

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

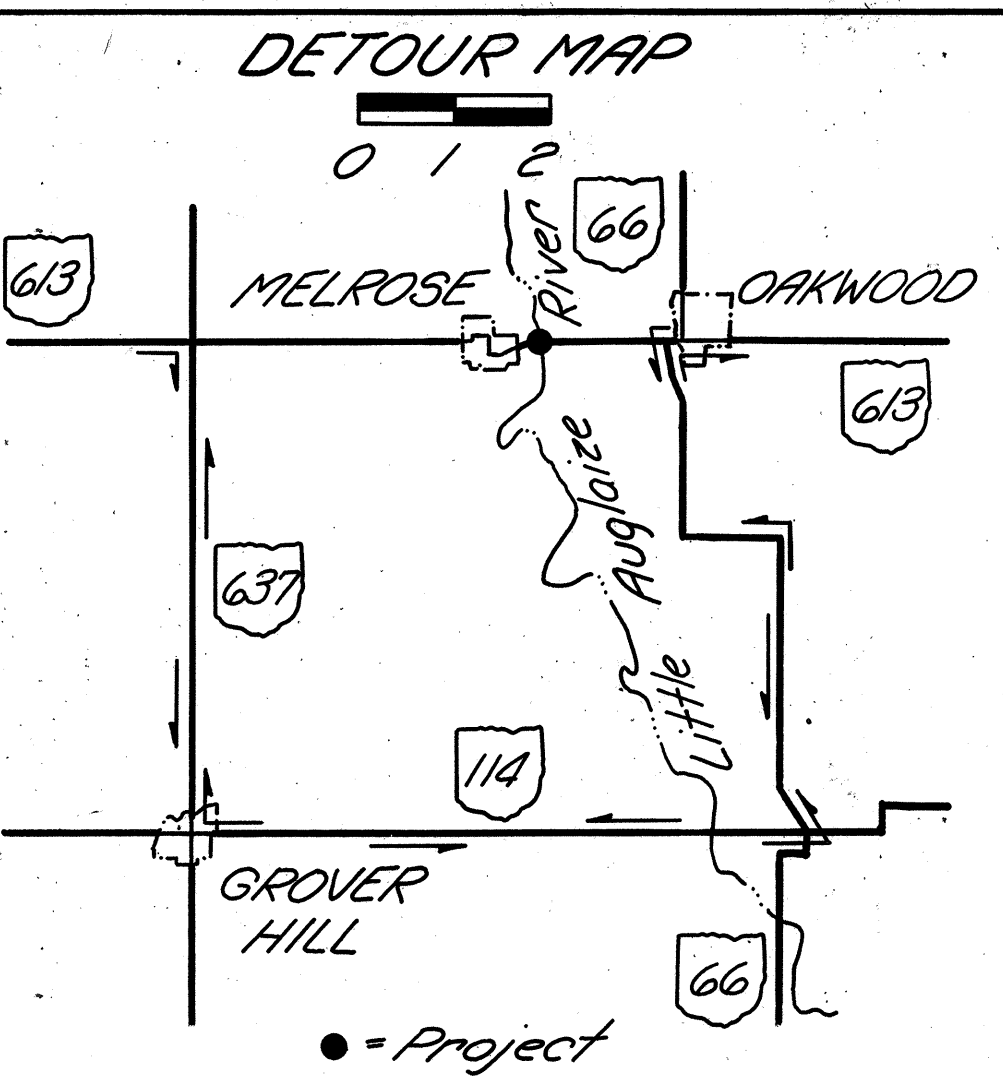
BRS-402 (6)

|               |                 |    |
|---------------|-----------------|----|
| PAU-613-21.93 | OHIO            | 1  |
| BRS-402 (6)   | FHWA REGION 5   | 39 |
|               | FEDERAL PROJECT |    |

## PAU-613-21.93 BROWN TOWNSHIP PAULDING COUNTY

MICROFILMED  
OCT 26 1990

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MAY 3 1985

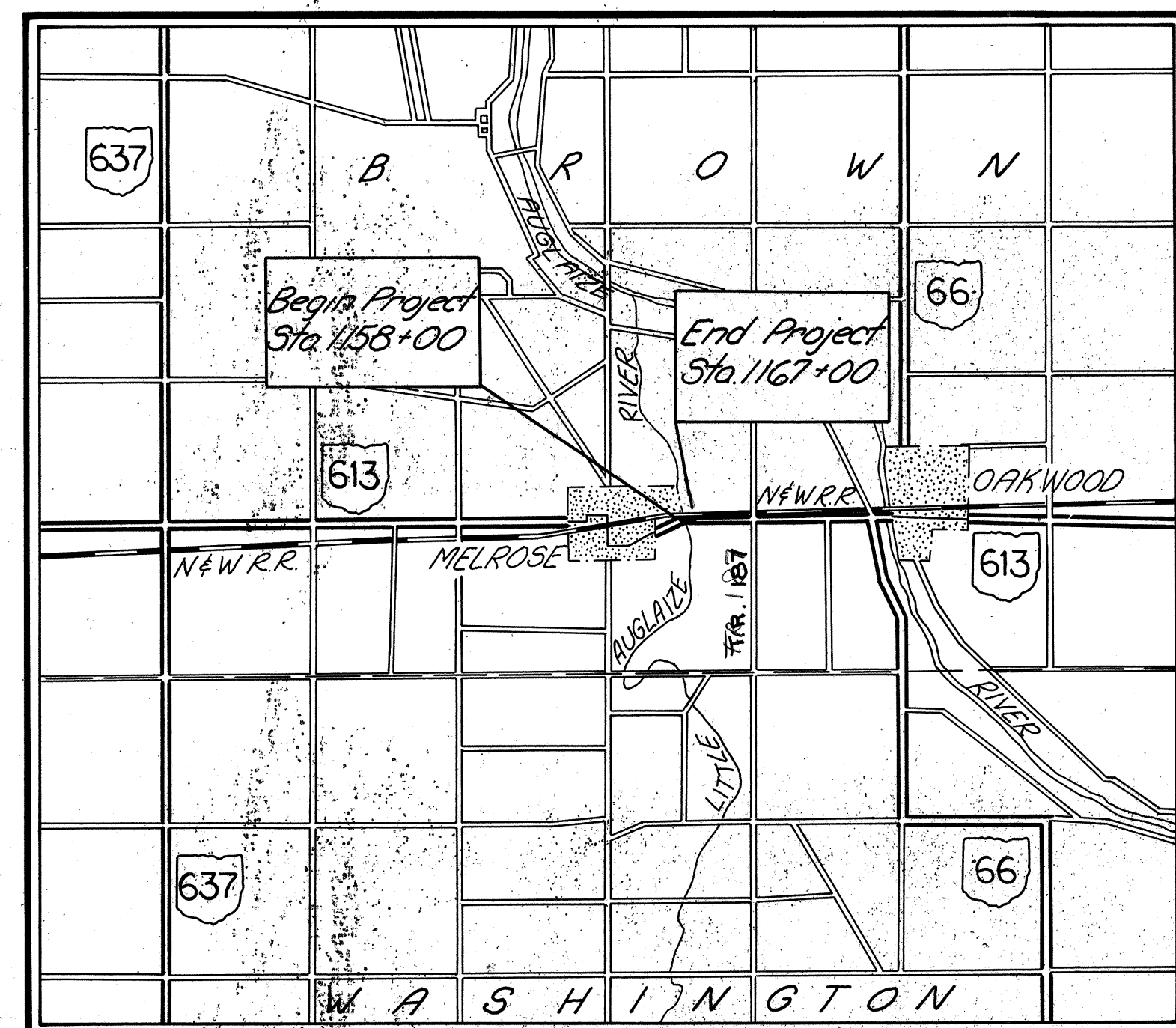


### CONVENTIONAL SIGNS

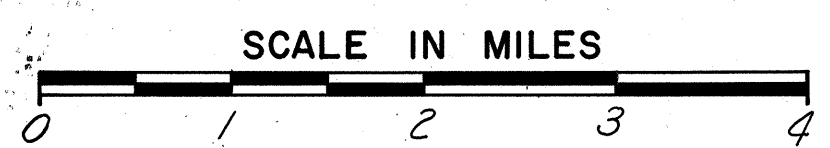
|                          |                 |                               |                               |
|--------------------------|-----------------|-------------------------------|-------------------------------|
| County Line              | -----           | Limited Access (only)         | ----- 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-           | Property Line                 | — — (in existing fence) -x-x- |
| Center Line              | 352 or 353      | Railroad                      | ----- or -----                |
| Trees                    | (to be removed) | Guardrail (existing)          | ----- (proposed)              |
| Utility Poles: Telephone | φ               |                               |                               |
| Power                    | φ               |                               |                               |
| Light                    | φ               |                               |                               |

### INDEX OF SHEETS

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| Title Sheet   | 1     |
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| Right-of-Way  | 34-39 |



LOCATION MAP



### LINE DATA

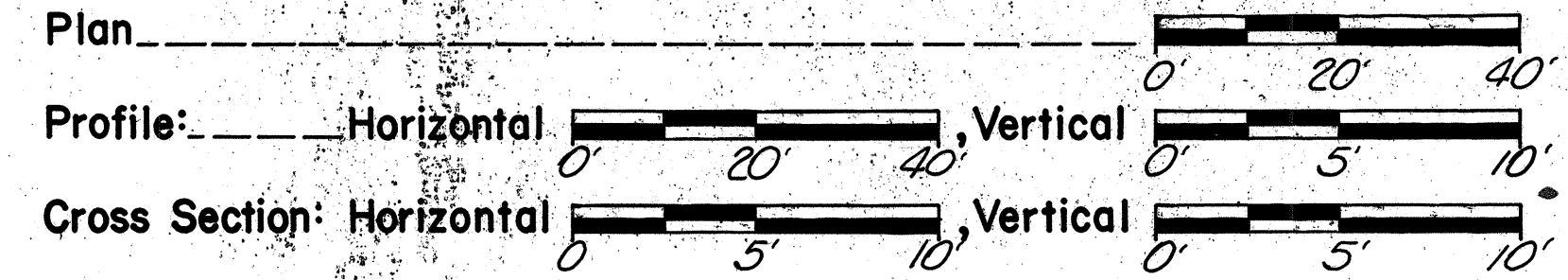
Begin Project ~ Sta. 1158+00  
End Project ~ Sta. 1167+00  
Total Length of Project = 9000.00 Lin. Ft. or 0.170 Mile

Begin Work ~ Sta. 1155+75  
End Work ~ Sta. 1169+0002  
Total Length of Work = 13250.27 Lin. Ft. or 0.251 Mile



Portion to be improved: \_\_\_\_\_  
State & Federal Routes: \_\_\_\_\_  
Other Roads: \_\_\_\_\_

### SCALES



| SUPPLEMENTAL SPECIFICATIONS |         |
|-----------------------------|---------|
| 803                         | 5-27-83 |
|                             |         |
|                             |         |
|                             |         |
|                             |         |
|                             |         |
|                             |         |
|                             |         |

**1983 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 require the closing to traffic of the highway and that detours will be provided as indicated on the plans.

