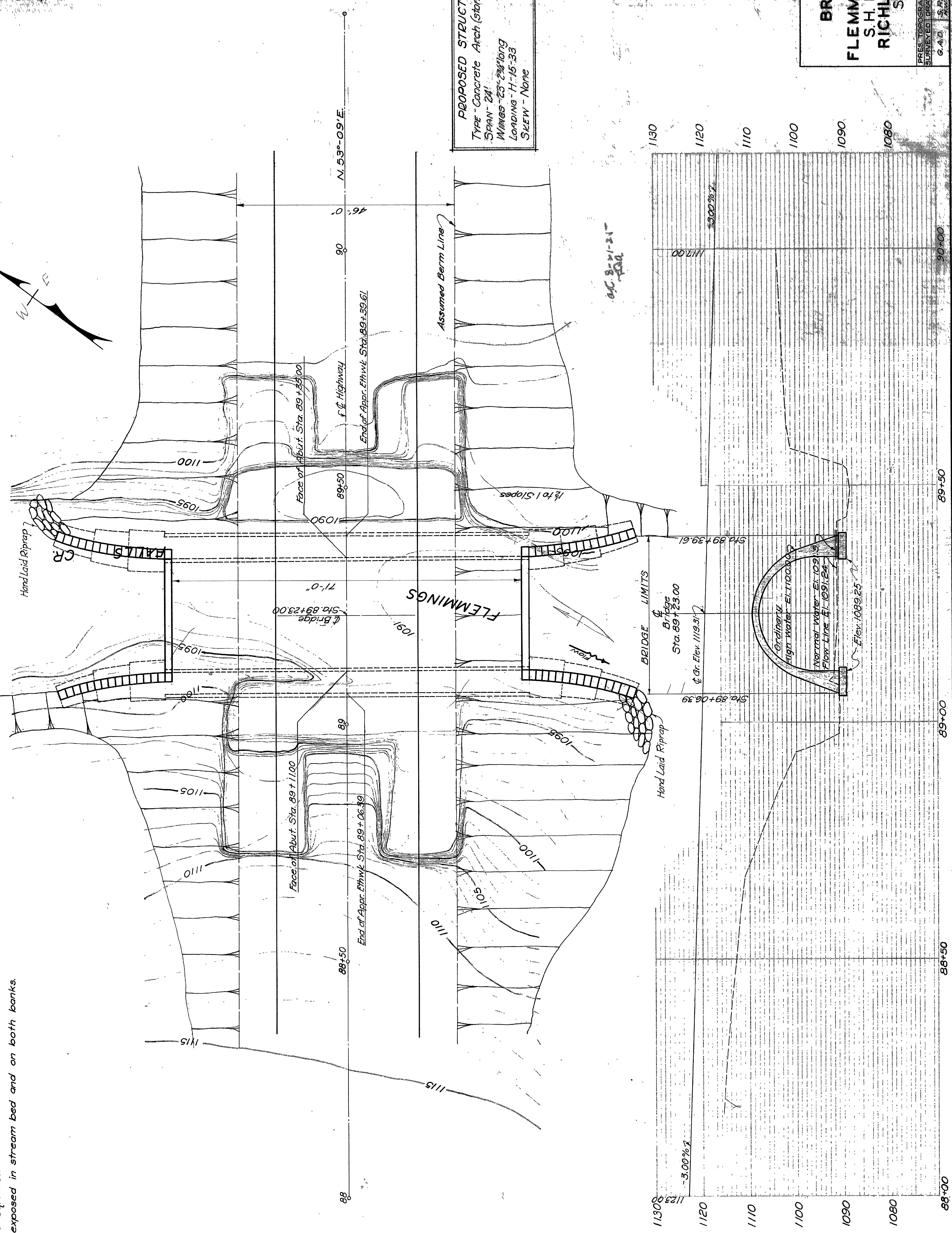
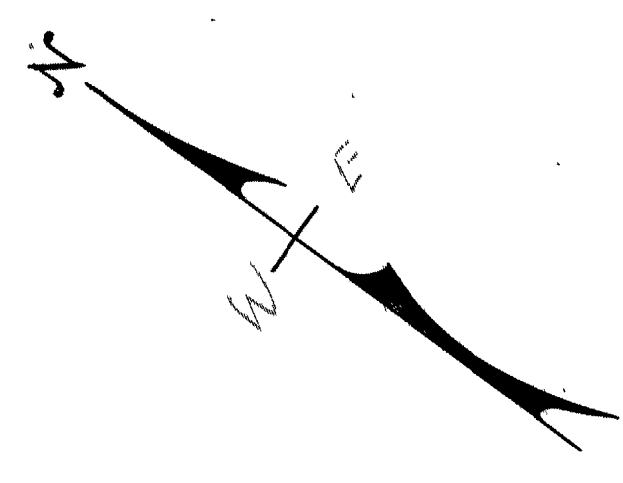


| | | | |
|-----------|-------|-------------|--------------|
| DIST. NO. | STATE | PROJ. DIST. | PROJECT YEAR |
| 10 | OHIO | 1936 | 1936 |

RICHLAND COUNTY
S.H. 140 SEC. P-PT.
4 Mi. N.E. of Mansfield

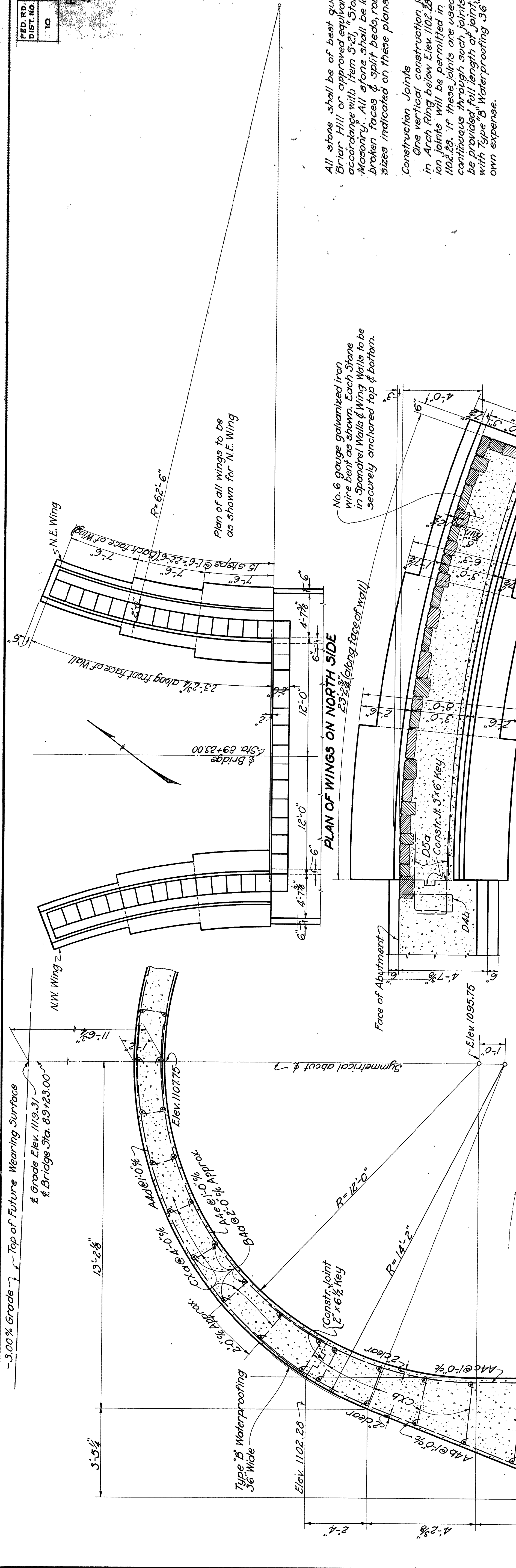
PRESENT STRUCTURE - None. (New road location)
DRAINAGE AREA - 3.5 Sq. Miles.
FOUNDATION - Rock exposed in stream bed and on both banks.



