

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DEF-66-340
DEFIANCE TOWNSHIP
DEFIANCE COUNTY
CITY OF DEFIANCE

| | | |
|-------------------|-------|--------------|
| FED. RD. DIVISION | STATE | PROJECT |
| 2 | OHIO | S-SU-1167(2) |

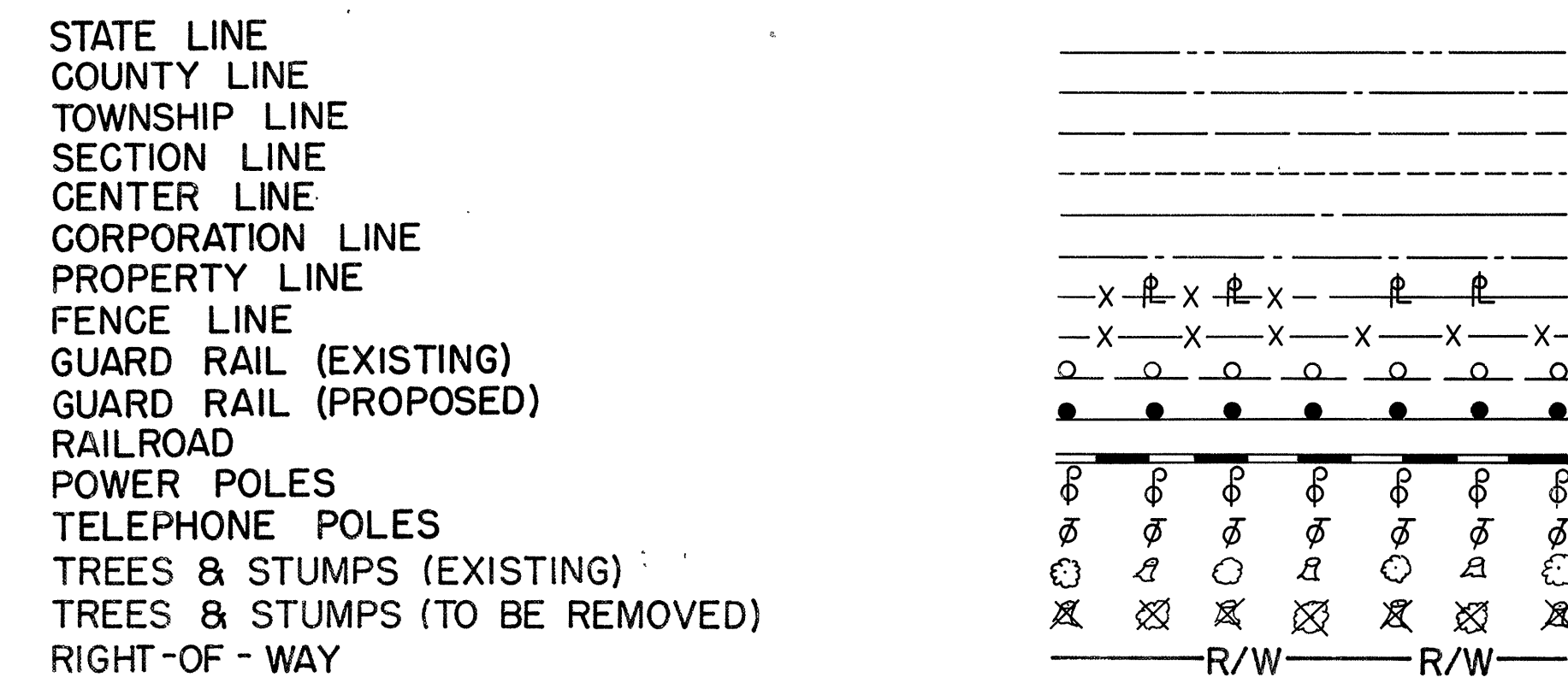
1
57

DEFIANCE COUNTY
DEF-66-340

S-SU-1167(2)

1965 SPECIFICATIONS

CONVENTIONAL SIGNS



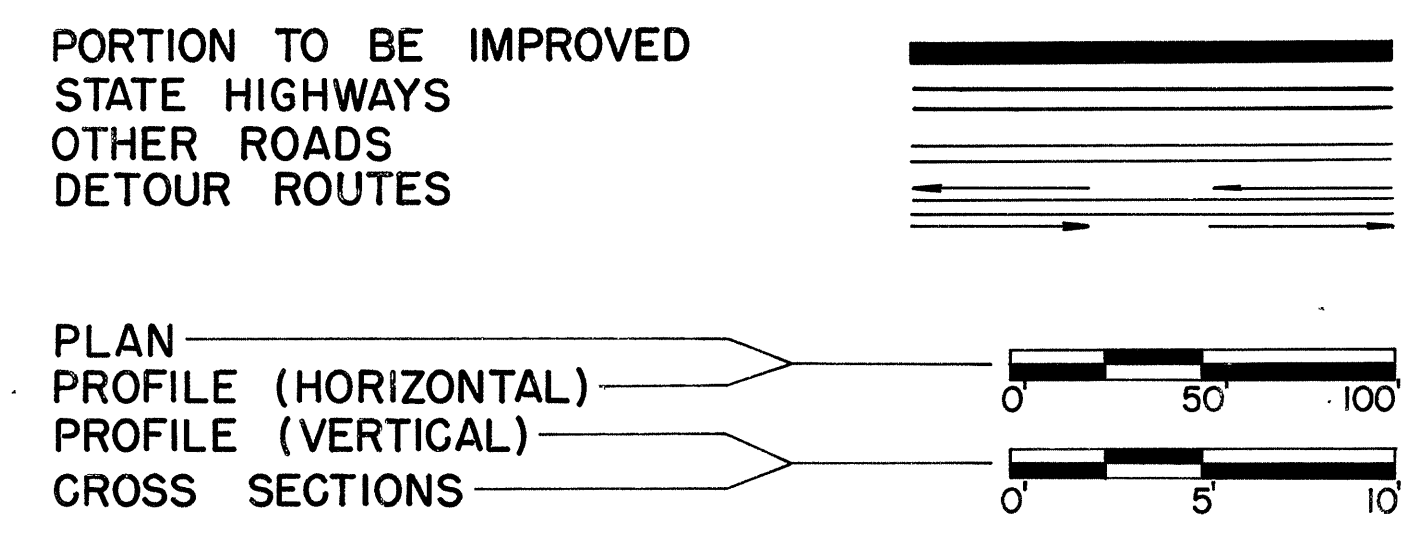
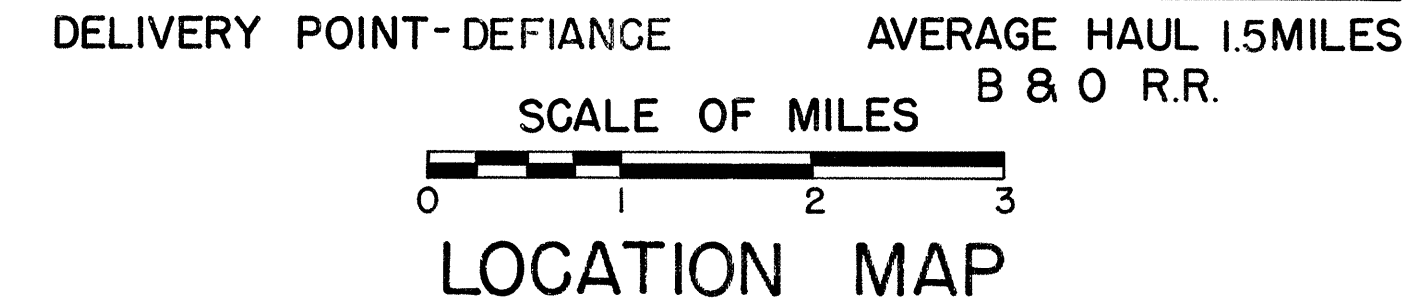
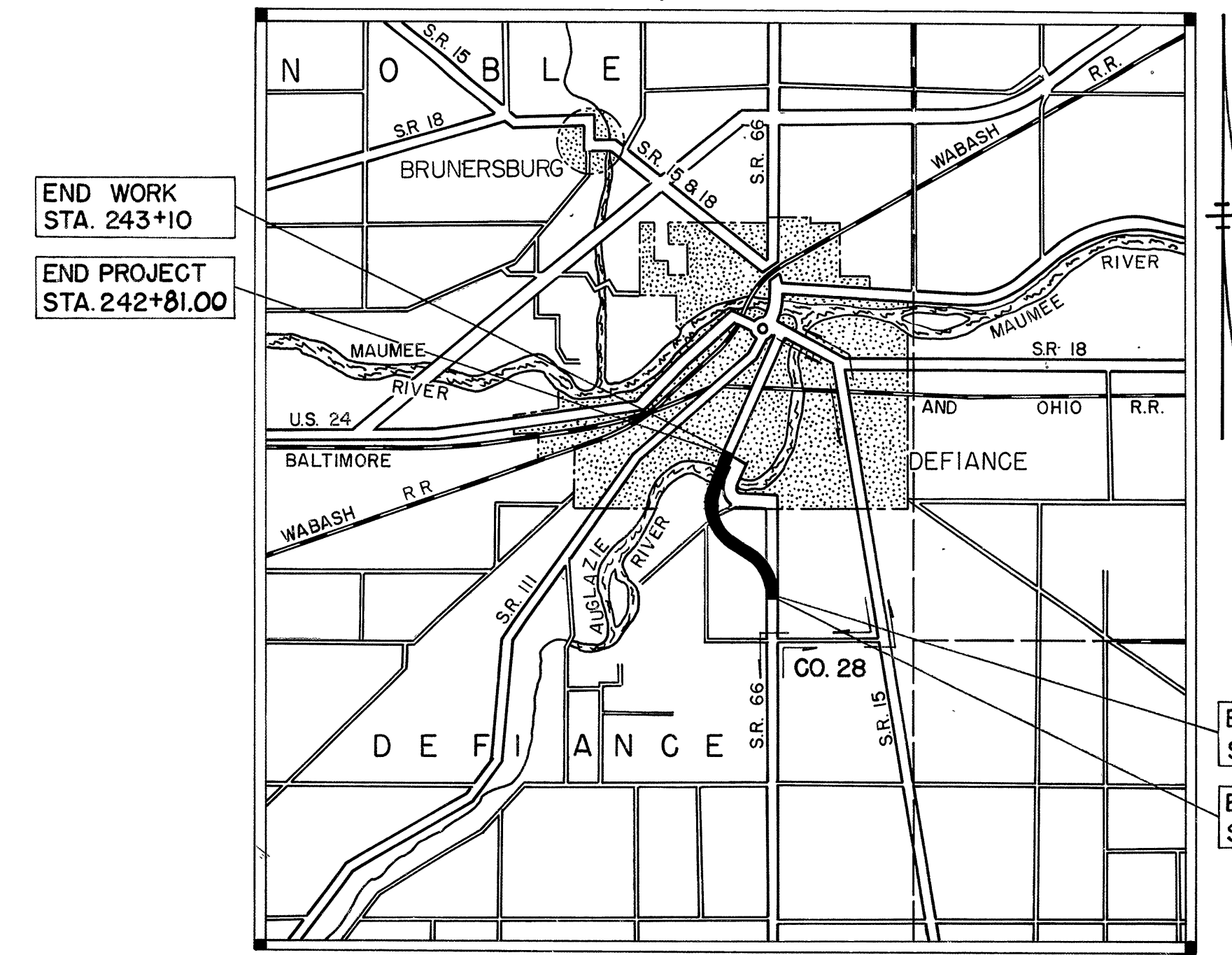
INDEX OF SHEETS

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LINE DATA

| | | | |
|---------------------------------------|----------------|----------------------------------|-------------|
| S-1167(2) | | | |
| BEGIN PROJECT | STA. 179+75.00 | BEGIN WORK | STA. 179+00 |
| END PROJECT | STA. 236+46.00 | END WORK | STA. 236+46 |
| NO ADDITIONS OR DEDUCTIONS | | | |
| NET LENGTH OF PROJECT=5671 LIN. FT. | | ADD FOR INTERSECTIONS | |
| | | 1-P STA. 0+12.51 TO STA. 4+34.13 | |
| | | 4-P STA. 100+10 TO STA. 111+75 | |
| NET LENGTH OF WORK = 7332.62 LIN. FT. | | | |

| | | | |
|--|----------------|------------------------------------|----------------|
| SU-1167(2) (MUNICIPAL) | | | |
| BEGIN PROJECT | STA. 236+46.00 | BEGIN WORK | STA. 236+46.00 |
| END PROJECT | STA. 242+81.00 | END WORK | STA. 243+10.00 |
| NO ADDITIONS OR DEDUCTIONS | | | |
| NET LENGTH OF PROJECT=635.00 LIN. FT. | | NET LENGTH OF WORK=664.00 LIN. FT. | |
| TOTAL LENGTH OF PROJECT = 6306.00 LIN. FT. OR 1.194 MILE | | | |
| TOTAL LENGTH OF WORK = 7996.62 LIN. FT. OR 1.514 MILE | | | |



THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATION LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT-OF-WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, EXCEPT AS NOTED ON SHEET 5 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

- APPROVED William R. Conner
DATE 2-9-66 DIVISION DEPUTY DIRECTOR
- APPROVED C. H. Alton
DATE 4-28-66 ENGINEER OF BRIDGES
- APPROVED R. N. Ricketts
DATE 5-5-66 ENGINEER OF LOCATION AND DESIGN
- APPROVED D. E. Shultz
DATE 5-5-66 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION
- APPROVED T. H. Board
DATE 5-11-66 DEPUTY DIRECTOR OF RIGHT-OF-WAY
- APPROVED F. W. Wilson
DATE 5-11-66 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING
- APPROVED _____
DATE _____ FIRST ASSISTANT DIRECTOR
- APPROVED P. E. Marshall
DATE 5/12/66 DIRECTOR OF HIGHWAYS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

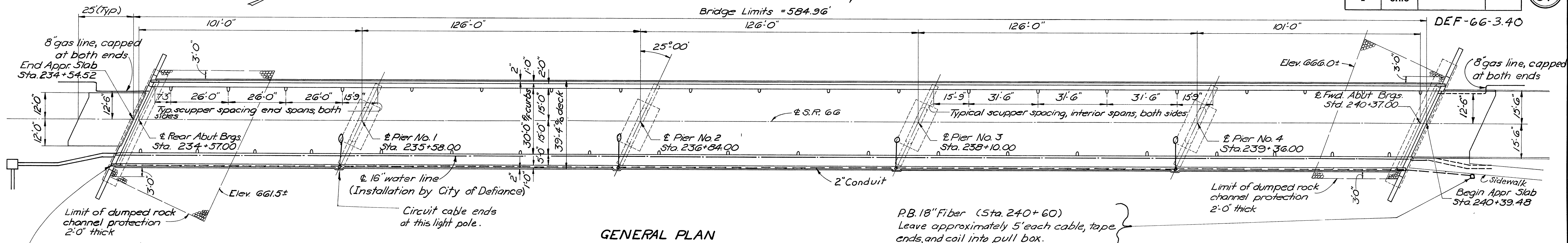
APPROVED: _____
DIVISION ENGINEER DATE _____

| | |
|-----------------|------------|
| FILE No | DEF-66-340 |
| DATE OF LETTING | 19-- |
| CONTRACT NO. | |

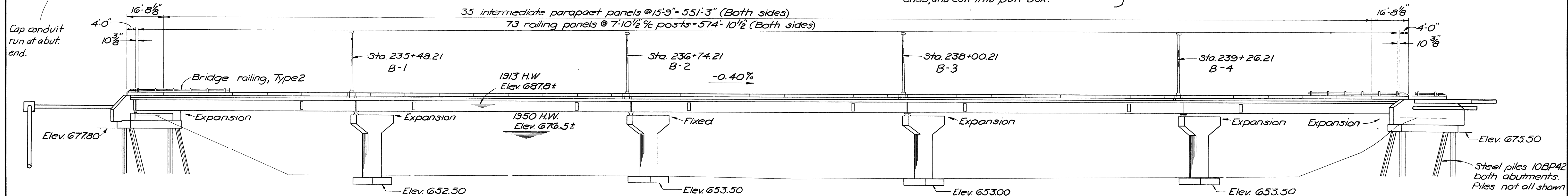
| STANDARD DRAWINGS | | | | | |
|-------------------|---------|-------|--------|-----------------------|----------|
| AS-1-54 | 8-10-65 | GR-1 | 6-1-65 | MC-4 | 11-1-65 |
| BP-5 | 6-1-65 | GR-2A | 9-1-65 | BR-1-65, sheet 2 | 11-24-65 |
| BP-6 | 6-1-65 | HW-E | 6-1-65 | SD-1-65, sheets 1 & 2 | 11-8-65 |
| BP-7 | 1-1-66 | BP-3 | 6-1-65 | RB-1-55 | 2-2-59 |
| CB-3A | 6-1-65 | L-1 | 6-1-65 | HL-2 | 11-1-65 |
| F.A.C.I.-1 | 6-1-65 | MC-1 | 6-1-65 | HL-3 | 11-1-65 |
| F.A.C.I.-2 | 6-1-65 | MC-3 | 6-1-65 | HL-4 | 1-1-66 |

| SUPPLEMENTAL SPECIFICATIONS | |
|-----------------------------|---------|
| 1001 | 9-2-65 |
| 808 | 2-7-66 |
| 811 | 3-29-65 |
| 825 | 4-22-65 |
| 828 | 7-21-65 |

Note: 8" gas lines at ends of bridge to be installed by Toledo Edison Co.



GENERAL PLAN



ELEVATION

LIGHT POLE IDENTIFICATION

B = Bridge Lighting Circuit
1 = Lighting Unit Number

GENERAL NOTES

REFERENCE shall be made to Standard Drawings BR-1-65, sheet 2, revised 11-24-65; SD-1-65, sheets 1 and 2, dated 11-8-65; and RB-1-55, revised 2-2-59; and to Supplemental Specifications 808 dated 2-7-66; 811 dated 3-29-65; 825 dated 4-22-65 and 828 dated 7-21-65.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

DESIGN LOADING: CF400 (57)

BASIC UNIT STRESSES:

Concrete Class "C" 4333 p.s.i.
Concrete Class "E" 1,133 p.s.i.
Structural Steel ASTM A36 20,000 p.s.i.
Reinforcing Steel ASTM A15, A16, A16G, Deformed, Intermediate or Hard Grade 20,000 p.s.i.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. South Abutment shall remain in place. North Abutment shall be removed as called for on shts. 42, 43, and 44. Suitable waste masonry may be placed as Bank Protection as directed by the Engineer.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the rear abutment.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 is not less than the following value for a pile hammer of the indicated energy rating:

(piles continued)
50 tons per pile using a 7,000 ft. lb. hammer
45 tons per pile using an 11,000 ft. lb. hammer
40 tons per pile using a 15,000 ft. lb. or greater hammer
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 7 tons per sq. ft.

ERECTION PROCEDURE: The Contractor shall submit to the Director, for approval, 3 prints showing his proposed erection procedure for the plate girders.

UTILITIES: The installation of the 16" water line and capped 8" gas line is not part of this contract. However, the Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ESTIMATED QUANTITIES

| Item | Total | Unit | Description | Super | Abuts. | Piers | Gen'l |
|------|---------|----------|--|---------|--------|--------|-------|
| 202 | Lump | Sum | Existing structure removed | | | | Lump |
| 503 | Lump | Sum | Cofferdams, cribs and sheeting | | | | Lump |
| 503 | 298 | cu. yds. | Unclassified excavation | | 272 | 26 | |
| 503 | 79 | cu. yds. | Shale excavation | | | 79 | |
| 505 | Lump | Sum | First test pile | | | | Lump |
| 507 | 740 | lin. ft. | Steel piles, 10BP42 | | 740 | | |
| 509 | 257,131 | lbs. | Reinforcing steel | 203,219 | 11,265 | 42,647 | |
| 511 | 790 | cu. yds. | Class "C" concrete, superstructure | 790 | | | |
| 511 | 275 | cu. yds. | Class "C" concrete, piers above footings | | | 275 | |
| 511 | 122 | cu. yds. | Class "E" concrete, abutments above footings | | 122 | | |
| 511 | 178 | cu. yds. | Class "E" concrete, footings | | 84 | 94 | |
| 513 | 833,000 | lbs. | Structural steel | 833,000 | | | |
| 513* | 5,600 | lbs. | Structural steel (water line support) | 5,600 | | | |
| 514 | 833,000 | lbs. | Field painting of structural steel | 833,000 | | | |
| 514* | 5,600 | lbs. | Field painting of structural steel | 5,600 | | | |
| 517 | 1169.21 | lin. ft. | Railing (Type 2) | 1169.21 | | | |
| 518 | 114 | lin. ft. | 6" perforated helical c.m.p. including specials 707.06 | | 114 | | |
| 518 | 45 | lin. ft. | 6" non-perforated helical c.m.p. 707.06 | | 45 | | |
| 518 | 40 | each | Scuppers, Type 2, including supports | 40 | | | |
| 518 | 80 | cu. yds. | Porous backfill | | 80 | | |
| 625 | | | See Sh. 54A for Lighting Summary | | | | |
| 808 | 790 | Units | Water-reducing, set-reducing admixture | 790 | | | |
| 825 | 2825 | sq. yds. | Concrete surface treatment | | | | 2825 |
| 828 | 66 | lin. ft. | Joint sealer | 66 | | | |

* No Federal Participation

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION
NOTES, ESTIMATED QUANTITIES
BRIDGE NO. DEF-66-0444
OVER AUGLAIZE RIVER