Approved: James L. Schenk  
Date: 6-3-83 District Deputy Director of Transportation

Approved: Robert B. Chisler  
Date: 8-26-83 Engineer, Bureau of Bridges and Structural Design

Approved: Wayne H. Kauble  
Date: 11-7-83 Chief Engineer, Planning & Design

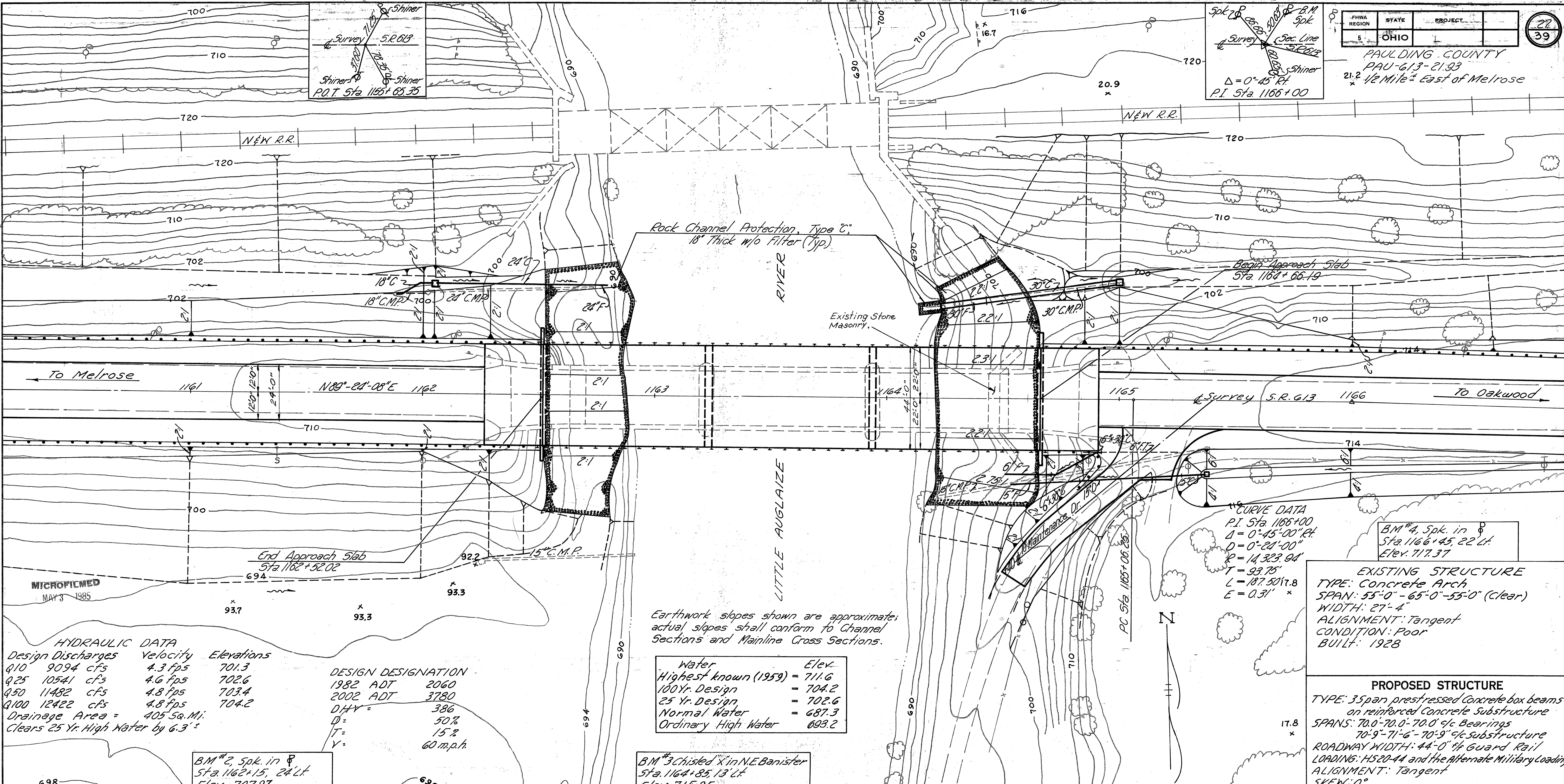
Approved: Warren J. Smith  
Date: 11-7-83 Director, Department of Transportation

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

| SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS |         |           |          |
|---|---------|-----------|----------|
| BP-5  | 7-16-81 | MC-11     | 8-1-78   |
| CB-22A+B  | 5-1-79  | CB-5      | 5-1-79   |
| CB-23+24  | 5-1-79  | DBR-2-73  | 4-10-73  |
| GR-1  | 2-5-82  | PSBD-1-81 | 9-18-81  |
| GR-2B   | 2-5-82  | PS-1-81   | 11-27-81 |
| GR-3  | 2-5-82  |           |          |
| GR-4  | 2-5-82  |           |          |
| GR-4A   | 2-5-82  |           |          |
| GR-4B   | 2-5-82  |           |          |
| GR-5  | 2-5-82  |           |          |
| MC-1  | 6-13-69 |           |          |
| MC-3  | 6-1-73  |           |          |
| MC-4  | 7-26-76 |           |          |

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: \_\_\_\_\_  
DIVISION ADMINISTRATOR DATE



|             |       |         |
|-------------|-------|---------|
| FHWA REGION | STATE | PROJECT |
| 5           | OHIO  |         |

PAULDING COUNTY  
PAU-613-21.93  
21.2 1/2 Mile East of Melrose

**HYDRAULIC DATA**

| Design Discharges | Velocity | Elevations |
|-------------------|----------|------------|
| Q10 9094 cfs      | 4.3 fps  | 701.3      |
| Q25 10541 cfs     | 4.6 fps  | 702.6      |
| Q50 11482 cfs     | 4.8 fps  | 703.4      |
| Q100 12422 cfs    | 4.8 fps  | 704.2      |

Drainage Area = 405 Sq. Mi.  
Clears 25 Yr. High Water by 6.3'

**DESIGN DESIGNATION**

|          |           |
|----------|-----------|
| 1982 ADT | 2060      |
| 2002 ADT | 3780      |
| D.H.V.   | 386       |
| D        | 50%       |
| T        | 15%       |
| V        | 60 m.p.h. |

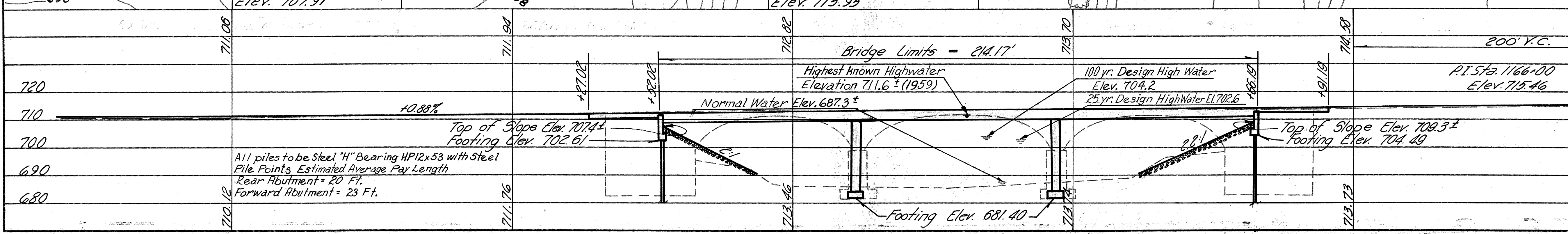
| Water                | Elev. |
|----------------------|-------|
| Highest known (1959) | 711.6 |
| 100 Yr. Design       | 704.2 |
| 25 Yr. Design        | 702.6 |
| Normal Water         | 687.3 |
| Ordinary High Water  | 693.2 |

**CURVE DATA**  
 P.I. Sta 1166+00  
 $\Delta = 0^\circ 45' 00''$  R.H.  
 $D = 0^\circ 21' 00''$   
 $R = 14,323.94'$   
 $T = 93.75'$   
 $L = 187.5017.8$   
 $E = 0.31' \times$

B.M. #4, Spk. in P  
 Sta. 1166+45.22 Lt.  
 Elev. 717.37

**EXISTING STRUCTURE**  
 TYPE: Concrete Arch  
 SPAN: 55'-0" - 65'-0" - 55'-0" (Clear)  
 WIDTH: 27'-4"  
 ALIGNMENT: Tangent  
 CONDITION: Poor  
 BUILT: 1928

**PROPOSED STRUCTURE**  
 TYPE: 35 span prestressed Concrete box beams on reinforced Concrete Substructure  
 SPANS: 70.0'-70.0'-70.0' c/c Bearings  
 70'-9"-71'-6"-70'-9" c/c Substructure  
 ROADWAY WIDTH: 44'-0" 1/4 Guard Rail  
 LOADING: HS20-44 and the Alternate Military Loading  
 ALIGNMENT: Tangent  
 SKEN: 0°  
 APPROACH SLABS: AS-1-B1 (25'-0" Long)  
 WEARING SURFACE: 2 1/2" Asphalt Concrete



STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

**SITE PLAN**

BRIDGE NO. PAU-613-2202  
Over  
Little Auglaize River  
Sta. 1162+52.02  
1164+66.19

| PRESENT TOPOGRAPHY |               | PROPOSED WORK |       |         | REVIEWED      |
|--------------------|---------------|---------------|-------|---------|---------------|
| SURVEYED           | DRAWN         | DESIGNED      | DRAWN | CHECKED |               |
| RLW                | C.O.<br>O.DOT | RCI           | RCI   | UEH     | N.J.B.<br>FFK |

