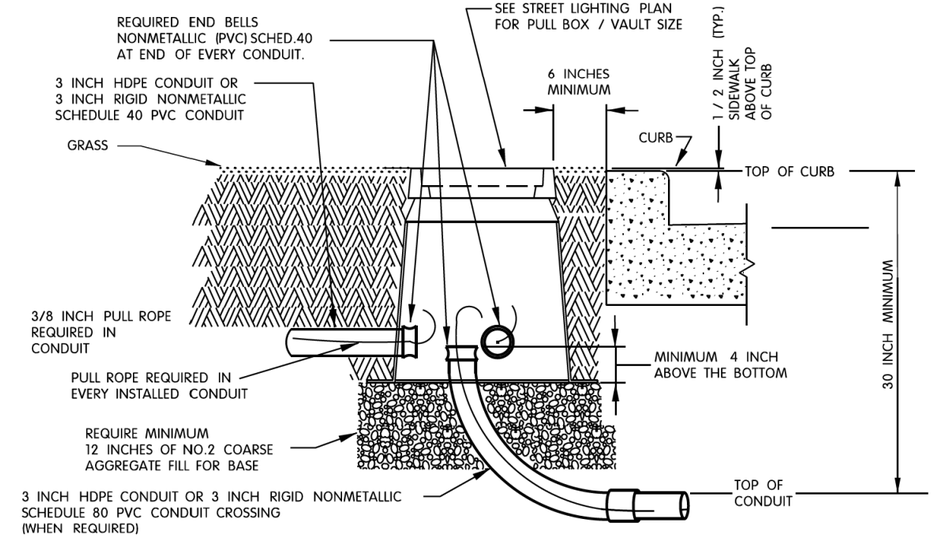
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PLOT DATE: 3/27/2024 PLOT TIME: 5:23:34 PM
BATCH PRINT SHEET 70 OF 83

STATE PROJECT NUMBER

2984-26-73







112 DETAIL

TYPICAL PULL BOX / VAULT INSTALLATION
IN EITHER PAVEMENT OR GRASS AREAS

NOT TO SCALE

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

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-DEC-2023 11:34
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC 13-2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

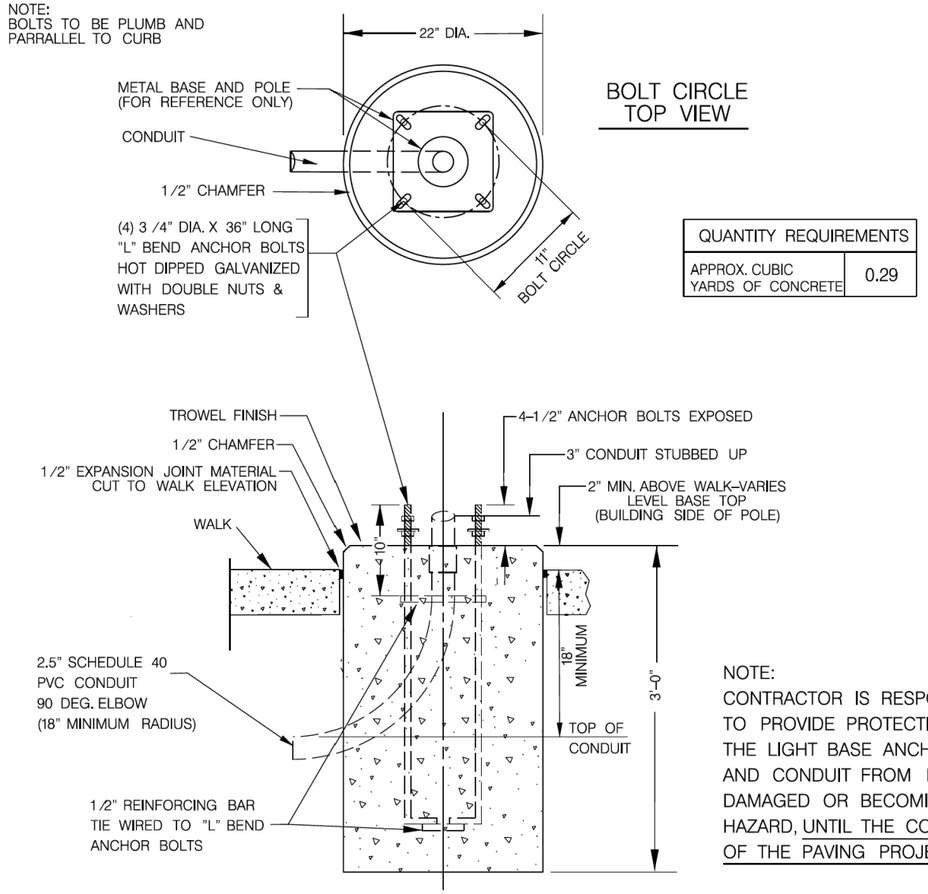
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PULL BOX INSTALL IN PAVEMENT OR GRASS

SHEET E70 OF E83
242

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8



BOLT CIRCLE
TOP VIEW

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	0.29

NOTE:
CONTRACTOR IS RESPONSIBLE TO PROVIDE PROTECTION FOR THE LIGHT BASE ANCHOR BOLTS, AND CONDUIT FROM BEING DAMAGED OR BECOMING A TRIP HAZARD, UNTIL THE COMPLETION OF THE PAVING PROJECT.

134 DETAIL

TYPICAL CONCRETE LIGHT BASE TYPE 1

GENERAL NOTES:

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 3 INCHES.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE. ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE PLUGGED.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHORS RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THE 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STELL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION)

* ANY ANCHOR ROD PROJECTION SHORTER THAN 4" OR LONGER THAN 4- 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CONCRETE LIGHT BASE TYPE 1

SHEET E71 OF E83

243

8

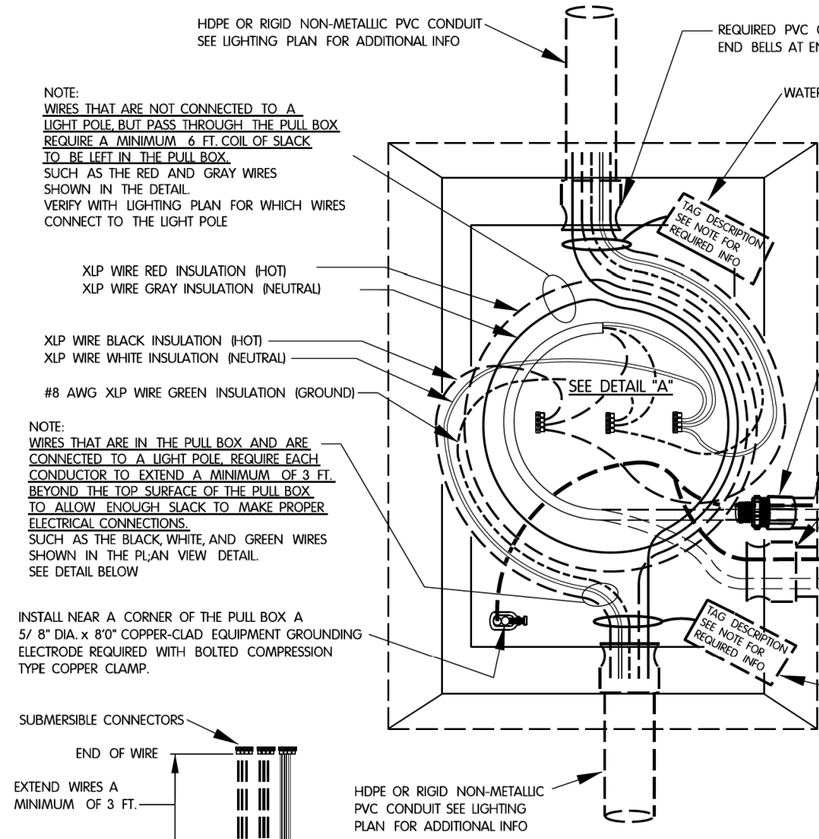
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BATCH PRINT SHEET 71 OF 83

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PLOT DATE: 3/27/2024 PLOT TIME: 5:23:48 PM BATCH PRINT SHEET 72 OF 83

STATE PROJECT NUMBER

2984-26-73



PLAN VIEW

NOT TO SCALE

USE WHEN CONNECTING TO DIRECT BURIED POLE

USE 1 1/2 INCH NYLON LIQUIDTIGHT CONNECTOR (STRAIGHT GRAY)
WHEN CONNECTING 1 1/2 INCH NONMETALLIC LIQUIDTIGHT FLEXIBLE CONDUIT TO A PULL BOX.

USE 1 1/2 INCH NONMETALLIC LIQUIDTIGHT FLEXIBLE CONDUIT TYPE LFNC-B WHEN CONNECTING TO A DIRECT BURIED POLE.

USE WHEN CONNECTING TO CONCRETE LIGHT BASE

USE PVC CONDUIT END BELLS WHEN CONECTING RIGID NONMETALLIC CONDUIT TO A PULL BOX.

USE RIGID NONMETALLIC CONDUIT SCHEDULE 40 TO CONNECT TO CONCRETE LIGHT BASE.

#6 AWG XLP WIRE
GREEN INSULATION (GROUND)
GOES TO GOUNDING LUG
IN HAND HOLE OF POLE

RISER CABLE
2#12 AWG "UF" TYPE WITH GROUND
NOTE - ONE RISER CABLE RUN PER LUMINIAIRE ON POLE

WATERPROOF CABLE TAG

REQUIRED WATERPROOF TAGGING:

WHEN THERE IS MORE THAN ONE CIRCUIT, BUNDLE THE CIRCUIT CONDUCTORS WITH NYLON CABLE TIES OR ENGINEER APPROVED ELECTRICAL TAPE AT ACCESS POINTS.