PROPOSED STRUCTURE
Type - Concrete Arch (stone faced)
Span - 24'
Wings - 23' x 1/2' wing
Loadings - H-15-33
SKEW - None

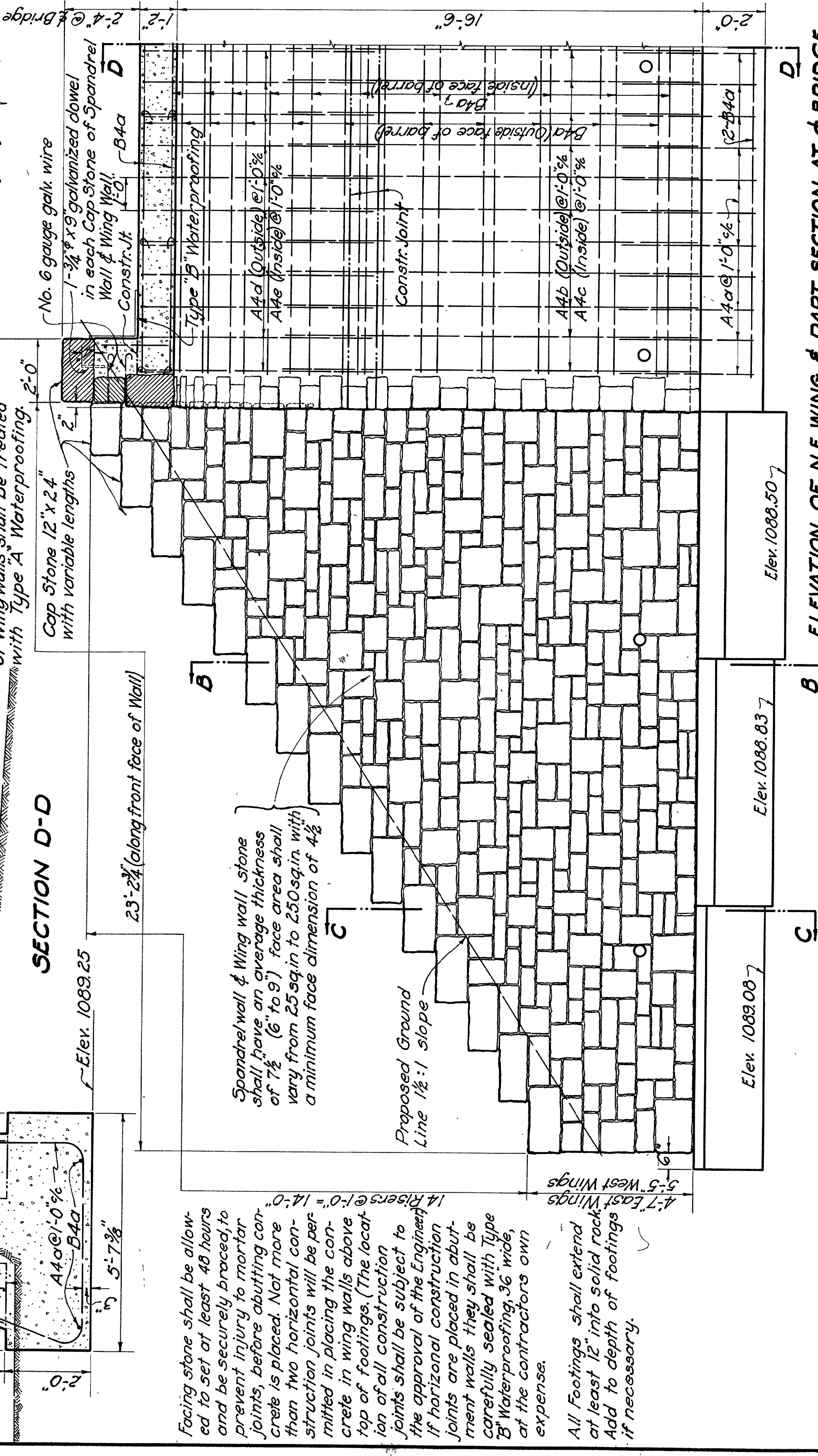
SITE PLAN
BR. NO. RI-42-163
OVER
FLEMING'S FALLS CREEK
S.H. 140 SEC. P-PT.
RICHLAND COUNTY
STATE OF OHIO

| | | | |
|-------------|-------------|------------|-------------|
| PREPARED BY | DESIGNED BY | CHECKED BY | REVIEWED BY |
| G.A.B. | S.P.E. | | |
| DATE | DATE | DATE | DATE |
| 2/22 | 3/10 | 3/10 | 3/10 |



HORIZ. SEC. THRU WINGS 2 FT. ABOVE TOP OF FOOTINGS
(For bar markings see Elevation of Wings Sheet No. 102)

All construction joints above top of footings shall be sealed on back with Type B Waterprooing 3/6 wide. Inside face of spandrel walls; top of arch ring and back face of wing walls shall be treated with Type A Waterprooing.



SECTION D-D

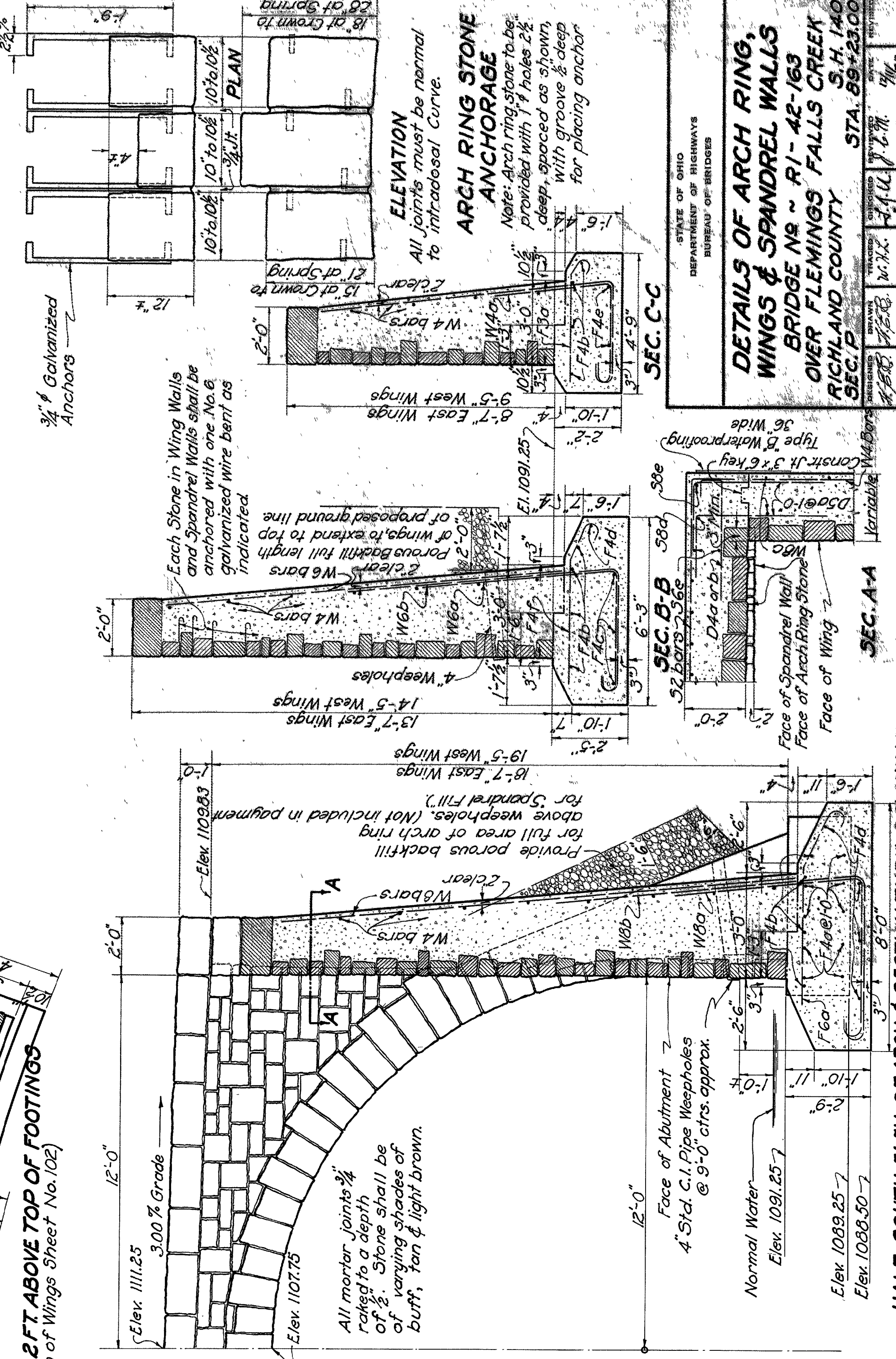
Facing stone shall be allowed to set at least 48 hours and be securely braced to prevent injury to mortar joints, before abutting concrete is placed. Not more than two horizontal construction joints will be permitted in placing the concrete in wing walls above top of footings. (The location of all construction joints shall be subject to the approval of the Engineer.) If horizontal construction joints are placed in abutment walls they shall be carefully sealed with Type B Waterprooing, 3/6 wide, at the contractors own expense.

