

MOT SEQUENCE OF OPERATIONS

PRE-PHASE 1 (SHEETS 103-139)

REMOVE AND REERECT EXISTING LIGHT POLES THAT CONFLICT WITH THE PROPOSED TEMPORARY PAVEMENT.

CONSTRUCT TEMPORARY PAVEMENT ON THE OUTSIDE SHOULDERS OF I.R. 70 AS SHOWN IN THE PLANS UTILIZING SHOULDER CLOSURES AS PER SCD MT-95.45. PORTABLE BARRIER QUANTITIES ITEMIZED IN THE PLANS.

REMOVE ALL OVERHEAD SIGNS AND SUPPORTS ALONG I.R. 70 AS SHOWN IN THE PLANS. INSTALL WORK ZONE GROUND MOUNTED MAJOR SIGNS ON TEMPORARY SUPPORTS IN ACCORDANCE WITH SCD MT-105.10. SEE SHEETS 93-95 FOR DETAILS OF THESE SIGNS.

MILL AND FILL EXISTING RUMBLE STRIPS ALONG THE INSIDE AND OUTSIDE SHOULDERS OF I.R. 70 AS DETAILED ON SHEET 63.

INSTALL ALL PROPOSED RADAR DETECTORS AT THE VARIOUS INTERSECTIONS IN THE CITY OF ZANESVILLE AS SHOWN ON SHEETS 1221-1228.

ALL CONFLICTING PAVEMENT MARKINGS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE REMOVED OR COVERED.

PHASE 1 (SHEETS 140-189)

MAINTAIN TWO LANES OF TRAFFIC IN EACH DIRECTION ON I.R. 70 AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

MOVE TRAFFIC TO THE OUTSIDE OF THE EASTBOUND AND WESTBOUND LANES AND CONSTRUCT THE MEDIAN SECTION OF I.R. 70.

CONSTRUCT THE I.R. 70 MAINLINE PAVEMENT AS PER THE PROPOSED TYPICAL SECTIONS EXCEPT THAT THE 1.50" SURFACE COURSE SHALL BE REPLACED WITH A TEMPORARY 1.50" SURFACE COMPRISED OF ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN (PG64-22/PG64-28).

CONSTRUCT RAMP E, RAMP F, RAMP H AND RAMP O DURING PHASE 1. (RAMP N MAY BE CONSTRUCTED THIS PHASE ALSO.)

BEFORE RAMP O CAN BE CLOSED, TEMPORARY SIGNALS MUST BE IN PLACE AT THE RAMP INTERSECTIONS OF THE I.R. 70/S.R. 93 INTERCHANGE AS SHOWN ON SHEETS 87-89. THESE SIGNALS ARE TO REMAIN IN PLACE UNTIL THE PROJECT IS COMPLETED.

BEFORE RAMP E CAN BE CLOSED, THE NECESSARY RE-STRIPING OF MAPLE AVE. AT ADAIR AVE. AND SUBSEQUENT SIGNAL WORK MUST BE IN PLACE. SEE SHEETS 90-92 FOR DETAILS.

CLOSURE RESTRICTIONS:

- RAMP E AND RAMP O SHALL NOT BE CLOSED AT THE SAME TIME.
- 5TH STREET, 6TH STREET, AND 7TH STREET SHALL BE CLOSED DURING BRIDGE DEMOLITION AND WHILE THE FALSEWORK IS IN PLACE. 5TH STREET AND 7TH STREET SHALL NOT BE CLOSED AT THE SAME TIME.

PRE-PHASE 2 (SHEETS 190-196)

CONSTRUCT CROSSOVER 1, CROSSOVER 2, AND OTHER NECESSARY TEMPORARY PAVEMENT NEEDED TO MAINTAIN PHASE 2 TRAFFIC AS DETAILED IN THE PLANS.

ALL CONFLICTING PAVEMENT MARKINGS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE REMOVED OR COVERED.

PHASE 2 (SHEETS 197-239)

MAINTAIN TWO LANES OF TRAFFIC IN EACH DIRECTION ON I.R. 70 AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE PASSING LANE OF I.R. 70 EASTBOUND WILL CROSSOVER TO THE WESTBOUND SIDE OF THE ROADWAY, AND THE DRIVING LANE WILL TAPER OVER TO THE PASSING LANE TO ALLOW FOR THE CONSTRUCTION AREA OF THE EASTBOUND LANES.

CONSTRUCT THE I.R. 70 MAINLINE PAVEMENT AS PER THE PROPOSED TYPICAL SECTIONS EXCEPT THAT THE 1.50" SURFACE COURSE SHALL BE REPLACED WITH A TEMPORARY 1.50" SURFACE COMPRISED OF ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN (PG64-22/PG64-28).

CONSTRUCT RAMP T, RAMP U, RAMP J, AND RAMP L DURING PHASE 2.

CLOSURE RESTRICTIONS:

- RAMP T, RAMP J, AND RAMP L SHALL NOT BE CLOSED AT THE SAME TIME. A MINIMUM OF TWO EASTBOUND OFF-RAMPS SHALL BE OPEN AT ALL TIMES.
- RAMP U AND RAMP O SHALL NOT BE CLOSED AT THE SAME TIME.
- RAMP E, RAMP H, AND RAMP J SHALL BE CLOSED WHILE WORK IS IN PROGRESS ON THE MUS-70-1159 STRUCTURE. RAMP E AND RAMP H MAY BE REOPENED TO FIRE/EMS VEHICLES WHILE WORK ON THE MUS-70-1159 STRUCTURE IS ONGOING ONCE THE REAR APPROACH SLAB IS COMPLETE.
- 5TH STREET, 6TH STREET, AND 7TH STREET SHALL BE CLOSED DURING BRIDGE DEMOLITION AND WHILE THE FALSEWORK IS IN PLACE. 5TH STREET AND 7TH STREET SHALL NOT BE CLOSED AT THE SAME TIME.

PRE-PHASE 3 (SHEETS 240-248)

CONSTRUCT CROSSOVER 3, CROSSOVER 4, AND OTHER NECESSARY TEMPORARY PAVEMENT NEEDED TO MAINTAIN PHASE 3 TRAFFIC AS DETAILED IN THE PLANS.

ALL CONFLICTING PAVEMENT MARKINGS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE REMOVED OR COVERED.

PHASE 3 (SHEETS 249-292)

MAINTAIN TWO LANES OF TRAFFIC IN EACH DIRECTION ON I.R. 70 AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE PASSING LANE OF I.R. 70 WESTBOUND WILL CROSSOVER TO THE EASTBOUND SIDE OF THE ROADWAY, AND THE DRIVING LANE WILL TAPER OVER TO THE PASSING LANE TO ALLOW FOR THE CONSTRUCTION AREA OF THE WESTBOUND LANES.

CONSTRUCT THE I.R. 70 MAINLINE PAVEMENT AS PER THE PROPOSED TYPICAL SECTIONS EXCEPT THAT THE 1.50" SURFACE COURSE SHALL BE REPLACED WITH A TEMPORARY 1.50" SURFACE COMPRISED OF ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN (PG64-22/PG64-28).

CONSTRUCT RAMP V, RAMP W, RAMP A, RAMP K, AND STATE STREET DURING PHASE 3. CONSTRUCT RAMP N IN PHASE 3 (IF NOT CONSTRUCTED IN PHASE 1).

CLOSURE RESTRICTIONS:

- RAMP W, RAMP A, AND RAMP N SHALL NOT BE CLOSED AT THE SAME TIME. A MINIMUM OF TWO WESTBOUND OFF-RAMPS SHALL BE OPEN AT ALL TIMES.
- RAMP V AND RAMP K SHALL NOT BE CLOSED AT THE SAME TIME.
- RAMP A AND RAMP K SHALL BE CLOSED WHILE WORK IS IN PROGRESS ON THE MUS-70-1159 STRUCTURE. RAMP A AND RAMP K MAY BE REOPENED TO FIRE/EMS VEHICLES WHILE WORK ON THE MUS-70-1159 STRUCTURE IS ONGOING ONCE THE APPROACH SLABS ARE COMPLETE.
- 5TH STREET, 6TH STREET, AND 7TH STREET SHALL BE CLOSED DURING BRIDGE DEMOLITION AND WHILE THE FALSEWORK IS IN PLACE. 5TH STREET AND 7TH STREET SHALL NOT BE CLOSED AT THE SAME TIME.
- STATE STREET SHALL BE CLOSED AS PER THE A+B DETAILS ON THIS SHEET.

BEFORE FINAL RESURFACING, CONSTRUCT THE REMAINING SECTIONS OF MEDIAN BARRIER UTILIZING SHOULDER CLOSURES PER SCD MT-95.45.

PHASE 4

THE ASPHALT CONCRETE PAVEMENT ALONG I.R. 70 WITHIN THE FULL DEPTH PROJECT LIMITS SHALL BE PLANED OFF AT A DEPTH OF 1.50".

PLACE ASPHALT CONCRETE SURFACE COURSE AS SHOWN ON THE PROPOSED TYPICAL SECTIONS.

WORK DURING THIS PHASE SHALL BE PERFORMED AT NIGHT WITH ONE LANE CLOSED DURING THE PERMITTED CLOSURE TIMES.

PAINTING OF ALL STRUCTURES AS SHOWN IN THE PLANS SHALL ALSO BE PERFORMED DURING PHASE 4. INTERMITTENT CLOSURES OF MCINTIRE AVENUE, LINDEN AVENUE, AND UNDERWOOD STREET WILL BE PERMITTED.

A+B BIDDING CONTRACT TABLE

USE THE FOLLOWING INFORMATION WITH THE PROPOSAL NOTE 124 A+B BIDDING. THE CONTRACTOR WILL BID THE NUMBER OF CALENDAR DAYS TO COMPLETE THE PROJECT AS LISTED IN THE PROPOSAL.

A+B BIDDING CONTRACT TABLE

| CONTRACT SEGMENT/ LOCATION OF CRITICAL WORK | MIN. DAYS | MAX. DAYS | INCENTIVE/ DISINCENTIVE \$ PER DAY | MAXIMUM INCENTIVE \$ |
|---|-----------|-----------|------------------------------------|----------------------|
| STATE STREET BRIDGE & RELATED ROADWAY WORK | 115* | 125 | \$8,000 | \$80,000 |

*CLOSURE WILL ONLY BE PERMITTED DURING THE SUMMER MONTHS. ANY CLOSURE TIME THAT WILL OCCUR WHILE SCHOOL IS IN SESSION MUST BE COORDINATED WITH ZANESVILLE CITY SCHOOLS A MINIMUM OF 1 (ONE) YEAR PRIOR TO THE CLOSURE BEING PUT INTO PLACE.

LANE VALUE- I.R. 70

LANE CLOSURES WILL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE OHIO DEPARTMENT OF TRANSPORTATION'S WEBSITE, "PERMITTED LANE CLOSURE TIMES" SECTION, LOCATED AT THE ADDRESS BELOW:

<http://plcm.dot.state.oh.us/>

THE PERMITTED LANE CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE, WILL BE IN EFFECT FOR THIS PROJECT. NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES. WHEN NECESSARY, LANE CLOSURES WILL BE ACCOMPLISHED IN ACCORDANCE WITH THE STANDARD CONSTRUCTION DRAWINGS.

SHOULD THE CONTRACTOR CLOSE A LANE BEFORE THE ALLOWABLE TIME AND/OR FAIL TO RE-OPEN ALL LANES TO TRAFFIC, BY THE ALLOWABLE TIME, A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE AND PROPOSAL NOTE 127 WILL BE ASSESSED.

LANE VALUE CONTRACT TABLE - I.R. 70

| DESCRIPTION OF CRITICAL LANE TO BE MAINTAINED | RESTRICTED TIME PERIOD | TIME UNIT | DISINCENTIVE \$ PER TIME UNIT |
|---|--|-----------|-------------------------------|
| 1 LANE OF I.R. 70 MM 10.00 TO MM 14.00 | ODOT WEBSITE: PERMITTED LANE CLOSURE TIMES | 15 MIN. | \$2,500 |

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

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CALCULATED
BRH
CHECKED
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MAINTENANCE OF TRAFFIC GENERAL NOTES

MUS-70-10.49

MUS-70-1066L BRIDGE SUMMARY - 02/IMS/BR

CALC: MMZ CHECK: CTM

| ITEM | ITEM EXT. | TOTAL QUANTITY | TOTAL PER PHASE | | | UNIT | DESCRIPTION | PHASE 1 | | | PHASE 3 | | | GENERAL | APP/REF SHEET NO. |
|---------|-----------|----------------|-----------------|---------|-------|------|--|---------|-------|---------|---------|-------|---------|---------|-------------------|
| | | | PH 1 | PH 3 | GEN | | | ABUT. | PIERS | SUPER | ABUT. | PIERS | SUPER | | |
| 202 | 11003 | LS | | | LS | | STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | | | | | | LS | 4 | |
| 202 | 22900 | 228 | 78 | 150 | | SY | APPROACH SLAB REMOVED | 78 | | | 150 | | | | |
| 503 | 11101 | LS | | | LS | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | | | | | | LS | 5 | |
| 503 | 21301 | LS | LS | LS | | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LS | | | LS | | | 5 | |
| 505 | 11100 | LS | | | LS | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | | | LS | | |
| 507 | 00600 | 1,050 | 550 | 500 | | FT | 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN | 550 | | | 500 | | | | |
| 507 | 00650 | 1,190 | 620 | 570 | | FT | 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED | 620 | | | 570 | | | | |
| 509 | 10001 | 180,372 | 72,730 | 107,642 | | LB | EPOXY COATED REINFORCING STEEL, AS PER PLAN | 7,635 | | 65,095 | 10,538 | | 97,104 | 5 | |
| 509 | 20001 | 300 | | | 300 | LB | REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN | | | | | | 300 | 5 | |
| 510 | 10001 | 118 | 38 | 80 | | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN | 38 | | | 80 | | | 5 | |
| 511 | 33500 | 2 | 2 | | | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE | 2 | | | | | | | |
| 511 | 34447 | 566 | 213 | 353 | | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN | | | 213 | | | 353 | 5 | |
| 511 | 34451 | 120 | 60 | 60 | | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN | | | 60 | | | 60 | 5 | |
| 511 | 44112 | 185 | 73 | 113 | | CY | CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING | 73 | | | 113 | | | | |
| 511 | 46512 | 62 | 31 | 31 | | CY | CLASS QC1 CONCRETE WITH QC/QA, FOOTING | 31 | | | 31 | | | | |
| 512 | 10050 | 911 | 445 | 466 | | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | 52 | | 393 | 74 | | 392 | | |
| 512 | 10300 | 75 | | 75 | | SY | SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN | | | | | | 75 | | |
| 512 | 10601 | 50 | | | 50 | FT | CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN | | | | | | 50 | 5 | |
| 512 | 33000 | 66 | 26 | 40 | | SY | TYPE 2 WATERPROOFING | 26 | | | 40 | | | | |
| 513 | 10260 | 517,113 | 210,852 | 306,261 | | LB | STRUCTURAL STEEL MEMBERS, LEVEL 3 | | | 210,852 | | | 306,261 | | |
| 513 | 20000 | 7,077 | 3,033 | 4,044 | | EACH | WELDED STUD SHEAR CONNECTORS | | | 3,033 | | | 4,044 | | |
| 514 | 00061 | 26,218 | 10,786 | 15,432 | | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN | | | 10,786 | | | 15,432 | 5 | |
| 514 | 00067 | 26,218 | 10,786 | 15,432 | | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN | | | 10,786 | | | 15,432 | 5 | |
| 514 | 10000 | 22 | 9 | 13 | | EACH | FINAL INSPECTION REPAIR | | | 9 | | | 13 | | |
| 516 | 13901 | 79 | 39 | 39 | | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | | | 39 | | | 39 | 5 | |
| 516 | 14020 | 182 | 72 | 111 | | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | | | 72 | | | 111 | | |
| 516 | 14600 | 142 | 51 | 91 | | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 51 | | | 91 | | | 50 | |
| 516 | 44101 | 28 | 12 | 16 | | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN , DIMENSIONS VARY | 6 | 6 | | 8 | 8 | | 30 | |
| 516 | 46900 | 7 | 3 | 4 | | EACH | BEARING DEVICE, MISC.: SEISMIC ISOLATION BEARING | | 3 | | | 4 | | 31 | |
| 518 | 12200 | 7 | 5 | 2 | | EACH | SCUPPERS, INCLUDING SUPPORTS | 5 | | | 2 | | | | |
| 518 | 21200 | 134 | 53 | 81 | | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | 53 | | | 81 | | | | |
| 518 | 40000 | 217 | 88 | 129 | | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | 88 | | | 129 | | | | |
| 518 | 40010 | 60 | 30 | 30 | | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 30 | | | 30 | | | | |
| 519 | 11101 | 70 | | | 70 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN | | | | | | 70 | 5 | |
| 523 | 20001 | 8 | 4 | 4 | | EACH | DYNAMIC LOAD TESTING, AS PER PLAN | 4 | | | 4 | | | 5 | |
| 523 | 20501 | 8 | 4 | 4 | | EACH | RESTRIKE, AS PER PLAN | 4 | | | 4 | | | 5 | |
| 526 | 30010 | 316 | 114 | 201 | | SY | REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17") | 114 | | | 201 | | | | |
| SPECIAL | 53000200 | LS | | | LS | | STRUCTURES - MEASUREMENTS FOR PROPOSED BEARINGS | | | | | | LS | 6 | |
| 601 | 20000 | 1,044 | | | 1,044 | SY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | | | 1,044 | | |
| 607 | 39900 | 350 | 175 | 175 | | FT | VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC | | | 175 | | | 175 | | |
| 613 | 41201 | 287 | 99 | 188 | | CY | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 99 | | | 188 | | | 5 | |

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2800 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBIUS, OHIO 43231

DATE
12/2020
REVIEWED
CTM
STRUCTURE FILE NUMBER
6002641

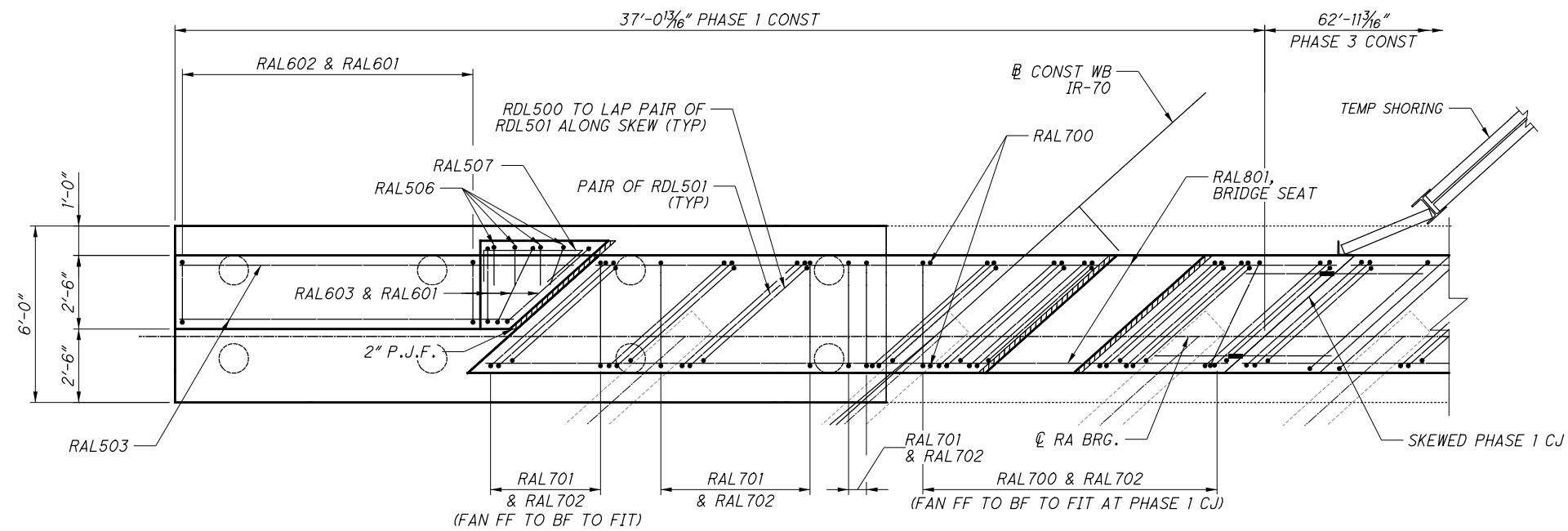
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BRIDGE SUMMARY
BRIDGE NO. MUS-70-1066L
OVER LICKING ROAD & CUOH RAILROAD

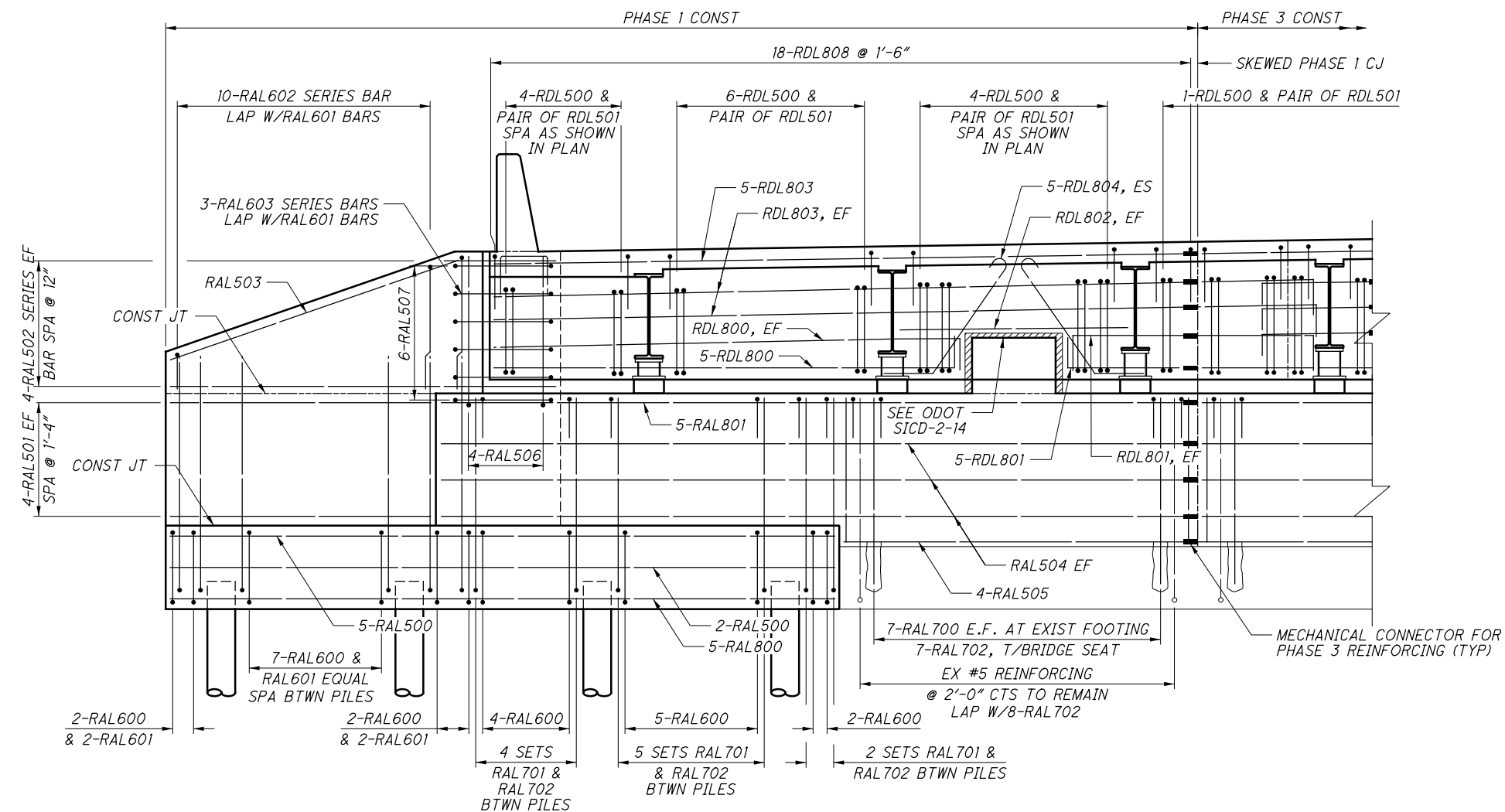
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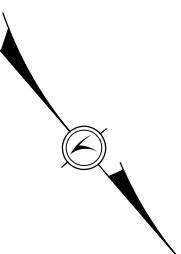
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REAR ABUTMENT PHASE 1 PLAN



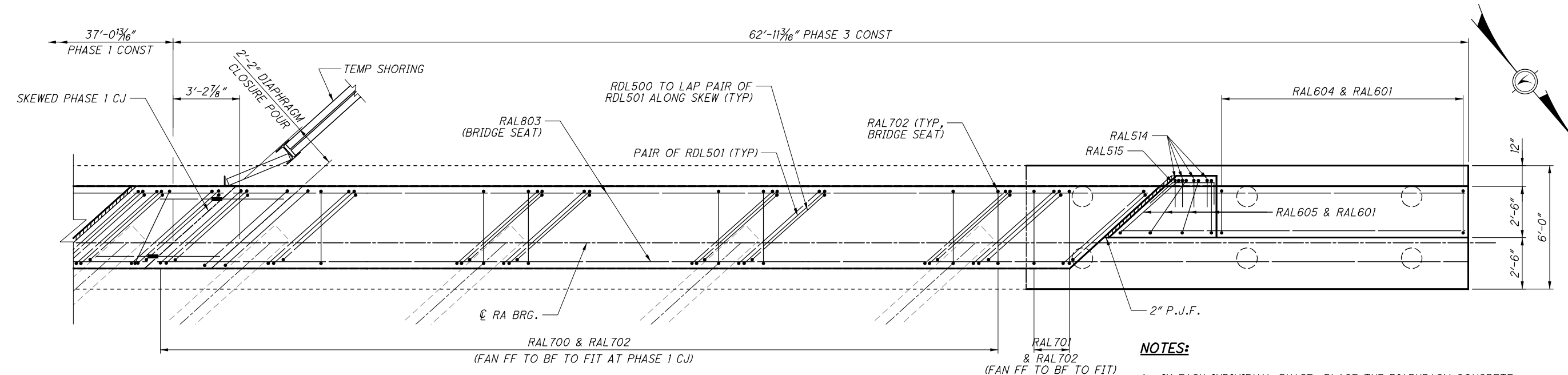
REAR ABUTMENT PHASE 1 ELEVATION
DECK REINFORCEMENT NOT SHOWN FOR CLARITY



- NOTES**
- SEE SHEET 18/54 FOR ABUTMENT DETAILS AND SECTIONS.
 - SEE SHEET 12/54 FOR FOUNDATION PLAN.
 - SEE SHEET 38/54 FOR TRANSVERSE SECTION.
 - 2" CLEAR COVER UNLESS NOTED OTHERWISE.
 - 12" MAX SPACING UNLESS NOTED OTHERWISE.

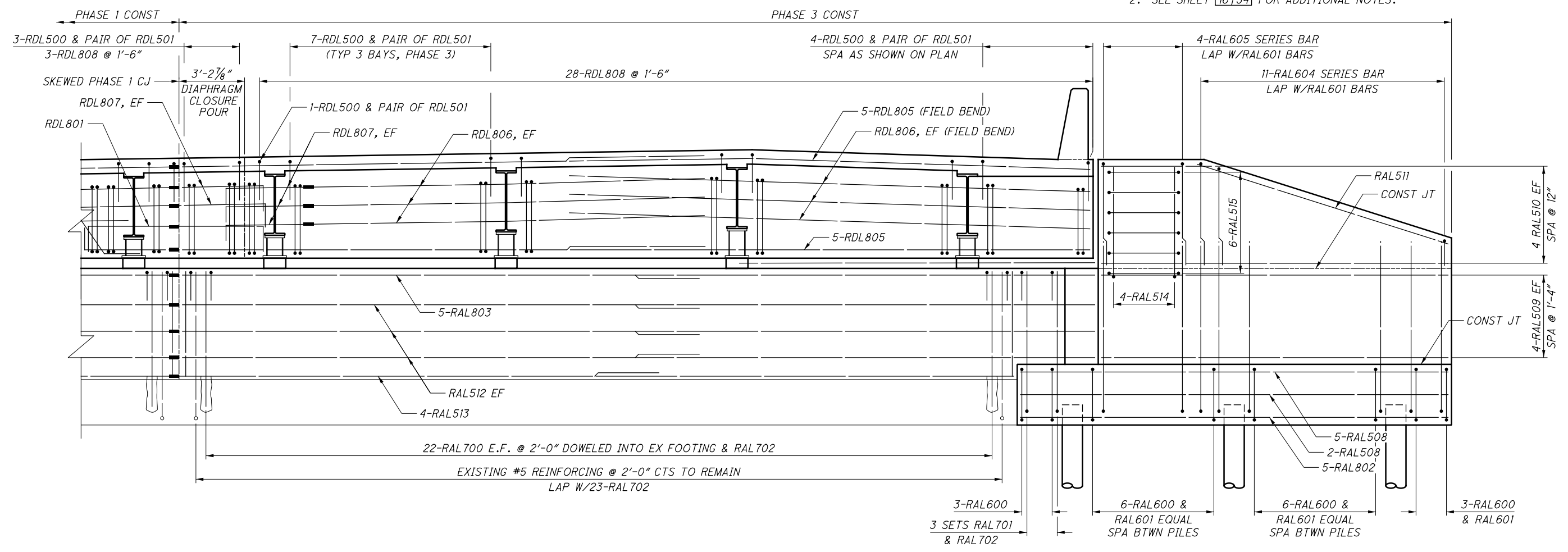
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|--|--------------------------------------|---|
| REAR ABUTMENT PHASE 1 BRIDGE NO. MUS-70-1066L OVER LICKING ROAD & CUOH RAILROAD | MUS-70-10.49 PID No. 93006 | Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 2500 CORPORATE EXCHANGE DRIVE SUITE 230 COLUMBUS, OHIO 43231 |
| DESIGNED JGC | DRAWN LAM | REVIEWED CTM |
| CHECKED DF | LAP REVISED | DATE 12/2020 |
| | | STRUCTURE FILE NUMBER 6002641 |
| | | DESIGN AGENCY |

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REAR ABUTMENT PHASE 3 PLAN

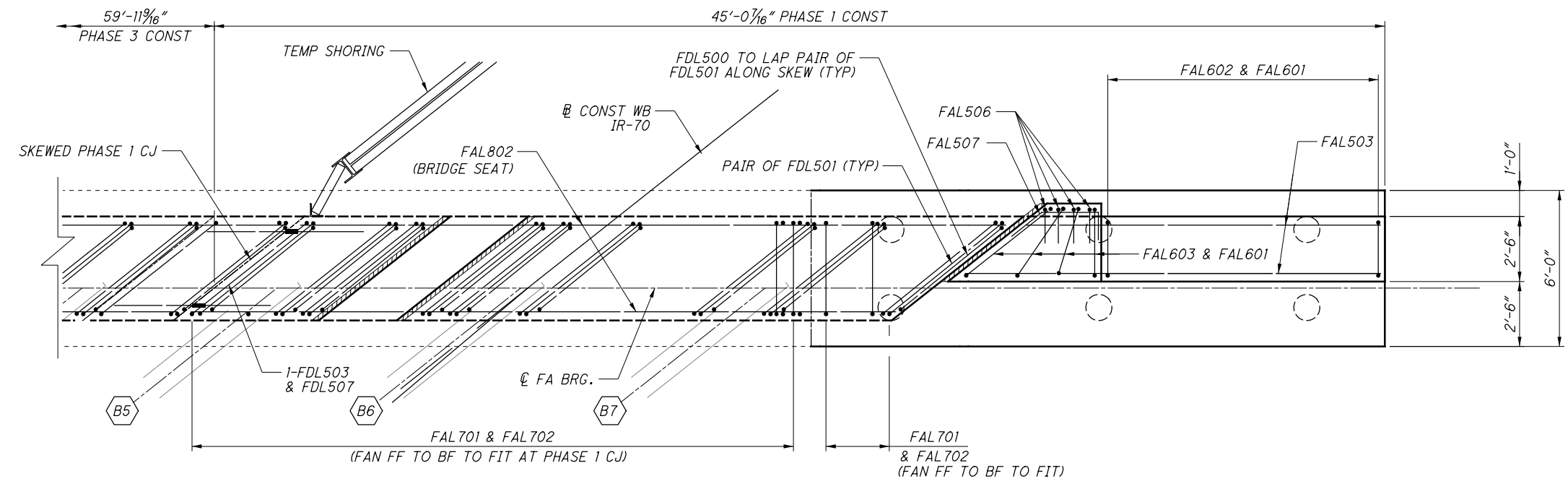
- NOTES:**
1. IN EACH INDIVIDUAL PHASE, PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR IN THE DIAPHRAGM AND DECK CONCURRENTLY.
 2. SEE SHEET **16154** FOR ADDITIONAL NOTES.



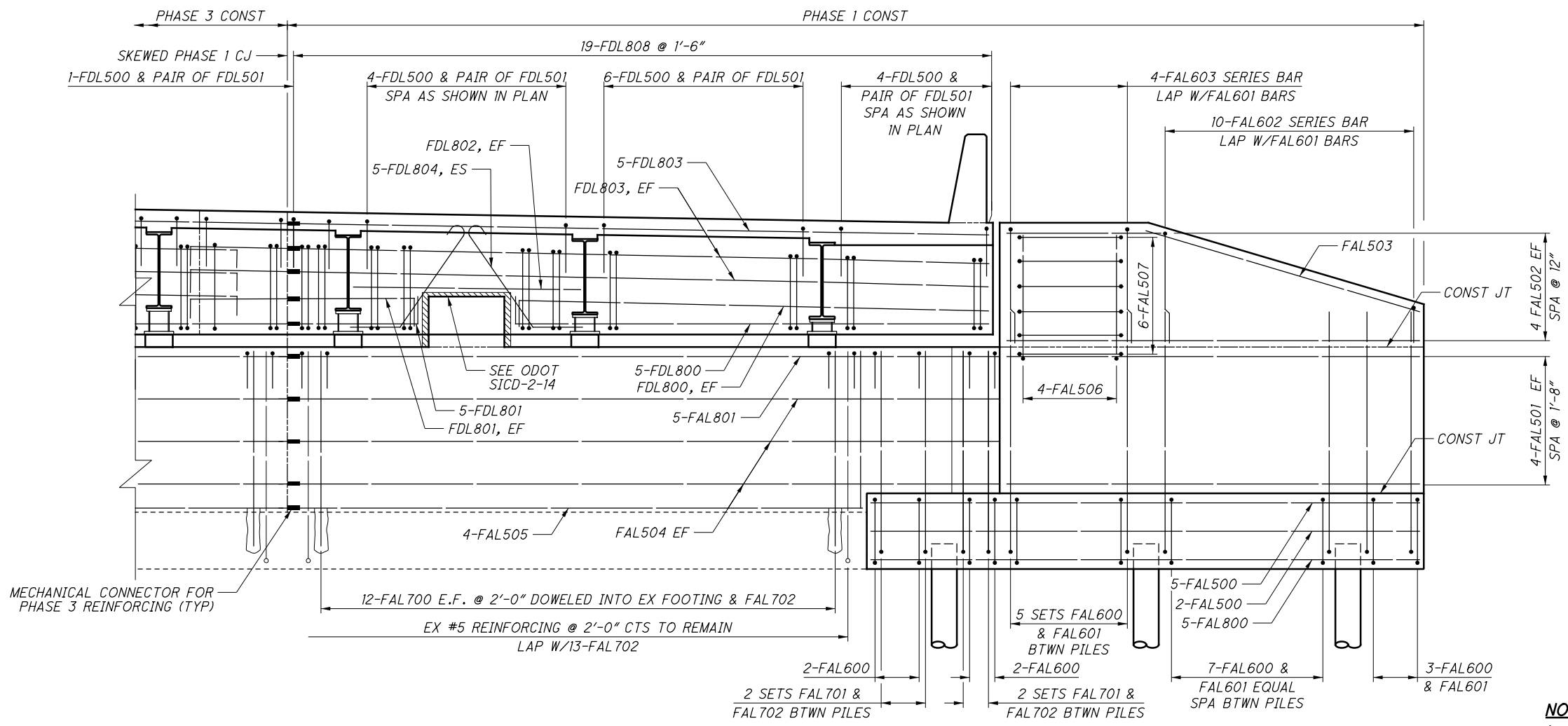
REAR ABUTMENT PHASE 3 ELEVATION
 DECK REINFORCEMENT NOT SHOWN FOR CLARITY

| | | | | |
|--|---|----------------------------------|-------------------------|---|
| Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 2500 CORPORATE EXCHANGE DRIVE, SUITE 230 COLUMBUS, OHIO 43231 | DESIGN AGENCY DATE: 12/2020 CTM STRUCTURE FILE NUMBER: 6002641 | REVIEWED JGC CHECKED DF | DRAWN LAM REVISED | REAR ABUTMENT PHASE 3 BRIDGE NO. MUS-70-10661 OVER LICKING ROAD & CUOH RAILROAD |
| MUS-70-10.49 PID No. 93006 | | | | 17 / 54 1304 2231 |

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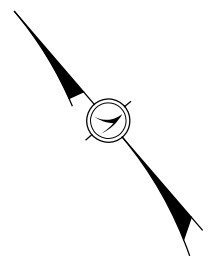
FORWARD ABUTMENT PHASE 1 PLAN



FORWARD ABUTMENT PHASE 1 ELEVATION
DECK REINFORCEMENT NOT SHOWN FOR CLARITY

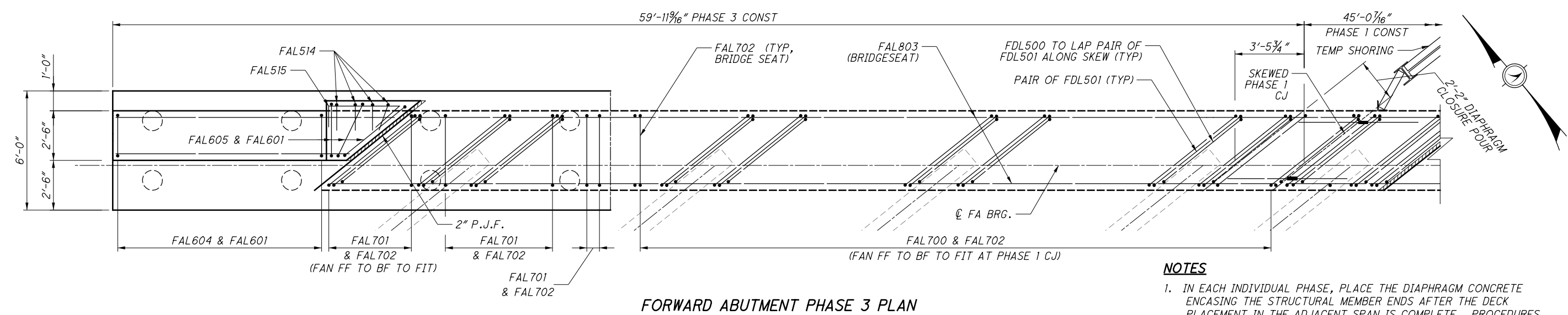
NOTES

1. SEE SHEET 24/54 FOR ABUTMENT DETAILS AND SECTIONS.
2. SEE SHEET 13/54 FOR FOUNDATION PLAN.
3. SEE SHEET 38/54 FOR TRANSVERSE SECTION.
4. 2" CLEAR COVER UNLESS NOTED OTHERWISE.



| | | | | | | | |
|----------|-----|---------|-----|-----------------------|---------|------|---------|
| DESIGNED | JGC | DRAWN | LAM | REVIEWED | CTM | DATE | 12/2020 |
| CHECKED | DF | REVISED | | STRUCTURE FILE NUMBER | 6002641 | | |

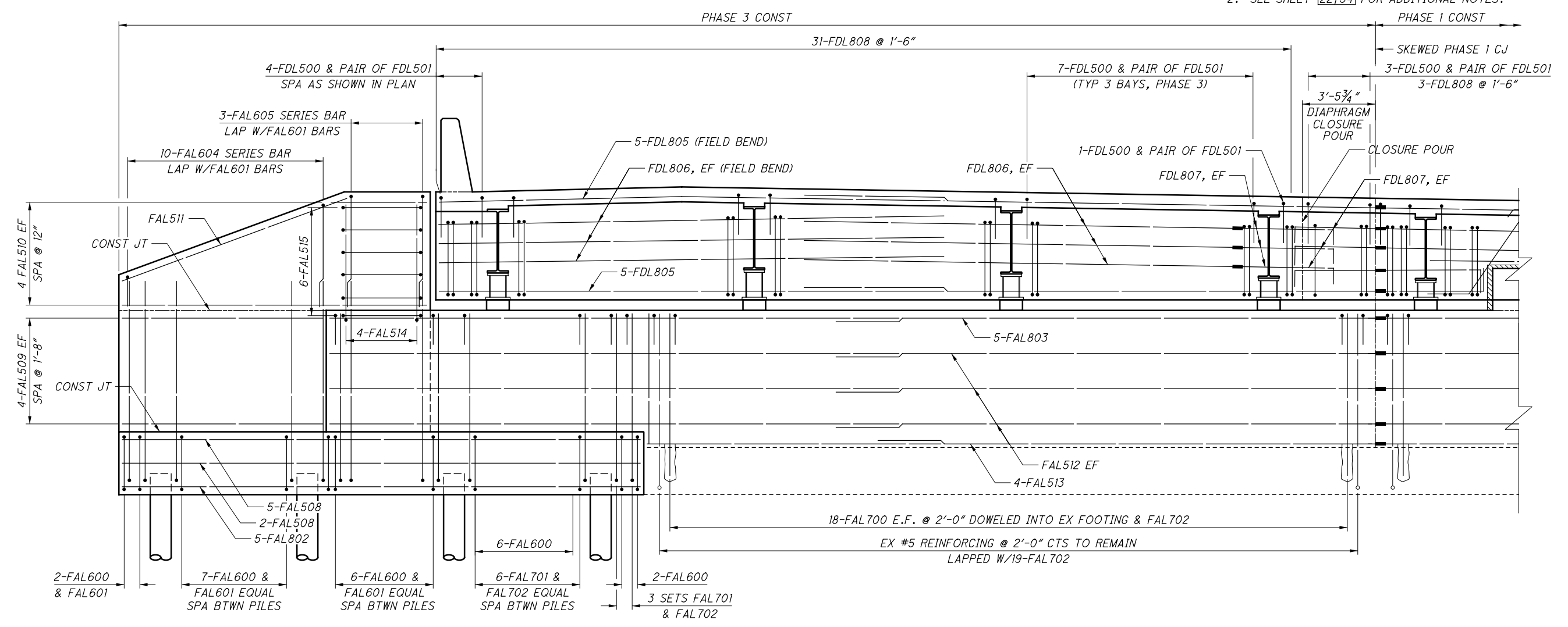
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FORWARD ABUTMENT PHASE 3 PLAN

NOTES

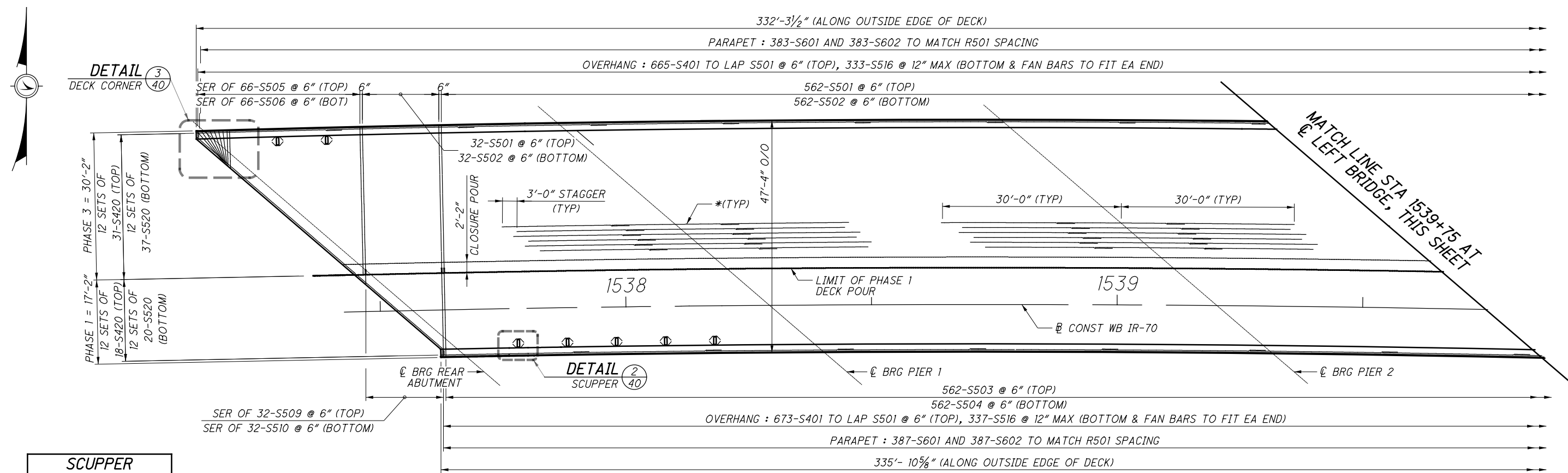
1. IN EACH INDIVIDUAL PHASE, PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR IN THE DIAPHRAGM AND DECK CONCURRENTLY.
2. SEE SHEET 22154 FOR ADDITIONAL NOTES.



FORWARD ABUTMENT PHASE 3 ELEVATION
 DECK REINFORCEMENT NOT SHOWN FOR CLARITY

| | | | | |
|--|----------------------------------|---|---------------------------|----------------------------------|
| Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 2500 CORPORATE EXCHANGE DRIVE SUITE 230 COLUMBIUS, OHIO 43231 | DESIGN AGENCY DATE 12/2020 | REVIEWED CTM STRUCTURE FILE NUMBER 6002641 | DRAWN LAM REVISIONS | DESIGNED JGC CHECKED DF |
| FORWARD ABUTMENT PHASE 3 BRIDGE NO. MUS-70-1066L OVER LICKING ROAD & CUOH RAILROAD | | | | |
| MUS-70-10.49 PID No. 93006 | | | | |
| 23 / 54 | | | | |
| 1310 2231 | | | | |

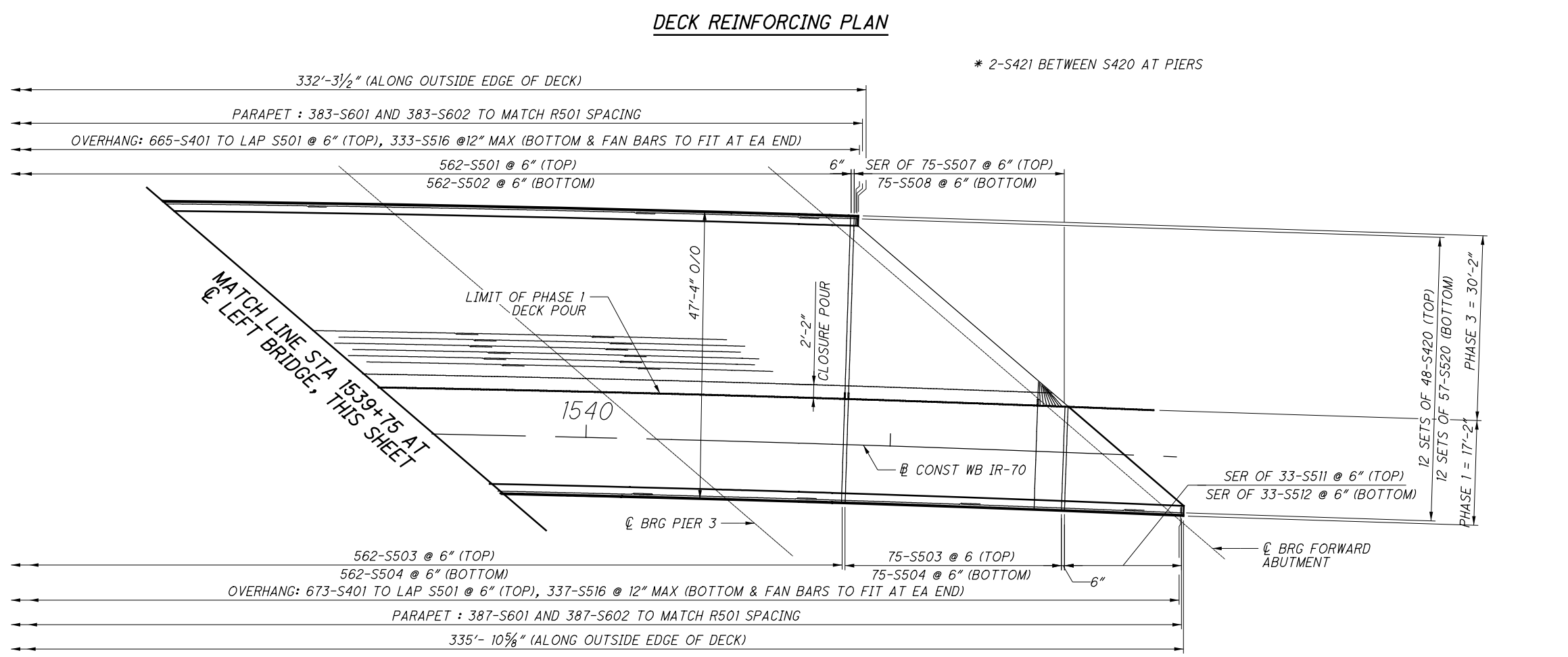
SUBMITTAL: Stage 3
 PLOT DRIVER: 000Tcodd_PDF.pltcf9
 PENTABLE: 93006_0001V81_Pen.tbl
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SCUPPER LOCATION TABLE

| STATION | OFFSET |
|---------|-----------|
| 1537+30 | 36.00' LT |
| 1537+40 | 36.00' LT |
| 1537+78 | 8.00' RT |
| 1537+88 | 8.00' RT |
| 1537+98 | 8.00' RT |
| 1538+08 | 8.00' RT |
| 1538+18 | 8.00' RT |

OFFSET MEASURED FROM \varnothing TO GUTTER LINE



DECK REINFORCING PLAN (CONTINUATION)

DESIGN AGENCY
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DESIGNED MMZ
CHECKED DF
DRAWN EBP
REVISSED

REVIEWED CTM
DATE 12/2020
STRUCTURE FILE NUMBER 6002641

DECK REINFORCING PLAN
 BRIDGE NO. MUS-70-1066L
 OVER LICKING ROAD & CUOH RAILROAD

MUS-70-10.49
PID No. 93006

39 / 54
 1326
 2231

| Mark | NUMBER | | | LENGTH | WEIGHT | | | TYPE | DIMENSIONS | | | | | |
|----------------|-----------|---------|--------|---------|---------|---------|---------|------|------------|-------|-------|-------|----|--------|
| | Phase 1 | Phase 3 | TOTAL | | Phase 1 | Phase 3 | TOTAL | | A | B | C | D | R | INC |
| DECK | | | | | | | | | | | | | | |
| S401 | 673 | 665 | 1,338 | 7'-5" | 3,334 | 3,295 | 6,629 | 16 | 6'-11" | | | | | |
| S420 | 216 | 372 | 588 | 30'-3" | 4,365 | 7,517 | 11,882 | STR. | | | | | | |
| S421 | 324 | 540 | 864 | 21'-4" | 4,617 | 7,696 | 12,313 | STR. | | | | | | |
| S501 | | 594 | 594 | 30'-6" | | 18,897 | 18,897 | 16 | 29'-11" | | | | | |
| S502 | | 594 | 594 | 29'-11" | | 18,535 | 18,535 | STR. | | | | | | |
| S503 | 637 | | 637 | 17'-9" | 11,793 | | | 16 | 17'-2" | | | | | |
| S504 | 637 | | 637 | 17'-2" | 11,406 | | | STR. | | | | | | |
| S505 | | 1 | 1 | 1'-7" | | | | | 1'-0" | | | | | |
| | | SER OF | SER OF | to | | 1,105 | 1,105 | 16 | to | | | | | 5 1/4" |
| | | 66 | 66 | 30'-6" | | | | | 29'-11" | | | | | |
| | | 1 | 1 | 1'-0" | | | | | | | | | | |
| S506 | | SER OF | SER OF | to | | 1,065 | 1,065 | STR. | | | | | | 5 1/4" |
| | | 66 | 66 | 29'-11" | | | | | | | | | | |
| | | 1 | 1 | 1'-7" | | | | | 1'-0" | | | | | |
| S507 | | SER OF | SER OF | to | | 203 | 203 | 16 | to | | | | | 1/4" |
| | | 75 | 75 | 3'-7" | | | | | 3'-0" | | | | | |
| | | 1 | 1 | 1'-0" | | | | | | | | | | |
| S508 | | SER OF | SER OF | to | | 1,210 | 1,210 | STR. | | | | | | 4 1/2" |
| | | 75 | 75 | 29'-11" | | | | | | | | | | |
| | | 1 | 1 | 1'-7" | | | | | 1'-0" | | | | | |
| S509 | SER OF | | SER OF | to | 323 | | 323 | 16 | to | | | | | 6 1/4" |
| | 32 | | 32 | 17'-9" | | | | | 17'-2" | | | | | |
| | 1 | | 1 | 1'-0" | | | | | | | | | | |
| S510 | SER OF | | SER OF | to | 304 | | 304 | STR. | | | | | | 6 1/4" |
| | 32 | | 32 | 17'-2" | | | | | | | | | | |
| | 1 | | 1 | 1'-7" | | | | | 1'-0" | | | | | |
| S511 | SER OF | | SER OF | to | 333 | | 333 | 16 | to | | | | | 6" |
| | 33 | | 33 | 17'-9" | | | | | 17'-2" | | | | | |
| | 1 | | 1 | 1'-0" | | | | | | | | | | |
| S512 | SER OF | | SER OF | to | 313 | | 313 | STR. | | | | | | 6" |
| | 33 | | 33 | 17'-2" | | | | | | | | | | |
| S516 | 337 | 333 | 670 | 7'-9" | 2,724 | 2,692 | 5,416 | 2 | 3'-9" | 6" | 3'-9" | | | |
| S520 | 240 | 444 | 684 | 30'-3" | 7,572 | 14,009 | 21,581 | STR. | | | | | | |
| S521 | 10 | 4 | 14 | 5'-10" | 61 | 25 | 86 | 13 | 2'-0" | 1'-4" | 1'-4" | 2'-0" | | |
| S601 | 420 | 417 | 837 | 5'-4" | 3,365 | 3,340 | 6,705 | 1 | 2'-5" | 3'-1" | | | | |
| S602 | 420 | 417 | 837 | 5'-3" | 3,312 | 3,289 | 6,601 | 28 | 3'-1" | 1'-2" | | | | |
| | 2 | 4 | 6 | 4'-0" | | | | | | 3'-2" | | | | |
| S603 | SER OF | SER OF | SER OF | to | 159 | 319 | 478 | 1 | 1'-0" | to | | | | 3/4" |
| | 12 | 12 | 12 | 4'-10" | | | | | | 4'-0" | | | | |
| S604 | 6 | 12 | 18 | 4'-0" | 36 | 73 | 109 | 1 | 1'-0" | 3'-2" | | | | |
| | 1 | | 1 | 10'-4" | | | | | | | 3'-4" | | | |
| S620 | SER OF | | SER OF | to | 296 | | 296 | 35 | 7 1/2" | 1'-4" | 1'-0" | to | 3" | 13/4" |
| | 17 | | 17 | 12'-10" | | | | | | | 4'-7" | | | |
| | SUB-TOTAL | | | | 54,313 | 83,270 | 137,583 | | | | | | | |
| PARAPET | | | | | | | | | | | | | | |
| R501 | 420 | 417 | 837 | 7'-5" | 3,249 | 3,226 | 6,475 | 23 | 11" | 3'-3" | 3'-0" | | | 2 3/4" |
| R510 | 30 | 34 | 64 | 9'-8" | 303 | 343 | 646 | STR. | | | | | | |
| R511 | 68 | 62 | 130 | 4'-8" | 331 | 302 | 633 | STR. | | | | | | |
| R512 | | 4 | 4 | 3'-5" | | 15 | 15 | STR. | | | | | | |
| R513 | 2 | | 2 | 6'-9" | 15 | | 15 | STR. | | | | | | |
| R514 | 2 | | 2 | 8'-5" | 18 | | 18 | STR. | | | | | | |
| R515 | 48 | 48 | 96 | 30'-3" | 1,514 | 1,514 | 3,028 | STR. | | | | | | |
| R520 | 2 | 4 | 6 | 15'-9" | 33 | 66 | 99 | STR. | | | | | | |
| R521 | 8 | 16 | 24 | 16'-1" | 134 | 269 | 403 | STR. | | | | | | |
| R522 | 4 | 8 | 12 | 10'-0" | 42 | 84 | 126 | STR. | | | | | | |
| R523 | 4 | 8 | 12 | 5'-11" | 25 | 50 | 75 | STR. | | | | | | |
| R524 | 4 | 8 | 12 | 5'-11" | 25 | 50 | 75 | STR. | | | | | | |
| R530 | 6 | | 6 | 14'-9" | 93 | | 93 | STR. | | | | | | |
| R531 | 8 | | 8 | 16'-1" | 135 | | 135 | STR. | | | | | | |
| R532 | 2 | | 2 | 8'-11" | 19 | | 19 | STR. | | | | | | |
| R533 | 2 | | 2 | 14'-9" | 31 | | 31 | STR. | | | | | | |
| R610 | 15 | 17 | 32 | 9'-8" | 218 | 247 | 465 | STR. | | | | | | |
| R611 | 34 | 31 | 65 | 4'-8" | 239 | 217 | 456 | STR. | | | | | | |
| R612 | | 2 | 2 | 3'-4" | | 11 | 11 | STR. | | | | | | |
| R613 | 1 | | 1 | 6'-9" | 11 | | 11 | STR. | | | | | | |
| R614 | 1 | | 1 | 8'-5" | 13 | | 13 | STR. | | | | | | |
| R620 | 1 | 2 | 3 | 15'-9" | 24 | 47 | 71 | STR. | | | | | | |
| R630 | 1 | | 1 | 14'-9" | 23 | | 23 | STR. | | | | | | |
| | SUB-TOTAL | | | | 6,495 | 6,441 | 12,936 | | | | | | | |

= BAR WITH MECHANICAL CONNECTOR

MINIMUM LAP LENGTH

- #4 BARS = 1'-11"
- #5 BARS (DECK) = 2'-5"
- #5 BARS (OTHERS) = 3'-1"
- #6 BARS = 3'-7"
- #7 BARS = 4'-8"
- #8 BARS = 5'-4"

NOTES:

- ALL REINFORCEMENT BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL
- "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
- "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS/SERIES.
- REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
- MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH C.M.S. SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WITH MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509.