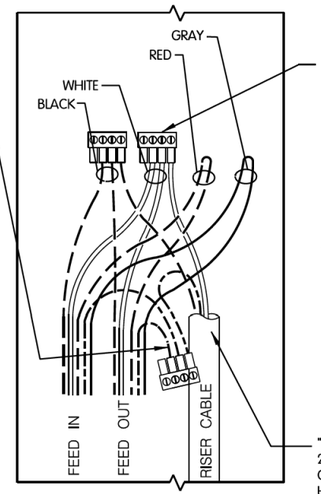
AT EACH PULL BOX, IDENTIFY THE LINE SIDE OF EACH CIRCUIT WITH AN ATTACHED TAG USING A FADE-RESISTANT WATERPROOF BLACK MARKER PEN AND PROVIDE THE FOLLOWING INFO:

CIRCUIT ID: (CIR.WD-E)
LINE SIDE COMING FROM UNIT STREET LIGHT UNIT IS ON: (STREET NAME)
SIDE OF STREET LIGHT UNIT IS ON: (N,S,E,OR W)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (1,2,3,4,5)
DIRECTION FROM THE NEAREST CROSSING STREET: (N,S,E,OR W)
NAME OF THE NEAREST CROSSING STREET: (STREET NAME)

EXAMPLE OF TAG INFO:
CIR.WD-E,
LINE SIDE FROM: W. CANAL ST. / N. / 1 / W. /OF POTAWATOMI CIR.

142 DETAIL

TYPICAL WATERTIGHT MULTI-PORT CONNECTIONS
SPLICING CONDUCTORS WITHIN THE PULL BOX



CIRCUIT MUST BE TAGGED AND IDENTIFIED INSIDE PULL BOX

USE:
POLARIS EDGE CONNECTOR (ISPB2)
OR
MORRIS PRODUCTS SUBMERSIBLE INSULATED STREETLIGHTING CONNECTOR,
OR
EQUAL
3 OR 4 PORT PRE-INSULATED CONNECTOR OR EQUAL.
DESIGNED FOR USE IN BELOW GRADE BOXES, DIRECT BURIAL AND SUBMERSIBLE
CONDUCTORS RANGE FROM #2/0-#14
RATED FOR 600 VOLTS
DUAL RATED FOR CU. OR AL.
INSULATED WITH HIGH DIELECTRIC STRENGTH ABRASION AND CHEMICAL RESISTANT RUBBER
SET SCREWS OR APPROVED EQUAL
UL 486D LISTED FOR DIRECT BURIAL AND SUBMERSIBLE APPLICATIONS

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

DETAIL "A"

CONNECTIONS WITHIN PULL BOX
NOT TO SCALE

NOTES:

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

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

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

PULL ROPE SHALL BE INSTALLED IN ALL NEW CONDUITS.

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

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

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

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

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 3-MAR-2023 15:12
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAR.03-2023

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

WATERYIGHT MULTIPORT CONNECTION WIRING

SHEET E72 OF E83
244

8

8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:23:55 PM BATCH PRINT SHEET 73 OF 83

GENERAL NOTES

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

USE THIS DETAIL 142 IN CONJUNCTION WITH THIS DETAIL FOR ELECTRICAL WIRING.

USE EITHER THE POLARIS EDGE (ISPB2) OR MORRIS PRODUCT SUBMERSIBLE INSULATED CONNECTOR OR ELSE AN EQUAL CONNECTOR THAT IS 3 or 4 PORT PRE-INSULATED, THAT IS DESIGNED FOR USE IN BELOW GRADE BOXES, DIRECT BURIAL, AND SUBMERSIBLE. THE CONDUCTORS RANGE FROM #2/0 - #14 RATED FOR 600 VOLTS DUAL RATED FOR CU. or AL.

USE A WATERPROOF IN-LINE FUSE HOLDER ASSEMBLY THAT NEEDS TO BE 600 VOLT RATED, AND UP TO 30 AMPS, 1-POLE BREAKAWAY, WITH COPPER SET SCREW TERMINALS FOR LOAD, AND WIRE SIZE RANGE #12 TO #8 AWG.
PROVIDE A FAST ACTING 5 AMP 250 VOLT FUSES, FROM THE RECOMMENDED FUSE LIST FROM THE IN-LINE FUSE HOLDER MANUFACTURER.

USE WATERPROOF AND TEAR RESISTANT CABLE TAGS/LABELS AT EACH PULL BOX, TO IDENTIFY THE LINE SIDE OF EACH CIRCUIT USING A FADE-RESISANT WATERPROOF BLACK MARKER PEN AND PROVIDE THE FOLLOWING INFO:

CIRCUIT ID: (CIR.WD-E)
LINE SIDE COMING FROM UNTIL STREET LIGHT UNIT IS ON: (STREET NAME)
SIDE OF STREET LIGHT UNIT IS ON: (N,S,E,or W)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (1,2,3,4,5)
DIRECTION FROM THE NEAREST CROSSING STREET: (N,S,E,or W)
NAME OF THE NEAREST CROSSING STREET: (STREET NAME)

EXAMPLE OF TAG INFO:

CIR.WD-E,
LINE SIDE FROM: W. CANAL ST. / N. / 1 / W. /OF POTAWATOMI CIR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

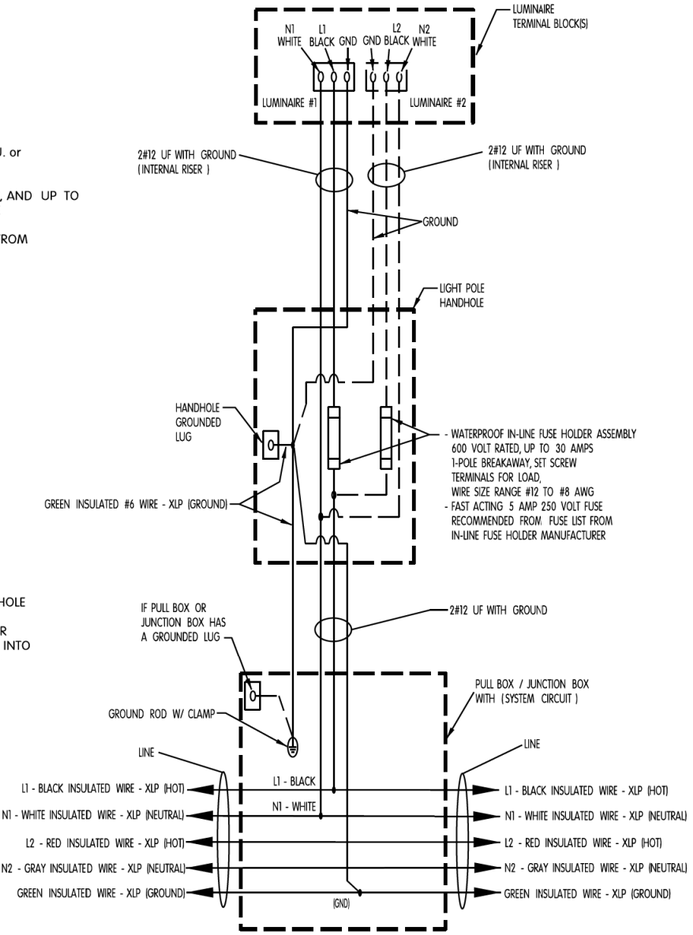
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

USE 2#12UF WITH GROUND FROM THE PULL BOX / JUNCTION BOX TO THE POLE HANDHOLE

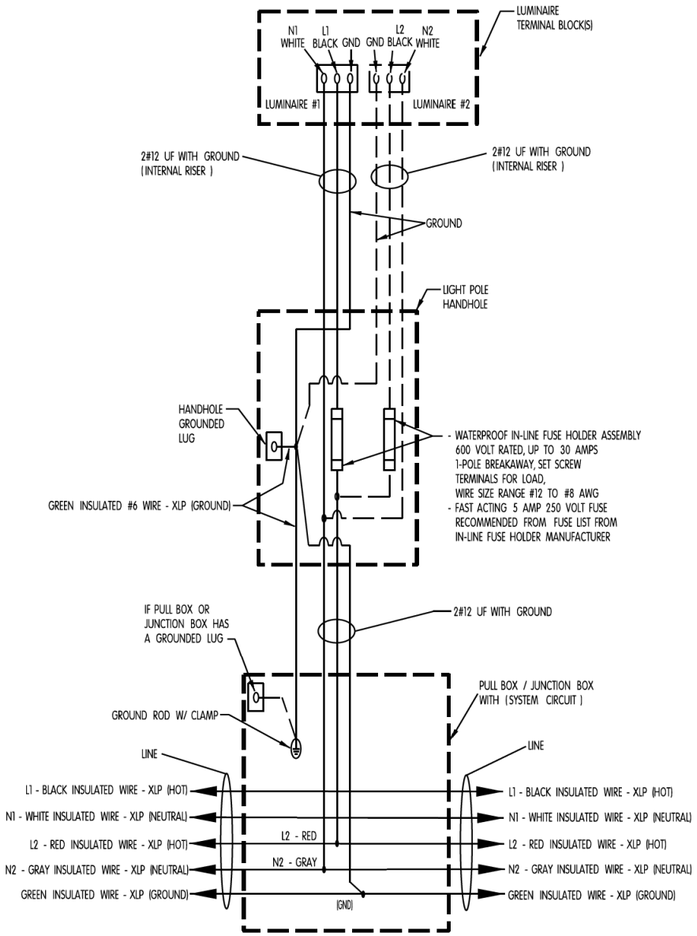
THE INTENT OF THE PULL BOX / JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFF NESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT.

