OS-2 (11-08)

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DEPARTMENT OF TRANSPORTATION
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SECRETARY'S BUREAU

November 27, 2019

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
PO Box 3265
Harrisburg, PA 17105-3265

Re: Allegheny County
Glenfield Borough, Neville Township, Robinson Township
SR 0079, Section A61
DOT Nos. 584 829 W, 507 463 C
PUC No. A-2019-3011548

Dear Secretary Chiavetta,

In accordance with ordering paragraph number 2 of the PUC Secretarial Letter at Docket No. A-2019-3011548 dated September 30, 2019, please find attached for your approval one hard copy of the signed title sheet and a CD containing a copy of the final signed Structure Plans for State Route 0079, Section A61 in Allegheny County, consisting of sheets 1 through 164 of 164.

The Department of Transportation hereby avers that a set of the aforesaid final Structure Plans (S-38036) are being sent to the parties of record in accordance with the attached Certificate of Service.

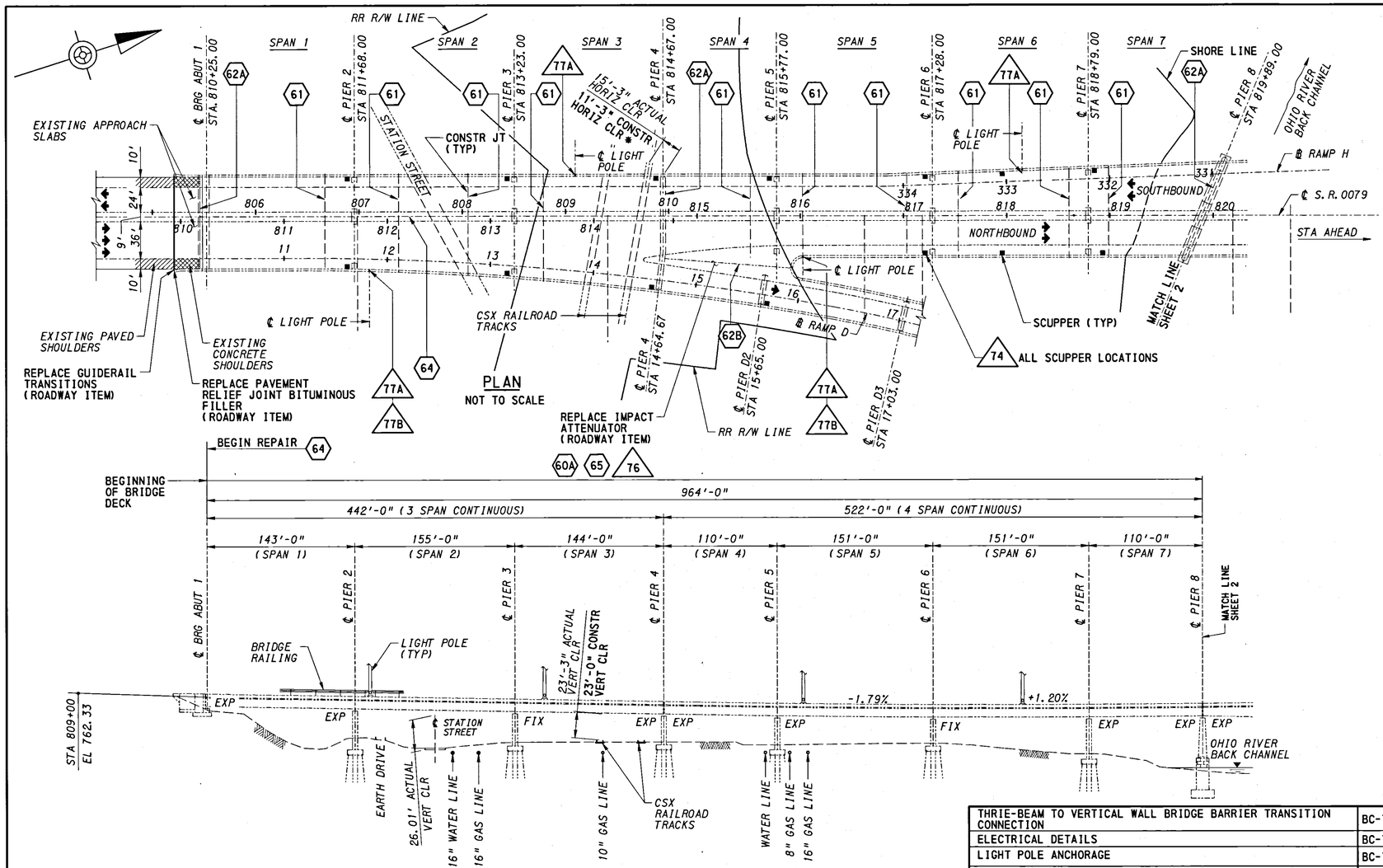
We respectfully request the approval of these plans. Should you have any questions or concerns, please feel free to contact Gregory J. Vaughn at (717) 772 - 3079.

Sincerely,

Gregory J. Vaughn
Grade Crossing Engineer
Right-of-Way and Utilities Section
Department of Transportation

Attachments

cc: Parties of Record
Daniel D. Leonard, P.E., Acting Chief, Right-of-Way and Utilities Section, 7th Floor, CKB
Gina M. D'Alfonso, Senior Counsel in Charge, Office of Chief Counsel, 9th Floor, CKB
Ronald J. Hull, P.E., Supervisor, Rail Safety Engineering Section, PUC, 3rd Floor, CKB



SCOPE OF WORK

SUBSTRUCTURE WORK INCLUDES:

- CONCRETE REPAIRS OF ABUTMENTS AND PIERS.
- EPOXY INJECTION CRACK SEALING OF ABUTMENTS AND PIERS.
- CLEAN PIER CAPS AND BEARING SEATS.
- POINTING MORTAR JOINTS AT RIVER PIERS.
- REPLACING MISSING GRANITE STONES AT RIVER PIERS.

SUPERSTRUCTURE WORK INCLUDES:

- CLEAN AND PAINT ENTIRE OUTSIDE SURFACES OF SUPERSTRUCTURE.
- ZONE PAINT AREAS INSIDE TIE-GIRDERS, FLOORBEAMS, ARCH RIBS, AND UPPER LATERAL BRACING.
- REPLACE ALL ROCKER EXPANSION BEARINGS WITH MULTI-ROTATIONAL BEARINGS.
- RETROFIT FATIGUE AND BRITTLE FRACTURE DETAILS ASSOCIATED WITH GIRDERS, FLOORBEAMS, AND STRINGERS.
- REMOVE EXTRANEOUS WELDMENTS AND CRACKED TACK WELDS. REPAIR CRACKED WELDS.
- REPAIR DETERIORATED AREAS OF STEEL MEMBERS WITH WELDED SCAB PLATES, BOLTED PLATES OR ANGLES, AND REPLACING MEMBER ELEMENTS.
- ADD SUSPENDER CABLE SLEEVE TYPE SEIZING AT SPECIFIC LOCATIONS.
- REPLACE LOOSE, SHEARED, AND DETERIORATED BOLTS.
- REPAIR/REPLACE SIGN SUPPORT ACHORAGES.
- REPAIR TIE-GIRDER ACCESS HATCHES.
- REPLACE OR REPAIR ARCH AND TIE-GIRDER ACCESS HATCH TYPE COVERS.
- REPAIR INSPECTION WALKWAY.
- DRILL DRAIN HOLES AND INSTALL BIRD SCREENS IN TIE-GIRDER, ARCH RIB, AND UPPER LATERAL BRACING.

BRIDGE DECK WORK INCLUDES:

- SEAL CONCRETE BRIDGE DECK WITH HIGH WOLECULAR WEIGHT METHACRYLATE (HWWM) PENETRATING SEALER.
- REPLACE LATEX MODIFIED CONCRETE WEARING SURFACE IN PORTIONS OF SPANS 12 THROUGH 20.
- PERFORM TYPE 2 AND 3 CONCRETE REPAIRS ON BRIDGE DECK.
- PERFORM CONCRETE REPAIRS TO BRIDGE AND MEDIAN BARRIERS.
- PERFORM REPAIRS TO BRIDGE BARRIER TUBULAR RAIL.
- REPLACE EXISTING STRIP SEALS AT ALL STRIP SEAL AND MODULAR EXPANSION DAMS.
- REPLACE STEEL PLATE TOOTH DAM DRAINAGE TROUGH.
- REPAIR EXPANSION DAM HOOD PLATES.
- REPLACE MEDIAN BARRIER LONGITUDINAL JOINT SEAL.
- BRIDGE AND MEDIAN BARRIER EPOXY INJECTION CRACK SEALING.

MISCELLANEOUS WORK INCLUDES:

- REPAIR DOWNSPOUTS.
- CLEAN AND FLUSH SCUPPERS AND DOWNSPOUTS.
- CLEAN, FLUSH, VIDEO, AND REPAIR UNDERGROUND DRAINAGE SYSTEM.
- CLEAN AND FLUSH BRIDGE DECK.
- REPAIR ROADWAY LIGHT POLES.
- REPAIR ELECTRICAL CONDUIT.
- REPAIR SIGN STRUCTURES.
- INSTALL NEW SIGNS ON SIGN STRUCTURES.
- REPLACE APPROACH GUIDE RAIL TRANSITIONS.
- REPLACE PAVEMENT RELIEF JOINT BITUMINOUS FILLER.
- REPLACE TRAFFIC ATTENUATORS IN GORE AREAS.

NOTES

- FOR GENERAL LEGEND SEE SHEET 7
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 AND 7
- FOR TYPICAL SECTIONS SEE ORIGINAL DESIGN DRAWINGS

LEGEND

* HORIZONTAL CLEARANCE DURING CONSTRUCTION FOR PIER CONCRETE REPAIR AND BEARING JACKING ONLY. FOR PIER REPAIR, MAINTAIN CONTINUOUS REPAIR OPERATIONS UNTIL COMPLETE. FOR JACKING OPERATION SEE SHEET 137. COORDINATE WITH CSXT PER SPECIAL PROVISIONS

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

PREPARED BY:

SAI Consulting Engineers
1350 Penn Avenue, Suite 300, Pittsburgh, PA 15222-4211

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A MILLER ENGINEER PE 030827 E

REG. PROF. ENGR. PENNA.

DATE: 11/7/2019

DESCRIPTION	DWG. NO.	APP. DATE
THRIE-BEAM TO VERTICAL WALL BRIDGE BARRIER TRANSITION CONNECTION	BC-703M	08-04-2017
ELECTRICAL DETAILS	BC-721M	09-30-2016
LIGHT POLE ANCHORAGE	BC-722M	09-30-2016
ANCHOR SYSTEMS	BC-734M	01-31-2019
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	01-31-2019
BRIDGE BARRIER TO GUIDE RAIL TRANSITION	BC-739M	01-31-2019
OVERHEAD SIGN STRUCTURES-CANTILEVER AND CENTER-MOUNT STRUCTURES STRUT LENGTH UP TO 40'	BC-741M	08-04-2017
OVERHEARD SIGN STRUCTURES - 2 POST AND 4 POST TRI-CHORD TRUSS SPANS FROM 60' TO 240'	BC-744M	08-04-2017
BRIDGE DRAINAGE	BC-751M	01-31-2019
CONCRETE DECK SLAB DETAILS	BC-752M	09-30-2016
STEEL GIRDER DETAILS	BC-753M	01-31-2019
STEEL DIAPHRAGMS FOR STEEL BEAM/GIRDER STRUCTURES (STRAIGHT GIRDERS ONLY)	BC-754M	01-31-2019
HIGH LOAD MULTI-ROTATIONAL POT BEARINGS	BC-756M	09-30-2016
TOOTH EXPANSION DAM FOR PRESTRESSED CONCRETE & STEEL BEAM BRIDGES	BC-762M	01-31-2019
PERFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	01-31-2019
NEOPRENEE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	01-31-2019
REINFORCED CONCRETE REPAIR	BC-783M	01-31-2019
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	01-31-2019
BRIDGE APPROACH SLABS	RC-23M	02-08-2019
PAVEMENT RELIEF JOINT	RC-24M	04-29-2019
SHOULDERS	RC-25M	02-08-2019
SUBSURFACE DRAINS	RC-30M	02-08-2019
ENDWALLS	RC-31M	06-01-2010
EXTRUDED ALUMINUM CHANNEL SIGNS	TC-8701E	06-13-2013

SUPPLEMENTAL DRAWINGS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

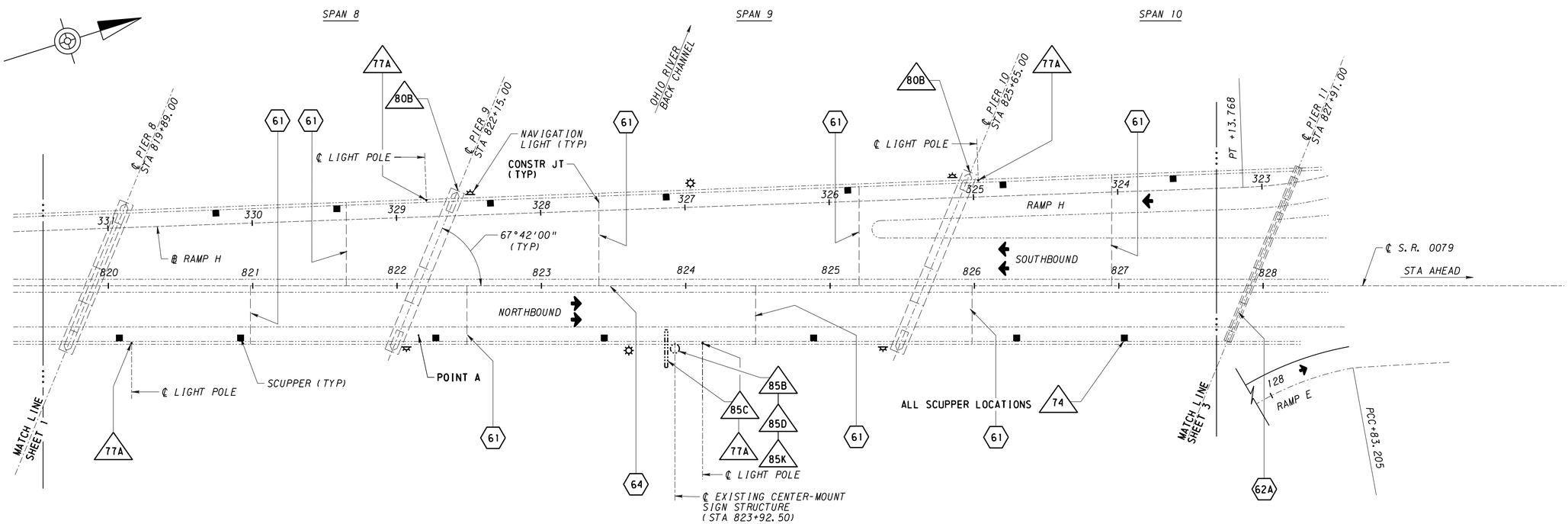
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

GENERAL PLAN AND ELEVATION - SPANS 1-7

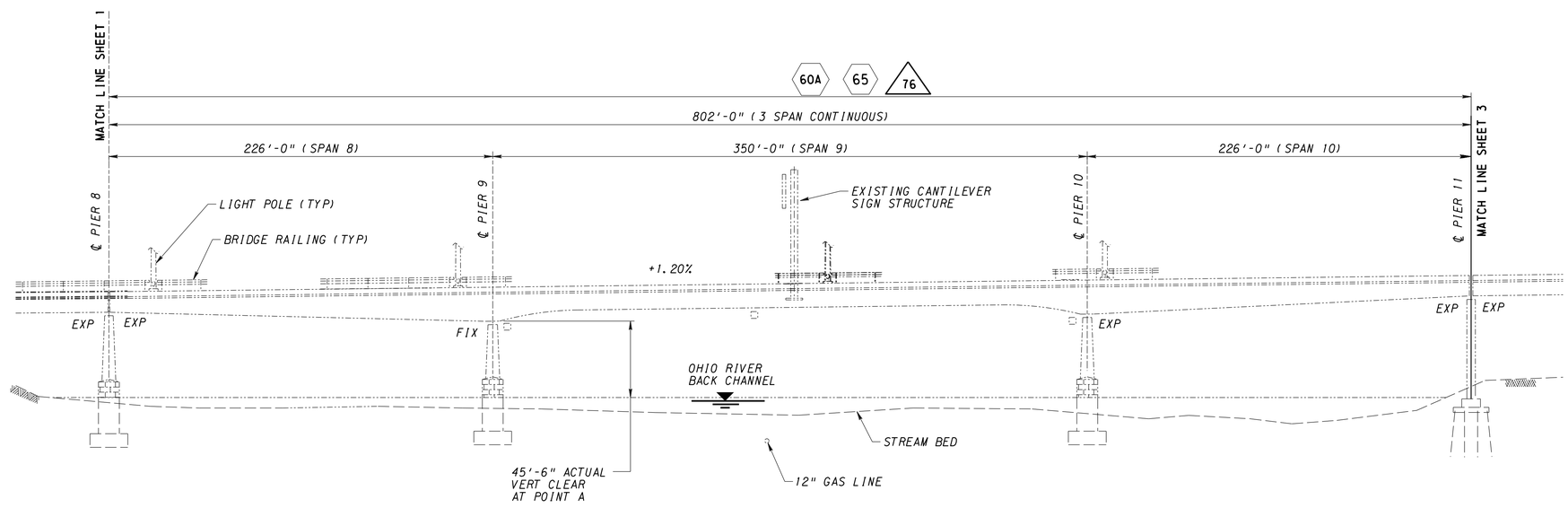
RECOMMENDED NOVEMBER 7, 2019
James D. Rungo
DISTRICT BRIDGE ENGINEER

SHEET 1 OF 164

S - 38036



PLAN
NOT TO SCALE



ELEVATION
NOT TO SCALE

NOTE

- FOR NOTES SEE SHEET 1
- FOR GENERAL LEGEND SEE SHEET 7

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

GENERAL PLAN AND ELEVATION - SPANS 8-10

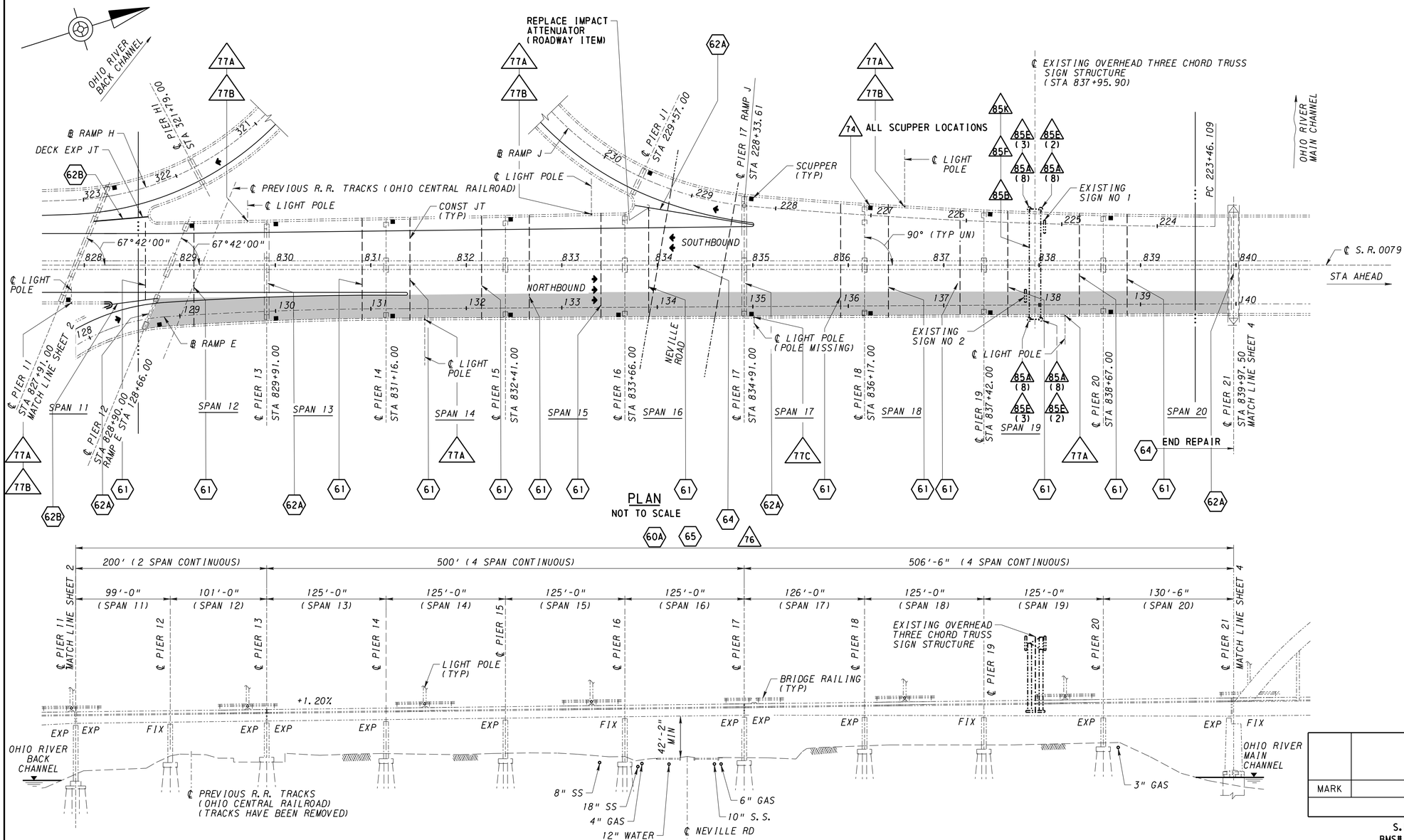
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 2 OF 164

S - 38036

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DRAWN BY	MEG
CHECKED BY	DAM



PLAN
NOT TO SCALE

ELEVATION
NOT TO SCALE

NOTE

- FOR NOTES SEE SHEET 1
- FOR GENERAL LEGEND SEE SHEET 7

LEGEND

INDICATES REPAIR TYPE 69-PLACE NEW LATEX MODIFIED CONCRETE BRIDGE DECK WEARING SURFACE (SEE SHEET 157)

NOISE MONITOR RECEPTOR LOCATIONS	
NOISE RECEPTOR NO.	LOCATIONS
NRL1	INTERSECTION OF STATION STREET AND EQUIPMENT CORP OF AMERICAL PARKING LOT
NRL2	INTERSECTION OF NEVILLE ROAD AND FAIRFIELD INN PARKING LOT
NRL3	INTERSECTION OF NEVILLE ROAD AND ELSIE STREET
NRL4	INTERSECTION OF DAWSON AVENUE AND RIVER AVENUE
NRL5	INTERSECTION OF DEER RUN AND KILBUCK STREET

CONSTRUCTION NOISE MONITORING AND CONTROL
(SEE SPECIAL PROVISIONS)

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

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DRAWN BY	SJW
CHECKED BY	DAM

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REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
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DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

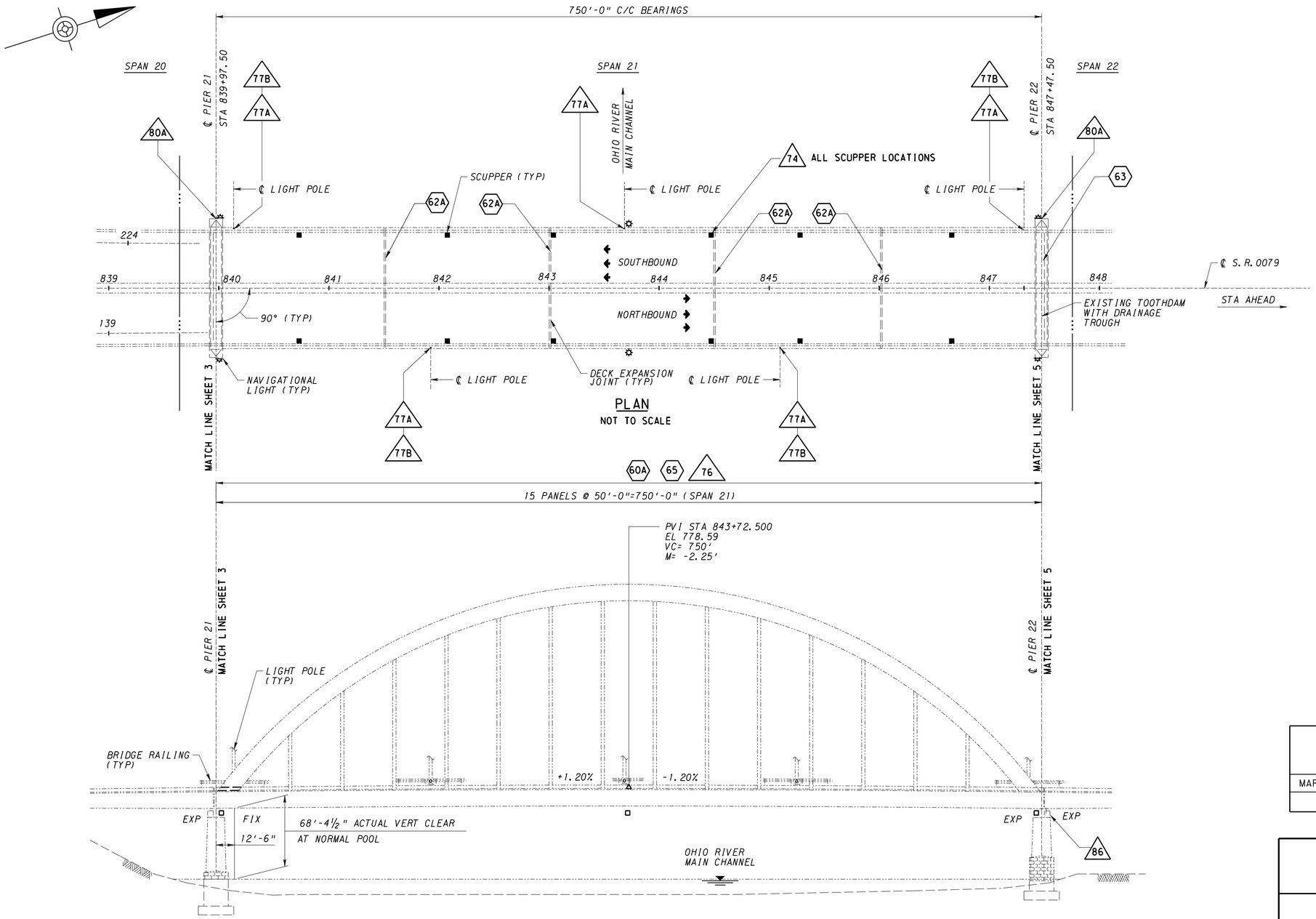
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SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
GENERAL PLAN AND ELEVATION - SPANS 11-20

RECOMMENDED _____

SHEET 3 OF 164

S - 38036



NOTE

- FOR NOTES SEE SHEET 1
- FOR GENERAL LEGEND SEE SHEET 7

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

GENERAL PLAN AND ELEVATION - SPAN 21

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CHECKED BY	DAM

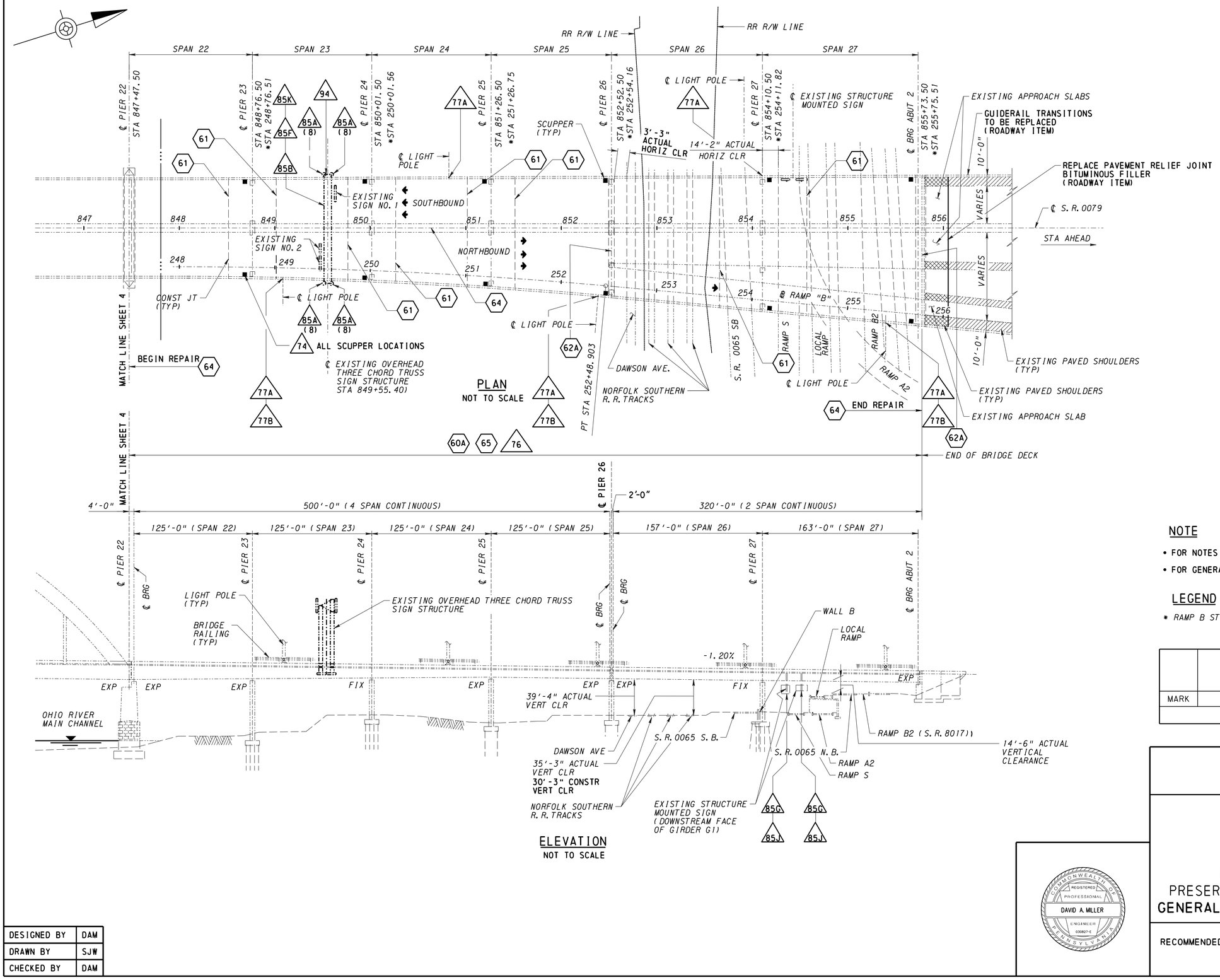
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DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 4 OF 164

S - 38036

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NOTE

- FOR NOTES SEE SHEET 1
- FOR GENERAL LEGEND SEE SHEET 7

LEGEND

* *RAMP B STATION*

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

GENERAL PLAN AND ELEVATION - SPANS 22-27

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
039027-E

RECOMMENDED _____

SHEET 5 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	DAM

INDEX OF DRAWINGS	
NO.	DESCRIPTION
1	GENERAL PLAN AND ELEVATION - SPANS 1-7
2	GENERAL PLAN AND ELEVATION - SPANS 8-10
3	GENERAL PLAN AND ELEVATION - SPANS 11-20
4	GENERAL PLAN AND ELEVATION - SPAN 21
5	GENERAL PLAN AND ELEVATION - SPANS 22-27
6	INDEX OF DRAWINGS
7	INDEX OF REPAIRS AND GENERAL LEGEND
8	GENERAL NOTES 1 & RATING TABLE
9	GENERAL NOTES 2
10	QUANTITIES 1
11	QUANTITIES 2
12	QUANTITIES 3
13	QUANTITIES 4
14	QUANTITIES 5
15	QUANTITIES 6
16	QUANTITIES 7
17	QUANTITIES 8
18	QUANTITIES 9
19	QUANTITIES 10
20	QUANTITIES 11
21	QUANTITIES 12
22	QUANTITIES 13
23	FRAMING PLAN SPANS 1 THRU 3 SB
24	FRAMING PLAN SPANS 1 THRU 3 NB
25	FRAMING PLAN SPANS 4 THRU 7 SB
26	FRAMING PLAN SPANS 4 THRU 7 NB W/RAMP D
27	FRAMING PLAN SPANS 8 & 9 SB
28	FRAMING PLAN SPANS 8 & 9 NB
29	FRAMING PLAN SPANS 10 THRU 12 SB W/ RAMP H
30	FRAMING PLAN SPANS 10 THRU 12 NB W/ RAMP E
31	FRAMING PLAN SPANS 13 THRU 16 SB
32	FRAMING PLAN SPANS 13 THRU 16 NB
33	FRAMING PLAN SPANS 17 THRU 20 SB
34	FRAMING PLAN SPANS 17 THRU 20 NB
35	FRAMING PLAN SPAN 21 SB
36	FRAMING PLAN SPAN 21 NB
37	UPSTREAM ARCH EAST ELEVATION
38	DOWNSTREAM ARCH EAST ELEVATION
39	UPSTREAM TIE GIRDER - SPAN 21 (RO-T3)
40	UPSTREAM TIE GIRDER - SPAN 21 (T3-T6)
41	UPSTREAM TIE GIRDER - SPAN 21 (T6-T9)
42	UPSTREAM TIE GIRDER - SPAN 21 (T9-T12)
43	UPSTREAM TIE GIRDER - SPAN 21 (T12-R15)
44	DOWNSTREAM TIE GIRDER - SPAN 21 (RO-T3)
45	DOWNSTREAM TIE GIRDER - SPAN 21 (T3-T6)
46	DOWNSTREAM TIE GIRDER - SPAN 21 (T6-T9)

INDEX OF DRAWINGS	
NO.	DESCRIPTION
47	DOWNSTREAM TIE GIRDER - SPAN 21 (T9-T12)
48	DOWNSTREAM TIE GIRDER - SPAN 21 (T12-R15)
49	FLOORBEAM ELEVATION-RO-SPAN 21
50	FLOORBEAM ELEVATION-R15-SPAN 21
51	UPPER LATERAL BRACING PLAN-SPAN 21
52	FRAMING PLAN SPANS 22 THRU 25 SB
53	FRAMING PLAN SPANS 22 THRU 25 NB
54	FRAMING PLAN SPANS 26 & 27 SB
55	FRAMING PLAN SPANS 26 & 27 NB
56	ABUTMENT 1 - REPAIRS
57	ABUTMENT 2 - REPAIRS
58	PIER 2 - REPAIRS
59	PIER 3 - REPAIRS
60	PIER 4 - REPAIRS
61	PIER 5 - REPAIRS
62	PIER 6 - REPAIRS
63	PIER 7 - REPAIRS
64	PIER 8 - REPAIRS
65	PIER 9 - REPAIRS
66	PIER 10 - REPAIRS
67	PIER 11 - REPAIRS
68	PIER 12 - REPAIRS
69	PIER 13 - REPAIRS
70	PIER 14 - REPAIRS
71	PIER 15 - REPAIRS
72	PIER 16 - REPAIRS
73	PIER 17 - REPAIRS
74	PIER 18 - REPAIRS
75	PIER 19 - REPAIRS
76	PIER 20 - REPAIRS
77	PIER 21 - REPAIRS
78	PIER 22 - REPAIRS
79	PIER 23 - REPAIRS
80	PIER 24 - REPAIRS
81	PIER 25 - REPAIRS
82	PIER 26 - REPAIRS
83	PIER 27 - REPAIRS
84	REPAIR TYPE 20 - CONCRETE REPAIR DETAILS
85	REPAIR TYPE 25
86	REPAIR TYPE 1A
87	REPAIR TYPE 1A & CAH DETAILS
88	REPAIR TYPES 3A , 3B & 3C
89	REPAIR TYPES 4A, 4B, 4C & 4D
90	REPAIR TYPE 5
91	REPAIR TYPE 6B
92	REPAIR TYPES 6C & 6D

INDEX OF DRAWINGS	
NO.	DESCRIPTION
93	REPAIR TYPES 6C, 6D, CAH & 9
94	REPAIR TYPES 7A, 7B, 7C, 7D, 7E & 7F
95	REPAIR TYPES 8A, 8B & 8C
96	REPAIR TYPE 8D
97	REPAIR TYPES 10, 11A & 11B
98	REPAIR TYPES 12A, 12B, 13A & 13B
99	REPAIR TYPES 12C, 12D, 13C & 13D
100	REPAIR TYPES 12E, 12F & 13G
101	REPAIR TYPES 15A, 15B & 34A
102	REPAIR TYPES 16E & 16F
103	REPAIR TYPE 18
104	REPAIR TYPE 30A
105	REPAIR TYPE 30C
106	REPAIR TYPE 30D
107	REPAIR TYPE 30E
108	REPAIR TYPES 30F & 30G
109	REPAIR TYPES 31A & 31B
110	REPAIR TYPES 31C, 31D & 31E
111	REPAIR TYPE 31F
112	REPAIR TYPES 33A & 33B
113	REPAIR TYPE 34F
114	REPAIR TYPES 34G & 34S
115	REPAIR TYPES 35A, 35B, 35C, 35D & 35E
116	REPAIR TYPE 36
117	REPAIR TYPES 34T, 34B, 38T & 38B
118	REPAIR TYPES 39A & 39B
119	REPAIR TYPE 40A
120	REPAIR TYPE 40B
121	REPAIR TYPES 40C, 85A & 85C
122	REPAIR TYPES 85D, 85E, 85F & 85H
123	REPAIR TYPES 41A & 41B DETAILS 1
124	REPAIR TYPES 41A & 41B DETAILS 2
125	REPAIR TYPE 42
126	REPAIR TYPE 44A
127	REPAIR TYPES 44C & 44D
128	REPAIR TYPE 45A
129	REPAIR TYPE 45B
130	REPAIR TYPE 45C
131	REPAIR TYPE 45D
132	REPAIR TYPES 48A & 48B
133	REPAIR TYPES 48C & 48D

INDEX OF DRAWINGS	
NO.	DESCRIPTION
134	REPAIR TYPE 51
135	REPAIR TYPES 55 & 56 DETAILS 1
136	REPAIR TYPES 55 & 56 DETAILS 2
137	REPAIR TYPES 55 & 56 DETAILS 3
138	REPAIR TYPES 55 & 56 DETAILS 4
139	REPAIR TYPES 55 & 56 DETAILS 5
140	REPAIR TYPES 55 & 56 DETAILS 6
141	REPAIR TYPES 55 & 56 DETAILS 7
142	REPAIR TYPES 55 & 56 DETAILS 8
143	REPAIR TYPES 55 & 56 DETAILS 9
144	REPAIR TYPES 55 & 56 DETAILS 10
145	REPAIR TYPES 55 & 56 DETAILS 11
146	REPAIR TYPES 55 & 56 DETAILS 12
147	REPAIR TYPES 55 & 56 DETAILS 13
148	REPAIR TYPES 55 & 56 DETAILS 14
149	REPAIR TYPES 55 & 56 DETAILS 15
150	REPAIR TYPES 55 & 56 DETAILS 16
151	REPAIR TYPES 60A, 60B & 65
152	REPAIR TYPES 61, 64, 66, 67 & 68
153	REPAIR TYPE 62A
154	REPAIR TYPE 62B
155	REPAIR TYPE 63 DETAILS 1
156	REPAIR TYPE 63 DETAILS 2
157	REPAIR TYPE 69A, 69B, 69C, 69D & 69E
158	REPAIR TYPE 71A
159	REPAIR TYPE 71B
160	REPAIR TYPE 71C
161	REPAIR TYPE 71D
162	REPAIR TYPES 72A & 72B
163	REPAIR TYPES 78A & 78B
164	REPAIR TYPES 77A, 77B, 77C, 80A & 80B

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	RLC

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

INDEX OF DRAWINGS

RECOMMENDED _____

SHEET 6 OF 164

S - 38036

INDEX OF REPAIRS		
REPAIR TYPE	SHEET NUMBER	DESCRIPTION
□ SUPERSTRUCTURE REPAIRS		
1A	86 & 87	FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
3A, 3B, 3C	88	FLOORBEAM WEB-TO-FLOORBEAM TOP FLANGE - DRILL CRACK ARREST HOLE RETROFIT
4A, 4B, 4C, 4D	89	FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE - BOLTED ANGLE AND/OR DRILL CRACK ARREST HOLE RETROFIT
5	90	FLOORBEAM KNEE BRACE TAB PLATE-TO-GIRDER BOT FLANGE RETROFIT WITH MODIFIED SOLE PLATE
6B	91	END DIAPHRAGM CONNECTION PLATE-TO-STRINGER BOTTOM FLANGE RETROFIT
6C, 6D	92 & 93	STRINGER INTERMEDIATE DIAPHRAGM CONNECTION PLATE ADJACENT STRINGER TOP FLANGE RETROFIT
7A, 7B, 7C, 7D	94	STRINGER DIAPHRAGM-TO-FLOORBEAM CONNECTION PLATE RETROFIT
7E, 7F	94	STRINGER DIAPHRAGM-TO-DIAPHRAGM CONNECTION PLATE RETROFIT
8A, 8B, 8C, 8D	95 & 96	GRIND TAPER IN BACK-UP BAR SPLICE OR TERMINATION
9	35 & 93	CRACKED TACK WELD REMOVAL
10	97	FLOORBEAM TRANSVERSE STIFFENER-TO-FLOORBEAM TOP FLANGE CRACKED WELD RETROFIT
11A, 11B	97	FLOORBEAM TRANSVERSE STIFFENER-TO-FLOORBEAM WEB CRACKED WELD RETROFIT
12A, 12B, 12C, 12D, 12E, 12F	98 THRU 100	FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT (POSITIVE MOMENT REGION)
13A, 13B, 13C, 13D, 13G	98 THRU 100	GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT (POSITIVE MOMENT REGION)
14	23 THRU 55	REMOVE WELD REMNANTS AND WELDED ATTACHMENTS
15A, 15B	101	REMOVE PLUG WELDS
16E, 16F	102	STRINGER OUT OF PLANE DISPLACEMENT RETROFIT WITH DIAPHRAGM INTERMEDIATE SUPPORT STOOL (SPAN 21)
17	49 & 50	REPAIR CRACKED OR MISSING WELDS
18	103	RETROFIT CRACKED LONGITUDINAL STIFFENER WELD
30A, 30C, 30D, 30E, 30F, 30G	104 THRU 108	REPAIR DETERIORATED GIRDER AREAS
31A, 31B, 31C, 31D, 31E, 31F	109 THRU 111	REPAIR DETERIORATED FLOORBEAM AREAS
32	35 & 36	INSTALL NEW ACCESS HATCH IN FLOORBEAM BOTTOM PLATE
33A, 33B	112	REPAIR/REPLACE DETERIORATED DIAPHRAGM AREAS
34A, 34B, 34F, 34G, 34S, 34T	101,113, 114,117	REPLACE SHORT, LOOSE, MISSING, OR DETERIORATED BOLT WITH NEW HS BOLT
34C	37	REPLACE MISSING NUTS AND WASHERS AT INTERIOR ACCESS HATCH COVERS IN ARCH SPAN MEMBERS
35A, 35B, 35C, 35D, 35E	115	REPLACE STRINGER BEARING PLATE AND/OR ANCHOR BOLTS
36	116	REPAIR/REPLACE DETERIORATED STRINGER DIAPHRAGM
38T, 38B	117	REPLACE TOP AND/OR BOTTOM LOWER LATERAL BRACING GUSSET PLATE
39A, 39B	118	REPAIR LOWER LATERAL BRACING MEMBER
40A, 40B, 40C	119 THRU 121	REPLACE/RETROFIT SIGN SUPPORT CANTILEVER BRACKETS
41A, 41B	123 & 124	REPLACE GIRDER BOTTOM FLANGE FIELD SPLICE
42	125	REPAIR/SHIM STRINGER BEARINGS
43	35	REPLACE CAULKING IN STRESS RELIEF SLOTS
44A, 44C, 44D	126 & 127	MODIFY EXISTING ACCESS HATCH COVERS IN ARCH SPAN MEMBERS
45A, 45B, 45C, 45D	128 THRU 131	REPLACE EXISTING ACCESS HATCH COVERS IN ARCH SPAN MEMBERS
47	23 & 24	REMOVE UNUSED SIGN SUPPORT BRACKET
48A, 48B, 48C, 48D	132 & 133	DRILL CRACK ARREST HOLES IN INSPECTION WALKWAY END PLATE
51	134	INSTALL NEW SUSPENDER ROPE NYLATRON PLASTIC PROTECTIVE SLEEVES
55A, 55B, 55C, 55D, 55E, 55F, 55G, 55H	135 THRU 150	REPLACE EXISTING EXPANSION BEARING WITH NEW HIGH LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL
56A, 56B	135 THRU 150	REPLACE EXISTING EXPANSION BEARING WITH NEW HIGH LOAD MULTI-ROTATIONAL POT BEARING AND STOOL
57	35 & 36	CLEAN AND LUBRICATE BRIDGE BEARINGS

INDEX OF REPAIRS		
REPAIR TYPE	SHEET NUMBER	DESCRIPTION
△ MISCELLANEOUS REPAIRS		
71A, 71B, 71C, 71D	158 THRU 161	REPLACE/REPAIR MISSING OR DAMAGED DOWNSPOUT PIPE
72A, 72B	162	REPLACE DOWNSPOUT PIPE SUPPORT, ANCHOR BOLT, AND/OR U-BOLT
74	1 THRU 5	CLEAN AND FLUSH SCUPPERS AND DOWN SPOUTS
75	56 THRU 83	CLEAN, FLUSH, VIDEO, AND REPAIR UNDERGROUND DRAINAGE SYSTEM
76	1 THRU 5	CLEAN AND FLUSH BRIDGE DECK
77A, 77B, 77C	164	REPAIR OR REPLACE LIGHT POLES
78A, 78B	163	INSTALL BIRD SCREENS OVER DRAIN HOLES
79	35 THRU 38	REMOVAL OF BRIDGE HEALTH MONITORING SYSTEM (SPAN 21)
80A, 80B	164	INSTALL NAVIGATION PLACARDS AT PIERS
81	28,30,72	REPAIR ELECTRICAL CONDUIT
82	35 THRU 51	DRILL DRAIN HOLES IN ARCH MEMBERS
84	35 THRU 51	CLEAN BIRD RELATED DIRT AND DEBRIS FROM INTERIOR OF ARCH MEMBERS
85A, 85B, 85C, 85D, 85E, 85F, 85G, 85H, 85K	121 THRU 122	SIGN REPAIRS
85J	5	REPLACE SIGN CLIPS
90	23 THRU 55	PAINTING EXISTING AND NEW STRUCTURAL STEEL
91	37,38	PAINTING EXISTING ARCH SUSPENDER CABLES
92	37,38, 51	ZONE PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS
94	39 THRU 50	ZONE PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS
96	37 THRU 51	SPOT PAINTING EXISTING AND NEW STRUCTURAL STEEL REPAIR AREAS ON INTERIOR OF ARCH SPAN MEMBERS
97	23 & 24	PAINTING EXISTING STEEL GIRDER BOTTOM FLANGES OVER CSX RAILROAD
98	SPECIAL PROV.	SOUND CURTAINS

INDEX OF REPAIRS		
REPAIR TYPE	SHEET NUMBER	DESCRIPTION
⬡ DECK REPAIRS		
60A	151	TYPE 2 BRIDGE DECK SPALL REPAIR
60B	151	BRIDGE DECK UNDERSIDE SPALL REPAIR
61	152	REPLACE JOINT SEALS IN TRANSVERSE CONSTRUCTION JOINTS
62A, 62B	153 & 154	INSTALL NEW NEOPRENE STRIP SEAL EXPANSION DAM SEALS
63	155 & 156	REPLACE STEEL PLATE TOOTH EXPANSION DAM DRAINAGE TROUGH SYSTEM
64	152	REPLACE BRIDGE MEDIAN BARRIER LONGITUDNIAL JOINT SEAL
65	151	SEAL BRIDGE DECK WITH HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) PENETRATING SEALER
66	152	BRIDGE BARRIER AND MEDIAN CONCRETE SPALL/DELAMINATION REPAIR
67	152	BRIDGE BARRIER AND MEDIAN CONCRETE CRACK REPAIR
68	152	BRIDGE BARRIER ALUMINUM RAILING REPAIR
69A, 69B, 69C, 69D, 69E	157	PLACE NEW LATEX MODIFIED CONCRETE BRIDGE DECK WEARING SURFACE
69F	151	REPAIR BRIDGE DECK LATEX OVERLAY

INDEX OF REPAIRS		
REPAIR TYPE	SHEET NUMBER	DESCRIPTION
◇ SUBSTRUCTURE REPAIRS		
20	56 THRU 84	CLASS AA CEMENT CONCRETE REPAIRS OF DETERIORATED CONCRETE AREAS
21	56 THRU 83	EPOXY INJECTION CRACK SEAL
22	56 THRU 83	CLEAN TOP OF PIER CAP OR ABUTMENT SEAT
23	56 THRU 83	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
24	64 THRU 66 & 77, 78	POINTING OF PIER MORTAR JOINTS FOR GRANITE CAP AND ROCK FACE STONES
25	65 & 85	REPLACE MISSING AND REPAIR PIER GRANITE ROCK FACE STONES
26	57, 72, 73, 82, 83	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)

NOTES

- FOR INDEX OF DRAWINGS SEE SHEET 6

GENERAL LEGEND

- ◇21◇ INDICATES SUBSTRUCTURE REPAIR TYPE AND LOCATION
- [33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
- [13C] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)
- ⬡60⬡ INDICATES DECK REPAIR TYPE AND LOCATION
- △74△ INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION
- ← INDICATES DIRECTION OF TRAFFIC
- (8) INDICATES NUMBER OF BOLTS BEING REPLACED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	RLC
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

INDEX OF REPAIRS AND GENERAL LEGEND

RECOMMENDED _____

SHEET 7 OF 164

S - 38036

GENERAL NOTES

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2016. INCLUDING CHANGE 6, ANSI/AASHTO/AWS/D1.5 BRIDGE WELDING CODE, 2008, AND THE CONTRACT SPECIAL PROVISIONS.

SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68 DEGREES F.

ALL DIMENSIONS SHOW ARE HORIZONTAL, EXCEPT AS NOTED.

VERIFY ALL DIMENSIONS, ELEVATIONS AND GEOMETRY OF THE EXISTING STRUCTURE IN THE FIELD AS NECESSARY FOR PROPER FIT OF THE PROPOSED CONSTRUCTION.

PROVIDING ACCESS AND OBTAINING ANY NECESSARY DIMENSIONS, MEMBER SIZES, ELEVATIONS, BOLT SIZE/ SPACINGS, AND OTHER MEASUREMENTS NECESSARY TO PERFORM THE REQUIRED WORK IS INCIDENTAL TO THE REPAIR ITEM. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.

USE CARE WHEN REMOVING PORTIONS OF THE EXISTING STRUCTURE TO PREVENT DAMAGE TO THE REMAINING PORTIONS. REPAIR OR REPLACE AT THE CONTRACTORS EXPENSE, ANY REMAINING COMPONENTS DAMAGED BY REMOVAL OPERATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR ANY PROPERTY DAMAGE DONE DURING THE CONSTRUCTION. MAKE REPAIRS TO THE SATISFACTION OF THE REPRESENTATIVE AND OWNER AT CONTRACTOR'S COST.

PEREGRINE FALCONS NEST WITHIN THE PROJECT LIMITS. THE CONTRACTOR IS TO COMPLY WITH RESTRICTIONS SET FORTH IN SPECIAL PROVISION - NOTICE TO CONTRACTOR- PEREGRINE FALCONS.

NO WORK IS PERMITTED IN THE OHIO RIVER FROM BARGES OR WATER CRAFT THAT ARE SPUDDED OR ANCHORED TO THE RIVER BOTTOM WITH OUT CONDUCTING A MUSSEL SURVEY, OBTAINING THE REQUIRED PERMITS, AND REVISING THE ENVIRONMENTAL DOCUMENTS.

NOTIFY THE REGIONAL HEADQUARTERS OF THE FISH AND BOAT COMMISSION PRIOR TO CONSTRUCTION AND COOPERATE WITH THE FISH AND BOAT COMMISSIOIN DURING CONSTRUCTION.

EMIL S. VETAHOR
236 LAKE ROAD
SOMERSET, PA 15501
(814) 455-8974

THE BRIDGE IS NOT WEIGHT RESTRICTED. SEE SPECIAL PROVISION SECTION 105.17 - ACCEPTANCE OF CONSTRUCTION LOADINGS AND MATERIAL STOCKPILING ON THE BRIDGES FOR CONSTRUCTION LOADING LIMITS.

DEP PERMIT NO. E02-9999

DESIGN SPECIFICATIONS

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DESIGN MANUAL PART 4, AUGUST 1996.

LIVE LOAD DISTRIBUTION IS BASED UPON PENNDOT DESIGN MANUAL 4 DISTRIBUTION FACTORS.

DESIGN (RATING ANALYSIS) IS IN ACCORDANCE WITH THE ALLOWABLE STRESSES AND LOAD FACTOR METHOD.

LOAD FACTOR DESIGN - APPROACH SPANS

ALLOWABLE STRESS DESIGN - ARCH

DESIGN LIVE LOAD
HS-20 OR P-82 (204K PERMIT LOAD)

SEISMIC FORCES WERE CONSIDERED FOR ACCELERATION COEFFICIENT OF 0.05.

LRFD - BEARINGS.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION, 2014.

DESIGN MANUAL PART 4, APRIL 2015.

DESIGN LIVE LOAD
PHL-93 OR P-82 (204K PERMIT LOAD)

FATIGUE DESIGN IS BASED ON THE FOLLOWING:

STEEL STRUCTURE:
NB ADT 40,872 (2019) 48,506 (2039)
SB ADT 32,478 (2019) 38,545 (2039)

ONE DIRECTION
NB ADTT 4,496 (2019) 5,336 (2039)
SB ADTT 5,547 (2019) 5,396 (2039)

ONE DIRECTION
TRUCK LOADING 2,000,000 CYCLES

CONCRETE NOTES

USE CLASS AAAP CEMENT CONCRETE IN BRIDGE DECK REPAIRS.

USE CLASS AA CEMENT CONCRETE IN SUBSTRUCTURE REPAIRS, APPROACH SLABS, BARRIERS, AND MEDIAN BARRIERS.

A HIGHER CLASS OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

CHAMFER EXPOSED CONCRETE EDGES 1" X 1", EXCEPT AS NOTED.

RAKE FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(K)9.

REINFORCEMENT NOTES

USE EPOXY COATED REINFORCEMENT BARS IN ALL CONCRETE REPAIRS.

PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A615/A615M, 996/A996M, OR A 706/A706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. IF APPROVED BY THE CHIEF BRIDGE REPRESENTATIVE, GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA. DO NOT USE RAIL STEEL A996/A996M REINFORCEMENT BARS IN BRIDGE ABUTMENTS, PIERS, SHEAR BLOCKS, BARRIERS, OR WHERE BENDING OR WELDING OF THE REINFORCING BARS IS INDICATED.

CLEAN AND PROPERLY ALIGN REINFORCEMENT BARS WHICH ARE TO REMAIN IN THE STRUCTURE BEFORE PLACING NEW CONCRETE. FIELD COAT WITH AN APPROVED EPOXY PAINT THE EXPOSED PORTION OF EXISTING REINFORCEMENT WHICH ARE TO REMAIN.

WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.

PROVIDE MINIMUM SPLICE LENGTH AND EMBEDMENT LENGTH IN ACCORDANCE WITH STANDARD DRAWING BC-736M UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL NOTES

PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50 (ASTM A709, GRADE 50) DESIGN EXCEPT WHERE NOTED OTHERWISE.

PROVIDE CHARPY V-NOTCH TEST RESULTS FOR ZONE 2 AS SPECIFIED IN SECTION 1105.02(a) 5 FOR ALL REPAIR STEEL ASSOCIATED WITH THE FRACTURE CRITICAL GIRDERS, FLOORBEAMS, AND ARC TIE GIRDERS.

PROVIDE MECHANICALLY GALVANIZED 7/8-INCH DIAMETER FASTENERS CONFORMING TO ASTM A325, TYPE 1, HIGH-STRETCHED BOTLS EXCEPT WHERE NOTED OTHERWISE. WHERE FEASIBLE, PLACE BOLTS SO THAT THE THREADED ENDS ARE PROTECTED FROM THE WEATHER. EXCLUDE THREADS FROM THE SHEAR PLANES.

MECHANICALLY GALVANIZED ALL HIGH-STRENGTH BOLTS, NUTS AND WASHERS EXCEPT WHERE NOTED.

REAM HOLES IN FIELD AS REQUIRED TO ACHIEVE $^{15}/_{16}$ INCH HOLE WHERE EXISTING BOLTS ARE BEING REPLACED WITH NEW HIGH-STRENGTH BOLTS.

PROVIDE A $1^{1}/_{2}$ INCH MINIMUM EDGE DISTANCE FROM THE CENTER OF ANY STANDARD BOLT HOLD TO THE EDGE OF ANY STEEL PLATE UNLESS OTHERWISE SPECIFIED.

FOR EXISTING FASTENERS DESIGNATED FOR REMOVAL OR REPLACEMENT, REPLACE EXISTING FASTENERS WITH NEW HIGH-STRENGTH BOLTS OF THE SAME DIAMETER AS THE EXISTING FASTENER, UNLESS NOTED.

ADDITIONAL STEEL REPAIRS ARE NOT TO BE PERFORMED WITHOUT THE APPROVAL OF THE DISTRICT BRIDGE ENGINEER.

PERFORM ABRASIVE BLAST CLEANING AND APPLY PRIMER PAINT TO ALL STEEL REPAIR AREAS PRIOR TO PERFORMING REPAIRS. COMPLETE ALL REPAIRS AND APPLY ADDITIONAL PRIMER PAINT AS REQUIRED, PRIOR TO APPLYING INTERMEDIATE AND FINISH PAINT COATS.

SAFELY AND ADEQUATELY SUPPORT STEEL MEMBERS DURING THEIR FULL OR PARTIAL REMOVAL, SHIPPING, HANDLING, AND ERECTIOIN, INCLUDING BEARING REPLACEMENT AND MEMBER REMOVAL SUCH THAT ALLOWABLE STRESSES IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES, ARE NOT EXCEEDED.

DO NOT USE FORM SUPPORT SYSTEMS THAT WILL CAUSE UNACCEPTABLE OVERSTRESS OR DEFORMATION TO PERMANENT BRIDGE MEMBERS.

KEEP CRANE BOOMS FROM OVERSHADOWING LIVE TRAFFIC LANES.

REUSE OF EXISTING FASTENERS IS NOT PERMITTED. USE TURN OF THE NUT METHOD FOR BOLTED CONNECTIONS. AFTER OBTAINING SNUG FIT CONDITION, MARK WITH STRAIGHT LINE ACROSS ALL BOLTS, NUTS AND PLATES TO MONITOR ALL ROTATIONS ON BOLTS AND NUTS RELATIVE TO THE PLATES.

SHOP DRAWINGS MUST INDICATE THAT THE EXISTING DIMENSIONS, ELEVATIONS, MEMBER SIZES, ANGLES, BOLT SIZE/SPACINGS, ETC, THAT RELATE TO THE REQUIRED WORK HAVE BEEN FIELD VERIFIED BEFORE SHOP DRAWINGS CAN BE REVIEWED.

BRIDGE LOAD RATING TABLE

		H20	HS20	ML-80	TK-527	P-82
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	1.856	1.856	--	--	--
	TYPE OF MEMBER	GIRDER	GIRDER	FLOORBEAM	FLOORBEAM	--
	MEMBER(S)	G2	G2	FB21	FB5	--
	LOCATION (SPAN)	1.00L (SPAN 9)	1.00L (SPAN 9)	SPAN 25	SPAN 17	--
	RATING FACTOR	0.88 (V)	0.88 (V)	0.77 (M)	0.82 (V)	--
OPERATING RATING (OR)	DISTRIBUTION FACTOR	1.856	1.856	--	--	1.478
	TYPE OF MEMBER	GIRDER	GIRDER	FLOORBEAM	FLOORBEAM	GIRDER
	MEMBER(S)	G2	G2	FB21	FB5	G4
	LOCATION (SPAN)	1.00L (SPAN 9)	1.00L (SPAN 9)	SPAN 25	SPAN 17	0.28L (SPAN 5)
	RATING FACTOR	1.47 (V)	1.47 (V)	1.29 (M)	1.37 (V)	1.01 (M)

RATING NOTES:
- LOAD RATING BASED ON LOAD FACTOR METHODOLOGY
- M - FLEXURE GOVERNS; V - SHEAR GOVERNS; I - MOMENT-SHEAR INTERACTION GOVERNS
- DISTRIBUTION FACTOR IS THE VEHICULAR LOAD DISTRIBUTION FACTOR TO PRODUCE THE GIVEN RATING
- P-82 RATINGS ARE BASED ON A SINGLE LANE OF P-82 WITH HS20 IN ADJACENT LANE(S)
- FUTURE WEARING SURFACE IS NOT INCLUDED

FIELD MEASUREMENTS OF BEARINGS

ALL DIMENSIONS ASSOCIATED WITH THE PROPER FIT UP AND PLACEMENT OF THE NEW BEARINGS ARE TO BE FIELD VERIFIED TO ENSURE PROPER INSTALLATION.

FIELD MEASUREMENTS TO BE PERFORMED BY THE CONTRACTOR AND PROVIDED TO THE REPRESENTATIVE FOR EVALUATION AND POSSIBLE BEARING DETAIL ADJUSTMENTS PRIOR TO BEARING FABRICATION.

PRIOR TO AND AFTER THE BEARING REPLACEMENTS, FIELD MEASURE THE TOPSIDE ELEVATION DIFFERENCE BETWEEN OPPOSITE SIDES OF THE BRIDGE DECK EXPANSION DAMS ABOVE EACH BEARING REPLACEMENT LOCATION. ASSURE THAT THE DIFFERENCE IN ELEVATIONS AT THESE LOCATIONS ARE THE SAME OR LESS AT THE COMPLETION OF THE BEARING REPLACEMENTS.

ALL FIELD MEASUREMENTS ARE CONSIDERED INCIDENTAL TO THE BEARINGS.

NO BEARING IS TO BE FABRICATED OR INSTALLED WITHOUT THE APPROVAL OF THE REPRESENTATIVE.

DO NOT REMOVE THE EXISTING BEARING WITHOUT APPROVAL OF THE REPRESENTATIVE OF ALL THE FIELD DIMENSIONS REQUIRED FOR EVALUATION.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

GENERAL NOTES 1 & RATING TABLE

RECOMMENDED _____

SHEET 8 OF 164

S - 38036

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PAINTING STRUCTURAL STEEL NOTES

THE EXISTING BRIDGE STRUCTURAL MEMBERS CONTAIN LEAD PAINT, AND OTHER TOXIC MATERIALS. THE RESULTS OF THE LABORATORY TESTING OF PAINT SAMPLES ARE:

LEAD: AS HIGH AS 662,510 PPM

CHROMIUM: AS HIGH AS 47,050 PPM

CADMIUM: NOT DETECTED

HEXAVALENT CHROMIUM: (NOT TESTED)

ARSENIC: (NOT TESTED)

PERFORM REMOVAL OF EXISTING PAINT, CLEANING AND PAINTING OF NEW AND EXISTING STRUCTURAL STEEL IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROVIDE FINISH COAT AMS-STANDARD-595A - COLOR ID NO.35450
PROVIDE PAINT CHIPS TO THE DEPARTMENT AND OBTAIN APPROVAL PRIOR TO APPLICATION.

PROVIDE COATING SYSTEM TO MEET SLIP CRITICAL CLASS B FAYING SURFACE REQUIREMENTS OF BOLTED PARTS UNLESS NOTED OTHERWISE.

USE A NON-CORROSIVE ABRASIVE MEDIA FOR BLAST CLEANING ALL STEEL ABOVE THE BRIDGE DECK THAT IS ACCEPTABLE TO THE STRUCTURE CONTROL ENGINEER.

PERFORM BLAST CLEANING AND APPLY PRIMER PAINT TO STEEL REPAIR AREAS PRIOR TO PERFORMING REPAIRS. COMPLETE ALL REPAIRS PRIOR TO APPLYING INTERMEDIATE AND FINISH PAINT COATS.

PAINT LIMITS ARE NOT TO BE INCREASED WITHOUT THE APPROVAL OF THE DISTRICT BRIDGE ENGINEER.

ALL SEALING PLUGS USED IN THE ARCH MEMBERS TO SEAL CRACK ARREST HOLES AND STEEL SAMPLE HOLE LOCATIONS ARE TO BE REMOVED, STORED AND REINSTALLED OR REPLACED. THIS WORK IS INCIDENTAL TO THE PAINT ITEMS.

ALL ACCESS HATCHES AND GASKETS REMOVED IN THE ARCH SPAN MEMBERS WILL REQUIRE REINSTALLED AFTER FINAL INSPECTION. ANY GASKETS, BOLTS, NUTS, OR STUDS DAMAGED OR MISSING ARE TO BE REPLACED. THIS WORK IS INCIDENTAL TO THE PAINT ITEMS.

SUPPORT CONTAINMENT FROM GIRDERS, FLOORBEAMS, OR STRINGERS. DO NOT WELD, BOLT OR DRILL THE CONTAINMENT SYSTEM TO THE GIRDERS, FLOORBEAMS, OR STRINGERS.

DO NOT DRILL, ANCHOR, OR MOUNT ANY COMPONENTS OF THE JACKING, PAINTING, DEMOLITION, RIGGING, WORK PLATFORMS, AND TEMPORARY SUPPORT STRUCTURES TO THE EXISTING PIER CAPS OR PIER COLUMNS EXCEPT AS PERMITTED IN THE CONCEPTUAL JACKING NOTES.

PAINT EQUIPMENT AND MILLING EQUIPMENT ARE NOT PERMITTED ON THE BRIDGE AT THE SAME TIME.

WELDING NOTES

WELDING SPECIFICATIONS: AASHTO/AWS D1.5 BRIDGE WELDING CODE (2008) CONSISTENT WITH PUB 408 1105.03 (M) AND THE CONTRACT SPECIAL PROVISIONS.

DO NOT FIELD-WELD ON ANY PART OF THE EXISTING BRIDGE, EXCEPT WHERE SHOWN ON THE DRAWINGS, WITHOUT PRIOR APPROVAL OF THE DEPARTMENT REPRESENTATIVE.

WELDING OF EXISTING STRUCTURAL STEEL: USE THE SHIELDED METAL ARC PROCESS AND LOW HYDROGEN ELECTRODES WHICH ARE COMPATIBLE WITH THE BASE METAL AS SPECIFIED AND IN ACCORDANCE WITH AN APPROVED WELD PROCEDURE SPECIFICATION.

DO NOT WELD WHEN SURFACES ARE MOIST OR EXPOSED TO RAIN, SNOW, OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF WORK.

DO NOT WELD OR BURN WHEN THE TEMPERATURE IS BELOW 0 DEGREES F. PREHEAT AND MAINTAIN THE TEMPERATURE OF THE METAL TO AT LEAST 70 DEGREES F WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0 DEGREES F AND 32 DEGREES F DURING WELDING OR BURNING.

PREHEAT THE STEEL TO THE SPECIFIED MINIMUM TEMPERATURE FOR A DISTANCE EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN THREE INCHES IN ALL DIRECTIONS FROM THE POINT OF THE WELD.

REMOVE BY APPLICATION OF HEAT ANY MOISTURE PRESENT AT POINT OF WELD. PROVIDE WINDBREAKS FOR PROTECTION FROM DIRECT WIND.

PRIOR TO PLACING THE WELD THOROUGHLY CLEAN ALL PORTIONS OF NEW AND EXISTING SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, INCLUDING PAINT FILM FOR A DISTANCE OF TWO INCHES FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD OR IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

TEST COMPLETED WELDS USING VISUAL AND NONDESTRUCTIVE METHODS IN ACCORDANCE WITH AASHTO/AWS D1.5M/D1.5 2008 BRIDGE WELDING CODE CHAPTER 6.

UTILITY NOTES

COORDINATE, LOCATE, AND CONDUCT WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408 SECTIONS 105.06 AND 107.12.

PRIOR TO ANY EXCAVATION OR DEMOLITION WORK, CONTACT THE PA ONE CALL SYSTEM, INC. AT 1-800-242-1776 AND COMPLY WITH THE PROVISIONS OF PA ACT 287 OF 1994 AS AMENDED BY ACT 187 OF 1996. IDENTIFY ALL LINES OVER AND UNDER THE STRUCTURE. NOTIFY AND COMPLY WITH THE APPLICABLE UTILITIES COMPANY'S CLEARANCE REQUIREMENTS. DESIGNER'S SERIAL NUMBER 20172361674, (ROBINSON TOWNSHIP), AND 20172361675 (NEVILLE TOWNSHIP) AND 20172361673, (GLENFIELD BOROUGH).

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. PENNDOT OR FHWA DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS OR LIABILITY FOR ACCURACY OF TYPE, SIZE, AND LOCATION OF ANY UTILITY.

COORDINATE THE REQUIREMENTS FOR PROTECTION AND/OR RELOCATION OF UTILITIES WITH THE UTILITY OWNER PRIOR TO STARTING WORK. SEE SPECIAL PROVISIONS.

CONCRETE REPAIR NOTES

THE DEPARTMENT DOES NOT GUARANTEE THE LOCATION OR QUANTITY OF ANY CRACKED OR SPALLED AREAS OF CONCRETE AS SHOWN OR AS REFERRED TO ON THE DRAWINGS. NEITHER DOES THE DEPARTMENT GUARANTEE THAT ALL DEFECTS ARE AS SHOWN. THE QUANTITIES SHOWN ARE FOR THE CONTRACTOR'S GUIDANCE ONLY AND ARE NOT BINDING IN ANY WAY.

THE REPRESENTATIVE WILL DELINEATE THE CONCRETE REPAIR AREAS. PROVIDE ACCESS TO THE REPAIR AND THE ASSOCIATED INSPECTION. INCLUDE ACCESS TO THE CONCRETE REPAIR IN THE BID PRICE FOR THE RESPECTIVE REPAIR. NO SEPARATE PAYMENT WILL BE MADE.

THE REPRESENTATIVE RESERVES THE RIGHT TO CHANGE THE NATURE AND LIMITS OF THE WORK TO ASSURE A SATISFACTORY REPAIR.

DETERMINE THE QUANTITIES FOR CONCRETE REPAIRS FROM MEASUREMENTS OF THE VOLUMES OF THE RESPECTIVE PATCHES TAKEN BY THE REPRESENTATIVE AND CHECKED BY THE CONTRACTOR BEFORE THE PATCHES ARE FILLED WITH NEW CONCRETE.

APPLY PROTECTIVE COATING FOR NEW REINFORCED CONCRETE SURFACES (PENETRATING SEALERS) ON ABUTMENTS AND PIERS AFTER CONCRETE PATCHES HAVE CURED.

APPLY EPOXY BONDING COMPOUND TO ALL INTERFACES BETWEEN NEW CONCRETE AND EXISTING CONCRETE.

EXERCISE CARE DURING REMOVAL OF EXISTING CONCRETE AND PROVIDE ADEQUATE SHIELDING TO PREVENT DEBRIS FROM FALLING ONTO RAILROAD PROPERTY, PRIVATE PROPERTY, WATERWAYS, AND ROADWAYS BELOW, AND ADJACENT LANES.

RAILROAD NOTES

CONDUCT ALL WORK ACTIVITIES IN COORDINATION WIHT CSX RAILROAD BELOW SPANS 3NB AND 3SB TO ASSURE SAFETY OF WORKERS, RAILROAD EMPLOYEES AND GENERAL PUBLIC, REFER TO SPECIAL PROVISIONS. COMPLY WITH SPECIAL PROVISION - RAILROAD CLEARANCES FOR SPAN 3.

CONDUCT ALL WORK ACTIVITIES IN COORDINATION WITH OHIO CENTRAL RAILROAD (BELOW SPANS 12NB AND 12SB - TRACKS HAVE BEEN REMOVED) TO ASSURE SAFETY OF WORKERS, RAILROAD EMPLOYEES AND GENERAL PUBLIC, REFER TO SPECIAL PROVISIONS.

CONDUCT ALL WORK ACTIVITIES IN COORDINATION WITH NORFOLK SOUTHERN RAILROAD BELOW SPANS 26NB AND 26SB TO ASSURE SAFETY OF WORKERS, RAILROAD EMPLOYEES AND GENERAL PUBLIC, REFER TO SPECIAL PROVISIONS.

NO WELDING, CUTTING, OR ANY WORK ASSOCIATED WITH THE STEEL REPAIRS THAT MAY PRODUCE SPARKS WILL BE PERMITTED WHILE TRAINS ARE PASSING.

NAVIGATIONAL LIGHTING SYSTEM

MAINTAIN NAVIGATIONAL LIGHTS IN AN OPERABLE AND VISIBLE CONDTION ON THE BRIDGE AT ALL TIMES.

NAVIGATIONAL CHANNEL

DURING CONSTRUCTION, MAINTAIN NAVIGATIONAL CHANNEL WIDTHS INDICATED ON THE ATON PLAN. DO NOT ALLOW WORK PLATFORM, CABLES TARPS OR OTHER CONSTRUCTION EQUIPMENT AND MATERIALS TO EXTEND MORE THAN 3 FEET BELOW EXISTING STEEL OVER RIVER SPANS.

EXISTING PLANS

DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTERED IN THE FIELD.

THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL, OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED WAY DIFFER FROM THOSE INDICATED.

THE FOLLOWING EXISTING DRAWINGS ARE AVAILABLE FROM THE DISTRICT:

REFERENCE DRAWINGS - EXISTING BRIDGE		
DWG. NO.	DATE	DESCRIPTION
S-9424	1970	DESIGN DRAWINGS (SHTS. 1 THRU 135 OF 167)
S-9682	1970	DESIGN DRAWINGS (SHEETS 1 THRU 42 OF 47)
REFERENCE S-9424, S-9682	1973	SHOP DRAWINGS (CONTRACT NO. C-20495)
S-9420	1963	SUBSTRUCTURE DESIGN DRAWINGS (SHEETS 1 THRU 21 OF 36)
S-9423	1970	SUBSTRUCTURE DESIGN DRAWINGS (SHEETS 1 THRU 30 OF 73)
S-12964	1977	CONTINGENCY REPAIR DESIGN (SHEETS 1 THRU 12)
S-22660	1999	FATIGUE DETAIL RETROFIT DESIGN DRAWINGS (SHEETS 1 THRU 37)
REFERENCE S-22660	2000	FATIGUE DETAIL RETROFIT SHOP DRAWINGS
S-23658	2000	CONCRETE DECK REPAIRS AND EXPANSION DAM REPLACEMENT (SHEETS 1 THRU 27)
S-25212	2003	HOAN-LIKE DETAIL RETROFIT DESIGN DRAWINGS (SHEETS 1 THRU 21)
S-24956	2005	FATIGUE DETAIL RETROFIT DESIGN DRAWINGS (SHEETS 1 THRU 44)
REFERENCE S-24956	2006	FATIGUE DETAIL RETROFIT SHOP DRAWINGS
S-25546	2006	GENERAL REPAIR DESIGN DRAWINGS (SHEETS 1 THRU 54)
REFERENCE S-25546	2007 2008	EXPANSION DAM SHOP DRAWINGS
S-29389	2009	CONCRETE DECK REPAIRS, LATEX MODIFIED CONCRETE OVERLAY, AND NEW EXPANSION DAMS (SPAN 21) (SHEETS 1 THRU 19)

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

GENERAL NOTES 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 9 OF 164

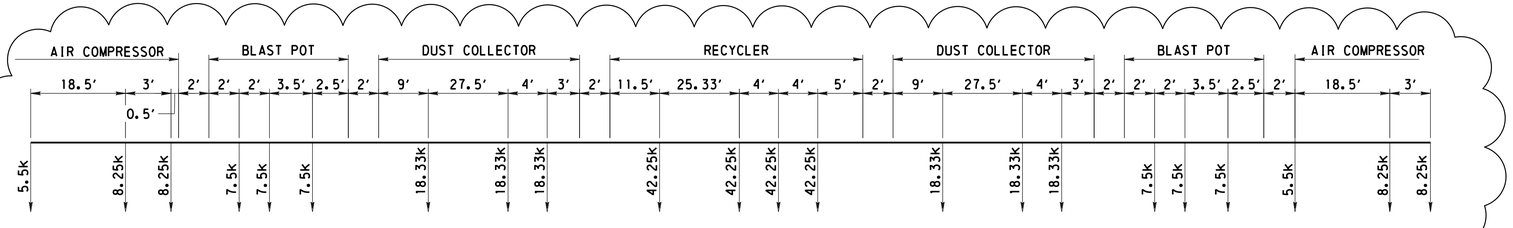
S - 38036

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

\\svr-pgh-data-01\Data\Client\PGH_Client\17041-000-Nevillels_Preservation\CADD\Structure\BR1\Final\BR1GEN02.dgn 6:51:29 AM 11/7/2019

ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1011	REPAIR TYPE 1A - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH FATIGUE CRACKS TYPE W, Wo, AND ST, S-38036	EACH	1	(1)																													1
9000-1031	REPAIR TYPE 3A - FLOORBEAM WEB-TO-FLOORBEAM TOP FLANGE - DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	2	(1)																													2
9000-1032	REPAIR TYPE 3B - FLOORBEAM WEB-TO-FLOORBEAM TOP FLANGE - DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	129	(1)																													129
9000-1033	REPAIR TYPE 3C - FLOORBEAM WEB-TO-FLOORBEAM TOP FLANGE - DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	1	(1)																													1
9000-1041	REPAIR TYPE 4A - FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE - DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	2	(1)																													2
9000-1042	REPAIR TYPE 4B - FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE - DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	37	(1)																													37
9000-1043	REPAIR TYPE 4C - FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE - DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	1	(1)																													1
9000-1044	REPAIR TYPE 4D - FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE - BOLTED ANGLE AND DRILL CRACK ARREST HOLE RETROFIT, S-38036	EACH	1	(1)																													1
9000-1062	REPAIR TYPE 6B - STRINGER DIAPHRAGM CONNECTION PLATE-TO-STRINGER WEB WELD RETROFIT WITH FATIGUE CRACKS TYPE P, S-38036	EACH	60	(1)																													60
9000-1063	REPAIR TYPE 6C - STRINGER INTERMEDIATE DIAPHRAGM CONNECTION PLATE ADJACENT STRINGER TOP FLANGE RETROFIT WITH FATIGUE CRACKS TYPE PU, S-38036	EACH	10	(1)																													10
9000-1064	REPAIR TYPE 6D - STRINGER INTERMEDIATE DIAPHRAGM CONNECTION PLATE ADJACENT STRINGER TOP FLANGE RETROFIT WITH FATIGUE CRACKS TYPE PU, S-38036	EACH	1	(1)																													1
9000-1071	REPAIR TYPE 7A - STRINGER DIAPHRAGM WEB STRENGTHENING AT PREVIOUS GIRDER RETROFIT REPAIR WITH EXISTING FATIGUE CRACKS TYPE D, S-38036	EACH	11	(1)																													11

NOTE:
(1) SEE SPECIAL PROVISIONS



PAINT TRAIN LOADING
(AXIAL LOADS)
NOT TO SCALE

VERIFY

PAINT TRAIN LOCATION RESTRICTIONS

SPANS 9-10, 21, 22-25, & 26-27 LIMITS

1. THE PAINT TRAIN MAY BE PARKED ON THE BRIDGE DECK ONLY WITHIN SPANS 9-10 SB, SPANS 21 NB AND SB, AND SPANS 22-27 SB UNDER THE FOLLOWING CONDITIONS:
   - ALLOW A 12' LANE FOR THE PAINT TRAIN VEHICLES ALONG THE BRIDGE'S SHOULDER.
   - ALLOW A MINIMUM OF 10' BETWEEN THE PAINT TRAIN LANE AND TRAFFIC LANES.
   - MAINTAIN 2 LANES OF TRAFFIC ON THE BRIDGE.
   - FOR SPANS 9-10 SB THE PAINT TRAIN MUST BE PARKED BETWEEN THE FOLLOWING LIMITS:
     - 100' NORTH OF PIER 9 IN SPAN 9 SB
     - 125' SOUTH OF PIER 11 IN SPAN 10 SB
2. FOR ALL OTHER SPANS, PAINTING EQUIPMENT MUST BE PLACED ON THE GROUND UNDERNEATH THE BRIDGE.
3. THE PAINT RECYCLER MUST BE TRANSPORTED UNDER THE LEGAL LOAD LIMIT.

NOTES

1. AN ACCEPTABLE CONFIGURATION (AXLE LOADS AND SPACINGS) FOR PAINTING EQUIPMENT LOCATED ON THE BRIDGE IS AS SHOWN ON THESE PLANS. ONLY ONE LINE OF PAINTING EQUIPMENT IS PERMITTED ON THE BRIDGE AT ANY TIME.
2. SUBMIT ALTERNATE PAINTING OPERATIONS INCLUDING BUT NOT LIMITED TO EQUIPMENT, LOADING AND CONFIGURATION TO THE REPRESENTATIVE FOR APPROVAL. INCLUDE SIGNING AND SEALED ANALYSIS SHOWING THAT THE OPERATING RATING FACTOR IS GREATER THAN 1.0. CONTRACTOR ALTERNATE OPERATIONS MUST ALLOW FOR ALL LEGAL LIVE LOADS AND P-82 LIVE LOAD IN THE ADJACENT TRAFFIC LANE DURING ALL PHASES OF CONSTRUCTION.
3. PAINT EQUIPMENT AND MILLING EQUIPMENT ARE NOT PERMITTED ON THE BRIDGE AT THE SAME TIME

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

QUANTITIES 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 10 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																	
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1072	REPAIR TYPE 7B - STRINGER DIAPHRAGM WEB STRENGTHENING AT PREVIOUS GIRDER RETROFIT REPAIR WITHOUT EXISTING FATIGUE CRACKS TYPE D, S-38036	EACH	97	(1)																													97
9000-1073	REPAIR TYPE 7C - STRINGER DIAPHRAGM WEB STRENGTHENING AT DIAPHRAGM CONNECTION PLATE-TO GIRDER WEB WITH EXISTING FATIGUE CRACKS TYPE D, S-38036	EACH	1	(1)																													1
9000-1074	REPAIR TYPE 7D - STRINGER DIAPHRAGM WEB STRENGTHENING AT DIAPHRAGM CONNECTION PLATE-TO GIRDER WEB WITHOUT EXISTING FATIGUE CRACKS TYPE D, S-38036	EACH	14	(1)																													14
9000-1075	REPAIR TYPE 7E - STRINGER DIAPHRAGM WEB STRENGTHENING AT DIAPHRAGM CONNECTION PLATE-TO-STRINGER WEB WITH EXISTING FATIGUE CRACKS TYPE D, S-38036	EACH	6	(1)																													6
9000-1076	REPAIR TYPE 7F - STRINGER DIAPHRAGM WEB STRENGTHENING AT DIAPHRAGM CONNECTION PLATE-TO-STRINGER WEB WITHOUT EXISTING FATIGUE CRACKS TYPE D, S-38036	EACH	1	(1)																													1
9000-1081	REPAIR TYPE 8A - GRIND TAPER IN BACKUP BAR TERMINATION, S-38036	EACH	16	(1)																													16
9000-1082	REPAIR TYPE 8B - GRIND TAPER IN BACKUP BAR SPLICE, S-38036	EACH	371	(1)																													371
9000-1083	REPAIR TYPE 8C - GRIND TAPER IN BACKUP BAR TERMINATIONS AT BOTH SIDES OF DRAIN HOLE, S-38036	EACH	41	(1)																													41
9000-1084	REPAIR TYPE 8D - GRIND TAPER IN BACKUP BAR SPLICE WHEN SPLICE IS LESS THAN 2-1/2" FROM TRANSVERSE STIFFENER PLATE, S-38036	EACH	6	(1)																													6
9000-1090	REPAIR TYPE 9 - CRACKED TACK WELD REMOVAL, S-38036	EACH	1	(1)																													1
9000-1100	REPAIR TYPE 10 - FLOORBEAM TRANSVERSE STIFFENER-TO-FLOORBEAM TOP FLANGE CRACKED WELD RETROFIT, S-38036	EACH	4	(1)																													4
9000-1110	REPAIR TYPE 11 - FLOORBEAM TRANSVERSE STIFFENER-TO-FLOORBEAM WEB CRACKED WELD RETROFIT, S-38036	EACH	3	(1)																													3
9000-1121	REPAIR TYPE 12A - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH EXISTING "K" TYPE CRACK (POSITIVE MOMENT REGION), S-38036	EACH	8	(1)																													8

NOTE:
(1) SEE SPECIAL PROVISIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 2

RECOMMENDED _____

SHEET 11 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																	
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1122	REPAIR TYPE 12B - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITHOUT EXISTING "K" TYPE CRACK (POSITIVE MOMENT REGION), S-38036	EACH	38	(1)																													38
9000-1123	REPAIR TYPE 12C - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	1	(1)																													1
9000-1124	REPAIR TYPE 12D - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITHOUT EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	1	(1)																													1
9000-1125	REPAIR TYPE 12E - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH OR WITHOUT EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	2	(1)																													2
9000-1126	REPAIR TYPE 12F - FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH OR WITHOUT EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	1	(1)																													1
9000-1131	REPAIR TYPE 13A - GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH EXISTING "K" TYPE CRACK (POSITIVE MOMENT REGION), S-38036	EACH	14	(1)																													14
9000-1132	REPAIR TYPE 13B - GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITHOUT EXISTING "K" TYPE CRACK (POSITIVE MOMENT REGION), S-38036	EACH	38	(1)																													38
9000-1133	REPAIR TYPE 13C - GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	2	(1)																													2
9000-1134	REPAIR TYPE 13D - GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITHOUT EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	4	(1)																													4
9000-1135	REPAIR TYPE 13G - GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH OR WITHOUT EXISTING "K" TYPE CRACK ADJACENT TOP FLANGE TRANSITION (POSITIVE MOMENT REGION), S-38036	EACH	1	(1)																													1
9000-1140	REPAIR TYPE 14 - REMOVE WELD REMNANTS AND WELDED ATTACHMENTS, S-38036	EACH	14	(1)																													14
9000-1151	REPAIR TYPE 15A - REMOVE PLUG WELDS, S-38036	EACH	2	(1)																													2
9000-1152	REPAIR TYPE 15B - REMOVE PLUG WELDS, S-38036	EACH	12	(1)																													12

NOTE:
(1) SEE SPECIAL PROVISIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 3

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 12 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1161	REPAIR TYPE 16E - STRINGER OUT OF PLANE DISPLACEMENT RETROFIT WITH DIAPHRAGM INTERMEDIATE SUPPORT STOOL (EXPANSION), S-38036	EACH	24	(1)																												24
9000-1162	REPAIR TYPE 16F - STRINGER OUT OF PLANE DISPLACEMENT RETROFIT WITH DIAPHRAGM INTERMEDIATE SUPPORT STOOL (FIXED), S-38036	EACH	32	(1)																												32
9000-1170	REPAIR TYPE 17 - REPAIR CRACKED OR MISSING WELD, S-38036	EACH	13	(1)																												13
9000-1180	REPAIR TYPE 18 - REMOVE PORTION OF LONGITUDINAL STIFFENER AND RETROFIT WITH BOLTED ANGLES, S-38036	EACH	1	(1)																												1
9000-1200	REPAIR TYPE 20 - CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS, S-38036	CF	5,724	(1)	12	1	5	173	--	1	--	126	4	8	875	98	183	3	5	--	500	--	7	6	1,867	799	36	17	11	847	51	89	--
9000-1210	REPAIR TYPE 21 - EPOXY INJECTION CRACK SEAL, S-38036	LF	2,288	(1)	36	9	--	--	5	9	27	100	265	165	112	--	118	26	111	--	--	--	124	83	158	636	--	--	--	45	11	248	--
9000-1220	REPAIR TYPE 22 - CLEAN TOP OF PIER CAP OR ABUTMENT SEAT, S-38036	LS	1	(1)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9000-1230	REPAIR TYPE 23 - PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER), S-38036	SY	1,624	(1)	3	1	2	50	--	1	--	38	2	3	245	29	52	1	3	--	141	--	4	3	519	223	11	6	4	237	15	31	--
9000-1240	REPAIR TYPE 24 - POINTING OF PIER MORTAR JOINTS FOR GRANITE CAP AND ROCK FACE STONES, S-38036	LF	838	(1)	--	--	--	--	--	--	--	218	50	70	--	--	--	--	--	--	--	--	--	--	400	100	--	--	--	--	--	--	--
9000-1250	REPAIR TYPE 25 - REPLACE MISSING AND REPAIR PIER GRANITE ROCK FACE STONES, S-38036	EACH	1	(1)	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9000-1260	REPAIR TYPE 26 - PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN), S-38036	SY	1,516	(1)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	168	222	--	--	--	--	--	--	--	--	186	490	450	--
9000-1301	REPAIR TYPE 30A - REPAIR DETERIORATED GIRDER WEB WITH WELDED SCAB PLATES, S-38036	EACH	1	(1)																												1
9000-1303	REPAIR TYPE 30C - REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES, S-38036	EACH	1	(1)																												1

NOTE:
(1) SEE SPECIAL PROVISIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 4

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 13 OF 164

S - 38036

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																	
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1304	REPAIR TYPE 30D - REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES, S-38036	EACH	1	(1)																													1
9000-1305	REPAIR TYPE 30E - REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES, S-38036	EACH	1	(1)																													1
9000-1306	REPAIR TYPE 30F - REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES, S-38036	EACH	1	(1)																													1
9000-1307	REPAIR TYPE 30G - STRENGTHENING GIRDER BOTTOM FLANGE WITH BOLTED COVER PLATE, S-38036	EACH	1	(1)																													1
9000-1311	REPAIR TYPE 31A - REPAIR DETERIORATED FLOORBEAM WEB WITH BOLTED ANGLES, S-38036	EACH	1	(1)																													1
9000-1312	REPAIR TYPE 31B - REPAIR DETERIORATED FLOORBEAM STIFFENER WITH BOLTED ANGLES, S-38036	EACH	1	(1)																													1
9000-1313	REPAIR TYPE 31C - REPAIR DETERIORATED FLOORBEAM STIFFENER WITH NEW STIFFENER PLATE AND BOLTED ANGLES, S-38036	EACH	2	(1)																													2
9000-1314	REPAIR TYPE 31D - REPAIR DETERIORATED FLOORBEAM STIFFENER WITH NEW WELDED STIFFENER PLATE, S-38036	EACH	1	(1)																													1
9000-1315	REPAIR TYPE 31E - REPAIR DETERIORATED FLOORBEAM STIFFENER WITH NEW WELDED STIFFENER PLATE, S-38036	EACH	3	(1)																													3
9000-1316	REPAIR TYPE 31F - REPAIR DETERIORATED FLOORBEAM WEB WITH WELDED SCAB PLATE, S-38036	EACH	1	(1)																													1
9000-1320	REPAIR TYPE 32 - INSTALL NEW ACCESS HATCH IN FLOORBEAM BOTTOM PLATE, S-38036	EACH	4	(1)																													4
9000-1331	REPAIR TYPE 33A - REPAIR DETERIORATED AREAS OF DIAPHRAGMS WITH BOLTED COVER PLATES, S-38036	EACH	3	(1)																													3
9000-1332	REPAIR TYPE 33B - REPAIR CORROSION HOLES IN DIAPHRAGMS WITH WELDED SCAB PLATES, S-38036	EACH	10	(1)																													10

NOTE:
(1) SEE SPECIAL PROVISIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

QUANTITIES 5

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 14 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1341	REPAIR TYPE 34A - REPLACE SHORT, LOOSE, MISSING, OR DETERIORATED BOLT WITH NEW HS BOLT, S-38036	EACH	26	(1)																													26
9000-1342	REPAIR TYPE 34F - REPLACE DETERIORATED BOLT WITH NEW HS BOLT IN FLOORBEAM BOTTOM FLANGE-TO-TIE GIRDER BOTTOM PLATE CONNECTION (SPAN 21), S-38036	EACH	333	(1)																													333
9000-1344	REPAIR TYPE 34G - REPLACE DETERIORATED BOLT WITH NEW HS BOLT IN GIRDER BOTTOM FLANGE SPLICE PLATE, S-38036	EACH	68	(1)																													68
9000-1345	REPAIR TYPE 34S - REPLACE DETERIORATED BOLT WITH NEW HS BOLT IN TIE GIRDER BOTTOM PLATE SPLICE (SPAN 21), S-38036	EACH	491	(1)																													491
9000-1346	REPAIR TYPE 34T - REPLACE DETERIORATED OR MISSING BOLT WITH NEW HS BOLT IN LATERAL BRACING TOP GUSSET PLATE, S-38036	EACH	111	(1)																													111
9000-1347	REPAIR TYPE 34B - REPLACE DETERIORATED OR MISSING BOLT WITH NEW HS BOLT IN LATERAL BRACING BOTTOM GUSSET PLATE, S-38036	EACH	119	(1)																													119
9000-1348	REPAIR TYPE 34C - REPLACE MISSING NUTS AND WASHERS AT INTERIOR ACCESS HATCH COVERS IN ARCH SPAN MEMBERS, S-38036	EACH	13	(1)																													13
9000-1351	REPAIR TYPE 35A - REPLACE STRINGER ANCHOR BOLTS AT STRINGER-TO-FLOORBEAM CONNECTION, S-38036	EACH	5	(1)																													5
9000-1352	REPAIR TYPE 35B - REPLACE STRINGER ANCHOR BOLTS AT STRINGER-TO-FLOORBEAM CONNECTION, S-38036	EACH	20	(1)																													20
9000-1353	REPAIR TYPE 35C - REPLACE STRINGER ANCHOR BOLTS AND STRINGER BEARING PLATE AT STRINGER-TO-FLOORBEAM CONNECTION, S-38036	EACH	1	(1)																													1
9000-1354	REPAIR TYPE 35D - REPLACE STRINGER ANCHOR BOLTS AND STRINGER BEARING PLATE AT STRINGER-TO-FLOORBEAM CONNECTION, S-38036	EACH	2	(1)																													2
9000-1355	REPAIR TYPE 35E - REPLACE STRINGER ANCHOR BOLTS AND STRINGER BEARING PLATE AT STRINGER-TO-FLOORBEAM CONNECTION, S-38036	EACH	8	(1)																													8
9000-1360	REPAIR TYPE 36 - REPAIR DETERIORATED STRINGER DIAPHRAGM AREA, S-38036	EACH	1	(1)																													1

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(1) SEE SPECIAL PROVISIONS

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REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 6

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 15 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																	
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1381	REPAIR TYPE 38T - REPLACE TOP DETERIORATED GUSSET PLATE FOR LOWER LATERAL BRACING, S-38036	EACH	4	(1)																													4
9000-1382	REPAIR TYPE 38B - REPLACE BOTTOM DETERIORATED GUSSET PLATE FOR LOWER LATERAL BRACING, S-38036	EACH	3	(1)																													3
9000-1391	REPAIR TYPE 39A - REPLACE DETERIORATED LOWER LATERAL SHEAR BRACING, S-38036	EACH	1	(1)																													1
9000-1392	REPAIR TYPE 39B - REPAIR DETERIORATED LOWER LATERAL BRACING WITH WELDED SCAB PLATE, S-38036	EACH	2	(1)																													2
9000-1401	REPAIR TYPE 40A - REPLACE SIGN SUPPORT CANTILEVER BRACKET, S-38036	LS	1	(1)																													1
9000-1402	REPAIR TYPE 40B - RETROFIT SIGN SUPPORT CANTILEVER BRACKET FOR FATIGUE CRACKING, S-38036	EACH	8	(1)																													8
9000-1403	REPAIR TYPE 40C - REINFORCE SIGN SUPPORT CANTILEVER BRACKET BOTTOM FLANGE, S-38036	EACH	2	(1)																													2
9000-1411	REPAIR TYPE 41A - REPLACE GIRDER BOTTOM FLANGE SPLICE PLATES AND BOLTS, S-38036	EACH	9	(1)																													9
9000-1412	REPAIR TYPE 41B - REPLACE GIRDER BOTTOM FLANGE SPLICE PLATES AND BOLTS, S-38036	EACH	1	(1)																													1
9000-1420	REPAIR TYPE 42 - INSTALL SHIM PLATES BETWEEN STRINGER-TO-FLOORBEAM BEARING AREA GAP, S-38036	EACH	2	(1)																													2
9000-1441	REPAIR TYPE 44A - MODIFY EXISTING ACCESS HATCH COVER ON TIE GIRDER, S-38036	EACH	28	(1)																													28
9000-1443	REPAIR TYPE 44C - MODIFY EXISTING ACCESS HATCH COVER ON ARCH RIB, S-38036	EACH	4	(1)																													4
9000-1444	REPAIR TYPE 44D - MODIFY EXISTING ACCESS HATCH COVER ON ARCH RIB, S-38036	EACH	6	(1)																													6

NOTE:
(1) SEE SPECIAL PROVISIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 7

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 16 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																		
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1451	REPAIR TYPE 45A - REPLACE EXISTING ACCESS HATCH COVER ON ARCH RIB WITH NEW HATCH COVER SECURED BY LATCH ASSEMBLY, S-38036	EACH	4	(1)																													4
9000-1452	REPAIR TYPE 45B - REPLACE EXISTING ACCESS HATCH COVER AT END OF TIE GIRDER WITH NEW HATCH COVER SECURED BY LATCH ASSEMBLY, S-38036	EACH	4	(1)																													4
9000-1453	REPAIR TYPE 45C - REPLACE EXISTING ACCESS HATCH COVER ON ARCH RIB WITH NEW HATCH COVER SECURED BY BOLTS, S-38036	EACH	18	(1)																													18
9000-1454	REPAIR TYPE 45D - REPLACE EXISTING ACCESS HATCH COVER ON END FLOORBEAM WITH NEW HATCH COVER SECURED BY LATCH ASSEMBLY, S-38036	EACH	2	(1)																													2
9000-1470	REPAIR TYPE 47 - REMOVE UNUSED SIGN SUPPORT BRACKETS, S-38036	LS	1	(1)																													1
9000-1481	REPAIR TYPE 48A - DRILL CRACK ARREST HOLES IN TOP OF INSPECTION WALKWAY END PLATE , S-38036	EACH	15	(1)																													15
9000-1482	REPAIR TYPE 48B - DRILL TWO CRACK ARREST HOLES IN MIDDLE OF INSPECTION WALKWAY END PLATE , S-38036	EACH	3	(1)																													3
9000-1483	REPAIR TYPE 48C - REPLACE CONNECTION PLATE FOR INSPECTION WALKWAY LADDER, S-38036	EACH	1	(1)																													1
9000-1484	REPAIR TYPE 48D - REPAIR HOLE IN INSPECTION WALKWAY SUPPORT CHANNEL, S-38036	EACH	1	(1)																													1
9000-1510	REPAIR TYPE 51 - INSTALL NEW SUSPENDER ROPE NYLATRON PLASTIC PROTECTIVE SLEEVES, S-38036	EACH	26	(1)																													26
9000-1551	REPAIR TYPE 55A - REPLACE EXISTING EXPANSION BEARING WITH NEW 300 TO 499 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	10	(1)	--	--		2	--		--	--		--	6		--	--	--		2	--		--	--	--	--		--	--	--	--	--	--
9000-1552	REPAIR TYPE 55B - REPLACE EXISTING EXPANSION BEARING WITH NEW 500 TO 599 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	11	(1)	--	--		4	--		--	--		--	--		4	--	--		2	--		--	--	--	--		--	1	--	--	--
9000-1553	REPAIR TYPE 55C - REPLACE EXISTING EXPANSION BEARING WITH NEW 600 TO 699 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	7	(1)	--	--		2	--		--	4		--	--		1	--	--		--	--		--	--	--	--		--	--	--	--	--
9000-1554	REPAIR TYPE 55D - REPLACE EXISTING EXPANSION BEARING WITH NEW 700 TO 799 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	27	(1)	4	--		--	--		--	--		--	2		4	--	--		4	--		--	4	4	--		--	5	--	--	--

NOTE:
(1) SEE SPECIAL PROVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 8

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 17 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1555	REPAIR TYPE 55E - REPLACE EXISTING EXPANSION BEARING WITH NEW 800 TO 899 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	13	(1)	--	--		--	--		--	4		--	--		--	--	--		2	--		--	--	--	--		--	3	--	4	--
9000-1556	REPAIR TYPE 55F - REPLACE EXISTING EXPANSION BEARING WITH NEW 900 TO 1099 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	5	(1)	--	--		2	--		--	--		--	2		--	--	--		--	--		--	--	--	--		--	--	--	1	--
9000-1557	REPAIR TYPE 55G - REPLACE EXISTING EXPANSION BEARING WITH NEW 1400 TO 1550 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	16	(1)	--	2		--	4		4	--		--	--		--	2	4		--	--		--	--	--	--		--	--	--	--	--
9000-1558	REPAIR TYPE 55H - REPLACE EXISTING EXPANSION BEARING WITH NEW 1700 TO 2000 KIP HIGH-LOAD MULTI-ROTATIONAL DISC BEARING AND STOOL, S-38036	EACH	20	(1)	--	2		--	--		--	--		--	--		--	2	--		--	4		4	--	--	4		4	--	--	--	--
9000-1561	REPAIR TYPE 56A - REPLACE EXISTING EXPANSION BEARING WITH NEW HIGH-LOAD MULTI-ROTATIONAL POT BEARING AND STOOL, S-38036	EACH	2	(1)	--	--		--	--		--	--		2	--		--	--	--		--	--		--	--	--	--		--	--	--	--	--
9000-1562	REPAIR TYPE 56B - REPLACE EXISTING EXPANSION BEARING WITH NEW HIGH-LOAD MULTI-ROTATIONAL POT BEARING AND STOOL, S-38036	EACH	2	(1)	--	--		--	--		--	--		2	--		--	--	--		--	--		--	--	--	--		--	--	--	--	--
9000-1570	REPAIR TYPE 57 - CLEAN AND LUBRICATE BEARINGS, S-38036	EACH	4	(1)	--	--		--	--		--	--		--	--		--	--	--		--	--		--	2	2	--		--	--	--	--	--
9000-1601	REPAIR TYPE 60A - TYPE 2 BRIDGE DECK SPALL REPAIR, S-38036	SF	3,480	(1)																												3,480
9000-1602	REPAIR TYPE 60B - BRIDGE DECK UNDERSIDE CONCRETE SPALL REPAIR, S-38036	SF	344	(1)																												344
9000-1603	REPAIR TYPE 60C - TYPE 3 BRIDGE DECK SPALL REPAIR, S-38036	SF	300	(1)																												300
9000-1610	REPAIR TYPE 61 - REPLACE JOINT SEALS IN TRANSVERSE CONSTRUCTION JOINTS, S-38036	LF	3,520	(1)																												3,520
9000-1621	REPAIR TYPE 62A - INSTALL NEW NEOPRENE STRIP SEAL EXPANSION DAM SEALS, S-38036	LF	1,879	(1)																												1,879
9000-1622	REPAIR TYPE 62B - INSTALL NEW NEOPRENE STRIP SEAL EXPANSION DAM SEALS, S-38036	LF	243	(1)																												243
9000-1630	REPAIR TYPE 63 - REPLACE STEEL PLATE TOOTH EXPANSION DAM DRAINAGE TROUGH SYSTEM, S-38036	LF	105	(1)																												105

NOTE:
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S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 9

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

SHEET 18 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																		
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1640	REPAIR TYPE 64 - REPLACE BRIDGE MEDIAN BARRIER LONGITUDINAL JOINT SEAL, S-38036	LF	3,800	(1)																													3,800
9000-1650	REPAIR TYPE 65 - HMWM SEALING OF CRACKS IN BRIDGE DECK, S-38036	SY	21,308	(1)																													21,308
9000-1660	REPAIR TYPE 66 - BRIDGE BARRIER AND MEDIAN BARRIER CONCRETE SPALL/DELAMINATION REPAIR, S-38036	SF	344	(1)																													344
9000-1670	REPAIR TYPE 67 - BRIDGE BARRIER AND MEDIAN BARRIER CONCRETE CRACK REPAIR, S-38036	LF	7,784	(1)																													7,784
9000-1680	REPAIR TYPE 68 - BRIDGE BARRIER ALUMINUM RAILING REPAIR, S-38036	EACH	620	(1)																													620
9000-1691	REPAIR TYPE 69A - BRIDGE DECK SCARIFICATION, 1" DEPTH, S-38036	SY	2,800	(1)																													2,800
9000-1692	REPAIR TYPE 69B - CONCRETE BRIDGE DECK SURFACE PREPARATION USING HYDRODEMOLITION, S-38036	SY	2,800	(1)																													2,800
9000-1693	REPAIR TYPE 69C - PLACE NEW LATEX-MODIFIED CONCRETE BRIDGE DECK WEARING SURFACE, 1-1/4" DEPTH, S-38036	SY	2,800	(1)																													2,800
9000-1694	REPAIR TYPE 69D - PLACE NEW LATEX-MODIFIED CONCRETE BRIDGE DECK WEARING SURFACE, VARIABLE DEPTH, S-38036	CY	60	(1)																													60
9000-1695	REPAIR TYPE 69E - TEXTURIZING CONCRETE BRIDGE DECK SURFACE WITH TRANSVERSE SAWED GROOVES, S-38036	SY	2,800	(1)																													2,800
9000-1696	REPAIR TYPE 69F -REPAIR BRIDGE DECK LATEX OVERLAY, S-38036	SF	300	(1)																													300
9000-1711	REPAIR TYPE 71A - REPLACE MISSING DOWNSPOUT CLEAN OUT CAP, S-38036	EACH	2	(1)							1										1												
9000-1712	REPAIR TYPE 71B - INSTALL NEW 45 DEGREE LATERAL CLEAN OUT PIPE WITH PLUG IN DOWNSPOUT PIPE, S-38036	EACH	9	(1)		2	2		1		1						2										1						
9000-1713	REPAIR TYPE 71C - REPLACE CRACKED GROOVE TYPE DOWNSPOUT COUPLING WITH NEW GROOVE TYPE COUPLING, S-38036	EACH	4	(1)																							1	2			1		

NOTE:
(1) SEE SPECIAL PROVISIONS

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 10

RECOMMENDED _____

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APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																		
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1714	REPAIR TYPE 71D - REPAIR AND REALIGN DOWNSPOUTS WITH UNDERGROUND DRAINAGE PIPE, S-38036	EACH	4	(1)																										2	2	
9000-1721	REPAIR TYPE 72A - REPOSITION AND REPLACE DOWNSPOUT PIPE SUPPORT, ANCHOR BOLTS, AND/OR U-BOLT, S-38036	EACH	1	(1)											1																	
9000-1722	REPAIR TYPE 72B - REPLACE MISSING DOWNSPOUT PIPE SUPPORT, ANCHOR BOLT, AND/OR U-BOLT, S-38036	EACH	2	(1)																						1	1					
9000-1740	REPAIR TYPE 74 - CLEAN AND FLUSH SCUPPERS AND DOWNSPOUTS, S-38036	LS	1	(1)																												
9000-1750	REPAIR TYPE 75 - CLEAN, FLUSH, VIDEO, AND REPAIR UNDERGROUND DRAINAGE SYSTEM, S-38036	DOLLA	55,000	(1)																												55,000
9000-1760	REPAIR TYPE 76 - CLEAN AND FLUSH BRIDGE DECK, S-38036	LS	1	(1)																												
9000-1771	REPAIR TYPE 77A - REPAIR LIGHT POLES, S-38036	EACH	24	(1)																												24
9000-1772	REPAIR TYPE 77B - REPLACE ELECTRICAL BOX COVER AT LIGHT POLES WITH NEW GALVANIZED COVER, S-38036	EACH	13	(1)																												13
9000-1773	REPAIR TYPE 77C - REPLACE LIGHT POLE, S-38036	LS	1	(1)																												1
9000-1781	REPAIR TYPE 78A - INSTALL BIRD SCREENS OVER DRAIN HOLES IN GIRDERS, S-38036	EACH	53	(1)																												53
9000-1782	REPAIR TYPE 78B - INSTALL BIRD SCREENS OVER DRAIN HOLES IN FLOORBEAMS, S-38036	EACH	4	(1)																												4
9000-1790	REPAIR TYPE 79 - REMOVAL OF BRIDGE HEALTH MONITORING SYSTEM, S-38036	LS	1	(1)																												
9000-1801	REPAIR TYPE 80A - INSTALL NAVIGATION PLACARD AT PIER, S-38036	EACH	2	(1)																					1	1						
9000-1802	REPAIR TYPE 80B - INSTALL NAVIGATION PLACARD ON NAVIGATION LIGHT DOWN ROD , S-38036	EACH	2	(1)									1	1																		

NOTE:
(1) SEE SPECIAL PROVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 11

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 20 OF 164

S - 38036

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED																																	
ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-1810	REPAIR TYPE 81 - REPAIR ELECTRICAL CONDUIT, S-38036	EACH	6	(1)																													6
9000-1820	REPAIR TYPE 82 - DRILL DRAIN HOLES IN ARCH SPAN MEMBERS, S-38036	EACH	1	(1)																													1
9000-1840	REPAIR TYPE 84 - CLEAN BIRD RELATED DIRT AND DEBRIS FROM INTERIOR ARCH SPAN MEMBERS, S-38036	CF	40	(1)																													40
9000-1850	REPAIR TYPE 85K - INSTALL NEW SIGNS WITH NEW SIGN SUPPORT BRACKETS, S-38036	EACH	6	(1)																													6
9000-1851	REPAIR TYPE 85A - REPLACE ANCHOR BOLTS AT SIGN COLUMN BASE PLATE, S-38036	EACH	64	(1)																													64
9000-1852	REPAIR TYPE 85B - SPOT PAINT GALVANIZED SURFACE OF SIGN STRUCTURE, S-38036	DOLLA	10,000	(1)																													10,000
9000-1853	REPAIR TYPE 85C - REPLACE BOLTS ON STRUT-TO- SIGN COLUMN CONNECTION, S-38036	EACH	4	(1)																													4
9000-1854	REPAIR TYPE 85D - REPLACE CORRODED TYPE LB CONDUIT BODY, S-38036	EACH	1	(1)																													1
9000-1855	REPAIR TYPE 85E - REPLACE TRUSS CHORD U-BOLTS AT SIGN SUPPORT TOWERS, S-38036	EACH	10	(1)																													10
9000-1856	REPAIR TYPE 85F - REPLACE BOLTS AT SIGN TRUSS CONNECTIONS AND CHORD SPLICES, S-38036	EACH	1,000	(1)																													1,000
9000-1857	REPAIR TYPE 85G - REPLACE SIGN CONNECTION U-BOLTS AT TRUSS CHORD, S-38036	EACH	12	(1)																													12
9000-1858	REPAIR TYPE 85H - DRILL OVERSIZE DRAIN HOLE IN VERTICAL SIGN SUPPORT, S-38036	EACH	2	(1)																													2
9000-1859	REPAIR TYPE 85J - REPLACE ALUMINUM BOLT WITH GALVANIZED STEEL BOLT FOR ALUMINUM SIGN CLIP, S-38036	EACH	80	(1)																													80
9000-1980	REPAIR TYPE 98 - SOUND CURTAINS, S-38036	LS	1	(1)																													1

NOTE:
(1) SEE SPECIAL PROVISIONS

DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E PENNSYLVANIA

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 12

RECOMMENDED _____

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APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED

ITEM NO	ITEM	UNIT	TOTAL	LEGEND	ABUT 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24	PIER 25	PIER 26	PIER 27	ABUT 2	SUPERSTR
9000-2000	UNFORESEEN PAINTING OF STRUCTURAL STEEL. S-38036	DOLLA	200,000	(1)																													200,000
9056-1000	UNFORESEEN STRUCTURAL STEEL REPAIRS. S-38036	DOLLA	500,000	(1)																													500,000
9070-1900	REPAIR TYPE 90 - PAINTING EXISTING AND NEW STRUCTURAL STEEL USING ORGANIC ZINC-RICH COATING SYSTEM, S-38036	LS	1	(1)																													1
9070-1920	REPAIR TYPE 92 - ZONE PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR SURFACES OF ARCH SPAN MEMBERS, S-38036	LS	1	(1)																													1
9070-1930	REPAIR TYPE 93 - PAINTING EXISTING AND NEW STRUCTURAL STEEL USING ORGANIC ZINC-RICH PRIMER ONLY, S-38036	LS	1	(1)																													1
9070-1940	REPAIR TYPE 94 - ZONE PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS, S-38036	LS	1	(1)																													1
9070-1950	REPAIR TYPE 95 - PENETRATING SEALER AND CAULKING APPLICATION, S-38036	DOLLA	355,000	(1)																													355,000
9070-1970	REPAIR TYPE 97 - PAINTING EXISTING STEEL GIRDER BOTTOM FLANGES OVER CSX RAILROAD, S-38036	LS	1	(1)																													1
9071-1910	REPAIR TYPE 91 - OVER COATING EXISTING ARCH SUSPENDER CABLES USING A HIGH-BUILD ACRYLIC COATING SYSTEM, S-38036	LS	1	(1)																													1
9071-1960	REPAIR TYPE 96 - SPOT PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR SURFACES OF ARCH SPAN MEMBERS, S-38036	SF	800	(1)																													800
9073-1001	DISPOSAL OF BRIDGE WASTE, S-38036	LS	1	(1)																													1
9075-1001	CONTAINMENT, S-38036	LS	1	(1)																													1
9077-1001	WORKER HEALTH AND SAFETY, S-38036	LS	1	(1)																													1
9090-1100	TEMPORARY SUPPORT AND JACKING OF SUPERSTRUCTURE FOR BEARING REPLACEMENTS, S-38036	LS	1	(1)																													1

NOTE:
(1) SEE SPECIAL PROVISIONS

PAINT QUANTITIES - FOR INFORMATION ONLY:
REPAIR TYPE 90 = 1,416,660 SF
REPAIR TYPE 91 = 7,140 SF
REPAIR TYPE 92 = 26,145 SF
REPAIR TYPE 93 = 2,100 SF
REPAIR TYPE 94 = 12,600 SF

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
QUANTITIES 13

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

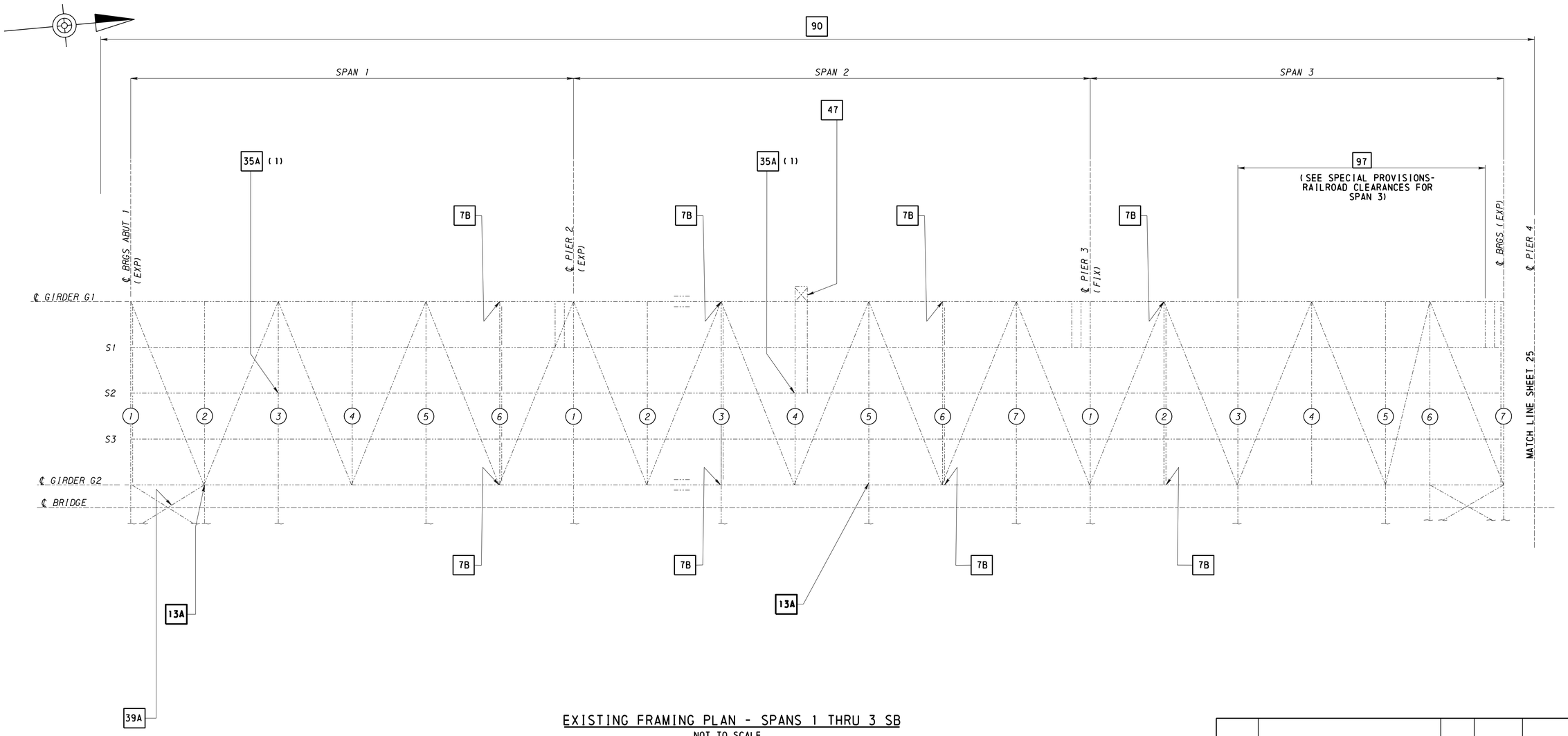
DESIGNED BY	JRH
DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 22 OF 164

S - 38036

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EXISTING FRAMING PLAN - SPANS 1 THRU 3 SB

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

33 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

(1) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 STRINGER DESIGNATION

13C INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED



REPAIR TYPE 47

REMOVE UNUSED SIGN SUPPORT BRACKETS
NOT TO SCALE
SIGN BRACKET AT GIRDER G4 SHOWN
SIGN BRACKET AT GIRDER G1 SIMILAR

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

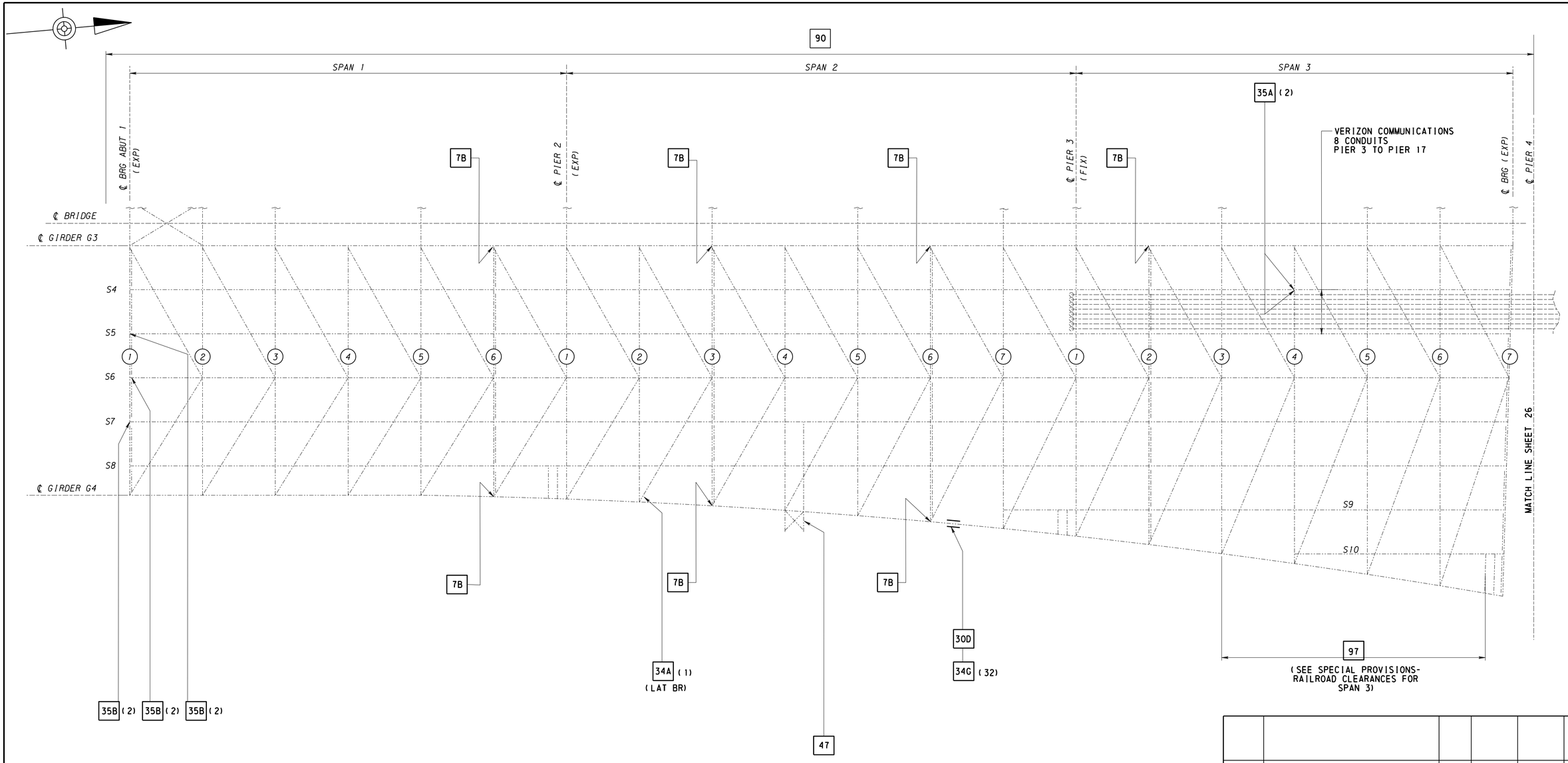
FRAMING PLAN SPANS 1 THRU 3 SB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 23 OF 164

S - 38036



EXISTING FRAMING PLAN - SPANS 1 THRU 3 NB

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S2 STRINGER DESIGNATION

33 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

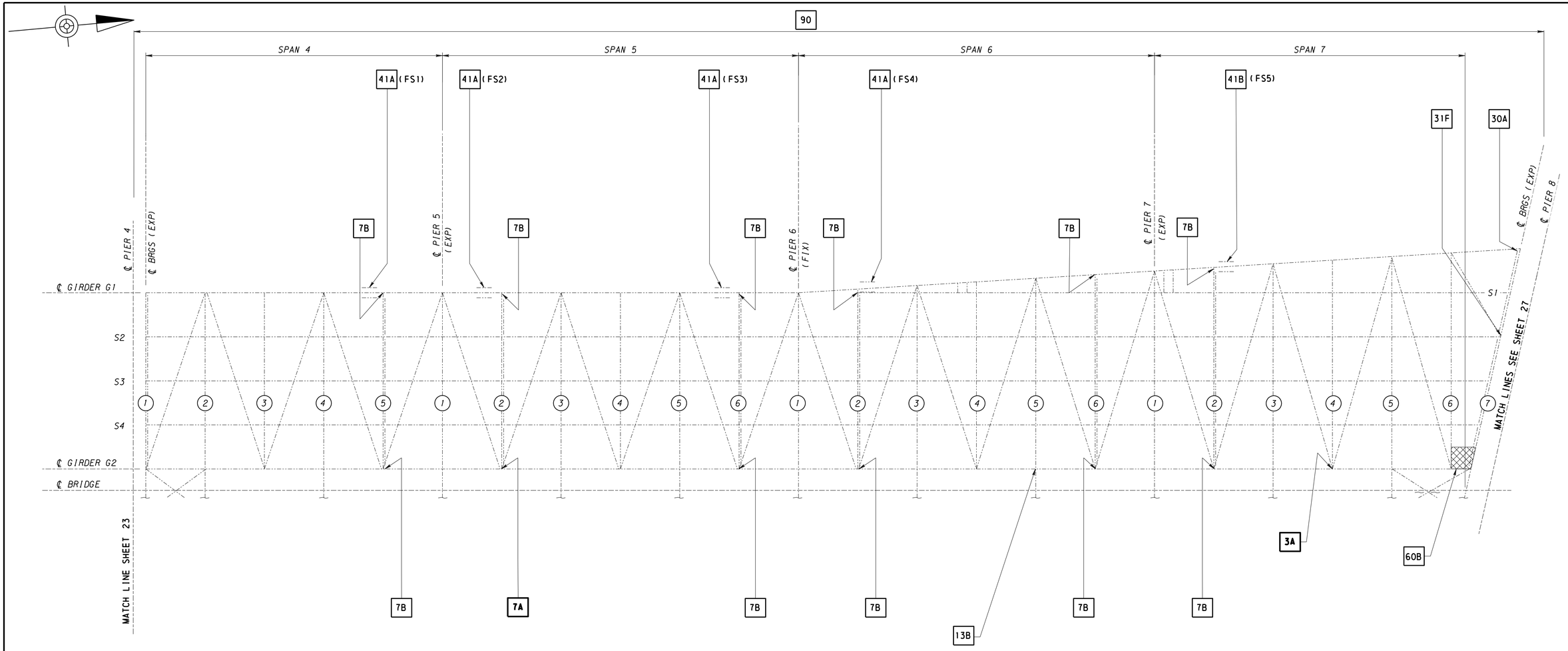
FRAMING PLAN SPANS 1 THRU 3 NB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 24 OF 164

