

Telephone Line  
Power Line  
Center Line  
Proposed Limited Access R/W  
Existing R/W  
Proposed R/W  
Slope Easement  
Property Line  
Fence Line  
Water Line  
Gas Line  
Existing Sewer  
Proposed Sewer  
Water Valves  
Existing Manholes  
Proposed Manholes  
Manholes Adjusted to Grade  
Manholes Abandoned  
Manholes Removed  
Water Manholes  
Electric Manholes  
Coal Chute  
Power Pole  
Light Pole  
Guy Pole  
Existing Guard Rail  
Proposed Guard Rail  
Proposed Fence

# CONVENTIONAL SIGNS

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MAY 26 1969

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WM.H.  
EM.H.  
C.C.

Gas Valves  
Existing Catch Basins  
Proposed Catch Basins  
Catch Basins Adjusted to Grade  
Catch Basins Abandoned  
Catch Basins Removed  
Telephone Pole  
Water Hydrant  
Traffic Light  
Tree

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SEP 23 1985

# STATE OF OHIO DEPARTMENT OF HIGHWAYS COLUMBUS EXPRESSWAY SYSTEM FRA-40-12.82

CITY OF COLUMBUS, FRANKLIN COUNTY

FRA-70-12.82

# SOUTH INNERBELT

I-70-3(4)99

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	I-70-3(4)99	1250

FRANKLIN COUNTY  
FRA-40-12.82

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1963 SPECIFICATIONS

"LIMITED ACCESS"

This improvement is especially designed for thru traffic and has been declared a Limited Access Highway or Freeway by action of the Director of Highways, in accordance with the provisions of Sec.5511.02 of The Revised Code of Ohio.

The Standard Specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications 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 of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved 5-4-62  
Date Superintendent, Division of Electricity, Cols. O.

Approved 5-29-62  
Date Superintendent, Division of Water, Cols. O.

Approved 5-4-62  
Date Chief Engineer, Division of Sewerage & Drainage, Cols. O.

Approved 5-4-62  
Date Chief Engineer, Division of Engineering & Construction, Cols. O.

Approved 5-15-62  
Date Director of Public Service, Cols. O.

Approved 1-22-63  
Date Division, Deputy Director

Approved 4-24-63  
Date Engineer of Bridges

Approved 4-30-63  
Date Engineer of Location & Design

Approved 4-30-63  
Date Deputy Director of Design & Construction

Approved 4-26-63  
Date Deputy Director of Right of Way

Approved 4-30-63  
Date Deputy Director of Planning & Programming

Approved  
Date First Assistant Director

Approved 4-30-63  
Date Director of Highways

PLANS PREPARED BY  
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
245 NORTH HIGH STREET  
COLUMBUS, OHIO  
FOR  
STATE OF OHIO

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

APPROVED

MICROFILMED

MAY 26 1969

GROUND PHOTO LAB

DIVISION ENGINEER

DATE:

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## LINE DATA

Begin Project	Sta. 50+75.00
End Project	Sta. 104+26.50
Net Length of Project	5,351.50 L.F. = 1.013 Miles
Begin Work	Sta. 43+34.50
End Work	Sta. 105+00.00
Net Length of Work	6,165.50 L.F. = 1.167 Miles

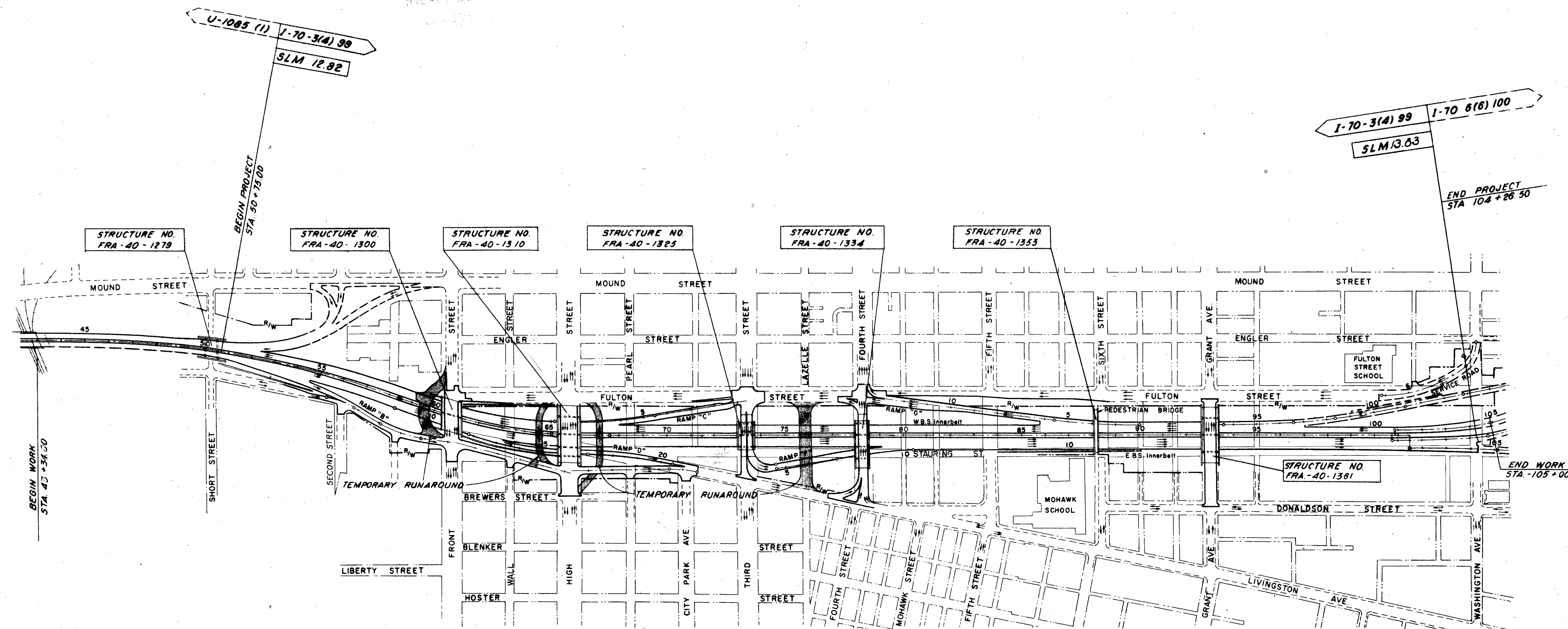
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1810, 181

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SEP 23 1985

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

2  
250

FRANKLIN COUNTY  
FRA.-40-12.82



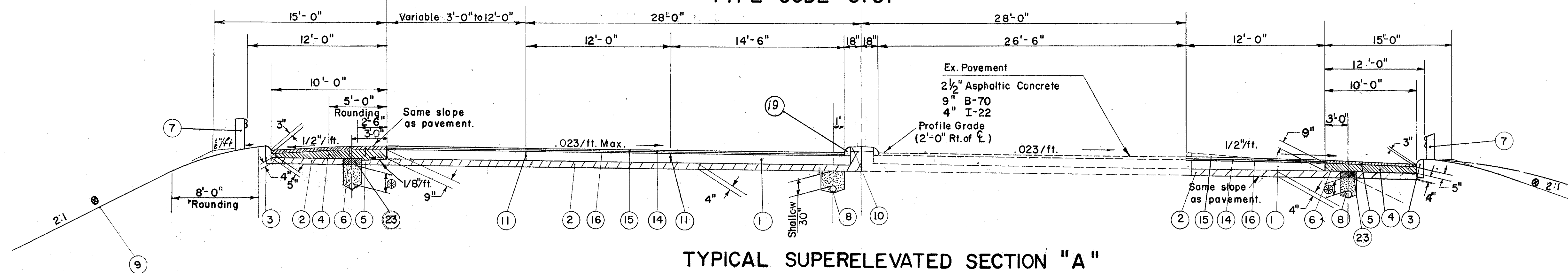


# TYPICAL SECTIONS

T-35 on B-70  
TYPE CODE 6707

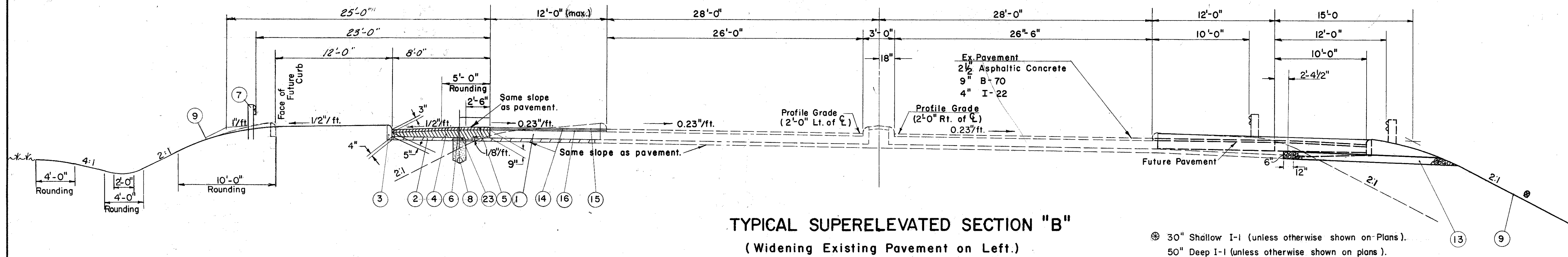
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

FRANKLIN COUNTY  
FRA 40-1282



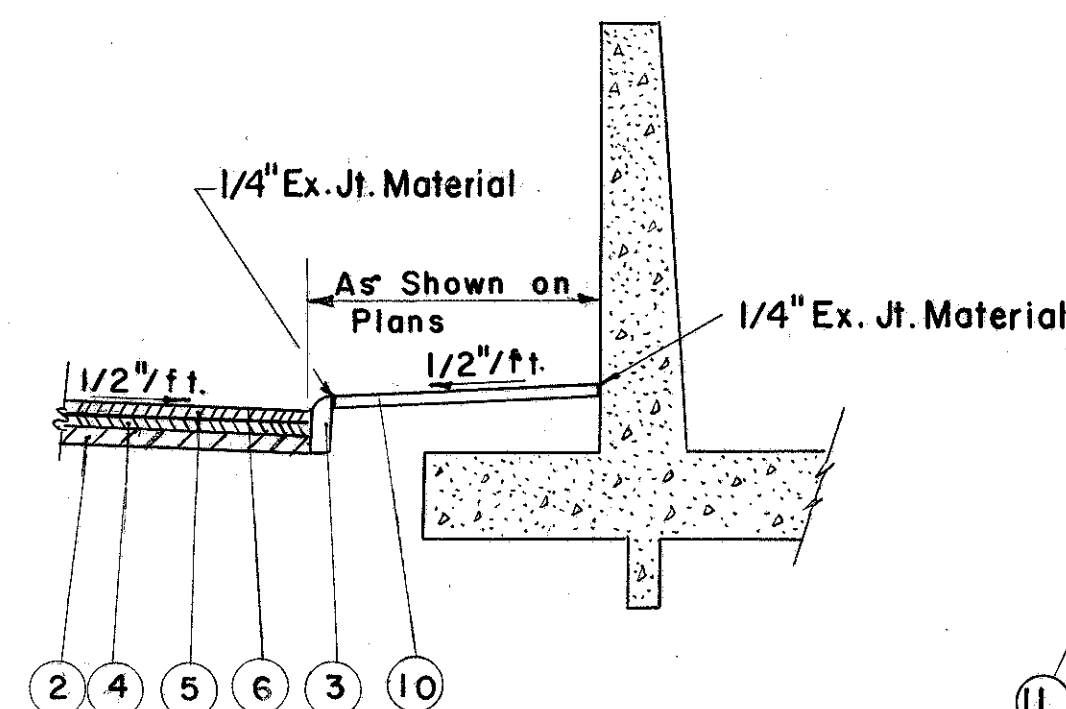
**TYPICAL SUPERELEVATED SECTION "A"**  
(Constructing New West Bound Lanes on Left.)  
(Widening East Bound Lanes on Right.)  
Sta. 50+95.27 to Sta. 55+04.00

Note: For details not shown on this drawing, see  
Standard Construction Drawing number RI-1.

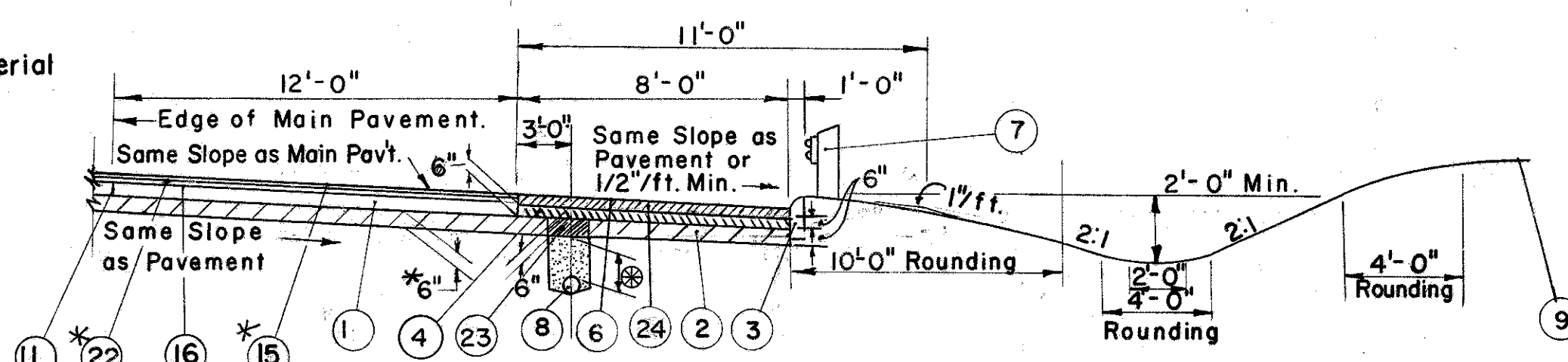


**TYPICAL SUPERELEVATED SECTION "B"**  
(Widening Existing Pavement on Left.)  
(Placing Embankment on Right for Future Pavement.)  
Sta. 43+39 to 49+22.68

30" Shallow I-1 (unless otherwise shown on Plans).  
50" Deep I-1 (unless otherwise shown on plans).



**PAVED SLOPES AT RETAINING WALL**



**ACCELERATION or DECELERATION LANE, TYPICAL SECTION**

\*NOTE: From Sta. 43+39.00 to Sta. 55+04.00 the Type and Thickness of Pavement is the same as the Proposed Pavement in Typical Section "A".

ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	B-70 9" Portland Cement Concrete Base Course	11	Standard Longitudinal Joint.
2	I-22 Subbase Grading "A" or "B" as per plan.	13	I-9 Stone Underdrains (N <sup>o</sup> 2) as shown on plans.
3	I-12 Standard Concrete Curb Type "6"	14	B-35 1 1/4" Asphaltic Concrete Leveling Course (60-70)
4	B-112 Porous Base Course	15	T-35 1 1/4" Asphaltic Concrete Surface Course Type "C" (60-70)
5	B-21 3" Waterproofed Aggregate Base Course	16	T-30 Bituminous Tack Coat, Sec. M5.5, MS-2 or RS-1, or Sec. M-5.2, RC-1, or RC-2, as per. Sec. T-30-02, apply at the rate of 0.10 Gal. per. Sq. Yd.
6	T-31 Bituminous Surface Treatment using 0.008 Cu.Yds. No. 6 Aggregate, Sec. M-3.1 or Sec. M-3.3 (White Limestone) & 0.25 Gal. Bituminous Material per Sq.Yd. (See note in proposal).	19	I-12 Standard Concrete Curb, Type 2-B
7	I-15 Guard Rail Steel Beam Standard Type (Deep)	NOTE:	1. See Pavt. Detail Sheet for Acceleration and Deceleration Lanes (Pavement and Shoulder Transition Widths.)
8	I-1 6" Pipe Class I-3		2. See Typical Section "C" for Ditch Detail
9	L-9 Seeding and Protecting		3. SLOPES (Unless otherwise indicated on X-Section.) For Fills over 10' use 2:1 Slopes. For Fills 10' & under use 4:1 Slopes. For Cuts 10' & under use 3:1 Backslopes. For Cuts over 10' use 2:1 Backslopes.
10	I-21 4" Portland Cement Concrete Median Pavement, Standard Type 1		
22	B-35 1 1/4" Asphaltic Concrete Leveling Course (60-70)		
23	Remove subbase for width of Item I-1 trench and replace with Type 3 backfill material immediately prior to placing the item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1, 6" Pipe, Class I-3.		
24	B-21 6" Waterproofed Aggregate Base Course (Place in 2-3" Courses)		

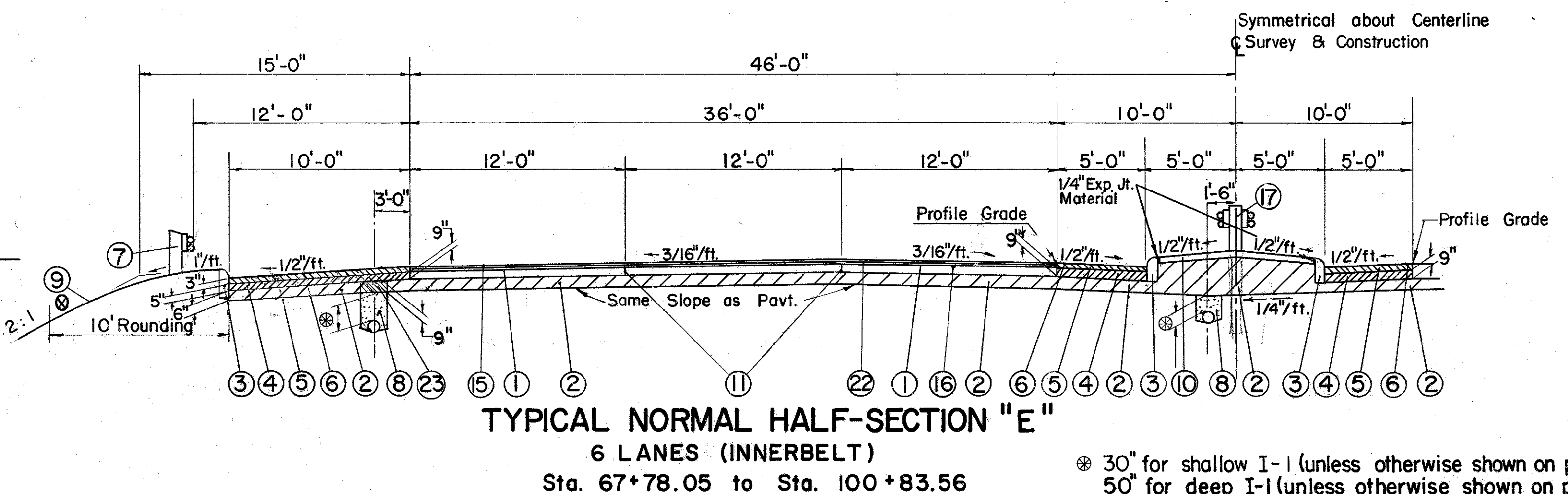
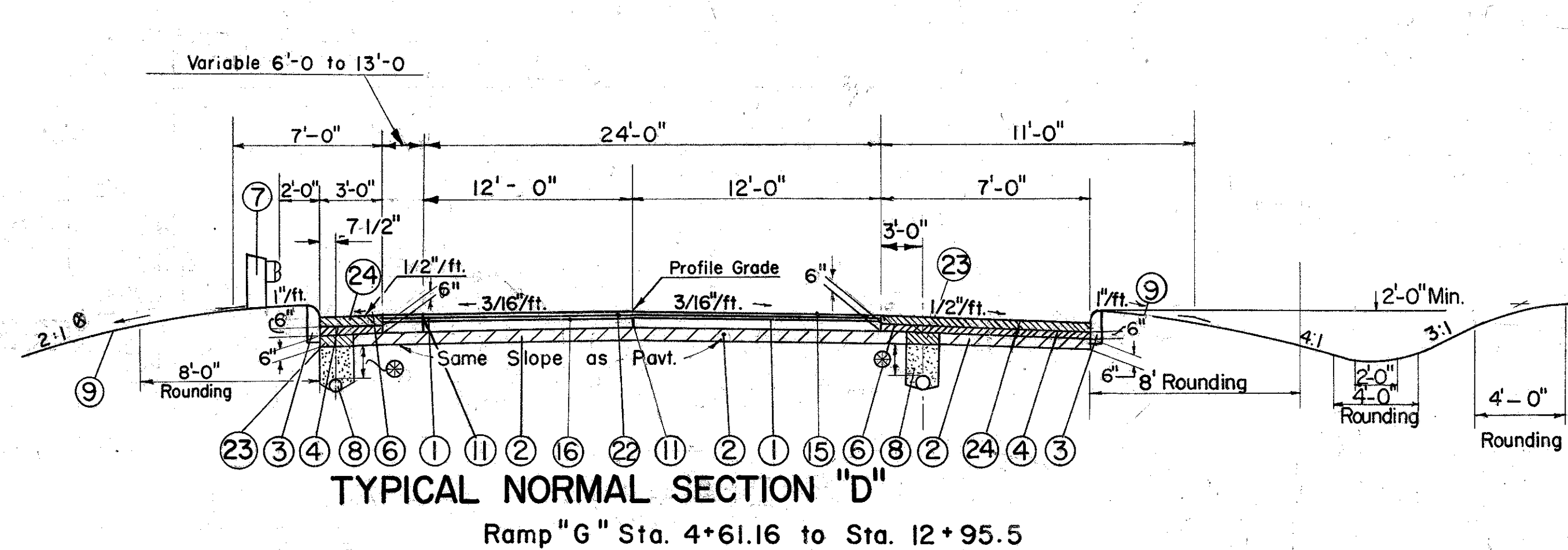
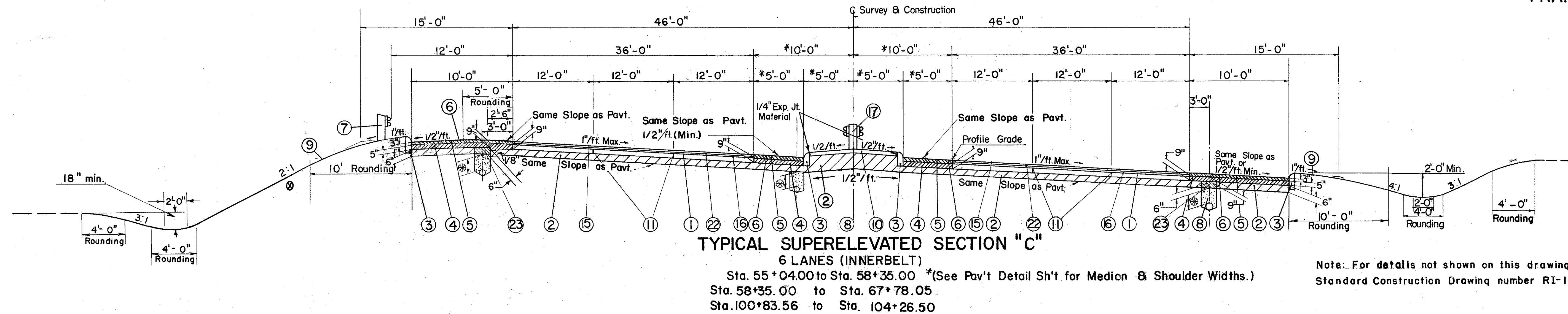
# TYPE CODE 6707

## TYPICAL SECTIONS

### TYPE T-35 ON B-70

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

FRANKLIN COUNTY  
FRA. -40-1282

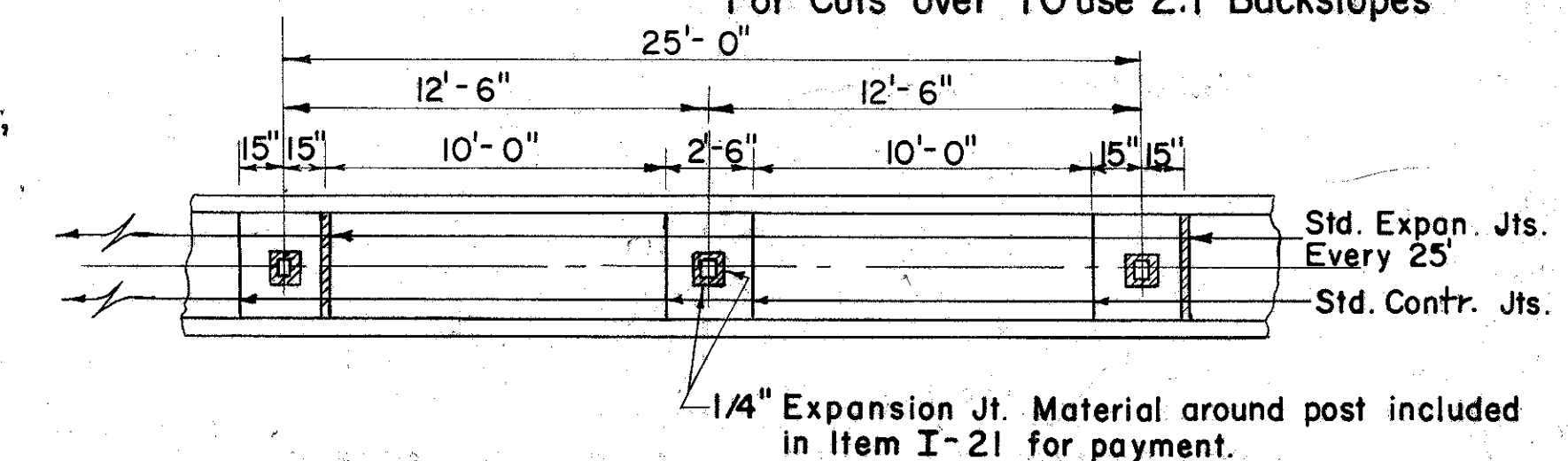


ITEM	DESCRIPTION
①	B-70 9" Portland Cement Concrete Base Course
②	I-22 6" Subbase, Grading "A" or "B" as per plan.
③	I-12 Standard Concrete Curb Type 6
④	B-112 Porous Base Course
⑤	B-21 3" Waterproofed Aggregate Base Course,
⑥	T-31 Bituminous Surface Treatment using 0.008 Cu. Yds. No. 6 Aggregate, Sec. M-3.1 or Sec. M-3.3 (White Limestone) and 0.25 Gal. Bituminous Material per Sq. Yd. (See note in proposal).
⑦	I-15 Guard Rail Steel Beam Standard Type (Deep)
⑧	I-1 6" Pipe Class I-3
⑨	B-21 6" Waterproofed Aggregate Base Course. (Placed in 2-3 Courses)

• Thicknesses shown are "designed" thicknesses as described in Sections T-35.01, B-35.21 and B-21.01.

ITEM	DESCRIPTION
⑨	L-9 Seeding and Protecting
⑩	I-21 4" Portland Cement Concrete Median Pavement, Standard Type 1
⑪	Standard Longitudinal Joint
⑫	T-35 1/4" Asphaltic Concrete Surface Course Type "C" (60-70)
⑬	T-30 Bituminous Tack Coat Sec. M-55, M.S.-2, or RS-1, or Sec. M-5.2; RC-1, or RC-2 as per Sec. T-30.02, apply at the rate of 0.10 gal. per sq. yd.
⑭	I-15 Guard Rail Steel Beam Barrier Type (Deep)
⑮	B-35 3/4" Asphaltic Concrete Leveling Course (60-70)
⑯	Remove subbase for width of Item I-1 trench and replace with Type 3 backfill material immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in price bid per lin. ft. for Item I-1, 6" Pipe, Class I-3

- NOTE: 1. See Detail Sh't for Acceleration and Deceleration Lanes (Pavement and Shoulder Transition Widths)
2. ⓧ See Typical Section "C" for Ditch Sections
3. SLOPES (Unless otherwise indicated on X-Sections):  
For Fills over 10' use 2:1 Slopes  
For Fills 10' & under use 4:1 Slopes  
For Cuts 10' & under use 3:1 Backslopes  
For Cuts over 10' use 2:1 Backslopes



#### JOINT DETAIL AT GUARD RAIL POSTS IN CONCRETE MEDIAN

NOTE: Spacing of expansion and contraction joints in item I-21 Median and Pavement shall, in lieu of the spacing requirements of Sta. Drawing I-21-23, be as detailed above.

NOTE: Backfill around posts in Median shall be granular material, payment for which shall be included in the unit price bid for Guard Rail.



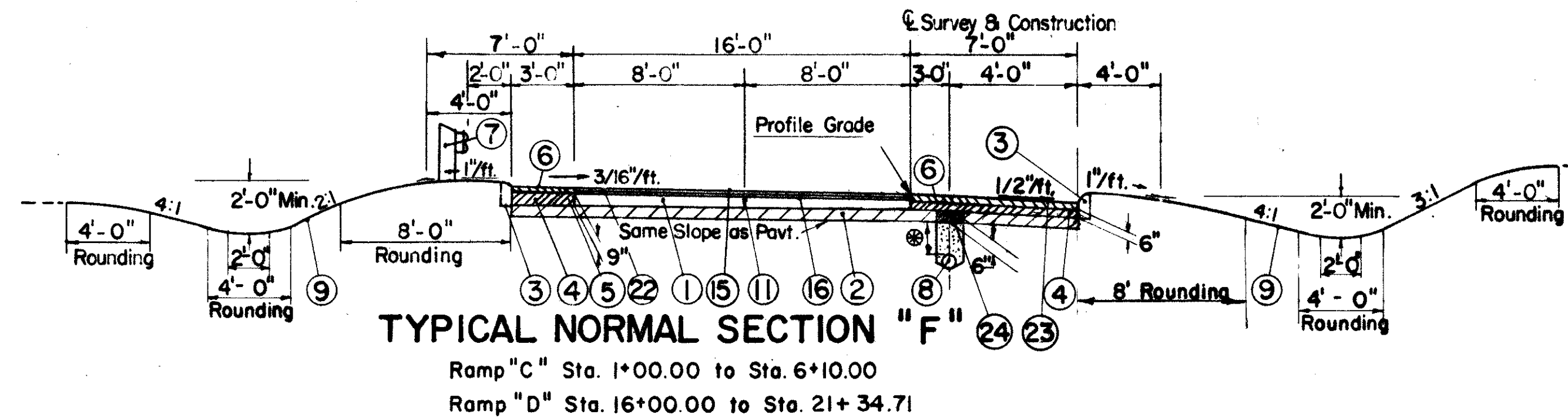
# TYPICAL SECTIONS

TYPE T-35 ON B-70  
TYPE CODE 6707

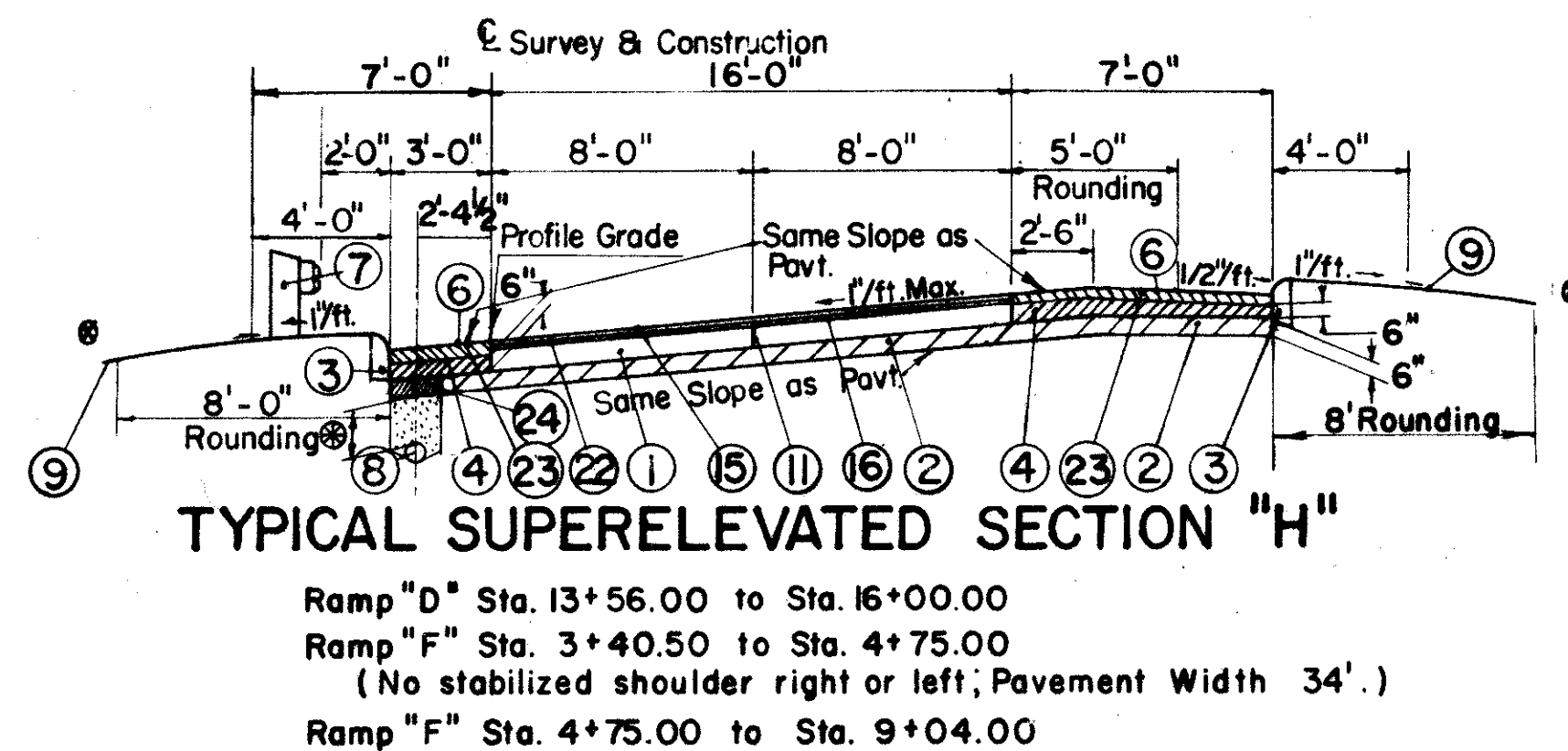
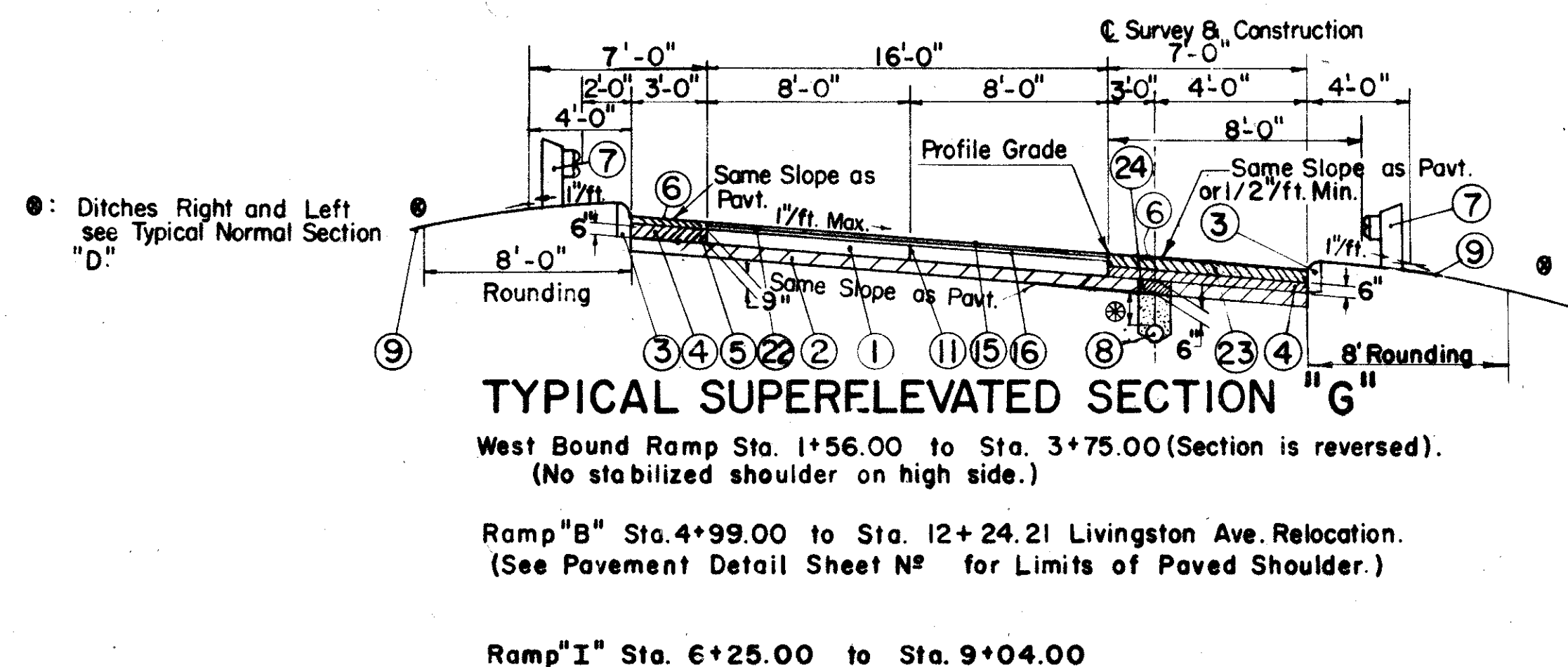
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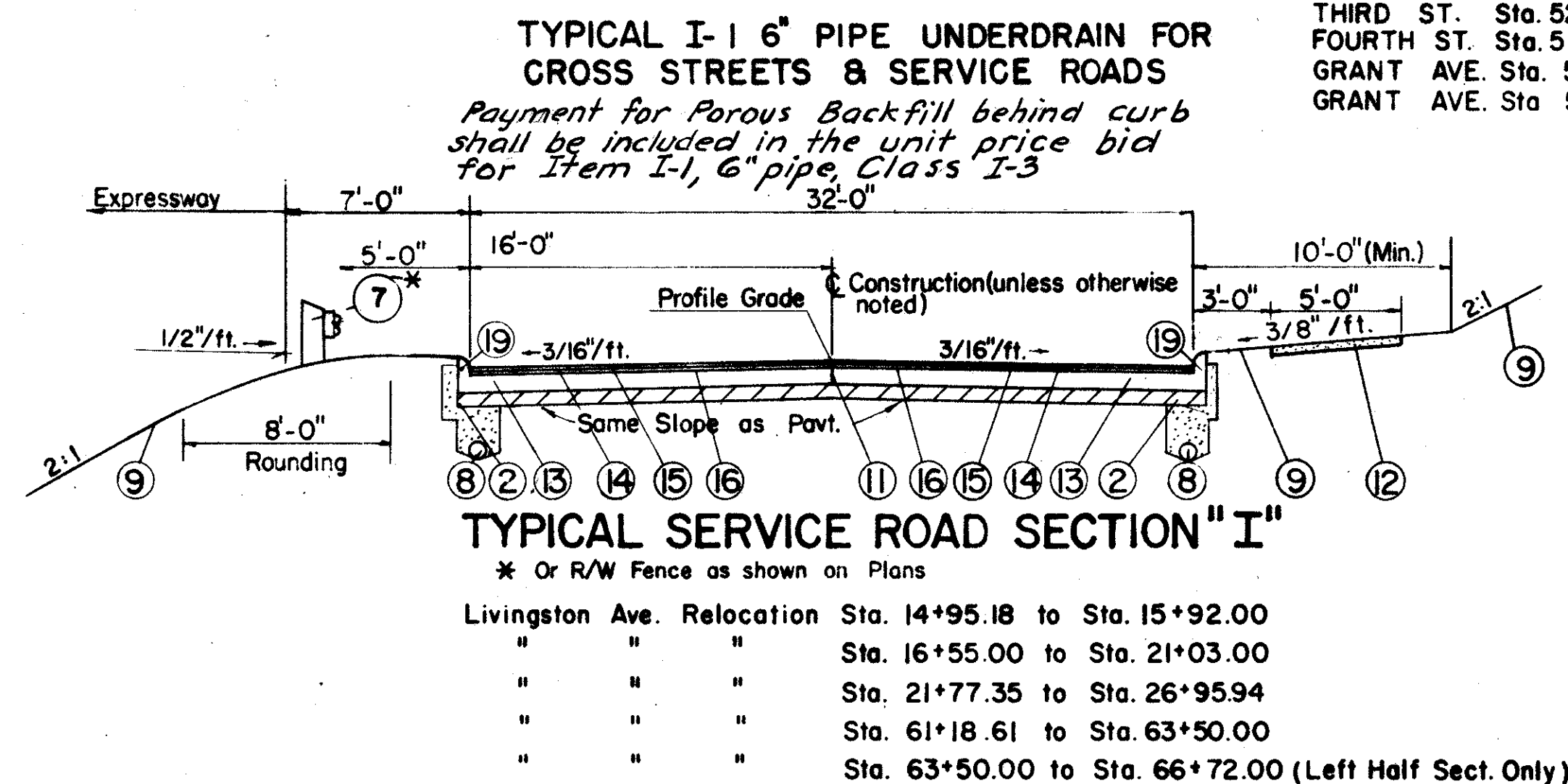
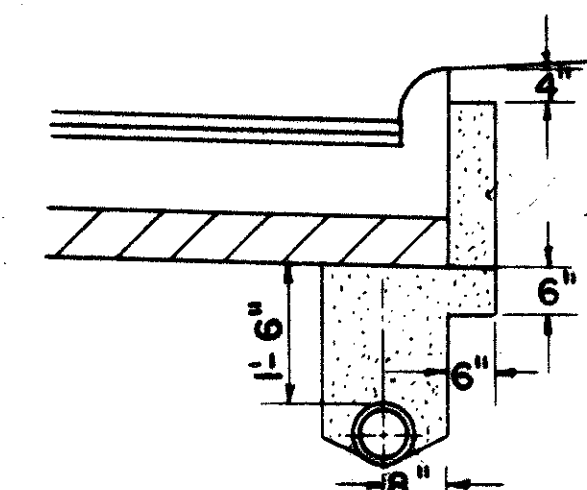
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Note: For details not shown on this drawing, see  
Standard Construction Drawing number RI-1.

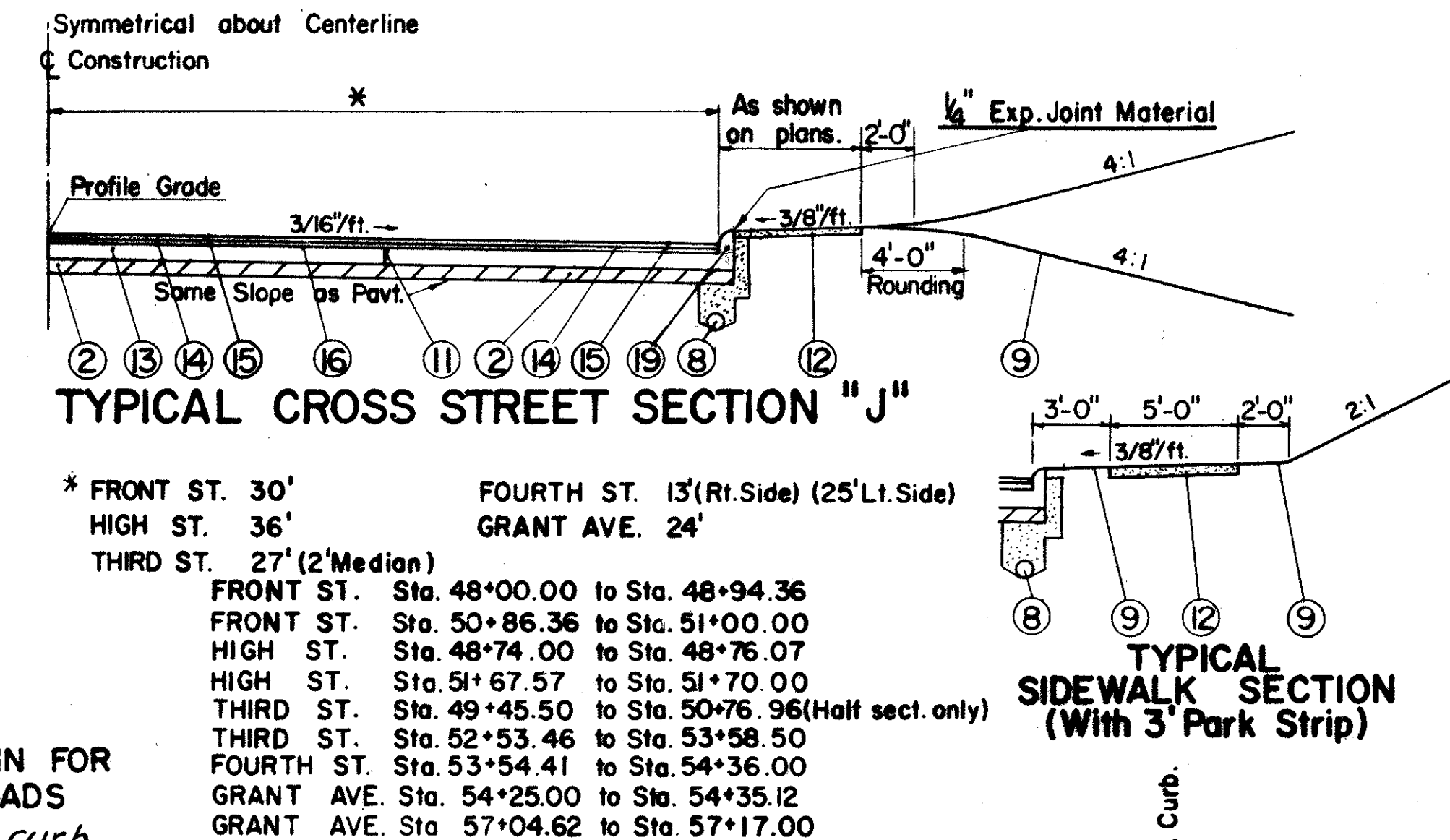


24 Remove subbase for width of Item I-1 trench and replace with Type 3 backfill material immediately prior to placing the Item B-112 Porous Base Course. Cost shall be included in the price bid per lin. ft. for Item I-1, 6" Pipe, Class I-3.

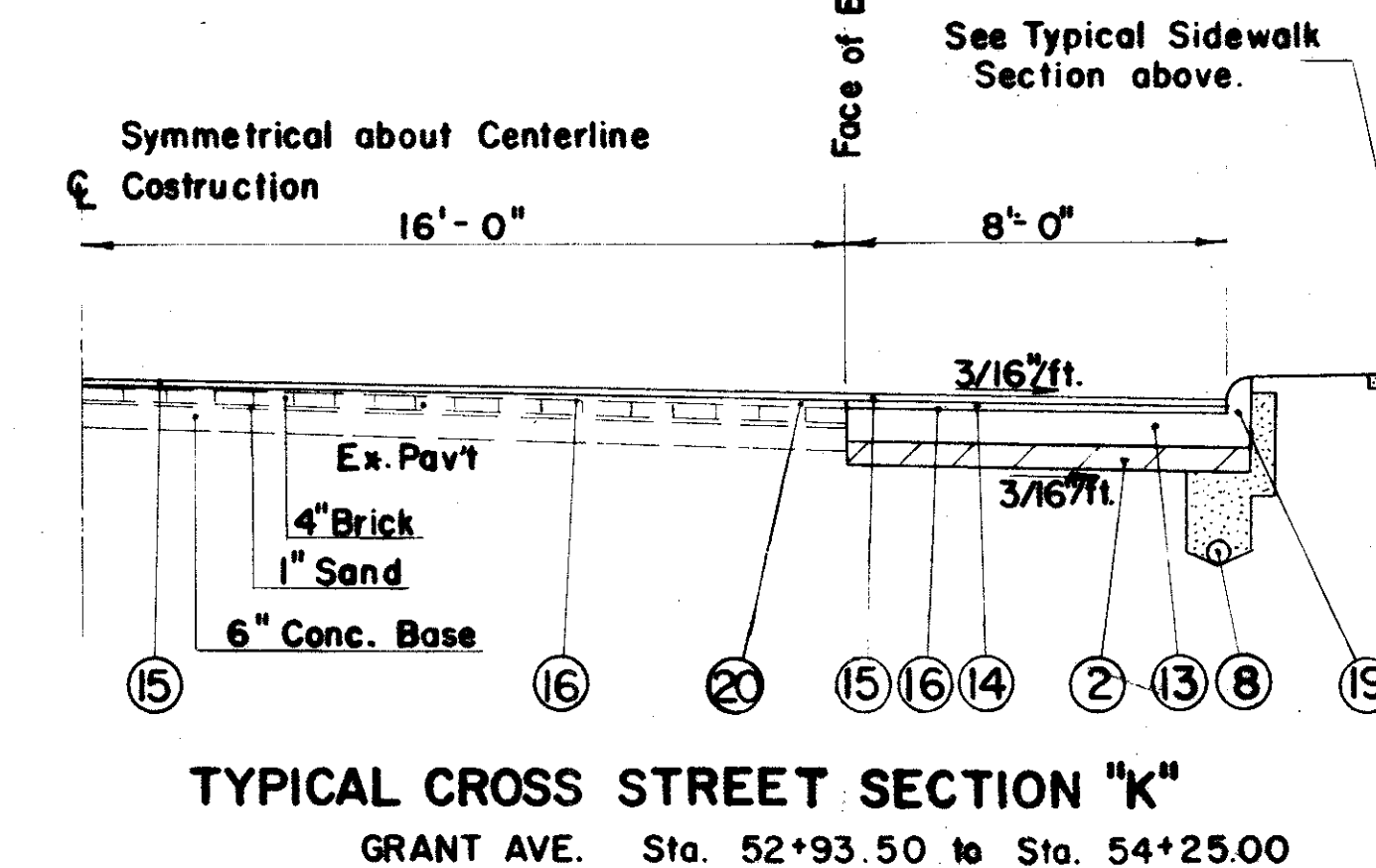


30" Shallow I-1 (unless otherwise noted on Plans).  
50" Deep I-1 (unless otherwise noted on Plans).

ITEM	DESCRIPTION
1	B-70 9" Portland Cement Concrete Base Course
2	I-22 6" Subbase Grading "A" or "B" as per plan.
3	I-12 Standard Concrete Curb Type "6"
4	B-112 Porous Base Course
5	B-21 3" Waterproofed Aggregate Base Course,
6	T-31 Bituminous Surface Treatment using 0.008 Cu.Yds. No. 6 Aggregate, Sec. M-3.1 or Sec. M-3.3 (White Limestone) & 0.25 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal).
7	I-15 Guard Rail Steel Beam Standard Type (Deep)
8	I-1 6" Pipe Class I-3
9	L-9 Seeding and Protecting
11	Standard Longitudinal Joint
12	I-13 4" Portland Cement Concrete Sidewalk



**TYPICAL SIDEWALK SECTION (With 3' Park Strip)**



ITEM	DESCRIPTION
13	B-70 8" Portland Cement Concrete Base Course
14	B-35 1/4" Asphaltic Concrete Leveling Course (60-70)
15	T-35 1/4" Asphaltic Concrete Surface Course Type "C" (60-70)
16	T-30 Bituminous Tack Coat, Sec. M 5.5, MS-2, or RS-1, or Sec. M 5.2, RC-1 or RC-2, as per Sec. T-30.02, apply at the rate of 0.10 Gal. per Sq. Yd.
23	B-21 6" Waterproofed Aggregate Base Course (Placed in two 3" courses).
19	I-12 Standard Concrete Curb Type 2-B
20	B-35 0" to 1/2" Variable Thickness Asphaltic Concrete Leveling Course (60-70)
22	B-35 1/4" Asphaltic Concrete Leveling Course (60-70)

Thicknesses shown are "designed" thicknesses as described in Sections T-35.01, B-35.01, and B-21.01.

SLOPES (Unless otherwise indicated on X-Sections)  
For Fills over 10' use 2:1 Slopes  
For Fills 10' & under use 4:1 Slopes  
For Cuts 10' & under use 3:1 Backslopes  
For Cuts over 10' use 2:1 Backslopes



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## GENERAL

### Field Office

The Contractor shall, in accordance with Sec. S-0.01 (b), provide for the exclusive use of the State's employees, a suitable field office (with sanitary facilities) having a minimum of 500 sq. ft. of floor space (exclusive of sanitary facilities). The Contractor shall have a telephone installed and maintained in this field office during the construction of this project. The Contractor shall also provide and install wiring and outlets suitable for connecting electric lights and office equipment in the field office and provide 110-volt alternating current to the office during the entire period of construction of this project. Cost of maintaining the telephone shall not include the cost of long distance telephone calls made by State personnel.

### Elevation Datum

All elevations are based on U.S.G.S. datum.

### Street Marker & Light Standard Removal

The City of Columbus will remove all street marker standards, street light standards, and other traffic control devices not the property of the State of Ohio, within the work limits.

Section markers that will be removed by construction shall be protected by the Contractor as per Section G-7.09 until they can be witnessed, referenced and reset by the Engineer.

### Estimated Quantities

Specific locations and usage of estimated quantities set up on this plan to be used "as directed by the Engineer" shall be made a matter of record by incorporation into the final change order governing completion of this project.

### Utilities

The Contractor shall notify at least 5 days before breaking ground all Public Service Corporations having wire, poles, pipe, conduits, manholes or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans. Street markers, light standards, and traffic control devices excepted as per note above.

### Underground Utilities

The location of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct, but the State of Ohio makes no guarantees as to their accuracy or completeness.

### Utility Ownership

The Ohio Bell Telephone Company, Columbus, Ohio.  
The Ohio Fuel Gas Company, Columbus, Ohio.  
Columbus & Southern Ohio Electric Company, Columbus, Ohio.  
City of Columbus, Division of Water, Columbus, Ohio  
City of Columbus, Division of Sewerage, Columbus, Ohio  
City of Columbus, Division of Electricity, Columbus, Ohio.  
Columbus Transit Company, Columbus, Ohio.

### Utility Adjustment

Any or all work required for Public or Private Utilities will be done by and at the expense of their respective owners, unless otherwise noted on these plans.

### Replacement

The Contractor shall replace, at his own expense, any item not specifically listed for removal that is damaged or destroyed by his operations.

### Design Speed

The geometrics for this project have been planned for a design speed of 50 miles per hour on the E.B. and W.B. lanes from Sta. 50+75 to Sta. 58+50 and 60 miles per hour from Sta. 58+50 to Sta. 104+24.50.

### Construction Layout Stakes

See note in proposal describing the work included in this lump sum pay item.

## ROADWAY

### Sidewalks

Where new sidewalk is to meet existing sidewalk, the new sidewalk shall be built to the existing joint. Payment shall be made on final measurements.

### Sidewalk Removal

The Item E-8, Removal and Disposal of Existing Sidewalk, includes only the removal of concrete sidewalk within the street right of way. Where new sidewalk is replacing existing sidewalk, the removal of the existing sidewalk is included in the Item I-13 sidewalk.

### Rounding of Corners Shown on Cross Sections

The rounded corners shown on Standard Drawing RI-1, as modified by the typical sections, apply to all cross sections, even though otherwise shown on these plans.

### Existing Non-Rigid Pavement

Removal and disposal of existing non-rigid pavement, unless otherwise indicated on these plans, shall be measured and paid for as Item E-1, Roadway Excavation.

Within the limits of construction where the existing flexible pavement will have less than six (6) inches of fill placed upon it, or where it is noted on the plans for pavement to be scarified, the pavement shall be thoroughly scarified for its full depth, mixed with sufficient soil and properly recompacted to insure the elimination of any planes of separation between it and the embankment placed thereon. Payment for scarification as described above shall be included in the unit price bid for Item E-1, Roadway Excavation.

### Existing Pavement (Outside Limits of Construction)

After the existing pavement has been removed under Pavement Removal, Item E-8, the old roadway shall be plowed, harrowed and dragged to a smooth grade, the old ditches filled and the entire area left in a neat condition, ready for seeding. Cost of the above work shall be included in the price bid for Pavement Removal, Item E-8. Areas shall then be seeded and mulched, Item L-9.

### L-9 Commercial Fertilizer

All areas to be seeded under Item L-9, or sodded under Item L-10, shall have commercial fertilizer (12-12-12) applied at the rate of twenty (20) pounds per 1,000 square feet.

### I-15 Guard Rail as per plan

The cost of the extra guard rail posts (6'-3" centers) including materials and installation shall be included in the unit price bid for I-15 Guard Rail, Steel Beam Standard Type (deep) as per plan. The face of the Guard Rail shall be 2 ft. from the face of the curb unless otherwise noted.

### Seeding and Protecting

Quantities for seeding Item L-9 are calculated for the entire soil area not sodded within the Right-of-Way Line on Ramps and the Expressway and to the Work limits on the cross streets and service roads. The rate of seeding shall be three (3) pounds per 1,000 square feet and the seed mixture shall be as follows:

- 50% Kentucky Bluegrass (Poa Pratensis)
- 10% Kentucky 31 Fescue (Festuca Elatior)
- 30% Creeping Red Fescue (Festuca Rubra)
- 5% Red Top (Agrostis Alba)
- 5% White Dutch Clover (Trifolium Repens)

### Basements

Before backfilling all basements within the R/W limits, slope easements, and work agreement lines, all floors shall be broken or removed and all drains plugged, as specified in Sec. E-1.03(d) of the Standard Specifications.

### Guard Rail Removal

The removal of any guard rail or guard rail posts lying within the limits of roadway excavation or embankment (and not specifically paid for under a separate item) is included in the Contract unit price bid for Roadway Excavation. All resulting materials shall become the property of the Contractor and shall be disposed of by him at no extra cost to the State, except that the steel rail on all existing steel beam type or steel cable on steel cable type guard rails shall be stored on the right-of-way for disposal by the City.

### Guard Rail Post Anchors

At locations where pier footings interfere with installation of full length guard rail posts, short posts shall be provided and shall be anchored in accordance with the Standard Drawing No. I-15, No. 6. Cost of providing and installing necessary anchors shall be included in the unit price bid per lineal foot for guard rail, Item I-15.

### Guard Rail Flares

Where proposed guard rail flares are constructed of rail elements which have not been fabricated exactly to fit the curvature shown on the plans, the two end posts of each flared section shall be encased in a minimum 4-inch thickness of Class "E" concrete for the full depth of the post below the ground line. Payment for encasement, if required, shall be included in the unit price bid for the guard rail.

### Guard Rail Posts

The I-15 guard rail Steel Beam Barrier Type (deep) in the Median does not include the Quantity around the piers. This is a separate Item I-15 guard rail Steel Beam Standard Type (deep).

### Item I-15 Guard Rail

In lieu of the pressure treatment required for wood posts by standard construction drawing I-15 No. 2-A, all wood guard rail posts furnished on this project shall be Pentachlorophenol pressure treated for the entire length of the post.

### I-15 Guard Rail for Temporary Runarounds

This item shall include furnishing, placing and removal of the guard rail including all labor and materials. Used guard rail steel beam (shallow or deep) may be used in lieu of new guard rail, subject to the approval of the Engineer.



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## Excavation for Item T-70 or B-19 for Drives

Excavation for Item T-70 or B-19 has been included in Earthwork Quantities when same is in "Cut". Where drives are in "Fill", excavation for T-70 or B-19 material shall be made by the Contractor at his own expense if he builds the embankment up to finish grade before placing the T-70 or B-19 material.

## Drive Locations

The locations of the drives as shown on the plans may be relocated as approved by the Engineer as long as they are kept out of the LA R/W Boundary and at no additional cost for the relocation.

## Removal of Trees and Stumps

All trees and stumps lying within the construction limits of this project shall be removed under the lump sum price bid for Item E-9, Removal of Trees and Stumps, except that those trees and stumps for which protection and preservation work is indicated elsewhere in these plans shall not be removed.

The estimate below is approximate and the State reserves the right to order the removal of additional trees or stumps outside of the limits of construction but within the right of way and/or easement lines. Payment for the removal of these additional trees or stumps shall be included in the lump sum price bid for Item E-9, Removal of Trees and Stumps.

The following is an approximate estimate of the number of trees and stumps to be removed:

TREES	STUMPS
12" to 18" - 44	2
18" to 24" - 20	0
24" to 30" - 10	1
30" to 36" - 5	
36" to 42" - 3	
42" to 48" - 0	
Over 48" - 2	

## Federal Aid Construction Identification Signs

The Contractor shall furnish, erect, maintain, and subsequently remove federal aid construction identification signs at each of the following locations:

- (1) 49+00 (rt.) Main centerline
- (2) High St. 47+55 (rt.)  
52+15 (lt.)

Sign details shall be as specified on standard drawing FACI-1 "Code N-43(3)-144" and the signs shall be erected in accordance with standard drawing FACI-2. Additional requirements shall be in accordance with notes in the proposal.

## PAVEMENT

### Pavement Joint Symbols

L	Standard Longitudinal Joint.
LK	Longitudinal Key Joint without tie bars.
E	Standard Expansion Joint.
(E)	Expansion Joint without Tie bars, 2' minimum length.
C	Construction Joint.

## Superelevation

Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in the area indicated on pavement details.

## Fence on Retaining Walls

Care shall be exercised to provide for possible conflict between cross arm supports for lamp standards and fence that is to be erected on top of retaining walls, such as at station 15+21 Ramp D and 86+84 Rt. Wherever this occurs, a 4" gap shall be provided in the fence at the direction of the Engineer.

## Pavement Elevations

All pavement edge elevations are at the face of the curb unless otherwise specified.

## Dimensions

All dimensions shown are to the face of curbs.

## Curb Replacements (Areas not shown on the plans)

The following quantities shall be used when the curb and adjoining pavement area are reconstructed:

E-8	Removal & Disposal of Exist. Curb	200 L.F.
E-8	Removal & Disposal of Exist. Pavement	25 S.Y.
B-70	8" Portland Cement Concrete Pavement	28 S.Y.
I-12	Standard Type 2-B Curb	200 L.F.
T-35	1-1/4" Asphaltic Concrete Surface Course (60-70) Type "C"	1 C.Y.
B-35	1-3/4" Asphaltic Concrete Leveling Course (60-70)	2 C.Y.
T-30	Tack Coat	3 Gal.

## Pavement Joints

Although specific locations of certain expansion joints have been detailed on this plan, no waiver of the specifications and standard drawing requirements is intended and expansion joints shall be provided at all major structures as required by Standard Construction Drawing T.J.

## Hot Longitudinal Joint

Asphaltic concrete leveling and surface courses shall be laid using two or more bituminous pavers operating in parallel lanes, one just ahead of the other, so that a hot longitudinal joint will be secured between the through lanes. At no time shall one of the pavers be farther ahead of the other paver than the distance the normal load being hauled will cover. The loads of mixture as they arrive shall be alternated between the pavers. Rollers performing the initial rolling operation on the first lane laid shall in no case be allowed closer than 12 inches to the longitudinal joint until the adjacent lane is laid.

## T-30 Tack Coat

Although this item has been estimated for use on the entire existing bituminous pavement area to be resurfaced, it shall be used only on dry or checked pavement areas where specifically directed by the Engineer.

Pay quantities for this item shall be determined by final measurement.

## Flared Approach Slabs

Place additional A-bars in flared areas by maintaining the standard spacing along the wide end of the slab and fanning the bars in toward the bridge as directed by the Engineer.

## ITEM S.S. CE-101.04-COMPACTION USING HEAVY PNEUMATIC TIRED ROLLER

An estimated quantity for this item has been included in the General Summary, for use as directed by the Engineer, in proof rolling of all mainline ramp subgrade, except for areas where rock or shale is encountered. The pneumatic tired roller shall be operated at 50 tons gross load for the final proof rolling.

## Sequence of Construction Operations

Underdrains shall be installed and back-filled to subgrade elevation, immediately prior to construction of the subbase, except that, where subsurface conditions are such that improvement of an unstable subgrade can be accomplished through the drying action of deep underdrains, the project engineer may authorize or require the contractor to delay the construction of the subbase as necessary. The subbase shall then be constructed under the concrete base area and extended out to cover the porous backfill for the underdrain. Pavement shall be constructed.

After the subbase in the shoulder area is in place and compacted as specified, and immediately prior to placing the porous base course, the material located above and within the underdrain trench shall be removed to the depth necessary to expose clean Type 3 backfill. The trench so excavated shall be backfilled with new Type 3 backfill material. If after testing the subbase material for composition in the shoulder area, it is found that removal of contaminated material from the surface is necessary, such material shall be replaced with material meeting the requirements of Item B-112, Porous Base Course at the expense of the Contractor. Porous Base Course shall then be constructed and construction of the Water-proofed Aggregate course shall follow immediately.

## Embankment Surcharge

Embankment surcharge from Sta. 47+90 to Sta. 53+10 as shown on the cross-sections shall be placed and compacted up to the finished spill-thru slope and to the top of the earth surcharge, as indicated on the Roadway Cross Sections, before any construction is initiated on the pier or abutment construction. The Engineer shall be satisfied that all settlement of the embankments and existing abutments has occurred before abutment construction is permitted by placing suitable hubs in the embankments and establishing control points on each end of the existing abutments. The Engineer shall make periodic observations of the hubs and control points.

It is anticipated that construction may proceed on the existing or proposed abutments after a period of nine months.

The embankment material is included in the Embankment Quantities and shall be removed under the Unit Bid Item for E-1, Roadway Excavation, as per plan.

## I-22 Subbase, Grading "A" or "B", as Per Plan

The material furnished for this item shall meet the requirements of Grading "A" or "B" of Sec. I-22.02 except that for either grading no more than 10% of the material shall pass a No. 200 sieve after all operations of placing and compaction have been completed.

## I-22 and Class I-3 Pipe

Where clean natural sand or gravel is encountered and essentially complies with the requirements of I-22.02, it shall be left in place and the subbase nonperformed in these areas as directed by the Engineer.

If the granular soil appears to have adequate interval drainage, the underdrain pipe shall be nonperformed, as directed by the Engineer.

The approximate limits of the natural sand and gravel are as follows:

Station 58+00 to Station 70+00  
Station 95+00 to Station 100+00



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## DRAINAGE

### Location and Size of Pipes

The location, type, depth and size of all existing pipes are shown as near exact as the available information will permit. The State will not be responsible for any variations found during construction.

### Connections to Existing Pipes

At places where the plans provide for proposed drainage pipe to be connected to existing pipes, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade, before he starts to lay the proposed pipe. The cost of this operation shall be included in the unit price bid for the pertinent pipe item.

### Items L-10 Sodding & I-14 Paved Gutter

These items are provided on the plans for erosion control. The Engineer shall check and make adjustments in location and quantities for these items where indicated by field conditions during construction.

### Special Ditches

For special ditch grades, see Cross Sections.

### Inlet Location

The location of an inlet as shown on the plans is the face of curb and the center of M.H. cover. The elevation shown on the plans is the pavement elevation minus the 2" depression at the face of curb opposite the center of the M.H. cover.

### Catch Basin Location

The location of a C.B. as shown on the plans is the center of grate. The location of the No. 6 C.B. as shown on the plans is to the face of curb.

### Existing Water Wells & Cisterns

Dug wells & cisterns encountered within the work limits shall be filled with rock or granular material. Drilled well casing shall be removed to an elevation approximately three feet below finished grade and covered with a precast concrete slab or a large rock. Prior to construction of embankment, Contractor shall remove any masonry surrounding a well or cistern, within three feet of finished grade. Pumps and other appurtenances shall become the property of the Contractor and shall be disposed of by him. The cost of capping or filling of wells or cisterns shall be included in the unit price bid per cubic yard of Roadway Excavation, Item E-1, for payment.

### Existing House Drains

All existing house drains including sanitary, yard, roof, basement, or other similar drain pipes now in use which are disturbed because of the highway improvement shall be replaced by the Contractor; if the sewer is to be abandoned satisfactory house connections shall be provided to another sewer. Where an existing house is to be removed, the up-grade end of the existing house connections shall be sealed and accurately referenced. All the above, except sealing, shall be included with and paid for with the unit price bid for the items listed herein. An estimated amount of pipe and an estimated number of pipe specials have been added to make house connections that may be required. See the following:

HOUSE DRAINS			
Item	Description	Unit	Quantity
I-5	6" Pipe Class B-1, Premium Joints San.	L.F.	500
I-5	6"x8" Wye Pipe Special, Class B-1, Pre. Jt.	Each	3
I-5	6"x12" Wye Pipe Special Class B-1, Pre. Jt.	Each	3
I-5	6"x15" Wye Pipe Special Class B-1, Pre. Jt.	Each	3
I-5	6"x21" Wye Pipe Special Class B-1, Pre. Jt.	Each	3

### Item I-1

Reinforced concrete radius pipe

shall be manufactured to meet the requirements of reinforced concrete pipe Section M-6.6 (b), Section M-6.6 (d), or

Section M-106.6 (d), respectively, except that the ends of the pipe shall be beveled to fit the alignment shown on the plan.

### Item Special - Concrete Cradle for Pipe

This item shall consist of constructing concrete cradles for Item I-1 Pipe in accordance with details shown on the plans in amounts and at locations specified. Concrete shall be Class "E" meeting the requirements of Item S-1. Excavations and backfill shall be in accordance with the provisions of Item E-2 except as otherwise specified. The footage to be paid for shall be the actual number of linear feet of concrete cradle for each pipe size specified, measured in place along the centerline of the sewer, completed and accepted. The footage so measured shall be paid for at contract unit price per linear foot bid for "Item Special - Concrete Cradle for Pipe", which price and payment shall constitute full compensation for furnishing, hauling, and placing all materials, removal and disposal of excavation below and outside of normal limits for Item I-1 Pipe, backfill, water, concrete, and for all labor, equipment, tools, and incidentals necessary to complete this item.

### Item Special - Concrete Backing for Pipe

This item shall consist of constructing concrete backing for Item I-1 Pipe in accordance with details shown on the plans in amounts and at locations specified. Concrete shall be Class "E" meeting the requirements of Item S-1. Excavation and backfill shall be in accordance with the provisions of Item E-2 except as otherwise specified. The footage to be paid for shall be the actual number of linear feet of concrete backing for each pipe size specified, measured in place along the centerline of the sewer; completed and accepted. The footage so measured shall be paid for at the contract unit price per linear foot bid for "Item Special - Concrete Backing for Pipe", which price and payment shall constitute full compensation for furnishing, hauling, and placing all materials, removal and disposal of excavation outside of normal limits for Item I-1 Pipe, backfill, water, concrete, and for all labor, equipment, tools, and incidentals necessary to complete this item.

### I-8 Catch Basins Reconstructed to Grade, as Per Plan

This item shall consist of the careful removal of the existing catch basin casting and reconstruction of the catch basin the new grade, conforming as nearly as practical to the existing dimensions and type of construction, using the salvaged catch basin casting.

### I-8 Manhole Reconstructed to Grade, as Per Plan

This item shall consist of the careful removal of the existing manhole down to the spring line and reconstruction of the manhole to the new grade, conforming as nearly as practicable to the existing dimensions and type of construction and using the salvaged manhole frame and cover.

### Removal of Existing Pipe

The removal of all existing pipe drains within the limits of proposed excavation items shall be included for payment in the unit prices bid for the respective excavation items, unless otherwise itemized in the plans.

### Existing Sewers

The Contractor shall exercise due care to keep debris out of existing City sewers during construction.

### Trench Backfill

Pipe trenches shall not be backfilled above the elevation of the proposed ground shown on the drainage profiles.

### Plugging Pipe Ends

The ends of the pipe or tile lines intercepted by earthwork operations shall be effectively blocked and covered. Broken pieces and portions of pipe or tile shall be removed until a whole length is encountered.

Existing pipes or new pipe stubs for future connections 15" and under shall be plugged with a vitrified or concrete stopper. Existing pipes or new pipe stubs for future connections over 15" shall be bulkheaded, using a wall of bricks and mortar.

The wall thickness shall be as follows:

Pipe Size	Wall Thickness
18" to 30"	8" (Under 12' Cover)
	12" (12' & over of Cover)
36" to 60"	12"

Payment for the above work not included in the pipe item shall be included in the unit price bid for Item E-1, Roadway Excavation or Pipe Item.

### No. 5 Catch Basin (Modified)

The grate elevation is the top of grate on the upstream end of the catch basin. The sod strips shown on the standard drawing are to be deleted and 2 - 48" strips of jute matting shall be placed for a distance of 150 ft. upstream from the catch basin. The grate bars shall be spaced 3" on centers.

### Premium Joints for Sanitary Sewers (See Note in Proposal)

Where Item I-1, Sanitary Sewers with Premium Joints are specified, one of the joint sealing methods outlined below shall be used.

- Rubber gasket joints: The joints shall be sealed with rubber gaskets, together with full diaphragms.
- Pre-cast plastisol joints: The joints shall be plant applied plastisol joints together with full diaphragms.

### Springs

Springs are to be intercepted with a 6" pipe as shown in the special details, when encountered in the excavation.

### AERIAL CABLES:

The Contractor shall use utmost care when operating cranes or other large equipment in the vicinity of aerial cables, especially in South High Street, South Fourth Street, and South Grant Avenue.



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## TRAFFIC MAINTENANCE

Mound St. Expressway Traffic (Eastbound and Westbound at the Short St. Structure)

- Eastbound and Westbound traffic (2 lanes each) shall be maintained until the new portion of the Short St. structure is open to traffic.
- Westbound traffic (1 lane) shall then use the new portion of the structure and the eastbound (2 lanes) continue to use the existing E.B. lanes when the existing structure carrying the original westbound traffic is being reconstructed.
- When the existing structure carrying the original westbound traffic is reopened to traffic, eastbound traffic (1 lane) shall be detoured over onto it and westbound traffic (1 lane) shall continue to use the new portion of the structure while the remaining portion of the structure is reconstructed.

Wall St.

Wall St. from Sta. 49+00 to Fulton St. shall be closed to traffic when deemed necessary by the Engineer.

High St.

High St. shall be closed to traffic after the High St. temporary runarounds are open to traffic.

Pearl St.

Pearl St. from Sta. 49+25 to Fulton St. shall be closed to traffic when deemed necessary by the Engineer.

Third St. and Fourth St.

Third St. and Fourth St. shall be closed to traffic after the temporary runaround on Lazelle St. is open to traffic.

Second St.

Two-way traffic shall be maintained at all times except when the 96" sewer is being constructed. At this time (not to exceed 14 days) ingress and egress shall be provided.

Front St.

Front St. shall be closed to traffic after the Front St. Temporary Runaround is open to traffic. Four lanes (two-way) traffic shall be maintained at all times. The connection of the Mound St. Expressway (Eastbound) to the Front St. detour shall be closed when Ramp "B" is open to traffic.

Front St. shall be reduced to two lanes (two-way) for a period not to exceed 24 hours while it is being resurfaced.

Lazelle St.

Lazelle St. from Livingston Ave. to Fulton St. shall be closed temporarily until the Third-Fourth temporary runaround is constructed. The temporary runaround (Lazelle St.) shall be closed to traffic when the structures on Third and Fourth Sts. are open to traffic.

SHORT ST.

Two way traffic shall be maintained at all times during the construction of Structure No. Fra. 40-1279.

The Contractor shall safe guard the traveling public, on Short St. by providing platforms, nets, or other suitable protection above the traveled lanes. A minimum vertical clearance of 13'-0" and 20'-0" roadway width shall be maintained at all times.

Fifth Street

Fifth St. from Station 52+62 to Fulton St. shall be closed to traffic when the Grant St. structure is open to traffic.

Sixth St.

Sixth St. from Station 53+78 to Fulton St. shall be closed to traffic when deemed necessary by the Engineer.

A 10-foot, hard surface sidewalk with fence on both sides shall be constructed at Sixth St. from Sta. 53+85 (Sixth St.) to Fulton St. A temporary fence shall be placed at the edge of the construction limits along the Mohawk School property. Payment for the sidewalk and fence, including materials and labor for construction and removal of these items, shall be included in the lump sum bid for maintaining traffic.

Grant St.

Grant St. from Station 54+50 to Fulton St. shall be closed to traffic until the Grant St. Structure is open to traffic.

Fulton St.

Fulton St. from Station 8+18 to Station 12+25 shall become one lane (one-way eastbound) when directed by the Engineer.

Fulton St. from Front St. to Third St. shall remain two lanes (one-way eastbound) until the High St. runaround and Livingston Ave. Relocation are open to traffic.

It shall then be one lane (one-way westbound) during the reconstruction of Fulton St.

Fulton St. from Third St. to Fourth St. shall become four lanes (two-way) until the Third and Fourth St. Structures are open to traffic. It shall then be reduced to one way (one-lane westbound) during the reconstruction of Fulton Street.

Fulton St.

Fulton St. from Fourth St. to Sixth St. shall become one way (2 lanes) when directed by the Engineer.

Livingston Ave.

Livingston Ave. shall be closed to traffic from Front St. to Third St. when deemed necessary by the Engineer. Livingston Ave. Relocation shall be two lanes (East bound) after the High St. runaround is open to traffic.

Stauring St.

Stauring St. from Pearl St. to Fifth and Sixth to Lehman St. shall be closed to traffic when deemed necessary by the Engineer.

Alleys

All alleys within the construction limits shall be closed to traffic when deemed necessary by the Engineer.

Existing Streets

Existing streets within the limits of work except those which are to be closed shall be maintained by the Contractor. Payment, except for the furnishing and placing of Items T-10, I-4, and T-35 for Maintaining Traffic, shall be included in the lump sum bid price for maintaining traffic.

Cooperation Note

The Contractor will note that the East Innerbelt (FRA-62-15.30) to the east, may be constructed simultaneously. The Contractor shall cooperate to the fullest extent with contractors on adjacent projects in a manner that will result in a minimum amount of interference with other contractors.

Temporary Connections and Existing Streets

500 C.Y. of T-10 Aggregate, 10 tons of I-4 Calcium Chloride and 50 C.Y. T-35 Asphaltic Concrete surface course are to be used at the direction of the Engineer for temporary connections and existing streets not shown on the plans. Payment for construction, maintenance, and subsequent removal where required of temporary connections except for furnishing and placing Items T-10, I-4, and T-35 for maintaining traffic, shall be included for payment in the lump sum bid for "maintaining traffic".

Dust Control

50 Tons of Calcium Chloride for dust control and 100 M Gals. Water for dust control are to be used at the direction of the Engineer for dust control.

Temporary Run-Arounds

Temporary run-arounds shall be paid for on a unit bid price for each individual item required.

9" T-70 Concrete Pavement for Temporary Run-arounds

A standard longitudinal joint without tie bars shall be constructed on the centerline of temporary 24' concrete run-around pavement.

The provisions of Section 5-15.06 which pertain to materials and construction requirements for temporary concrete pavement shall apply to the Item T-70 9" concrete pavement used for temporary run-arounds on this project.

Maintenance of Sewer Flows

The Contractor shall conduct his operations so as to maintain, at all times, sewer flows through existing facilities to remain in place, and through existing facilities to be replaced, until new facilities are completed and placed into use.

By November 30, 1963, the Contractor shall be prepared to provide suitable outlets for both storm and sanitary drainage from the adjacent project to the East (FRA-62-15.30), either through the proposed sewer system (Line A and Line F), or a combination of proposed and existing sewers.

Payment for any additional costs involved in maintaining these flows, by pumping or by any other means approved by the Engineer, shall be included in the unit prices bid for the respective pipe items.



FRANKLIN COUNTY  
FRA-40-12.82

\* Non Participation By State or Federal

## GENERAL SUMMARY



# GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

FRANKLIN COUNTY  
FRA. - 40-12.82

11  
250

ITEM	S H E E T N U M B E R S												TOTAL PARTICIPATING BY STATE & FEDERAL		TOTAL NON PARTICIPATING BY STATE OR FEDERAL	PROJECT TOTAL	ITEM	UNIT	DESCRIPTION
	111	112	113	114	115	116	98	99	100	101	Code Y080	Code 6707							
	Code Y080	Code 6707	Code Y080	Code 6707	Code Y080	Code 6707	Code Y080	Code 6707	Code Y080	Code 6707	Code Y080	Code 6707							
S-25		0	5	1	7	5	3	0	3				6	18		24	S-25	Ea.	LIGHTING Street Light Standard, Anchor Base, 10 Ft. Bracket Arm, Pole Wiring, Lamp, Ballast, & 250 Watt Luminaire, Type II Dist. as Per Plan.
S-25				1	0	4	4						5	4		9	S-25	Ea.	Street Light Standard, Anchor Base, 10 Ft. Bracket Arm, Pole Wiring, Lamp, Ballast, & 250 Watt Luminaire, Type III Dist. as per Plan.
S-25				6	0								6	0		6	S-25	Ea.	Street Light Standard, Anchor Base, 15 Ft. Bracket Arm, Pole Wiring, Lamp, Ballast, & 250 Watt Luminaire, Type II Dist. as Per Plan.
S-25						1	1	0	0				1	1		2	S-25	Ea.	Street Light Standard, Anchor Base, 10 Ft. Bracket Arm, Pole Wiring, Lamp, Ballast, & 400 Watt Luminaire, Type III Dist. As per plan.
S-25		0	3	0	12	0	10	0	12	0	10	0	10	57		57	S-25	Ea.	Street Light Standard, Anchor Base, 15 Ft. Bracket Arm, Pole Wiring, Lamp, Ballast, & 400 Watt Luminaire, Type III Dist. as Per Plan.
S-25			0	1	0	1			0	1	0	2	0	5		5	S-25	Ea.	Street Light Standard, Anchor Base, 15 Ft. Bracket Arm, Pole Wiring, Lamp, Ballast, & 400 Watt Luminaire, Type IV Dist. as Per Plan.
S-25		0	1	0	6	6	12	6	5	0	10	0	3	12	37	49	S-25	Ea.	Pull Boxes,as per plan
S-25		0	1250	0	4710	1298	6930	1714	6430	0	5888	0	3900	3012	29108	32120	S-25	L.F.	#20 Wire, Direct Burial & in Conduit Below Ground
S-25		0	20	0	350	294	1155	442	720	0	672	0	40	736	2957	3693	S-25	L.F.	2" Conduit, Plastic, Concrete Encased
S-25						0	1			0	1			0	2	2	S-25	Ea.	Lighting Control Stations,as per plan
I-124																			



# GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

12  
250

FRANKLIN COUNTY  
FRA - 40 - 12.82

\* Non participation by State or Federal

ITEM	S H E E T							N U M B E R S							TOTAL PARTICIPATING BY CITY STATE & FEDERAL	TOTAL NON PARTICIPATING BY STATE OR FEDERAL	PROJECT TOTAL	ITEM	UNIT	DESCRIPTION
	17	*98	98	*99	99	100	101													
I-124					1								1		1	I-124	Ea.	WATER LINES CODE Y-060		
			1										1		1			16" x 16" x 12" M.J. - M.J. - M.J. Tee		
			6										6		6			12" x 12" x 8" M.J. - M.J. - M.J. Tee		
			1										1		1			12" x 12" x 6" M.J. - M.J. - M.J. Tees		
																		12" x 12" x 4" M.J. - M.J. - M.J. Tee		
					2								2		2			30" - 7 1/2° Bends		
						1							1		1			24" - 79° Bend		
						4							4		4			24" - 22 1/2° Bends		
							2						2		2			24" - 4° Bends		
			1										1		1			20" - 90° Bend		
			1										1		1			20" - 45° Bend		
			4										4		4			20" - 22 1/2° Bends		
								1					1		1			6" - 90° M.J. - M.J. - Bend		
								1					1		1			16" - 90° M.J. - M.J. - Bend		
								6					6		6			16" - 22 1/2° M.J. - M.J. - Bends		
								1					1		1			16" - 11 1/4° M.J. - M.J. - Bend		
			2										2		2			12" - 22 1/2° M.J. - M.J. - Bends		
			1										1		1			12" - 22 1/2° M.J. - P.E. Bend		
			1										1		1			12" - 11 1/4° M.J. - M.J. - Bend		
								2					2		2			6" - 45° M.J. - M.J. - Bends		
								1					1		1			8" - 90° M.J. - P.E. Bend		
													1		1			8" - 45° M.J. - M.J. - Bend		
			1						1				3		3			8" - 45° M.J. - P.E. - Bends		
			2						5				10		10			8" - 22 1/2° M.J. - M.J. - Bends		
									1				2		2			8" - 22 1/2° M.J. - P.E. - Bends		
			1										1		1			6" - 22 1/2° M.J. - P.E. - Bend		
			1										1		1			6" - 11 1/4° M.J. - P.E. - Bend		
			1										1		1			4" - 22 1/2° M.J. - P.E. - Bend		
			1										1		1			8" - M.J. - P.E. Offset Bend with 18" Offset		
			1										1		1			6" - M.J. - P.E. Offset Bend with 12" Offset		
			1										1		1			4" - M.J. - P.E. Offset Bend with 18" Offset		
			1										1		1			6" - M.J. - P.E. Offset Bend with 18" Offset		
			2										2		2			20" - Flange Adapter Pieces		
								1					1		1			16" x 12" M.J. - P.E. Reducer		
			1										1		1			12" x 8" P.E. - P.E. Reducer		
			1										1		1			8" x 6" P.E. - P.E. Reducer		
								2					2		2			6" x 4" B-S Reducers		
			1										1		1			6" Solid Leaded Sleeve		
			1										2		2			8" Solid Leaded Sleeves		
			1										1		1			12" Solid Leaded Sleeve		
								1					1		1			24" Solid Leaded Sleeve		
			1										1		1			8" M.J. - Sleeves		
			2										2		2			30" M.J. - Sleeves		
								2					2		2			16" M.J. - Plugs		
			1										1		1			30" M.J. - Plug		
			1										1		1			24" Plug		
			1					1	2				4		4			4" Leaded Plugs		
			1					1					2		2			6" Leaded Plugs		
			1					2	1				4		4			8" Leaded Plugs		
			1					1					2		2			12" Leaded Plugs		
								1					1		1			24" Leaded Plug		
			1										1		1			6" Leaded Cap		
			1										1		1			20" Leaded Cap		
		5			6			17	7	7			37		37			Service Branches Removed from Existing Mains		
		5											5		5			Fire Hydrants Removed & Reset		
					7								5		5	Ea.		Fire Hydrants		
													7		7	L.F.		30" Water Main Removed & Relaid w/Existing Valve		
								65					65		65	L.F.		2" - New Service Branch		
													1		1	Ea.		2" Corporation Cock		
I-124								1					1		1	I-124	Ea.	2" Curb Stop & Box		
I-8			2	4	8		1		1				6	10	16	I-8	Ea.	Water Valve Boxes Adjusted to grade		
I-1				70									70		70	I-1	L.F.	48" Bituminous Coated Corrugated Metal Pipe, Sec. M-6A(c)		
																		8 Gage, Class C-1, Elongated as per plan, for Casing Pipe		
I-5				2									2		2	I-5	Ea.	48" Bituminous Coated Corrugated Metal Pipe Specials, Sec. M-6A(c)		
																		8 Gage, Class C-1, Elongated as per plan, for Casing Pipe		



# GENERAL SUMMARY

FRANKLIN COUNTY  
FRA -40 -12.82

\* Non Participating by State or Federal

S H E E T										N U M B E R S						TOTAL PARTICIPATION BY STATE & FEDERAL	TOTAL NON PARTICIPATION BY STATE OR FEDERAL	PROJECT TOTALS	ITEM	UNIT	DESCRIPTION										
										8	39	16	30	54	55	56	57	58	59	60	61										
														335	120	350	807	361	66	227	141		2407		2407	I - 1	LF	DRAINAGE (STORM) TYPE CODE 6107			
														338	83	353	253	256	302	345			1930		1930				12" Pipe M-6.6 (a) or M-6.8 (b) Class A-1		
															76				140	300			516		516				15" Pipe M-6.6 (a) or M-6.8 (b) Class A-1		
																		57	127			184		184				18" Pipe M-6.6 (a) or M-6.8 (b) Class A-1			
																138	157					295		295				21" Pipe M-6.6 (a) or M-6.8 (b) Class A-1			
												79										79		79				24" Pipe M-6.6 (a) or M-6.8 (b) Class A-1			
																												8" Pipe M-6.6 (b) or M-6.8 (b) Class A-1			
															160								160		160				12" Pipe M-6.6 (b) or M-6.8 (b) Class A-1		
														31									31		31				15" Pipe M-6.4 (d) Class A-1		
																				266			266		266				54" Pipe M-6.6 (d) Class A-1		
																				28			28		28				54" Pipe M-6.6 (d) Class A-1 (50' Radius)		
											294												294		294				12" Pipe Class B-1		
																				332	168		500		500				84" Pipe M-106.6 (d) Class A-1		
														26									26		26				8" Pipe Class E-1		
														17		73	78	124	48	85			425		425				12" Pipe Class E-1		
														256			111	129	41	39	4		580		580				15" Pipe Class E-1		
																	73		52	55			180		180				18" Pipe Class E-1		
																		34					34		34				21" Pipe Class E-1		
																		37					37		37				24" Pipe Class E-1		
																	20							20		20				15" Pipe M-6.6 (b) or M-6.8 (b) Class E-1	
																	14							14		14				24" Pipe M-6.6 (b) or M-6.8 (b) Class E-1	
													800											800		800				6" Pipe M-6.4 (h) Class I-3 as per plan	
															137									137		137				15" Pipe M-6.6 (c) Class E-1	
																					4		4		4				60" Pipe M-6.6 (c) Class E-1		
																					146		146		146				72" Pipe M-6.6 (d) Class E-1		
																			224	275			499		499					84" Pipe M-6.6 (b) Class E-1	
																			447	296			743		743					84" Pipe M-106.6 (c) Class E-1	
																479	23						502		502					96" Pipe M-106.6 (d) Class E-1	
																		309					309		309					96" Pipe M-6.6 (b) Class E-1	
														95				115	115				325		325					12" Pipe Class F-1	
															74	7	50	15				146		146					15" Pipe Class F-1		
															30							30		30					96" Pipe M-106.6 (d) Class A-1- Pipe Under Railroad		
															303	284						587		587					96" Pipe M-6.6 (b) Class A-1		
															48							48		48					96" Pipe M-6.6 (b) Class A-1 (50' radius)		
																	400	75	235			710		710					96" Pipe M-106.6 (c) Class A-1		
																						1262		1262					96" Pipe M-106.6 (d) Class A-1		
																						104		104					96" Pipe M-106.6 (d) Class A-1 (50' radius)		
															24966								24966		24966					6" Pipe, Class I-3, as per plan	
															1150	80							1230		1230					6" Pipe Class F-1	
																	92						92		92						DRAINAGE (SANITARY) CODE Y-060
																	* 313						313		313					12" Pipe M-6.6 (b) or M-6.8 (b) Class A-1 (Sanitary) with Premium Joints	
																						500		500					18" Pipe M-6.6 (d) Class A-1 (Sanitary) with Premium Joints		
																			249	90	132		322	249	571					6" Pipe Class B-1 (Sanitary) with Premium Joints	
																														21" Pipe M-6.6 (a) or M-6.8 (b) Class A-1 (Sanitary) with Premium Joints	
																														36" Pipe M-6.6 (a) Class A-1 (Sanitary) with Premium Joints	
																														48" Pipe M-6.6 (a) Class A-1 (Sanitary) with Premium Joints	
																														78" Pipe M-6.6 (a) Class A-1 (Sanitary) with Premium Joints	
																														78" Pipe M-6.6 (a) Class A-1 (50' radius) (Sanitary) with Premium Joints	
																															21" Pipe M-6.6 (c) Class E-1 (Sanitary) with Premium Joints
																														21" Pipe M-6.6 (b) or M-6.8 (b) Class E-1 (Sanitary) with Premium Joints	
																														78" Pipe M-6.6 (a) Class E-1 (Sanitary) with Premium Joints	
																															Concrete Cradle for 36" Pipe
																															Concrete Cradle for 48" Pipe
																															Concrete Cradle for 78" Pipe
																															Concrete Backing for 18" Pipe
																															Concrete Backing for 21" Pipe



FRANKLIN COUNTY  
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## GENERAL SUMMARY



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## GENERAL SUMMARY



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\* Non participation by State or Federal

## GENERAL SUMMARY



I-1 CLASS I-3 SUMMARY OF QUANTITIES

Sheet No.	Station to Station	I-3		I-5 PIPE SPECIALS									F.I.	A.B.
		Shallow	Deep	6"x8" Inc.	8"x6" Red	6" 90° Bend	6" 60° Bend	6" 45° Bend	6" 30° Bend	6" 15° Bend	6"x6" Wye	6"x6" Tee	N-6 G.G. or M.C.B.	
49	30+63M to 4120 Lt. W.B. Ramp	360									1		10	
	51456 to 52+16 Lt. M.	63				1							10	
	52+28 to 56+50 Lt. M.	415.5				1							20	
	51+00 to 53+46, 2.5 Lt. M.	236							1				10	
	53+52 to 56+50, 2.5 Lt. M.	290							1				10	
	55+04 to 56+50 Rt. M.		125						2				20	
	49+85 Rt. M. to 51+15.5 Rt. M.	23				1							10	
	51+15.5 Rt. M. to 2+19 Rt. "B"	96				1							10	
	2+18 to 11+50 Rt. "B"	409				1							30	
50	56+50 to 63+00 Lt. M.	512.5	108			2							30	
	56+50 to 57+75 Lt. M.	115							1				10	
	57+81 to 59+55, 1.5 Rt. M.	166											10	
	59+61 to 61+35, 7' E" M.	162							1				10	
	61+26 to 63+00 Rt. M.	142							3				30	
	56+50 to 58+25, 55.75 Rt. M.		169			1							10	
	58+20 M to 10+50 Rt. "D"	226									1		20	
	10+50 to 13+25, 3' Rt. "D"	269				1							10	
	45+85 to 47+150 Rt. "Fulton"	155											10	
	50+73 to 51+80 Lt. "Front"	87											20	
	14+95, 18 Lt. (Liv.) to 49+25 Lt. "Front"	112												
	15+20 Rt. (Liv.) to 48+00 "Front"	141												
	49+06 Rt. "Front" to 18+25 Lt. (Liv.)	172											20	
	47+90 Rt. "Front" to 18+25 Lt. (Liv.)	198											10	
51	63+00 M to 74+25, 3' Rt. "C"	343												
	63+00 M to 66+75, 5.5 Rt. M.	377				2		1					10	
	13+75 Lt. "D" to 66+75, 49 Rt. M.	317												
	13+75 to 17+00, 8' Rt. "D"	313		* 1	* 1	* 2							10	21
	13+25 to 13+50, 3' Rt. "D"	25												
	47+50 to 48+25 Rt. "Fulton"	75												
	51+45 Rt. "High" to 50+90 Rt. "Fulton"	16												
	18+25 Lt. (Liv.) to 48+97 Lt. "High"	290												
	18+25 Lt. (Liv.) to 49+96 Lt. "Brewers"	366												
	21+88 to 22+25 Lt. (Liv.)	37												
	48+10 Rt. "High" to 22+25 Rt. (Liv.)	54												
	50+88 Lt. "Brewers" to 48+95 Rt. "High"	148												
52	34+50 to 74+25, 3' Rt. "C"	377							1				10	
	67+95 to 70+50, 49 Lt. M.	200												
	66+75 to 68+45, 5.5 Rt. M.	170												
	68+50 to 70+50, 1.5 Lt. M.	200												
	66+75 to 70+50, 49 Rt. M.	325	50											
	17+00 to 20+50, 3' Rt. "D"	350												
	52+83.5 to 54+75 Rt. "Fulton"	192												

Totals taken to General Summary	
I-1 "G" Pipe Class I-3	= 24966 LF
I-1 "G" Pipe Class F-1	= 1,150 LF
I-1 "B" Pipe Class A-1 MG G(b) or MG Ø(b)	= 79 LF
I-5 "G" Pipe Specials for Class I-3 pipe	2116+510+133+8 = 72 Ea
I-5 "G" Pipe Specials for Class A-1 pipe MG G(b) or MG Ø(b)	= 6 Ea
F-5 "B" Pipe Specials for Class A-1 pipe MG G(b) or MG Ø(b)	= 6 Ea



Station to Station	EARTHWORK & SEEDING			
	Exc. CY	Emb. CY	Emb + 20% CY	Seeding SY
EB & WB (IB) 43 + 34.5 to 105 + 50	747,019	53,010	63,612	85,183
Front St & Front St Runaround	998	202	242	958
High St	205	6	7	
Third St	880	97	116	440
Fourth St	614	594	713	2,039
Grant St	321			
Livingston Ave. Reloc.	161	49	59	86
Third & Fourth St Runaround	583			
Basements to be filled		8,483	10,180	
Basements to be Deducted	-33,361			
Totals to Earth work Calc.		62,441	74,929	88,706
Totals to General Summary	717,420			

EARTHWORK CALCULATIONS

E-1 - Excavation \_\_\_\_\_ = 717,420 CY  
TOTAL EXCAVATION \_\_\_\_\_ = 717,420 CY. (To G.S.)

Embankment \_\_\_\_\_ 62,441 CY  
Embankment + 20% \_\_\_\_\_ = 74,929 CY

Excavation - (Embankment + 20%) \_\_\_\_\_ = 642,491 CY  
SURPLUS \_\_\_\_\_ = 642,491 CY

FERTILIZER

L-9 - Seeding \_\_\_\_\_ = 88,706 SY  
L-10 Sod \_\_\_\_\_ = 1,179 SY  
TOTAL \_\_\_\_\_ 89,885 SY

$\frac{89885 \text{ SY}}{1000} \times \frac{9}{2000} \times 20$  \_\_\_\_\_ = 8.09 Tons (To G.S.)

WATER

Embankment \_\_\_\_\_ = 62,441 CY  
I-22 Subbase \_\_\_\_\_ = 17,899 CY  
I-18 \_\_\_\_\_ = 857 CY  
TOTAL \_\_\_\_\_ 81,197 CY

$81,197 \text{ CY} \times \frac{5}{1000}$  406.0 M.Gals = 406 M-Gals (To G.S.)

RECAP TABLE FOR FIRE HYDRANTS

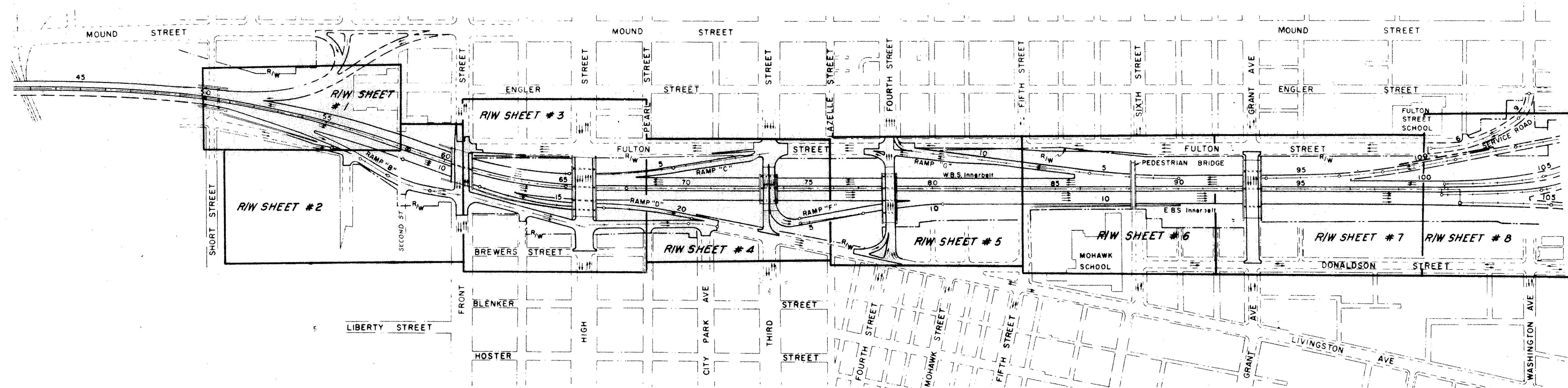
Sheet No.	Fire Hydrants (Eq.)	Fire Hydrants Removed & Reset (Eq.)
102	5	1
103	4	2
104	1	1
105		1
Totals	10	5
Totals to G.S.	10 - 5 = 5	5



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13  
250

FRANKLIN COUNTY  
FRA.-40-12.82





**FRANKLIN COUNTY**  
**FRA - 40 - 12.82**  
**RIGHT OF WAY PLAN**  
**LIMITED ACCESS**

**R/W SHEET # 1**

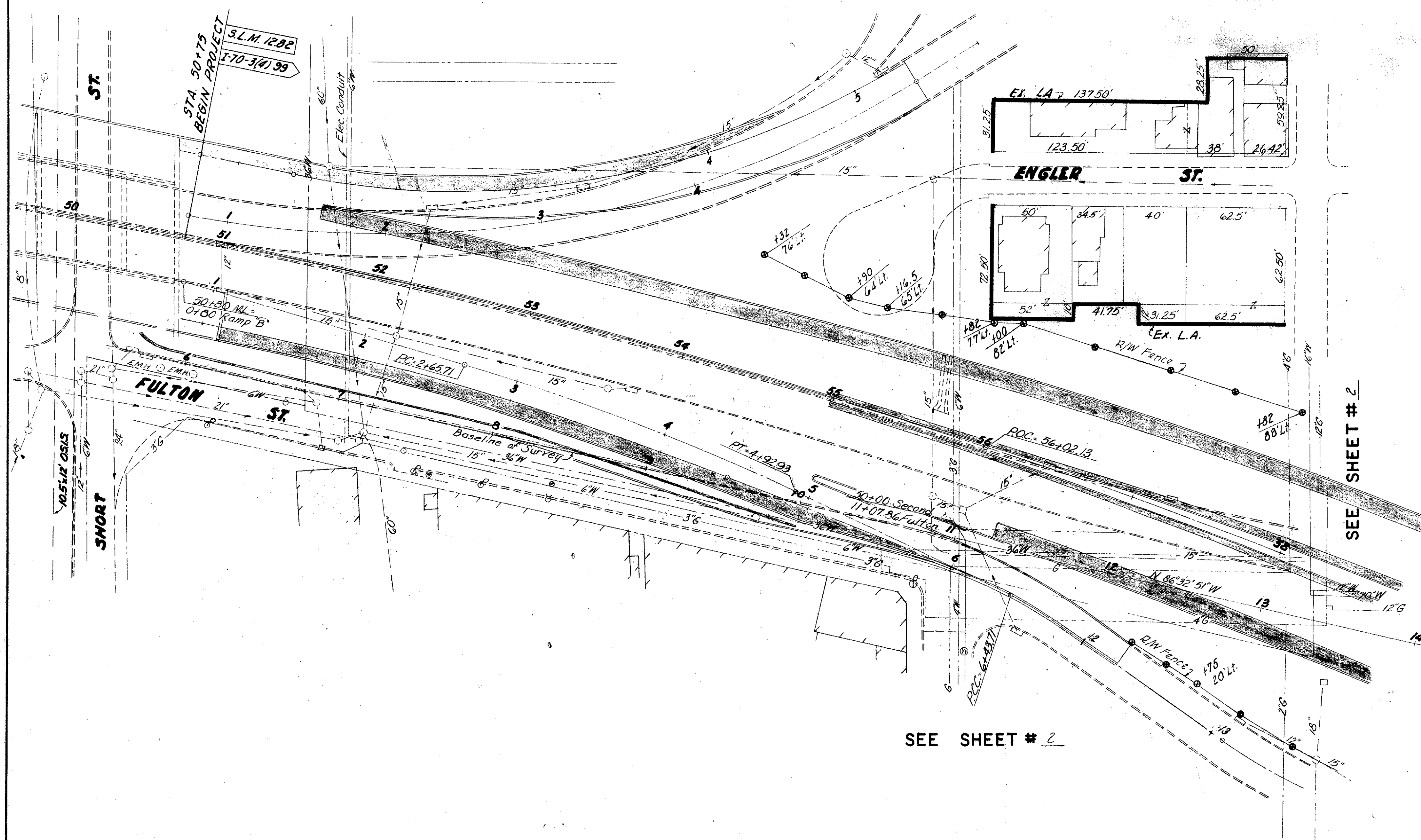
**SUBDIVISION DATA**

**SUBDIVISION**

**Plat Book No.**

**Page No.**

O. Laken Appraiser Sub'd.	3	131
L. Hoster Brewing Sub'd.	3	131
Abraham Stott's Sub'd.	(D.B.) 21	214
Hoster & Silbernagle Sub'd.	1	239
Robert Armstrong Jr. Sub'd.	(D.B.) 34	454
Commissioner of Court Sub'd.	Complete Record 55	101
Otis & Samuel Crosby's Change of Inlots	14	483
Henry Schwartz vs. Louisa Schneider Court Sub'd.	Complete Record 91	406
George Willards Sub'd.	1	230
Felty & Karst Sub'd.	1	36
McGowan's Addition	(D.B.) 6	70
Crosby's Second	11	456
A.A. Stewarts Sub'd.	1	145
J.W. Baldwin's Sub'd.	1	105
Baldwin & Platts Sub'd.	(Inlots 882-883)	67
Baldwin & Platts Sub'd.	(Inlots 876-877)	66
Baker & Mitchell Sub'd.	(D.B.) 36	255
Maris & Willard	(D.B.) 263	109
Goodale & Ides Sub'd.	2	11
John Links Sub'd.	3	437
William A. McCoy's Sub'd.	1	396
English & Martins Sub'd.	1	211
W.M. Crawford's Sub'd.	4	241
Theo. H. Butler Sub'd.	4	241
Wm. A. Platts Amended Sub'd.	2	210
Thos. Millers Sub'd.	(Destroyed) 2	48
Joseph Braun's Add.	3	391
Wm. Cox's Sub'd.	2	67
J.D. Cummins Sub'd.	1	306
John Rickleys Sub'd.	(D.B.) 30	23
Inlots	14	27
O'Hara's Sub'd.	2	294
F. Bennis Sub'd.	1	19
R.H. & M.A. Snowden's Sub'd.	1	62
English & Martins Sub'd.	(O.L. 32) 2	28
Champion's Sub'd.	(D.B.) 41	159
Outlots (North Fulton - West Parsons)	14	27
Hayden & Baker's Sub'd.	4	138
Eugene Lane Adm'r. Sub'd.	5	250
Donaldson Butler & Collins Sub'd.	3	198
Morgan & Gills Addition	1	22
Nathaniel Merion's Sub'd. (Lots 1-18 Main Street.)	2	83
Zettler Ryan's Sub'd.	2	335
Michael McAllister Sub'd.	1	324
Hanna Neil Mission Amended Sub'd.	3	152
D. McAllister Sub'd.	3	375
Johanna Haverstein Sub'd.	4	127
Nathaniel Merion's Sub'd.	1	371
McAllister Sub'd.	3	375
Livingston Park Addition	4	300
Jeremiah Armstrong Sub'd.	1	284
Wilcox Addition	7	120
M. McAllister's Executor's Sub'd.	4	121
A.A. Stewart Heirs Sub'd.	4	298
Henry Mauers	2	2



**LEGEND**

Existing Right of Way	---
Property Line	---
Lot lines or other Divisions that are not property lines	---
Limited Access Highway Easement	(LA) ---
Standard Highway Easement	(I) ---
Easement for Sewer Purposes	(S) ---
Work Agreements	(WA) ---
Temporary Easement	(T) ---
Utility Easement	(U) ---

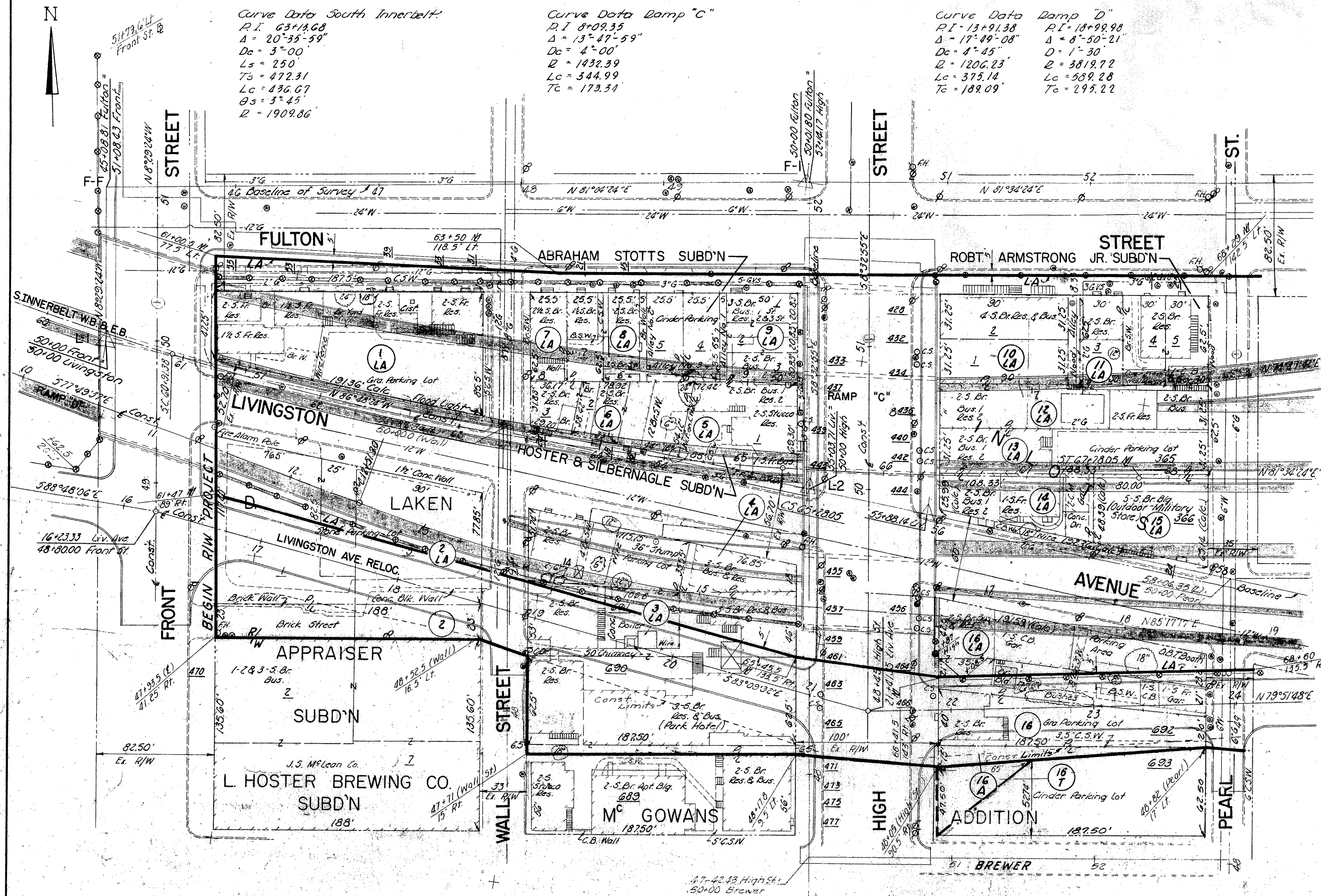






**FRANKLIN COUNTY**  
**FRA - 40 - 12.82**  
**RIGHT OF WAY PLAN**  
**LIMITED ACCESS**

**R/W SHEET #3**



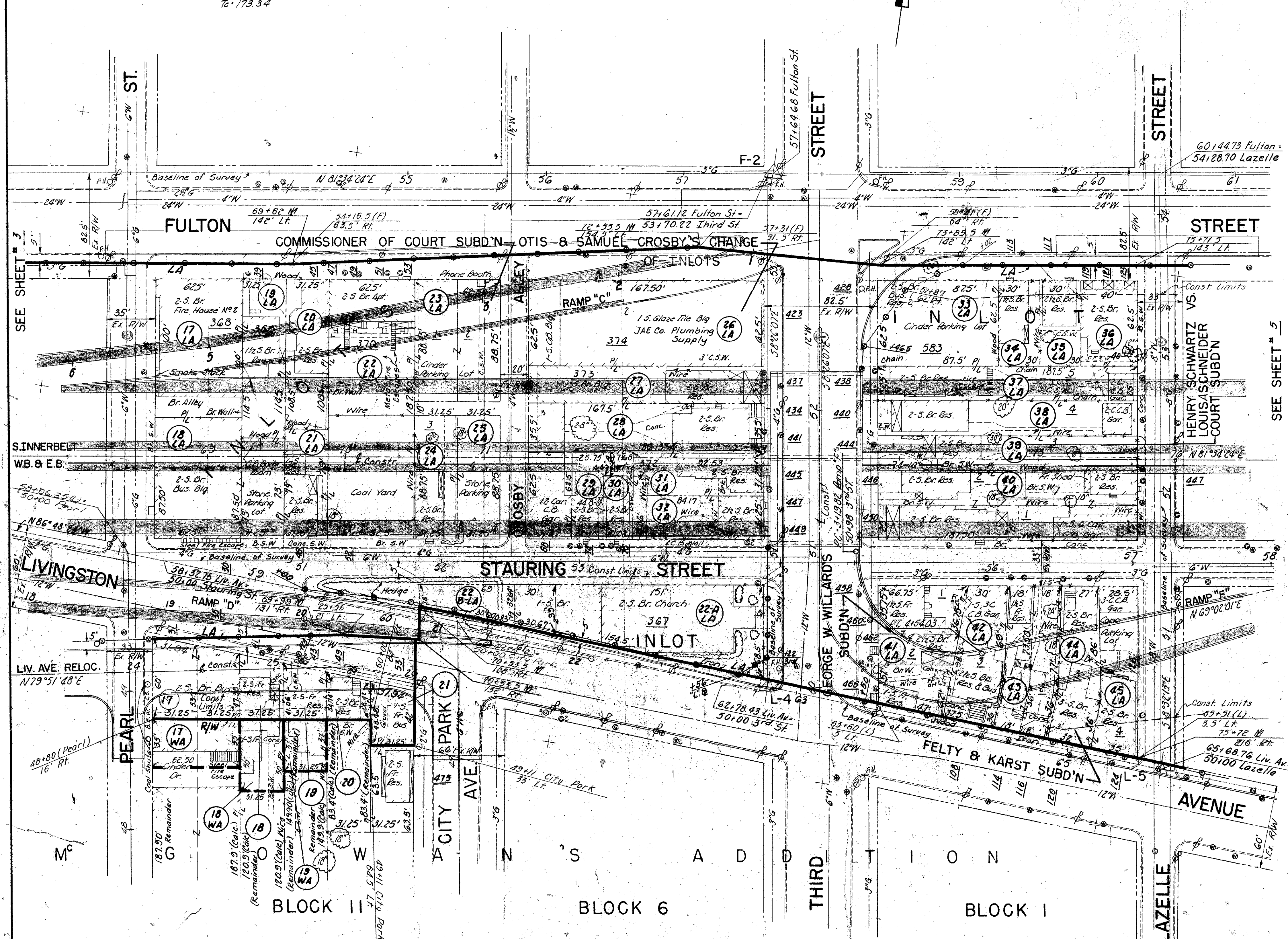
LAND APPROPRIATION TABLE						
ENG'RS PARCEL NO.	AUDITORS PARCEL NO.	DATE OF PURCHASE	OWNERS NAME	RESIDUE	SQ. FT. OWNED	SQ. FT. TO BE APPROPRIATED
1-LA	44416	3-24-55	Wesleyan University	None	12,445.31	12,445.31
2-LA	61489	5-12-56	M. B. & Bernice A. Crispin		18,353.50	18,353.50
3-LA	22730	6-22-23	J. S. MacLean Co.		29,816.80	4,324.00
4-LA	22396	5-10-30	465 S. High Inc.		26,629.30	26,629.30
5-LA	42580	5-16-52	K.T. Stallman & David H. Thomas		2,127.58	2,127.58
6-LA	44854	12-24-46	Sigmund Ornstein		4,845.69	4,845.69
7-LA	8264	3-29-56	Jack Frye		4,676.42	4,676.42
8-LA	41951	4-16-31	Mary A. Nelson		1,593.75	1,593.75
9-LA	29888	9-20-44	Joseph & Lula Bidolto		4,602.75	4,602.75
10-LA	21791	6-10-50	Anna Schmidt & Etal (3)		4,629.00	4,629.00
11-LA	44312	6-20-52	Anna S. Weller		5,625.00	5,625.00
12-LA	44315	9-19-45	Agnes C. Murnane		1,875.00	1,875.00
13-LA	15344	6-30-48	Alben C. Zeitelbach		9,635.31	9,635.31
14-LA	14173	2-10-51	Minnie D. Jacobs		5,885.31	5,885.31
15-LA	21249	10-28-59	Harry I. O. Olson		4,028.79	4,028.79
16-LA	23746	6-11-45	Lyman David Rogers		4,573.56	4,573.56
17-LA	14150	9-30-48	Alben C. Zeitelbach		10,096.87	10,096.87
18-LA	14152	3-13-57	" "			
19-LA	52971	1-9-59	Brylea Realty Co.	None	5,615.63	5,615.63
20-LA	6052	6-28-46	Clair E. & Kathryn Mackon	10,812.50	11,718.75	1,406.25
21-LA	"	"	" "	None	11,718.75	11,718.75

DATE	DESCRIPTION
8-6-62	Parcels 16 LA, 16 Revised



**FRANKLIN COUNTY  
FRA-40-12.82  
RIGHT OF WAY PLAN  
LIMITED ACCESS**

**R/W SHEET #4**



LAND APPROPRIATION TABLE						
ENG'RS PARCEL NO.	AUDITORS PARCEL NO.	DATE OF PURCHASE	OWNERS NAME	RESIDUE	SQ. FT. OWNED	SQ. FT. TO BE APPROPRIATED
17-LA	66788		City of Columbus	None	6250.00	6250.00
17	23745	6-20-38	Marie Gabler	11,743.75	15,093.38	3355.63
18-LA	23747	12-1-21	United Seal Co. of Columbus	None	7,750.00	7,750.00
	13942	11-3-27				
18	45027	11-27-59	David W. Jones	3178.12	5160.00	1381.88
19-LA	44686	10-28-43	Maile Chandler	None	3578.13	3578.13
19	13661	3-27-56	Margaret Skevett	4684.37	5868.75	1184.38
20-LA	14612	10-10-60	Marianthi Constanin	None	3390.63	3390.63
20	13603	1-20-43	Agnes A. Lindemood	2606.25	3593.13	986.88
21-LA	57416	7-20-37	Esther N. Lohrmer	None	2468.75	2468.75
21	42414	11-4-48	John G. Turner		1411.85	1411.25
22-LA	8175	12-21-32	George A. & Dollie K. Cochran		11718.75	11718.75
22-B-LA	33595	3-21-39	City of Columbus		1747.08	1747.08
23-LA	48802	11-18-55	Raul J. Jacobs Etal		5546.88	5546.88
	16368	8-4-55				
24-LA	29136	1-29-53	John & Elizabeth Ruoff		2773.44	2773.44
25-LA	20896	8-30-37	Boyd B. Dreher		2773.44	2773.44
26-LA	51381	5-25-60	Raul J. Jacobs Etal		10468.75	10468.75
27-LA	33415	6-1-46	John & Elizabeth D. Ruoff		4522.50	4522.50
28-LA	33414	2-24-40	Ruth Moyer		7906.88	7906.88
	33412	2-20-40				
29-LA	94283	6-25-59	Mary E. Koehler		1468.59	1468.59
30-LA	3924	3-26-22	Margaret Mc Carthy		1236.50	1236.50
31-LA	33413	4-9-54	Maud M. Dover		3152.81	3152.81
32-LA	11844	4-3-54	Charles D. Doll		2630.31	2630.31
33-LA	52000	7-20-56	Quincy G. Watkins		5468.75	5468.75
34-LA	18847	1-9-56	Florence Maupin		1875.00	1875.00
35-LA	1647	1-9-56	Myrtle E. Swanek		1875.00	1875.00
36-LA	1623	10-29-54	Investment Properties Inc.		2500.00	2500.00
37-LA	35091	8-3-51	Edna M. Deiss		4687.50	4687.50
38-LA	45125	4-12-26	Anna S. Link		4687.50	4687.50
39-LA	33660	10-27-56	Louis F. Vireck		4687.50	4687.50
40-LA	28897	10-25-55	Christine Miller		9375.00	9375.00
	28898	10-25-55				
41-LA	2154	5-21-48	Charles D. Doll (L.E.)		5215.91	5215.91
42-LA	11764	5-2-50	Morthea Ignatze & Margaret J. Kofod		3561.56	3561.56
43-LA	9017	2-27-58	Arthur S. Lakin		4200.50	4200.50
44-LA	50848	7-30-57	William H. Thomas		3524.50	3524.50
45-LA	41250	6-28-49	Jack Kelley		3450.75	3450.75
22-A-LA	66868	1-16-40	The Livingston M.E. Church	None	9153.17	9153.17
18-WA	45027	11-27-59	David W. Jones		5160.00	1362.50
17-WA	23745	6-20-38	Marie Gabler			2187.50
19-WA	13661	3-27-56	Margaret Skevett			1156.25

DATE	DESCRIPTION
8-6-62	Parcels 20LA, 23LA, 26LA, 29LA and 38LA Revised

Curve Data Ramp "D"  
 P.I. = 21+07.13  
 Δ = 7°54'19"  
 Dc = 5' 45"  
 R = 1527.89'  
 Lc = 210.81'  
 Tc = 105.57'

Curve Data Livingston Ave. Relec.  
 P.I. = 26+52.13  
 Δ = 13°19'48"  
 Dc = 10' 00"  
 R = 572.96'  
 Lc = 133.30'  
 Tc = 66.95'  
 Es = 3.90'



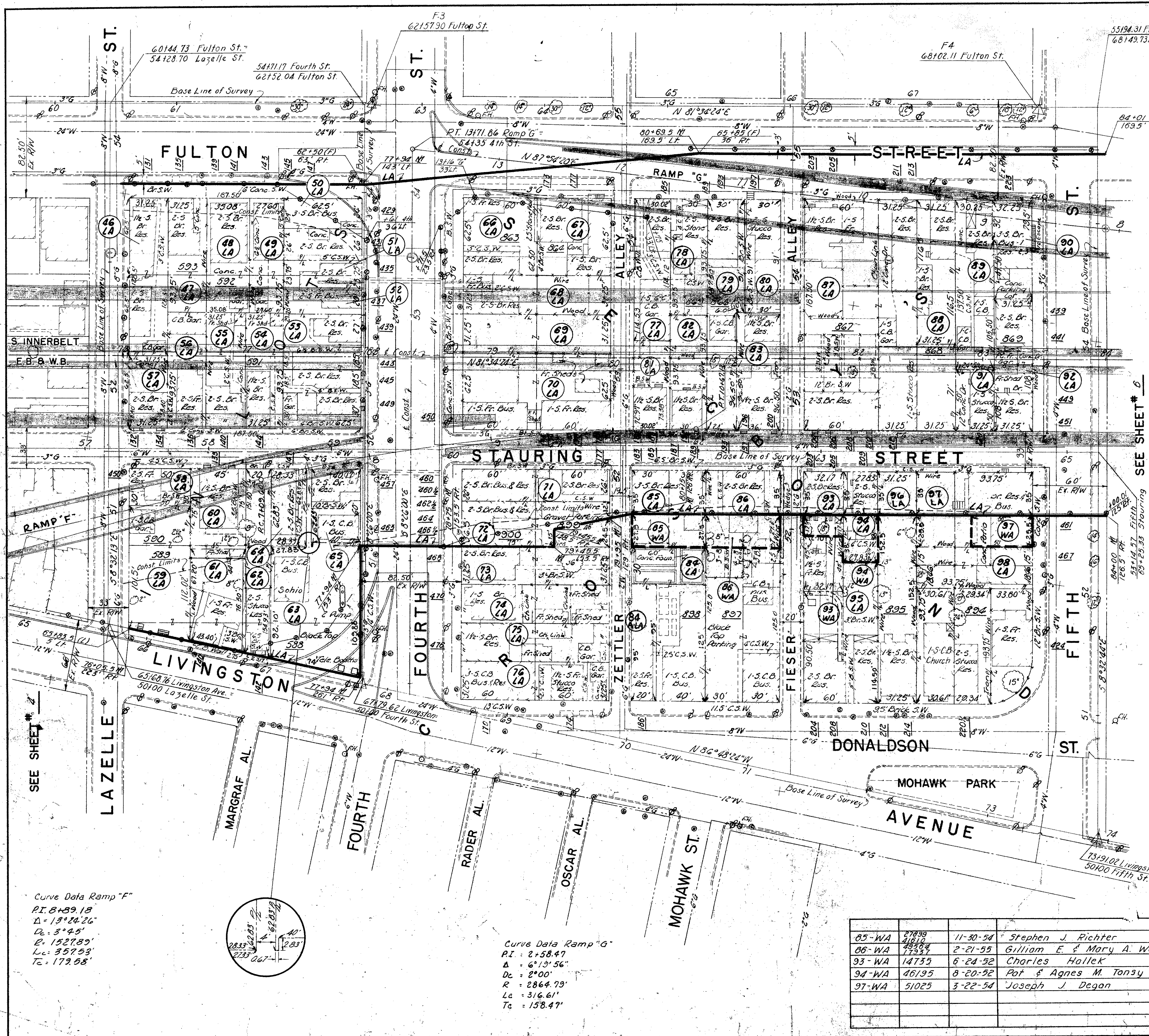
**FRANKLIN COUNTY**  
**FRA-40-12.82**  
**RIGHT OF WAY PLAN**  
**LIMITED ACCESS**

**LAND APPROPRIATION TABLE**

ENG'RS PARCEL NO.	AUDITORS PARCEL NO.	DATE OF PURCHASE	OWNERS NAME	RESIDUE	SQ.FT. OWNED	SQ.FT. TO BE APPROPRIATED
46-LA	39097	10-16-52	Florina Metzger	None	4015.63	4015.63
47-LA	3865	9-9-37	Anna B. Boehm		2929.69	2929.69
48-LA	44602	2-4-46	Janis E. & Pauline M. Pierce		3288.75	3288.75
49-LA	44019	7-4-53	Vernon Rocco		2587.50	2587.50
50-LA	44488	1-5-50	Sally B. Kane		3125.00	3125.00
51-LA	3723	12-22-50	Grace T. Ferry		1484.38	1484.38
52-LA	30154	11-24-47	Lana Luley		1250.00	1250.00
53-LA	11781	11-11-49	Jessie B. & Lucinda Doersam		5875.00	5875.00
	11798	11-11-49				
	11800	11-11-49				
54-LA	44634	6-18-46	Frederick E. Kripter		2929.69	2929.69
55-LA	50553	9-29-53	Martha E. Palmer		2929.69	2929.69
56-LA	54256	5-22-14	Lena Weishaupt		2929.69	2929.69
57-LA	56953	1-26-48	L. G. Buscilli Jr.		1825.00	1825.00
58-LA	41251	1-7-50	Maud M. Dover		1500.00	1500.00
59-LA	7967	10-24-51	Ohio Development Co.		5338.00	5338.00
60-LA	11485	3-4-41	Milton P. Elberfield		3375.00	3375.00
61-LA	19931	7-8-46	James L. & Effie M. Hearford		3094.46	3094.46
62-LA	20951	6-12-52	Max S. Manow		3207.74	3207.74
63-LA	16284	2-1-27	Standard Oil Co.		7583.71	7583.71
64-LA	18768	1-19-40	Robert D. & Myrtle Stouch		1779.97	1779.97
65-LA	43610	9-4-47	Charles Hauck		2410.20	2410.20
66-LA	15288	12-31-59	Mohawk Enterprise Inc.		3750.00	3750.00
67-LA	27179	9-13-44	Mary A. Dynes		3750.00	3750.00
68-LA	11789	7-19-37	Jessie Doersam		3750.00	3750.00
69-LA	9474	12-31-59	Mohawk Enterprise Inc.		3750.00	3750.00
70-LA	27547	8-31-33	Harriet J. Kratz		7500.00	7500.00
71-LA	44447	7-6-45	George Mehler	None	3120.00	3120.00
72-LA	54110	3-2-45	Mary K. Weilbacher	888.75	4380.00	3491.25
73-LA	20909	5-14-56	Raul E. & Robert F. Weilbacher		Not Needed	
74-LA	5122	10-31-56	George Mehler		Not Needed	
75-LA	27546	7-21-33	Harriet J. Kratz		Not Needed	
76-LA	39135	4-5-46	George Mehler		Not Needed	
77-LA	94285	2-2-48	George C. & Dolores C. Kovachoff	None	3429.75	3429.75
78-LA	25656	11-12-57	Ida M. Dennison		2812.50	2812.50
79-LA	1777	4-21-45	John J. Halton		5046.00	5046.00
	21138	4-21-45				
80-LA	1401	3-1-60	Josie E. Jones Etal. (3)		2730.00	2730.00
81-LA	63602	8-22-51	Curtiss & Lillian Whitwell		2195.25	2195.25
82-LA	30708	3-24-50	Fred & Magie Freeman		2812.50	2812.50
83-LA	34138	4-12-54	Golda P. Large	None	3474.00	3474.00
84-LA	41625	9-15-55	Elizabeth Calvin & Clyde Spencer		Not Needed	
85-LA	27499	11-30-54	Stephen J. Richter	1650.00	3750.00	2100.00
86-LA	47610	2-21-55	William E. & Mary A. Wegner	9150.00	1250.00	2100.00
87-LA	11801-43002	6-9-59	Mary A. Buff. Etal. (3)	None	19328.13	19328.13
88-LA	26445	8-8-39	Helen Dalo		3640.63	3640.63
89-LA	62254	3-13-50	Goldie Rapoutsis		4264.88	4264.88
90-LA	12750	6-27-46	Samuel Goldberg		2516.38	2516.38
91-LA	21299	8-10-56	Charles & Minnie Carroll		1562.50	1562.50
92-LA	51723	1-3-41	Estate of Joseph C. Brehl Sr.	None	3375.00	3375.00
93-LA	14735	6-24-52	Charles Hallek	1994.54	3120.49	1125.95
94-LA	46195	8-20-52	Pat & Agnes M. Tonsy	1057.54	2031.59	974.05
95-LA	14735	11-14-47	Hazel Block		Not Needed	
96-LA	40818	4-3-56	Barr & Ethel I. Edwards	4762.63	5859.38	1093.75
97-LA	51025	3-22-54	Joseph J. Degon	2390.63	5671.88	3281.25
98-LA	26446	3-7-57	Lewis H. Anderson		Not Needed	
84A-LA	50435	10-3-56	Elizabeth A. Wayne W. Colvin		Not Needed	

85-WA	27899	11-30-54	Stephen J. Richter	3750.00	1650.00
86-WA	47610	2-21-55	William E. & Mary A. Wegner	11250.00	1650.00
93-WA	14735	6-24-52	Charles Hallek	3120.49	546.89
94-WA	46195	8-20-52	Pat & Agnes M. Tonsy	2031.59	1057.54
97-WA	51025	3-22-54	Joseph J. Degon	5671.88	1275.00

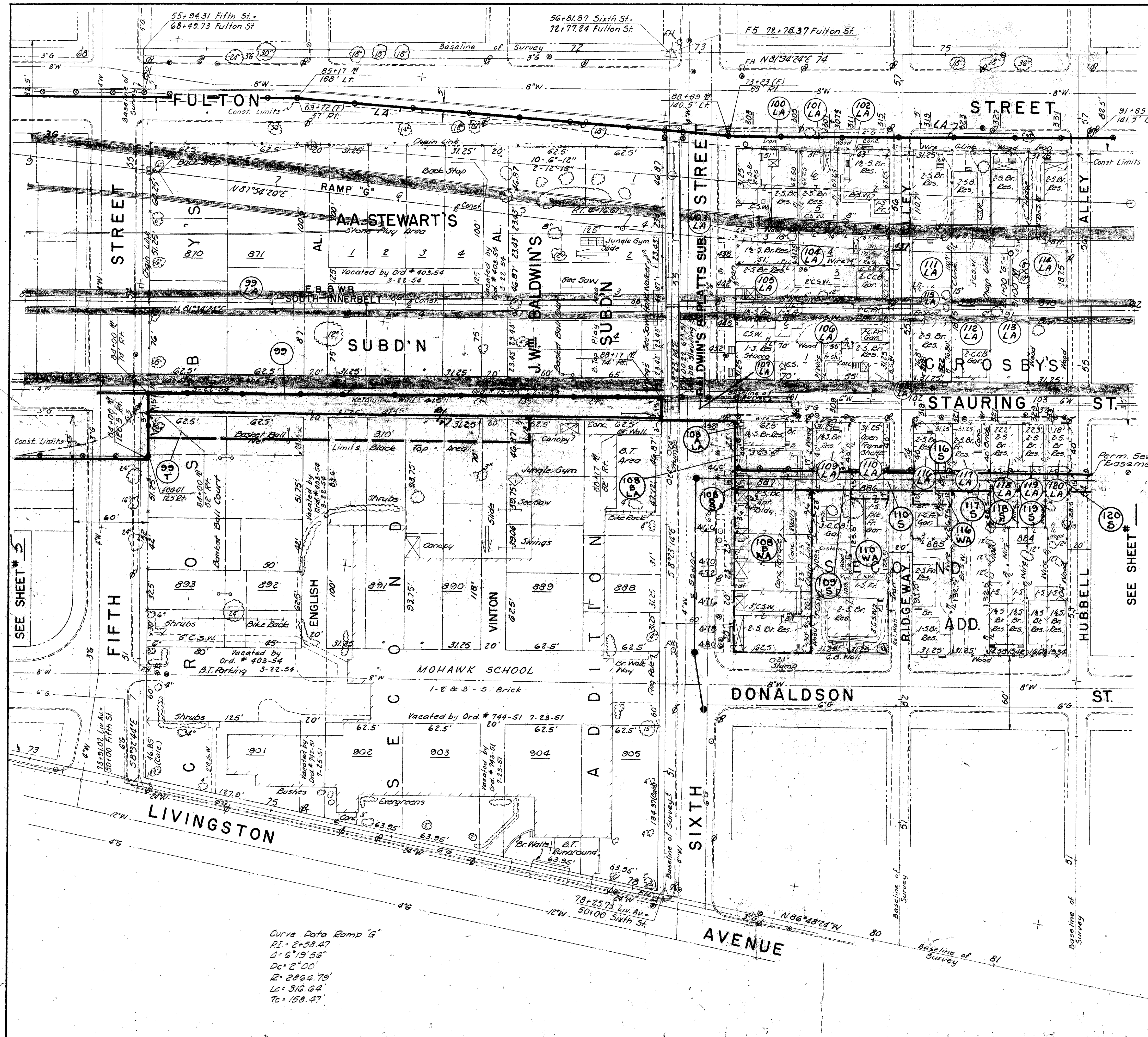
DATE	DESCRIPTION
11-22-60	Parcels 79-LA, 80-LA and 83-LA Revised
5-3-61	Parcels 72-LA, 85-LA, 86-LA, 93-LA
5-3-61	94-LA, 96-LA and 97-LA Revised
5-3-61	Parcels 73-LA thru 76-LA, 84-LA, 84A-LA
5-3-61	95-LA, and 98-LA deleted.
8-6-62	Parcels 61-62 LA, 66 LA, 69 LA, 77 LA, 81 LA, and 87 LA Revised





**FRANKLIN COUNTY  
FRA-40-12.82  
RIGHT OF WAY PLAN  
LIMITED ACCESS**

**R/W SHEET #6**



LAND APPROPRIATION TABLE						
ENG'RS PARCEL NO.	AUDITORS PARCEL NO.	DATE OF PURCHASE	OWNERS NAME	RESIDUE	SQ. FT. OWNED	SQ. FT. TO BE APPROPRIATED
99-LA	43782	7-1-33	City of Columbus Board of Education Note: Individual Auditor Parcel No's are now listed under Parcel No 43782	14,548.20	23,810.70	84,037.50
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
99-LA	43782	7-1-33				
100-LA	4911	9-21-43	Louis Mohrman	None	3,187.50	3,187.50
101-LA	538	12-6-49	Helen P. Williamson		2,084.75	2,084.75
102-LA	54127	8-2-49	Brynes R. Lupe		2,891.75	2,891.75
103-LA	37092	9-22-47	Oscar Stange & Jesse Suttan		1,593.75	1,593.75
104-LA	54442	12-10-51	Nell & Alice Hummel		2,077.00	2,077.00
105-LA	18132	4-7-48	Donald B. & John A. Fadyen		3,790.25	3,790.25
106-LA	31683	6-1-40	Walter P. & Effie B. Wise		3,706.65	3,706.65
107-LA	17273	3-21-49	Jessie J. & Hilda Denner		2,187.50	2,187.50
108-LA	40886	5-23-42	Hilda G. Reades		1,718.75	1,718.75
108-A-LA	51725	1-7-58	J.H. & Elizabeth Crabtree	None	1,437.50	1,437.50
109-LA	20852	3-16-38	Nellie O. Kagee	1187.50	2,437.50	12,500.00
110-LA	21366	5-15-53	Louis Wierack	8081.26	2,281.26	12,600.00
111-LA	40817	2-18-52	Chalmers & Katie Dunn		3,459.38	3,459.38
112-LA	5397	8-17-51	Byrdie Thompson		5,859.38	5,859.38
113-LA	29034	4-1-41	Henry K. Steckel		5,859.38	5,859.38
114-LA	35467	8-5-58	Joseph & Louie Smith		5,859.38	5,859.38
115-LA	40817	2-19-52	William & Pauline McGregor	None	2,400.00	2,400.00
116-LA	42003	10-3-40	Marie Carroll	1,679.69	2,929.69	12,500.00
117-LA	43295	8-27-58	Katie Getz	4,409.38	5,859.38	12,500.00
118-LA	13273	5-23-51	Robert G. Denmead	966.70	1,853.70	888.00
119-LA	18976	3-22-43	Harriett R. Metcalf	970.05	1,862.05	892.00
120-LA	19267	8-5-51	Henry & Susan Holland	783.00	1,503.00	720.00
99	(See Above)		City of Columbus - Bd. of Education		23,810.70	6225.00
99-T	(See Above)		City of Columbus - Bd. of Education		23,810.70	6510.00
108-B-LA	56403		Elsie M. Wolfel	9187.50	10,250.00	10,625.00
108-B-S	56364	1-17-33	" "		10,250.00	937.50
108-B-WA	56364	5-16-37	" "	None	10,250.00	8,250.00
109-S	20852	8-16-38	Nellie O. Kagee		2,437.50	468.75
110-S	21366	5-15-53	Louis Wierack		2,281.26	468.75
110-WA	"	"	"		9,281.26	218.75
116-S	42003	10-3-40	Marie Carroll		2,929.69	468.75
116-WA	"	"	"		2,929.69	375.00
117-S	43295	8-27-58	Katie Getz		5,859.38	468.75
118-S	13273	5-23-51	Robert G. Denmead		1,853.70	333.00
119-S	18976	3-22-43	Harriett R. Metcalf		1,862.05	334.50
120-S	19267	8-5-51	Henry & Susan Holland	None	1,503.00	270.00

DATE	DESCRIPTION
5-4-61	Parcel 99-LA Revised
5-28-62	Parcel 99 & 99-T Added
5-28-62	Parcel 99 & 99-T revised in area



FRANKLIN COUNTY  
FRA - 40 - 12.82  
RIGHT OF WAY PLAN  
LIMITED ACCESS

R/W SHEET # 7

LAND APPROPRIATION TABLE

ENG'RS PARCEL NO.	AUDITORS PARCEL NO.	DATE OF PURCHASE	OWNERS NAME	RESIDUE	SQ. FT. OWNED	SQ. FT. TO BE APPROPRIATED
121-LA	26 651	9-24-53	Freda Kauffman & Minnie Glassman	None	19,125.00	19,125.00
122-LA	26 655	8-22-56	Church of the Living God	None	3,187.50	3,187.50
123-LA	3 718	8-1-46	John S. Walker & John Harris	2295.00	3,187.50	892.50
124-LA	56 903	5-16-39	Joseph Papier	None	8,188.50	8,188.50
125-LA	49 514	3-29-60	Sam Zeldin Etal (3)	None	22,657.50	22,657.50
126-LA	26 653	3-24-53	Farrell K. Shar	2464.50	7056.00	4591.50
126A-LA	28414	4-3-59	David B. Morgan II & David E. Morgan	None	576.00	576.00
127-LA	18 536	3-29-60	Sam Zeldin Etal (3)	None	11,640.00	11,640.00
128-LA	17 915	5-11-51	James A & Dollie M. Martin	17650.00	2,150.00	1900.00
129-LA	40 815	7-12-54	Minnie Greenburg & Sarah Shamansky	5099.49	6099.39	999.90
130-LA	19 482	12-17-48	David Rabkin	None	7760.00	7760.00
131-LA	35 816	1-30-47	Anna Katz	None	6208.00	6208.00
132-LA	38 438	10-28-44	Bert O. Castle	5101.02	6101.22	1000.20
133-LA	54 489	9-30-43	Elgin & Anna Ervin	5099.49	6099.39	999.90
134-LA	12 407	12-17-48	David Rabkin	None	7617.00	7617.00
135-LA	44 755	9-30-46	Dee & Flossy Williams	4590.00	5625.00	1035.00
136-LA	18 938	3-25-36	Janton Co.	24060.78	23486.25	5425.47
137-LA	49 512	1-12-61	Minnie Glassman & Freda Kauffman	None	13,200.00	13,200.00
138-LA	9 032	12-31-57	Stella Katz	None	5850.00	5850.00
139-LA	27 655	8-29-27	I. E. Rubin	None	17,550.00	17,550.00
140-LA	18 956	6-24-54	Schmidt & Co.	4580.82	5613.75	1032.93
141-LA	30 402	6-29-51	Bert Davis	4590.00	5625.00	1035.00
142-LA	69 977	5-22-56	Friendship Baptist Church	20,136	24,750.00	4534.00
143-LA	33 153	12-10-57	Willie & Bertie Roy	None	5625.00	5625.00
144-LA	44 754	11-23-56	Edna Cooks		2859.38	2859.38
145-LA	94 097	7-25-52	Local Homes & Co.		2859.38	2859.38
146-LA	13 588	5-15-46	Edna B. Mc Cleary		6656.25	6656.25
147-LA	27 701	6-11-58	Mervin L. & Verdie L. Reed	None	6187.50	6187.50
123-S	3718	8-1-46	John S. Walker & John Harris		3187.50	1530.00
123-WA						765.06
126-S	26653	3-24-53	Farrell K. Shar		7056.00	2464.50
128-S	17915	5-11-51	James A. & Dollie M. Martin		9150.00	750.00
129-S	40815	7-12-54	Minnie Greenburg & Sarah Shamansky		6099.39	499.99
132-S	38438	10-28-44	Bert O. Castle		6101.22	500.10
133-S	54489	9-30-43	Elgin & Anna Ervin		6099.39	499.95
135-S	44755	9-30-46	Dee & Flossy Williams		5625.00	450.00
136-S	18938	3-25-36	Janton Co.		23486.25	2358.30
140-S	18956	6-24-54	Schmidt & Co.		5613.75	449.10
141-S	30402	6-29-51	Bert Davis		5625.00	450.00
142-S	69977	5-22-56	Friendship Baptist Church		24,750.00	1980.00

DATE	DESCRIPTION
10-26-61	Parcel 126-A-LA Re-assigned
8-6-62	Parcels 125 LA, 127 LA, 131 LA, 143 LA, 131 LA Revised

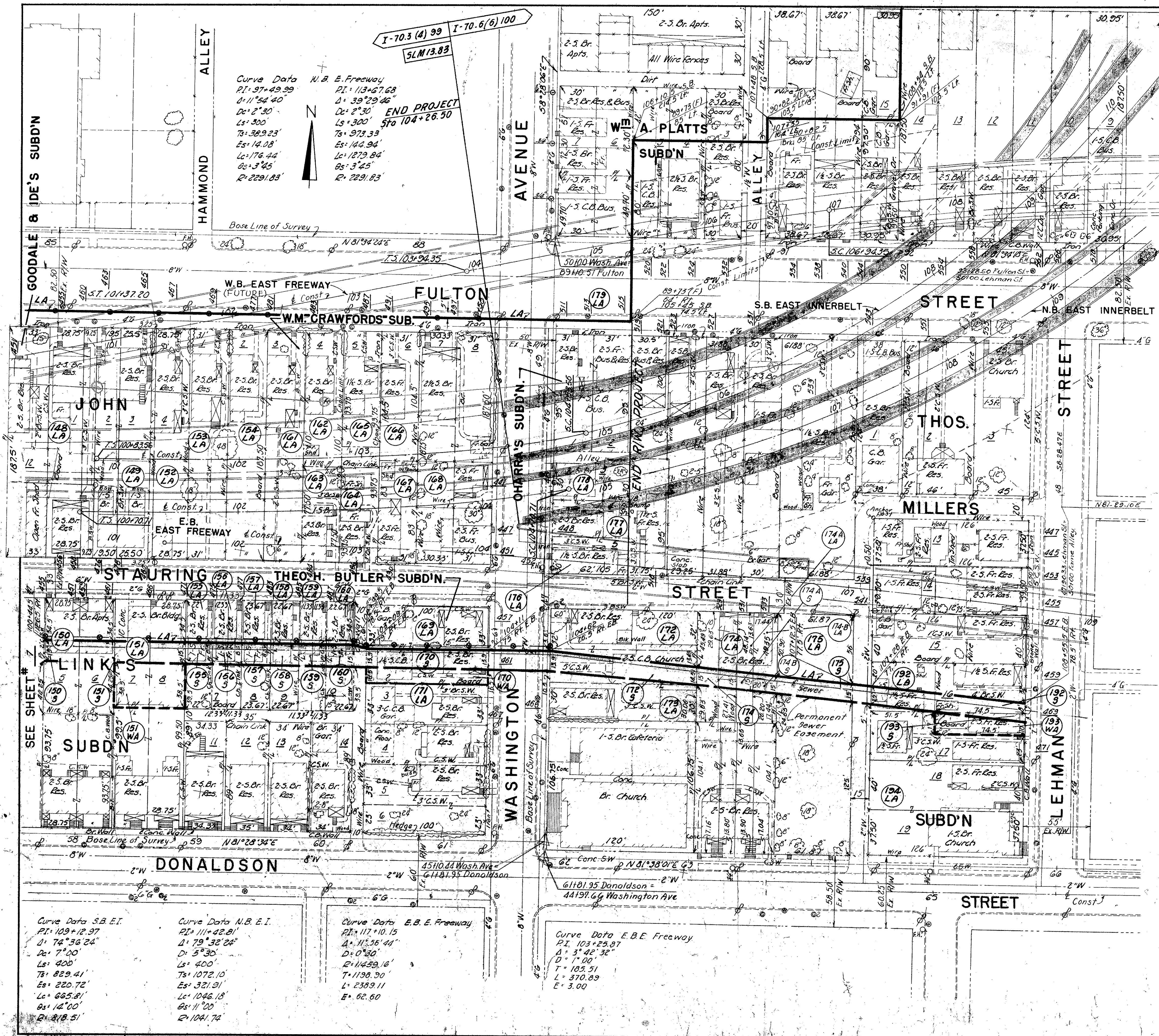
Curve Data E.B.E. Freeway  
PI: 113+44.73  
D: 15°39'16"  
DC: 0°30'  
R: 11459.16'  
T: 1575.26'  
L: 3130.89'  
E: 107.76'

Curve Data W.B.E. Freeway  
PI: 97+43.99  
D: 11°54'40"  
DC: 2°30'  
R: 300'  
T: 389.23'  
E: 14.03'  
L: 176.44'



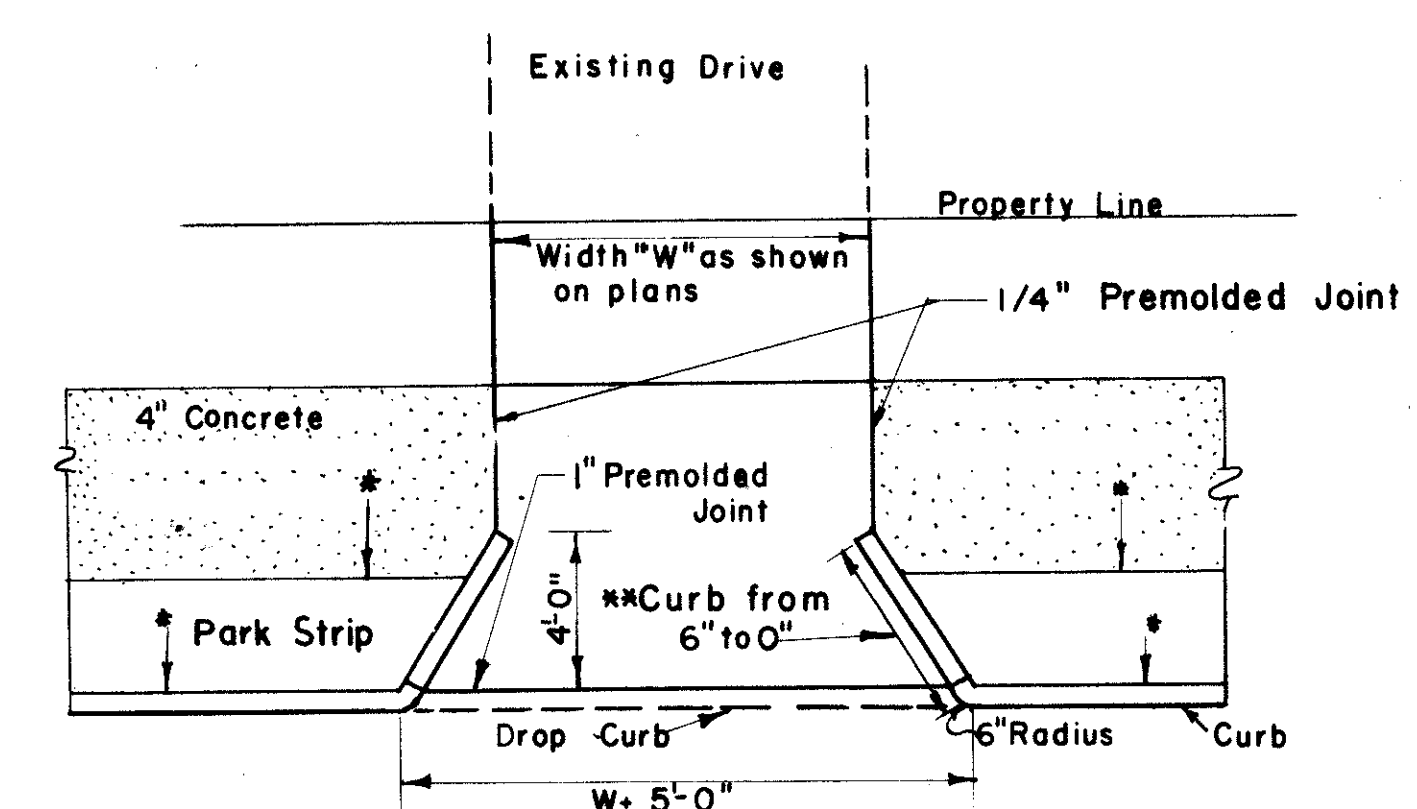
FRANKLIN COUNTY  
FRA-40-12.82  
RIGHT OF WAY PLAN  
LIMITED ACCESS

R/W SHEET # 8



LAND APPROPRIATION TABLE						
ENG'RS PARCEL NO.	AUDITORS PARCEL NO.	DATE OF PURCHASE	OWNERS NAME	RESIDUE	SQ.FT. OWNED	SQ.FT. TO BE APPROPRIATED
148-LA	10904	1-28-49	Anna Kotz	None	13312.50	13312.50
149-LA	27490	5-14-42	Alexander & Florence Bernstein	None	8437.50	8437.50
150-LA	42239	7-9-49	Israel L. Turner	3406.88	5390.63	1983.75
151-LA	35712	2-7-57	Timmons Metal Products	3076.25	5060.00	1983.75
152-LA	26654	11-20-52	Gladys Wilson	None	6000.00	6000.00
153-LA	1517	1-23-56	Edna W. Mc Common	None	5812.50	5812.50
154-LA	43758	6-9-59	Mary A. Ruff Etol (3)	None	5812.50	5812.50
155-LA	8269	11-22-39	Olin L. Porrett	1199.00	1958.00	759.00
156-LA	8263	11-29-55	Willie R. & H. Prysock	1289.47	2105.74	816.27
157-LA	54135	8-2-43	John W. & Susan G. Wright	1290.01	2106.63	816.62
158-LA	50566	6-30-58	Molly Robkin	1235.51	2017.63	782.12
159-LA	17921	6-3-49	Edward & L. G. Knox	1234.97	2016.74	781.77
160-LA	5709	5-11-36	R. & W. Realty Co.	None	2017.63	2017.63
161-LA	54180	1-29-57	Willie & Lucille Hommett	5812.50	5812.50	
162-LA	93717	8-16-46	John H. Harmon	3410.00	3410.00	
163-LA	10646	8-21-46	Richard & Mable Simpson	2402.50	2402.50	
164-LA	30667	6-30-52	Susie L. Hywarden	2906.25	2906.25	
165-LA	30785	10-25-46	Charles & Cora Vaughn	2906.25	2906.25	
166-LA	15049	7-5-52	Elmae Jones	3239.50	3239.50	
167-LA	93751	8-12-47	Mattie Turner	2573.00	2573.00	
168-LA	13050	9-6-58	Joanette Friedman Etol (6)	11499.38	11499.38	
169-LA	47734	11-17-54	Maggie Mizon	None	3560.00	3560.00
170-S	47735	8-31-44	Gilman J. & Bertha Rogers	None	3040.00	1330.00
171-LA	9264	11-12-57	Yetta Grundstein & Albert Beim	Not Needed		
172-LA	66668	2-9-48	Goldie K. Mayer	2334.60	1200.00	4865.20
173-LA	16394	9-15-45	Effiey N. Sr. & Lucille R. Brooks	Not Needed		
175-LA	48966	10-1-34	Ruth E. Stern	6819.57	12126.52	3306.95
192-LA	36591	3-4-40	James A. Thompson	1764.00	5040.00	3276.00
193-S	14436	1-23-35	Elmer L. & Lydia J. Schumacher	None	5040.00	260.75
194-LA	35087	7-6-54	Bethel African M.E. Church Trs.	None	Not Needed	
176-LA	29030	3-8-52	Sophia T. Riehl	None	1860.00	1860.00
177-LA	3108	3-5-47	Henry S. Watkins	1860.00	1860.00	
150-S	42239	1-9-49	Israel L. Turner		5390.63	862.50
151-S	35712	2-7-57	Timmons Metal Products		5060.00	862.50
151-WA					5060.00	2273.75
155-S	8269	11-22-39	Olin L. Porrett		1958.00	350.00
156-S	8263	11-29-55	Willie R. & H. Prysock		2105.74	354.90
157-S	54135	8-2-43	John W. & Susan G. Wright		2106.63	355.05
158-S	50566	6-30-58	Molly Robkin		2017.63	340.25
159-S	17921	6-3-49	Edward & L. G. Knox		2016.74	339.90
160-S	5709	5-11-36	R. & W. Realty Co.		2017.63	340.05
170-WA	47735	8-31-44	Gilman J. & Bertha Rogers		3040.00	1650.00
172-S	66668	2-9-48	Goldie K. Mayer		7800.00	1704.60
175-S	48966	10-1-34	Ruth E. Stern		12126.52	328.05
192-S	36591	3-4-40	James A. Thompson		5040.00	1635.25
193-WA	14436	1-23-35	Elmer L. & Lydia J. Schumacher		5040.00	1005.75
178-LA	47581	10-14-47	Condis W. & Bertha M. Whitaker		1860.00	1860.00
179-LA	2640	2-4-54	Phillip Bernstein	None	5890.00	5890.00
174-LA			Sladeco Inc. (James & Marnie Barnett)	1295.87	2683.00	1387.13
174-S			"	None	2683.00	444.45
174A-LA			Sladeco Inc. (Sylvester & Hattie M. Morris)	569.87	1234.20	664.39
174A-S			"	None	1234.20	204.45
174B-LA			James & Mary Ann Hampton			
174B-S			Res Owned Table			
	705.01	1579.19	874.16			
	None		281.60			
		DATE	DESCRIPTION			
		8-6-62	Parcel 149 LA and 154 LA Revised			
		9-5-62	174 LA Reassigned			
			174A-LA added			
			174B-LA "			
			174A-S "			
			174B-S "			



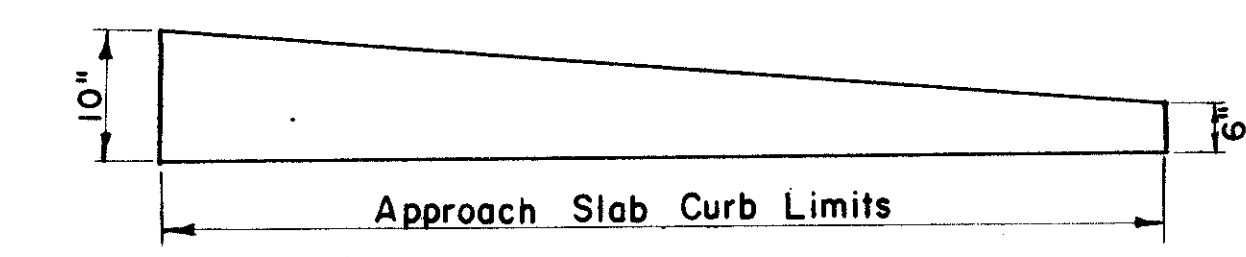


\* Slope Sidewalk and Park Strip  $\frac{3}{8}$ "/Ft. unless otherwise noted on X-Sections.

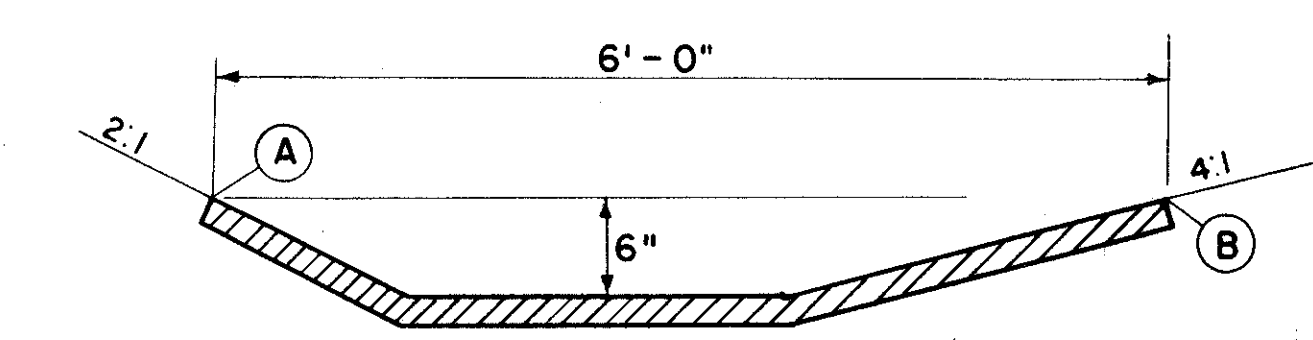
**TYPE "A" DRIVE (with park strip)**  
Thickness = 7" - Residence  
                              = 8" - Business

\*\* The Transition Curb Shall be included in the Unit Bid Price for T-70, as per plan.

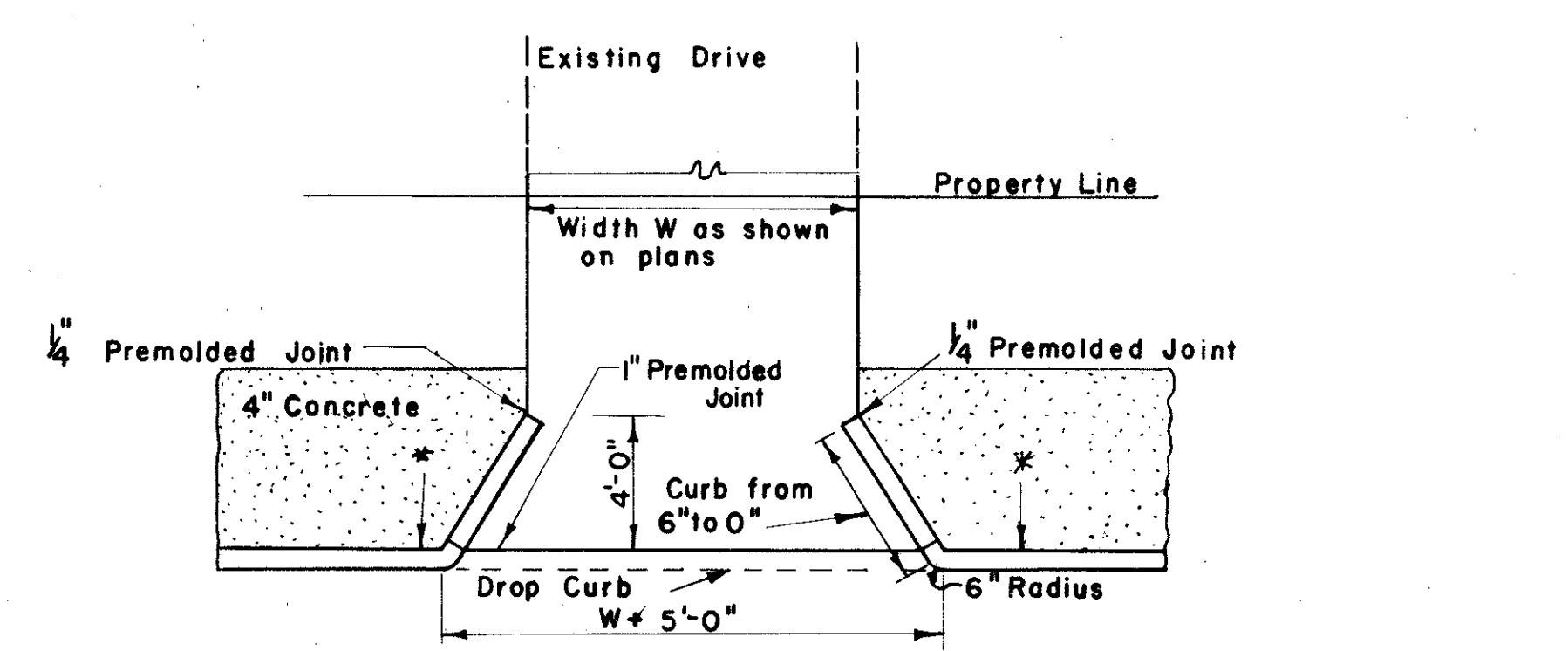
The drop Curb should be considered as Full Height Curb for Payment under Item I-12. for all Drives



**CURB HEIGHT TRANSITION DETAIL**  
(Unless otherwise shown on plans)



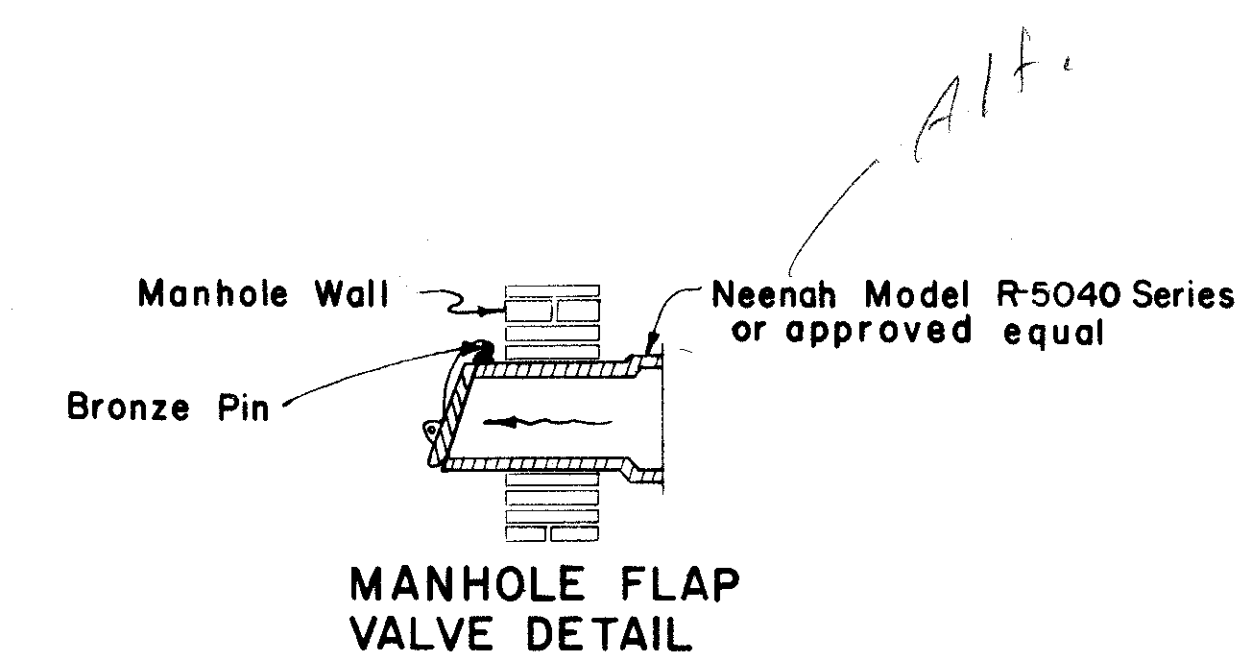
**SOD DETAIL**  
Points A & B Shall be the Same Elevation



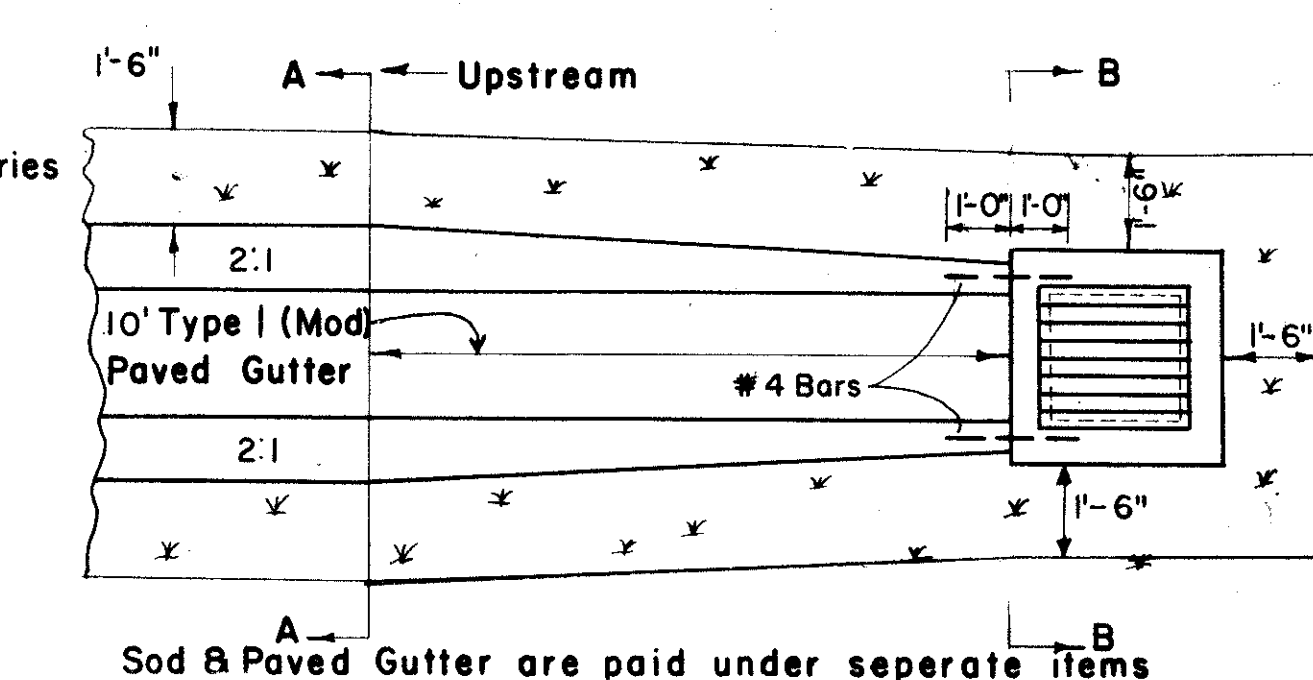
**TYPE "A" DRIVE (without park strip)**  
Thickness = 7" - Residence  
                              = 8" - Business

\* Slope sidewalk  $\frac{3}{8}$ "/Ft. unless otherwise noted on X-Section.

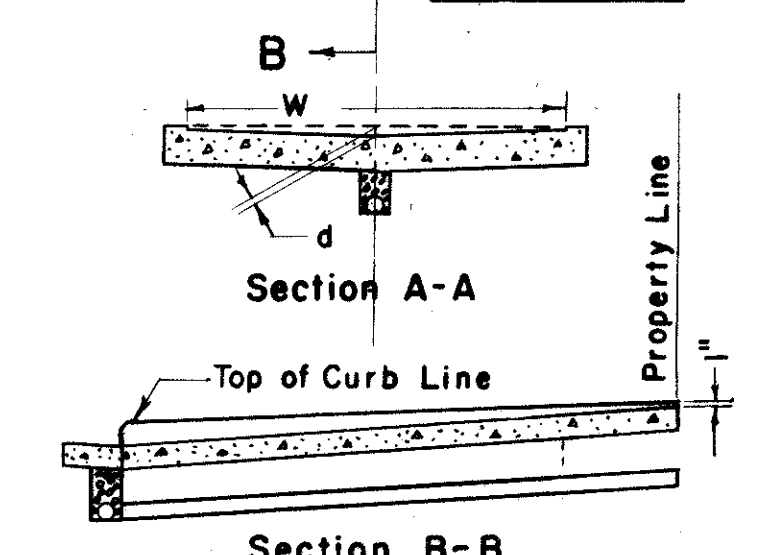
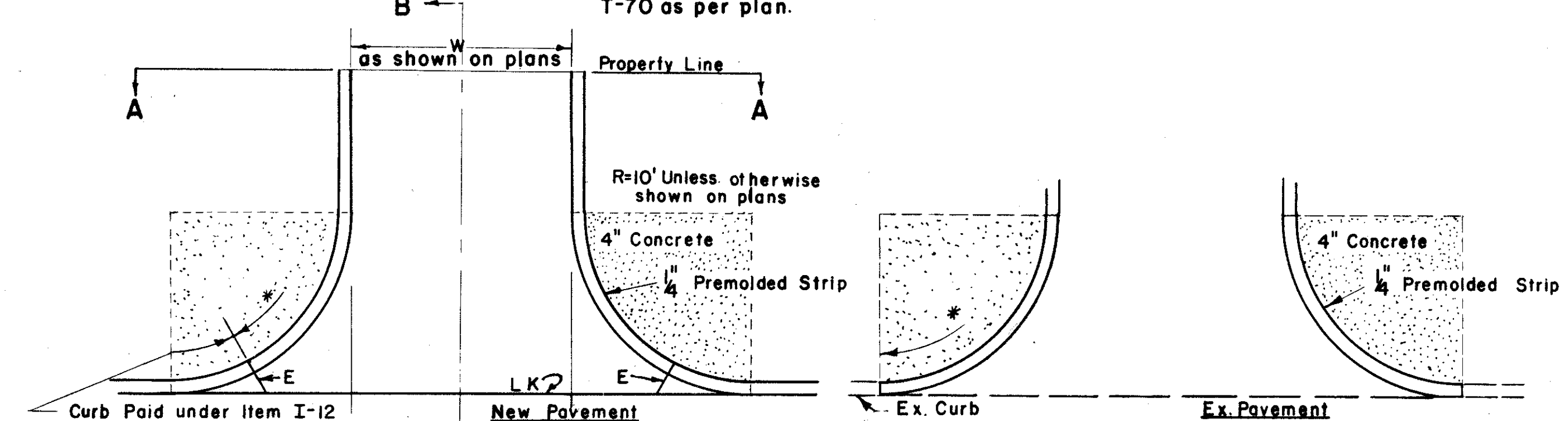
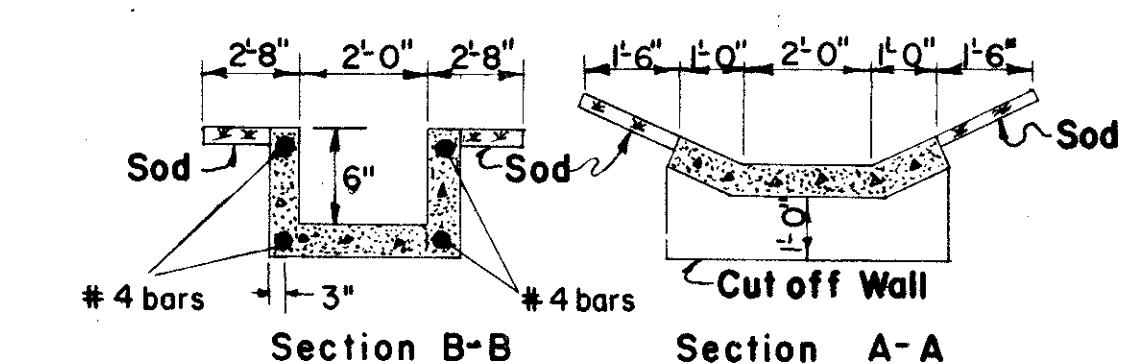
The Curb Shall be included in the Unit Bid Price for T-70 as per plan.



**MANHOLE FLAP VALVE DETAIL**

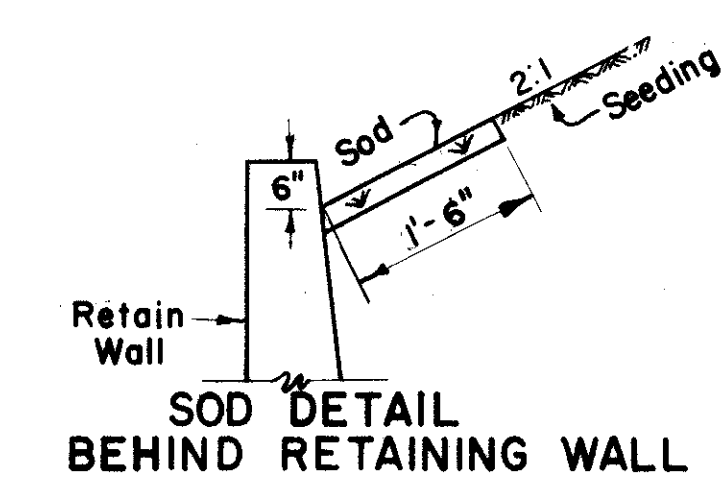


**DETAIL OF 2-2A CATCH BASIN AND TYPE I (MOD.) PAVED GUTTER**



**ALLEY ENTRANCE DETAIL**  
Thickness = 8"

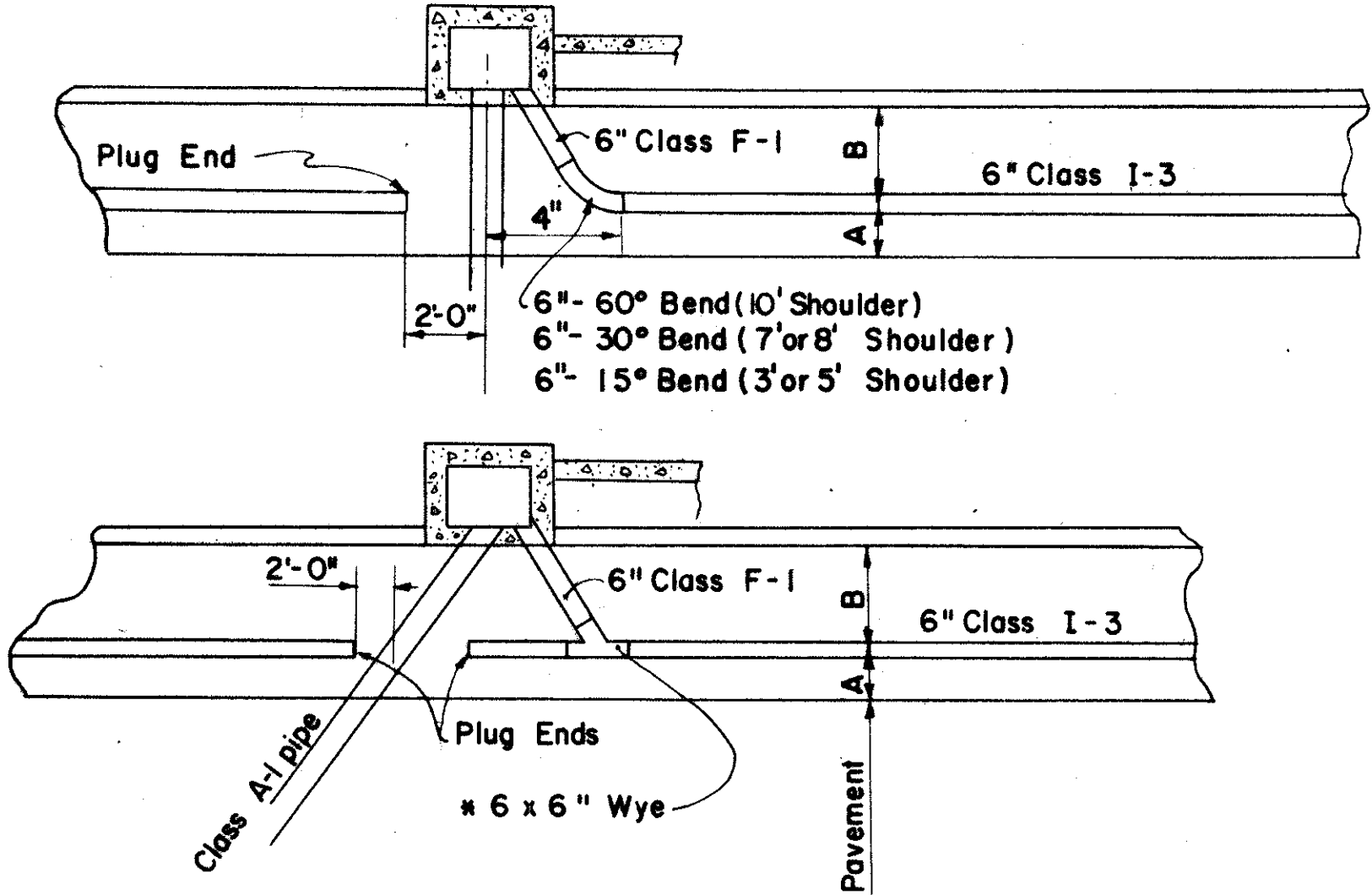
\* The Curb shall be included in the Unit Bid Price for T-70, as per plan, unless otherwise noted on the plan.