LEGEND

BLACK & RED	UNGROUNDED SYSTEM CIRCUIT CONDUCTORS (L1 & L2)
WHITE & GRAY (N)	GROUNDED SYSTEM CIRCUIT CONDUCTORS (N1 & N2)
GREEN (GND)	EQUIPMENT GROUNDING CONDUCTOR
	HANDHOLE GROUNDED LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	TERMINAL
	SPLICE
	CONDUCTOR
	GROUND ROD



TYPICAL WIRING DIAGRAM - FOR BLACK (L1) AND WHITE (N1)
TWO SEPARATE NEUTRALS SYSTEM
240 / 480VAC 4 WIRE



TYPICAL WIRING DIAGRAM - FOR RED (L2) AND GRAY (N2)
TWO SEPARATE NEUTRALS SYSTEM
240 / 480VAC 4 WIRE

145 ELECTRICAL DETAILS STRUCTURE MOUNT
LIGHT POLES SEPARATED NEUTRALS SYSTEM — NOT TO SCALE

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 4-JUL-2023 09:01
APPROVED REVISION BY: E.K. LEE APPROVED REVISION DATE: MAR.14-2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

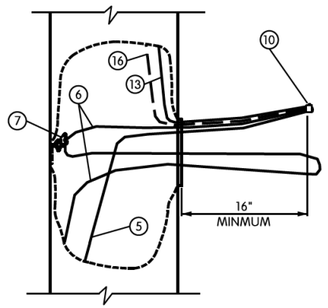
DRAWN BY HG | PLANS CK'D. LT

ELECTRICAL DETAILS MOUNT LIGHT POLES

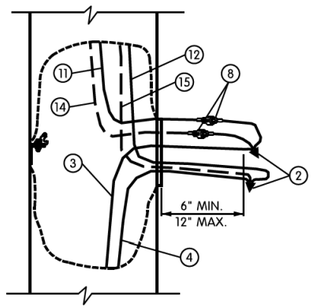
SHEET E73 OF E83
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PLOT DATE: 3/27/2024 PLOT TIME: 5:24:02 PM BATCH PRINT SHEET 74 OF 83

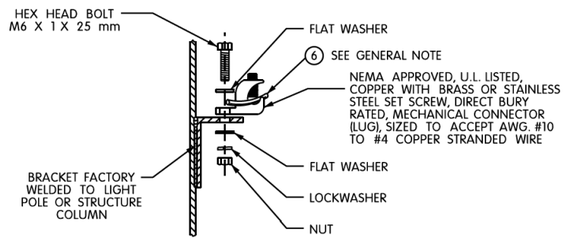


EQUIPMENT GROUNDING CONDUCTOR SLACK

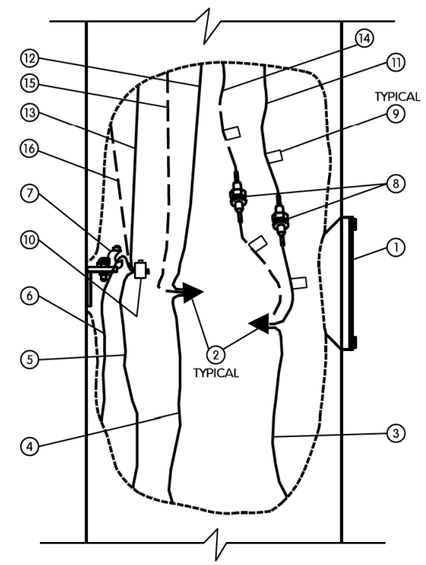


UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



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



CUTAWAY HANDHOLE DETAIL
SEPARATED NEUTRAL SYSTEMS
SINGLE PHASE

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

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



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

WATERPROOF IN-LINE FUSE HOLDER ASSEMBLY

CONDUCTOR COLOR CODES

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

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

GENERAL NOTES

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

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

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

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

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

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 25-JUL-2023 15:39
APPROVED REVISION BY: E.K. LEE APPROVED REVISION DATE: MAR.17-2023

146 ELECTRICAL HANDHOLE WIRING DETAIL NOT TO SCALE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

ELECTRICAL HANDHOLE WIRING DETAIL

SHEET E74 OF E83
246

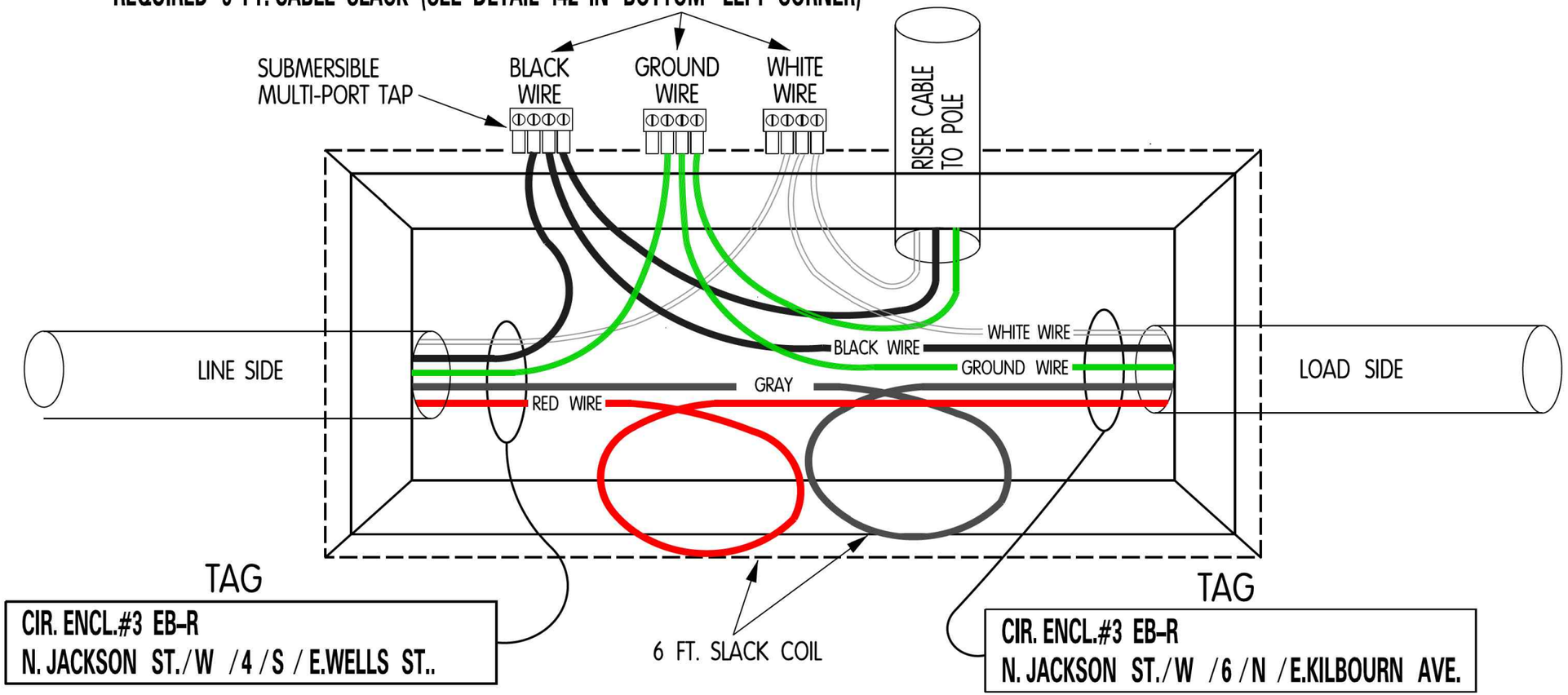
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PLOT DATE: 3/27/2024 PLOT TIME: 5:24:09 PM BATCH PRINT SHEET 75 OF 83

STATE PROJECT NUMBER
2984-26-73

REQUIRED 3 FT. CABLE SLACK (SEE DETAIL 142 IN BOTTOM LEFT CORNER)



TAG

CIR. ENCL.#3 EB-R
N. JACKSON ST./W /4 /S / E.WELLS ST..

TAG

CIR. ENCL.#3 EB-R
N. JACKSON ST./W /6 /N /E.KILBOURN AVE.

TAG DESCRIPTION BREAKDOWN - LINE SIDE

CIRCUIT ID: (CIR. ENCL.#3 EB-R)
LINE SIDE COMING FROM UNIT STREET LIGHT UNIT IS ON: (N. JACKSON ST.)
SIDE OF STREET LIGHT UNIT IS ON: (WEST SIDE)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (COMING FROM UNIT 4)
DIRECTION FROM THE NEAREST CROSSING STREET: (TO THE SOUTH)
NAME OF THE NEAREST CROSSING STREET: (E. WELLS ST.)

TAG DESCRIPTION BREAKDOWN - LOAD SIDE

CIRCUIT ID: (CIR. ENCL.#3 EB-R)
LINE SIDE COMING FROM UNIT STREET LIGHT UNIT IS ON: (N. JACKSON ST.)
SIDE OF STREET LIGHT UNIT IS ON: (WEST SIDE)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (GOING TO UNIT 6)
DIRECTION FROM THE NEAREST CROSSING STREET: (TO THE NORTH)
NAME OF THE NEAREST CROSSING STREET: (E. KILBOURN AVE.)

147 DETAIL
TYPICAL SCHEMATIC AND TAGGING

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-NOV-2023 07:25
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: AUG.14-2023