S - 38036



EXISTING FRAMING PLAN - SPANS 4 THRU 7 SB

NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED AND/OR DELAMINATION CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK
- (3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*
- S2 *STRINGER DESIGNATION*
- [33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
- [7A] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

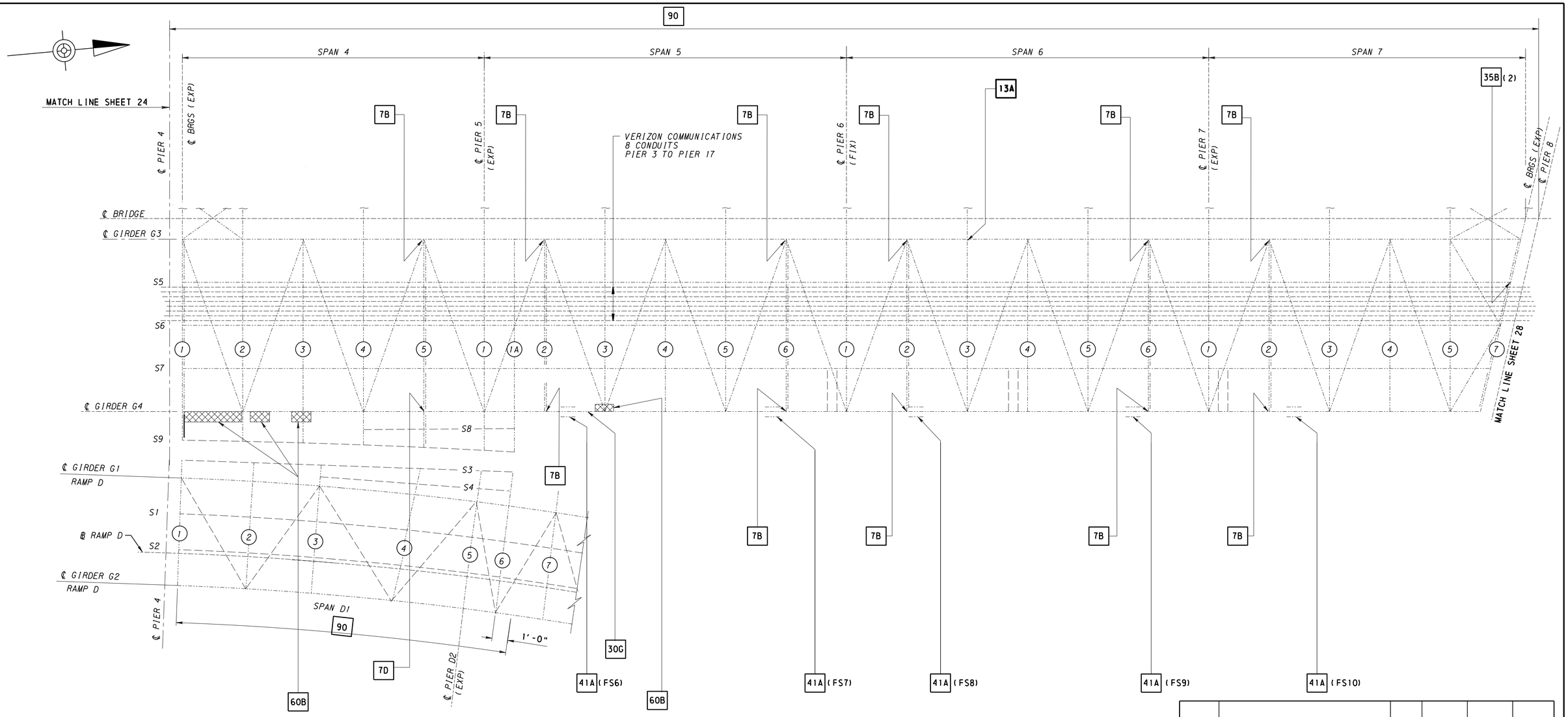
FRAMING PLAN SPANS 4 THRU 7 SB

RECOMMENDED _____

SHEET 25 OF 164

S - 38036

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EXISTING FRAMING PLAN - SPANS 4 THRU 7 NB W/RAMP D

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED AND/OR DELAMINATION CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK
- (3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*
- *S1* *STRINGER DESIGNATION*
- 33 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
- 13C INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 4 THRU 7 NB W/RAMP D

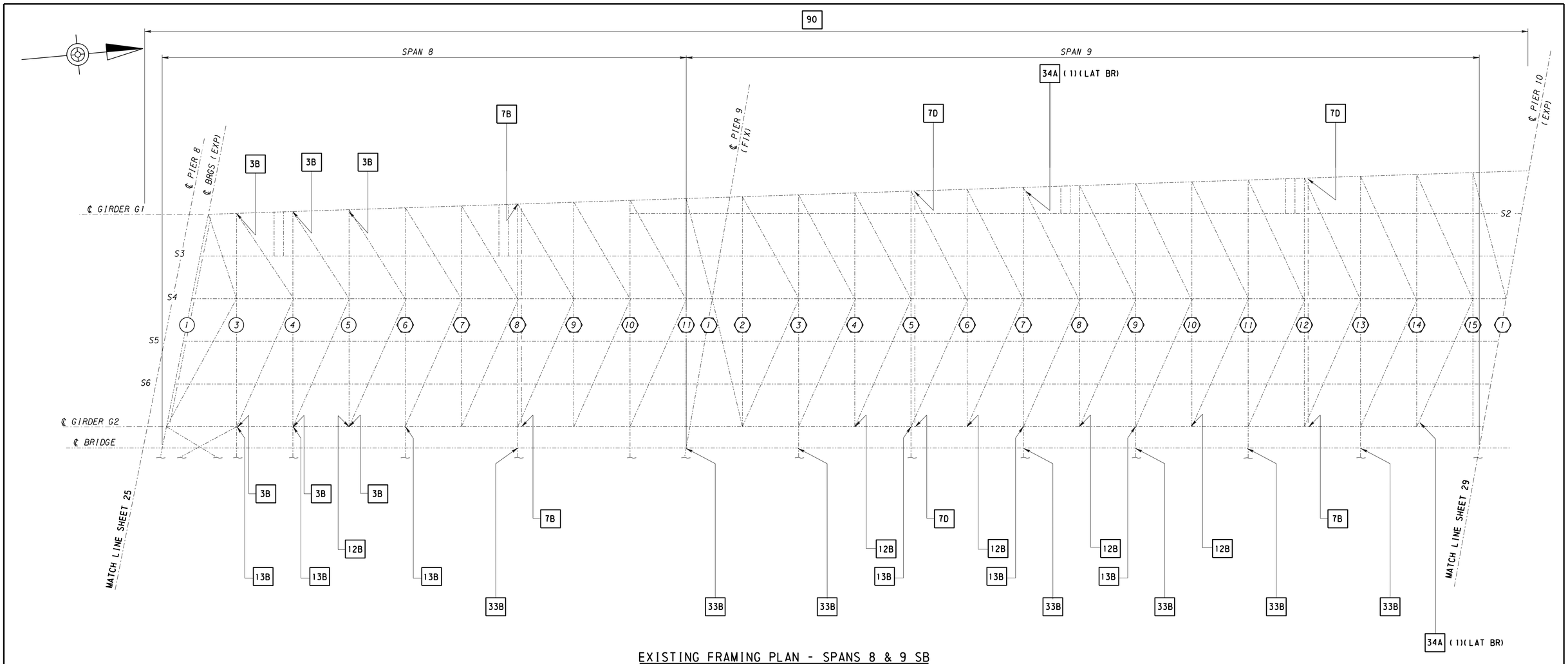
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

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DRAWN BY	MEG
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RECOMMENDED _____

SHEET 26 OF 164

S - 38036



EXISTING FRAMING PLAN - SPANS 8 & 9 SB

NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(6) *INDICATES FLOORBEAM DESIGNATION (TRUSS TYPE)*

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 *STRINGER DESIGNATION*

[33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 8 & 9 SB

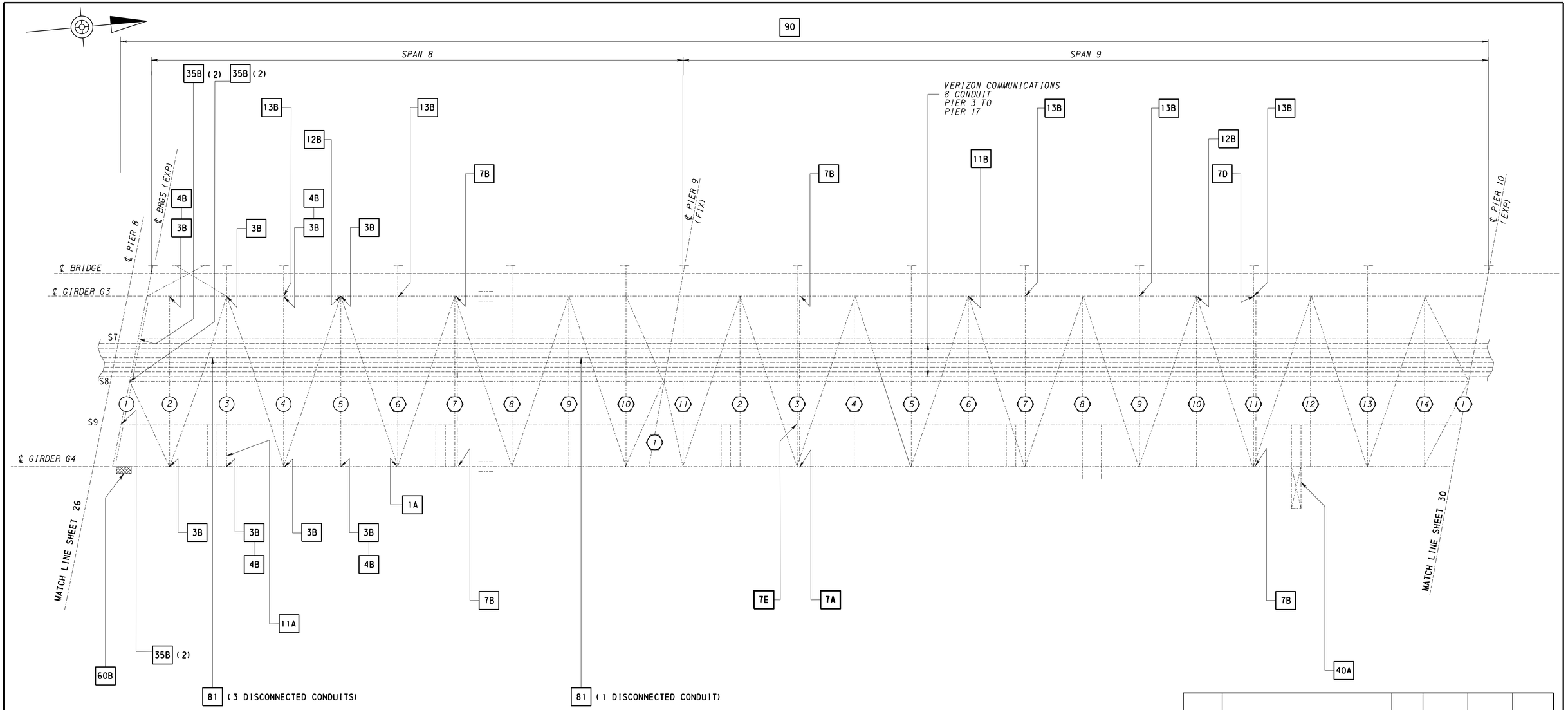
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DRAWN BY	MEG
CHECKED BY	DAM

RECOMMENDED _____

SHEET 27 OF 164

S - 38036

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EXISTING FRAMING PLAN - SPANS 8 & 9 NB

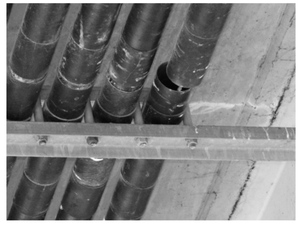
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NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(6)	INDICATES FLOORBEAM DESIGNATION (TRUSS TYPE)
(3)	FLOORBEAM DISIGNATION (PLATE GIRDER TYPE)
S1	STRINGER DESIGNATION
33	INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
7A	INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)
(1)	INDICATES NUMBER OF BOLTS BEING REPLACED





REPAIR TYPE 81

REPAIR ELECTRICAL CONDUIT

DESIGNED BY	DAM
DRAWN BY	MEG
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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

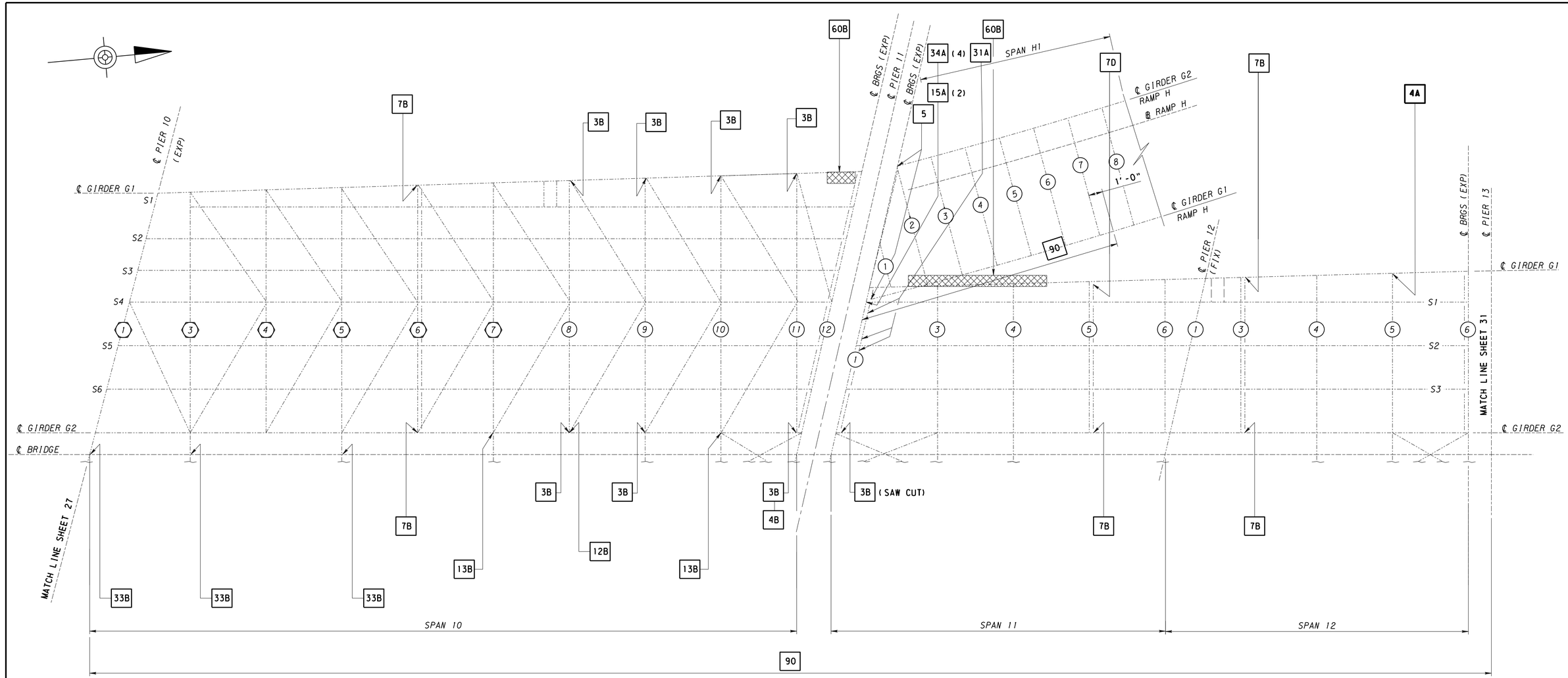
FRAMING PLAN SPANS 8 & 9 NB

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 28 OF 164

S - 38036



EXISTING FRAMING PLAN - SPANS 10 THRU 12 SB W/ RAMP H

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED AND/OR DELAMINATION CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK
- (6) INDICATES FLOORBEAM DESIGNATION (TRUSS TYPE)
- (3) FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)
- S1 STRINGER DESIGNATION
- [33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
- [4A] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 10 THRU 12 SB W/RAMP H

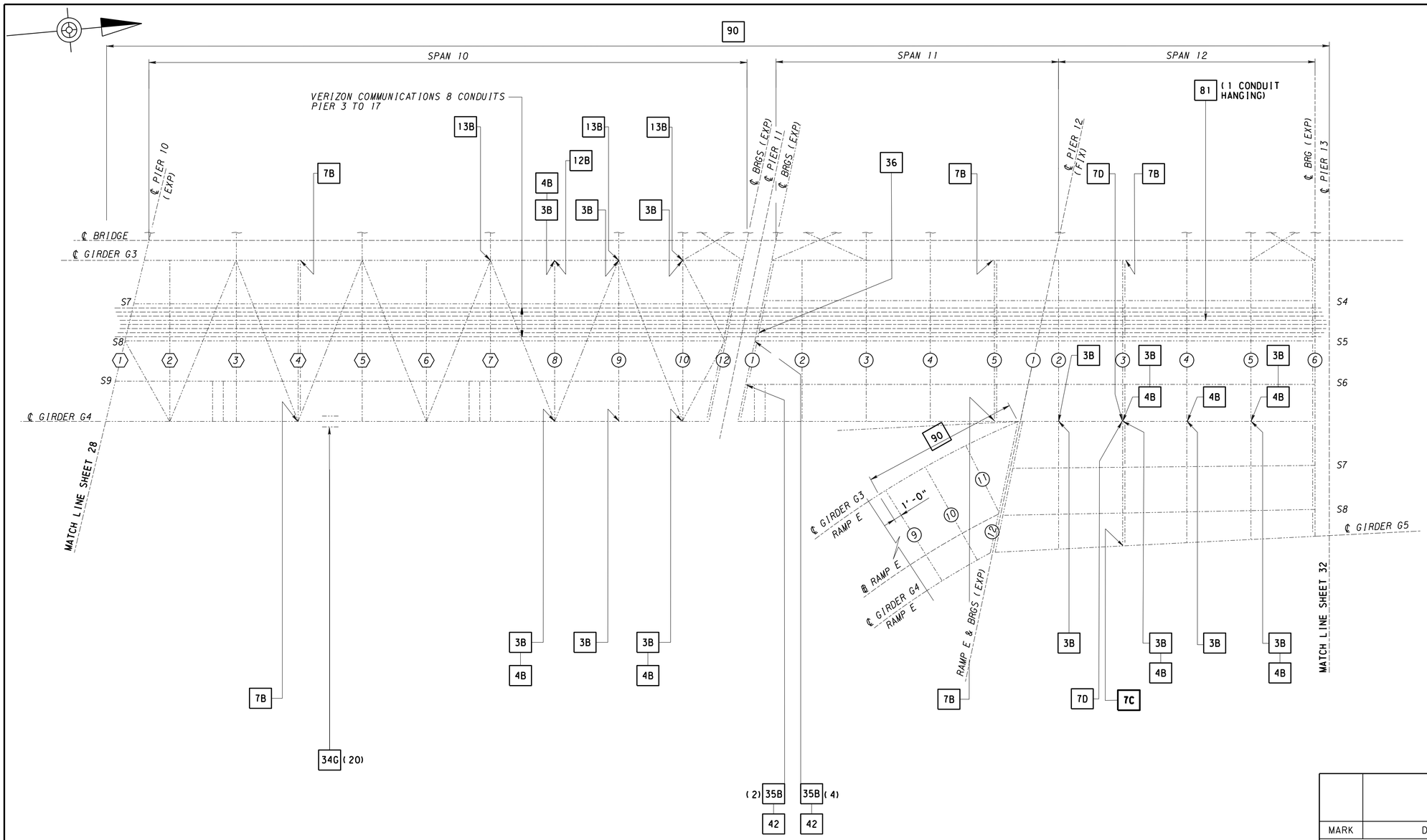
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 29 OF 164

S - 38036

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EXISTING FRAMING PLAN - SPANS 10 THRU 12 NB W/ RAMP E

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL BEARING ROCKER REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3)	FLOOR BEAM DESIGNATION (PLATE GIRDER TYPE)
⟨3⟩	FLOORBEAM DESIGNATION (TRUSS TYPE)
S2	STRINGER DESIGNATION
33	INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
7C	INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)
(6)	INDICATES NUMBER OF BOLTS BEING REPLACED

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 10 THRU 12 NB W/RAMP E

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 30 OF 164

S - 38036

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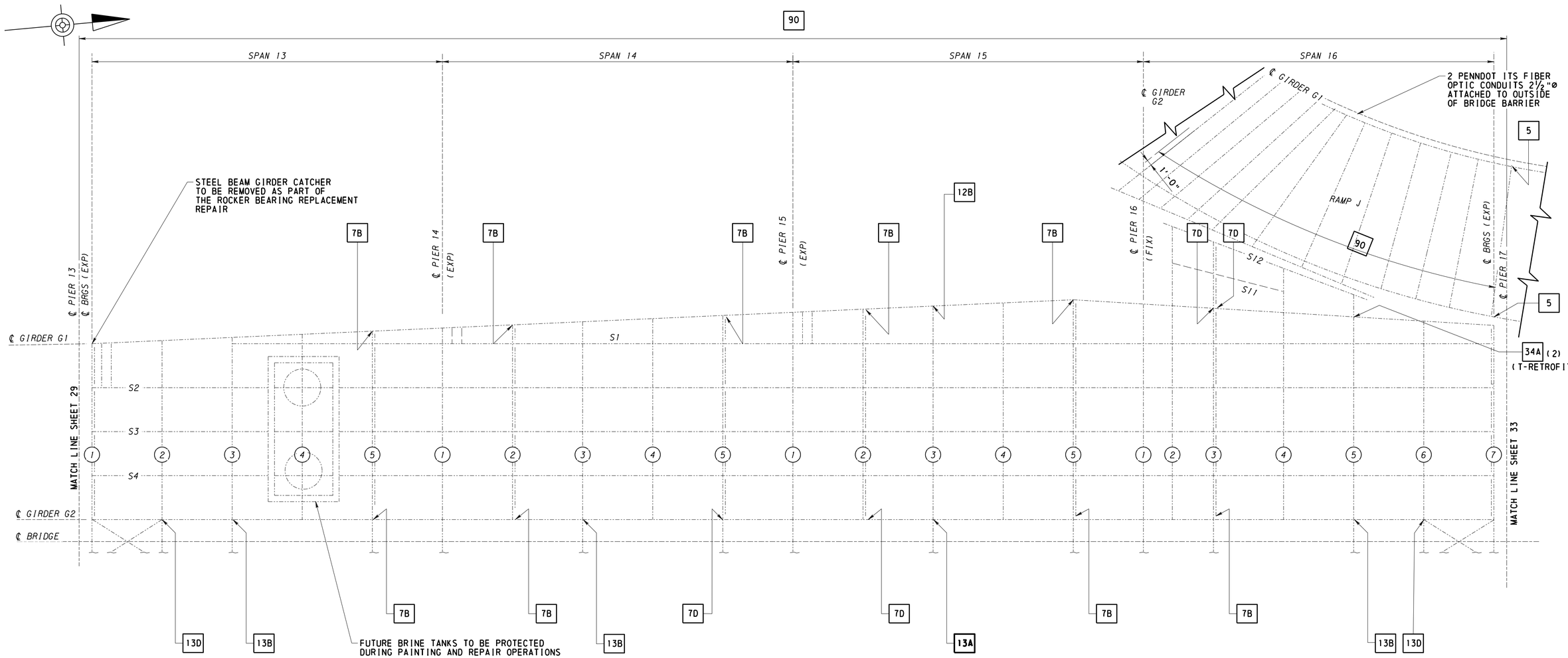




PHOTO 1

LOCATION OF FUTURE NEW BRINE TANKS UNDER SPAN 13

EXISTING FRAMING PLAN - SPANS 13 THRU 16 SB

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S2 STRINGER DESIGNATION

33 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

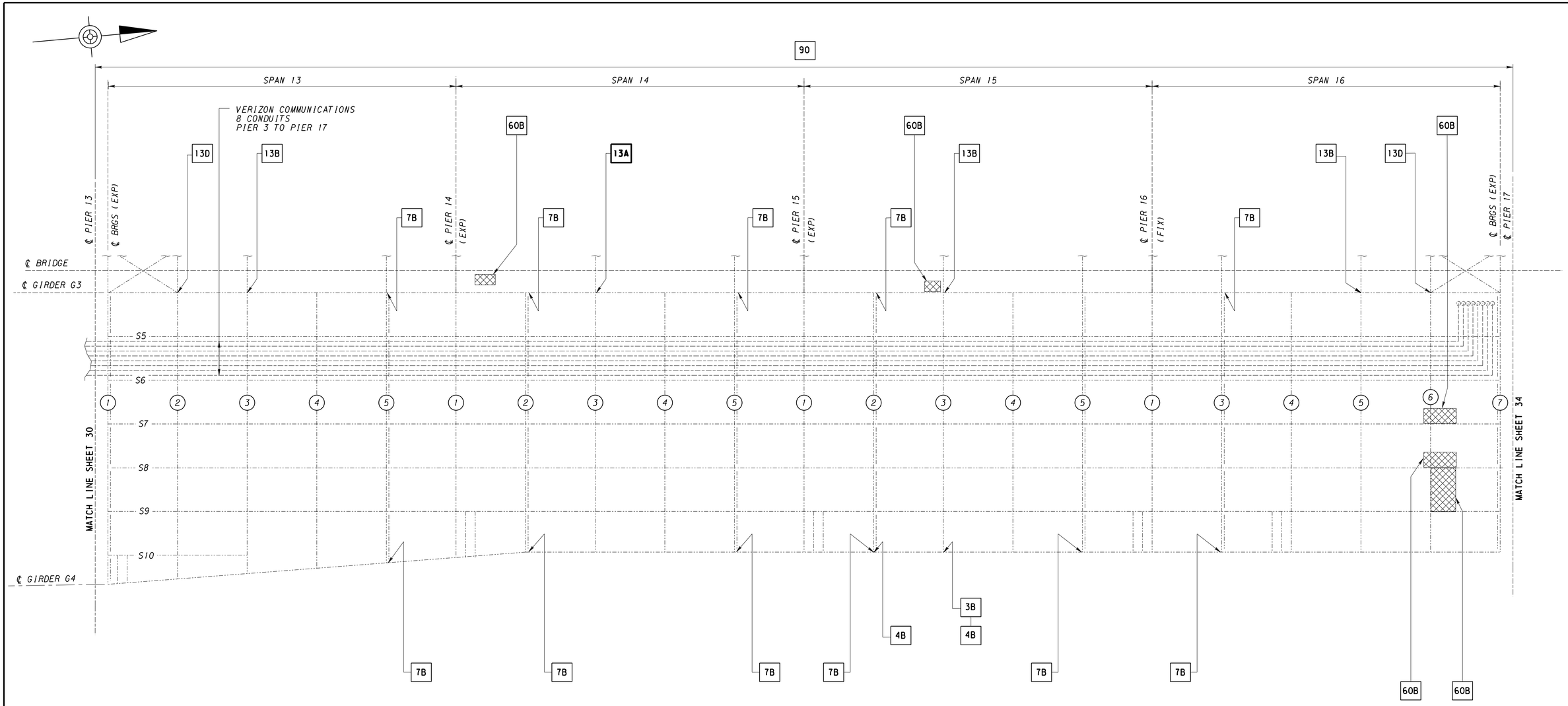
FRAMING PLAN SPANS 13 THRU 16 SB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 31 OF 164

S - 38036



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EXISTING FRAMING PLAN - SPANS 13 THRU 16 NB

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED AND/OR DELAMINATION CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK
- (3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*
- *S1* *STRINGER DESIGNATION*
- [33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 13 THRU 16 NB

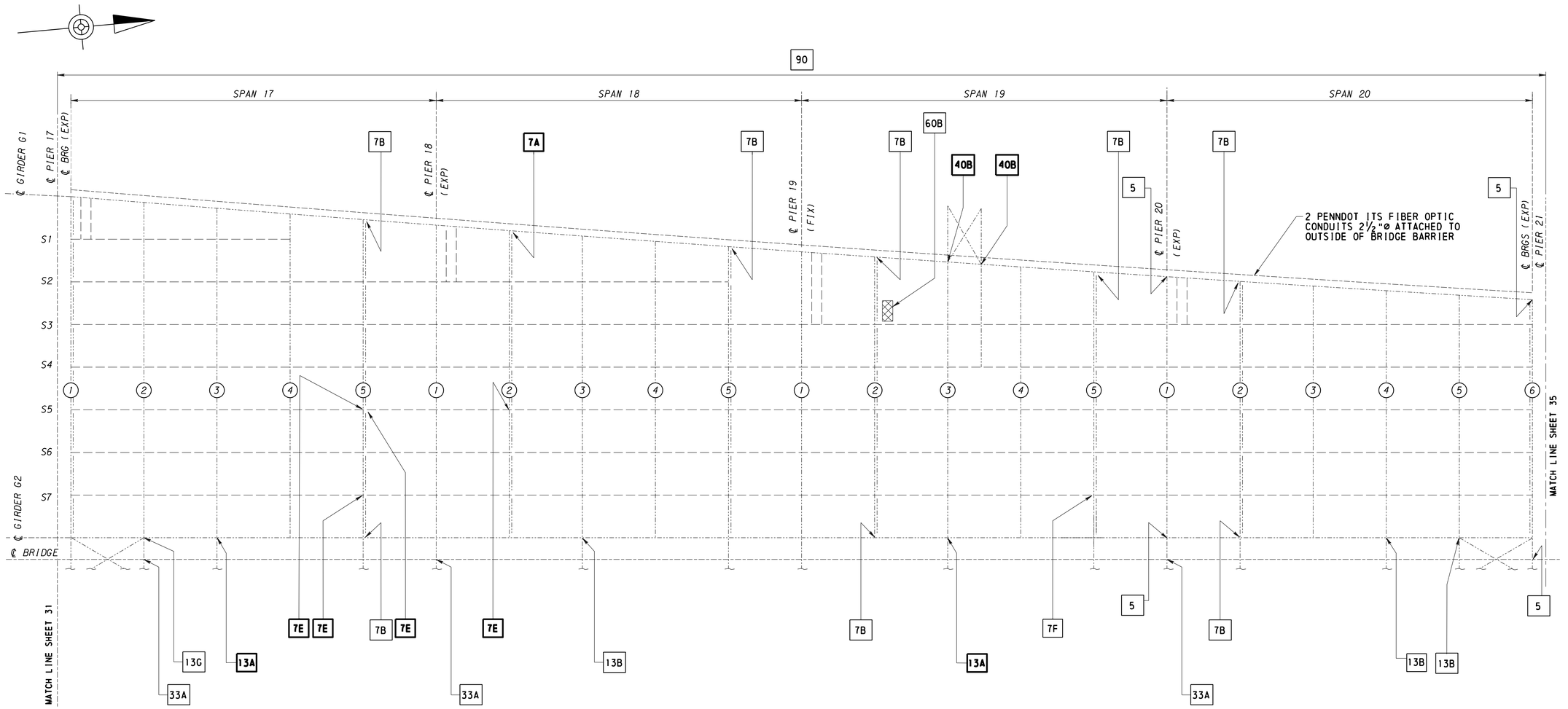
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SHEET 32 OF 164

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EXISTING FRAMING PLAN - SPANS 17 THRU 20 SB

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED AND/OR DELAMINATION CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK
- (3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*
- *S1* *STRINGER DESIGNATION*
- [33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)
- [7E] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

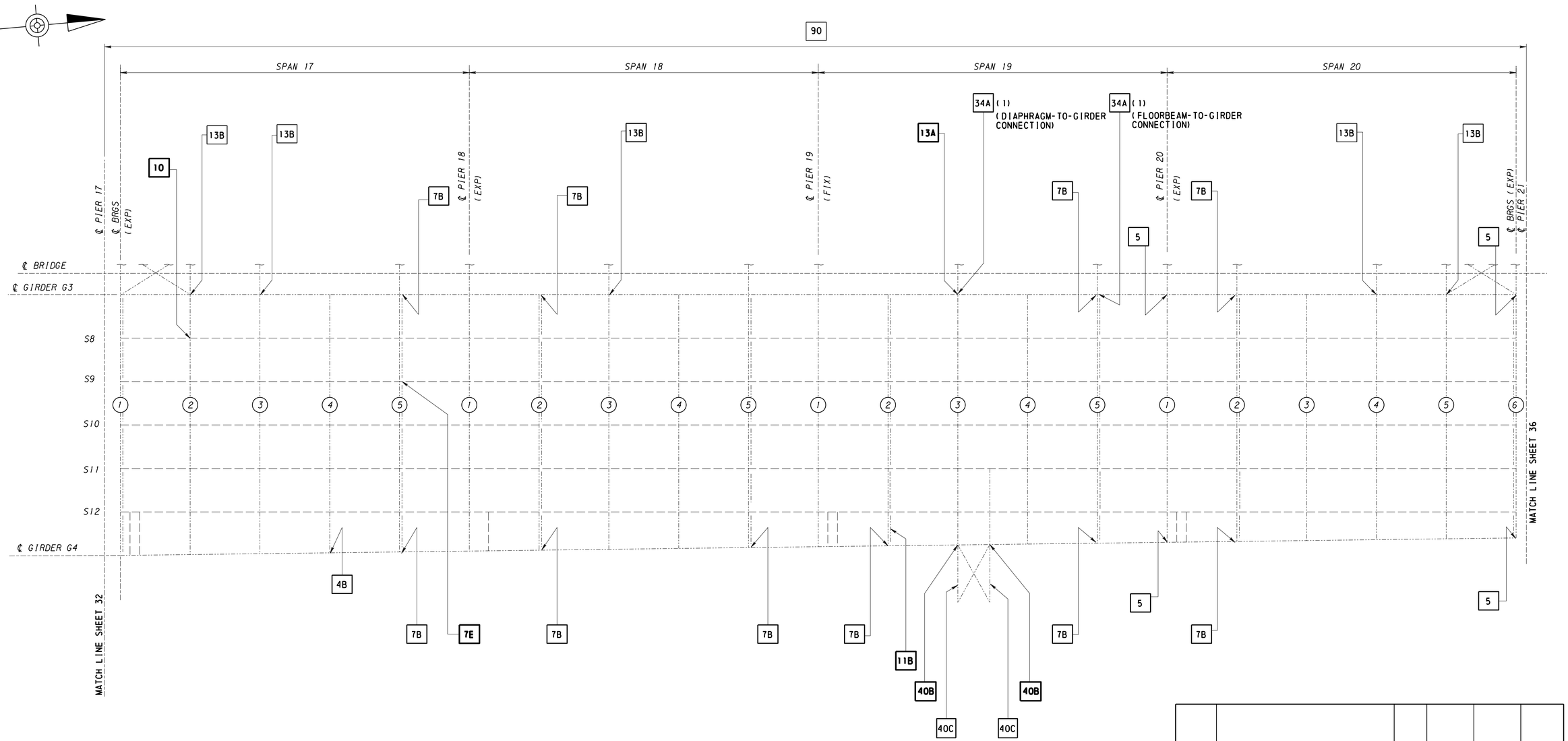
FRAMING PLAN SPANS 17 THRU 20 SB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 33 OF 164

S - 38036



EXISTING FRAMING PLAN - SPANS 17 THRU 20 NB

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 *STRINGER DESIGNATION*

33 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

4B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

DESIGNED BY	DAM
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CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 17 THRU 20 NB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 34 OF 164

S - 38036

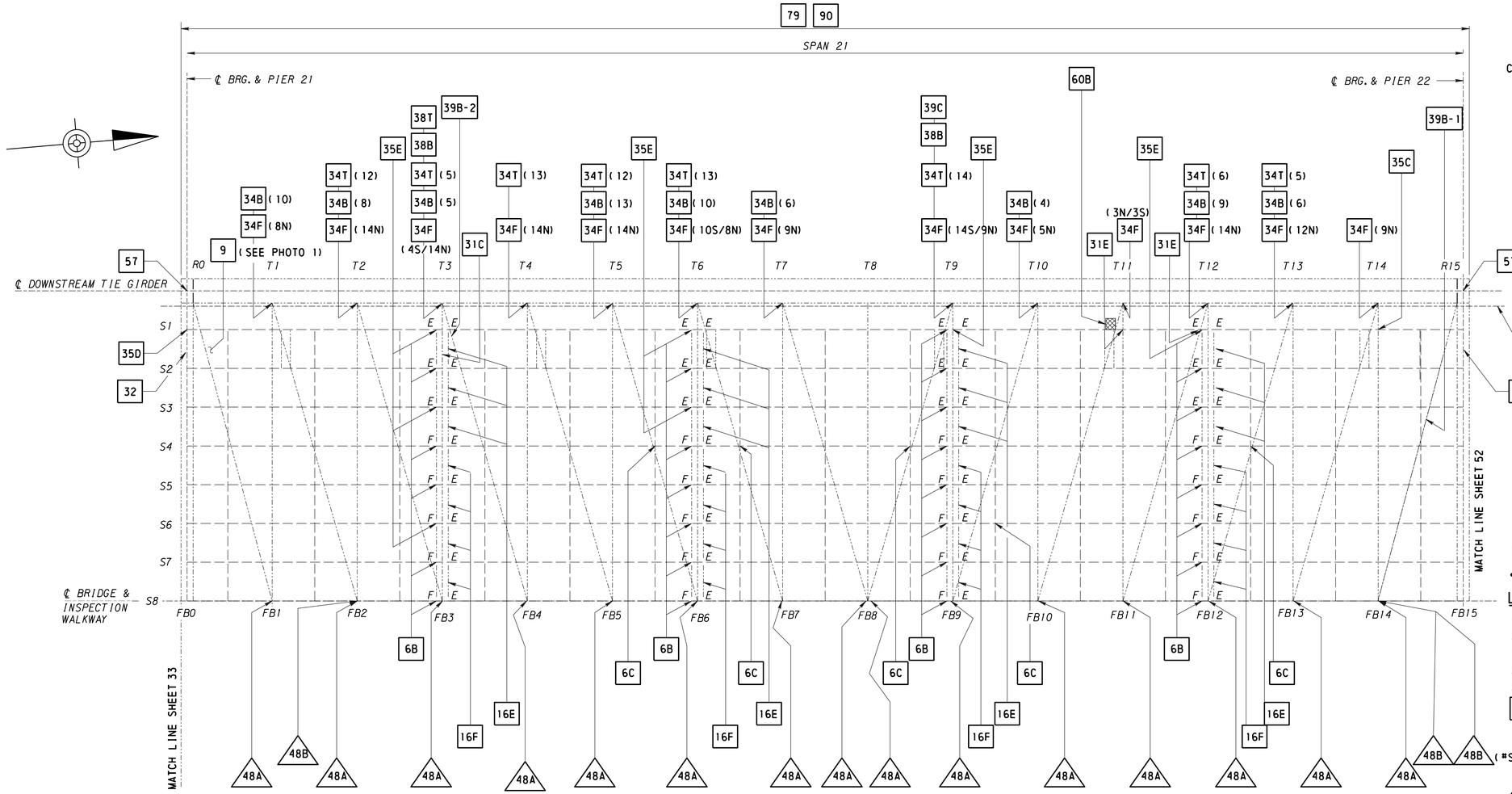




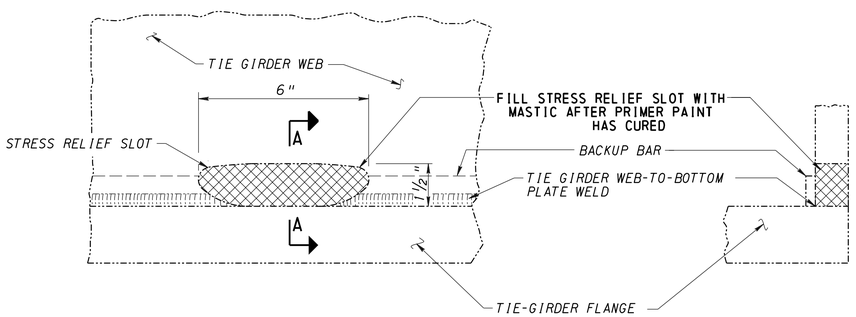
PHOTO 1
LOCATION REPAIR TYPE 9
CRACKED TACK WELD IN KNEE BRACE-TO-INSPECTION WALKWAY CHANNEL ADJACENT UPSTREAM TIE GIRDER AT R0

2 PENNDOT ITS FIBER OPTIC CONDUITS 2½"Ø ATTACHED TO OUTSIDE OF BRIDGE BARRIER

EXISTING FRAMING PLAN - SPAN 21 SB
NOT TO SCALE

NOTE
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

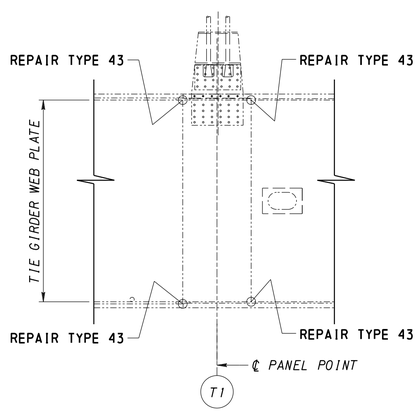
LEGEND
- T1 TIE GIRDER PANEL POINT NUMBER
- FB1 FLOORBEAM DESIGNATION
- S1 STRINGER DESIGNATION
- E EXPANSION END OF STRINGER
- F FIXED END OF STRINGER
- 6B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION
- (#) INDICATES NUMBER OF BOLTS THAT NEED REPLACED
- (#S/#N) INDICATES NUMBER OF BOLTS THAT NEED REPLACED ON THE SOUTH SIDE AND NORTH SIDE OF CONNECTION
- 48A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION
- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK



TIE-GIRDER WEB RELIEF HOLE AT BOTTOM PLATE
TOP PLATE SIMILAR
(TYP AT TOP AND BOTTOM PLATES OF TIE-GIRDER)
NOT TO SCALE

SECTION A-A
NOT TO SCALE

REPAIR TYPE 43
REPLACE CAULKING AT STRESS RELIEF SLOT
THIS ITEM IS INCIDENTAL TO REPAIR TYPES 90 AND 92



TIE GIRDER ELEVATION
REPAIR TYPE 43 LOCATIONS
TYPICAL AT TIE GIRDER WEB PLATES AT ALL PANEL POINTS FOR BOTH UPSTREAM AND DOWNSTREAM TIE GIRDERS
NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
FRAMING PLAN SPAN 21 SB

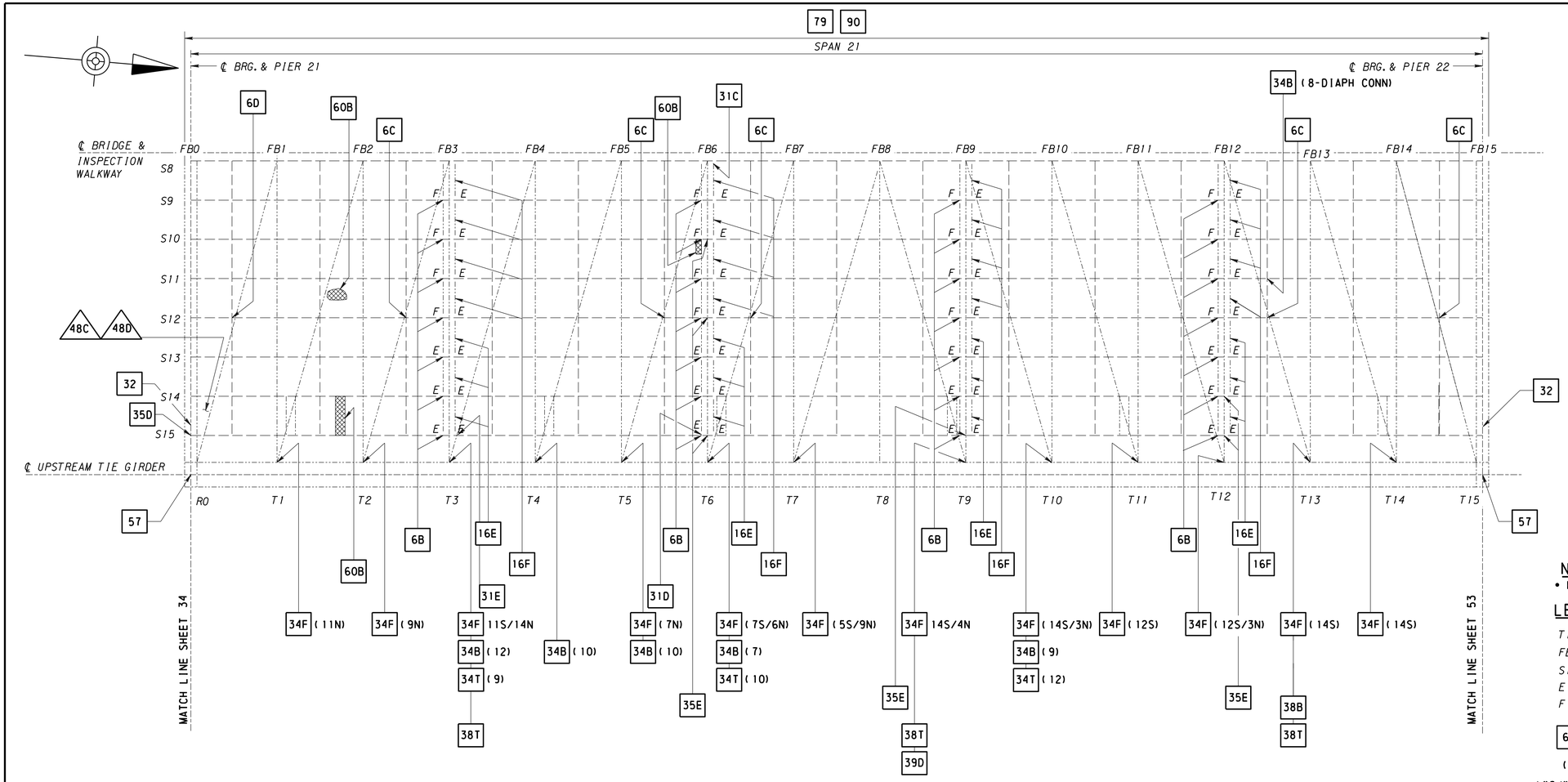
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

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DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

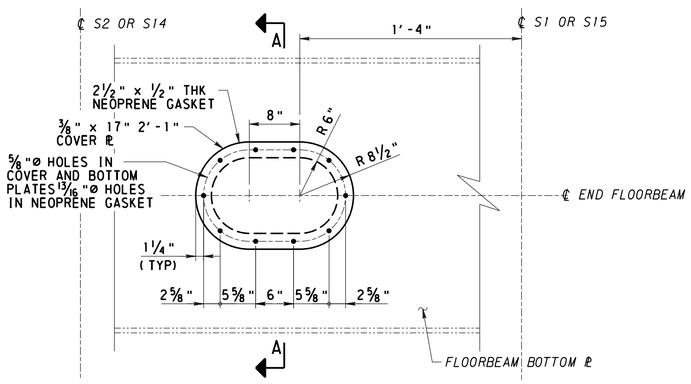
SHEET 35 OF 164
S - 38036

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EXISTING FRAMING PLAN - SPAN 21 NB

NOT TO SCALE

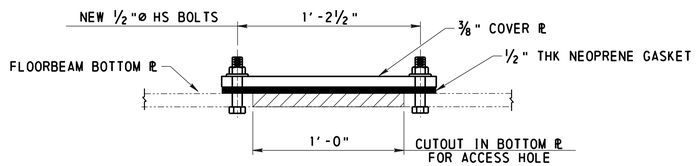


PARTIAL FLOORBEAM FB15 PLAN VIEW

NOT TO SCALE

REPAIR TYPE 32

INSTALL NEW ACCESS HATCH IN FLOORBEAM BOTTOM PLATE



SECTION A-A

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 32

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FOLLOWING ABRASIVE BLAST CLEANING LAYOUT ACCESS HOLE CUTOUT LOCATION AND BOLT HOLES IN FLOORBEAM BOTTOM PLATE. USING A PLASMA ARC CUTTER AND TEMPLATE CUT OUT ACCESS HOLE AND DRILL HOLES FOR BOLTS.
4. GRIND THE CUT EDGES OF THE ACCESS HOLE AND ROUND OVER THE EDGES OF THE HOLE. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
5. WHEN NOT WORKING IN END FLOORBEAMS INSTALL ACCESS HATCHES AND GASKETS.
6. WHEN WORK IS DONE INSIDE END FLOORBEAMS, FINISH PAINTING COVER PLATE AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND INSTALL COVER PLATE AND GASKET.

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

LEGEND

T1 TIE GIRDER PANEL POINT NUMBER
FB1 FLOORBEAM DESIGNATION
S1 STRINGER DESIGNATION
E EXPANSION END OF STRINGER
F FIXED END OF STRINGER

6B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

(#) INDICATES NUMBER OF BOLTS THAT NEED REPLACED

(#S/#N) INDICATES NUMBER OF BOLTS THAT NEED REPLACED ON THE SOUTH SIDE AND NORTH SIDE OF CONNECTION

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPAN 21 NB

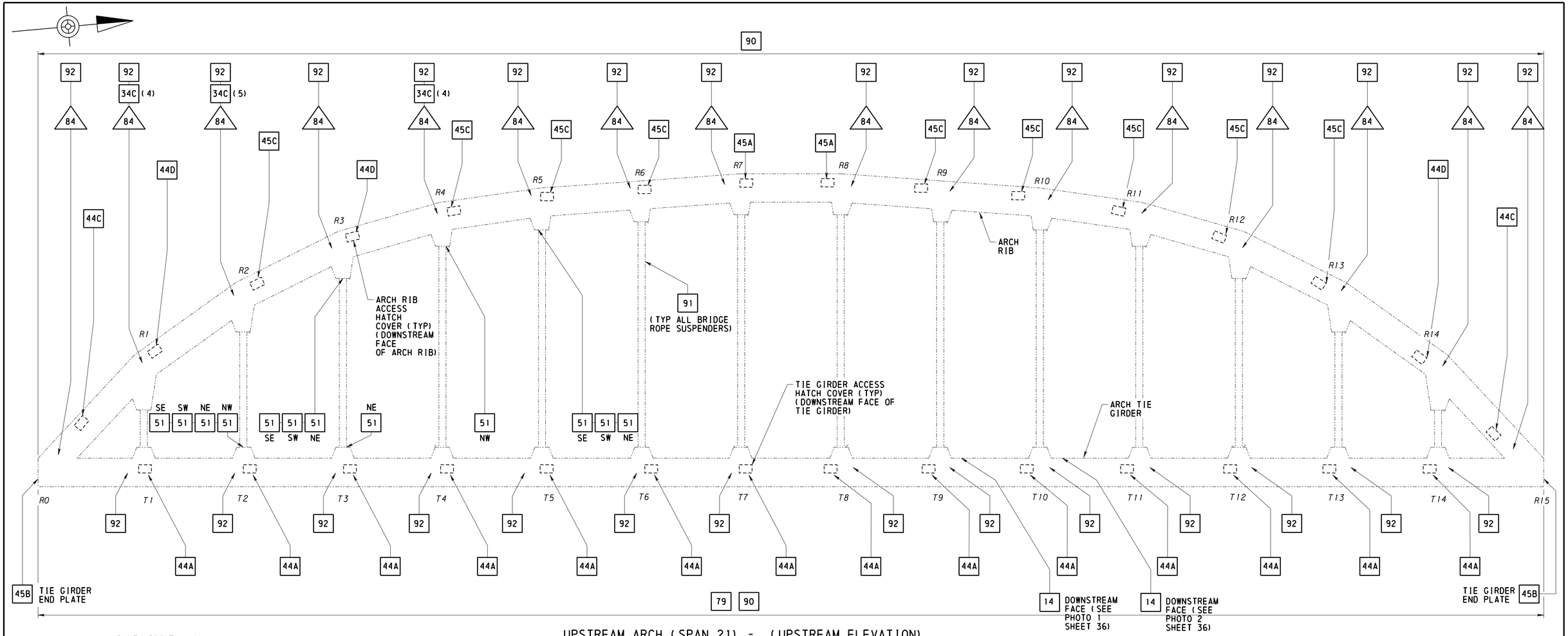
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DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

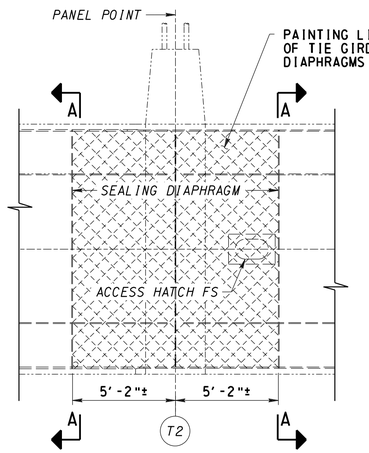
SHEET 36 OF 164

S - 38036



UPSTREAM ARCH (SPAN 21) - (UPSTREAM ELEVATION)

NOT TO SCALE

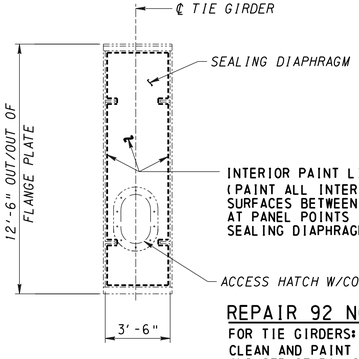


UPSTREAM TIE GIRDER-UPSTREAM ELEVATION

NOT TO SCALE

PANEL POINT AT T2 SHOWN, OTHER PANEL POINTS SIMLAR (TYP EACH TIE GIRDER)

(APPROXIMATE PAINT AREA = 510 SF FOR INFORMATION PURPOSES ONLY) (EACH LOCATION)



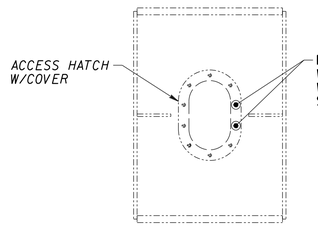
SECTION A-A

NOT TO SCALE

REPAIR 92 NOTES

FOR TIE GIRDERS:

CLEAN AND PAINT ALL INTERIOR SURFACES AND STRUCTURAL STEEL ELEMENTS AND COMPONENTS OF THE TIE GIRDER WITHIN THE LIMITS INDICATED IN SECTION A-A OF THIS SHEET AND LATERALLY BETWEEN THE SEALING DIAPHRAGMS. THE ELEMENTS AND COMPONENTS TO BE CLEANED AND PAINTED INCLUDE BUT ARE NOT RESTRICTED TO TIE GIRDER BOTTOM AND TOP PLATE, WEB PLATES, STIFFENER PLATES, AND FACE OF SEALING DIAPHRAGMS.



ARCH RIB TYPICAL SECTION AT INTERIOR ACCESS HATCH LOCATION

NOT TO SCALE

REPAIR TYPE 34C

REPLACE MISSING NUTS AND WASHERS AT INTERIOR ACCESS HATCH COVERS IN ARCH SPAN MEMBERS (REPLACE WITH NEW STAINLESS STEEL NUTS AND WASHERS)

REPAIR TYPE 92

ZONE PAINTING EXISTING STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS (TIE GIRDERS, ARCH RIBS, AND UPPER LATERAL BRACING)

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

LEGEND

R0 ARCH RIB PANEL POINT NUMBER

T1 TIE GIRDER PANEL POINT NUMBER

[33] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

(4) INDICATES NUMBER OF BOLTS BEING REPLACED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

UPSTREAM ARCH EAST ELEVATION

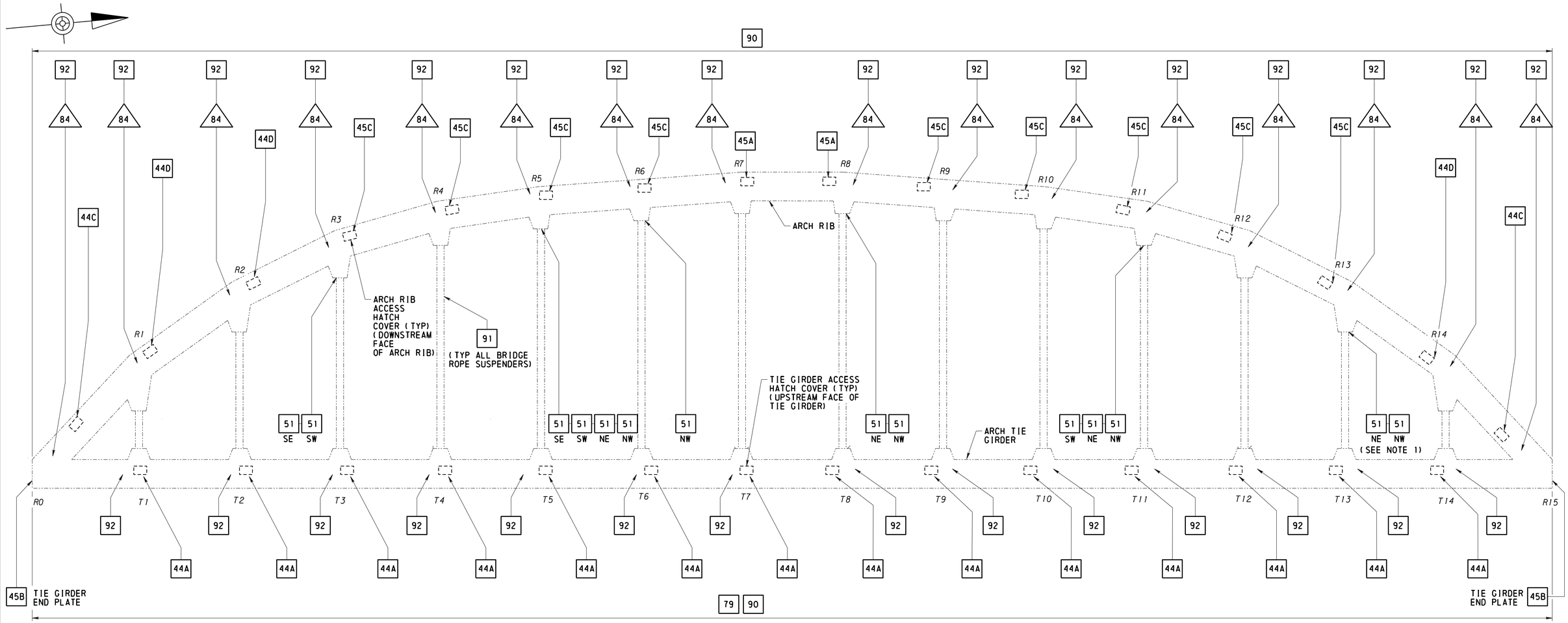
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

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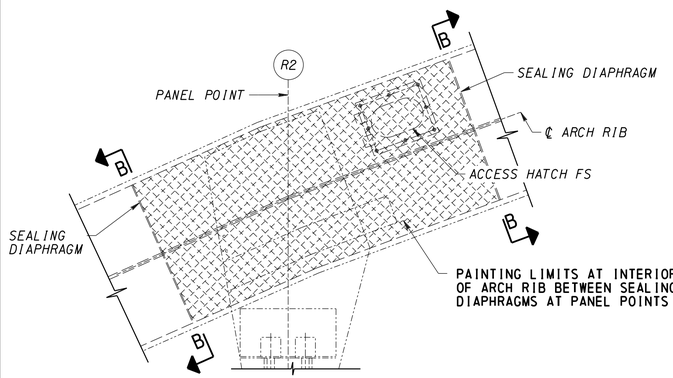
SHEET 37 OF 164

S - 38036



DOWNSTREAM ARCH (SPAN 21) - (UPSTREAM ELEVATION)

NOT TO SCALE

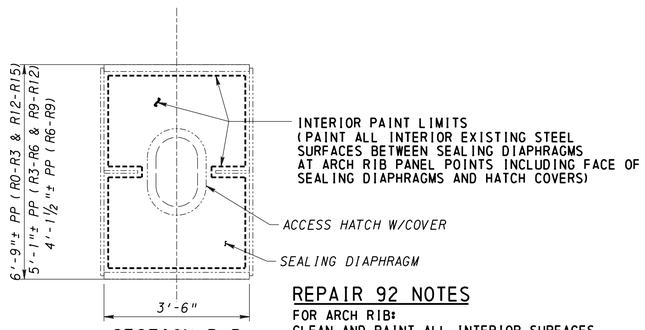


UPSTREAM ARCH RIB-UPSTREAM ELEVATION

PANEL POINT AT R2 SHOWN, OTHER PANEL POINTS SIMLAR (TYP EACH ARCH RIB)

NOT TO SCALE

(APPROXIMATE PAINT AREA =
316 SF (RO-R3 & R12-R15)
232 SF (R3-R6 & R12-R15)
214 SF (R6-R9)
FOR INFORMATION PURPOSES ONLY)
(EACH LOCATION)



SECTION B-B

NOT TO SCALE

REPAIR TYPE 92

ZONE PAINTING EXISTING STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS (TIE GIRDERS, ARCH RIBS, AND UPPER LATERAL BRACING)

REPAIR 92 NOTES

FOR ARCH RIB:
CLEAN AND PAINT ALL INTERIOR SURFACES AND STRUCTURAL STEEL ELEMENTS AND COMPONENTS OF THE ARCH RIB WITHIN THE LIMITS INDICATED IN SECTION B-B OF THIS SHEET AND LATERALLY BETWEEN THE SEALING DIAPHRAGMS. THE ELEMENTS AND COMPONENTS TO BE CLEANED AND PAINTED INCLUDE BUT ARE NOT RESTRICTED TO ARCH RIB BOTTOM AND TOP PLATES, WEB PLATES, STIFFENER PLATES, AND FACE OF SEALING DIAPHRAGMS.

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

LEGEND

RO ARCH RIB PANEL POINT NUMBER

T1 TIE GIRDER PANEL POINT NUMBER

33 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

NOTE 1:
REMOVE WOODEN WEDGES PRIOR TO SANDBLASTING.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

DOWNSTREAM ARCH EAST ELEVATION

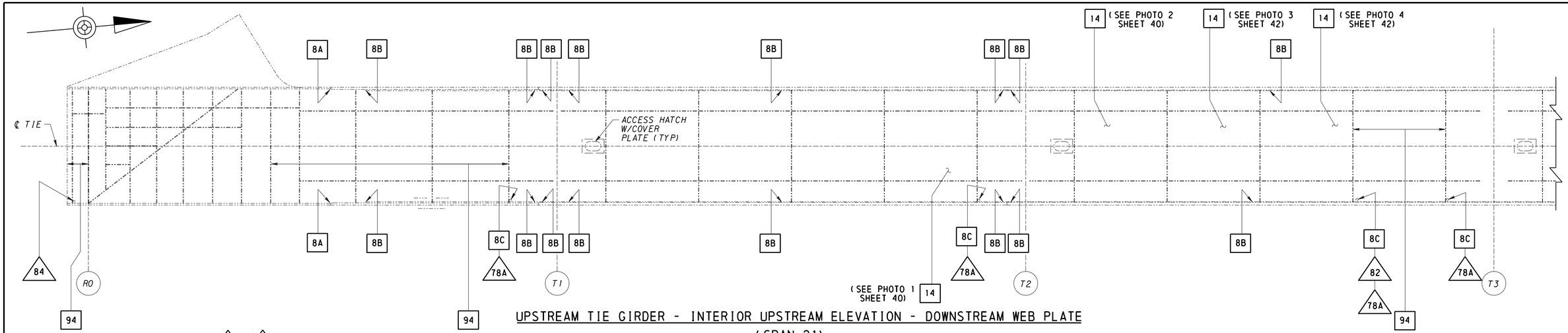
DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 38 OF 164

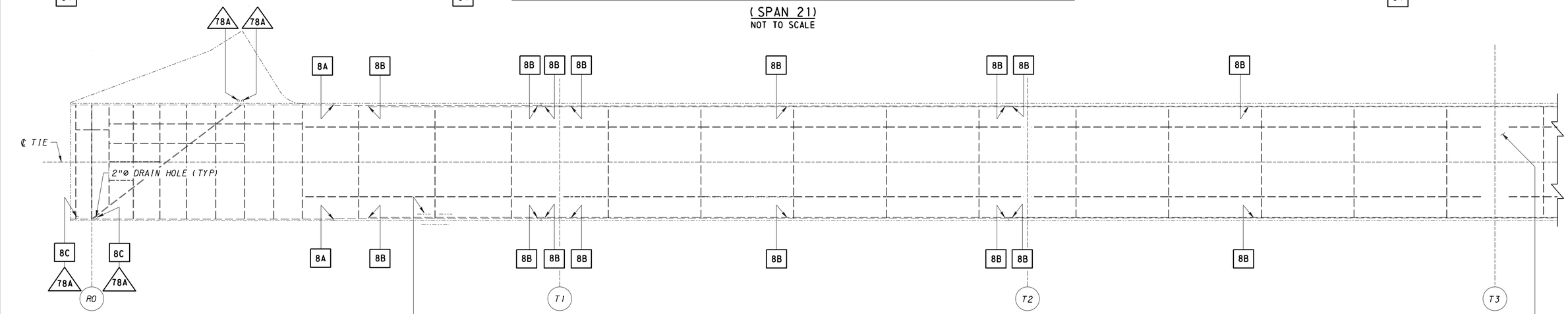
S - 38036



UPSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

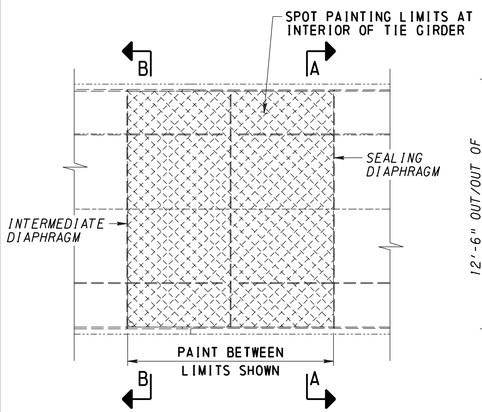
NOT TO SCALE



UPSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

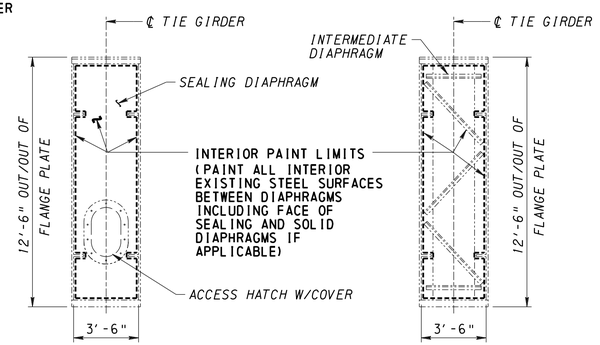
(SPAN 21)

NOT TO SCALE



TIE GIRDER ELEVATION

NOT TO SCALE



SECTION A-A

NOT TO SCALE

SECTION B-B

NOT TO SCALE

REPAIR TYPE 94

ZONE PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS

REPAIR 94 NOTES

FOR TIE GIRDERS:
CLEAN AND PAINT ALL INTERIOR SURFACES AND STRUCTURAL STEEL ELEMENTS AND COMPONENTS OF THE TIE GIRDER WITHIN THE LIMITS INDICATED ON THE ELEVATIONS AND LATERALLY BETWEEN THE DIAPHRAGMS. THE ELEMENTS AND COMPONENTS TO BE CLEANED AND PAINTED INCLUDE BUT ARE NOT RESTRICTED TO TIE GIRDER TOP AND BOTTOM PLATES, WEB PLATES, STIFFENER PLATES, FACE OF SEALING DIAPHRAGMS, SOLID DIAPHRAGMS, AND INTERMEDIATE DIAPHRAGM ELEMENTS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE BOX TIE GIRDERS

LEGEND

(T3) TIE GIRDER PANEL POINT

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

71B INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

UPSTREAM TIE GIRDER-SPAN 21 (R0-T3)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

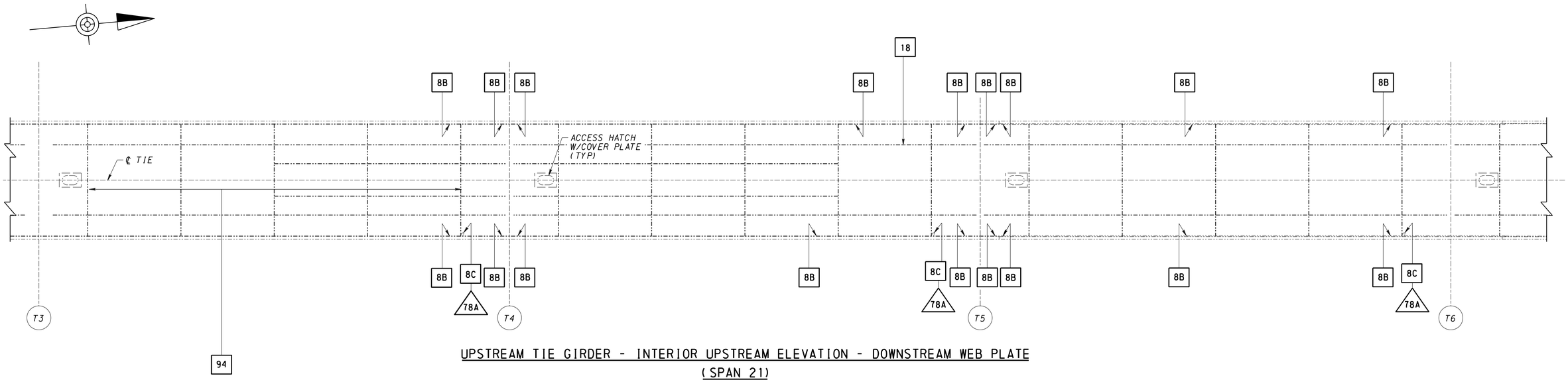
RECOMMENDED _____

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DRAWN BY	ERK
CHECKED BY	DAM

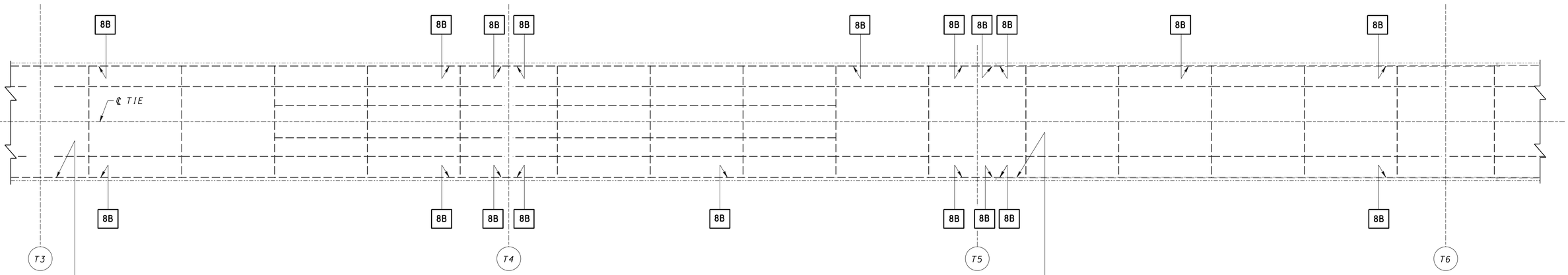
SHEET 39 OF 164

S - 38036

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UPSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE
(SPAN 21)
NOT TO SCALE



UPSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE
(SPAN 21)
NOT TO SCALE



PHOTO 1

ROLLING DEFECT IN DOWNSTREAM WEB OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T2 (SEE SHEET 39)

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS



PHOTO 2

ARC STRIKE ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER BETWEEN PANEL POINTS T2 AND T3 (SEE SHEET 39)

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE BOX TIE GIRDER

LEGEND

(T3) *TIE GIRDER PANEL POINT*

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

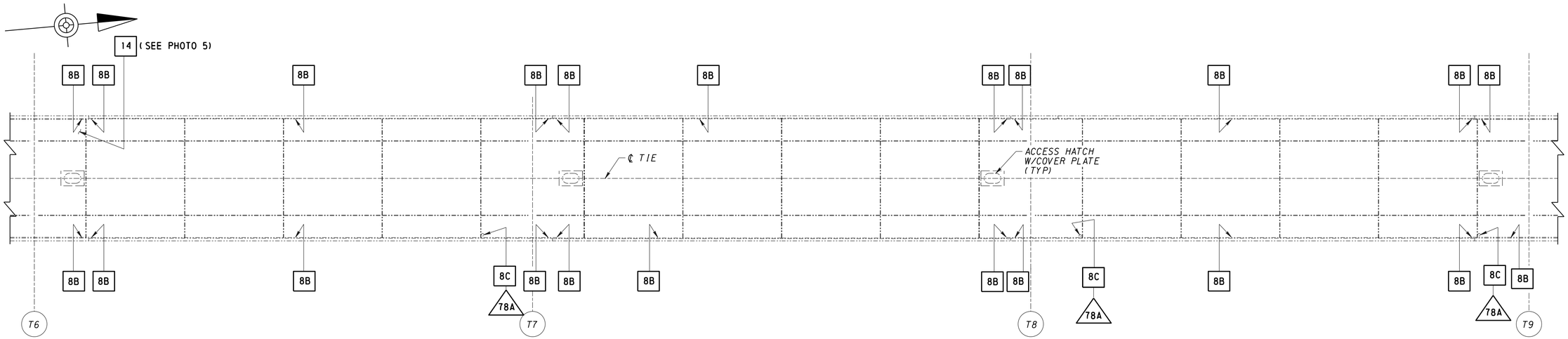
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

UPSTREAM TIE GIRDER - SPAN 21 (T3-T6)

RECOMMENDED _____

SHEET 40 OF 164

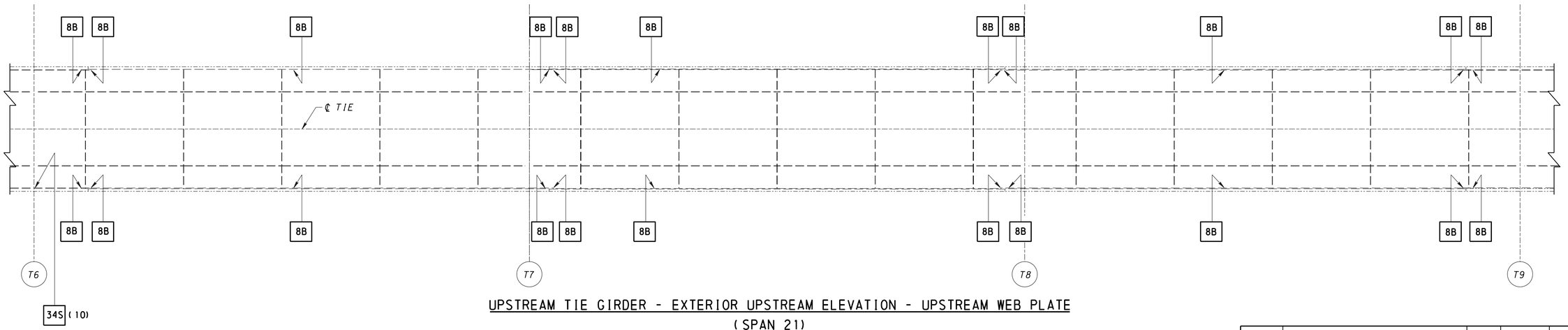
S - 38036



UPSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



UPSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



PHOTO 5

ARC STRIKE ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T6

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELD ATTACHMENTS

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NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDER

LEGEND

T6 *TIE GIRDER PANEL POINT*

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

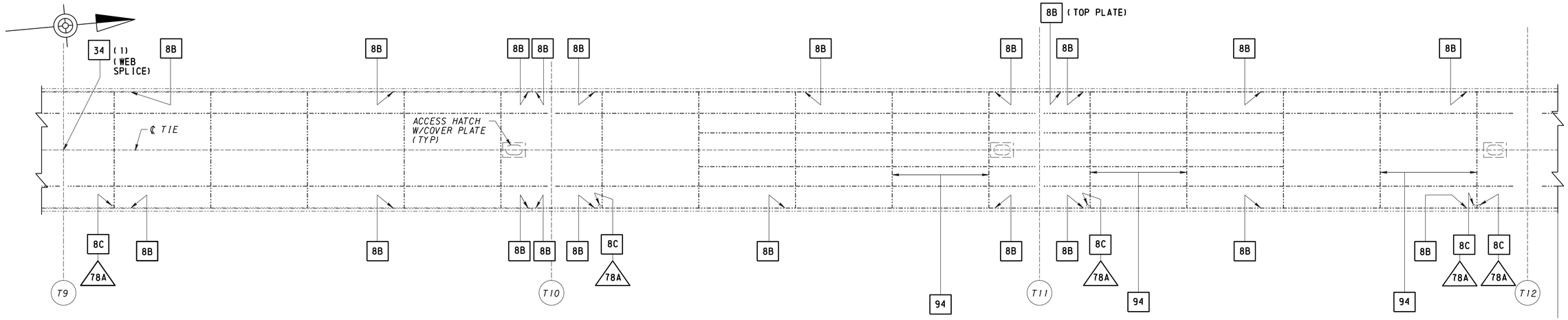
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

UPSTREAM TIE GIRDER - SPAN 21 (T6-T9)

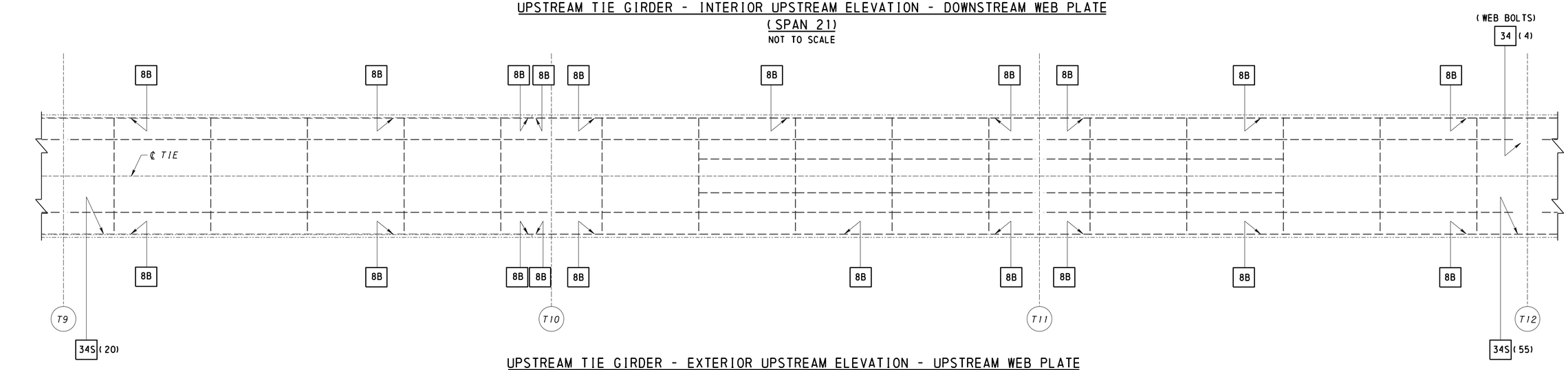
RECOMMENDED _____

SHEET 41 OF 164

S - 38036



UPSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE
(SPAN 21)
NOT TO SCALE



UPSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE
(SPAN 21)
NOT TO SCALE

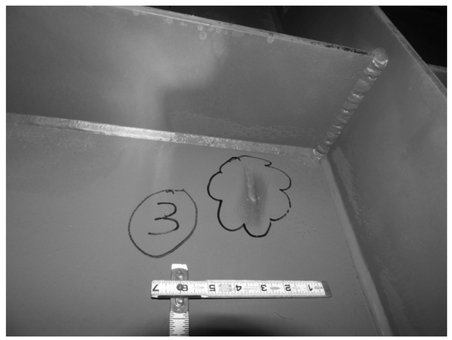


PHOTO 3
ARCH STRIKE ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER BETWEEN PANEL POINTS T2 AND T3 (SEE SHEET 39)
REPAIR TYPE 14
REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

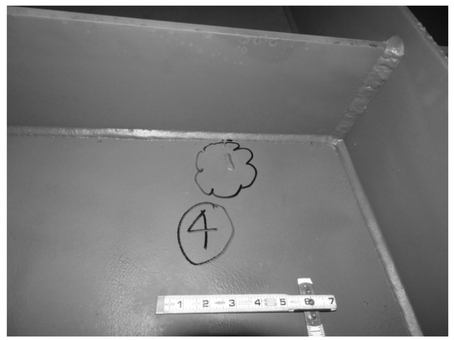


PHOTO 4
ARCH STRIKE ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER BETWEEN PANEL POINTS T2 AND T3 (SEE SHEET 39)
REPAIR TYPE 14
REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDER

LEGEND

(T9) TIE GIRDER PANEL POINT

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

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CHECKED BY	DAM

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REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

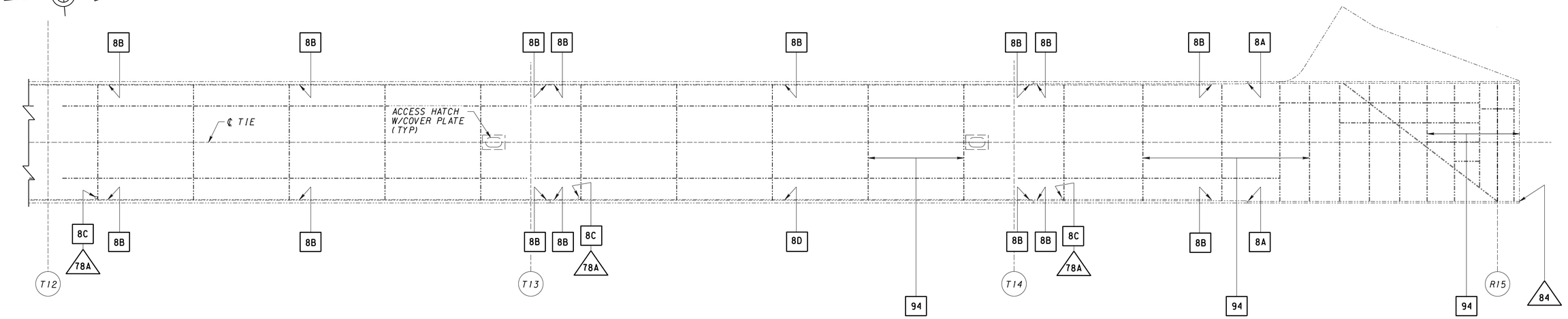
UPSTREAM TIE GIRDER - SPAN 21 (T9-T12)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 42 OF 164

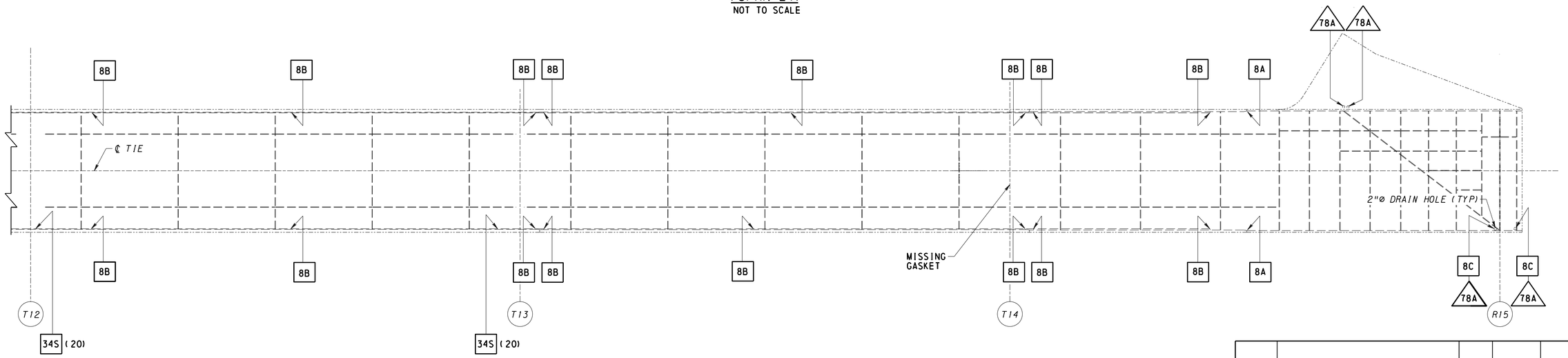
S - 38036



UPSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



UPSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDER

LEGEND

T13 TIE GIRDER PANEL POINT

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

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COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
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SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

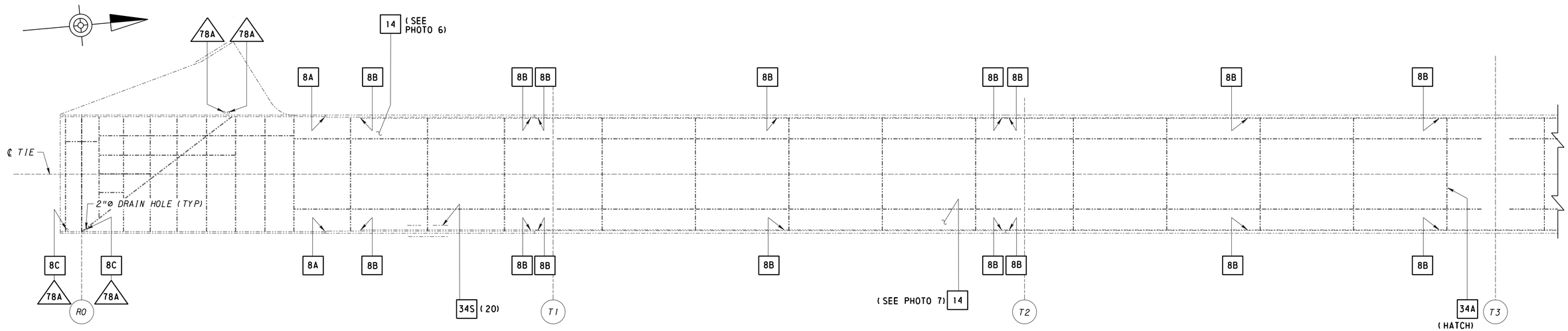
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

UPSTREAM TIE GIRDER - SPAN 21 (T12-R15)

RECOMMENDED _____

SHEET 43 OF 164

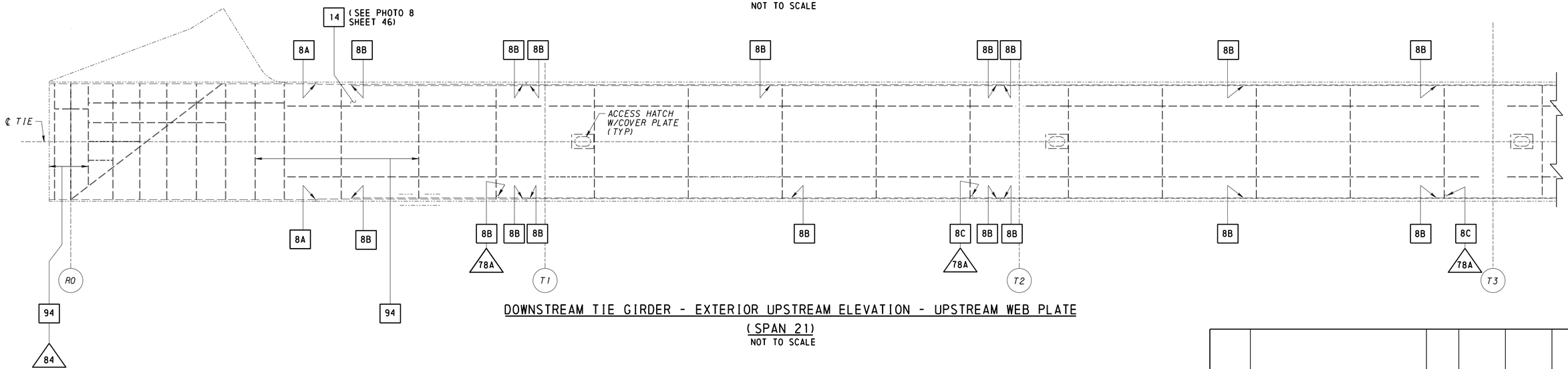
S - 38036



DOWNSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



DOWNSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



PHOTO 6

WELD REMNANTS ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER BETWEEN PANEL POINTS T0 AND T1

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS



PHOTO 7

WELD REMNANTS ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T2

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDERS

LEGEND

T1 — TIE GIRDER PANEL POINT

8B — INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A — INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

DOWNSTREAM TIE GIRDER - SPAN 21 (RO-T3)

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030627-E

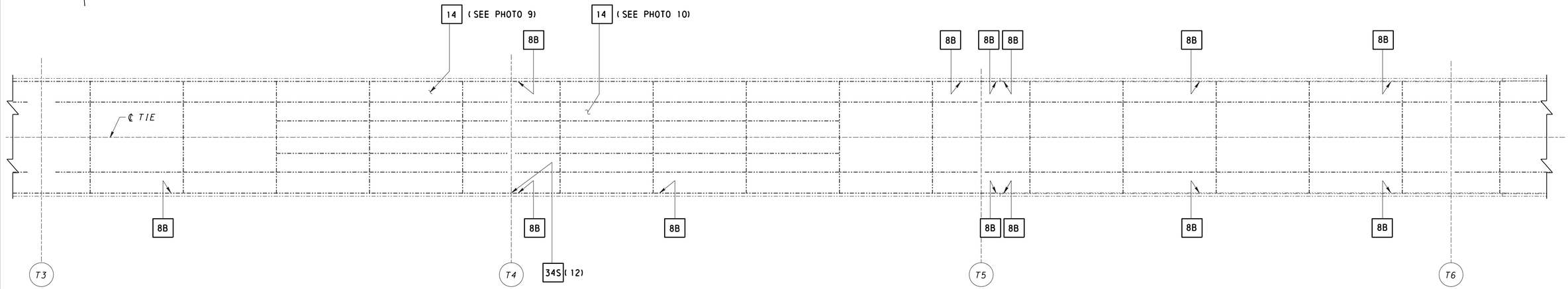
RECOMMENDED _____

SHEET 44 OF 164

S - 38036

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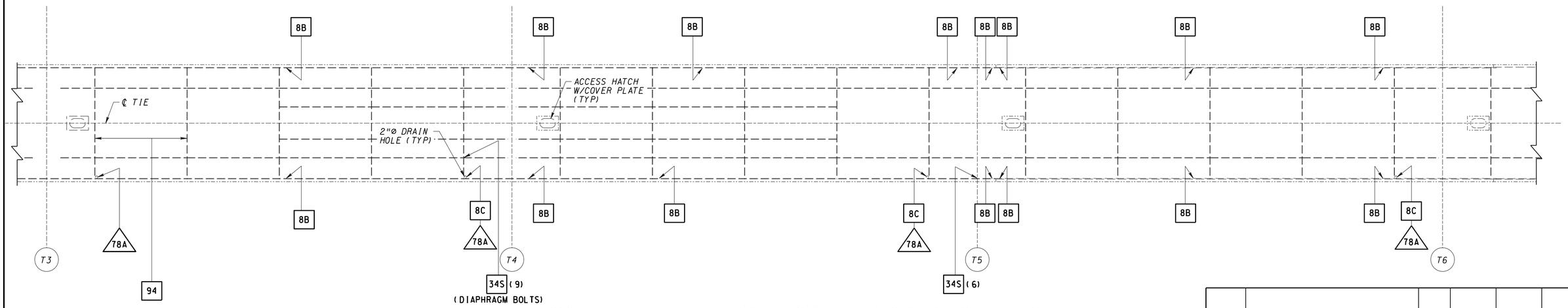
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DOWNSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



DOWNSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



PHOTO 9

ARC STRIKES ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T4

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

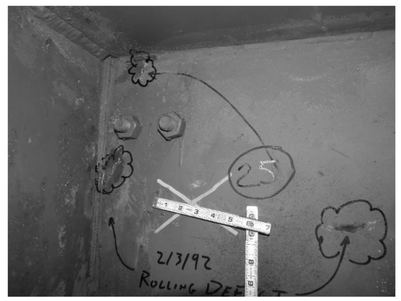


PHOTO 10

ARC STRIKES ON DOWNSTREAM WEB OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T4

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

DESIGNED BY	DAM
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CHECKED BY	DAM

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDERS

LEGEND

(T3) TIE GIRDER PANEL POINT

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E PENNSYLVANIA

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
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SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

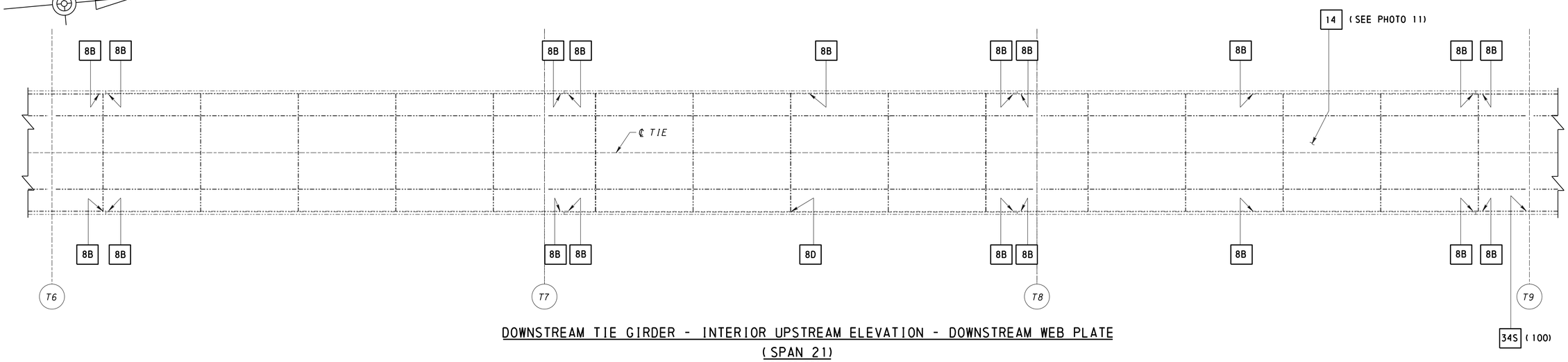
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

DOWNSTREAM TIE GIRDER - SPAN 21 (T3-T6)

RECOMMENDED _____

SHEET 45 OF 164

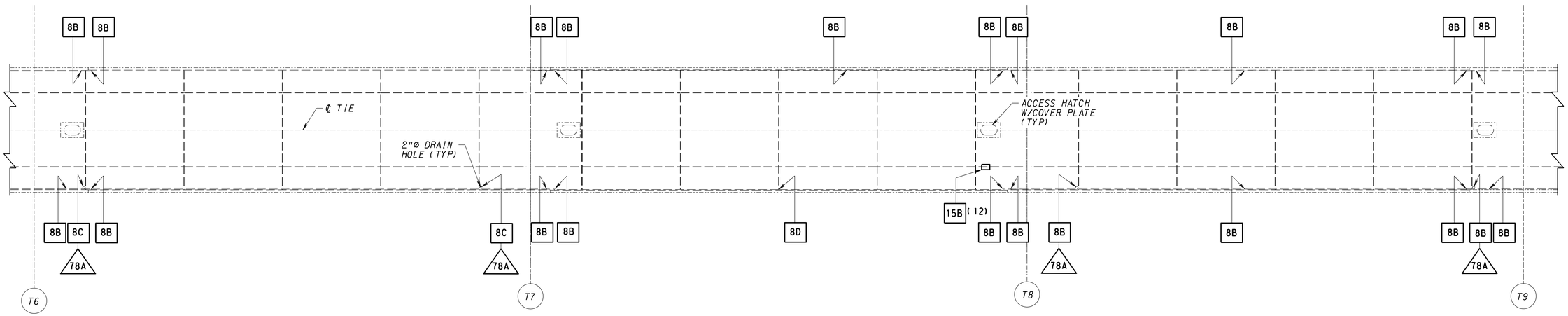
S - 38036



DOWNSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



DOWNSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



PHOTO 8

ARC STRIKES ON DOWNSTREAM WEB PLATE OF UPSTREAM TIE GIRDER BETWEEN PANEL POINTS R0 AND T1 (SEE SHEET 44)

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS



PHOTO 11

ARC STRIKES ON DOWNSTREAM WEB PLATE OF UPSTREAM TIE GIRDER BETWEEN PANEL POINTS T8 AND T9

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDERS

LEGEND

(T3) TIE GIRDER PANEL POINT

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
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SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

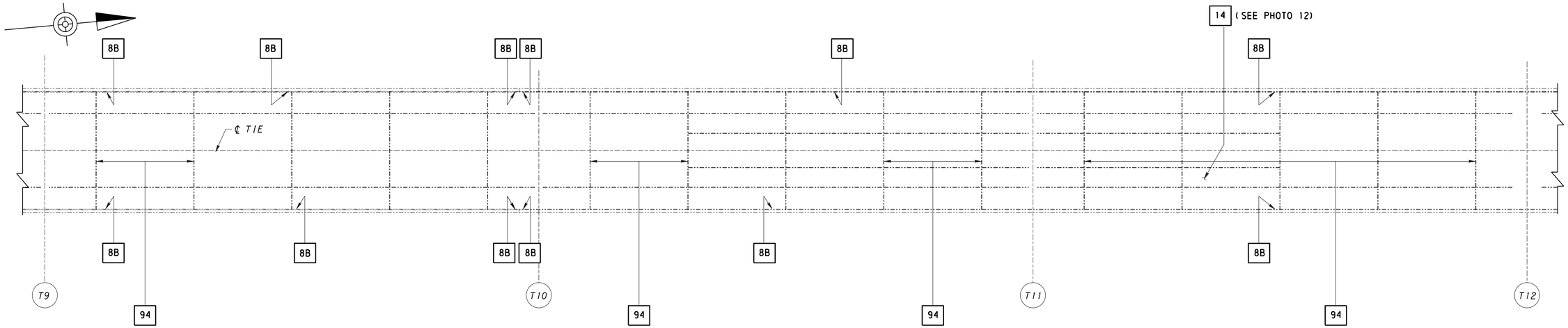
DOWNSTREAM TIE GIRDER - SPAN 21 (T6-T9)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

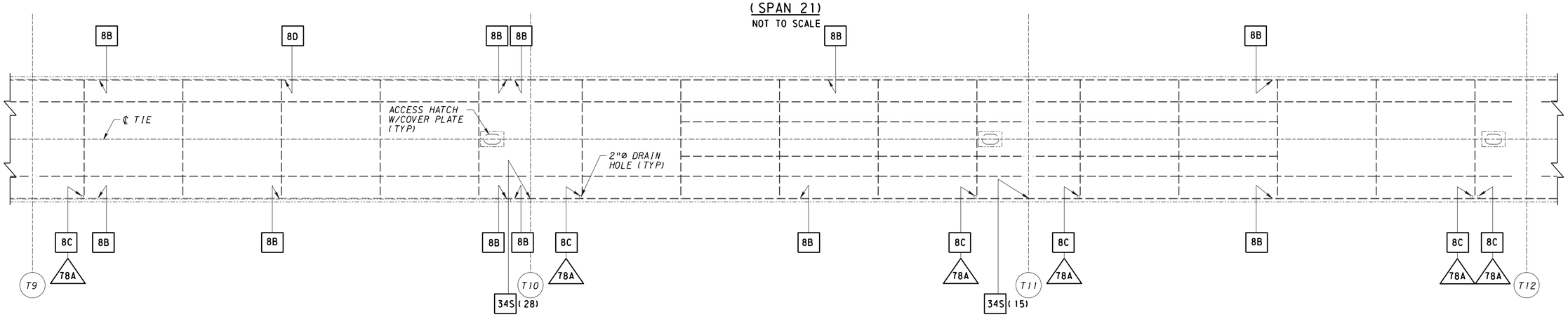
RECOMMENDED _____

SHEET 46 OF 164

S - 38036



DOWNSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE
(SPAN 21)
NOT TO SCALE



DOWNSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE
(SPAN 21)
NOT TO SCALE

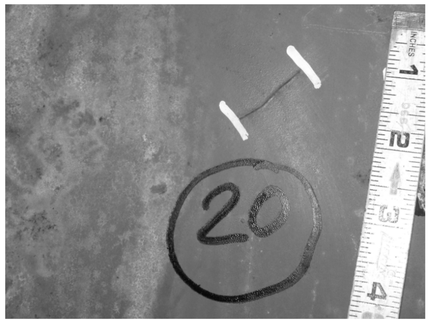


PHOTO 12

DEFECT ON DOWNSTREAM WEB PLATE OF DOWNSTREAM TIE GIRDER BETWEEN PANEL POINTS T11 AND T12

REPAIR TYPE 14

REMOVE WELD REMNANTS AND WELDED ATTACHMENTS

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDER

LEGEND

(T3) TIE GIRDER PANEL POINT

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

DOWNSTREAM TIE GIRDER - SPAN 21 (T9-T12)

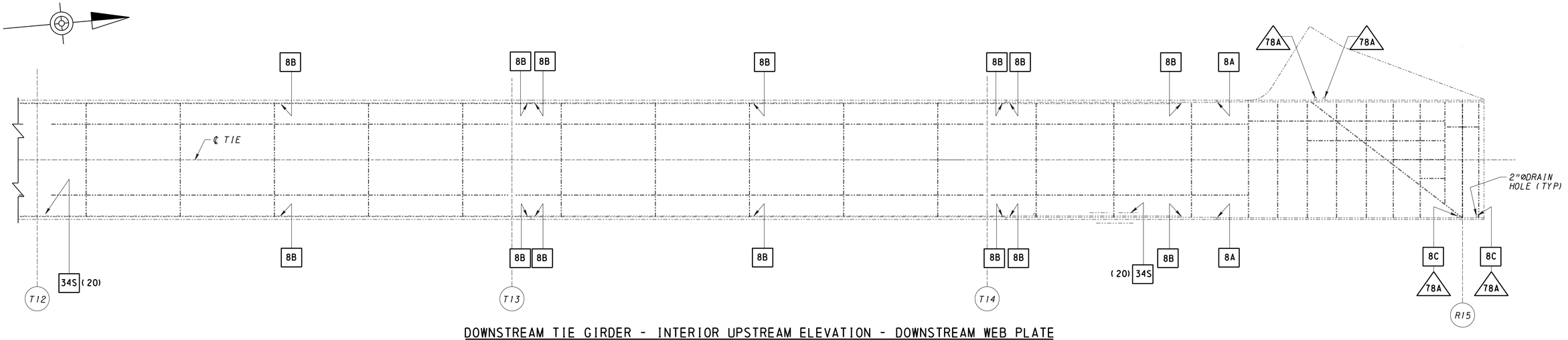
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

SHEET 47 OF 164

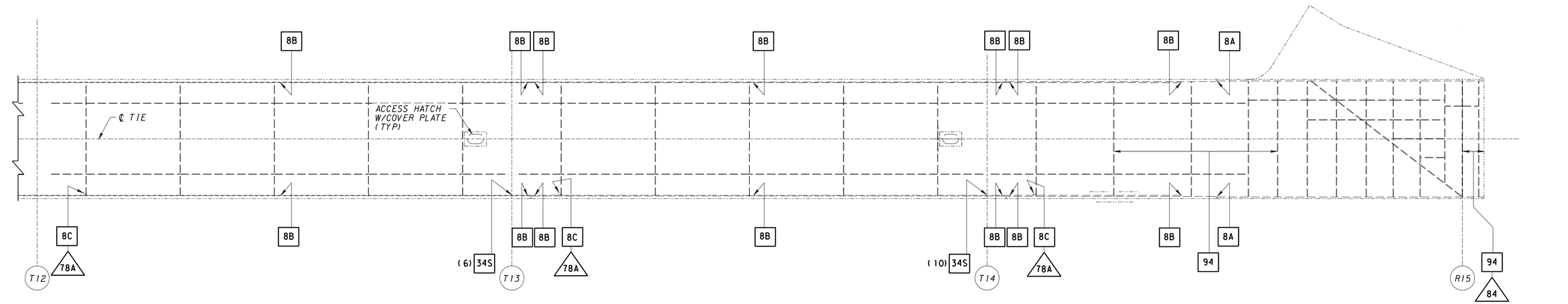
S - 38036



DOWNSTREAM TIE GIRDER - INTERIOR UPSTREAM ELEVATION - DOWNSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE



DOWNSTREAM TIE GIRDER - EXTERIOR UPSTREAM ELEVATION - UPSTREAM WEB PLATE

(SPAN 21)

NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE TIE GIRDER

LEGEND

(T3) *TIE GIRDER PANEL POINT*

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78A INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DAM
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CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

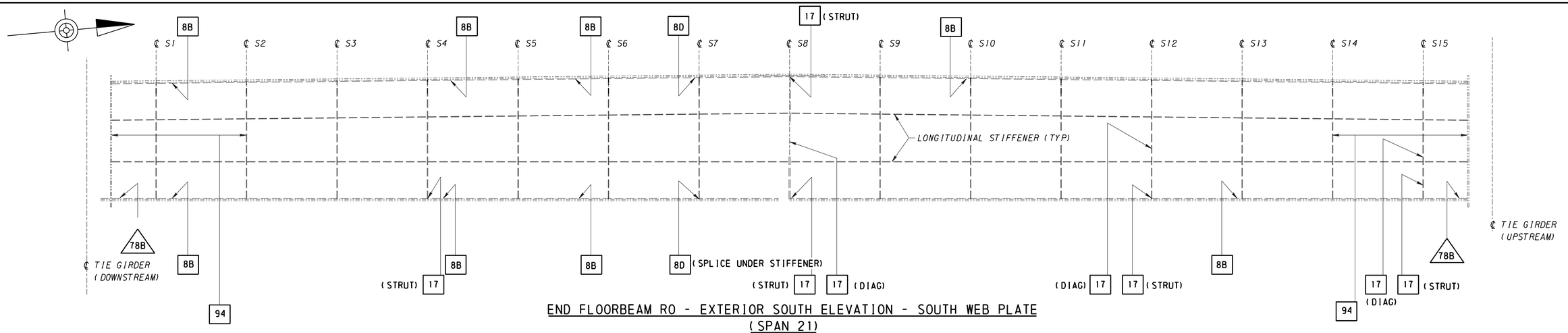
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

DOWNSTREAM TIE GIRDER - SPAN 21 (T12-R15)

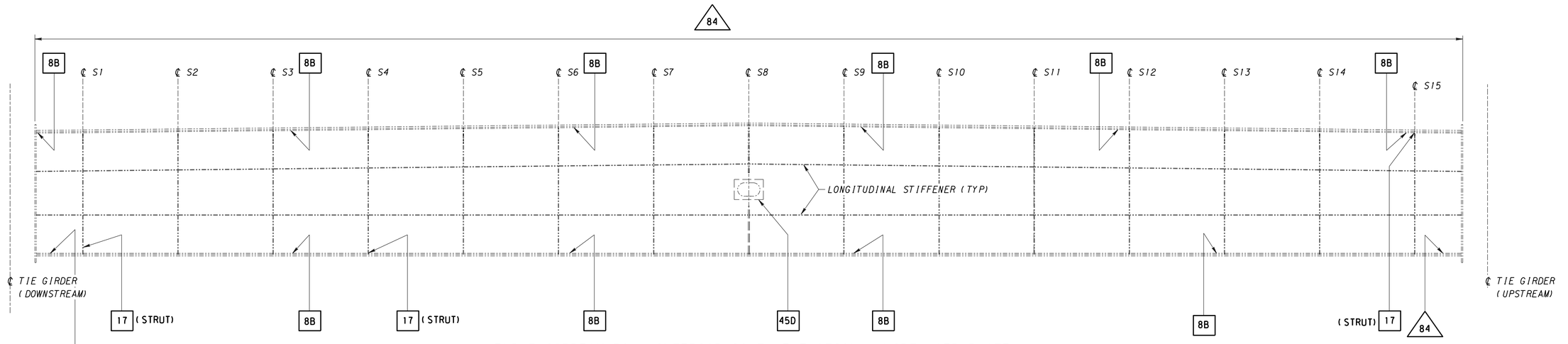
RECOMMENDED _____

SHEET 48 OF 164

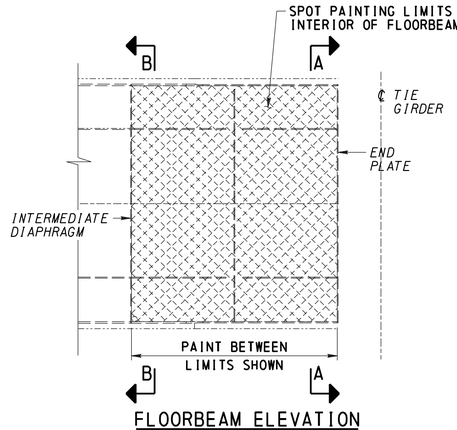
S - 38036



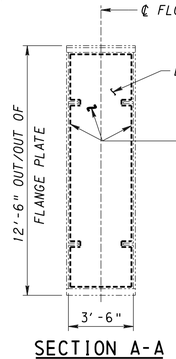
END FLOORBEAM RO - EXTERIOR SOUTH ELEVATION - SOUTH WEB PLATE
(SPAN 21)
NOT TO SCALE



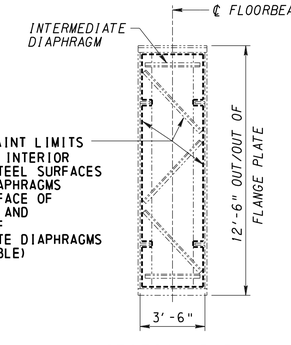
END FLOORBEAM RO - INTERIOR SOUTH ELEVATION - NORTH WEB PLATE
(SPAN 21)
NOT TO SCALE



FLOORBEAM ELEVATION
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE BOX FLOORBEAM

LEGEND

SI STRINGER DESIGNATION

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78B INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FLOORBEAM ELEVATION - RO - SPAN 21

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

REPAIR TYPE 94

SPOT PAINTING EXISTING AND NEW STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS

REPAIR 94 NOTES

FOR FLOORBEAMS:
CLEAN AND PAINT ALL INTERIOR SURFACES AND STRUCTURAL STEEL ELEMENTS AND COMPONENTS OF THE FLOORBEAM WITHIN THE LIMITS INDICATED ON THE ELEVATIONS AND LATERALLY BETWEEN THE DIAPHRAGMS. THE ELEMENTS AND COMPONENTS TO BE CLEANED AND PAINTED INCLUDE BUT ARE NOT RESTRICTED TO FLOORBEAM TOP AND BOTTOM PLATES, WEB PLATES, STIFFENER PLATES, FACE OF END PLATE, AND INTERMEDIATE DIAPHRAGM ELEMENTS.

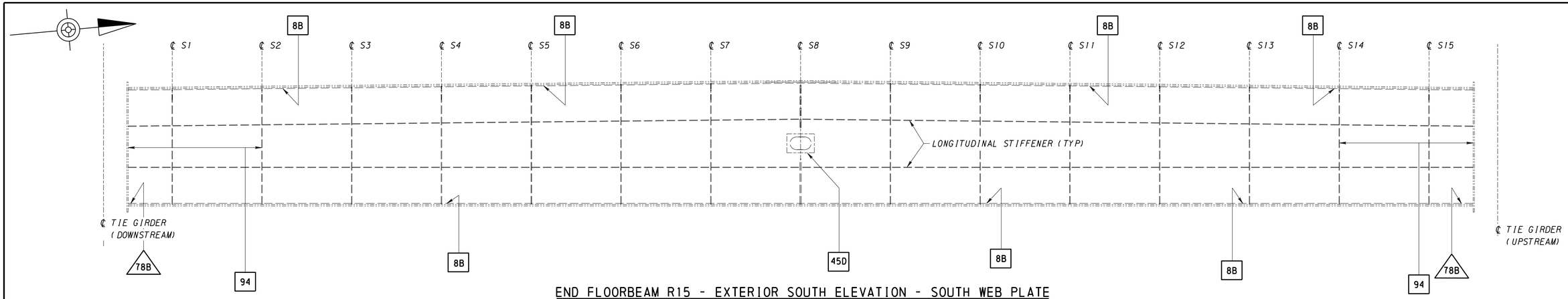
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 49 OF 164

S - 38036

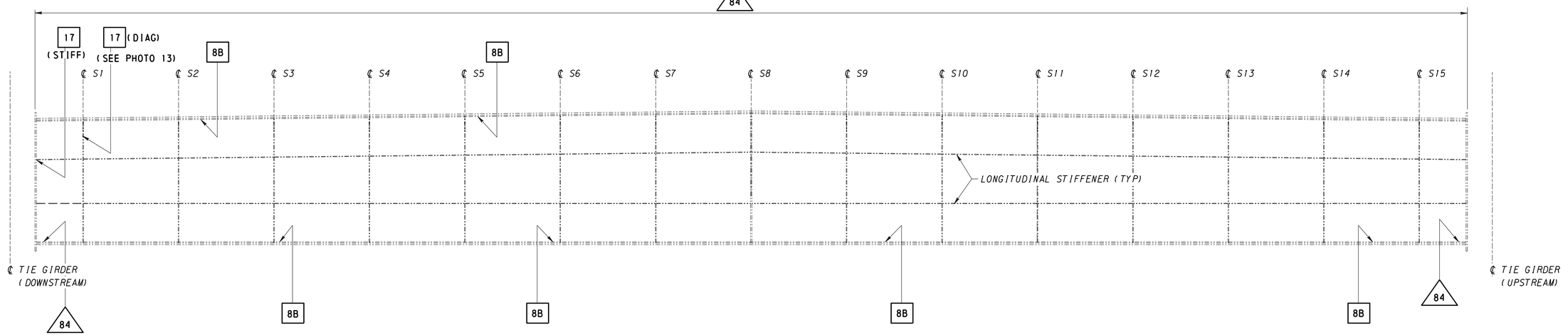
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END FLOORBEAM R15 - EXTERIOR SOUTH ELEVATION - SOUTH WEB PLATE

(SPAN 21)

NOT TO SCALE



END FLOORBEAM R15 - INTERIOR SOUTH ELEVATION - NORTH WEB PLATE

(SPAN 21)

NOT TO SCALE



PHOTO 13

UNDER CUT WELD FOR DIAPHRAGM BRACING-TO-DIAPHRAGM CONNECTION PLATE IN FLOORBEAM NO. 15 (OTHER LOCATIONS SIMILAR)

REPAIR TYPE 17

REPAIR CRACKED OR MISSING WELD (REWELD CRACKED WELD OR WELD MISSING WELD CONNECTION)

PROCEDURE FOR REPAIR TYPE 17

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINNER FOR APPROVAL.
2. REPRESENTATIVE OF THE DEPARTMENT TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT FROM REPAIR AREA AS REQUIRED FOR MT (MAGNETIC PARTICLE NON-DESTRUCTIVE TEST) AND REPAIR.
4. PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING, IN ACCORDANCE WITH SPECIAL PROVISIONS, AT REPAIR LOCATIONS THAT CONTAIN CRACKS TO DETERMINE LOCATION OF THE CRACK TIPS.
5. USING DYE GRINDERS TO GRIND OR AIR ARC, GOUGE THE FILLET WELD FOR THE LENGTH OF THE CRACK IN ACCORDANCE WITH AASHTO/AWS D1.5. REMOVE THE ENTIRE CRACK.
6. CLEAN AND REMOVE ALL SLAG AND DEBRIS FROM THE GOUGED CHANNEL AND REWELD FOLLOWING THE WELD PROCEDURE SPECIFICATIONS AND IN ACCORDANCE WITH AASHOT/AWS D1.5.
7. WELD STIFFENER TO FLOORBEAM TOP FLANGE WITH A 1/4" WELD.
8. DO NOT INTERSECT THE NEW TRANSVERSE WELD WITH THE VERTICAL STIFFENER-TO-WEB WELD. MAINTAIN A 1" MINIMUM GAP BETWEEN THE WELD TOES.
9. PAINT WORK AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- ALL REPAIRS SHOWN ARE LOCATED ON THE INTERIOR OF THE BOX FLOORBEAM

LEGEND

SI STRINGER DESIGNATION

8B INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION

78B INDICATES MISCELLANEOUS REPAIR TYPE AND LOCATION

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

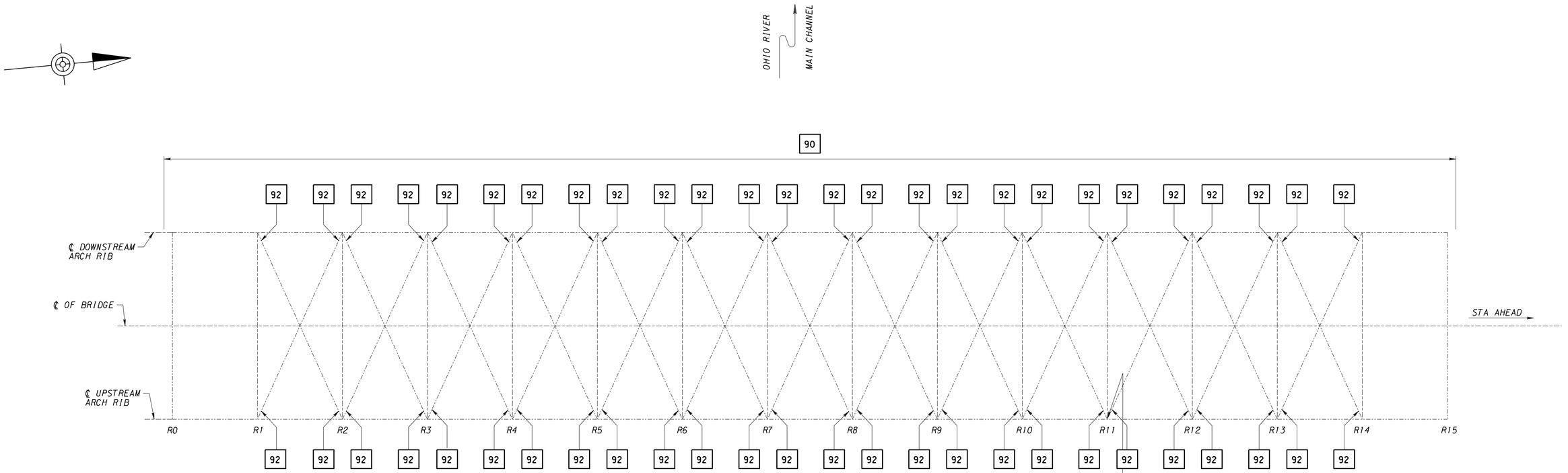
FLOORBEAM ELEVATION - R15 - SPAN 21

RECOMMENDED _____

SHEET 50 OF 164

S - 38036

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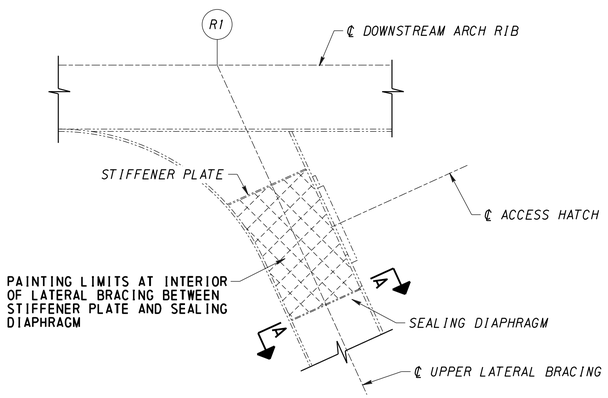


UPPER LATERAL BRACING PLAN
SPAN 21
NOT TO SCALE

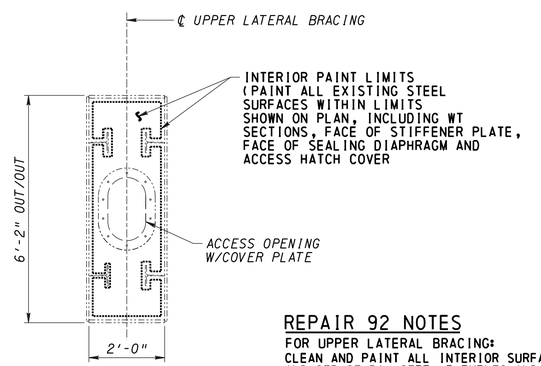
NOTES
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7

LEGEND
RO ARCH RIB JOINT NUMBER

92 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION



UPPER LATERAL BRACING PLAN
NOT TO SCALE
(TYP AT LATERAL BRACING TO ARCH RIB CONNECTIONS)
(APPROXIMATE PAINT AREA = 106 SF FOR INFORMATION PURPOSES ONLY)
(EACH LOCATION)



SECTION A-A
NOT TO SCALE
SEALING DIAPGRAGM SHOWN, STIFFENER PLATE SIMILAR WITH ACCESS OPENING ONLY

REPAIR 92 NOTES
FOR UPPER LATERAL BRACING:
CLEAN AND PAINT ALL INTERIOR SURFACES AND STRUCTURAL STEEL ELEMENTS AND COMPONENTS OF THE UPPER LATERAL BRACING WITHIN THE LIMITS INDICATED IN SECTION A-A OF THIS SHEET AND LATERALLY FOR A APPROXIMATE DISTANCE BETWEEN THE STIFFENER PLATE AND SEALING DIAPHRAGM. THE ELEMENTS AND COMPONENTS TO BE CLEANED AND PAINTED INCLUDE BUT ARE NOT RESTRICTED TO THE LATERAL BRACING TOP AND BOTTOM PLATES, WEB PLATE, STIFFENER PLATES AND FACE OF SEALING DIAPHRAGM.