All footings shall extend at least 12" into solid rock. Add to depth of footings if necessary.

All stone shall be of best quality sandstone, Briar Hill or approved equivalent, laid in accordance with Item 527, Stone facing for Concrete Masonry. All stone shall be laid random ashlar with broken faces & split beds, roughly shaped to the sizes indicated on these plans.

Construction Joints
One vertical construction joint will be permitted in Arch Ring below Elev. 102.28. Two vertical construction joints will be permitted in arch ring above Elev. 102.28. If these joints are used D4a bars shall be continuous through each joint and 2 1/2 x 5 keys shall be provided full length of joint. Joints to be sealed with Type B Waterprooing 3/6 wide at the Contractors own expense.

No. 6 gauge galvanized iron wire bent as shown. Each stone in Spandrel Walls & Wing Walls to be securely anchored top & bottom.



DETAILS OF ARCH RING, WINGS & SPANDEL WALLS
BRIDGE No. ~ R1-42-163
OVER FLEMINGS FALLS CREEK
RICHLAND COUNTY S.H. 140
SEC. P STA. 89+23.00

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

ELEVATION OF N.E. WING & PART SECTION AT & BRIDGE

HALF SOUTH ELEV. OF ARCH & SECTION THRU S.E. WING

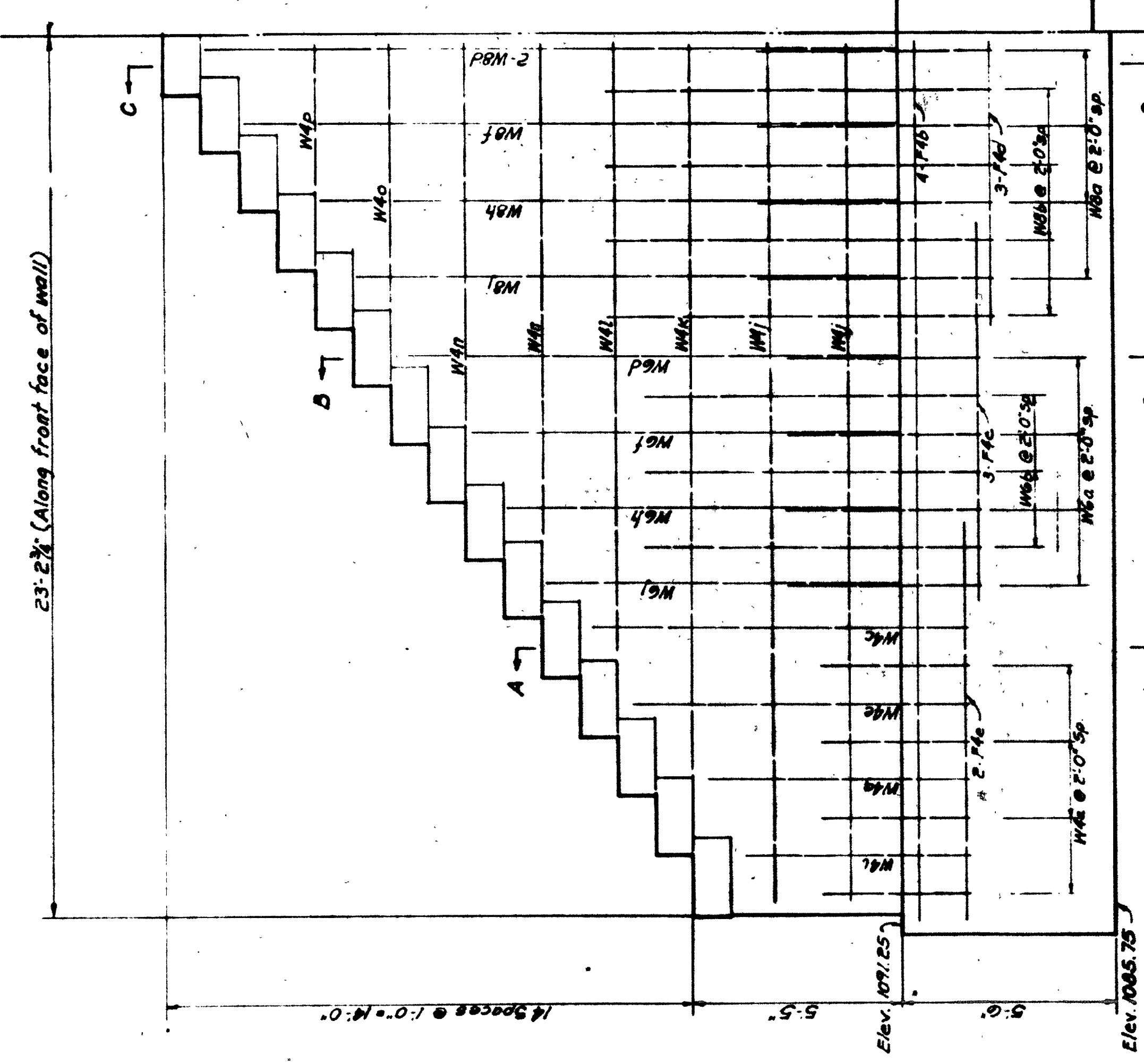
101A
7/13

| | | | |
|-------|----------|-----------------|------|
| STATE | FED. AID | PROJECT | YEAR |
| 10 | OHIO | 20 UN. 2 RELOC. | 1936 |

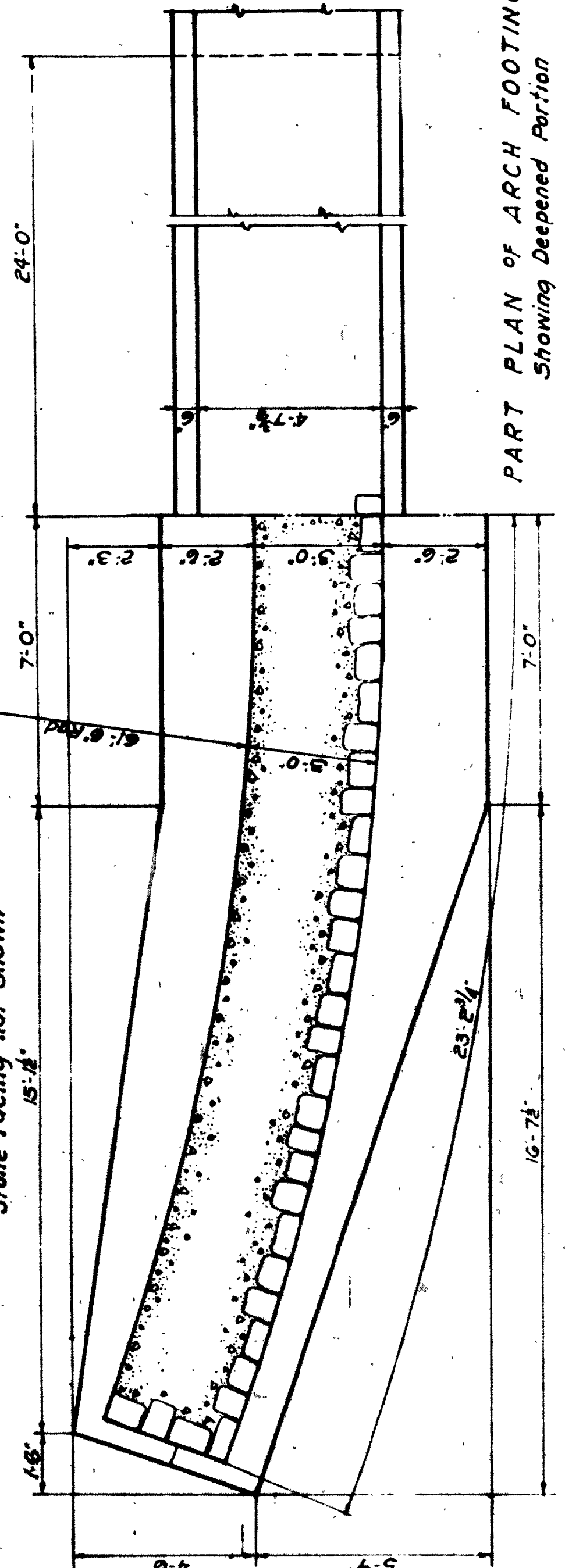
RICHLAND COUNTY
S. H. 140 SEC. P (P)

37'-6" to Roadway

23'-2 1/2" (Along front face of wall)