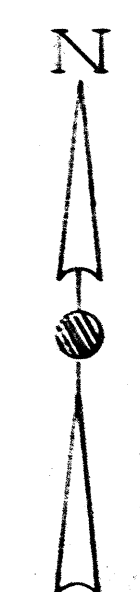
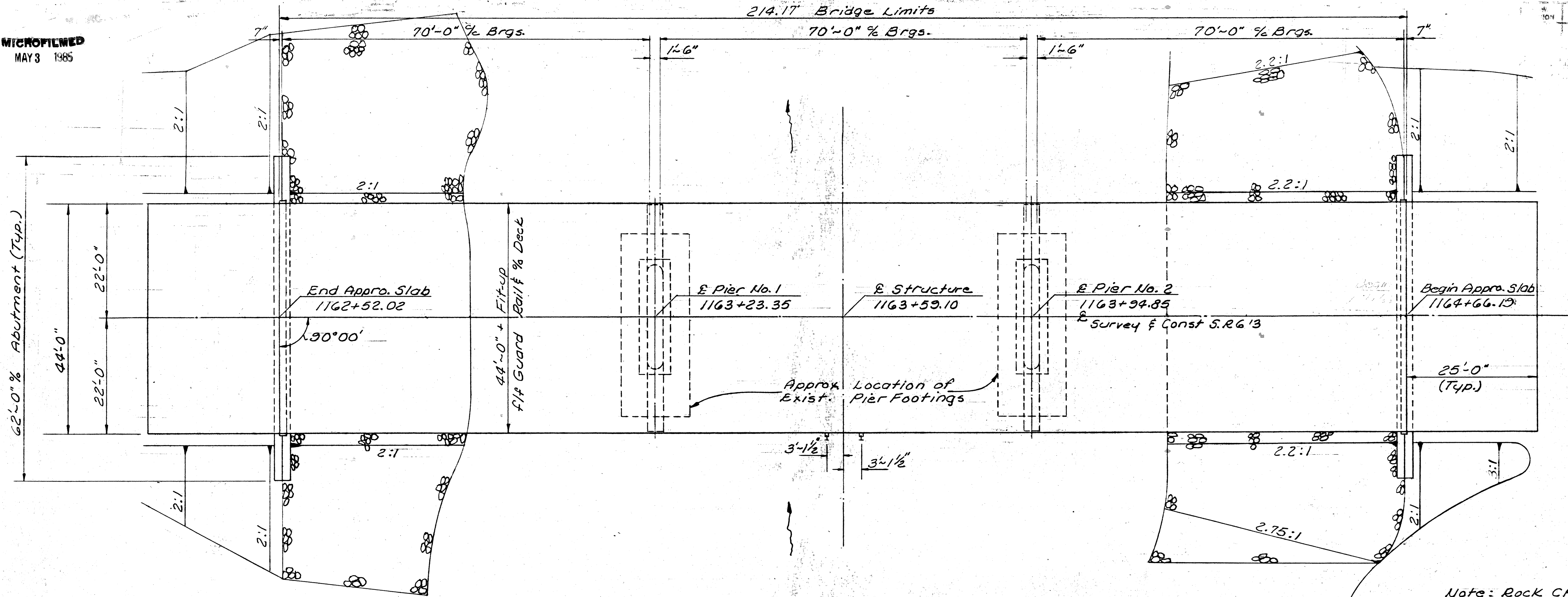
RLD 7-25-83

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|             |       |         |
|-------------|-------|---------|
| FHWA REGION | STATE | PROJECT |
| 5           | OHIO  |         |

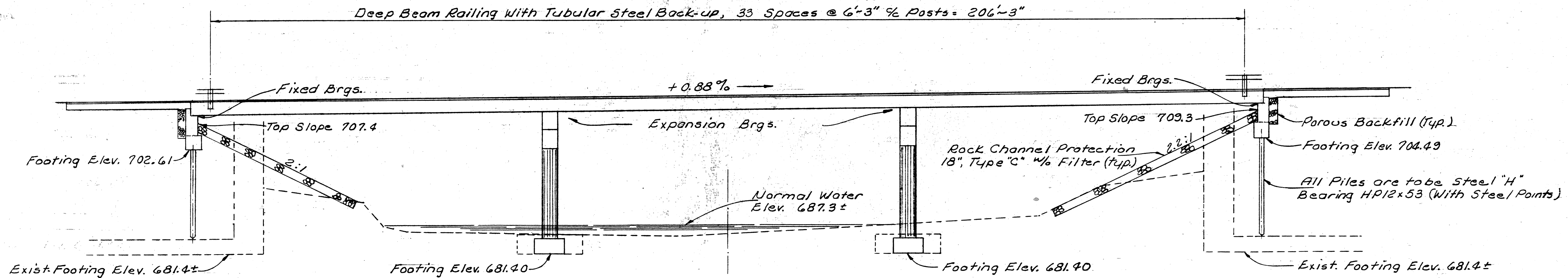
28  
39

PAULDING COUNTY  
PAU-613-21.98



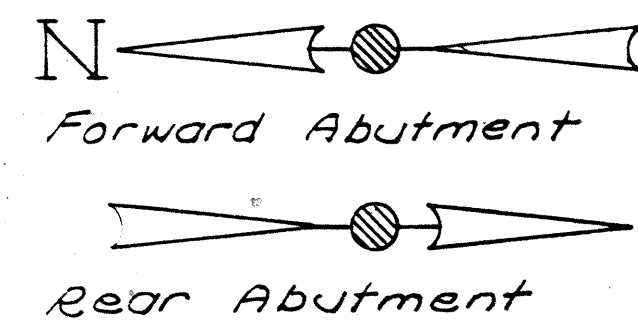
GENERAL PLAN

Note: Rock Channel Protection quantities are carried with roadway plans.



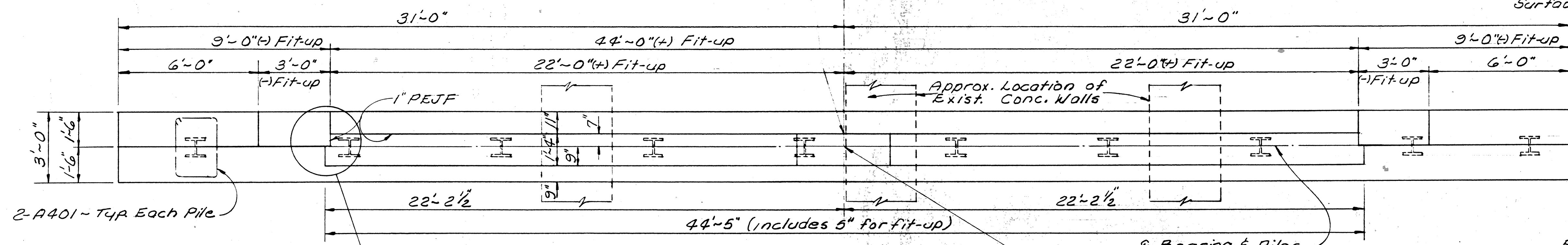
ELEVATION

|   |       |        |         |          |         |         |
|---|-------|--------|---------|----------|---------|---------|
| STATE OF OHIO                           |       |        |         |          |         | 27      |
| DEPARTMENT OF TRANSPORTATION            |       |        |         |          |         |         |
| BUREAU OF BRIDGES AND STRUCTURAL DESIGN |       |        |         |          |         |         |
| GENERAL PLAN AND ELEVATION              |       |        |         |          |         |         |
| BRIDGE No. PAU-613-2202                 |       |        |         |          |         |         |
| OVER                                    |       |        |         |          |         |         |
| LITTLE AUGLAIZE RIVER                   |       |        |         |          |         |         |
| DESIGNED                                | DRAWN | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| FO                                      | FO    |        | AJM     | RLD      | 7-25-83 |         |



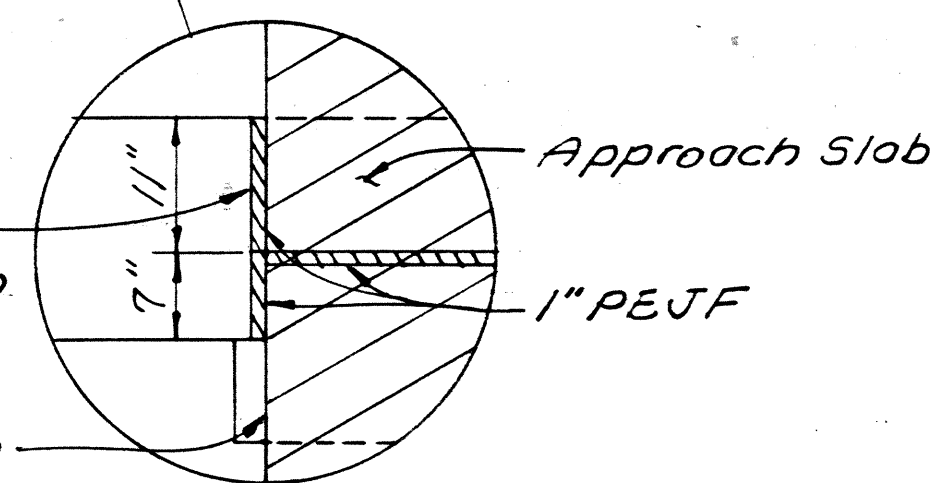
Begin Appro. Slab 1164+66.13 Fwd. Abut.  
End Appro. Slab 1162+52.02 Rear Abut.