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

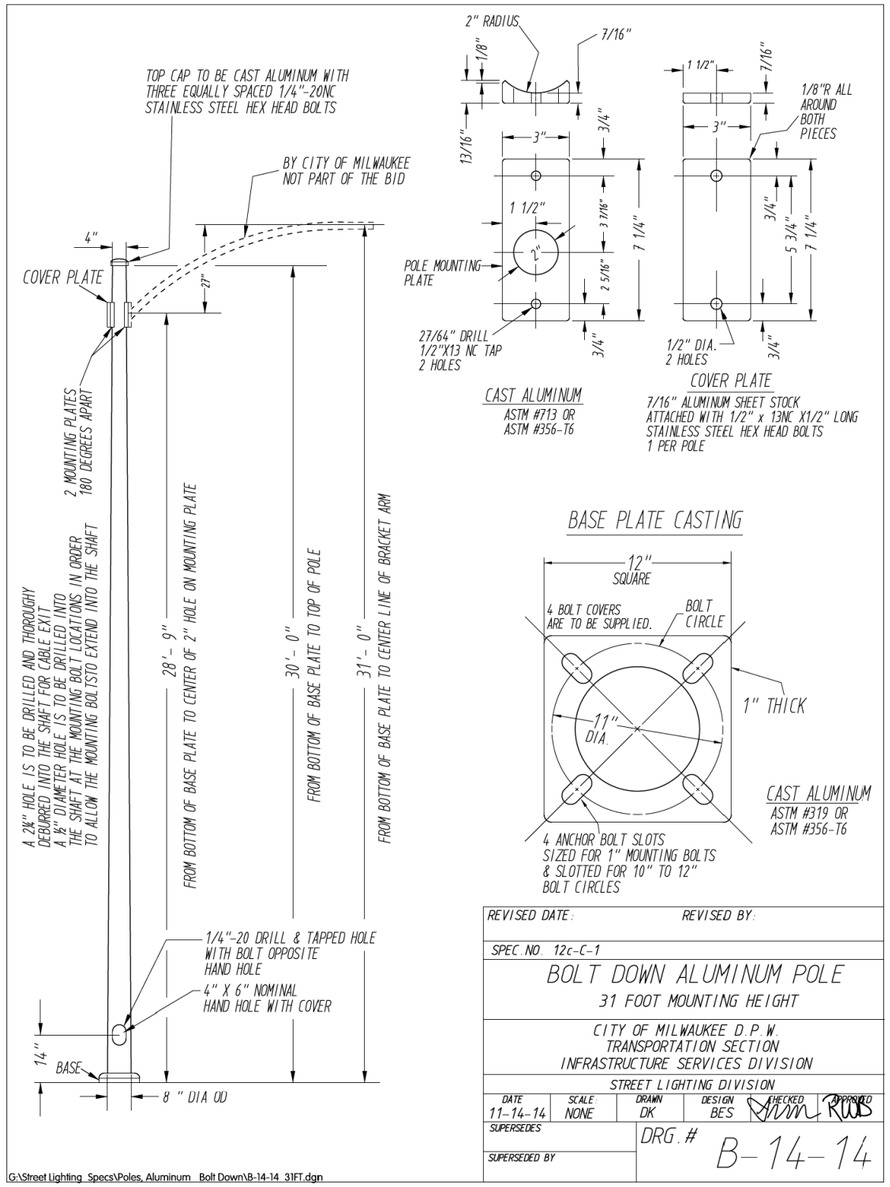
TYPICAL SCHEMATIC AND TAGGING DETAIL

SHEET E75 OF E83
247

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PLOT DATE: 3/27/2024 PLOT TIME: 5:24:15 PM BATCH PRINT SHEET 76 OF 83



REVISED DATE:	REVISED BY:
SPEC. NO. 12c-C-1	

BOLT DOWN ALUMINUM POLE
31 FOOT MOUNTING HEIGHT

CITY OF MILWAUKEE D.P.W.
TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION
STREET LIGHTING DIVISION

DATE	SCALE:	DRAWN	DESIGN	CHECKED	APPROVED
11-14-14	NONE	DK	BES	MM	RWB

SUPERSEDES
SUPERSEDED BY
DRG. # B-14-14

G:\Street Lighting Specs\Poles, Aluminum Bolt Down\B-14-14 31FT.dgn

CITY PROVIDED LIGHT POLE

GENERAL NOTES:

ANCHOR BOLTS:

ANCHOR BOLTS SHALL BE 24" IN LENGTH AND HAVE 3/4" X 10 NC THREADS. EACH ANCHOR BOLT SHALL BE SUPPLIED WITH A DOUBLE NUT, TWO PUNCH WASHERS AND A LOCK WASHER. EACH ANCHOR BOLT SHALL HAVE 55,000 PSI MINIMUM YIELD STRENGTH. THE ANCHOR BOLT (EXCEPT THE BOTTOM 6 INCHES), NUTS AND WASHERS SHALL BE ELECTRO-GALVANIZED PER ASTM A164 (TYPE G.S.). PROVIDE ENLARGED THREADS ON NUTS FOR PROPER FIT AFTER GALVANIZING

POLE FINISH: FOR THE FOUR (4) HARPS

GALVANIZED SURFACE IS TO BE PREPARED TO ACCEPT A FINISH POWDER COAT OF TIGER DRY LACQUER OR EQUIVALENT AS FOLLOWS:

GREEN GLOSS, POLYESTER POWDER COAT, RAL 6009, FIR GREEN. (1 COAT APPLIED ELECTROSTATICALLY 8 MILS DRY FILM)

THE POWDER COATING MUST BE FULLY CURED BEFORE SHIPPING SUPPLIER SHOULD SUBMIT FOR APPROVAL A COLOR SAMPLE AND THE SPECIFICATION DATA FOR THE POLE FINISH PAINT WITH THE BID.

BASE FINISH: FOR THE FOUR (4) HARPS

THE FINISHSHALL CONSIST OF ONE PRIMER COAT (2 TO 3 MILS) USING CITY SPECIFICATION NUMBER 29-A-4, WHITE LACQUER RESISTANT, ESSER S-4196 OR EQUAL. THE BASE CASTING SHALL BE SPECIFIED UPON ORDER AND AS FOLLOWS:

GREEN GLOSS, POLYESTER POWDER COAT, RAL 6009, FIR GREEN. (2 COATS APPLIED ELECTROSTATICALLY 2 TO 2.5 MILS DRY FILM)

SUPPLIER SHOULD SUBMIT FOR APPROVAL A COLOR SAMPLE AND THE SPECIFICATION DATA FOR THE BASE FINISH PAINT WITH THE BID.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

BOLT DOWN ALUMINUM POLE DETAIL

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PLOT DATE: 3/27/2024 PLOT TIME: 5:24:21 PM BATCH PRINT SHEET 77 OF 83

valmont STRUCTURES

TRANSFORMER BASE TB2-17/ M104
Aluminum

Job Name: _____ Client Name: _____
Job Location - City: _____ State: _____ Created By: _____ Date: _____
Product: ---- Quote: _____ Customer Approval: _____ Date: _____

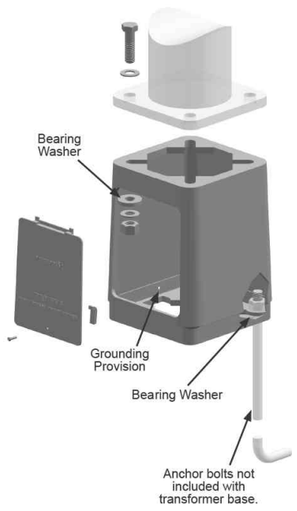
SPECIFICATIONS

Transformer Base - The aluminum transformer base is accepted by the Federal Highway Administration (FHWA) as satisfying up to the LTS-6 edition of the American Association of State Highway and Transportation Officials' (AASHTO) breakaway requirements within the range of conditions tested. This base has specific loading restriction based on full scale testing performed by Valmont per the criteria set forth in the 2009 Fifth Edition of the AASHTO Standard Specification for the Supports for Highway Signs, Luminaries and Traffic Signals. Contact Valmont for loading restrictions.

Access Door - An aluminum access door and grounding provision is provided. The door opening is 11.00" tall, 8.50" wide at the top, and 9.00" wide at the bottom. A hinged or plastic door is available upon request.

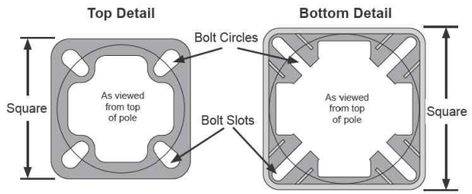
Hardware - Connecting bolts, flat washers, bearing washers and hex nuts are provided per base assembly. All structural fasteners are galvanized high strength carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

Finish - The satin finish is provided when ordering with an aluminum structure. A mill finish is provided when ordering with a steel structure. Additional finishes available upon request.



DETAILS

TOP PLATE					BOTTOM PLATE							
BOLT CIRCLE					BOLT CIRCLE							
DIA (IN)	± (IN)	MAX BOLT DIA (IN)	SQUARE (IN)	THK (IN)	DIA (IN)	± (IN)	MAX BOLT DIA (IN)	SQUARE (IN)	THK (IN)	HEIGHT (IN)	QTY OF ACCESS DOORS	MODEL NUMBER
11.00	1.00	1.00	12.04	0.700	11.00	1.00	1.00	12.32	0.620	17.00	1	TB2-17



INSTALLATION INSTRUCTIONS
1. Level transformer base with shims only. DO NOT USE LEVELING NUTS.
2. To approach optimum static loads, use the largest possible bolt circles and hardware supplied with the transformer base.

PRODUCT ORDERING CODES

MODEL NUMBER	FINISH	COLOR	OPTIONS
TB2-17	-- = Satin / Mill FP = Finish Paint	-- = Satin / Mill WH = White BK = Black SM = Silver Metallic SL = Silver LG = Light Gray MB = Medium Bronze CB = Bronze DB = Dark Bronze SC = Special Color (Contact Factory)	

GENERAL NOTES:

1. PROVIDE STAINLESS STEEL STRUCTURAL FASTENERS.
2. TRANSFORMER BASE SHALL HAVE A BLACK FINISH PAINT.

SPC7368 09/15 valmontstructures.com carries the most current spec information and supersedes these guidelines.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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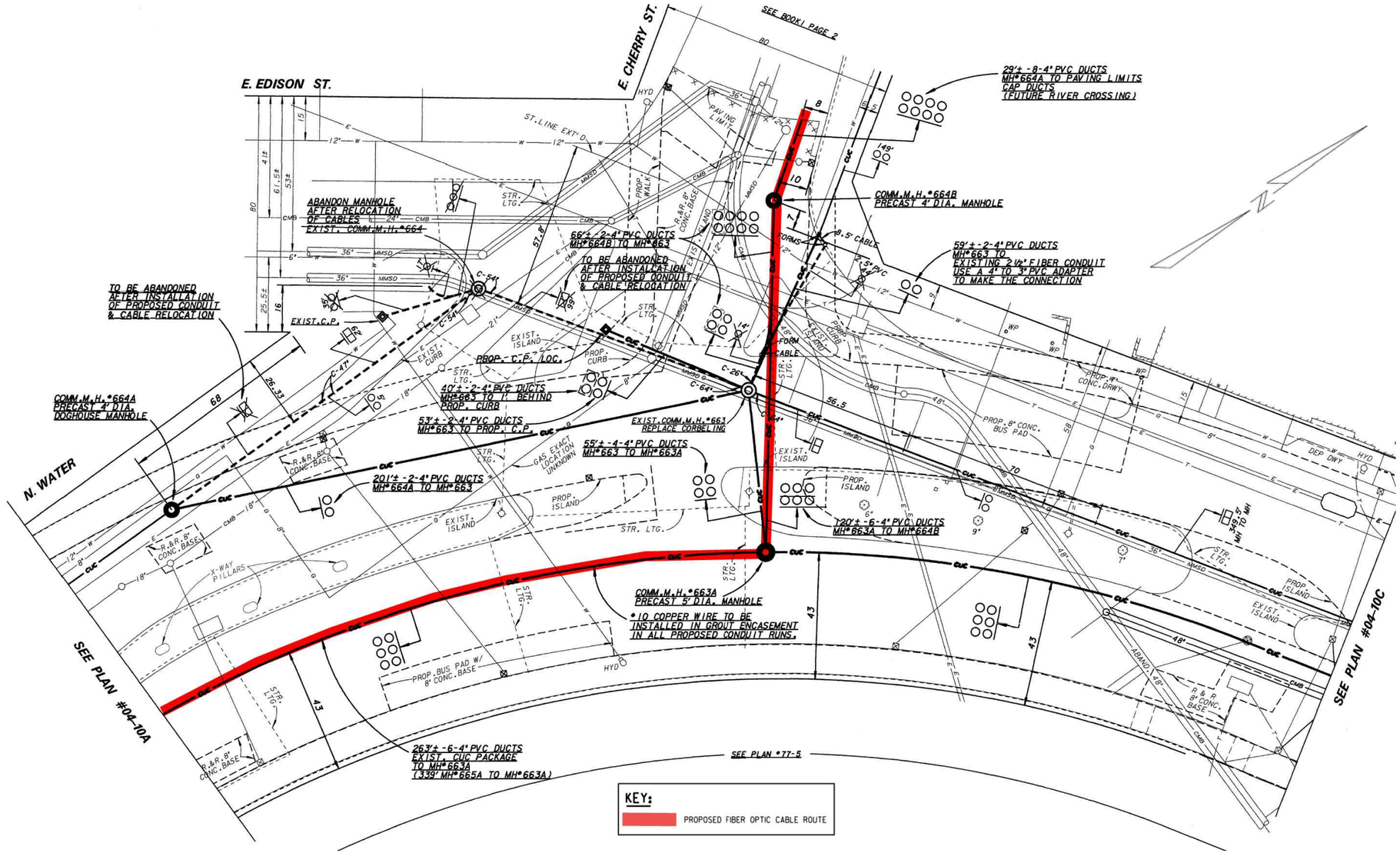
TRANSFORMER BASE DETAIL