DESIGN AGENCY
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

DESIGNED
 MZ
 CHECKED
 JC

DRAWN
 MZ
 REVISED

REVIEWED
 CTM
 STRUCTURE FILE NUMBER
 6002641

DATE
 12/2020

REINFORCING LIST 01
 BRIDGE NO. MUS-70-1066L
 OVER LICKING ROAD & CUOH RAILROAD

MUS-70-10.49

PID No. 93006

52

54

1339

2231

| Mark | NUMBER | | | LENGTH | WEIGHT | | | TYPE | DIMENSIONS | | | | |
|-----------------------|---------|---------|--------|-----------|---------|---------|-------|------|------------|-----------|------------|------------|-----|
| | Phase 1 | Phase 3 | TOTAL | | Phase 1 | Phase 3 | TOTAL | | A | B | C | D | INC |
| REAR ABUTMENT | | | | | | | | | | | | | |
| RAL500 | 7 | | 7 | 23'-10" | 175 | | 175 | STR. | | | | | |
| RAL501 | 8 | | 8 | 13'-10" | 116 | | 116 | STR. | | | | | |
| | 2 | | 2 | 4'-3" | | | | | | | | | |
| RAL502 | SER OF | | SER OF | to | 76 | | 76 | STR. | | | | 3'-2 1/4" | |
| | 4 | | 4 | 13'-10" | | | | | | | | | |
| RAL503 | 2 | | 2 | 11'-0" | 23 | | 23 | STR. | | | | | |
| RAL504 | 6 | | 6 | 25'-6" | 160 | | 160 | STR. | | | | | |
| | 1 | | 1 | 12'-0" | | | | | | | | | |
| RAL505 | SER OF | | SER OF | to | 60 | | 60 | STR. | | | | 1'-6" | |
| | 4 | | 4 | 16'-6" | | | | | | | | | |
| RAL506 | 4 | | 4 | 10'-0" | 42 | | 42 | 19 | 5'-10" | 2'-11" | 2'-11" | | |
| RAL507 | 6 | | 6 | 7'-7" | 48 | | 48 | 9 | 1'-0" | 1'-0" | 3'-9" | 2'-8" | |
| RAL508 | | 7 | 7 | 21'-2" | | 155 | 155 | STR. | | | | | |
| RAL509 | | 8 | 8 | 17'-1" | | 143 | 143 | STR. | | | | | |
| | | 2 | 2 | 5'-6" | | | | | | | | | |
| RAL510 | SER OF | | SER OF | to | 95 | | 95 | STR. | | | | 3'-10 1/4" | |
| | 4 | | 4 | 17'-1" | | | | | | | | | |
| RAL511 | 2 | | 2 | 13'-0" | | 28 | 28 | STR. | | | | | |
| RAL512 | 12 | | 12 | 24'-0" | | 301 | 301 | STR. | | | | | |
| RAL513 | 8 | | 8 | 23'-0" | | 192 | 192 | STR. | | | | | |
| RAL514 | 4 | | 4 | 10'-2" | | 43 | 43 | 19 | 6'-0" | 2'-11" | 2'-11" | | |
| RAL515 | 6 | | 6 | 5'-6" | | 35 | 35 | 9 | 1'-0" | 1'-0" | 1'-8" | 2'-8" | |
| RAL600 | 22 | 18 | 40 | 17'-0" | 562 | 460 | 1,022 | 3 | 5'-8" | 2'-7" | | | |
| RAL601 | 11 | 15 | 26 | 20'-0" | 331 | 451 | 782 | 2 | 9'-1" | 2'-2" | 9'-1" | | |
| | 1 | | 1 | 4'-4" | | | | | 1'-3" | | 1'-3" | | |
| RAL602 | SER OF | | SER OF | to | 116 | | 116 | 2 | to | 2'-2" | to | 8 3/4" | |
| | 10 | | 10 | 11'-0" | | | | | 4'-7" | | 4'-7" | | |
| | 1 | | 1 | 11'-0" | | | | | | 2'-2" | | | |
| RAL603 | SER OF | | SER OF | to | 53 | | 53 | 2 | 4'-7" | to | 4'-7" | 8" | |
| | 3 | | 3 | 12'-4" | | | | | | 3'-6" | | | |
| | 1 | | 1 | 4'-4" | | | | | 1'-3" | | 1'-3" | | |
| RAL604 | SER OF | | SER OF | to | 127 | | 127 | 2 | to | 2'-2" | to | 8" | |
| | 11 | | 11 | 11'-0" | | | | | 4'-7" | | 4'-7" | | |
| | 1 | | 1 | 11'-0" | | | | | | 2'-2" | | | |
| RAL605 | SER OF | | SER OF | to | 71 | | 71 | 2 | 4'-7" | to | 4'-7" | 5 1/4" | |
| | 4 | | 4 | 12'-4" | | | | | | 3'-6" | | | |
| RAL700 | 14 | 44 | 58 | 7'-0" | 200 | 630 | 830 | STR. | | | | | |
| RAL701 | 11 | 3 | 14 | 19'-0" | 427 | 117 | 544 | 2 | 7'-10" | 3'-8" | 7'-10" | | |
| RAL702 | 26 | 48 | 74 | 12'-8" | 673 | 1,243 | 1,916 | 2 | 4'-8" | 3'-8" | 4'-8" | | |
| RAL800 | 5 | | 5 | 23'-10" | 319 | | 319 | STR. | | | | | |
| RAL801 | 5 | | 5 | 25'-6" | 341 | | 341 | STR. | | | | | |
| RAL802 | | 5 | 5 | 21'-2" | | 283 | 283 | STR. | | | | | |
| RAL803 | | 10 | 10 | 25'-3" | | 675 | 675 | STR. | | | | | |
| | | | | SUB-TOTAL | 3,722 | 5,049 | 8,771 | | | | | | |
| REAR DIAPHRAGM | | | | | | | | | | | | | |
| RDL500 | 15 | 28 | 43 | 9'-9" | 153 | 285 | 438 | 2 | 2'-6" | 4'-11" | 2'-6" | | |
| RDL501 | 30 | 56 | 86 | 11'-2" | 350 | 652 | 1,002 | 2 | 2'-11 1/2" | 5'-6" | 2'-11 1/2" | | |
| RDL800 | 7 | | 7 | 18'-4" | 343 | | 343 | 1 | 1'-6" | 17'-0" | | | |
| RDL801 | 7 | | 7 | 6'-1" | 114 | | 114 | 1 | 1'-6" | 4'-9" | | | |
| RDL802 | 2 | | 2 | 8'-6" | 46 | | 46 | STR. | | | | | |
| RDL803 | 9 | | 9 | 25'-5" | 611 | | 611 | STR. | | | | | |
| RDL804 | 10 | | 10 | 8'-6" | 227 | | 227 | 18 | 5'-0" | 1'-11" | 1'-9" | | |
| RDL805 | | 20 | 20 | 25'-10" | | 1,380 | 1,380 | STR. | | | | | |
| RDL806 | | 12 | 12 | 22'-11" | | 735 | 735 | STR. | | | | | |
| RDL807 | | 12 | 12 | 5'-0" | | 161 | 161 | 1 | 1'-0" | 4'-2" | | | |
| RDL808 | 18 | 31 | 49 | 5'-2" | 248 | 428 | 676 | 18 | 2'-3" | 1'-4 3/4" | 1'-4 3/4" | | |
| | | | | SUB-TOTAL | 2,092 | 3,641 | 5,733 | | | | | | |

= BAR WITH MECHANICAL CONNECTOR

REINFORCING LIST 02
 BRIDGE NO. MUS-70-1066L
 OVER LICKING ROAD & CUOH RAILROAD

MUS-70-10.49
 PID No. 93006

53 / 54

1340
2231

DESIGN AGENCY
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DATE
12/2020

REVIEWED
CTM

DRAWN
MZ

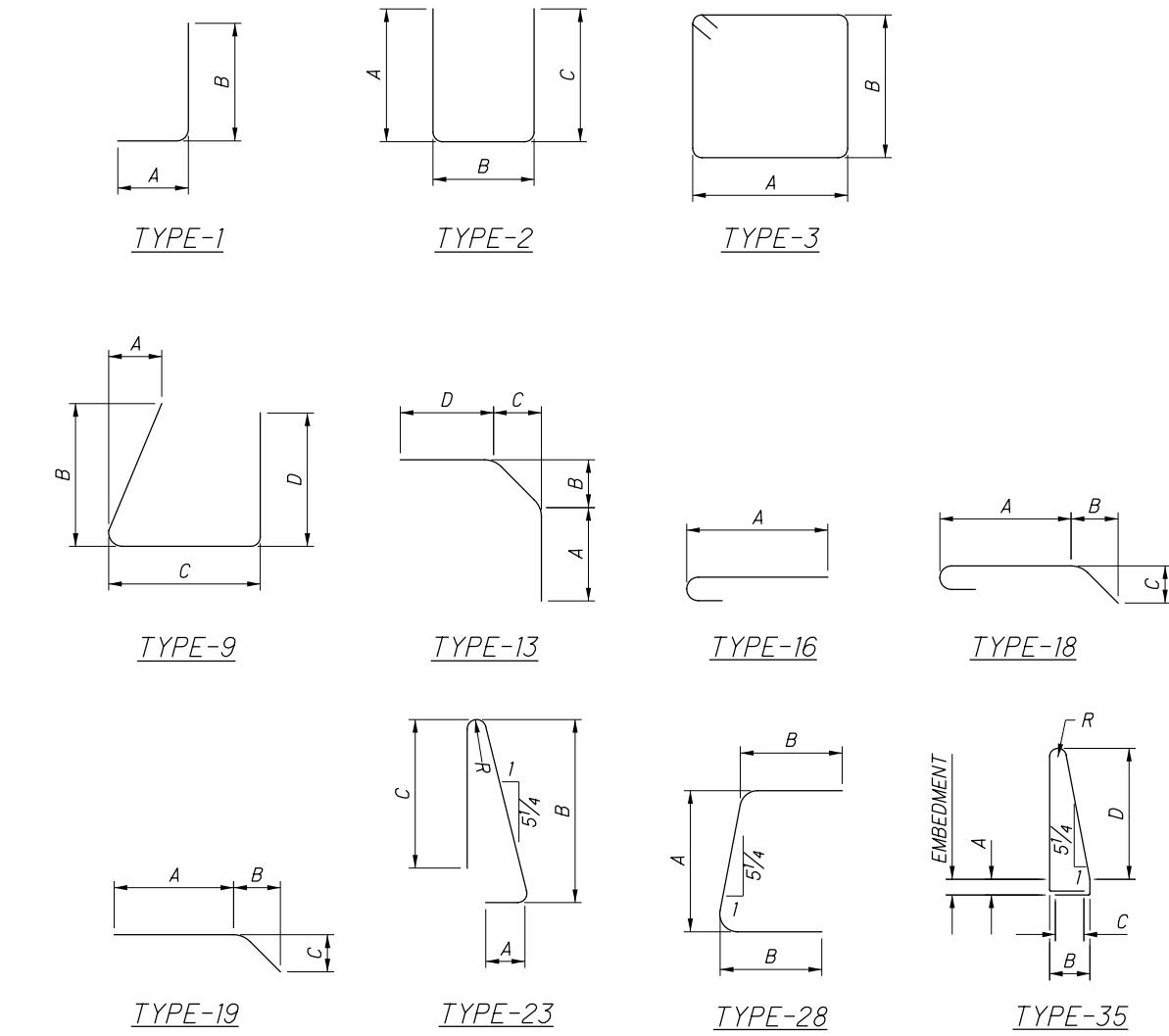
DESIGNED
MZ

CHECKED
JC

STRUCTURE FILE NUMBER
6002641

REVISED

| Mark | NUMBER | | | LENGTH | WEIGHT | | | TYPE | DIMENSIONS | | | | |
|--------------------------|---------|---------|--------|-----------------------|---------|---------|---------|------|------------|-----------|------------|-------|-----------|
| | Phase 1 | Phase 3 | TOTAL | | Phase 1 | Phase 3 | TOTAL | | A | B | C | D | INC |
| FORWARD ABUTMENT | | | | | | | | | | | | | |
| FAL500 | 7 | | 7 | 21'-9" | 159 | | 159 | STR. | | | | | |
| FAL501 | 8 | | 8 | 16'-6" | 138 | | 138 | STR. | | | | | |
| FAL502 | SER OF | | SER OF | to | 94 | | 94 | STR. | | | | | 3'-6 1/2" |
| | 4 | | 4 | 16'-6" | | | | | | | | | |
| FAL503 | 2 | | 2 | 11'-4" | 24 | | 24 | STR. | | | | | |
| FAL504 | 6 | | 6 | 27'-6" | 173 | | 173 | STR. | | | | | |
| FAL505 | SER OF | | SER OF | to | 91 | | 91 | STR. | | | | | 1'-8" |
| | 4 | | 4 | 24'-3" | | | | | | | | | |
| FAL506 | 4 | | 4 | 9'-9" | 41 | | 41 | 19 | 5'-7" | 2'-11" | 2'-11" | | |
| FAL507 | 6 | | 6 | 5'-10" | 37 | | 37 | 9 | 1'-0" | 1'-0" | 2'-0" | 2'-8" | |
| FAL508 | | 7 | 7 | 24'-10" | | 182 | 182 | STR. | | | | | |
| FAL509 | | 8 | 8 | 14'-10" | | 124 | 124 | STR. | | | | | |
| FAL510 | SER OF | | SER OF | to | | 58 | 58 | STR. | | | | | 1'-10" |
| | 4 | | 4 | 9'-7" | | | | | | | | | |
| FAL511 | 2 | | 2 | 14'-10" | | 31 | 31 | STR. | | | | | |
| FAL512 | 12 | | 12 | 26'-6" | | 332 | 332 | STR. | | | | | |
| FAL513 | 8 | | 8 | 19'-0" | | 159 | 159 | STR. | | | | | |
| FAL514 | 4 | | 4 | 10'-6" | | 44 | 44 | 19 | 6'-4" | 2'-11" | 2'-11" | | |
| FAL515 | 6 | | 6 | 7'-8" | | 48 | 48 | 9 | 1'-0" | 1'-0" | 3'-10" | 2'-8" | |
| FAL600 | 18 | 23 | 41 | 17'-0" | 460 | 587 | 1,047 | 3 | 5'-8" | 2'-7" | | | |
| FAL601 | 14 | 15 | 29 | 22'-6" | 474 | 507 | 981 | 2 | 10'-4" | 2'-2" | 10'-4" | | |
| FAL602 | SER OF | | SER OF | to | 116 | | 116 | 2 | to | 2'-2" | to | | 8 3/4" |
| | 10 | | 10 | 11'-0" | | | | | 4'-7" | | 4'-7" | | |
| FAL603 | SER OF | | SER OF | to | 71 | | 71 | 2 | 4'-7" | to | 4'-7" | | 5 1/4" |
| | 4 | | 4 | 12'-4" | | | | | 3'-6" | | | | |
| FAL604 | SER OF | | SER OF | to | | 112 | 112 | 2 | to | 2'-2" | to | | 11 3/4" |
| | 10 | | 10 | 11'-10" | | | | | 5'-0" | | 5'-0" | | |
| FAL605 | SER OF | | SER OF | to | | 57 | 57 | 2 | 5'-0" | to | 5'-0" | | 8" |
| | 3 | | 3 | 13'-2" | | | | | 3'-6" | | | | |
| FAL700 | 24 | 36 | 60 | 7'-7" | 372 | 559 | 931 | STR. | | | | | |
| FAL701 | 4 | 9 | 13 | 19'-4" | 158 | 356 | 514 | 2 | 8'-0" | 3'-8" | 8'-0" | | |
| FAL702 | 29 | 46 | 75 | 14'-2" | 840 | 1,332 | 2,172 | 2 | 5'-5" | 3'-8" | 5'-5" | | |
| FAL800 | 5 | | 5 | 21'-9" | 291 | | 291 | STR. | | | | | |
| FAL801 | 5 | | 5 | 28'-0" | 374 | | 374 | STR. | | | | | |
| FAL802 | | 5 | 5 | 24'-9" | | 331 | 331 | STR. | | | | | |
| FAL803 | | 10 | 10 | 25'-1" | | 670 | 670 | STR. | | | | | |
| | | | | SUB-TOTAL | 3,913 | 5,489 | 9,402 | | | | | | |
| FORWARD DIAPHRAGM | | | | | | | | | | | | | |
| FDL500 | 15 | 29 | 44 | 9'-9" | 153 | 295 | 448 | 2 | 2'-6" | 4'-11" | 2'-6" | | |
| FDL501 | 30 | 58 | 88 | 11'-2" | 349 | 676 | 1,025 | 2 | 2'-11 1/2" | 5'-6" | 2'-11 1/2" | | |
| FDL800 | 7 | | 7 | 20'-0" | 374 | | 374 | 1 | 1'-6" | 18'-8" | | | |
| FDL801 | 7 | | 7 | 6'-7" | 124 | | 124 | 1 | 1'-6" | 5'-3" | | | |
| FDL802 | 2 | | 2 | 9'-0" | 49 | | 49 | STR. | | | | | |
| FDL803 | 9 | | 9 | 27'-4" | 657 | | 657 | STR. | | | | | |
| FDL804 | 10 | | 10 | 8'-6" | 227 | | 227 | 18 | 5'-0" | 1'-11" | 1'-9" | | |
| FDL805 | | 20 | 20 | 26'-9" | | 1,429 | 1,429 | STR. | | | | | |
| FDL806 | | 12 | 12 | 22'-6" | | 721 | 721 | STR. | | | | | |
| FDL807 | | 12 | 12 | 5'-0" | | 161 | 161 | 1 | 1'-0" | 4'-2" | | | |
| FDL808 | 19 | 34 | 53 | 5'-2" | 262 | 470 | 732 | 18 | 2'-3" | 1'-4 3/4" | 1'-4 3/4" | | |
| | | | | SUB-TOTAL | 2,195 | 3,752 | 5,947 | | | | | | |
| | | | | TOTAL ALL REINFORCING | 72,730 | 107,642 | 180,372 | | | | | | |



= BAR WITH MECHANICAL CONNECTOR

MUS-70-1066R BRIDGE SUMMARY - 02/IMS/BR

CALC: MMZ

CHECK: CTM

| ITEM | ITEM EXT. | TOTAL QUANTITY | TOTAL PER PHASE | | | UNIT | DESCRIPTION | PHASE 1 | | | PHASE 2 | | | GENERAL | APP/REF SHEET NO. |
|---------|-----------|----------------|-----------------|---------|-------|------|--|---------|-------|---------|---------|-------|---------|---------|-------------------|
| | | | PH 1 | PH 2 | GEN | | | ABUT. | PIERS | SUPER | ABUT. | PIERS | SUPER | | |
| 202 | 11003 | LS | | | LS | | STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | | | | | | LS | 4 | |
| 202 | 22900 | 228 | 78 | 150 | | SY | APPROACH SLAB REMOVED | 78 | | | 150 | | | | |
| 503 | 11101 | LS | | | LS | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | | | | | | LS | 5 | |
| 503 | 21301 | LS | LS | LS | | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LS | | | LS | | | 5 | |
| 505 | 11100 | LS | | | LS | | PILE DRIVING EQUIPMENT MOBILIZATION | | | | | | LS | | |
| 507 | 00600 | 1,050 | 500 | 550 | | FT | 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN | 500 | | | 550 | | | | |
| 507 | 00650 | 1,190 | 570 | 620 | | FT | 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED | 570 | | | 620 | | | | |
| 509 | 10001 | 178,208 | 71,416 | 106,792 | | LB | EPOXY COATED REINFORCING STEEL, AS PER PLAN | 7,612 | | 63,804 | 10,181 | | 96,611 | 5 | |
| 509 | 20001 | 300 | | | 300 | LB | REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN | | | | | | 300 | 5 | |
| 510 | 10001 | 108 | 34 | 74 | | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN | 34 | | | 74 | | | 5 | |
| 511 | 33500 | 2 | 2 | | | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE | 2 | | | | | | | |
| 511 | 34447 | 553 | 206 | 346 | | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN | | | 206 | | | 346 | 5 | |
| 511 | 34451 | 117 | 58 | 58 | | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN | | | 58 | | | 58 | 5 | |
| 511 | 44112 | 168 | 70 | 99 | | CY | CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING | 70 | | | 99 | | | | |
| 511 | 46512 | 61 | 31 | 29 | | CY | CLASS QC1 CONCRETE WITH QC/QA, FOOTING | 31 | | | 29 | | | | |
| 512 | 10050 | 909 | 444 | 465 | | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | 62 | | 382 | 82 | | 383 | | |
| 512 | 10300 | 73 | | 73 | | SY | SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN | | | | | | 73 | | |
| 512 | 10601 | 50 | | | 50 | FT | CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN | | | | | | 50 | 5 | |
| 512 | 33000 | 64 | 26 | 38 | | SY | TYPE 2 WATERPROOFING | 26 | | | 38 | | | | |
| 513 | 10260 | 512,447 | 212,046 | 300,401 | | LB | STRUCTURAL STEEL MEMBERS, LEVEL 3 | | | 212,046 | | | 300,401 | | |
| 513 | 20000 | 6,951 | 2,979 | 3,972 | | EACH | WELDED STUD SHEAR CONNECTORS | | | 2,979 | | | 3,972 | | |
| 514 | 00061 | 26,269 | 11,173 | 15,096 | | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN | | | 11,173 | | | 15,096 | 5 | |
| 514 | 00067 | 26,269 | 11,173 | 15,096 | | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN | | | 11,173 | | | 15,096 | 5 | |
| 514 | 10000 | 22 | 9 | 13 | | EACH | FINAL INSPECTION REPAIR | | | 9 | | | 13 | | |
| 516 | 13901 | 79 | 40 | 39 | | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | | | 40 | | | 39 | 5 | |
| 516 | 14020 | 180 | 71 | 109 | | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | | | 71 | | | 109 | | |
| 516 | 14600 | 142 | 51 | 91 | | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 51 | | | 91 | | | 50 | |
| 516 | 44101 | 28 | 12 | 16 | | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN , DIMENSIONS VARY | 6 | 6 | | 8 | 8 | | 30 | |
| 516 | 46900 | 7 | 3 | 4 | | EACH | BEARING DEVICE, MISC.: SEISMIC ISOLATION BEARING | | 3 | | | 4 | | 31 | |
| 518 | 12200 | 7 | 2 | 5 | | EACH | SCUPPERS, INCLUDING SUPPORTS | 2 | | | 5 | | | | |
| 518 | 21200 | 128 | 52 | 76 | | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | 52 | | | 76 | | | | |
| 518 | 40000 | 194 | 88 | 105 | | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | 88 | | | 105 | | | | |
| 518 | 40010 | 60 | 30 | 30 | | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | 30 | | | 30 | | | | |
| 519 | 11101 | 70 | | | 70 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN | | | | | | 70 | 5 | |
| 523 | 20001 | 8 | 4 | 4 | | EACH | DYNAMIC LOAD TESTING, AS PER PLAN | 4 | | | 4 | | | 5 | |
| 523 | 20501 | 8 | 4 | 4 | | EACH | RESTRIKE, AS PER PLAN | 4 | | | 4 | | | 5 | |
| 526 | 30010 | 316 | 114 | 201 | | SY | REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17") | 114 | | | 201 | | | | |
| SPECIAL | 53000200 | LS | | | LS | | STRUCTURES - MEASUREMENTS FOR PROPOSED BEARINGS | | | | | | LS | 6 | |
| 601 | 20000 | 1,022 | | | 1,022 | SY | CRUSHED AGGREGATE SLOPE PROTECTION | | | | | | 1,022 | | |
| 607 | 39900 | 340 | 170 | 170 | | FT | VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC | | | 170 | | | 170 | | |
| 613 | 41201 | 333 | 128 | 205 | | CY | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 128 | | | 205 | | | 5 | |

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2800 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBIUS, OHIO 43231

DATE
12/2020
REVIEWED
CTM
STRUCTURE FILE NUMBER
6002676

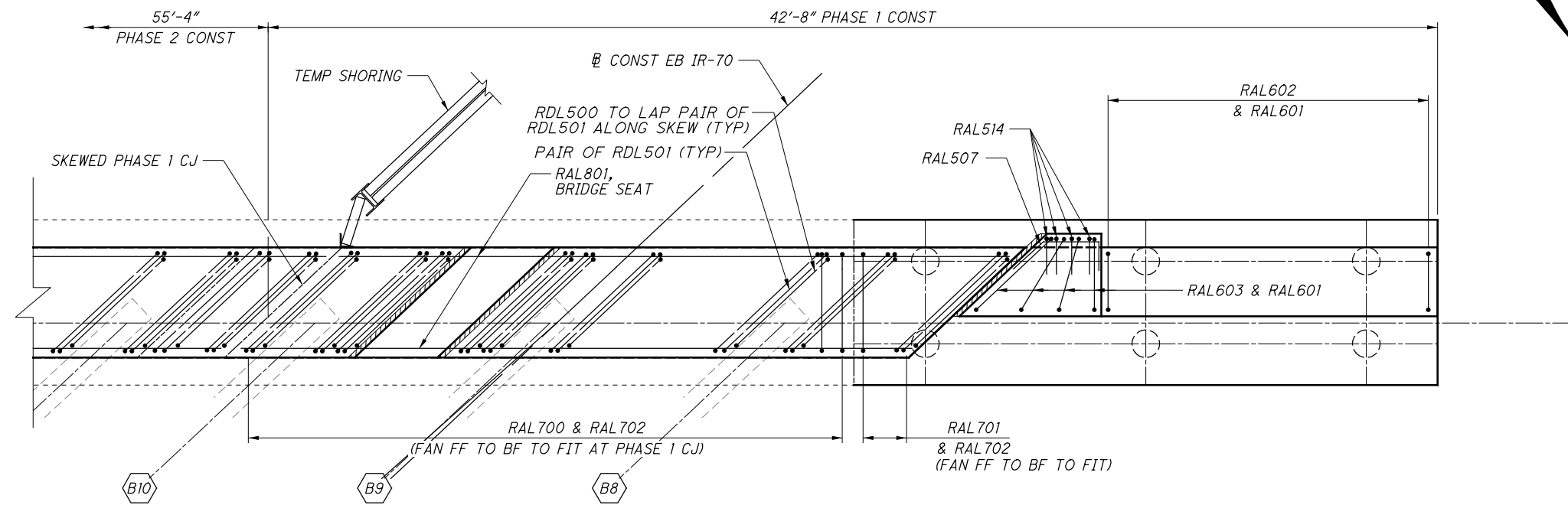
DRAWN
LAM
REVISOR
MMZ
CHECKED
DF

BRIDGE SUMMARY
BRIDGE NO. MUS-70-1066R
OVER LICKING ROAD & CUOH RAILROAD

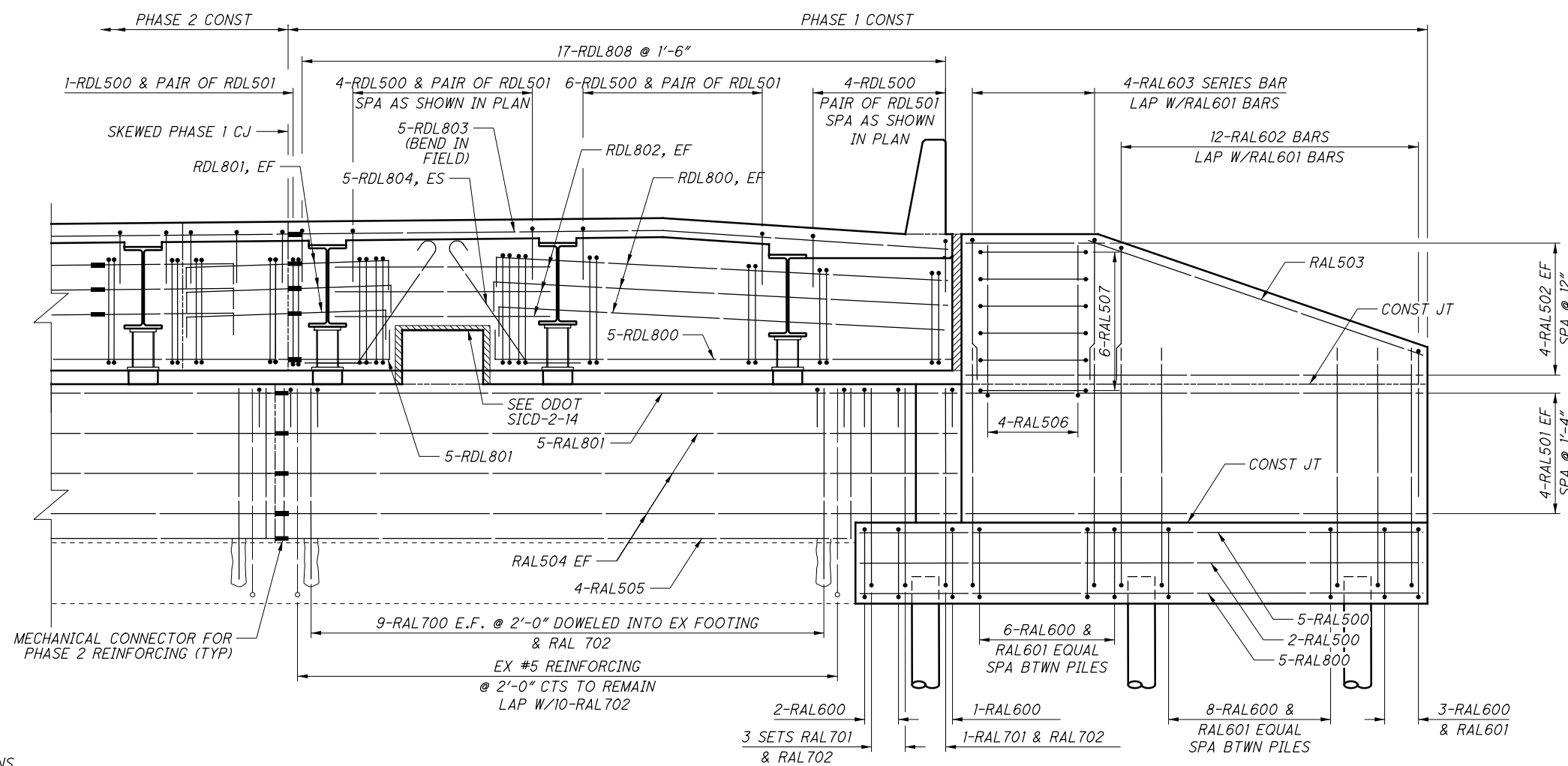
MUS-70-10.49
PID No. 93006

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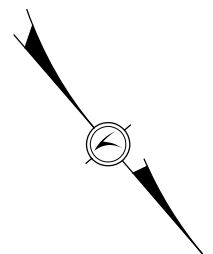


REAR ABUTMENT PHASE 1 PLAN



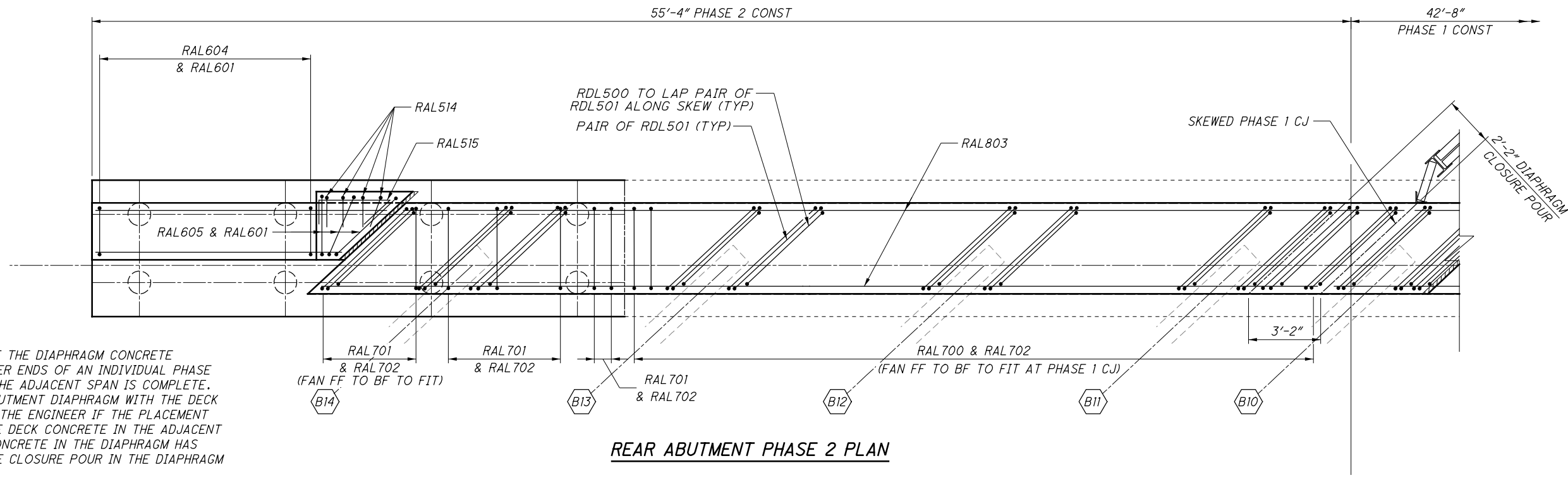
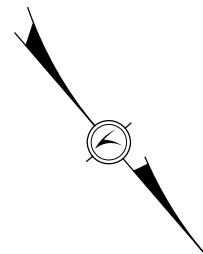
REAR ABUTMENT PHASE 1 ELEVATION
 DECK REINFORCEMENT NOT SHOWN FOR CLARITY

- NOTES**
1. SEE SHEET **18/53** FOR ABUTMENT DETAILS AND SECTIONS.
 2. SEE SHEET **12/53** FOR FOUNDATION PLAN.
 3. SEE SHEET **38/53** FOR TRANSVERSE SECTION.
 4. ASSUME 2" CLEAR COVER UNLESS NOTED OTHERWISE.



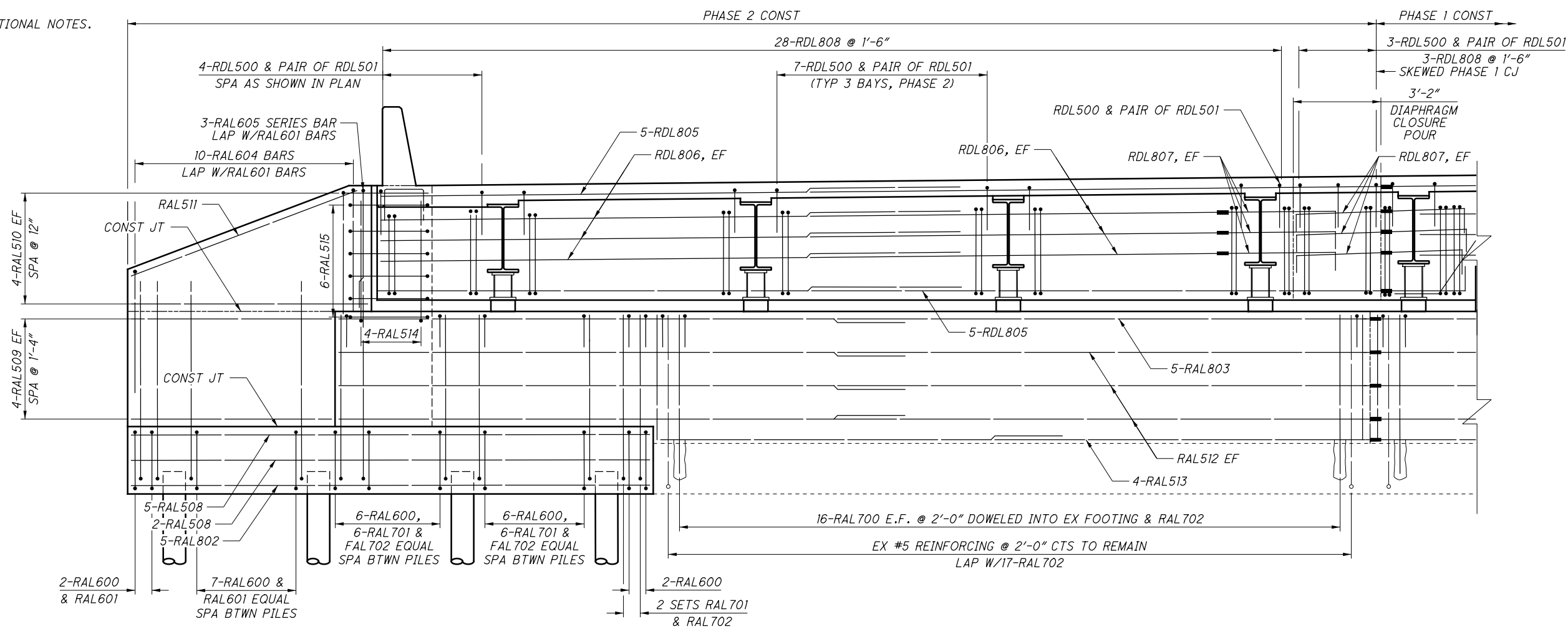
| | | |
|--------------------------------------|--|--|
| MUS-70-10.49 PID No. 93006 | REAR ABUTMENT PHASE 1 BRIDGE NO. MUS-70-1066R OVER LICKING ROAD & CUOH RAILROAD | DESIGN AGENCY GannettFleming ENGINEERS & ARCHITECTS, P.C. 2500 CORPORATE EXCHANGE DRIVE, SUITE 230 COLUMBUS, OHIO 43231 |
| DESIGNED JGC | DRAWN LAM | REVIEWED CTM |
| CHECKED DF | REVISIONS | DATE 12/2020 |
| STRUCTURE FILE NUMBER 6002676 | | FILE NUMBER 6002676 |
| 16 / 53 | | |
| 1357 2231 | | |

SUBMITTAL: Stage 3
 PLOT DRIVER: 000Tcodd_PDF.pltcf9
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NOTES:

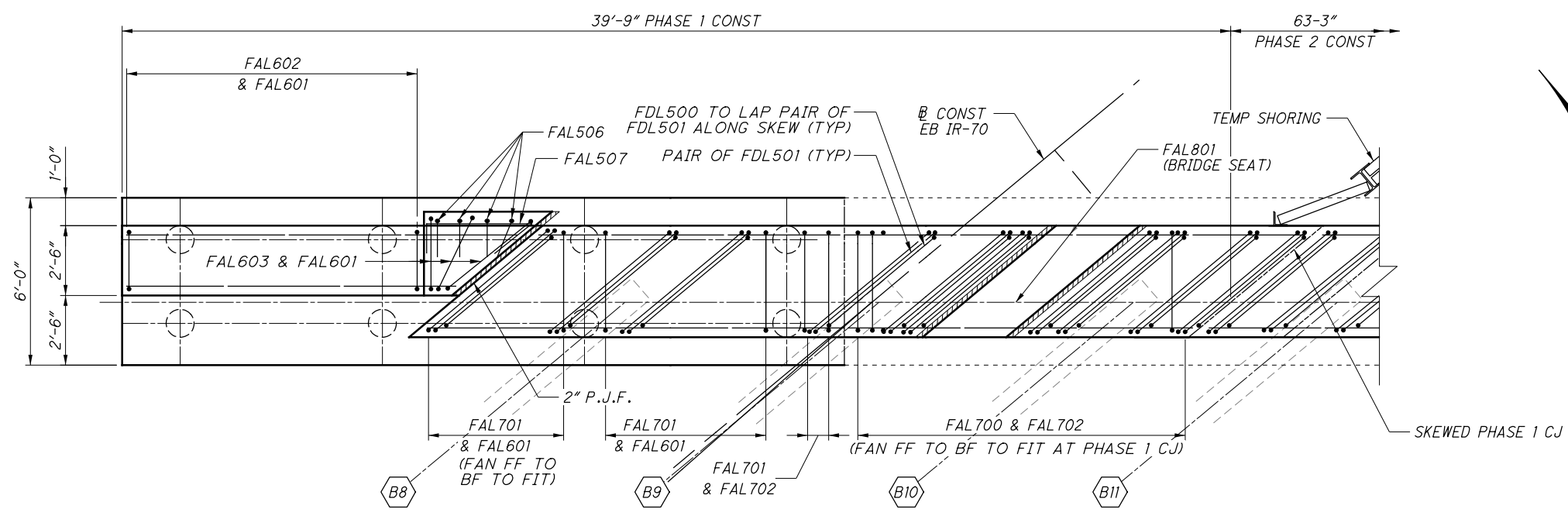
1. IN EACH INDIVIDUAL PHASE, PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR IN THE DIAPHRAGM AND DECK CONCURRENTLY.
2. SEE SHEET 22153 FOR ADDITIONAL NOTES.



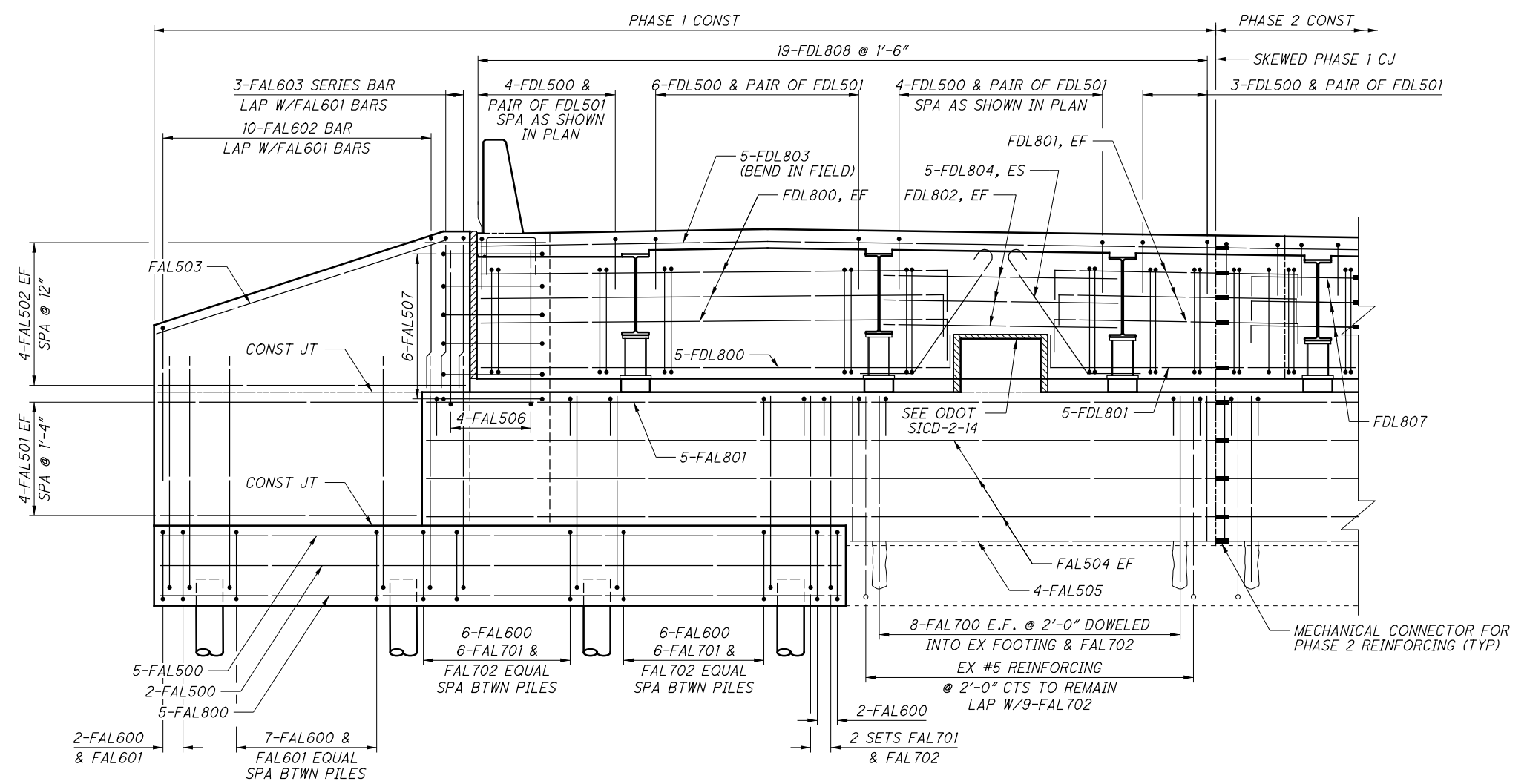
REAR ABUTMENT PHASE 2 ELEVATION
 DECK REINFORCEMENT NOT SHOWN FOR CLARITY

| | |
|--|---------|
| Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 2800 CORPORATE EXCHANGE DRIVE, SUITE 230 COLUMBUS, OHIO 43231 | |
| DESIGNED BY | JGC |
| CHECKED BY | DF |
| DRAWN BY | LAM |
| REVIEWED BY | CTM |
| DATE | 12/2020 |
| STRUCTURE FILE NUMBER | 6002676 |
| REAR ABUTMENT PHASE 2 BRIDGE NO. MUS-70-1066R OVER LICKING ROAD & CUOH RAILROAD | |
| MUS-70-10.49 PID No. 93006 | |
| 17 / 53 | |
| 1358 2231 | |

SUBMITTAL: Stage 3
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FORWARD ABUTMENT PHASE 1 PLAN

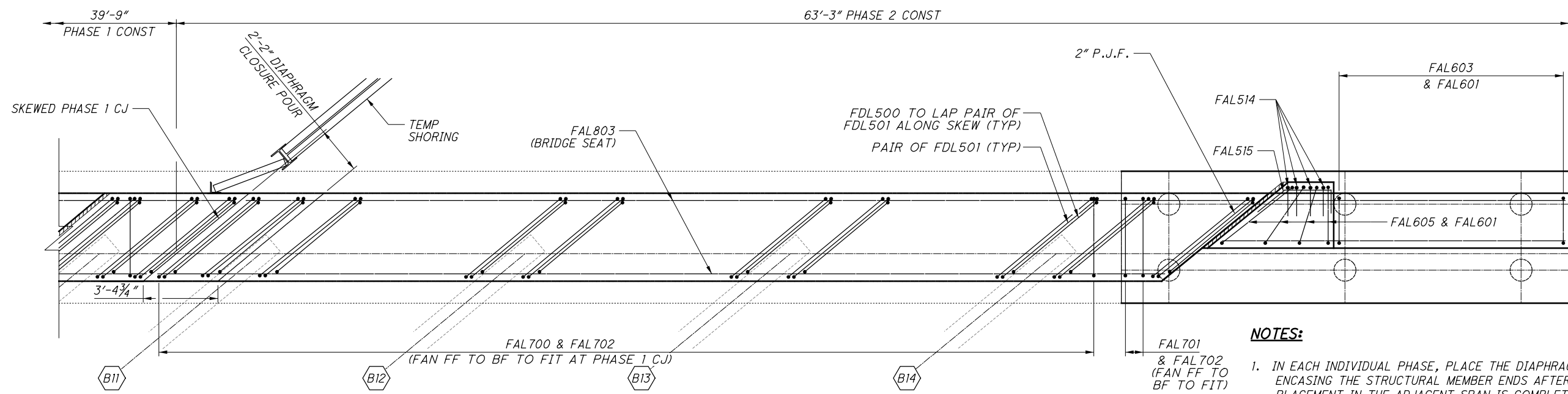


FORWARD ABUTMENT PHASE 1 ELEVATION
DECK REINFORCEMENT NOT SHOWN FOR CLARITY

- NOTES**
1. SEE SHEET 24/53 FOR ABUTMENT DETAILS AND SECTIONS.
 2. SEE SHEET 13/53 FOR FOUNDATION PLAN.
 3. SEE SHEET 38/53 FOR TRANSVERSE SECTION.
 4. ASSUME 2" CLEAR COVER UNLESS NOTED OTHERWISE.

| | | | | |
|--|---|--|---------------------------------------|---|
| DESIGN AGENCY Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 2500 CORPORATE EXCHANGE DRIVE, SUITE 230 COLUMBUS, OHIO 43231 | DATE 12/2020 REVIEWED CTM STRUCTURE FILE NUMBER 6002676 | DESIGNED JGC CHECKED DF | DRAWN LAM REVISED | FORWARD ABUTMENT PHASE 1 BRIDGE NO. MUS-70-1066R OVER LICKING ROAD & CUOH RAILROAD |
| MUS-70-10.49 PID No. 93006 | | | | 22 / 53 |
| | | | | |

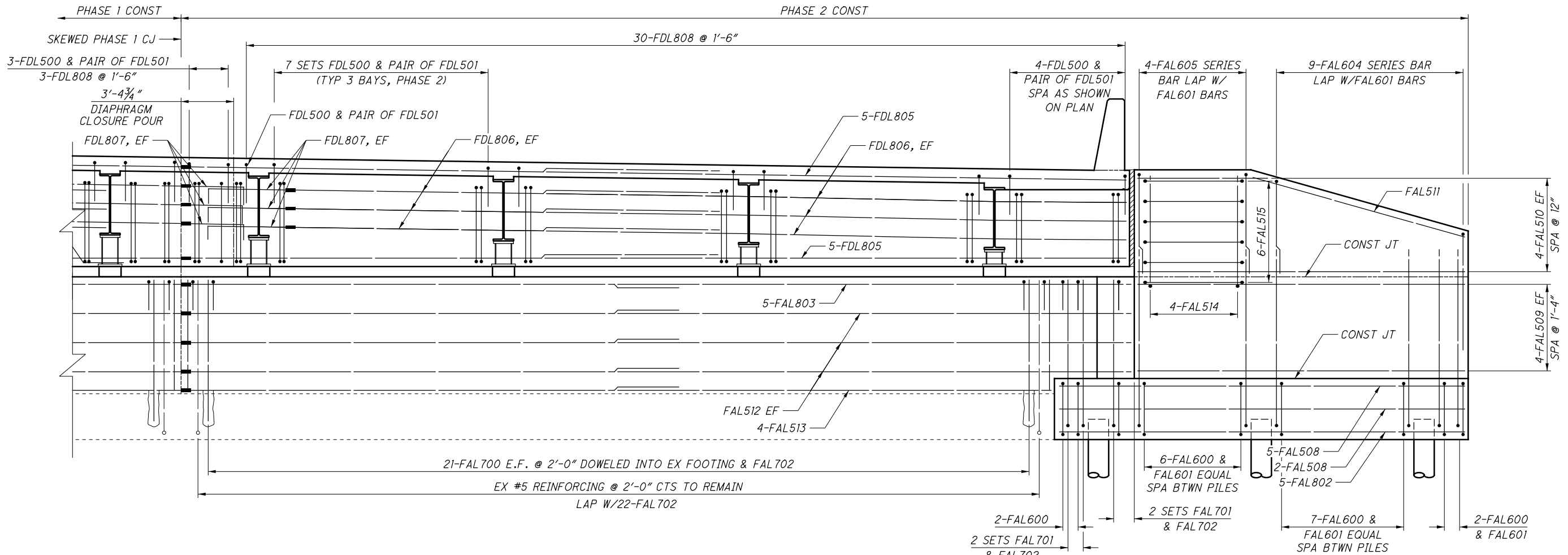
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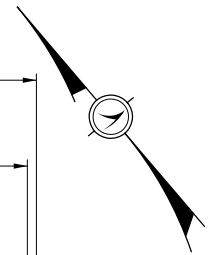
FORWARD ABUTMENT PHASE 2 PLAN

NOTES:

1. IN EACH INDIVIDUAL PHASE, PLACE THE DIAPHRAGM CONCRETE ENCASEING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR IN THE DIAPHRAGM AND DECK CONCURRENTLY.
2. SEE SHEET 22/53 FOR ADDITIONAL NOTES.