ELEVATION OF S. E. WING WALL
Stone facing not shown

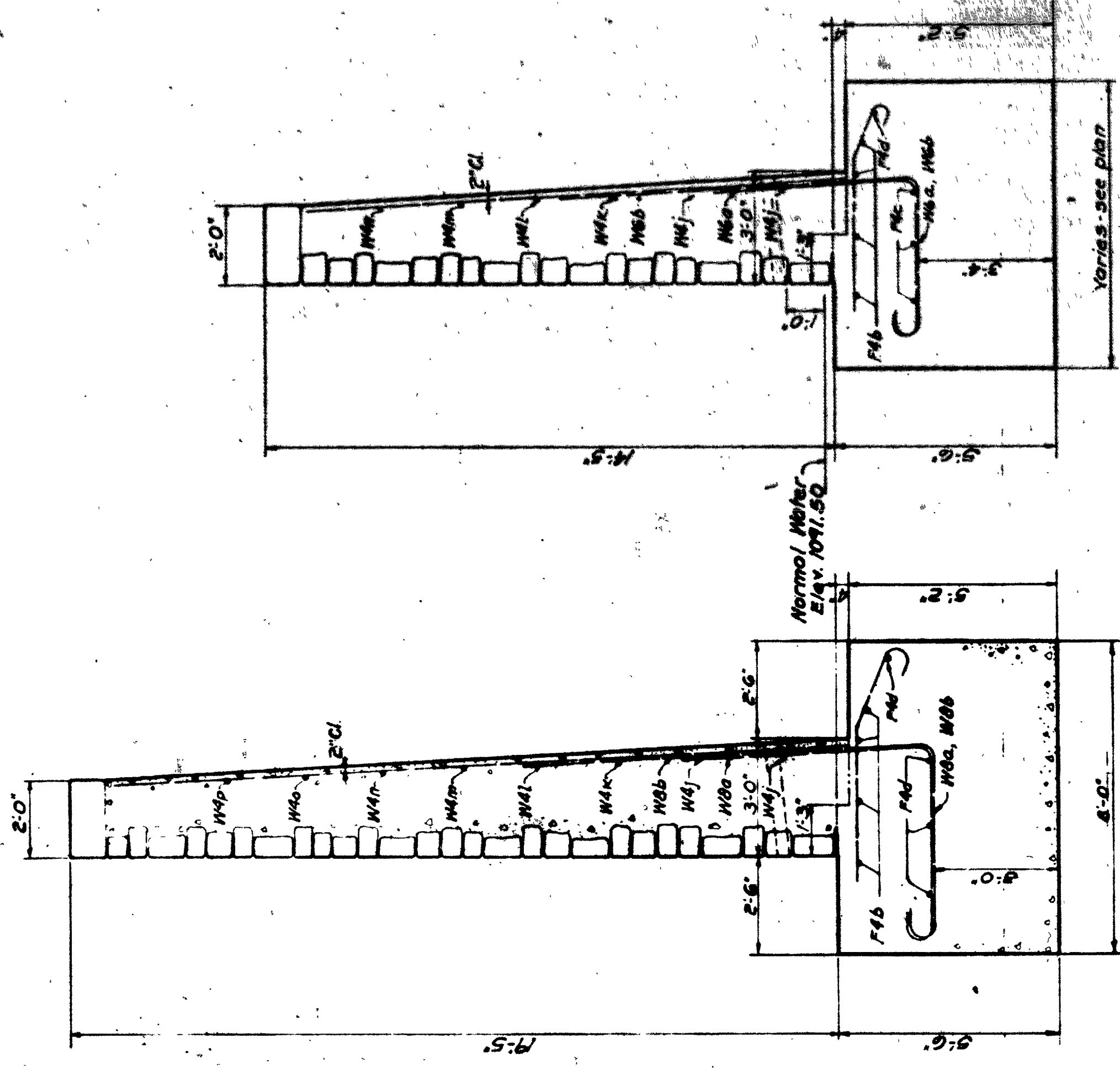


PLAN OF FOOTING FOR S.W. WING WALL

PART PLAN OF ARCH FOOTING
Showing Deepened Portion

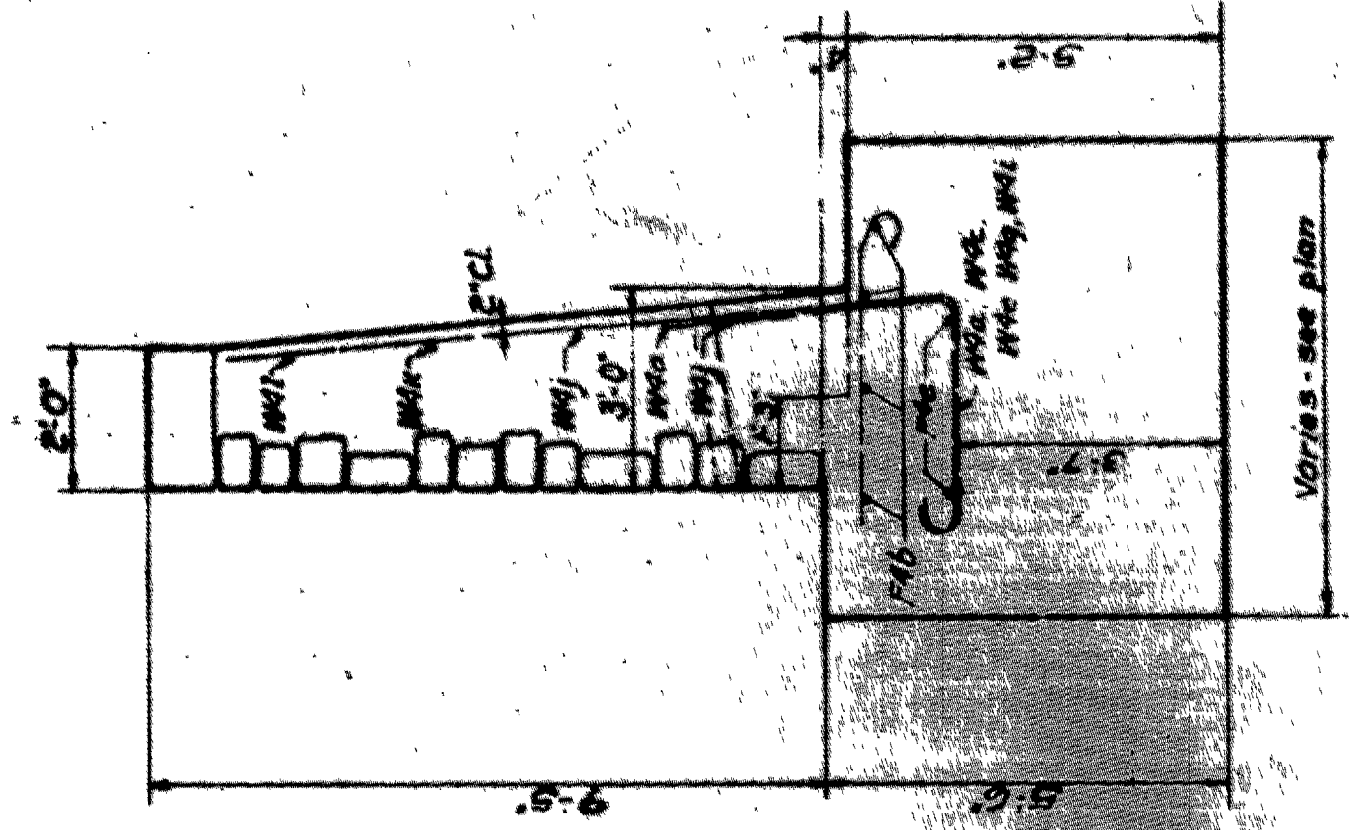
BILL OF ADDITIONAL REINFORCING STEEL

| MARK | SIZE | MINIMUM LENGTH | HEIGHT | SHAPE |
|-------|------|----------------|--------|-------|
| W41 | 3/4" | 17'-6" | 29 | ST |
| W42 | 3/4" | 10'-6" | 26 | ST |
| W43 | 3/4" | 17'-6" | 26 | ST |
| W44 | 3/4" | 15'-6" | 23 | ST |
| W45 | 3/4" | 13'-6" | 20 | ST |
| W46 | 3/4" | 9'-6" | 17 | ST |
| W47 | 3/4" | 9'-6" | 23 | ST |
| W48 | 3/4" | 9'-6" | 10 | ST |
| W49 | 3/4" | 7'-6" | 9 | ST |
| W50 | 3/4" | 7'-6" | 8 | ST |
| W51 | 3/4" | 6'-6" | 7 | ST |
| TOTAL | | | 222 | |