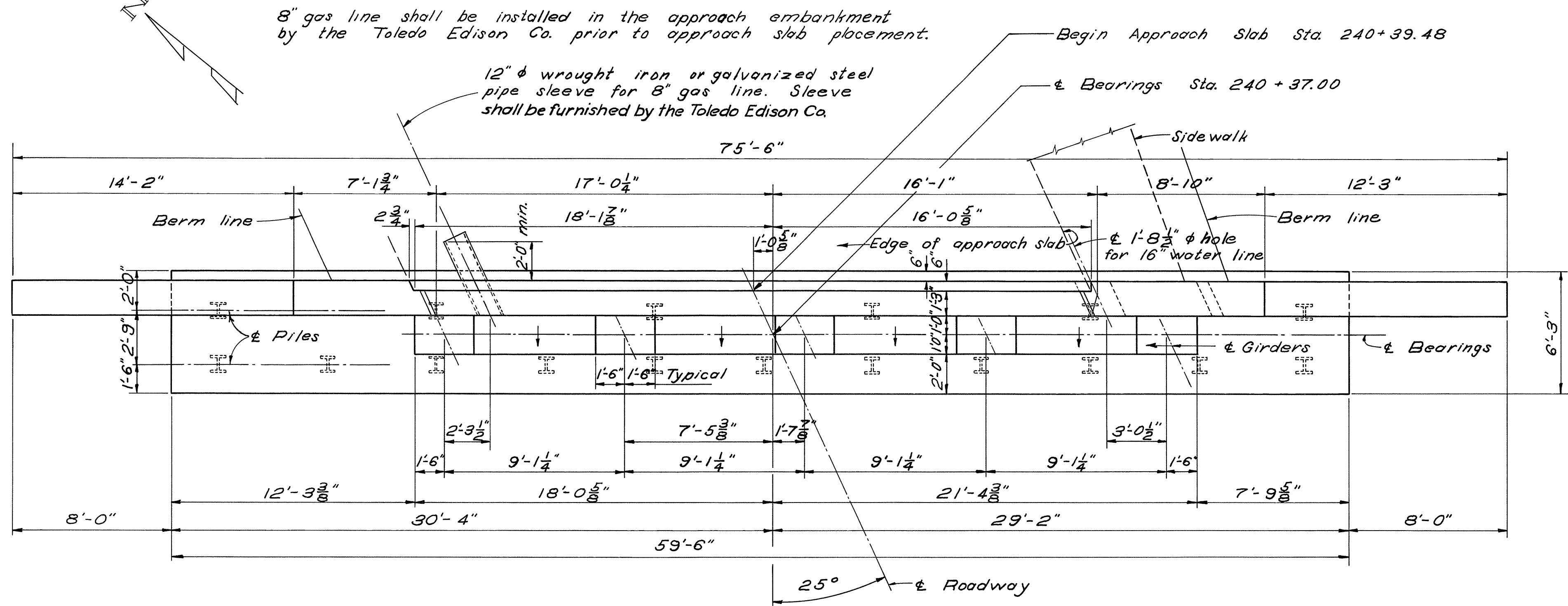
DEFIANCE CO. STA. 234+54.52
240+39.48

| | | | | | | |
|----------|-------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| wjy | wjy | PK.I. | MPB | BFG | 3-21-66 | |

Rev. 5-16-66

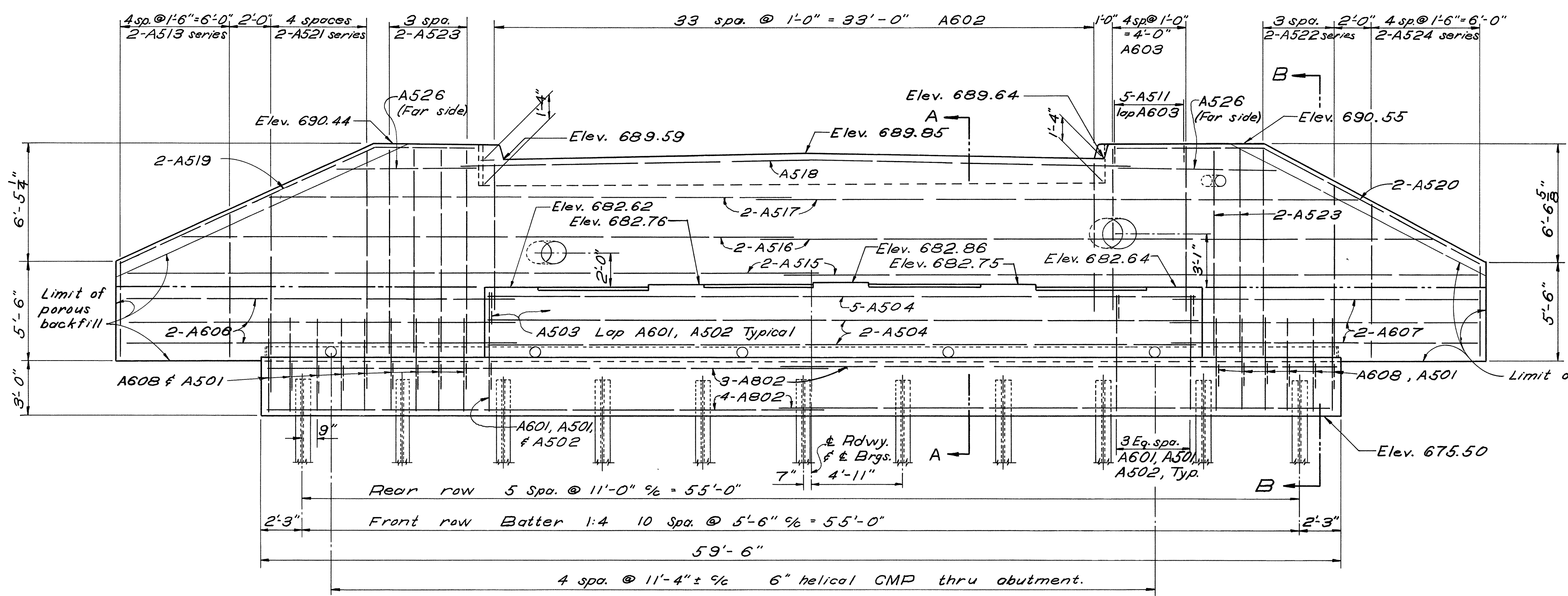
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DEF-66-3.40

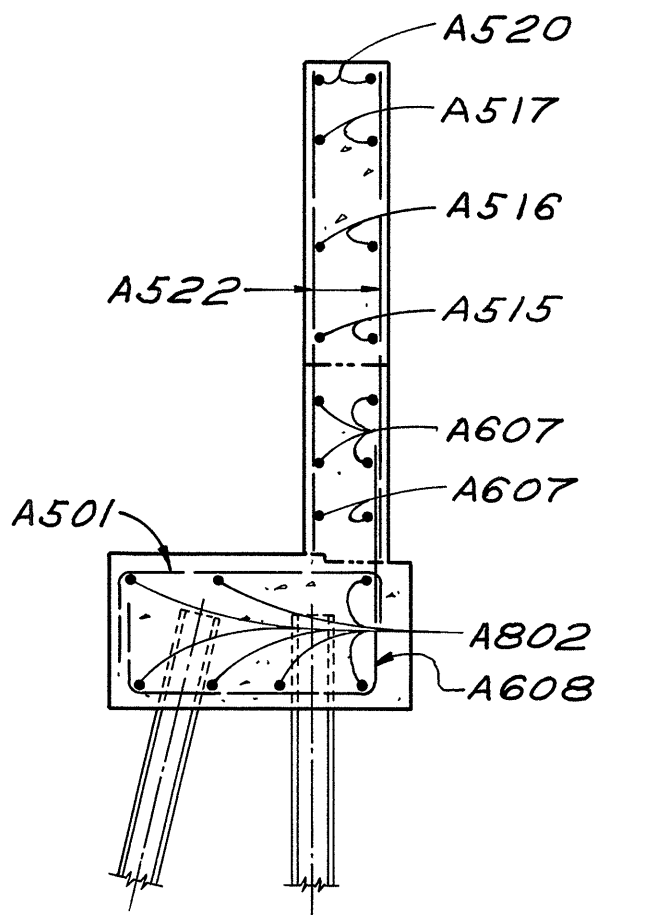


PLAN

Cut or bend bars at holes for water line and gas line as required.



ELEVATION



SECTION B-B

Reinforcing steel shown for forward abutment. Rear abutment similar.

POROUS BACKFILL 1'-6" thick shall extend from the top of the footing upward to the underside of the approach slab and sidewalk, and to the surface of the earth shoulders, and outward to the surface of the embankment slopes but not beyond the ends of the abutment wingwalls.

See sheet 48 for Section A-A.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

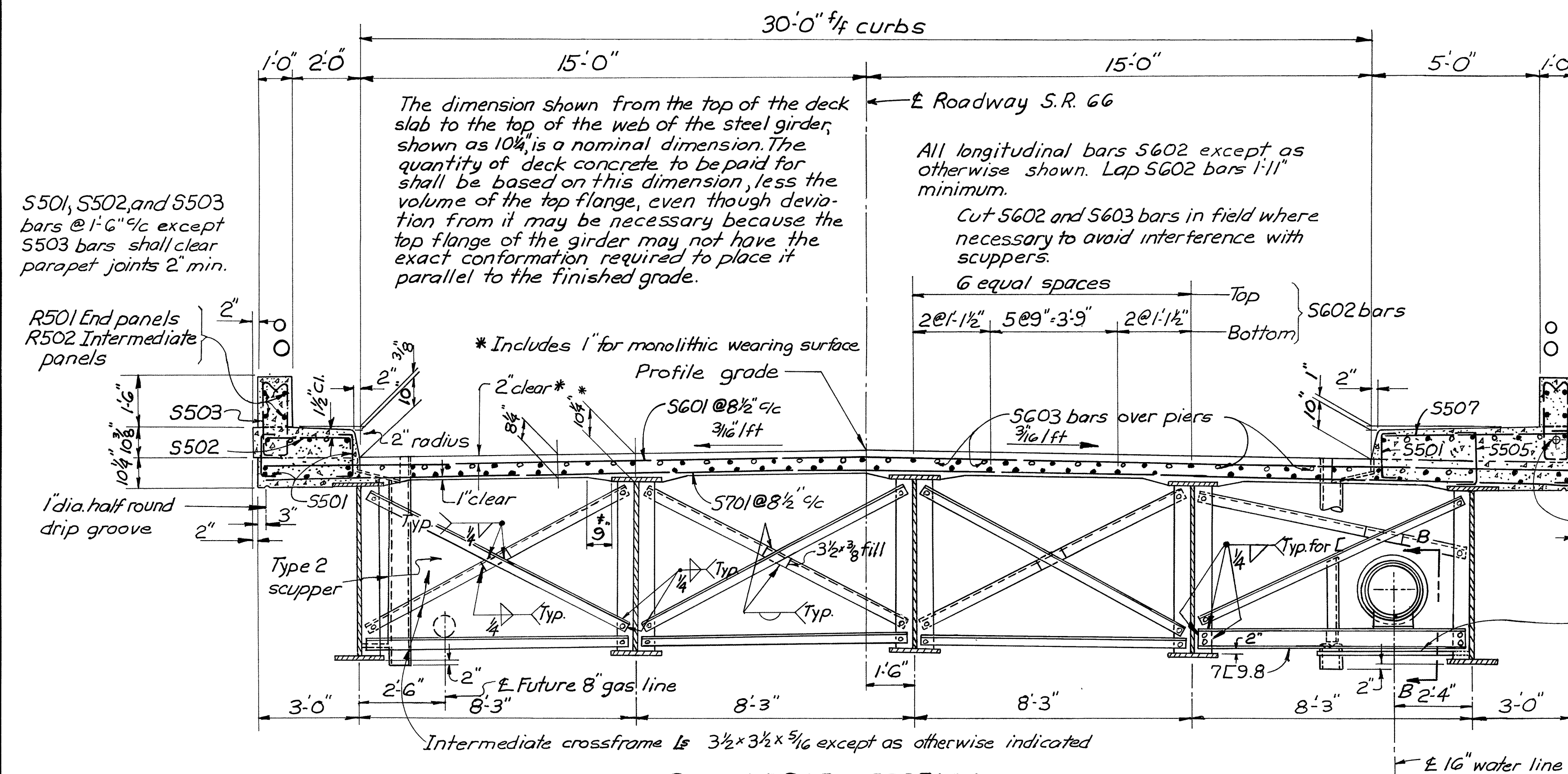
FORWARD ABUTMENT DETAIL

BRIDGE NO. DEF-66-0444
OVER AUGLAIZE RIVER

STA. 234+54.52
DEFIANCE COUNTY 240+39.48

| | | | | | | |
|----------|-------|--------|---------|----------|---------|----------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISION |
| WJF | WJF | REF | MPB | BFG | 3-21-66 | |

Co257049



TRANSVERSE SECTION

* A haunch width of 9" as shown has been used in computing the quantity of deck concrete and shall be the basis for payment. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch width less than 9".

S501, S502, and S503 bars @ 1'-6" c/c except S503 bars shall clear parapet joints 2" min.

The dimension shown from the top of the deck slab to the top of the web of the steel girder shown as 10 1/4" is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, less the volume of the top flange, even though deviation from it may be necessary because the top flange of the girder may not have the exact conformation required to place it parallel to the finished grade.

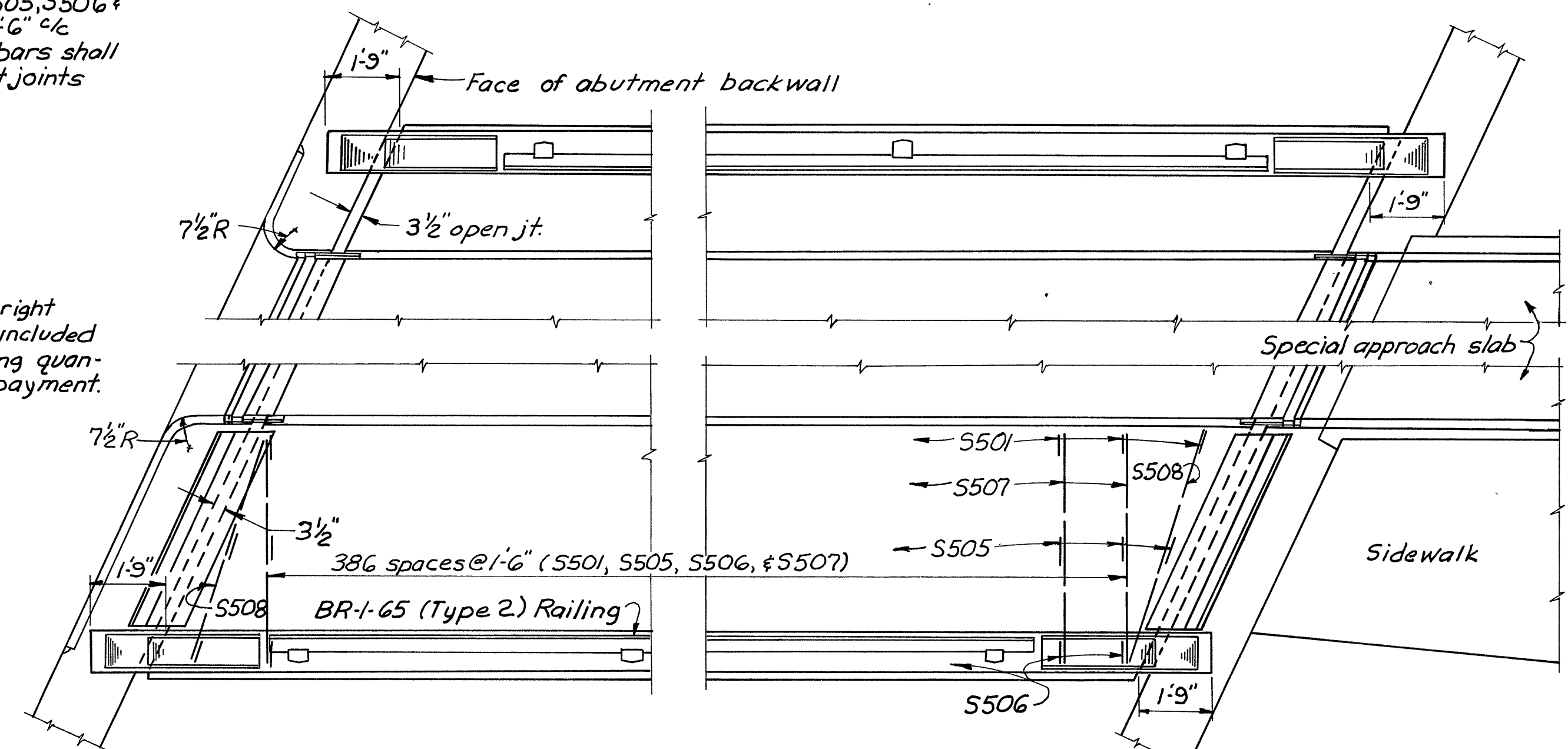
All longitudinal bars S602 except as otherwise shown. Lap S602 bars 1'-11" minimum.

Cut S602 and S603 bars in field where necessary to avoid interference with scuppers.

S501, S504, S505, S506 & S507 bars @ 1'-6" c/c except S504 bars shall clear parapet joints 2" min.

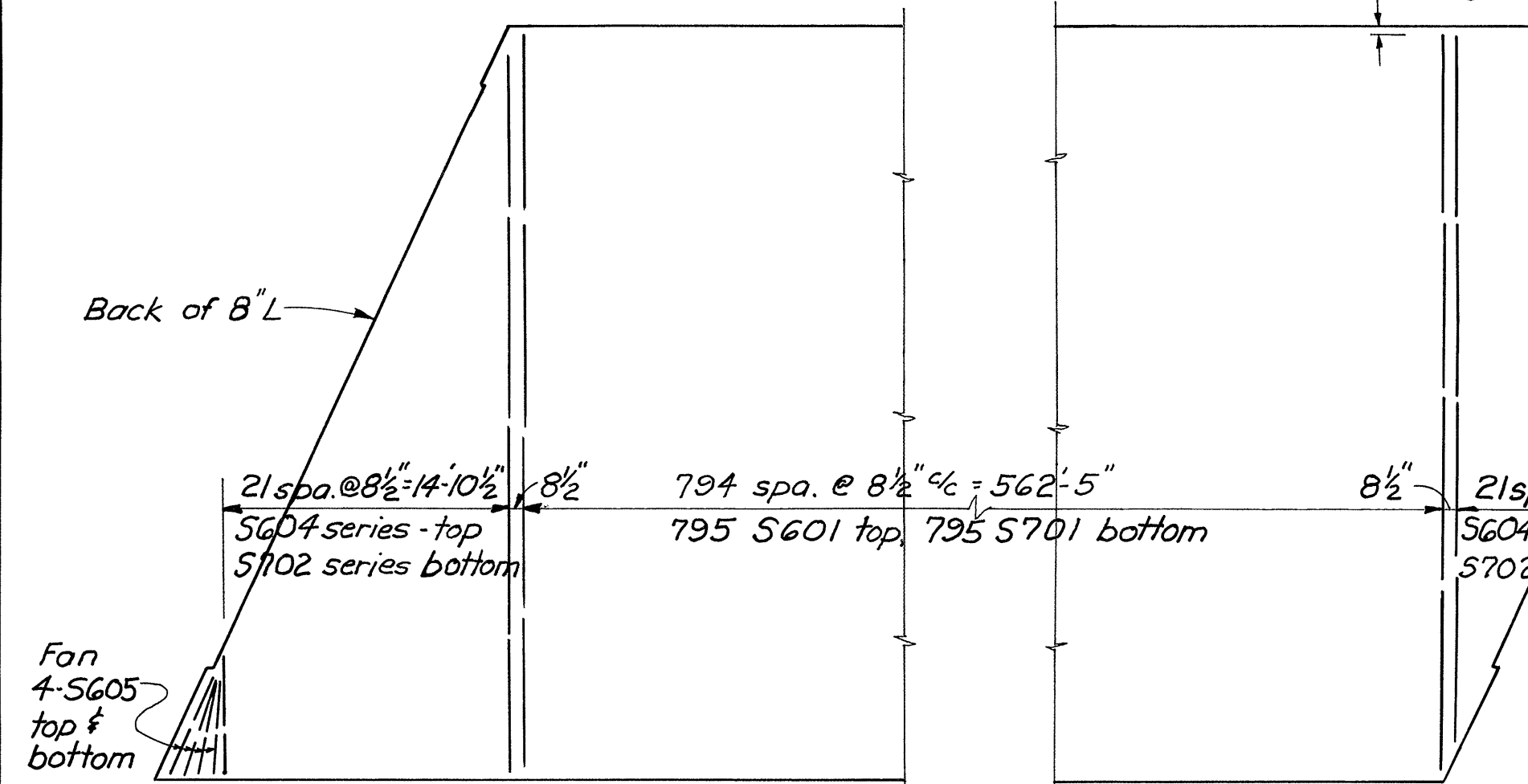
2" phi conduit, right side only, included with lighting quantities for payment.

Scupper brace 1 1/2" x 1/2" bar. Included with scuppers for payment.