& Survey & Construction



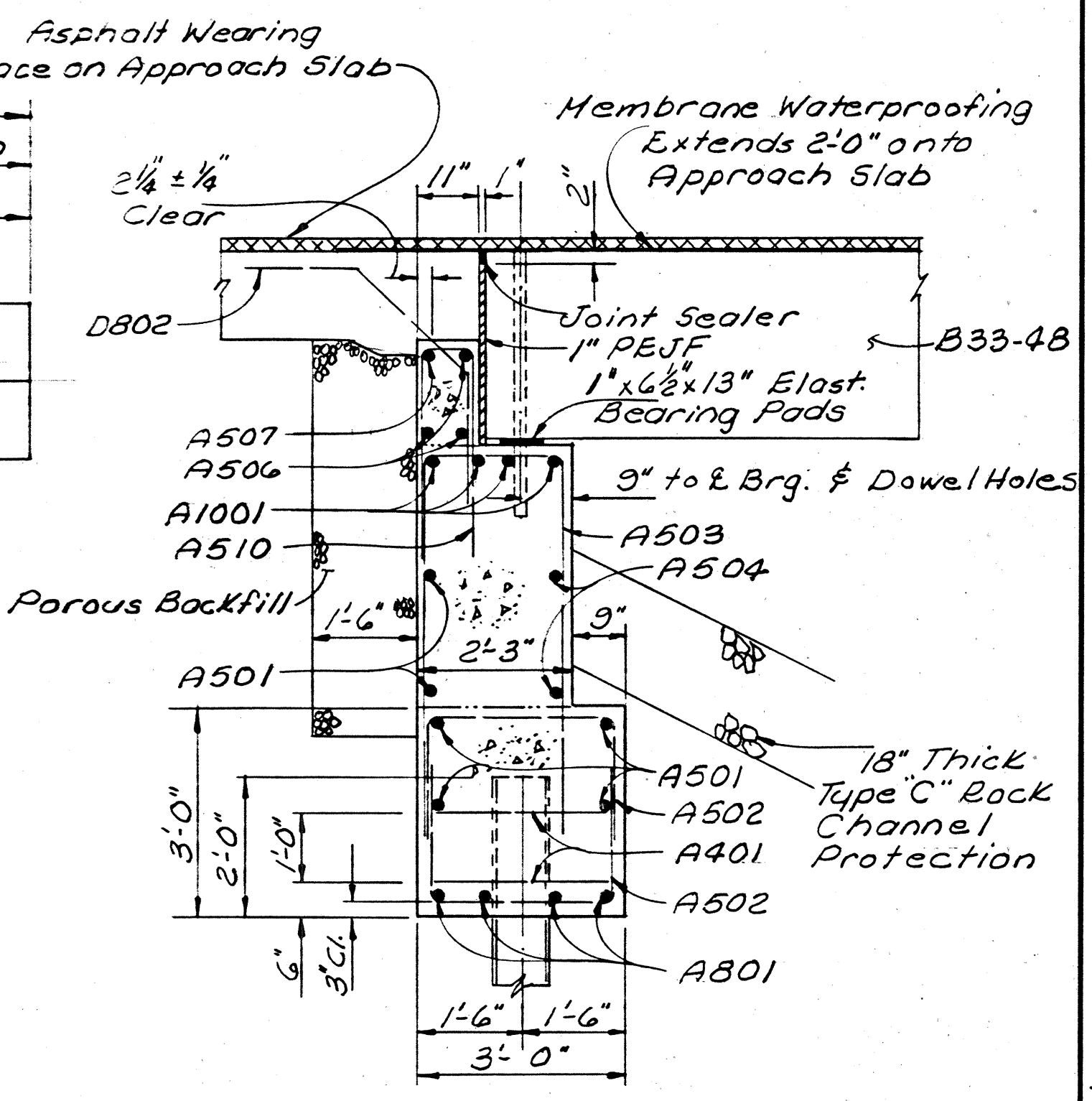
**PLAN**  
Forward Abutment is Shown  
Rear Abutment is opposite hand  
& Bearing & Piles  
E Bearing 1164+65.60 Fwd. Abut.  
E Bearing 1162+52.60 Rear Abut.

Std. Dwg. AS-1-81 shall be modified by placing the 1" PEJF on the exterior of the approach slab.

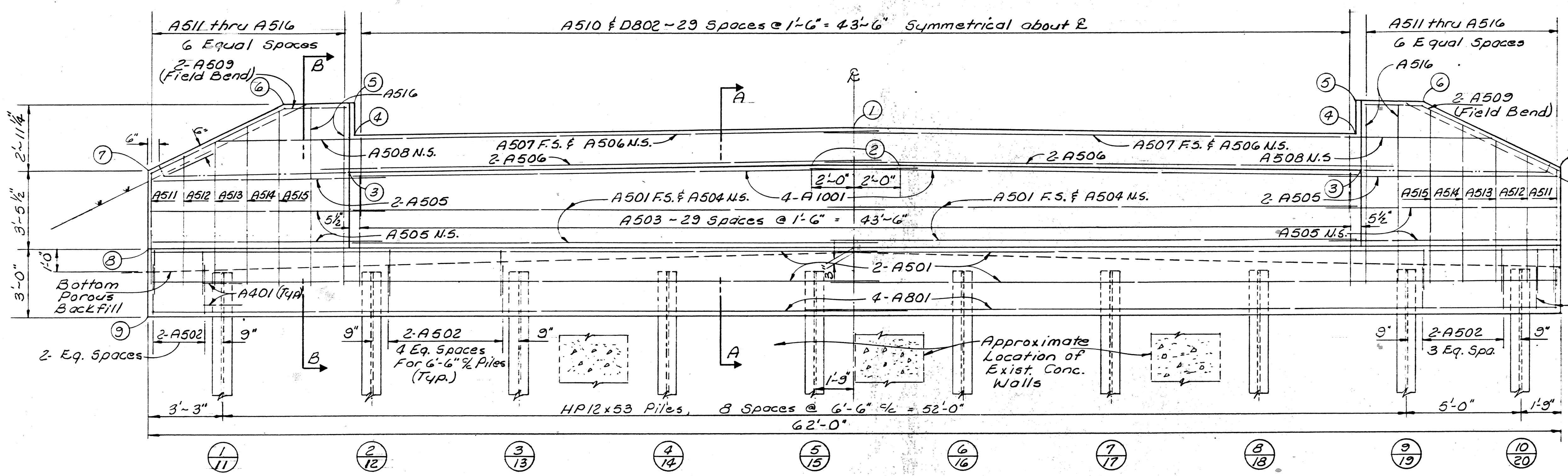


| Elevation     | ①      | ②      | ③      | ④      | ⑤      | ⑥      | ⑦      | ⑧      | ⑨      |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Rear Abutment | 710.86 | 709.26 | 708.95 | 710.52 | 712.06 | 712.01 | 709.07 | 705.61 | 702.61 |
| Fwd. Abutment | 712.74 | 711.14 | 710.83 | 712.40 | 713.94 | 713.89 | 710.35 | 707.49 | 704.49 |

- NOTES**
- All concrete above the bridge seat construction joint shall not be placed until the prestressed box beams have been erected.
  - Porous backfill shall extend upward to the plane of the subgrade and laterally to the surface of the embankment slopes.
  - Care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as not to interfere with drilling of anchor dowel holes.
  - For steel pile point details, see sheet 617

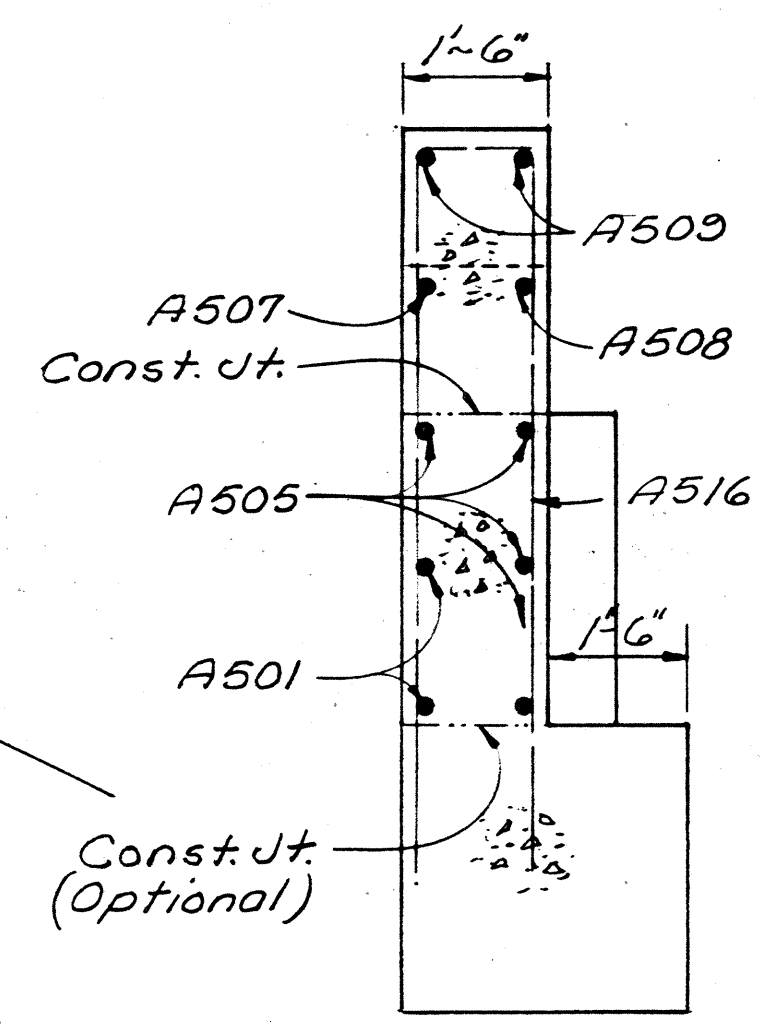


**SECTION A-A**



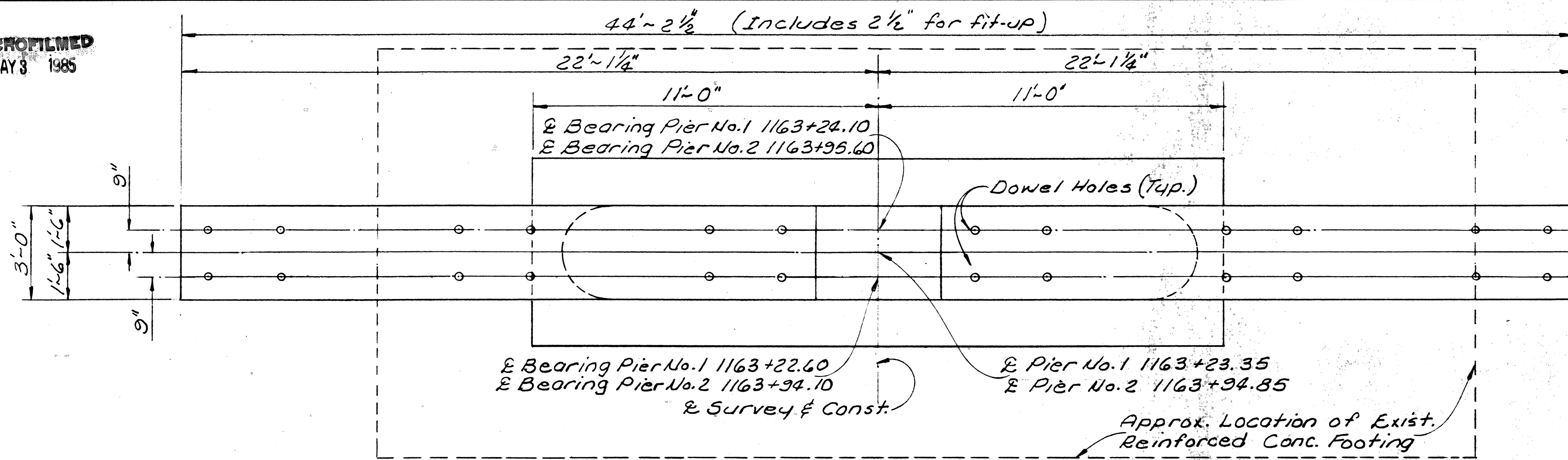
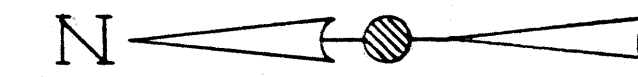
**ELEVATION**