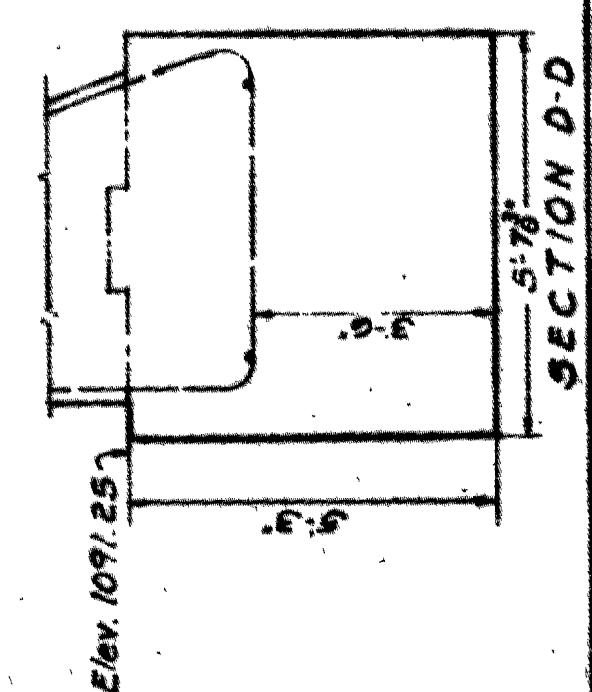


SECTION B-B

SECTION A-A



SECTION C-C



SECTION D-D

ESTIMATED ADDITIONAL QUANTITIES

| | For Wing Wall | For Arch Footing | Totals |
|----------------------------------|---------------|------------------|-----------|
| Excavation for Structures, Earth | 8 | 7 | 15 Cu Yds |
| Excavation for Structures, Rock | 14 | 11 | 25 Cu Yds |
| 1-6% Concrete for Footings | 20.5 | 16.5 | 37 Cu Yds |

REVISED DETAILS
OF S.W. WING WALL
BR. NO. RI-42-163
OVER FLEMINGS FALLS CREEK
RICHLAND COUNTY S. H. 140
SEC. P STA 89+23.00

DR. H.P.L. 7-36

| | | | |
|----------------|-------|--------------------------------------|-------------|
| FED. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
| 10 | OHIO | 20 UN. 2 RELOC. 201-5, UN. 1, RELOC. | 1936 |

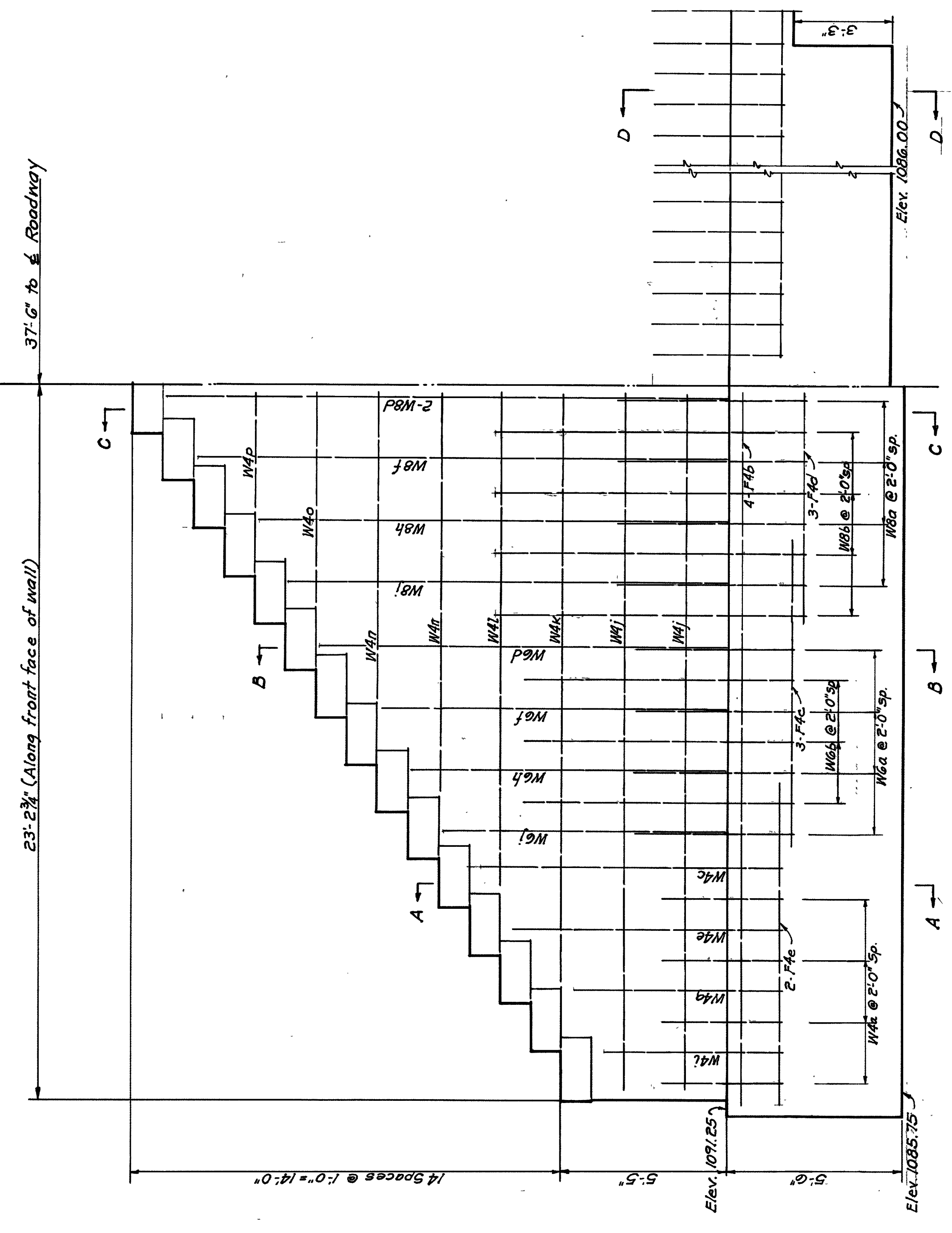
RICHLAND COUNTY
S. H. 140 SEC. P (Pt.)

BILL OF ADDITIONAL REINFORCING STEEL

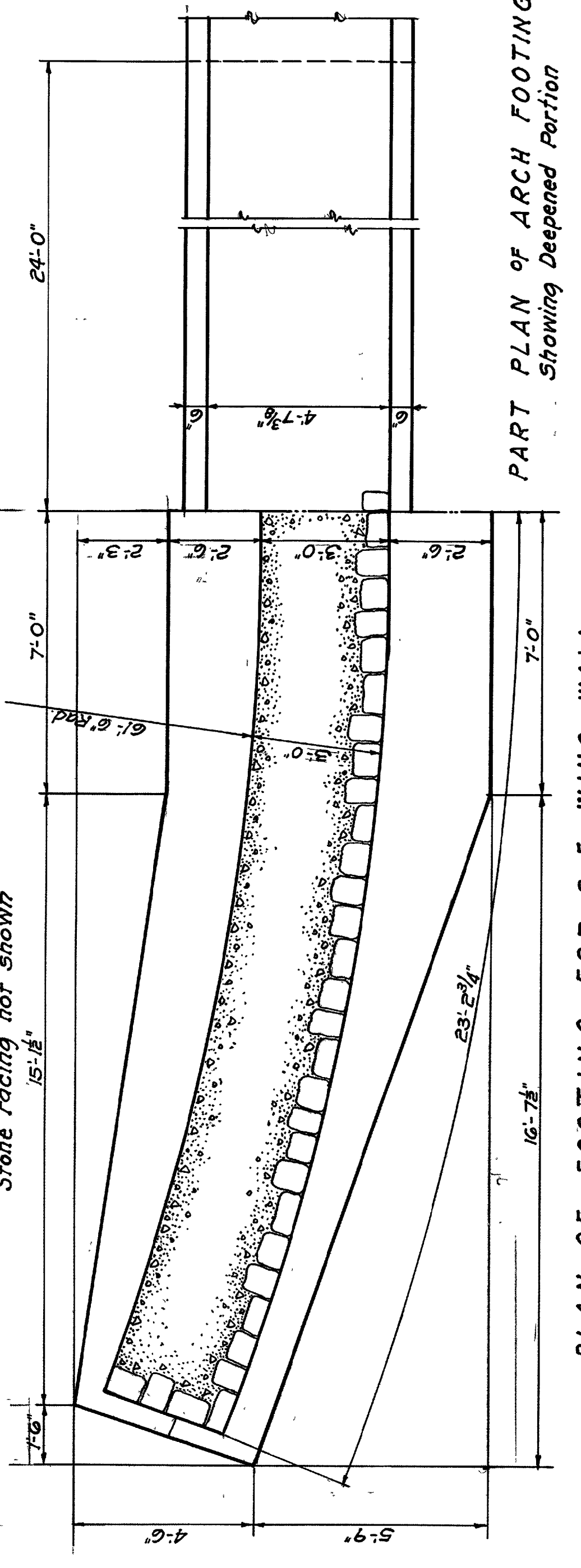
| MARY SIZE | NUMBER | LENGTH | WEIGHT | SHAPE |
|--------------|--------|--------|--------|------------|
| W52 | 3/4" | 17'-6" | 29 | ST. |
| W56 | 3/4" | 18'-6" | 29 | ST. |
| W56 | 3/4" | 17'-6" | 26 | ST. |
| W56 | 3/4" | 15'-6" | 23 | ST. |
| W56 | 3/4" | 14'-6" | 20 | ST. |
| W56 | 3/4" | 13'-6" | 17 | ST. |
| W47 | 5/8" | 12'-6" | 23 | ST. |
| W47 | 5/8" | 9'-6" | 10 | ST. |
| W45 | 5/8" | 8'-6" | 9 | ST. |
| W42 | 5/8" | 7'-6" | 8 | ST. |
| W42 | 5/8" | 6'-6" | 7 | ST. |
| TOTAL | | | | 222 |