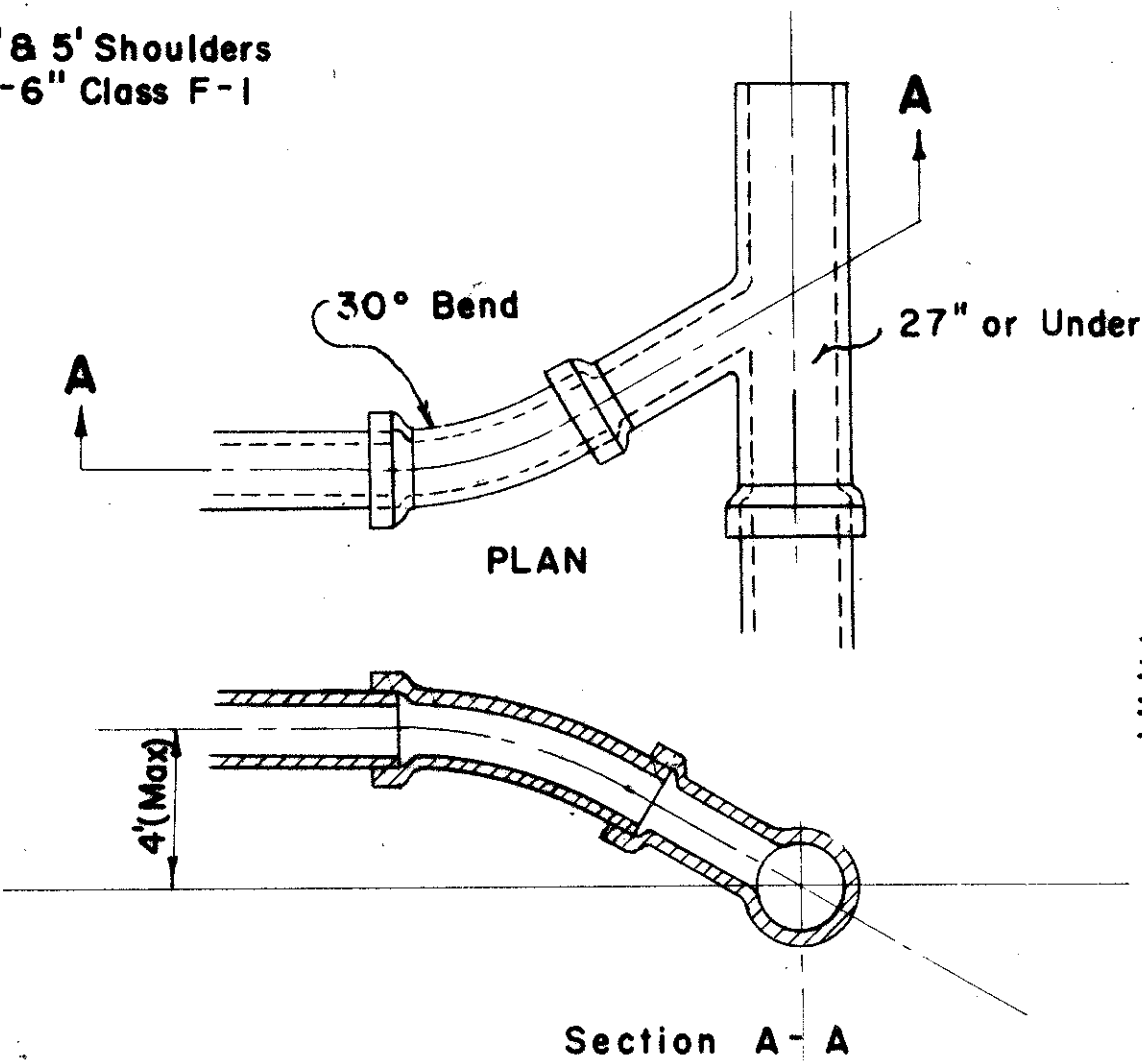
**SOD DETAIL BEHIND RETAINING WALL**



FRANKLIN COUNTY  
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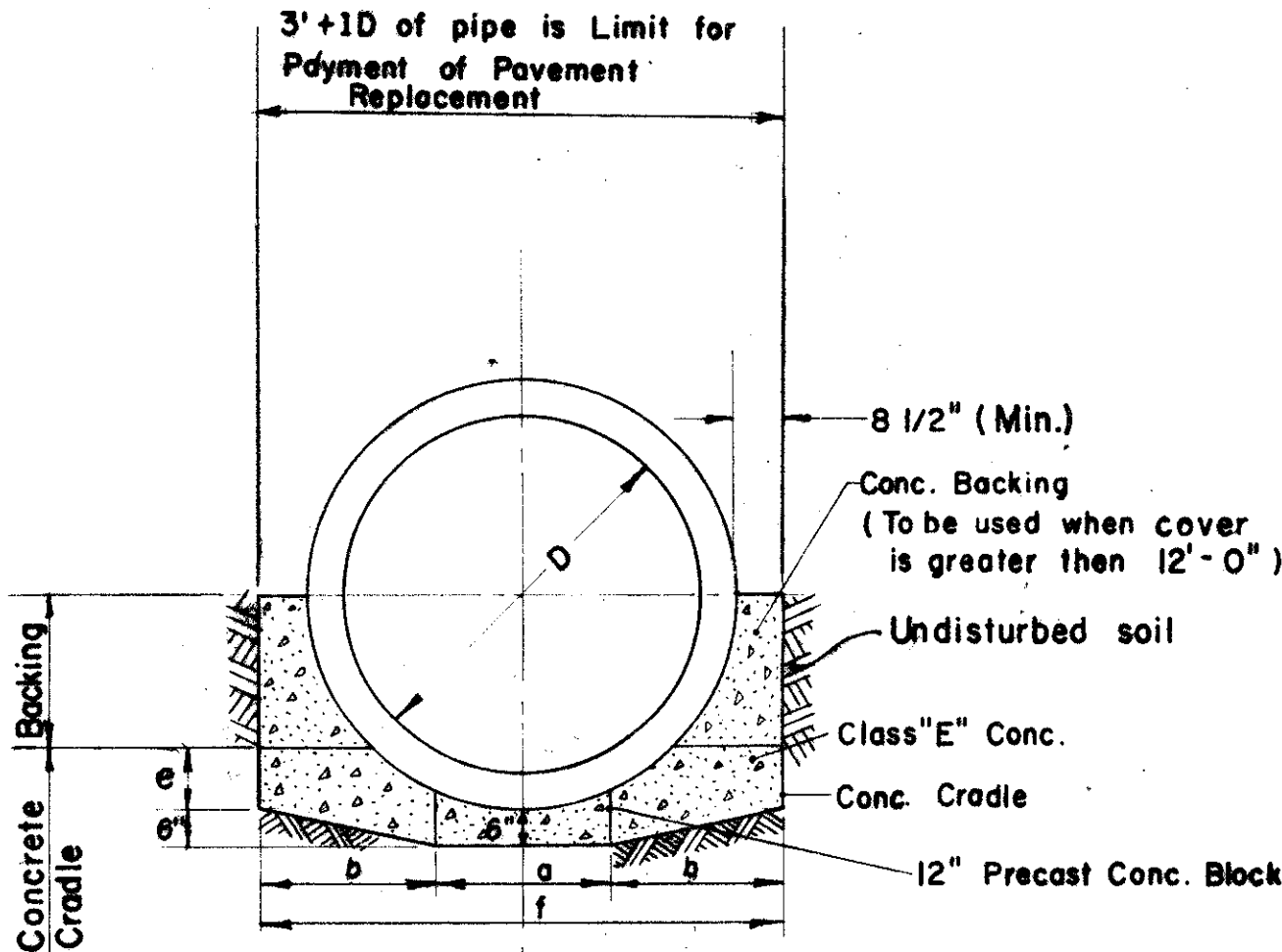


\* Omit 6 x 6" Wye on 3' & 5' Shoulders  
Use 6"-15° Bend & 10'-6" Class F-1



### TYPICAL RISER DETAIL FOR HOUSE CONNECTION

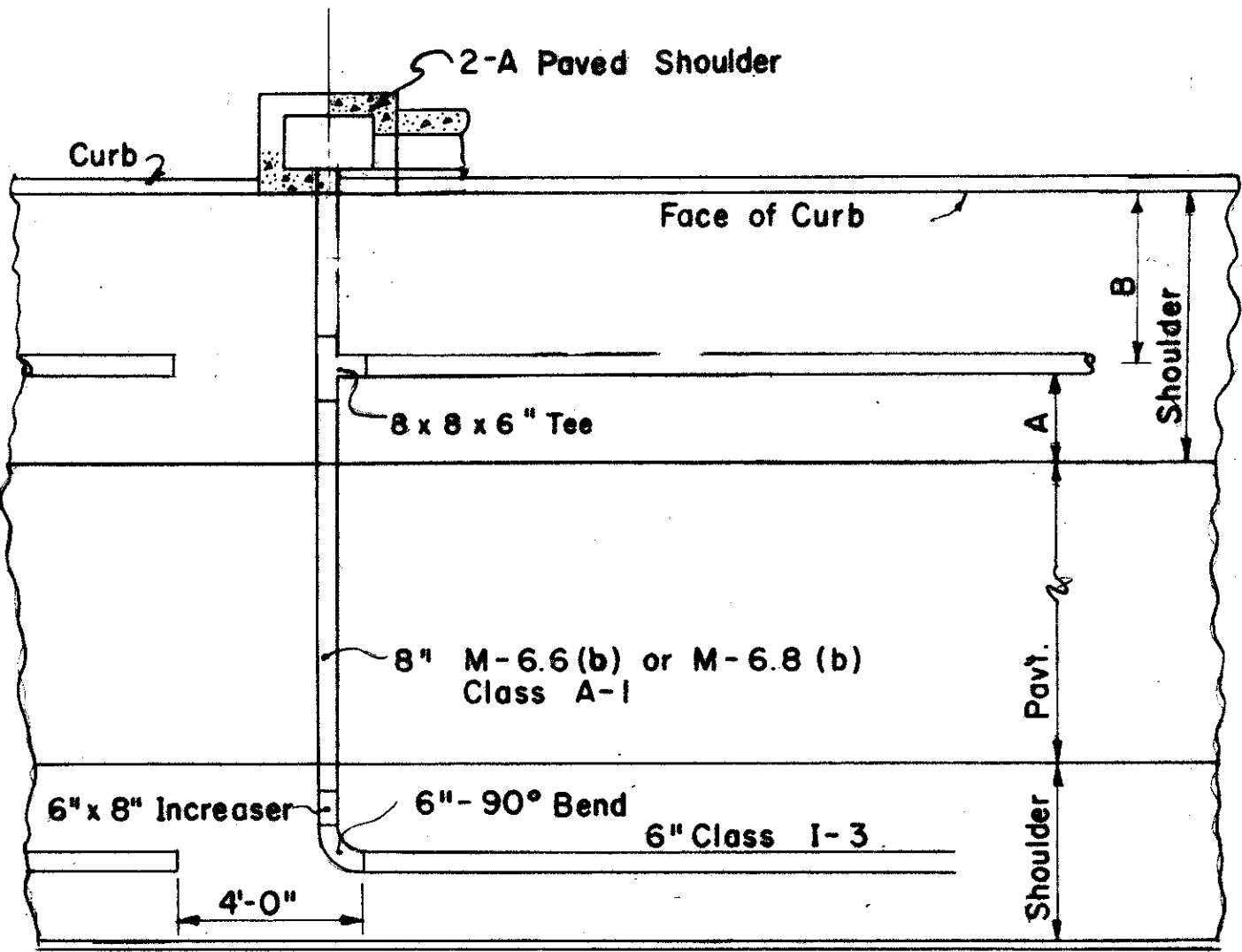
This detail is to be used when the difference in elevation of the two  
Sewer Lines are 2' to 4'.



### CONCRETE CRADLE & BACKING DETAIL

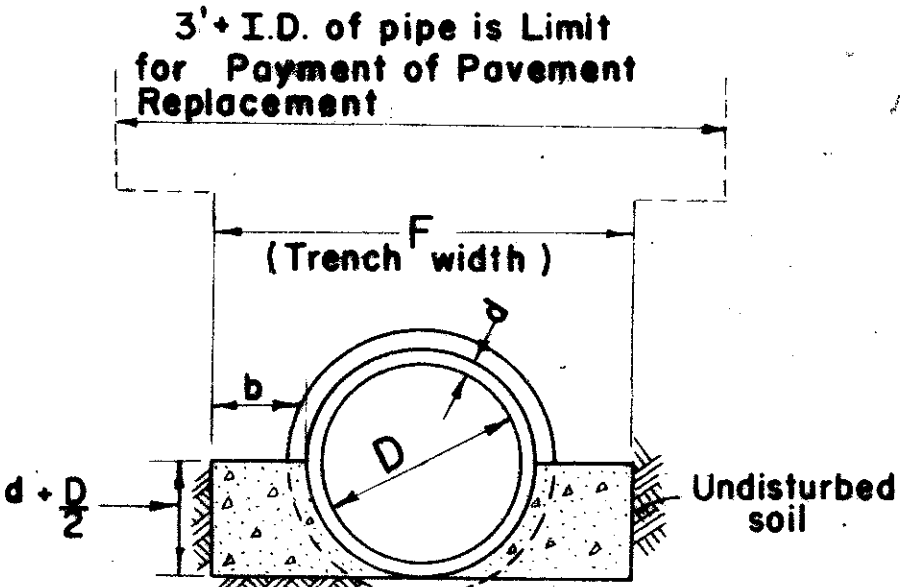
For Pipes 30" & Larger where Indicated on Plans.  
The cost of furnishing & Placing the precast  
Conc. Block shall be included in the unit price  
bid per linear foot of Conc. Cradle.  
The Conc. Backing is for Sanitary Lines Only. (See Req'd Above.)  
The Conc. Cradle is for Sanitary Storm Sewers  
for depth requirements and as indicated on the  
Plans.

D	a	b	e	f
36"	18"	21 1/2"	6 1/2"	61"
48"	24"	25 1/2"	8 1/2"	75"
78"	39"	35 1/2"	13 1/2"	110"



Width of Shoulder	A	B
10'	3'	
8'	3'	
7'	3'	
5'	2'-4.5"	
3'	2'-4.5"	

### UNDERDRAIN OUTLET DETAILS



D	Mt. Clay Pipe		Concrete Pipe		F
	(Min.)	b	(Min.)	b	
6"	1/8"	11 3/8"	3/8"	11 3/8"	2'-6"
8"	3/8"	11 1/4"	1/2"	11 1/4"	2'-8"
12"	1"	11"	1"	11"	3'-0"
15"	1 1/4"	11 1/4"	1 1/4"	11 1/4"	3'-4"
18"	1 1/2"	11 1/2"	1 1/2"	11 1/2"	3'-8"

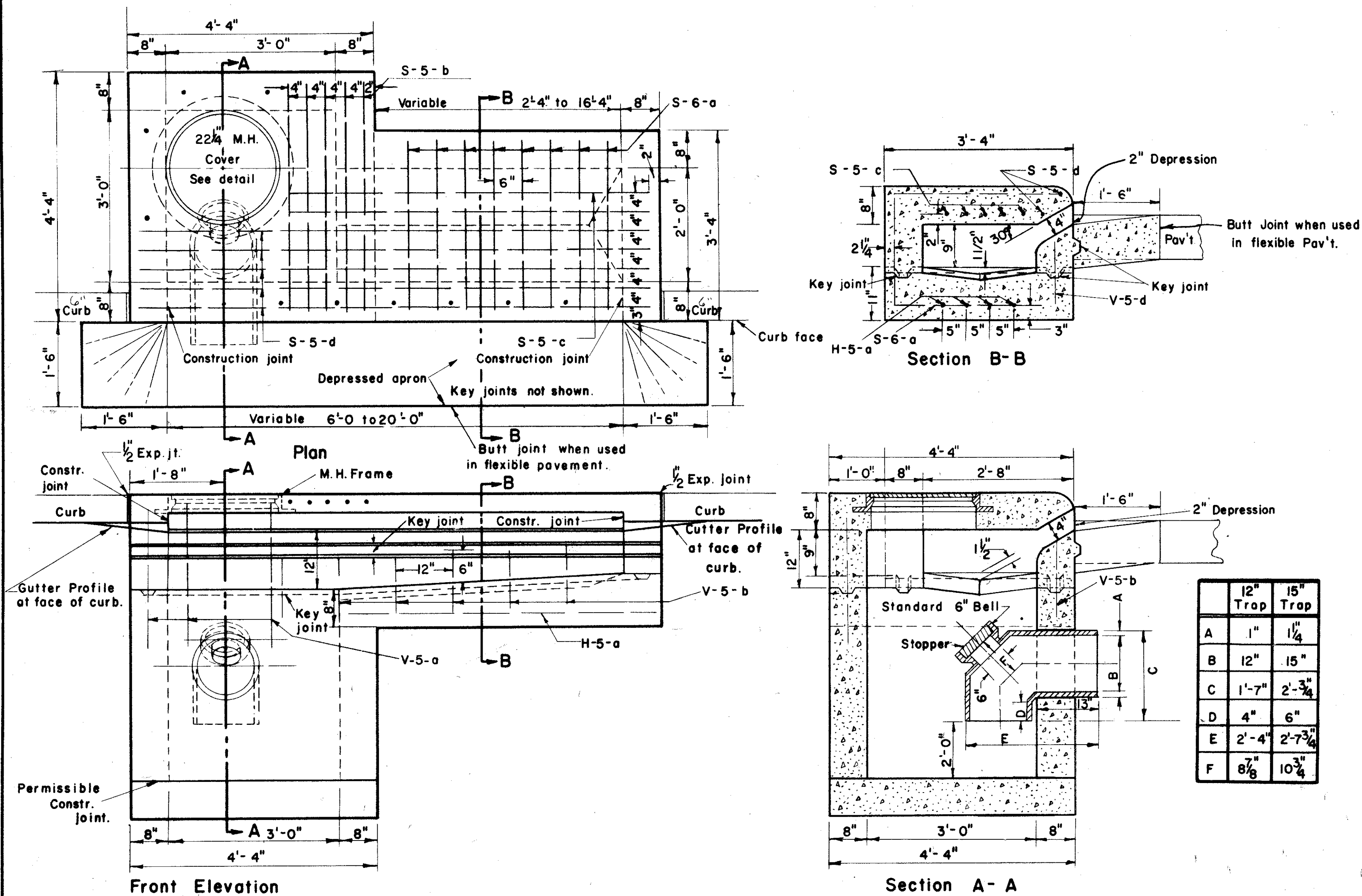
**CONCRETE BACKING**  
For Sanitary Sewers (pipes 27" & under)  
where the cover is 12' or more.  
Labor and Materials is to be paid for  
under ITEM: Special Concrete Backing







FRANKLIN COUNTY  
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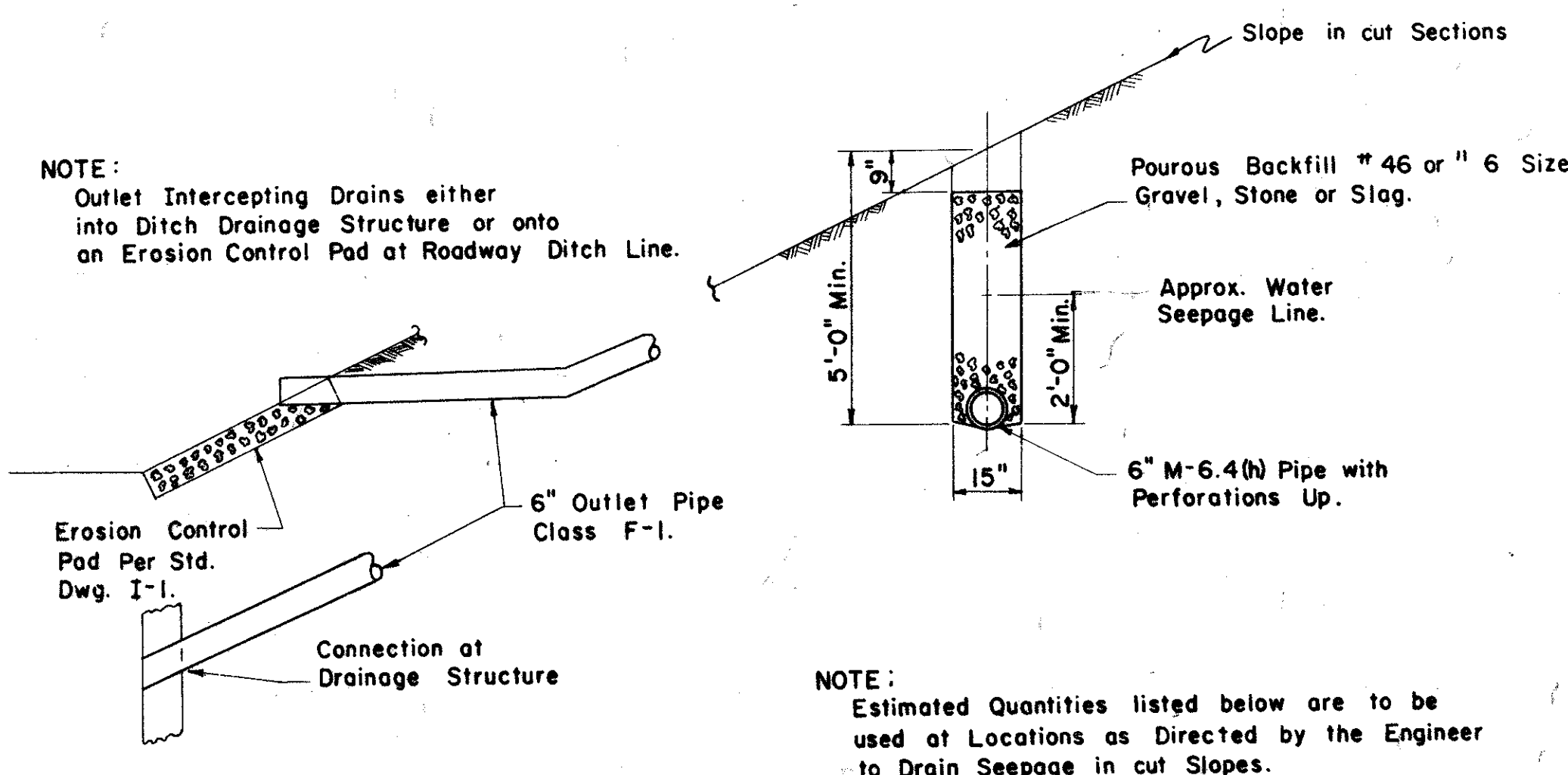
I-8 INLET No 2-B (MODIFIED)  
(with sump)

The cost of the trap is included in the Unit Price  
Bid for I-8 INLET No 2-B (mod).

See Standard Drawing I-8 Paved Shoulder Inlet 2A for notes, dimensions and Materials not shown above. There are five S-5-b bars at 3'-11" each, five S-5-d and two S-5-c instead of the number shown on the Std. Dwg. and the H-5-a bars are 4" shorter than those shown in the Std. Dwg. bar list.

NOTE: 1. All Inlets and Manholes shall be modified to use the City of Columbus Manhole Cover and Frame as Detailed on Sheet No 29

2. I-8 INLET No 2-C as per plan  
The I-8 Inlet No 2-C as per plan is to built as the I-8 Inlet No 2-B as per plan as shown above with the exception that Trap and Sump are omitted.



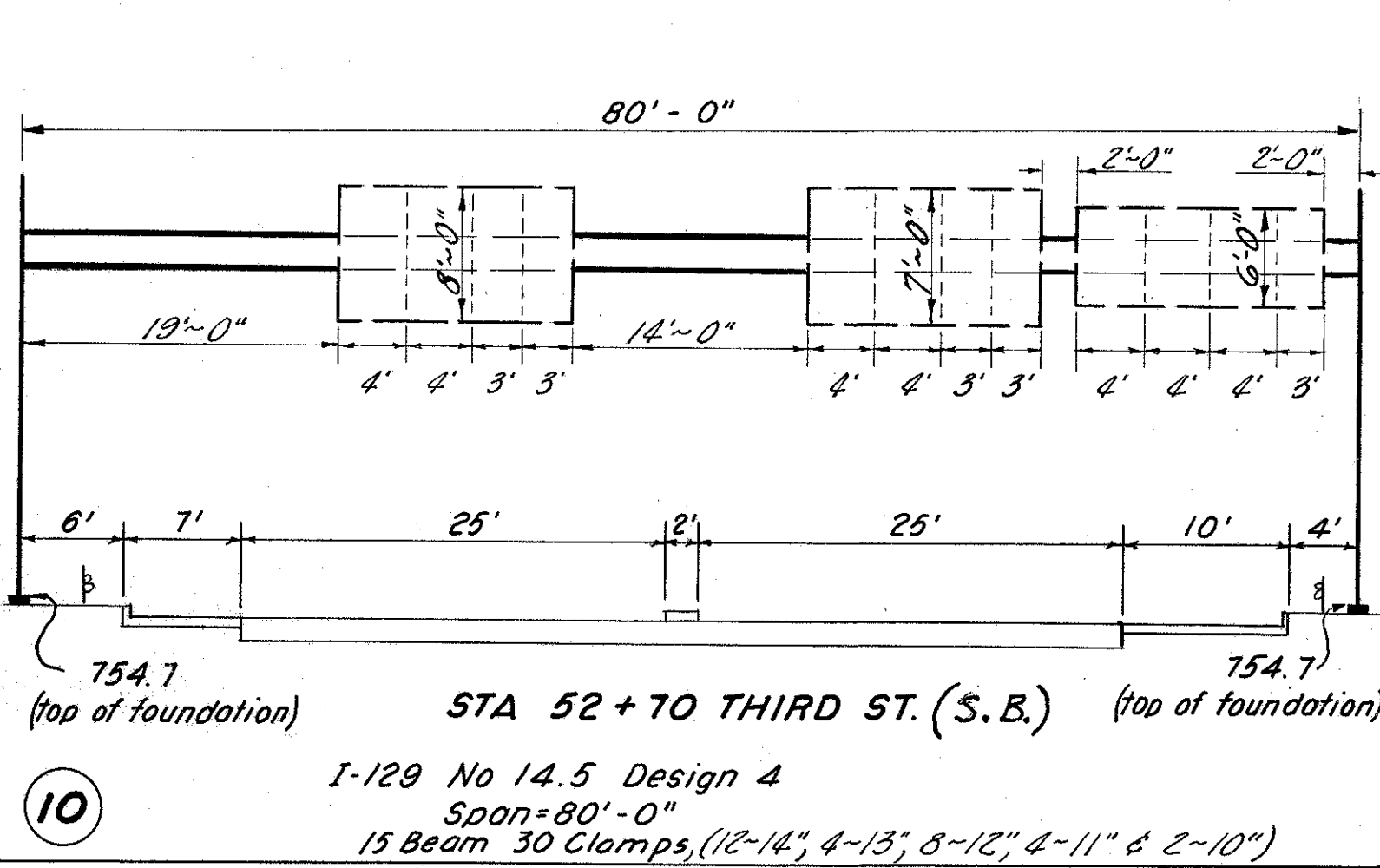
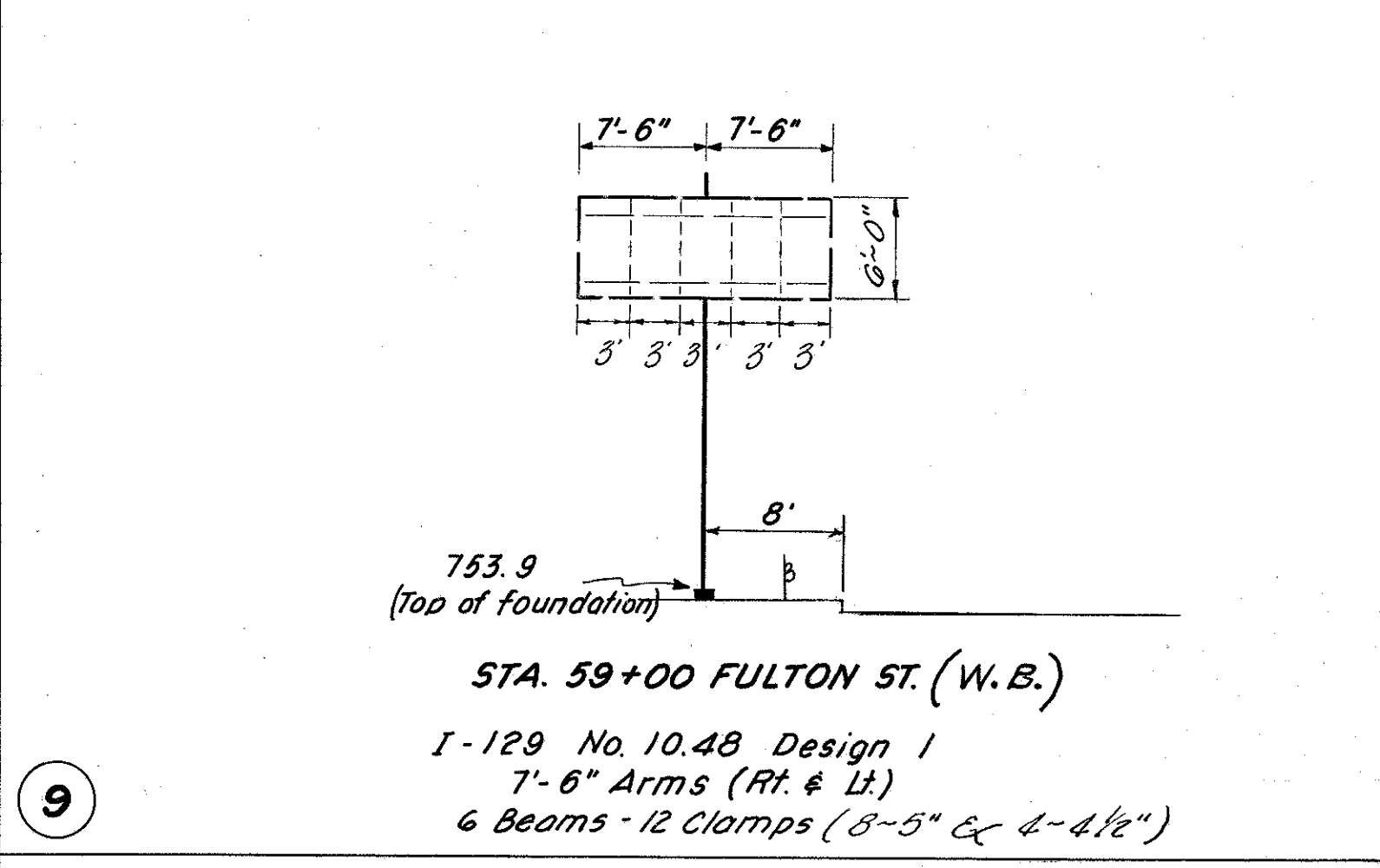
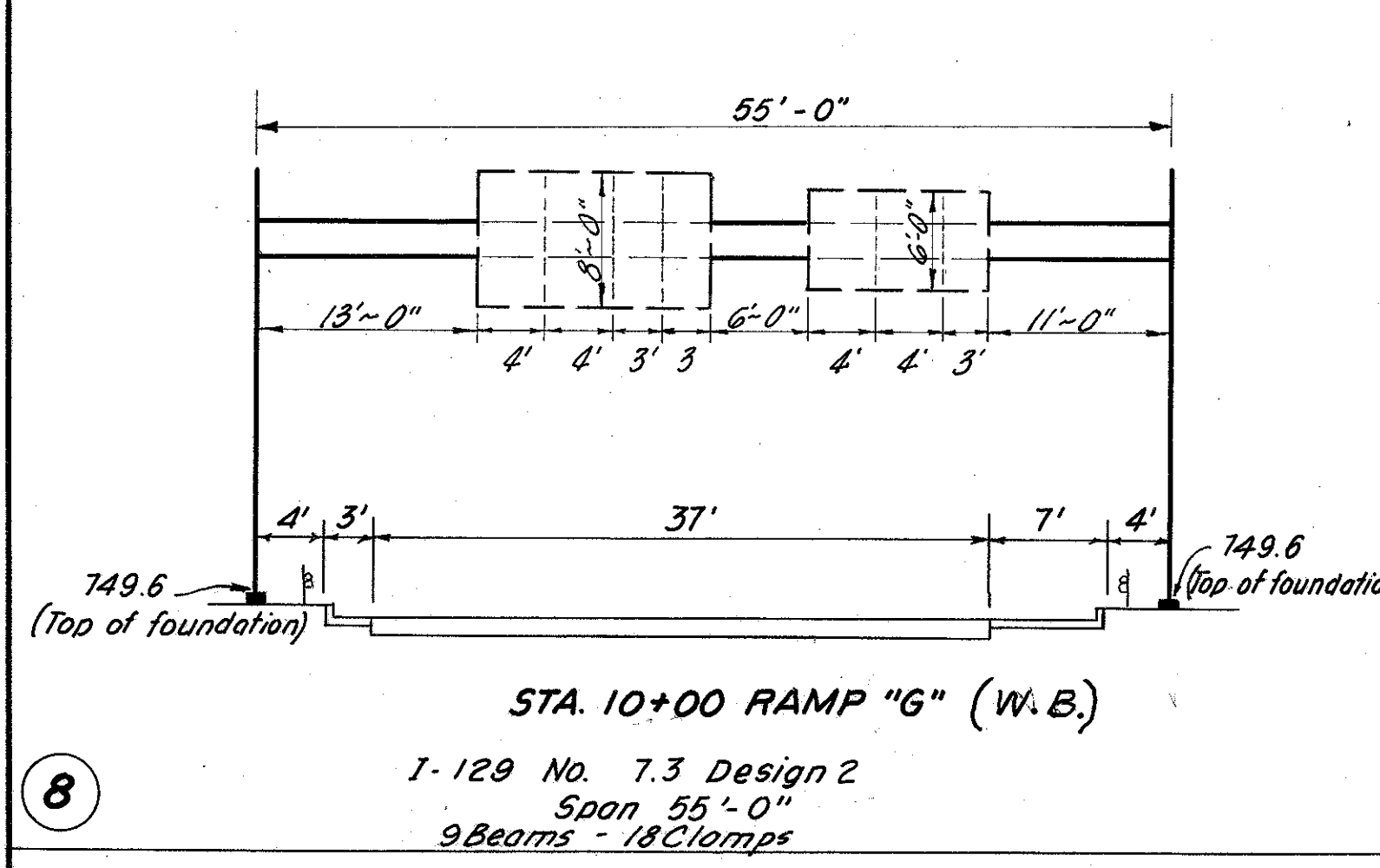
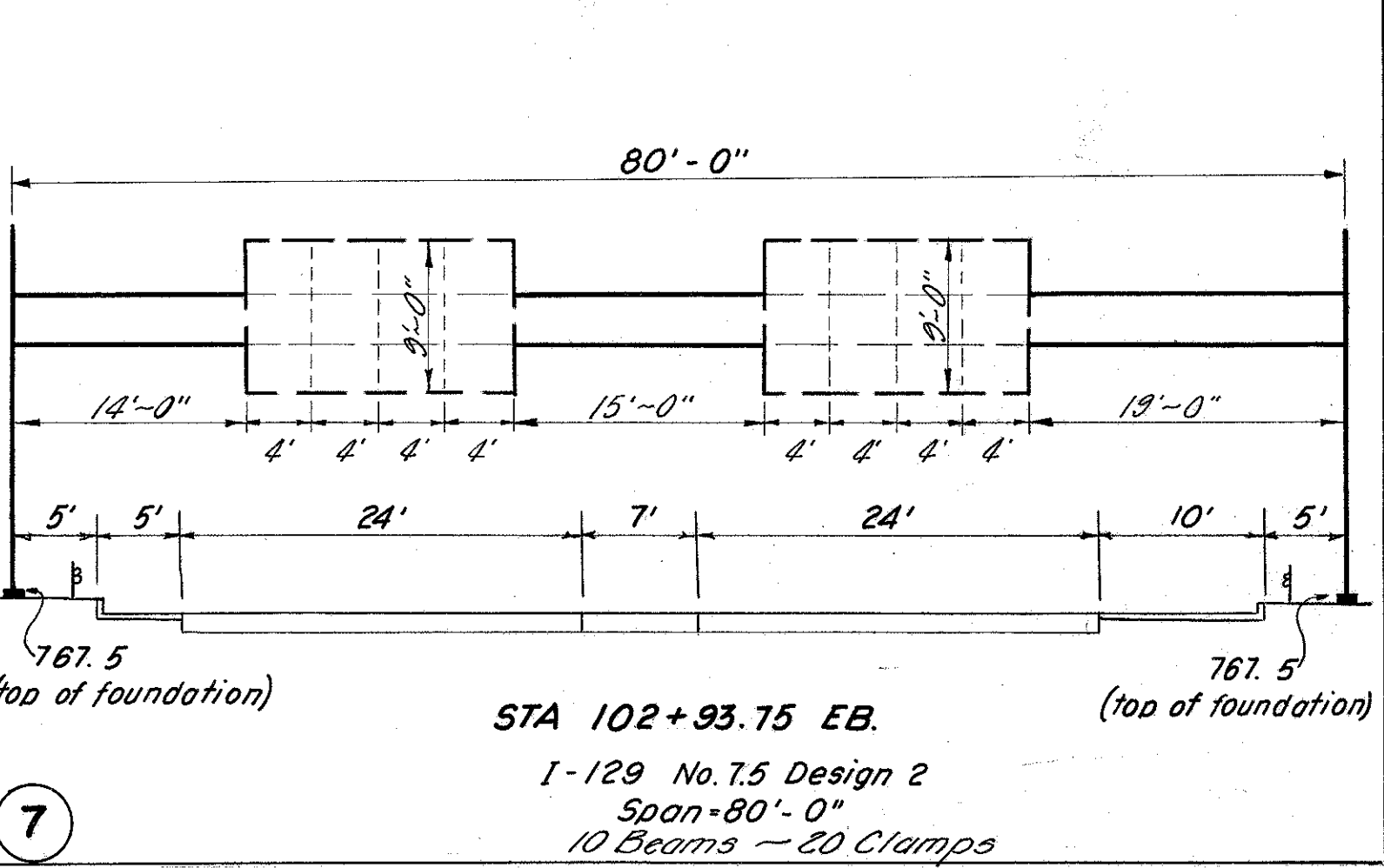
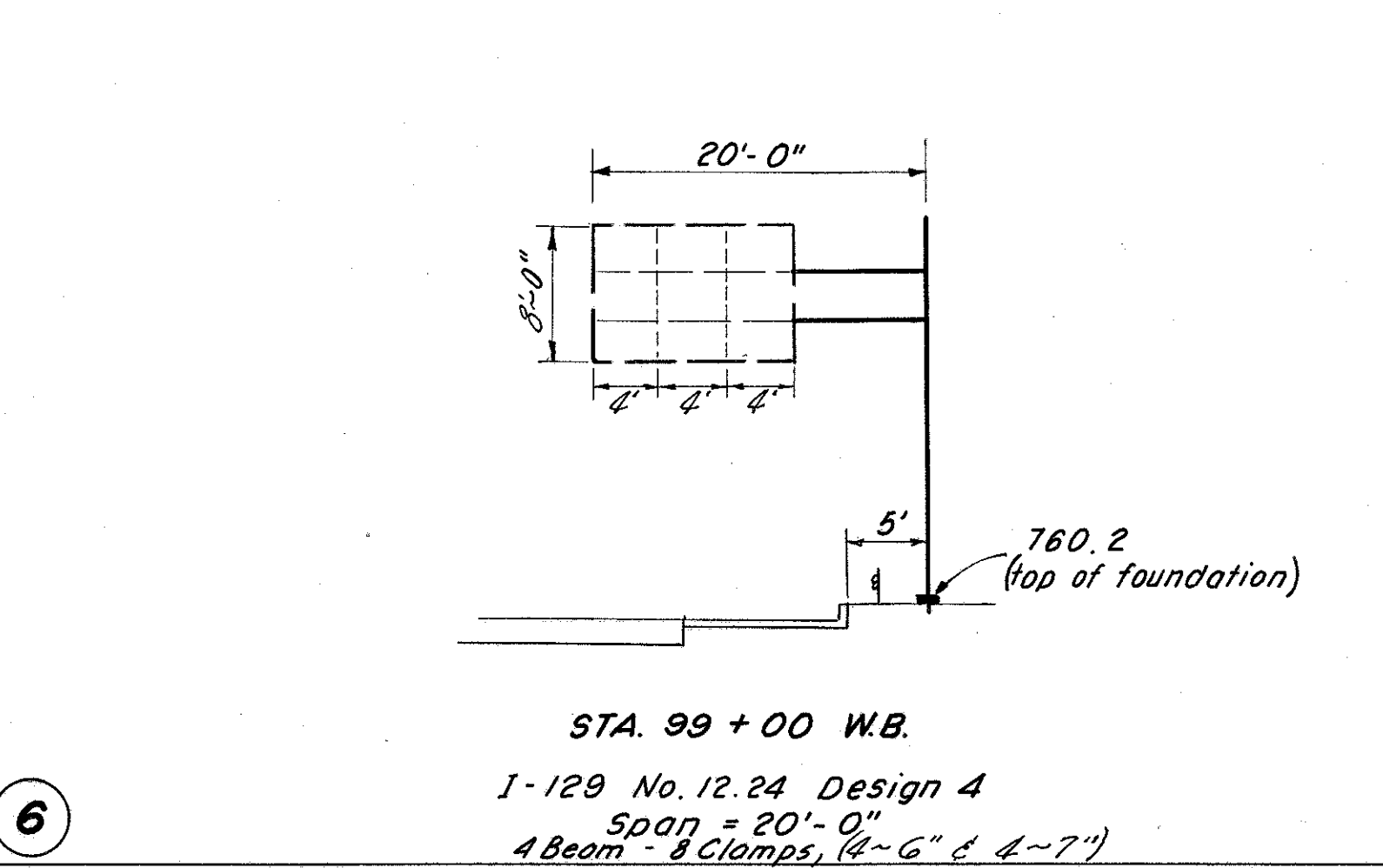
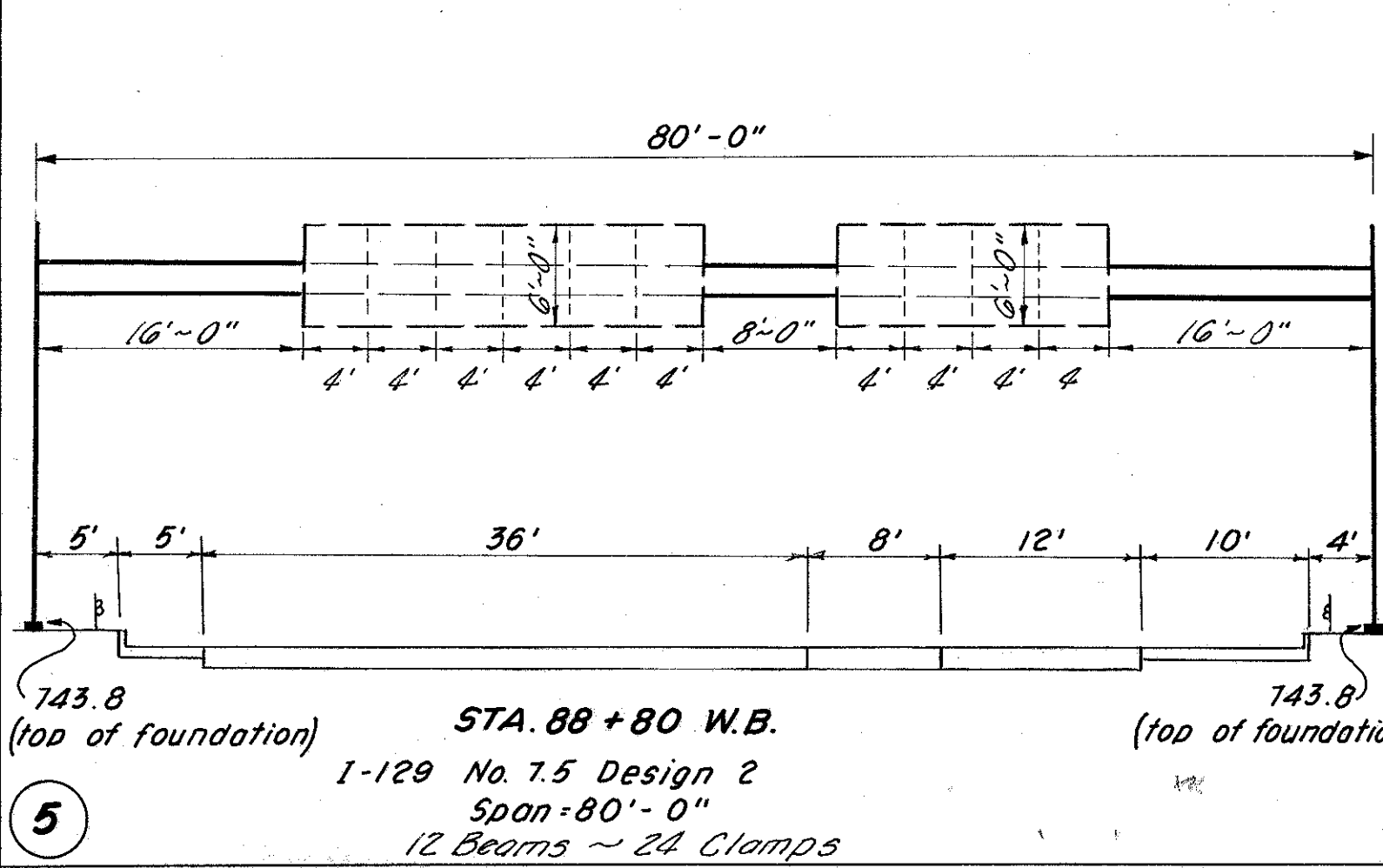
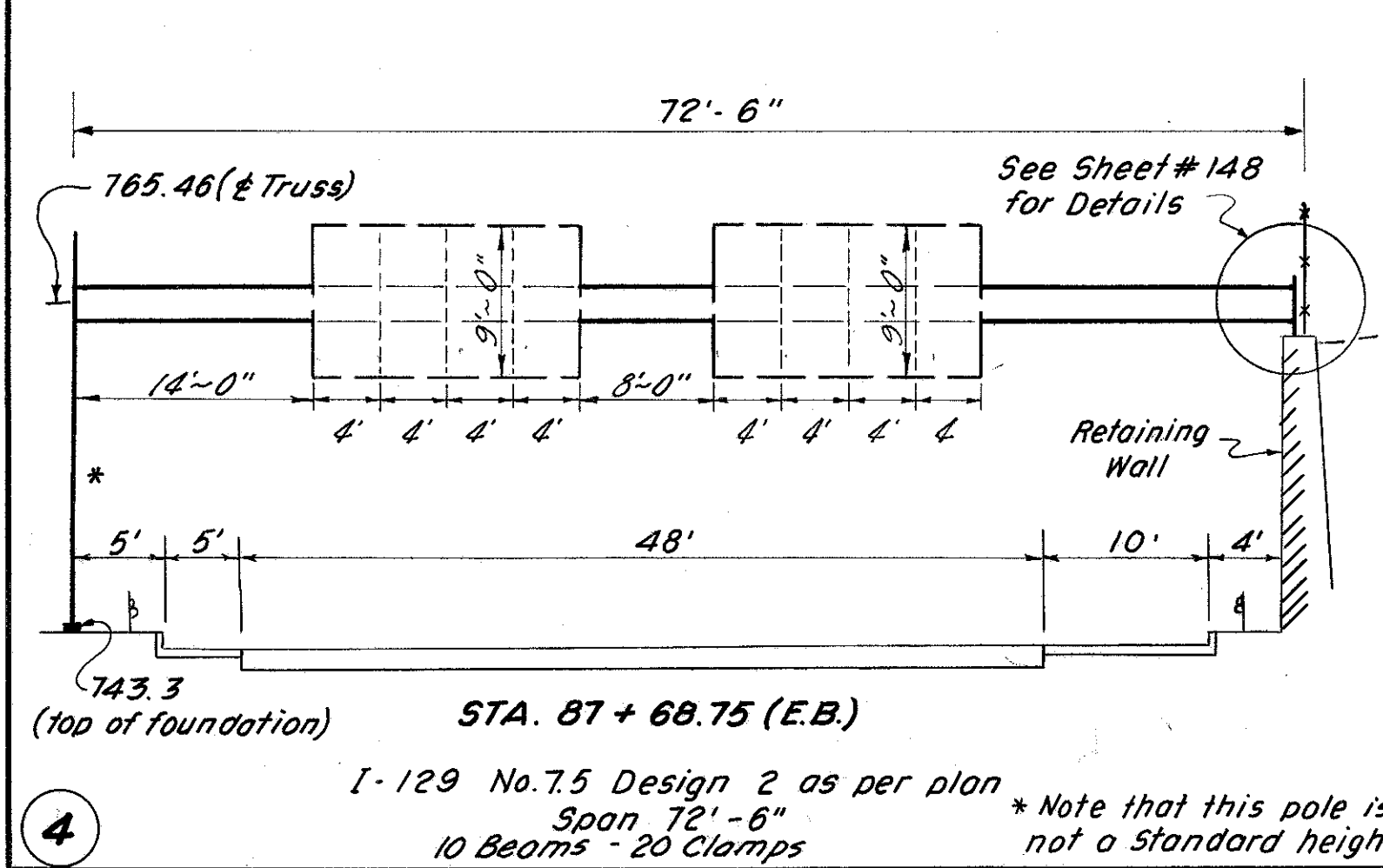
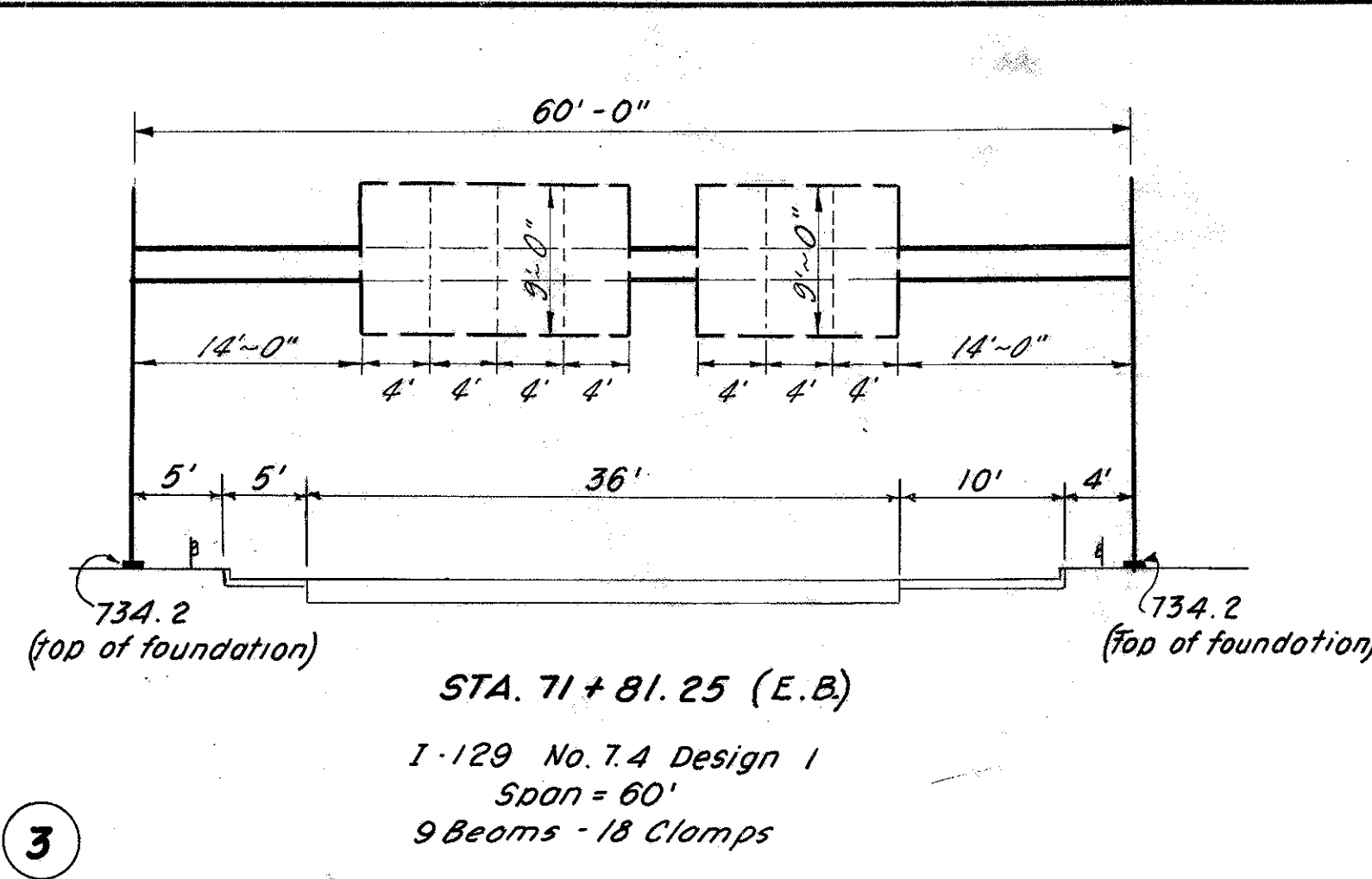
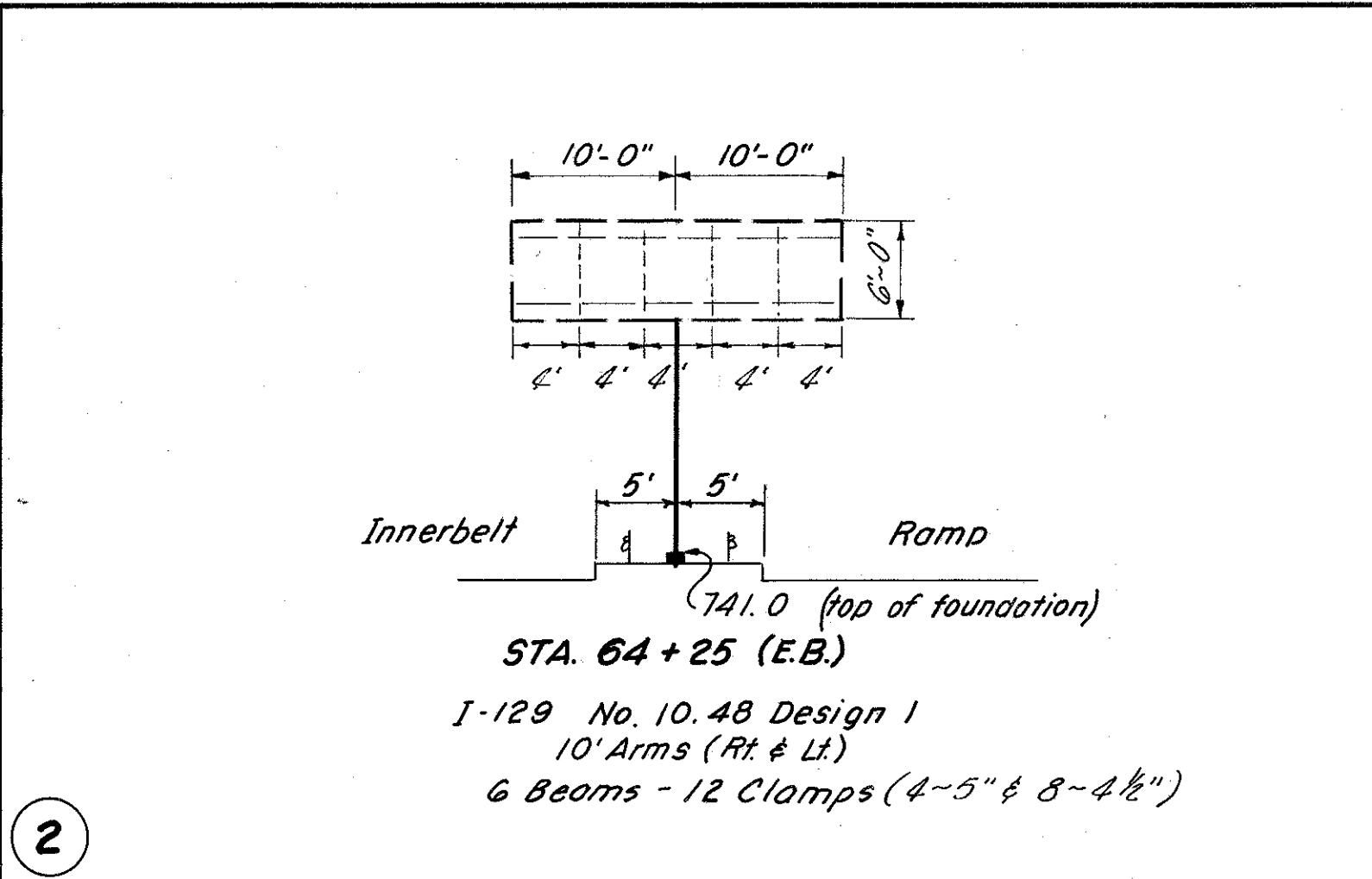
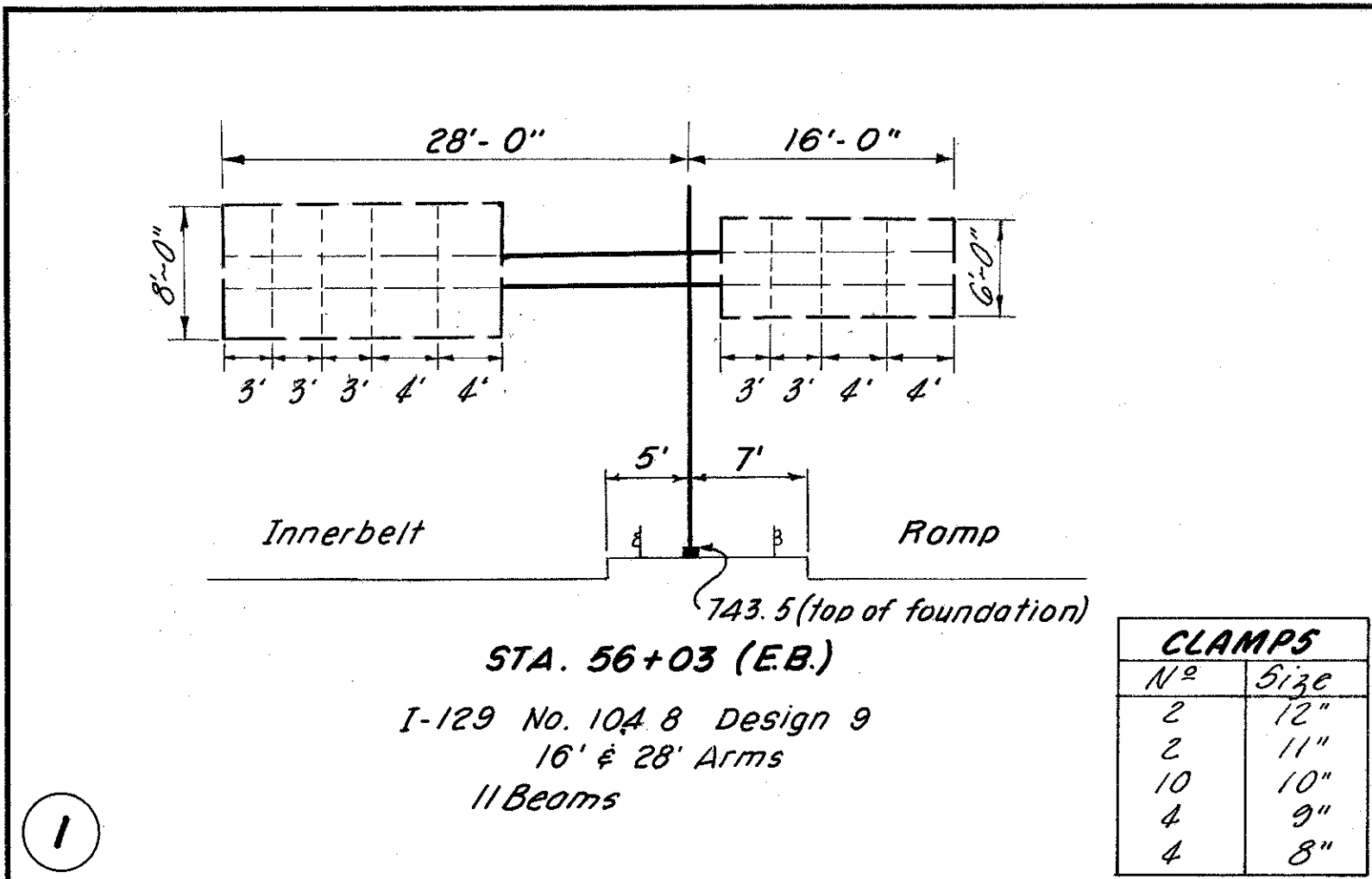
# ESTIMATED QUANTITIES

ITEM	I-1	6"	Intercepting Drains Sec. M-6.4(h) CL I-3 (as per plan)	800 Lin. Ft.
ITEM	I-1	6"	Pipe CL. F-1	80 Lin. Ft.
ITEM	I-5	6"	Pipe Specials Class F-1	8 Each

DETAIL FOR INTERCEPTING DRAIN

SPECIAL DETAILS





SIGN QUANTITIES

I-129													
Reference No.	No. 7.3 Design 2 Span = 55'				No. 10.48				No. 12.24 Design 4 Span = 80'		No. 14.5 Design 4 Span = 80'		Concrete for Sign Support Foundations
	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.	
1													5.1
2													3.0
3													9.3
4													4.8
5													9.6
6													3.6
7													9.6
8													9.6
9													9.6
10													8.2
Total	1	1	2	1	1	1	1	1	1	1	1	1	66
to 6.5													10



### NOTES

#### MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

#### FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-74(d). MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

#### ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

#### PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVER-HEAD SIGN SUPPORTS.

#### SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

#### REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

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.

#### \*FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17" CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

#### DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC

OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD

SIGN SUPPORTS

I-129

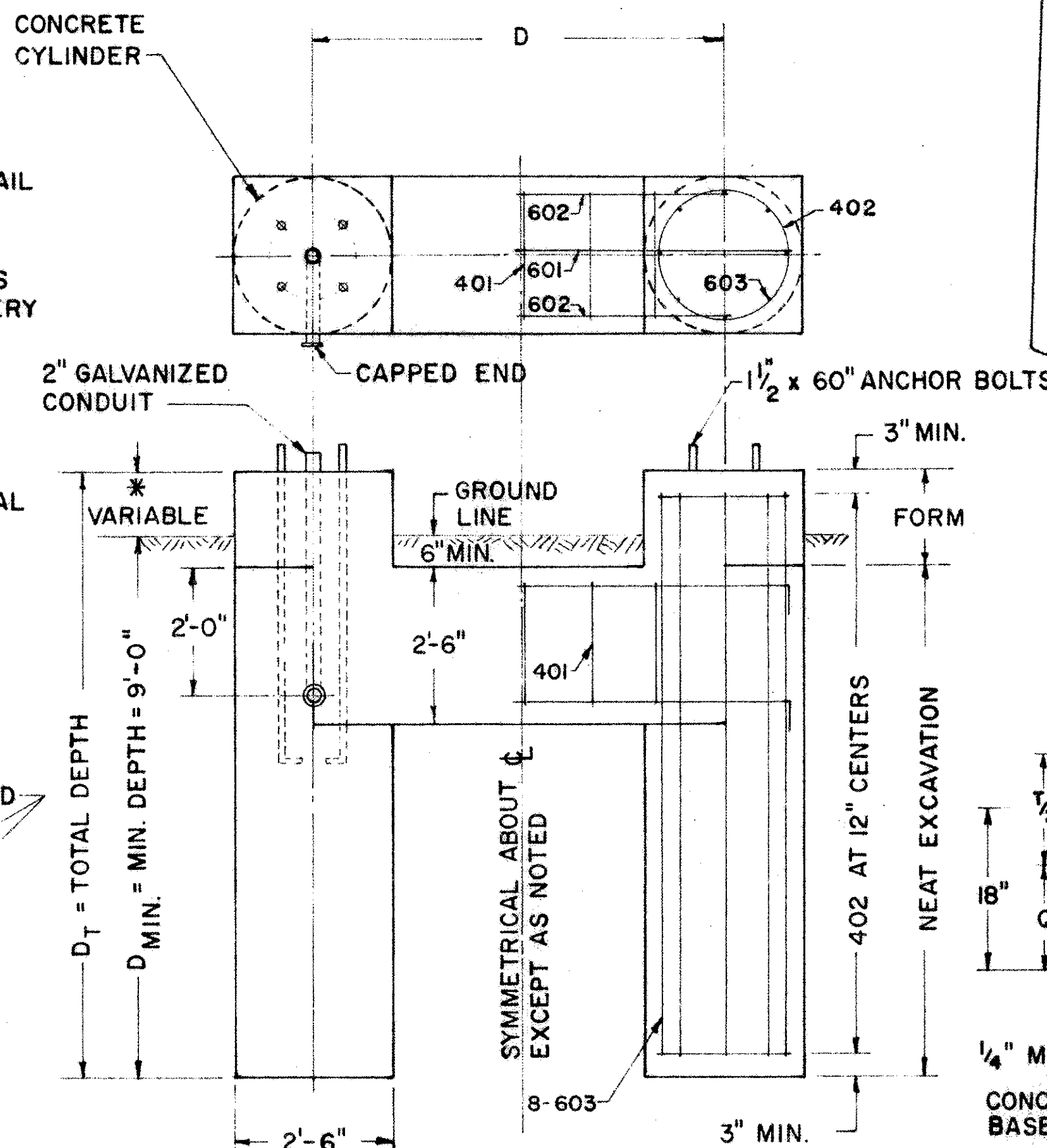
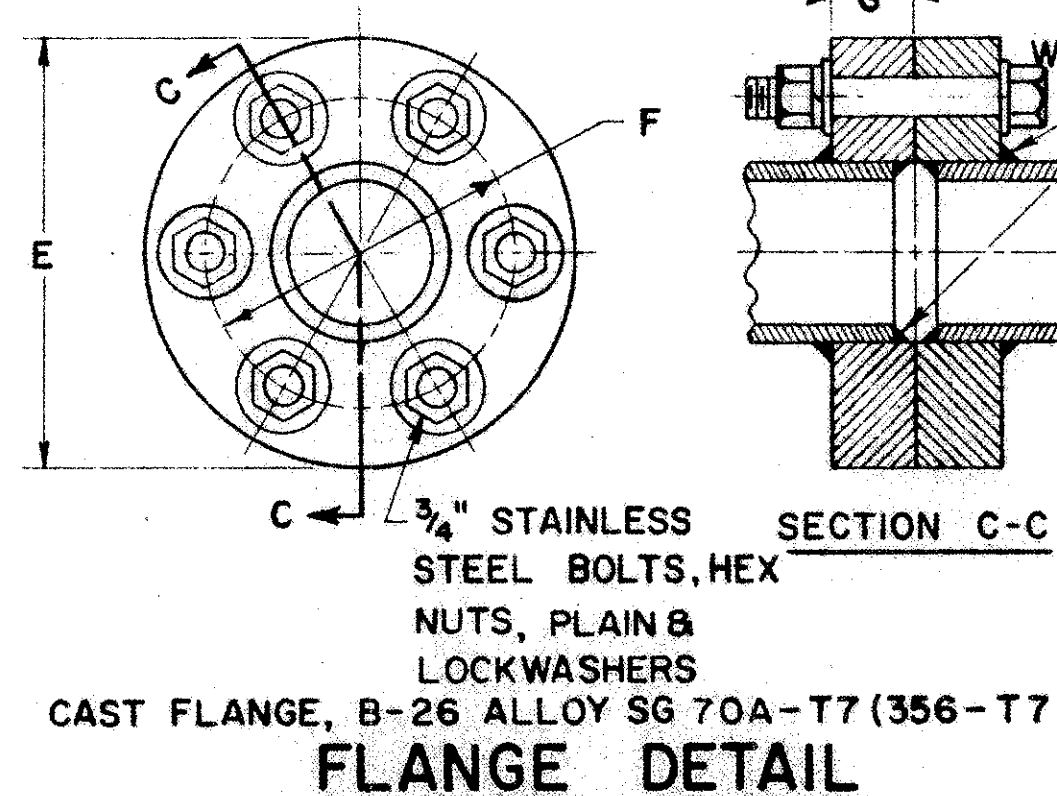
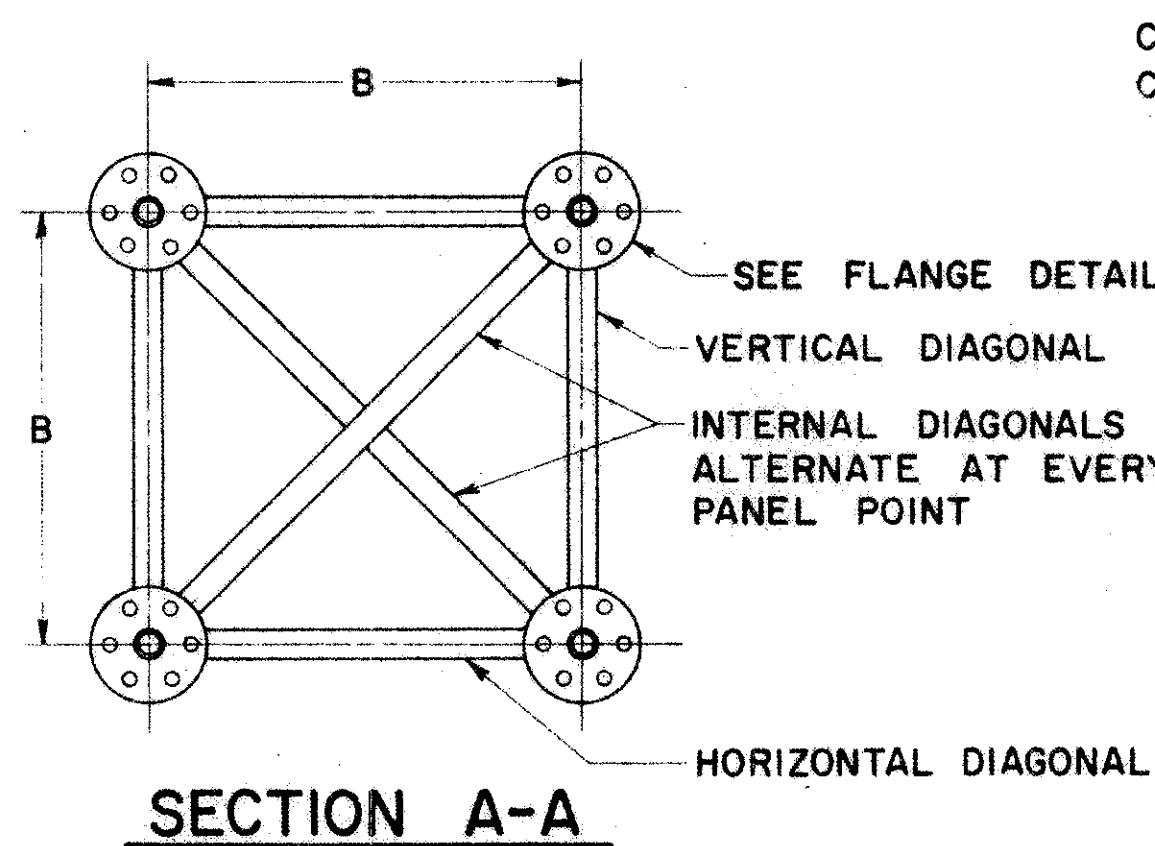
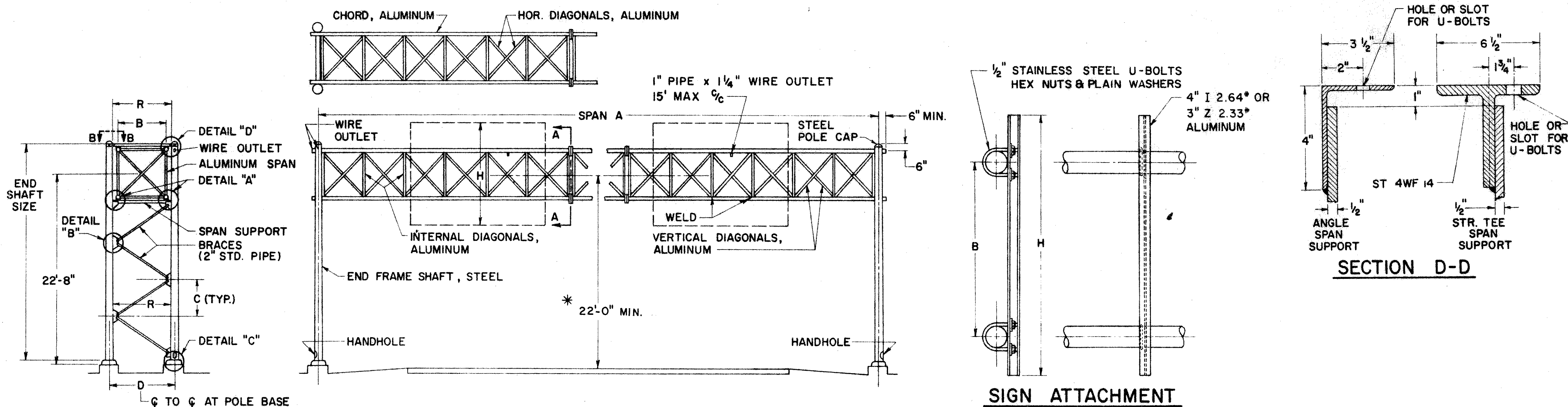
No.7.3

DATE

7-25-62

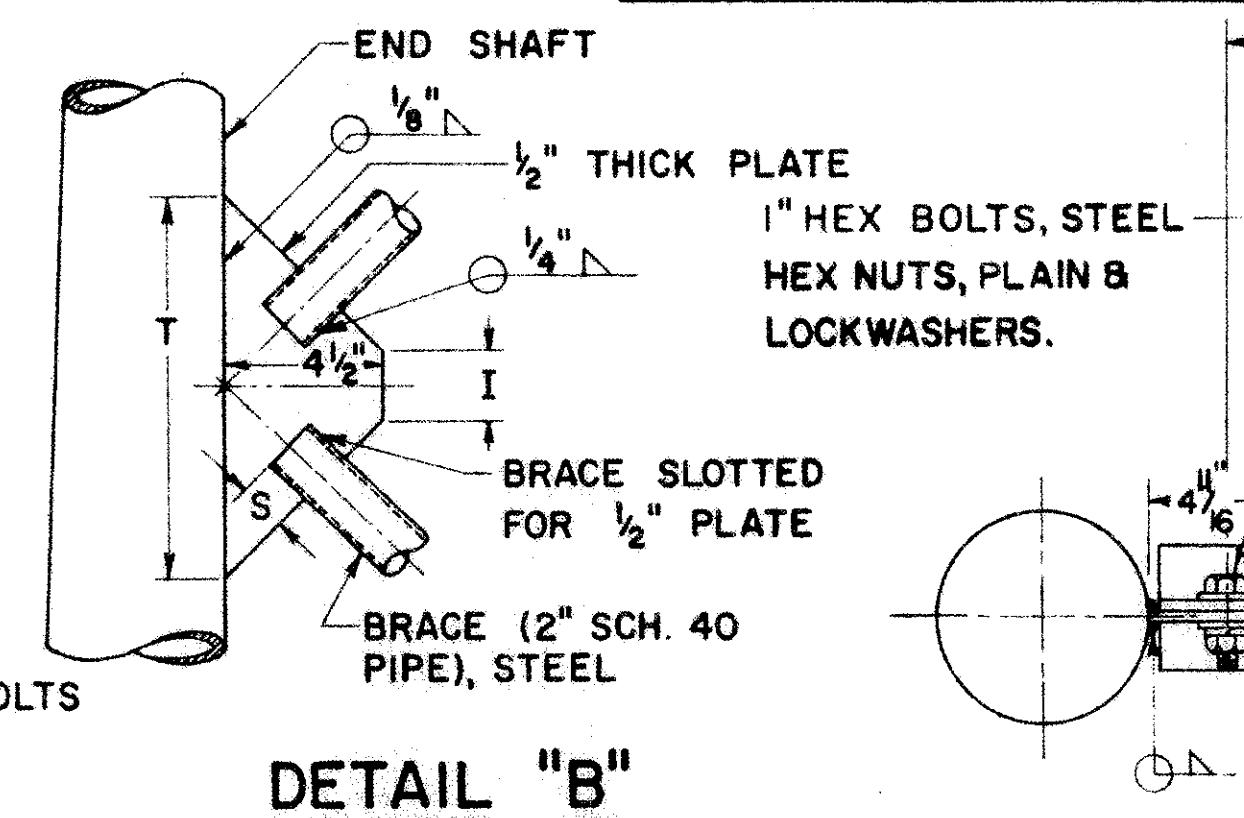
APPROVED

ENGINEER OF TRAFFIC

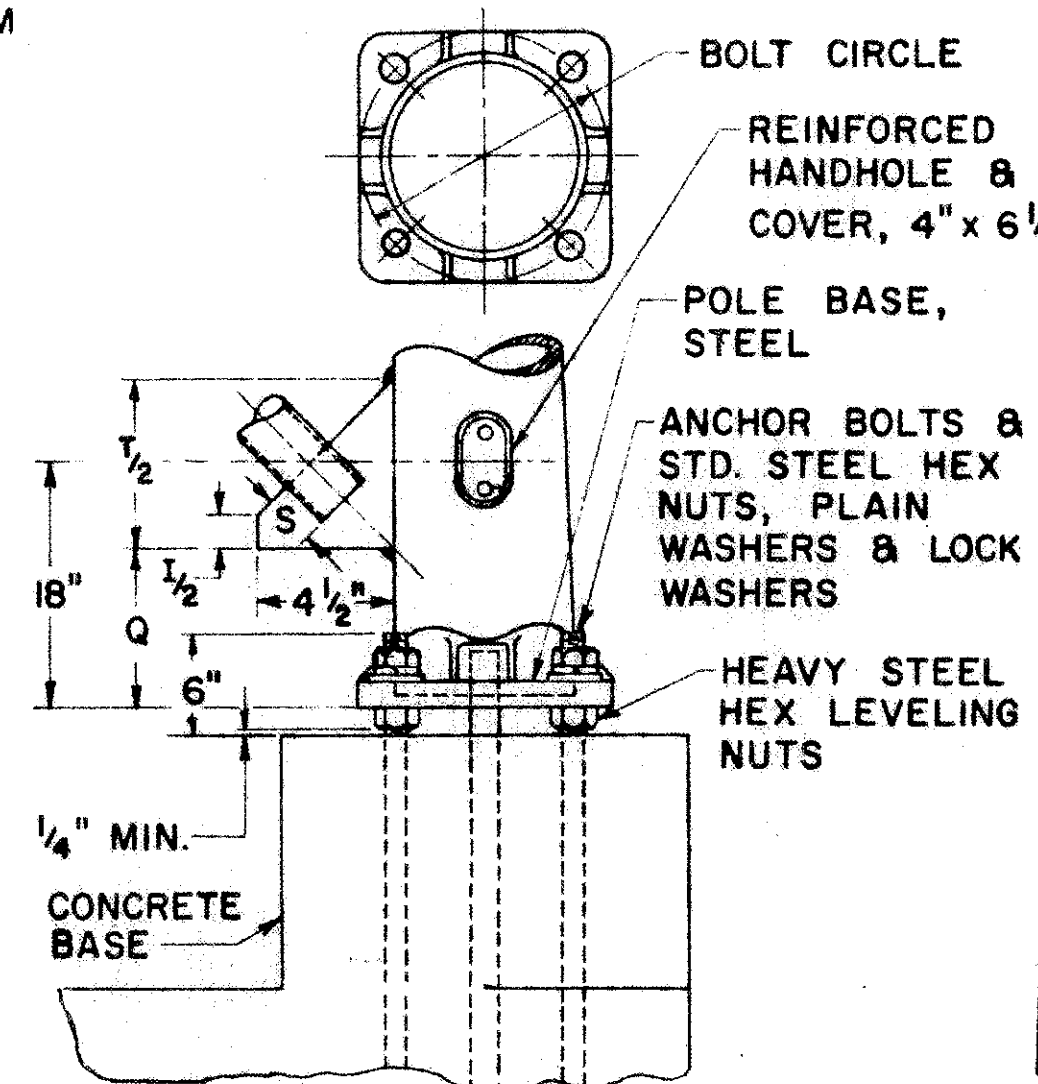


### FOUNDATION DETAIL

(RIGHT HAND SHOWN - LEFT HAND OPPOSITE)



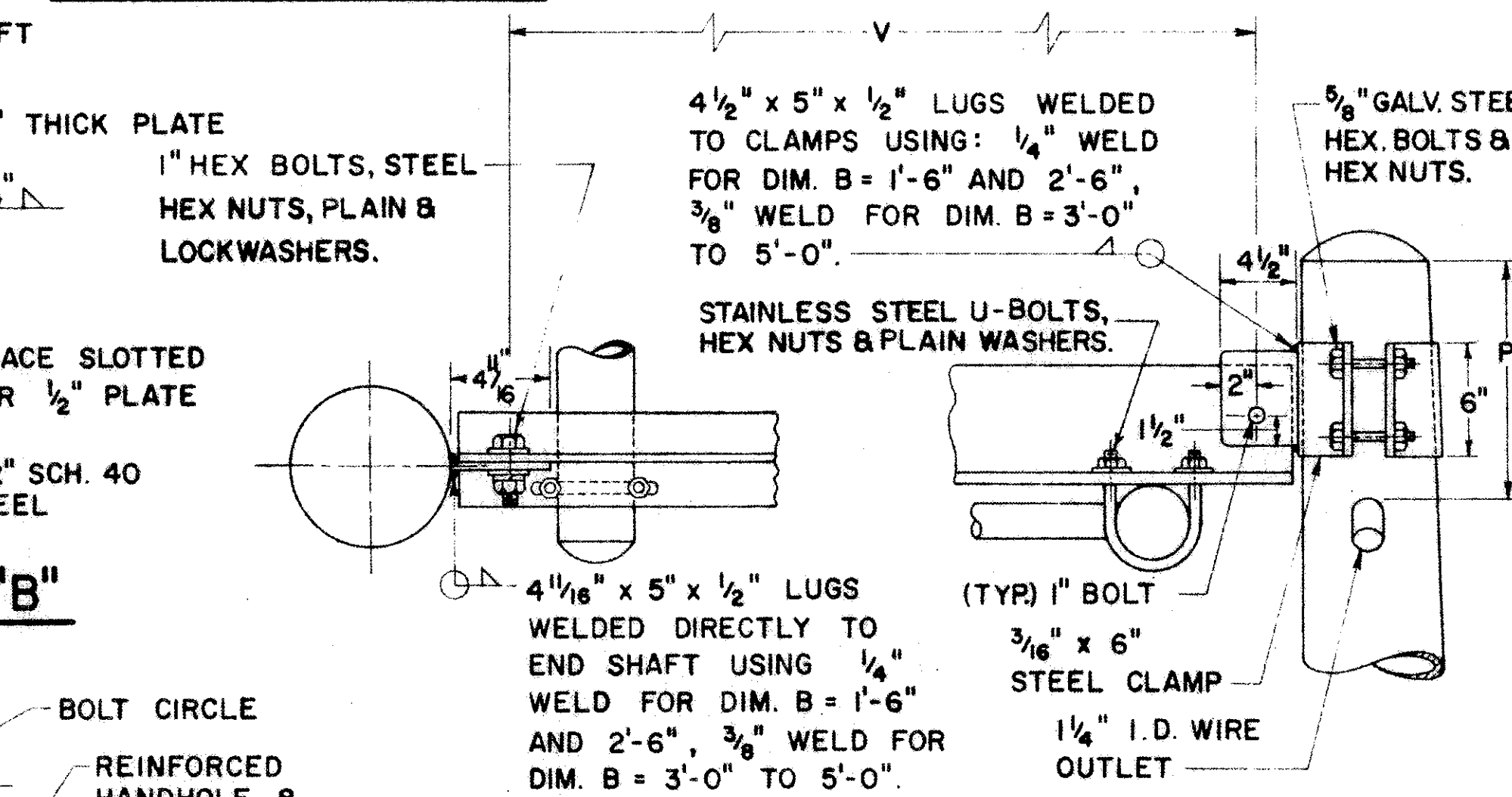
### DETAIL "B"



### DETAIL "C"

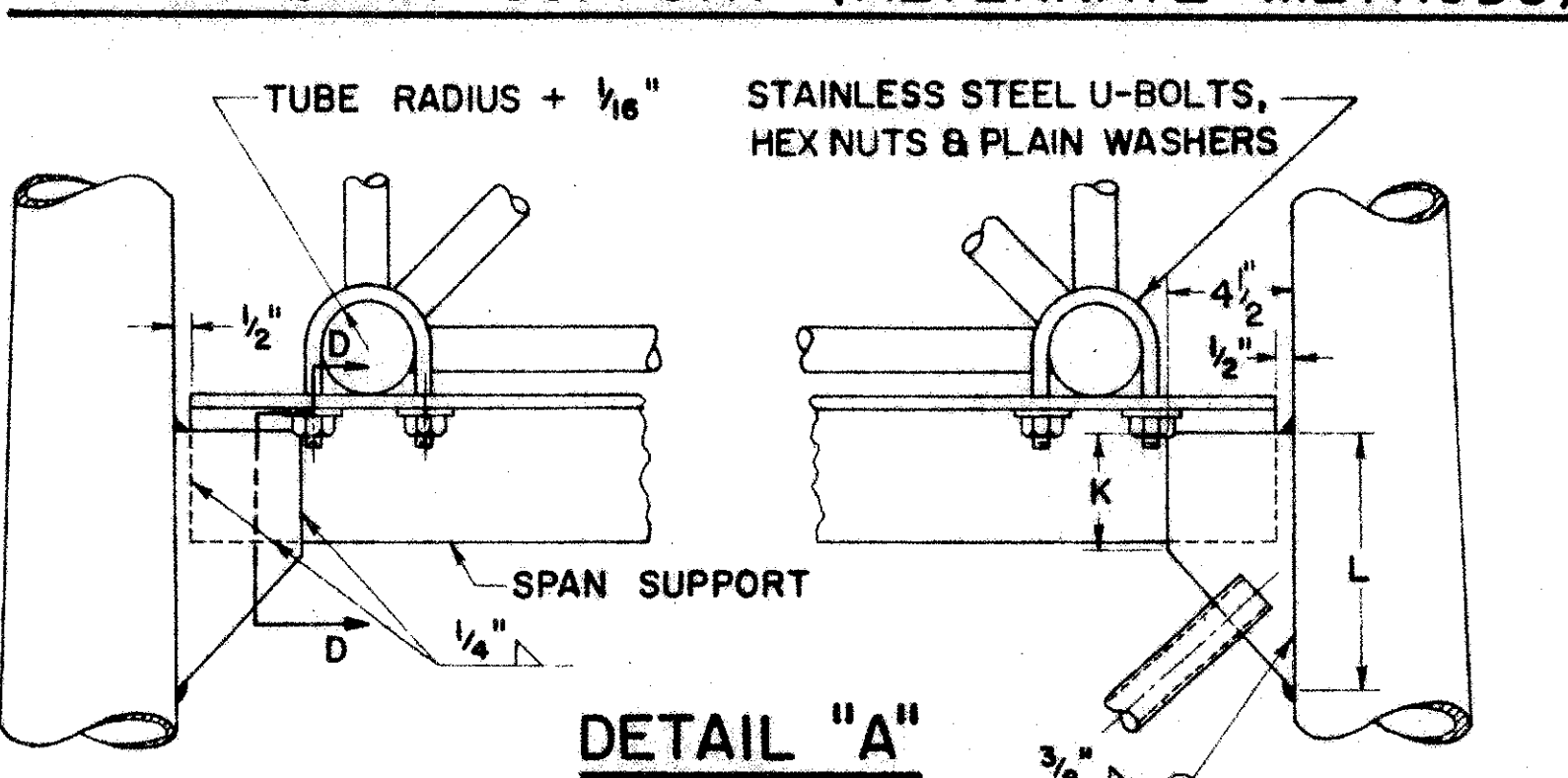
### POLE BASE DETAIL

### SIGN ATTACHMENT



### VIEW B-B

### UPPER SPAN SUPPORT (ALTERNATE METHODS)



### DETAIL "A"

### LOWER SPAN SUPPORT

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL	REINFORCEMENT SCHEDULE				101		102	
																									MARK	NO.	LENGTH	TYPE	2'-0"	2'-0"		
1	50'Thru 55'	3'-0"	4'-11 <sup>3</sup> / <sub>4</sub> "	4'-5"	7"	8"x 4.5"x 25'-0", 3GA	5'-10 <sup>13</sup> / <sub>16</sub> "	5 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>2</sub> "	4 <sup>3</sup> / <sub>4</sub> "	8"	12"	6 <sup>5</sup> / <sub>8</sub> "	3'-9"	1 <sup>1</sup> / <sub>2</sub> "	10"	5 <sup>5</sup> / <sub>8</sub> "	3'-3 <sup>5</sup> / <sub>8</sub> "	11"	SPLIT TEE 3'-8"	3 <sup>1</sup> / <sub>2</sub> " x .188"	1.660" x .140"	1.660" x .140"	401	12" C/C	8'-6"	102	2'-0"	2'-0"		
2	60'Thru 80'	3'-0"	4'-11 <sup>3</sup> / <sub>4</sub> "	4'-5"	9 <sup>1</sup> / <sub>4</sub> "	8"x 4.5"x 25'-0", 3GA	5'-10 <sup>13</sup> / <sub>16</sub> "	7 <sup>7</sup> / <sub>16</sub> "	1 <sup>3</sup> / <sub>8</sub> "	3 <sup>1</sup> / <sub>2</sub> "	4 <sup>3</sup> / <sub>4</sub> "	8"	12"	6 <sup>5</sup> / <sub>8</sub> "	3'-9"	1 <sup>1</sup> / <sub>2</sub> "	10"	5 <sup>5</sup> / <sub>8</sub> "	3'-3 <sup>5</sup> / <sub>8</sub> "	11"	SPLIT TEE 3'-8"	4 <sup>3</sup> / <sub>4</sub> " x .188"	1.900" x .145"	1.660" x .140"	402	12" C/C	7'-6"	103	102			
3	85'Thru 90'	4'-0"	4'-10 <sup>1</sup> / <sub>4</sub> "	5'-6"	9 <sup>1</sup> / <sub>4</sub> "	7"x 5.18"x 26'-0", 3GA	6'-7 <sup>1</sup> / <sub>8</sub> "	7 <sup>7</sup> / <sub>16</sub> "	1 <sup>3</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4 <sup>3</sup> / <sub>8</sub> "	7 <sup>3</sup> / <sub>4</sub> "	18"	6 <sup>1</sup> / <sub>4</sub> "	4'-11"	1 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4'-5 <sup>5</sup> / <sub>8</sub> "	10"	SPLIT TEE 4'-10"	4 <sup>3</sup> / <sub>4</sub> " x .188"	1.900" x .145"	1.900" x .145"	601	4	D+ 4'-0"	101	2'-0"			
4	95'Thru 105'	4'-0"	4'-10 <sup>1</sup> / <sub>4</sub> "	5'-6"	9 <sup>1</sup> / <sub>4</sub> "	7"x 5.18"x 26'-0", 3GA	6'-7 <sup>1</sup> / <sub>8</sub> "	7 <sup>7</sup> / <sub>16</sub> "	1 <sup>3</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4 <sup>3</sup> / <sub>8</sub> "	7 <sup>3</sup> / <sub>4</sub> "	18"	6 <sup>1</sup> / <sub>4</sub> "	4'-11"	1 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4'-5 <sup>5</sup> / <sub>8</sub> "	10"	SPLIT TEE 4'-10"	4 <sup>3</sup> / <sub>4</sub> " x .188"	2" x .188"	1.900" x .145"	602	8	D+ 2'-0"	101				
																									603	32	D+ 6"	STR.	103			

300 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, I-129 NO.7.3



FRANKLIN COUNTY  
FRA-40-12.82

## NOTES

### MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL. SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

### FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-74(d). MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

### ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

### PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

### SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

### REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. 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.

### FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

### DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

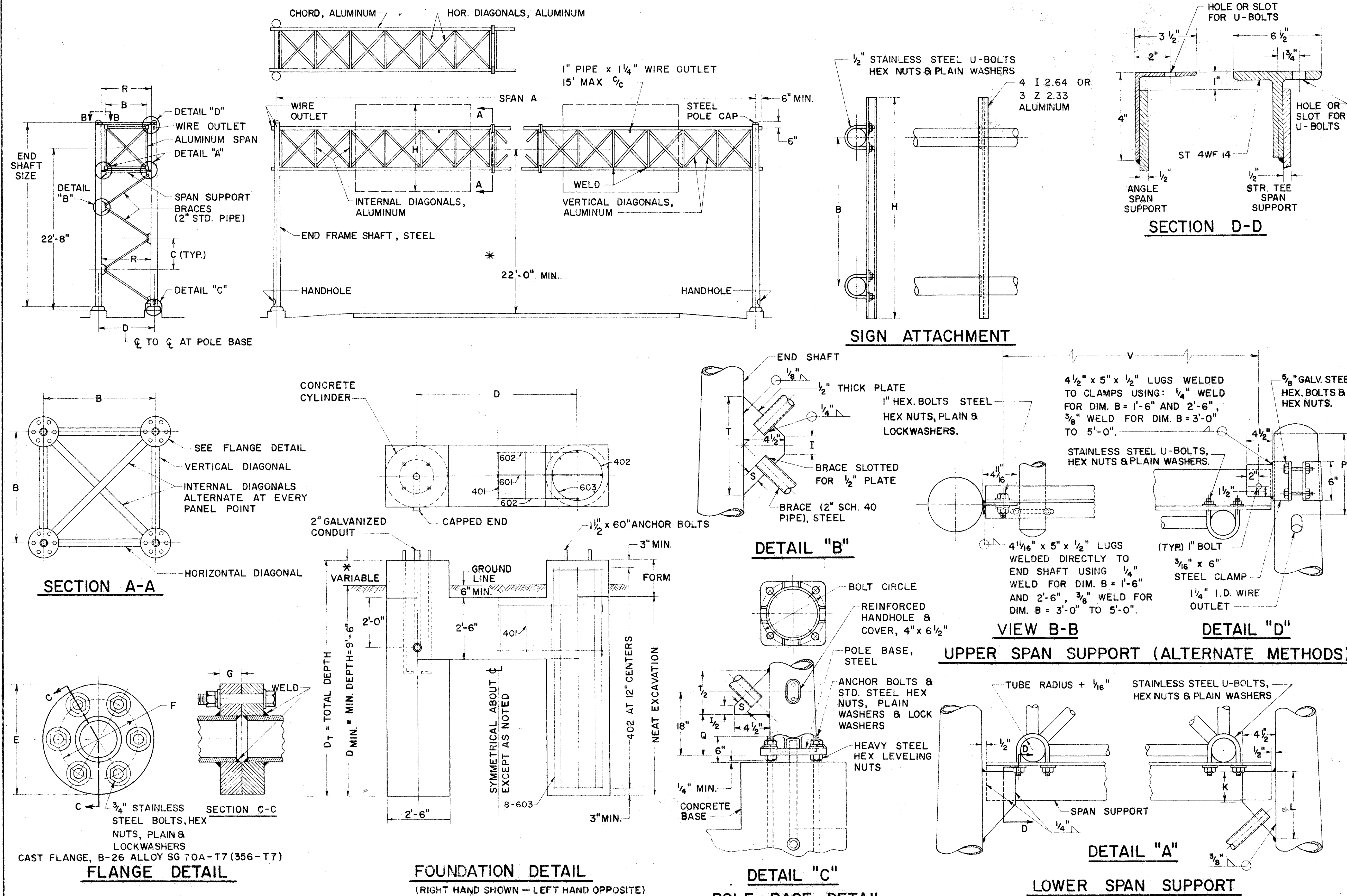
BUREAU OF TRAFFIC  
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD  
SIGN SUPPORTS

I-129  
No.7.4

APPROVED *Robert E. Lomer*  
ENGINEER OF TRAFFIC

DATE  
5-2-62  
7-25-62



DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL	REINFORCEMENT SCHEDULE				101		102		103		
																										MARK	NO.	LENGTH	TYPE	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"
1	50' thru 75'	3'-0"	4'-11 <sup>3</sup> / <sub>4</sub> "	4'-5"	9 <sup>1</sup> / <sub>4</sub> "	8"x 4.5"x 25'-0", 3 GA.	5'-10 <sup>13</sup> / <sub>16</sub> "	7 <sup>7</sup> / <sub>16</sub> "	1 <sup>3</sup> / <sub>8</sub> "	3 <sup>1</sup> / <sub>2</sub> "	4 <sup>3</sup> / <sub>4</sub> "	8"	12"	6 <sup>5</sup> / <sub>8</sub> "	3'-9"	1 <sup>1</sup> / <sub>2</sub> "	10"	5 <sup>5</sup> / <sub>8</sub> "	3'-3 <sup>5</sup> / <sub>8</sub> "	11"	SPLIT TEE 3'-8"	4 <sup>3</sup> / <sub>4</sub> " x .188"	1.900" x .145"	1.660" x .140"	401	12"C/C	8'-6"	102	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	
2	80' thru 85'	4'-0"	4'-10 <sup>1</sup> / <sub>4</sub> "	5'-6"	9 <sup>1</sup> / <sub>4</sub> "	7"x 5.18"x 26'-0", 3 GA.	6'-7 <sup>1</sup> / <sub>8</sub> "	7 <sup>7</sup> / <sub>16</sub> "	1 <sup>3</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4 <sup>3</sup> / <sub>8</sub> "	7 <sup>3</sup> / <sub>4</sub> "	18"	6 <sup>1</sup> / <sub>4</sub> "	4'-11"	1 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4'-5 <sup>5</sup> / <sub>8</sub> "	10"	SPLIT TEE 4'-10"	4 <sup>3</sup> / <sub>4</sub> " x .188"	2" x .188"	1.900" x .145"	402	12"C/C	7'-6"	103							
3	90'	4'-0"	4'-10 <sup>1</sup> / <sub>4</sub> "	5'-6"	11"	7"x 5.18"x 26'-0", 3 GA.	6'-7 <sup>1</sup> / <sub>8</sub> "	8 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4 <sup>3</sup> / <sub>8</sub> "	7 <sup>3</sup> / <sub>4</sub> "	18"	6 <sup>1</sup> / <sub>4</sub> "	4'-11"	1 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>2</sub> "	5 <sup>5</sup> / <sub>8</sub> "	4'-5 <sup>5</sup> / <sub>8</sub> "	10"	SPLIT TEE 4'-10"	5 <sup>1</sup> / <sub>2</sub> " x .250"	2" x .188"	1.900" x .145"	601	4	D+ 4'-0"	101							
4	95' thru 110'	5'-0"	4'-8 <sup>1</sup> / <sub>2</sub> "	6'-6"	11"	7"x 5.18"x 26'-0", 3 GA.	7'-3 <sup>1</sup> / <sub>4</sub> "	8 <sup>1</sup> / <sub>2</sub> "	1 <sup>1</sup> / <sub>2</sub> "	—	3 <sup>1</sup> / <sub>2</sub> "	7 <sup>3</sup> / <sub>4</sub> "	12"	7 <sup>1</sup> / <sub>4</sub> "	5'-11"	1 <sup>3</sup> / <sub>4</sub> "	11 <sup>1</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>4</sub> "	5'-5 <sup>5</sup> / <sub>8</sub> "	10"	SPLIT TEE 5'-10"	5 <sup>1</sup> / <sub>2</sub> " x .250"	2 <sup>1</sup> / <sub>2</sub> " x .188"	2 <sup>1</sup> / <sub>2</sub> " x .188"	602	8	D+ 2'-0"	101							
																									603	32	D <sub>T</sub> - 6"	STR							

400 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, I-129 NO.7.4



FRANKLIN COUNTY  
FRA-40-12.82

## NOTES

### MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL. SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION I-129 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

### FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-74(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

### ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

### PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

### SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

### REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

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.

### \*FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF PAVEMENT AND SHOULDERS.

### DESIGN

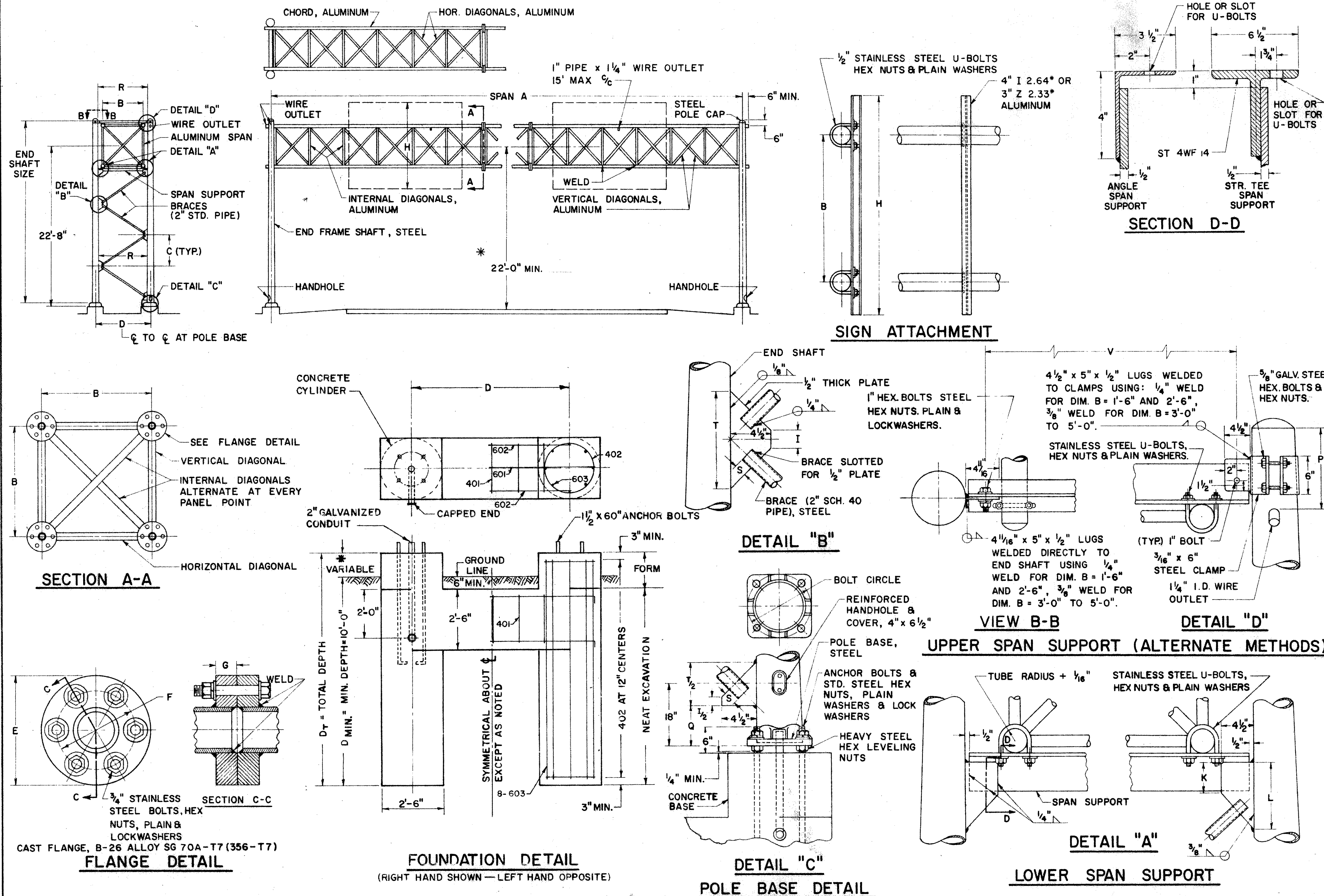
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC  
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD  
SIGN SUPPORTS I-129  
No.7.5

APPROVED *Robert E. Comer*  
ENGINEER OF TRAFFIC

DATE  
5-2-62  
7-25-62



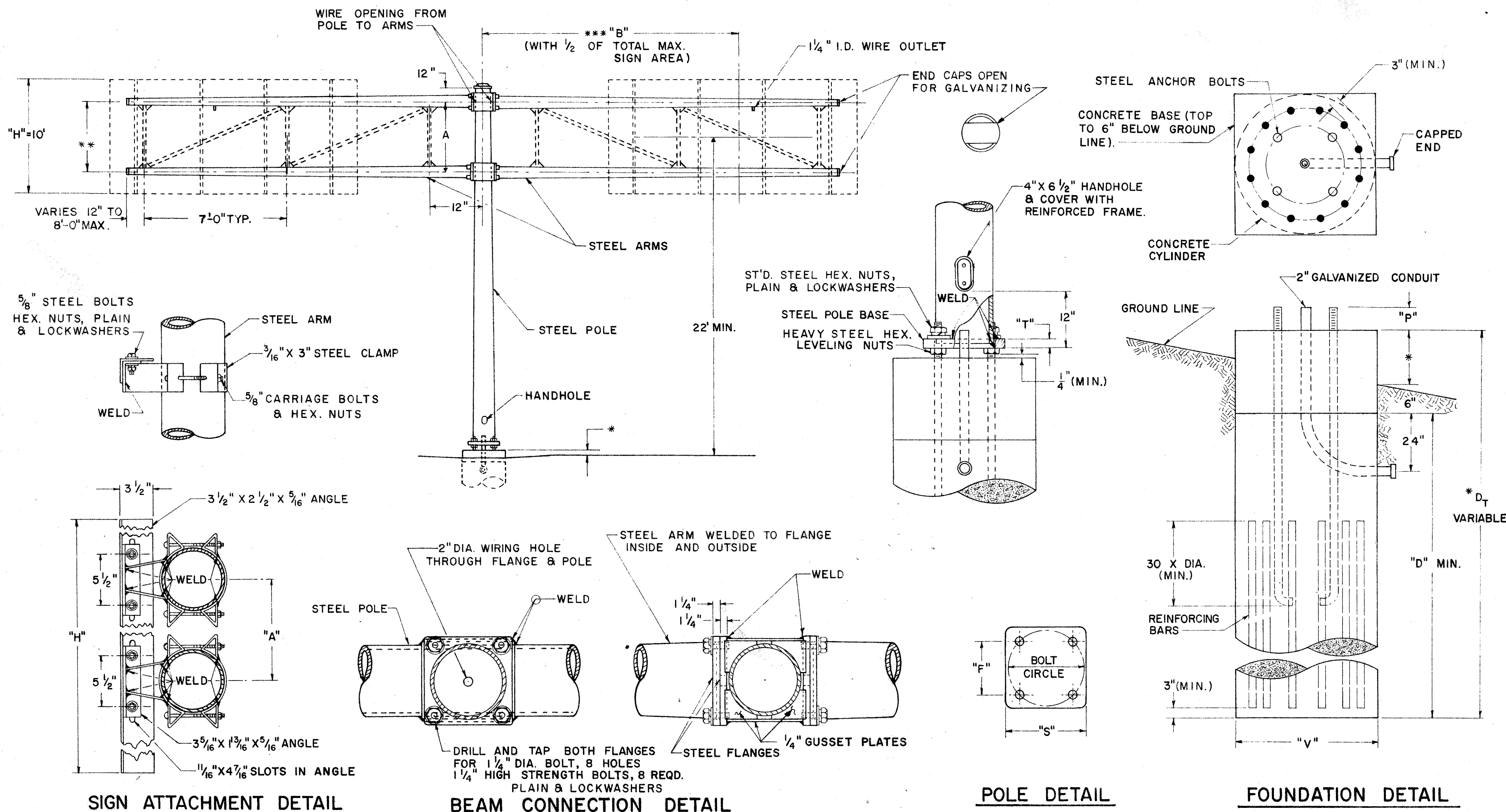
DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' THRU 70'	3'-0"	4'-1 3/4"	4'-5"	9 1/4"	8" X 4.5" X 25'-0", 3GA	5'-10 3/8"	7 7/8"	1 3/8"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5 5/8"	3'-35 5/8"	11"	SPLIT TEE 3'-8"	4 3/4" X .188"	1.900" X .145"	1.660" X .140"
2	75' THRU 80'	4'-0"	4'-10 1/4"	5'-6"	9 1/4"	7" X 5.18" X 26'-0", 3GA	6'-7 1/8"	7 7/8"	1 3/8"	5 5/8"	4 3/8"	7 3/4"	18"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5 5/8"	4'-55 5/8"	10"	SPLIT TEE 4'-10"	4 3/4" X .188"	2" X .188"	1.900" X .145"
3	85'	4'-0"	4'-10 1/4"	5'-6"	11"	7" X 5.18" X 26'-0", 3GA	6'-7 1/8"	8 1/2"	1 1/2"	5 5/8"	4 3/8"	7 3/4"	18"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5 5/8"	4'-55 5/8"	10"	SPLIT TEE 4'-10"	5 1/2" X .250"	2" X .188"	1.900" X .145"
4	90' THRU 110'	5'-0"	4'-8 1/2"	6'-6"	11"	7" X 5.18" X 26'-0", 3GA	7'-3 1/4"	8 1/2"	1 1/2"	—	3 1/2"	7 3/4"	12"	7 1/4"	5'-11"	1 3/4"	11 1/4"	3 3/4"	5'-55 5/8"	10"	SPLIT TEE 5'-10"	5 1/2" X .250"	2 1/2" X .188"	2 1/2" X .188"

MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+4'-0"	101
602	8	D+2'-0"	101
603	32	D+6'-0"	STR.

500 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, I-129 NO.7.5



FRANKLIN COUNTY  
FRA.-40-12.82


# NOTES

**FABRICATION** - ALL PORTIONS OF THE SIGN SUPPORT INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. S-25.08 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

**\*FOUNDATION** - THE TOP ELEVATION OF ALL FOUNDATIONS SHALL BE BUILT UP 1'-0" ABOVE THE HIGHWAY CROWN.

**\*\*ERECTION** - ARMS OVER 20' IN LENGTH SHALL BE TRUSS TYPE USING 3"x3"x $\frac{3}{8}$ " ANGLES WELDED TO GUSSET PLATES WITH THE INSIDE EDGES OF THE ARMS PARALLEL.

**\*\*\*VALUES OF "B"** MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM C OF POLE TO C OF SIGN DOES NOT EXCEED THE PRODUCT OF "B" TIMES  $\frac{1}{2}$  THE MAX. SIGN AREA.

**GENERAL** - THE MAX. SIGN AREA ON EACH SIDE OF THE POLE EQUALS  $\frac{1}{2}$  THE MAX. TOTAL AREA IN THE CHART.

**MATERIAL** - STEEL POLE BASES, AND FLANGES SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7. AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

**SOILS** - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

**REINFORCING STEEL** - REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

## DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC  
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD  
SIGN SUPPORT

I-129  
No.10.48

APPROVED  
ENGINEER OF TRAFFIC

DATE  
11-2-61  
1-18-62  
3-20-62  
4-18-62

DESIGN NO.	POLE SIZE	* * ARM SIZE	DIM. A	DIM. ***B	DIM. "D" MIN.	DIM. F	DIM. P	DIM. S	DIM. T	BOLT CIRCLE	ANCHOR BOLT SIZE	DIM. V	MAX SIGN AREA	REINF. BARS SIZE	NO.
1	3ga. 18"x14.64"x24'-0"	7ga., 5.7"x4.02"x12'-0"	4'	8'	9'	18"	8 $\frac{3}{8}$ "	26 $\frac{1}{2}$ "	2"	25 $\frac{1}{2}$ "	2"x96"	3'-0"	160	$\frac{3}{4}$ "	12
2	3ga. 18"x14.64"x24'-0"	7ga., 6.9"x4.66"x16'-0"	4'	12'	9'	18"	8 $\frac{3}{8}$ "	26 $\frac{1}{2}$ "	2"	25 $\frac{1}{2}$ "	2"x96"	3'-0"	160	$\frac{3}{4}$ "	12
3	0ga., 18"x14.64"x24'-0"	7ga., 7.5"x5.82"x12'-0"	4'	8'	11'	18"	9 $\frac{3}{8}$ "	26 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "x108"	3'-0"	240	1"	12
4	0ga., 18"x14.64"x24'-0"	7ga., 8.3"x6.06"x16'-0"	4'	12'	11'	18"	9 $\frac{3}{8}$ "	26 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "x108"	3'-0"	240	1"	12
5	0ga., 18"x14.64"x24'-0"	7ga., 10"x7.2"x20'-0"	4'	16'	11'	18"	9 $\frac{3}{8}$ "	26 $\frac{1}{2}$ "	2 $\frac{1}{2}$ "	25 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "x108"	3'-0"	220	1"	12
6	2ply 3ga., 18"x14.5"x25'-0"	7ga., 10"x7.48"x18'-0"	6'	10'	14'	18"	11 $\frac{1}{4}$ "	26 $\frac{1}{2}$ "	3"	25 $\frac{1}{2}$ "	3"x144"	3'-0"	360	1 $\frac{1}{8}$ "	12
7	2ply 3ga., 18"x14.5"x25'-0"	7ga., 11"x7.92"x22'-0"	6'	14'	14'	18"	11 $\frac{1}{4}$ "	26 $\frac{1}{2}$ "	3"	25 $\frac{1}{2}$ "	3"x144"	3'-0"	360	1 $\frac{1}{8}$ "	12
8	2ply 0ga., 18"x14.5"x25'-0"	7ga., 12.5"x9.14"x24'-0"	6'	14'	17'	18"	11 $\frac{1}{4}$ "	26 $\frac{1}{2}$ "	3"	25 $\frac{1}{2}$ "	3"x168"	3'-0"	480	1 $\frac{1}{4}$ "	12
9	2ply 0ga., 18"x14.5"x25'-0"	3ga., 12.5"x8.58"x28'-0"	6'	18'	17'	18"	11 $\frac{1}{4}$ "	26 $\frac{1}{2}$ "	3"	25 $\frac{1}{2}$ "	3"x168"	3'-0"	480	1 $\frac{1}{4}$ "	12



FRANKLIN COUNTY  
FRA-40-12.82

## NOTES

FABRICATION- ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. S-25.08 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

\* FOUNDATION- THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

\* \* ERECTION- VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM C OF POLE TO C OF SIGN DOES NOT EXCEED THE MAX. SIGN AREA TIMES "B".

\* \* \* ARMS 20' LONG OR LONGER ARE TO BE TRUSS TYPE WITH 3" X 3" X 3/8" ANGLES WELDED TO GUSSET PLATES.

MATERIAL- STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7 AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS- THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL- REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

## DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

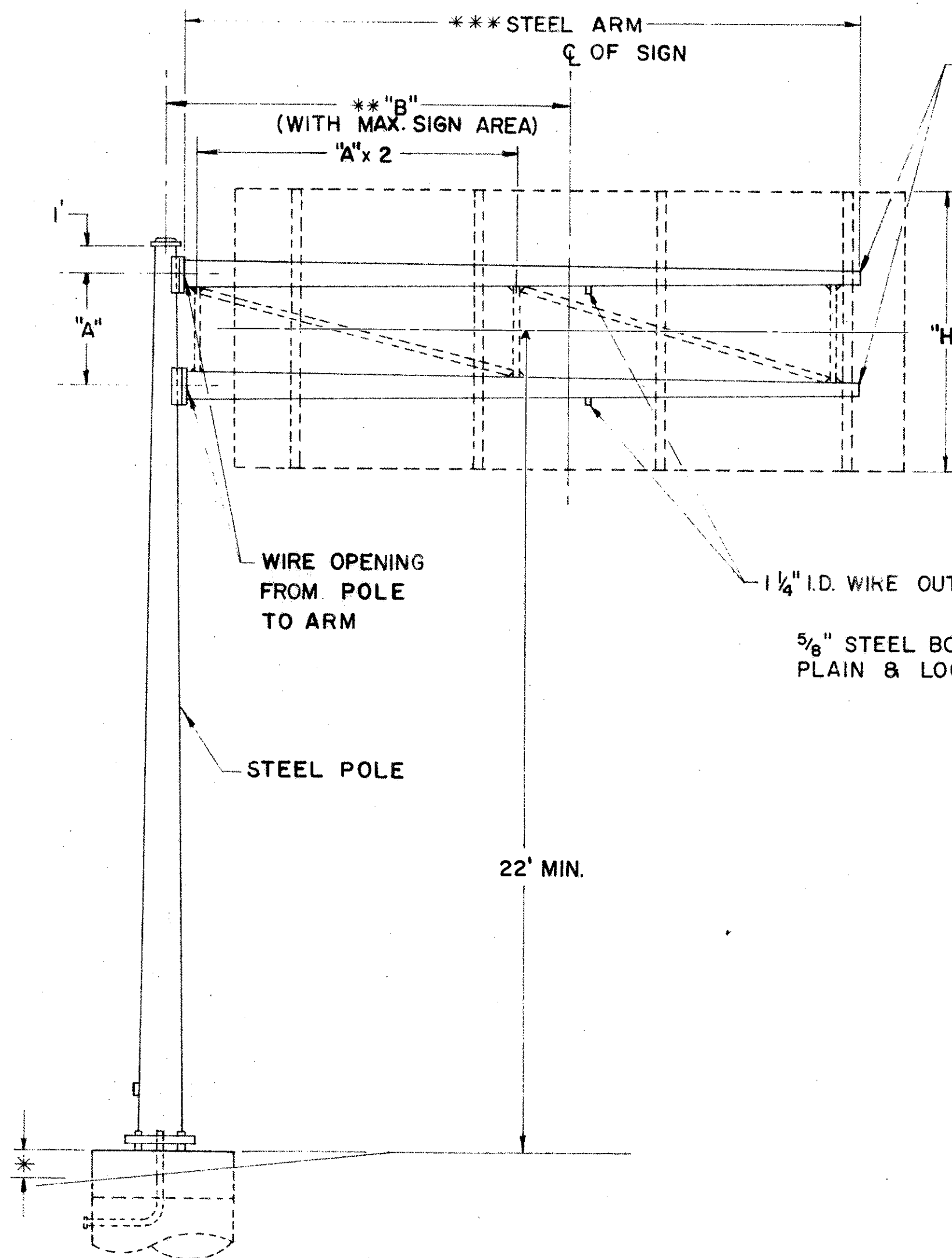
BUREAU OF TRAFFIC  
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD  
SIGN SUPPORT

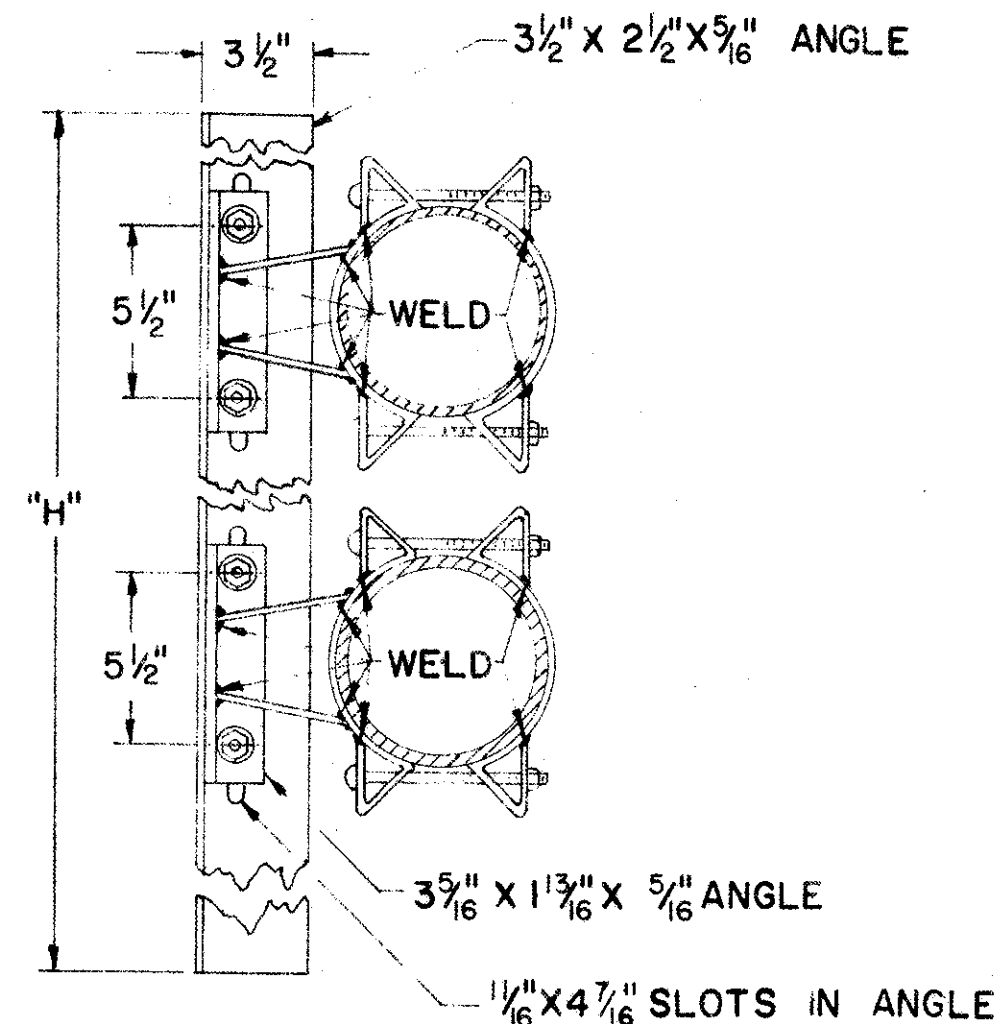
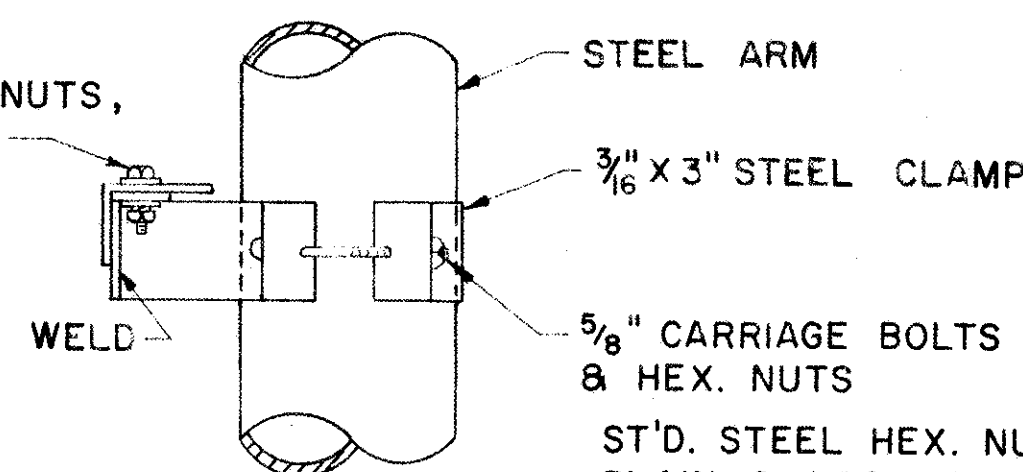
I-129  
No.12.24

DATE  
8-18-61  
4-11-62

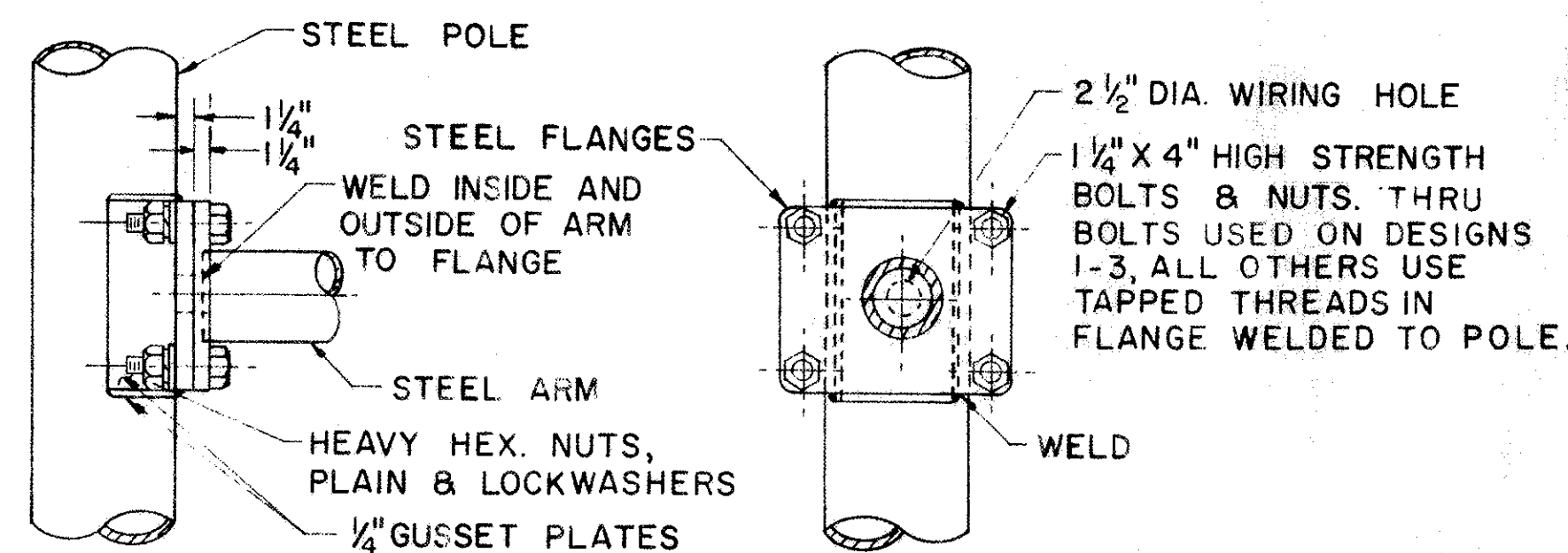
APPROVED *Robert E. Comer*  
ENGINEER OF TRAFFIC



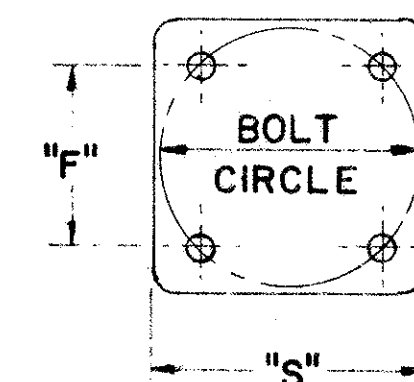
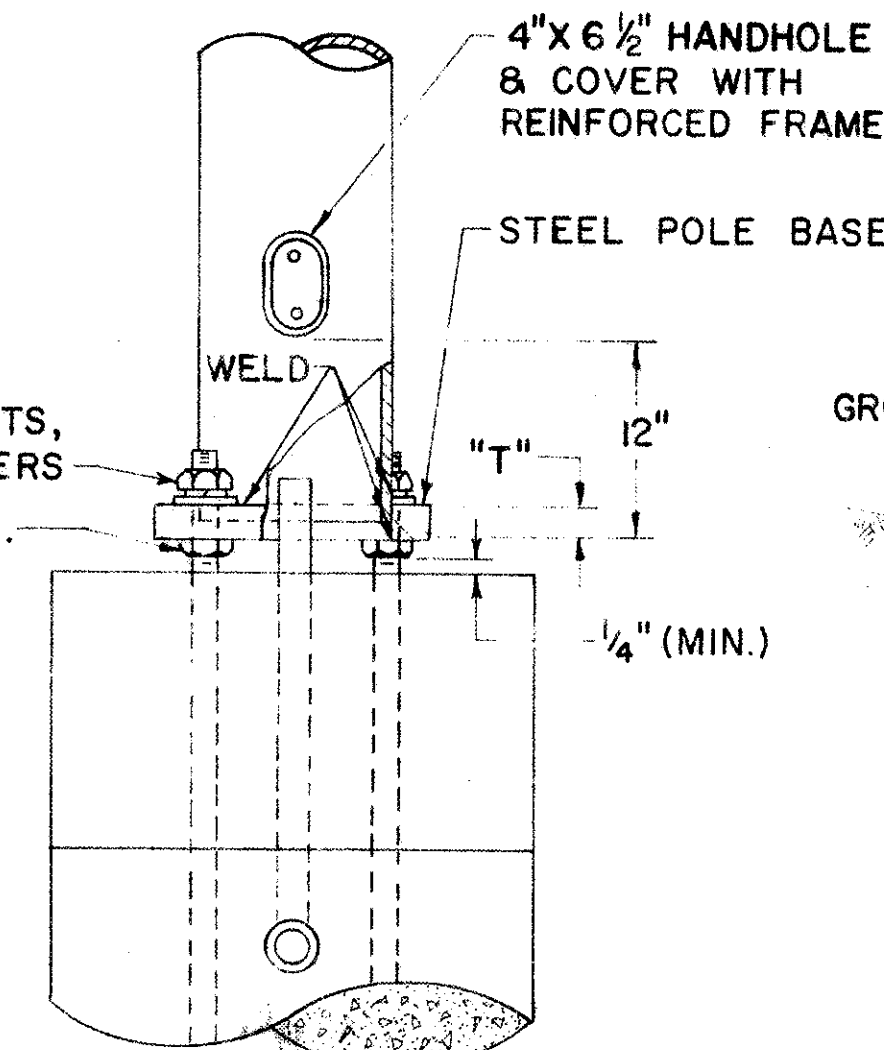
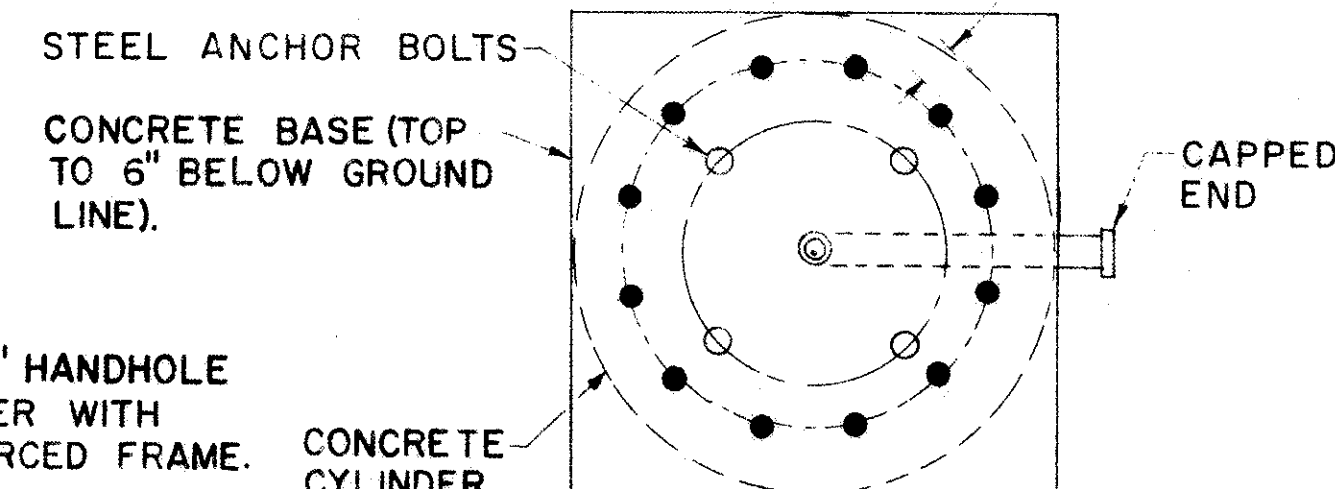
5/8" STEEL BOLTS, HEX. NUTS,  
PLAIN & LOCKWASHERS



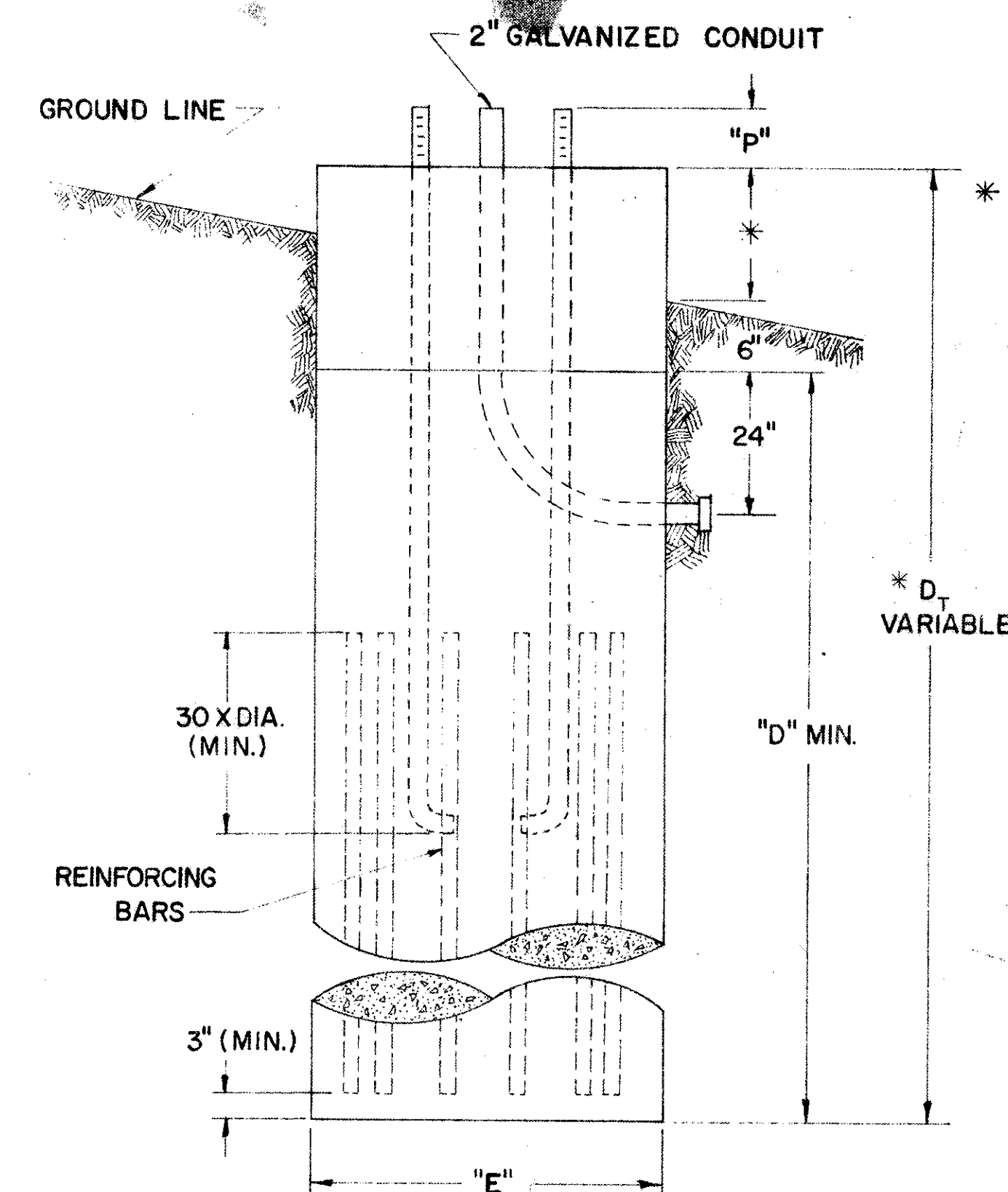
## SIGN ATTACHMENT DETAIL



## ARM ATTACHMENT



## POLE DETAIL



## FOUNDATION DETAIL

DESIGN NO.	POLE SIZE	*** ARM SIZE	DIM A	DIM **B	DIM "D" MIN.	DIM E	DIM F	DIM P	DIM S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	REINFORCING BARS SIZE	REINFORCING BARS NO.
1	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 6.9" X 4.66" X 16'-0"	4'	12'	9'	3'-0"	11 5/16"	7 3/4"	17"	2"	16"	1 3/4" X 90"	80	3/4"	12
2	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 8" X 5.2" X 20'-0"	4'	16'	9'	3'-0"	11 5/16"	7 3/4"	17"	2"	16"	1 3/4" X 90"	80	3/4"	12
3	3 Ga, 15" X 11.5" X 25'-0"	7 Ga, 8.3" X 6.06" X 16'-0"	4'	12'	11'	3'-0"	15 1/2"	8 3/8"	23"	2"	22"	2" X 96"	120	1"	12
4	3 Ga, 16" X 12.5" X 25'-0"	3 Ga, 9.2" X 6.40" X 20'-0"	4'	16'	11'	3'-0"	16 1/2"	8 3/8"	24 1/2"	2"	23 1/2"	2" X 96"	120	1"	12
5	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 11" X 7.92" X 22'-0"	6'	14'	13'	3'-0"	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 120"	180	1 1/8"	12
6	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 8.86" X 26'-0"	6'	18'	13'	3'-0"	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 120"	180	1 1/8"	12
7	2 PLY 7 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 9.14" X 24'-0"	6'	14'	15'	3'-0"	18"	9 3/4"	26 1/2"	2 1/2"	25 1/2"	2 1/2" X 144"	240	1 1/4"	12
8	2 PLY 1/4", 18" X 14.36" X 26'-0"	3 Ga, 12.5" X 8.58" X 28'-0"	6'	18'	15'	3'-0"	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 144"	240	1 1/4"	12



FRANKLIN COUNTY  
FRA.-40-12.82

### NOTES

**FABRICATION** - ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. S-25.08 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

\* **FOUNDATION** - THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN THE PROPER CLEARANCE BETWEEN THE CROSS-MEMBER CENTER LINE AND THE HIGHWAY CROWN.

\* **ERECTION** - WHEN THE SPAN IS LESS THAN THE MAXIMUM, DECREASE THE LENGTH OF THE TAPERED BEAM-HALVES ON THE SMALL DIA. END.

**MATERIAL** - STEEL POLE BASES, AND FLANGES SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7. AFTER FABRICATION TAPERED POLES AND BEAM HALVES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

**SOILS** - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

**REINFORCING STEEL** - REINFORCING STEEL AS SHOWN IN DETAIL SHALL BE INSTALLED WHEN "D" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM I-129 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

**DESIGN**  
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

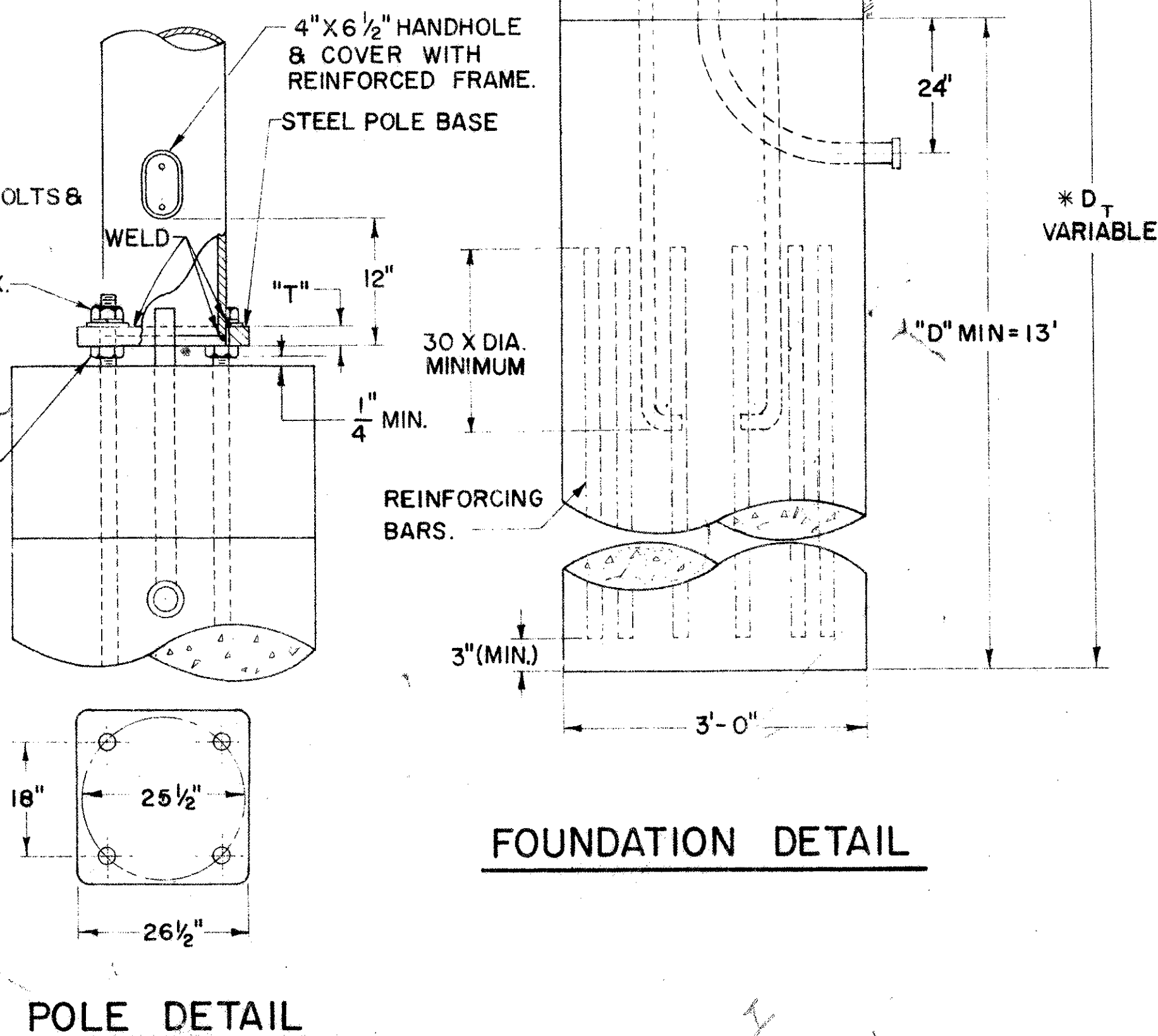
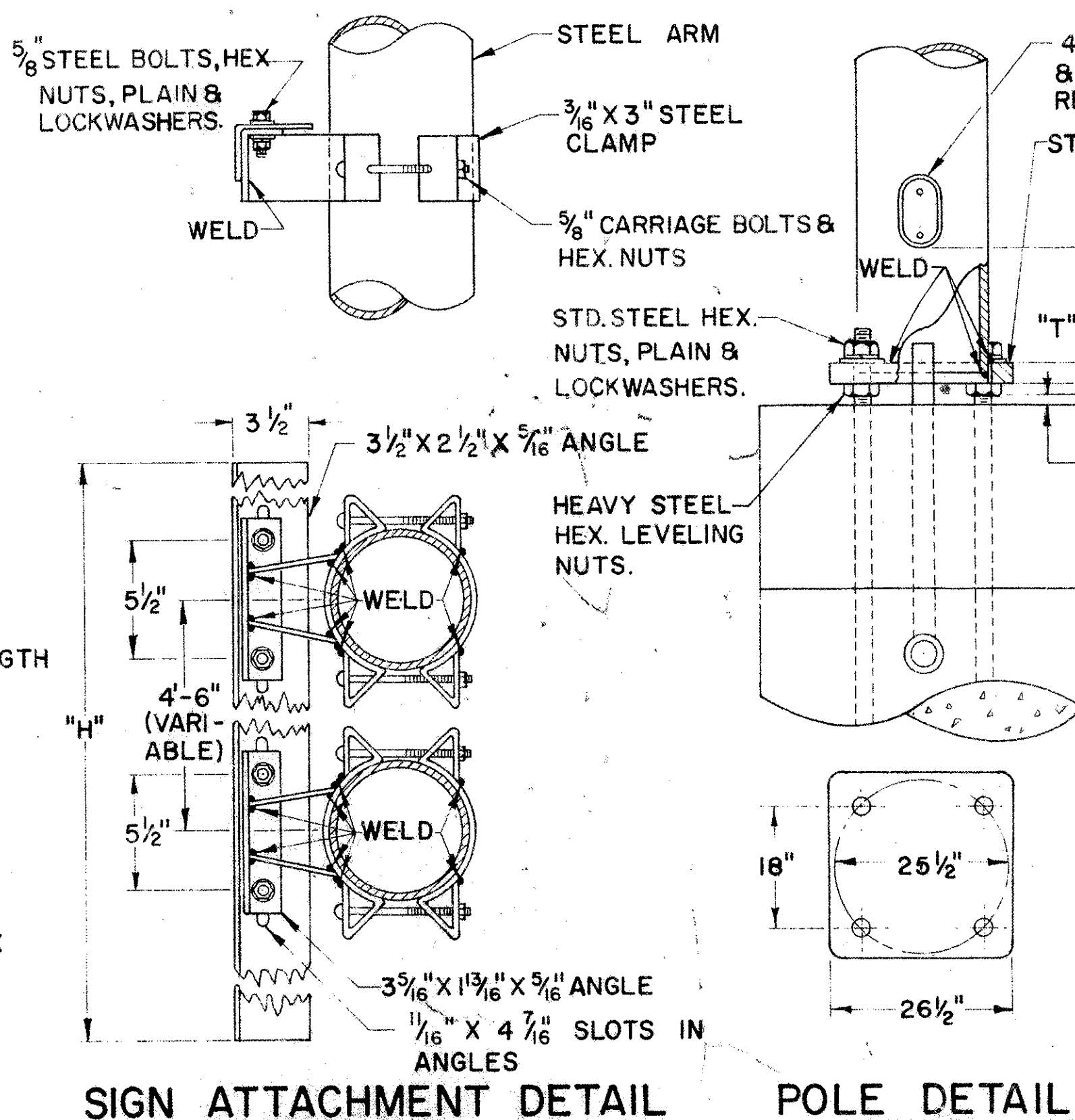
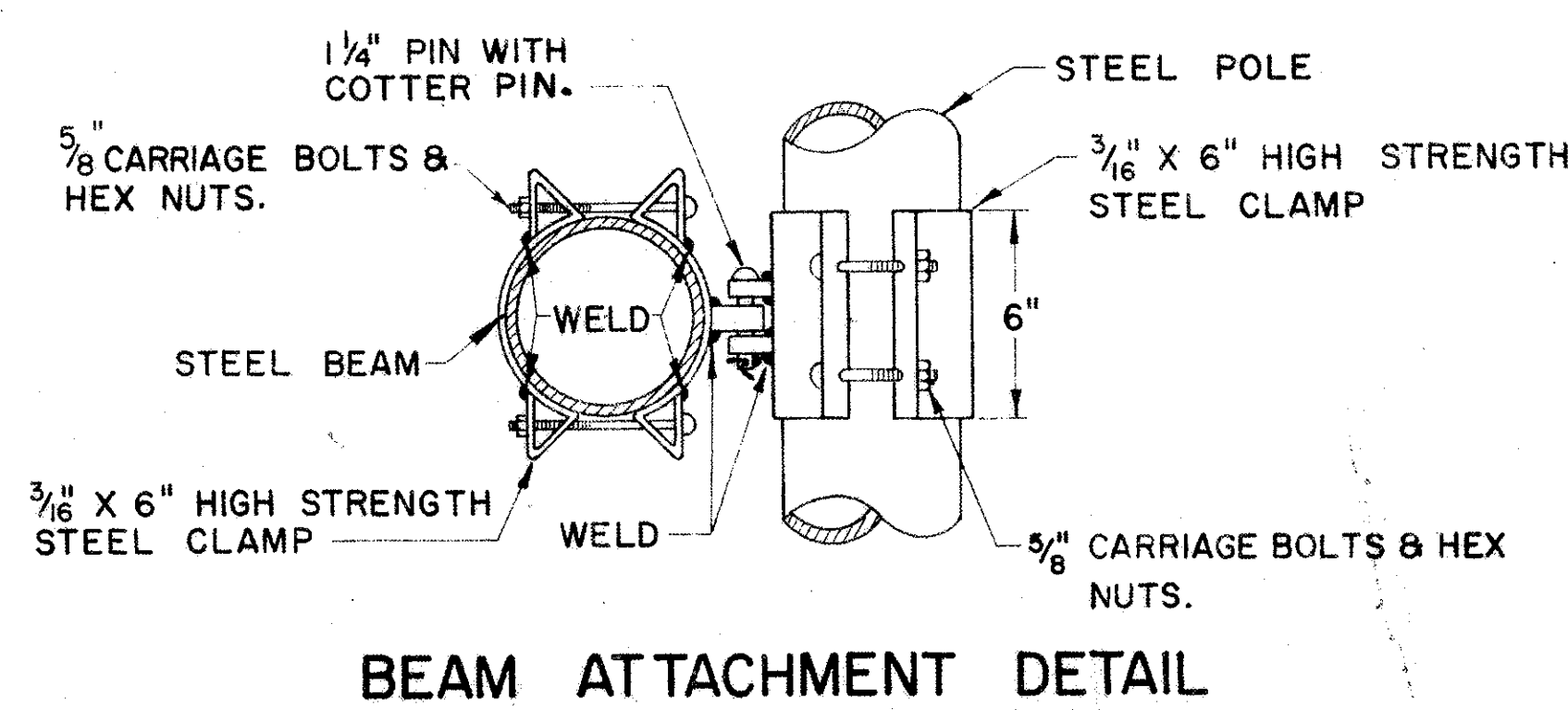
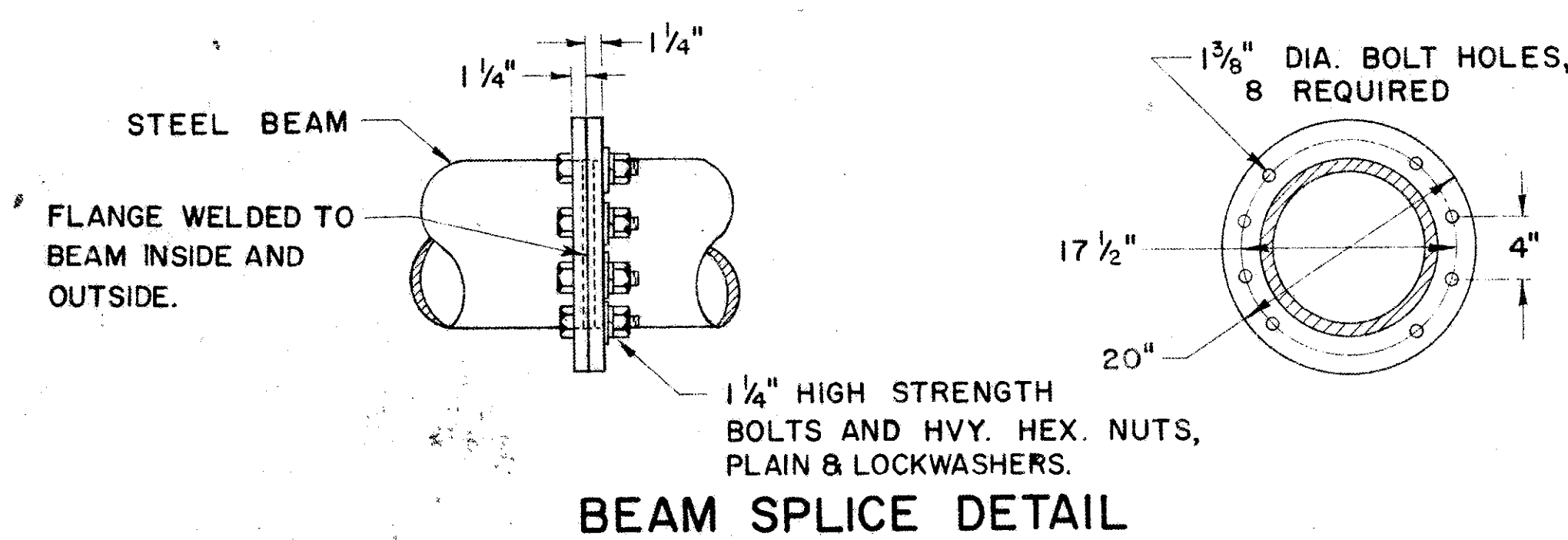
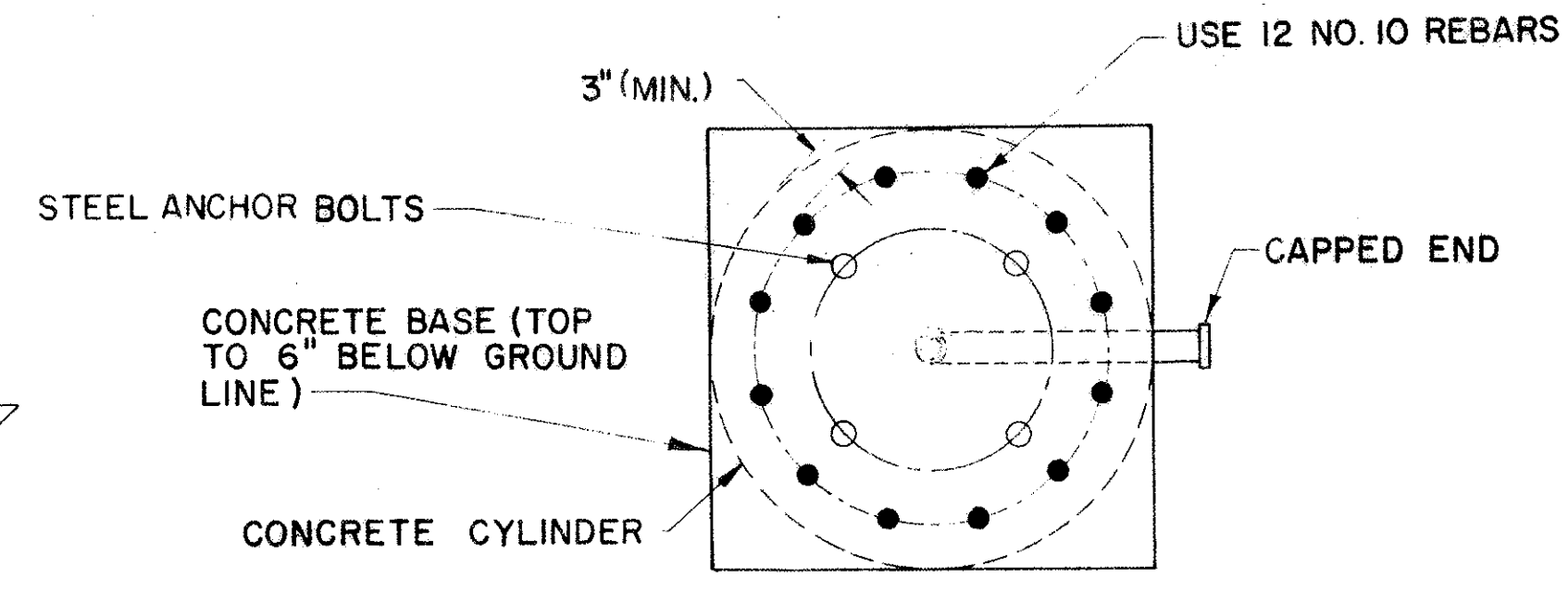
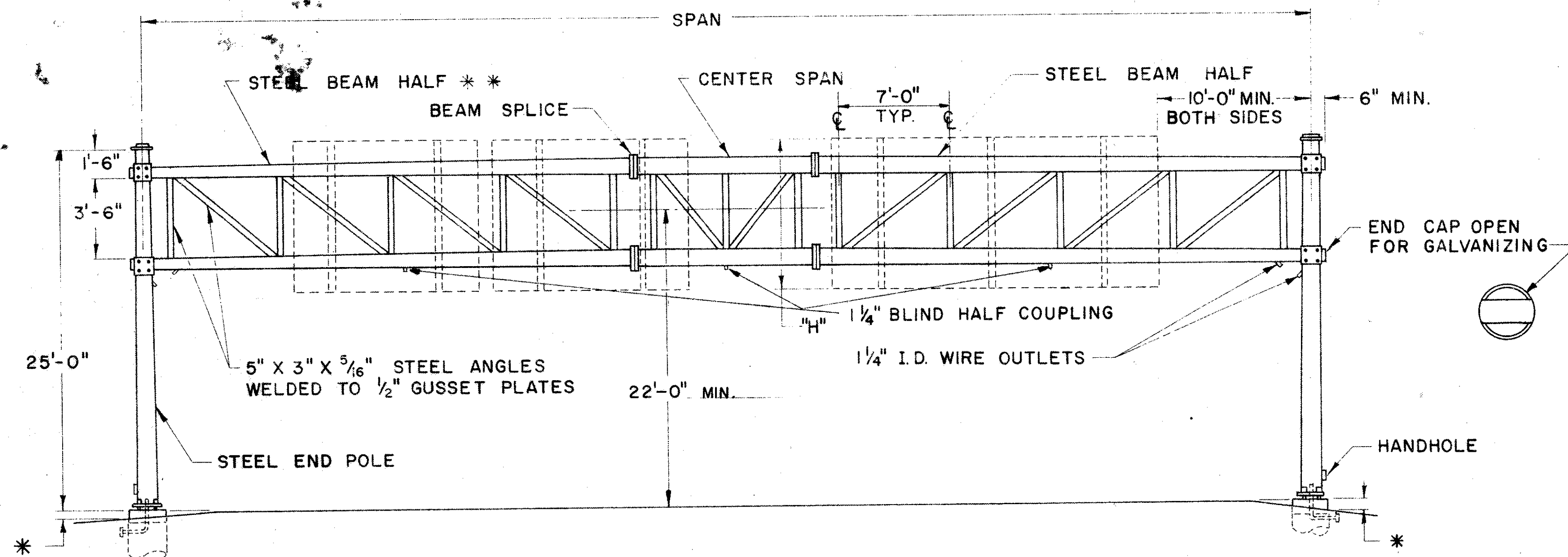
BUREAU OF TRAFFIC  
OHIO DEPARTMENT OF HIGHWAYS

**OVERHEAD  
SIGN SUPPORT**

**I-129  
No.14.5**

APPROVED   
ENGINEER OF TRAFFIC

DATE  
11-13-61  
4-12-62  
7-5-62



FOUNDATION DETAIL

DESIGN NO.	SPAN	END POLE SIZE	BEAM HALF SIZE * *	CENTER SPAN FOR MAXIMUM SPAN	DIM. P	DIM. T	ANCHOR BOLTS	MAX SIGN AREA				
								SIGN SPREAD, FT.				
								30	40	50	60	70
1	50'	O Ga. 18" X 14.5" X 25'-0"	.250" X 14.25" X 10.68" X 25'-6"	NONE	8 1/4"	2"	2" X 144"	540				
2	60'	O Ga. 18" X 14.5" X 25'-0"	.250" X 14.25" X 9.98" X 30'-6"	NONE	8 1/4"	2"	2" X 144"	430	480			
3	70'	O Ga. 18" X 14.5" X 25'-0"	.250" X 14.25" X 10.4" X 27'-6"	.312" X 14.238" X 16'-0"	9 1/2"	2 1/2"	2 1/4" X 144"	410	460	530		
4	80'	O Ga. 18" X 14.5" X 25'-0"	.250" X 14.25" X 10.19" X 29'-0"	.312" X 14.238" X 23'-0"	9 1/2"	2 1/2"	2 1/4" X 144"	360	400	440	490	
5	90'	O Ga. 18" X 14.5" X 25'-0"	.250" X 14.25" X 9.98" X 30'-6"	.312" X 14.238" X 30'-0"	9 1/2"	2 1/2"	2 1/4" X 144"	310	340	375	410	460

See Sh. 34 I  
FRA-62-1530  
For extra sheet  
"Illuminated Sign Details"







FRANKLIN COUNTY  
FRA-40-12.82

## NOTES

### GENERAL

DETAILS ON THIS SHEET SHALL APPLY TO EACH OVERHEAD SIGN STRUCTURE TO SUPPORT ILLUMINATED SIGNS. ELECTRIC SERVICE SHALL ENTER THE STRUCTURE THROUGH A 2" RIGID STEEL GALVANIZED CONDUIT PLACED IN THE STRUCTURE FOUNDATION. SERVICE WIRES SHALL ENTER THE DISCONNECT SWITCH OR COMBINATION SWITCH CONTACTOR THROUGH AN INSULATED CHASE NIPPLE TO BE FIELD INSTALLED AS SHOWN IN DETAIL. FIELD DETERMINE SIZE OF NIPPLE: SIGN LOAD WIRES AND CONTROL WIRES (IF REQUIRED) SHALL ENTER SIGN STRUCTURE AND CONTINUE UPWARD TO PROPER OUTLET. CONTROL PILOT DEVICE SHALL BE A PHOTO-ELECTRIC CELL UNIT AS SPECIFIED IN THE ELECTRICAL NOTES AND INSTALLED ON THE CAP OF THE UPRIGHT STRUCTURE MEMBER.

CONTROLLER

SIGN CIRCUIT SHALL BE CONTROLLED AS REQUIRED BY THE SYSTEM DESIGN, EITHER AT THE PRIMARY SOURCE OR AT THE STRUCTURE LOCATION. A DISCONNECTING MEANS MUST BE PROVIDED AT EACH STRUCTURE FOR MAINTENANCE AND CIRCUIT PROTECTION. SWITCHES SHALL HAVE NEMA TYPE IV, WATERTIGHT STAINLESS STEEL ENCLOSURES FURNISHED WITH HUBS. DISCONNECT MECHANISM SHALL BE FLANGE MOUNTED TO REMAIN IN OPERATING POSITION WHEN COVER IS OPEN. SWITCHES SHALL BE SQUARE "D" FUSIBLE DISCONNECT CLASS 9421, TYPE W 999 - FA 221 A OR CUTLER HAMMER TYPE 95 89 X601-2F-30, or approved equal.

SWITCHES SHALL BE MOUNTED WITH  $\frac{5}{16}$ "-18 X  $\frac{3}{4}$ " HEX. HEAD CADMIUM PLATED MACHINE BOLTS. ALL MOUNTING BOLT HOLES TO BE FIELD DRILLED AND TAPPED. MOUNTING BRACKET

THE SWITCH BOX MOUNTING BRACKET SHALL FIRST BE FABRICATED THEN GALVANIZED BEFORE ASSEMBLY.

THE BRACKET SHALL BE FIELD MOUNTED WITH  $\frac{5}{16}$ " HEX. HEAD SELF-TAPPING CADMIUM PLATED SCREWS. HOLES IN POLE TO BE FIELD DRILLED.

PAYMENT FOR SWITCH MOUNTING BRACKETS SHALL BE INCLUDED IN THE COST OF OVERHEAD SIGN SUPPORTS.

PHOTO-ELECTRIC  
CONTROL UNIT.  
(IF REQUIRED)

2" WIRING HOLE

4" X 6 1/2" HANDHOLE

2" GALVANIZED CONDUIT

ANCHOR BOLT

HEX. NUT, PLAIN  
WASHER & LOCKWASHER

STEEL POLE BASE

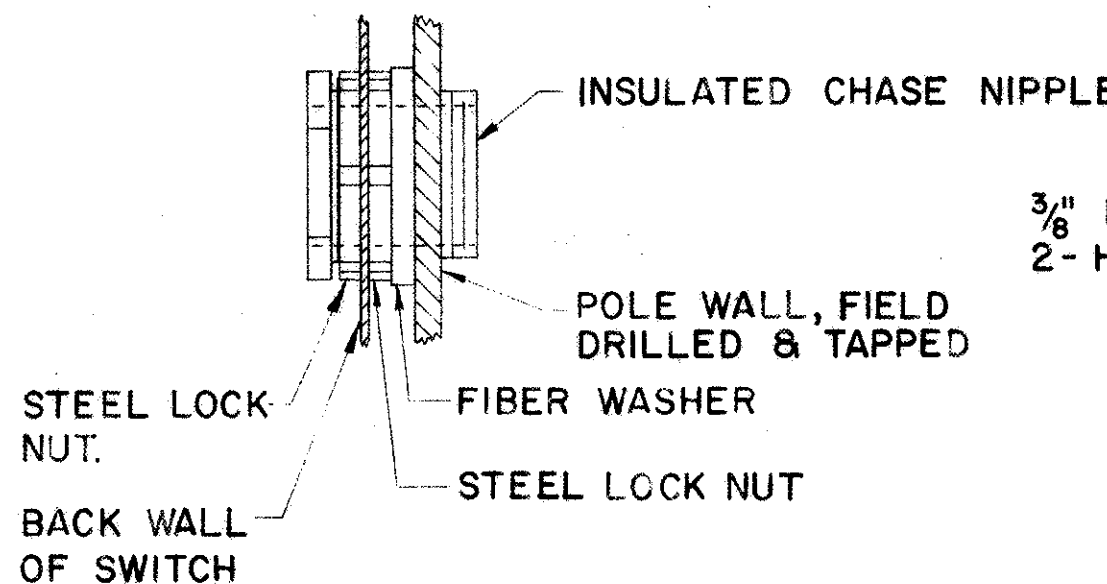
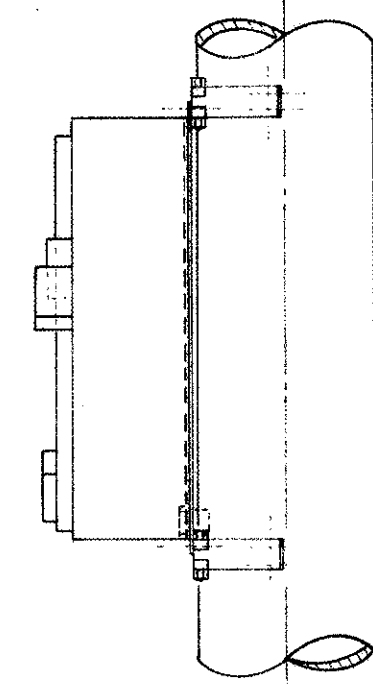
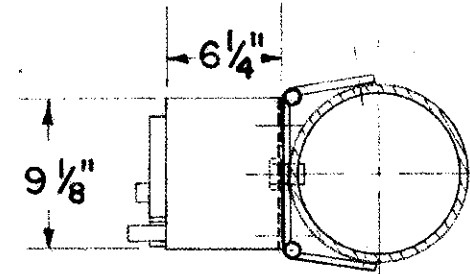
HEAVY HEX. LEVELING NUT

FINISHED GRADE

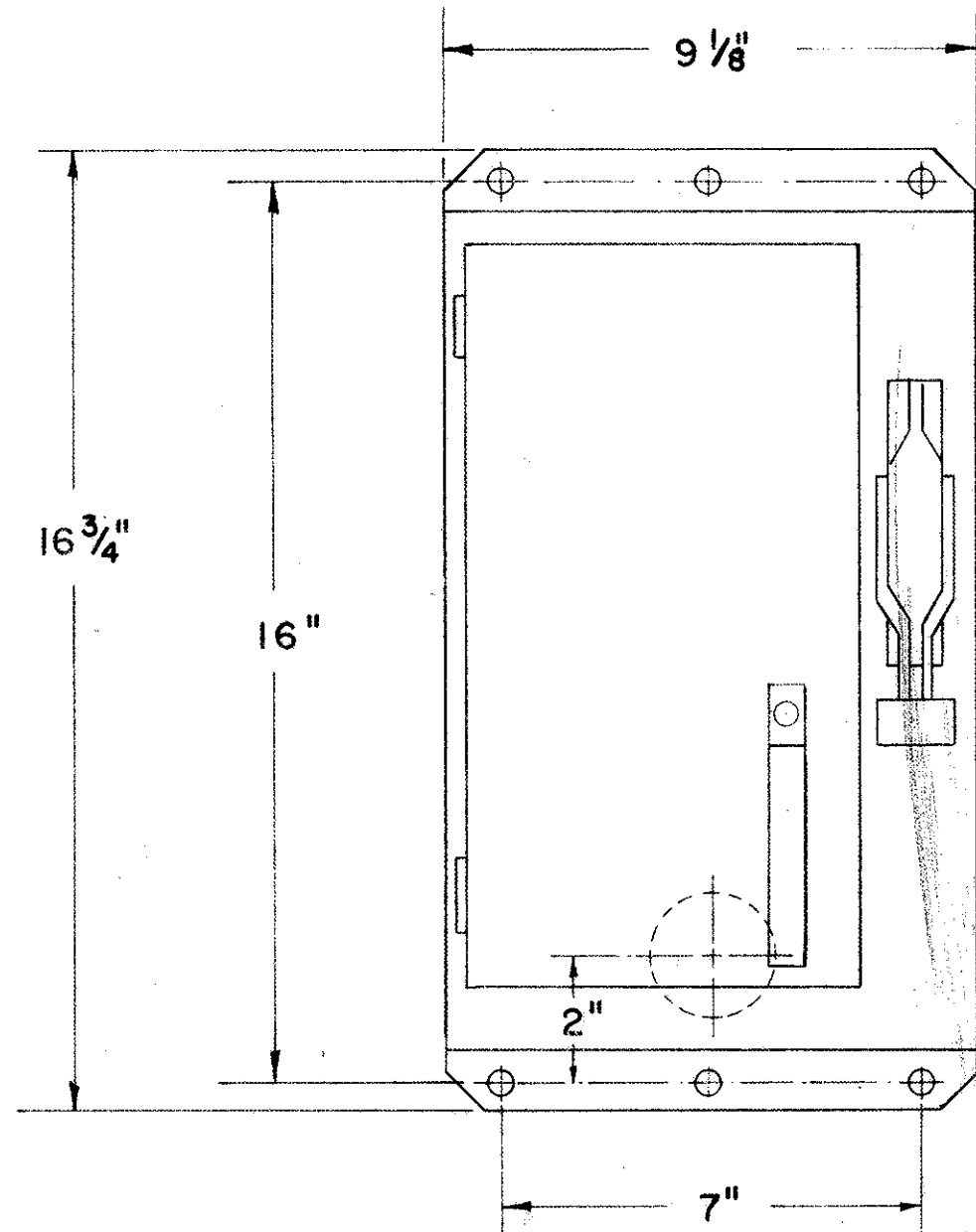
30" BELOW  
FINISHED GRADE

5/8" X 8'-0" COPPERCLAD  
GROUND ROD WITH  
NO. 4 BARE COPPER  
GROUND WIRE CON-  
NECTED TO STANDARD  
GROUND LUG.

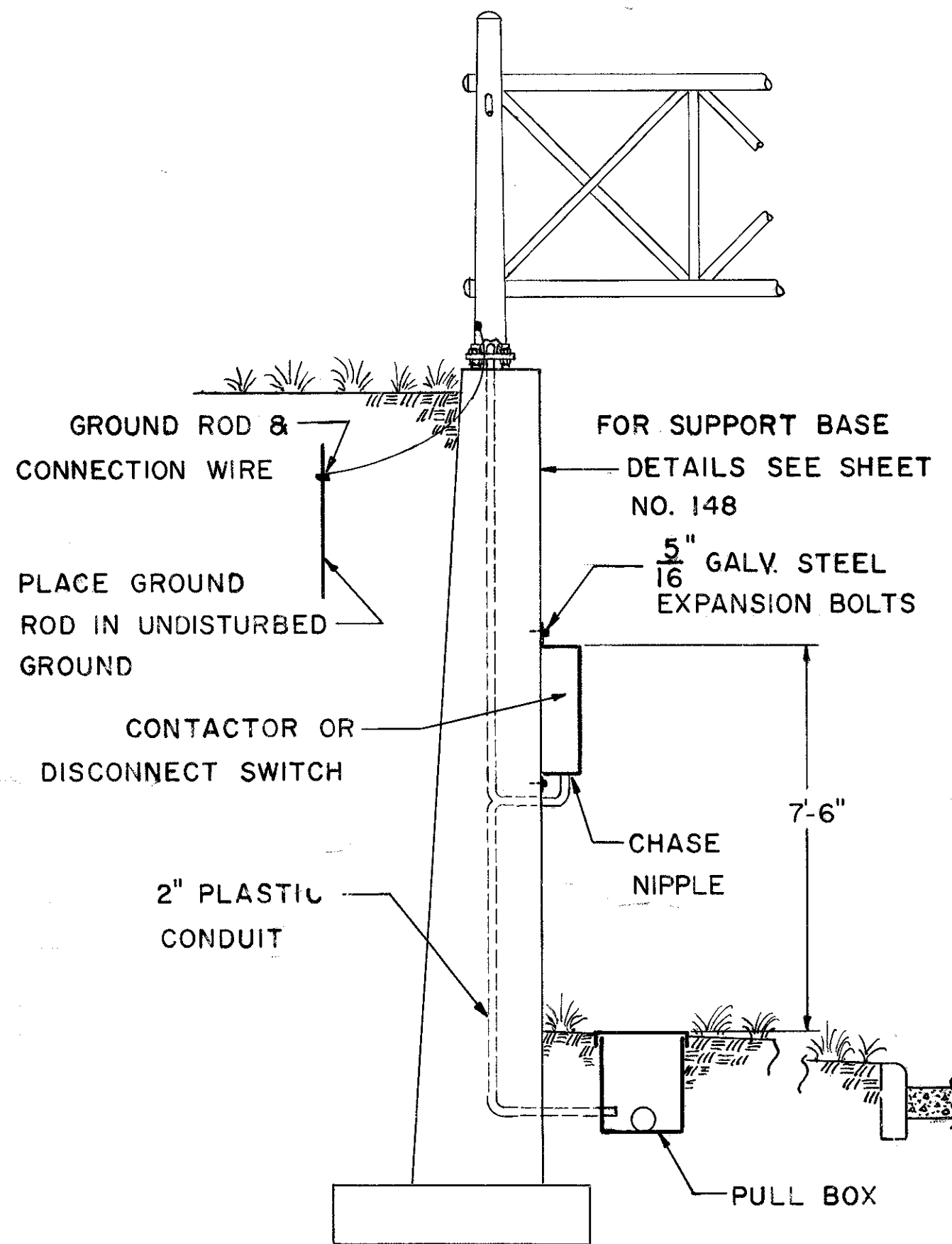
## STRUCTURE DETAIL FOR ILLUMINATED SIGNS



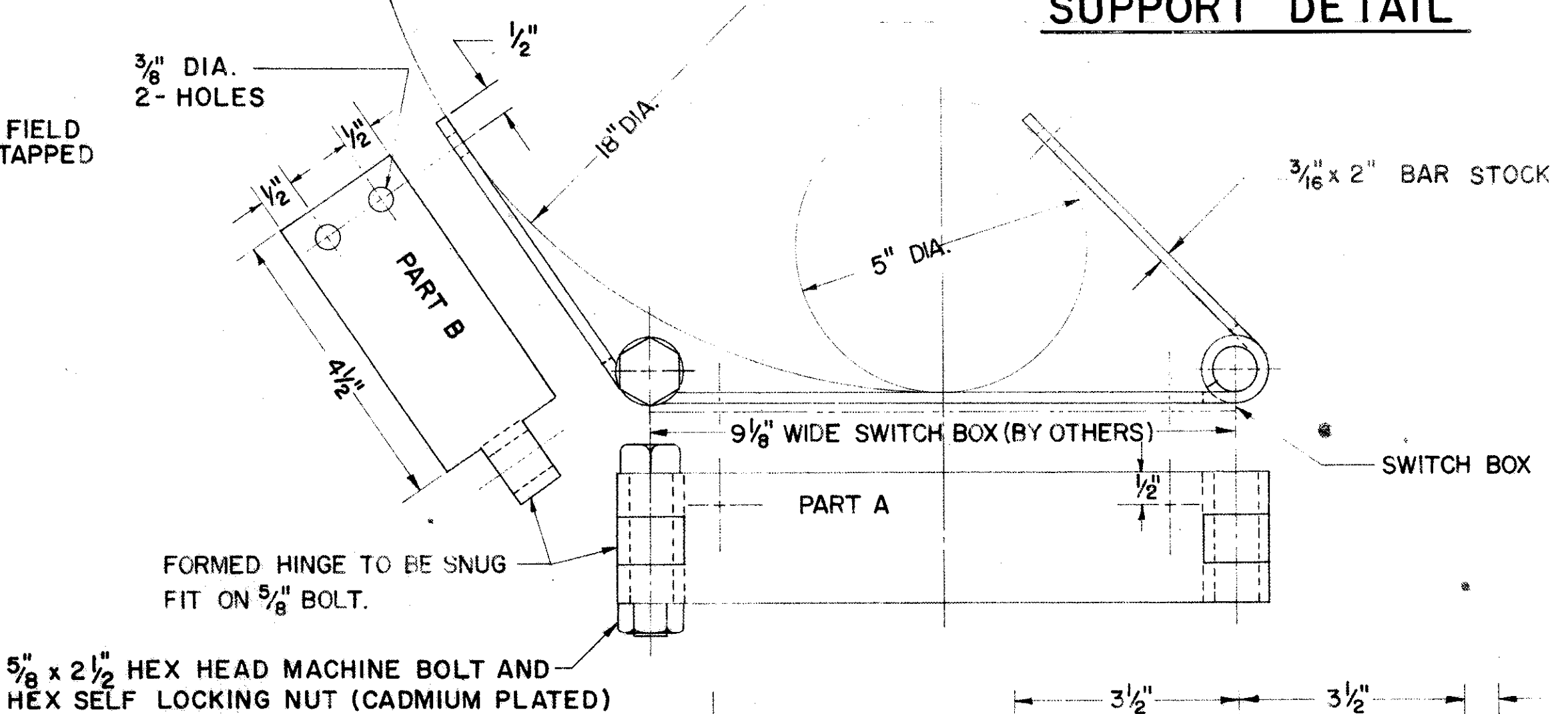
## CHASE NIPPLE ASSEMBLY DETAIL



## SWITCH DETAIL



## RETAINING WALL SPECIAL SUPPORT DETAIL



## SWITCH BOX MOUNTING BRACKET



BUREAU OF TRAFFIC  
OHIO DEPARTMENT OF HIGHWAYS

ILLUMINATED  
SIGN DETAILS

ES-3

DATE  
10-18-62

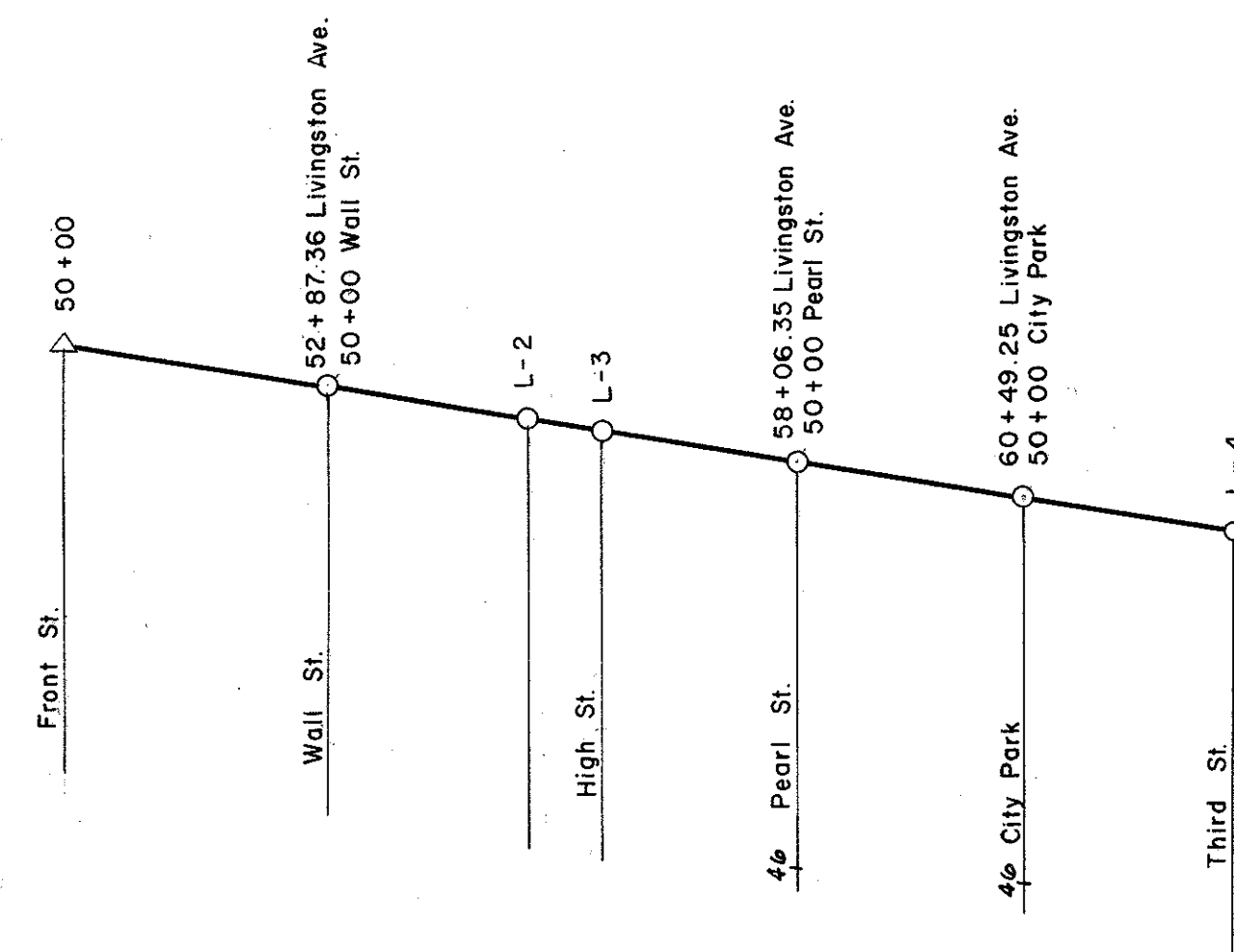
APPROVED *Robert E. Conner*  
ENGINEER OF TRAFFIC



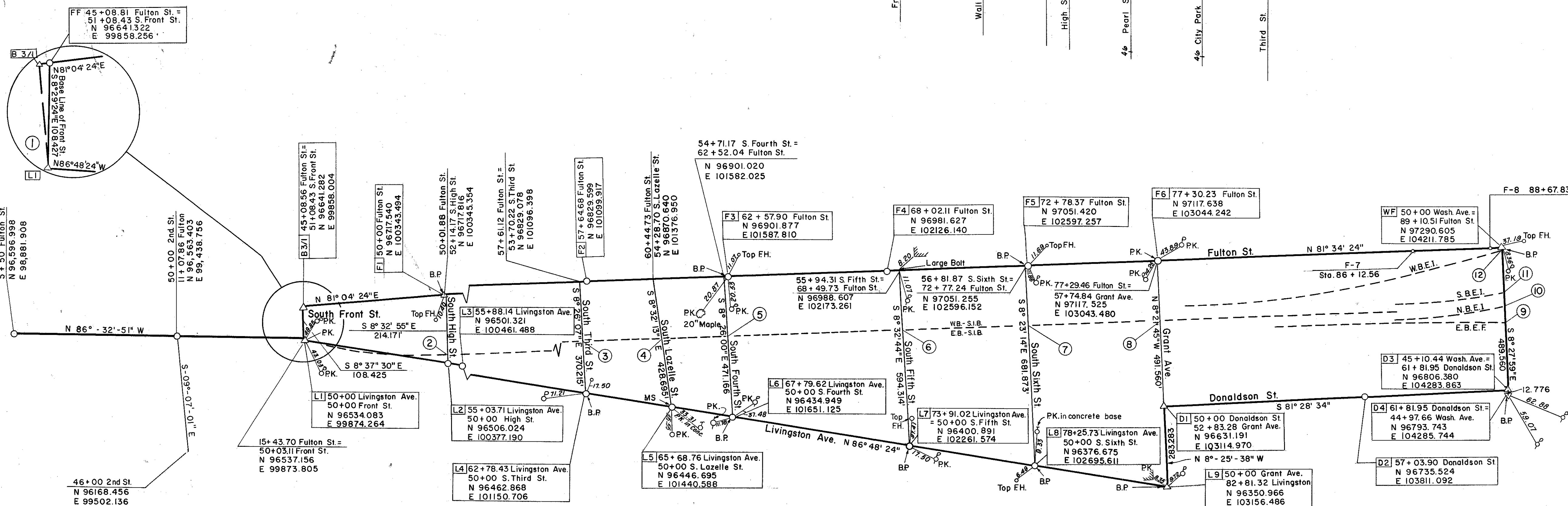
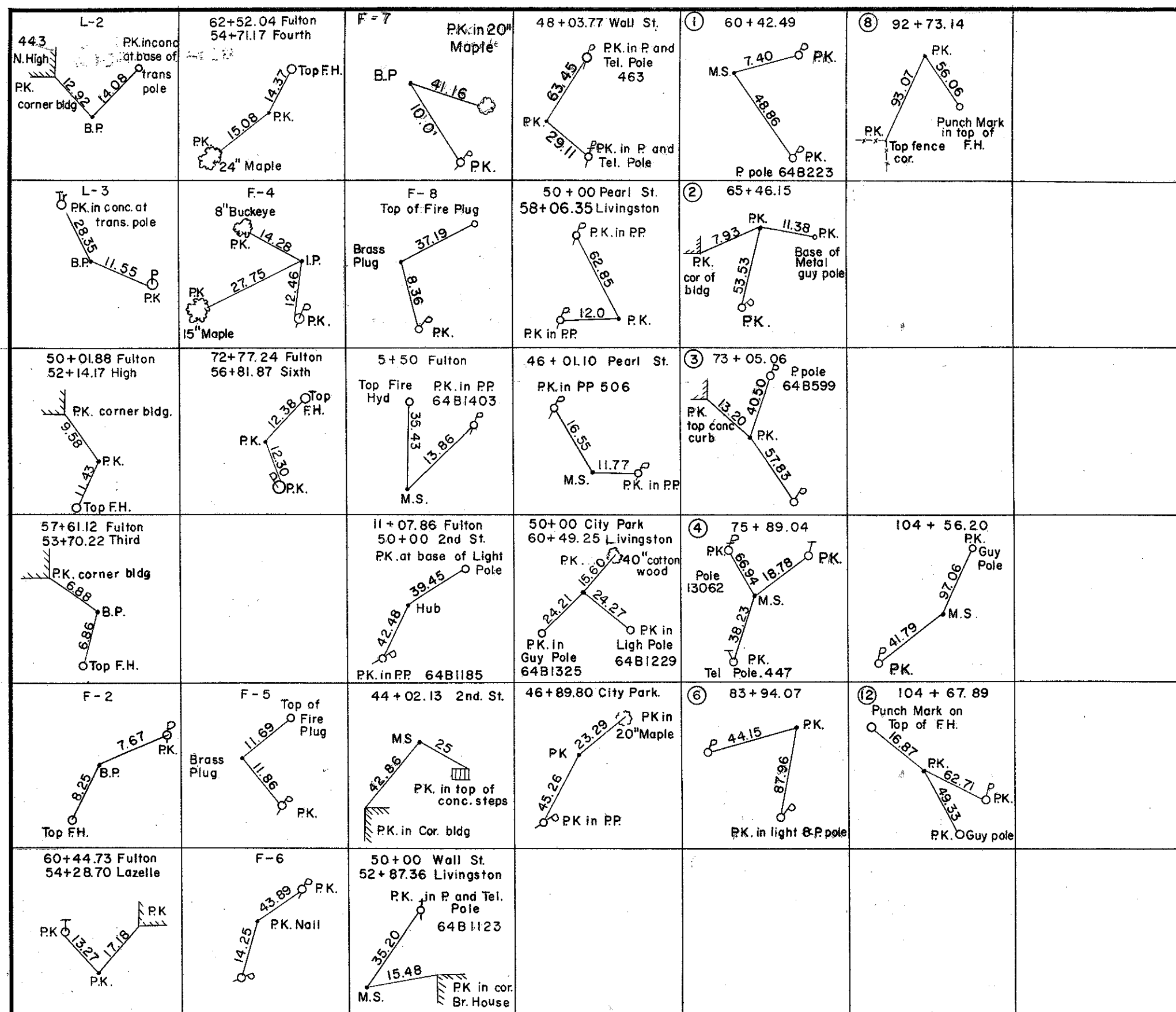
FRANKLIN COUNTY  
FRA.-40-12.82

STATIONS & COORDINATES ON POINTS OF INTERSECTION				
REF.	STATIONS		COORDINATES	
	EXPRESSWAY	EXISTING STREETS	NORTH	EAST
1	60 + 42.49	50 + 05.88	96,339.82	99,873.41
2	65 + 46.15	50 + 13.52	98,519.40	100,375.18
3	73 + 05.06	51 + 65.22	96,601.78	100,961.23
4	75 + 89.04	52 + 23.70	96,667.91	101,407.38
5	77 + 95.98	52 + 66.16	96,698.23	101,612.09
6	83 + 94.07	53 + 89.31	96,785.88	102,203.72
7	88 + 21.01	54 + 76.88	96,848.45	102,626.05
8	92 + 73.14	55 + 69.84	96,914.71	103,073.29
9	104 + 55.03	47 + 40.15	97,033.80	104,250.02

BENCH MARKS	
Ref.	Elevation
B-3/1	757.08
F-1	772.197
F-2	754.250
F-3	750.989
F-4	755.331
F-5	760.864
F-6	765.506
F-7	775.270
F-8	778.122
F-9	782.349



LEGEND  
 △ DEFLECTION IN LINE  
 ○ POINT ON LINE





MICROFILMED  
SEP 23 1985

**PROPOSED STRUCTURE NO. FRA 40-1279**  
TYPE: Cont. Steel Beams with Reinforced Conc. Deck and Substructure.  
SPANS: 32'-0", 54'-0", 32'-0" % brgs. (Along Tangent)  
ROADWAY: 57.9' min. W/ Curbs West Bound Pav't, with a  
1'-2" Safety Curb  
LOADING: CF 2000 (Adequate for AASHTO Alt. Loading.)  
WEARING SURFACE: 2 1/2" Asphaltic Conc.  
SKEW: 11°-01'-00" Rt. Fwd.  
ALIGNMENT: 1°-20' Curve Rt. Fwd. - Parallel to Ref. Line.  
APPROACH SLAB: 25' Long *Superelevation 0.023'/1'*

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

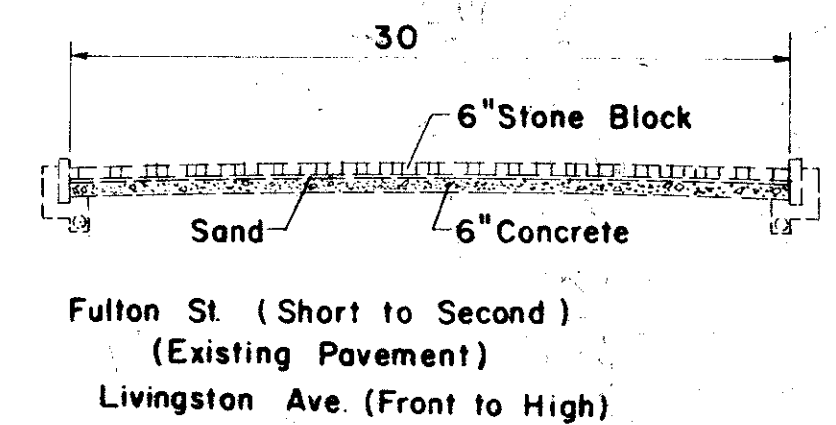
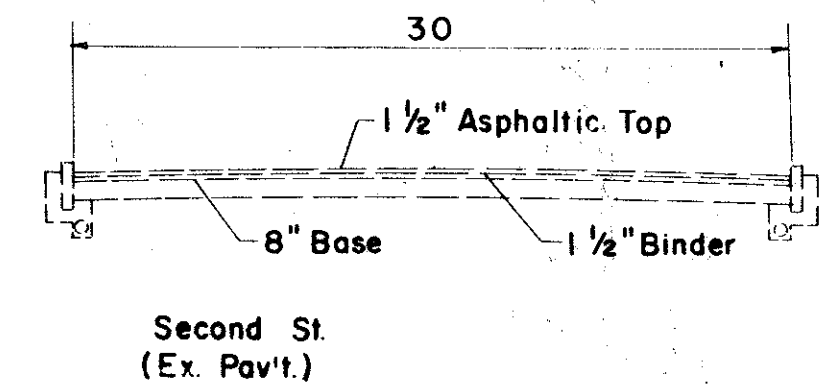
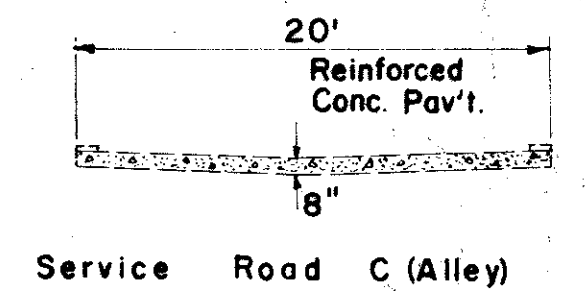
**FRANKLIN COUNTY**  
**FRA-40-12.82**

Exist. & Curve Data  
PI - 49+70.57 *N-96, 724.722*  
Δ = 16°-58' *E-90, 808.235*  
Dc = 1°-20'  
R = 4297.18  
T = 640.94  
L = 1272.50  
E = 47.54

M & Curve Data  
PI - 57+18.60  
Δ = 3°-06'-18"  
Dc = 1°-20'  
Lc = 232.87  
Ts = 116.47

M & Curve Data  
PI - 63+13.68 *N-96, 479.852*  
Δ = 20°-35'-59" *E-100, 137.941*  
Dc = 3°-00'  
Lc = 250'  
Ts = 3°-45'  
Ts = 472.30'  
Es = 32.66'  
Lc = 436.67

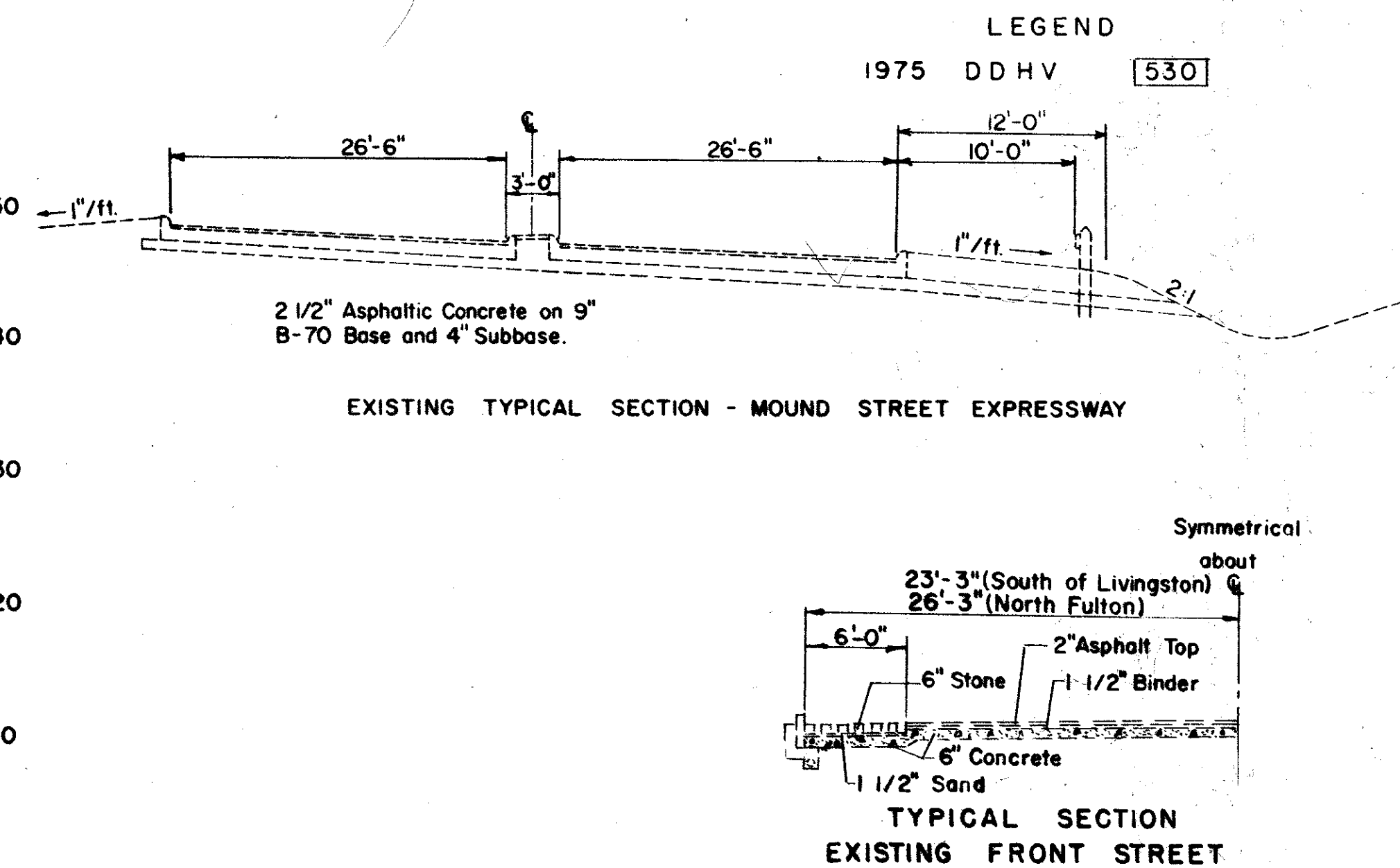
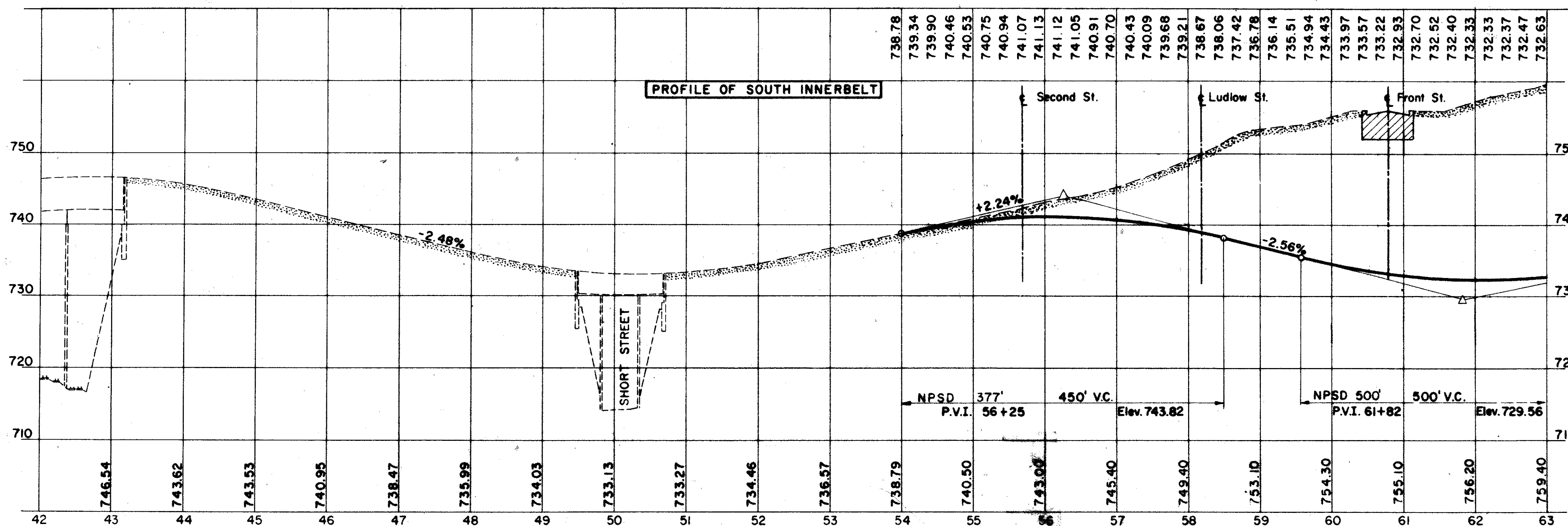
NOTE 1- See Sheet No. 37 for temporary Runaround on Front St.  
2- See Pavement Details for Service Rds. and Ramps Geometrics



NOTE: Marker will be furnished and Erected on the Right by State Forces Prior to Acceptance of this improvement.