- LEGEND**
- N.S. - Indicates near side
  - F.S. - Indicates far side
  - PEJF - Preformed expansion joint filler
  - ① - Pile No. Forward Abutment
  - ⑪ - Pile No. Rear Abutment



**SECTION B-B**  
Footing reinforcing steel and piles not shown

|  |       |        |         |          |         |         |     |
|--|-------|--------|---------|----------|---------|---------|-----|
| STATE OF OHIO<br>DEPARTMENT OF TRANSPORTATION<br>BUREAU OF BRIDGES AND STRUCTURAL DESIGN |       |        |         |          |         |         | 3/7 |
| <b>ABUTMENT DETAILS</b>  |       |        |         |          |         |         |     |
| BRIDGE No. PAU-613-2202<br>OVER<br>LITTLE AUGLAIZE RIVER                                 |       |        |         |          |         |         |     |
| DESIGNED   | DRAWN | TRACED | CHECKED | REVIEWED | DATE    | REVISED |     |
| FO   | FO    |        | AJM     | RLD      | 7-25-83 |         |     |

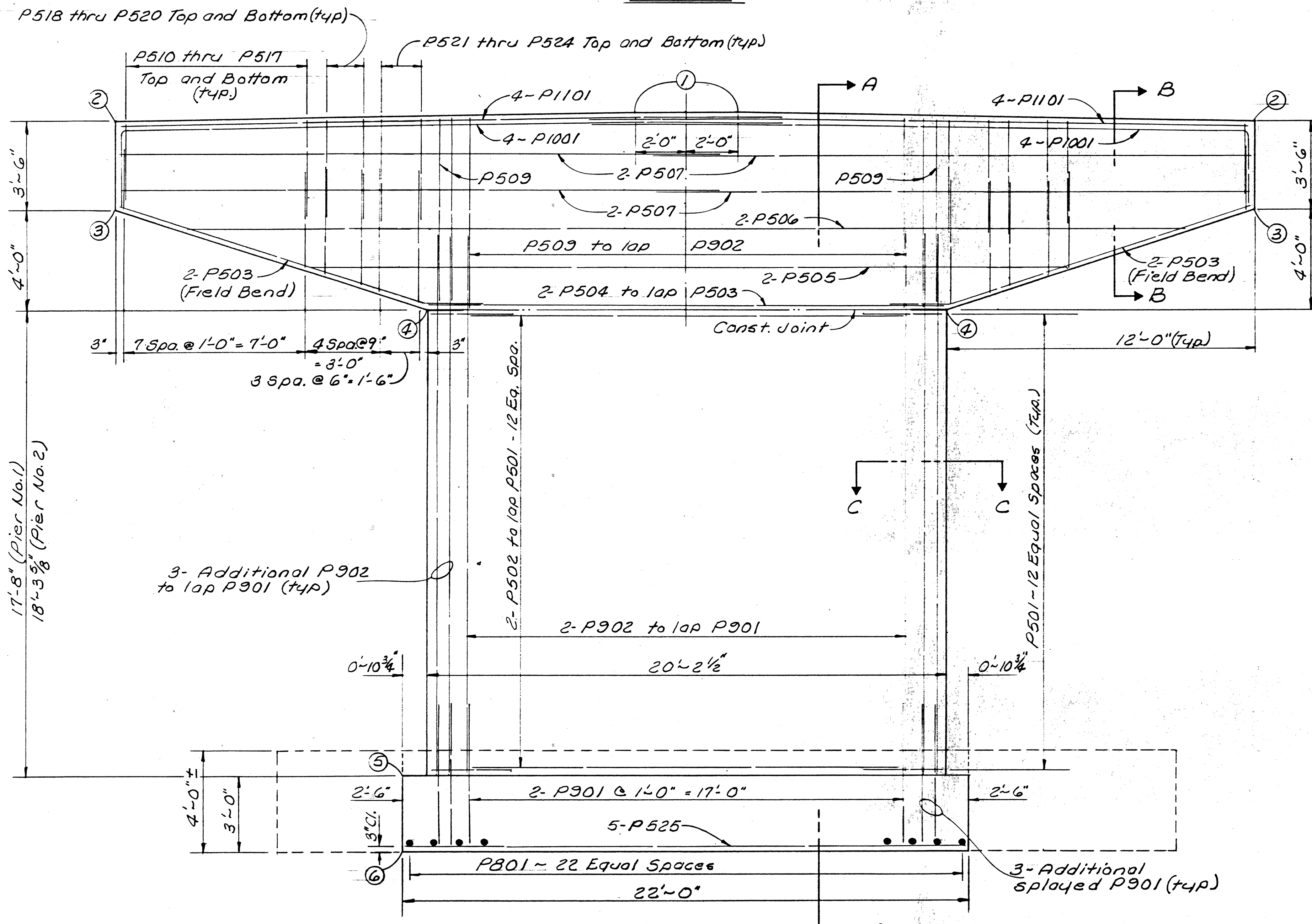


| Elevation  | ①      | ②      | ③      | ④      | ⑤      | ⑥      |
|------------|--------|--------|--------|--------|--------|--------|
| Pier No. 1 | 709.88 | 709.57 | 706.07 | 702.07 | 684.40 | 681.40 |
| Pier No. 2 | 710.51 | 710.20 | 706.70 | 702.70 | 684.40 | 681.40 |

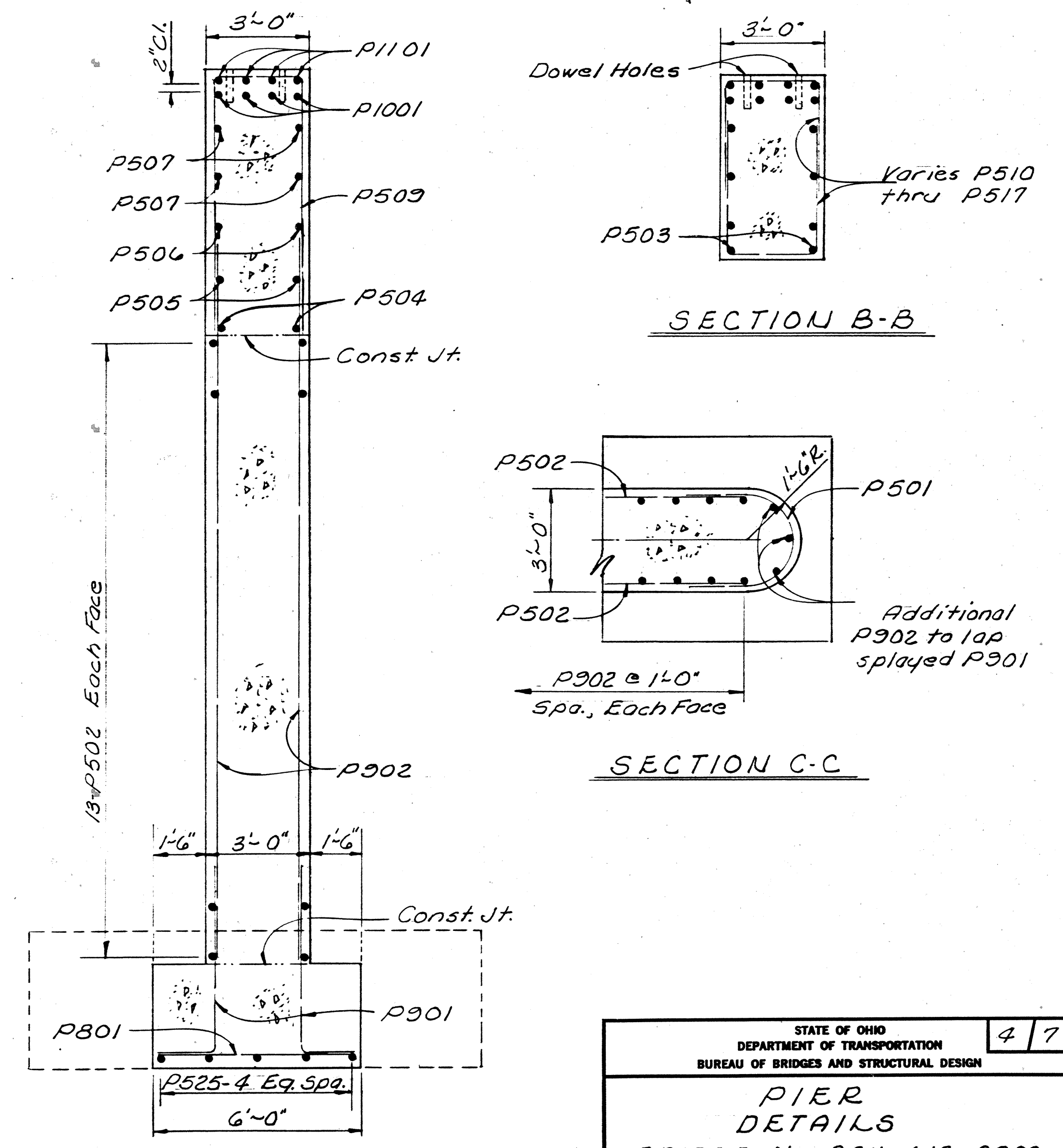
NOTES

1. Core shall be taken in placing reinforcing steel in the vicinity of the beam seats so as not to interfere with drilling of anchor dowel holes.
2. For beam details over piers, see Superstructure Details, Sheet 617
3. The existing reinforced concrete pier footings shall be removed as required to construct the new footings. All costs are to be included under Item 202, Lump Sum, Structure Removed.