SHEET E77 OF E83
249

8

STATE PROJECT NUMBER

2984-26-73



NOTE:

PROVIDE FIBER OPTIC CABLE THRU EXISTING COMMUNICATIONS NETWORK AS SHOWN.
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CUC
BRIDGE APPROACH
(SHEET 1 OF 4)

SHEET E78 OF E83
250

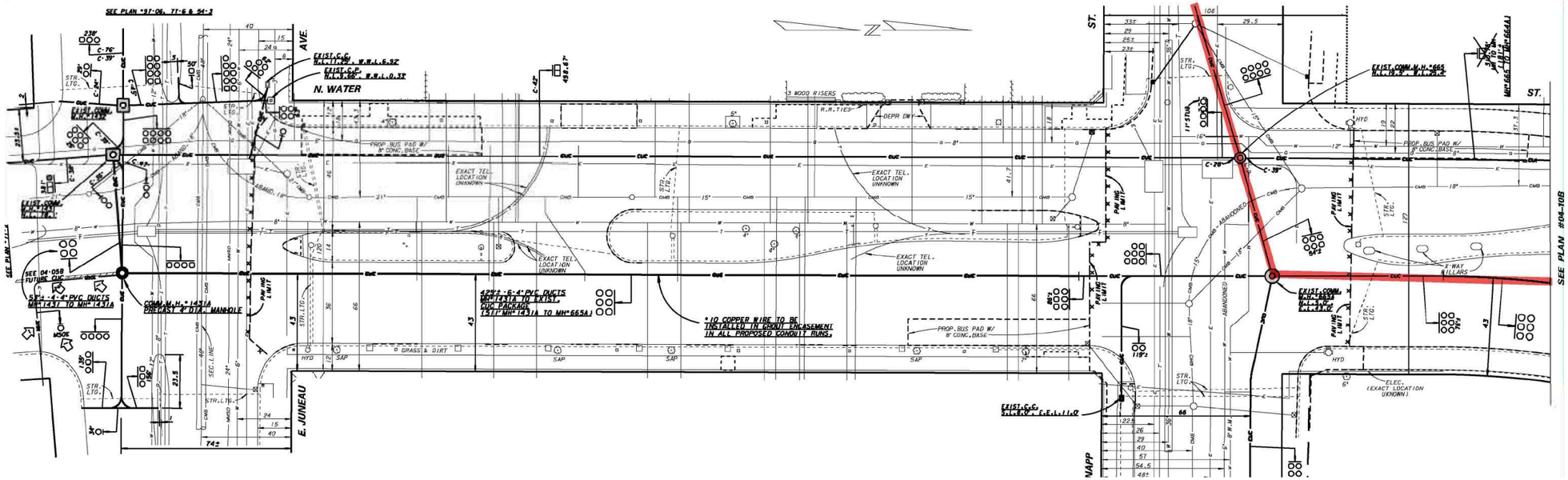
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8

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PLOT DATE: 3/27/2024 PLOT TIME: 5:24:34 PM
BATCH PRINT SHEET 79 OF 83

STATE PROJECT NUMBER
2984-26-73



NOTE:

PROVIDE FIBER OPTIC CABLE THRU EXISTING COMMUNICATIONS NETWORK AS SHOWN.
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

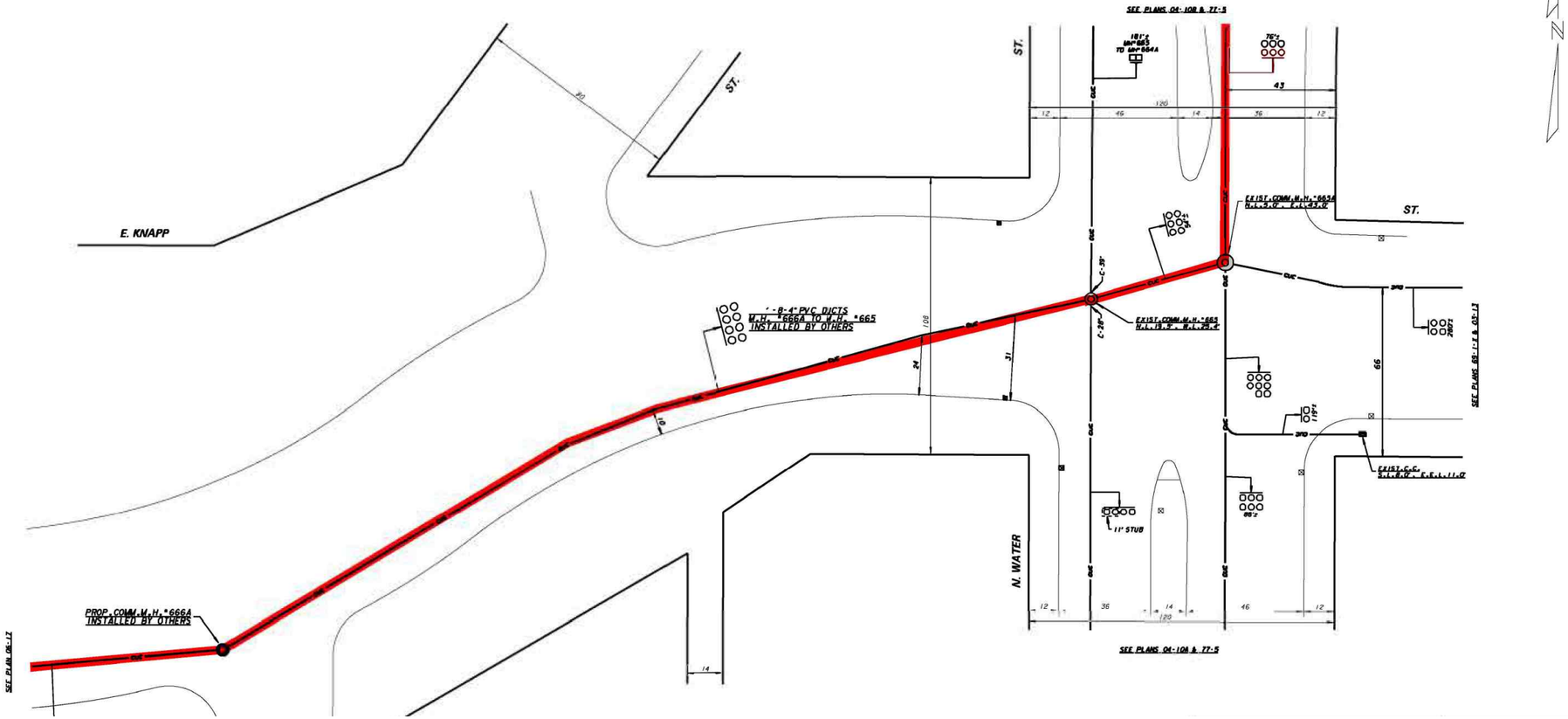
STRUCTURE P-40-0864

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CUC
BRIDGE APPROACH
(SHEET 2 OF 4)

SHEET E79 OF E83
251

CONDUIT INSTALLED IN CONJUNCTION WITH PARK EAST FREEWAY CONSTRUCTION PROJECT 2002



NOTE:

PROVIDE FIBER OPTIC CABLE THRU EXISTING COMMUNICATIONS NETWORK AS SHOWN.
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