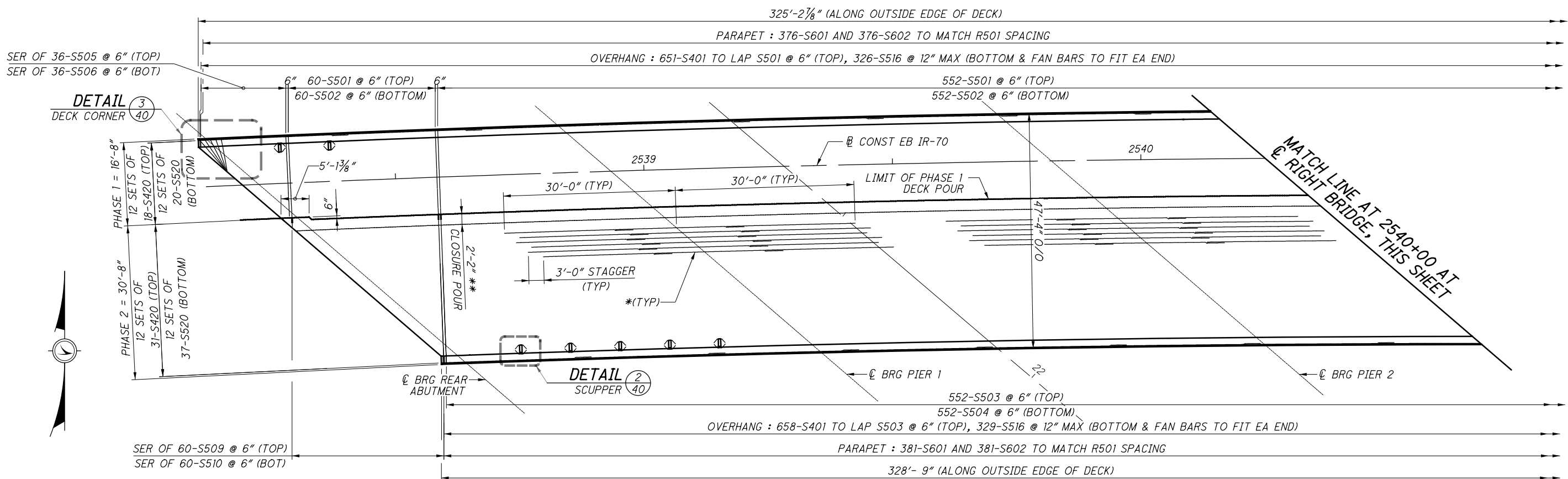


FORWARD ABUTMENT PHASE 2 ELEVATION
 DECK REINFORCEMENT NOT SHOWN FOR CLARITY

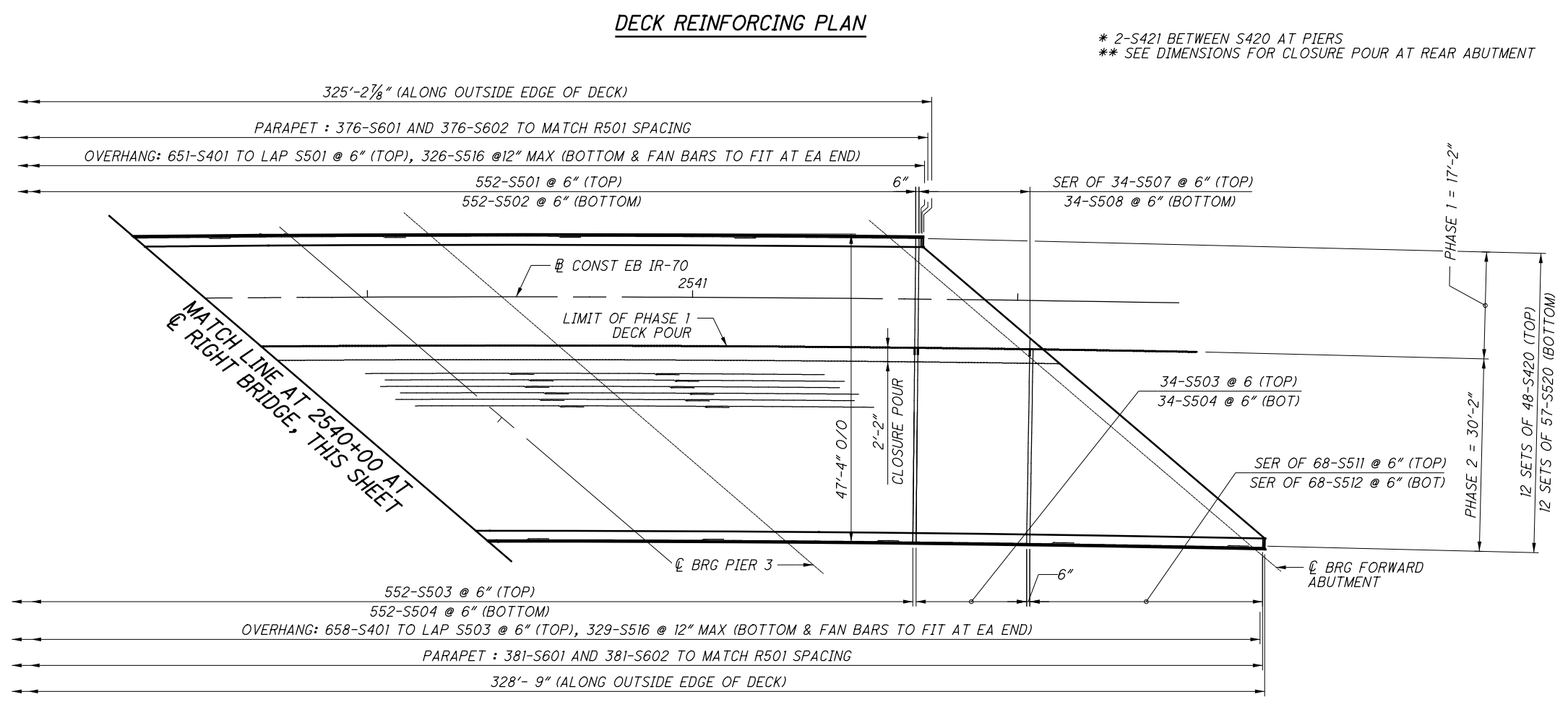


| | | | |
|--|------------------------|------------------------|---|
| DESIGN AGENCY Gannett Fleming <small>ENGINEERS & ARCHITECTS, P.C.</small> <small>2500 CORPORATE EXCHANGE DRIVE SUITE 230</small> <small>COLUMBUS, OHIO 43231</small> | DATE 12/2020 | REVIEWED CTM | STRUCTURE FILE NUMBER 6002676 |
| DESIGNED JGC | CHECKED DF | DRAWN LAM | REVISED |
| FORWARD ABUTMENT PHASE 2 BRIDGE NO. MUS-70-1066R OVER LICKING ROAD & CUOH RAILROAD | | | |
| MUS-70-10.49 PID No. 93006 | | | |
| 23 / 53 | | | |
| 1364 2231 | | | |

SUBMITTAL: Stage 3
 PID: 93006
 PLOT DRIVER: 000Tcodd_PDF.pltcf9
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OFFSET MEASURED FROM \bar{C} TO GUTTER LINE



DECK REINFORCING PLAN
 BRIDGE NO. MUS-70-1066R
 OVER LICKING ROAD & CUOH RAILROAD
MUS-70-10.49
 PID No. 93006
 39 / 53
 1380
 2231

DESIGN AGENCY
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DATE 12/2020
 REVIEWED CTM
 DRAWN EBP
 DESIGNED MMZ
 CHECKED DF

STRUCTURE FILE NUMBER 6002676

| Mark | NUMBER | | | LENGTH | WEIGHT | | | TYPE | DIMENSIONS | | | | | | |
|----------------|-----------|---------|--------|---------|---------|---------|---------|------|------------|-------|-------|-------|---|-----|--------|
| | Phase 1 | Phase 2 | TOTAL | | Phase 1 | Phase 2 | TOTAL | | A | B | C | D | R | INC | |
| DECK | | | | | | | | | | | | | | | |
| S401 | 651 | 658 | 1,309 | 7'-5" | 3,226 | 3,260 | 6,486 | 16 | 6'-11" | | | | | | |
| S420 | 216 | 372 | 588 | 30'-3" | 4,365 | 7,517 | 11,882 | STR. | | | | | | | |
| S421 | 324 | 540 | 864 | 21'-4" | 4,617 | 7,696 | 12,313 | STR. | | | | | | | |
| # S501 | 612 | | 612 | 17'-9" | 11,331 | | 11,331 | 16 | 17'-2" | | | | | | |
| # S502 | 612 | | 612 | 17'-2" | 10,958 | | 10,958 | STR. | | | | | | | |
| S503 | | 586 | 586 | 30'-6" | | 18,642 | 18,642 | 16 | 29'-11" | | | | | | |
| S504 | | 586 | 586 | 29'-11" | | 18,286 | 18,286 | STR. | | | | | | | |
| S505 | 1 | | 1 | 1'-7" | | | | | 1'-0" | | | | | | |
| | SER OF | | SER OF | to | 363 | | 363 | 16 | to | | | | | | 5 1/2" |
| | 36 | | 36 | 17'-9" | | | | | 17'-2" | | | | | | |
| S506 | 1 | | 1 | 1'-0" | | | | | | | | | | | |
| | SER OF | | SER OF | to | 342 | | 342 | STR. | | | | | | | 5 1/2" |
| | 36 | | 36 | 17'-2" | | | | | | | | | | | |
| S507 | 1 | | 1 | 1'-7" | | | | | 1'-0" | | | | | | |
| | SER OF | | SER OF | to | 343 | | 343 | 16 | to | | | | | | 5 3/4" |
| | 34 | | 34 | 17'-9" | | | | | 17'-2" | | | | | | |
| S508 | 1 | | 1 | 1'-0" | | | | | | | | | | | |
| | SER OF | | SER OF | to | 323 | | 323 | STR. | | | | | | | 5 3/4" |
| | 34 | | 34 | 17'-2" | | | | | | | | | | | |
| S509 | | 1 | 1 | 1'-7" | | | | | 1'-0" | | | | | | |
| | SER OF | | SER OF | to | | 1,004 | 1,004 | 16 | to | | | | | | 5 3/4" |
| | 60 | | 60 | 30'-6" | | | | | 29'-11" | | | | | | |
| S510 | | 1 | 1 | 1'-0" | | | | | | | | | | | |
| | SER OF | | SER OF | to | | 968 | 968 | STR. | | | | | | | 5 3/4" |
| | 60 | | 60 | 29'-11" | | | | | | | | | | | |
| S511 | | 1 | 1 | 1'-7" | | | | | 1'-0" | | | | | | |
| | SER OF | | SER OF | to | | 1,138 | 1,138 | 16 | to | | | | | | 5" |
| | 68 | | 68 | 30'-6" | | | | | 29'-11" | | | | | | |
| S512 | | 1 | 1 | 1'-0" | | | | | | | | | | | |
| | SER OF | | SER OF | to | | 1,097 | 1,097 | STR. | | | | | | | 5" |
| | 68 | | 68 | 29'-11" | | | | | | | | | | | |
| S516 | 326 | 329 | 655 | 7'-9" | 2,635 | 2,660 | 5,295 | 2 | 3'-9" | 6" | 3'-9" | | | | |
| S520 | 240 | 444 | 684 | 30'-3" | 7,572 | 14,009 | 21,581 | STR. | | | | | | | |
| S521 | 4 | 10 | 14 | 5'-10" | 25 | 61 | 86 | 13 | 2'-0" | 1'-4" | 1'-4" | 2'-0" | | | |
| S601 | 410 | 415 | 825 | 5'-4" | 3,284 | 3,325 | 6,609 | 1 | 2'-5" | 3'-1" | | | | | |
| S602 | 410 | 415 | 825 | 5'-3" | 3,233 | 3,273 | 6,506 | 28 | 3'-1" | 1'-2" | | | | | |
| | 4 | 4 | 8 | 4'-0" | | | | | | 3'-2" | | | | | |
| S603 | SER OF | SER OF | SER OF | to | 318 | 318 | 636 | 1 | 1'-0" | to | | | | | 3/4" |
| | 12 | 12 | 12 | 4'-10" | | | | | | 4'-0" | | | | | |
| S604 | 12 | 12 | 24 | 3'-10" | 70 | 70 | 140 | 1 | 1'-0" | 3'-0" | | | | | |
| | SUB-TOTAL | | | | 53,005 | 83,324 | 136,329 | | | | | | | | |
| PARAPET | | | | | | | | | | | | | | | |
| R501 | 410 | 415 | 825 | 7'-5" | 3,172 | 3,210 | 6,382 | 23 | 11" | 3'-3" | 3'-0" | | | | 2 3/4" |
| R510 | 30 | 28 | 58 | 9'-8" | 303 | 282 | 585 | STR. | | | | | | | |
| R511 | 66 | 74 | 140 | 4'-8" | 322 | 360 | 682 | STR. | | | | | | | |
| R512 | 2 | 2 | 4 | 3'-5" | 8 | 8 | 16 | STR. | | | | | | | |
| R513 | 2 | | 2 | 6'-9" | 15 | | 15 | STR. | | | | | | | |
| R514 | 48 | | 48 | 29'-4" | 1,469 | | 1,469 | STR. | | | | | | | |
| R515 | | 48 | 48 | 29'-7" | | 1,482 | 1,482 | STR. | | | | | | | |
| R520 | 4 | 4 | 8 | 15'-11" | 66 | 66 | 132 | STR. | | | | | | | |
| R521 | 16 | 16 | 32 | 16'-2" | 270 | 270 | 540 | STR. | | | | | | | |
| R522 | 8 | 8 | 16 | 10'-0" | 84 | 84 | 168 | STR. | | | | | | | |
| R523 | 8 | 8 | 16 | 5'-11" | 50 | 50 | 100 | STR. | | | | | | | |
| R524 | 8 | 8 | 16 | 5'-11" | 50 | 50 | 100 | STR. | | | | | | | |
| R610 | 15 | 14 | 29 | 9'-8" | 218 | 204 | 422 | STR. | | | | | | | |
| R611 | 33 | 37 | 70 | 4'-8" | 231 | 260 | 491 | STR. | | | | | | | |
| R612 | 1 | 1 | 2 | 3'-4" | 6 | 6 | 12 | STR. | | | | | | | |
| R613 | 1 | | 1 | 6'-9" | 11 | | 11 | STR. | | | | | | | |
| R620 | 2 | 2 | 4 | 15'-11" | 48 | 48 | 96 | STR. | | | | | | | |
| | SUB-TOTAL | | | | 6,323 | 6,380 | 12,703 | | | | | | | | |

= BAR WITH MECHANICAL CONNECTOR

MINIMUM LAP LENGTH

- #4 BARS = 1'-11"
- #5 BARS (DECK) = 2'-5"
- #5 BARS (OTHERS) = 3'-1"
- #6 BARS = 3'-7"
- #7 BARS = 4'-8"
- #8 BARS = 5'-4"

NOTES:

1. ALL REINFORCEMENT BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL
2. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
3. "SER OF" DENOTES SERIES OF BARS, E.G. "X" SER OF "Y" = "X" SERIES OF "Y" BARS/SERIES.
4. REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
5. MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH C.M.S. SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WITH MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509.

| Mark | NUMBER | | | LENGTH | WEIGHT | | | TYPE | DIMENSIONS | | | | |
|-----------------------|---------|---------|--------|-----------|---------|---------|-------|------|------------|-----------|------------|-------|-----------|
| | Phase 1 | Phase 2 | TOTAL | | Phase 1 | Phase 2 | TOTAL | | A | B | C | D | INC |
| REAR ABUTMENT | | | | | | | | | | | | | |
| RAL500 | 7 | | 7 | 20'-10" | 153 | | 153 | STR. | | | | | |
| RAL501 | 8 | | 8 | 16'-11" | 142 | | 142 | STR. | | | | | |
| | 2 | | 2 | 4'-8" | | | | | | | | | |
| RAL502 | SER OF | | SER OF | to | 91 | | 91 | STR. | | | | | 4'-1" |
| | 4 | | 4 | 16'-11" | | | | | | | | | |
| RAL503 | 2 | | 2 | 12'-10" | 27 | | 27 | STR. | | | | | |
| RAL504 | 6 | | 6 | 24'-5" | 153 | | 153 | STR. | | | | | |
| | 1 | | 1 | 18'-2" | | | | | | | | | |
| RAL505 | SER OF | | SER OF | to | 85 | | 85 | STR. | | | | | 1'-5 1/4" |
| | 4 | | 4 | 22'-6" | | | | | | | | | |
| RAL506 | 4 | | 4 | 9'-7" | 40 | | 40 | 19 | 6'-2" | 2'-5" | 2'-5" | | |
| RAL507 | 6 | | 6 | 5'-6" | 35 | | 35 | 9 | 1'-0" | 1'-0" | 1'-8" | 2'-8" | |
| RAL508 | | 7 | 7 | 23'-1" | | 169 | 169 | STR. | | | | | |
| RAL509 | | 8 | 8 | 13'-2" | | 110 | 110 | STR. | | | | | |
| | | 2 | 2 | 3'-6" | | | | | | | | | |
| RAL510 | SER OF | | SER OF | to | | 70 | 70 | STR. | | | | | 3'-2 1/2" |
| | 4 | | 4 | 13'-2" | | | | | | | | | |
| RAL511 | 2 | | 2 | 10'-6" | | 22 | 22 | STR. | | | | | |
| RAL512 | 12 | | 12 | 24'-2" | | 303 | 303 | STR. | | | | | |
| RAL513 | 8 | | 8 | 17'-1" | | 143 | 143 | STR. | | | | | |
| RAL514 | 4 | | 4 | 9'-8" | | 41 | 41 | 19 | 6'-3" | 2'-5" | 2'-5" | | |
| RAL515 | 6 | | 6 | 7'-6" | | 47 | 47 | 9 | 1'-0" | 1'-0" | 3'-8" | 2'-8" | |
| RAL600 | 20 | 23 | 43 | 17'-0" | 511 | 587 | 1,098 | 3 | 5'-8" | 2'-7" | | | |
| RAL601 | 17 | 12 | 29 | 20'-6" | 523 | 370 | 893 | 2 | 9'-4" | 2'-2" | 9'-4" | | |
| | 1 | | 1 | 4'-4" | | | | | 1'-3" | | 1'-3" | | |
| RAL602 | SER OF | | SER OF | to | 146 | | 146 | 2 | to | 2'-2" | to | | 8" |
| | 12 | | 12 | 11'-10" | | | | | 5'-0" | | 5'-0" | | |
| | 1 | | 1 | 11'-10" | | | | | | 2'-2" | | | |
| RAL603 | SER OF | | SER OF | to | 76 | | 76 | 2 | 5'-0" | to | 5'-0" | | 5 1/4" |
| | 4 | | 4 | 13'-2" | | | | | | 3'-6" | | | |
| | | 1 | 1 | 4'-4" | | | | | 1'-3" | | 1'-3" | | |
| RAL604 | SER OF | | SER OF | to | | 116 | 116 | 2 | to | 2'-2" | to | | 8 3/4" |
| | | 10 | 10 | 11'-0" | | | | | 4'-7" | | 4'-7" | | |
| | | 1 | 1 | 11'-0" | | | | | | 2'-2" | | | |
| RAL605 | SER OF | | SER OF | to | | 53 | 53 | 2 | 4'-7" | to | 4'-7" | | 8" |
| | | 3 | 3 | 12'-4" | | | | | | 3'-6" | | | |
| RAL700 | 18 | 32 | 50 | 7'-0" | 258 | 458 | 716 | STR. | | | | | |
| RAL701 | 4 | 14 | 18 | 18'-10" | 154 | 539 | 693 | 2 | 7'-9" | 3'-8" | 7'-9" | | |
| RAL702 | 23 | 47 | 70 | 12'-8" | 596 | 1,217 | 1,813 | 2 | 4'-8" | 3'-8" | 4'-8" | | |
| RAL800 | 5 | | 5 | 20'-10" | 279 | | 279 | STR. | | | | | |
| RAL801 | 5 | | 5 | 24'-7" | 329 | | 329 | STR. | | | | | |
| RAL802 | | 5 | 5 | 23'-1" | | 309 | 309 | STR. | | | | | |
| RAL803 | | 10 | 10 | 24'-2" | | 646 | 646 | STR. | | | | | |
| | | | | SUB-TOTAL | 3,598 | 5,200 | 8,798 | | | | | | |
| REAR DIAPHRAGM | | | | | | | | | | | | | |
| RDL500 | 15 | 29 | 44 | 9'-6" | 149 | 287 | 436 | 2 | 2'-6" | 4'-9" | 2'-6" | | |
| RDL501 | 30 | 58 | 88 | 11'-0" | 344 | 666 | 1,010 | 2 | 2'-11 1/2" | 5'-3" | 2'-11 1/2" | | |
| RDL800 | 11 | | 11 | 18'-1" | 532 | | 532 | 1 | 1'-6" | 16'-9" | | | |
| RDL801 | 11 | | 11 | 5'-10" | 172 | | 172 | 1 | 1'-6" | 4'-6" | | | |
| RDL802 | 6 | | 6 | 8'-2" | 131 | | 131 | STR. | | | | | |
| RDL803 | 5 | | 5 | 24'-7" | 329 | | 329 | STR. | | | | | |
| RDL804 | 10 | | 10 | 8'-6" | 227 | | 227 | 18 | 5'-0" | 1'-11" | 1'-9" | | |
| RDL805 | | 20 | 20 | 25'-7" | | 1,367 | 1,367 | STR. | | | | | |
| RDL806 | | 12 | 12 | 22'-4" | | 716 | 716 | STR. | | | | | |
| RDL807 | | 12 | 12 | 5'-0" | | 161 | 161 | 1 | 1'-0" | 4'-2" | | | |
| RDL808 | 17 | 31 | 48 | 5'-2" | 235 | 428 | 663 | 18 | 2'-3" | 1'-4 3/4" | 1'-4 3/4" | | |
| | | | | SUB-TOTAL | 2,119 | 3,625 | 5,744 | | | | | | |

= BAR WITH MECHANICAL CONNECTOR

REINFORCING LIST 02
 BRIDGE NO. MUS-70-1066R
 OVER LICKING ROAD & CUOH RAILROAD

MUS-70-10.49
 PID No. 93006

52 / 53

1393
2231

DESIGN AGENCY
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DATE
12/2020

REVIEWED
CTM

DRAWN
MZ

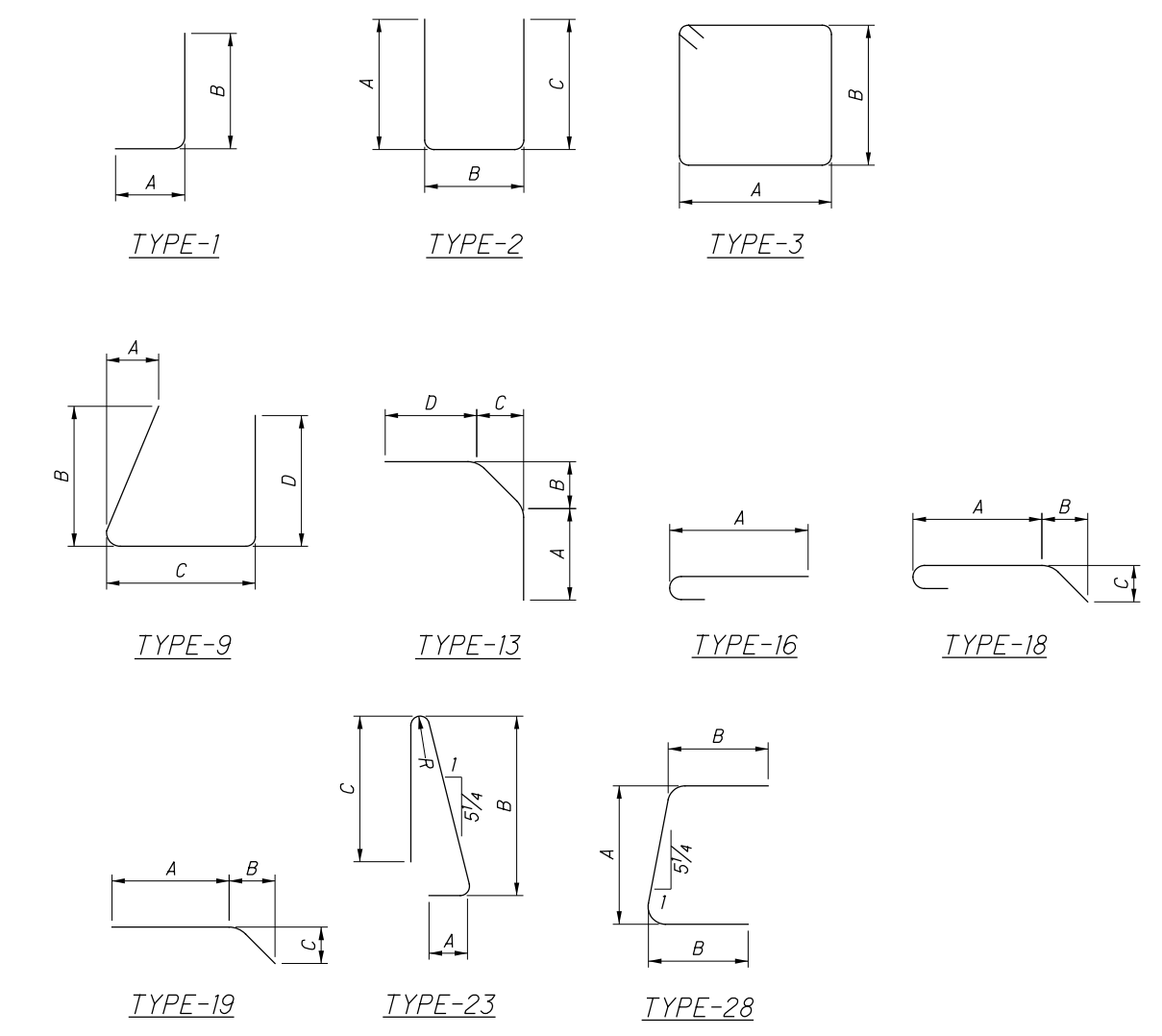
DESIGNED
MZ

CHECKED
JC

STRUCTURE FILE NUMBER
6002676

REVISED

| Mark | NUMBER | | | LENGTH | WEIGHT | | | TYPE | DIMENSIONS | | | | |
|--------------------------|---------|---------|--------|---------|---------|---------|---------|------|------------|-----------|------------|--------|-----------|
| | Phase 1 | Phase 2 | TOTAL | | Phase 1 | Phase 2 | TOTAL | | A | B | C | D | INC |
| FORWARD ABUTMENT | | | | | | | | | | | | | |
| FAL500 | 7 | | 7 | 25'-6" | 187 | | 187 | STR. | | | | | |
| FAL501 | 8 | | 8 | 13'-10" | 116 | | 116 | STR. | | | | | |
| FAL502 | 2 | | 2 | 3'-6" | | | | | | | | | |
| FAL502 | SER OF | | SER OF | to | 73 | | 73 | STR. | | | | | 3'-5 1/4" |
| FAL503 | 2 | | 2 | 11'-0" | 23 | | 23 | STR. | | | | | |
| FAL504 | 6 | | 6 | 27'-9" | 174 | | 174 | STR. | | | | | |
| FAL505 | 1 | | 1 | 12'-0" | | | | | | | | | |
| FAL505 | SER OF | | SER OF | to | 61 | | 61 | STR. | | | | | 1'-7 1/4" |
| FAL506 | 4 | | 4 | 16'-10" | | | | | | | | | |
| FAL507 | 4 | | 4 | 9'-1" | 38 | | 38 | 19 | 5'-8" | 2'-5" | 2'-5" | | |
| FAL508 | 6 | | 6 | 7'-8" | 48 | | 48 | 9 | 1'-0" | 1'-0" | 3'-10" | 2'-8" | |
| FAL508 | | 7 | 7 | 20'-0" | | | 147 | 147 | STR. | | | | |
| FAL509 | | 8 | 8 | 16'-4" | | | 137 | 137 | STR. | | | | |
| FAL510 | | 2 | 2 | 4'-11" | | | | | | | | | |
| FAL510 | SER OF | | SER OF | to | 89 | | 89 | STR. | | | | | 3'-9 1/2" |
| FAL511 | | 4 | 4 | 16'-4" | | | | | | | | | |
| FAL511 | | 2 | 2 | 11'-0" | | | 23 | 23 | STR. | | | | |
| FAL512 | | 12 | 12 | 24'-6" | | | 307 | 307 | STR. | | | | |
| FAL513 | | 8 | 8 | 23'-6" | | | 197 | 197 | STR. | | | | |
| FAL514 | | 4 | 4 | 9'-4" | | | 39 | 39 | 19 | 5'-11" | 2'-5" | 2'-5" | |
| FAL515 | | 6 | 6 | 5'-8" | | | 36 | 36 | 9 | 1'-0" | 1'-0" | 1'-10" | 2'-8" |
| FAL600 | 23 | 18 | 41 | 17'-0" | 587 | 460 | 1,047 | 3 | 5'-8" | 2'-7" | | | |
| FAL601 | 8 | 14 | 22 | 22'-4" | 268 | 470 | 738 | 2 | 10'-3" | 2'-2" | 10'-3" | | |
| FAL602 | 1 | | 1 | 4'-4" | | | | | | | | | |
| FAL602 | SER OF | | SER OF | to | 127 | | 127 | 2 | to | 2'-2" | to | | 10 3/4" |
| FAL602 | | 10 | 10 | 12'-6" | | | | | | | | | |
| FAL603 | 1 | | 1 | 12'-6" | | | | | | | | | |
| FAL603 | SER OF | | SER OF | to | 60 | | 60 | 2 | 5'-4" | to | 5'-4" | | 8" |
| FAL603 | | 3 | 3 | 13'-10" | | | | | | | | | |
| FAL604 | | 1 | 1 | 3'-0" | | | | | | | | | |
| FAL604 | SER OF | | SER OF | to | 95 | | 95 | 2 | to | 2'-2" | to | | 1'-0" |
| FAL604 | | 9 | 9 | 11'-0" | | | | | | | | | |
| FAL604 | | 1 | 1 | 11'-0" | | | | | | | | | |
| FAL605 | SER OF | | SER OF | to | 71 | | 71 | 2 | 4'-7" | to | 4'-7" | | 5 1/4" |
| FAL605 | | 4 | 4 | 12'-4" | | | | | | | | | |
| FAL700 | 16 | 42 | 58 | 7'-0" | 229 | 601 | 830 | STR. | | | | | |
| FAL701 | 14 | 4 | 18 | 18'-4" | 525 | 150 | 675 | 2 | 7'-6" | 3'-8" | 7'-6" | | |
| FAL702 | 31 | 47 | 78 | 12'-8" | 803 | 1,217 | 2,020 | 2 | 4'-8" | 3'-8" | 4'-8" | | |
| FAL800 | 5 | | 5 | 25'-6" | 341 | | 341 | STR. | | | | | |
| FAL801 | 5 | | 5 | 26'-6" | 354 | | 354 | STR. | | | | | |
| FAL802 | | 5 | 5 | 20'-0" | | 267 | 267 | STR. | | | | | |
| FAL803 | | 10 | 10 | 25'-3" | | 675 | 675 | STR. | | | | | |
| SUB-TOTAL | | | | | 4,014 | 4,981 | 8,995 | | | | | | |
| FORWARD DIAPHRAGM | | | | | | | | | | | | | |
| FDL500 | 17 | 29 | 46 | 9'-9" | 173 | 295 | 468 | 2 | 2'-6" | 5'-0" | 2'-6" | | |
| FDL501 | 34 | 58 | 92 | 11'-3" | 399 | 681 | 1,080 | 2 | 2'-11 1/2" | 5'-7" | 2'-11 1/2" | | |
| FDL800 | 11 | | 11 | 19'-4" | 568 | | 568 | 1 | 1'-6" | 18'-0" | | | |
| FDL801 | 11 | | 11 | 7'-4" | 216 | | 216 | 1 | 1'-6" | 6'-0" | | | |
| FDL802 | 6 | | 6 | 8'-9" | 141 | | 141 | STR. | | | | | |
| FDL803 | 5 | | 5 | 27'-9" | 371 | | 371 | STR. | | | | | |
| FDL804 | 10 | | 10 | 8'-6" | 227 | | 227 | 18 | 5'-0" | 1'-11" | 1'-9" | | |
| FDL805 | | 20 | 20 | 26'-6" | | 1,416 | 1,416 | STR. | | | | | |
| FDL806 | | 12 | 12 | 8'-6" | | 273 | 273 | 18 | 5'-0" | 1'-11" | 1'-9" | | |
| FDL807 | | 12 | 12 | 5'-0" | | 161 | 161 | 1 | 1'-0" | 4'-2" | | | |
| FDL808 | 19 | 33 | 52 | 5'-2" | 262 | 456 | 718 | 18 | 2'-3" | 1'-4 3/4" | 1'-4 3/4" | | |
| SUB-TOTAL | | | | | 2,357 | 3,282 | 5,639 | | | | | | |
| TOTAL ALL REINFORCING | | | | | 71,416 | 106,792 | 178,208 | | | | | | |



= BAR WITH MECHANICAL CONNECTOR

DESIGN AGENCY
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

REINFORCING LIST 03
 BRIDGE NO. MUS-70-1066R
 OVER LICKING ROAD & CUOH RAILROAD

MUS-70-10.49
PID No. 93006

DESIGNED: MZ
 CHECKED: JC

DRAWN: MZ
 REVISED:

REVIEWED: CTM
 DATE: 12/2020

STRUCTURE FILE NUMBER: 6002676

53 / 53

1394
 2231

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

| | | |
|----------|---------------|----------|
| A-1-20 | DATED/REVISED | 07/17/20 |
| AS-1-15 | DATED/REVISED | 07/17/15 |
| AS-2-15 | DATED/REVISED | 01/18/19 |
| EXJ-4-87 | DATED/REVISED | 01/19/18 |
| GSD-1-19 | DATED/REVISED | 01/18/19 |
| PCB-91 | DATED/REVISED | 7/17/20 |
| SBR-2-13 | DATED/REVISED | 07/20/18 |
| SBR-1-13 | DATED/REVISED | 07/20/18 |

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

SPECIAL DESIGN SPECIFICATIONS

THIS BRIDGE REQUIRED THE USE OF A TWO-DIMENSIONAL MODEL USING GRILLAGE DESIGN METHOD TO ANALYZE THE STRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS BENTLEY LEAP STEEL V19.

DEAD LOAD DISTRIBUTION: DC1 LOADING WAS DISTRIBUTED TO BEAMS BASED ON TRIBUTARY AREA. BARRIER LOADS DC2 WERE APPLIED TO THE TWO EXTERIOR BEAMS (FOR DESIGN) AND EQUALLY TO ALL BEAMS FOR CAMBER/DEFLECTION DESIGN.

LIVE LOAD DISTRIBUTION: HL-93 TRUCK AND LANE LOADS WERE APPLIED BY 1, 2, & 3 LANE FLOAT METHOD ACROSS THE BRIDGE DECK DIRECTLY TO THE GRILLAGE MODEL.

LRFD OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5, AND THE ODOT BRIDGE DESIGN MANUAL, 2020

DESIGN LOADING

HL-93
FUTURE WEARING SURFACE (FWS) OF 0.60 KSF

DESIGN DATA

CONCRETE CLASS, QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS, QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

INSPECTION FOR BATS

PRIOR TO THE START OF DEMOLITION ACTIVITIES THE CONTRACTOR SHALL INSPECT THE UNDERSIDE OF THE BRIDGE FOR THE PRESENCE OF BATS OR NESTING BIRDS. IF ANY BATS OR BIRD NESTS ARE OBSERVED THE CONTRACTOR SHALL NOTIFY NICOLE HAFERLIPSTREU IN THE DISTRICT 5 PLANNING DEPARTMENT @ (740) 323-5103 (NICOLE.HAFERLIPSTREU@DOT.OHIO.GOV), OR, BRIAN TATMAN @ (740) 323-5191 (BRIAN.TATMAN@DOT.OHIO.GOV) PRIOR TO STARTING ANY DEMOLITION WORK.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM INCLUDES THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS MUST NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS MUST NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

IN ORDER TO MAINTAIN STABILITY OF PIER 4 DURING TRAFFIC SHIFT, INSTALL TEMPORARY SUPPORTS FOR BEAMS 1 & 14 AT PIER 4 PRIOR TO REMOVING THE DECK IN PHASE 1. AFTER THE COMPLETION OF PHASE 1 AND PRIOR TO THE DECK REMOVAL IN PHASE 2, MOVE THE TEMPORARY SUPPORTS TO BEAMS 7 AND 8 AT PIER 4. THE SUPPORTS ARE TO REMAIN UNTIL THE COMPLETION OF PHASE 3. DESIGN JACKS AND TEMPORARY SUPPORTS TO PROVIDE A MINIMUM OF 250 KIPS RESISTANCE PER BEAM.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05. IF, DURING JACKING OPERATIONS, CRACKING OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL.

DECK PLACEMENT DESIGN ASSUMPTIONS

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR THE SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 KIPS

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

DECK SLAB CONCRETE QUANTITY

THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

ITEM 513 STRUCTURAL STEEL, MISC: EXTERNAL POST TENSIONING

THIS ITEM CONSIST OF FURNISHING ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL EXTERNAL POST TENSIONING ASSEMBLIES TO TEMPORARILY ATTACH PIER THREE STRUCTURES.

THE 1 INCH DIAMETER (NOMINAL) ALL-THREAD BARS WITH A CROSS SECTIONAL AREA OF 0.85 SQUARE INCHES AND A MODULUS OF ELASTICITY OF 29,700 KSI SHALL BE ASTM A722 (TYPE II) GRADE 150 MANUFACTURED IN THE UNITED STATES. THE ANCHOR (SPHERICAL HEX) NUTS MUST BE ASTM A536. ANCHOR (DISHED) PLATES SHALL BE A572 GRADE 50.

GALVANIZED DISHED ANCHOR PLATES AND GALVANIZED SPHERICAL HEX NUTS SHALL BE COMPATIBLE WITH THE GALVANIZED ALL-THREAD BARS AND SHALL MEET THE REQUIREMENTS OF THE ALL-THREAD BAR MANUFACTURER'S POST TENSIONING SYSTEM. DISHED ANCHOR PLATES, SPHERICAL HEX NUTS AND ALL-THREAD BARS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH C&MS 711.02. ALL -THREAD BARS SHALL BE MECHANICALLY CLEANED (NOT ACID WASHED) TO AVOID PROBLEMS ASSOCIATED WITH HYDROGEN EMBRITTLEMENT.

END PLATE ASSEMBLIES SHALL BE HOT DIP GALVANIZED ACCORDING TO C&MS 711.02.

FABRIC PADS SHALL MEET THE REQUIREMENTS OF C&MS 711.21, PERFORMED BEARING PADS.

BAR CLAMPS SHALL BE 1/8 INCH INSIDE DIAMETER VIBRATION-DAMPING ROUTING CLAMPS.

ALL-THREAD BARS SHALL BE TENSIONED BY HYDRAULIC JACKS SO AS TO PRODUCE THE INDICATED FORCES.

EACH JACK USED TO TENSION THE BARS SHALL BE EQUIPPED WITH A PRESSURE GAUGE HAVING AN ACCURATE READING DIAL AT LEAST SIX INCHES IN DIAMETER FOR DETERMINING JACK PRESSURE. WITHIN 30 DAYS PRIOR TO USE FOR TENSIONING ON THE PROJECT, EACH JACK AND ITS GAUGE SHALL BE CALIBRATED AS A UNIT BY A TESTING LABORATORY APPROVED BY THE ENGINEER. CALIBRATION SHALL BE DONE WITH CYLINDER EXTENSION APPROXIMATELY IN THE POSITION THAT IT WILL BE WHEN APPLYING THE FINAL JACKING FORCE AND WITH THE JACK ASSEMBLY IN AN IDENTICAL CONFIGURATION TO THAT WHICH WILL BE USED AT THE JOB SITE (I.E. SAME LENGTH HYDRAULIC LINES). PERFORM THE CALIBRATION WITH THE JACK APPLYING LOAD TO THE TESTING MACHINE. FURNISH CERTIFIED CALIBRATION CALCULATIONS AND CALIBRATION CHART, BOTH IN ENGLISH UNITS OF MEASURE, TO THE ENGINEER FOR EACH JACK. THESE CERTIFICATIONS SHALL STATE THAT THE CALIBRATION TESTING WAS PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE PROJECT. PRESSURE GAUGE READINGS ARE TO BE WITHIN THREE PERCENT OF THE ACTUAL APPLIED FORCE DURING CALIBRATION. IF PRESSURE GAUGE READINGS ARE NOT WITHIN THREE PERCENT OF THE APPLIED FORCE, THE SOURCE OF ERROR IS TO BE DETERMINED AND CORRECTED AND THE GAUGE RE CALIBRATED.

RE CALIBRATION OF EACH JACK SHALL BE DONE AS REQUESTED BY THE ENGINEER (SIX MONTH MINIMUM INTERVAL). AT THE OPTION OF THE CONTRACTOR, CALIBRATIONS SUBSEQUENT TO THE INITIAL LABORATORY CALIBRATION MAY BE ACCOMPLISHED BY USE OF A MASTER GAUGE. THE MASTER GAUGE SHALL BE SUPPLIED BY THE CONTRACTOR IN A PROTECTIVE WATERPROOF CONTAINER CAPABLE OF PROTECTING THE CALIBRATION OF THE MASTER GAUGE DURING SHIPMENT TO A LABORATORY. THE CONTRACTOR SHALL PROVIDE A QUICK-ATTACH COUPLER NEXT TO THE PERMANENT GAUGE IN THE HYDRAULIC LINES, WHICH ENABLES THE QUICK AND EASY INSTALLATION OF THE MASTER GAUGE TO VERIFY THE PERMANENT GAUGE READINGS. THE MASTER GAUGE SHALL REMAIN IN THE POSSESSION OF AND BE CALIBRATED BY THE ENGINEER FOR THE DURATION OF THE PROJECT. IF ANY REPAIR TO OR MODIFICATION OF A JACK IS ACCOMPLISHED, SUCH AS REPLACING THE SEALS OR CHANGING THE LENGTH OF HYDRAULIC LINES, THE JACK SHALL BE RE CALIBRATED BY THE APPROVED TESTING LABORATORY. JACKS AND GAUGES SHALL NOT BE INTERCHANGED WITHOUT RE CALIBRATION OR PROOF LOADING USING LOAD CELLS, MAST GAUGES OR OTHER METHODS APPROVED BY THE ENGINEER. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THE INITIAL OR SUBSEQUENT JACK CALIBRATIONS OR FOR USE AND REQUIRED CALIBRATION OF A MASTER GAUGE.

THE FOLLOWING VALUES WERE CALCULATED

FINAL JACKING TENSION = 35 KIPS
ELONGATION = 1.56 INCHES

A RECORD OF GAUGE PRESSURES AND BAR ELONGATIONS FOR EACH BAR SHALL BE PROVIDED BY THE CONTRACTOR

FOR REVIEW AND APPROVAL BY THE ENGINEER. ELONGATIONS SHALL BE MEASURED TO AN ACCURACY OF +/- 1/16 INCH.

BASIS OF PAYMENT: THE WORK SHALL BE PAID FOR BY LUMP SUM FOR STRUCTURAL STEEL, MISC.: EXTERNAL POST TENSIONING. THE LUMP SUM UNIT SHALL INCLUDE ALL WORK NECESSARY TO TEMPORARILY SUPPORT THE PIERS BY EXTERNAL POST TENSIONING, INCLUDING BUT NOT LIMITED TO: ALL-THREAD BARS, DISHED ANCHOR PLATES, SPHERICAL HEX NUTS, END PLATE ASSEMBLIES, GALVANIZING, CLAMPS, EXPANSION ANCHORS, JACKING EQUIPMENT, CALIBRATING AND CERTIFYING JACKS, TEMPORARY OCI CONCRETE BETWEEN PIERS.

ITEM 601 CONCRETE SLOPE PROTECTION, AS PER PLAN

THIS ITEM INCLUDES REMOVAL AND REPLACEMENT OF EXISTING DETERIORATED CONCRETE SLOPE PROTECTION LOCATED AT THE FORWARD ABUTMENT.

REMOVE ALL CONCRETE PANELS WHERE FILL HAS WASHED OUT OR LOOSENED BELOW THE PANEL. BACKFILL AND COMPACT CAVITIES WITH 703.16 TYPE B MATERIAL AND PROVIDE 712.09 GEOTEXTILE FABRIC BELOW BETWEEN THE TYPE B AND EXISTING SOIL. SEE GENERAL PLAN FOR APPROXIMATE LOCATION.

CONSTRUCT NEW PANELS IN ACCORDANCE WITH ITEM 601.

THIS WORK WILL BE PAID FOR BY SQUARE FOOT BASIS FOR ITEM 601 CONCRETE SLOPE PROTECTION, AS PER PLAN AND INCLUDES ALL WORK NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM INCLUDES REMOVING MATERIALS FROM BEHIND THE EXISTING BACK BALL IN ORDER TO PERFORM ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. LIMITS OF EXCAVATION SHALL BE LIMITED BETWEEN THE PROPOSED WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED.

BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND APPROACH SLABS AND BELOW APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM TYPE 1 SHALL CONFORM TO C&MS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THE AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF LSM, TYPE 1 BACKFILL AND PLACEMENT OF THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PERFORM ALL WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

A 2" DEEP X 1" WIDE STRIP SHALL BE SAWCUT OUT OF THE APPROACH SLAB CONCRETE ABUTTING THE BRIDGE AFTER THE FINAL SURFACE HAS BEEN CONSTRUCTED. JOINT SEALER AS PER 705.04 SHALL BE USED TO SEAL THE JOINT CREATED.

\\d05fsi05\ProjectData\MUS\93006\400-Engineering\Structures\SFN_6002706\Sheets\070_1089C_SNO01.dgn 93006SNO01 4/1/2021 11:05 AM jhuffma3

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| DESIGNED MJB CHECKED MJB | DRAWN JPH REVISED | REVIEWED JPH STRUCTURE FILE NUMBER 6002706 | DATE 12/2/2020 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 5 |
| BRIDGE NOTES | | | | |
| BRIDGE NO. MUS-70-1089 OVER LICKING RIVER & NEWARK RD. | | | | |
| MUS-70-10-49 PID No. 93006 | | | | |
| 3 / 52 | | | | |
| 1397 2231 | | | | |

MUS-70-1159 BRIDGE PLAN SUMMARY

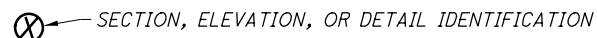
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|------------------------------|---|---------|----|---------|
| SITE AND GENERAL PLANS | - | 11/160 | TO | 11/160 |
| GENERAL NOTES AND QUANTITIES | - | 12/160 | TO | 15/160 |
| STAGED CONSTRUCTION DETAILS | - | 16/160 | TO | 36/160 |
| REAR ABUTMENT DETAILS | - | 37/160 | TO | 44/160 |
| FORWARD ABUTMENT DETAILS | - | 47/160 | TO | 56/160 |
| TYPICAL ABUTMENT DETAILS | - | 57/160 | TO | 60/160 |
| PIER DETAILS | - | 61/160 | TO | 68/160 |
| BEARING DETAILS | - | 69/160 | TO | 75/160 |
| STRUCTURAL STEEL DETAILS | - | 76/160 | TO | 97/160 |
| TRANSVERSE SECTIONS | - | 98/160 | TO | 103/160 |
| DECK REINFORCING PLANS | - | 104/160 | TO | 114/160 |
| DECK ELEVATIONS | - | 115/160 | TO | 134/160 |
| PARAPET DETAILS | - | 135/160 | TO | 142/160 |
| SIDEWALK DETAILS | - | 143/160 | TO | 144/160 |
| EXPANSION JOINT DETAILS | - | 145/160 | TO | 146/160 |
| APPROACH SLAB DETAILS | - | 147/160 | TO | 151/160 |
| REINFORCING STEEL LISTS | - | 152/160 | TO | 160/160 |

STANDARD PLAN DETAILING NOMENCLATURE

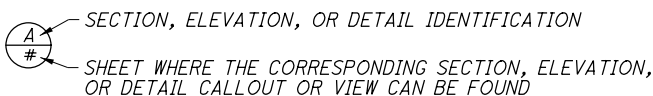
THROUGHOUT THE PLANS, SECTIONS AND DETAILS ARE REFERENCED TO THEIR CORRESPONDING VIEWS THROUGH THE USE OF STANDARD CALLOUTS. THE VIEWS OF SECTIONS, ELEVATIONS, AND DETAILS WILL HAVE UNIQUE NUMBERS ON THE PAGES ON WHICH THEY ARE SHOWN.

LETTERS WILL BE UTILIZED FOR SECTION AND ELEVATION CALLOUTS. NUMBERS WILL BE UTILIZED FOR DETAIL CALLOUTS.

IF A SECTION, ELEVATION, OR DETAIL VIEW IS ON THE SAME SHEET FROM WHICH IT IS CUT, THE CALLOUT WILL APPEAR AS FOLLOWS:



IF A SECTION, ELEVATION, OR DETAIL VIEW IS ON A DIFFERENT SHEET FROM WHICH IT IS CUT, THE CALLOUT WILL APPEAR AS FOLLOWS:



MEMBERS WILL BE IDENTIFIED AS FOLLOWS:



SURFACE SMOOTHNESS FOR BRIDGES AND APPROACHES

AT THE COMPLETION OF WORK FOR ALL PHASES OF CONSTRUCTION THE CONTRACTOR SHALL PERFORM THE FOLLOWING AS PER PROPOSAL NOTE 555:

1. CLEAN, SWEEP, AND PREPARE THE FINAL DECK AND FINAL ROADWAY SURFACE.
2. MEASURE, GRIND, AND RE-MEASURE THE BRIDGE AND/OR ROADWAY AS NECESSARY.
3. PERFORM GROOVING OF THE BRIDGE DECK.

RAILROAD CONSTRUCTION CLEARANCES

MAINTAIN A CONSTRUCTION CLEARANCE OF 13.00' HORIZONTALLY FROM THE CENTER OF TRACKS, AND 22.00' VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL AND 6.00' FROM THE CENTER OF TRACKS, AT ALL TIMES.

STANDARD PLAN ABBREVIATIONS AND SYMBOLS

| | |
|---|--|
| ABUT = ABUT APP = APPROACH AVE = AVENUE B# = BEAM NUMBER BF = BOTTOM FLANGE BM = BENCHMARK BOT = BOTTOM BRG = BEARING BTWN = BETWEEN C.B. = CHORD BEARING C/C = CENTER TO CENTER CB = CATCH BASIN CCTV = CLOSED CIRCUIT TELEVISION CIP = CAST IN PLACE CJ = CONSTRUCTION JOINT CJ-O = OPTIONAL CONSTRUCTION JOINT CLR = CLEAR CMP = CORRUGATED METAL PIPE CMS = CONSTRUCTION MATERIAL SPECIFICATIONS CONST = CONSTRUCTION CP = COVER PLATE CSP/N = CORRUGATED STEEL PIPE (NON-PERFORATED) CSP/P = PERFORATED CORRUGATED STEEL PIPE DIA = DIAMETER DND = DO NOT DISTURB DPRM = DIAPHRAGM E/P = EDGE OF PAVEMENT E/S = EDGE OF SHOULDER EB = EASTBOUND EF = EACH FACE ELEC = ELECTRIC ELEV or EL = ELEVATION EX = EXISTING EXP = EXPANSION F/F = FACE TO FACE FA = FORWARD ABUTMENT FF = FAR FACE/FILL FACE FO = FIBER OPTIC FTG = FOOTING G# = GIRDER NUMBER GR = GUARDRAIL H.C. = HORIZONTAL CURVE HORZ = HORIZONTAL I/I = INSIDE TO INSIDE IR = INTERSTATE ROUTE JT = JOINT LT = LEFT MAX = MAXIMUM MH = MANHOLE MHC = MINIMUM HORIZONTAL CLEARANCE MIN = MINIMUM MISC = MISCELLANEOUS MSE = MECHANICALLY STABILIZED EARTH MVC = MINIMUM VERTICAL CLEARANCE | NB = NORTHBOUND NE = NORTHEAST NF = NEAR FACE NO = NUMBER NW = NORTHWEST O/O = OUT TO OUT OD = OUTSIDE DIAMETER OH = OVERHANG OVHD = OVERHEAD ODOT = OHIO DEPARTMENT OF TRANSPORTATION P.V.I. = POINT OF VERTICAL INTERSECTION PC = POINT OF CURVE PCB = PORTABLE CONCRETE BARRIER PEJF = PREFORMED EXPANSION JOINT FILLER PGL = PROFILE GRADE LINE PI = POINT OF INTERSECTION PMVC = POINT OF MINIMUM VERTICAL CLEARANCE POT = POINT ON TANGENT PROP = PROPOSED PT = POINT OF TANGENT PVMT = PAVEMENT RA = REAR ABUTMENT RCP = REINFORCED CONCRETE PIPE RD = ROAD REF = REFERENCE REINF. = REINFORCING OR REBAR REQ'D = REQUIRED RT = RIGHT R/W = RIGHT OF WAY S/O = SERIES OF SR = STATE ROUTE SB = SOUTHBOUND SCD = STANDARD CONSTRUCTION DRAWING SE = SOUTHEAST SER = SERIES SF = SQUARE FEET SHLDR = SHOULDER SPA = SPACES ST = STREET OR SPAN TOTAL STA = STATION STD = STANDARD STG = STAGE STM = STORM SW = SOUTHWEST T/ = TOP OF T/B = TOP AND BOTTOM T/T = TOE TO TOE TBR = TO BE REMOVED TEMP = TEMPORARY TYP = TYPICAL U.N.O. = UNLESS NOTED OTHERWISE VC = VERTICAL CURVE VERT = VERTICAL WB = WEST BOUND WW = WINGWALL |
|---|--|

ITEM 530 - STRUCTURES: MEASUREMENTS FOR PROPOSED BEARINGS

THIS WORK CONSISTS OF VERIFYING THE EXISTING SUBSTRUCTURE DIMENSIONS, SEAT ELEVATIONS, AND EXISTING BEARING LOCATIONS AND HEIGHTS BEFORE FABRICATING THE PROPOSED BEARINGS. AT EACH LOCATION WHERE NEW BEARINGS WILL SIT ATOP EXISTING BEARING SEATS, THE CONTRACTOR SHALL VERIFY THAT THE PLAN DIMENSIONS AND ELEVATIONS MATCH THE EXISTING CONDITIONS USED IN THESE PLANS. A REPORT DETAILING EXISTING HORIZONTAL CLEARANCES AND SEAT ELEVATIONS COMPARED TO THOSE IN THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO BEARING FABRICATION. ANY PROPOSED HEIGHT ADJUSTMENTS SHALL BE SUBMITTED ALONG WITH THE REPORT. ADDITIONALLY, AT LOCATIONS WHERE THE PROPOSED BEARINGS REQUIRE ANCHORAGE, CONTRACTOR SHALL VERIFY LOCATIONS OF THE EXISTING BEAM SEAT REINFORCING, ADJUST THE ANCHOR HOLE LOCATIONS TO CLEAR THE REINFORCING AS NECESSARY, AND INCORPORATE THE ADJUSTED ANCHOR HOLE LOCATIONS INTO THE BEARING SHOP DRAWINGS AND FABRICATION.

ITEM 530 - STRUCTURES: MEASUREMENTS FOR PROPOSED BEARINGS (CONT'D)

THE DEPARTMENT WILL MEASURE THE WORK ON A LUMP SUM BASIS AND PAY FOR ACCEPTED QUANTITIES AT THE LUMP SUM CONTRACT PRICE. PAYMENT IS FULL COMPENSATION FOR THE ACCESS, MEASUREMENT, DOCUMENTATION, AND REPORTING OF REQUIRED DATA, INCLUDING MARKUPS OF REQUIRED ADJUSTMENTS TO BEARING HEIGHTS AND ANCHOR HOLE LOCATIONS. FABRICATED BEARING HEIGHTS SHALL BE ADJUSTED TO MATCH CONTRACTOR BEARING MEASUREMENTS. BEARING HEIGHT ADJUSTMENTS OF 3" OR LESS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE BEARINGS.