PLAN



ELEVATION



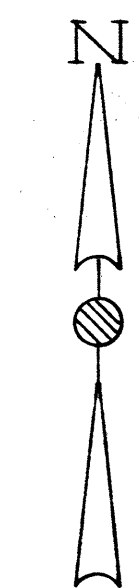
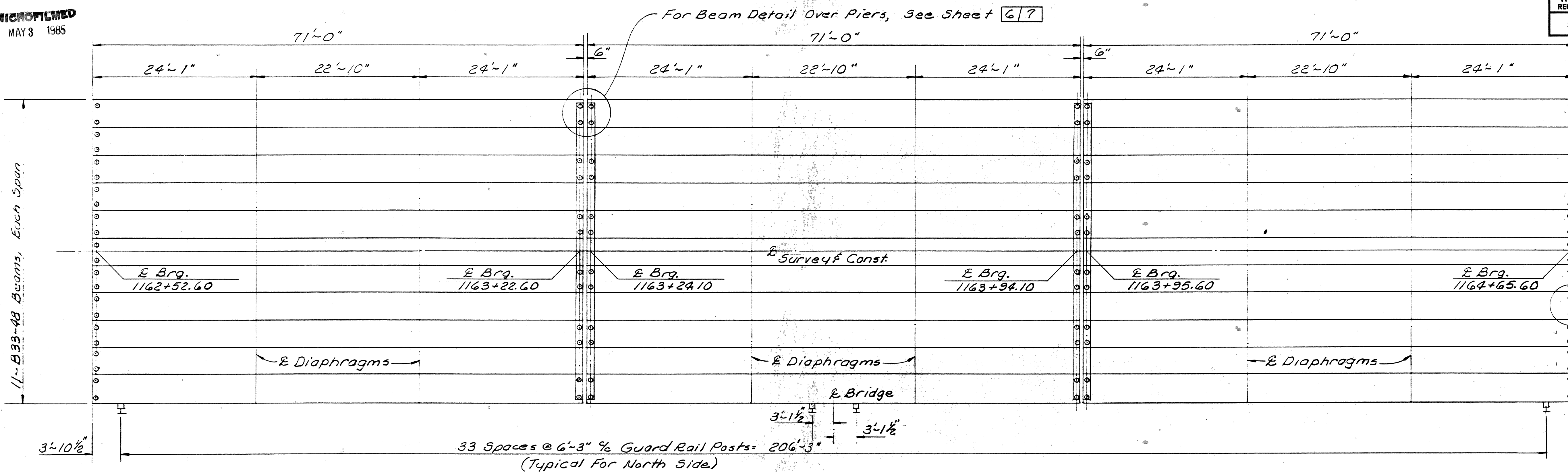
SECTION A-A

|  |       |        |         |          |         |         |
|--|-------|--------|---------|----------|---------|---------|
| STATE OF OHIO<br>DEPARTMENT OF TRANSPORTATION<br>BUREAU OF BRIDGES AND STRUCTURAL DESIGN |       |        |         |          |         | 47      |
| PIER<br>DETAILS<br>BRIDGE No. PAU-613-2202<br>OVER<br>LITTLE AUGLAIZE RIVER              |       |        |         |          |         |         |
| DESIGNED   | DRAWN | TRACED | CHECKED | REVIEWED | DATE    | REVISED |
| Fo   | Fo    |        | AJM     | RLD      | 7-25-83 |         |

MICROFILMED  
MAY 3 1985

|             |       |         |          |
|-------------|-------|---------|----------|
| FHWA REGION | STATE | PROJECT | 31<br>39 |
| 5           | OHIO  |         |          |

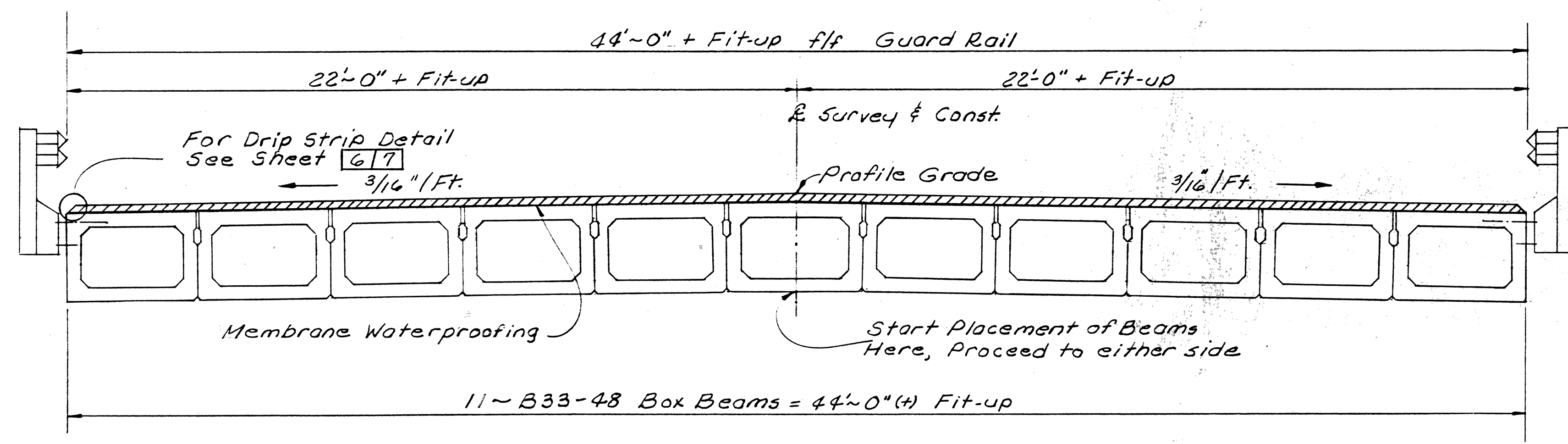
PAULDING COUNTY  
PAU-613-21.98



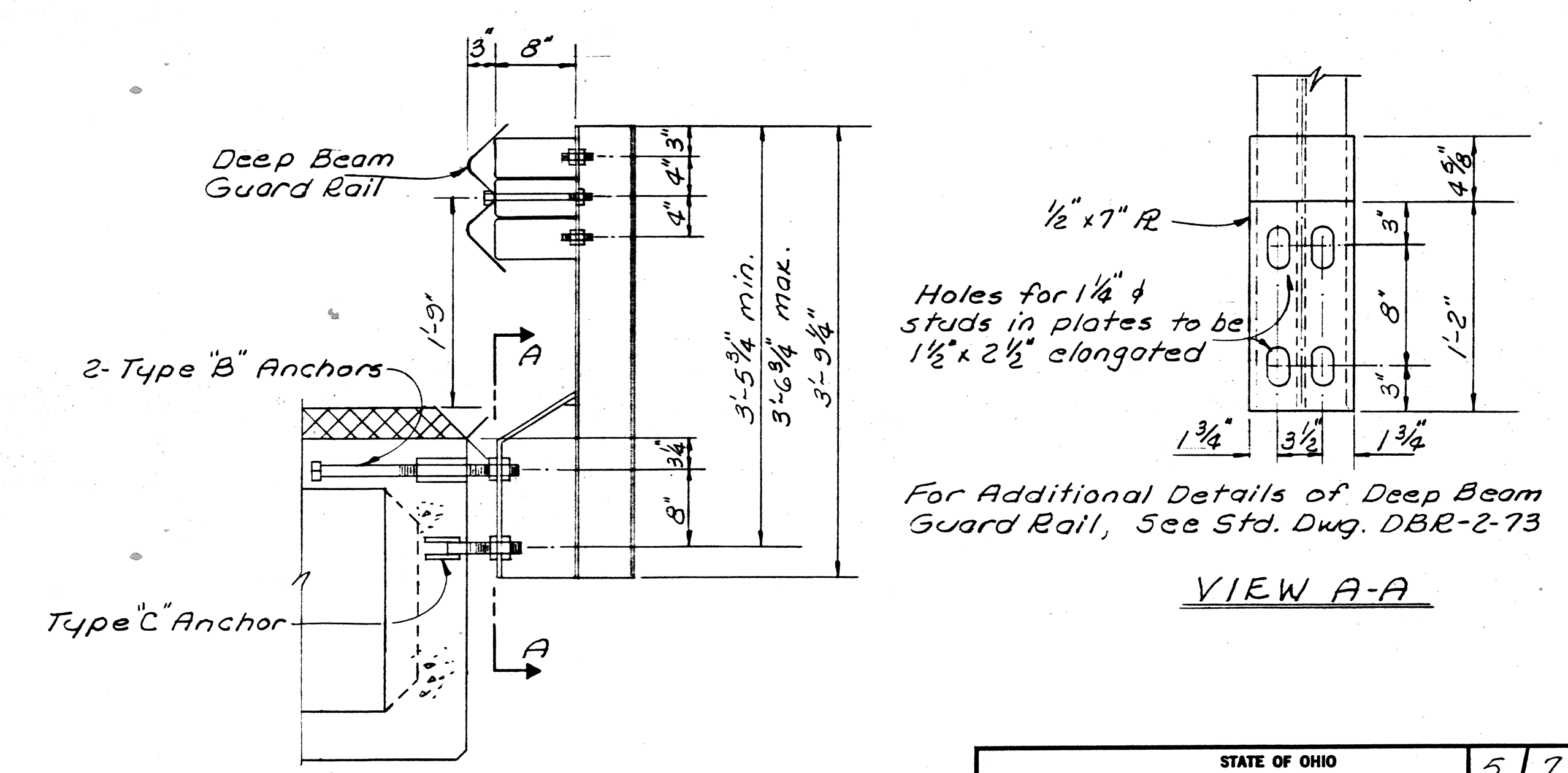
For Bearing Pad Detail See Sheet 67

& 2"  $\phi$  Dowel Holes, Typ. For all locations shown. Provide 2-2"  $\phi$  dowel holes in each beam at abutments and in alternate beams at piers.