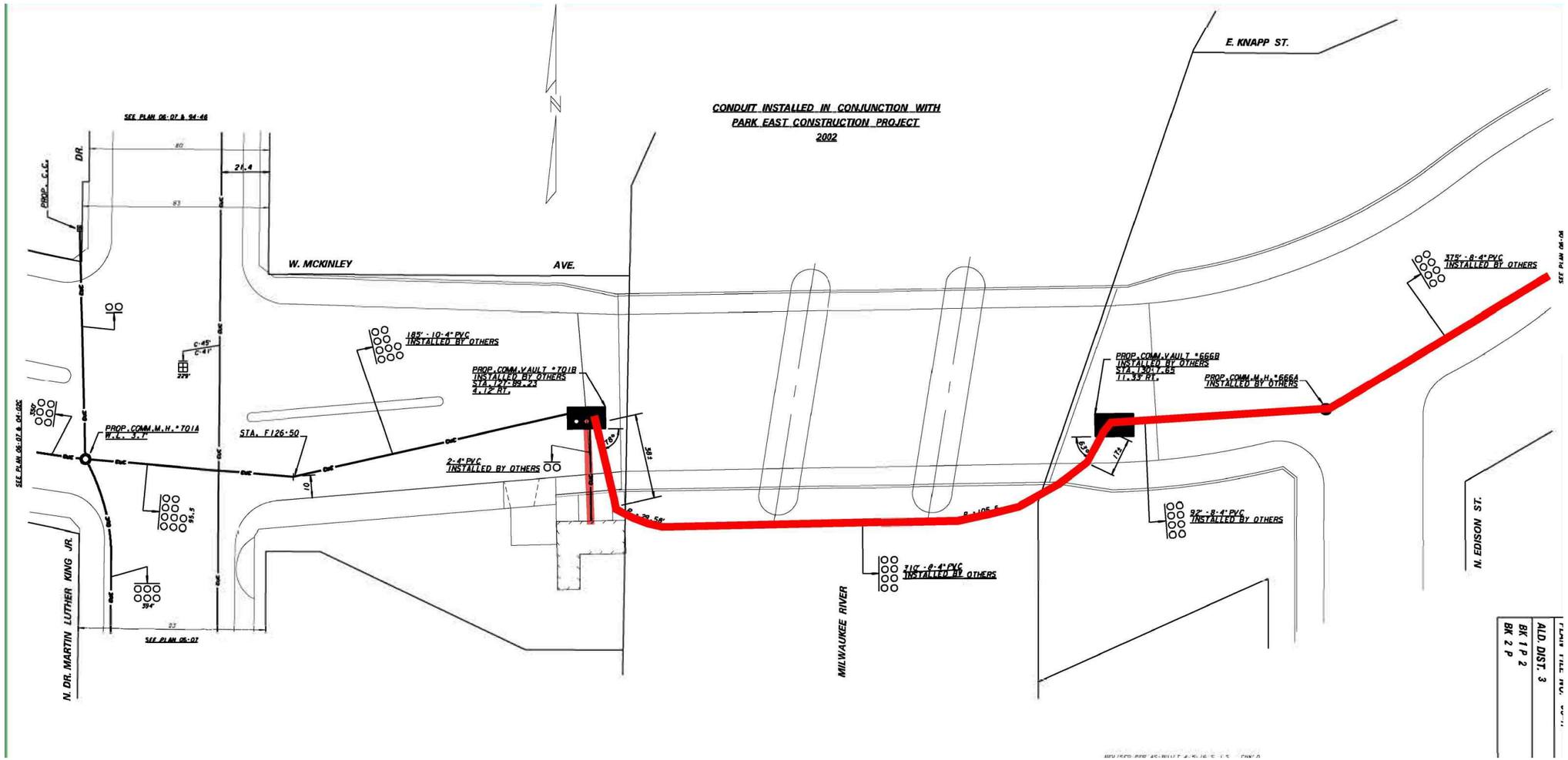
CUC
BRIDGE APPROACH
(SHEET 3 OF 4)

SHEET E80 OF E83
252

8

8

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NOTE:

PROVIDE FIBER OPTIC CABLE THRU EXISTING COMMUNICATIONS NETWORK AS SHOWN.
REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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CUC
BRIDGE APPROACH
(SHEET 4 OF 4)

SHEET E81 OF E83
253

8

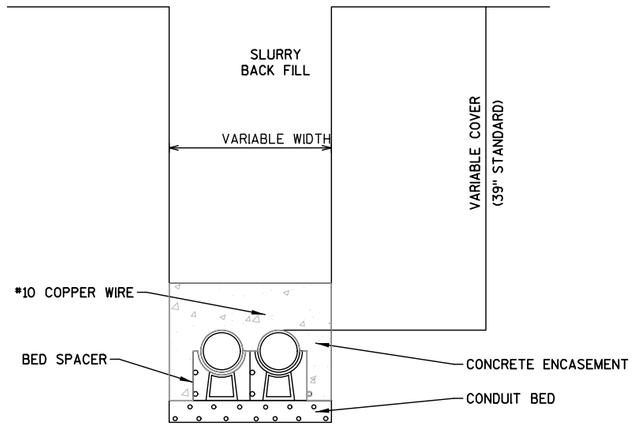
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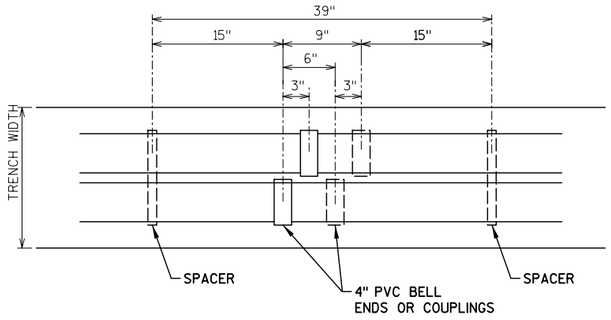
STATE PROJECT NUMBER

2984-26-73



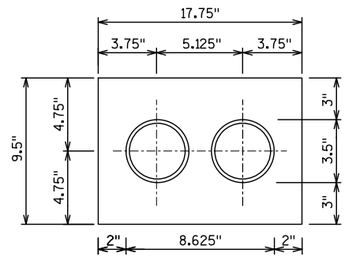
CROSS SECTION VIEW TYP.

N.T.S.



PLAN VIEW

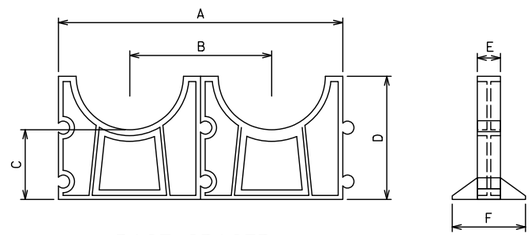
N.T.S.



CONCRETE ENCASED
CROSS SECTION TYP.

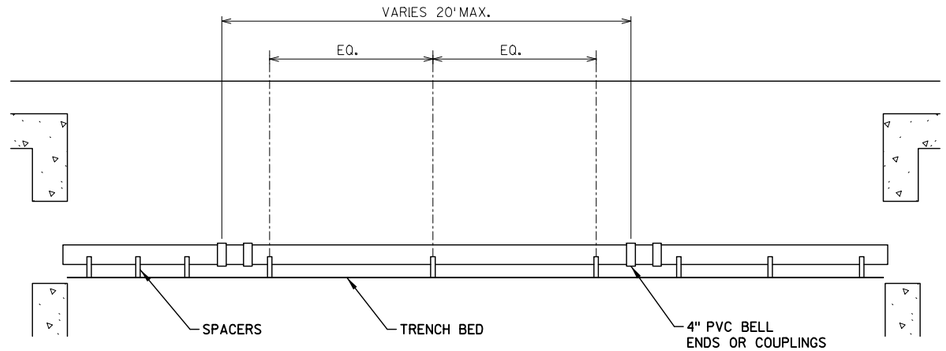
N.T.S.

COND.	3"	4"
A	10 1/4"	12 1/4"
B	5.13"	6.13"
C	3"	3"
D	4 3/4"	5.31"
E	1"	1"
F	3"	3"



BASE SPACER

N.T.S.



INSTALLATION VIEW

N.T.S.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

DRAWN BY HG | PLANS CK'D. LT

CUC
APPROACH DETAILS

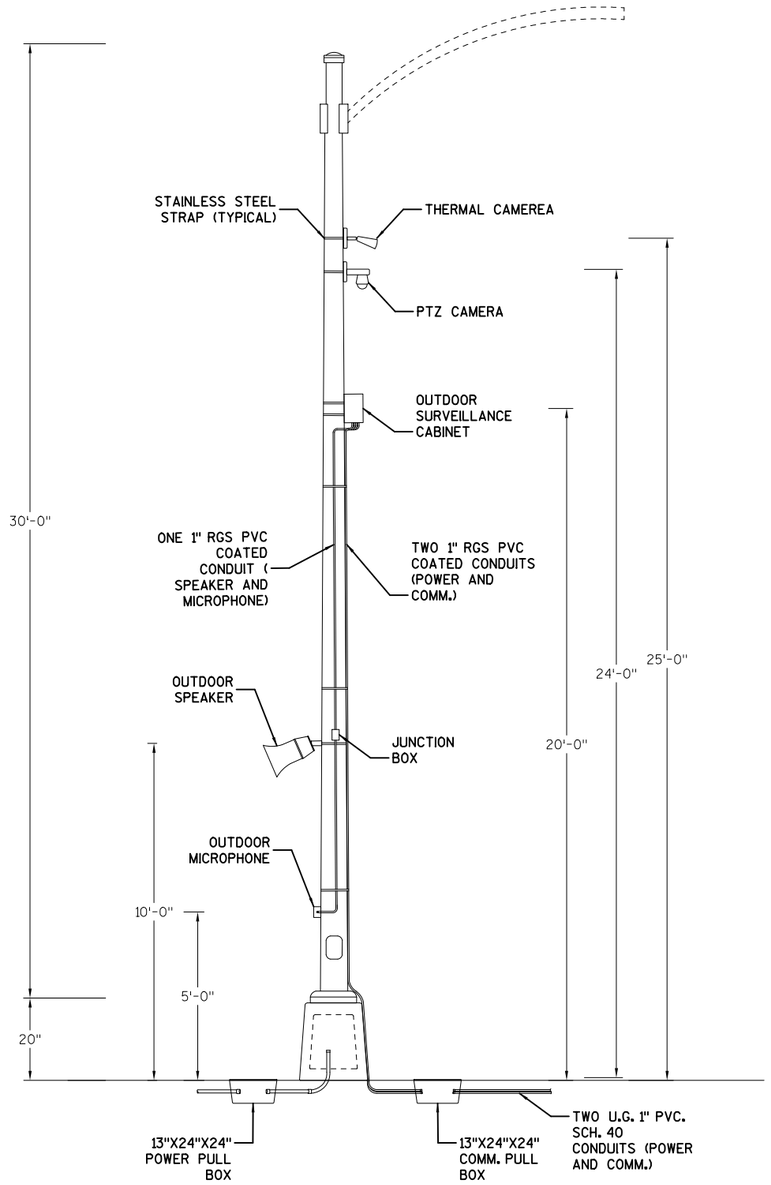
SHEET E82 OF E83
254

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PLOT DATE: 3/27/2024 PLOT TIME: 5:24:58 PM BATCH PRINT SHEET 83 OF 83

8

STATE PROJECT NUMBER

2984-26-73



COMMUNICATION HARDWARE POLE MOUNTED
N.T.S.