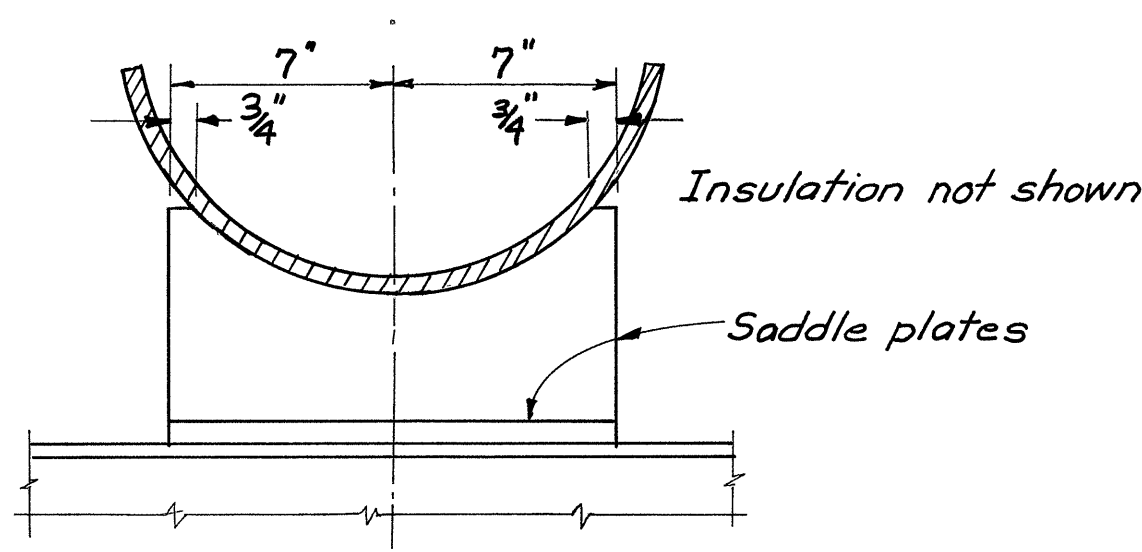


PART PLAN SHOWING TREATMENT AT ENDS OF BRIDGE

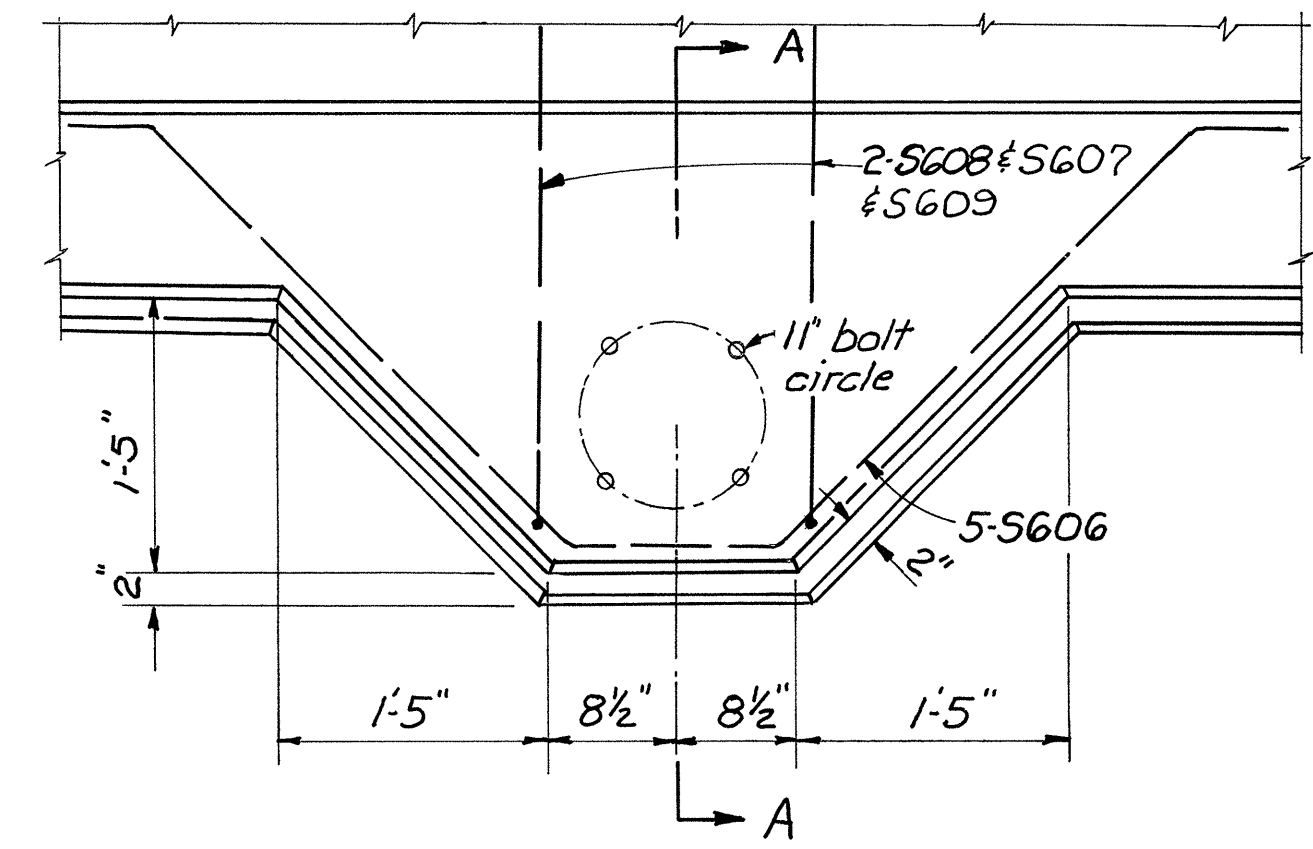
See Sheet for additional lighting details.



DECK PLAN SHOWING TRANSVERSE REINFORCING STEEL



SECTION C-C



PLAN OF LIGHT POLE BASE

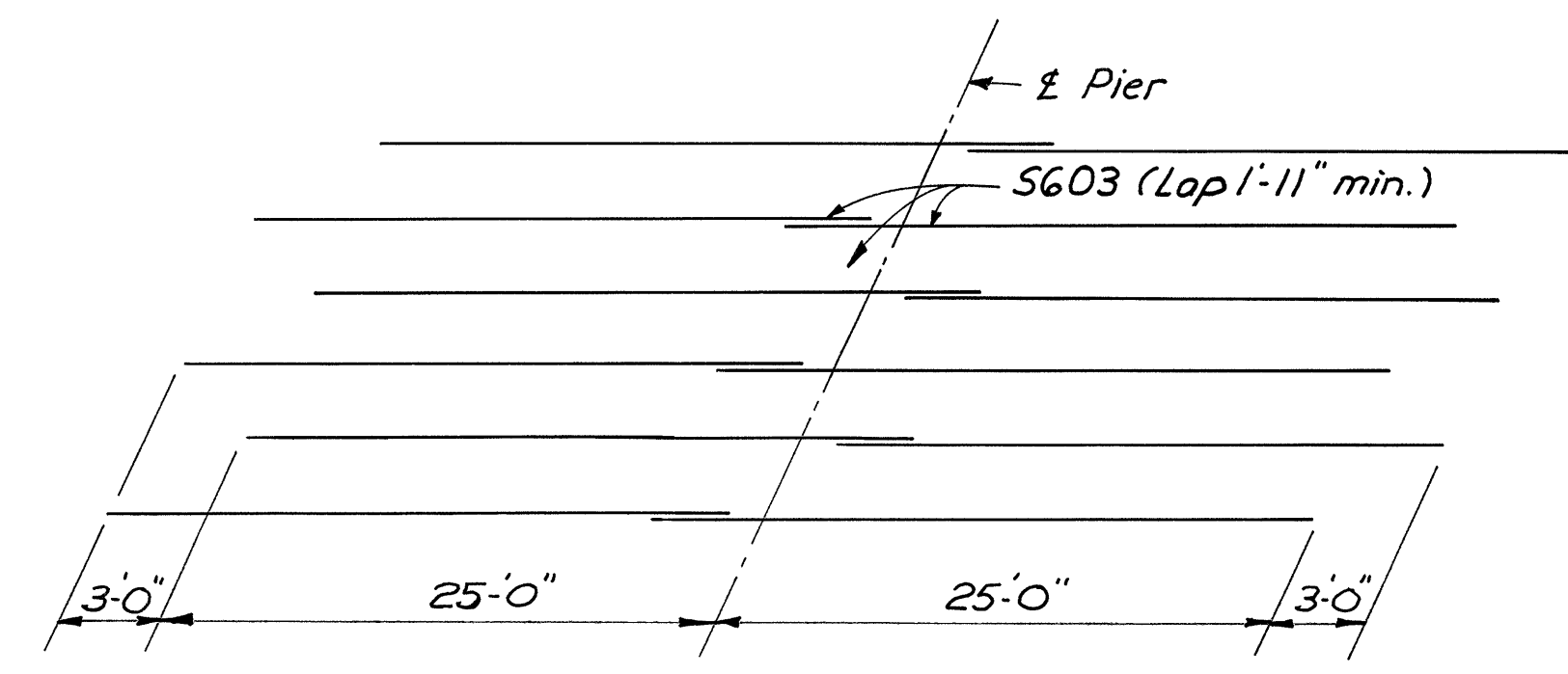
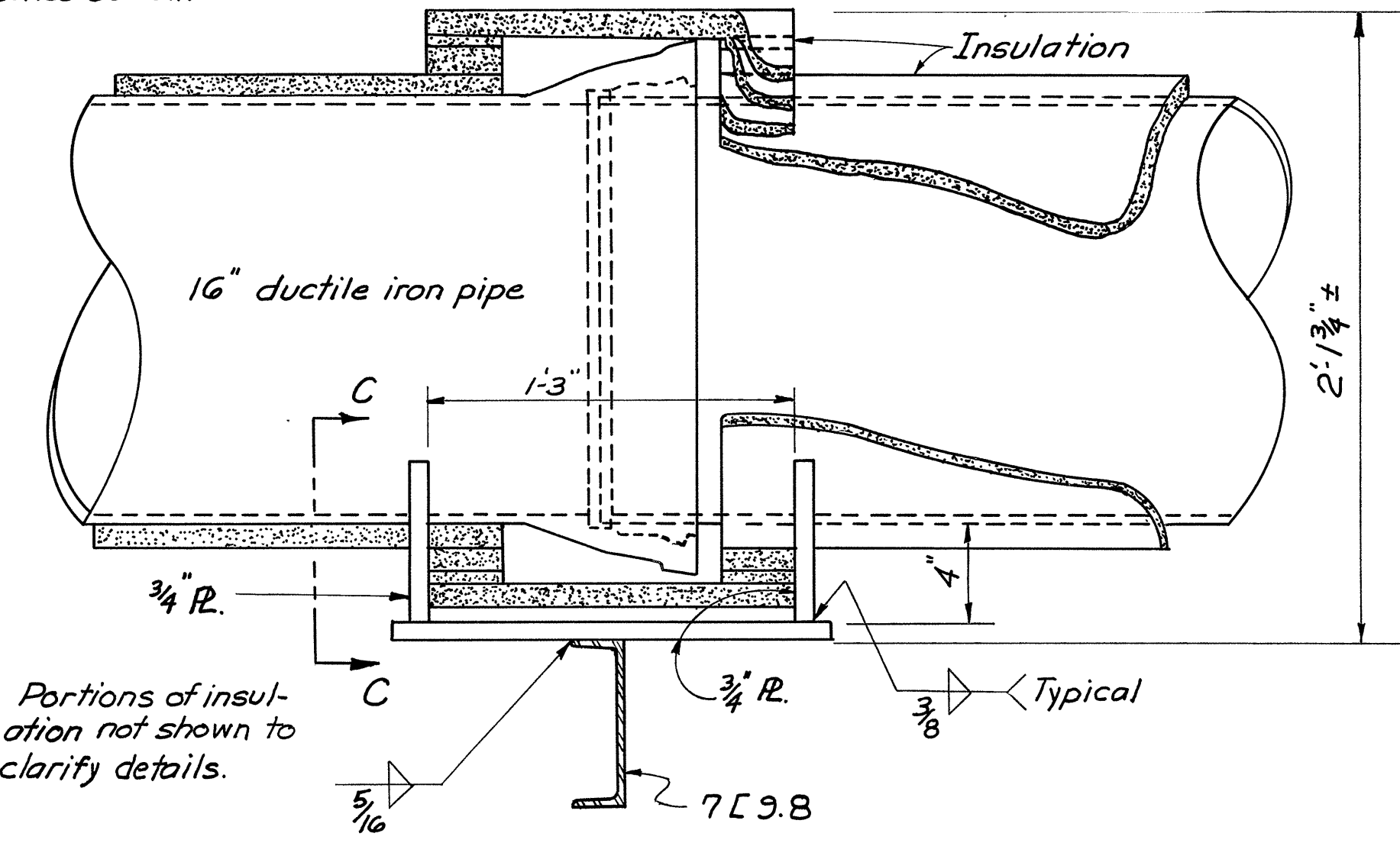
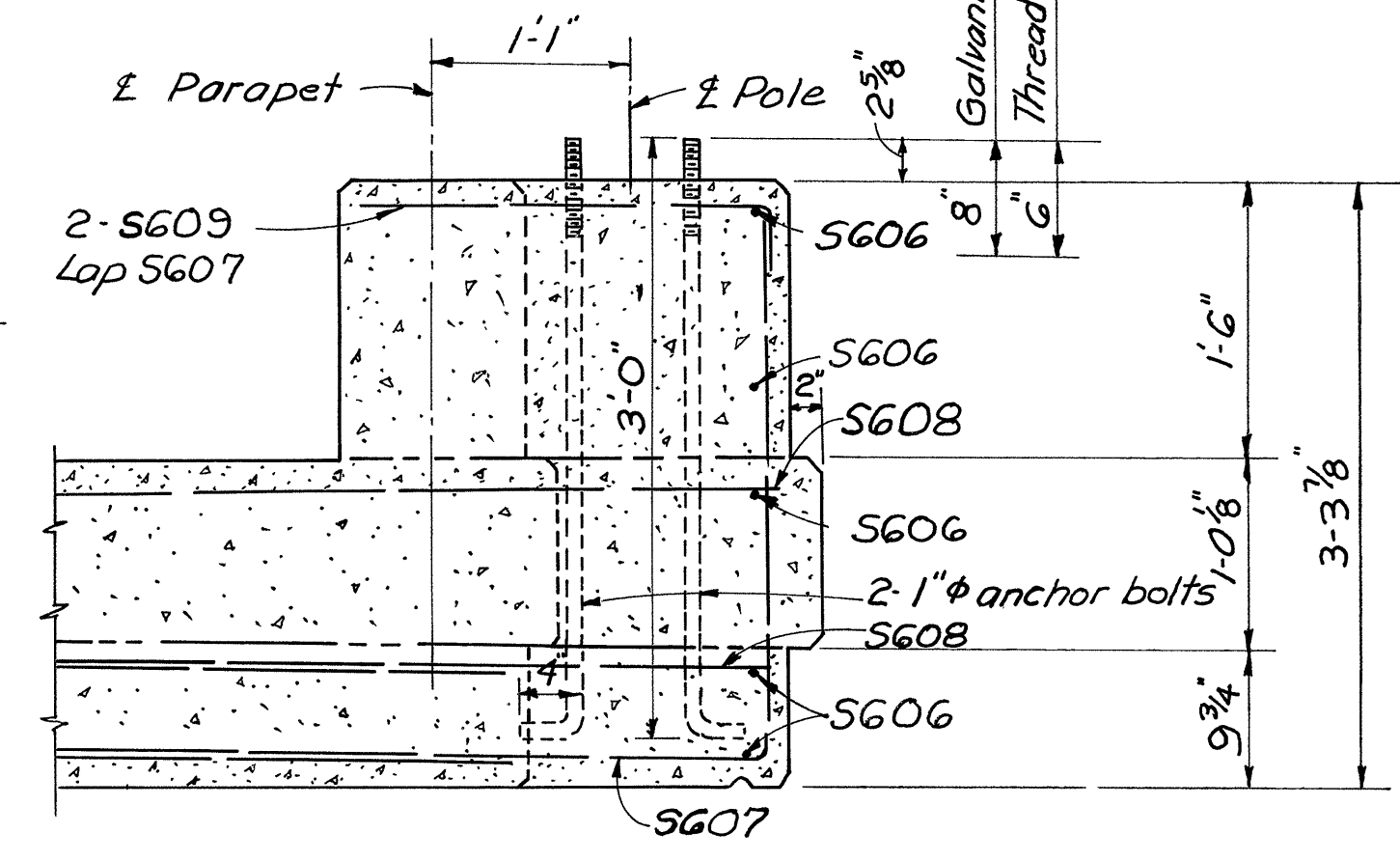


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS



SECTION B-B WATER LINE SUPPORT DETAIL

Note: Pipe and insulation not included in this contract. Weight of saddles and extra crossframe weight required for support of 16" water line is listed as a separate pay item in the Estimated Quantities and shall be paid for by the City of Defiance.



SECTION A-A REINFORCING DETAIL

- REFER to the following standard drawings:
- HL-4
 - SD-1-G5
 - Roadway & sidewalk end dams, curb plates.
 - End crossframes.
 - Scuppers and supports.

BR-1-G5 Type 2 railing

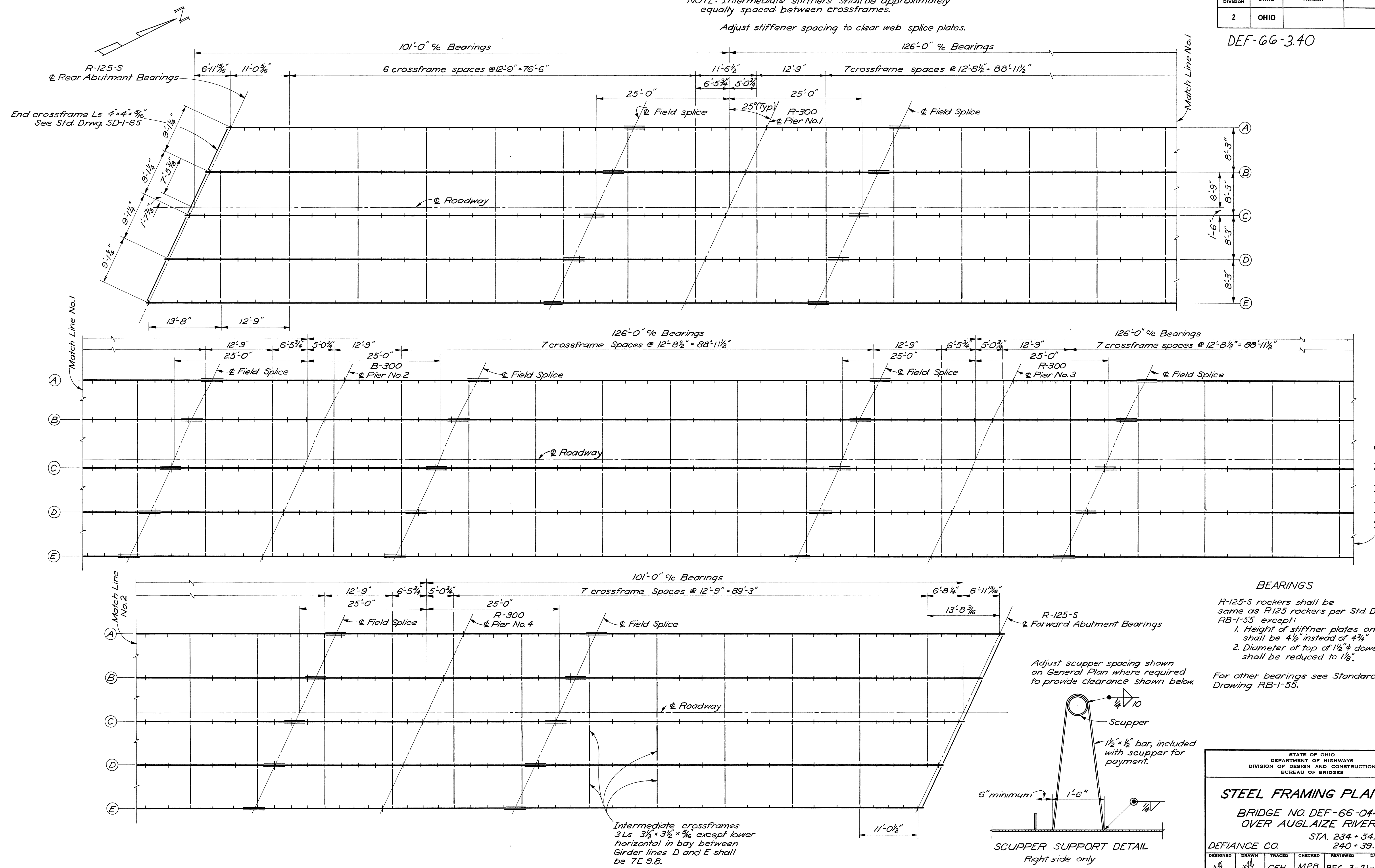
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| STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES | | | | | |
| SUPERSTRUCTURE DETAILS | | | | | |
| BRIDGE NO. DEF-GG-0444 OVER AUGLAIZE RIVER | | | | | |
| DEFIANCE CO. | | | | STA. 234+54.52 240+39.48 | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE |
| wjg | wjg | R.M. | MPB | BFG | 3-21-66 |

150657051

DEF-66-340

NOTE: Intermediate stiffeners shall be approximately equally spaced between crossframes.

Adjust stiffener spacing to clear web splice plates.



BEARINGS

R-125-S rockers shall be same as R125 rockers per Std. Drwg. RB-1-55 except:

1. Height of stiffener plates on web shall be 4 1/2" instead of 4 3/4"
2. Diameter of top of 1 1/2" diameter dowels shall be reduced to 1 1/8".