37'-6" to Roadway

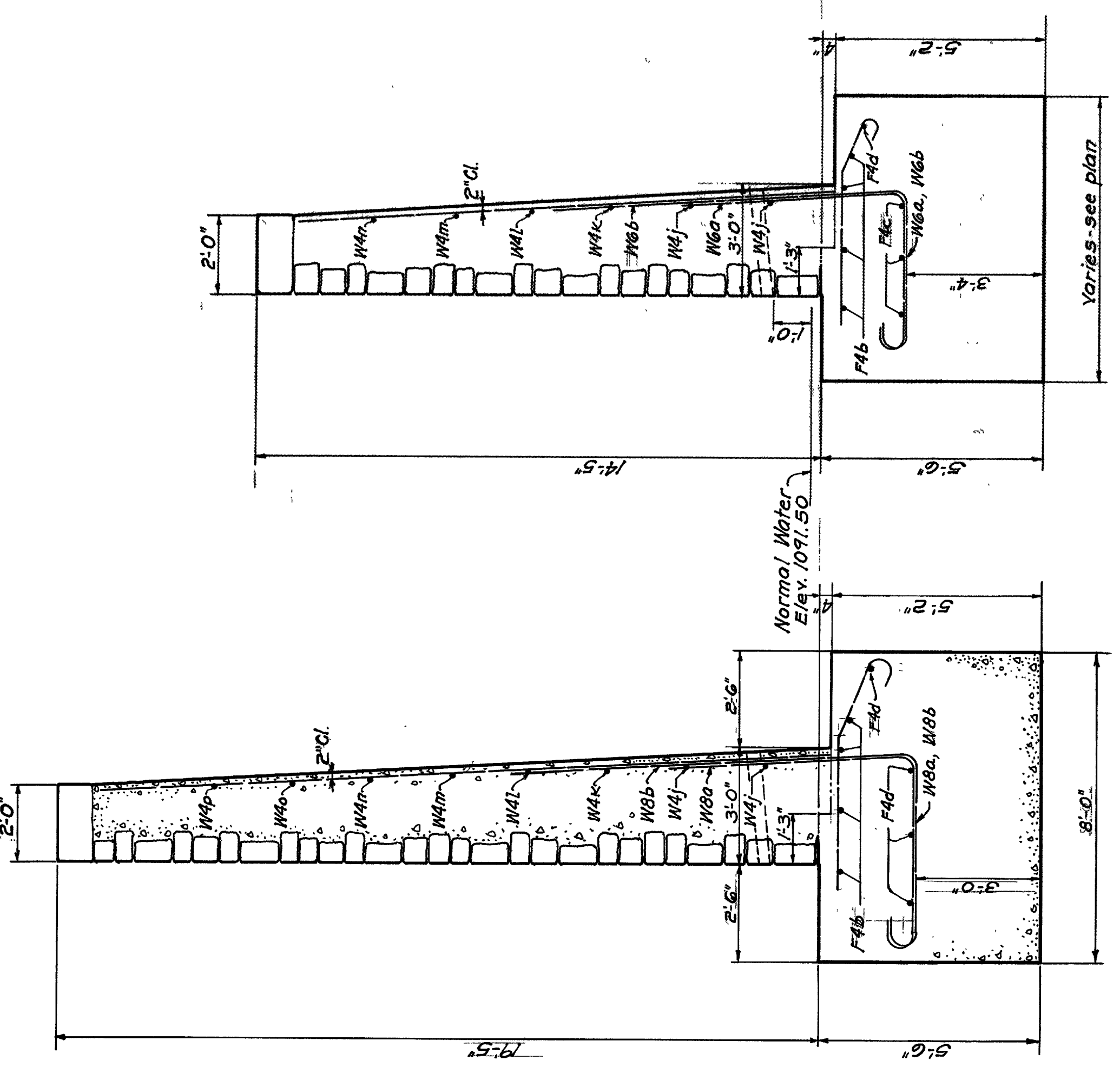
23'-2 1/4" (Along front face of wall)



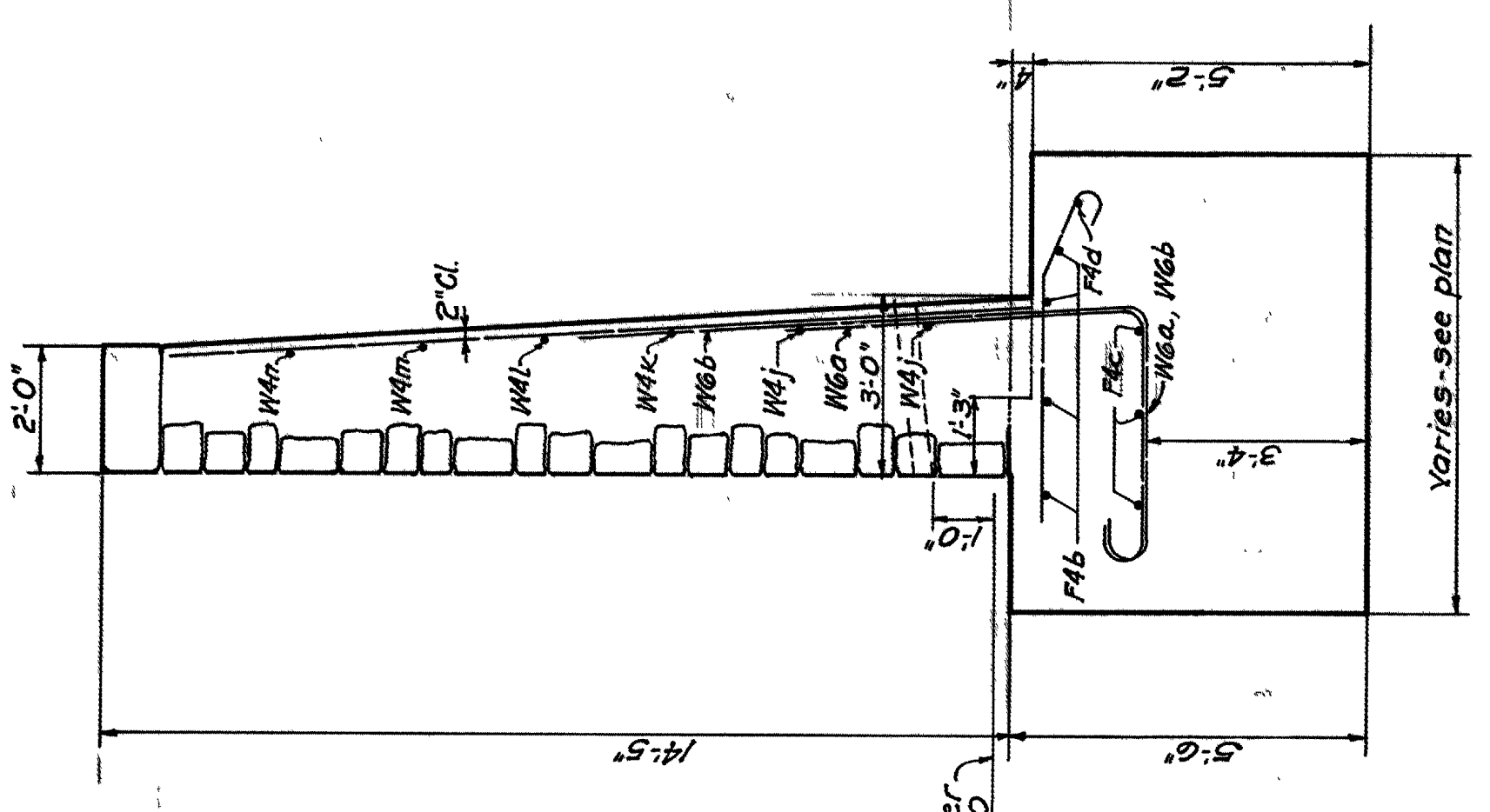
ELEVATION OF S. E. WING WALL
Stone Facing not shown