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DESIGN AGENCY: **Gannett Fleming**
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

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|----------|---------|----------|---------|---------|---------|
| DESIGNED | DATE | REVIEWED | DATE | DRAWN | DATE |
| MTD | 12/2020 | MTD | 12/2020 | MTD | 12/2020 |
| CHECKED | CTM | REVISID | 6002854 | REVISID | 6002854 |

BRIDGE GENERAL NOTES 1 OF 3
 BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

MUS-70-10.49
PID No. 93006

12 / 160
 1458
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MUS-70-1159 BRIDGE SUMMARY - 02/IMS/BR

CALC: ST/RSN CHECK: CTM

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| ITEM | ITEM EXT. | TOTAL QUANTITY | TOTAL PER PHASE | | | | UNIT | DESCRIPTION | PHASE 1 | | | PHASE 2 | | | PHASE 3 | | | GENERAL | APP/REF SHEET NO. |
|---------|-----------|----------------|-----------------|---------|---------|-------|------|--|---------|-------|---------|---------|-------|---------|---------|-------|---------|---------|-------------------|
| | | | PH 1 | PH 2 | PH 3 | GEN | | | ABUT. | PIERS | SUPER | ABUT. | PIERS | SUPER | ABUT. | PIERS | SUPER | | |
| 202 | 11203 | LS | | | | LS | | | | | | | | | | | LS | 13 | |
| 202 | 22900 | 768 | 228 | 286 | 254 | | SY | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | | | | | | | | | | | |
| | | | | | | | | APPROACH SLAB REMOVED | 228 | | | | | | | | 286 | 254 | |
| 503 | 11100 | LS | | | | LS | | COFFERDAMS AND EXCAVATION BRACING | | | | | | | | | LS | | |
| 503 | 21301 | LS | LS | LS | LS | | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LS | | | LS | | | | | LS | 14 | |
| 509 | 10001 | 1,134,875 | 382,879 | 396,441 | 355,555 | | LB | EPOXY COATED REINFORCING STEEL, AS PER PLAN | 3,504 | 3,406 | 375,969 | 3,467 | 3,733 | 389,241 | 2,995 | 4,140 | 348,420 | | |
| 509 | 20001 | 300 | | | | 300 | LB | REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN | | | | | | | | | 300 | 13 | |
| 510 | 10001 | 788 | 209 | 321 | 258 | | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN | 59 | 150 | | 129 | 192 | | 114 | 144 | | 13 | |
| 511 | 33500 | 4 | 4 | | | | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE | 4 | | | | | | | | | | |
| 511 | 34447 | 3,279 | 1,065 | 1,205 | 1,009 | | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN | | | 1,065 | | | 1,205 | | | 1,009 | 14 | |
| 511 | 34451 | 433 | 433 | | | | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN | | | 433 | | | | | | | 14 | |
| 511 | 34463 | 298 | | 147 | 151 | | CY | CLASS QC SCC CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN | | | | | | 147 | | | 151 | 14 | |
| 511 | 42512 | 131 | 46 | 43 | 42 | | CY | CLASS QCI CONCRETE WITH QC/QA, PIER CAP | | 46 | | | 43 | | | 42 | | | |
| 511 | 45712 | 80 | 20 | 32 | 28 | | CY | CLASS QCI CONCRETE WITH QC/QA, ABUTMENT | 20 | | | 32 | | | 28 | | | | |
| 512 | 10050 | 8,985 | 3,419 | 2,867 | 2,699 | | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | 208 | 667 | 2,544 | 550 | 715 | 1,602 | 543 | 806 | 1,350 | | |
| 512 | 10300 | 1,016 | | 603 | 413 | | SY | SEALING CONCRETE BRIDGE DECKS WITH HMMW RESIN | | | | | | 603 | | | 413 | | |
| 512 | 10601 | 100 | | | | 100 | FT | CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN | | | | | | | | | 100 | 14 | |
| 512 | 33000 | 131 | 31 | 49 | 51 | | SY | TYPE 2 WATERPROOFING | 31 | | | 49 | | | 51 | | | | |
| 513 | 10260 | 1,211,292 | 372,132 | 436,885 | 402,275 | | LB | STRUCTURAL STEEL MEMBERS, LEVEL 3 | | | 372,132 | | | 436,885 | | | 402,275 | | |
| 513 | 20000 | 39,198 | 14,355 | 12,276 | 12,567 | | EACH | WELDED STUD SHEAR CONNECTORS | | | 14,355 | | | 12,276 | | | 12,567 | | |
| 514 | 00050 | 193,100 | 76,700 | 57,400 | 59,000 | | SF | SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL | | | 76,700 | | | 57,400 | | | 59,000 | | |
| 514 | 00056 | 193,100 | 76,700 | 57,400 | 59,000 | | SF | FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT | | | 76,700 | | | 57,400 | | | 59,000 | | |
| 514 | 00061 | 262,000 | 97,000 | 84,300 | 80,700 | | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN | | | 97,000 | | | 84,300 | | | 80,700 | 14 | |
| 514 | 00067 | 262,000 | 97,000 | 84,300 | 80,700 | | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN | | | 97,000 | | | 84,300 | | | 80,700 | 14 | |
| 514 | 00504 | 108 | 43 | 33 | 32 | | MNHR | GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL | | | 43 | | | 33 | | | 32 | | |
| 514 | 10000 | 104 | 37 | 41 | 26 | | EACH | FINAL INSPECTION REPAIR | | | 37 | | | 41 | | | 26 | | |
| 516 | 11211 | 248 | 75 | 98 | 75 | | FT | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN | | 75 | | | 98 | | | | 75 | 146 | |
| 516 | 13601 | 60 | 40 | 10 | 10 | | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 40 | | | 10 | | | 10 | | | 14 | |
| 516 | 13901 | 287 | 175 | 54 | 58 | | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 175 | | | 54 | | | 58 | | | 14 | |
| 516 | 14020 | 298 | 77 | 124 | 97 | | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | 77 | | | 124 | | | 97 | | | | |
| 516 | 14600 | 330 | 95 | 128 | 107 | | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 95 | | | 128 | | | 107 | | | 151 | |
| 516 | 44101 | 90 | 32 | 28 | 30 | | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN , DIMENSIONS VARY | 12 | 20 | | 11 | 17 | | 12 | 18 | | 69 | |
| 516 | 46900 | 20 | 8 | 6 | 6 | | EACH | BEARING DEVICE, MISC.: ELASTOMERIC BEARING WITH INTERNAL LAMINATES, LOAD PLATE, AND PTFE SURFACE | | 8 | | | 6 | | | 6 | | 71 | |
| 516 | 46900 | 55 | 20 | 17 | 18 | | EACH | BEARING DEVICE, MISC.: SEISMIC ISOLATION BEARING | | 20 | | | 17 | | | 18 | | 73 | |
| 516 | 47001 | LS | | | | LS | | JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN | | | | | | | | | LS | 14 | |
| 518 | 12201 | 52 | 17 | 13 | 22 | | EACH | SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN | | | 17 | | | 13 | | | 22 | 14 | |
| 518 | 21200 | 35 | 11 | 14 | 10 | | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | 11 | | | 14 | | | 10 | | | | |
| 518 | 63300 | LS | | | | LS | | STRUCTURE DRAINAGE, MISC.: BRIDGE DRAINAGE SYSTEM, AS PER PLAN | | | | | | | | | LS | 14 | |
| 519 | 11101 | 1,000 | | | | 1,000 | SF | PATCHING CONCRETE STRUCTURE, AS PER PLAN | | | | | | | | | 1,000 | 14 | |
| 526 | 25010 | 798 | 194 | 334 | 270 | | SY | REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15") | | | 194 | | | 334 | | | 270 | | |
| SPECIAL | 53000200 | LS | LS | LS | LS | | | STRUCTURES - MEASUREMENTS FOR PROPOSED BEARINGS | | | LS | | | LS | | | LS | 12 | |
| SPECIAL | 53000600 | 5,766 | | 2,811 | 2,955 | | SF | STRUCTURES - AESTHETIC TREATMENT (CONCRETE FORMLINER/STAIN) | | | | | | 2,811 | | | 2,955 | 14 | |
| 607 | 39900 | 1,883 | | 916 | 967 | | FT | VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC | | | | | | 916 | | | 967 | | |
| 607 | 39930 | 886 | | 886 | | | FT | VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC | | | | | | 886 | | | | | |
| 613 | 41201 | 646 | 166 | 250 | 230 | | CY | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 166 | | | 250 | | | 230 | | | 14 | |

DESIGN AGENCY: **Gannett Fleming**
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

DATE: 12/2020
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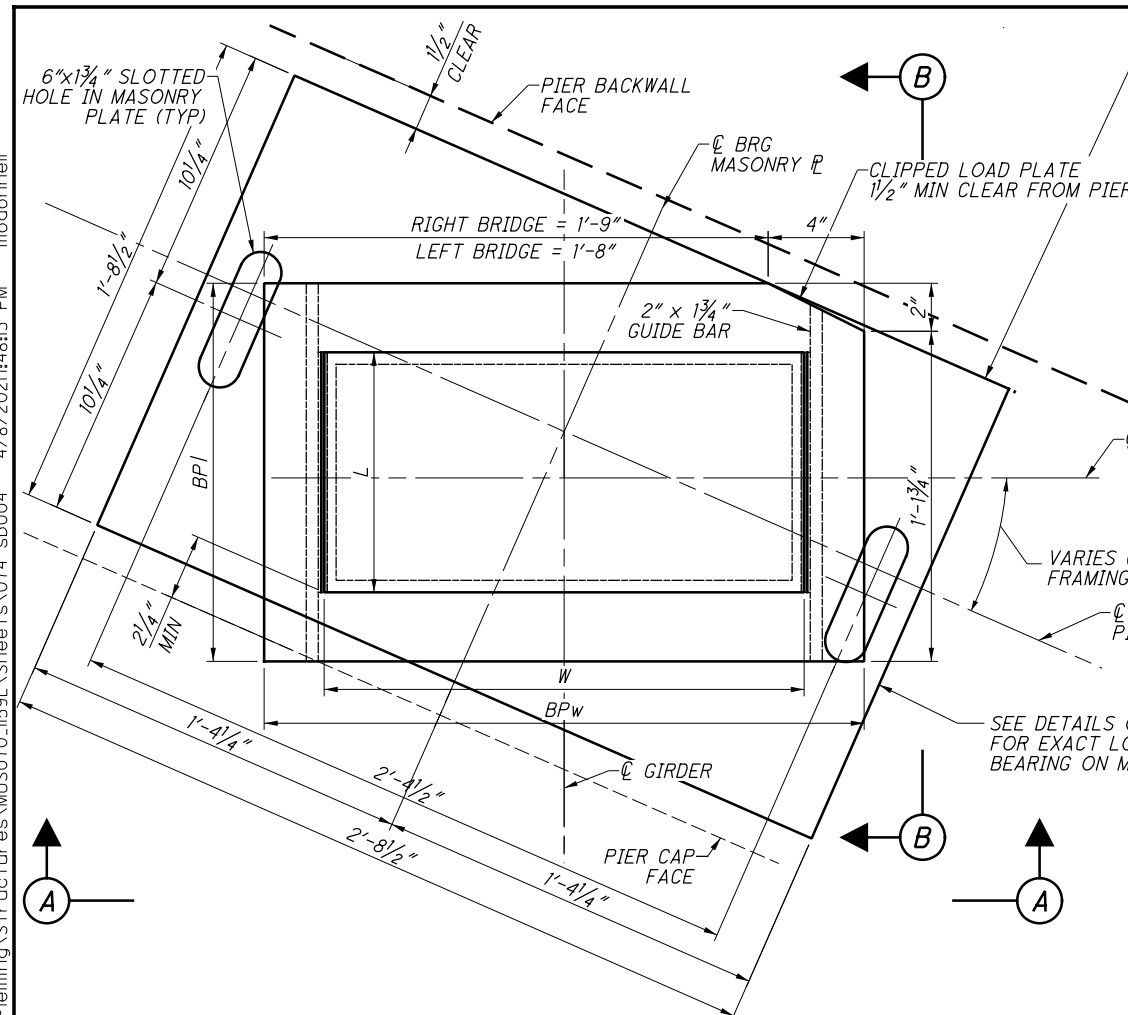
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BRIDGE SUMMARY
 BRIDGE NO.: MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

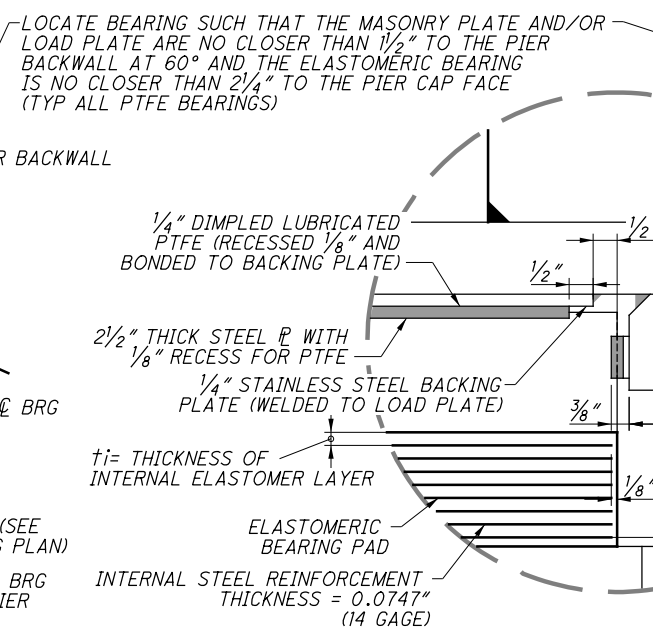
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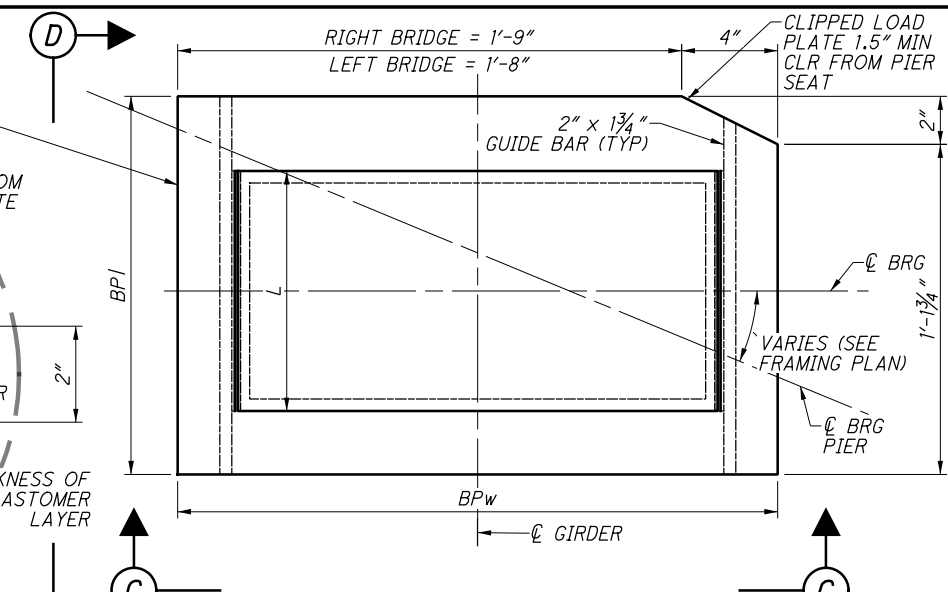


EXPANSION BEARING WITH MASONRY PLATE
 PIER 2 (FWD) SHOWN, PIER 7 (REAR) SIMILAR. TYP AT GIRDERS 3 & 8

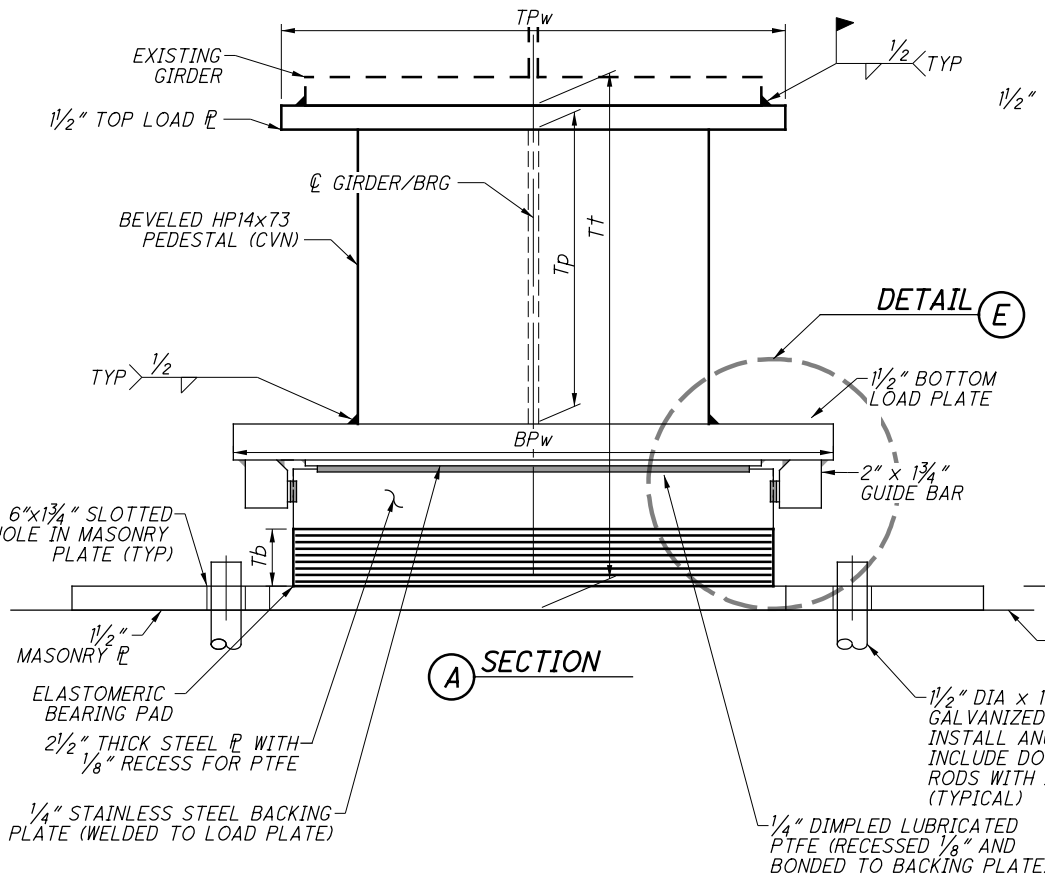


(E) DETAIL

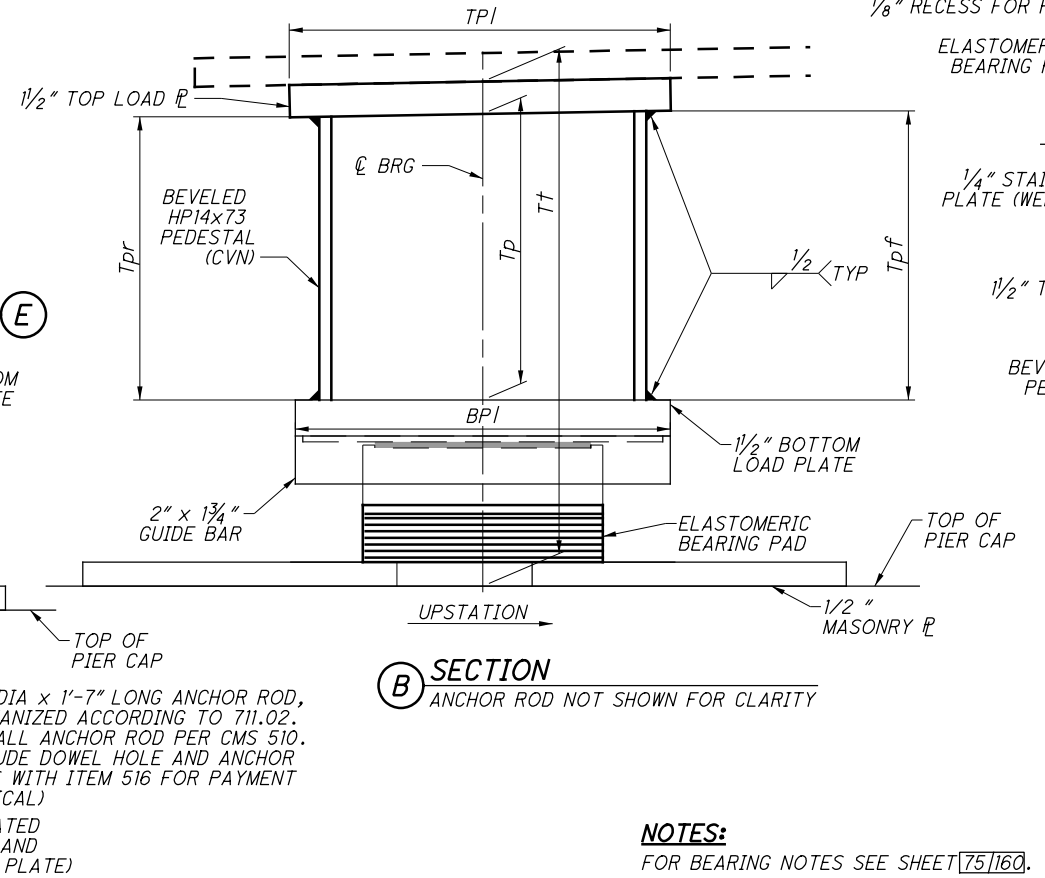
| MAX REACTION TABLE FOR PTFE BEARINGS | | | | |
|--------------------------------------|--------------|------------------|------------------|-------------------|
| SUPPORT | BEARING TYPE | DEAD LOAD (KIPS) | LIVE LOAD (KIPS) | TOTAL LOAD (KIPS) |
| PIER 2 (FWD)-LEFT BRIDGE | EXP | 91.23 | 128.88 | 220.11 |
| PIER 2 (FWD)-RIGHT BRIDGE | EXP | 128.99 | 115.41 | 244.4 |
| PIER 7 (REAR)-LEFT BRIDGE | EXP | 91.3 | 123.5 | 214.8 |
| PIER 7 (REAR)-RIGHT BRIDGE | EXP | 110.71 | 98.5 | 209.21 |



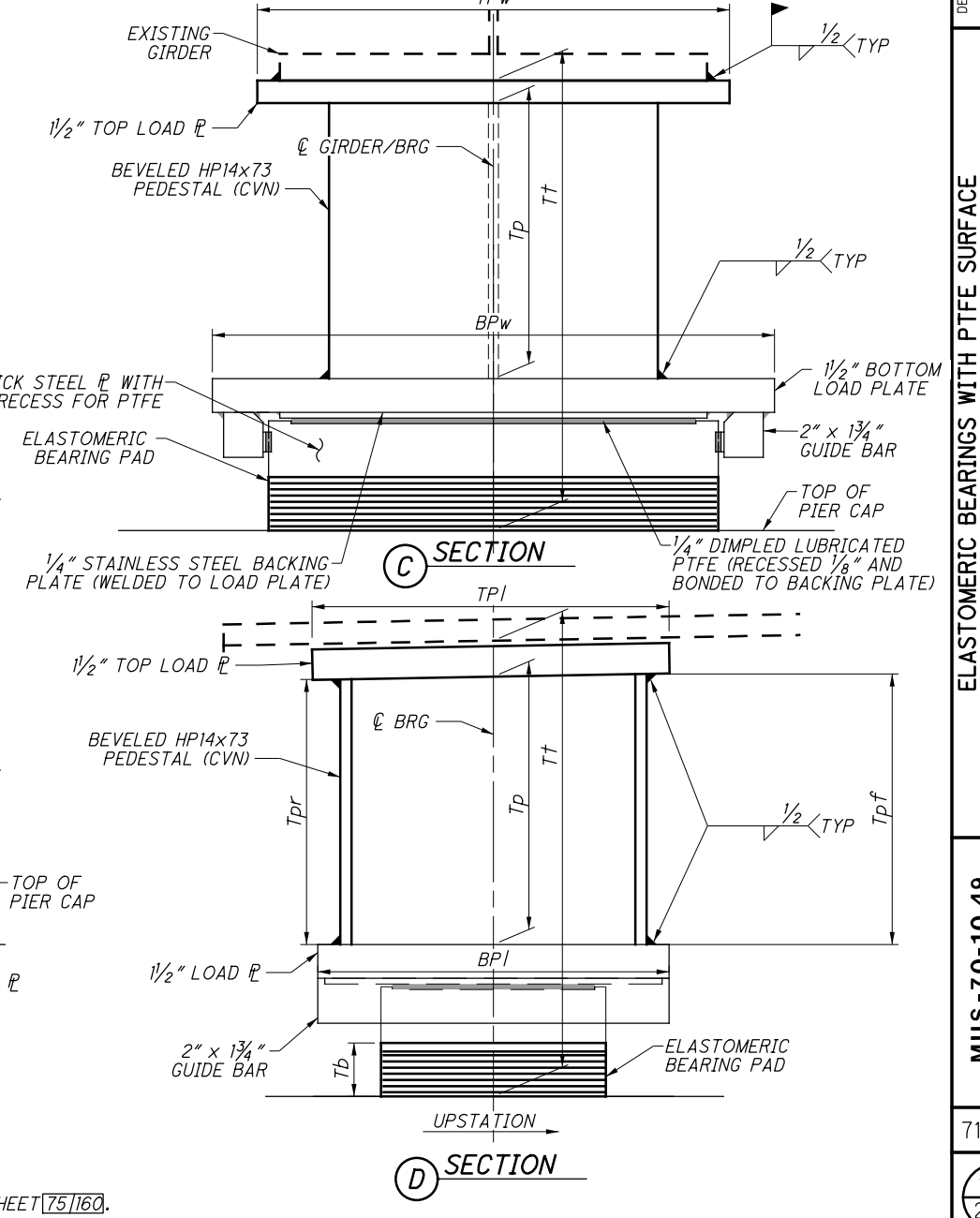
EXPANSION BEARING WITHOUT MASONRY PLATE
 TYPICAL AT PIER 2 (REAR) AND PIER 7 (FWD) GIRDERS 1,2,4,5,6,7,9, & 10



(A) SECTION



(B) SECTION
 ANCHOR ROD NOT SHOWN FOR CLARITY



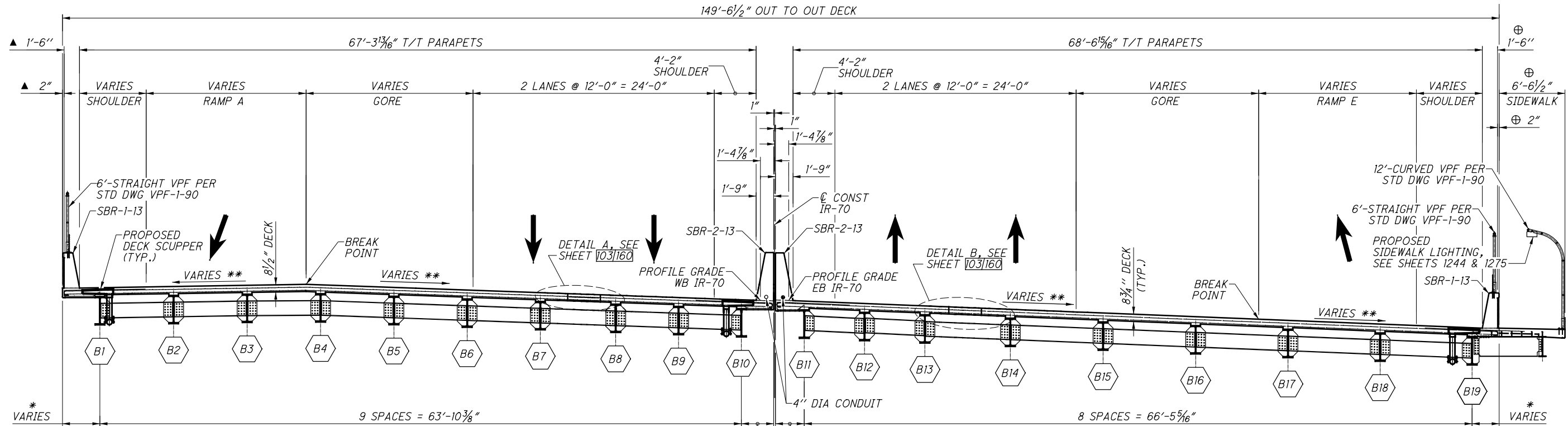
(C) SECTION

(D) SECTION

NOTES:
 FOR BEARING NOTES SEE SHEET 75/160.

DESIGN AGENCY: **GannettFleming**
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBIUS, OHIO 43231
 DATE: 12/2020
 MTO: MTO
 STRUCTURE FILE NUMBER: 6002854
 DRAWN: RSN
 REVISION: REVISED
 CHECKED: DSF
 DESIGNED: RSN
 BRIDGE NO.: MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER
MUS-70-10.49
PID No. 93006
 71 / 160
 1517
 2231

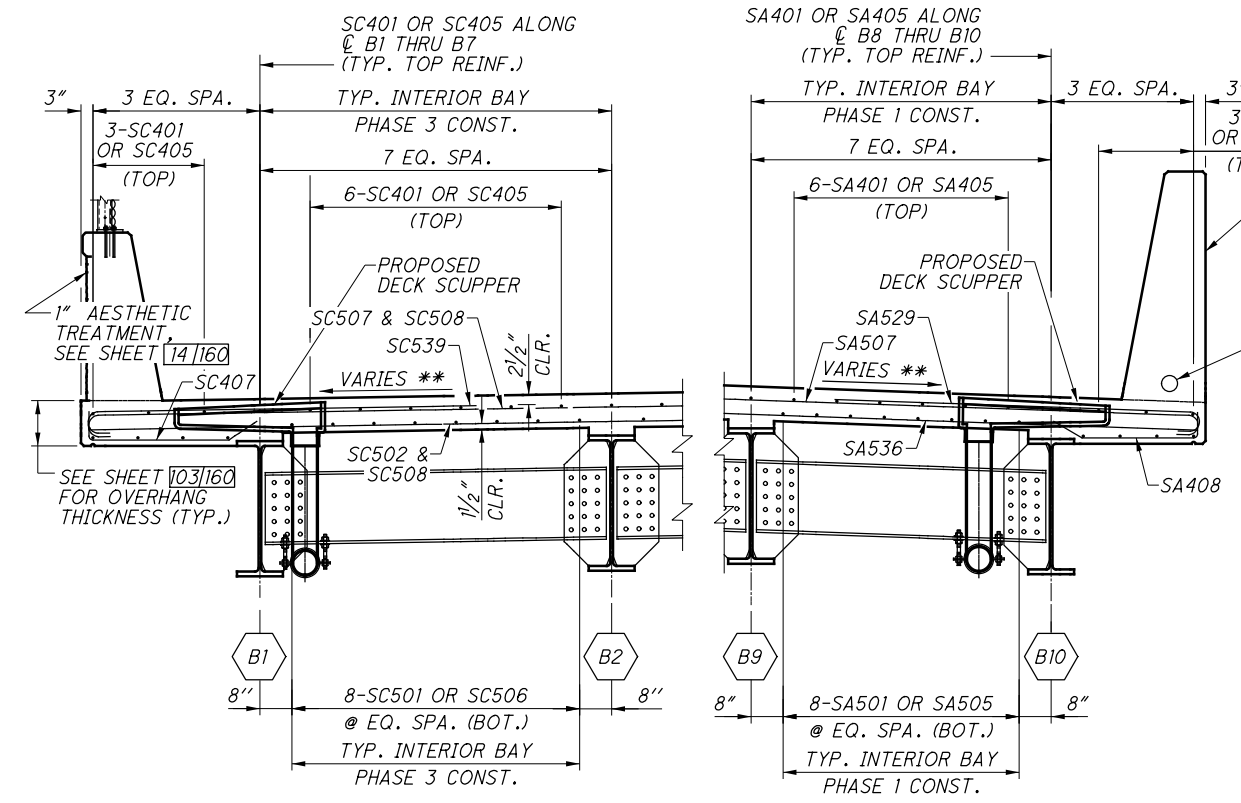
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TRANSVERSE SECTION AT REAR ABUTMENT
LOOKING UPSTATION

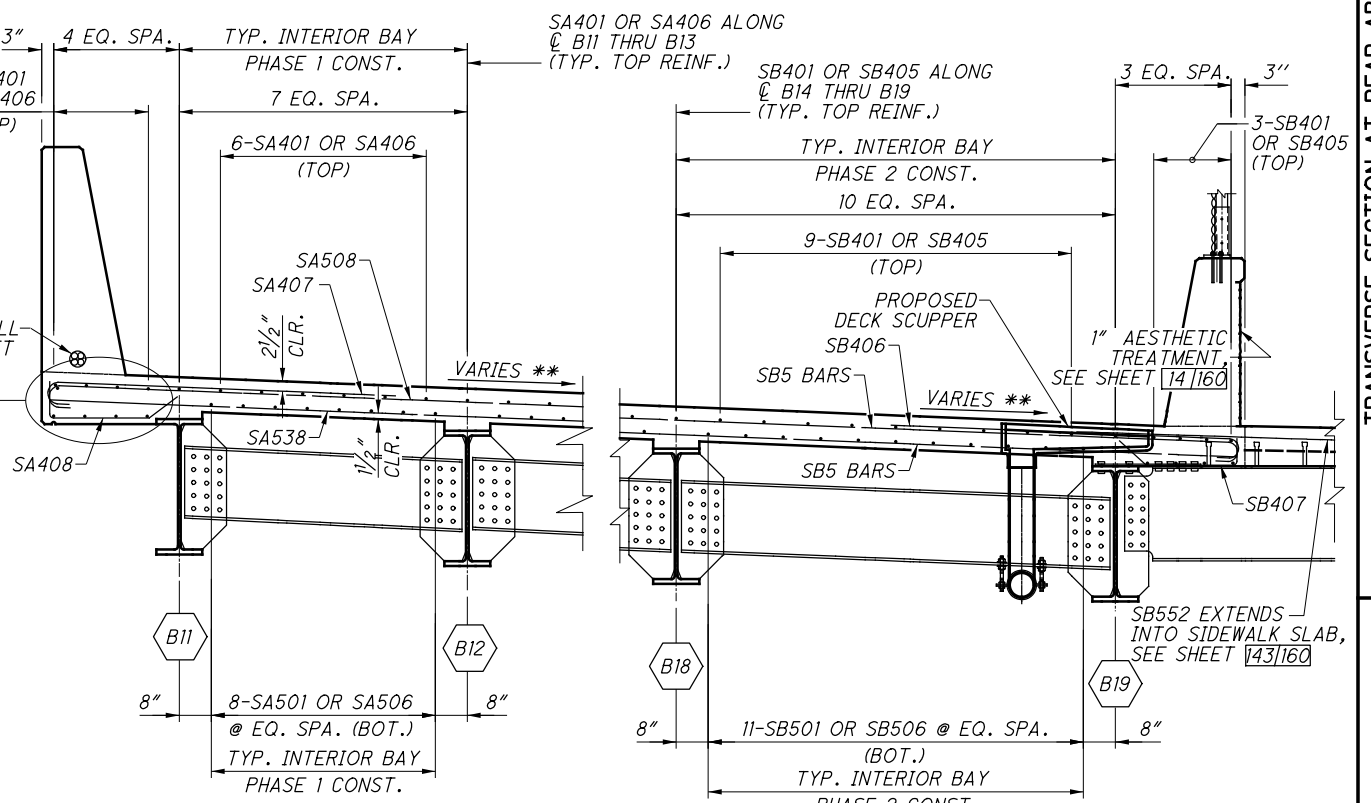
* SEE SHEET 114/160 FOR HORIZONTAL OVERHANG OFFSETS.

** SEE SHEET 9/160 TO 11/160 FOR SUPERELEVATION DIAGRAMS.



REINFORCING DETAILS-WEST BOUND STRUCTURE

| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |



REINFORCING DETAILS-EAST BOUND STRUCTURE

- ▲ DIMENSION MEASURED PERPENDICULAR TO @ CONST RAMP A.
- ⊕ DIMENSION MEASURED PERPENDICULAR TO @ CONST RAMP E.

- NOTES:**
- DIMENSIONS ARE MEASURED PERPENDICULAR TO @ CONST IR-70 UNLESS NOTED OTHERWISE.
 - SEE SHEET 103/160 FOR CLOSURE POUR DETAILS AND ADDITIONAL NOTES.
 - REFER TO SHEET 1897 OF 2231 FOR ADDITIONAL PARAPET AESTHETIC DETAILS.

Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBIUS, OHIO 43231

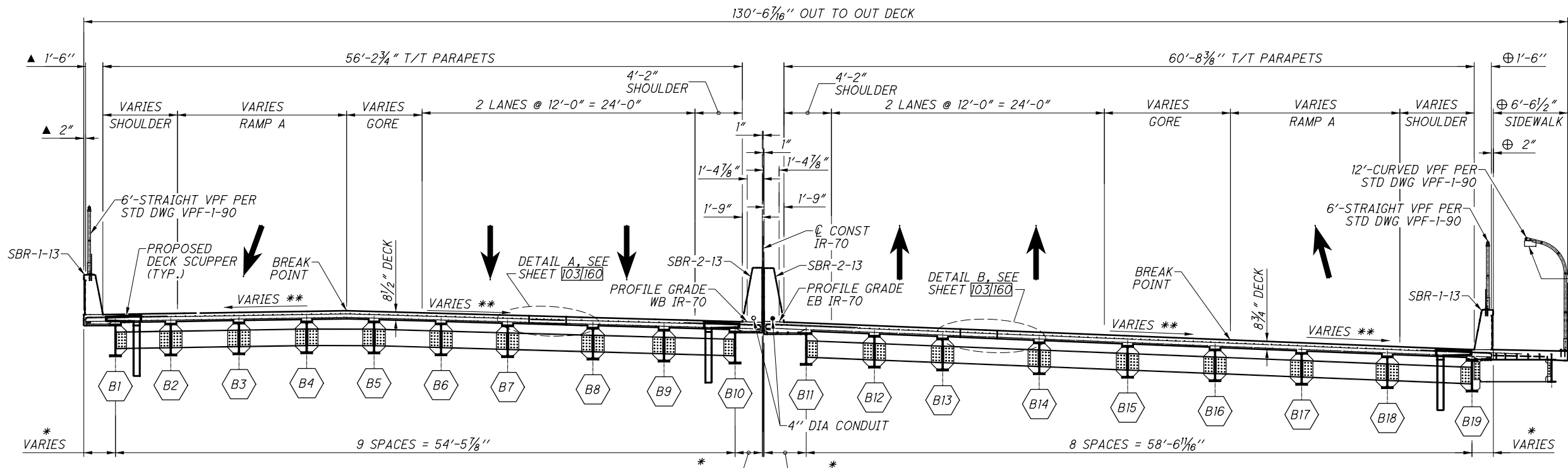
DESIGN AGENCY
 DATE 12/2020
 REVIEWED MTO
 DRAWN JMM
 DESIGNED TMF
 CHECKED JAY

BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

MUS-70-10-49
 PID No. 93006

98/160
 1544
 2231

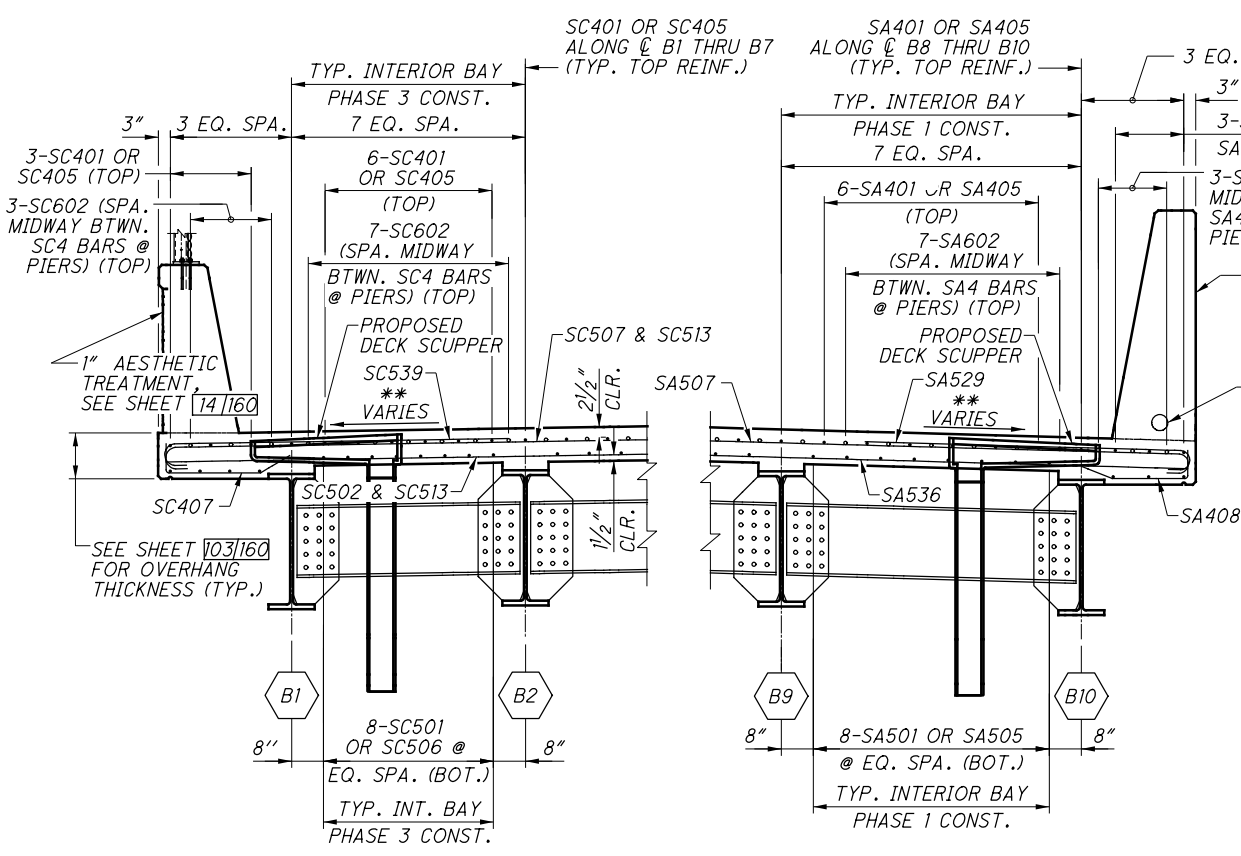
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TRANSVERSE SECTION AT PIER 1
LOOKING UPSTATION

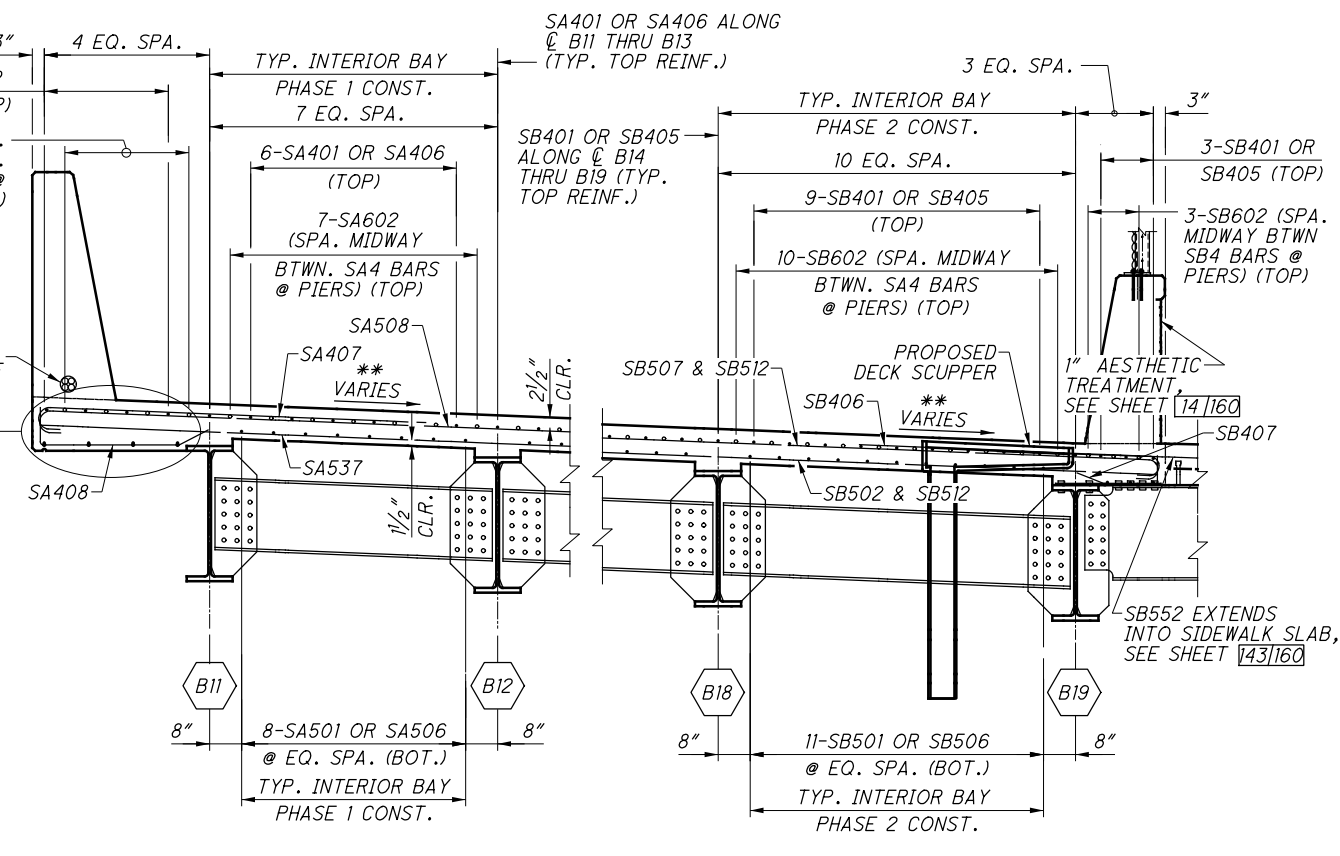
* SEE SHEET 1141160 FOR HORIZONTAL OVERHANG OFFSETS.

** SEE SHEET 91160 TO 111160 FOR SUPERELEVATION DIAGRAMS.



REINFORCING DETAILS-WEST BOUND STRUCTURE

| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

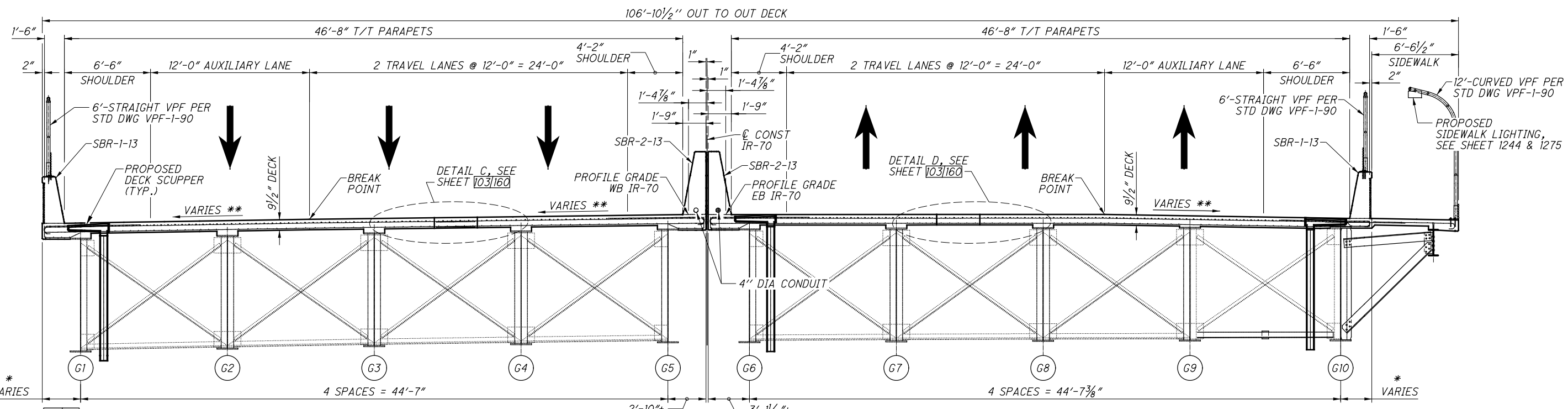


REINFORCING DETAILS-EAST BOUND STRUCTURE

- NOTES:**
- DIMENSIONS ARE MEASURED PERPENDICULAR TO \varnothing CONST IR-70 UNLESS NOTED OTHERWISE.
 - SEE SHEET 1031160 FOR CLOSURE POUR DETAILS AND ADDITIONAL NOTES.
 - REFER TO SHEET 1897 OF 2231 FOR ADDITIONAL PARAPET AESTHETIC DETAILS.

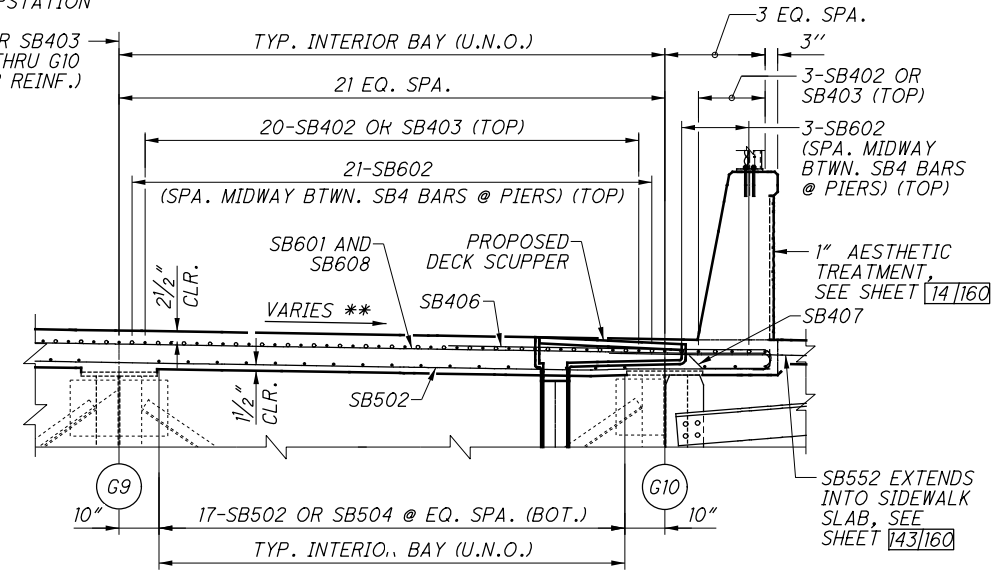
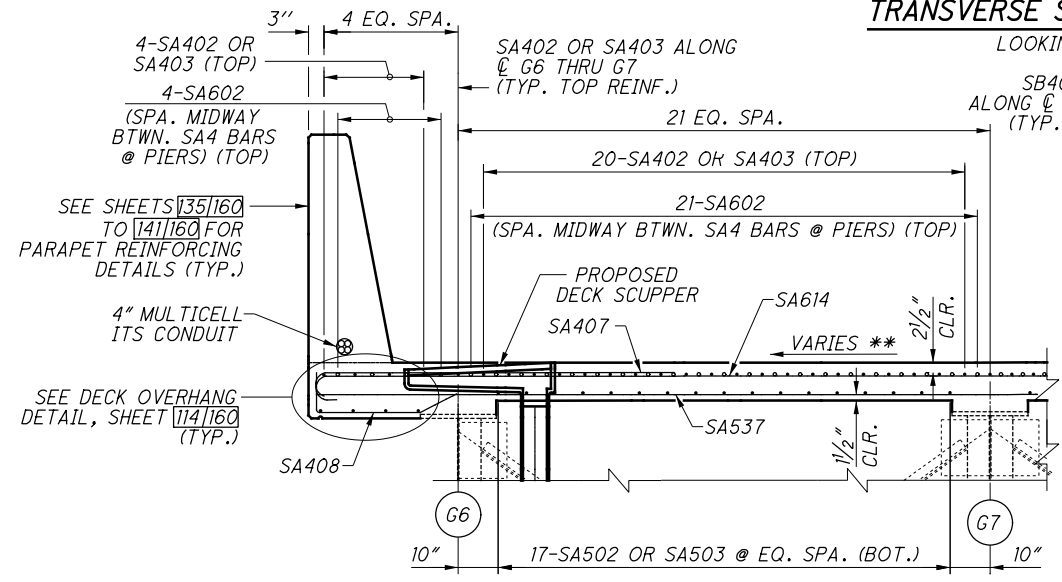
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231
 DESIGN AGENCY
 DATE: 12/2020
 REVIEWED: MTO
 DRAWN: JIM
 CHECKED: JAY
 STRUCTURE FILE NUMBER: 6002854
 BRIDGE NO.: MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER
MUS-70-10.49
PID No. 93006
 99/160
 1545
 2231

SUBMITTAL Stage 3
 PLOT DRIVER: 000Tcodd_PDF.plt
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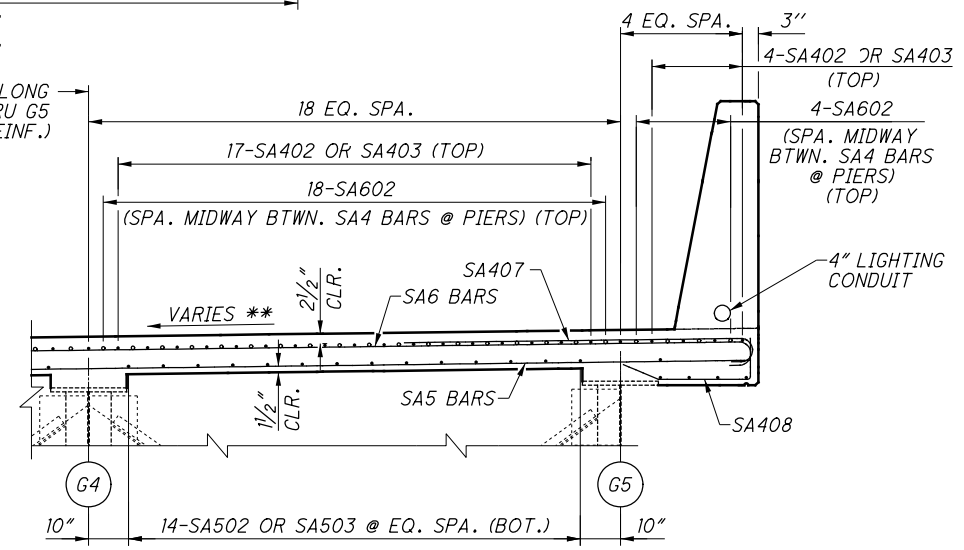
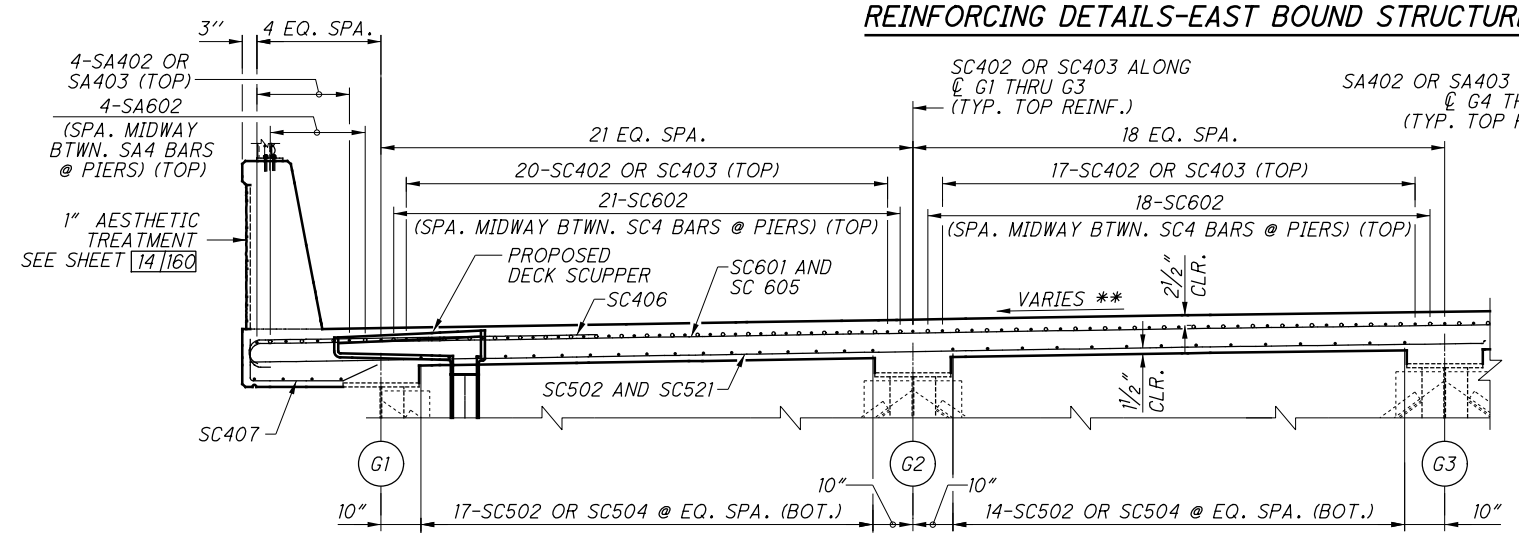
* SEE SHEET 1141160 FOR HORIZONTAL OVERHANG OFFSETS.

** SEE SHEET 91160 TO 111160 FOR SUPERELEVATION DIAGRAMS.

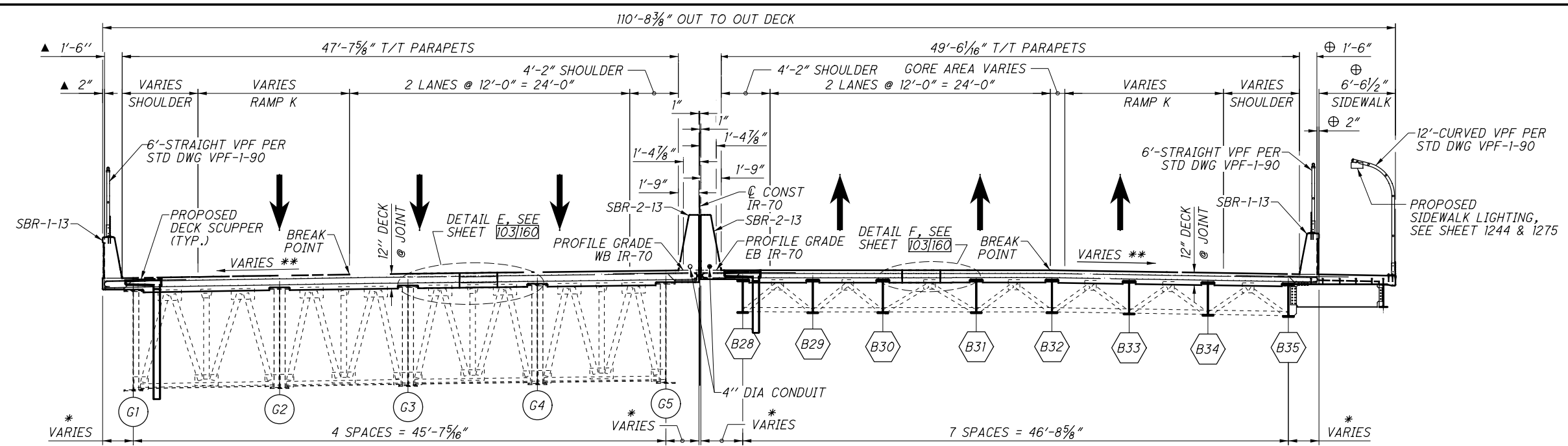


| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

- NOTES:**
- DIMENSIONS ARE MEASURED PERPENDICULAR TO ϕ CONST IR-70 UNLESS NOTED OTHERWISE.
 - SEE SHEET 1031160 FOR CLOSURE POUR DETAILS AND ADDITIONAL NOTES.
 - REFER TO SHEET 1897 OF 2231 FOR ADDITIONAL PARAPET AESTHETIC DETAILS.

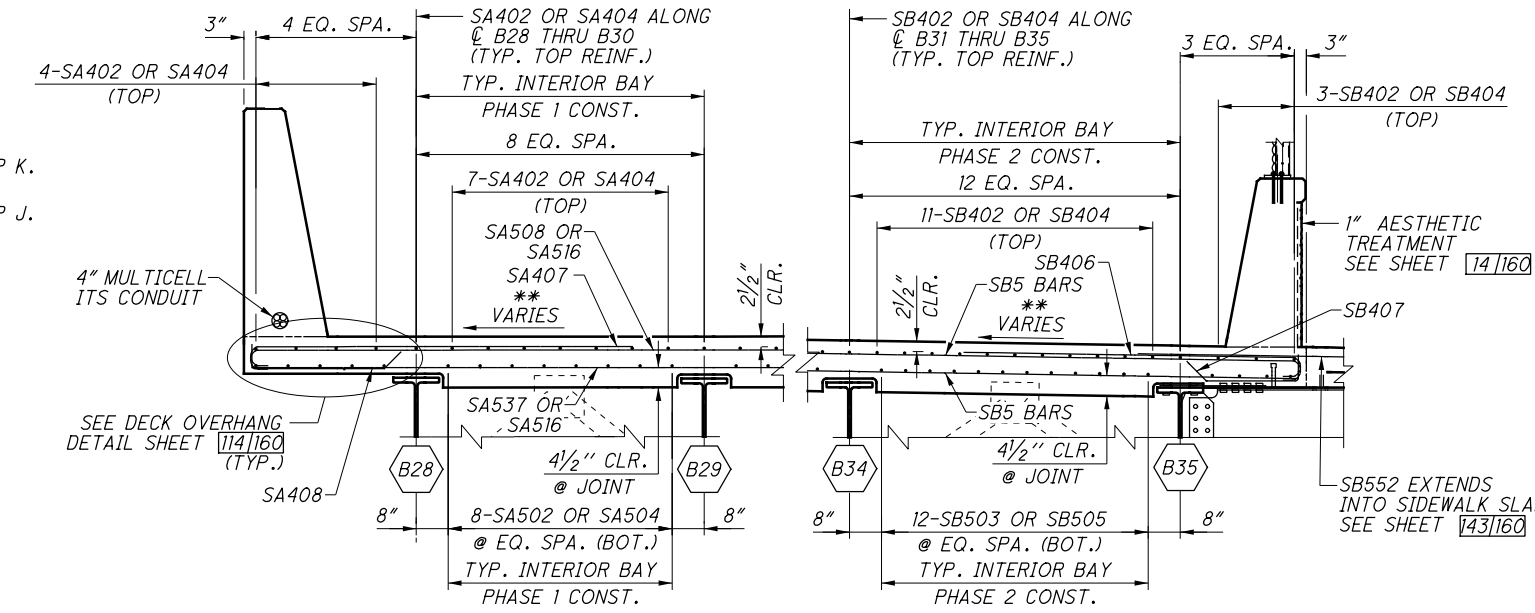


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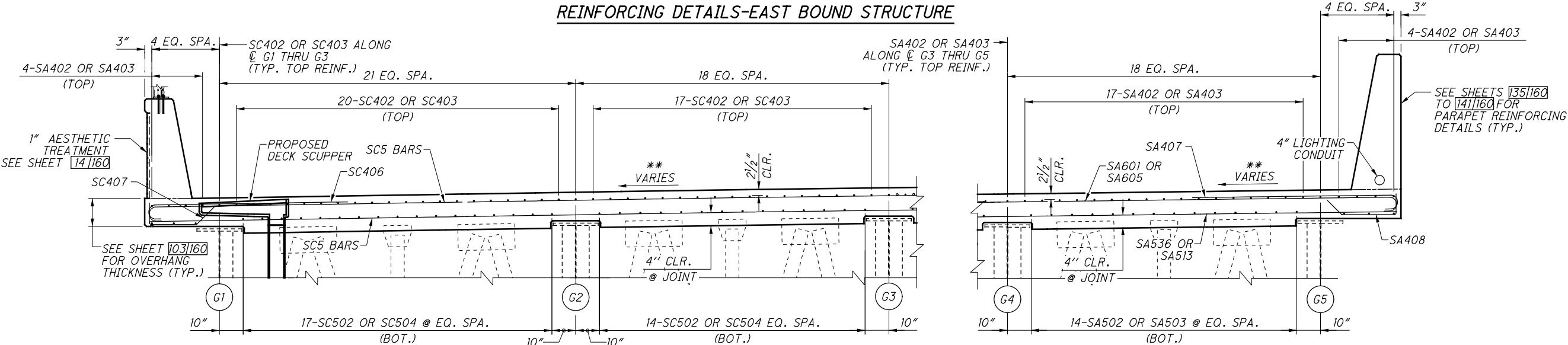
TRANSVERSE SECTION AT PIER 7 (REAR)
 LOOKING UPSTATION
TRANSVERSE SECTION AT PIER 7 (FORWARD)
 LOOKING UPSTATION

** SEE SHEET [9/160] TO [11/160] FOR SUPERELEVATION DIAGRAMS.



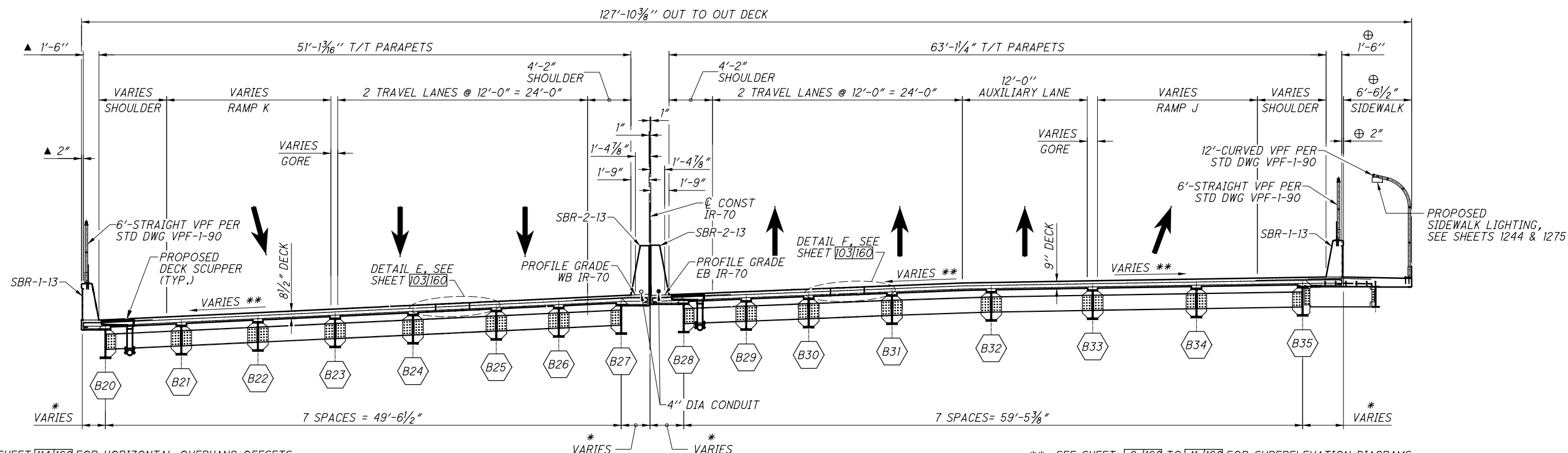
| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

- NOTES:**
- DIMENSIONS ARE MEASURED PERPENDICULAR TO @ CONST IR-70 UNLESS NOTED OTHERWISE.
 - SEE SHEET [103/160] FOR CLOSURE POUR DETAILS AND ADDITIONAL NOTES.
 - REFER TO SHEET 1897 OF 2231 FOR ADDITIONAL PARAPET AESTHETIC DETAILS.