For other bearings see Standard Drawing RB-1-55.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

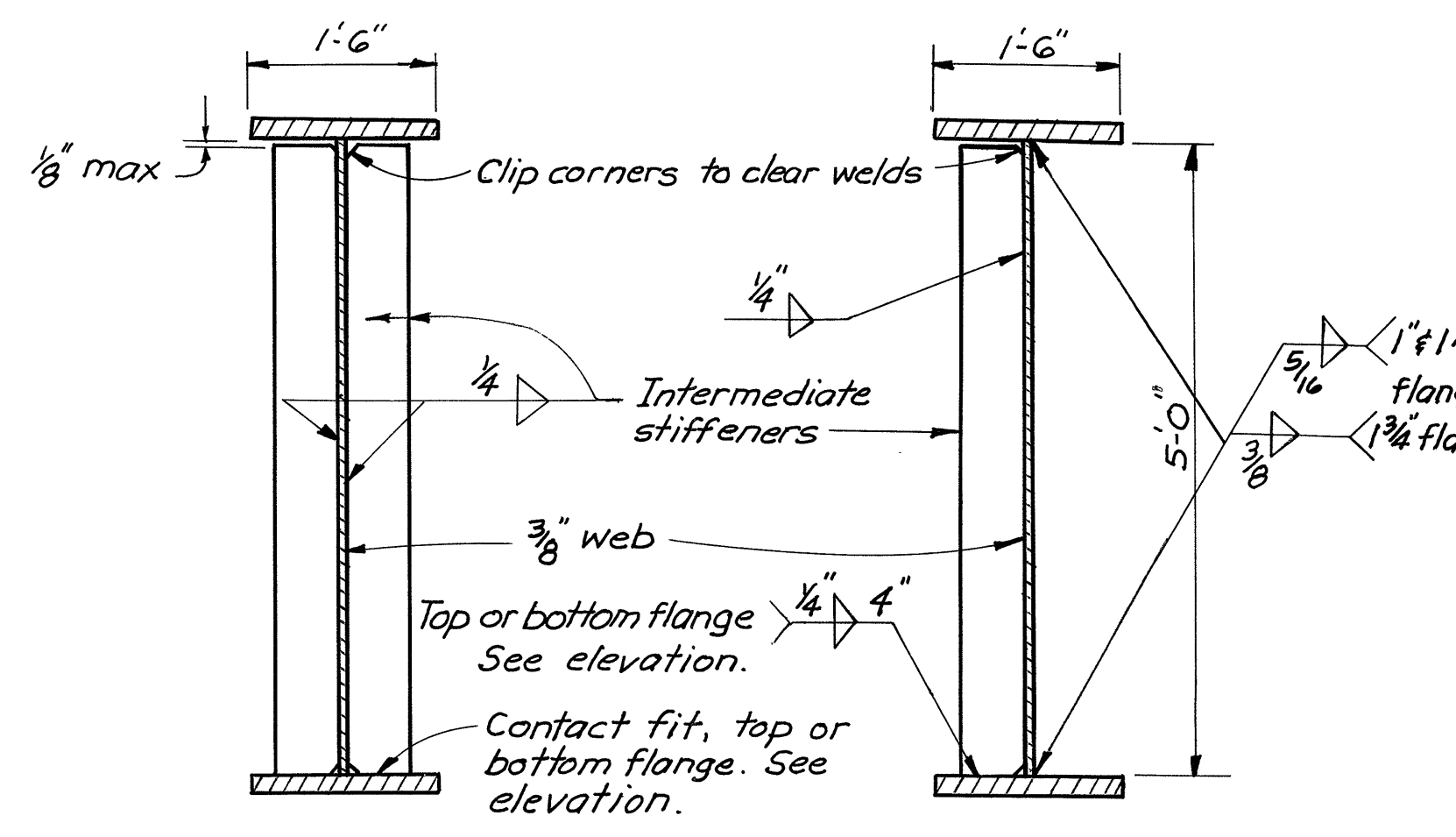
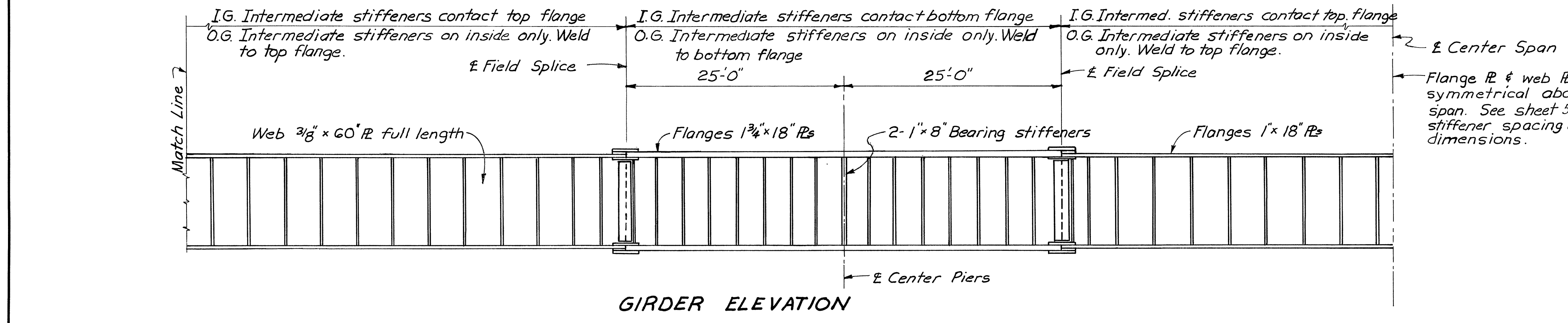
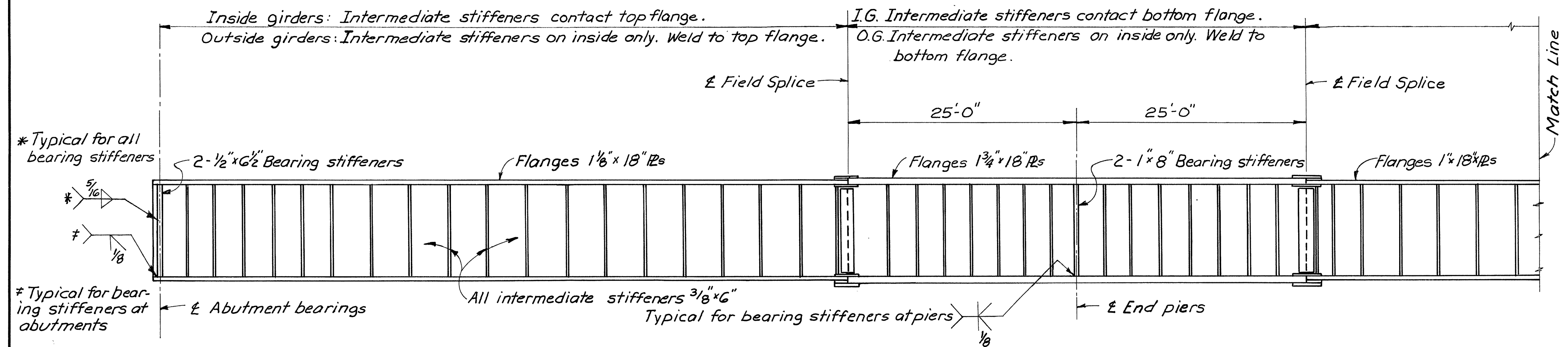
STEEL FRAMING PLAN

BRIDGE NO. DEF-66-0444
OVER AUGLAIZE RIVER

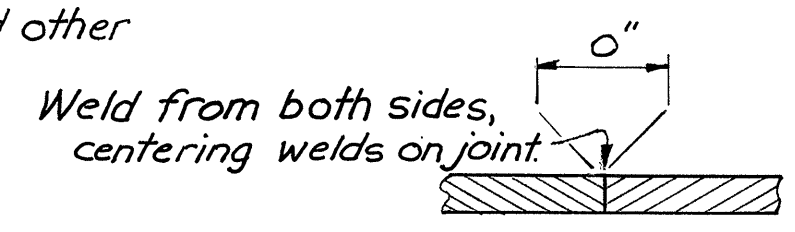
STA. 234 + 54.52
240 + 39.48
DEFIANCE CO.

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| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| wjy | wjy | CEH | MPB | BFG | 3-21-66 | |

DEF-66-340

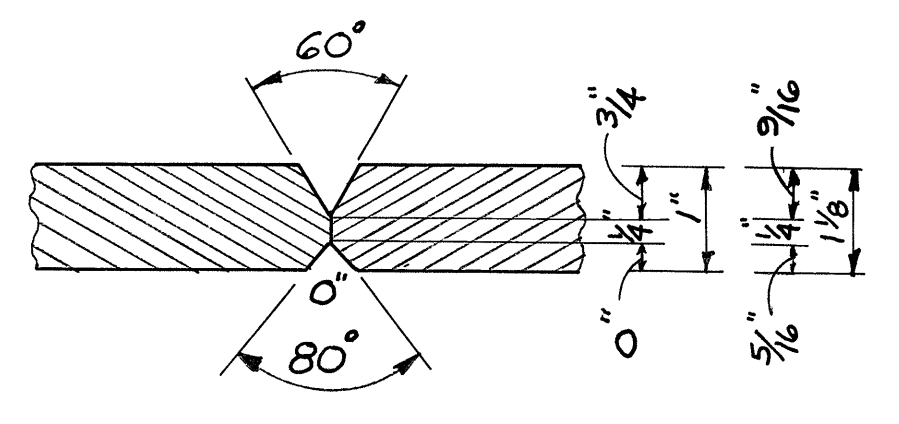


INSIDE
OUTSIDE
GIRDER DETAILS



WEB SPLICES

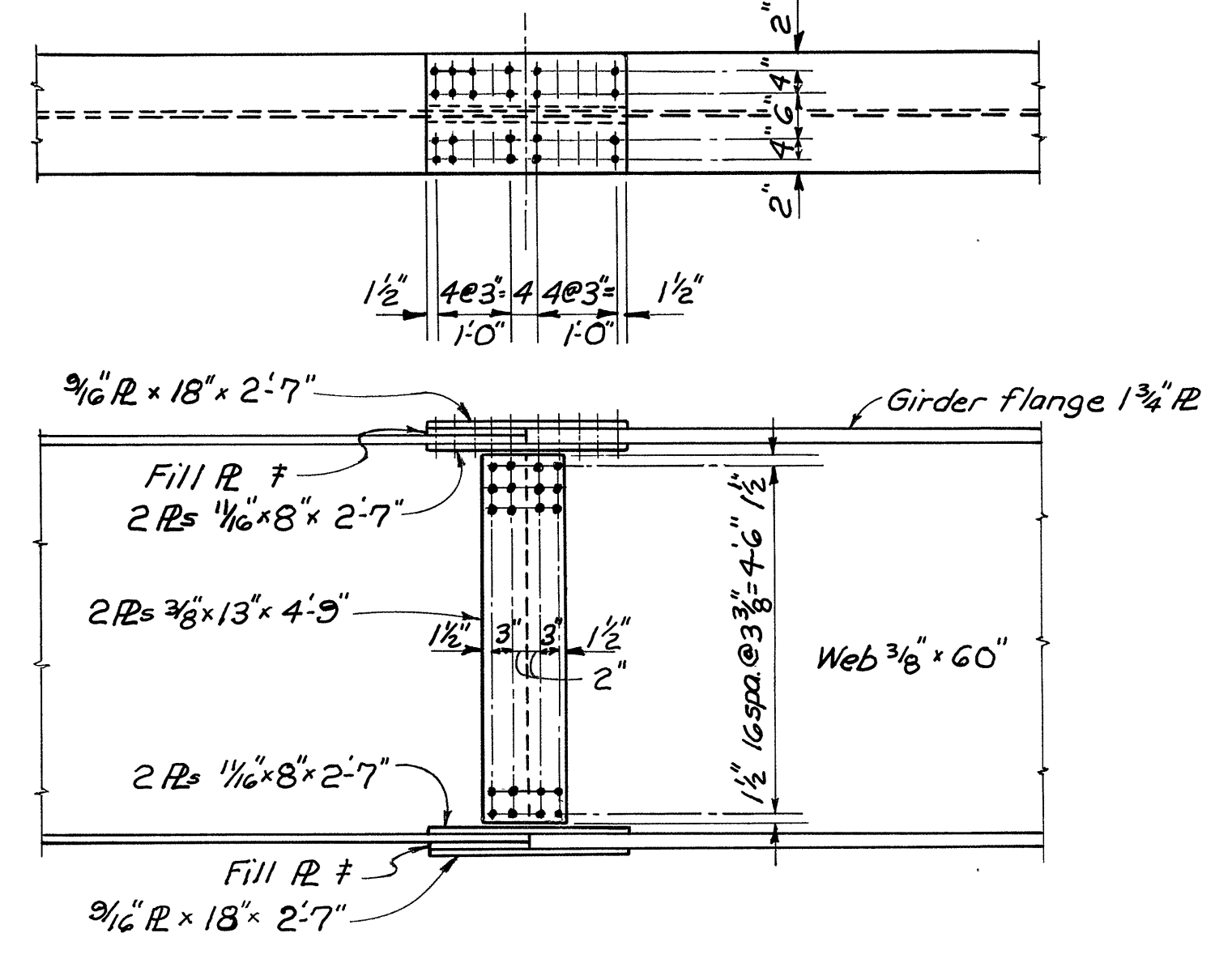
All full penetration welds, shown here shall be back-gouged and welded after welding far side.
Flange butt welds shall be ground flush, the finish grinding being parallel to the direction of stress.



FLANGE SPLICES

JOINT PREPARATION FOR SUBMERGED ARC WELDED SHOP SPLICES

FLANGE AND WEB PLATE SPLICES: Where necessary to provide plates of the length shown hereon, flange or web plates may be butt welded, using the joint preparation shown above.



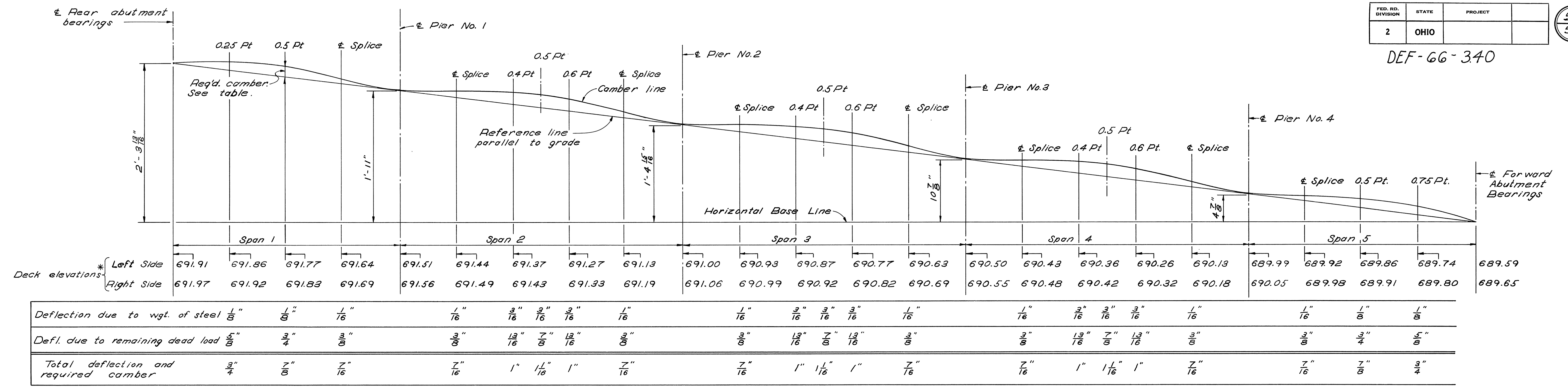
GIRDER FIELD SPLICE
All bolts 1/2" High Strength

Fill Plates:
5/8" x 18" x 1-3/4" Spans 1 & 5
3/4" x 18" x 1-3/4" Spans 2, 3, 4

ERECTION: In field erection, the girders shall be positioned to facilitate the placing of drift pins. Drifting done during erection shall be only such as to align the parts to be bolted and not to enlarge the holes or distort the metal. Heavy driving of drift pins will not be permitted.

| | | | | | | |
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| STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES | | | | | | |
| GIRDER DETAILS | | | | | | |
| BRIDGE NO. DEF-66-0444 OVER AUGLAIZE RIVER | | | | | | |
| DEFIANCE COUNTY | | | | | STA. 234 + 54.52 240 + 39.48 | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISION |
| wj | wj | R. | MPB | BFG | 3-21-66 | |

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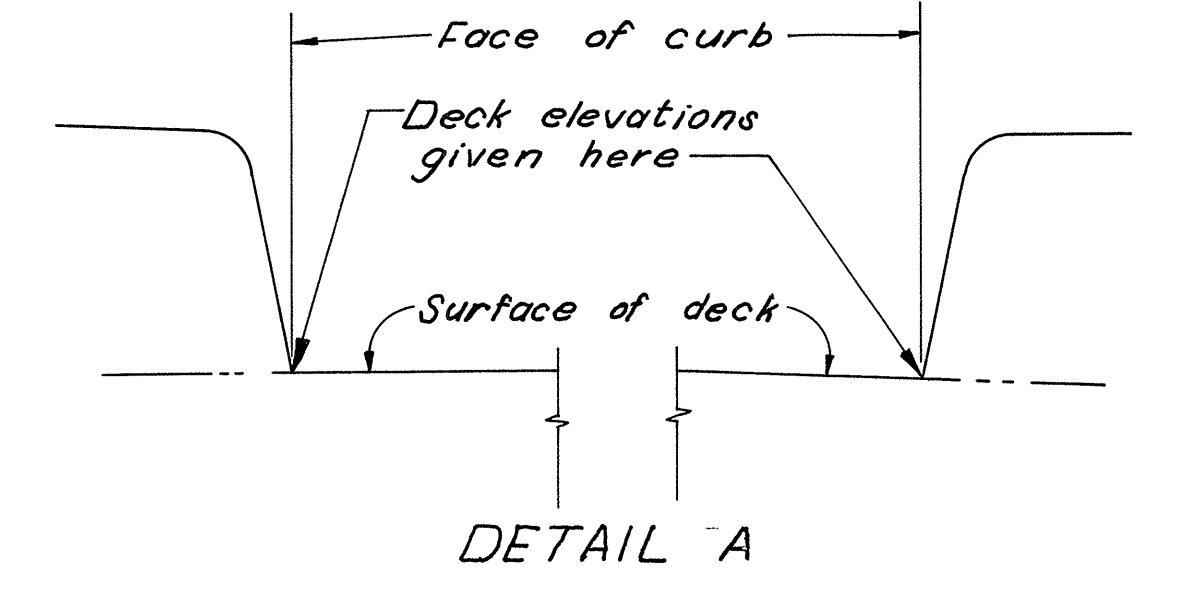


DEFLECTION AND CAMBER

REINFORCING STEEL LIST

| Mark | No. | Length | Weight | Shp. | Bending Diagrams | Mark | No. | Length | Weight | Shp. | Rear | Fwd. | Bending Diagrams | Mark | No. | Length | Width | Shp. | Rear | Fwd. | Bending Diagrams | | | | | | |
|------------------------------|-----|--------|--------|------|----------------------------|-------------------|-----|--------|--------|------|------|------|------------------|------|-----|--------|-------|------|------|------|------------------|--|--|--|--|--|--|
| Superstructure | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S701 | 795 | 38'-8" | 62833 | S | | Abutments (Cont.) | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A604 6 19'-4" 174 S 6 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A605 6 15'-5" 139 S 6 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A606 6 22'-0" 198 S 6 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A607 6 17'-8" 159 S 6 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A608 26 12'-4" 482 B 11 15 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A501 84 8'-4" 730 B 40 44 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A502 58 7'-1" 428 B 29 29 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A503 58 6'-4" 383 B 29 29 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A504 18 39'-1" 734 S 9 9 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A505 4 36'-0" 150 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A506 4 32'-2" 134 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A507 4 28'-1" 117 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A508 1 30'-0" 31 S 1 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A509 2 22'-2" 46 B 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A510 2 16'-8" 35 B 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A511 12 4'-4" 54 B 7 5 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A512 2 11'-5" 106 S 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A513 4 7'-11" 136 S 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A514 4 11'-8" 49 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A515 4 38'-5" 160 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A516 4 35'-8" 149 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A517 4 31'-2" 130 S 4 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A518 1 36'-3" 38 S 1 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A519 2 20'-11" 44 B 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A520 2 22'-0" 46 B 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A521 2 11'-3" 105 S 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A522 2 11'-7" 88 S 2 | | | | | | | | | | | | | | | | | | | | | | |
| Vary by 1'-6 1/2" increments | | | | | A523 12 11'-6" 144 S 12 | | | | | | | | | | | | | | | | | | | | | | |
| Piers | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P1101 32 43'-0" 7311 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P1102 28 36'-3" 5893 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P901 168 9'-8" 5522 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P902 40 20'-8" 2811 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P903 152 6'-6" 3359 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P904 152 14'-0" 7235 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P601 152 10'-0" 2283 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P602 16 13'-7" 326 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P603 8 18'-3" 219 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P604 8 29'-0" 348 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P605 16 39'-11" 959 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P501 82 15'-3" 1304 S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P502 82 7'-1" 606 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P503 160 7'-9" 1293 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P504 64 18'-1" 1207 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P505 64 11'-3" 751 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P506 48 7'-7" 380 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P507 32 8'-11" 298 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P508 16 9'-11" 165 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P509 16 11'-5" 191 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P510 16 12'-11" 216 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P511 32 14'-1" 470 B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Replacement Bars | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RE1101 1 7'-6" - S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RE901 1 6'-10" - S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RE801 1 6'-6" - S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RE701 4 6'-2" - S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RE601 7 5'-11" - S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RE501 2 5'-7" - S | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* Deck elevations are given for points shown in Detail A. They are the elevations which are required before the concrete deck is placed and include allowance for deflection due to the weight of the concrete.



BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A502 is a No. 5 size bar and P1101 is a No. 11 size.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

**CAMBER DIAGRAM,
REINFORCING STEEL LIST
BRIDGE NO. DEF-66-0444
OVER AUGLAIZE RIVER**

DEFIANCE COUNTY STA. 234+54.52
240+39.48

| | | | | | | |
|----------|-------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| off | off | REF | MPB | BFG | 3-21-66 | |

C251957

MICROFILMED
OCT 4 1994

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DEFIANCE COUNTY DEFIANCE TOWNSHIP CITY OF DEFIANCE DEF - 66 - 4.44

| | | |
|------------------------------------|--------------------------|---------|
| DEFIANCE COUNTY DEF - 66 - 4.44 | OHIO FHWA REGION 5 | 1 10 |
| PLAN NUMBER BR-43-91 | | |

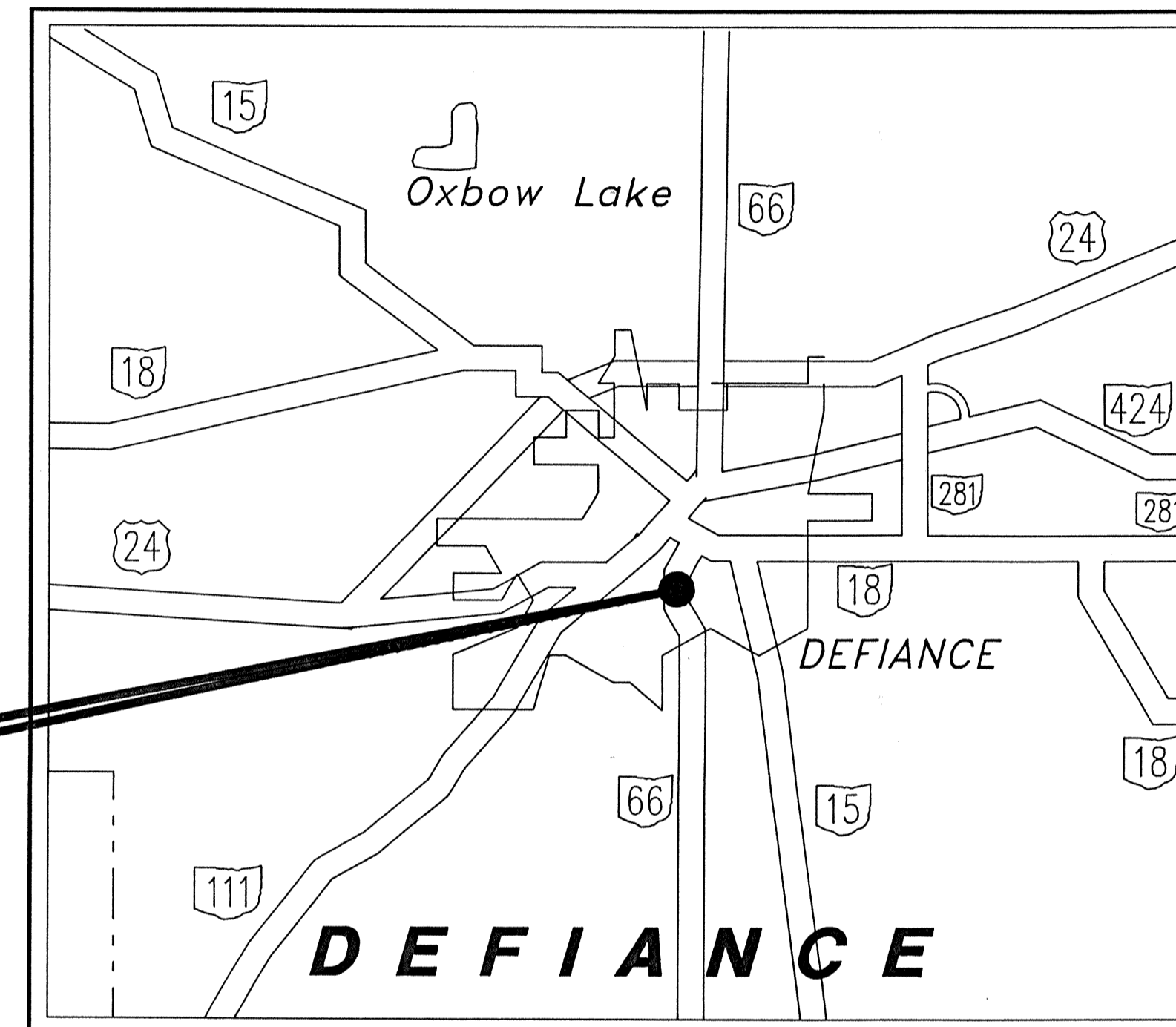
MICRO-SILICA MODIFIED CONCRETE OVERLAY

CONVENTIONAL SIGNS

| | | | |
|--|---|--|----------------------------------|
| County Line ———— | Limited Access (only) ———— LA ———— | Township Line ———— | Right of Way (only) ———— RW ———— |
| Section Line ———— | Limited Access & Right of Way ———— LA&RW ———— | Corporation Line ———— or ———— | Existing Right of Way ———— |
| Fence Line (existing) —x—x— (proposed) —x—x— | Property Line —E— (in existing fence) —x—E—x— | Center Line ———— | Railroad ———— or ———— |
| Trees (to be removed) —X—X— | Guardrail (existing) —o—o—o— (proposed) —o—o—o— | Utility Poles: Telephone ∅, Power ∅, Light ∅ | |