**PROPOSED STRUCTURE NO. FRA-40-1300**  
TYPE: Cont. Steel Beam with Reinf. Conc. Deck and Substructure.  
SPANS: 73'-0" and 64'-3" % Brgs.  
ROADWAY: 60'-0" 1/1 10'-2" S. Walks with Concrete Parapets and Aluminum Railing  
W.S.: 2 1/2" Asphaltic Concrete.  
SKEW: 17°54' Lt. Forward.  
ALIGNMENT: Tangent.  
APPRO. SLABS: 25'-0" Long.

**EXISTING STRUCTURE NO. 1279**  
TYPE: Cont. Steel Beams with Reinf. Conc. Deck and Sub-structure.  
SPANS: 32'-0", 54'-0", 32'-0" % Brgs. (Along Tangent)  
ROADWAY: 56' 1/1 2'-0" Safety Curb with Median (3'-0" 1/1 curb) with Conc. Parapets and Aluminum Railing.  
LOADING: CF-2000  
WEARING SURFACE: 2 1/2" Asphaltic Conc.  
SKEW: 11°-01'-00" Rt. Fwd.  
ALIGNMENT: 1°-20' Curve Rt.  
APPROACH SLAB: 25' Long



**SCHEMATIC PLAN & PROFILE**



PI 63+13.68 M  
Δ=20°-35'-59"  
Dc=3'-0"  
Ls=250'  
Ts=472.30'  
Xc=249.89'  
Yc=5.45'

SEP 24 1985



**PROPOSED STRUCTURE NO. FRA-40-1310**  
TYPE: Cont. Steel Beam with Reinf. Conc. Deck and Substructure.  
SPANS: 46'-3"; 62'-3"; 71'-6"; 57'-0"; c/c Brgs.  
ROADWAY: 72'-0" f/t Curbs; 10'-2" S. Walks with concrete parapets and aluminum railing  
LOADING: CF-400 (1957)  
W.S.: 2 1/2" Asphaltic Concrete.  
SKEW: 2°55' Lt. Forward.  
ALIGNMENT: Tangent.  
APPRO. SLABS: 25'-0" Long.

**PROPOSED STRUCTURE NO. FRA-40-1325**  
TYPE: Cont. Steel Beam with Reinf. Conc. Deck and Substructure.  
SPANS: 61'-0"; 93'-0"; 61'-0"; c/c Brgs.  
ROADWAY: 54'-0" f/t Curbs with 2'-0" concrete median; 10'2" S. walk on West side; 2' Safety Curb on East side, and concrete parapets and aluminum railing  
LOADING: CF-400 (1957)  
W.S.: 2 1/2" Asphaltic Concrete.  
SKEW: None  
ALIGNMENT: Tangent.  
APPRO. SLABS: 25'-0" Long.

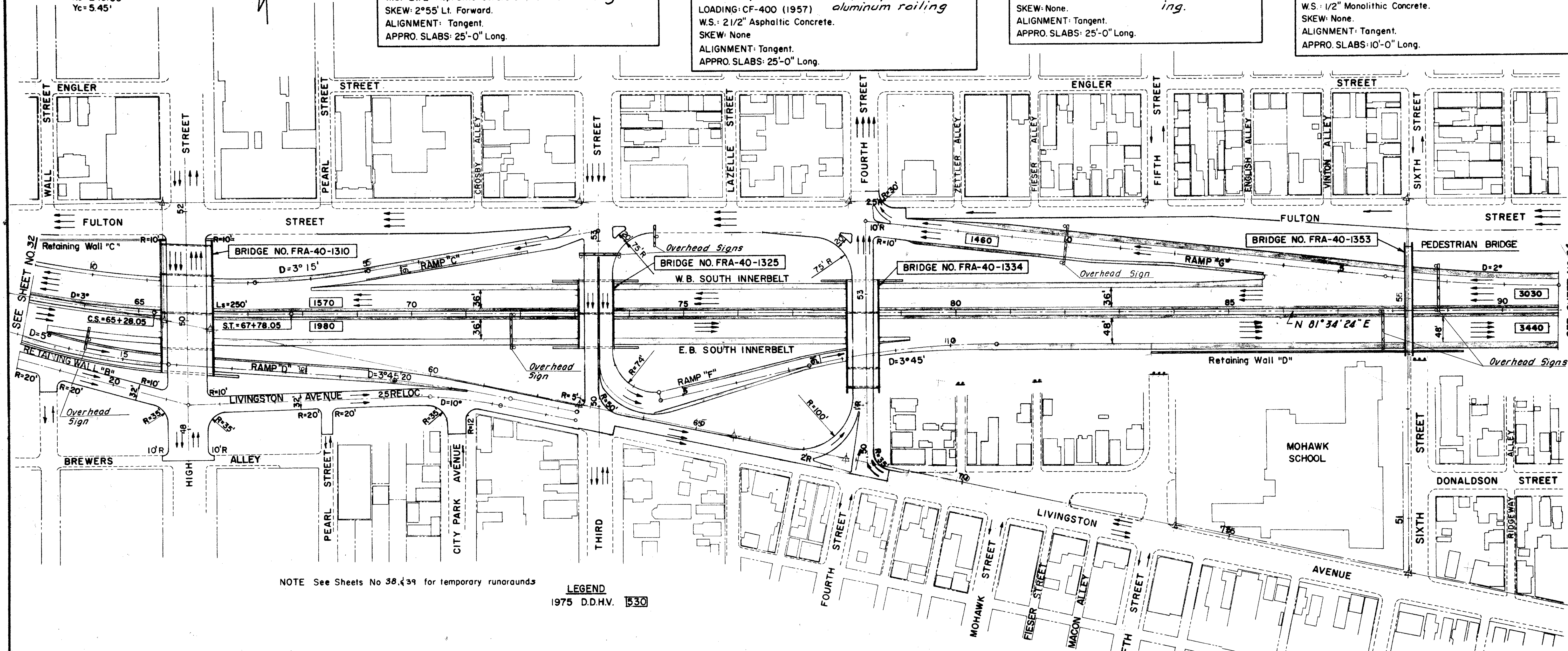
**PROPOSED STRUCTURE NO. FRA-40-1334**  
TYPE: Cont. Steel Beam with Reinf. Conc. Deck and Substructure.  
SPANS: 56'-0"; 93'-0"; 61'-0"; c/c Brgs.  
ROADWAY: 38'-0" f/t 10'-2" S. Walks with concrete parapets and aluminum railing.  
LOADING: CF-400 (1957)  
W.S.: 2 1/2" Asphaltic Concrete.  
SKEW: None.  
ALIGNMENT: Tangent.  
APPRO. SLABS: 25'-0" Long.

**PROPOSED STRUCTURE NO. FRA-40-1353**  
TYPE: Cont. Steel Beam with Reinf. Conc. Deck and Substructure.  
SPANS: 73'-0"; 83'-6"; 50'-0"; c/c Brgs.  
ROADWAY: 10'-0" f/t Conc. Parapets and 5'-0" Chain Link Fence.  
LOADING: 85#/Sq. Ft. (Live Load.)  
W.S.: 1/2" Monolithic Concrete.  
SKEW: None.  
ALIGNMENT: Tangent.  
APPRO. SLABS: 10'-0" Long.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

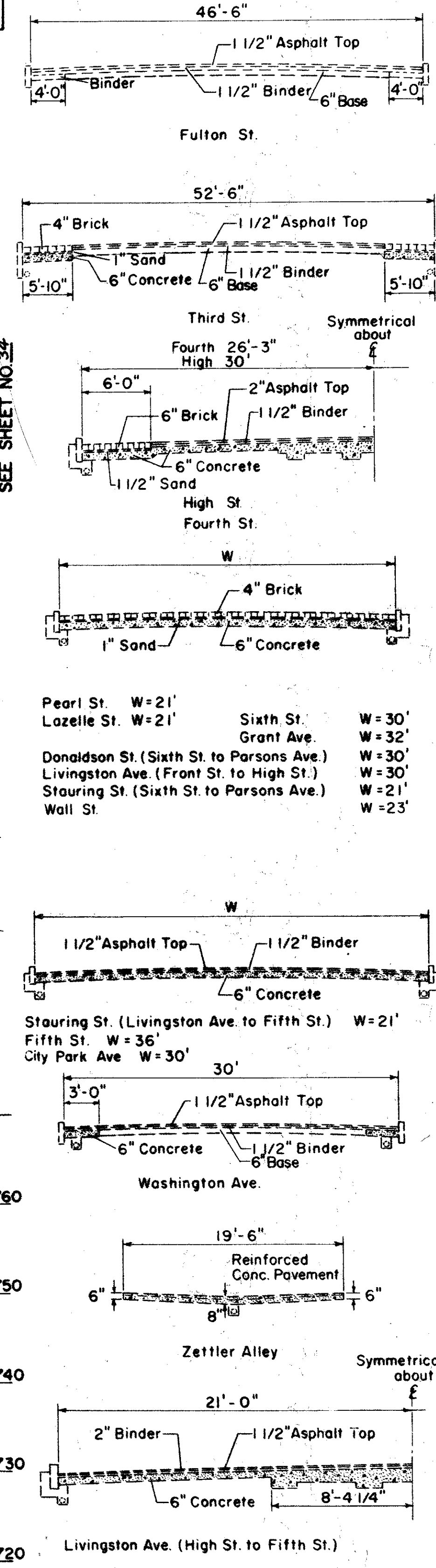
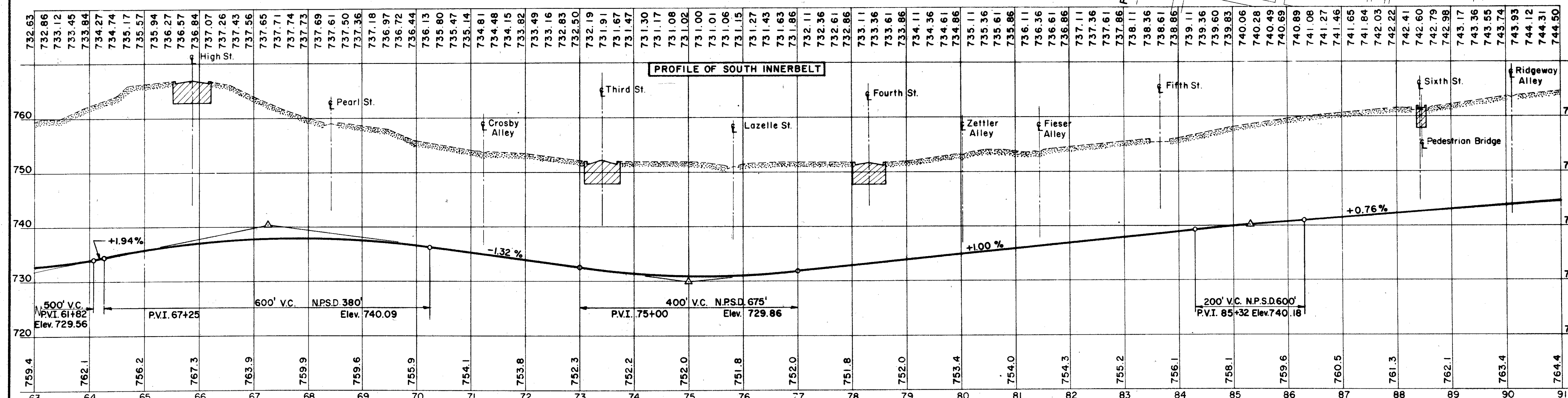
33  
250

**FRANKLIN COUNTY**  
**FRA-40-12.82**



NOTE See Sheets No 38, 39 for temporary runarounds

**LEGEND**  
1975 D.D.H.V. 1530



**SCHEMATIC PLAN & PROFILE**



MICROFILMED  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

34  
250

FRANKLIN COUNTY  
FRA - 40 - 1282

CURVE DATA W.B.E.F.  
P.I. 97+49.99 N 97.030.08  
Δ = 11°54'40" E 103.530.28  
D = 2°30'  
Θs = 3°45'  
Ls = 300'  
Ts = 389.23'  
Lc = 176.44'  
Es = 14.07'

CURVE DATA S.B.E.I.  
P.I. 109+12.97 N 97.176.76  
Δ = 74°36'24" E 104.692.21  
D = 7°00'  
Θs = 14°00'  
Ls = 400'  
Ts = 829.41'  
Lc = 665.81'  
Es = 220.72'

CURVE DATA N.B.E.I.  
P.I. 111+42.81 N 97.66.93  
Δ = 79°32'24" E 104.926.01  
D = 5°30'  
Θs = 11°00'  
Ls = 400'  
Ts = 1072.10'  
Lc = 1046.18'  
Es = 321.91'

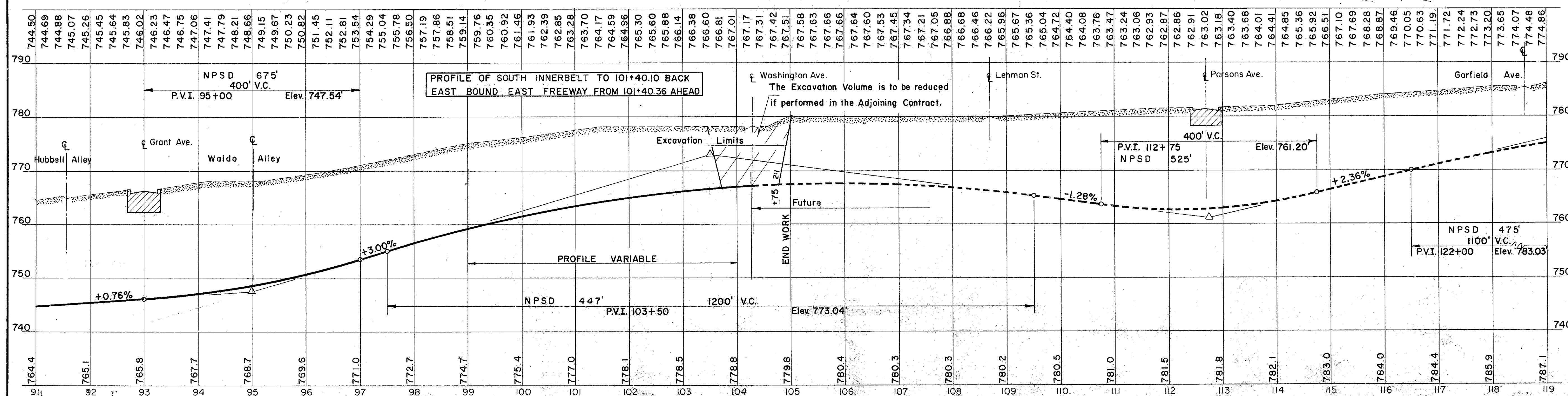
CURVE DATA E.B.E.F.  
P.I. 103+25.87 P.I. 117+10.15  
N = 97023.44 N = 97.131.31  
E = 104.121.15 E = 105.500.87  
Δ = 3°42'32" Δ = 11°56'44"  
D = 1°00" D = 0°30"  
T = 185.51 T = 1198.90  
L = 370.89 L = 2389.11  
E = 3.00 E = 62.60

PROPOSED STRUCTURE NO. FRA-40-1361  
TYPE: Cont. Steel Beam with Reinf. Conc. Deck and Substructure.  
SPANS: 44'-0", 2@73'-6", 44'-0" % Brgs.  
ROADWAY: 48'-0" f/f 5'-2" S. Walks with concrete  
parapets and aluminum railing  
W.S.: 2 1/2" Asphaltic Concrete.  
SKEW: None.  
ALIGNMENT: Tangent.  
APPRO. SLABS: North, 15' long. South 25' long.

NOTE: Typical Section of Adjacent Pav't Same  
as Typical Section "C" Page 4.

NOTE: Marker will be furnished and erected  
on the left by State Forces prior to  
acceptance of this improvement.

LEGEND  
1975 DDHV 530



SCHEMATIC PLAN & PROFILE

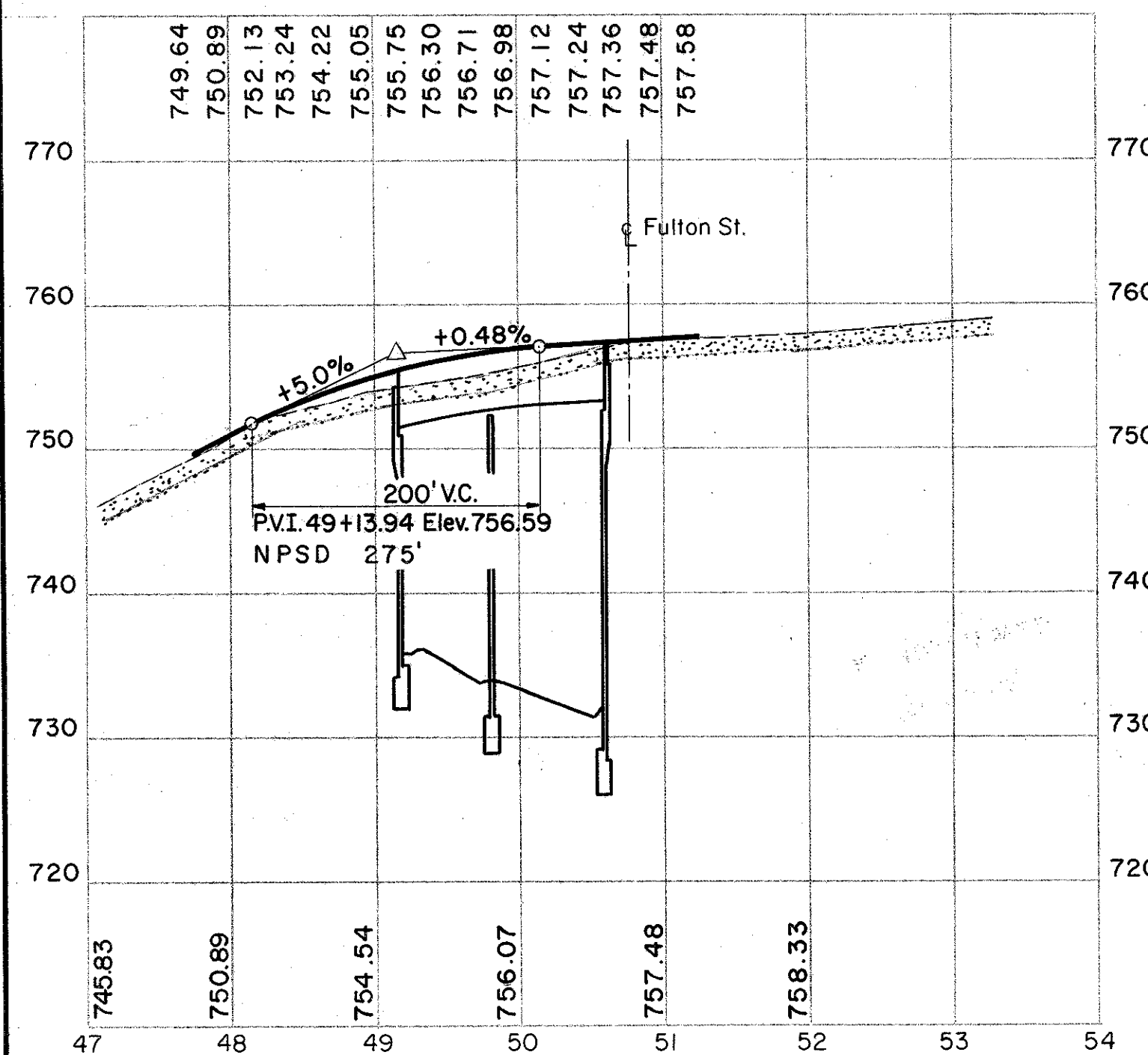


MICROFILMED  
SEP 24 1985

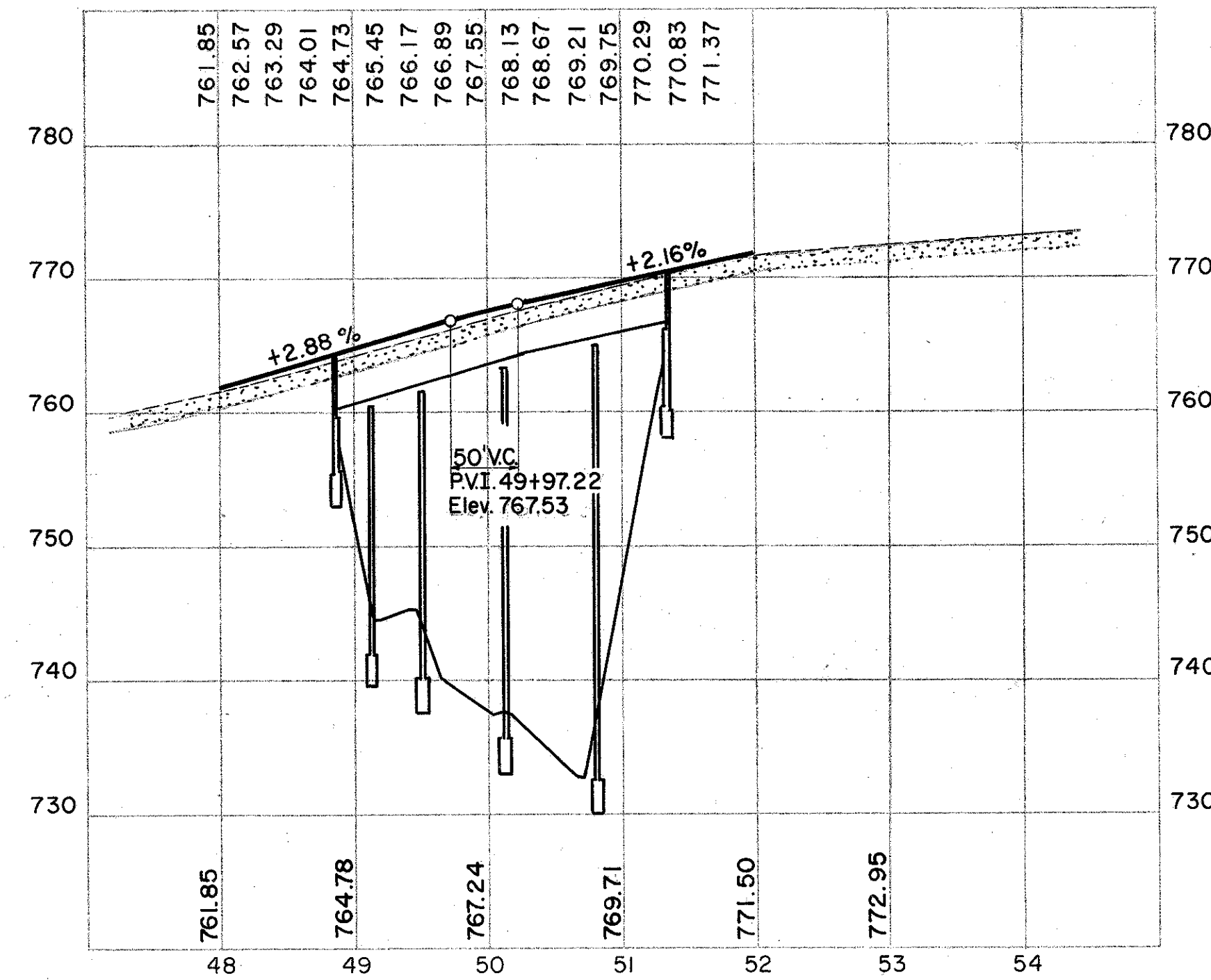
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

35  
250

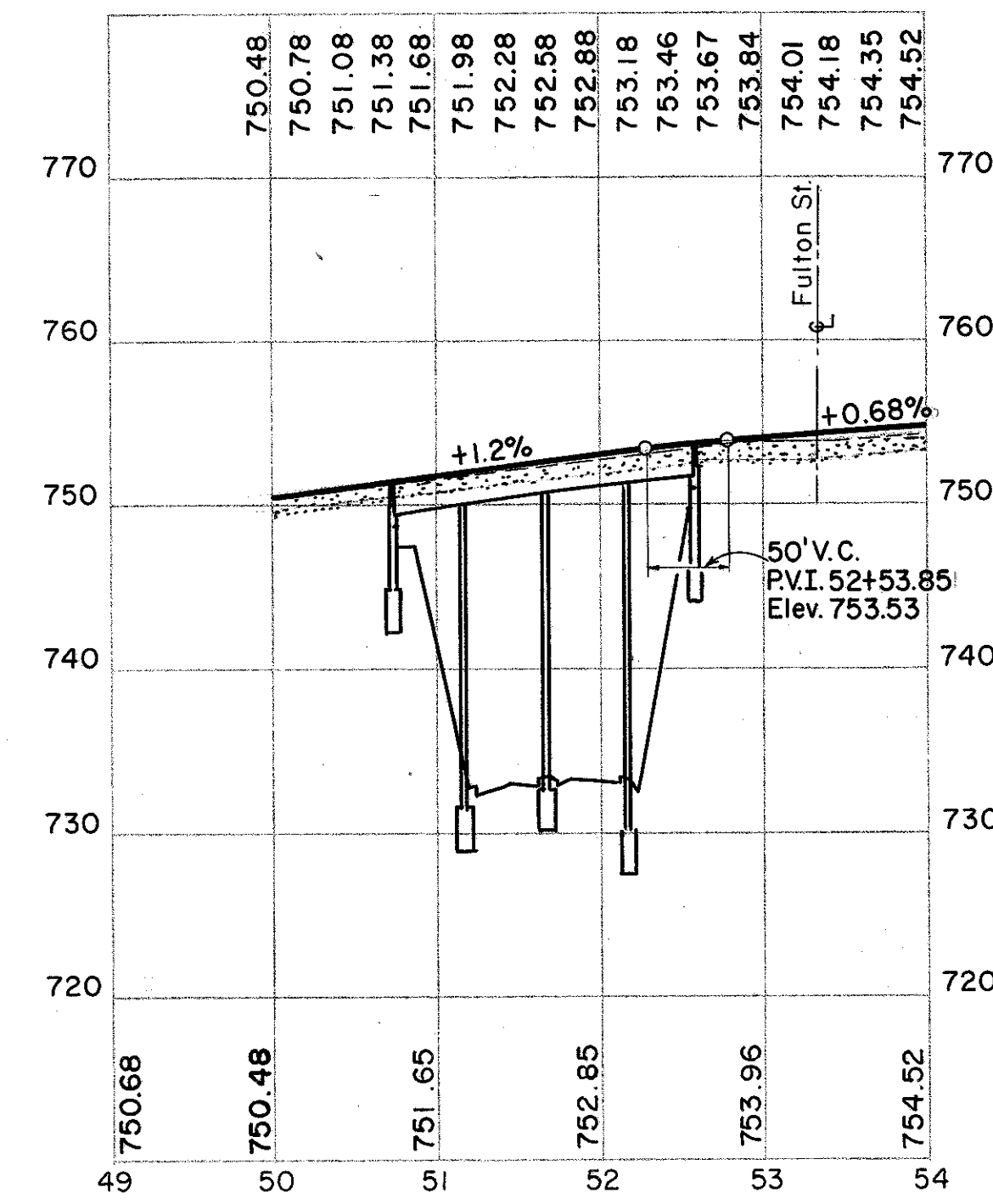
FRANKLIN COUNTY  
FRA-40-12.82



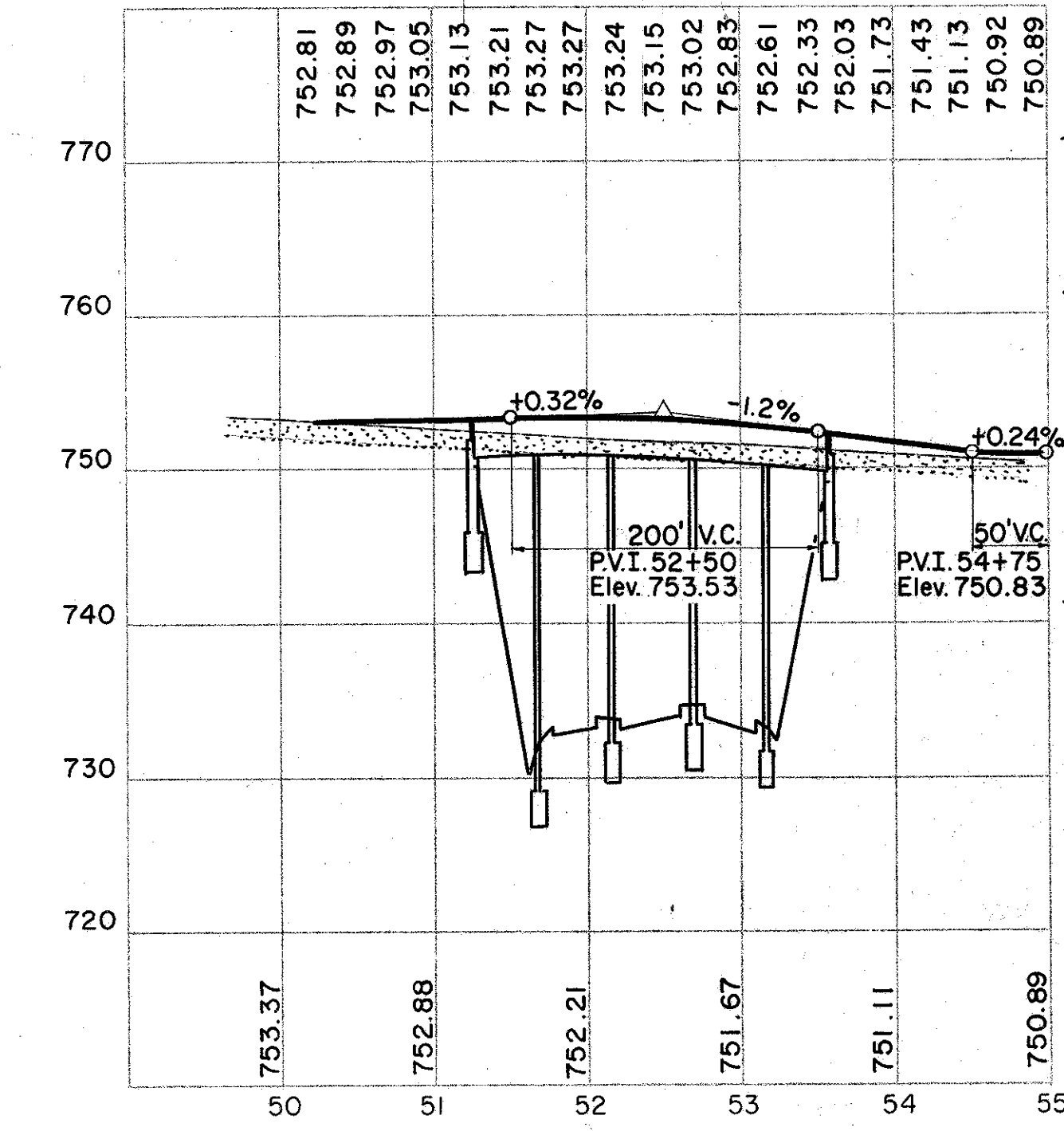
FRONT STREET



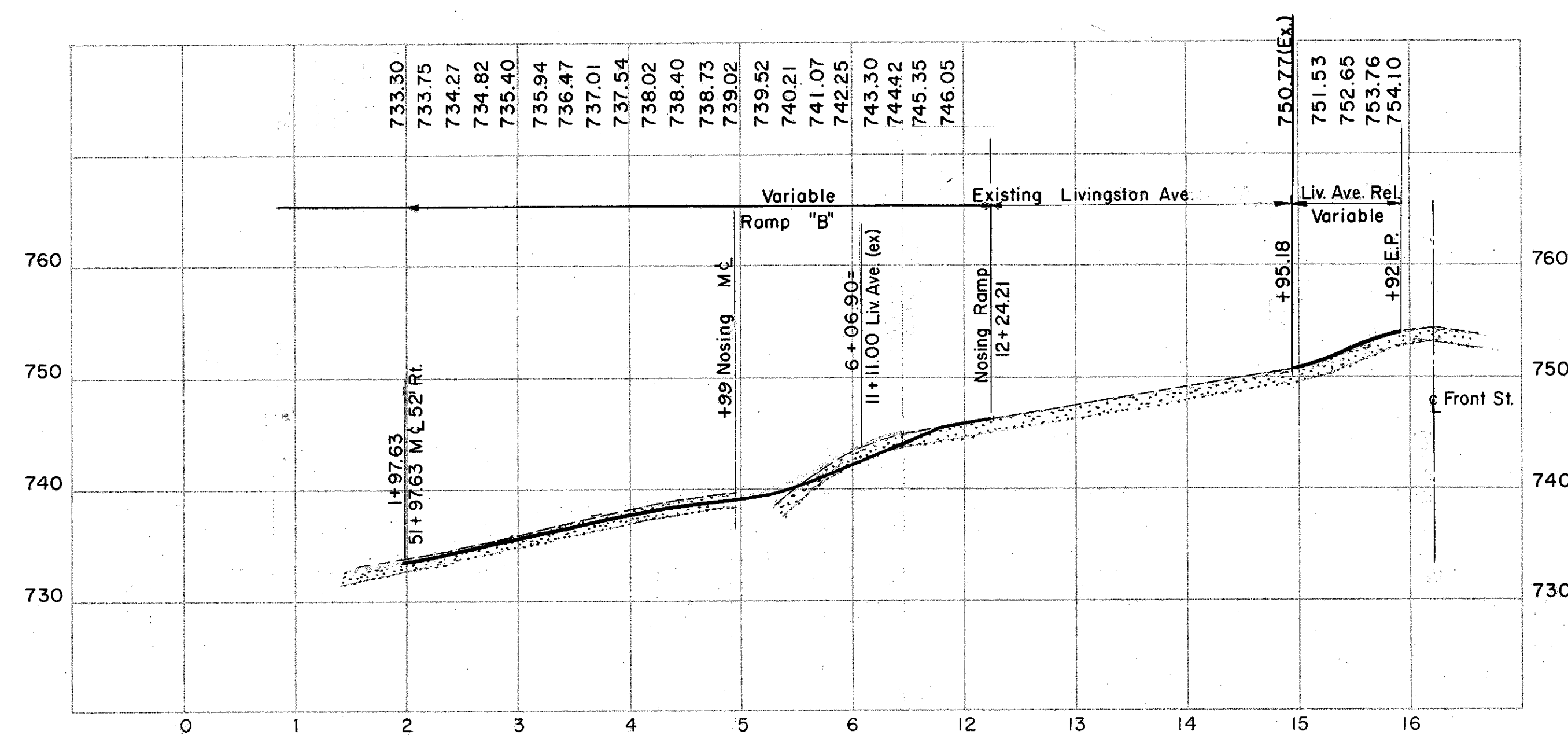
HIGH STREET



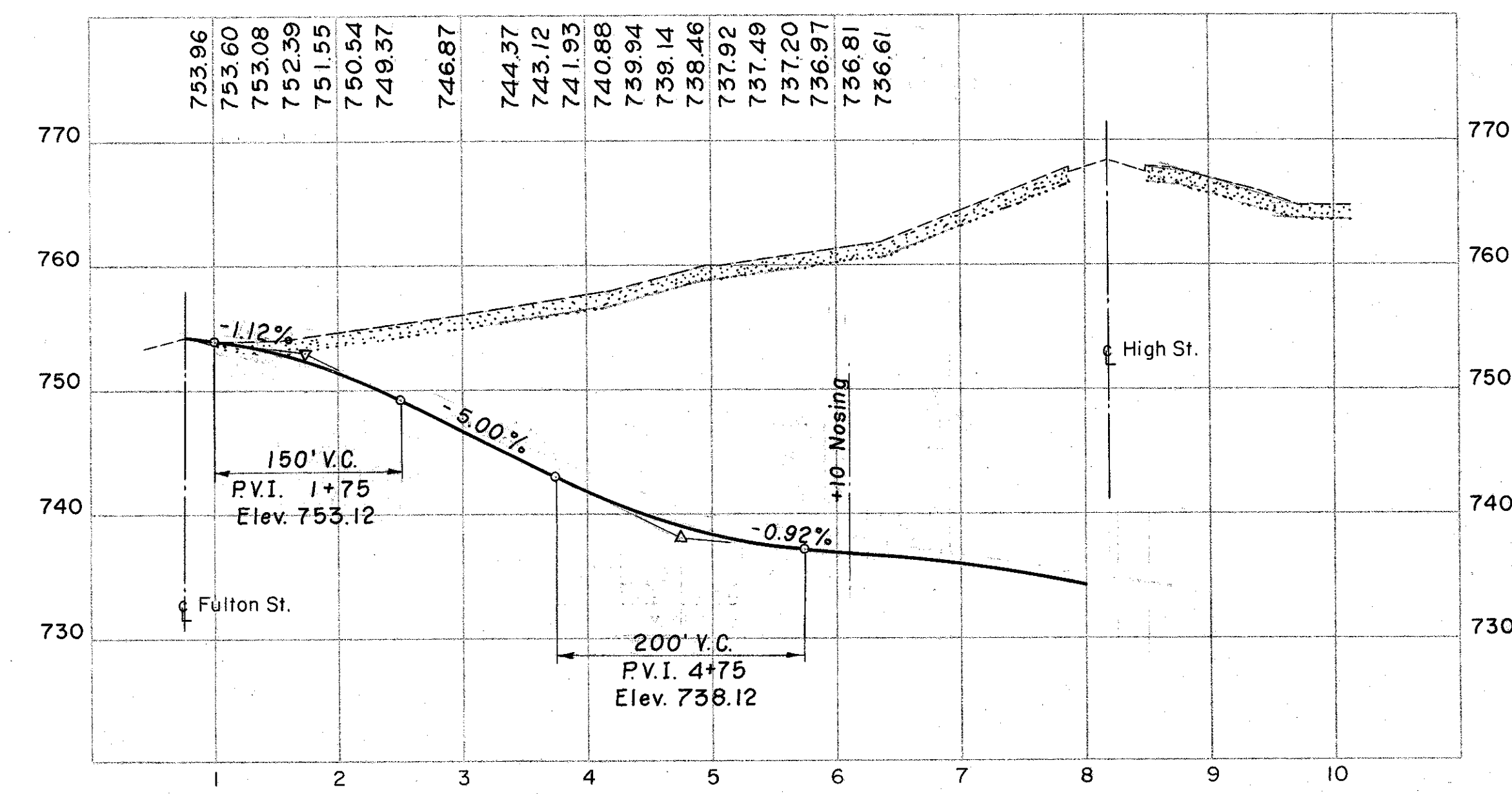
THIRD STREET



FOURTH STREET



RAMP "B" & LIVINGSTON AVE. RELOC.



RAMP "C"

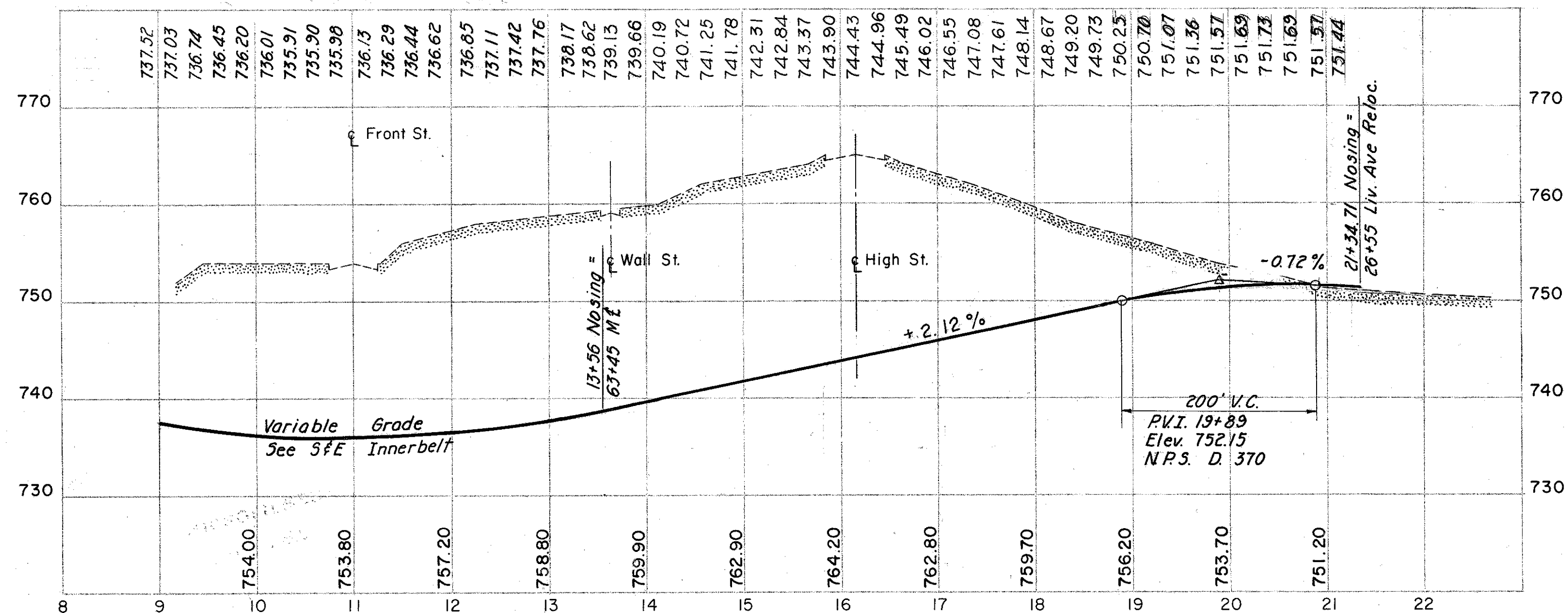


MICROFILMED  
SEP 24 1985

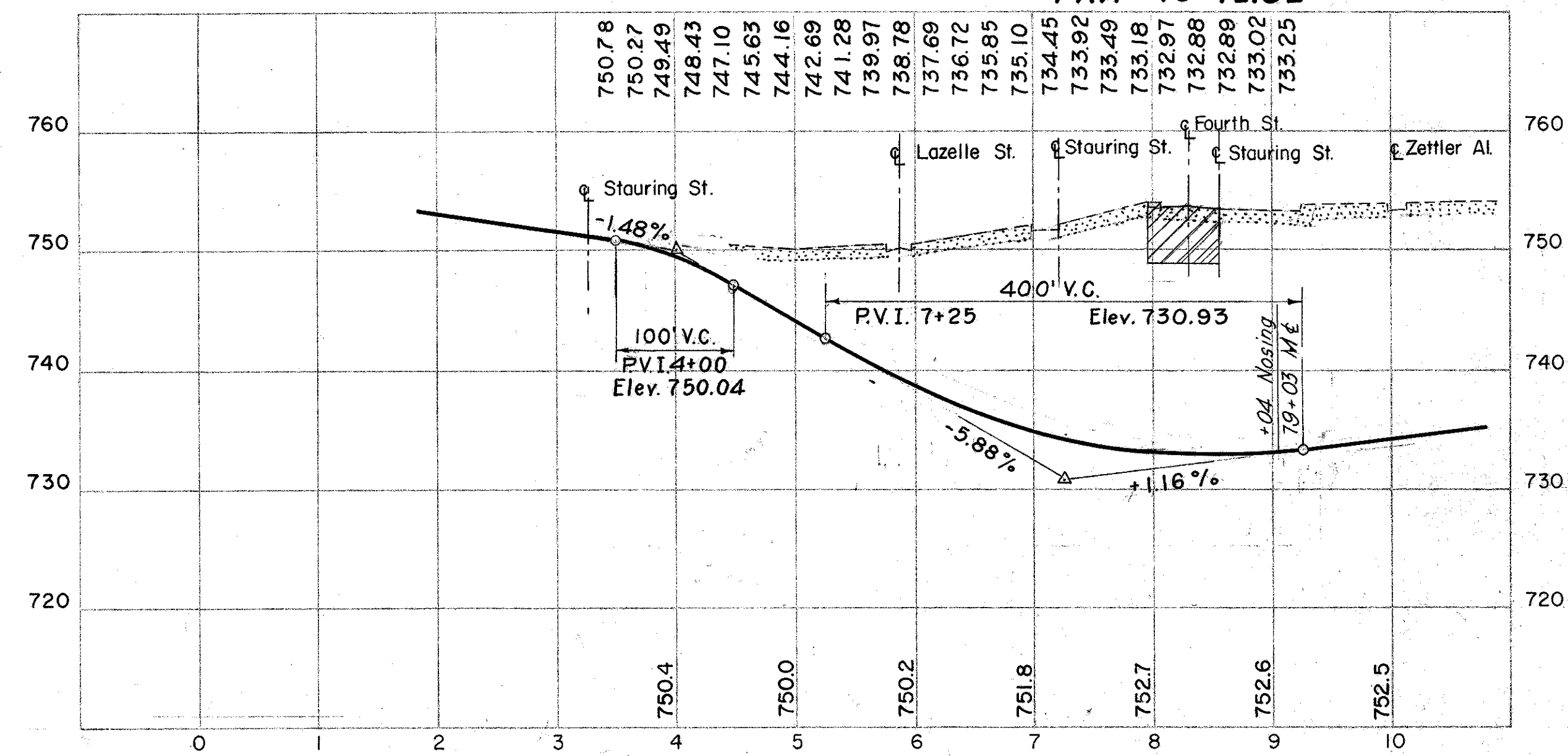
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

36  
250

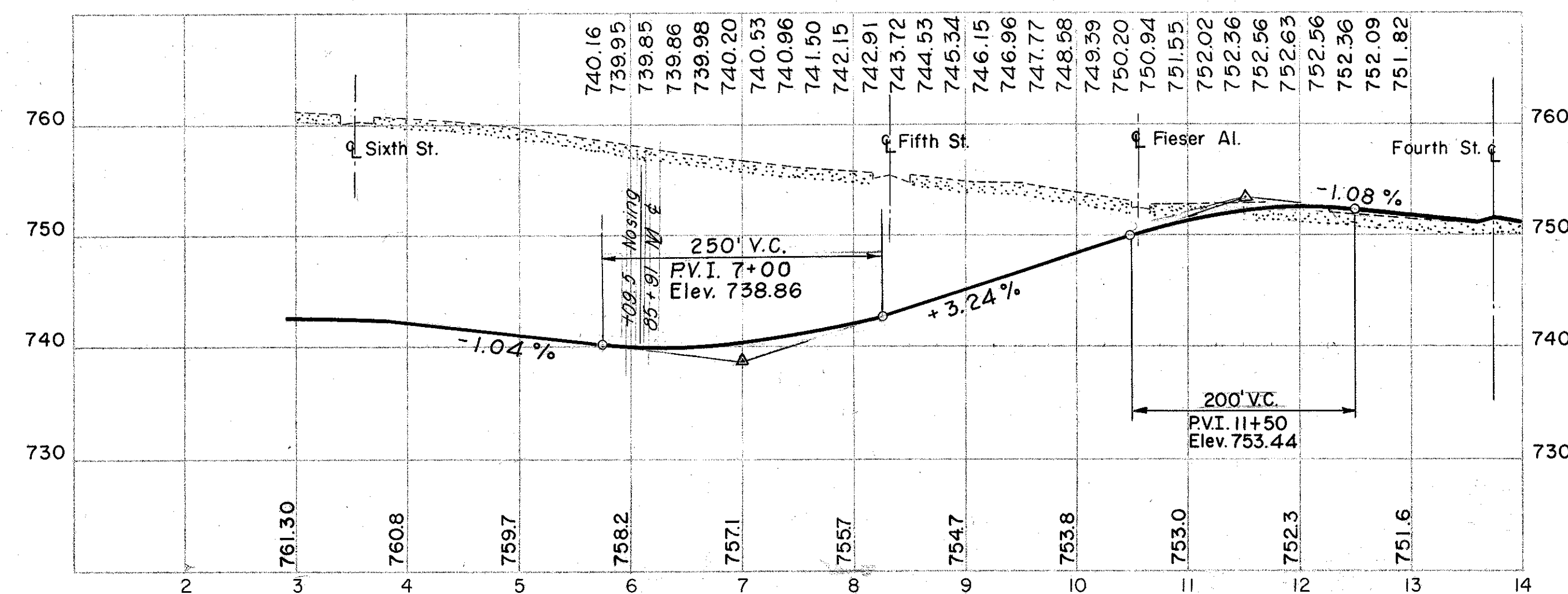
FRANKLIN COUNTY  
FRA-40-12.82



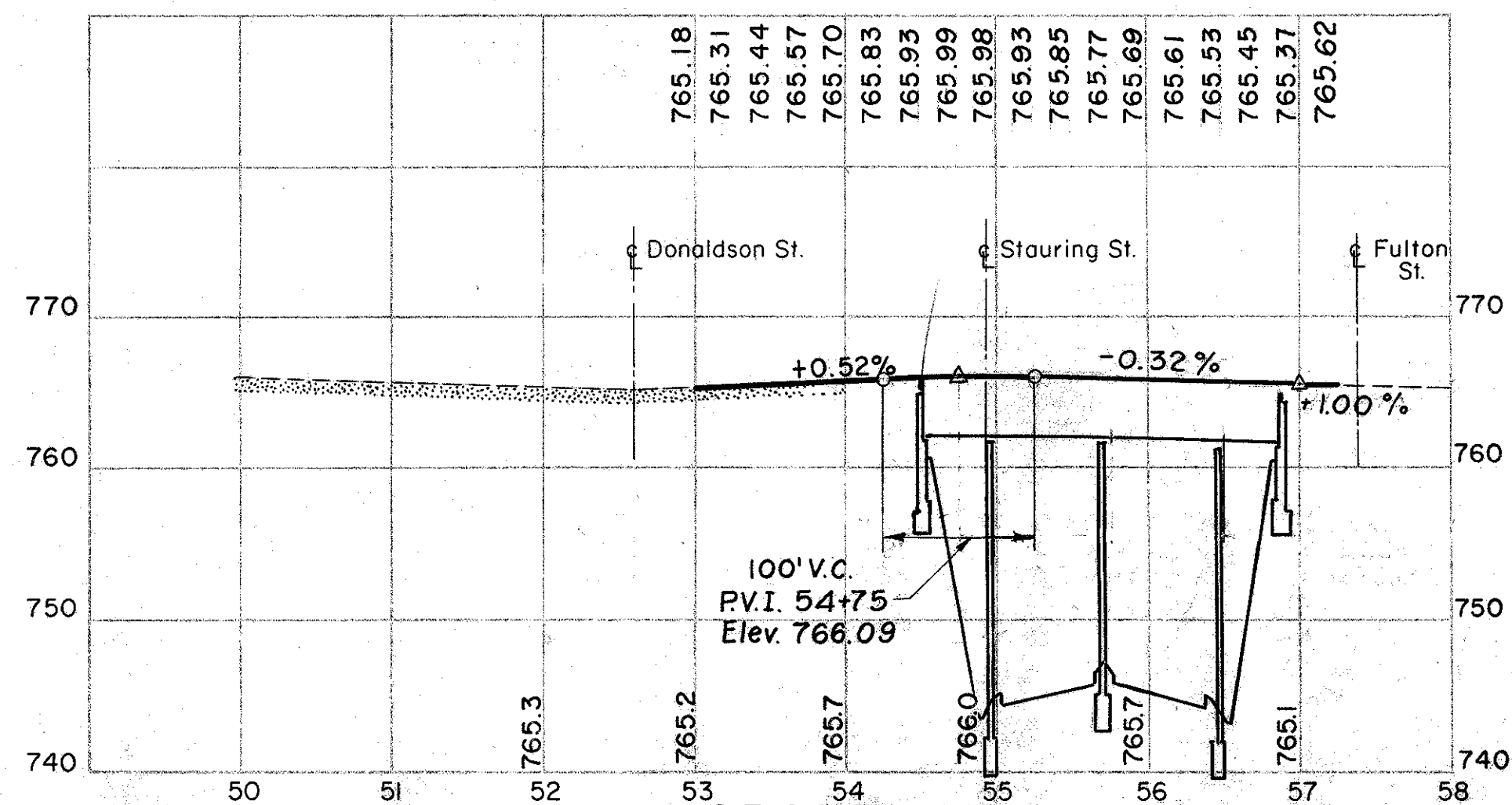
RAMP "D"



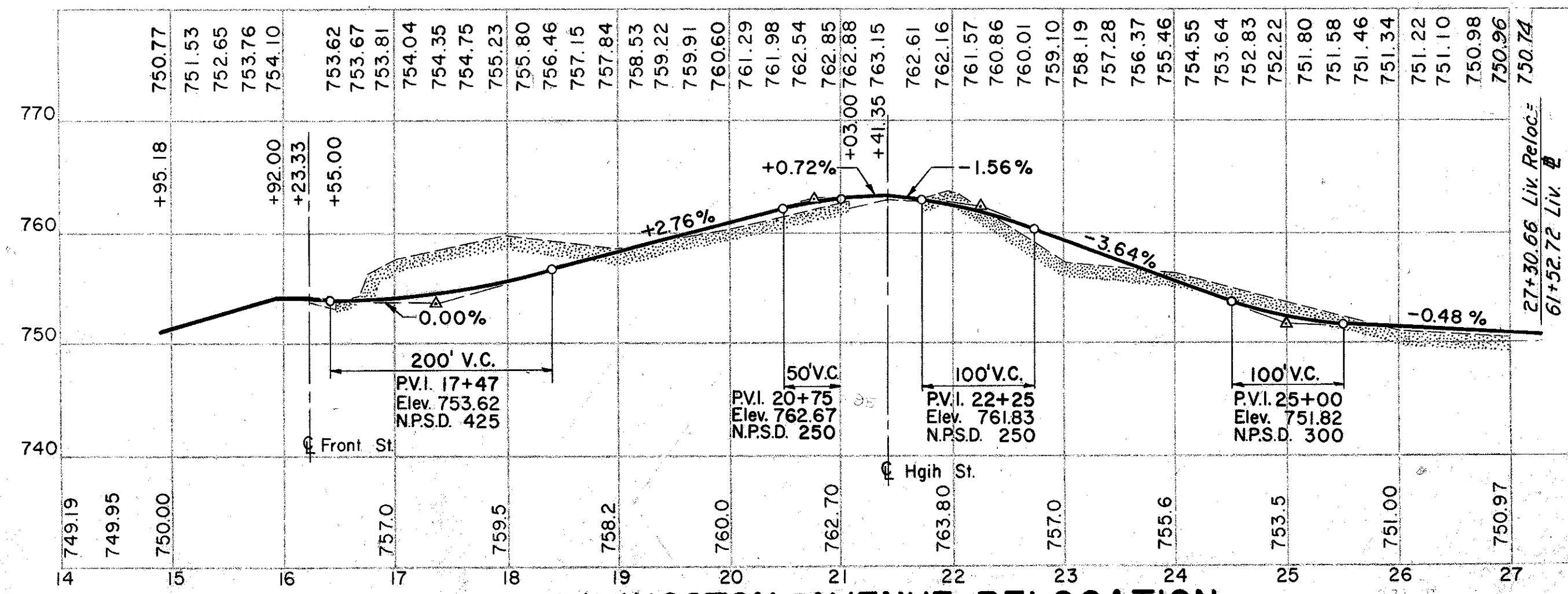
RAMP "F"



RAMP "G"

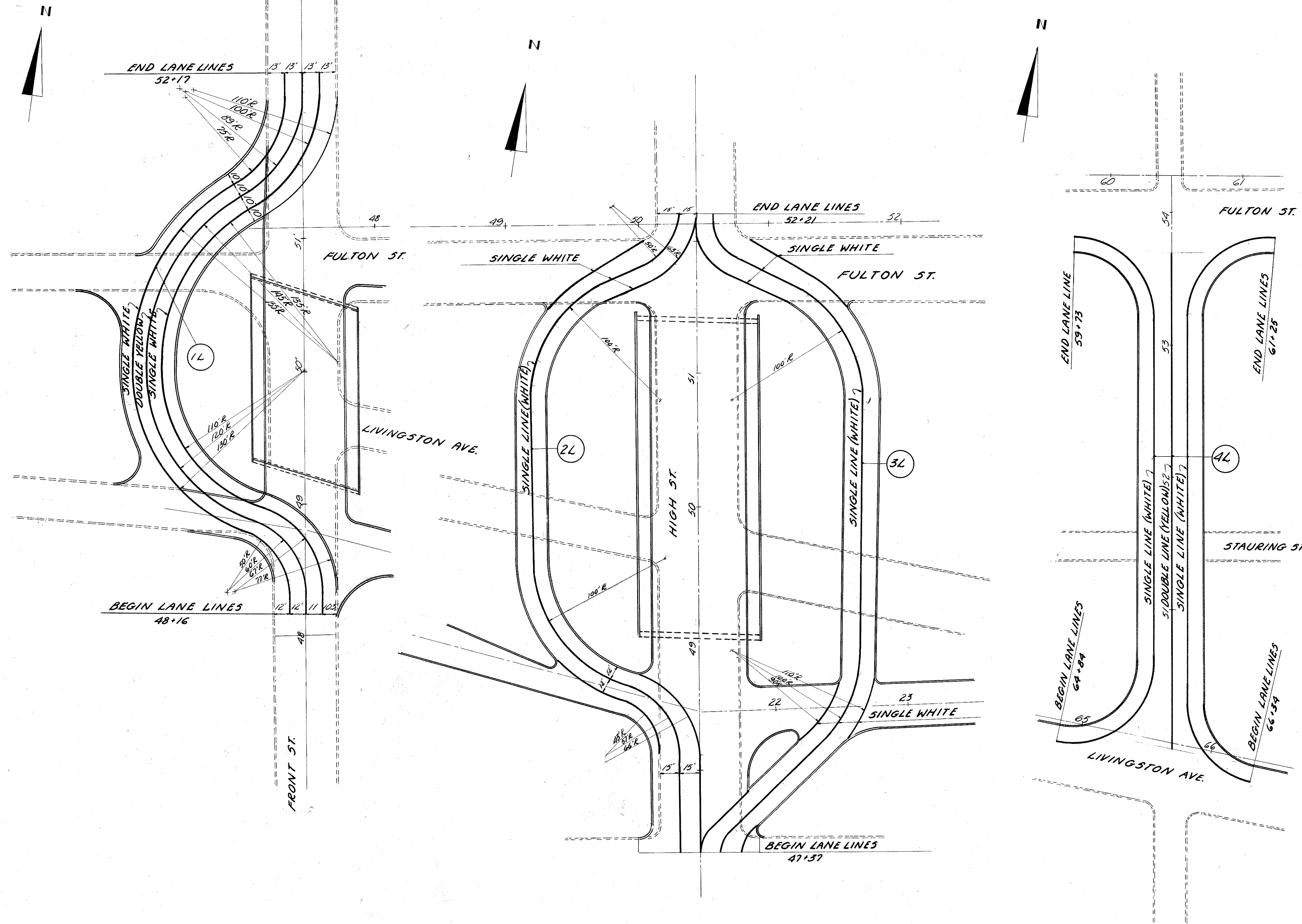


GRANT AVE.



LIVINGSTON AVENUE RELOCATION





FRONT ST. RUNAROUND

HIGH ST. RUNAROUND

3rd & 4th ST. RUNAROUND

QUANTITIES

I-125	
Barrier Lines (Yellow)	Lane Lines (White)
1L	499
2L	998
3L	1031
4L	944
Total	3905

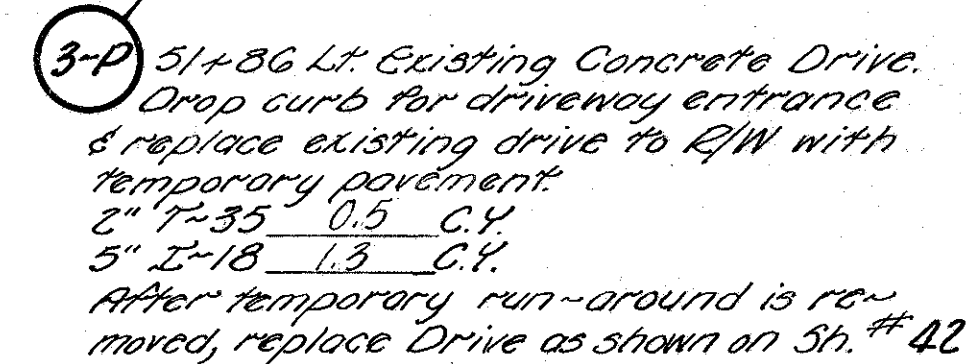
x 2 1752  
Barrier Lines Double 4" Continuous- Yellow  
Lane Lines 4" Continuous- White  
Mile 0.33 0.74

SCALE 1"=40'

LANE LINES (PAINT) FOR TEMPORARY RUNAROUND



$50+79.79/134.12$   
 Lt. Front St  
 $= P.I. = 3+66.21$   
 $\Delta = 67^{\circ}39'42''$   
 $D = 39^{\circ}30'52''$   
 $T = 97.182'$   
 $L = 171.233$   
 $R = 145'$



Hand-drawn cross-section of a bridge deck. The deck is 60'-0" wide, divided into three 20'-0" sections. The top width is 10'-0" (5'-0" on each side of the centerline). The deck is 2'-0" thick. Reinforcement includes 3/4" bars at the top and bottom, and 5" T-357 bars. The bottom reinforcement is labeled "1/2" I-18". The deck is supported by a 1'-0" wide base.

**NOTE**




For removal item quantities not shown  
on this sheet, see sheet #42



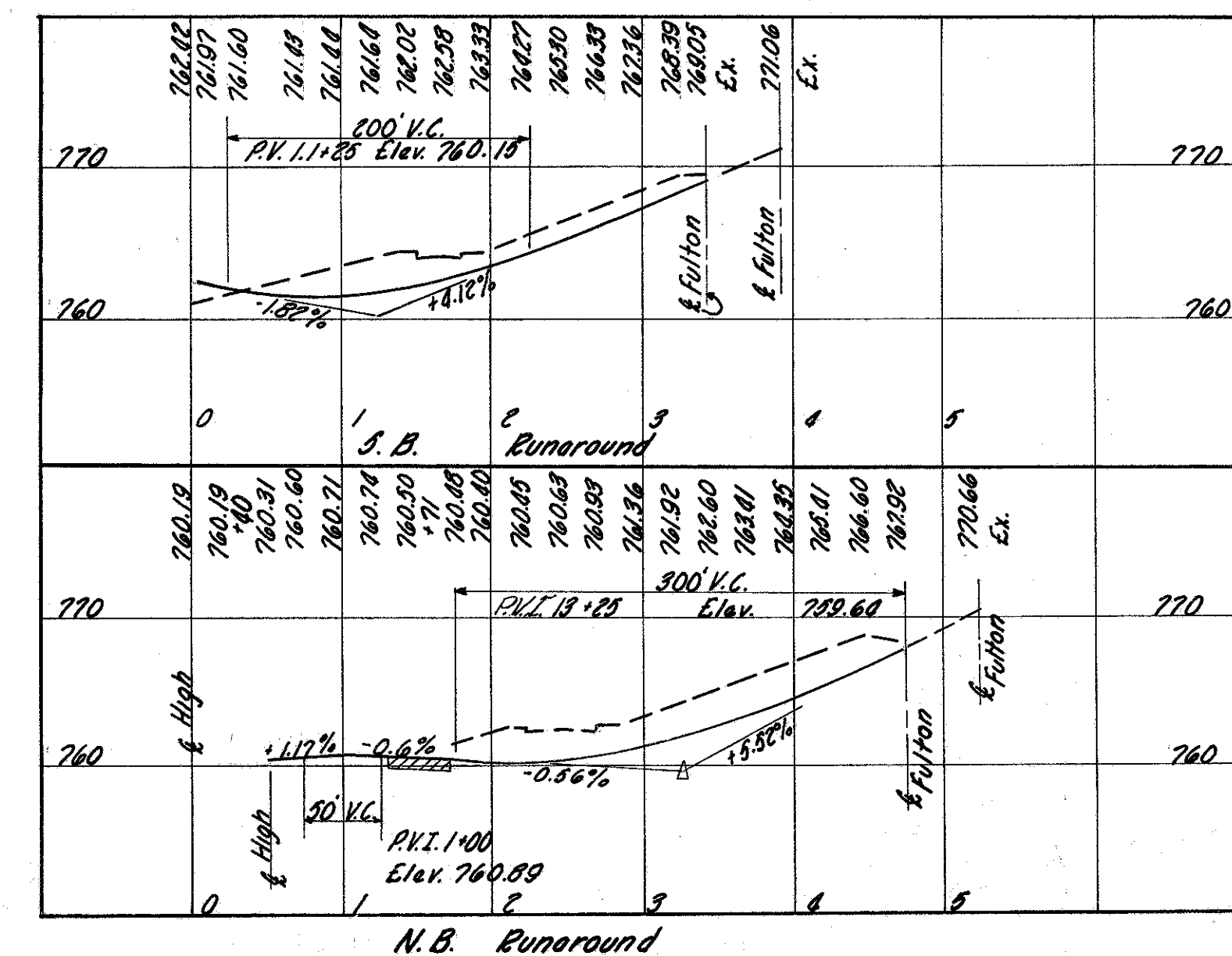


or Quantities

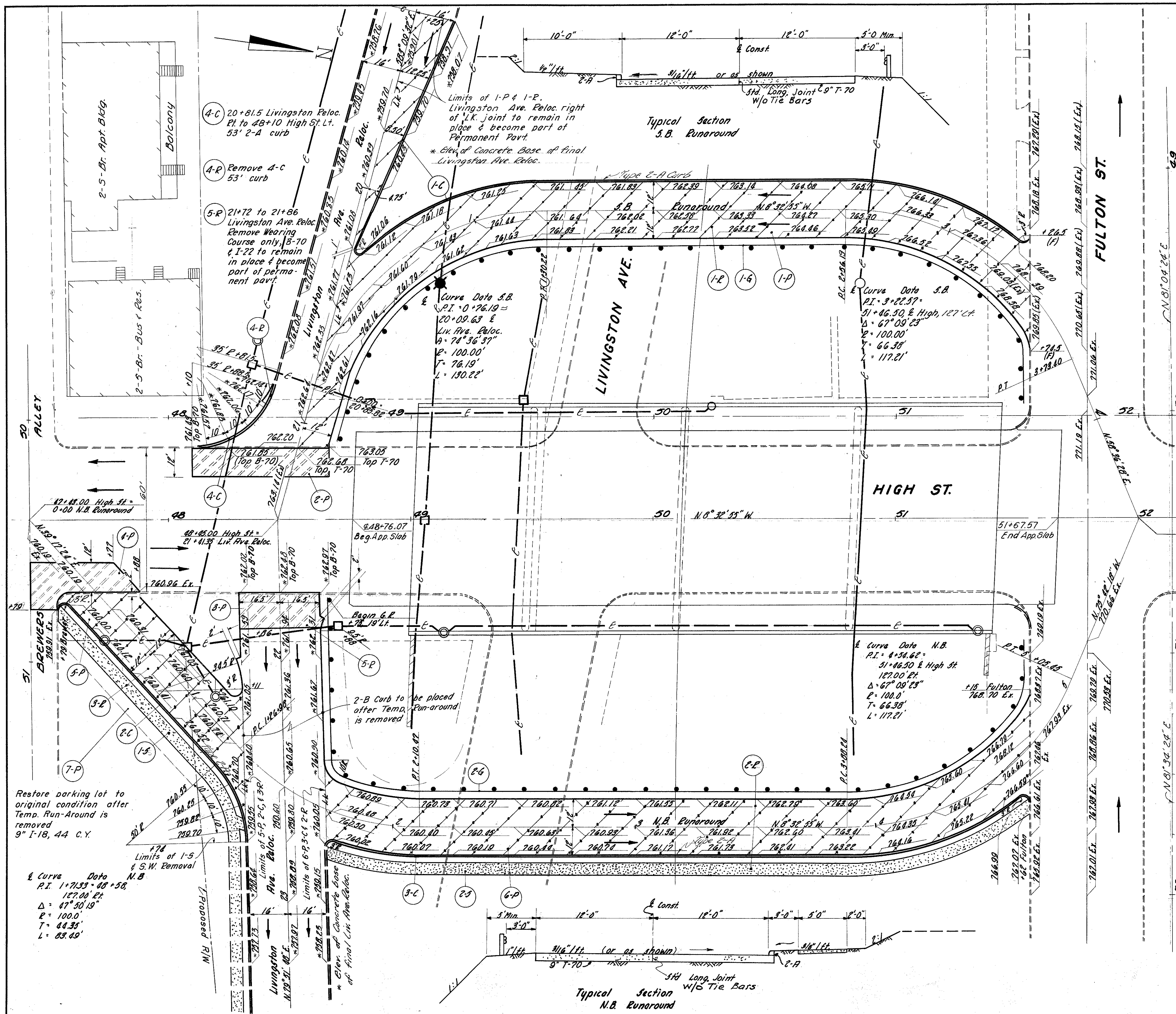
*Legend*

	0" to 2 1/2" T-35" T-30 Tack Coat on brick & concrete
	4" Conc. S.W.
	9" T-70

*Note:*  
All elevations indicated on Liv. Ave. Baloc.  
are to top of B-70.  
See sheet No. 5 for Liv. Ave Baloc. typical section.  
See sheets 43 and 44 for removal item quantities  
not included on this sheet.



# HIGH ST. TEMPORARY RUNAROUND





1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

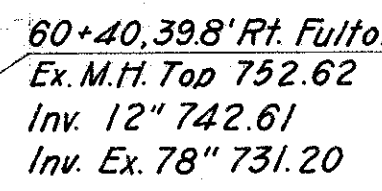
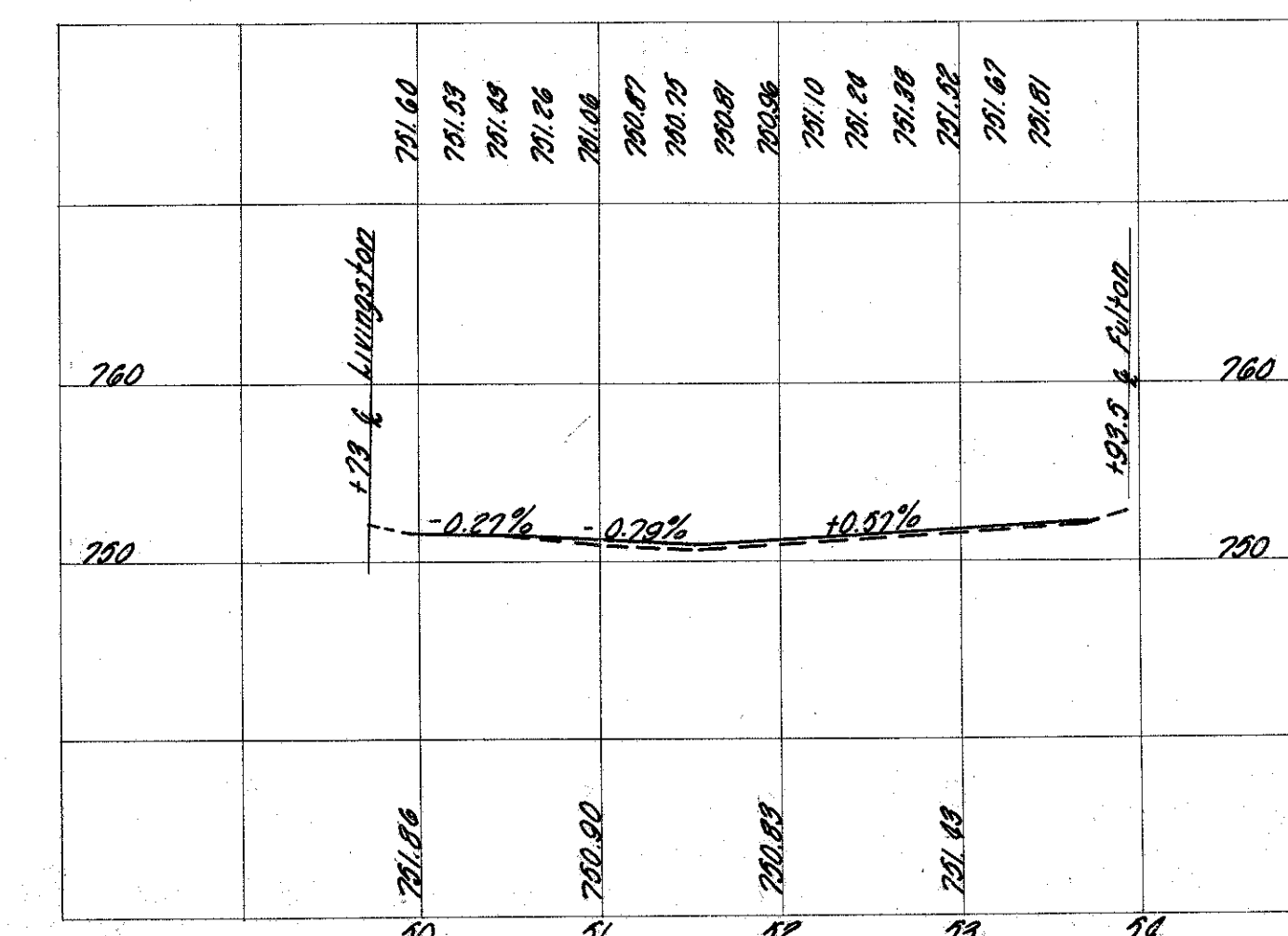

$$4 + 28.70 \text{ Lora} = 60 + 44.73 \text{ Fulton}$$

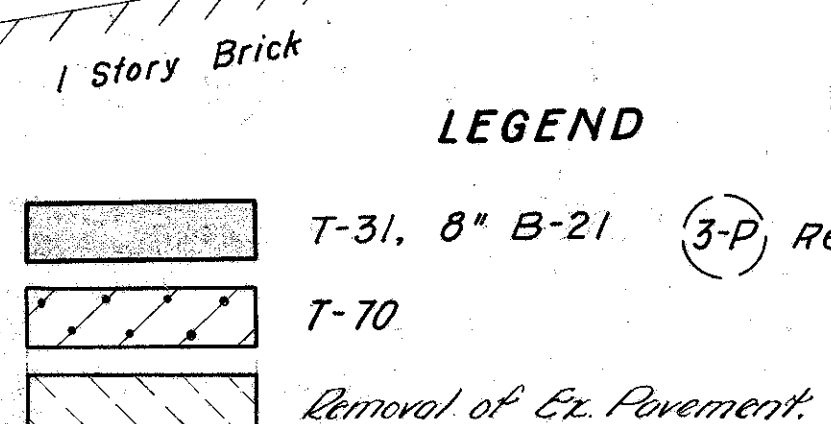
Diagram illustrating the removal of existing pavement and brick and sand cushion only. The diagram shows a cross-section of the pavement structure with layers labeled: 6" Conc. S.H., Removal of Existing Pavement, Removal of brick and sand cushion only, 1 1/4" T-35, T-30 Tack Coat on brick 0" to 4" B-35 Leveling, 1 1/4" T-35, 0" to 5" B-35 Leveling, T-30 Tack Coat on Conc. base, 9" T-70, and 0"-4" T-35.



2. Stouring St. exist pav't from Sta. 57+09.5 to Sta. 57+30.5 to remain in place until temp. runaround is removed.





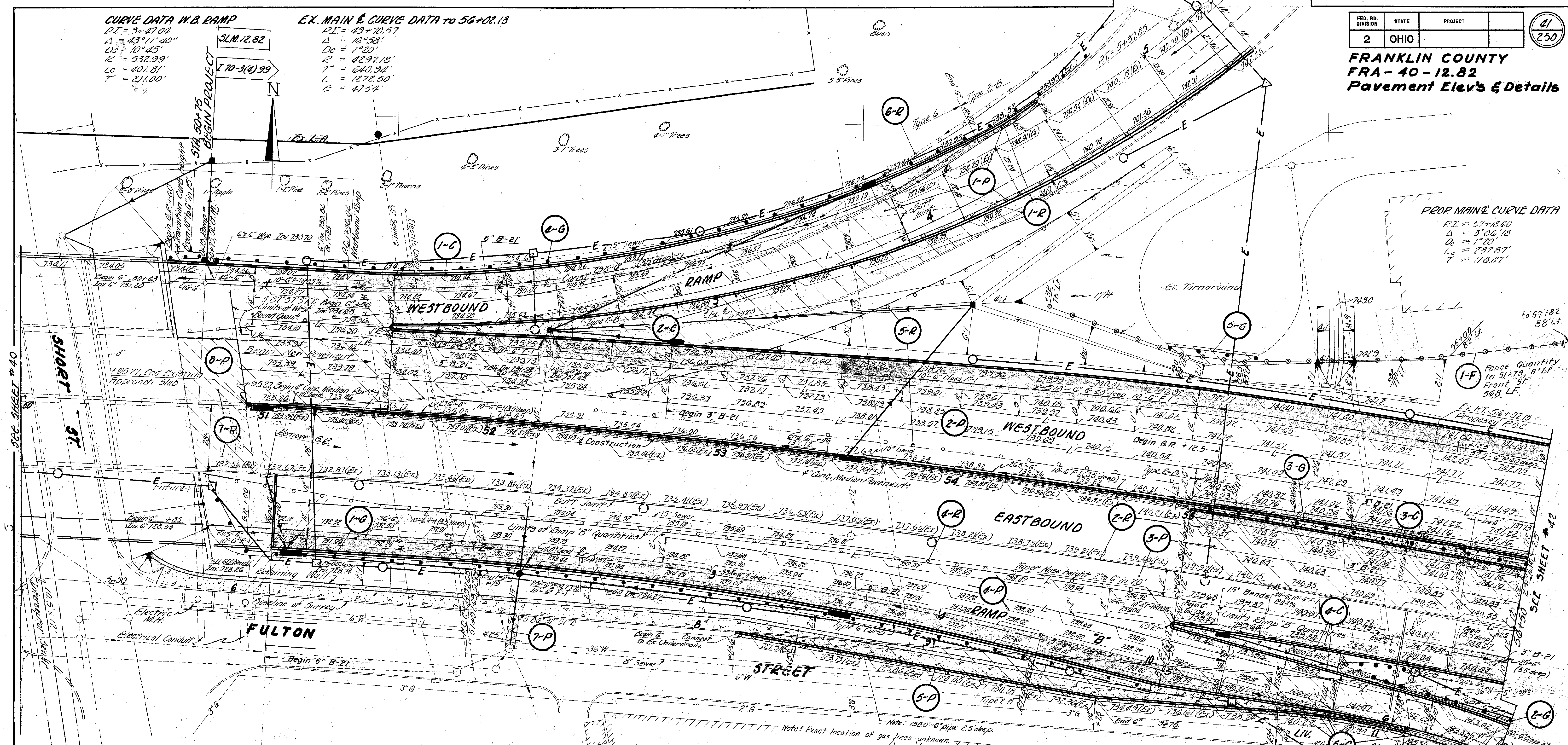


### PAVEMENT AND ROADWAY QUANTITIES

### PAVEMENT DETAILS & ELEV'S.



**FRANKLIN COUNTY**  
**FRA - 40 - 12.82**  
**Pavement Elev's & Details**



B-112	REF. N°	B-70	B-70, 8"	T-35, 2"	T-35, 1 1/2"	B-35 1 1/4"	T-30 Tack Coat	T-31	Ns & Stone	T-31 Bit. Material	B-21 3"	E-1 Comp. Subgr.	B-21 8"	I-22 Subbase	T-30 Prime Coat	I-12 2-B Curb	I-12 Type 6 Curb	I-21 4" Conc. Med. Hw's	E-8 Part Removal	E-8 Curb Removal	E-8 Removal of Existing Working Concrete	E-21 Type 2 Particle Island	B-35 1 1/4"	REF. N°	I-15 2-A	I-15 2-A Carrier	I-15 2-A Reinforced Concrete	E-7 7 1/2" 15" Approx. Jct. 6-6	I-18	I-15 2-A Mod. as per Mod.	
C.Y.		S.Y.	S.Y.	C.Y.	C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	C.Y.	S.Y.	C.Y.	C.Y.	Gal.	L.F.	L.F.	S.Y.	S.Y.	L.F.	S.Y.	S.Y.	C.Y.	C.Y.	L.F.	L.F.	L.F.	S.Y.	C.Y.	L.F.	
146.7	1-P	584.5	44.4		20.1	6.3	60.5	2.2	70.0			352.8	46.7	158.8										19.8	1-6	425					
142	2-P	2073.6			71.2	20.9	205.1	4.5	141.8	47.5	2212		402										28.4	2-6	50.1						50
289	3-P	12043			425	22.3	122.6	1.2	37.0	3.7	1179	13.0	199.5										28.4	3-6		137.5					
508	4-P	1053.1			358	22.5	103.0	2.4	76.2		1051	50.8	175.3										18.6	4-6	412.5						
	5-P		64.4		1.7	1.7	4.8						7.2												5-6	375					
	6-P		86.1	21.2	3.0	3.0	8.6						9.6	152.8											6-R			382.5			
	7-P		6.4		0.2	0.2	0.6						0.7												7-R			500			
	1-C															30	361														
	2-C															397	501	41.3													
	3-C															408.7	292	148.7													
	4-C															272.6	25	48.8													
	5-C															332.4	429.5	273.5													
	1-R																		1285.6	45											
	2-R																		486.1	594											
	3-R																		502.2	230.6	4.5										
	8-P																														
	7-R											227.8		25.3						158											
268	Totals	49,933	201	21.2	104.5	106.9	505.2	10.3	325	53.2	5703	110.5	953.4	153	1440.7	1604.5	512	7392	669	4	9	957			975	1375	1300	278	186	50	

**LEGEND**

Removal of Ex. Pav't. &amp; Conc. Sidewalk.

7-31. B-21.

*M. C. ...*

1 1/4" T-35, 1 1/4" B-35, T-30 Tack Coat.  
8" B-70, 4" I-22.

7" L-18, 2" T-35, (2-1" Courses)  
T-30 Prime Coat

1-2 Remove Ex. Westbound Ramp Pavement from 50+95.27 W to 5+37.85 N.B. Ramp as shown. Remove North side curb only from 3+75 to 4+20

2-2 Remove Ex. Pavement from 55+04 to 56+50.  
Remove Rt. Curb of Ex. Pav't. From 51+10 to 55+00

3-R Remove Ex. Part. from 8+18.6 Baseline Fulton St. to 11+50 Liv. Ave. Reloc. as shown. 11+11.00 to 11+50.00, remove strip

of existing wearing course 1ft. wide.  
Remove Ex. Curb from 8+18.6 Fulton St  
baseline to 10+49. (End of Ex. header Curb)

**RAM.**  
P.I.  
A

3	4-2	Remove and rebuild existing Guard Rail excluding first two panels at Short St. Structure.	DC R LC X
---	-----	---	--------------------

REF. N°	I-26
	L.H.
I-F	560
Total	560

RAMP "B" CURVE DATA

$P.I. = 3 + 21.80$   
 $\Delta = 9^\circ 17' 32''$   
 $O.C. = 3^\circ 25'$   
 $R = 1527.89$   
 $L.C. = 247.79$   
 $T = 122.17$

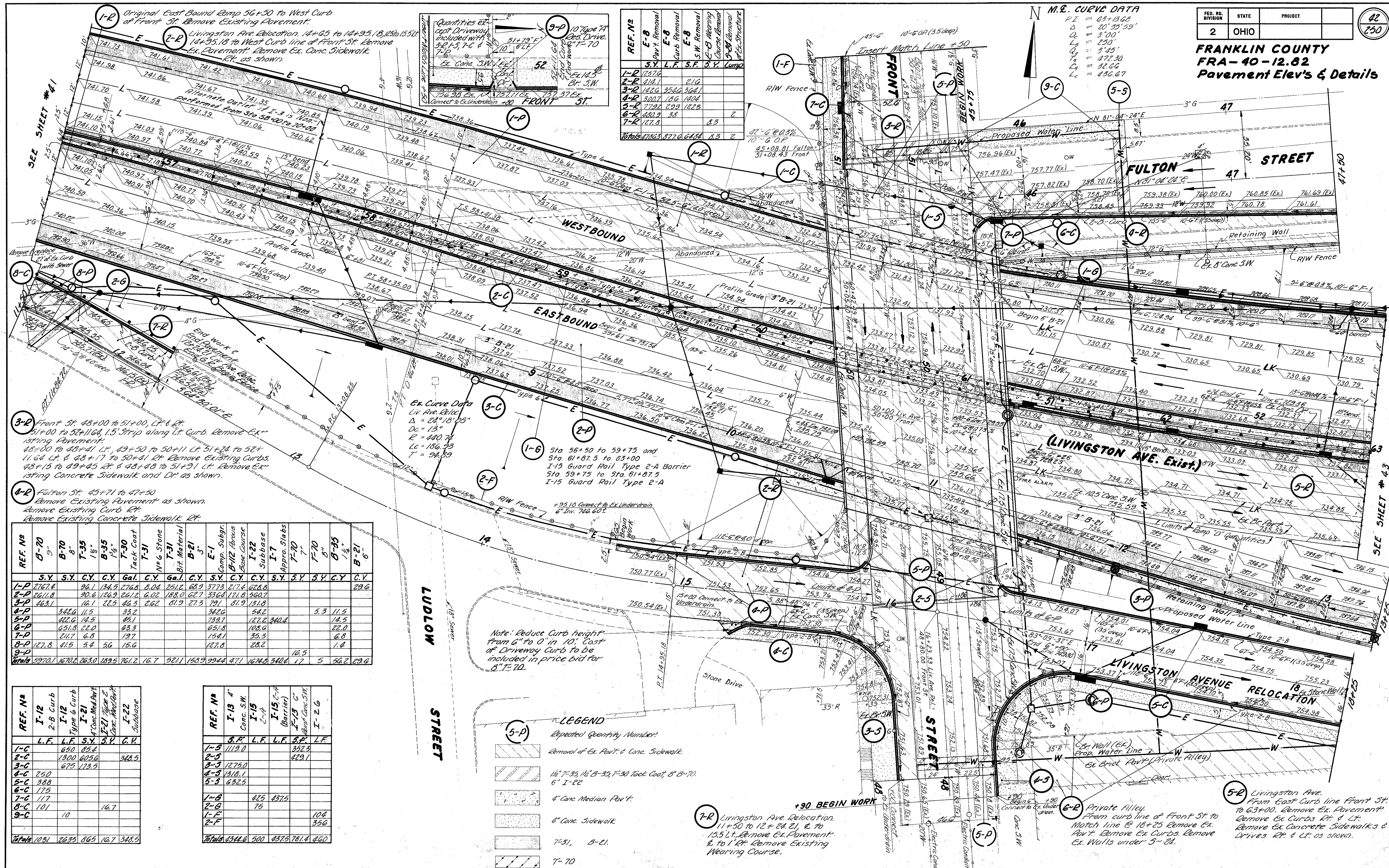
CURVE DATA LIV. AVE. RELOC

$PE = 11 + 20.6'$   
 $\Delta = 22^\circ 03' 10''$   
 $D = 17^\circ 00'$   
 $R = 337.03'$   
 $T = 65.67'$   
 $L = 129.72'$   
 $E = 6.34'$

See Drainage Sheet # 55  
for Pav't. Replacement for 36" Pipe.



**FRANKLIN COUNTY**  
**FRA-40-12.82**  
**Pavement Elev's & Details**



### PAVEMENT DETAILS & ELEV'S



FRANKLIN COUNTY FRA-40-12.82 Pavement Elev's & Details

LEGEND

- Removal of Ex. Pavement & Conc. S.W.
- Removal of Ex. Wearing Course.
- 1 1/4" T-35, 1 1/4" B-35, 0 to 6" B-35 T-30 Tack Coat.
- 1 1/4" T-35, 1 1/4" B-35, T-30 Tack Coat 8" B-35, 6" T-22
- 4" Conc. Median Pavement.
- 4" Conc. Sidewalk
- T-31, B-21
- 1 1/4" T-35, T-30 Tack Coat (Non Participation by State & Federal)

- 3-R Livingston Ave. 63+00 to West Curb line of High St. East Curb line of High St. to 66+75 M.B. Remove Existing Pavement. Remove Ex. Curb Rt. & Lt. Remove Ex. Conc. Sidewalks Rt. & Lt. & Drive Rt. as shown.
- 4-R High St. 47+43 to 48+74. Remove Ex. Wearing Course. 47+43 to 48+74. Remove Ex. Pavt. as shown. 48+74 to 51+55. Remove Ex. Pavt. as shown. 47+43 to 51+55. Remove Ex. Curb Rt. & Lt. Remove Ex. Concrete Sidewalk Rt. & Lt. as shown.

REF. N°	B-70	B-70	T-35	B-35	T-30	Tack Coat	T-31	No. & Stone	T-31	B-21	E-1	Comp. Subgr.	B-1/2	I-22	I-7	I-15	B-35	B-35	B-35	B-21	B-21
S.Y.	S.Y.	C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	S.Y.	C.Y.	C.Y.	S.Y.	C.Y.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
1-P	119.1	7.0	20.1																		
2-P	180.1	62.6	87.7	180.4	3.3	103	17.4	221.6	85.9	362.4											
3-P	215.8	7.5	10.5	21.6	1.1	33	326.5	21.8	57.7												
4-P	1500	52.1	72.9	150	3.7	115	38.2	237.5	104.9	326.4											
5-P	868.4	23.9	41.9	86.2	2.5	77	5.9	117.5	75.1	196.3											
6-P		118.1	38.6					111.3													
7-P		425.5	39.8					136.1													
8-P		201.4	6.8					19.6													
9-P			*13.2					*52.0													
Totals	4383.3	189.1	244.3	213	725.3	10.6	328	615.8	117.8	257.7	1330.8	402.6	68	92.2	115.2						

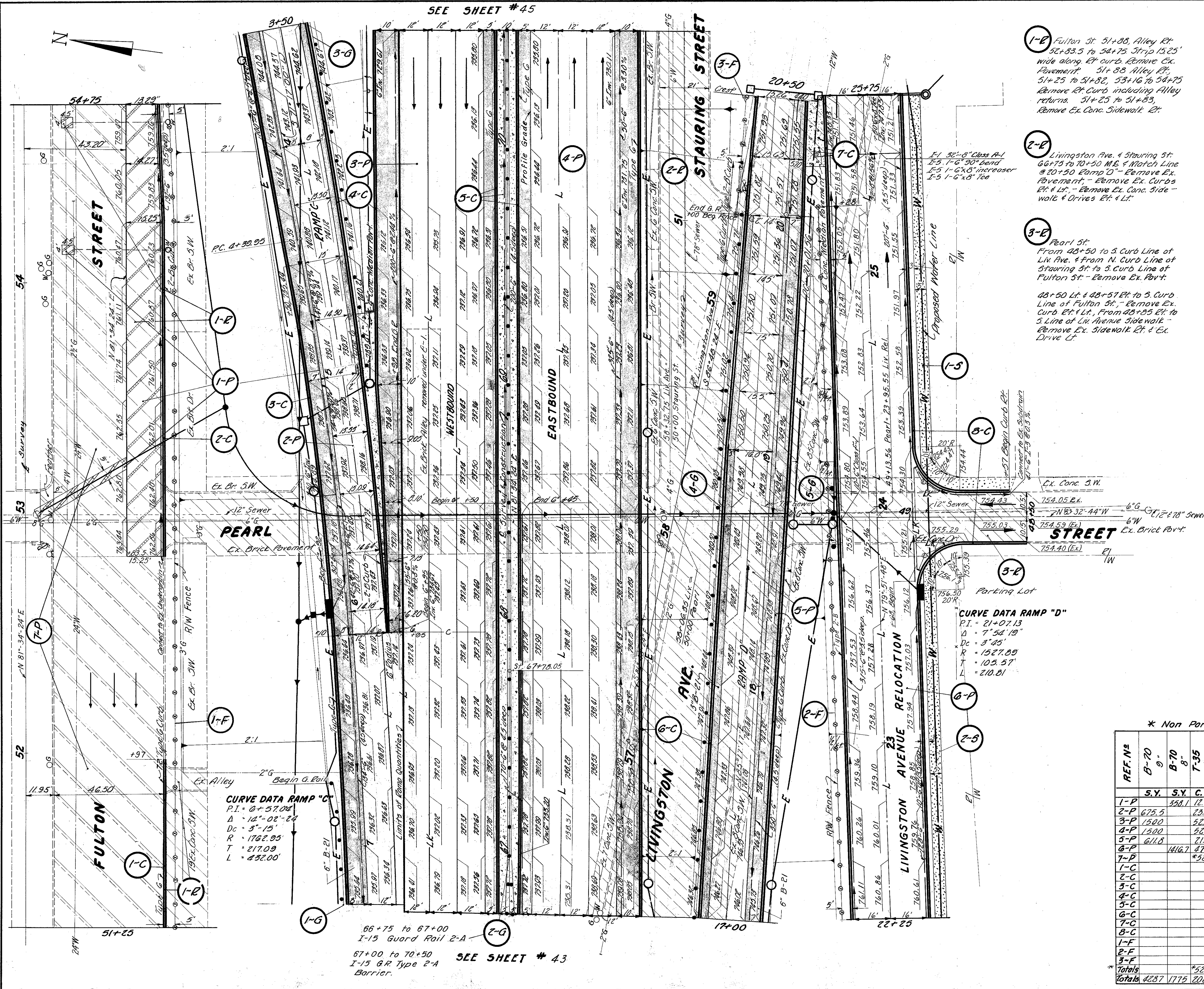
\* Non Participation by State or Federal.

REF. N°	I-12	I-12	I-21	I-13	I-13	I-13	I-22
L.F.	L.F.	S.Y.	S.F.	S.F.	S.F.	S.F.	S.F.
1-C	257.5						
2-C		375					
3-C		150	368.7				
4-C	111.3	569	266.3				
5-C		3733	175.9				
6-C	581.5						
7-C	66.5						
8-C	11.0						
9-C	55						
10-C	10	35					
1-5						232	
2-5						294	
3-5						204.5	
4-5						219	
Totals	1198	2108	810.9	32.14	72.6	213.3	

REF. N°	I-15	I-15	I-15	I-15	I-15	I-15	I-15
L.F.	L.F.	L.F.	S.Y.	L.F.	S.F.	S.Y.	L.F.
1-6	142.0						
2-6	400	175					
3-6	487.5						
1-R			830.2	491	351		
2-R			106.9	243.5	437.6	36.4	
3-R			121.6	557	233.6		
4-R			216.1	72.3	119.0	720.5	
1-F							44
2-F							55
Totals	437.5	1034.5	175	4320.2	2015.1	1815.3	99



# **FRANKLIN COUNTY** **FRA-40-12.82** **Pavement Elev's & Details**



**1-B** Fulton St. 51+88, Alley Rt. 52+83.5 to 54+75 Strip 15.25' wide along Rt. curb. Remove Ex. Pavement. 51+88 Alley Rt. 51+25 to 51+82, 53+16 to 54+75 Remove Rt. Curb including Alley returns. 51+25 to 51+83, Remove Ex. Conc. Sidewalk Rt.

**2-E** Livingston Ave. & Stauring St. 66+75 to 70+50 M.E. & Match Line @ 20+50 Ramp "D" - Remove Ex. Pavement. - Remove Ex. Curbs Rt. & Lt. - Remove Ex. Conc. Side-walk & Drives Rt. & Lt.

**3-E** Pearl St. From 48+50 to S. Curb Line of Liv. Ave. & From N. Curb Line of Stauring St. to S. Curb Line of Fulton St. - Remove Ex. Pavt.

48+50 Lt. & 48+57 Rt. to S. Curb Line of Fulton St. - Remove Ex. Curb Rt. & Lt. From 48+85 Rt. to S. Line of Liv. Avenue Side-walk - Remove Ex. Sidewalk Rt. & Ex. Drive Lt.

REF. N°	I-13.4" Conc. S.W.	I-15 C.H.	I-15 T.A (Barrier)	E-8 Pavt. Removal	E-8 Curb Removal	E-8 W.C. Removal	E-8 S.W. Removal
1-5	1022						
2-5	763						
1-G		53					
2-G		50	350				
3-G		148					
4-G		300					
1-E				343.2	257		1098
2-E				2212.6	751		45025
3-E				987	279		418
5-G		25					
Totals	1785	576	350	3543	1287		6019

\* Non Participating by State or Federal.

REF. N°	B-20 9"	B-70 8"	T-35 8"	B-35 1 1/2"	B-35 0-6"	T-30 Tack Coat	T-31 1 1/2" Stone	T-31 Bit Material	B-21 3"	E-1 Comp. Subgr.	B-112	I-22 Subbase	I-22 2-B Curb	I-21 Type 6 Curb	I-21 4" Conc. Med. Pavt.	B-35 1 1/2"	B-21 6"
1-P																	
2-P	675.5																
3-P	1500																
4-P	1500																
5-P	611.8																
6-P																	
7-P																	
1-C																	
2-C																	
3-C																	
4-C																	
5-C																	
6-C																	
7-C																	
8-C																	
1-F																	
2-F																	
3-F																	
Totals	4287	1775	208.2	2079		600	14.5	452	98.9	64248	376	1546.3	703	1101	2627	6613	597



**FRANKLIN COUNTY**  
**FRA - 40 - 12.82**  
**Pavement Elev's & Details**

22 Third St. From N. Curb line of Livingston Ave.  
to 53+58.5. Remove Ex. Pavement.  
Remove Ex. Curbs Rt. & Lt. Remove Ex. Conc. S.W.  
Lt. & Rt. and Dr. Rt. as shown.

3-2 Stouring 5<sup>th</sup> 70+50 M.L. to W curb line of 3<sup>rd</sup> 5<sup>th</sup> E curb line of 3<sup>rd</sup> 5<sup>th</sup> to 74+25 M.L.  
Remove Ex. Pav't. including Crosby Alley to N. E.W. line of Stouring 5<sup>th</sup>. Remove Ex. Curbs 4<sup>th</sup> & 5<sup>th</sup> including Crosby Alley returns. Remove Ex. Conc. 5<sup>th</sup>. 4<sup>th</sup> & 5<sup>th</sup> as shown.

4-2 Livingston Ave. From Match Line @ 20+50 Ramp "D" to 63+50 "Liv." RT & LT. & from 63+50 to 63+75, & to Lt. Curb. Remove Ex. Pavement as shown. 20+50 "D" to 63+75 "Liv." Remove Ex. Lt. Curb. 20+50 "D" to 62+89 "Liv." Remove Ex. RT Curb. Remove Ex. Conc. 3W. RT & LT. & DR. RT as shown.

5-R City Port Ave. 49+00 to S. Curb line of Livingston Ave. Remove Ex. Pav't. Remove Ex. Curbs Rt. & Lt.

-(6-2) Crosby Alley. Remove Ex. Conc. Sidewalk as shown.

49+46 Begin Work

LEGEND

Removal of Ex. Pav't. &amp; Corrc. S.W.

1 1/4" T-35, 1 1/4" B-35, T-30 Tack Coat  
8" B-70, 6" I-22.

4" Conc. Median Pavement:

4" Conc. Sidewalk

T-31. B-21.

1 1/4" T-35, T-30 Rack Coat.  
(Non Participation by State & Federal)

8" T-70

* REF. N <sup>o</sup>	B-70 9"	B-70 8"	T-35 1½"	B-35 1½"	T-30 Tack Coat	T-31 N <sup>s</sup> & Stone	T-31 Bit. Material	B-21 3"	E-1 Comp. Subgr.	B-112	I-22 Subbase	I-T-1-B" Appro Slabs	B-35 ¾"	B-21 6"	T-70 A"
S.Y.	S.Y.	C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	S.Y.	C.Y.	C.Y.	S.Y.	C.Y.	C.Y.	S.Y.	S.Y.
1-P		6960	23.6	23.6	68.0				683.7		116				
2-P	514.4		17.6		50.9	1.4	45.8	3.7	743	34.1	116.4			24.6	23.2
3-P	1500		22.1		150	5	156	52.1	2125	140	352.6			72.9	
4-P	1500		22.1		150	5	156	52.1	2125	140	352.6			72.2	
5-P		630.8	21.7	21.7	62.6				630.8		130.3	150.9			
6-P		382.7	12.9	12.9	37.3				382.7		88.8	151.8			
7-P	285.0		9.6		27.7				285		47.5			13.4	7
8-P		230.9	7.9	7.9	22.7				230.9		38.5				
9-P		1461.0	49.7	49.7	143.2				1461		243.5				
10-P	147.8		4.9		14.1	0.1	6.3		165	2.8	27.5			6.9	2.8
11-P		212.6	7.1	7.1	20.6				212.6		35.4				
12-P			*24.2		*63.7										
13-P			*3.3		*9.5										
* Totals			27.5		79.2										
Totals	3947	3612	259.2	122.9	742.8	11.5	362	107.9	9045	317	1559	303	190.7	26.0	7

\* Non Participating by State & Federal

REF. N <sup>o</sup>	I-12 2-B Curb	I-12 Type 6 Curb	I-21 4" Conc. Med. Part.	I-15 2-A	I-15 2-A (Barrier)	J-21 Type 2 Conc. Med. Part.	I - Z G	F-15 2-A Med con. part - 200's	REF. N <sup>o</sup>	E-8 Part A Removal	E-8 Curb Removal	E-8 S.W. Removal	I-13 4" Conc. S.W.	I-13 6" Rein. Conc. SW
	L.F.	L.F.	S.Y.	L.F.	L.F.	S.Y.	L.F.	L.F.	S.Y.	L.F.	S.F.	S.F.	S.F.	S.F.
1-C	327	191	6.5						1-R	910.4	305	432.5		
2-C	167	130				1.G			2-R	2138	512	4592.4		
3-C		375	71.3						3-R	701.2	668	2330.8		
4-C		750	370.9						4-R	1712.5	521	2843		
5-C		375	67.8						5-R	183.0	115			
6-C	58.5								6-R		441			
7-C	228.5		14.7											
8-C	644.5	17							1-S			457	238	
9-C	203.5	50	46.7						2-S			759.1	238	
10-C		5							3-S			2193.3		
5-G								50	6-S			516		
4-G								50	5-S			20		
1-G			252						Totals	5720.1	2121	14,572	3845	476
2-G			620	50										
3-G			79											
1-F							257							
2-F							64							
3-F							370							
4-F							25							
Totals	1629	1913	577.3	381	50	2	716	100						

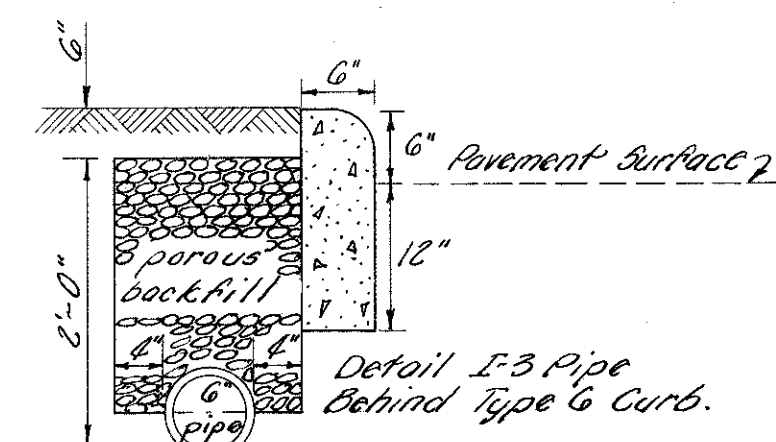
**PAVEMENT DETAILS & ELEV'S.**



# **FRANKLIN COUNTY FRA-40-12.82 Pavement Elev's & Details**

## **LEGEND**

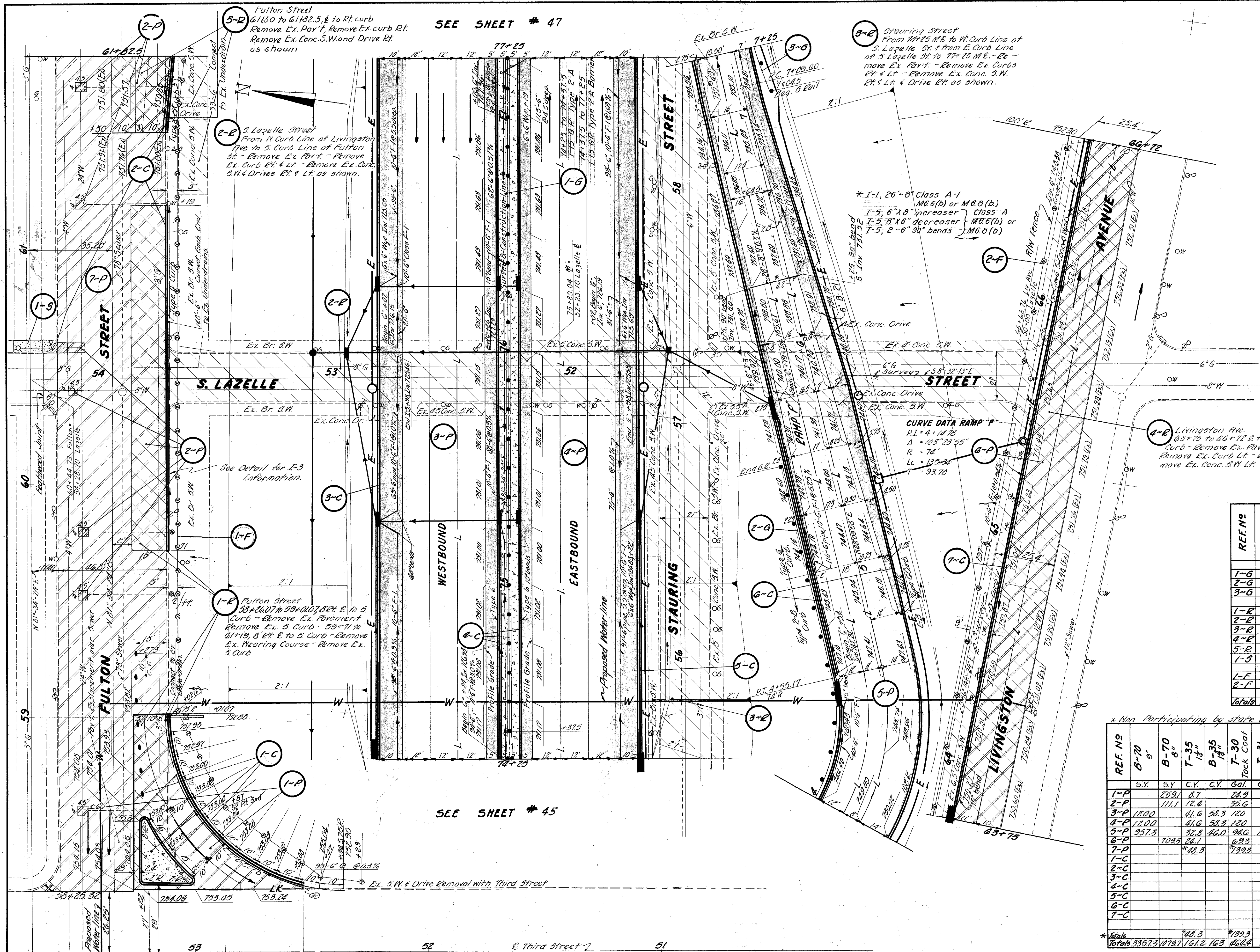
- Removal of Ex. Pavement & Conc. Sidewalk
- Removal of Ex. Wearing Course
- 1 1/2" T-35, 0" to 6" B-35, T-30 Tack Coat
- 1 1/2" T-35, 1 1/2" B-35, T-30 Tack Coat
- 8" B-70, 6" T-22
- 4" Conc. Median Pavement
- T-31, B-21
- 1 1/2" T-35, T-30 Tack Coat  
(Non Participating by State & Federal.)
- 2-P Reported Quantity Number



REF. NO.	I-15 2-A	I-15, E-4 (Barrier)	E-8 Part Removal	E-8 Curb Removal	E-8 S.W. Removal	E-8 Wearing Course Removal	I-15 4 Conc. S.W.	I-26
	L.F.	S.Y.	L.F.	S.F.	S.Y.	S.F.	L.F.	
1-B	25							
2-G	146							
3-G	20.5							
1-E		137.0	194			246.7		
2-E		88.39	740	237.3				
3-E		65.64	534	210.64				
4-E		62.30	251	168.7				
5-E		831	33	706				
1-S							66	
1-F								396
2-F								697
<b>Totals</b>	<b>191.5</b>	<b>287.5</b>	<b>2452</b>	<b>1752</b>	<b>6959</b>	<b>247</b>	<b>66</b>	<b>693</b>

\* Non Participating by State or Federal.

REF. NO.	B-70 9"	B-70 8"	T-35 1 1/2"	B-35 1 1/2"	T-30 Tack Coat	T-31 No 6 Stone	T-31 Bit Material	B-21 3"	E-1 Comp. Subgr	B-112 Base Course	I-22 Subbase	B-35 0" to 6"	I-12 2-B Curb	I-12 Type 6 Curb	I-21 Conc. Med Pavt	I-23 Traffic Divides	B-35 1 1/2"	B-21 6"
	S.Y.	S.Y.	C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	S.Y.	C.Y.	C.Y.	C.Y.	L.F.	L.F.	S.Y.	Eq.	C.Y.	C.Y.
1-P		259.1	8.7		24.9				257.1		43.2							
2-P		111.1	12.4		35.6				90.4		18.5	20.6						8.7
3-P	1200		41.6	58.3	120	4	125	41.7	1700	112	283.3							3.8
4-P	1200		41.6	58.3	120	4	125	41.7	1700	112	283.3							
5-P	997.3		32.8	46.0	94.6	1.8	59	5.8	1193	45.1	198.9							27.8
6-P		709.5	24.1		69.3				709.5		118.2							24.1
7-P																		
1-C																		
2-C																		
3-C																		
4-C																		
5-C																		
6-C																		
7-C																		
<b>Totals</b>	<b>3357.3</b>	<b>1079.7</b>	<b>161.2</b>	<b>163</b>	<b>464.4</b>	<b>9.8</b>	<b>309</b>	<b>89.2</b>	<b>5650</b>	<b>2291</b>	<b>1133</b>	<b>20.6</b>	<b>725</b>	<b>1823</b>	<b>338</b>	<b>7</b>	<b>36.6</b>	<b>27.8</b>



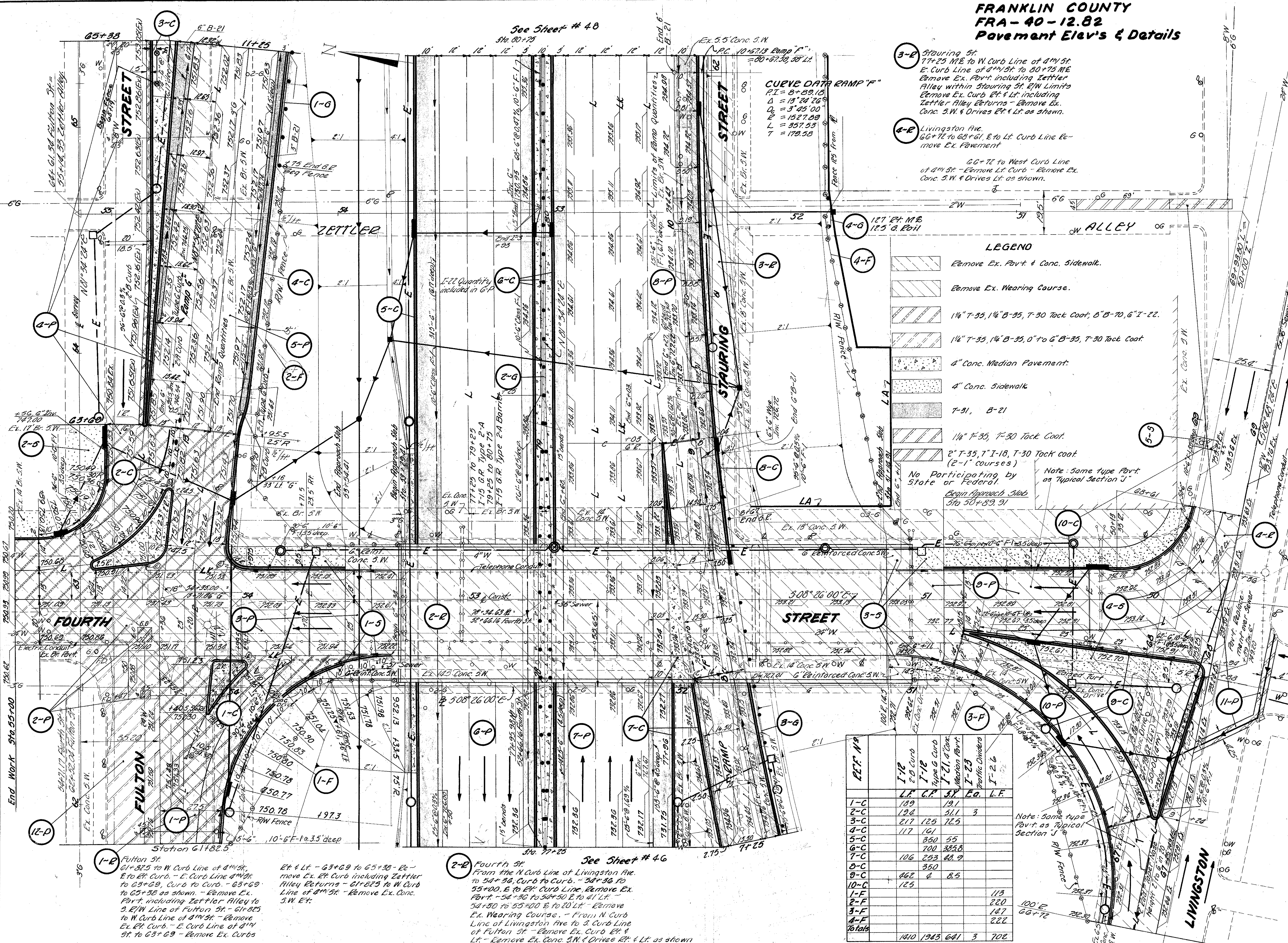
SEE SHEET # 47

SEE SHEET # 45



# FRANKLIN COUNTY FRA-40-12.82 Pavement Elev's & Details

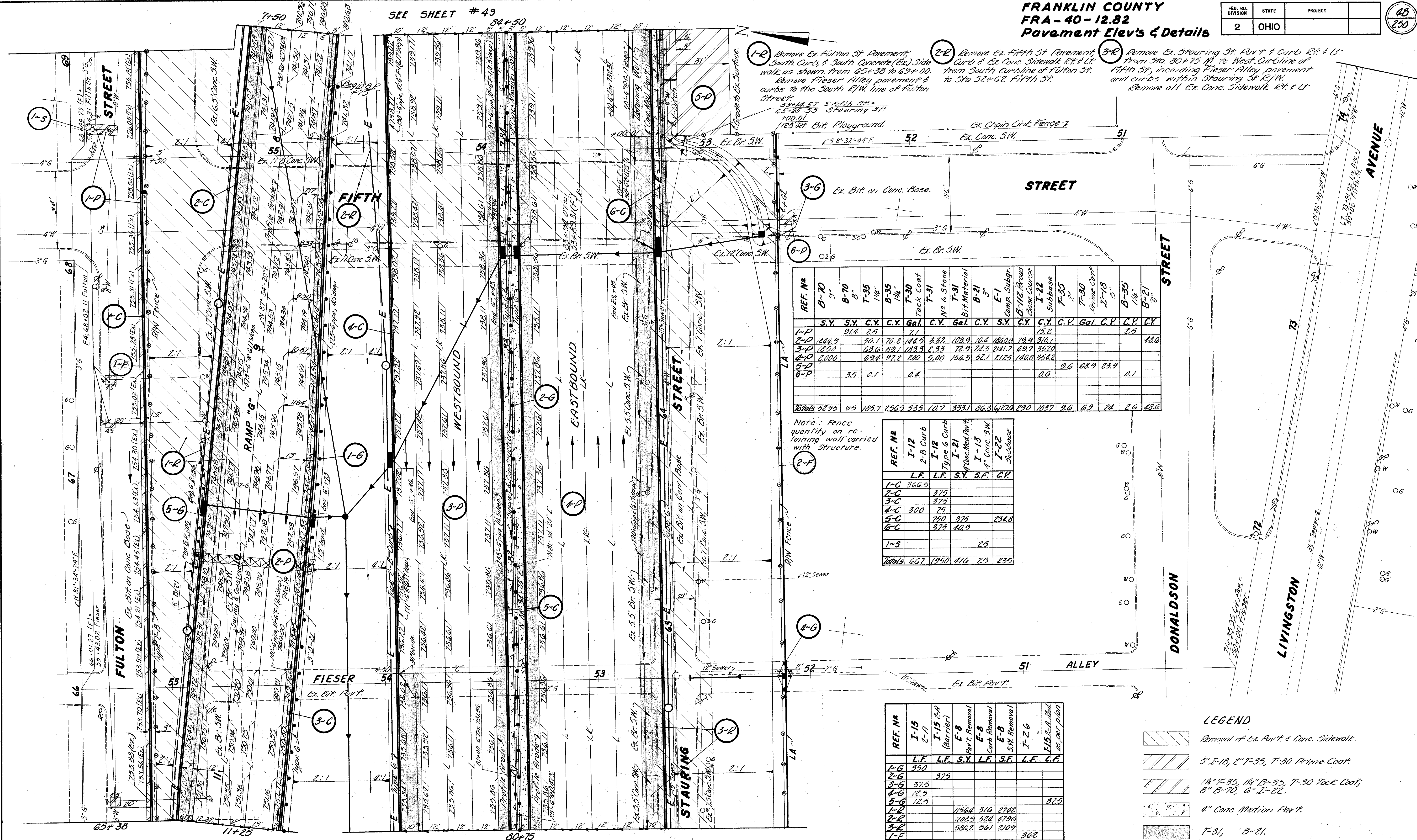
FED. RD. DIVISION	STATE	PROJECT	47 250
2	OHIO		



Ref. No.	1-E	2-E	3-E	4-E	Totals
5' W. Rem.	1136	175	676	175	3767
W.C. Rem.	1136	175	676	175	3767
Curb Rem.	1136	175	676	175	3767
Part. Rem.	1136	175	676	175	3767

60	with 3x	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13 C <sup>1</sup> Reinforced Conc. Side walls I-13 4 Conc. S.W.	I-13
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REF. N <sup>o</sup>	B-70	B-70	T-35	B-35	T-30	T-31	T-31	B-21	E-1	B-12	E-22	T-35	T-30	I-13	B-35	B-21
S.Y.	S.Y.	C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	S.Y.	C.Y.	C.Y.	C.Y.	C.Y.	Gal.	C.Y.	C.Y.	C.Y.
1-P	914	2.5			71							13.2				
2-P	444.9	50.1	70.2	144.5	3.32	103.9	10.4	1060.9	79.9	310.1						48.6
3-P	1850	63.6	89.1	183.3	2.33	72.9	24.3	2141.7	69.7	3570						
4-P	2000	69.4	97.2	200	5.00	156.3	52.1	2125	140.0	354.2						
5-P											0.6					
6-P	3.5	0.1		0.4								9.6	68.9	23.9	0.1	
Totals	5295	95	185.7	256.5	535	10.7	333.1	86.8	1210	290	1037	2.6	6.9	24	2.6	48.6

Note: Fence quantity on retaining wall carried with structure.

REF. N <sup>o</sup>	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12	I-12
L.F.	L.F.	S.Y.	S.F.	C.P.	L.F.	L.F.	S.Y.	S.F.	C.P.	L.F.	L.F.	S.Y.	S.F.	C.P.	L.F.	L.F.
1-C	366.5															
2-C		375														
3-C		375														
4-C	300	75														
5-C		750	375		234.8											
6-C		375	40.9													
1-S										25						
Totals	667	1950	416	25	235											

REF. N <sup>o</sup>	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15	I-15
L.F.	L.F.	S.Y.	L.F.	S.F.	L.F.	L.F.	S.Y.	L.F.	S.F.	L.F.	L.F.	S.Y.	L.F.	S.F.	L.F.	L.F.
1-G	350															
2-G		375														
3-G		375														
4-G	12.5															
5-G	12.5															
1-D			1156.4	316	2742											
2-D			1103.9	522	4796											
3-D			586.2	561	2109											
1-F										362						
2-F										377						
Totals	412.5	375	2852	1401	9647	739	37.5									

- LEGEND
- Removal of Ex. Pav't & Conc. Sidewalk.
  - 5" I-15, 2" T-35, T-30 Prime Coat.
  - 1 1/2" T-35, 1 1/2" B-35, T-30 Tack Coat.
  - 4" Conc. Median Pav't.
  - T-31, B-21.



**FRANKLIN COUNTY**  
**FRA-40-12.82**  
**Pavement Elev's & Details**

LEGENO

- Removal of Ex. Pav't. & Conc. S.W.
- T-31, B-21
- 4" Conc. Median Pavement
- 4" Conc. Sidewalk
- 5" I-18, 2" T-35, T-30 Prime Coat
- 1 1/2" T-35, 1 1/2" B-35, T-30 Tack Coat  
A-A-D, 6" T-22

REF. N°	I-13 4" Conc. S.W.	I-15 2-A Guard Rail	I-15 2-A G.R. (Barrier)	I-26	I-15 2-A, Mod as per 10/27
1-G	3.F.	L.F.	L.F.	L.F.	L.F.
	75				37.5
2-G		550	275		
3-G		25			
1-F				178	
1-5	30				
2-5	97.2				
2-F				388	
3-F				172	
Totals	1277	650	275	732	375

REF. N <sup>o</sup>	E-8 Part. Removal	E-8 Curb Removal	E-8 S. W. Removal		
	S.Y.	L.F.	S.F.		
1~2	799.2	381	05512		
2~2	380.9	447	35045		
3~2	329.6	292	165		
Totals	1980	1120	8221		

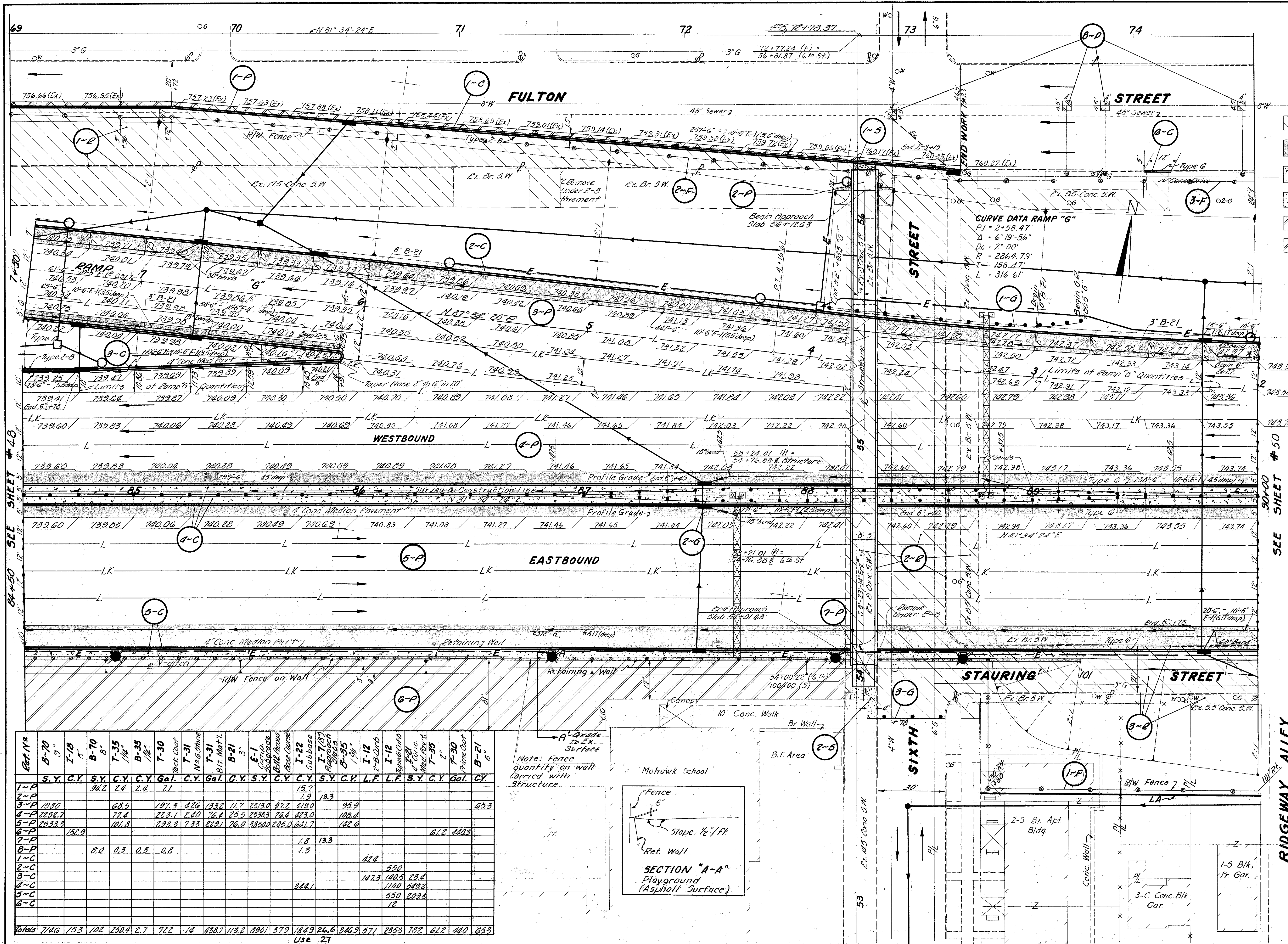
1-2 Remove Fulton St. Pavement as shown &  
South Curb from Sta. 69+00 to 73+23  
Remove Ex. South Conc. Sidewalk from Sta.  
69+00 to 74+15.5

2-R Remove Ex. 6<sup>th</sup> St. Pavement, Curb, & Conc. Sidewalk Rt. & Lt. from South Curb Line of Fulton St. to Sta. 53+78 6<sup>th</sup> St. including Houston St. returns West of 6<sup>th</sup> St.

3-2 Remove Ex. Stauring 5<sup>th</sup> Pavement & Curb from East Curb Line of 6<sup>th</sup> St. to 5<sup>th</sup>. 101+80 Stauring 5<sup>th</sup>. - Remove Ex. Conc. Side walk on Right Side.

131' RT. RIDGEWAY A11FY

### PAVEMENT DETAILS & ELEV'S.





- 1-R Remove Lidgenway Alley and Hubbell Alley pavement & curb to Fulton St. R/W line.
- 2-R Remove Stauring St. Pavement & Curb from 101 + 80 to West curb line of Grant Ave. & Lidgenway & Hubbell Alleys within Stauring St. R/W lines. Remove all existing Conc. Sidewalks & Drive C&T & 2<sup>nd</sup> R/W.
- 3-R Remove Ex. Grant Ave. Pavement from Sta. 52+72 to 52+93.5 and from Sta. 54+25 to 57+17 as shown. Remove Ex. East curb from 51+00 Lt. Donaldson St. to 77+31 Rt. Fulton St. Remove Ex. West Curb from 43+83 Lt. Donaldson St. to 77+22.5 Rt. of Fulton St. Remove Ex. Conc. Sidewalk & Drs. C&T along Grant Ave. between South curbline Fulton St. and North Curbline of Donaldson St. and along North Side of Donaldson St. between Sta. 43+83 and 50+71.5 as shown.
- 4-R Remove Ex. Stauring St. pavement and curb from East Curbline of Grant Ave. to Sta. 93+75 Rt. 1<sup>st</sup>.

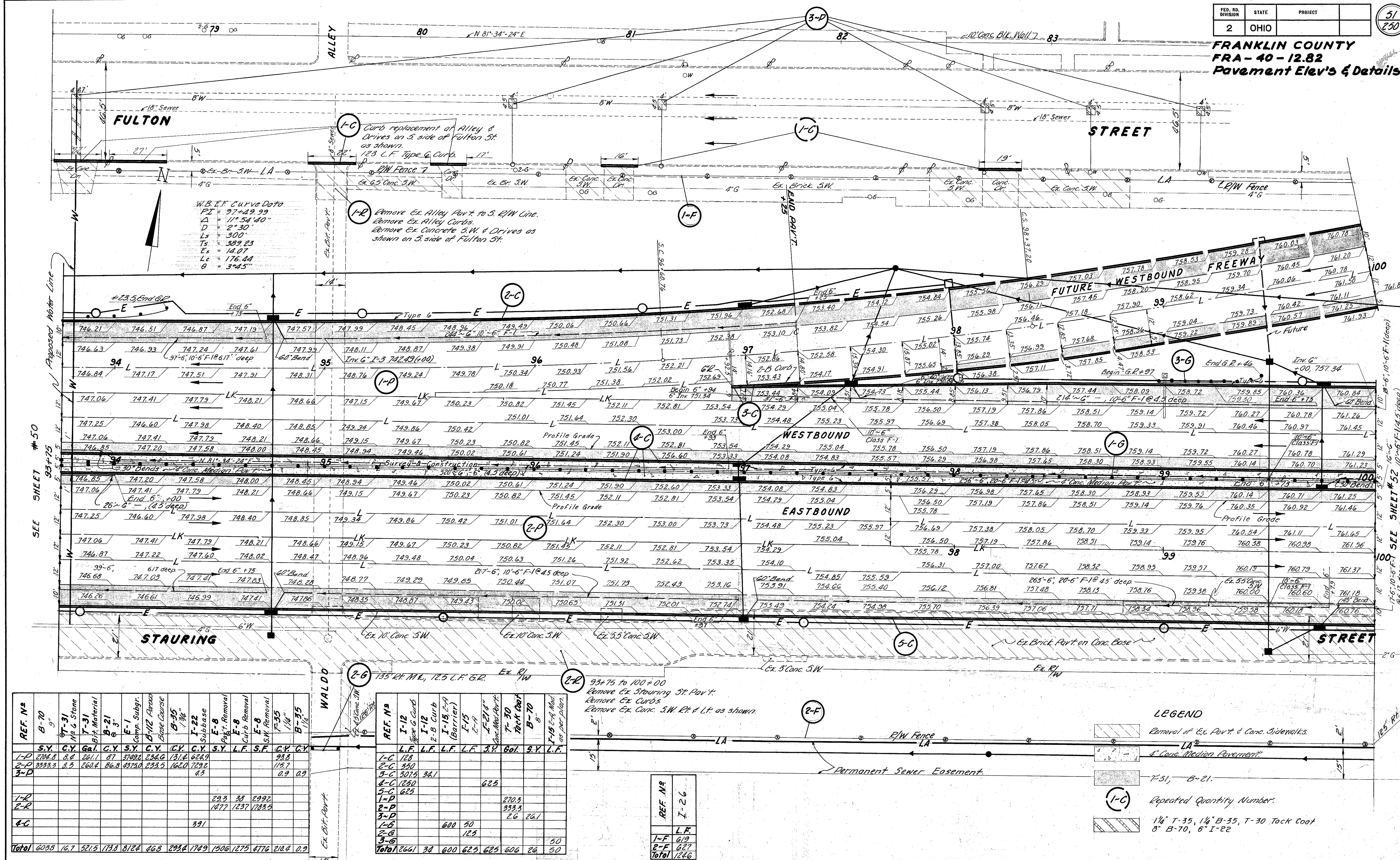
*LEGEND*

- |          |      |
|----------|------|
| REF. NO. | I-26 |
|          | L.F. |
| 1-F      | 276  |
| 2-F      | 63   |
| 3-F      | 270  |
| 4-F      | 40   |
| Total    | 635  |

REF. N <sup>o</sup>	B-70	B-35	B-70	T-35	B-35	B-35	T-30	T-31	T-31	B-21	F-1	B-112	I-22	I-7	I-12	I-12	I-12	I-21	I-13	I-15	I-15	F-8	F-8	F-8
	9"	1 1/4"	8"	1 1/4"	1 1/4"	0"-2"	Tack Coat	N <sup>o</sup> 6 Stone	Bit Material	3"	Comp. Subgr.	Base Course	Subbase	Appro. Slabs	2-B Curb	2-B Curb	Type 6 Curb	4" Conc'd Pave.	4" Conc. S.W.	2-A	(Barrier)	Part. Removal	Curb Removal	S.W. Removal
	S.Y.	C.Y.	S.Y.	C.Y.	C.Y.	C.Y.	Gal.	C.Y.	Gal.	C.Y.	S.Y.	C.Y.	C.Y.	S.Y.	L.F.	L.F.	L.F.	S.Y.	S.F.	L.F.	L.F.	S.Y.	L.F.	S.F.
1-P																								
2-P	133.3	6.5		4.6			16.2	0.84	26.4	1.0	73.0	3.0	32.4	80										
3-P	186.8	90.8		66.8			13.3	2.11	42.8		239.0	116.6	39.9											
4-P	200.0	37.2		69.4			186.8				233.0		39.7											
5-P			463.0	31.2	15.1	13.0	200.0				263.0		89	133										
1-C							91				463.0													
2-C															16									
3-C															16									
4-C																44								
5-C													335			375								
6-C																750								
7-C															174	375								
8-C															202									
1-B																								
2-B																								
3-B																								
4-B																								
5-B																								
1-S																								
2-S																								
3-S																								
4-S																								
6-P			4.0	0.2	0.2		0.4						0.7											
1-R																								
2-R																								
3-R																								
4-R																								
TOTAL	4002	1945	571.5	175.8	18.8	14.7	508	5	155	43.8	5788	120	1350	213	408	1544	416	1802	650	200	2050	1656		5616



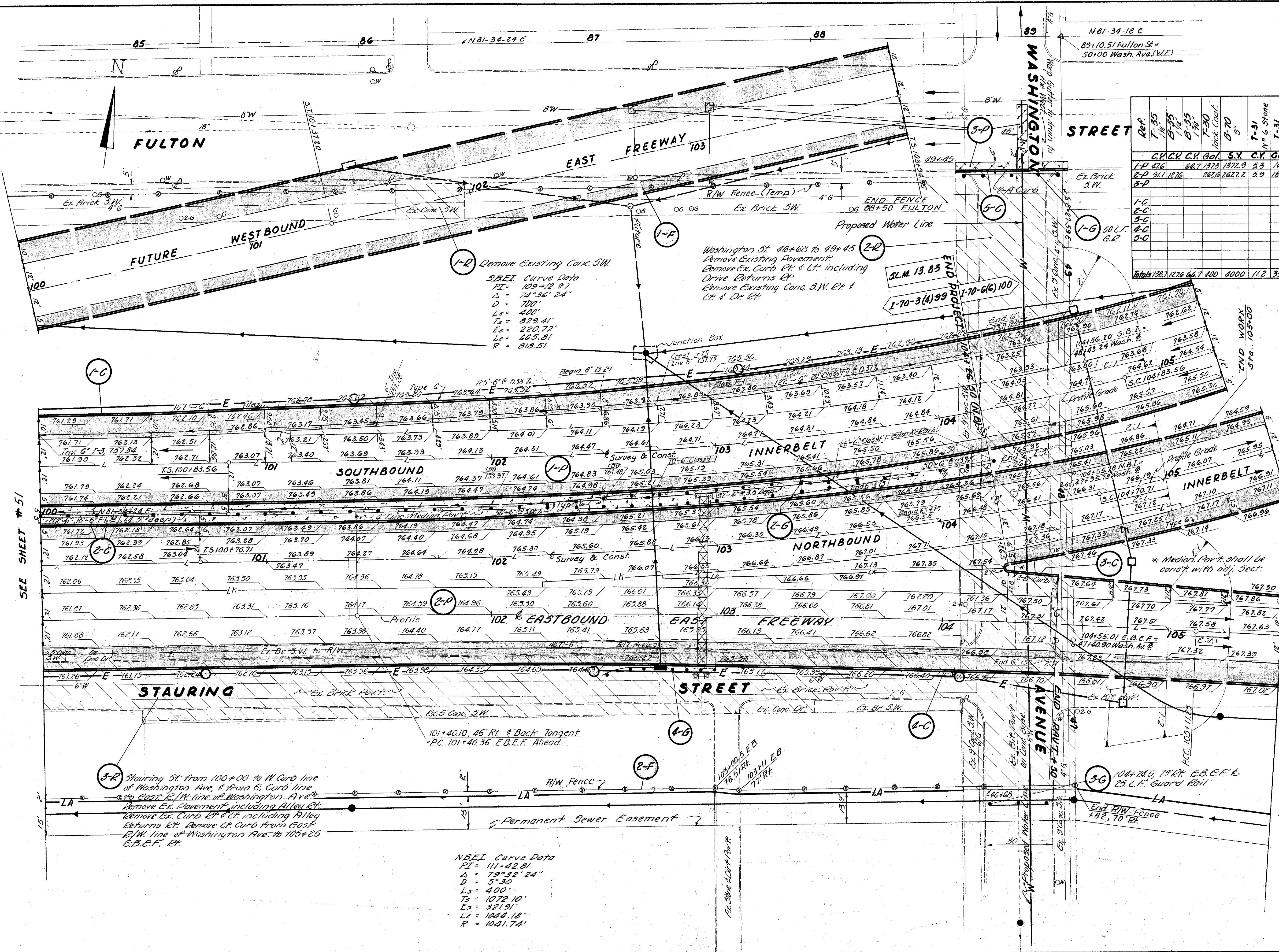
**FRANKLIN COUNTY**  
**FRA-40-12.82**  
**Pavement Elev's & Details**



### PAVEMENT DETAILS & ELEV'S.



**FRANKLIN COUNTY**  
**FRA - 40 - 12.82**  
**Pavement Elev's & Details**



Ref.	T-55 1 1/8"	B-35 1 1/8"	B-35 1 3/8"	T-50 Tack Coat	B-70 9"	T-31 No 6 Stone	T-31 Bit Material	B-21 3"	E-1 Comp. Subgr.	B-112 Arrows Base Course	I-22 Subbase	I-12 2-B	I-12 2-B	Type 6 Curb	I-21 4 Conc Med Port	T-20 8"	B-21 6"
	C.Y.	C.Y.	Gal.	S.Y.	C.Y.	Gal.	C.Y.	S.Y.	C.Y.	S.Y.	C.Y.	L.F.	L.F.	S.K.	S.V.	C.Y.	
1-P	476	66.7	3713	1372.9	5.3	1823	40.5	8010	127.7	335							
2-P	911	1276			5.9	1840	61.3	3363	164.6	561							
3-P																44	
1-C														419			
2-C											272			845	480		
3-C												78					
4-C														450			
5-C											50						
Totals	1387	1276	66.7	400	4000	11.2	3333	101.8	5373	312.3	1170	50	28	1714	480	44	242

REF. N°	I-15 E-R	I-15 E-R (Barrier)	E-8	E-8 Part. Removal	E-8 Curb Removal	E-8 S.W. Removal	F4E-2A Mod. as per plan
	L.F.	L.F.	S.Y.	L.F.	S.F.	L.F.	
1-6	50						
2-6	325	2625					
3-6	25						
4-6	125						375
1-R					533		
2-R			930	483	447		
3-R			102	337	1537		
Total	417.5	2625	1036	1420	6517		375

REF. N <sup>o</sup> .	I-20
	L.F.
1-F	405
2-F	456
Total	861

E.B.E.F. Curve Data

PI =	103+25.87
Δ =	3° 24' 32"
D =	1000'
L =	185.51'
T =	370.89
E =	3.0'
R =	5729.58'

\* Median. Pov't. shall be const. with adj. Sect.

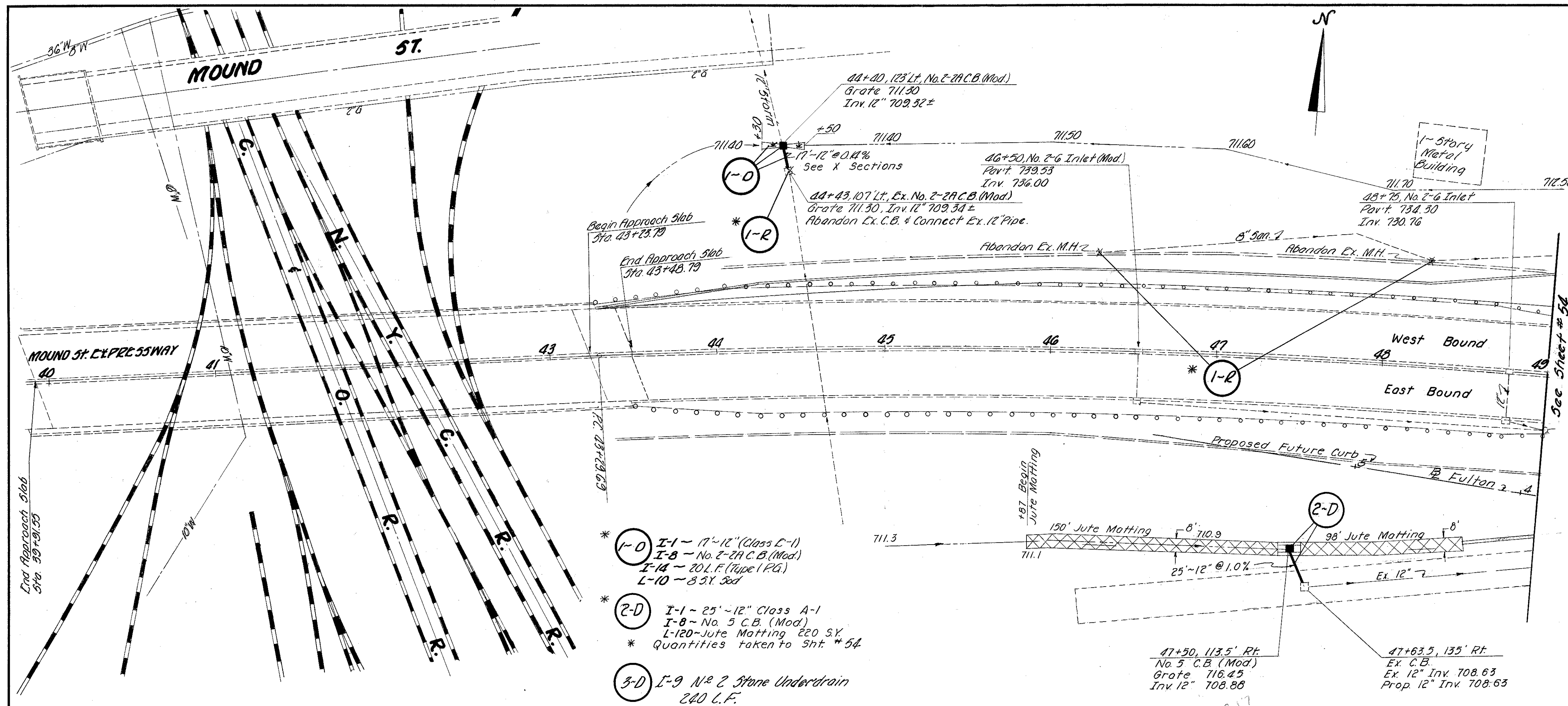
- LEGEND**
- Removal of Ex. Pav't.  
& Conc. Sidewalk.
- 8" F 70
- 4" Conc. Median Pav't.
- 7-31, B-21.



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

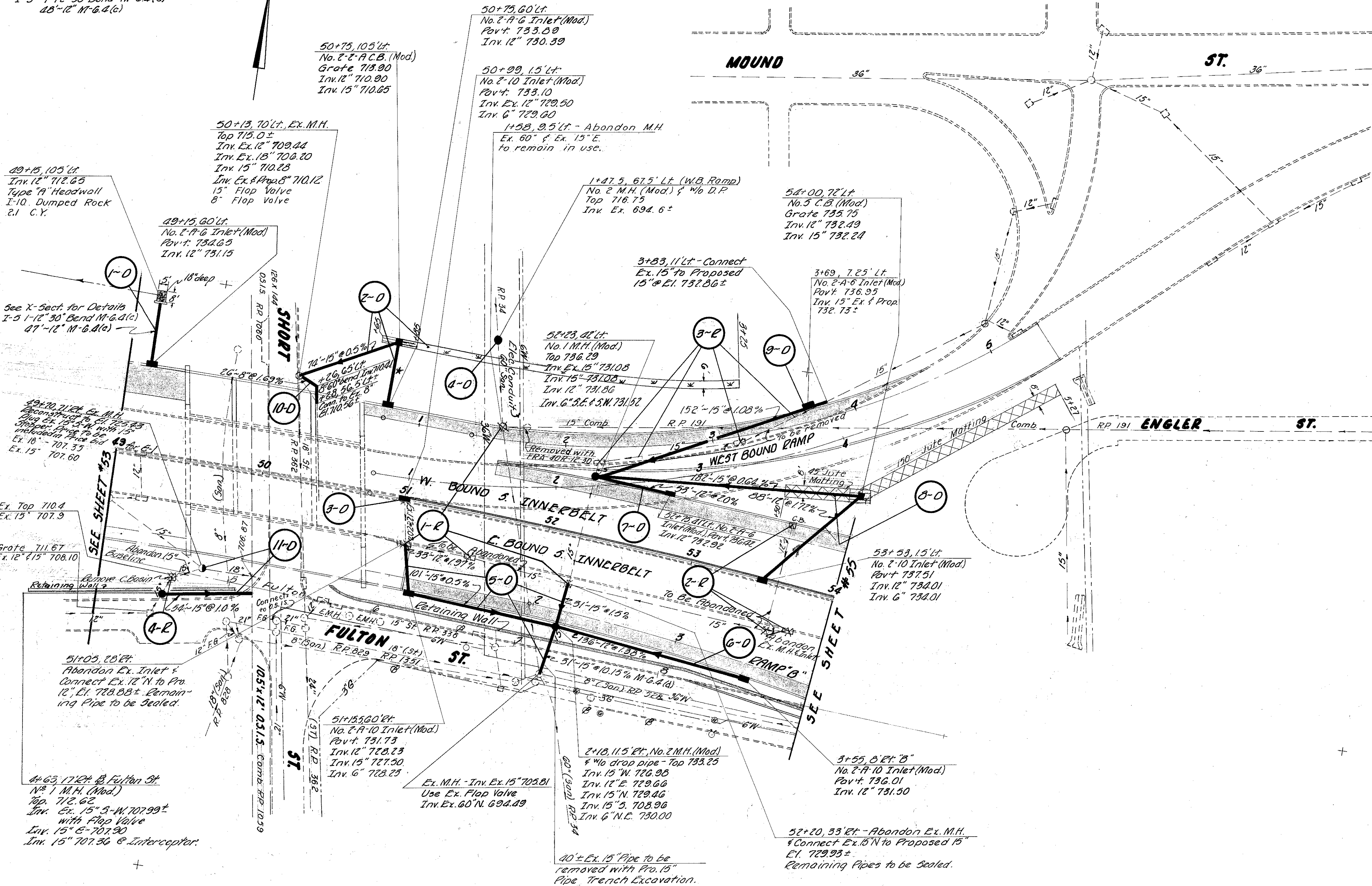
53  
250

FRANKLIN COUNTY  
FEA-40-12.82  
DRAINAGE PLAN





\* See X-Section for Details  
I-5 1'-12" 30' Bend M-6.4(c)  
48'-12" M-6.4(c)

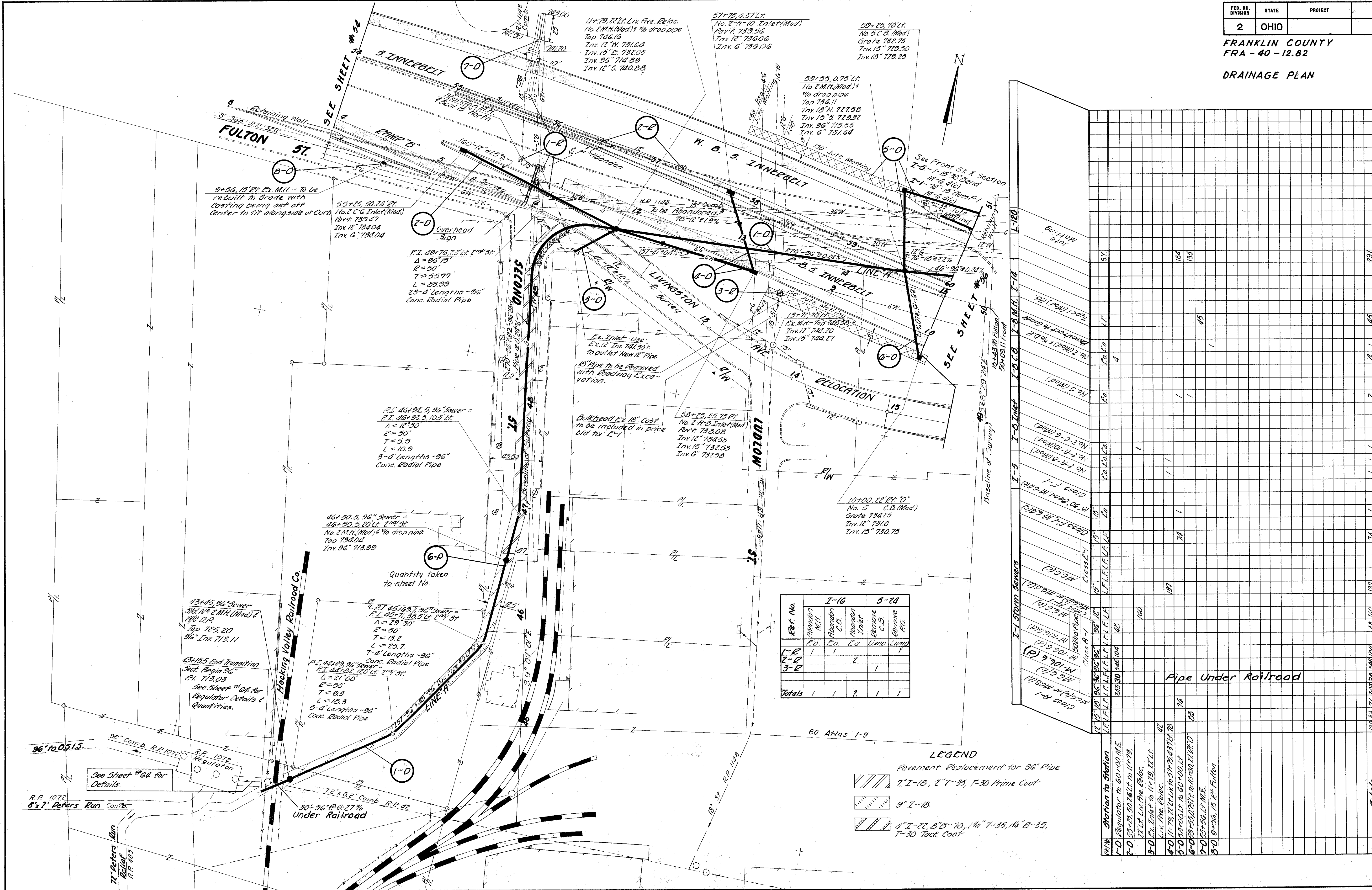


Ref. No.	I-16		E-12		S-24	
	Abandon Inlet	Abandon M.H.	Abandon C.B.	Removal of 15' Under Structures	Removal of 15' Under Structures	Removal of 15' Under Structures
1-R	2	2				
2-R	1	1				
3-R	2			158		
4-R					1	
1-R		2	1			
Totals	5	5	2	158	1	

\* Quantities from Sheet # 53

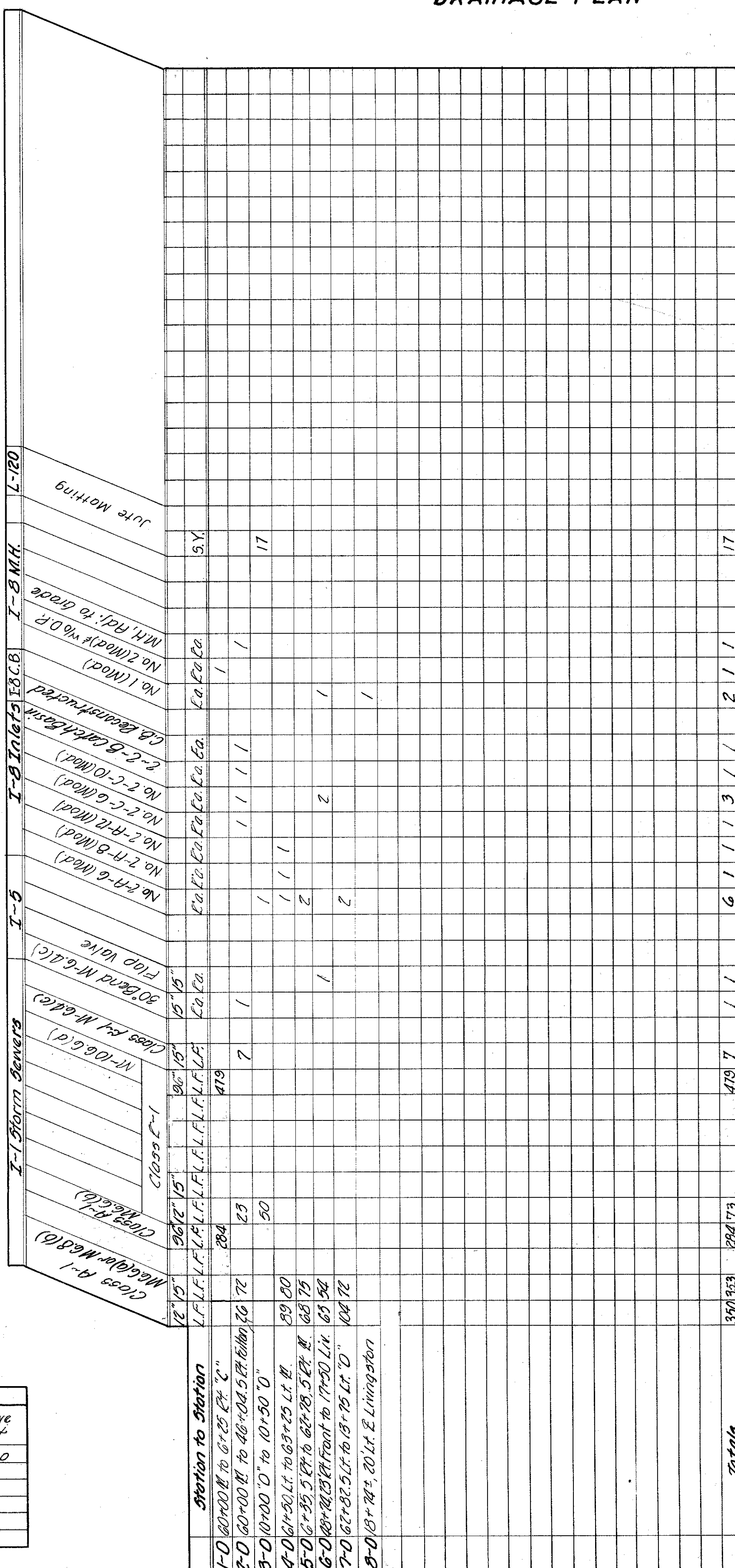
Class R-1 (Med) or Med (S)		Class R-1 (Med)		Class C-1		Masonry		Pipe		Pipe Special		Class C-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 (Med)		Class R-1 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## DRAINAGE PLAN



Ref. No.	5-24	
	Remove M.H.	Remove Inlet
Units	Lump	Lump
1-R	1	2
2-R		1
3-R	1	
Total	2	3



## DRAINAGE PLAN





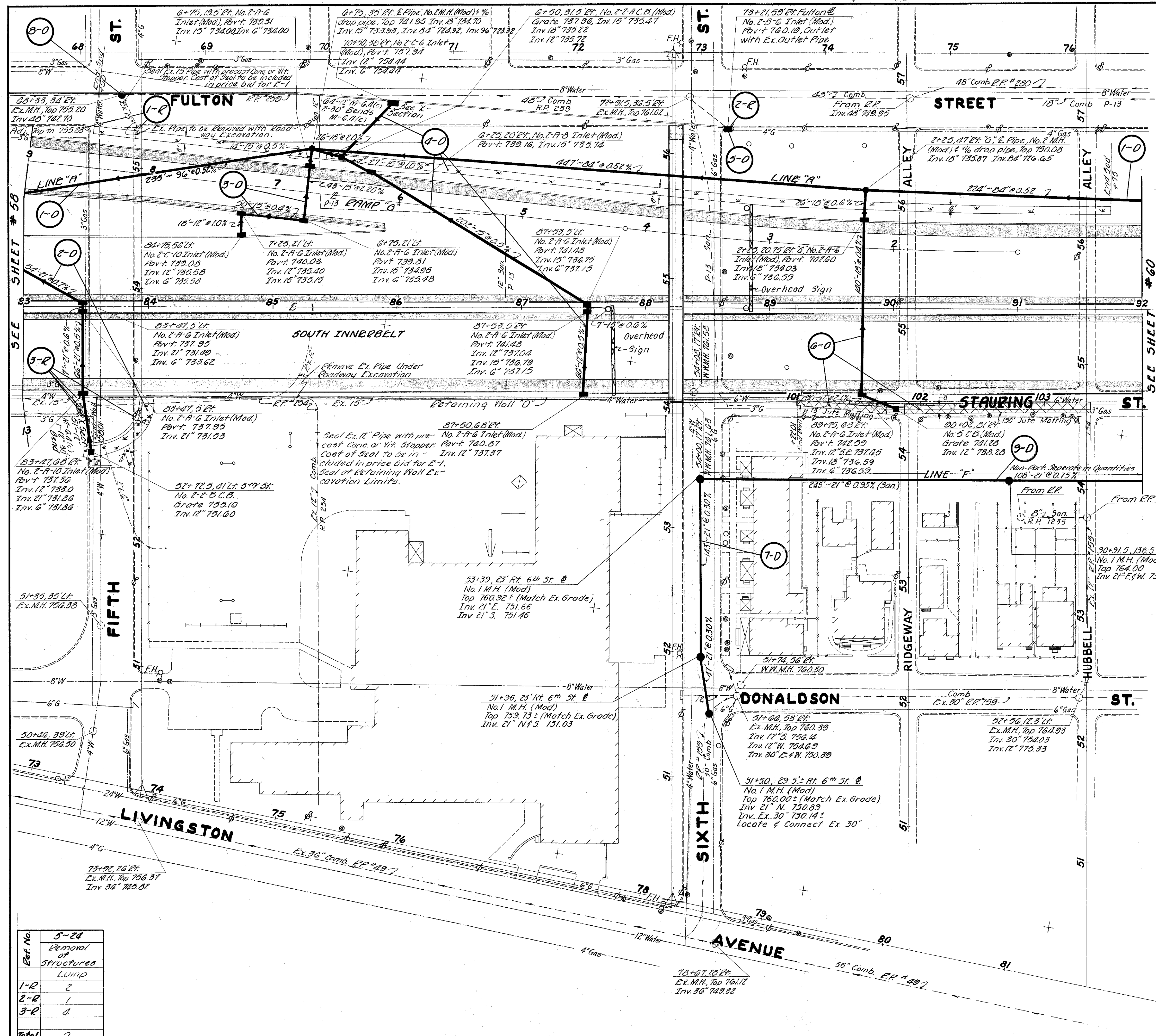
### *DRAINAGE PLAN*





FRANKLIN COUNTY  
FRA - 40 - 12.82

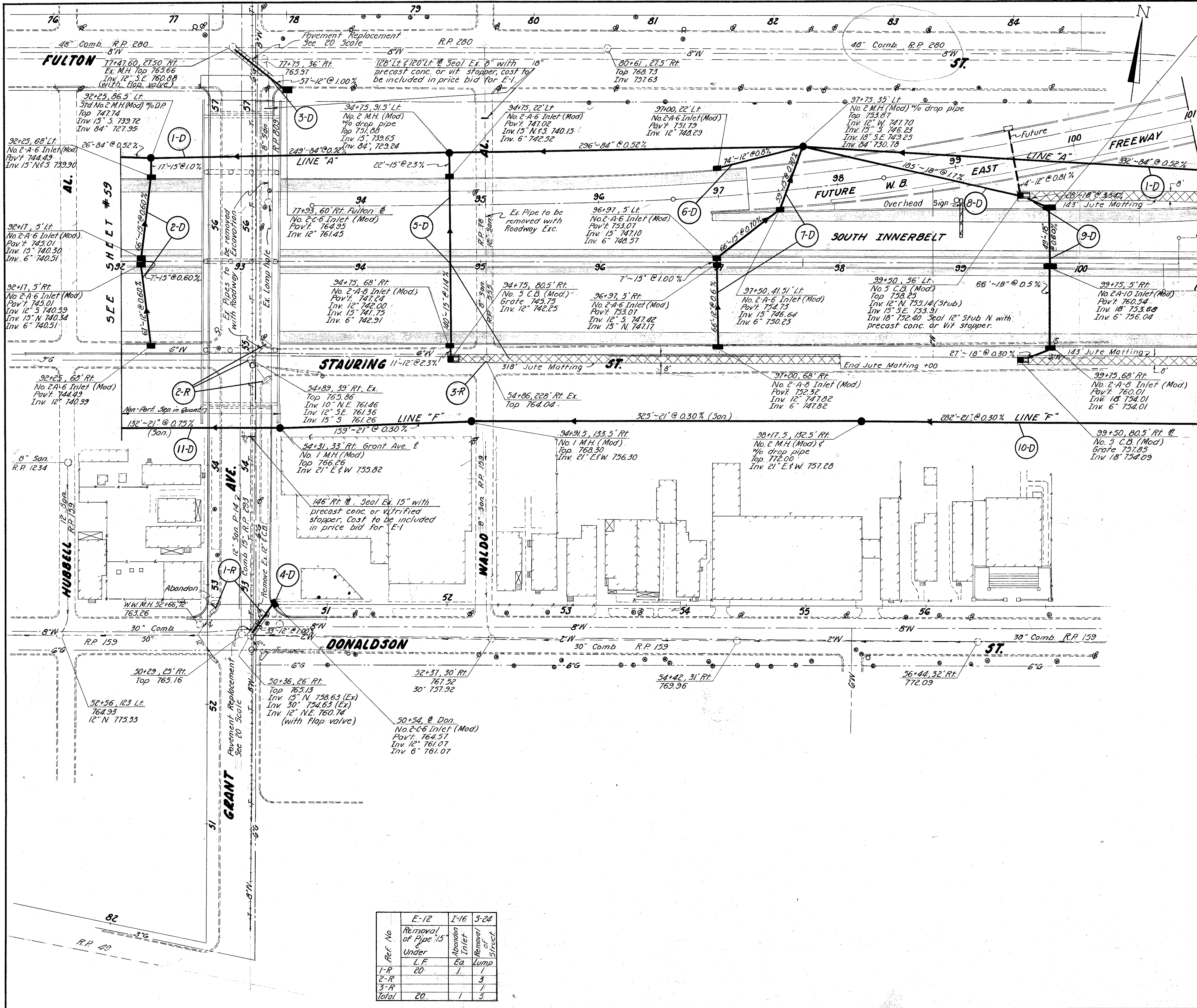
## DRAINAGE PLAN



Ref. No.	5-24
	Removal of structures Lump
1-R	2
2-R	1
3-R	4
Total	7

* Non-Participation by State & Federal														
I-1 Storm Sewer														
I-133 (30in.)														
I-5														
I-8 MH														
I-8 Inlet														
I-8 CB														
I-10														
Type 1 PG (Mod)														
No. 2-28														
No. 2-21 (Mod)														
No. 5 (Mod)														
No. 2-7 (Mod)														
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39+75, 44' Lt  
No 2-A-10 Inlet (Mod)  
Pav't 760.19  
Inv 18" 753.39  
Inv 6" 754.19

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

60  
2.50

FRANKLIN COUNTY  
FRA - 40 - 12.82

DRAINAGE PLAN

SEE SHEET #61

\* Non-Participation by State or Federal  
I-1 Storm Sewer

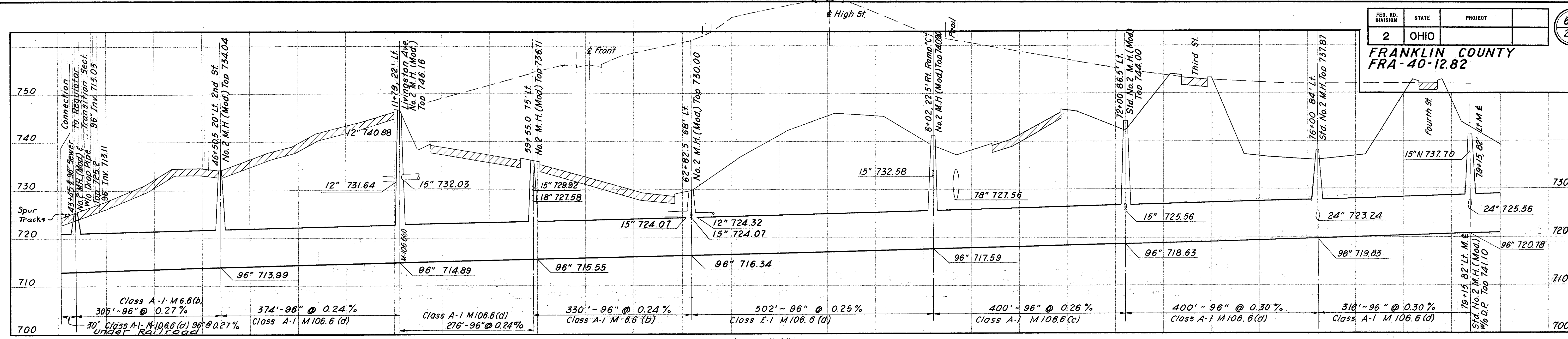
Ref #	Station to Station	12-15"	18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	102"	108"	114"	120"	126"	132"	138"	144"	150"	156"	162"	168"	174"	180"	186"	192"	198"	204"	210"	216"	222"	228"	234"	240"	246"	252"	258"	264"	270"	276"	282"	288"	294"	300"	306"	312"	318"	324"	330"	336"	342"	348"	354"	360"	366"	372"	378"	384"	390"	396"	402"	408"	414"	420"	426"	432"	438"	444"	450"	456"	462"	468"	474"	480"	486"	492"	498"	504"	510"	516"	522"	528"	534"	540"	546"	552"	558"	564"	570"	576"	582"	588"	594"	600"	606"	612"	618"	624"	630"	636"	642"	648"	654"	660"	666"	672"	678"	684"	690"	696"	702"	708"	714"	720"	726"	732"	738"	744"	750"	756"	762"	768"	774"	780"	786"	792"	798"	804"	810"	816"	822"	828"	834"	840"	846"	852"	858"	864"	870"	876"	882"	888"	894"	900"	906"	912"	918"	924"	930"	936"	942"	948"	954"	960"	966"	972"	978"	984"	990"	996"	1002"	1008"	1014"	1020"	1026"	1032"	1038"	1044"	1050"	1056"	1062"	1068"	1074"	1080"	1086"	1092"	1098"	1104"	1110"	1116"	1122"	1128"	1134"	1140"	1146"	1152"	1158"	1164"	1170"	1176"	1182"	1188"	1194"	1200"	1206"	1212"	1218"	1224"	1230"	1236"	1242"	1248"	1254"	1260"	1266"	1272"	1278"	1284"	1290"	1296"	1302"	1308"	1314"	1320"	1326"	1332"	1338"	1344"	1350"	1356"	1362"	1368"	1374"	1380"	1386"	1392"	1398"	1404"	1410"	1416"	1422"	1428"	1434"	1440"	1446"	1452"	1458"	1464"	1470"	1476"	1482"	1488"	1494"	1500"	1506"	1512"	1518"	1524"	1530"	1536"	1542"	1548"	1554"	1560"	1566"	1572"	1578"	1584"	1590"	1596"	1602"	1608"	1614"	1620"	1626"	1632"	1638"	1644"	1650"	1656"	1662"	1668"	1674"	1680"	1686"	1692"	1698"	1704"	1710"	1716"	1722"	1728"	1734"	1740"	1746"	1752"	1758"	1764"	1770"	1776"	1782"	1788"	1794"	1800"	1806"	1812"	1818"	1824"	1830"	1836"	1842"	1848"	1854"	1860"	1866"	1872"	1878"	1884"	1890"	1896"	1902"	1908"	1914"	1920"	1926"	1932"	1938"	1944"	1950"	1956"	1962"	1968"	1974"	1980"	1986"	1992"	1998"	2004"	2010"	2016"	2022"	2028"	2034"	2040"	2046"	2052"	2058"	2064"	2070"	2076"	2082"	2088"	2094"	2100"	2106"	2112"	2118"	2124"	2130"	2136"	2142"	2148"	2154"	2160"	2166"	2172"	2178"	2184"	2190"	2196"	2202"	2208"	2214"	2220"	2226"	2232"	2238"	2244"	2250"	2256"	2262"	2268"	2274"	2280"	2286"	2292"	2298"	2304"	2310"	2316"	2322"	2328"	2334"	2340"	2346"	2352"	2358"	2364"	2370"	2376"	2382"	2388"	2394"	2400"	2406"	2412"	2418"	2424"	2430"	2436"	2442"	2448"	2454"	2460"	2466"	2472"	2478"	2484"	2490"	2496"	2502"	2508"	2514"	2520"	2526"	2532"	2538"	2544"	2550"	2556"	2562"	2568"	2574"	2580"	2586"	2592"	2598"	2604"	2610"	2616"	2622"	2628"	2634"	2640"	2646"	2652"	2658"	2664"	2670"	2676"	2682"	2688"	2694"	2700"	2706"	2712"	2718"	2724"	2730"	2736"	2742"	2748"	2754"	2760"	2766"	2772"	2778"	2784"	2790"	2796"	2802"	2808"	2814"	2820"	2826"	2832"	2838"	2844"	2850"	2856"	2862"	2868"	2874"	2880"	2886"	2892"	2898"	2904"	2910"	2916"	2922"	2928"	2934"	2940"	2946"	2952"	2958"	2964"	2970"	2976"	2982"	2988"	2994"	3000"	3006"	3012"	3018"	3024"	3030"	3036"	3042"	3048"	3054"	3060"	3066"	3072"	3078"	3084"	3090"	3096"	3102"	3108"	3114"	3120"	3126"	3132"	3138"	3144"	3150"	3156"	3162"	3168"	3174"	3180"	3186"	3192"	3198"	3204"	3210"	3216"	3222"	3228"	3234"	3240"	3246"	3252"	3258"	3264"	3270"	3276"	3282"	3288"	3294"	3300"	3306"	3312"	3318"	3324"	3330"	3336"	3342"	3348"	3354"	3360"	3366"	3372"	3378"	3384"	3390"	3396"	3402"	3408"	3414"	3420"	3426"	3432"	3438"	3444"	3450"	3456"	3462"	3468"	3474"	3480"	3486"	3492"	3498"	3504"	3510"	3516"	3522"	3528"	3534"	3540"	3546"	3552"	3558"	3564"	3570"	3576"	3582"	3588"	3594"	3600"	3606"	3612"	3618"	3624"	3630"	3636"	3642"	3648"	3654"	3660"	3666"	3672"	3678"	3684"	3690"	3696"	3702"	3708"	3714"	3720"	3726"	3732"	3738"	3744"	3750"	3756"	3762"	3768"	3774"	3780"	3786"	3792"	3798"	3804"	3810"	3816"	3822"	3828"	3834"	3840"	3846"	3852"	3858"	3864"	3870"	3876"	3882"	3888"	3894"	3900"	3906"	3912"	3918"	3924"	3930"	3936"	3942"	3948"	3954"	3960"	3966"	3972"	3978"	3984"	3990"	3996"	4002"	4008"	4014"	4020"	4026"	4032"	4038"	4044"	4050"	4056"	4062"	4068"	4074"	4080"	4086"	4092"	4098"	4104"	4110"	4116"	4122"	4128"	4134"	4140"	4146"	4152"	4158"	4164"	4170"	4176"	4182"	4188"	4194"	4200"	4206"	4212"	4218"	4224"	4230"	4236"	4242"	4248"	4254"	4260"	4266"	4272"	4278"	4284"	4290"	4296"	4302"	4308"	4314"	4320"	4326"	4332"	4338"	4344"	4350"	4356"	4362"	4368"	4374"	4380"	4386"	4392"	4398"	4404"	4410"	4416"	4422"	4428"	4434"	4440"	4446"	4452"	4458"	4464"	4470"	4476"	4482"	4488"	4494"	4500"	4506"	4512"	4518"	4524"	4530"	4536"	4542"	4548"	4554"	4560"	4566"	4572"	4578"	4584"	4590"	4596"	4602"	4608"	4614"	4620"	4626"	4632"	4638"	4644"	4650"	4656"	4662"	4668"	4674"	4680"	4686"	4692"	4698"	4704"	4710"	4716"	4722"	4728"	4734"	4740"	4746"	4752"	4758"	4764"	4770"	4776"	4782"	4788"	4794"	4800"	4806"	4812"	4818"	4824"	4830"	4836"	4842"	4848"	4854"	4860"	4866"	4872"	4878"	4884"	4890"	4896"	4902"	4908"	4914"	4920"	4926"	4932"	4938"	4944"	4950"	4956"	4962"	4968"	4974"	4980"	4986"	4992"	4998"	5004"	5010"	5016"	5022"	5028"	5034"	5040"	5046"	5052"	5058"	5064"	5070"	5076"	5082"	5088"	5094"	5100"	5106"	5112"	5118"	5124"	5130"	5136"	5142"	5148"	5154"	5160"	5166"	5172"	517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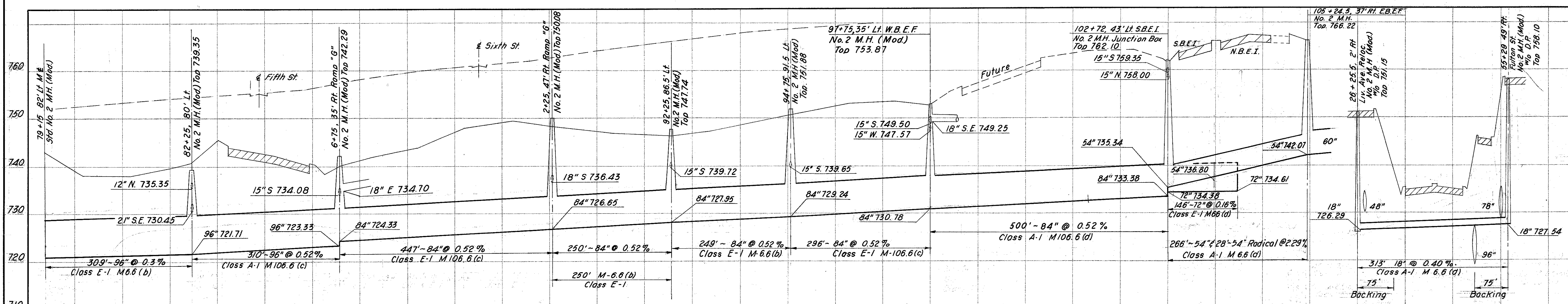
### ***DRAINAGE PLAN***





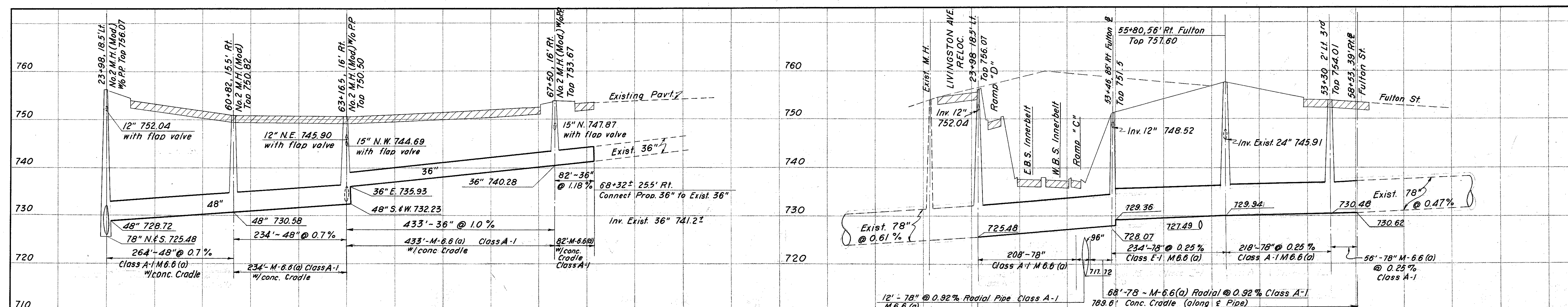


Line "A"



Line "A" (Cont.)