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL HARDWARE REQUIRED TO MOUNT EQUIPMENT ON ROADWAY LIGHT POLE AS INDICATED.
2. COORDINATE MOUNTING REQUIREMENTS WITH CCTV EQUIPMENT SUPPLIER.
3. EQUIPMENT ELEVATION HAS BEEN ADDED IN COORDINATION WITH EQUIPMENT TYPE. FIELD ADJUST ELEVATIONS AS NEEDED AND ADJUCT CAREMAS ANGLE VIEW IN COORDINATION WITH CCTV MONITORING VIEW AT THE CONTROL HOUSE.
4. REFER TO SHEETS E6, E7, E15 AND E50 FOR CCTV EQUIPMENT LOCATIONS AND COMMUNICATIONS DIAGRAM.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE P-40-0864

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COMMUNICATION HARDWARE POLE MOUNTED

SHEET E83 OF E83
255

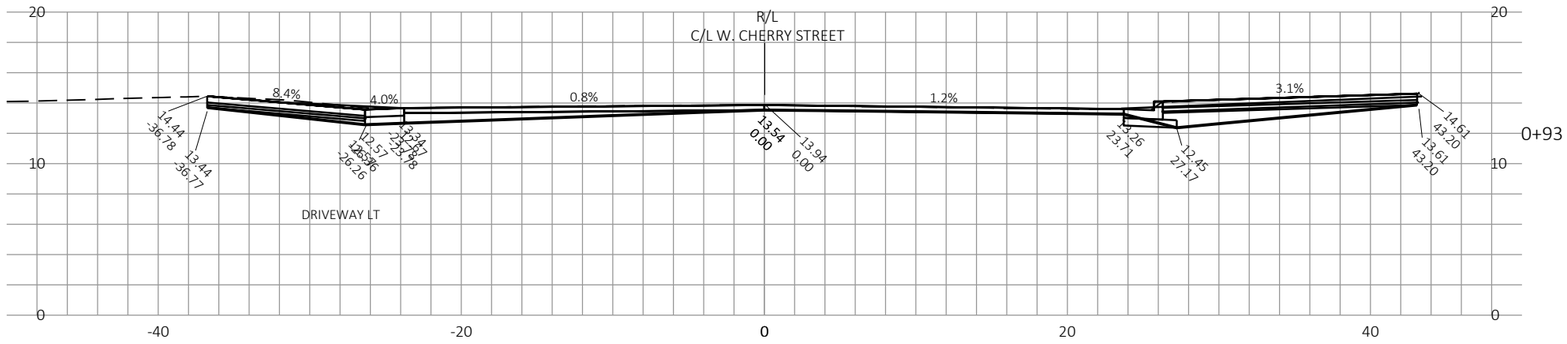
CHERRY STREET - WEST APPROACH

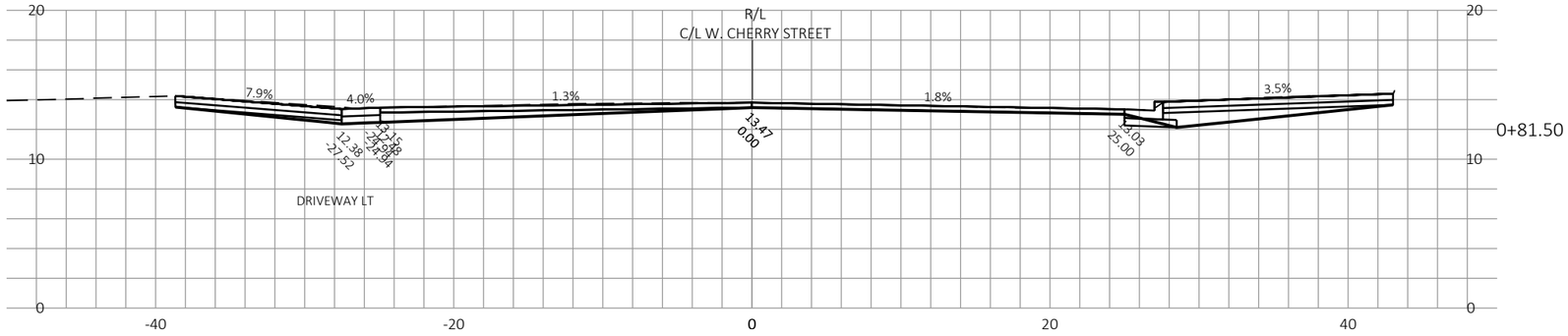
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
0+81.35	81.35	0.00	60.58	30	0.00	0	0	0	0	0	0
1+00.00	100.00	18.65	59.13	29	0.00	41	20	0	41	0	21
1+20.53	120.53	20.53	61.56	28	0.00	46	22	0	87	0	45
1+20.57	120.57	0.04	61.60	56	0.00	0	0	0	87	0	45
1+35.57	135.57	15.00	19.58	51	0.00	23	30	0	110	0	38

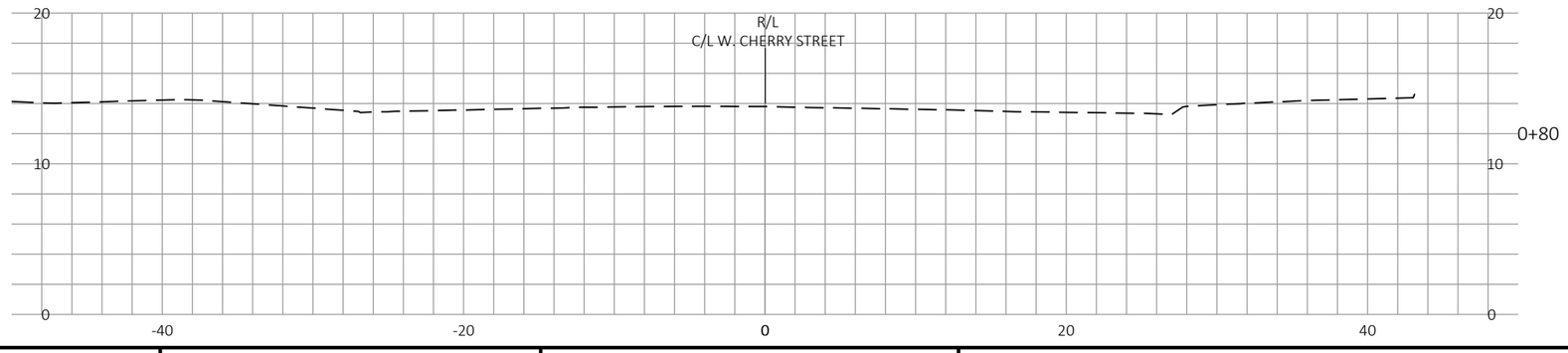
CHERRY STREET - EAST APPROACH

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
3+50.00	350.00	0.00	0.00	53	0.00	0	0	0	0	0	0
3+65.16	365.16	15.16	44.99	56	0.00	13	31	0	13	0	-18
3+65.17	365.17	0.01	45.01	28	0.00	0	0	0	13	0	-18
3+75.00	375.00	9.83	58.89	30	0.02	19	11	0	32	0	-10
4+00.00	400.00	25.00	50.44	29	0.02	51	27	0	83	0	14

Note 1: Mass Ordinate = Cut - Fill









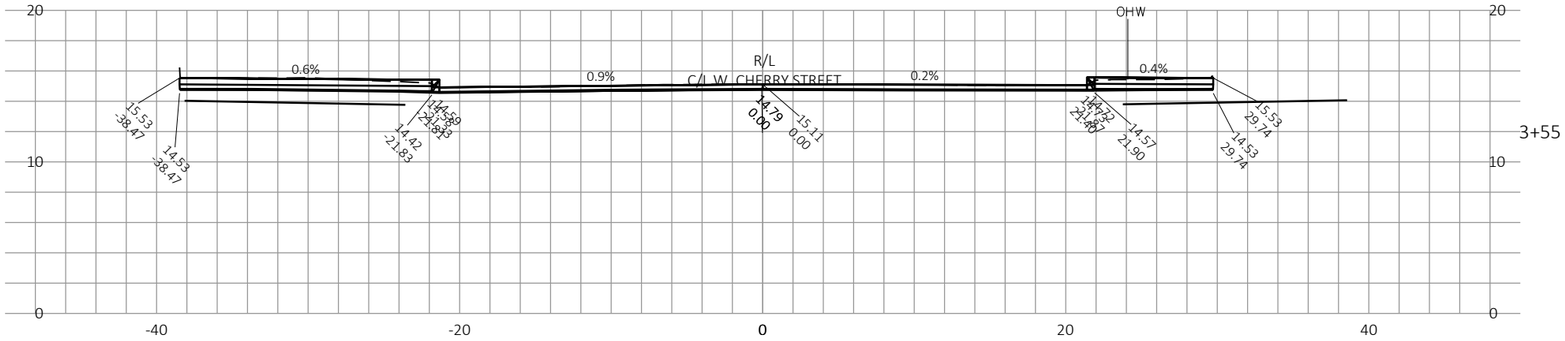
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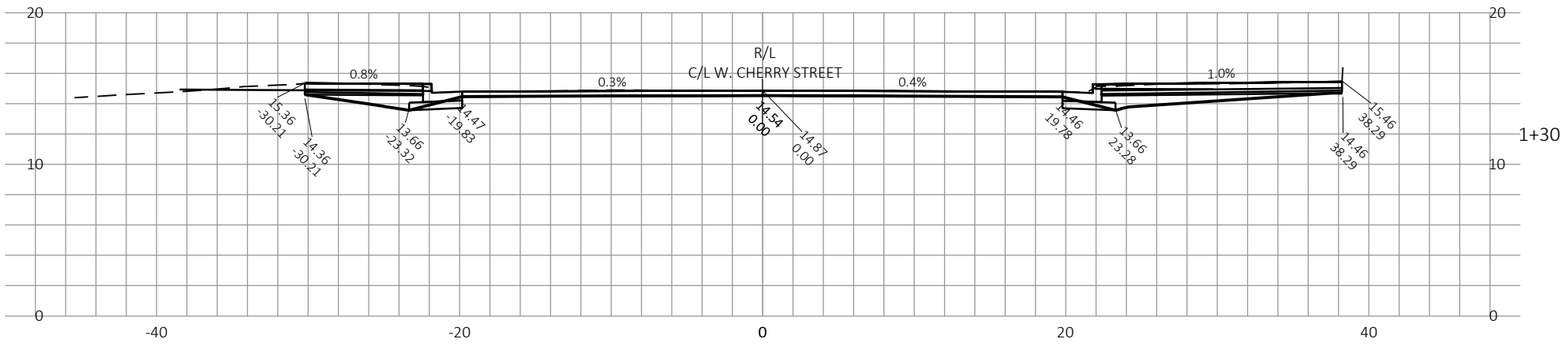
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PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	CROSS SECTIONS: CHERRY STREET	SHEET 257	E