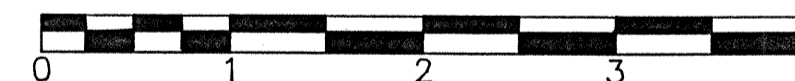
INDEX OF SHEETS

| | |
|---|-----|
| Title Sheet | 1 |
| General Notes | 2-3 |
| General Summary | 4 |
| Plan And Elevation Views | 5 |
| Transverse Sect. And Miscellaneous Details | 6 |
| Expansion Joint Notes And Details | 7-9 |
| Barrier Notes And Details | 10 |



LOCATION MAP

SCALE IN MILES



| | |
|------------------------|-------|
| Portion to be Improved | _____ |
| State & Federal Routes | _____ |
| Other Roads | _____ |

SCALES

| | | |
|---------------|----------------------------------|-------|
| Plan | _____ | _____ |
| Profile | Horizontal _____, Vertical _____ | |
| Cross Section | Horzt _____, Vertical _____ | |

1991 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

LINE DATA

STRUCTURE NO. - DEF. 66 - 0444

UNDERGROUND UTILITIES
 TWO WORKING DAYS
 BEFORE YOU DIG
 Call 800-362-2764 (Toll Free)
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY

| SUPPLEMENTAL SPECIFICATIONS | |
|-----------------------------|---------|
| 802 | 4-13-90 |
| | |
| | |
| | |
| | |

Approved [Signature]
Date 8-5-91 District Deputy Director
of Transportation

Approved B.D. Hankelmann
Date 8-8-91 Engineer, Bureau of Bridges and
Structural Design

Approved Aljander H. Hynds
Date 8-30-91 Deputy Director, Operations

Approved [Signature]
Date 9-3-91 Director, Department of Transportation

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

| Print No. | Date | Print No. | Date |
|-----------|---------|-----------|--------|
| BP-5 | 10-1-87 | MT-96.11 | 9-9-88 |
| | | MT-96.20 | 9-9-88 |
| MC-9.2 | 5-6-91 | MT-96.25 | 9-9-88 |
| EXJ-4-87 | 1-5-89 | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Plan Prepared By:
DISTRICT NO.1
OHIO DEPARTMENT
OF TRANSPORTATION

Project _____
Date of Letting _____ 19__ Contract No. _____

SEAL

GENERAL NOTES

DEBRIS CONTROL:

Due to the location of this project within the City of Defiance, the Contractor shall not dump any debris along the river, either inside or outside the State's right-of-way. Care shall be taken by the Contractor not to allow any debris to fall into the river while working on this structure. This shall include, but not be limited to, portions of the existing deck, asphalt from the approach slabs and portions of the existing expansion joints that are to be removed prior to the placing of the proposed concrete overlay as well as any of the overlay material.

EXISTING STRUCTURE VERIFICATION:

Details and dimensions shown on these plans pertaining to the existing structure have been obtained from field observation, measurements & plans. Consequently, they are indicative of the existing structure and proposed work, but they shall be considered tentative and approximate. The Contractor is referred to CMS Sections 102.05, 105.02, and 513.02.

Plans for the existing structure are on file for observation and review at the O.D.O.T. District One Office, 1885 N. McCullough Street, Lima, Ohio, and at the O.D.O.T. Central Office in Columbus, Ohio. The dimensions used on this plan were taken from the original plan for the existing structure. The Contractor shall field verify these dimensions. Any variance between what is shown on this plan and what exists in the field shall be discussed and resolved with the Engineer.

Contract bid prices shall be based upon recognition of the uncertainties described above and upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

ITEM 202 - WEARING COURSE REMOVED:

The Contractor at the direction of the Engineer shall remove the existing asphalt overlay from the approach slabs and portions of the existing approach pavements as needed to obtain a desirable profile of approach pavement with the new deck surface. The Contractor shall include in this item the preparation costs of "Butt Joints" between the new and existing pavements at each end of the structure. For purposes of calculations, the "Butt Joints" were estimated to be seventy-five (75) feet beyond the approach slab limits at each end of the structure. The approximate thickness of the asphalt removal is estimated to be one and one-half (1½) inches.

The actual quantity of work performed on this item will be as directed by the Engineer and may vary from that shown on the plan.

ITEM 404 - ASPHALT CONCRETE, AC-20:

The quantity shown for this item shall be used by the Contractor to resurface the approach slabs and the portions of the approach pavement removed under Item 202, Wearing Course Removed. The 404 shall be placed at a nominal depth of one and three-quarters (1¾) inches on the approach slabs and extending past the approach slabs approximately seventy-five (75) feet (+ or -) to meet the existing pavement at "Butt Joints". The depth and length of the 404 shall be subject to verification by the Engineer in order to achieve a smooth transition from the existing pavement to the new deck surface. All

ITEM 404 - ASPHALT CONCRETE, AC-20 Concluded

"Butt Joints" shall be sealed with asphalt as per Item 407 of the CMS. For addition information on "Butt Joints", refer to Standard Drawing BP-5, dated 10-01-87.

ITEM 407 - TACK COAT:

This item shall consist of applying tack coat on all approach areas prior to the placing of Item 404, Asphalt Concrete. The rate of application of this item shall be subject to adjustment as directed by the Engineer with the maximum rate being 0.075 Gallons per Square Yard. The plan quantity indicates an application rate of 0.075 Gallons per Square Yard.

Also to be included for payment in this item is the quantity of 407 needed to seal the "Butt Joints". See general note for Item 404 - Asphalt Concrete.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY)(SEE PROPOSAL NOTE):

The quantity shown for this item shall be used by the Contractor to seal the portion of the decks as shown in the detail on Sheet _ of _ . Also, the Contractor shall seal the wingwalls, backwalls, abutment seats and abutments.

The Contractor is hereby advised he is to take special note of Paragraph A under Application of the Proposal Note. As per this paragraph, the Contractor shall incorporate silica sand at the rate of 1 ½ pounds per square yard on the horizontal sidewalk surfaces to produce a non-skid surface satisfactory to the Engineer. Payment for the silica sand shall be included in the Square Yard unit price bid for Item Special, Sealing Of Concrete Surfaces (Epoxy) (See Proposal Note).

The actual quantity performed on this item will be as directed by the Engineer and may vary from that shown on this plan.

ITEM SPECIAL - MICRO-SILICA MODIFIED CONCRETE OVERLAY (1¾" THICKNESS):

The Contractor is hereby advised to take notice that the thickness of the proposed overlay is one and one-half (1½) inches above the existing concrete deck surface. The remaining one-quarter (¼) inch thickness of the proposed overlay is to replace the one-quarter (¼) inch of the existing deck that is to be machine scarified and removed as shown on Sheet 6 of 10. (See Proposal Note.)

ITEM SPECIAL - MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS):

The quantity shown on this item is to be used to repair areas of unsound concrete, greater than one-quarter (¼) inch, but less than that required for full-depth repair, removed from the existing bridge deck. (See Proposal Note.)

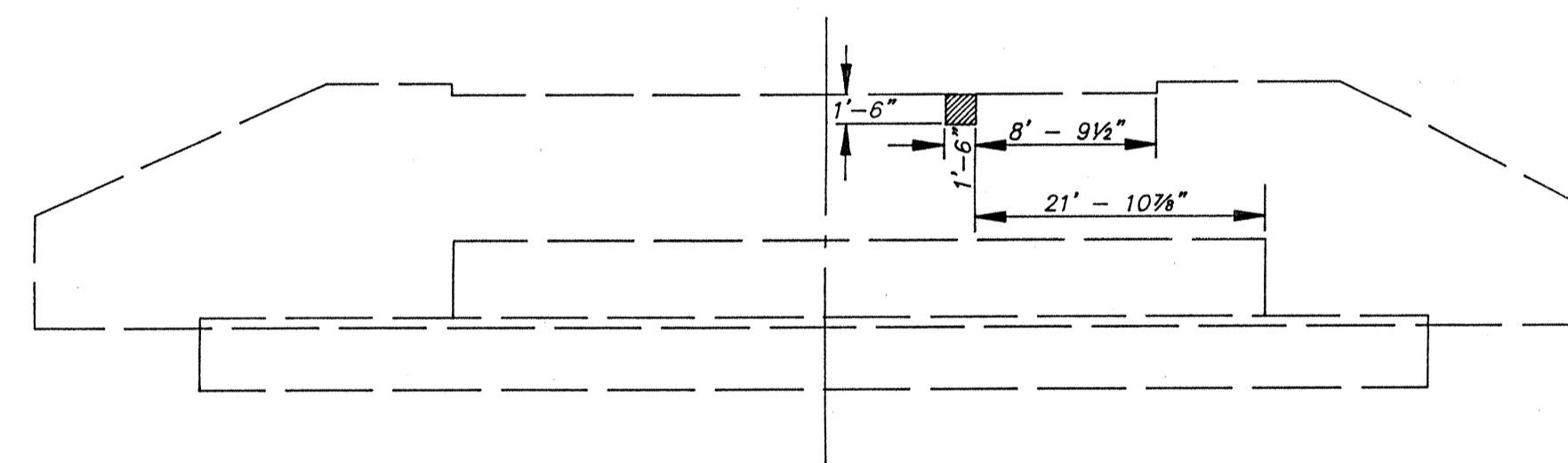
ITEM SPECIAL - FULL DEPTH REPAIR:

The quantity shown for this item is to be used to replace deteriorated full-depth areas on the existing bridge deck. Areas to be removed shall be designated by the Engineer and then rechecked prior to completion of the removal to assure that all unsound concrete has been removed. (See Proposal Note.)

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN:

The quantity shown for this item is to be used as directed by the Engineer to patch the existing curbs, portions of the existing deck removed to do expansion joint removal and portions of the abutment backwalls as directed by the Engineer. The amount estimated for the curbs is ninety two (92) Square Feet. An estimated amount of one hundred thirty two (132) Square Feet was included for the deck patching while three (3) Square Feet was estimated for the abutment backwalls. See detail below for the approximate area to be patched on the forward abutment backwall.

The quantity shown are estimates and the actual quantity performed may vary from that shown on this plan.



FORWARD ABUTMENT DETAIL

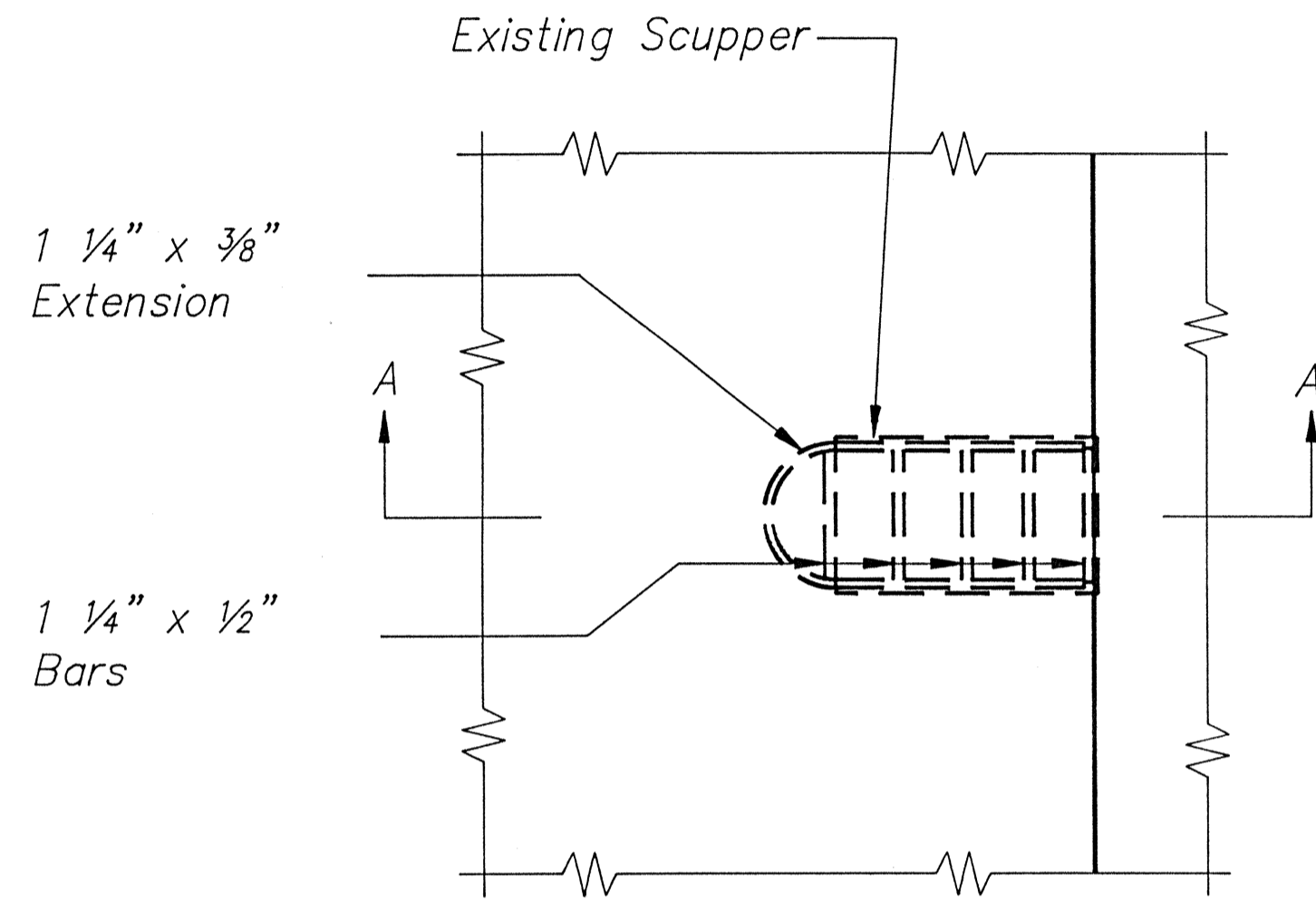
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|---|-------|--------|---------|----------|---------|---------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE | | | | | | 1 / 2 |
| GENERAL NOTES | | | | | | |
| STRUCTURE NO.: DEF - 66 - 0444 over the Auglaize River | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| JWR | JWR | | | FFE | 7-24-91 | JWR |

GENERAL NOTES

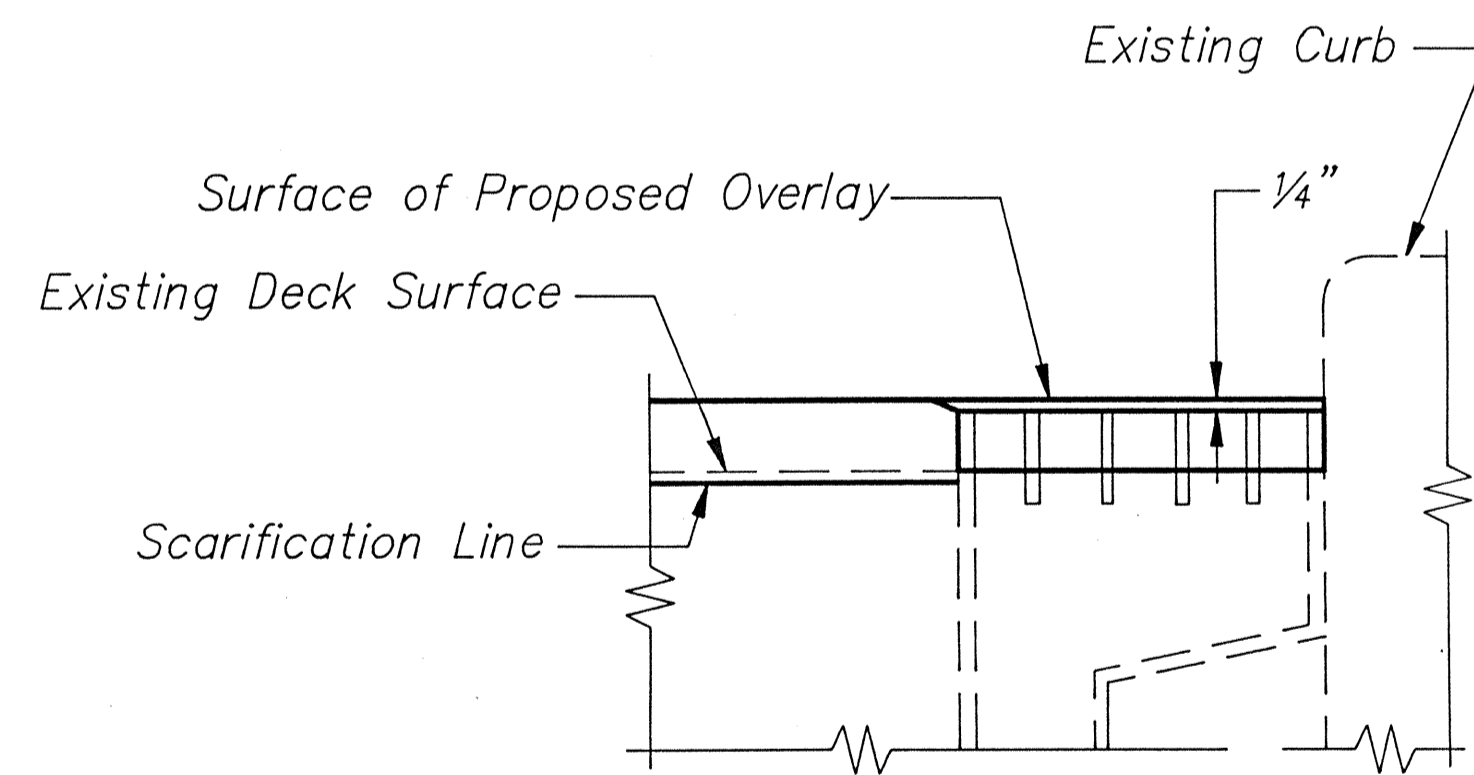
ITEM 518 SCUPPER, VERTICAL EXTENSION, AS PER PLAN:

Prior to the placement of the Micro-Silica Modified Concrete Overlay, the Contractor shall add, by welding, vertical extensions to all the existing scuppers on the structure.

Payment for all labor, equipment and materials necessary to perform this work shall be included in the Each unit price bid for Item 518, Scupper, Vertical Extension, As Per Plan.



PLAN VIEW



SECTION A-A

ITEM 614 - MAINTAINING TRAFFIC:

Traffic will be maintained on this structure for the performance of this work using temporary traffic signals as per Standard Drawings MT-96.11, MT-96.20 and MT-96.25. A minimum of five (5) working days prior to the closing of the first lane, the Contractor shall consult with the District Traffic Engineer, (419) 222-9055 Ext. 240, to obtain the initial signal timing.

The Contractor shall provide, erect and maintain all barricades, signs and other traffic control devices at each work site as required by the latest edition of and revisions (Revision 14 or newer) to the Ohio Manual of Uniform Traffic Control devices. The work shall be done in two phases. On the phase I portion of this project, the East lane shall not be closed for more than twenty-one (21) consecutive calendar days for the performance of this work. On the phase II portion of this project, the West lane shall not be closed for more than twenty-one (21) consecutive calendar days for the performance of this work. Failure to comply with this limitation shall result in liquidated damages in accordance with Section 108.07 of the CMS.

The Contractor shall provide temporary ramps as per Standard Drawing BP-5 before reopening any lanes to traffic prior to the repaving of the approach slabs and approach pavement.

The payment for all labor, equipment and materials needed to perform this work shall be included in the Lump Sum price bid for Item 614, Maintaining Traffic.