Line "C"



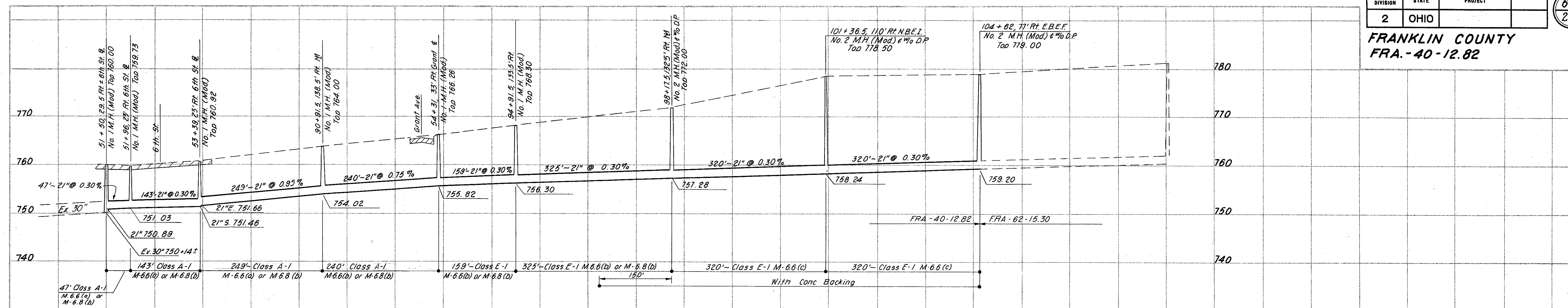
Line "E"

Line "B"

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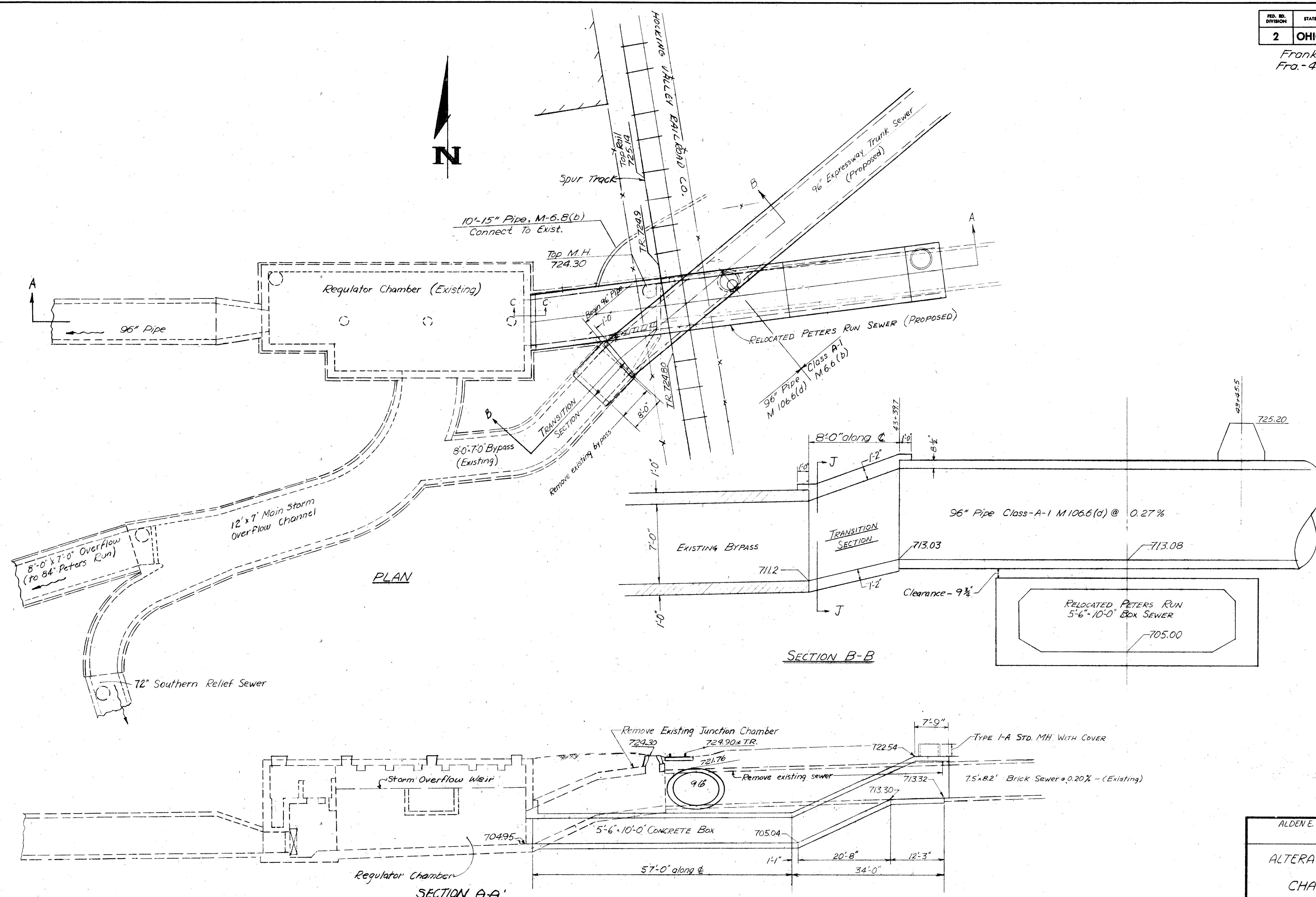


FRANKLIN COUNTY  
FRA-40-12.82



Line "F" Along M, E.B.E.F., (Sanitary)

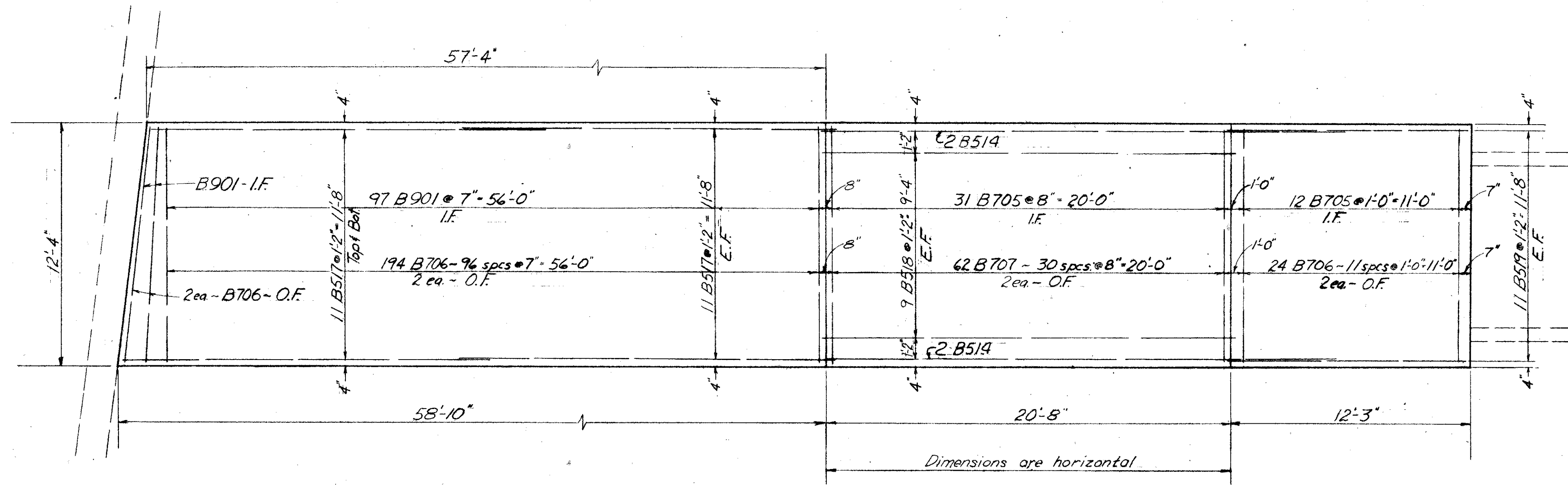




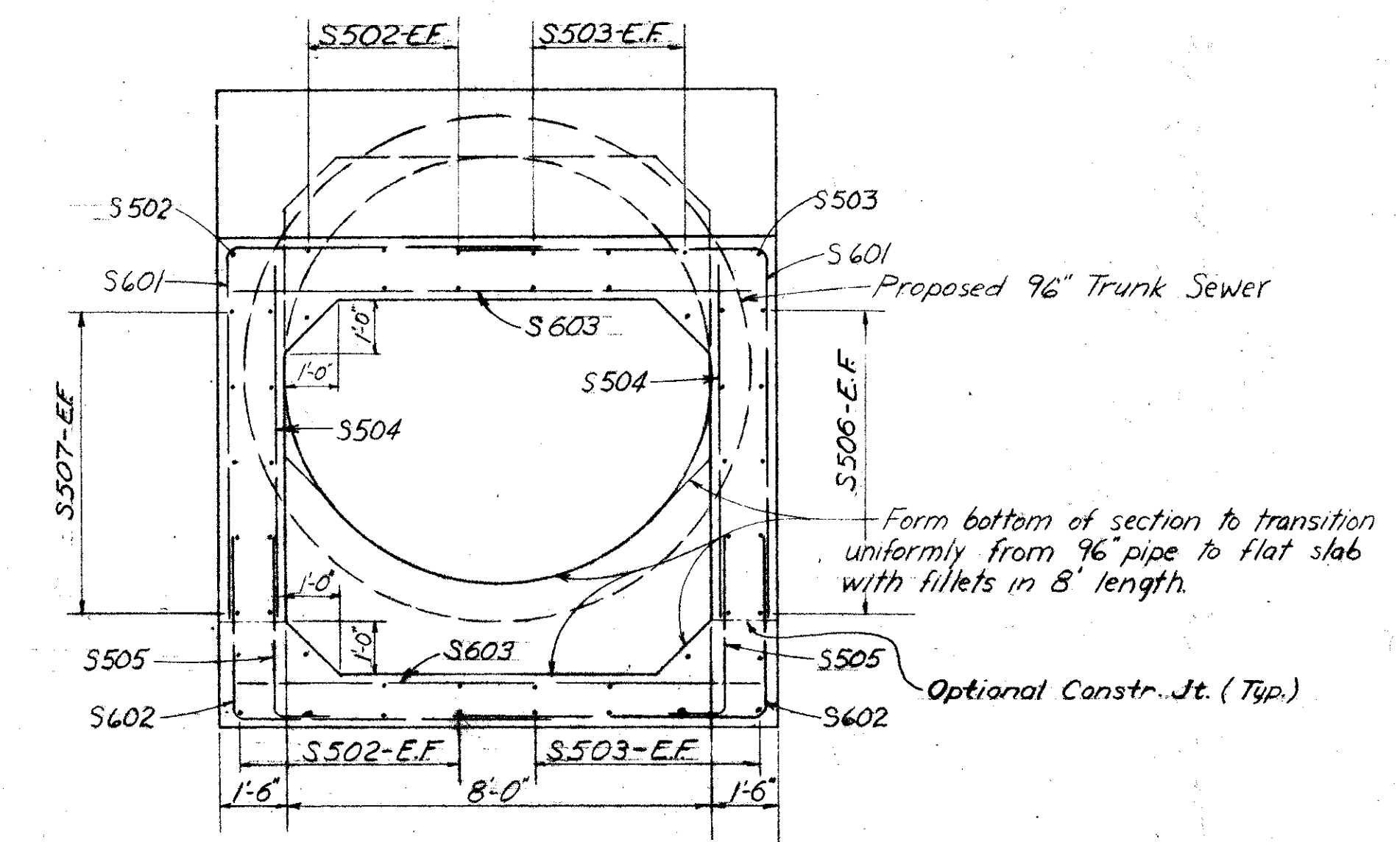




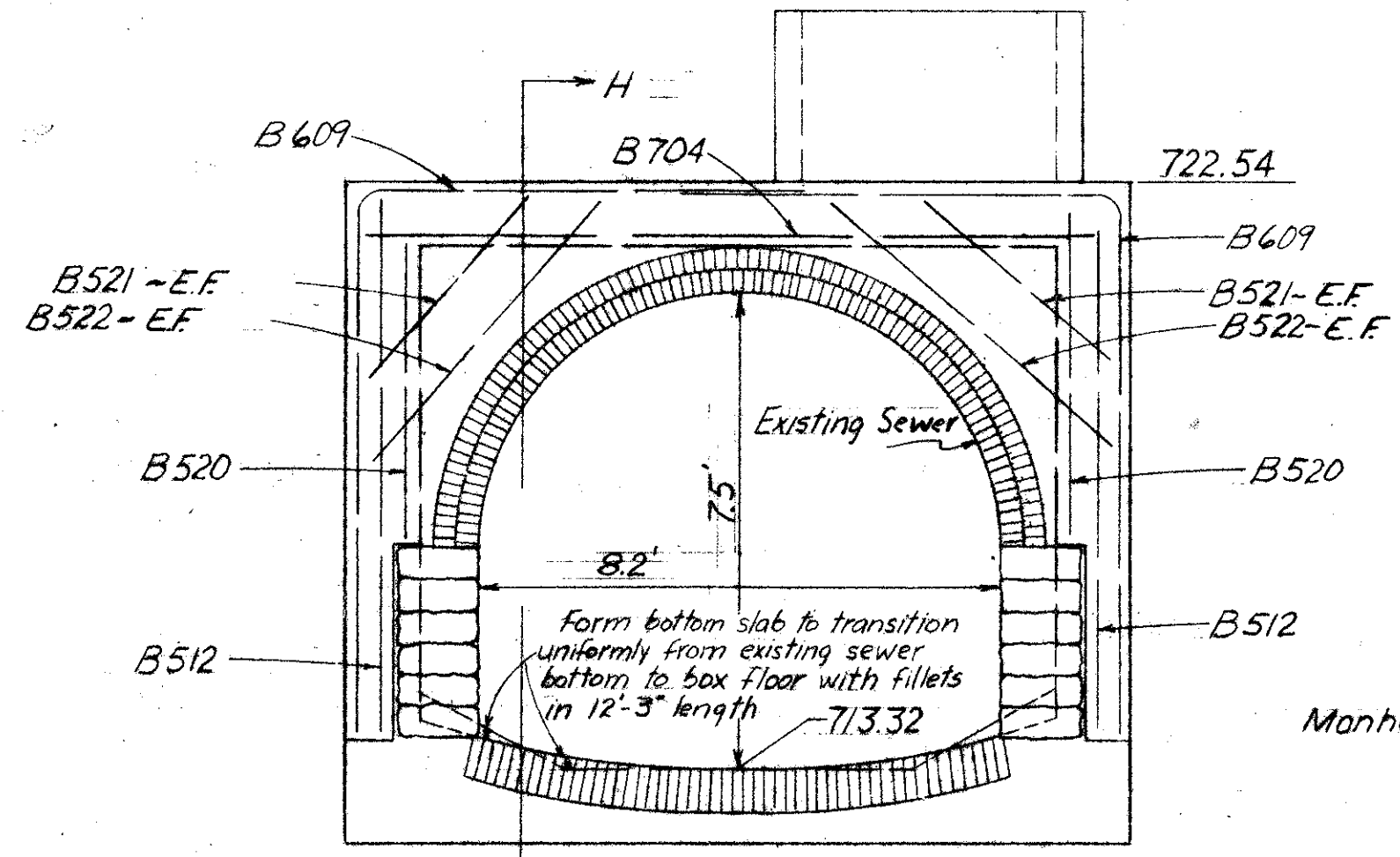




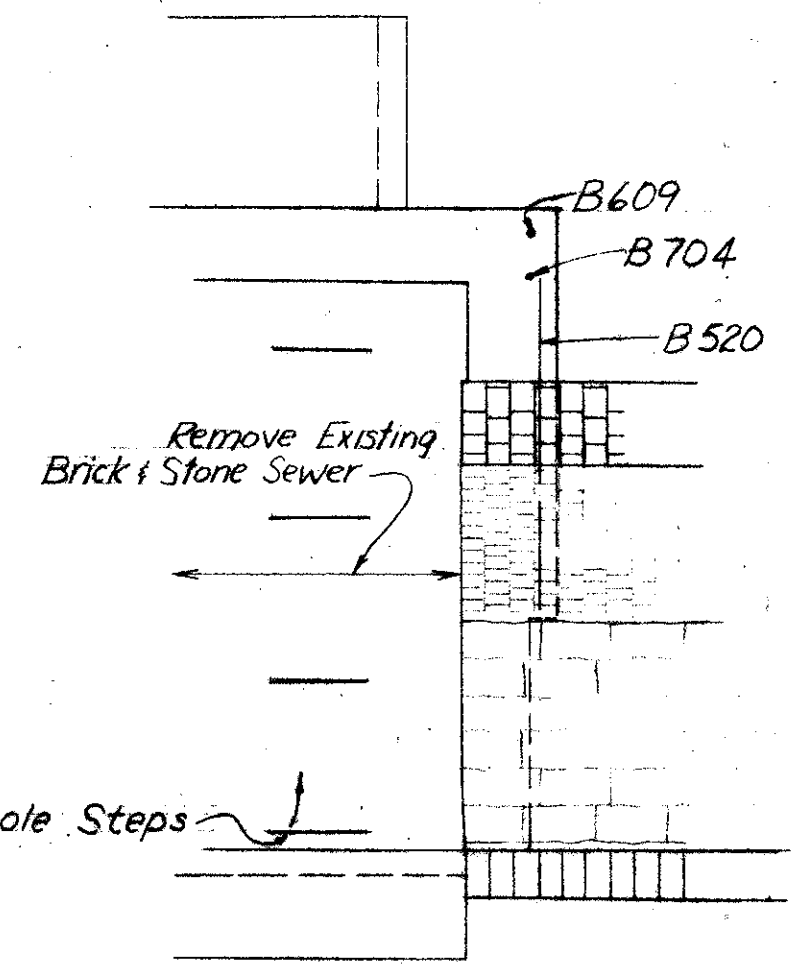
BOTTOM SLAB - PLAN & REINFORCING STEEL



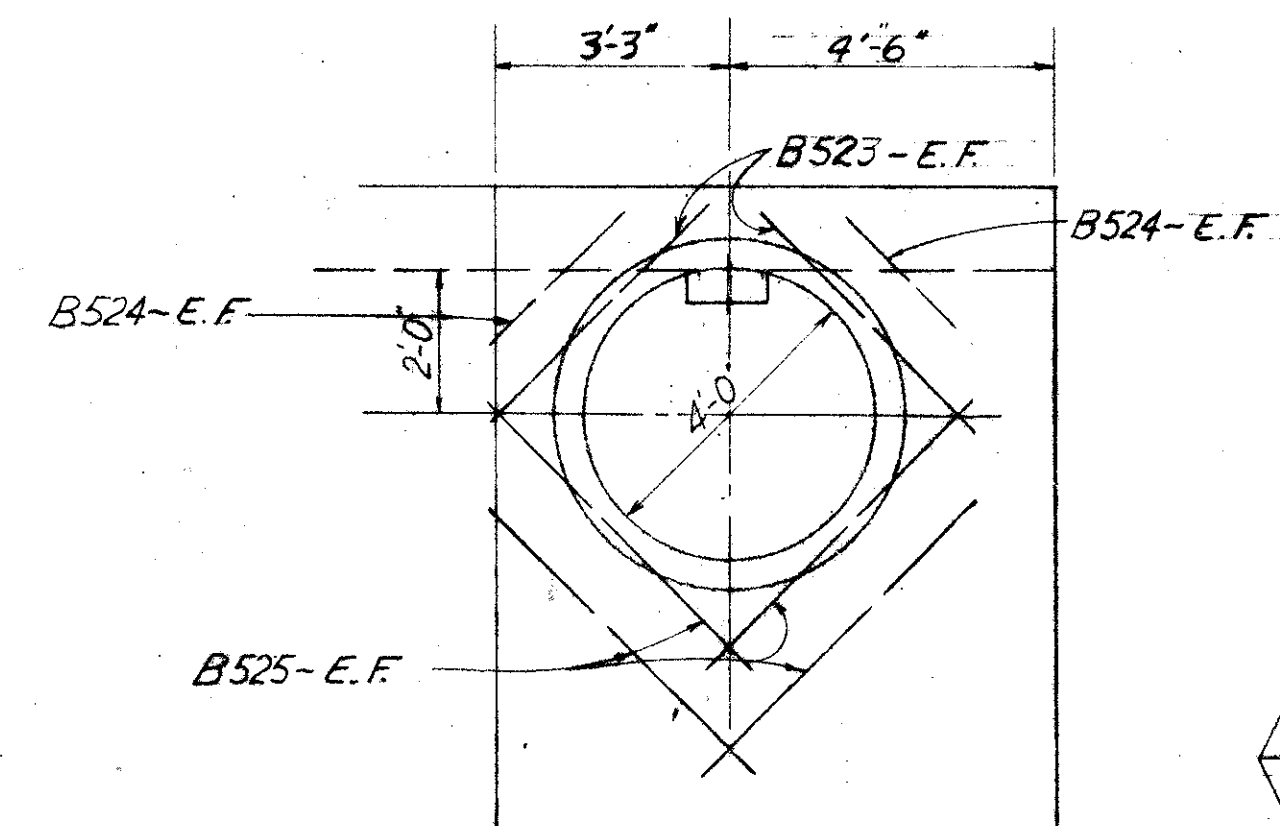
SECTION J-J



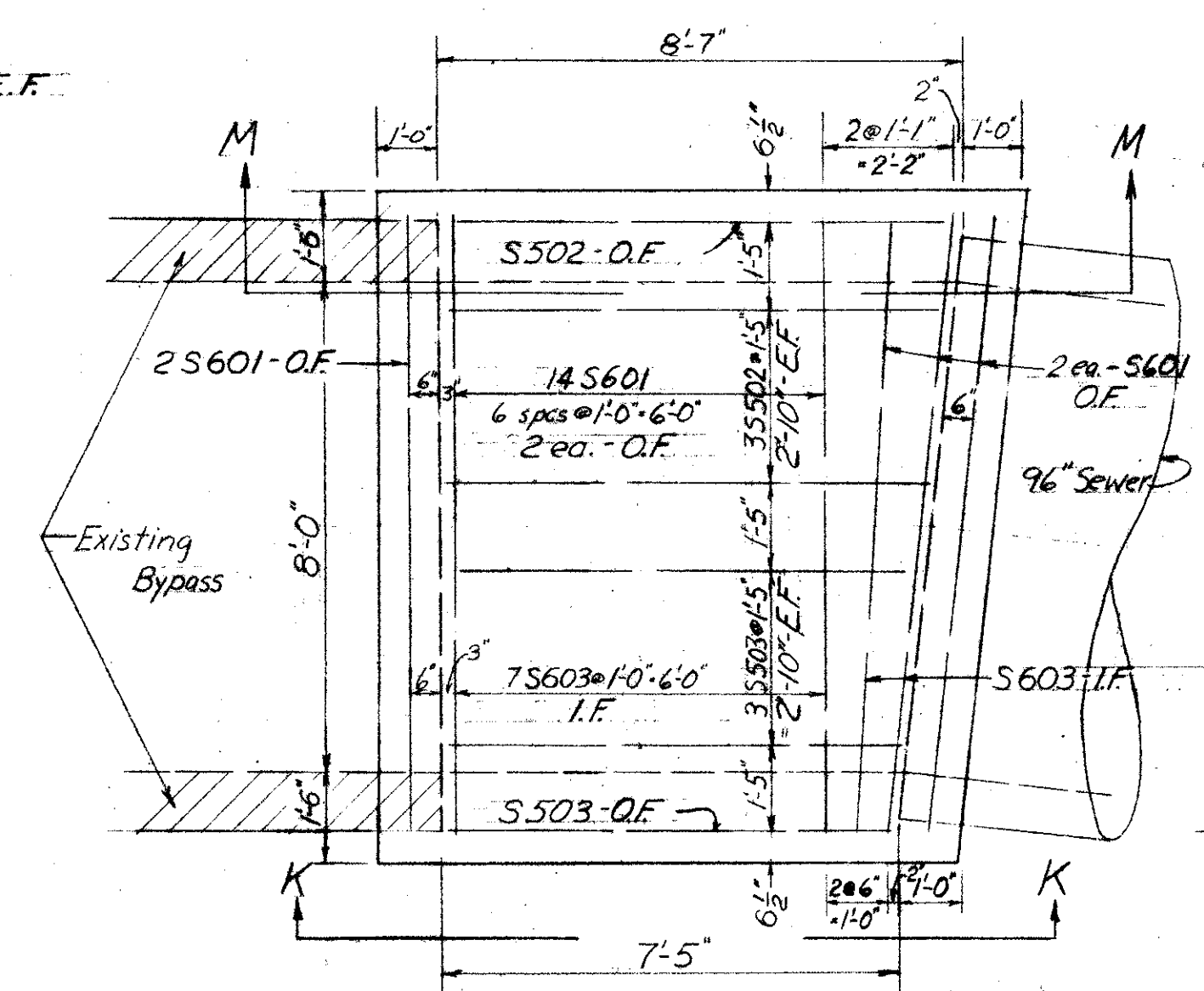
SECTION G-G



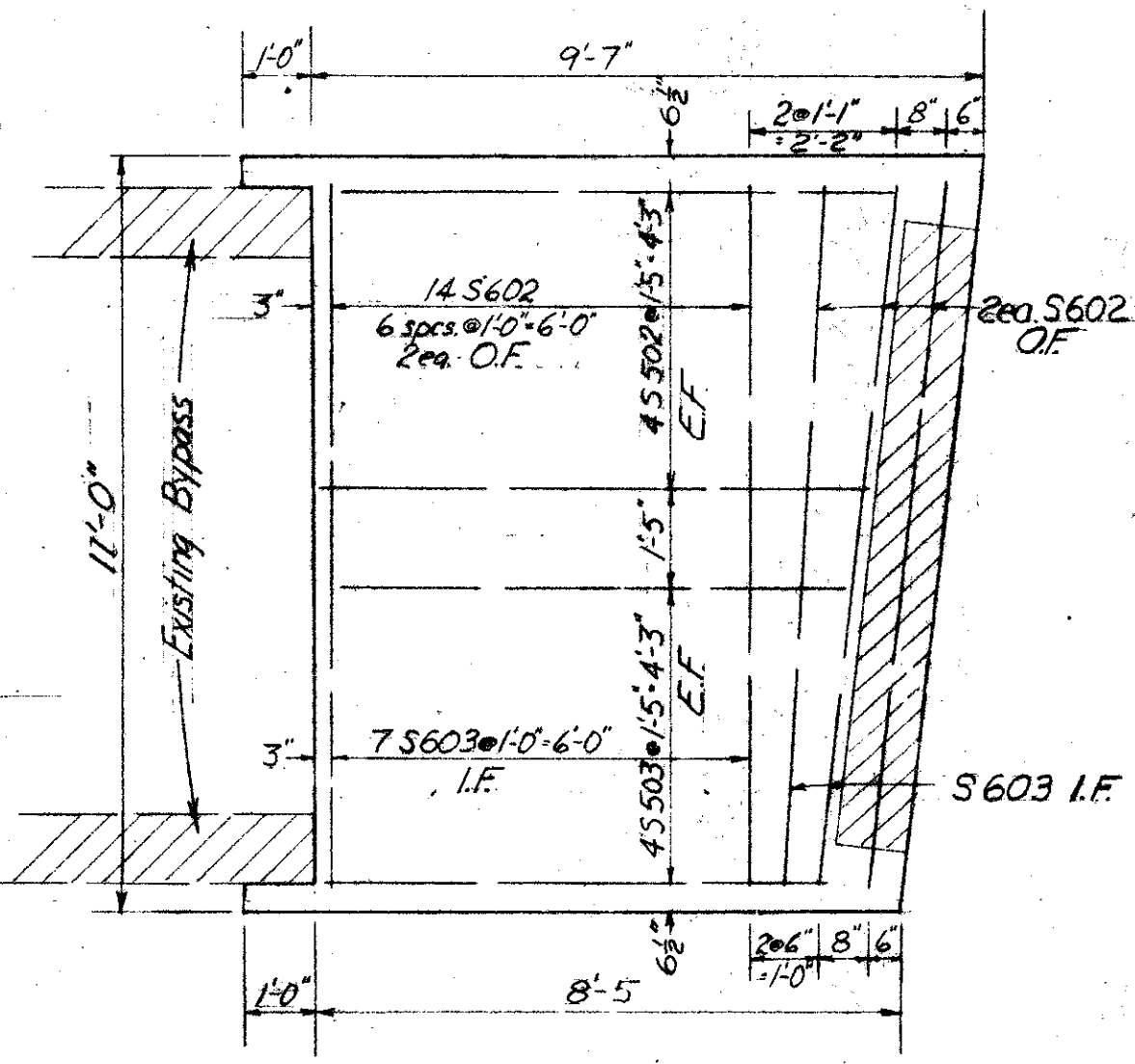
SECTION H-H



PLAN - TOP SLAB AT MANHOLE

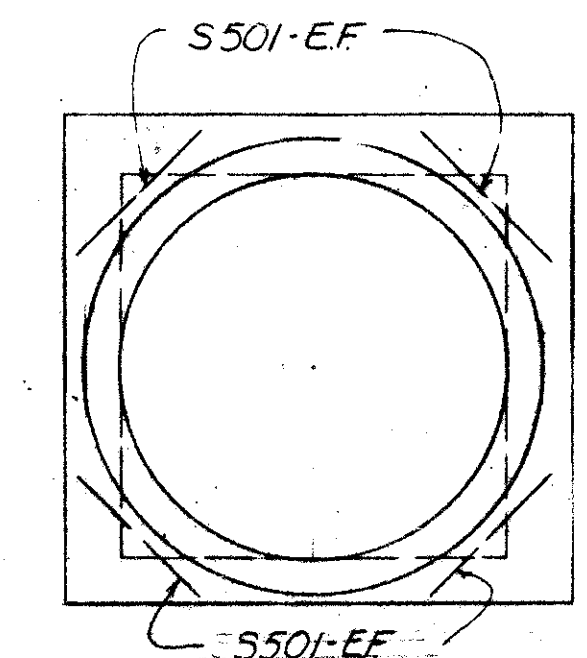


TRANSITION SECTION

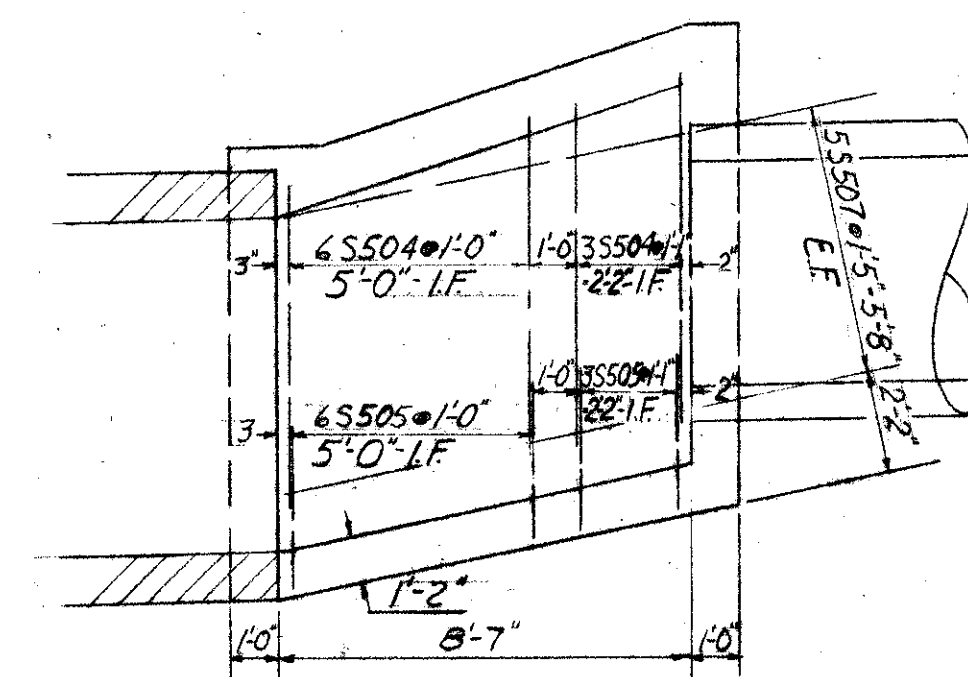


BOTTOM SLAB - PLAN & REINFORCING STEEL  
dimensions are horizontal

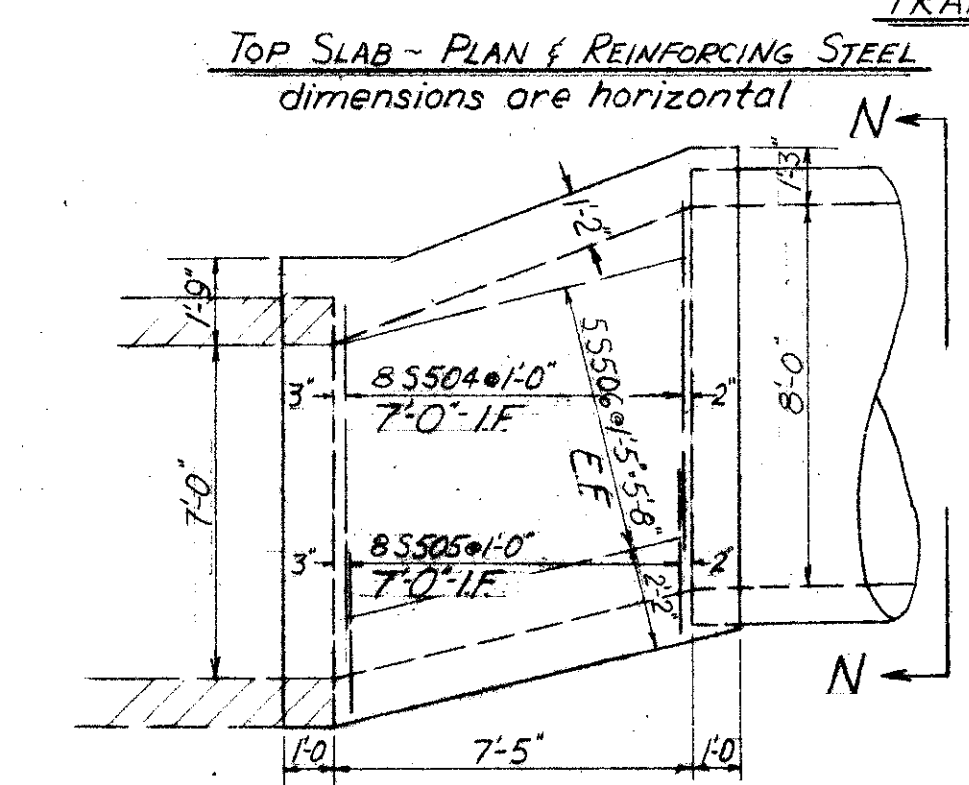
Note: Manhole steps shall be constructed according to details shown on manhole standard I-8 No. 1-A. Cost is included with concrete for payment.



SECTION N-N



SECTION M-M



VIEW K-K



## REINFORCING

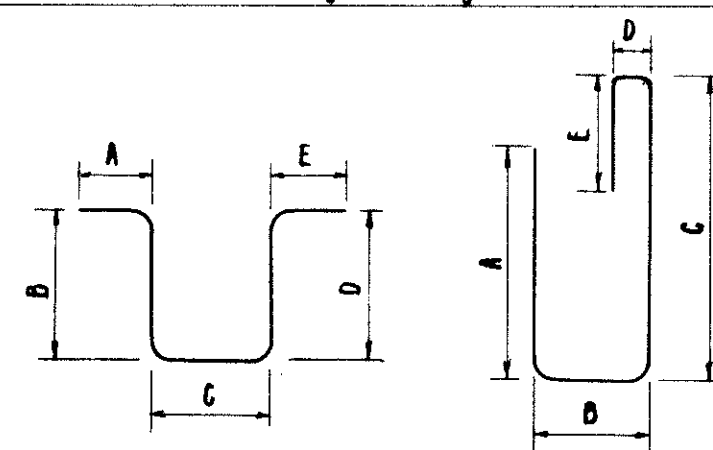
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
PETERS RUN SEWER										
B 501	68	30-2	2140							ST
B 502	18	30-0	563							ST
B 503	10	7-7	79							ST
B 504	7	7-9	54	1		2-0	2-1	3-6		BT
B 505	9	4-5	41	1		3-6	1-0			BT
B 506	101	5-0	527							ST
B 507	30	5-9	167							ST
B 508	2	5-8	12							ST
B 509	2	6-3	13							ST
B 510	6	6-10	43							ST
B 511	2	7-6	16							ST
B 512	10	7-9	81							ST
B 513	117	4-7	559	1		3-9	1-0			BT
B 514	20	30-6	636							ST
B 515	20	7-8	160							ST
B 516	30	4-10	151	1		4-0	1-0			BT
B 517	44	30-9	1392							ST
B 518	18	23-0	432							ST
B 519	22	12-3	281							ST
B 520	2	4-6	9							ST
B 521	4	3-9	16							ST
B 522	4	5-7	23							ST
B 523	4	4-3	18							ST
B 524	4	2-8	11							ST
B 525	8	5-3	44							ST
B 601	2	12-8	38	1		5-10	7-0			BT
B 602	2	13-1	39	1		6-3	7-0			BT
B 603	2	13-6	41	1		6-8	7-0			BT
B 604	2	13-11	42	1		7-1	7-0			BT
B 605	2	14-3	43	1		7-5	7-0			BT
B 606	6	14-8	132	1		7-10	7-0			BT
B 607	4	13-11	84	1		7-10	6-3			BT
B 608	4	8-6	51	1		7-10	0-10			BT
B 609	2	15-0	45	1		8-2	7-0			BT
B 701	62	12-6	1584	1		5-7	7-1			BT
B 702	8	12-0	196							ST
B 703	4	6-3	51							ST
B 704	1	12-0	25							ST
B 705	43	12-0	1055							ST
B 706	222	11-3	5105	1		4-4	7-1			BT
B 707	62	11-6	1457	1		4-7	7-1			BT
B 801	198	12-2	6432	1		5-2	7-3			BT
B 802	31	12-0	993							ST
B 901	198	12-0	8078							ST

## STEEL

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
TRANSITION SECTION-EXPRESSWAY SEWER										
S 501	8	3-6	29							ST
S 502	15	8-3	129							ST
S 503	15	7-7	119							ST
S 504	17	7-0	124							ST
S 505	17	5-4	95	1		4-6	1-0			BT
S 506	10	7-4	76							ST
S 507	10	8-5	88							ST
S 601	22	13-4	441	1		7-2	6-4			BT
S 602	20	10-10	325	1		4-8	6-4			BT
S 603	18	10-8	288							ST
REPLACEMENT STEEL										
RE 501	1	5-7								ST
RE 601	1	5-11								ST
RE 701	1	6-2								ST
RE 801	1	6-6								ST
RE 901	1	6-10								ST

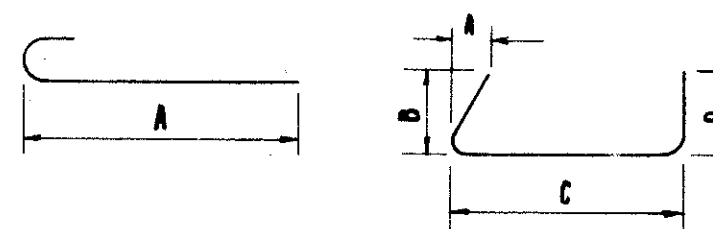
## LIST

Bending Diagram



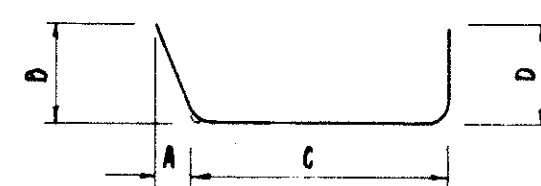
TYPE 1

TYPE 2



TYPE 3

TYPE 4



TYPE 6

NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

Franklin County  
Fra. - 40-12.82

## ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	PETERS RUN	TRANSITION SECT.
E-2	1137	Cu. Yd.	Excavation for Structure (As per plan)	957	69
E-2	Lump	Lump	Cofferdams, Cribbs & Sheeting		
S-1	171	Cu. Yd.	Class "C" Concrete	154	17
S-4	34,673	Lb.	Reinforcing Steel	32,959	1714
I-8	1	Ea.	Type I-A Manhole (Modified)	1	
S-22	Lump	Lump	Removal of portions of Existing Structure		
Totals to G.S.					

## Notes:

Construction Procedure: Portions of the existing structure shall be removed as indicated on the plans. During this removal and during the construction of the new facility, the flow in Peters Run Sewer shall be maintained by by-passing this flow into the existing 96 inch pipe or the 12'x7' Main Storm Overflow Channel. The cost of maintaining this flow shall be included with E-2, Unclassified Excavation, as per plan.

Excavation Quantity: The volume occupied by the existing pipe and chamber, within the construction area, has not been deducted from the excavation quantity shown.

15" Pipe: The existing 15 inch pipe cannot be verified in the field. The Contractor shall attempt to locate this pipe during construction and make the connection.

96" Pipe: After construction of the box for Peters Run, the area shall be backfilled according to E-2.08 up to the existing ground prior to construction of the 96" pipe. The pipe trench shall be backfilled with granular material in accordance with I-1.07 for a distance of 40 feet from the pipe end of the transition section.

Spur Track: The spur track will be removed and re-installed by the Railroad Company.

## REPLACEMENT BARS

IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

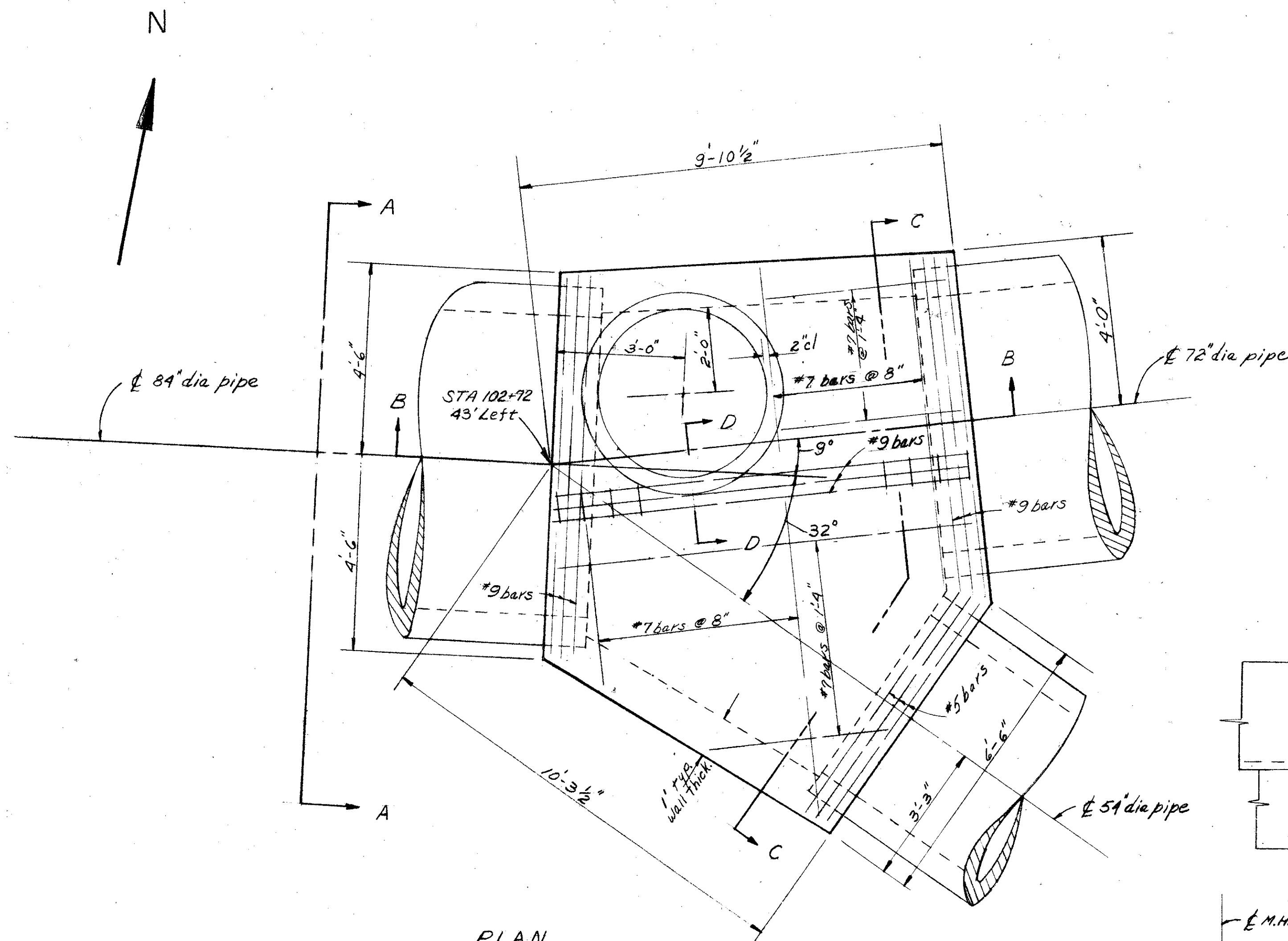
ALTERATION OF REGULATOR

CHAMBER SYSTEM

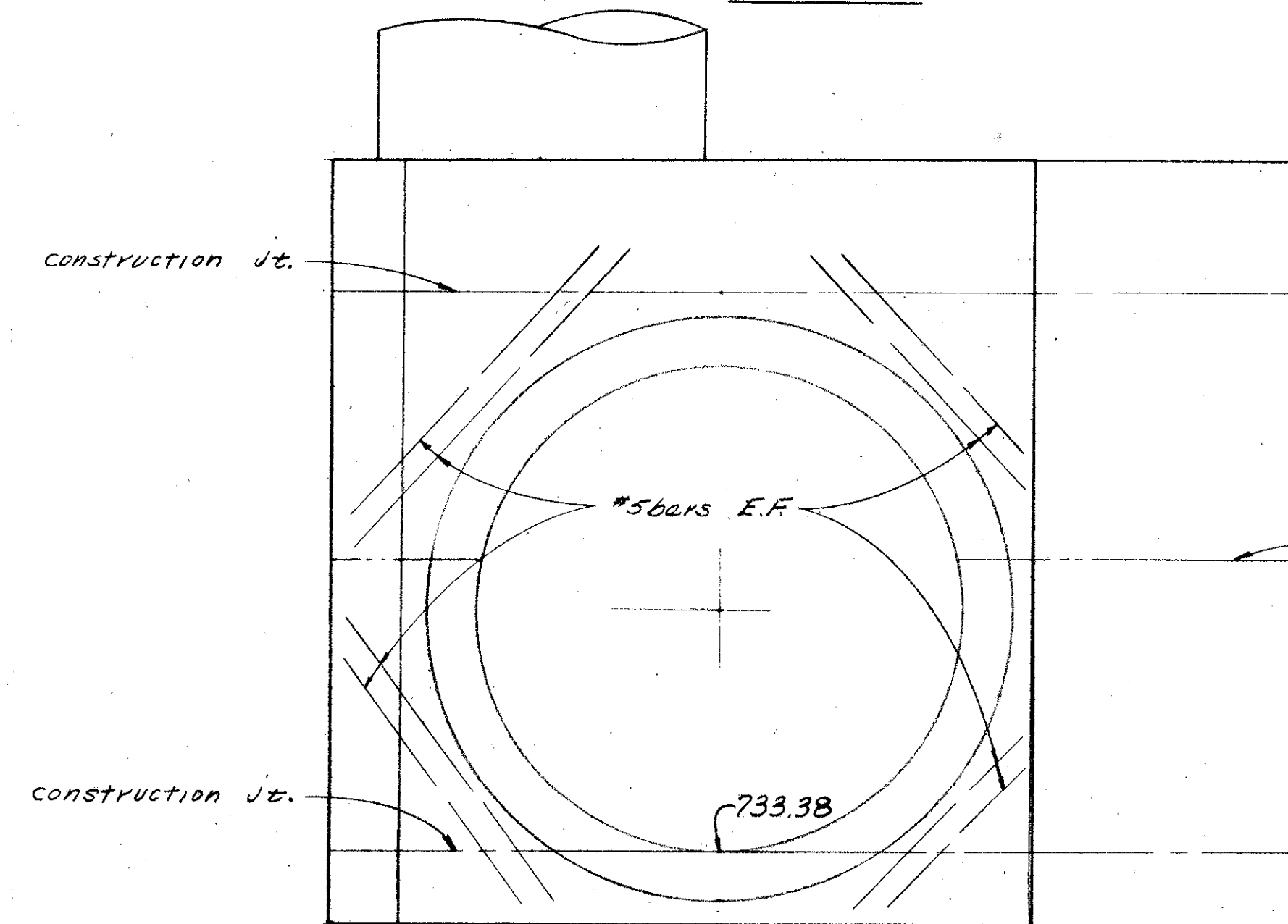
SOUTHEAST INNERBELT

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RWE	DWH		BETTING	724		

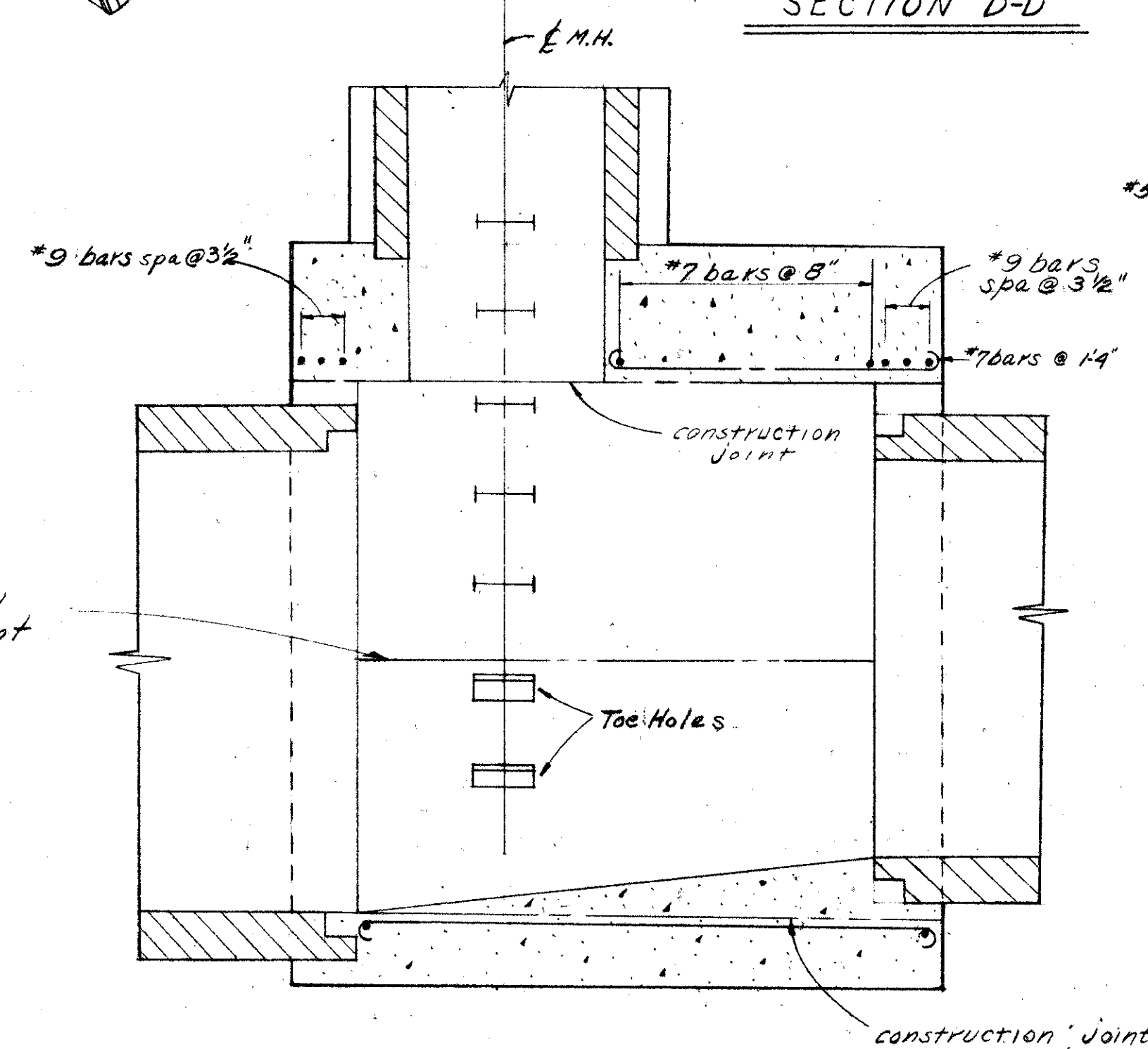




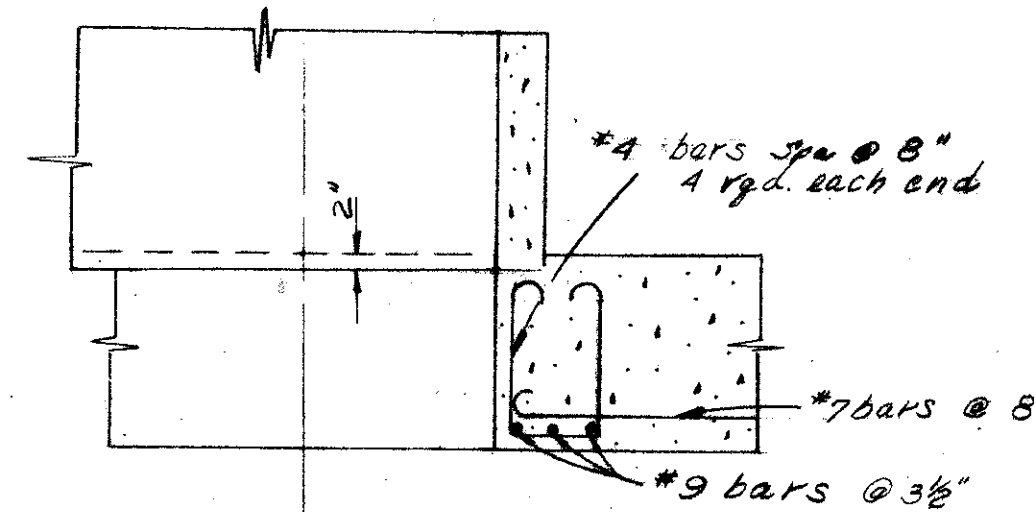
PLAN



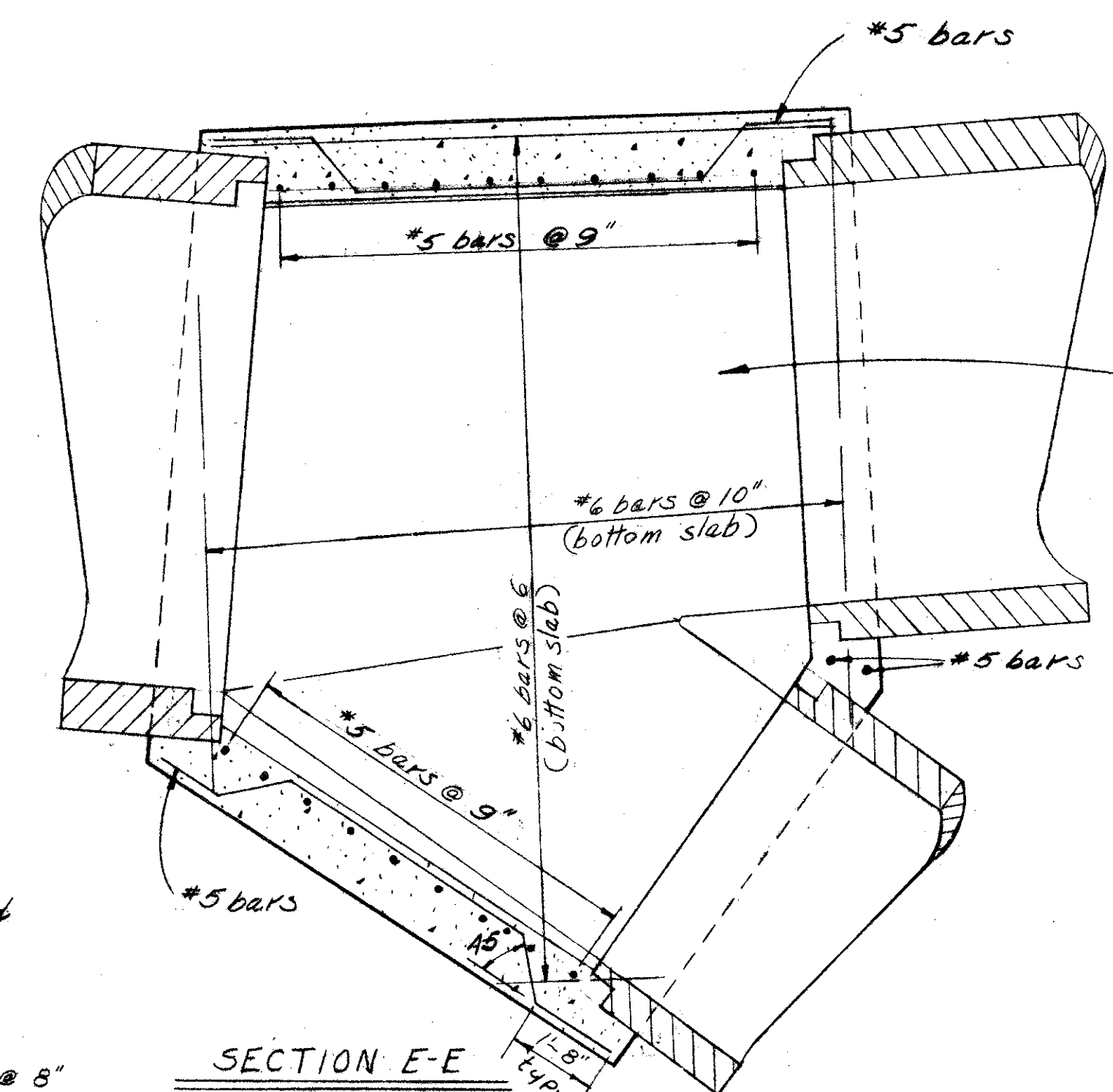
VIEW A-A



SECTION B-B



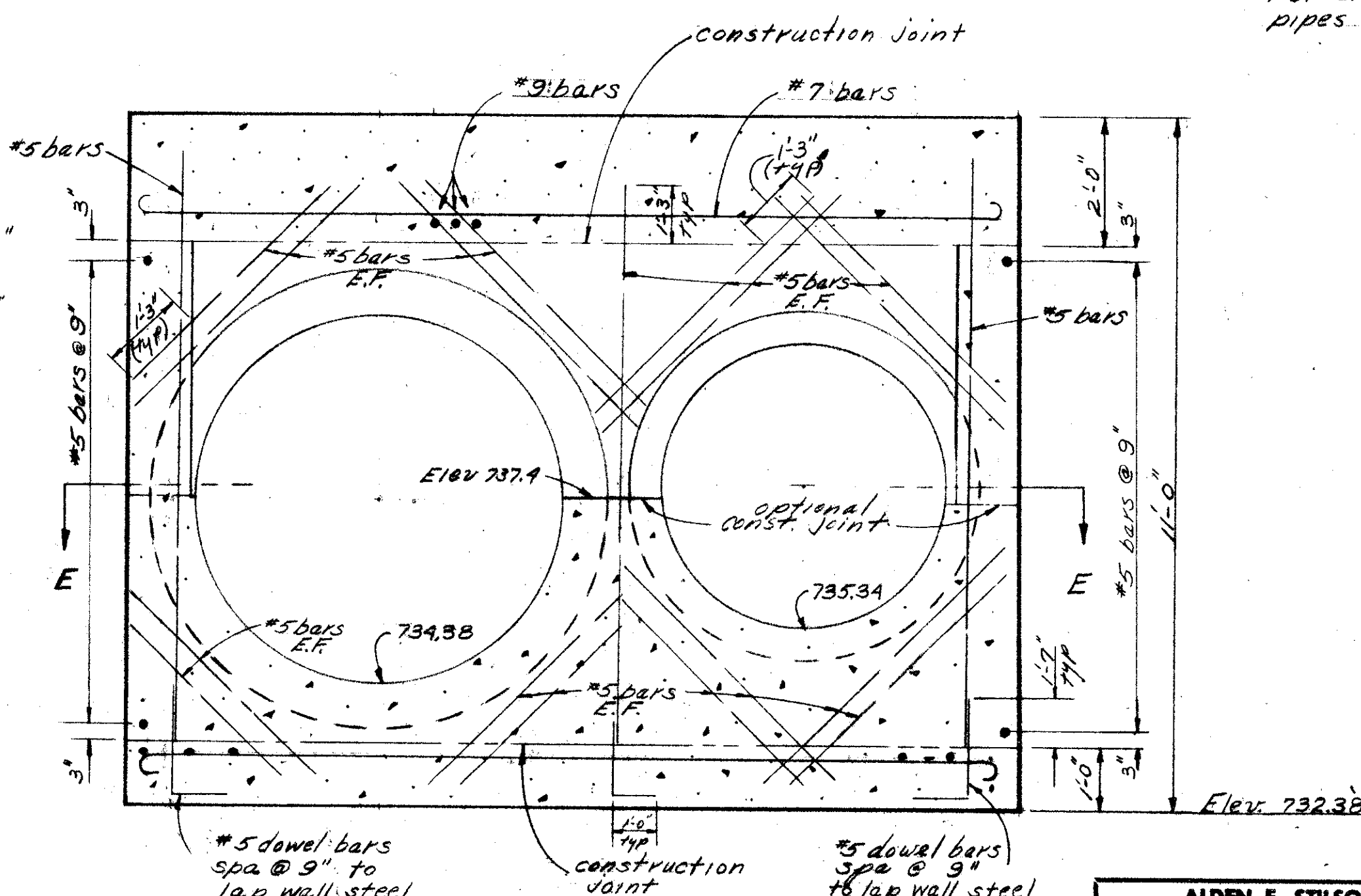
SECTION D-D



SECTION E-E

Note: Shape bottom to conform to bottom of pipe

Note: For additional details see Std. Dwg. I-8 M.H. 1-A. E.F. indicates each face. All top & bottom slab bars shall be hooked. For direction and location of pipes see drainage plans.



SECTION C-C

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

JUNCTION BOX  
Station 102+72 43' Left

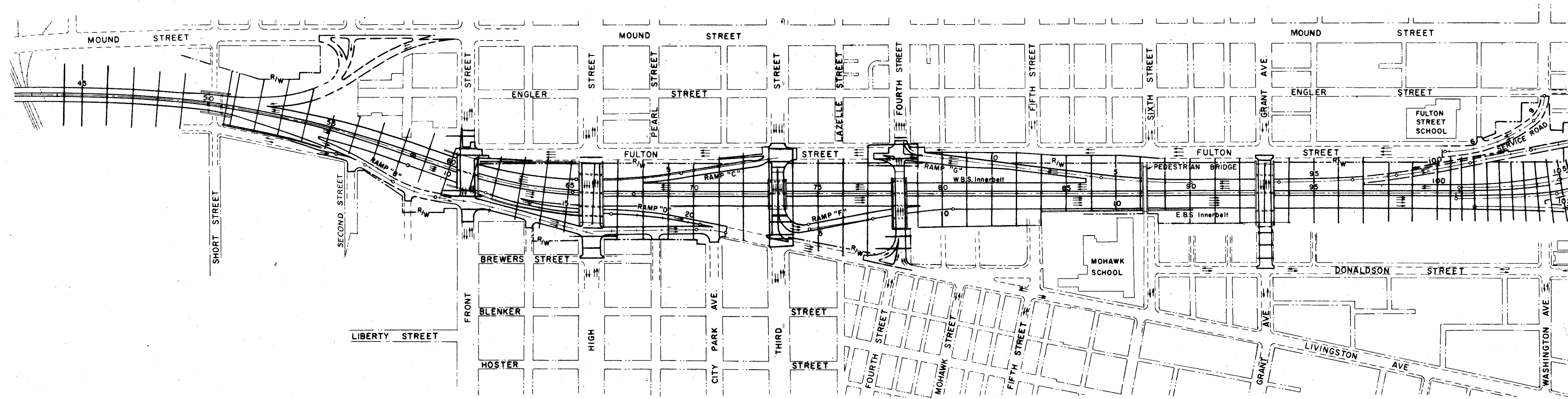
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.R.W.	DFH		DFH	TLU	4-26-62	



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

69  
250

FRANKLIN COUNTY  
FRA.-40-12.82



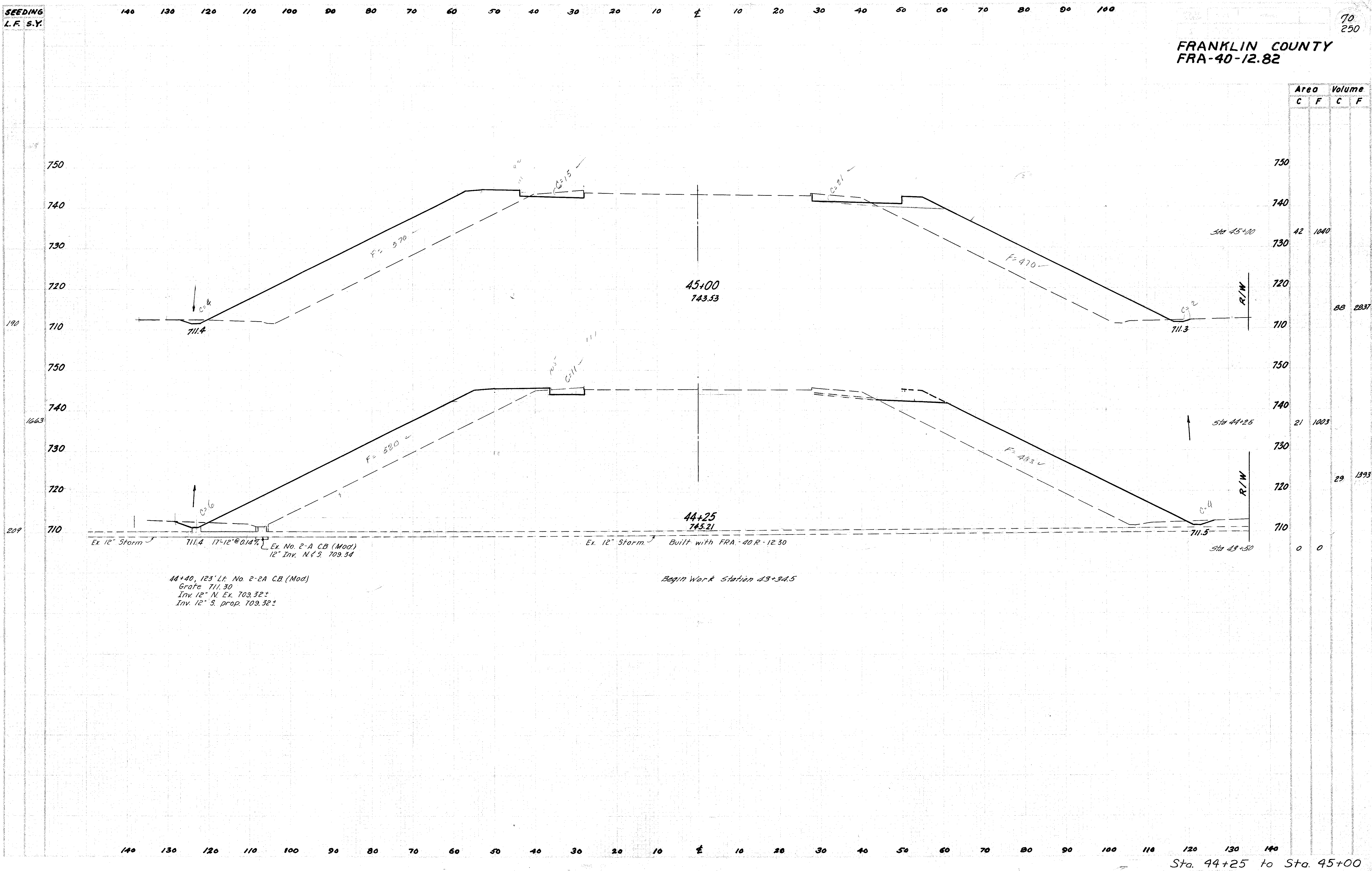
CROSS-SECTION LAYOUT



SEEDING  
L.F. S.Y.

FRANKLIN COUNTY  
FRA-40-12.82

70  
250





AREA		VOLUME	
C	F	C	F
0	0	344	907
580	1530		
		1031	2720
580	1530		
		2180	5804
597	1604		
		2108	6050
541	1666		
		1067	8907
352	984		
		143	3740
42	1040		

Price of all materials & Labor for  
the above connection is to be  
included in the Unit Bid Price 730  
for the Pipe.

\* Note: See Structure FRA-40-1279 Notes for the earthwork surcharge fill

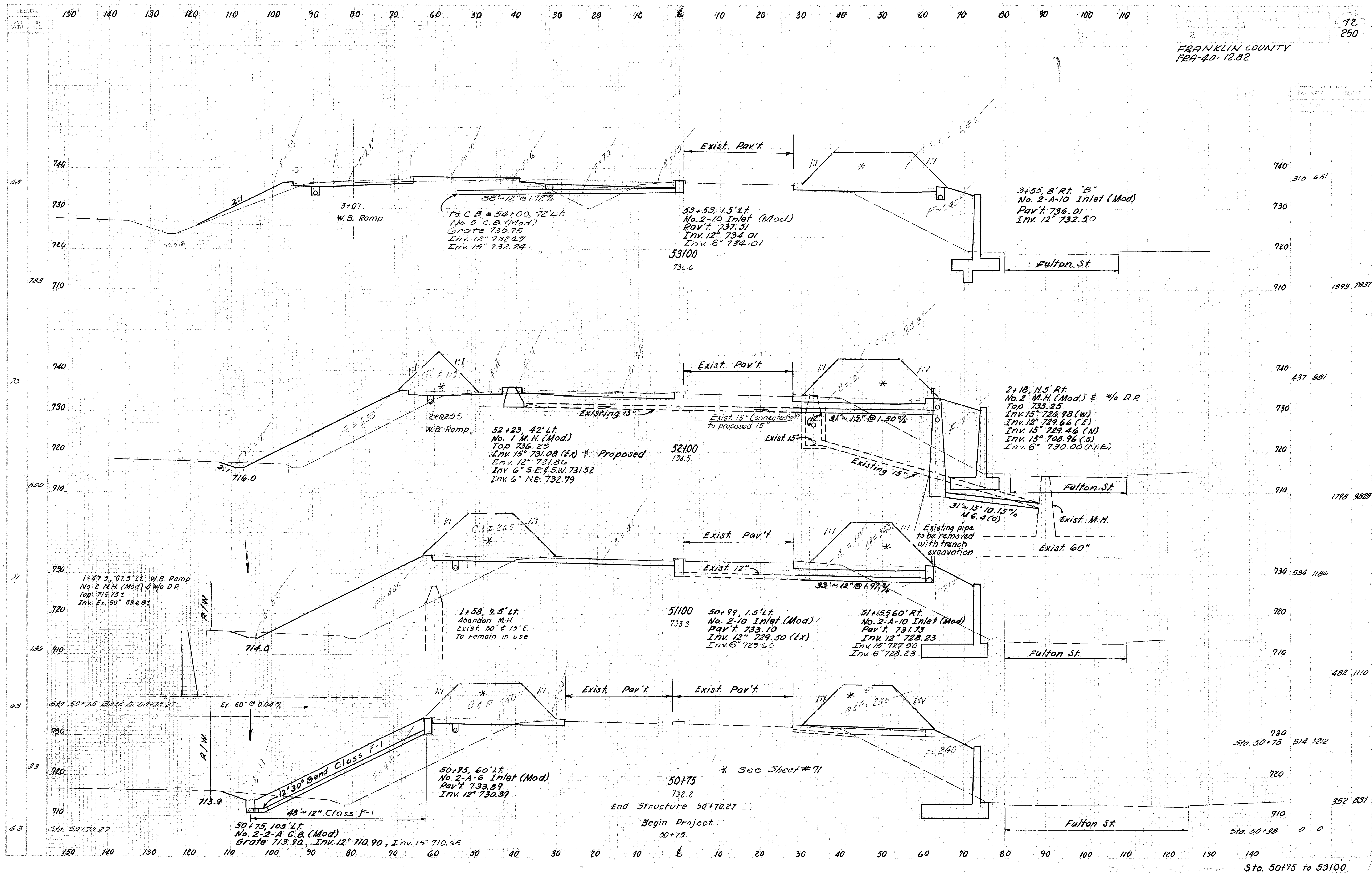
C.B. @ 47+50  
Grote 710.45

Service Rd. 'C'

Sta 45+00	42	1040
-----------	----	------

Sta. 46+00 to 49+00



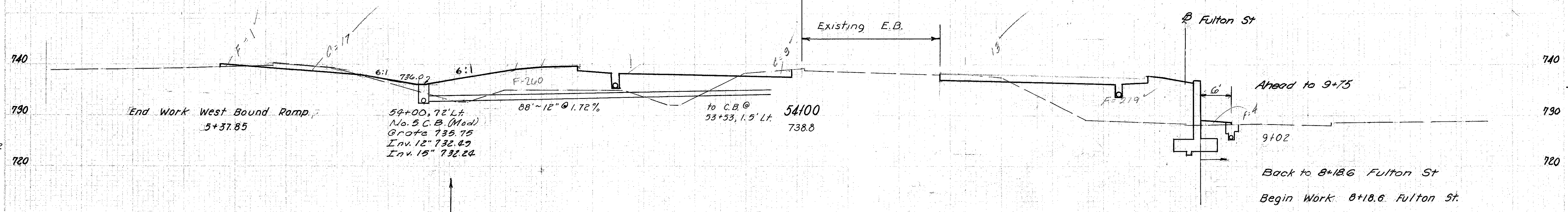
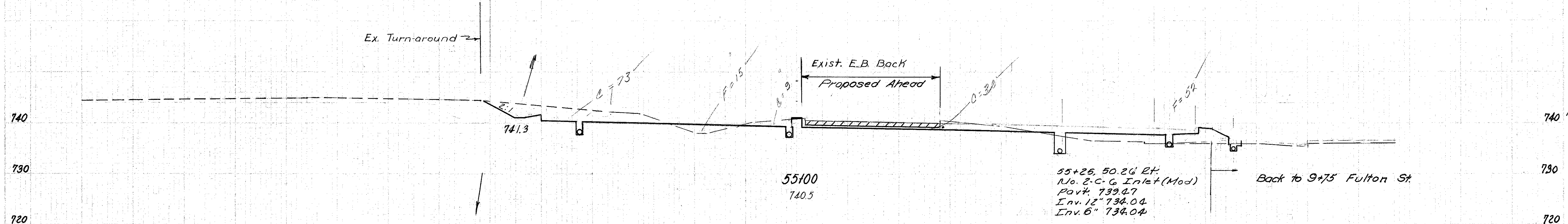
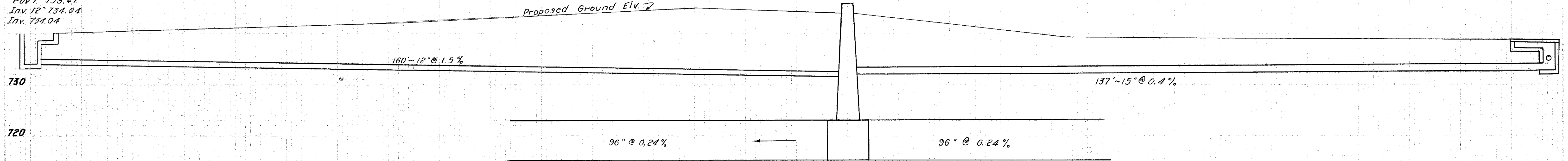




58+25, 55.75' Rt.  
No. 2-A-8 Inlet (Mod.)  
Pav't. 738.08  
Inv. 12" 734.58  
Inv. 15" 732.58  
Inv. 8" 732.58

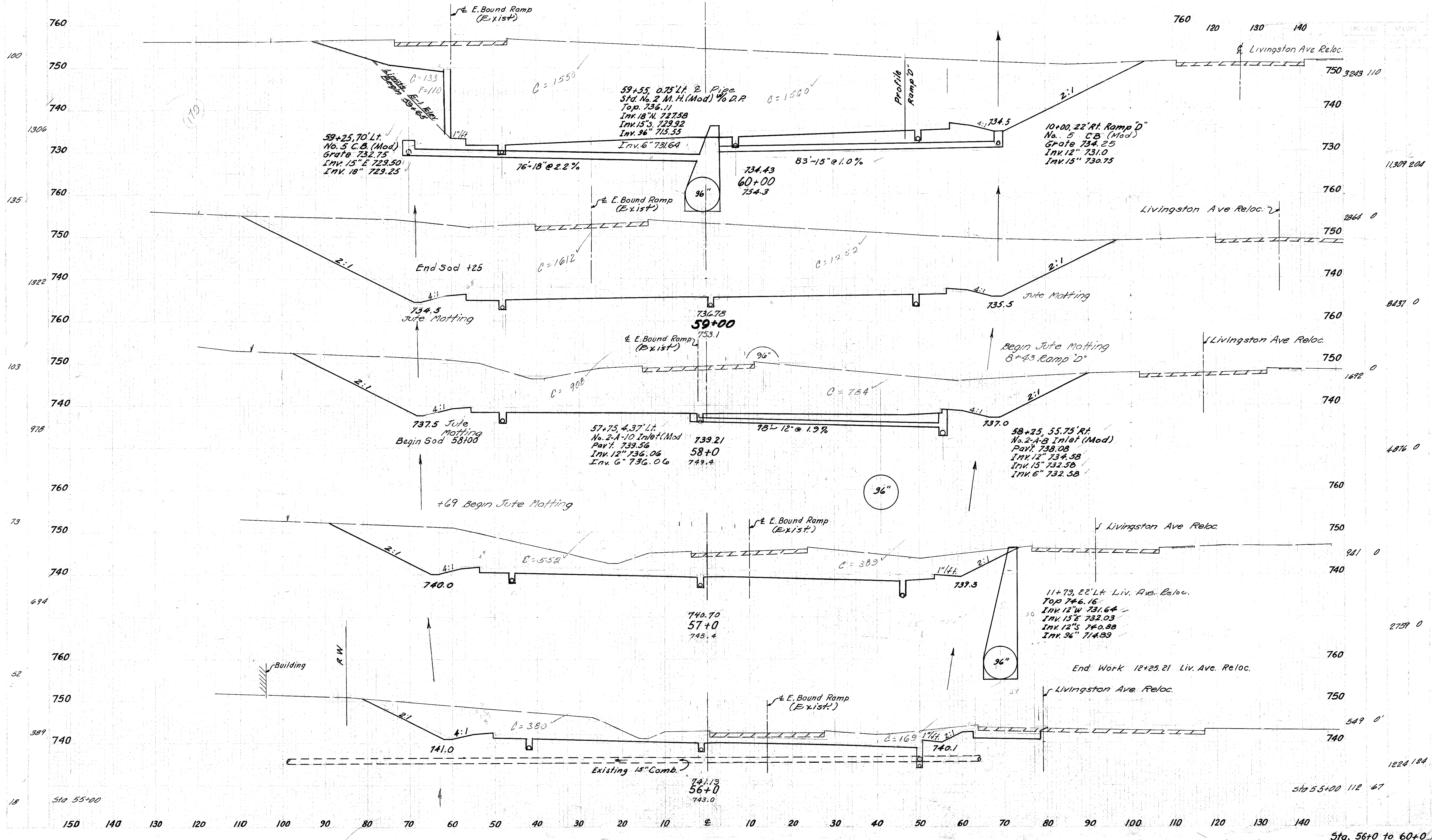
11+79, 22' Lt. Liv. Ave. Reloc.  
No. 2 M.H. (Mod.) & W/o D.P.  
Top 746.16  
Inv. 12" W. 731.64  
Inv. 15" E. 732.03  
Inv. 12" S. 740.88  
Inv. 96" 740.88

55+25, 50.26' Rt. M.E.  
No. 2-C-6 Inlet (Mod.)  
Pav't. 739.47  
Inv. 12" 734.04  
Inv. 734.04

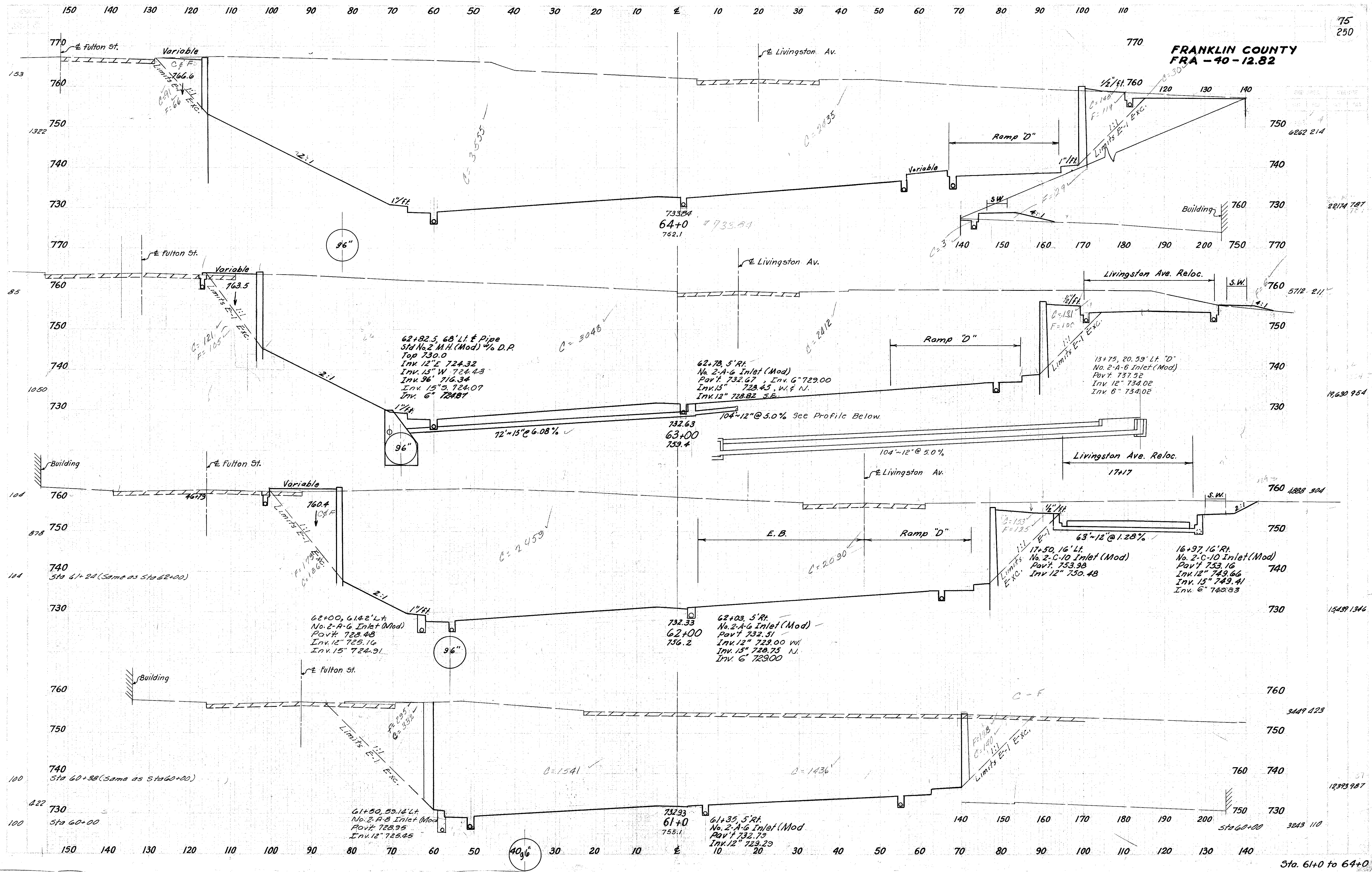




FRANKLIN COUNTY  
FRA-40-12.82

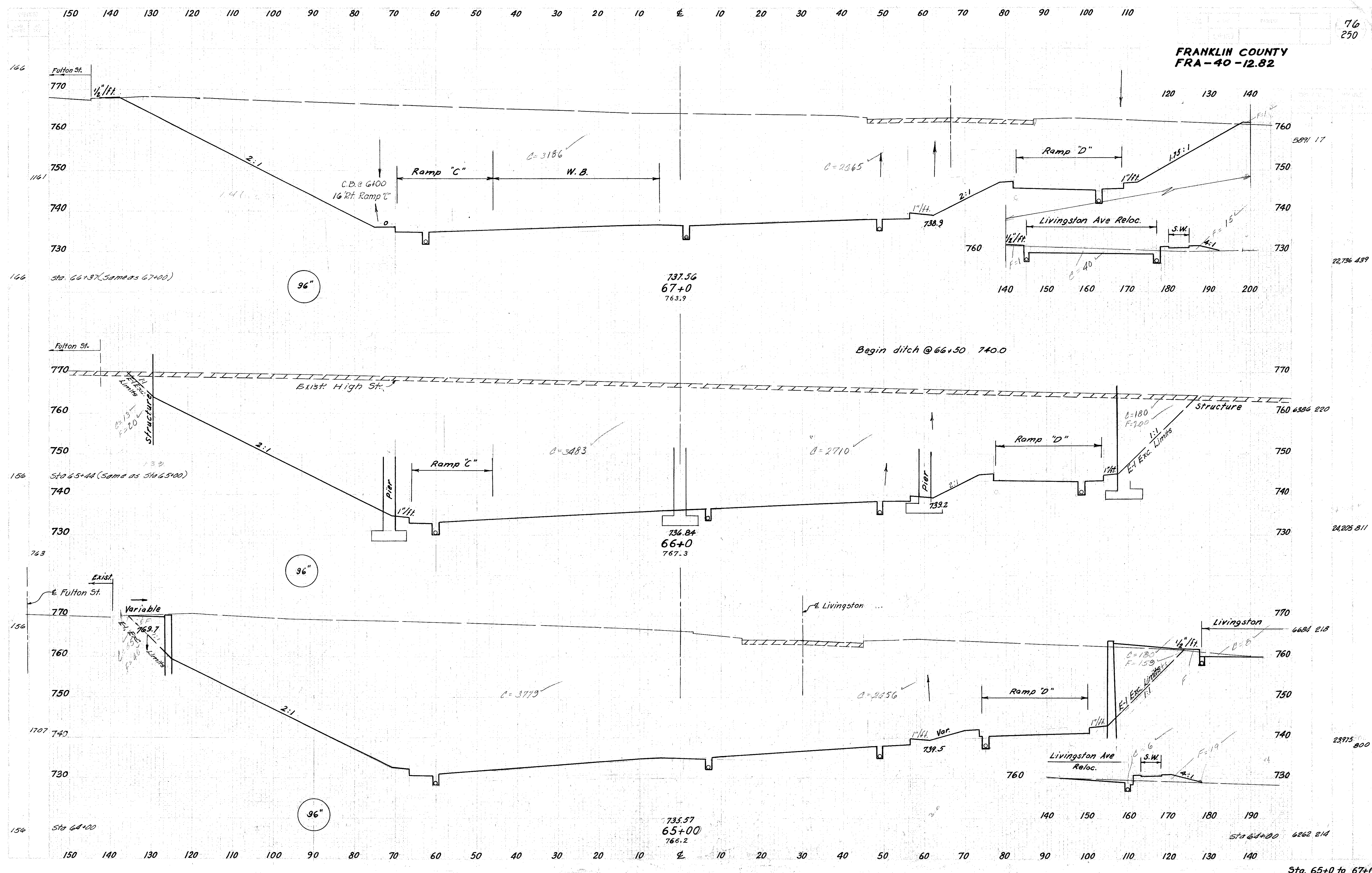






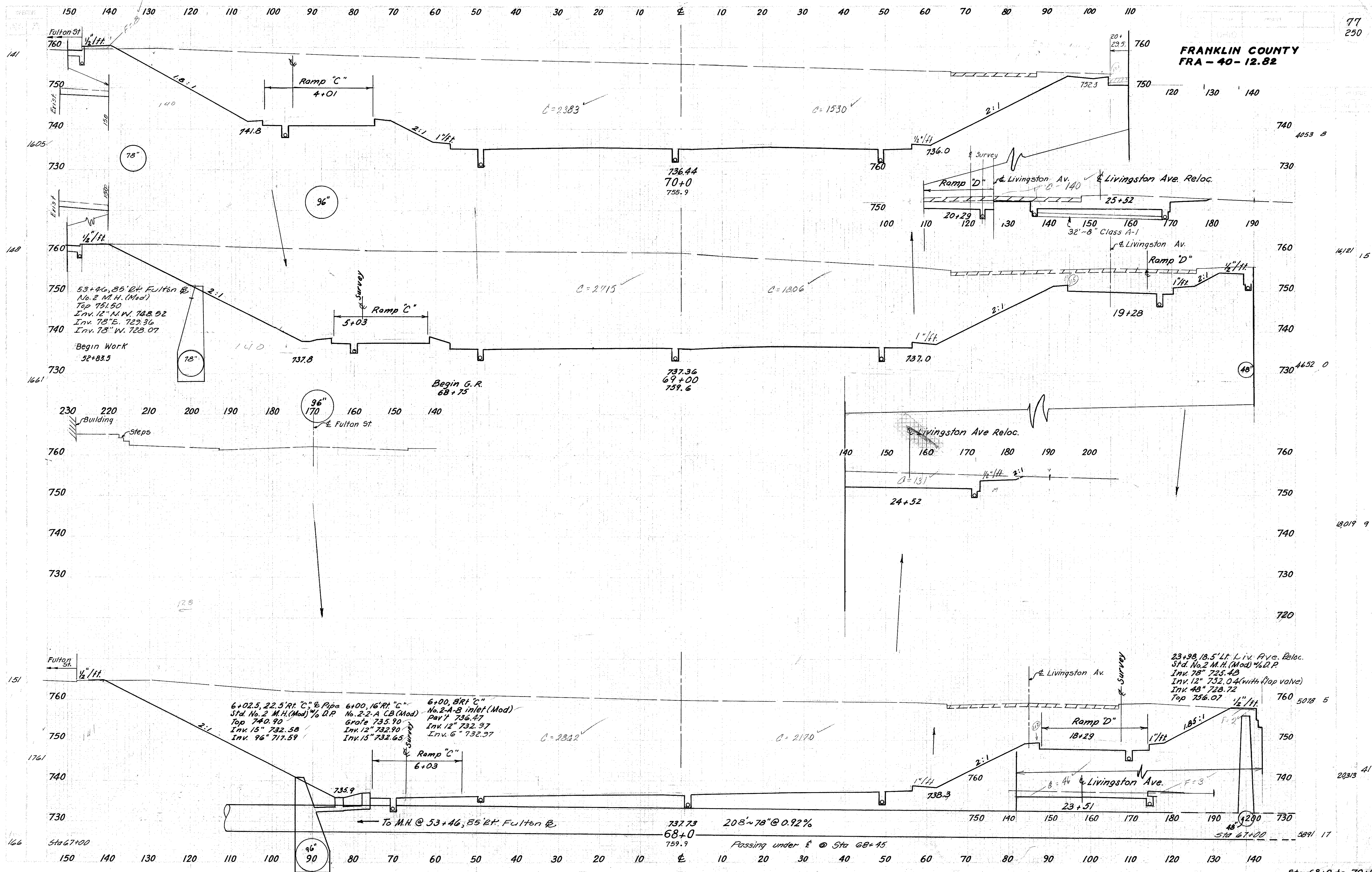


FRANKLIN COUNTY  
FRA-40-12.82

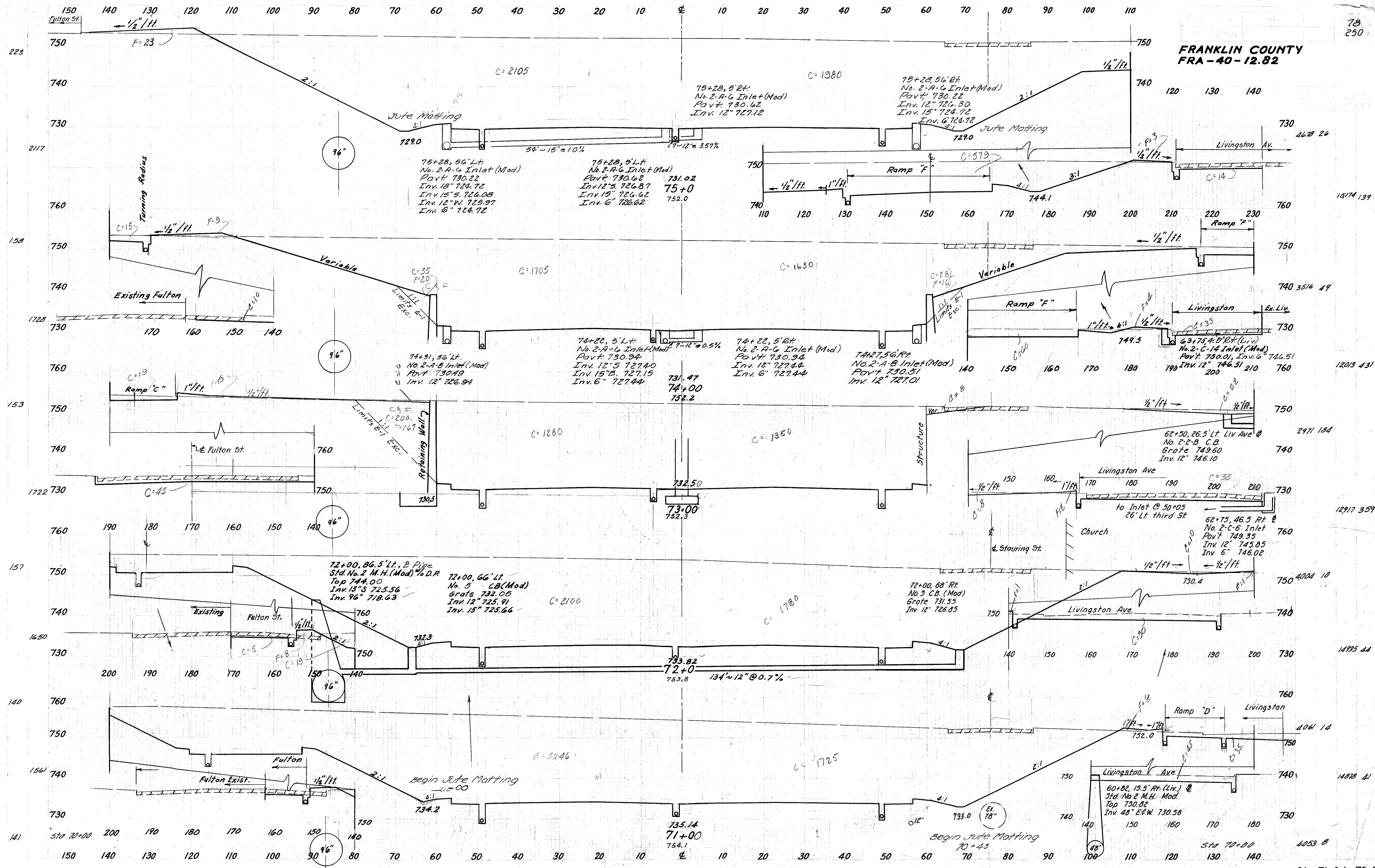




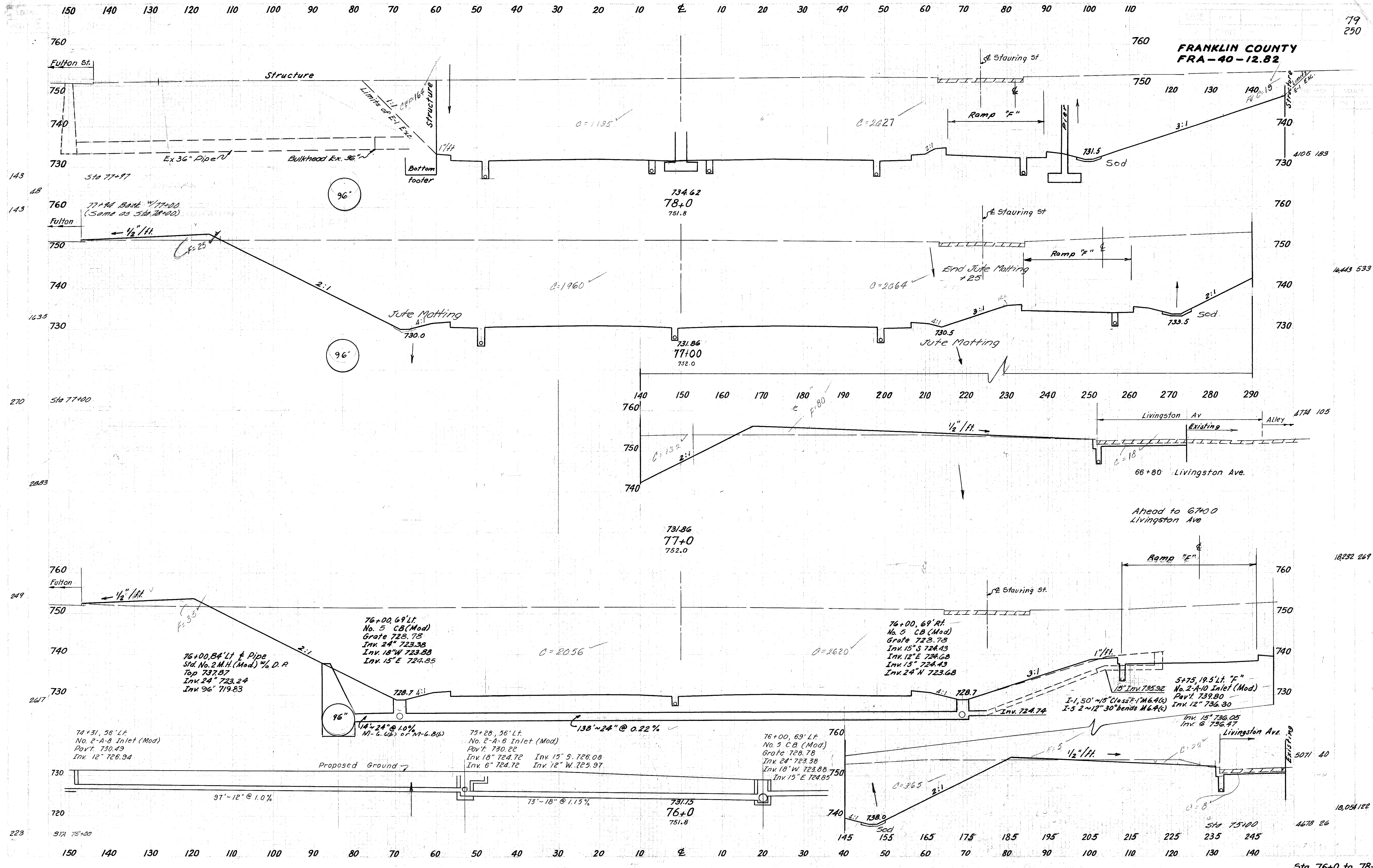
FRANKLIN COUNTY  
FRA - 40-12.82



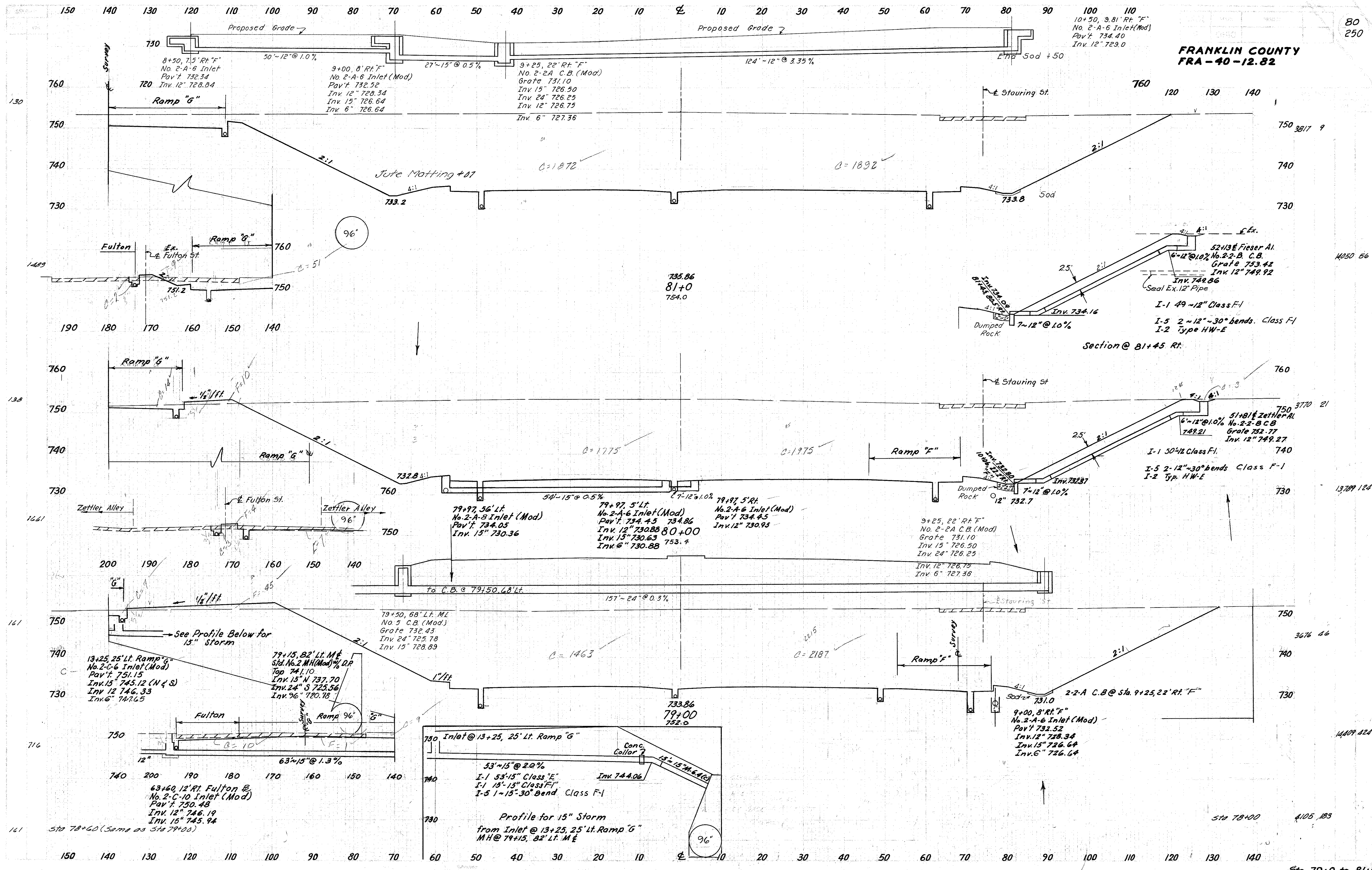




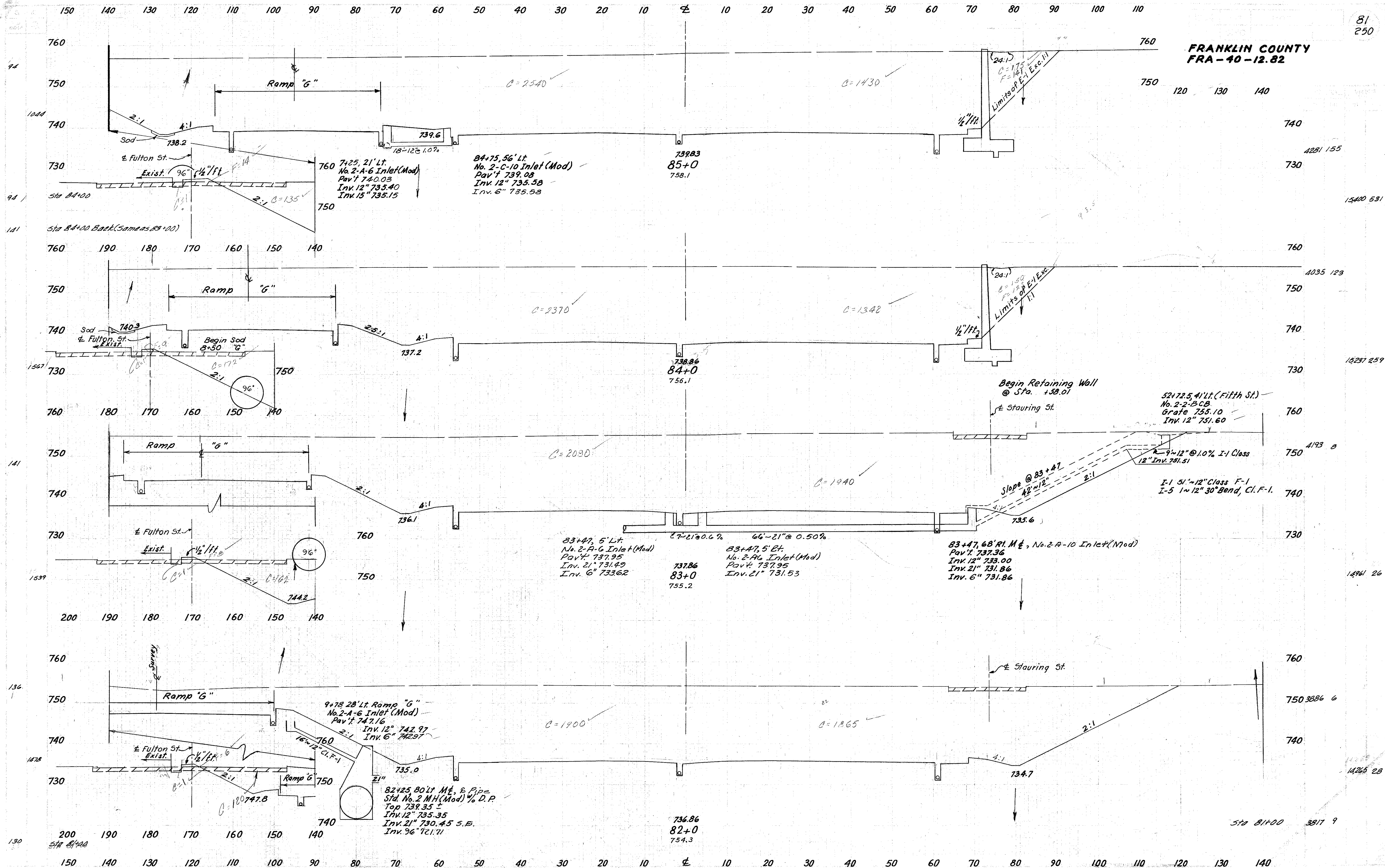




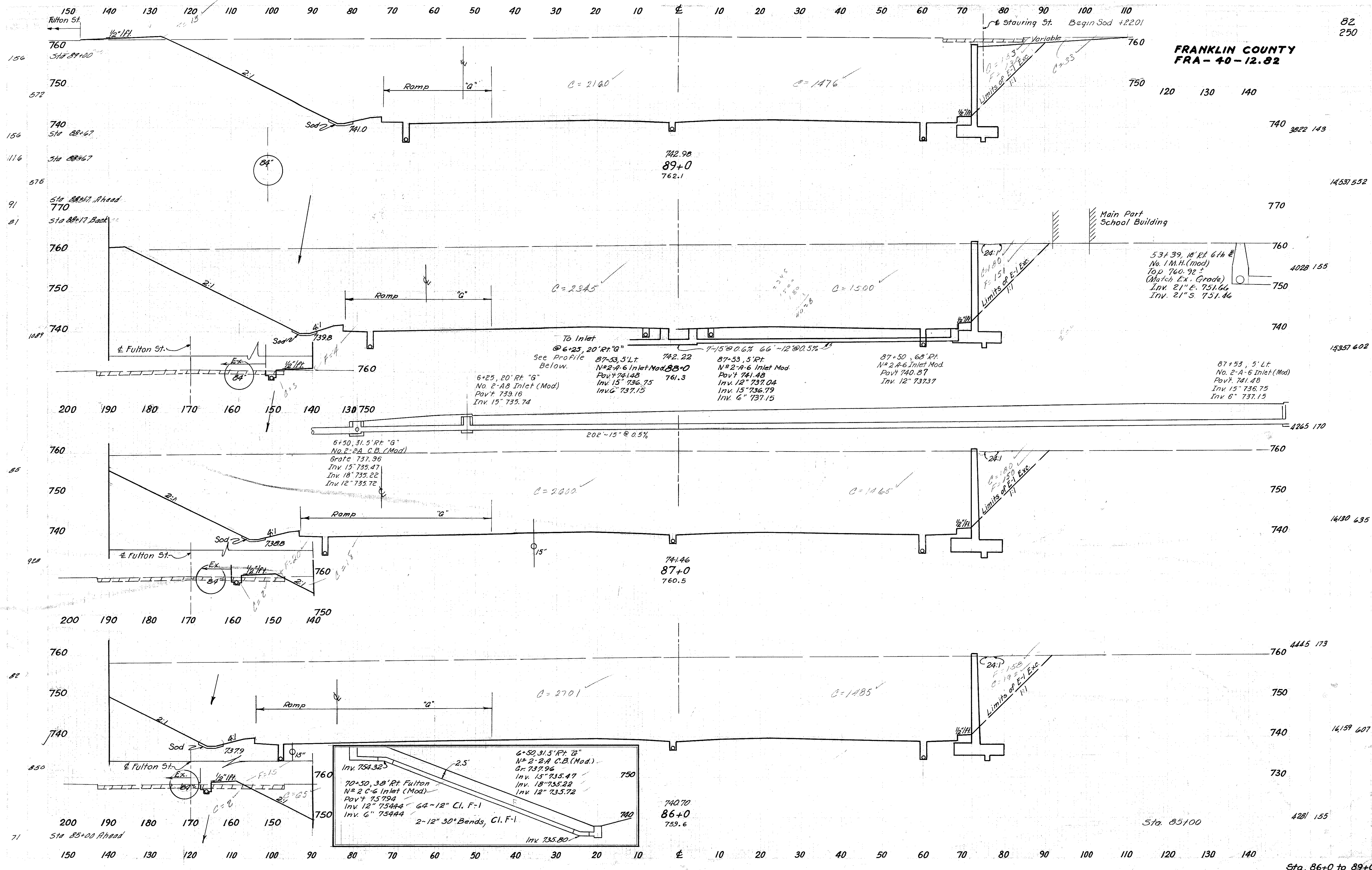






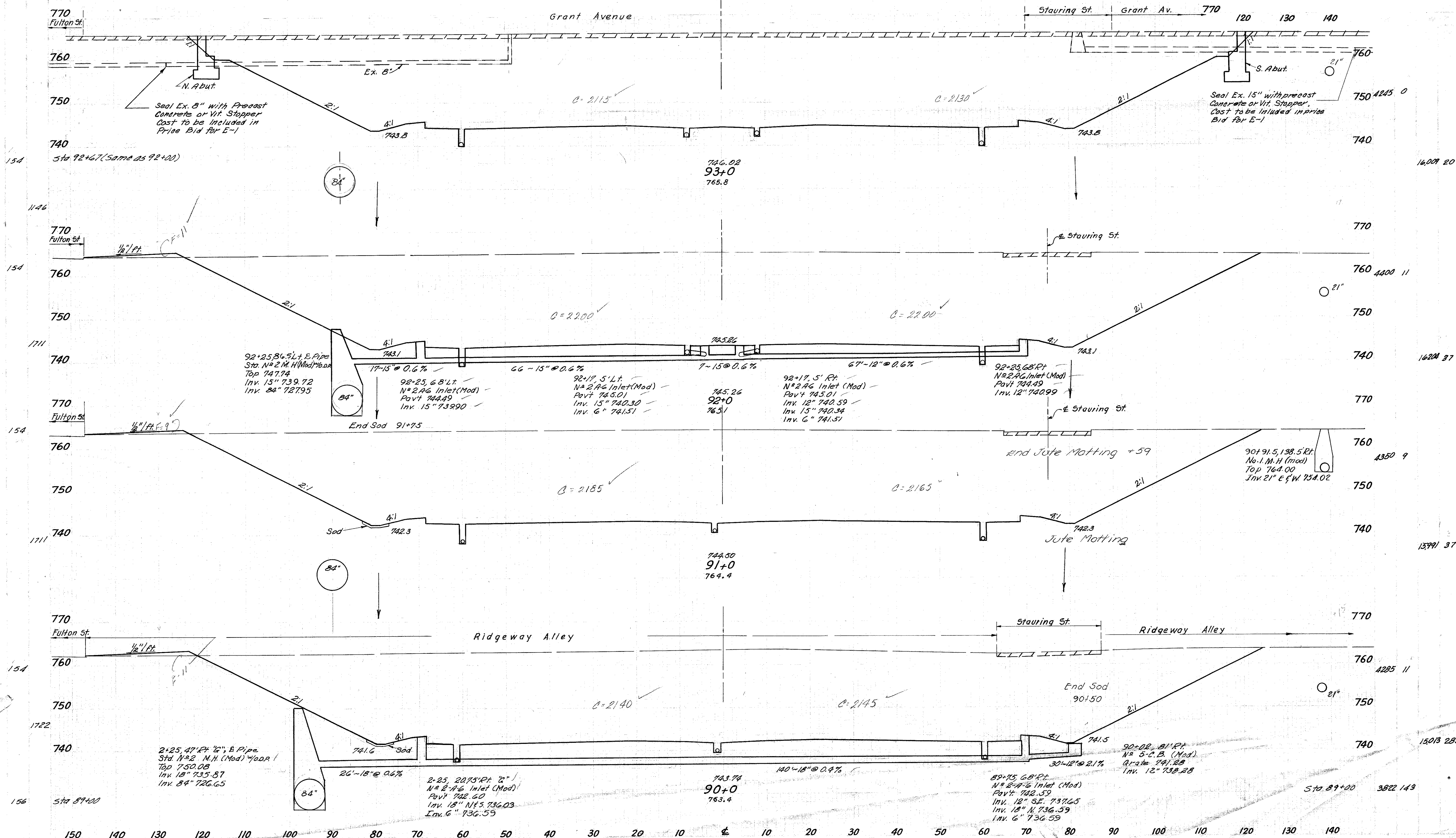








FRANKLIN COUNTY  
FRA-40-12.82



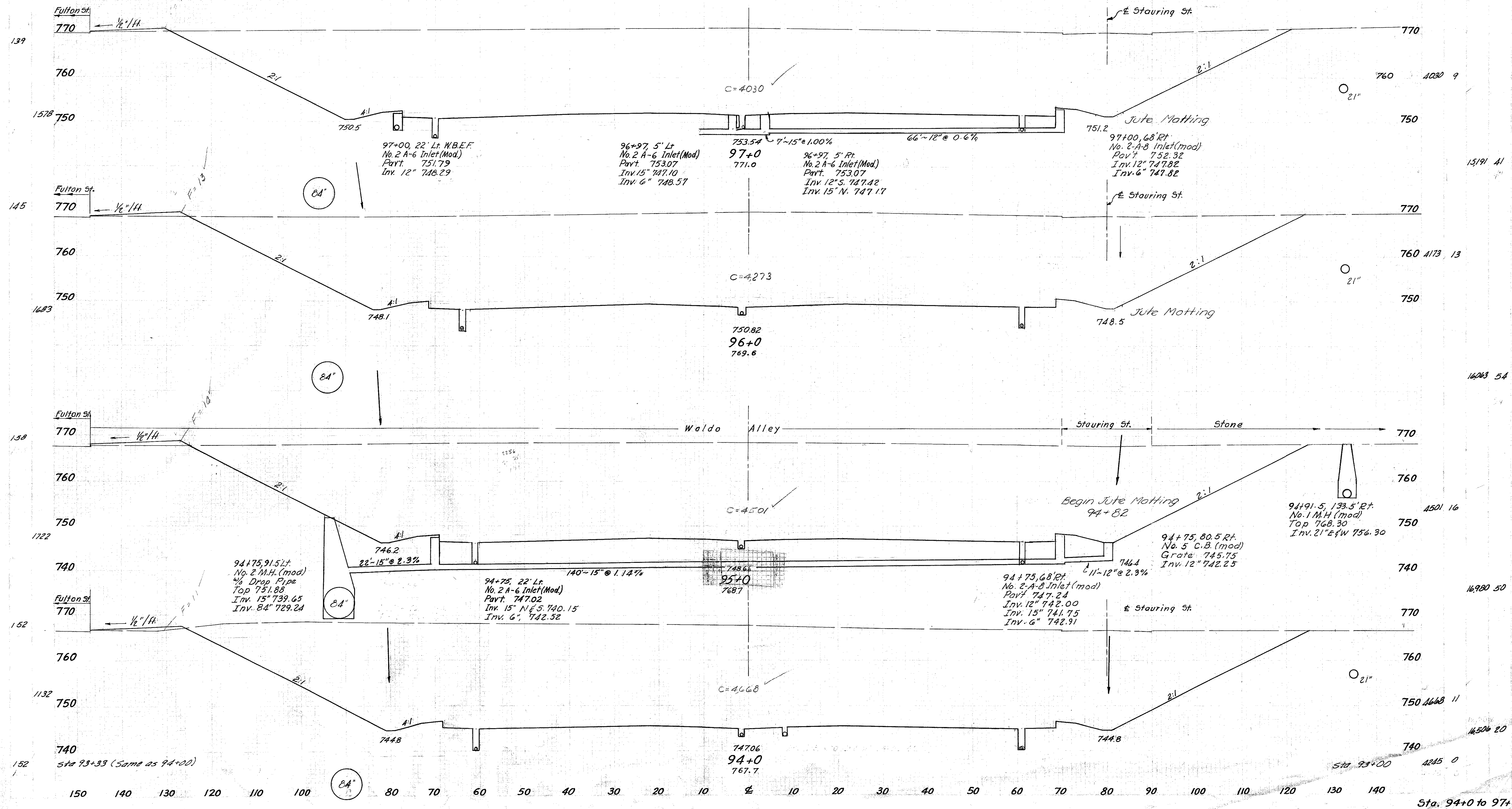


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

84  
250

FRANKLIN COUNTY  
FRA-40-12.82

120 130 140





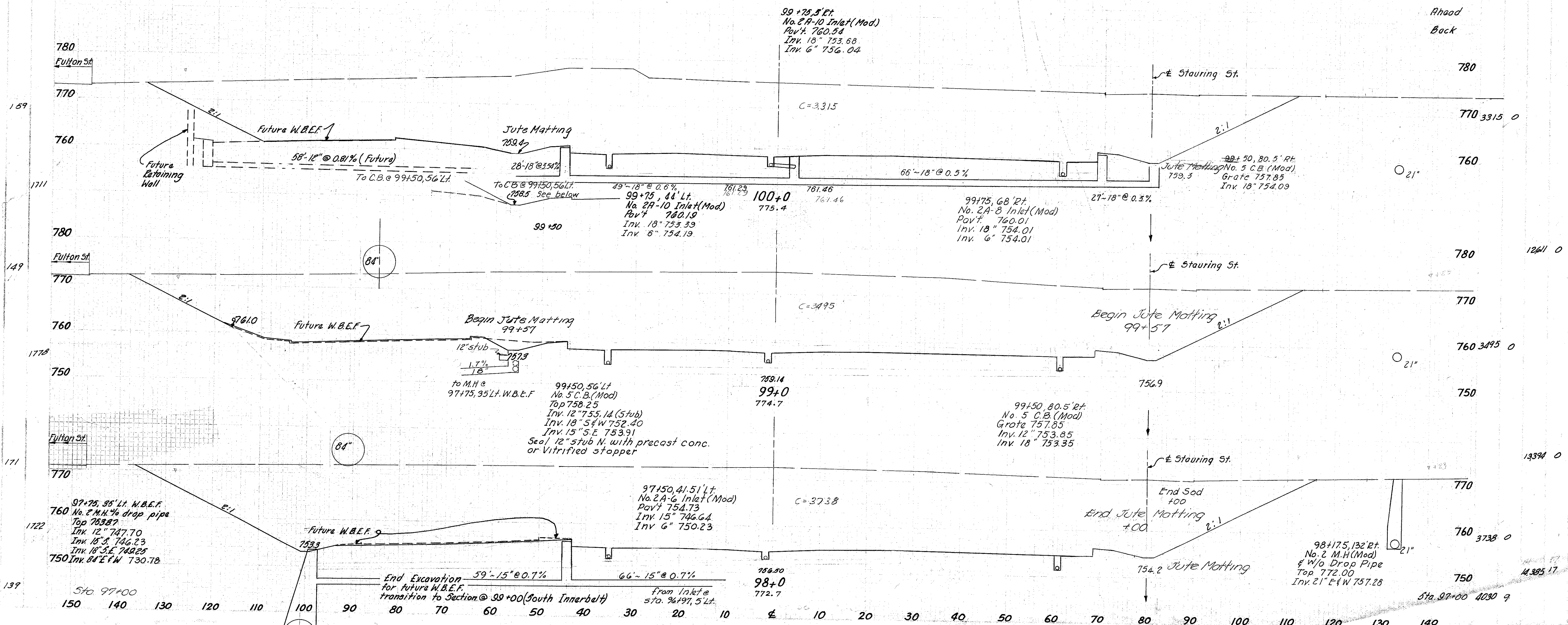
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

85  
250

FRANKLIN COUNTY  
FRA-40-12.82

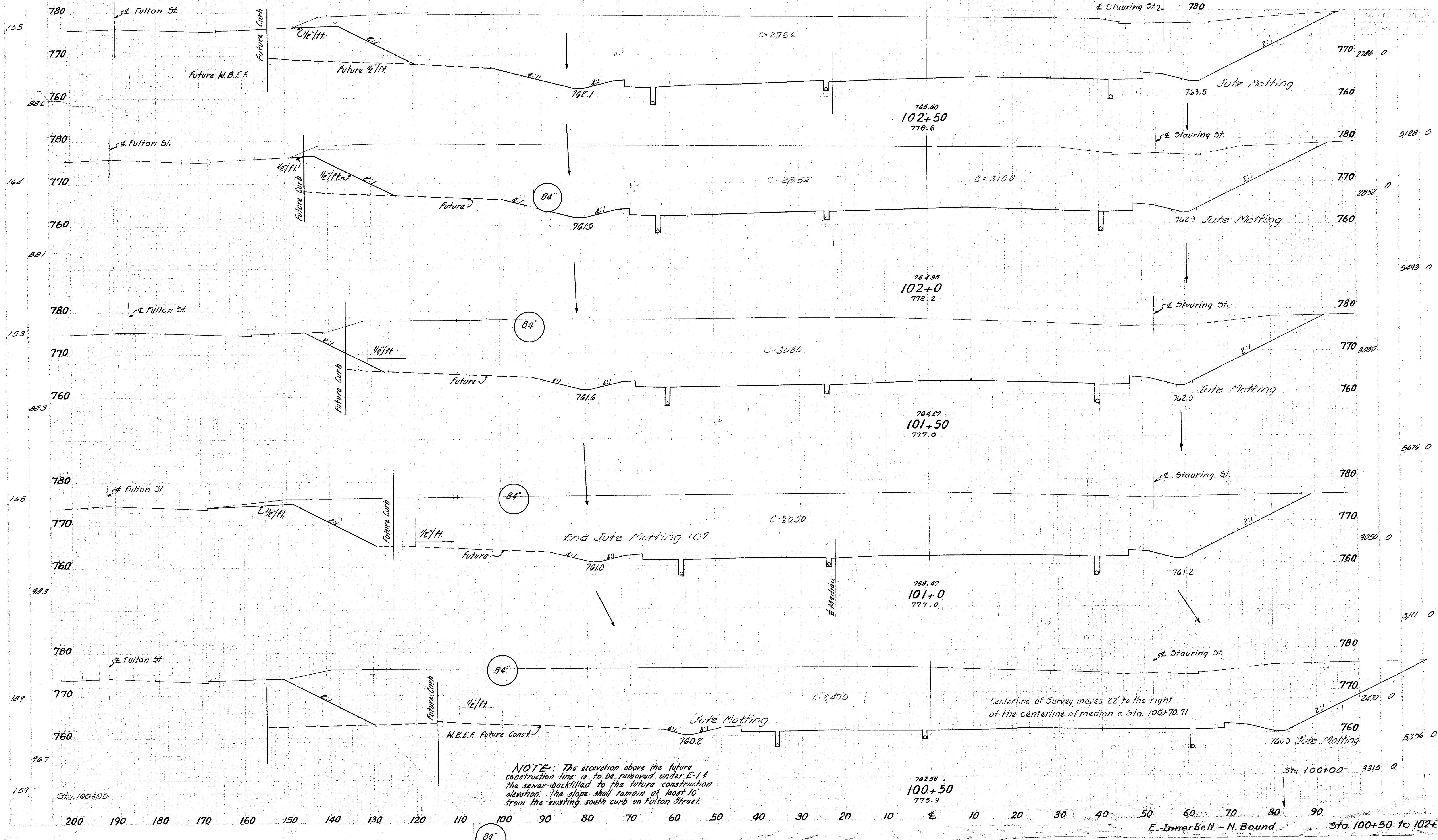
120 130 140

NOTE: The excavation above  
the future construction line  
is to be removed under E-1 &  
the sewer backfilled to the  
future construction elevation.  
The slope shall remain at  
least 10' from the existing  
south curb on Fulton St.

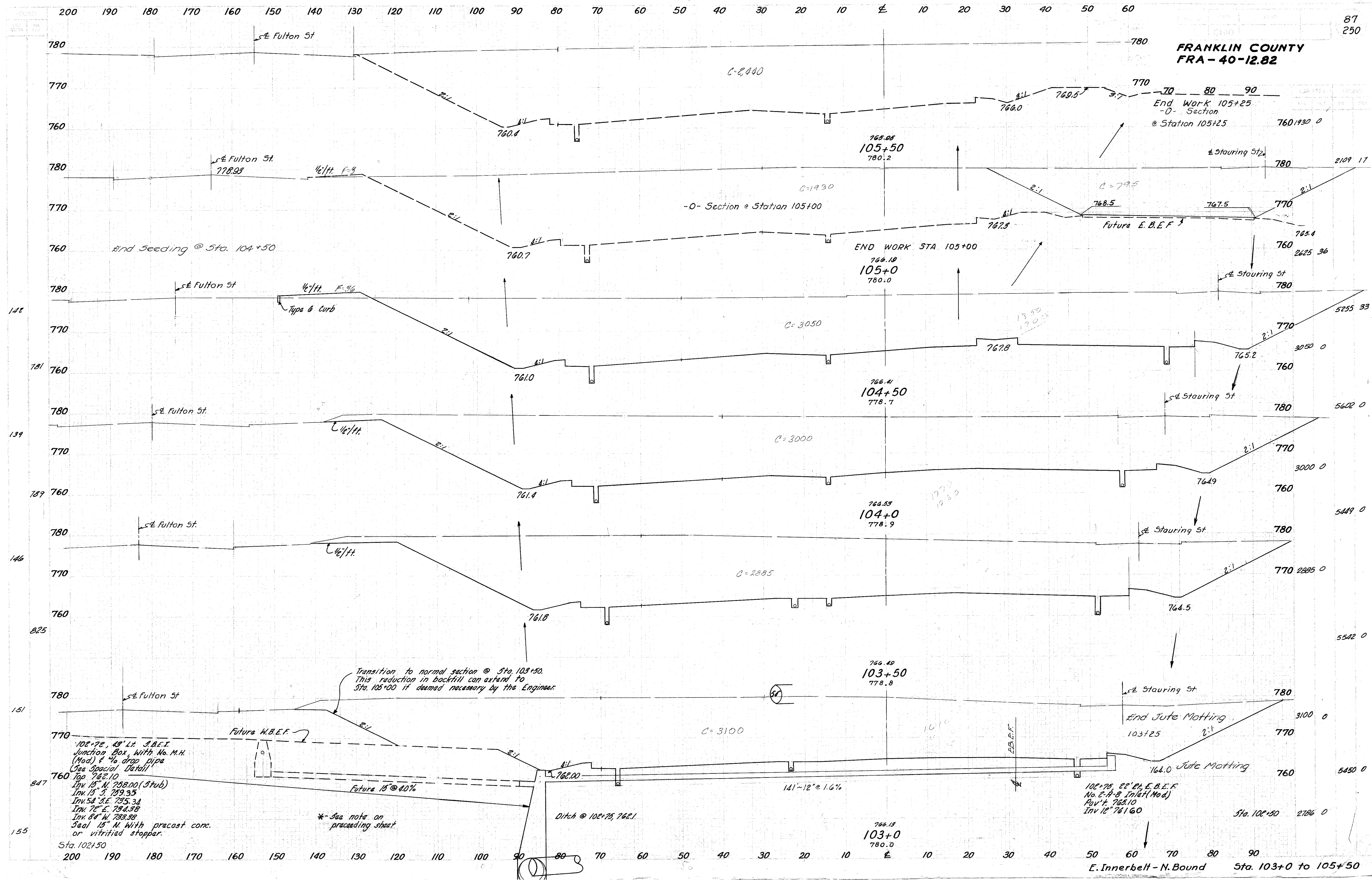




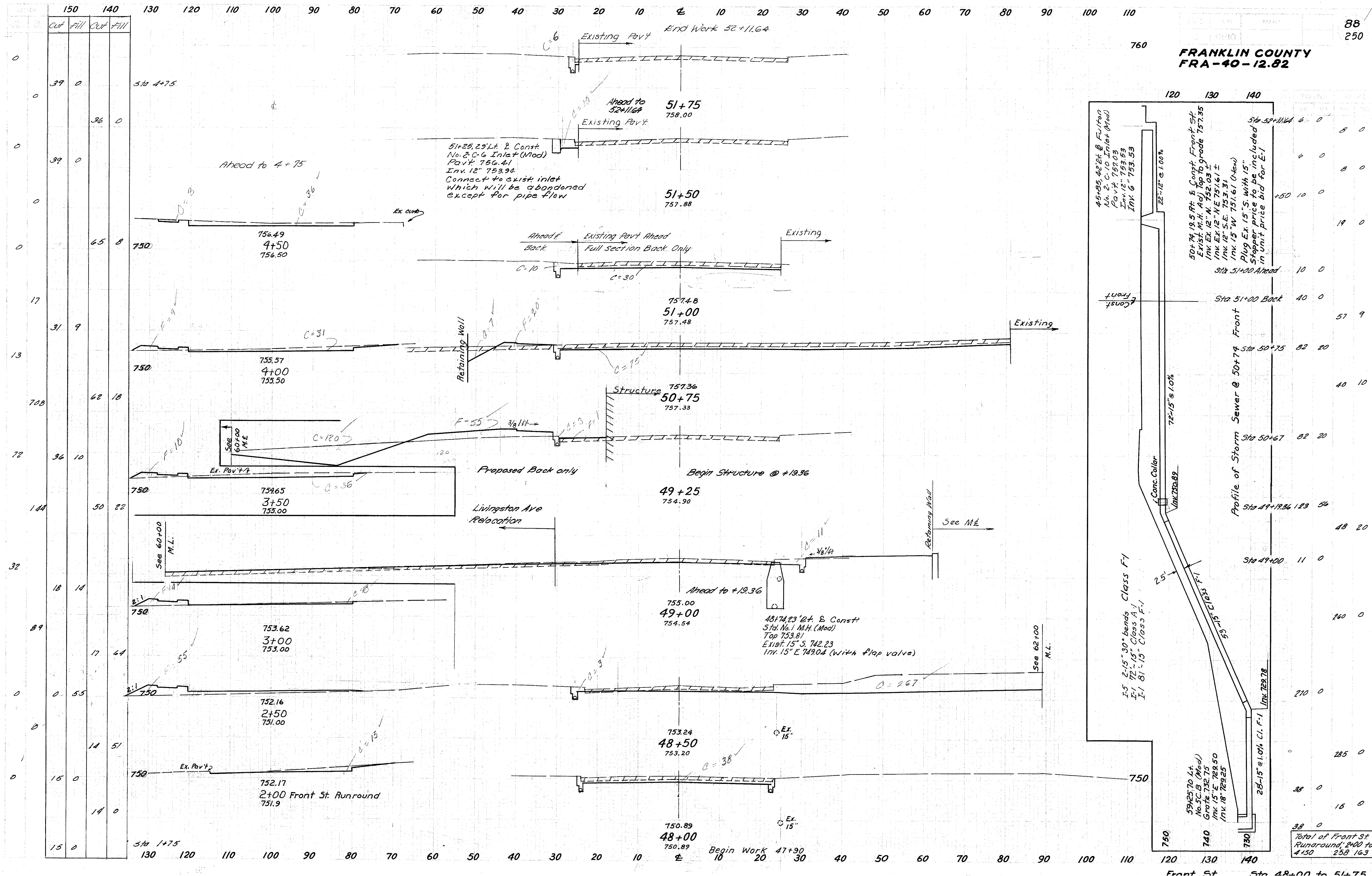
FRANKLIN COUNTY  
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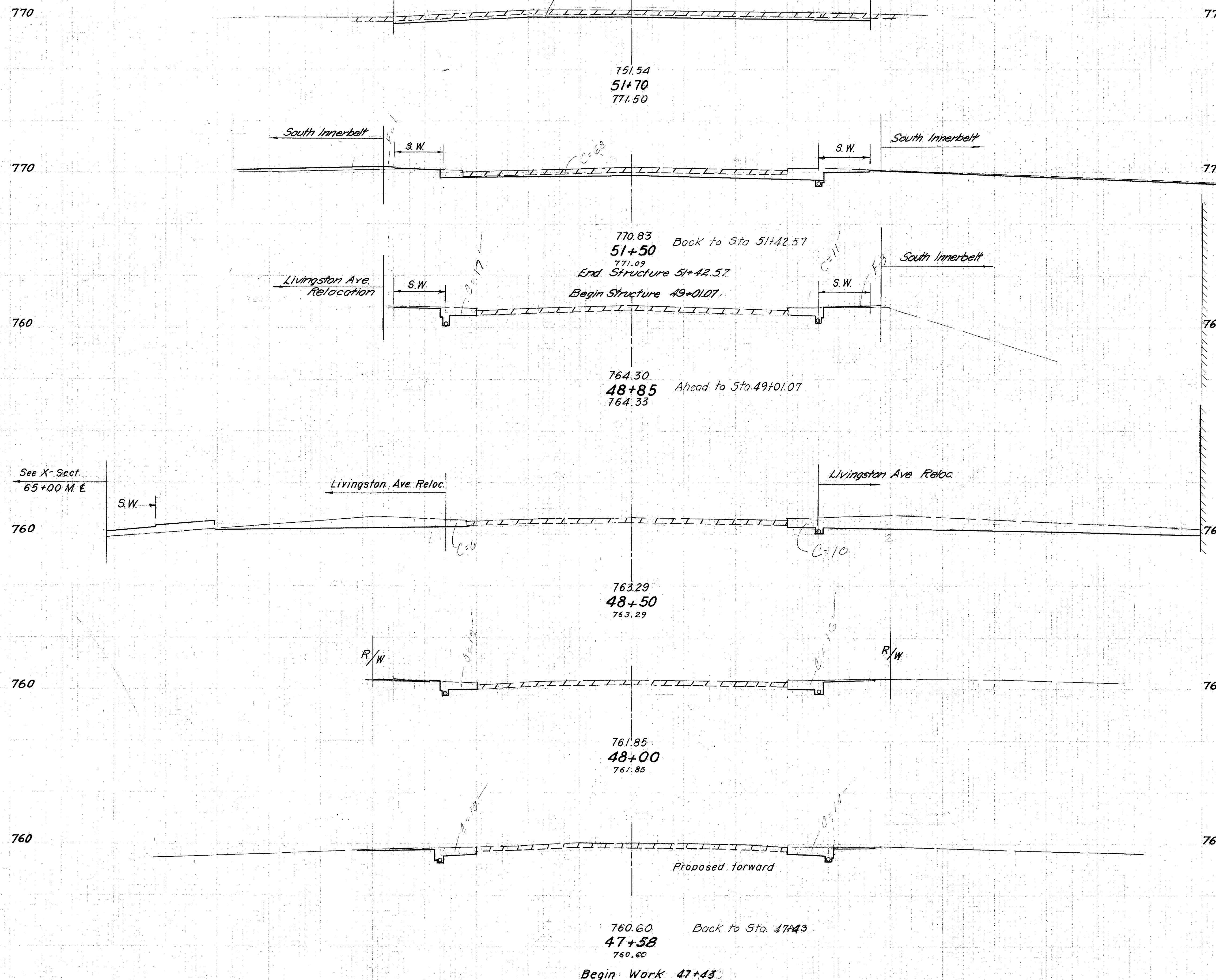








No Seeding on High St



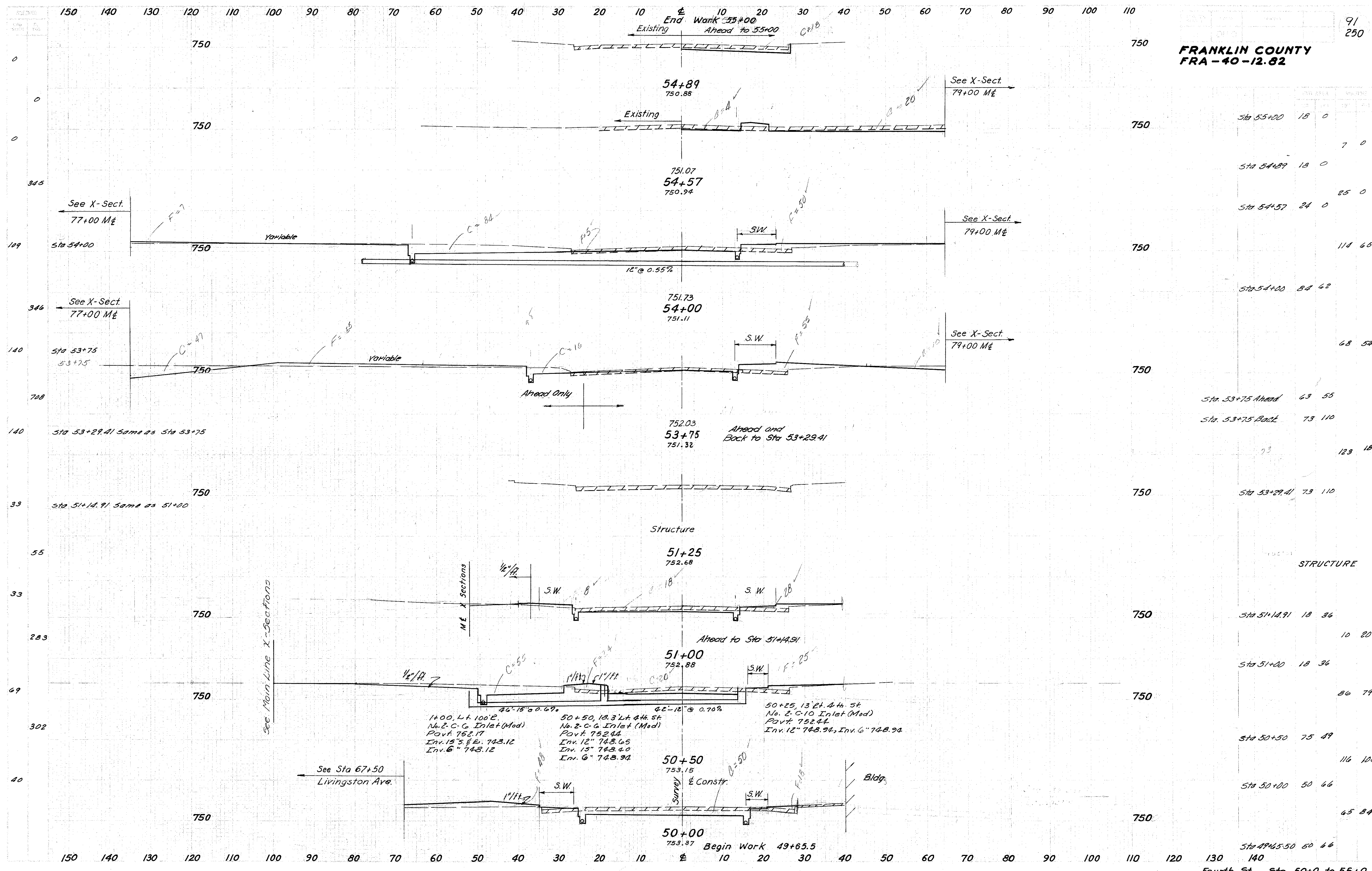
Sta 51+70	46	0
Sta 51+50	68	1
Sta 51+42.57	68	1
Sta 49+01.07	28	3
Sta 48+85	28	3
Sta 48+50	16	0
Sta 48+00	28	0
Sta 47+58	27	0
Sta 47+43	27	0







**FRANKLIN COUNTY**  
**FRA-40-12.82**

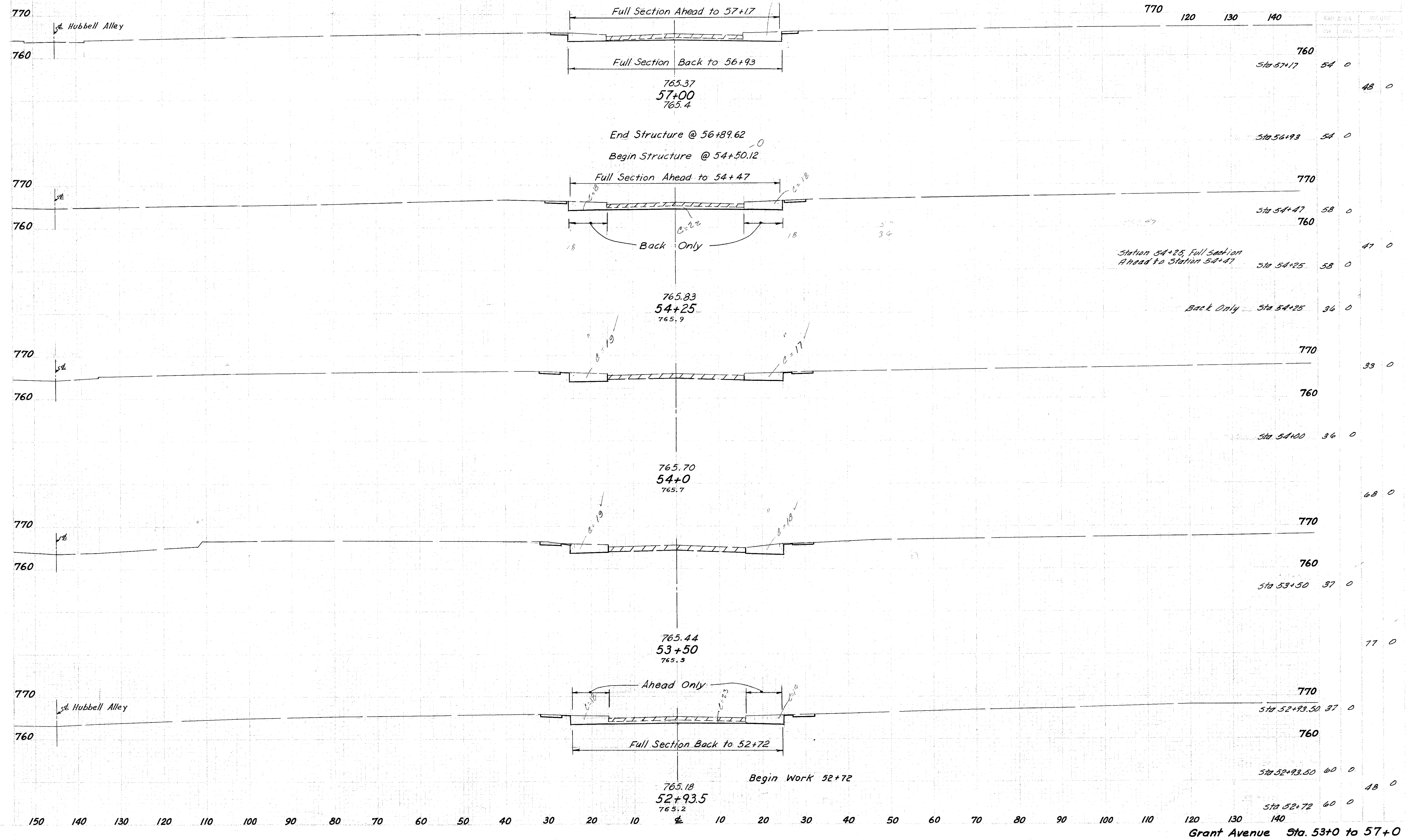




**FRANKLIN COUNTY**  
**FRA-40-12.82**

92  
250

No Seeding on Grant Avenue













# WATERLINE NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

95  
250

FRANKLIN COUNTY  
FRA - 40 - 12.82

## WATER LINE RELOCATIONS SPECIFICATIONS

All water line relocations shall be made in accordance with Department of Highways Supplemental Specification No. I-124 entitled "Water Mains and Service Branches" dated March 20, 1961. This specification is modified by the following Special Provisions which consist of these notes. In all cases of conflict with Supplemental Specification I-124, these notes shall govern. The figures in parenthesis in these notes refers to the section of Supplemental Specification I-124 which is being modified.

### NOTIFICATION (I-124.01)

The Contractor shall notify the Division of Water, City of Columbus, before beginning work on any part of the water line relocations.

### CAST IRON PIPE AND FITTINGS (I-124.02a)

Pipe and fittings less than 4 inches in diameter, except service branches, shall be galvanized wrought iron, Sec. M-6.10. Pipe 4 inches in diameter and larger shall be cast iron, except that prestressed concrete cylinder pipe may be used in sizes larger than 16 inches in diameter. Cast iron pipe ends shall be either mechanical joint or the slip ring rubber gasket seal type joint.

Cast iron pipe shall be centrifugally cast, made in accordance with ASA Specifications A21.6 or A21.8. It shall have a thin bituminous-coated cement lining complying with ASA A21.4 except as to thickness which shall be 50% less than specified. The pipe shall have an outside coating of bitumastic enamel.

All cast iron fittings shall be the mechanical joint type.

Bell and spigot type pipe may be used for connections to existing pipe. Where bell and spigot pipe is used, the packing material shall be lead and braided hemp.

### PRESTRESSED CONCRETE CYLINDER PIPE AND FITTINGS (I-124.02b)

Prestressed concrete cylinder pipe and fittings meeting AWWA Specification C301 may be used in sizes larger than 16 inches in diameter. Fittings to be same Class as pipe.

Prestressed concrete cylinder pipe shall be Class 150 and designed to support a normal earth cover of 6 feet. Where cover is greater than 6 feet, the pipe shall be designed to carry the added earth load and the design shall be submitted to the Engineer for approval.

Bevel pipe, outlet connections on straight pipe, closure pipe assemblies, and other accessories required for prestressed concrete cylinder pipe water main may not be called out on the drawings, but shall be furnished as required to satisfactorily install the new water main. Payment for these piping items shall be included in the unit price bid for Item I-124 "New Water Main as per plan".

Water lines 20" and larger in diameter have been detailed using prestressed concrete cylinder pipe. If cast iron pipe is used, the Contractor shall furnish equivalent fittings or a combination of fittings to match those specified or shown. Methods for tying pipe joints, anchorage and special backing shall be submitted to the Engineer for approval.

### BLOCKING & BACKING (I-124.03b)

No separate payments will be made for reinforcing steel, steel pipe straps, steel backing plates, concrete backing or timber blocking, as called for in details. Cost shall be included with the unit price bid for Item I-124 "New Water Mains as per plan". Concrete backing shall consist of Class "E" concrete.

### PAINTING

All pipe accessories such as steel bolts, straps, etc., which are not encased in concrete, shall be painted with a bitumastic paint such as gilsonite after assembly in the work.

### HYDROSTATIC TEST (I-124.03c)

The Hydrostatic test shall be made as specified under Alternate "B" at 150 psi. The cost of any test plugs or caps and blocking on pipe tested prior to connection to existing mains shall be included in the unit price bid for "New Water Mains".

### AIR RELEASE AND TESTING TAPS (I-124.03c)

When a tap is made to release air from a pipe, or to test or chlorinate a pipe, the corporation cock shall be left in the pipe when completed. The cost of these taps and cocks shall be included in the price bid for pipe.

### DISINFECTION (I-124.03e)

The completed pipe line will be chlorinated by the City of Columbus. The City will furnish the chlorine, the equipment necessary to introduce the chlorine into the pipe, and one man. All other labor, material, and equipment required will be furnished by the Contractor.

### SERVICE BRANCH TAPS (I-124.07b)

Service branch taps shall be made on horizontal center lines.

### CORPORATION COCKS AND CURB STOPS (I-124.02d)

Corporation cocks shall be Mueller H-15000, Hays 5200 or approved equal. Curb stops shall be Mueller H-15175, Hays 5040 (with key check) or approved equal.

### DIVISION OF WATER APPROVAL

The City of Columbus, Division of Water, will inspect the water line relocation work. Construction and materials must meet the approval of the Division of Water.

### EXISTING UTILITIES

All existing surface, subsurface, or overhead structures are not necessarily shown on the water line drawings. The State of Ohio makes no guarantees as to their accuracy or completeness.

The Contractor shall make such investigations as are necessary to determine the extent to which existing surface, subsurface, or overhead structures may interfere with the prosecution of the works.

### CONNECTIONS TO EXISTING PIPE

At places where the plans provide for proposed pipe to be connected to existing pipe, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed pipe. The cost of this operation shall be included in the unit price bid for the pertinent pipe item.

### LINES TO BE ABANDONED

Water lines to be abandoned need only be removed to the limits necessary for the Contractor to complete his work.

### PIPE REMOVAL

Payment for the removal of any existing water line shall be included in the price bid per lin. ft. for "New Water Main as per plan".

### NIGHT AND WEEK END CONNECTIONS

It will be necessary that certain main line connections be made at night and/or on week ends. The Division of Water shall determine the time and place or such connections and the Contractor shall be responsible for making these connections in the time allotted. No extra payment will be made for any work required under this note.

Night and/or week end work will be ordered only when such work must be done at these times in order to protect the water supply of the City of Columbus.

### BACKFILLING TRENCHES

Trenches shall be backfilled in accordance with Sec. I-124.03(d). Trenches for water lines which will be under roadways or paved areas shall be backfilled with granular material in the same manner as specified in Sec. I-1.07 (Class 1 Backfill).

In lieu of performing the tamping requirements of Sec. I-124.03(d), the Contractor may backfill the water line trenches with gravel grits backfill and crushed stone or gravel, 46D, in accordance with the typical trench detail. No additional payment will be made for gravel grits backfill or crushed stone or gravel 46D since all backfilling is included in the price bid for new water main.

In the event gravel grits or crushed stone or gravel, 46D, are used, the material shall meet the following specifications:

Gravel grits shall consist of clean, washed, uncrushed gravel, so graded that 99.5 percent will pass a 1/4-inch screen, and not more than 2.5 percent will pass a No. 16 screen.

The "46D" shall be 100% crushed stone or gravel meeting the following grading:

SCREEN	PASSING	SCREEN	PASSING
1/4" "	100%	No. 16	5-20%
No. 4	95-100%	No. 200	0-4%

### ALTERATION OF PROPOSED WATER LINE ELEVATIONS

In the event an adjustment of proposed water line elevations is ordered during construction of this project, a supplemental agreement will be made, as contemplated in Sec. I-1.03, where the proposed water line is raised or lowered more than 1 foot.

### WATER MAIN PIPE COVER

Pipe cover for new water mains shall be a minimum of 3 feet between top of pipe and existing ground or finished grade, whichever is lower. Pipe 2" & under shall be laid a minimum of 3'-6" below final grade.

### CUTTING AND PLUGGING (OR CAPPING) EXISTING MAINS (I-124.03)

Water mains called out to be cut and plugged (or capped) at points on existing mains shall have the abandoned water mains cut and removed as required to attach the new fittings and place backing. Blocking shall be used to brace between the new plug (or cap) and end of abandoned pipe. Concrete backing shall be used to encase blocking, and shall be as shown on water main detail sheet for "Dead End Pipe and Tee Backing," Sheet 104.



# WATERLINE NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

96  
250

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## REMOVING SERVICE BRANCHES FROM EXISTING MAINS (I-124.03)

Existing service branches to be abandoned shall be removed at existing mains remaining in service. Corporation stops shall be turned off, service branches shall be removed from stops, and the stops shall be suitably plugged or capped to withstand water pressure.

The locations shown on the Water Line plans and Pavement Detail sheets are approximate. Additional taps located during construction shall be removed when directed by the Engineer.

The unit price bid for each service branch removed shall be full compensation for all labor, material and equipment required for locating, excavating, removing service branch in manner mentioned above, and backfilling with granular material under pavement.

Pavement to be replaced shall be paid for under the Unit Bid Items for Pavement Replacement. The type of pavement replacement for the additional taps shall be the same as the pavement for the adjacent taps shown on the plans.

## CASING PIPE FOR WATER MAINS

Casing pipe shall be Class C-1, M6.4(c) and shall be of the size and gauge specified. Installation shall be as detailed on the drawings. The price bid per lin. ft. shall constitute full compensation for all labor, material and equipment required for excavation, installation and backfilling and to include granular material placed around the carrier pipe all as shown in details and at the locations shown on the drawings. The carrier pipe which is to be installed in the casing pipe shall be paid for under Item I-124 "New Water Main as per plan".

Where pipe specials or casing pipe lengths longer than shown on profile sheets are required to encase 20" or 30" cast iron fittings, these specials or added lengths shall be included in the unit price bid for Item I-124 "New Water Main, as per plan". See Sheet 103 for deformation of casing pipe.

## VALVE BOXES

Columbus standard valve boxes as shown on the detail shall be used on all valves. Valve boxes shall meet the requirements of Sec. M-7.8(a).

## FIRE HYDRANTS REMOVED AND RESET (I-124.06)

The Contractor shall contact the City of Columbus, Division of Fire-Maintenance, two weeks in advance of anticipated hydrant removal. Only fire hydrants of the new "break-ring" type as marked by the Division of Fire will be removed and reset. These hydrants will be reset as a part of this Item at locations indicating new fire hydrant installations as shown on the plans.

Existing fire hydrants that are not marked to be removed and reset but have hydrant leads crossed out for abandonment, as shown on the plans, shall be removed and disposed of by the Contractor under S-24 Removal of Structures.

Existing fire hydrants on mains to be abandoned shall not be removed prior to abandonment of main, unless removal is approved by the Engineer.

Removal of existing fire hydrants on mains to remain in service shall be scheduled by the Contractor for removal. This schedule shall be submitted to the Engineer for approval. The open end of the hydrant lead shall be plugged or capped. Plugs or caps will be paid for under Item I-124 Leaded Plugs or Item I-124 Leaded Caps.

## FIRE HYDRANTS (I-124.02c)

All fire hydrants shall be set plumb and to the grade line shown on the hydrant. Hydrant watch valve covers shall be set flush with the finished grade.

Fire hydrants shall be set 24 inches from the back of curb to center of standpipe, where possible. Where no lawn strip exists between the curb and sidewalk or where the lawn strip is too narrow that a hydrant would be located towards the middle of a sidewalk, the hydrant will be placed at the back side of the sidewalk, if adequate right of way is available.

The hydrant base shall rest on undisturbed soil.

Only Columbus Standard type fire hydrant, A.P. Smith, or C.D. Kennedy Safe Top, with one 4-inch 6-thread center located outlet nozzle will be approved for use. Hydrants and installation must be approved by the Division of Fire, City of Columbus. Diameter of port in the seat ring shall be 4-1/2".

All hydrant watch valves shall be strapped to the hydrant tee as shown on the detail.

Fire hydrant backfilling shall be power tamped as described under Section E-2.08 or shall consist of crushed stone or gravel size 46-D power tamped in layers not exceeding 6 inches in thickness, loose measurement. In no case will concrete be permitted to encase the hydrant below grade.

Fire hydrants shall clear all openings or radius by a minimum of ten feet. Self-draining hydrants will not be approved for use.

## TAPPING SLEEVES AND VALVES (I-124.02c)

This item shall include furnishing and installing the tapping sleeves and valves complete and in service at the locations shown on the plans. The installation is to be made while the tapped pipe is under pressure.

Tapping sleeves and valves shall be Hackensack Type 4 for use on Class "D" pipe American Waterworks Association or approved equal.

Tapping valves shall be iron body bronze mounted, American Waterworks Association, 300 pound test pressure, 150 pound working pressure, double disc, parallel seats, hub outlet, nut operated and left hand open, non rising stem.

The sleeves and valves shall be tested at 150 psi water pressure to check for leaks prior to making any cut.

## INSERTING VALVES (I-124.02c)

~~Inserting valves shall be double disc, parallel seat non-rising stem, iron body bronze mounted, AWWA, 300 pound test pressure, 150 pound working pressure, nut operated and left hand open as manufactured by A. P. Smith Mfg. Co., or approved equal. Inserting valves to be equipped with high pressure anchor clamps. The Contractor shall obtain and pay for the services of a manufacturer's representative to supervise all inserting valve installations. The inserting valves shall be installed in accordance with the manufacturer's recommendations. After the valve body has been installed, but before any cutting is made, the unit shall be tested under 150 psi water pressure to check for leaks. The price bid for each shall constitute full compensation for material, labor, manufacturer's representative charges, equipment rentals, and testing; all as required for excavation, installation and backfilling at each location shown on the drawings.~~

## BUTTERFLY VALVES (I-124.02c)

This item shall include furnishing and installing valves complete and in service at the locations shown on the plans.

Butterfly Valves shall conform in all respects to the A.W.W.A. Standard Specifications for Rubber-Seated Butterfly Valves, Designation A.W.W.A. C504-58 together with subsequent revisions thereto except as herein specifically modified.

Valves shall be suitable for buried service.

Valves shall be A.W.W.A. Class 125-16 except that they shall be designed for a tight shut-off against an unbalanced pressure of 150 p.s.i.

Valve bodies shall be constructed of close-grain cast iron (ASTM A-126, Class B) and shall have flanges or mechanical joint end. Flange drilling shall be in accordance with A.S.A. B.16.1. Mechanical joint ends, glands, gaskets and bolts shall be made in accordance with A.S.A. Specifications A21.11-1953. Bolts for flange ends shall be cadmium plated steel.

Valve discs shall be constructed of cast iron, cast steel or fabricated steel. All seating edges shall be smooth and polished and constructed of stainless steel or monel.

Shafts shall be a solid one-piece unit extending full size through the valve disc and valve bearings. Taper pins, dowels or keys will be constructed of either monel or stainless steel.

Valve discs shall seat at 90° to the pipe line axis. Valve seats shall be constructed of pure gum rubber and strengthened by a heavy reinforcing insert molded into the rubber seat. Valve seats shall be rubber cemented or vulcanized and clamped into the valve body by a positive means of retention. These retention devices shall be of a corrosive resistant material with a life expectancy equal to that of the valve. Valve seats that extend over the face of the flange will not be accepted.

Stuffing boxes shall be constructed of cast iron (ASTM A126). Stuffing box packing shall be flax packing conforming to Federal Specifications HH-P-106c.

Valves shall be equipped with a Philadelphia<sup>type</sup> gear operator or approved equal. Operators shall be composed of worm gearing. Valve operators shall be for left hand open.

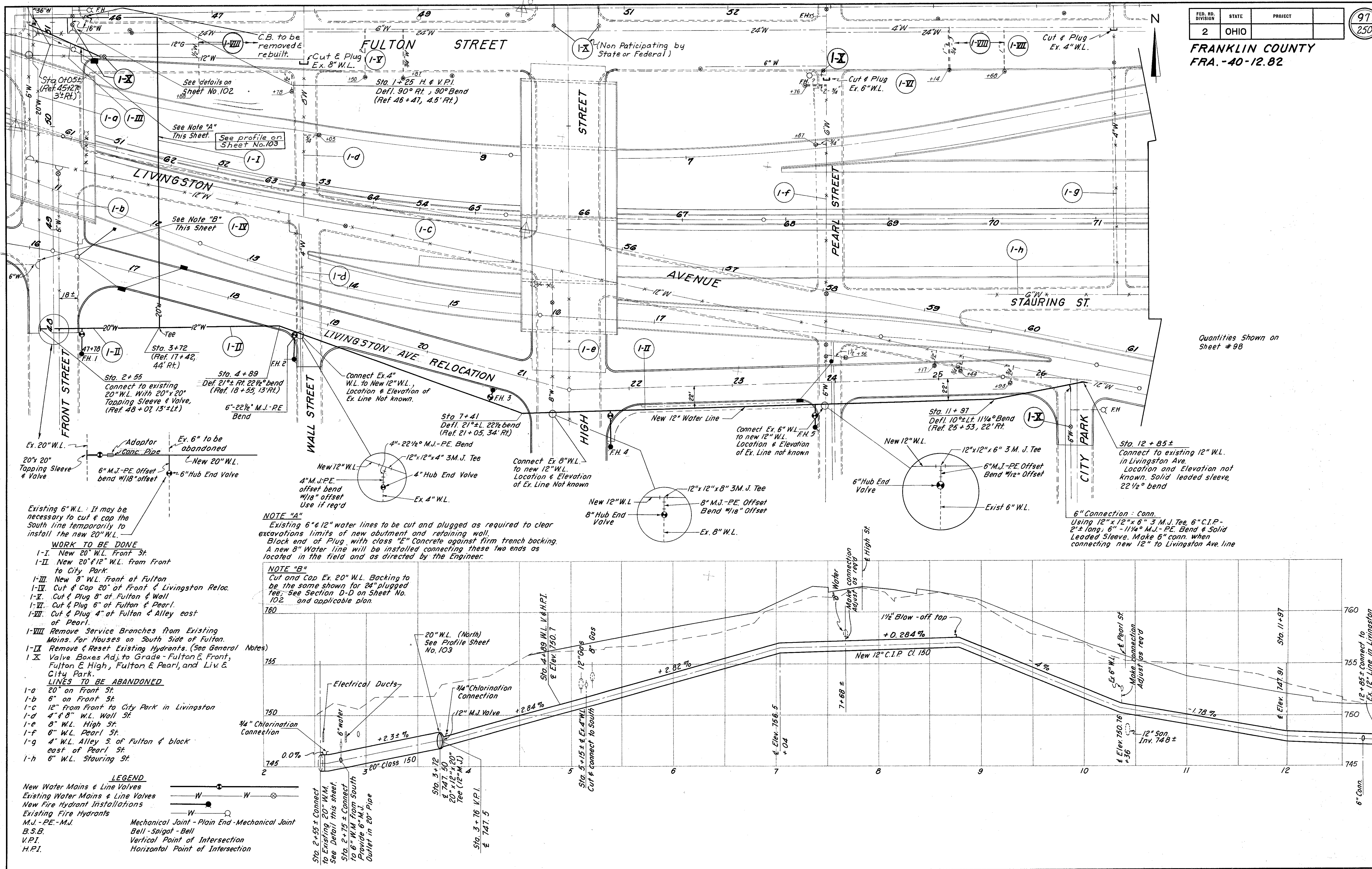
Maximum input force on the operator shaft shall be 40 pounds when applied through a lever arm of 12-inches.

The Manufacturer shall furnish to the City certifications of all tests performed on the valve.

The Manufacturer shall present proof that he has manufactured tight closing rubber seated butterfly valves, of the class and size specified, for a period of at least five years.

A stainless steel collar 6-inches high shall be welded to the operating gear box housing centered on the tee nut to seal the valve box. An extension stem, as required, shall be furnished with each valve.







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Quantities for Sheet # 97

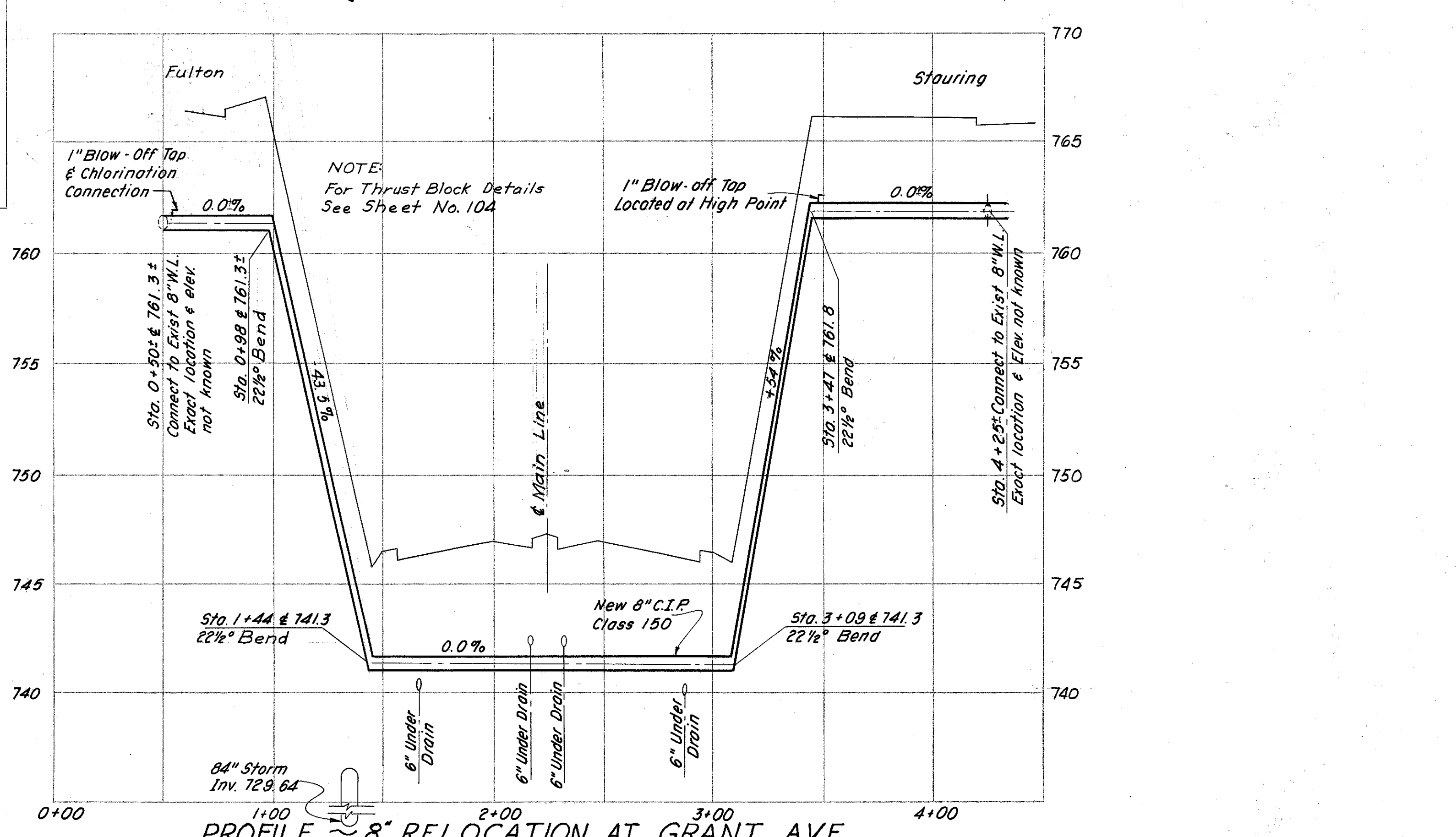
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\* Non Participation by State or Federal









		New Water Main Cl 120	New Water Main Cl 150	Hub End Valve Box	7 1/8" Teeing Street	6" Teeing Street	90° M.J. Tee Box	30° M.J.-P.T. Bend	45° M.J.-P.T. Bend	60° M.J.-P.T. Bend	Lead Plug	Lead Plug	Remove Service Branches from Existing Mains	Fire Hydrant	Hydrant - Remove & Reinstall	22 1/2" M.J.-P.T. Bend	M.I. Boxes Add to Grade	I-8
	L.F.	L.F.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Ea.	Fa.	Ea.	Ea.	
3-I	390		/	/		/	5								/	/		
3-II											/							
3-III											/							
3-IV										/								
3-V	520		/		/			2	2									
3-VI												7						
3-VII	10		/											/				
3-VIII															/			
3-IX																	/	
Totals to G.S.	390	530	/	/	/	/	/	5	2	2	/	2	7			/	/	/
Totals to # 17														/	/			

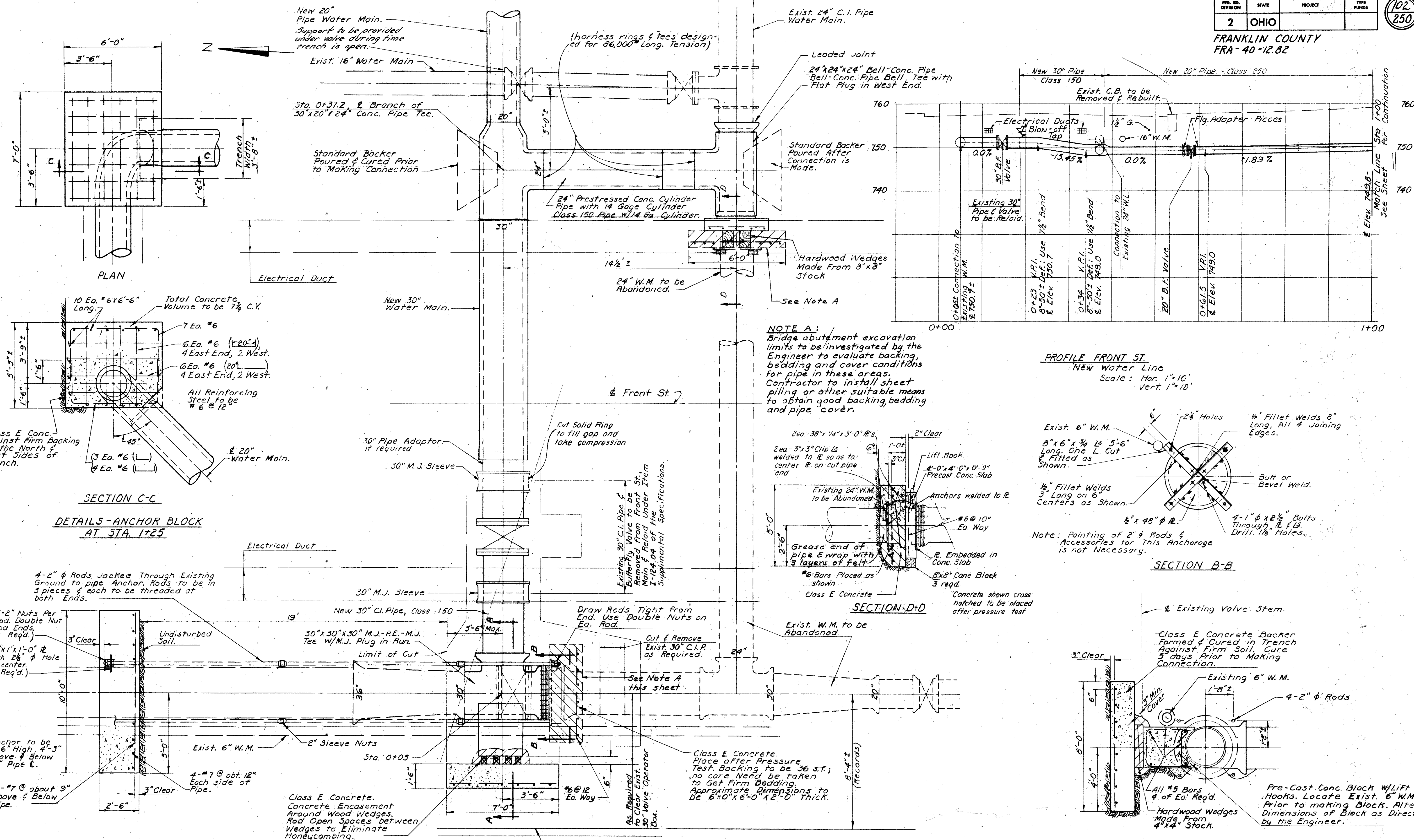
3-b 4" in Fifth, Fulton to Stouring  
3-b 4" in Sixth, Fulton to Stouring  
3-c 6" in Stouring  
3-d 8" in Grant, Fulton to south  
of Stouring.



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**NOTE A:**  
Bridge abutment excavation limits to be investigated by the Engineer to evaluate backing, bedding and cover conditions for pipe in these areas. Contractor to install sheet piling or other suitable means to obtain good backing, bedding and pipe cover.

**PROFILE FRONT ST.**  
New Water Line  
Scale: Hor. 1" = 10'  
Vert. 1" = 10'

Exist. 6" W.M.  
8"x6"x 3/4" Ls 5'-6" Long, One L Cut & Fitted as Shown.  
1/2" Fillet Welds 3" Long on 6" Centers as Shown.  
Note: Painting of 2" & Rods & Accessories for This Anchorage is not Necessary.

2ea. - 36"x 1/4"x 3'-0" R's.  
2ea. - 3"x 3" Clip Ls welded to R so as to center R on cut pipe end.  
Existing 24" W.M. to be Abandoned.  
Grease end of pipe & wrap with 5 layers of felt.  
6 Bars Placed as shown.  
Class E Concrete.  
SECTION D-D  
Concrete shown cross hatched to be placed after pressure test.

Existing Valve Stem.  
Class E Concrete Backer Formed & Cured in Trench Against Firm Soil. Cure 3 days Prior to Making Connection.  
Existing 6" W.M.  
1'-8"±  
4-2" φ Rods  
All #5 Bars 4 of Ea. Req'd.  
Hardwood Wedges Made From 4"x4" Stock.  
Pre-Cast Conc. Block w/ Lift Hooks. Locate Exist. 6" W.M. Prior to making Block. Alter Dimensions of Block as Directed by the Engineer.