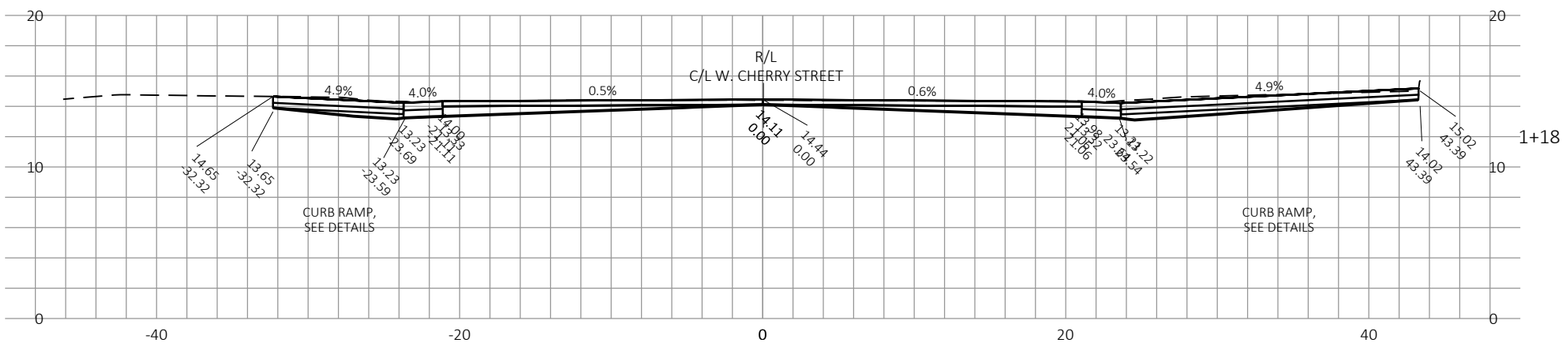
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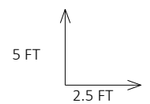
PLOT DATE : 2/23/2024 11:13 AM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:2 FT VERT.





STRUCTURE
STA. 1+35.55 - STA. 3+50.17





9

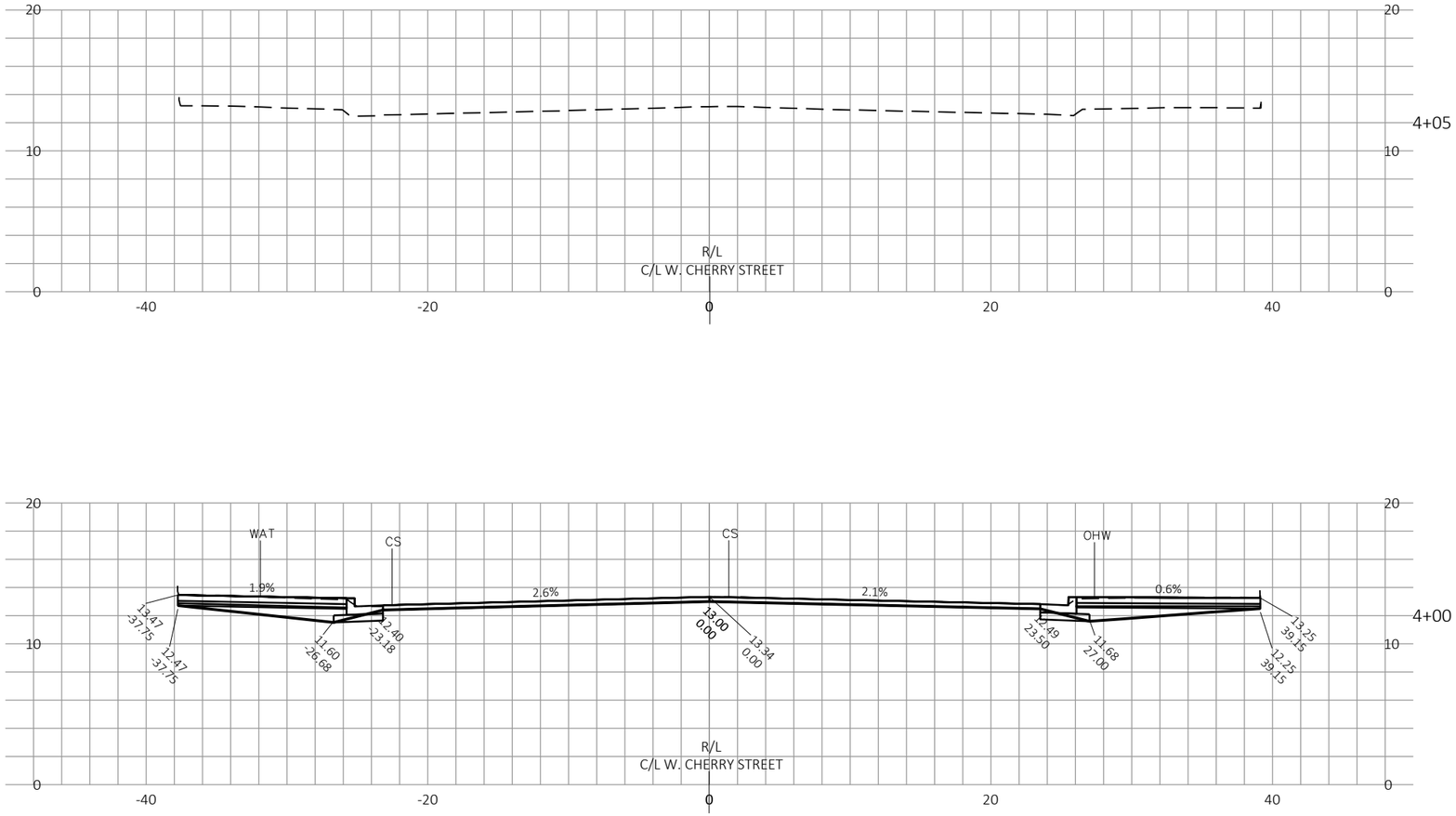
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PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	CROSS SECTIONS: CHERRY STREET	SHEET 258	E

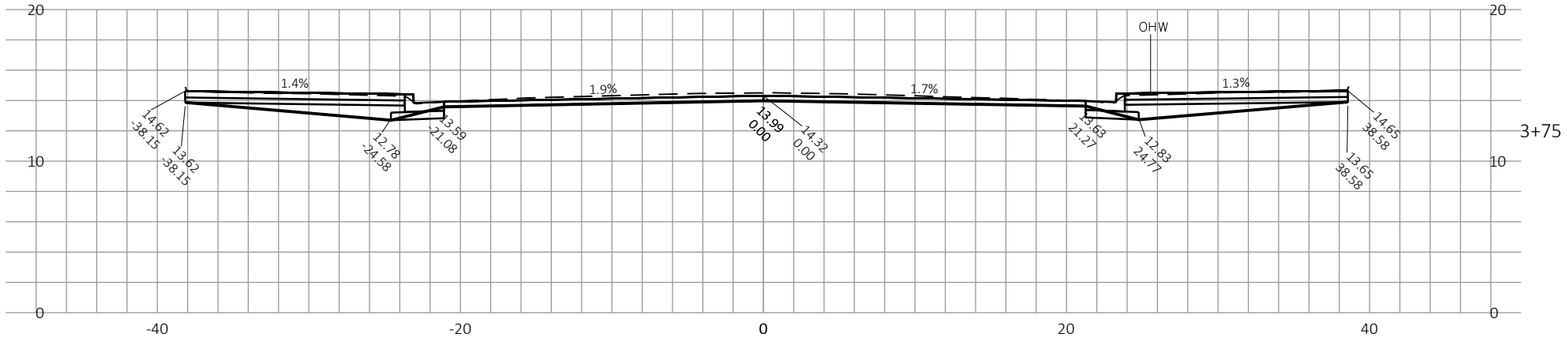
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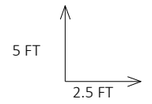
PLOT DATE : 2/23/2024 11:13 AM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:2 FT VERT.

WISDOT/CADDS SHEET 49



XX





9

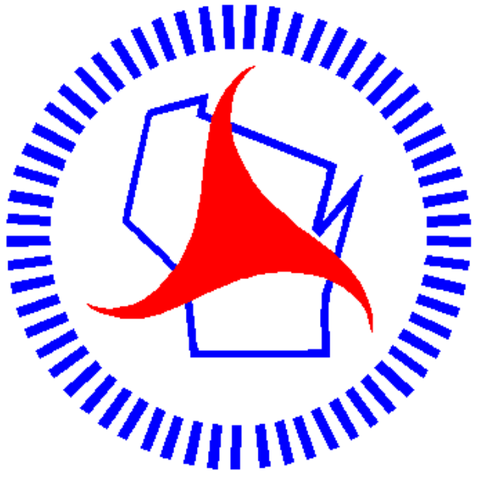
9

PROJECT NO: 2984-26-73	HWY: LOC STR	COUNTY: MILWAUKEE	CROSS SECTIONS: CHERRY STREET	SHEET 259	E

FILE NAME : C:\PWWORKING\USWI\DMS02004\090201-XS.DWG
LAYOUT NAME - 090201-03

PLOT DATE : 2/23/2024 11:13 AM PLOT BY : LANCELLE, JESSICA PLOT NAME : PLOT SCALE : 1 IN:5 FT HORZ. / 1 IN:2 FT VERT.

WISDOT/CADDS SHEET 49



Wisconsin Department of Transportation

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