GENERAL NOTES

STRUCTURE NO.: DEF - 66 - 0444
over the Auglaize River

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
|----------|-------|--------|---------|----------|---------|---------|
| JWR | JWR | | | FFE | 7-24-91 | JWR |

GENERAL SUMMARY

| STRUCTURE | NUMBER | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION |
|-----------|--------|------|-----------|-------------|---------|---|
| | | | | 0444 | | |
| | | | | | | ROADWAY |
| | | Lump | 202 | 11200 | Lump | Portions Of Structure Removed |
| | | 533 | 202 | 23500 | Sq. Yd. | Wearing Course Removed |
| | | | | | | PAVEMENT |
| | | 26 | 404 | 20000 | Cu. Yd. | Asphalt Concrete, AC-20 |
| | | 40 | 407 | 10000 | Gal. | Tack Coat |
| | | | | | | STRUCTURES 20 FT. SPAN AND OVER |
| | | 1273 | Special | 51267502 | 1273 | Sq. Yd. Sealing Of Concrete Surfaces (Epoxy) (See Proposal Note) |
| | | 86 | 516 | 11211 | 86 | Lin. Ft. Structural Expansion Joint Including Elastomeric Strip Seal, As Per Plan |
| | | 40 | 518 | 12701 | 40 | Each Scupper, Vertical Extension, As Per Plan |
| | | 227 | 519 | 11101 | 227 | Sq. Ft. Patching Concrete Structure, As Per Plan |
| | | 1947 | Special | 51922006 | 1947 | Sq. Yd. Micro-silica Modified Concrete Overlay (1 3/4" Thickness) (See Proposal Note) |
| | | 41 | Special | 51922100 | 41 | Cu. Yd. Micro-silica Modified Concrete Overlay (Variable Thickness) (See Proposal Note) |
| | | 3 | Special | 51922200 | 3 | Cu. Yd. Full Depth Repair (Micro-silica) (See Proposal Note) |
| | | Lump | Special | 51922300 | Lump | Test Slab (Micro-silica) (See Proposal Note) |
| | | | | | | MAINTENANCE OF TRAFFIC |
| | | 20 | 614 | 13300 | 20 | Each Barrier Reflector, Type B |
| | | 0.15 | 614 | 21400 | 0.15 | Mile Temporary Center Line, Class II |
| | | 24 | 614 | 26000 | 24 | Lin. Ft. Temporary Stop Line, Class I |
| | | 1800 | 622 | 40041 | 750 | Lin. Ft. Portable Concrete Barrier, Bridge Mounted, As Per Plan |
| | | Lump | 614 | 11000 | Lump | Maintaining Traffic |
| | | Lump | 619 | 15000 | Lump | Field Office, Type A |
| | | Lump | 624 | 10000 | Lump | Mobilization |

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT ONE

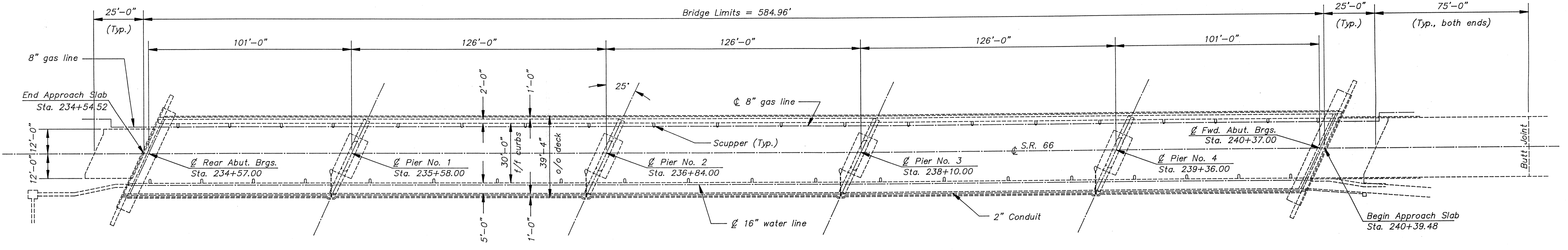
GENERAL SUMMARY

STRUCTURE NO.: DEF - 66 - 0444
over the Auglaize River

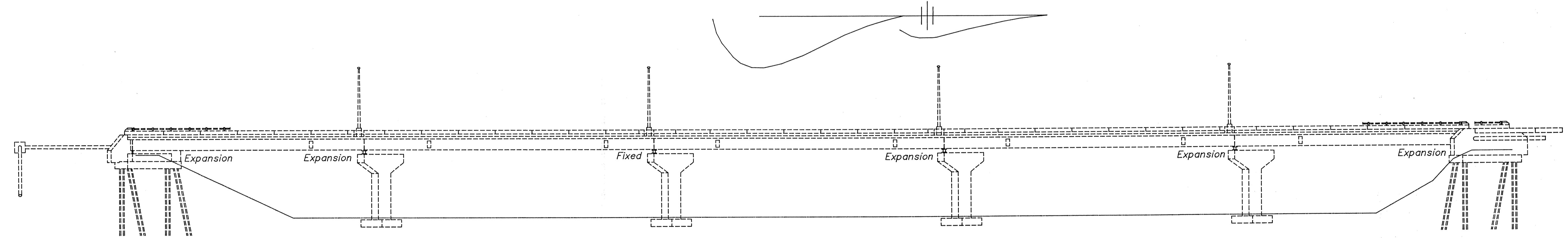
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| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| JWR | JWR | | | FFE | 7-24-91 | JWR |

REV 8/10 11-20-91

DEFIANCE COUNTY
DEF - 66 - 4.44

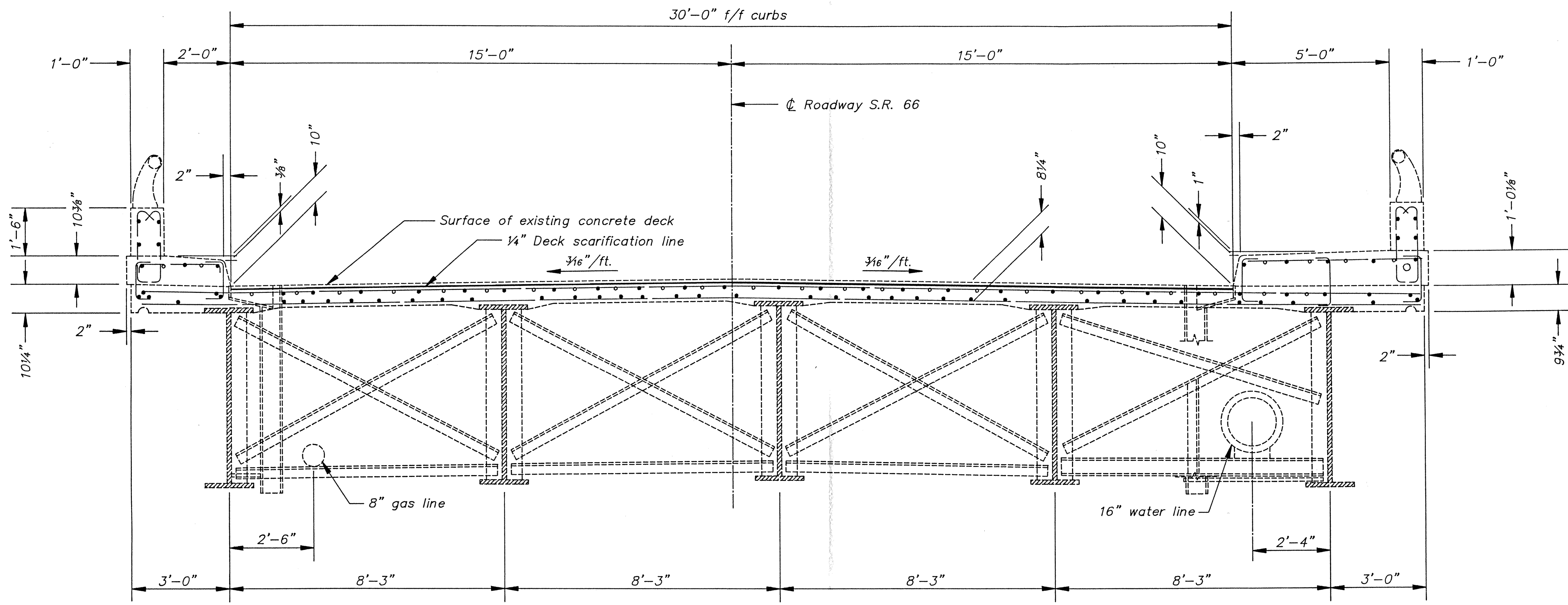


GENERAL PLAN

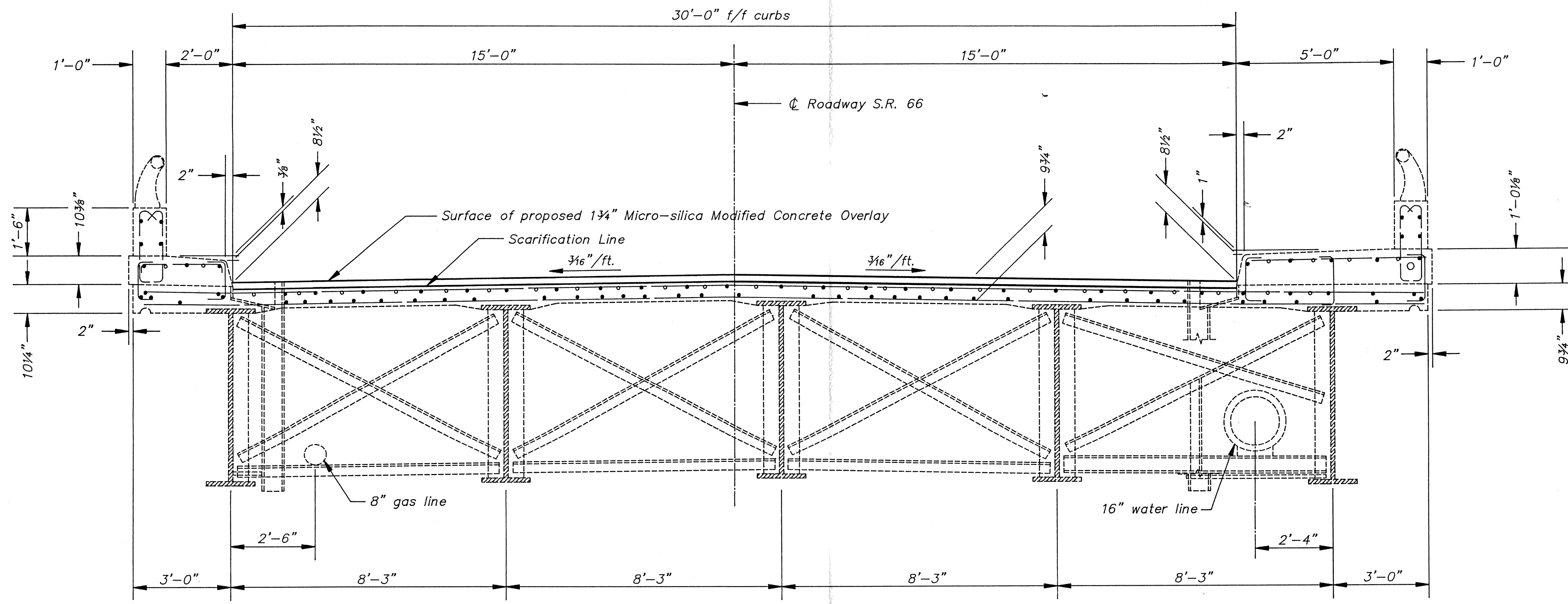


GENERAL ELEVATION

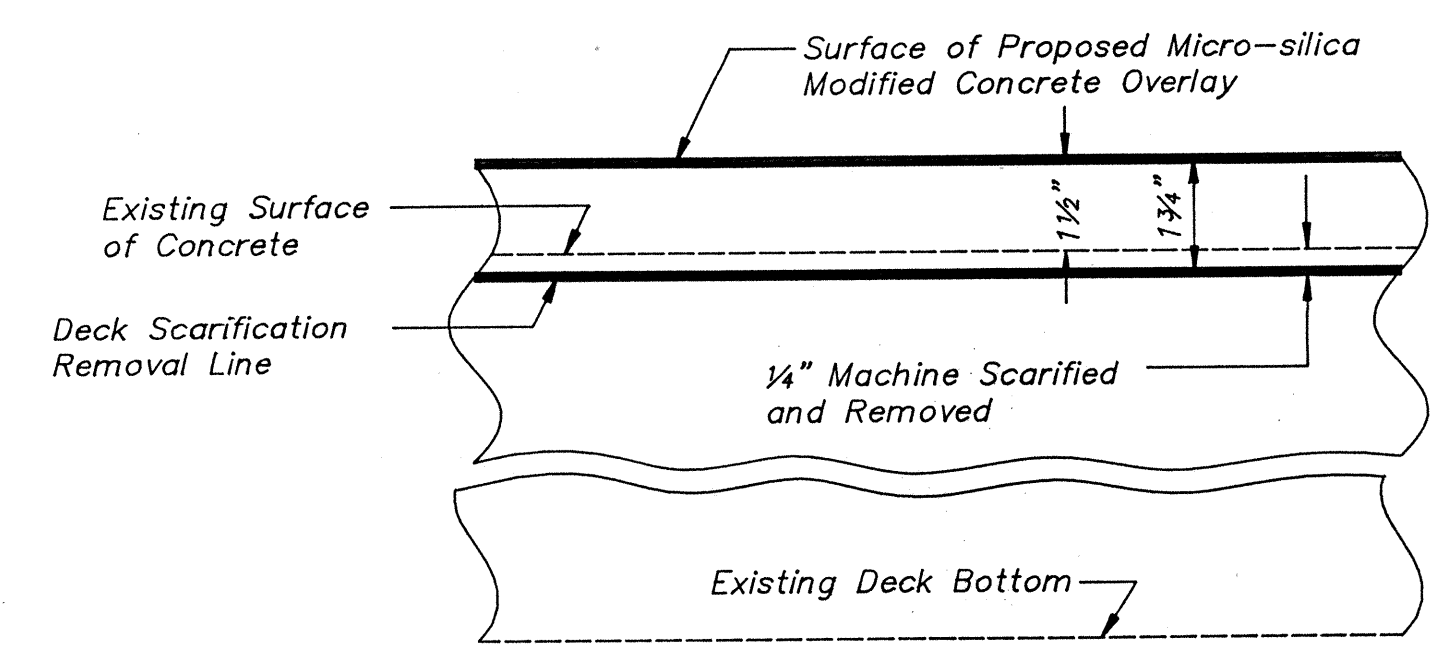
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|---|-------|--------|---------|----------|---------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE | | | | | |
| GENERAL PLAN AND ELEVATION VIEWS | | | | | |
| STRUCTURE NO.: DEF.-66-0444 over Auglaize River | | | | | |
| SCALE: N.T.S. | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE |
| | GLI | | | FFE | 7-24-91 |
| | | | | | JWR |



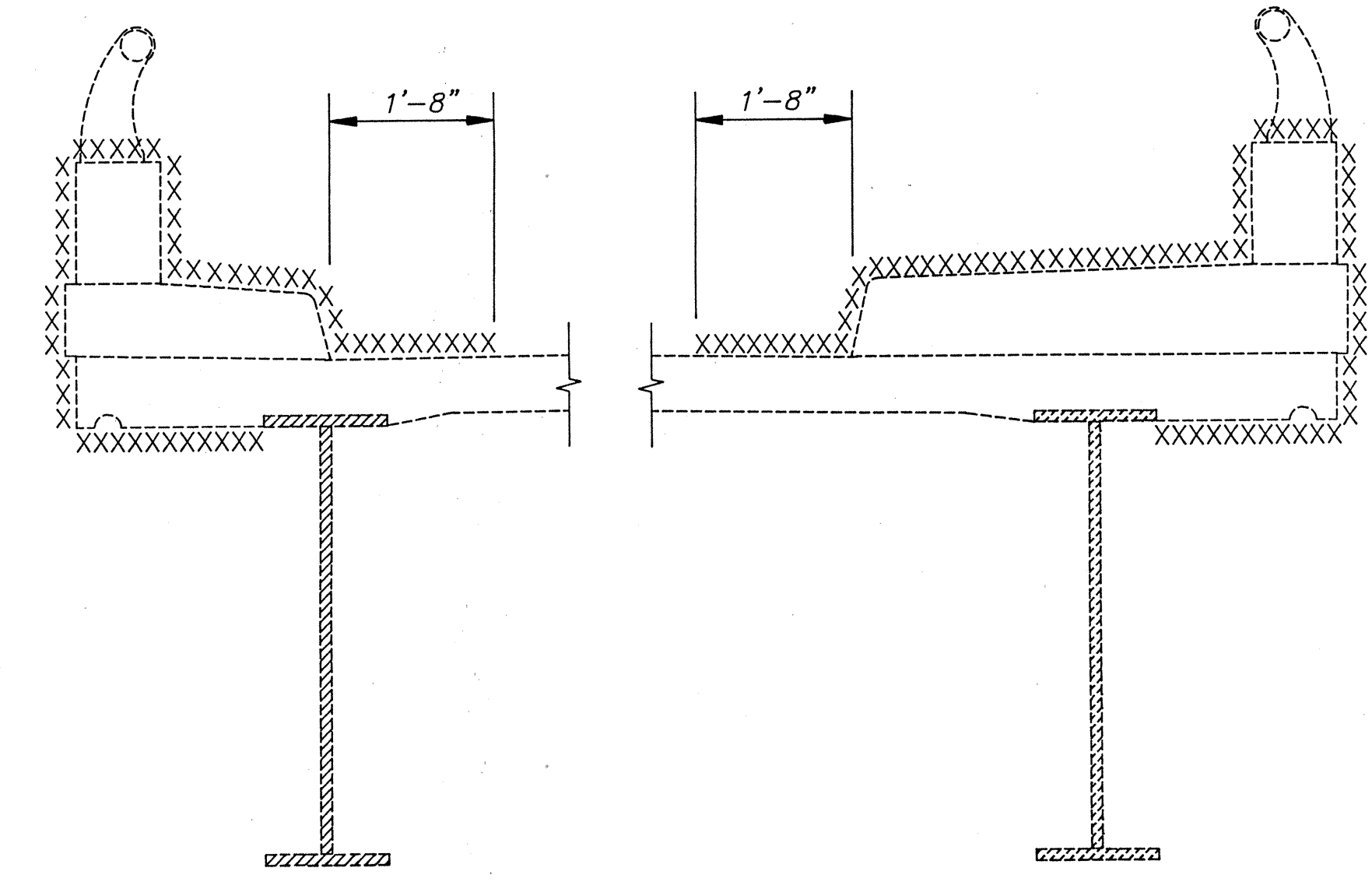
EXISTING TRANSVERSE SECTION



PROPOSED TRANSVERSE SECTION



DETAIL OF PROPOSED MICRO-SILICA MODIFIED CONCRETE OVERLAY



SEALING DETAILS
XXXX = AREA TO BE SEALED

| | | | | | |
|---|-------|--------|---------|-------------|------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE | | | | | |
| EXISTING & PROPOSED TRANSVERSE SECTIONS | | | | | |
| STRUCTURE NO.: DEF.-66-0444 Over Auglaize River | | | | | |
| SCALE: N.T.S. | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE |
| | GLI | | | FFE 7-24-91 | JWR |

STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMETRIC STRIP SEALS

Description - This item shall consist of furnishing, fabricating and installing structural expansion joints with elastomeric strip seals.

Materials - Steel portions of the joints shall be A36 steel. Elastomeric strip seals shall be neoprene meeting the requirements given under "Materials Properties". The elastomeric strip seal and the steel extrusions shall be as manufactured by:

The Watson Bowman & Acme Corporation, Amherst, New York
D. S. Brown Co., North Baltimore, Ohio
or an approved equal.

Adhesive shall be: A polyurethane and hydrocarbon solvent mixture as specified by the seal manufacturer (Unless otherwise approved by the Director). It shall have suitable consistency at the temperature at which the seals are installed and shall be compatible with the seals and the steel extrusions.

Size - Strip seals shall have the movement rating of 5 inches. The seal for each joint shall be furnished and installed in one complete piece. Cuts, tears, cracks, or other irregularities shall be cause for rejection.

Material Properties - The neoprene strip seals shall meet the requirements of ASTM D2628 (modified to omit the recovery test) and shall have the properties specified below:

PHYSICAL PROPERTIES OF SEAL ELEMENT

| Property | Requirement | ASTM Method |
|---|--------------------|---------------------|
| Tensile Strength, Min. P.S.I. | 2,000 | D412 |
| Elongation at Break, Min. Percent | 250 | D412 |
| Hardness, Type A Durometer | 50 min. 65 max. | D2240 (Modified) |
| Oven Aging, 70 hr. at 212° F | | |
| Tensile Strength, Loss, Max. | 20 Percent | D573 |
| Elongation, Loss, Max. | 20 Percent | |
| Hardness, Type A Durometer (Points Change) | 0 to +10 | |
| Ozone Resistance | | |
| 20 Percent Strain, 300 PPHM, in Air at 104° F (Wiped with Toluene to remove Surface Contamination) | No Cracks | D1149 |

Testing - Each lot of strip seals shall be tested by the manufacturer or an accredited laboratory to ensure compliance with these provisions. Two copies of the certified test data indicating that the tested materials comply with these provisions shall be submitted. Material acceptance will be based upon laboratory evaluation of certified test data.

Preparations for Installation - To avoid the subsequent contamination of prepared surfaces all of elastomeric strip seals shall be cleaned with methyl-ethyl Keytone (MEK), Toluene (T) or other approved solvent using clean cloth rags.

Lubricant - Adhesive used to install the performed strip seals shall be a polyurethane and hydrocarbon solvent mixture as specified by the seal manufacturer (unless otherwise approved by the Director). It shall have suitable consistency at the temperature at which the seals are installed and shall be compatible with the seals and steel extrusions.

The bonding surfaces of the steel extrusions (the interior of the anchor grooves) shall be prepared to grade SA 3, ASTM D2200. Preparation shall be accomplished not more than 24 hours prior to the adhesive bonding.

Installation - Immediately prior to adhesive application, bonding surfaces shall be clean, dry and warmer than 45° F. The bonding surfaces shall be maintained at or above this temperature until the adhesive has cured. Adhesive shall be applied liberally to both the steel and elastomeric bonding surfaces using a stiff brush if necessary to achieve a complete and relatively uniform coating. Then the bulbed edges of the elastomeric seal shall be inset into the anchor grooves. After installation, excess adhesive shall be removed from the exposed seal surface.

Shop Drawings - Shop drawings for the expansion joints are required. The manufacturer of the expansion joints shall submit complete dimensional details of the proposed joint extrusions, for approval. The Contractor shall coordinate the preparations of the structural steel and expansion joint shop drawings to ensure complete geometrical and dimensional compatibility.

Painting - The exposed portions of the expansion joints shall be painted with system A shop prime coat of paint, 708.17.

Measurement - Measurement for pay purposes shall be based on the sealed length of the joint, measured along the joint centerlines, furnished and placed, including all labor, material, concrete removal, steel plates and equipment necessary to complete the joint in place. Payment shall be made per linear feet for Item 516 "Structural Expansion Joints, Including Elastomeric Strip Seals", As Per Plan.

TABLE OF VALUES FOR "A"

| Temp. F* | Dimension "A" for anticipated peak ambient temperature |
|----------|--|
| 30 | 3 1/8" |
| 40 | 2 7/8" |
| 50 | 2 5/8" |
| 60 | 2 3/8" |
| 70 | 2 1/8" |
| 80 | 1 7/8" |
| 90 | 1 5/8" |
| 100 | 1 3/8" |
| 110 | 1 1/8" |

See Sheets 8 of 10 and 9 of 10 for locations of "A".