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

REPAIR TYPE 92
ZONE PAINTING EXISTING STRUCTURAL STEEL ON INTERIOR OF ARCH SPAN MEMBERS (TIE GIRDERS, ARCH RIB, AND UPPER LATERAL BRACING)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 039027-E

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

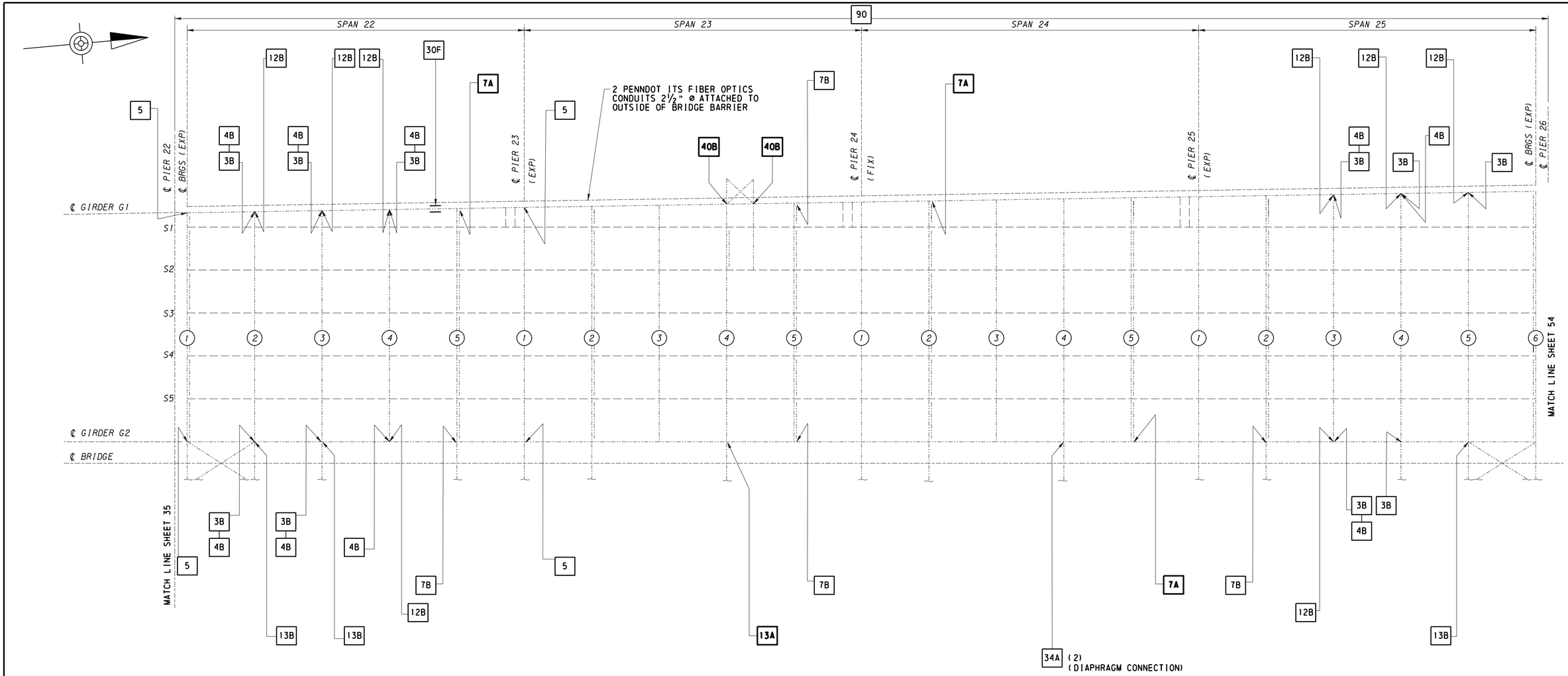
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
UPPER LATERAL BRACING PLAN-SPAN 21

RECOMMENDED _____

SHEET 51 OF 164

S - 38036

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EXISTING FRAMING PLAN - SPANS 22 THRU 25 SB

NOT TO SCALE

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 *STRINGER DESIGNATION*

[34] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

[13C] INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

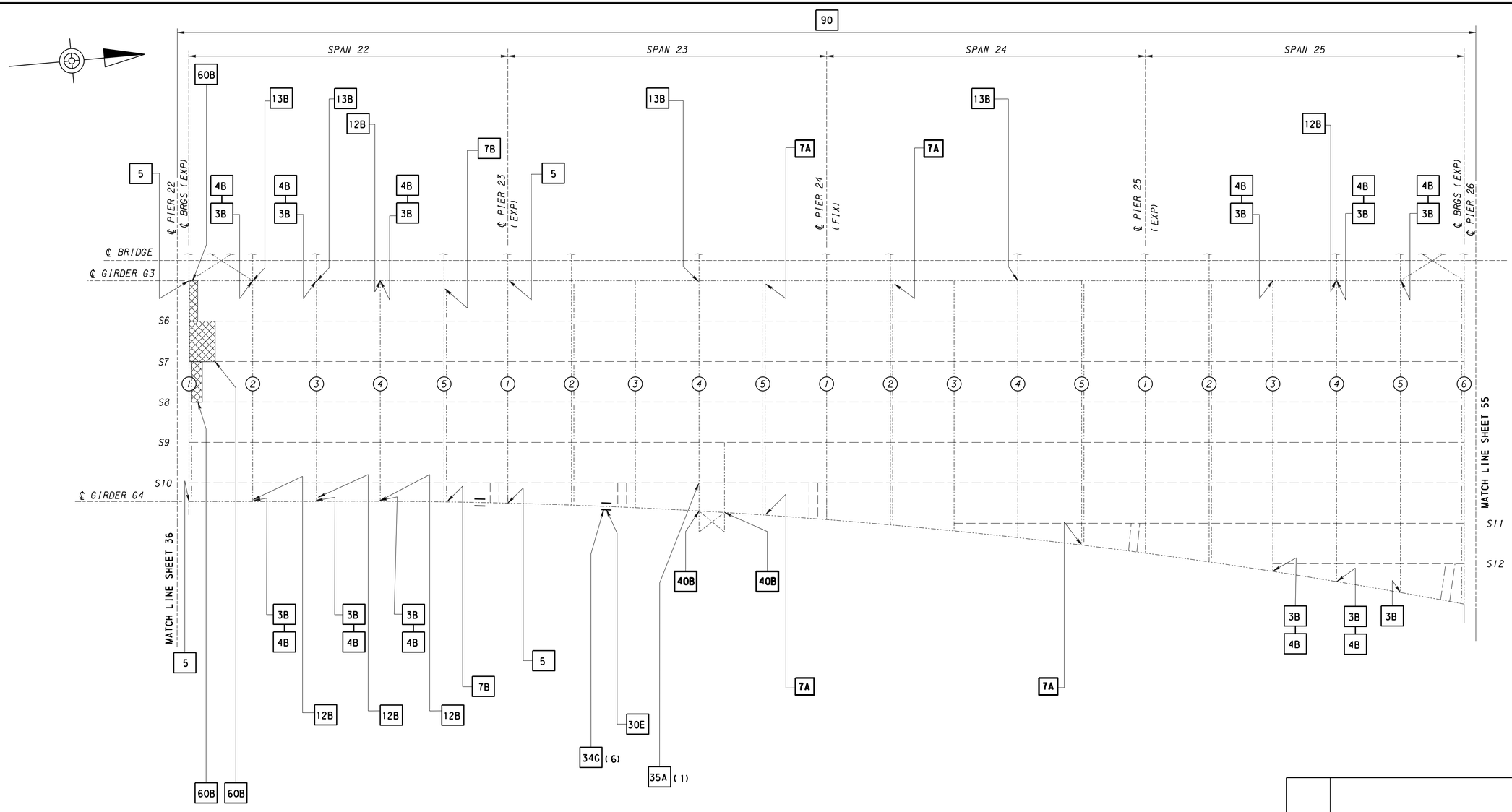
FRAMING PLAN SPANS 22 THRU 25 SB

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 52 OF 164

S - 38036



EXISTING FRAMING PLAN - SPANS 22 THRU 25 NB

NOT TO SCALE

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED AND/OR DELAMINATION CONCRETE REPAIR ON UNDERSIDE OF BRIDGE DECK

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 *STRINGER DESIGNATION*

35 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

7A INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

FRAMING PLAN SPANS 22 THRU 25 NB

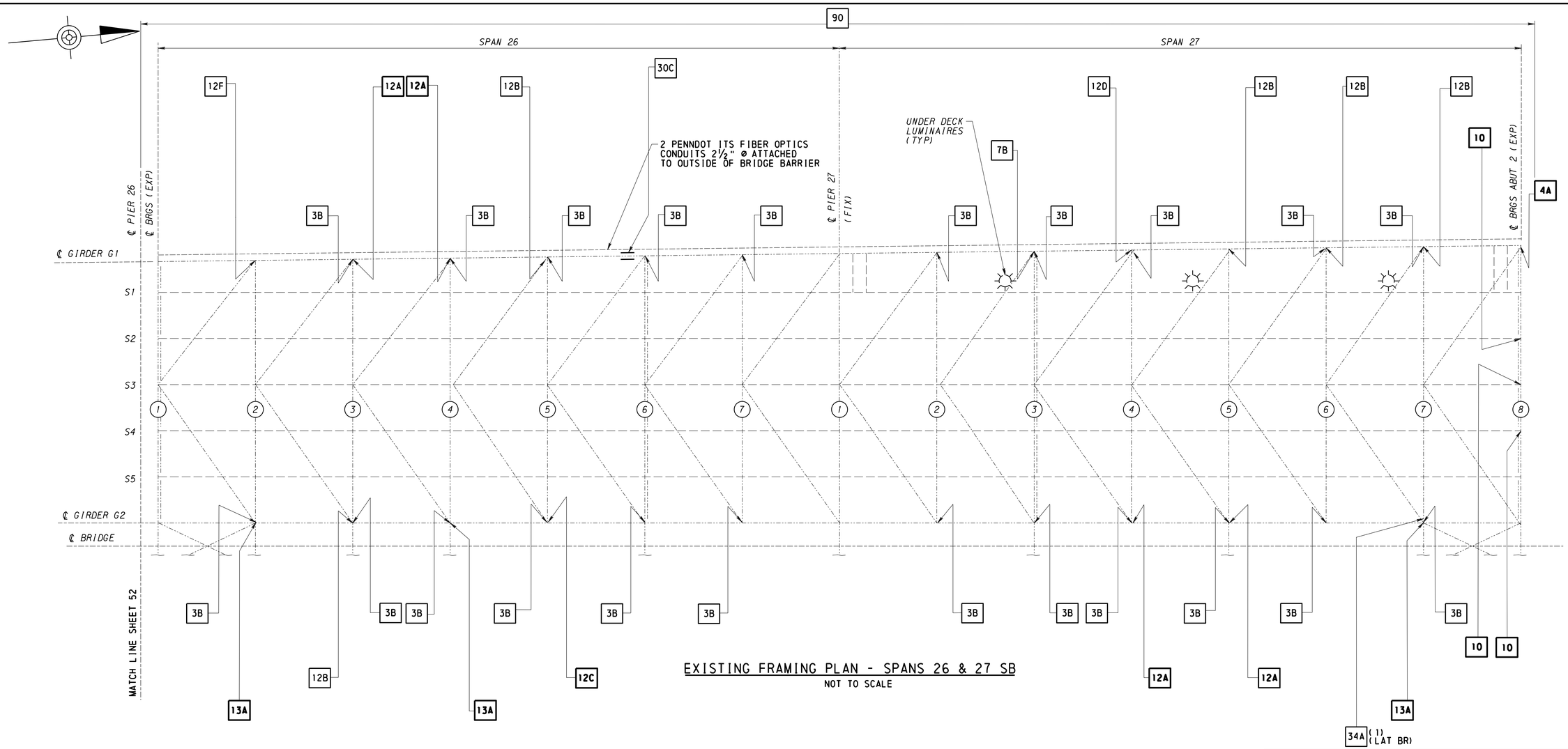
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 53 OF 164

S - 38036

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EXISTING FRAMING PLAN - SPANS 26 & 27 SB
NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 *STRINGER DESIGNATION*

34 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

4A INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

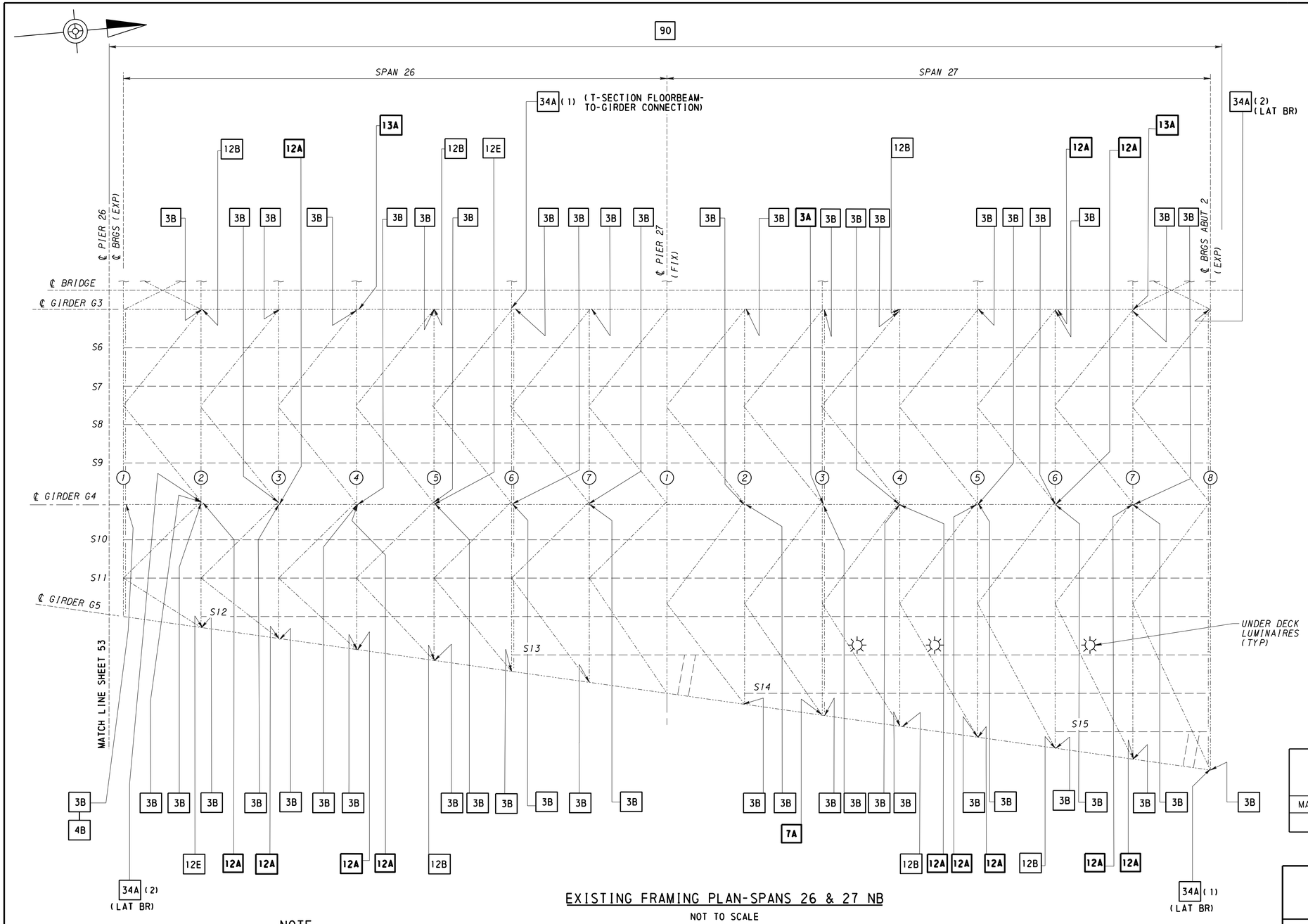
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
FRAMING PLAN SPANS 26 & 27 SB

RECOMMENDED _____

SHEET 54 OF 164

S - 38036

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EXISTING FRAMING PLAN-SPANS 26 & 27 NB

NOT TO SCALE

NOTE

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR STEEL ROCKER BEARING REPLACEMENT LOCATIONS SEE SHEETS 135 & 136

LEGEND

(3) *FLOORBEAM DESIGNATION (PLATE GIRDER TYPE)*

S1 STRINGER DESIGNATION

34 INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (UNCRACKED)

7A INDICATES SUPERSTRUCTURE REPAIR TYPE AND LOCATION (CRACKED OR CONTAINS FLAWS)

(1) INDICATES NUMBER OF BOLTS BEING REPLACED

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

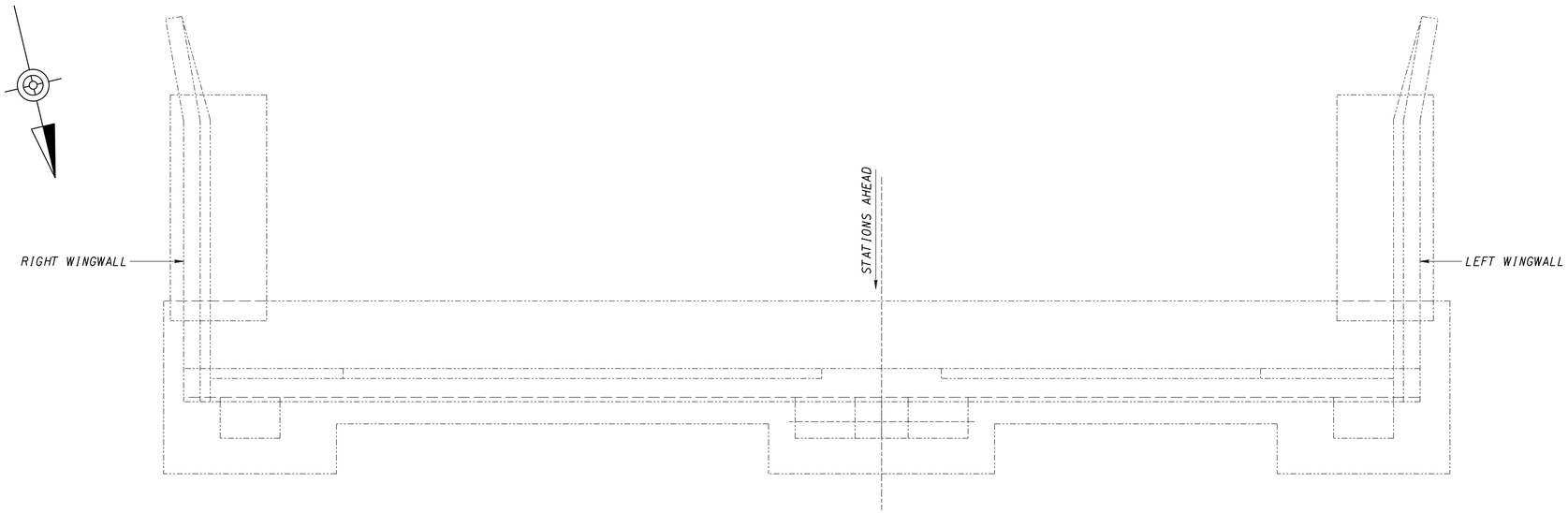
FRAMING PLAN SPANS 26 & 27 NB

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

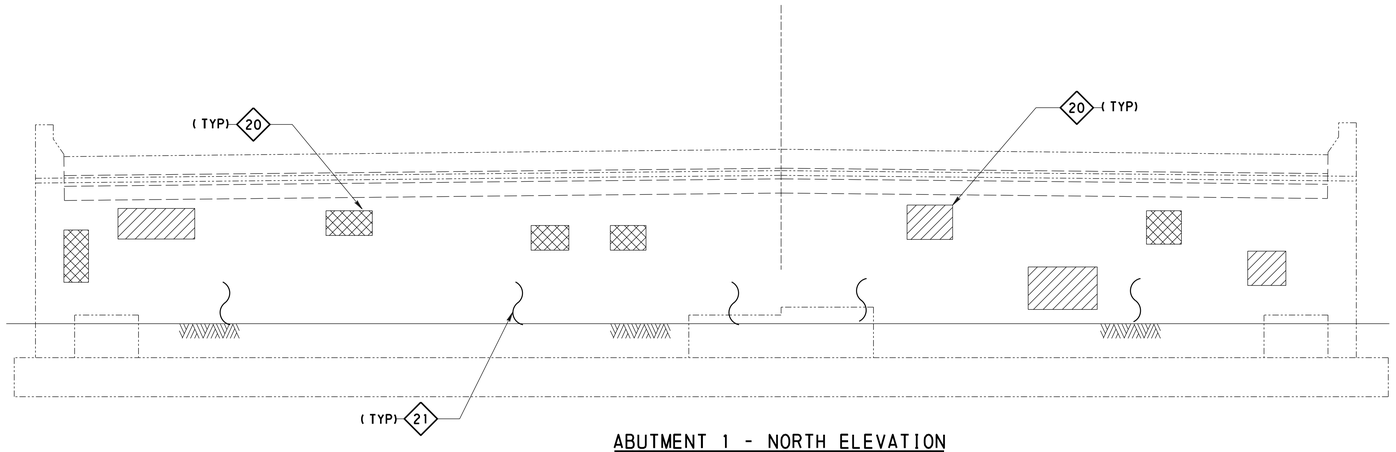
RECOMMENDED _____

SHEET 55 OF 164

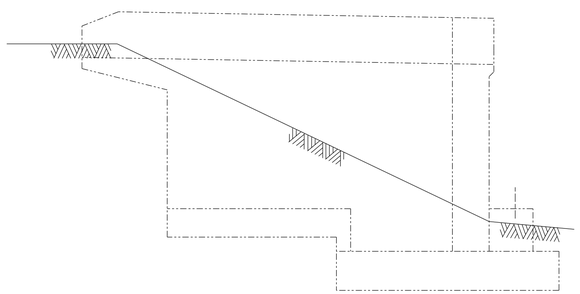
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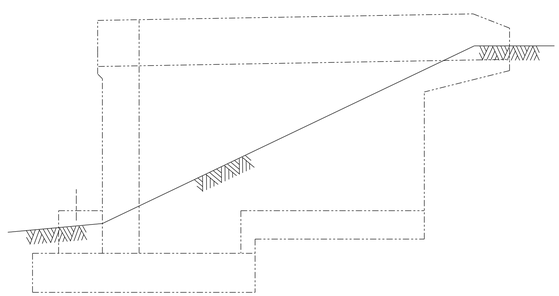
ABUTMENT 1 - PLAN



ABUTMENT 1 - NORTH ELEVATION



RIGHT WINGWALL - ELEVATION



LEFT WINGWALL - ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	LEFT WINGWALL	STEM	RIGHT WINGWALL	TOTAL PER UNIT
ABUTMENT 1	0	12	0	12

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	LEFT WINGWALL	STEM	RIGHT WINGWALL	TOTAL PER UNIT
ABUTMENT 1	0	36	0	36

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	LEFT WINGWALL	STEM	RIGHT WINGWALL	TOTAL PER UNIT
ABUTMENT 1	0	1	0	1

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
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- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

ABUTMENT 1 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

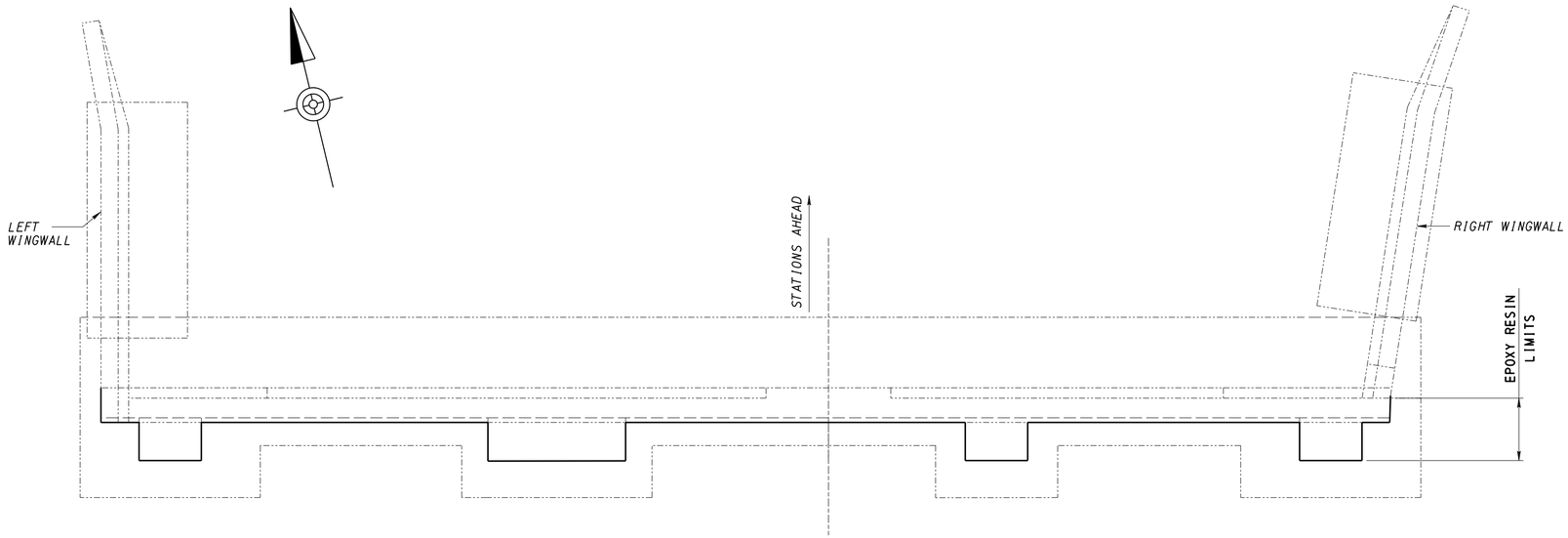
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SHEET 56 OF 164

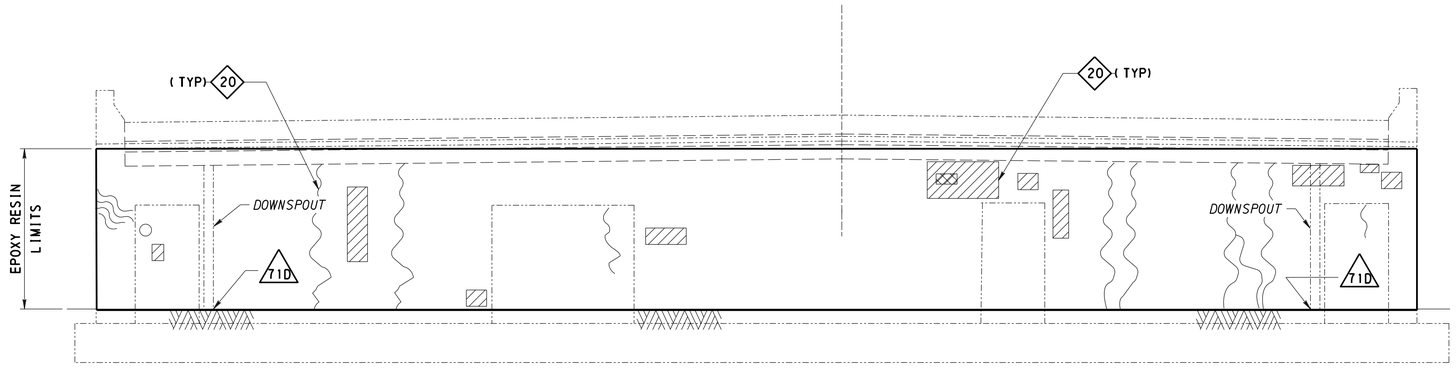
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CHECKED BY	DAM

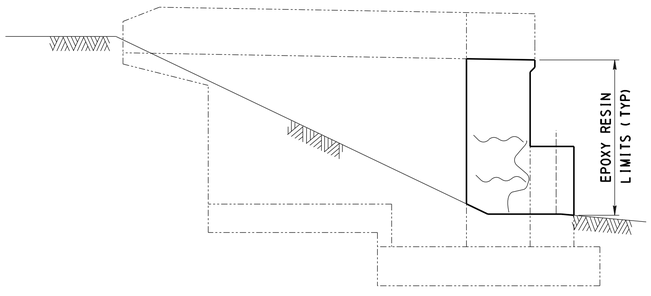
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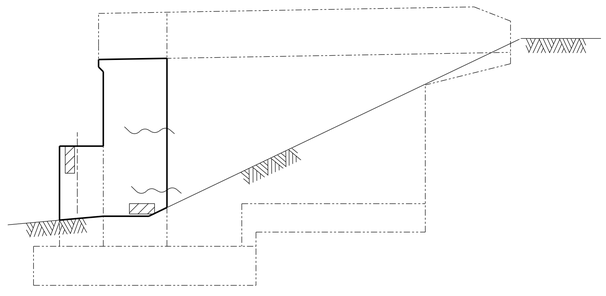
ABUTMENT 2 PLAN



ABUTMENT 2 NORTH ELEVATION



LEFT WINGWALL - ELEVATION



RIGHT WINGWALL - ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	LEFT WINGWALL	STEM	RIGHT WINGWALL	TOTAL PER UNIT
ABUTMENT 2	1	81	7	89

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	LEFT WINGWALL	STEM	RIGHT WINGWALL	TOTAL PER UNIT
ABUTMENT 2	27	209	12	248

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)					
COATING TYPE	SUBSTRUCTURE UNIT	LEFT WINGWALL	STEM	RIGHT WINGWALL	TOTAL PER UNIT
REPAIR TYPE 23 PENETRATING SEALER	ABUTMENT 2	1	27	3	31
REPAIR TYPE 26 EPOXY RESIN	ABUTMENT 2	0	450	0	450

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

REPAIR TYPE 26

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)
APPLY EPOXY RESIN TO ALL SURFACES AS INDICATED ABOVE EXISTING GROUNDLINE.

NOTES

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- FOR GENERAL LEGEND SEE SHEET 7
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- FOR REPAIR TYPE 20 SEE SHEET 84

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

ABUTMENT 2 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

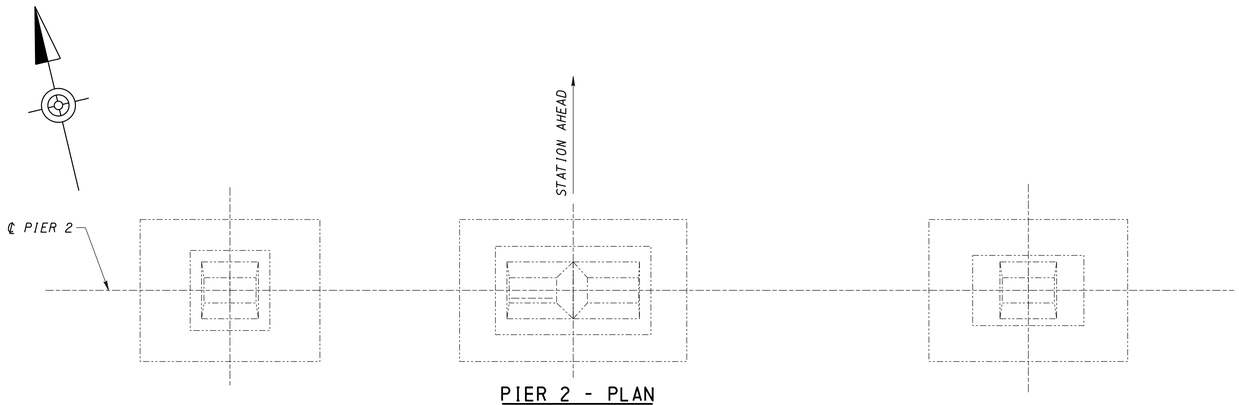
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CHECKED BY	DAM

RECOMMENDED _____

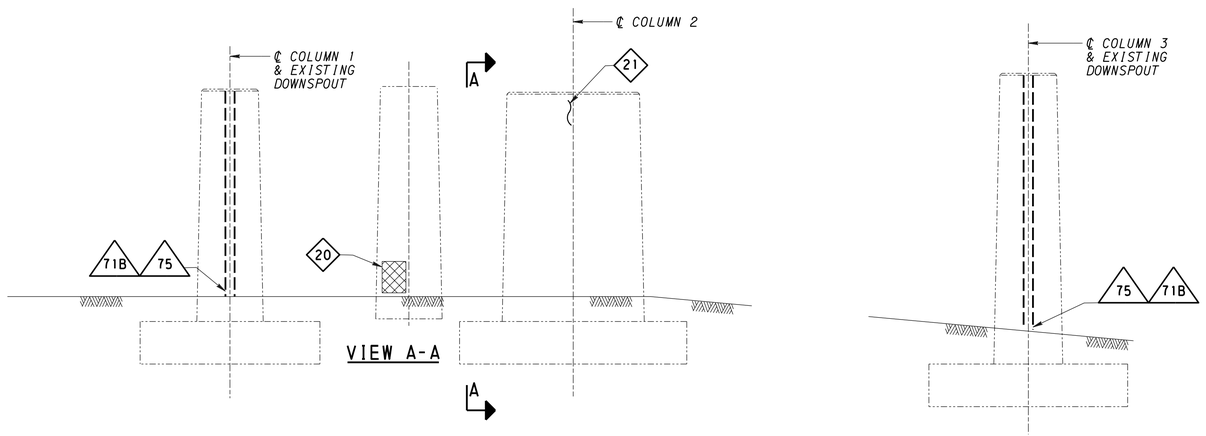
SHEET 57 OF 164

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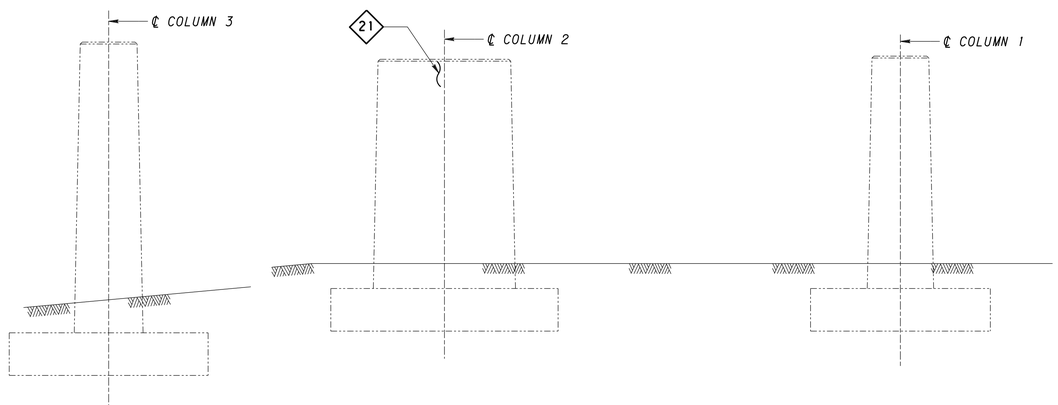


PIER 2 - PLAN



VIEW A-A

PIER 2 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



PIER 2 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 2	0	1	0	1

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 2	0	9	0	9

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 2	0	1	0	1

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 2 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

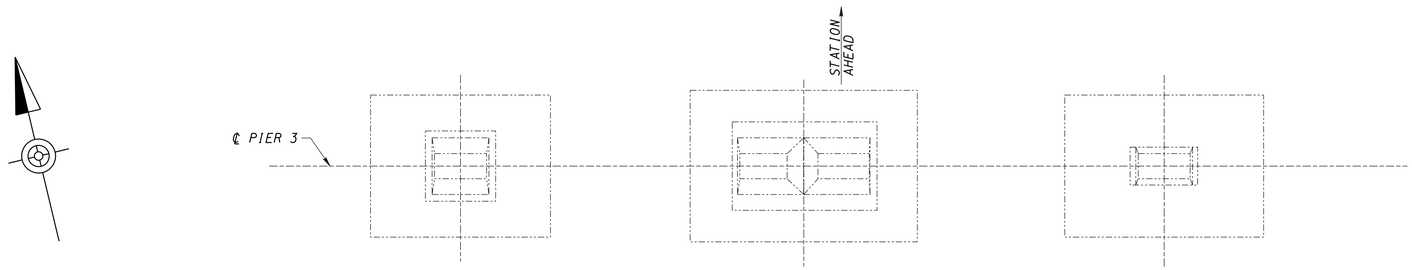
RECOMMENDED _____

SHEET 58 OF 164

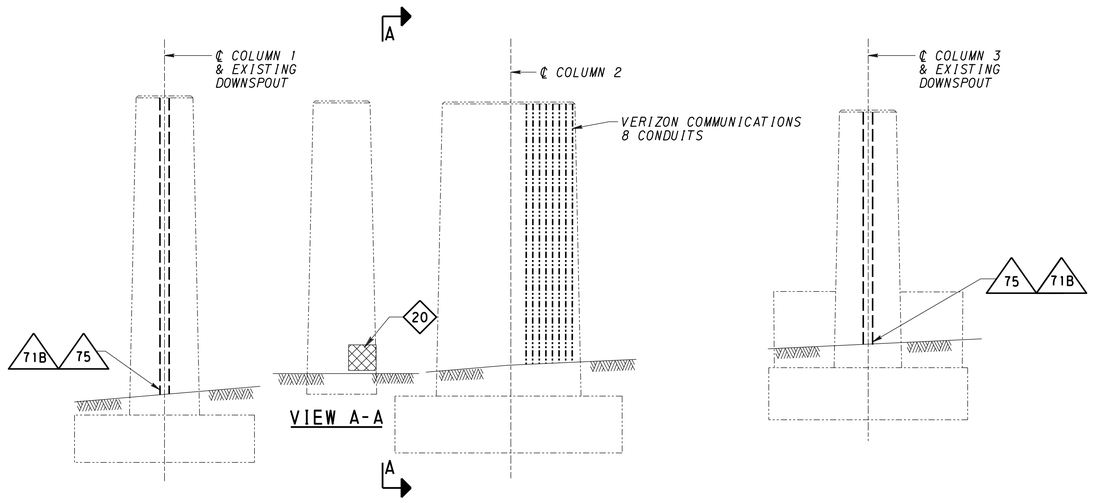
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CHECKED BY	DAM

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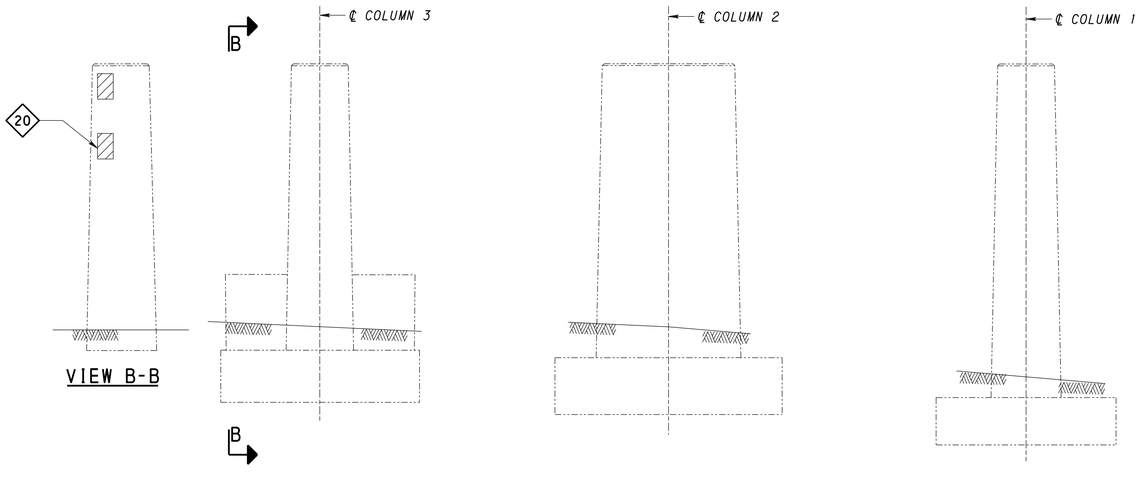


PIER 3 - PLAN



VIEW A-A

PIER 3 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



VIEW B-B

PIER 3 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 3	0	1	4	5

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 3	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 3	0	1	1	2

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 3 - REPAIRS

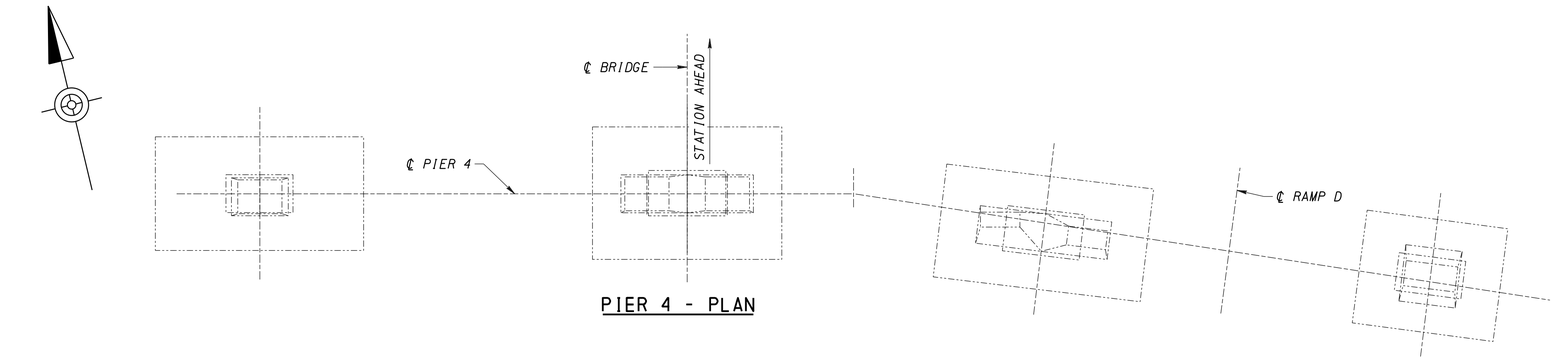
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

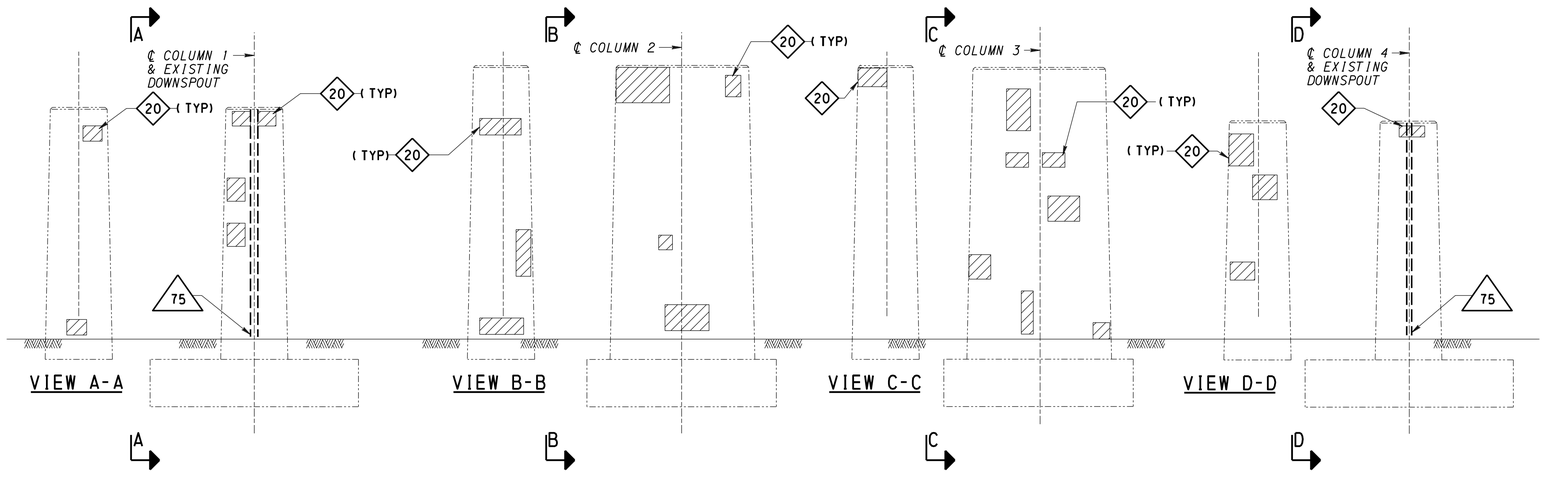
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SHEET 59 OF 164

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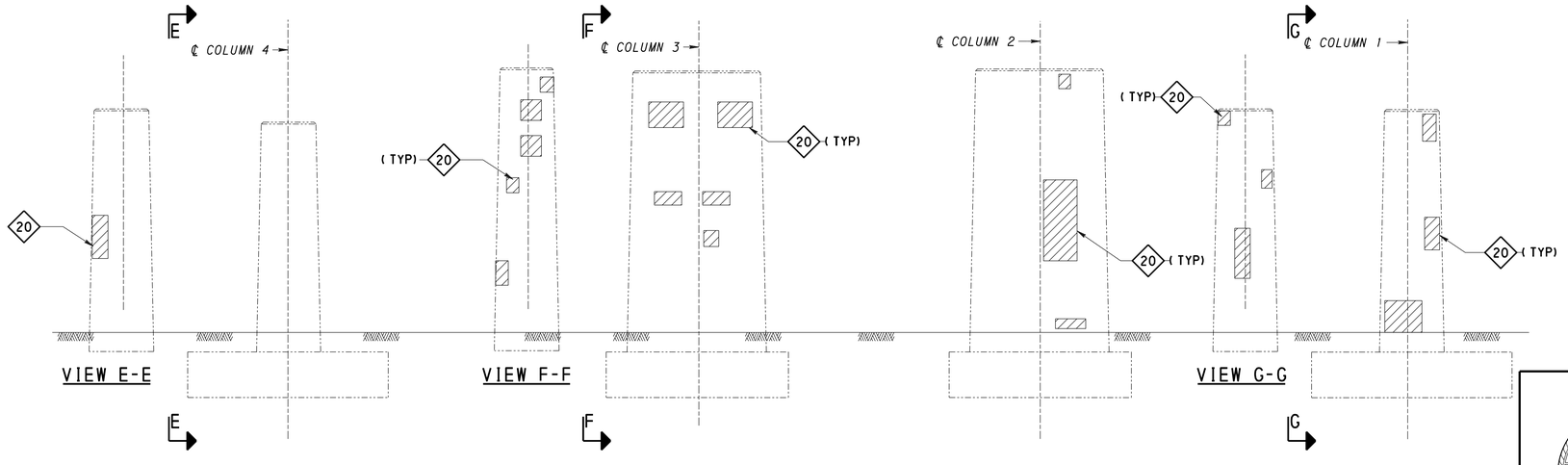


PIER 4 - PLAN



PIER 4 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 4 - NORTH ELEVATION

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CHECKED BY	DAM

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR
AREAS (CF)

SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 4	56	49	61	7	173

REPAIR TYPE 20
CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL
LENGTH (LF)

SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 4	0	0	0	0	0

REPAIR TYPE 21
EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES
AREA (SY)

SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 4	16	14	18	2	50

REPAIR TYPE 23
PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND
- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 4 - REPAIRS

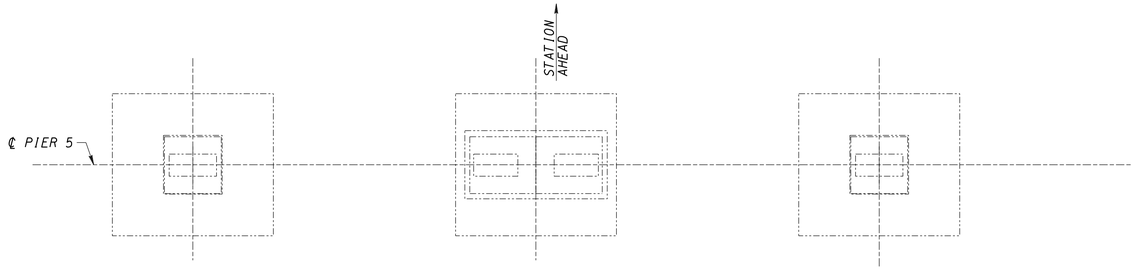
COMMONWEALTH OF PENNSYLVANIA
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DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

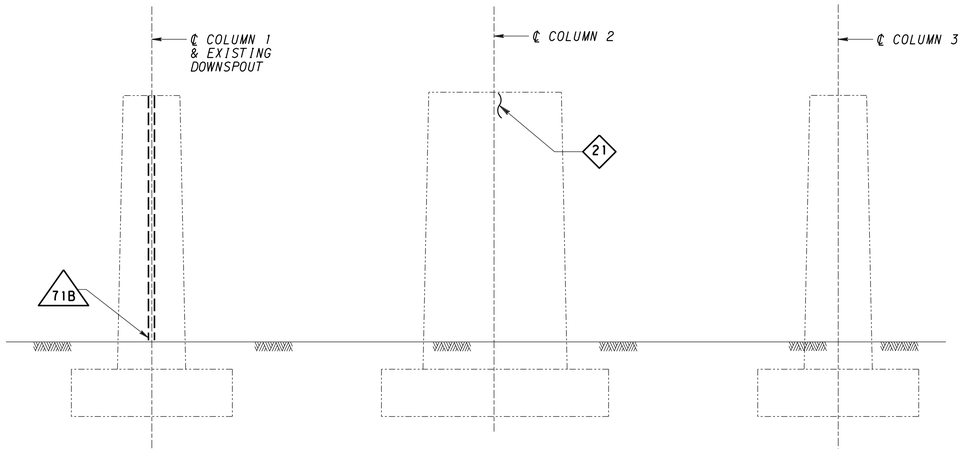
SHEET 60 OF 164

S - 38036

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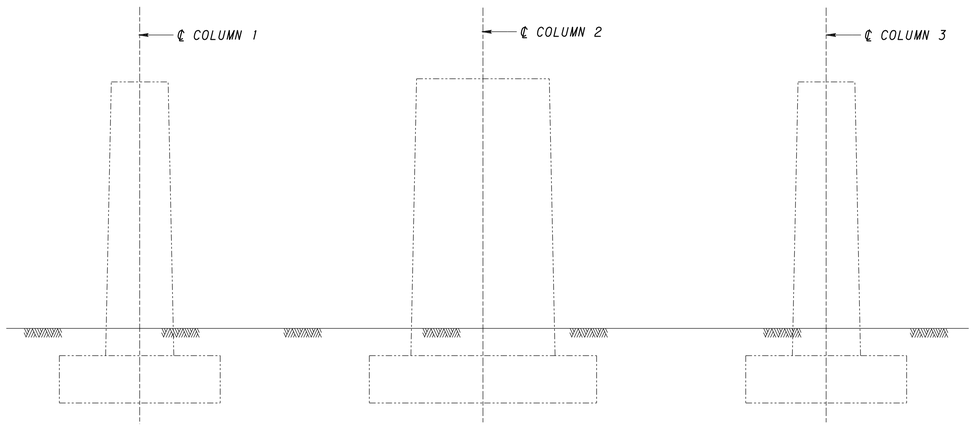


PIER 5 - PLAN



PIER 5 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 5 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 5	0	0	0	0

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 5	0	5	0	5

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 5	0	0	0	0

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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- FOR GENERAL LEGEND SEE SHEET 7
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- THE REPAIR LOCATION AND ESTIMATED QUANTITY ARE APPROXIMATE. ACTUAL REPAIR DIMENSIONS AND LOCATIONS SHALL BE DETERMINED BY THE DEPARTMENTS REPRESENTATIVE
- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 5 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

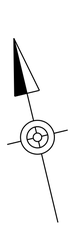
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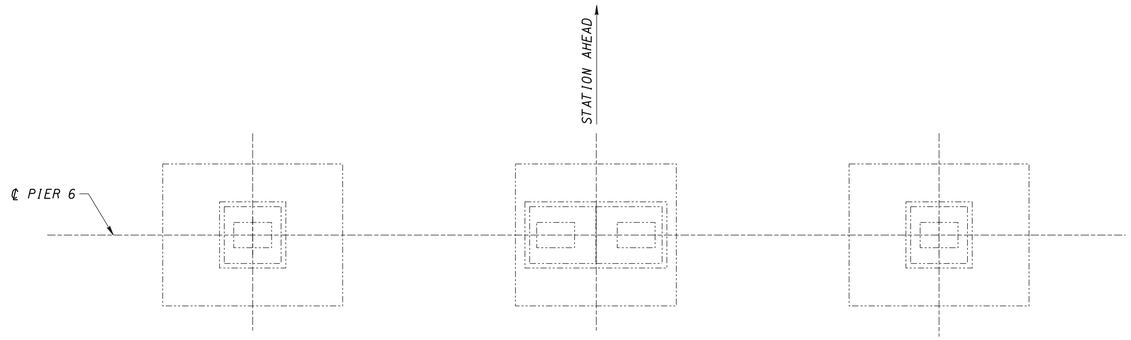
SHEET 61 OF 164

S - 38036

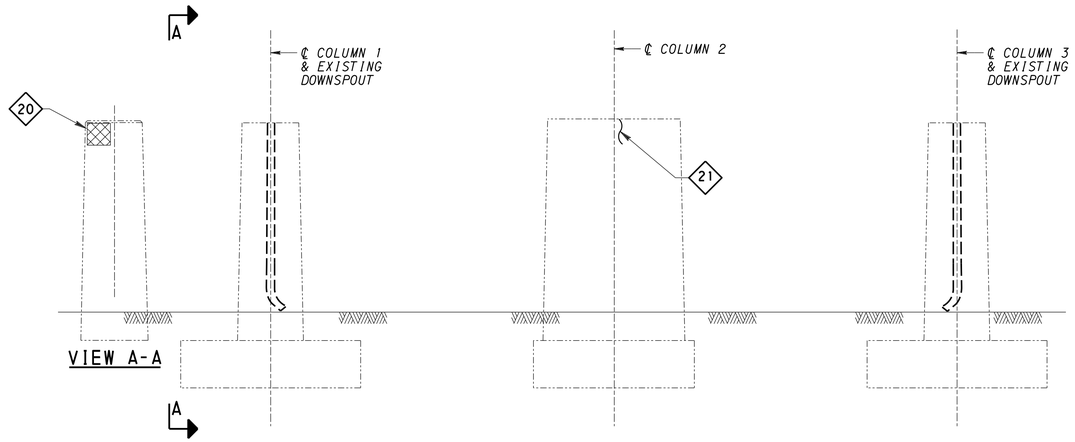
DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

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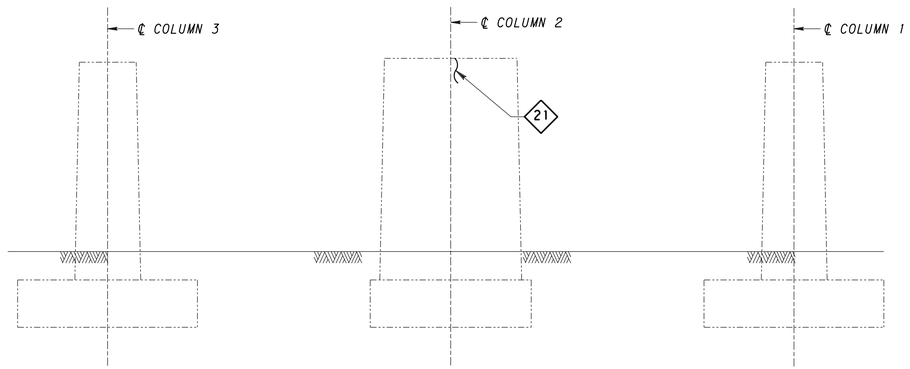


PIER 6 - PLAN



VIEW A-A

PIER 6 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



PIER 6 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 6	1	0	0	1

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 6	0	9	0	9

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 6	1	0	0	1

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

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DRAWN BY	MEG
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

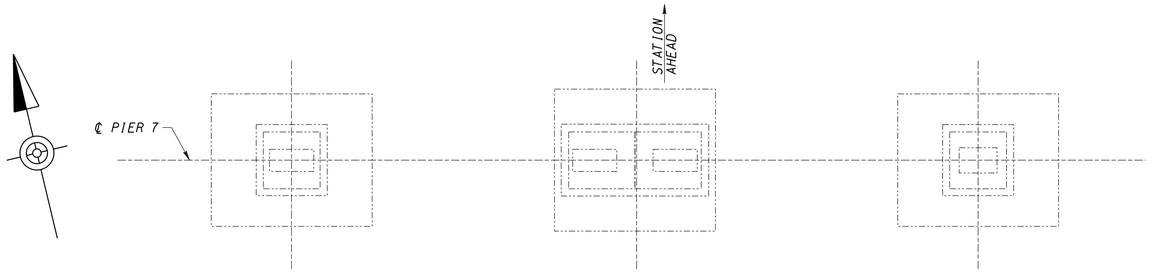
PIER 6 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

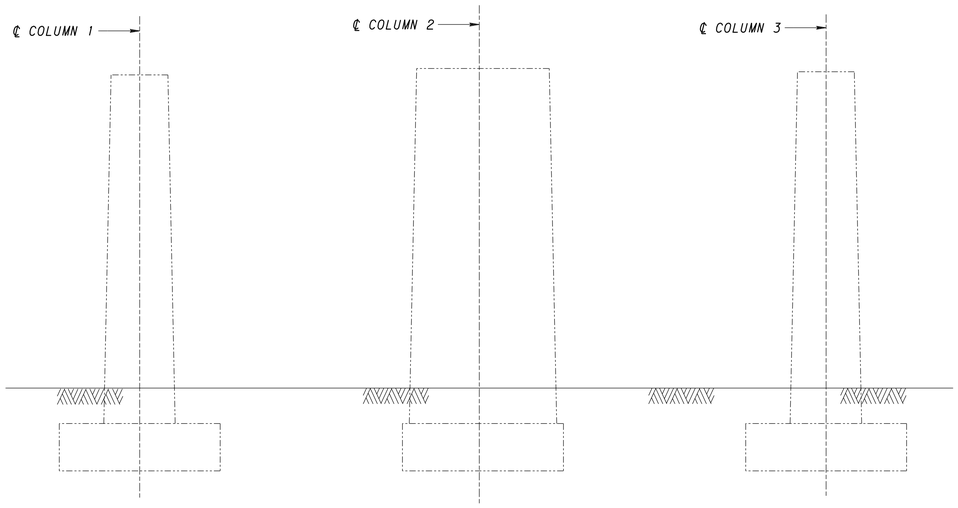
RECOMMENDED _____

SHEET 62 OF 164

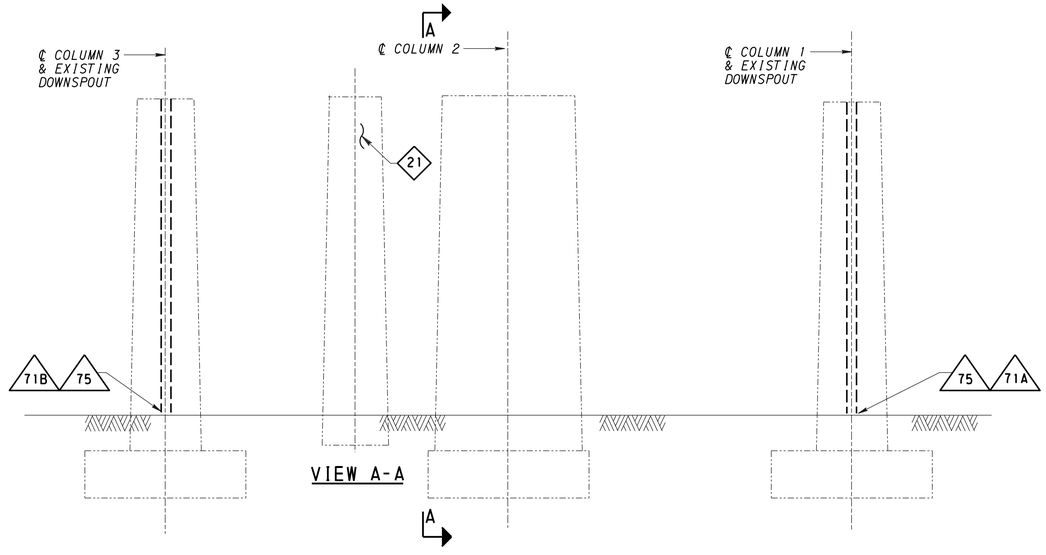
S - 38036



PIER 7 - PLAN



PIER 7 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



VIEW A-A

PIER 7 - NORTH ELEVATION

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CHECKED BY	DAM

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 7	0	0	0	0

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 7	0	27	0	27

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 7	0	0	0	0

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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REVISIONS					

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

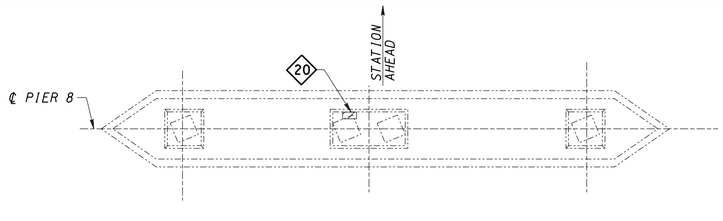
PIER 7 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

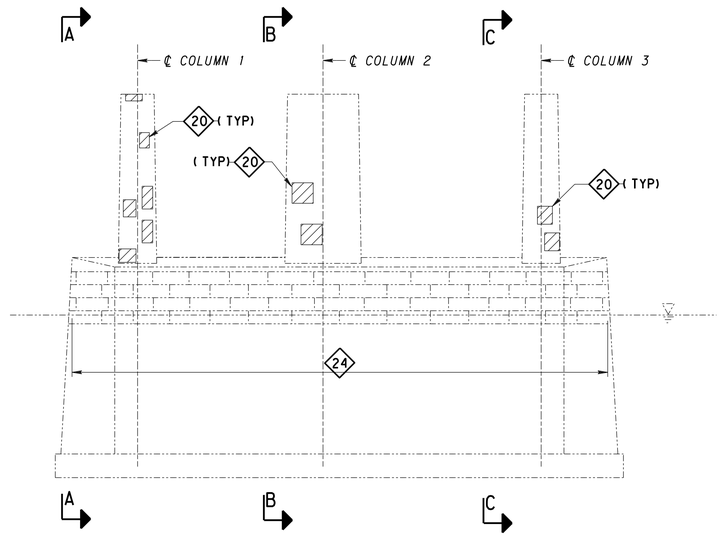
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SHEET 63 OF 164

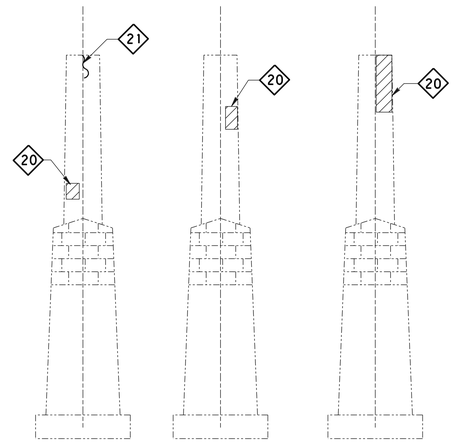
S - 38036



PIER 8 - PLAN



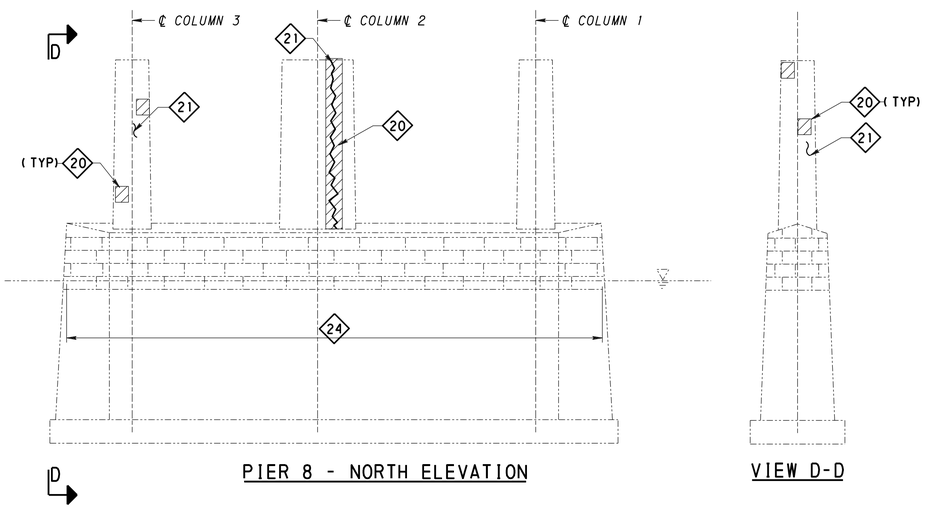
PIER 8 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



VIEW A-A VIEW B-B VIEW C-C

POINTING DETERIORATED GRANITE MASONRY MORTAR JOINTS LENGTH (LF)	
SUBSTRUCTURE UNIT	PLINTH
PIER 8	218

REPAIR TYPE 24
POINTING DETERIORATED MASONRY MORTAR JOINTS



PIER 8 - NORTH ELEVATION

VIEW D-D

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 8	54	54	18	126

REPAIR TYPE 20
CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 8	26	69	5	100

REPAIR TYPE 21
EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 8	16	16	6	38

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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- FOR GENERAL LEGEND SEE SHEET 7
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	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
PIER 8 - REPAIRS

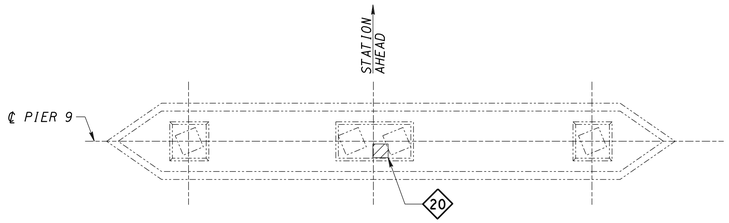
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

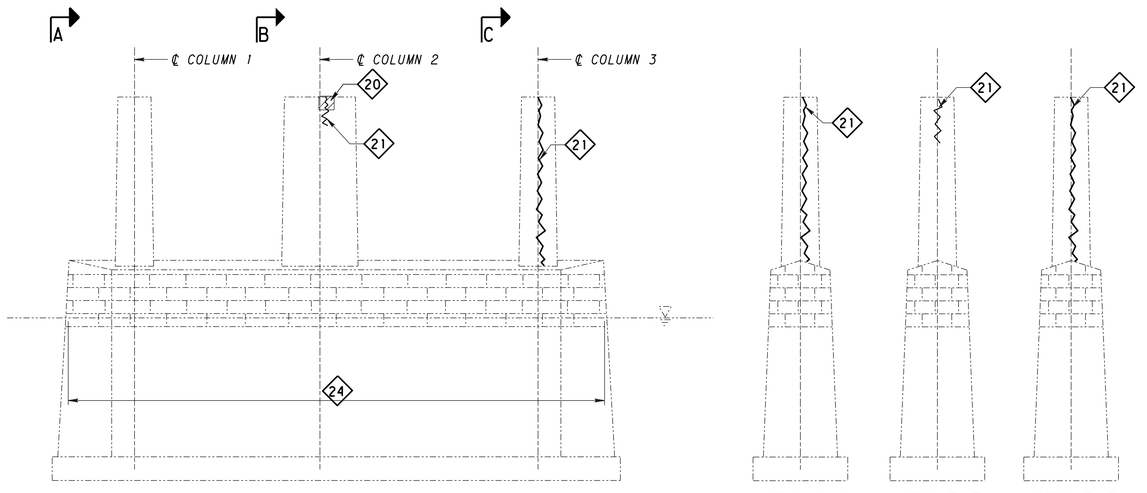
SHEET 64 OF 164

S - 38036

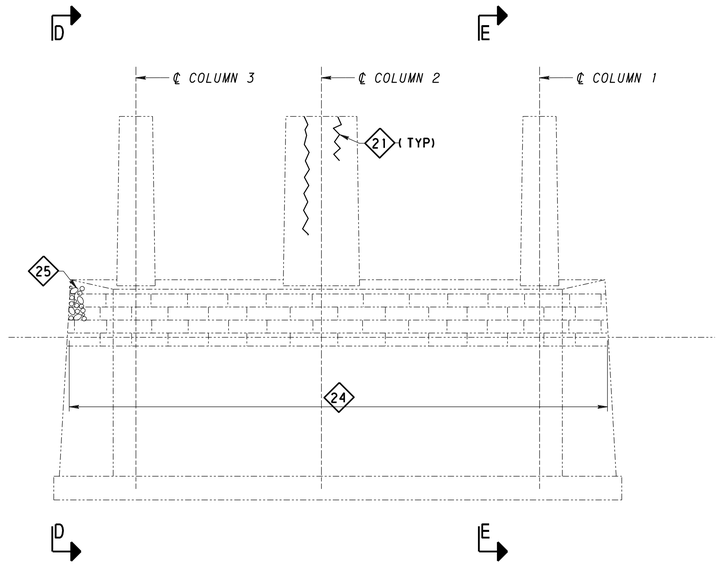
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CHECKED BY	RLC



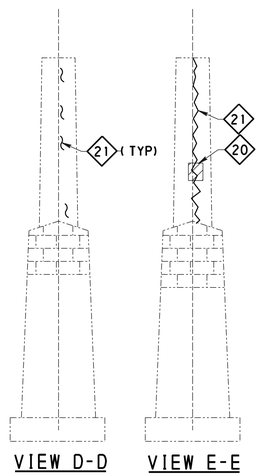
PIER 9 - PLAN



PIER 9 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



PIER 9 - NORTH ELEVATION



POINTING DETERIORATED GRANITE MASONRY MORTAR JOINTS LENGTH (LF)	
SUBSTRUCTURE UNIT	PLINTH
PIER 9	50

REPAIR TYPE 24

POINTING OF PIER MORTAR JOINTS FOR GRANITE CAP AND ROCK FACE STONES

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 9	0	2	2	4

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 9	68	66	131	265

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 9	0	1	1	2

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 9 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 039827-E

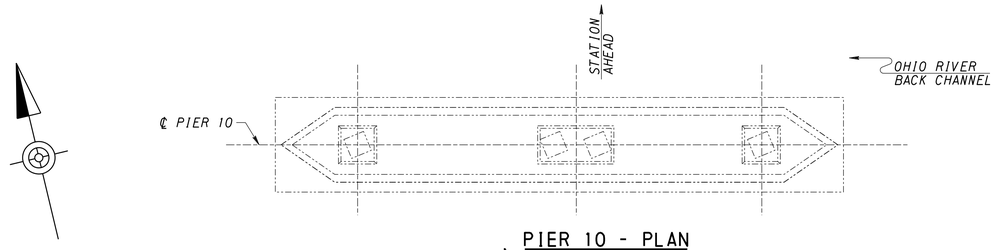
RECOMMENDED _____

SHEET 65 OF 164

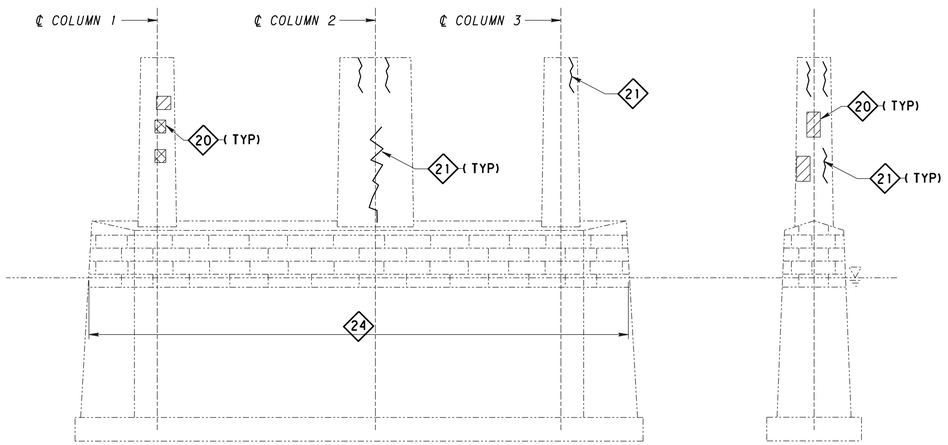
S - 38036

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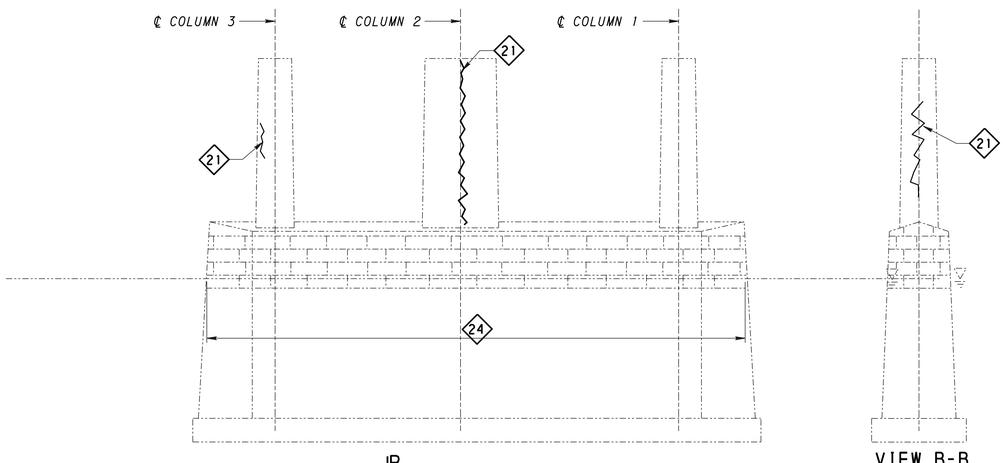


PIER 10 - PLAN



PIER 10 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)

VIEW A-A



PIER 10 - NORTH ELEVATION

VIEW B-B

POINTING DETERIORATED GRANITE MASONRY MORTAR JOINTS LENGTH (LF)	
SUBSTRUCTURE UNIT	PLINTH
PIER 10	70

REPAIR TYPE 24

POINTING OF PIER MORTAR JOINTS FOR GRANITE CAP AND ROCK FACE STONES

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 10	2	6	0	8

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 10	0	147	18	165

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 10	1	2	0	3

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 10 - REPAIRS

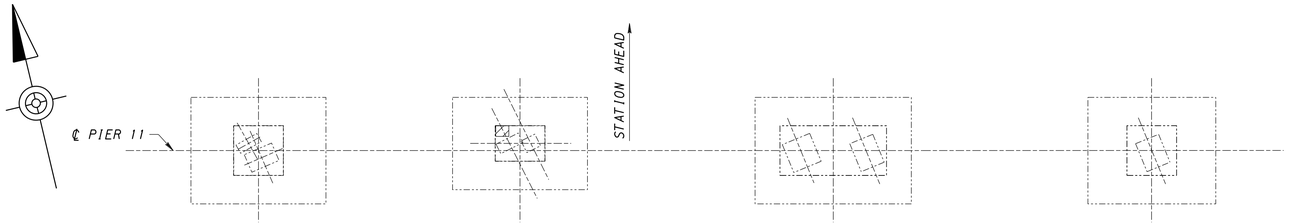
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 039027-E

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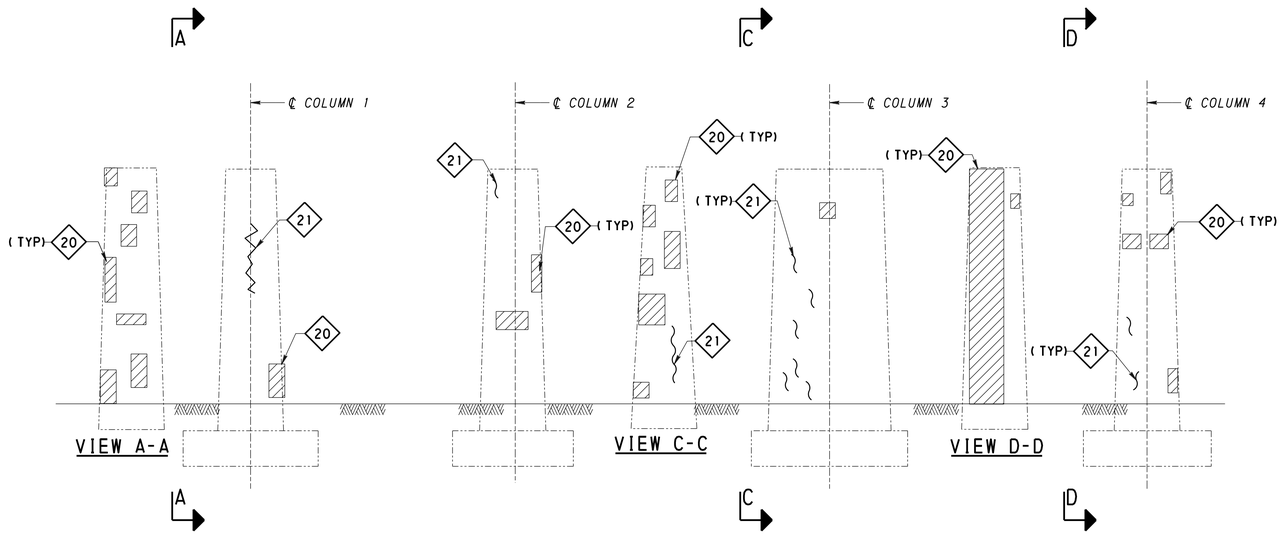
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SHEET 66 OF 164

S - 38036

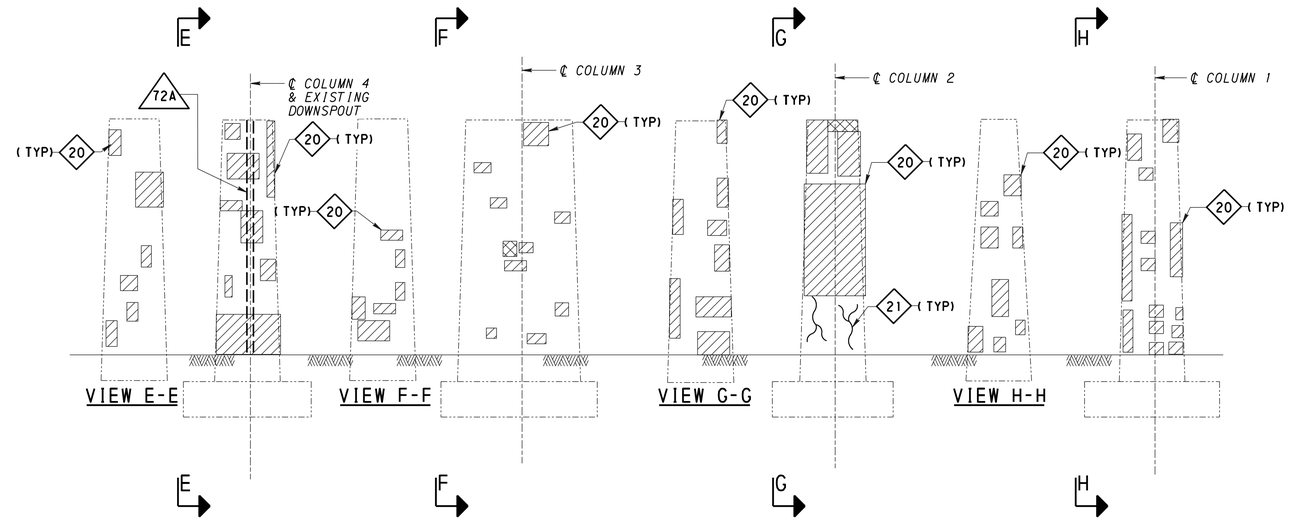


PIER 11 - PLAN



PIER 11 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 11 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 11	179	228	59	409	875

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 11	26	4	61	21	112

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 11	50	64	17	114	245

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- THE REPAIR TYPE 20 AREAS SHOWN REPRESENT APPROXIMATE SPALLED OR DELAMINATED SURFACE AREA AND LOCATION
- THE REPAIR LOCATION AND ESTIMATED QUANTITY ARE APPROXIMATE. ACTUAL REPAIR DIMENSIONS AND LOCATIONS SHALL BE DETERMINED BY THE DEPARTMENTS REPRESENTATIVE
- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 11 - REPAIRS

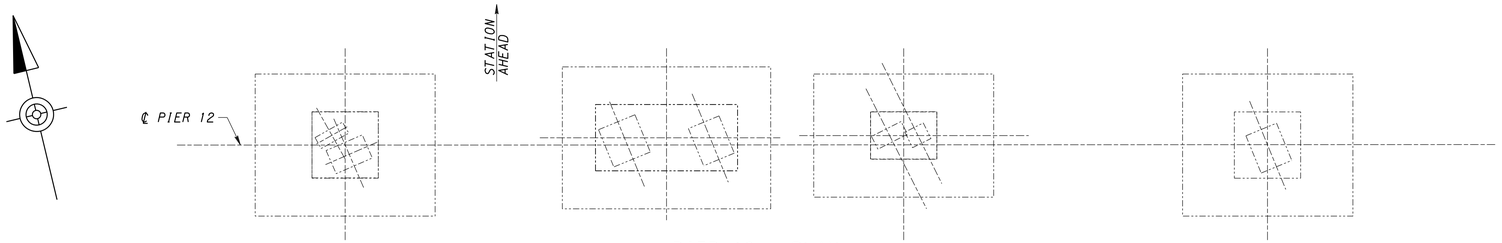
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

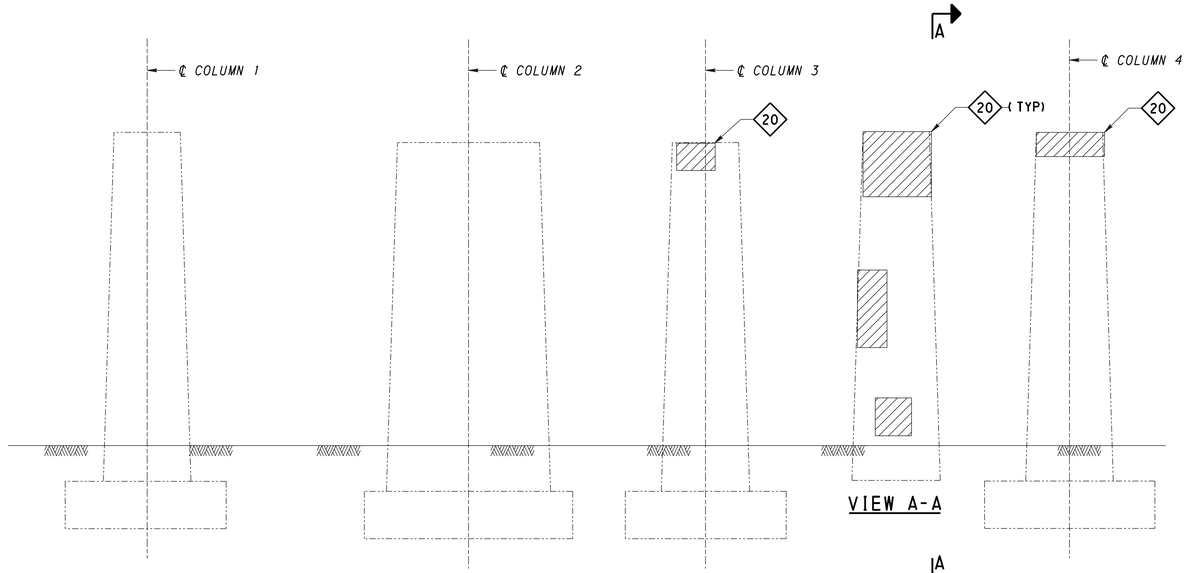
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DRAWN BY	MEG
CHECKED BY	DAM

SHEET 67 OF 164

S - 38036



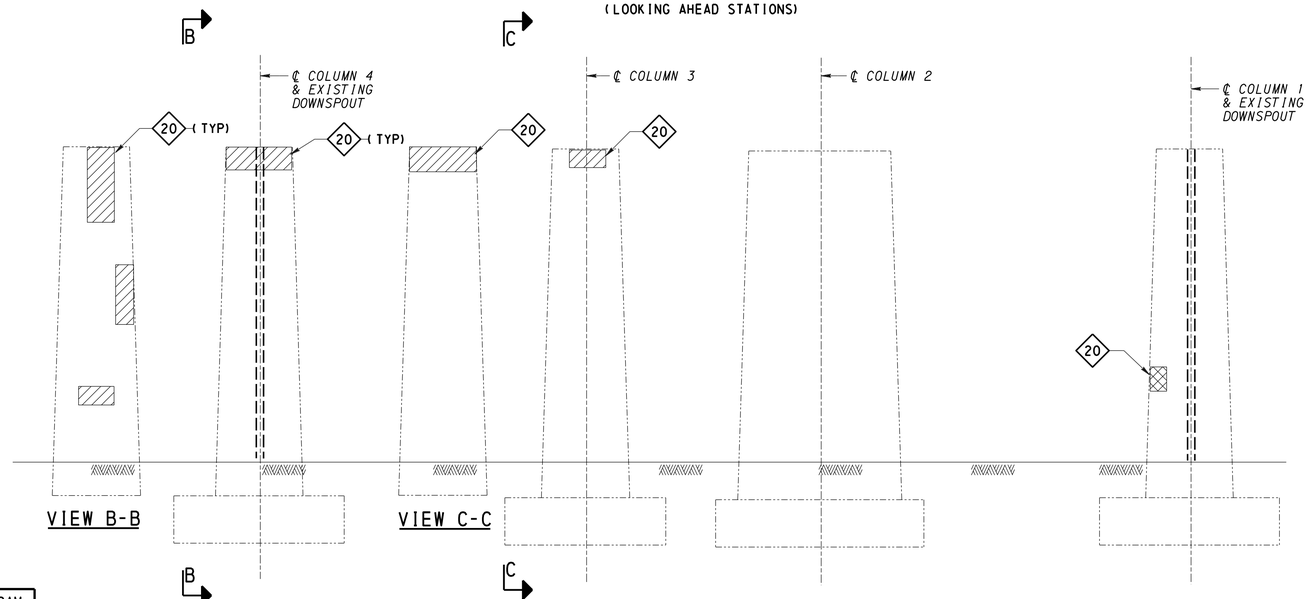
PIER 12 - PLAN



VIEW A-A

PIER 12 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 12 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 12	1	0	29	68	98

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 12	0	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 12	1	0	9	19	29

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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- FOR GENERAL LEGEND SEE SHEET 7
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- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 12 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

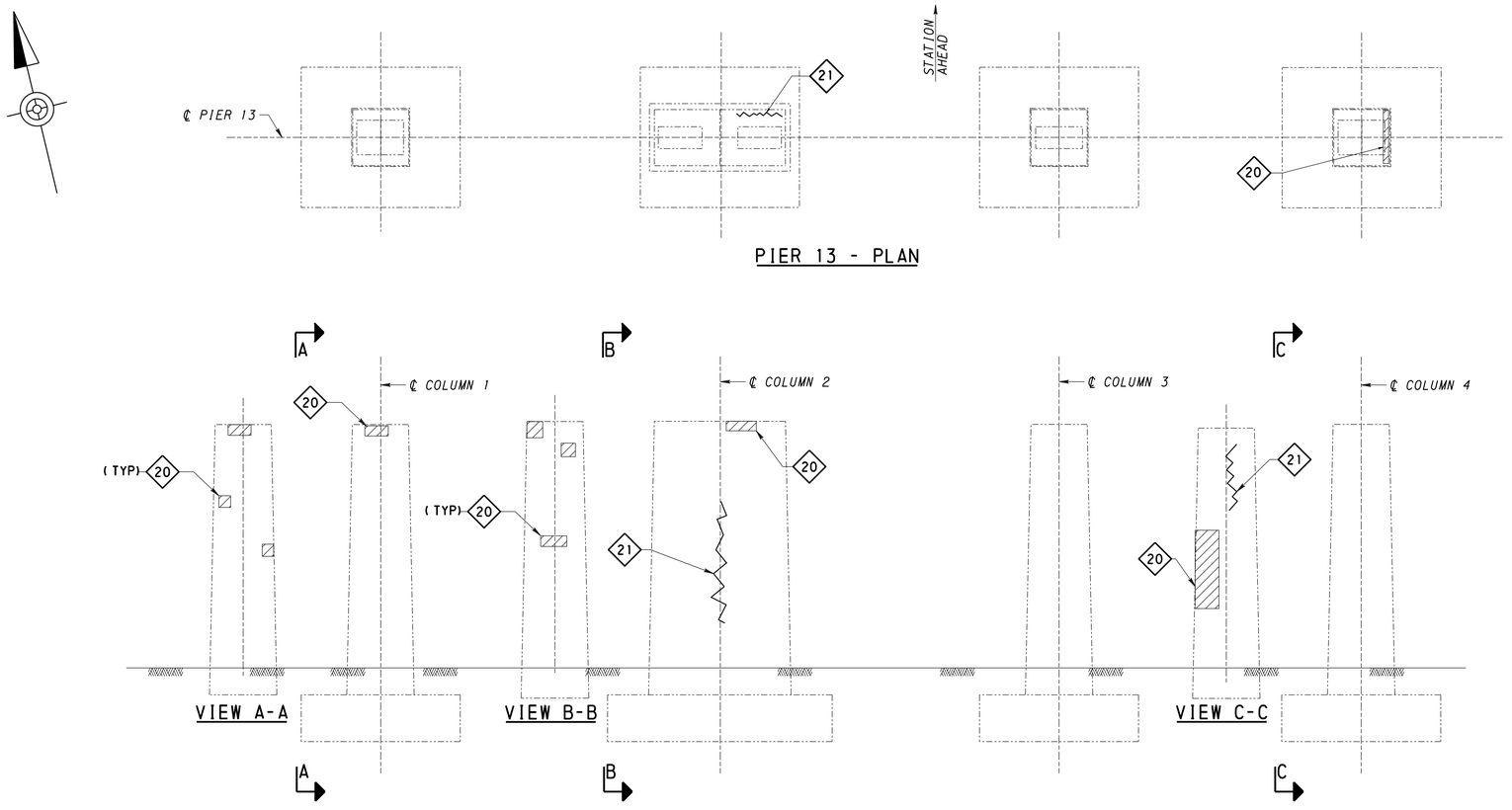
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CHECKED BY	DAM

RECOMMENDED _____

SHEET 68 OF 164

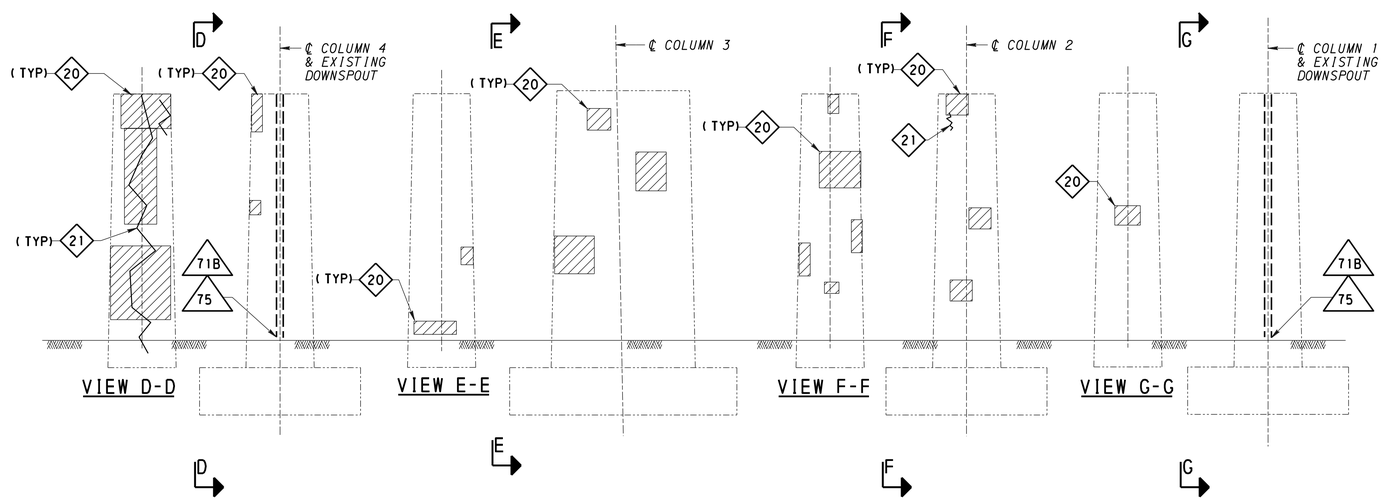
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PIER 13 - PLAN

PIER 13 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



PIER 13 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 13	7	46	26	104	183

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 13	0	39	0	79	118

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 13	2	13	8	29	52

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 13 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

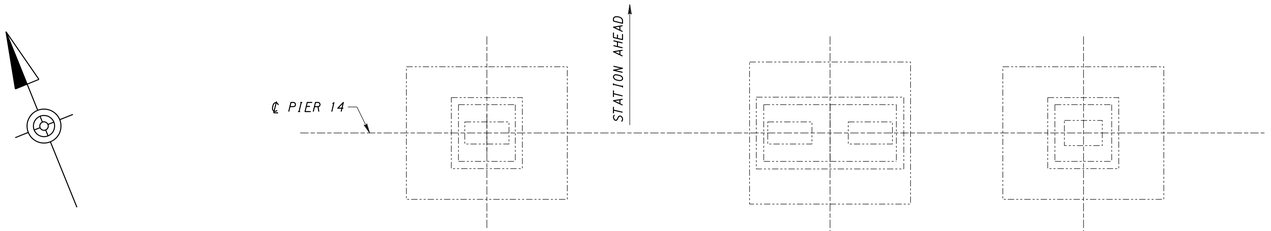
RECOMMENDED _____

SHEET 69 OF 164

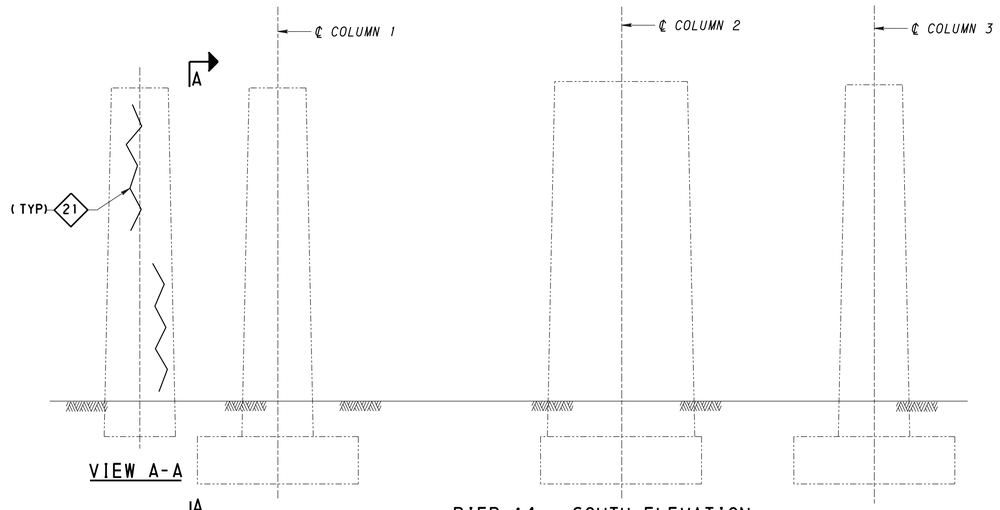
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DRAWN BY	MEG
CHECKED BY	DAM

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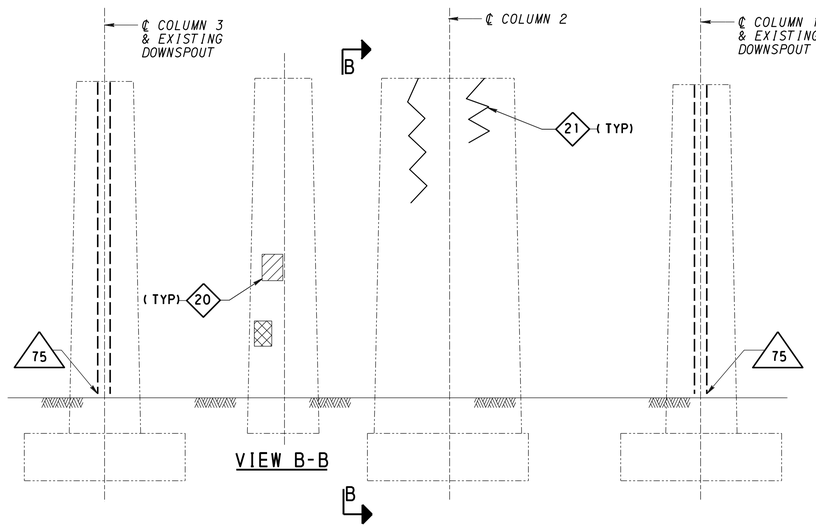


PIER 14 - PLAN



VIEW A-A

PIER 14 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



VIEW B-B

PIER 14 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 14	0	3	0	3

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 14	14	12	0	26

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 14	0	1	0	1

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 14 - REPAIRS

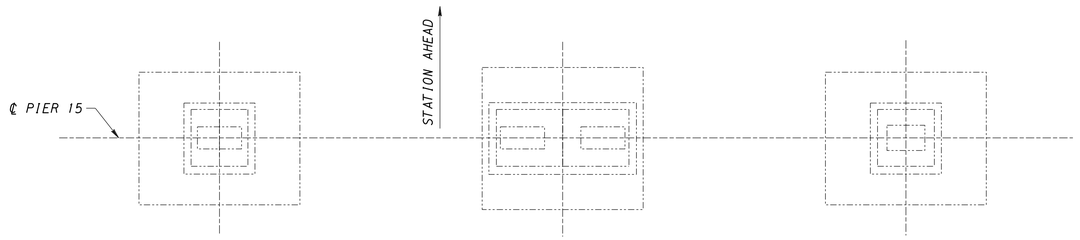
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

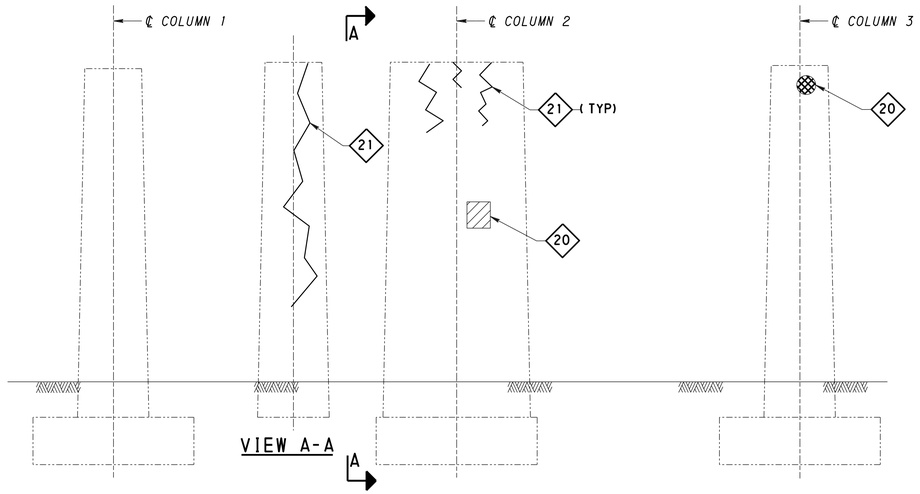
SHEET 70 OF 164

S - 38036

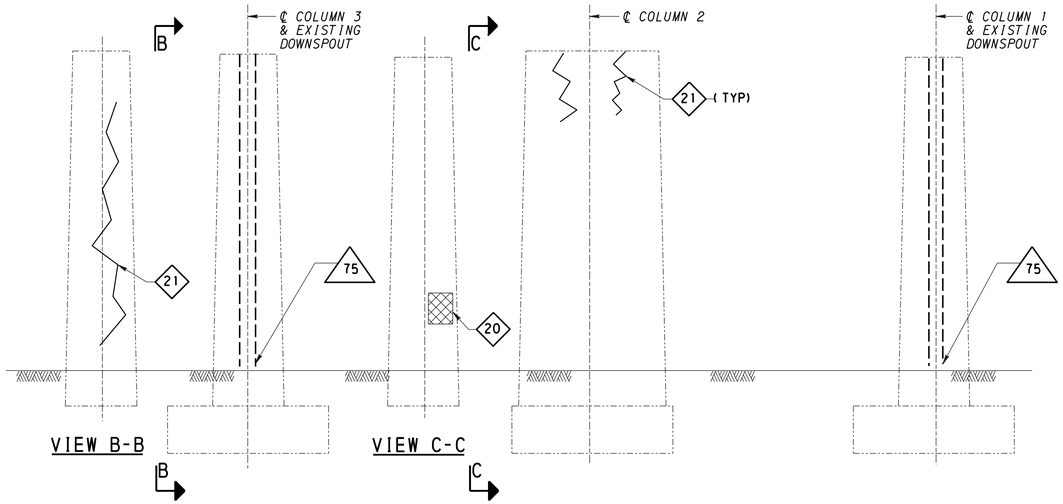
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CHECKED BY	DAM



PIER 15 - PLAN



PIER 15 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



PIER 15 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 15	0	4	1	5

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 15	0	63	48	111

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 15	0	2	1	3

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
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MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 15 - REPAIRS

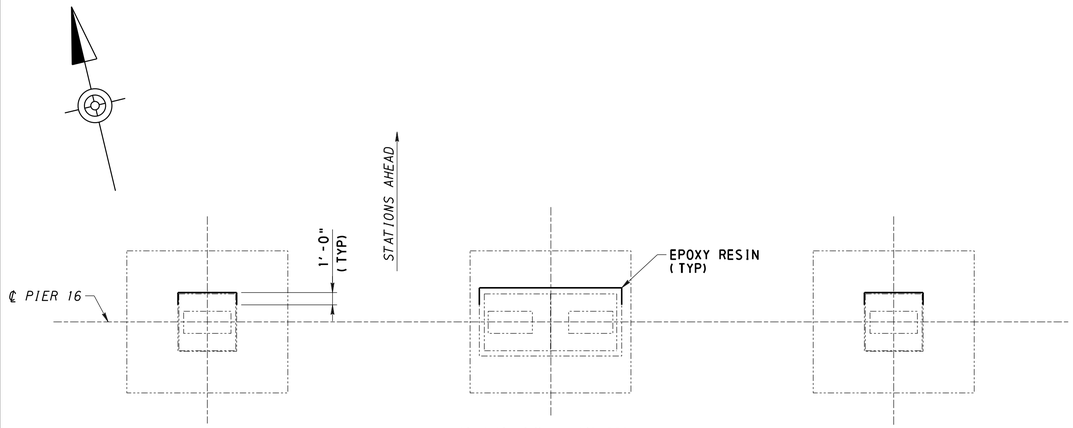
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

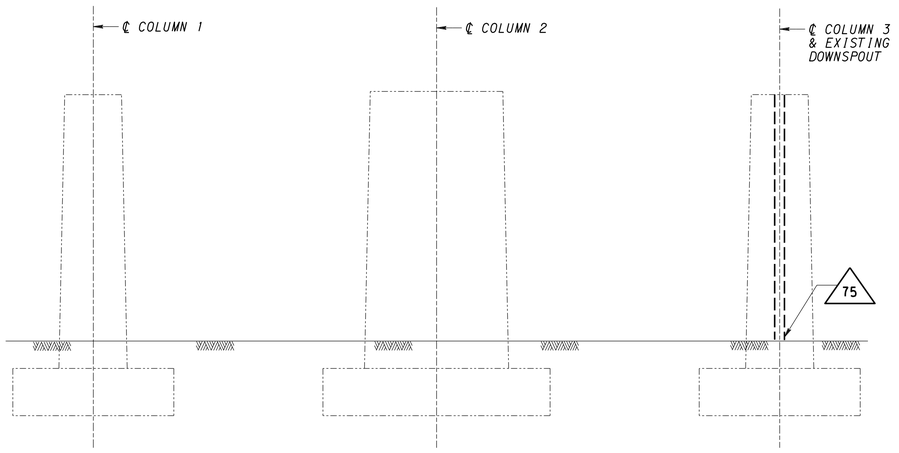
SHEET 71 OF 164

S - 38036

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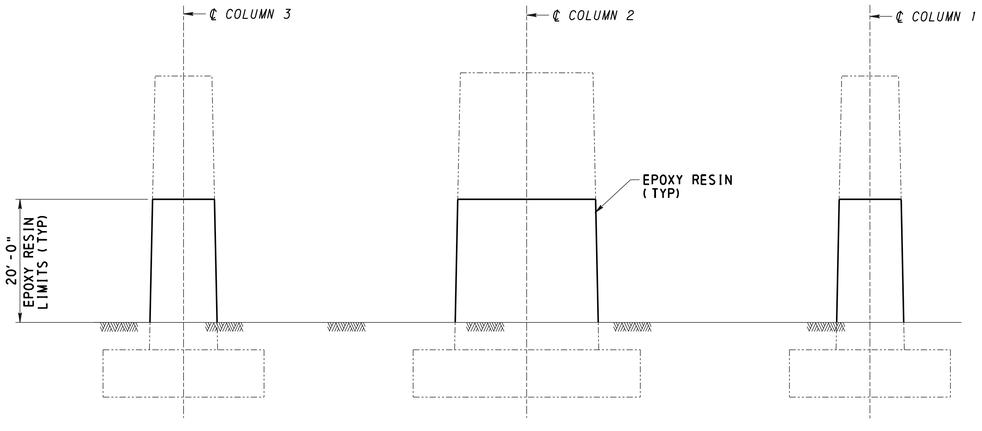


PIER 16 - PLAN



PIER 16 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 16 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 16	0	0	0	0

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 16	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)					
COATING TYPE	SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
REPAIR TYPE 23 PENETRATING SEALER	PIER 16	0	0	0	0
REPAIR TYPE 26 EPOXY RESIN	PIER 16	44	80	44	168

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE

REPAIR TYPE 26

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)
APPLY EPOXY RESIN TO ALL SURFACES AS INDICATED ABOVE EXISTING GROUNDLINE

NOTES

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- FOR GENERAL LEGEND SEE SHEET 7
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- FOR REPAIR TYPE 20 SEE SHEET 84

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

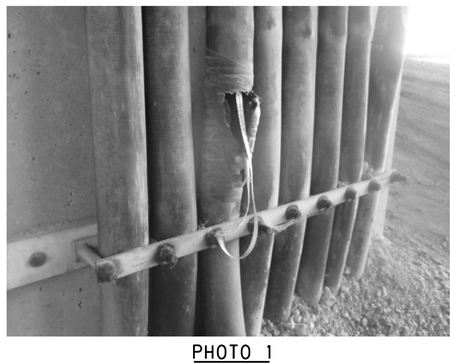


PHOTO 1

DETERIORATED ELECTRICAL CONDUIT AT BASE OF PIER 17 (SEE SHEET 73)

REPAIR TYPE 81

REPAIR ELECTRICAL CONDUIT

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E
COMMONWEALTH OF PENNSYLVANIA

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

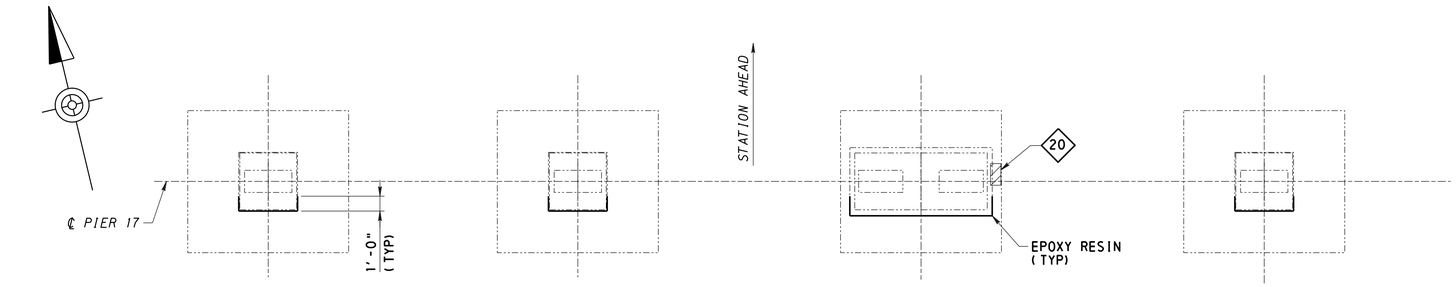
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 16 - REPAIRS

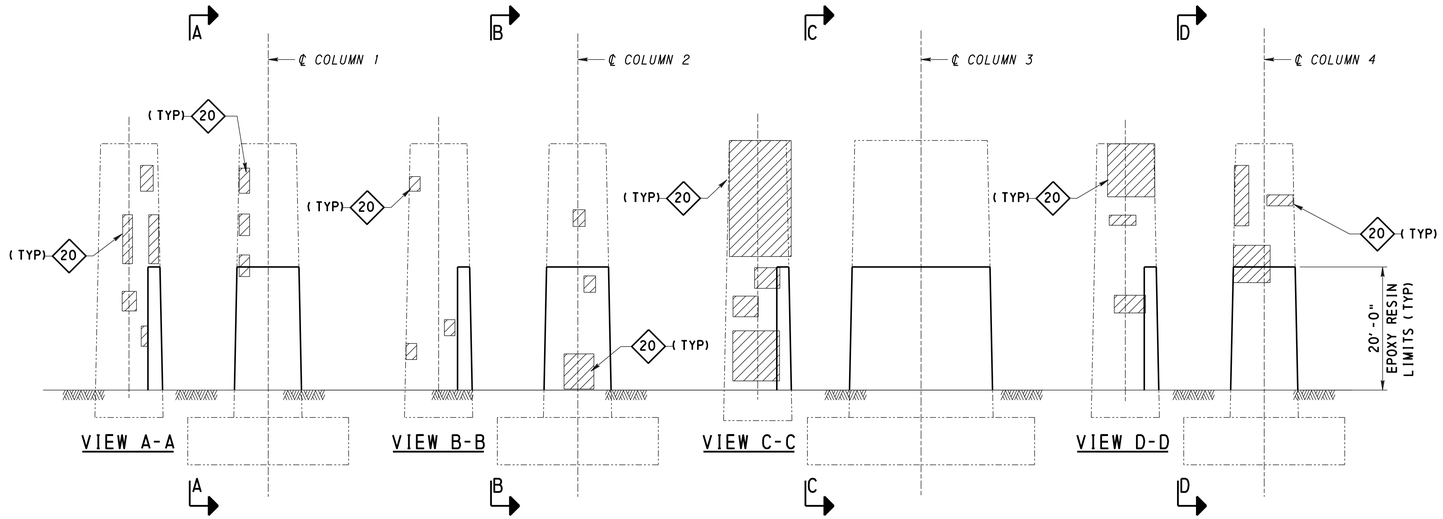
RECOMMENDED _____

SHEET 72 OF 164

S - 38036

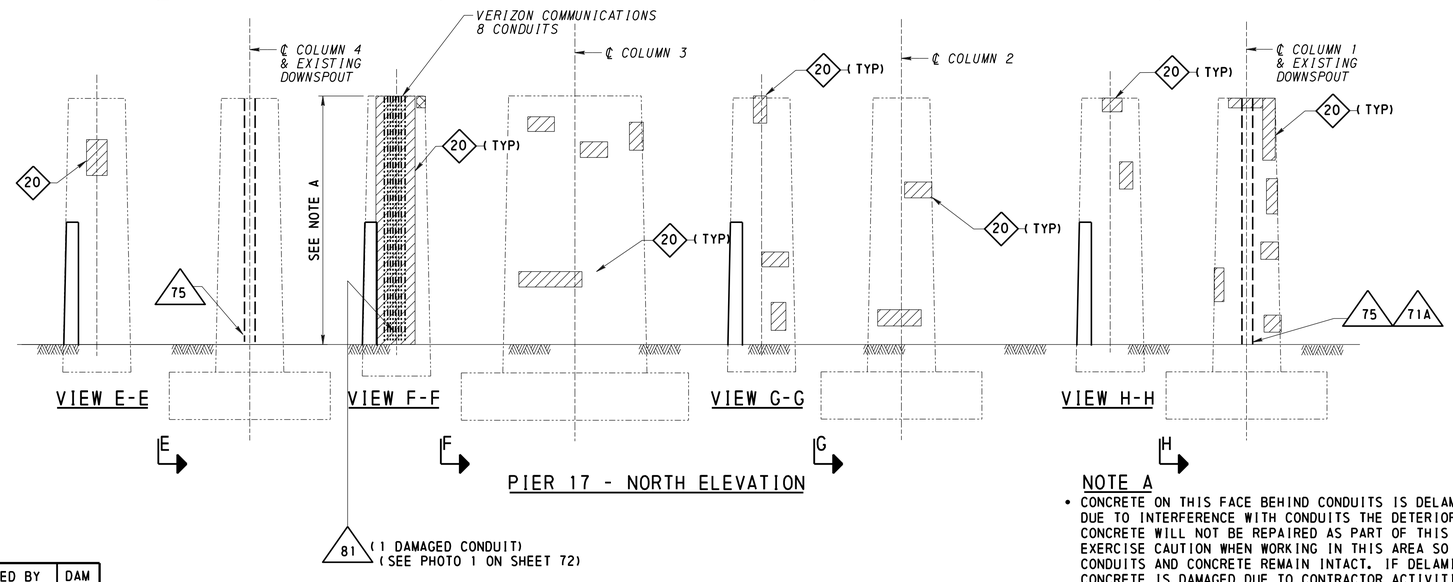


PIER 17 - PLAN



PIER 17 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 17 - NORTH ELEVATION

NOTE A

- CONCRETE ON THIS FACE BEHIND CONDUITS IS DELAMINATED. DUE TO INTERFERENCE WITH CONDUITS THE DETERIORATED CONCRETE WILL NOT BE REPAIRED AS PART OF THIS PROJECT. EXERCISE CAUTION WHEN WORKING IN THIS AREA SO THAT CONDUITS AND CONCRETE REMAIN INTACT. IF DELAMINATED CONCRETE IS DAMAGED DUE TO CONTRACTOR ACTIVITIES, THE CONTRACTOR WILL REPAIR THE CONCRETE AND ADJUST THE HIGHWAY LIGHTING SYSTEM AS DIRECTED BY THE REPRESENTATIVE AT NO ADDITIONAL COST TO THE DEPARTMENT.