BEAM LAYOUT PLAN



TRANSVERSE SECTION  
For Additional Beam Details, See Sheet 67

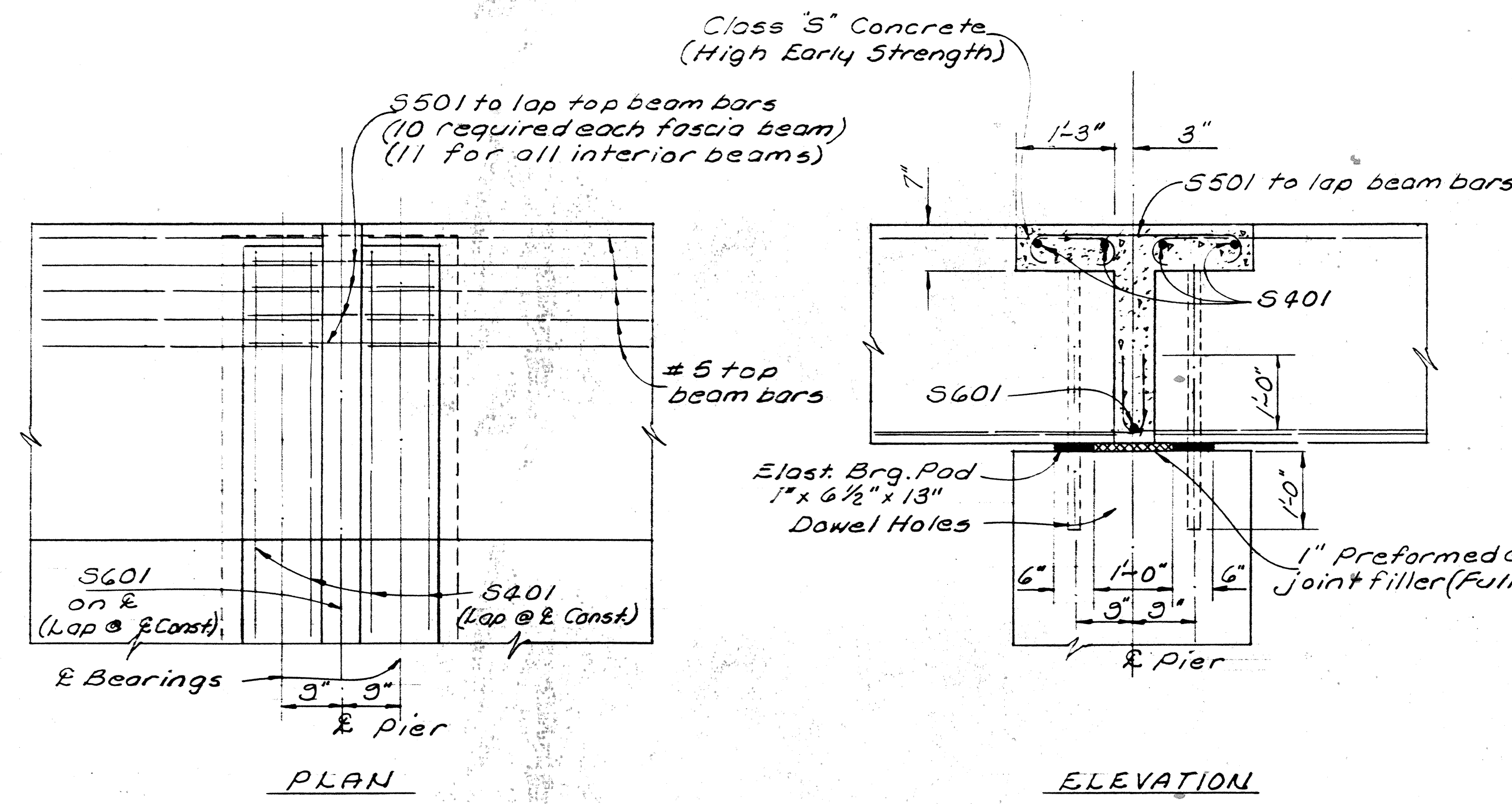
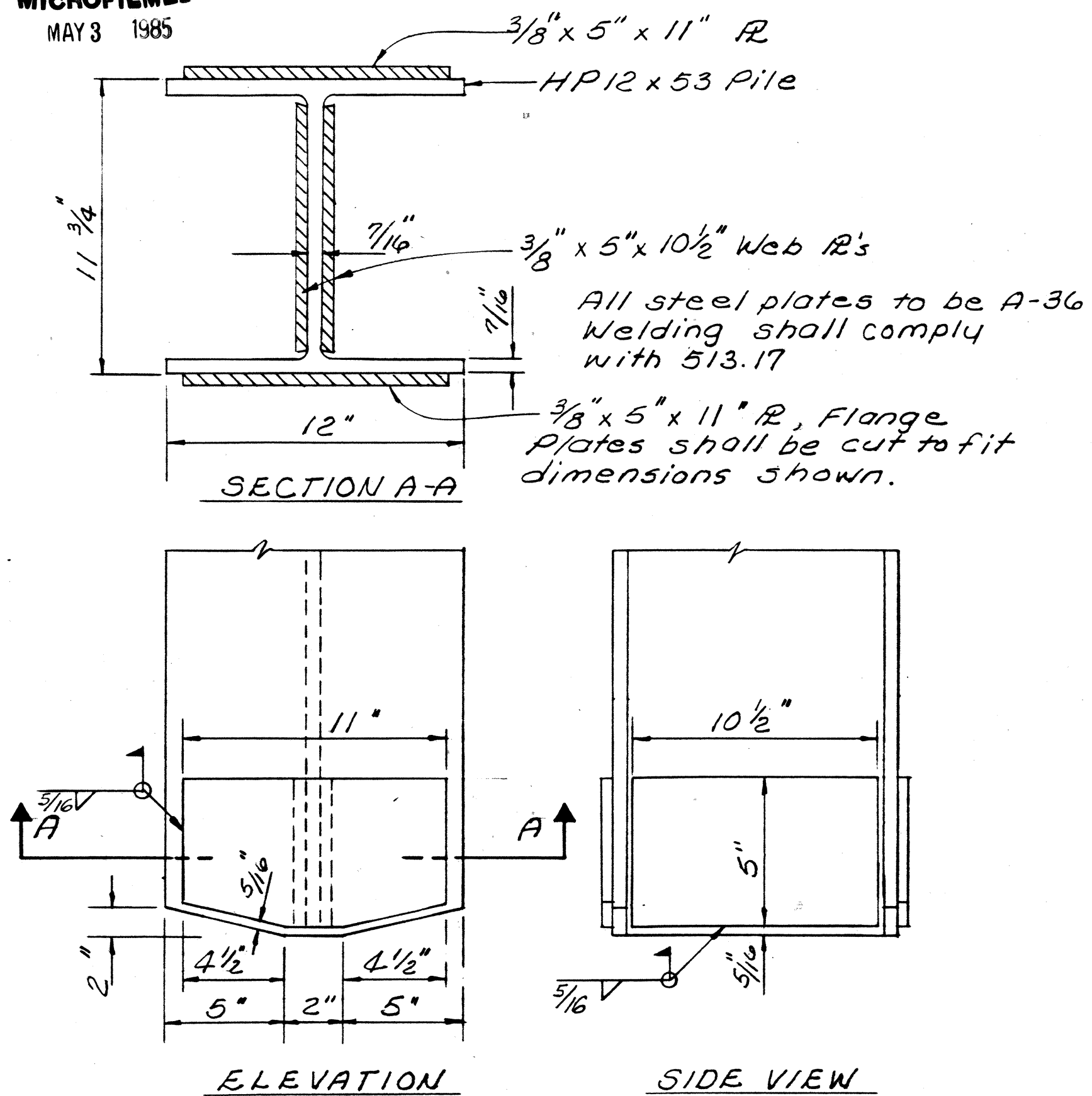


GUARD RAIL DETAIL

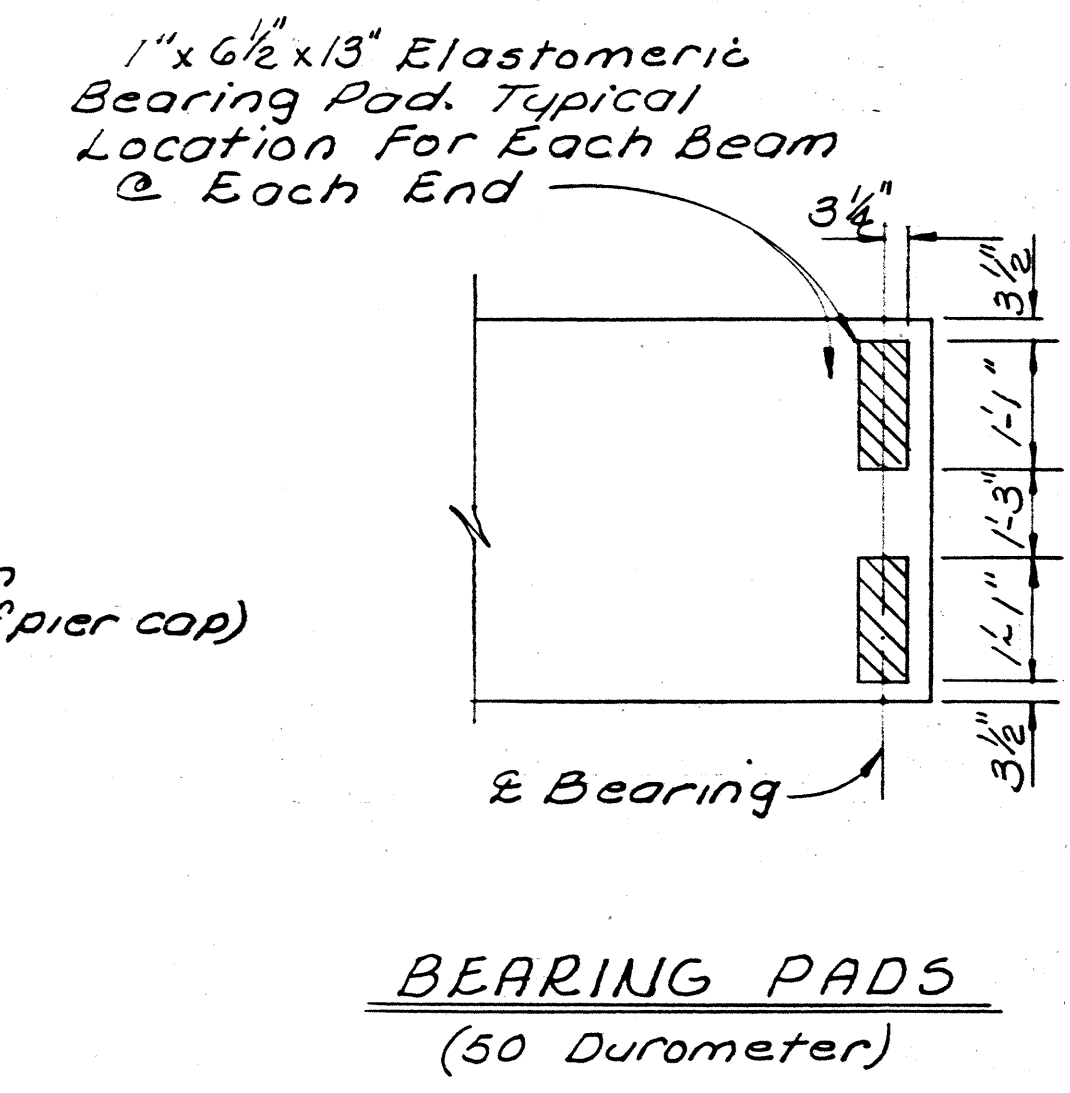
For Additional Details of Deep Beam Guard Rail, See Std. Dwg. DBR-2-73