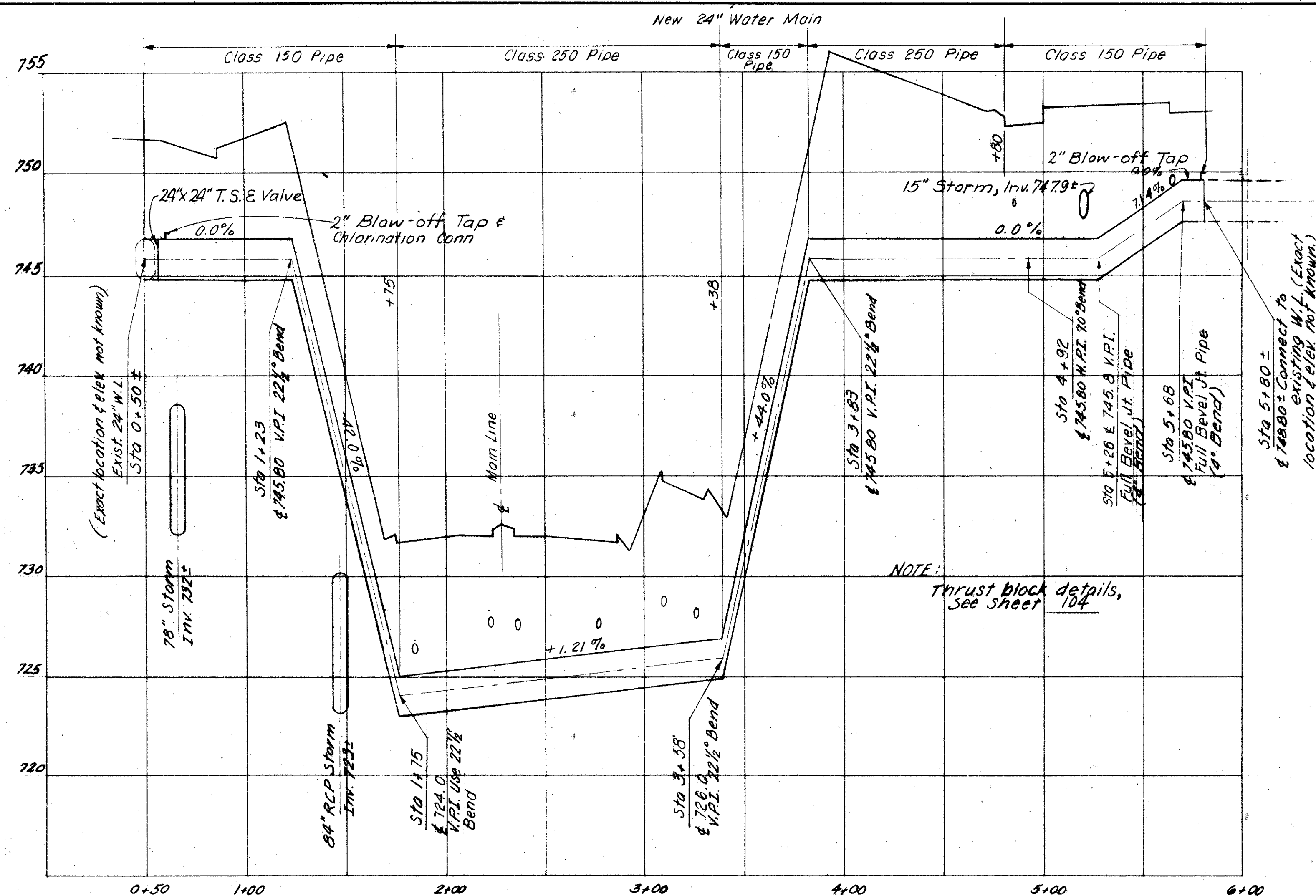
10 Ea. #6x6'-6" Long.  
Total Concrete Volume to be 7 1/2 C.Y.  
7 Ea. #6  
6 Ea. #6 (r20")  
4 East End, 2 West.  
6 Ea. #6 (20")  
4 East End, 2 West.  
All Reinforcing Steel to be #6 @ 12"  
Class E Conc. against Firm Backing on the North & East Sides of Trench.  
3 Ea. #6 (L)  
4 Ea. #6 (L)

Electrical Duct  
New 30" Water Main.  
30" Pipe Adaptor, if required.  
30" M.J. Sleeve.  
Cut Solid Ring to fill gap and take compression.  
Existing 30" C.I. Pipe & Butterfly Valve to be Removed From Front St. Main & Relaid Under Item 1-12.04 of the Supplemental Specifications.  
New 30" C.I. Pipe, Class 150.  
30"x30"x30" M.J.-RE.-M.J. Tee w/M.J. Plug in Run.  
Limit of Cut  
3'-6" Max.  
Draw Rods Tight from End. Use Double Nuts on Ea. Rod.  
Cut & Remove Exist. 30" C.I.P. as Required.  
See Note A this sheet.  
Sta. 0+05  
2" Sleeve Nuts  
4-#7 @ obt. 12" Each side of Pipe.  
Class E Concrete. Concrete Encasement Around Wood Wedges. Rod Open Spaces between Wedges to Eliminate Honeycombing.  
Face of West Curb on Front St.

Class E Concrete. Place after Pressure Test. Backing to be 36 s.f.; no core Need be taken to Get Firm Bedding. Approximate Dimensions to be 6'-0"x6'-0"x2'-0" Thick.  
As Required to Clear Exist. 30" Valve Operator Box.  
6"± (Records)  
24"

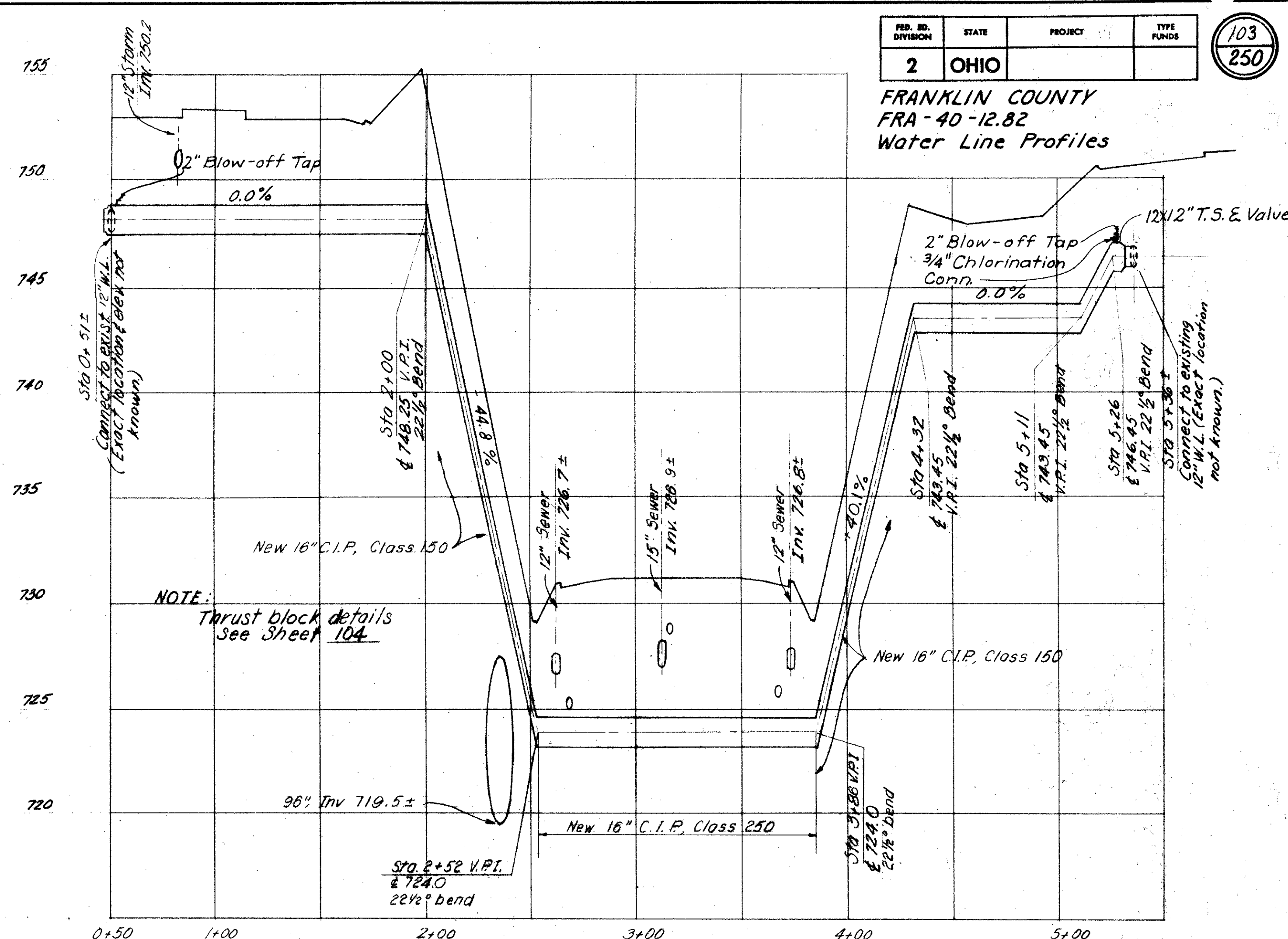


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Water Line Profiles



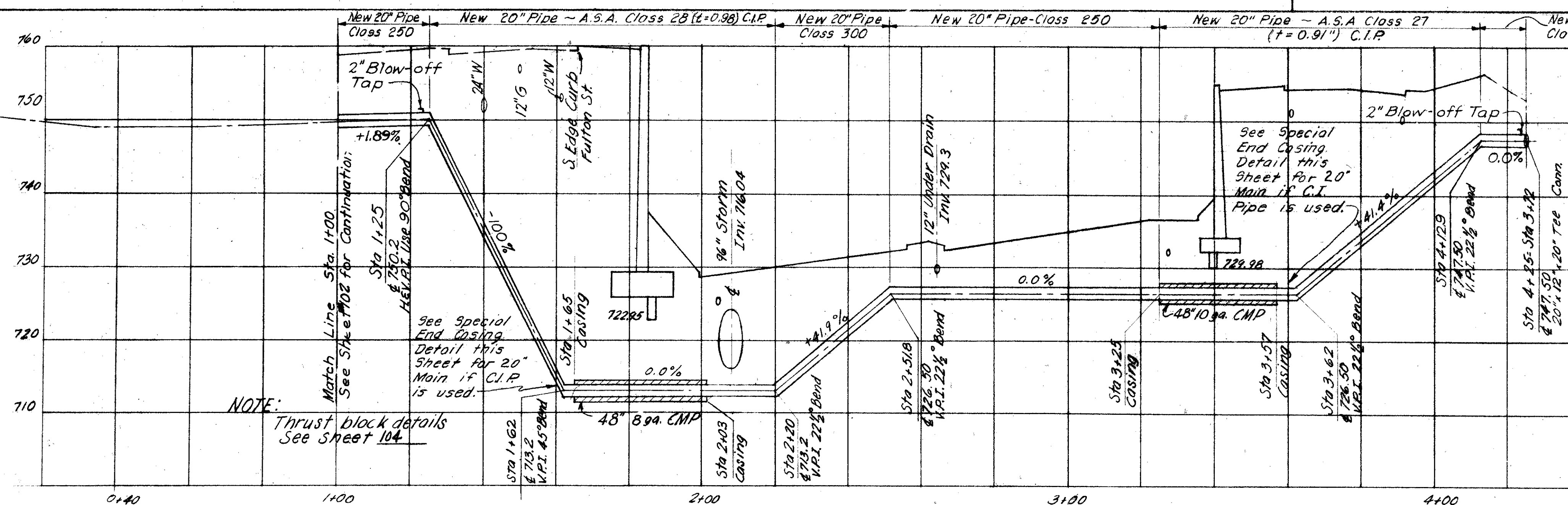
PROFILE 4TH ST. STA 77+40  
New 24" Water Line

Scale: Hor. 1"=40'  
Vert. 1"=4'



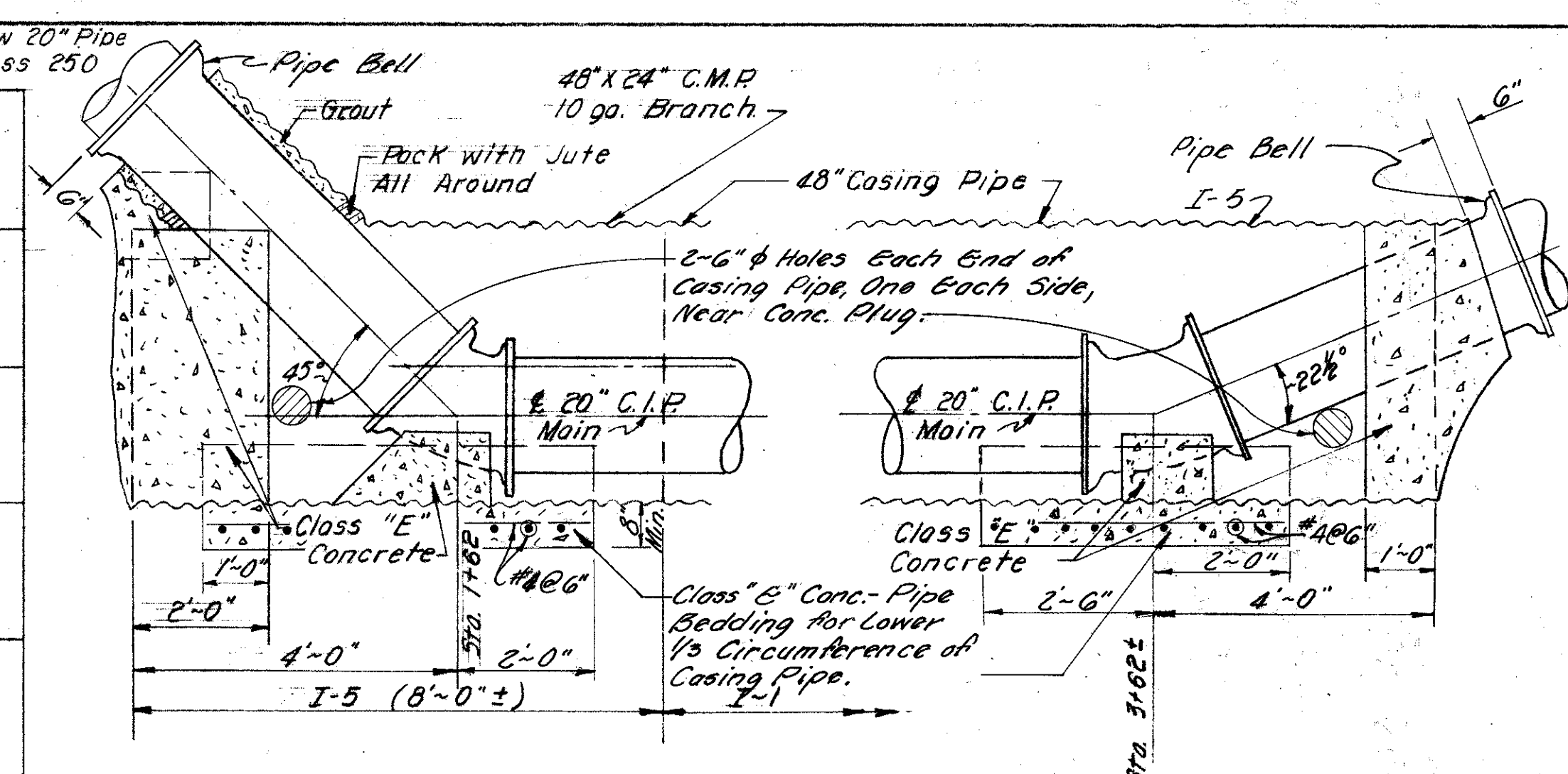
PROFILE 3RD ST. STA 74+50  
New 16" Water Line

Scale: Hor. 1"=40'  
Vert. 1"=4'



PROFILE FRONT ST.  
New 20" Water Line

Scale: Hor. 1"=20'  
Vert. 1"=10'

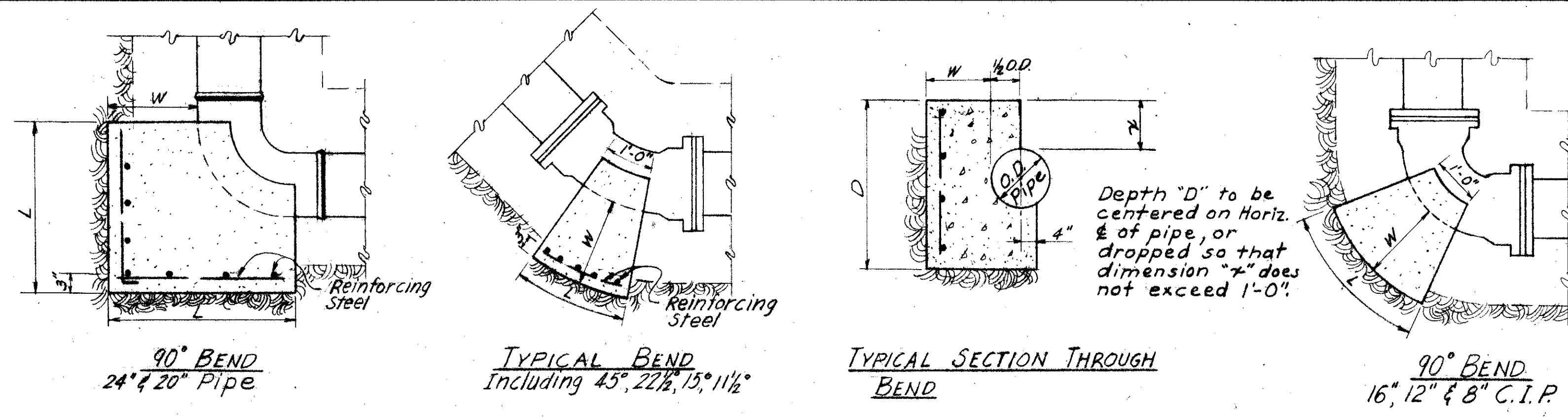


SAG BEND BACKING & ENCASEMENT  
REQUIRED FOR CAST IRON MAIN  
FRONT ST.

The 48" Corrugated Metal Casing Pipe shall be shop deformed to produce and maintain a 5% vertical elongation. The I-5 48" Pipe Specials shall also be shop deformed to fit.

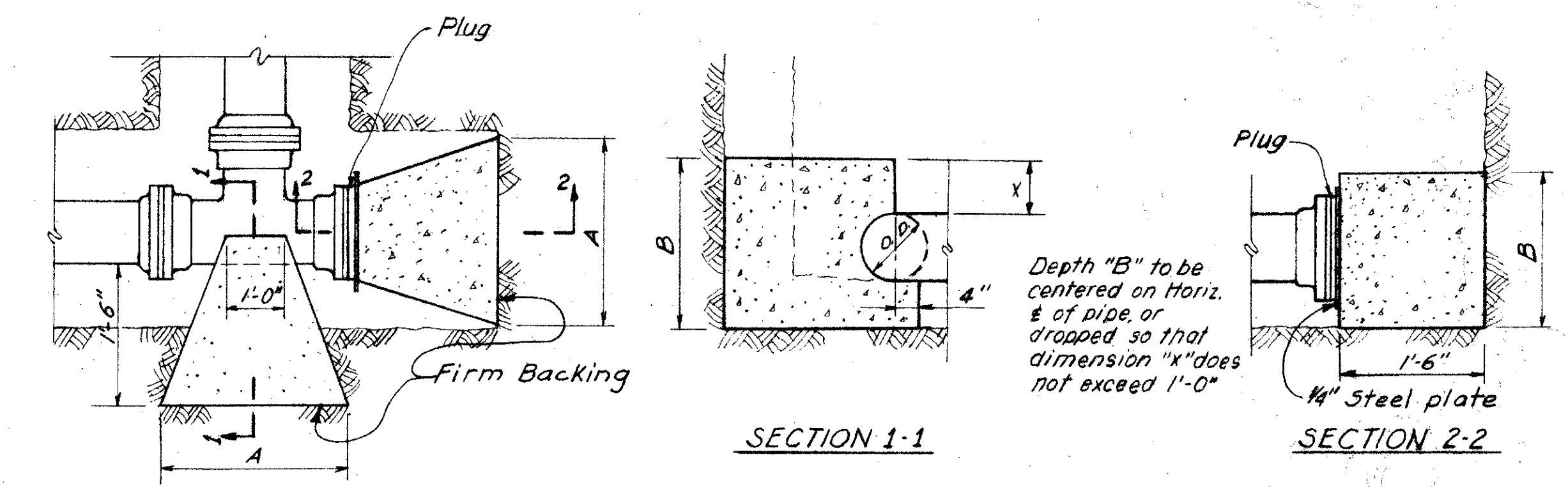


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THRUST BLOCK DIMENSIONS FOR HORIZONTAL BENDS

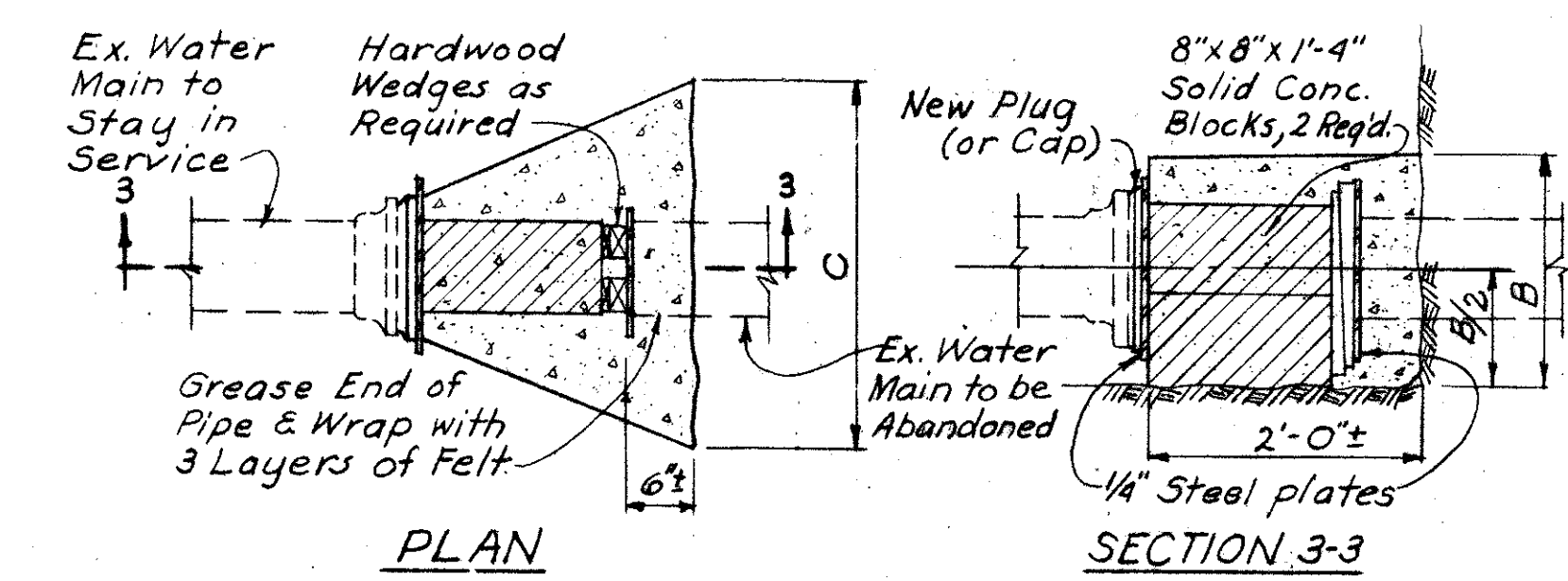
TYPE	90°				45°				22 1/2°				11 1/4°				15°			
	L	W	D	STEEL	L	W	D	STEEL	L	W	D	STEEL	L	W	D	STEEL	L	W	D	STEEL
24" Conc. press. pipe	6'-3"	2'-0"	5'-6"	#6 @ 10"	5'-0"	2'-0"	5'-0"	#6 @ 10"	4'-0"	2'-0"	3'-6"	#6 @ 12"	3'-3"	2'-0"	2'-6"	#4 @ 11"	3'-3"	1'-10"	3'-0"	#4 @ 11"
20" Conc. press. pipe	5'-0"	2'-0"	5'-0"	#5 @ 10 1/2"	3'-8"	2'-0"	5'-0"	#5 @ 10 1/2"	3'-9"	2'-0"	2'-0"	#4 @ 12"	2'-4"	2'-0"	1'-8"	—	—	—	—	—
16" Dia. C.I.P.	3'-6"	1'-10"	3'-0"	#5 @ 11"	3'-0"	1'-10"	2'-0"	#4 @ 18"	2'-0"	1'-10"	2'-0"	—	1'-6"	1'-10"	1'-8"	—	—	—	—	—
12" Dia. C.I.P.	2'-6"	1'-10"	2'-6"	#4 @ 18"	2'-3"	1'-10"	1'-6"	—	2'-0"	1'-10"	1'-10"	—	1'-0"	1'-10"	1'-4"	—	—	—	—	—
8" Dia. C.I.P.	3'-0"	1'-10"	1'-6"	—	2'-4"	1'-10"	1'-0"	—	1'-5"	1'-10"	0'-10"	—	0'-10"	1'-10"	0'-9"	—	—	—	—	—



PLAN-TEE, DEAD END PIPE OR DEAD END TEE (NEW WORK)

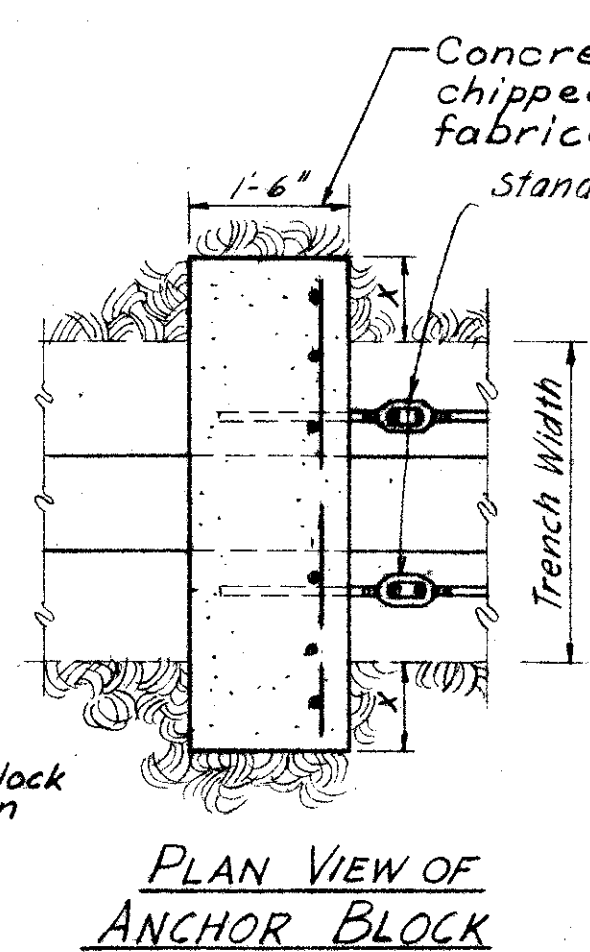
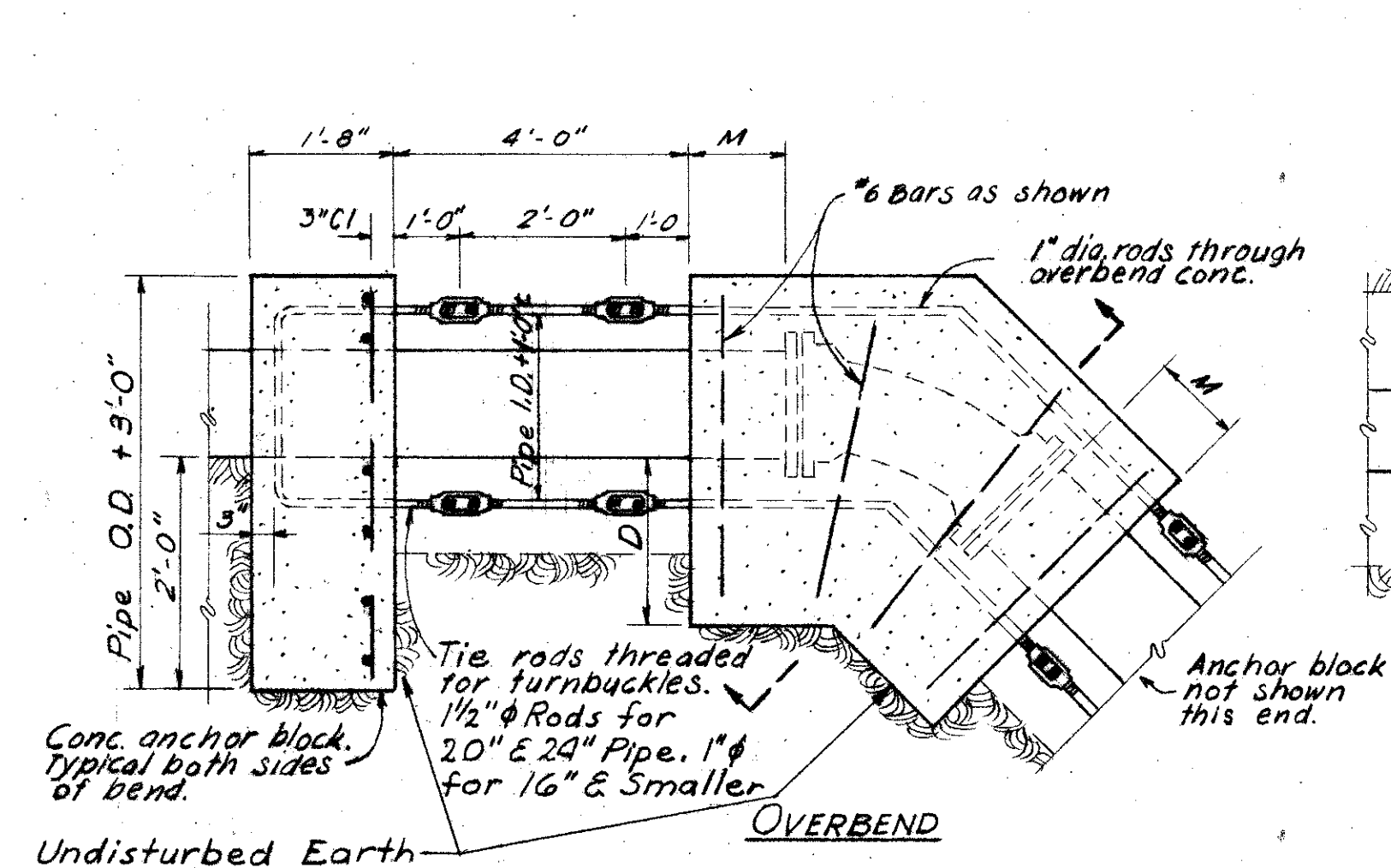
DIMENSIONS FOR DEAD END AND TEE BACKING

TYPE	A	B	C
24" Pipe	5'-0"	4'-6"	—
20" Pipe	4'-0"	3'-0"	—
16" C.I.P.	3'-0"	2'-6"	—
12" C.I.P.	2'-6"	2'-0"	3'-6"
8" C.I.P.	2'-0"	1'-0"	3'-0"
6" C.I.P.	1'-6"	0'-9"	2'-6"
4" C.I.P.	1'-6"	0'-9"	2'-6"

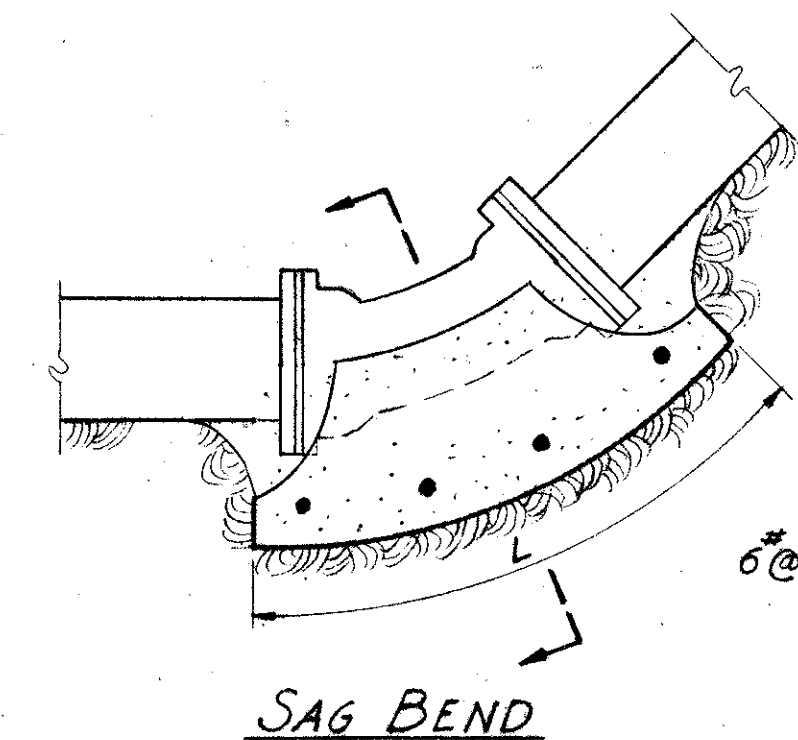


PLAN  
DEAD END PIPE BACKING (EXISTING MAINS)

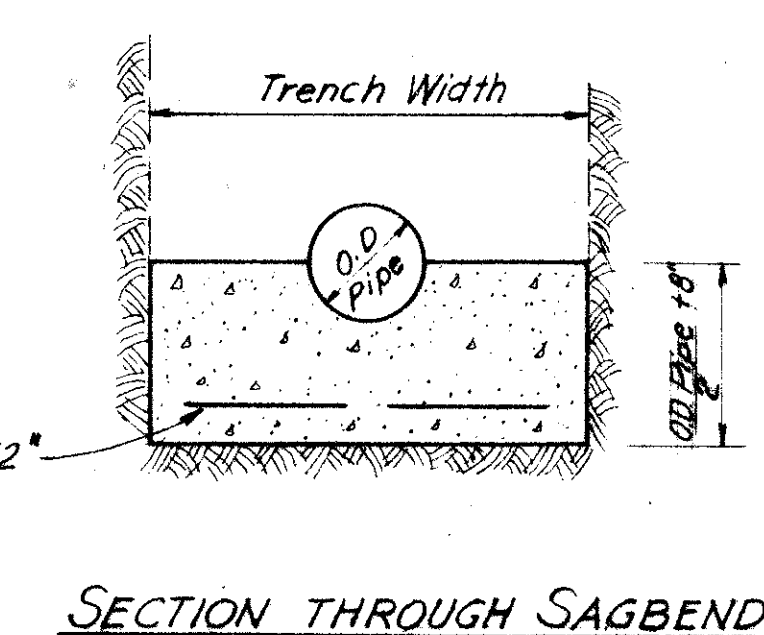
DEAD END PIPE AND TEE BACKING - DETAILS



PLAN VIEW OF ANCHOR BLOCK



SAG BEND

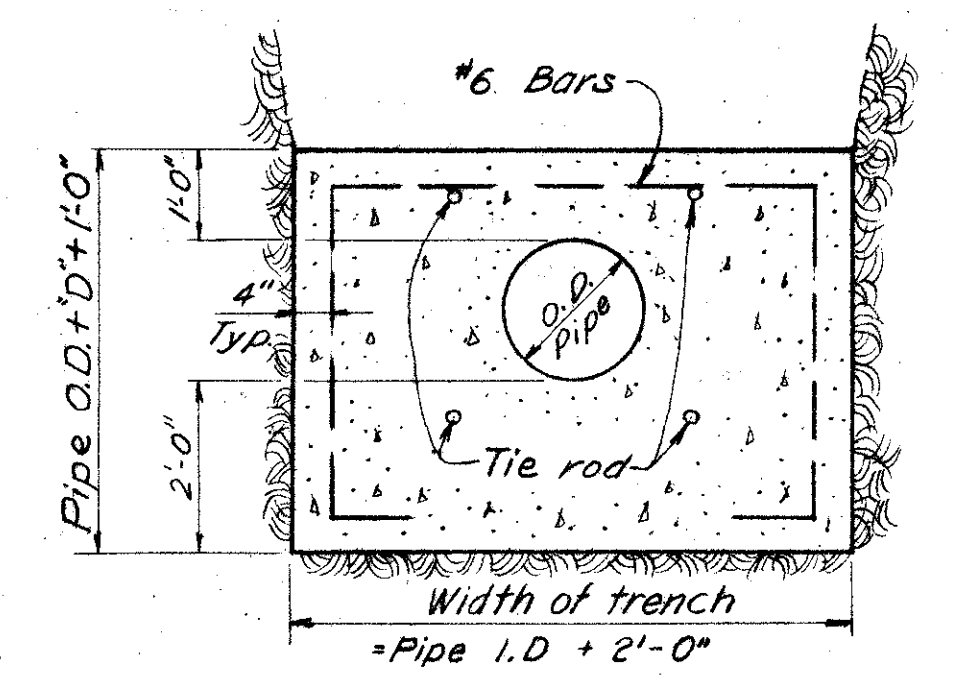


SECTION THROUGH SAGBEND

THRUST BLOCK DIMENSIONS FOR OVERBEND AND SAGBENDS

TYPE	45°				22 1/2°				11 1/4°			
	M	D	STEEL	X	M	D	STEEL	X	M	D	STEEL	X
24" pipe					4'-2"	1'-0"	1'-0"	#10 @ 6" Hor. #7 @ 12" Vert.	2'-0"	2'-0"	1'-0"	1'-0"
20" pipe					3'-0"	1'-0"	1'-0"	#10 @ 6" Hor. #7 @ 12" Vert.	2'-0"	2'-0"	1'-0"	1'-0"
16" C.I.P.	1'-0"	1'-0"	#7 @ 12" Hor. #7 @ 12" Vert.	1'-6"	1'-6"	2'-0"	2'-0"	—	1'-0"	1'-0"	1'-0"	—
12" C.I.P.	2'-0"	2'-0"	—	*	1'-0"	2'-0"	2'-0"	—	1'-0"	2'-0"	2'-0"	—
8" C.I.P.	2'-0"	2'-0"	—	*	1'-0"	2'-0"	2'-0"	—	1'-0"	2'-0"	2'-0"	—

\* No Anchor Blocks Required



SECTION THROUGH OVERBEND

Field paint tie rods and accessories exposed to earth with one coat Inertol Standard Thick Black or approved equal.







GENERAL LIGHTING NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

106  
250

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LIGHTING FOR STRUCTURES

Quantities for the standards, luminaires, wiring, and conduit up to the nearest pull box off the structure shall be included with the structure quantities.

INTENSITIES

The design intensity for this project is as follows:  
Average maintained footcandles on roadways and ramps. . . . . 0.8 FC  
Average maintained footcandles on underpasses (night only) 5.0 FC.

GALVANIZED STEEL CONDUIT

Galvanized steel conduit shall be rigid standard NEC conduit of sizes indicated. Ends of steel conduit exposed in pole bases and pull boxes are to be provided with insulating bushings. Where bends are necessary, factory ells or appropriate fittings will be used whenever possible. Field bends will be made with hickies or hydraulic benders only. Conduit shall comply with Federal Specification No. WW-C-581c.

PLASTIC CONDUIT, CONCRETE ENCASED

2" & 4" I.D. Plastic Conduit shall be modified high impact Styrene Type I, by Consolidated, Carlon, or approved equal. Fittings are to be of like material. Joints are to be made with approved solvent cement.  
A 12" long by 1-3/4" diameter mandrel is to be pulled through duct after placement of concrete. Concrete shall be Class C. No separate payment will be allowed for concrete encasement.

MERCURY VAPOR LAMPS

Lamps shall be 250 Watt and 400 Watt as appropriate, clear mercury vapor, American Standards Association Code No. H-37-5KB and H-33-1CD respectively.

BRIDGE CONDUIT EXPANSION JOINTS

Expansion Joints shall be hot dipped galvanized malleable iron body and head with graphite packing, copper ground, pressure ring, copper ground jumper and bakelite bushing. Type AX (2" or less expansion.) Furnished by OZ Mfg. Company, Spring City Mfg. Co., or approved equal.  
Provide hot dipped galvanized steel conduit expansion nipple, fixed nipple and steel to plastic conduit adapters.

MERCURY VAPOR BALLASTS

Ballasts shall be built-in 230/460 volt, 60 cycle, -20°F operation regulator type ballasts for 250 or 400 watt lamps as applicable.

CABLE

Direct burial and in-conduit below ground cable shall be No. 2/0 AWG 19 strand single conductor, 600 volt, insulated rubber covered GE Special #SI 58007 (Insulation 5/64", Jacket 5/64") Super Coronol Insulation --Geoprene Jacket or approved equal by General Cable or Anaconda.

LAMP WIRING

Lamp and standard wire shall be 600 volt #12 RHW Type SI 58006 as manufactured by General Electric or approved equal by General Cable or Anaconda. Connections and fusing shall be as shown on the details.

SPLICES

No splices will be allowed except in manholes, lamp standard bases, or junction boxes. No separate payment will be allowed for splicing.

CIRCUITS

Circuits shall be 460 volt single phase two wire multiple ungrounded.

MERCURY LUMINAIRES

Luminaires shall be General Electric type M400, Westinghouse type OV-25 or Line Material Unistyle with ASA light distribution types as indicated on Plans.

UNDERPASS LUMINAIRES

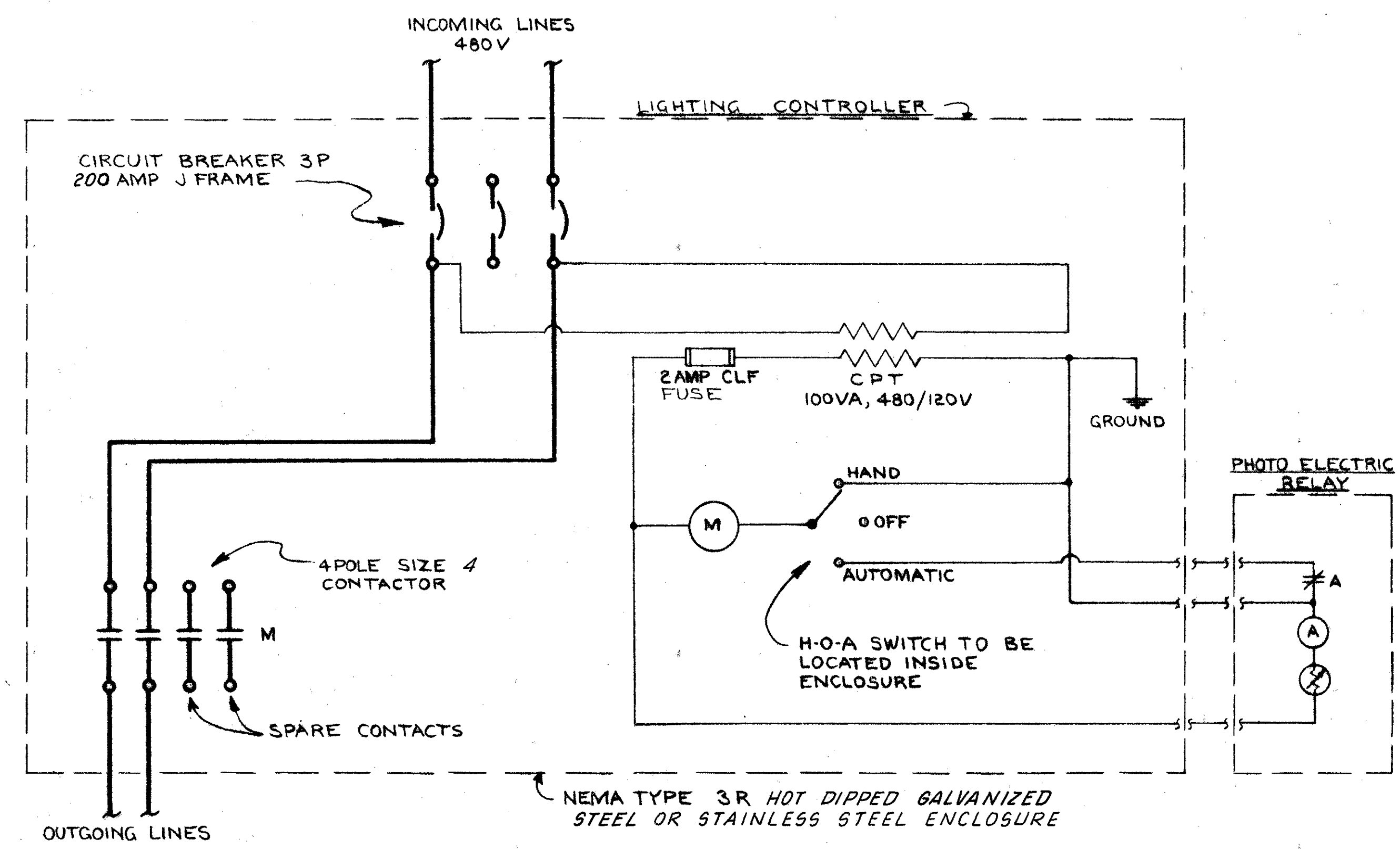
Underpass luminaires shall be 250 Watt Mercury type - Integral Ballast - Weather and Insect-proof Gasket - Stainless Steel Hinge and Latches - Weather proof Cast Aluminum Housing and Door - Anodized Aluminum Visor - Asymmetric Aluminum Reflector - One-Piece Prismatic Heat and Shock Resistant Borosilicate Crystal Glass Refractor. (Holophane Co., Inc., No. 488, or approved equal.)

LUMINAIRE SHIELDS

Shields shall be employed where indicated on the plans and shall be of the same manufacture as the luminaire and shall be part of the street light unit for payment.



FRANKLIN COUNTY  
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LIGHTING DETAILS



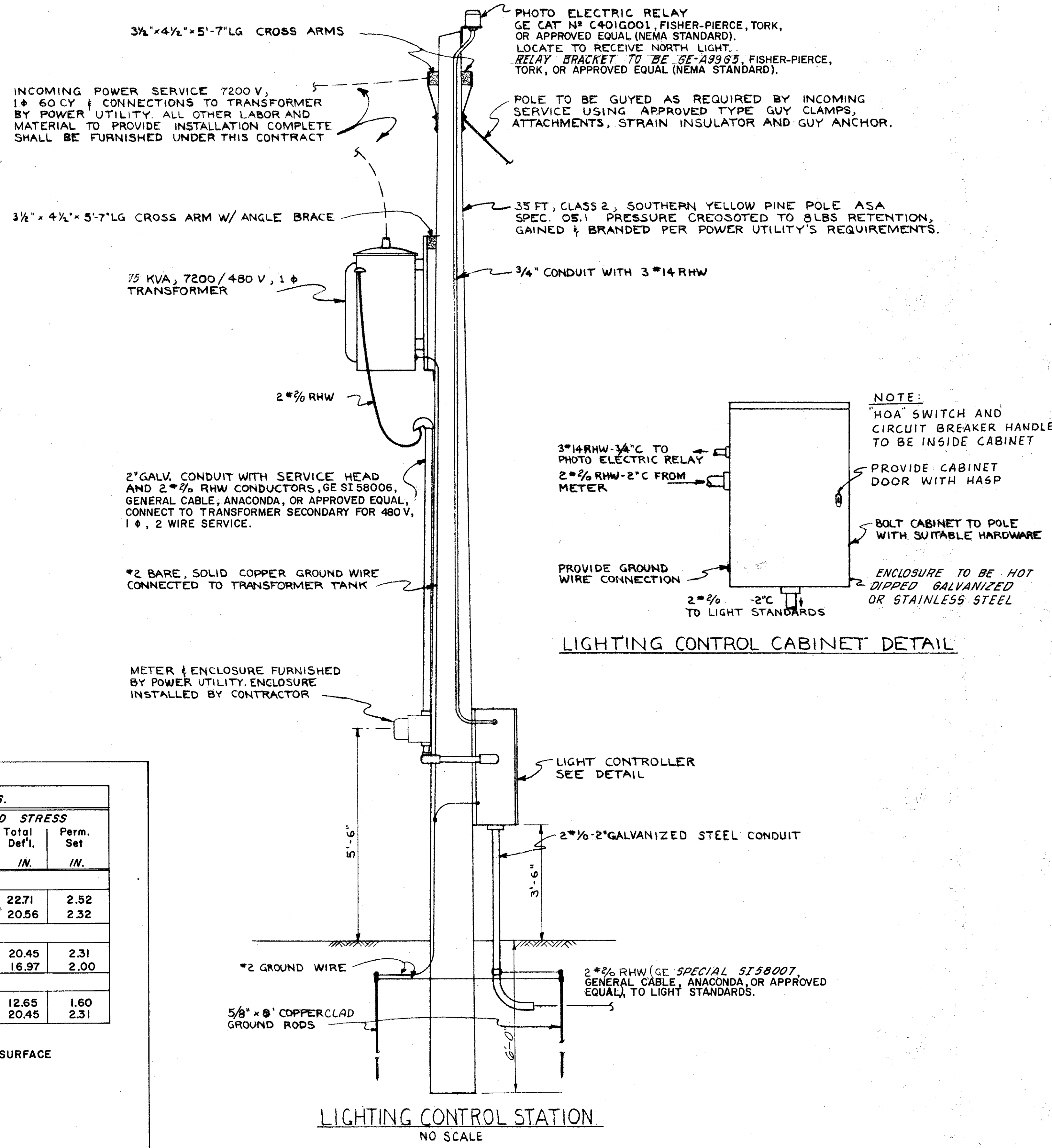
WIRING DIAGRAM

NOTES:

- POLE CONSTRUCTION TO BE IN ACCORDANCE WITH NATIONAL ELECTRICAL SAFETY CODE CLASS B CONSTRUCTION.
- LIGHTING CONTROL IS TO BE A COMBINATION ACROSS THE LINE MAGNETIC CONTACTOR "MODIFIED 9591H3518" AS MANUFACTURED BY CUTLER-HAMMER, OR EQUAL BY GE OR SQUARE D.
- TRANSFORMER IS TO BE 75 KVA, 10, 60~OIL IMMERSED SELF-PROTECTED TYPE W/7200V. PRIMARY 240/480V. SECONDARY TWO 2 1/2% TAPS ABOVE AND BELOW RATED PRIMARY INTERNAL PRIMARY FUSES AND TWO VALVE-TYPE ARRESTERS. UNIT IS TO BE GE, HSBA OR EQUAL BY LINE MATERIAL OR WESTINGHOUSE.
- THE CONTRACT UNIT PRICE BID FOR ITEM S-25 LIGHTING CONTROL SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS, LABOR, and INCIDENTALS NECESSARY TO MAKE A COMPLETE WORKABLE INSTALLATION.

MECHANICAL PROPERTIES FOR 11 GAUGE ROUND TAPERED STEEL LIGHT POLES — SEE PROPOSAL FOR SPECIFICATIONS.											
POLE SIZE * (Round 11 Ga.)	ANCHOR Dia. Bolt Circle	BOLT Project. Above Foundation	ARM LENGTH *	MOUNTING HEIGHT	ELASTIC DEF'L. RATE In. per 100 lb.	AT 2/3 OF YEILD STRESS Load 18" Down from Top			AT YEILD STRESS Load 18" Down from Top		
						LB.	IN.	IN.	LB.	IN.	IN.
<b>Ground Mounted Poles (Anchor Base)</b>											
8.0"x 4.22"x 27'-0"	11.0"	2-5/8"	10'	30'-0"	2.37	568	13.96	.50	825	22.71	2.52
8.5"x 4.72"x 27'-0"	11.5"	2-3/4"	15'	30'-0"	1.89	643	12.65	.50	965	20.56	2.32
<b>Bridge Mounted Poles (Anchor Base)</b>											
7.5"x 4.00"x 25'-0"	10.5"	2-5/8"	10'	30'-0"	2.24	540	12.60	.50	810	20.45	2.31
8.5"x 5.00"x 25'-0"	11.5"	2-3/4"	15'	30'-0"	1.43	698	10.48	.50	1047	16.97	2.00
<b>Retaining Wall Mounted Poles (Transformer Base)</b> NOTE: Mechanical Properties for Shaft Only.											
7.0"x (4.20"x 20'-0")†	15.00"	3"	10' and 15'	30'-0"	1.24	594	7.87	.50	891	12.65	1.60
7.5"x 4.00"x 25'-0"	15.00"	3"	10'	30'-0"	2.24	540	12.60	.50	810	20.45	2.31

\* BASED ON A 75 LB. LUMINAIRE WITH MAXIMUM PROJECTED AREA OF 3.3 SQ. FT. ANCHOR BOLTS 1" x 40"  
† TOP DIAMETER and LENGTH OF EACH POLE VARIES IN ACCORDANCE WITH HEIGHT OF RETAINING WALL ABOVE FINISHED ROADWAY SURFACE UNDER LUMINAIRE. SEE SHEET NO. 108.



LIGHTING CONTROL STATION  
NO SCALE







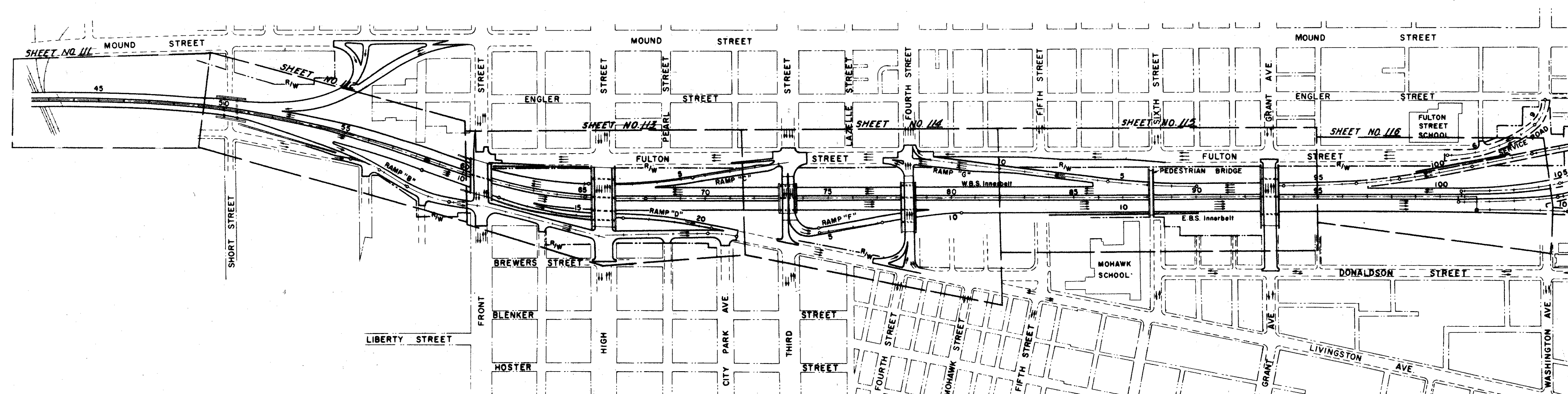




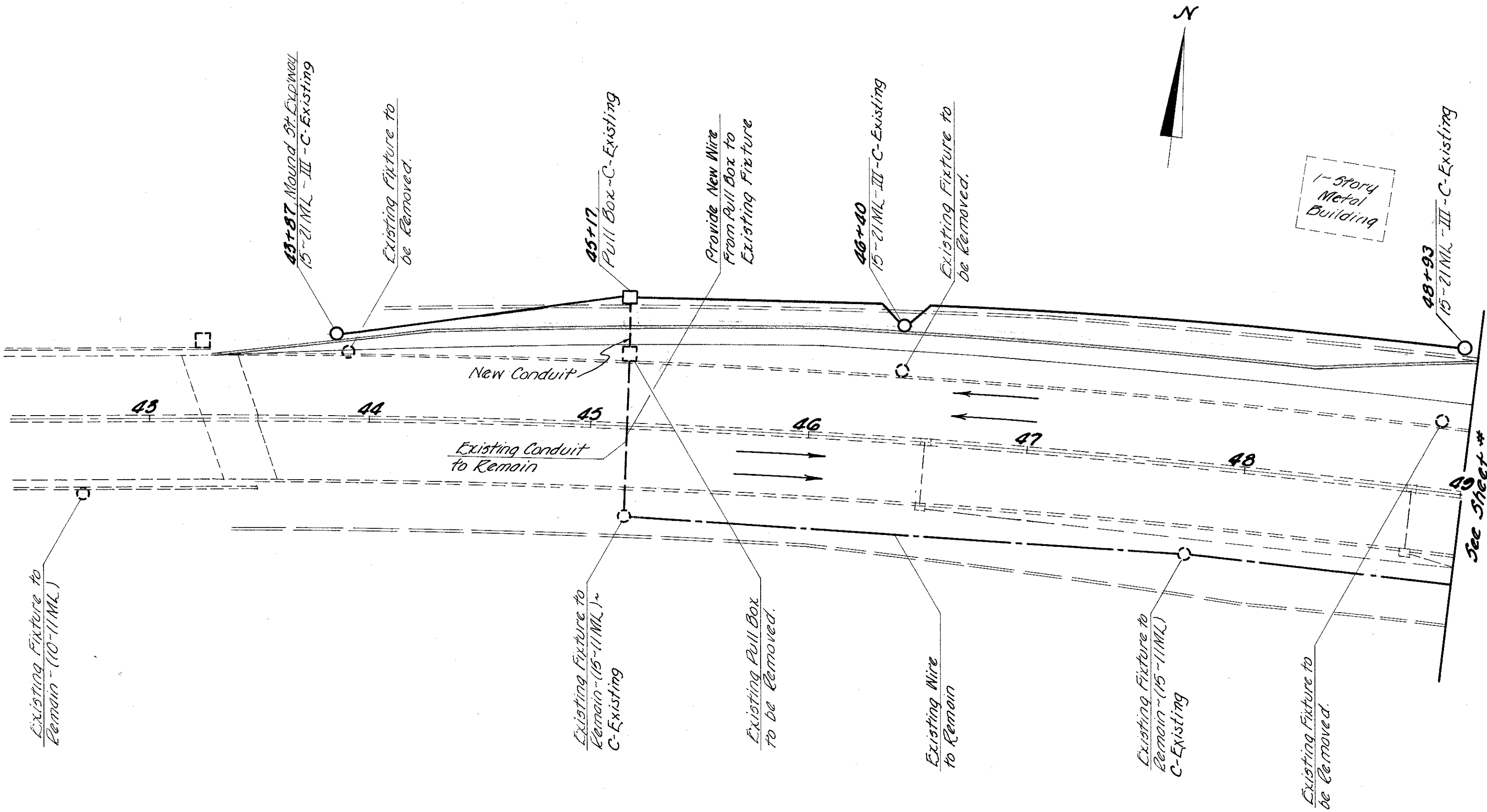
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

110  
250

FRANKLIN COUNTY  
FRA.-40-12.82







SUMMARY				
Item	Unit	Participating		Total
		Code 1000	Code 600	
Street Light- 15 Ft. Bracket, 400 Watt, Type III Dist.	Ea.	0	3	0
Pull Box	Ea.	0	1	0
Wire, #2/0	Lf.	0	1250	0
2" Conduit Plastic, Conc. Encased	Lf.	0	20	0
				3
				1
				1250
				20

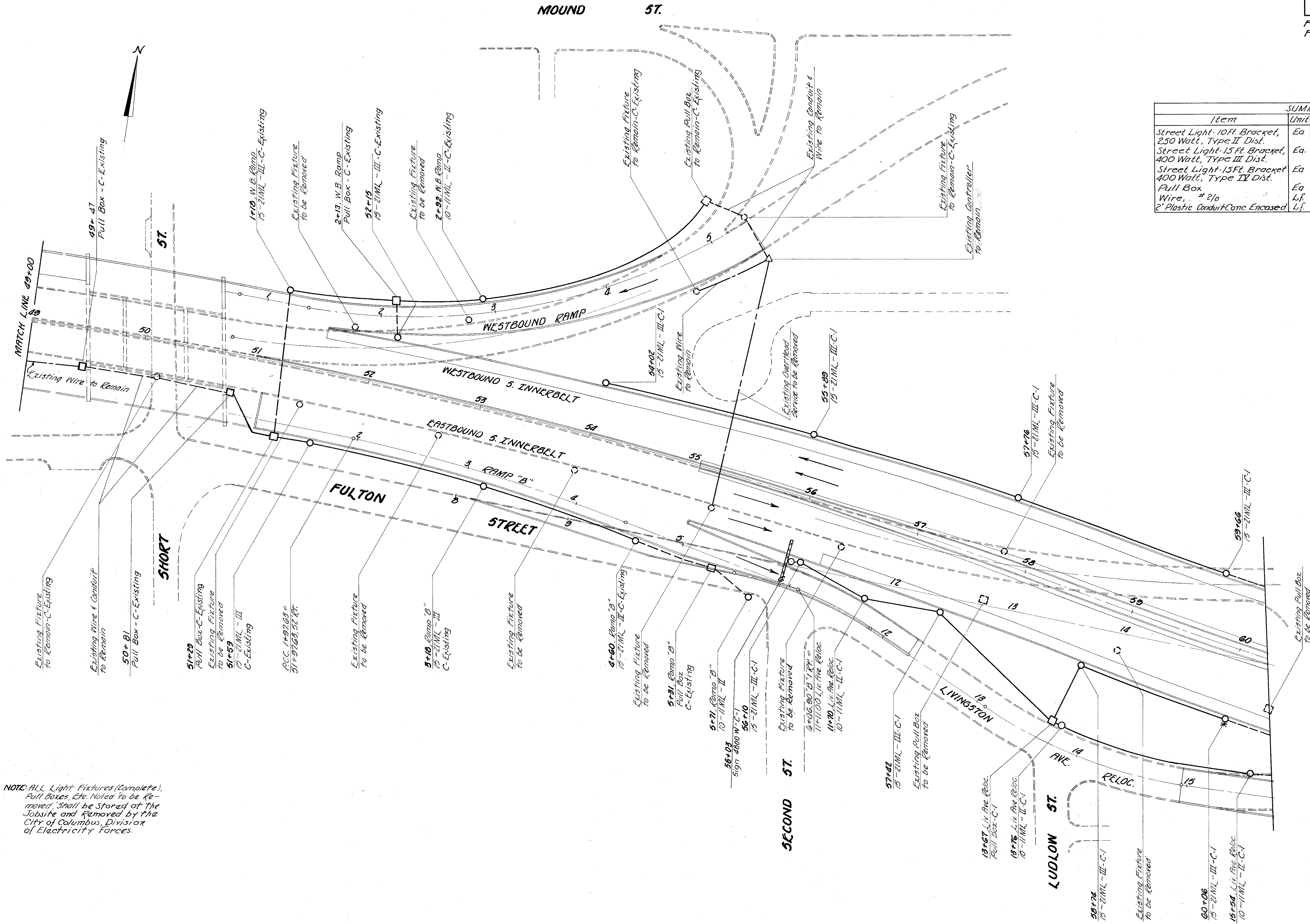
LEGEND

- Steel Light Standard, Anchor Base, with Single Bracket Arm, Foundation, Luminaire, Lamp, Ballast & Pole Wiring.
- ⊗ Same as Above - Shown & Paid for Under Structure Item.
- ⊙ Steel Light Standard, Anchor Base, with Single Bracket Arm, Foundation, Luminaire, Lamp, Ballast & Pole Wiring - Replacement in Kind.
- ⊕ Same as Above - Shown & Paid for Under Structure Item.
- ✱ Steel Light Standard, Transformer Base, with Single Bracket Arm, Luminaire, Lamp, Ballast & Pole Wiring - Shown & Paid for Under Structure Item.
- ⊖ Steel Light Standard, Anchor Base, with Single Bracket Arm, Foundation, Luminaire, Lamp, Ballast & Pole Wiring - Full City Participation.
- 7+22, Fulton St. ~ Station & Road  
10-11ML - II - C-1 ~ Bracket Length, Lamp Lumens in Thousands, Light Pattern, & Circuit Number.
- \* Luminaire Shield
- Pull Box
- ⊗ Pull Box - Full City Participation
- Direct Burial Cable.
- 2" Plastic Conduit, Encased in Concrete.
- △ Lighting Control Station.
- (UPL) Underpass Lighting.
- Lighted Signs

NOTE: ALL Light Fixtures, (Complete), Pull Boxes, Etc. Noted to be Removed, Shall be Stored at the Jobsite and Removed by the City of Columbus, Division Of Electricity Forces

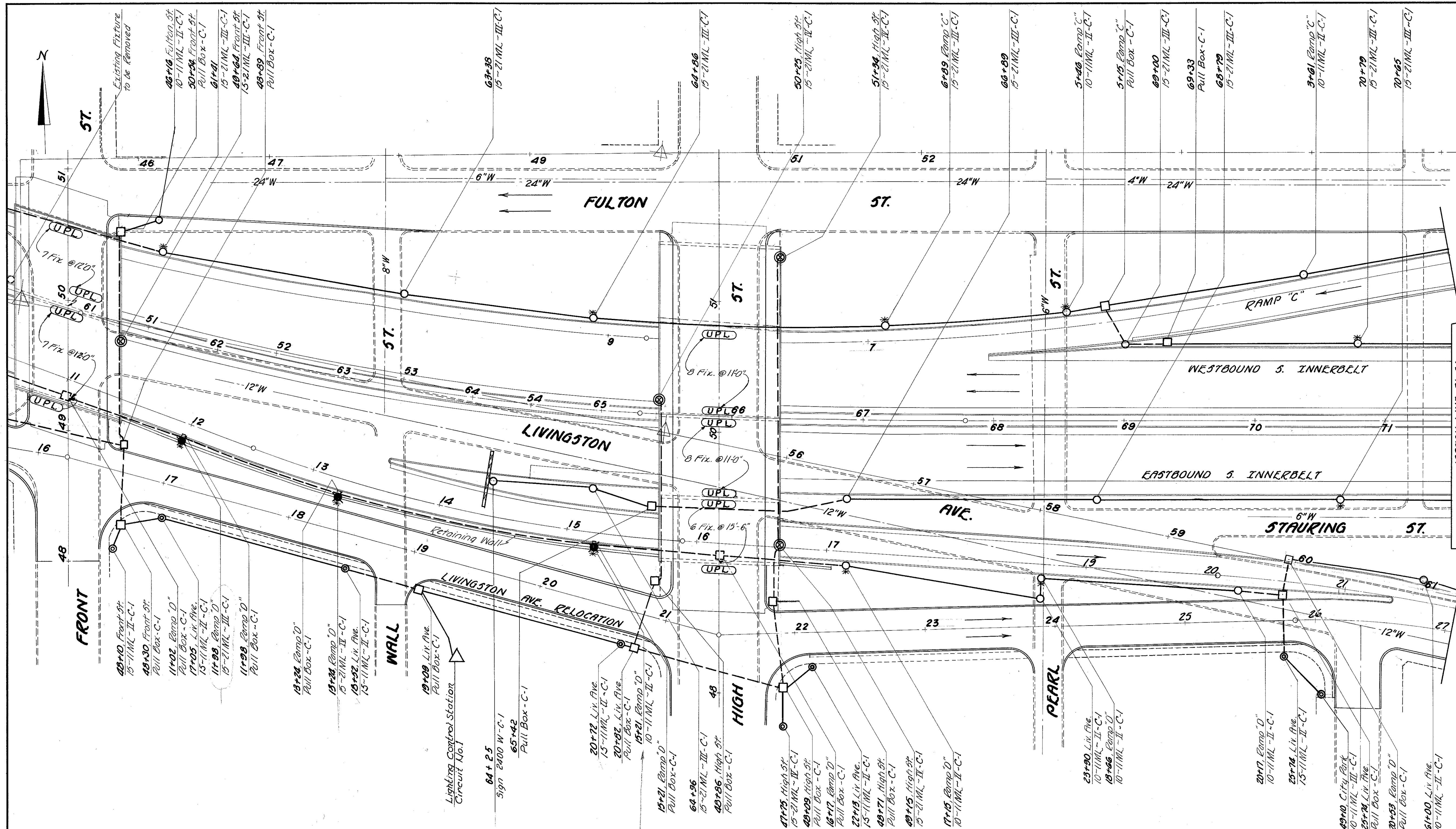


SUMMARY				
Item	Unit	Participating	Non Participating	Total
Street Light-10Ft. Bracket, 250 Watt, Type II Dist.	Ea	0 5	0	5
Street Light-15 Ft. Bracket, 400 Watt, Type III Dist.	Ea	0 12	0	12
Street Light-15Ft. Bracket 400 Watt, Type IV Dist.	Ea	0 1	0	1
Pull Box	Ea	0 6	0	6
Wire, # 2/0	Lf	0 4710	0	4710
2" Plastic Conduit Conc. Encased	Lf	0 350	0	350



NOTE: ALL Light Fixtures (Complete), Pull Boxes, Etc. Noted to be Removed, shall be Stored at the Jobsite and Removed by the City of Columbus, Division of Electricity Forces.

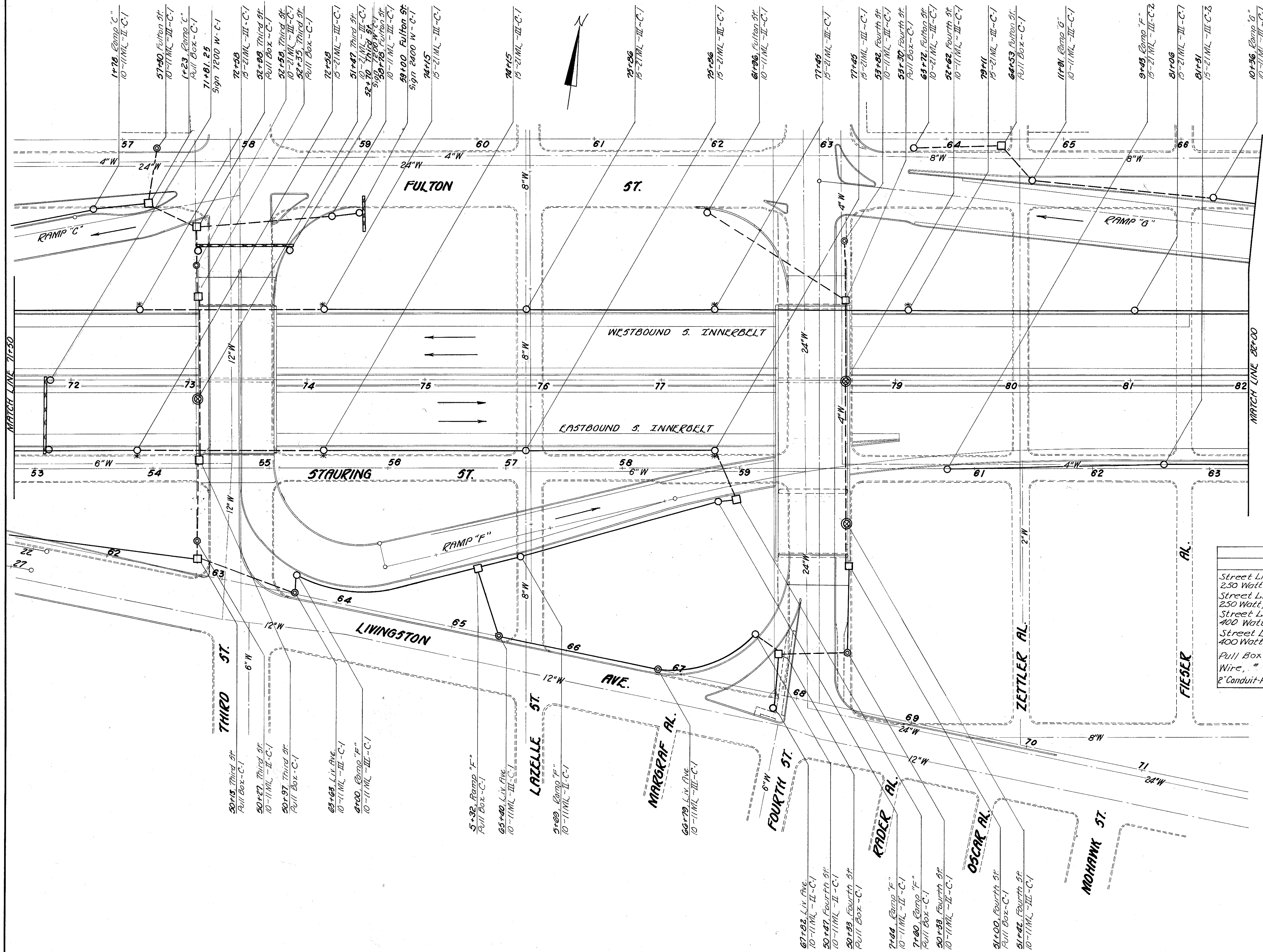




SUMMARY				
Item	Unit	Participating	Non Participating	Total
Street Light - 10 Ft. Bracket, 250 Watt, Type II Dist.	Ea.	1	7	8
Street Light - 10 Ft. Bracket, 250 Watt, Type III Dist.	Ea.	1	0	1
Street Light - 15 Ft. Bracket, 250 Watt, Type II Dist.	Ea.	6	0	6
Street Light - 15 Ft. Bracket, 400 Watt, Type III Dist.	Ea.	0	10	10
Street Light - 15 Ft. Bracket, 400 Watt, Type IV Dist.	Ea.	0	1	1
Pull Box	Ea.	6	12	18
Wire - %	Lf.	1298	6930	8228
2" Conduit - Plastic Conc. Encased	Lf.	294	1155	1449
Lighting Control Station as per plan	Ea.	0	1	1

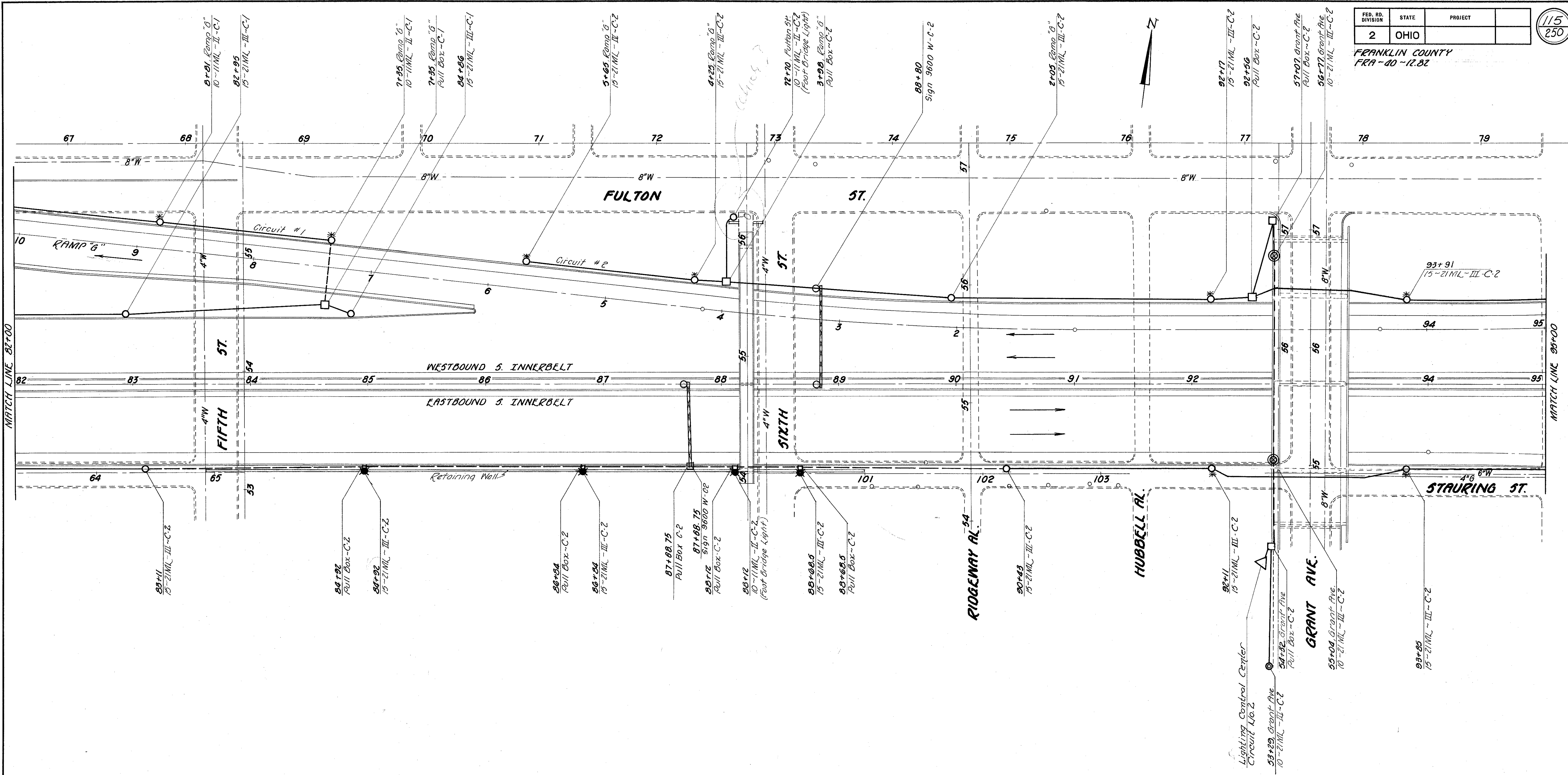


FRANKLIN COUNTY  
FRI - 40 - 12.82



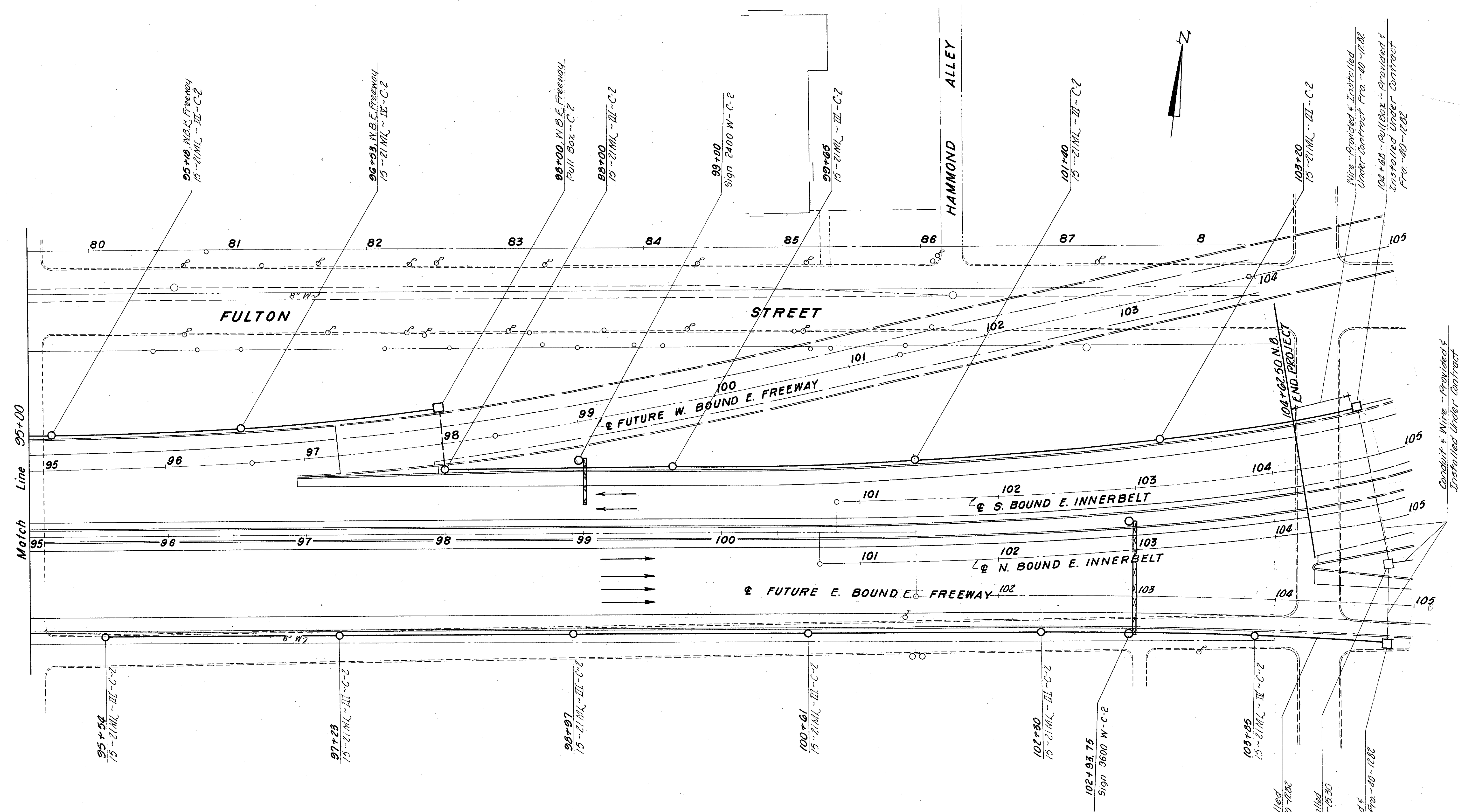
SUMMARY				
Item	Unit	Participating	Non Participating	Total
Street Light - 10 Ft. Bracket, 250 Watt, Type II Dist.	Ea	5	3	0
Street Light - 10 Ft. Bracket, 250 Watt, Type III Dist.	Ea	4	4	0
Street Light - 10 Ft. Bracket, 400 Watt, Type III Dist.	Ea	1	1	0
Street Light - 15 Ft. Bracket, 400 Watt, Type III Dist.	Ea	0	12	0
Pull Box	Ea	6	5	0
Wire, # 2/0	Lf	1714	6430	0
2" Conduit - Plastic, Conc. Exposed	Lf	442	720	0





SUMMARY				
Item	Unit	Participating	Non Participating	Total
Street Light - 10 Ft. Bracket, 250 Watt, Type II Dist.	Ea	0 3	0	3
Street Light - 10 Ft. Bracket, 400 Watt, Type III Dist.	Ea	0 0	0	0
Street Light - 15 Ft. Bracket, 400 Watt, Type III Dist.	Ea	0 10	0	10
Street Light - 15 Ft. Bracket, 400 Watt, Type IV Dist.	Ea	0 1	0	1
Pull Box	Ea	0 10	0	10
Wire - #2/0	Lf	0 5888	0	5888
2" Conduit - Plastic, Conc. Exposed	Lf	0 672	0	672
Lighting Control Station as per plan	Ea	0 1	0	1





SUMMARY				
Item	Unit	Participating	Non Participating	Total
Street Light - 15 Ft. Bracket, 400 Watt, Type III Dist.	Ea.	0	10	10
Street Light - 15 Ft. Bracket 400 Watt, Type IV Dist.	Ea.	0	2	2
Pull Box	Ea.	0	3	3
Wire # 2/0	L.F.	0	3900	3900
2" Conduit - Plastic, Conc. Encased	L.F.	0	40	40



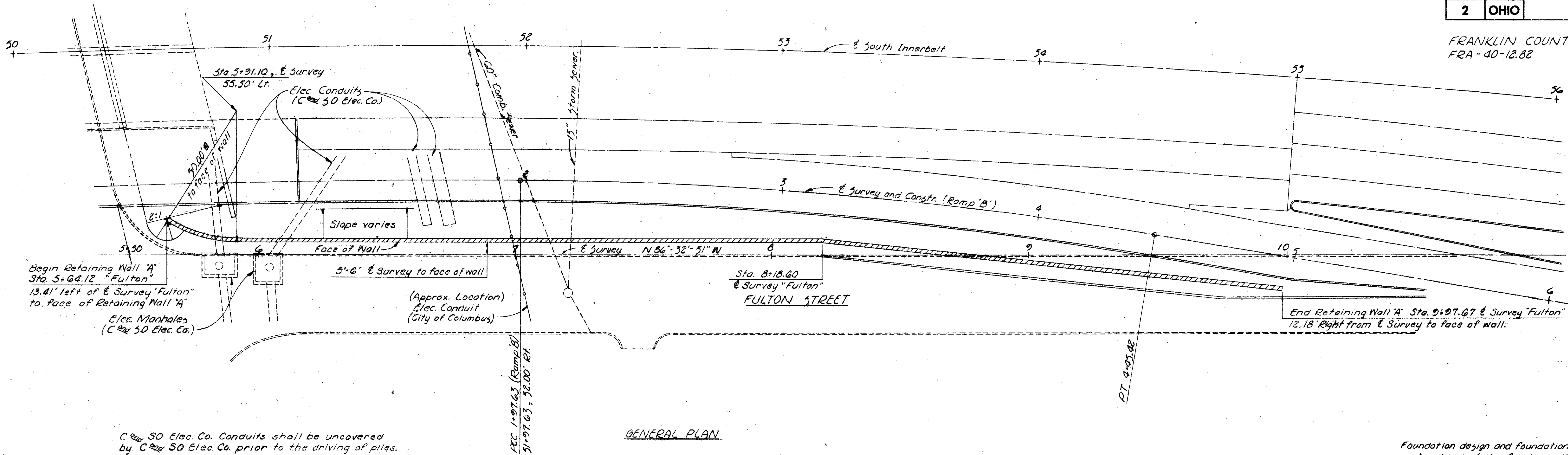
Franklin County  
FRA-40-12.82

SUMMARY OF ESTIMATED QUANTITIES Code 6707														
ITEM	TOTAL	UNIT	DESCRIPTION	WALL DESIGNATION										Total
				A	B	C	D	K						
E-2	8436	Cu.Yd.	Unclassified Excavation	1650	1782	2509	2325	170						8436
E-2	1098	Sq.Ft.	Sheet piling, left-in-place (27 # per sq. ft.) *	776				322						1098
E-2	Lump	Sum	Cofferdams, Cribbs & Sheeting		Lump	Lump	Lump							Lump
S-1	2763	Cu.Yd.	Class "E" Concrete, footings.	420	687	813	750	93						2763
S-1	3132	Cu.Yd.	Class "E" Concrete, walls	530	750	797	998	57						3132
S-3	1168	Lin.Ft.	Waterproofing, Premolded sealing strip.	181	281	344	335	27						1168
S-4	286,491	Lbs.	Reinforcing Steel	42845	69,002	95,465	75,090	4089						286,491
S-9	1020	Sq.Ft.	1" Gray rubber, Preformed expansion joint filler.	104	295	309	297	15						1020
S-9	12	Sq.Ft.	1/2" Gray rubber, Preformed expansion joint filler.	12										12
S-16	Lump	Sum	First test pile	Lump				Lump						Lump
S-18	2226	Lin.Ft.	10 BP 42 Steel Piles	2226										2226
S-18	840	Lin.Ft.	12" Cast-in-place reinforced concrete piles.					840						840
I-26	1,304	Lin.Ft.	Galvanized Steel Chain Link Fence, as per plan		426	411	467							1304
S-25	7	Each	Lamp Standards		3		4							7
S-25	7	Each	Mercury Vapor Luminaires		3		4							7
S-25	588	Lin.Ft.	Pole and bracket cable (single conductor)		252		336							588
S-25	182	Lin.Ft.	Plastic wall conduit		65		117							182
S-29	1,888	Cu.Yd.	Porous Backfill	254	568	464	577	25						1888

\* MZ-27 or ZP-27 or other equivalent section



FRANKLIN COUNTY  
FRA-40-12.82



C&S Elec. Co. Conduits shall be uncovered by C&S Elec. Co. prior to the driving of piles.

City of Columbus Elec. Conduits and 60\"/>

GENERAL PLAN

Foundation design and foundation quantities are based on a study of road soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

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 revisions thereof, dated 2-21-58.

Maximum foundation pressure = 2.5 tons per sq. ft.

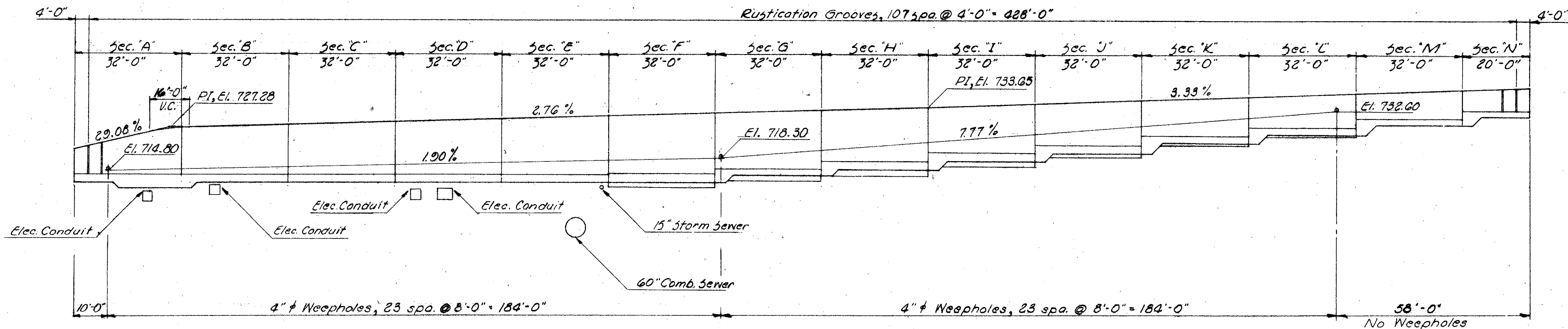
Key on bottom of footing shall be placed in a carefully made trench against undisturbed earth.

Piles shall be driven to a minimum bearing capacity of 30 tons. Estimated average pile length is 28.5'. Vertical piles shall be driven first within each section after which the battered piles shall be driven to the same tip elevation.

Weephole elevations given are to bottom of 4\"/>

Weepholes shall be placed in straight line between given elevations.

End porous backfill 2'-0\"/>



DEVELOPED GENERAL ELEVATION

(Piling not shown)

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

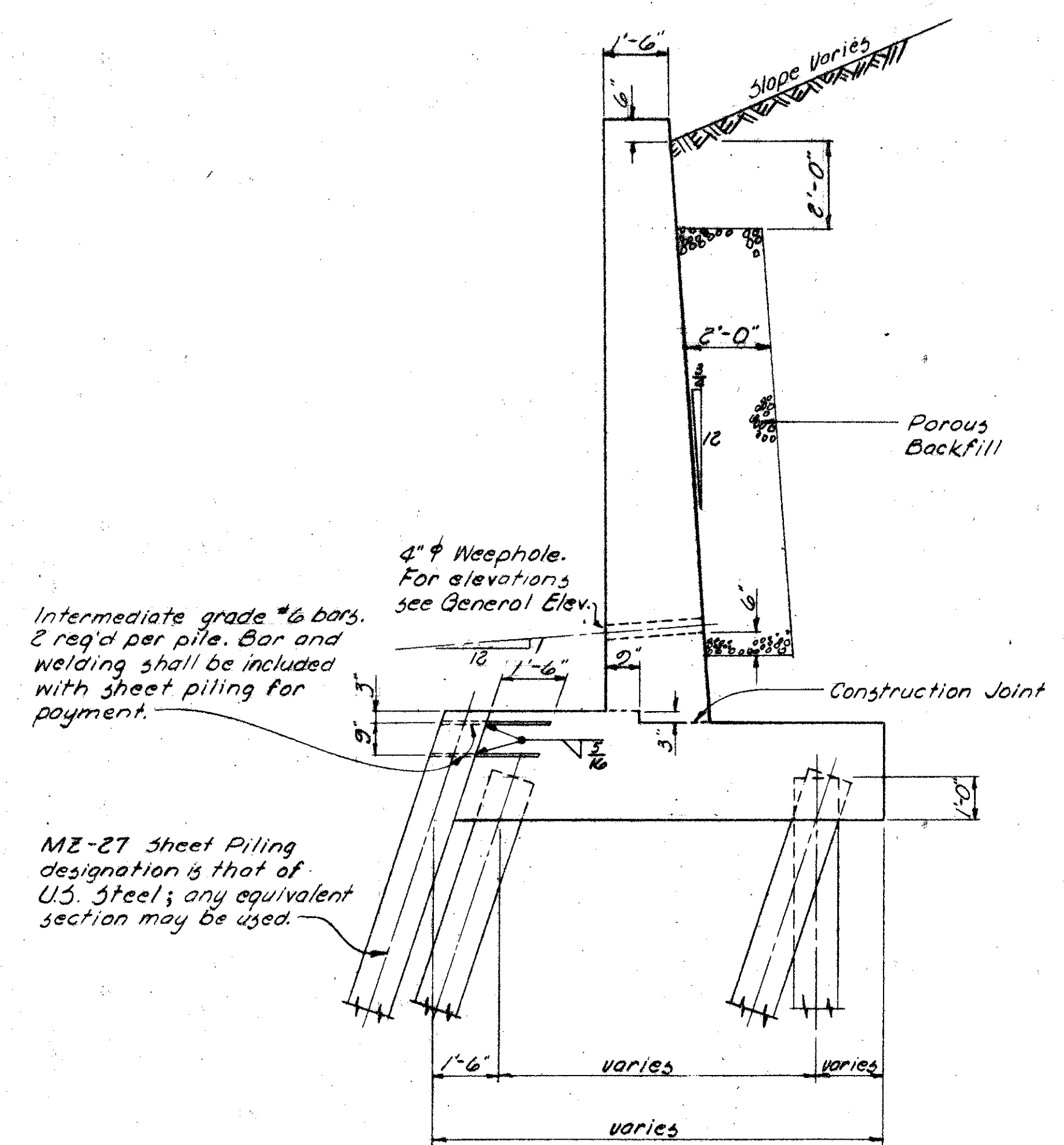
GENERAL PLAN & ELEVATION  
RETAINING WALL "A" along  
SOUTH INNERBELT

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		R.R.M.	T.L.U.	5-10-62	

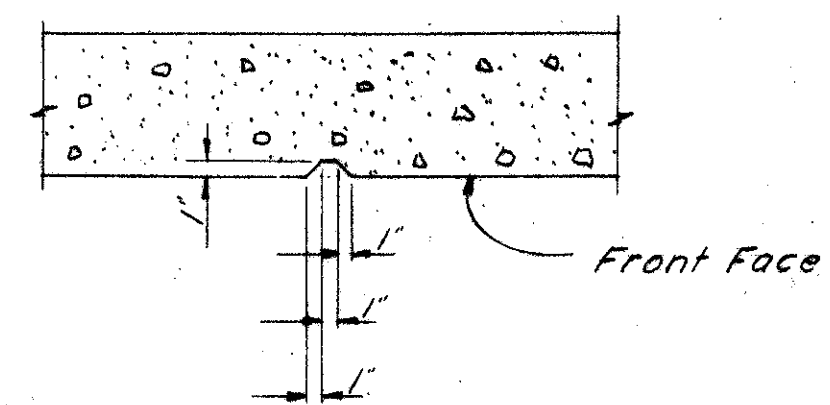


FRANKLIN COUNTY  
FRA-40-12.82

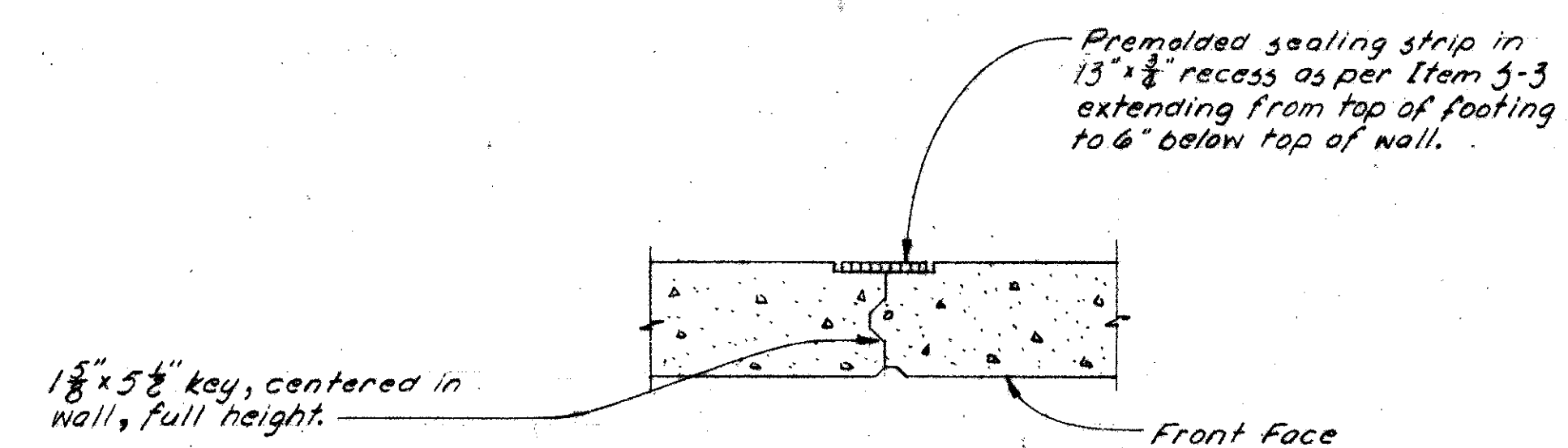


TYPICAL SECTION

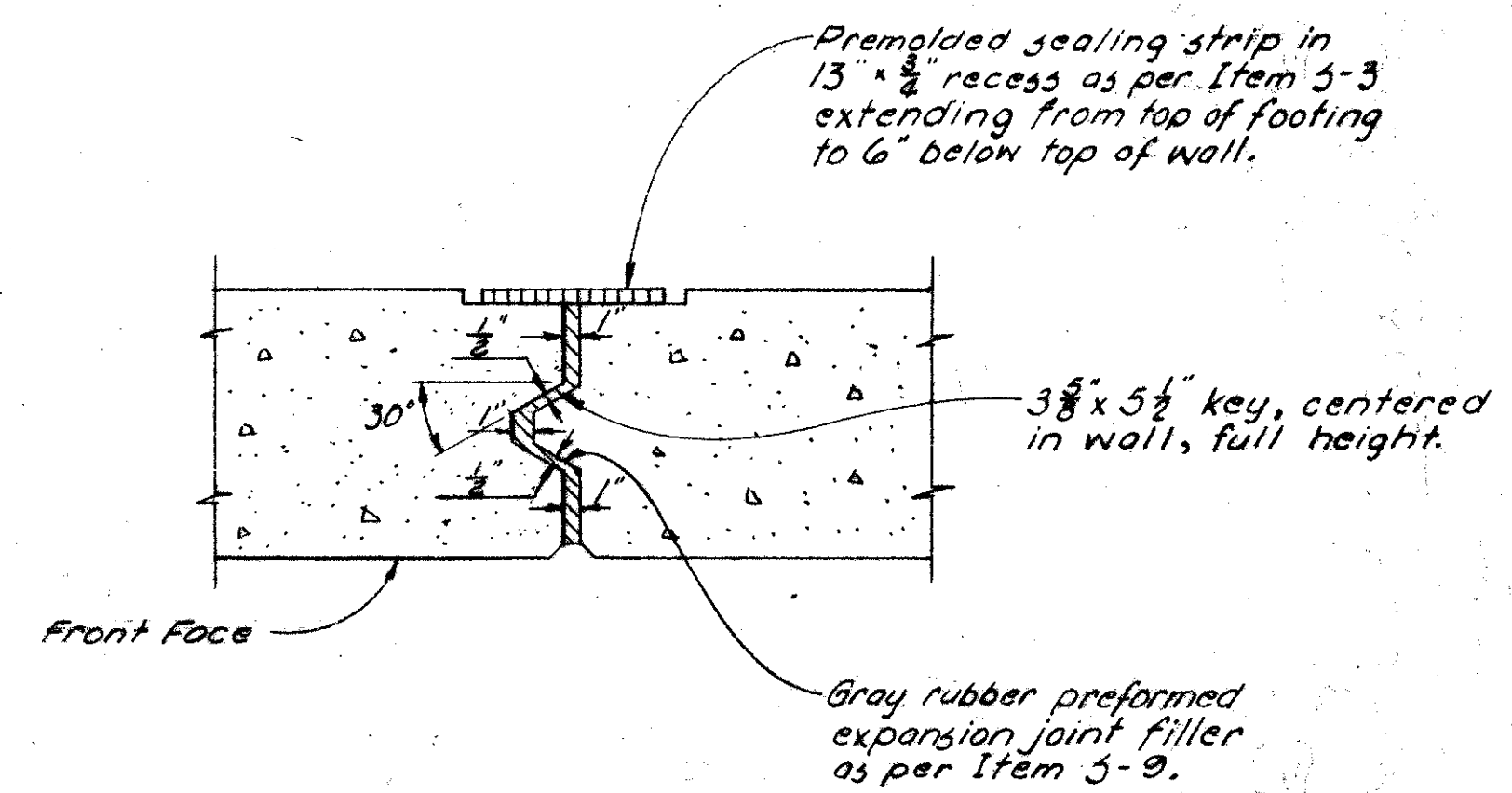
Footing shown typical for sections A thru E. Portion above footing typical for all sections. Omit sheet piling in Sections A & B.



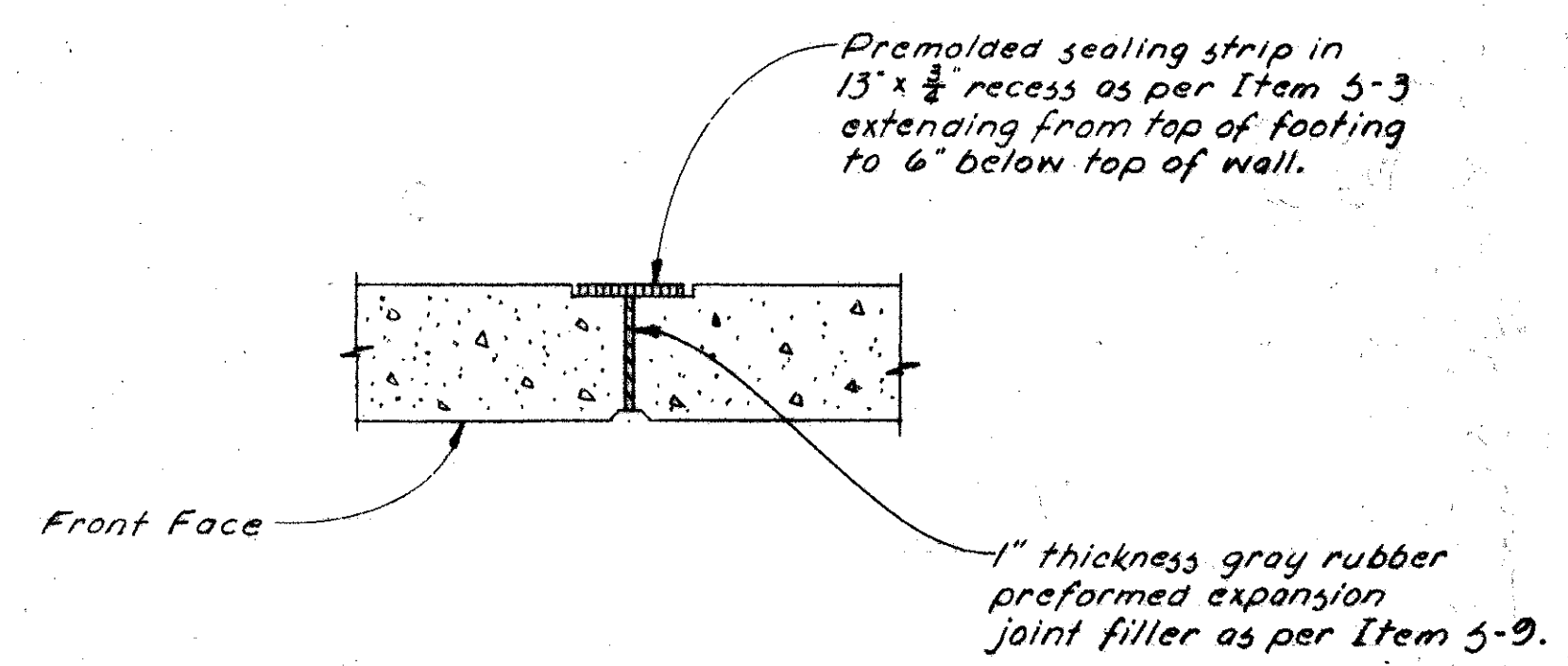
RUSTICATION GROOVE DETAIL



CONTRACTION JOINT DETAIL



KEYED EXPANSION JOINT DETAIL



EXPANSION JOINT DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
DETAILS RETAINING WALL "A" along SOUTH INNERBELT						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		R.R.M.	TLU	5/10/62	







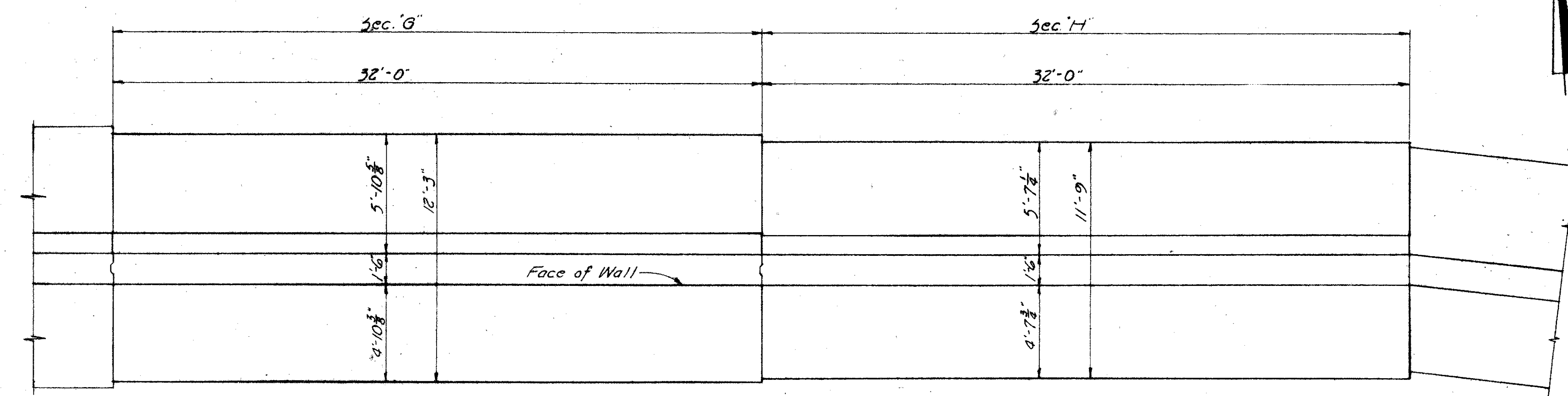




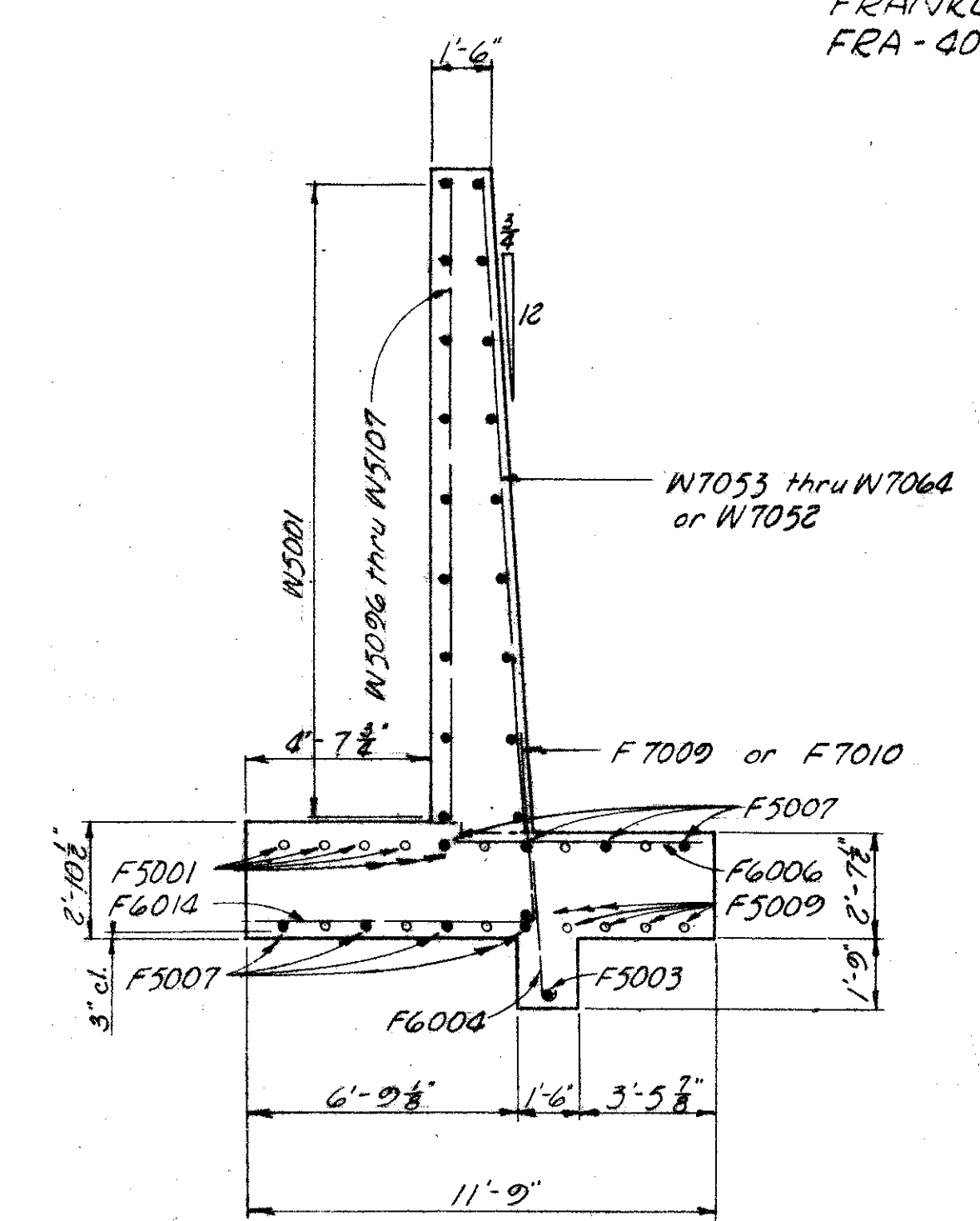




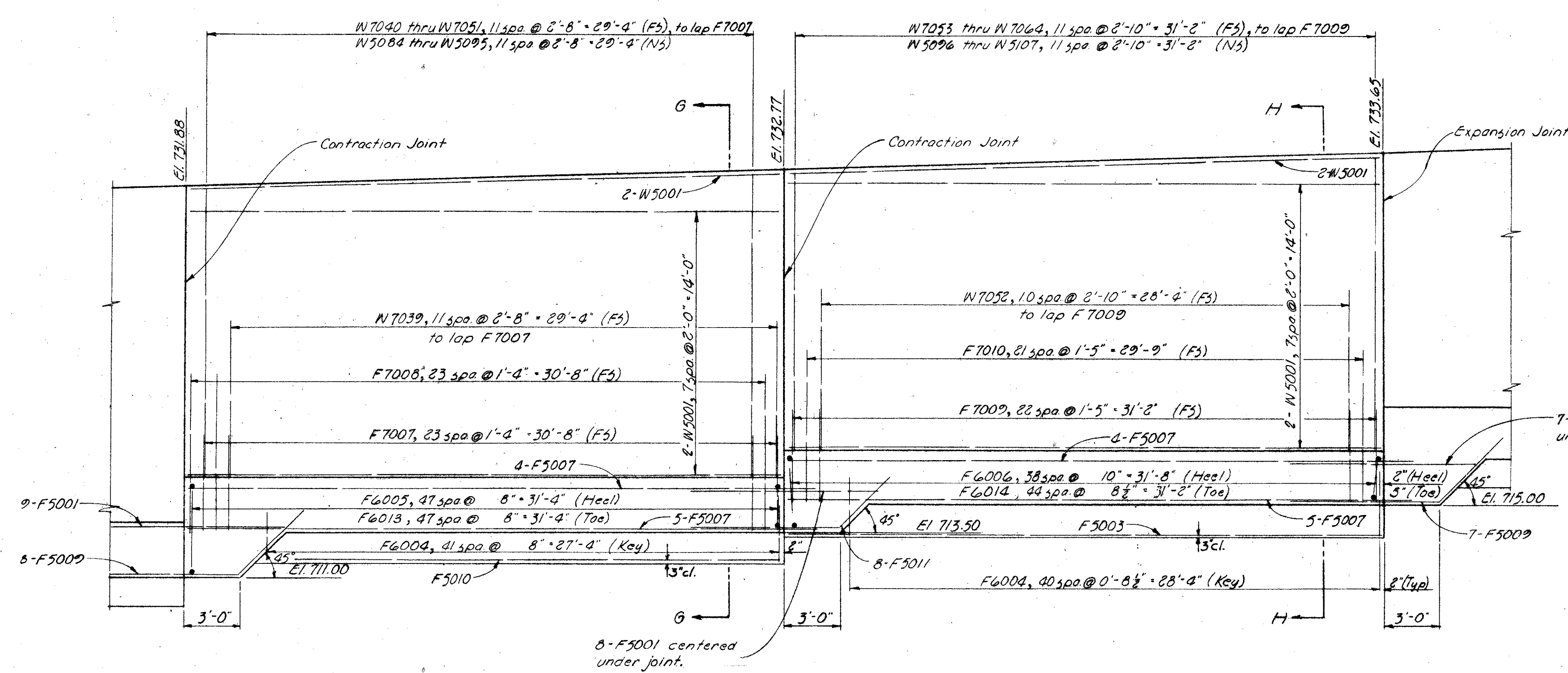
FRANKLIN COUNTY  
FRA-40-12.82



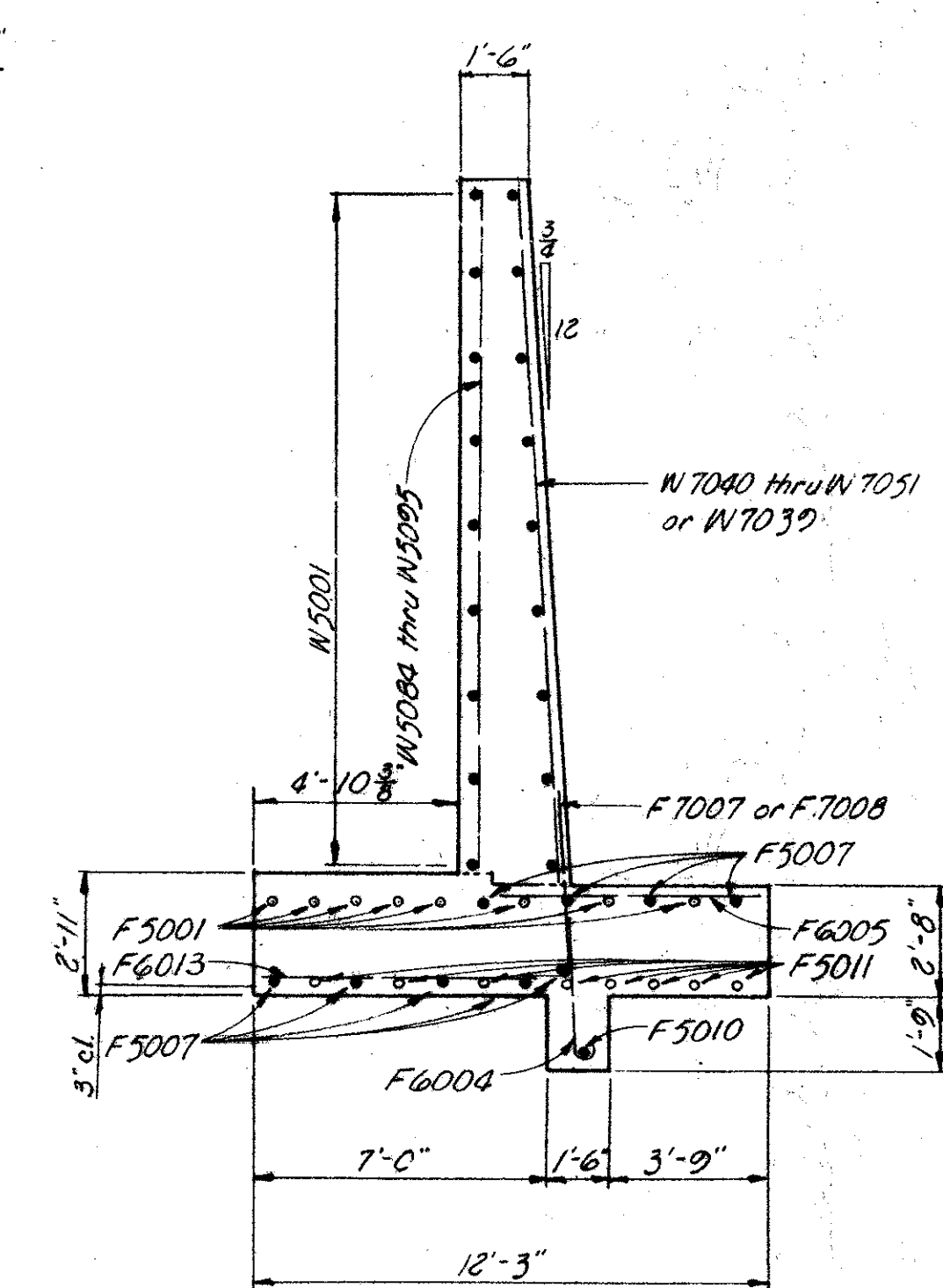
PLAN



SECTION "H"



ELEVATION



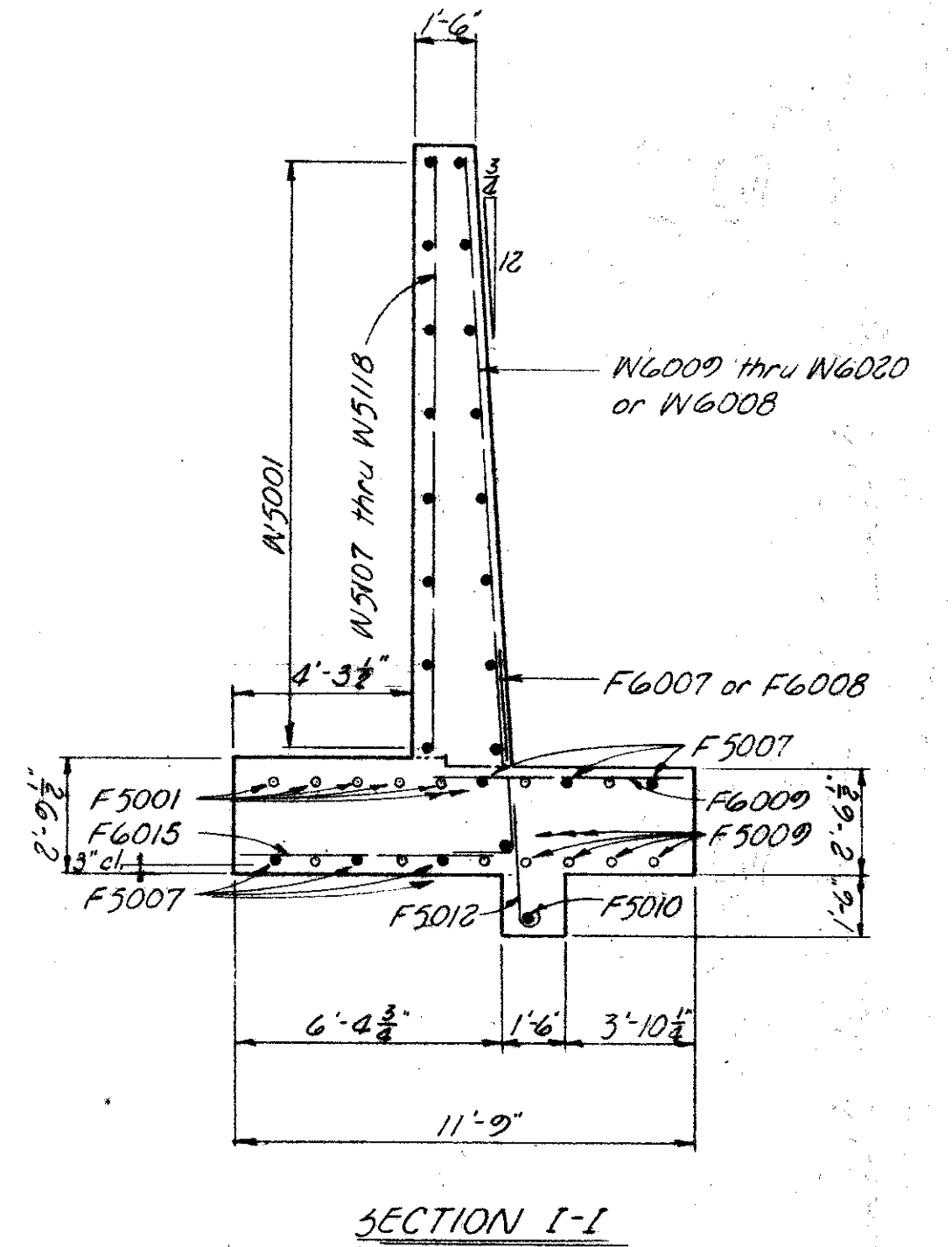
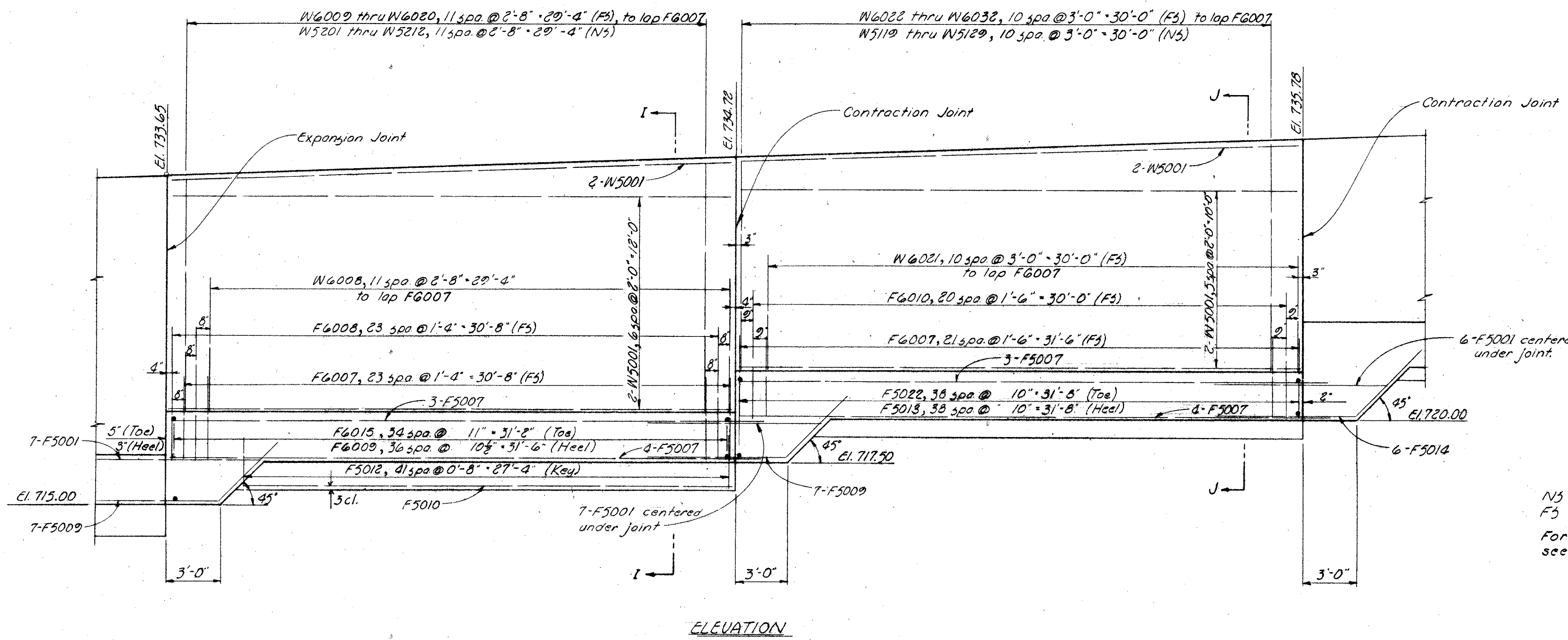
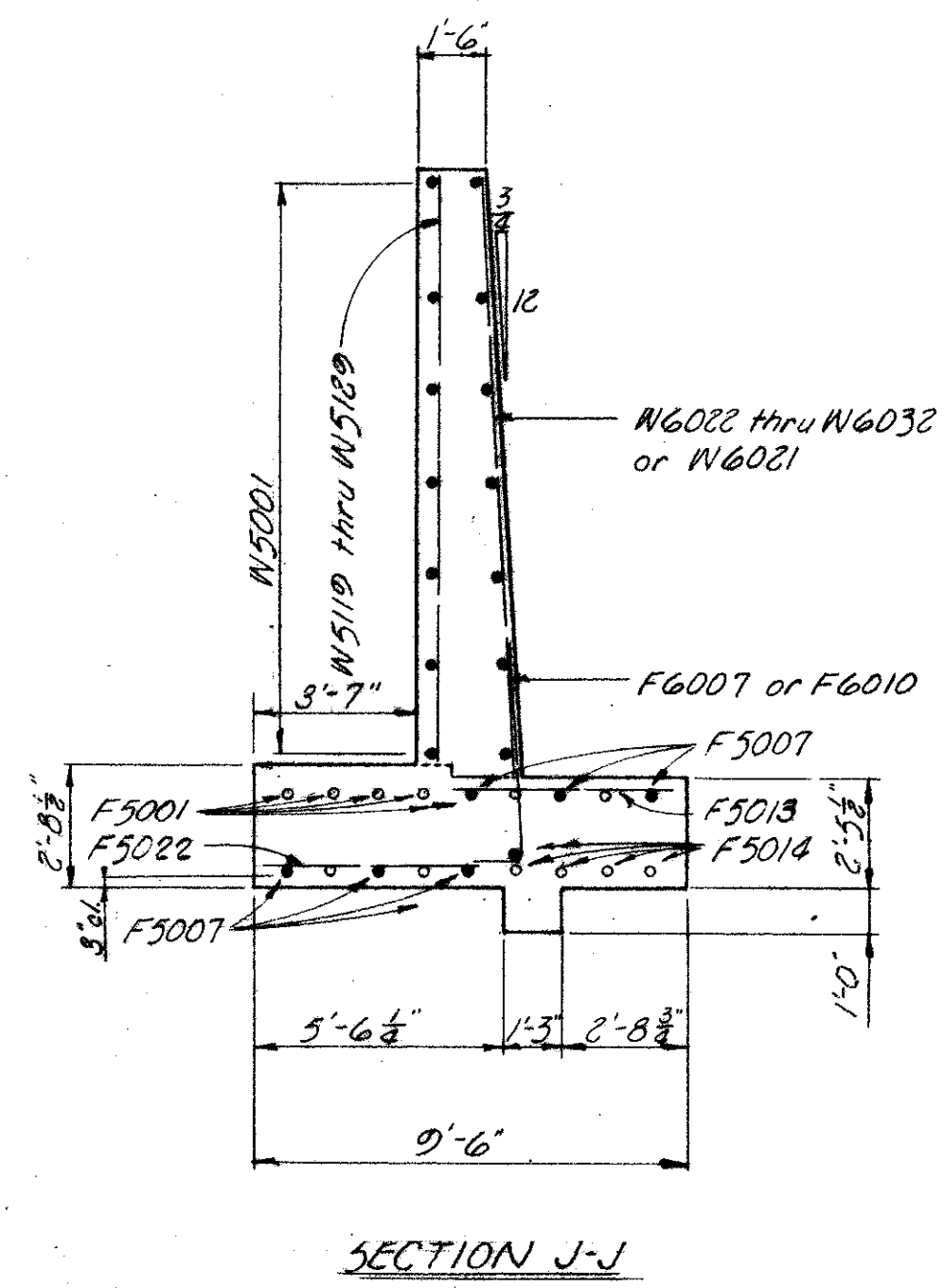
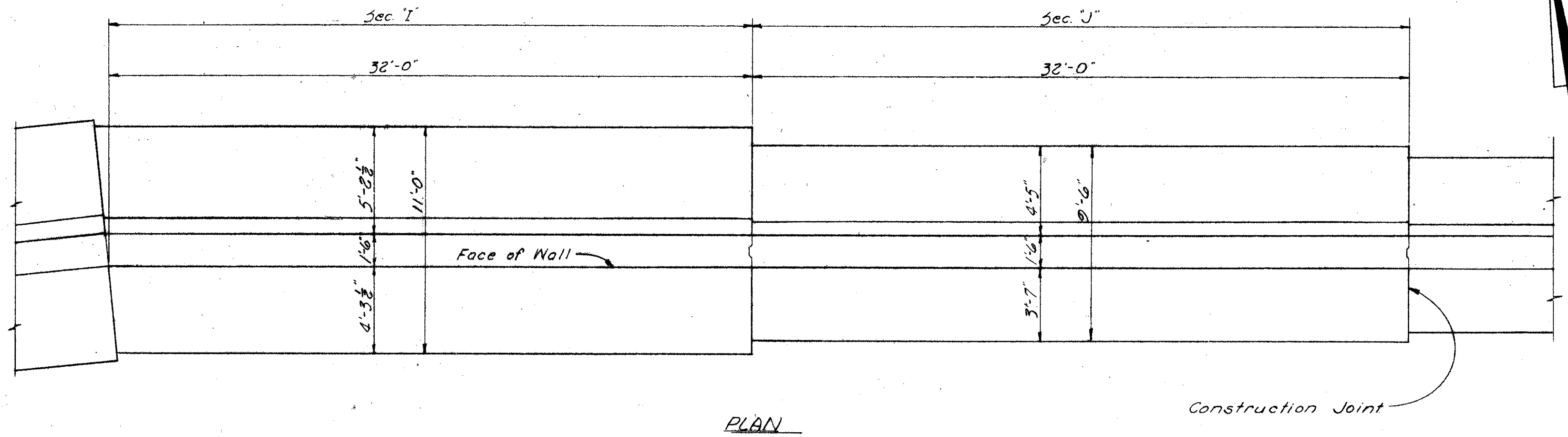
SECTION "G"

F5 indicates For side  
N5 indicates Near side.  
For additional notes & details  
see sheets 118 and 119

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SECTIONS "G" & "H" RETAINING WALL "A" along SOUTH INNERBELT						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		R.R.M.	TLU	5-10-62	



FRANKLIN COUNTY  
FRA - 40 - 12.82



N3 indicates Near Side.  
F3 indicates Far Side.  
For additional notes & details  
see Sheets 118 and 119

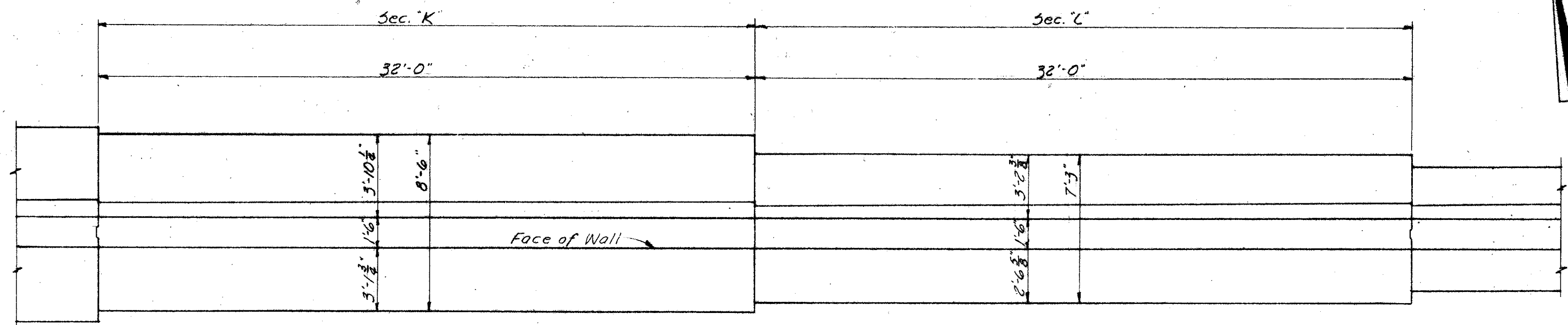
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SECTIONS 'I' & 'J' RETAINING WALL 'A' along SOUTH INNERBELT						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		R.R.M.	T.L.U.	5-10-62	



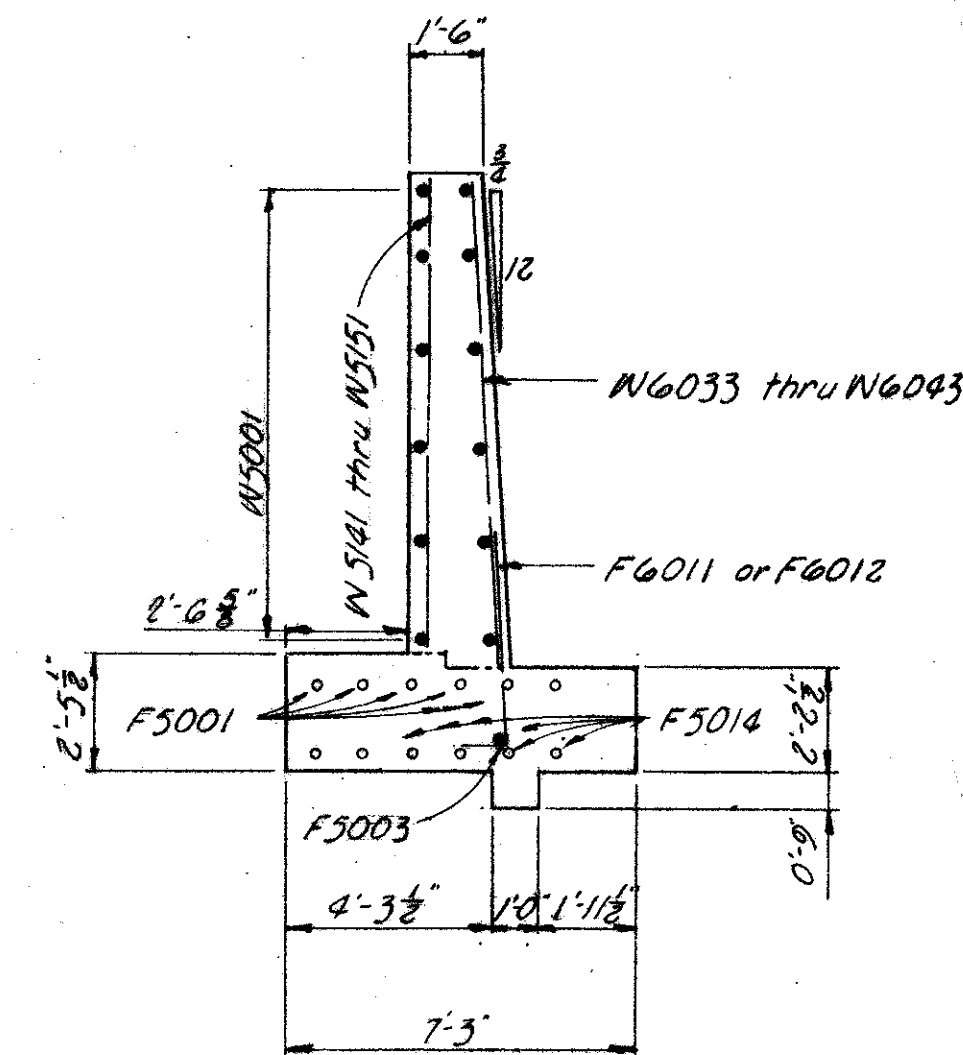
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

125  
250

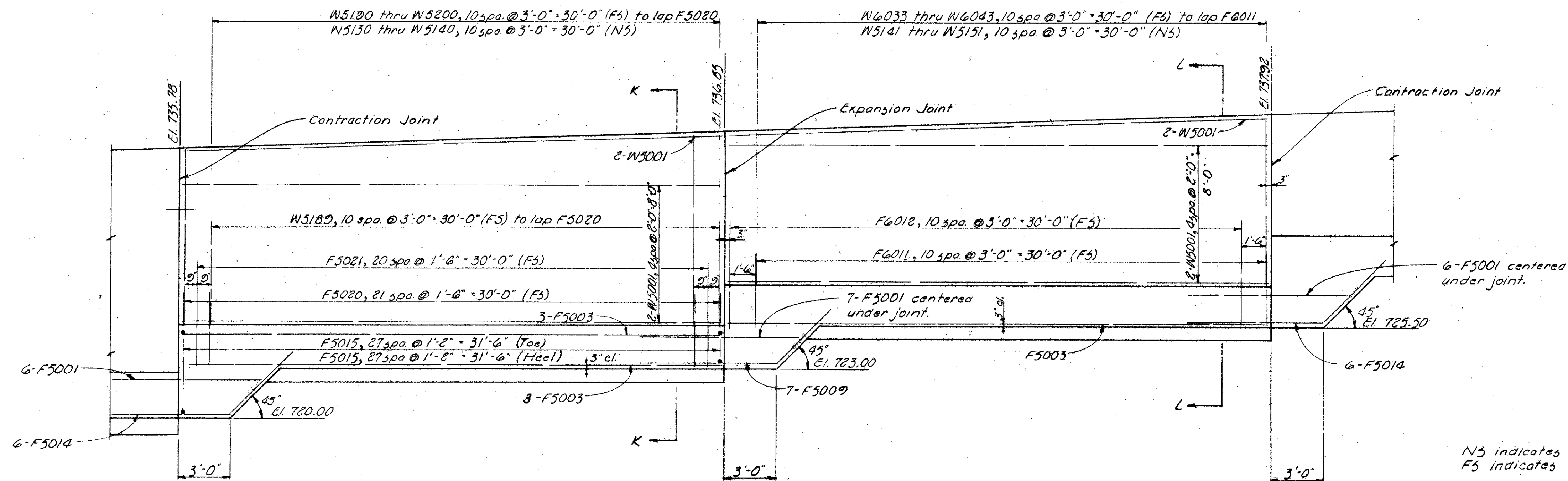
FRANKLIN COUNTY  
FRA-40-12.82



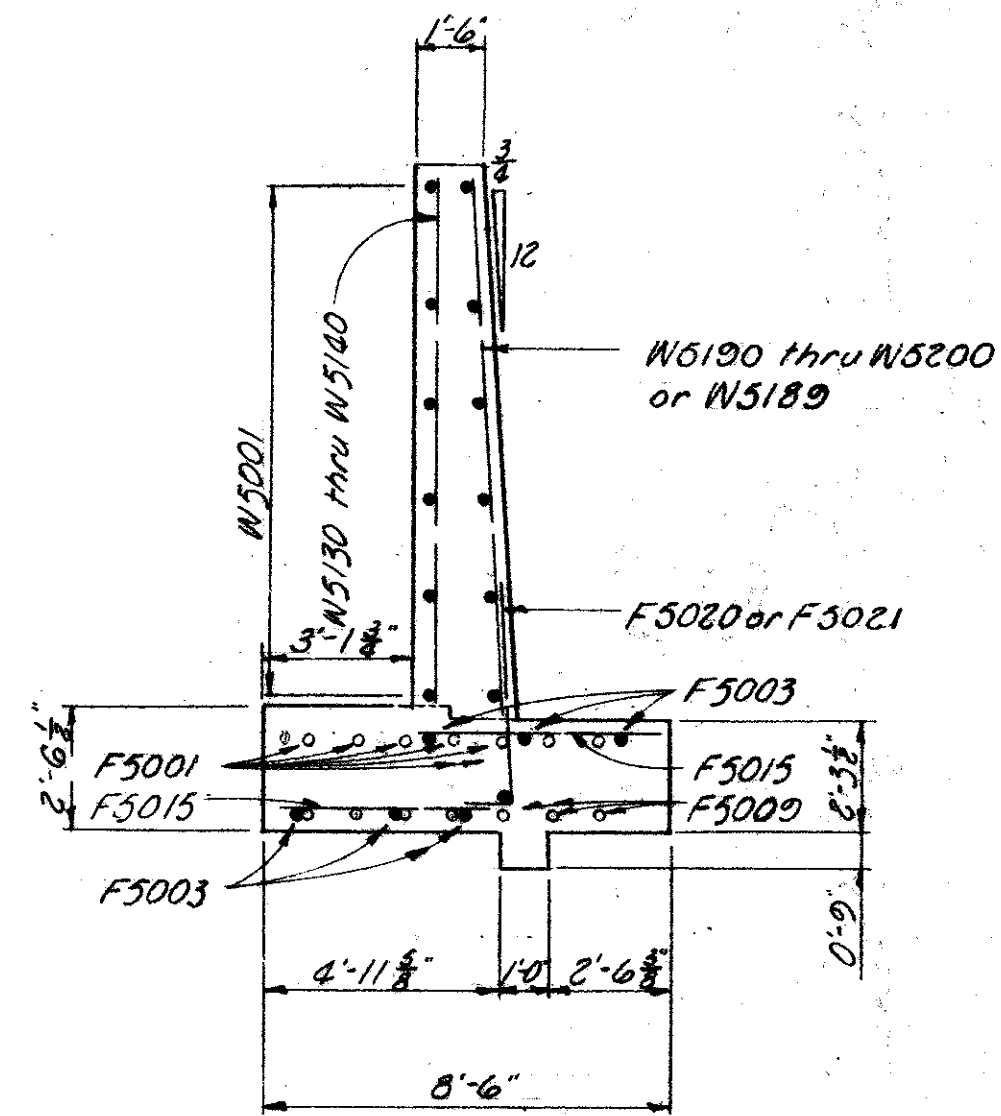
PLAN



SECTION L-L



ELEVATION



SECTION K-K

NS indicates Near Side.  
FS indicates Far Side.  
For additional notes & details  
see Sheets 118 and 119

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS K & L  
RETAINING WALL "A" along  
SOUTH INNERBELT

FRANKLIN COUNTY

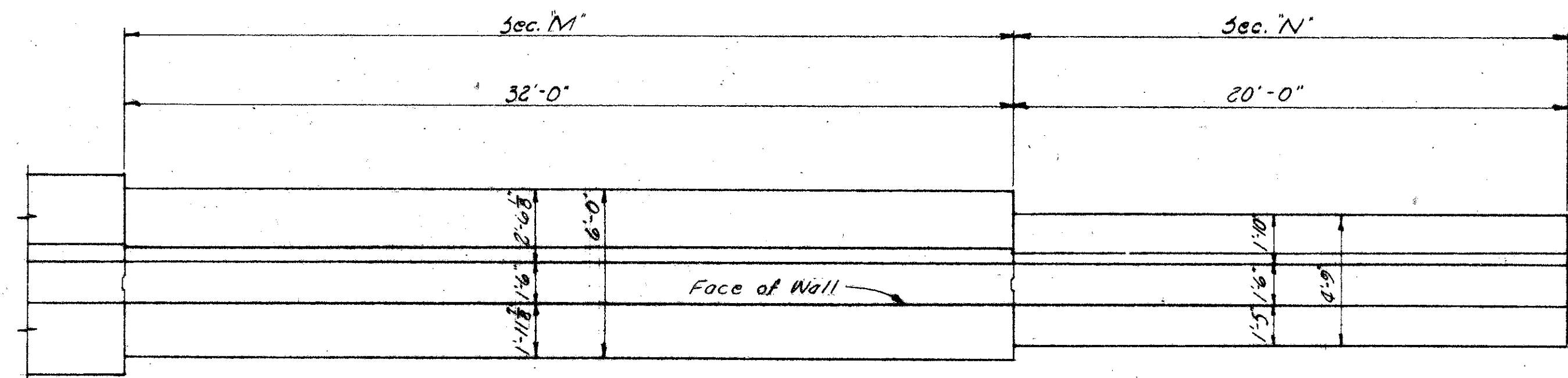
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FWD	FWD		R.R.M.	720 510-62		



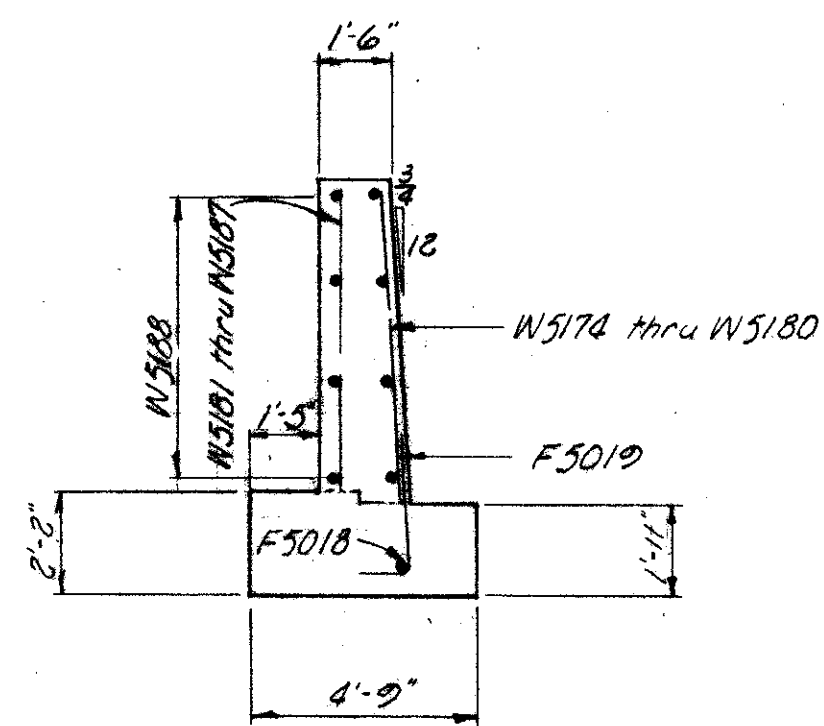
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

126  
250

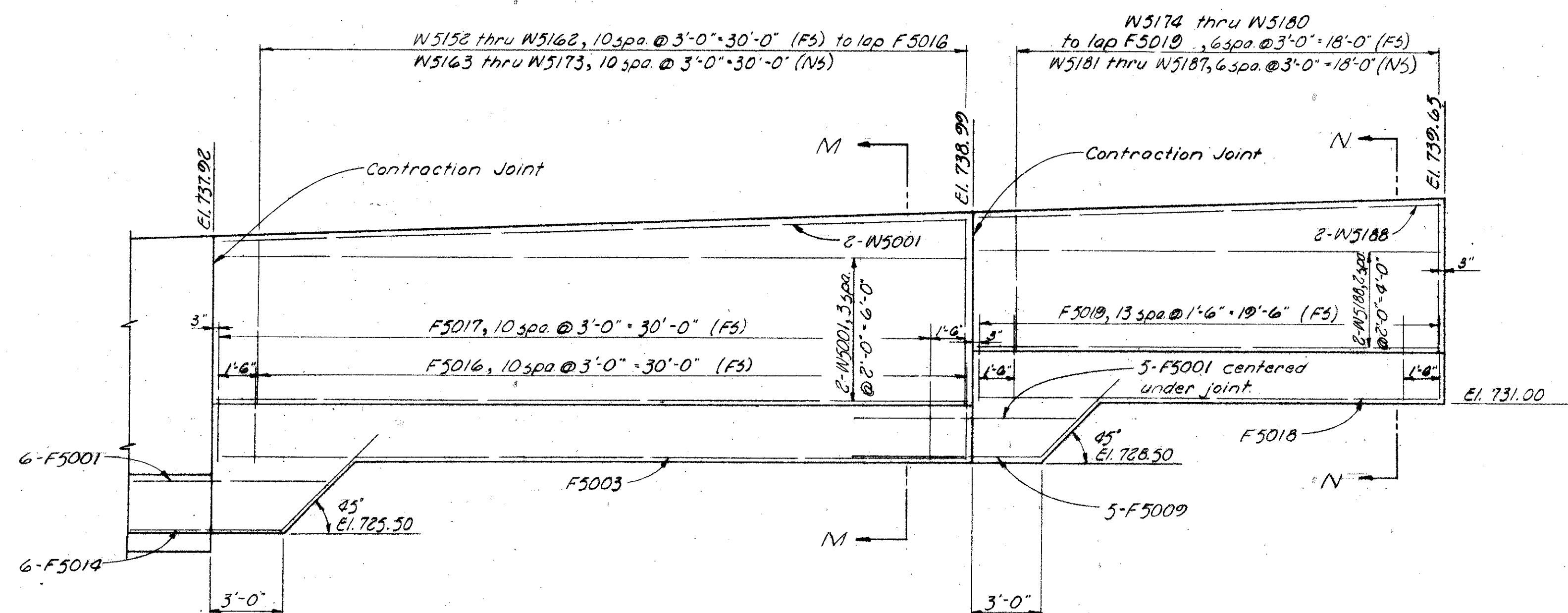
FRANKLIN COUNTY  
FRA - 40 - 12.82



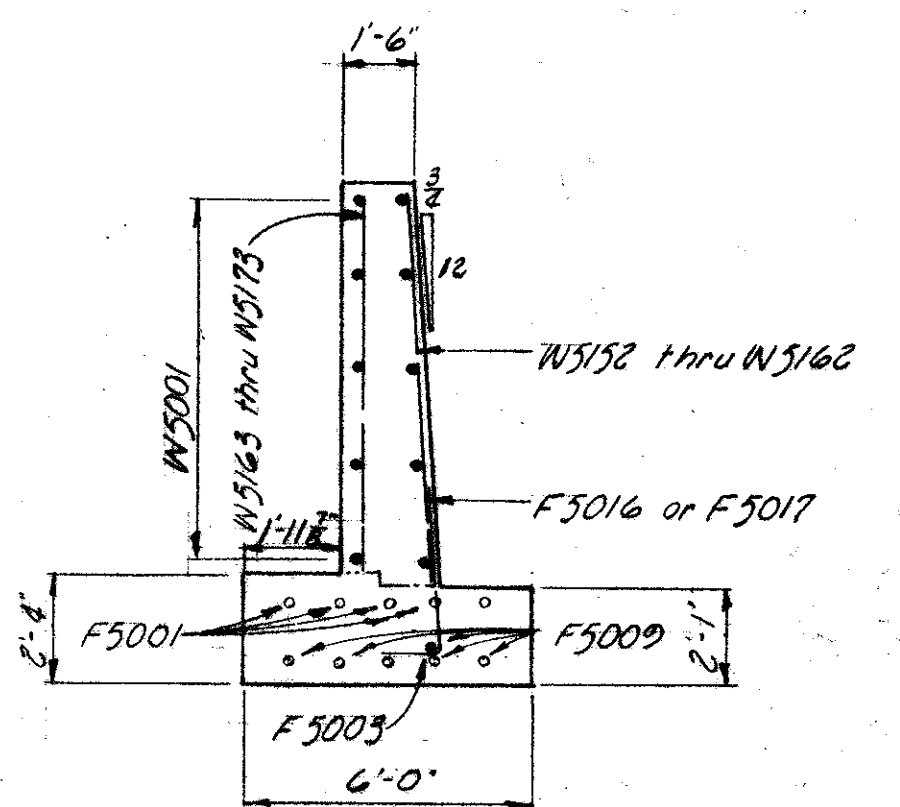
PLAN



SECTION N-N



ELEVATION



SECTION M-M

N3 indicates Near Side  
F3 indicates Far Side

For additional notes & details  
see Sheets 118 and 119.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS "M" & "N"  
RETAINING WALL "A" along  
SOUTH INNERBELT

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		R.R.M.	TLU	5/10/62	



## REINFORCING

## STEEL

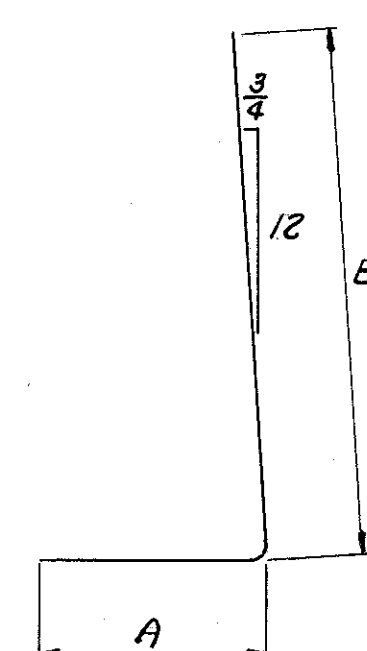
## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

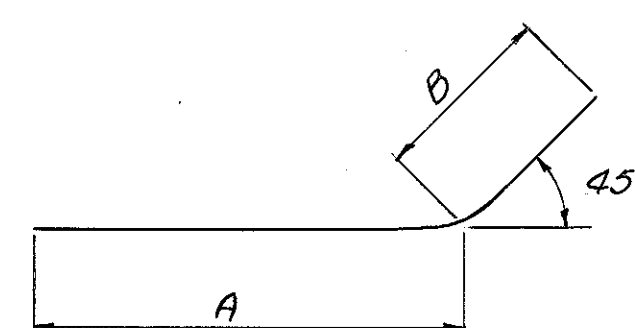
FRANKLIN COUNTY  
FRA-40-12.82127  
250

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	Shp.
FOOTING									
F5001	101	10-0	1053						st.
F5002	5	32-0	167	5	11-7	1-10	18-8		bt.
F5003	16	31-8	528						st.
F5004	2	13-8	33						st.
F5005	11	4-7	33	1	1-0	3-9			bt.
F5006	10	7-0	73	1	1-0	6-2			bt.
F5007	77	33-7	2697						st.
F5008	3	33-10	106	5	4-7	1-10	27-7		bt.
F5009	34	12-6	443	2	7-10	4-9			bt.
F5010	2	27-3	57						st.
F5011	8	11-1	92	2	7-10	3-4			st.
F5012	42	3-1	135	3	2-6				st.
F5013	39	4-10	197						st.
F5014	12	13-3	166	2	7-10	5-6			bt.
F5015	36	5-7	326						st.
F5016	11	4-3	49	1	1-0	3-4			bt.
F5017	11	6-0	69	1	1-0	5-1			bt.
F5018	1	19-8	21						st.
F5019	14	4-1	60	1	1-0	3-2			bt.
F5020	22	4-6	103	1	1-0	3-7			bt.
F5021	21	6-4	139	1	1-0	5-5			bt.
F5022	39	6-2	251						st.
F6001	11	6-2	102	1	1-0	5-4			bt.
F6002	12	8-10	159	1	1-0	8-0			bt.
F6003	20	9-6	285						st.
F6004	41	3-8	226	3	3-0				bt.
F6005	48	6-3	451						st.
F6006	39	6-0	351						st.
F6007	46	5-0	345	1	1-0	4-2			bt.
F6008	24	7-11	285	1	1-0	7-1			bt.
F6009	37	5-8	315						st.
F6010	21	7-6	237	1	1-0	6-8			bt.
F6011	11	4-8	77	1	1-0	3-10			bt.
F6012	11	6-6	107	1	1-0	5-8			bt.
F6013	48	7-9	559						st.
F6014	45	7-6	507						st.
F6015	35	7-1	372						st.
F7002	21	8-11	383	1	1-0	8-1			bt.
F7003	47	5-2	496	1	1-0	4-4			bt.
F7004	22	8-5	378	1	1-0	7-7			bt.
F7005	24	9-1	446	1	1-0	8-3			bt.
F7006	48	6-10	670						st.
F7007	24	5-4	262	1	1-0	4-6			bt.
F7008	24	8-8	425	1	1-0	7-10			bt.
F7009	23	5-4	251	1	1-0	4-6			bt.
F7010	22	8-6	382	1	1-0	7-8			bt.
F7011	22	6-5	289	1	1-0	5-7			bt.
F7012	43	8-4	732						st.
F8001	24	13-9	881	4	11-7				bt.
F8002	18	14-9	709	4	12-7				bt.
F8003	36	10-9	1607	4	8-7				bt.
F8004	35	6-10	639						st.
F8005	35	7-0	654						st.
F8006	36	12-9	1226	4	10-7				bt.
F8007	39	8-0	833						st.
F8008	22	5-7	328	1	1-2	4-8			bt.
F8009	21	9-3	519	1	1-2	8-4			bt.
F8010	45	4-4	521	3	3-3				bt.
F8011	23	5-10	358	1	1-2	4-11			bt.
F8012	22	9-6	558	1	1-2	8-7			bt.
F10001	61	14-9	3872						st.
WALL									
W5001	198	31-8	6540	st.					
W5002	2	24-0		st.					
thru vary by	7-0	106							
W5004	2	10-0		st.					
W5005	2	20-8	43	st.					
W5006	2	12-8	26	st.					
W5007	6	5-11	37	st.					
W5008	1	6-10		st.					
thru vary by	10 1/2	45							
W5012	1	10-4		st.					
W5013	1	6-7		st.					
thru vary by	10 1/2	43							
W5017	1	10-1		st.					
W5018	1	11-0		st.					
thru vary by	6	77							
W5023	1	13-6		st.					
W5024	1	13-6		st.					
thru vary by	1	160							
W5034	1	14-4		st.					
W5035	1	14-4		st.					
thru vary by	1	185							
W5046	1	15-3		st.					
W5047	1	15-3		st.					
thru vary by	1	197							
W5058	1	16-2		st.					
W5059	11	6-3	72	st.					
W5060	1	16-2		st.					
thru vary by	1	190							
W5070	1	17-0		st.					
W5071	12	6-3	78	st.					
W5072	1	16-10		st.					
thru vary by	1	216							
W5083	1	17-9		st.					
W5084	1	15-3		st.					
thru vary by	1	197							
W5095	1	16-2		st.					
W5096	1	14-8		st.					
thru vary by	1	189							
W5107	1	15-7		st.					
W5119	1	11-10		st.					
thru vary by	1	141							
W5129	1	12-8		st.					
W5130	1	10-1		st.					
thru vary by	1	120							
W5140	1	10-11		st.					
W5141	1	8-9		st.					
thru vary by	1	105							
W5151	1	9-7		st.					
W5152	1	7-2		st.					
thru vary by	1	87							
W5162	1	8-0		st.					
W5163	1	6-11		st.					
thru vary by	1	84							
W5173	1	7-9		st.					
W5174	1	5-11		st.					
thru vary by	1	45							
W5180	1	6-5		st.					
W5181	1	5-8		st.					
thru vary by	1	43							
W5187	1	6-2		st.					
W5188	8	19-8	164	st.					
W5189	11	5-10	67	st.					
W5190	1	10-4		st.					
thru vary by	1	123							
W5200	1	11-2		st.					
W5201	1	13-2		st.					
thru vary by	1	171							
W5212	1	14-1		st.					
REPLACEMENT STEEL									
RE 501	1	5-7		st.					
RE 601	1	5-11		st.					
RE 701	1	6-2		st.					
RE 801	1	6-6		st.					
RE 1001	1	7-2		st.					

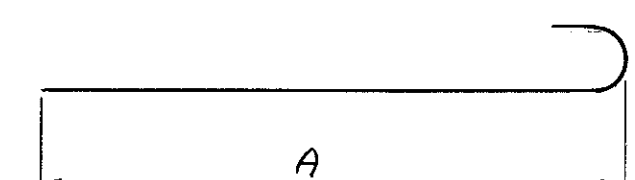
Bending Diagram



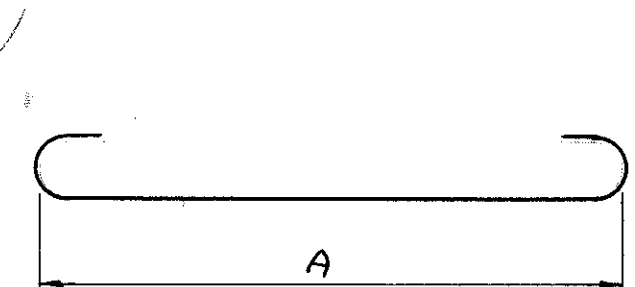
TYPE 1



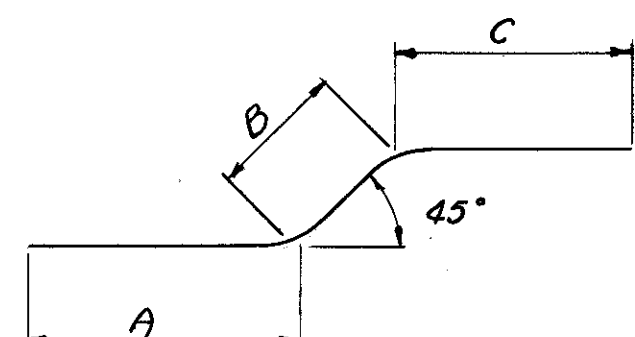
TYPE 2



TYPE 3



TYPE 4



TYPE 5

Note: In the reinforcing steel bar marks, the first digit where four digits are used and the first two where five are used is the bar number which indicates the size of the bar.

## ESTIMATED QUANTITIES

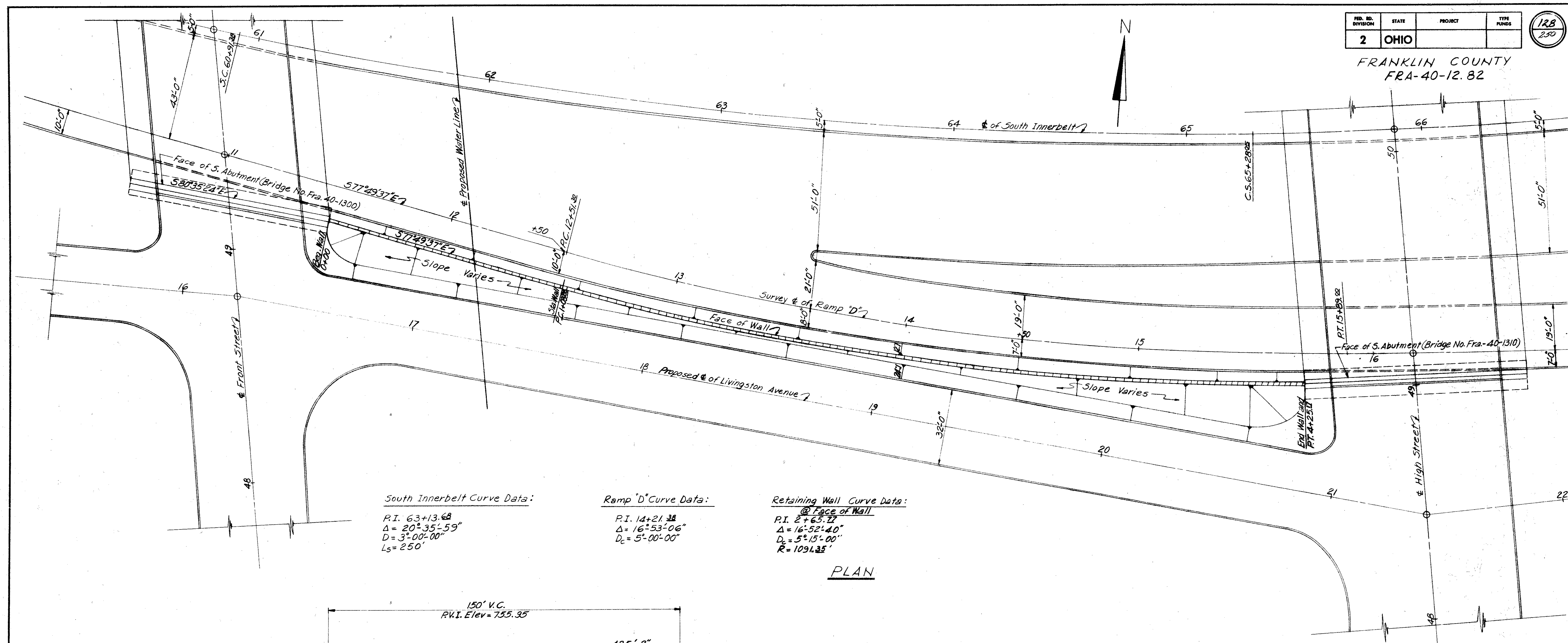
Item	Total	Unit	Description	FOOTING	WALL	GENERAL
E-2	1650	Cu.Yd.	Unclassified Excavation	1650		
E-2	776	Sq.Ft.	Sheet Piling, left-in-place (27" per sq.ft.)	776		
S-1	420	Cu.Yd.	Class "E" Concrete, Footing	420		
S-1	530	Cu.Yd.	Class "E" Concrete, Wall		530	
S-3	181	Lin.Ft.	Waterproofing, Premolded Sealing Strip		181	
S-4	42,845	Lbs.	Reinforcing Steel	28,087	14,758	
S-9	104	Sq.Ft.	1" Gray Rubber, preformed expansion joint filler		104	
S-9	12	Sq.Ft.	1/2" Gray Rubber, preformed expansion joint filler		12	
S-16	Lump	Sum	First Test Pile			Lump
S-18	2226	Lin.Ft.	10 BP42 Steel Piles	2226		
S-29	254	Cu.Yd.	Porous Backfill		254	

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIOREINFORCING STEEL and  
ESTIMATED QUANTITIESRETAINING WALL "A" along  
SOUTH INNERBELT

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		R.R.M.	TLU	5-10-62	



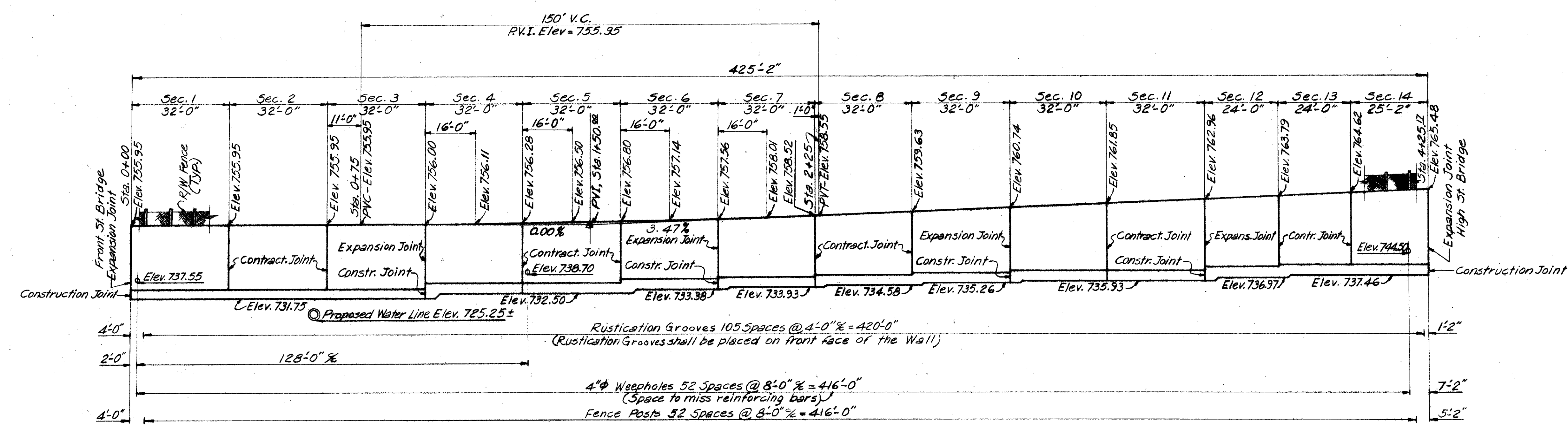


South Innerbelt Curve Data:  
P.I. 63+13.68  
 $\Delta = 20^\circ 35' 59''$   
 $D = 3^\circ 00' 00''$   
 $L_s = 250'$

Ramp "D" Curve Data:  
P.I. 14+21.38  
 $\Delta = 16^\circ 53' 06''$   
 $D_c = 5^\circ 00' 00''$

Retaining Wall Curve Data:  
@ Face of Wall  
P.I. 2+65.12  
 $\Delta = 16^\circ 52' 40''$   
 $D_c = 5^\circ 15' 00''$   
 $R = 1091.35'$

PLAN



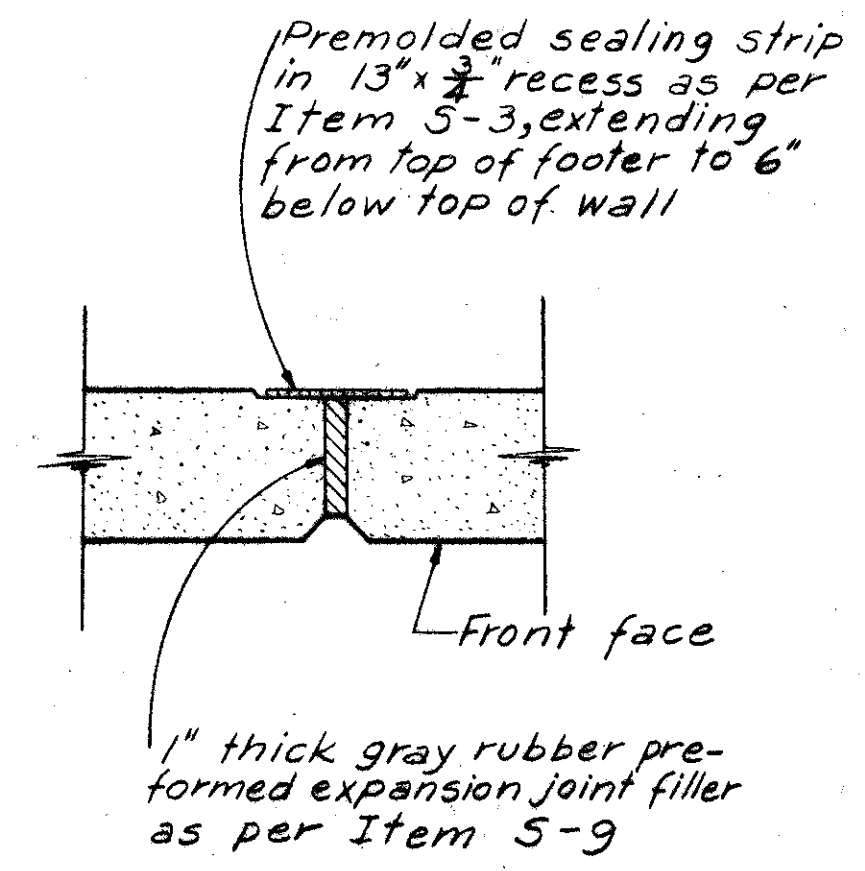
DEVELOPED ELEVATION  
Note: Keys are not shown

- Notes:
1. Weepholes elevations are at bottom of 4" hole at face of wall
  2. Weepholes placed in straight line between given elevations

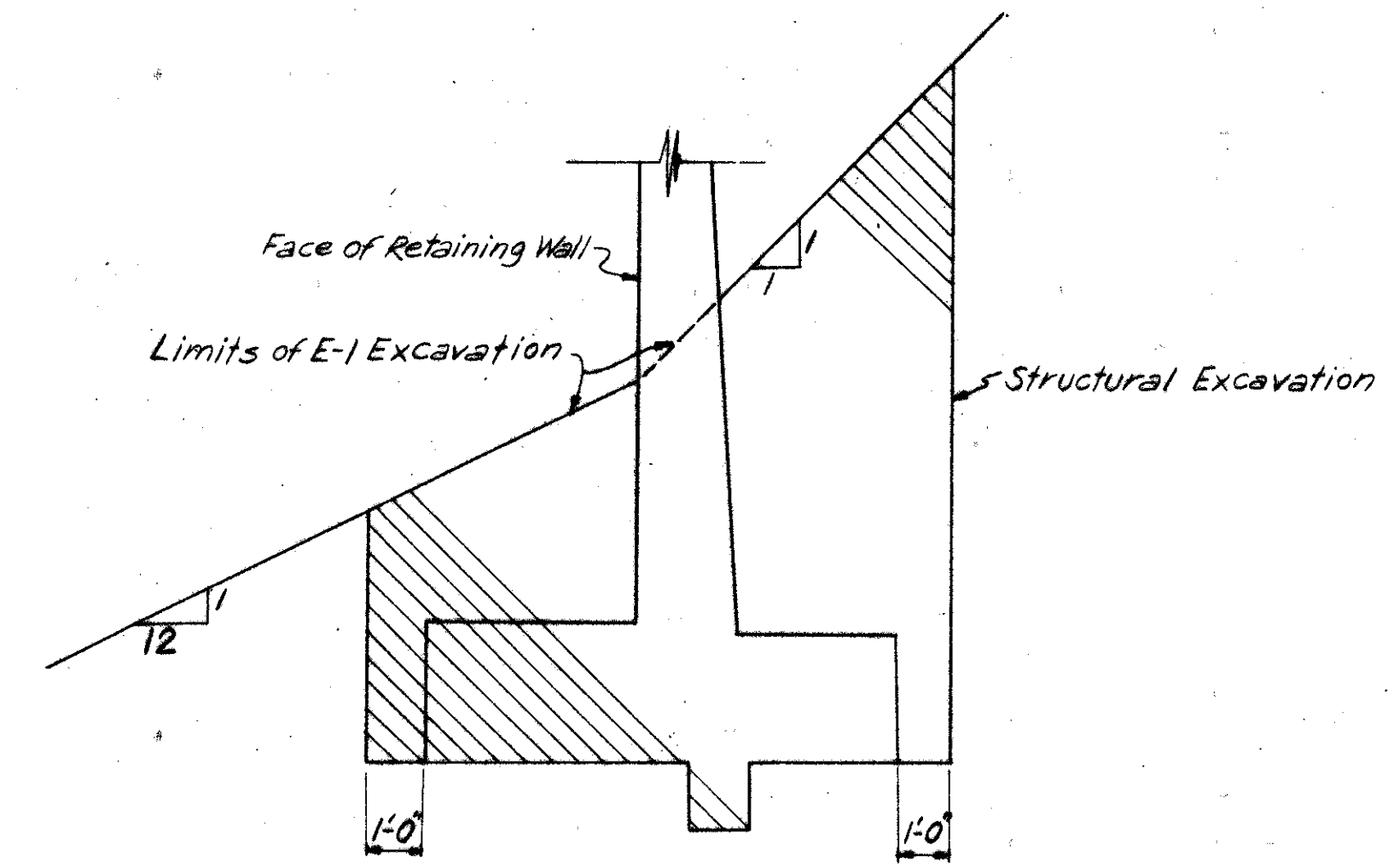
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
GENERAL PLAN AND ELEVATION RETAINING WALL "B" ALONG SOUTH INNERBELT FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.U.	5-10-62	



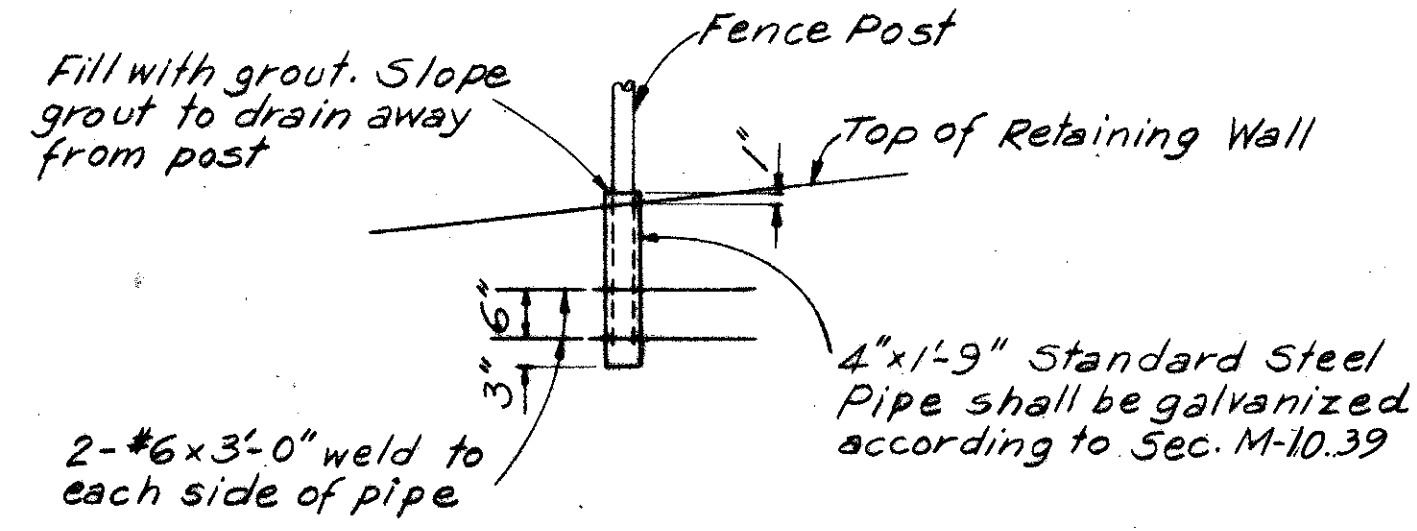
FRANKLIN COUNTY  
FRA-40-12.82



EXPANSION JOINT DETAIL



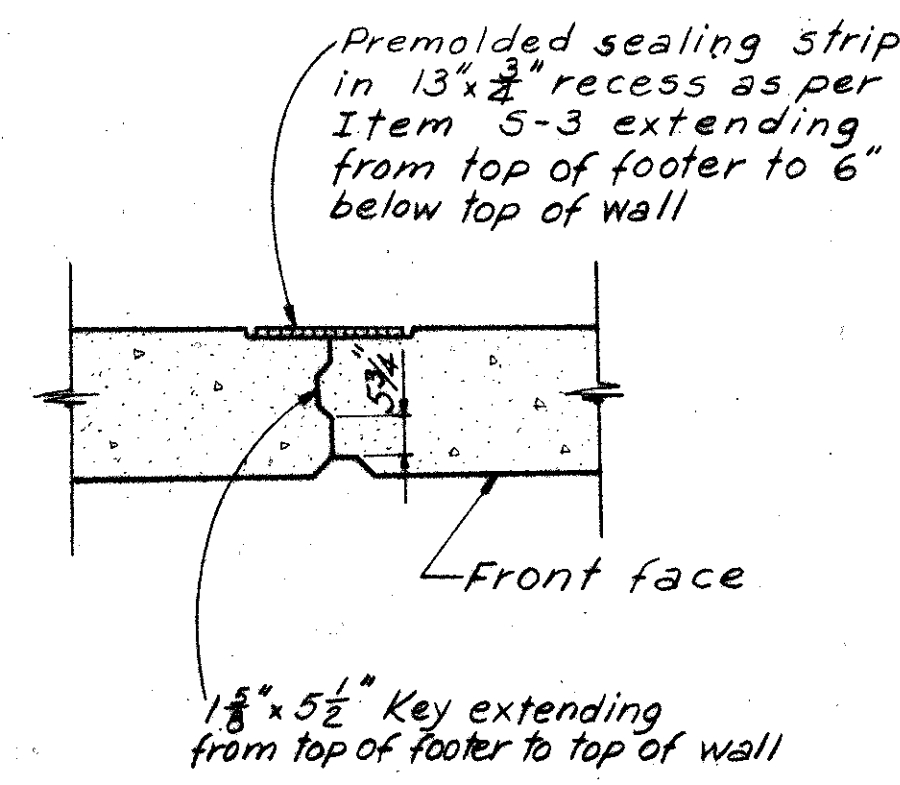
EXCAVATION DETAIL



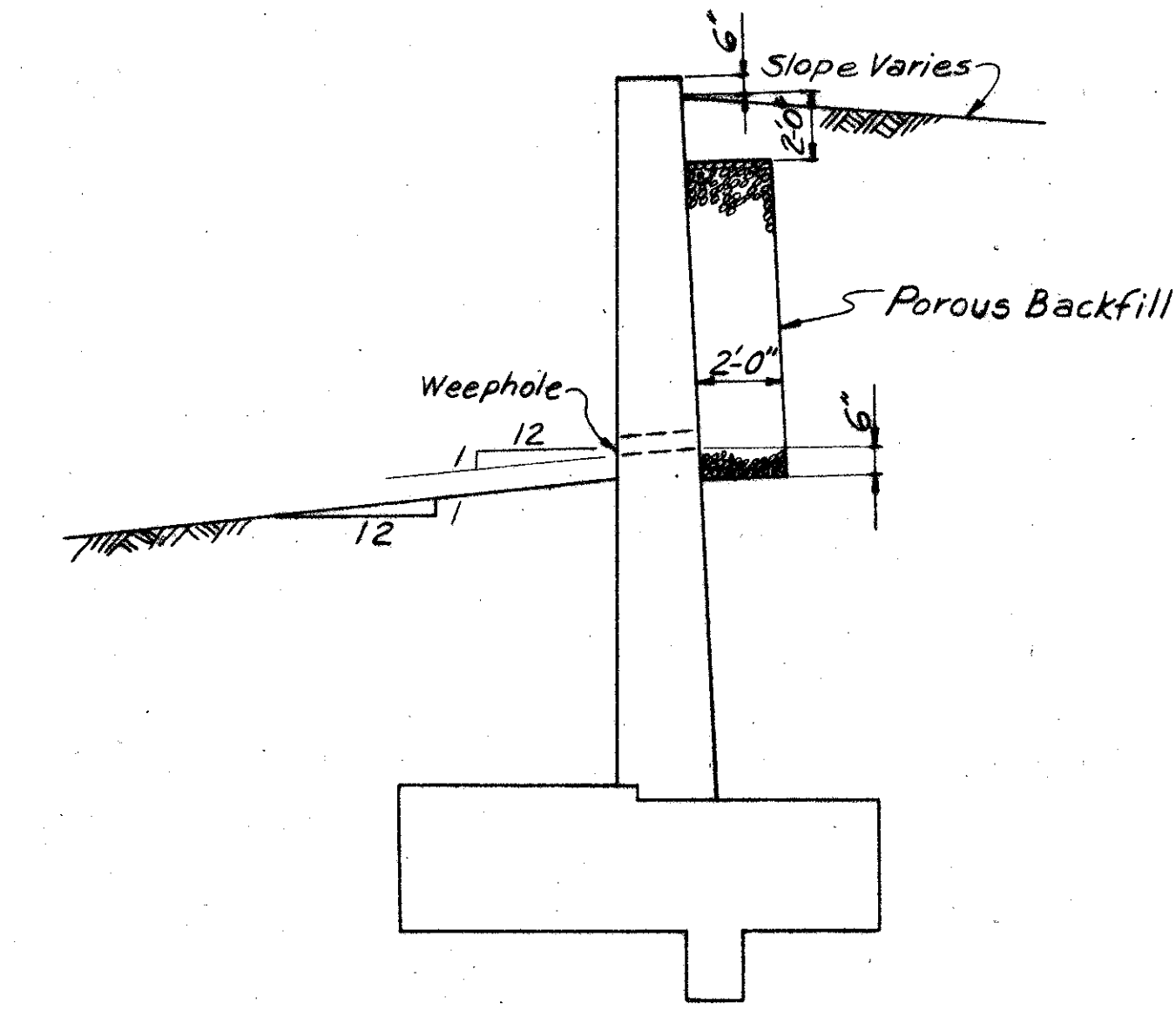
Notes:

1. Grout, reinforcing bars, and pipe to be included with fence for payment
2. E of fence to be located 1'-2" from face of wall.