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 17	87	82	253	78	500

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 17	0	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)						
COATING TYPE	SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
REPAIR TYPE 23 PENETRATING SEALER	PIER 17	25	23	71	22	141
REPAIR TYPE 26 EPOXY RESIN	PIER 17	44	54	80	44	222

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE

REPAIR TYPE 26

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)
APPLY EPOXY RESIN TO ALL SURFACES AS INDICATED ABOVE EXISTING GROUNDLINE

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- THE REPAIR TYPE 20 AREAS SHOWN REPRESENT APPROXIMATE SPALLED OR DELAMINATED SURFACE AREA AND LOCATION
- THE REPAIR LOCATION AND ESTIMATED QUANTITY ARE APPROXIMATE. ACTUAL REPAIR DIMENSIONS AND LOCATIONS SHALL BE DETERMINED BY THE DEPARTMENTS REPRESENTATIVE
- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 17 - REPAIRS

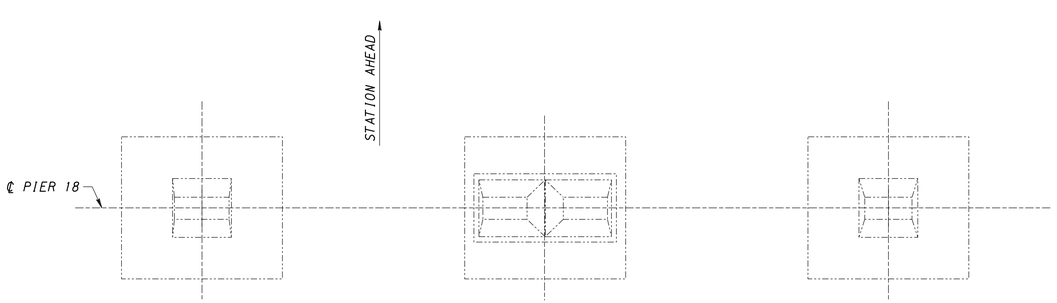
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030627-E

DESIGNED BY	DAM
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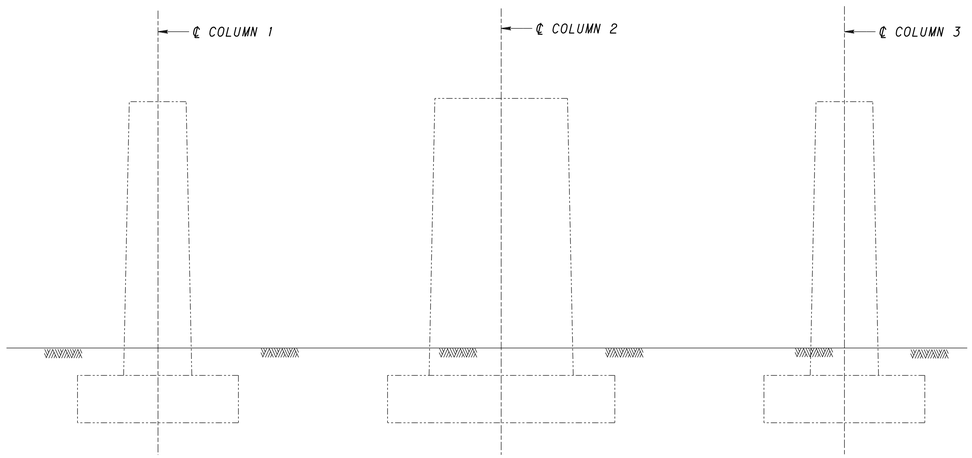
RECOMMENDED _____

SHEET 73 OF 164

S - 38036

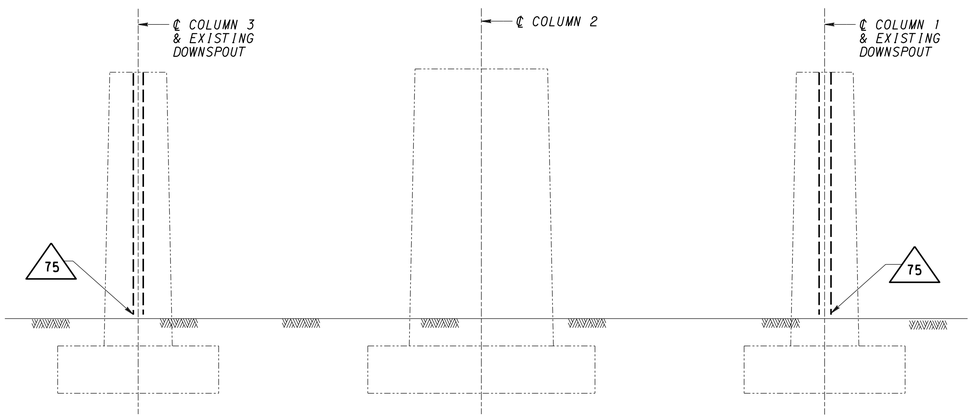


PIER 18 - PLAN



PIER 18 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 18 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 18	0	0	0	0

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 18	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 18	0	0	0	0

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 18 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

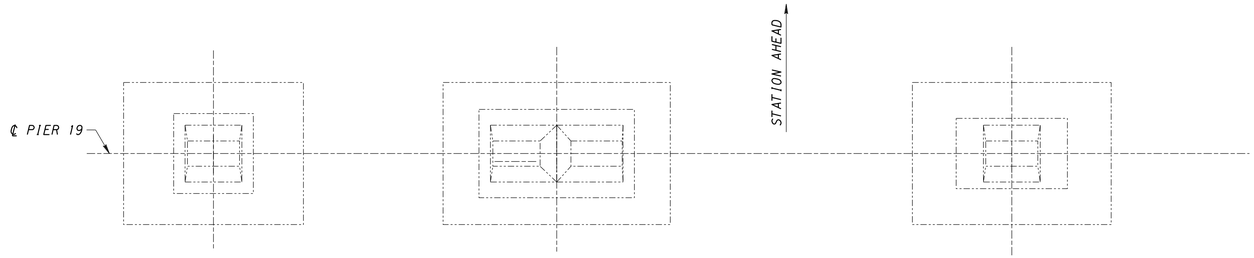
RECOMMENDED _____

SHEET 74 OF 164

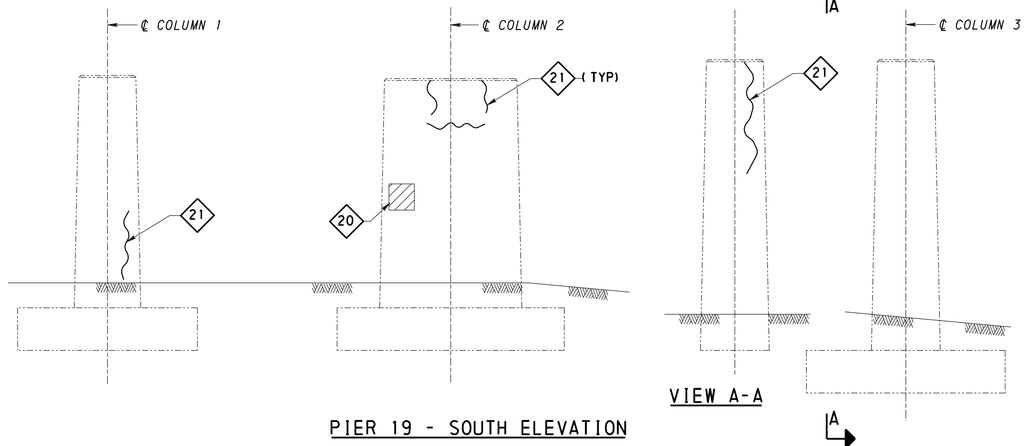
S - 38036

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DRAWN BY	MEG
CHECKED BY	DAM

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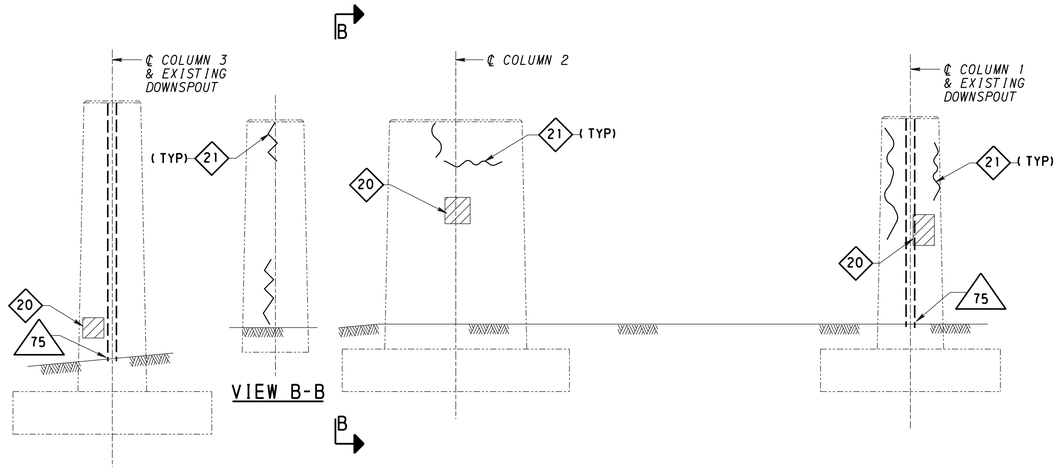
PIER 19 - PLAN



PIER 19 - SOUTH ELEVATION

LOOKING AHEAD STATIONS

VIEW A-A



VIEW B-B

PIER 19 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 19	2	4	1	7

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 19	54	32	38	124

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 19	1	2	1	4

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 19 - REPAIRS

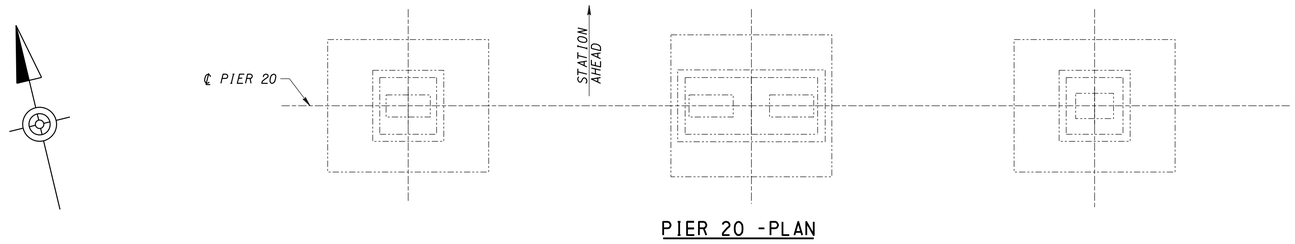
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

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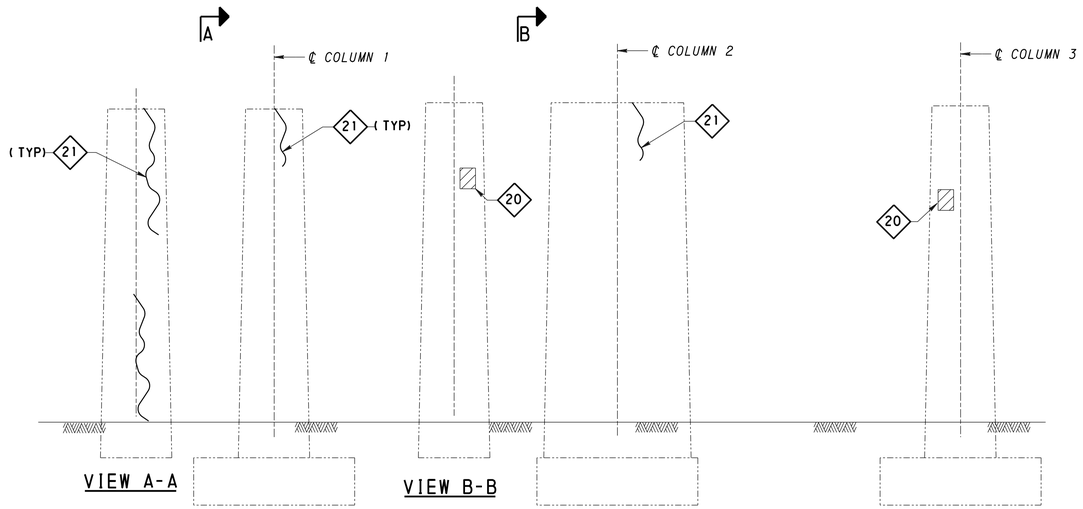
SHEET 75 OF 164

S - 38036

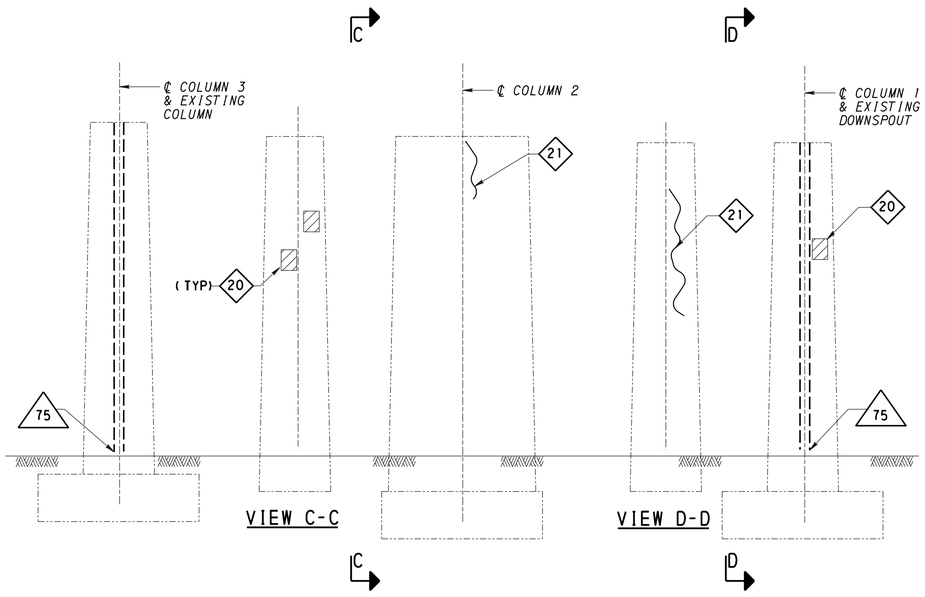
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DRAWN BY	MEG
CHECKED BY	DAM



PIER 20 -PLAN



PIER 20 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)



PIER 20 - NORTH ELEVATION

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 20	1	3	2	6

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 20	68	15	0	83

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 20	1	1	1	3

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

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SR 0079 SECTION A61

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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

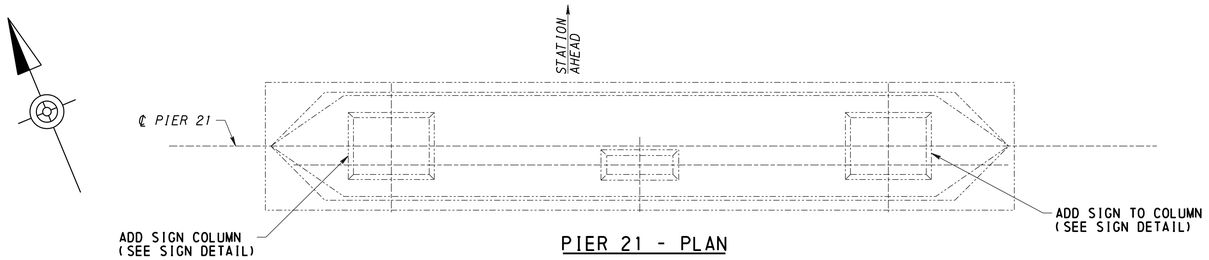
PIER 20 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

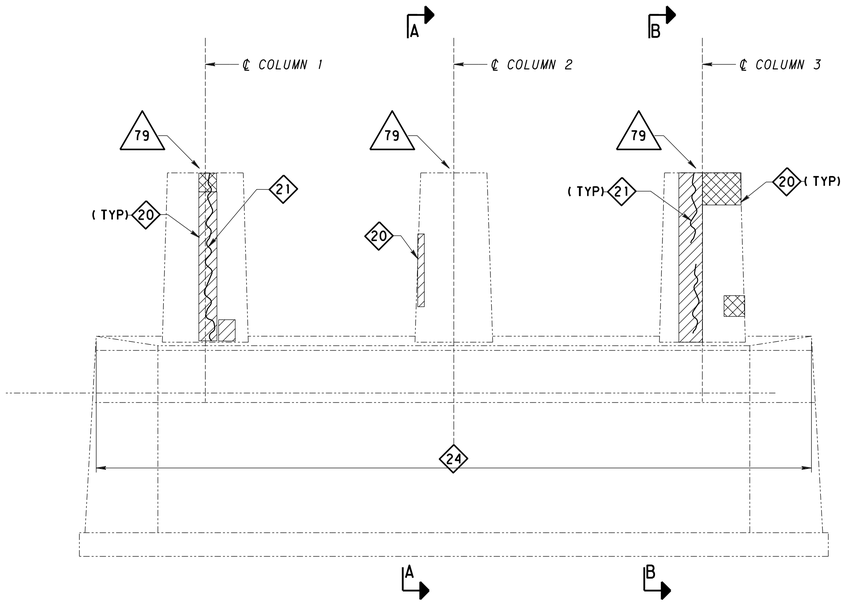
RECOMMENDED _____

SHEET 76 OF 164

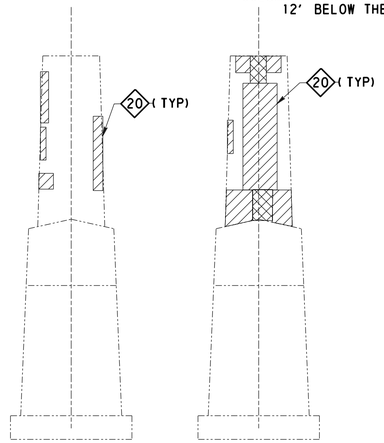
S - 38036



PIER 21 - PLAN

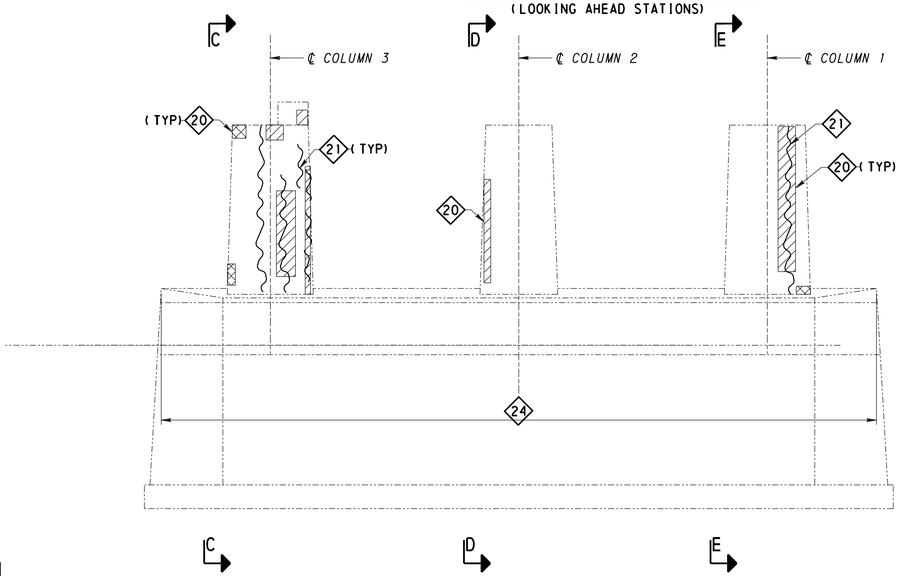


PIER 21 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)

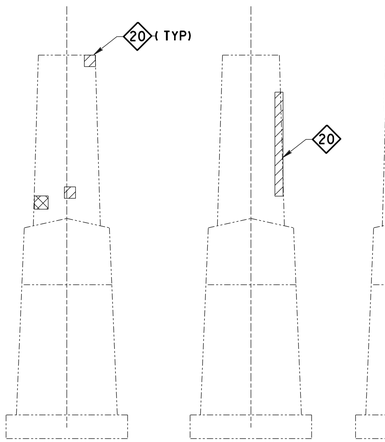


VIEW A-A

VIEW B-B

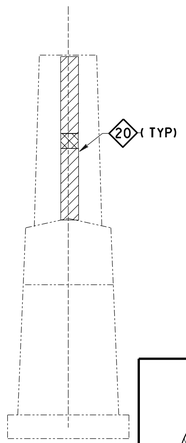


PIER 21 - NORTH ELEVATION



VIEW C-C

VIEW D-D



VIEW E-E

POINTING DETERIORATED GRANITE MASONRY MORTAR JOINTS LENGTH (LF)	
SUBSTRUCTURE UNIT	PLINTH
PIER 21	400

REPAIR TYPE 24

POINTING OF PIER MORTAR JOINTS FOR GRANITE CAP AND ROCK FACE STONES

I-79
Neville Island Bridge

I 18-1
138"x30"
STRUCTURE MOUNTED TO PIER 21

SIGN DETAIL

NOT TO SCALE

SIGN TO BE MOUNTED TO THE WEST FACE OF COLUMN 1 AND THE EAST FACE OF COLUMN 3 12' BELOW THE TOP OF COLUMN

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 21	767	88	1012	1867

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 21	75	0	83	158

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 21	213	25	281	519

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

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DRAWN BY	MEG
CHECKED BY	DAM

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DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

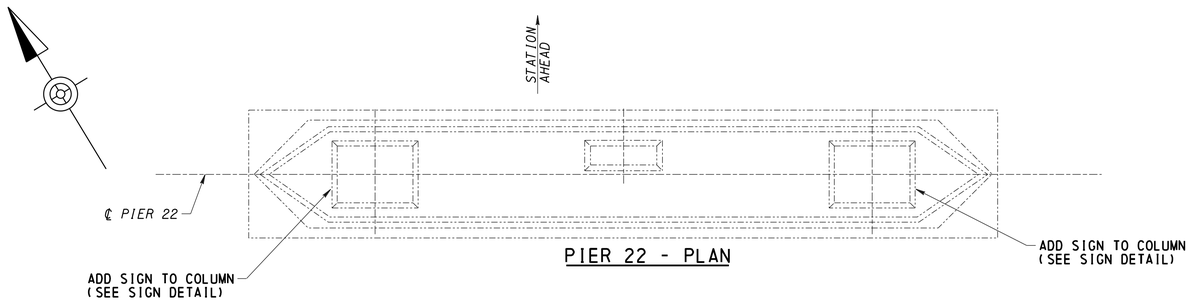
PIER 21 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

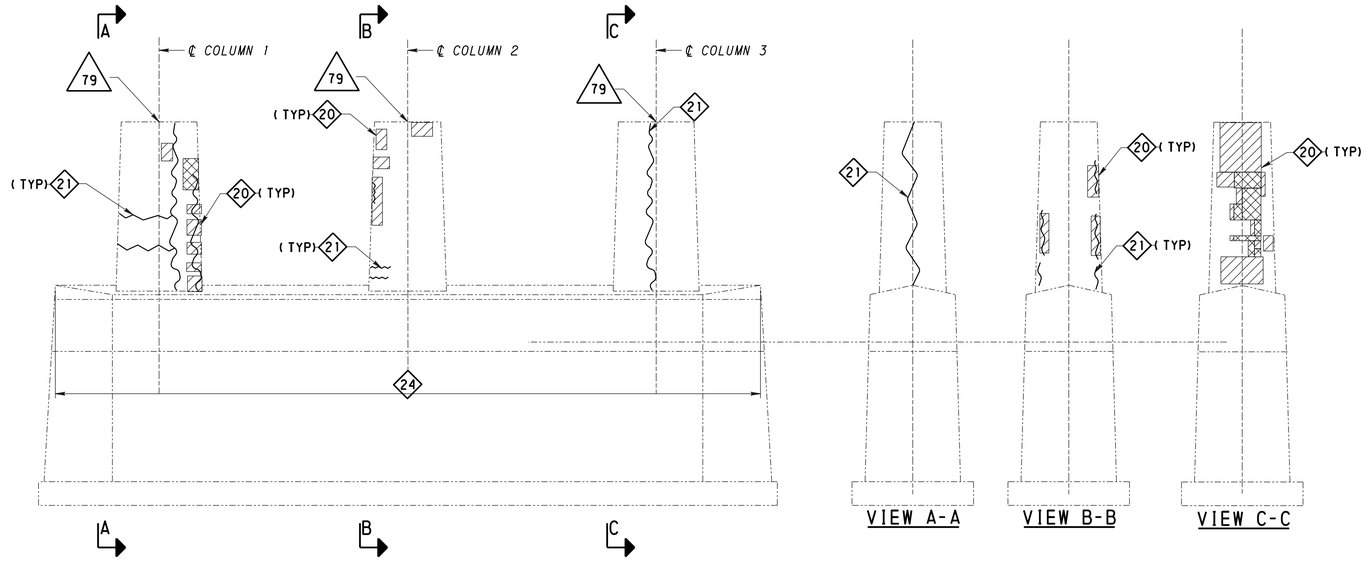
RECOMMENDED _____

SHEET 77 OF 164

S - 38036



PIER 22 - PLAN

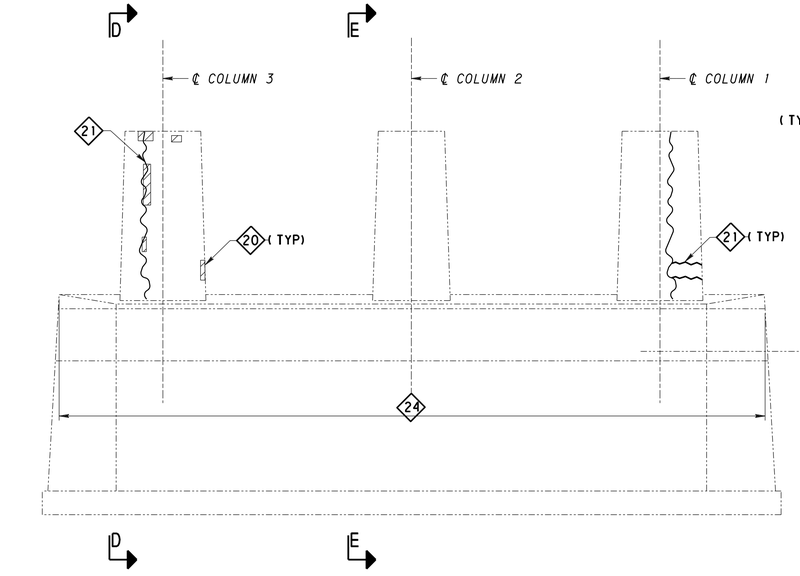


PIER 22 - SOUTH ELEVATION
(LOOKING AHEAD STATIONS)

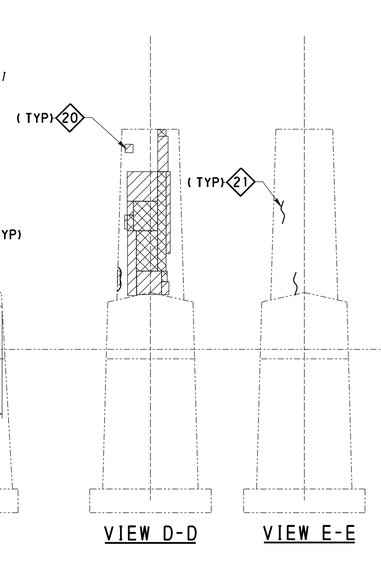
VIEW A-A

VIEW B-B

VIEW C-C



PIER 22 - NORTH ELEVATION



VIEW D-D

VIEW E-E

POINTING DETERIORATED GRANITE MASONRY MORTAR JOINTS LENGTH (LF)	
SUBSTRUCTURE UNIT	PLINTH
PIER 22	100

REPAIR TYPE 24

POINTING OF PIER MORTAR JOINTS FOR GRANITE CAP AND ROCK FACE STONES

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 22	460	32	307	799

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 22	348	116	172	636

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 22	128	9	86	223

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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I-79
Neville Island Bridge

I 18-1
138"x30"
STRUCTURE MOUNTED TO PIER 22

SIGN DETAIL

NOT TO SCALE

SIGN TO BE MOUNTED TO THE WEST FACE OF COLUMN 1 AND THE EAST FACE OF COLUMN 3 12' BELOW THE TOP OF COLUMN

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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SR 0079 SECTION A61

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PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 22 - REPAIRS

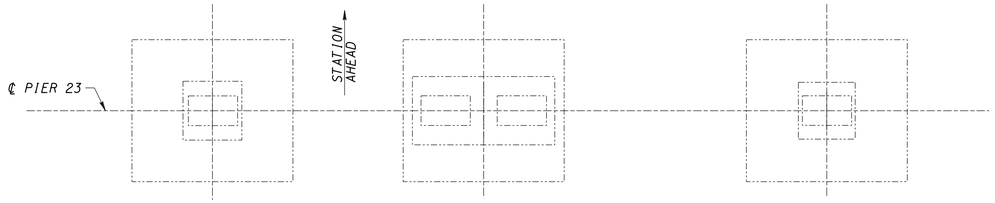
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

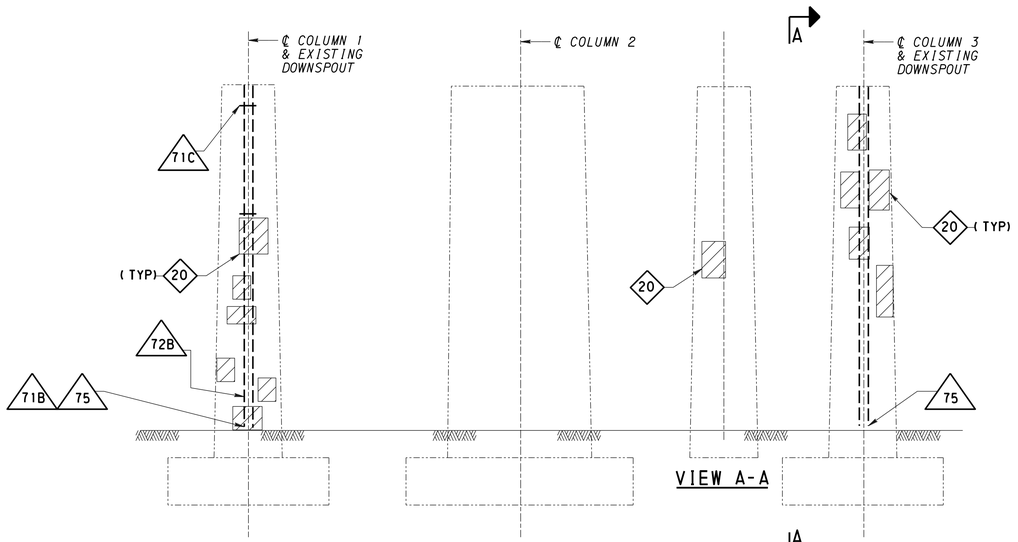
SHEET 78 OF 164

S - 38036

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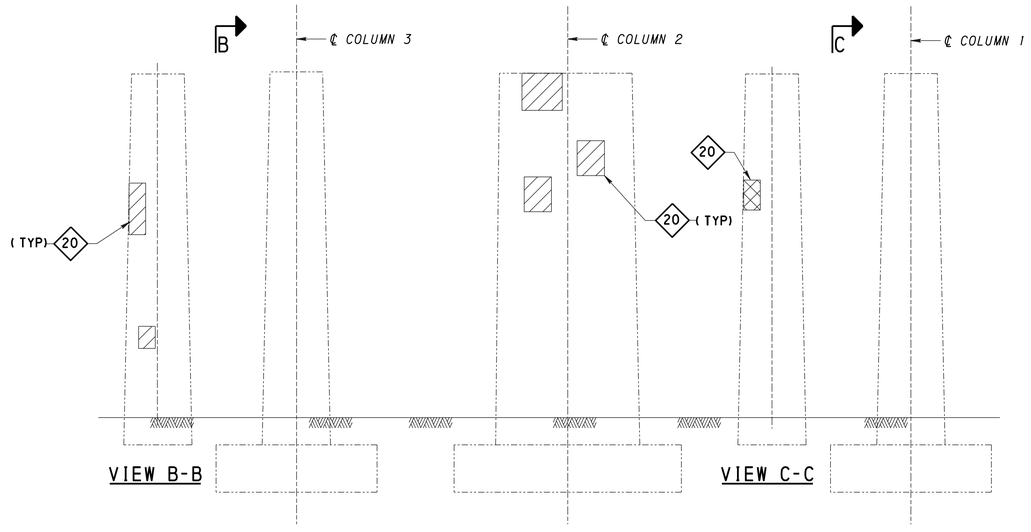


PIER 23 - PLAN



PIER 23 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 23 - NORTH ELEVATION

DESIGNED BY	DAM
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SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 23	15	7	14	36

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 23	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 23	5	2	4	11

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7
- THE REPAIR TYPE 20 AREAS SHOWN REPRESENT APPROXIMATE SPALLED OR DELAMINATED SURFACE AREA AND LOCATION
- THE REPAIR LOCATION AND ESTIMATED QUANTITY ARE APPROXIMATE. ACTUAL REPAIR DIMENSIONS AND LOCATIONS SHALL BE DETERMINED BY THE DEPARTMENTS REPRESENTATIVE
- FOR REPAIR TYPE 20 SEE SHEET 84

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

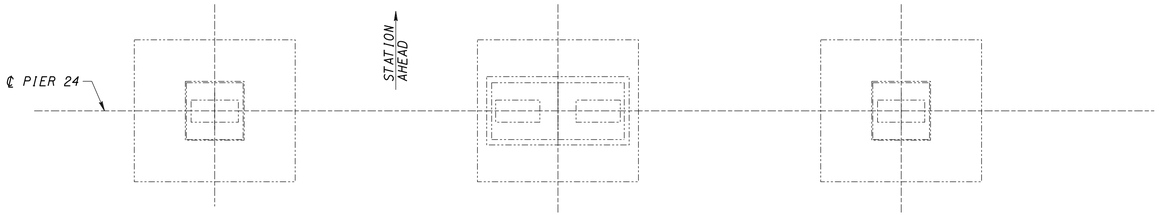
PIER 23 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

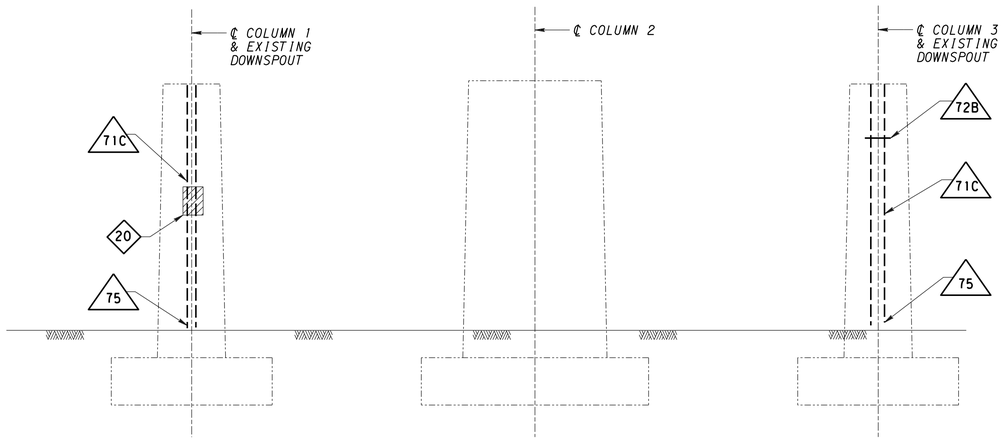
RECOMMENDED _____

SHEET 79 OF 164

S - 38036

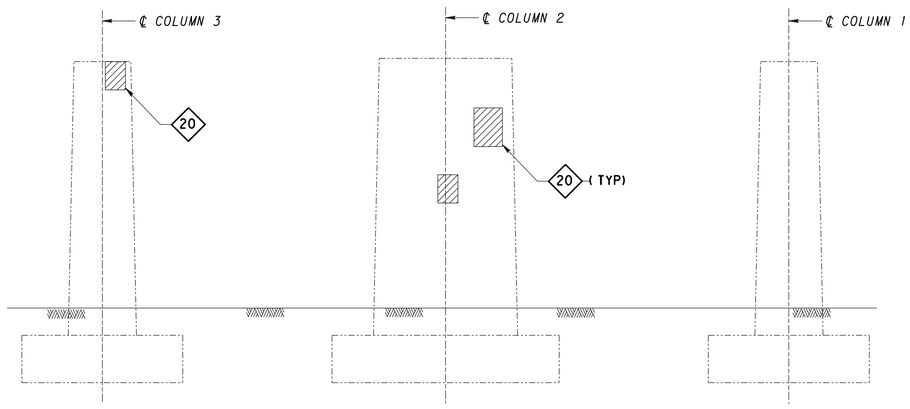


PIER 24 - PLAN



PIER 24 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 24 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 24	6	9	2	17

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 24	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 24	2	3	1	6

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 24 - REPAIRS

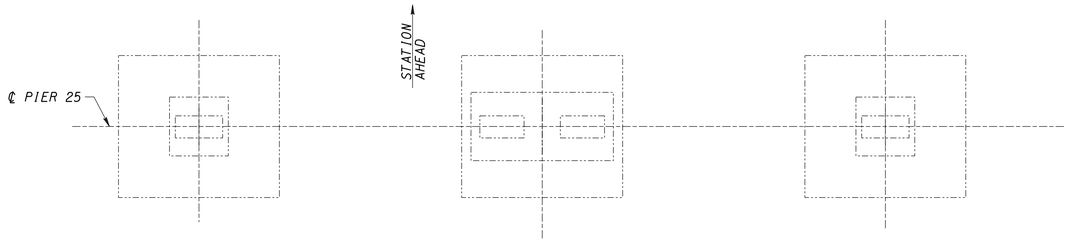
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

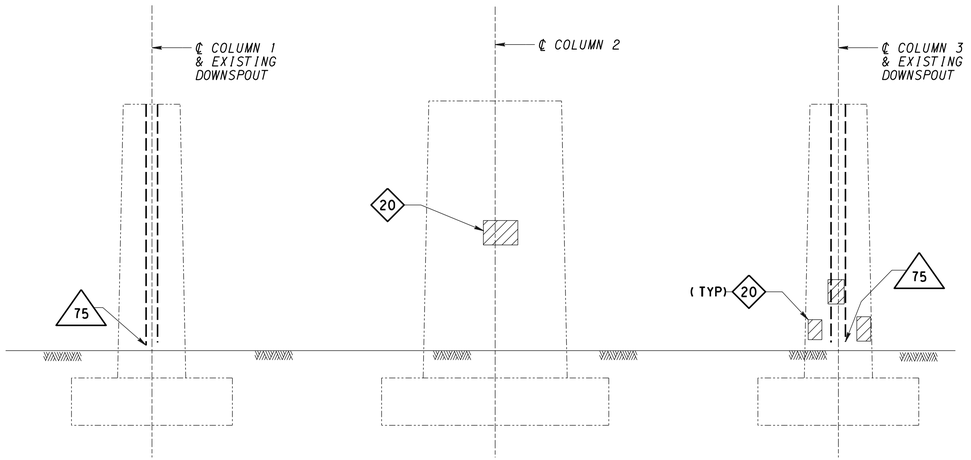
SHEET 80 OF 164

S - 38036

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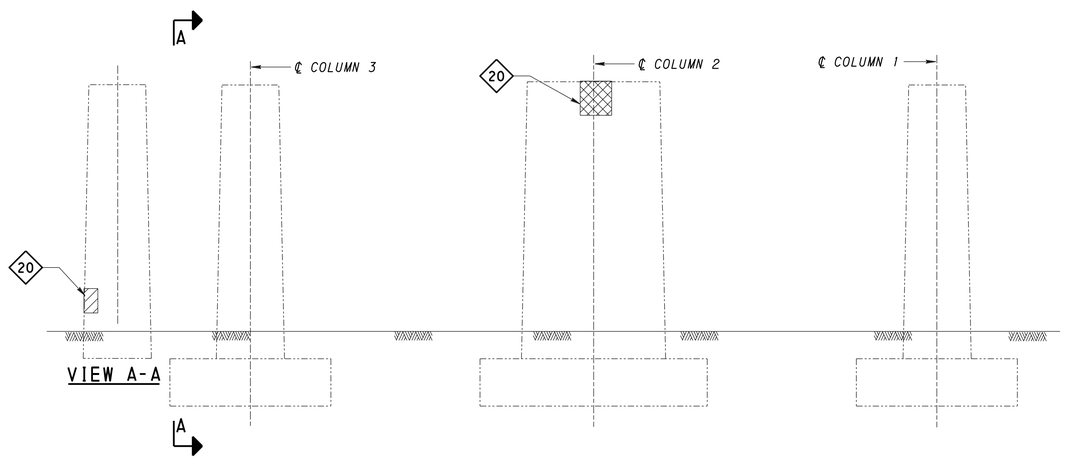


PIER 25 - PLAN



PIER 25 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 25 - NORTH ELEVATION

DESIGNED BY	DAM
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SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 25	0	5	6	11

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 25	0	0	0	0

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)				
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	TOTAL PER UNIT
PIER 25	0	2	2	4

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE.

LEGEND

DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR

DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

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REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

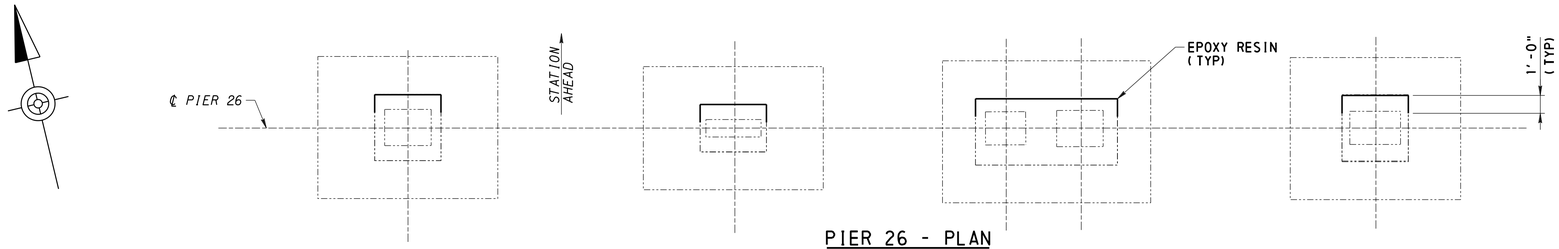
PIER 25 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

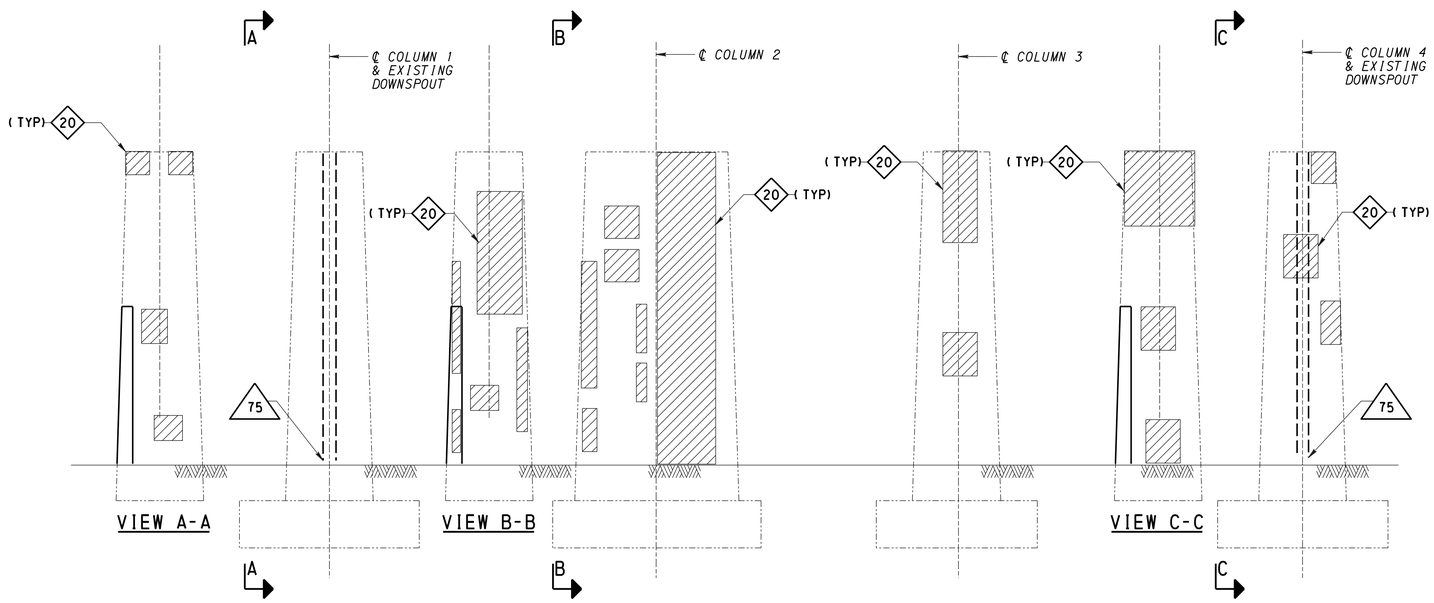
RECOMMENDED _____

SHEET 81 OF 164

S - 38036

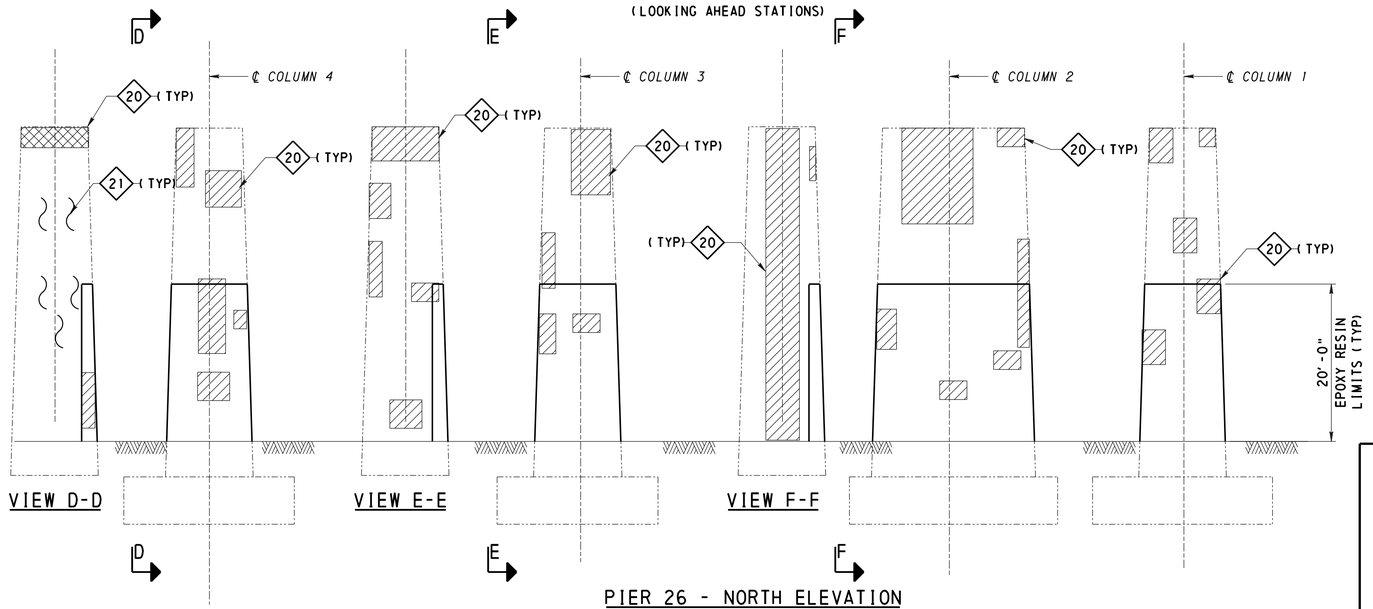


PIER 26 - PLAN



PIER 26 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 26 - NORTH ELEVATION

SUBSTRUCTURE DETERIORATED CONCRETE REPAIR AREAS (CF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 26	46	532	141	128	847

REPAIR TYPE 20

CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL LENGTH (LF)					
SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 26	45	0	0	0	45

REPAIR TYPE 21

EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES AREA (SY)						
COATING TYPE	SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
REPAIR TYPE 23 PENETRATING SEALER	PIER 26	13	148	40	36	237
REPAIR TYPE 26 EPOXY RESIN	PIER 26	38	72	38	38	186

REPAIR TYPE 23

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES APPLY PENETRATING SEALER TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE

REPAIR TYPE 26

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)
APPLY EPOXY RESIN TO ALL SURFACES AS INDICATED ABOVE EXISTING GROUNDLINE

LEGEND

- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES

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	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 26 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

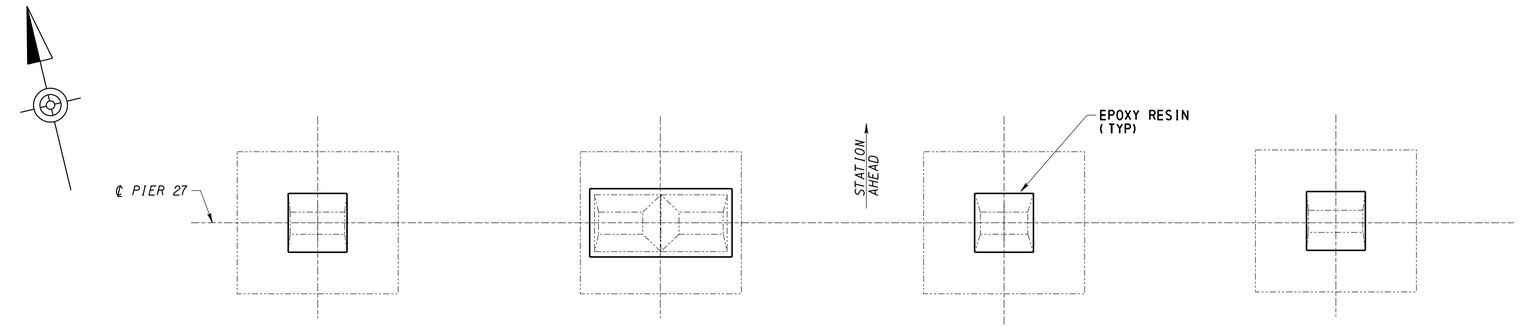
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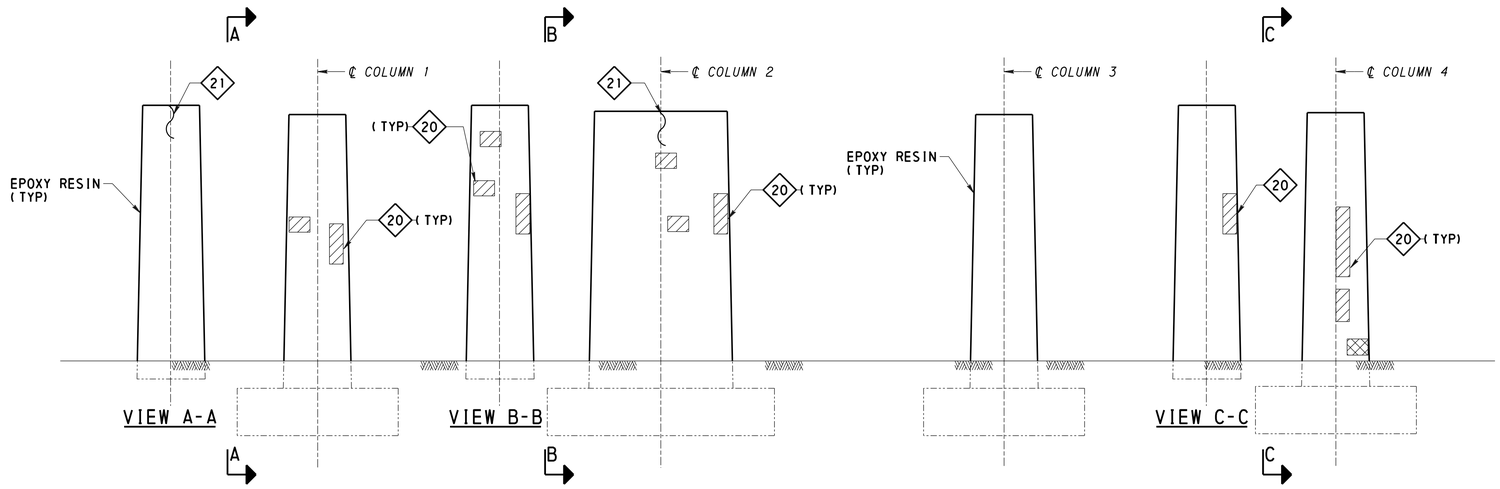
SHEET 82 OF 164

S - 38036

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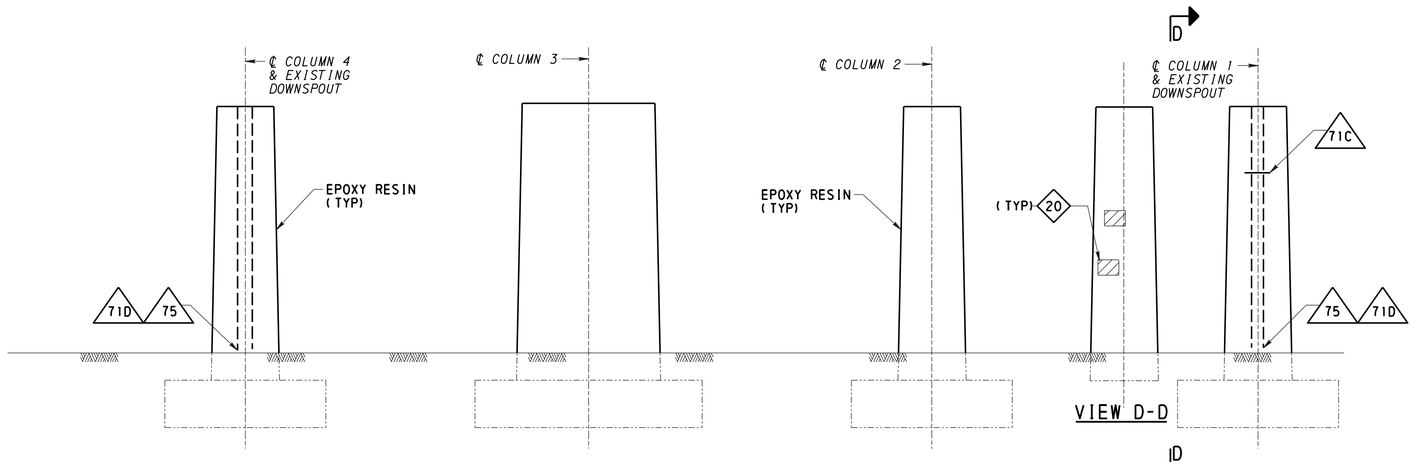


PIER 27 - PLAN



PIER 27 - SOUTH ELEVATION

(LOOKING AHEAD STATIONS)



PIER 27 - NORTH ELEVATION

DESIGNED BY	DAM
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SUBSTRUCTURE DETERIORATED CONCRETE REPAIR
AREAS (CF)

SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 27	9	21	0	21	51

REPAIR TYPE 20
CLASS AA CEMENT CONCRETE REPAIRS OF SPALLED AND DELAMINATED CONCRETE AREAS

EPOXY INJECTION CRACK SEAL
LENGTH (LF)

SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
PIER 27	5	6	0	0	11

REPAIR TYPE 21
EPOXY INJECTION CRACK SEAL

PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES
AREA (SY)

COATING TYPE	SUBSTRUCTURE UNIT	COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	TOTAL PER UNIT
REPAIR TYPE 23 PENETRATING SEALER	PIER 27	3	6	0	6	15
REPAIR TYPE 26 EPOXY RESIN	PIER 27	106	172	106	106	490

REPAIR TYPE 23
PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER)
APPLY TO ALL CONCRETE SURFACES ABOVE EXISTING GROUND LINE

REPAIR TYPE 26
PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (EPOXY RESIN)
APPLY EPOXY RESIN TO ALL SURFACES AS INDICATED ABOVE EXISTING GROUNDLINE.

LEGEND
- DENOTES APPROXIMATE LOCATION OF SPALLED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF DELAMINATED CONCRETE REPAIR
- DENOTES APPROXIMATE LOCATION OF EPOXY INJECTION CRACK SEAL REPAIR

NOTES
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

PIER 27 - REPAIRS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 83 OF 164

S - 38036

CONSTRUCTION PROCEDURE

REMOVAL REPAIR AREA PREPARATION AND REINFORCEMENT INSTALLATION

- PROVIDE SATISFACTORY PROTECTIVE SHIELDING BELOW ALL REPAIR AREAS.
- SOUND AND DETERMINE THE EXTENT OF THE REPAIR AREAS IN THE PRESENCE OF A REPRESENTATIVE.
- OUTLINE EDGE OF THE DESIGNATED REPAIR AREAS WITH A 1" MAXIMUM DEPTH SAWCUT
- WITHIN THE OUTLINED REPAIR AREAS, REMOVE THE DETERIORATED CONCRETE TO A DEPTH OF ¾ INCH BEHIND THE FIRST MAT OF REINFORCEMENT BARS TO SOUND CONCRETE. ALLOW UNCOVERED OR EXPOSED REINFORCEMENT BARS TO HAVE A ¾ INCH CLEARANCE ALL AROUND. IF CONCRETE IS UNSOUND AT A DEPTH OF ¾ INCH BEHIND REINFORCEMENT BARS, DO NOT REMOVE ADDITIONAL CONCRETE WITHOUT THE APPROVAL OF THE STRUCTURE CONTROL ENGINEER.
- SQUARE-OUT/BEVEL EDGE OF THE REPAIR AREAS TO KEY IN CONSTRUCTION. USE HAND TOOLS FOR REMOVING DETERIORATED CONCRETE. USE PNEUMATIC HAMMERS, IF REQUIRED, NOT EXCEEDING AN IMPACT RATING OF 30 FOOT POUNDS. IF DETERIORATED CONCRETE EXTENDS BEYOND THE INITIALLY OUTLINED REPAIR AREA, ENLARGE AREA AS DIRECTED BY THE REPRESENTATIVE.
- AFTER REMOVAL OPERATIONS ARE COMPLETE, CLEAN REMAINING DEBRIS AND LOOSE MATERIALS FROM REPAIR AREAS BY ABRASIVE BLASTING. ABRASIVE BLAST EXPOSED REINFORCEMENT BARS TO NEAR-WHITE METAL (RUST AND MILL SCALE REMOVED). EPOXY COAT EXPOSED REINFORCEMENT BARS. SPLICE DAMAGED OR HEAVILY CORRODED REINFORCEMENT BARS AT 50% OR MORE SECTION LOSS AS SHOWN ON STANDARD DRAWING BC-736M. IF ENOUGH SPLICE LENGTH IS NOT AVAILABLE, DRILL NEW DOWEL HOLES AND PLACE DOWEL BARS AS DIRECTED.
- PLACE EPOXY COATED NO. 4 BENT "L" REINFORCEMENT BARS IN A 1'-0" CENTER-TO-CENTER MAXIMUM SPACED GRID. ANCHOR INTO SOUND CONCRETE WITH EPOXY ANCHORING SYSTEM.
- ATTACH WWF TO THE BENT "L" REINFORCEMENT BARS WITH ANNEALED IRON WIRE AT A MAXIMUM SPACING OF 1'-0" IN EACH DIRECTION. IF USING 6X6 WWF, PLACE A SECOND LAYER OF 6X6 WWF AND STAGGER TO ACHIEVE A 3X3 GRID SPACING.
- REPAIR CONCRETE DAMAGED DURING REPAIR OPERATIONS TO THE SATISFACTION OF THE REPRESENTATIVE AT NO ADDITIONAL COST TO THE DEPARTMENT.

CONCRETE PLACEMENT
▲ : CONVENTIONAL METHOD

- SET FORMS TO PROVIDE MINIMUM CONCRETE COVER OF 2 INCHES. IF ENOUGH CONCRETE COVER ON THE EXISTING REINFORCEMENT BARS IS NOT AVAILABLE, HAUNCH THE REPAIR OUTWARD.
- MAINTAIN EXISTING CHAMFERS.
- AIR-BLAST ALL REPAIR AREAS WITH OIL-FREE COMPRESSED AIR TO PROTECT AGAINST ANY CONTAMINANTS DETRIMENTAL TO THE BOND OF NEW CONCRETE. APPLY EPOXY BOUNDING COMPOUND TO REPAIR AREAS. WHILE EPOXY BONDING COMPOUND IS STILL TACKY, PLACE CLASS AA CEMENT CONCRETE WITH NO. 8 COARSE AGGREGATE. DO NOT PLACE CONCRETE IF COMPOUND IS NO LONGER TACKY OR HAS HARDENED. RECOAT COMPOUND THAT IS NO LONGER TACKY. WIRE BRUSH OR ABRASIVE BLAST HARDENED COMPOUND AND RECOAT REPAIR AREA.

♦ : SHOTCRETE METHOD

- PROVIDE MINIMUM CONCRETE COVER OF 2 INCHES. IF ENOUGH CONCRETE COVER ON EXISTING REINFORCEMENT BARS IS NOT AVAILABLE, HAUNCH THE REPAIR OUTWARD.
- MAINTAIN EXISTING CHAMFERS.
- AIR-BLAST REPAIR AREAS WITH OIL-FREE COMPRESSED AIR TO PROTECT AGAINST CONTAMINANTS DETRIMENTAL TO THE BOND OF NEW CONCRETE.
- SATURATE PREPARED CONCRETE SUBSTRATE WITH CLEAN WATER THE DAY BEFORE SHOTCRETE APPLICATION. BRING WETTED SURFACES TO A SATURATED SURFACE DRY (SSD) CONDITION BEFORE APPLICATION OF SHOTCRETE. DO NOT APPLY SHOTCRETE TO A DRY SURFACE, OR TO A SURFACE WITH FREE SURFACE WATER.
- WATER CURE REPAIR AREAS. LIQUID MEMBRANE CURING COMPOUND MAY BE USED ONLY WHEN ACCEPTED BY THE REPRESENTATIVE.

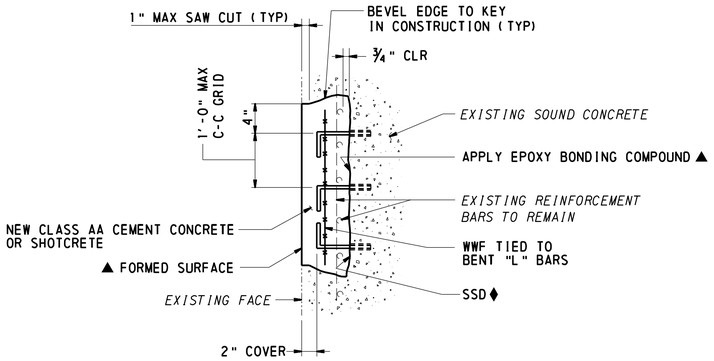
ITEM 9000-1200 REPAIR DETERIORATED CONCRETE (FOR INFORMATION ONLY)

(THIS ITEM INCLUDES PAYMENT FOR THE FOLLOWING MATERIALS AND THEIR INSTALLATIONS)

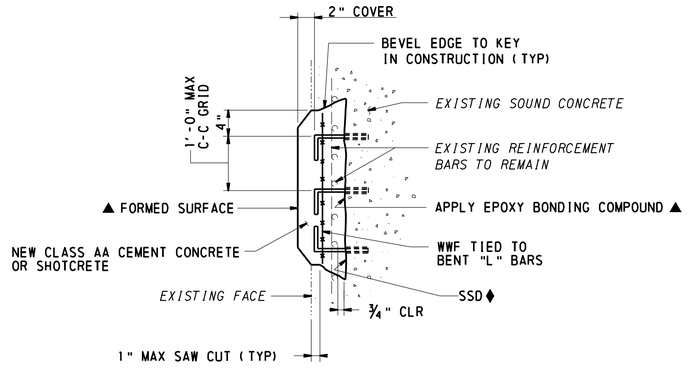
DOWEL HOLES	SECTION 1003, DIAMETER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
REINFORCEMENT BARS (EPOXY COATED)	SECTION 709.1
EPOXY ANCHORING SYSTEM	BULLETIN 15 AND MANUFACTURER'S RECOMMENDATIONS
WELDED WIRE FABRIC (WWF) EPOXY OR GALVANIZED	SECTION 709.3, 3x3, 4x4, OR 6x6 WWF MADE OF 8, 10, OR 11 GAUGE WIRE
ANNEALED IRON WIRE	ASTM A684
▲ FORMS	SECTION 1001.2(h)
▲ EPOXY BONDING COMPOUND	ASTM C881 TYPE II, GRADE 2
▲ CLASS AA CEMENT CONCRETE	SECTION 704 EXCEPT USE NO.8 COARSE AGGREGATE
♦ SHOTCRETE	SECTION 1043.2(a)

NOTE: ANY ADDITIONAL REINFORCING STEEL IS INCIDENTAL TO ITEM 9000-0001.

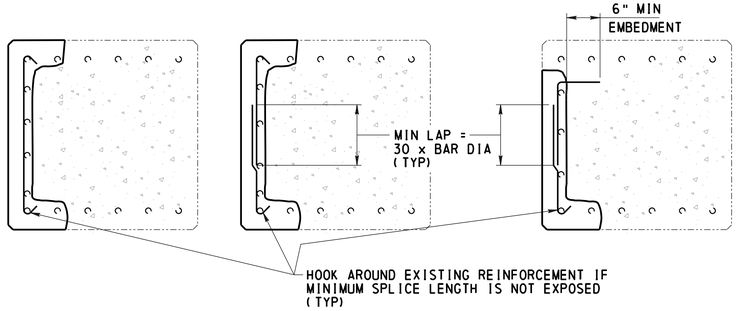
DESIGNED BY	DAM
DRAWN BY	RLC
CHECKED BY	DAM



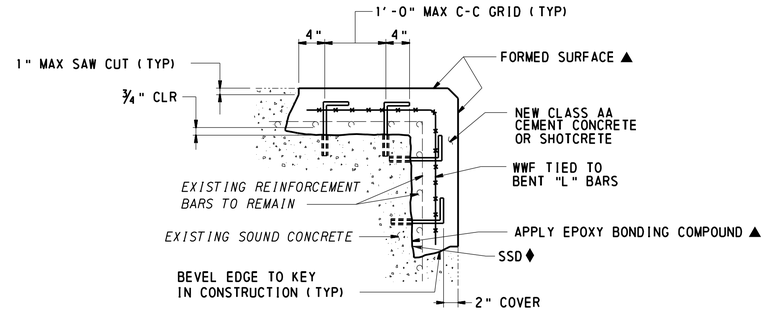
TYPICAL REPAIR DETAIL
NOT TO SCALE



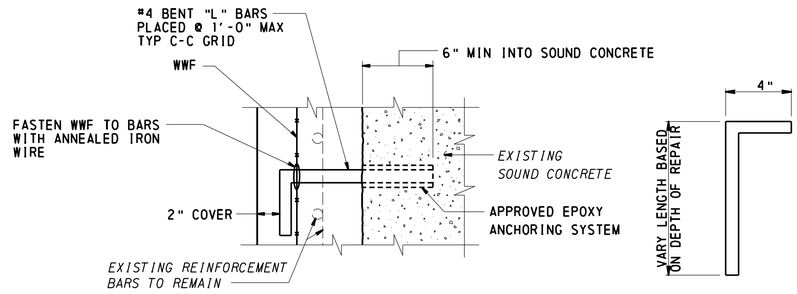
REPAIR FOR LESS THAN 2" COVER
NOT TO SCALE



SPLICE DETAILS FOR PIER CAP STIRRUPS WITH ≥ 50% SECTION LOSS
NOT TO SCALE



TYPICAL CORNER REPAIR DETAIL
NOT TO SCALE



TYPICAL "L" BAR DETAILS
NOT TO SCALE

LEGEND

▲ CONVENTIONAL METHOD (FORM AND PLACE ONLY)
♦ SHOTCRETE METHOD ONLY
SSD SATURATED SURFACE DRY
WWF WELDED WIRE FABRIC

NOTES

- USE A PACHOMETER TO LOCATE EXISTING REINFORCEMENT WHEN DRILLING DOWEL HOLES TO AVOID DRILLING THROUGH EXISTING BARS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

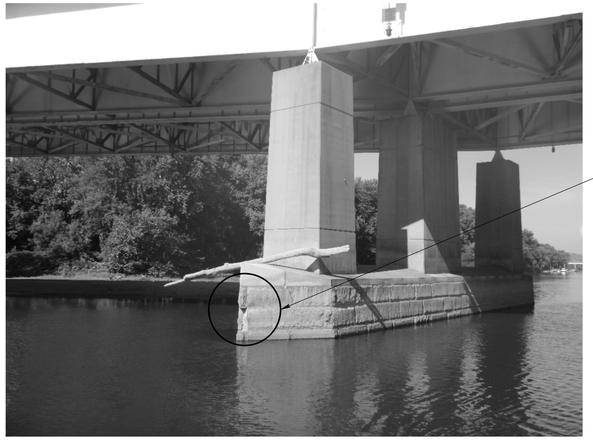
REPAIR TYPE 20 - CONCRETE REPAIR DETAILS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

RECOMMENDED _____

SHEET 84 OF 164

S - 38036



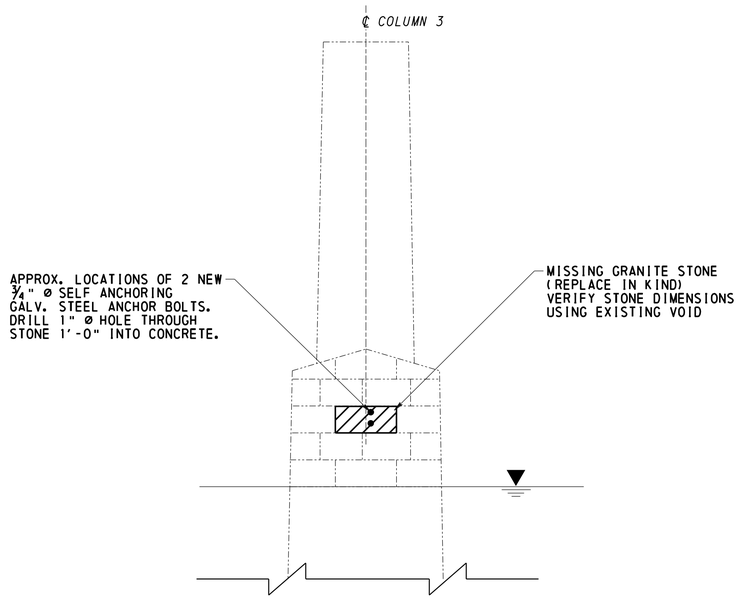
LOCATION REPAIR TYPE 25

PHOTO OF UPSTREAM END VIEW OF PIER 9



DETAIL A - UPSTREAM END VIEW OF PIER 9

NOTE: MISSING GRANITE STONE



UPSTREAM END VIEW - PIER 9

REPAIR TYPE 25

REPLACE MISSING AND REPAIR GRANITE
ROCK FACE STONES

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATION OF REPAIR SEE SHEET 65
- FOR GENERAL LEGEND SEE SHEET 7

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 25

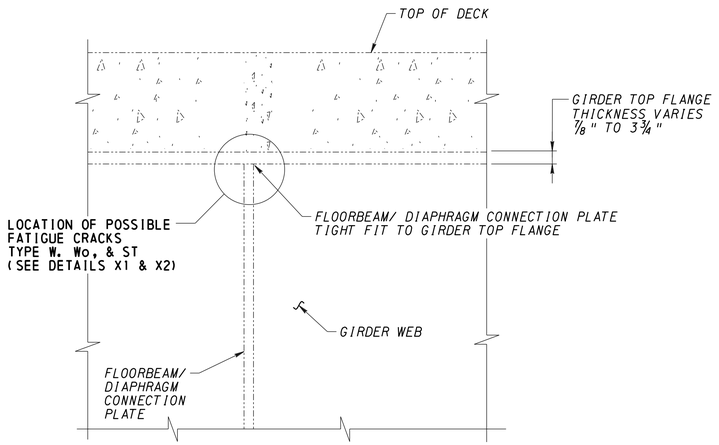
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 85 OF 164

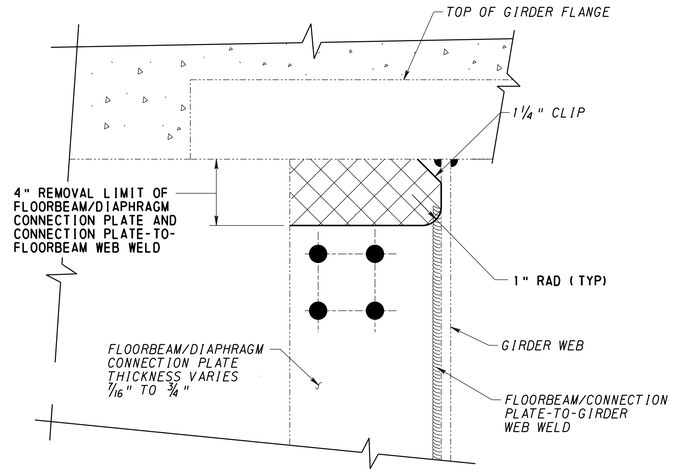
S - 38036

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DRAWN BY	MEG
CHECKED BY	DAM



EXISTING PARTIAL GIRDER ELEVATION AND FLOORBEAM CONNECTION PLATE

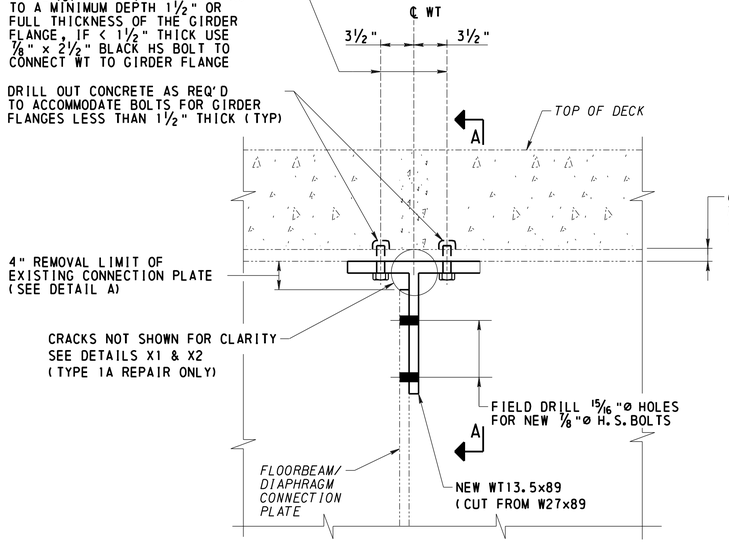
NOT TO SCALE



DETAIL A

PARTIAL REMOVAL OF FLOORBEAM CONNECTION PLATE

NOT TO SCALE

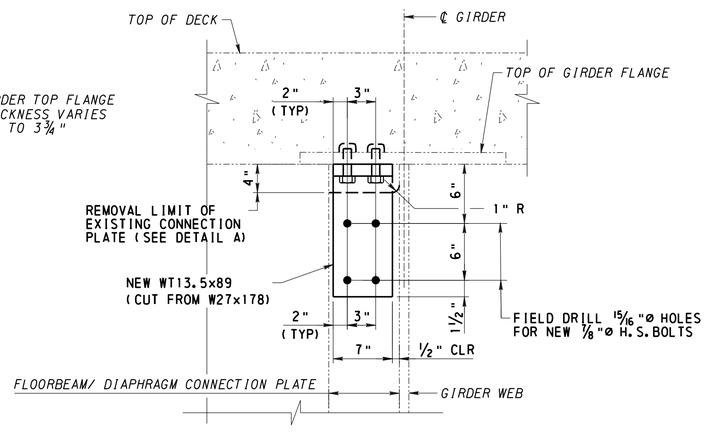


PARTIAL GIRDER ELEVATION AND FLOORBEAM CONNECTION PLATE

NOT TO SCALE

REPAIR TYPE 1A

FLOORBEAM CONNECTION PLATE TO GIRDER TOP FLANGE RETROFIT WITH FATIGUE CRACKS TYPE W, Wo, AND ST



SECTION A-A

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATION OF REPAIR SEE SHEET 28
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR DETAILS X1 & X2 SEE SHEET 87

DESIGNED BY	DAM
DRAWN BY	RLC
CHECKED BY	DAM

PROCEDURE FOR REPAIR TYPE 1A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN FLOORBEAM CONNECTION PLATE ON INSIDE OF GIRDER AND GIRDER FLANGE AND WEB ON INSIDE AND OUTSIDE OF GIRDER AS REQUIRED FOR NON-DESTRUCTIVE TESTING AND REPAIR. (SEE DETAILS X1 AND X2 FOR LOCATIONS OF POSSIBLE CRACKS).
4. REMOVE THE TOP 4" OF THE FLOORBEAM CONNECTION PLATE AT THE GIRDER TOP FLANGE USING A PLASMA-ARC CUTTER (SEE DETAIL A).
5. GRIND THE CUT EDGE OF THE CONNECTION PLATE AND THE WELD RESIDUE OF THE CONNECTION PLATE WELD TO THE GIRDER WEB UNTIL IT IS PROPERLY CONTOURED AND BLENDED INTO THE GIRDER WEB. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
6. TEST ON INSIDE & OUTSIDE OF GIRDER USING MT (MAGNETIC PARTICLE TEST) TO LOCATE ANY W, WO OR ST CRACKS AND MARK ENDS OF THE CRACKS.
7. ATTEMPT TO REMOVE ANY SUPERFICIAL W, WO, AND ST CRACKS BY GRINDING AND/OR DEBURRING (DO NOT GO DEEPER THAN 1/16" INTO THE GIRDER WEB.)
8. RETEST USING MT (MAGNETIC PARTICLE TEST) AND MARK THE TIPS OF ANY W, WO AND ST CRACKS THAT STILL REMAIN. IF NO CRACKS ARE VERIFIED SKIP TO STEP 10.
9. DRILL CRACK ARREST HOLES (CAH) AS REQUIRED AT EACH CRACK TIP (SEE DETAILS X1 AND X2).

   NOTE: 1/4" PILOT HOLES MAY BE NECESSARY TO ENSURE THAT THE CAH CAPTURES THE END OF THE CRACKS ON BOTH THE INSIDE & OUTSIDE OF THE GIRDER.

   A) IF THERE ARE NO CRACKS FOUND ON THE INSIDE OR THE OUTSIDE OF THE GIRDER WEB OR IF THE CRACKS FOUND WERE REMOVED BY GRINDING AND/OR DEBURRING DO NOT DRILL ANY CRACK ARREST HOLES.

   B) IF THE OUTSIDE SURFACE CRACK TIPS ARE AT OR BETWEEN THE PILOT HOLES DRILL CRACK ARREST HOLES AT THE PILOT HOLES.

   C) IF THE OUTSIDE CRACKS EXTEND BEYOND THE PILOT HOLES DRILL THE CRACK ARREST HOLE AT THE TIP OF THE OUTSIDE CRACK AND INCLUDE THE PILOT HOLE IN THE CRACK ARREST HOLE WHENEVER POSSIBLE.

   D) RETEST BOTH SIDES OF THE GIRDER USING (MT) MAGNETIC PARTICLE TEST AT ALL LOCATIONS INCLUDING AREAS WHERE CRACK ARREST HOLES WERE DRILLED.
10. FIT T SECTION IN PLACE AND DO THE FOLLOWING LAYOUT WORK:

    A) LAYOUT LOCATION FOR THE FOUR (4) DRILLED AND TAPPED HOLES IN THE GIRDER FLANGE.

    B) USE THE FOUR (4) PREDRILLED HOLES IN THE T SECTION AND MARK THE HOLES TO BE DRILLED IN THE FLOORBEAM CONNECTION PLATE.
11. REMOVE T SECTION AND DRILL FOUR (4) HOLES 49/64" DIAMETER X 1-3/4" MINIMUM DEPTH OR THROUGH THE FULL THICKNESS OF THE GIRDER FLANGE WHICHEVER IS LESS.
12. FOR FLANGES LESS THAN 1-3/4" THICK HAMMER DRILL 1/2" TO 1" INTO THE DECK CONCRETE TO CREATE A CAVITY.
13. TAP THE FOUR (4) HOLES USING A 7/8" X 9 STANDARD TAP TO A MINIMUM DEPTH OF 1-1/2" OR ALL THE WAY THROUGH THE FLANGE.
14. CLEAN OUT THE TAPPED HOLE AND TEST THE THREADS AND THREAD DEPTH BY SCREWING A 7/8" X 2-1/2" UNCOATED BOLT INTO EACH TAPPED HOLE UNTIL IT SHANKS OUT.
15. DRILL FOUR (4) 15/16" DIAMETER HOLES IN THE FLOORBEAM CONNECTION PLATE.
16. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
17. WHEN PRIME PAINT IS DRY, INSTALL THE T-SECTION BY SNUGGING ALL FOUR (4) BOLTS (LUBRICATE THE BOLTS BEFORE INSTALLATION) INTO THE GIRDER FLANGE AND THEN TIGHTEN TO COMPLY WITH STANDARD TURN OF THE NUT REQUIREMENTS. INSTALL FOUR (4) BOLTS IN FLOORBEAM CONNECTION PLATE.
18. REMOVE THE WAX-LIKE LUBRICANT FROM THE GALVANIZED FASTENERS.
19. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
20. FINISH PAINTING NEW T-SECTION AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

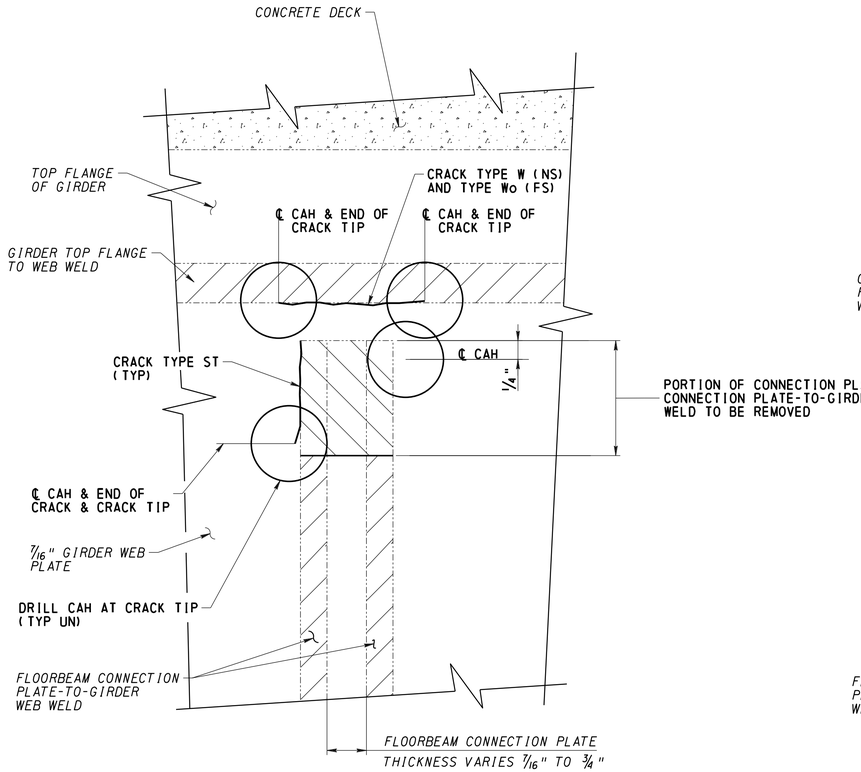
REPAIR TYPE 1A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 86 OF 164

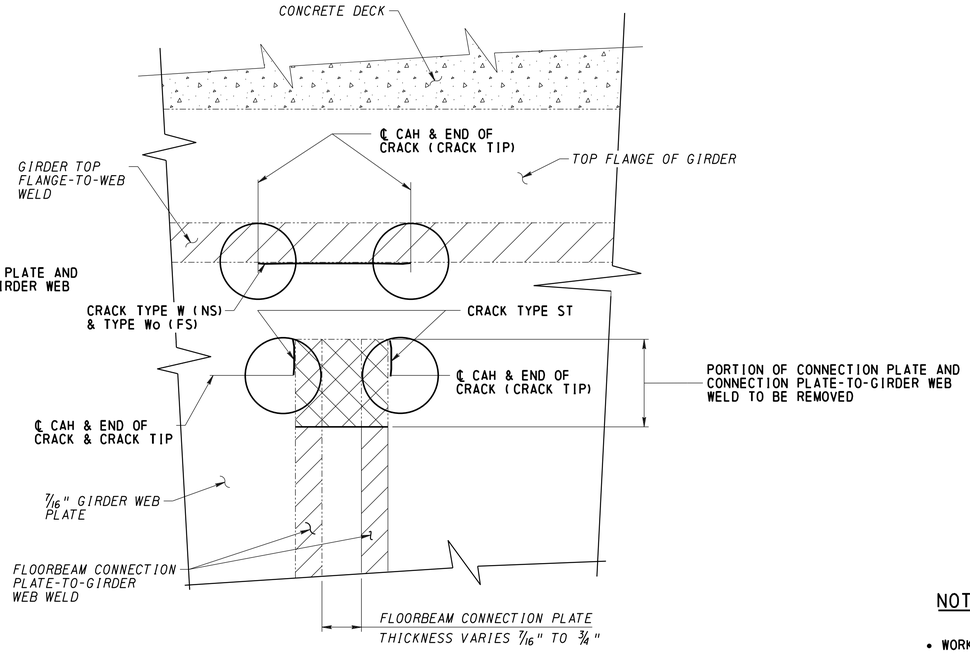
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DETAIL X1

GIRDER WEB CRACK ARREST HOLES FOR FATIGUE CRACK TYPES W OR Wo AND/OR TYPE ST WHEN ONLY ONE SIDE OF THE FLOORBEAM CONNECTION PLATE CONTAINS TYPE ST CRACKS

NOT TO SCALE



DETAIL X2

GIRDER WEB CRACK ARREST HOLES FOR FATIGUE CRACK TYPES W OR Wo AND/OR TYPE ST WHEN BOTH SIDES OF THE FLOORBEAM CONNECTION PLATE CONTAINS TYPE ST CRACKS

NOT TO SCALE

PROCEDURE FOR DETAILS X1 AND X2

1. ONCE THE PRESENCE OF CRACKS ARE VERIFIED AND THE CRACK TIPS LOCATED, POSITION THE CRACK ARREST HOLE ℄ ON THE CRACK TIP AND AS CLOSE TO THE FLOORBEAM CONNECTION PLATE OR GIRDER TOP FLANGE AS POSSIBLE AND DRILL 1" ⌀ CRACK ARREST HOLE. (CAH)
2. GRIND THE BORE AND EDGES OF EACH CRACK ARREST HOLE SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING OPERATION. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER GRIT TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
3. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON THE INSIDE EDGES OF THE CRACK ARREST HOLE TO ENSURE CRACK TIP HAS BEEN REMOVED. IF CRACKS ARE FOUND NOTIFY THE REPRESENTATIVE FOR FURTHER DIRECTION.
4. WHEN MULTIPLE CRACKS SUCH AS BRANCH CRACKS OCCUR ON THE SAME SIDE OF THE FLOORBEAM CONNECTION PLATE, POSITION THE CRACK ARREST HOLE SO AS TO CATCH ALL THE ENDS OF THE CRACKS (CRACK TIPS).
5. WHEN TWO CRACK ARREST HOLES INTERSECT, REMOVE THE TRIANGULAR PORTIONS OF THE GIRDER WEB BY DRILLING, SAWING AND GRINDING TO MAKE A SLOTTED HOLE.
6. WHEN A CRACK ARREST SLOT IS MADE GRIND THE BORE AND EDGES OF THE SLOT SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING AND OR SAWING OPERATION.
7. GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER GRIT TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.

NOTES

- WORK THIS SHEET WITH SHEET 86
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATION OF REPAIR SEE SHEET 34
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 1A & CAH DETAILS

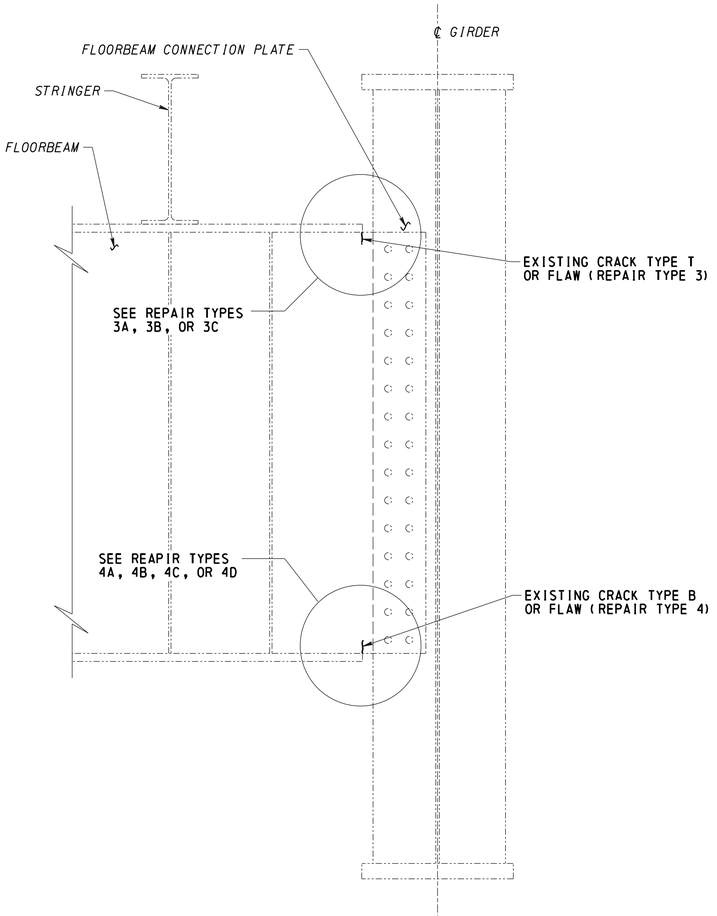
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 87 OF 164

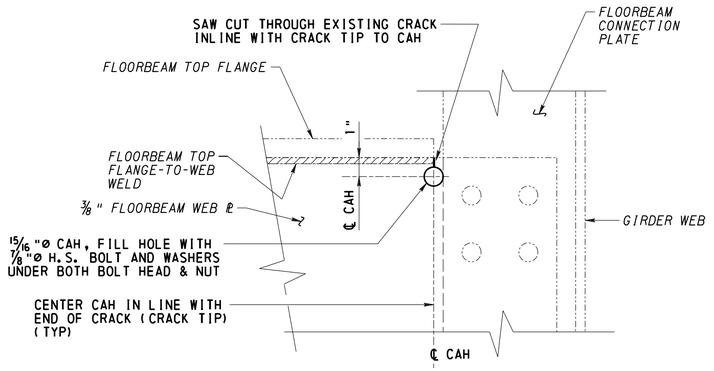
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CHECKED BY	DAM



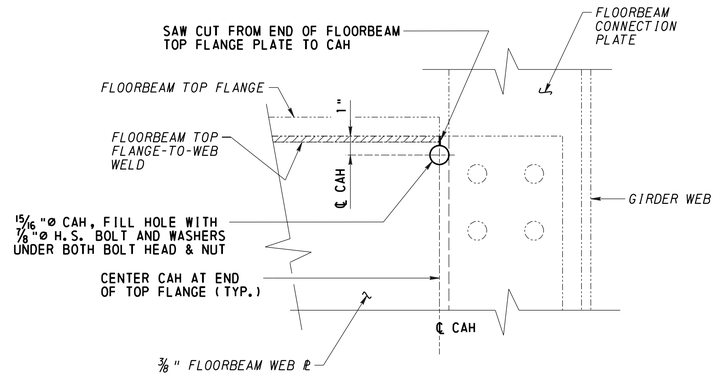
EXISTING FLOORBEAM-TO-GIRDER CONNECTION

NOT TO SCALE



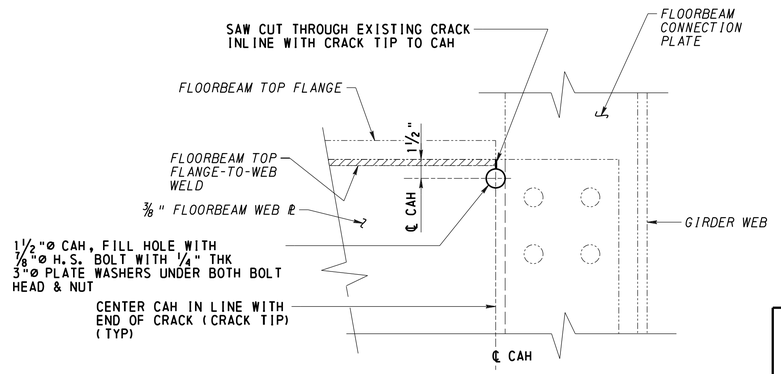
REPAIR TYPE 3A

FLOORBEAM WEB-TO-FLOORBEAM
TOP FLANGE-DRILL CRACK
ARREST HOLE RETROFIT
(EXISTING CRACK LENGTHS FROM ⅛" TO 1")
NOT TO SCALE



REPAIR TYPE 3B

FLOORBEAM WEB-TO-FLOORBEAM
TOP FLANGE-DRILL CRACK
ARREST HOLE RETROFIT
(RETROFIT OF UNCRACKED FLOORBEAMS)
NOT TO SCALE



REPAIR TYPE 3C

FLOORBEAM WEB-TO-FLOORBEAM
TOP FLANGE-DRILL CRACK
ARREST HOLE RETROFIT
(EXISTING CRACK LENGTHS FROM 1/16" TO 1¾")
NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 3A, 3B, 3C, 4A, 4B, & 4C

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY LOCATION AND SIZE OF EXISTING CRACK OR FLAW TO CONFIRM REPAIR TYPE PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT AND CORROSION FROM THE FLOORBEAM WEB AS NECESSARY TO PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING ON BOTH SIDES OF THE COPED AREA OF THE FLOORBEAM WEB ADJACENT THE FLOORBEAM BOTTOM OR TOP FLANGE.
4. PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING ON BOTH SIDES OF THE COPED AREA OF THE FLOORBEAM WEB TO DETERMINE THE EXISTENCE OF ANY CRACKS OR FLAWS AND THEN DETERMINE THE LOCATION OF THE CRACK TIP OR END OF THE FLAW.
5. DRILL A CRACK ARREST HOLE (CAH) THROUGH THE FLOORBEAM WEB OF THE SIZE AND LOCATION INDICATED ON THE REPAIR DETAILS. LOCATE THE CRACK ARREST HOLE SO THE CRACK TIP OR FLAW END IS ON THE CENTERLINE OF THE HOLE AND JUST INSIDE THE CIRCUMFERENCE OF THE BOTTOM OF THE CRACK ARREST HOLE FOR REPAIR TYPES 4 AND JUST INSIDE THE CIRCUMFERENCE OF THE TOP OF THE CRACK ARREST HOLE FOR REPAIR TYPE 3 OR UNLESS NOTED OTHERWISE.
6. SAW CUT THE FLOORBEAM WEB FROM THE EDGE OF THE COPE TOWARD THE CRACK TIP THROUGH THE CRACK OR FLAW TO THE EDGE OF THE CRACK ARREST HOLE.
7. GRIND THE BORE AND EDGES OF THE CRACK ARREST HOLE SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING ANY NICKS OR GOUGES FROM THE DRILLING OPERATION. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
8. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON THE INSIDE EDGES OF THE CRACK ARREST HOLE TO ENSURE CRACKS HAVE BEEN REMOVED FROM THE FLOORBEAM WEB. IF CRACKS ARE FOUND NOTIFY THE REPRESENTATIVE FOR FURTHER DIRECTION.
9. PREPARE AREA OF FLOORBEAM WEB WHERE THE PAINT WAS REMOVED TO BE PRIMER PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
10. AFTER PRIMER PAINT HAS DRYED FILL SAW CUT WITH APPROVED CAULKING.
11. INSTALL NEW ⅞" DIAMETER HIGH STRENGTH BOLT WITH NUT AND WASHERS UNDER BOTH NUT AND BOLT HEAD. CLIP WASHERS AS REQUIRED TO MISS FLOORBEAM FLANGE-TO-WEB WELD. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS FOR BOLTED ASSEMBLIES.
12. FINISH PAINTING BOLT HEAD, NUT, WASHERS AND SURROUNDING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATION OF REPAIR SEE SHEETS 23 THRU 35 & SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR DETAILS OF REPAIR TYPES 4A, 4B, 4C, AND 4D SEE SHEET 89

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 3A, 3B & 3C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E

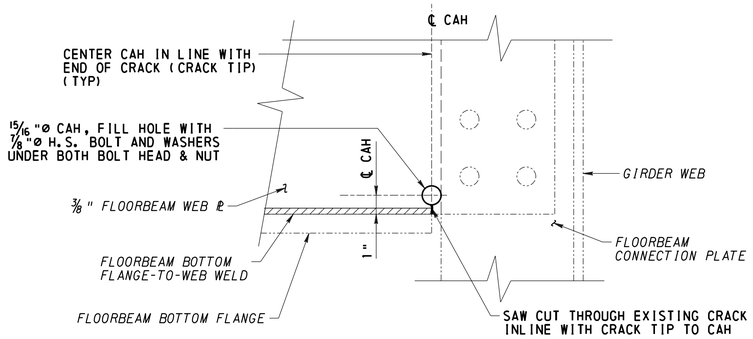
DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	DAM

RECOMMENDED _____

SHEET 88 OF 164

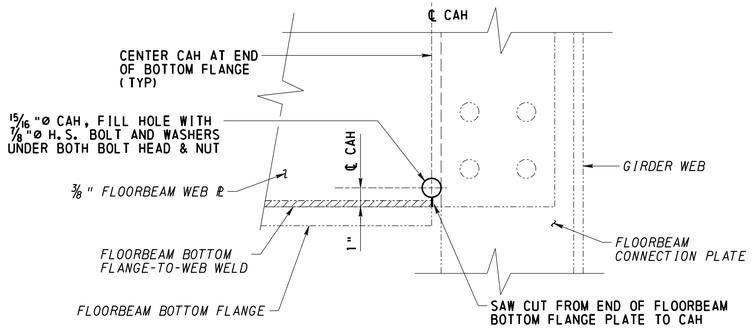
S - 38036

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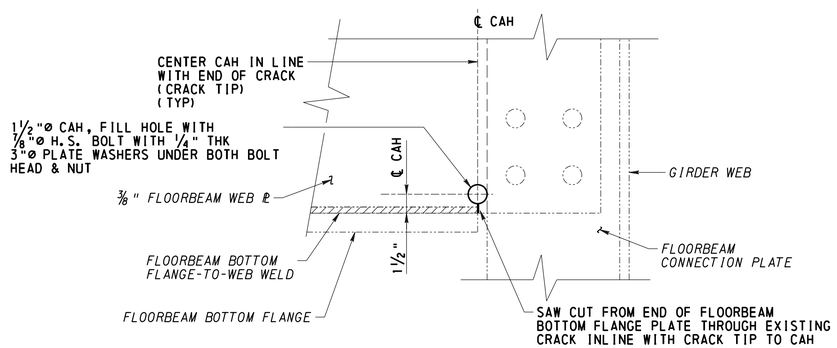
REPAIR TYPE 4A

FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE-DRILL CRACK ARREST HOLE RETROFIT (EXISTING CRACK LENGTHS FROM 1/8" TO 1")
NOT TO SCALE



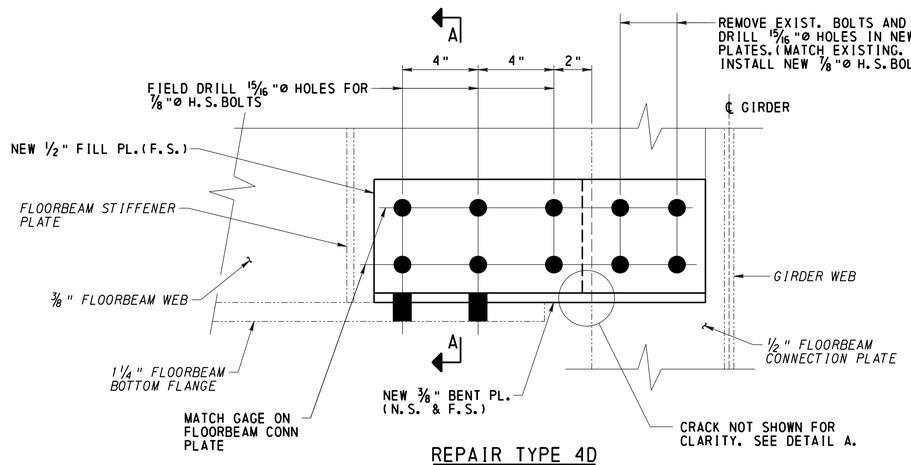
REPAIR TYPE 4B

FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE-DRILL CRACK ARREST HOLE RETROFIT (RETROFIT OF UNCRACKED FLOORBEAMS)
NOT TO SCALE



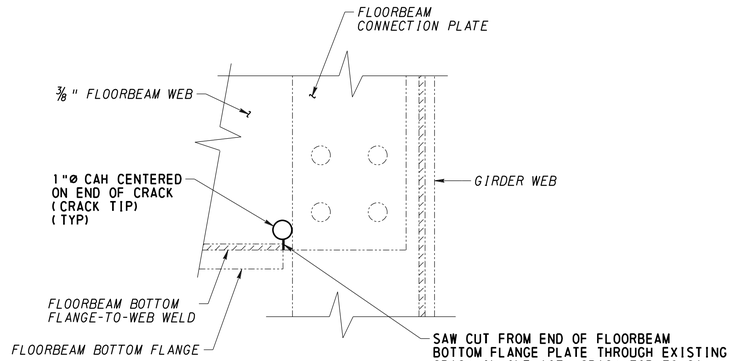
REPAIR TYPE 4C

FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE-DRILL CRACK ARREST HOLE RETROFIT (EXISTING CRACK LENGTHS FROM 1 1/16" TO 1 3/4")
NOT TO SCALE



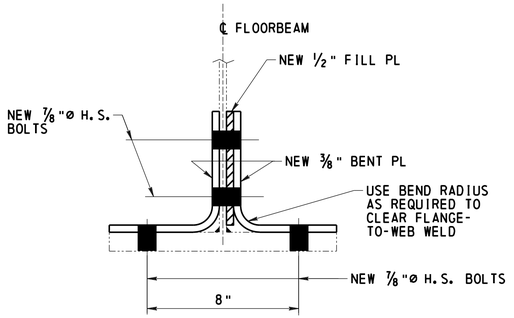
REPAIR TYPE 4D

FLOORBEAM WEB-TO-FLOORBEAM BOTTOM FLANGE-BOLTED ANGLE AND DRILL CRACK ARREST HOLE RETROFIT (CRACK LENGTHS >1 3/4")
NOT TO SCALE



DETAIL A

NOT TO SCALE



SECTION A-A

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 4D

1. PERFORM PROCEDURE FOR REPAIR TYPES 3A, 3B, 3C, 4A, 4B, AND 4C STEPS 1 THRU 8 (SHEET 88).
2. REMOVE EXISTING BOTTOM 4 BOLTS AS INDICATED FROM THE FLOORBEAM WEB CONNECTION.
3. USING THE BENT PLATES AS TEMPLATES DRILL 15/16"ø HOLES IN THE WEB AND FLANGE OF THE FLOORBEAM FOR NEW BENT PLATE ATTACHMENT.
4. USING THE FLOORBEAM CONNECTIONS PLATE AS A TEMPLATE DRILL 15/16"ø HOLES IN BENT PLATES.
5. REMOVE PAINT FROM FLOORBEAM BOTTOM FLANGE, WEB, AND CONNECTION PLATE WHERE REPAIR STEEL WILL BE ATTACHED.
6. PREPARE AREA OF FLOORBEAM WEB AND FLOOR BEAM CONNECTION PLATE WHERE THE PAINT WAS REMOVED TO BE PRIMER PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. FILL SAW CUT WITH APPROVED CAULKING.
8. WHEN PRIMER PAINT IS DRY INSTALL NEW BENT AND FILL PLATES AND BOLT-UP WITH NEW 7/8"ø H.S. BOLTS IN FLOORBEAM WEB, FLANGE AND FLOORBEAM CONNECTION PLATE.
9. REMOVE THE WAX-LIKE LUBRICANT FROM THE GALVANIZED FASTENERS.
10. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
11. FINISH PAINTING NEW BENT PLATES AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 34 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR REPAIR TYPES 4A, 4B AND 4C PROCEDURES FOR REPAIR SEE SHEET 88

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 4A, 4B, 4C & 4D

DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	DAM

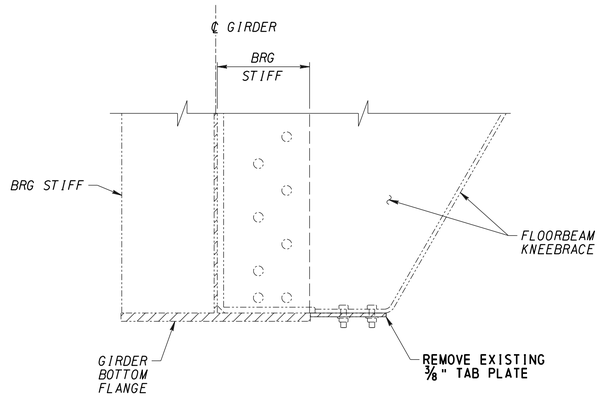
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 89 OF 164

S - 38036

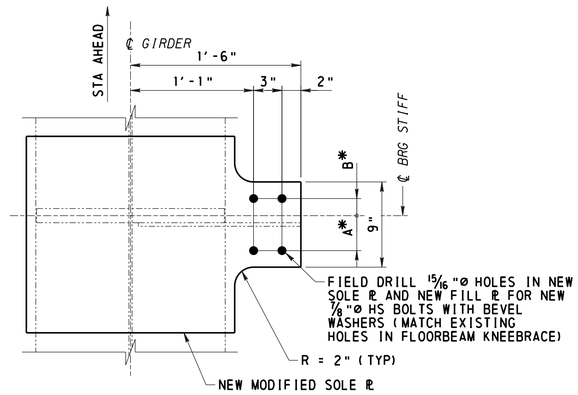
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CROSS-SECTION

EXISTING FLOORBEAM KNEEBRACE-TO-GIRDER CONNECTION

NOT TO SCALE



PLAN VIEW

MODIFIED SOLE PLATE DETAIL

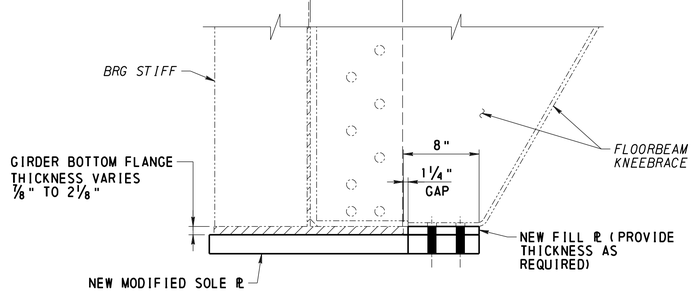
NOT TO SCALE

(FOR MAINLINE APPROACH SPANS GIRDERS G1 AND G3 AS SHOWN)
(FOR MAINLINE APPROACH SPANS GIRDERS G2 AND G4 OPPOSITE HAND)

(RAMPS J AND H FLOORBEAM KNEE BRACE TAB PLATES ARE SIMILAR BUT ARE CONNECTED AT A SKEW TO THE GIRDER BOTTOM FLANGE)

NOTE

*DIMENSIONS "A" AND "B" TO BE FIELD MEASURED



CROSS-SECTION

RETROFIT OF FLOORBEAM KNEE BRACE CONNECTION TO NEW MODIFIED BEARING SOLE PLATE

NOT TO SCALE

REPAIR TYPE 5

FLOORBEAM KNEEBRACE TAB PLATE-TO-GIRDER BOTTOM FLANGE RETROFIT WITH MODIFIED SOLE PLATE
(THIS REPAIR IS INCIDENTAL TO REPAIR TYPES 55A, 55D, AND 55H)

PROCEDURE FOR REPAIR TYPE 5

1. PERFORM THIS REPAIR CONCURENTLY WITH THE REPLACEMENT OF THE ROCKER BEARING.
2. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
3. MECHANICALLY CUT PORTION OF TAB PLATE FROM GIRDER BOTTOM FLANGE, BUT NOT LESS THAN 1/4" AWAY FROM EDGE OF GIRDER BOTTOM FLANGE.
4. GRIND REMAINING PORTION OF TAB PLATE AND WELD METAL FLUSH WITH EDGE OF GIRDER BOTTOM FLANGE. FINISHED SURFACE OF THE EDGE OF THE GIRDER BOTTOM FLANGE IS TO BE SMOOTH AND FLAT AND SHOULD NOT CONTAIN ANY NICKS, GOUGES, OR UNDULATIONS FROM THE GRINDING AND CUTTING PROCESS.
5. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
6. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON GROUND AREA OF FLANGE EDGE TO ENSURE CRACKS HAVE BEEN REMOVED FROM THE GIRDER FLANGE. IF CRACKS ARE FOUND NOTIFY THE REPRESENTATIVE FOR FURTHER DIRECTION.
7. INSTALL NEW DISC BEARING WITH FILL PLATE.
8. FIELD DRILL HOLES IN NEW SOLE AND FILL PLATES.
9. INSTALL NEW HS BOLTS TO CONNECT BRACKET TO SOLE PLATE.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 29, 31, 33, 34, 52, AND 53
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 5

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 90 OF 164

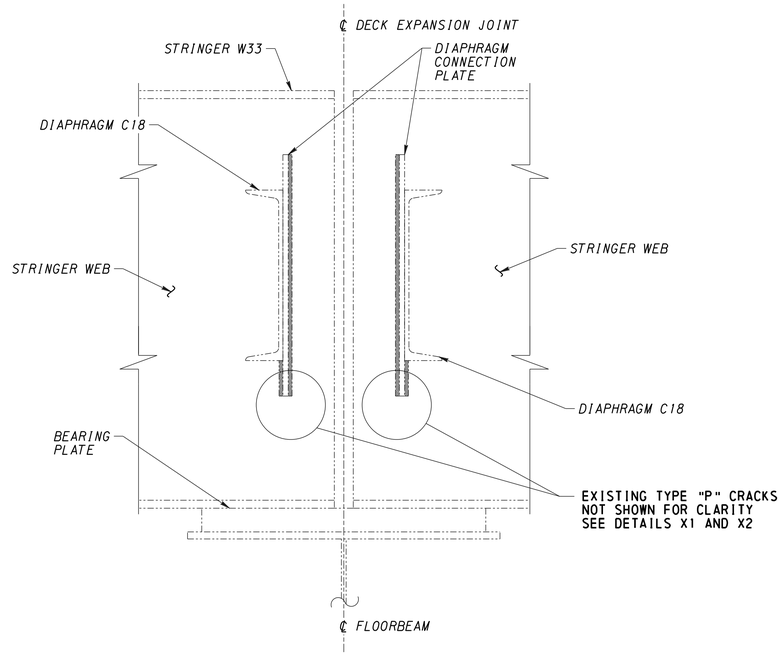
S - 38036

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DAM



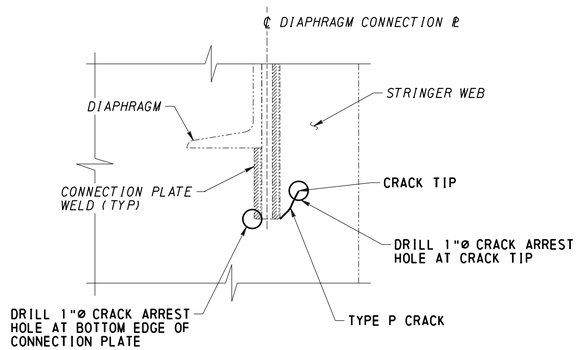
PHOTO 1

TYPE 'P' FATGUE CRACKS AT BOTTOM EDGE OF STRINGER DIAPHRAGM CONNECTION PLATES IN WEBS OF STRINGERS S6 ABOVE FLOORBEAM NO. 3 IN SPAN 21 SHOWN (OTHER LOCATIONS SIMILAR)



STRINGER ELEVATION AT DIAPHRAGM CONNECTION PLATE

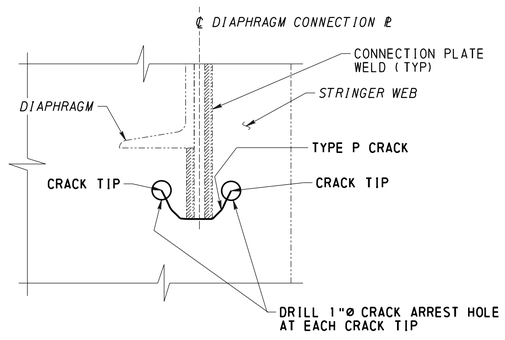
NOT TO SCALE



DETAIL X1

STRINGER WEB CRACK ARREST HOLES FOR FATIGUE CRACK TYPE "P" WHEN ONLY ONE CRACK IS CONFIRMED ON ONE SIDE OF THE DIAPHRAGM CONNECTION PLATE

NOT TO SCALE



DETAIL X2

STRINGER WEB CRACK ARREST HOLES FOR FATIGUE CRACK TYPE "P" WHEN CRACKS ARE CONFIRMED ON BOTH SIDES OF THE DIAPHRAGM CONNECTION PLATE

NOT TO SCALE

REPAIR TYPE 6B

STRINGER DIAPHRAGM CONNECTION PLATE-TO-STRINGER WEB WELD RETROFIT WITH FATIGUE CRACKS TYPE "P"

PROCEDURE FOR REPAIR TYPE 6B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. TEST ON INSIDE & OUTSIDE OF STRINGER USING MT (MAGNETIC PARTICLE TEST) TO LOCATE ANY P TYPE CRACKS AND MARK ENDS OF THE CRACKS.
4. DRILL CRACK ARREST HOLES (CAH) AS REQUIRED AT EACH CRACK TIP (SEE DETAILS X1 AND X2).

   NOTE: 1/4" PILOT HOLES MAY BE NECESSARY TO ENSURE THAT THE CAH CAPTURES THE END OF THE CRACKS ON BOTH SIDES OF THE STRINGER.
5. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
6. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROCEDURE FOR DETAILS X1 AND X2

1. ONCE THE PRESENCE OF CRACKS ARE VERIFIED AND THE CRACK TIPS LOCATED, POSITION THE CRACK ARREST HOLE ℄ ON THE CRACK TIP AND DRILL 1"ø CRACK ARREST HOLE.
2. GRIND THE BORE AND EDGES OF EACH CRACK ARREST HOLE SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING OPERATION. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER GRIT TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
3. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON THE INSIDE EDGES OF THE CRACK ARREST HOLE TO ENSURE CRACK TIP HAS BEEN REMOVED. IF CRACKS ARE FOUND NOTIFY THE REPRESENTATIVE FOR FURTHER DIRECTION.
4. WHEN MULTIPLE CRACKS SUCH AS BRANCH CRACKS OCCUR ON THE SAME SIDE OF THE DIAPHRAGM CONNECTION PLATE, POSITION THE CRACK ARREST HOLE SO AS TO CATCH ALL THE ENDS OF THE CRACKS (CRACK TIPS). WHEN TWO CRACK ARREST HOLES INTERSECT, REMOVE THE TRIANGULAR PORTIONS OF THE GIRDER WEB BY DRILLING, SAWING AND GRINDING TO MAKE A SLOTTED HOLE.
6. WHEN A CRACK ARREST SLOT IS MADE GRIND THE BORE AND EDGES OF THE SLOT SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING AND OR SAWING OPERATION.
7. GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER GRIT TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 AND 36
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

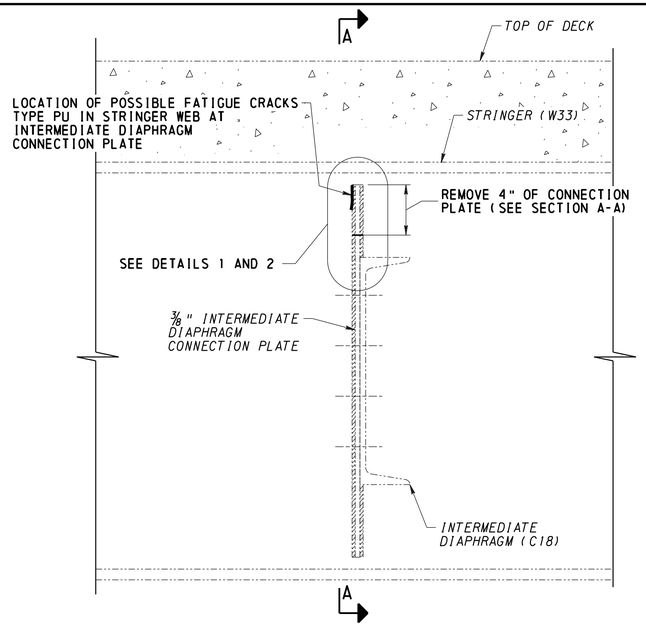
REPAIR TYPE 6B

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 91 OF 164

S - 38036

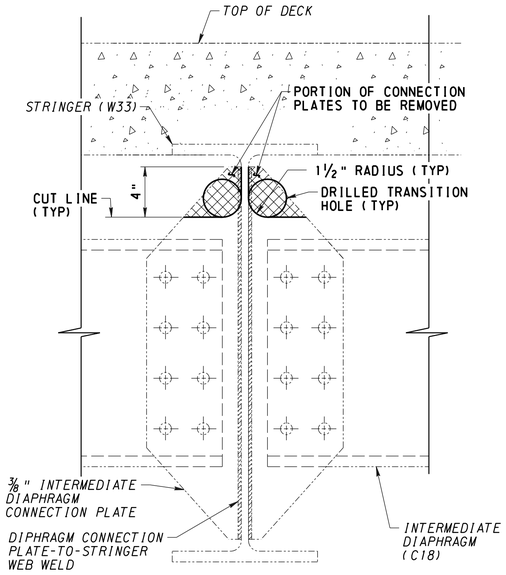


EXISTING PARTIAL STRINGER ELEVATION AT INTERMEDIATE DIAPHRAGM CONNECTION PLATE

NOT TO SCALE

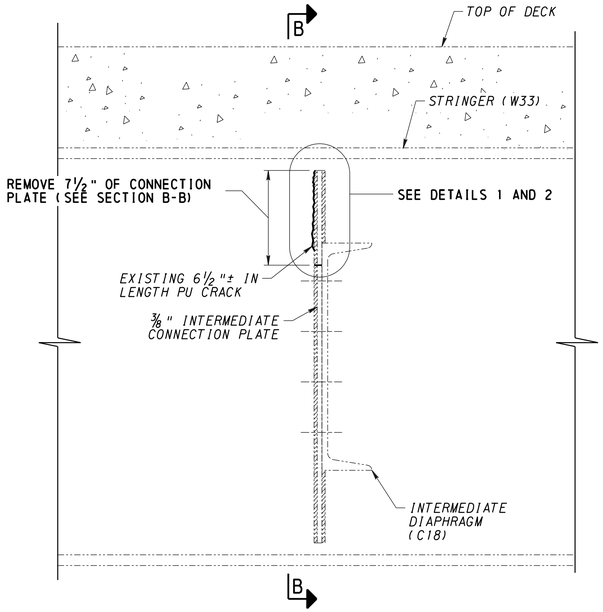
REPAIR TYPE 6C

STRINGER INTERMEDIATE DIAPHRAGM CONNECTION PLATE ADJACENT STRINGER TOP FLANGE RETROFIT WITH FATIGUE CRACKS TYPE PU (REMOVE PORTION OF DIAPHRAGM CONNECTION PLATE-TO-STRINGER WEB AND DRILL CRACK ARREST HOLES)



SECTION A-A

NOT TO SCALE

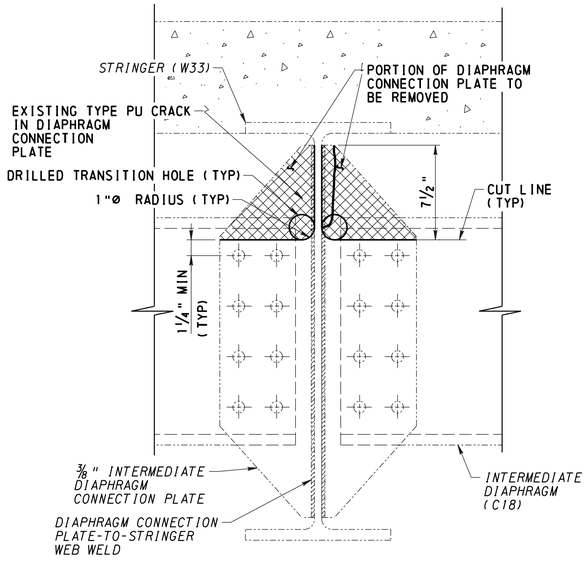


EXISTING PARTIAL STRINGER S12 WEST ELEVATION AT DIAPHRAGM CONNECTION PLATE BETWEEN FLOORBEAM NOS. FB0 AND FB1

NOT TO SCALE

REPAIR TYPE 6D

STRINGER INTERMEDIATE DIAPHRAGM CONNECTION PLATE ADJACENT STRINGER TOP FLANGE RETROFIT WITH FATIGUE CRACKS TYPE PU (REMOVE PORTION OF DIAPHRAGM CONNECTION PLATE-TO-STRINGER WEB) AND DRILL CRACK ARREST HOLES (EXISTING 6½"± IN LENGTH PU CRACK)



SECTION B-B

NOT TO SCALE

PROCEDURE FOR TYPE 6C AND 6D REPAIRS

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FOR REPAIR TYPE 6D ONLY REMOVE AND SAVE EXISTING DIAPHRAGMS FROM BOTH SIDES OF STRINGERS TO FACILITATE PORTION OF DIAPHRAGM CONNECTION PLATE REMOVAL.
4. REMOVE PAINT FROM DIAPHRAGM CONNECTION PLATES ON BOTH SIDES OF STRINGER WEB FOR NON-DESTRUCTIVE TESTING AND REPAIR. (SEE DETAILS 1 AND 2 FOR LOCATIONS OF POSSIBLE CRACKS.
5. REMOVE THE TOP 4" OF THE DIAPHRAGM CONNECTION PLATE FOR REPAIR TYPE 6C AND 7 1/2" FOR REPAIR TYPE 6D ADJACENT THE STRINGER TOP FLANGE USING A PLASMA-ARC CUTTER OR MECHANICAL CUTTER.
6. GRIND THE CUT EDGE OF THE CONNECTION PLATE AND THE REMAINING WELD OF THE CONNECTION PLATE-TO-STRINGER WEB WELD UNTIL IT IS PROPERLY CONTOURED AND BLENDED INTO THE STRINGER WEB. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
7. TEST ON BOTH SIDES OF STRINGER USING MT (MAGNETIC PARTICLE TEST) TO LOCATE ANY PU CRACKS AND MARK ENDS OF THE CRACKS.
8. ATTEMPT TO REMOVE ANY SUPERFICIAL PU CRACKS BY GRINDING AND/OR DEBURRING (DO NOT GO DEEPER THAN 1/16" INTO THE GIRDER WEB.)
9. RETEST USING MT (MAGNETIC PARTICLE TEST) AND MARK THE TIPS OF ANY PU CRACKS THAT STILL REMAIN.
10. DRILL CRACK ARREST HOLES (CAH) AS REQUIRED AT EACH CRACK TIP (SEE PROCEDURES FOR DETAILS 1 AND 2).

    NOTE: 1/4" PILOT HOLES MAY BE NECESSARY TO ENSURE THAT THE CAH CAPTURES THE END OF THE CRACKS ON BOTH SIDES OF THE STRINGER WEB.

    A) IF THERE ARE NO CRACKS FOUND ON EITHER SIDE OF THE STRINGER WEB OR IF THE CRACKS FOUND WERE REMOVED BY GRINDING AND/OR DEBURRING DO NOT DRILL ANY CRACK ARREST HOLES.

    B) IF THE OPPOSITE SIDE CRACK TIPS ARE SHORTER THAN THE PILOT HOLES, DRILL CRACK ARREST HOLES AT THE PILOT HOLES.

    C) IF THE OPPOSITE SIDE CRACKS EXTEND BEYOND THE PILOT HOLES DRILL THE CRACK ARREST HOLE AT THE TIP OF THE OPPOSITE SIDE CRACK AND INCLUDE THE PILOT HOLE IN THE CRACK ARREST HOLE WHENEVER POSSIBLE.

    D) RETEST BOTH SIDES OF THE STRINGERS USING (MT) MAGNETIC PARTICLE TEST AT ALL LOCATIONS INCLUDING AREAS WHERE CRACK ARREST HOLES WERE DRILLED.
11. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
12. WHEN PRIME PAINT IS DRY, INSTALL THE SAVED DIAPHRAGMS USING NEW BOLTS, NUTS AND WASHERS. TENSION BOLTS IN ACCORDANCE WITH CODE PROVISIONS AND BOLTED ASSEMBLIES.
13. REMOVE THE WAX-LIKE LUBRICANT FROM THE GALVANIZED FASTENERS.
14. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
15. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DETAILS 1 AND 2 SEE SHEET 93
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 & 36
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

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	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

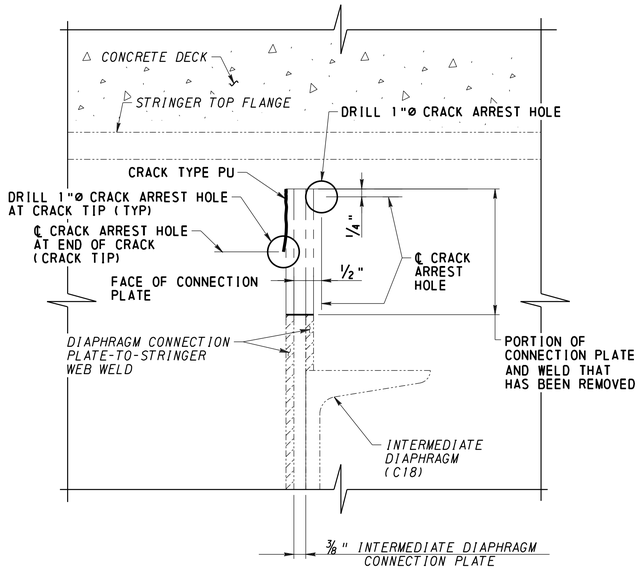
REPAIR TYPES 6C & 6D

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 92 OF 164

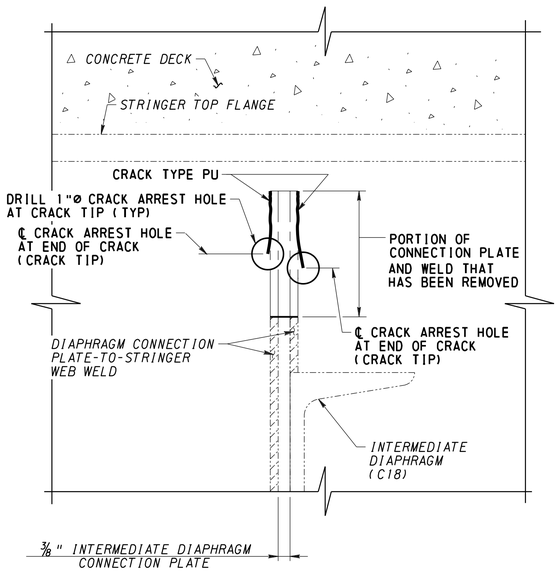
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DETAIL 1

STRINGER WEB CRACK ARREST HOLES FOR FATIGUE CRACK TYPE PU WHEN ONLY ONE SIDE OF THE DIAPHRAGM CONNECTION PLATE CONTAINS TYPE PU CRACKS

NOT TO SCALE



DETAIL 2

STRINGER WEB CRACK ARREST HOLES FOR FATIGUE CRACK TYPE PU WHEN BOTH SIDES OF THE DIAPHRAGM CONNECTION PLATE CONTAINS TYPE PU CRACKS

NOT TO SCALE

PROCEDURE FOR DETAILS 1 AND 2

1. ONCE THE PRESENCE OF CRACKS ARE VERIFIED AND THE CRACK TIPS LOCATED, POSITION THE CRACK ARREST HOLE ℄ ON THE CRACK TIP OR IF PRESENT AS CLOSE TO THE DIAPHRAGM CONNECTION PLATE AS POSSIBLE AND DRILL 1"ø CRACK ARREST HOLE. (CAH)
2. GRIND THE BORE AND EDGES OF EACH CRACK ARREST HOLE SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING OPERATION. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER GRIT TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
3. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON THE INSIDE EDGES OF THE CRACK ARREST HOLE TO ENSURE THE CRACK TIP HAS BEEN REMOVED. IF CRACKS ARE FOUND, NOTIFY THE DEPARTMENT REPRESENTATIVE FOR FURTHER DIRECTION.
4. WHEN MULTIPLE CRACKS SUCH AS BRANCH CRACKS OCCUR ON THE SAME SIDE OF THE DIAPHRAGM CONNECTION PLATE, POSITION THE CRACK ARREST HOLE SO AS TO CATCH ALL THE ENDS OF THE CRACKS (CRACK TIPS).
5. WHEN TWO CRACK ARREST HOLES INTERSECT, REMOVE THE TRIANGULAR PORTIONS OF THE STRINGER WEB BY DRILLING, SAWING AND GRINDING TO MAKE A SLOTTED HOLE.
6. WHEN A CRACK ARREST SLOT IS MADE GRIND THE BORE AND EDGES OF THE SLOT SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING AND OR SAWING OPERATION.
7. DRILL ONE CRACK ARREST HOLE IF BY ADJUSTING THE CRACK ARREST HOLE LOCATION BOTH CRACK TIPS CAN BE REMOVED.
8. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER GRIT TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.



COMPLETED REPAIR TYPE 9

REPAIR TYPE 9

CRACKED TACK WELD REMOVAL
(REMOVE CRACKED TACK WELD BY GRINDING

PROCEDURE FOR REPAIR TYPE 9

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. ENGINEER IN FIELD VERIFY REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT FROM REPAIR AREA BY ABRASIVE BLAST CLEANING OR SHROUDED POWER TOOL CLEANING AS REQUIRED FOR NON-DESTRUCTIVE TESTING AND REPAIR.
4. REMOVE THE WELDS BY MILLING THE GRINDING USING GRINDERS, CARBIDE TOOLS, AND DYE GRINDER. GRIND THE SURFACE FLUSH WITH AND AS SMOOTH AS THE BASE METAL FROM THE PLATES OR ANGLES.
5. PERFORM ALL GRINDING IN A DIRECTION PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
6. PERFORM FINAL SURFACE FINISHING OF THE GROUND SURFACES WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE "FLAPPER" WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
7. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON AND AROUND THE REPAIR AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY INDICATIONS FOUND.
8. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- WORK THIS SHEET WITH SHEET 92
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 & 36
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 6C, 6D, CAH & 9

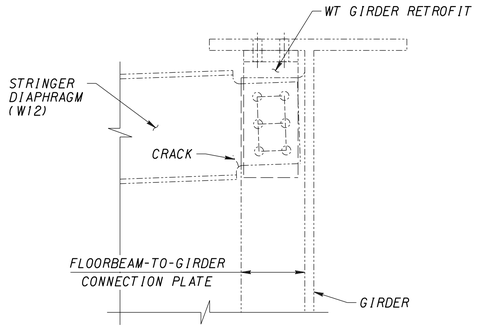
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 93 OF 164

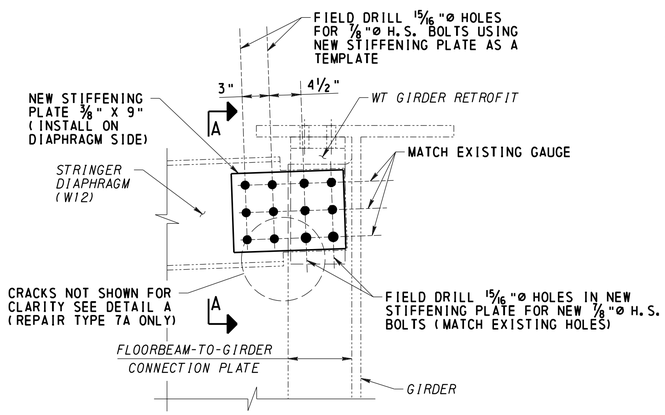
S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



PARTIAL ELEVATION OF
EXISTING STRINGER DIAPHRAGM-TO-FLOORBEAM
CONNECTION PLATE AT GIRDER
WITH GIRDER RETROFIT

NOT TO SCALE



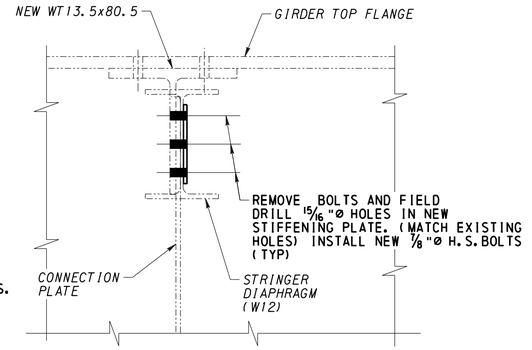
REPAIR TYPE 7A

STRINGER DIAPHRAGM WEB STRENGTHENING AT PREVIOUS
GIRDER RETROFIT REPAIR WITH EXISTING FATIGUE CRACKS TYPE D

REPAIR TYPE 7B

STRINGER DIAPHRAGM WEB STRENGTHENING AT PREVIOUS
GIRDER RETROFIT REPAIR WITHOUT EXISTING FATIGUE CRACKS TYPE D

NOT TO SCALE

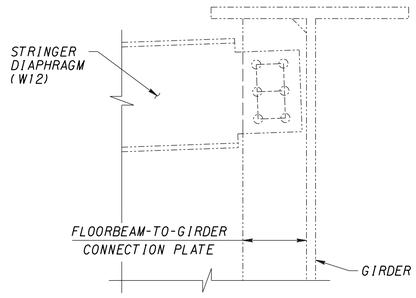


SECTION A-A

NOT TO SCALE

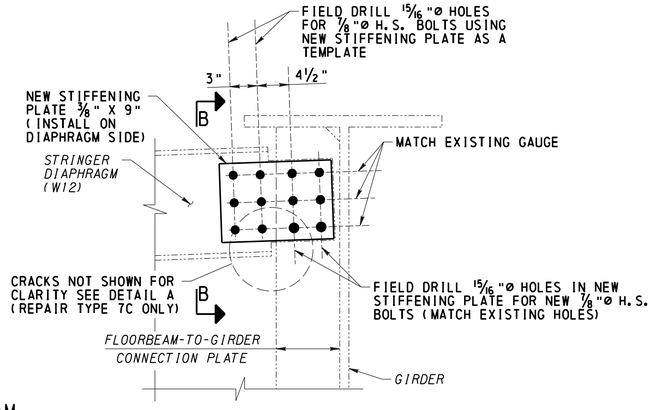
PROCEDURE FOR REPAIR TYPE 7A, 7B, 7C, 7D, 7E, & 7F

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FILED VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. PROVIDE TEMPORARY SUPPORT OF DIAPHRAGM.
4. REMOVE PAINT FROM DIAPHRAGM CONNECTION PLATE AND DIAPHRAGM WEB ON BOTH SIDES AS REQUIRED FOR NON-DESTRUCTIVE TESTING AND REPAIR.
5. TEST ON BOTH SIDES OF DIAPHRAGM WEB AT FLANGE COPE USING MT (MAGNETIC PARTICLE TESTING) TO LOCATE THE PRESENCE OF ANY D CRACK TYPES.
6. ATTEMPT TO REMOVE ANY SUPERFICIAL D CRACK TYPES BY GRINDING AND/OR DEBURRING (DO NOT GO DEEPER THAN 1/16" INTO THE DIAPHRAGM WEB.)
7. RETEST USING MT (MAGNETIC PARTICLE TEST) AND MARK THE TIPS OF ANY D CRACK TYPES THAT STILL REMAIN.
8. IF NO CRACK IS FOUND ON EITHER SIDE OF THE DIAPHRAGM WEB OR IF THE CRACK FOUND WAS REMOVED BY GRINDING AND/OR DEBURRING DO NOT DRILL CRACK ARREST HOLE.
9. IF A CRACK STILL REMAINS, DRILL CRACK ARREST HOLE (CAH) CENTERED ON THE CRACK TIP OF THE LONGEST CRACK FROM THE WEB COPE.
10. SAW CUT THE DIAPHRAGM WEB FROM THE EDGE OF THE COPE TOWARDS THE CRACK TIP THROUGH THE CRACK TO THE EDGE OF THE CRACK ARREST HOLE.
11. GRIND THE EDGES AND BORE OF THE HOLE SMOOTH TO ELIMINATE ANY IMPERFECTIONS FROM THE DRILLING OPERATION. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH A GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
12. REMOVE THE EXISTING DIAPHRAGM TO CONNECTION PLATE BOLTS.
13. USING THE NEW STIFFENING PLATE AND FLOORBEAM CONNECTION PLATE AS TEMPLATES, FIELD DRILL 15/16"Ø HOLES IN DIAPHRAGM WEB AND NEW STIFFENING PLATE.
14. REMOVE PAINT FROM DIAPHRAGM WEB AND CONNECTION PLATE WHERE REPAIR STEEL WILL BE ATTACHED.
15. PREPARE AREA OF DIAPHRAGM WEB AND FLOORBEAM CONNECTION PLATE WHERE THE PAINT WAS REMOVED TO BE PRIMER PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
16. FILL SAW CUT WITH APPROVED CAULKING.
17. WHEN PRIMER HAS CURED INSTALL NEW STIFFENING PLATE WITH NEW 7/8"Ø H.S. BOLTS TO DIAPHRAGM AND FLOORBEAM CONNECTION PLATE.
18. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
19. FINISH PAINTING NEW STIFFENING PLATE AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.