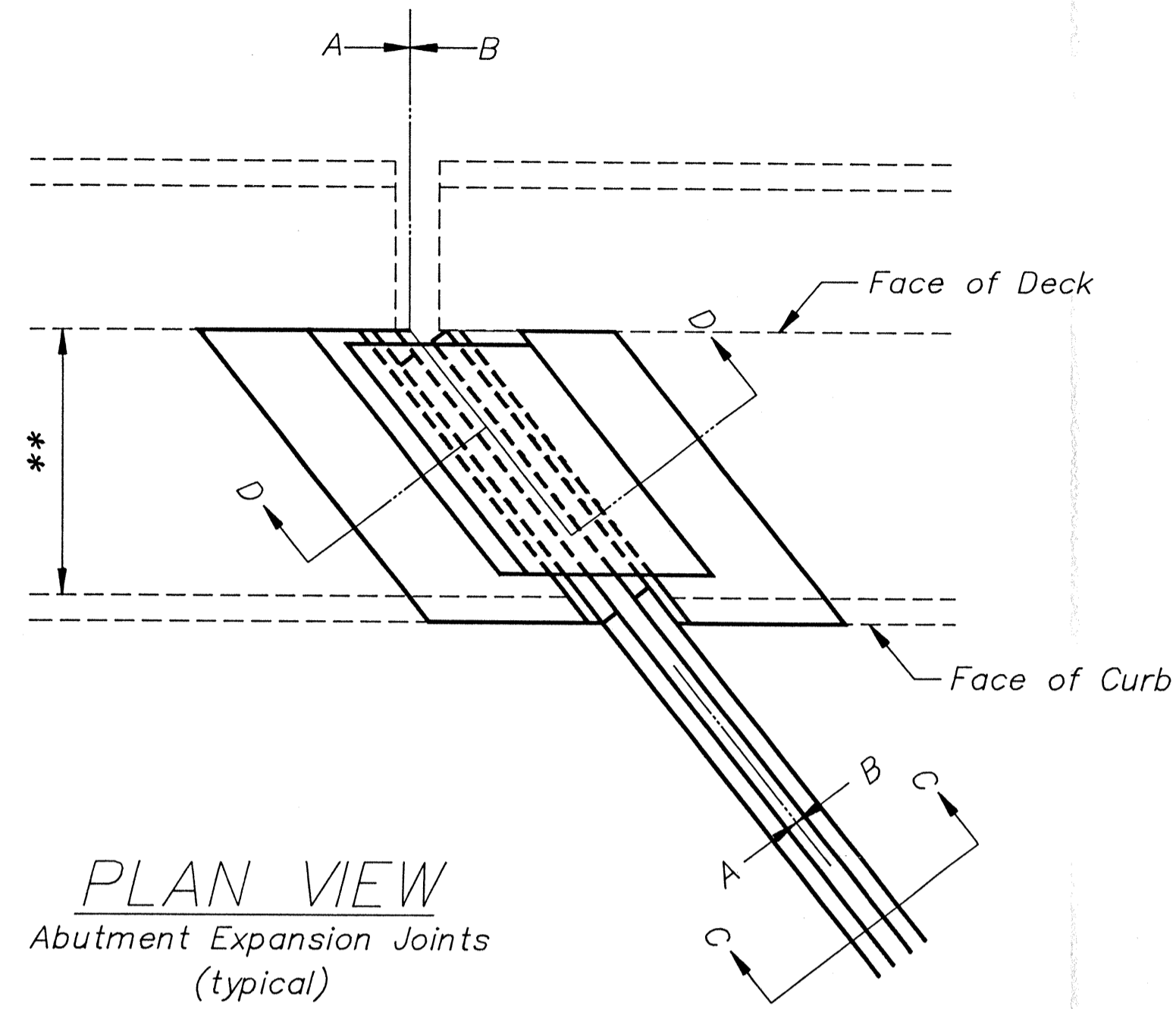
| | | | | | | |
|---|-------|--------|---------|----------|---------|---------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE | | | | | | 1 / 3 |
| EXPANSION JOINT NOTES STRUCTURE NO.: DEF - 66 - 0444 over the Auglaize River | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| JWR | JWR | | | FFE | 7-24-91 | JWR |

EXPANSION JOINT DETAILS

| | | | |
|-------------|-------|-------------|----|
| FHWA REGION | STATE | PLAN NUMBER | 8 |
| 5 | OHIO | BR-43-91 | 10 |

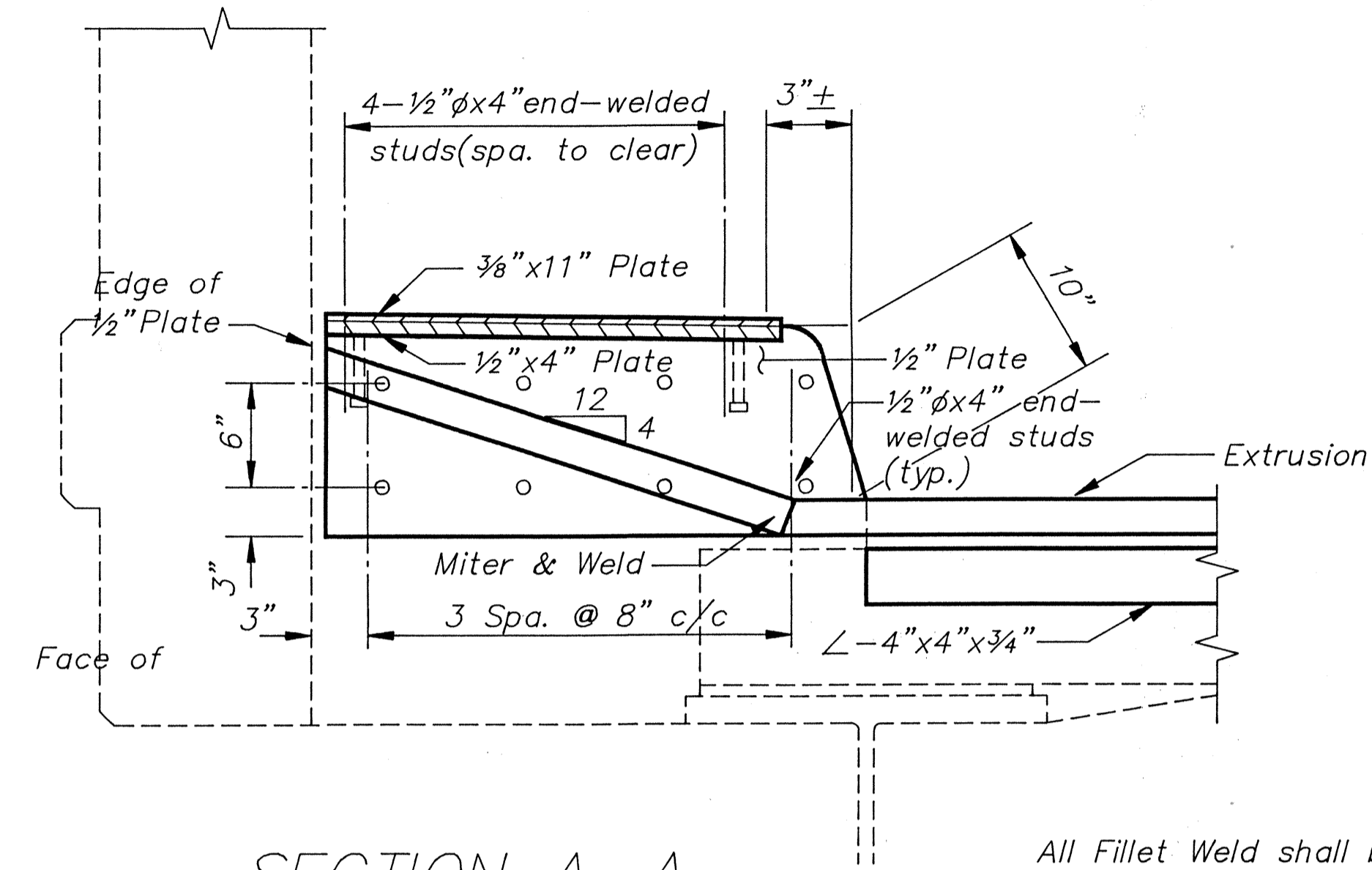
DEFIANCE COUNTY
DEF - 66 - 4.44

** ~ Width of sidewalk is not the same on both sides of the structure. Refer to the Transverse Section on Sheet of .



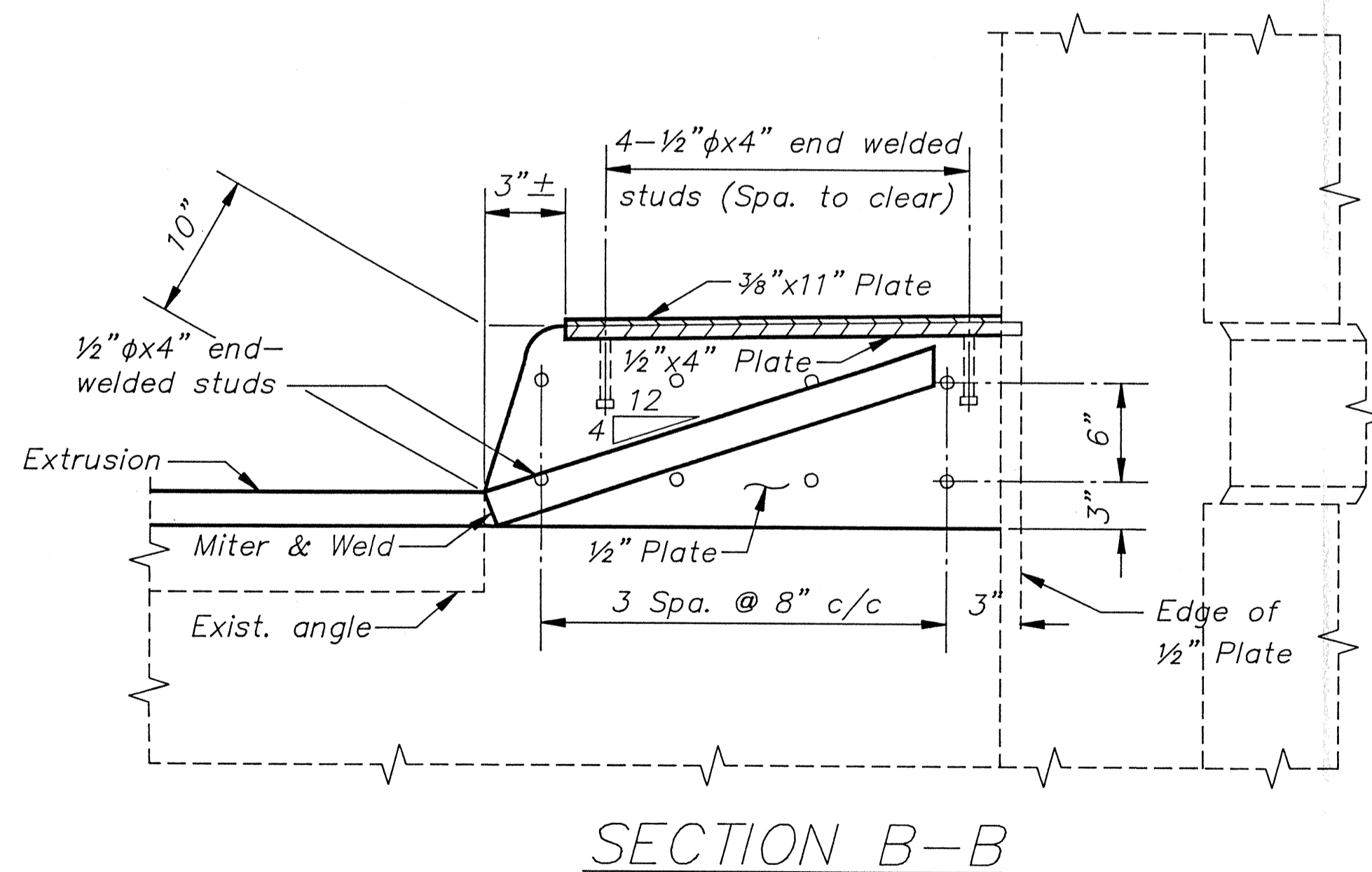
The elastomeric gland shall be installed in one complete piece.

NOTE: For Section C-C, see Sheet 9 of 10.



All Fillet Weld shall be 1/4" continuous.

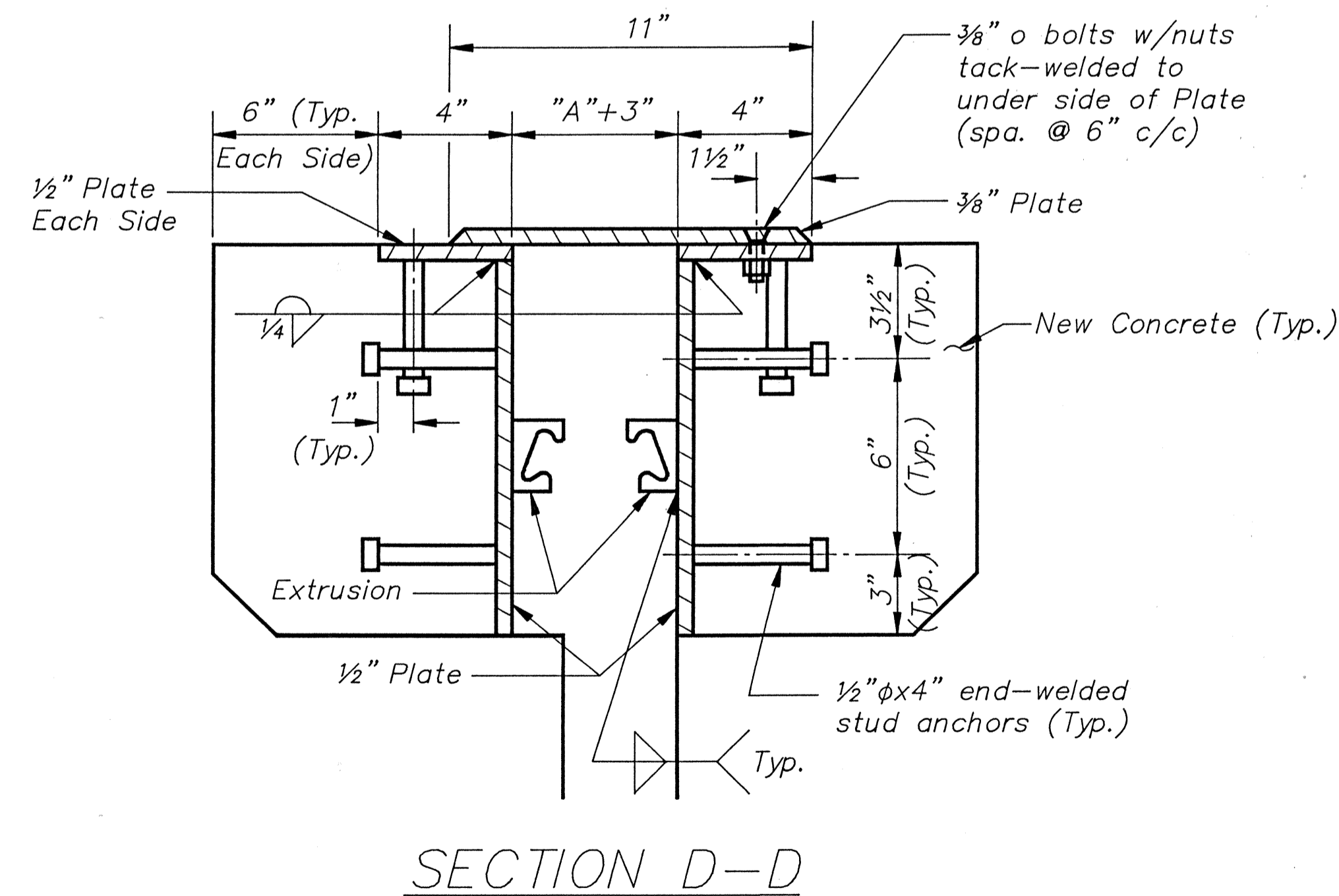
Strip Seals shall be an A-2 extrusion with S500 gland as manufactured by Watson-Bowman and Acme Corp., a SS extrusion with a No. 500 gland as manufactured by the D. S. Brown Co., or an approved equal.



Removal of all existing steel shall be included for payment in Item 516, Structural Expansion Joints, including Elastomeric Strip Seals.

All Fillet Welds shall be 1/4" continuous.

Any reinforcement damaged or removed shall be replaced by the Contractor at no cost to the State of Ohio.

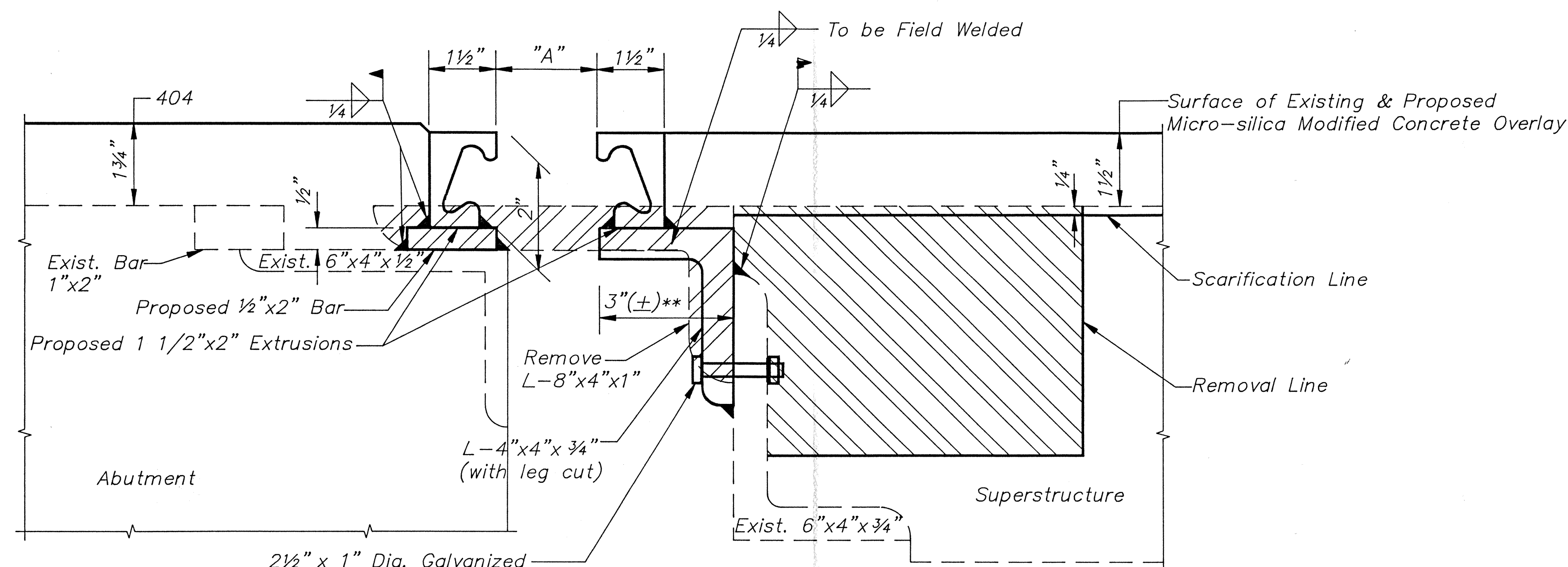


NOTE: For the value of "A", See the table on sheet 7 of 10.

| | | | | | |
|---|-------|--------|---------|---------------|---------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE | | | | | 2/3 |
| EXPANSION JOINT DETAILS | | | | | |
| STRUCTURE NO.: DEF - 66 - 0444 over the Auglaize River | | | | | |
| SCALE: N.T.S. | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
| JWR | JWR | | | FFE 7-24-91 | JWR |

EXPANSION JOINT DETAILS

NOTE: For the value of "A", See the table on Sheet 7 of 10.

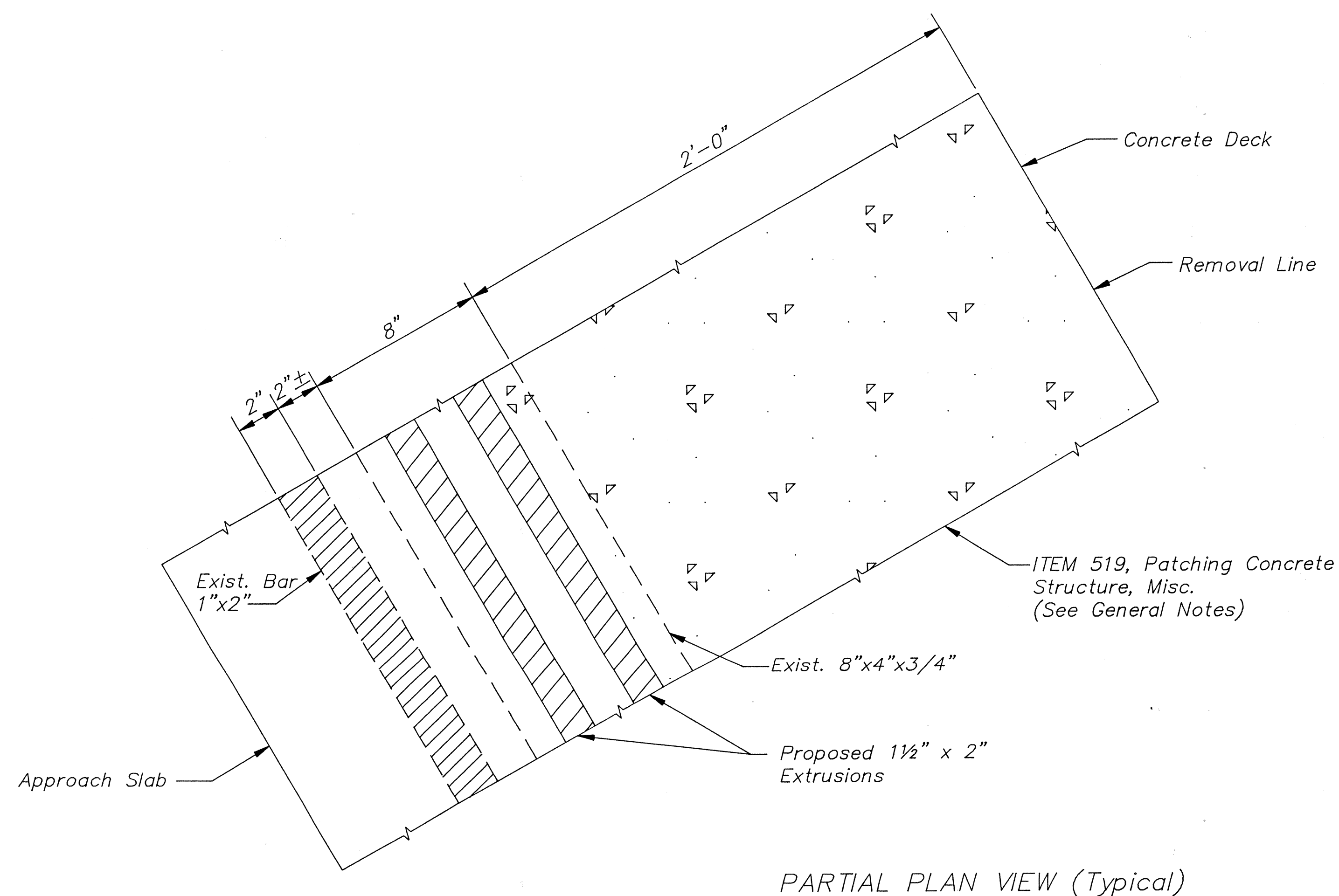


NOTE: The cost of the Proposed 1/2"x2" Bar shall be included for payment in Item 516, Structural Expansion Joint Including Elastomeric Strip Seal, As Per Plan.