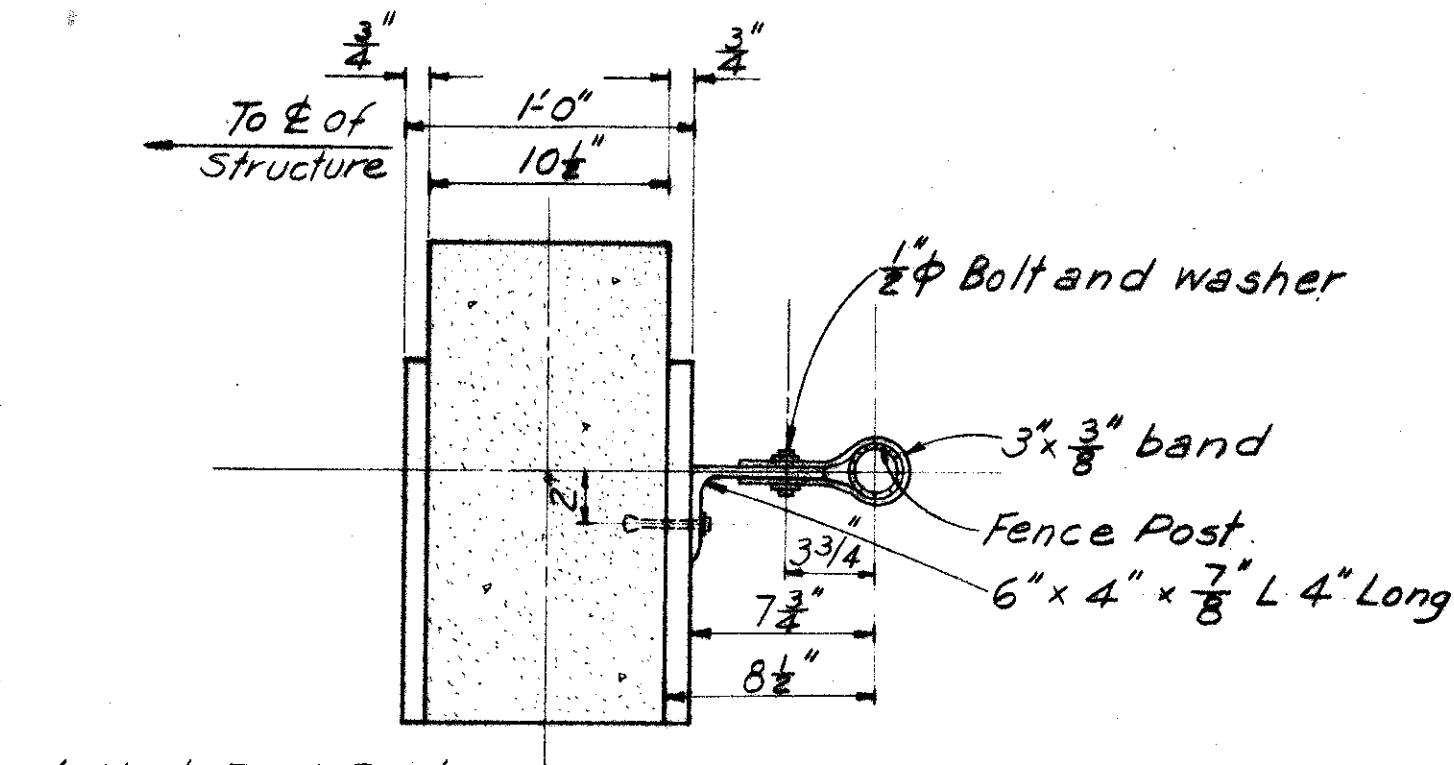
FENCE DETAIL



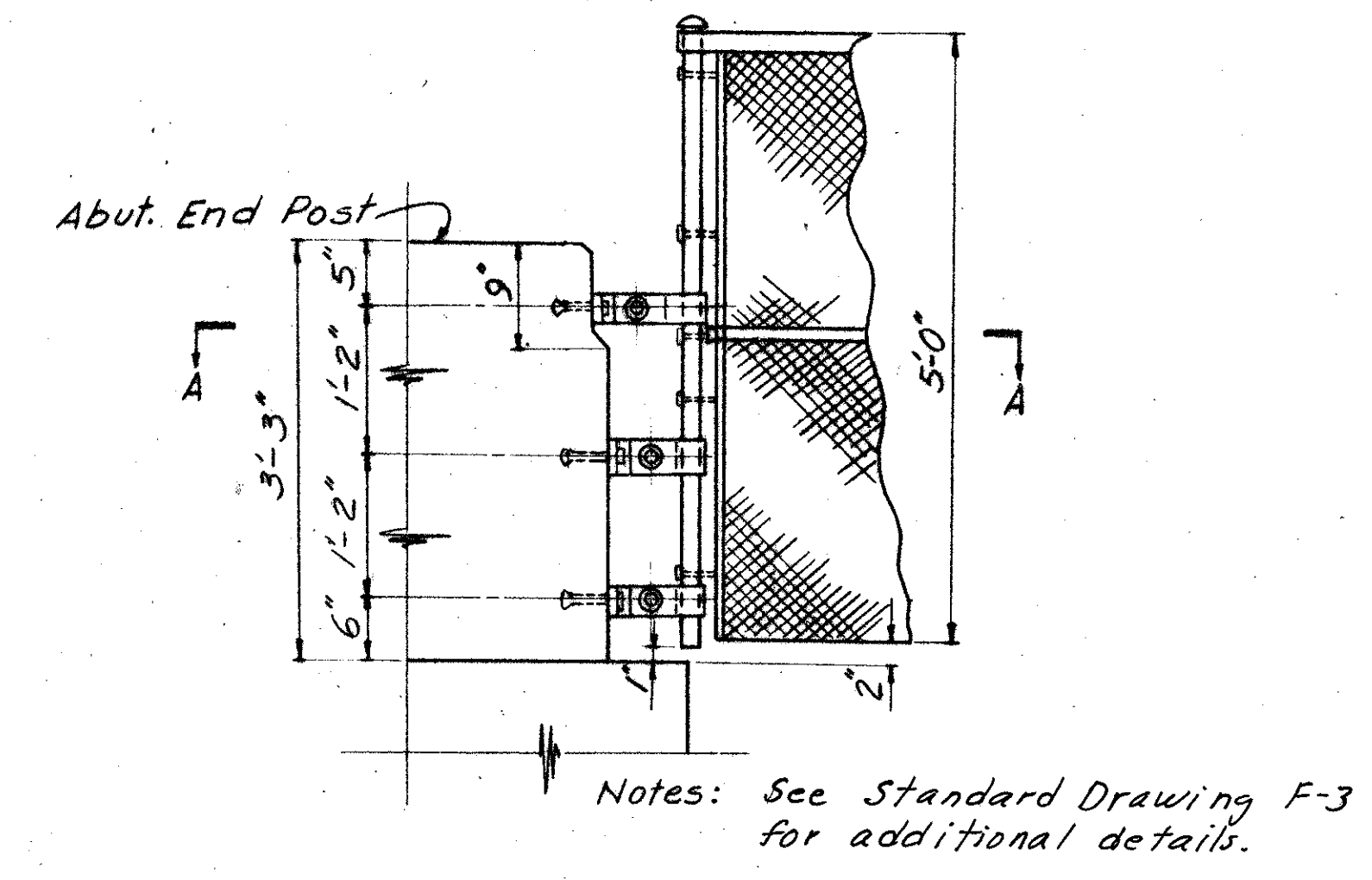
CONTRACTION JOINT DETAIL



POROUS BACKFILL DETAIL



SECTION A-A



ELEVATION

FENCE  
END POST CONNECTION

GENERAL NOTES

- 1- Foundation design and foundation quantities are based on a study of rod soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, Ohio or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.
- 2- 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 revisions thereof, dated 2-21-58.
- 3- Maximum foundation pressure = 3.00 tons per S.F.
- 4- The key on the bottom of the footing shall be placed in a carefully made trench against undisturbed earth.
- 5- For Details and payment of expansion joint between wall and adjacent bridge, See Bridge Details

LIGHTING DETAIL NOTES

- Item 5-25
- Item 5-25 includes the installation of all electrical equipment on the retaining wall to the adjacent Roadway Pull Box. For notes and details covering the luminaires, standards, conduit and cable see the Lighting Plans.

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COLUMBUS, OHIO

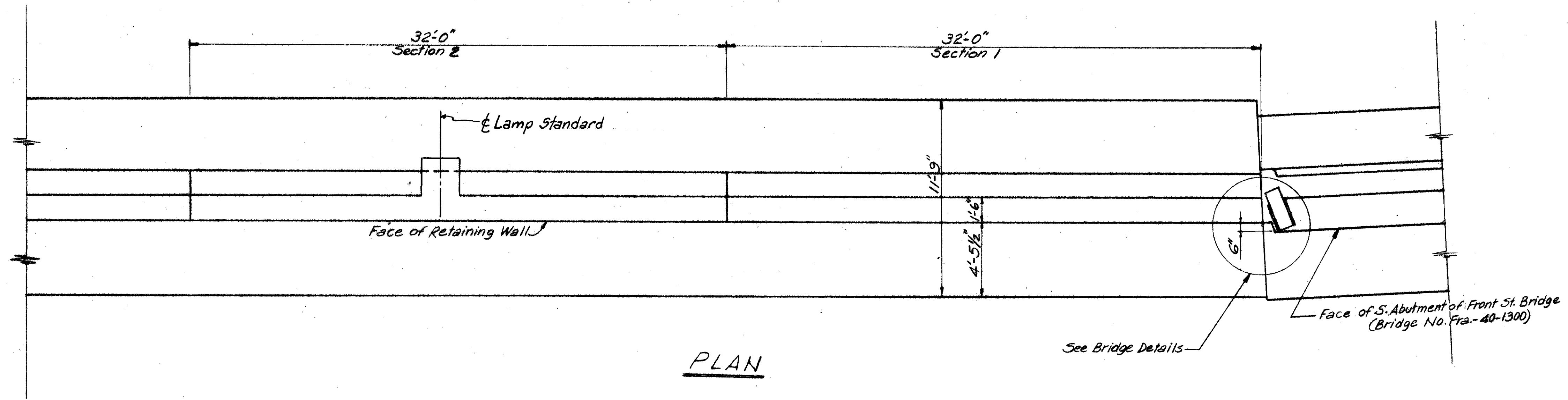
DETAILS AND NOTES  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT

FRANKLIN COUNTY

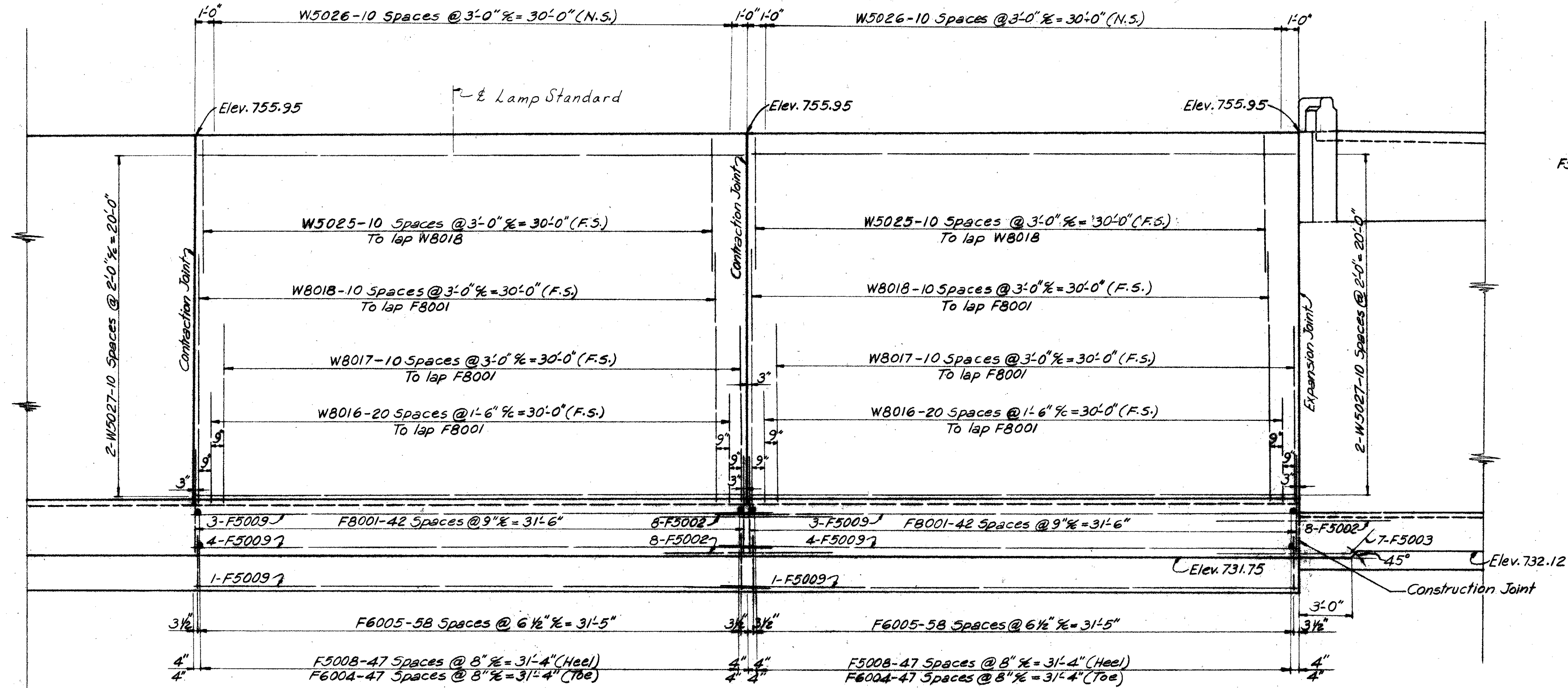
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.V.	5-10-62	



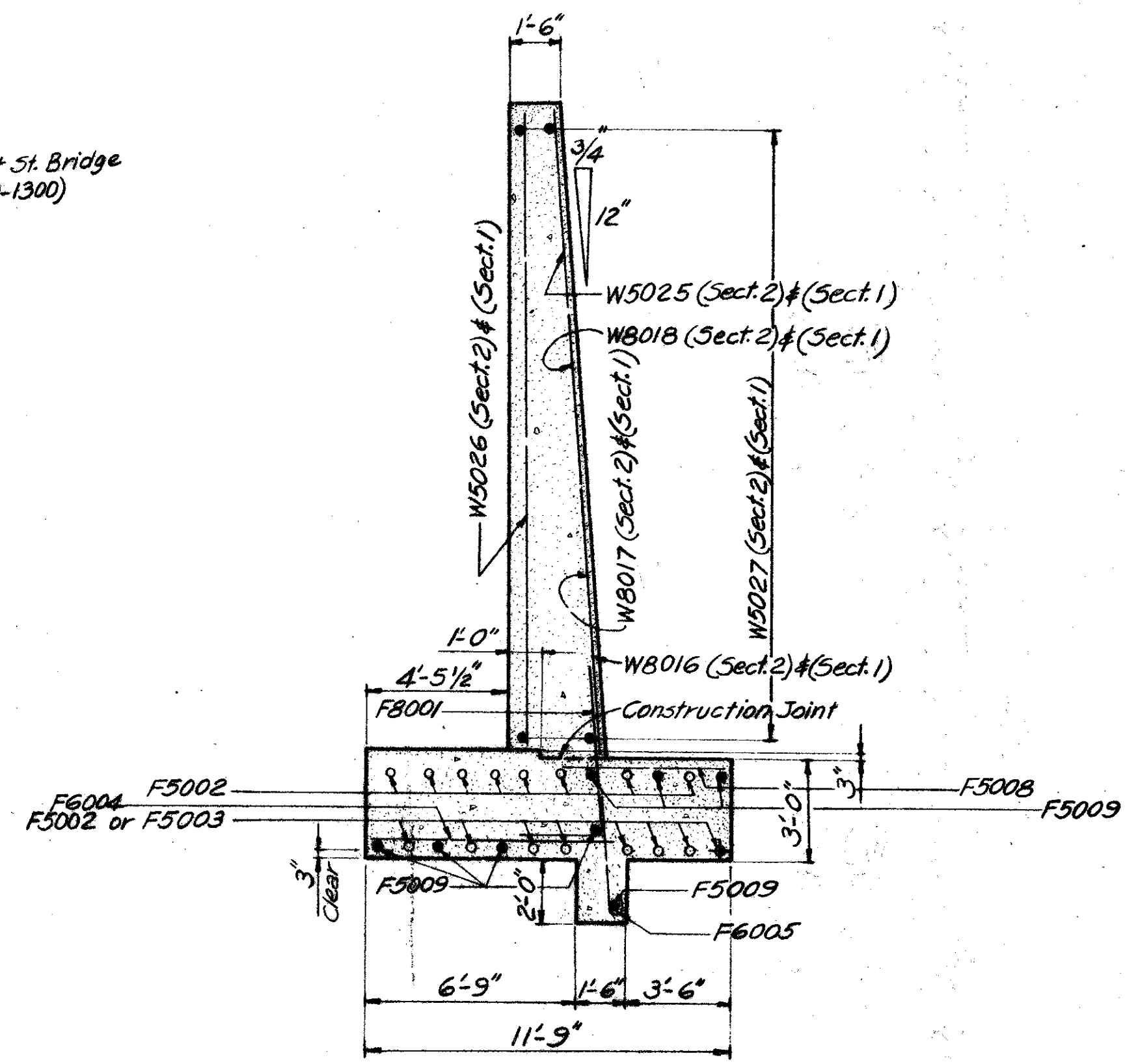
FRANKLIN COUNTY  
FRA-40-12.82



PLAN



DEVELOPED ELEVATION



TYPICAL SECTION

Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
+ This bar to be omitted between footer of South Abutment of Front St. Bridge and footer of Sect. 1 of Wall

Dimensions:  
All dimensions are measured along or normal to face of wall

Lamp Standard:  
For details see Sheet 108

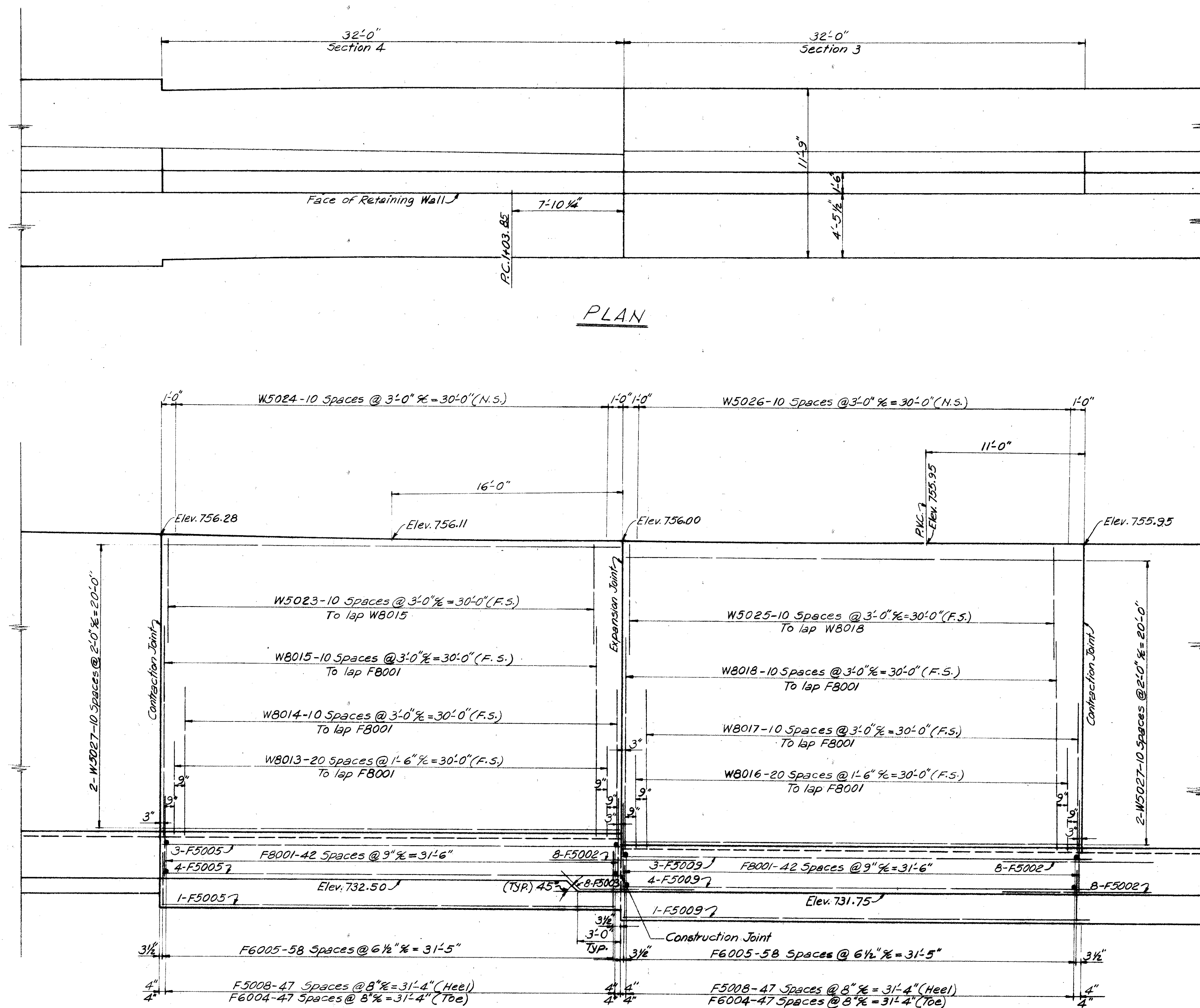
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS 2 AND 1  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

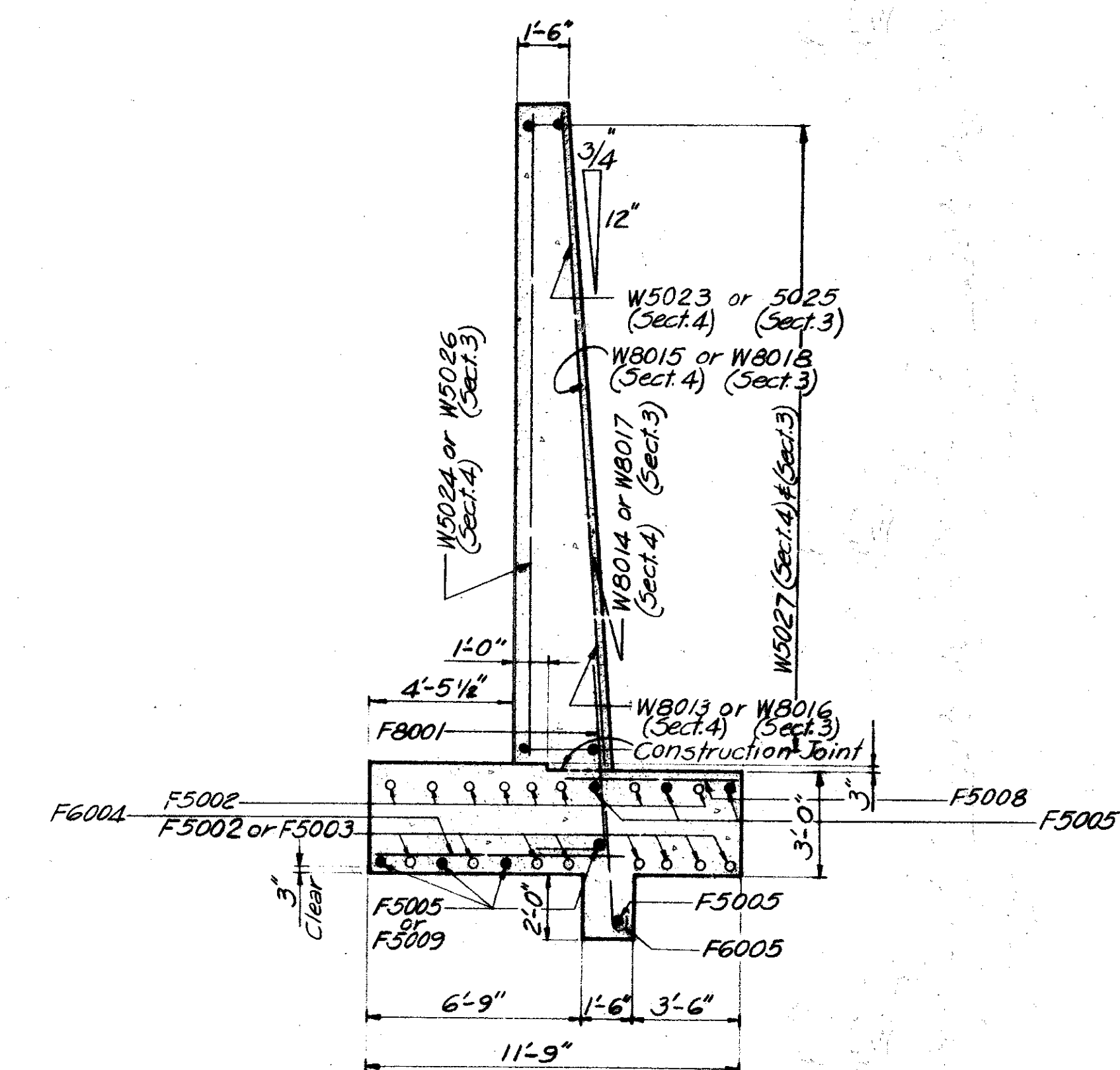
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.U.	5-10-62	



FRANKLIN COUNTY  
FRA-40-12.82



DEVELOPED ELEVATION



TYPICAL SECTION

Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
Dimensions:  
All dimensions are measured along or normal to face of wall

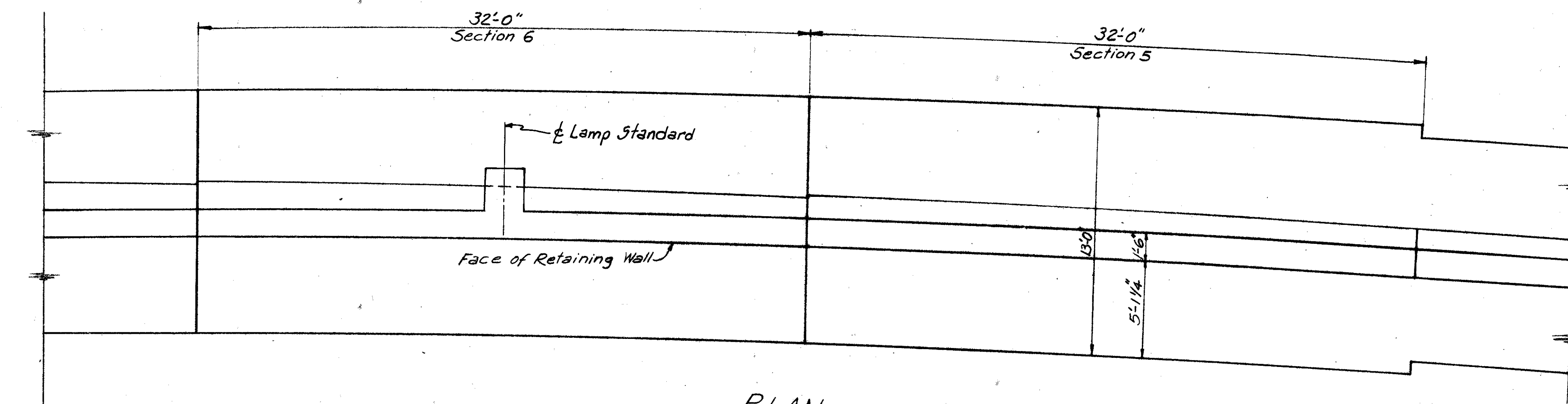
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS 4 AND 3  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

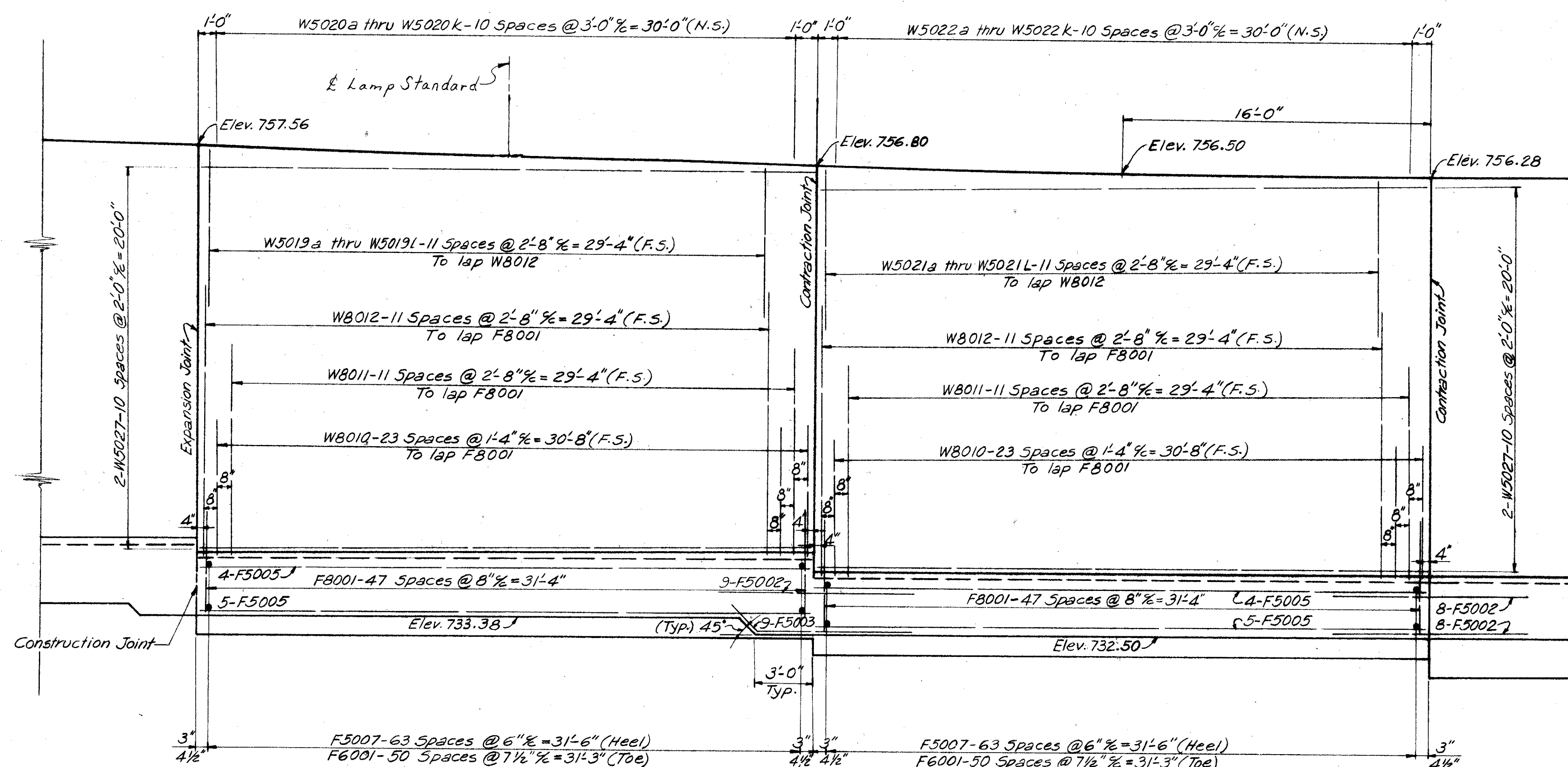
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.V.	5/10/62	



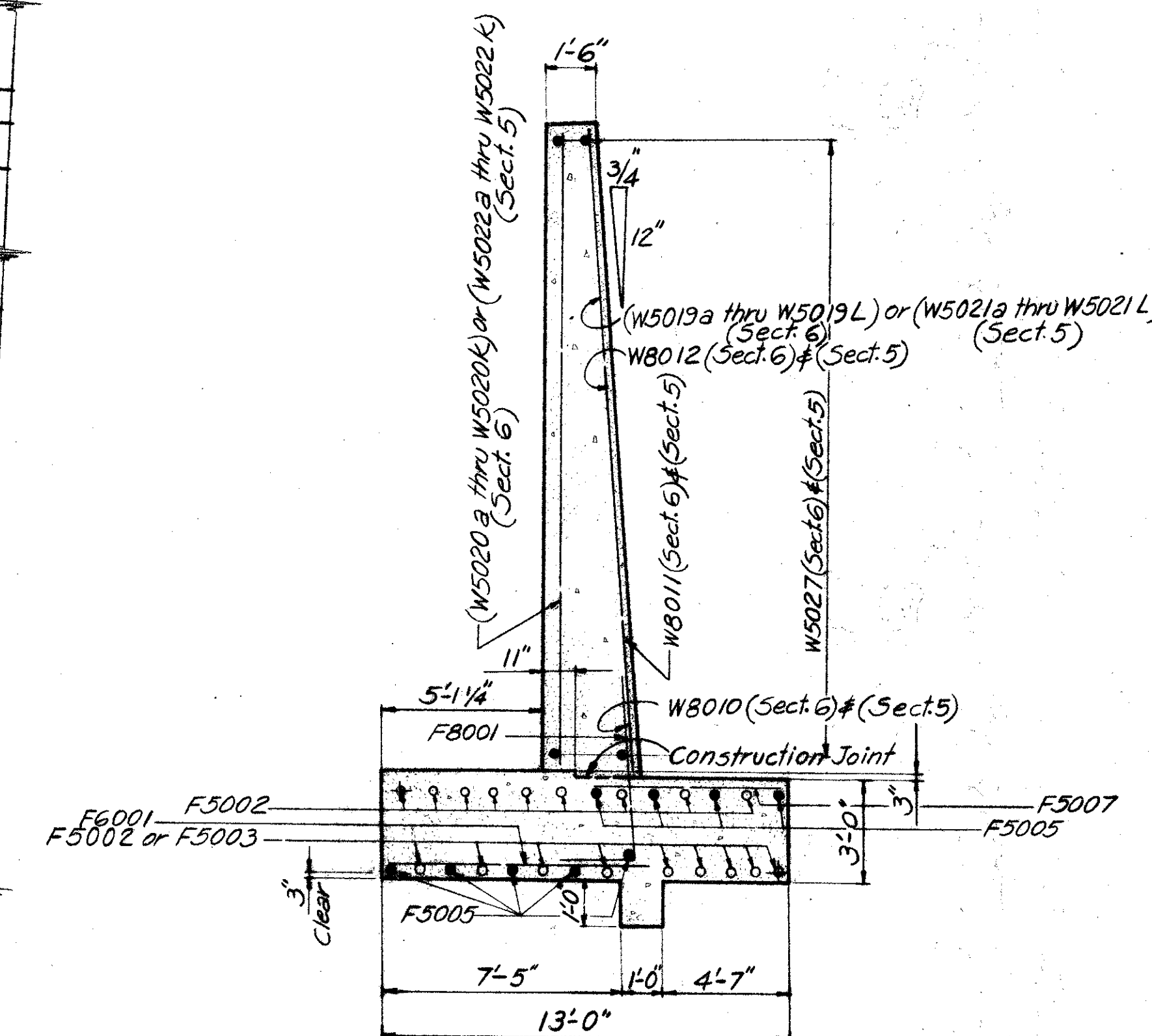
FRANKLIN COUNTY  
FRA-40-12.82



PLAN



DEVELOPED ELEVATION



TYPICAL SECTION

Lamp Standard:  
For details see Sheet 108.

Reinforcing Steel:  
N.S. denotes near side.  
F.S. denotes far side.  
+ These bars to be omitted between Sections 5 & 4.

Dimensions:  
All dimensions are measured along or normal to face of wall.

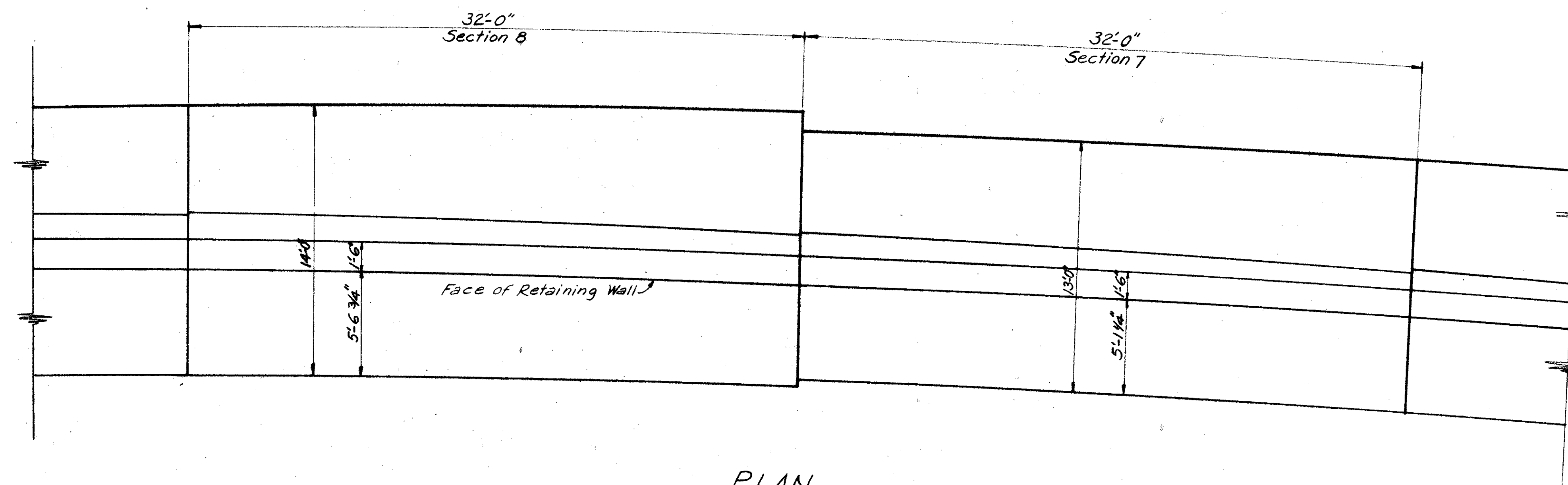
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS "6" AND "5"  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

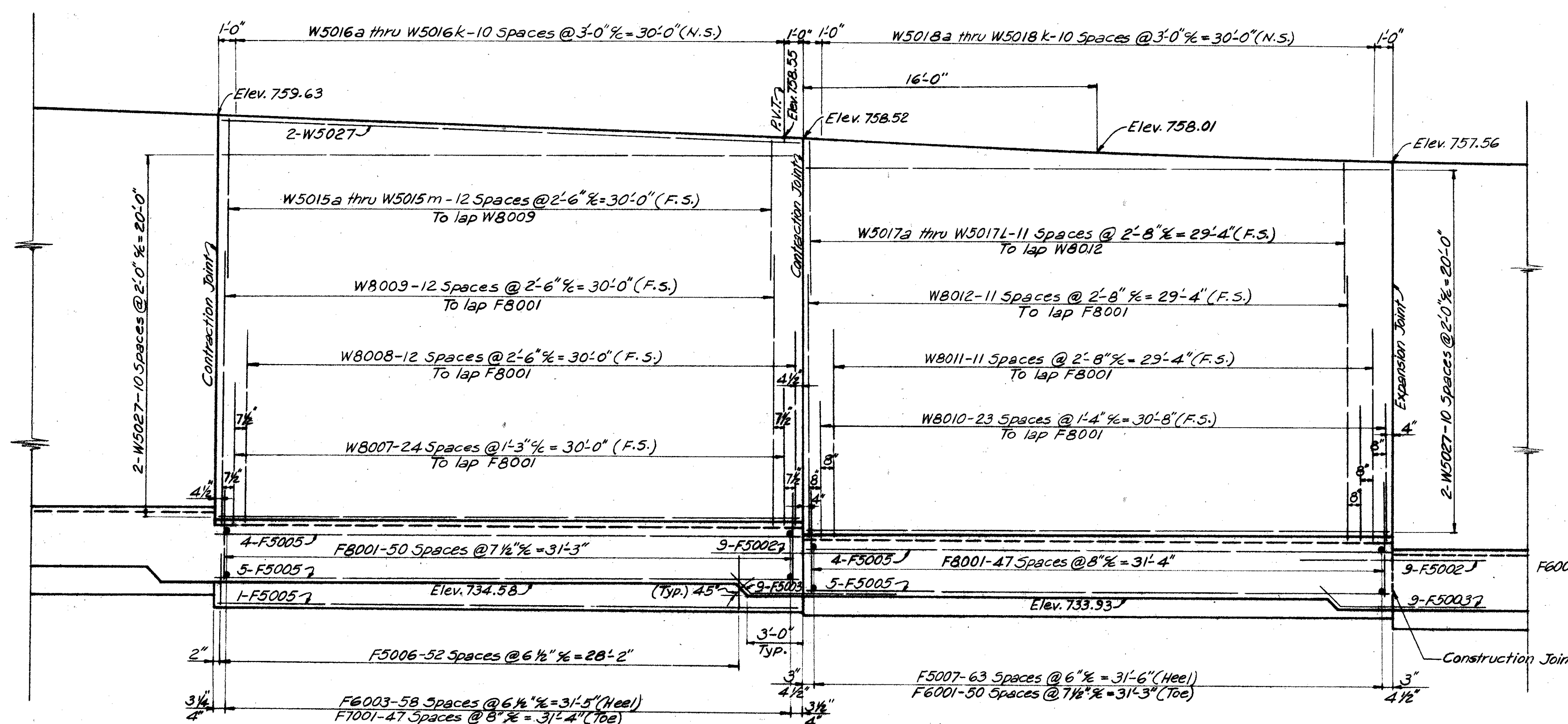
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R.T.	R.T.		C.R.W.	T.L.V.	5-10-82	



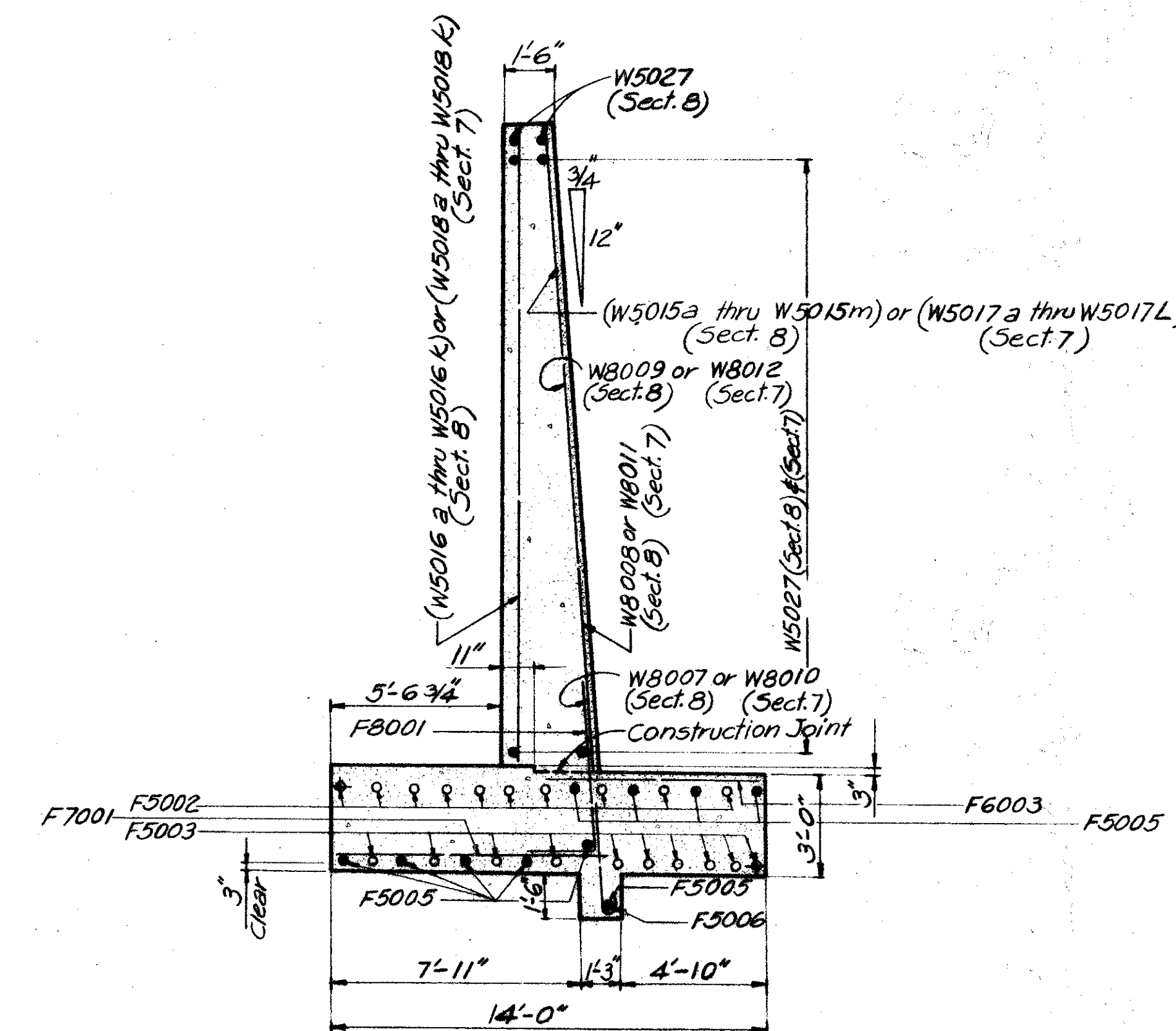
FRANKLIN COUNTY  
FRA-40-12.82



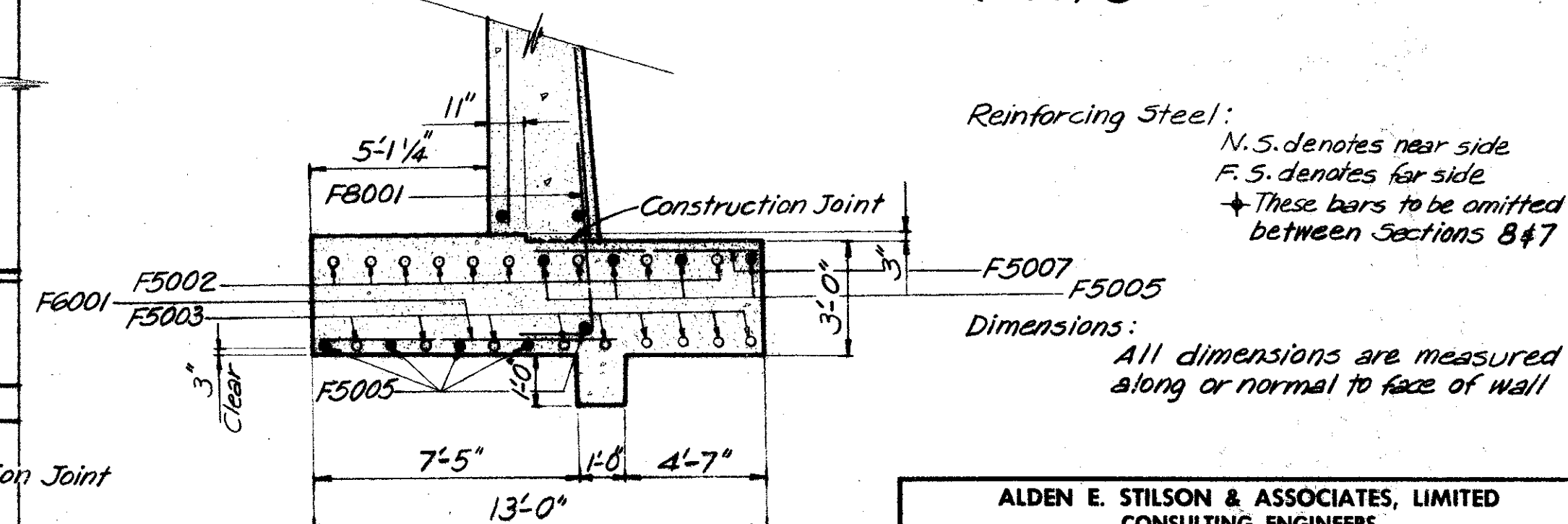
PLAN



DEVELOPED ELEVATION



TYPICAL SECTION  
FOOTER IS SHOWN ONLY FOR SECT. 8



FOOTER FOR SECT. 7

Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
+ These bars to be omitted between Sections 8 & 7

Dimensions:  
All dimensions are measured along or normal to face of wall

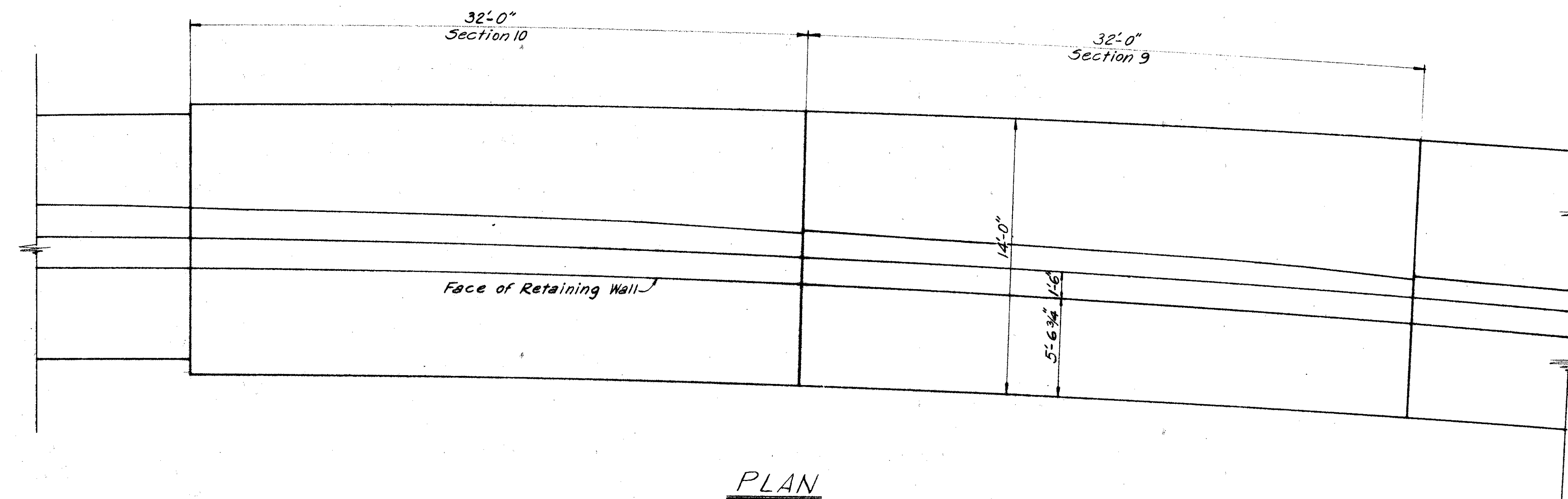
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS "8" AND "7"  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

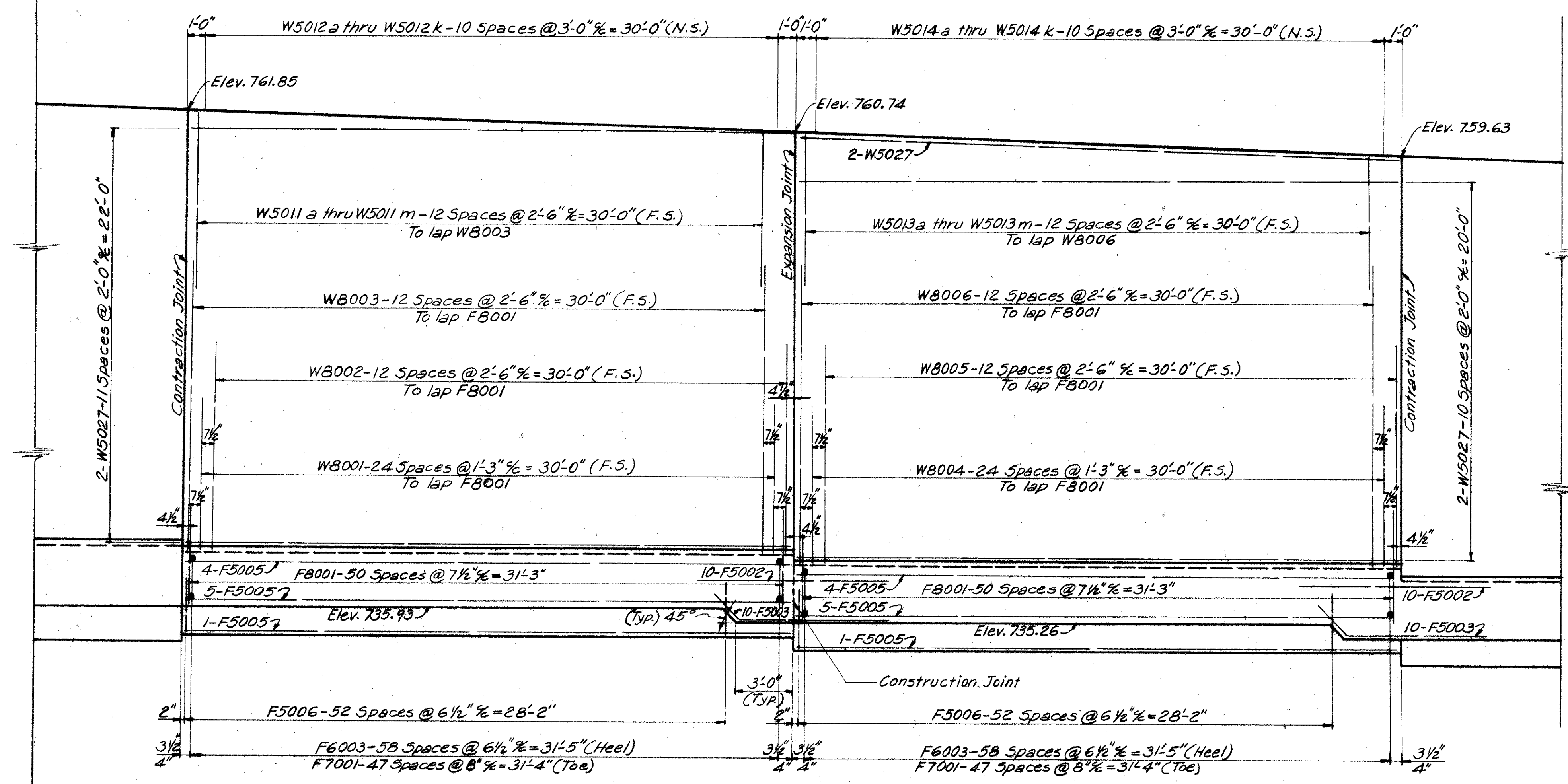
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R.T.	R.T.		C.R.W.	T.L.V.	5/10/62	



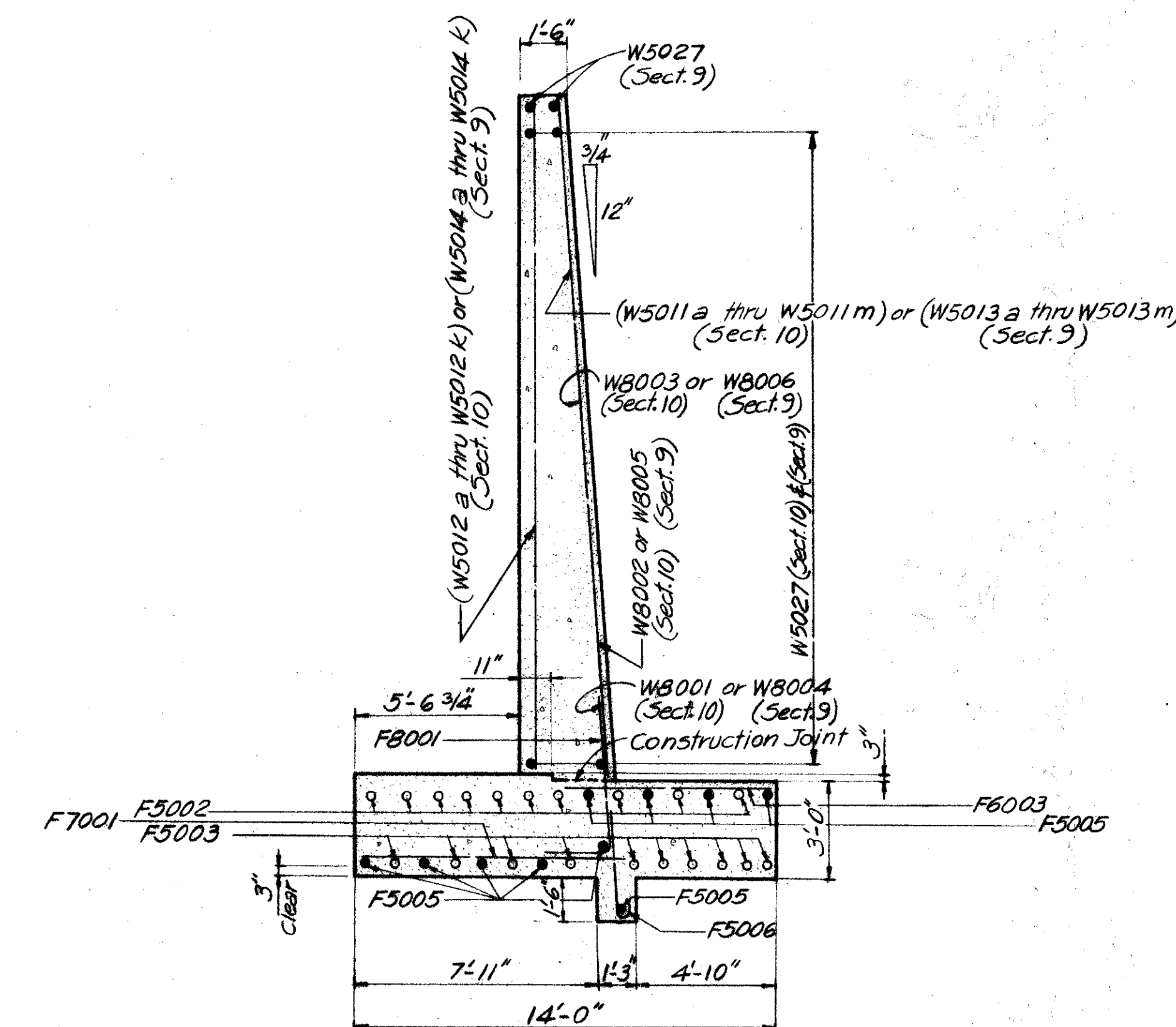
FRANKLIN COUNTY  
FRA-40-12.82



PLAN



DEVELOPED ELEVATION



TYPICAL SECTION

Reinforcing Steel:

N.S. denotes near side  
F.S. denotes far side

Dimensions:

All dimensions are measured along or normal to face of wall

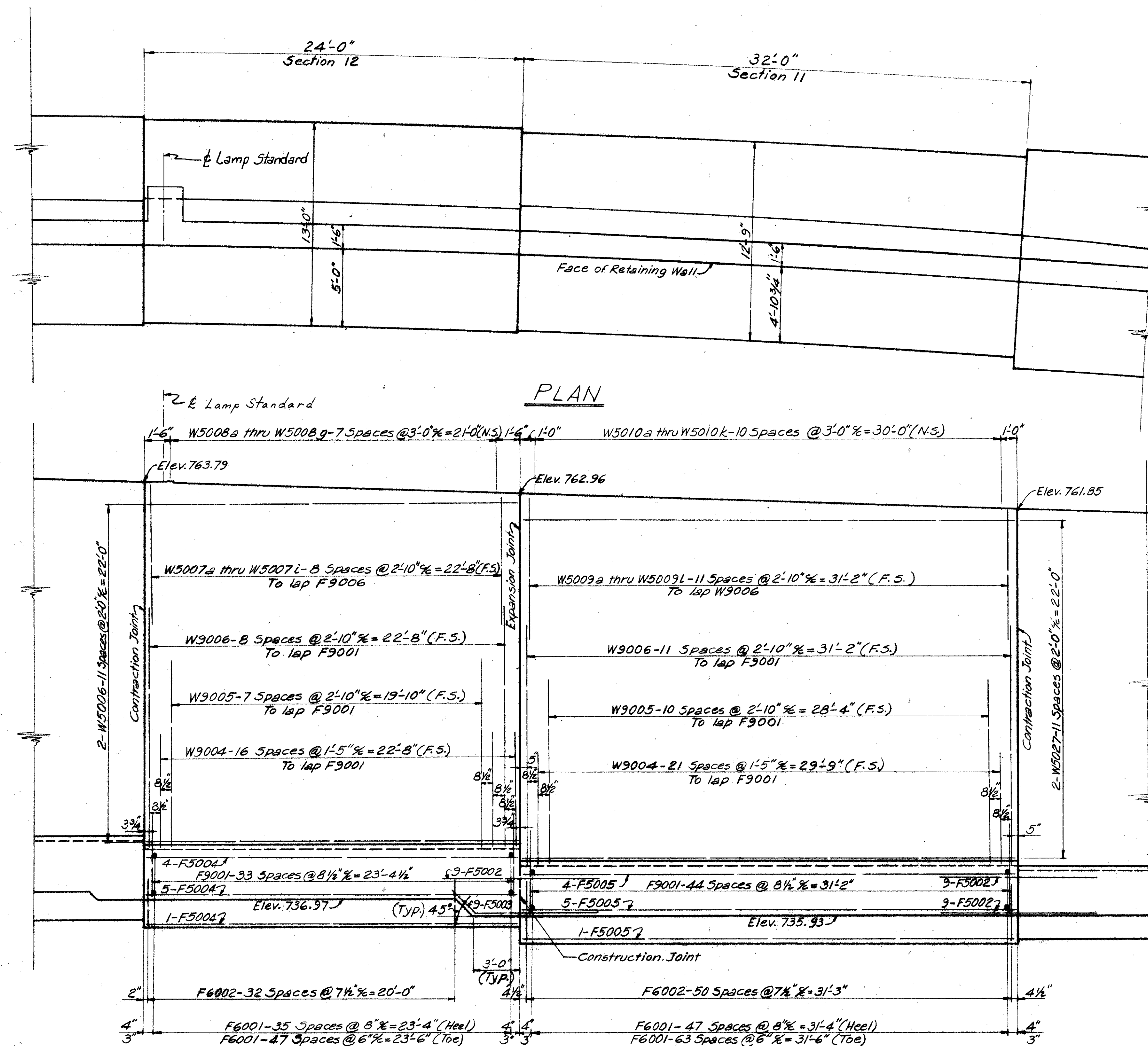
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS "10" AND "9"  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

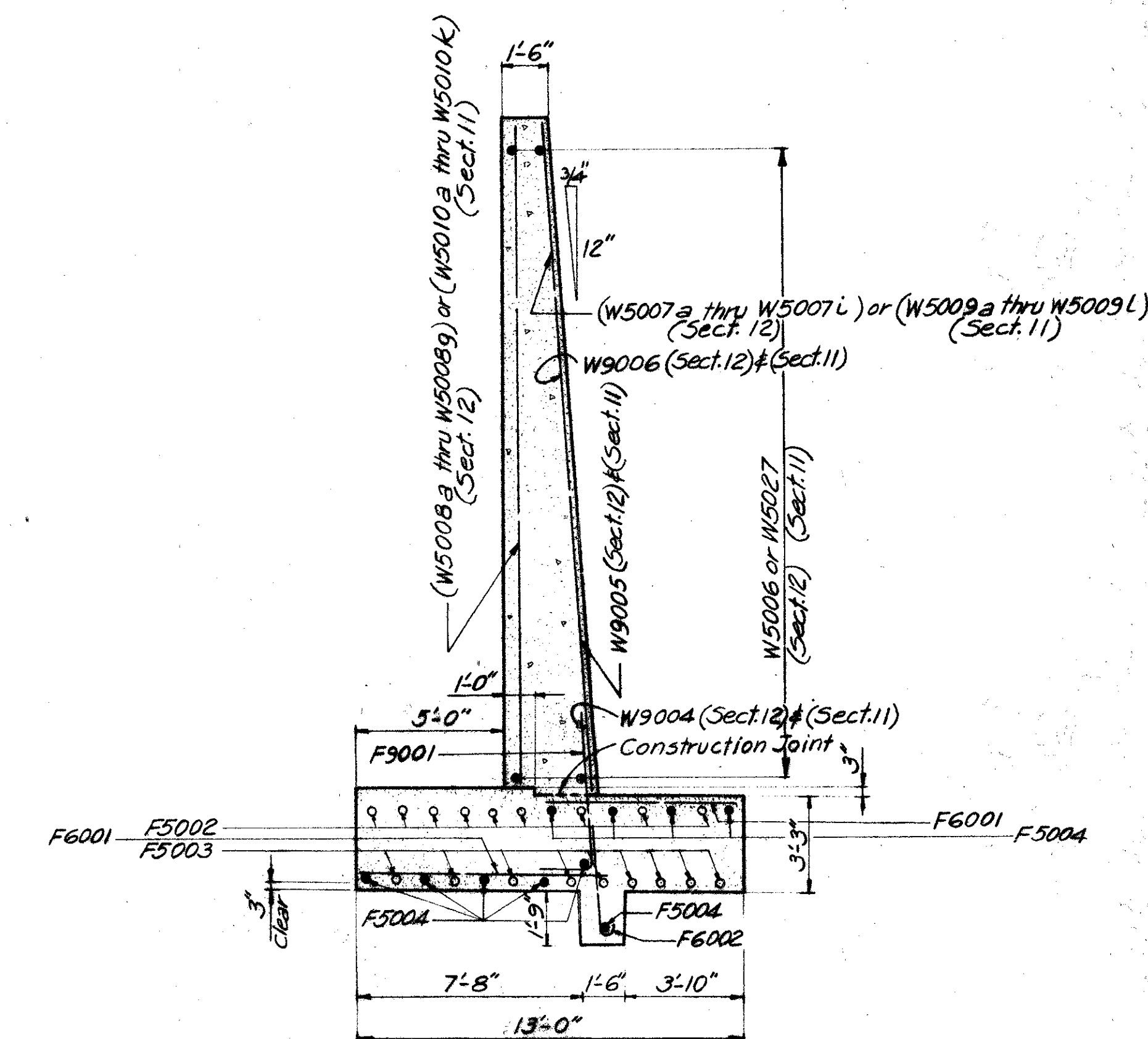
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R.T.	R.T.		C.R.W.	T.L.U.	5.10.62	



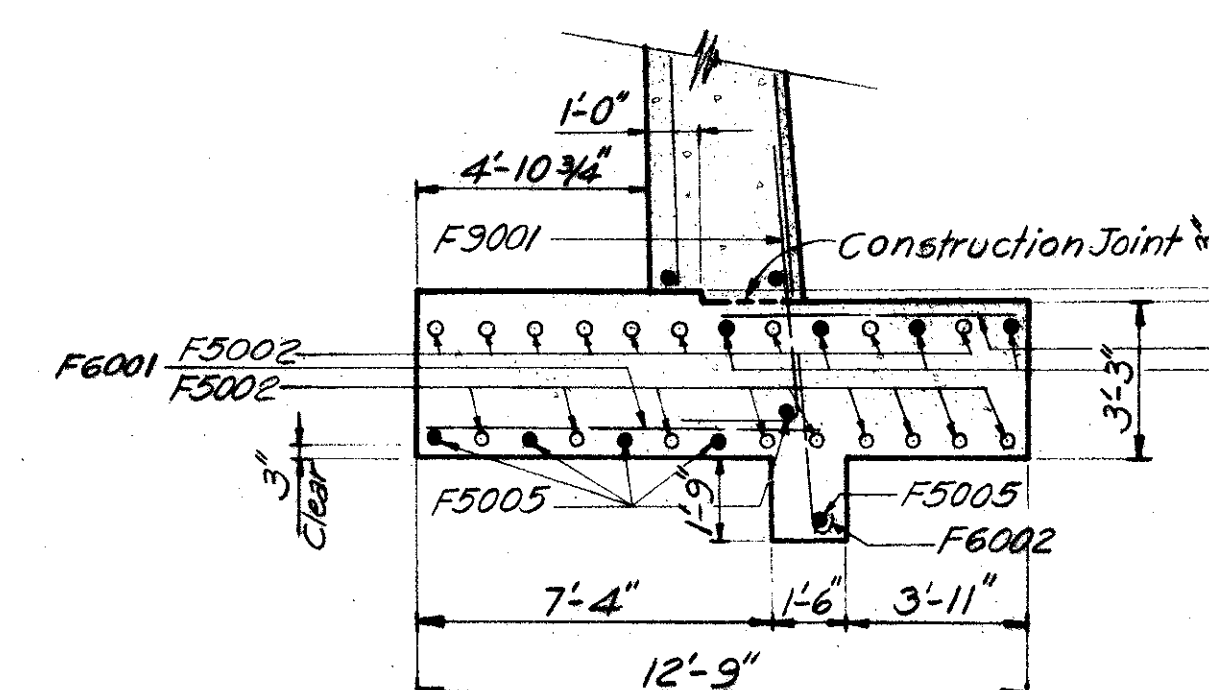
FRANKLIN COUNTY  
FRA-40-12.82



DEVELOPED ELEVATION



TYPICAL SECTION  
FOOTER IS SHOWN ONLY FOR SECT. 12



FOOTER FOR SECT. 11

Lamp Standard:  
For details see Sheet 108

Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side

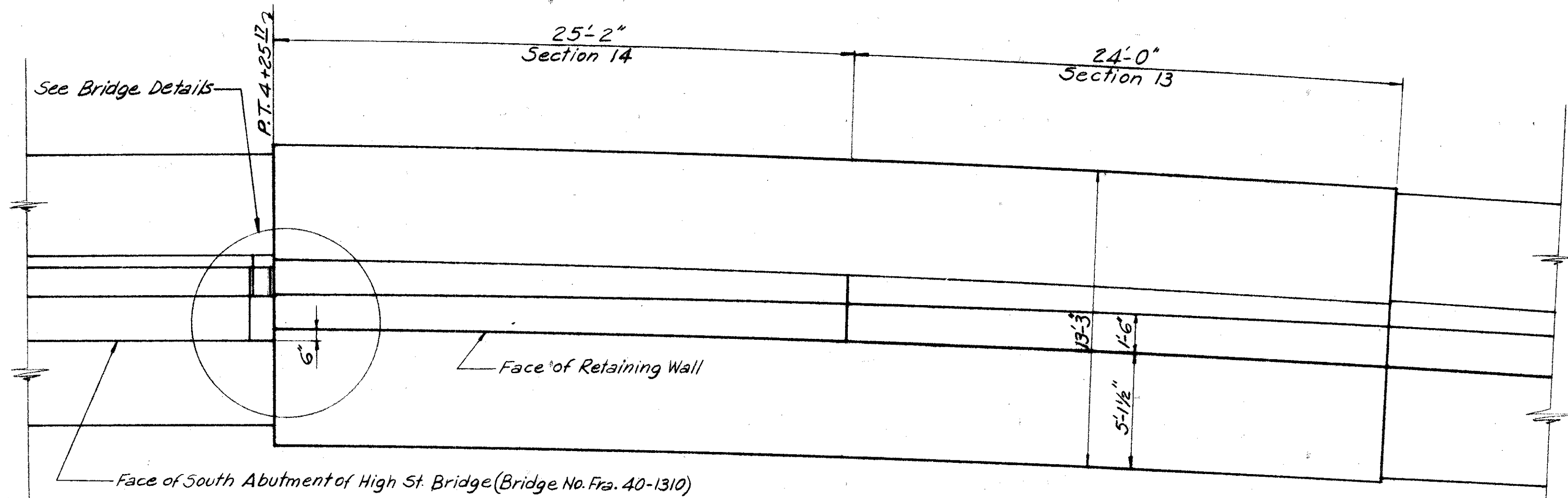
Dimensions:  
All dimensions are measured along or  
normal to face of wall

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

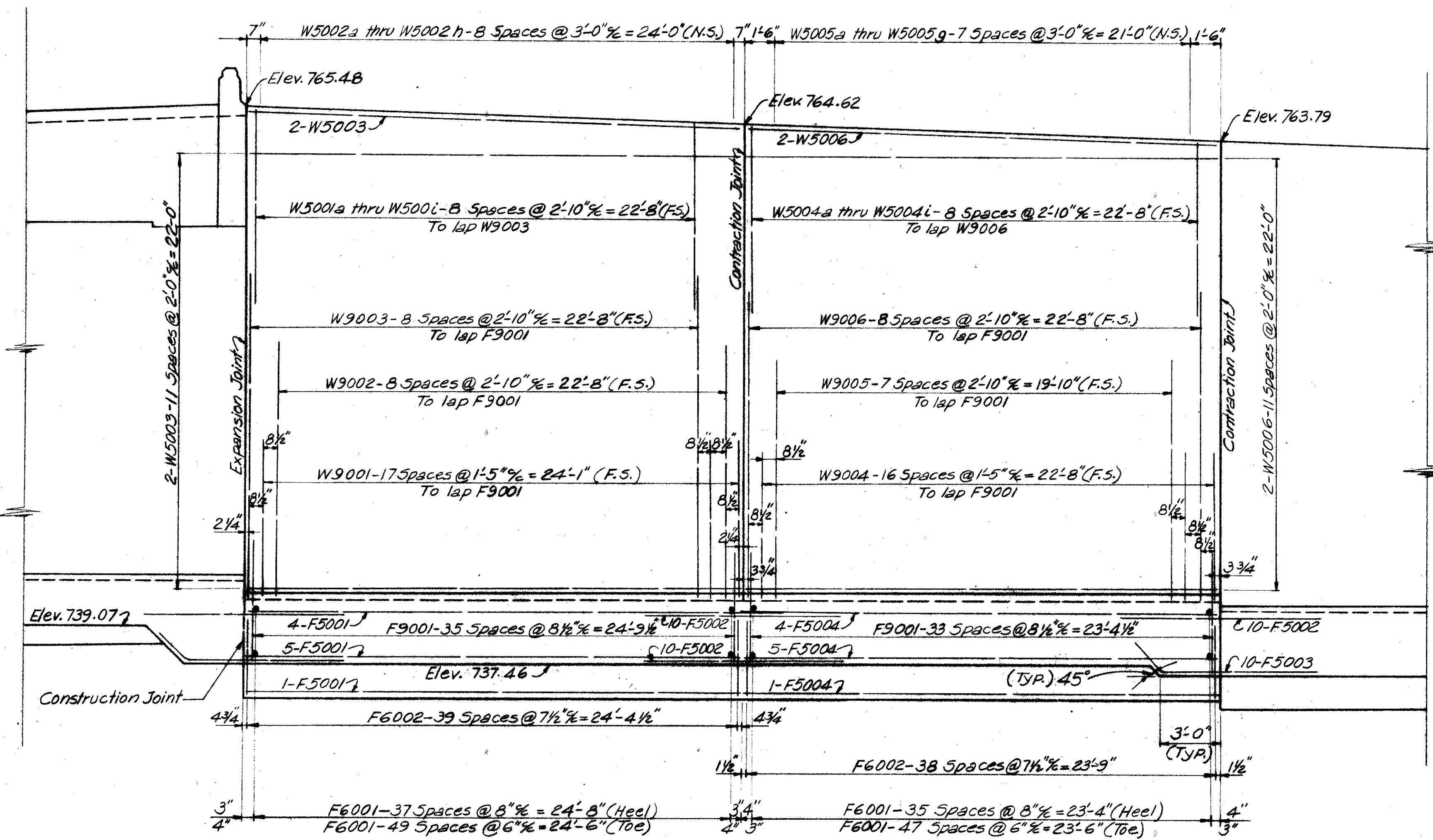
SECTIONS "12" AND "11"  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.U.	5/10/62	

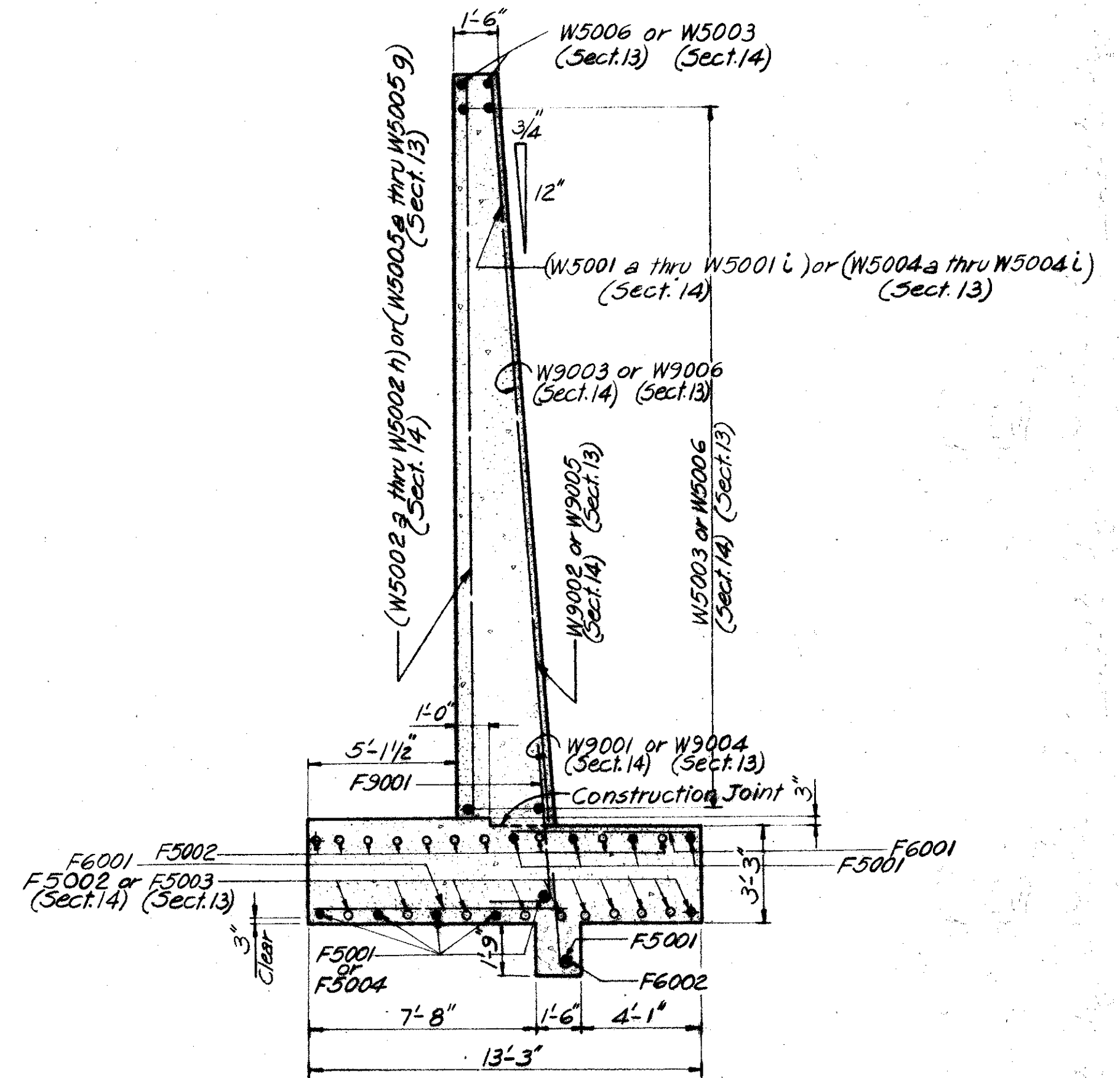




PLAN



DEVELOPED ELEVATION



TYPICAL SECTION

Dimensions:  
All dimensions are measured along or normal to face of wall

Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
These bars to be omitted between footer of South Abut. of High St. Bridge and footer of Sect. 14 of Wall

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS "14" AND "13"  
RETAINING WALL "B"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.Z. 5/10/82		



## REINFORCING

## STEEL

## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

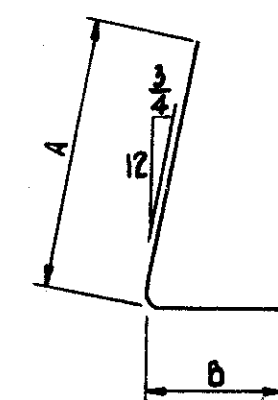
FRANKLIN COUNTY  
FRA-40-12.82

137  
250

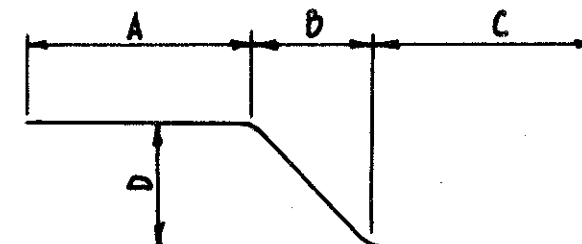
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	Shp.
-FOOTING-									
F5003	81	10'-0	845	2		1'-7	7'-10	1'-7	bt
F5006	159	3'-4	553	4	2'-9				bt
F6002	163	3'-9	918	4	3'-1				bt
F6005	236	4'-0	1418	4	3'-4				bt
F8001	469	6'-1	7617	1	5'-2	1'-2			bt
F9001	149	6'-8	3378	1	5'-8	1'-3			bt
-WALL-									
W5001a	1	9'-0		st					
thru		Varies by 1/4"	81	st					
W5001i	1	8'-2		st					
W5002a	1	24'-2		st					
thru		Varies by 1/4"	199	st					
W5002h	1	23'-5		st					
W5003	26	24'-10	673	st					
W5004a	1	8'-3		st					
thru		Varies by 1/4"	74	st					
W5004i	1	7'-5		st					
W5005a	1	23'-4		st					
thru		Varies by 1/4"	168	st					
W5005g	1	22'-7		st					
W5006	50	23'-8	1234	st					
W5007a	1	7'-11		st					
thru		Varies by 1/4"	70	st					
W5007i	1	7'-1		st					
W5008a	1	23'-0		st					
thru		Varies by 1/4"	165	st					
W5008g	1	22'-3		st					
W5009a	1	8'-1		st					
thru		Varies by 1/4"	94	st					
W5009i	1	6'-11		st					
W5010a	1	23'-2		st					
thru		Varies by 1/4"	264	st					
W5010k	1	22'-11		st					
W5011a	1	8'-9		st					
thru		Varies by 1/4"	112	st					
W5011m	1	7'-9		st					
W5012a	1	22'-6		st					
thru		Varies by 1/4"	252	st					
W5012k	1	21'-5		st					
W5013a	1	8'-10		st					
thru		Varies by 1/4"	113	st					
W5013m	1	7'-10		st					
W5014a	1	22'-1		st					
thru		Varies by 1/4"	247	st					
W5014k	1	21'-0		st					
W5015a	1	8'-11		st					
thru		Varies by 1/4"	114	st					
W5015m	1	7'-11		st					
W5016a	1	21'-7		st					
thru		Varies by 1/4"	241	st					
W5016k	1	20'-6		st					
W5017a	1	8'-8		st					
thru		Varies by 1/4"	103	st					
W5017i	1	7'-9		st					
W5018a	1	21'-2		st					
thru		Varies by 1/4"	236	st					
W5018k	1	19'-11		st					
W5019a	1	8'-2		st					
thru		Varies by 1/4"	97	st					
W5019i	1	7'-3		st					
W5020a	1	20'-9		st					
thru		Varies by 1/4"	233	st					
W5020k	1	19'-11		st					
W5021a	1	8'-4		st					
thru		Varies by 1/4"	99	st					
W5021i	1	7'-5		st					
W5022a	1	20'-10		st					
thru		Varies by 1/4"	234	st					
W5022k	1	20'-0		st					
W5023	11	9'-3	106	st					
W5024	11	20'-1	230	st					
W5025	33	9'-2	316	st					
W5026	33	20'-9	714	st					
W5027	250	31'-8	8257	st					
-REPLACEMENT STEEL-									
RE5001	2	5'-7		st					
RE6001	1	5'-11		st					
RE7001	1	6'-2		st					
RE8001	2	6'-6		st					
RE9001	1	6'-10		st					
W8001	25	8'-6	567	st					
W8002	13	11'-5	396	st					
W8003	13	15'-7	541	st					
W8004	25	8'-0	534	st					
W8005	13	10'-11	379	st					
W8006	13	15'-1	524	st					
W8007	25	7'-6	501	st					
W8008	13	10'-5	362	st					

Mark	Nº	Length	Weight	Shp.
-WALL (cont)-				
W8009	13	14'-7	506	st
W8010	72	7'-4	1410	st
W8011	36	11'-3	1081	st
W8012	36	14'-3	1370	st
W8013	21	7'-2	402	st
W8014	11	10'-3	301	st
W8015	11	13'-0	382	st
W8016	63	7'-8	1290	st
W8017	33	10'-9	947	st
W8018	33	13'-6	1189	st
-LAMP STANDARD REINFORCING-				
L5090	24	2'-10	71	st
L5091	6	1'-4	8	st

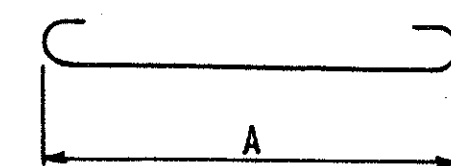
Bending Diagram



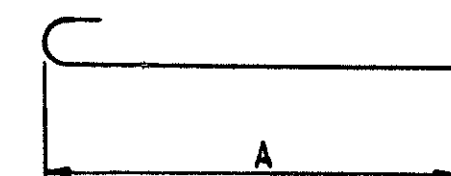
TYPE 1



TYPE 2



TYPE 3



TYPE 4

Note: In the reinforcing steel bar marks, the first digit where four digits are used and the first two where five are used is the bar number which indicates the size of the bar.

## ESTIMATED QUANTITIES

Item	Total	Unit	Description
E-2	1782	Cu. Yds.	Unclassified Excavation
E-2	Lump	Sum	Cofferdams, Crib and Sheeting
S-1	687	Cu. Yds.	Class "E" Concrete, Footing
S-1	750	Cu. Yds.	Class "E" Concrete, Wall
S-3	281	Lin. Ft.	Waterproofing - Premolded Sealing Strip
S-4	69,002	Lbs.	Reinforcing Steel
S-9	295	Sq. Ft.	1" Gray Rubber, Preformed Expansion Joint Filler
I-26	426	Lin. Ft.	Chain Link Fence
S-29	568	Cu. Yds.	Porous Backfill
S-25	3	Each	Lamp standard
S-25	3	Each	Mercury vapor luminaire
S-25	252	Lin. Ft.	Pole and bracket cable (single conductor)
S-25	65	Lin. Ft.	Plastic wall conduit

## REPLACEMENT BARS

IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST  
AND ESTIMATED QUANTITIES  
RETAINING WALL "B" ALONG  
SOUTH INNERBELT

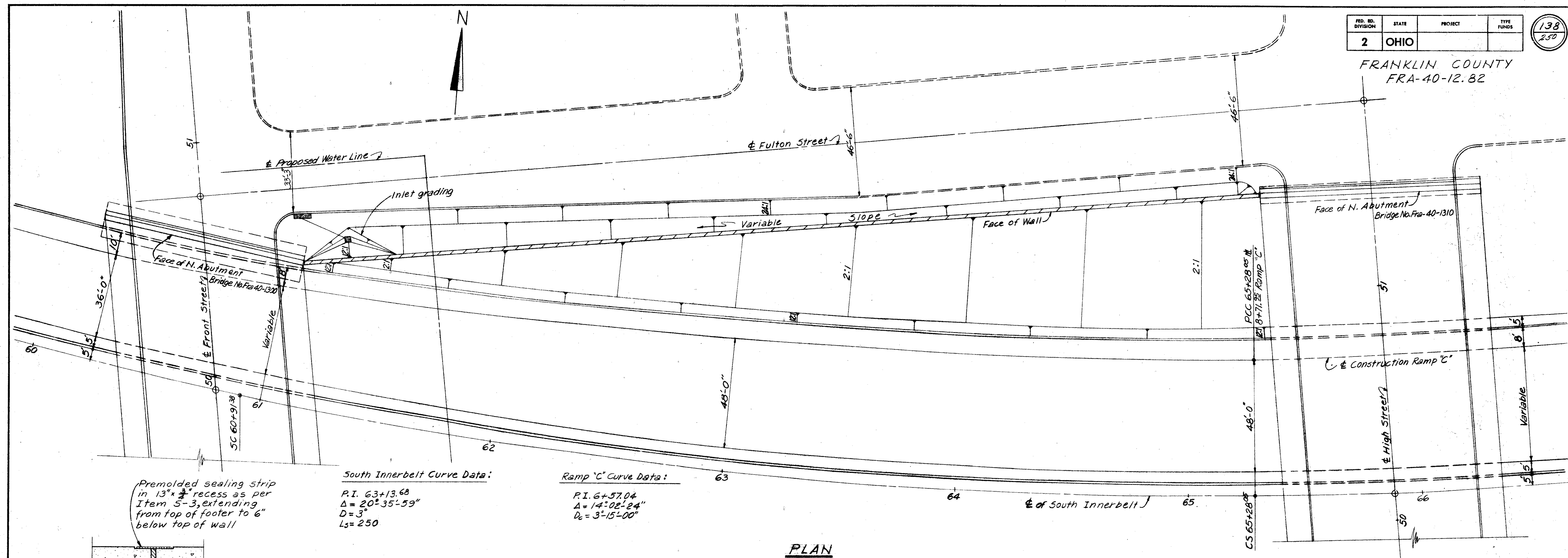
FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	HT		WTH	HEM	TLU 5-10-62	



FRANKLIN COUNTY

FRA-40-12.82



South Innerbelt Curve Data:

P.I. 63+13.68

$\Delta = 20^{\circ}35'59''$

D=3°

Ls=250

Ramp "C" Curve Data:

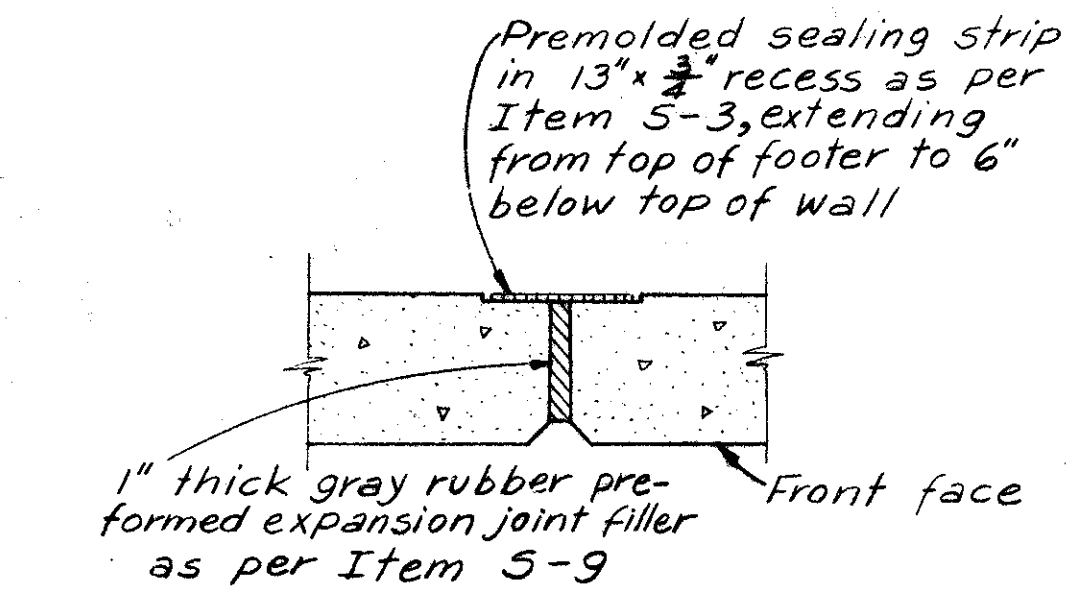
P.I. 6+57.04

$\Delta = 14^{\circ}02'24''$

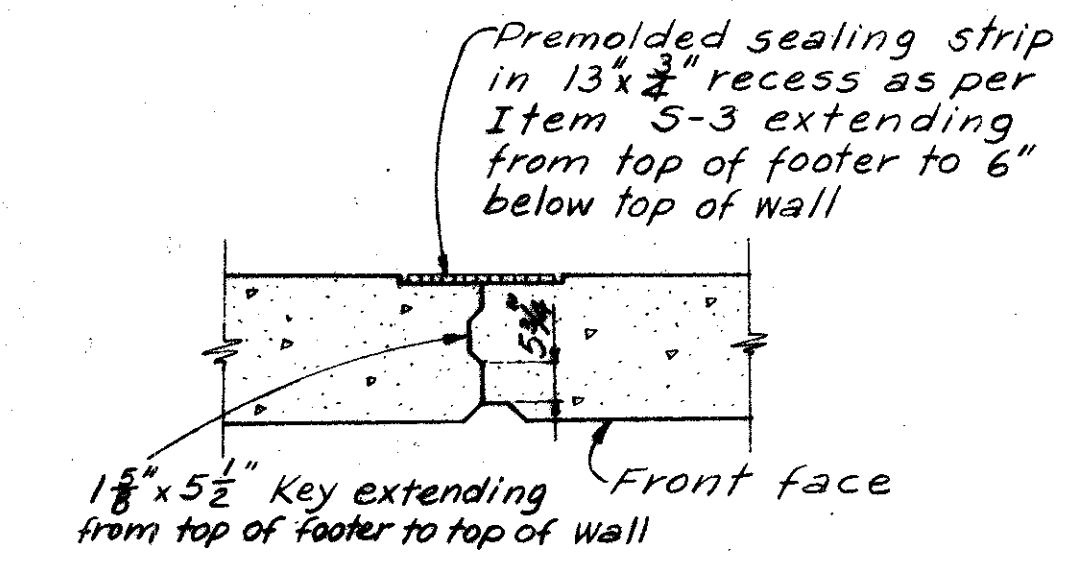
Ds=3°15'00"

PLAN

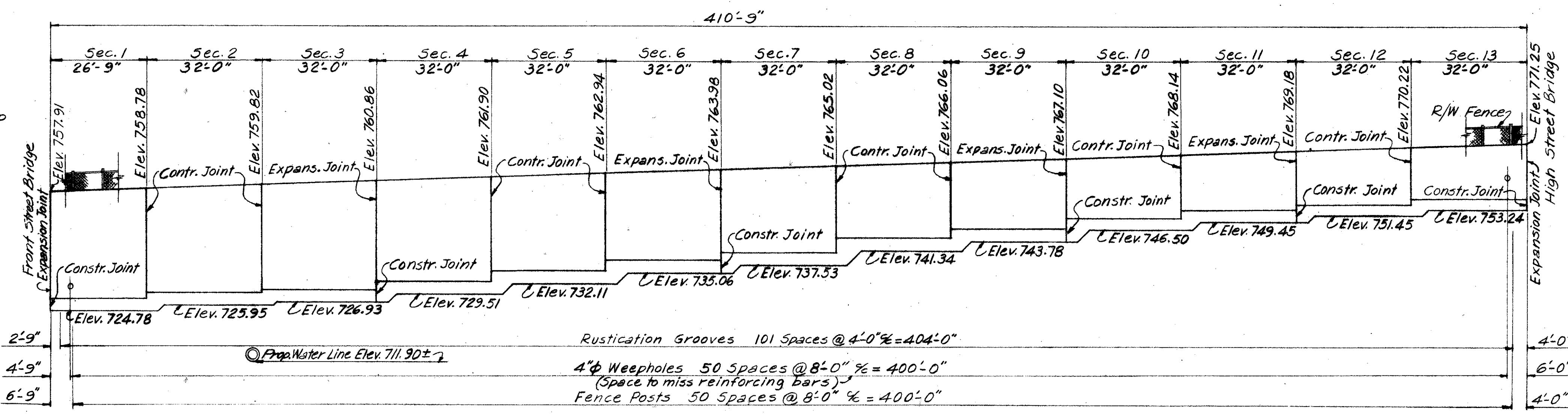
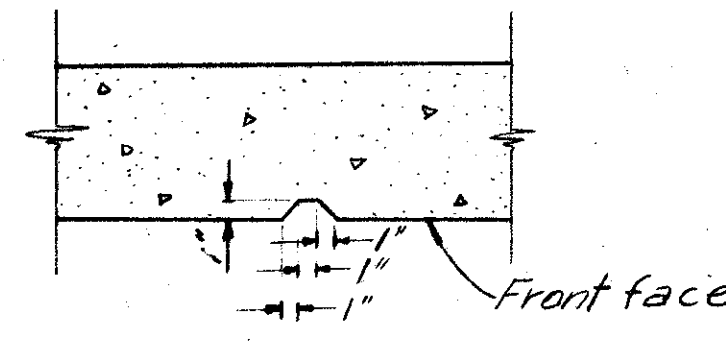
EXPANSION JOINT DETAIL



CONTRACTION JOINT DETAIL



RUSTICATION GROOVE DETAIL



DEVELOPED ELEVATION

Note: Keys are not shown

Note: For Weephole Elevations See Sheet 139.

ALDEN E. STILSON & ASSOCIATES, LIMITED

CONSULTING ENGINEERS

COLUMBUS, OHIO

GENERAL PLAN AND ELEVATION

RETAINING WALL "C"

ALONG SOUTH INNERBELT

FRANKLIN COUNTY

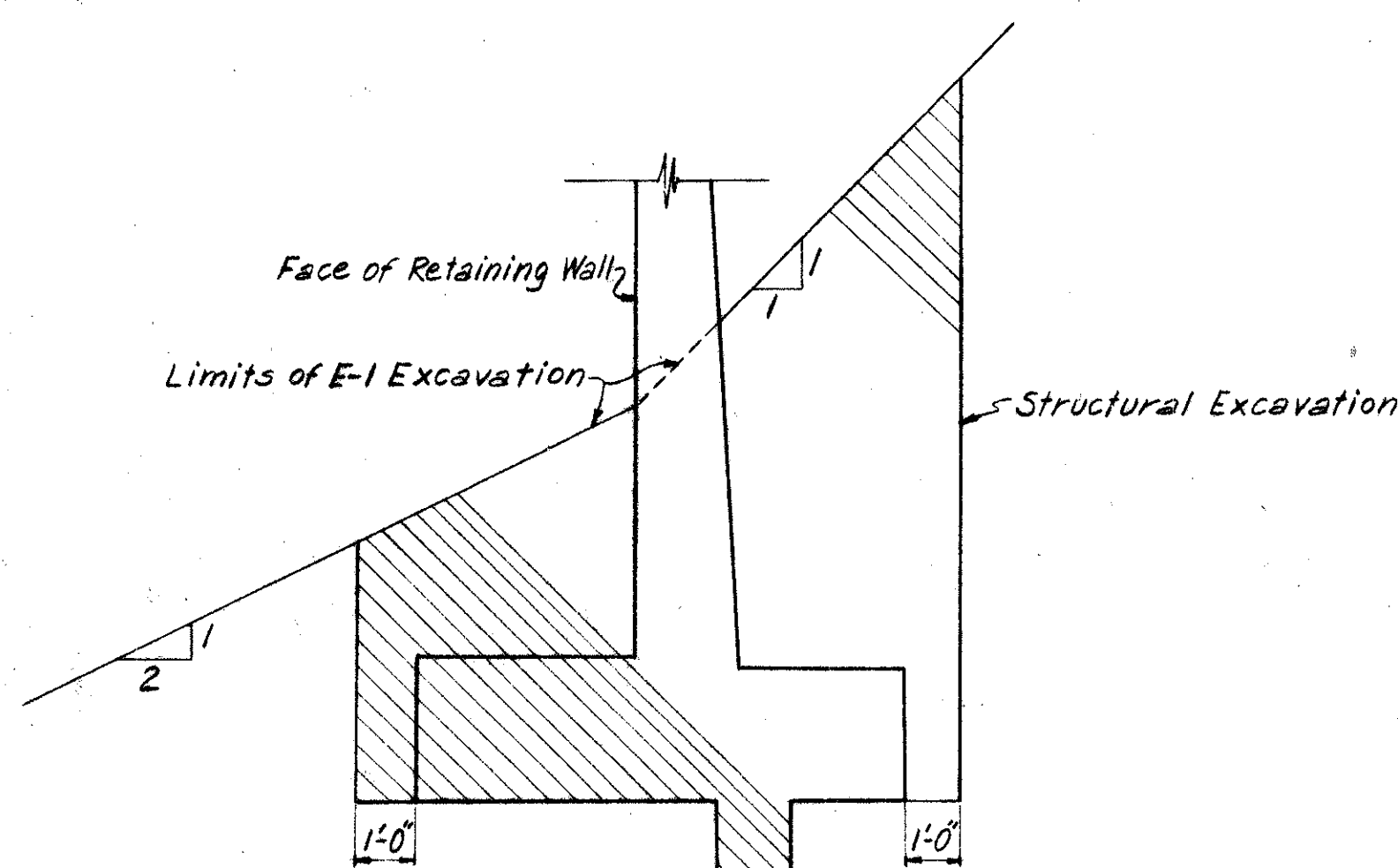
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	TLV	5-10-68	



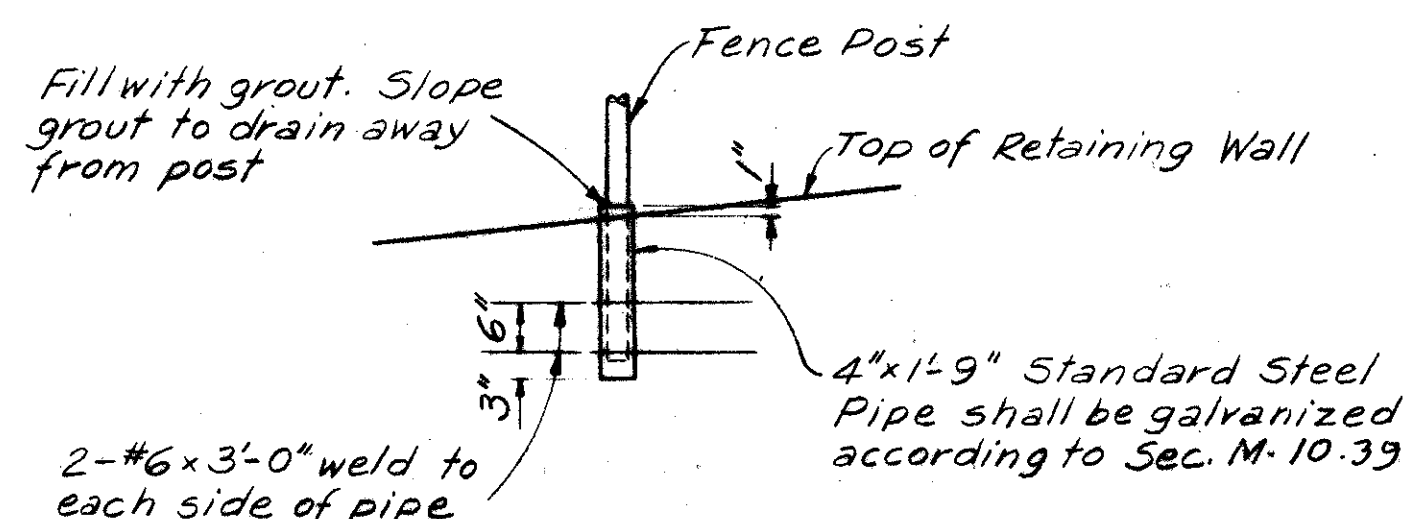
FRANKLIN COUNTY  
FRA-40-12.82

### GENERAL NOTES

- 1- Foundation design and foundation quantities are based on a study of rod soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, Ohio or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.
- 2- 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 revisions thereof, dated 2-21-58.
- 3- Maximum foundation pressure = 3.00 tons per S.F.
- 4- The key on the bottom of the footing shall be placed in a carefully made trench against undisturbed earth.
- 5- See Sheet ① for other details.
- 6- For Details and payment of expansion joint between wall and adjacent bridge, See Bridge Details



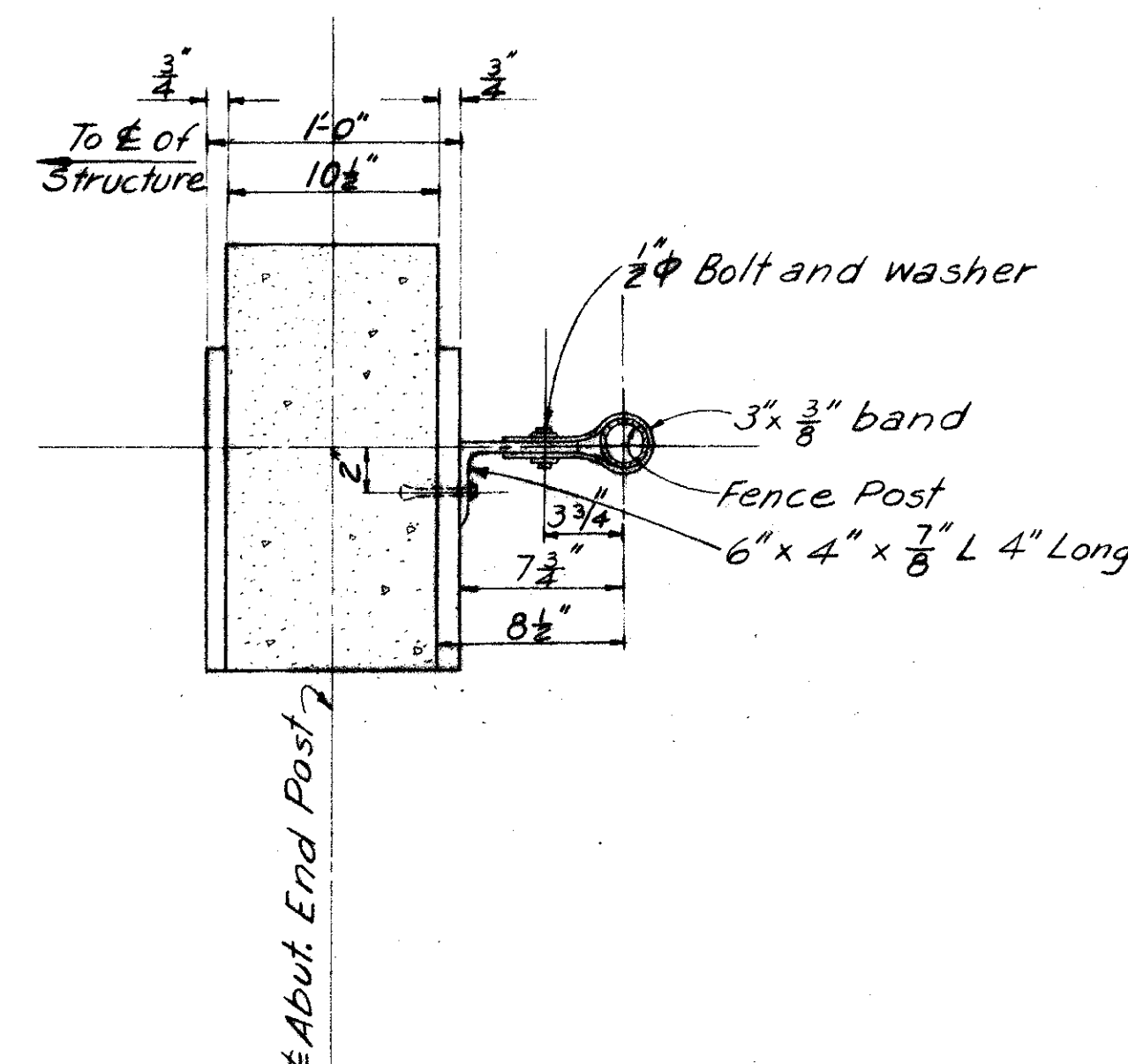
EXCAVATION DETAIL



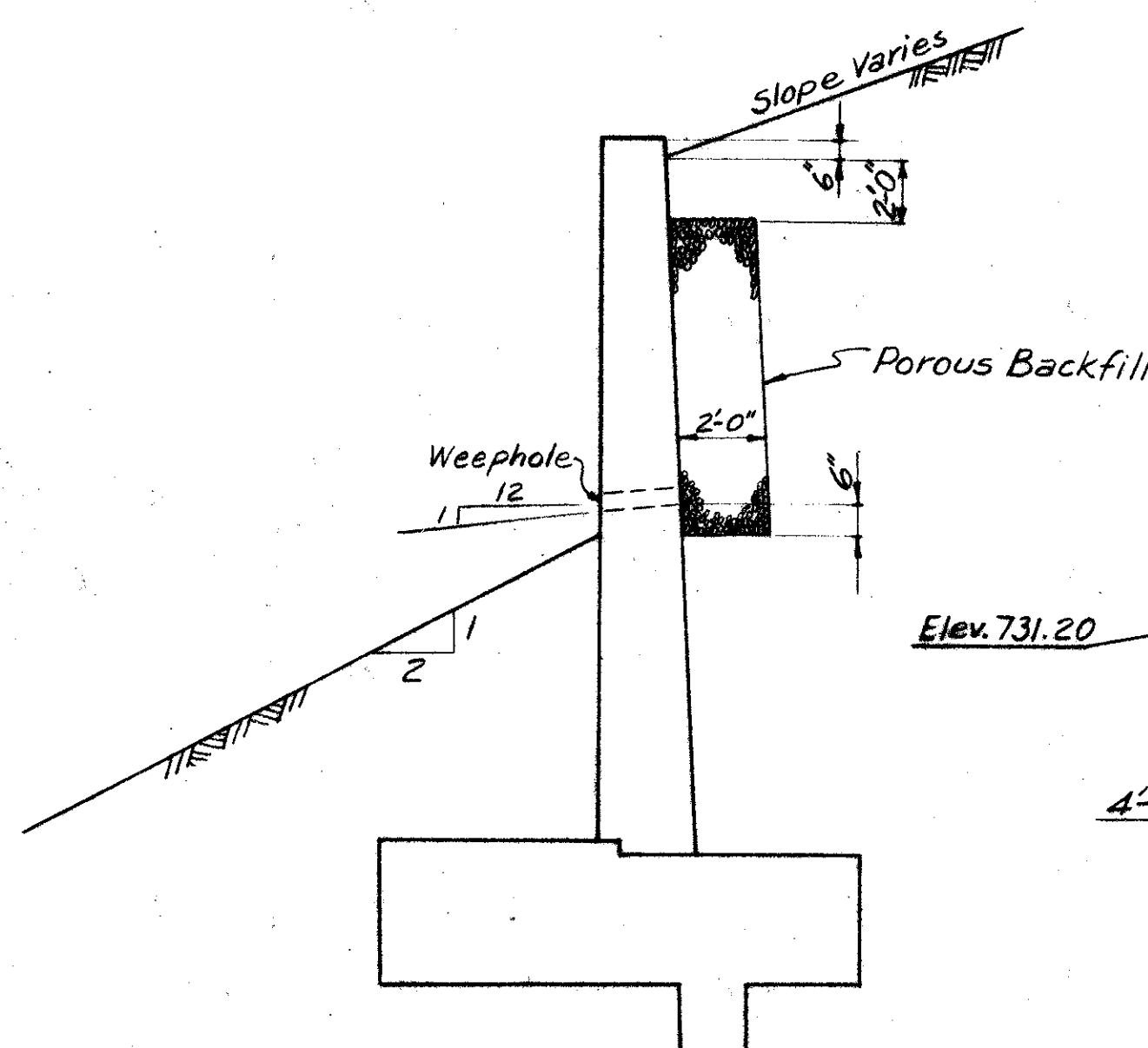
Notes:

- Grout, reinforcing bars and pipe to be included with fence for payment.
- E of fence shall be located 1'-2" from face of wall

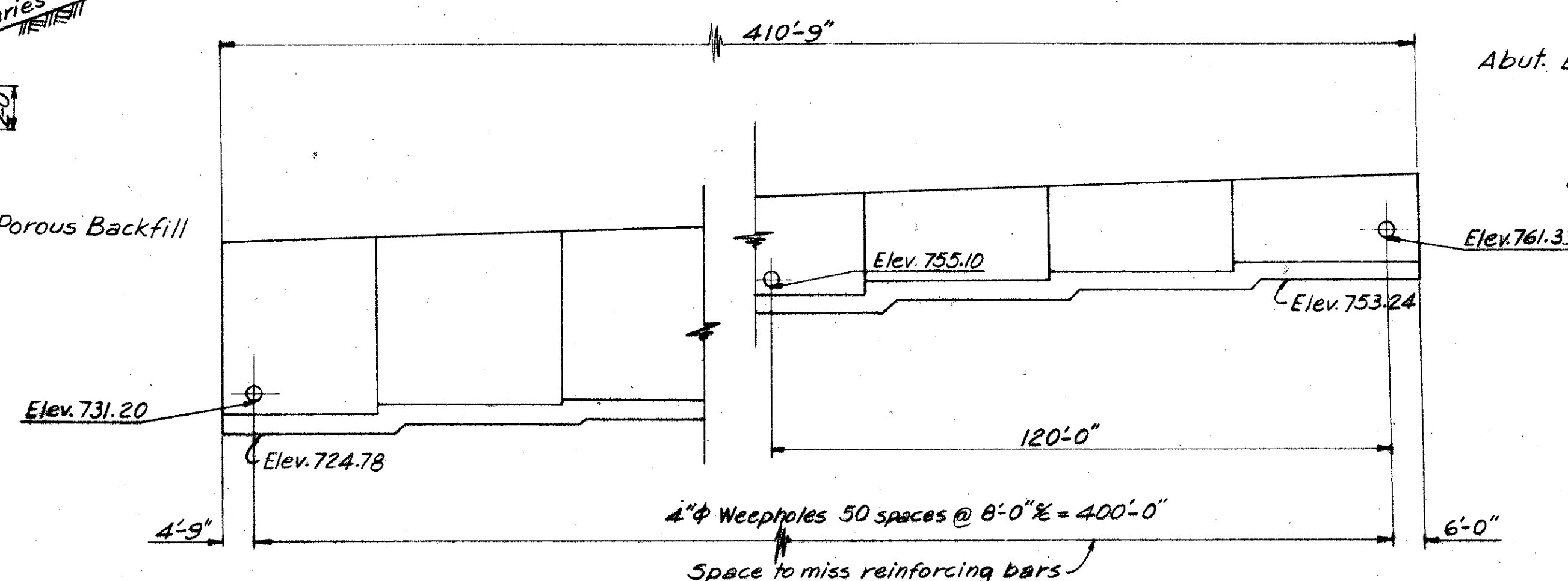
### FENCE DETAIL



SECTION A-A

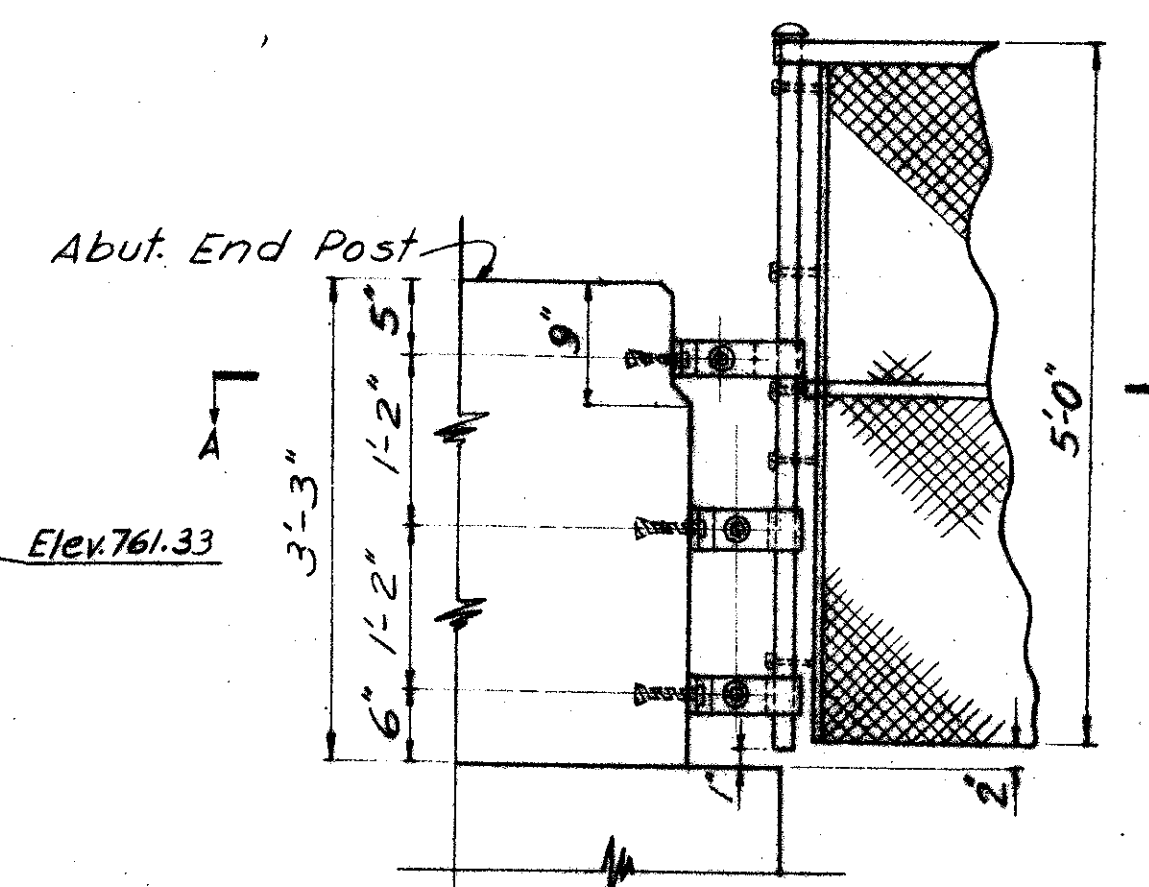


POROUS BACKFILL DETAIL



- Notes: 1- Weephole elevations are at bottom of 4" hole at face of wall.  
2- Weepholes placed in straight line between given elevations.

### WEEPHOLE ELEVATIONS



- Notes: 1- For details not shown see standard Drawing F-3

### ELEVATION

### FENCE END POST CONNECTION

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

DETAILS AND NOTES  
RETAINING WALL "C"  
ALONG SOUTH INNERBELT

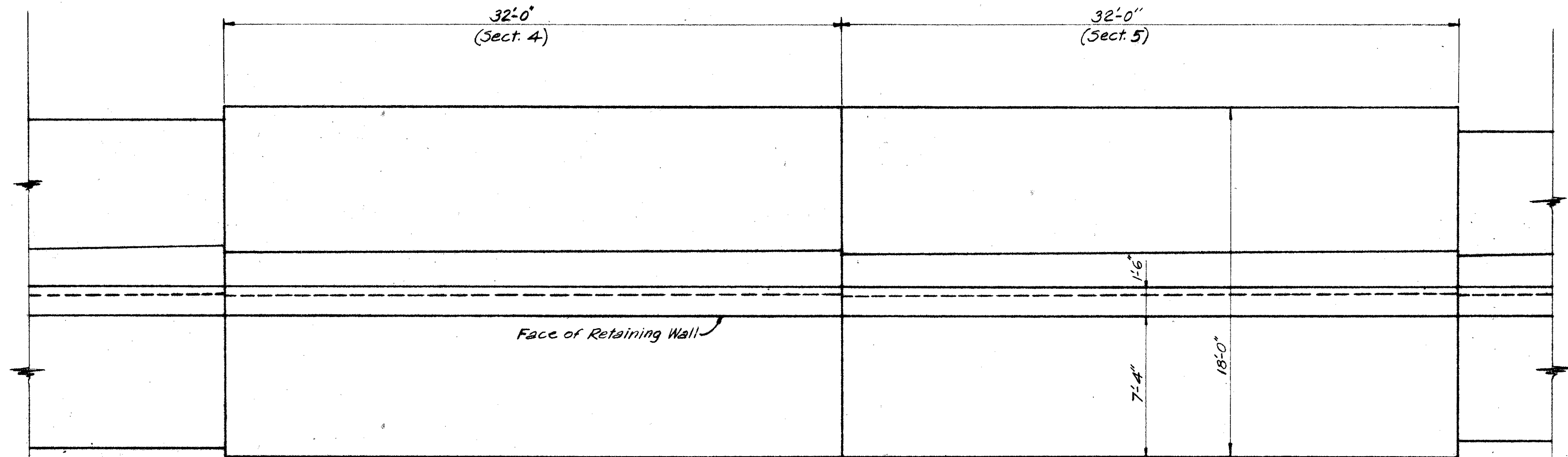
FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.U.	5-10-62	

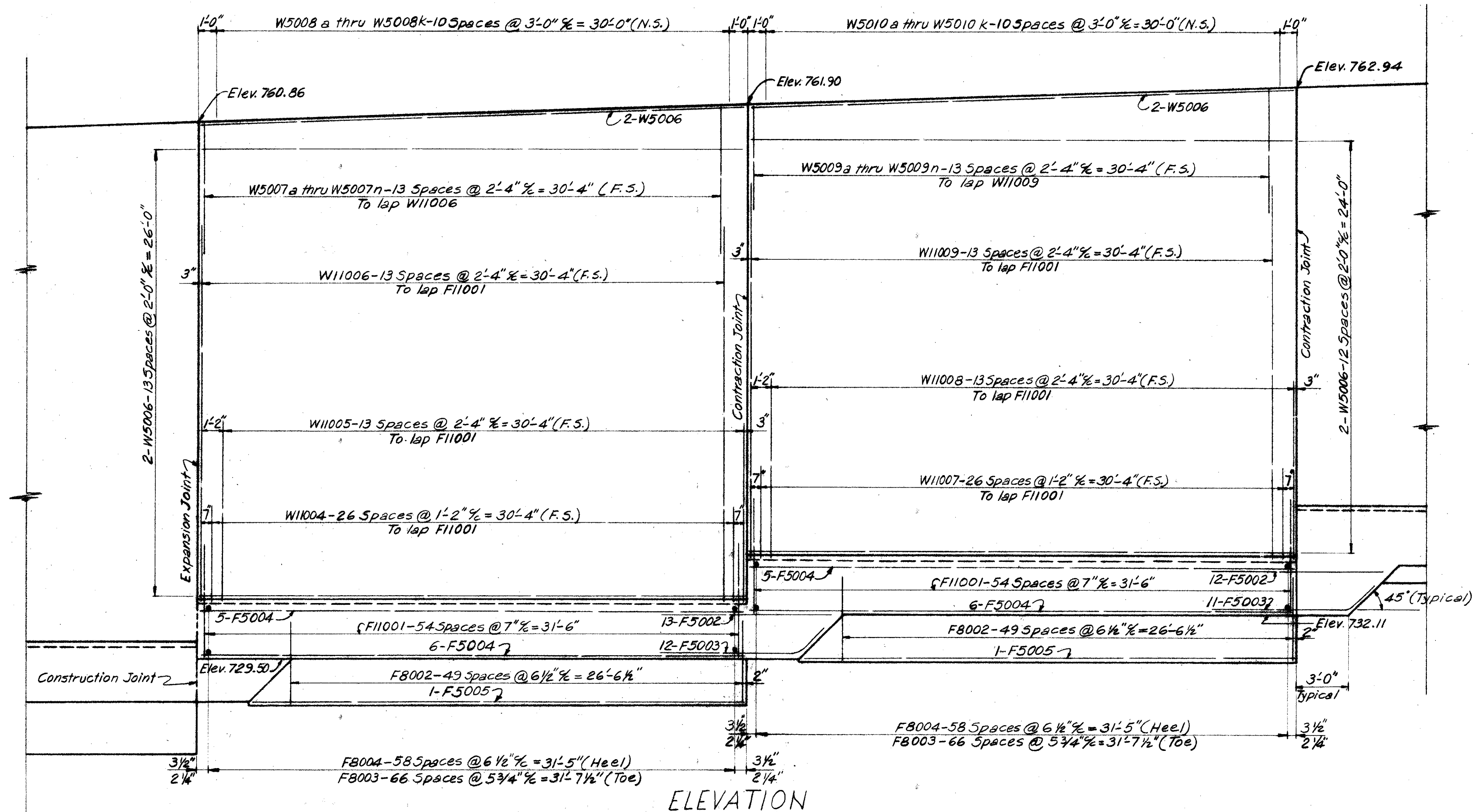




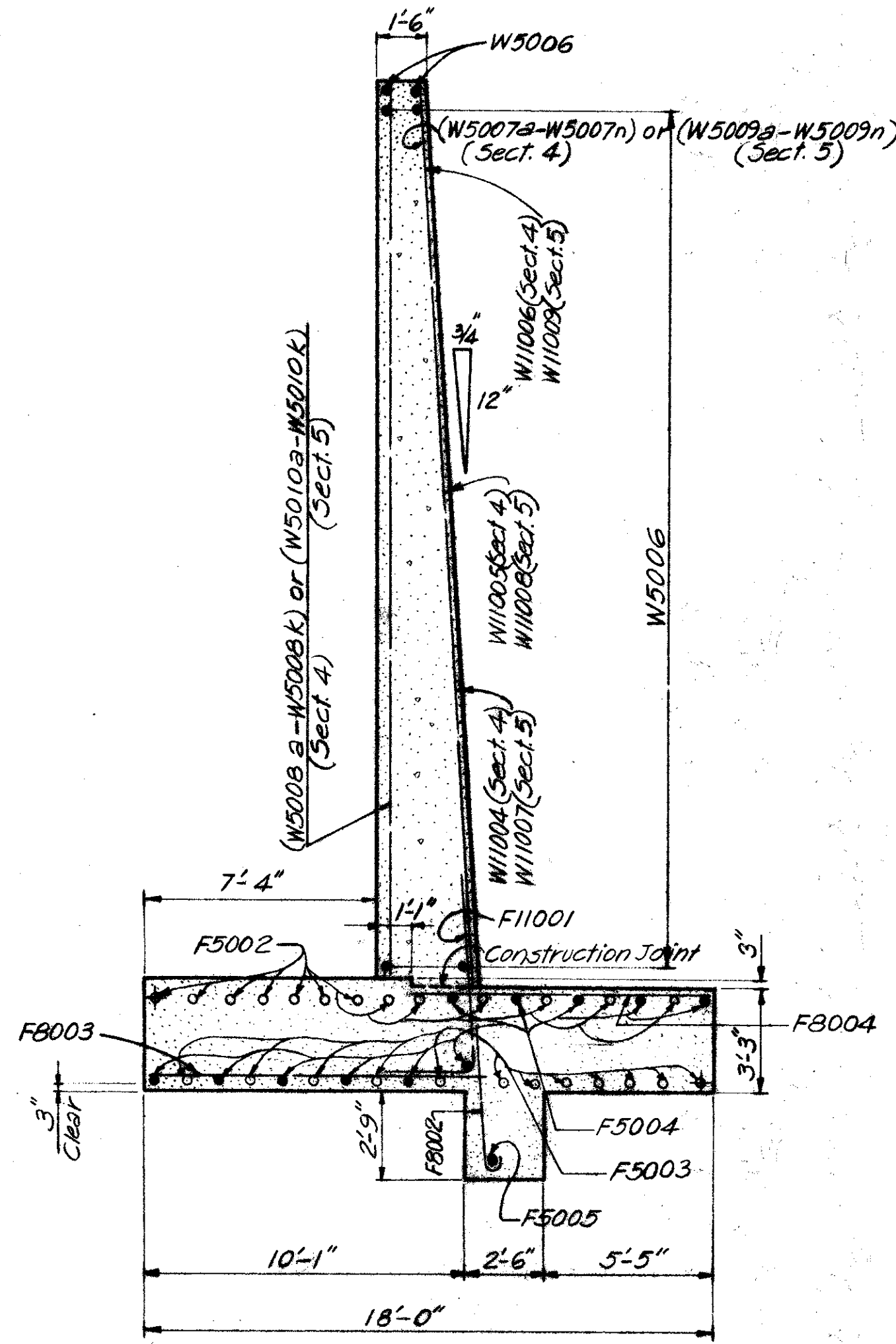




PLAN



ELEVATION

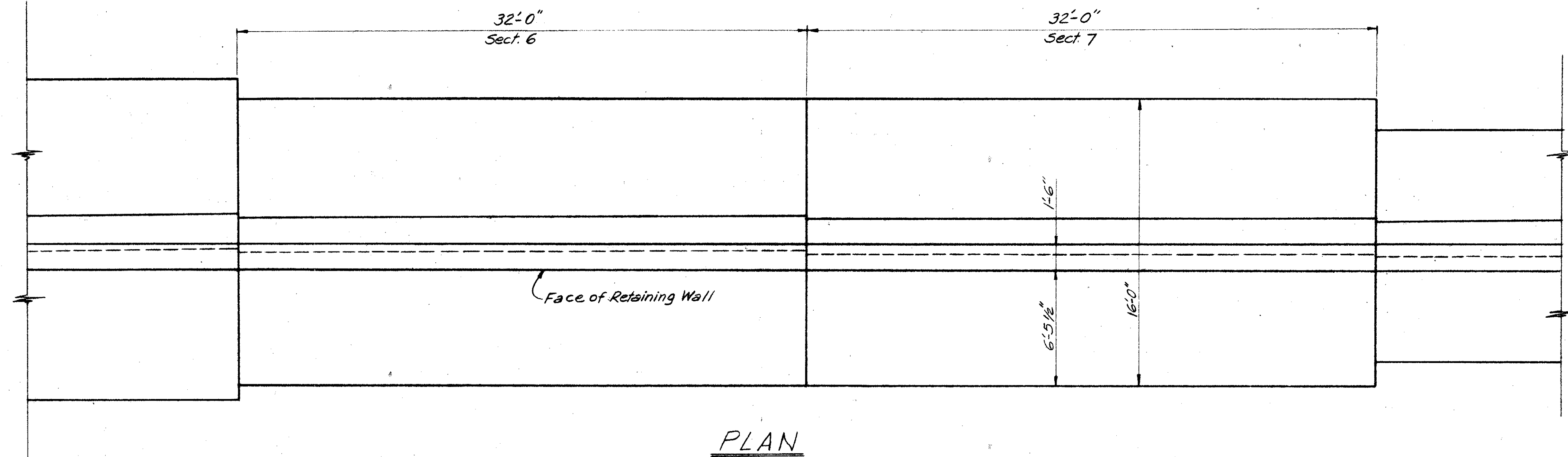


TYPICAL SECTION

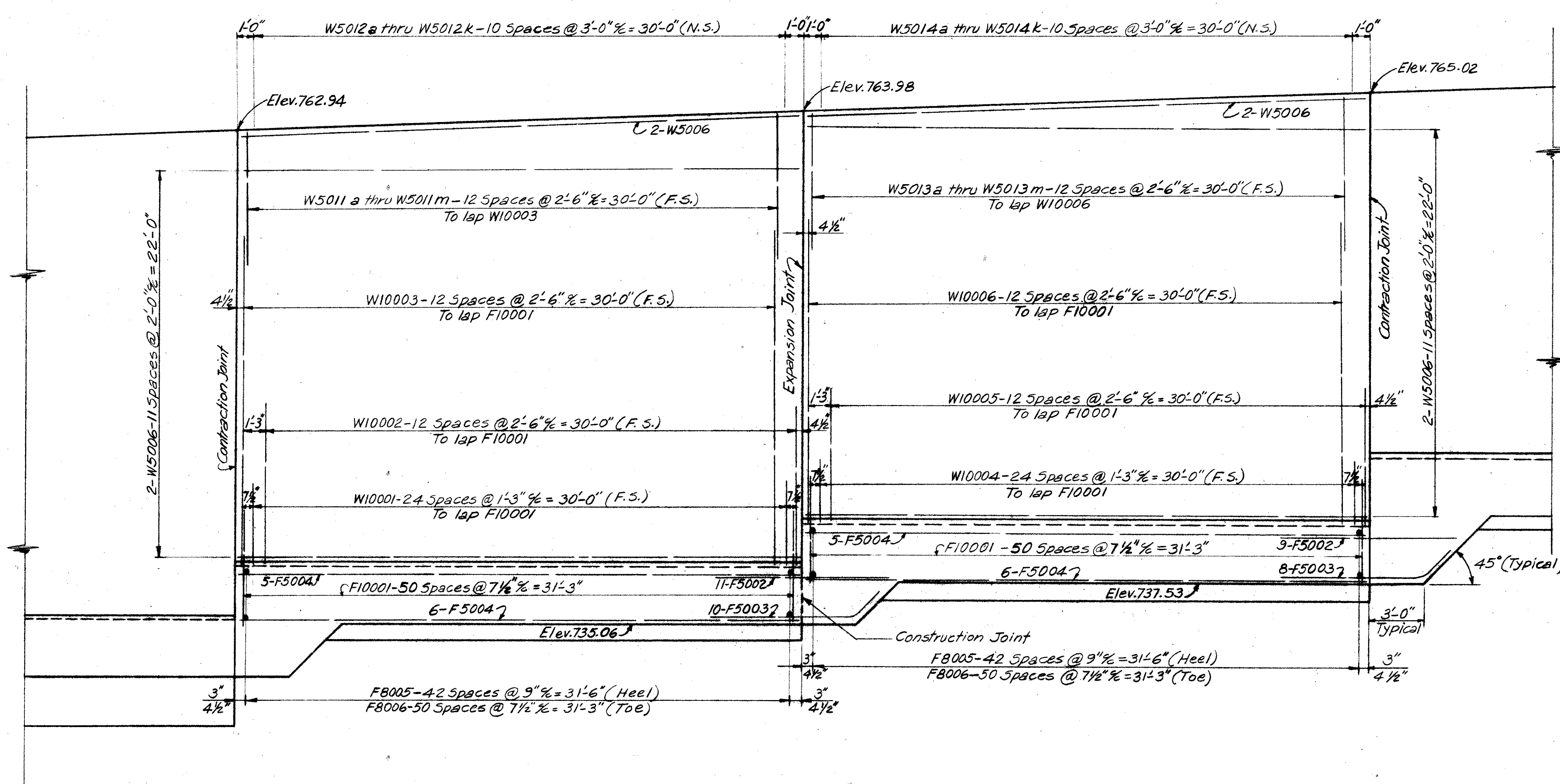
Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
\* These bars to be omitted between Sections 5 & 6

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SECTIONS 4 AND 5 RETAINING WALL "C" ALONG SOUTH INNERBELT FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	72051062		

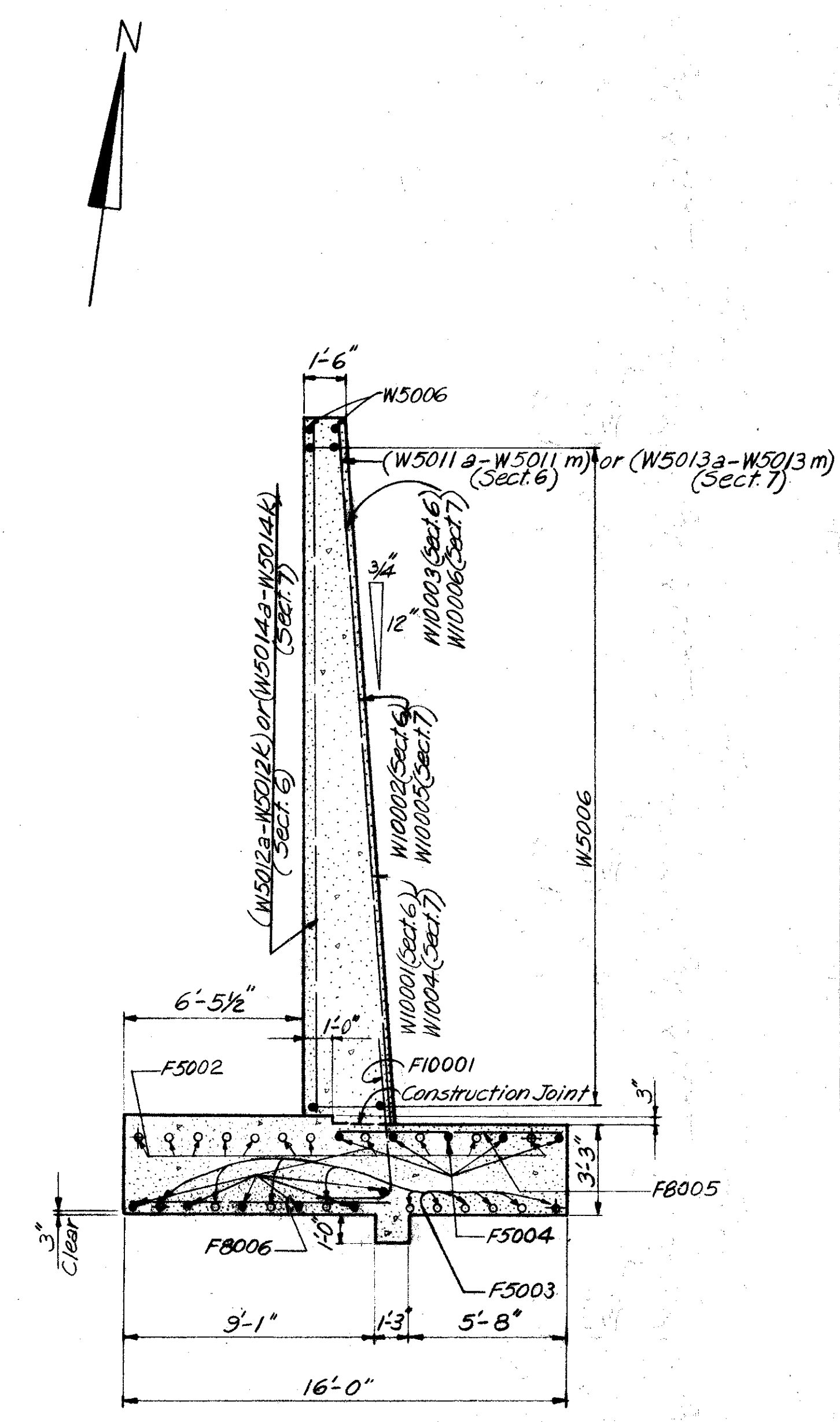




PLAN



ELEVATION

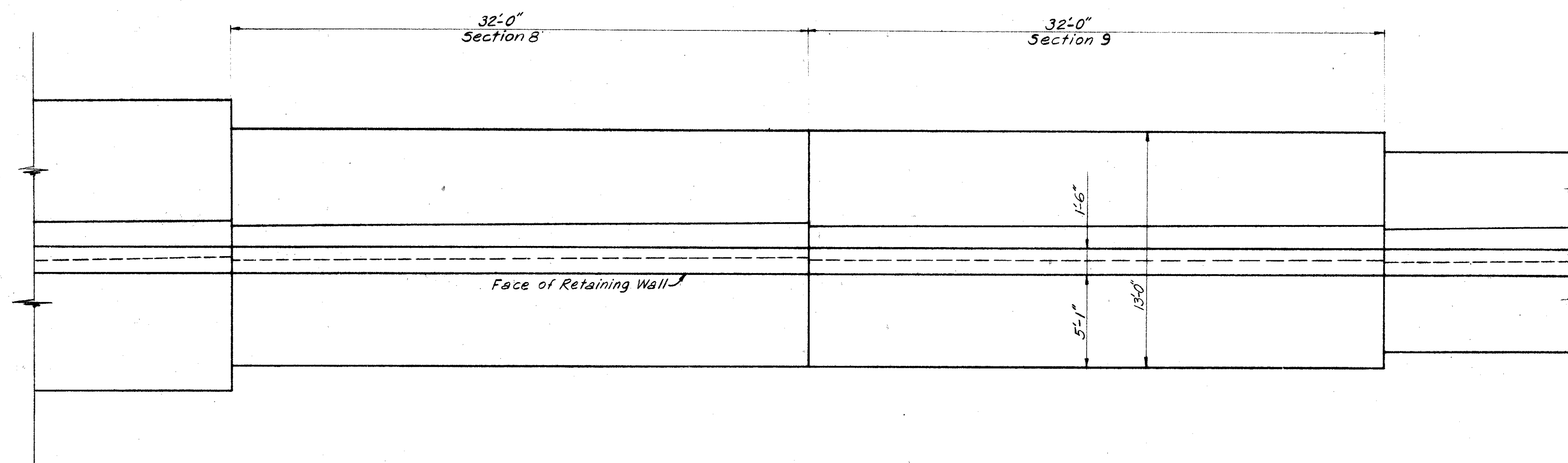


TYPICAL SECTION

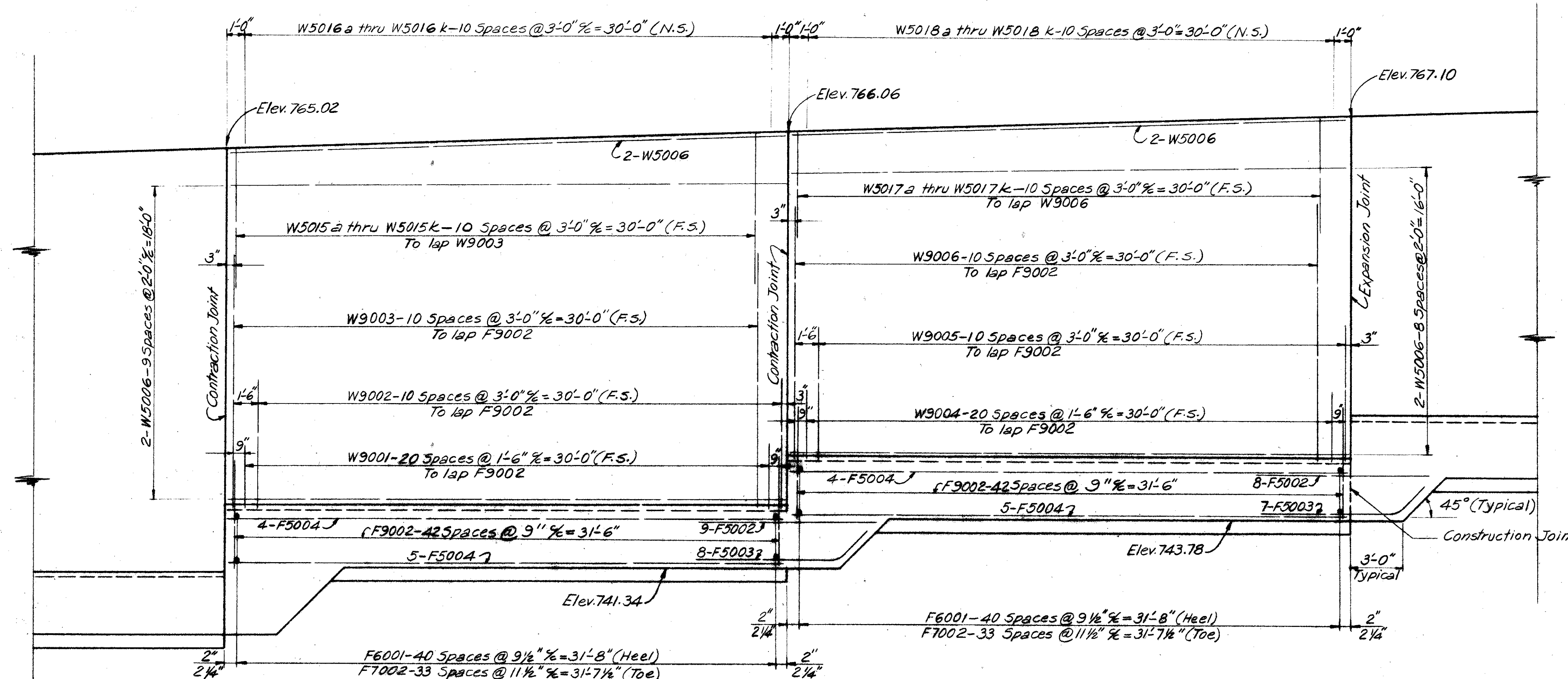
Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
+ These bars are to be omitted between section 7 & 8

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SECTIONS "6" AND "7" RETAINING WALL "C" ALONG SOUTH INNERBELT FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.V.	5-10-82	

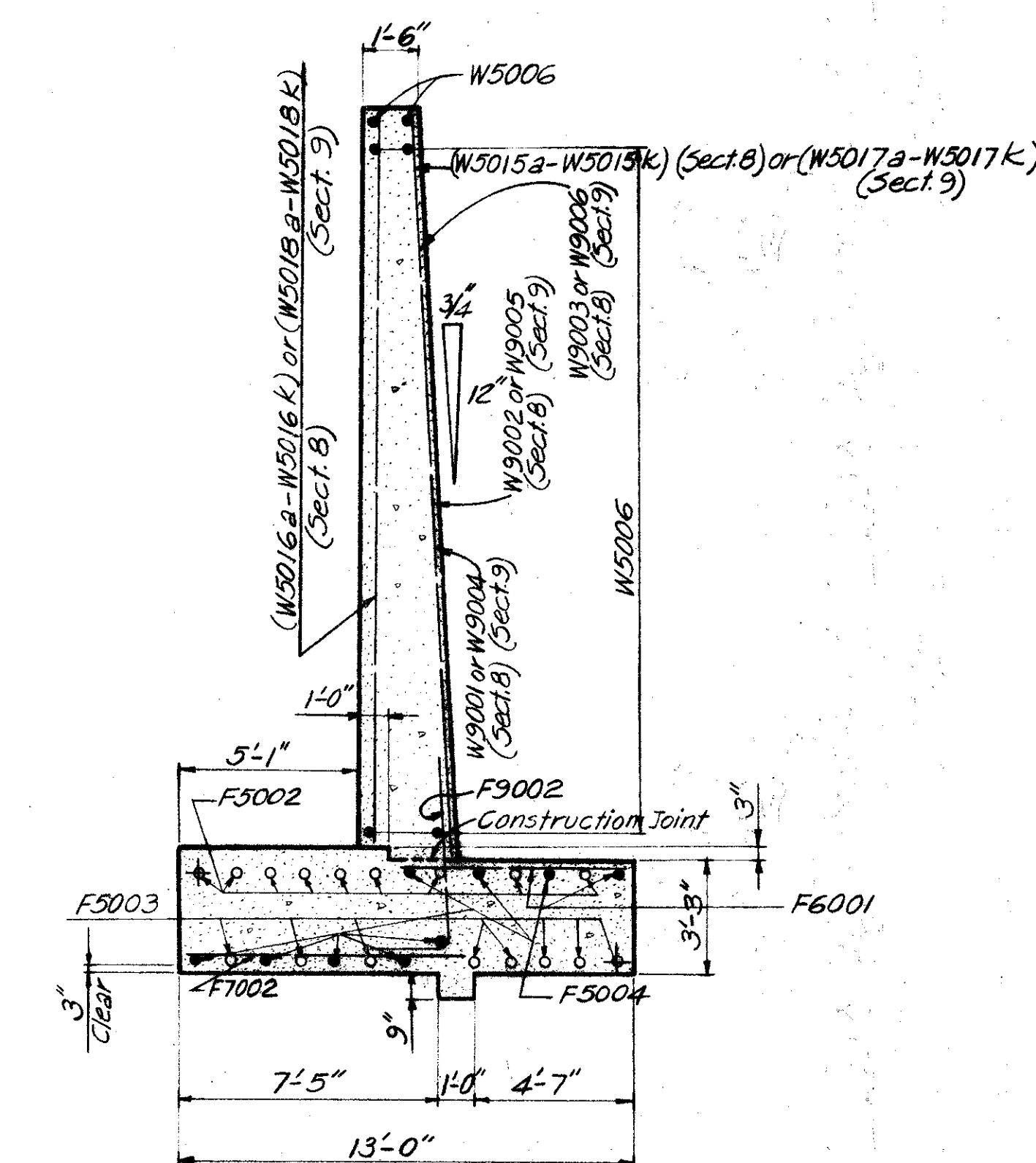




PLAN



ELEVATION



TYPICAL SECTION

Reinforcing Steel:  
N.S. denotes near side  
F.S. denotes far side  
+ Indicates reinforcing bars to be omitted between Sections 9 & 10

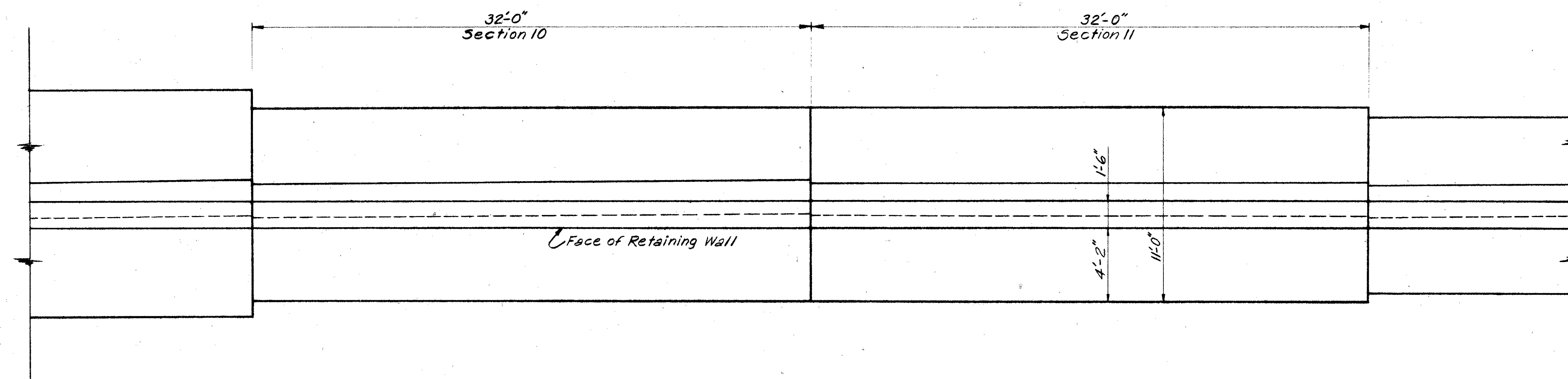
ALDEN E. STILSON & ASSOCIATES, LIMITED						
CONSULTING ENGINEERS						
COLUMBUS, OHIO						
SECTIONS "8" AND "9"						
RETAINING WALL "C"						
ALONG SOUTH INNERBELT						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	T.L.U.	5-10-62	



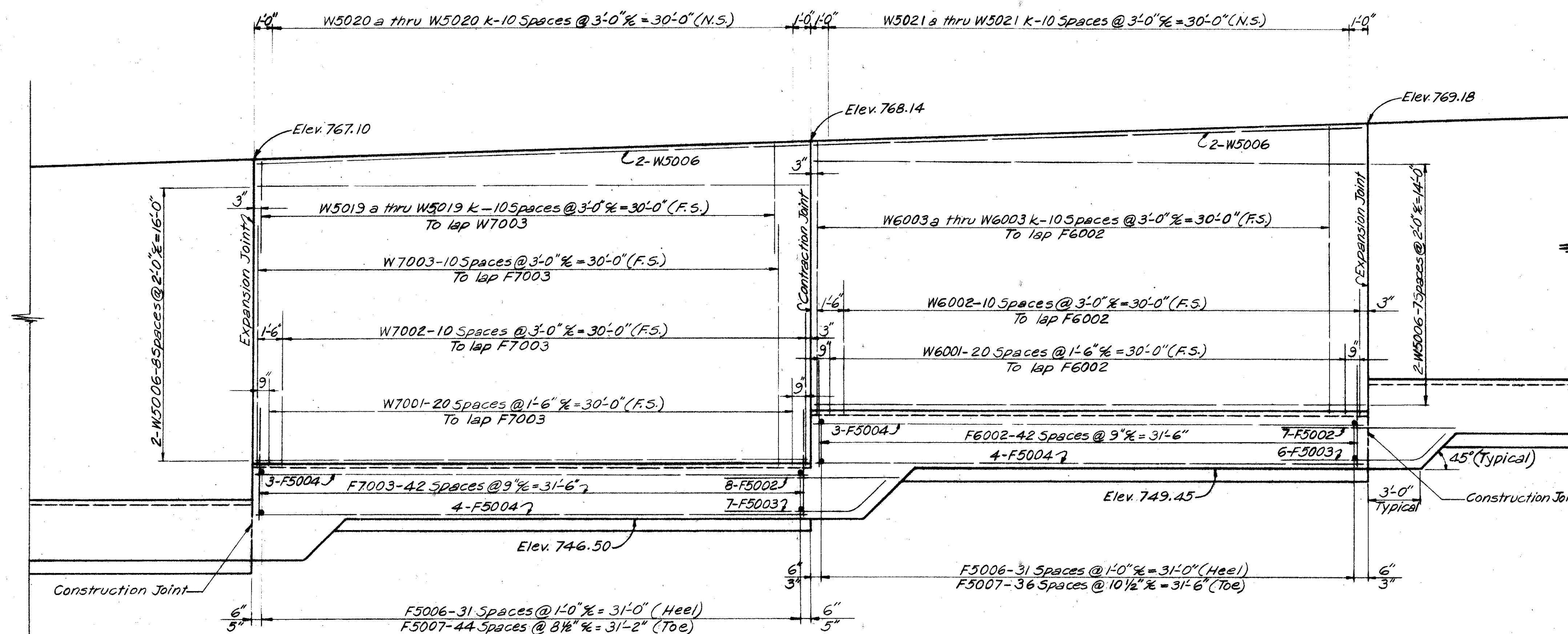
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		



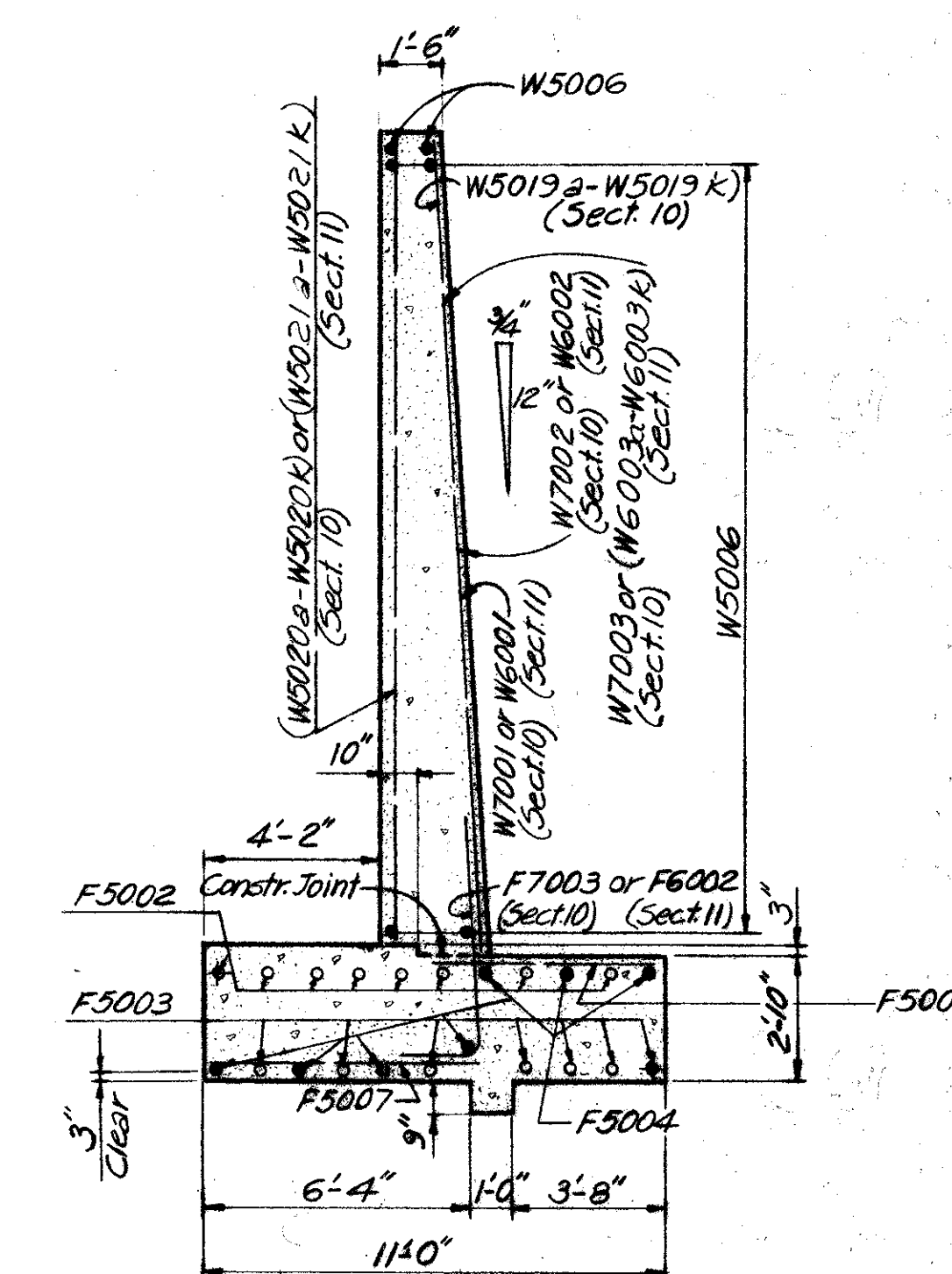
FRANKLIN COUNTY  
FRA-40-12.82



PLAN



ELEVATION



TYPICAL SECTION

Reinforcing Steel:

N.S. denotes near side  
F.S. denotes far side  
+ Indicates reinforcing bars to be omitted between Sections 11 & 12

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS 10 AND 11  
RETAINING WALL "C"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.		C.R.W.	J.L.U.	5-10-62	







## REINFORCING

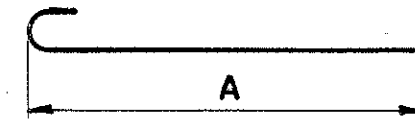
## STEEL

## LIST

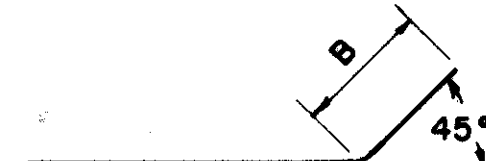
FRANKLIN COUNTY  
FRA-40-12.82

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	Shp.
FOOTER									
F5003	125	10-0	304	6	7-10	2-2			bf
F5008	52	4-4	235	7	3-10	0-8			bf
F5009	15	8-7	224	7	7-6	1-3			bf
F5011	16	7-10	204	7	6-9	1-3			bf
F6002	43	5-2	334	7	4-6	0-10			bf
F7003	43	5-7	491	7	4-9	1-0			bf
F8002	100	5-7	1491	3	4-6				bf
F9001	156	6-4	3,359	3	5-1				bf
F9002	86	6-10	1,998	7	5-10	1-3			bf
F1001	102	7-3	3,182	7	6-2	1-5			bf
F11001	255	7-8	10,387	7	6-6	1-6			bf
WALL									
W5001a	1	10-8							st
thru	varies by 1"	123							
W5001b	1	11-2							st
W5002a	1	29-6							st
thru	varies by 1"	280							
W5002b	1	30-2							st
W5003	32	26-5	882						st
W5004a	2	10-0							st
thru	varies by 1"	285							
W5004b	2	11-0							st
W5005a	2	29-2							st
thru	varies by 1"	679							
W5005b	2	30-0							st
W5006	288	31-8	9,512						st
W5007a	1	7-8							st
thru	varies by 1"	120							
W5007b	1	8-9							st
W5008a	1	27-8							st
thru	varies by 1"	322							
W5008b	1	28-6							st
W5009a	1	8-2							st
thru	varies by 1"	127							
W5009b	1	9-3							st
W5010a	1	26-1							st
thru	varies by 1"	304							
W5010b	1	26-11							st
W5011a	1	8-0							st
thru	varies by 1"	115							
W5011b	1	9-0							st
W5012a	1	24-2							st
thru	varies by 1"	282							
W5012b	1	25-0							st
W5013a	1	9-1							st
thru	varies by 1"	130							
W5013b	1	10-1							st
W5014a	1	22-9							st
thru	varies by 1"	266							
W5014b	1	23-7							st
W5015a	1	8-5							st
thru	varies by 1"	101							
W5015b	1	9-3							st
W5016a	1	20-0							st
thru	varies by 1"	234							
W5016b	1	20-10							st
W5017a	1	7-7							st
thru	varies by 1"	92							
W5017b	1	8-5							st
W5018a	1	18-7							st
thru	varies by 1"	218							
W5018b	1	19-5							st
W5019a	1	9-1							st
thru	varies by 1"	109							
W5019b	1	9-11							st
W5020a	1	17-1							st
thru	varies by 1"	201							
W5020b	1	17-11							st
W5021a	1	15-5							st
thru	varies by 1"	182							
W5021b	1	16-3							st
W5022	13	8-1	110						st
W5023a	1	14-10							st
thru	varies by 1"	208							
W5023b	1	15-10							st
W5024a	1	14-6							st
thru	varies by 1"	171							
W5024b	1	15-8							st
W5025	13	7-6	102						st
W5026a	1	14-1							st
thru	varies by 1"	198							
W5026b	1	15-1							st
W5027a	1	13-9							st
thru	varies by 1"	163							
W5027b	1	14-7							st
WALL (cont.)									
W6001	21	5-2	163						st
W6002	11	8-0	132						st
W6003a	1	16-8							st
thru	varies by 1"	266							
W6003b	1	16-6							st
W7001	21	5-6	236						st
W7002	11	8-10	199						st
W7003	11	11-2	251						st
W9001	21	7-0	500						st
W9002	11	11-5	427						st
W9003	11	13-5	502						st
W9004	21	5-3	375						st
W9005	11	9-2	343						st
W9006	11	13-1	489						st
W10001	25	8-0	861						st
W10002	13	13-4	746						st
W10003	13	18-3	1,021						st
W10004	25	6-8	717						st
W10005	13	11-11	667						st
W10006	13	16-9	937						st
W11001	71	10-2	3,835						st
W11002	37	15-2	2,982						st
W11003	37	21-0	9,128						st
W11004	27	10-0	1,435						st
W11005	14	15-0	1,116						st
W11006	14	21-10	1,624						st
W11007	27	8-5	1,207						st
W11008	14	13-5	998						st
W11009	14	20-0	1,488						st
FOOTER									
F5001	12	26-5	331						st
F5002	186	10-0	1,419						st
F5004	108	31-8	3,567						st
F5005	2	23-8	60						st
F5006	64	5-7	373						st
F5007	82	6-9	577						st
F5010	61	5-8	360						st
F6001	82	6-9	831						st
F7001	28	8-9	3,899						st
F7002	68	6-3	1,147						st
F8001	190	10-1	5,115						st
F8003	134	10-8	3,816						st
F8004	18	9-6	2,993						st
F8005	86	8-6	1,952						st
F8006	102	9-9	2,655						st
REPLACEMENT BARS									
RE5001	2	5-7							st
RE6001	1	5-11							st
RE7001	1	6-2							st
RE8001	1	6-6							st
RE9001	1	6-10							st
RE10001	1	7-2							st
RE11001	2	7-6							st

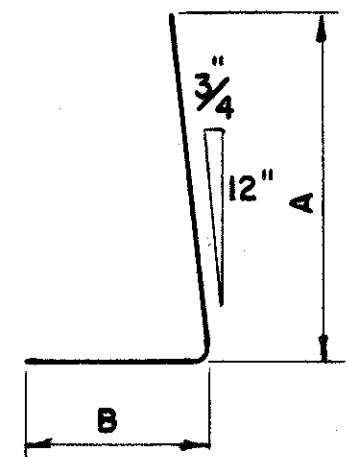
Bending Diagram



Type 3



Type 6



Type 7

Note: In the reinforcing steel bar marks, the first digit where four digits are used and the first two where five digits are used is the bar number which indicates the size of the bar.

## ESTIMATED

## QUANTITIES

Item	Total	Unit	Description
E-2	2,509	CY	Unclassified excavation
E-2	Lump	Sum	Cofferdams, cribs and sheeting
3-1	813	CY	Class "E" concrete (footings)
3-1	797	CY	Class "E" concrete (walls)
3-3	344	L.F.	Waterproofing - Premolded Sealing strip
3-9	95,465	Lb.	Reinforcing steel
3-9	309	S.F.	1" Gray rubber, preformed expansion jt. filler
3-29	464	CY	Porous backfill
I-26	411	L.F.	Chain Link Fence

## REPLACEMENT BARS

IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIOREINFORCING STEEL LIST AND  
ESTIMATED QUANTITIES  
RETAINING WALL "C"  
ALONG SOUTH INNERBELT  
FRANKLIN COUNTY

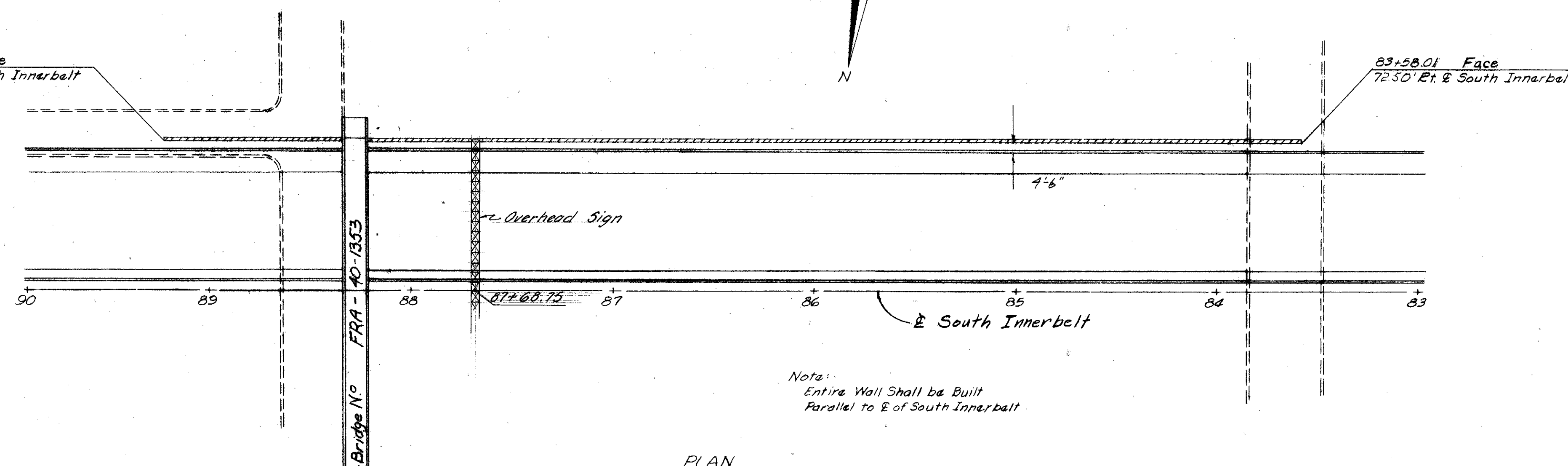
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT			CRW	TLU	5-10-62	



FRANKLIN COUNTY  
FRA-40-12.82

89+22.01 Face  
72.50' Et. & South Innerbelt

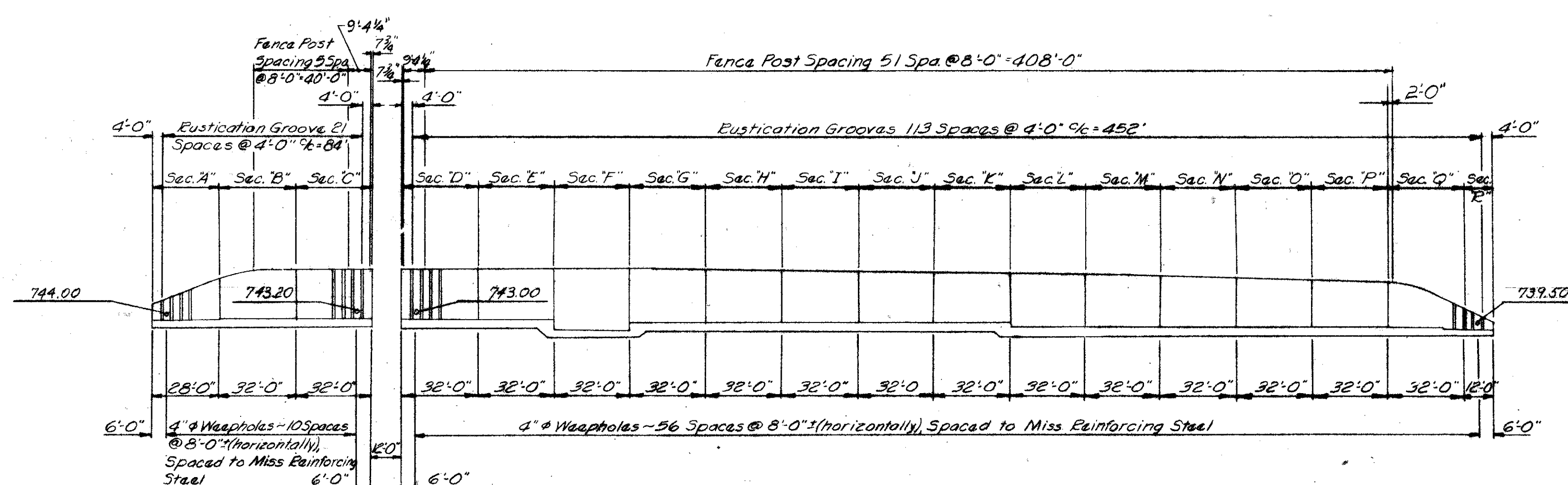
83+58.01 Face  
72.50' Et. & South Innerbelt



Notes:  
Entire Wall Shall be Built  
Parallel to E of South Innerbelt

PLAN

- NOTES
- (1) Foundation design and foundation quantities are based on a study of soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.
  - (2) 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 revisions thereof, dated 2-21-58.
  - (3) Maximum foundation pressure = 2.51 tons per S.F.
  - (4) Key: the key shall be placed in a carefully made trench against undisturbed earth.
  - (5) N.S. indicates reinforcing placed on near side of stem.
  - (6) Wall Steel: All vertical wall steel is placed on the back of the stem unless noted.

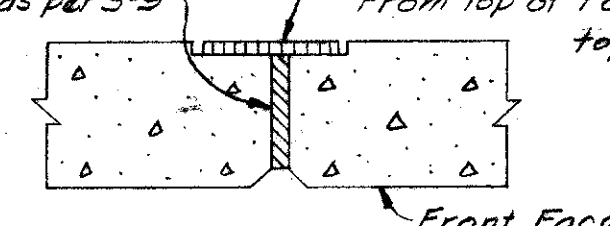


ELEVATION

- Note:
- (1) Weephole Elevations are at Bottom of 4" Hole at Face of Wall
  - (2) Weepholes Placed in Straight Line Between Noted Elevations
  - (3) End porous backfill 2'0" beyond end weepholes.

1" Thick Gray Rubber  
Preformed Expansion  
Joint Filler as per S-9

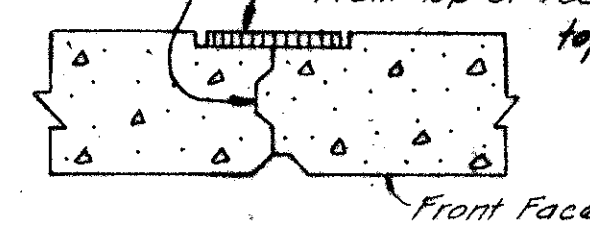
Premolded Sealing Strip in 13"x3/4"  
Recess as per Item S-3 Extending  
From Top of Footer to 6" Below  
top of wall



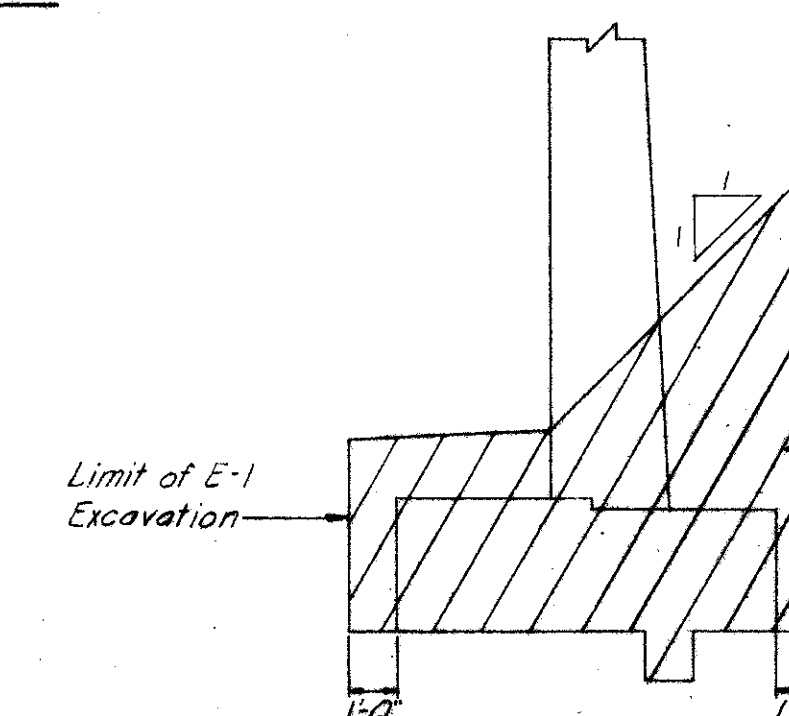
EXPANSION JOINT DETAIL

1 1/2" x 5/8" Key Centered  
in Wall, Full Height

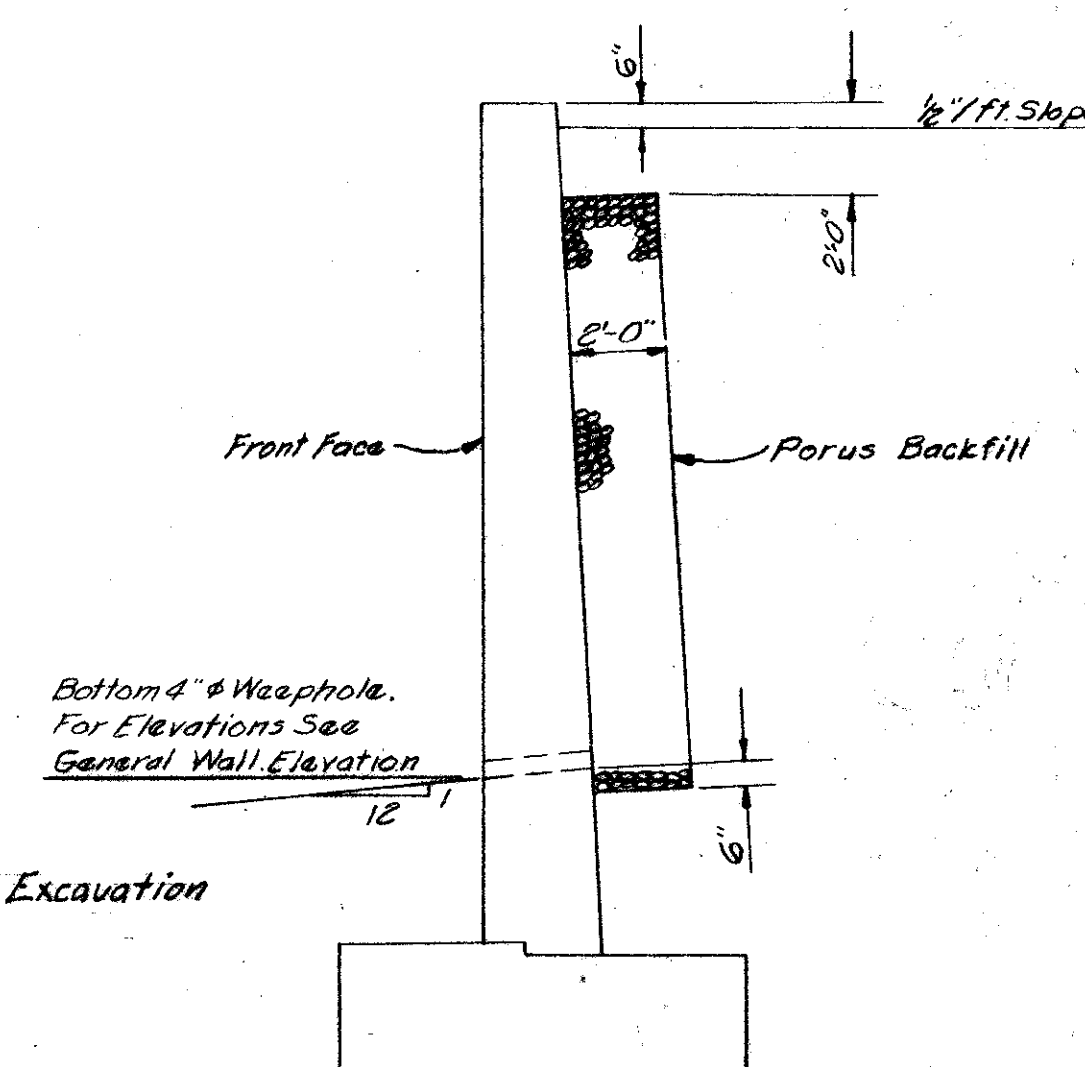
Premolded Sealing Strip in 13"x3/4"  
Recess as per Item S-3 Extending  
From Top of Footer to 6" Below  
top of wall



CONTRACTION JOINT DETAIL



EXCAVATION DETAIL

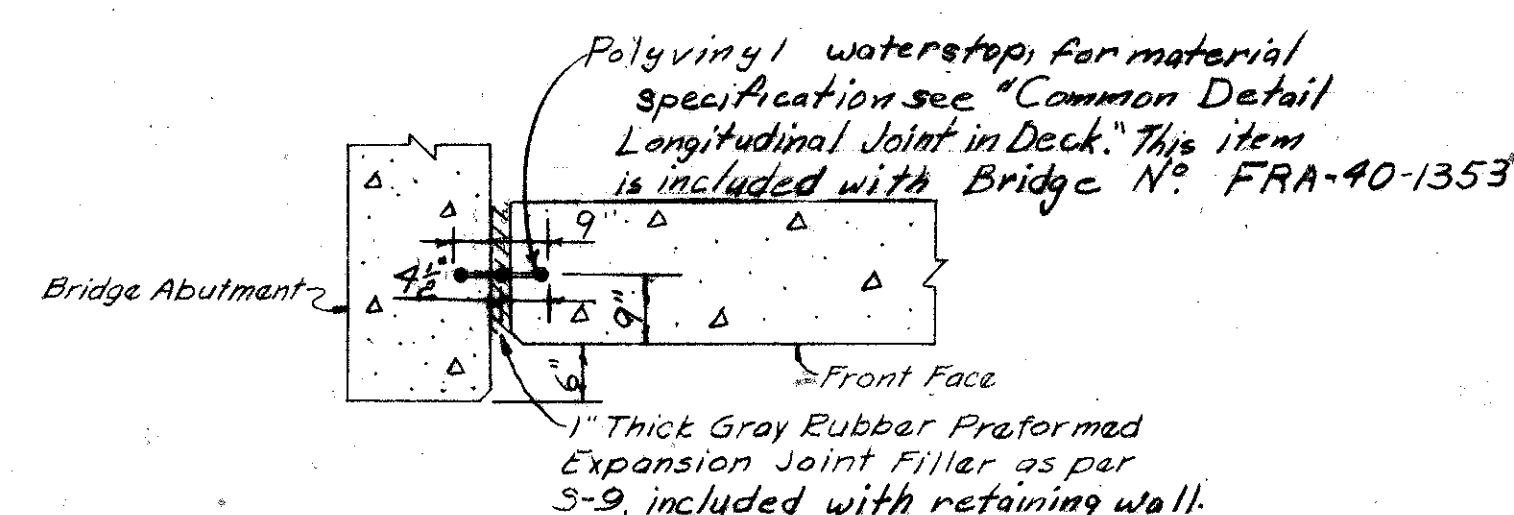


POROUS BACKFILL DETAIL

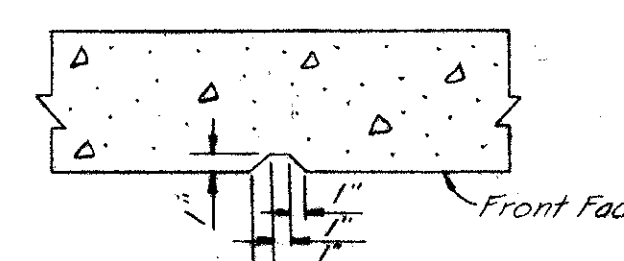
# LIGHTING DETAIL NOTES

## Item S-25

Item S-25 includes the installation of all electrical equipment on the retaining wall to the adjacent Roadway Pull Box. For notes and details covering the luminaires, standards, conduit and cable see the Lighting Plans.