PARTIAL ELEVATION OF
EXISTING STRINGER DIAPHRAGM-TO-FLOORBEAM
CONNECTION PLATE AT GIRDER
WITHOUT GIRDER RETROFIT

NOT TO SCALE



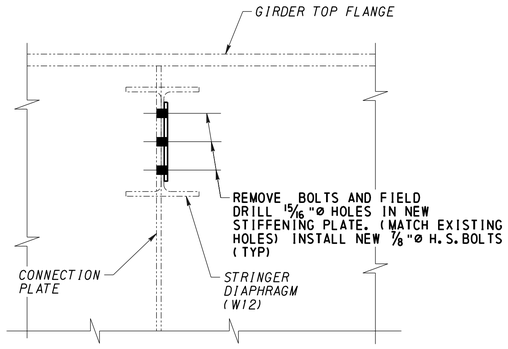
REPAIR TYPE 7C

STRINGER DIAPHRAGM WEB STRENGTHENING AT
DIAPHRAGM CONNECTION PLATE-TO-
GIRDER WEB WITH EXISTING FATIGUE CRACKS TYPE D

REPAIR TYPE 7D

STRINGER DIAPHRAGM WEB STRENGTHENING AT
DIAPHRAGM CONNECTION PLATE-TO-GIRDER WEB
WITHOUT EXISTING FATIGUE CRACKS TYPE D

NOT TO SCALE

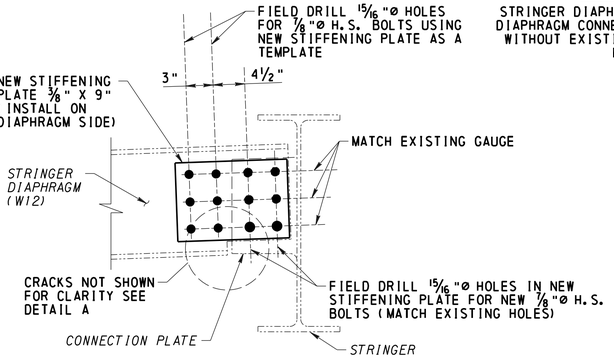


SECTION B-B

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 34 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED



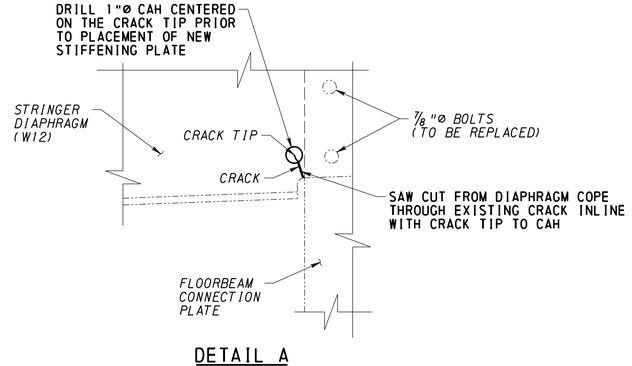
REPAIR TYPE 7E

STRINGER DIAPHRAGM WEB STRENGTHENING AT DIAPHRAGM CONNECTION
PLATE-TO-STRINGER WEB WITH EXISTING FATIGUE CRACKS TYPE D

NOT TO SCALE

REPAIR TYPE 7F

STRINGER DIAPHRAGM WEB STRENGTHENING AT DIAPHRAGM CONNECTION
PLATE-TO-STRINGER WEB WITHOUT EXISTING FATIGUE CRACKS TYPE D



DETAIL A

NOT TO SCALE

DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

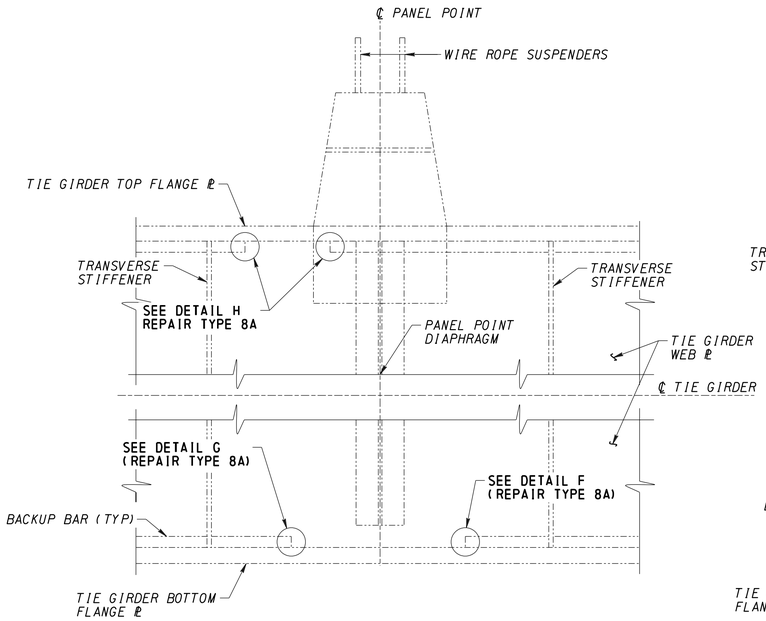
REPAIR TYPES 7A, 7B, 7C, 7D, 7E & 7F

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

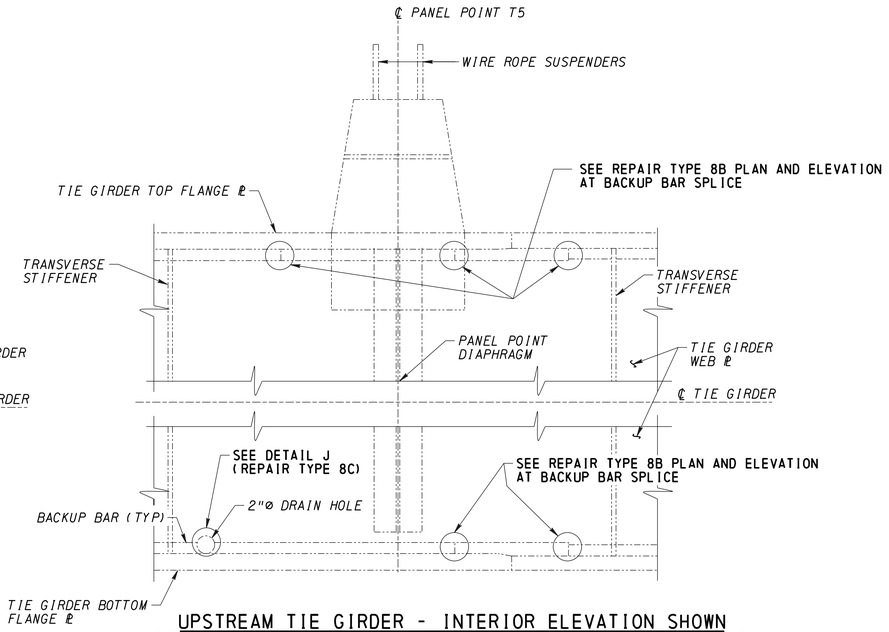
SHEET 94 OF 164

S - 38036



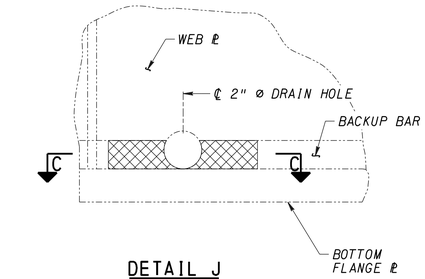
UPSTREAM TIE GIRDER - INTERIOR ELEVATION SHOWN
DOWNSTREAM TIE GIRDER - INTERIOR ELEVATION SIMILAR
END FLOORBEAMS NO. FBO AND FB15 - BACKUP BAR TERMINATIONS SIMILAR

TYPICAL LOCATIONS OF BACKUP BAR TERMINATIONS
NOT TO SCALE



UPSTREAM TIE GIRDER - INTERIOR ELEVATION SHOWN
DOWNSTREAM TIE GIRDER - INTERIOR ELEVATION SIMILAR
END FLOORBEAMS NO. FBO AND FB15 - BACKUP BAR SPACES SIMILAR

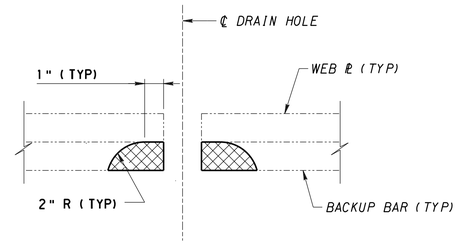
TYPICAL LOCATIONS OF BACKUP BAR SPLICES
SEE PHOTO 1 FOR STEPPED BACKUP BAR SPLICES
NOT TO SCALE



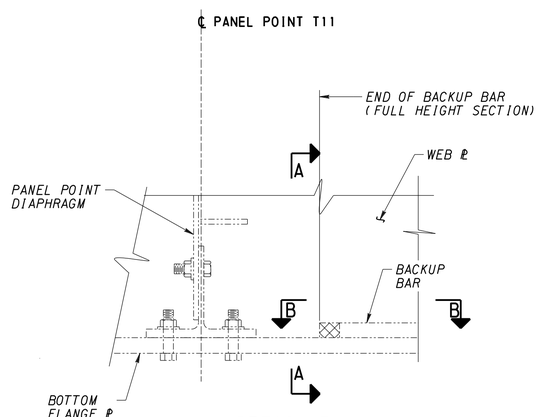
DETAIL J
NOT TO SCALE

REPAIR TYPE 8C

GRIND TAPER IN BACKUP BAR TERMINATIONS AT BOTH SIDES OF DRAIN HOLE



SECTION C-C
NOT TO SCALE

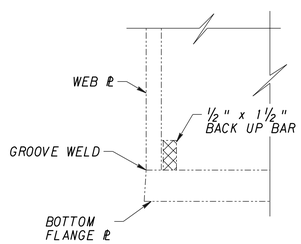


DETAIL F
NOT TO SCALE
(INSIDE TIE GIRDER LOOKING OUT)

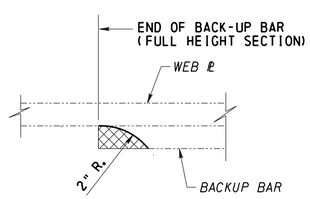
DETAIL G
SIMILAR TO DETAIL F EXCEPT OPPOSITE HAND

DETAIL H
SIMILAR TO DETAILS F & G EXCEPT AT TIE GIRDER TOP FLANGE PLATE

REPAIR TYPE 8A
GRIND TAPER IN BACKUP BAR TERMINATION
NOT TO SCALE

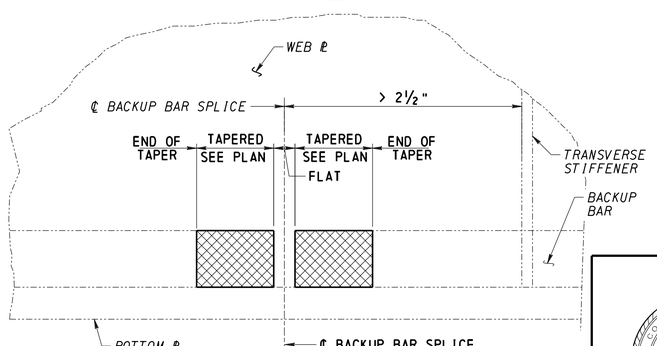


SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

PLAN
NOT TO SCALE



ELEVATION
NOT TO SCALE

REPAIR TYPE 8B

GRIND TAPER IN BACKUP BAR SPLICE
SEE PHOTO 3 FOR COMPLETED REPAIR AT BACKUP BAR SPLICE

NOTES

- WORK THIS SHEET WITH SHEET 96.
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7.
- FOR GENERAL LEGEND SEE SHEET 1.
- FOR LOCATION OF REPAIRS ON UPSTREAM TIE GIRDERS SEE SHEETS 39 THRU 43
- FOR LOCATION OF REPAIRS ON DOWNSTREAM TIE GIRDERS SEE SHEETS 44 THRU 48
- FOR LOCATION OF REPAIRS IN END FLOORBEAM NO'S RO AND R15 SEE SHEETS 49 AND 50

LEGEND

PORTION OF BACKUP BAR TO BE REMOVED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 8A, 8B & 8C

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

RECOMMENDED _____

SHEET 95 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

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PHOTO 1
STEPPED BACKUP BAR SPLICES



PHOTO 2
BACKUP BAR SPLICE NEAR TRANSVERSE STIFFENER

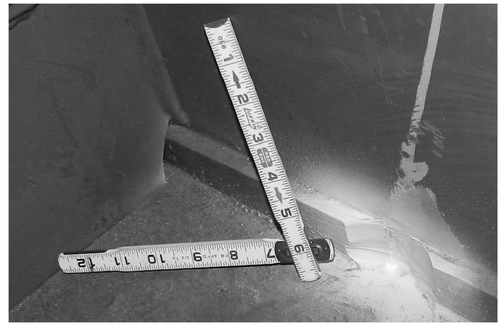
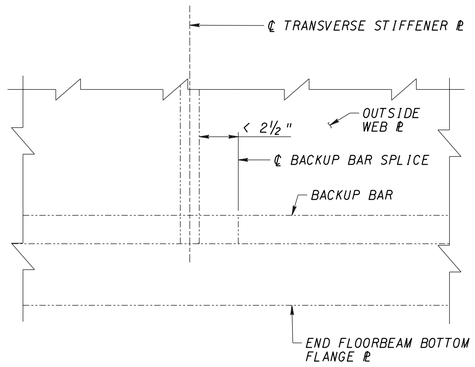
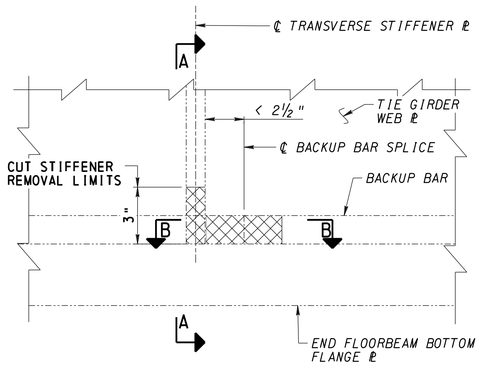


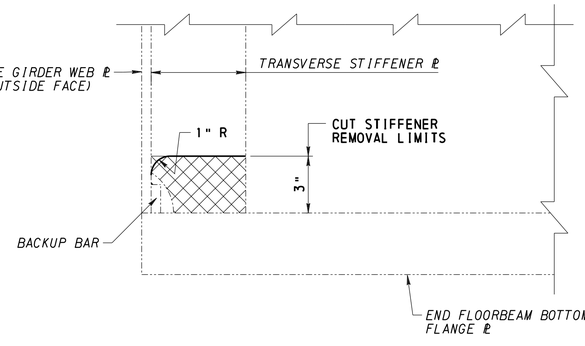
PHOTO 3
COMPLETED REPAIR-TAPER GROUND IN BACKUP BAR SPLICE



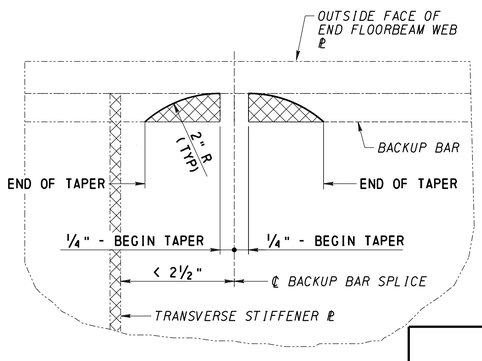
END FLOORBEAM INTERIOR ELEVATION AT BACKUP BAR SPLICE ADJACENT STIFFENER
EXISTING CONDITION
SEE PHOTO 2 FOR SIMILAR CONDITION
NOT TO SCALE



END FLOORBEAM INTERIOR ELEVATION AT STIFFENER
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 8A, 8B 8C, AND 8D

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. ENGINEER TO FIELD VERIFY REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT FROM BACKUP BAR ON INSIDE OF TIE GIRDER OR END FLOORBEAM AND ON BOTTOM PLATE WEB AS REQUIRED FOR NON-DESTRUCTIVE TESTING AND REPAIR.
4. REPAIR 8D ONLY - REMOVE THE TOP OR BOTTOM 3" OF THE TRANSVERSE STIFFENER PLATE AT THE TIE GIRDER OR FLOORBEAM TOP OR BOTTOM PLATE USING A PLASMA-ARC CUTTER. (SEE SECTION A-A THIS SHEET).
5. REPAIR 8D ONLY - GRIND THE CUT EDGE OF THE CONNECTION PLATE AND WELD RESIDUE OF THE TRANSVERSE STIFFENER WELD-TO-TIE GIRDER OR FLOORBEAM WEB UNTIL IT IS PROPERLY CONTOURED AND BLENDED INTO THE TIE GIRDER OR FLOORBEAM WEB.
6. BEGIN TAPER AT FULL SECTION OF BACK-UP BAR AS INDICATED.
7. USING A MINIMUM OF 4" DIAMETER STRAIGHT CUP OR RECESSED TYPE GRINDING WHEEL. REMOVE THE END PORTION OF THE BACK-UP BAR FORMING A TAPER AS INDICATED. THE GRINDING OF THE TAPER SHALL PRODUCE A SMOOTH TRANSITION AND SHALL BE PERFORMED SO THAT THE TIE GIRDER WEB PLATE AND BOTTOM OR TOP FLANGE PLATES ARE NOT NICKED OR GOUGED.
8. REMOVE BY GRINDING ANY REMAINING PORTIONS OF THE BACK-UP BAR OR WELD THAT REMAIN ON THE WEB PLATE BEYOND THE TAPER.
9. PERFORM FINAL SURFACE FINISHING OF THE TAPER, AND GROUND SURFACES WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE "FLAPPER" WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
10. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON AND AROUND THE TAPERED END OF BACK-UP-BAR IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY INDICATIONS FOUND.
11. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR LOCATION OF REPAIRS IN END FLOORBEAM NO'S FB0 AND FB15 (SPAN 21) SEE SHEETS 49 & 50.
- WORK THIS SHEET WITH SHEET 95.
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7.
- FOR GENERAL LEGEND SEE SHEET 1.
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED.

LEGEND

PORTION OF BACKUP BAR TO BE REMOVED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 8D

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

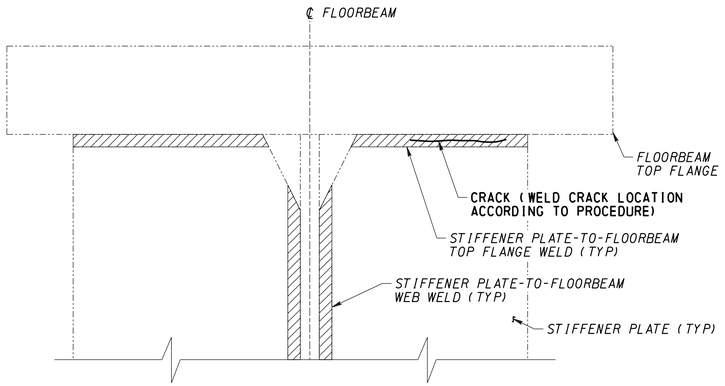
SHEET 96 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

REPAIR 8D DETAILS

GRIND TAPER IN BACKUP BAR SPLICE
WHEN SPLICE IS < 2½" FROM TRANSVERSE STIFFENER PLATE
NOTE: BACKUP BAR AT BOTTOM FLANGE PLATE SHOWN,
BACKUP BAR AT TOP FLANGE PLATE SIMILAR



FLOORBEAM TOP FLANGE - TYPICAL SECTION

NOT TO SCALE

REPAIR 10

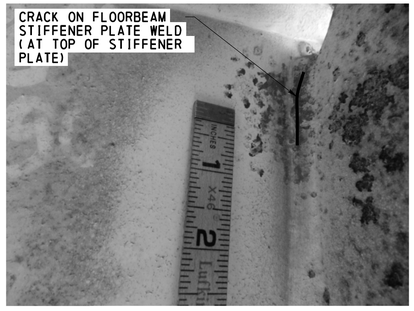
FLOORBEAM TRANSVERSE STIFFENER-TO-FLOORBEAM TOP FLANGE CRACKED WELD RETROFIT (REWELD CRACKED WELD)



LOCATION REPAIR TYPE 10

NOT TO SCALE

PHOTO OF FLOORBEAM FB-8 BELOW STRINGER S3 (SPAN 27)



LOCATION REPAIR TYPE 11A

NOT TO SCALE

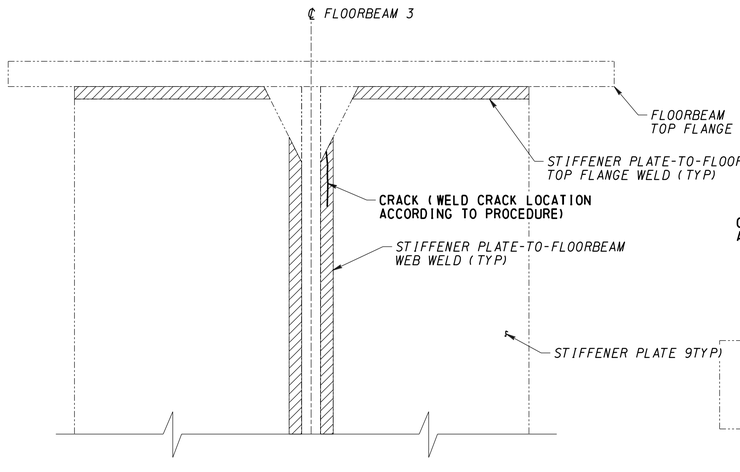
PHOTO OF FLOORBEAM FB-3 BELOW AND BETWEEN STRINGER S3 AND GIRDER G4 (SPAN 8)



LOCATION REPAIR TYPE 11B

NOT TO SCALE

PHOTO OF FLOORBEAM FB-2 BELOW AND BETWEEN STRINGER S10 AND GIRDER G4 (SPAN 19)



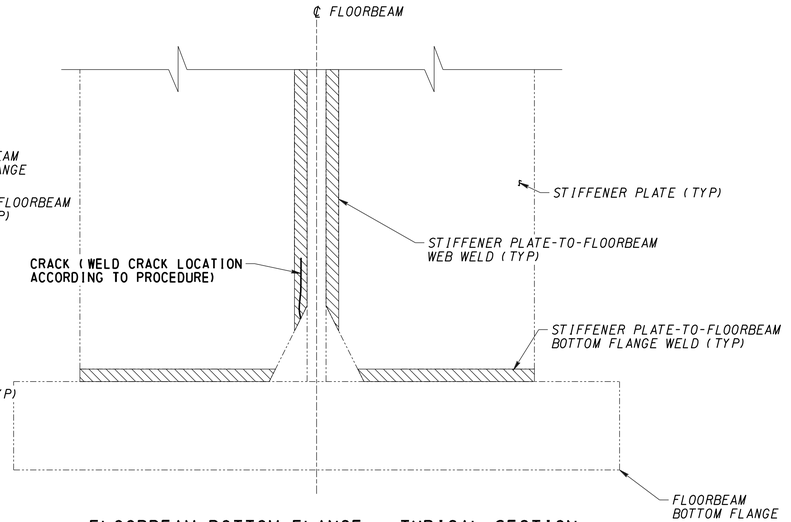
FLOORBEAM TOP FLANGE - TYPICAL SECTION

NOT TO SCALE

REPAIR 11A

REPAIR 11

FLOORBEAM TRANSVERSE STIFFENER-TO-FLOORBEAM WEB CRACKED WELD RETROFIT (REWELD CRACKED WELD)



FLOORBEAM BOTTOM FLANGE - TYPICAL SECTION

NOT TO SCALE

REPAIR 11B

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

PROCEDURE FOR REPAIR TYPE 10

1. PRIOR TO INITIATING REPAIR, SUBMIT DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATION PRIOR TO INITIATING RETROFIT.
3. FOLLOWING ABRASIVE BLAST CLEANING AND PRIME PAINTING INDICATED AREA- REMOVE PAINT FROM FLOORBEAM AND STIFFENER AS NECESSARY TO PERFORM MAGNETIC PARTICLE TEST AND RETROFIT.
4. TEST THE REPAIR LOCATION USING MT (MAGNETIC PARTICLE TEST) TO LOCATE AND MARK THE ENDS OF THE CRACK (CRACK TIPS).
5. USING DYE GRINDERS TO GRIND OR AIR ARC, GOUGE THE FILLET WELD FOR THE LENG OF THE CRACK IN ACCORDANCE WITH AASHTO/AWS D1.5. REMOVE THE ENTIRE CRACK.
6. CLEAN AND REMOVE ALL SLAG AND DEBRIS FROM THE GOUGED CHANNEL AND REWELD FOLLOWING THE WELDING PROCEDURE SPECIFICATIONS AND IN ACCORDANCE WITH AASHTO/AWS D1.5.
7. WELD STIFFENER TO FLOORBEAM TOP FLANGE WITH A 1/4" WELD.
8. DO NOT INTERSECT THE NEW TRANSVERSE WELD WITH THE VERTICAL STIFFENER-TO-WEB WELD. MAINTAIN A 1" MINIMUM GAP BETWEEN THE WELD TOES.
9. PAINT WORK AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROCEDURE FOR REPAIR TYPE 11

1. PRIOR TO INITIATING REPAIR, SUBMIT DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATION PRIOR TO INITIATING RETROFIT.
3. FOLLOWING ABRASIVE BLAST CLEANING AND PRIME PAINTING INDICATED AREA- REMOVE PAINT FROM WEB AND STIFFENER AS NECESSARY TO PERFORM MAGNETIC PARTICLE TEST AND RETROFIT.
4. USE MAGNETIC PARTICLE TESTING TO TEST AREA OF RETROFIT FOR ANY EXISTING CRACKS.
5. IF NO CRACKS ARE FOUND, DO NOTHING.
6. IF CRACKS ARE FOUND, ATTEMPT REMOVING ANY SUPERFICIAL AND EXISTING CRACKS IN WELD BY GRINDING. GRIND WELD AN ADDITIONAL 2" BEYOND END OF CRACK ON EACH SIDE. DO NOT GO DEEPER THAN 1/16" INTO WEB OR STIFFENER.
7. RETEST USING MAGNETIC PARTICLE TESTING TO DETERMINE IF CRACKS REMAIN.
8. IF NO CRACKS ARE FOUND, DO NOTHING. IF CRACKS REMAIN, USING DYE GRINDERS GRIND OR AIR ARC, GOUGE THE FILLET WELD FOR THE LENGTH OF THE CRACK IN ACCORDANCE WITH AASHTO/AWS D1.5.
9. CLEAN AND REMOVE ALL SLAG AND DEBRIS FROM THE GOUGED CHANNEL AND REWELD.
10. WELD STIFFENER TO FLOORBEAM WEB WITH A 1/4" WELD.
11. DO NOT INTERSECT THE NEW VERTICAL WELD WITH THE TRANSVERSE STIFFENER-TO-WEB WELD. MAINTAIN A 1" MINIMUM GAP BETWEEN WELD TOES.
12. PAINT WORK AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 34 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

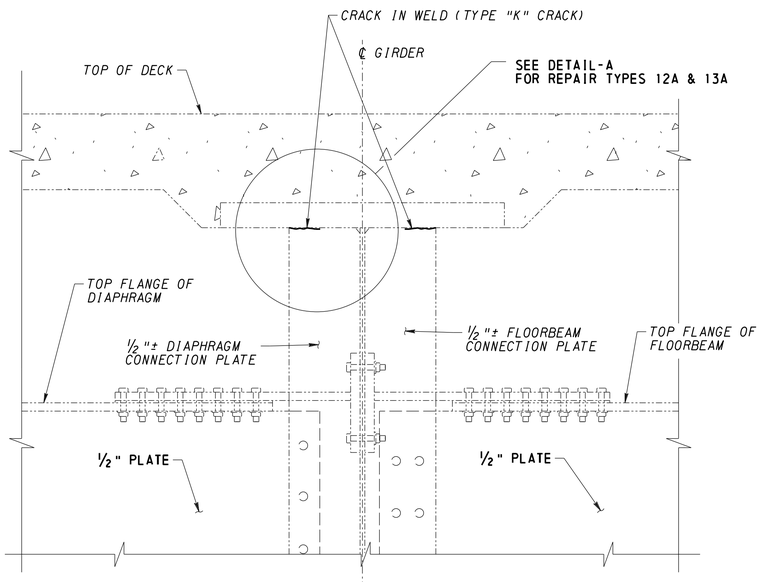
REPAIR TYPES 10, 11A & 11B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

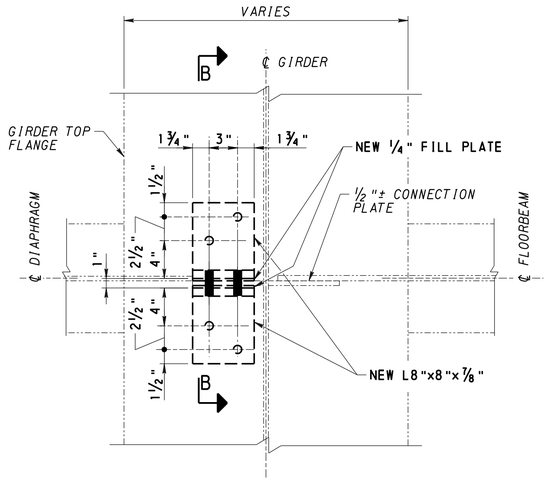
SHEET 97 OF 164

S - 38036



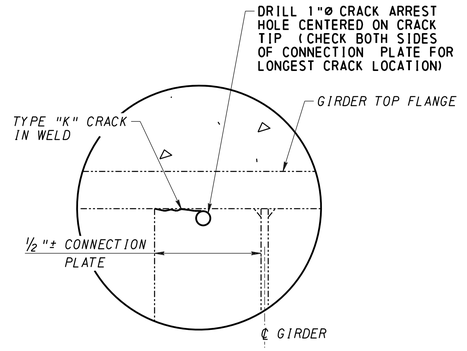
PARTIAL ELEVATION OF
EXISTING DIAPHRAGM-TO-GIRDER AND FLOORBEAM-TO-GIRDER CONNECTION

NOT TO SCALE



SECTION A-A

NOT TO SCALE

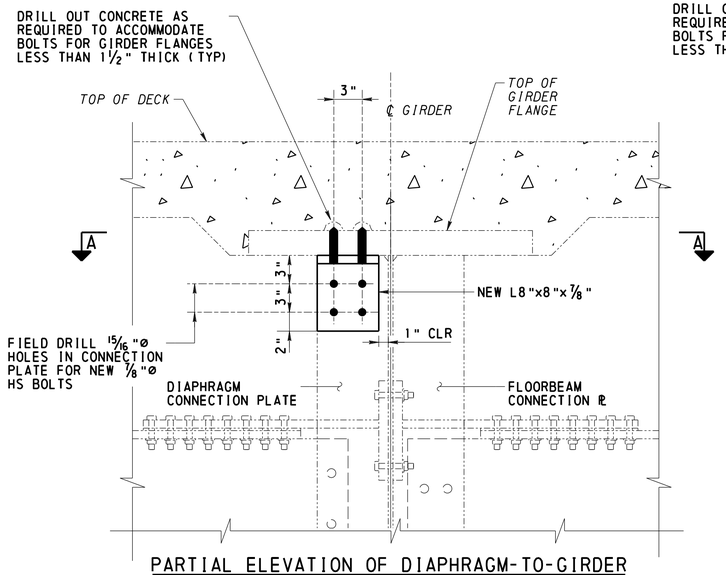


DETAIL A

NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 12A, 12B, 12C, 12D 13A, 13B, 13C, & 13D

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE OF THE DEPARTMENT TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT FROM FLOORBEAM OR DIAPHRAGM CONNECTION PLATE AND GIRDER FLANGE AND WEB AS REQUIRED FOR MT (MAGNETIC PARTICLE NON-DESTRUCTIVE TEST) AND REPAIR.
4. PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING, IN ACCORDANCE WITH SPECIAL PROVISIONS, ON BOTH SIDES OF FLOORBEAM OR DIAPHRAGM CONNECTION PLATE TO DETERMINE LOCATION OF THE CRACK TIP FOR TYPE "K" CRACK.
5. ATTEMPT TO REMOVE ANY SUPERFICIAL TYPE "K" CRACKS BY GRINDING AND/OR DEBURRING. DO NOT GO DEEPER THAN 1/16" INTO THE FLOORBEAM OR DIAPHRAGM CONNECTION PLATE.)
6. RETEST USING MT (MAGNETIC PARTICLE NON-DESTRUCTIVE TEST) AND MARK THE TIPS OF ANY TYPE "K" CRACKS THAT STILL REMAIN.
7. DRILL A 1-INCH DIAMETER CRACK ARREST HOLE, CENTERED ON CRACK TIP, THROUGH FLOORBEAM OR DIAPHRAGM CONNECTION PLATE. THE CRACK ARREST HOLE SHOULD BE PARALLEL AND AS CLOSE AS POSSIBLE TO GIRDER TOP FLANGE AS SHOWN. THE LOCATION AND DRILLING OF THE CRACK ARREST HOLE SHALL BE SUCH THAT THE GIRDER TOP FLANGE IS NOT NICKED, GOUGED, OR DRILLED.
8. GRIND THE BORE AND EDGES OF THE CRACK ARREST HOLE TO ELIMINATE ANY IMPERFECTIONS, INCLUDING NICKS & GOUGES FROM THE DRILLING OPERATIONS. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
9. TEMPORARILY POSITION NEW 8-INCH ANGLES IN PLACE AND LAYOUT LOCATIONS OF DRILLED AND TAPPED HOLES IN GIRDER TOP FLANGE AND DRILLED HOLES IN FLOORBEAM OR DIAPHRAGM CONNECTION PLATE.
10. REMOVE NEW 8-INCH ANGLES AND DRILL AND TAP HOLES IN GIRDER TOP FLANGE AND DRILL HOLES IN FLOORBEAM OR DIAPHRAGM CONNECTION PLATE. DRILL OUT CONCRETE AS REQUIRED TO ACCOMMODATE BOLTS FOR GIRDER FLANGES LESS THAN 1½" THICK (TYP).
11. CLEAN OUT THE TAPPED HOLES AND TEST THE THREADS AND THREAD DEPTH BY SCREWING A ⅞" X 2½" UNCOATED BOLT INTO EACH TAPPED HOLE UNTIL IT SHANKS OUT.
12. MECHANICALLY REMOVE ADDITIONAL PAINT AS REQUIRED AND PREPARE THE SURFACES OF THE WORK AREA TO BE PRIMER PAINTED WHERE NEW STEEL ANGLES AND BOLTS WILL BE ATTACHED. APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
13. AFTER PRIMER IS FULLY CURED INSTALL NEW 8-INCH ANGLES BY SNUGGING ALL FOUR (4) BOLTS (LUBRICATE THE BOLTS BEFORE INSTALLATION) INTO THE GIRDER FLANGE AND THEN TIGHTEN TO COMPLY WITH STANDARD TURN OF THE NUT REQUIREMENTS. INSTALL FOUR (4) BOLTS IN CONNECTION PLATE.
14. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
15. FINISH PAINTING NEW 8-INCH ANGLES AND SURROUNDING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.



PARTIAL ELEVATION OF DIAPHRAGM-TO-GIRDER AND FLOORBEAM-TO-GIRDER CONNECTION

NOT TO SCALE

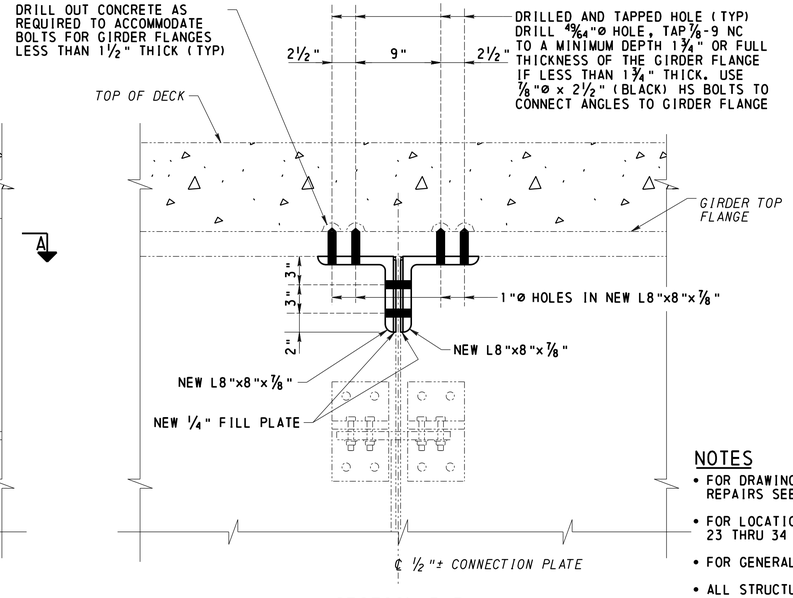
REPAIR TYPE 13A AND TYPE 13B (SHOWN)
REPAIR TYPE 12A AND TYPE 12B (SIMILAR)

REPAIR TYPE 12A

(SIMILAR TO REPAIR TYPE 13A)
FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH EXISTING "K" TYPE CRACK (GIRDER POSITVE MOMENT REGION)

REPAIR TYPE 12B

FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITHOUT EXISTING "K" TYPE CRACK (GIRDER POSITVE MOMENT REGION)



SECTION B-B

NOT TO SCALE

REPAIR TYPE 13A

GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITH EXISTING "K" TYPE CRACK (GIRDER POSITVE MOMENT REGION)

REPAIR TYPE 13B

GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT WITHOUT EXISTING "K" TYPE CRACK (GIRDER POSITVE MOMENT REGION)

NOTES

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- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 34 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

DESIGNED BY	CMB
DRAWN BY	SJW
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

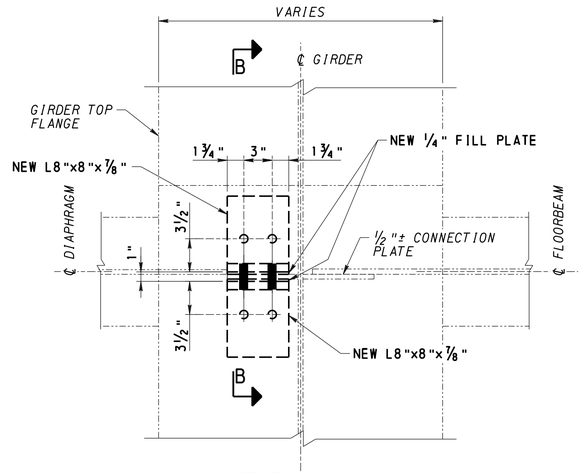
REPAIR TYPES 12A, 12B, 13A & 13B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E

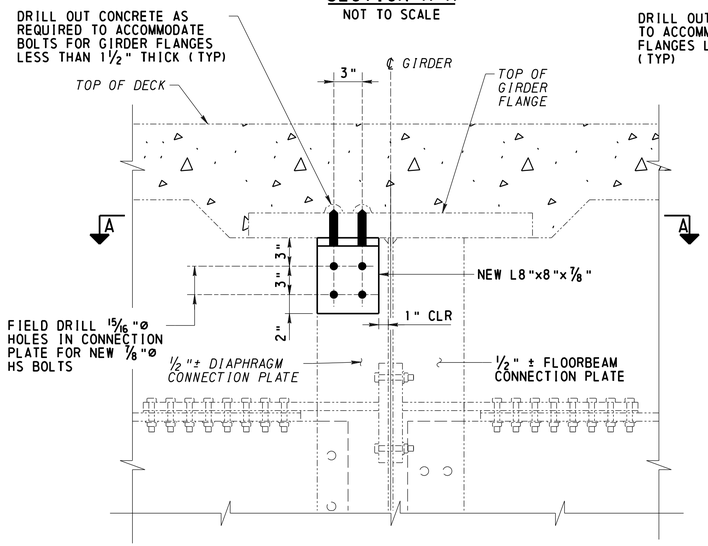
RECOMMENDED _____

SHEET 98 OF 164

S - 38036



SECTION A-A
NOT TO SCALE



PARTIAL ELEVATION OF DIAPHRAGM-TO-GIRDER AND FLOORBEAM-TO-GIRDER CONNECTION

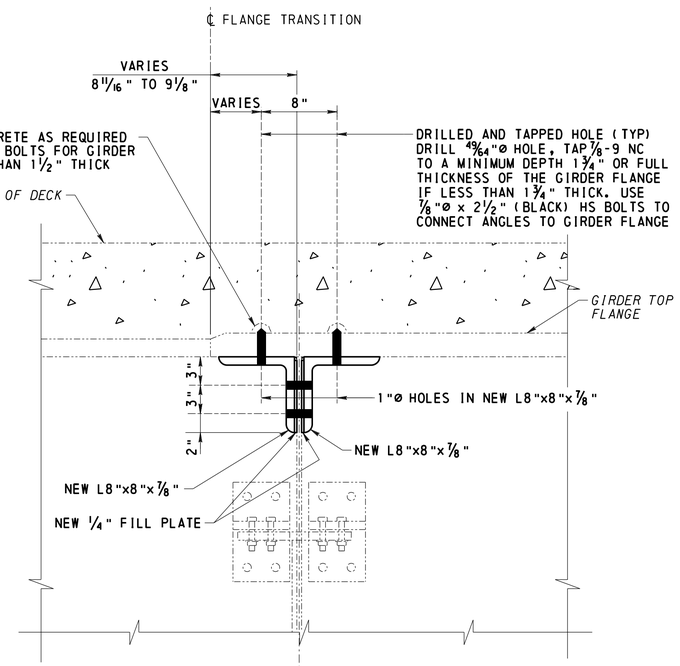
NOT TO SCALE
(REPAIR TYPE 13C AND 13D SHOWN)
(REPAIR TYPE 12C AND 12D SIMILAR)

REPAIR TYPE 12C

(SIMILAR TO REPAIR TYPE 13C)
FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
ADJACENT GIRDER TOP FLANGE TRANSITION
WITH EXISTING "K" TYPE CRACK
(GIRDER POSITVE MOMENT REGION)

REPAIR TYPE 12D

(SIMILAR TO REPAIR TYPE 13C)
FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
WITHOUT EXISTING "K" TYPE CRACK
ADJACENT GIRDER TOP FLANGE TRANSITION
(GIRDER POSITVE MOMENT REGION)



SECTION B-B
NOT TO SCALE

REPAIR TYPE 13C

GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
WITH EXISTING "K" TYPE CRACK
ADJACENT GIRDER TOP FLANGE TRANSITION
(GIRDER POSITVE MOMENT REGION)

REPAIR TYPE 13D

(SIMILAR TO REPAIR TYPE 13C)
GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
WITHOUT EXISTING "K" TYPE CRACK
ADJACENT GIRDER TOP FLANGE TRANSITION
(GIRDER POSITVE MOMENT REGION)

NOTES

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- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- WORK THIS SHEET WITH SHEET 98

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 12C, 12D, 13C & 13D

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E

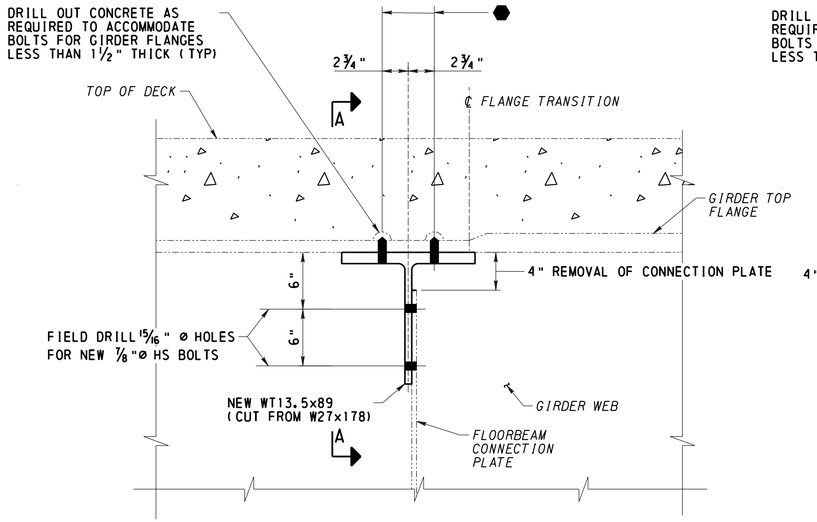
RECOMMENDED _____

SHEET 99 OF 164

S - 38036

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	DAM

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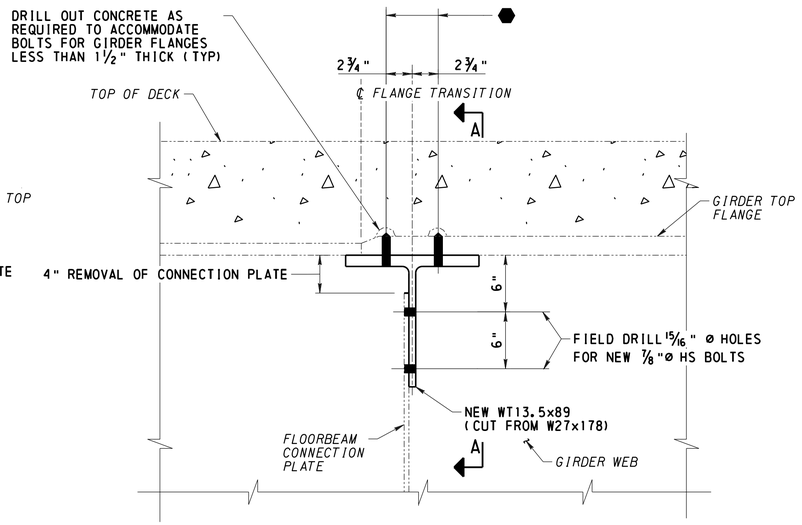
PARTIAL GIRDER G4 OR G5 ELEVATION-SPAN 26

NOT TO SCALE

(REPAIR TYPE 12E SHOWN)

REPAIR TYPE 12E

FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
WITH OR WITHOUT "K" TYPE CRACK
ADJACENT TOP FLANGE TRANSITION
(GIRDER POSITVE MOMENT REGION)



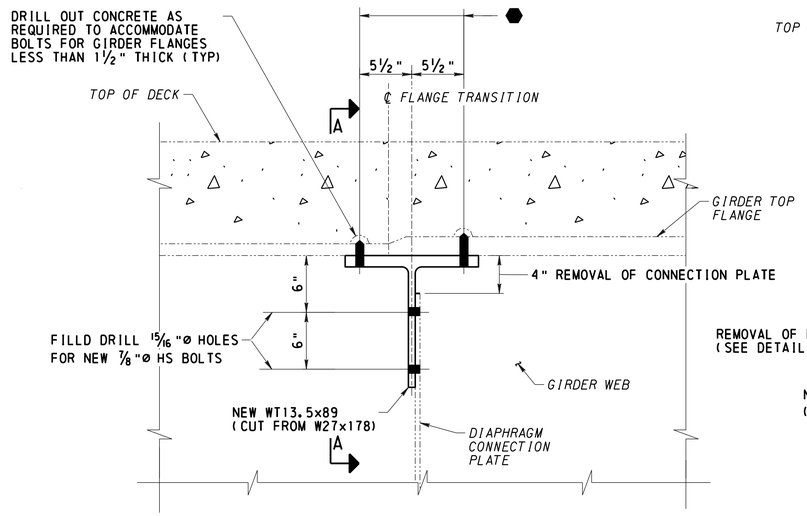
PARTIAL GIRDER G1 ELEVATION-SPAN 26

NOT TO SCALE

(REPAIR TYPE 12F SHOWN)

REPAIR TYPE 12F

FLOORBEAM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
WITH OR WITHOUT "K" TYPE CRACK
ADJACENT TOP FLANGE TRANSITION
(GIRDER POSITVE MOMENT REGION)



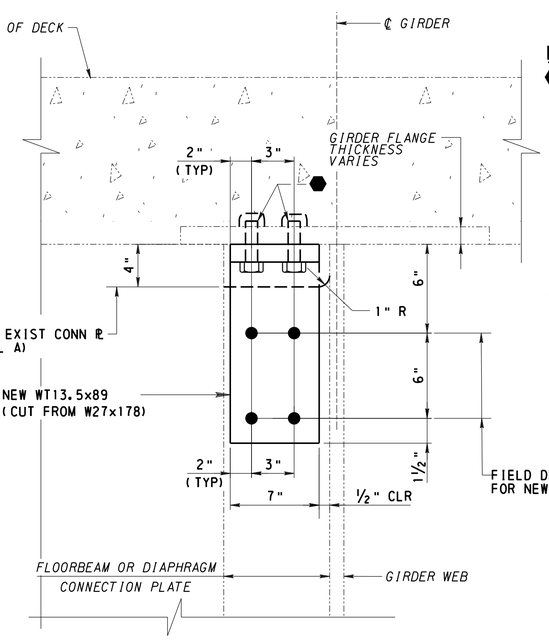
PARTIAL GIRDER G2 ELEVATION-SPAN 17

NOT TO SCALE

(REPAIR TYPE 13G SHOWN)

REPAIR TYPE 13G

GIRDER DIAPHRAGM CONNECTION PLATE-TO-GIRDER TOP FLANGE RETROFIT
WITH OR WITHOUT "K" TYPE CRACK
ADJACENT TOP FLANGE TRANSITION
(GIRDER POSITVE MOMENT REGION)



SECTION A-A

NOT TO SCALE

LEGEND

⬢ DRILLED AND TAPPED HOLE (TYP)
DRILL 49/64"ø HOLE, TAP ⅞-9 NC
TO A MINIMUM DEPTH 1¾" OR FULL
THICKNESS OF THE GIRDER FLANGE
IF LESS THAN 1¾" THICK. USE
⅞"ø x 2½" (BLACK) HS BOLTS TO
CONNECT ANGLES TO GIRDER FLANGE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 34 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR EXISTING DIAPHRAGM-TO-GIRDER AND FLOORBEAM-TO-GIRDER CONNECTION SEE SHEET 98
- FOR DETAIL A SEE SHEET 86

PROCEDURE FOR REPAIR TYPES 12E, 12F, & 13G

1. PERFORM PROCEDURE FOR REPAIR TYPES 12A, 12B, 12C, 12D, 13A, 13B, 13C, & 13D STEPS 1 THRU 3.
2. REMOVE THE TOP 4" OF THE FLOORBEAM OR DIAPHRAGM CONNECTION PLATE ADJACENT THE GIRDER TOP FLANGE USING A PLASMA-ARC CUTTER (SEE DETAIL A).
3. GRIND THE CUT EDGE OF THE CONNECTION PLATE AND THE WELD RESIDUE OF THE CONNECTION PLATE WELD TO THE GIRDER WEB AND TOP FLANGE UNTIL IT IS PROPERLY CONTOURED AND BLENDED INTO THE GIRDER WEB AND TOP FLANGE. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
4. TEST THE GIRDER WEB AND TOP FLANGE USING MT (MAGNETIC PARTICLE TEST.) TO LOCATE ANY CRACKS IN THE AREAS WHERE A PORTION OF THE CONNECTION PLATE WAS REMOVED.
5. ATTEMPT TO REMOVE ANY SUPERFICIAL CRACKS BY GRINDING AND/OR DEBURRING (DO NOT GO DEEPER THAN 1/16" INTO THE GIRDER WEB OR TOP FLANGE.
6. RETEST USING MT (MAGNETIC PARTICLE TEST) AND MARK THE TIPS OF ANY CRACKS THAT STILL REMAIN AND NOTIFY THE REPRESENTATIVE OF THE DEPARTMENT BEFORE CONTINUING WITH THE REPAIR.
7. FIT T-SECTION IN PLACE AND DO THE FOLLOWING LAYOUT WORK:
   A) LAYOUT LOCATION FOR THE FOUR (4) DRILLED AND TAPPED HOLES IN THE GIRDER FLANGE.
   B) USE THE FOUR (4) PREDRILLED HOLES IN THE T-SECTION AND MARK THE HOLES TO BE DRILLED IN THE FLOORBEAM CONNECTION PLATE.
8. REMOVE T-SECTION AND DRILL FOUR (4) HOLES 49/64" DIAMETER X 1¾" MINIMUM DEPTH OR THROUGH THE FULL THICKNESS OF THE GIRDER FLANGE WHICHEVER IS LESS.
9. FOR FLANGES LESS THAN 1¾" THICK HAMMER DRILL ½" TO 1" INTO THE DECK CONCRETE TO CREATE A CAVITY.
10. TAP THE FOUR (4) HOLES USING A ⅞" X 9" STANDARD TAP TO A MINIMUM DEPTH OF 1½" OR ALL THE WAY THROUGH THE FLANGE.
11. CLEAN OUT THE TAPPED HOLE AND TEST THE THREADS AND THREAD DEPTH BY SCREWING A ⅞" X 2½" UNCOATED BOLT INTO EACH TAPPED HOLE UNTIL IT SHANKS OUT.
12. DRILL FOUR (4) 15/16" DIAMETER HOLES IN THE CONNECTION PLATE.
13. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
14. WHEN PRIME PAINT IS DRY, INSTALL THE T-SECTION BY SNUGGING ALL FOUR (4) BOLTS (LUBRICATE THE BOLTS BEFORE INSTALLATION) INTO THE GIRDER FLANGE AND THEN TIGHTEN TO COMPLY WITH STANDARD TURN OF THE NUT REQUIREMENT. INSTALL FOUR (4) BOLTS IN CONNECTION PLATE.
15. REMOVE THE WAX-LIKE LUBRICANT FROM THE GALVANIZED FASTENERS.
16. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
17. FINISH PAINTING NEW T-SECTION AND SURROUNDING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

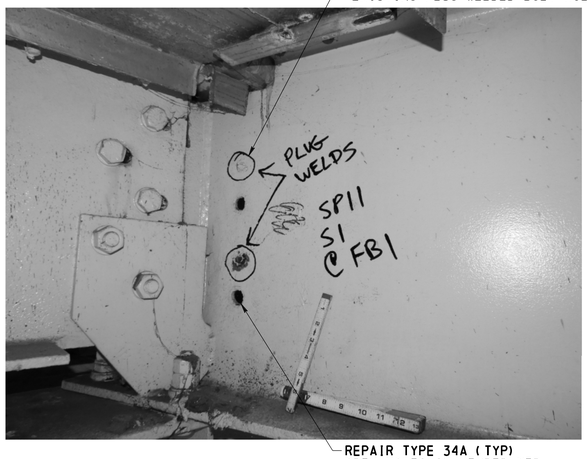
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 12E, 12F & 13G

RECOMMENDED _____

SHEET 100 OF 164

S - 38036



LOCATION REPAIR TYPES 15A AND 34A

NOT TO SCALE

PHOTO OF STRINGER S1 ABOVE FLOORBEAM NO. 1 OF SPAN 11.

REPAIR TYPES 15A AND 15B

REMOVE PLUG WELDS

(DRILL OUT PLUG WELDED BOLT HOLES AND INSTALL HIGH STRENGTH BOLT, NUT, AND WASHERS.)

PROCEDURE FOR REPAIR TYPE 15A, AND 15B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. DEPARTMENT REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT FROM BOTH SIDES OF DIAPHRAGM WEB, STRINGER WEB, AND TIE-GIRDER WEB PLATE AT PLUG WELDED HOLE.
4. GRIND EXCESS WELD METAL FROM PLUG WELD SO WELD IS FLUSH WITH WEB SURFACE. GRINDING OF THE EXCESS WELD METAL SHALL BE PERFORMED SUCH THAT THE WEB IS NOT NICKED OR GOUGED. DETERMINE THE CENTER OF THE PREVIOUS BOLT HOLE AND LAYOUT A HOLE 1/4" IN DIAMETER LARGER THAN THE PLUG WELD.
5. PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING OF THE WELD PERMIETER ON BOTH SIDES OF THE WEB TO DETERMINE IF ANY CRACKS EXIST.
6. IF ANY EXISTING CRACK TIP CAN NOT BE INCORPORATED IN THE CORE HOLE OR IF PREVIOUS BOLT HOLE IS LARGER THAN 1 1/4" DIAMETER NOTIFY THE DEPARTMENT REPRESENTATIVE PRIOR TO DRILLING ANY HOLE.
7. DRILL CORE HOLE.
8. FOR REPAIR TYPE 15B PERFORM FINAL FINISHING OF ALL GROUND AND DRILLED SURFACES WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH A GRIT NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE AND ROUND OVER THE EDGES OF THE CORE HOLE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
9. FOR REPAIR TYPE 15B, AFTER FINAL FINISHING IS COMPLETE PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON ALL SURFACES WHERE WELD MATERIAL FOR THE PLUG WELD HAS BEEN REMOVED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IMMEDIATELY NOTIFY THE DEPARTMENT'S REPRESENTATIVE OF ANY FLAWS OR INDICATIONS FOUND.
10. PREPARE ALL SURFACES AROUND THE HOLE AND IN THE BORE WHERE PAINT WAS REMOVED TO BE PRIMER PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
11. WHEN PRIMER PAINT IS DRY INSTALL NEW 7/8" DIAMETER HIGH STRENGTH BOLT WITH NUT AND WASHERS UNDER BOTH NUT AND HEAD. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS AND BOLTED ASSEMBLIES.
12. REMOVE THE WAX-LIKE LUBRICANT FROM THE GALVANIZED FASTENERS.
13. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
14. FINISH PAINTING BOLT HEAD, NUT, WASHERS, AND SURROUNDING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

REPAIR TYPE 34A

REPLACE SHORT, LOOSE, MISSING OR DETERIORATED BOLT WITH NEW HS BOLT

PROCEDURE FOR REPAIR TYPE 34A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. DEPARTMENT REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. REMOVE PAINT FROM AROUND BOLT HOLE AND BORE AS NECESSARY TO COMPLETE REPAIR.
4. REAM BOLT HOLE TO 1" DIAMETER TO CLEAN BORE.
5. IF PREVIOUS HOLE IS LARGER THAN 1" DIAMETER NOTIFY THE DEPARTMENT REPRESENTATIVE PRIOR TO DRILLING ANY HOLE.
6. PREPARE ALL SURFACES AROUND THE HOLE AND IN THE BORE WHERE PAINT WAS REMOVED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. WHEN PRIMER PAINT IS DRY INSTALL NEW 7/8" DIAMETER HIGH STRENGTH BOLT WITH NUT AND WASHERS UNDER BOTH NUT AND HEAD. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS AND BOLTED ASSEMBLIES.
8. REMOVE THE WAX-LIKE LUBRICANT FROM THE GALVANIZED FASTENERS.
9. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
10. FINISH PAINTING BOLT HEAD, NUT, WASHERS, AND SURROUNDING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.



LOCATION REPAIR TYPE 15B

NOT TO SCALE

PHOTO OF PLUG WELDS IN UPSTREAM WEB OF DOWNSTREAM TIE GIRDER ADJACENT FLOORBEAM NO.8 OF SPAN 21.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	CMB
DRAWN BY	SJW
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

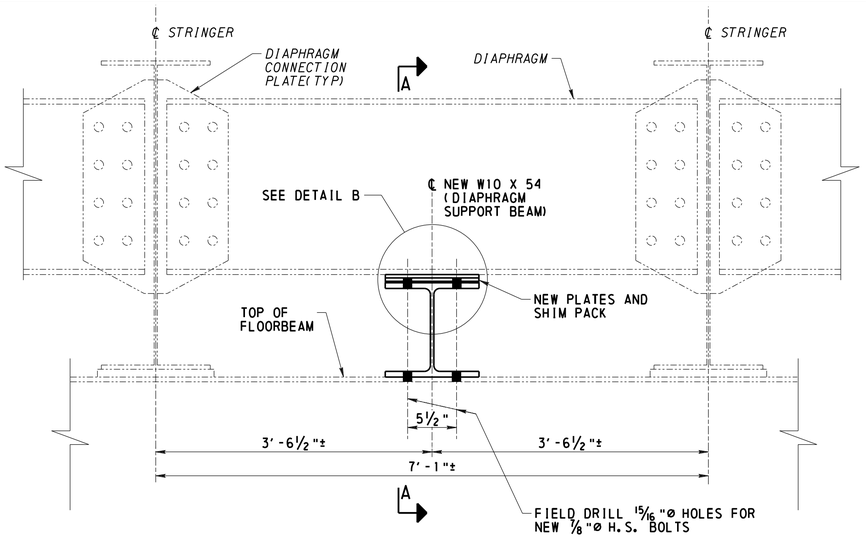
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 15A, 15B & 34A

RECOMMENDED _____

SHEET 101 OF 164

S - 38036

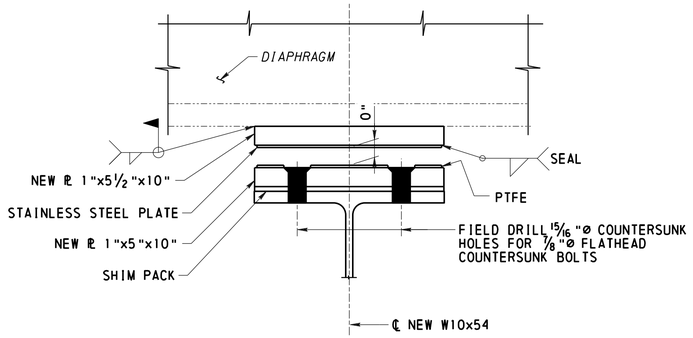


TYPICAL STRINGER END DIAPHRAGM ELEVATION (SPAN 21)

NOT TO SCALE

REPAIR TYPES 16E (SHOWN) AND 16F (SIMILAR)

STRINGER OUT-OF-PLANE DISPLACEMENT RETROFIT WITH DIAPHRAGM INTERMEDIATE SUPPORT STOOL (EXPANSION)



DETAIL B

NOT TO SCALE

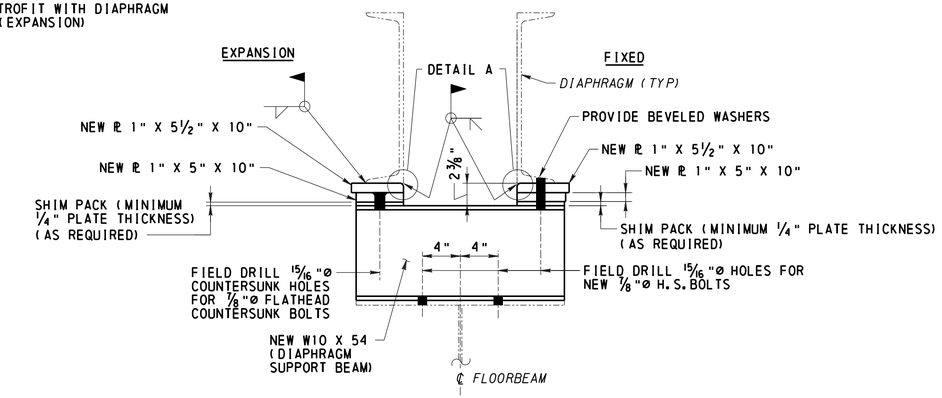
REPAIR TYPE 16E SHOWN

REPAIR TYPE 16F SIMILAR

FOR ADDITIONAL DETAILS NOT SHOWN SEE SECTION A-A

PROCEDURE FOR REPAIR TYPES 16E AND 16F

1. PERFORM THIS REPAIR CONCURRENTLY WITH REPAIR TYPE 6B.
2. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
3. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
4. FOLLOWING ABRASIVE BLAST CLEANING OF THE DIAPHRAGMS AND FLOORBEAM LAYOUT AND FIELD-DRILL THE BOLT HOLES IN THE EXISTING FLOORBEAM TOP FLANGE AND DIAPHRAGM BOTTOM FLANGES AS REQUIRED FOR THE SUPPORT STOOL.
5. REMOVE EXISTING STOOLS AT THE DOWNSTREAM PORTION OF FLOORBEAM NO.12. INSTALL NEW STOOLS BY MATCHING EXISTING HOLES IN FLOORBEAM TOP FLANGE AND DIAPHRAGM BOTTOM FLANGES.
6. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. WHEN PRIME PAINT IS DRY, INSTALL SUPPORT STOOL BOLTS, SHIM PACKS, AND FIELD-WELD AS INDICATED TO ASSURE A TIGHT FIT BETWEEN THE EXISTING DIAPHRAGMS AND THE FLOORBEAM TOP FLANGE.
8. FINISH PAINTING NEW SUPPORT STOOL AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

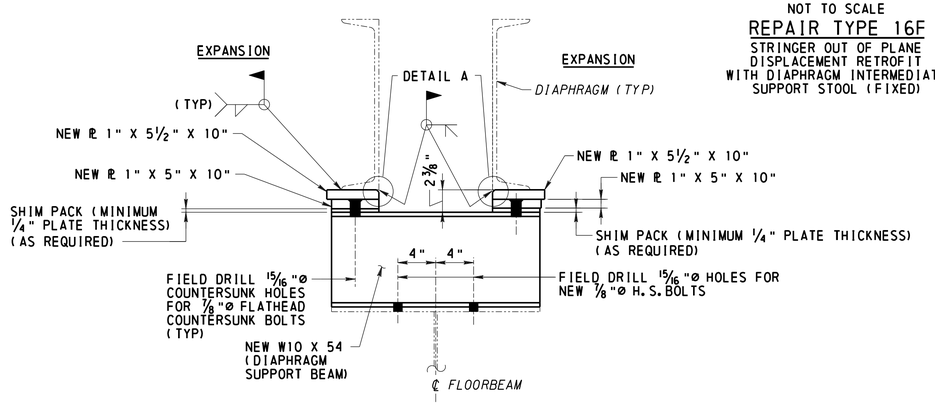


SECTION A-A

NOT TO SCALE

REPAIR TYPE 16F

STRINGER OUT OF PLANE DISPLACEMENT RETROFIT WITH DIAPHRAGM INTERMEDIATE SUPPORT STOOL (FIXED)

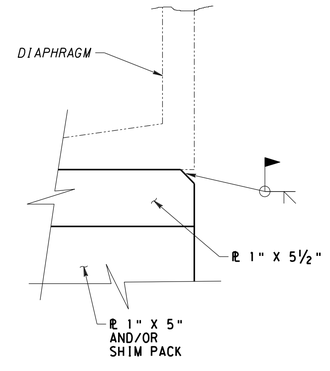


SECTION A-A

NOT TO SCALE

REPAIR TYPE 16E

STRINGER OUT OF PLANE DISPLACEMENT RETROFIT WITH DIAPHRAGM INTERMEDIATE SUPPORT STOOL (EXPANSION)



DETAIL A

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 & 36
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 16E & 16F

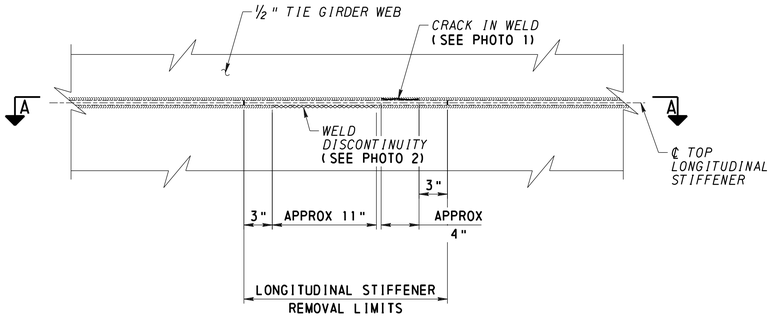
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 102 OF 164

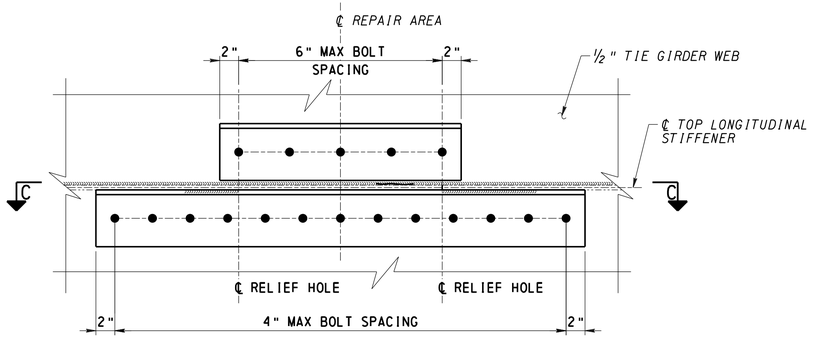
S - 38036

DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	DAM



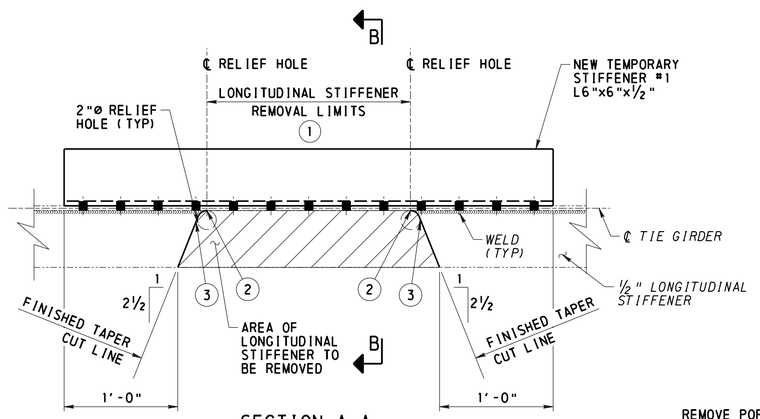
EXISTING PARTIAL ELEVATION - DOWNSTREAM WEB PLATE OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T4

NOT TO SCALE



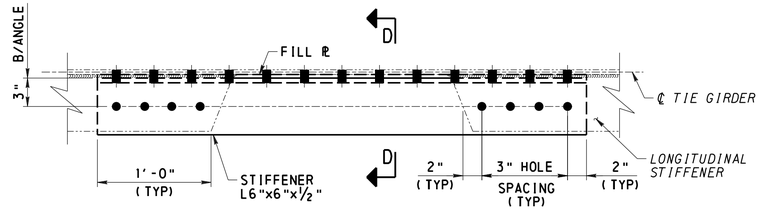
PARTIAL ELEVATION - DOWNSTREAM WEB PLATE OF UPSTREAM TIE GIRDER ADJACENT PANEL POINT T4

NOT TO SCALE



SECTION A-A

NOT TO SCALE

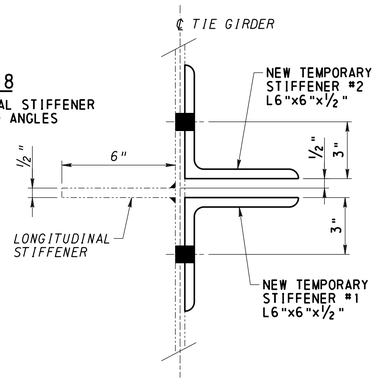


SECTION C-C

NOT TO SCALE

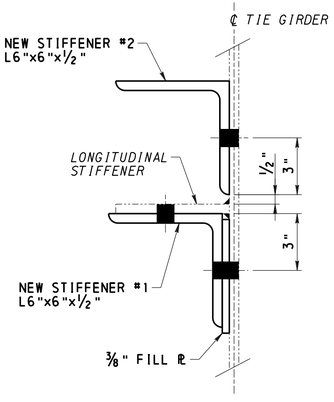
REPAIR TYPE 18

REMOVE PORTION OF LONGITUDINAL STIFFENER AND RETROFIT WITH BOLTED ANGLES



SECTION B-B

NOT TO SCALE



SECTION D-D

NOT TO SCALE

LEGEND

(1) DRILL RELIEF HOLES AND REMOVE INDICATED PORTION OF LONGITUDINAL STIFFENER BY MECHANICAL CUTTERS OR PLASMA ARC CUTTING. REMOVE REMAINING LONGITUDINAL STIFFENER-TO-TIE GIRDER WEB WELDS AND LONGITUDINAL STIFFENER BY GRINDING. GROUND SURFACE IS TO BE FLUSH WITH AND AS SMOOTH AS THE BASE METAL.

(2) GRIND A TRANSITION RADIUS EQUAL TO OR GREATER THAN THE RELIEF HOLE INTO THE END OF THE HORIZONTAL WELDS OF THE LONGITUDINAL STIFFENER.

(3) GRIND A SMOOTH TANGENT TRANSITION BETWEEN THE RELIEF HOLE AND THE TAPER CUT LINE.

PROCEDURE FOR REPAIR TYPE 18

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATION AND LIMITS.
3. REMOVE PAINT FROM TIE GIRDER WEB AND LONGITUDINAL STIFFENER AS REQUIRED FOR NON-DESTRUCTIVE TESTING AND REPAIR.
4. TEST ALONG TOP AND BOTTOM OF LONGITUDINAL STIFFENER USING MAGNETIC PARTICLE TEST (MT) TO DETERMINE THE CRACK TIPS OF THE CRACKED WELD ON TOP AND THE LIMITS OF THE DISCONTINUITY OF THE WELD ALONG THE BOTTOM.
5. DETERMINE CENTER OF RELIEF HOLES BY ADDING 3" LONGITUDINAL LENGTH TO OUTSIDE LIMITS OF TOP WELD CRACK TIP AND BOTTOM WELD DISCONTINUITY AS INDICATED.
6. CLAMP NEW TEMPORARY STIFFENER ANGLES #1 AND #2 TO THE LONGITUDINAL STIFFENER, CENTERED ON THE LONGITUDINAL STIFFENER REMOVAL LIMITS. DRILL BOLT HOLES IN TIE GIRDER WEB USING ANGLE AND FILL PLATE AS TEMPLATE. INSTALL TEMPORARY STIFFENER ANGLES #1 AND #2 ON OUTSIDE OF TIE GIRDER WEB PRIOR TO DRILLING RELIEF HOLES.
7. DRILL 2" DIAMETER RELIEF HOLES. THE RELIEF HOLES SHOULD BE PARALLEL AND AS CLOSE AS POSSIBLE TO THE VERTICAL FACE OF THE GIRDER WEB AS SHOWN. THE LOCATION AND DRILLING OF THE RELIEF HOLES SHALL BE SUCH THAT THE TIE GIRDER WEB IS NOT NICKED, GOUGED, OR DRILLED.
8. REMOVE THE PORTION OF THE LONGITUDINAL STIFFENER AS INDICATED BY USING A MECHANICAL CUTTER OR PLASMA ARC CUTTER TO PRODUCE A TAPER AT THE END OF THE LONGITUDINAL STIFFENER. PROVIDE PROTECTION FOR THE TIE GIRDER WEB TO ASSURE THAT THE WEB IS NOT NICKED OR GOUGED DURING THE REMOVAL PROCESS.
9. REMOVE THE REMAINING LONGITUDINAL STIFFENER-TO-GIRDER WEB WELD MATERIAL AND LONGITUDINAL STIFFENER PLATE BY GRINDING AS SHOWN.
10. GRIND THE BORE AND THE EDGES OF THE RELIEF HOLE AND TAPER CUT LINE SMOOTH TO ELIMINATE ANY IMPERFECTIONS, INCLUDING NICKS & GOUGES FROM THE DRILLING, CUTTING AND ANY PREVIOUS GRINDING OPERATIONS.
11. GRIND ENDS OF HORIZONTAL WELDS ON THE GIRDER WEB TO PRODUCE A SMOOTH TRANSITION AS INDICATED. GRIND THE CUT EDGE OF THE LONGITUDINAL STIFFENER AND THE REMAINING WELDS UNTIL THE REMAINING SURFACE IS PROPERLY CONTOURED AND BLENDED INTO THE TIE GIRDER WEB.
12. PERFORM FINAL SURFACE FINISHING OF ALL DRILLED, CUT, OR GROUND EDGES AND SURFACES WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE "FLAPPER" WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
13. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON ALL SURFACES WHERE WELD MATERIAL HAS BEEN REMOVED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IF CRACKS OR INDICATIONS ARE FOUND IMMEDIATELY NOTIFY THE REPRESENTATIVE FOR FURTHER DIRECTION.
14. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
15. REMOVE TEMPORARY STIFFENER ANGLE #1 AND IMMEDIATELY INSTALL NEW STIFFENER ANGLE #1 ON INSIDE OF TIE GIRDER USING NEW BOLTS AND NUTS. USING NEW STIFFENER ANGLE #1 AND FILL PLATE AS A TEMPLATE DRILL HOLES IN EXISTING LONGITUDINAL STIFFENER AND INSTALL NEW BOLTS AND NUTS.
16. REMOVE TEMPORARY STIFFENER ANGLE #2 AND IMMEDIATELY INSTALL NEW STIFFENER ANGLE #2 ON INSIDE OF TIE GIRDER WITH NEW BOLTS AND NUTS.
17. FINISH PAINTING EXISTING AND NEW STRUCTURAL STEEL IN ACCORDANCE WITH SPECIAL PROVISIONS.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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PHOTO 1

CRACK IN TOP LONGITUDINAL STIFFENER-TO-TIE GIRDER WEB WELD

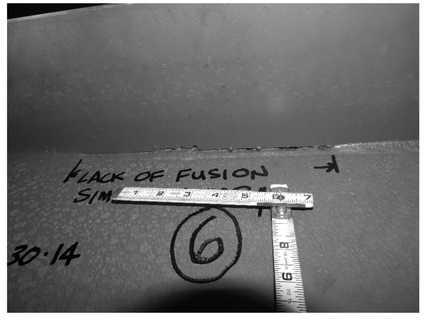


PHOTO 2

DISCONTINUITY IN TOP LONGITUDINAL STIFFENER-TO-TIE GIRDER WEB WELD

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 40
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- ALL HOLES 15⁄16"ø FOR 7⁄8"ø HS BOLTS UNLESS NOTED

DESIGNED BY	DAM
DRAWN BY	SJW
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

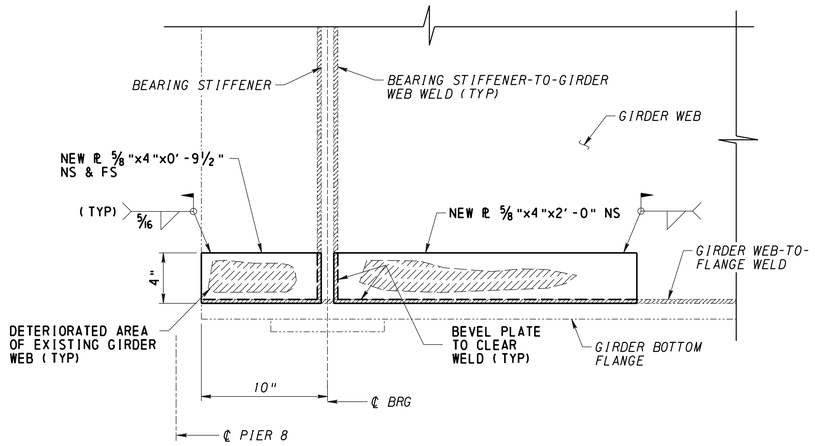
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 18

RECOMMENDED _____

SHEET 103 OF 164

S - 38036



GIRDER G1 DOWNSTREAM ELEVATION AT PIER 8 (SPAN 7)

NOT TO SCALE

REPAIR 30A

REPAIR DETERIORATED GIRDER WEB WITH WELDED SCAB PLATES

PROCEDURE FOR REPAIR TYPES 30A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN INDICATED AREA AS PART OF REPAIR TYPE 90.
4. USING A DIE GRINDER, TRIM BACK THE RAGGED EDGES OF THE STEEL AROUND ANY CORRODED AREA IN THE GIRDER WEB TO 1/16" MINIMUM THICKNESS. THE FINISHED SURFACE OF THE GIRDER WEB IS TO BE SMOOTH AND FLAT AND SHOULD NOT CONTAIN ANY GOUGES, NICKS, OR UNDULATIONS FROM THE GRINDING PROCESS. DO NOT GRIND INTO ADJACENT WELDS AT GIRDER BOTTOM FLANGE PLATE AND BEARING STIFFENER PLATE.
5. PREPARE REPAIR AREA AND REPAIR PLATES TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
6. INSTALL NEW REPAIR PLATES AS SHOWN.
7. PAINT REPAIR AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 25
- FOR GENERAL LEGEND SEE SHEET 1
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

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SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 30A

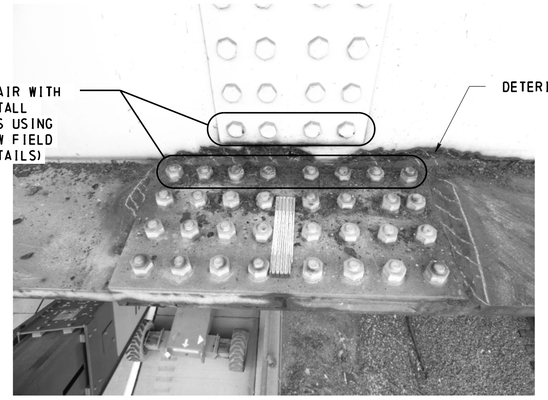
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 104 OF 164

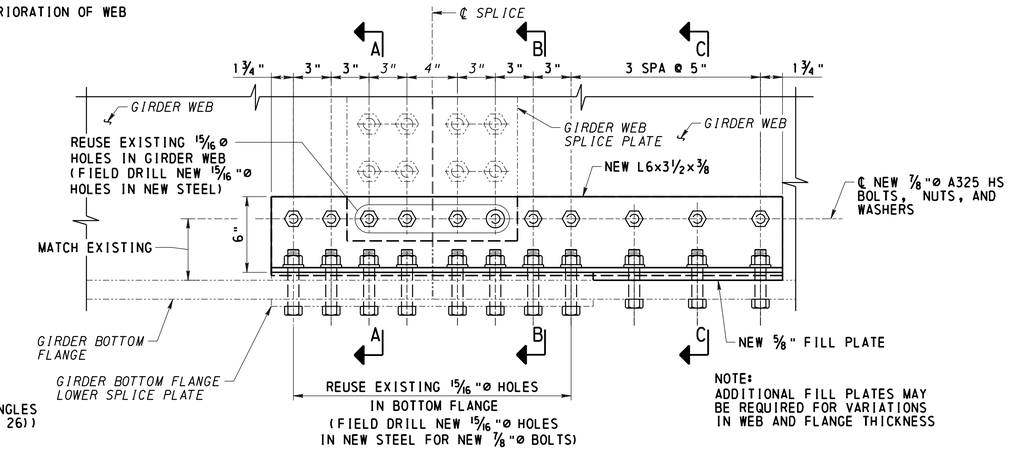
S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



LOCATION REPAIR TYPE 30C

REPAIR DETERIORATED OF GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES (BOTTOM FLANGE OF GIRDER G1 BETWEEN FLOORBEAMS NO 5 AND 6 (SPAN 26))



GIRDER G1 DOWNSTREAM ELEVATION AT FIELD SPLICE (SPAN 26)

NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 30C, 30D, 30E, AND 30F

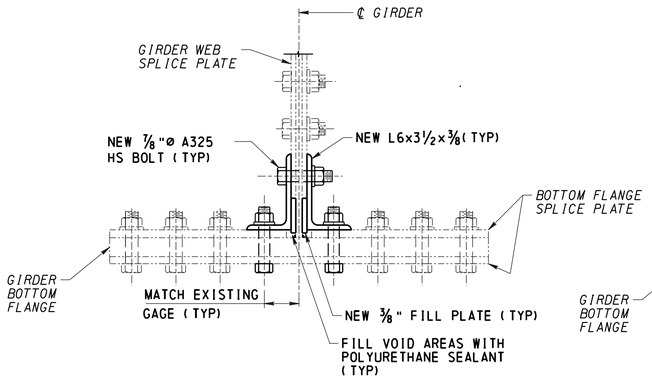
1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE REPRESENTATIVE FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN INDICATED AREA AS PART OF REPAIR TYPE 90.
4. USING A DIE GRINDER, TRIM BACK THE RAGGED EDGES OF THE STEEL AROUND ANY CORRODED HOLES IN THE GIRDER WEB TO 1/16" MINIMUM THICKNESS AS REQUIRED.
5. APPLY PRIME COAT TO NEW STEEL.
6. PERFORM THE INSTALLATION OF THE NEW REPAIR PLATES, ANGLES, AND BOLTS DURING A WEEKEND CLOSURE. NO CONSTRUCTION LIVE LOADS OR PARKED EQUIPMENT IS PERMITTED IN THE FOLLOWING SPANS DURING THE INSTALLATION OF THE PLATES, ANGLES, AND BOLTS:

   30C - SOUTHBOUND SPANS 26 AND 27
   30D - NORTHBOUND SPANS 1, 2, AND 3
   30E - NORTHBOUND SPANS 22, 23, 24, AND 25
   30F - SOUTHBOUND SPANS 22, 23, 24, AND 25
   30G - NORTHBOUND SPANS 4, 5, 6, AND 7

   ALL REPAIR WORK IS TO BE ACCESSED FROM BENEATH THE BRIDGE.
7. DO NOT REMOVE THE FLANGE BOLTS ON BOTH SIDES OF THE WEB AT THE SAME TIME.
8. REMOVE THE INDICATED UPSTREAM FLANGE BOLTS AND WEB BOLTS. BLAST CLEAN AND PRIME THE SURFACES OF THE REPAIR AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
9. PLACE THE REQUIRED FILL PLATES AND FILL THE VOID AREAS WITH POLYURETHANE SEALANT. MAKE SURE THE CONTACT SURFACES ARE CLEAN OF SEALANT.
10. POSITION THE NEW UPSTREAM ANGLE IN PLACE AND SECURE TIGHT AGAINST THE WEB BY INSTALLING TWO TEMPORARY WEB BOLTS. DRILL NEW REQUIRED HOLES IN THE FLANGE USING THE NEW ANGLE AS A TEMPLATE. INSTALL AND TIGHTEN THE FLANGE BOLTS.
11. REMOVE THE WEB TEMPORARY BOLTS AND REPEAT STEPS 7 THROUGH 9 FOR THE DOWNSTREAM SIDE OF THE FLANGE SPLICE.
12. INSTALL AND TIGHTEN ALL THE WEB BOLTS.
13. PAINT THE COMPLETED REPAIR AREA ACCORDING TO THE SPECIAL PROVISIONS.

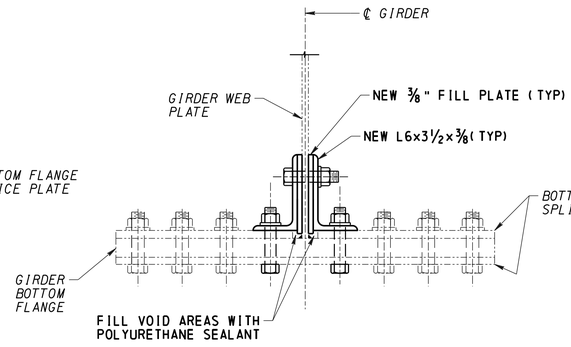
NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 54
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED



SECTION A-A

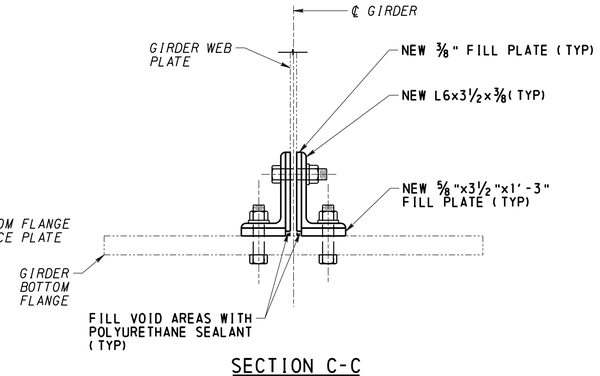
NOT TO SCALE



SECTION B-B

FOR ADDITIONAL INFORMATION NOT SHOWN SEE SECTION A-A

NOT TO SCALE



SECTION C-C

FOR ADDITIONAL INFORMATION NOT SHOWN SEE SECTION A-A

NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 30C

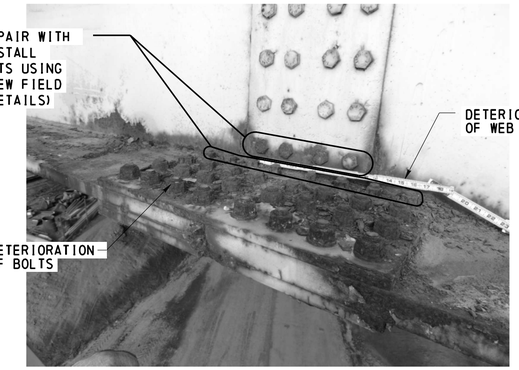
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 105 OF 164

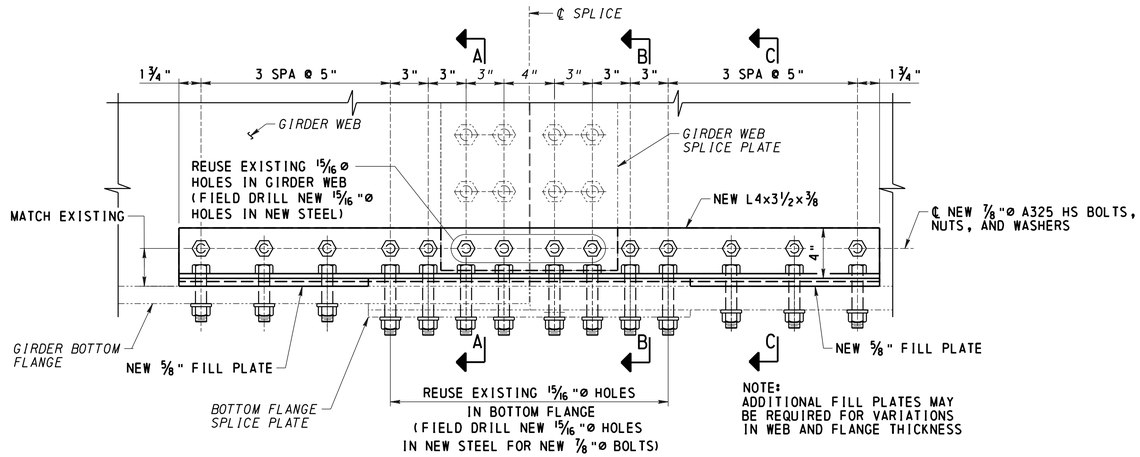
S - 38036

DESIGNED BY	AA
DRAWN BY	ERK
CHECKED BY	AA



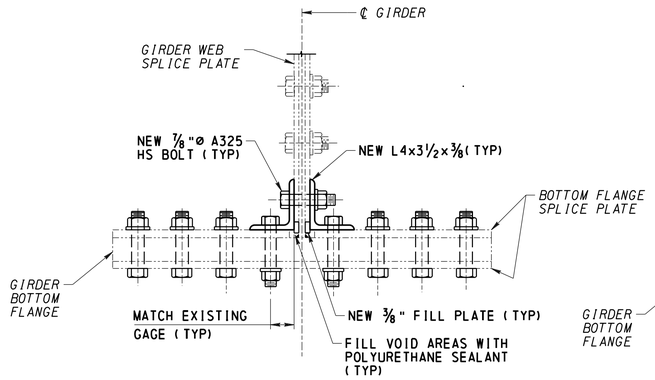
LOCATION REPAIR TYPE 30D

REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLE
(BOTTOM OR OF GIRDER G4 BETWEEN FLOORBEAMS NO 6 AND 7 (SPAN 2))
(WORK REPAIR TYPE 30D IN CONJUNCTION WITH REPAIR TYPE 34G)



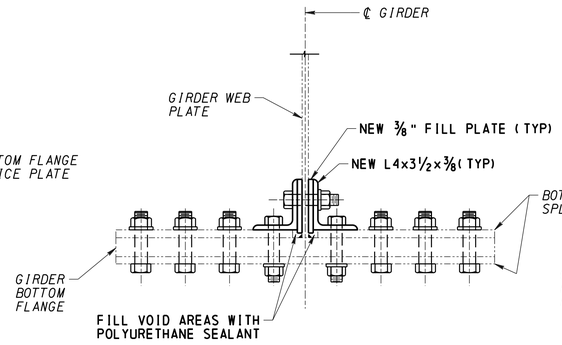
GIRDER G4 UPSTREAM ELEVATION AT FIELD SPLICE (SPAN 2)

NOT TO SCALE



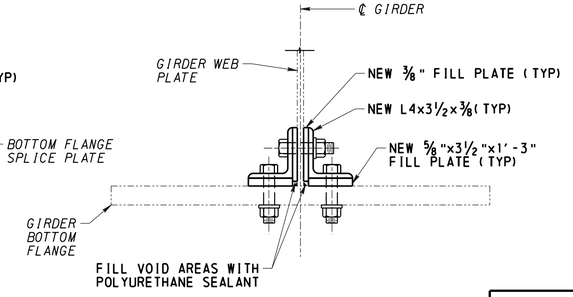
SECTION A-A

NOT TO SCALE



SECTION B-B

FOR ADDITIONAL INFORMATION
NOT SHOWN SEE SECTION A-A
NOT TO SCALE



SECTION C-C

FOR ADDITIONAL INFORMATION
NOT SHOWN SEE SECTION A-A
NOT TO SCALE

NOTES

- FOR REPAIR TYPE 30D PROCEDURE SEE SHEET 105
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 24
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 30D

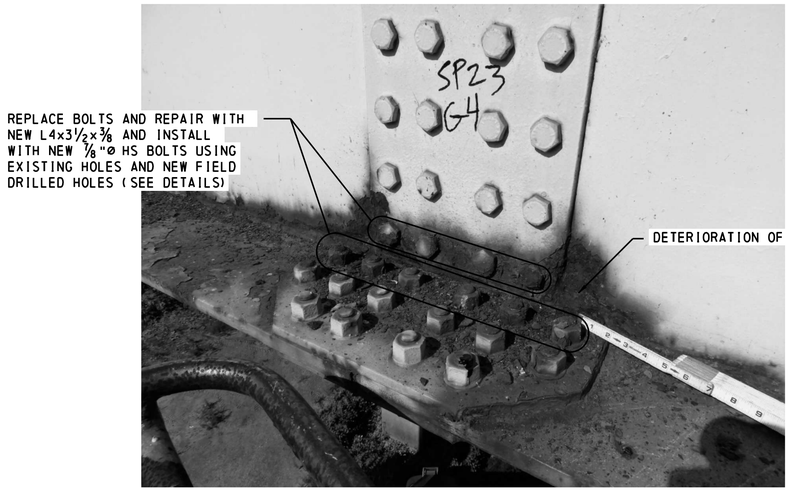
COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

DESIGNED BY	AA
DRAWN BY	ERK
CHECKED BY	AA

RECOMMENDED _____

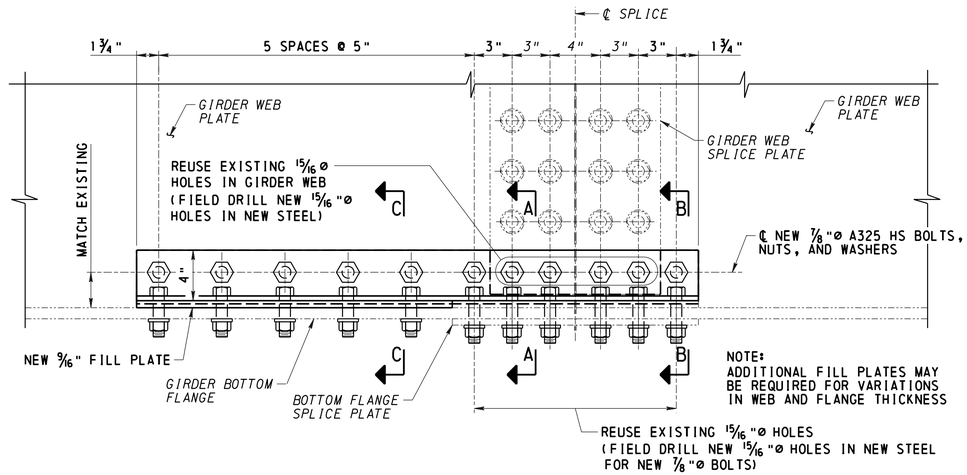
SHEET 106 OF 164

S - 38036



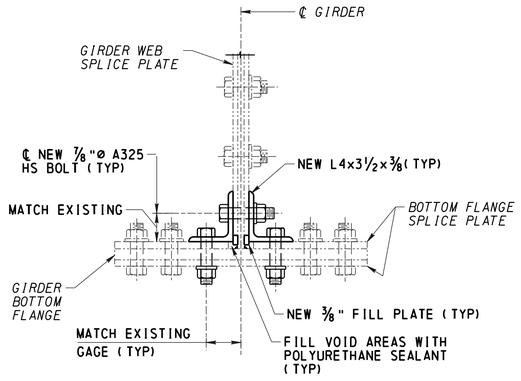
LOCATION REPAIR TYPE 30E

REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES
(BOTTOM FLANGE OF GIRDER G4 BETWEEN
FLOORBEAMS NO 2 AND 3 (SPAN 23))
(WORK REPAIR TYPE 30E IN CONJUNCTION WITH REPAIR TYPE 34G)



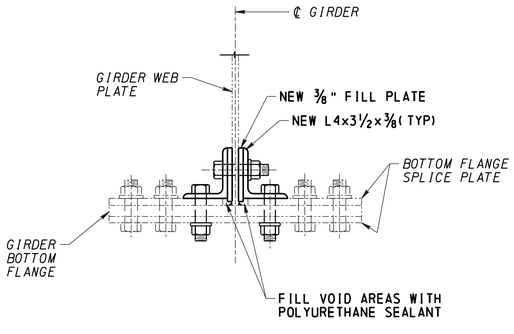
GIRDER G4 UPSTREAM ELEVATION AT FIELD SPLICE (SPAN 23)

NOT TO SCALE



SECTION A-A

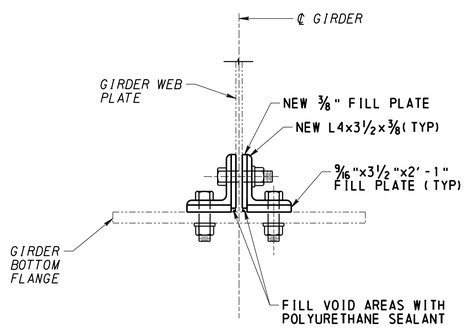
NOT TO SCALE



SECTION B-B

FOR ADDITIONAL INFORMATION
NOT SHOWN SEE SECTION A-A

NOT TO SCALE



SECTION C-C

FOR ADDITIONAL INFORMATION
NOT SHOWN SEE SECTION A-A

NOT TO SCALE

NOTES

- FOR REPAIR TYPE 30E PROCEDURE SEE SHEET 105
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 53
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 30E

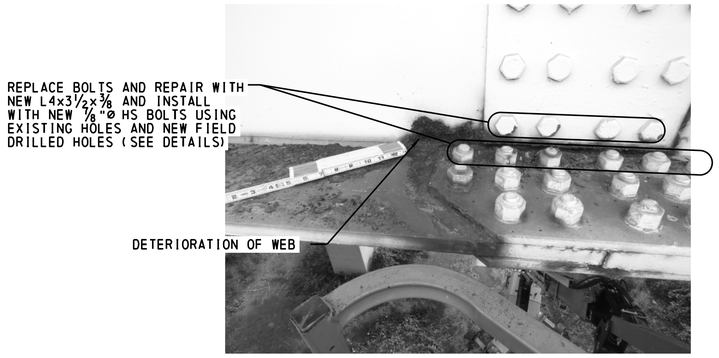
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 107 OF 164

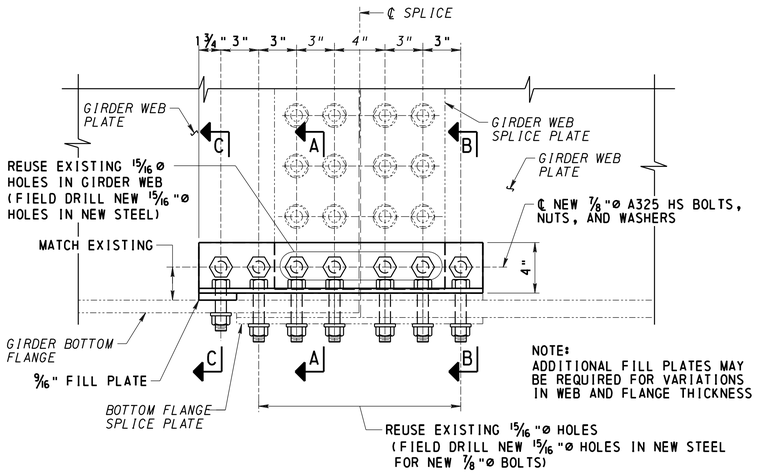
S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



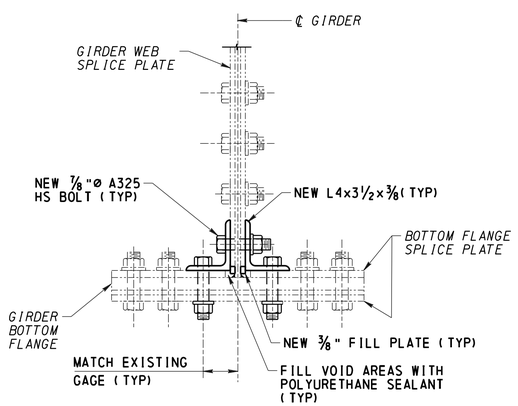
LOCATION REPAIR TYPE 30F

REPAIR DETERIORATED GIRDER WEB AT FIELD SPLICE WITH BOLTED ANGLES
(BOTTOM FLANGE OF GIRDER G1 BETWEEN FLOORBEAMS NO 4 AND 5 (SPAN 22))



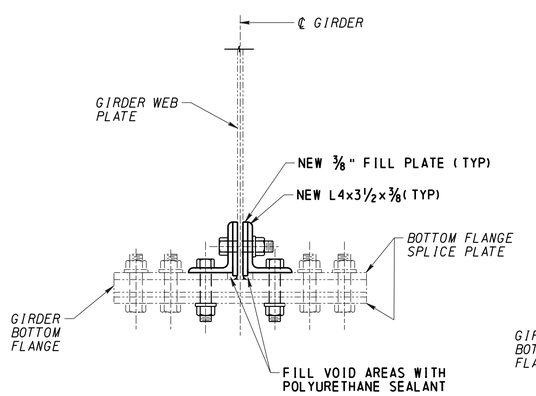
GIRDER G1 DOWNSTREAM ELEVATION AT FIELD SPLICE (SPAN 22)

NOT TO SCALE



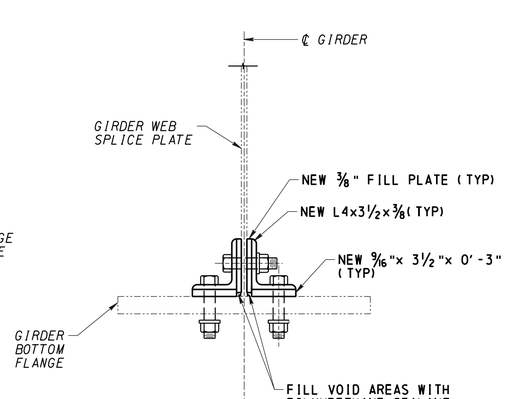
SECTION A-A

NOT TO SCALE



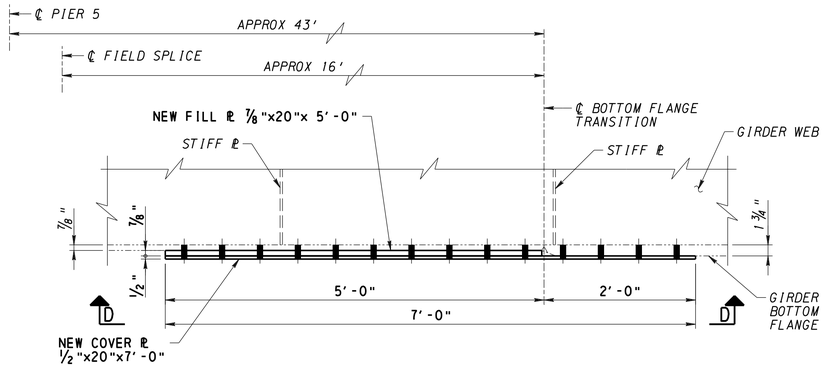
SECTION B-B

FOR ADDITIONAL INFORMATION
NOT SHOWN SEE SECTION A-A
NOT TO SCALE



SECTION C-C

FOR ADDITIONAL INFORMATION
NOT SHOWN SEE SECTION A-A
NOT TO SCALE

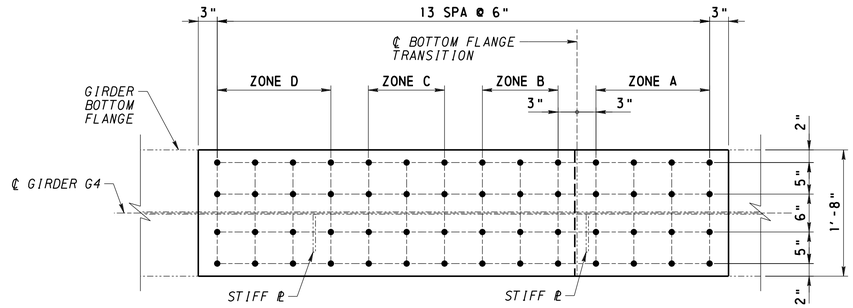


PARTIAL UPSTREAM ELEVATION OF GIRDER G4 (SPAN 5)

NOT TO SCALE

REPAIR TYPE 30G

STRENGTHENING GIRDER BOTTOM FLANGE WITH BOLTED COVER PLATE



SECTION D-D

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 30G

1. PERFORM PROCEDURE FOR REPAIR TYPES 30C, 30D, 30E AND 30F STEPS 1, 2, 3, 5, AND 6.
2. USE NEW COVER PLATE AS TEMPLATE TO DRILL NEW BOLT HOLES IN BOTTOM FLANGE.
3. CLAMP NEW COVER PLATE AND FILL PLATE TO EXISTING GIRDER BOTTOM FLANGE AS INDICATED, DRILL HOLES AND INSTALL HS BOLTS IN ZONE A. ONCE THE BOLTS IN ZONE A ARE TIGHTENED DRILL HOLES AND INSTALL BOLTS IN ZONE B. CONTINUE THIS PROCESS WITH THE BOLTS IN ZONES C AND D.
4. FINISH PAINTING NEW COVER PLATE AND BOLTS AND SURROUNDING AREA IN ACCORDANCE WITH SPECIAL PROVISIONS. CAULK THE GAP ON THE SIDES OF THE GIRDER BOTTOM FLANGE BETWEEN THE NEW FILL PLATE AND THE EXISTING FLANGE TRANSITION.

NOTES

- FOR REPAIR TYPE 30F PROCEDURE SEE SHEET 105
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 26 AND 52
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- ALL HOLES 15/16 "Ø FOR ⅞"Ø HS BOLTS UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
REPAIR TYPE 30F & 30G

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

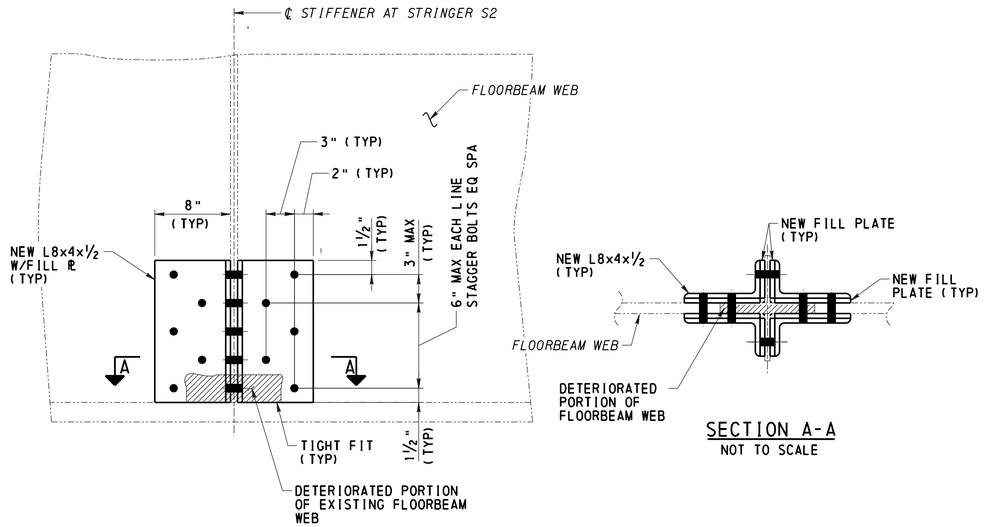
RECOMMENDED _____

SHEET 108 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

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FLOORBEAM 1 FAR SIDE ELEVATION AT S2
(SPAN 11)
NOT TO SCALE

REPAIR TYPE 31A

REPAIR DETERIORATED FLOORBEAM WEB WITH BOLTED ANGLES

SECTION A-A
NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 31A, AND 31B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. ENGINEER TO FIELD MEASURE AND VERIFY ALL DIMENSIONS.
3. REMOVE PAINT AND DETERIORATED AREAS OF STIFFENER/WEB IN THE AREA WHERE THE NEW STEEL WILL BE INSTALLED.
4. LOCATE AND FIELD DRILL BOLT HOLES AS INDICATED WITH THE NEW ANGLES AS TEMPLATES.
5. INSTALL NEW STEEL AS SHOWN. ENSURE A CLEAN DRY MATING SURFACE BEFORE INSTALLATION.
6. PAINT STIFFENER AND SURROUNDING WORK AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

NOTES

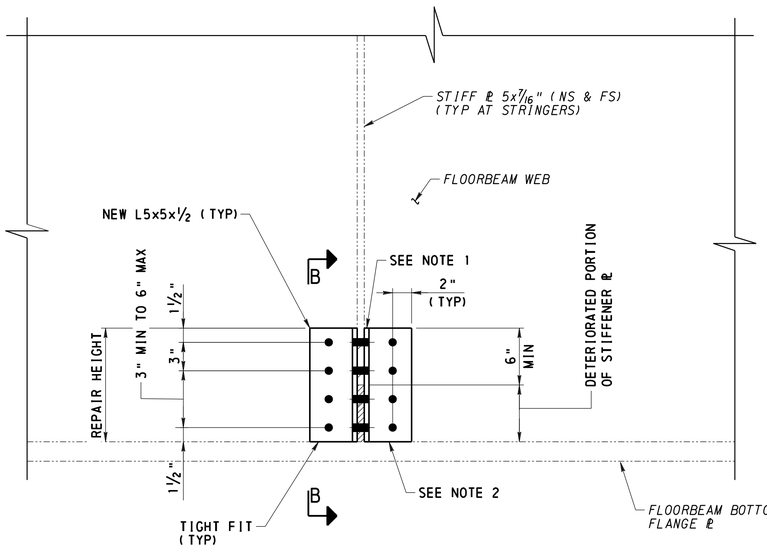
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 29
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

NOTE 1

- REMOVE BACKCORNER OF NEW ANGLE BY GRINDING SO ANGLE DOES NOT HIT STIFFENER-TO-FLOORBEAM WEB FILLET WELD, THUS ALLOWING ANGLE TO FIT TIGHT AGAINST FLOORBEAM WEB AND STIFFENER.

NOTE 2

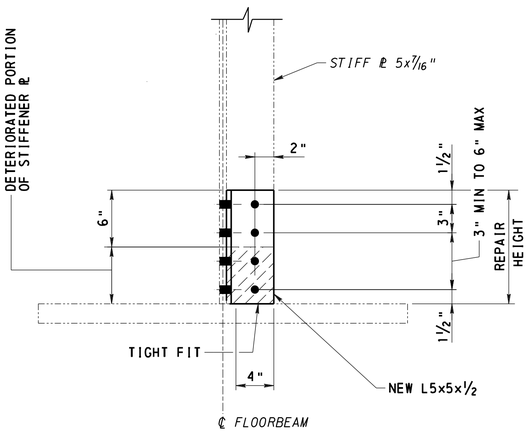
- REMOVE BACKCORNER OF NEW ANGLE BY GRINDING SO ANGLE DOES NOT HIT FLOORBEAM WEB-TO-FLOORBEAM FLANGE FILLET WELD, THUS ALLOWING ANGLE TO FIT TIGHT AGAINST FLOORBEAM WEB AND FLOORBEAM FLANGE.



FLOORBEAM 1 NEAR SIDE ELEVATION AT S1
(SPAN 11)
NOT TO SCALE

REPAIR TYPE 31B

REPAIR DETERIORATED FLOORBEAM
STIFFENER WITH BOLTED ANGLES



SECTION B-B
NOT TO SCALE

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	CMB

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

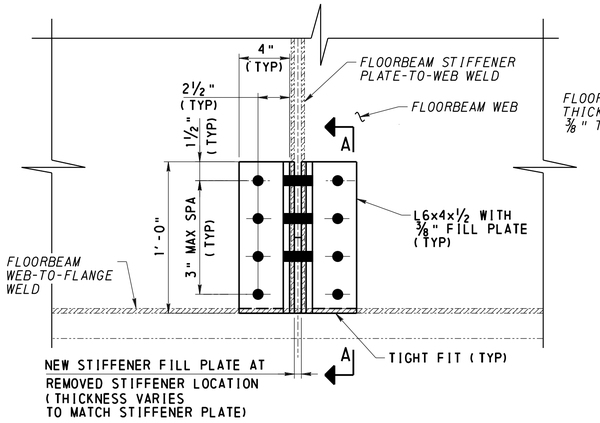
REPAIR TYPES 31A & 31B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 109 OF 164

S - 38036

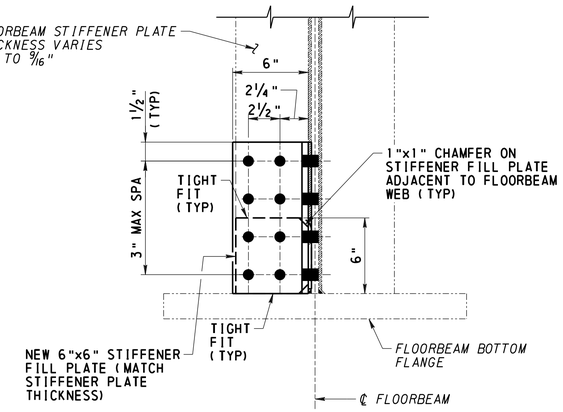


FLOORBEAM ELEVATION AT STIFFENER LOCATION

LEFT END OF FLOORBEAM 3 ELEVATION (SPAN 21)
NOT TO SCALE

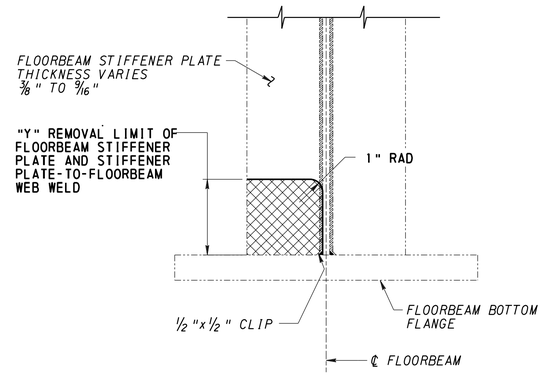
REPAIR TYPE 31C

REPAIR DETERIORATED FLOORBEAM STIFFENER WITH NEW STIFFENER PLATE AND BOLTED ANGLES



SECTION A-A

NOT TO SCALE



FLOORBEAM STIFFENER PLATE REMOVAL DETAIL

NOT TO SCALE
"Y" = 6" REMOVAL LIMIT (REPAIRS 31C & 31D)
"Y" = 3" REMOVAL LIMIT (REPAIR 31E)

PROCEDURE FOR REPAIR TYPES 31C

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD MEASURE AND VERIFY ALL DIMENSIONS.
3. ABRASIVE BLAST CLEAN INDICATED AREA AS PART OF REPAIR TYPE 90.
4. LOCATE AND FIELD DRILL BOLT HOLES AS INDICATED WITH THE NEW ANGLES AS TEMPLATES.
5. INSTALL NEW STEEL AS SHOWN. ENSURE A CLEAN DRY MATING SURFACE BEFORE INSTALLATION.
6. PAINT STIFFENER AND SURROUNDING WORK AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

PROCEDURE FOR REPAIR TYPES 31D AND 31E

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD MEASURE AND MARK REMOVAL LIMITS FOR TRANSVERSE STIFFENERS.
3. ABRASIVE BLAST CLEAN INDICATED AREA AS PART OF REPAIR TYPE 90.
4. PERFORM THE FOLLOWING STEPS 5 THRU 8 ON ONE STIFFENER AT A TIME.
5. REMOVE DETERIORATED PORTIONS OF FLOORBEAM STIFFENERS BY USING A PLASMA ARC CUTTER OR MECHANICAL CUTTER. THE CUT FROM THE PLASMA ARC CUTTER OR MECHANICAL CUTTER SHALL BE MADE NOT LESS THAN ¼" AWAY FROM THE FLOORBEAM WEB.
6. REMOVE THE REMAINING PORTIONS OF THE FLOORBEAM STIFFENERS BY GRINDING. THE FINISHED SURFACE OF THE FLOORBEAM WEB IS TO BE SMOOTH AND FLAT AND SHOULD NOT CONTAIN ANY GOUGES, NICKS, OR UNDULATIONS FROM THE GRINDING OR CUTTING PROCESS.
7. MECHANICALLY REMOVE PAINT FROM FLOORBEAM WEB IN THE AREA WHERE THE NEW FLOORBEAM STIFFENERS WILL BE INSTALLED.
8. INSTALL NEW STIFFENER PORTIONS AS SHOWN.
9. PAINT STIFFENERS AND SURROUNDING WORK AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS.