VIEW A-A

|   |       |        |         |          |         |         |   |   |
|---|-------|--------|---------|----------|---------|---------|---|---|
| STATE OF OHIO                           |       |        |         |          |         |         | 5 | 7 |
| DEPARTMENT OF TRANSPORTATION            |       |        |         |          |         |         |   |   |
| BUREAU OF BRIDGES AND STRUCTURAL DESIGN |       |        |         |          |         |         |   |   |
| SUPERSTRUCTURE<br>DETAILS               |       |        |         |          |         |         |   |   |
| BRIDGE No. PAU-613-2202                 |       |        |         |          |         |         |   |   |
| OVER                                    |       |        |         |          |         |         |   |   |
| LITTLE AUGLAIZE RIVER                   |       |        |         |          |         |         |   |   |
| DESIGNED                                | DRAWN | TRACED | CHECKED | REVIEWED | DATE    | REVISED |   |   |
| FO                                      | FO    |        | AJM     | RLD      | 7-25-83 |         |   |   |



**BEAM DETAILS OVER PIERS \***



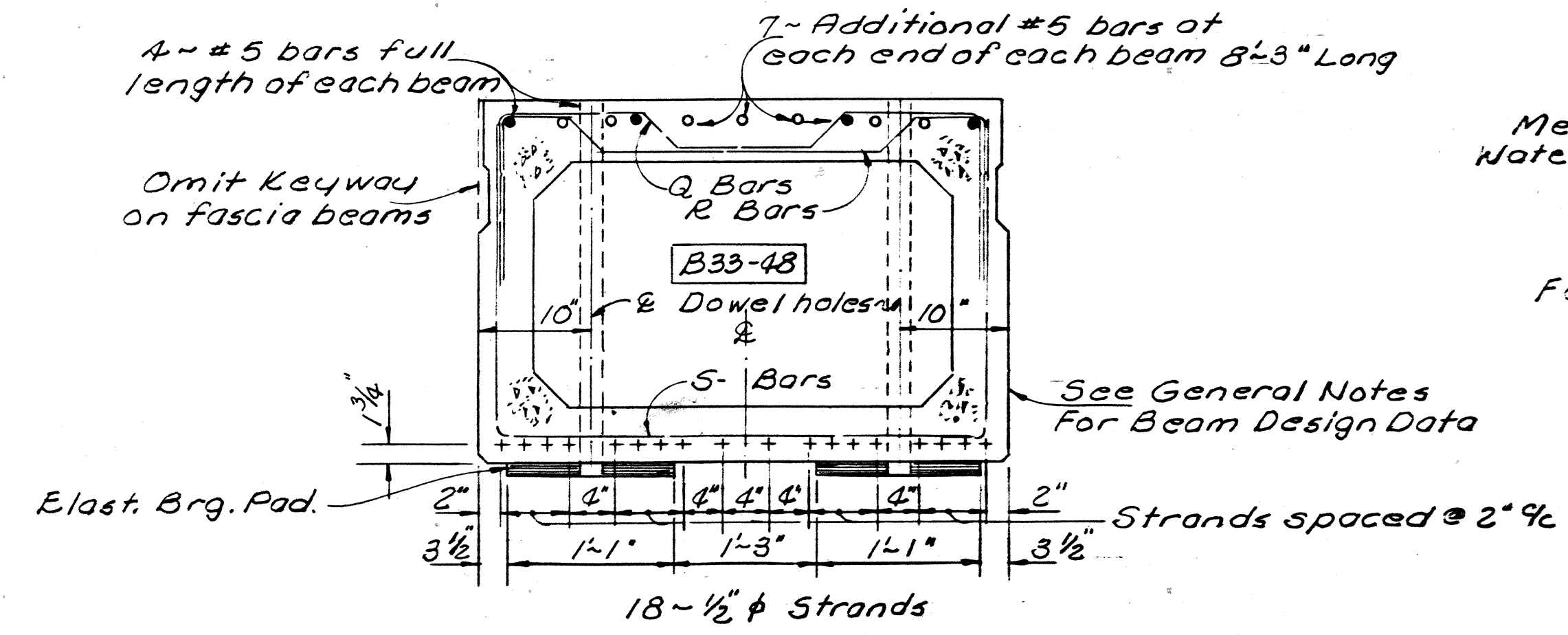
**NOTES**

**DRIP STRIP** Prior to applying deck membrane waterproofing, a bent drip strip shall be installed along the edges of the deck as shown. The strips shall be fastened at 1'-6" max. with 1 1/4 x 5/32 x 1/4 flat head drive pin and washer. (Length x shank dia. x head dia.) or #10 galvanized screws and expansion anchors, subject to the approval of the Engineer. The strips shall be placed the full length of the deck, ending at the face of the abutment wingwall. Where splices are required a 3" min. lap shall be used with a fastener through the lap. Steel for galvanized strips shall be 8" x 0.105" and shall meet the requirements of ASTM A568. Galvanizing shall be in accordance with 711.02. Stainless steel shall be 20 gage ASTM A167, Type 304, mill finish. Payment shall be at the contract price bid for "Item Special", S.F., Steel Drip Strip, which shall include all materials, labor, tools and incidentals necessary to complete this item.

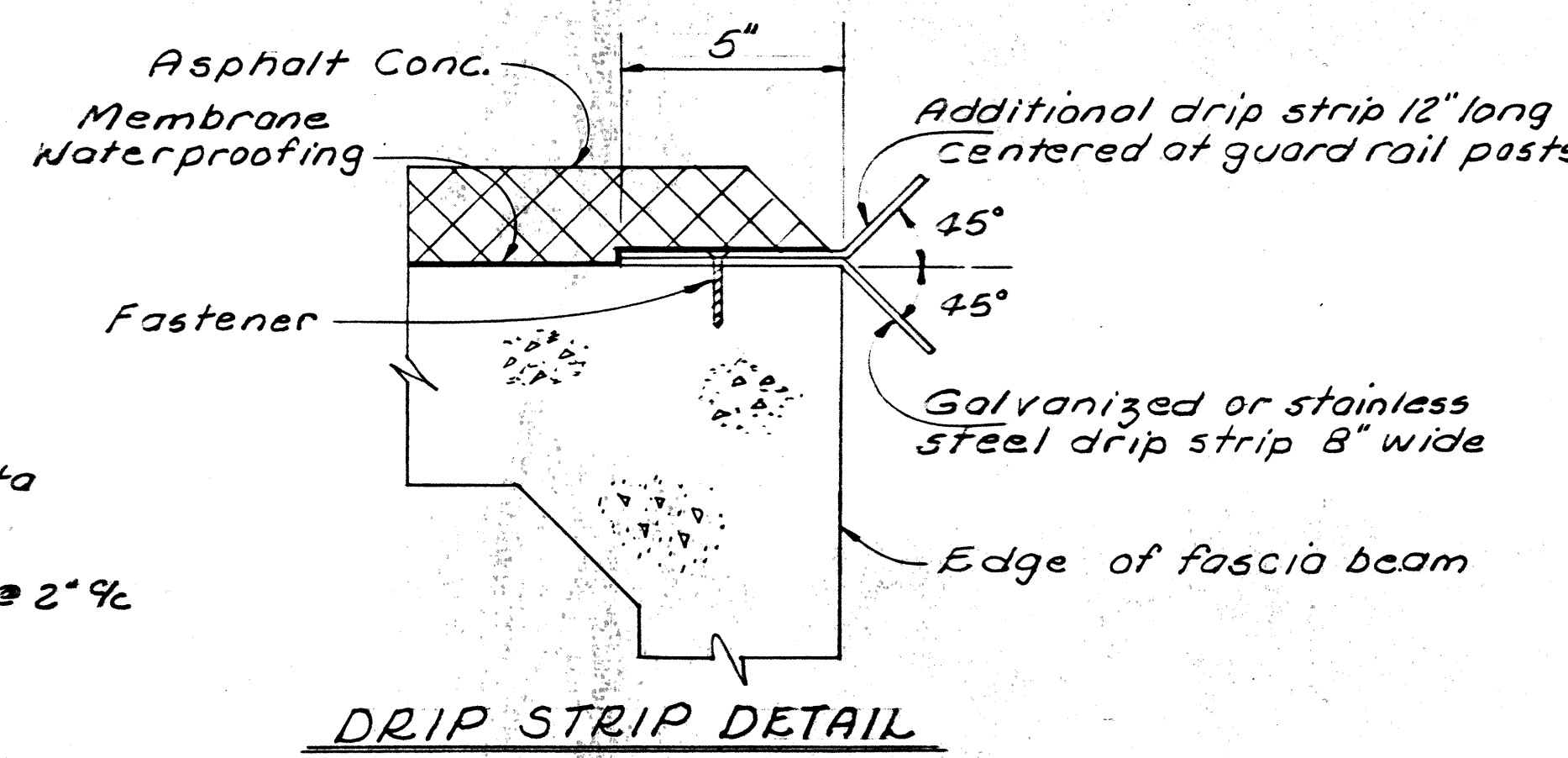
**CAMBER** Calculated camber at time of paving, including allowance for camber growth due to creep is 1/8". Calculated deflection due to the weight of the surface course and railing is 1/8". Net final camber of beams is 1". This is 1/16" excess of the amount required to place the top of beam parallel to the profile grade. This excess shall be compensated for by thickening the 403 leveling course from 1 1/4" at center of spans to 2 1/4" at ends of spans.

**ASPHALT CONCRETE** shall consist of a variable thickness of 403 and a 1 1/4" thickness of 404. The 403 shall be placed in two operations. The first course shall be of 1 1/4" uniform thickness. The second course shall be feathered to place the surface parallel to and 1 1/4" below final pavement surface elevation.

**REFERENCE** See Standard Drawing PSBD-1-81, Sheets 1 thru 4 for additional beam details.



**TYPICAL STRAND LOCATION \***  
Note: The Fabricator's shop drawings shall show complete details of the reinforcing steel.



|   |       |        |         |          |         |         |     |
|---|-------|--------|---------|----------|---------|---------|-----|
| STATE OF OHIO<br>DEPARTMENT OF TRANSPORTATION<br>BUREAU OF BRIDGES AND STRUCTURAL DESIGN          |       |        |         |          |         |         | 6/7 |
| SUPERSTRUCTURE<br>AND SPECIAL DETAILS<br>BRIDGE No. PAU-613-2202<br>OVER<br>LITTLE AUGLAIZE RIVER |       |        |         |          |         |         |     |
| DESIGNED  | DRAWN | TRACED | CHECKED | REVIEWED | DATE    | REVISED |     |
| FO  | FO    |        | AJM     | RLD      | 7-25-83 |         |     |