REINFORCING DETAILS-EAST BOUND STRUCTURE
REINFORCING DETAILS-WEST BOUND STRUCTURE

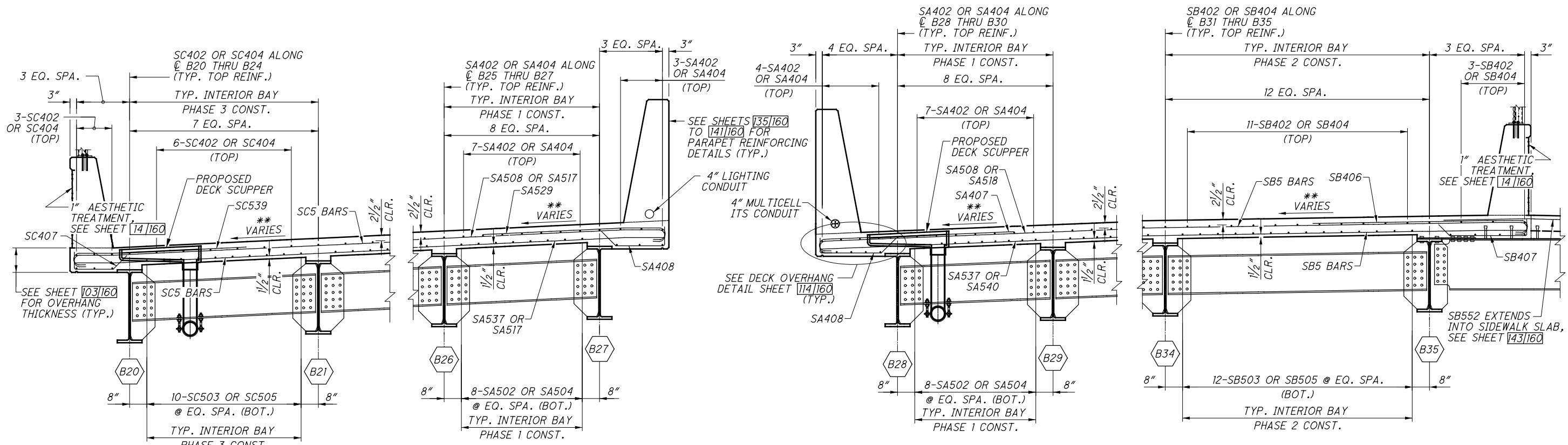
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* SEE SHEET 1141160 FOR HORIZONTAL OVERHANG OFFSETS.

** SEE SHEET 91160 TO 111160 FOR SUPERELEVATION DIAGRAMS.

TRANSVERSE SECTION AT FORWARD ABUTMENT
LOOKING UPSTATION



REINFORCING DETAILS-WEST BOUND STRUCTURE

REINFORCING DETAILS-EAST BOUND STRUCTURE

| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

- ▲ DIMENSION MEASURED PERPENDICULAR TO @ CONST RAMP K.
- ⊕ DIMENSION MEASURED PERPENDICULAR TO @ CONST RAMP J.

NOTES:

1. DIMENSIONS ARE MEASURED PERPENDICULAR TO @ CONST IR-70 UNLESS NOTED OTHERWISE.
2. SEE SHEET 1031160 FOR CLOSURE POUR DETAILS AND ADDITIONAL NOTES.
3. REFER TO SHEET 1897 OF 2231 FOR ADDITIONAL PARAPET AESTHETIC DETAILS.

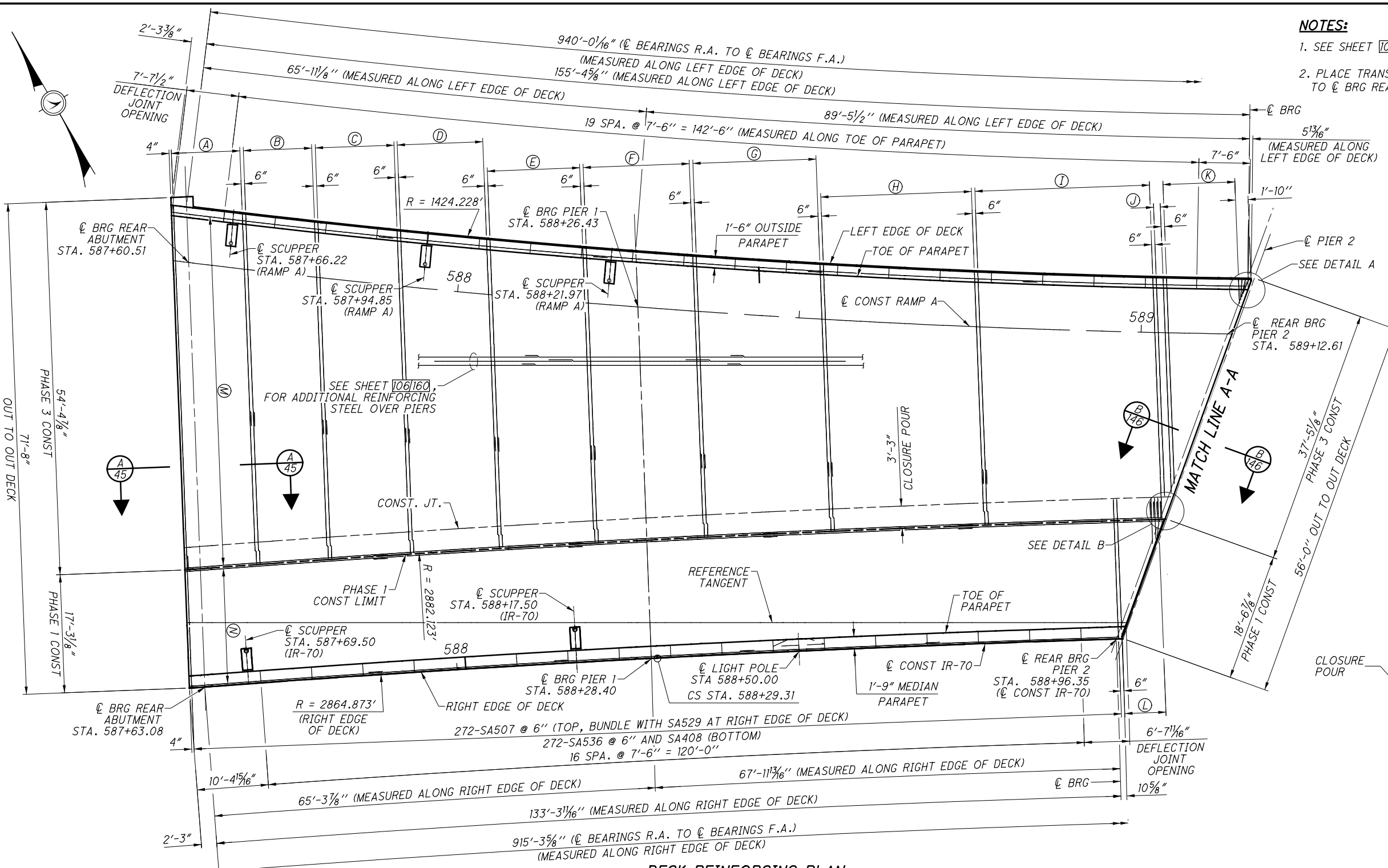
Gannett Fleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DESIGN AGENCY
 DATE 12/2020
 MTO
 STRUCTURE FILE NUMBER 6002854
 DRAWN JM
 REVISIONS
 DESIGNED TMF
 CHECKED JAY

MUS-70-10.49
 PID No. 93006
 BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

TRANSVERSE SECTION AT FORWARD ABUTMENT

102/160
 1548
 2231



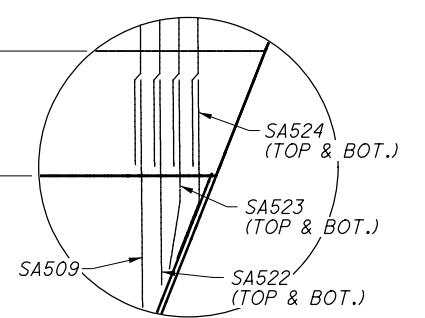
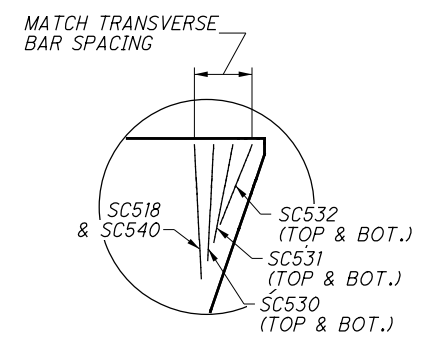
DECK REINFORCING PLAN
 LEFT SPAN 1 AND SPAN 2

- (A) = 21-SC507 AND SC508 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 21-SC502, SC508 @ 6" AND SC407 (BOTTOM)
- (B) = 21-SC507 AND SC509 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 21-SC502, SC509 @ 6" AND SC407 (BOTTOM)
- (C) = 24-SC507 AND SC510 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 24-SC502, SC510 @ 6" AND SC407 (BOTTOM)
- (D) = 26-SC507 AND SC511 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 26-SC502, SC511 @ 6" AND SC407 (BOTTOM)
- (E) = 28-SC507 AND SC512 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 28-SC502, SC512 @ 6" AND SC407 (BOTTOM)
- (F) = 32-SC507 AND SC513 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 32-SC502, SC513 @ 6" AND SC407 (BOTTOM)
- (G) = 37-SC507 AND SC514 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 37-SC502, SC514 @ 6" AND SC407 (BOTTOM)
- (H) = 45-SC507 AND SC515 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 45-SC502, SC515 @ 6" AND SC407 (BOTTOM)
- (I) = 52-SC507 AND SC516 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 52-SC502, SC516 @ 6" AND SC407 (BOTTOM)
- (J) = 4-SC507 AND SC517 @ 6" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
 4-SC502, SC517 @ 6" AND SC407 (BOTTOM)
- (K) = 1 S.O. 21-SC518 @ 6" (TOP, BUNDLE WITH SC539 AT LEFT EDGE OF DECK)
 1 S.O. 21-SC540 @ 6" AND SC407 (BOTTOM)
- (L) = 1 S.O. 11-SA509 @ 6" (TOP)
 1 S.O. 11-SA509 @ 6" (BOTTOM)
- (M) = 53-SC401 (5 LENGTHS) LAPPED WITH 1 S.O. 53-SC405 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
 60-SC501 (5 LENGTHS) LAPPED WITH 1 S.O. 60-SC506 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- (N) = 19-SA401 (5 LENGTHS) LAPPED WITH 1 S.O. 19-SA405 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
 22-SA501 (5 LENGTHS) LAPPED WITH 1 S.O. 22-SA505 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)

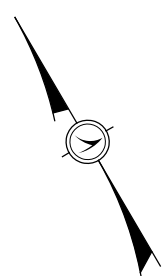
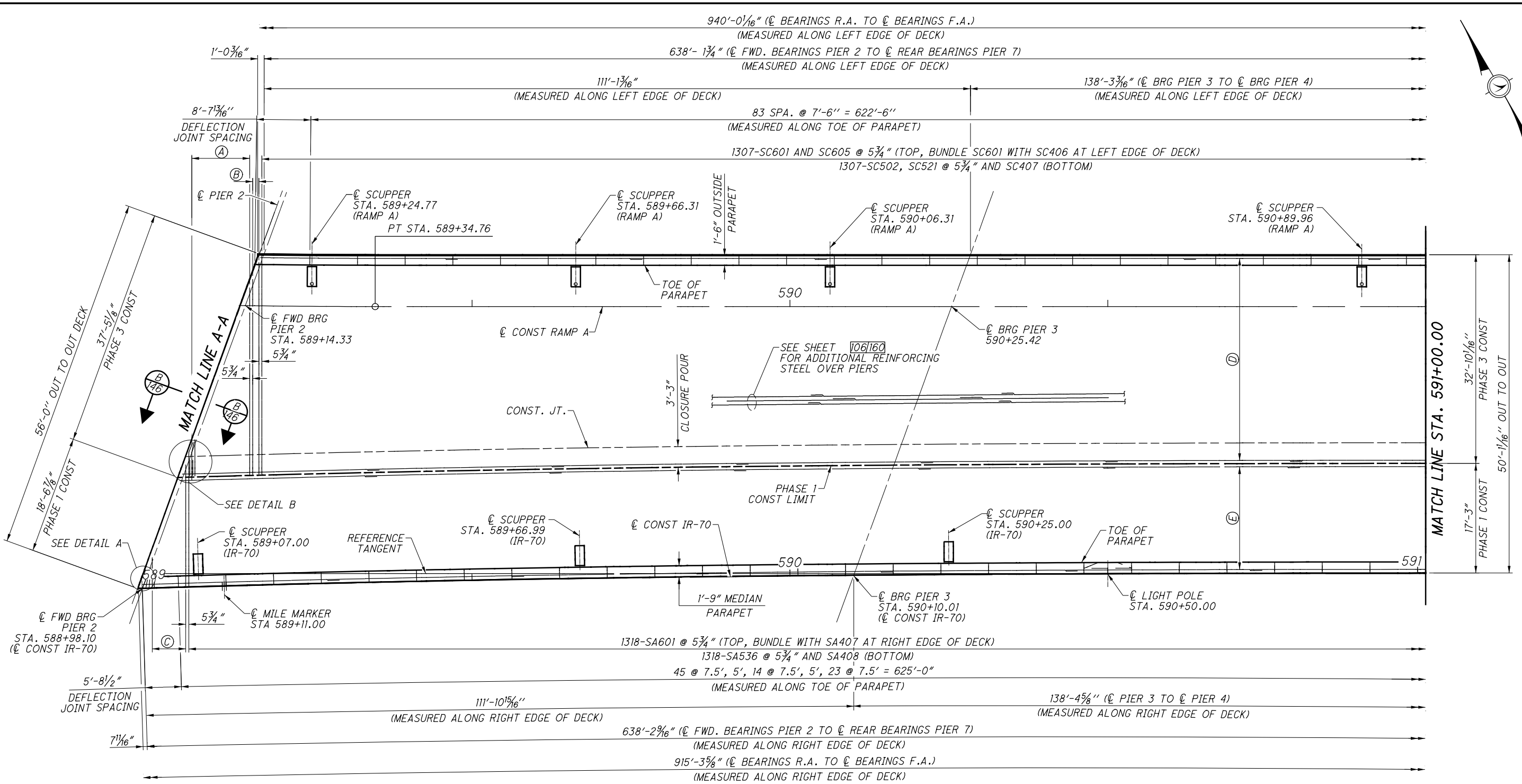
NOTES:
 1. SEE SHEET 103160 FOR ADDITIONAL NOTES AND LEGEND.
 2. PLACE TRANSVERSE REINFORCEMENT PARALLEL TO BRG REAR ABUTMENT.

MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.)

| | |
|----|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |



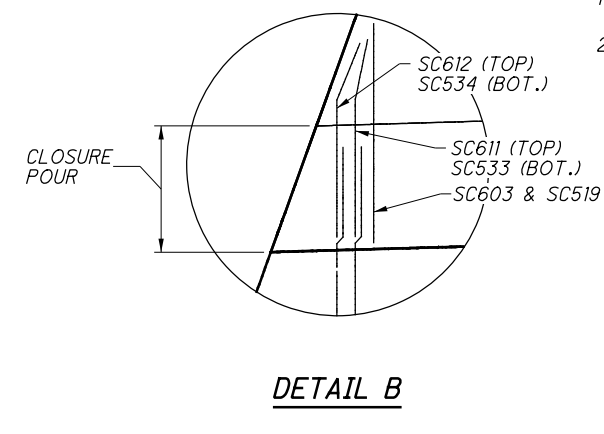
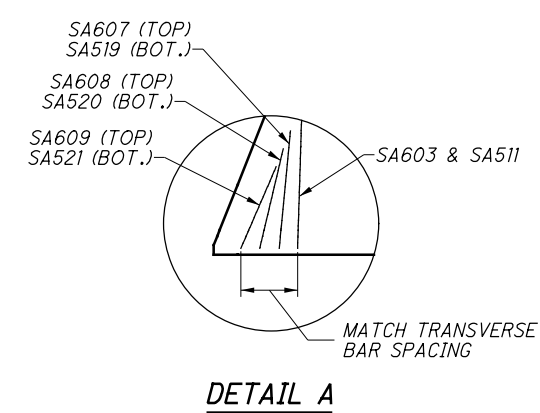
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Design Agency: GannettFleming ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE, SUITE 230 COLUMBUS, OHIO 43231
BRIDGE NO.: MUS-70-1159
OVER: LINDEN AVE., OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER
DATE: 12/2020
REVIEWED: MTO
STRUCTURE FILE NUMBER: 6002854
DESIGNED: JAY
CHECKED: RDF
DRAWN: JM
REVISED:
LEFT SPAN 3 AND 4 DECK REINFORCING PLAN
MUS-70-10.49
PID No. 93006
 105/160
 1551
 2231

- (A) = 1 S.O. 19-SC603 @ 5 3/4" (TOP)
1 S.O. 19-SC519 @ 5 3/4" (BOTTOM)
- (B) = 3-SC613 AND 3-SC604 @ 5 3/4" (TOP)
3-SC502 AND 3-SC520 @ 5 3/4" (BOTTOM)
- (C) = 1 S.O. 12-SA603 @ 5 3/4" (TOP, BUNDLE WITH SA407 AT RIGHT EDGE OF DECK)
1 S.O. 12-SA511 @ 5 3/4" AND SA408 (BOTTOM)
- (D) = 56-SC402 (23 LENGTHS) LAPPED WITH 56-SC403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
46-SC502 (23 LENGTHS) LAPPED WITH 46-SC504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- (E) = 27-SA402 (23 LENGTHS) LAPPED WITH 27-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
22-SA502 (23 LENGTHS) LAPPED WITH 22-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)

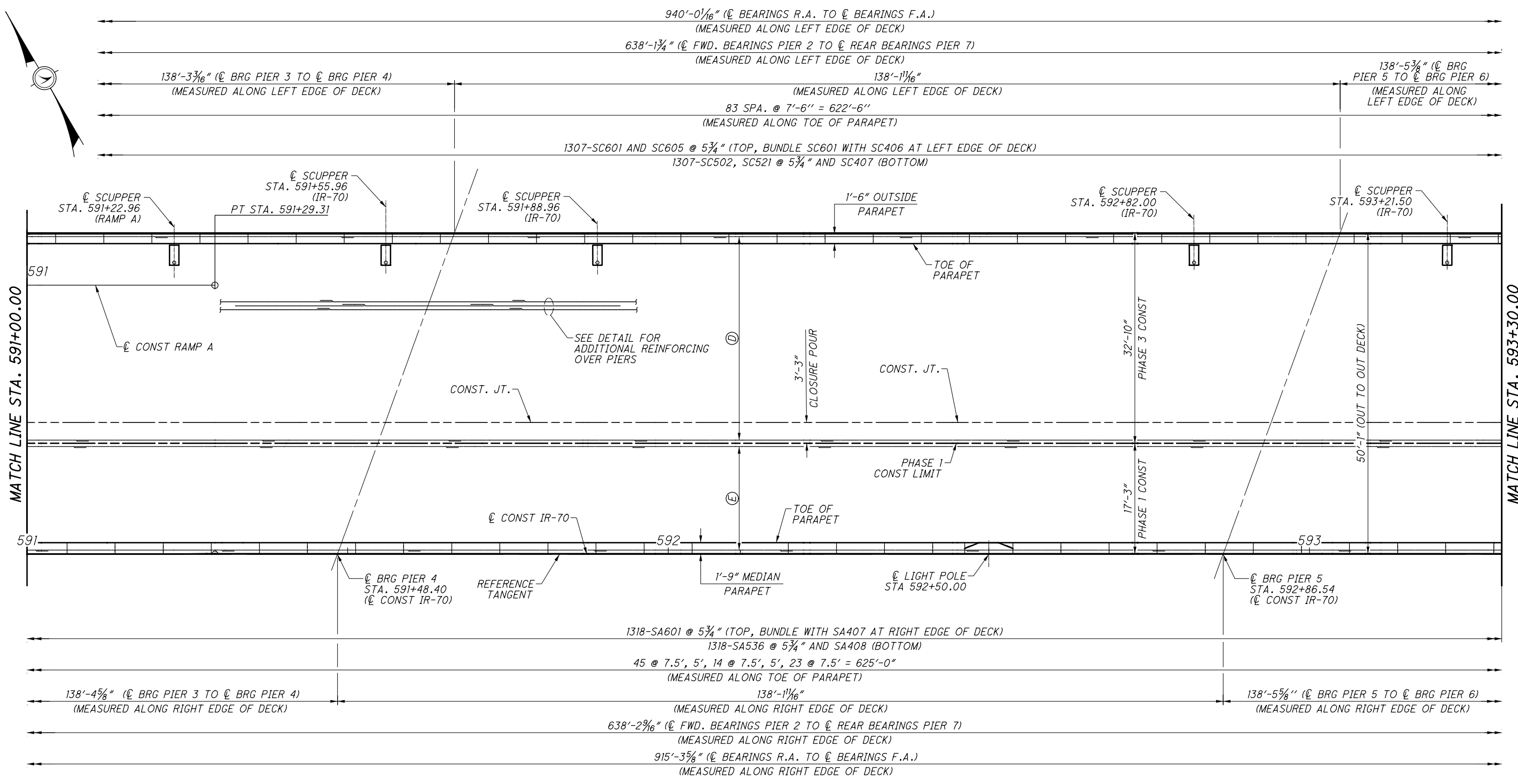
DECK REINFORCING PLAN
LEFT SPAN 3 AND 4



| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

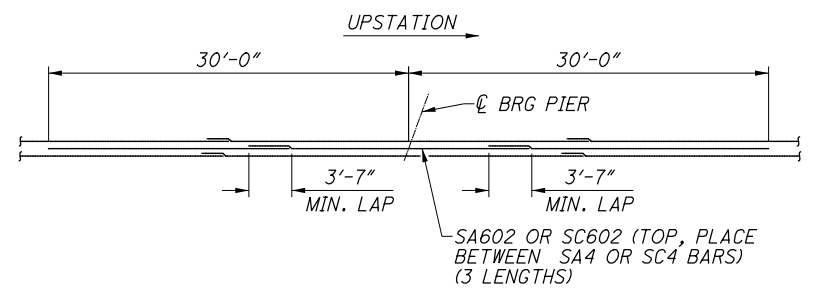
- NOTES:**
- SEE SHEET 1031160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.

SUBMITTAL: Stage 3
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DECK REINFORCING PLAN
LEFT SPAN 4, 5 AND 6

- Ⓛ = 56-SC402 (23 LENGTHS) LAPPED WITH 56-SC403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
46-SC502 (23 LENGTHS) LAPPED WITH 46-SC504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- Ⓧ = 27-SA402 (23 LENGTHS) LAPPED WITH 27-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
22-SA502 (23 LENGTHS) LAPPED WITH 22-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)



ADDITIONAL REINFORCEMENT OVER PIERS

- NOTES:**
- SEE SHEET 103160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.

| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

GannettFleming
 ENGINEERS & ARCHITECTS, P.C.
 2800 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DESIGN AGENCY
 DATE 12/2020
 REVIEWED MTO
 DRAWN JM
 DESIGNED JAY
 CHECKED RDF
 STRUCTURE FILE NUMBER 6002854

MUS-70-10.49
 PID No. 93006

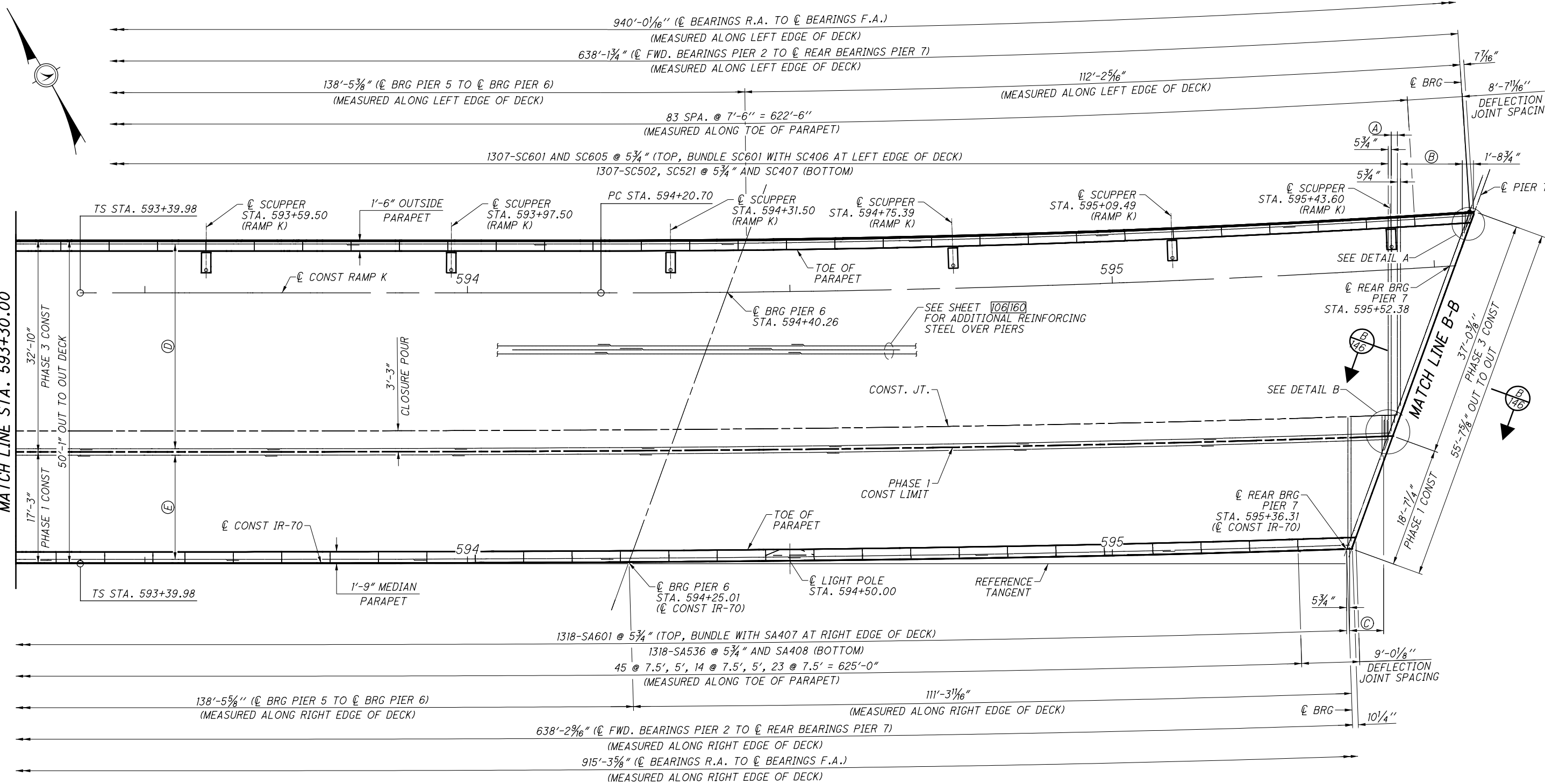
BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

LEFT SPAN 4, 5 AND 6 DECK REINFORCING PLAN

106/160
 1552
 2231

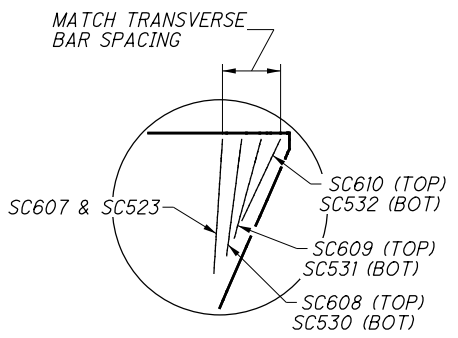
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MATCH LINE STA. 593+30.00

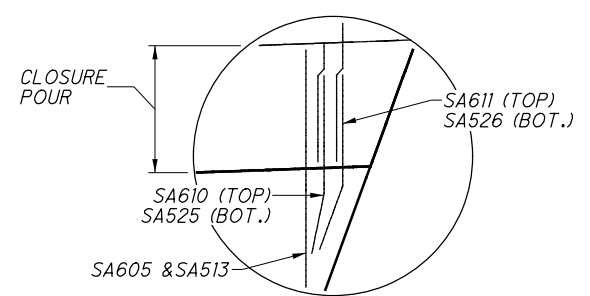


DECK REINFORCING PLAN
LEFT SPAN 6 AND 7

- (A) = 3-SC601 AND 1 S.O. 3-SC606 @ 5³/₄" (TOP, BUNDLE SC601 WITH SC406 AT LEFT EDGE OF DECK)
3-SC502 AND 1 S.O. 3-SC522 @ 5³/₄" AND SC407 (BOTTOM)
- (B) = 1 S.O. 21-SC607 @ 5³/₄" (TOP, BUNDLE WITH SC406 AT LEFT EDGE OF DECK)
1 S.O. 21-SC523 @ 5³/₄" AND SC407 (BOTTOM)
- (C) = 1 S.O. 11-SA605 @ 5³/₄" (TOP)
1 S.O. 11-SA513 @ 5³/₄" (BOTTOM)
- (D) = 56-SC402 (23 LENGTHS) LAPPED WITH 56-SC403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
46-SC502 (23 LENGTHS) LAPPED WITH 46-SC504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- (E) = 27-SA402 (23 LENGTHS) LAPPED WITH 27-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
22-SA502 (23 LENGTHS) LAPPED WITH 22-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)



DETAIL A



DETAIL B

- NOTES:**
- SEE SHEET 1031160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.

| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

GannettFleming
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

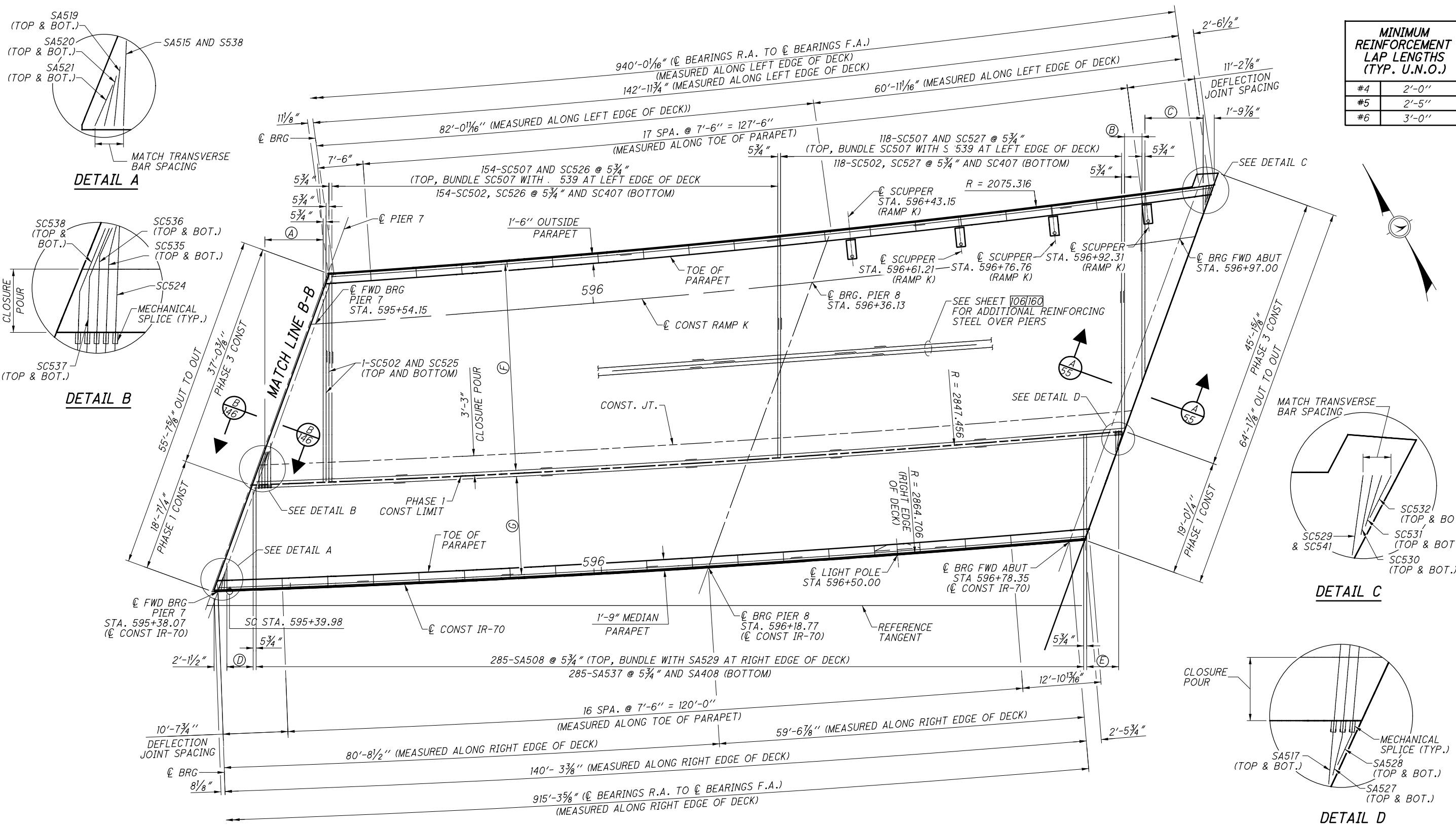
DESIGN AGENCY
 DATE 12/2020
 REVIEWED MTO
 DRAWN JM
 DESIGNED JAY
 CHECKED RLF

BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE., OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

MUS-70-10.49
 PID No. 93006

107/160
 1553
 2231

SUBMITTAL: Stage 3
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| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

DETAIL A

DETAIL B

DETAIL C

DETAIL D

DECK REINFORCING PLAN
LEFT SPAN 8 AND 9

- (A) = 1 S.O. 19-SC524 @ 5 3/4" (TOP)
1 S.O. 19-SC524 @ 5 3/4" (BOTTOM)
- (B) = 7-SC507 AND 1 S.O. 7-SC528 @ 5 3/4" (TOP, BUNDLE SC507 WITH SC539 AT LEFT EDGE OF DECK)
7-SC502 AND 1 S.O. 7-SC528 @ 5 3/4" AND SC407 (BOTTOM)
- (C) = 1 S.O. 21-SC529 @ 5 3/4" (TOP, BUNDLE WITH SC539 AT LEFT EDGE OF DECK)
1 S.O. 21-SC541 @ 5 3/4" AND SC407 (BOTTOM)
- (D) = 1 S.O. 10-SA515 @ 5 3/4" (TOP, BUNDLE WITH SA529 AT RIGHT EDGE OF DECK)
1 S.O. 10-SA538 @ 5 3/4" AND SA408 (BOTTOM)
- (E) = 1 S.O. 11-SA517 @ 5 3/4" (TOP)
1 S.O. 11-SA517 @ 5 3/4" (BOTTOM)
- (F) = 39-SC402 (5 LENGTHS) LAPPED WITH 39-SC404 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
52-SC503 (5 LENGTHS) LAPPED WITH 52-SC505 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- (G) = 22-SA402 (5 LENGTHS) LAPPED WITH 22-SA404 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
23-SA502 (5 LENGTHS) LAPPED WITH 23-SA504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)

- NOTES:**
- SEE SHEET 103160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.
 - MECHANICAL SPLICES ARE REQUIRED FOR THE TRANSVERSE BARS BETWEEN PHASE 1 AND PHASE 3 CONSTRUCTION.

DESIGN AGENCY
GannettFleming
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

BRIDGE NO. MUS-70-1159
OVER LINDEN AVE., OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

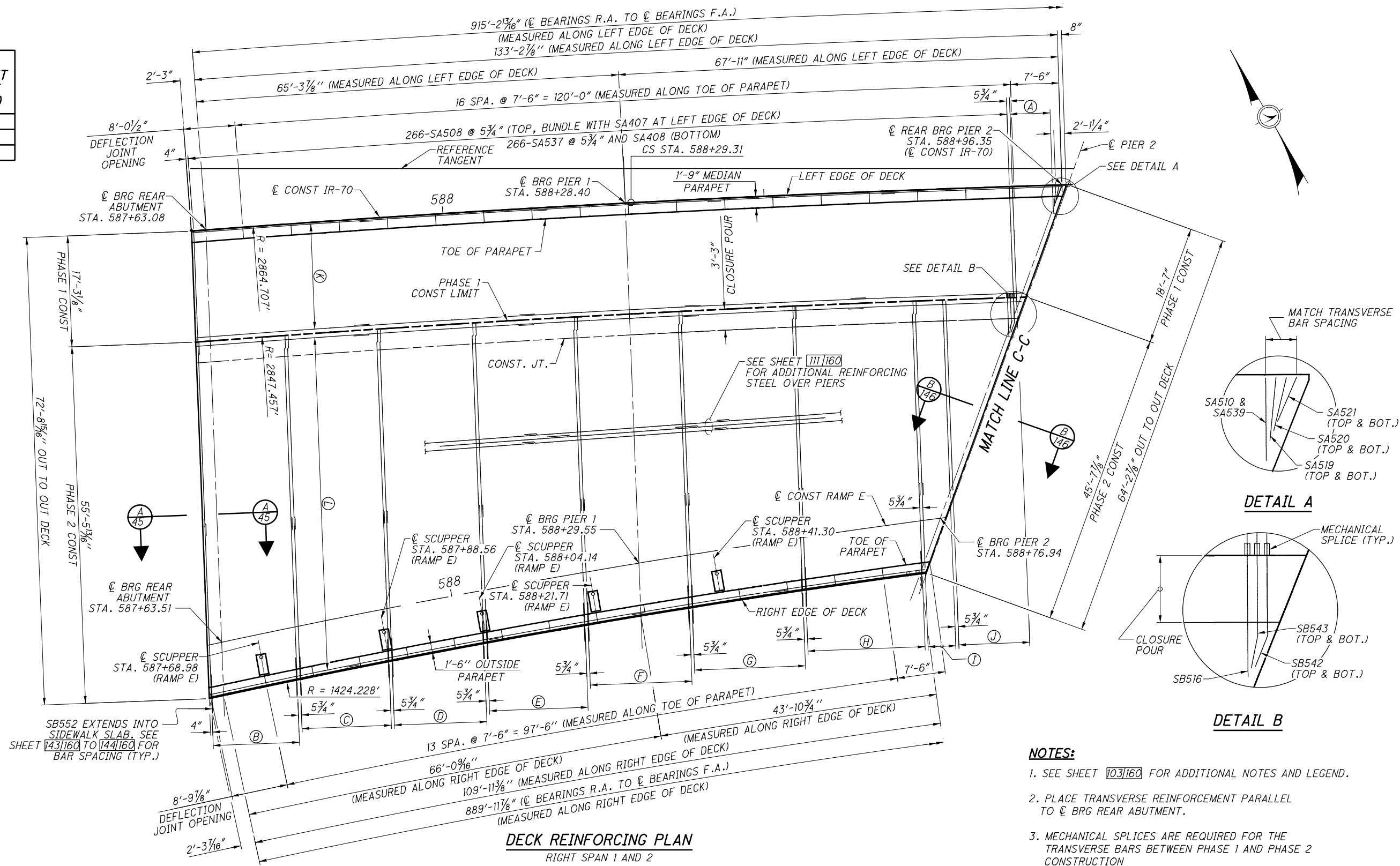
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| DESIGNED | JAY | CHECKED | RF |
| DRAWN | JM | REVISED | |
| REVIEWED | MTO | STRUCTURE FILE NUMBER | 6002854 |
| DATE | 12/2020 | | |

LEFT SPAN 8 AND 9 DECK REINFORCING PLAN
MUS-70-10.49
PID No. 93006

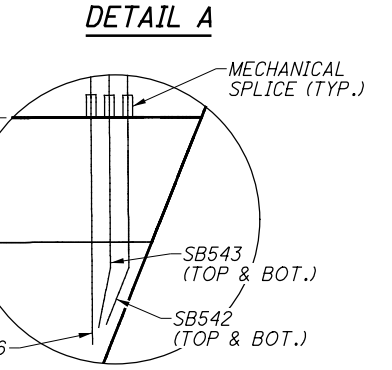
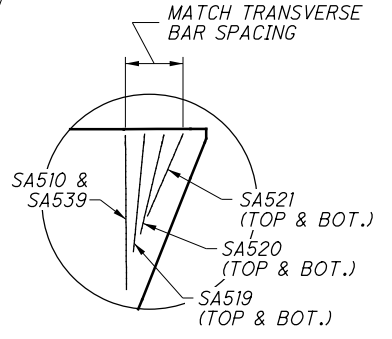
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| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |



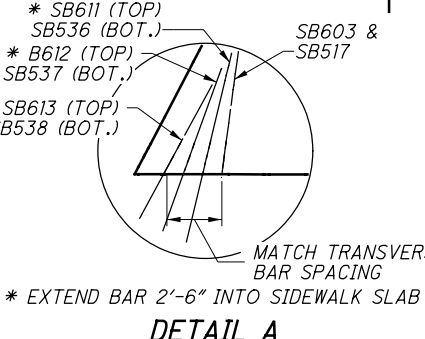
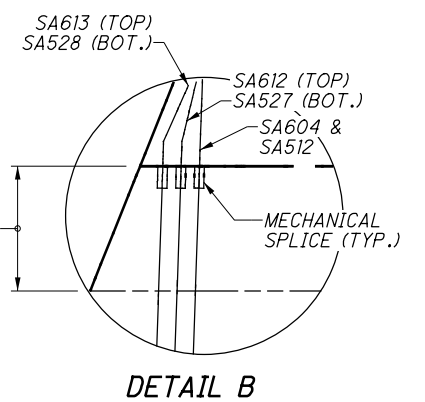
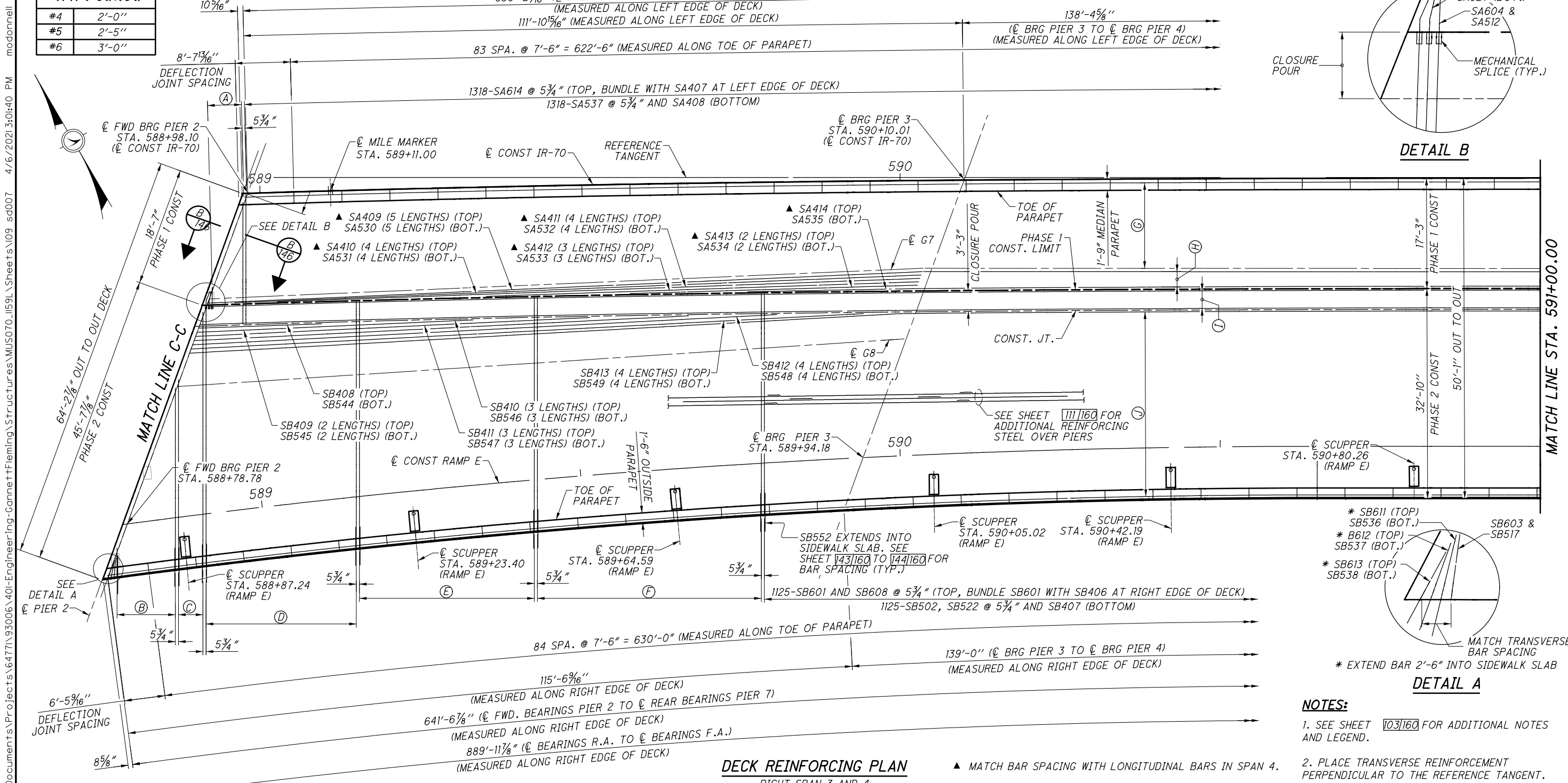
DECK REINFORCING PLAN
RIGHT SPAN 1 AND 2



- NOTES:**
- SEE SHEET 103160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PARALLEL TO BRG REAR ABUTMENT.
 - MECHANICAL SPLICES ARE REQUIRED FOR THE TRANSVERSE BARS BETWEEN PHASE 1 AND PHASE 2 CONSTRUCTION

- (A) = 1 S.O. 14-SA510 @ 5 3/4" (TOP, BUNDLE WITH SA407 AT LEFT EDGE OF DECK)
1 S.O. 14-SA539 @ 5 3/4" AND SA408 (BOTTOM)
- (B) = 29-SB507 AND SB508 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
29-SB502, SB508 @ 5 3/4" AND SB407 (BOTTOM)
- (C) = 30-SB507 AND SB509 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
30-SB502, SB509 @ 5 3/4" AND SB407 (BOTTOM)
- (D) = 31-SB507 AND SB510 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
31-SB502, SB510 @ 5 3/4" AND SB407 (BOTTOM)
- (E) = 33-SB507 AND SB511 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
33-SB502, SB511 @ 5 3/4" AND SB407 (BOTTOM)
- (F) = 34-SB507 AND SB512 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
34-SB502, SB512 @ 5 3/4" AND SB407 (BOTTOM)
- (G) = 37-SB507 AND SB513 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
37-SB502, SB513 @ 5 3/4" AND SB407 (BOTTOM)
- (H) = 39-SB507 AND SB514 @ 5 3/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK)
39-SB502, SB514 @ 5 3/4" AND SB407 (BOTTOM)
- (I) = 10-SB502 AND 1 S.O. 10-SB515 @ 5 3/4" (TOP)
10-SB502 AND 1 S.O. 10-SB515 @ 5 3/4" (BOTTOM)
- (J) = 1 S.O. 21-SB516 @ 5 3/4" (TOP)
1 S.O. 21-SB516 @ 5 3/4" (BOTTOM)
- (K) = 21-SA401 (5 LENGTHS) LAPPED WITH 1 S.O. 21-SA406 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
24-SA501 (5 LENGTHS) LAPPED WITH 1 S.O. 24-SA506 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)
- (L) = 62-SB401 (5 LENGTHS) LAPPED WITH 1 S.O. 62-SB405 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
67-SB501 (5 LENGTHS) LAPPED WITH 1 S.O. 67-SB506 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)

| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |



DECK REINFORCING PLAN
RIGHT SPAN 3 AND 4

▲ MATCH BAR SPACING WITH LONGITUDINAL BARS IN SPAN 4.

- (A) = 1 S.O. 12-SA604 @ 5 3/4" (TOP)
1 S.O. 12-SA512 @ 5 3/4" (BOTTOM)
- (B) = 21-SB603 @ 5 3/4" (TOP, BUNDLE WITH SB406 AT RIGHT EDGE OF DECK)
21-SB517 @ 5 3/4" AND SB407 (BOTTOM)
- (C) = 9-SB601 AND SB604 @ 5 3/4" (TOP, BUNDLE SB601 WITH SB406 AT RIGHT EDGE OF DECK)
9-SB502, SB518 @ 5 3/4" AND SB407 (BOTTOM)
- (D) = 50-SB601 AND SB605 @ 5 3/4" (TOP, BUNDLE SB601 WITH SB406 AT RIGHT EDGE OF DECK)
50-SB502, SB519 @ 5 3/4" AND SB407 (BOTTOM)
- (E) = 58-SB601 AND SB606 @ 5 3/4" (TOP, BUNDLE SB601 WITH SB406 AT RIGHT EDGE OF DECK)
58-SB502, SB520 @ 5 3/4" AND SB407 (BOTTOM)

- (F) = 74-SB601 AND SB607 @ 5 3/4" (TOP, BUNDLE SB601 WITH SB406 AT RIGHT EDGE OF DECK)
74-SB502, SB521 @ 5 3/4" AND SB407 (BOTTOM)
- (G) = 27-SA402 (23 LENGTHS) LAPPED WITH 27-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
21-SA502 (23 LENGTHS) LAPPED WITH 21-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- (H) = 6-SA402 (20 LENGTHS) LAPPED WITH 6-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
5-SA502 (20 LENGTHS) LAPPED WITH 5-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)

- (I) = 5-SB402 (23 LENGTHS) LAPPED WITH 5-SB403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
5-SB502 (23 LENGTHS) LAPPED WITH 5-SB504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)
- (J) = 54-SB402 (23 LENGTHS) LAPPED WITH 54-SB403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
44-SB502 (23 LENGTHS) LAPPED WITH 44-SB504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)

- NOTES:**
- SEE SHEET 103/160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.
 - MECHANICAL SPLICES ARE REQUIRED FOR THE TRANSVERSE BARS BETWEEN PHASE 1 AND PHASE 2 CONSTRUCTION.

RIGHT SPAN 3 AND 4 DECK REINFORCING PLAN

BRIDGE NO. MUS-70-1159
OVER LINDEN AVE., OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

DESIGN AGENCY: **Gannett Fleming**
ENGINEERS & ARCHITECTS, P.C.
2800 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DATE: 12/2020
REVIEWED: MTO
DRAWN: JIM
CHECKED: JAY
DESIGNED: JAY

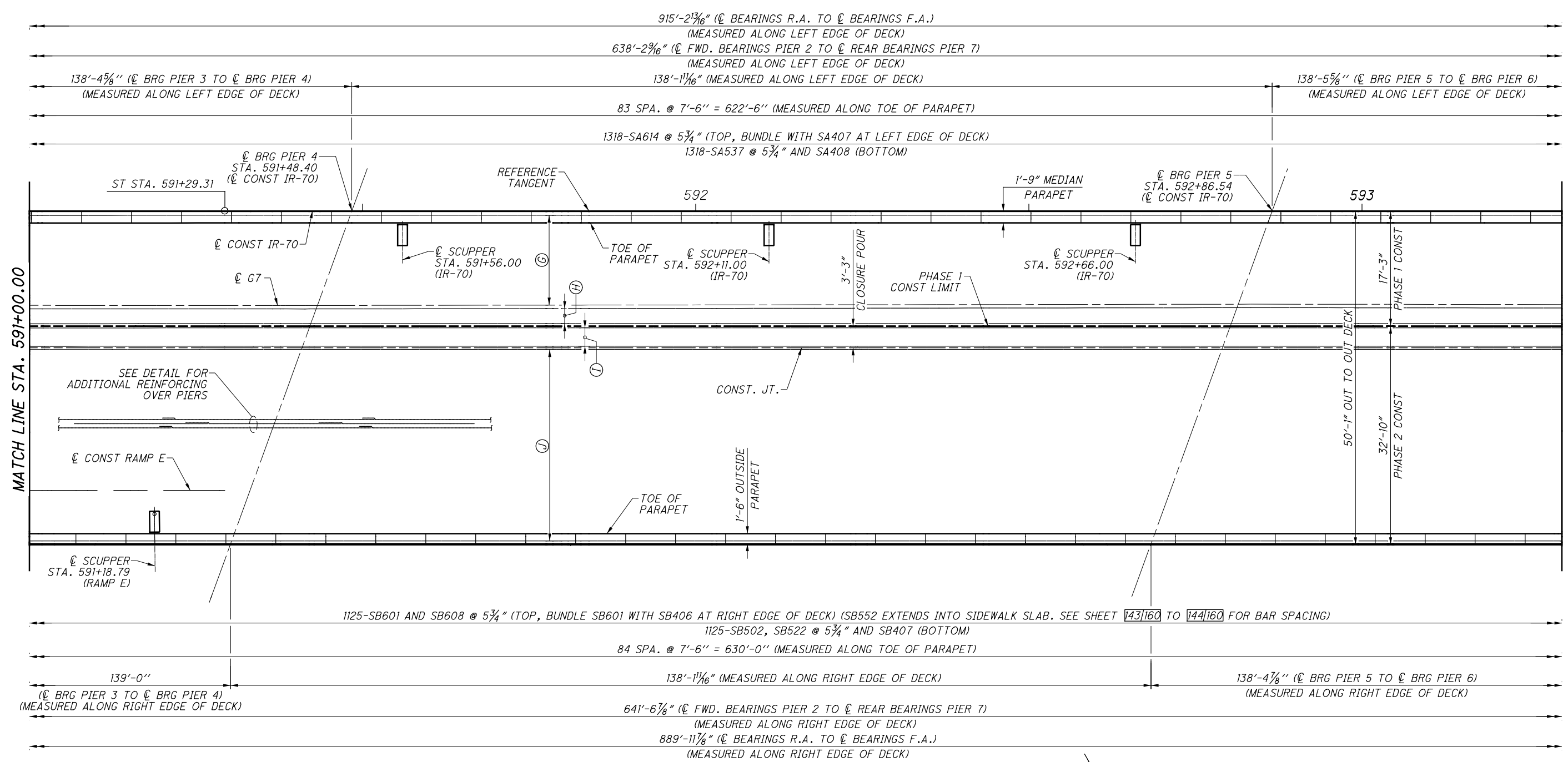
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PID No. 93006

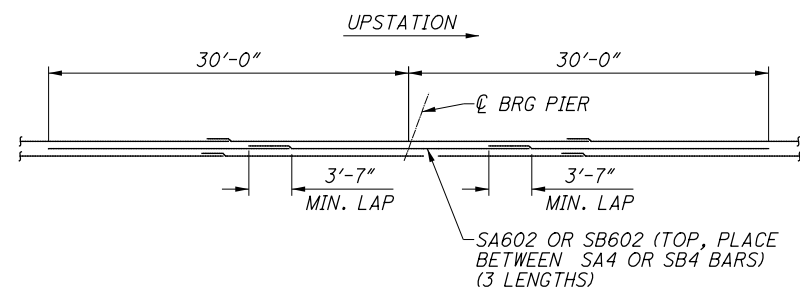
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DECK REINFORCING PLAN
RIGHT SPAN 4, 5 AND 6

- Ⓒ = 27-SA402 (23 LENGTHS) LAPPED WITH 27-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
21-SA502 (23 LENGTHS) LAPPED WITH 21-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- Ⓓ = 6-SA402 (20 LENGTHS) LAPPED WITH 6-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
5-SA502 (20 LENGTHS) LAPPED WITH 5-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)
- Ⓔ = 5-SB402 (23 LENGTHS) LAPPED WITH 5-SB403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
5-SB502 (23 LENGTHS) LAPPED WITH 5-SB504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)
- Ⓕ = 54-SB402 (23 LENGTHS) LAPPED WITH 54-SB403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
44-SB502 (23 LENGTHS) LAPPED WITH 44-SB504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)



ADDITIONAL REINFORCEMENT OVER PIERS

MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.)

| | |
|----|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

- NOTES:**
- SEE SHEET 103160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.
 - MECHANICAL SPLICES ARE REQUIRED FOR THE TRANSVERSE BARS BETWEEN PHASE 1 AND PHASE 2 CONSTRUCTION.