EXPANSION JOINT DETAIL  
at Bridge No. FRA-40-1353



RUSTICATION GROOVE DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

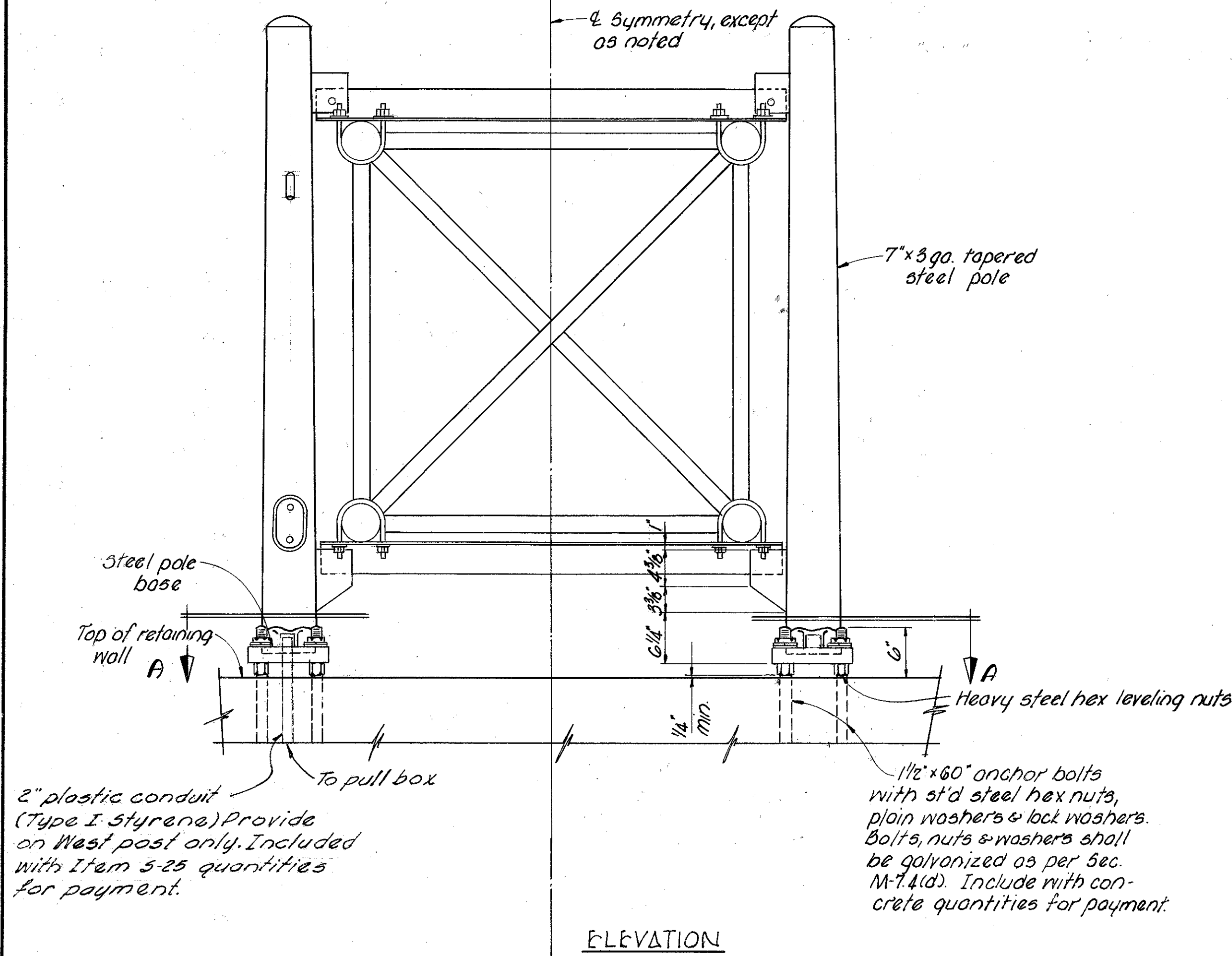
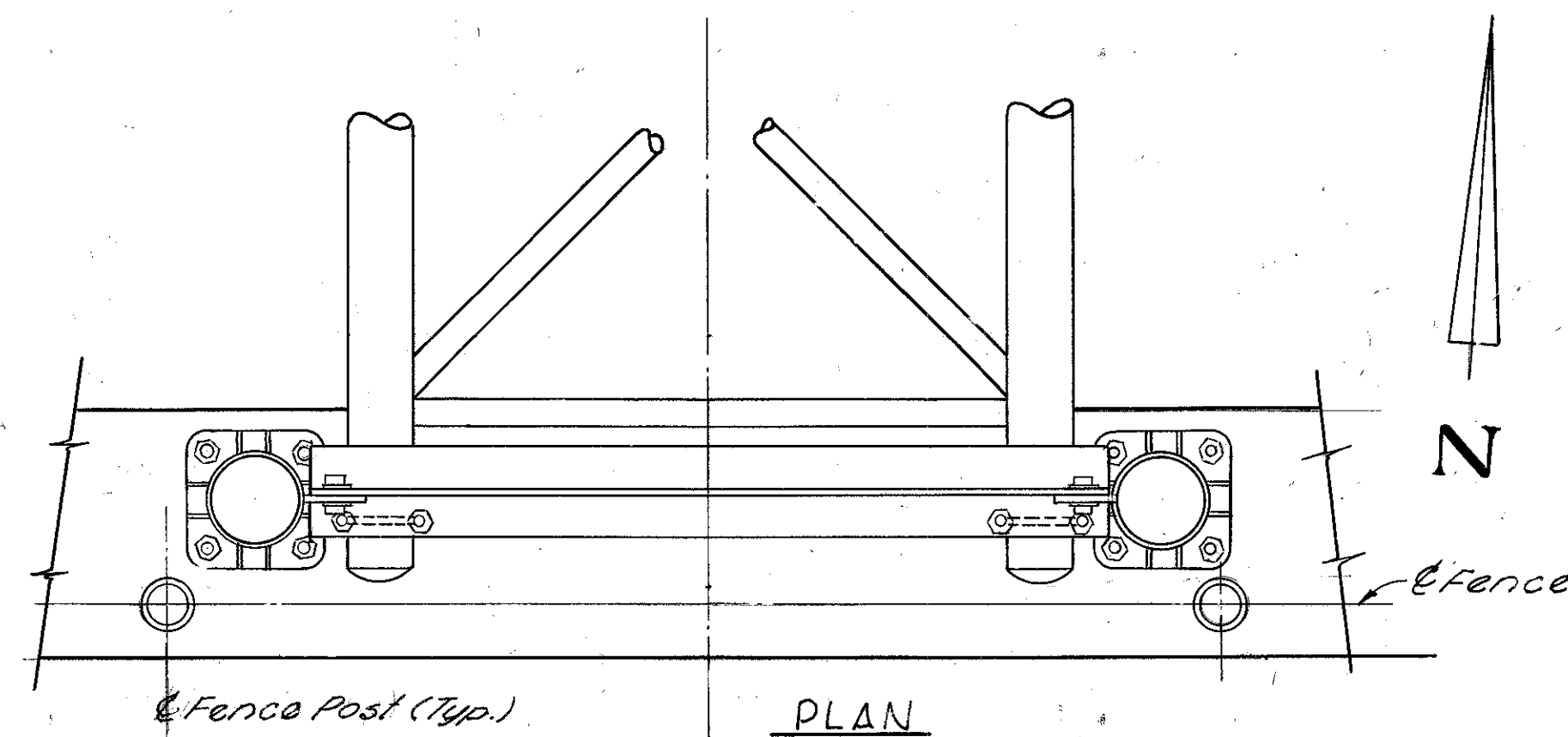
GENERAL PLAN AND ELEVATION

RETAINING WALL "D" ALONG SOUTH INNERBELT

FRANKLIN COUNTY

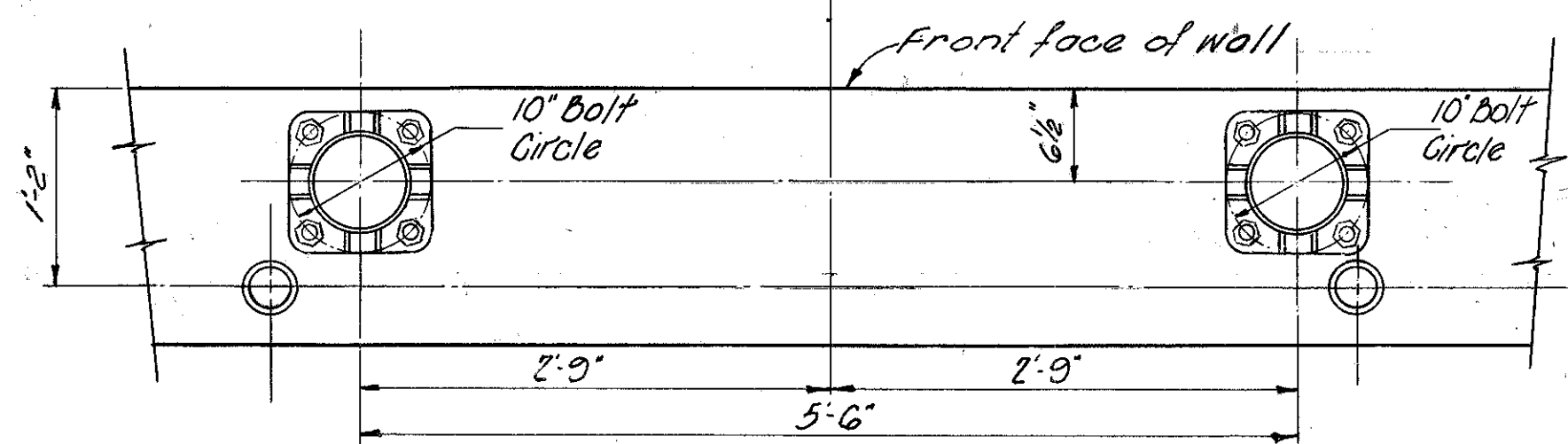
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RF	E.S.B.		FWD	TLU	5-20-62	





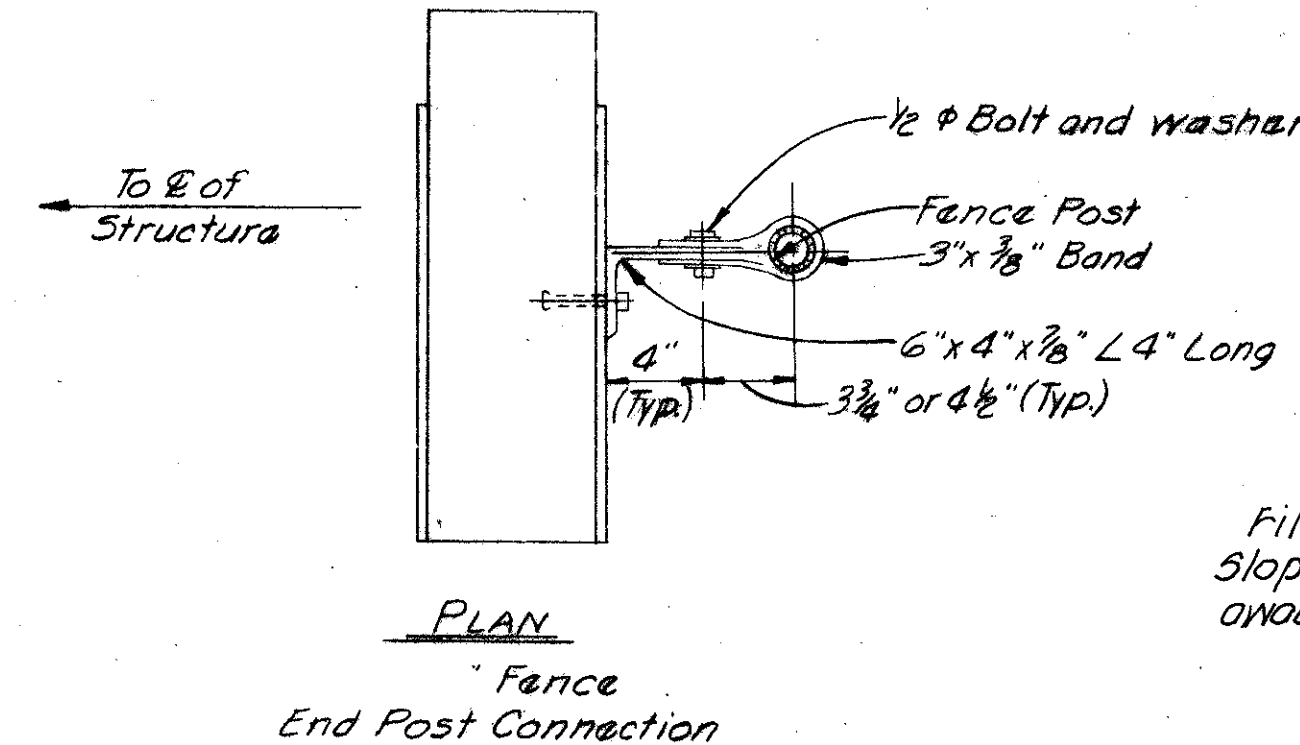
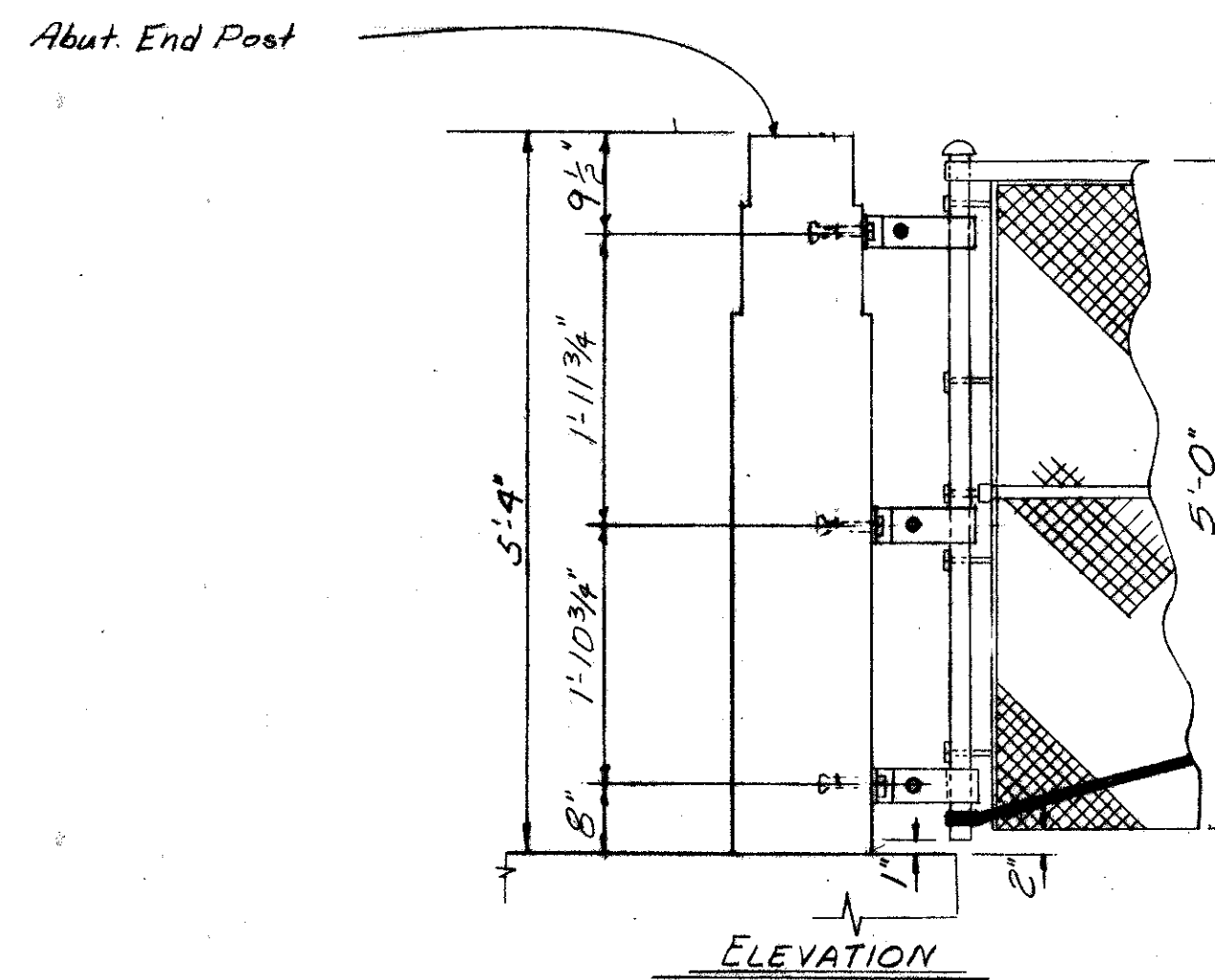
2" plastic conduit (Type I Styrene) Provide on West post only. Included with Item 5-25 quantities for payment.

1 1/2" x 60" anchor bolts with std steel hex nuts, plain washers & lock washers. Bolts, nuts & washers shall be galvanized as per Sec. M-7.4(d). Include with concrete quantities for payment.

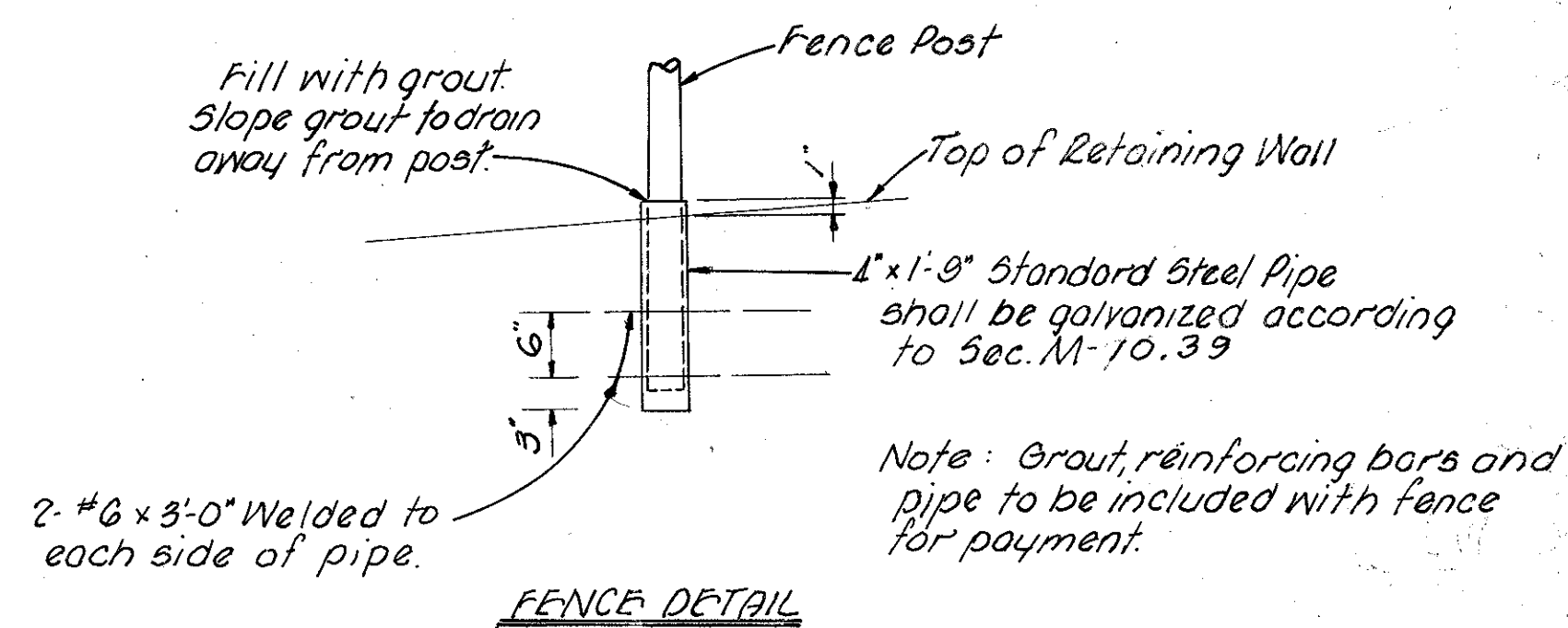


**OVERHEAD SIGN SUPPORT DETAILS**

(Sign and sign supports included with roadway quantities for payment.) Sta. 87+68.75. See Sheet # 151 for location on Wall, Section "E".



NOTES  
(1) For additional details see Standard Drawing F-3



Note: Fence to be located 1'-2" from front face of wall.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
DETAILS						
RETAINING WALL "D" ALONG SOUTH INNERBELT						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DF	E.S.B.		FND	TLU	5-10-68	



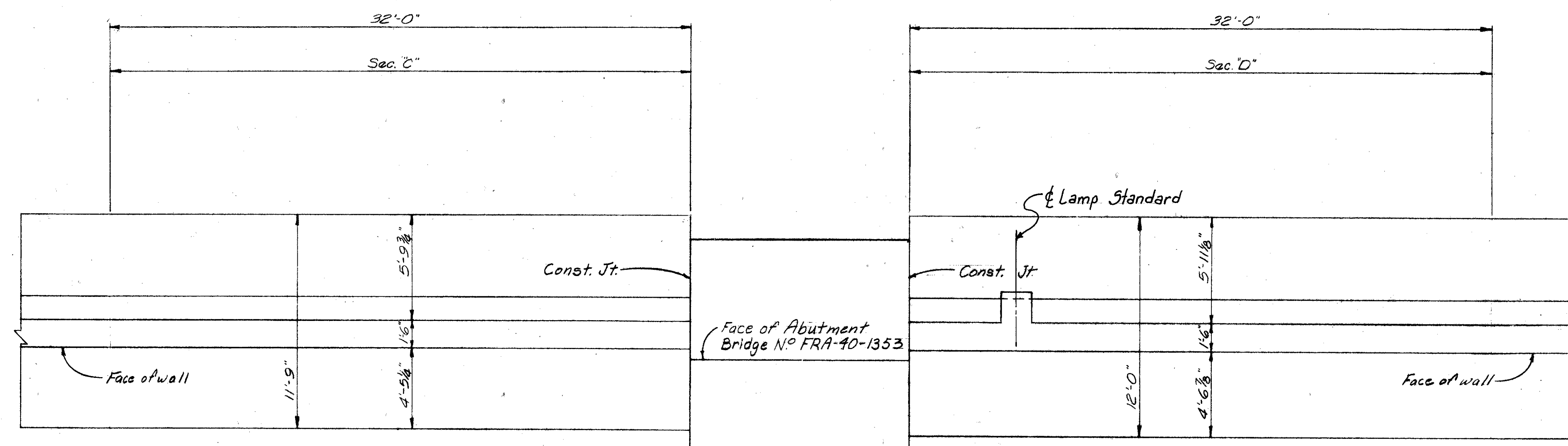




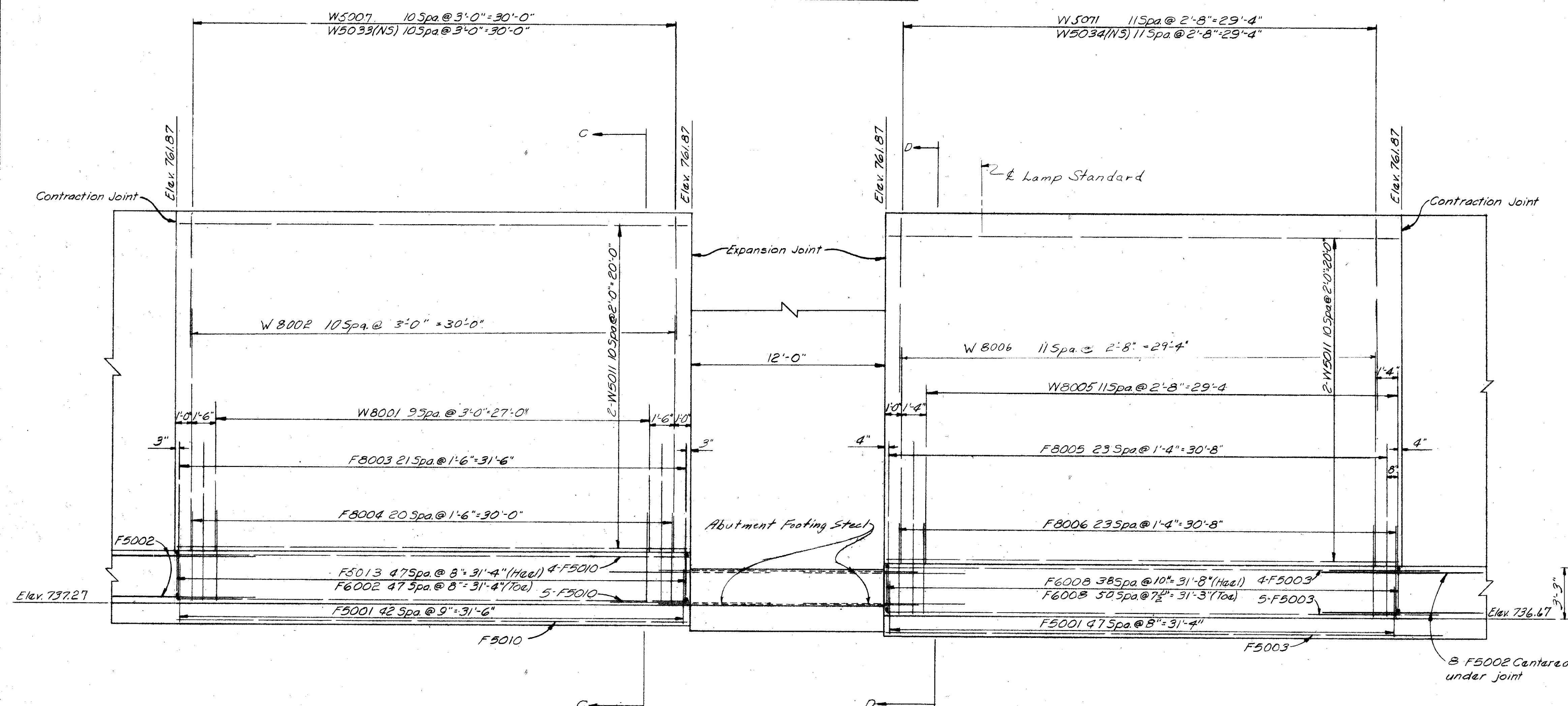
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

150  
250

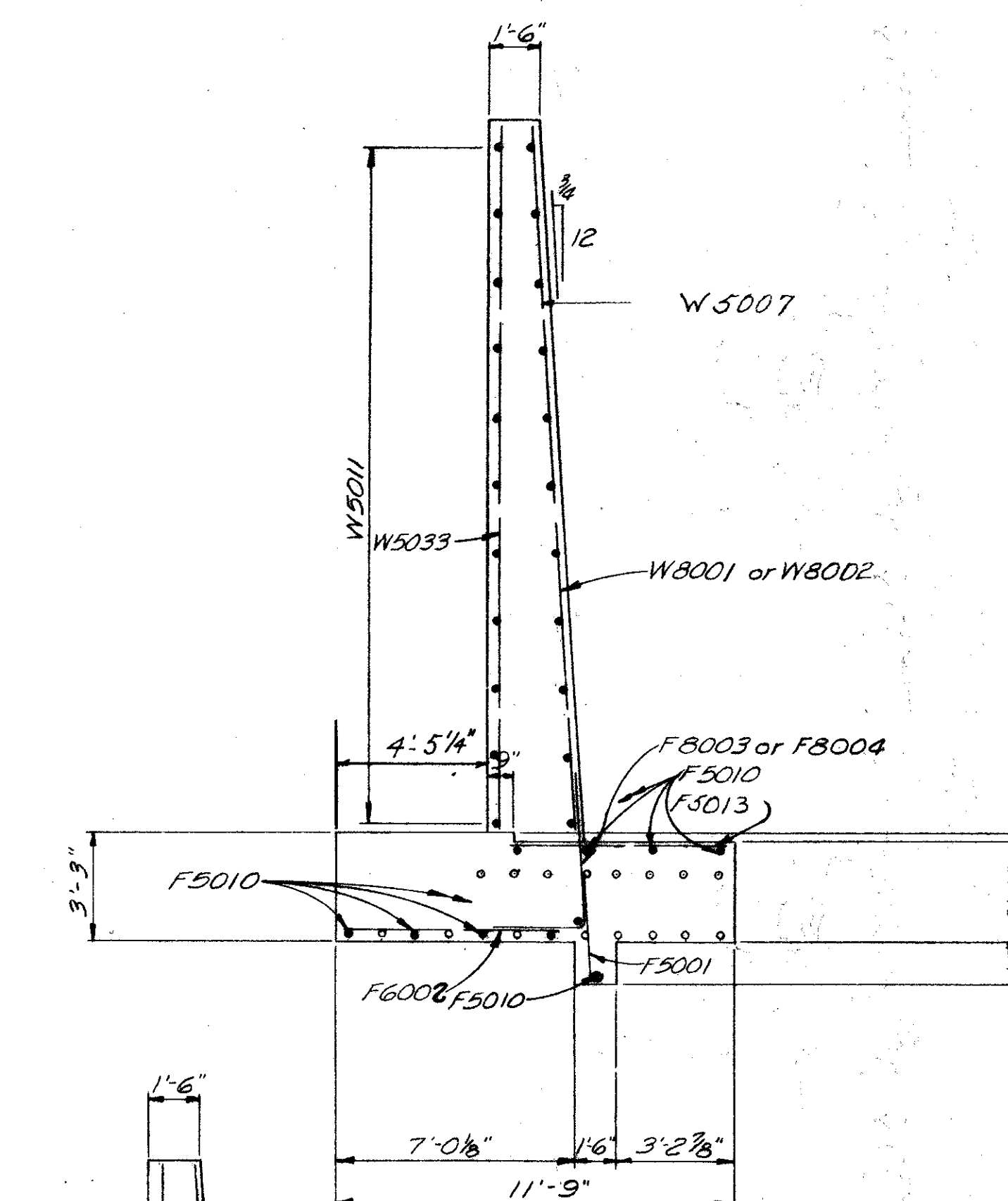
FRANKLIN COUNTY  
FEA-40-12.82



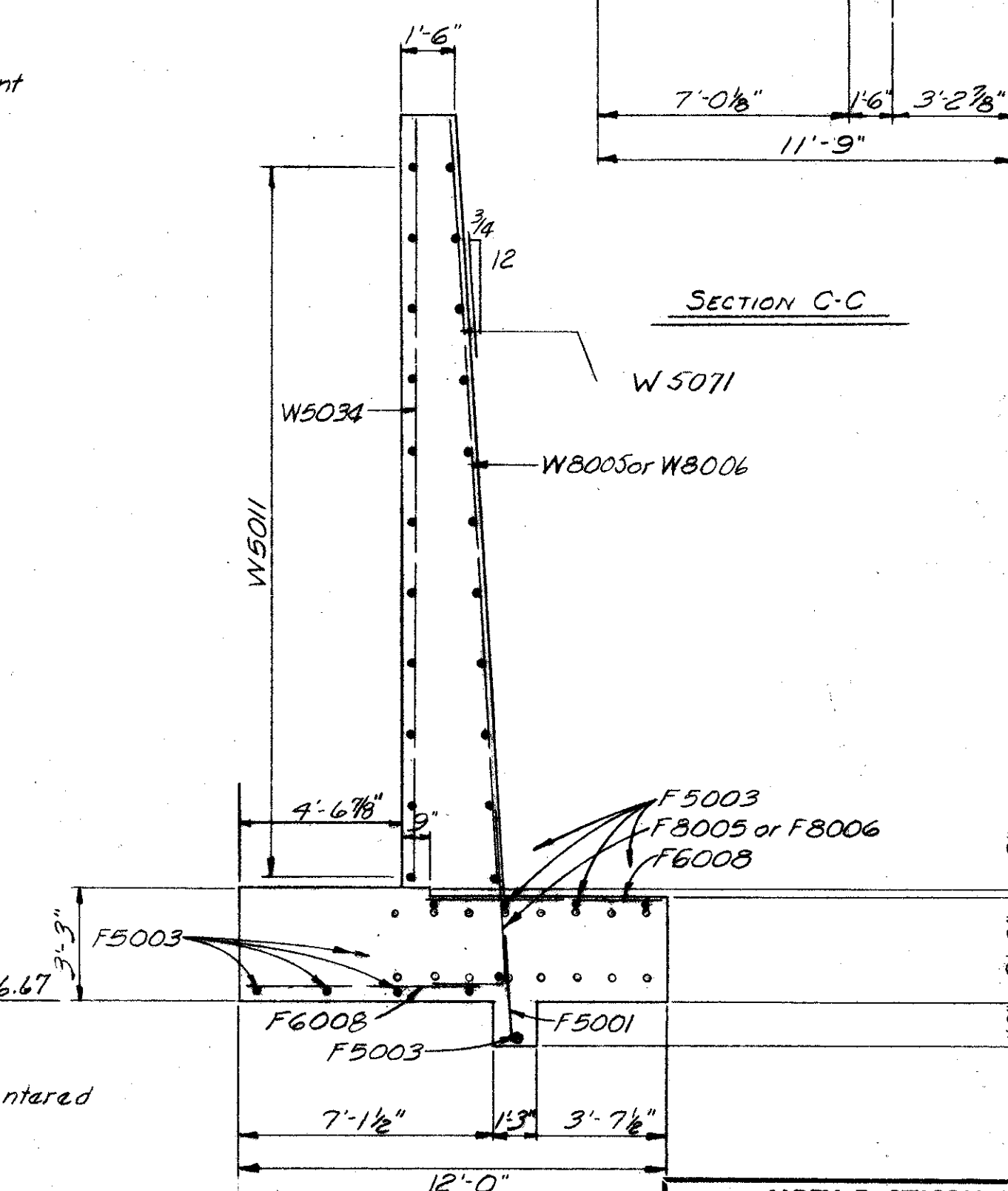
PLAN - SECTIONS C & D



ELEVATION



SECTION C-C



SECTION D-D

Note: For additional details and notes  
see sheets 147 & 148.

For Lighting Details see Sheet 108.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS C & D  
RETAINING WALL "D" ALONG SOUTH INNERBELT

FRANKLIN COUNTY

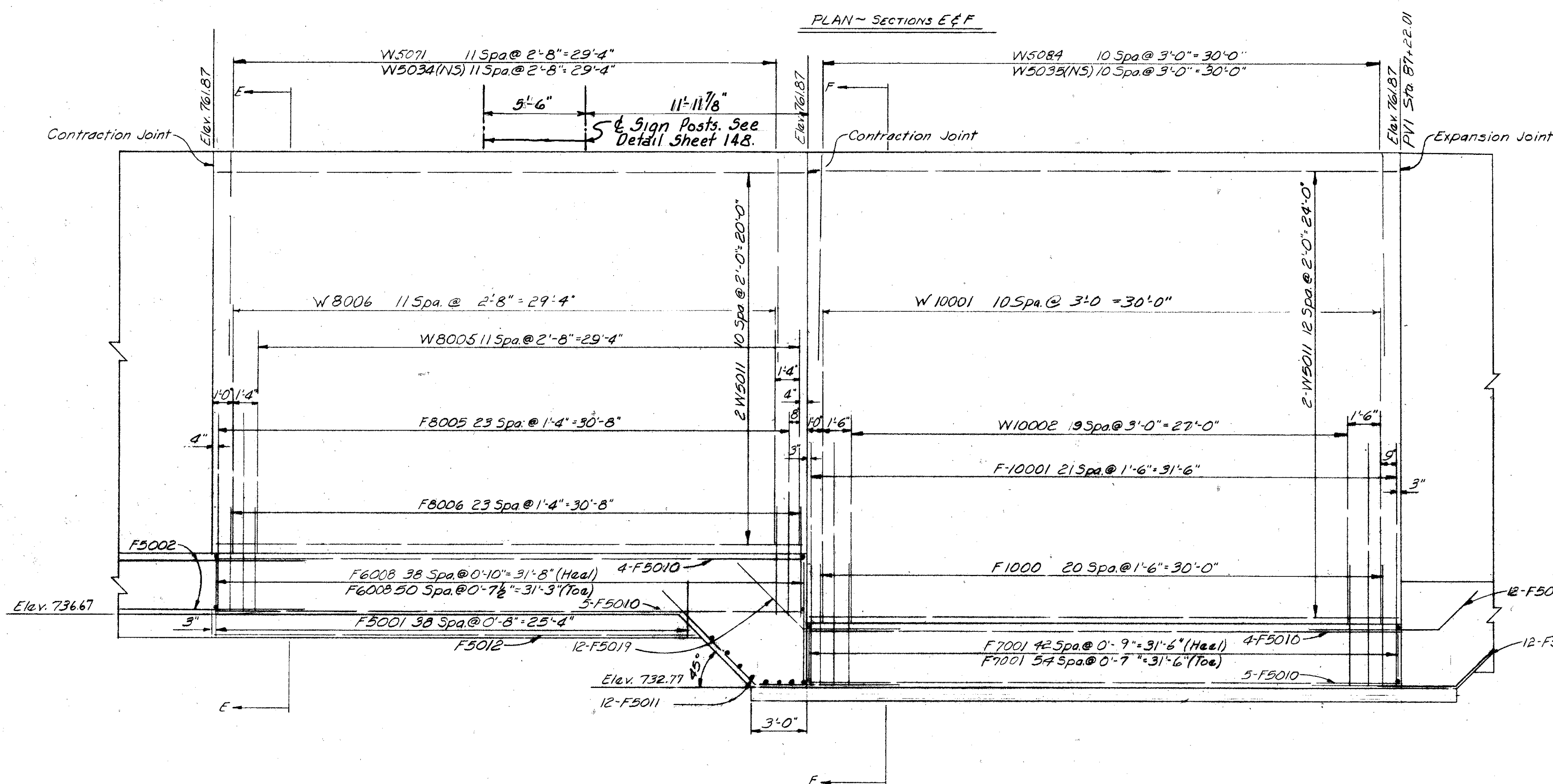
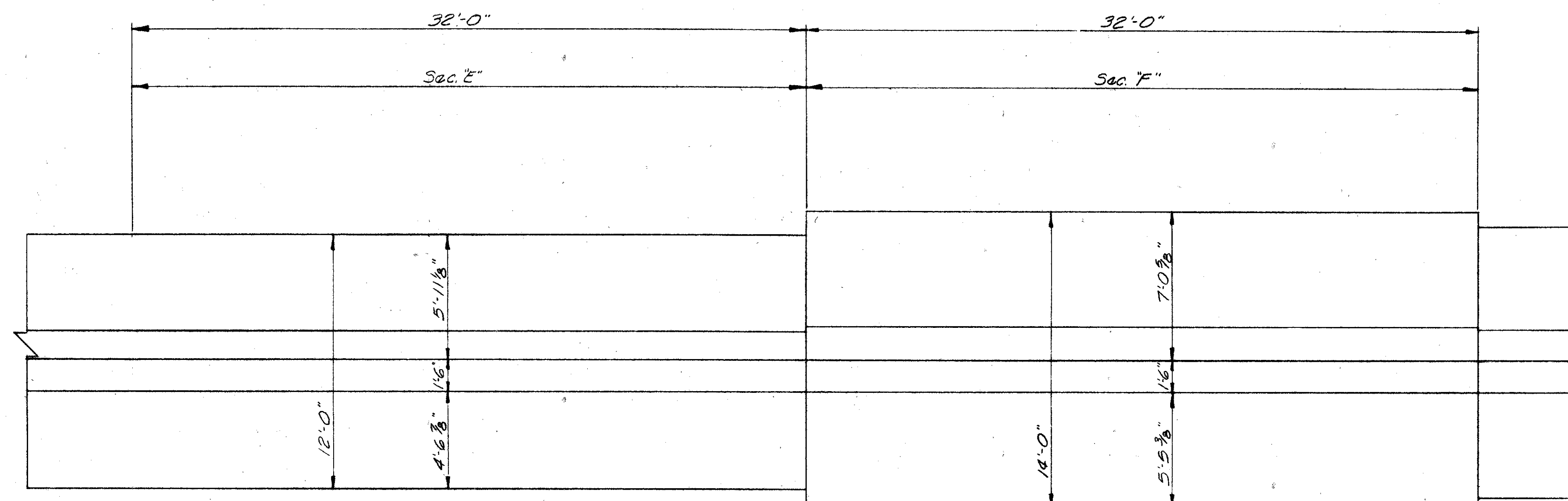
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RF	E.S.B.		FND	TLU	5-14-62	



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

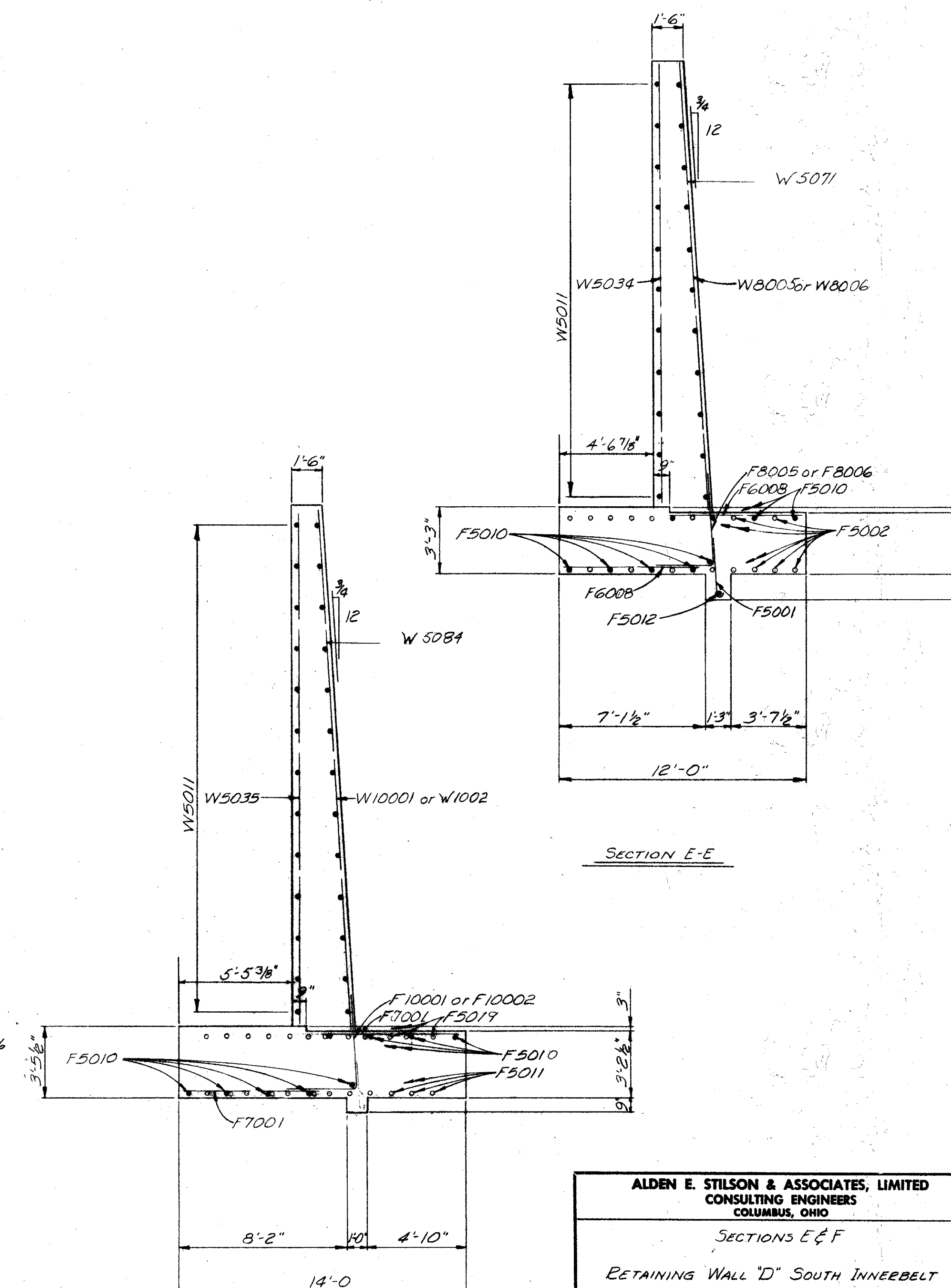
151  
250

FRANKLIN COUNTY  
FEA-40-12.82



ELEVATION

Note: For additional details  
and notes see sheets 147 & 148



SECTION F-F

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
SECTIONS E & F							
RETAINING WALL "D" SOUTH INNERBELT							
FRANKLIN COUNTY							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS	
PF	E.S.B.		FWD	TLU	5-10-62		







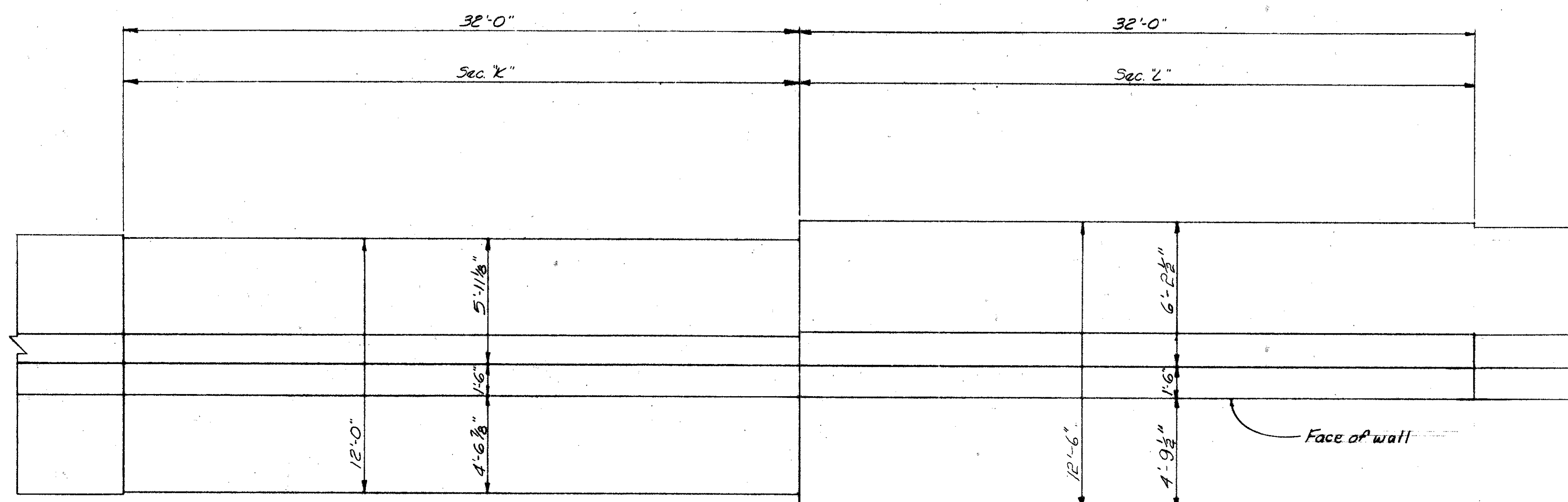




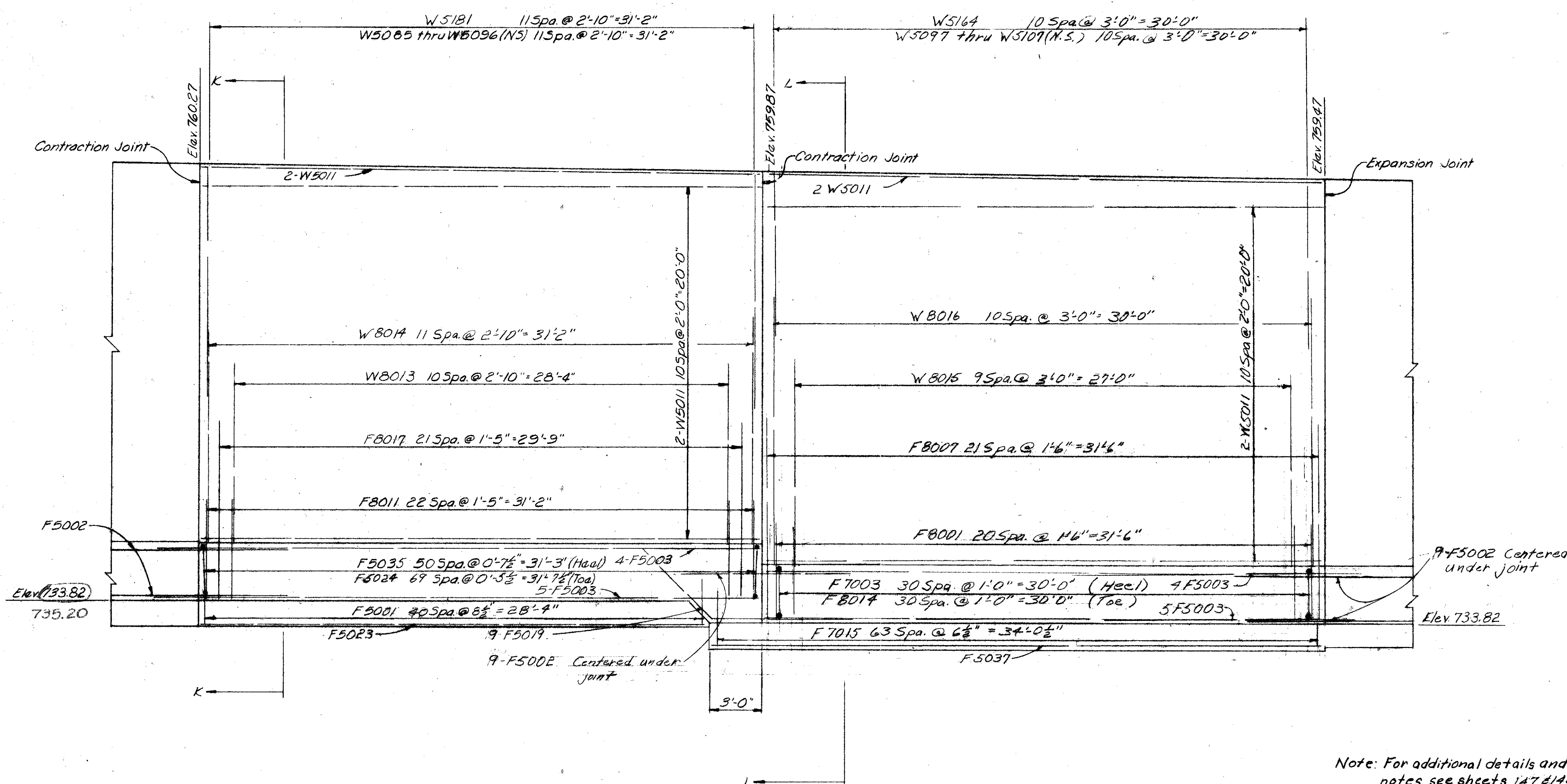
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

154  
250

FRANKLIN COUNTY  
FEA-40-12.82

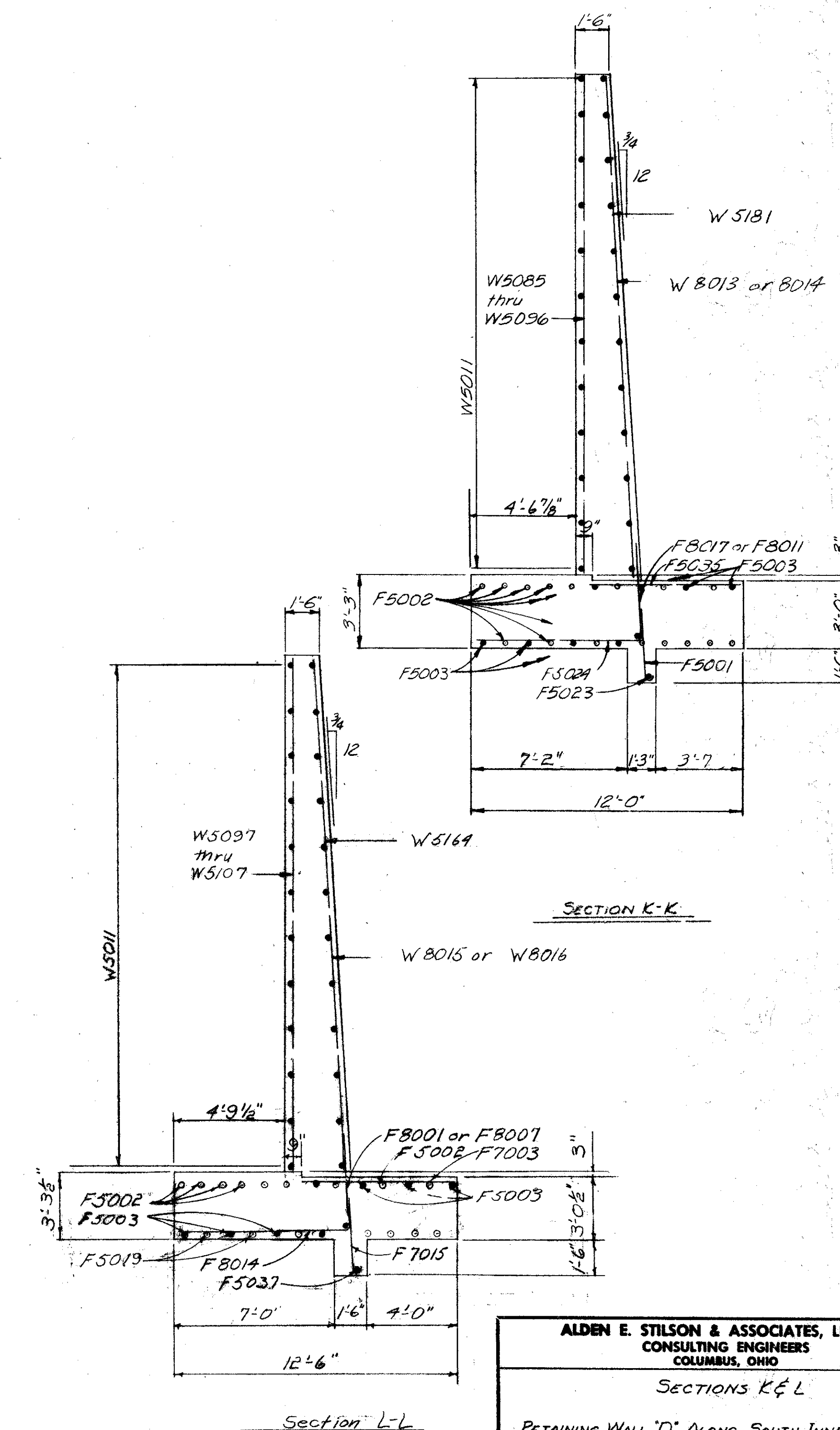


PLAN - SECTIONS K & L



ELEVATION

Note: For additional details and notes see sheets 147 & 148.



ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SECTIONS K & L

RETAINING WALL 'D' ALONG SOUTH INNERBELT

FRANKLIN COUNTY

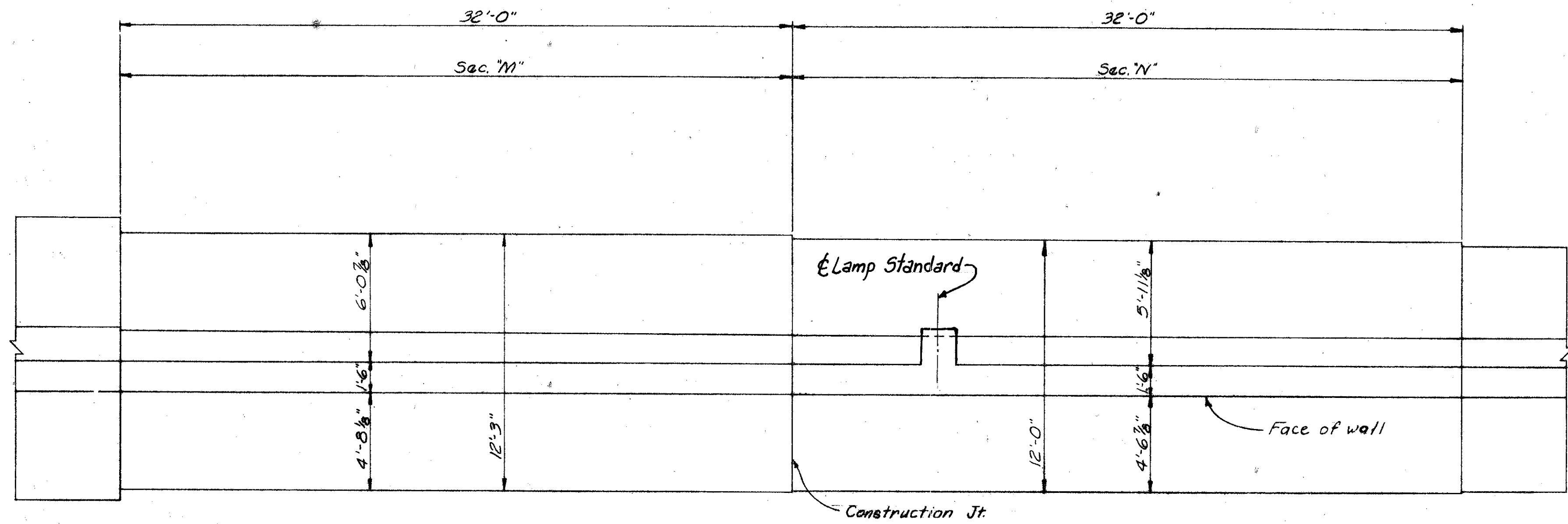
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PF	E.S.B.		FND	TLU	5-10-62	7-12-63



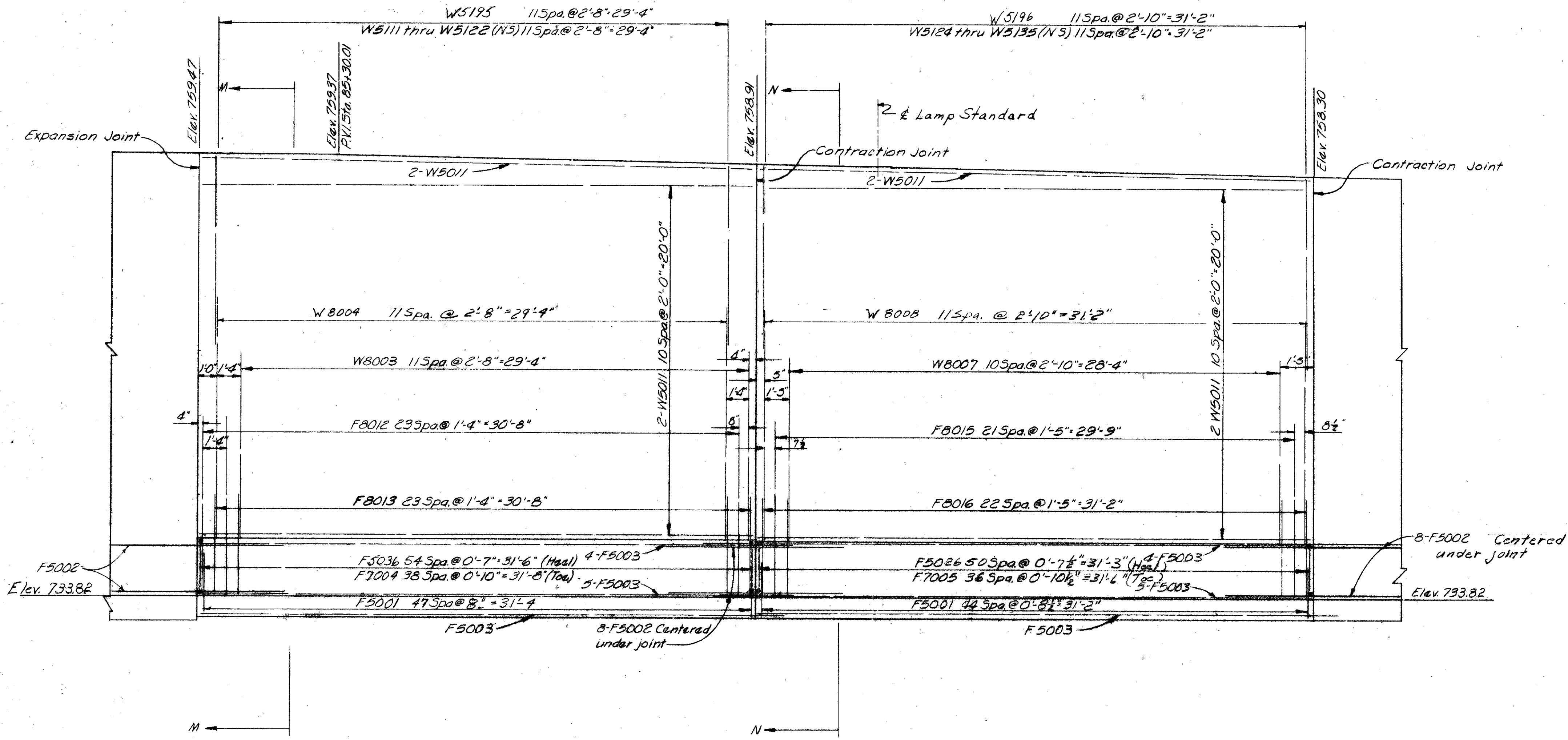
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

155  
250

FRANKLIN COUNTY  
FEA-40-12.82

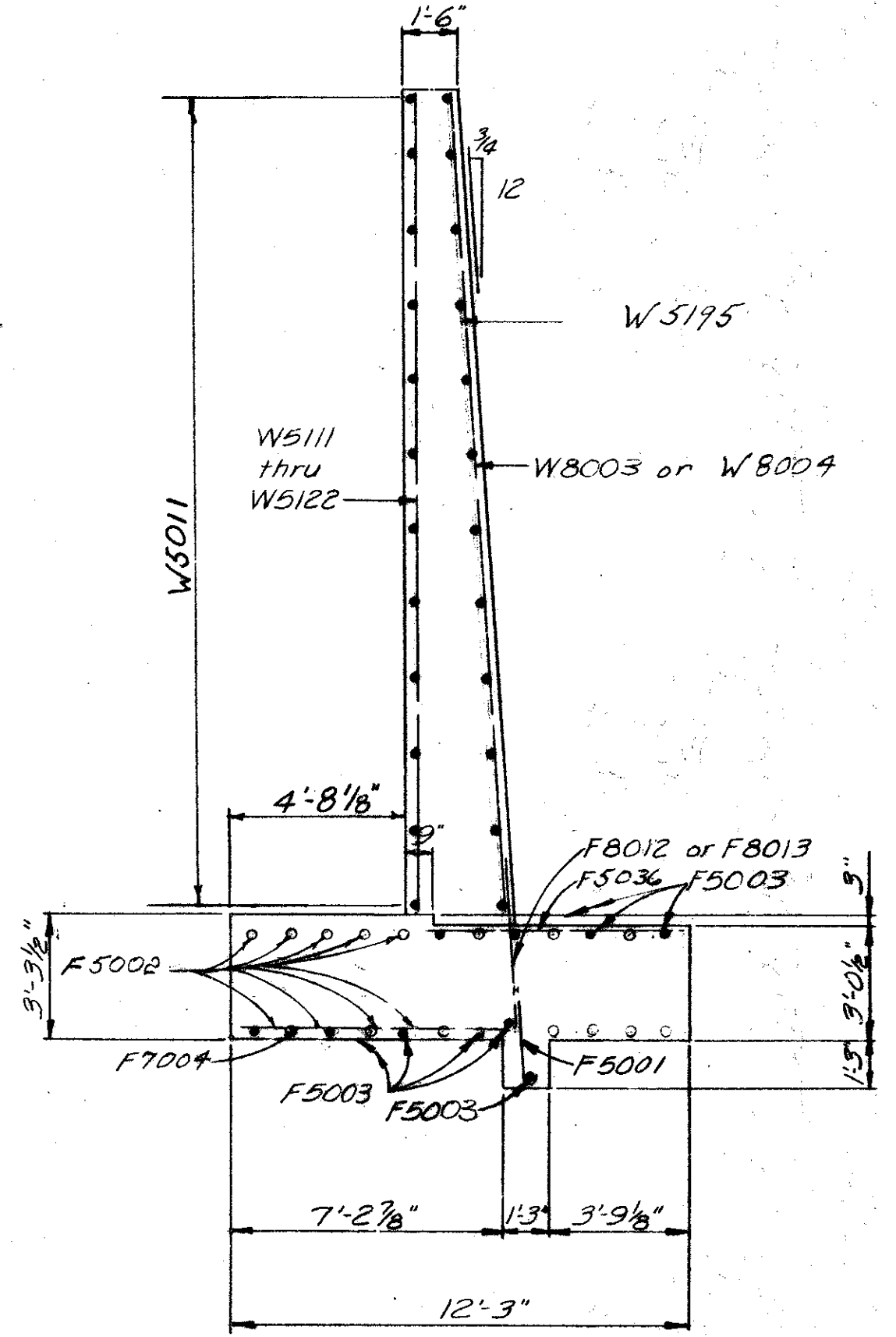


PLAN- SECTIONS M-M & N-N

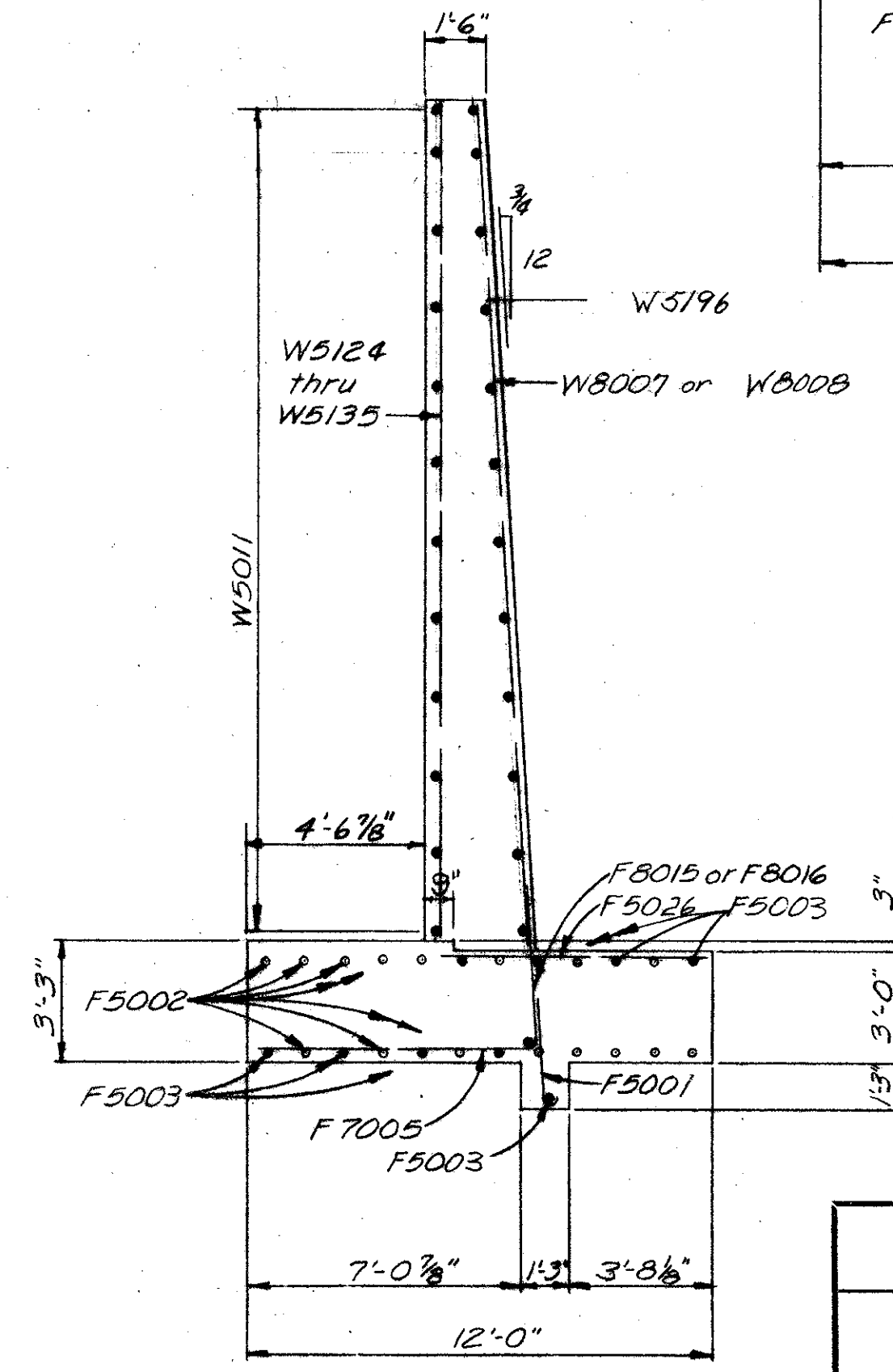


ELEVATION

Note: For additional details and notes see sheets 1A7 & 1A8.  
For Lighting Details see Sheet 108.



SECTION M-M



SECTION N-N

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SECTIONS M-M & N-N						
RETAINING WALL "D" ALONG SOUTH INNERBELT						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PF	E.S.B.		FND	TLU	5/10/62	











## REINFORCING

## STEEL

## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

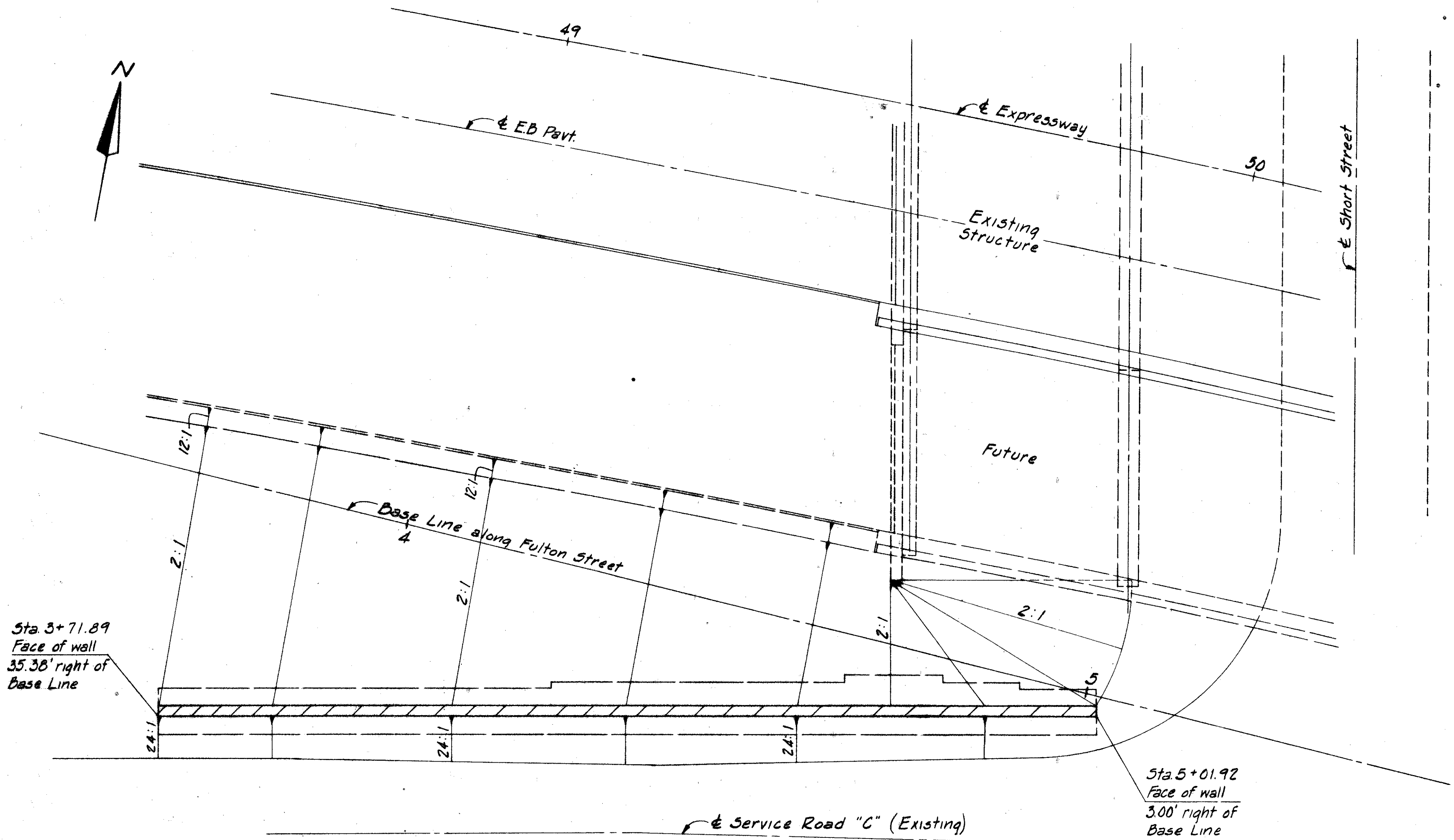
158  
250FRANKLIN COUNTY  
FRA-40-12.82

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	Shp.
F5001	541	3-1	1740	2	2-6				st.
F5002	215	10-0	2242						st.
F5003	117	33-5	4078						st.
F5004	14	4-8	68	1	1-0	3-10			st.
F5006	4	5-8	24	1	1-0	4-10			st.
F5007	7	8-7	63						st.
F5008	9	6-4	59						st.
F5009	10	5-3	55						st.
F5010	28	31-8	925						st.
F5011	12	14-6	181	3	7-10	6-9			st.
F5012	1	26-0	27						st.
F5013	96	6-1	609						st.
F5015	14	6-10	100						st.
F5016	12	12-4	154	3	7-10	4-7			st.
F5017	77	7-6	602						st.
F5019	21	12-0	263	3	5-0	7-1			st.
F5020	12	10-2	127	3	7-0	3-3			st.
F5021	55	5-11	339						st.
F5023	1	29-0	30						st.
F5024	70	7-4	535						st.
F5025	1	28-2	29						st.
F5026	51	6-0	319						st.
F5027	55	5-8	325						st.
F5028	51	5-7	297						st.
F5029	10	5-6	57						st.
F5030	6	4-6	28	1	1-0	3-8			st.
F5031	9	5-11	56						st.
F5032	20	9-7	200						st.
F5033	8	4-2	35	1	1-0	3-4			st.
F5034	9	5-3	49						st.
F5035	51	5-10	310						st.
F5036	55	6-0	344						st.
F5037	1	34-8	36						st.
F6001	43	6-4	409						st.
F6002	96	7-4	1057						st.
F6003	5	5-2	39	1	1-0	4-4			st.
F6004	5	9-5	71	1	1-0	8-7			st.
F6006	51	7-7	581						st.
F6008	78	6-1	712						st.
F6009	102	7-6	1149						st.
F6019	5	8-0	60	1	1-0	7-2			st.
F6020	5	5-1	33	1	1-0	4-3			st.
F7006	28	10-1	577	1	1-0	9-3			st.
F7007	27	5-8	313	1	1-0	4-10			st.
F7009	26	10-0	531	1	1-0	9-2			st.
F7010	25	5-7	285	1	1-0	4-9			st.
F7011	6	9-7	118	1	1-0	8-9			st.
F7012	6	5-7	68	1	1-0	4-9			st.
F7013	5	9-2	94	1	1-0	8-4			st.
F7014	5	5-6	56	1	1-0	4-8			st.
F7015	64	3-9	491	2	2-11				st.
F8001	43	6-1	698	1	1-2	5-2			st.
F8002	21	10-5	584	1	1-2	9-6			st.
F8003	22	10-5	612	1	1-2	9-6			st.
F8004	22	6-1	357	1	1-2	5-2			st.
F8005	48	10-7	1356	1	1-2	9-8			st.
F8006	48	6-1	780	1	1-2	5-2			st.
F8007	48	11-8	1495	1	1-2	10-9			st.
F8008	25	6-2	412	1	1-2	5-3			st.
F8009	24	10-6	673	1	1-2	9-7			st.
F8010	24	6-2	395	1	1-2	5-3			st.
F8011	23	6-1	374	1	1-2	5-2			st.
F8012	24	10-8	684	1	1-2	9-9			st.
F8013	24	6-2	395	1	1-2	5-3			st.
F8015	22	10-5	612	1	1-2	9-6			st.
F8016	23	6-1	374	1	1-2	5-2			st.
F8017	22	10-5	612	1	1-2	9-6			st.
F9001	22	11-2	835	1	1-3	10-2			st.
F9002	21	6-7	470	1	1-3	5-7			st.
F9003	22	10-10	810	1	1-3	9-10			st.
F9004	21	6-7	470	1	1-3	5-7			st.
F10001	22	12-4	1168	1	1-5	11-3			st.
F10002	21	7-2	643	1	1-5	6-1			st.
F6014	43	6-4	409	st.					
F6015	41	6-4	390	st.					
F6016	43	7-2	463	st.					
F6017	9	6-8	90	st.					
F7001	43	7-3	637	st.					
F7002	43	8-2	718	st.					
F7003	32	6-7	430	st.					
F7004	39	7-10	624	st.					
F7005	37	7-9	586	st.					
F7008	34	7-7	527	st.					
F7009	55	8-9	984	st.					
F7010	41	8-2	684	st.					
F8004	31	8-2	676	st.					
W5001	1	4-11 1/4		st.					
thru		Var. by							
		0-8 1/2	43						
W5006	1	8-8		st.					
W5007	16	8-8	145	st.					
W5008	2	13-2	27	st.					
W5009	2	21-2	44	st.					
W5010	2	29-4	61	st.					
W5011	356	31-8	11758	st.					
W5012	1	11-9	12	st.					
W5013	1	13-3	14	st.					
W5014	1	9-0	9	st.					
W5015	1	10-6	11	st.					
W5016	3	4-8	15	st.					
W5017	1	7-9		st.					
thru		Var. by							
		1-6	20						
W5019	1	4-9		st.					
W5020	2	30-8	64	st.					
W5021	4	27-8	115	st.					
W5022	2	27-0		st.					
thru		Var. by							
		4-0	219						
W5028	2	3-0		st.					
W5029	2	7-0	15	st.					
W5030	1	14-4		st.					
thru		Var. by							
		1-3 1/2	49						
W5032	1	16-9		st.					
W5033	16	20-10	348	st.					
W5034	24	21-6	538	st.					
W5035	11	25-1	288	st.					
W5036	1	22-10		st.					
thru		Var. by							
		0-0 1/2	260						
W5046	1	22-5		st.					
W5047	1	22-6		st.					
thru		Var. by							
		0-0 1/2	256						
W5057	1	22-1		st.					
W5058	1	22-1		st.					
thru		Var. by							
		0-0 1/2	297						
W5070	1	21-8 1/2		st.					
W5071	24	8-10	221	st.					
W5072	1	21-8		st.					
thru		Var. by							
		0-0 1/2	268						
W5083	1	21-2 1/2		st.					
W5084	11	8-3	95	st.					
W5085	1	21-4		st.					
thru		Var. by							
		0-0 1/2	264						
W5096	1	20-10 1/2		st.					
W5097	1	22-3		st.					
thru		Var. by							
		0-0 1/2	299						
W5109	1	21-10		st.					
W5110	11	8-6	98	st.					
W5111	1	21-10		st.					
thru		Var. by							
		0-0 3/8	270						
W5122	1	21-3 1/2		st.					
W5123	11	8-7	98	st.					
W5124	1	21-4		st.					
thru		Var. by							
		0-0 1/2	262						
W5135	1	20-7 1/4		st.					
W5136	13	9-5	128	st.					
W5137	1	20-8		st.					
thru		Var. by							

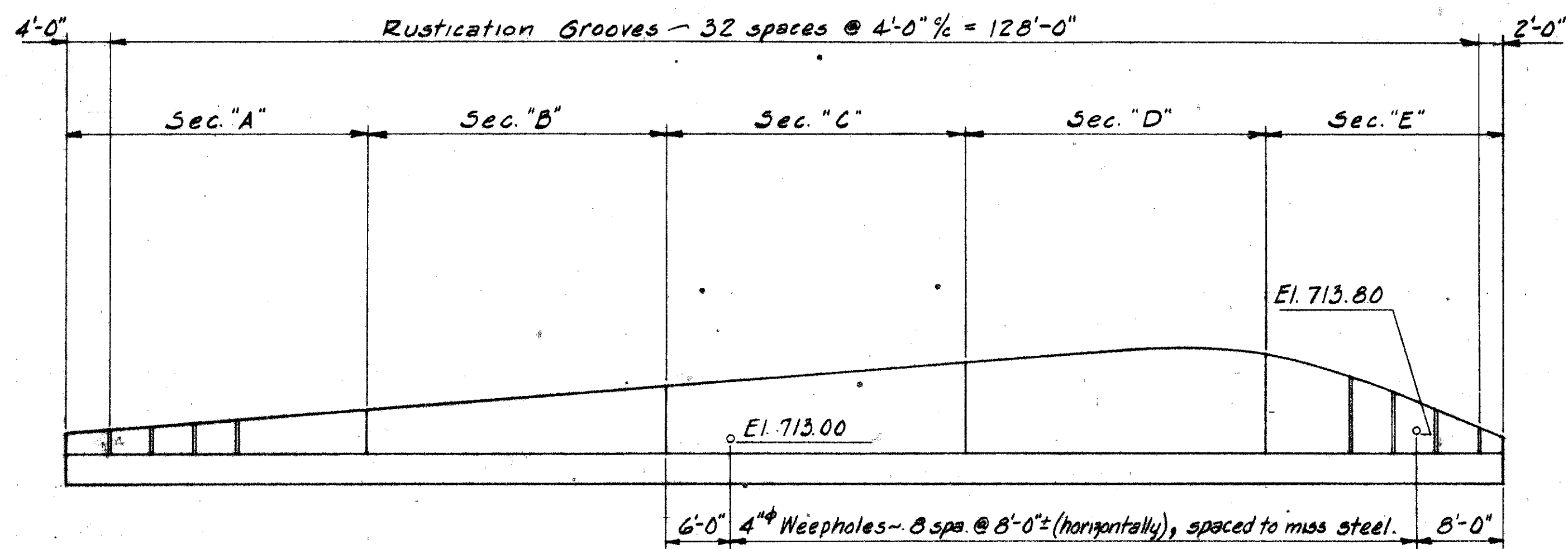


**NOTES**

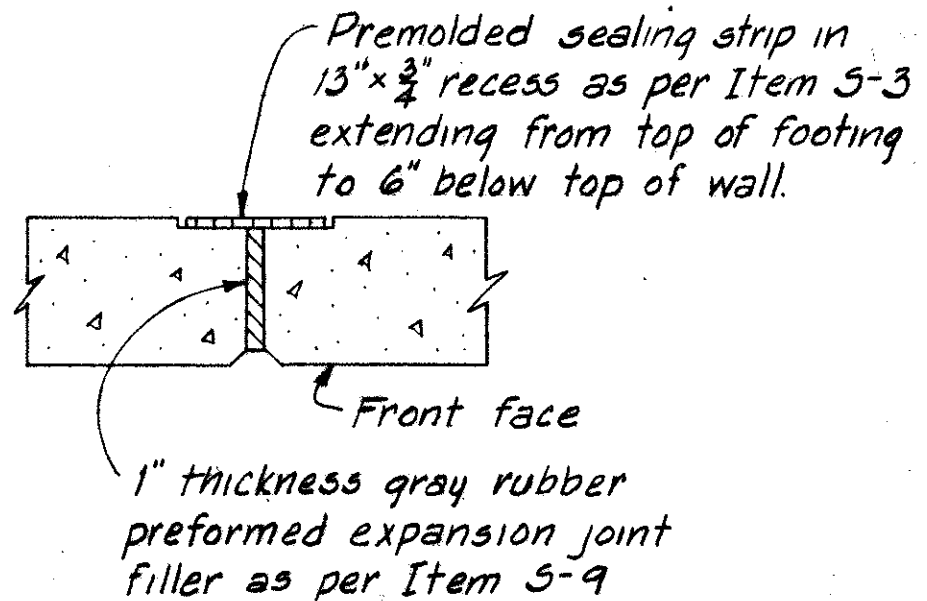
- (1) Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.
- (2) 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 revisions thereof, dated 2-21-58.
- (3) Piles shall be driven to a minimum bearing capacity of 30 tons. Estimated average pay-length for all piles is 30'-0". Maximum pile reaction = 29.1 tons.
- (4) Field bending of reinforcing steel shall be included with Item 5-4 for payment.
- (5) Porous backfill and weepholes shall be omitted from Sections "A" and "B".



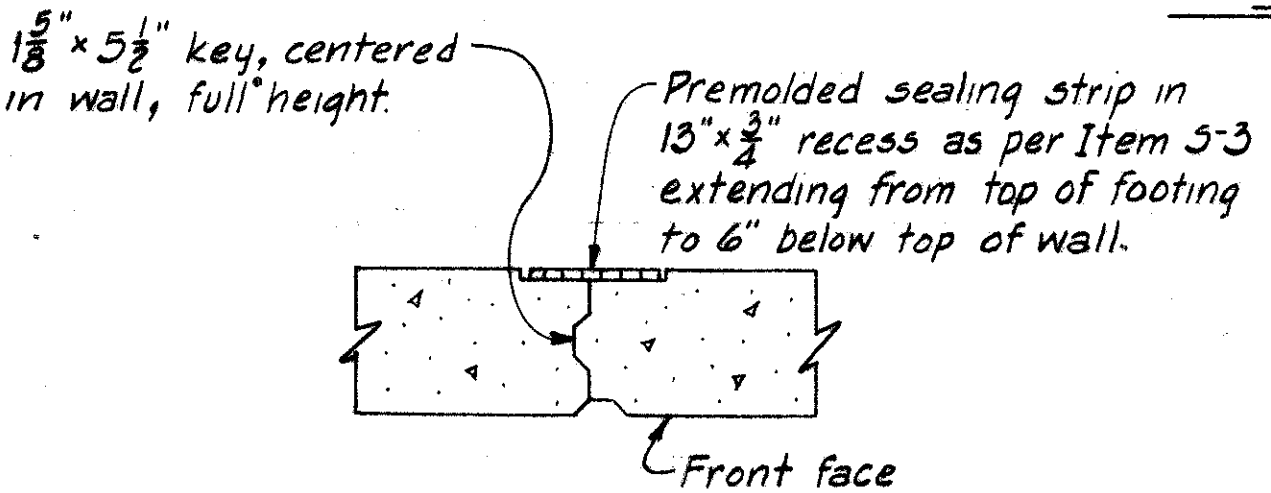
**GENERAL PLAN**



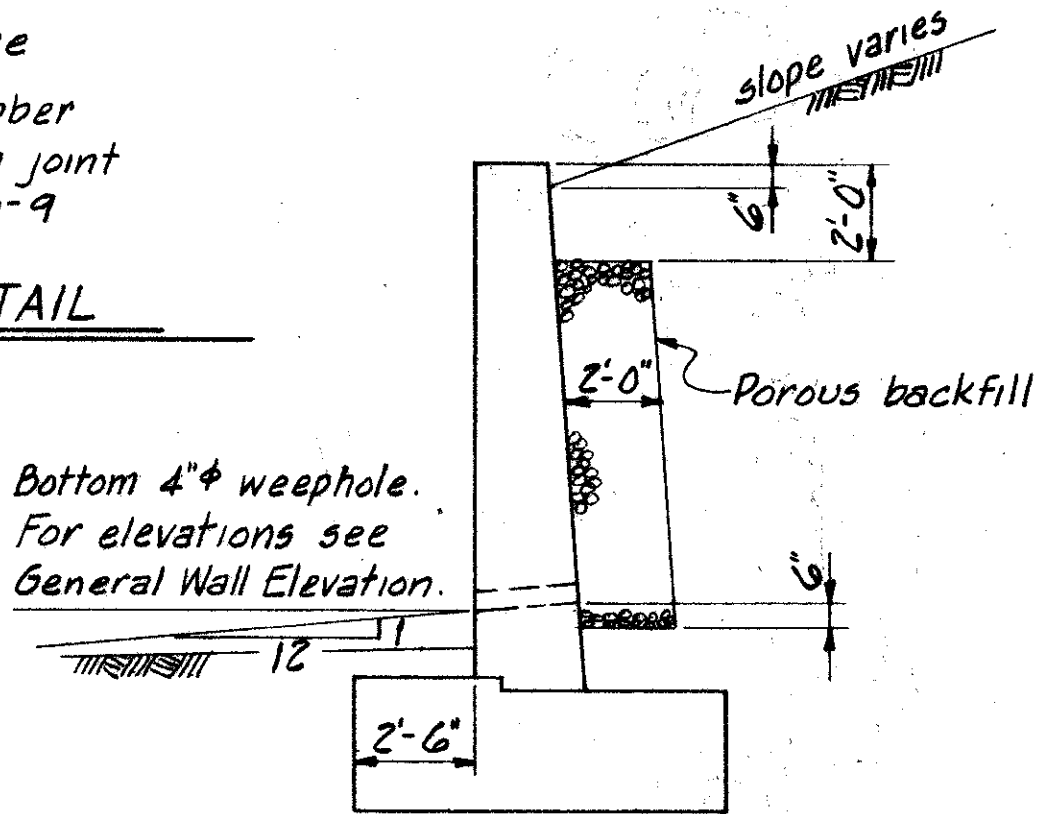
**ELEVATION**  
(Piles not shown)



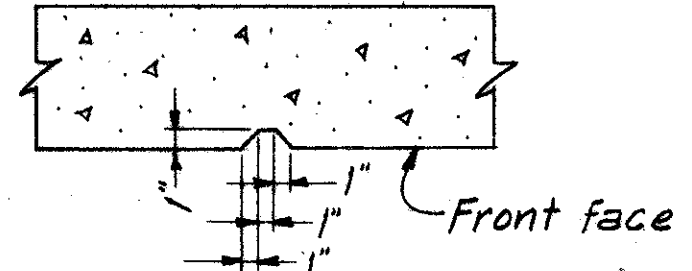
**EXPANSION JOINT DETAIL**



**CONTRACTION JOINT DETAIL**



**POROUS BACKFILL DETAIL**



**RUSTICATION GROOVE DETAIL**

- Note-**
- (1) Weephole elevations are at bottom of 4" hole at face of wall.
  - (2) Weepholes shall be placed in a straight line between noted elevations.

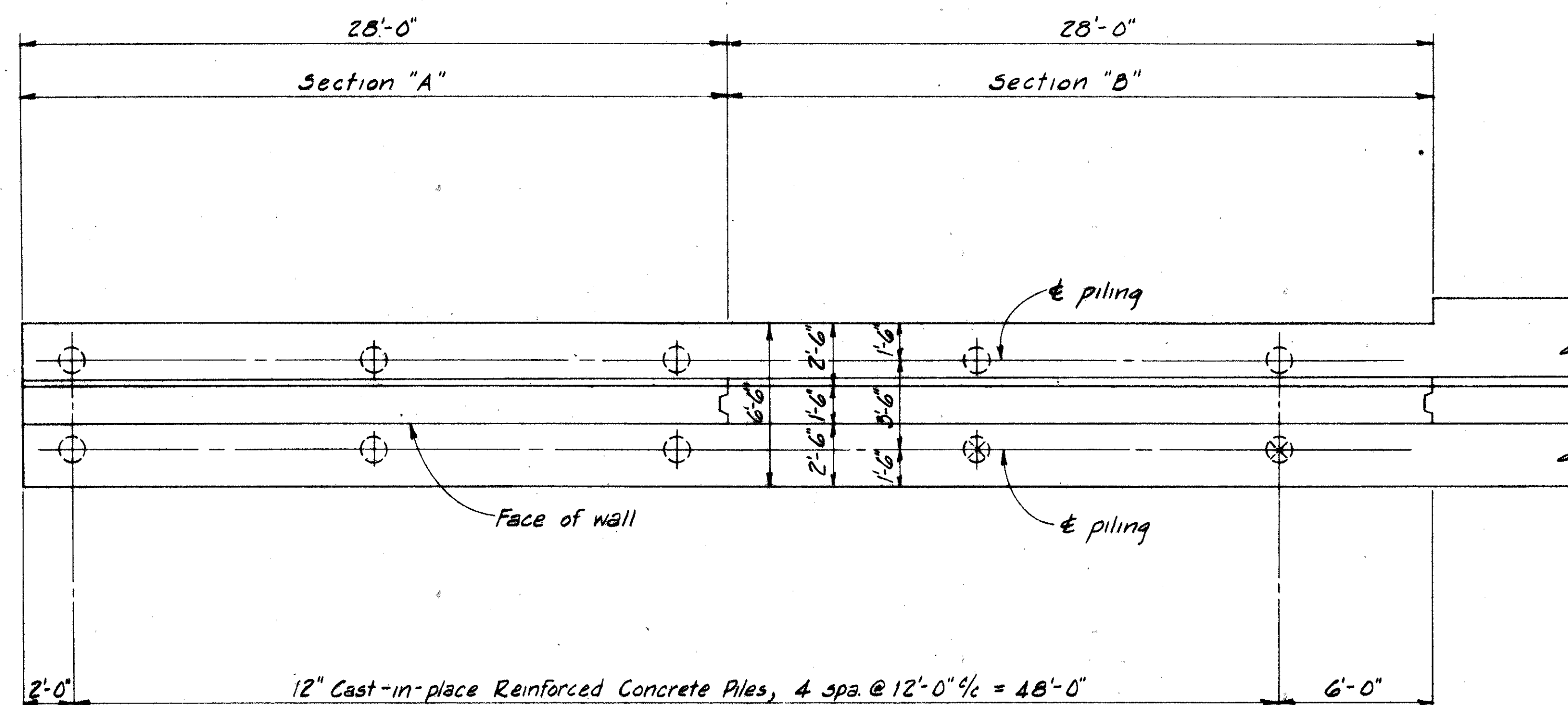
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
GENERAL PLAN & ELEVATION							
RETAINING WALL "K" ALONG SERVICE ROAD "C"							
FRANKLIN COUNTY							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
HT	HT		RF	TLU	5-10-62		



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

160  
250

FRANKLIN COUNTY  
FRA-40-12.82

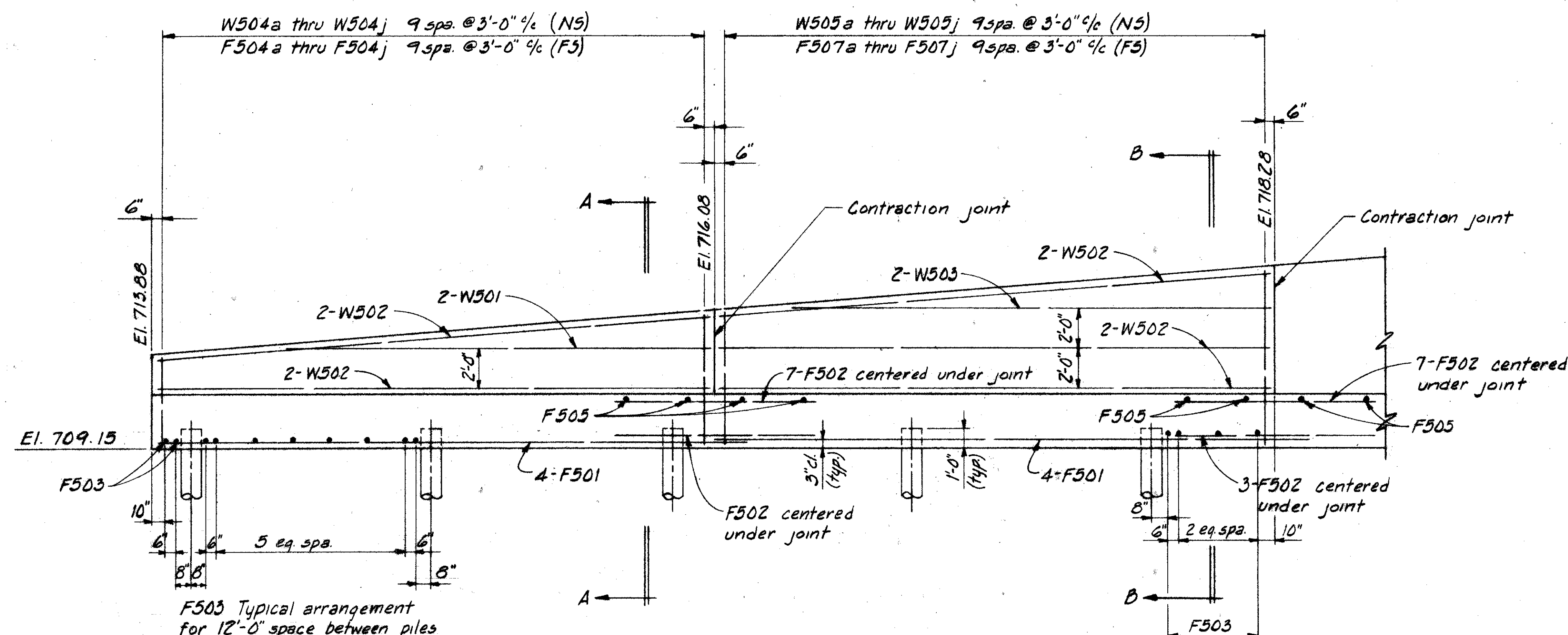


PLAN - SECTIONS A-B

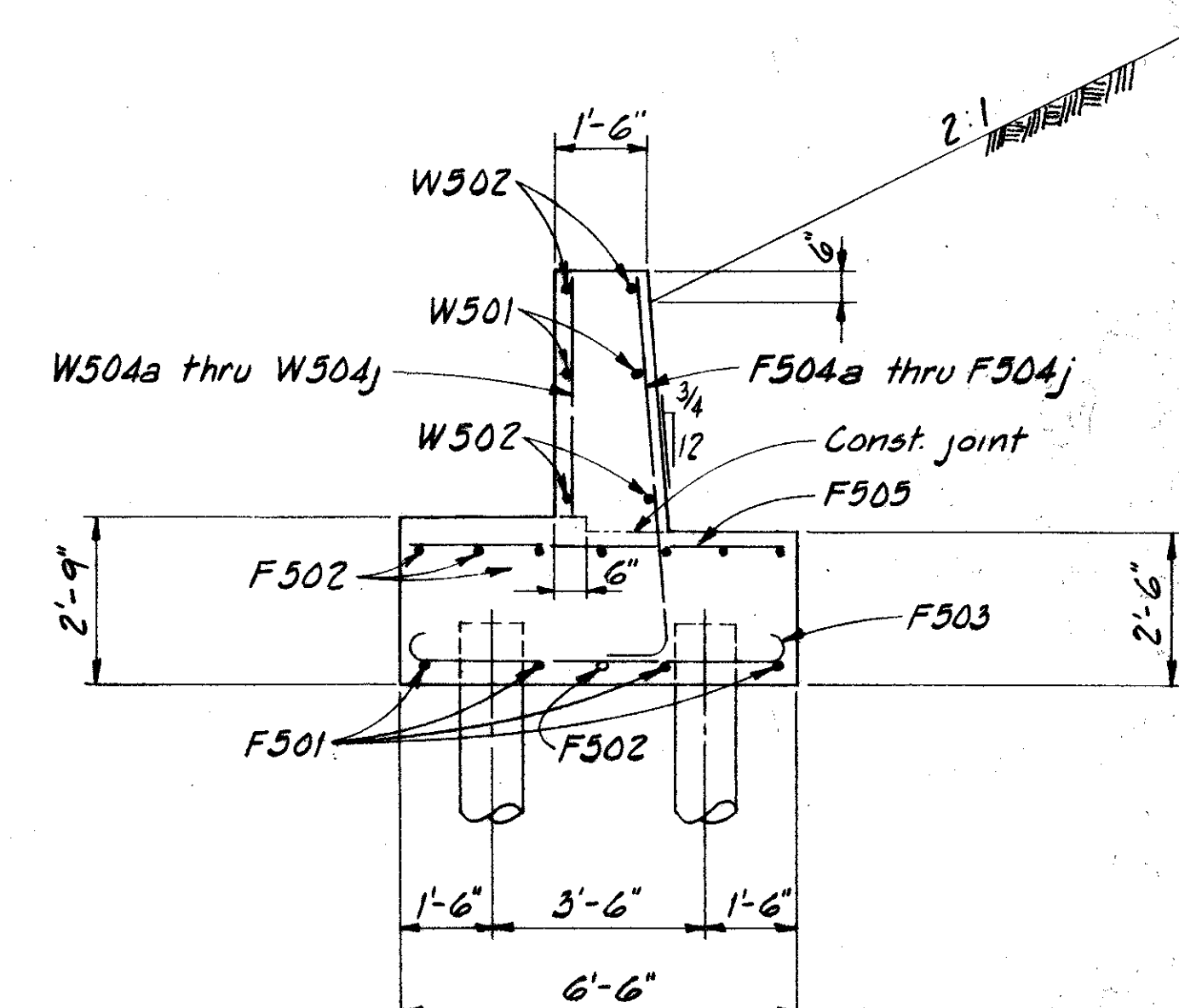
Piling  
○ Vertical  
⊗ 1:3 Batter

NOTES

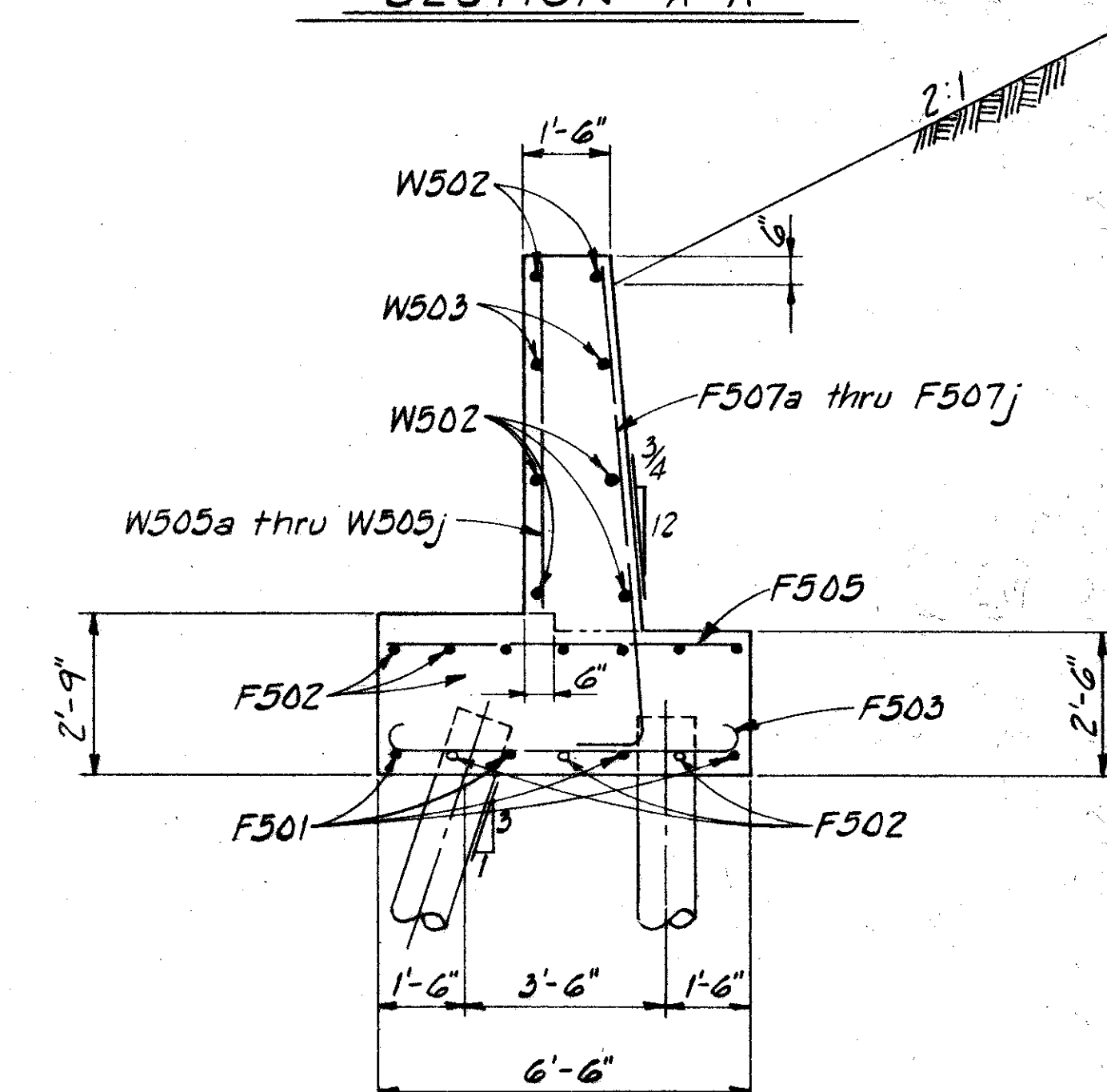
- (1) For location of wall sections see sheet N<sup>o</sup> 159
- (2) For Rustication Grooves and Contraction Joints see sheet N<sup>o</sup> 159
- (3) Reinforcing steel location—  
N5 indicates near side  
F5 indicates far side



ELEVATION



SECTION A-A



SECTION B-B

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

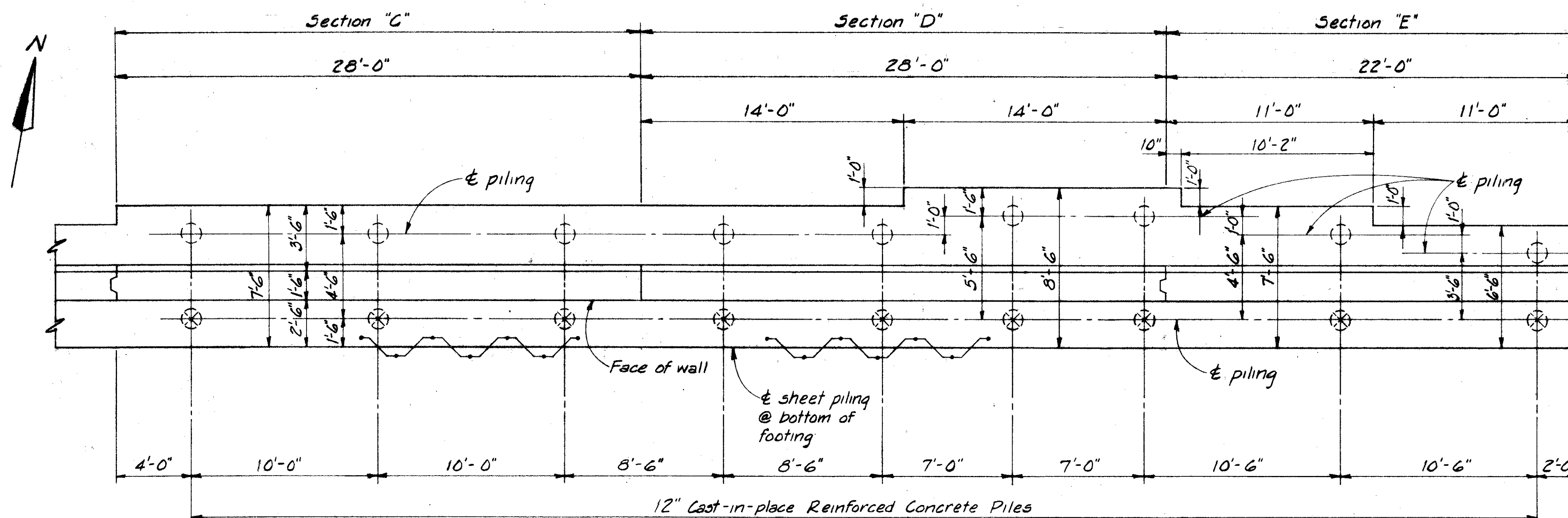
SECTIONS A & B

RETAINING WALL "K" ALONG SERVICE ROAD "C"

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HT	HT		DF	TLU	5/10/62	



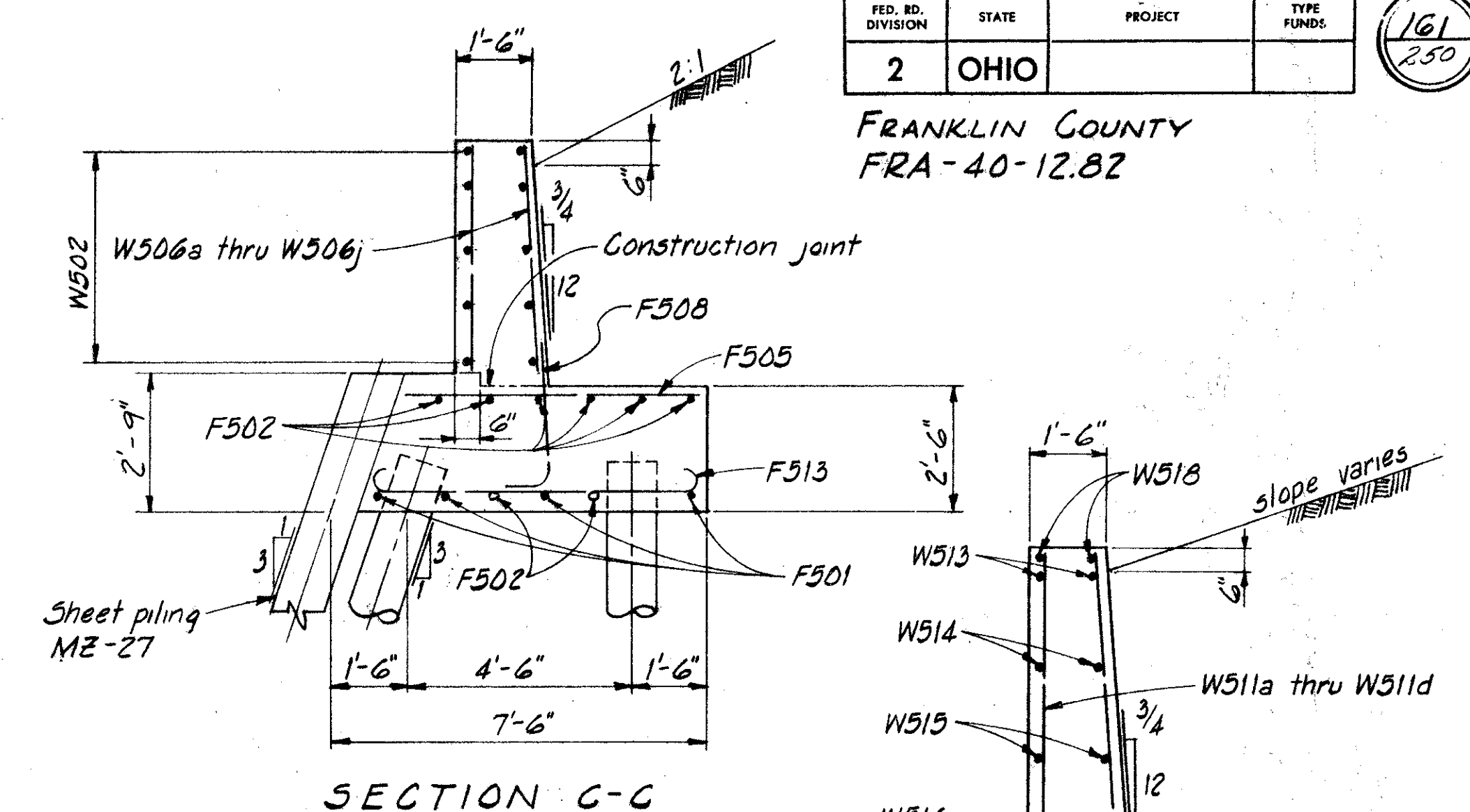


FOOTING PLAN - SECTIONS C-D-E

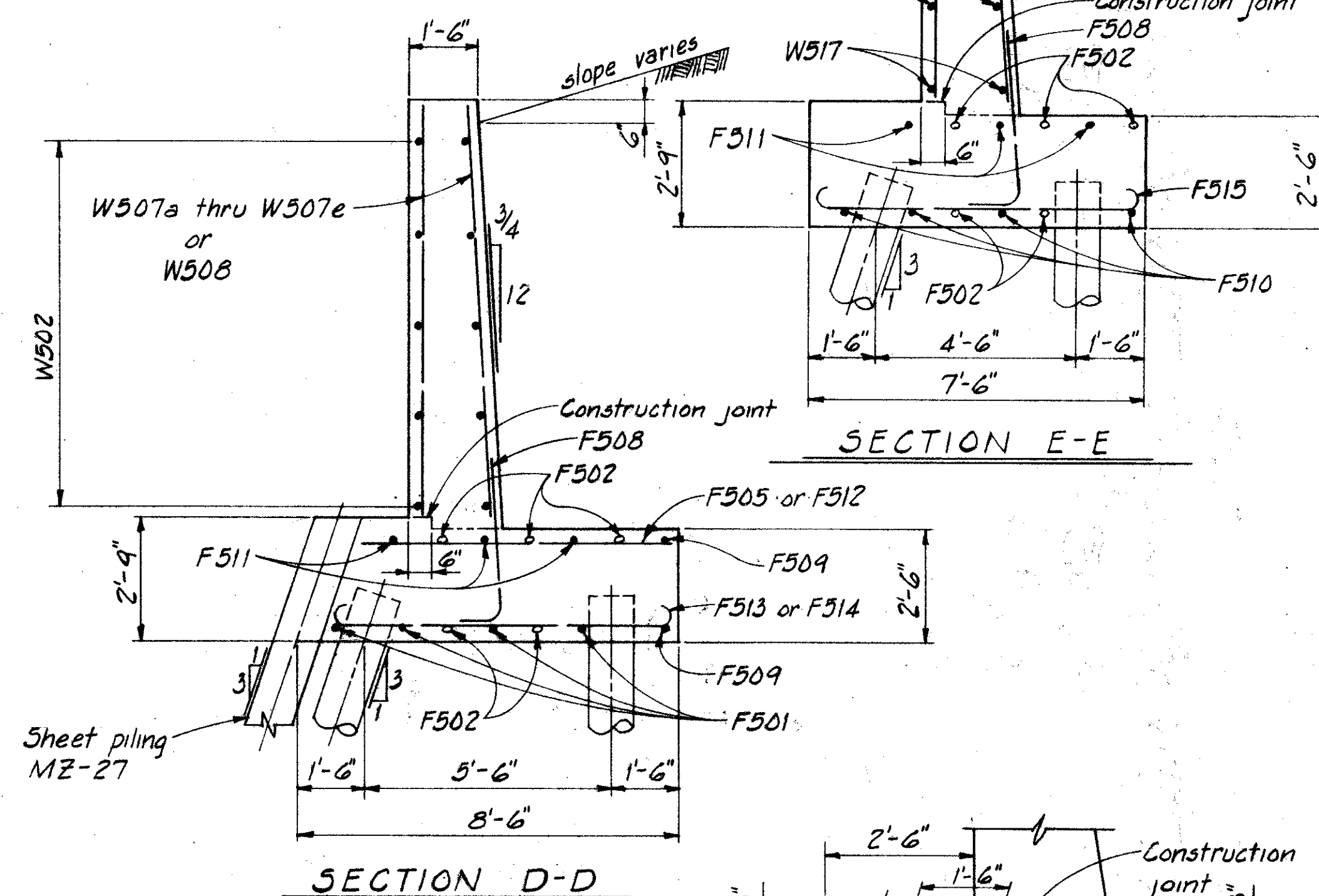
NOTES

- (1) For location of wall sections see sheet No. 159
- (2) For Rustication Grooves, Expansion and Contraction Joints see sheet No. 159
- (3) Sheet piling is to be placed in Sections "C" and "D" only.
- (4) Reinforcing steel location -  
N5 indicates near side  
F5 indicates far side

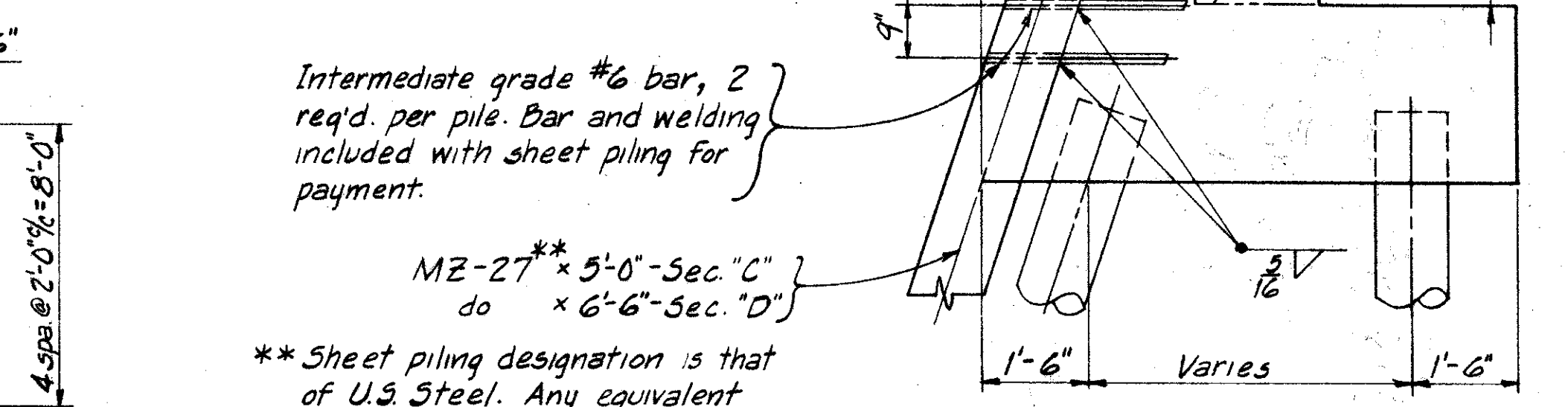
Piling  
○ Vertical  
⊗ 1:3 batter



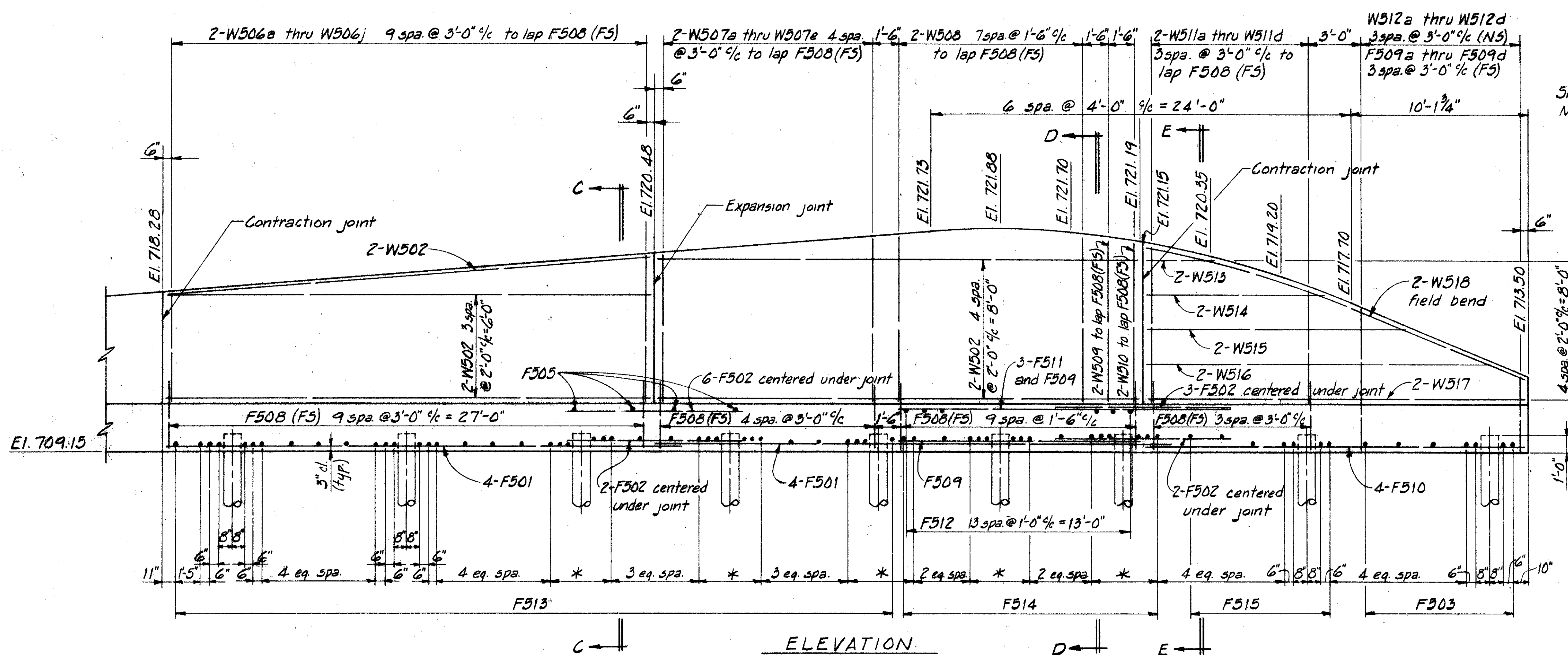
SECTION C-C



SECTION D-D



SHEET PILING ANCHOR DETAIL  
(For Sections "C" and "D")



ELEVATION

Intermediate grade #6 bar, 2 req'd. per pile. Bar and welding included with sheet piling for payment.

MZ-27\*\* 5'-0" Sec. "C"  
do 6'-6" Sec. "D"

\*\* Sheet piling designation is that of U.S. Steel. Any equivalent section may be used, such as Bethlehem Z P-27

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
SECTIONS C, D & E					
RETAINING WALL "K" ALONG SERVICE ROAD "C"					
FRANKLIN COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
HT	HT		DF	TLU	5/10/62

\* Spacing of bars to be same as shown around second pile in Wall Section "C."



# REINFORCING

# STEEL

# LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

162  
250

FRANKLIN COUNTY  
FRA-40-12.82

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	Shp.
<b>FOOTING</b>									
F503	45	7'-4"	344	3	6'-2"				bt.
F504a	1	5'-1"		1	4'-3"	1'-0"			bt.
thru		varies by 3"	65						
F504j	1	7'-4"		1	6'-6"	1'-0"			bt.
F507a	1	7'-4"		1	6'-6"	1'-0"			bt.
thru		varies by 3"	88						
F507j	1	9'-7"		1	8'-9"	1'-0"			bt.
F508	29	4'-7"	139	1	3'-9"	1'-0"			bt.
F509a	1	8'-4"		1	7'-6"	1'-0"			bt.
thru		varies by 1'-4"	26						
F509d	1	4'-4"		1	3'-6"	1'-0"			bt.
F513	38	7'-9"	307	3	6'-7"				bt.
F514	16	8'-9"	146	3	7'-7"				bt.
F515	7	8'-4"	61	3	7'-2"				bt.

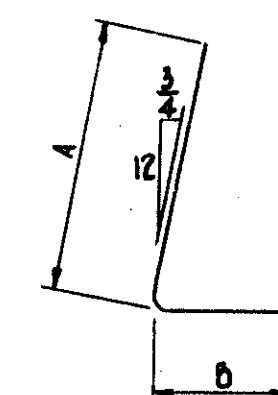
<b>WALL</b>									
W518	2	22'-8"	47	5	*	10'-6"	12'-2"		bt.

Mark	Nº	Length	Weight	Shp.
<b>FOOTING</b>				
F501	16	29'-7"	494	st.
F502	31	10'-0"	323	st.
F505	12	6'-2"	77	st.
F509	2	13'-8"	29	st.
F510	4	21'-10"	91	st.
F511	3	19'-0"	59	st.
F512	14	5'-9"	84	st.

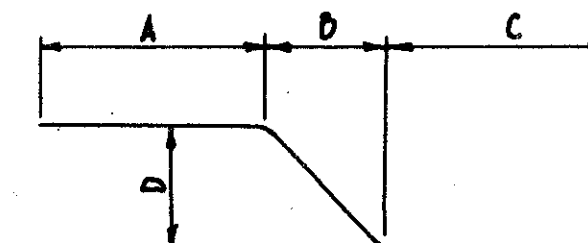
Mark	Nº	Length	Weight	Shp.
<b>WALL</b>				
W501	2	21'-1"	44	st.
W502	30	27'-8"	866	st.
W503	2	23'-9"	50	st.
W504a	1	1'-9"		st.
thru		varies by 3"	30	
W504j	1	3'-11"		st.
W505a	1	3'-11"		st.
thru		varies by 3"	53	
W505j	1	6'-2"		st.
W506a	2	6'-2"		st.
thru		varies by 3"	152	
W506j	2	8'-5"		st.
W507a	2	8'-5"		st.
thru		varies by 93		
W507e	2	9'-5"		st.
W508	16	9'-6 1/2"	159	st.
W509	2	9'-3"	19	st.
W510	2	9'-0"	19	st.
W511a	2	8'-10"		st.
thru		varies by 9"	64	
W511d	2	6'-7"		st.
W512a	1	5'-3"		st.
thru		varies by 1'-4"	14	
W512d	1	1'-3"		st.
W513	2	3'-10"	8	st.
W514	2	10'-1"	21	st.
W515	2	14'-9"	31	st.
W516	2	19'-8"	41	st.
W517	2	21'-8"	45	st.

<b>REPLACEMENT STEEL</b>				
RE501	1	5'-7"		st.

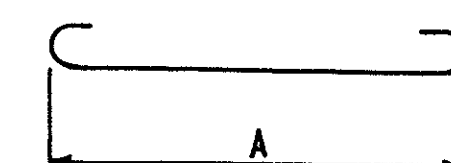
## Bending Diagram



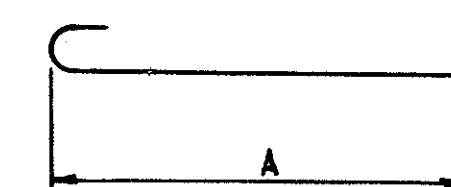
TYPE 1



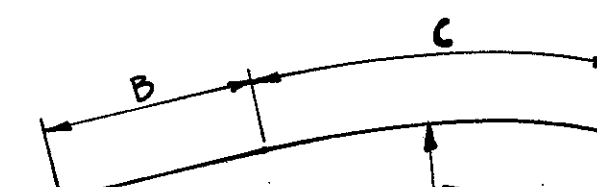
TYPE 2



TYPE 3



TYPE 4



TYPE 5

\*- Field bend ~ see sheet N<sup>o</sup> 161

Note: In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

## ESTIMATED QUANTITIES

Item	Total	Unit	Description	Footings	Wall	General
E-2	170	Cu. Yds.	Unclassified Excavation	170		
E-2	322	Sq. Ft.	Sheet Piling Left-in-Place (27 lbs./sq.ft.)	322		
5-1	93	Cu. Yds.	Class "E" Concrete, Footing	93		
5-1	57	Cu. Yds.	Class "E" Concrete, Wall		57	
5-3	27	Lin. Ft.	Waterproofing, Premolded Sealing Strip		27	
5-4	4089	Lbs.	Reinforcing Steel	2380	1709	
5-9	15	Sq. Ft.	1" Gray Rubber Preformed Expansion Joint Filler		15	
5-16	Lump	Sum	First Test Pile	Lump		
5-18	840	Lin. Ft.	12" Cast-in-Place Reinforced Concrete Piles	840		
5-29	25	Cu. Yds.	Porous Backfill			25

## REPLACEMENT BARS

IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

## REINFORCING STEEL LIST AND ESTIMATED QUANTITIES

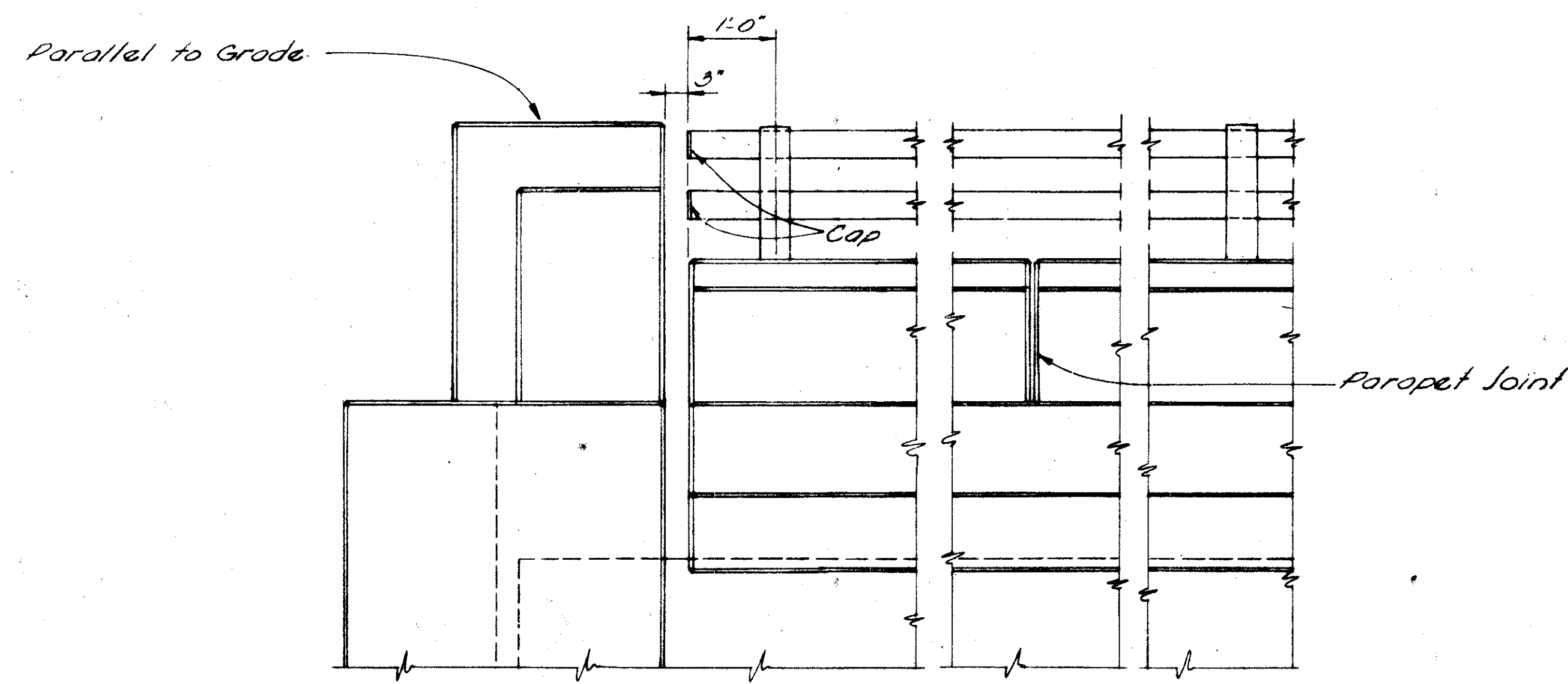
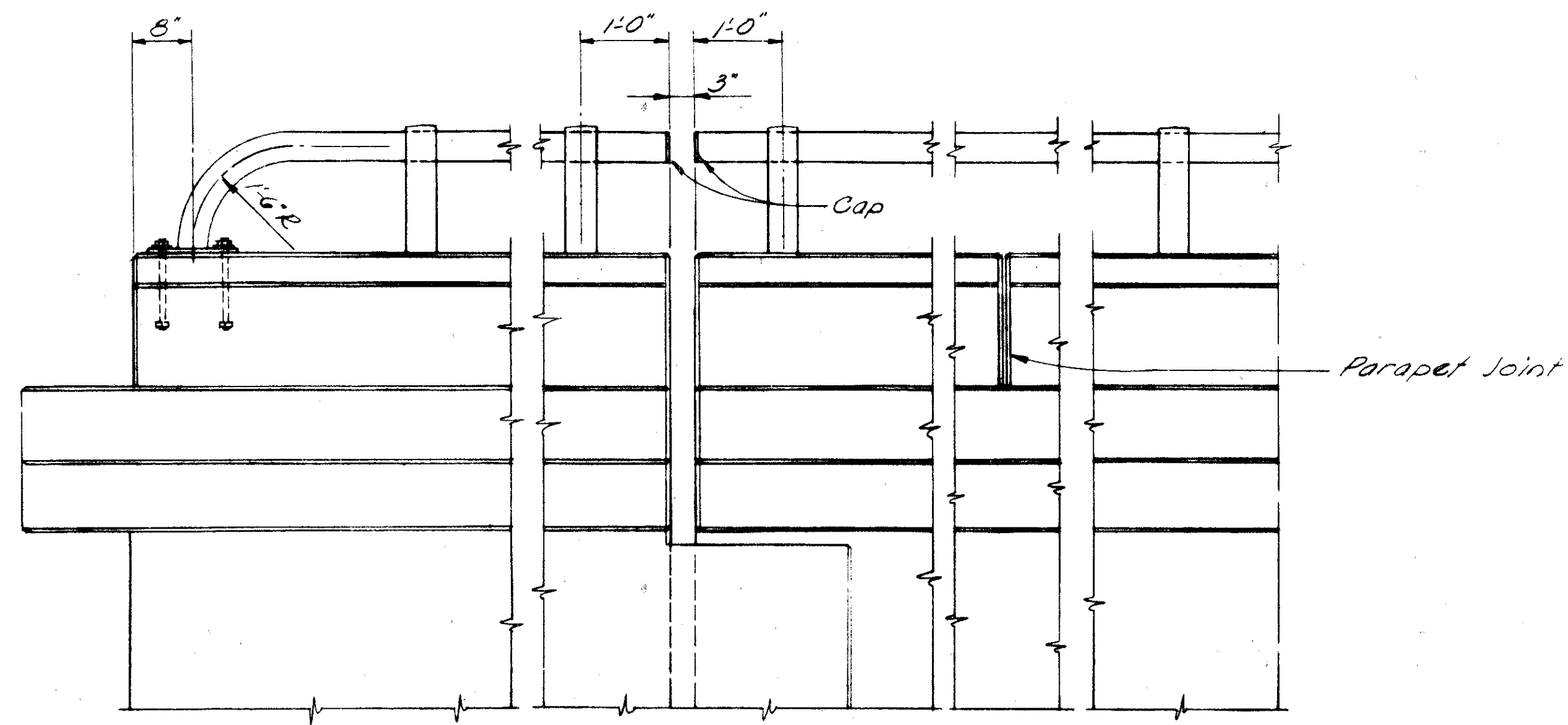
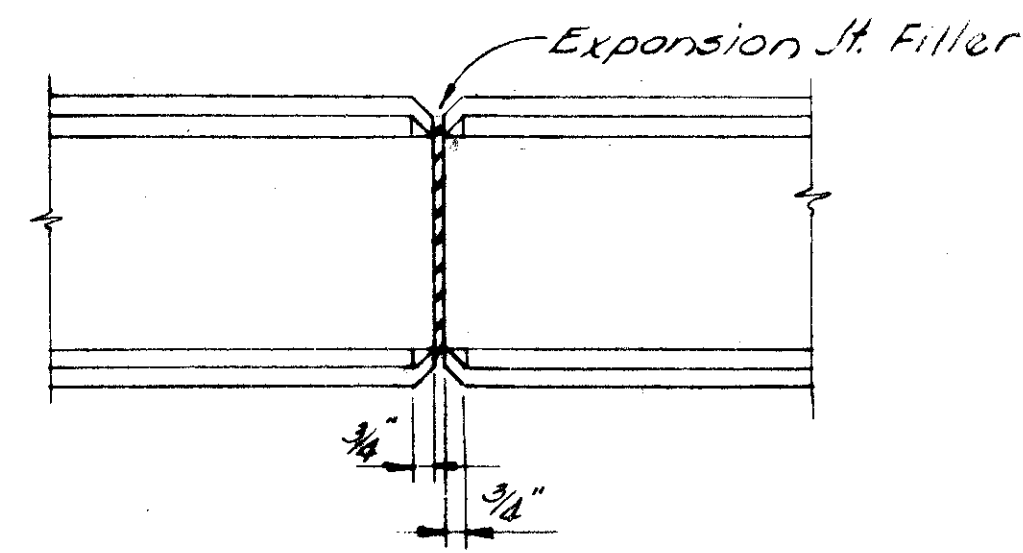
RETAINING WALL "K" ALONG SERVICE ROAD "C"

FRANKLIN COUNTY

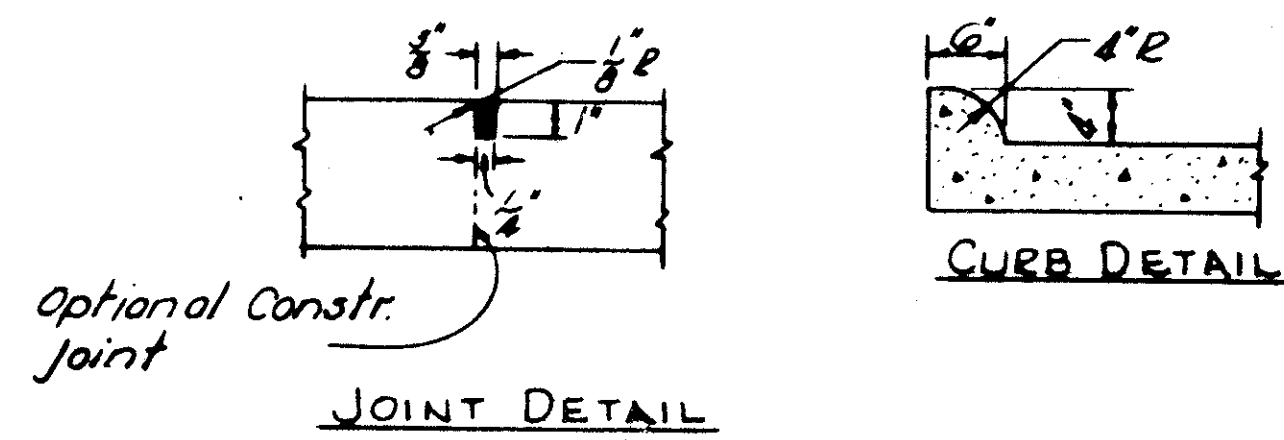
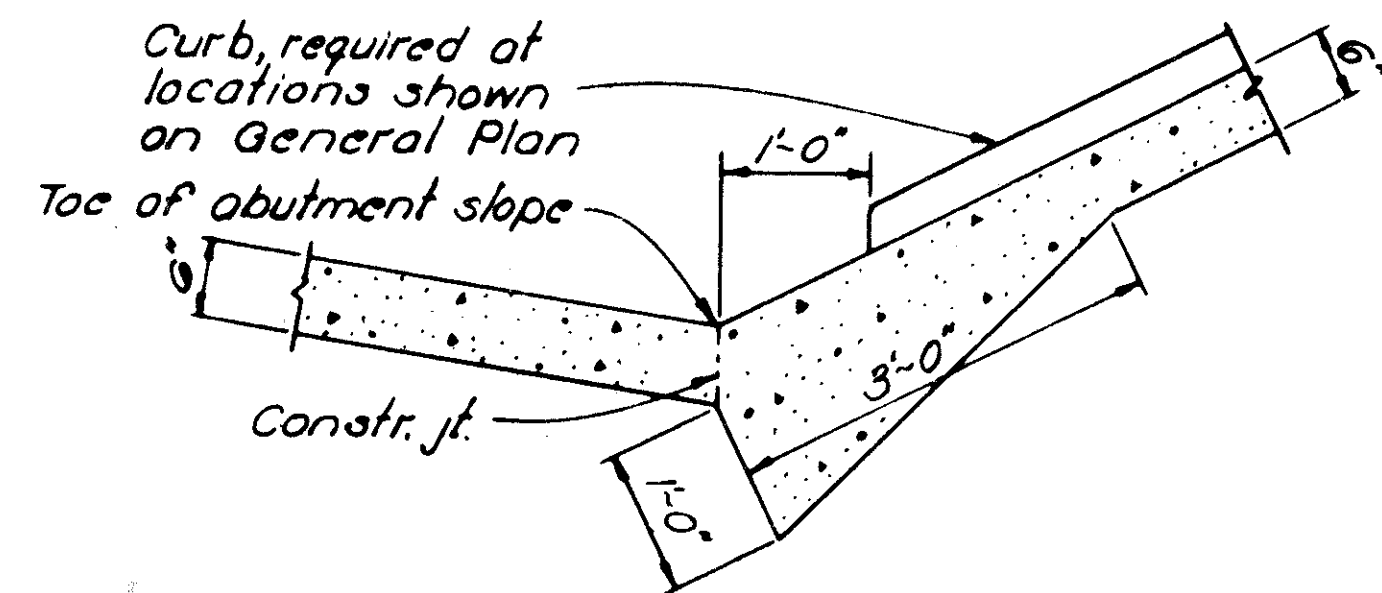
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ht	Ht		P.F.	TLU	5-10-62	



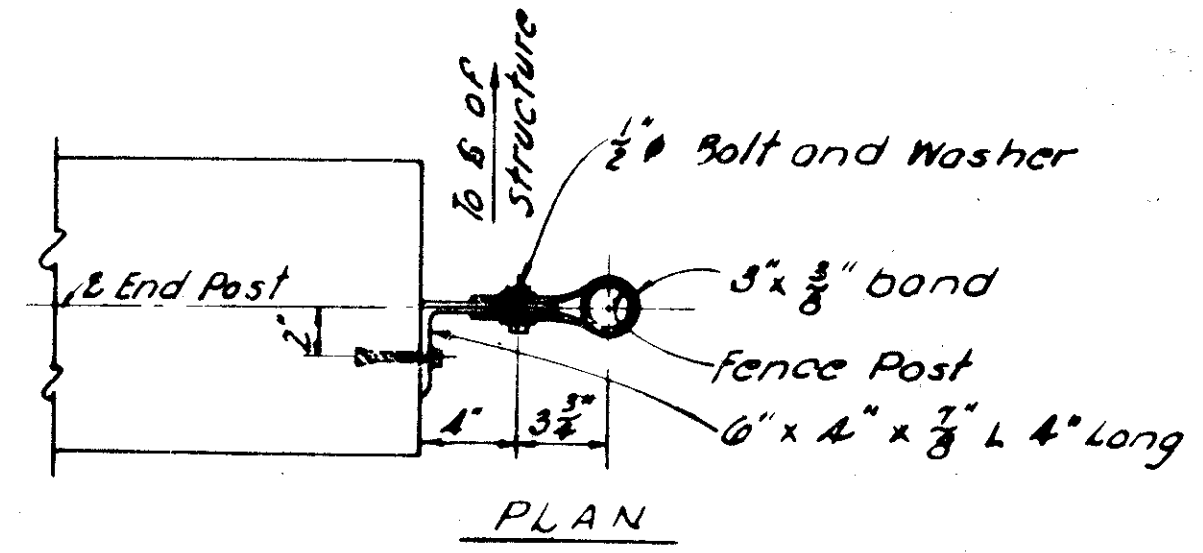
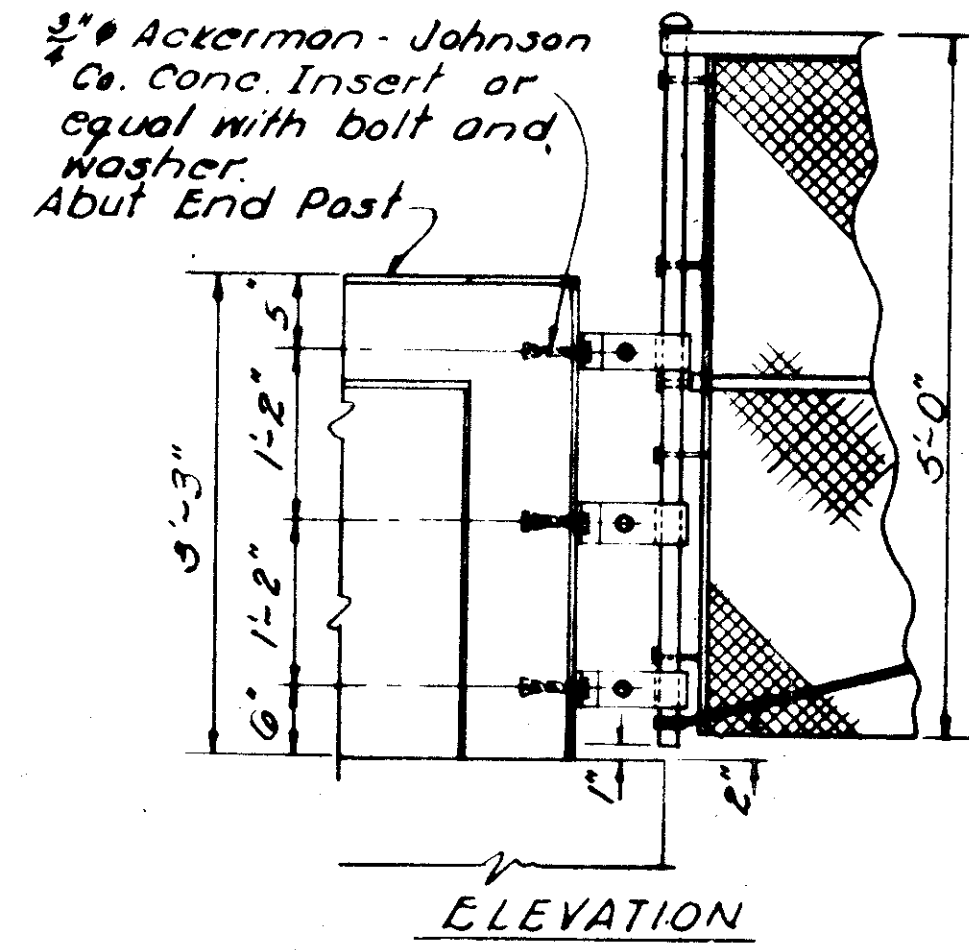
FRANKLIN COUNTY  
FCA-40-1282



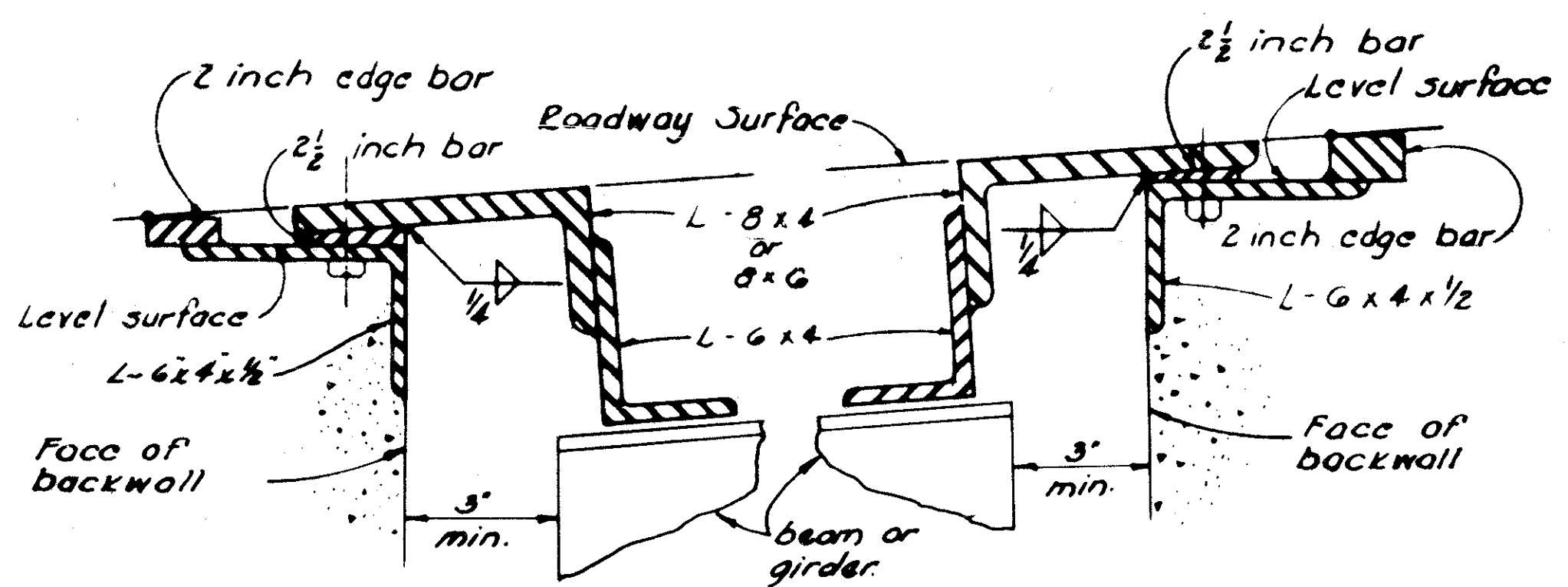
RAILING DETAILS



Curbs: Curbs shall be included with Item I-10 For payment.  
DETAIL FOR ITEM I-10 CONCRETE SLOPE PROTECTION



I-20 FENCE END POST CONNECTION



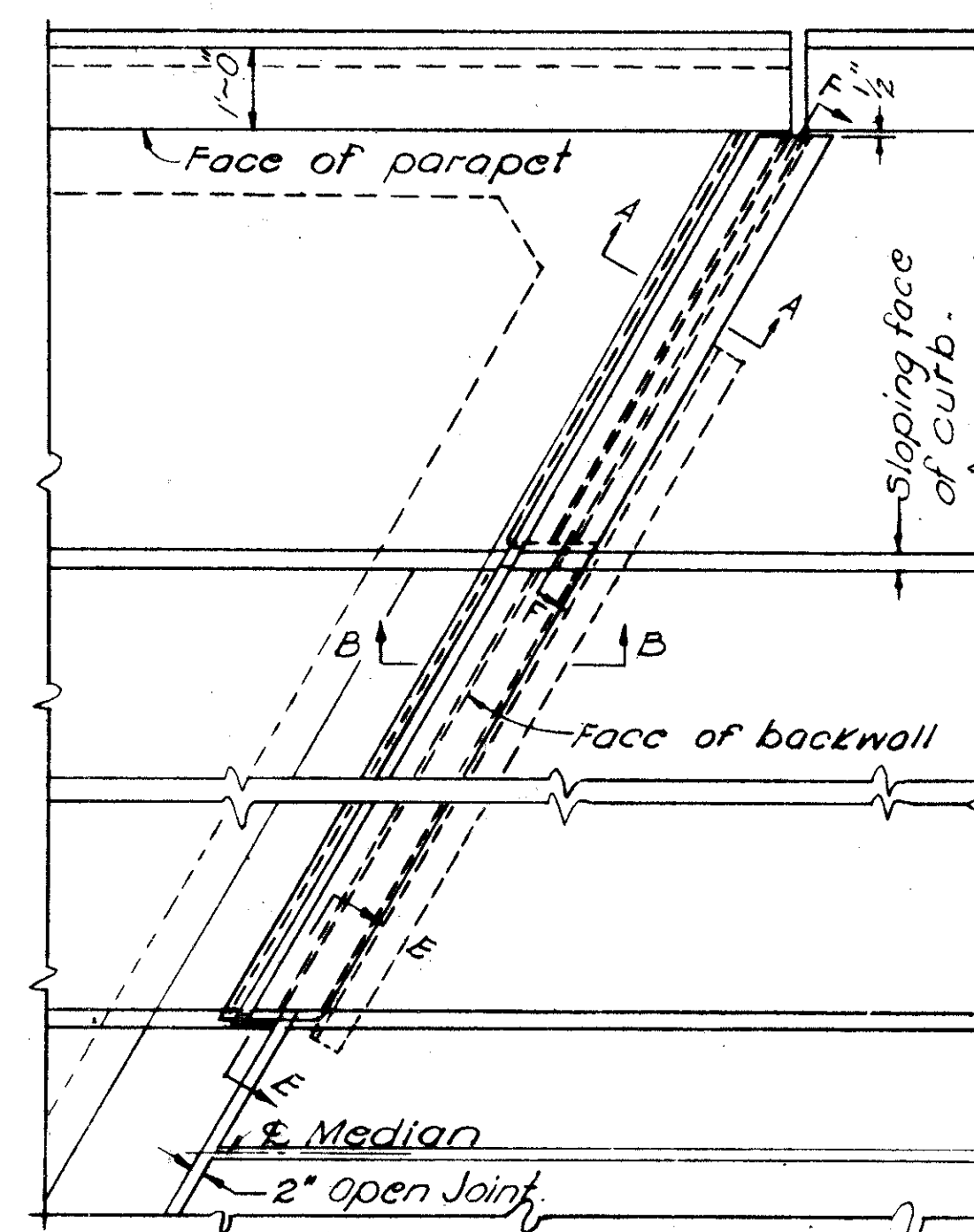
Notes: 2 1/2 inch bar shall be beveled to fit slope of roadway surface. Minimum thickness shall be 1/4 inch.  
Thickness of the 2 inch edge bar shall be determined by slope of roadway surface.  
For additional details see section C-C, Standard Drawing CSB-2-56, sheet 2.

END FINISH DETAIL

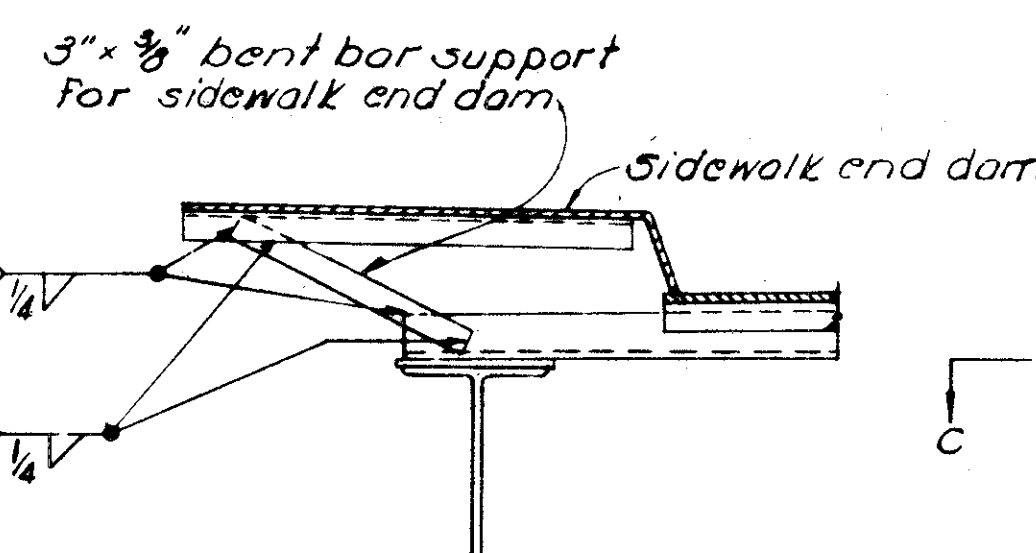
(To be used only where the roadway profile gradient at the end finish exceeds 2%.)

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
COMMON DETAILS						
FRANKLIN COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	BDB				7/10/62	

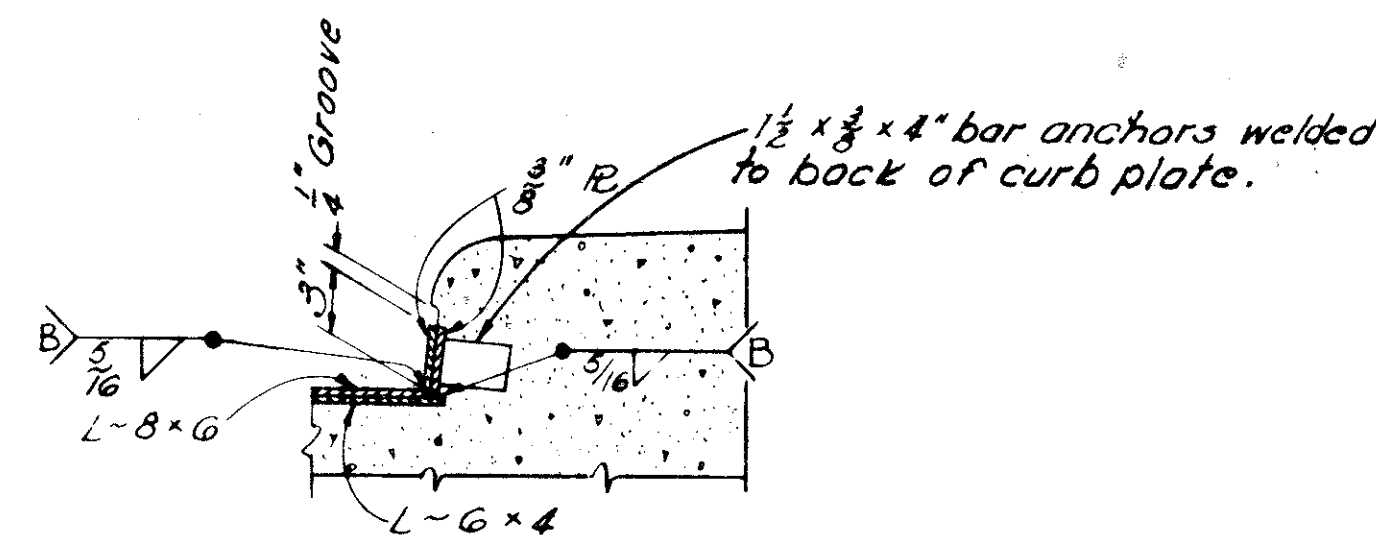




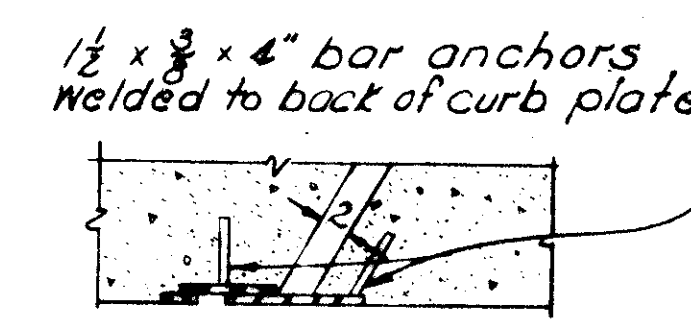
PLAN AT ABUTMENT



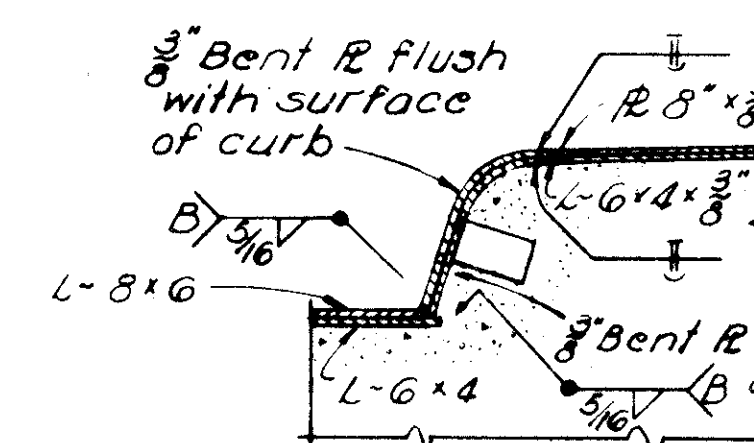
SECTION F-F



SECTION E-E

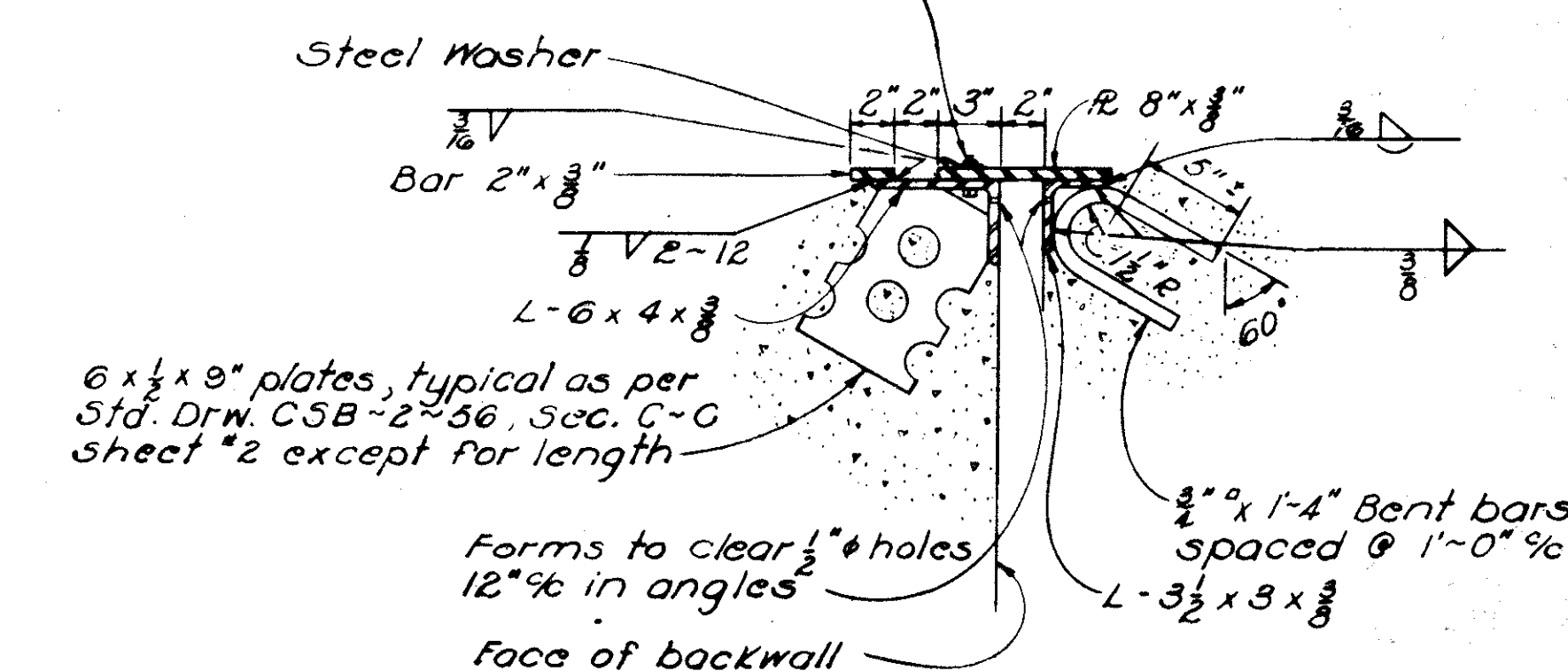


SECTION C-C



SECTION D-D

$\frac{5}{8}$ " x  $1\frac{1}{2}$ " bolts at 2'-0" o.c., with nuts track-welded to under side of angle.  $\frac{1}{16}$ " holes in plate. Center  $\frac{3}{8}$ " bolts in  $\frac{1}{16}$ " holes. Apply flake graphite between washers and plate. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has set, preferably within two hours after placing, to avoid damage due to temperature expansion or contraction of superstructure. Fill holes with bituminous material.

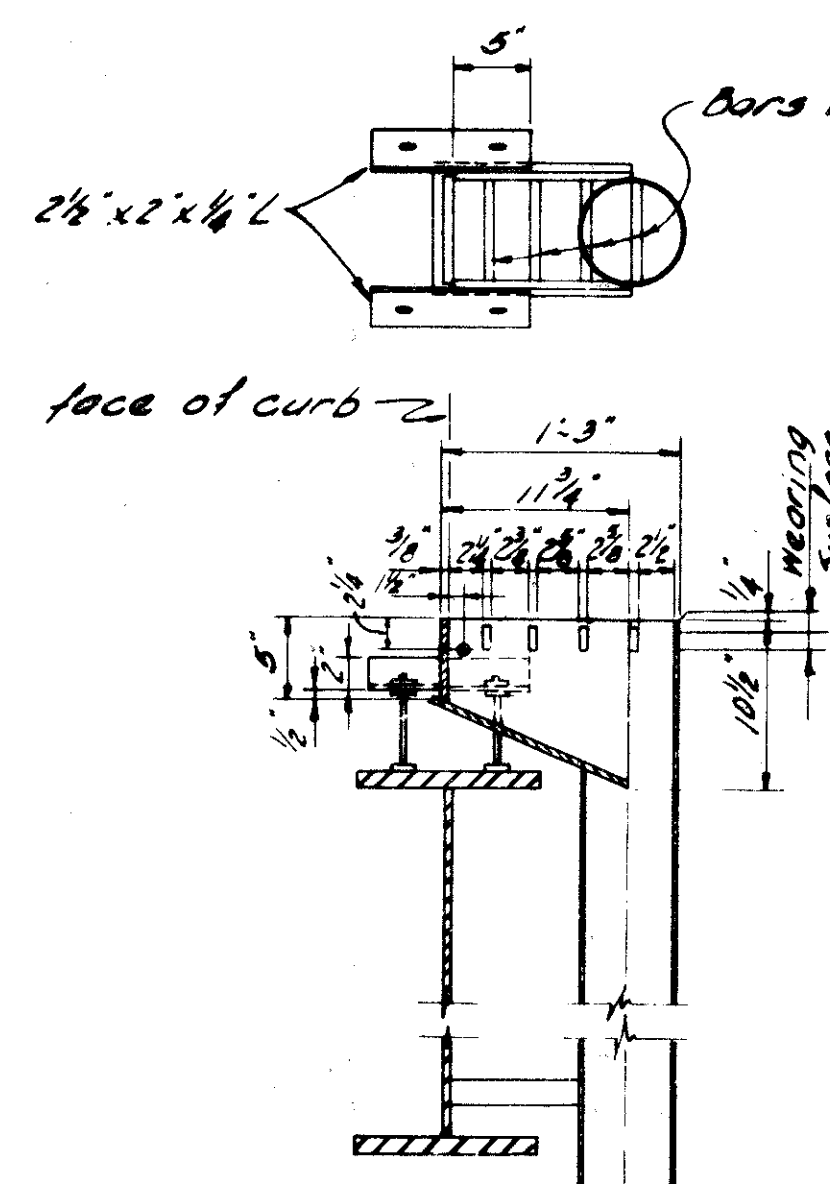


See Standard Drawing No. CSB-2-56, Sh. 2, Sec. C-C for the treatment of contact surface between L-6 x 4 x  $\frac{3}{8}$ " and R-8 x  $\frac{3}{8}$ " and painting procedure of all portions of end finish.

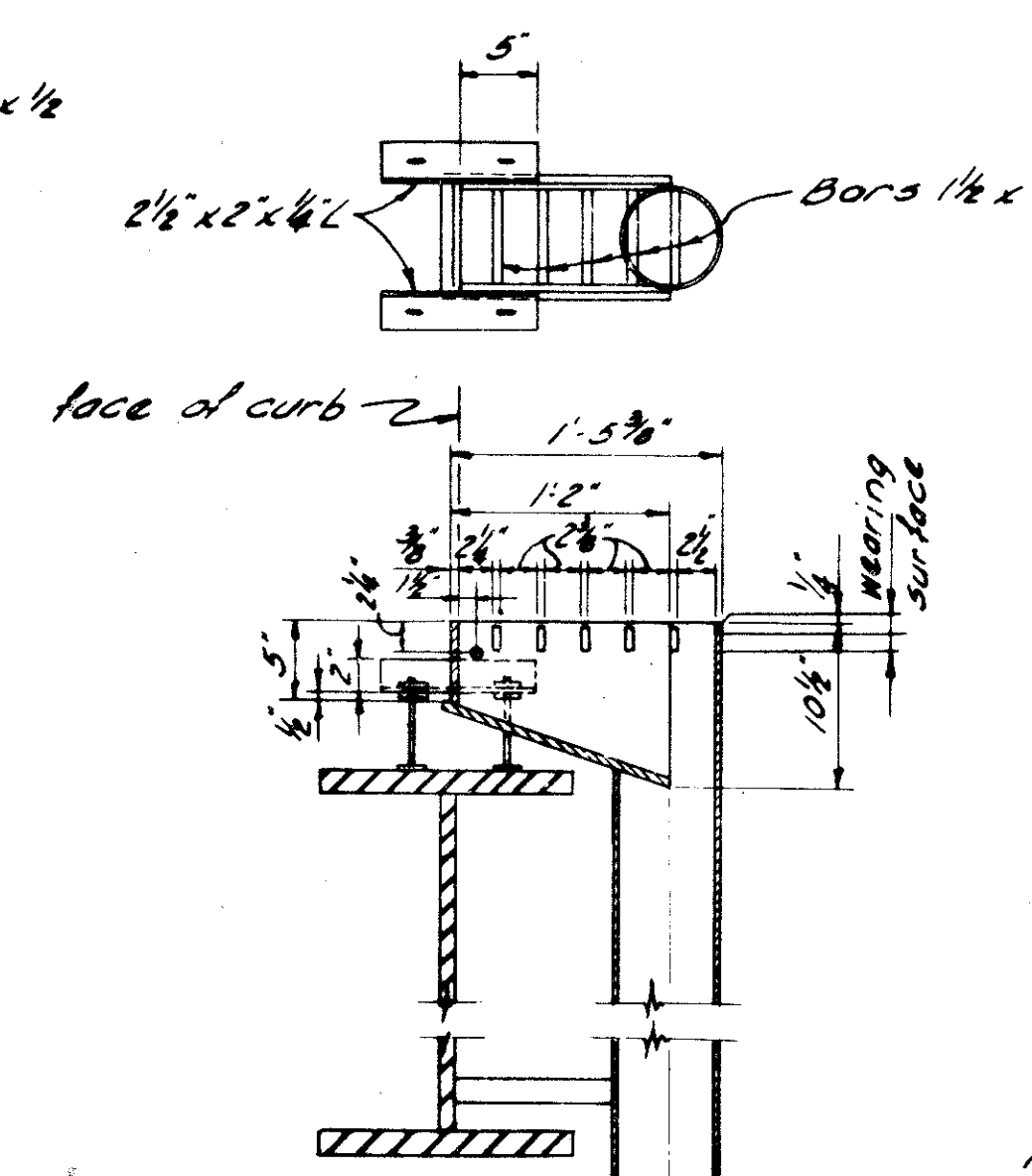
SECTION A-A

### SIDWALK AND MEDIAN END DAM

For Roadway end dam see Std. Drg. CSB-2-56 Sh. 2

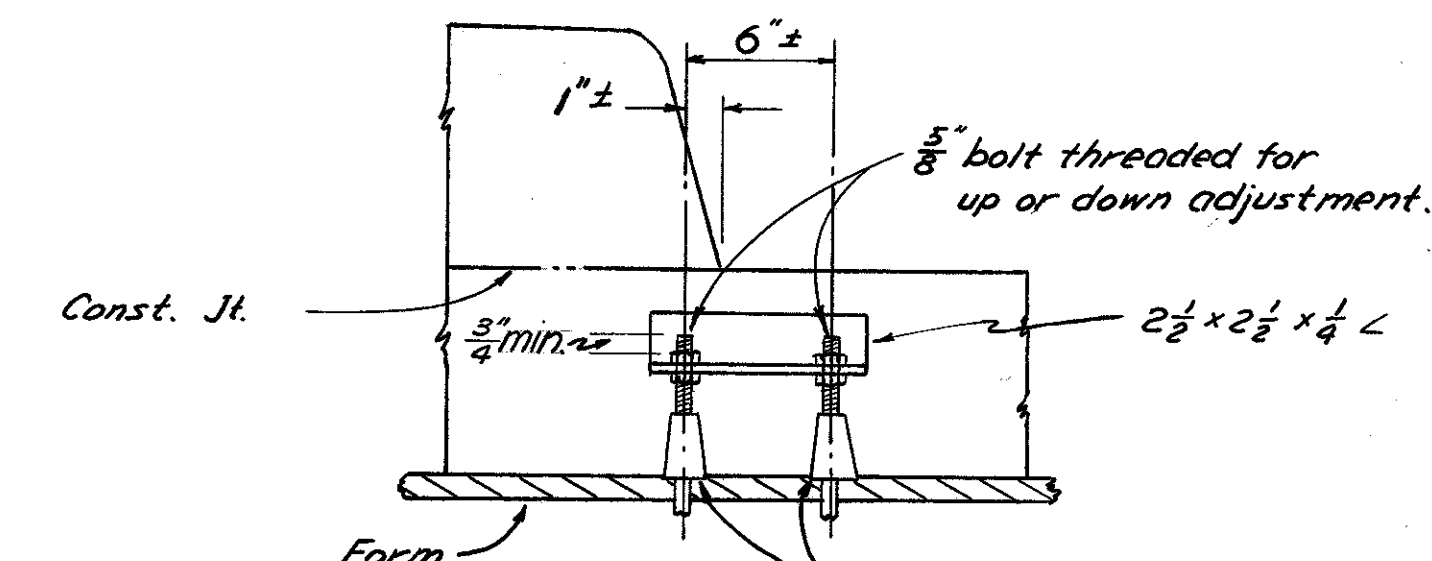


Flanges  $12\frac{1}{8}$ " or less.



Flanges over  $12\frac{1}{8}$ "

SCUPPER DETAILS



Indent form at base of cone and set cone perpendicular. Clamp cone firmly to form. Remove cone with removal of form and fill hole with grout.

Detail "A"  
(Scupper not shown)

NOTE: For additional details see CSB-2-56 Sheet 3. When horizontal dimension from face of curb to E beam exceeds 1'-6" use scupper support Detail "A".

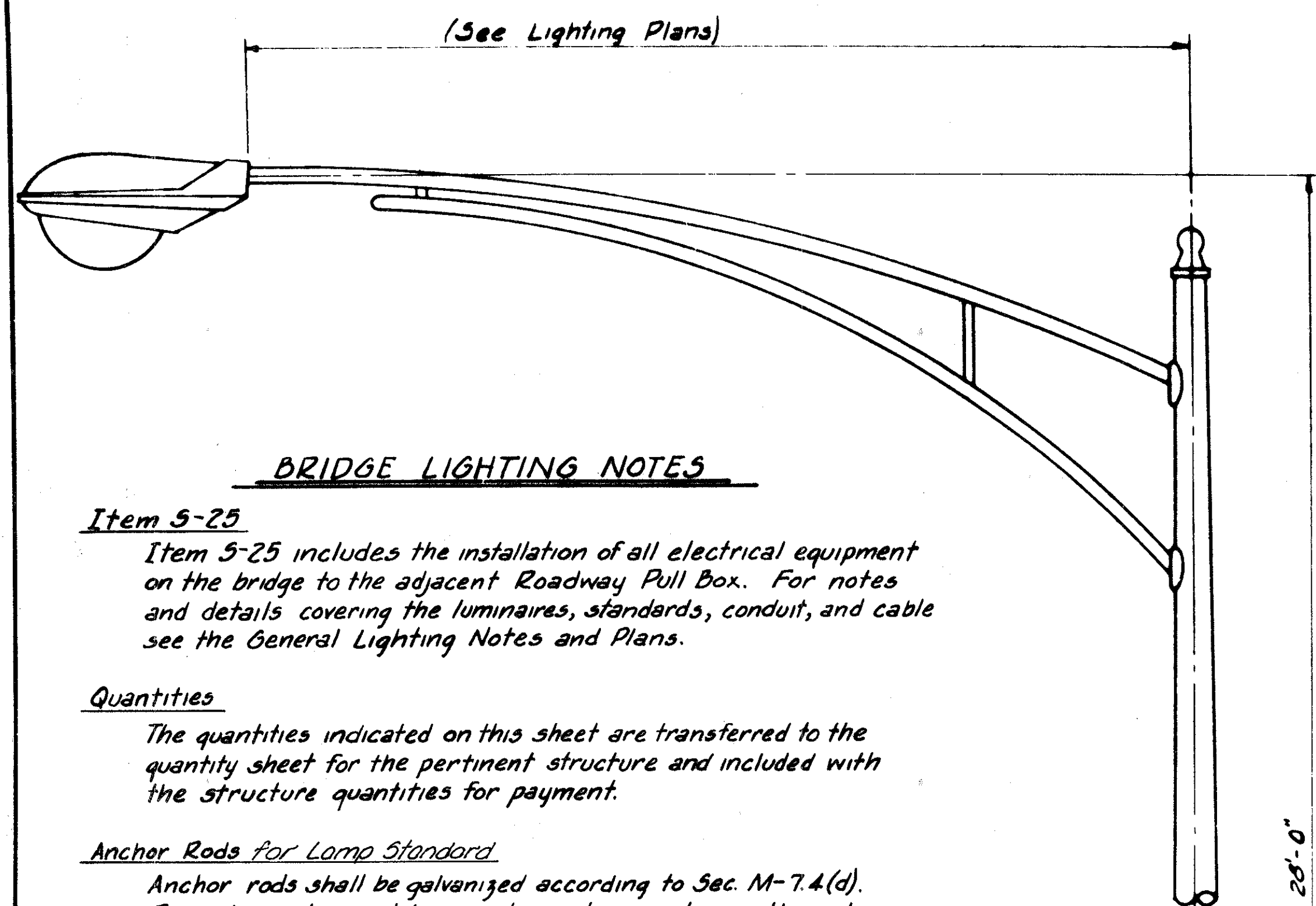
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SIDWALK END DAM  
and  
SCUPPER DETAILS

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	5-7-62	





### BRIDGE LIGHTING NOTES

#### Item 5-25

Item 5-25 includes the installation of all electrical equipment on the bridge to the adjacent Roadway Pull Box. For notes and details covering the luminaires, standards, conduit, and cable see the General Lighting Notes and Plans.

#### Quantities

The quantities indicated on this sheet are transferred to the quantity sheet for the pertinent structure and included with the structure quantities for payment.

#### Anchor Rods for Lamp Standard

Anchor rods shall be galvanized according to Sec. M-7.4(d). Furnish a galvanized hex nut and washer with each anchor rod. See proposal for anchor rod specifications.

#### Hand Hole

A hand hole shall be provided 1'-5" above the base of the standard on the same side as the bracket.

#### Ground

Each lamp standard & trolley bracket shall be grounded as indicated in the General Notes for the pertinent structure. Cost shall be included with the price bid for Electric Grounding System.

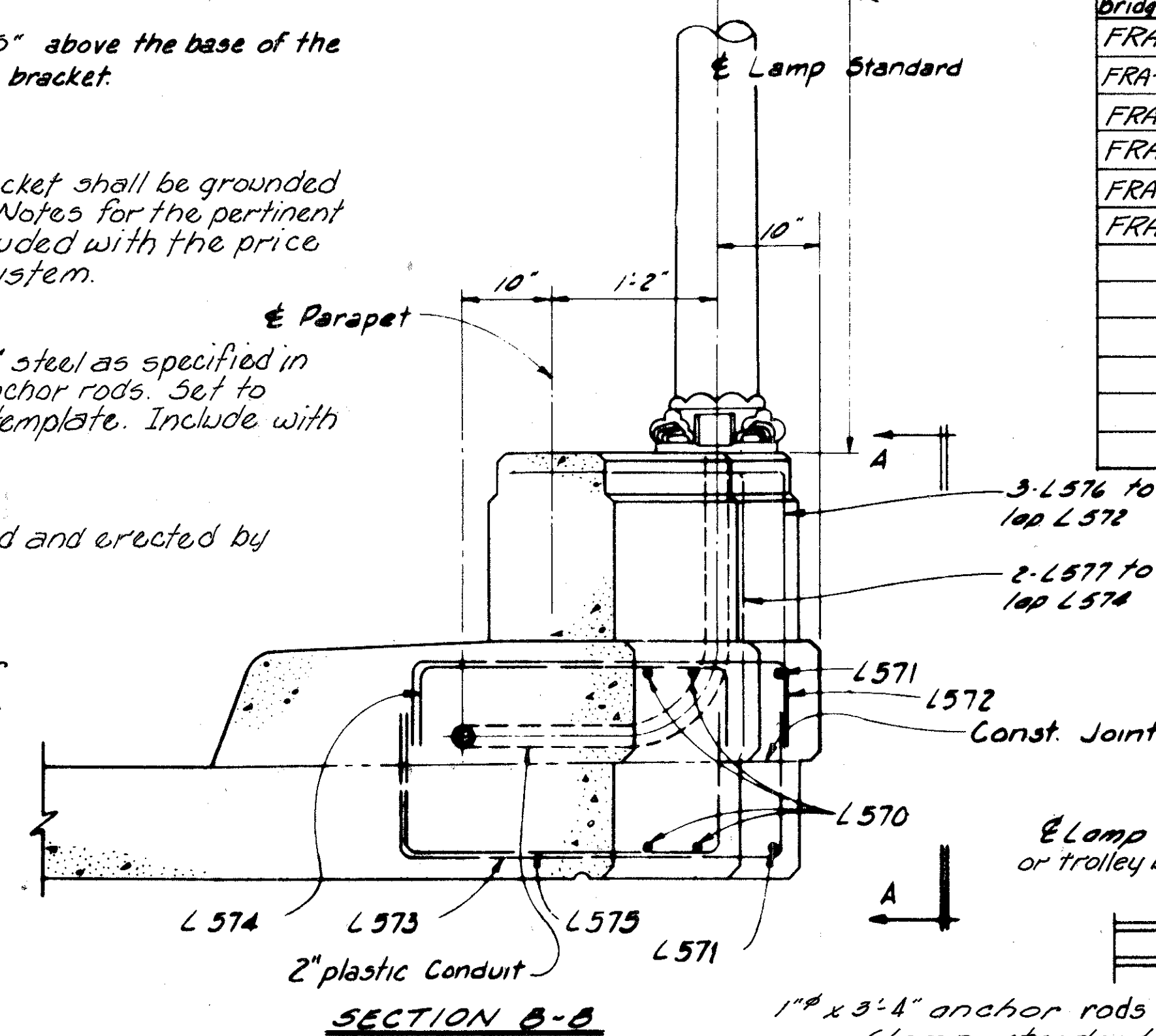
#### Trolley Bracket Anchor Rods

Anchor rods shall be 1/2" x 3'-6" steel as specified in the proposal for light pole anchor rods. Set to Columbus Transit Company template. Include with Item 5-7 for payment.

#### Trolley Poles

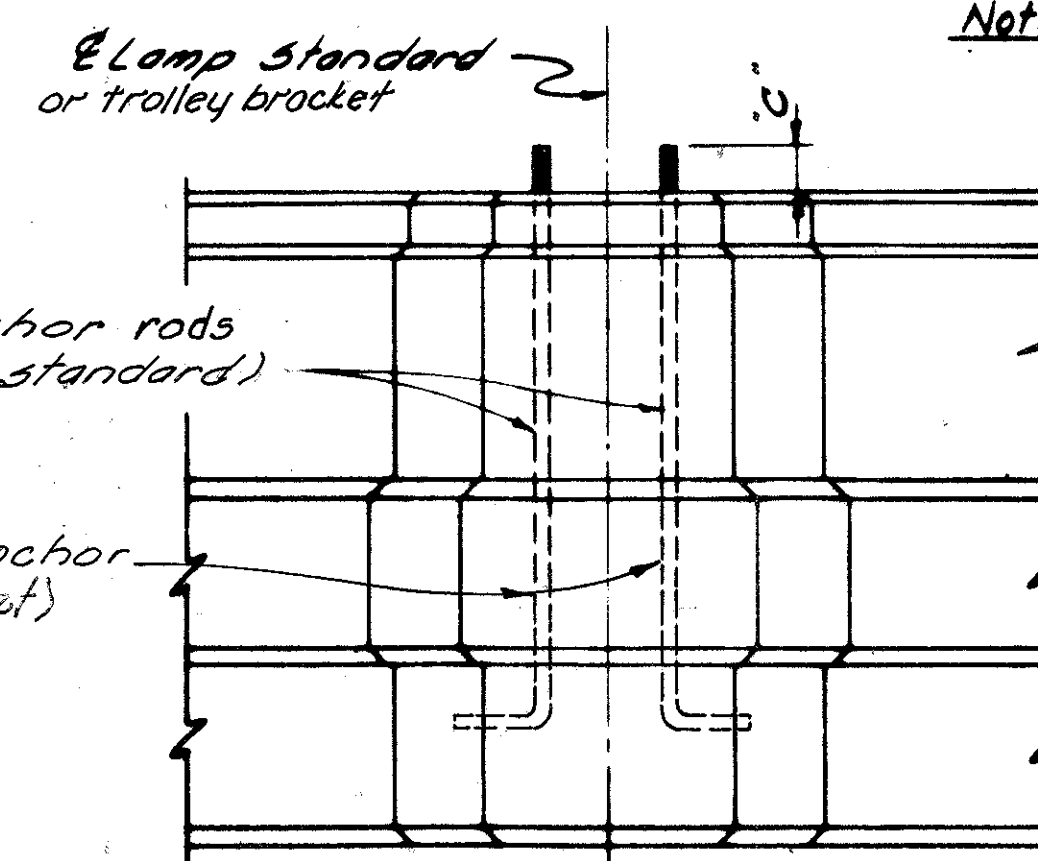
Trolley poles will be furnished and erected by Columbus Transit Company.

Refer to Sheets 106 and 108 for additional bridge lighting details.