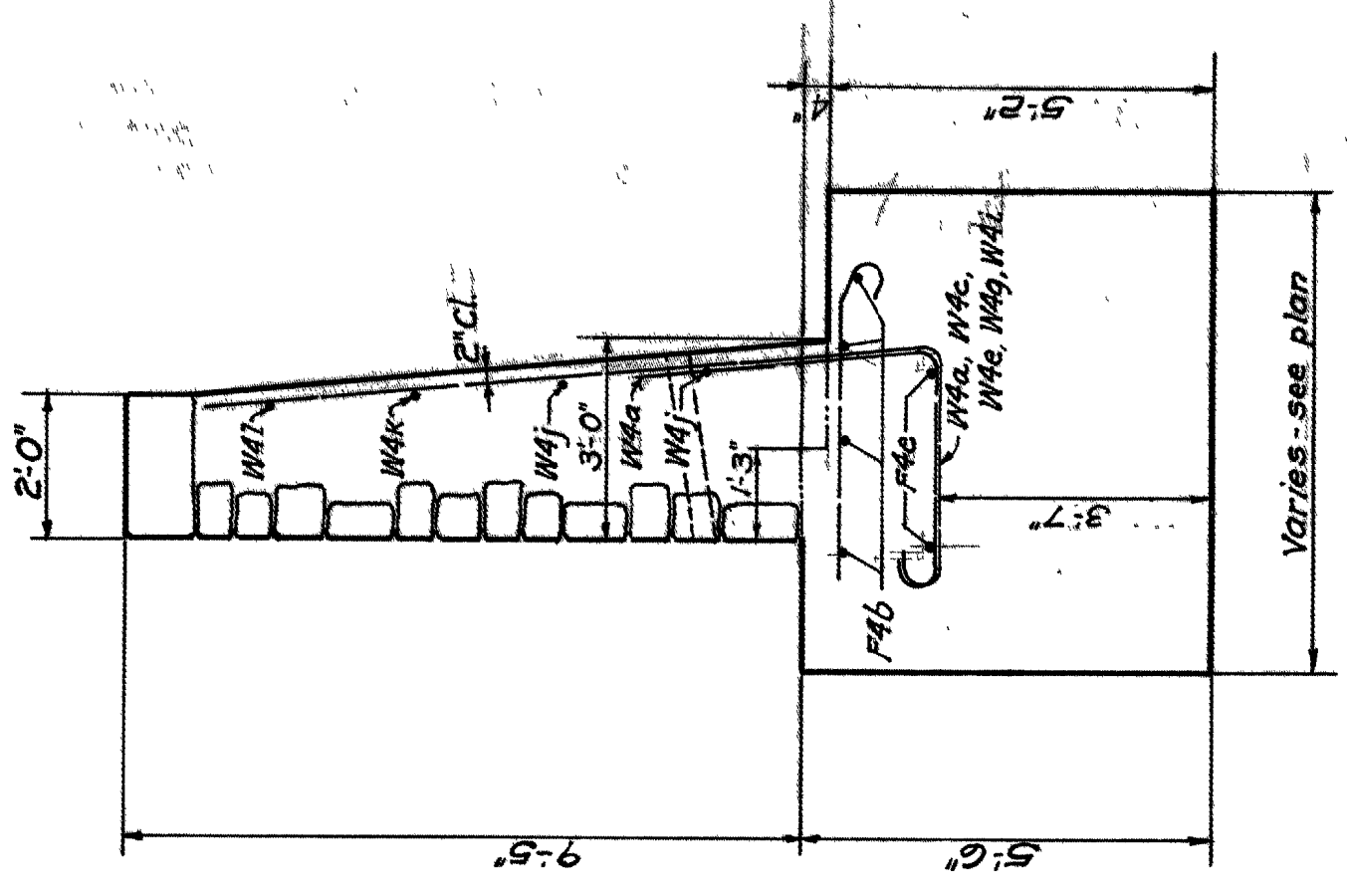
PART PLAN OF ARCH FOOTING
Showing Deepened Portion