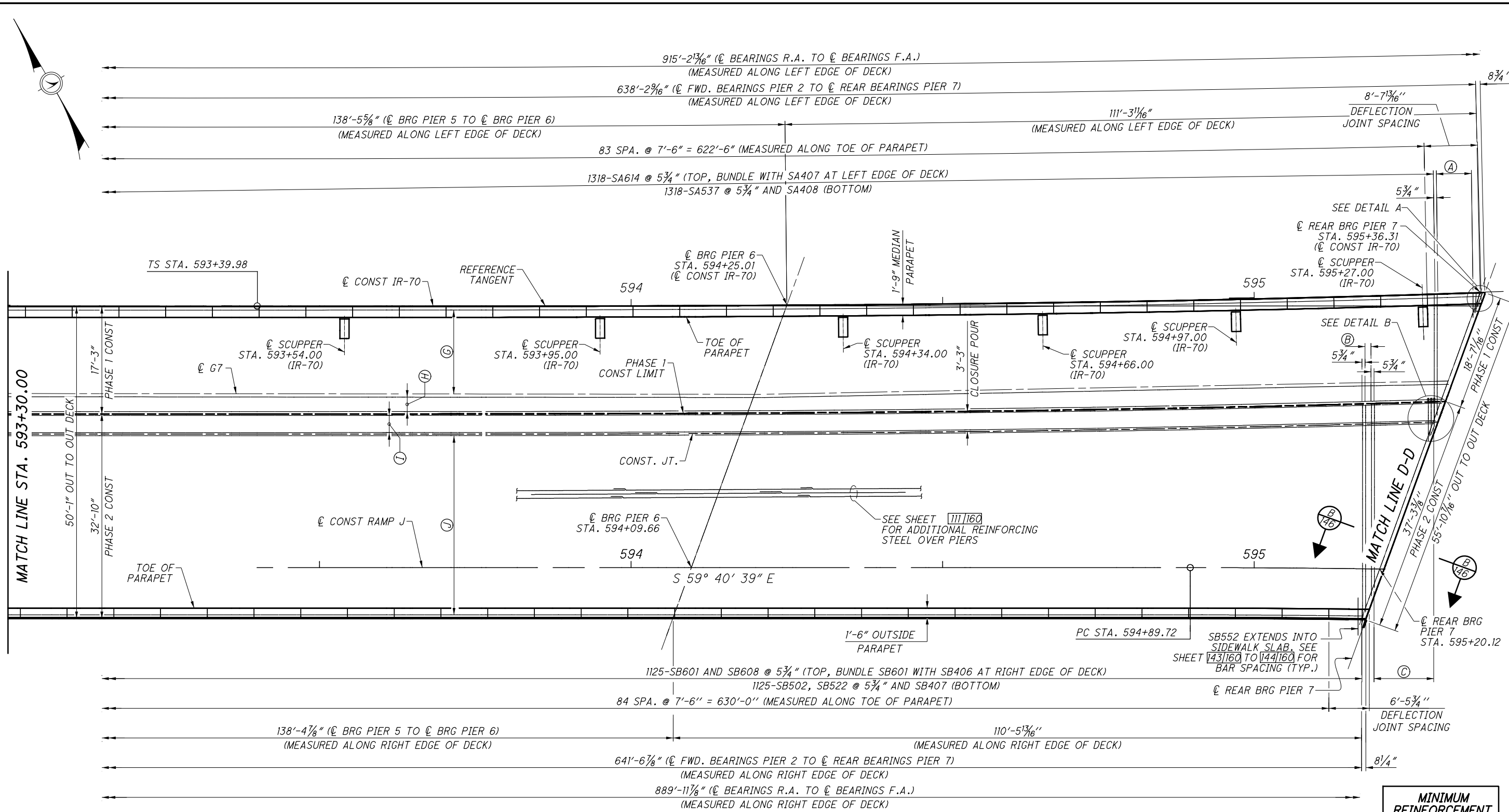
Gannett Fleming
 DESIGN AGENCY
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

DATE 12/2020
 REVIEWED MTO
 DRAWN JM
 DESIGNED JAY
 CHECKED RDF

BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

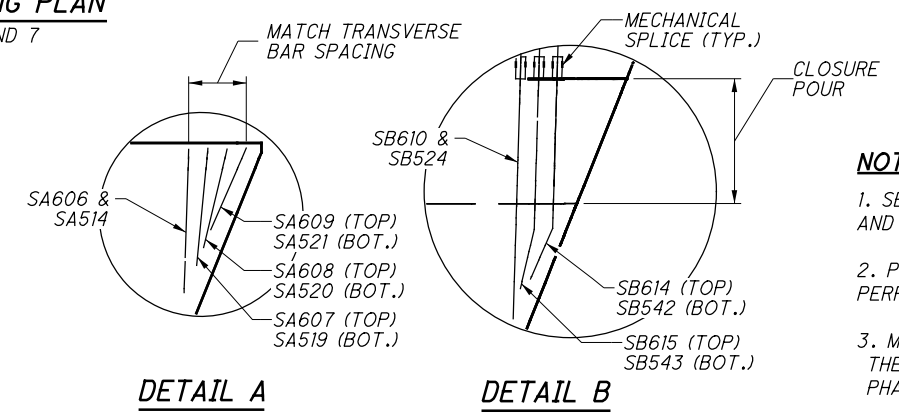
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PID No. 93006

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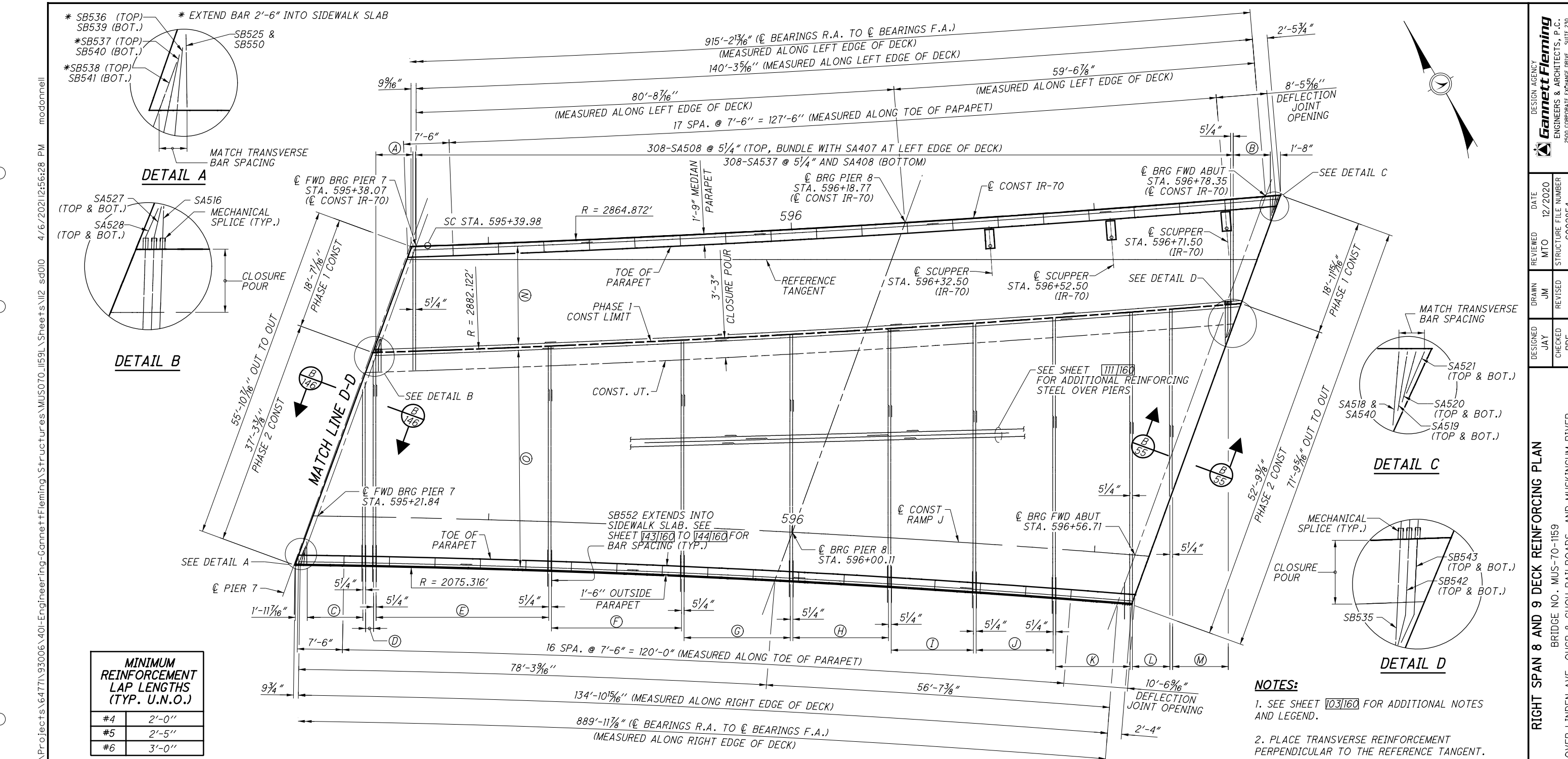
DECK REINFORCNG PLAN
 RIGHT SPAN 6 AND 7

- (A) = 1 S.O. 13-SA606 @ 5 3/4" (TOP, BUNDLE WITH SA407 AT LEFT EDGE OF DECK)
 1 S.O. 13-SA514 @ 5 3/4" AND SA408 (BOTTOM)
- (B) = 3-SB616 AND 1 S.O. 3-SB609 @ 5 3/4" (TOP)
 3-SB502 AND 1 S.O. 3-SB523 @ 5 3/4" (BOTTOM)
- (C) = 1 S.O. 19-SB610 @ 5 3/4" (TOP)
 1 S.O. 19-SB524 @ 5 3/4" (BOTTOM)
- (G) = 27-SA402 (23 LENGTHS) LAPPED WITH 27-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
 21-SA502 (23 LENGTHS) LAPPED WITH 21-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
- (H) = 6-SA402 (20 LENGTHS) LAPPED WITH 6-SA403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
 5-SA502 (20 LENGTHS) LAPPED WITH 5-SA503 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)
- (I) = 5-SB402 (23 LENGTHS) LAPPED WITH 5-SB403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION)
 5-SB502 (23 LENGTHS) LAPPED WITH 5-SB504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION)
- (J) = 54-SB402 (23 LENGTHS) LAPPED WITH 54-SB403 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)
 44-SB502 (23 LENGTHS) LAPPED WITH 44-SB504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)



| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

- NOTES:**
- SEE SHEET 103160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.
 - MECHANICAL SPLICES ARE REQUIRED FOR THE TRANSVERSE BARS BETWEEN PHASE 1 AND PHASE 2 CONSTRUCTION.



| MINIMUM REINFORCEMENT LAP LENGTHS (TYP. U.N.O.) | |
|---|-------|
| #4 | 2'-0" |
| #5 | 2'-5" |
| #6 | 3'-0" |

DECK REINFORCNG PLAN
RIGHT SPAN 8 AND 9

- NOTES:**
- SEE SHEET 1031160 FOR ADDITIONAL NOTES AND LEGEND.
 - PLACE TRANSVERSE REINFORCEMENT PERPENDICULAR TO THE REFERENCE TANGENT.
 - MECHANICAL SPLICES ARE REQUIRED FOR THE TRANSVERSE BARS BETWEEN PHASE 1 AND PHASE 2 CONSTRUCTION.

- | | | |
|--|---|---|
| <p>(A) = 1 S.O. 13-SA516 @ 5/4" (TOP AND BOTTOM)</p> <p>(B) = 1 S.O. 15-SA518 @ 5/4" (TOP, BUNDLE WITH SA407 AT LEFT EDGE OF DECK) 1 S.O. 15-SA540 @ 5/4" AND SA408 (BOTTOM)</p> <p>(C) = 1 S.O. 22-SB525 @ 5/4" (TOP, BUNDLE WITH SB406 AT RIGHT EDGE OF DECK) 1 S.O. 22-SB550 @ 5/4" AND SB407 (BOTTOM)</p> <p>(D) = 4-SB507 AND 1 S.O. 4-SB526 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 4-SB502 AND 1 S.O. 4-SB526 @ 5/4" AND SB407 (BOTTOM)</p> <p>(E) = 66-SB507 AND SB527 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 66-SB502 AND SB527 @ 5/4" AND SB407 (BOTTOM)</p> <p>(F) = 50-SB507 AND SB528 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 50-SB502 AND SB528 @ 5/4" AND SB407 (BOTTOM)</p> | <p>(G) = 41-SB507 AND SB529 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 41-SB502, SB529 @ 5/4" AND SB407 (BOTTOM)</p> <p>(H) = 37-SB507 AND SB530 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 37-SB502, SB530 @ 5/4" AND SB407 (BOTTOM)</p> <p>(I) = 32-SB507 AND SB531 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 32-SB502, SB531 @ 5/4" AND SB407 (BOTTOM)</p> <p>(J) = 30-SB507 AND SB532 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 30-SB502, SB532 @ 5/4" AND SB407 (BOTTOM)</p> <p>(K) = 29-SB507 AND SB533 @ 5/4" (TOP, BUNDLE SB507 WITH SB406 AT RIGHT EDGE OF DECK) 29-SB502, SB533 @ 5/4" AND SB407 (BOTTOM)</p> <p>(L) = 15-SB502 AND 1 S.O. 15-SB534 @ 5/4" (TOP AND BOTTOM)</p> | <p>(M) = 1 S.O. 21-SB535 @ 5/4" (TOP AND BOTTOM)</p> <p>(N) = 23-SA402 (5 LENGTHS) LAPPED WITH 23-SA404 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY) 24-SA502 (5 LENGTHS) LAPPED WITH 24-SA504 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)</p> <p>(O) = 60-SB402 (6 LENGTHS) LAPPED WITH 60-SB404 (TOP, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY) 61-SB503 (5 LENGTHS) LAPPED WITH 1 S.O. 61-SB505 (BOTTOM, SPACED AS SHOWN ON TRANSVERSE SECTION) (FAN BARS AS NECESSARY)</p> |
|--|---|---|

SUBMITTAL: Stage 3
 PLOT DRIVER: 000Tcodd_PDF.plt
 PLOT DATE: 4/6/2021 12:56:28 PM
 MOD: modonnell

PROJECT: 93006-0001781_Pen.tbl
 DWG: gfnnet-pw.bentley.com

BRIDGE NO. MUS-70-1159
 OVER LINDEN AVE., OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

DESIGN AGENCY: **Gannett Fleming**
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE, SUITE 230
 COLUMBUS, OHIO 43231

DATE: 12/2020
 MTO: MTO
 STRUCTURE FILE NUMBER: 6002854

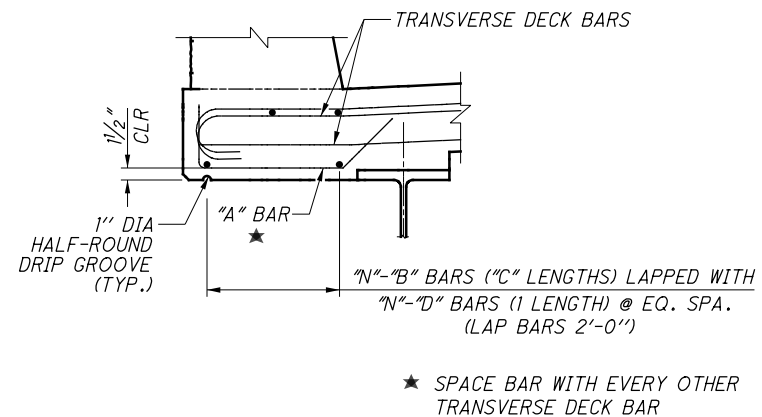
DRAWN: JAY
 CHECKED: RFD
 DESIGNED: JAY
 REVISIONS:

RIGHT SPAN 8 AND 9 DECK REINFORCING PLAN

MUS-70-10.49
 PID No. 93006

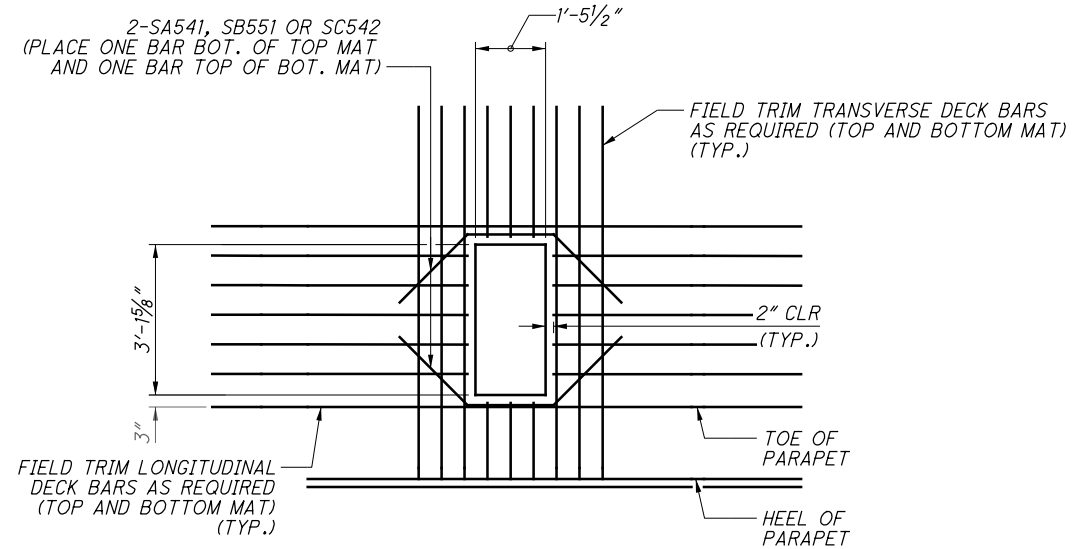
113/160
 1559
 2231

| HORIZONTAL OFFSETS TO EDGE OF DECK | | | | | | | | | |
|------------------------------------|-----------|---------------|-----------|----------------|-----------|---------------|-----------|----------------|--------|
| SPAN NO. | LOCATION | LEFT BRIDGE | | | | RIGHT BRIDGE | | | |
| | | LEFT OVERHANG | | RIGHT OVERHANG | | LEFT OVERHANG | | RIGHT OVERHANG | |
| | | STATION | OFFSET | STATION | OFFSET | STATION | OFFSET | STATION | OFFSET |
| SPAN 1 | R.A. | 587+65.65 | 3.54 | 587+63.08 | 3.22 | 587+63.08 | 2.87 | 587+60.29 | 2.79 |
| | 1/4 L | 587+81.50 | 3.06 | 587+79.41 | 2.87 | 587+79.41 | 3.21 | 587+77.12 | 2.27 |
| | 1/2 L | 587+97.38 | 2.77 | 587+95.74 | 2.62 | 587+95.74 | 3.47 | 587+93.92 | 1.94 |
| | 3/4 L | 588+13.30 | 2.67 | 588+12.07 | 2.45 | 588+12.07 | 3.63 | 588+10.69 | 1.80 |
| SPAN 2 | PIER 1 | 588+29.26 | 2.76 | 588+28.40 | 2.38 | 588+28.40 | 3.70 | 588+27.44 | 1.85 |
| | 1/4 L | 588+50.84 | 3.04 | 588+47.76 | 2.43 | 588+45.44 | 3.67 | 588+39.21 | 2.00 |
| | 1/2 L | 588+72.57 | 2.95 | 588+67.12 | 2.59 | 588+62.46 | 3.55 | 588+50.71 | 2.24 |
| | 3/4 L | 588+94.55 | 3.21 | 588+86.47 | 2.86 | 588+79.43 | 3.33 | 588+62.21 | 2.57 |
| SPAN 3 | P2 (REAR) | 589+16.93 | 3.84 | 588+96.38 | 3.05 | 588+96.32 | 3.04 | 588+71.99 | 2.92 |
| | P2 (FWD) | 589+18.62 | 2.79 | 588+98.13 | 3.11 | 588+98.07 | 2.88 | 588+73.85 | 2.87 |
| | 1/6 L | 589+36.88 | 2.71 | 589+16.86 | 2.89 | 589+16.79 | 3.04 | 588+93.68 | 2.19 |
| | 1/3 L | 589+55.20 | 2.75 | 589+35.55 | 2.76 | 589+35.49 | 3.11 | 589+13.35 | 1.78 |
| SPAN 4 | 1/2 L | 589+73.54 | 2.78 | 589+54.21 | 2.71 | 589+54.15 | 3.10 | 589+32.87 | 1.64 |
| | 2/3 L | 589+91.90 | 2.82 | 589+72.85 | 2.73 | 589+72.78 | 3.02 | 589+52.24 | 1.76 |
| | 5/6 L | 590+10.28 | 2.85 | 589+91.45 | 2.82 | 589+91.39 | 2.88 | 589+71.48 | 2.13 |
| | PIER 3 | 590+28.69 | 2.88 | 590+10.04 | 2.95 | 590+09.98 | 2.73 | 589+90.60 | 2.76 |
| SPAN 5 | 1/6 L | 590+51.61 | 2.86 | 590+33.15 | 2.85 | 590+33.08 | 2.89 | 590+14.20 | 1.98 |
| | 1/3 L | 590+74.57 | 2.84 | 590+56.22 | 2.81 | 590+56.16 | 3.00 | 590+37.62 | 1.61 |
| | 1/2 L | 590+97.55 | 2.83 | 590+79.29 | 2.81 | 590+79.23 | 3.06 | 590+60.87 | 1.62 |
| | 2/3 L | 591+20.57 | 2.81 | 591+02.34 | 2.92 | 591+02.28 | 3.09 | 590+83.99 | 1.87 |
| SPAN 6 | 5/6 L | 591+43.61 | 2.79 | 591+25.38 | 2.89 | 591+25.32 | 3.10 | 591+07.08 | 2.13 |
| | PIER 4 | 591+66.66 | 2.76 | 591+48.43 | 3.03 | 591+48.37 | 3.19 | 591+30.14 | 2.39 |
| | 1/6 L | 591+89.68 | 2.67 | 591+71.45 | 2.91 | 591+71.39 | 3.11 | 591+53.16 | 2.38 |
| | 1/3 L | 592+12.70 | 2.58 | 591+94.48 | 2.88 | 591+94.41 | 3.12 | 591+76.19 | 2.36 |
| SPAN 7 | 1/2 L | 592+35.73 | 2.48 | 592+17.50 | 2.85 | 592+17.44 | 3.12 | 591+99.21 | 2.35 |
| | 2/3 L | 592+58.75 | 2.39 | 592+40.52 | 2.82 | 592+40.46 | 3.13 | 592+22.23 | 2.34 |
| | 5/6 L | 592+81.77 | 2.30 | 592+63.54 | 2.79 | 592+63.48 | 3.13 | 592+45.25 | 2.33 |
| | PIER 5 | 593+04.13 | 2.21 | 592+86.57 | 2.75 | 592+86.51 | 3.13 | 592+68.28 | 2.31 |
| SPAN 8 | 1/6 L | 593+27.86 | 2.28 | 593+09.63 | 2.77 | 593+09.57 | 3.12 | 592+91.35 | 2.37 |
| | 1/3 L | 593+50.93 | 2.35 | 593+32.70 | 2.80 | 593+32.64 | 3.11 | 593+14.41 | 2.44 |
| | 1/2 L | 593+74.05 | 2.43 | 593+55.77 | 2.82 | 593+55.71 | 3.10 | 593+37.48 | 2.51 |
| | 2/3 L | 593+97.21 | 2.50 | 593+78.84 | 2.83 | 593+78.78 | 3.11 | 593+60.59 | 2.58 |
| SPAN 9 | 5/6 L | 594+20.42 | 2.57 | 594+01.93 | 2.80 | 594+01.87 | 3.15 | 593+83.53 | 2.65 |
| | PIER 6 | 594+43.72 | 2.77 | 594+25.04 | 2.72 | 594+24.98 | 3.25 | 594+06.49 | 2.72 |
| | 1/6 L | 594+62.43 | 2.44 | 594+43.52 | 2.88 | 594+43.45 | 3.03 | 594+24.79 | 2.71 |
| | 1/3 L | 594+81.24 | 2.24 | 594+62.02 | 3.04 | 594+61.95 | 2.86 | 594+43.07 | 2.68 |
| SPAN 8 | 1/2 L | 595+00.15 | 2.20 | 594+80.55 | 3.13 | 594+80.48 | 2.76 | 594+61.31 | 2.66 |
| | 2/3 L | 595+17.71 | 2.34 | 594+99.11 | 3.13 | 594+99.04 | 2.75 | 594+79.52 | 2.63 |
| | 5/6 L | 595+38.29 | 2.65 | 595+17.71 | 3.03 | 595+17.64 | 2.83 | 594+97.69 | 2.62 |
| | P7 (REAR) | 595+57.49 | 3.13 | 595+36.35 | 2.83 | 595+36.28 | 3.02 | 595+15.78 | 2.76 |
| SPAN 8 | P7 (FWD) | 595+59.30 | 3.08 | 595+38.10 | 2.27 | 595+38.03 | 3.57 | 595+17.47 | 3.10 |
| | 1/4 L | 595+80.05 | 2.54 | 595+58.19 | 2.69 | 595+58.12 | 3.15 | 595+36.78 | 2.61 |
| | 1/2 L | 596+00.89 | 2.21 | 595+78.33 | 2.97 | 595+78.26 | 2.86 | 595+55.98 | 2.32 |
| | 3/4 L | 596+21.82 | 2.07 | 595+98.54 | 3.11 | 595+98.47 | 2.72 | 595+75.10 | 2.20 |
| SPAN 9 | PIER 8 | 596+42.86 | 2.13 | 596+18.81 | 3.11 | 596+18.74 | 2.73 | 595+94.11 | 2.27 |
| | 1/4 L | 596+58.29 | 2.30 | 596+33.65 | 3.01 | 596+33.58 | 2.82 | 596+07.94 | 2.44 |
| | 1/2 L | 596+73.78 | 2.59 | 596+48.53 | 2.84 | 596+48.45 | 2.99 | 596+21.71 | 2.70 |
| | 3/4 L | 596+89.33 | 2.98 | 596+63.44 | 2.59 | 596+63.36 | 3.24 | 596+35.42 | 3.06 |
| F.A. | 597+04.93 | 3.49 | 596+78.38 | 2.26 | 596+78.31 | 3.57 | 596+49.08 | 3.52 | |



DECK OVERHANG DETAIL

| DECK OVERHANG REINFORCING STEEL | | | | | |
|---------------------------------|---------------|---------------|----------------|---------------|----------------|
| SPANS | REINFORCEMENT | LEFT BRIDGE | | RIGHT BRIDGE | |
| | | LEFT OVERHANG | RIGHT OVERHANG | LEFT OVERHANG | RIGHT OVERHANG |
| SPAN 1 AND 2 | "N" | 4 | 4 | 5 | 3 |
| | "A" BAR | SC407 | SA408 | SA408 | SB407 |
| | "B" BAR | SC501 | SA501 | SA501 | SB501 |
| | "C" BAR | 5 | 5 | 5 | 5 |
| SPAN 3 THRU 7 | "D" BAR | SC506 | SA505 | SA506 | SB506 |
| | "N" | 4 | 4 | 4 | 3 |
| | "A" BAR | SC407 | SA408 | SA408 | SB407 |
| | "B" BAR | SC502 | SA502 | SB502 | SB502 |
| SPAN 8 ANFD 9 | "C" BAR | 23 | 23 | 23 | 23 |
| | "D" BAR | SC504 | SA503 | SA503 | SB504 |
| | "N" | 4 | 4 | 5 | 4 |
| | "A" BAR | SC407 | SA408 | SA408 | SB407 |
| | "B" BAR | SC503 | SA502 | SA502 | SB503 |
| | "C" BAR | 5 | 5 | 5 | 5 |
| | "D" BAR | SC505 | SA504 | SA504 | SB505 |



SCUPPER REINFORCING DETAIL

NOTES:

- OFFSETS ARE MEASURED NORMAL TO THE FASCIA BEAMS/GIRDERS. DIMENSIONS ARE IN FEET.
- SEE SHEETS 115160, 120160, 125160 AND 130160 FOR LAYOUT OF SCREED CONTROL POINTS.

DESIGN AGENCY
GannettFleming
 ENGINEERS & ARCHITECTS, P.C.
 2500 CORPORATE EXCHANGE DRIVE SUITE 230
 COLUMBUS, OHIO 43231

DATE
 12/2020

REVIEWED
 MTO

DRAWN
 BAW

DESIGNED
 JAY

CHECKED
 RFD

STRUCTURE FILE NUMBER
 6002854

MISCELLANEOUS DECK REINFORCING DETAILS

BRIDGE NO. MUS-70-1159

OVER LINDEN AVE., OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

MUS-70-10.49

PID No. 93006

114/160

1560
2231

SUBMITTAL: Stage 3
 PLOT DRIVER: 000Tcodd_PDF.plt
 PENTABLE: 93006_000T1v81_Pen.tbl
 pw:\gtfnet-pw-0\Documents\Projects\6477\93006\401-Engineering-GannettFleming\Structures\MUS070-1159\Sheets\S52_s1001_4/7/2021\10:03 AM modonnell

| Mark | NUMBER | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|--------------------------|--------|---------|--------|------|------------|----|-------|----|-----------|
| | TOTAL | | TOTAL | | A | B | C | D | INC |
| PHASE 1 DECK SLAB | | | | | | | | | |
| SA401 | 200 | 26'-0" | 3,474 | STR. | | | | | |
| SA402 | 1,587 | 29'-0" | 30,744 | STR. | | | | | |
| SA403 | 60 | 18'-6" | 742 | STR. | | | | | |
| SA404 | 45 | 8'-5" | 254 | STR. | | | | | |
| | 1 | 16'-1" | | | | | | | |
| SA405 | SER OF | to | 249 | STR. | | | | | 4 1/2" |
| | 19 | 23'-0" | | | | | | | |
| | 1 | 10'-8" | | | | | | | |
| SA406 | SER OF | to | 199 | STR. | | | | | 4" |
| | 21 | 17'-8" | | | | | | | |
| SA407 | 3,264 | 8'-9" | 19,079 | 16 | 8'-3" | | | | |
| SA408 | 1916 | 2'-10" | 3627 | 10 | 6" | 6" | 1'-7" | 7" | |
| SA409 | 5 | 24'-6" | 82 | STR. | | | | | |
| SA410 | 4 | 29'-0" | 78 | STR. | | | | | |
| SA411 | 4 | 27'-3" | 73 | STR. | | | | | |
| SA412 | 3 | 24'-9" | 50 | STR. | | | | | |
| SA413 | 2 | 24'-9" | 34 | STR. | | | | | |
| SA414 | 1 | 28'-8" | 20 | STR. | | | | | |
| | | | | | | | | | |
| SA501 | 230 | 26'-0" | 6,238 | STR. | | | | | |
| SA502 | 1,324 | 30'-0" | 41,428 | STR. | | | | | |
| SA503 | 48 | 5'-8" | 284 | STR. | | | | | |
| SA504 | 47 | 5'-6" | 270 | STR. | | | | | |
| | 1 | 18'-2" | | | | | | | |
| SA505 | SER OF | to | 497 | STR. | | | | | 3 3/4" |
| | 22 | 25'-1" | | | | | | | |
| | 1 | 13'-7" | | | | | | | |
| SA506 | SER OF | to | 428 | STR. | | | | | 3 1/2" |
| | 24 | 20'-7" | | | | | | | |
| SA507 | 272 | 20'-9" | 5,887 | 16 | 20'-2" | | | | |
| SA508 | 859 | 17'-7" | 15,754 | 16 | 17'-0" | | | | |
| | 2 | 6'-2" | | | | | | | |
| SA509 | SER OF | to | 289 | STR. | | | | | 1'-3 1/4" |
| | 11 | 19'-0" | | | | | | | |
| | 1 | 4'-7" | | | 4'-0" | | | | |
| SA510 | SER OF | to | 179 | 16 | to | | | | 1'-2" |
| | 14 | 19'-11" | | | 19'-4" | | | | |
| | 1 | 4'-8" | | | | | | | |
| SA511 | SER OF | to | 149 | STR. | | | | | 1'-3 1/2" |
| | 12 | 19'-1" | | | | | | | |
| | 1 | 4'-11" | | | | | | | |
| SA512 | SER OF | to | 143 | STR. | | | | | 1'-2" |
| | 12 | 17'-11" | | | | | | | |
| | 1 | 5'-8" | | | | | | | |
| SA513 | SER OF | to | 140 | STR. | | | | | 1'-3 1/2" |
| | 11 | 18'-7" | | | | | | | |
| | 1 | 3'-9" | | | | | | | |
| SA514 | SER OF | to | 156 | STR. | | | | | 1'-3 1/2" |
| | 13 | 19'-3" | | | | | | | |
| | 1 | 5'-0" | | | 4'-5" | | | | |
| SA515 | SER OF | to | 113 | 16 | to | | | | 1'-3 1/2" |
| | 10 | 16'-8" | | | 16'-1" | | | | |
| | 2 | 2'-3" | | | | | | | |
| SA516 | SER OF | to | 254 | STR. | | | | | 1'-2" |
| | 13 | 16'-5" | | | | | | | |

NOTES:

- ALL REINFORCING BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.
- "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
- "SER OF" DENOTES SERIES OF BARS, E.G. "X" SER OF "Y" = "X" SERIES OF "Y" BARS/SERIES.
- REFER TO CMS SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
- FOR BENDING DIAGRAMS, SEE SHEET 1531160.
- MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH CMS SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

| MARK | NUMBER | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|------------------------------------|--------|---------|---------|------|------------|-----------|--------|-------|-----------|
| | TOTAL | | TOTAL | | A | B | C | D | INC |
| PHASE 1 DECK SLAB CONTINUED | | | | | | | | | |
| | 2 | 3'-3" | | | | | | | |
| SA517 | SER OF | to | 221 | STR. | | | | | 1'-3 1/4" |
| | 11 | 16'-0" | | | | | | | |
| | 1 | 4'-4" | | | 3'-9" | | | | |
| SA518 | SER OF | to | 196 | 16 | to | | | | 1'-2" |
| | 15 | 20'-8" | | | 20'-1" | | | | |
| SA519 | 8 | 3'-1" | 26 | STR. | | | | | |
| SA520 | 8 | 2'-8" | 23 | STR. | | | | | |
| SA521 | 8 | 2'-4" | 20 | STR. | | | | | |
| SA522 | 2 | 5'-1" | 11 | 19 | 3'-3" | 1'-9" | 3" | | |
| SA523 | 2 | 4'-11" | 11 | 19 | 3'-3" | 1'-7 1/2" | 4 1/2" | | |
| SA524 | 2 | 5'-0" | 11 | 19 | 3'-3" | 1'-7 1/2" | 8" | | |
| SA525 | 1 | 4'-11" | 6 | 19 | 3'-3" | 1'-7 1/2" | 4 1/2" | | |
| SA526 | 1 | 5'-0" | 6 | 19 | 3'-3" | 1'-7 1/2" | 8" | | |
| SA527 | 5 | 2'-5" | 13 | 19 | 8" | 1'-8" | 4 1/2" | | |
| SA528 | 5 | 2'-5" | 13 | 19 | 8" | 1'-7 1/2" | 8" | | |
| SA529 | 567 | 8'-4" | 4,929 | 16 | 7'-9" | | | | |
| SA530 | 5 | 24'-9" | 130 | STR. | | | | | |
| SA531 | 4 | 29'-3" | 123 | STR. | | | | | |
| SA532 | 4 | 27'-6" | 115 | STR. | | | | | |
| SA533 | 3 | 25'-0" | 79 | STR. | | | | | |
| SA534 | 2 | 25'-0" | 53 | STR. | | | | | |
| SA535 | 1 | 28'-8" | 30 | STR. | | | | | |
| SA536 | 1,590 | 20'-0" | 33,168 | STR. | | | | | |
| SA537 | 2,177 | 17'-0" | 38,601 | STR. | | | | | |
| | 1 | 4'-5" | | | | | | | |
| SA538 | SER OF | to | 107 | STR. | | | | | 1'-3 1/2" |
| | 10 | 16'-1" | | | | | | | |
| | 1 | 4'-0" | | | | | | | |
| SA539 | SER OF | to | 171 | STR. | | | | | 1'-2" |
| | 14 | 19'-4" | | | | | | | |
| | 1 | 3'-9" | | | | | | | |
| SA540 | SER OF | to | 187 | STR. | | | | | 1'-2" |
| | 15 | 20'-1" | | | | | | | |
| SA541 | 68 | 5'-10" | 414 | 13 | 2'-0" | 1'-4" | 1'-4" | 2'-0" | |
| | | | | | | | | | |
| SA601 | 1,318 | 20'-10" | 41,243 | 16 | 20'-2" | | | | |
| SA602 | 963 | 22'-5" | 32,424 | STR. | | | | | |
| | 1 | 4'-8" | | | | | | | |
| SA603 | SER OF | to | 215 | STR. | | | | | 1'-3 1/2" |
| | 12 | 19'-1" | | | | | | | |
| | 1 | 4'-11" | | | | | | | |
| SA604 | SER OF | to | 206 | STR. | | | | | 1'-2" |
| | 12 | 17'-11" | | | | | | | |
| | 1 | 5'-8" | | | | | | | |
| SA605 | SER OF | to | 201 | STR. | | | | | 1'-3 1/2" |
| | 11 | 18'-7" | | | | | | | |
| | 1 | 3'-9" | | | | | | | |
| SA606 | SER OF | to | 225 | STR. | | | | | 1'-3 1/2" |
| | 13 | 19'-3" | | | | | | | |
| SA607 | 2 | 3'-1" | 10 | STR. | | | | | |
| SA608 | 2 | 2'-8" | 9 | STR. | | | | | |
| SA609 | 2 | 2'-4" | 8 | STR. | | | | | |
| SA610 | 1 | 5'-7" | 9 | 19 | 3'-10" | 1'-8" | 4 1/2" | | |
| SA611 | 1 | 5'-7" | 9 | 19 | 3'-10" | 1'-7 1/2" | 8" | | |
| SA612 | 1 | 2'-5" | 4 | 19 | 8" | 1'-8" | 4 1/2" | | |
| SA613 | 1 | 2'-5" | 4 | 19 | 8" | 1'-7 1/2" | 8" | | |
| SA614 | 1,318 | 17'-8" | 34,974 | 16 | 17'-0" | | | | |
| SUB-TOTAL | | | 319,118 | | | | | | |

7. MECHANICAL CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WITH MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN. MECHANICAL CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.

MINIMUM LAP SPLICE LENGTH
 #4 BAR (DECK) = 2'-0"
 #5 BAR (PIERS) = 2'-5"
 #5 BAR (DECK) = 2'-5"
 #5 BAR (ABUTMENTS) = 3'-1"
 #6 BAR (DECK) = 3'-0"
 #6 BAR (DECK OVER PIERS) = 3'-7"
 #6 BAR (ALL OTHERS) = 4'-0"
 #8 BAR (ALL) = 5'-4"
 #9 BAR (ALL) = 6'-7"
 #10 BAR (PIERS) = 6'-3"
 * = BAR WITH MECHANICAL CONNECTOR

| | | |
|---|-----------------------|---|
| REINFORCING STEEL - PHASE 1 DECK | | DESIGN AGENCY Gannett Fleming ENGINEERS & ARCHITECTS, P.C. 2500 CORPORATE EXCHANGE DRIVE, SUITE 230 COLUMBUS, OHIO 43231 |
| DESIGNED JAY | CHECKED RDF | DRAWN JAY |
| REVIEWED MTG | DATE 12/2020 | STRUCTURE FILE NUMBER 6002854 |
| BRIDGE NO. MUS-70-1159 | | OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER |
| MUS-70-10.49 | | PID No. 93006 |
| 152/160 | | (1598) 2231 |

| Mark | NUMBER | | LENGTH | WEIGHT | | TYPE | DIMENSIONS | | | | |
|-------------------|-----------|---------|--------|--------|------------|------|------------|----|---|-----------|-----|
| | TOTAL | | | TOTAL | | | A | B | C | D | INC |
| PHASE 2 DECK SLAB | | | | | | | | | | | |
| Mark | TOTAL | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | | INC | |
| SB401 | 310 | 23'-0" | 4,763 | STR. | | | | | | | |
| SB402 | 1,717 | 30'-0" | 34,409 | STR. | | | | | | | |
| SB403 | 59 | 7'-8" | 303 | STR. | | | | | | | |
| SB404 | 60 | 19'-2" | 769 | STR. | | | | | | | |
| SB405 | SER OF 62 | 25'-8" | 729 | STR. | | | | | | 3" | |
| SB406 | 1,881 | 8'-9" | 10,995 | 16 | 8'-3" | | | | | | |
| SB407 | 941 | 1'-11" | 1,205 | 10 | 6" | 6" | 8" | 7" | | | |
| SB408 | 1 | 19'-6" | 14 | STR. | | | | | | | |
| SB409 | 2 | 22'-9" | 31 | STR. | | | | | | | |
| SB410 | 3 | 22'-0" | 45 | STR. | | | | | | | |
| SB411 | 3 | 27'-3" | 55 | STR. | | | | | | | |
| SB412 | 4 | 24'-6" | 66 | STR. | | | | | | | |
| SB413 | 4 | 28'-0" | 75 | STR. | | | | | | | |
| SB414 | 7 | 28'-10" | 135 | STR. | | | | | | | |
| SB415 | 7 | 26'-9" | 126 | STR. | | | | | | | |
| SB416 | 7 | 25'-9" | 121 | STR. | | | | | | | |
| SB501 | 335 | 23'-0" | 8,037 | STR. | | | | | | | |
| SB502 | 2,993 | 30'-0" | 93,651 | STR. | | | | | | | |
| SB503 | 305 | 26'-0" | 8,271 | STR. | | | | | | | |
| SB504 | 49 | 21'-0" | 1,073 | STR. | | | | | | | |
| SB505 | SER OF 61 | 27'-8" | 1,594 | STR. | | | | | | 1" | |
| SB506 | SER OF 67 | 28'-7" | 1,433 | STR. | | | | | | 2 3/4" | |
| SB507 | 522 | 30'-0" | 16,334 | 16 | 29'-5" | | | | | | |
| SB508 | 58 | 27'-9" | 1,679 | STR. | | | | | | | |
| SB509 | 60 | 25'-10" | 1,617 | STR. | | | | | | | |
| SB510 | 62 | 24'-0" | 1,552 | STR. | | | | | | | |
| SB511 | 66 | 22'-1" | 1,521 | STR. | | | | | | | |
| SB512 | 68 | 20'-3" | 1,437 | STR. | | | | | | | |
| SB513 | 74 | 18'-5" | 1,422 | STR. | | | | | | | |
| SB514 | 78 | 16'-6" | 1,343 | STR. | | | | | | | |
| SB515 | SER OF 10 | 13'-8" | 174 | STR. | | | | | | 1'-2" | |
| SB516 | SER OF 21 | 19'-4" | 512 | STR. | | | | | | 9" | |
| SB517 | SER OF 21 | 28'-4" | 360 | STR. | | | | | | 1'-2 1/4" | |
| SB518 | SER OF 9 | 12'-2" | 69 | STR. | | | | | | 1'-2 1/2" | |
| SB519 | 50 | 13'-1" | 683 | STR. | | | | | | | |
| SB520 | 58 | 11'-1" | 671 | STR. | | | | | | | |
| SB521 | 74 | 9'-1" | 702 | STR. | | | | | | | |
| SB522 | 1,125 | 7'-1" | 8,312 | STR. | | | | | | | |

| Mark | NUMBER | | LENGTH | WEIGHT | | TYPE | DIMENSIONS | | | | |
|-----------------------------|-----------|---------|--------|--------|--------|-----------|------------|-------|---|-----------|-----|
| | TOTAL | | | TOTAL | | | A | B | C | D | INC |
| PHASE 2 DECK SLAB CONTINUED | | | | | | | | | | | |
| SB523 | SER OF 3 | 3'-1" | 14 | STR. | | | | | | 1'-3 1/2" | |
| SB524 | SER OF 19 | 29'-4" | 351 | STR. | | | | | | 1'-3 1/2" | |
| SB525 | SER OF 22 | 29'-6" | 389 | 16 | 3'-9" | | | | | 1'-2 1/4" | |
| SB526 | SER OF 4 | 6'-2" | 37 | STR. | | | | | | 1'-2 1/4" | |
| SB527 | 132 | 9'-5" | 1,297 | STR. | | | | | | | |
| SB528 | 100 | 11'-3" | 1,174 | STR. | | | | | | | |
| SB529 | 82 | 13'-0" | 1,112 | STR. | | | | | | | |
| SB530 | 74 | 14'-11" | 1,152 | STR. | | | | | | | |
| SB531 | 64 | 16'-8" | 1,113 | STR. | | | | | | | |
| SB532 | 60 | 18'-6" | 1,158 | STR. | | | | | | | |
| SB533 | SER OF 2 | 3'-5" | 364 | STR. | | | | | | 1'-2" | |
| SB534 | SER OF 15 | 19'-10" | 796 | STR. | | | | | | 1'-2" | |
| SB535 | SER OF 21 | 29'-10" | 12 | STR. | | | | | | | |
| SB536 | 2 | 5'-9" | 12 | STR. | | | | | | | |
| SB537 | 2 | 5'-6" | 11 | STR. | | | | | | | |
| SB538 | 2 | 5'-2" | 6 | 19 | 3'-11" | 1'-5 1/2" | 7" | | | | |
| SB539 | 1 | 5'-6" | 6 | 19 | 3'-11" | 1'-6 1/2" | 3 3/4" | | | | |
| SB540 | 1 | 5'-6" | 6 | 19 | 3'-11" | 1'-8" | 4 1/2" | | | | |
| SB541 | 1 | 2'-4" | 3 | STR. | | | | | | | |
| SB542 | 5 | 5'-8" | 30 | 19 | 3'-11" | 1'-7 1/2" | 8" | | | | |
| SB543 | 5 | 5'-8" | 30 | 19 | 3'-11" | 1'-7 1/2" | 8" | | | | |
| SB544 | 1 | 19'-5" | 21 | STR. | | | | | | | |
| SB545 | 2 | 23'-0" | 48 | STR. | | | | | | | |
| SB546 | 3 | 22'-3" | 70 | STR. | | | | | | | |
| SB547 | 3 | 27'-6" | 87 | STR. | | | | | | | |
| SB548 | 4 | 24'-9" | 104 | STR. | | | | | | | |
| SB549 | 4 | 28'-3" | 118 | STR. | | | | | | | |
| SB550 | SER OF 22 | 28'-11" | 375 | STR. | | | | | | 1'-2 1/4" | |
| SB551 | 48 | 5'-10" | 293 | 13 | 2'-0" | 1'-4" | 1'-4" | 2'-0" | | | |
| SB552 | 1,846 | 6'-0" | 11,553 | STR. | | | | | | | |
| SB553 | 1,854 | 6'-4" | 12,247 | STR. | | | | | | | |
| SB554 | 2 | 2'-11" | 7 | STR. | | | | | | | |
| SB555 | SER OF 6 | 8'-0" | 49 | STR. | | | | | | 1" | |
| SB556 | SER OF 3 | 5'-2" | 13 | STR. | | | | | | 1'-1 1/2" | |
| SB557 | SER OF 3 | 5'-5" | 14 | STR. | | | | | | 1'-3" | |
| SB558 | 2 | 2'-5" | 6 | STR. | | | | | | | |
| SB559 | 2 | 1'-10" | 4 | STR. | | | | | | | |
| SB560 | SER OF 3 | 5'-11" | 15 | STR. | | | | | | 1'-4" | |

| Mark | NUMBER | | LENGTH | WEIGHT | | TYPE | DIMENSIONS | | | | |
|-----------------------------|-----------|--------|---------|--------|--------|-----------|------------|---|---|-----------|-----|
| | TOTAL | | | TOTAL | | | A | B | C | D | INC |
| PHASE 2 DECK SLAB CONTINUED | | | | | | | | | | | |
| SB560 | SER OF 3 | 5'-11" | 15 | STR. | | | | | | 1'-4" | |
| SB561 | SER OF 3 | 5'-1" | 13 | STR. | | | | | | 1'-2 1/2" | |
| SB562 | 1 | 2'-7" | 3 | STR. | | | | | | | |
| SB563 | 1 | 2'-0" | 3 | STR. | | | | | | | |
| SB564 | 1 | 2'-2" | 3 | STR. | | | | | | | |
| SB565 | 1 | 1'-7" | 2 | STR. | | | | | | | |
| SB566 | SER OF 4 | 8'-5" | 32 | STR. | | | | | | 6 1/2" | |
| SB567 | SER OF 7 | 8'-10" | 64 | STR. | | | | | | 1/2" | |
| SB568 | SER OF 4 | 7'-8" | 25 | STR. | | | | | | 1'-2 1/2" | |
| SB569 | 1 | 3'-2" | 4 | STR. | | | | | | | |
| SB570 | 1 | 2'-4" | 3 | STR. | | | | | | | |
| SB571 | 1 | 1'-7" | 2 | STR. | | | | | | | |
| SB572 | 1 | 4'-10" | 6 | STR. | | | | | | | |
| SB573 | 1 | 3'-11" | 5 | STR. | | | | | | | |
| SB574 | 1 | 2'-11" | 4 | STR. | | | | | | | |
| SB601 | 1,316 | 30'-0" | 59,299 | 16 | 29'-4" | | | | | | |
| SB602 | 1,062 | 22'-5" | 35,758 | STR. | | | | | | | |
| SB603 | SER OF 21 | 28'-4" | 518 | STR. | | | | | | 1'-2 1/4" | |
| SB604 | SER OF 9 | 12'-9" | 104 | STR. | | | | | | 1'-3 1/4" | |
| SB605 | 50 | 13'-8" | 1,027 | STR. | | | | | | | |
| SB606 | 58 | 11'-8" | 1,017 | STR. | | | | | | | |
| SB607 | 74 | 9'-8" | 1,075 | STR. | | | | | | | |
| SB608 | 1,125 | 8'-4" | 14,082 | STR. | | | | | | | |
| SB609 | SER OF 3 | 6'-3" | 23 | STR. | | | | | | 3 3/4" | |
| SB610 | SER OF 19 | 29'-4" | 506 | STR. | | | | | | 1'-3 1/2" | |
| SB611 | 1 | 3'-1" | 5 | STR. | | | | | | | |
| SB612 | 1 | 2'-8" | 5 | STR. | | | | | | | |
| SB613 | 1 | 2'-4" | 4 | STR. | | | | | | | |
| SB614 | 1 | 5'-8" | 9 | 19 | 3'-11" | 1'-8" | 4 1/2" | | | | |
| SB615 | 1 | 5'-8" | 9 | 19 | 3'-11" | 1'-7 1/2" | 8" | | | | |
| SB616 | 3 | 30'-0" | 136 | STR. | | | | | | | |
| SUB-TOTAL | | | 355,361 | | | | | | | | |

= BAR WITH MECHANICAL CONNECTOR

NOTES:
1. FOR MINIMUM LAP SPLICE LENGTHS AND ADDITIONAL NOTES, SEE SHEET 152160.
2. FOR BENDING DIAGRAMS, SEE SHEET 153160.

DESIGN AGENCY: **GannettFleming**
ENGINEERS & ARCHITECTS, P.C.
2800 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

DATE: 12/20/2020
REVIEWED: MTO
DRAWN: JAY
CHECKED: JAY
STRUCTURE FILE NUMBER: 6002854
REVISIONS: 0

BRIDGE NO.: MUS-70-1159
OVER LINDEN AVE, OHCR & CUOH RAILROADS, AND MUSKINGUM RIVER

MUS-70-10.49
PID No. 93006

154/160
1600
2231

| Mark | NUMBER | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|--------------------------|-----------|---------|--------|------|------------|----|-------|----|-----------|
| | TOTAL | | TOTAL | | A | B | C | D | INC |
| PHASE 3 DECK SLAB | | | | | | | | | |
| SC401 | 265 | 28'-0" | 4,957 | STR. | | | | | |
| SC402 | 1,483 | 29'-0" | 28,729 | STR. | | | | | |
| SC403 | 56 | 18'-6" | 693 | STR. | | | | | |
| SC404 | 39 | 11'-2" | 291 | STR. | | | | | |
| SC405 | SER OF 1 | 13'-0" | 723 | STR. | | | | | 3 1/4" |
| | 53 | 27'-10" | | | | | | | |
| SC406 | 1,331 | 8'-9" | 7,780 | 16 | 8'-3" | | | | |
| SC407 | 971 | 2'-6" | 1,622 | 10 | 6" | 6" | 1'-3" | 7" | |
| SC501 | 300 | 29'-0" | 9,075 | STR. | | | | | |
| SC502 | 2,940 | 30'-0" | 91,993 | STR. | | | | | |
| SC503 | 260 | 27'-0" | 7,322 | STR. | | | | | |
| SC504 | 46 | 5'-1" | 244 | STR. | | | | | |
| SC505 | 52 | 23'-3" | 1,261 | STR. | | | | | |
| SC506 | SER OF 1 | 10'-1" | | | | | | | 3" |
| | 60 | 24'-11" | 1,096 | STR. | | | | | |
| SC507 | 569 | 30'-0" | 17,805 | 16 | 29'-5" | | | | |
| SC508 | 42 | 26'-0" | 1,139 | STR. | | | | | |
| SC509 | 42 | 24'-0" | 1,052 | STR. | | | | | |
| SC510 | 48 | 22'-0" | 1,102 | STR. | | | | | |
| SC511 | 52 | 20'-0" | 1,085 | STR. | | | | | |
| SC512 | 56 | 17'-11" | 1,047 | STR. | | | | | |
| SC513 | 64 | 15'-11" | 1,063 | STR. | | | | | |
| SC514 | 74 | 13'-10" | 1,068 | STR. | | | | | |
| SC515 | 90 | 11'-9" | 1,103 | STR. | | | | | |
| SC516 | 104 | 9'-9" | 1,058 | STR. | | | | | |
| SC517 | 8 | 6'-9" | 57 | STR. | | | | | |
| SC518 | SER OF 1 | 4'-1" | | | 3'-6" | | | | |
| | 21 | 29'-5" | 367 | 16 | to | | | | 1'-3" |
| | 1 | 5'-10" | | | 28'-10" | | | | |
| SC519 | SER OF 19 | 29'-6" | 351 | STR. | | | | | 1'-3 3/4" |
| SC520 | 3 | 5'-10" | 19 | STR. | | | | | |
| SC521 | 1,307 | 7'-0" | 9,543 | STR. | | | | | |
| SC522 | SER OF 1 | 2'-11" | | | | | | | 1'-3 1/2" |
| | 3 | 5'-6" | 14 | STR. | | | | | |
| SC523 | SER OF 1 | 3'-6" | | | | | | | 1'-3 1/4" |
| | 21 | 29'-2" | 358 | STR. | | | | | |
| | 2 | 6'-9" | | | | | | | |
| SC524 | SER OF 19 | 30'-0" | 729 | STR. | | | | | 1'-3 1/2" |
| SC525 | 4 | 5'-1" | 22 | STR. | | | | | |
| SC526 | 308 | 9'-2" | 2,945 | STR. | | | | | |
| SC527 | 236 | 11'-4" | 2,790 | STR. | | | | | |
| SC528 | SER OF 2 | 3'-3" | | | | | | | 1'-3" |
| | 7 | 10'-10" | 103 | STR. | | | | | |
| SC529 | SER OF 1 | 4'-9" | | | 4'-2" | | | | 1'-3" |
| | 21 | 29'-9" | 378 | 16 | to | | | | |

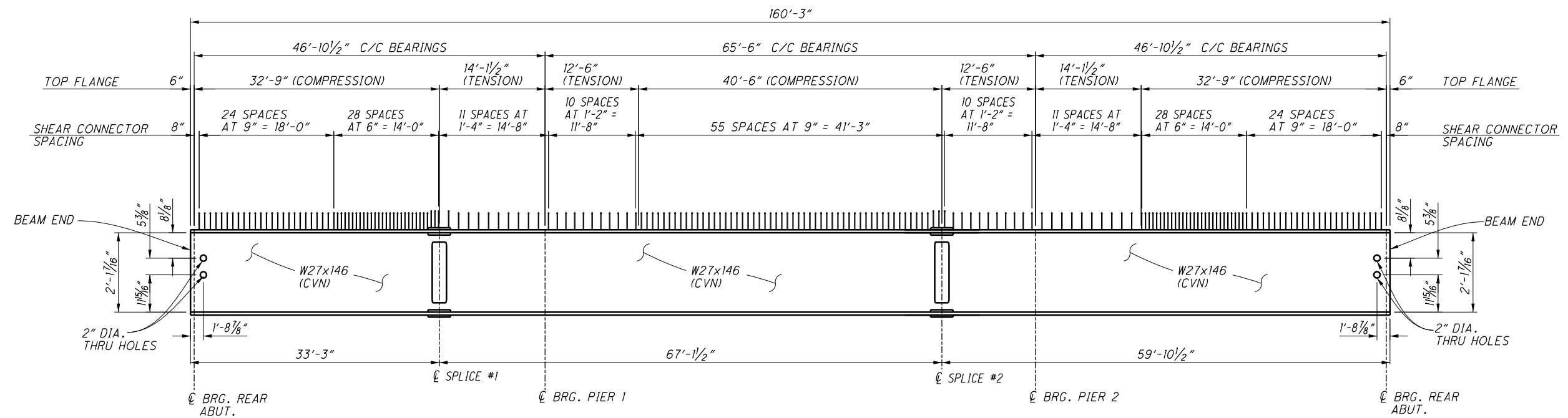
| Mark | NUMBER | LENGTH | WEIGHT | TYPE | DIMENSIONS | | | | |
|--------------------------|-----------|---------|---------|------|------------|-----------|--------|-------|-----------|
| | TOTAL | | TOTAL | | A | B | C | D | INC |
| PHASE 3 DECK SLAB | | | | | | | | | |
| SC530 | 5 | 3'-1" | 17 | STR. | | | | | |
| SC531 | 5 | 2'-8" | 14 | STR. | | | | | |
| SC532 | 5 | 2'-4" | 13 | STR. | | | | | |
| SC533 | 1 | 5'-7" | 6 | 19 | 3'-10" | 1'-8" | 4 1/2" | | |
| SC534 | 1 | 5'-7" | 6 | 19 | 3'-10" | 1'-7 1/2" | 8" | | |
| SC535 | 2 | 5'-8" | 12 | 19 | 3'-11" | 1'-8" | 4 1/2" | | |
| SC536 | 2 | 5'-8" | 12 | 19 | 3'-11" | 1'-7 1/2" | 8" | | |
| SC537 | 2 | 5'-6" | 12 | 19 | 2'-10" | 2'-6" | 9" | | |
| SC538 | 2 | 5'-8" | 12 | 19 | 3'-6" | 2'-0 1/2" | 9" | | |
| SC539 | 611 | 8'-10" | 5,630 | 16 | 8'-3" | | | | |
| SC540 | SER OF 1 | 3'-6" | | | | | | | 1'-3" |
| | 21 | 28'-10" | 355 | STR. | | | | | |
| | 1 | 4'-2" | | | | | | | |
| SC541 | SER OF 21 | 29'-2" | 366 | STR. | | | | | 1'-3" |
| SC542 | 88 | 5'-10" | 536 | 13 | 2'-0" | 1'-4" | 1'-4" | 2'-0" | |
| SC601 | 1,310 | 30'-0" | 59,029 | 16 | 29'-4" | | | | |
| SC602 | 930 | 22'-5" | 31,313 | STR. | | | | | |
| SC603 | SER OF 1 | 5'-10" | | | | | | | 1'-3 3/4" |
| | 19 | 29'-6" | 505 | STR. | | | | | |
| SC604 | 3 | 5'-10" | 27 | STR. | | | | | |
| SC605 | 1,307 | 8'-2" | 16,033 | STR. | | | | | |
| SC606 | SER OF 1 | 4'-10" | | | 4'-2" | | | | 1'-3 1/2" |
| | 3 | 7'-5" | 28 | 16 | to | | | | |
| | 1 | 4'-2" | | | 6'-9" | | | | |
| SC607 | SER OF 1 | 4'-2" | | | 3'-6" | | | | 1'-3 1/4" |
| | 21 | 29'-10" | 537 | 16 | to | | | | |
| | | | | | 29'-2" | | | | |
| SC608 | 1 | 3'-1" | 5 | STR. | | | | | |
| SC609 | 1 | 2'-8" | 5 | STR. | | | | | |
| SC610 | 1 | 2'-4" | 4 | STR. | | | | | |
| SC611 | 1 | 5'-7" | 9 | 19 | 3'-10" | 1'-8" | 4 1/2" | | |
| SC612 | 1 | 5'-7" | 9 | 19 | 3'-10" | 1'-7 1/2" | 8" | | |
| SC613 | 3 | 30'-0" | 136 | STR. | | | | | |
| SUB-TOTAL | | | 315,615 | | | | | | |

= BAR WITH MECHANICAL CONNECTOR

NOTES:

- 1. FOR MINIMUM LAP SPLICE LENGTHS AND ADDITIONAL NOTES, SEE SHEET 1521160.
- 2. FOR BENDING DIAGRAMS, SEE SHEET 1531160.