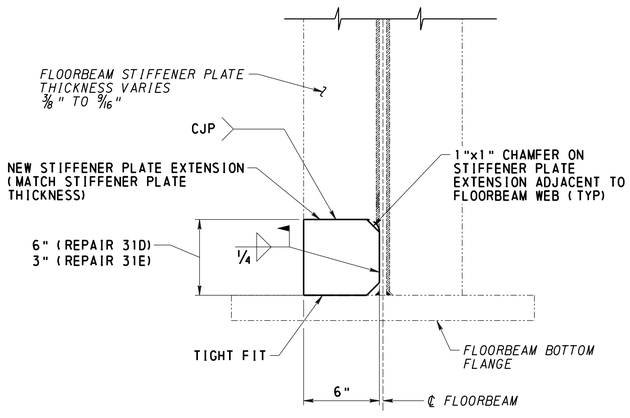
LOCATION REPAIR TYPE 31D

PHOTO OF DETERIORATED STIFFENER PLATE ON FLOORBEAM 6 BELOW STRINGER S15 WITH BOLTED RETROFIT CONNECTION PLATE AT BOTTOM FLANGE (SPAN 21)



LOCATION REPAIR TYPE 31E

PHOTO OF DETERIORATED STIFFENER PLATE ON FLOORBEAM 12 BELOW STRINGER S1 AT BOLTED LATERAL BRACING GUSSET PLATE CONNECTION (SPAN 21)



TYPICAL SECTION AT FLOORBEAM

NOT TO SCALE

REPAIR TYPES 31D AND 31E

REPAIR DETERIORATED FLOORBEAM STIFFENER WITH NEW WELDED STIFFENER PLATE (REMOVE DETERIORATED PORTION OF EXISTING STIFFENER PLATE AND WELD NEW PORTION OF PLATE TO EXISTING STIFFENER) (FOR EXISTING FLOORBEAM STIFFENER PLATE REMOVAL SEE DETAIL)

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 & 36
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

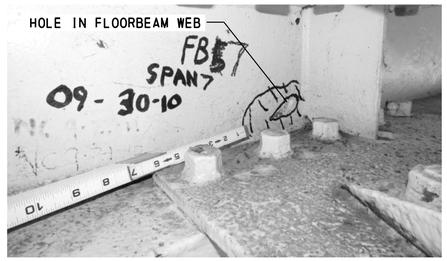
REPAIR TYPES 31C, 31D & 31E

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E

RECOMMENDED _____

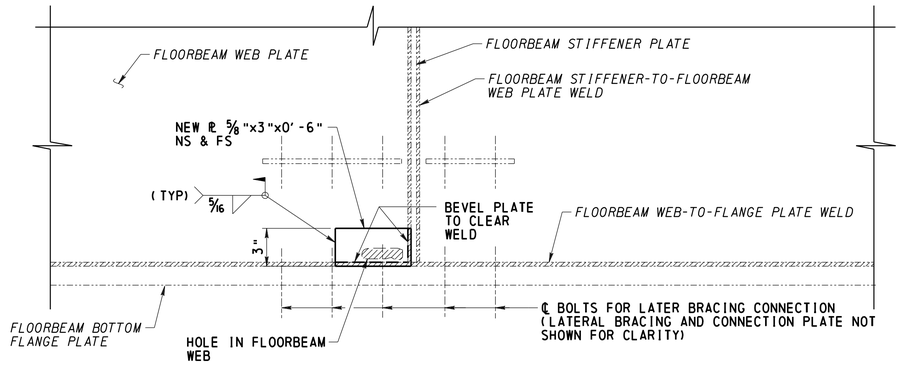
SHEET 110 OF 164

S - 38036



LOCATION REPAIR 31F

REPAIR HOLE AND DETERIORATION IN FLOORBEAM WEB
ON FLOORBEAM NO 7 BELOW STRINGER S2
NEAR LATERAL BRACING CONNECTION PLATE (SPAN 7)



FLOORBEAM NO 7 SOUTH ELEVATION BELOW STRINGER S2
ADJACENT PIER 8 (SPAN 7)

NOT TO SCALE

REPAIR 31F

REPAIR DETERIORATED FLOORBEAM WEB
WITH WELDED SCAB PLATE

PROCEDURE FOR REPAIR TYPES 31F

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN INDICATED AREA AS PART OF REPAIR TYPE 90.
4. USING A DIE GRINDER, TRIM BACK THE RAGGED EDGES OF THE STEEL AROUND ANY CORRODED AREA AT HOLE IN THE FLOORBEAM WEB TO 1/16" MINIMUM THICKNESS. THE FINISHED SURFACE OF THE FLOORBEAM WEB IS TO BE SMOOTH AND FLAT AND SHOULD NOT CONTAIN ANY GOUGES, NICKS, OR UNDULATIONS FROM THE GRINDING PROCESS. DO NOT GRIND INTO ADJACENT WELDS AT FLOORBEAM BOTTOM FLANGE PLATE AND STIFFENER PLATE.
5. PREPARE REPAIR AREA AND REPAIR PLATES TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
6. INSTALL NEW REPAIR PLATES AS SHOWN.
7. PAINT REPAIR AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 25
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 31F

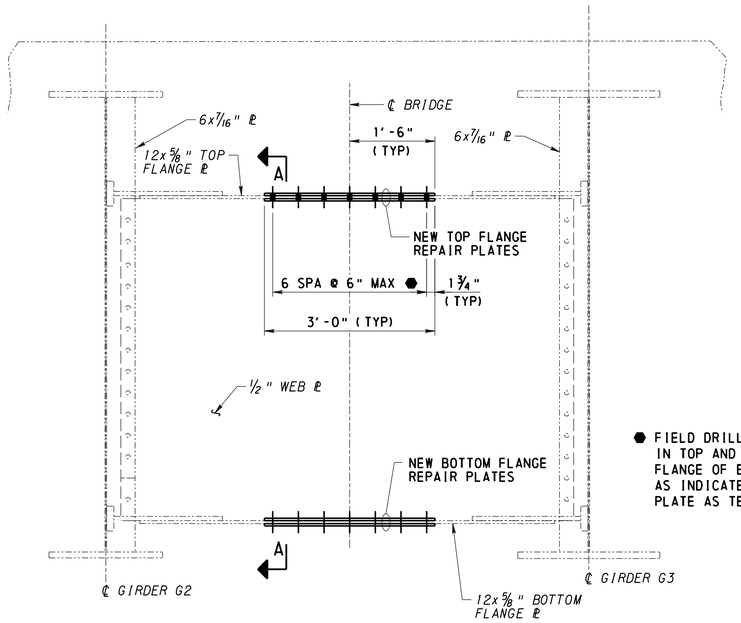
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 111 OF 164

S - 38036

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DRAWN BY	ERK
CHECKED BY	DAM



DIAPHRAGM ELEVATION AT ℄ BRIDGE

NOT TO SCALE

FB2 AT SPAN 17 WITH TOP AND BOTTOM FLANGE REPAIRS SHOWN, OTHER LOCATIONS TOP FLANGE REPAIR ONLY

REPAIR 33A

REPAIR DETERIORATED AREAS OF DIAPHRAGMS WITH BOLTED COVER PLATES

FB2 AT SPAN 17 - REPAIR AT TOP & BOTTOM FLANGE
FB3 AT SPAN 18 - REPAIR AT TOP FLANGE ONLY
FB1 AT SPAN 20 - REPAIR AT TOP FLANGE ONLY

⬢ FIELD DRILL 15/16"Ø HOLES IN TOP AND BOTTOM FLANGE OF EXISTING DIAPHRAGM AS INDICATED, USING NEW REPAIR PLATE AS TEMPLATE (TYP)

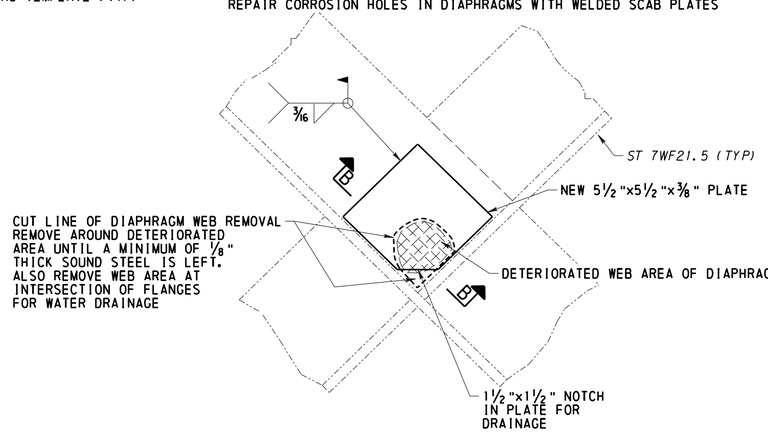


LOCATION REPAIR TYPE 33B

PHOTO OF DIAPHRAGM WITH DETERIORATED WEB SECTION AT FB9 SPAN 9 BETWEEN GIRDERS G2 AND G3, OTHER DIAPHRAGM REPAIR LOCATIONS SIMILAR

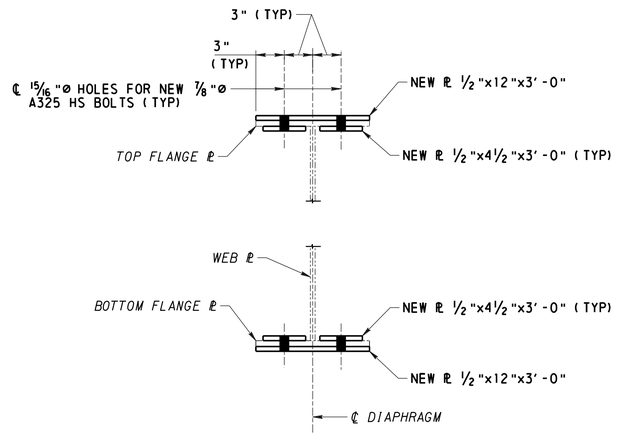
REPAIR TYPE 33B

REPAIR CORROSION HOLES IN DIAPHRAGMS WITH WELDED SCAB PLATES



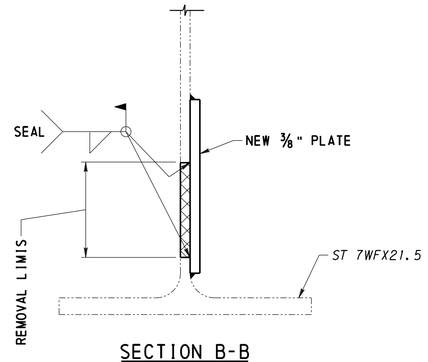
PARTIAL DIAPHRAGM ELEVATION AT REPAIR AREA

NOT TO SCALE



SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 33A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. ABRASIVE BLAST CLEAN INDICATED REPAIR AREA AS PART OF REPAIR TYPE 90.
3. TEMPORARILY POSITION THE NEW COVER PLATES IN PLACE AND USING THE NEW COVER PLATE AS A TEMPLATE DRILL HOLES IN DIAPHRAGM TOP AND/OR BOTTOM FLANGES.
4. REMOVED NEW COVER PLATES AND MECHANICALLY REMOVE ADDITIONAL PAINT AS REQUIRED AND PREPARE THE SURFACES OF THE WORK AREA TO BE PRIMER PAINTED. APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
5. AFTER PRIMER IS FULLY CURED INSTALL NEW COVER PLATES AND BOLTS AND THEN TIGHTEN TO COMPLY WITH STANDARD TURN OF THE NUT REQUIREMENTS.
6. FINISH PAINTING THE NEW COVER PLATES AND SURROUNDING WORK AREAS IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROCEDURE FOR REPAIR TYPE 33B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. ABRASIVE BLAST CLEAN INDICATED REPAIR AREA AS PART OF REPAIR TYPE 90.
3. REPRESENTATIVE TO FIELD MEASURE AND MARK REMOVAL LIMITS FOR DIAPHRAGM WEB.
4. REMOVE INDICATED PORTION OF DIAPHRAGM WEB BY USING A PLASMA ARC CUTTER OR MECHANICAL CUTTER.
5. REMOVE THE REMAINING PORTIONS OF THE DIAPHRAGM METAL BY GRINDING. THE FINISHED SURFACE OF THE WEB IS TO BE SMOOTH AND FLAT AND SHOULD NOT CONTAIN ANY GOUGES, NICKS, OR UNDULATIONS FROM THE GRINDING OR CUTTING PROCESS.
6. WELD PLATE TO DIAPHRAGM WEB AND SEAL WELD ON OPPOSITE SIDE.
7. PREPARE REPAIR AREA TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
8. PAINT COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 34 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 33A & 33B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

SHEET 112 OF 164

S - 38036

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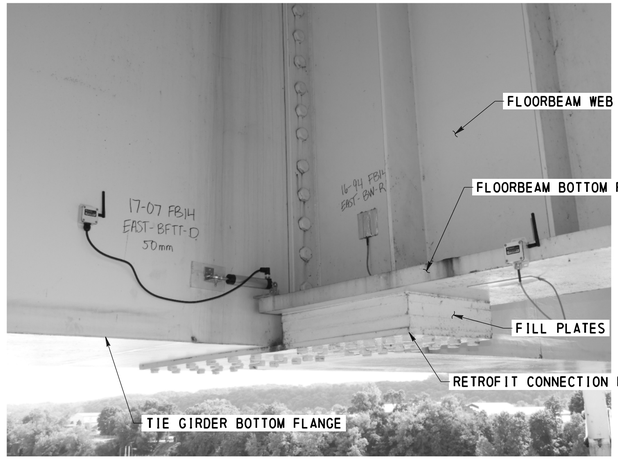


PHOTO 1

INTERMEDIATE FLOORBEAM BOTTOM FLANGE-TO-TIE GIRDER BOTTOM PLATE
EXISTING RETROFIT CONNECTION

NORTH ELEVATION OF FLOORBEAM NO 14 AT UPSTREAM TIE GIRDER SHOWN. OTHER INTERMEDIATE FLOORBEAMS SIMILAR

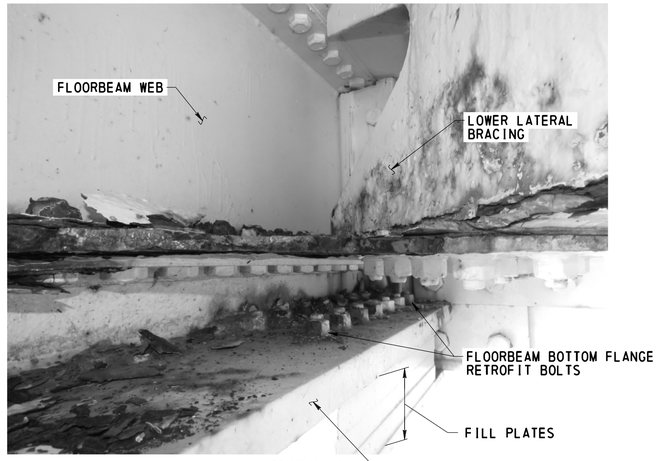


PHOTO 2

INTERMEDIATE FLOORBEAM BOTTOM FLANGE-TO-TIE GIRDER BOTTOM PLATE
EXISTING RETROFIT CONNECTION ON LATERAL BRACING SIDE OF FLOORBEAM

NORTH ELEVATION OF FLOORBEAM NO 6 AT DOWNSTREAM TIE GIRDER SHOWN. OTHER INTERMEDIATE FLOORBEAMS SIMILAR

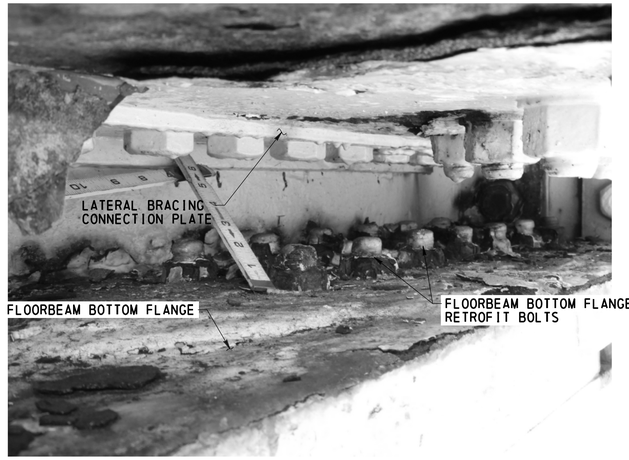
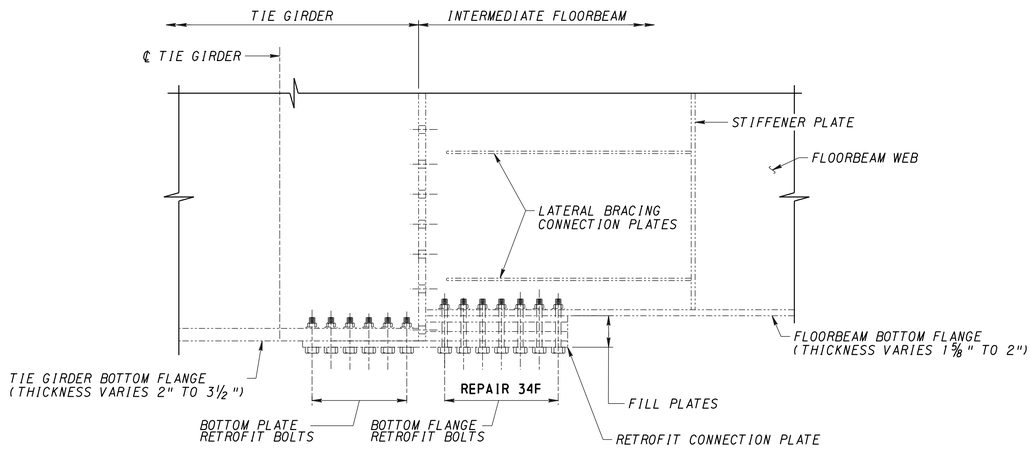


PHOTO 3

INTERMEDIATE FLOORBEAM BOTTOM FLANGE-TO-TIE GIRDER BOTTOM PLATE
EXISTING RETROFIT CONNECTION ON LATERAL BRACING SIDE OF FLOORBEAM

NORTH ELEVATION OF FLOORBEAM NO 5 AT DOWNSTREAM TIE GIRDER SHOWN. OTHER INTERMEDIATE FLOORBEAMS SIMILAR



INTERMEDIATE FLOORBEAM BOTTOM FLANGE-TO-TIE GIRDER BOTTOM PLATE
EXISTING RETROFIT CONNECTION - SPAN 21

NOT TO SCALE

REPAIR TYPE 34F

REPLACE DETERIORATED BOLT WITH NEW HS BOLT IN
FLOORBEAM BOTTOM FLANGE-TO-TIE GIRDER BOTTOM PLATE CONNECTION (SPAN 21)

PROCEDURE FOR REPAIR TYPE 34F

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS AND BOLTS TO REPLACE PRIOR TO INITIATING REPAIR.
3. CONTRACTOR TO DETERMINE TYPE, SIZES, AND LENGTHS OF EXISTING FLOORBEAM BOTTOM FLANGE RETROFIT BOLTS, NUTS, AND WASHERS SO AS TO REPLACE IN KIND.
4. FOLLOWING THE ABRASIVE BLAST CLEANING OF THE FLOORBEAM-TO-GIRDER CONNECTION AREA, MEASURE THE REMAINING SECTION OF THE FLOORBEAM BOTTOM FLANGE RETROFIT NUTS AND REPLACE THE BOLT, NUT, AND WASHERS ONE AT A TIME, OF ANY NUT THAT MEASURES LESS THAN 50% OF ITS ORIGINAL SECTION. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS FOR BOLTED ASSEMBLIES.
5. PREPARE FASTENERS AND CONNECTION AREA TO BE PRIMER PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
6. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
7. FINISH PAINTING THE COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR GENERAL LEGEND SEE SHEET 7
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF TYPE 34F REPAIRS SEE SHEETS 35 & 36

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 34F

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 113 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

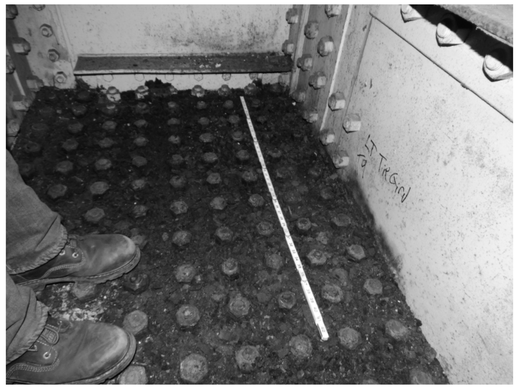
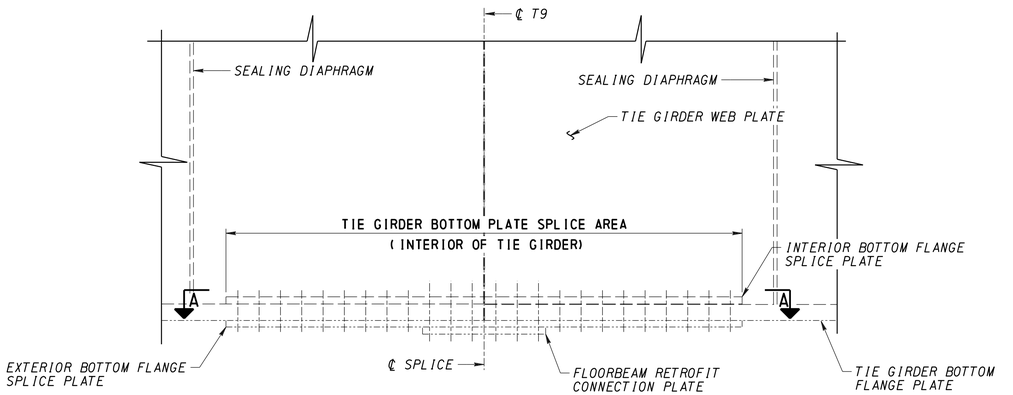
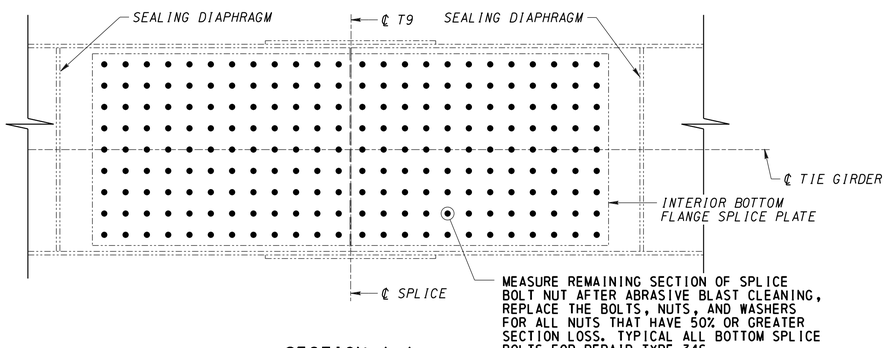


PHOTO 1
TIE GIRDER BOTTOM FLANGE SPLICE AT INTERIOR OF DOWNSTREAM TIE GIRDER AT PANEL POINT T9 (SPAN 21)
(OTHER LOCATIONS SIMILAR)



PARTIAL DOWNSTREAM ELEVATION OF DOWNSTREAM TIE GIRDER PANEL POINT T9
SPAN 21
OTHER LOCATIONS SIMILAR
NOT TO SCALE



SECTION A-A
TIE GIRDER BOTTOM FLANGE SPLICE DETAIL
NOT TO SCALE
REPAIR TYPE 34S

REPLACE DETERIORATED BOLT WITH NEW HS BOLT IN TIE GIRDER BOTTOM PLATE SPLICE (SPAN 21)
(REPLACE EXISTING CORRODED NUT FOR BOTTOM PLATE SPLICE BOLTS WITH NEW BOLTS, NUTS, AND WASHERS IN KIND)

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



PHOTO 2
GIRDER G4 BOTTOM FLANGE SPLICE LOCATION BETWEEN FLOORBEAMS NOS. 4 AND 5 (SPAN 10)
(OTHER LOCATIONS SIMILAR)

REPAIR TYPE 34G

REPLACE DETERIORATED BOLT WITH NEW HS BOLT IN GIRDER BOTTOM FLANGE SPLICE PLATE
(REPLACE EXISTING CORRODED NUT FOR BOTTOM FLANGE SPLICE BOLTS WITH NEW BOLTS, NUTS, AND WASHERS IN KIND)
WORK REPAIR TYPES 30D AND 30E IN CONJUNCTION WITH REPAIR TYPE 34G

PROCEDURE FOR REPAIR TYPE 34S

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATIONS AND BOLTS TO REPLACE PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN INDICATED REPAIR AREA AS PART OF REPAIR TYPE 92.
4. MEASURE REMAINING SECTION OF THE NUTS FOR THE TIE GIRDER BOTTOM FLANGE SPLICE PLATE AND REPLACE THE BOLTS, WASHERS, AND NUTS FOR ALL NUTS THAT HAVE LOST SECTION OF 50% OR GREATER. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS FOR BOLTED ASSEMBLIES.
5. CONTRACTOR TO DETERMINE TYPE, SIZE AND LENGTHS OF EXISTING SPLICE BOLTS, NUTS, AND WASHERS SO AS TO REPLACE IN KIND.
6. DO NOT REMOVE MORE THAN 5% OF BOLTS AT ANY ONE TIME OR MORE THAN TWO BOLTS IN ANY ONE ROW.
7. PREPARE FASTENERS AND SPLICE AREA TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 92.
8. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
9. FINISH PAINTING THE COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

PROCEDURE FOR REPAIR TYPE 34G

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATIONS AND BOLTS TO REPLACE PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN INDICATED REPAIR AREA AS PART OF REPAIR TYPE 90.
4. MEASURE REMAINING SECTION OF THE NUTS FOR THE GIRDER BOTTOM FLANGE SPLICE PLATE AND REPLACE THE BOLTS, WASHERS, AND NUTS FOR ALL NUTS THAT HAVE LOST SECTION OF 50% OR GREATER. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS FOR BOLTED ASSEMBLIES.
5. CONTRACTOR TO DETERMINE TYPE, SIZE AND LENGTHS OF EXISTING SPLICE BOLTS, NUTS, AND WASHERS SO AS TO REPLACE IN KIND.
6. DO NOT REMOVE MORE THAN 5% OF BOLTS AT ANY ONE TIME OR MORE THAN TWO BOLTS IN ANY ONE ROW.
7. PREPARE FASTENERS AND SPLICE AREA TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
8. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
9. FINISH PAINTING THE COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR TYPE 34S SEE SHEETS 39 THRU 48
- FOR LOCATION OF REPAIR TYPE 34G SEE SHEETS 23 THRU 34 & 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

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S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

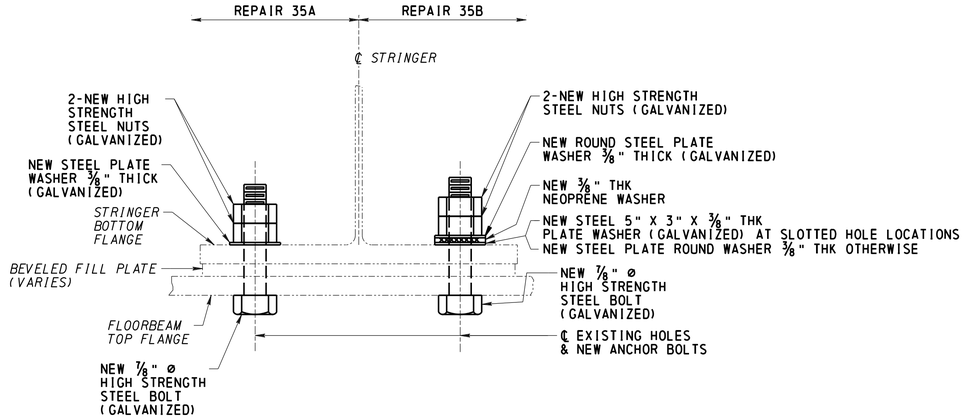
REPAIR TYPES 34G & 34S

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E

RECOMMENDED _____

SHEET 114 OF 164

S - 38036



ELEVATION - STRINGER-TO-FLOORBEAM CONNECTION

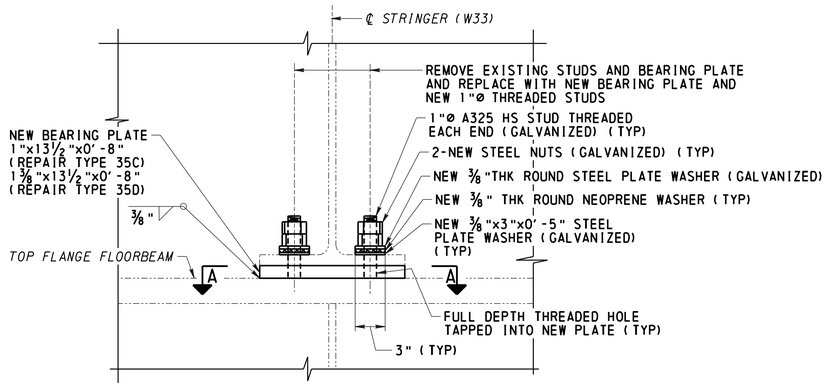
NOT TO SCALE

REPAIR TYPE 35A

REPLACE STRINGER ANCHOR BOLTS AT STRINGER-TO-FLOORBEAM CONNECTION (REPLACE STRINGER ANCHOR BOLT IN KIND)

REPAIR TYPE 35B

REPLACE STRINGER ANCHOR BOLTS AT STRINGER-TO-FLOORBEAM CONNECTION (REPLACE STRINGER ANCHOR BOLT WITH NEOPRENE AND PLATE WASHERS IN KIND)

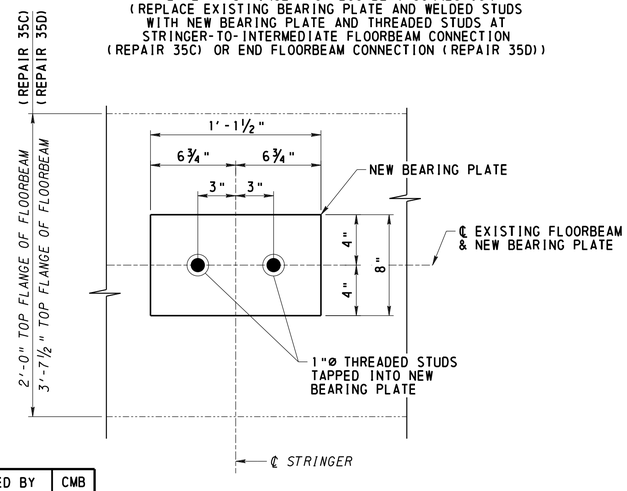


ELEVATION AT STRINGER-TO-FLOORBEAM CONNECTION (SPAN 21)

NOT TO SCALE

REPAIR TYPES 35C AND 35D

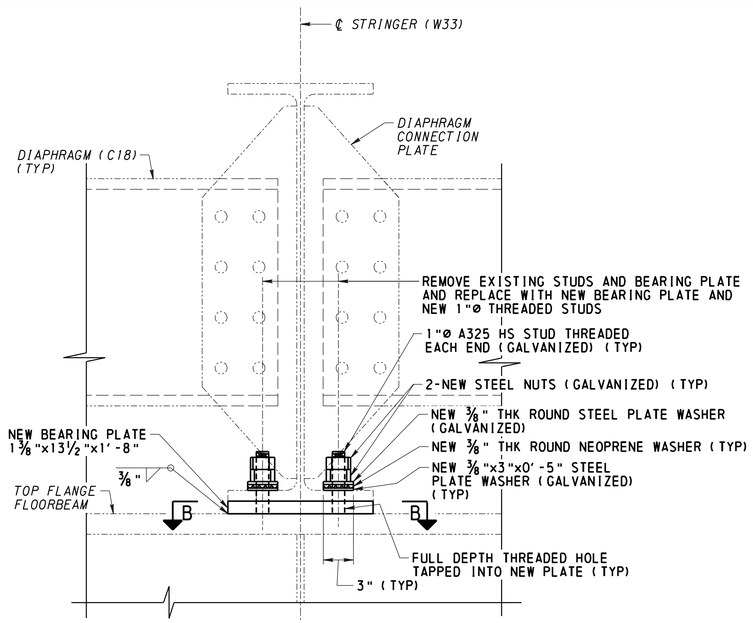
REPLACE STRINGER ANCHOR BOLTS AND STRINGER BEARING PLATE AT STRINGER-TO-FLOORBEAM CONNECTION (REPLACE EXISTING BEARING PLATE AND WELDED STUDS WITH NEW BEARING PLATE AND THREADED STUDS AT STRINGER-TO-INTERMEDIATE FLOORBEAM CONNECTION (REPAIR 35C) OR END FLOORBEAM CONNECTION (REPAIR 35D))



SECTION A-A

NOT TO SCALE

DESIGNED BY	CMB
DRAWN BY	SJW
CHECKED BY	CMB

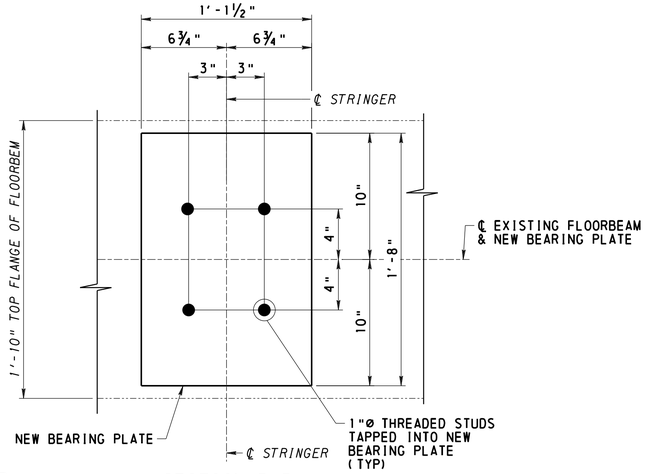


ELEVATION AT STRINGER-TO-FLOORBEAM CONNECTION (SPAN 21)

NOT TO SCALE

REPAIR TYPE 35E

REPLACE STRINGER ANCHOR BOLTS AND STRINGER BEARING PLATE AT STRINGER-TO-FLOORBEAM CONNECTION (REPLACE EXISTING BEARING PLATE AND WELDED STUDS NEW BEARING PLATE AND THREADED STUDS AT STRINGER-TO-INTERMEDIATE FLOORBEAM CONNECTION)



SECTION B-B

NOT TO SCALE

UNFACTORED JACKING REACTIONS (KIPS)		
REPAIR	(1) DEAD LOAD	(2) LIVE LOAD + IMPACT
35C	54.0	40.0
35D	20.0	52.0
35E	20.0	52.0

NOTES:
(1) INCLUDES APPLICABLE GIRDER DEAD LOADS (STEEL, CONCRETE DECK, BARRIER).
(2) LIVE LOADS SHOWN ARE FOR THE HS-20 VEHICLE.

PROCEDURE FOR REPAIR TYPES 35A AND 35B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. AFTER REPAIR AREA HAS BEEN BLAST CLEANED AND PRIMER PAINTED REMOVE DESIGNATED EXISTING STRINGER-TO-FLOORBEAM ANCHOR BOLT.
3. INSTALL NEW ANCHOR BOLT, WASHERS (AS DETAILED), AND NUT. FIRST NUT TO BE FINGER TIGHT.
4. USE SECOND NUT AS A JAM NUT, PUNCH THE BOLT THREADS AFTER NUT HAS BEEN TIGHTENED.
5. PAINT EXISTING STRUCTURAL STEEL IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROCEDURE FOR REPAIR TYPE 35C, 35D AND 35E

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD AND JACKING PROCEDURE TO THE ENGINEER FOR APPROVAL.
2. COORDINATE REPAIR WITH WEEKEND CLOSURE THE PHASING OF BEARING REPLACEMENTS, EXPANSION DAMS GLAND REPLACEMENTS, AND GIRDER FIELD SPLICE REPAIRS.
3. AFTER REPAIR AREA HAS BEEN BLAST CLEANED AND PRIMER PAINTED, REMOVE EXISTING ANCHOR BOLT NUTS AND WASHERS. MEASURE AND MARK LOCATION OF EXISTING BEARING PLATE TO ASSURE NEW BEARING PLATE IS INSTALLED AT THE SAME LOCATION.
4. TEMPORARILY JACK AND SUPPORT EXISTING STRINGER TO ENABLE REMOVAL OF BEARING PLATE AND ANCHOR BOLTS, DO NOT JACK STRINGER MORE THAN ⅛".
5. REMOVE EXISTING BEARING PLATES AND ANCHOR BOLTS BY MECHANICAL METHODS OR AIR ARC. DO NOT CUT OR GOUGE THE FLOORBEAM TOP FLANGE.
6. AFTER THE BEARING PLATE HAS BEEN REMOVED GRIND/SAND THE FLOORBEAM TOP FLANGE SMOOTH BY REMOVING ANY REMAINING WELD METAL AND BEARING PLATE REMNANTS.
7. REMOVE ALL CORROSION PRODUCTS FROM BOTTOM OF STRINGER BOTTOM FLANGE AND PREPARE AREA FOR PRIMER PAINT.
8. PRIMER PAINT THE REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
9. CENTER BEARING PLATE AND ANCHOR BOLTS AT ORIGINAL LOCATION AND WELD IN PLACE.
10. INSTALL NEW ANCHOR BOLTS, WASHERS (AS DETAILED), AND NUTS. FIRST NUT TO BE FINGER TIGHT.
11. USE SECOND NUT AS A JAM NUT, PUNCH THE BOLT THREADS AFTER NUT HAS BEEN TIGHTENED.
12. PAINT COMPLETE REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 THRU 36 AND SHEETS 52 THRU 55
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 35A, 35B, 35C, 35D & 35E

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 039827-E

RECOMMENDED _____

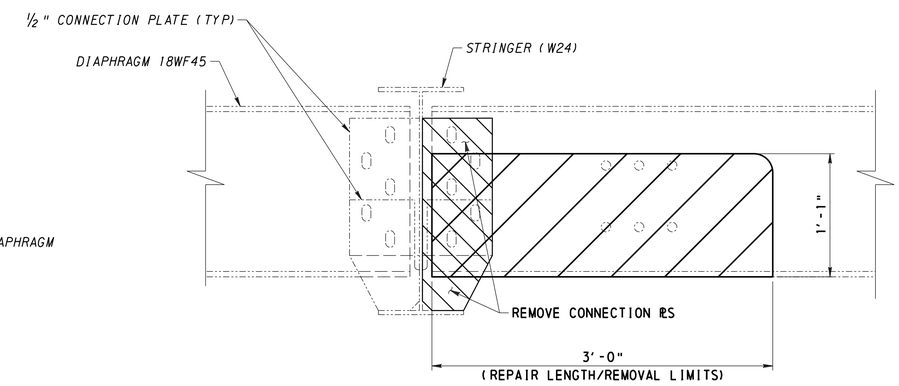
SHEET 115 OF 164

S - 38036



LOCATION REPAIR TYPE 36

REPAIR DETERIORATED STRINGER DIAPHRAGM WITH NEW SECTION OF DIAPHRAGM AND CONNECTION PLATE BETWEEN STRINGERS S7 AND S8 ABOVE FLOORBEAM NO. 1 (SPAN 11)

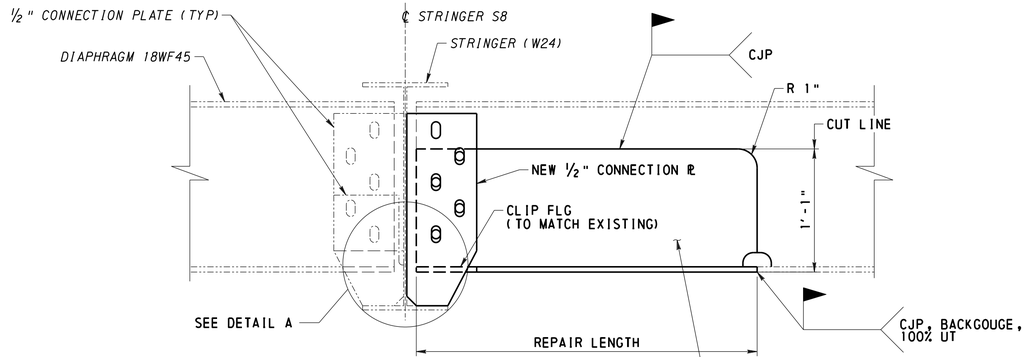


EXISTING DIAPHRAGM - ELEVATION

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 36

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. PROVIDE TEMPORARY SUPPORT OF DIAPHRAGM AND PROTECTION OF TELEPHONE CONDUIT.
4. FOLLOWING ABRASIVE BLAST CLEANING OF THE DIAPHRAGM REMOVE EXISTING CONNECTION PLATES AND DIAPHRAGM SECTION AS INDICATED.
5. GRIND EXISTING WELD CONNECTION SMOOTH WITH STRINGER WEB.
6. INSTALL NEW SECTION OF W18x46 DIAPHRAGM.
7. INSTALL NEW STEEL CONNECTION PLATE.
8. USE EXISTING AND NEW HOLES IN STEEL DIAPHRAGM AS A TEMPLATE TO FIELD DRILL HOLES IN NEW CONNECTION PLATE.
9. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
10. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

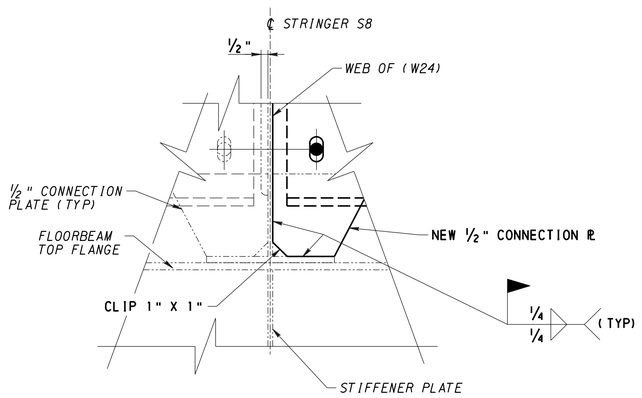


NORTH ELEVATION OF STRINGER DIAPHRAGM BETWEEN STRINGERS S7 AND S8 ABOVE FLOORBEAM NO. 1 (SPAN 11)

NOT TO SCALE

REPAIR TYPE 36

REPAIR DETERIORATED STRINGER DIAPHRAGM AREA



DETAIL A

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 30
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

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	REVISIONS				

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BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	CMB
DRAWN BY	SJW
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
039827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

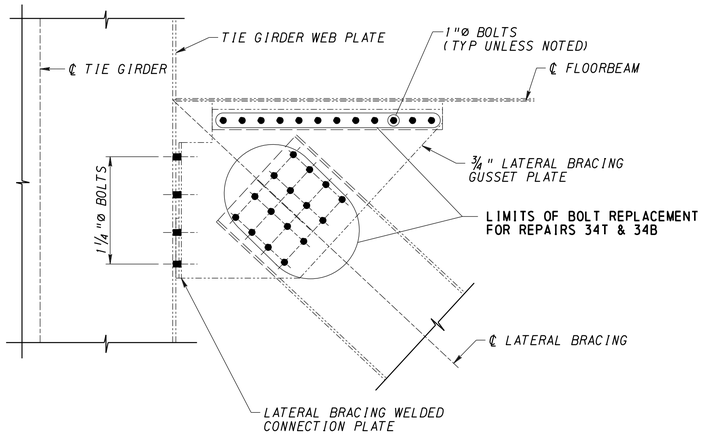
REPAIR TYPE 36

RECOMMENDED _____

SHEET 116 OF 164

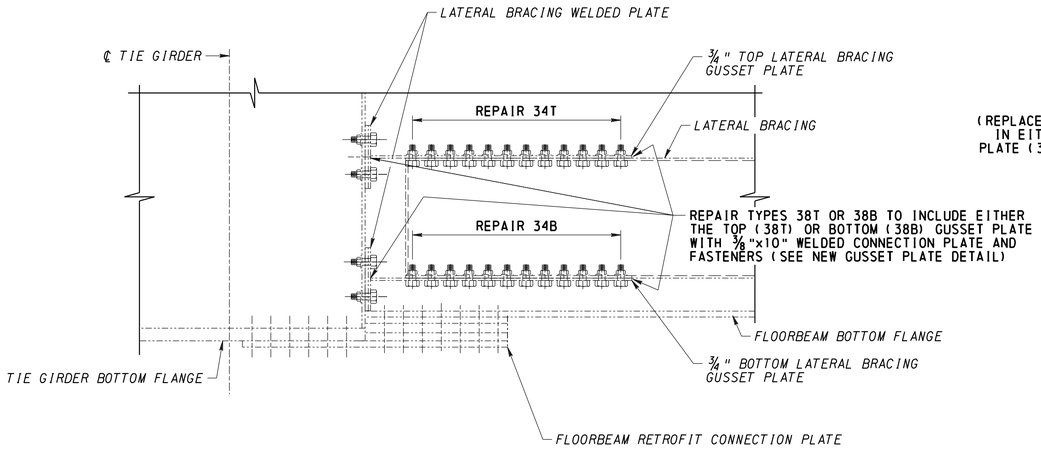
S - 38036

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PLAN OF LATERAL BRACING CONNECTION PLATE AT FLOORBEAM AND TIE GIRDER

NOT TOP SCALE



ELEVATION OF LATERAL BRACING CONNECTION PLATE AT FLOORBEAM AND TIE GIRDER

NOT TO SCALE

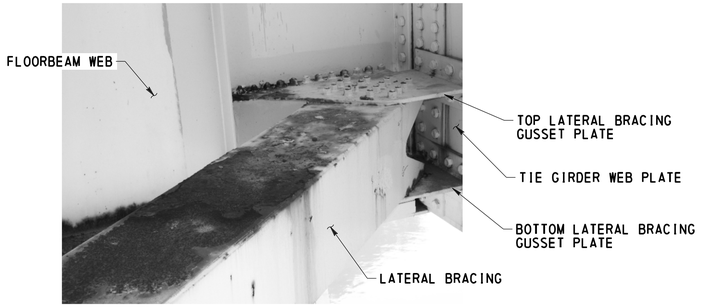


PHOTO 1
LOWER LATERAL BRACING CONNECTION TO FLOORBEAM FB3 AND DOWNSTREAM TIE GIRDER (SPAN 21)
(OTHER LOCATIONS SIMILAR)

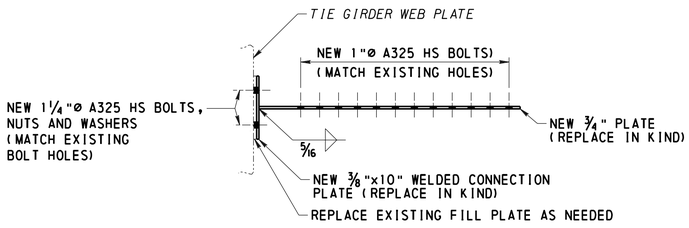
REPAIR TYPE 34T

REPLACE DETERIORATED OR MISSING BOLT WITH NEW HS BOLT IN LATERAL BRACING TOP GUSSET PLATE

REPAIR TYPE 34B

REPLACE DETERIORATED OR MISSING BOLT WITH NEW HS BOLT IN LATERAL BRACING BOTTOM GUSSET PLATE

(REPLACE DETERIORATED OR MISSING BOLTS IN LATERAL BRACING IN EITHER THE TOP GUSSET PLATE (34T) OR BOTTOM GUSSET PLATE (34B) WITH NEW 1"Ø A325 HS BOLTS, NUTS AND WASHERS.)



NEW GUSSET PLATE DETAIL

REPAIR TYPES 38T OR 38B
NOT TO SCALE

REPAIR TYPE 38T

REPLACE TOP DETERIORATED GUSSET PLATE FOR LOWER LATERAL BRACING

REPAIR TYPE 38B

REPLACE BOTTOM DETERIORATED GUSSET PLATE FOR LOWER LATERAL BRACING

(REPLACE DETERIORATED ¾" BOTTOM (38B) OR TOP (38T) LATERAL BRACING GUSSET PLATE WITH NEW ¾" PLATE. REPAIR TO INCLUDE WELDED CONNECTION PLATE-TO-TIE GIRDER WEB PLATE AND FILL PLATES AS NEEDED, REPLACE ALL FASTENERS IN KIND WITH NEW A325 HS BOLTS, NUTS AND WASHERS.)

PROCEDURE FOR REPAIR TYPES 34T & 34B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN INDICATED REPAIR AREA AS PART OF REPAIR TYPE 90.
4. CONTRACTOR TO DETERMINE TYPE, SIZES, AND LENGTHS OF EXISTING LATERAL BRACING GUSSET PLATE BOLTS, NUTS, AND WASHERS SO AS TO REPLACE IN KIND.
5. FOLLOWING THE ABRASIVE BLAST CLEANING OF THE LATERAL BRACING CONNECTION AREA, MEASURE THE REMAINING SECTION OF THE LATERAL BRACING GUSSET PLATE CONNECTION BOLT HEADS AND NUTS AND REPLACE THE BOLT, NUT, AND WASHERS ONE AT A TIME, OF ANY BOLT HEAD OR NUT THAT MEASURES LESS THAN 50% OF ITS ORIGINAL SECTION. TENSION BOLT IN ACCORDANCE WITH CODE PROVISIONS FOR BOLTED ASSEMBLIES.
6. PREPARE FASTENERS AND LATERAL BRACING GUSSET PLATE CONNECTION AREA TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
7. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
8. FINISH PAINTING COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

PROCEDURE FOR REPAIR TYPES 38T & 38B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD ALONG WITH TEMPORARY LATERAL BRACING SUPPORT DESIGN TO THE ENGINEER FOR APPROVAL.
2. CONTRACTOR TO DETERMINE TYPE, SIZES, AND LENGTHS OF EXISTING LATERAL BRACING GUSSET PLATES BOLTS, NUTS, AND WASHERS SO AS TO REPLACE IN KIND.
3. PROVIDE TEMPORARY SUPPORT FOR LATERAL BRACING STRUT DURING REPLACEMENT OF LATERAL BRACING GUSSET PLATES.
4. REMOVE AND REPLACE ONE OF THE LATERAL BRACING GUSSET PLATE ASSEMBLIES AT A TIME.
5. PREPARE FASTENERS AND CONNECTION AREA TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
6. INSTALL LATERAL BRACING GUSSET PLATE ASSEMBLY WITH NEW HS BOLTS AFTER PRIMER HAS CURED.
7. REPEAT STEPS 4 THROUGH 6 FOR THE OTHER LATERAL BRACING GUSSET PLATE ASSEMBLY.
8. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
9. FINISH PAINTING COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7.
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 & 36.
- FOR GENERAL LEGEND SEE SHEET 7.
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 34T, 34B, 38T & 38B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 117 OF 164

S - 38036

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LOCATION - REPAIR TYPE 39A

NOT TO SCALE

CORROSION HOLES AND DETERIORATION OF LATERAL SHEAR BRACING BETWEEN GIRDERS G2 AND G3 (SPAN 1)



LOCATION 2 - REPAIR TYPE 39B-1

NOT TO SCALE

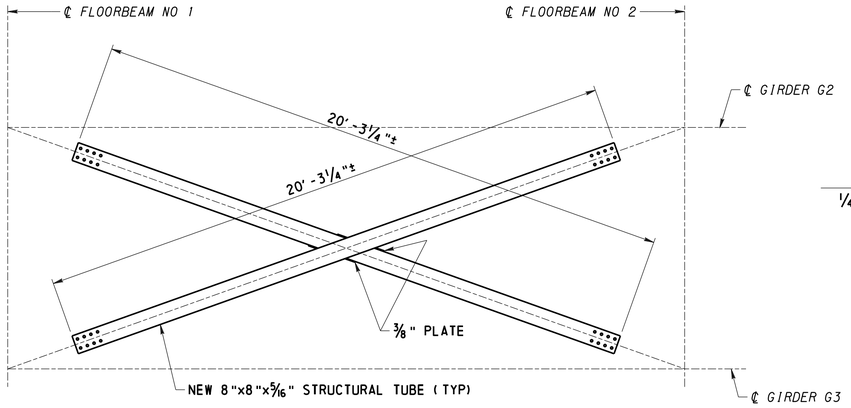
CORROSION AND AREA OF SECTION LOSS ON TOP OF LATERAL BRACING LOCATED BETWEEN FLOORBEAM NOS. 14 AND 15 AND BELOW STRINGER3 S3 AND S4 (SPAN 21)



LOCATION 3 - REPAIR TYPE 39B-2

NOT TO SCALE

CORROSION AND AREA OF SECTION LOSS ON TOP OF LATERAL BRACING ADJACENT GUSSET PLATE CONNECTION TO FLOORBEAM NO 3 AND DOWNSTREAM TIE GIRDER AT (SPAN 21)

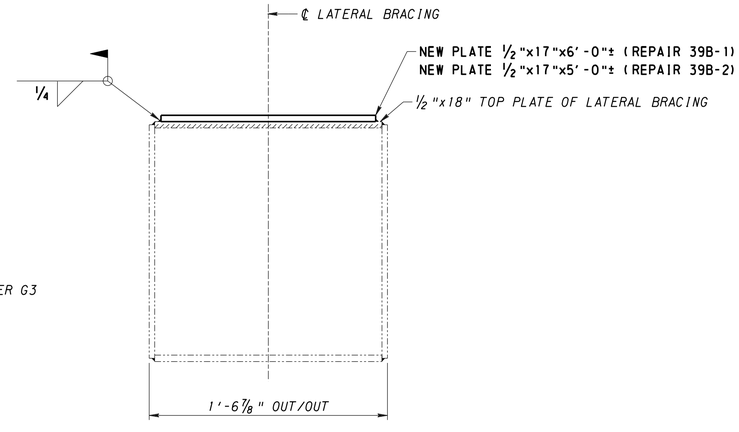


PLAN AT LATERAL BRACING

NOT TO SCALE

REPAIR TYPE 39A

REPLACE DETERIORATED LOWER LATERAL SHEAR BRACING (PROVIDE AND INSTALL NEW LATERAL SHEAR BRACING AND COMPONENTS IN KIND)



TYPICAL SECTION OF LATERAL BRACING (SPAN 21)

NOT TO SCALE

REPAIR TYPE 39B

REPAIR DETERIORATED LOWER LATERAL BRACING WITH WELDED SCAB PLATE

PROCEDURE FOR REPAIR TYPE 39A

1. CONTRACTOR TO COORDINATE THIS REPAIR WITH THE REPLACEMENT OF THE ROCKER BEARINGS AT GIRDERS G2 AND G3.
2. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
3. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
4. CONTRACTOR TO DETERMINE TYPE, SIZES, AND LENGTHS OF EXISTING LATERAL BRACING GUSSET PLATE BOLTS, NUTS, AND WASHERS SO AS TO REPLACE IN KIND.
5. FOLLOWING ABRASIVE BLAST CLEANING REMOVE LATERAL BRACING, AND LATERAL BRACING GUSSET PLATE ASSEMBLIES AS REQUIRED.
6. PREPARE LATERAL BRACING AND CONNECTION AREAS TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
7. INSTALL NEW LATERAL BRACING AND EXISTING LATERAL BRACING GUSSET PLATES WITH NEW HS BOLTS AFTER PRIMER HAS CURED.
8. COAT THE INTERFACE BETWEEN THE NEWLY PRIMED AREAS AND THE EXISTING PAINT AS WELL AS ALL GALVANIZED FASTENERS WITH RUST BOND PENETRATING SEALER.
9. PAINT COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

PROCEDURE FOR REPAIR TYPES 39B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN LATERAL BRACING AS PART OF REPAIR TYPE 90.
4. FOLLOWING THE ABRASIVE BLAST CLEANING OF THE LATERAL BRACING, MEASURE THE REMAINING SECTION OF THE LATERAL BRACING TOP PLATE. MARK OUT THE AREA FOR SCAB PLATE WHERE TOP PLATE MEASURES LESS THAN ⅜" THICKNESS.
5. PREPARE LATERAL BRACING AREA TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
6. PROVIDE ADEQUATE SIZE SCAB PLATE TO COVER MEASURED SECTION LOSS AREA AND WELD SCAB PLATE TO TOP PLATE OF LATERAL BRACING.
7. PREPARE REPAIR AREA TO BE PRIME PAINT AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
8. PAINT COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 23 & 35
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

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SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 39A & 39B

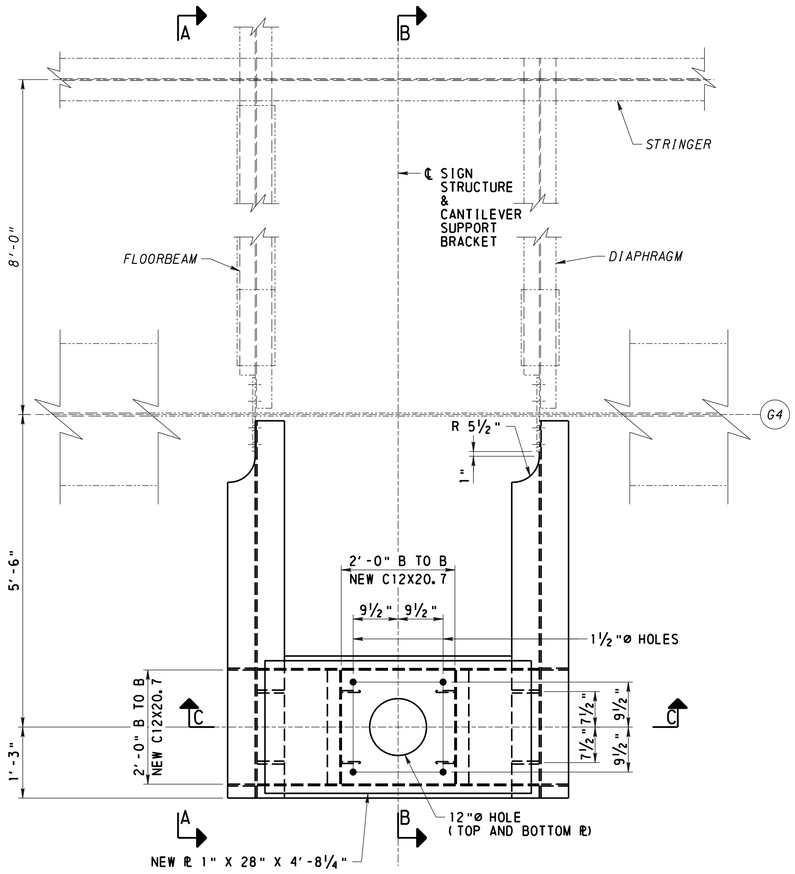
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

SHEET 118 OF 164

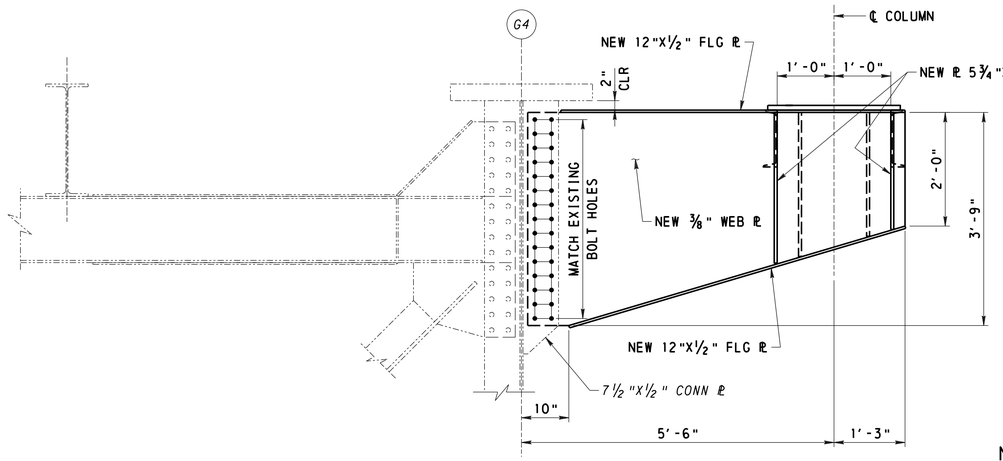
S - 38036



PLAN - CANTILEVER SUPPORT BRACKET
REPAIR TYPE 40A

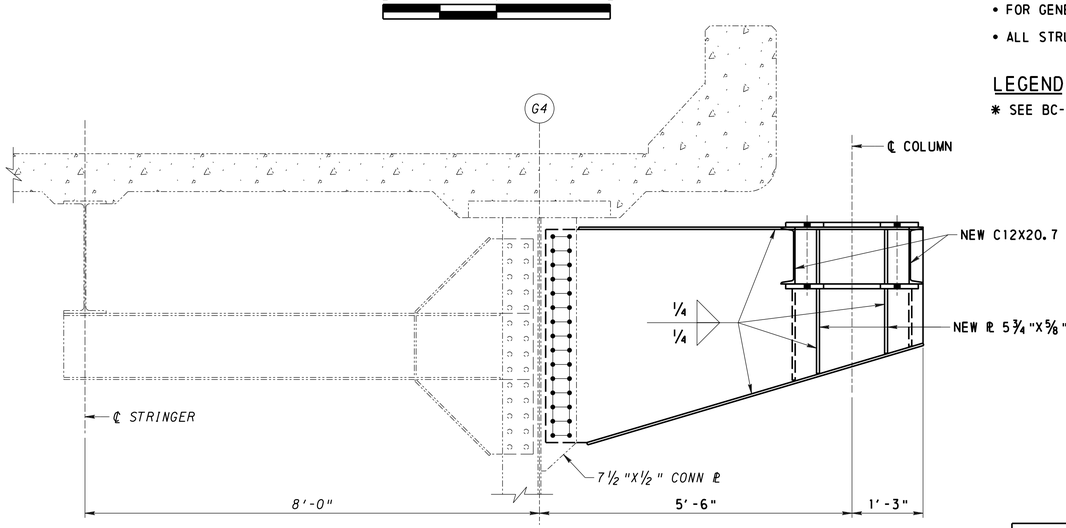
REPLACE SIGN SUPPORT CANTILEVER BRACKET

2' 1' 0' 2'



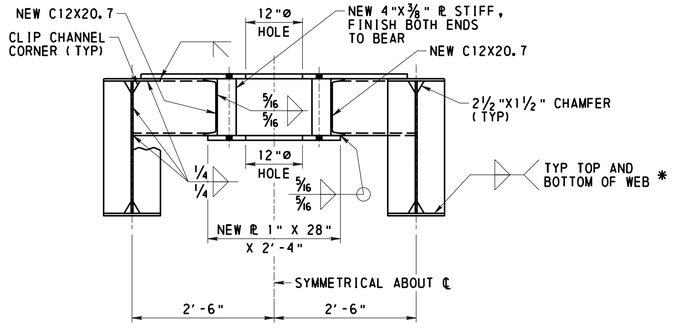
SECTION A-A

2' 1' 0' 2'



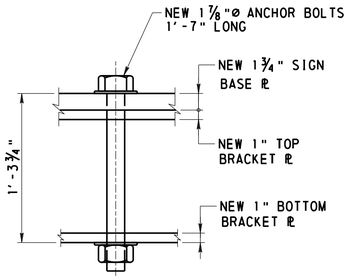
SECTION B-B

2' 1' 0' 2'



SECTION C-C

2' 1' 0' 2'



ANCHOR BOLT DETAIL

NOT TO SCALE
(4 REQUIRED)

PROCEDURE FOR REPAIR TYPE 40A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE REPRESENTATIVE FOR APPROVAL
2. REMOVE EXISTING SIGN, SIGN POST, CANTILEVER SUPPORT BRACKETS, AND ANCHOR BOLTS. SEE ROADWAY PLAN FOR DETAILS OF NEW SIGN. STORE SIGN POST FOR REINSTALLATION ON NEW SUPPORT BRACKETS WITH NEW ANCHOR BOLTS
3. ABRASIVE BLAST CLEAN AND PRIME PAINT ALL CONNECTION AREAS IN ACCORDANCE WITH THE SPECIAL PROVISIONS PRIOR TO INSTALLING NEW SUPPORT BRACKETS
4. VERIFY EXISTING CONNECTION AND SIGN BASE PLATE GEOMETRY AT THE SITE
5. INSTALL NEW CANTILEVER SUPPORT BRACKET AS INDICATED
6. PAINT NEW AND EXISTING STEEL IN ACCORDANCE WITH SPECIAL PROVISIONS
7. RE-INSTALL SIGN POST AND NEW SIGN

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIR SEE SHEET 28
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

LEGEND

* SEE BC-753M FOR WELD AND CHAMFER DETAILS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 40A

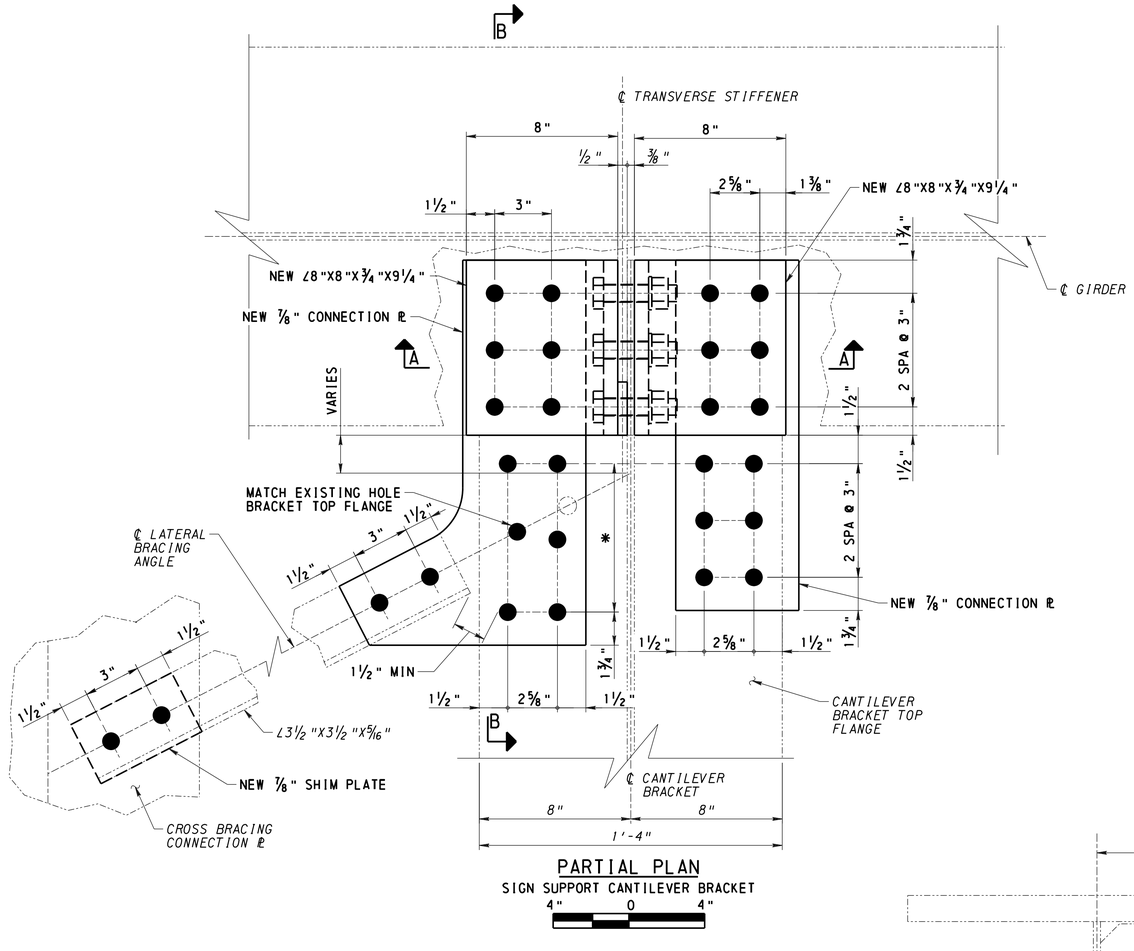
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 119 OF 164

S - 38036

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DRAWN BY	SJW
CHECKED BY	EAT



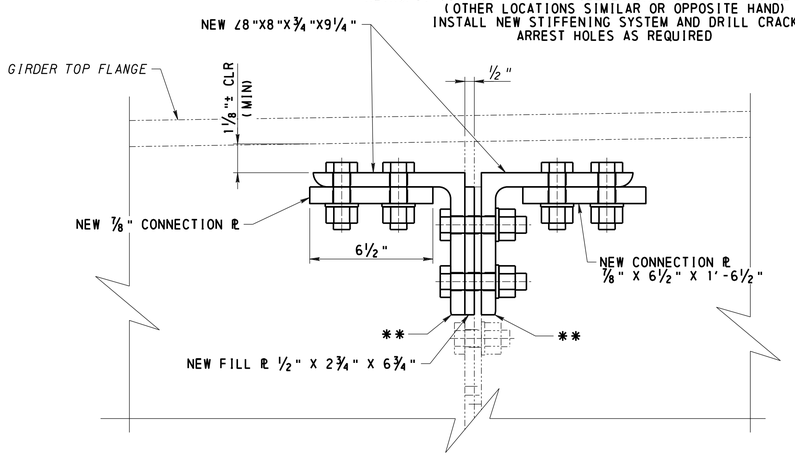
PARTIAL PLAN

SIGN SUPPORT CANTILEVER BRACKET

4" 0 4"

REPAIR TYPE 40B

RETROFIT SIGN SUPPORT CANTILEVER BRACKET FOR FATIGUE CRACKING
(OTHER LOCATIONS SIMILAR OR OPPOSITE HAND)
INSTALL NEW STIFFENING SYSTEM AND DRILL CRACK ARREST HOLES AS REQUIRED

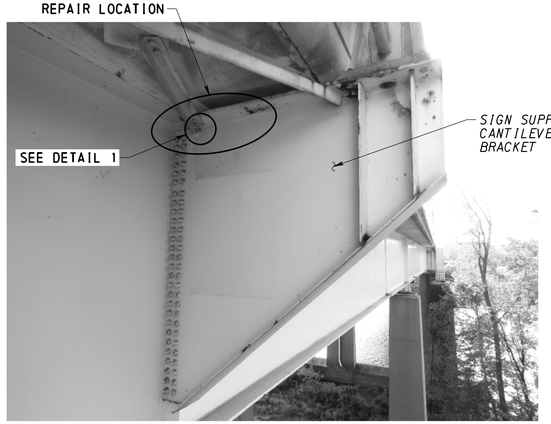


SECTION A-A

4" 0 4"

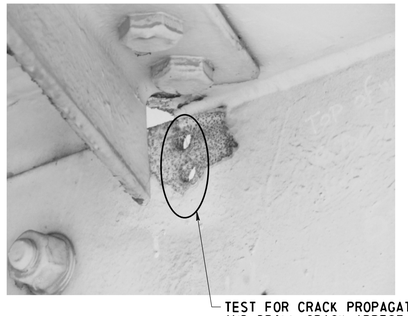
DESIGNED BY	EAT
DRAWN BY	SJW
CHECKED BY	EAT

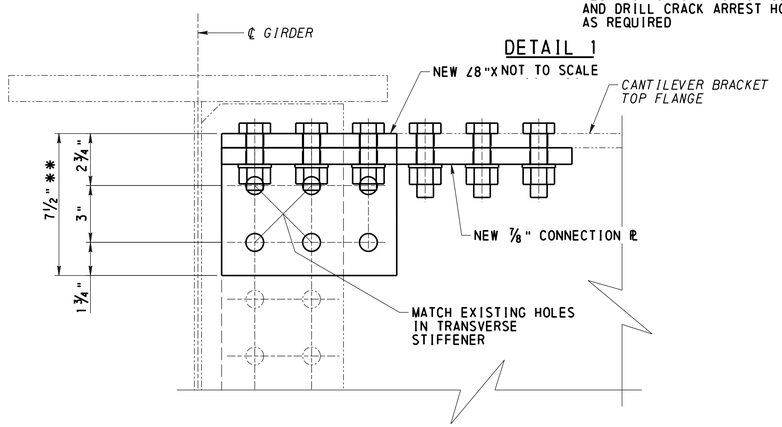
REPAIR LOCATION



LOCATION REPAIR TYPE 40B

(OTHER LOCATIONS SIMILAR)





DETAIL 1

SECTION B-B

4" 0 4"

LEGEND

* SPACING VARIES TO MATCH EXISTING HOLES AND PROVIDE MINIMUM BOLT SPACING. PROVIDE MAXIMUM 4" SPACING. ACCOMMODATE BRACING CONNECTIONS AND SHIM PLATE FOR ADJACENT BRACKET WITH BRACING CONNECTION ON OPPOSITE SIDE OF BRACKET WEB.

** TRIM LEG OF ∠8"X8"X¾" TO 7½" FOR BOLT CLEARANCE.

PROCEDURE FOR REPAIR TYPE 40B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. FIELD MEASURE AND VERIFY ALL DIMENSIONS.
3. REMOVE PAINT AND CORROSION FROM THE CANTILEVER BRACKET TO PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING ON BOTH SIDES OF THE CANTILEVER BRACKET WEB ADJACENT THE GIRDER TOP FLANGE.
4. PERFORM MAGNETIC PARTICLE NON-DESTRUCTIVE TESTING ON BOTH SIDES OF THE CANTILEVER BRACKET WEB TO DETERMINE THE EXISTENCE OF ANY CRACKS OR FLAWS AND THEN DETERMINE THE LOCATION OF THE CRACK TIP OR END OF THE FLAW. IF NO CRACKS ARE FOUND DO NOT DRILL ANY CRACKS AND GO TO STEP 12.
5. DRILL A 1"Ø CRACK ARREST HOLE (CAH) THROUGH THE CANTILEVER BRACKET WEB SO THE CRACK TIP OR FLAW IS ON THE CENTERLINE OF THE HOLE AND JUST INSIDE THE CIRCUMFERENCE OF THE TOP OF THE CRACK ARREST HOLE.
6. WHEN MULTIPLE CRACKS SUCH AS BRANCH CRACKS OCCUR ON THE SAME SIDE OF THE FLOORBEAM CONNECTION PLATE, POSITION THE CRACK ARREST HOLE SO AS TO CATCH ALL THE ENDS OF THE CRACKS (CRACK TIPS).
7. WHEN TWO CRACK ARREST HOLES INTERSECT, REMOVE THE TRIANGULAR PORTIONS OF THE GIRDER WEB BY DRILLING, SAWING AND GRINDING TO MAKE A SLOTTED HOLE.
8. WHEN A CRACK ARREST SLOT IS MADE GRIND THE BORE AND EDGES OF THE SLOT SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING NICKS AND GOUGES FROM THE DRILLING AND OR SAWING OPERATION.
9. GRIND THE BORE AND EDGES OF THE CRACK ARREST HOLE SMOOTH TO ELIMINATE ANY IMPERFECTIONS INCLUDING ANY NICKS OR GOUGES FROM THE DRILLING OPERATION. PERFORM FINAL GRINDING WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE.
10. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON THE INSIDE EDGES OF THE CRACK ARREST HOLE TO ENSURE CRACKS HAVE BEEN REMOVED FROM THE FLOORBEAM WEB. IF CRACKS ARE FOUND NOTIFY THE REPRESENTATIVE FOR FURTHER DIRECTION.
11. PREPARE AREA OF CANTILEVER BRACKET WHERE THE PAINT WAS REMOVED TO BE PRIMER PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
12. PROVIDE TEMPORARY SUPPORT OF LATERAL BRACING ANGLE. INSTALL SHIM PLATE AT CROSS BRACING CONNECTION PLATE.
13. LOCATE AND FIELD DRILL BOLT HOLES AS INDICATED WITH THE NEW STEEL AS TEMPLATES.
14. INSTALL NEW STEEL AS SHOWN. ENSURE A CLEAN DRY MATING SURFACE BEFORE INSTALLATION.
15. PAINT IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 33, 34, 52, AND 53
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- ALL HOLES 15/16"Ø FOR ⅞"Ø HS BOLTS UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

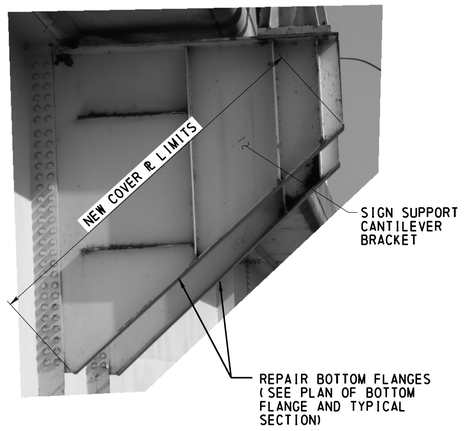
REPAIR TYPE 40B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

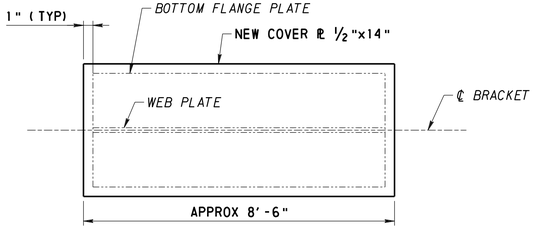
SHEET 120 OF 164

S - 38036



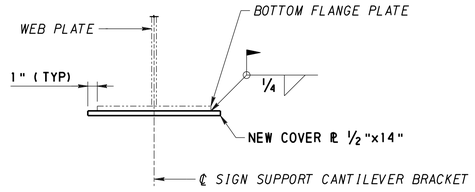
ELEVATION VIEW

NOT TO SCALE



PLAN OF BOTTOM FLANGE

NOT TO SCALE

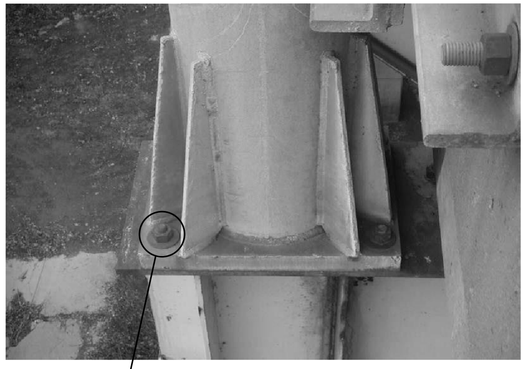


TYPICAL SECTION

NOT TO SCALE

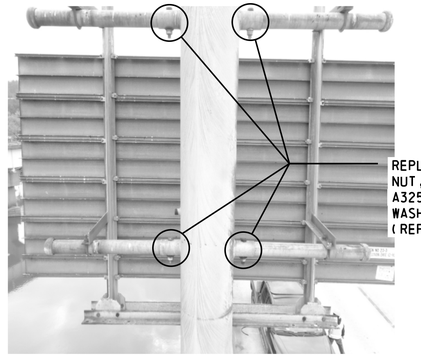
REPAIR TYPE 40C

REINFORCE SIGN SUPPORT CANTILEVER BRACKET BOTTOM FLANGE
(SPAN 19 - 2 EAST BRACKETS)



REPAIR TYPE 85A

REPLACE ANCHOR BOLTS AT SIGN COLUMN
BASE PLATE (SPANS 19 & 23)



REPAIR TYPE 85C

REPLACE BOLTS ON
STRUT-TO-SIGN COLUMN CONNECTION

PROCEDURE FOR REPAIR TYPE 40C

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. ABRASIVE BLAST CLEAN SIGN SUPPORT CANTILEVER BRACKET AS PART OF REPAIR TYPE 90.
4. FOLLOWING THE ABRASIVE BLAST CLEANING OF THE BRACKET MEASURE THE REMAINING SECTION OF THE BRACKET BOTTOM FLANGE. MARK OUT THE DETERIORATED AREA OF THE FLANGE WHICH MEASURES LESS THAT 3/8" THICKNESS. REMOVEE DETERIORATED PORTION OF BOTTOM FLANGE AND GRIND CUT EDGES SMOOTH IN PREPARATION FOR WELDING.
5. PREPARE CANTILEVER BRACKET TO BE PRIME PAINTED AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
6. WELD COVER PLATE TO BRACKET BOTTOM FLANGE.
7. PREPARE REPAIR AREA TO BE PRIME PAINT AND APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
8. PAINT COMPLETED REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

PROCEDURE FOR REPAIR TYPE 85A

1. PERFORM THIS PROCEDURE ON ONE BOLT AT A TIME DURING PERIODS OF WIND SPEEDS LESS THAN 10 MPH.
2. REMOVE EXISTING ANCHOR BOLT.
3. CLEAN EXISTING SURFACES AT HEAD AND NUT OF ANCHOR BOLT BY WIRE BRUSHING OR OTHER SUITABLE MEANS TO REMOVE SURFACE CONTAMINANTS.
4. INSTALL NEW ANCHOR BOLT AND NUT WITH WASHERS AT BOTH THE NUT AND BOLT HEAD. INSTALL NEW BOLT WITH BOLT HEAD ON THE TOP SURFACE OF THE BASE PLATE.

PROCEDURE FOR REPAIR TYPE 85C

1. PERFORM THIS PROCEDURE ON ONE BOLT AT A TIME DURING PERIODS OF WIND SPEEDS LESS THAN 10 MPH.
2. REMOVE EXISTING BOLT.
3. CLEAN STRUT SURFACES AT HEAD AND NUT OF BOLT BY WIRE BRUSHING OR OTHER SUITABLE MEANS TO REMOVE SURFACE CONTAMINANTS.
4. INSTALL NEW BOLT AND NUT WITH WASHERS AT BOTH THE NUT AND BOLT HEAD. INSTALL BOLT WITH BOLT HEAD ON THE TOP SURFACE OF THE STRUT.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS EXCLUDING REPAIR TYPE 40C SEE SHEETS 1 THRU 5
- FOR REPAIR TYPE 40C LOCATION SEE SHEET 34
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- SEE SPECIAL PROVISIONS FOR EACH REPAIR TYPE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	EAT
DRAWN BY	ERK
CHECKED BY	EAT

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

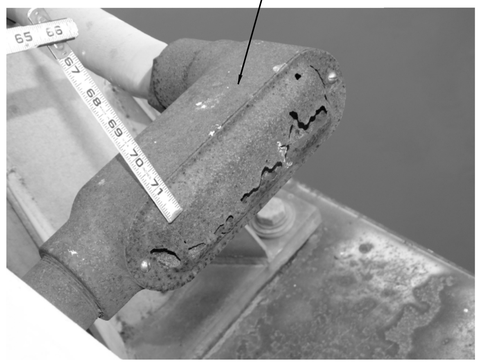
SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
REPAIR TYPES 40C, 85A & 85C

RECOMMENDED _____

SHEET 121 OF 164

S - 38036



REPAIR 85D

REPLACE CORRODED TYPE LB
CONDUIT BODY (SPAN 9)



REPAIR TYPE 85E

REPLACE TRUSS CHORD U-BOLTS
AT SIGN SUPPORT TOWERS (SPAN 19)



REPAIR 85F

REPLACE BOLTS AT SIGN TRUSS CONNECTIONS
AND CHORD SPLICES (SPANS 19 AND 23)



REPAIR TYPE 85H

DRILL OVERSIZE DRAIN HOLE
IN VERTICAL SIGN SUPPORT

PROCEDURE FOR REPAIR TYPE 85D

1. REMOVE EXISTING CORRODED CONDUIT BODY.
2. CLEAN EXISTING SURFACES.
3. REPLACE THE CONDUIT BODY IN-KIND OR SIMILAR.
4. IF CONDUIT RUN SERVES NO USEFUL PURPOSE, REMOVE CONDUIT BODY AND EXPOSED CONDUIT RUN TO ITS TERMINATION AT THE SIGN COLUMN AT NO ADDITIONAL COST (NO REPLACEMENT).

PROCEDURE FOR REPAIR TYPE 85E

1. PERFORM THIS PROCEDURE ON ONE U-BOLT AT A TIME DURING PERIOD OF LOW WIND.
2. REMOVE EXISTING U-BOLT.
3. CLEAN EXISTING SURFACES BY WIRE BRUSHING OR OTHER SUITABLE MEANS TO REMOVE SURFACE CONTAMINANTS.
4. INSTALL NEW STAINLESS STEEL U-BOLT AND NUTS WITH STAINLESS STEEL WASHERS AT THE NUTS. TIGHTEN U-BOLT NUTS UNIFORMLY.

PROCEDURE FOR REPAIR TYPE 85F

1. PERFORM THIS PROCEDURE ONE BOLT AT A TIME DURING PERIOD OF LOW WIND CONDITIONS. REPLACE ALL BOLTS, NUTS, AND WASHERS AT ALL TRUSS CONNECTIONS AND CHORD SPLICES.
2. REMOVE EXISTING BOLT.
3. CLEAN EXISTING SURFACES AT HEAD AND NUT OF BOLT BY WIRE BRUSHING OR OTHER SUITABLE MEANS TO REMOVE SURFACE CONTAMINANTS.
4. INSTALL NEW BOLT WITH NUT AND WASHERS.
5. PLACE BOLT HEAD ON THE TOP SIDE AND NUT ON THE UNDERSIDE OF CONNECTED PARTS.

PROCEDURE FOR REPAIR TYPE 85H

1. DRILL 2"-DIAMETER HOLE AT SAME LOCATION AS EXISTING HOLE.
2. CLEAR THE HOLE OF DEBRIS INSIDE THE VERTICAL SUPPORT WITH COMPRESSED AIR OR OTHER SUITABLE MEANS.
3. CLEAN ADJACENT SURFACES BY WIRE BRUSHING AND TOUCH-UP REPAIR GALVANIZING AT THE EDGES OF DRAIN HOLE.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 1 THRU 5
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- SEE SPECIAL PROVISIONS FOR EACH REPAIR TYPE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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DRAWN BY	ERK
CHECKED BY	EAT

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

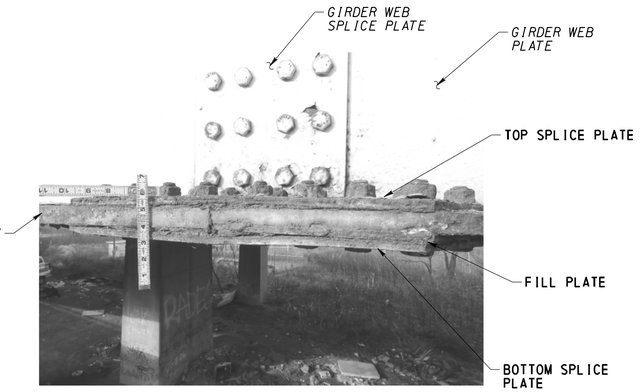
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 85D, 85E, 85F & 85H

RECOMMENDED _____

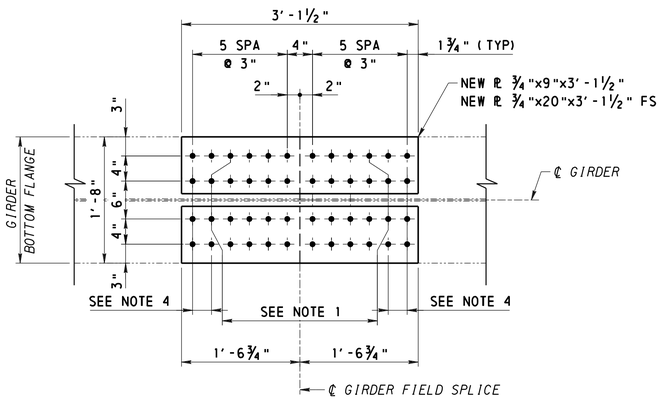
SHEET 122 OF 164

S - 38036



LOCATION REPAIR TYPE 41A

REPLACE GIRDER BOTTOM FLANGE SPLICE PLATES AND BOLTS OF GIRDER G4 ADJACENT FLOORBEAM NO. 2 (SPAN 6)

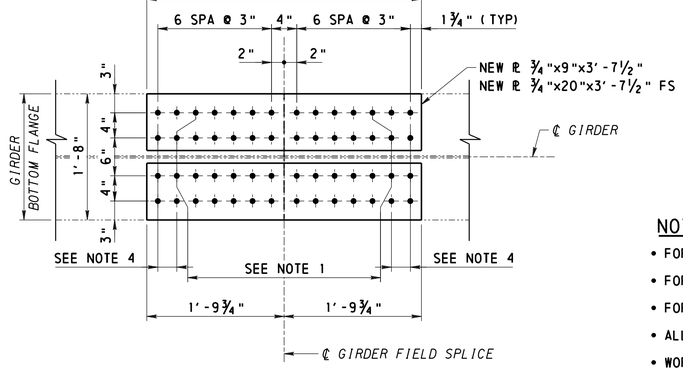


SECTION A-A

NOT TO SCALE

REPAIR TYPE 41A

REPLACE GIRDER BOTTOM FLANGE SPLICE PLATES AND BOLTS

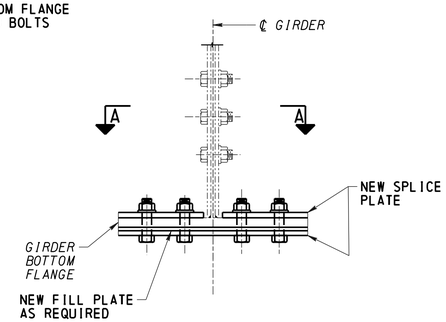


SECTION A-A

NOT TO SCALE

REPAIR TYPE 41B

REPLACE GIRDER BOTTOM FLANGE SPLICE PLATES AND BOLTS



TYPICAL GIRDER BOTTOM FLANGE SECTION AT FIELD SPLICE LOCATION

NOT TO SCALE

REPAIR TYPE 41A

REPAIR TYPE 41B

GIRDER BOTTOM FLANGE SPLICE REPLACEMENT AND GIRDER BOTTOM FLANGE SPLICE SUPPORT - LIVE LOAD RESTRICTIONS

1. PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH APPROVED TRAFFIC CONTROL PLAN.
2. GIRDER SPLICE PLATE REPLACEMENT IS ONLY PERMISSIBLE DURING WEEKEND CLOSURES.
3. CONSTRUCTION LIVE LOAD IS PERMITTED DURING INSTALLATION OF THE GIRDER SPLICE REPLACEMENT BYPASS SYSTEM AND SUPPORT TOWERS.
4. DO NOT PERMIT CONSTRUCTION LIVE LOADS OR EQUIPMENT PARKED IN SPANS 4-7 WITHOUT ALL EXISTING OR NEW SPLICE PLATES INSTALLED. ALL WORK IS TO BE PERFORMED FROM BENEATH THE BRIDGE DURING THE REMOVAL AND INSTALLATION PROCESS.
5. AFTER THE PROPOSED SPLICE PLATES ARE INSTALLED, CONSTRUCTION LIVE LOAD IS PERMITTED DURING THE REMOVAL OF THE GIRDER SPLICE REPLACEMENT BYPASS SYSTEM AND SUPPORT TOWERS.

GIRDER SPLICE REPLACEMENT BYPASS SYSTEM FOR REPAIR TYPES 41A AND 41B PROCEDURE

1. CONCEPTUAL DESIGN OF SPLICE REPLACEMENT BYPASS SYSTEM SHOWN ON PLANS. FINAL GEOMETRY, CLEARANCE FOR CONSTRUCTION AND COORDINATION WITH EXISTING STEEL DETAILING BY CONTRACTOR, SUBMIT SEALED CALCULATIONS FOR FINAL DETAILS INCLUDING ANY CONTRACTOR ALTERNATIVES FOR APPROVAL. ANY ALTERNATIVE MUST BE A REDUNDANT SYSTEM.
2. LOCATE AND FIELD DRILL HOLES IN THE EXISTING GIRDER BOTTOM FLANGE FOR SPLICE REPLACEMENT BYPASS SYSTEM FOR REPAIR 41 CONNECTION.
3. PREPARE SURFACES OF EXISTING GIRDERS TO PROVIDE A CLASS A SLIP COEFFICIENT AT THE LOCATIONS FOR BOLTED CONNECTION OF THE BOTTOM FLANGE SPLICE SUPPORT.
4. INSTALL THE BOTTOM FLANGE SPLICE SUPPORT WITH PASSIVE SUPPORT TOWER AS INDICATED.
5. COMPLETE GIRDER SPLICE REPLACEMENT IN ACCORDANCE WITH PROCEDURE FOR REPAIR TYPES 41A AND 41B.
6. REMOVE THE BOTTOM FLANGE SPLICE SUPPORT AND TOWERS.
7. INSTALL NEW 1" DIAMETER A325 BOLTS AND WASHERS IN ALL OPEN HOLES AND TIGHTEN TO SPECIFICATIONS.
8. TOUCH UP PRIMER AS DIRECTED. PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.

REPAIR TYPES 41A AND 41B PROCEDURE

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. FOLLOWING ABRASIVE BLAST CLEANING OF THE REPAIR AREA REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FIELD MEASURE EXISTING BOTTOM FLANGE SPLICE GAPS TO DETERMINE THE NUMBER AND THICKNESS OF FILL PLATES REQUIRED. PROVIDE FILL PLATES AS REQUIRED BOTH ABOVE AND BELOW THE FLANGE DUE TO VERTICAL MISALIGNMENT OF THE FLANGES. THE REQUIRED FILL PLATES MAY VARY IN NUMBER AND THICKNESS FROM THE EXISTING FILL PLATES. PROVIDE FILL PLATES SUCH THAT THE VERTICAL DIFFERENCE ACROSS THE SPLICE IS LESS THAN 1/16". THE REPRESENTATIVE SHALL APPROVE THE FILL PLATES BEFORE THE SPLICE REPLACEMENT IS INSTALLED.
4. AT LOCATIONS WHERE A TRANSVERSE STIFFENER EXISTS WITHIN THE LIMITS OF THE BOTTOM FLANGE SPLICE, FIELD MEASURE THE CLEARANCE BETWEEN THE TRANSVERSE STIFFENER AND THE BOTTOM FLANGE. IF SUFFICIENT CLEARANCE FOR THE NEW SPLICE PLATE DOES NOT EXIST, PROVIDE A REPAIR PROCEDURE FOR REVIEW AND APPROVAL FROM THE REPRESENTATIVE. COMPLETE TRIMMING OF THE STIFFENER BEFORE PROCEEDING WITH GIRDER SPLICE REPLACEMENT.
5. INSTALL GIRDER SPLICE REPLACEMENT BYPASS SYSTEM FOR REPAIR 41 IN ACCORDANCE WITH PROCEDURE FOR BYPASS SYSTEM FOR REPAIR TYPES 41A AND 41B.
6. LOOSEN ALL GIRDER BOTTOM FLANGE SPLICE BOLT NUTS AND REMOVE NUTS PRIOR TO REMOVING BOLTS.
7. REMOVE EXISTING BOTTOM FLANGE SPLICE PLATES, FILL PLATES, AND BOLTS.
8. CLEAN BOTTOM FLANGE IN THE AREA OF THE REPAIR IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
9. FIELD DRILL BOLT HOLES IN NEW SPLICE PLATES AND FILL PLATES USING THE EXISTING SPLICE PLATES AS A TEMPLATE. FIELD DRILL ADDITIONAL BOLT HOLES IN NEW SPLICE PLATES AND FILL PLATES AS INDICATED.
10. FIELD DRILL NEW BOLT HOLES IN GIRDER BOTTOM FLANGE USING THE NEW SPLICE PLATES AS A TEMPLATE.
11. FILL ALL CORROSION CRATERS OR PITTING IN THE FAYING AREAS OF THE GIRDER BOTTOM FLANGE WITH AN EPOXY ADHESIVE ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.
12. REMOVE EXCESS EPOXY ADHESIVE FROM AROUND CRATERS AND PITS, SO THAT THE EPOXY IS LEVEL WITH THE FLANGE SURFACE AND ONLY OCCUPIES THE PITS AND CRATERS.
13. PRIME THE FAYING SURFACES OF THE GIRDER AND SPLICE PLATES IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
14. INSTALL FILL PLATES, SPLICE PLATES, AND BOLTS.
15. REMOVE SPLICE REPLACEMENT BYPASS SYSTEM FOR REPAIR 41 IN ACCORDANCE WITH PROCEDURE FOR SUPPORT FOR REPAIRS 41A AND 41B.
16. FINISH PAINTING NEW SPLICE PLATES AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS. CAULK THE GAP ON THE SIDES OF THE GIRDER BOTTOM FLANGE BETWEEN THE FILL PLATES AND FLANGE TRANSITIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 25 & 26
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- WORK THIS SHEET WITH SHEET 124

NOTE 1

- 15/16" Ø HOLES FOR 7/8" A325 HS BOLTS MATCH EXISTING BOLT PATTERN. VERIFY SPACING SHOWN

NOTE 4

- FIELD DRILL 15/16" Ø HOLES FOR 7/8" Ø A325 HS BOLTS THRU EXISTING FLANGE PLATE USING NEW SPLICE PLATE AS TEMPLATE

LEGEND

FS FAR SIDE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 41A & 41B DETAILS 1

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

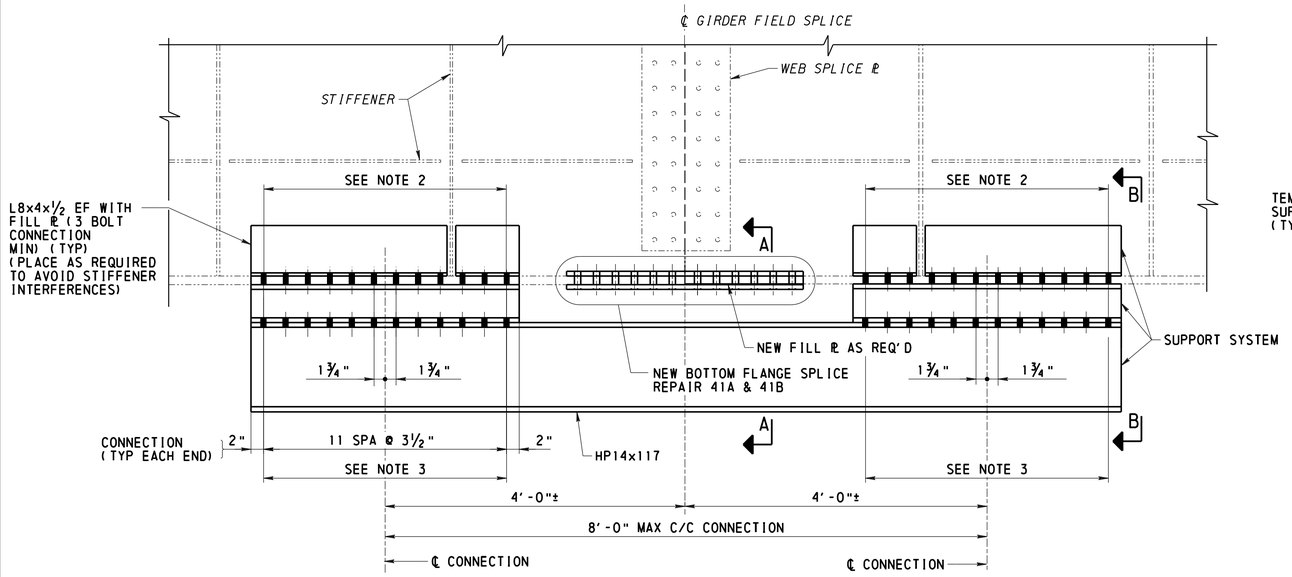
RECOMMENDED _____

SHEET 123 OF 164

S - 38036

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	CMB

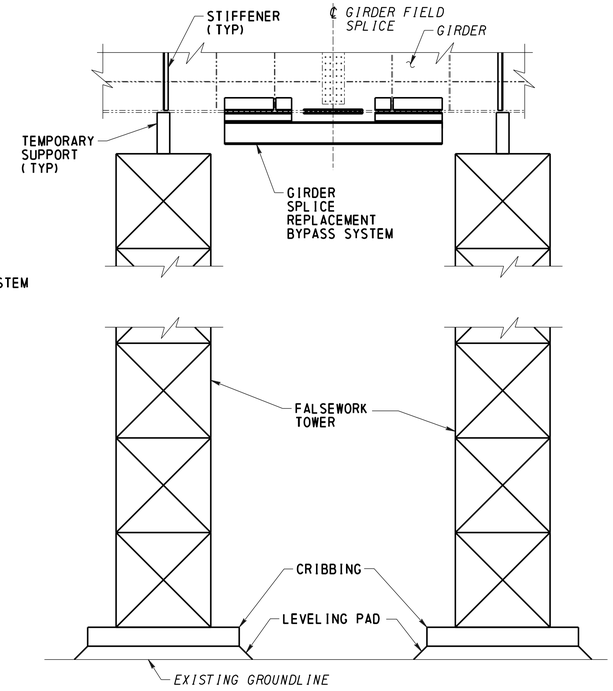
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ELEVATION-GIRDER SPLICE REPLACEMENT BYPASS SYSTEM FOR REPAIR 41

NOT TO SCALE

(INCIDENTAL TO SPLICE REPLACEMENT FOR REPAIR 41A AND 41B)



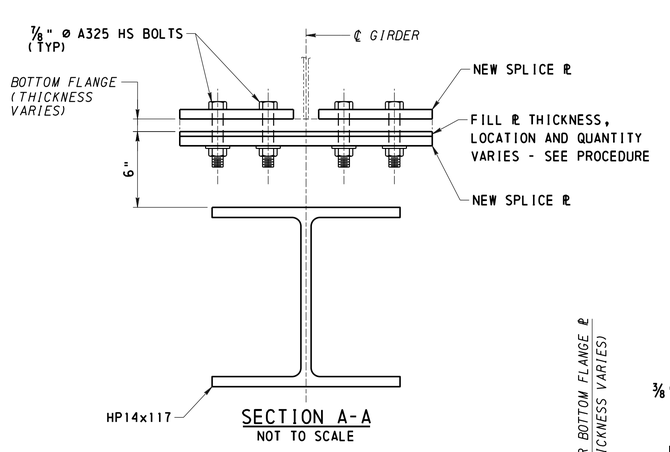
SUPPORT TOWER

NOT TO SCALE

(INCIDENTAL TO SPLICE REPLACEMENT FOR REPAIR 41A AND 41B)

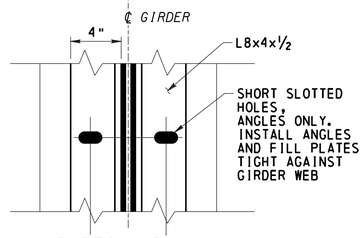
UNFACTORED TOWER SUPPORT LOADS (KIPS)		
LOCATION		LOAD
FS1 (G1)	STA BK	116
	STA AHD	50
FS2 (G1)	STA BK	50
	STA AHD	172
FS3 (G1)	STA BK	172
	STA AHD	50
FS4 (G1)	STA BK	50
	STA AHD	175
FS5 (G1)	STA BK	54
	STA AHD	148
FS6 (G4)	STA BK	65
	STA AHD	165
FS7 (G4)	STA BK	165
	STA AHD	65
FS8 (G4)	STA BK	65
	STA AHD	165
FS9 (G4)	STA BK	165
	STA AHD	65
FS10 (G4)	STA BK	54
	STA AHD	86

NOTES:
BK - BACK
AHD - AHEAD

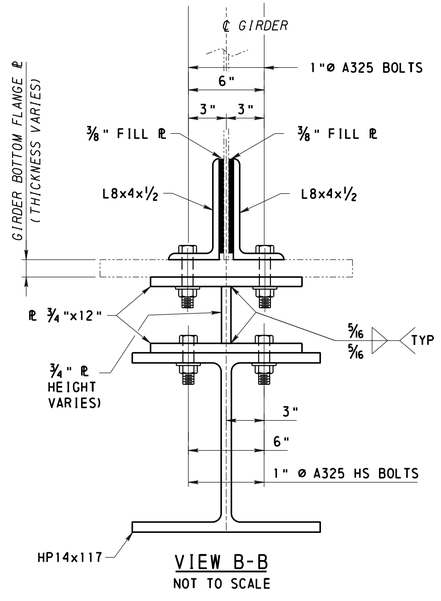


SECTION A-A

NOT TO SCALE



PARTIAL PLAN



VIEW B-B

NOT TO SCALE

UNFACTORED FIELD SPLICE FORCES				
LOCATION	MOMENT, K-FT		SHEAR, K	
	DL	LL+I	DL	LL+I
FS1 (G1)	-1405.7	-1554.5	171.5	108.8
FS2 (G1)	-1019.2	-1175.9	183.5	100.9
FS3 (G1)	-650.7	-1391.9	176.5	106.6
FS4 (G1)	-656.1	-1346.8	178.3	96.2
FS5 (G1)	-458.8	-1679.5	199.8	77.9
FS6 (G4)	-245	-843	159.2	92.9
FS7 (G4)	-1348	-1448	184.2	91.6
FS8 (G4)	-1289.9	-1456.2	186.3	91.6
FS9 (G4)	132	1183.3	157	92.1
FS10 (G4)	-214.9	-1308.4	116.9	81.5

NOTE

- WORK THIS SHEET WITH SHEET 123

NOTE 2

- FIELD DRILL 1 1/16" ø HOLES FOR 1" ø A325 HS BOLTS THRU EXISTING FLANGE PLATE

NOTE 3

- 1 1/16" ø HOLES FOR 1" ø A325 HS BOLTS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 41A & 41B DETAILS 2

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 039027-E

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	CMB

RECOMMENDED _____

SHEET 124 OF 164

S - 38036



LOCATION REPAIR TYPE 42

PHOTO OF STRINGER TO FLOORBEAM CONNECTION
AT STRINGERS S5 AND S6 ABOVE PIER 11, SPAN 11.

REPAIR TYPE 42

INSTALL SHIM PLATES BETWEEN
STRINGER-TO-FLOORBEAM BEARING AREA GAP

PROCEDURE FOR REPAIR TYPE 42

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD AND JACKING PROCEDURE TO THE ENGINEER FOR APPROVAL.
2. COORDINATE REPAIR WITH WEEKEND CLOSURE, THE PHASING OF BEARING REPLACEMENTS, EXPANSION DAMS GLAND REPLACEMENTS, AND GIRDER FIELD SPLICE REPAIRS.
3. AFTER REPAIR AREA HAS BEEN BLAST CLEANED AND PRIMER PAINTED, MEASURE THE GAPS BETWEEN THE STRINGER BOTTOM FLANGE AND FLOORBEAM TOP FLANGE TO ASSURE THAT THE NEW SHIM PLATE IS FABRICATED TO BEAR ON ALL SURFACES.
4. TEMPORARILY JACK AND SUPPORT EXISTING STRINGER.
5. REMOVE ALL CORROSION PRODUCTS FROM BOTTOM OF STRINGER BOTTOM FLANGE FLOORBEAM TOP FLANGE AND PREPARE AREA FOR PRIMER PAINT.
6. PRIMER PAINT THE REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.
7. INSTALL NEW SHIM PLATE AND NEW ANCHOR BOLTS, WASHERS (AS DETAILED), AND NUTS. FIRST NUT TO BE FINGER TIGHT. INSTALL NEW ANCHOR BOLTS: (FIELD DRILL SHIM AS REQUIRED TO FACILITATE ANCHOR BOLT REPLACEMENT).
8. USE SECOND NUT AS A JAM NUT, PUNCH THE BOLT THREADS AFTER NUT HAS BEEN TIGHTENED.
9. PAINT COMPLETE REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS AND REPAIR TYPE 90.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEET 30
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	CMB
DRAWN BY	ERK
CHECKED BY	CMB

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

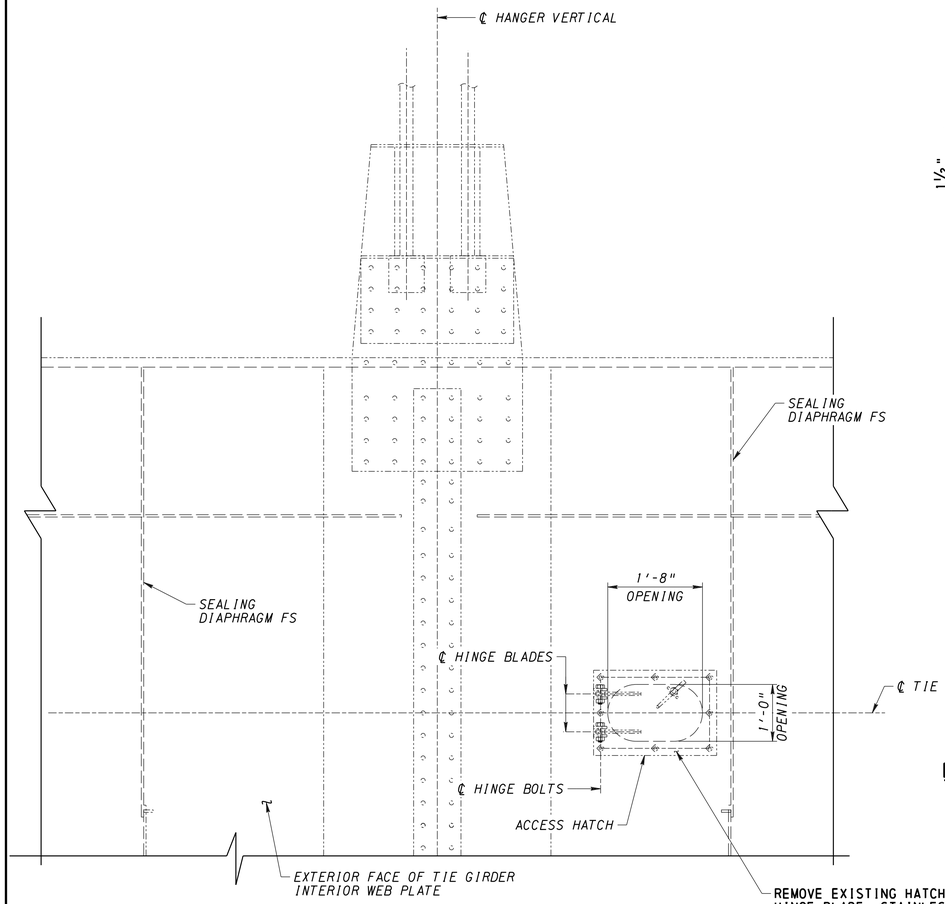
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 42

RECOMMENDED _____

SHEET 125 OF 164

S - 38036



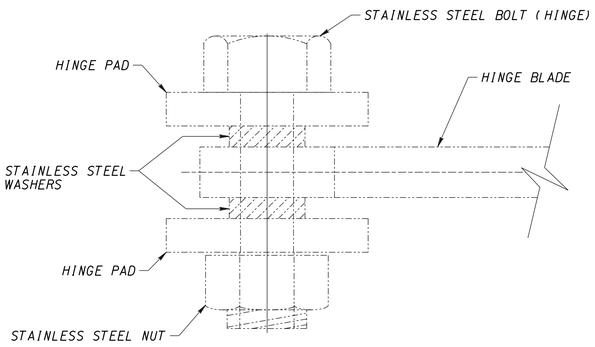
EXISTING TIE GIRDER - PARTIAL ELEVATION

NOT TO SCALE

EXISTING ACCESS HATCH AT TIE GIRDER SHOWN,
EXISTING ACCESS HATCH DETAILS AT ARCH RIB SIMILAR

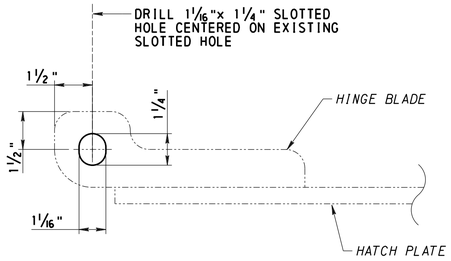
REPAIR TYPE 44A

MODIFY EXISTING ACCESS HATCH COVER ON TIE GIRDER
(MODIFY EXISTING HATCH COVER BY ENLARGING HOLE IN HINGE BLADE AND INSTALLING DELRIN BUSHINGS IN HINGE, WEATHER SEAL, LUBRICATE STAINLESS STEEL HINGE BOLTS AND TRIM CAST BRONZE DOOR LATCH. MODIFY ACCESS HATCH COVER TO PROVIDE A WATER TIGHT FIT BETWEEN THE HATCH AND BASE PLATE)



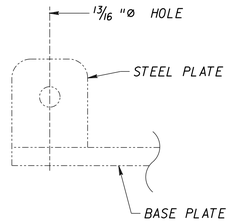
EXISTING HINGE ASSEMBLY

NOT TO SCALE



MODIFIED EXISTING HINGE BLADE DETAIL

NOT TO SCALE
SLOTTED HOLES ENLARGED TO 1 1/16"x1 1/4"



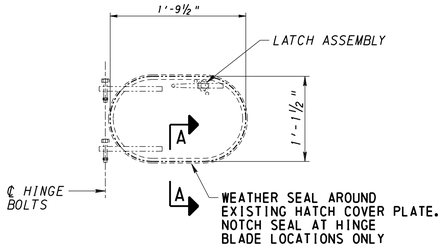
EXISTING HINGE PAD DETAIL

NOT TO SCALE



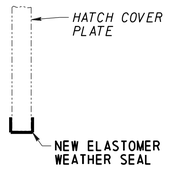
EXISTING HATCH COVER AND BRONZE DOOR LATCH TO BE TRIMMED AND FINISHED

NOT TO SCALE



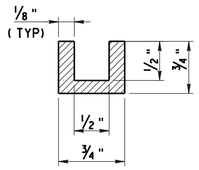
EXISTING HATCH COVER WITH NEW SEAL

NOT TO SCALE



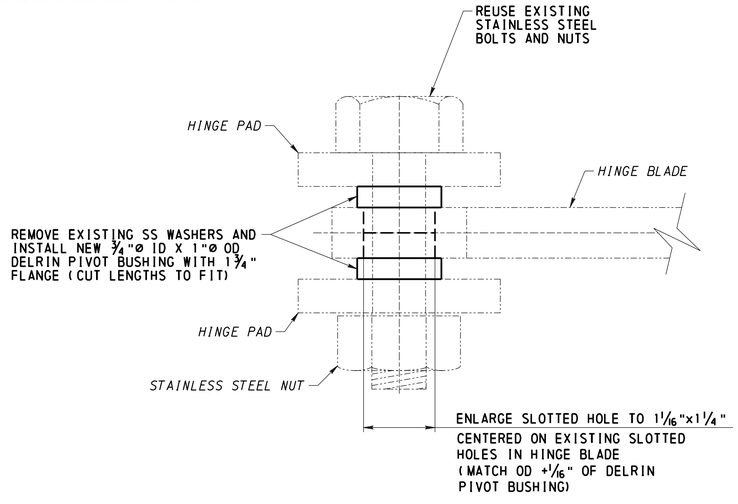
SECTION A-A

NOT TO SCALE



NEW WEATHER SEAL

NOT TO SCALE



MODIFIED HINGE ASSEMBLY WITH NEW PIVOT BUSHINGS

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 37 AND 38
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- SEE SHEET 127 FOR REPAIR PROCEDURE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 44A

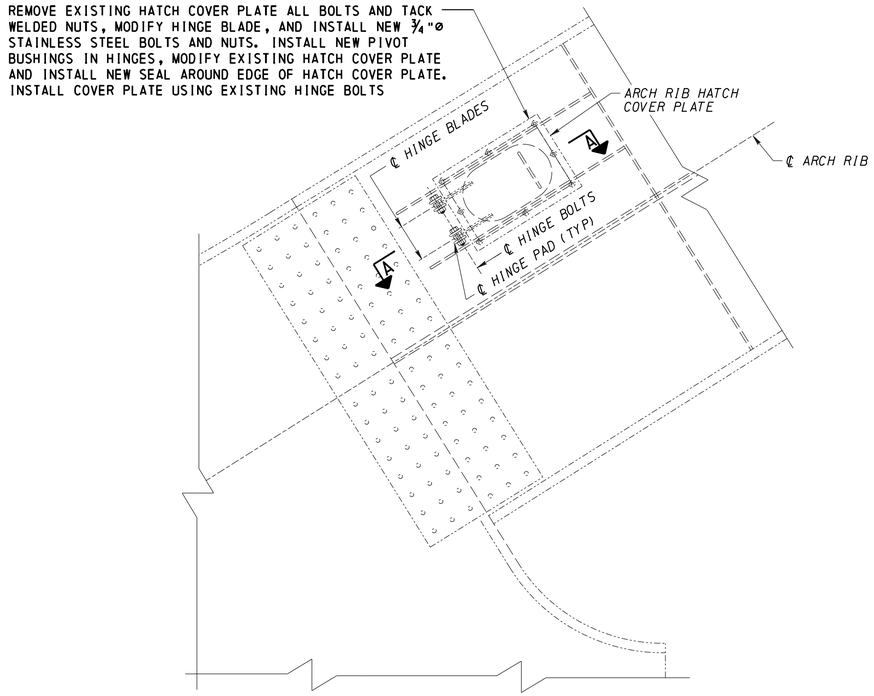
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 126 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

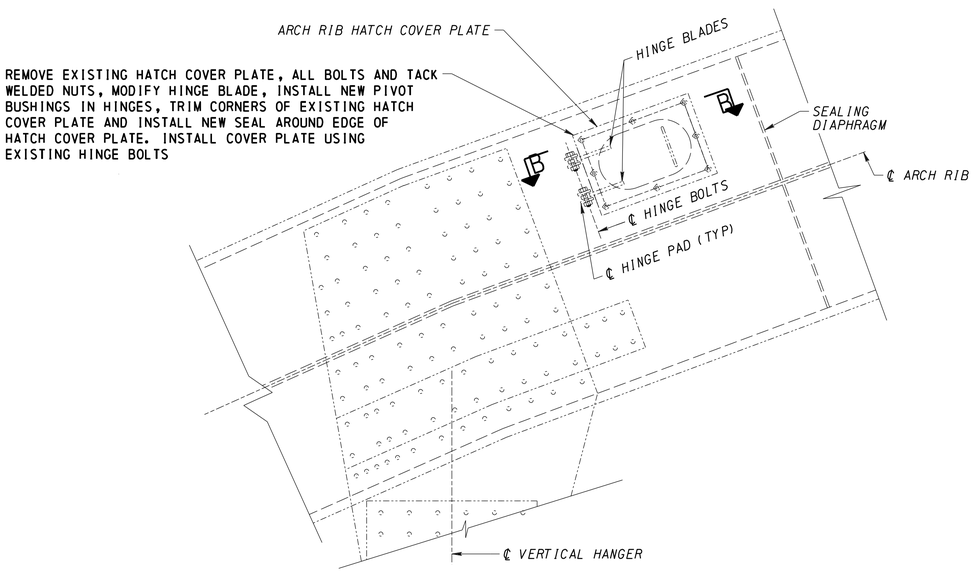


EXISTING ARCH RIB - PARTIAL ELEVATION

NOT TO SCALE

REPAIR TYPE 44C

MODIFY EXISTING ACCES HATCH COVER ON ARCH RIB
(MODIFY EXISTING HATCH COVER BY MODIFYING HOLE IN HINGE BLADE, INSTALLING DELRIN BUSHINGS IN HINGE, INSTALL WEATHER SEAL, AND LUBRICATE STAINLESS STEEL HINGE BOLTS. MODIFY ACCESS HATCH COVER TO PROVIDE A WATER TIGHT FIT BETWEEN THE HATCH AND BASE PLATE AND ARCH RIB)



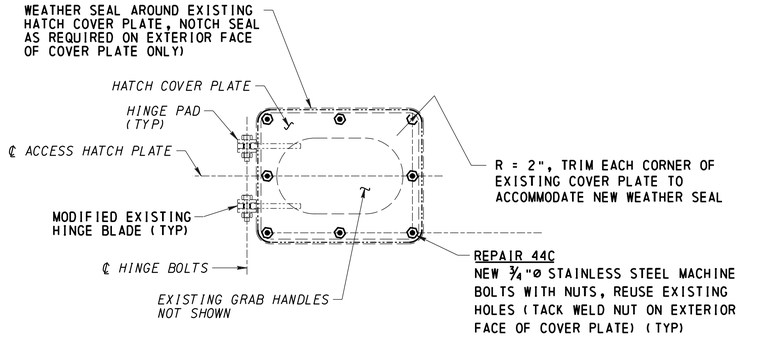
EXISTING UPSTREAM ARCH RIB - PARTIAL DOWNSTREAM ELEVATION

NOT TO SCALE

REPAIR TYPE 44D

MODIFY EXISTING ACCESS HATCH COVER ON ARCH RIB
(MODIFY EXISTING HATCH COVER PLATE AND HINGE BLADE, CLIP CORNERS OF COVER PLATE AND INSTALL NEW WEATHER SEAL, INSTALL WITH EXISTING BOLTS, NUTS AND WASHERS, LUBRICATE HINGE BOLTS. MODIFY ACCESS HATCH COVER TO PROVIDE A WATER TIGHT FIT BETWEEN THE HATCH AND BASE PLATE AND ARCH RIB.)

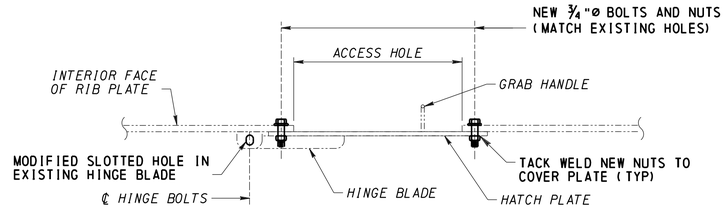
DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



MODIFIED EXISTING HATCH COVER PLATE

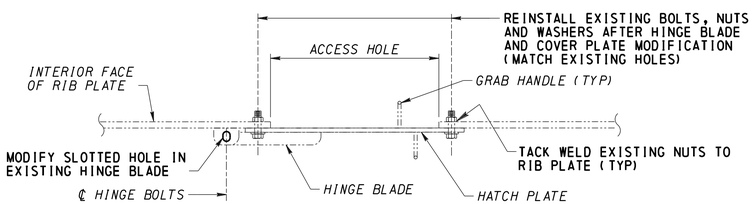
NOT TO SCALE

REPAIR 44C AS SHOWN, REPAIR 44D AS NOTED



SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 44A, 44C, AND 44D

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. TEMPORARILY SUPPORT EXISTING HATCH COVER PRIOR TO REMOVING HINGES.
3. FOLLOWING ABBRASIVE BLAST CLEANING REMOVE EXISTING HATCH COVER AND MODIFY HINDGE BLADES AND INSTALL NEW PIVOT BUSHINGS AS DETAILED.
4. MECHANICALLY REMOVE ADDITIONAL PAINT AS REQUIRED AND PREPARE SURFACES WHERE NEW STEEL HATCH COVER AND BOLTS WILL BE ATTACHED. APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
5. INSTALL NEW PRIMER PAINTED HATCH COVER BASE PLATE AND SEAL AROUND EDGES WITH APPROVED CAULKING.
6. PAINT NEW HATCH COVER BASE PLATE AND SURROUNDING WORK AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. INSTALL NEW PAINTED HATCH COVER AND WEATHER SEAL.
8. ADJUST OR MODIFY THE LATCH AND HINGE AS REQUIRED TO PROVIDE A WATER TIGHT SEAL AROUND THE HATCH COVER BY COMPRESSING THE WEATHER SEAL.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 37 AND 38
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR MODIFIED HINGE BLADE DETAIL, EXISTING HINGE PAD DETAIL, MODIFIED HINGE ASSEMBLY DETAILS AND NEW WEATHER SEAL SEE REPAIR TYPE 44A SHEET 126

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

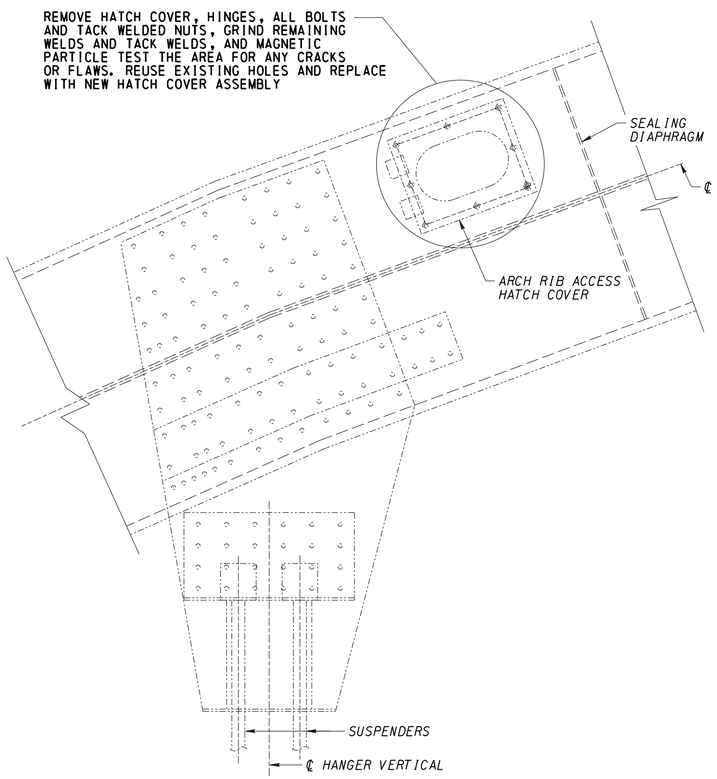
REPAIR TYPES 44C & 44D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

RECOMMENDED _____

SHEET 127 OF 164

S - 38036

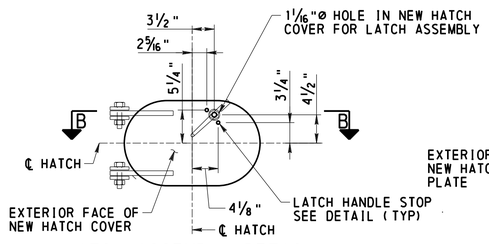


EXISTING UPSTREAM ARCH RIB - PARTIAL DOWNSTREAM ELEVATION

NOT TO SCALE

REPAIR TYPE 45A

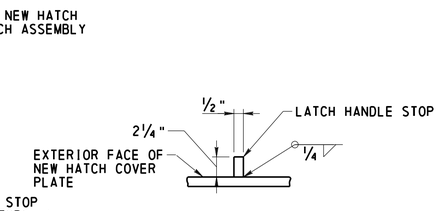
REPLACE EXISTING ACCESS HATCH COVER ON ARCH RIB WITH NEW HATCH COVER SECURED BY LATCH ASSEMBLY (FABRICATE HATCH COVER AND BASE PLATE TO PROVIDE A WATER TIGHT FIT BETWEEN THE ARCH RIB AND THE BASE PLATE AND THE ARCH RIB WEB PLATE)



LATCH ASSEMBLY DETAIL

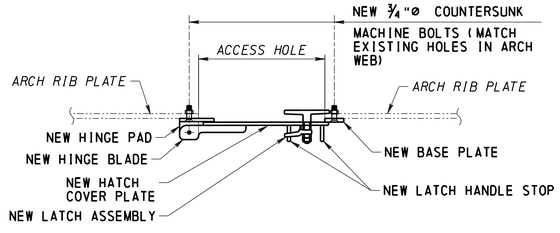
NOT TO SCALE

DOVER MARINE MFG - WATERTIGHT DOOR DOG WTD-3405 OR APPROVED EQUAL



LATCH HANDLE STOP DETAIL

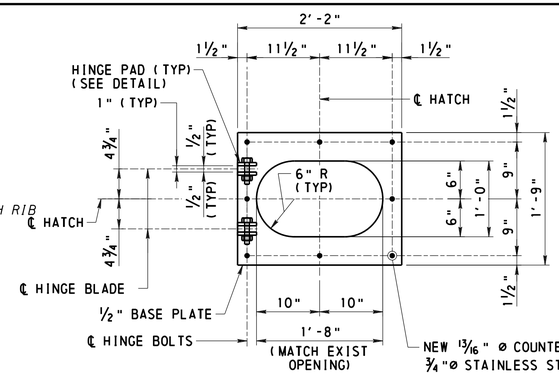
NOT TO SCALE



SECTION B-B

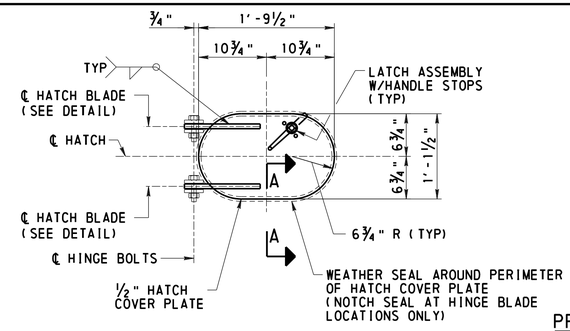
NOT TO SCALE

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



NEW BASE PLATE

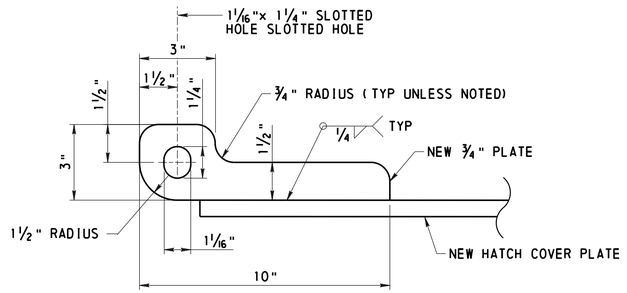
NOT TO SCALE



NEW HATCH COVER

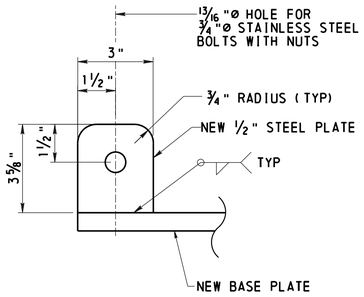
NOT TO SCALE

POSITION LATCH STOPS SO HATCH COVER REMAINS SECURE



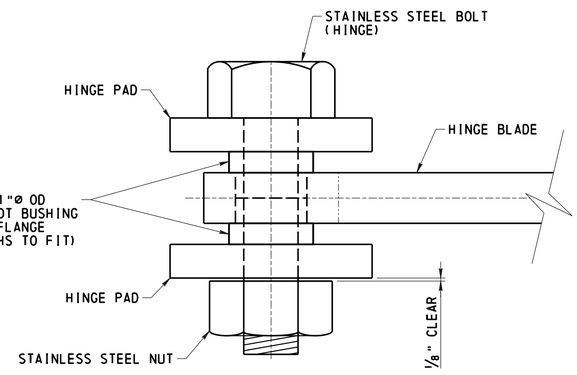
HINGE BLADE DETAIL

NOT TO SCALE



HINGE PAD DETAIL

NOT TO SCALE

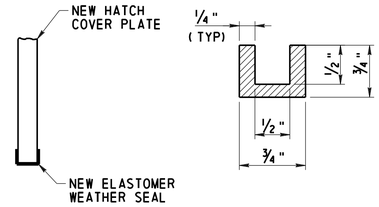


NEW HINGE ASSEMBLY WITH PIVOT BUSHINGS

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 37 AND 38
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED



SECTION A-A

NOT TO SCALE

NEW WEATHER SEAL

NOT TO SCALE

PROCEDURE FOR REPAIR TYPES 45A, 45B, AND 45D

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. TEMPORARILY SUPPORT EXISTING HATCH COVER PRIOR TO REMOVING HINGES.
3. FOLLOWING ABRASIVE BLAST CLEANING REMOVE EXISTING HINGES AND NUTS FOR HATCH COVER BOLTS BY GRINDING EXISTING WELDS. DO NOT GOUGE OR GRIND INTO ARCH RIB WEB PLATE.
4. AFTER REMOVING EXISTING HINGES, HATCH COVER, AND NUTS GRIND SURFACES OF ARCH RIB WEB PLATE SMOOTH TO ELIMINATE ANY IMPERFECTIONS FROM GRINDING OPERATIONS AT HINGE AND NUT LOCATIONS.
5. ENLARGE EXISTING 13/16" DIAMETER HATCH COVER BOLT HOLES IN EXISTING ARCH RIB WEB PLATE TO A ⅞" DIAMETER HOLE BY DRILLING TO REMOVE ANY EXISTING GROOVES OR RIDGES.
6. GRIND A ⅛" RADIUS INTO EDGES OF ALL DRILLED HOLES AND MANHOLE CUT OUT IN ARCH RIB WEB PLATE.
7. PERFORM FINAL SURFACE FINISHING OF ALL GROUND AND DRILLED SURFACES WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
8. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON ALL ARCH RIB WEB PLATE SURFACES WHERE WELD MATERIAL FOR HINGES AND NUTS HAVE BEEN REMOVED, AROUND ALL BOLT HOLES AND AROUND MANHOLE CUT OUT IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY FLAWS OR INDICATIONS FOUND.
9. MECHANICALLY REMOVE ADDITIONAL PAINT AS REQUIRED AND PREPARE SURFACES OF ARCH RIB WEB WHERE NEW STEEL HATCH COVER AND BOLTS WILL BE ATTACHED. APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
10. INSTALL NEW PRIMER PAINTED HATCH COVER BASE PLATE AND SEAL AROUND EDGES WITH APPROVED CAULKING.
11. PAINT NEW HATCH COVER BASE PLATE AND SURROUNDING WORK AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.
12. INSTALL NEW PAINTED HATCH COVER AND WEATHER SEAL.
13. ADJUST OR MODIFY THE LATCH AND HINGE AS REQUIRED TO PROVIDE A WATER TIGHT SEAL AROUND THE HATCH COVER BY COMPRESSING THE WEATHER SEAL.