2 1/2" x 1" Dia. Galvanized High Strength Bolt Inserted as Shown with Washer at the Nut End.

** - Width May Be Adjusted In the field As Directed By The Engineer.

SECTION C-C
Abutment Expansion Joint
(Typical)



PARTIAL PLAN VIEW (Typical)

| | | | | | |
|---|-------|--------|---------|---------------|---------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE | | | | | 3/3 |
| ABUTMENT EXPANSION JOINT & PLAN VIEW FOR EXPANSION JOINTS STRUCTURE NO.: DEF - 66 - 0444 over the Auglaize River | | | | | |
| SCALE: N.T.S. | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
| JWR | JWR | | | FFE 7-24-91 | JWR |

ITEM 622 - PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED, AS PER PLAN (PCB,BM,APP)

The type of PCB,BM,APP to be used on this project to close one lane of the roadway during Phases 1 & 2 shall be Item 622, Portable Concrete Barrier, 32", Bridge Mounted, As Per Plan. See Std. Construction Dwg. MC-9.2 and this sheet for details.

This Item shall be paid for by the actual linear feet of Item 622, Portable Concrete Barrier, 32", Bridge Mounted, As Per Plan, installed. Any costs associated with removing and resetting the PCB,BM,APP for any reason shall be included in the unit price bid for Item 622, Portable Concrete Barrier, 32", Bridge Mounted, As Per Plan. All Portable Concrete Barrier devices may be reused when switching from one side to the other and from one phase to the other.

An estimated quantity of 750 Lin. Ft. for Parts I and II has been included in the General Summary. The actual amount of PCB,BM,APP, used will be as directed by the Engineer and may vary from the quantity shown. All Portable Barrier used on this project shall be in good shape, free of cracks, spalling or any other damage or deterioration.

The bridge deck surface on which the Portable Concrete Barrier, 32", Bridge Mounted, As Per Plan, will rest shall be cleared of all loose sand, gravel, dirt and debris.

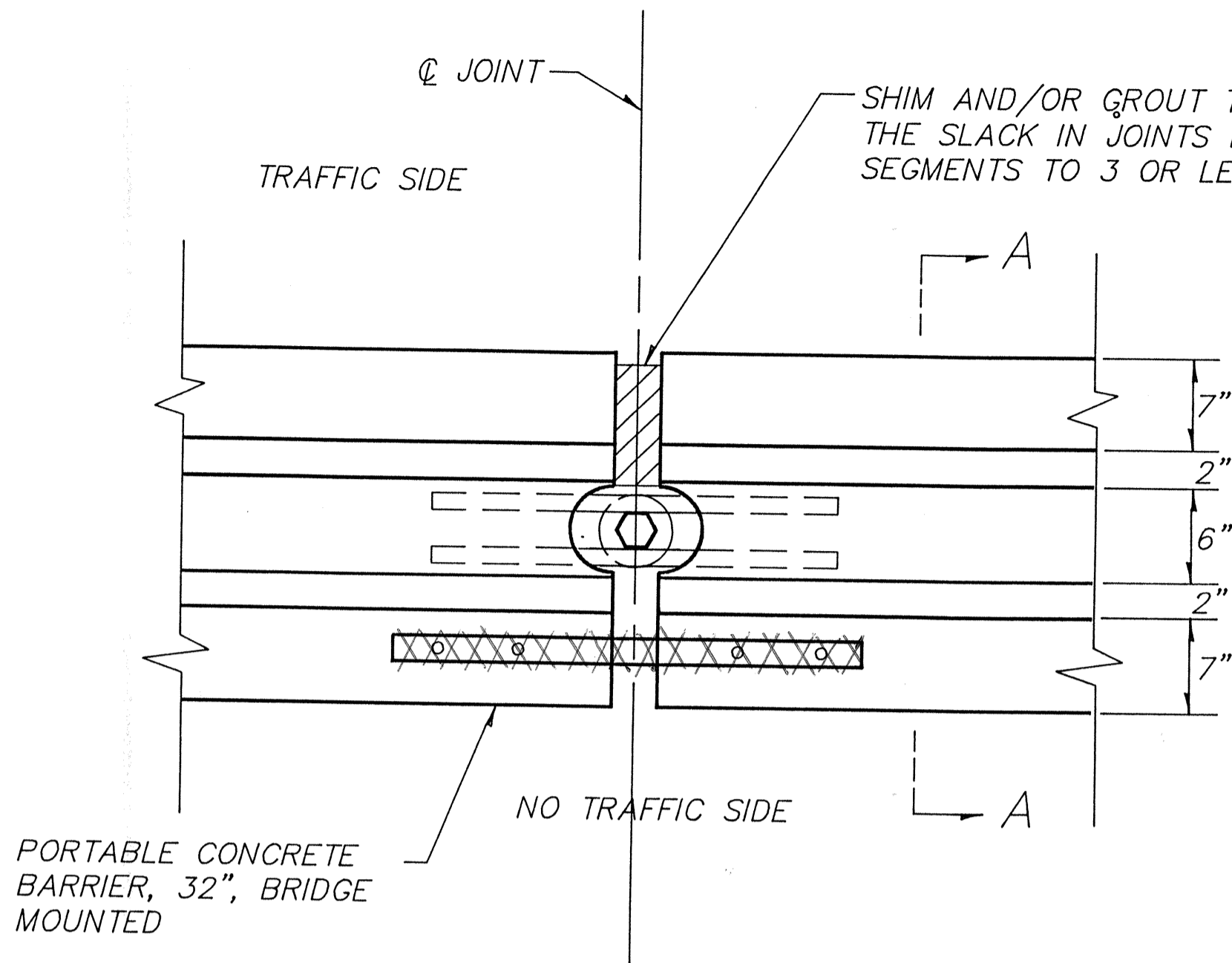
Any irregularities in the bridge deck area, unless judged by the Engineer to be inconsequential, shall be leveled with grout and/or asphalt.

Asphalt roll roofing shall be placed on those areas, as judged by the Engineer, to have a surface roughness which would inhibit friction contact between barrier segments and the deck.

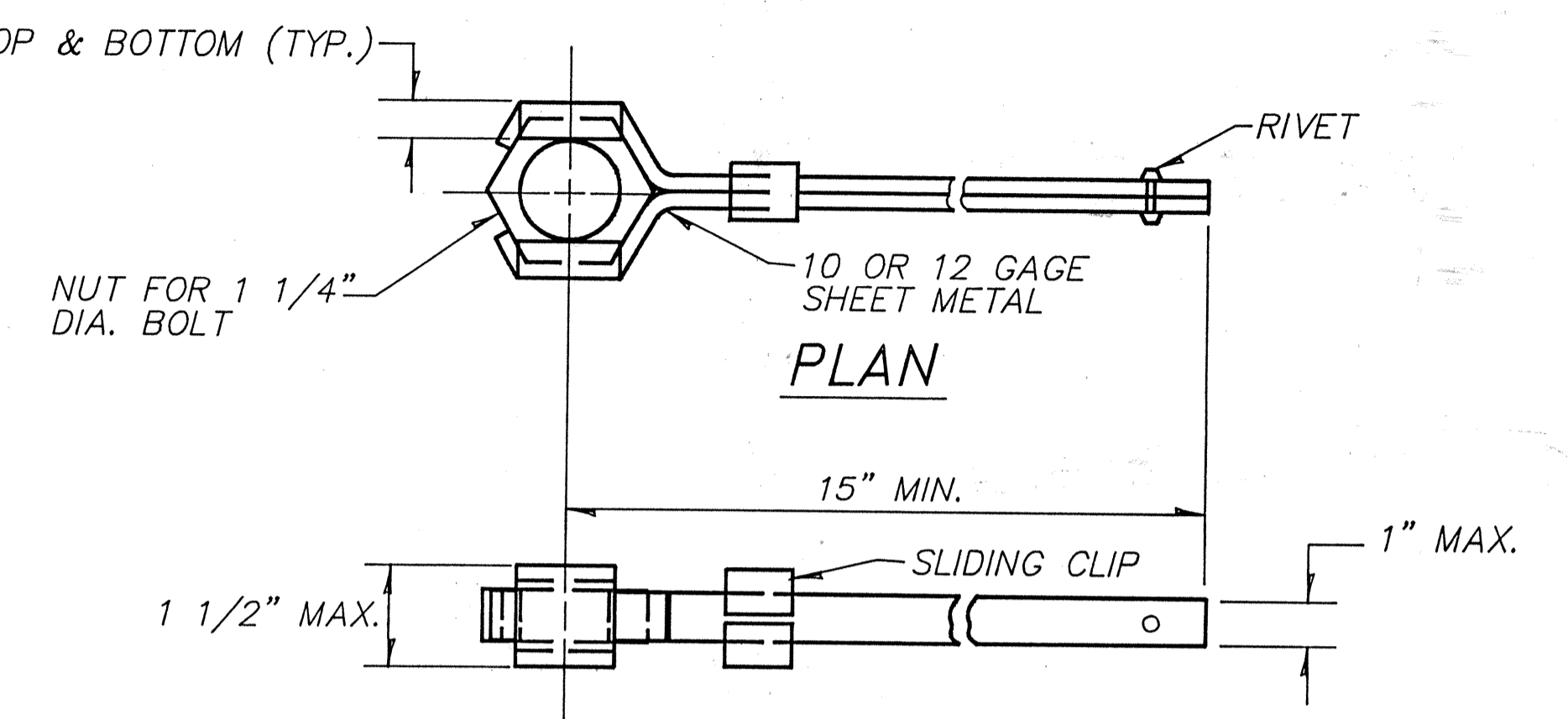
BARRIER NOTES & DETAILS

| | | | |
|-------------|-------|-------------|----|
| FHWA REGION | STATE | PLAN NUMBER | 10 |
| 5 | OHIO | BR-43-91 | 10 |

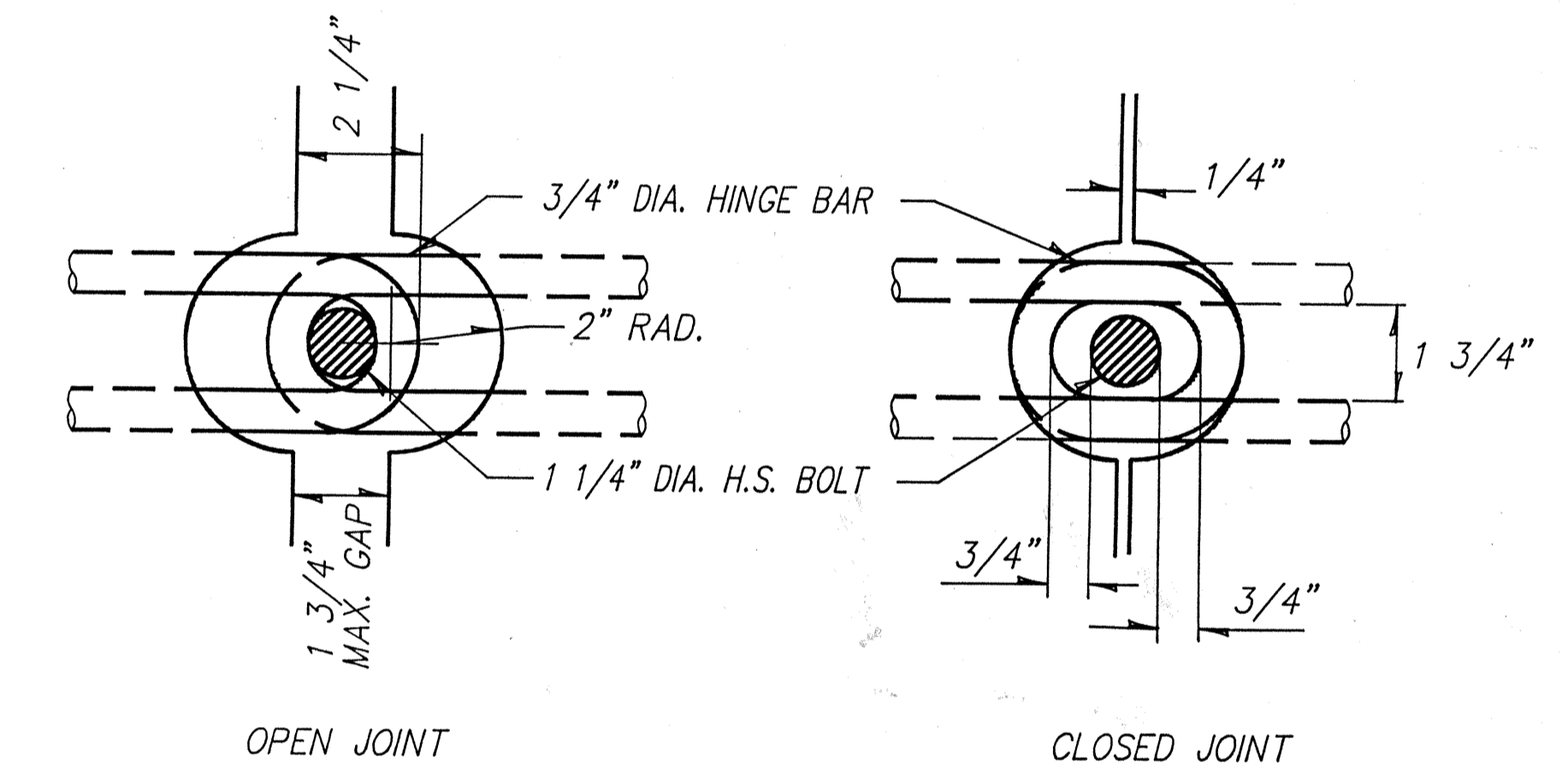
DEFIANCE COUNTY
DEF - 66 - 4.44



PLAN AT JOINT



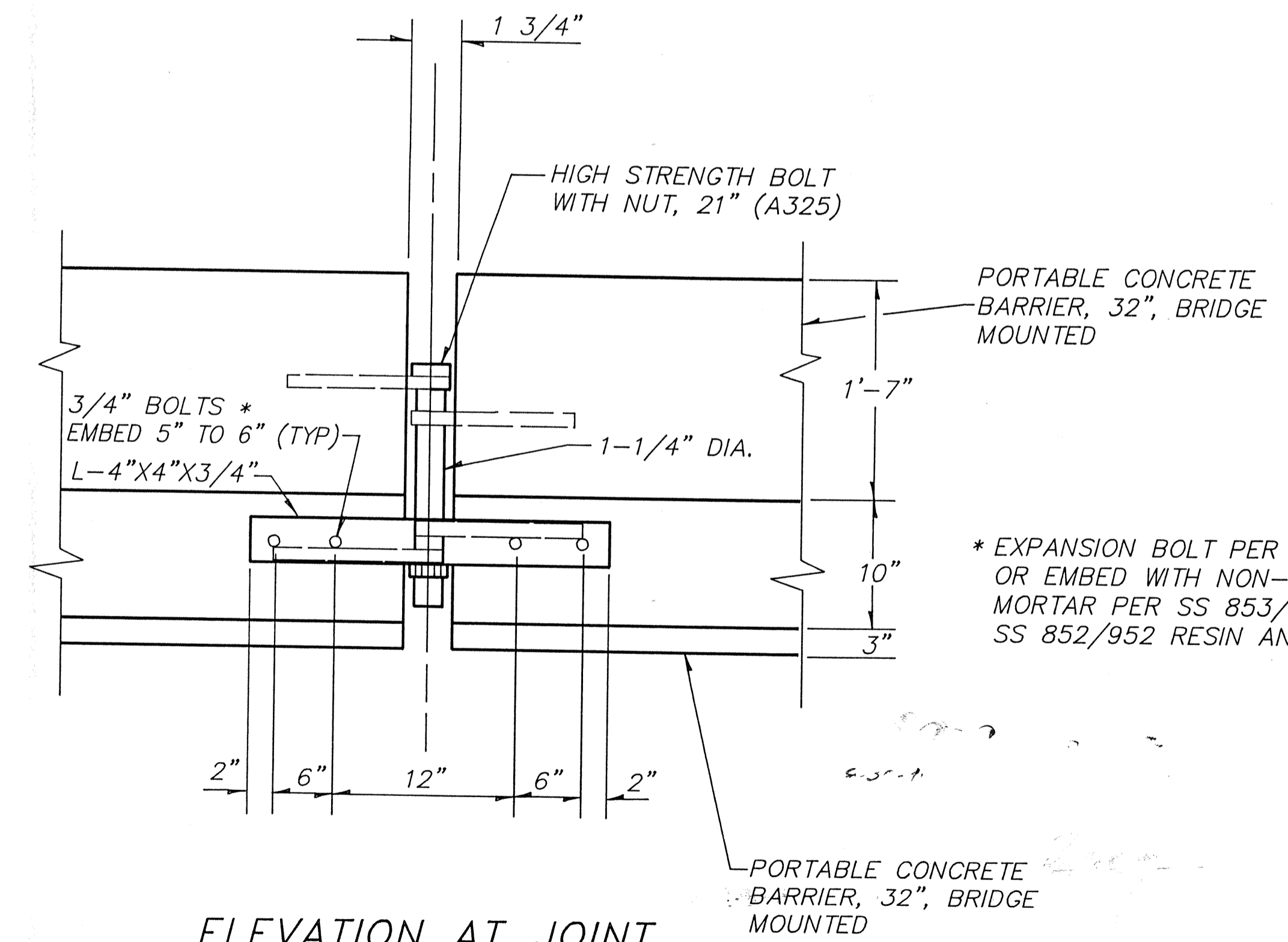
ELEVATION



JOINT CONNECTION DETAILS

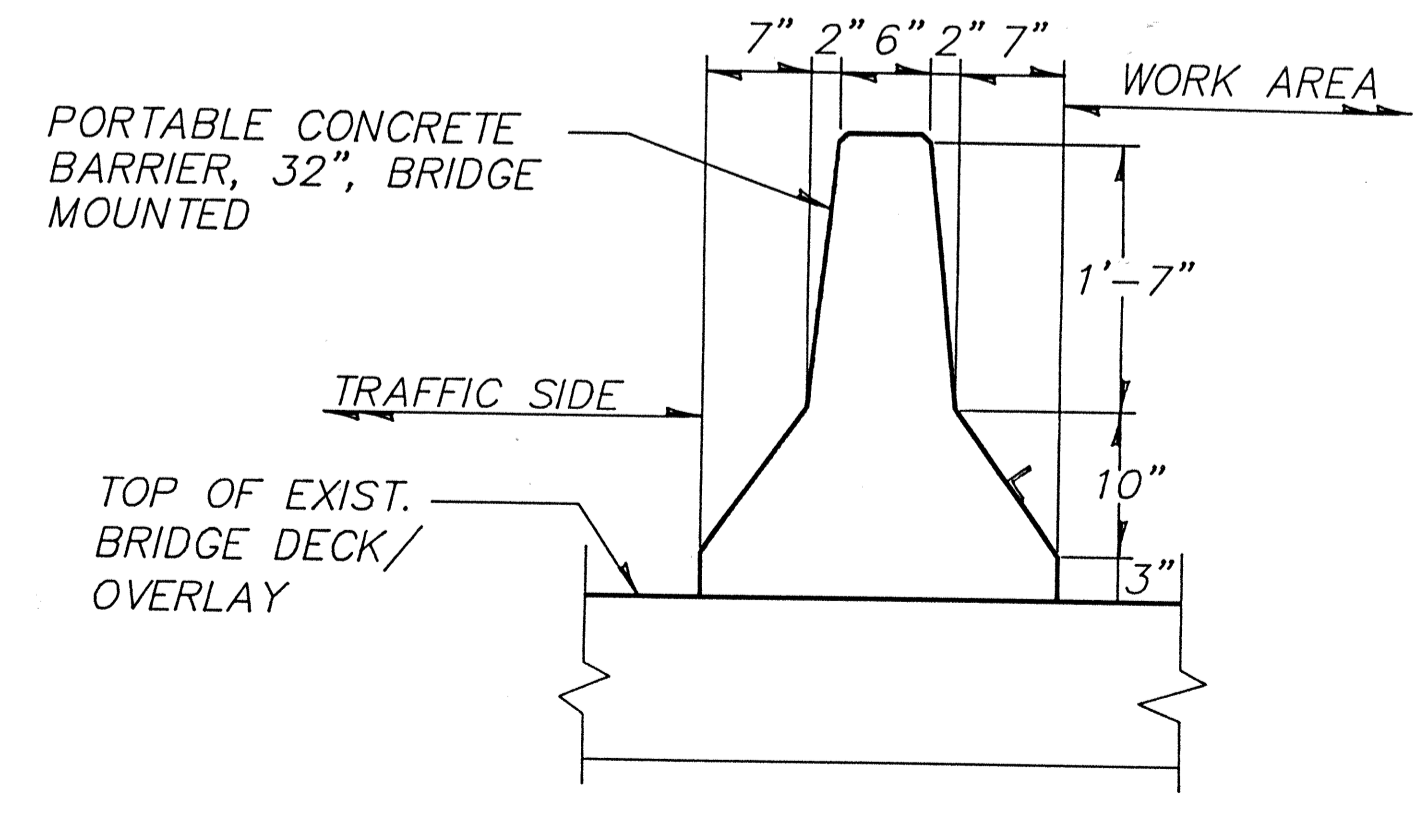
BARRIER JOINTS MUST BE FULLY OPEN BEFORE NUT IS TIGHTENED ONTO BOLT AND OPENING IS EITHER GROUTED OR SHIMMED.

BARRIERS SHOULD INITIALLY BE PLACED CLOSER TOGETHER SO THAT BOLTS CAN BE EASILY INSERTED THROUGH HINGE BAR LOOPS.



ELEVATION AT JOINT

* EXPANSION BOLT PER CMS 712.01 OR EMBED WITH NON-SHRINK EPOXY MORTAR PER SS 853/956 OR PER SS 852/952 RESIN ANCHORS.



SECTION A-A

PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED

| | | | | | |
|--|-------|--------|---------|---------------|---------|
| STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE PLANNING AND DESIGN OFFICE | | | | | |
| BARRIER NOTES & DETAILS | | | | | |
| STRUCTURE NO.: DEF - 66 - 0444 over the Auglaize River | | | | | |
| SCALE: N.T.S. | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
| JWR | JWR | | | FFE 7-24-91 | JWR |

REV JWR 11-20-91

DEF 10002 11/21