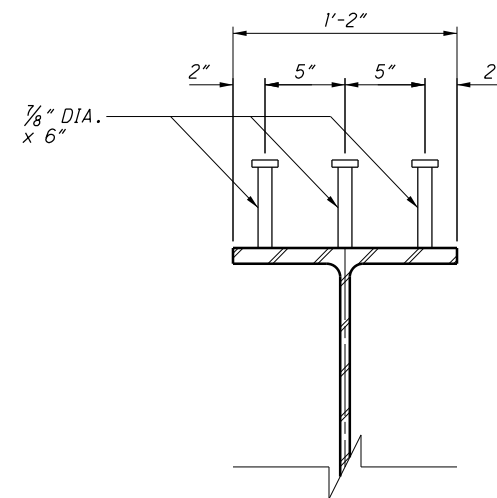
I:\ProjectData\MUS\93006\400-Engineering\Structures\SFN_6002978\Sheets\070_1212C_SS001.dgn Shear Connector Details 4/7/2021 11:34:44 AM cshonk



BEAM ELEVATION / SHEAR CONNECTOR SPACING
(NO CAMBER SHOWN & N.T.S.)

NOTES:
WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE AT LEAST 2" LONG AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

ALL SPLICE PLATES EXCEPT FILL PLATES SHALL BE CVN.
FOR INTERMEDIATE DIAPHRAGM LOCATIONS, SEE SHEET 46.
FOR ADDITIONAL DETAILS, SEE STANDARD DRAWING GSD-1-19.



SHEAR CONNECTOR DETAILS
(W27x146)
(N.T.S.)

DESIGN AGENCY
OHIO DEPARTMENT OF
TRANSPORTATION, DISTRICT 5

REVIEWED DATE
CPS 12/4/2020
STRUCTURE FILE NUMBER
6002978

DRAWN CPS
CHECKED TAG

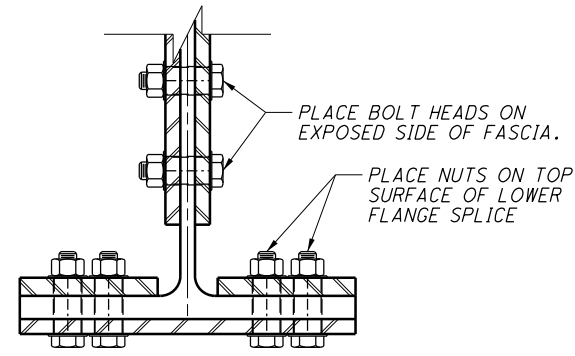
BEAM DETAILS
BRIDGE NO. MUS-70-1212
OVER UNDERWOOD ST.

MUS-70-10.49
PID No. 93006

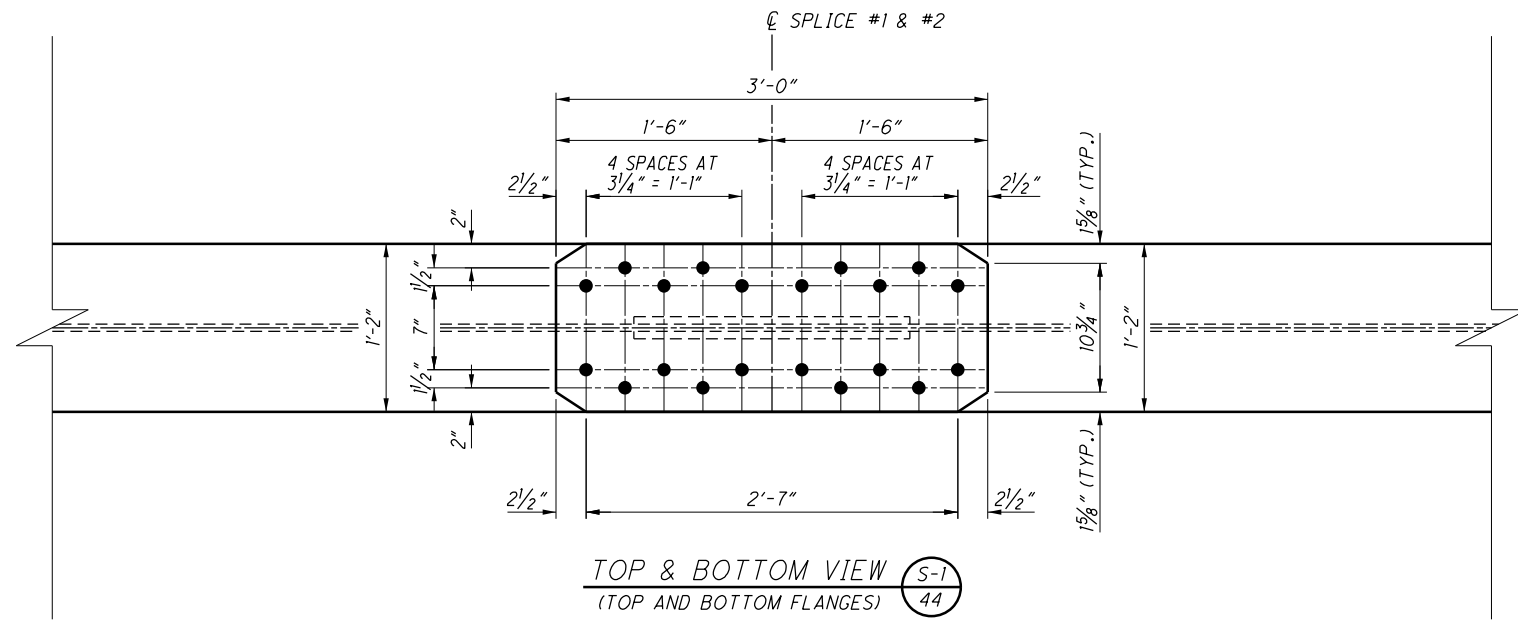
43 / 74

1875
2231

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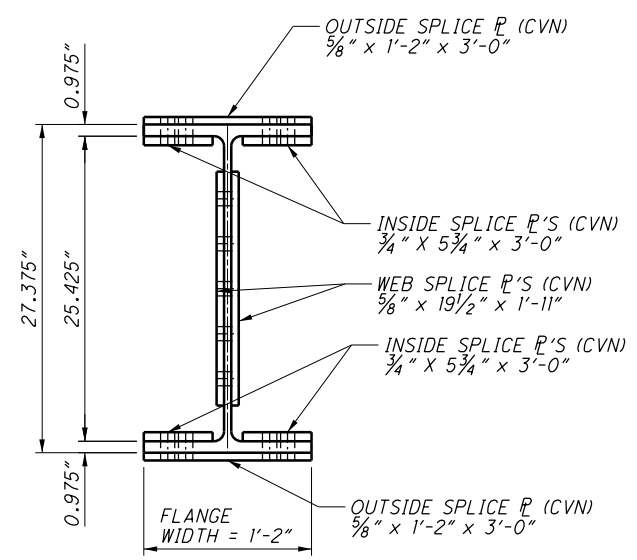
PARTIAL SECTION
(AT CL OF SPLICE #1 & #2)
(NOT TO SCALE)



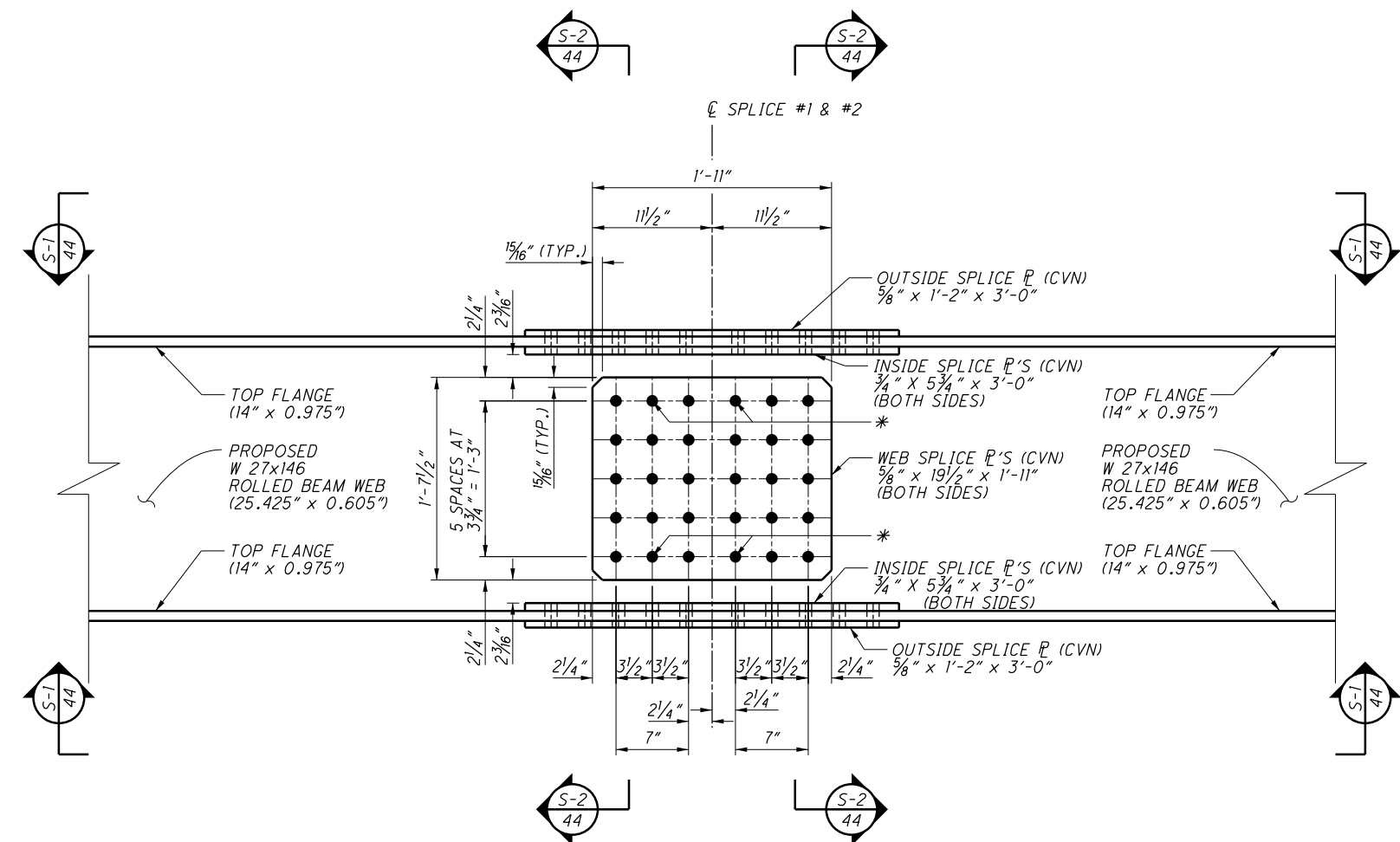
TOP & BOTTOM VIEW (S-1)
(TOP AND BOTTOM FLANGES)

NOTE:
EXCLUDE THE BOLT THREADS FROM THE SHEAR PLANES. (THE BOLT SHEAR STRENGTH FOR THE FLANGE AND WEB SPLICES HAS BEEN DESIGNED ASSUMING THAT THE THREADS ARE EXCLUDED FROM THE SHEAR PLANES.)
ALL BOLTS USED SHALL BE 1/8" DIAMETER.
ALL BOLT HOLES SHALL BE 1 3/16" DIAMETER.
BOLT SPECIFICATIONS SHALL CONFORM TO A325, TYPE 1.

(SEE FRAMING PLAN FOR LOCATION IN SPAN 1 AND 2)
(SPLICE #1 SHOWN, SPLICE #2 MIRRORED)



BEAM SECTION (S-2)
(REAR & FWD. OF CL SPLICE)
(W 27x146)



BOLTED SPLICE DETAIL
(SEE FRAMING PLAN FOR LOCATION IN SPAN 1 AND 2)

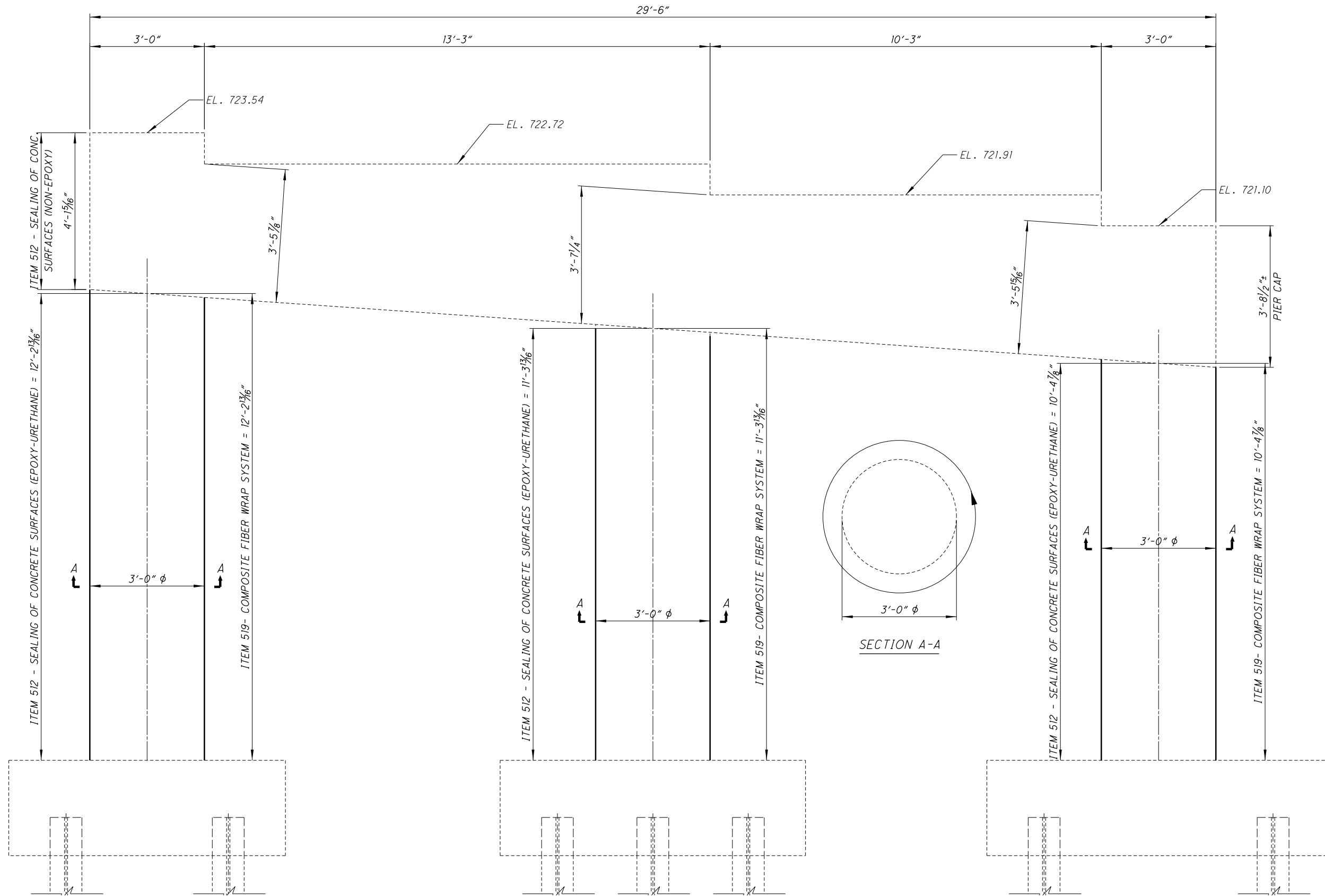
* - BOLT AND NUT LOCATIONS TO BE PLACED AND TIGHTENED LAST

| | | | | |
|---|---|----------------------|-----------------------|---------|
| DESIGNED | | CPS | CHECKED | TAG |
| DRAWN | | CPS | REVISED | |
| REVIEWED | CPS | 12/4/2020 | STRUCTURE FILE NUMBER | 6002978 |
| DATE | 12/4/2020 | | | |
| DESIGN AGENCY | OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 | | | |
| BOLTED BEAM SPLICE #1 & #2 DETAILS | | | | |
| BRIDGE NO. MUS-70-1212 OVER UNDERWOOD ST. | | | | |
| MUS-70-10.49 | | PID No. 93006 | | |
| 44 / 74 | | | | |
| (1876) 2231 | | | | |

I:\ProjectData\MUS_93006\400-Engineering\Structures\SFN_6001920\Sheets\070_1144P_GS001.dgn_Sheet 4/5/2021 5:24:32 PM tgreenwa

| SHEET NUM. | | | | | | | | PART. | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|--|--|-------|-------|--|--|---------------|-------|---------|----------|----------|-------------|--|-------------|---------------|
| | | | 27 | 28 | | | 02/IMS/B R | | | | | | | | |
| STRUCTURE OVER 20 FOOT SPAN (MUS-70-1144A or SFN6001920) | | | | | | | | | | | | | | | |
| | | | | | | | LS | | 202 | 11203 | LS | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (SUPERSTRUCTURE) | 3 | |
| | | | | | | | 128 | | 202 | 11301 | 128 | CY | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURES) | 3 | |
| | | | | | | | 169 | | 202 | 22900 | 169 | SY | APPROACH SLAB REMOVED | | |
| | | | | | | | LS | | 503 | 21301 | LS | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 45 | |
| | | | | | | | 65,308 | | 509 | 10000 | 65,308 | LB | EPOXY COATED REINFORCING STEEL | | |
| | | | | | | | 177 | | 511 | 21520 | 177 | CY | CLASS OC2 CONCRETE, SUPERSTRUCTURE | | |
| | | | | | | | 2 | | 511 | 33501 | 2 | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN | 20 | |
| | | | | | | | 38 | | 511 | 34448 | 38 | CY | CLASS OC2 CONCRETE, BRIDGE DECK (PARAPET) | | |
| | | | | | | | 122 | | 511 | 43510 | 122 | CY | CLASS OC1 CONCRETE, ABUTMENT INCLUDING FOOTING | | |
| | | | | | | | 496 | | 512 | 10050 | 496 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | | |
| | | | | | | | 77 | | 512 | 10100 | 77 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): PIERS | | |
| | | | 2,172 | | | | 2,172 | | 513 | 10200 | 2,172 | LB | STRUCTURAL STEEL MEMBERS, LEVEL UF | | |
| | | | | 1,952 | | | 1,952 | | 513 | 20000 | 1,952 | EACH | WELDED STUD SHEAR CONNECTORS | | |
| | | | | | | | 6,343 | | 514 | 00050 | 6,343 | SF | SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL | | |
| | | | | | | | 6,343 | | 514 | 00056 | 6,343 | SF | FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT | | |
| | | | | | | | 6,343 | | 514 | 00060 | 6,343 | SF | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT | | |
| | | | | | | | 6,343 | | 514 | 00066 | 6,343 | SF | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT | | |
| | | | | | | | 7 | | 514 | 10000 | 7 | EACH | FINAL INSPECTION REPAIR | | |
| | | | | | | | 12 | | 516 | 13601 | 12 | SF | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 | |
| | | | | | | | 190 | | 516 | 13901 | 190 | SF | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 | |
| | | | | | | | 90 | | 516 | 14020 | 90 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | | |
| | | | | | | | 66 | | 516 | 14600 | 66 | FT | STRUCTURAL JOINT OR JOINT SEALER, MISC.:EMSEAL WITH SLEEPER SLAB | 45 | |
| | | | | | | | 66 | | 516 | 31011 | 66 | FT | 2" DEEP JOINT SEALER, AS PER PLAN | 4 | |
| | | | | | | | 8 | | 516 | 44300 | 8 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 1'-0" x 3.2729") | 25 | |
| | | | | | | | 4 | | 516 | 44300 | 4 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-7" x 1'-3" x 3.7226") | 25 | |
| | | | | | | | 4 | | 516 | 44300 | 4 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0" x 1'-3" x 3.7226") WITH ANCHOR RODS | 25 | |
| | | | | | | | LS | | 516 | 47001 | LS | | JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN | 4 | |
| | | | | | | | 3 | | 518 | 12000 | 3 | EACH | SCUPPERS, INCLUDING SUPPORTS | | |
| | | | | | | | 60 | | 518 | 21200 | 60 | CY | POROUS BACKFILL WITH GEOTEXTILE FABRIC | | |
| | | | | | | | 66 | | 518 | 40000 | 66 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | | |
| | | | | | | | 64 | | 518 | 40010 | 64 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | | |
| | | | | | | | 801 | | SPECIAL | 51900100 | 801 | SF | COMPOSITE FIBER WRAP SYSTEM | 4 | |
| | | | | | | | 169 | | 526 | 25001 | 169 | SY | REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN | 3 | |
| | | | | | | | 78 | | 613 | 41201 | 78 | CY | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 4 | |

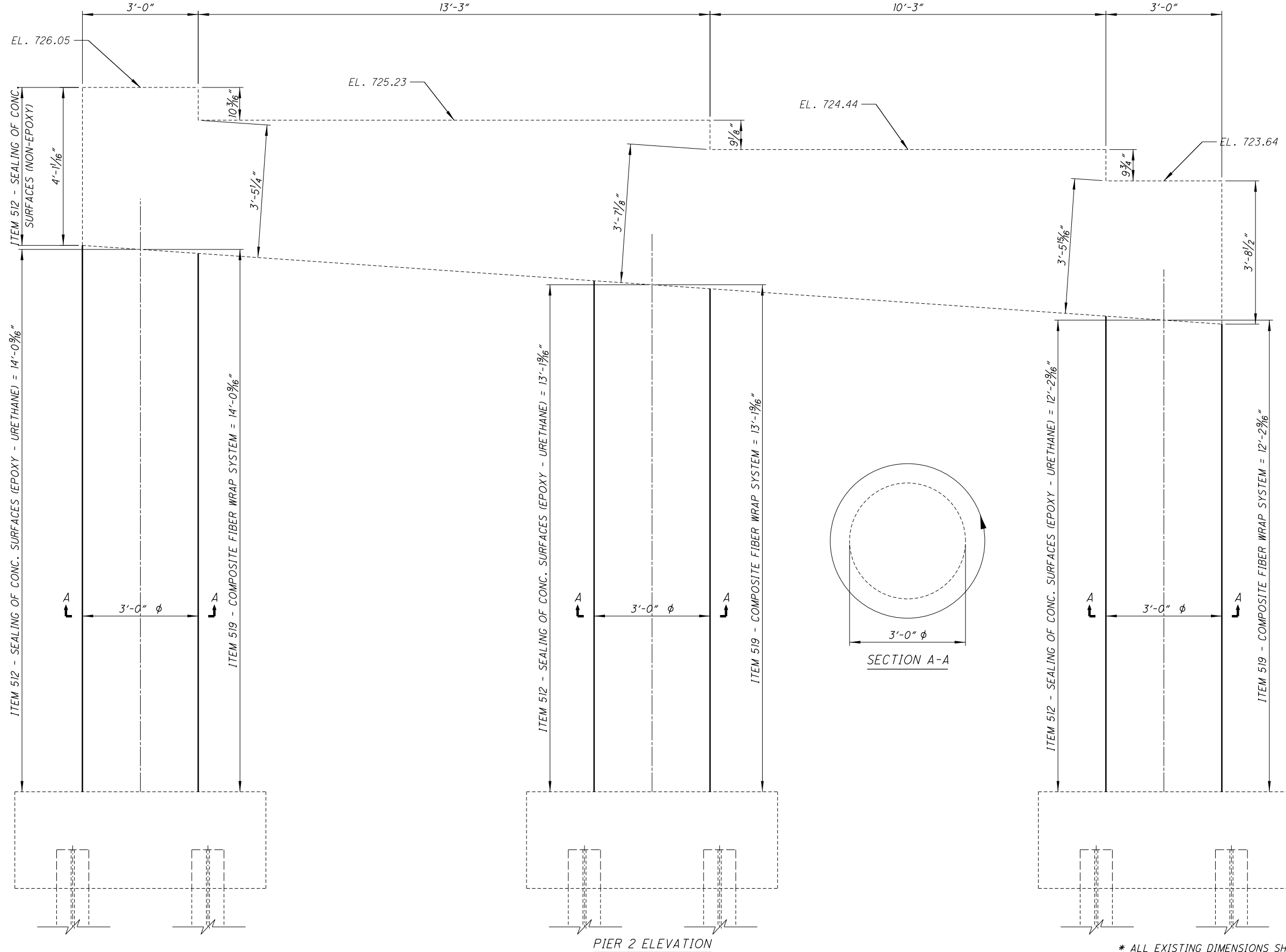
| | |
|-----------------------------|--------------------|
| DESIGN AGENCY | OHIO DEPARTMENT OF |
| DATE | 12/1/2020 |
| TAG | 6001920 |
| STRUCTURE FILE NUMBER | 6001920 |
| REVIEWED | |
| DRAWN | |
| YEL/TDF | |
| DESIGNED | |
| YEL | |
| CHECKED | |
| CPS | |
| GENERAL SUMMARY | |
| BRIDGE NO. MUS-70-1144A | |
| RAMP 'A' OVER-McINTIRE AVE. | |
| MUS-70-10.49 | |
| PID No. 93006 | |
| 5 / 45 | |
| 1923 | |
| 2231 | |



PIER 1 ELEVATION

* ALL EXISTING DIMENSIONS SHOULD BE CONSIDERED ±

| | | | | |
|--|------------------------------|----------------------------------|------------------|---|
| DESIGNED YEL CHECKED CPS | DRAWN YEL REVISED . | REVIEWED TAG | DATE 12/01/20 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| | | STRUCTURE FILE NUMBER 6001920 | | |
| EXISTING PIERS 1 BRIDGE NO. - MUS-70-1144 RAMP 'A' OVER MCINTIRE AVE | | | | MUS-70-10.49 PID No. 93006 |
| 21 / 45 | | | | 1939 2231 |



* ALL EXISTING DIMENSIONS SHOULD BE CONSIDERED ±

| | | | | | |
|-----------------|----------------|--------------|-----------------|-----------------------|----------------------------|
| DESIGNED YEL | CHECKED CPS | DRAWN YEL | REVIEWED TAG | DATE | DESIGN AGENCY |
| | | | | 12/01/20 | |
| | | | | STRUCTURE FILE NUMBER | |
| | | | | 6004920 | |
| MUS-70-10.49 | | | | | EXISTING PIER 2 |
| PID No. 93006 | | | | | BRIDGE NO. -MUS-70-1144 |
| | | | | | RAMP 'A' OVER MCINTIRE AVE |
| 22 | 45 | | | | |
| 1940 | 2231 | | | | |

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BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS (INCLUDING LOAD PLATES, HP SHAPES AND ANCHOR RODS, DOWEL HOLES, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) AS PER PLAN.

REAR ABUTMENT BEARING PADS: 1'-0" x 1'-4" x 3.5732" (50 DUROMETER)
 TOP STEEL LOAD PLATE: 1'-1" x 1'-2" x 1.50" BEVELED TO 2.125"
 BOTTOM STEEL LOAD PLATE: 1'-1" x 1'-5" x 1.50"

PIER 1 BEARING PADS: 1'-3" x 1'-6" x 3.7226" (50 DUROMETER)
 TOP STEEL LOAD PLATE: 1'-10" x 2'-1" x 3.8125" BEVELED TO 4.9375"

PIER 2 BEARING PADS: 1'-3" x 1'-6" x 3.7226" (50 DUROMETER)
 TOP STEEL LOAD PLATE: 1'-4" x 1'-7" x 3.8125" BEVELED TO 4.8125"

FORWARD ABUTMENT BEARING PADS:
 1'-0" x 1'-4" x 3.5732" (50 DUROMETER)
 TOP STEEL LOAD PLATE: 1'-1" x 1'-2" x 1.50" BEVELED TO 2.125"
 BOTTOM STEEL LOAD PLATE: 1'-1" x 1'-5" x 1.50"

ALL H-PILES: HP12x53

| ELASTOMERIC BEARING PAD DESIGN DATA | | | |
|-------------------------------------|--------|--------|-------------|
| LOCATION | DL (K) | LL (K) | DL & LL (K) |
| REAR ABUTMENT | 62 | 57 | 119 |
| PIER 1 | 112 | 92 | 204 |
| PIER 2 | 112 | 92 | 204 |
| FWD. ABUTMENT | 62 | 57 | 119 |

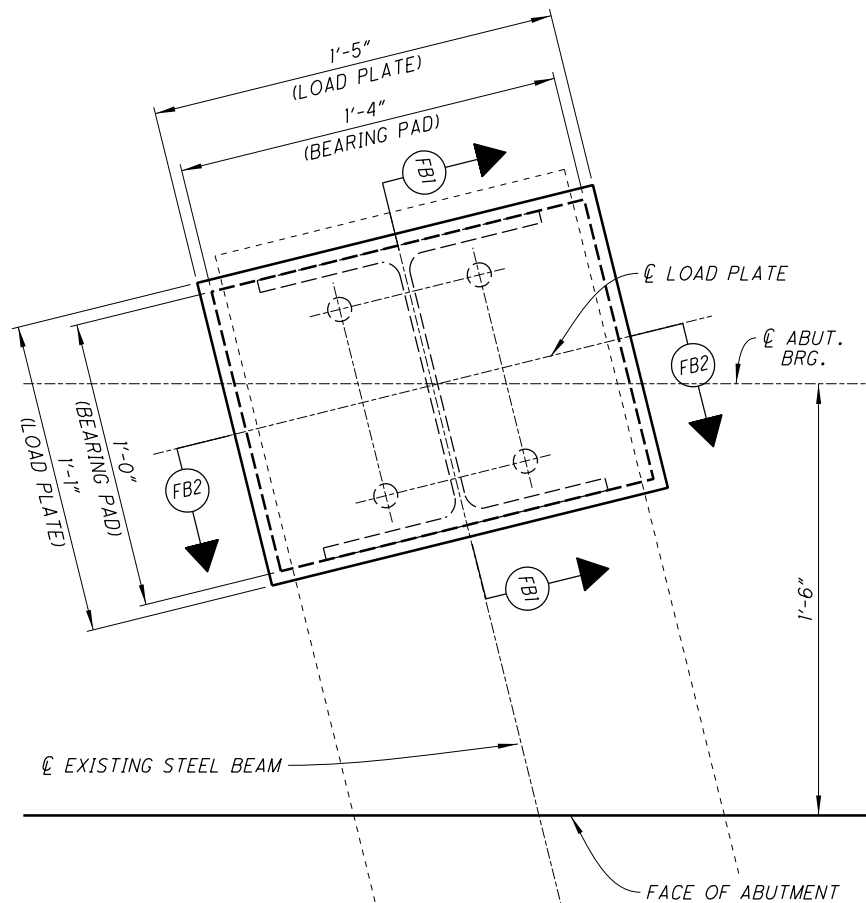
LOAD PLATE:
 THE STEEL LOAD PLATES SHALL BE MADE OF A709 STEEL. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ADDITIONAL UPPER LOAD PLATES AT THE ABUTMENTS AND ALL HP STEEL SHAPES SHALL BE INCLUDED WITH ITEM 516 FOR PAYMENT. FOR ADDITIONAL DETAILS, SEE STD DWG SICD-1-96.

WELDING:
 CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

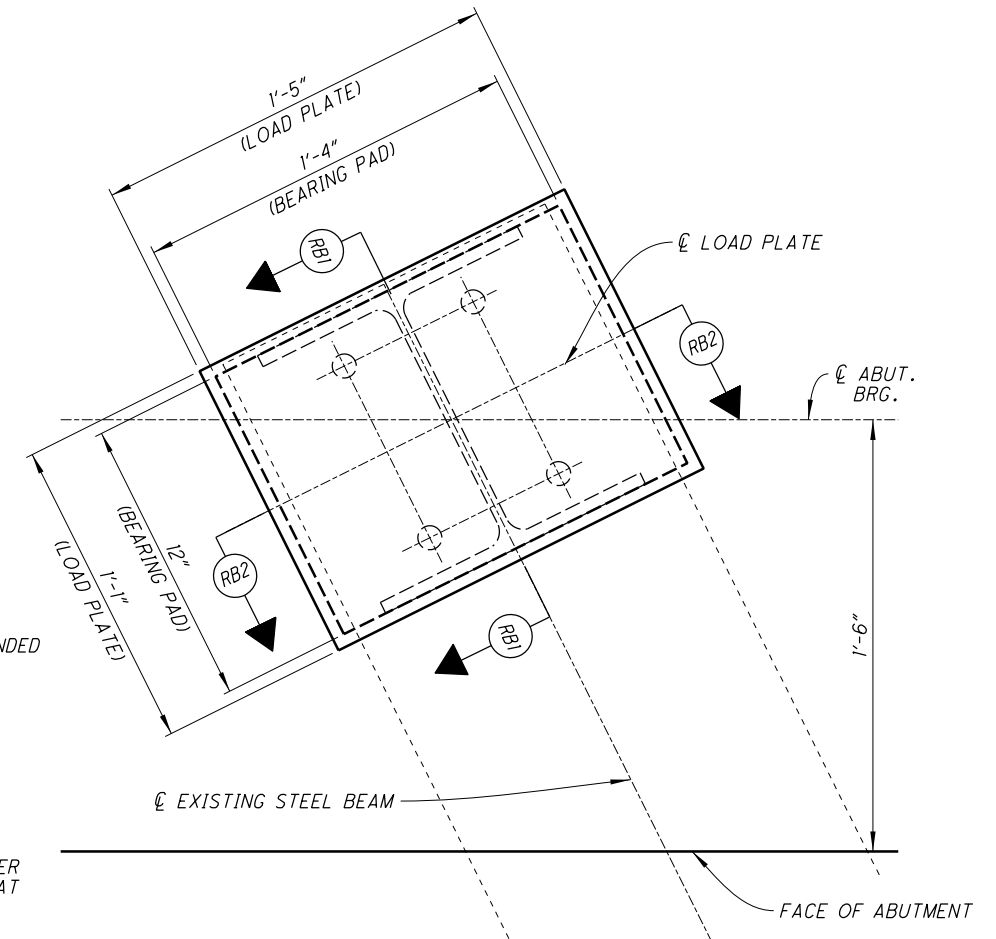
BEARING REPOSITIONING:
 IF THE GIRDERS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80 DEGREES F OR LOWER THAN 40 DEGREES F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60 DEGREES F (+/-) 10 DEGREES F, RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60 DEGREES F (+/-) 10 DEGREES F.

ELASTOMERIC BEARINGS:
 THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.5 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. PERFORM THE LONG-TERM COMPRESSION PROOF LOAD TEST IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6 AND 18.7.4.5.

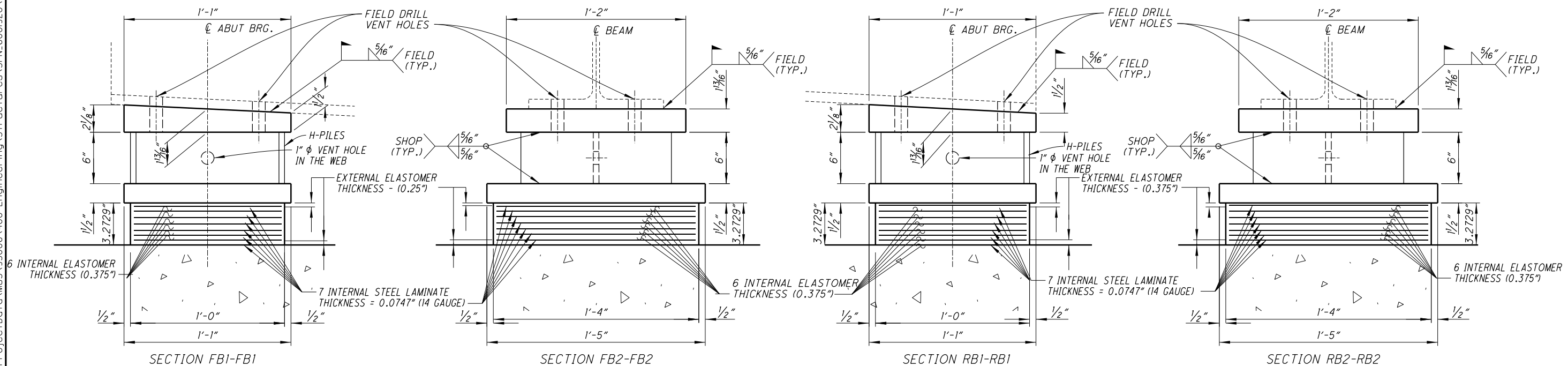
MARKINGS:
 ALL BEARINGS AND LOAD PLATES SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS, AND IS LABELED, UP-STATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER THE BEARING IS INSTALLED.



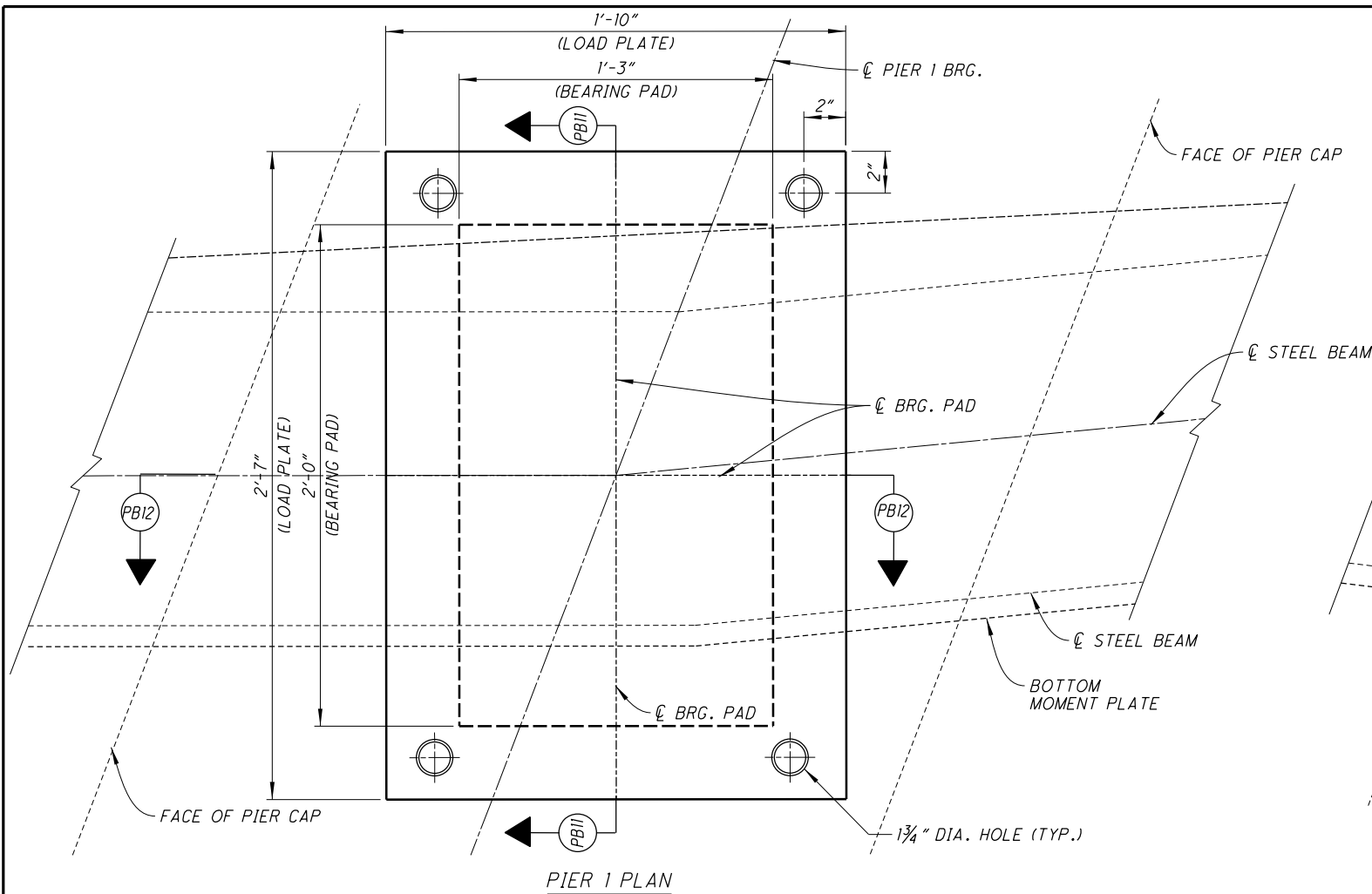
FORWARD ABUTMENT PLAN



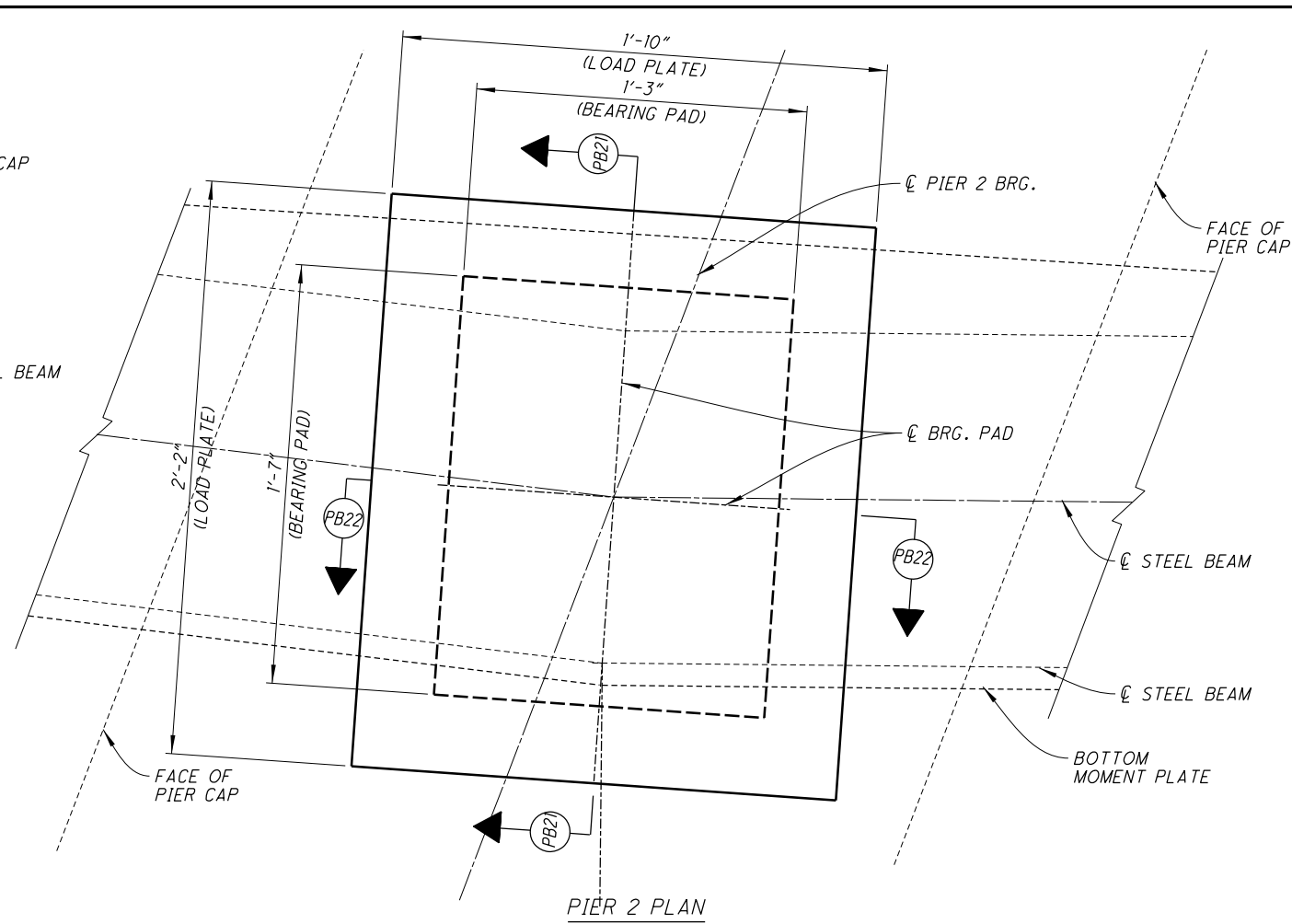
REAR ABUTMENT PLAN



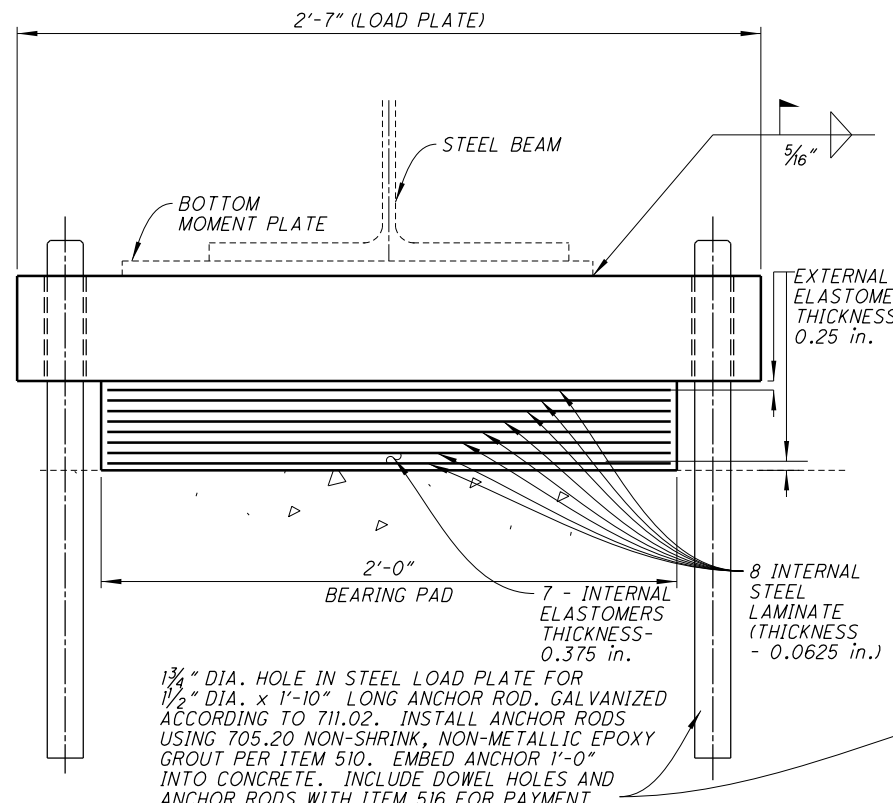
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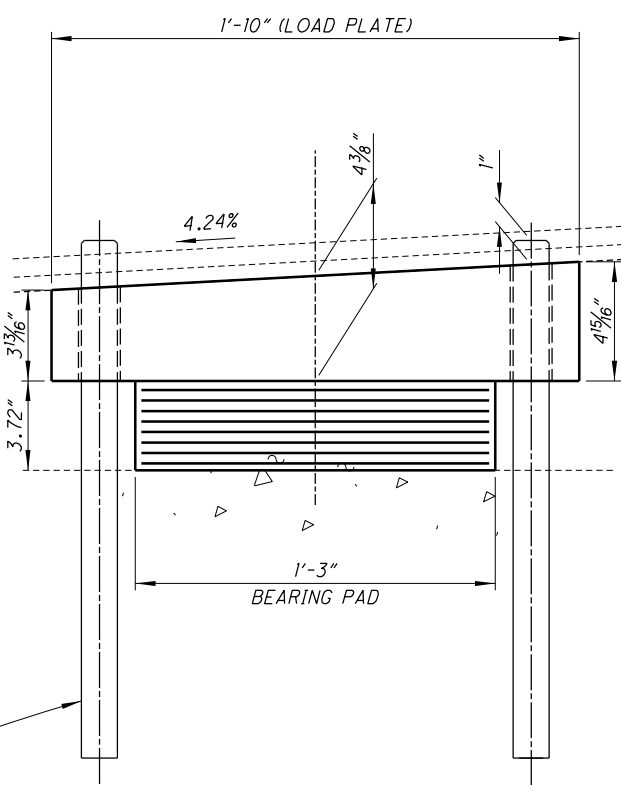
PIER 1 PLAN



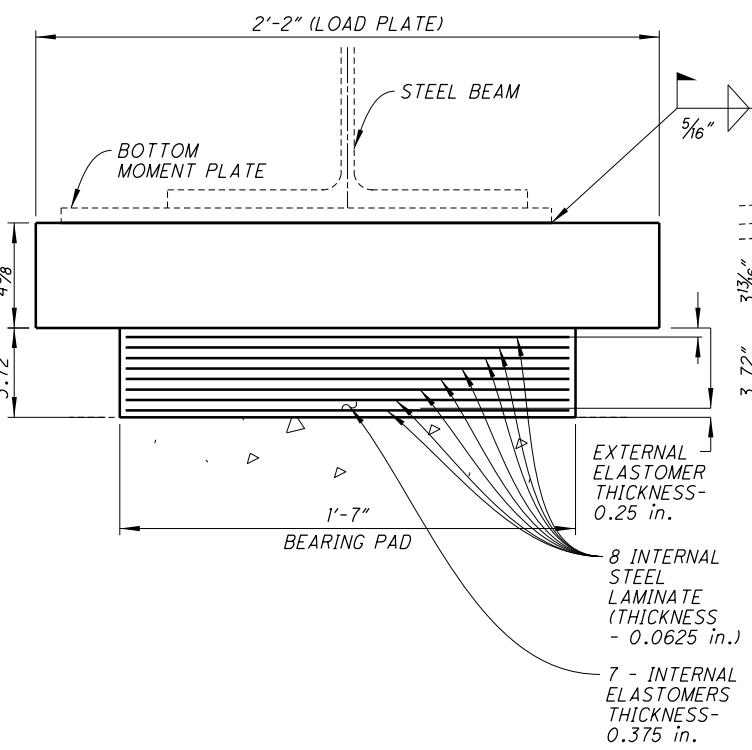
PIER 2 PLAN



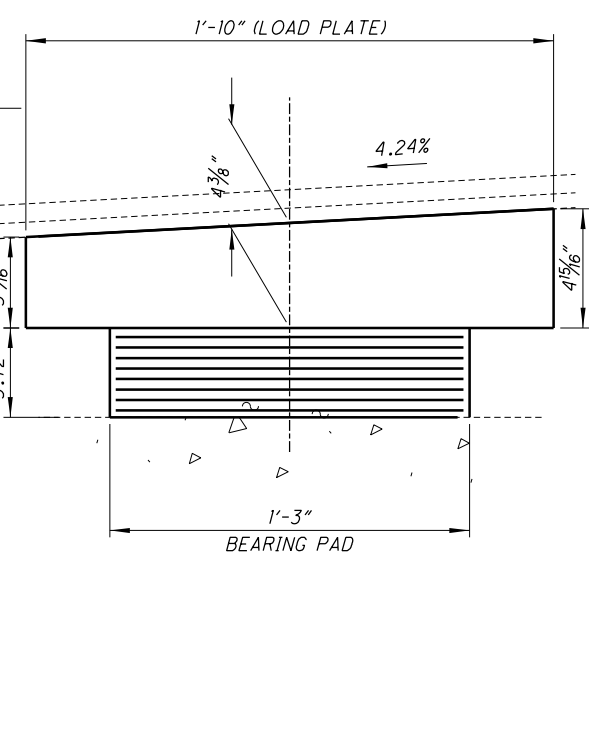
SECTION PB11-PB11



SECTION PB12-PB12



SECTION PB21-PB21

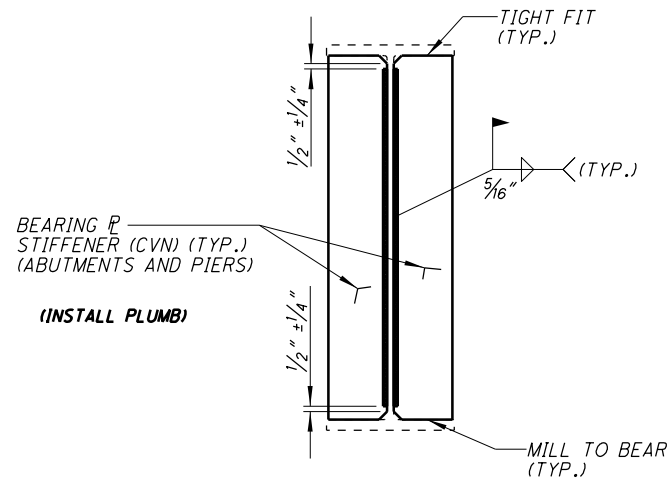


SECTION PB22-PB22

1 3/4" DIA. HOLE IN STEEL LOAD PLATE FOR 1/2" DIA. x 1'-10" LONG ANCHOR ROD. GALVANIZED ACCORDING TO 711.02. INSTALL ANCHOR RODS USING 705.20 NON-SHRINK, NON-METALLIC EPOXY GROUT PER ITEM 510. EMBED ANCHOR 1'-0" INTO CONCRETE. INCLUDE DOWEL HOLES AND ANCHOR RODS WITH ITEM 516 FOR PAYMENT.

| | | | | | | | |
|-----------------------------|------|----------------------------|-----------|-------------------------|---------|---------------|--|
| DESIGNED | | YEL | | CHECKED | | CPS | |
| DRAWN | | YEL/TDF | | REVISED | | . | |
| REVIEWED | DATE | TAG | 12/1/2020 | STRUCTURE FILE NUMBER | 6001920 | DESIGN AGENCY | |
| OHIO DEPARTMENT OF | | TRANSPORTATION, DISTRICT 5 | | BRIDGE NO. MUS-70-1144A | | | |
| RAMP 'A' OVER-McINTIRE AVE. | | | | PID No. 93006 | | | |
| BEARING PAD DETAILS | | | | MUS-70-10.49 | | | |
| 26 / 45 | | | | 1944 | | | |
| | | | | 2231 | | | |

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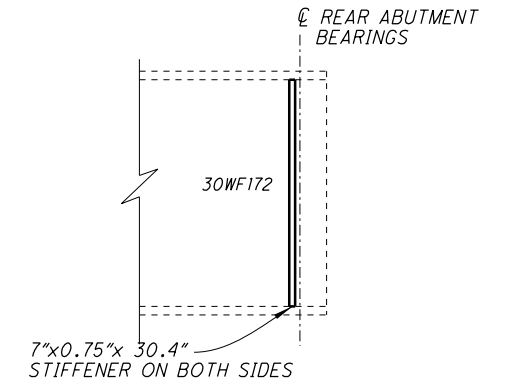
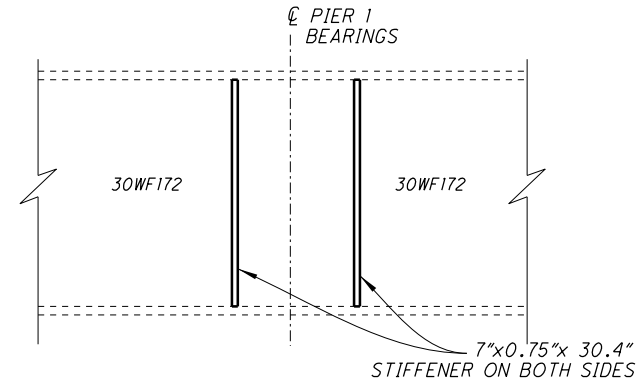
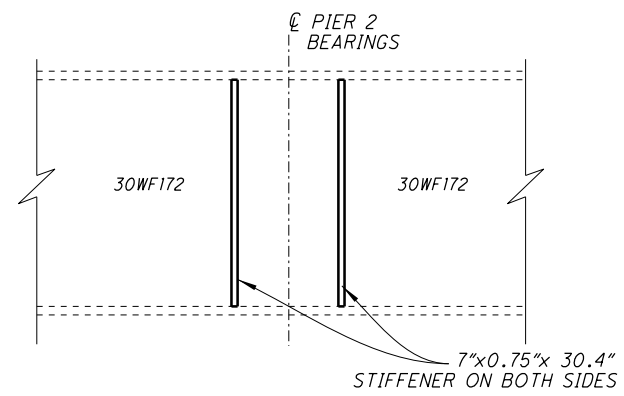
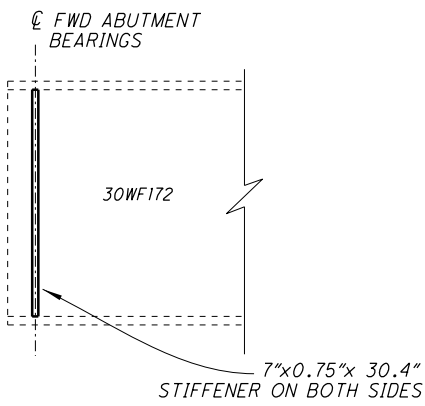
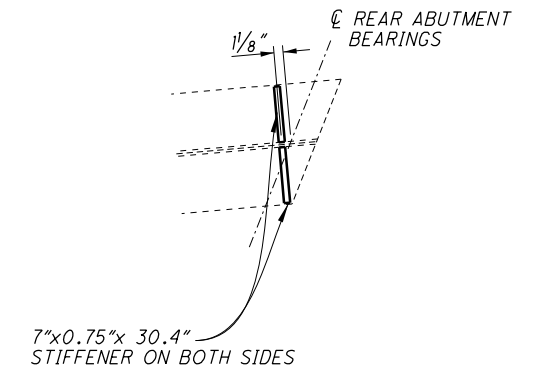
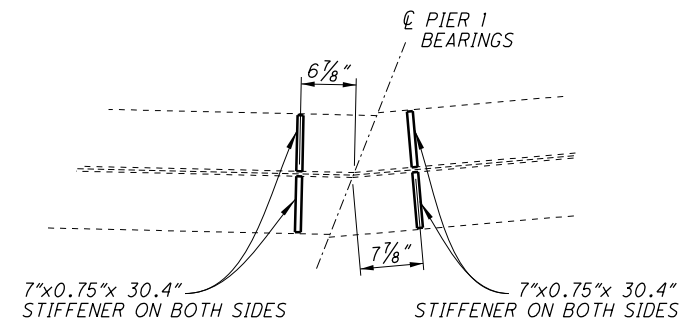
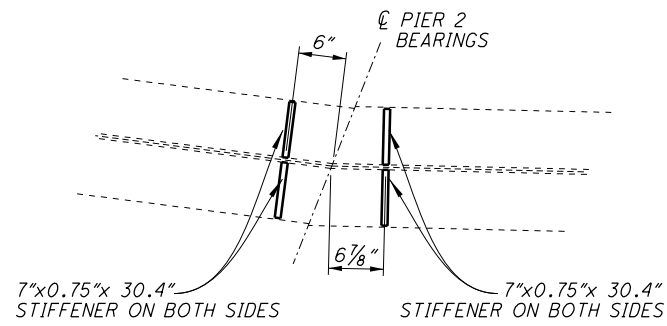
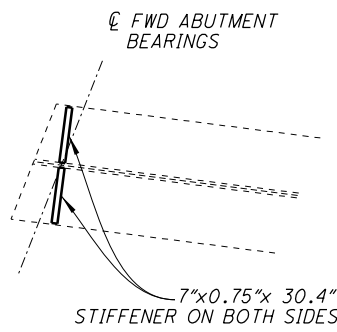


NOTE:
FOR NOTES AND ADDITIONAL
DETAILS INCLUDING WELDING
DETAILS SEE STD. DWG. GSD-1-96.
ALL PROPOSED BEARING STIFFENER
HEIGHTS SHALL BE FIELD MEASURED
AND VERIFIED BY THE CONTRACTOR
PRIOR TO FABRICATION (TYPICAL)

BEARING STIFFENERS DETAILS

| ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN | | |
|--|--------|--------|
| STIFFENER # | NUMBER | POUNDS |
| 7" x 0.75" x 30.4" | 48 | 2172 |
| TOTAL | | 2172 |

FINAL QUANTITIES FOR ITEM 513 STRUCTURAL
STEEL MEMBERS, LEVEL UF, AS PER PLAN SHALL
BE DETERMINED IN THE FIELD.