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

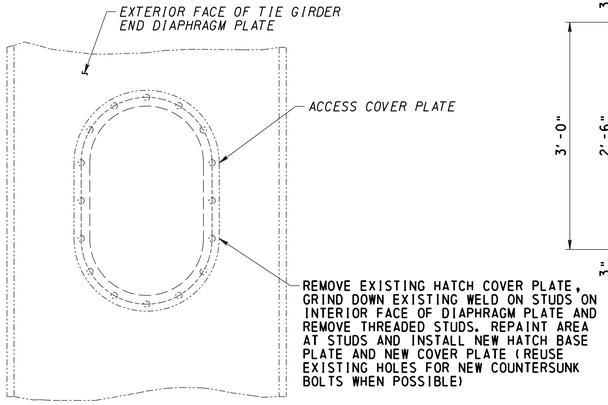
REPAIR TYPE 45A

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

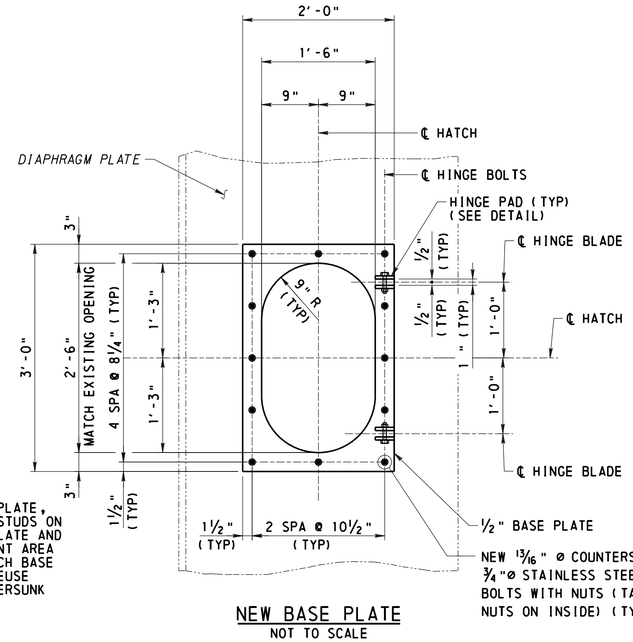
SHEET 128 OF 164

S - 38036



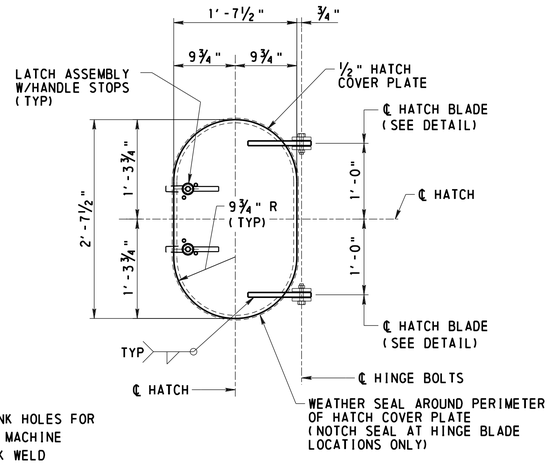
EXISTING TIE GIRDER PARTIAL END ELEVATION

NOT TO SCALE



NEW BASE PLATE

NOT TO SCALE



NEW HATCH COVER

NOT TO SCALE

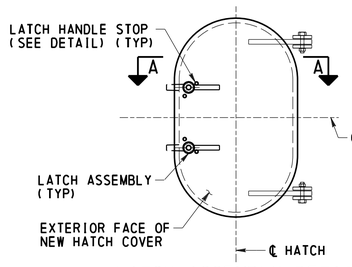
POSITION HANDLE STOPS SO HATCH COVER REMAINS SECURE

NOTE

- PLACE HINGES OPPOSITE ROADWAY SIDE OF TIE GIRDER WHEN FACING FROM EXTERIOR OF TIE GIRDER

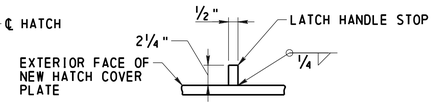
REPAIR TYPE 45B

REPLACE EXISTING ACCESS HATCH COVER AT END OF TIE GIRDER WITH NEW HATCH COVER SECURED BY LATCH ASSEMBLY (FABRICATE THE BASE PLATE AND HATCH COVER TO PROVIDE A WATER TIGHT SEAL BETWEEN THE BASE PLATE AND HATCH COVER AND TIE-GIRDER END PLATE)



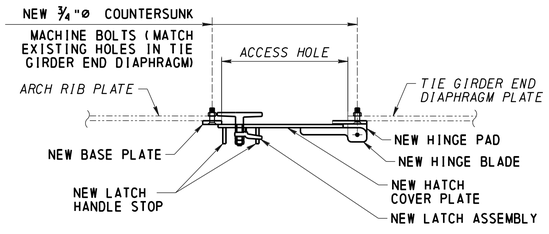
LATCH ASSEMBLY DETAIL

NOT TO SCALE



LATCH HANDLE STOP DETAIL

NOT TO SCALE



SECTION A-A

NOT TO SCALE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 37 AND 38
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR HINGE BLADE DETAIL, HINGE PAD DETAIL, NEW HINGE ASSEMBLE WITH PIVOT BUSHINGS, AND NEW WEATHER SEAL SEE REPAIR TYPE 45A SHEET 128
- SEE SHEET 128 FOR REPAIR PROCEDURE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

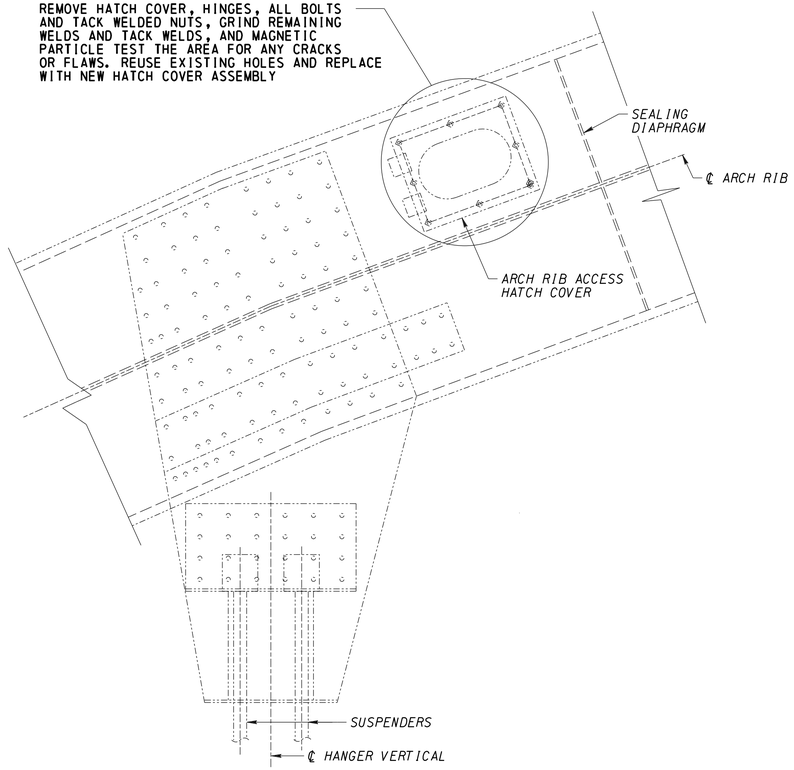
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 45B

RECOMMENDED _____

SHEET 129 OF 164

S - 38036

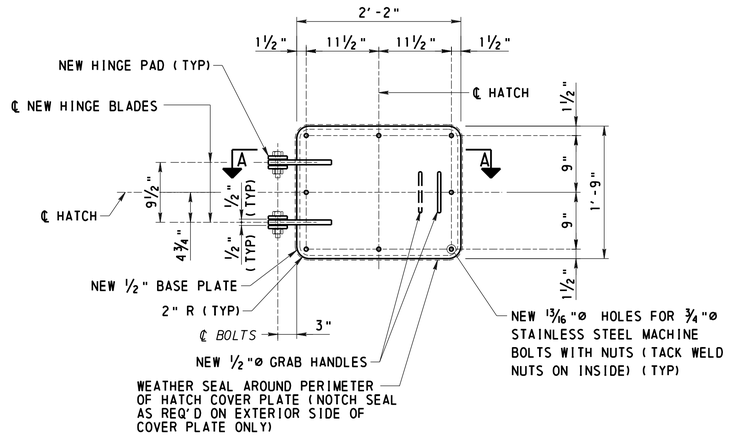


EXISTING UPSTREAM ARCH RIB - PARTIAL DOWNSTREAM ELEVATION

NOT TO SCALE

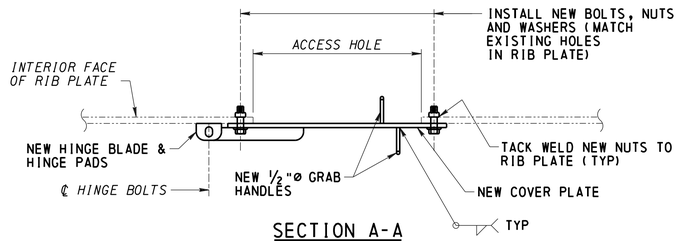
REPAIR TYPE 45C

REPLACE EXISTING ACCESS HATCH COVER ON ARCH RIB WITH NEW HATCH COVER SECURED BY BOLTS



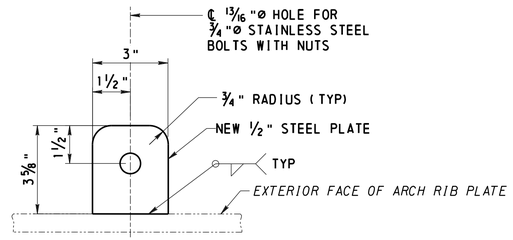
NEW HATCH COVER PLATE

NOT TO SCALE



SECTION A-A

NOT TO SCALE



NEW HINGE PAD DETAIL

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 45C

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. TEMPORARILY SUPPORT EXISTING HATCH COVER PRIOR TO REMOVING HINGES.
3. FOLLOWING ABRASIVE BLAST CLEANING REMOVE EXISTING HINGES AND NUTS FOR HATCH COVER BOLTS BY GRINDING EXISTING WELDS. DO NOT GOUGE OR GRIND INTO ARCH RIB WEB PLATE.
4. AFTER REMOVING EXISTING HINGES, HATCH COVER, AND NUTS GRIND SURFACES OF ARCH RIB WEB PLATE SMOOTH TO ELIMINATE ANY IMPERFECTIONS FROM GRINDING OPERATIONS AT HINGE AND NUT LOCATIONS.
5. ENLARGE EXISTING 13/16" DIAMETER HATCH COVER BOLT HOLES IN EXISTING ARCH RIB WEB PLATE TO A ⅞" DIAMETER HOLE BY DRILLING TO REMOVE ANY EXISTING GROOVES OR RIDGES.
6. GRIND A ⅛" RADIUS INTO EDGES OF ALL DRILLED HOLES AND MANHOLE CUT OUT IN ARCH RIB WEB PLATE.
7. PERFORM FINAL SURFACE FINISHING OF ALL GROUND AND DRILLED SURFACES WITH A STONE WHEEL AND REMOVE ALL REMAINING IMPERFECTIONS WITH A SANDPAPER TYPE FLAPPER WHEEL WITH GRIT ROUGHNESS NOT ROUGHER THAN GRADE 120 TO ACHIEVE A SMOOTH SURFACE. ALL GRINDING IS TO BE COMPLETED PARALLEL TO THE DIRECTION OF PRIMARY STRESSES IN THE MEMBER.
8. PERFORM MAGNETIC-PARTICLE NON-DESTRUCTIVE TESTING ON ALL ARCH RIB WEB PLATE SURFACES WHERE WELD MATERIAL FOR HINGES AND NUTS HAVE BEEN REMOVED, AROUND ALL BOLT HOLES AND AROUND MANHOLE CUT OUT IN ACCORDANCE WITH THE SPECIAL PROVISIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY FLAWS OR INDICATIONS FOUND.
9. MECHANICALLY REMOVE ADDITIONAL PAINT AS REQUIRED AND PREPARE SURFACES OF ARCH RIB WEB WHERE NEW STEEL HATCH COVER AND BOLTS WILL BE ATTACHED. APPLY PRIMER IN ACCORDANCE WITH SPECIAL PROVISIONS.
10. INSTALL NEW PRIMER PAINTED HATCH COVER AND HINGES, AND INSTALL WEATHER SEAL AROUND EDGES OF HATCH COVER.
11. PAINT NEW HATCH COVER HINGES AND SURROUNDING WORK AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 37 AND 38
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR HINGE BLADE DETAIL, NEW HINGE ASSEMBLY WITH PIVOT BUSHINGS, AND NEW WEATHER SEAL SEE REPAIR TYPE 45A SHEET 128

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

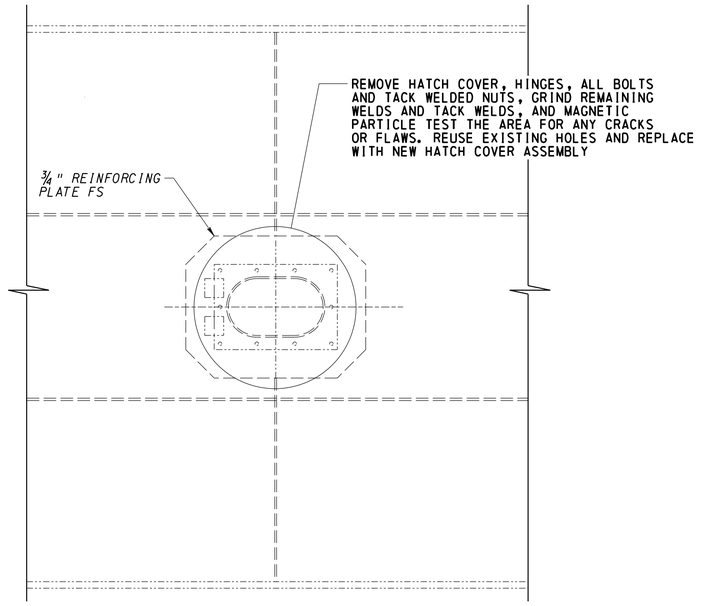
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 45C

RECOMMENDED _____

SHEET 130 OF 164

S - 38036

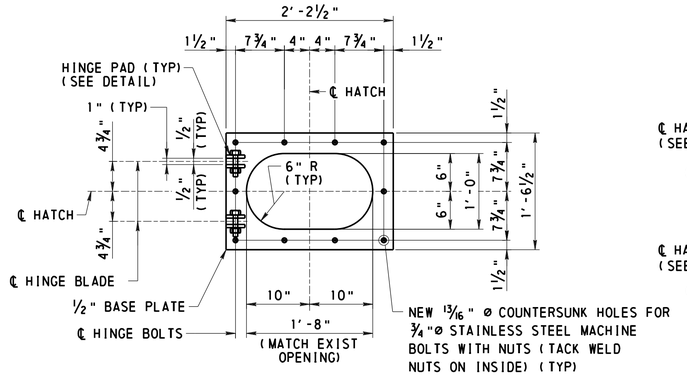


EXISTING END FLOORBEAM - PARTIAL ELEVATION

FLOORBEAM FB0 - LOOKING STATION BACK SHOWN,
FLOORBEAM FB15 - LOOKING STATION AHEAD SIMILAR
NOT TO SCALE

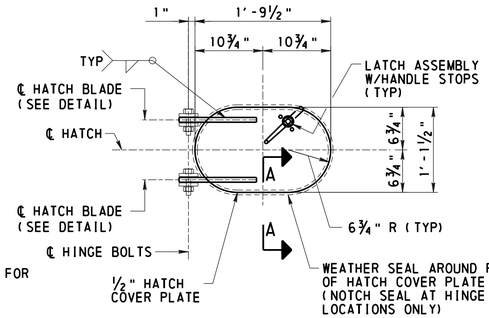
REPAIR TYPE 45D

REPLACE EXISTING ACCESS HATCH COVER ON END FLOORBEAM WITH NEW HATCH COVER SECURED BY LATCH ASSEMBLY (FABRICATE ACCESS HATCH COVER AND BASE PLATE TO PRODUCE A WATER TIGHT SEAL BETWEEN BASE PLATE AND ACCESS HATCH AND FLOORBEAM WEB PLATE)



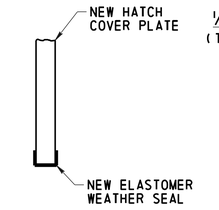
NEW BASE PLATE

NOT TO SCALE



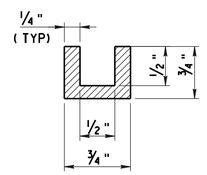
NEW HATCH COVER

NOT TO SCALE
POSITION LATCH STOPS SO HATCH COVER REMAINS SECURE



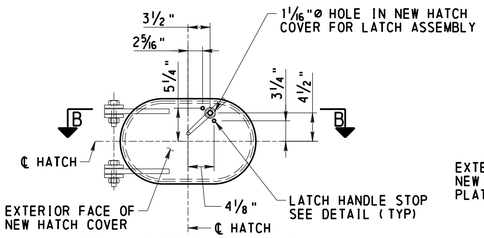
SECTION A-A

NOT TO SCALE



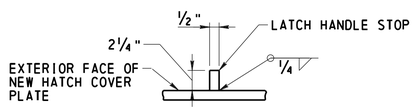
NEW WEATHER SEAL

NOT TO SCALE



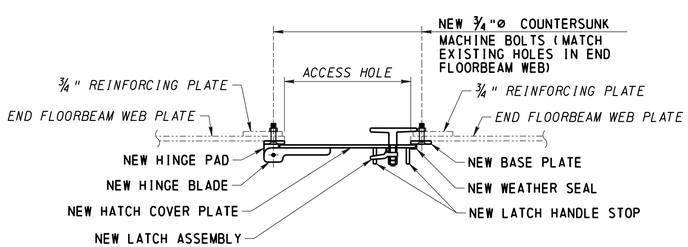
LATCH ASSEMBLY DETAIL

NOT TO SCALE
DOVER MARINE MFG - WATERTIGHT DOOR DOG WTD-3405 OR APPROVED EQUAL



LATCH HANDLE STOP DETAIL

NOT TO SCALE



SECTION B-B

NOT TO SCALE

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 49 AND 50
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR HINGE BLADE DETAIL, HINGE PAD DETAIL, AND NEW HINGE ASSEMBLY WITH PIVOT BUSHINGS, SEE REPAIR TYPE 45A SHEET 128
- FOR PROCEDURE SEE SHEET 128

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

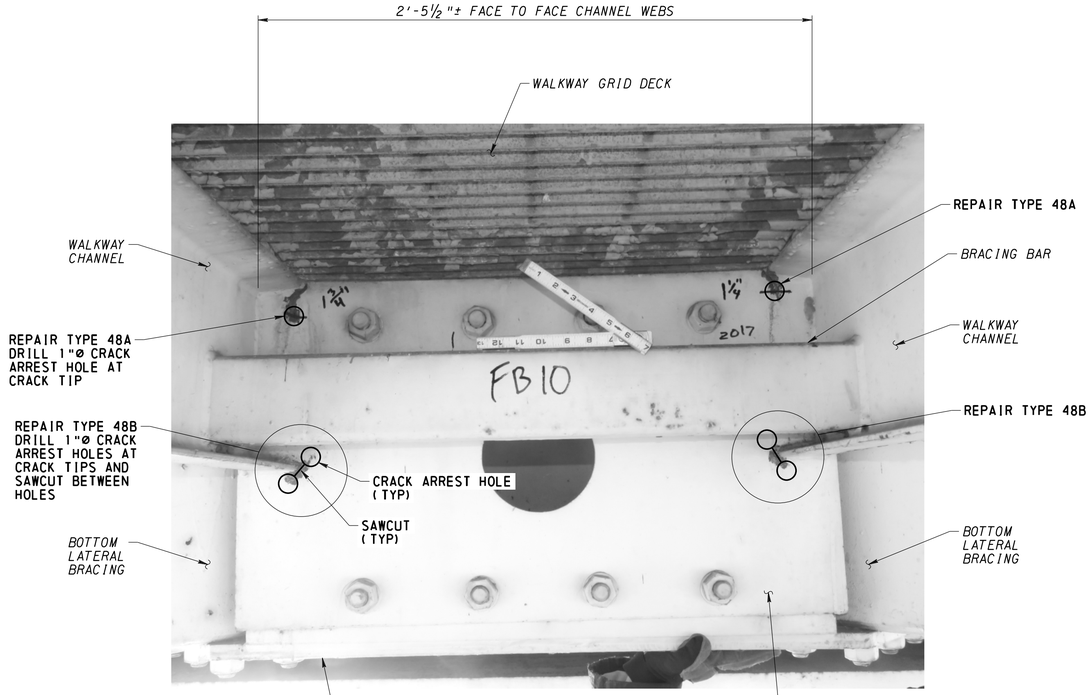
REPAIR TYPE 45D

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 131 OF 164

S - 38036



LOCATIONS OF REPAIR TYPES 48A AND 48B

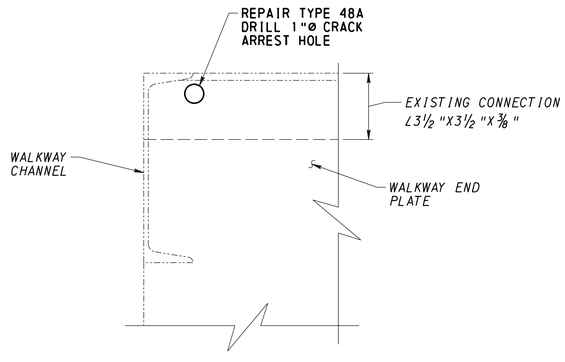
INSPECTION WALKWAY END PLATE BELOW FLOORBEAM NO. 10
SPAN 21
OTHER LOCATIONS SIMILAR

REPAIR TYPE 48A (CRACKED CONDITION)

DRILL CRACK ARREST HOLES IN TOP OF INSPECTION WALKWAY END PLATE (REPAIR IS TO DRILL TWO CRACK ARREST HOLES AT EACH WALKWAY END PLATE)

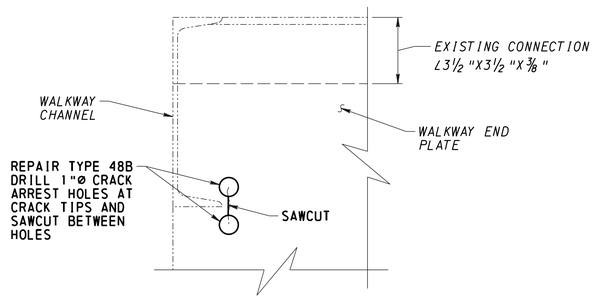
REPAIR TYPE 48B

DRILL TWO CRACK ARREST HOLES AT MIDDLE OF INSPECTION WALKWAY END PLATE



REPAIR TYPE 48A (UNCRACKED CONDITION)

NOT TO SCALE
DRILL CRACK ARREST HOLES AT WALKWAY END PLATE



REPAIR TYPE 48B

NOT TO SCALE
DRILL TWO CRACK ARREST HOLES AT MIDDLE OF INSPECTION WALKWAY END PLATE

PROCEDURE FOR REPAIR TYPE 48A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FOLLOWING ABRASIVE BLAST CLEANING USE MT (MAGNETIC PARTICLE TEST) TO TEST FOR CRACKS AND MARK THE CRACK TIPS IN THE WALKWAY END PLATE ADJACENT TO BOTH TOP FLANGE TIPS OF THE WALKWAY SUPPORT CHANNELS.
4. DRILL CRACK ARREST HOLES CENTERED ON THE CRACK TIPS THROUGH THE WALKWAY END PLATE AND THE VERTICAL LEG OF THE EXISTING CONNECTION ANGLE. LOCATE THE HOLES TO AVOID HORIZONTAL LEG OF EXISTING CONNECTION ANGLE. DO NOT DRILL INTO HORIZONTAL LEG OF EXISTING CONNECTION ANGLE.
5. TEST FOR CRACKS AT LOCATIONS WHERE THERE IS NO VISIBLE CRACKS. IF NO CRACKS ARE FOUND, DRILL CRACK ARREST HOLE BELOW TOP FLANGE TIP AS INDICATED.
6. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROCEDURE FOR REPAIR TYPE 48B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FOLLOWING ABRASIVE BLAST CLEANING USE MT (MAGNETIC PARTICLE TEST) TO TEST FOR CRACK AND MARK THE CRACK TIPS IN WALKWAY END PLATE ADJACENT TO BOTTOM FLANGE TIP OF WALKWAY SUPPORT CHANNEL ONLY WHERE A CRACK IS VISIBLE.
4. DRILL TWO CRACK ARREST HOLES CENTERED ON THE CRACK TIPS THROUGH THE WALKWAY END PLATE AS INDICATED. MOVE HOLE AWAY FROM CHANNEL FLANGE TIP IF HOLE CANNOT BE CENTERED ON FLANGE TIP DUE TO INTEFERENCE.
5. SAWCUT BETWEEN THE TWO HOLES ALONG THE PATH OF THE CRACK.
6. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. FINISH PAINTING REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEET 35
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- SEE SPECIAL PROVISIONS FOR EACH REPAIR TYPE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 48A & 48B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	EAT
DRAWN BY	SJW
CHECKED BY	EAT

RECOMMENDED _____

SHEET 132 OF 164

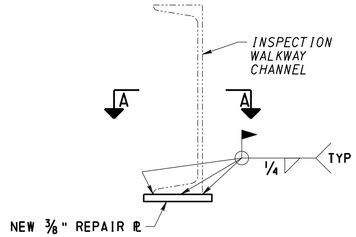
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REPAIR TYPE 48C
REPLACE CONNECTION PLATE
FOR INSPECTION WALKWAY LADDER
(REPALCE CONNECTION PLATE IN-KIND)

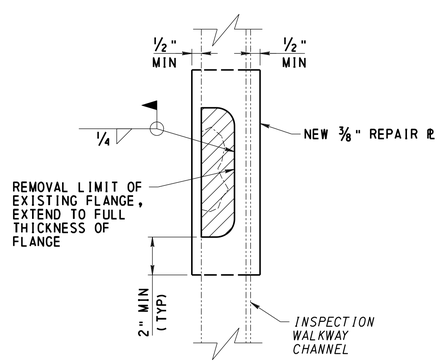


LOCATION REPAIR TYPE 48D
REPAIR HOLE IN INSPECTION
WALKWAY SUPPORT CHANNEL



CROSS-SECTION INSPECTION WALKWAY SUPPORT CHANNEL
NOT TO SCALE

REPAIR TYPE 48D
REPAIR HOLE IN INSPECTION
WALKWAY CHANNEL



SECTION A-A
NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 48C

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FOLLOWING ABRASIVE BLAST CLEANING REMOVE BOLTED CONNECTION OF EXISTING DETERIORATED SUPPORT PLATE.
4. REMOVE SUPPORT PLATE FROM EXISTING WALKWAY CHANNEL BY CUTTING. GRIND SURFACES OF CHANNEL SMOOTH.
5. INSTALL NEW PLATE BY WELDING TO THE CHANNEL AND RECONNECTING TO THE LADDER USING NEW 7/8"Ø A325 BOLTS.
6. PREPARE ALL UNPAINTED SURFACES TO BE PRIMED PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
7. FINISH PAINTING NEW SUPPORT STOOL AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

PROCEDURE FOR REPAIR TYPE 48D

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REPRESENTATIVE TO FIELD VERIFY EXISTING REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
3. FOLLOWING ABRASIVE BLAST CLEANING REMOVE DETERIORATED PORTION OF THE CHANNEL BOTTOM FLANGE TO PROVIDE AN EDGE THAT IS APPROXIMATELY THE FULL THICKNESS OF THE FLANGE. GRIND CUT EDGE SMOOTH.
4. CLEAN EXISTING MATING AND WELDING SURFACES OF PAINT AND CORROSION.
5. PROVIDE NEW PLATE TO COVER THE CUT AREA AS INDICATED.
6. INSTALL NEW PLATE BY WELDING TO THE CHANNEL FLANGE.
7. PREPARE ALL UNPAINTED SURFACES TO BE PRIME PAINTED AND PRIME PAINT IN ACCORDANCE WITH SPECIAL PROVISIONS.
8. FINISH PAINTING NEW SUPPORT STOOL AND REPAIR AREA IN ACCORDANCE WITH SPECIAL PROVISIONS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 35 & 36
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- SEE SPECIAL PROVISIONS FOR EACH REPAIR TYPE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 48C & 48D

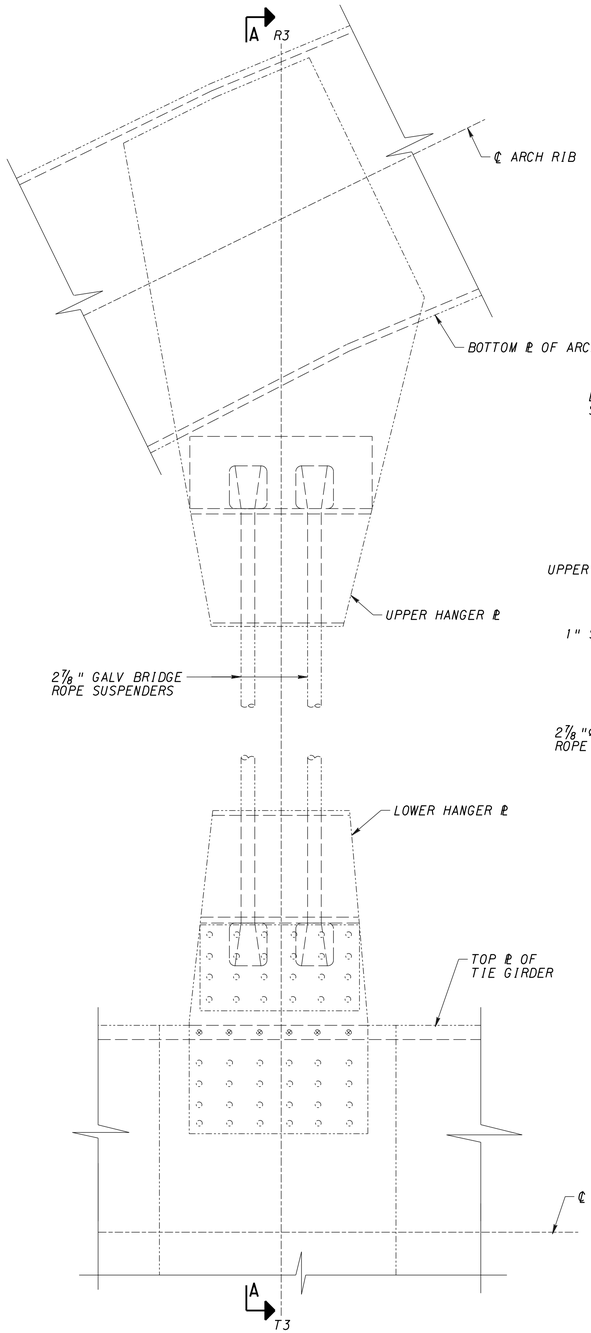
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

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SHEET 133 OF 164

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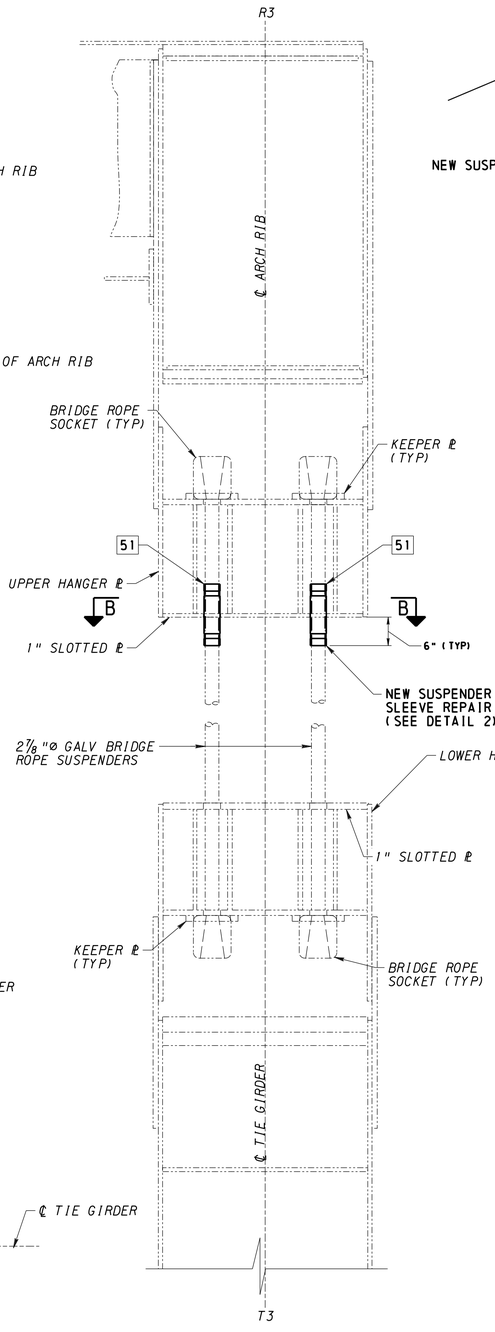
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DRAWN BY	SJW
CHECKED BY	EAT



EXISTING TYPICAL GALVANIZED BRIDGE ROPE SUSPENDER CONNECTION ELEVATION

NOT TO SCALE

UPSTREAM ARCH T3-R3 SHOWN - UPSTREAM ELEVATION
OTHER LOCATIONS SIMILAR

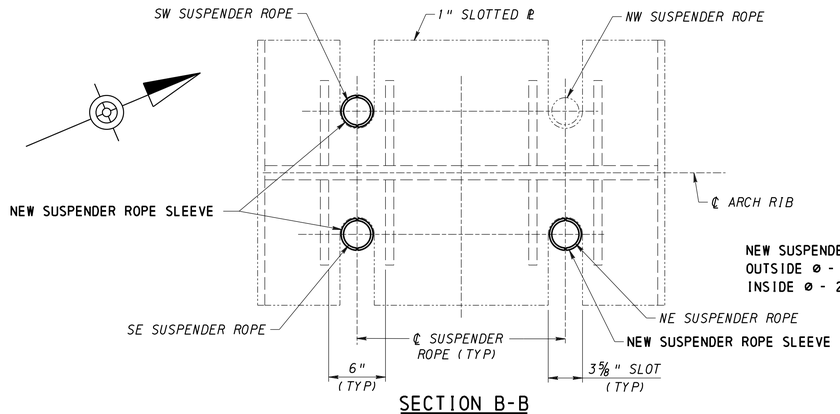


SECTION A-A

NOT TO SCALE

REPAIR TYPE 51

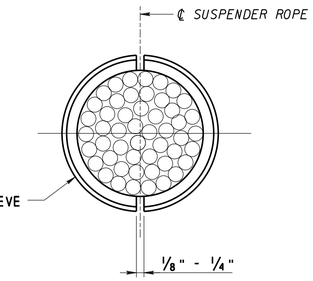
INSTALL NEW SUSPENDER ROPE NYLATRON PLASTIC PROTECTIVE SLEEVES



SECTION B-B

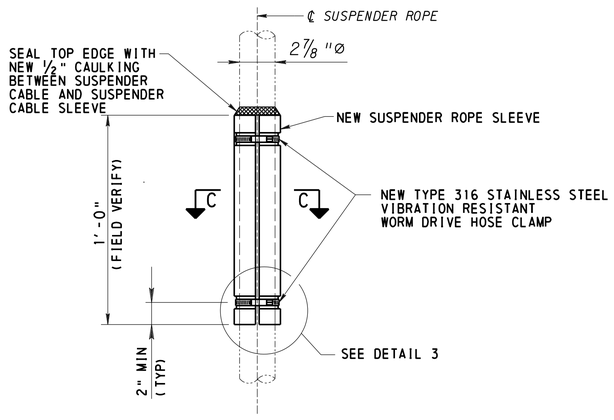
NOT TO SCALE

UPPER HANGER PLATE SHOWN,
LOWER HANGER PLATE SIMILAR



SECTION C-C

NOT TO SCALE

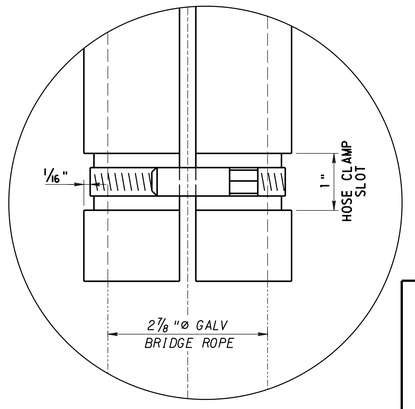


DETAIL 2

INSTALL SUSPENDER ROPE SLEEVES

NOT TO SCALE

INSTALL SUSPENDER ROPE SLEEVES OVER SUSPENDER ROPES THAT ARE RUBBING OR TOUCHING THE ENDS OF THE NOTCHED PLATES AT THE ARCH RIB AND TIE GIRDER ANCHORAGES



DETAIL 3

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 51

1. REPRESENTATIVE TO FIELD VERIFY REPAIR LOCATIONS PRIOR TO INITIATING REPAIR.
2. DO NOT INSTALL SUSPENDER ROPE SLEEVES UNTIL FINISH COAT OF PAINT HAS FULLY CURED.
3. POSITION SUSPENDER ROPE SLEEVES AS INDICATED AND ALIGN VERTICAL SLOTS IN SLEEVES PARALLEL TO THE CENTERLINE OF THE BRIDGE SO SOLID PORTION OF SLEEVE CONTACTS EDGE OF SLOTTED PLATE.
4. TIGHTEN HOSE CLAMPS SO SLEEVES ARE TIGHT AGAINST THE ROPE SO SLEEVE WILL NOT SLIDE DOWN THE ROPE. DO NOT EXCEED MANUFACTURERS RECOMMENDED TORQUE SPECIFICATIONS.
5. PLACE CAULKING AROUND TOP END OF SLEEVE ONLY TO SEAL GAP BETWEEN SLEEVE AND SUSPENDER ROPE.
6. TOUCH UP PAINT ON SLEEVES, ROPE OR BRIDGE MEMBERS THAT WAS DAMAGED DURING REPAIR OR ACCESS.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 37 & 38
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- SUSPENDER ROPE SLEEVES - NYLATRON ®GSM CAST NYLON OR EQUAL. FABRICATE AND MACHINE TUBE AS INDICATED. SLEEVES ARE TO BE PAINTED TO MATCH THE PAINT COLOR OF THE ROPE SUSPENDERS
- CAULKING - POLYURETHANE SEALANT THAT IS COMPATIBLE WITH THE EXISTING ROPE SUSPENDER PAINT SYSTEM AND NEW SUSPENDER ROPE SLEEVES
- VIBRATION RESISTANT WORM DRIVE HOSE CLAMP - BAND, BOLT, AND SCREW MATERIAL TO BE ASTM TYPE 316 STAINLESS STEEL

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

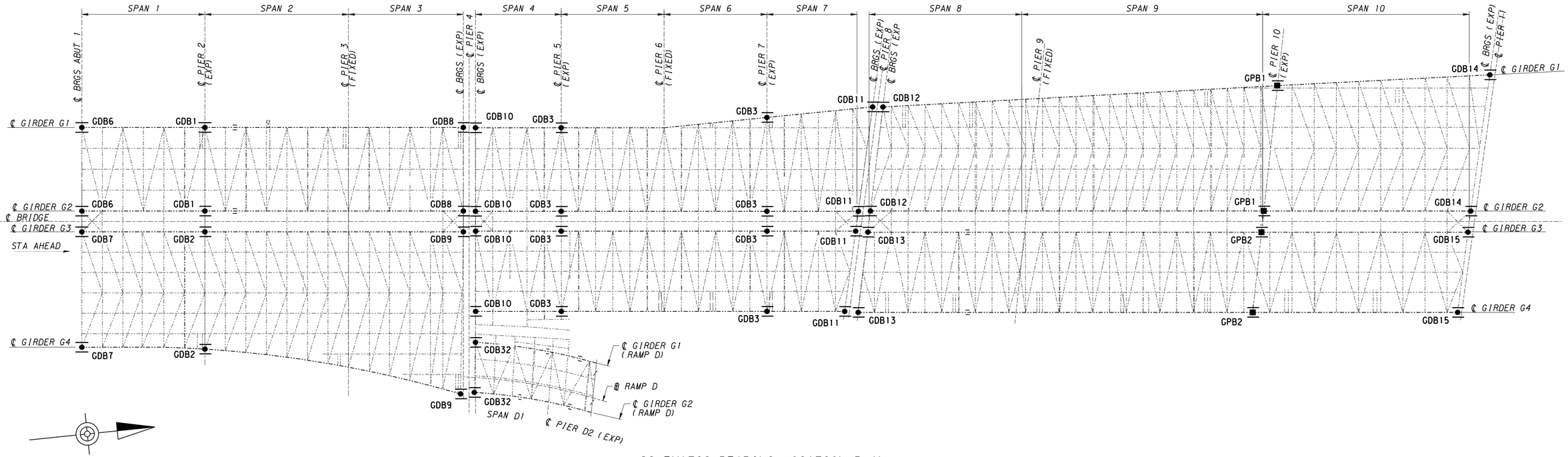
REPAIR TYPE 51

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

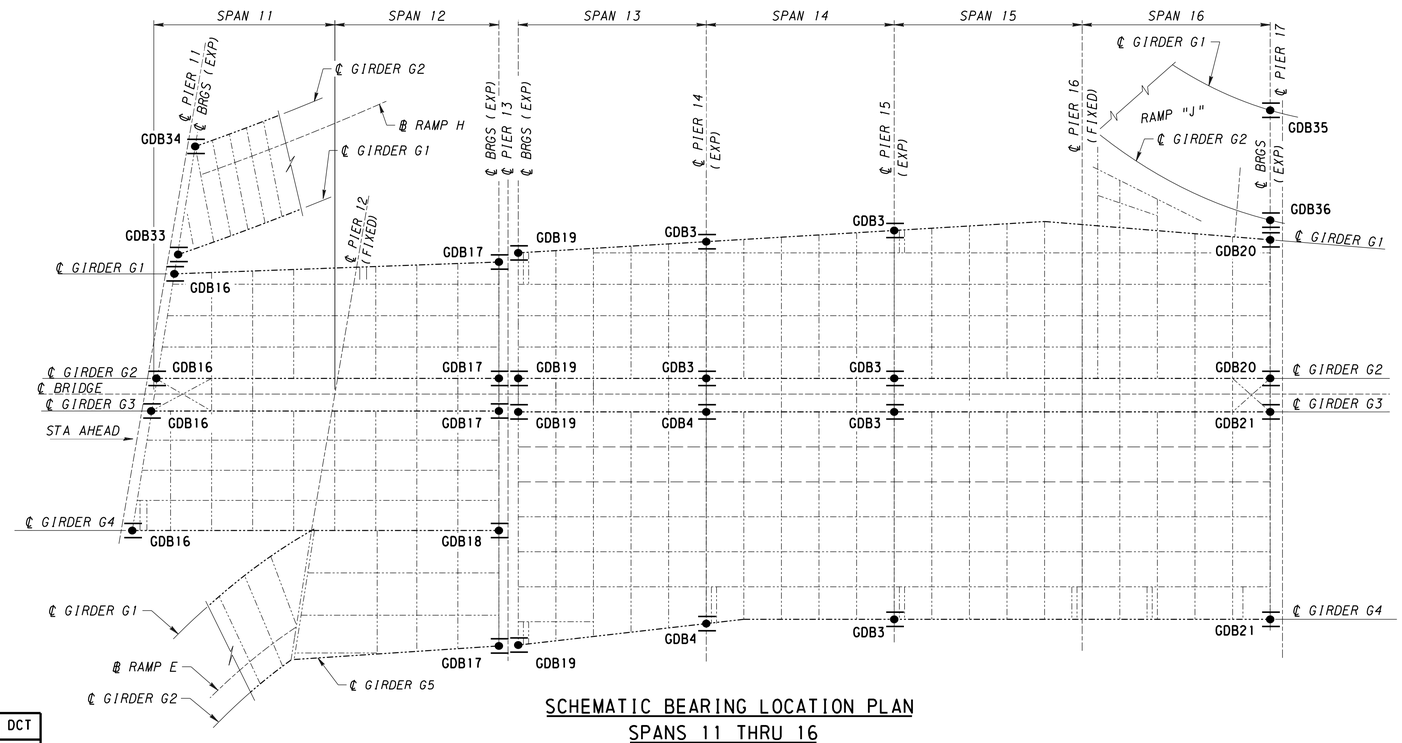
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SHEET 134 OF 164

S - 38036



SCHEMATIC BEARING LOCATION PLAN
SPANS 1 THRU 10
NOT TO SCALE



SCHEMATIC BEARING LOCATION PLAN
SPANS 11 THRU 16
NOT TO SCALE

NOTES

- FOR DISC BEARING NOTES, MATERIALS AND DESIGN LOADS SEE SHEET 139
- FOR BEARING SCHEMATIC KEY PLAN SPANS 17 THRU 27 SEE SHEET 136
- FOR DETAILS BD1, BD2, AND ADDITIONAL DISC BEARING DETAILS SEE SHEET 145

LEGEND

- ● GUIDED DISC BEARINGS
- ■ GUIDED POT BEARINGS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 1

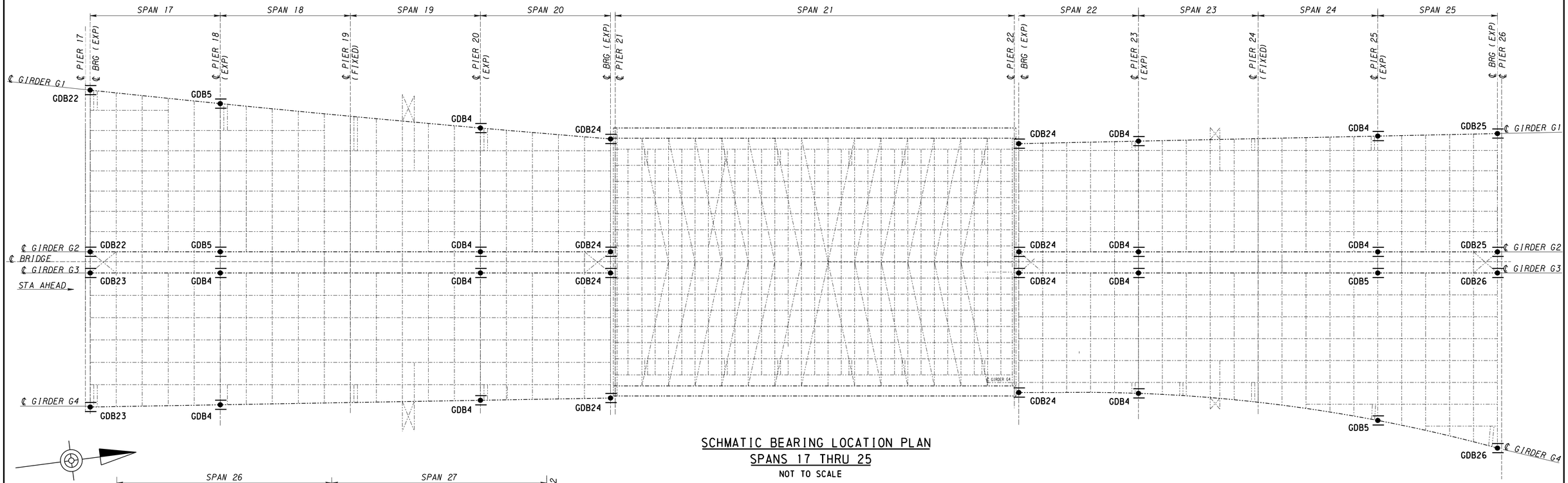
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

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DRAWN BY	ERK
CHECKED BY	DCT

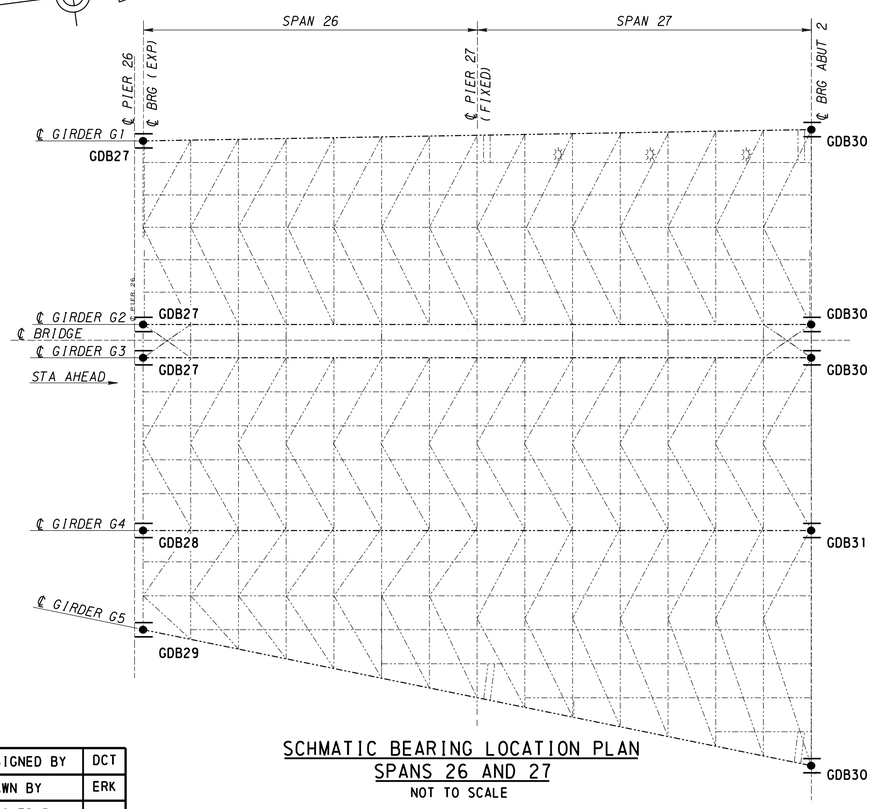
RECOMMENDED _____

SHEET 135 OF 164

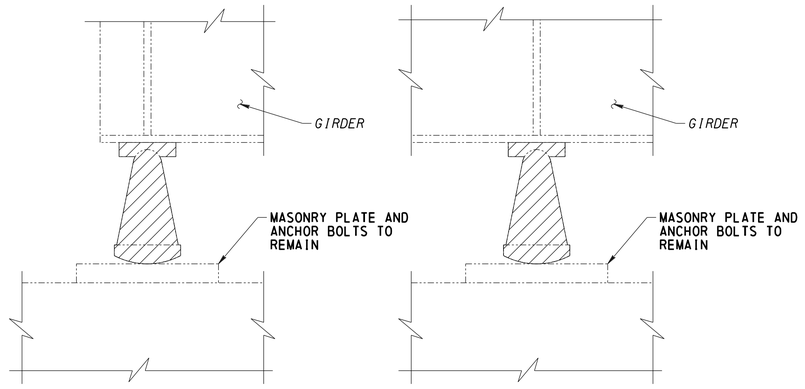
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SCHMATIC BEARING LOCATION PLAN
SPANS 17 THRU 25
NOT TO SCALE



SCHMATIC BEARING LOCATION PLAN
SPANS 26 AND 27
NOT TO SCALE



EXPANSION LOCATIONS

CONTINUOUS LOCATIONS

REMOVAL LIMITS OF EXISTING ROCKER BEARINGS
NOT TO SCALE

NOTES
- WORK THIS SHEET WITH SHEET 135

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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DRAWN BY	ERK
CHECKED BY	DCT

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
COMMONWEALTH OF PENNSYLVANIA

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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 2

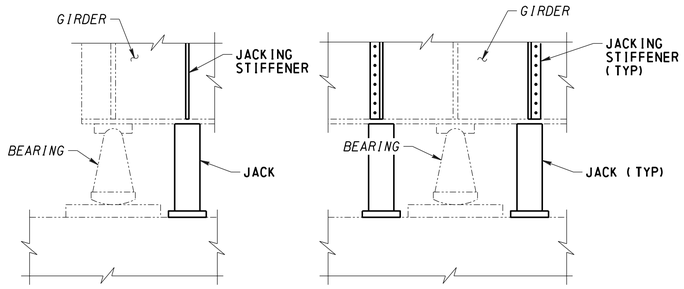
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SHEET 136 OF 164

S - 38036

UNFACTORED JACKING REACTIONS (KIPS)			
LOCATION	(2) GIRDER	(3) DEAD LOAD	(4) LIVE LOAD + IMPACT
ABUT 1	G1-G2	221.0	189.4
	G3-G4	290.0	224.8
(1) PIER 2	G1-G2	328.5	187.1
	G3-G4	429.5	221.8
PIER 4 (SPAN 3)	G1-G2	221.0	189.6
	G3-G4	355.0	257.3
PIER 4 (SPAN 4)	G1-G2	158.0	171.9
	G3-G4	168.0	171.9
(1) PIER 5	G1-G2	291.0	173.5
	G3-G4	297.0	173.5
(1) PIER 7	G1-G2	340.5	187.4
	G3-G4	260.5	187.4
PIER 8 (SPAN 7)	G1-G2	219.0	195.5
	G3-G4	114.0	195.5
PIER 8 (SPAN 8)	G1-G2	330.0	246.1
	G3-G4	294.0	225.9
(1) PIER 10	G1-G2	1068.0	334.9
	G3-G4	768.0	266.6
PIER 11 (SPAN 10)	G1-G2	435.0	289.5
	G3-G4	294.0	228.9
PIER 11 (SPAN 11)	G1-G2	106.0	158.5
	G3-G4	125.0	161.1
PIER 13 (SPAN 12)	G1-G2	115.0	161.8
	G3-G4	210.0	200.0
	G5	213.0	154.7
PIER 13 (SPAN 13)	G1-G2	218.0	188.2
	G3-G4	273.0	230.1
(1) PIER 14	G1-G2	323.5	181.9
	G3-G4	390.0	214.4
(1) PIER 15	G1-G2	282.0	180.1
	G3-G4	307.5	201.1
PIER 17 (SPAN 16)	G1-G2	202.0	191.2
	G3-G4	254.0	219.4
PIER 17 (SPAN 17)	G1-G2	337.0	247.7
	G3-G4	261.0	220.4
(1) PIER 18	G1-G2	450.0	224.0
	G3-G4	379.0	208.1
(1) PIER 20	G1-G2	378.5	213.3
	G3-G4	372.0	207.8
PIER 21 (SPAN 20)	G1-G2	254.0	214.4
	G3-G4	251.0	215.9
PIER 22 (SPAN 22)	G1-G2	251.0	212.1
	G3-G4	254.0	212.2
(1) PIER 23	G1-G2	372.0	205.5
	G3-G4	378.5	205.2
(1) PIER 25	G1-G2	379.0	208.5
	G3-G4	450.0	224.5
PIER 26 (SPAN 25)	G1-G2	261.0	220.1
	G3-G4	337.0	248.8
PIER 26 (SPAN 26)	G1-G2	296.0	234.5
	G3-G4	316.0	253.2
	G5	207.0	178.5
ABUT 2	G1-G2	324.0	239.7
	G3-G4	464.0	275.7
	G5	347.0	255.0
RAMP D (PIER 4)	G1	93.0	159.6
	G2	79.3	143.7
RAMP H (PIER 11)	G1	112.0	114.1
	G2	102.7	111.4
RAMP J (PIER 17)	G1	119.0	140.7
	G2	156.5	145.1

NOTES:
(1) REACTIONS ARE BASED ON TWO POINT JACKING AT THE PIER.
(2) USE GIRDER G1 AND G4 REACTIONS FOR GIRDER G2 AND G3 REACTIONS RESPECTIVELY.
(3) INCLUDES APPLICABLE GIRDER DEAD LOADS (STEEL, CONCRETE DECK, BARRIER, FWS).
(4) LIVE LOADS SHOWN ARE FOR THE PHL-93 DESIGN VEHICLE.

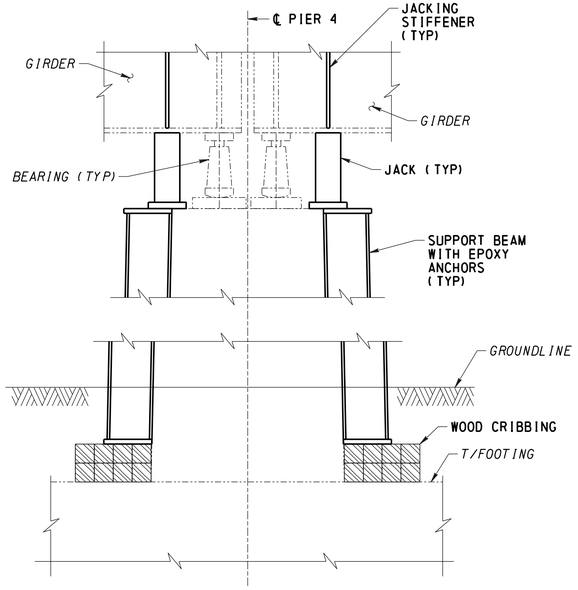


END LOCATIONS — CONTINUOUS LOCATIONS

CONCEPTUAL JACKING DETAILS

NOT TO SCALE

NOTE:
- TOP OF PIER CAPS ARE SLOPED AROUND BEARINGS SEATS. ENSURE ANY JACKING SUPPORT IS MADE LEVEL
- FOR LOCATIONS WHERE THE JACKING SYSTEM EXTENDS PAST THE FACE OF PIER, PROVIDE A JACKING BRACKET ATTACHED TO THE PIER TO PROVIDE ADDITIONAL WIDTH FOR SUPPORT



PIER 4 JACKING CONCEPT

NOT TO SCALE

REPAIR TYPE 55 AND REPAIR TYPE 56

JACKING NOTES

1. JACKING DETAILS SHOWN FOR REPAIRS 55 AND 56 ARE CONCEPTUAL ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE JACKING SYSTEM, SUPPORT MEMBERS, MEASUREMENTS, AND VERIFICATION OF THE SUBSTRUCTURE UNIT CAPACITY IN ACCORDANCE WITH THE SPECIAL PROVISIONS. ANY DETERIORATION OF THE STRUCTURAL MEMBERS OR PORTIONS OF THE PIERS THAT ARE TO BE USED IN THE JACKING OR TEMPORARY SUPPORT OPERATIONS MUST BE REPAIRED PRIOR TO THE JACKING. IF THE TOPS OF THE PIER COLUMNS ARE NOT ADEQUATE TO JACK FROM, THEN THE CONTRACTOR IS REQUIRED TO DEVELOP A NEW OR MODIFIED JACKING METHOD.
2. SUBMIT JACKING PLAN AND SEQUENCE WITH CALCULATIONS IN ACCORDANCE WITH THE SPECIAL PROVISIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF PENNSYLVANIA FOR REVIEW AND APPROVAL IN ACCORDANCE WITH PUBLICATION 408 SECTION 1050.
3. DRILLING, ANCHORING OR MOUNTING COMPONENTS OF THE JACKING AND TEMPORARY SUPPORT STRUCTURE SYSTEM TO THE EXISTING SUBSTRUCTURE UNITS IS PERMITTED BETWEEN THE BRIDGE SEAT AND 5 FT BELOW THE BRIDGE SEAT. PRIOR TO DRILLING INTO THE EXISTING PIER OR ABUTMENT LOCATE ALL EXISTING REINFORCEMENT WITHIN THE VICINITY OF THE PROPOSED HOLES. VERIFY ALL DRILLING LOCATIONS WITH THE REPRESENTATIVE PRIOR TO DRILLING, AFTER WORK IS COMPLETE REPAIR THE HOLES WITH NON-SHRINK GROUT.
3. DESIGN THE SUPPORT SYSTEM AND ANALYZE THE EXISTING JACKED STRUCTURE COMPONENTS USING STR-I DESIGN LOADS. DESIGN ALL ELEMENTS TO REMAIN IN ACCORDANCE WITH DESIGN MANUAL PART 4 AND PUBLICATION 408.
4. SIZE THE JACKS FOR THE GREATER OF THE FOLLOWING:
   A. 1.5X SERVICE DEAD LOADS
   B. SERVICE DEAD LOAD AND LIVE LOAD
   LOCK-OFF SUPPORT LOADS ARE THE GREATER OF THE FOLLOWING:
   A. 1.5X SERVICE DEAD LOADS
   B. STR-I DESIGN LOAD
5. USE PRESSURE GAGES TO ENSURE THAT THE JACKS ARE LIFTING THE GIRDERS EVENLY.
6. DESIGN THE SUPPORT SYSTEM FOR ALL THERMAL AND LIVE LOAD MOVEMENTS OF THE SUPERSTRUCTURE.
7. ENSURE THE STABILITY OF THE JACKS, SUPPORT SYSTEM, AND SUPERSTRUCTURE BY USING RESTRAINERS, SHIMS, BRACING, OR REDUNDANCY.
8. PROVIDE A VERTICAL TRANSITION SLOPE TO AVOID ABRUPT CHANGES IN THE ROAD SURFACE, TO PROVIDE A SAFE RIDING SURFACE, TO PREVENT DAMAGE TO THE BRIDGE, AND TO MINIMIZE VERTICAL ACCELERATION LOADING FROM THE TRAFFIC
9. PAINT ALL STIFFENERS AND ATTACHMENTS FOR JACKING IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
10. JACKING STIFFENERS ARE PERMANENT.
11. FILL ALL OPEN BOLT HOLES WITH HIGH STRENGTH BOLTS.
12. SUPPORT SYSTEM AND JACKING BEAMS ARE CONSIDERED INCIDENTAL TO THE COST OF JACKING.

PROPOSED SEQUENCE OF JACKING

1. ERECT SUPPORT SYSTEM AND INSTALL JACKS.
2. ACCURATELY LOCATE AND MARK CENTERLINE OF EACH GIRDER WITH RESPECT TO THE EXISTING SUBSTRUCTURE TO ENSURE THE FINAL PLANAR LOCATIONS OF THE SUPERSTRUCTURE DOES NOT CHANGE FROM THE EXISTING PLANAR LOCATION WHEN THE SUPERSTRUCTURE IS RESET INTO FINAL POSITION.
3. JACK GIRDERS WHILE LIVE LOAD IS NOT PRESENT ON THE SUPERSTRUCTURE AND LOCK OFF JACKS OR ADEQUATELY BRACE GIRDERS PRIOR TO ALLOWING LIVE LOAD ON THE JACKED SUPERSTRUCTURE.
4. JACK THE SUPERSTRUCTURE ONLY AS HIGH AS ABSOLUTELY NECESSARY (⅛" MAXIMUM) DURING THE BEARING REPLACEMENT. VERIFY HEIGHT WITH REPRESENTATIVE PRIOR TO JACKING.
5. UNIFORMLY AND SIMULTANEOUSLY RAISE AND LOWER JACKS TO DISTRIBUTE THE JACKING LOAD EVENLY AND PREVENT OVERSTRESSING OR TWISTING OF THE SUPERSTRUCTURE.
6. REMOVE JACKS AND TEMPORARY SUPPORT SYSTEM AFTER SUPERSTRUCTURE IS RESTING ON REPLACEMENT BEARINGS.

NOTE

- WORK THIS DRAWING WITH SHEETS 139 THRU 148 AND 138

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 3

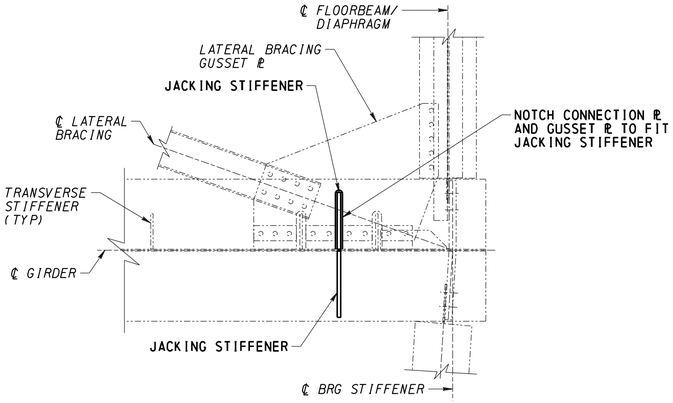
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 137 OF 164

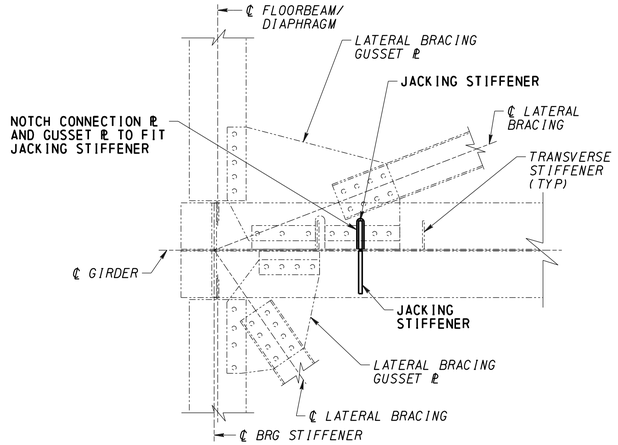
S - 38036

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT



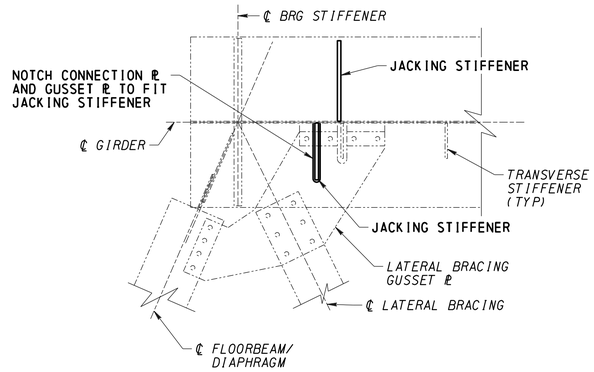
JACKING STIFFENER INTERFERENCE 1

NOT TO SCALE



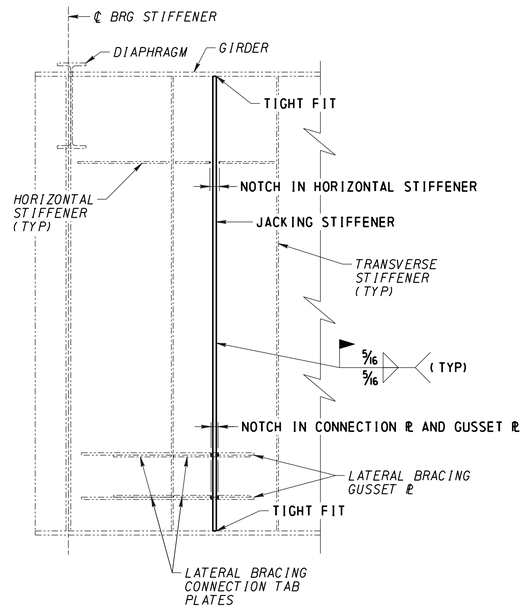
JACKING STIFFENER INTERFERENCE 2

NOT TO SCALE



JACKING STIFFENER INTERFERENCE 3

NOT TO SCALE



JACKING STIFFENER ELEVATION

NOT TO SCALE

JACKING SEQUENCE LIMITATIONS:

1. USE 15 MINUTE TRAFFIC STOPPAGE DURING JACKING OPERATIONS
2. JACK GIRDERS UNDER DEAD LOAD ONLY

FOUR GIRDER CORSS-SECTION

1. JACK GIRDERS G1 AND G4 SEPARATELY OR SIMUTANEOUSLY
2. REPLACE BEARINGS AT GIRDER G1 AND G4
3. JACK GIRDERS G2 AND G3 SIMULTANEOUSLY DUE TO FULL DEPTH DIAPHRAGM
4. REPLACE BEARINGS AT GIRDER G2 AND G3
5. REPLACE BEARINGS AT GIRDER G2 AND G3 WITHIN 1 WEEK OF THE BEARING REPLACEMENT OF GIRDER G1 AND G4

FIVE GIRDER CROSS-SECTION (SPAN 12 AND SPANS 25-26)

1. JACK GIRDERS G1, G4 SEPARATELY OR SIMULTANEOUSLY
2. REPLACE BEARINGS AT GIRDER G1 AND G4
3. JACK GIRDERS G2 AND G3 SIMULTANEOUSLY DUE TO FULL DEPTH DIAPHRAGM
4. REPLACE BEARINGS AT GIRDER G2 AND G3
5. REPLACE BEARINGS AT GIRDER G2 AND G3 WITHIN ONE WEEK OF THE BEARING REPLACEMENT OF GIRDER G1 AND G4
6. JACK GIRDER G5
7. REPLACE BEARING AT GIRDER G5

FIELD MEASUREMENT AT EXISTING BEARING NOTES:

1. FIELD MEASURE EXISTING BEARINGS TO ENSURE PROPER FIT OF THE NEW BEARINGS
2. MEASURE THE GIRDER BOTTOM FLANGE SLOPES TO DEVELOP PROPER SLOPES FOR THE NEW BEARING SOLE PLATES
3. MEASURE FLATNESS OF THE REMAINING EXISTING MASONRY PLATES, POSSIBLE ADJUSTMENTS TO THE SOLE PLATE SLOPES MAY BE NECESSARY
4. TRANSVERSE MEASUREMENTS OF GIRDER SLOPES ARE REQUIRED TO ENSURE BEARING IS LEVEL
5. MEASURE SLOPE ON GIRDER BOTTOM FLANGE AT THE ENDS OF THE PROPOSED SOLE PLATE AND AT CENTERLINE OF BEARING
6. ALL FIELD MEASUREMENTS TO BE PROVIDED TO THE REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OF THE NEW BEARINGS

NOTES

- WORK THIS SHEET WITH SHEET 137
- DETAILS SHOWN FOR REPAIRS 55 AND 56 ARE CONCEPTUAL ONLY AND MAY NOT SHOW EVERY CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE JACKING SYSTEM IN ACCORDANCE WITH THE SPECIAL PROVISIONS
- JACKING STIFFENERS ARE PERMANENT
- CONTRACTOR TO CONSIDER REMOVAL OF LATERAL GUSSET PLATES FOR PLACEMENT OF JACKING STIFFENERS
- REMOVAL OF LATERAL GUSSET PLATES INVOLVE TEMPORARY SUPPORT OF LATERAL BRACING, TEMPORARY REMOVAL AND REINSTALLATION OF OF LATERAL BRACING SYSTEM AND MODIFICATION TO THE CONNECTION PLATES AND GUSST PLATES OF LATERAL BRACING SYSTEM DUE TO NOTCHING REQUIRED TO CLEAR JACKING STIFFENER. ALL IS CONSIDERED INCIDENTAL TO THE JACKING SUPPORT SYSTEM.
- JACKING STIFFENERS MAY REQUIRE ADJUSTMENT DUE TO MEMBER INTERFERENCE AS SHOWN
- AT END LOCATIONS JACKING STIFFENERS MAY BE WELDED TO GIRDER WEB

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

REPAIR TYPE 55 AND REPAIR TYPE 56

REPLACE EXISTING EXPANSION BEARINGS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030627-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 4

RECOMMENDED _____

SHEET 138 OF 164

S - 38036

DISC BEARING NOTES

- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- SANDBLAST IN ACCORDANCE WITH SSPC-SP10 TO REMOVE MILL SCALE FROM BEARINGS. ABRASIVE BLAST THE PLATE SURFACES ABOVE AND BELOW THE DISC TO A NEAR WHITE CONDITION AS DEFINED IN SSPC-10 AND PROVIDE A BLAST PROFILE THAT IS JAGGED RATHER THAN "PEENED".
- GRIND SMOOTH ALL STEEL SURFACES AND EDGES AND REMOVE ANY SHARP PROTRUSIONS. PROVIDE FABRICATION TOLERANCES AND THE LIMITATIONS ON SURFACE FINISH IN ACCORDANCE WITH PUBLICATION 408, SECTION 1111.
- PAINT ALL STEEL SURFACES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1060. APPLY ALL COATS IN THE FABRICATION SHOP ONLY. DO NOT PAINT PTFE, STAINLESS STEEL, AREAS DIRECTLY ABOVE AND BELOW THE DISK, SHEAR PIN OR THE SHEAR PIN HOLE. APPLY ONLY PRIME COAT TO THE CONTACT AREA BETWEEN GIRDER BOTTOM FLANGE AND SOLE PLATE AND TO THE BOTTOM SIDE OF MASONRY PLATE.
- ROUND ALL PTFE CORNERS TO ACCOMMODATE THE MACHINED RECESS IN STEEL GUIDE PLATE.
- PROVIDE PIGMENTED PTFE ON THE SIDE OF GUIDE PLATE..
- PRIOR TO THE APPLICATION OF ADHESIVE CLEAN ALL MATING STEEL AND PTFE SURFACES BY GRIT BLASTING AND DEGREASING. APPLY ADHESIVE AS PER THE MANUFACTURER'S RECOMMENDATION.
- WELDING TO BEARING PLATES AFTER ASSEMBLY IS PERMITTED PROVIDED WELDING PROCEDURES RESTRICT THE MAXIMUM TEMPERATURE IN THE AREAS OF THE DISC AND PTFE TO NO MORE THAN 225°F. CONTROL TEMPERATURE BY WELDING PROCEDURES AND TEMPERATURE INDICATING WAX PENCILS OR OTHER DEVICES APPROVED BY THE ENGINEER. PROTECT THE POLYETHER URETHANE AND PTFE MATERIALS FROM ANY WELDING HEAT, SPARKS AND FLASH IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- PRIOR TO PLACING WELD FOR GIRDER TO DISC BEARING SOLE PLATE: THOROUGHLY CLEAN ALL PORTIONS OF THE GIRDER FLANGE AND SOLE PLATE SURFACES TO RECEIVE WELDS OF ALL FOREIGN MATTER, INCLUDING PAINT FILM AND GALVANIZING, FOR A DISTANCE OF 2" FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD, INCLUDING THE BOTTOM OF THE BOTTOM FLANGE. AFTER WELDING IS COMPLETE, TOUCH UP EXPOSED SOLE PLATE STEEL IN ACCORDANCE WITH THE SPECIFIED PAINT SYSTEM AND REPAIR EXPOSED SURFACES OF GIRDER STEEL, IN ACCORDANCE WITH PUBLICATION 408, SECTION 1105.02(s)2, REPAIR OF DAMAGED GALVANIZING.
- MARK CENTERLINE OF GUIDED AND NON-GUIDED DISC BEARINGS ON THE SIDES OF MASONRY PLATE AND SOLE PLATE. THE CENTERLINE IDENTIFICATION MARKS WILL BE USED TO LOCATE OFFSET DISTANCES IN THE FIELD. USE INDELIBLE INK TO PLACE ALL MARKS.
- MARK EACH BEARING WITH THE NAME OF THE MANUFACTURER AND TYPE OR MODEL NUMBER, INSTALLATION LOCATION AND DATE OF MANUFACTURER. PLACE THE IDENTIFICATION MARK IN A PERMANENT MANNER AND LOCATION SO THAT IT IS VISIBLE AFTER ERECTION.
- ENSURE ALL BEARING SURFACES INCLUDING THE BEARING SEAT ARE LEVEL PRIOR TO INSTALLATION OF DISC BEARINGS IN ACCORDANCE WITH PUBLICATION 408.
- SHIP AND HANDLE BEARING IN ACCORDANCE WITH PUBLICATION 408, SECTION 1111.03(f).
- AFTER HANDLING AND INSTALLATION IS COMPLETE, TOUCH UP ANY EXPOSED STEEL IN ACCORDANCE WITH THE SPECIFIED PAINT SYSTEM.
- TEST BEARINGS IN ACCORDANCE WITH PUBLICATION 408, SECTION 1111.03(e).
- CONDUCT TESTING AT A TESTING FACILITY WITH PRIOR EXPERIENCE TESTING BEARINGS OF THIS TYPE.

DISC BEARING MATERIALS

- STRUCTURAL STEEL: AASHTO M270 (ASTM A709), GRADE 50.
- STAINLESS STEEL: 13 GAUGE, ASTM A240 GRADE 30 TYPE 304 WITH AN ANSI 0.02 MIL SURFACE FINISH OR LESS.
- PROVIDE DISC IN ACCORDANCE WITH THE APPLICABLE MATERIAL REQUIREMENTS OF PUBLICATION 408.
- PTFE SHEET: UNFILLED, DIMPLED AND LUBRICATED AND MEETING THE APPLICABLE MATERIAL REQUIREMENTS PUBLICATION 408. ETCH ALL PTFE ON ONE SIDE FOR BONDING INTO THE MACHINED RECESS.
- SHEAR RESISTING MECHANISM: ASTM A193 GRADE B7.
- BEDDING MATERIAL: PER PUBLICATION 408, SECTION 1113.03(h). BEDDING MATERIAL IS INCIDENTAL TO DISC BEARINGS.

DISC BEARING MATERIALS DESIGN PARAMETERS

- DESIGN BASED ON COMPOUND B, TYPE D DUROMETER = 62
- PRESSURE IN POLYETHER URETHANE DISC AT THE SERVICE LIMIT STATE LEVEL NOT TO EXCEED 5000 PSI
- MAXIMUM AVERAGE CONTACT STRESS IN PTFE AT THE SERVICE LIMIT STATE NOT TO EXCEED 4500 PSI.
- CONCRETE COMPRESSIVE STRENGTH: f'_c 3000 PSI min

NOTE

- FOR DISC BEARING DETAILS SEE SHEETS 142 THRU 148

LEGEND

REMOVAL LIMITS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 55

REPAIR TYPES 55 & 56 DETAILS 5

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 139 OF 164

S - 38036

DESIGNED BY	DCT
DRAWN BY	ERK
CHECKED BY	DCT

DESIGN LOADS FOR EXPANSION DISC BEARINGS

BEARING LOCATION	BEARING MARK	REPAIR TYPE	LOAD COMBINATION	DESIGN LOADS (KIPS)								ROTATIONS (RADIANS)				TOTAL MOVEMENT
				VERTICAL						TRANSVERSE						
				DL		LL+I		TOTAL				FAB. & INSTALL	ALLOWANCE FOR	SERVICE	TOTAL	LONGIT.
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	TOLERANCE	UNCERTAINTIES	ROTATION (MAX.)	ROTATION	(IN)
ABUTMENT 1 G1-G2	GDB6	55D	STRENGTH - I	261.00	371.20	-47.46	393.47	213.54	764.67	---	---	0.010	0.010	0.006	0.026	4.44
			STRENGTH - III	261.00	371.20	0.00	0.00	261.00	371.20	0.00	57.91	0.010	0.010	0.006	0.026	4.44
			EXTREME EVENT - I	261.00	371.20	0.00	0.00	261.00	371.20	0.00	48.33	0.010	0.010	0.006	0.026	4.44
			SERVICE - I	290.00	290.00	-27.12	224.84	262.88	514.84	0.00	19.56	0.010	0.010	0.006	0.026	4.44
ABUTMENT 1 G3-G4	GDB7	55D	STRENGTH - I	261.00	371.20	-47.46	393.47	213.54	764.67	---	---	0.010	0.010	0.006	0.026	4.44
			STRENGTH - III	261.00	371.20	0.00	0.00	261.00	371.20	0.00	57.91	0.010	0.010	0.006	0.026	4.44
			EXTREME EVENT - I	261.00	371.20	0.00	0.00	261.00	371.20	0.00	48.33	0.010	0.010	0.006	0.026	4.44
			SERVICE - I	290.00	290.00	-27.12	224.84	262.88	514.84	0.00	19.56	0.010	0.010	0.006	0.026	4.44
PIER 4 (BK) G1-G2	GDB8	55C	STRENGTH - I	198.90	282.88	-41.30	331.89	157.60	614.77	---	---	0.010	0.010	0.007	0.027	2.54
			STRENGTH - III	198.90	282.88	0.00	0.00	198.90	282.88	0.00	58.21	0.010	0.010	0.007	0.027	2.54
			EXTREME EVENT - I	198.90	282.88	0.00	0.00	198.90	282.88	0.00	36.83	0.010	0.010	0.007	0.027	2.54
			SERVICE - I	221.00	221.00	-23.60	189.65	197.40	410.65	0.00	19.67	0.010	0.010	0.007	0.027	2.54
PIER 4 (BK) G3-G4	GDB9	55F	STRENGTH - I	319.50	454.40	-59.96	450.36	259.55	904.76	---	---	0.010	0.010	0.008	0.028	2.86
			STRENGTH - III	319.50	454.40	0.00	0.00	319.50	454.40	0.00	58.42	0.010	0.010	0.008	0.028	2.86
			EXTREME EVENT - I	319.50	454.40	0.00	0.00	319.50	454.40	0.00	59.17	0.010	0.010	0.008	0.028	2.86
			SERVICE - I	355.00	355.00	-34.26	257.35	320.74	612.35	0.00	19.72	0.010	0.010	0.008	0.028	2.86
PIER 4 (AHD) G1-G4	GDB10	55B	STRENGTH - I	151.20	215.04	-47.15	300.91	104.06	515.95	---	---	0.010	0.010	0.004	0.024	3.60
			STRENGTH - III	151.20	215.04	0.00	0.00	151.20	215.04	0.00	44.30	0.010	0.010	0.004	0.024	3.60
			EXTREME EVENT - I	151.20	215.04	0.00	0.00	151.20	215.04	0.00	28.00	0.010	0.010	0.004	0.024	3.60
			SERVICE - I	168.00	168.00	-26.94	171.95	141.06	339.95	0.00	14.99	0.010	0.010	0.004	0.024	3.60
PIER 8 (AHD) G1-G4	GDB11	55C	STRENGTH - I	197.10	280.32	-49.88	342.18	147.23	622.50	---	---	0.010	0.010	0.006	0.026	4.00
			STRENGTH - III	197.10	280.32	0.00	0.00	197.10	280.32	0.00	51.13	0.010	0.010	0.006	0.026	4.00
			EXTREME EVENT - I	197.10	280.32	0.00	0.00	197.10	280.32	0.00	36.50	0.010	0.010	0.006	0.026	4.00
			SERVICE - I	219.00	219.00	-28.50	195.53	190.50	414.53	0.00	17.28	0.010	0.010	0.006	0.026	4.00
PIER 8 (AHD) G1-G2	GDB12	55E	STRENGTH - I	297.00	422.40	-96.44	430.61	200.56	853.01	---	---	0.010	0.010	0.007	0.027	3.02
			STRENGTH - III	297.00	422.40	0.00	0.00	297.00	422.40	0.00	104.20	0.010	0.010	0.007	0.027	3.02
			EXTREME EVENT - I	297.00	422.40	0.00	0.00	297.00	422.40	0.00	55.00	0.010	0.010	0.007	0.027	3.02
			SERVICE - I	330.00	330.00	-55.11	246.06	274.89	576.06	0.00	33.63	0.010	0.010	0.007	0.027	3.02
PIER 8 (AHD) G3-G4	GDB13	55E	STRENGTH - I	297.00	422.40	-96.44	430.61	200.56	853.01	---	---	0.010	0.010	0.007	0.027	3.02
			STRENGTH - III	297.00	422.40	0.00	0.00	297.00	422.40	0.00	104.20	0.010	0.010	0.007	0.027	3.02
			EXTREME EVENT - I	297.00	422.40	0.00	0.00	297.00	422.40	0.00	55.00	0.010	0.010	0.007	0.027	3.02
			SERVICE - I	330.00	330.00	-55.11	246.06	274.89	576.06	0.00	33.63	0.010	0.010	0.007	0.027	3.02
PIER 11 (BK) G1-G2	GDB14	55F	STRENGTH - I	391.50	556.80	-116.18	506.64	275.32	1063.44	---	---	0.010	0.010	0.007	0.027	7.64
			STRENGTH - III	391.50	556.80	0.00	0.00	391.50	556.80	0.00	104.20	0.010	0.010	0.007	0.027	7.64
			EXTREME EVENT - I	391.50	556.80	0.00	0.00	391.50	556.80	0.00	72.50	0.010	0.010	0.007	0.027	7.64
			SERVICE - I	435.00	435.00	-66.39	289.51	368.61	724.51	0.00	33.63	0.010	0.010	0.007	0.027	7.64
PIER 11 (BK) G3-G4	GDB15	55D	STRENGTH - I	264.60	376.32	-87.50	400.59	177.10	776.91	---	---	0.010	0.010	0.007	0.027	7.52
			STRENGTH - III	264.60	376.32	0.00	0.00	264.60	376.32	0.00	103.28	0.010	0.010	0.007	0.027	7.52
			EXTREME EVENT - I	264.60	376.32	0.00	0.00	264.60	376.32	0.00	49.00	0.010	0.010	0.007	0.027	7.52
			SERVICE - I	294.00	294.00	-50.00	228.91	244.00	522.91	0.00	33.43	0.010	0.010	0.007	0.027	7.52
PIER 11 (AHD) G1-G4	GDB16	55A	STRENGTH - I	112.50	160.00	-33.90	281.94	78.60	441.94	---	---	0.010	0.010	0.004	0.024	1.44
			STRENGTH - III	112.50	160.00	0.00	0.00	112.50	160.00	0.00	39.33	0.010	0.010	0.004	0.024	1.44
			EXTREME EVENT - I	112.50	160.00	0.00	0.00	112.50	160.00	0.00	20.83	0.010	0.010	0.004	0.024	1.44
			SERVICE - I	125.00	125.00	-19.37	161.11	105.63	286.11	0.00	13.33	0.010	0.010	0.004	0.024	1.44
PIER 13 (BK) G1-G3, G5	GDB17	55B	STRENGTH - I	191.70	272.64	0.00	270.71	191.70	543.35	---	---	0.010	0.010	0.002	0.022	3.04
			STRENGTH - III	191.70	272.64	0.00	0.00	191.70	272.64	0.00	50.81	0.010	0.010	0.002	0.022	3.04
			EXTREME EVENT - I	191.70	272.64	0.00	0.00	191.70	272.64	0.00	35.50	0.010	0.010	0.002	0.022	3.04
			SERVICE - I	213.00	213.00	0.00	154.69	213.00	367.69	0.00	17.21	0.010	0.010	0.002	0.022	3.04
PIER 13 (BK) G4	GDB18	55C	STRENGTH - I	189.00	268.80	-37.52	349.98	151.48	618.78	---	---	0.010	0.010	0.005	0.025	1.82
			STRENGTH - III	189.00	268.80	0.00	0.00	189.00	268.80	0.00	46.70	0.010	0.010	0.005	0.025	1.82
			EXTREME EVENT - I	189.00	268.80	0.00	0.00	189.00	268.80	0.00	35.00	0.010	0.010	0.005	0.025	1.82
			SERVICE - I	210.00	210.00	-21.44	199.99	188.56	409.99	0.00	15.76	0.010	0.010	0.005	0.025	1.82
PIER 13 (AHD) G1-G4	GDB19	55D	STRENGTH - I	245.70	349.44	-48.76	402.64	196.95	752.08	---	---	0.010	0.010	0.006	0.026	5.24
			STRENGTH - III	245.70	349.44	0.00	0.00	245.70	349.44	0.00	50.53	0.010	0.010	0.006	0.026	5.24
			EXTREME EVENT - I	245.70	349.44	0.00	0.00	245.70	349.44	0.00	45.50	0.010	0.010	0.006	0.026	5.24
			SERVICE - I	273.00	273.00	-27.86	230.08	245.14	503.08	0.00	17.08	0.010	0.010	0.006	0.026	5.24
PIER 17 (BK) G1-G2	GDB20	55B	STRENGTH - I	181.80	258.56	-39.32	334.53	142.48	593.09	---	---	0.010	0.010	0.006	0.026	2.20
			STRENGTH - III	181.80	258.56	0.00	0.00	181.80	258.56	0.00	50.04	0.010	0.010	0.006	0.026	2.20
			EXTREME EVENT - I	181.80	258.56	0.00	0.00	181.80	258.56	0.00	33.67	0.010	0.010	0.006	0.026	2.20
			SERVICE - I	202.00	202.00	-22.47	191.16	179.53	393.16	0.00	16.94	0.010	0.010	0.006	0.026	2.20
PIER 17 (BK) G3-G4	GDB21	55D	STRENGTH - I	228.60	325.12	-45.03	383.93	183.57	709.05	---	---	0.010	0.010	0.006	0.026	2.18
			STRENGTH - III	228.60	325.12	0.00	0.00	228.60	325.12	0.00	50.43	0.010	0.010	0.006	0.026	2.18
			EXTREME EVENT - I	228.60	325.12	0.00	0.00	228.60	325.12	0.00	42.33	0.010	0.010	0.006	0.026	2.18
			SERVICE - I	254.00	254.00	-25.73	219.39	228.27	473.39	0.00	17.06	0.010	0.010	0.006	0.026	2.18
PIER 17 (AHD) G1-G2	GDB22	55E	STRENGTH - I	303.30	431.36	-52.29	433.53	251.01	864.89	---	---	0.010	0.010	0.006	0.026	3.80
			STRENGTH - III	303.30	431.36	0.00	0.00	303.30	431.36	0.00	53.42	0.010	0.010	0.006	0.026	3.80
			EXTREME EVENT - I	303.30	431.36	0.00	0.00	303.30	431.36	0.00	56.17	0.010	0.010	0.006	0.026	3.80
			SERVICE - I	337.00	337.00	-29.88	247.73	307.12	584.73	0.00	18.05	0.010	0.010	0.006	0.026	3.80

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

REPAIR TYPE 55

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 6

RECOMMENDED _____

SHEET 140 OF 164

S - 38036

DESIGN LOADS FOR EXPANSION DISC BEARINGS

BEARING LOCATION	BEARING MARK	REPAIR TYPE	LOAD COMBINATION	DESIGN LOADS (KIPS) VERTICAL DL MIN.	DL MAX.	LL+I MIN.	LL+I MAX.	TOTAL MIN.	TOTAL MAX.	TRANSVERSE MIN.	TRANSVERSE MAX.	ROTATIONS (RADIANS) FAB. & INSTALL TOLERANCE	ALLOWANCE FOR UNCERTAINTIES	SERVICE ROTATION (MAX.)	TOTAL ROTATION	TOTAL MOVEMENT LONGIT. (IN)
PIER 17 (AHD) G3-G4	GDB23	55D	STRENGTH - I	234.90	334.08	-45.94	385.65	188.96	719.73	---	---	0.010	0.010	0.006	0.026	3.74
			STRENGTH - III	234.90	334.08	0.00	0.00	234.90	334.08	0.00	51.02	0.010	0.010	0.006	0.026	3.74
			EXTREME EVENT - I	234.90	334.08	0.00	0.00	234.90	334.08	0.00	43.50	0.010	0.010	0.006	0.026	3.74
			SERVICE - I	261.00	261.00	-26.25	220.37	234.75	481.37	0.00	17.23	0.010	0.010	0.006	0.026	3.74
PIER 21 (BK) G1-G4	GDB24	55D	STRENGTH - I	228.60	325.12	-53.04	375.25	175.56	700.37	---	---	0.010	0.010	0.005	0.025	3.82
			STRENGTH - III	228.60	325.12	0.00	0.00	228.60	325.12	0.00	64.14	0.010	0.010	0.005	0.025	3.82
			EXTREME EVENT - I	228.60	325.12	0.00	0.00	228.60	325.12	0.00	42.33	0.010	0.010	0.005	0.025	3.82
			SERVICE - I	254.00	254.00	-30.31	214.43	223.69	468.43	0.00	20.07	0.010	0.010	0.005	0.025	3.82
PIER 22 (AHD) G1-G4	GDB24	55D	STRENGTH - I	228.60	325.12	-53.04	375.25	175.56	700.37	---	---	0.010	0.010	0.005	0.025	3.82
			STRENGTH - III	228.60	325.12	0.00	0.00	228.60	325.12	0.00	64.14	0.010	0.010	0.005	0.025	3.82
			EXTREME EVENT - I	228.60	325.12	0.00	0.00	228.60	325.12	0.00	42.33	0.010	0.010	0.005	0.025	3.82
			SERVICE - I	254.00	254.00	-30.31	214.43	223.69	468.43	0.00	20.07	0.010	0.010	0.005	0.025	3.82
PIER 26 (BK) G1-G2	GDB25	55D	STRENGTH - I	234.90	334.08	-46.41	385.11	188.49	719.19	---	---	0.010	0.010	0.005	0.025	3.78
			STRENGTH - III	234.90	334.08	0.00	0.00	234.90	334.08	0.00	50.62	0.010	0.010	0.005	0.025	3.78
			EXTREME EVENT - I	234.90	334.08	0.00	0.00	234.90	334.08	0.00	43.50	0.010	0.010	0.005	0.025	3.78
			SERVICE - I	261.00	261.00	-26.52	220.06	234.48	481.06	0.00	17.10	0.010	0.010	0.005	0.025	3.78
PIER 26 (BK) G3-G4	GDB26	55E	STRENGTH - I	303.30	431.36	-53.71	435.45	249.59	866.81	---	---	0.010	0.010	0.005	0.025	3.80
			STRENGTH - III	303.30	431.36	0.00	0.00	303.30	431.36	0.00	50.69	0.010	0.010	0.005	0.025	3.80
			EXTREME EVENT - I	303.30	431.36	0.00	0.00	303.30	431.36	0.00	56.17	0.010	0.010	0.005	0.025	3.80
			SERVICE - I	337.00	337.00	-30.69	248.83	306.31	585.83	0.00	17.13	0.010	0.010	0.005	0.025	3.80
PIER 26 (AHD) G1-G3	GDB27	55D	STRENGTH - I	266.40	378.88	-63.30	410.38	203.10	789.26	---	---	0.010	0.010	0.007	0.027	2.68
			STRENGTH - III	266.40	378.88	0.00	0.00	266.40	378.88	0.00	63.69	0.010	0.010	0.007	0.027	2.68
			EXTREME EVENT - I	266.40	378.88	0.00	0.00	266.40	378.88	0.00	49.33	0.010	0.010	0.007	0.027	2.68
			SERVICE - I	296.00	296.00	-36.17	234.50	259.83	530.50	0.00	21.50	0.010	0.010	0.007	0.027	2.68
PIER 26 (AHD) G4	GDB28	55E	STRENGTH - I	284.40	404.48	-60.53	443.19	223.87	847.67	---	---	0.010	0.010	0.006	0.026	2.68
			STRENGTH - III	284.40	404.48	0.00	0.00	284.40	404.48	0.00	63.80	0.010	0.010	0.006	0.026	2.68
			EXTREME EVENT - I	284.40	404.48	0.00	0.00	284.40	404.48	0.00	52.67	0.010	0.010	0.006	0.026	2.68
			SERVICE - I	316.00	316.00	-34.59	253.25	281.41	569.25	0.00	21.52	0.010	0.010	0.006	0.026	2.68
PIER 26 (AHD) G5	GDB29	55B	STRENGTH - I	186.30	264.96	-41.42	312.34	144.88	577.30	---	---	0.010	0.010	0.006	0.026	2.68
			STRENGTH - III	186.30	264.96	0.00	0.00	186.30	264.96	0.00	63.72	0.010	0.010	0.006	0.026	2.68
			EXTREME EVENT - I	186.30	264.96	0.00	0.00	186.30	264.96	0.00	34.50	0.010	0.010	0.006	0.026	2.68
			SERVICE - I	207.00	207.00	-23.67	178.48	183.33	385.48	0.00	21.54	0.010	0.010	0.006	0.026	2.68
ABUTMENT 2 G1-G3, G5	GDB30	55E	STRENGTH - I	312.30	444.16	-56.70	446.18	255.60	890.34	---	---	0.010	0.010	0.010	0.030	3.30
			STRENGTH - III	312.30	444.16	0.00	0.00	312.30	444.16	0.00	66.37	0.010	0.010	0.010	0.030	3.30
			EXTREME EVENT - I	312.30	444.16	0.00	0.00	312.30	444.16	0.00	57.83	0.010	0.010	0.010	0.030	3.30
			SERVICE - I	347.00	347.00	-32.40	254.96	314.60	601.96	0.00	22.40	0.010	0.010	0.010	0.030	3.30
ABUTMENT 2 G4	GDB31	55F	STRENGTH - I	417.60	593.92	-63.14	482.42	354.46	1076.34	---	---	0.010	0.010	0.009	0.029	3.16
			STRENGTH - III	417.60	593.92	0.00	0.00	417.60	593.92	0.00	66.48	0.010	0.010	0.009	0.029	3.16
			EXTREME EVENT - I	417.60	593.92	0.00	0.00	417.60	593.92	0.00	77.33	0.010	0.010	0.009	0.029	3.16
			SERVICE - I	464.00	464.00	-36.08	275.67	427.92	739.67	0.00	22.40	0.010	0.010	0.009	0.029	3.16
RAMP D - PIER 4 G1-G2	GDB32	55A	STRENGTH - I	83.70	119.04	(4)	279.30	79.70	398.34	---	---	0.010	0.010	0.005	0.025	3.32
			STRENGTH - III	83.70	119.04	(4)	0.00	79.70	119.04	0.00	40.35	0.010	0.010	0.005	0.025	3.32
			EXTREME EVENT - I	83.70	119.04	(4)	0.00	79.70	119.04	0.00	14.36	0.010	0.010	0.005	0.025	3.32
			SERVICE - I	93.00	93.00	(4)	159.60	89.00	252.60	0.00	13.65	0.010	0.010	0.005	0.025	3.32
RAMP H - PIER 11 G1	GDB33	55A	STRENGTH - I	100.80	143.36	(4)	199.68	96.80	343.04	---	---	0.010	0.010	0.005	0.025	1.80
			STRENGTH - III	100.80	143.36	(4)	0.00	96.80	143.36	0.00	49.63	0.010	0.010	0.005	0.025	1.80
			EXTREME EVENT - I	100.80	143.36	(4)	0.00	96.80	143.36	0.00	17.89	0.010	0.010	0.005	0.025	1.80
			SERVICE - I	112.00	112.00	(4)	114.10	108.00	226.10	0.00	16.80	0.010	0.010	0.005	0.025	1.80
RAMP H - PIER 11 G2	GDB34	55A	STRENGTH - I	100.80	143.36	(4)	199.68	96.80	343.04	---	---	0.010	0.010	0.005	0.025	1.80
			STRENGTH - III	100.80	143.36	(4)	0.00	96.80	143.36	0.00	49.63	0.010	0.010	0.005	0.025	1.80
			EXTREME EVENT - I	100.80	143.36	(4)	0.00	96.80	143.36	0.00	17.89	0.010	0.010	0.005	0.025	1.80
			SERVICE - I	112.00	112.00	(4)	114.10	108.00	226.10	0.00	16.80	0.010	0.010	0.005	0.025	1.80
RAMP J - PIER 17 G1	GDB35	55A	STRENGTH - I	140.85	200.32	(4)	253.93	136.85	454.25	---	---	0.010	0.010	0.008	0.028	2.42
			STRENGTH - III	140.85	200.32	(4)	0.00	136.85	200.32	0.00	52.57	0.010	0.010	0.008	0.028	2.42
			EXTREME EVENT - I	140.85	200.32	(4)	0.00	136.85	200.32	0.00	22.96	0.010	0.010	0.008	0.028	2.42
			SERVICE - I	156.50	156.50	(4)	145.10	152.50	301.60	0.00	17.79	0.010	0.010	0.008	0.028	2.42
RAMP J - PIER 17 G2	GDB36	55A	STRENGTH - I	140.85	200.32	(4)	253.93	136.85	454.25	---	---	0.010	0.010	0.008	0.028	2.42
			STRENGTH - III	140.85	200.32	(4)	0.00	136.85	200.32	0.00	52.57	0.010	0.010	0.008	0.028	2.42
			EXTREME EVENT - I	140.85	200.32	(4)	0.00	136.85	200.32	0.00	22.96	0.010	0.010	0.008	0.028	2.42
			SERVICE - I	156.50	156.50	(4)	145.10	152.50	301.60	0.00	17.79	0.010	0.010	0.008	0.028	2.42

NOTES

(1) MINIMUM HORIZONTAL LOAD CAPACITY FOR EXPANSION BEARINGS SHALL BE 10 PERCENT OF THE VERTICAL LOAD CAPACITY.

(2) FRICTIONAL RESISTANCE OF BEARINGS SLIDE SURFACES IS EXCLUDED FROM HORIZONTAL LOADS ON BEARINGS.

(3) TOTAL DESIGN MOVEMENT IS DUE TO TEMPERATURE RANGE OF 156 DEGREE F FOR STEEL STRUCTURES (DM4 3.12.2.1).

(4) UPLIFT REACTION NOT AVAILABLE.

BK - BACK STATION

AHD - AHEAD STATION

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

REPAIR TYPE 55

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
REPAIR TYPES 55 & 56 DETAILS 7

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 141 OF 164

S - 38036

\\svr-pgh-data-01\Data\Client\PGH_Client\17041-000-Neville Is_Preservation\CADD\Structure\BR1\Final\BR1DBRG11.dgn 6:55:31 AM 11/7/2019

BEARING MARK	REPAIR TYPE	DISC			SRM		LOWER AND UPPER BEARING PLATES				TOP PTFE		SIDE PTFE			TOP STAINLESS STEEL			SIDE STAINLESS STEEL			GUIDE BARS			SOLE PLATE				BEARING HEIGHT
		H	J	K	L	M	N	P	Q	LL	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH *	JJ	KK
GDB1	55G	19.250	3.125	2.500	4.9375	3.000	21.000	21.000	1.500	3.125	20.000	0.1875	20.000	1.250	0.1875	20.250	25.500	0.090	25.500	1.500	0.090	26.500	2.000	1.000	26.000	27.000	3.250	3.500	9.183
GDB2	55H	21.500	3.625	2.625	5.4375	3.500	24.000	24.000	1.750	3.625	23.000	0.1875	23.000	1.500	0.1875	23.250	28.500	0.090	28.500	1.750	0.090	29.500	2.250	1.000	32.000	30.000	3.750	4.250	10.558
GDB3	55G	19.500	3.375	2.500	4.9375	3.250	21.250	21.250	1.500	3.375	20.250	0.1875	20.250	1.250	0.1875	20.500	25.500	0.090	25.500	1.500	0.090	26.500	2.000	1.000	25.000	27.000	3.500	3.750	9.434
GDB4	55H	20.500	3.625	2.625	5.1875	3.500	22.500	22.500	1.500	3.625	21.500	0.1875	21.500	1.250	0.1875	21.750	26.500	0.090	26.500	1.500	0.090	27.500	2.000	1.000	26.000	28.000	3.500	3.750	9.559
GDB5	55H	21.500	3.625	2.625	5.4375	3.500	24.000	24.000	1.750	3.625	23.000	0.1875	23.000	1.500	0.1875	23.250	28.000	0.090	28.000	1.750	0.090	29.000	2.250	1.250	28.000	29.500	3.750	4.000	10.309

ALL DIMENSIONS ARE IN INCHES.

BEARING HEIGHT IS TAKEN AT THE CENTERLINE OF BEARING.

(NOTE: ALL HEIGHTS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO BEARING AND STOOL FABRICATION)

* MINIMUM SOLE PLATE THICKNESS

BEARING LOCATION	BEARING MARK	GIRDERS
PIER 2	GDB1	G1-G2
	GDB2	G3-G4
PIER 5	GDB3	G1-G4
PIER 7	GDB3	G1
	GDB3	G2-G4
PIER 14	GDB3	G1-G2
	GDB4	G3-G4
PIER 15	GDB3	G1-G4
PIER 18	GDB5	G1-G2
	GDB4	G3-G4
* PIER 20	GDB4	G1-G2
	GDB4	G3-G4
* PIER 23	GDB4	G1-G4
PIER 25	GDB4	G1-G2
	GDB5	G3-G4

* SEE REPAIR 5 ON SHEET 90 FOR SOLE PL MODIFICATION

DESIGN LOADS FOR EXPANSION DISC BEARINGS

BEARING LOCATION	BEARING MARK	REPAIR TYPE	LOAD COMBINATION	FACTORED LOADS VERTICAL DL MIN.	DL MAX.	LL+I MIN.	LL+I MAX.	TOTAL VERTICAL MIN.	TOTAL VERTICAL MAX.	TRANSVERSE MIN.	TRANSVERSE MAX.	ROTATIONS (RADIANS) FAB. & INSTALL TOLERANCE	ALLOWANCE FOR UNCERTAINTIES	SERVICE ROTATION (MAX.)	TOTAL ROTATION	TOTAL MOVEMENT LONGIT. (IN)
PIER 2 G1-G2	GDB1	55G	STRENGTH - I	591.30	840.96	-68.50	607.53	522.81	1448.49	---	---	0.010	0.010	0.003	0.023	2.38
			STRENGTH - III	591.30	840.96	0.00	0.00	591.30	840.96	0.00	122.41	0.010	0.010	0.003	0.023	2.38
			EXTREME EVENT - I	591.30	840.96	0.00	0.00	591.30	840.96	0.00	109.50	0.010	0.010	0.003	0.023	2.38
			SERVICE - I	657.00	657.00	-39.14	347.16	617.86	1004.16	0.00	41.13	0.010	0.010	0.003	0.023	2.38
PIER 2 G3-G4	GDB2	55H	STRENGTH - I	773.10	1099.52	-82.78	776.42	690.33	1875.94	---	---	0.010	0.010	0.002	0.022	2.34
			STRENGTH - III	773.10	1099.52	0.00	0.00	773.10	1099.52	0.00	122.41	0.010	0.010	0.002	0.022	2.34
			EXTREME EVENT - I	773.10	1099.52	0.00	0.00	773.10	1099.52	0.00	143.17	0.010	0.010	0.002	0.022	2.34
			SERVICE - I	859.00	859.00	-47.30	443.67	811.70	1302.67	0.00	41.13	0.010	0.010	0.002	0.022	2.34
PIER 5 G1-G4, PIER 7 G1-G4, PIER 14 G1-G2, PIER 15 G1-G4	GDB3	55G	STRENGTH - I	612.90	871.68	-69.11	655.83	543.79	1527.51	---	---	0.010	0.010	0.002	0.022	2.24
			STRENGTH - III	612.90	871.68	0.00	0.00	612.90	871.68	0.00	107.59	0.010	0.010	0.002	0.022	2.24
			EXTREME EVENT - I	612.90	871.68	0.00	0.00	612.90	871.68	0.00	113.50	0.010	0.010	0.002	0.022	2.24
			SERVICE - I	681.00	681.00	-39.49	374.76	641.51	1055.76	0.00	36.11	0.010	0.010	0.002	0.022	2.24
PIER 14 G3-G4, PIER 18 G3-G4, PIER 20 G1-G4, PIER 23 G1-G4, PIER 25 G1-G2	GDB4	55H	STRENGTH - I	702.00	998.40	-85.66	750.42	616.34	1748.82	---	---	0.010	0.010	0.002	0.022	1.88
			STRENGTH - III	702.00	998.40	0.00	0.00	702.00	998.40	0.00	122.56	0.010	0.010	0.002	0.022	1.88
			EXTREME EVENT - I	702.00	998.40	0.00	0.00	702.00	998.40	0.00	130.00	0.010	0.010	0.002	0.022	1.88
			SERVICE - I	780.00	780.00	-48.95	428.81	731.05	1208.81	0.00	39.04	0.010	0.010	0.002	0.022	1.88
PIER 18 G1-G2, PIER 25 G3-G4	GDB5	55H	STRENGTH - I	810.00	1152.00	-88.48	785.72	721.52	1937.72	---	---	0.010	0.010	0.002	0.022	1.90
			STRENGTH - III	810.00	1152.00	0.00	0.00	810.00	1152.00	0.00	103.83	0.010	0.010	0.002	0.022	1.90
			EXTREME EVENT - I	810.00	1152.00	0.00	0.00	810.00	1152.00	0.00	150.00	0.010	0.010	0.002	0.022	1.90
			SERVICE - I	900.00	900.00	-50.56	448.98	849.44	1348.98	0.00	34.80	0.010	0.010	0.002	0.022	1.90

NOTES

(1) MINIMUM HORIZONTAL LOAD CAPACITY FOR EXPANSION BEARINGS SHALL BE 10 PERCENT OF THE VERTICAL LOAD CAPACITY.

(2) FRICTIONAL RESISTANCE OF BEARINGS SLIDE SURFACES IS EXCLUDED FROM HORIZONTAL LOADS ON BEARINGS.

(3) TOTAL DESIGN MOVEMENT IS DUE TO TEMPERATURE RANGE OF 156 DEGREE F FOR STEEL STRUCTURES (DM4 3.12.2.1).