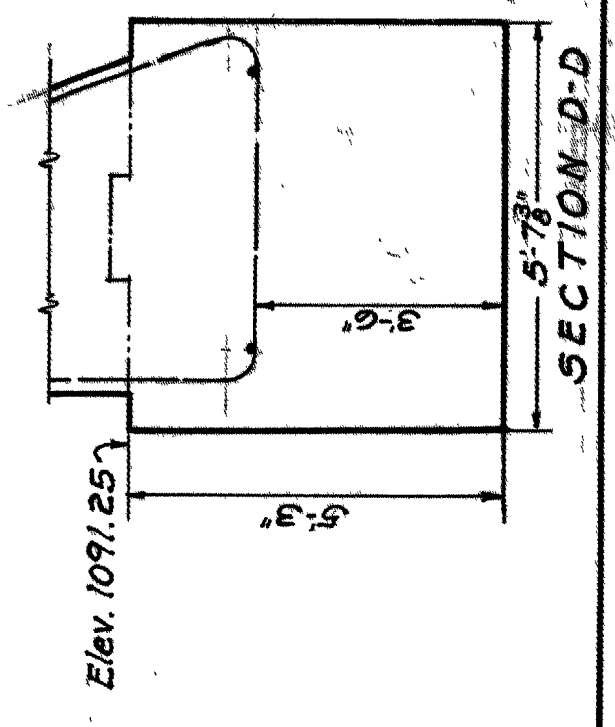
SECTION A-A



SECTION B-B



SECTION C-C



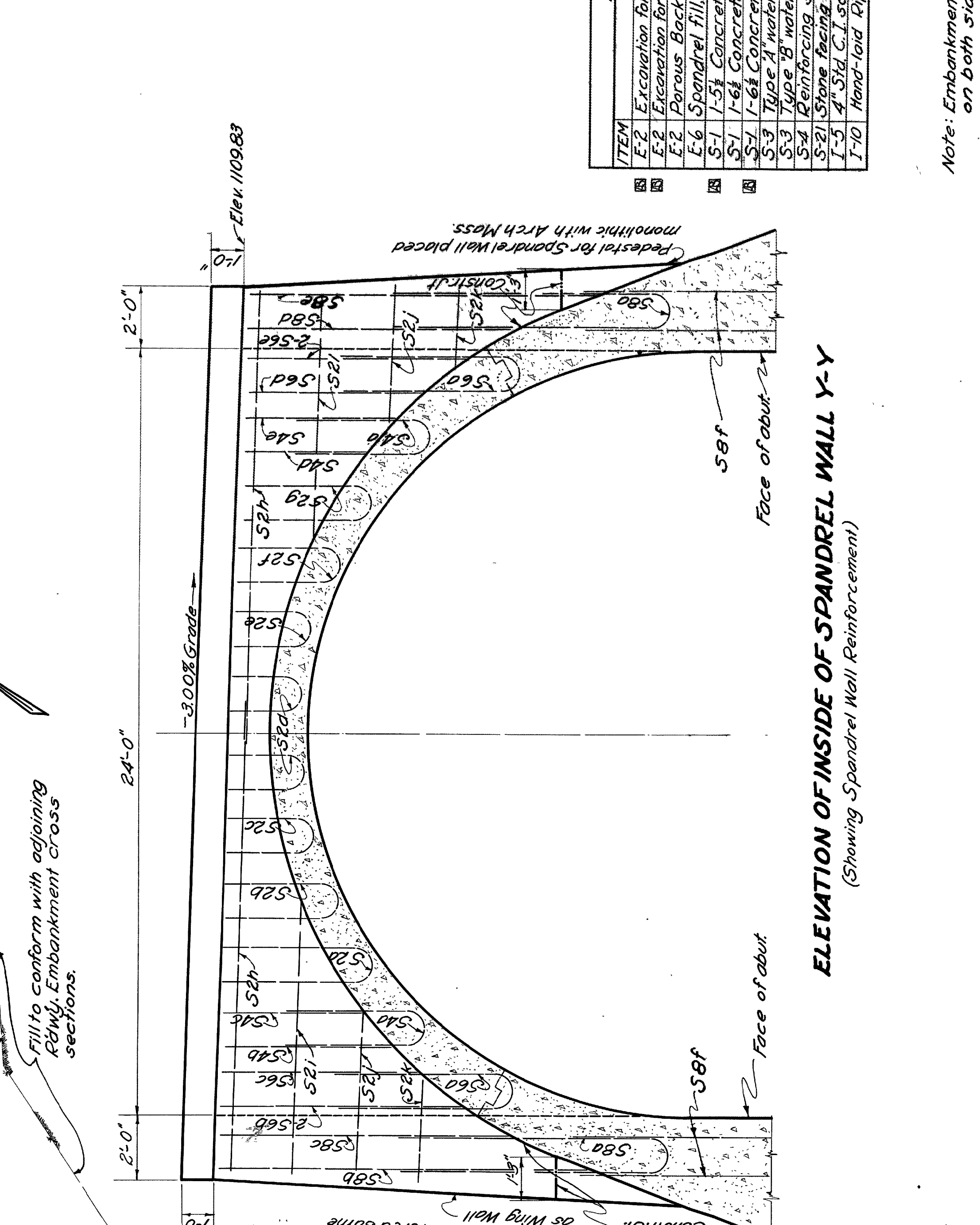
SECTION D-D

ESTIMATED ADDITIONAL QUANTITIES

| | For Wing Wall Ftg. | For Arch Footing | Totals |
|--------------------------------------|--------------------|------------------|-------------|
| E-2 Excavation for Structures, Earth | 8 | 7 | 15 Cu. Yds. |
| E-2 Excavation for Structures, Rock | 14 | 11 | 25 Cu. Yds. |
| S-1 1-6 1/2 Concrete for Footings | 20.5 | 16.5 | 37 Cu. Yds. |

REVISED DETAILS
OF S.W. WING WALL
BR. NO. R1-42-163
OVER FLEMINGS FALLS CREEK
RICHLAND COUNTY S. H. 140
SEC. P STA. 89+23.00

DR. M.F.L. 7-36



ELEVATION OF INSIDE OF SPANDEL WALL Y-Y
 (Showing Spandrel Wall Reinforcement)

ESTIMATED QUANTITIES

| ITEM | DESCRIPTION | AMOUNT | UNIT |
|------|--|----------|--------|
| E-1 | Excavation for structures, Earth | 105.0 | C.Y. |
| E-2 | Excavation for structures, rock | 135.0 | C.Y. |
| E-3 | Porous Backfill | Lump Sum | |
| E-4 | Spandrel fill, earth | 970.0 | Cu Yds |
| S-1 | 1-5" Concrete Arch ring above footings | 88.0 | Cu Yds |
| S-2 | 1-6" Concrete Walls | 460.0 | Cu Yds |
| S-3 | Type A waterproofing | 25.0 | Sq Yds |
| S-4 | Type B waterproofing | 1700.0 | Sq Ft |
| S-5 | Reinforcing steel | 25.0 | Tons |
| S-6 | Stone facing | 1700.0 | Sq Ft |
| T-1 | Hand-laid Rip-rap | 20.0 | Cu Yds |

Note: Embankment shall be placed simultaneously on both sides of barrel.

ELEVATION OF WINGS (At face of Abut.)
 (Stone Facing not shown)
 (For Wing Wall Sections see S.H. No. 101)

| MARK SIZE | NO. | LENGTH | WEIGHT | SHAPE |
|-----------|-----|--------|--------|-------|
| A40 | 148 | 12'-9" | 1,970 | Bt |
| A46 | 148 | 14'-6" | 2,240 | Bt |
| A44 | 148 | 13'-6" | 2,090 | Bt |
| A40 | 148 | 15'-6" | 2,390 | Bt |
| A46 | 148 | 14'-6" | 2,240 | Bt |
| B46 | 174 | 28'-0" | 4,720 | St |
| C40 | 7 | 2'-0" | 80 | Bt |
| C46 | 7 | 2'-0" | 90 | Bt |
| S80 | 4 | 18'-3" | 230 | Bt |
| S86 | 4 | 11'-2" | 80 | St |
| S84 | 4 | 9'-3" | 60 | St |
| S82 | 4 | 8'-6" | 60 | St |
| S80 | 4 | 11'-0" | 100 | St |
| S86 | 4 | 7'-6" | 60 | St |
| S84 | 4 | 6'-3" | 30 | St |
| S82 | 4 | 5'-6" | 20 | St |
| S80 | 4 | 7'-0" | 60 | St |
| S40 | 4 | 9'-3" | 40 | Bt |
| S46 | 4 | 5'-3" | 10 | St |
| S44 | 4 | 4'-6" | 10 | St |

| MARK SIZE | NO. | LENGTH | WEIGHT | SHAPE |
|-----------|-----|--------|--------|-------|
| S44 | 2 | 3'-0" | 10 | St |
| S46 | 2 | 4'-9" | 10 | St |
| S20 | 2 | 9'-9" | 10 | Bt |
| S26 | 2 | 7'-9" | 10 | Bt |
| S24 | 2 | 6'-3" | 10 | Bt |
| S22 | 2 | 5'-9" | 10 | Bt |
| S20 | 2 | 5'-9" | 10 | Bt |
| S26 | 2 | 7'-9" | 10 | Bt |
| S24 | 2 | 9'-9" | 10 | Bt |
| S22 | 2 | 13'-9" | 30 | Bt |
| S20 | 2 | 13'-9" | 30 | Bt |
| S26 | 2 | 12'-9" | 30 | Bt |
| S24 | 2 | 10'-9" | 20 | Bt |
| S22 | 2 | 9'-9" | 20 | Bt |
| S20 | 2 | 9'-9" | 20 | Bt |
| S26 | 2 | 16'-6" | 190 | * |
| S24 | 2 | 15'-0" | 80 | * |
| S22 | 2 | 15'-0" | 80 | * |
| S20 | 2 | 18'-0" | 40 | * |
| S26 | 2 | 18'-0" | 40 | * |
| S24 | 2 | 14'-6" | 100 | St |
| S22 | 2 | 13'-9" | 90 | St |
| S20 | 2 | 14'-6" | 100 | St |
| M60 | 6 | 10'-3" | 340 | Bt |
| M66 | 6 | 13'-9" | 340 | Bt |

| MARK SIZE | NO. | LENGTH | WEIGHT | SHAPE |
|-----------|-----|--------|--------|-------|
| M6C | 2 | 12'-9" | 80 | St |
| M6D | 2 | 13'-6" | 60 | St |
| M6E | 2 | 10'-9" | 40 | St |
| M6F | 2 | 11'-6" | 50 | St |
| M6G | 2 | 9'-9" | 40 | St |
| M6H | 2 | 10'-6" | 40 | St |
| M6I | 2 | 9'-9" | 40 | St |
| M6J | 2 | 8'-6" | 40 | St |
| M40 | 8 | 8'-0" | 130 | Bt |
| M46 | 8 | 13'-9" | 90 | Bt |
| M44 | 8 | 13'-9" | 90 | Bt |
| M42 | 8 | 12'-9" | 30 | Bt |
| M40 | 8 | 12'-9" | 30 | Bt |
| M46 | 8 | 10'-9" | 20 | Bt |
| M44 | 8 | 9'-9" | 20 | Bt |
| M42 | 8 | 9'-9" | 20 | Bt |
| M40 | 8 | 22'-6" | 190 | * |
| M36 | 8 | 15'-0" | 80 | * |
| M34 | 8 | 15'-0" | 80 | * |
| M32 | 8 | 18'-0" | 40 | * |
| M30 | 8 | 18'-0" | 40 | * |
| M26 | 8 | 14'-6" | 100 | St |
| M24 | 8 | 13'-9" | 90 | St |
| M22 | 8 | 14'-6" | 100 | St |
| M20 | 8 | 10'-3" | 340 | Bt |
| M26 | 8 | 13'-9" | 340 | Bt |

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

ELEVATION OF WINGS & SPANDEL WALL
STEEL LIST - EST. QUANTITIES
 BRIDGE NO. - R1-42-163
 OVER FLEMING FALLS CREEK
 RICHLAND COUNTY
 SEC. P

DATE: 7/28/35
 DRAWN: J. G. L.
 CHECKED: J. G. L.
 APPROVED: J. G. L.
 STA. 89+23.00