PROPOSED BEARING STIFFENERS LOCATIONS

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

REVIEWED DATE: 12/01/20

TAG: 6001920

STRUCTURE FILE NUMBER: 6001920

DESIGNED YEL

CHECKED CPS

DRAWN YEL

REVIS

BRIDGE NO. MUS-70-1144A

RAMP 'A' OVER-McINTIRE AVE.

PROPOSED BEARING STIFFENERS DETAILS

MUS-70-10-49

PID No. 93006

27/45

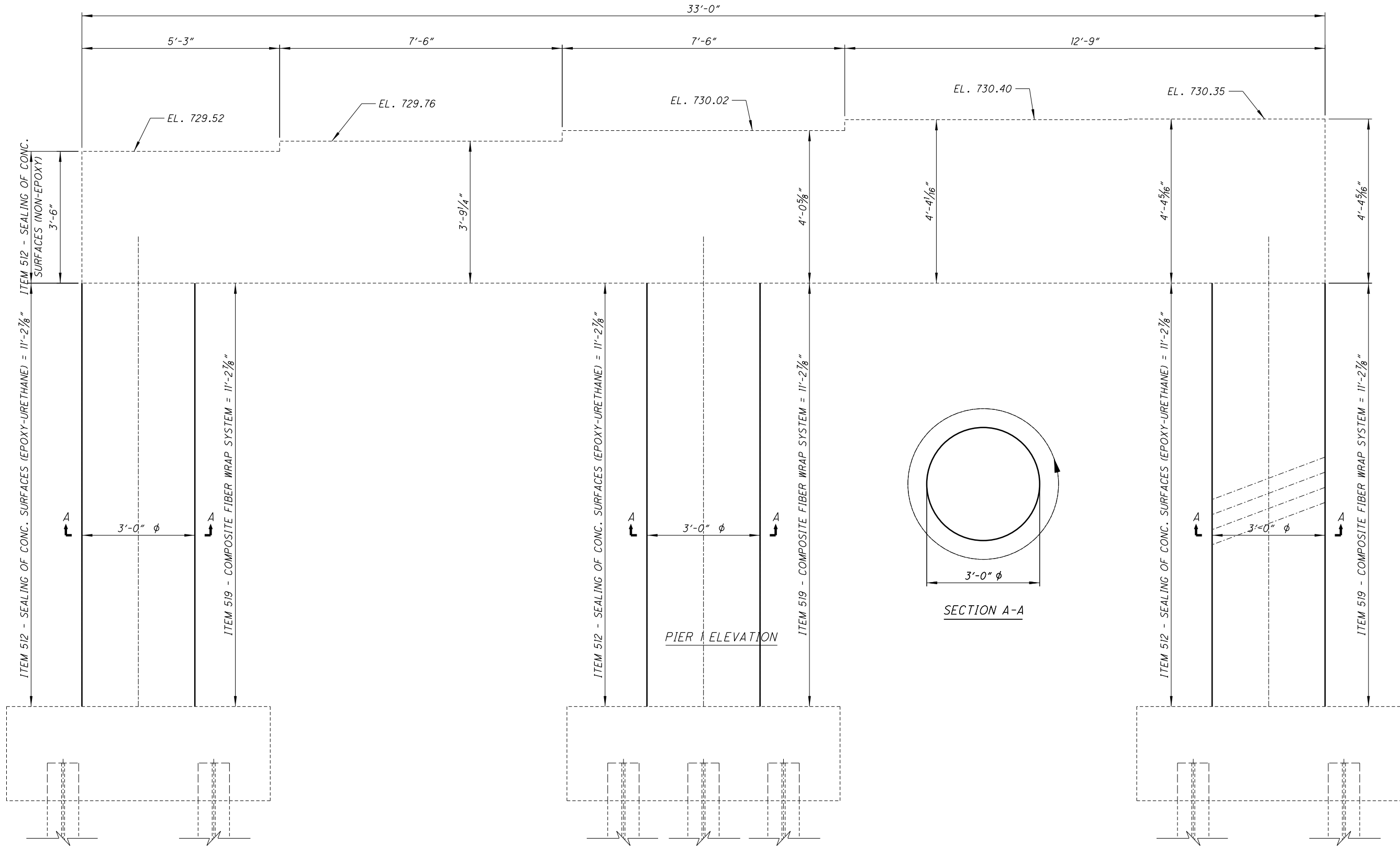
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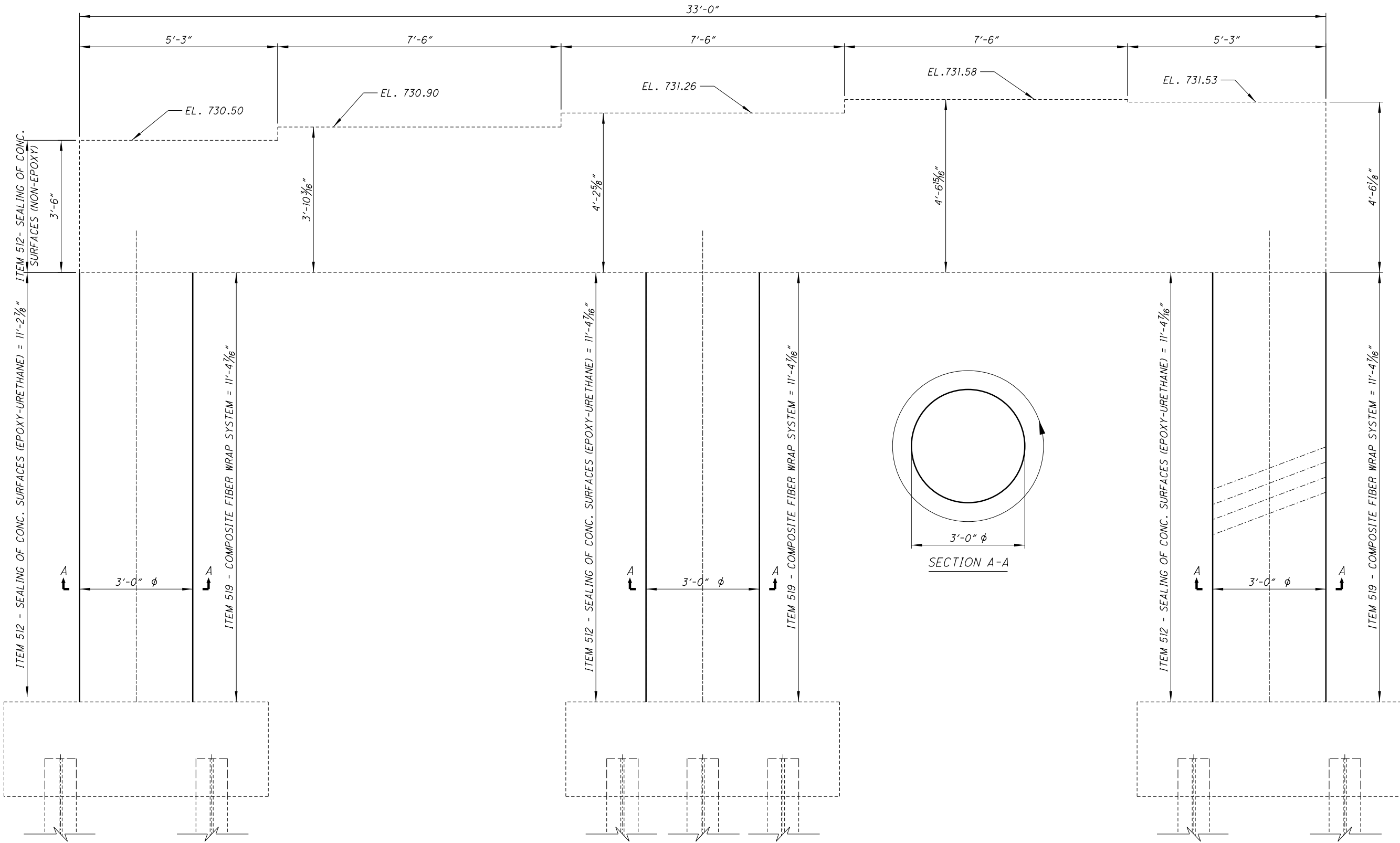
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| SHEET NUM. | | | | | PART. | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|------------|-----|-------|--|--|-----------|---------|----------|----------|-------------|------|--|---------------|
| | 24 | 31 | | | 02/IMS/BR | | | | | | | |
| | | | | | | | | | | | STRUCTURE OVER 20 FOOT SPAN (MUS-70-1142E or SFN6001890) | |
| | | | | | LS | 202 | 11203 | LS | | | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (SUPERSTRUCTURE) | 3 |
| | | | | | 105 | 202 | 11301 | 105 | CY | | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (SUBSTRUCTURES) | 3 |
| | | | | | 103 | 202 | 22900 | 103 | SY | | APPROACH SLAB REMOVED | |
| | | | | | LS | 503 | 21301 | LS | | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 44 |
| | | | | | 61,871 | 509 | 10000 | 61,871 | LB | | EPOXY COATED REINFORCING STEEL | |
| | | | | | 197 | 511 | 21520 | 197 | CY | | CLASS QC2 CONCRETE, SUPERSTRUCTURE | |
| | | | | | 2 | 511 | 33500 | 2 | EACH | | SEMI-INTEGRAL DIAPHRAGM GUIDE | |
| | | | | | 40 | 511 | 34448 | 40 | CY | | CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET) | |
| | | | | | 116 | 511 | 43510 | 116 | CY | | CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING | |
| | | | | | 451 | 512 | 10050 | 451 | SY | | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |
| | | | | | 71 | 512 | 10100 | 71 | SY | | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | |
| | 951 | 2,878 | | | 3,829 | 513 | 10201 | 3,829 | LB | | STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN | 3 |
| | | | | | 2,010 | 513 | 20000 | 2,010 | EACH | | WELDED STUD SHEAR CONNECTORS | |
| | | | | | 6,911 | 514 | 00050 | 6,911 | SF | | SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL | |
| | | | | | 6,911 | 514 | 00056 | 6,911 | SF | | FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT | |
| | | | | | 6,911 | 514 | 00060 | 6,911 | SF | | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT | |
| | | | | | 6,911 | 514 | 00066 | 6,911 | SF | | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT | |
| | | | | | 9 | 514 | 10000 | 9 | EACH | | FINAL INSPECTION REPAIR | |
| | | | | | 12 | 516 | 13601 | 12 | SF | | 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | 180 | 516 | 13901 | 180 | SF | | 2" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN | 3 |
| | | | | | 95 | 516 | 14020 | 95 | FT | | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | |
| | | | | | 71 | 516 | 14600 | 71 | FT | | STRUCTURAL JOINT OR JOINT SEALER, MISC.: EMSEAL WITH SLEEPER SLAB | 44 |
| | | | | | 71 | 516 | 31011 | 71 | FT | | 2" DEEP JOINT SEALER, AS PER PLAN | 4 |
| | | | | | 10 | 516 | 44300 | 10 | EACH | | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10" x 1'-2" x 3.2729") | 29 |
| | | | | | 5 | 516 | 44300 | 5 | EACH | | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-3" x 1'-6" x 3.7226") | 29 |
| | | | | | 5 | 516 | 44300 | 5 | EACH | | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-3" x 1'-6" x 3.7226") WITH ANCHOR RODS | 29 |
| | | | | | LS | 516 | 47001 | LS | | | JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN | 4 |
| | | | | | 6 | 518 | 12000 | 6 | EACH | | SCUPPERS, INCLUDING SUPPORTS | |
| | | | | | 41 | 518 | 21200 | 41 | CY | | POROUS BACKFILL WITH GEOTEXTILE FABRIC | |
| | | | | | 72 | 518 | 40000 | 72 | FT | | 6" PERFORATED CORRUGATED PLASTIC PIPE | |
| | | | | | 72 | 518 | 40010 | 72 | FT | | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | |
| | | | | | 741 | SPECIAL | 51900100 | 741 | SF | | COMPOSITE FIBER WRAP SYSTEM | 4 |
| | | | | | 171 | 526 | 25001 | 171 | SY | | REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN | 3 |
| | | | | | 79 | 613 | 41201 | 79 | CY | | LOW STRENGTH MORTAR BACKFILL, AS PER PLAN | 4 |

| | | | | |
|-----------------------------|---------|-----------------------|------------|----------------------------|
| DESIGNED | DRAWN | REVIEWED | DATE | DESIGN AGENCY |
| YEL | YEL | TAG | 11/27/2020 | OHIO DEPARTMENT OF |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | 6001890 | TRANSPORTATION, DISTRICT 5 |
| TAG | . | | | |
| PARAPET DETAILS | | | | |
| BRIDGE NO.: MUS-70-1142E | | | | |
| RAMP 'E' OVER MCINTIRE AVE. | | | | |
| MUS-70-10.49 | | | | |
| PID No. 93006 | | | | |
| 5 / 44 | | | | |
| 1968 2231 | | | | |



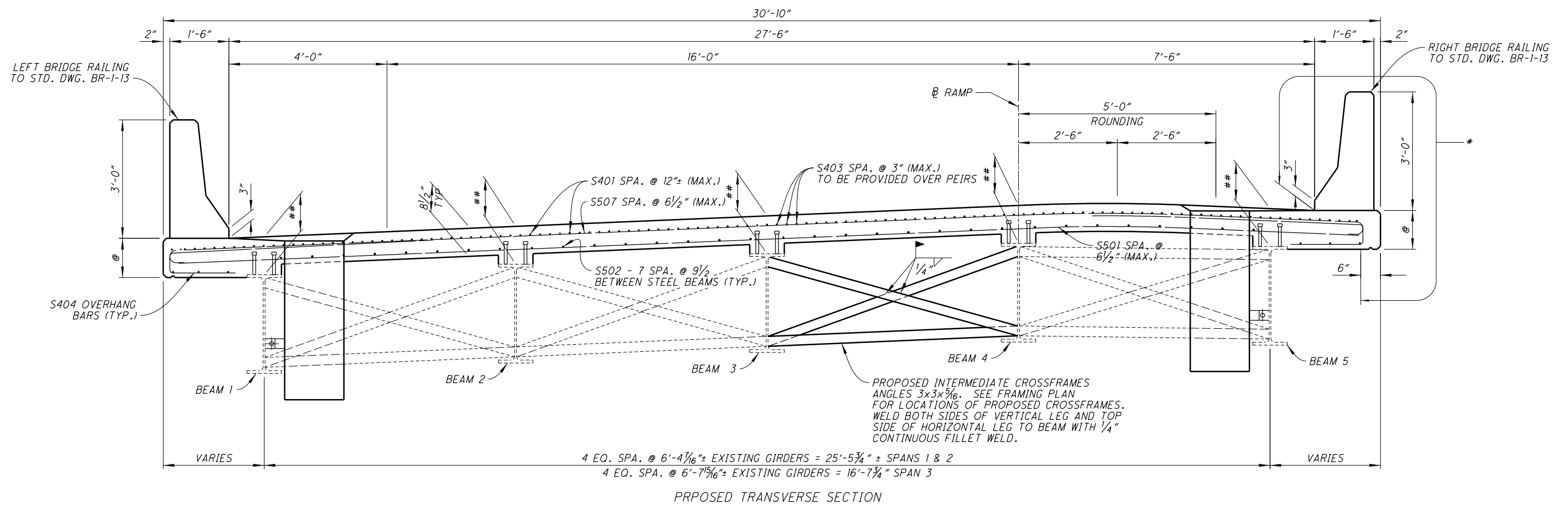
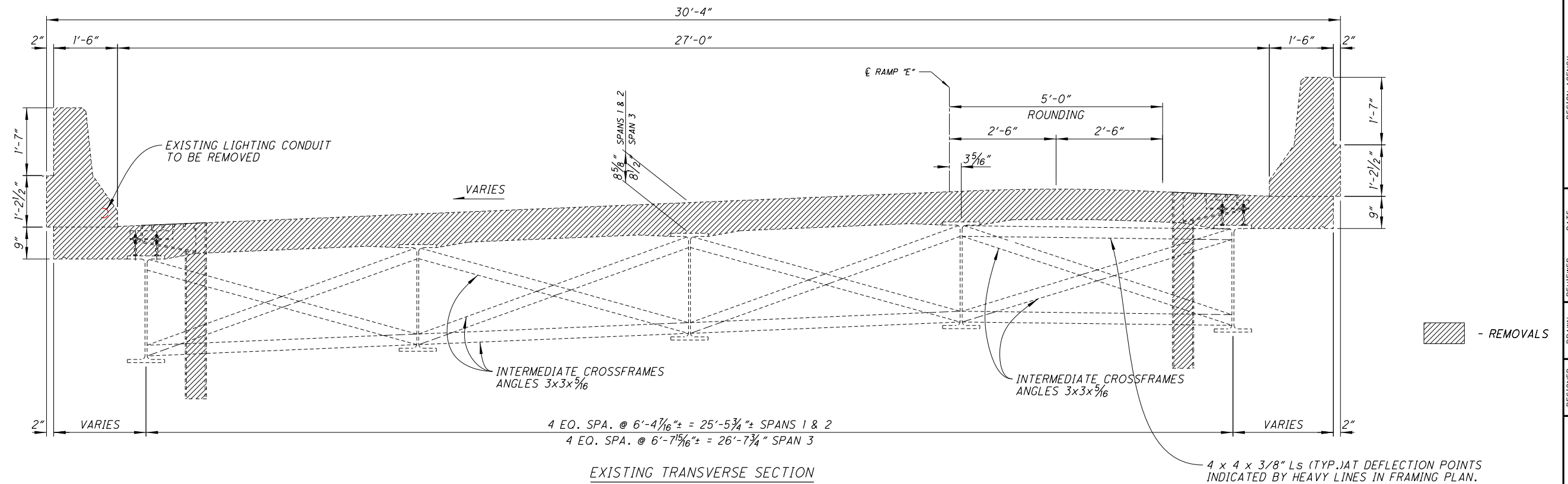
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|--------------------------------------|--|--------------|----------------------------------|----------------|--------------|-----------------|--------------------|---|
| MUS-70-10.49 PID No. 93006 | EXISTING PIER 1 DETAILS BRIDGE NO.: MUS-70-1142E RAMP 'E' OVER MCINTIRE AVE. | | DESIGNED YEL | CHECKED TAG | DRAWN YEL | REVIEWED TAG | DATE 11/27/2020 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| | 21 / 44 | 1984 2231 | STRUCTURE FILE NUMBER 6001890 | REVISIONS . | . | . | . | . |



PIER 2 ELEVATION

| | | | | | | | |
|--------------------------------------|--|--------------|-----------------------------------|-------------------------|---|--------------------|---|
| MUS-70-10.49 PID No. 93006 | EXISTING PIER 2 DETAILS BRIDGE NO.: MUS-70-1142E RAMP 'E' OVER MCINTIRE AVE. | | DESIGNED YEL CHECKED TAG | DRAWN YEL REVISED | REVIEWED TAG STRUCTURE FILE NUMBER 6001890 | DATE 11/27/2020 | DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5 |
| | 22 / 44 | 1985 2231 | | | | | |

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| ## | BEAM 1 | BEAM 2 | BEAM 3 | BEAM 4 | BEAM 5 |
|---------------|---------|----------|----------|----------|-----------|
| REAR ABUTMENT | 10 1/2" | 10 1/2" | 10 1/2" | 10 1/2" | 10 1/2" |
| PIER 1 | 11 7/8" | 11 7/8" | 11 5/8" | 10 3/16" | 10 11/16" |
| PIER 2 | 14 3/8" | 13 3/16" | 12 3/16" | 12 1/16" | 11 3/4" |
| FWD. ABUTMENT | 10 1/2" | 10 1/2" | 10 1/2" | 10 1/2" | 10 1/2" |

| @ | LT. DECK EDGE | RT. DECK EDGE |
|---------------|---------------|---------------|
| REAR ABUTMENT | 10 1/2" | 10 1/2" |
| PIER 1 | 11 1/2" | 10 1/2" |
| PIER 2 | 13 3/4" | 11 5/8" |
| FWD. ABUTMENT | 10 1/2" | 10 1/2" |

* - SEALING OF CONCRETE SURFACES WITH HMWM AS PER C.M.S. 511.22

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 5

REVIEWED DATE: 11/27/2020 TAG: 6001890

DESIGNED: YEL CHECKED: TAG

DRAWN: YEL REVISED: .

TRANSVERSE SECTIONS

BRIDGE NO.: MUS-70-1142E

RAMP 'E' OVER MCINTIRE AVE.

MUS-70-10.49

PID No. 93006

23 / 44

1986

2231

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BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS (INCLUDING LOAD PLATES, HP SHAPES AND ANCHOR RODS, DOWEL HOLES, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) AS PER PLAN.

REAR ABUTMENT BEARING PADS: 10" x 1'-2" x 3.2729" (50 DUROMETER)
TOP STEEL LOAD PLATE: 11" x 1'-3" x 1.50" BEVELED TO 1.875"
BOTTOM STEEL LOAD PLATE: 11" x 1'-3" x 1.50"

PIER 1 BEARING PADS: 1'-3" x 1'-6" x 3.7226" (50 DUROMETER)
TOP STEEL LOAD PLATE: 1'-10" x 2'-1" x 2.625" BEVELED TO 2.9375"

PIER 2 BEARING PADS: 1'-3" x 1'-6" x 3.7226" (50 DUROMETER)
TOP STEEL LOAD PLATE: 1'-4" x 1'-7" x 3.625"

FORWARD ABUTMENT BEARING PADS: 10" x 1'-2" x 3.2729" (50 DUROMETER)
TOP STEEL LOAD PLATE: 11" x 1'-3" x 1.50"
BOTTOM STEEL LOAD PLATE: 1'-1" x 1'-5" x 1.50"

ALL H-PILES: HP10x57

| ELASTOMERIC BEARING PAD DESIGN DATA | | | |
|-------------------------------------|--------|--------|-------------|
| LOCATION | DL (K) | LL (K) | DL & LL (K) |
| REAR ABUTMENT | 53 | 47 | 100 |
| PIER 1 | 100 | 94 | 194 |
| PIER 2 | 100 | 94 | 194 |
| FWD. ABUTMENT | 52 | 48 | 100 |

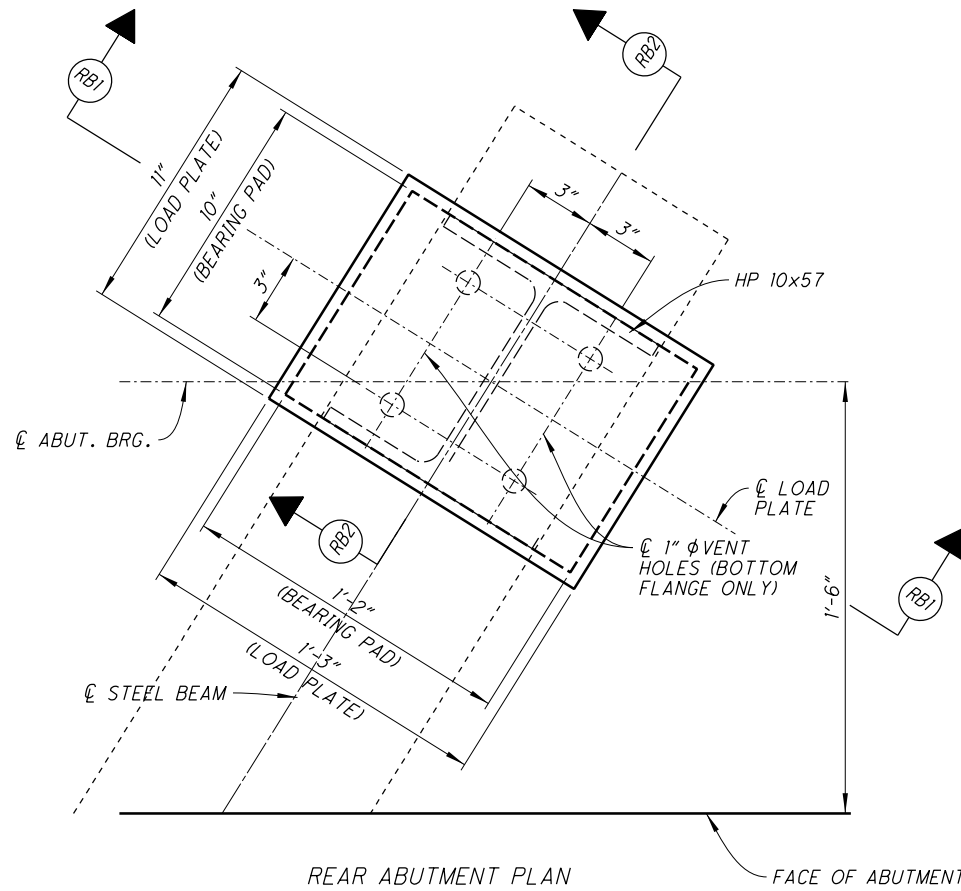
LOAD PLATE:
 THE STEEL LOAD PLATES SHALL BE MADE OF A709 STEEL. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ADDITIONAL UPPER LOAD PLATES AT THE ABUTMENTS AND ALL HP STEEL SHAPES SHALL BE INCLUDED WITH ITEM 516 FOR PAYMENT. FOR ADDITIONAL DETAILS, SEE STD DWG SICD-1-96.

WELDING:
 CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300 DEGREES F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING:
 IF THE GIRDERS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80 DEGREES F OR LOWER THAN 40 DEGREES F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60 DEGREES F (+/-) 10 DEGREES F, RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60 DEGREES F (+/-) 10 DEGREES F.

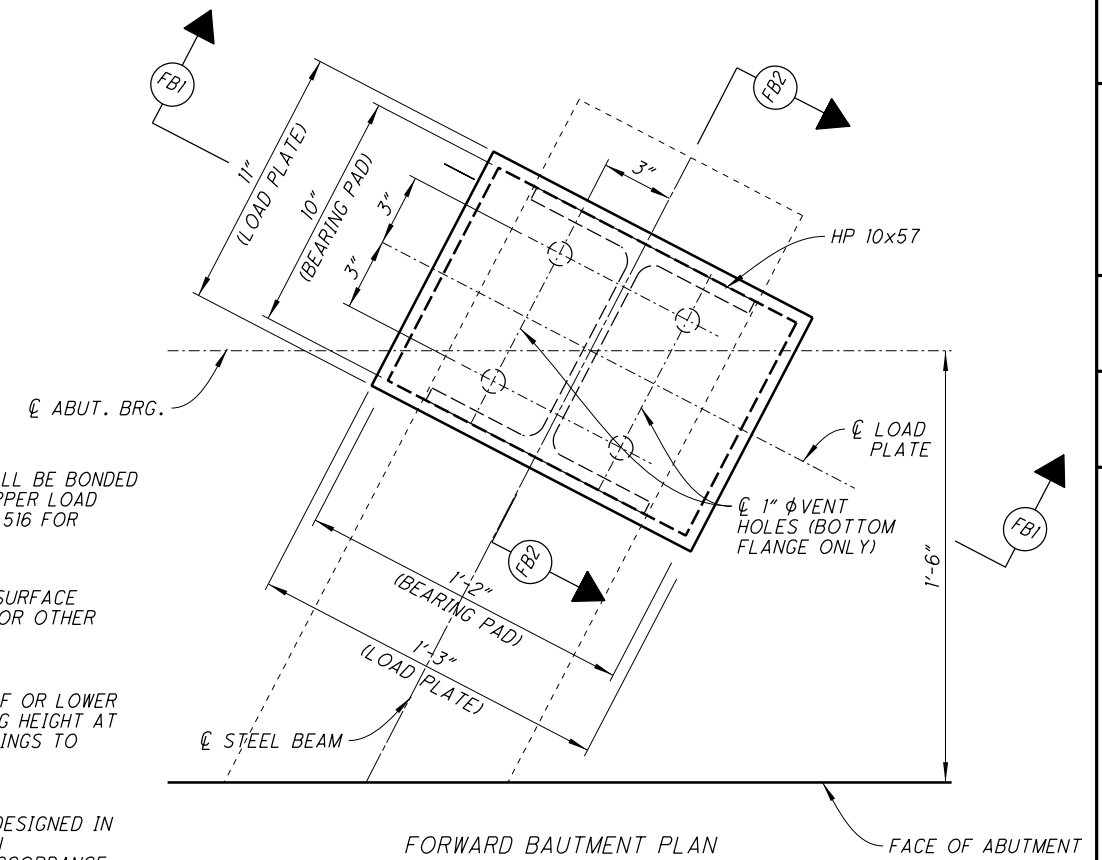
ELASTOMERIC BEARINGS:
 THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.5 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. PERFORM THE LONG-TERM COMPRESSION PROOF LOAD TEST IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6 AND 18.7.4.5.

MARKINGS:
 ALL BEARINGS AND LOAD PLATES SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS, AND IS LABELED, UP-STATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER THE BEARING IS INSTALLED.



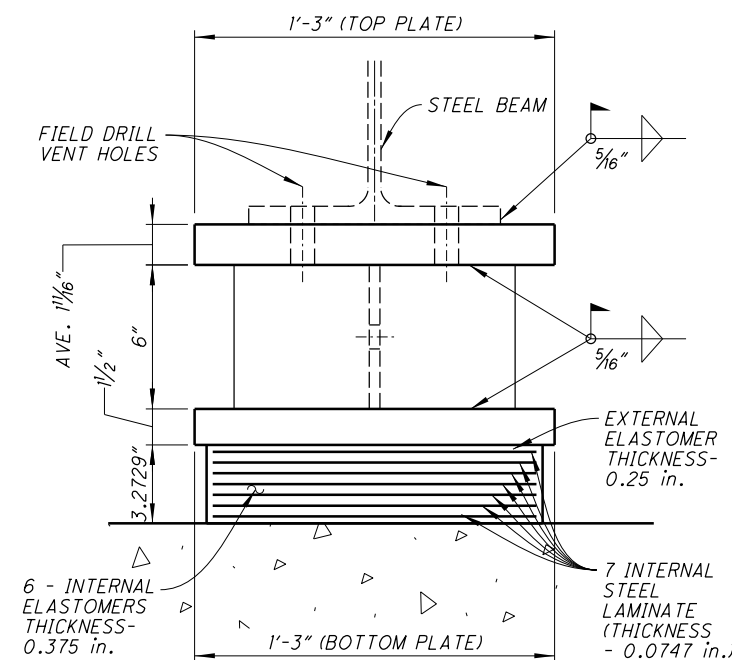
REAR ABUTMENT PLAN

FACE OF ABUTMENT

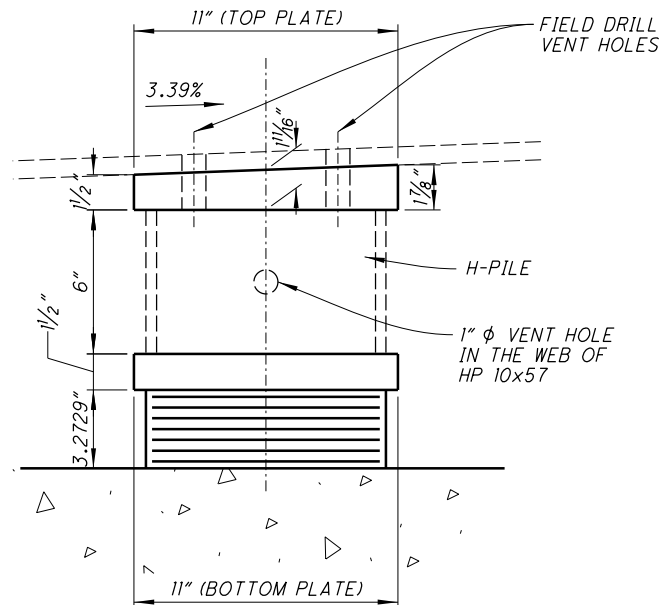


FORWARD ABUTMENT PLAN

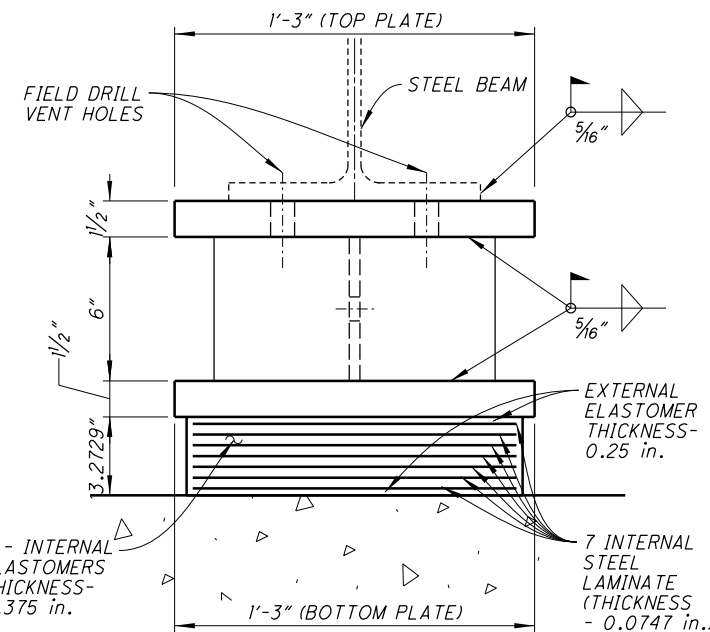
FACE OF ABUTMENT



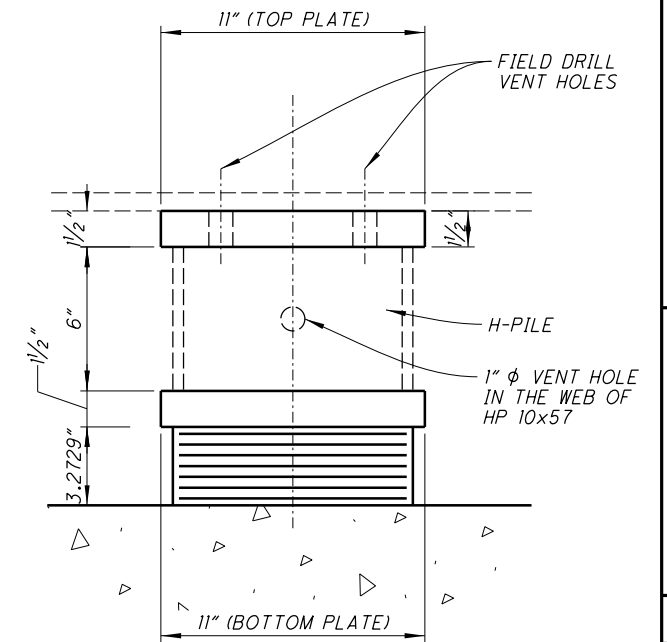
SECTION RB1-RB1



SECTION RB2-RB2

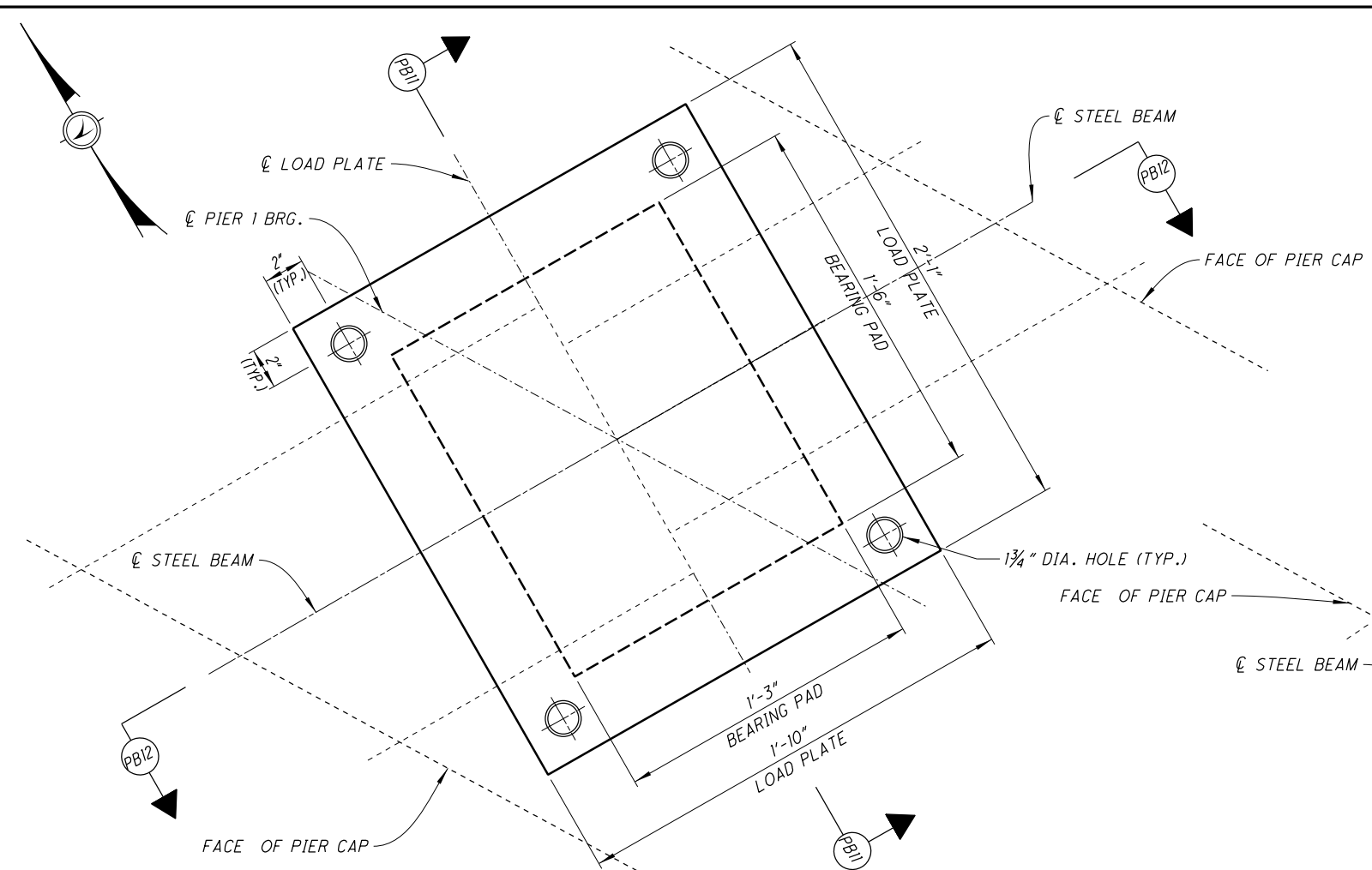


SECTION FBI-FB1

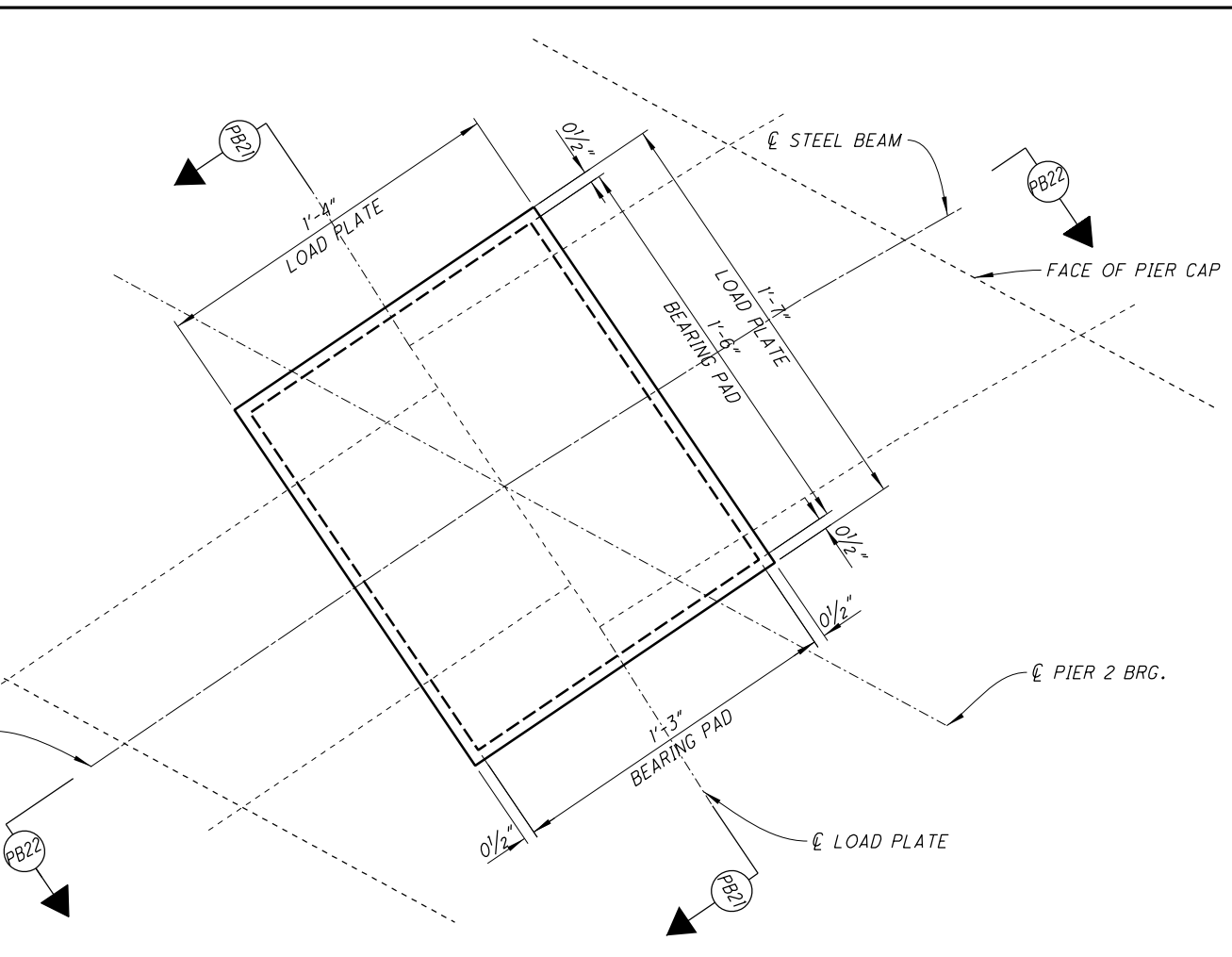


SECTION FB2-FB2

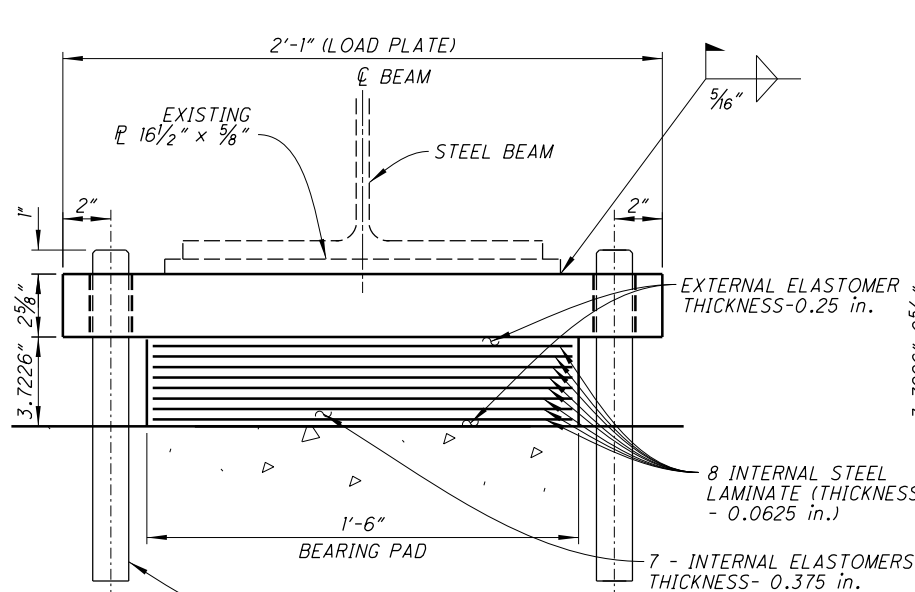
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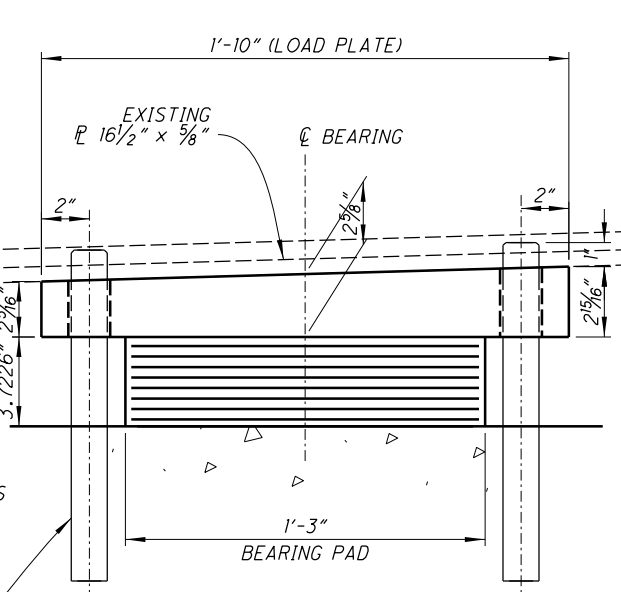
PIER 1 PLAN



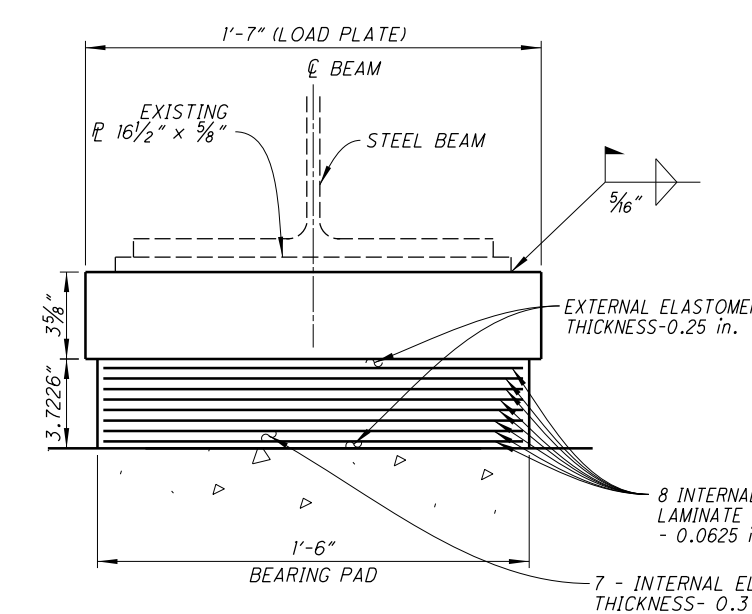
PIER 2 PLAN



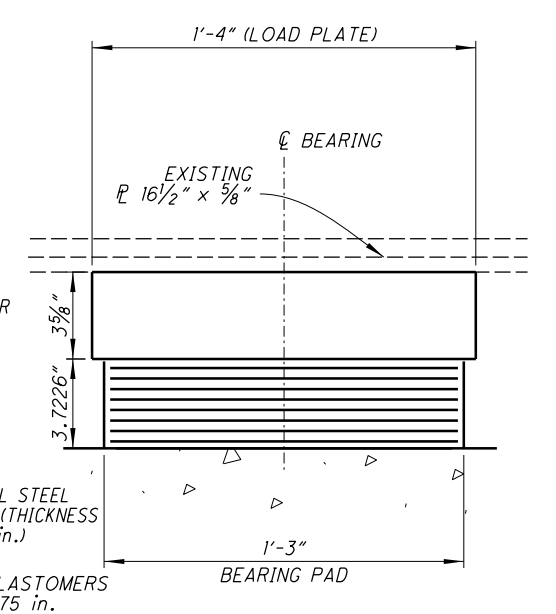
SECTION PB11-PB11



SECTION PB12-PB12



SECTION PB21-PB21

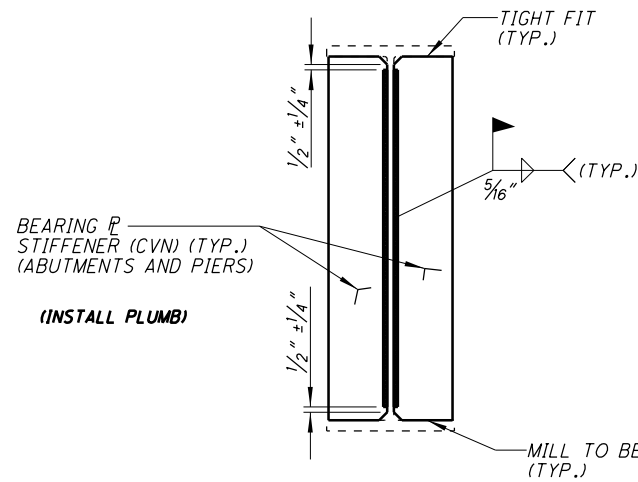


SECTION PB22-PB22

1 3/4" DIA. HOLE IN STEEL LOAD PLATE FOR 1/2" DIA. x 1'-7" LONG ANCHOR ROD. GALVANIZED ACCORDING TO 711.02. INSTALL ANCHOR RODS USING 705.20 NON-SHRINK, NON-METALLIC EPOXY GROUT PER ITEM 510. EMBED ANCHOR 1'-0" INTO CONCRETE. INCLUDE DOWEL HOLES AND ANCHOR RODS WITH ITEM 516 FOR PAYMENT.

| | | | | | | | | | |
|-----------------------------|--|---------|--|---------|--|-----------------------|--|------------|----------------------------|
| DESIGNED | | CHECKED | | DRAWN | | REVIEWED | | DATE | DESIGN AGENCY |
| YEL | | TAG | | YEL | | TAG | | 11/27/2020 | OHIO DEPARTMENT OF |
| TAG | | TAG | | REVISED | | STRUCTURE FILE NUMBER | | 6001890 | TRANSPORTATION, DISTRICT 5 |
| | | | | | | | | | |
| BEARING PAD DETAILS | | | | | | | | | |
| BRIDGE NO.: MUS-70-1142E | | | | | | | | | |
| RAMP 'E' OVER-MCINTIRE AVE. | | | | | | | | | |
| MUS-70-10.49 | | | | | | | | | |
| PID No. 93006 | | | | | | | | | |
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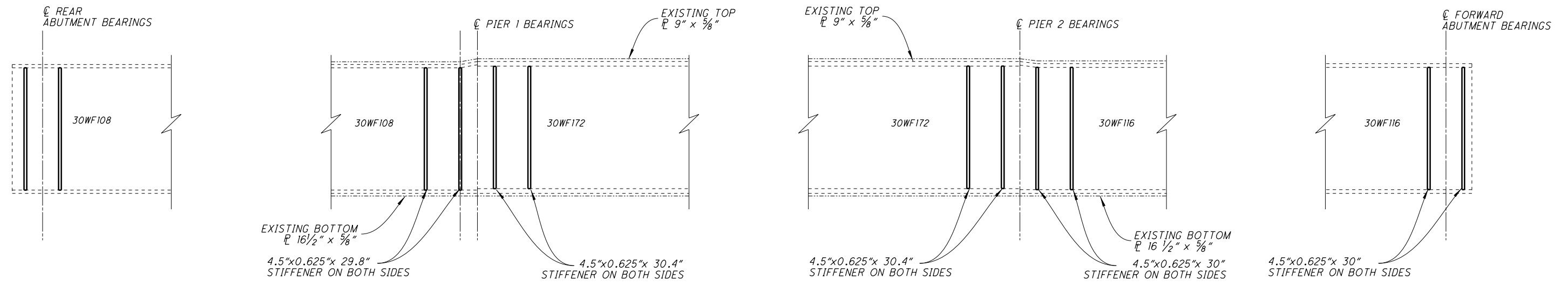
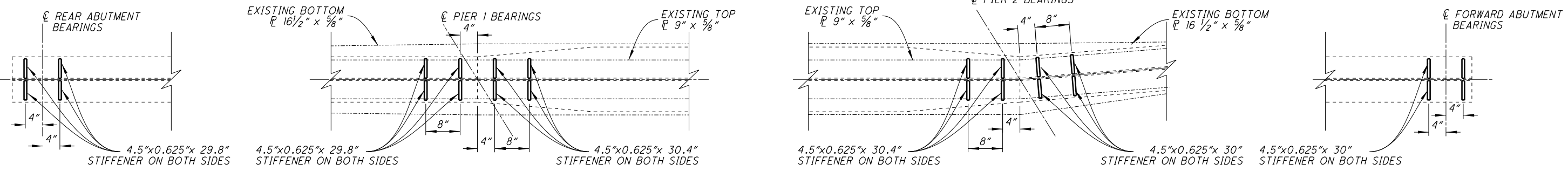
NOTE:
FOR NOTES AND ADDITIONAL
DETAILS INCLUDING WELDING
DETAILS SEE STD. DWG. GSD-1-96.

ALL PROPOSED BEARING STIFFENER
HEIGHTS SHALL BE FIELD MEASURED
AND VERIFIED BY THE CONTRACTOR
PRIOR TO FABRICATION (TYPICAL)

| ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN | | |
|--|--------|--------|
| STIFFENER \bar{L} | NUMBER | POUNDS |
| 4.5" x 0.625" x 29.8" | 40 | 951 |
| 4.5" x 0.625" x 30" | 40 | 957 |
| 4.5" x 0.625" x 30.4" | 40 | 970 |
| TOTAL | | 2878 |

FINAL QUANTITIES FOR ITEM 513 STRUCTURAL
STEEL MEMBERS, LEVEL UF, AS PER PLAN SHALL
BE DETERMINED IN THE FIELD.

BEARING STIFFENERS DETAILS



PROPOSED BEARING STIFFENERS LOCATIONS