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
REPAIR TYPES 55 & 56 DETAILS 8

REPAIR TYPE 55

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 142 OF 164

S - 38036

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

\\svr-pgh-data-01\Data\Client\PGH_Client\17041-000-Neville_Preservation\CADD\Structure\BR1\Final\BR1DBRG08.dgn 6:55:32 AM 11/7/2019

BEARING LOCATION	BEARING MARK	REPAIR TYPE	GIRDERS	DISC			SRM		UPPER BEARING PLATE				LOWER BEARING PLATE				TOP PTFE		SIDE PTFE			TOP STAINLESS STEEL			SIDE STAINLESS STEEL			GUIDE BARS			SOLE PLATE				BEARING HEIGHT
				H	J	K	L	M	N	P	Q	LL	N1	P1	Q	LL	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH *	JJ	KK
ABUT 1	GDB6	55D	G1-G2	12.750	2.125	1.500	3.6875	2.000	15.250	15.250	1.250	2.125	14.000	14.000	1.250	2.125	14.250	0.1875	14.250	1.000	0.1875	14.500	20.750	0.090	20.750	1.250	0.090	21.750	1.625	0.750	26.000	22.250	1.500	1.699	5.8829
	GDB7	55D	G3-G4	12.750	2.125	1.500	3.6875	2.000	15.250	15.250	1.250	2.125	14.000	14.000	1.250	2.125	14.250	0.1875	14.250	1.000	0.1875	14.500	20.750	0.090	20.750	1.250	0.090	21.750	1.625	0.750	32.000	22.250	1.375	1.574	5.7579
PIER 4 (BK)	GDB8	55C	G1-G2	11.875	2.125	1.500	3.6875	2.000	13.625	13.625	1.250	2.125	12.875	12.875	1.250	2.125	12.625	0.1875	12.625	1.000	0.1875	12.875	17.250	0.090	17.250	1.250	0.090	18.250	1.625	0.750	26.000	18.750	1.125	1.293	5.4766
	GDB9	55F	G3-G4	13.500	2.375	1.500	3.6875	2.250	16.750	16.750	1.250	2.375	14.500	14.500	1.250	2.375	15.750	0.1875	15.750	1.000	0.1875	16.000	20.625	0.090	20.625	1.250	0.090	21.625	1.625	0.750	32.000	22.125	1.500	1.684	5.8674
PIER 4 (AHD)	GDB10	55B	G1-G4	11.250	1.875	1.500	3.6875	1.750	12.250	12.250	1.250	1.875	12.250	12.250	1.250	1.875	11.250	0.1875	11.250	1.000	0.1875	11.500	16.875	0.090	16.875	1.250	0.090	17.875	1.625	0.750	22.000	18.375	1.375	1.414	5.5982
PIER 8 (BK)	GDB11	55C	G1-G4	11.875	2.125	1.500	3.6875	2.000	13.625	13.625	1.250	2.125	13.000	13.000	1.250	2.125	12.625	0.1875	12.625	1.000	0.1875	12.875	18.625	0.090	18.625	1.250	0.090	19.625	1.625	0.750	22.000	21.000	1.625	1.746	5.9295
PIER 8 (AHD)	GDB12	55E	G1-G2	13.250	2.125	1.500	3.6875	2.000	16.125	16.125	1.500	2.125	14.250	14.250	1.500	2.125	15.125	0.1875	15.125	1.000	0.1875	15.375	20.500	0.090	20.500	1.250	0.090	21.500	1.625	0.750	38.000	22.000	1.125	1.257	5.4407
	GDB13	55E	G3-G4	13.250	2.125	1.500	3.6875	2.000	16.125	16.125	1.500	2.125	14.250	14.250	1.500	2.125	15.125	0.1875	15.125	1.000	0.1875	15.375	20.500	0.090	20.500	1.250	0.090	21.500	1.625	0.750	32.000	22.000	1.500	1.632	5.8157
PIER 11 (BK)	GDB14	55F	G1-G2	14.875	2.375	1.750	3.9375	2.250	17.625	17.625	1.250	2.375	17.625	17.625	1.250	2.375	16.625	0.1875	16.625	1.000	0.1875	16.875	26.375	0.090	26.375	1.250	0.090	27.375	1.625	0.750	38.000	27.875	1.375	1.498	5.9314
	GDB15	55D	G3-G4	12.750	2.125	1.500	3.6875	2.000	15.250	15.250	1.250	2.125	15.250	15.250	1.250	2.125	14.250	0.1875	14.250	1.000	0.1875	14.500	23.875	0.090	23.875	1.250	0.090	24.875	1.625	0.750	32.000	25.375	1.375	1.527	5.7110
PIER 11 (AHD)	GDB16	55A	G1-G4	10.750	1.875	1.500	3.6875	1.750	11.750	11.750	1.250	1.875	11.750	11.750	1.250	1.875	10.750	0.1875	10.750	1.000	0.1875	11.000	14.375	0.090	14.375	1.250	0.090	15.375	1.625	0.625	18.000	15.875	1.250	1.345	5.5290
PIER 13 (BK)	GDB17	55B	G1-G3, G5	11.500	1.875	1.500	3.6875	1.750	13.250	13.250	1.250	1.875	12.500	12.500	1.250	1.875	12.250	0.1875	12.250	1.000	0.1875	12.500	17.375	0.090	17.375	1.250	0.090	18.375	1.625	0.750	18.000	18.875	1.375	1.522	5.7060
	GDB18	55C	G4	11.875	2.125	1.500	3.6875	2.000	13.375	13.375	1.250	2.125	13.000	13.000	1.250	2.125	12.375	0.1875	12.375	1.000	0.1875	12.625	16.250	0.090	16.250	1.250	0.090	17.250	1.625	0.750	18.000	17.750	0.875	0.981	5.1652
PIER 13 (AHD)	GDB19	55D	G1-G4	12.500	2.125	1.500	3.6875	2.000	14.750	14.750	1.250	2.125	13.500	13.500	1.250	2.125	13.750	0.1875	13.750	1.000	0.1875	14.000	21.000	0.090	21.000	1.250	0.090	22.000	1.625	0.750	22.000	22.500	1.625	1.800	5.9843
PIER 17 (BK)	GDB20	55B	G1-G2	11.750	1.875	1.500	3.6875	1.750	13.125	13.125	1.250	1.875	12.750	12.750	1.250	1.875	12.125	0.1875	12.125	1.000	0.1875	12.375	16.375	0.090	16.375	1.250	0.090	17.375	1.625	0.750	22.000	17.875	1.375	1.482	5.6660
	GDB21	55D	G3-G4	12.375	2.125	1.500	3.6875	2.000	14.375	14.375	1.250	2.125	13.375	13.375	1.250	2.125	13.375	0.1875	13.375	1.000	0.1875	13.625	17.625	0.090	17.625	1.250	0.090	18.625	1.625	0.750	22.000	19.125	1.500	1.615	5.7985
PIER 17 (AHD)	GDB22	55E	G1-G2	13.500	2.375	1.625	3.8125	2.250	15.875	15.875	1.250	2.375	14.500	14.500	1.250	2.375	14.875	0.1875	14.875	1.000	0.1875	15.125	20.750	0.090	20.750	1.250	0.090	21.750	1.625	0.750	26.000	22.250	1.625	1.825	6.1340
	GDB23	55D	G3-G4	12.375	2.125	1.500	3.6875	2.000	14.375	14.375	1.250	2.125	13.375	13.375	1.250	2.125	13.375	0.1875	13.375	1.000	0.1875	13.625	19.125	0.090	19.125	1.250	0.090	20.125	1.625	0.750	22.000	20.625	1.250	1.374	5.5575
** PIER 21 (BK)	GDB24	55D	G1-G4	12.250	2.125	1.500	3.6875	2.000	14.250	14.250	1.250	2.125	13.250	13.250	1.250	2.125	13.250	0.1875	13.250	1.000	0.1875	13.500	19.125	0.090	19.125	1.250	0.090	20.125	1.625	0.750	22.000	20.625	1.750	1.874	6.0575
**PIER 22 (AHD)	GDB24	55D	G1-G4	12.250	2.125	1.500	3.6875	2.000	14.250	14.250	1.250	2.125	13.250	13.250	1.250	2.125	13.250	0.1875	13.250	1.000	0.1875	13.500	19.125	0.090	19.125	1.250	0.090	20.125	1.625	0.750	22.000	20.625	1.750	1.874	6.0575
PIER 26 (BK)	GDB25	55D	G1-G2	12.375	2.125	1.500	3.6875	2.000	14.375	14.375	1.250	2.125	13.375	13.375	1.250	2.125	13.375	0.1875	13.375	1.000	0.1875	13.625	19.250	0.090	19.250	1.250	0.090	20.250	1.625	0.750	22.000	20.750	1.250	1.318	5.5022
	GDB26	55E	G3-G4	13.500	2.375	1.625	3.8125	2.250	15.625	15.625	1.250	2.375	14.500	14.500	1.250	2.375	14.625	0.1875	14.625	1.000	0.1875	14.875	20.500	0.090	20.500	1.250	0.090	21.500	1.625	0.750	26.000	22.000	1.625	1.698	6.0064
PIER 26 (AHD)	GDB27	55D	G1-G3	13.250	2.125	1.625	3.8125	2.000	15.250	15.250	1.250	2.125	14.250	14.250	1.250	2.125	14.250	0.1875	14.250	1.000	0.1875	14.500	19.000	0.090	19.000	1.250	0.090	20.000	1.625	0.750	32.000	20.500	1.500	1.567	5.8754
	GDB28	55E	G4	13.500	2.375	1.625	3.8125	2.250	15.750	15.750	1.250	2.375	14.500	14.500	1.250	2.375	14.750	0.1875	14.750	1.000	0.1875	15.000	19.500	0.090	19.500	1.250	0.090	20.500	1.625	0.750	38.000	21.000	1.250	1.318	5.6270
	GDB29	55B	G5	11.750	1.875	1.500	3.6875	1.750	13.250	13.250	1.250	1.875	12.750	12.750	1.250	1.875	12.250	0.1875	12.250	1.000	0.1875	12.500	17.000	0.090	17.000	1.250	0.090	18.000	1.625	0.750	30.000	18.500	1.125	1.185	5.3689
ABUT 2	GDB30	55E	G1-G3, G5	13.750	2.375	1.625	3.8125	2.250	16.500	16.500	1.250	2.375	14.750	14.750	1.250	2.375	15.500	0.1875	15.500	1.000	0.1875	15.750	20.875	0.090	20.875	1.250	0.090	21.875	1.625	0.750	32.000	22.375	1.750	1.806	6.1147
	GDB31	55F	G4	14.875	2.625	1.750	3.9375	2.500	17.875	17.875	1.250	2.625	15.875	15.875	1.250	2.625	16.875	0.1875	16.875	1.000	0.1875	17.125	22.125	0.090	22.125	1.250	0.090	23.125	1.625	0.875	38.000	23.625	1.375	1.379	5.8123
RAMP D - PIER 4	GDB32	55A	G1-G2	10.000	1.625	1.250	3.0625	1.500	11.250	11.250	1.000	1.625	11.250	11.250	1.000	1.625	10.250	0.1875	10.250	0.750	0.1875	10.500	15.625	0.090	15.625	1.000	0.090	16.625	1.375	0.625	22.000	17.125	0.875	1.017	4.4509
RAMP H - PIER 11 **	GDB33	55A	G1	10.000	1.625	1.250	3.0625	1.500	11.000	11.000	1.000	1.625	11.000	11.000	1.000	1.625	10.000	0.1875	10.000	0.750	0.1875	10.250	13.875	0.090	13.875	1.000	0.090	14.875	1.375	0.625	26.000	15.375	0.750	0.818	4.2514
	GDB34	55A	G2	10.000	1.625	1.250	3.0625	1.500	11.000	11.000	1.000	1.625	11.000	11.000	1.000	1.625	10.000	0.1875	10.000	0.750	0.1875	10.250	13.875	0.090	13.875	1.000	0.090	14.875	1.375	0.625	18.000	15.375	1.000	1.068	4.5014
RAMP J - PIER 17 **	GDB35	55A	G1	10.250	1.875	1.250	3.0625	1.750	12.000	12.000	1.000	1.875	11.250	11.250	1.000	1.875	11.000	0.1875	11.000	0.750	0.1875	11.250	15.500	0.090	15.500	1.000	0.090	16.500	1.375	0.625	18.000	17.000	1.375	1.528	4.9617
	GDB36	55A	G2	10.250	1.875	1.250	3.0625	1.750	12.000	12.000	1.000	1.875	11.250	11.250	1.000	1.875	11.000	0.1875	11.000	0.750	0.1875	11.250	15.500	0.090	15.500	1.000	0.090	16.500	1.375	0.625	26.000	17.000	1.125	1.278	4.7117

ALL DIMENSIONS ARE IN INCHES.
BEARING HEIGHT IS TAKEN AT THE CENTERLINE OF BEARING. (NOTE: ALL HEIGHTS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO BEARING AND STOOL FABRICATION.)
BK - BACK STATION
AHD - AHEAD STATION
* MINIMUM SOLE PLATE THICKNESS
** SEE REPAIR 5 ON SHEET 90 FOR SOLE & MODIFICATIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

REPAIR TYPE 55

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 9

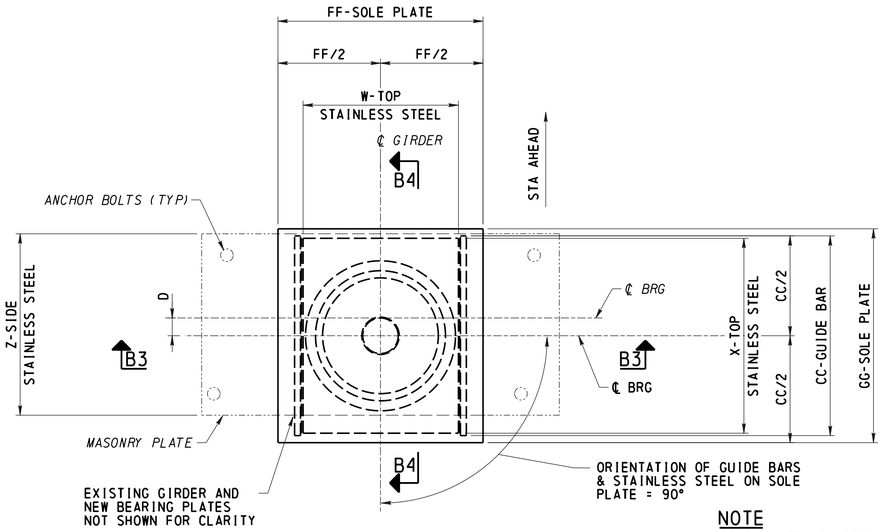
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 143 OF 164

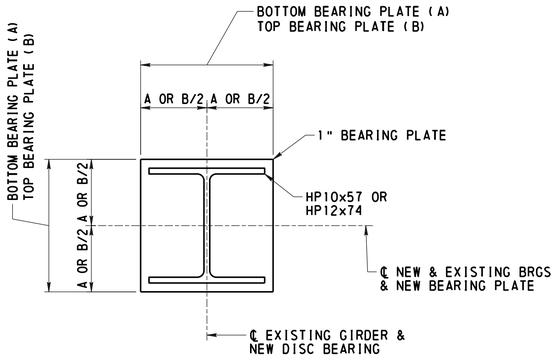
S - 38036

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

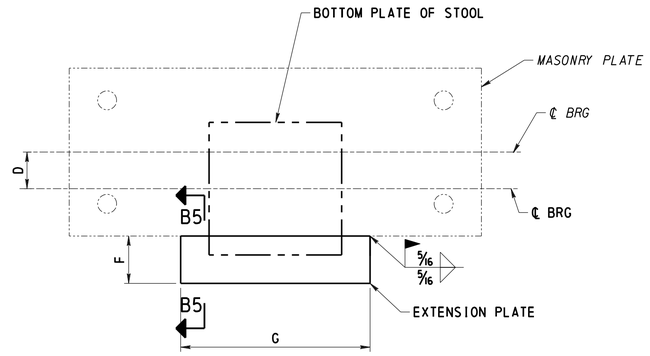


NOTE
- SOLE PLATE IS NORMAL TO ℄ GIRDER

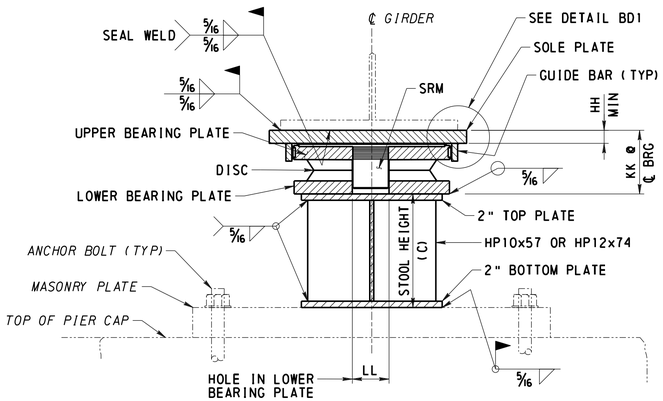
PLAN GUIDED DISC BEARING MARK GDB6 THRU GDB36
NOT TO SCALE



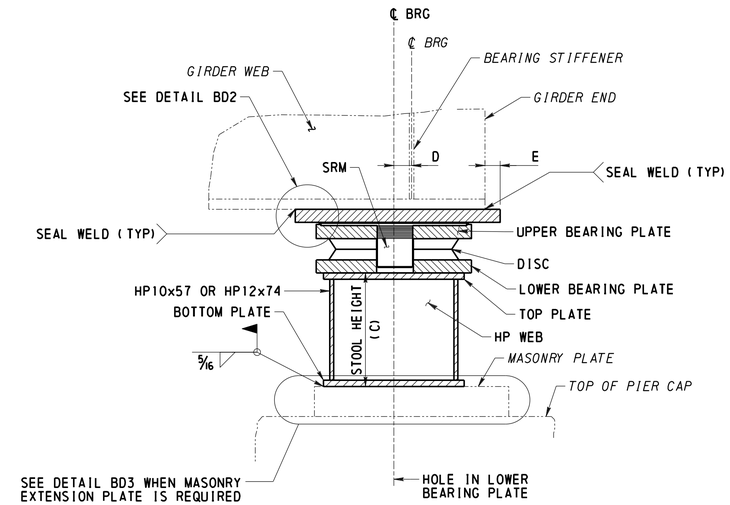
BOTTOM STOOL PLATE - PLAN (AS SHOWN)
TOP STOOL PLATE SIMILAR
NOT TO SCALE



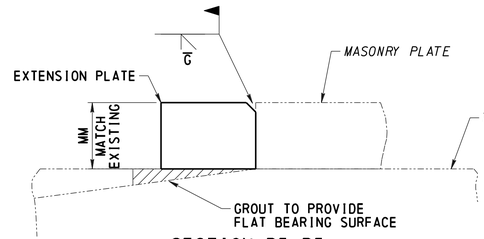
EXISTING MASONRY PLATE-PLAN
WITH NEW EXTENSION PLATE
NOT TO SCALE



SECTION B3-B3
NOT TO SCALE

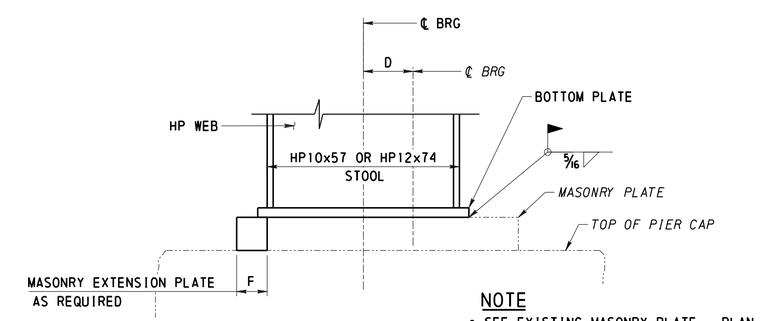


SECTION B4-B4
NOT TO SCALE



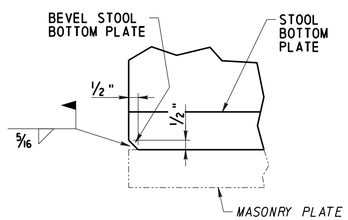
SECTION B5-B5
NOT TO SCALE

NOTES
- FOR DISC BEARING NOTES, MATERIALS AND DESIGN LOADS SEE SHEET 139
- FOR BEARING SCHEMATIC KEY PLAN SEE SHEETS 135 136
- FOR DETAILS BD1, BD2, AND ADDITIONAL DISC BEARING DETAILS SEE SHEET 145

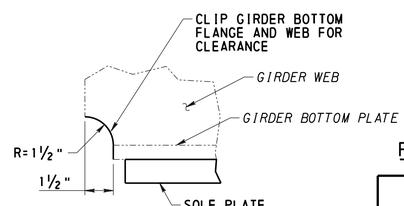


DETAIL BD3
NOT TO SCALE

NOTE
- SEE EXISTING MASONRY PLATE - PLAN WITH NEW EXTENSION PLATE FOR ADDITIONAL DETAILS



PIER 4 (STA BACK)
GIRDER G2
NOT TO SCALE



PIER 11 (STA AHEAD)
GIRDERS G2 THRU G4
NOT TO SCALE

REPAIR TYPE 55

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 10

DESIGNED BY	DCT
DRAWN BY	ERK
CHECKED BY	DCT

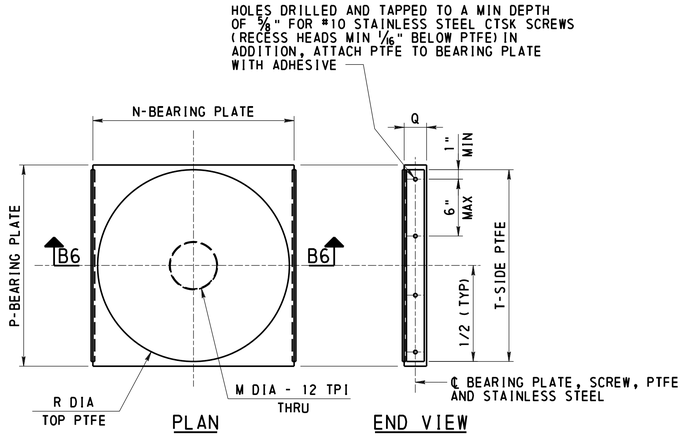
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030627-E

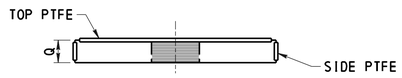
RECOMMENDED _____

SHEET 144 OF 164

S - 38036

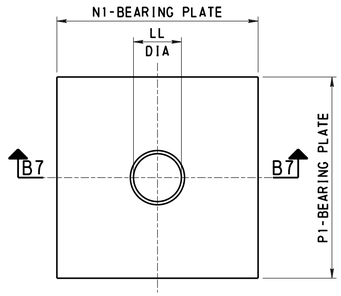
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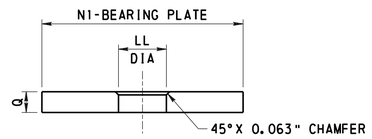


SECTION B6-B6

UPPER BEARING PLATE



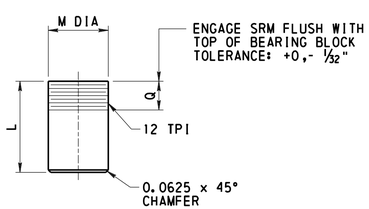
PLAN - LOWER BEARING PLATE



SECTION B7-B7

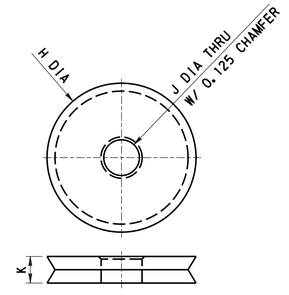
GUIDED BEARING PLATE DETAILS

NOT TO SCALE



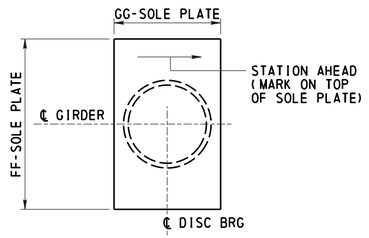
SHEAR RESISTING MECHANISM (SRM)

NOT TO SCALE

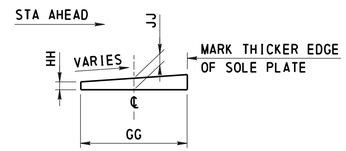


DISC

NOT TO SCALE



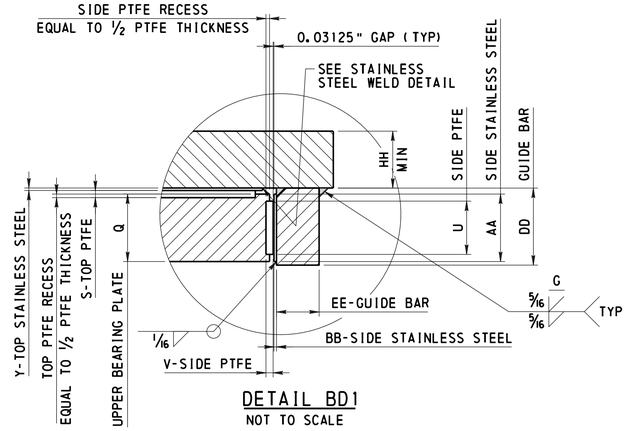
PLAN



SIDE VIEW

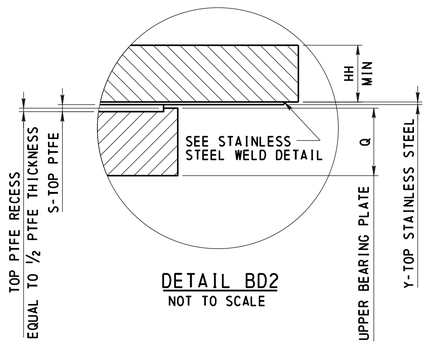
BEVELED SOLE PLATE DETAIL

NOT TO SCALE



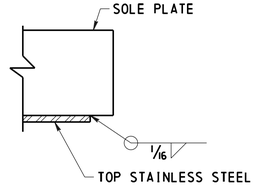
DETAIL BD1

NOT TO SCALE



DETAIL BD2

NOT TO SCALE



STAINLESS STEEL WELD DETAIL

NOT TO SCALE

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 11

REPAIR TYPE 55

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 145 OF 164

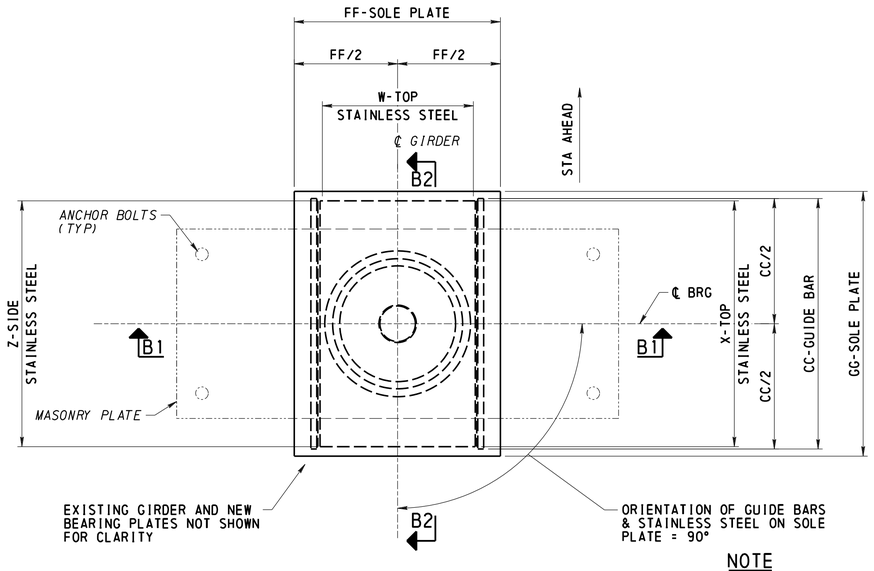
S - 38036

DESIGNED BY	DCT
DRAWN BY	ERK
CHECKED BY	DCT

NOTES

- WORK THIS SHEET WITH SHEETS 139 THRU 144

\\svr-pgh-data-01\Data\Client\PGH_Client\17041-000-Neviille's_Preservation\CADD\Structure\BR1\Final\BR1DBRG06.dgn 6:55:35 AM 11/7/2019

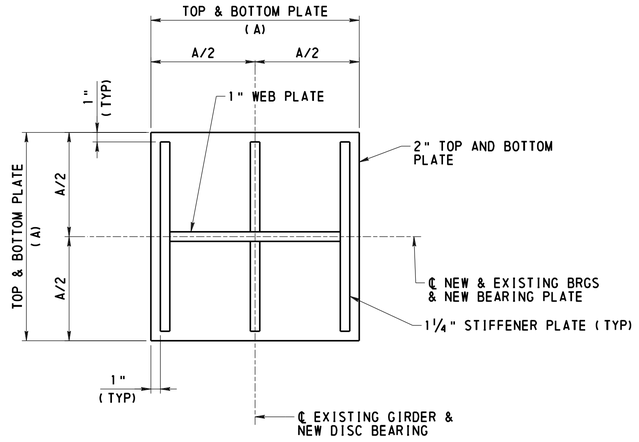


PLAN GUIDED DISC BEARING MARK GDB1 THRU GDB5

NOT TO SCALE

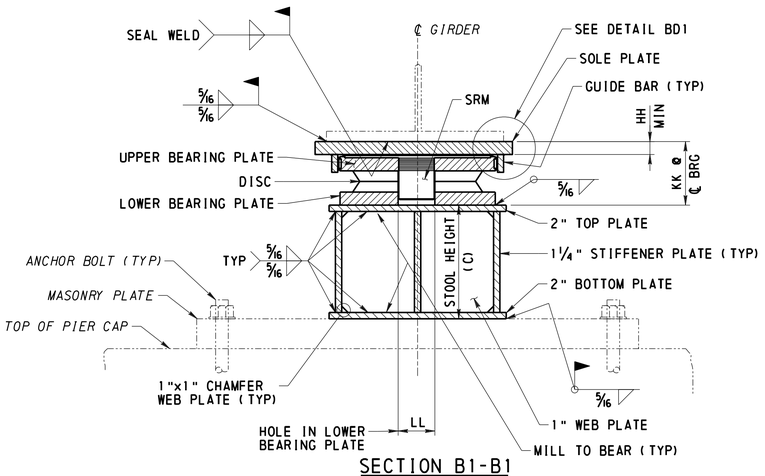
NOTE

- SOLE PLATE IS NORMAL TO ℄ GIRDER



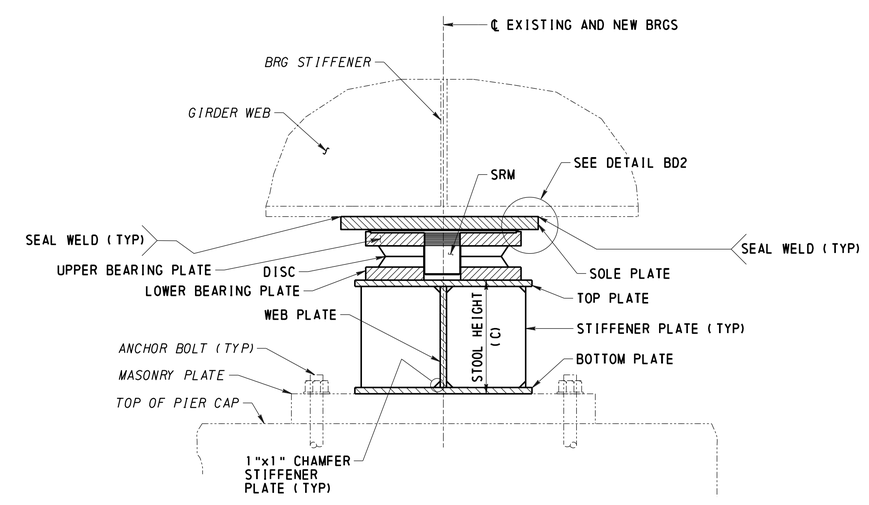
STOOL DETAIL - BOTTOM PLATE PLAN (AS SHOWN)
TOP PLATE PLAN (SIMILAR)

NOT TO SCALE



SECTION B1-B1

NOT TO SCALE



SECTION B2-B2

NOT TO SCALE

NOTES

- FOR DISC BEARING NOTES, MATERIALS AND DESIGN LOADS SEE SHEET 139
- FOR BEARING SCHEMATIC KEY PLAN SEE SHEETS 135 & 136
- FOR DETAILS BD1, BD2, AND ADDITIONAL DISC BEARING DETAILS SEE SHEET 145

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

REPAIR TYPE 55

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 12

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DCT
DRAWN BY	ERK
CHECKED BY	DCT

RECOMMENDED _____

SHEET 146 OF 164

S - 38036

LOCATION	GIRDER NO.	TOTAL EXISTING HEIGHT (BOT/GDR - TOP/CONC) *	MASONRY PLATE THICKNESS	MASONRY PLATE WIDTH **	BEARING HEIGHT	BOTTOM BEARING PLATE DIM.	STOOL DIMENSIONS				BRG OFFSET	SOLE PLATE OFFSET	MASONRY PLATE EXTENSION	
							HP SIZE	A	B	C	D	E	F	G
		(IN)	(IN)	(IN)	(IN)	(IN)		(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)
ABUT 1	G1	19.3750	3.50	17.00	5.8829	14.000	HP12x74	15.000	15.000	9.992	-	-	-	-
	G2	19.3750	3.50	17.00	5.8829	14.000	HP12x74	15.000	15.000	9.992	-	3.6250	-	-
	G3	24.0000	3.50	17.00	5.7579	14.000	HP12x74	15.000	15.000	14.742	-	3.6250	-	-
	G4	24.0000	3.50	17.00	5.7579	14.000	HP12x74	15.000	15.000	14.742	-	-	-	-
PIER 2	G1	30.0000	4.25	26.00	9.1834	21.000	-	23.000	-	16.567	-	-	-	-
	G2	37.5000	4.25	26.00	9.1834	21.000	-	23.000	-	24.067	-	-	-	-
	G3	37.2500	5.25	32.00	10.5583	24.000	-	26.000	-	21.442	-	-	-	-
	G4	37.2500	5.25	32.00	10.5583	24.000	-	26.000	-	21.442	-	-	-	-
PIER 4 (SPAN 3)	G1	19.3750	3.50	17.00	5.4766	12.875	HP12x74	13.250	13.875	10.398	1.8750	0.5000	-	-
	G2	26.7500	3.50	17.00	5.4766	12.875	HP12x74	13.250	13.875	17.773	1.8750	0.5000	-	-
	G3	25.1250	3.50	17.50	5.8674	14.500	HP12x74	13.250	15.500	15.758	3.5625	0.5000	3.00	18.00
	G4	26.5000	3.50	17.50	5.8674	14.500	HP12x74	13.250	15.500	17.133	3.5625	0.5000	3.00	18.00
PIER 4 (SPAN 4)	G1	19.0000	3.00	16.00	5.5982	12.250	HP10x57	11.500	13.250	10.402	1.6875	0.5000	-	-
	G2	26.6250	3.00	16.00	5.5982	12.250	HP10x57	11.500	13.250	18.027	1.6875	0.5000	-	-
	G3	26.6250	3.00	16.00	5.5982	12.250	HP10x57	11.500	13.250	18.027	1.6875	0.5000	-	-
	G4	19.3750	3.50	17.00	5.5982	12.250	HP10x57	11.500	13.250	10.277	-	1.4375	-	-
PIER 5	G1	27.0000	4.25	26.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G2	27.1250	4.25	24.00	9.4338	21.250	-	23.250	-	13.441	-	-	-	-
	G3	27.0000	4.25	24.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G4	27.0000	4.25	26.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
PIER 7	G1	30.0000	4.25	26.00	9.4338	21.250	-	23.250	-	16.316	-	-	-	-
	G2	27.0000	4.25	24.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G3	27.0000	4.25	24.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G4	27.0000	4.25	24.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
PIER 8 (SPAN 7)	G1	22.8125	3.50	17.00	5.9295	13.000	HP12x74	14.000	14.000	13.383	-	0.5000	-	-
	G2	24.0000	3.50	17.00	5.9295	13.000	HP12x74	14.000	14.000	14.571	-	0.5000	-	-
	G3	23.0000	3.00	16.00	5.9295	13.000	HP12x74	14.000	14.000	14.071	-	0.5000	-	-
	G4	22.5000	3.00	16.00	5.9295	13.000	HP12x74	14.000	14.000	13.571	-	0.5000	-	-
PIER 8 (SPAN 8)	G1	21.3750	3.00	22.00	5.4407	14.250	HP12x74	15.250	15.250	12.934	-	1.0000	-	-
	G2	21.3750	3.00	22.00	5.4407	14.250	HP12x74	15.250	15.250	12.934	1.0625	1.0000	-	-
	G3	21.3750	3.50	17.00	5.8157	14.250	HP12x74	15.250	15.250	12.059	2.2500	1.0000	-	-
	G4	21.0000	3.50	17.00	5.8157	14.250	HP12x74	15.250	15.250	11.684	-	1.0000	-	-
PIER 11 (SPAN 10)	G1	26.3750	4.00	30.00	5.9314	17.625	-	19.625	-	16.444	2.2500	1.6875	-	-
	G2	26.3750	4.00	30.00	5.9314	17.625	-	19.625	-	16.444	-	-	0.5	-
	G3	26.5000	4.00	30.00	5.7110	15.250	-	17.250	-	16.789	1.0000	1.6875	-	-
	G4	21.0000	4.00	30.00	5.7100	15.250	-	17.250	-	11.290	-	0.6875	-	-
PIER 11 (SPAN 11)	G1	19.3750	3.75	20.00	5.5290	11.750	HP10x57	12.750	12.750	10.096	-	-	-	-
	G2	29.3125	2.75	14.00	5.5290	11.750	HP10x57	12.750	12.750	21.034	-	-	-	-
	G3	28.3750	2.75	14.00	5.5290	11.750	HP10x57	12.750	12.750	20.096	-	-	-	-
	G4	22.6250	2.75	14.00	5.5290	11.750	HP10x57	12.750	12.750	14.346	-	-	-	-
PIER 13 (SPAN 12)	G1	19.7500	2.75	14.00	5.7060	12.500	HP12x74	14.000	14.000	11.294	1.9375	0.5000	4.00	18.00
	G2	22.3750	2.75	14.00	5.7060	12.500	HP12x74	14.000	14.000	13.919	1.9375	0.5000	4.00	18.00
	G3	22.0000	3.00	16.00	5.7060	12.500	HP12x74	14.000	14.000	13.294	1.9375	0.5000	4.00	18.00
	G4	20.8750	3.50	17.00	5.1652	13.000	HP12x74	14.000	14.000	12.210	-	1.8750	-	-
	G5	22.8750	3.50	17.00	5.7060	12.500	HP12x74	16.250	14.000	13.669	1.9375	0.5000	4.00	18.00
PIER 13 (SPAN 13)	G1	19.3750	3.50	17.00	5.9843	13.500	HP12x74	13.250	14.500	9.891	3.7500	0.5000	4.00	18.00
	G2	22.1250	3.50	17.00	5.9843	13.500	HP12x74	13.250	14.500	12.641	3.7500	0.5000	4.00	18.00
	G3	21.3750	3.50	17.00	5.9843	13.500	HP12x74	13.250	14.500	11.891	3.7500	0.5000	4.00	18.00
	G4	21.3750	3.50	17.00	5.9843	13.500	HP12x74	13.250	14.500	11.891	3.7500	0.5000	4.00	18.00
PIER 14	G1	27.0000	4.25	26.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G2	31.8750	4.25	26.00	9.4338	21.250	-	23.250	-	18.191	-	-	-	-
	G3	30.7500	4.75	30.00	9.5588	22.500	-	24.500	-	16.441	-	-	-	-
	G4	30.7500	4.75	30.00	9.5588	22.500	-	24.500	-	16.441	-	-	-	-
PIER 15	G1	27.0000	4.25	26.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G2	27.6250	4.25	26.00	9.4338	21.250	-	23.250	-	13.941	-	-	-	-
	G3	27.0000	4.25	26.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
	G4	27.0000	4.25	26.00	9.4338	21.250	-	23.250	-	13.316	-	-	-	-
PIER 17 (SPAN 16)	G1	19.3750	4.00	22.00	5.6660	12.750	HP10x57	12.000	13.750	9.709	-	1.9375	-	-
	G2	24.6250	3.50	17.00	5.6660	12.750	HP10x57	12.000	13.750	15.459	1.3750	0.5625	-	-
	G3	24.0000	3.50	17.00	5.7985	13.375	HP10x57	12.000	14.375	14.702	2.0000	0.5625	-	-
	G4	21.3750	3.50	17.00	5.7985	13.375	HP10x57	12.000	14.375	12.077	2.0000	0.5625	-	-
PIER 17 (SPAN 17)	G1	24.0000	3.50	17.50	6.1340	14.500	HP12x74	13.250	15.500	14.366	3.5625	0.5625	4.00	18.00
	G2	24.0000	3.50	17.50	6.1340	14.500	HP12x74	13.250	15.500	14.366	3.5625	0.5625	4.00	18.00
	G3	24.0000	3.50	17.00	5.5575	13.375	HP10x57	13.250	14.375	14.943	2.7500	0.5625	4.00	18.00
	G4	21.5000	3.50	17.00	5.5575	13.375	HP10x57	13.250	14.375	12.443	2.7500	0.5625	4.00	18.00

LOCATION	GIRDER NO.	TOTAL EXISTING HEIGHT (BOT/GDR - TOP/CONC) *	MASONRY PLATE THICKNESS	MASONRY PLATE WIDTH **	BEARING HEIGHT	BOTTOM BEARING PLATE DIM.	STOOL DIMENSIONS				BRG OFFSET	SOLE PLATE OFFSET	MASONRY PLATE EXTENSION	
							HP SIZE	A	B	C	D	E	F	G
		(IN)	(IN)	(IN)	(IN)	(IN)		(IN)	(IN)	(IN)	(IN)	(IN)	(IN)	(IN)
PIER 18	G1	36.0000	5.25	32.00	10.3088	24.000	-	26.000	-	20.441	-	-	-	-
	G2	36.0000	5.25	32.00	10.3088	24.000	-	26.000	-	20.441	-	-	-	-
	G3	36.1250	4.75	30.00	9.5588	22.500	-	24.500	-	21.816	-	-	-	-
	G4	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
PIER 20	G1	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
	G2	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
	G3	30.1250	4.75	30.00	9.5588	22.500	-	24.500	-	15.816	-	-	-	-
	G4	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
PIER 21 (SPAN 20)	G1	20.5000	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	10.943	-	1.3125	-	-
	G2	20.5000	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	10.943	-	1.3125	-	-
	G3	20.5000	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	10.943	-	1.3125	-	-
	G4	20.5000	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	10.943	-	1.3125	-	-
PIER 22 (SPAN 22)	G1	20.7500	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	11.193	-	3.8125	-	-
	G2	20.7500	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	11.193	-	3.8125	-	-
	G3	20.6250	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	11.068	-	3.8125	-	-
	G4	20.6250	3.50	17.00	6.0575	13.250	HP12x74	14.250	14.250	11.068	-	3.8125	-	-
PIER 23	G1	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
	G2	30.1250	4.75	30.00	9.5588	22.500	-	24.500	-	15.816	-	-	-	-
	G3	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
	G4	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
PIER 25	G1	30.0000	4.75	30.00	9.5588	22.500	-	24.500	-	15.691	-	-	-	-
	G2	36.1250	4.75	30.00	9.5588	22.500	-	24.500	-	21.816	-	-	-	-
	G3	36.0000	5.25	32.00	10.3088	24.000	-	26.000	-	20.441	-	-	-	-
	G4	36.0000	5.25	32.00	10.3088	24.000	-	26.000	-	20.441	-	-	-	-
PIER 26 (SPAN 25)	G1	21.5000	3.50	18.00	5.5022	13.375	HP12x74	13.250	14.375	12.498	1.7500	1.6250	-	-
	G2	21.0000	3.50	18.00	5.5022	13.375	HP12x74	13.250	14.375	11.998	1.7500	1.6250	-	-
	G3	21.0000	4.00	22.00	6.0064	14.500	HP12x74	13.250	15.500	10.994	1.7500	2.2500	-	-
	G4	21.0000	4.00	22.00	6.0064	14.500	HP12x74	13.250	15.500	10.994	1.7500	2.2500	-	-
PIER 26 (SPAN 26)	G1	20.2500	3.50	18.00	5.8754	14.250	HP12x74	13.250	15.500	10.875	1.2500	2.0000	-	-
	G2	20.6250	3.50	18.00	5.8754	14.250	HP12x74	13.250	15.500	11.250	1.2500	2.0000	-	-
	G3	20.8750	3.50	17.00	5.8754	14.250	HP12x74	13.250	15.500	11.500	1.2500	2.0000	-	-
	G4	24.0000	4.00	22.00	5.6270	14.500	HP12x74	13.250	15.500	14.373	-	3.5000	-	-
	G5	20.3750	3.50	17.00	5.3689	12.750	HP10x57	12.250	13.750	11.506	1.2500	1.0000	-	-
ABUT 2	G1	21.0000	3.50	20.00	6.1147	14.750	HP12x74	14.000	15.750	11.385	1.5000	1.6875	-	-
	G2	20.3750	3.50	20.00	6.1147	14.750	HP12x74	14.000	15.750	10.760	1.5000	1.6875	-	-
	G3	20.6250	3.50	18.00	6.1147	14.750	HP12x74	14.000	15.750	11.010	1.5000	1.6875	-	-
	G4	27.0000	4.25	24.00	5.8123	15.875	-	17.875	-	16.938	1.5000	2.3125	-	-
	G5	20.3750	3.50	20.00	6.1147	14.750	HP12x74	14.000	15.750	10.760	1.5000	1.6875	-	-
RAMP D PIER 4	G1	17.8750	3.00	16.00	4.4509	11.250	HP10x57	11.250	12.250	10.424	-	1.5625	-	-
	G2	27.0000	2.75	14.00	4.4509	11.250	HP10x57	11.250	12.250	19.799	1.0000	0.5625	-	-
RAMP H PIER 11	G1	18.2500	3.00	16.00	4.2514	11.000	HP10x57	12.000	12.000	10.999	-	-	-	-
	G2	28.9375	2.75	14.00	4.5014	11.000	HP10x57	12.000	12.000	21.686	-	-	-	-
RAMP J PIER 17	G1	24.7500	2.75	14.00	4.9617	11.250	HP10x57	11.250	12.250	17.038	1.0000	0.5000	-	-
	G2	18.0625	4.00	22.00	4.7117	11.250	HP10x57	11.250	12.250	9.351	1.0000	0.5000	-	-

NOTES:

* BASED ON AS-DESIGNED DRAWINGS

** EXCLUDES SHOP DRAWING AS-BUILT EXTENSIONS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

REPAIR TYPE 55

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
039827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

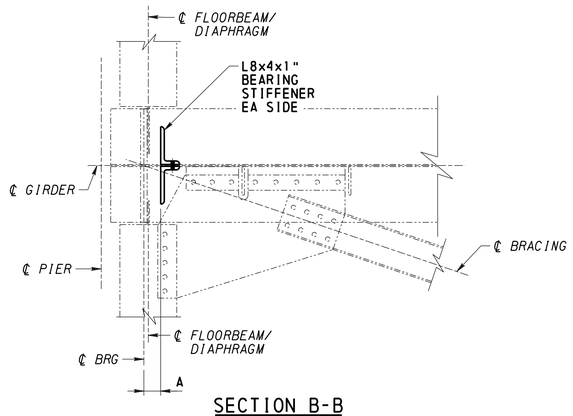
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 13

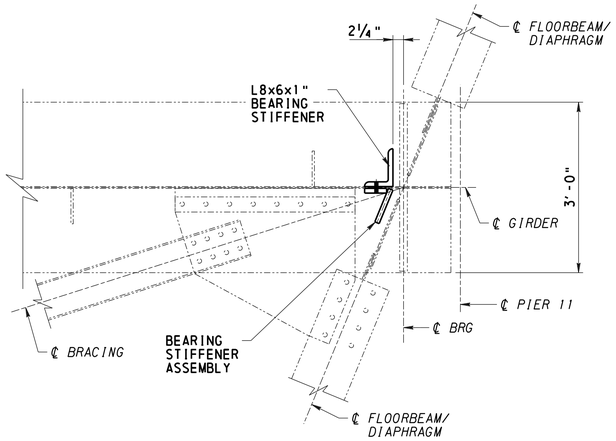
RECOMMENDED _____

SHEET 147 OF 164

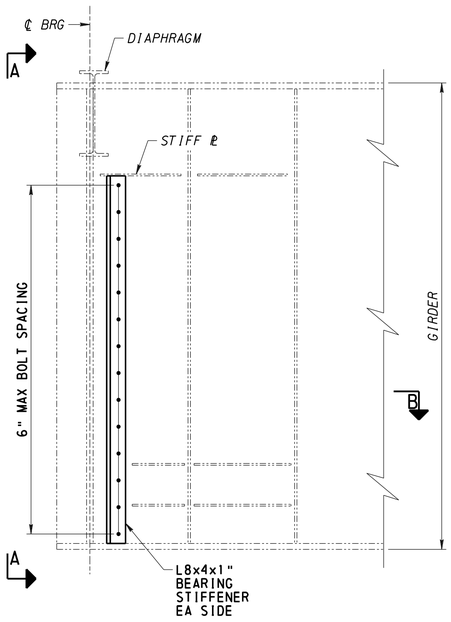
S - 38036



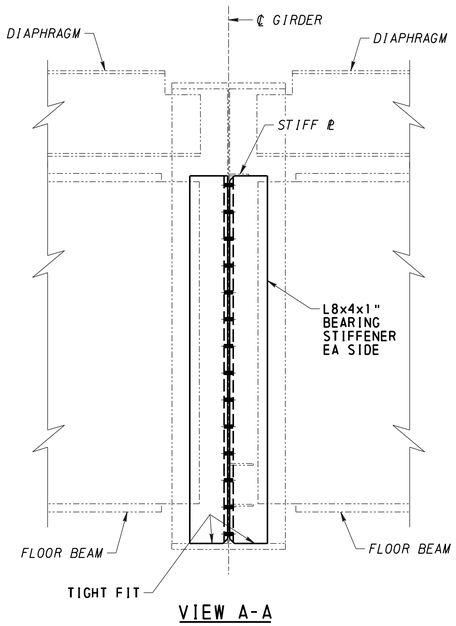
SECTION B-B



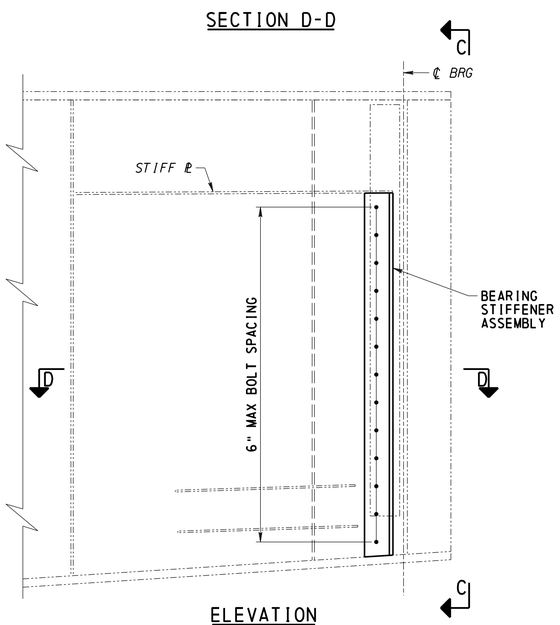
SECTION D-D



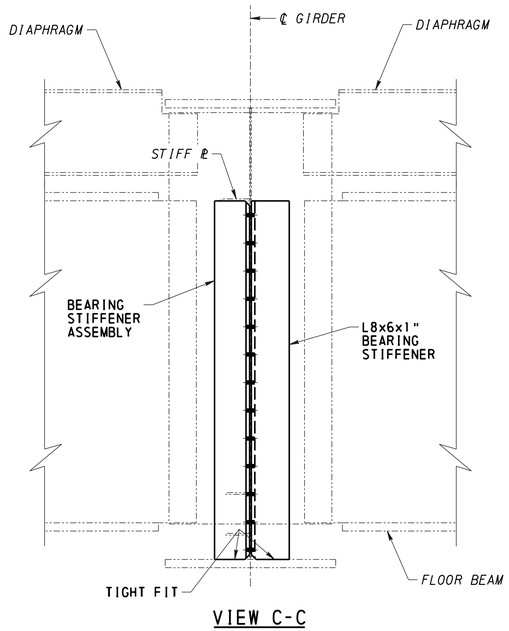
ELEVATION



VIEW A-A



ELEVATION



VIEW C-C

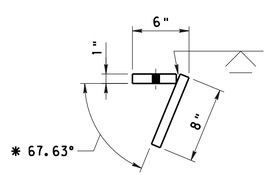
TYPICAL BEARING STIFFENER AT PIER 11

NOT TO SCALE

BEARING STIFFENER LOCATIONS	
LOCATION	'A'
PIER 4 (LT), GIRDER G3	3 9/16"
PIER 4 (LT), GIRDER G4	3 9/16"
PIER 13 (LT), GIRDER G1	3 11/16"
PIER 13 (LT), GIRDER G2	3 11/16"
PIER 13 (LT), GIRDER G4	3 11/16"
PIER 13 (LT), GIRDER G4	3 11/16"
PIER 17 (RT), GIRDER G1	3 9/16"
PIER 17 (RT), GIRDER G2	3 9/16"
PIER 17 (RT), GIRDER G3	2 3/4"
PIER 17 (RT), GIRDER G4	2 3/4"

TYPICAL BEARING STIFFENER

NOT TO SCALE



BEARING STIFFNER ASSEMBLY

NOT TO SCALE

NOTES

- FOR BEARING SCHEMATIC PLAN SEE SHEETS 135 AND 136
- HOLES 15/16"Ø FOR 7/8"Ø HIGH STRENGTH BOLTS

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

REPAIR TYPE 55



S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 14

RECOMMENDED _____

SHEET 148 OF 164

S - 38036

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

GENERAL BEARING NOTES

1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2011, ANSI/AASHTO/AWS/D1.5 BRIDGE WELDING CODE, BD-613M, BC-756M, AND CONTRACT SPECIAL PROVISIONS.
2. SANDBLAST IN ACCORDANCE WITH SSPC-SP10 TO REMOVE MILL SCALE FROM BEARINGS.
3. GRIND SMOOTH ALL STEEL SURFACES AND EDGES AND REMOVE ANY SHARP PROTRUSIONS. FABRICATION TOLERANCES AND THE LIMITATIONS ON SURFACE FINISH WILL BE IN ACCORDANCE WITH PUBLICATION 408, SECTION 1111.
4. PAINT ALL STEEL SURFACES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1060, SHOP PAINTING STRUCTURAL STEEL. APPLY ALL COATS IN THE FABRICATION SHOP ONLY. DO NOT PAINT PTFE, STAINLESS STEEL OR THE INSIDE OF THE POT. APPLY ONLY PRIME COAT TO THE CONTACT AREA BETWEEN BEAM BOTTOM FLANGE AND SOLE PLATE AND TO THE BOTTOM SIDE OF THE MASONRY PLATE.
5. ROUND ALL PTFE CORNERS TO ACCOMMODATE THE MACHINED RECESS IN STEEL GUIDE PLATE/PISTON.
6. ETCH PTFE ON ONE SIDE FOR BONDING INTO THE MACHINE RECESS.
7. PTFE ON THE SIDE OF THE GUIDE PLATE MUST BE PIGMENTED.
8. PRIOR TO THE APPLICATION OF ADHESIVE, CLEAN ALL MATING STEEL AND PTFE SURFACES BY GRIT BLASTING AND DEGREASING. APPLY ADHESIVE AS PER THE MANUFACTURER'S RECOMMENDATION.
9. LUBRICATE ALL SURFACES OF NEOPRENE DISC WITH SILICONE GREASE IN ACCORDANCE WITH MILITARY SPECIFICATION MIL-S-8660.
10. CUT FLAT BRASS SEALING RING ENDS AT 45° ANGLE WITH A MAXIMUM GAP OF 0.05". STAGGER THE OPENINGS IN THE BRASS RINGS 120° APART.
11. MARK THE THICKER EDGE OF THE SOLE PLATE AS SUCH FOR THE PURPOSE OF FIELD IDENTIFICATION. PLACE MARK ON THE EDGE OF THE SOLE PLATE SO THAT IT WILL BE VISIBLE AFTER BEARING INSTALLATION. IN THE CASE OF A SOLE PLATE WITH A COMPOUNDED BEVEL, PLACE THE MARK ON EITHER EDGE OF THE THICKEST SOLE PLATE CORNER.
12. MARK CENTERLINE OF GUIDED POT BEARINGS ON THE SIDES OF MASONRY PLATE AND SOLE PLATE. THE CENTERLINE IDENTIFICATION MARKS WILL BE USEFUL TO LOCATE OFFSET DISTANCES IN THE FIELD. USE INDELIBLE INK TO PLACE ALL MARKS.
13. MARK EACH BEARING WITH THE NAME OF THE MANUFACTURER AND TYPE OR MODEL NUMBER. PLACE THE IDENTIFICATION MARK IN A PERMANENT MANNER AND LOCATION SO THAT IT IS VISIBLE AFTER ERECTION.
14. ENSURE THAT ALL BEARING SURFACES INCLUDING THE BEARING SEAT ARE LEVEL PRIOR TO INSTALLATION OF POT BEARINGS IN ACCORDANCE WITH PUBLICATION 408.
15. TEST ONE BEARING PER TYPE OR PER LOT SIZE OF 25 FOR A HORIZONTAL FORCE CAPACITY ACCORDING TO SECTION 18.1.5.2.8 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS PRIOR TO SHIPMENT.
16. ANCHOR BOLT NUTS TO BE SNUG-TIGHT AGAINST MASONRY PLATES, UNLESS NOTED OTHERWISE.

MATERIALS

1. STRUCTURAL STEEL: AASHTO M270 (ASTM A709), GRADE 50.
2. STAINLESS STEEL: ASTM A240, GRADE 30, TYPE 304 WITH AN ANSI 0.4 um (0.02 mil) SURFACE FINISH OR LESS.
3. FLAT BRASS SEALING RINGS: ASTM B36 (HALF HARD) SPECIFICATION.
4. ELASTOMERIC DISC: VIRGIN PLAIN NEOPRENE OR NATURAL RUBBER WITH HARDNESS OF 50 DUROMETER (± 10) PER AASHTO M251.
5. PTFE SHEET: MADE FROM VIRGIN TFE RESIN PER ASTM D4894.
   - MAIN SLIDING SURFACE PTFE - UNFILLED, DIMPLED, AND LUBRICATED. DIMPLES MUST HAVE A MINIMUM EDGE DISTANCE OF 0.5" AND CONFORM TO 2010 AASHTO LRFD SECTION 14.7.2.
   - GUIDE BAR SURFACE PTFE - PIGMENTED, FILLED OR UNFILLED.

MATERIAL DESIGN PARAMETERS

1. ALLOWABLE PRESSURE IN ELASTOMER AND PTFE:
   MAXIMUM = 3500 psi ELASTOMER & PTFE
   MINIMUM = 700 psi ELASTOMER
2. COEFFICIENT OF FRICTION BETWEEN PTFE AND STAINLESS STEEL: 0.04

DESIGN LOADS FOR EXPANSION POT BEARINGS

BEARING LOCATION	BEARING MARK	REPAIR TYPE	LOAD COMBINATION	DESIGN LOADS (KIPS) VERTICAL DL MIN.	DL MAX.	LL+I MIN.	LL+I MAX.	TOTAL MIN.	TOTAL MAX.	TRANSVERSE MIN.	TRANSVERSE MAX.	ROTATIONS (RADIANS) FAB. & INSTALL TOLERANCE	ALLOWANCE FOR UNCERTAINTIES	SERVICE ROTATION (MAX.)	TOTAL ROTATION	TOTAL MOVEMENT LONGIT. (IN)
PIER 10	GPB1	56A	STRENGTH - I	1922	2734	-95	1173	1828	3907	0	0	0.010	0.010	0.004	0.024	2.77
			STRENGTH - III	1922	2734	0	0	1922	2734	0	365	0.010	0.010	0.004	0.024	
			EXTREME EVENT - I	1922	2734	0	0	1922	2734	0	356	0.010	0.010	0.004	0.024	
			SERVICE - I	2136	2136	-54	670	2082	2806	0	107	0.010	0.010	0.004	0.024	
PIER 10	GPB2	56B	STRENGTH - I	1382	1966	-72	935	1310	2901	0	0	0.010	0.010	0.004	0.024	2.74
			STRENGTH - III	1382	1966	0	0	1382	1966	0	361	0.010	0.010	0.004	0.024	
			EXTREME EVENT - I	1382	1966	0	0	1382	1966	0	256	0.010	0.010	0.004	0.024	
			SERVICE - I	1536	1536	-41	534	1495	2070	0	106	0.010	0.010	0.004	0.024	

DESIGN NOTES

- HORIZONTAL RESULTANT LOAD FOR EXTREME EVENT 1 IS DIVIDED BY 1.5 PER BD-613M.
- 0.8 RESPONSE MODIFICATION FACTOR IS APPLIED TO EXTREME EVENT 1 FORCES.
- BEARINGS ARE DESIGNED FOR A MAXIMUM ONE WAY MOVEMENT PLUS 1" CONTINGENCY. THE CENTERLINE OF ALL COMPONENTS ARE SYMMETRICAL ABOUT CENTERLINE OF BEARING.
- DESIGN ROTATION INCLUDES PERMANENT DEAD LOAD ROTATION, LL+I ROTATION, FWS ROTATION AND CONSTRUCTION TOLERANCE OF 0.02 RADIANS. ROADWAY GRADE IS ACCOMMODATED BY BEVELED SOLE PLATE.

LEGEND

PTFE POLYTETRAFLUORETHYLENE RESIN

NOTE

- FOR POT BEARING DETAILS SEE SHEET 150

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

REPAIR TYPE 56

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E
COMMONWEALTH OF PENNSYLVANIA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 15

RECOMMENDED _____

SHEET 149 OF 164

S - 38036

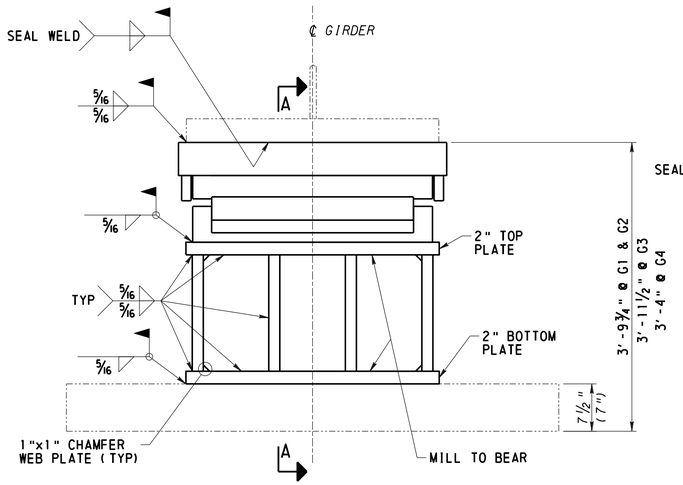
DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

\\svr-pgh-data-01\Data\Client\PGH_Client\17041-000-Neville_Preservation\CADD\Structure\BR1\Final\BRIDBRG15.dgn 6:55:39 AM 11/7/2019

BEARING LOCATION	BEARING MARK	REPAIR TYPE	GIRDERS	QUANTITY	SOLE PLATE				POT						NEOPRENE DISC			PISTON				GUIDE PLATE	
					H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
PIER 10	GPB1	56A	G1-G2	2	5.2500	0.2500	39.875	42.500	5.6875	38.00	4.1875	1.5000	0.0000	3.0000	3.250	32.00	0.250	2.0000	31.960	0.3750	0.313	3.688	38.00
PIER 10	GPB2	56B	G3-G4	2	4.5000	0.2500	35.250	37.000	4.8125	32.50	3.5625	1.2500	0.0000	2.5000	2.750	27.50	0.250	1.6875	27.460	0.3125	0.250	3.188	32.50

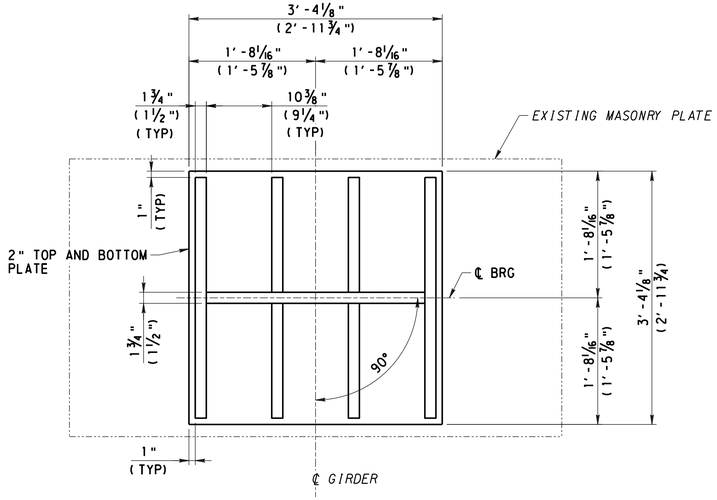
GUIDE BARS							PTFE				STAINLESS STEEL				BEARING HEIGHT
AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP *
4.000	1.500	39.875	0.3125	0.4375	0.3125	19.250	32.00	0.1875	3.188	37.75	39.625	33.00	39.625	3.438	15.8125
3.500	1.500	35.250	0.3125	0.4375	0.3125	16.500	27.50	0.1875	2.688	32.25	35.000	28.50	35.000	2.938	13.5625

NOTE: * THE HEIGHT OF THE BEARING EXCLUDES THE HEIGHT OF THE MASONRY PLATE



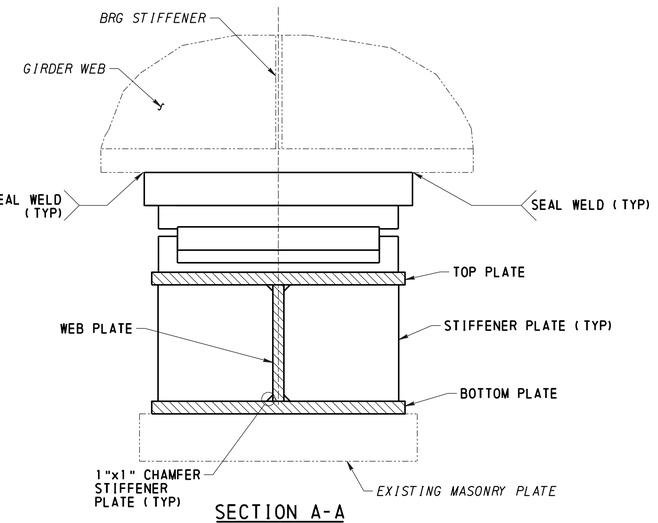
STOOL DETAIL - GUIDED POT BEARINGS GPB1 & GPB2

NOT TO SCALE
GPB1 AS SHOWN
GPB2 ( )



BOTTOM PLATE PLAN (AS SHOWN)
TOP PLATE PLAN (SIMILAR)

NOT TO SCALE
GPB1 AS SHOWN
GPB2 ( )



SECTION A-A

NOT TO SCALE

NOTES

- FOR POT BEARING DETAILS REFER TO STANDARD DRAWING BC-756M
- FOR POT BEARING NOTES, MATERIALS AND DESIGN LOADS SEE SHEET 149
- FOR BEARING SCHEMATIC KEY PLAN SEE SHEETS 135 & 136

REPAIR TYPE 56

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 55 & 56 DETAILS 16

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 150 OF 164

S - 38036

DESIGNED BY	DCT
DRAWN BY	SJW
CHECKED BY	DCT

BRIDGE DECK SPALLED/DELAMINATION REPAIR AREAS (SF) NORTHBOUND LANES					
SPAN	LEFT LANE & SHLDR	CENTER LANE	RIGHT LANE	RIGHT SHLDR	TOTAL/SPAN
1	0	0	0	0	0
2	49	0	3	4	56
3	0	45	0	0	45
4	0	N/A	0	0	0
5	0	N/A	0	0	0
6	0	N/A	5	0	5
7	2	N/A	0	0	2
8	19	N/A	0	0	19
9	21	N/A	0	56	77
10	14	N/A	1	3	17
11	11	N/A	0	0	11
12	0	N/A	*	*	0
13	12	0	*	*	12
14	6	43	*	*	49
15	69	59	*	*	128
16	53	65	*	*	119
17	0	16	*	*	16
18	0	6	*	*	6
19	0	4	*	*	4
20	5	2	*	*	7
21	0	250	339	81	670
22	0	0	0	23	23
23	7	0	78	82	167
24	0	0	6	17	23
25	0	0	0	26	26
26	0	0	0	23	23
27	0	0	0	2	2
NB TOTAL	266	490	431	317	1505

* SPALLED/DELAMINATED REPAIRS FOR THIS AREA INCLUDED IN REPAIR TYPE 69 REPLACEMENT OF LATEX MODIFIED CONCRETE WEARING SURFACE (SEE SHEET 157).

BRIDGE DECK SPALLED/DELAMINATION REPAIR AREAS (SF) SOUTHBOUND LANES					
SPAN	LEFT LANE & SHLDR	CENTER LANE	RIGHT LANE	RIGHT SHLDR	TOTAL/SPAN
1	0	N/A	15	56	71
2	12	N/A	2	95	108
3	0	N/A	7	53	60
4	0	N/A	0	28	28
5	0	N/A	2	14	16
6	27	N/A	10	61	98
7	20	N/A	10	0	29
8	5	N/A	59	62	126
9	72	N/A	434	146	652
10	17	N/A	17	200	235
11	0	N/A	26	0	26
12	0	N/A	19	0	19
13	0	N/A	12	0	12
14	0	N/A	3	0	3
15	0	N/A	6	6	12
16	9	N/A	32	11	52
17	0	2	0	14	16
18	0	0	3	15	18
19	0	0	0	31	31
20	0	0	0	95	95
21	7	36	41	76	160
22	0	0	0	14	14
23	0	0	5	2	8
24	0	2	12	0	14
25	0	2	11	9	21
26	3	3	0	11	17
27	0	2	22	14	38
SB TOTAL	171	46	746	1012	1974

GRAND TOTAL	437	536	1177	1329	3479

BRIDGE DECK UNDERSIDE SPALLED OR DELAMINATION REPAIR AREAS (SF)			
SPAN	NORTHBOUND SPANS	SOUTHBOUND SPANS	TOTAL/SPAN
1	0	0	0
2	0	0	0
3	0	0	0
4	27	0	27
5	1	0	1
6	0	0	0
7	0	1	1
8	2	0	2
9	0	0	0
10	0	6	6
11	0	93	93
12	0	0	0
13	0	0	0
14	3	0	3
15	2	0	2
16	148	0	148
17	0	0	0
18	0	0	0
19	0	2	2
20	0	0	0
21	0	0	0
22	59	0	59
23	0	0	0
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
TOTAL	242	102	344

REPAIR TYPE 69F

REPAIR BRIDGE DECK LATEX OVERLAY
(TYPE 1 REPAIR OF DEBONDED AREAS OF LATEX WEARING SURFACE AS DIRECTED)

REPAIR TYPE 60A

TYPE 2 BRIDGE DECK SPALL REPAIR

REPAIR ITEM 65 HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) SEALING OF CRACKS IN BRIDGE DECK		
SPAN NO.	METHOD OF APPLICATION	
	SEAL INDIVIDUAL CRACKS (SY)	FLOOD AREA BETWEEN BRIDGE BARRIERS (SY)
1 - 3	393	- -
4 - 7	464	- -
8 - 10	713	- -
11 -12	178	- -
13 - 16	444	- -
17 - 20	451	- -
21	- -	8,167
22 - 25	- -	5,778
26 - 27	- -	4,720
TOTALS	2,643	18,665
GRAND TOTAL		21,308

REPAIR TYPE 60B

BRIDGE DECK UNDERSIDE CONCRETE SPALL REPAIR

NOTE

- FOR GENERAL LEGEND SEE SHEET 7
- FOR LOCATION OF REPAIRS SEE SHEETS 1 THRU 5, 23 THRU 36 AND 52 THRU 55
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE

REVISIONS

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 60A, 60B & 65

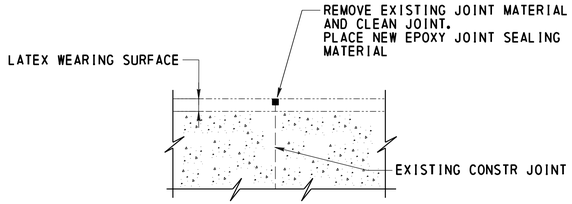
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REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

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DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

SHEET 151 OF 164

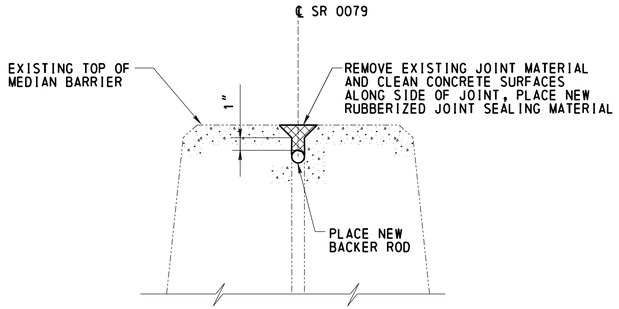
S - 38036



REPAIR TYPE 61

REPLACE JOINT SEALS IN
TRANSVERSE DECK CONSTRUCTION JOINT

NOT TO SCALE



EXISTING CONCRETE MEDIAN BARRIER SECTION

REPAIR TYPE 64

REPLACE BRIDGE
MEDIAN BARRIER LONGITUDINAL
JOINT SEAL

NOT TO SCALE

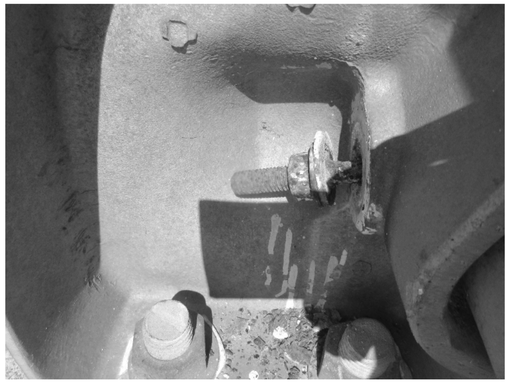


PHOTO 1

CORRODED AND DETERIORATED TOGGLE BOLT
FOR BRIDGE BARRIER ALUMINUM RAILING

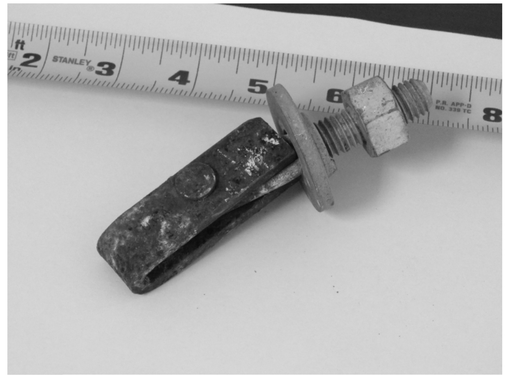


PHOTO 2

TYPICAL GALVANIZED TOGGLE BOLT,
HEX NUT, AND WASHER

REPAIR TYPE 68

BRIDGE BARRIER ALUMINUM RAILING REPAIR
(REPLACE MISSING, DETERIORATED, OR LOOSE TOGGLE BOLT)

BARRIER SPALLED/DELAMINATION REPAIR AREAS (SF)

SPAN	NORTHBOUND		SOUTHBOUND		TOTAL/SPAN
	LEFT MEDIAN BARRIER	RIGHT BRIDGE BARRIER	LEFT MEDIAN BARRIER	RIGHT BRIDGE BARRIER	
1	0	3	0	2	5
2	0	2	0	2	4
3	0	27	0	4	31
4	0	0	2	8	10
5	0	3	0	8	11
6	0	0	0	0	0
7	0	0	0	2	2
8	6	0	0	2	8
9	0	0	0	2	2
10	0	0	1	2	3
11	0	0	0	0	0
12	0	0	0	1	1
13	0	0	0	0	0
14	0	0	0	0	0
15	2	0	0	0	2
16	0	0	0	0	0
17	0	0	0	0	0
18	0	0	0	2	2
19	0	0	0	0	0
20	0	0	1	1	2
21	33	0	101	14	148
22	24	4	75	0	103
23	0	14	0	0	14
24	0	0	0	0	0
25	0	0	0	0	0
26	0	2	1	0	3
27	0	0	0	0	0
TOTAL	65	54	180	45	351

REPAIR TYPE 66

BRIDGE BARRIER AND MEDIAN BARRIER
CONCRETE SPALL/DELAMINATION
REPAIR

BARRIER CRACK REPAIR AREAS (SF)

SPAN	NORTHBOUND		SOUTHBOUND		TOTAL/SPAN
	LEFT MEDIAN BARRIER	RIGHT BRIDGE BARRIER	LEFT MEDIAN BARRIER	RIGHT BRIDGE BARRIER	
1	80	80	80	80	320
2	120	120	136	120	496
3	80	80	104	80	344
4	80	80	88	80	328
5	160	160	232	160	712
6	120	120	136	120	496
7	80	80	96	80	336
8	176	160	184	160	680
9	104	80	40	40	264
10	40	40	40	40	160
11	48	40	48	40	176
12	64	64	64	8	200
13	16	16	48	16	96
14	64	40	96	80	280
15	56	40	88	80	264
16	32	16	16	16	80
17	40	8	40	24	112
18	40	56	48	16	160
19	24	40	56	24	144
20	24	40	88	24	176
21	352	160	144	152	808
22	48	32	8	56	144
23	80	72	32	80	264
24	80	80	56	40	256
25	32	32	56	40	160
26	0	32	48	40	120
27	40	40	56	40	176
TOTAL	2080	1808	2128	1736	7752

REPAIR TYPE 67

BRIDGE BARRIER AND MEDIAN
BARRIER CONCRETE CRACK REPAIR

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7

LEGEND

NB	NORTHBOUND
SB	SOUTHBOUND
US	UPSTREAM
DS	DOWNSTREAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 61, 64, 66, 67 & 68

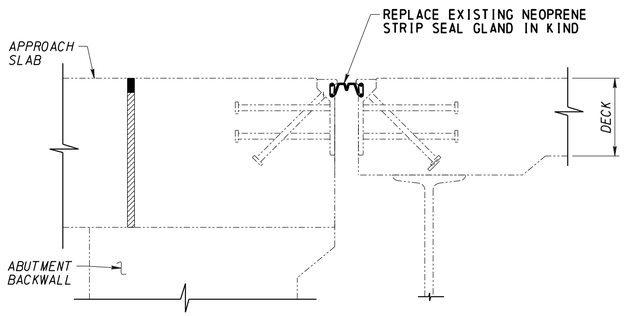
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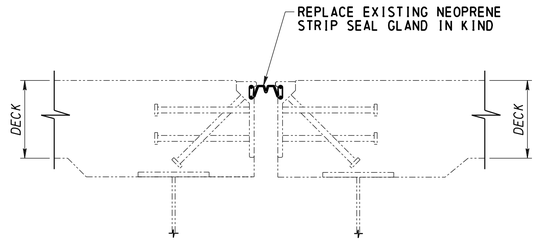
SHEET 152 OF 164

S - 38036

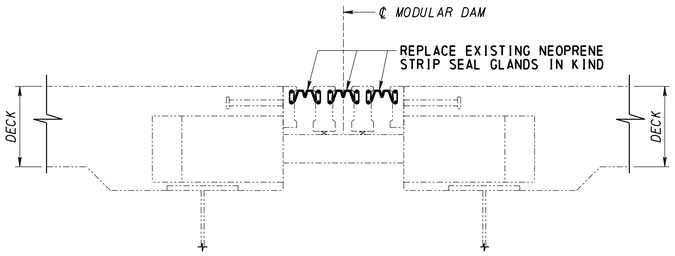
DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM



BRIDGE STRIP SEAL EXPANSION DAM OVER ABUTMENT
(ABUTMENTS 1 & 2 (NB & SB)
NOT TO SCALE

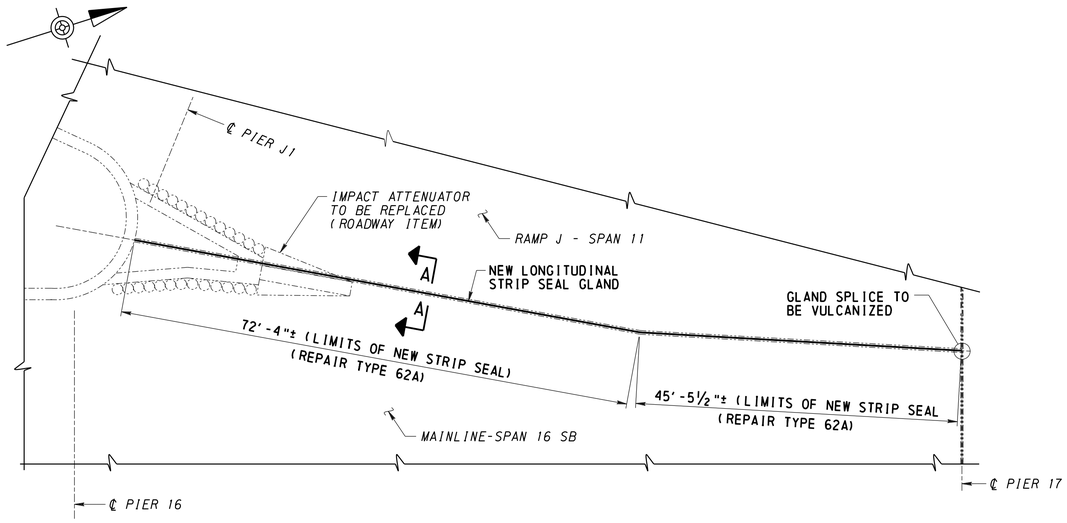


BRIDGE STRIP SEAL EXPANSION DAM OVER PIERS (SHOWN)
DECK EXPANSION JOINT IN MAIN SPAN (SIMILAR)
TYPICAL AT PIERS 4, 8, 12, 13, 17, 21, 26, AND
MAIN SPAN PANEL POINTS T3, T6, T9, & T12 (NB & SB)
NOT TO SCALE

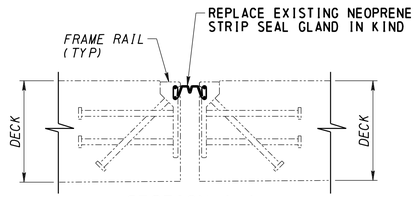


BRIDGE MODULAR STRIP SEAL EXPANSION DAM OVER PIER 11
TYPICAL SECTION THROUGH PIER 11
MAINLINE (NB & SB) AND RAMP H SHOWN
NOT TO SCALE

REPAIR TYPE 62A
INSTALL NEW NEOPRENE STRIP SEAL EXPANSION DAM SEALS



PLAN - LONGITUDINAL EXPANSION JOINT BETWEEN MAINLINE AND RAMP J
NOT TO SCALE



SECTION A-A
NOT TO SCALE

TRANSVERSE STRIP SEAL EXPANSION DAM REPAIRS
REPAIR TYPE 62A

LOCATION	* APPROX LENGTH		* GLAND TYPE
	NB	SB	
ABUT 1	55'	42'	L2-500
PIER 4	81'	42'	L2-500
PIER 8	47'	54'	L2-500
PIER 11	3 AT 43'	3 AT 71' (INCLUDES RAMP H)	L2-400
PIER 12	43'	0'	L2-400
PIER 13	62'	44'	L2-500
PIER 17	48'	65'	L2-400
PIER 21	55'	55'	L2-500
MAIN SPAN SPAN 21 T3, T6, T9, & T12	4 AT 53'	4 AT 53'	L2-400
PIER 26	77'	57'	L2-500
ABUT 2	106'	60'	L2-400

LONGITUDINAL STRIP SEAL EXPANSION JOINT REPAIRS

LOCATION	REPAIR TYPE	* APPROX LENGTH	* GLAND TYPE
RAMP D	62B	123'	A2R-400
RAMP E	62B	45'	A2R-400
RAMP H	62B	75'	A2R-400
RAMP J	62A	120'	L2-400

* ALL STRIP SEAL LENGTHS AND TYPES LISTED ARE FOR INFORMATION ONLY AND MUST BE VERIFIED BY THE CONTRACTOR.

PROCEDURE FOR REPAIR TYPES 62A AND 62B

- CONTRACTOR TO DETERMINE THE MANUFACTURER OF THE EXISTING STRIP SEAL EXPANSION DAMS, JOINTS, GLAND TYPES, GLAND SIZES, AND LENGTHS TO BE ABLE TO REPLACE THE GLANDS IN KIND.
- CONTRACTOR TO CONFIRM THAT THAT THE EDGE BEAMS OR FRAME RAILS ARE SECURE IN THE BRIDGE DECK AND ANY UNSOUND CONCRETE AREAS ADJACENT THE EXPANSION DAMS BE REPAIRED PRIOR TO THE GLAND REPLACEMENT.
- ANY EDGE BEAMS, CENTER BEAMS, OR FRAME RAILS THAT ARE DAMAGED OR DETERIORATED WILL NEED REPLACED PRIOR TO INSTALLING THE GLAND. NOTIFY THE DEPARTMENT'S REPRESENTATIVE OF THESE CONDITIONS TO DETERMINE THE LIMITS OF REPLACEMENT AND PROCEDURE.
- COORDINATE THE GLAND REPLACEMENTS WITH OTHER REPAIR ACTIVITIES AND MAINTENANCE AND PROTECTION OF TRAFFIC PROCEDURES AND CLOSURES.
- SPLICING OF THE GLAND IS NOT PERMITTED UNLESS INDICATED. THE GLAND IS TO BE CONTINUOUS FOR THE LENGTH OF THE EXPANSION DAM OR JOINT.
- AFTER THE GLANDS ARE REMOVED CLEAN THE CHANNELS IN THE FRAME RAILS, EDGE BEAMS, AND CENTER BEAMS USING WIRE BRUSHES AND SOLVENT TO REMOVE THE OLD ADHESIVE AND ANY PIECES OF THE OLD GLAND OR OTHER MATERIALS THAT WOULD DETER THE INSTALLATION OF THE NEW GLAND AND STILL MAINTAIN THE INTEGRITY OF THE EXISTING GALVANIZE COATING. IF SAND BLASTING IS REQUIRED TO CLEAN THE CHANNEL, NOTIFY THE DEPARTMENT'S REPRESENTATIVE FOR APPROVAL. FOLLOWING ANY SAND BLASTING, THE CHANNEL SHOULD BE COATED WITH GALVANIZING PAINT ACCORDING TO THE PAINT MANUFACTURER'S PROCEDURES. APPLY A PAINT FILM OF UNIFORM THICKNESS AND FREE OF A BUILD-UP THAT WILL NOT HAMPER THE GLAND INSTALLATION.
- REPORT TO THE DEPARTMENT'S REPRESENTATIVE FOR FURTHER DIRECTION IF ANY SECTION LOSSES DUE TO CORROSION OF THE EXISTING CHANNEL THAT WOULD PROHIBIT THE GLAND FROM PROVIDING A WATER TIGHT SEAL.
- INSTALL THE GLAND ACCORDING TO THE MANUFACTURER'S PROCEDURES AND STANDARD DRAWING BC-767M.

NOTES

- WORK THIS SHEET WITH SHEET 154
- FOR GENERAL LEGEND SEE SHEET 7
- FOR LOCATION OF REPAIRS SEE SHEETS 1 THRU 5
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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ENGINEER
030827-E

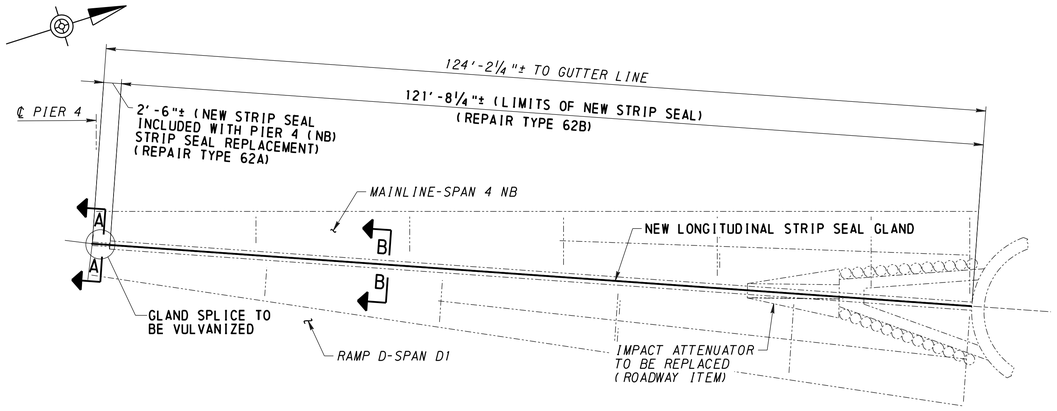
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SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE
REPAIR TYPE 62A

RECOMMENDED _____

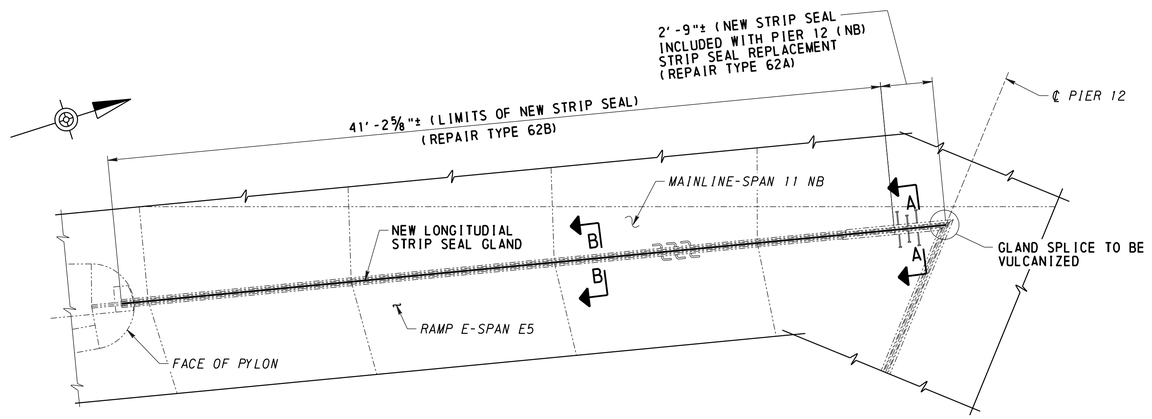
SHEET 153 OF 164

S - 38036



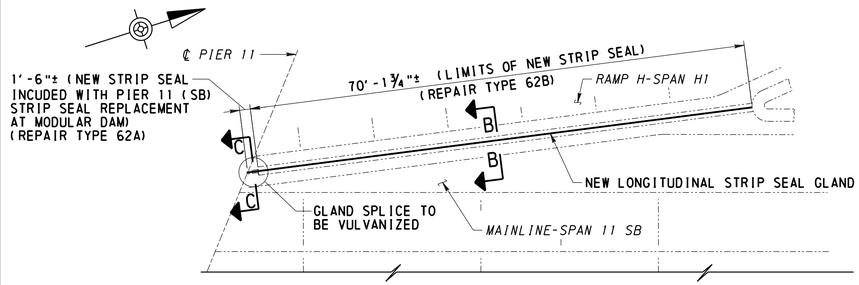
PLAN - LONGITUDINAL EXPANSION JOINT BETWEEN MAINLINE NB AND RAMP D

NOT TO SCALE



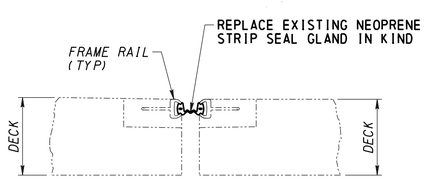
PLAN - LONGITUDINAL EXPANSION JOINT BETWEEN MAINLINE NB AND RAMP E

NOT TO SCALE



PLAN - LONGITUDINAL EXPANSION JOINT BETWEEN MAINLINE SB AND RAMP H

NOT TO SCALE

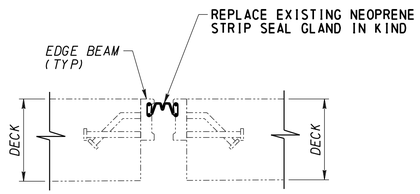


SECTION B-B

NOT TO SCALE

REPAIR TYPE 62B

INSTALL NEW NEOPRENE STRIP SEAL
EXPANSION DAM SEALS
(LONGITUDINAL JOINTS)



SECTION C-C

NOT TO SCALE

NOTES

- WORK THIS SHEET WITH SHEET 153
- FOR GENERAL LEGEND SEE SHEET 7
- FOR LOCATION OF REPAIRS SEE SHEETS 1 THRU 5
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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COMMONWEALTH OF PENNSYLVANIA
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ALLEGHENY COUNTY
SR 0079 SECTION A61

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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 62B

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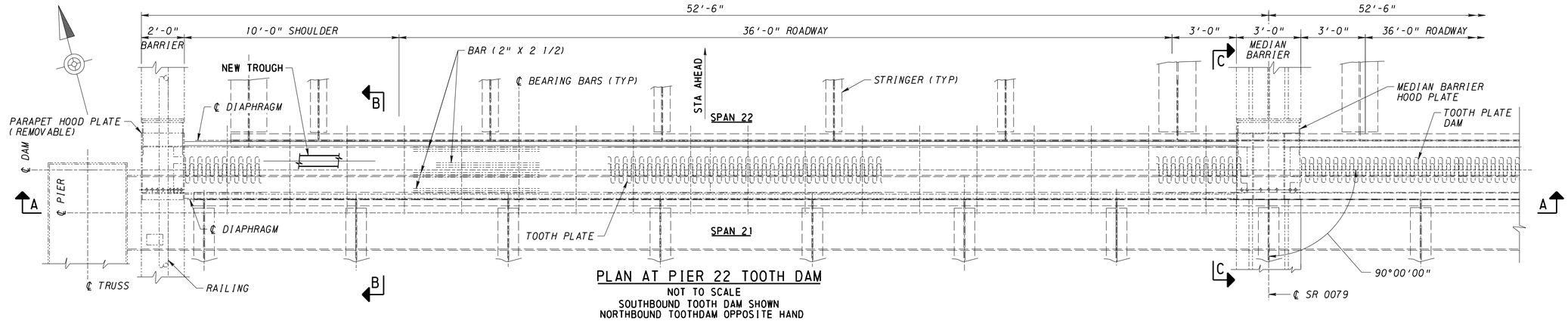
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SHEET 154 OF 164

S - 38036

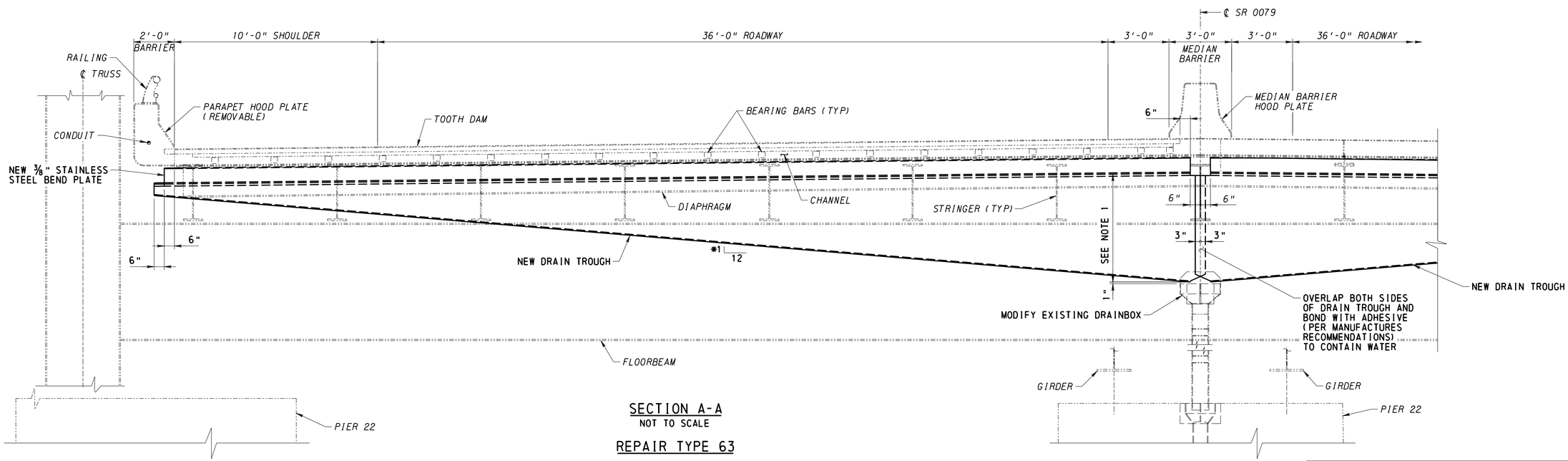
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CHECKED BY	DAM

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PLAN AT PIER 22 TOOTH DAM

NOT TO SCALE
SOUTHBOUND TOOTH DAM SHOWN
NORTHBOUND TOOTHDAM OPPOSITE HAND

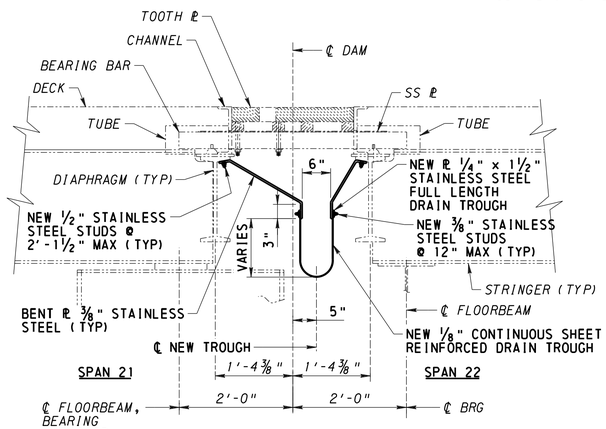


SECTION A-A

NOT TO SCALE

REPAIR TYPE 63

REPLACE STEEL PLATE TOOTH EXPANSION DAM DRAINAGE TROUGH SYSTEM
(REPLACE EXISTING TROUGH AND STAINLESS STEEL TROUGH PLATES AT PIER 22
TOOTH DAM FOR BOTH NORTHBOUND AND SOUTHBOUND ROADWAYS AND MODIFY
EXISTING DRAIN BOX AT PIER 22)



SECTION B-B

NOT TO SCALE

NOTES

- WORK THIS SHEET WITH SHEET 156
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATION OF REPAIR SEE SHEET 4
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR ADDITIONAL DETAILS OF EXPANSION DAM SEE STANDARD DRAWING BC-762M
- FIELD MEASURE PRIOR TO SHOP DRAWING PREPARATION FOR NEW TROUGH PLATES, TROUGH, DRAIN BOXES AND DOWNPOUTING

LEGEND

* MINIMUM DRAIN TROUGH SLOPE

NOTE 1

- ENSURE DRAIN TROUGH SLOPE WILL ALLOW DRAIN TROUGH TO FALL INSIDE DRAINBOX AS INDICATED

DESIGNED BY	DCT
DRAWN BY	ERK
CHECKED BY	DCT

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

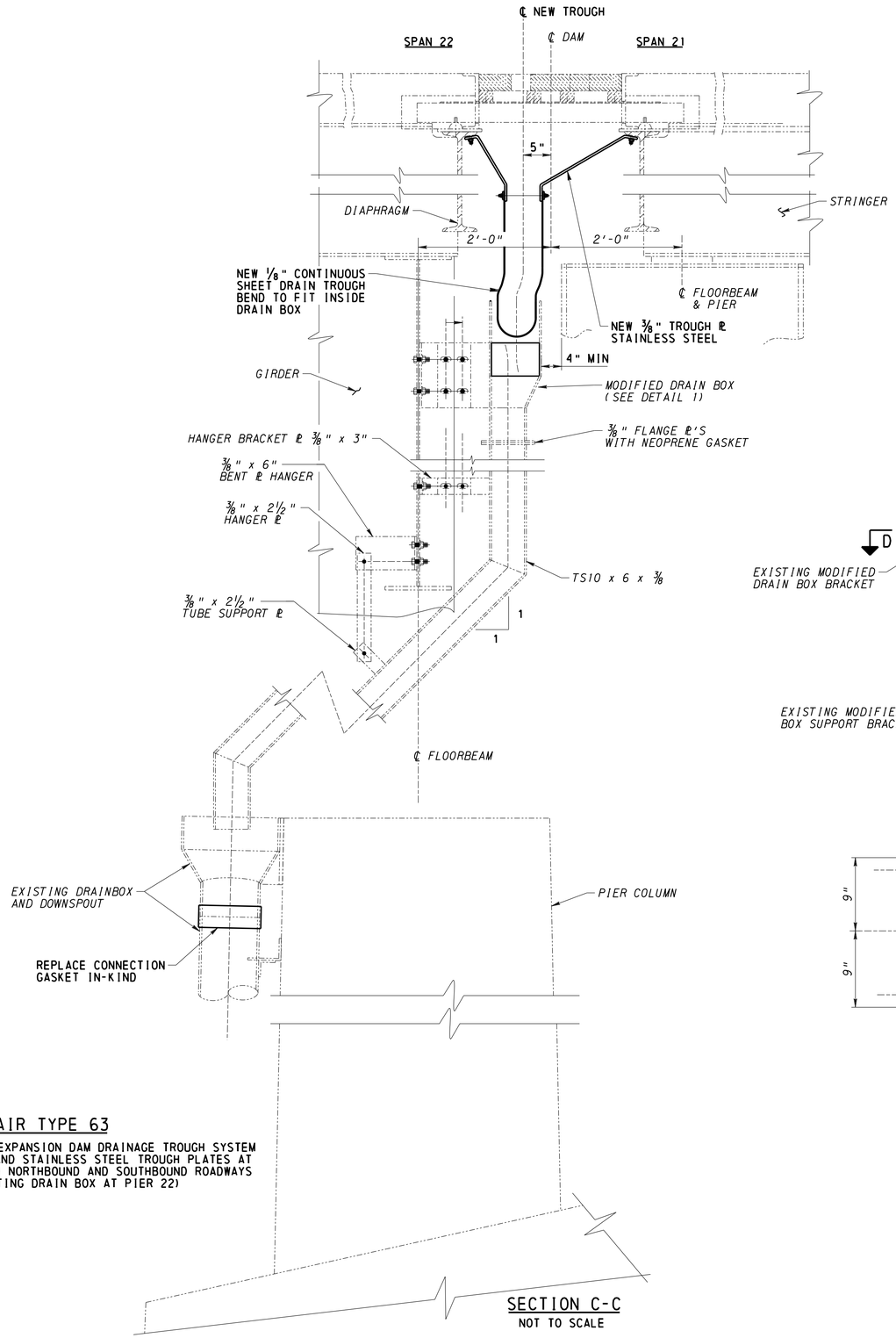
PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 63 DETAILS 1

RECOMMENDED _____

SHEET 155 OF 164

S - 38036

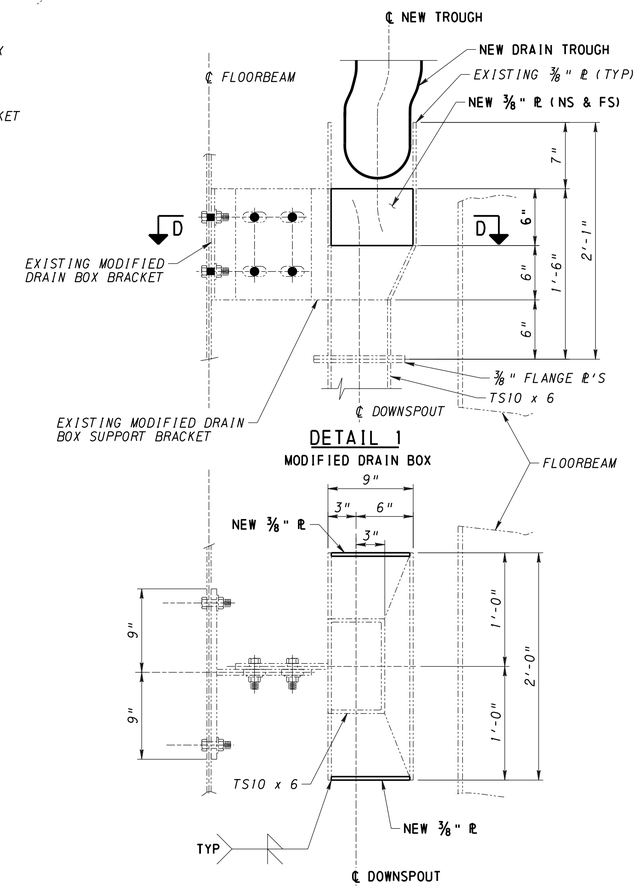


REPAIR TYPE 63

REPLACE STEEL PLATE TOOTH EXPANSION DAM DRAINAGE TROUGH SYSTEM (REPLACE EXISTING TROUGH AND STAINLESS STEEL TROUGH PLATES AT PIER 22 TOOTH DAM FOR BOTH NORTHBOUND AND SOUTHBOUND ROADWAYS AND MODIFY EXISTING DRAIN BOX AT PIER 22)

SECTION C-C

NOT TO SCALE



DETAIL 1

MODIFIED DRAIN BOX

SECTION D-D

NOT TO SCALE

PROCEDURE FOR REPAIR TYPE 63

1. DRAIN BOX TO BE DISASSEMBLED, REPAIRED, AND REINSTALLED.
2. EXISTING TROUGH AND TROUGH PLATES TO BE REMOVED, DISCARDED AND REPLACED WITH NEW TROUGH PLATES AND TROUGH.

NOTES

- WORK THIS SHEET WITH SHEET 155
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATION OF REPAIR SEE SHEET 4
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- FOR ADDITIONAL DRAIN BOX DETAILS SEE DWG. BC-751M AND BC-762M
- FOR ADDITIONAL DRAIN TROUGH DETAILS SEE DWG. BC-762M
- ALL DIMENSIONS SHOWN ARE AT 68°
- ALL HOLES 13/16"ø FOR 3/4"ø HIGH STRENGTH BOLTS (UNLESS NOTED)
- GALVANIZE NEW DRAIN BOX PLATES
- FIELD MEASURE PRIOR TO SHOP DRAWING PREPARATION FOR NEW TROUGH PLATES, TROUGH, AND MODIFIED DRAIN BOX

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	DCT
DRAWN BY	ERK
CHECKED BY	DCT

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

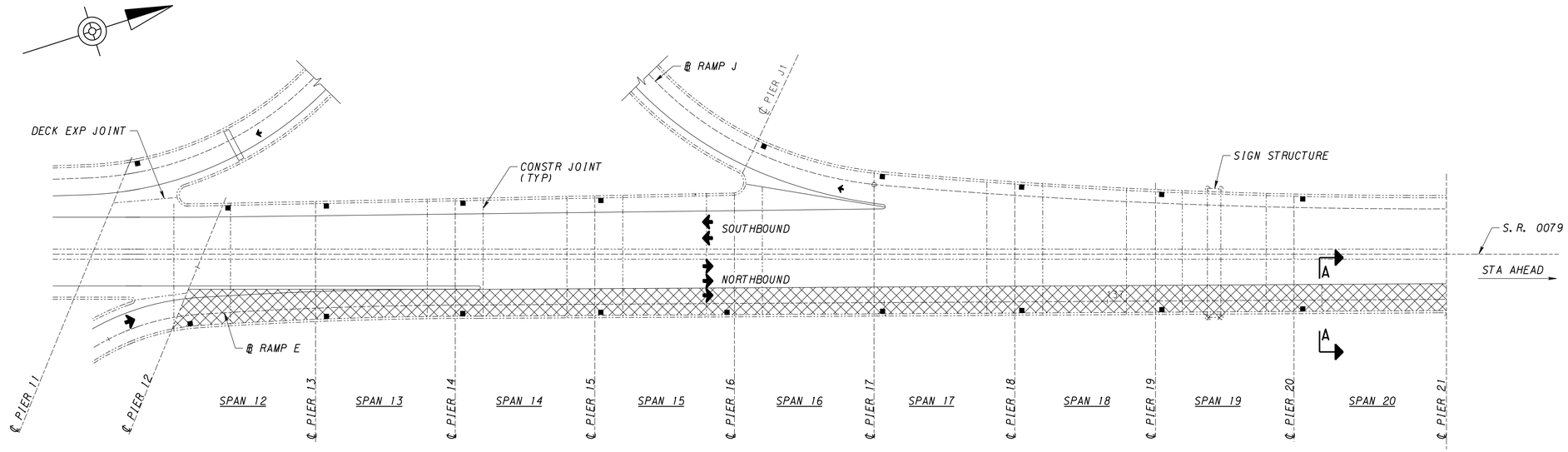
REPAIR TYPE 63 DETAILS 2

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — DAVID A. MILLER — ENGINEER — 030827-E

RECOMMENDED _____

SHEET 156 OF 164

S - 38036



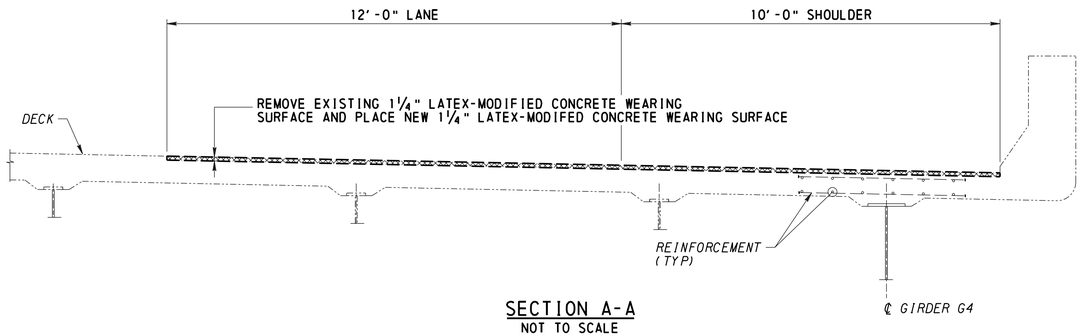
PARTIAL DECK PLAN
SPANS 11 THRU 20
NOT TO SCALE

NOTES
- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR GENERAL LEGEND SEE SHEET 7

REPAIR TYPE 69A
BRIDGE DECK SCARIFICATION, 1" DEPTH
(SCARIFICATION OF THE EXISTING CONCRETE DECK-
TWO SEPARATE ½" PASSES)

REPAIR TYPE 69B
CONCRETE BRIDGE DECK SURFACE
PREPARATION USING HYDRODEMOLITION
(HYDRODEMOLITION OF THE EXISTING
CONCRETE DECK ¼" DEPTH)

REPAIR TYPE 69C
PLACE NEW LATEX-MODIFIED CONCRETE BRIDGE
DECK WEARING SURFACE, 1¼" DEPTH
(OVERLAY THE EXISTING CONCRETE DECK WITH
LATEX MODIFIED CONCRETE. FINISHED WEARING
SURFACE GRADE TO MATCH EXISTING DECK GRADE)



SECTION A-A
NOT TO SCALE

REPAIR TYPE 69D
PLACE NEW LATEX-MODIFIED CONCRETE BRIDGE
DECK WEARING SURFACE, VARIABLE DEPTH
(CONCRETE DECK REPAIRS AS DIRECTED)

REPAIR TYPE 69E
TEXTURING CONCRETE BRIDGE DECK SURFACE
WITH TRANSVERSE SAWED GROOVES
(SAWCUT TRANSVERSE GROOVES IN NEW LATEX-MODIFIED
CONCRETE WEARING SURFACE)

LEGEND
INDICATES LIMITS OF NEW LATEX MODIFIED CONCRETE WEARING SURFACE-REPAIR TYPES 69A, 69B, 69C, 69D, & 69E

INDICATES DIRECTION OF TRAFFIC

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 69A, 69B, 69C, 69D & 69E

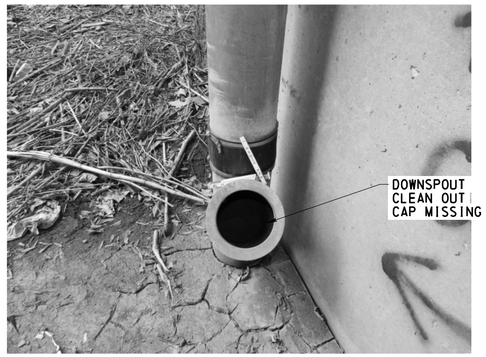
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

RECOMMENDED _____

SHEET 157 OF 164

S - 38036



LOCATION REPAIR TYPE 71A

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 7



LOCATION REPAIR TYPE 71A

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 4 OF PIER 17

REPAIR TYPE 71A

REPLACE MISSING DOWNSPOUT
CLEAN OUT CAP

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 63 AND 73
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- PERFORM REPAIR 71A AFTER UNDERGROUND DRAINAGE SYSTEM HAS BEEN INSPECTED AND REPAIRED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 71A

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 158 OF 164

S - 38036

DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

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LOCATION REPAIR TYPE 71B

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 2
(45°LATERAL AND
CLEANOUT MISSING)



LOCATION REPAIR TYPE 71B

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 3 OF PIER 7
(45°LATERAL AND
CLEANOUT MISSING)



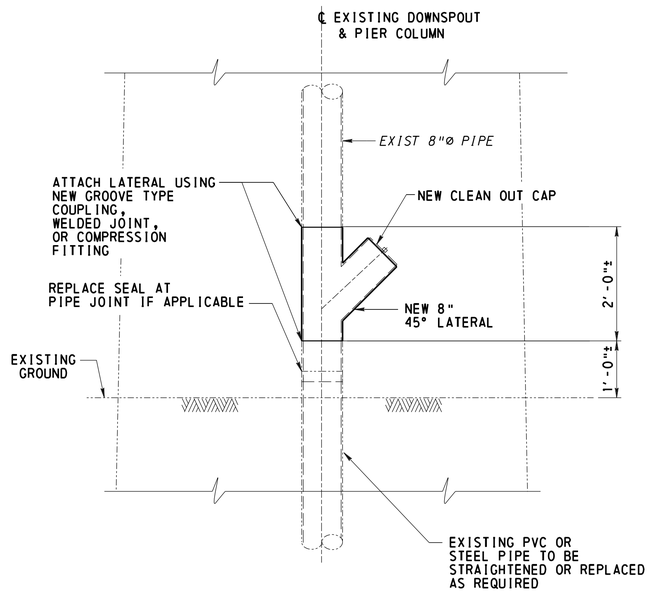
LOCATION REPAIR TYPE 71B

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 4 OF PIER 13
(45°LATERAL AND
CLEANOUT MISSING)



LOCATION REPAIR TYPE 71B

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 23
(45°LATERAL AND
CLEANOUT MISSING)



PARTIAL PIER COLUMN ELEVATION

REPAIR TYPE 71B

INSTALL NEW 45 DEGREE LATERAL CLEAN OUT PIPE WITH
PLUG IN DOWNSPOUT PIPE

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 58, 63, 69, AND 79
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- PERFORM REPAIR 71B AFTER UNDERGROUND DRAINAGE SYSTEM HAS BEEN INSPECTED AND REPAIRED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 71B

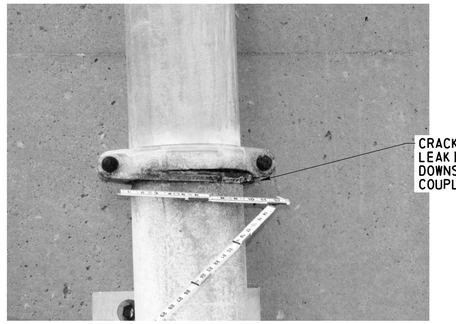
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

SHEET 159 OF 164

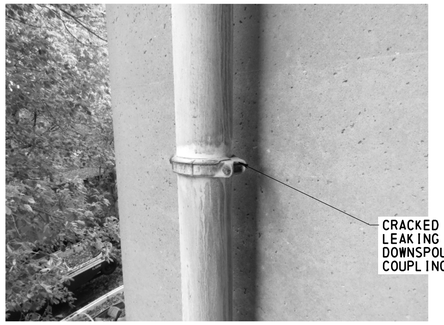
S - 38036

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DRAWN BY	MEG
CHECKED BY	DAM



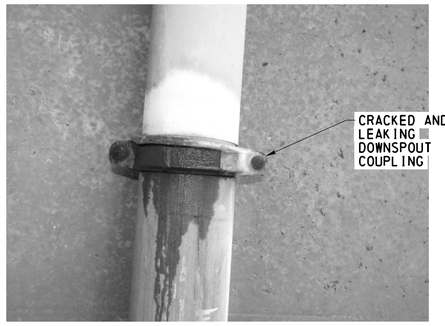
LOCATION REPAIR TYPE 71C

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 23



LOCATION REPAIR TYPE 71C

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 24



LOCATION REPAIR TYPE 71C

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 3 OF PIER 24



LOCATION REPAIR TYPE 71C

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 27

REPAIR TYPE 71C

REPLACE CRACKED GROOVE
TYPE DOWNSPOUT COUPLING WITH NEW
GROOVE TYPE COUPLING

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 79, 80, AND 83
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- PERFORM REPAIR 71C AFTER UNDERGROUND DRAINAGE SYSTEM HAS BEEN INSPECTED AND REPAIRED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 71C

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

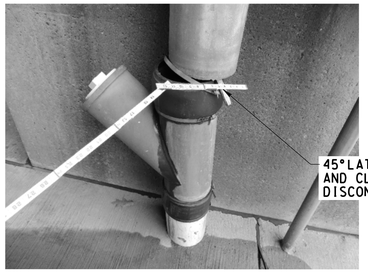
RECOMMENDED _____

SHEET 160 OF 164

S - 38036

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DRAWN BY	MEG
CHECKED BY	DAM

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LOCATION REPAIR TYPE 71D

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 27



LOCATION REPAIR TYPE 71D

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT COLUMN 1 OF PIER 27



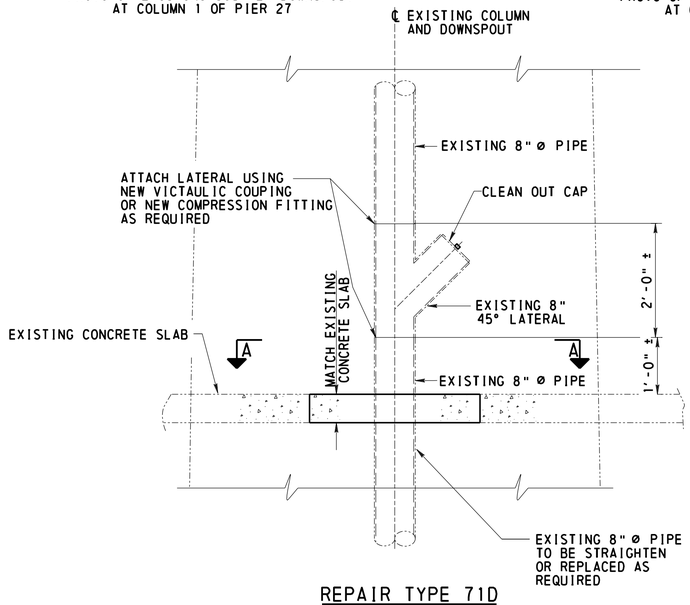
LOCATION REPAIR TYPE 71D

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT DOWNSTREAM END OF ABUTMENT 2



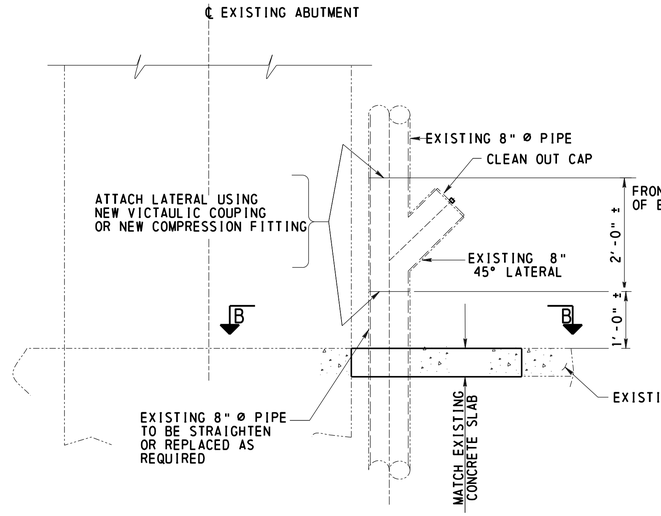
LOCATION REPAIR TYPE 71D

PHOTO OF EXISTING SCUPPER DOWNSPOUT
AT UPSTREAM END OF ABUTMENT 2



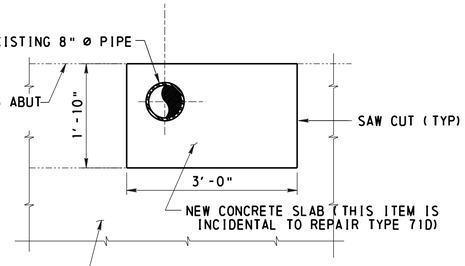
REPAIR TYPE 71D

REPAIR AND REALIGN DOWNSPOUTS
WITH UNDER GROUND DRAINAGE PIPE
(2 LOCATIONS AT PIER 27)

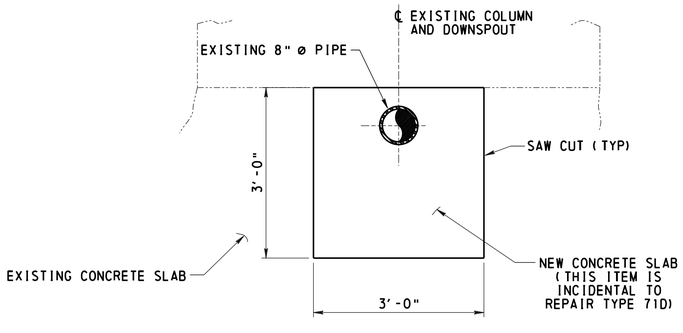


REPAIR TYPE 71D

REPAIR AND REALIGN DOWNSPOUTS
WITH UNDER GROUND DRAINAGE PIPE
(2 LOCATIONS AT ABUTMENT 2)



SECTION B-B



SECTION A-A

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 57 AND 83
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- PERFORM REPAIR 71D AFTER UNDERGROUND DRAINAGE SYSTEM HAS BEEN INSPECTED AND REPAIRED

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DRAWN BY	MEG
CHECKED BY	DAM

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPE 71D

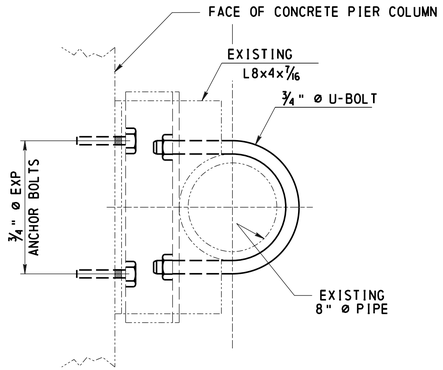
COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

RECOMMENDED _____

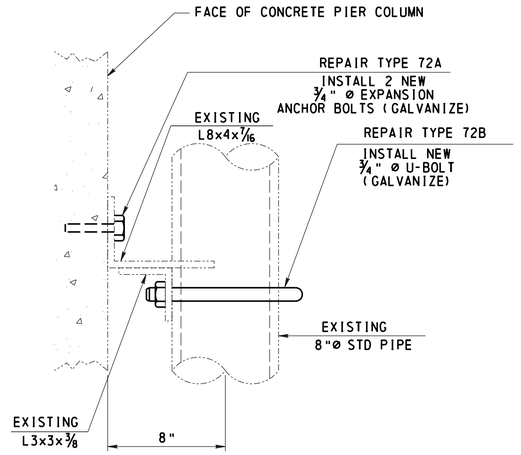
SHEET 161 OF 164

S - 38036

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PLAN



PARTIAL PIER COLUMN ELEVATION

REPAIR TYPE 72A

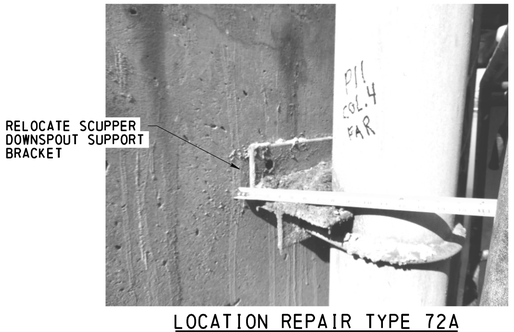
REPOSITION AND REPLACE DOWNSPOUT PIPE SUPPORT,
ANCHOR BOLT, AND/OR U BOLT

REPAIR TYPE 72B

REPLACE MISSING DOWNSPOUT PIPE SUPPORT,
ANCHOR BOLT, AND/OR U-BOLT

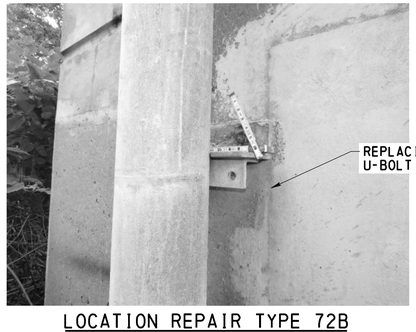
NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 67, 79, AND 80
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED



LOCATION REPAIR TYPE 72A

PHOTO OF EXISTING SCUPPER DOWNSPOUT
SUPPORT BRACKET AT COLUMN 4 OF PIER 11



LOCATION REPAIR TYPE 72B

PHOTO OF EXISTING SCUPPER DOWNSPOUT
SUPPORT BRACKET AT COLUMN 1 OF PIER 23



LOCATION REPAIR TYPE 72B

PHOTO OF EXISTING SCUPPER DOWNSPOUT
SUPPORT BRACKET AT COLUMN 3 OF PIER 24

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
REVISIONS					

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COMMONWEALTH OF PENNSYLVANIA
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ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
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NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 72A & 72B

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

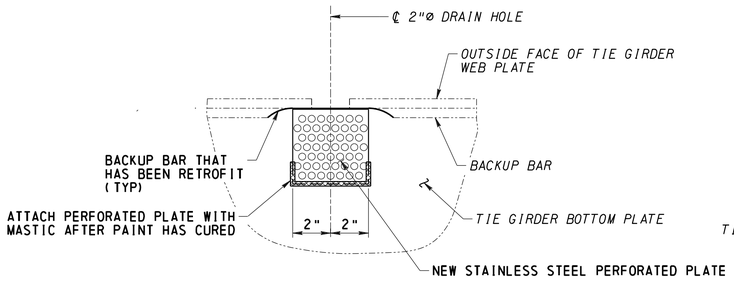
RECOMMENDED _____

SHEET 162 OF 164

S - 38036

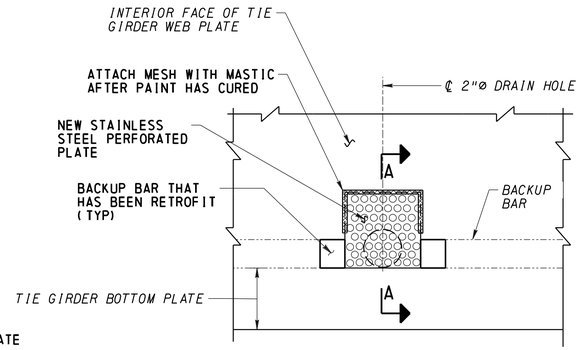
DESIGNED BY	DAM
DRAWN BY	MEG
CHECKED BY	DAM

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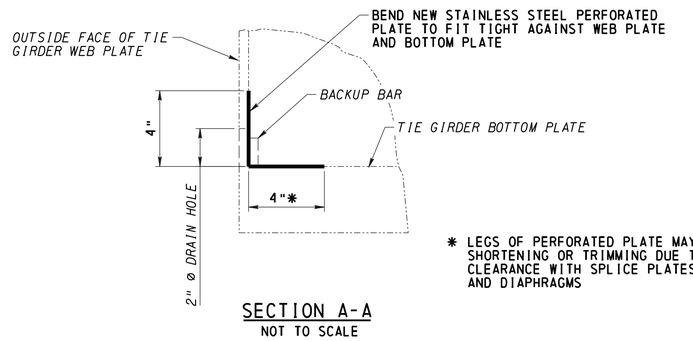
PLAN - TIE GIRDER DRAIN HOLE

NOT TO SCALE



INTERIOR ELEVATION - TIE GIRDER DRAIN HOLE

NOT TO SCALE



* LEGS OF PERFORATED PLATE MAY REQUIRE SHORTENING OR TRIMMING DUE TO CLEARANCE WITH SPLICE PLATES AND DIAPHRAGMS

SECTION A-A

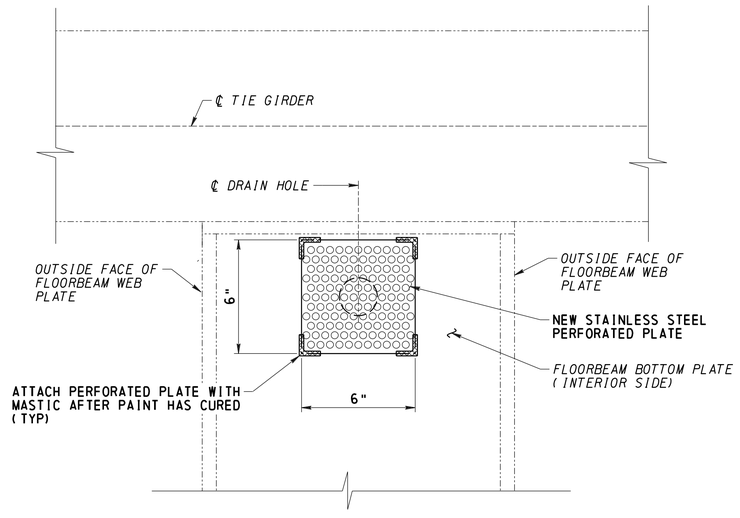
NOT TO SCALE

REPAIR TYPE 78A

INSTALL BIRD SCREENS OVER DRAIN HOLES IN TIE GIRDERS

PROCEDURE FOR REPAIR TYPE 78A

1. DO NOT INSTALL STAINLESS STEEL PERFORATED PLATE UNTIL BACKUP BAR TERMINATIONS HAVE BEEN RETROFIT AND FINAL COAT OF PAINT HAS FINALLY CURED.
2. POSITION PERFORATED PLATE OVER CENTERLINE OF DRAIN HOLE ASSURING PERFORATED PLATE LAYS FLAT AGAINST THE GIRDER WEB AND FLANGE PLATES.
3. MARK OUTLINE OF PERFORATED PLATE ON GIRDER WEB AND FLANGE PLATES, REMOVE PERFORATED PLATE AND APPLY MASTIC AS INDICATED ON THE DETAIL.
4. BEFORE MASTIC HAS SKINNED OVER INSTALL PERFORATED PLATE IN THE MASTIC CENTERED ON THE DRAIN HOLE AND TIGHT TO THE GIRDER WEB AND FLANGE PLATES.



PLAN - FLOORBEAM NO. 0 AND 15 DRAIN HOLES

NOT TO SCALE

REPAIR TYPE 78B

INSTALL BIRD SCREENS OVER DRAIN HOLES IN FLOORBEAMS

PROCEDURE FOR REPAIR TYPE 78B

1. DO NOT INSTALL STAINLESS STEEL PERFORATED PLATE UNTIL FINAL COAT OF PAINT HAS CURED.
2. POSITION PERFORATED PLATE OVER CENTER OF DRAIN HOLE AND MARK OUTLINE OF PLATE ON FLOORBEAM BOTTOM PLATE.
3. REMOVE PERFORATED PLATE AND APPLY MASTIC AS INDICATED ON THE DETAIL.
4. BEFORE MASTIC HAS SKINNED OVER INSTALL PERFORATED PLATE IN THE MASTIC CENTERED OVER THE DRAIN HOLE AND TIGHT TO THE BOTTOM PLATE.

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 39 THRU 50
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED
- STAINLESS STEEL PERFORATED PLATE - 11 GAUGE, 3/8" HOLE DIAMETER, OPEN AREA -51%, TYPE 316 STAINLESS STEEL

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

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DESIGNED BY	DAM
DRAWN BY	ERK
CHECKED BY	DAM

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 78A & 78B

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL DAVID A. MILLER ENGINEER 030827-E

RECOMMENDED _____

SHEET 163 OF 164

S - 38036



REPAIR TYPE 77A

REPAIR LIGHT POLES
(REMOVE LIGHT POLE ID TAG, REMOVE CORROSION
FROM DETERIORATED AREA, PAINT DETERIORATED
AREA, AND INSTALL NEW STAINLESS STEEL COVER PLATE)



REPAIR TYPE 77B

REPLACE ELECTRICAL BOX COVER
AT LIGHT POLES WITH NEW
GALVANIZED COVER

PROCEDURE FOR REPAIR TYPE 77A

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REMOVE COPPER/BRONZE ID PLATE FROM POLE AND DISCARD. INSPECT POLE FOR DETERIORATION BEHIND ID PLATE.
3. MECHANICALLY REMOVE DETERIORATED PORTIONS OF POLE AND PREPARE THE SURFACE OF THE POLE FOR GALVANIZING PAINT. APPLY GALVANIZING PAINT TO PREPARED AREA OF POLE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. SIZE NEW STAINLESS STEEL COVER PLATE A MINIMUM OF 1" BEYOND LIMITS OF ANY DETERIORATED PORTION OF THE POLE.
5. CONFORM AND SECURE NEW STAINLESS STEEL COVER PLATE TO POLE WITH A MINIMUM OF FOUR SELF-TAPPING STAINLESS STEEL FASTENERS.
6. APPLY CAULKING AROUND PERIMETER OF NEW STAINLESS STEEL COVER PLATE.

PROCEDURE FOR REPAIR TYPE 77B

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. MEASURE SIZE OF PLATE COVERING ELECTRICAL CONNECTION ACCESS HOLE IN POLE FOR USE IN FABRICATION OF AN IN-KIND GALVANIZE STEEL REPLACEMENT PLATE.
3. REMOVE COVER PLATE AND ANY LOOSE MATERIAL IN OPENING.
4. MECHANICALLY REMOVE ANY CORROSION FROM AROUND THE ELECTRICAL BOX AND PREPARE THE SURFACE OF THE POLE FOR GALVANIZING PAINT. APPLY GALVANIZING PAINT TO THE PREPARED AREA OF THE POLE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. SECURE REPLACEMENT COVER PLATE TO POLE IN A MANNER SIMILAR TO ORIGINAL PLATE.

PROCEDURE FOR REPAIR TYPE 77C

1. PRIOR TO INITIATING REPAIR SUBMIT A DETAILED REPAIR METHOD TO THE ENGINEER FOR APPROVAL.
2. REMOVE TEMPORARY COVER OVER LIGHTING POLE ANCHORAGE AND MEASURE ANCHOR BOLT PATTERN FOR USE IN FABRICATING REPLACEMENT POLE.
3. INSTALL REPLACEMENT POLE, BRACKET ARM AND LUMINAIRE.



REPAIR TYPE 80A

INSTALL NAVIGATION PLACARD AT PIER
(INSTALL NEW HIGH INTENSITY RED
NAVIGATIONAL RETRO-REFLECTIVE
PANEL OR PLACARD (12"x12") TO RAILING
ON PIER CAP (PROVIDE PLACARD AND MOUNTING
SYSTEM AS SHOWN IN PHOTO))



REPAIR TYPE 80B

INSTALL NAVIGATION PLACARD ON NAVIGATION LIGHT DOWN ROD
(INSTALL NEW HIGH INTENSITY RED
NAVIGATIONAL RETRO-REFLECTIVE
PANEL OR PLACARD (12"x12") TO NAVIGATIONAL
LIGHT DOWN ROD (PROVIDE PLACARD AND MOUNTING SYSTEM
AS SHOWN IN PHOTO))



REPAIR TYPE 77C

REPLACE LIGHT POLE
LIGHT POLE MISSING AT DOWNSTREAM
BRIDGE BARRIER IN SPAN 17

NOTES

- FOR DRAWING INDEX AND INDEX OF REPAIRS SEE SHEETS 6 & 7
- FOR LOCATIONS OF REPAIRS SEE SHEETS 1 THRU 5
- FOR GENERAL LEGEND SEE SHEET 7
- ALL STRUCTURAL STEEL SHOWN IS EXISTING UNLESS NOTED

MARK	DESCRIPTION	BY	CHK'D.	APP'D.	DATE
	REVISIONS				

S.R. 0079 PREVIOUSLY KNOWN AS L.R. 1016
BMS# 02-0079-0650-0000 BRKEY 0897 ECMS# 87756

DESIGNED BY	EAT
DRAWN BY	MEG
CHECKED BY	EAT

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
DAVID A. MILLER
ENGINEER
030827-E

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

ALLEGHENY COUNTY
SR 0079 SECTION A61

SEGMENT 0650 OFFSET 0000
SR 0079 STA 843+72.50 N.B.
NEVILLE ISLAND BRIDGE OVER OHIO RIVER

PRESERVATION OF 27-SPAN STEEL ARCH BRIDGE

REPAIR TYPES 77A, 77B, 77C, 80A & 80B

RECOMMENDED _____

SHEET 164 OF 164

S - 38036

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of the Department of Transportation of the Commonwealth of Pennsylvania for approval to perform bridge preservation work on the existing bridge where State Route 79 crosses the tracks of CSX Transportation, Inc. DOT Number 584 829 W and Norfolk Southern Railway Company DOT Number 507 463 C in Robinson Township, Neville Township, and Glenfield Borough, Allegheny County and the allocation of costs incident thereto.	Application Docket No. A-2019-3011548 **Electronically Filed**

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants listed below, in accordance with the requirements of 52 Pa. Code § 1.54, by first class mail, postage prepaid:

Mr. Derek Mihaly, P.E.
CSX Transportation, Inc.
4 Neshaminy Interplex
Suite 205
Trevose, PA 19053

Mr. D. Shawn Starling, P.E.
Norfolk Southern Railway Company
1200 Peachtree Street N.E.
Atlanta, GA 30309

Ms. Candace N. Hager
AMTRAK (National Railroad Passenger Corporation)
Engineering I&C
30th Street Station
2955 Market Street, Box 64
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Mr. Rich Fitzgerald
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101 County Courthouse
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Mr. Larry Goglin
Windstream
98 Industrial Park
Brookville, PA 15825

Dated this 27th Day of November, 2019

Name