### LAMP STANDARD DETAILS

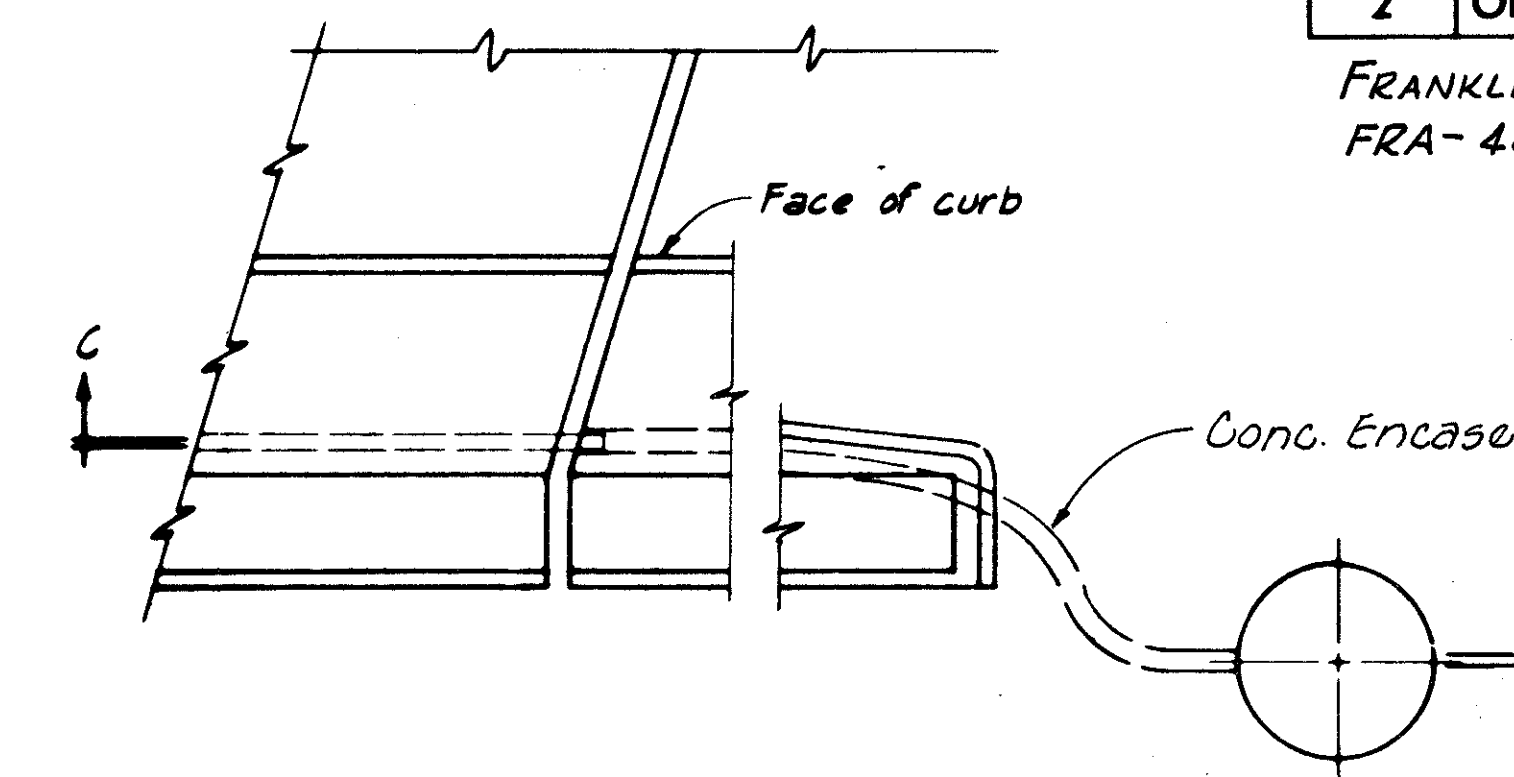
1/2" x 3'-6" steel anchor rods (trolley bracket)



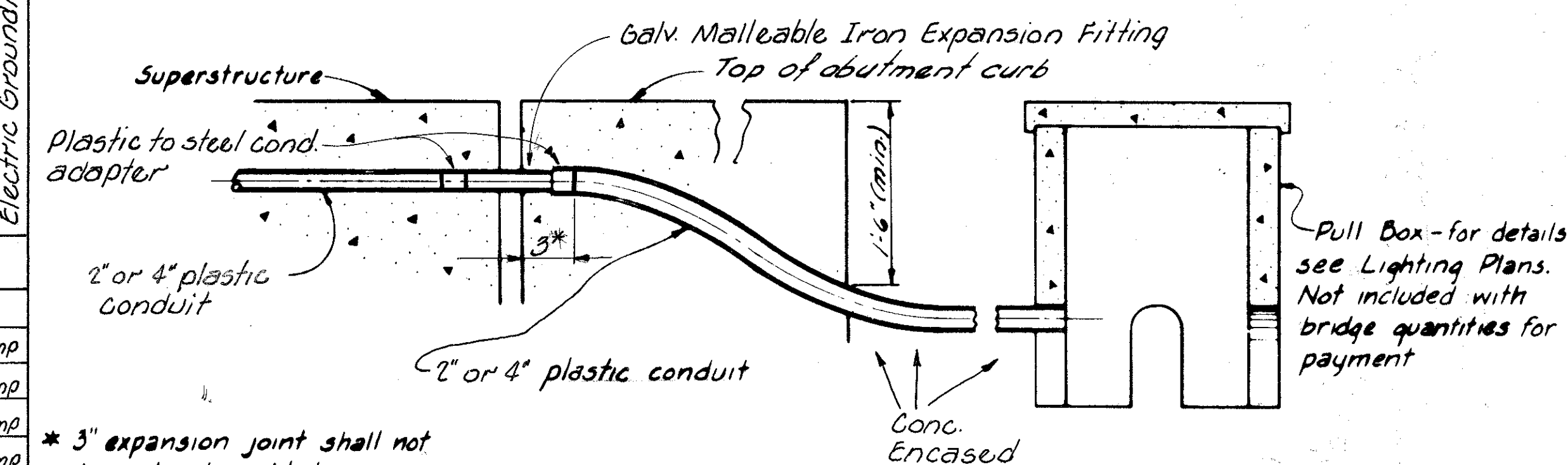
### VIEW A-A

Mark	N <sup>o</sup>	Length	Wgt.	Type	A	B	C	D	E	Shp.
L570	4	1'-10"	8							st.
L571	2	1'-4"	3							st.
L572	3	4'-1"	13	1		8"	3'-0"	8"		bt.
L573	3	5'-1"	16	1		1'-2"	3'-0"	1'-2"		bt.
L574	2	3'-10"	8	1		8"	2'-9"	8"		bt.
L575	2	4'-10"	10	1		1'-2"	2'-9"	1'-2"		bt.
L576	3	3'-10"	12	1	1'-10"	2'-2"				bt.
L577	2	3'-7"	7	1	1'-7"	2'-2"				bt.

Item 5-25 Quantities											
Description	Lamp Standard	Mercury Vapor Luminaire	Mercury Underpass Luminaire	Pole and Bracket Cable (single conductor)	Main Circuit Cable (single conductor)	2" Main Circuit Conduit & Fittings	Mercury Underpass Cable (single conductor)	Mercury Underpass Conduit	Electric Lighting System, as per plan	4" Lighting Conduit & Fittings	Electric Grounding System
Bridge No.	Unit	Each	Each	Each	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lump Sum	Lin. Ft.	Lump
FRA-40-1279											
FRA-40-1300	1	1	28	82	298	149	1072	301		572	Lump
FRA-40-1310	3	3	44	246	804	402	1778	450			Lump
FRA-40-1325	1	1		82	276	138					Lump
FRA-40-1334	2	2		164	460	230					Lump
FRA-40-1361	2	2		164	552	276			1066		Lump



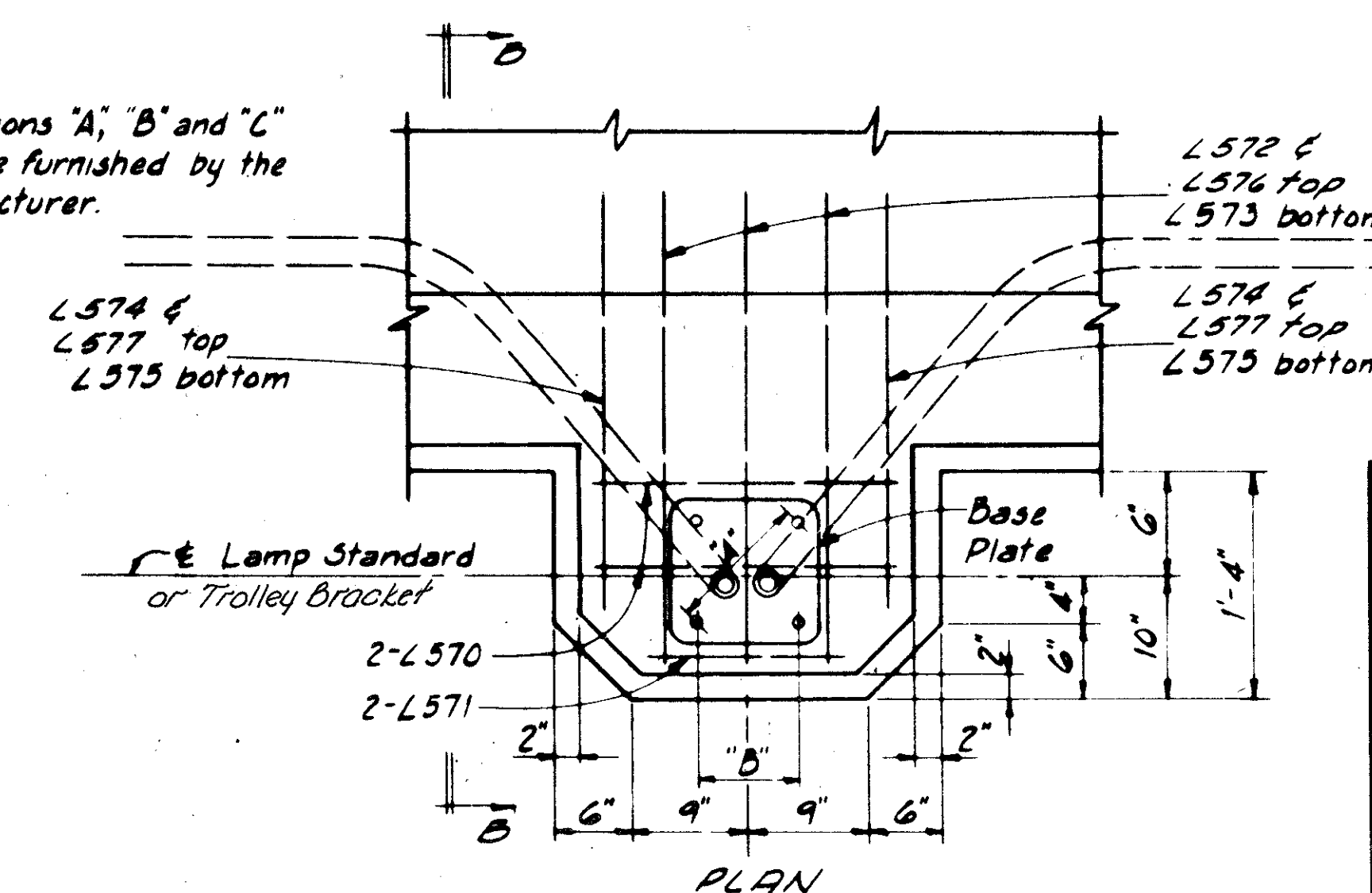
### DETAIL OF LIGHTING CONDUIT AT ABUTMENT



### SECTION C-C

\* 3" expansion joint shall not be solvent welded.

Note: Dimensions "A", "B" and "C" shall be furnished by the manufacturer.



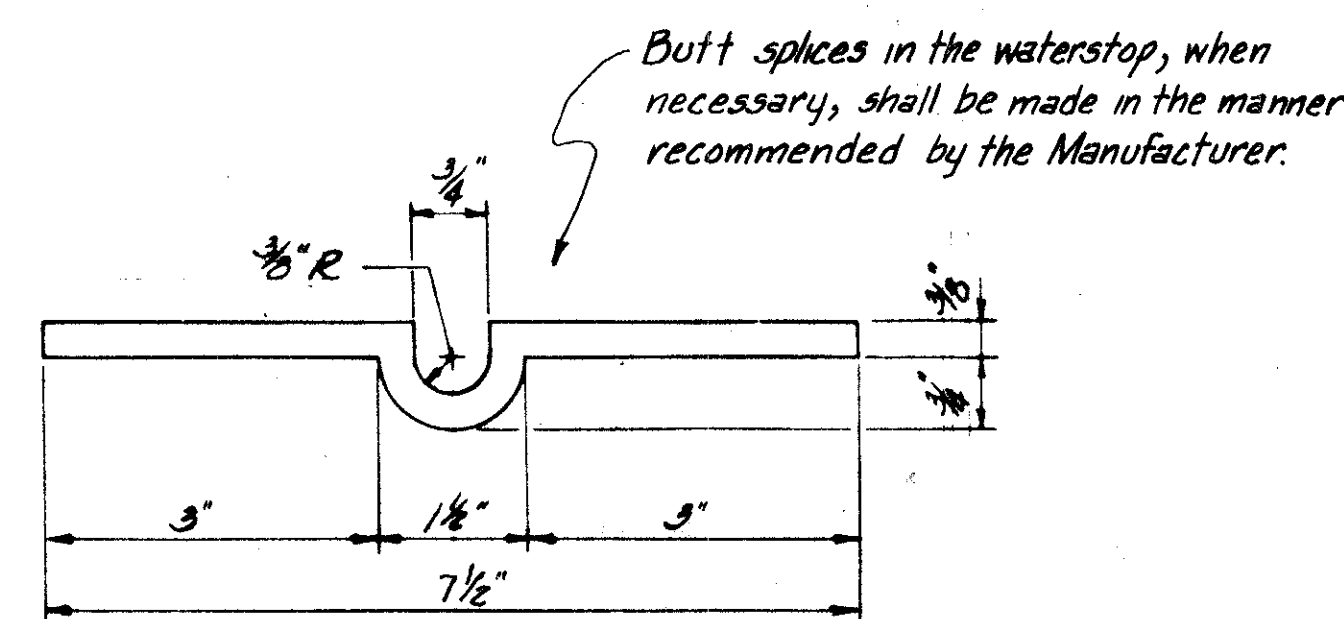
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

### ELECTRICAL LIGHTING SYSTEM and TROLLEY BRACKET DETAILS

FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
					TLU 5-18-62	

FRANKLIN COUNTY  
FRA-40-12.82



POLYVINYL WATERSTOP

# POLYVINYL PLASTIC WATERSTOP MATERIAL SPECIFICATIONS

Tensile strength, lbs per sq. inch min.

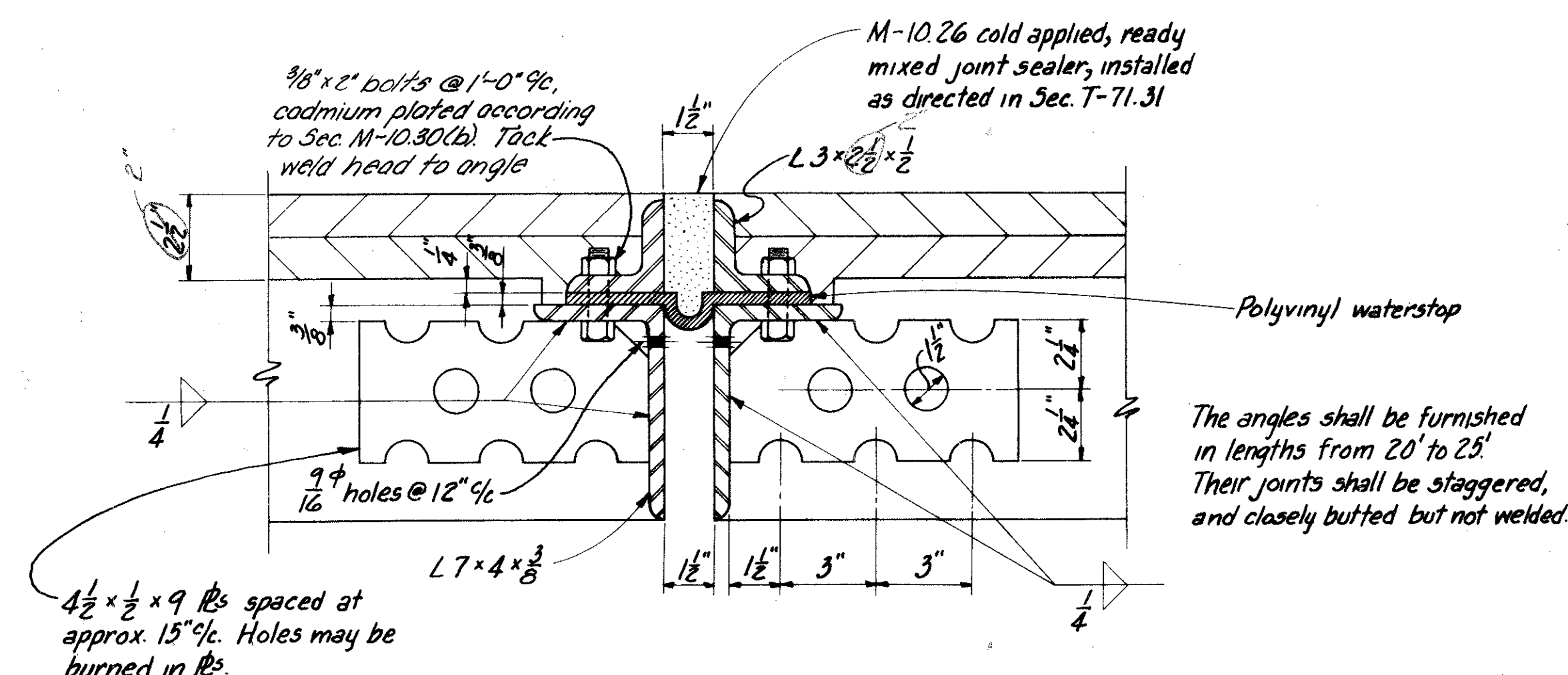
Elongation of break, percent min.

Temperature range

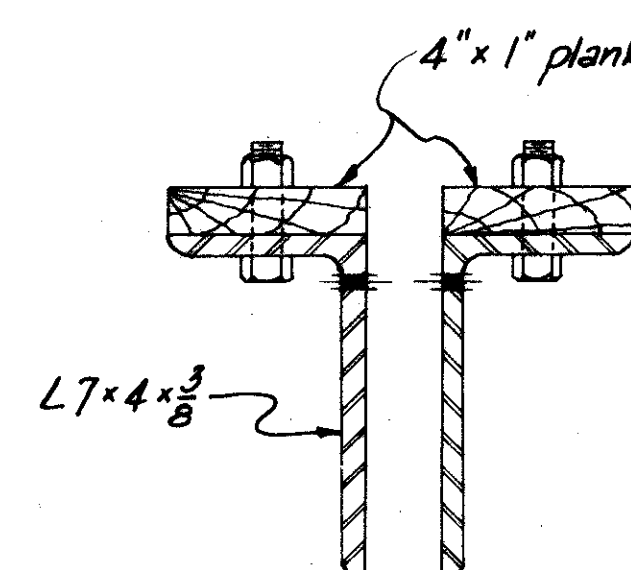
Cold brittleness test ASTM D746-55T

specific gravity, max

*Durometer hardness*



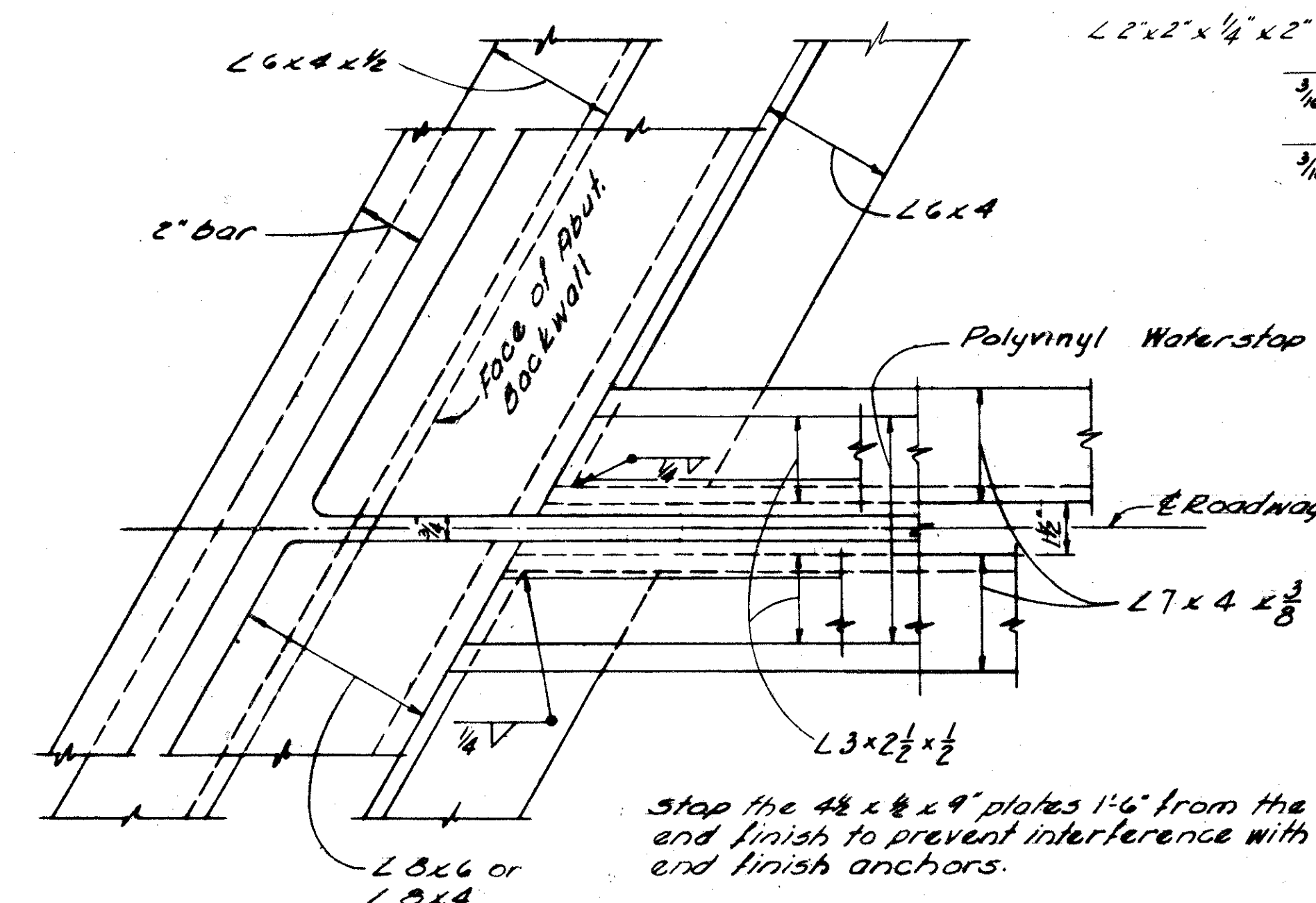
SEAL FOR CENTERLINE JOINT IN DECK  
(To form joint in bituminous wearing surface see Detail "A")



DETAIL "A"  
(Suggested joint forming method)

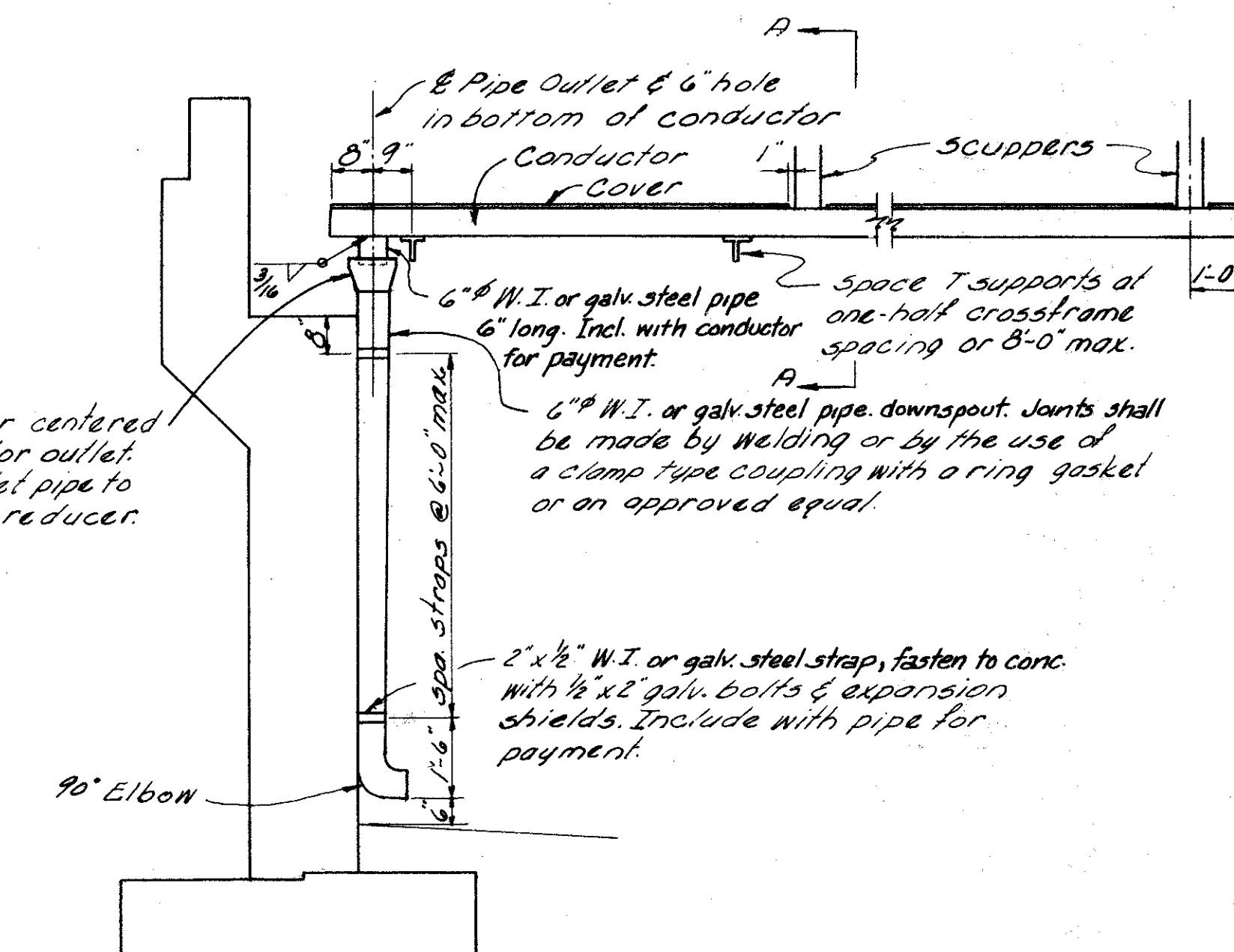
NOTE: Before concrete is poured secure 4"x1" planks to 1s 7x4x $\frac{3}{8}$ . When concrete has set, remove 4"x1" planks and secure waterstop and 1s 3x2 $\frac{1}{2}$  x $\frac{1}{2}$  to 1s 7x4x $\frac{3}{8}$  to act as form for bituminous wearing surface.

NOTE: All the structural shapes and bolts are included with structural steel for payment. Polyvinyl waterstop, and cold applied ready mixed joint sealer are included with Item Special polyvinyl waterstop for payment.



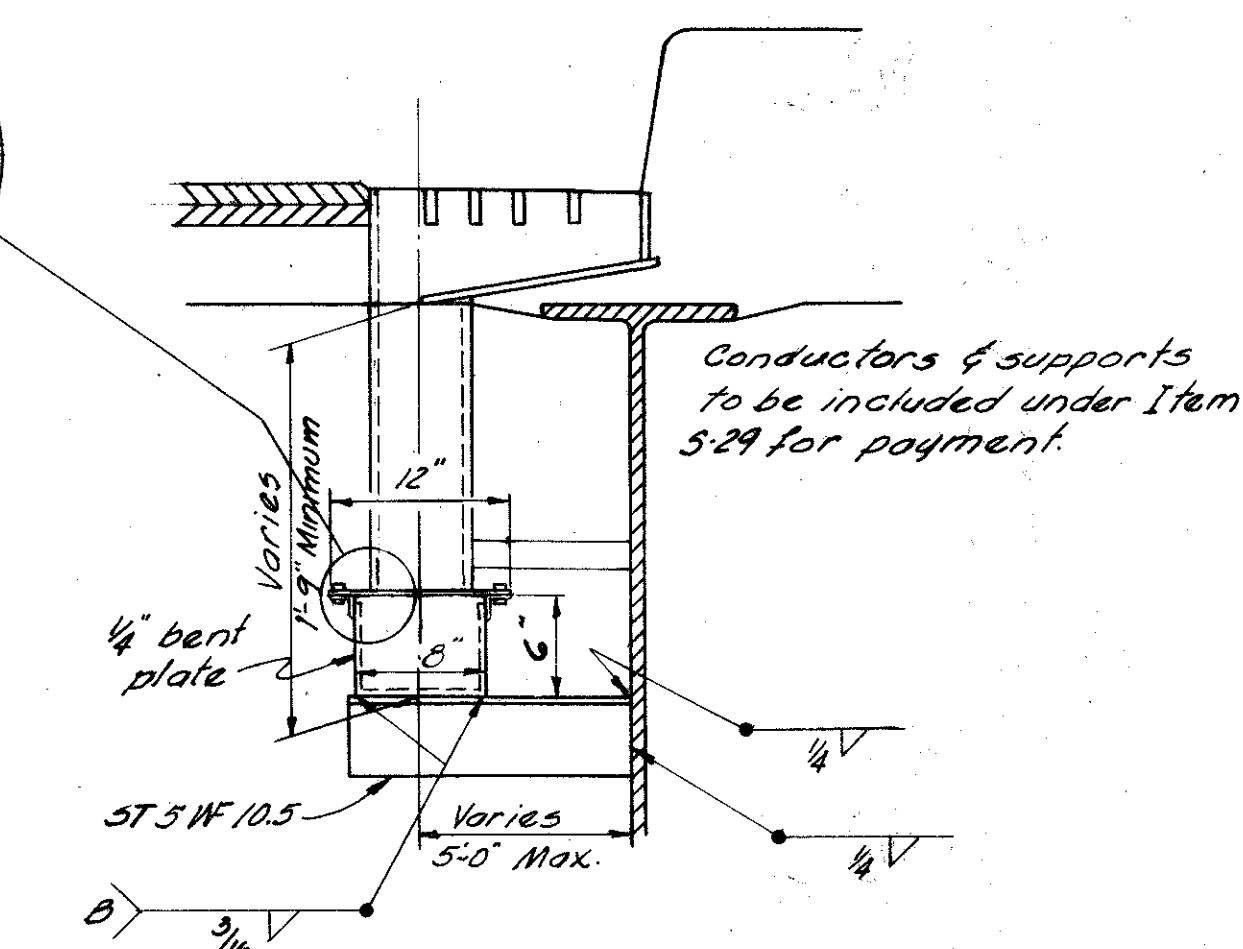
PLAN OF JOINT AT END FINISH

See the plans for each bridge for the actual direction and amount of skew.



DOWNSPOUT & CONDUCTOR DETAIL  
(longitudinal section)

Removable cover 12" x 4" pl. furnish in 3'-0" max. lengths, locate  $\frac{1}{4}$ " holes 1'-0" from ends of each cover. Use  $\frac{3}{8}$ " washers and  $\frac{3}{8}$ " x 1" stainless steel bolts and nuts.



SECTION A-F

Conductor and cover shall be made of wrought iron or galv. steel. Bottom of scupper shall be flush with top of conductor. Slope conductor parallel to slope of deck but with  $\frac{1}{4}$ "/ft. minimum.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

DETAIL OF  
LONGITUDINAL JOINT IN DECK  
and  
DOWNSPOUT AND CONDUCTOR DETAIL  
FRANKLIN COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	BDB			TLU	5-10-62	7-9-6



RECEIVED  
SEP 24 1963



Westbound  
Ramp Curve Data  
P.I. 3+47.04  
 $\Delta = 43^\circ 11' 40''$   
 $D_c = 10^\circ 45' 00''$   
 $R = 532.99$   
 $L_c = 401.81$

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

167  
250

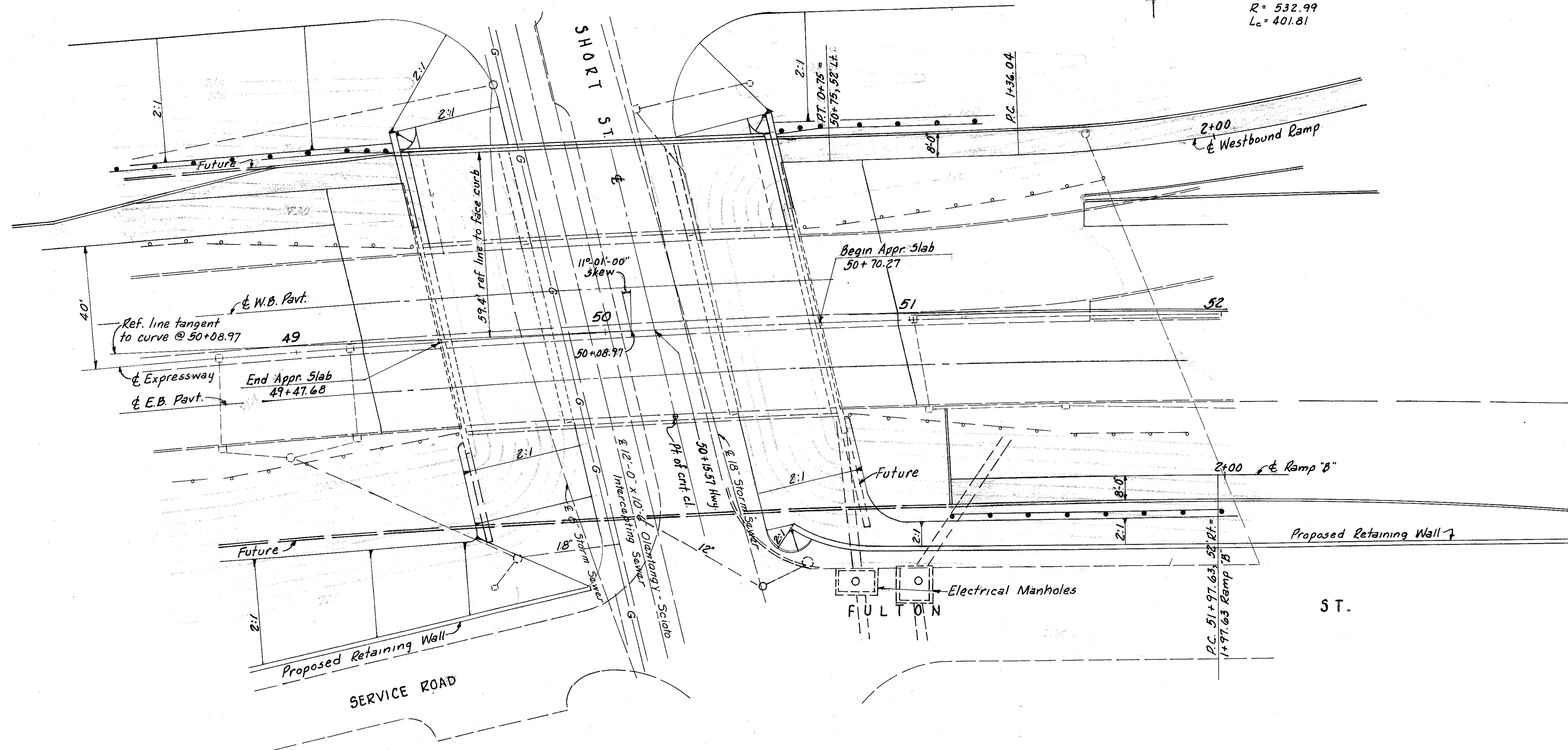
FRANKLIN COUNTY  
FRA-40-12.82

### PROPOSED STRUCTURE

Type: Continuous steel beams with reinforced concrete deck and substructure.  
Spans: 32'-0", 54'-0", 32'-0" g/c brgs. (Along tangent)  
Roadway: 57.9' (min) f/c curbs west bound part, with a 1'-2" safety curb.  
Loading: CF-2000 (adequate for AASHTO alternate loading)  
Wearing Surface: 2" Asphaltic Conc.  
Skew: 11° 01' 00" Rt. Fwd.  
Alignment: 1° 20' Curve Rt. Fascia - parallel to ref. line.  
Superelevation: 0.023'/  
Approach Slabs: (25' long), see sheet # 168

### EXISTING STRUCTURE

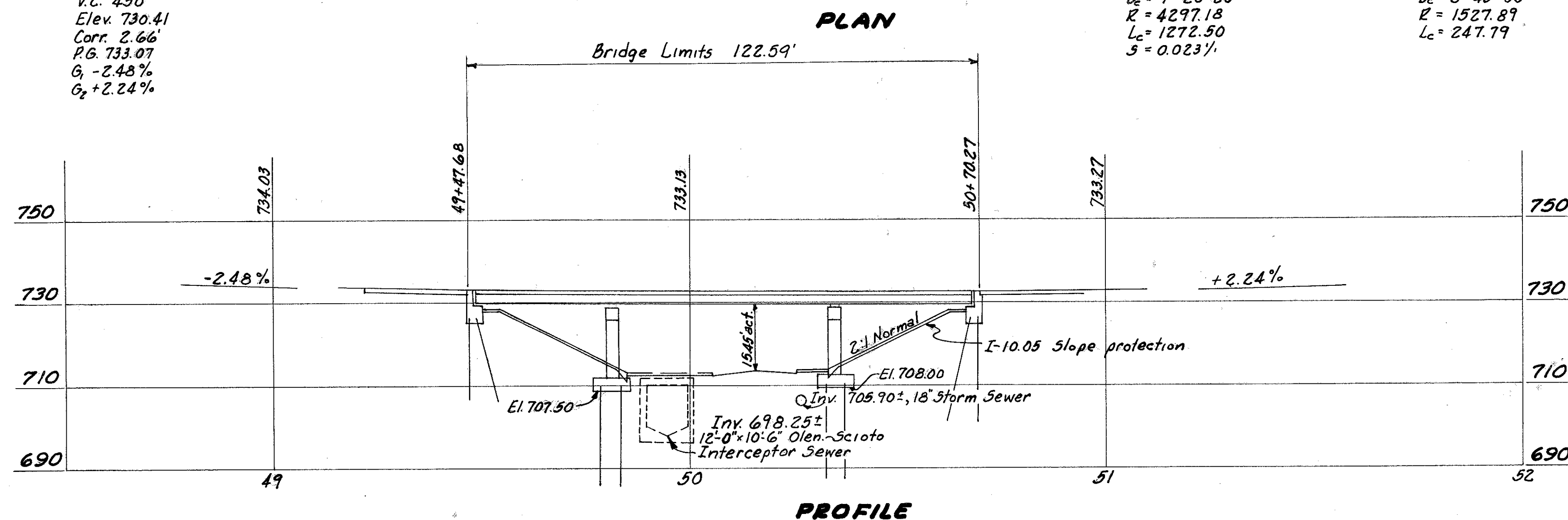
Type: Continuous steel beams with reinforced concrete deck and substructure.  
Spans: 32'-0", 54'-0", 32'-0" g/c brgs. (Along tangent)  
Roadway: 56' f/c 2'-0" safety curbs with median (3'-0" f/c curbs), conc. parapet and aluminum railing.  
Loading: CF-2000  
Wearing Surface: 2" Asphaltic Conc.  
Skew: 11° 01' 00" Rt. Fwd.  
Alignment: 1° 20' Curve Rt.  
Superelevation: 0.023'/  
Approach Slabs: (25' long)



P.V.I. Sta. 50+25  
V.C. 450'  
Elev. 730.41  
Corr. 2.66'  
P.G. 733.07  
 $G_1 = -2.48\%$   
 $G_2 = +2.24\%$

MAIN CURVE DATA  
P.I. Sta. 49+70.57  
 $\Delta = 16^\circ 58' 00''$   
 $D_c = 1^\circ 20' 00''$   
 $R = 4297.18$   
 $L_c = 1272.50$   
 $S = 0.023\%$

RAMP "B" CURVE DATA  
P.I. Sta. 3+21.80  
 $\Delta = 9^\circ 17' 32''$   
 $D_c = 3^\circ 45' 00''$   
 $R = 1527.89$   
 $L_c = 247.79$



Note: All piling shall be 12" Cast-in-place, Reinforced Concrete Piles. Estimated average pile length is 45' for the West Abut., 50' for the East Abut., and 30' for the Piers.

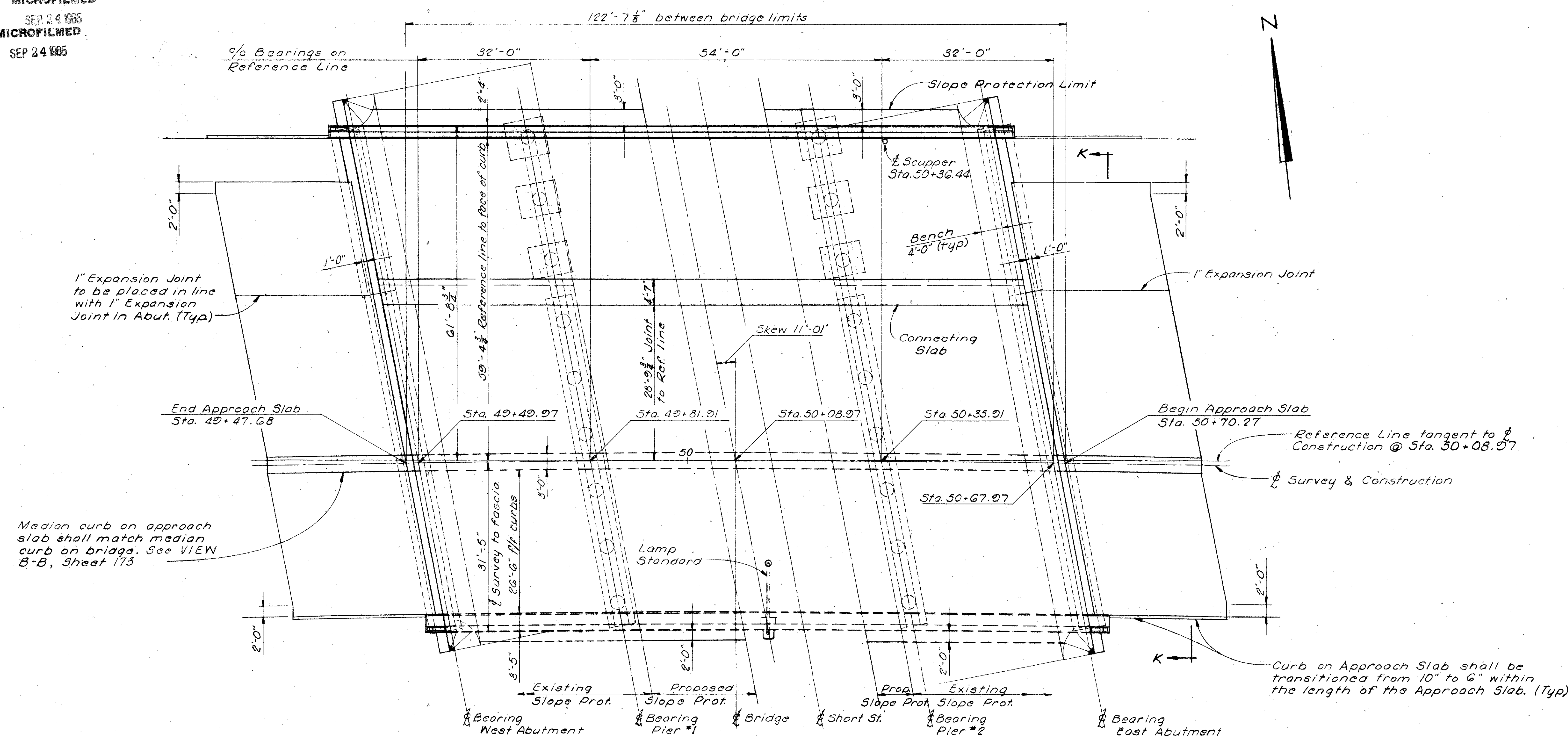
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SITE PLAN						
BRIDGE N° FRA-40-1279 SOUTH INNERBELT OVER SHORT STREET						
FRANKLIN COUNTY STA. 50+15.57						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.R.W.	C.R.W.		TLU	TLU	5-9-62	7-9-63

MICROFILMED  
SEP 24 1985  
MICROFILMED  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

168  
250

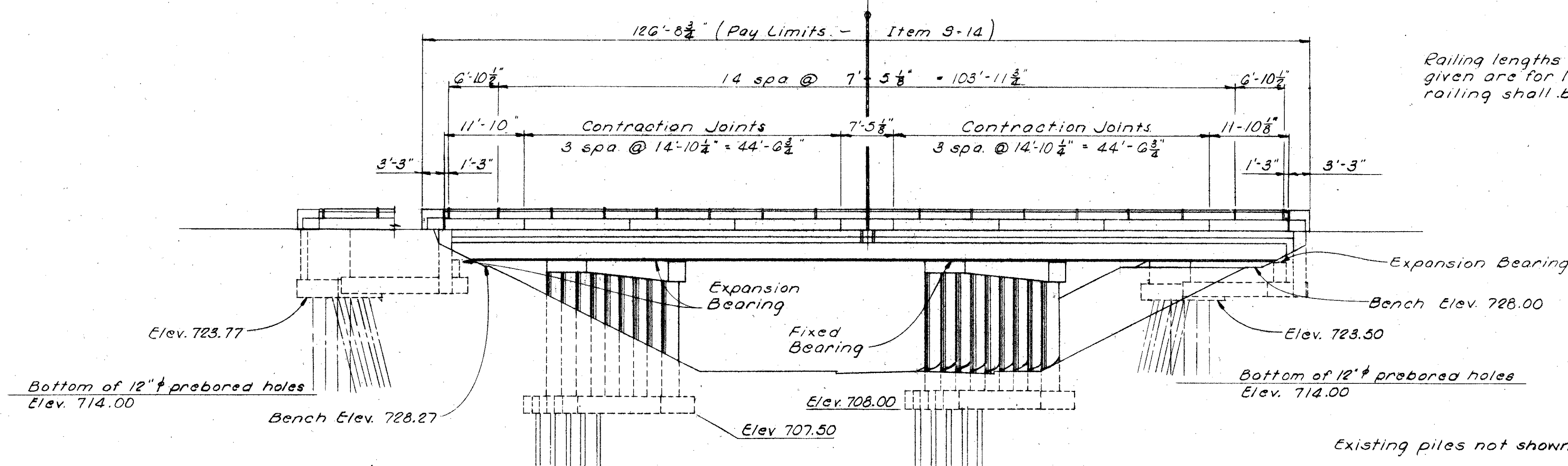
FRANKLIN COUNTY  
FRA-40-12.82



Median curb on approach slab shall match median curb on bridge. See VIEW B-B, Sheet 173

Curb on Approach Slab shall be transitioned from 10" to 6" within the length of the Approach Slab. (Typ)

PLAN

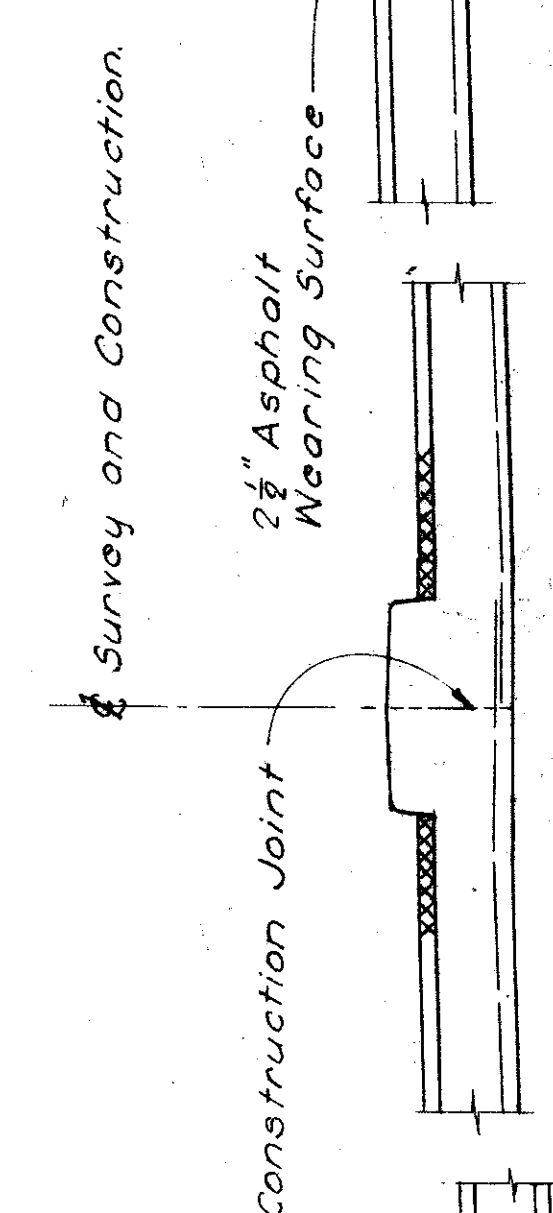


Railing lengths and contraction joint spacings given are for North Parapet. Existing aluminum railing shall be used and adjusted to fit.

ELEVATION

Expansion Joint (Type M-10.01)  
(No steel shall extend through joint.)

The existing approach slab shall be carefully removed so as not to disturb the existing dowel bars. New dowel bars are required only beyond the limits of the existing pavement.



SECTION K-K

Note: For details not shown see A5-1-54

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
GENERAL PLAN & ELEVATION BRIDGE N <sup>o</sup> FRA 40-1279 SOUTH INNERBELT over SHORT STREET FRANKLIN COUNTY STA 50+15.57							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
FND	FND		BETTIN	TLO	5-9-62		



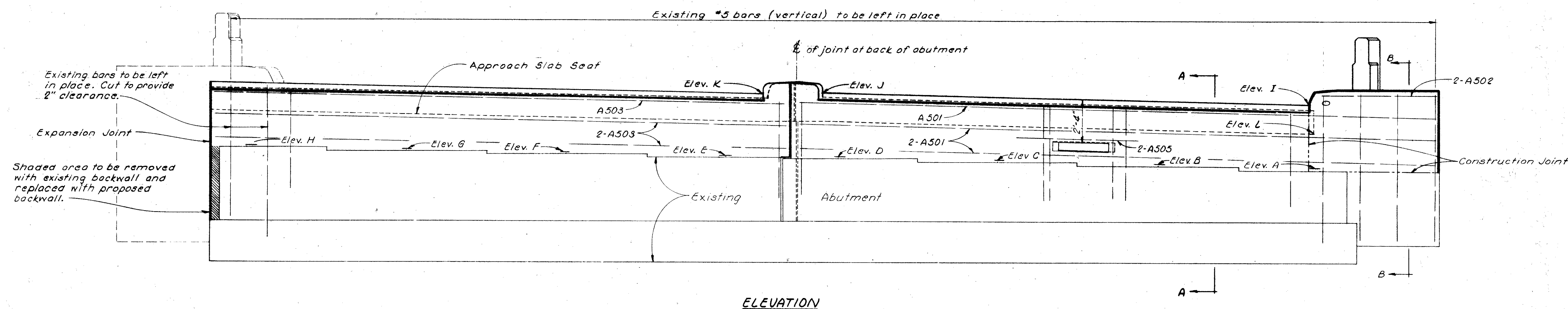
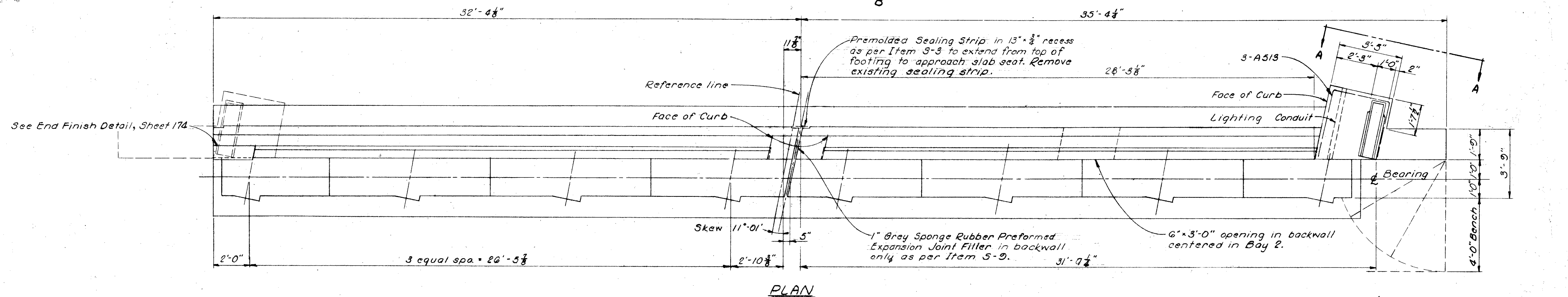
MICROFILMED

SEP 24 1985

MICROFILMED

SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY  
FRA-40-12.82169  
250

ELEVATIONS	
A	729.17
B	729.37
C	729.56
D	729.75
E	729.80
F	729.99
G	730.18
H	730.37
I	732.54
J	733.12
K	733.10
L	731.02

Elevations A thru H are at the bottom of the beams. Shim Beams to proper elevations.

Elevations I thru K are on top of 2" edge bar at face of curb.

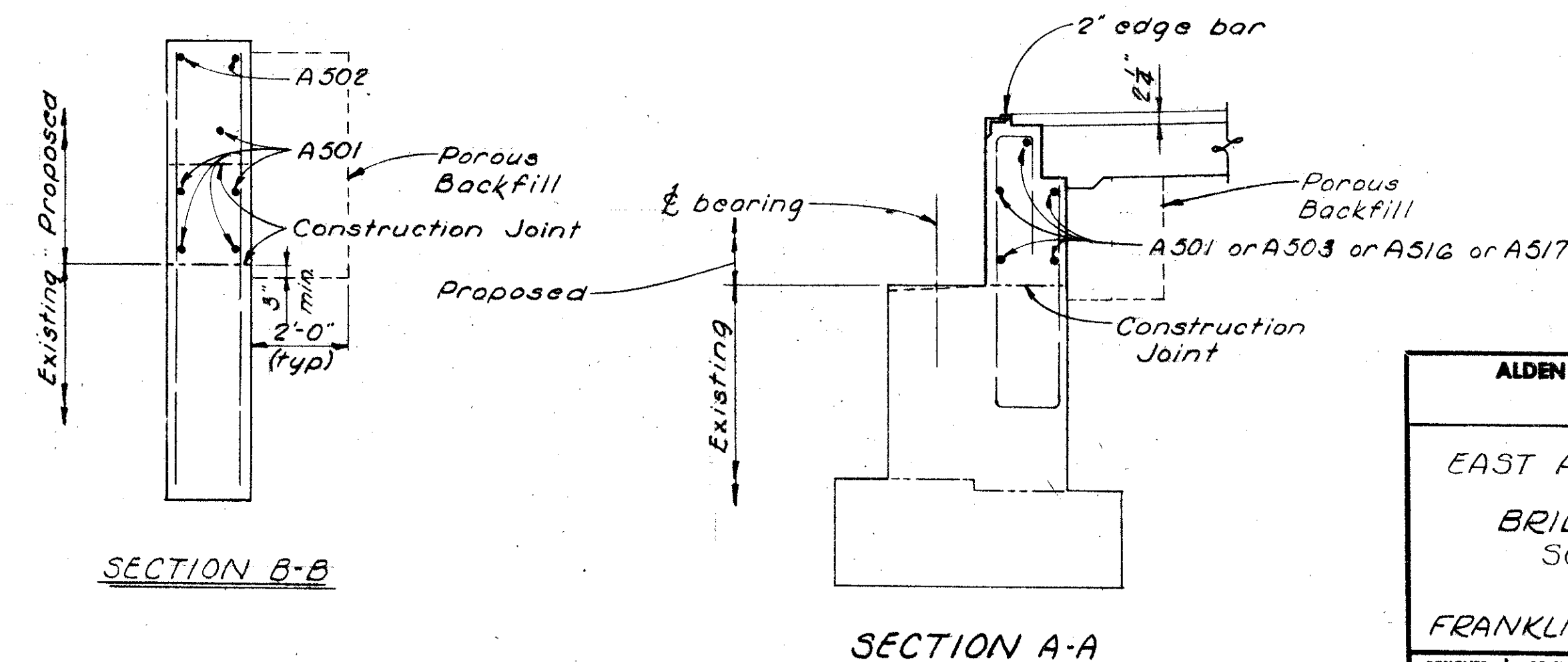
Porous backfill shall extend full length of abutments and wings and shall extend upward to the approach slab and to the shoulders and outward to the surface of the North Embankment slopes. The bottom shall slope at a minimum of 1/4" ft down to the North Embankment slopes. Excavation, therefore, in excess of that required for the construction of the abutment, shall be considered as paid for in the price per cu. yd. paid for porous backfill.

Existing vertical steel in the backwall shall be left in place in accordance with Item S-22.

Existing backwall except vertical steel shall be removed in accordance with Item S-22 and shall be disposed of in accordance with Item S-24.

For additional notes and details see Sheets 170, 173 and 174.

That portion of existing end finish which rests on the Abutment shall be removed with backwall.

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COLUMBUS, OHIO

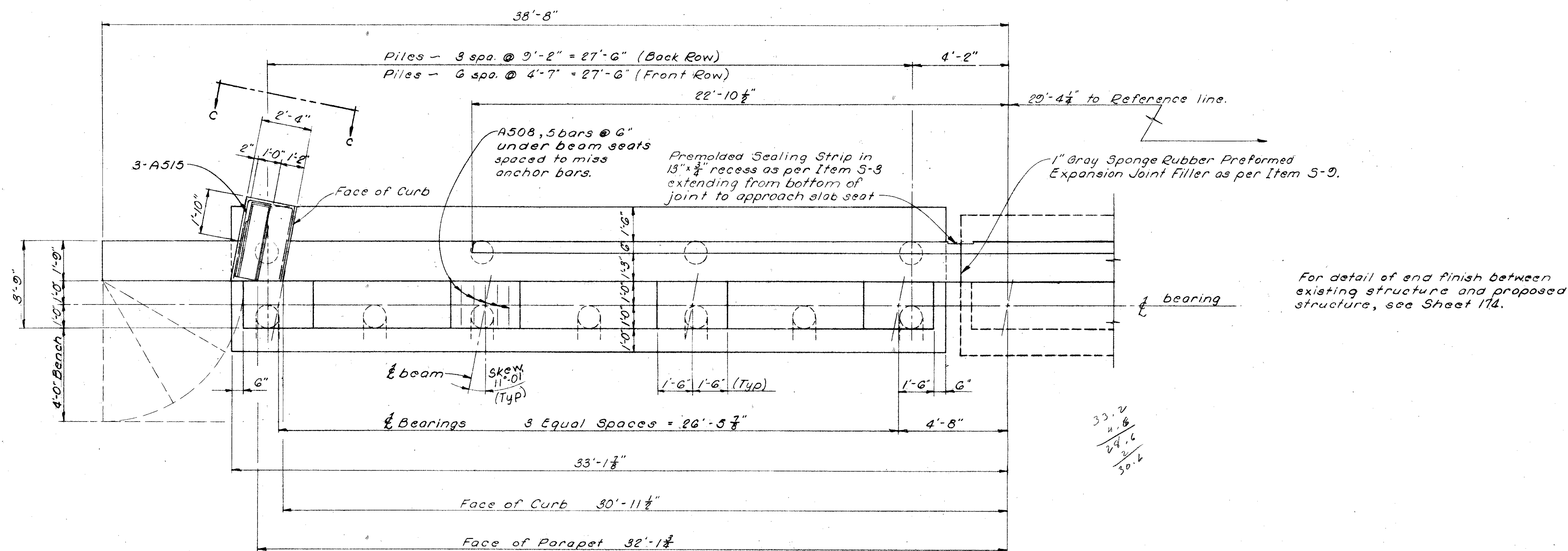
EAST ABUTMENT DETAILS

BRIDGE N<sup>o</sup> FRA-40-1270SOUTH INNERBELT over  
SHORT STREET

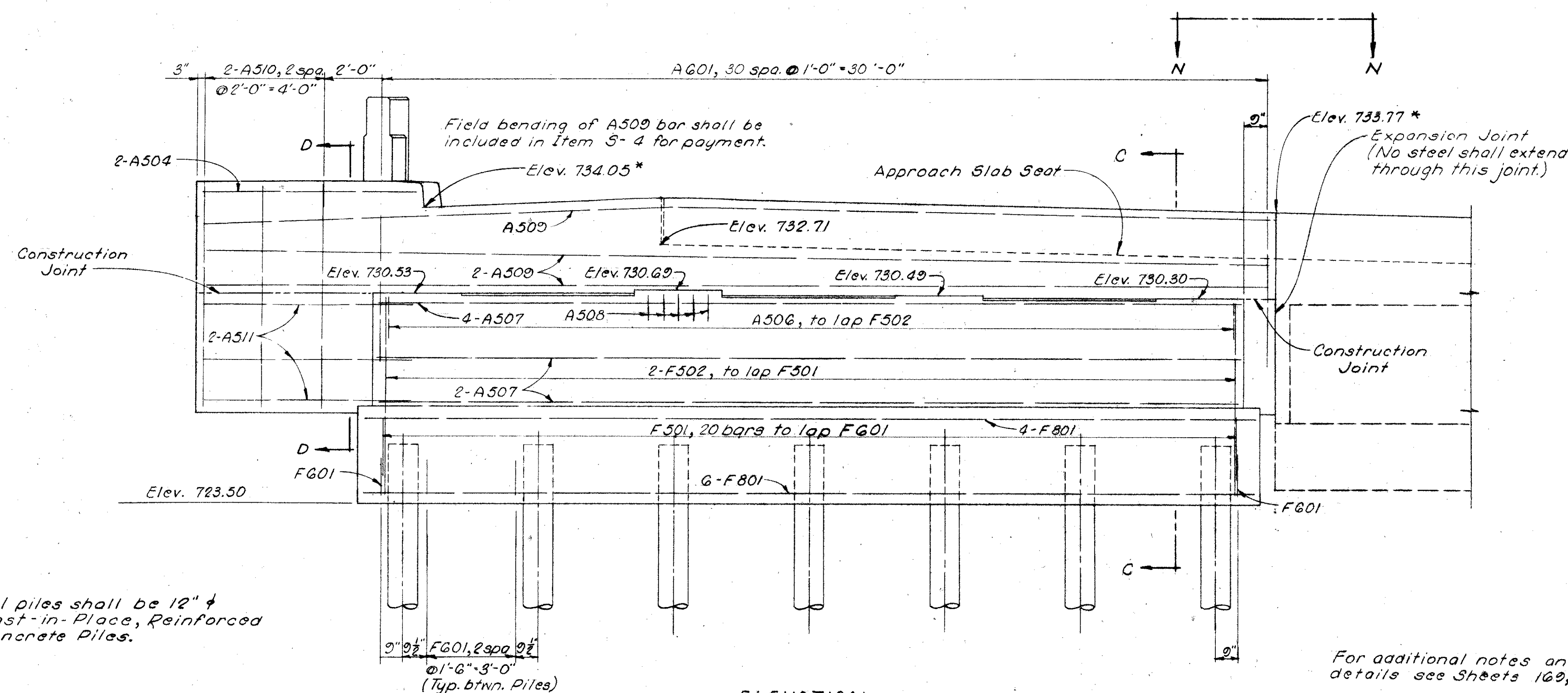
FRANKLIN COUNTY STA 50+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		BETTIN	7/10 5-962		

FRANKLIN COUNTY  
FRA-40-12.82



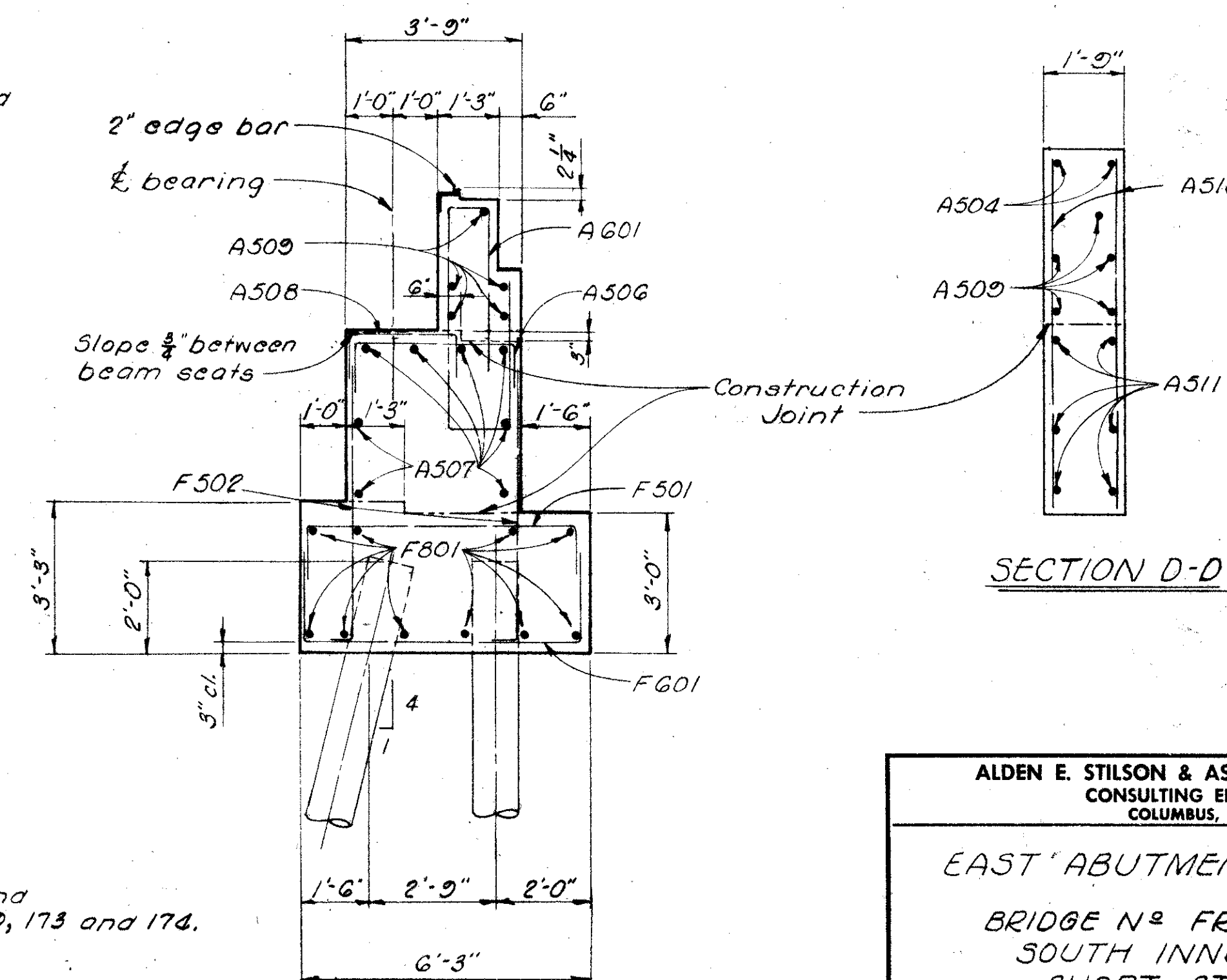
## PLAN

ELEVATION

All piles shall be 12"  $\phi$   
Cast-in-Place, Reinforced  
Concrete Piles.

\* Elevation marked with an asterisk is at top of 2" edge bar

For Porous Backfill details  
see Sheet 169.



SECTION D-D

SECTION C-C

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

EAST ABUTMENT DETAILS  
BRIDGE N° FRA-40-1272  
SOUTH INNERBELT over  
SHORT STREET

FRANKLIN COUNTY STA. 50+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
FWD	FWD		BETTIN	TLU	5-9-62	

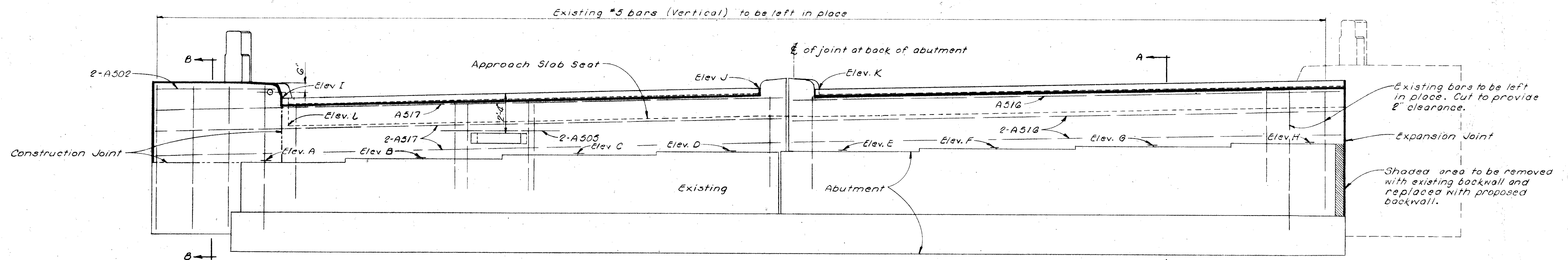
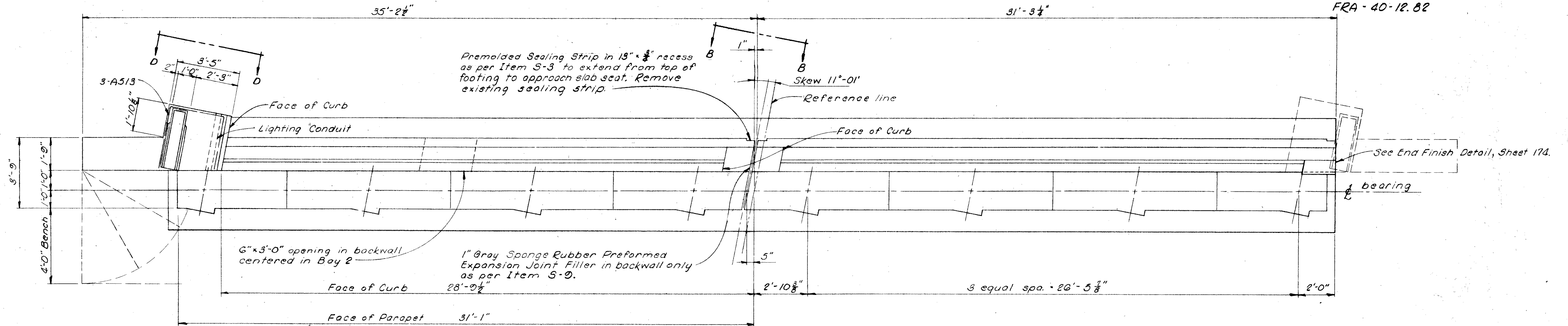


MICROFILMED  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

171  
2.50

FRANKLIN COUNTY  
FRA-40-12.82



ELEVATIONS	
A	729.44
B	729.68
C	729.87
D	730.08
E	730.14
F	730.35
G	730.57
H	730.78
I	732.82
J	733.47
K	733.45
L	731.30

Elevations A thru H are at the bottom of the beams. Shim beams to proper elevations.

Elevations I thru K are on top of 2" edge bar at face of curb.

For additional notes and details see Sheets 162, 172, 173 and 174.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
WEST ABUTMENT DETAILS BRIDGE N <sup>o</sup> FRA-40-1279 SOUTH INNERBELT over SHORT STREET FRANKLIN COUNTY STA. 50+15.57						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		GETTIN	720	5-9-62	



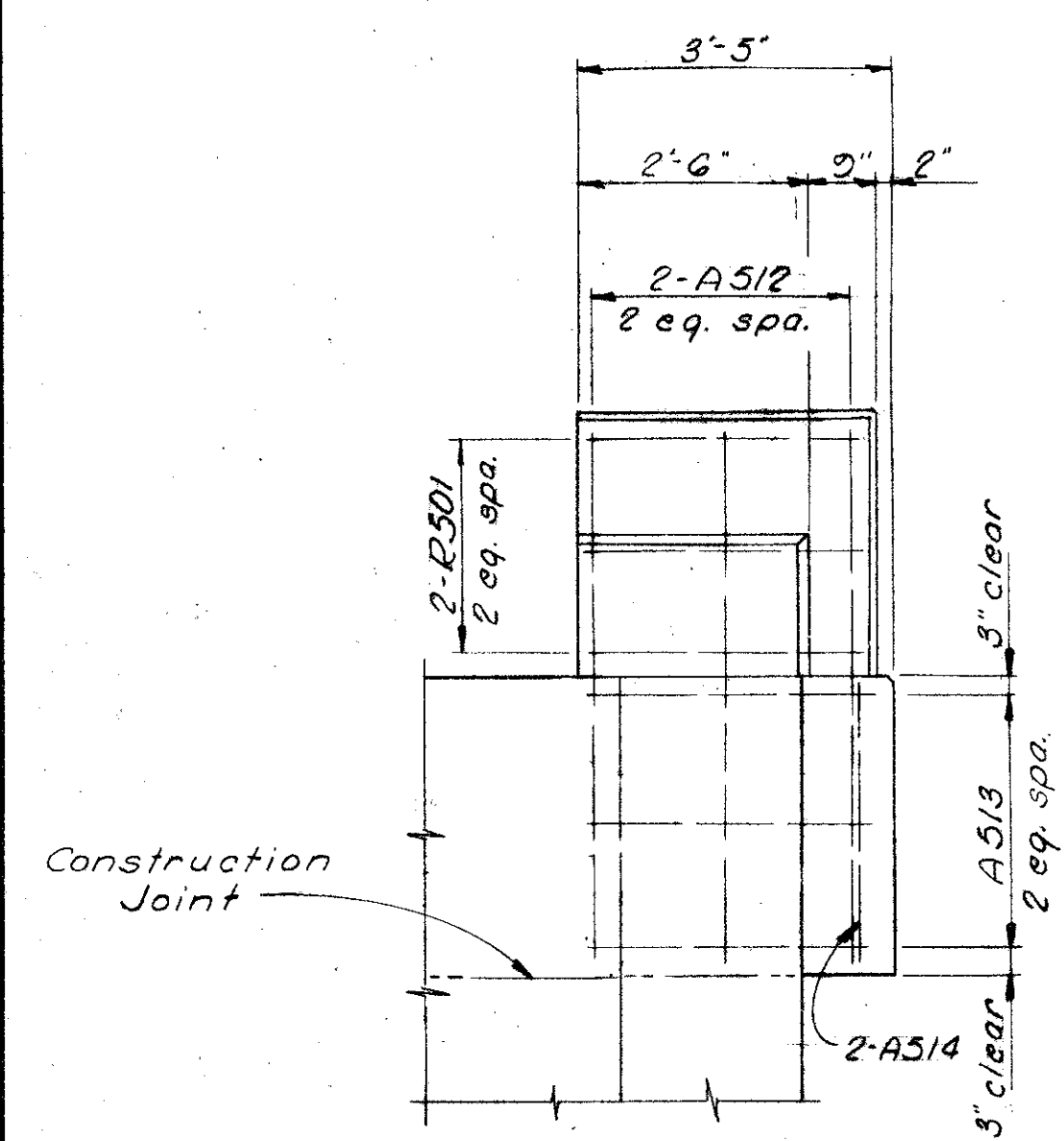


MICROFILMED  
SEP 24 1985  
SEP 24 1985

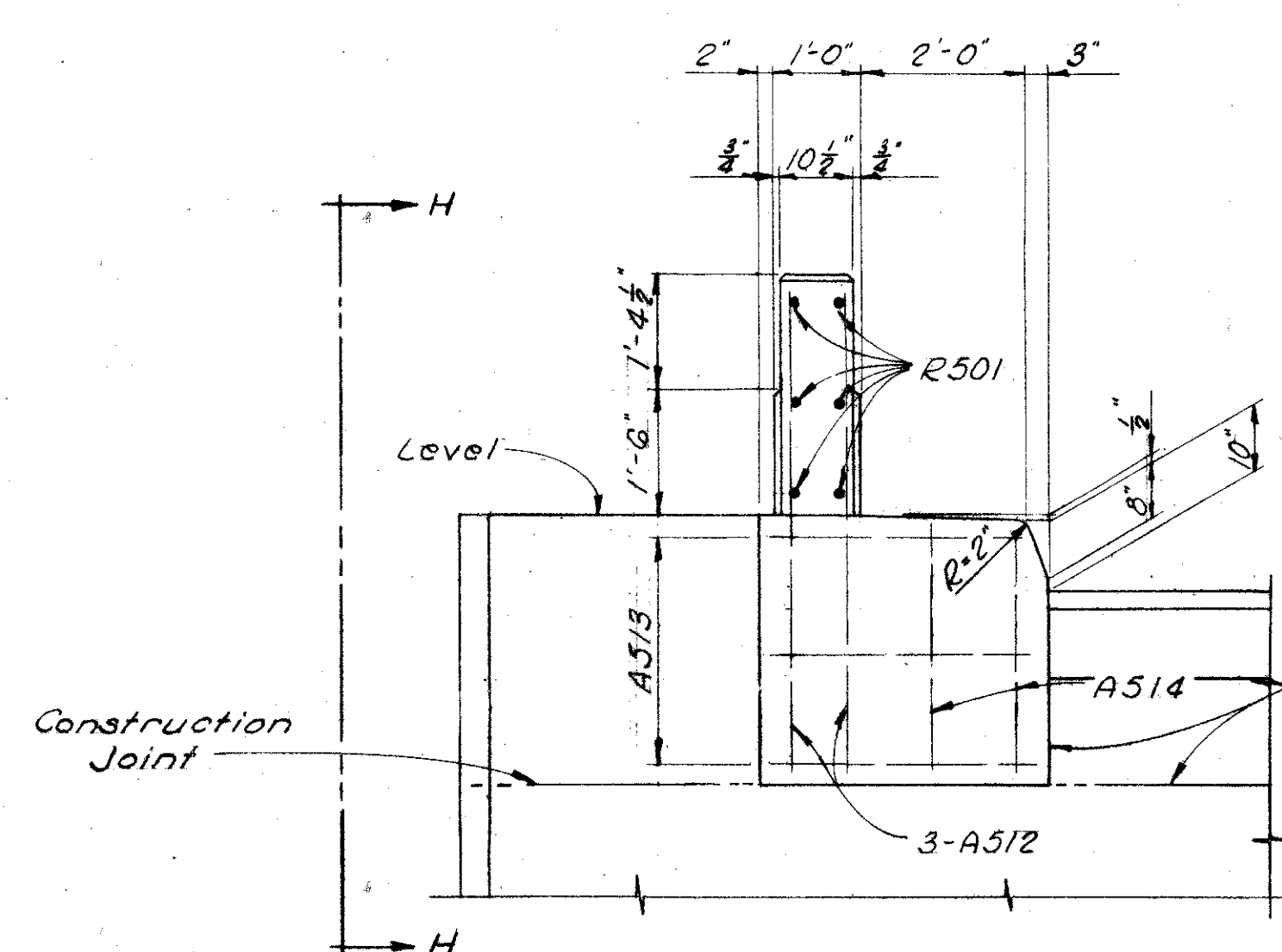
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

173  
250

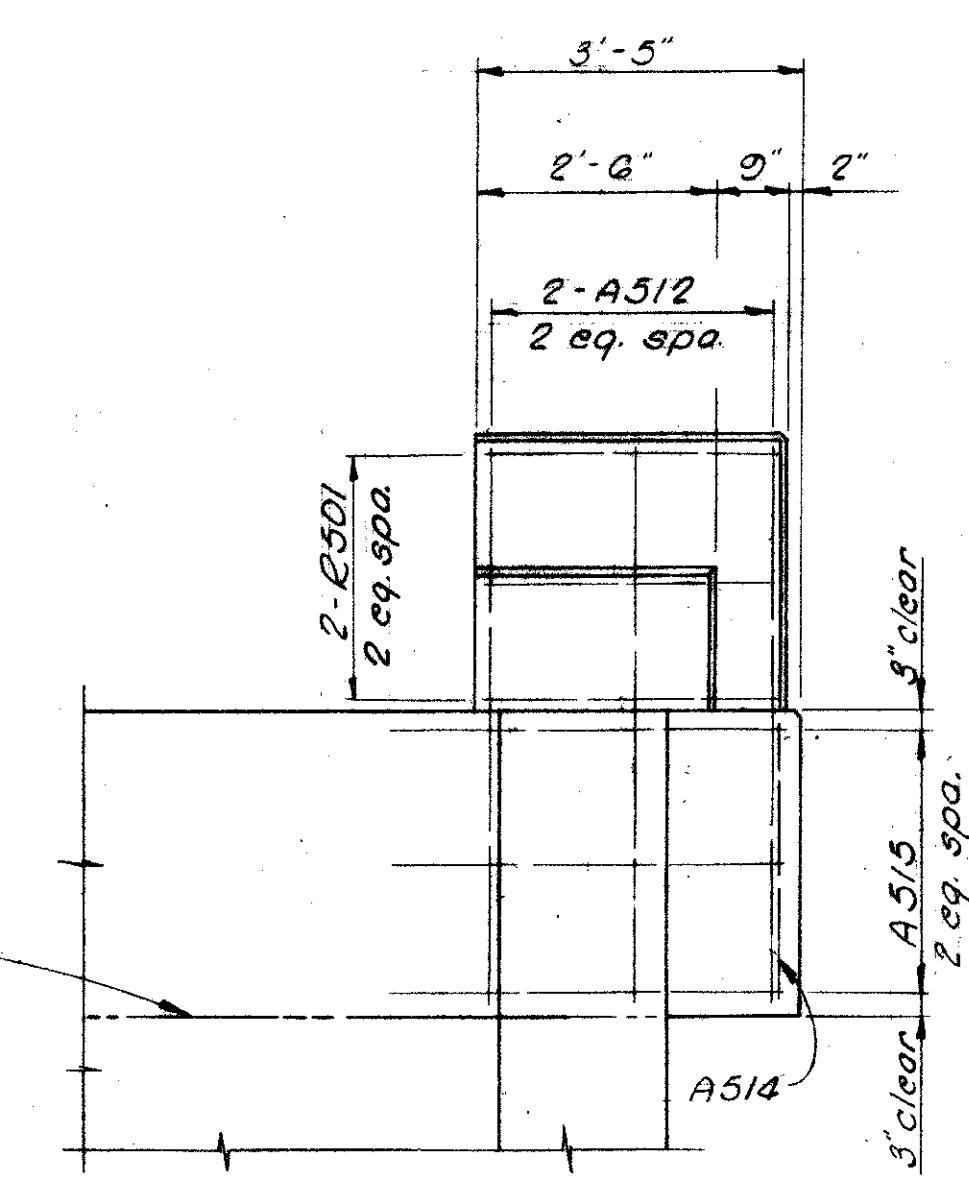
FRANKLIN COUNTY  
FRA-40-12.82



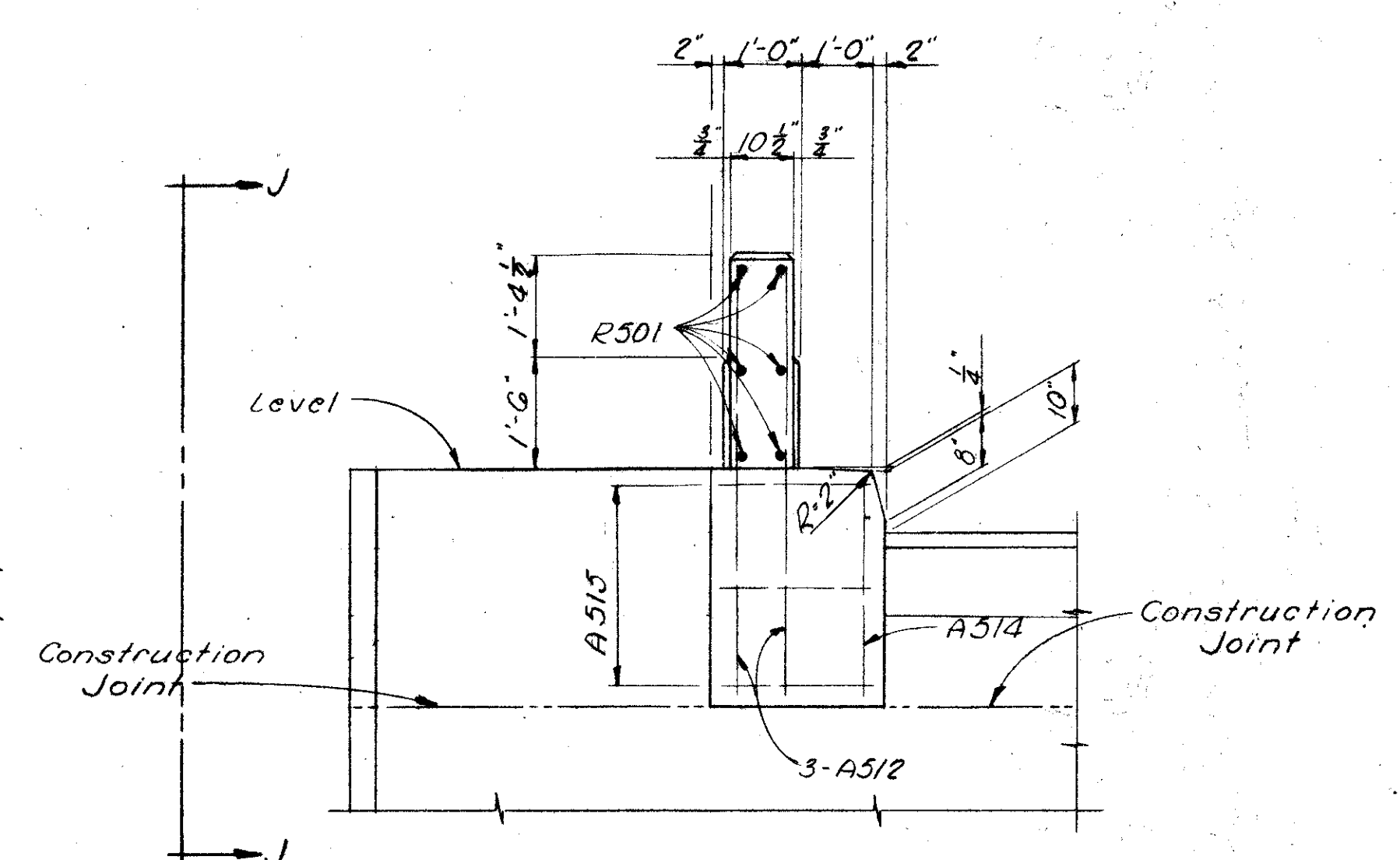
VIEW H-H



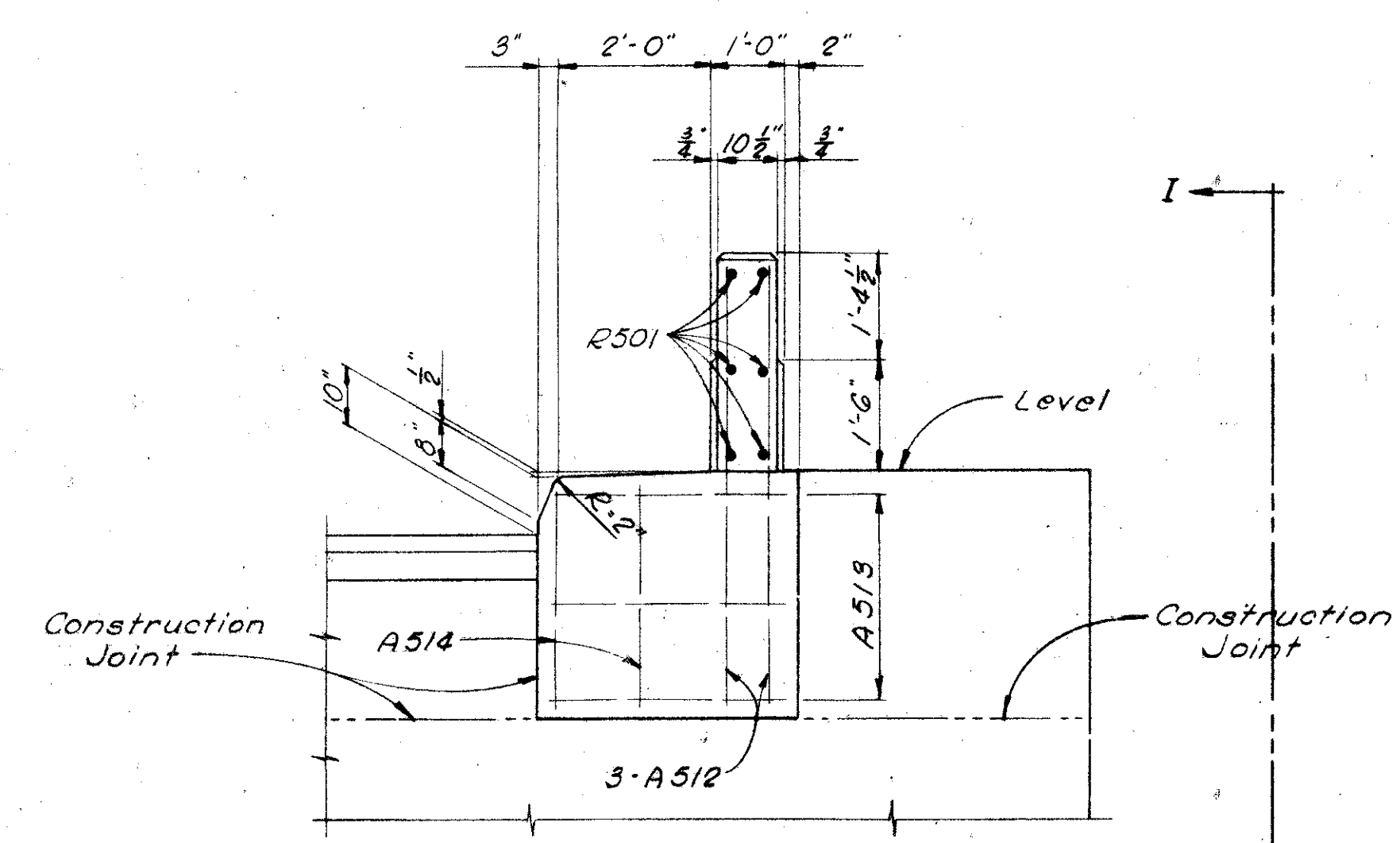
VIEW A-A



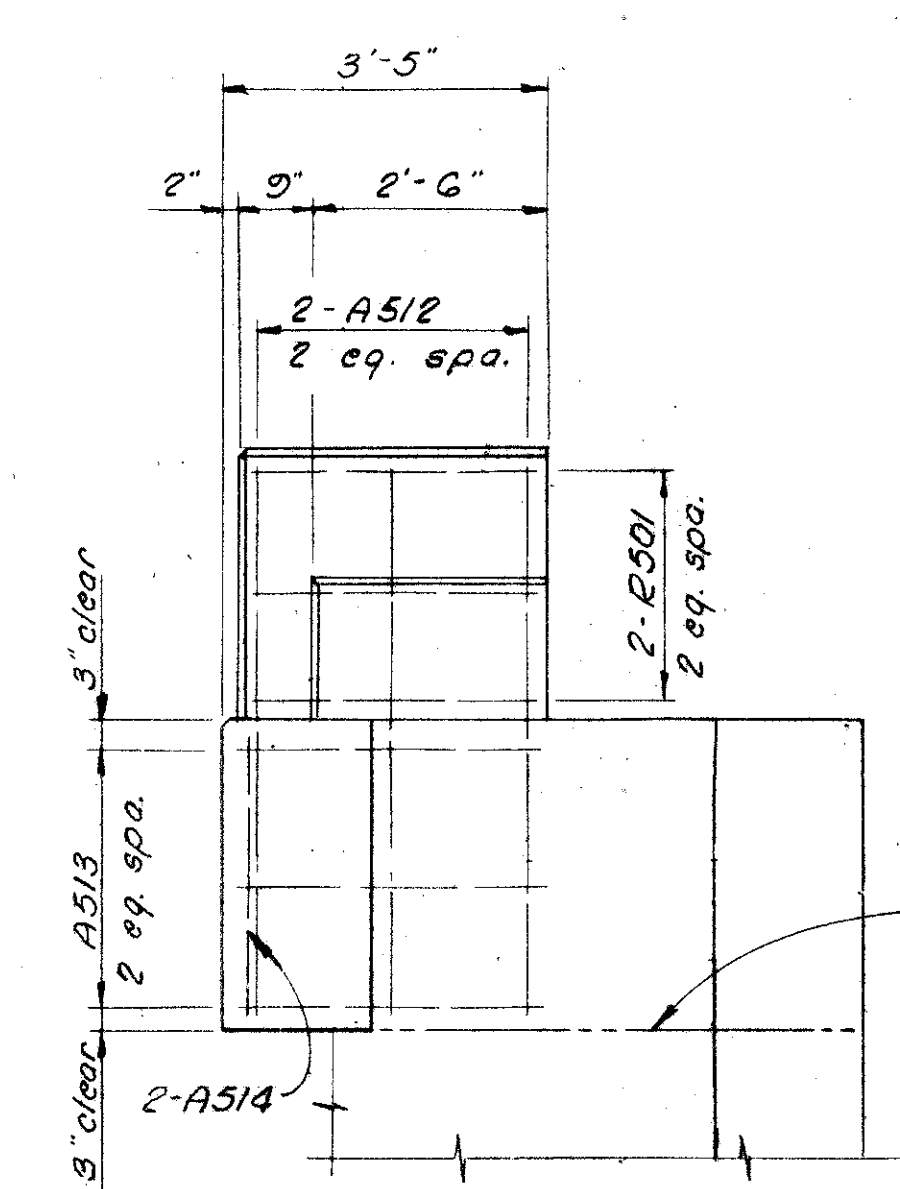
VIEW J-J



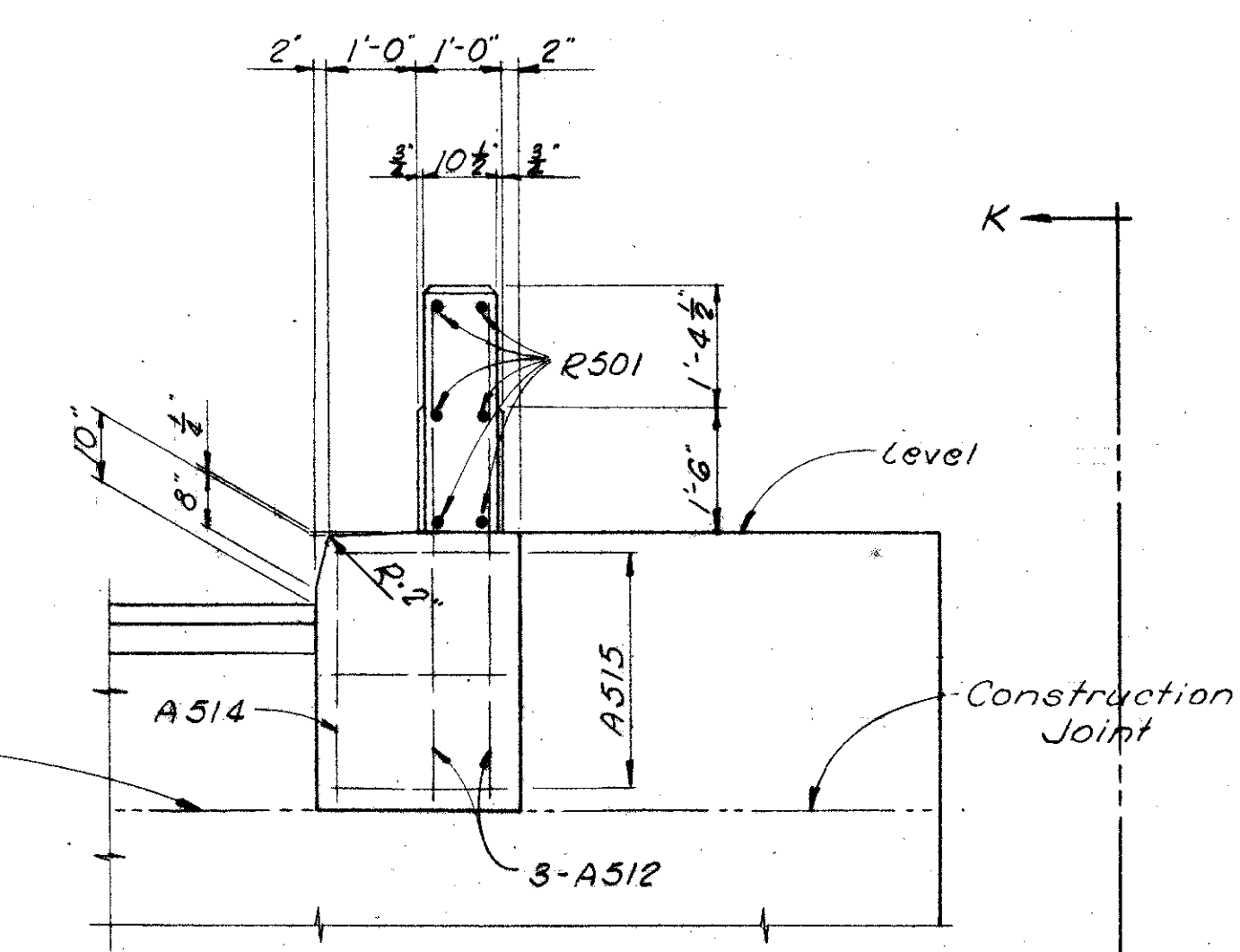
VIEW E-E



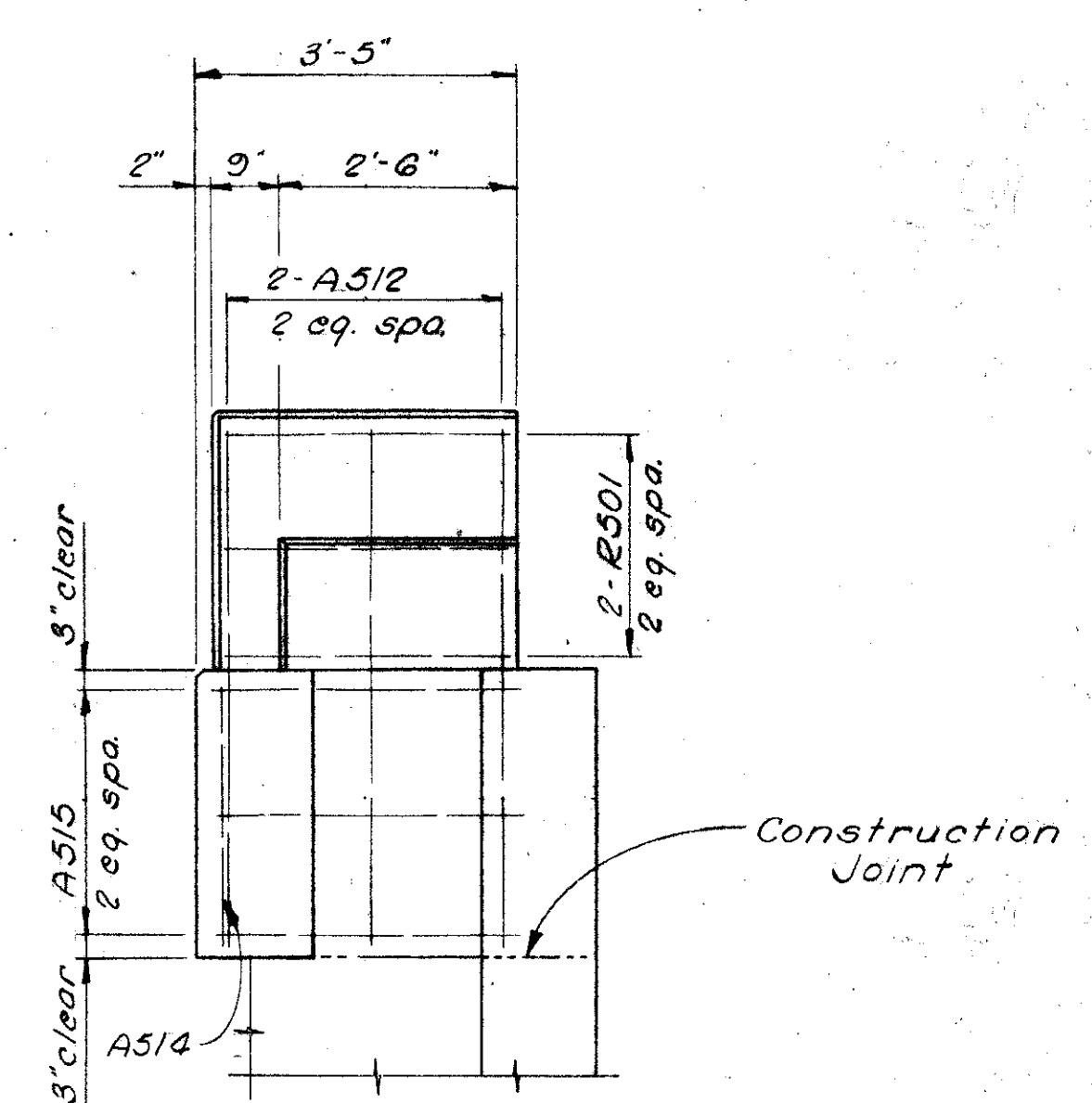
VIEW D-D



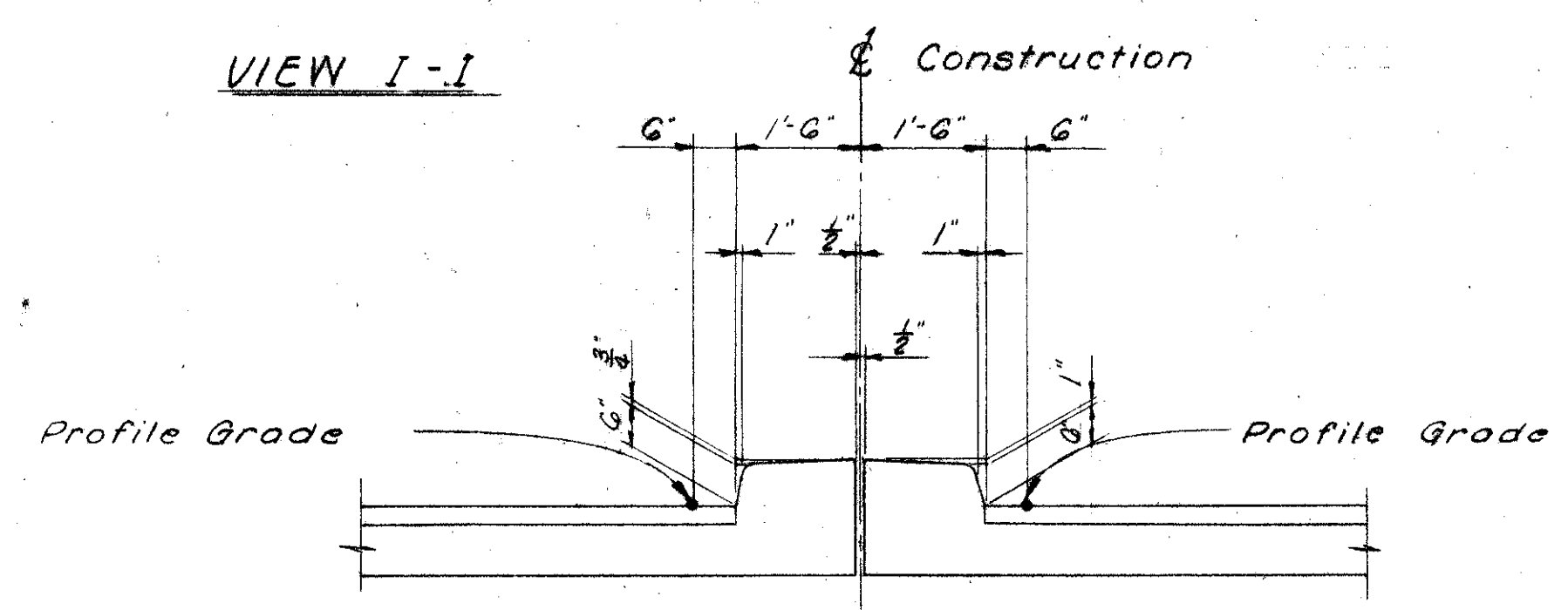
VIEW I-I



VIEW C-C



VIEW K-K



VIEW B-B

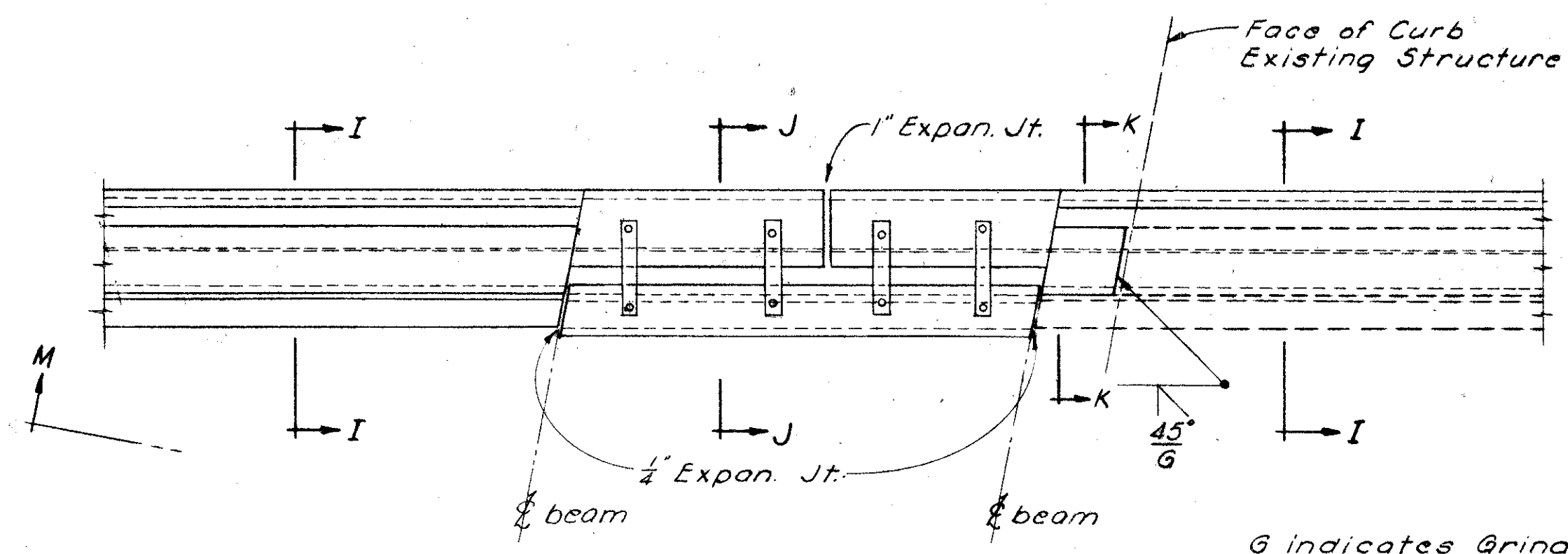
East Abutment Shown  
West Abutment Opposite Hand

For additional notes and details see Sheets 162, 170, 171 and 172

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
ABUTMENT DETAILS					
BRIDGE N <sup>o</sup> FRA 40-1279 SOUTH INNERBELT over SHORT STREET					
FRANKLIN COUNTY STA. 50+15.57					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
FND	FND		BETTIN	720	5-9-62

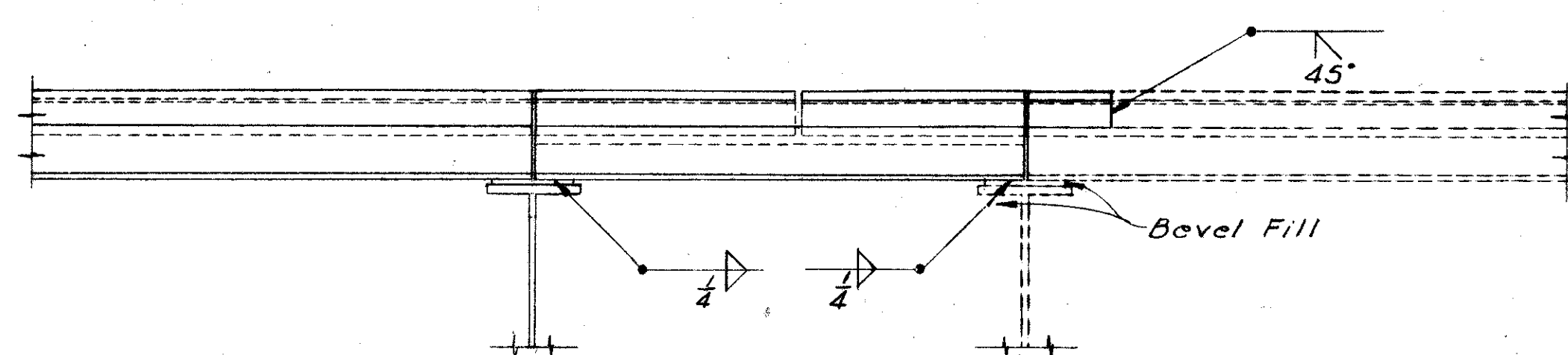
FRANKLIN COUNTY  
FRA-40-12.82

For Section I-I see CSB-2-56

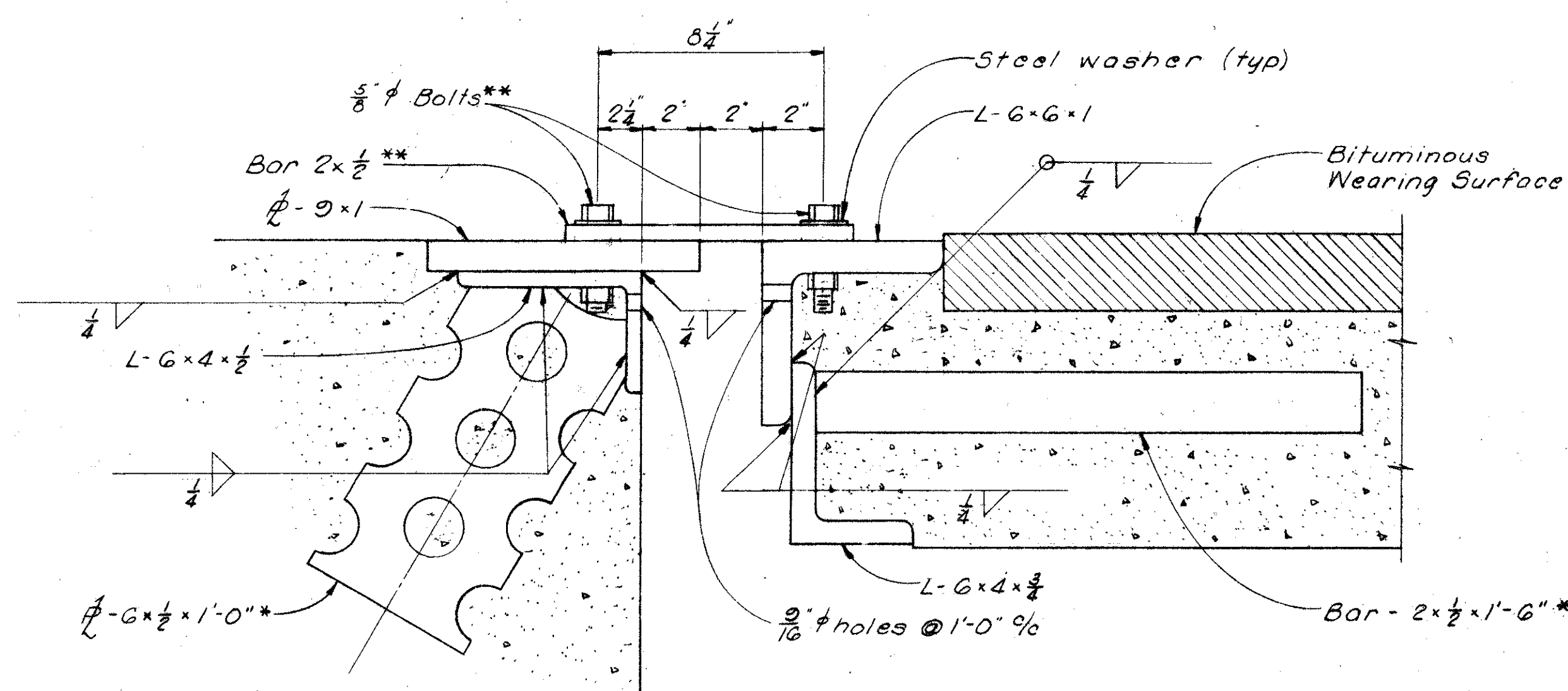


VIEW N-N

East Abutment Shown  
West Abutment Similar



VIEW M-M

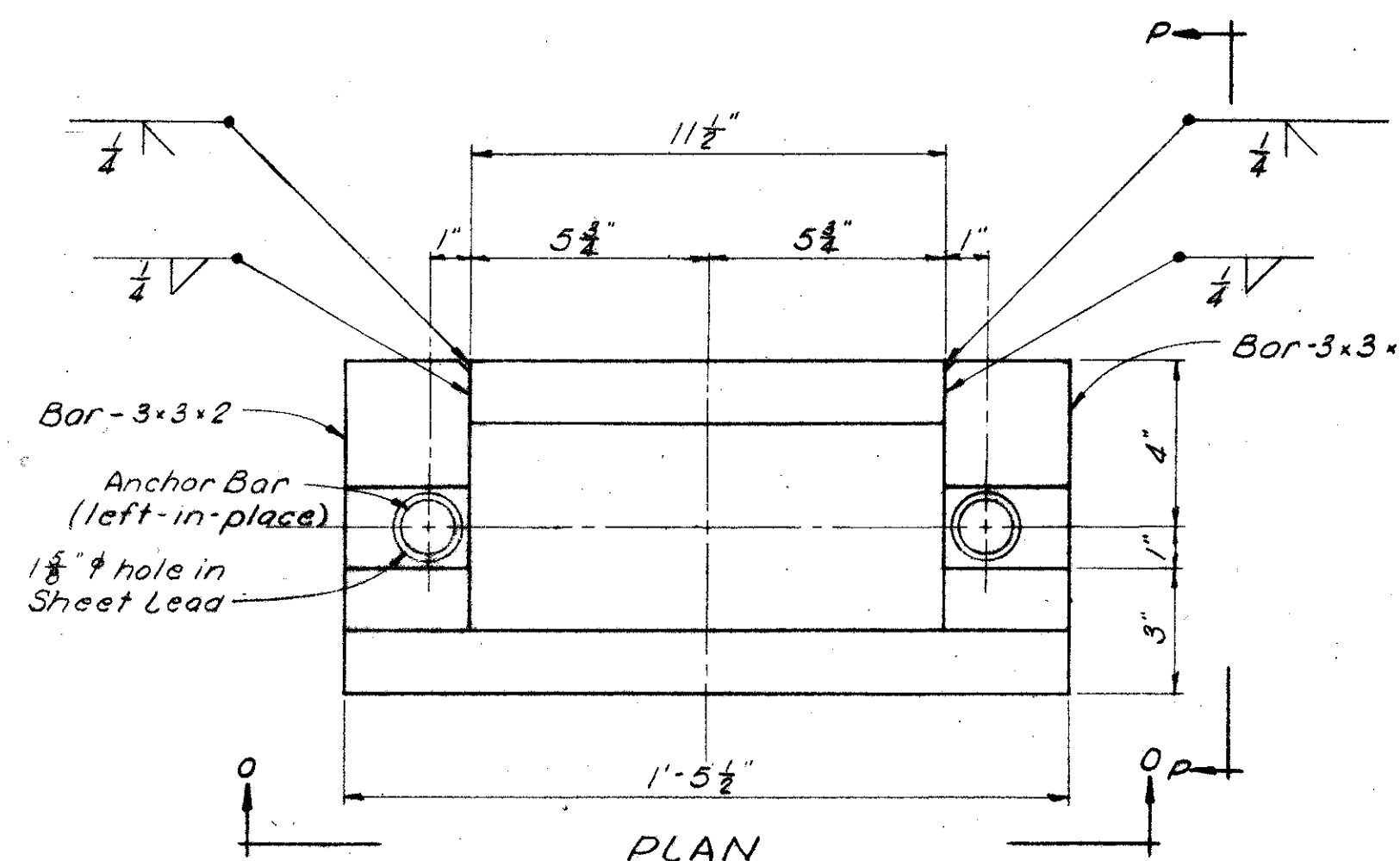


SECTION J-J

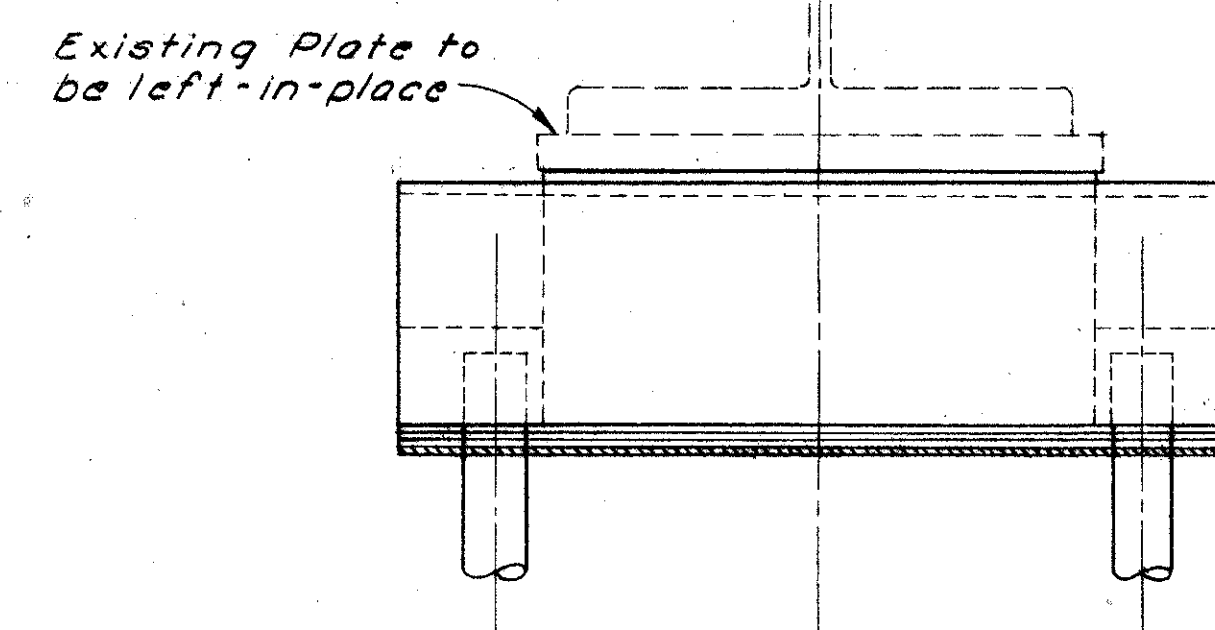
END FINISH DETAILS

(Bay 8 only)

\* For notes and details  
see CSB-2-56.



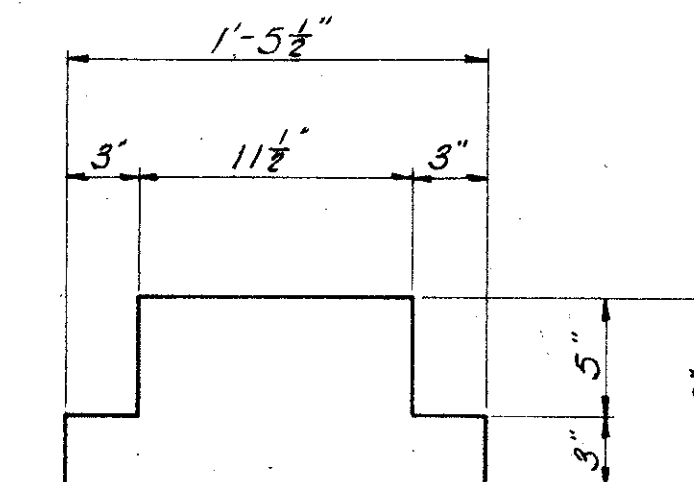
PLAN



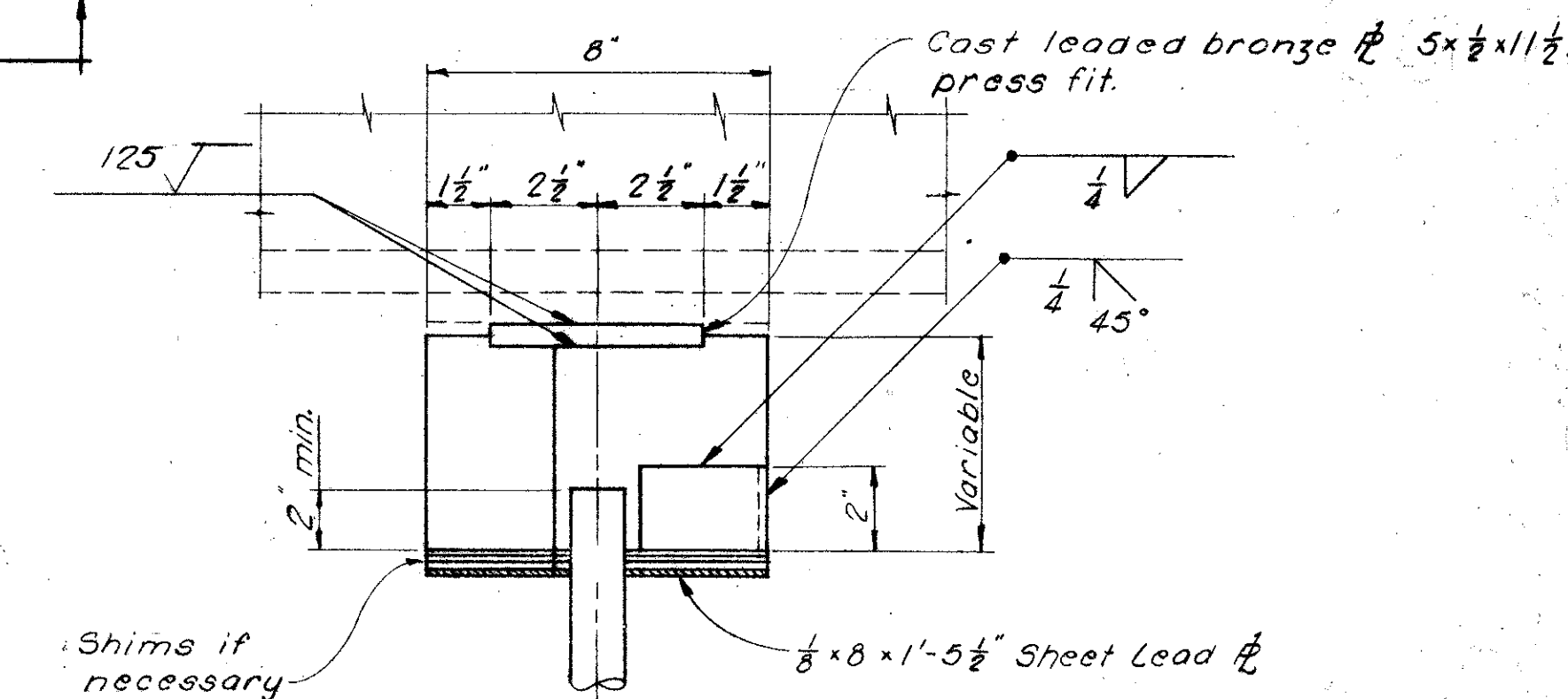
VIEW O-O

FILLER UNDER ABUTMENT BEARINGS

(16 Required)  
(Variable dimension to be determined in field)

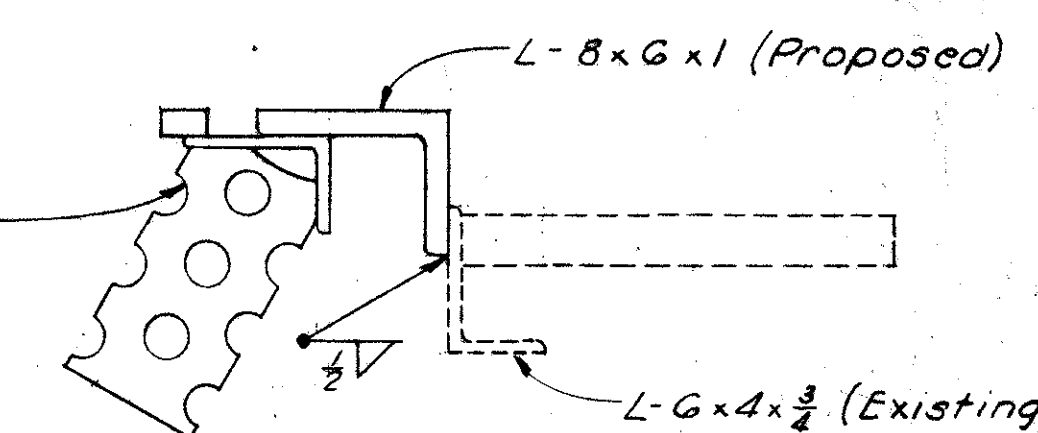


FILLER & SHIM  
DIMENSIONS



VIEW P-P

New Abutment End Dam  
For Details see CSB-2-56



SECTION K-K

Note: Existing L-6x4x3/4 shall be removed from E of existing North Exterior Beam to North end of L. Existing Curb Plates shall be removed from North Curb and the End Dam extended as indicated. The Curb Plate attached to the Superstructure portion of the End Dam at the South Curb shall be left-in-place. The Bevel Fills on the existing North Exterior Beam shall be left-in-place and ground smooth.

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CONSULTING ENGINEERS  
COLUMBUS, OHIO

DETAILS

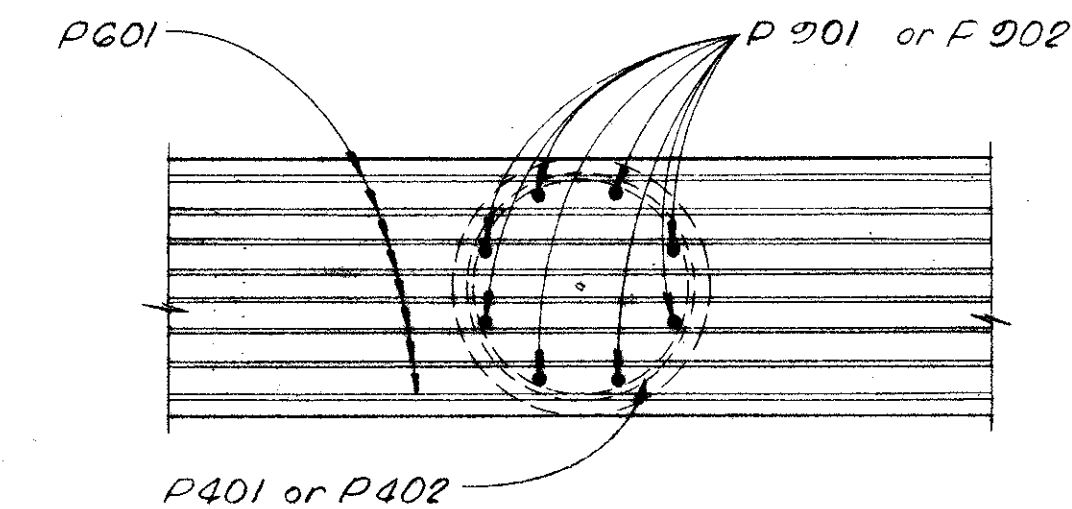

BRIDGE N<sup>o</sup> FRA 40-1279  
SOUTH INNERBELT over  
SHORT STREET

FRANKLIN COUNTY STA 50+13.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FND	FND		BETTIN	TLU	5-9-62	



SEP 20 1968



The drawing illustrates the structural details of a bridge pier. Key features include:

- Elevations:** Elevations A, B, C, D, and E are marked along the vertical axis of the pier.
- Reinforcement:**
  - P501:** Vertical reinforcement bars, with a note indicating "5 eq. spa." (5 equal spaces).
  - P502:** Horizontal reinforcement bars, with a note indicating "5 equal spaces (Top and Bottom)".
  - P503:** Horizontal reinforcement bars, with a note indicating "2-P503".
  - P504:** Horizontal reinforcement bars, with a note indicating "4-P504".
  - F504:** Vertical reinforcement bars at the base, with a note indicating "7 eq. spa." (7 equal spaces).
- Construction Joints:** Indicated by dashed lines and the label "Construction Joint (Typ)".
- Dimensions:**
  - Horizontal dimensions: "1'-0" 1'-0" 1'-0" 1'-0" 3"
  - Vertical dimensions: "5 eq. spa." (for P501), "1'-0" 1'-0" 1'-0" 1'-0" 3"
- Labels:** "Existing Pier" is labeled on the right side of the drawing.

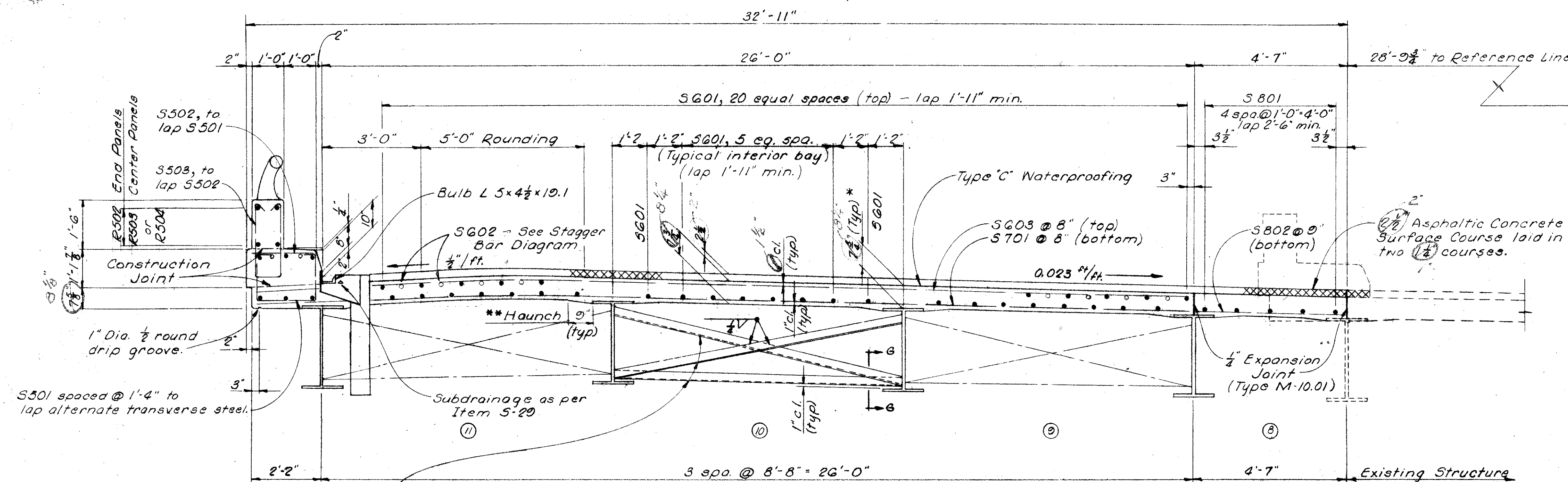
(Typical interior column  
footing steel)

Technical drawing of a cross-section of a bridge deck. The drawing shows a central rectangular section with a width of 2'-8" and a height of 2'-6". This central section is flanked by two side sections, each with a width of 2'-5". The total width of the deck is 5'-6". The drawing also shows the reinforcement details, including top and bottom longitudinal bars and vertical stirrups. Labels include "12-F504" pointing to the top reinforcement, "F506" pointing to the bottom reinforcement, and "F506" pointing to the stirrups. A dimension line at the bottom indicates a spacing of "F506 4 eq. spa." for the stirrups.

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COLUMBUS, OHIO

FRANKLIN COUNTY STA. 50+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FWD	FWD		GETTIN	TL	5-9-62	



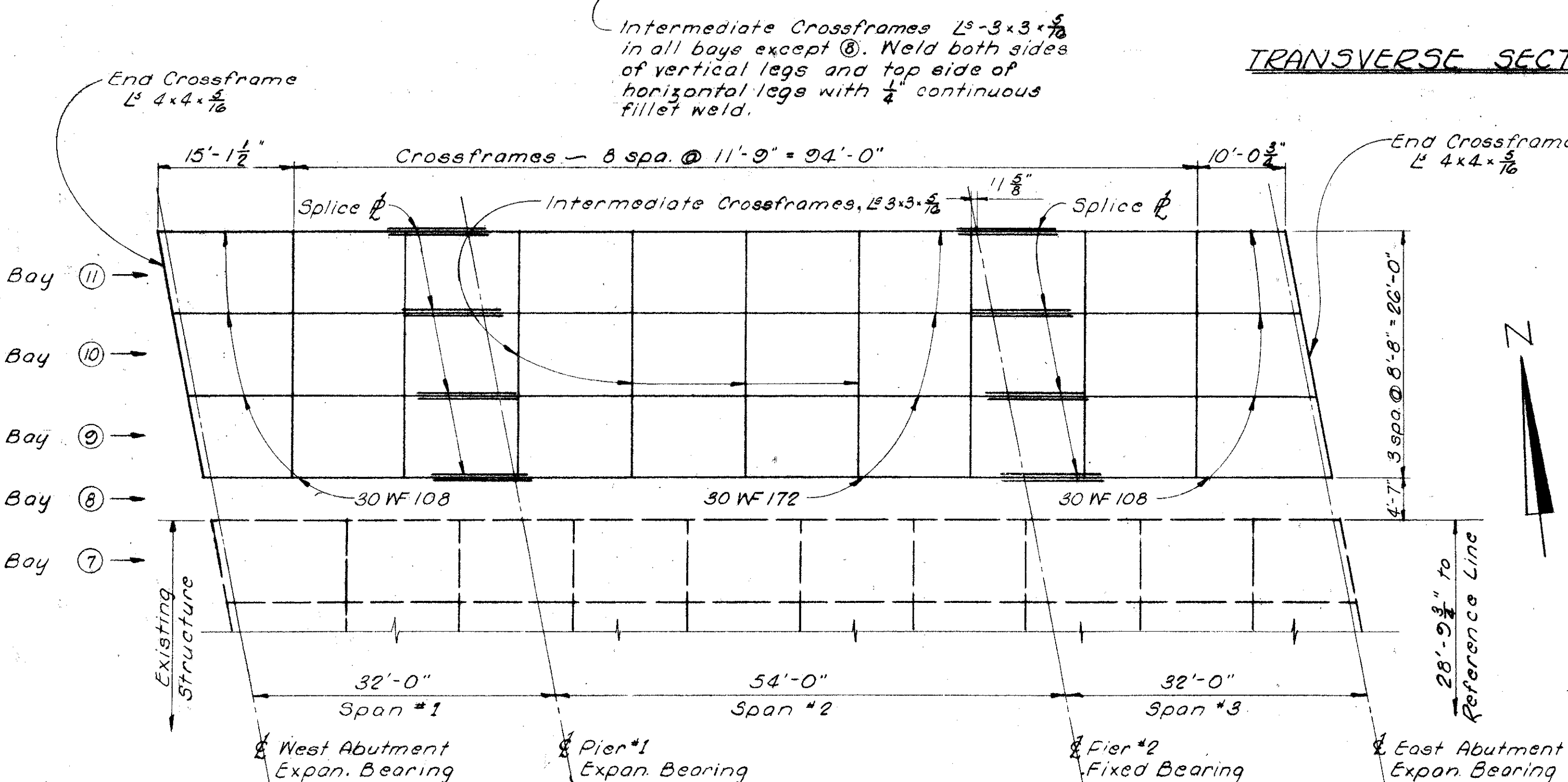
\* This dimension is from the top of the slab to the top of the flange of the beam, and is the nominal dimension. The quantity of deck concrete to be paid shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

\*\* Deck Slab Haunch: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension with a minimum of 6" and maximum of 12". Maximum slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 9" width.

Field bending of transverse deck steel shall be included in Item 5-4 for payment.

Transverse deck steel shall be placed parallel to piers and spaced 8" c-c along the beams.

For Bearing Plate Details see CSB-2-56.



FRAMING PLAN

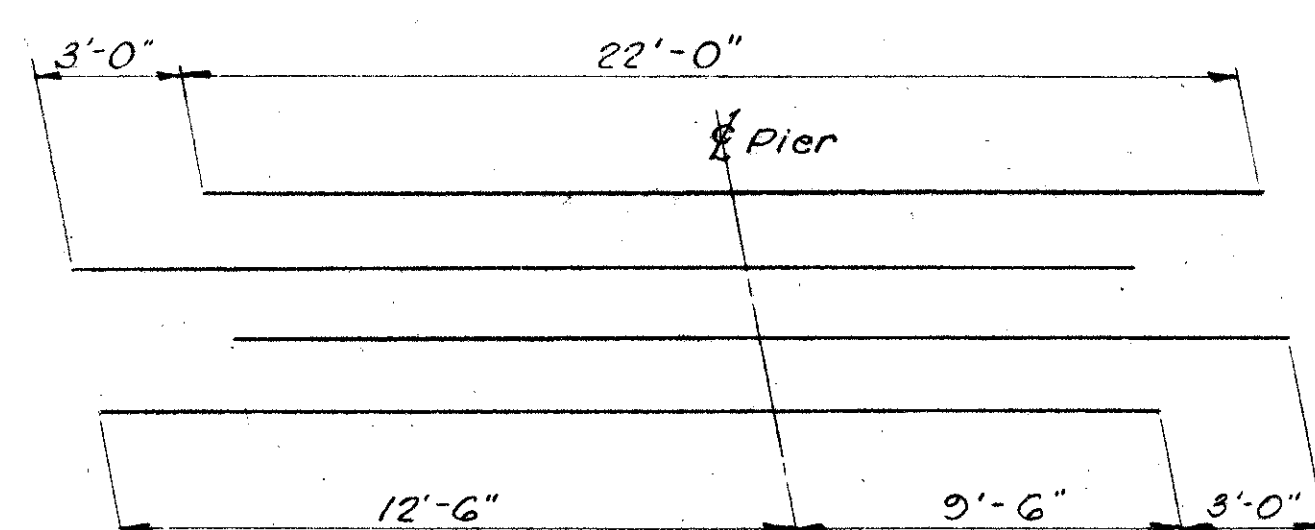
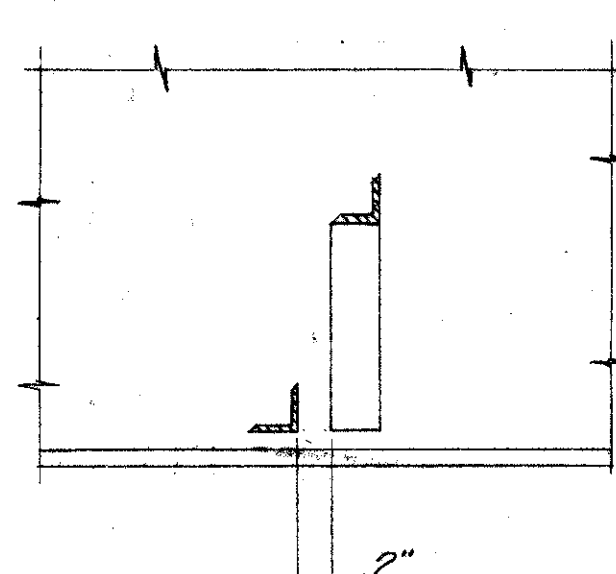
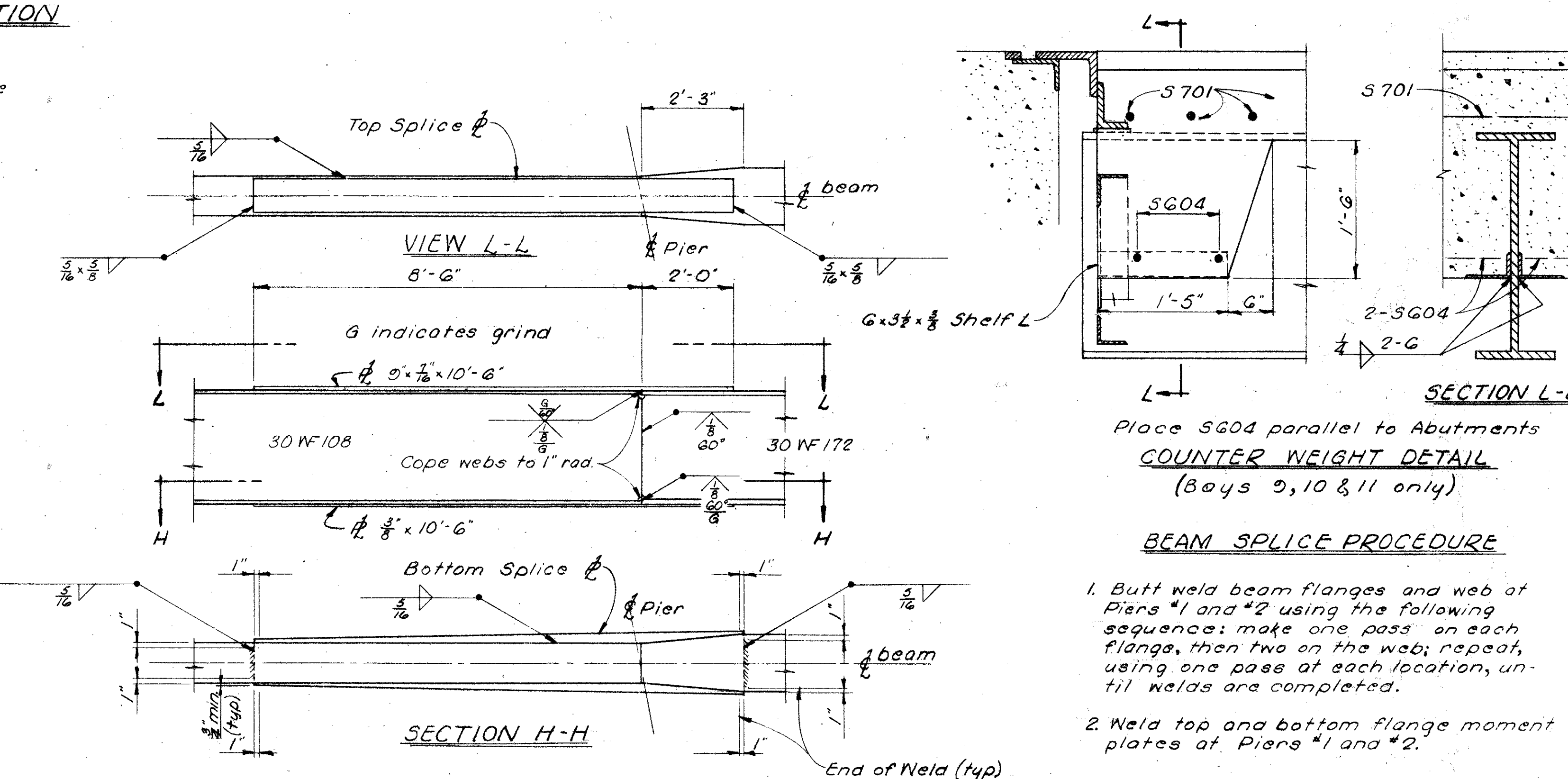


DIAGRAM SHOWING STAGGER OF S602 BARS OVER PIERS



SECTION G-G



BEAM SPLICE DETAILS

DEFLECTION & CAMBER				
Location	Spans 1 & 3		Span 2	
	Int.	Ext.	Int.	Ext.
Deflection due to weight of steel	0	0	+1/16"	+1/16"
Deflection due to remaining Dead Load	0	0	+3/8"	+7/16"
Camber required for vertical curve	-3/16"	-3/16"	-7/16"	-7/16"
Camber required for horizontal curve	0	0	0	0
Sum of Deflection and Camber	-3/16"	-3/16"	0	+1/16"
Required Shop Camber	None	None	None	None

Place S604 parallel to Abutments  
COUNTER WEIGHT DETAIL  
(Bays 9, 10 & 11 only)

#### BEAM SPLICE PROCEDURE

1. Butt weld beam flanges and web at Piers #1 and #2 using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass on each location, until welds are completed.
2. Weld top and bottom flange moment plates at Piers #1 and #2.

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CONSULTING ENGINEERS  
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS  
BRIDGE N<sup>o</sup> FRA 40-1279  
SOUTH INNERBELT over  
SHORT STREET

FRANKLIN COUNTY STA 30+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FND	FND		BETTING	7/20/82	7/20/82	



SEP 24 1985

## REINFORCING

## STEEL

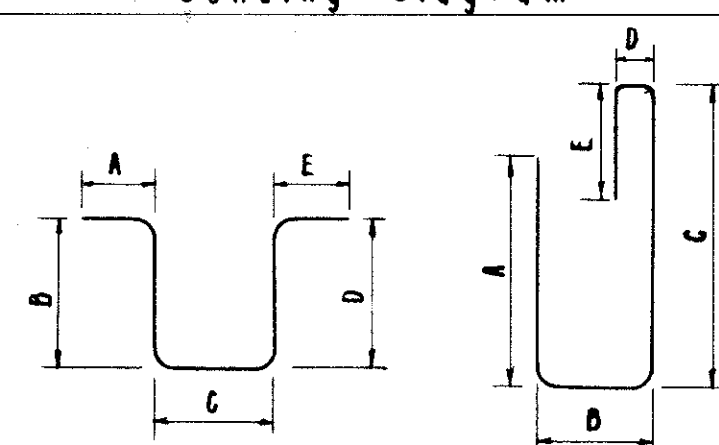
## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUND
2	OHIO		

177  
250FRANKLIN COUNTY  
FRA - 40-12.82

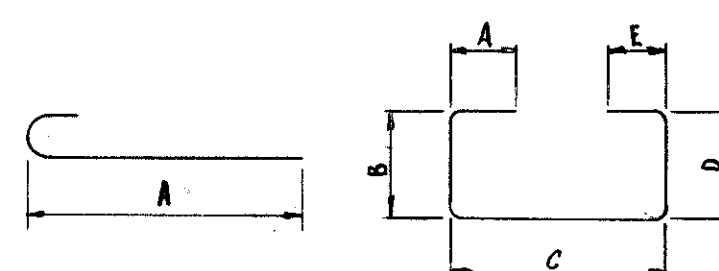
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
ABUTMENTS										
R501	24	2-11	*							st.
F501	40	10-0	417	1		2-2	5-11	2-2		bt.
F502	80	7-2	598	1	1-0	6-4				bt.
FG01	40	9-7	576	1		2-0	5-11	2-0		bt.
F801	20	30-1	1606							st.
A501	5	35-0	183							st.
A502	4	6-2	26							st.
A503	5	31-8	165							st.
A504	4	7-4	31							st.
A505	4	5-6	23							st.
A506	40	6-10	285	1		1-10	3-5	1-10		bt.
A507	16	29-1	485							st.
A508	40	2-11	122	1		0-6	2-2	0-6		bt.
A509	10	36-4	379							st.
A510	12	7-11	99							st.
A511	12	7-5	93							st.
A512	24	6-7	165							st.
A513	6	9-5	59	1		3-0	3-1	3-7		bt.
A514	6	3-9	23							st.
A515	6	8-1	51	1		3-0	2-0	3-4		bt.
A516	5	30-11	161							st.
A517	5	34-6	180							st.
AG01	62	15-9	1467	2	4-10	1-5	6-2	0-11	3-0	bt.
PIERS										
F504	76	8-4	661	7	7-2					bt.
F505	44	6-10	314	7	5-8					bt.
F506	18	7-10	147	7	6-8					bt.
F901	48	6-0	979	1	1-3	5-0				bt.
P501	12	6-10	86	8	1-7	1-1½				bt.
P502	64	7-5	495	1		2-8	2-4	2-8		bt.
P503	4	29-2	122							st.
P504	30	3-1	96	1		0-6	2-4	0-6		bt.
P601	16	29-10	717	3	29-2					bt.
P901	24	20-2	1646							st.
P902	24	19-6	1591							st.
P903	6	31-9	648	1	2-10	29-2				bt.
P904	8	22-10	621							st.
SUPERSTRUCTURE										
R502	8	11-6	*							st.
R503	24	14-6	*							st.
R504	4	7-1	*							st.
S501	90	4-11	462	4	0-6	1-5	1-8	1-5	0-6	bt.
S502	90	1-8	157							st.
S503	90	5-11	555	6	2-4	0-8				bt.
S601	200	31-3	9388							st.
S602	44	22-0	1454							st.
S603	179	27-10	7483							st.
S604	12	8-4	150							st.
S701	179	27-10	10,183							st.
S801	20	31-8	1691							st.
S802	160	4-4	1851							st.
REPLACEMENT STEEL										
RE501	1	5-7								st.
RE601	2	5-11								st.
RE701	1	6-2								st.
RE801	1	6-6								st.
RE901	1	6-10								st.
REPLACEMENT STEEL FOR SPIRALS										
RE401	1	5-3		5	1-1½		5-3			bt.

Bending Diagram



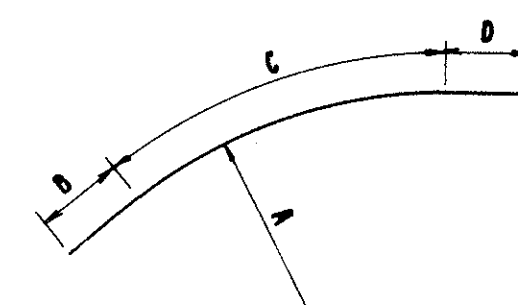
TYPE 1

TYPE 2

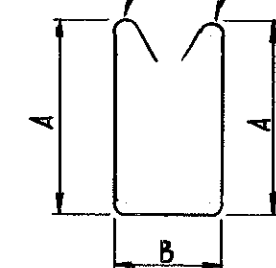


TYPE 3

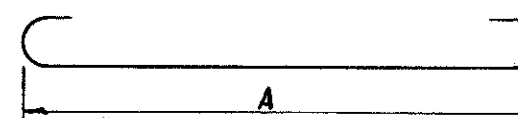
TYPE 4



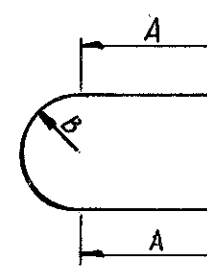
TYPE 5

Standard  
Stirrup  
Bend

TYPE 6



TYPE 7



TYPE 8

NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

Revised As-Built  
3/16/66 H.V.A.

## ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	258	Cu.Yd.	Unclassified Excavation	130	128		
S-1	115	Cu.Yd.	Class "C" Concrete, Superstructure			115	
S-1	41	Cu.Yd.	Class "C" Concrete, Pier caps and Columns		41		
S-1	70	Cu.Yd.	Class "E" Concrete, Footings	44	26		
S-1	87	Cu.Yd.	Class "E" Concrete, Abutments above Footings	87			
S-3	401	Sq.Yd.	Type "C" Waterproofing			401	
S-3	30	Lin.Ft.	Waterproofing, Premolded Sealing Strip	30			
S-4	50,370	Lb.	Reinforcing Steel	7194	9802	33,374	
S-7	91,700	Lb.	Structural Steel			91,700	
S-8	91,700	Lb.	Field Painting of Structural Steel			91,700	
S-9	38	Sq.Ft.	1" Gray Rubber Preformed Expansion Joint Filler		38		
S-9	153	Sq.Ft.	½" Preformed Expansion Joint Filler			153	
S-14	134	Lin.Ft.	Concrete Parapet and End Posts (including anchor bolts)			134	
S-16	Lump	Sum	First Test Pile				Lump
S-18	1471	Lin.Ft.	12" Cast-in-place Reinforced Concrete Piles	1045	720		1471
S-22	Lump	Sum	Removal of portions of existing structure				Lump
S-25	Lump	Sum	Electric Lighting System, as per plan				Lump
S-29	46	Cu.Yd.	Porous Backfill	46			
S-29	1	Each	Scupper, including supports			1	
S-29	119	Lin.Ft.	Subdrainage for Wearing Surface Course			119	
I-10	489	Sq.Yd.	Concrete Slope Protection			489	489
T-35	28	Cu.Yd.	Asphaltic Concrete Surface Course, Type "C" (60-70)			28	
Special	398	Lin.Ft.	Prebored Holes for Piles	212	186		
Special	Lump	Sum	Removal and Relocation of Railing				Lump
S-101	109	Each	Water-reducing, Set-retarding Admixture			109	

## SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	3	17-4	28"	4½"	49	12	849
P402	3	16-9	28"	4½"	48	12	830

## SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.

THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL

IN OTHER RESPECTS CONFORM TO ITEM S-4, 1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL and  
ESTIMATED QUANTITIES  
BRIDGE N° FRA 40-1279  
SOUTH INNERBELT over  
SHORT STREET

FRANKLIN COUNTY STA 50+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
fwd	fwd		BETTIN	TLU	5-9-62	



REFERENCES:

Standard Drawings:

End Dam and End Cross Frame Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Gutter and Scupper Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Railing Details Type B Bearing Plate Details	- AR-1-57, Revised 4-2-62 - CSB-2-56, Sheet 3 Revised 2-2-59
Approach Slab Details Supplemental Specification Common Details:	- AS-1-54, Revised 7-5-62 - S-101, Dated 7-12-62
Lighting Details	- Sheet 165
Concrete Slope Protection Details	- Sheet 163

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 revisions thereof dated 2-21-58.

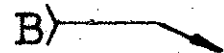
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

PROPOSED CONSTRUCTION: The existing bridge shall be widened as indicated on the plans. The existing north curb and parapet, a portion of the superstructure slab and reinforcing, the abutment backwalls and north wingwalls, and the approach slabs shall be removed. A new structure shall be built adjacent to the existing structure as indicated on the plans. The existing beams shall be shimmed to the proper elevation, as indicated, prior to the construction of the slab connecting the existing and proposed structure and prior to the construction of the backwalls on the existing abutments.

REMOVAL OF PORTION OF SUPERSTRUCTURE SLAB: A portion of the superstructure slab on the existing structure shall be removed as indicated on the plans. Extreme care shall be used so that the structural integrity of the remaining slab shall not be impaired. Before the slab connecting the existing and proposed structure is placed, the face of the joint on the existing slab shall be coated with mortar, troweled smooth, cured according to Section S-1, and the 1/4 inch expansion joint material placed. The cost of preparing the joint is included with S-1 for payment.

REMOVAL OF RAILING: The aluminum railing on the north parapet of the existing bridge shall be removed and installed on the north parapet of the proposed structure. The lengths of the existing panels shall be adjusted as required before installment. This installation shall conform to the applicable provisions of Item S-14.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may be, at the option of the contractor, made in the shop. Class "B" welding shown thus:

B) 

TRAFFIC MAINTENANCE: For details of traffic maintenance, see Roadway Plans.

PILES shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments and 40 tons per pile for the piers.

PRE-BORING FOR PILES: All piles at the abutments and at Pier #1 shall be driven into 12" diameter pre-bored holes. The holes shall be bored to the elevations shown on the plans or to lower elevations, if necessary, to suit field conditions. The cost of pre-boring 12" diameter holes shall be paid for at the unit price bid per lineal foot for Item Special, "Pre-bored Holes for Piles".

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

WIRING DETAILS: For details and notes for wiring, see Roadway Plans.

LIGHTING CONDUIT AND CABLE: The cable in the existing conduit shall be spliced as indicated on the Lighting Plans in the proposed pull boxes adjacent to the structure. New conduit shall be provided, as indicated on the Bridge Lighting Detail, thru the backwall and extending to the above noted pull boxes. The cost of the conduit and splicing shall be included with Item S-25.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.

EMBANKMENT: The embankment shall be placed and compacted up to the finished spill-thru slope and to the top of the earth surcharge, as indicated on the Roadway Cross Sections, before any construction is initiated on the pier or abutment construction. The Engineer shall be satisfied that all settlement of the embankments and existing abutments has occurred before abutment construction is permitted by placing suitable hubs in the embankments and establishing control points on each end of the existing abutments. The Engineer shall make periodic observations of the hubs and control points.

Construction may proceed on the existing or proposed abutments after a maximum period of nine months.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the piers and abutments and the removal of fill material above the level of the earth bench.

BEARING SURFACES: The concrete surface under all bearing plates on the new structure shall be placed a minimum of 1/4 inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

CONCRETE SLOPE PROTECTION: Concrete slope protection shall extend from the face of the abutment to the back of the curb under the proposed structure and from the bottom of the existing slope protection to the back of the curb under the existing structure as indicated on the General Plan.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats, backwalls, and the face of spill-thru abutments between outside beams.

CONTINUOUS BEAM SPLICES: If beams having depths differing by more than 1/8" are to be spliced by butt welding, the depth of the smaller depth beam shall be increased by splitting the web longitudinally at a distance of 1-1/2" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES

BRIDGE No. FRA-90-1279

SOUTH INNERBELT OVER SHORT ST.

FRANKLIN COUNTY STA. 50+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
					TLU 5-18-62	

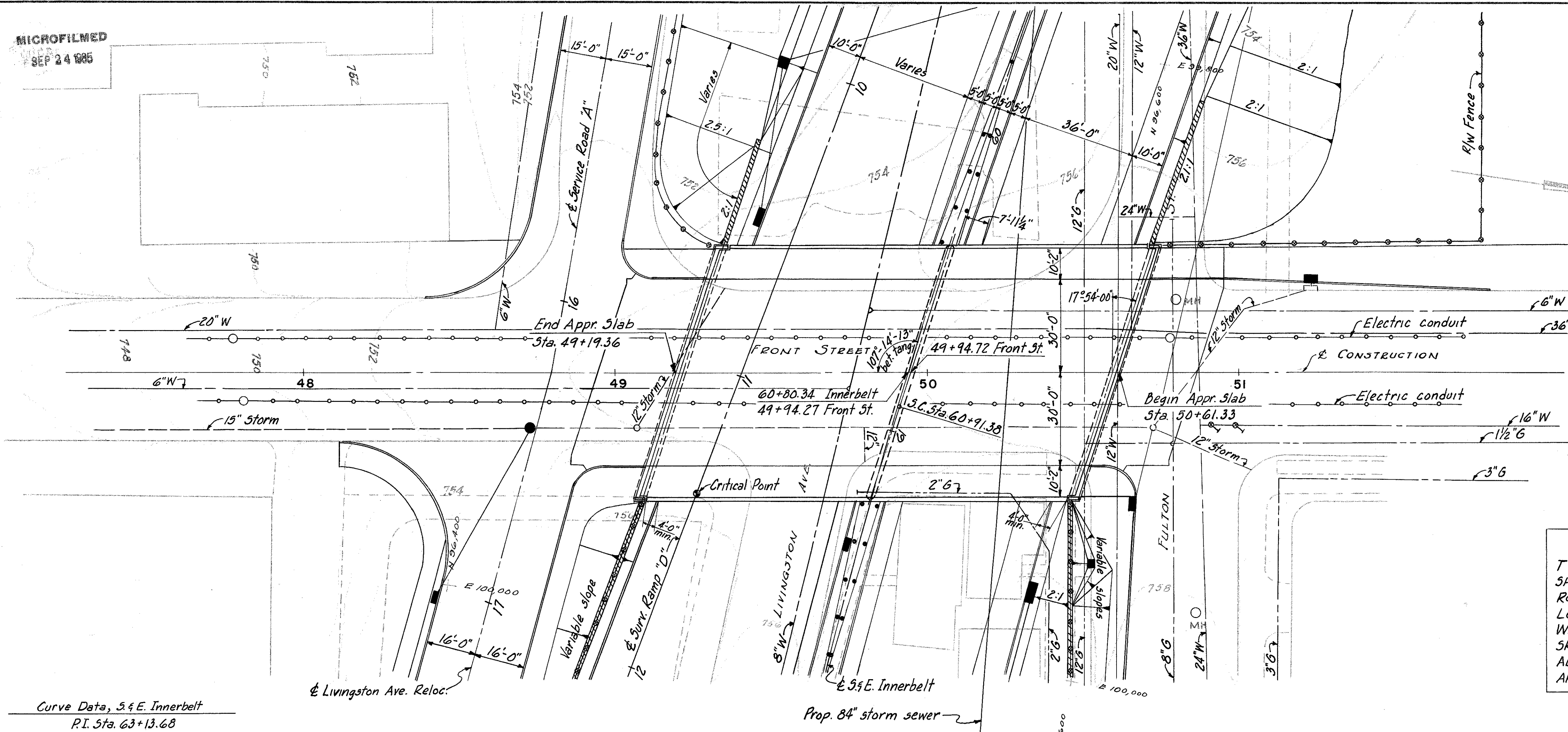


MICROFILMED  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

179  
250

FRANKLIN COUNTY  
FRA.-40-12.82



Curve Data, S & E Innerbelt  
P.I. Sta. 63+13.68  
 $\Delta = 20^\circ 35' 59''$   
 $D_c = 3'$   
 $L_s = 250'$

& Livingston Ave. Reloc.

& S & E Innerbelt

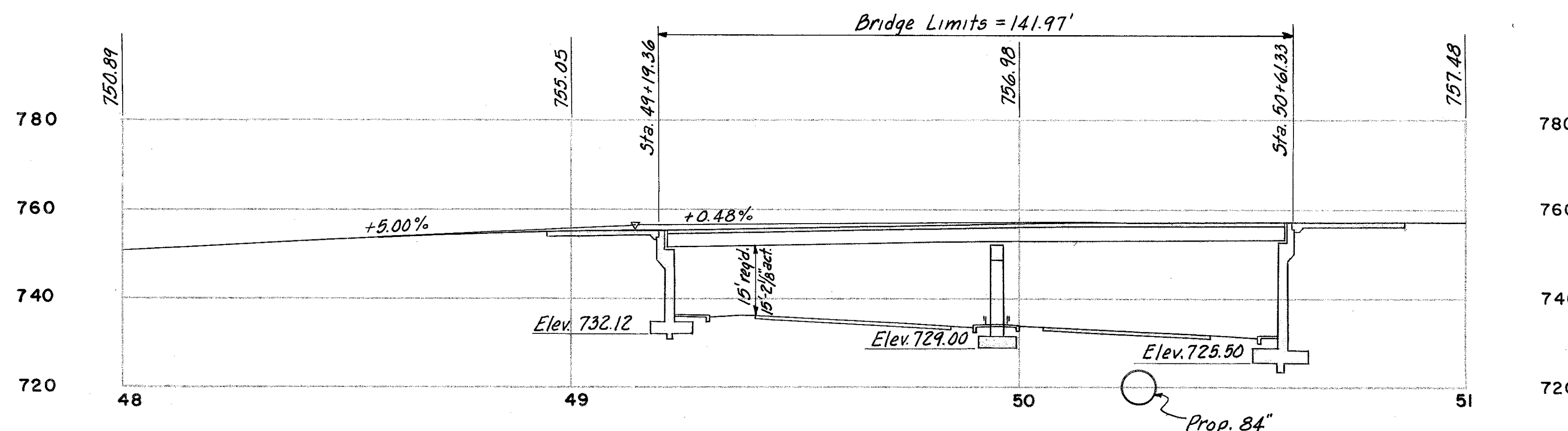
Prop. 84" storm sewer

PLAN

#### PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure  
SPANS: 73'-0" & 64'-3" % brgs.  
ROADWAY: 60'-0" w/ 10'-2" sidewalks with concrete parapets and aluminum railing  
LOADING: CF-400  
WEARING SURFACE: 2" asphaltic concrete  
SKEW: 17° 54'-00" left forward  
ALIGNMENT: Tangent  
APPROACH SLABS: 25'-0" long; see sheet N° 180

P.V.I. Sta. 49+13.94  
200' V.C.  
Elev. 756.59  
Corr. 1.13'  
P.G. Elev. 755.46



PROFILE  
(along & construction)

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SITE PLAN  
BRIDGE NO. FRA.-40-1300  
SOUTH INNERBELT UNDER FRONT ST.

FRANKLIN COUNTY STA. 60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.D.	E.D.	E.D.A.	R.J.W.	TLU	5-8-62	7-9-65

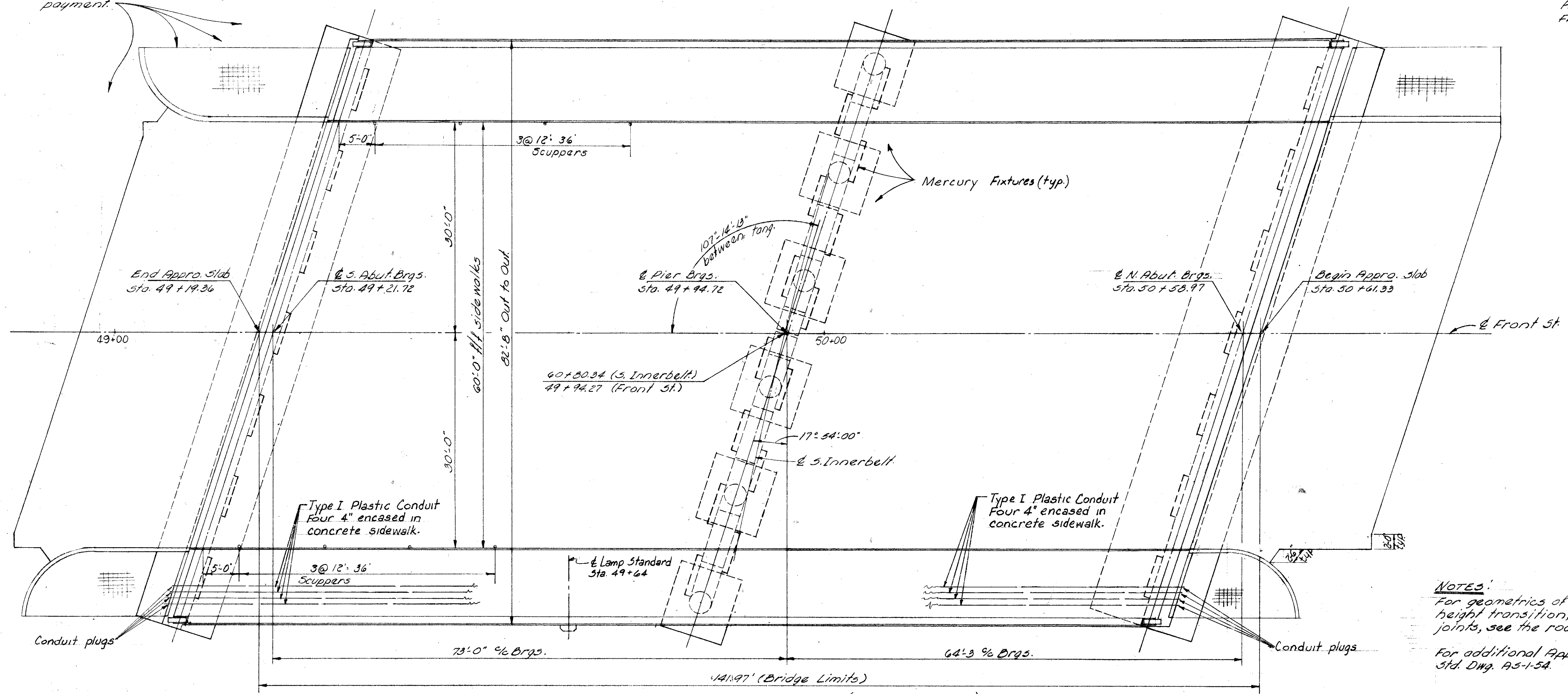
MICROFILMED  
SEP 24 1985

6" thick approach slab reinforced with  
612-22 wire fabric centered in the slab.  
Included with roadway quantities for  
payment.

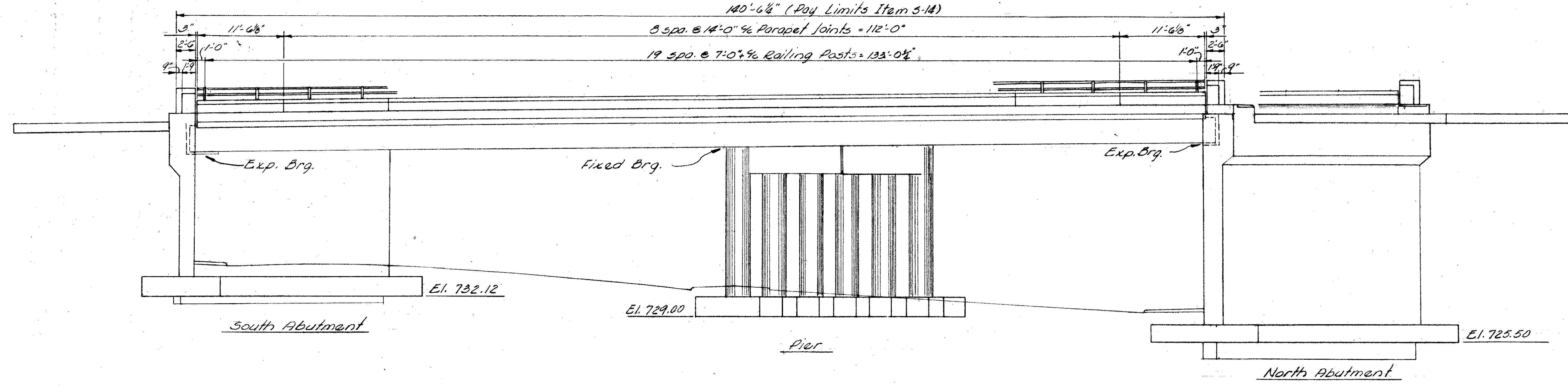
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

180  
250

FRANKLIN COUNTY  
FRA-40-12.82



**NOTES:**  
For geometrics of the approach slabs, curb  
height transition, and type of pavement  
joints, see the roadway plans.  
For additional Approach Slab details see  
Std. Dwg. AS-1-54.



GENERAL ELEVATION

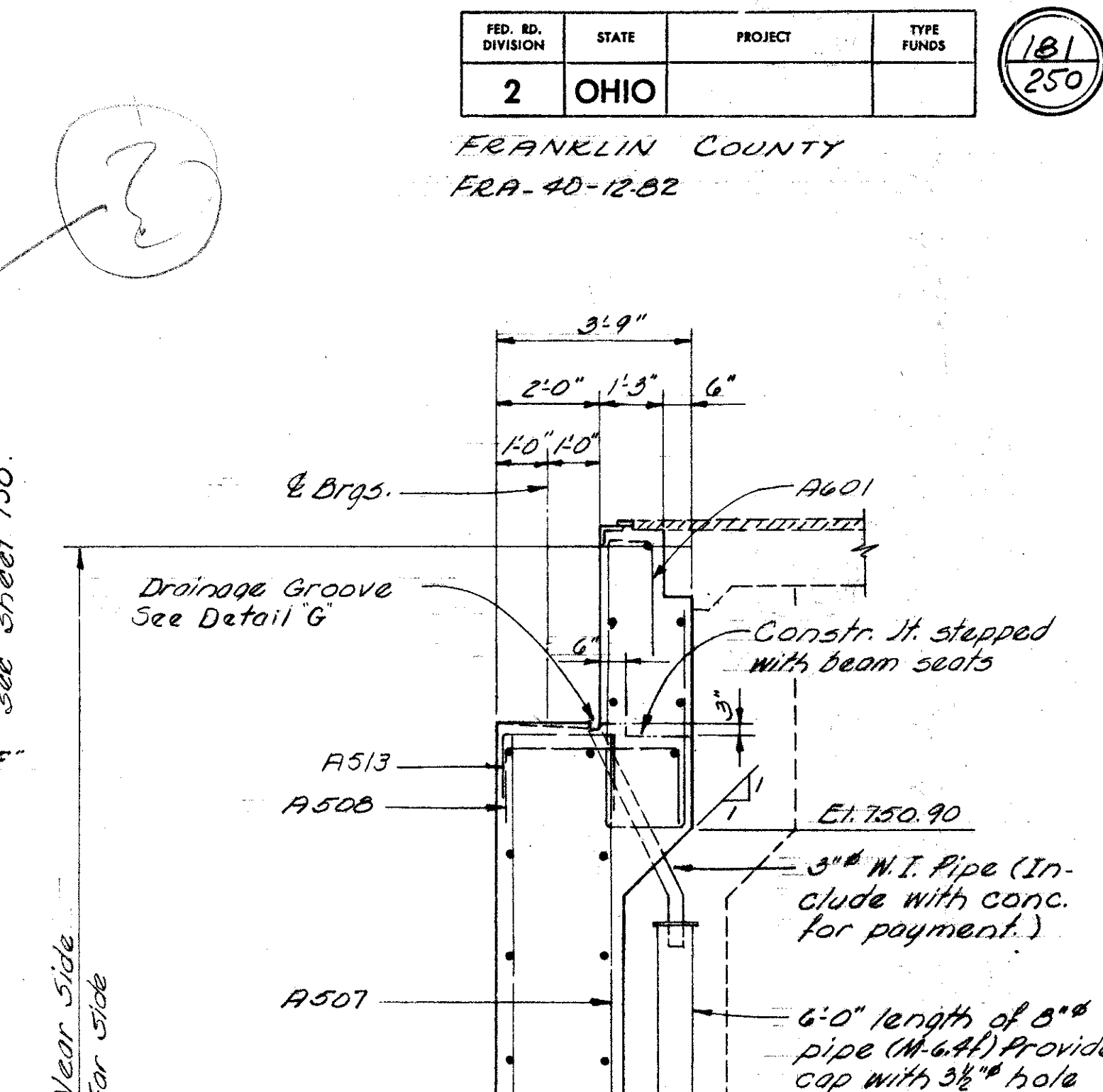
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
GENERAL PLAN & ELEVATION BRIDGE No FRA-40-1300 SOUTH INNERBELT UNDER FRONT ST. FRANKLIN COUNTY STA-60+80.34					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
CRW	DOB		Pardo	TZU	5-8-62



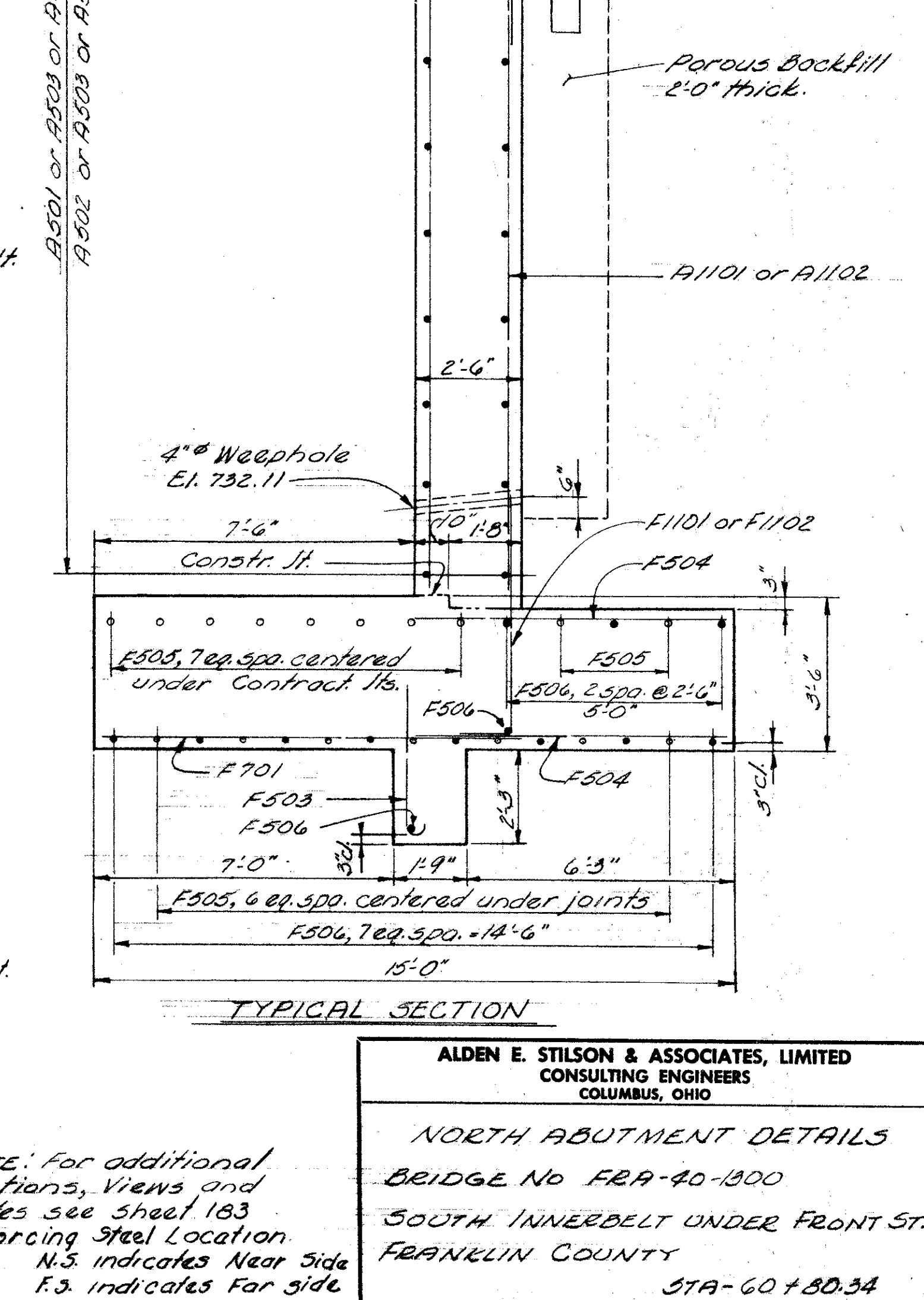
2 Front St.  $\rightarrow$   $17^{\circ}54'00''$  skew



FRANKLIN COUNTY  
FRA-40-12.82



45



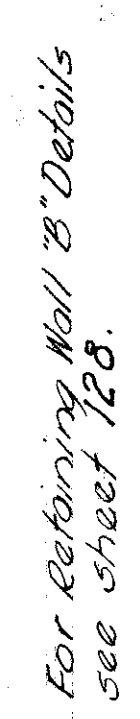
NOTE: For additional  
Sections, Views and  
notes see sheet 183.  
Reinforcing Steel Location.  
N.S. indicates Near Side  
F.S. indicates Far side

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

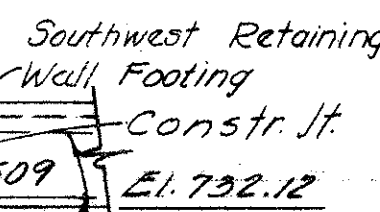
NORTH ABUTMENT DETAILS  
BRIDGE No FRA-40-100  
SOUTH INNERBELT UNDER FRONT ST  
FRANKLIN COUNTY  
STA-60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WITHEM	BDB		Pardo	TLU	5-8-62	10-11-62

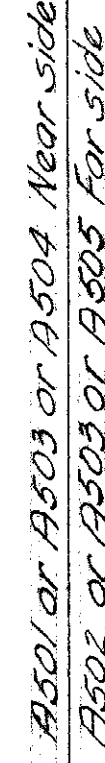




For Retaining Wall Details  
see sheet 185



TYPICAL SECTION



Reinforcing Steel location:  
N.S. indicates near side  
F.S. indicates far side

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CRW	BOB		Pardo	TLV	5-8-62	10-11-6

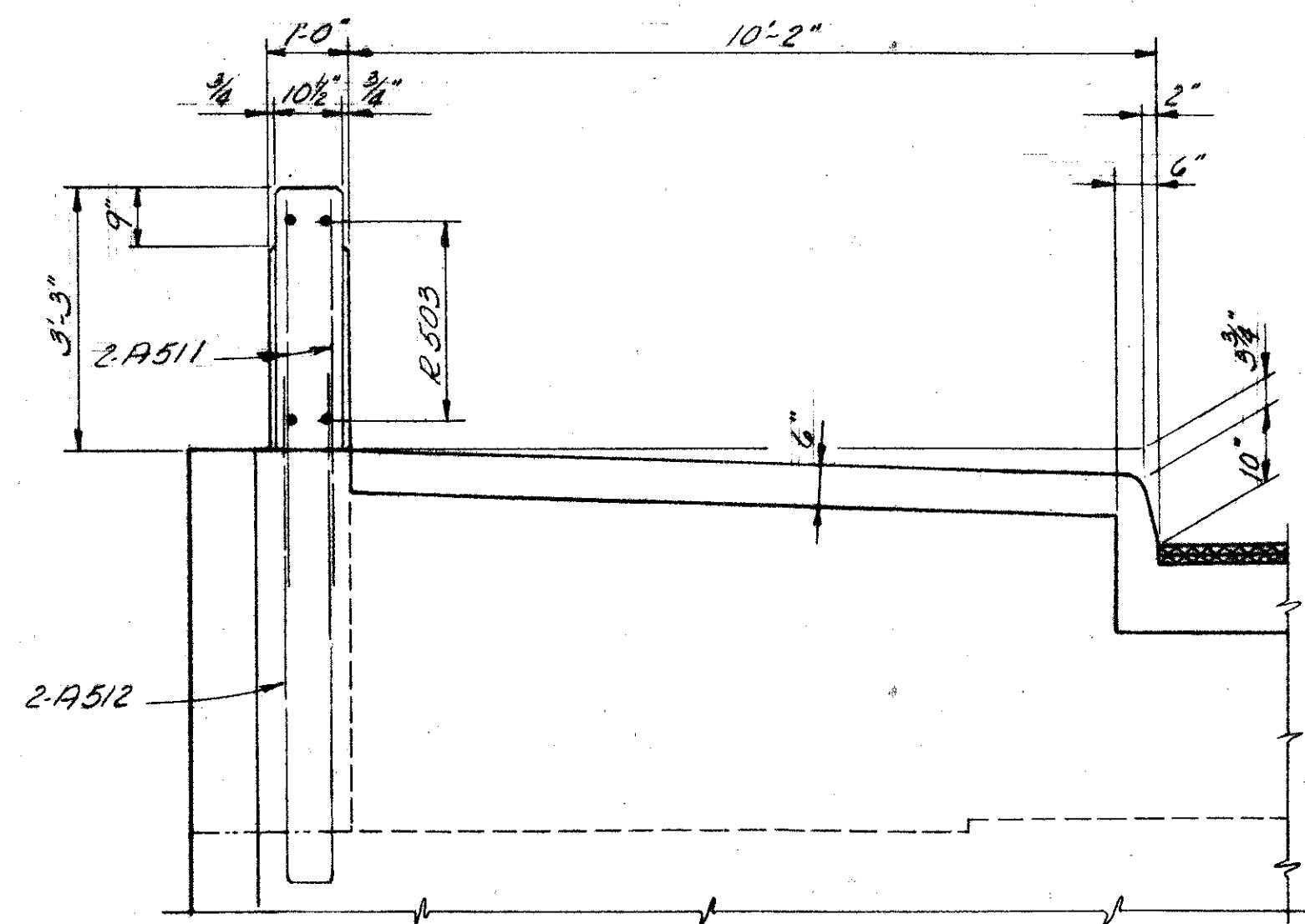


MICROFILMED  
SEP 24 1985

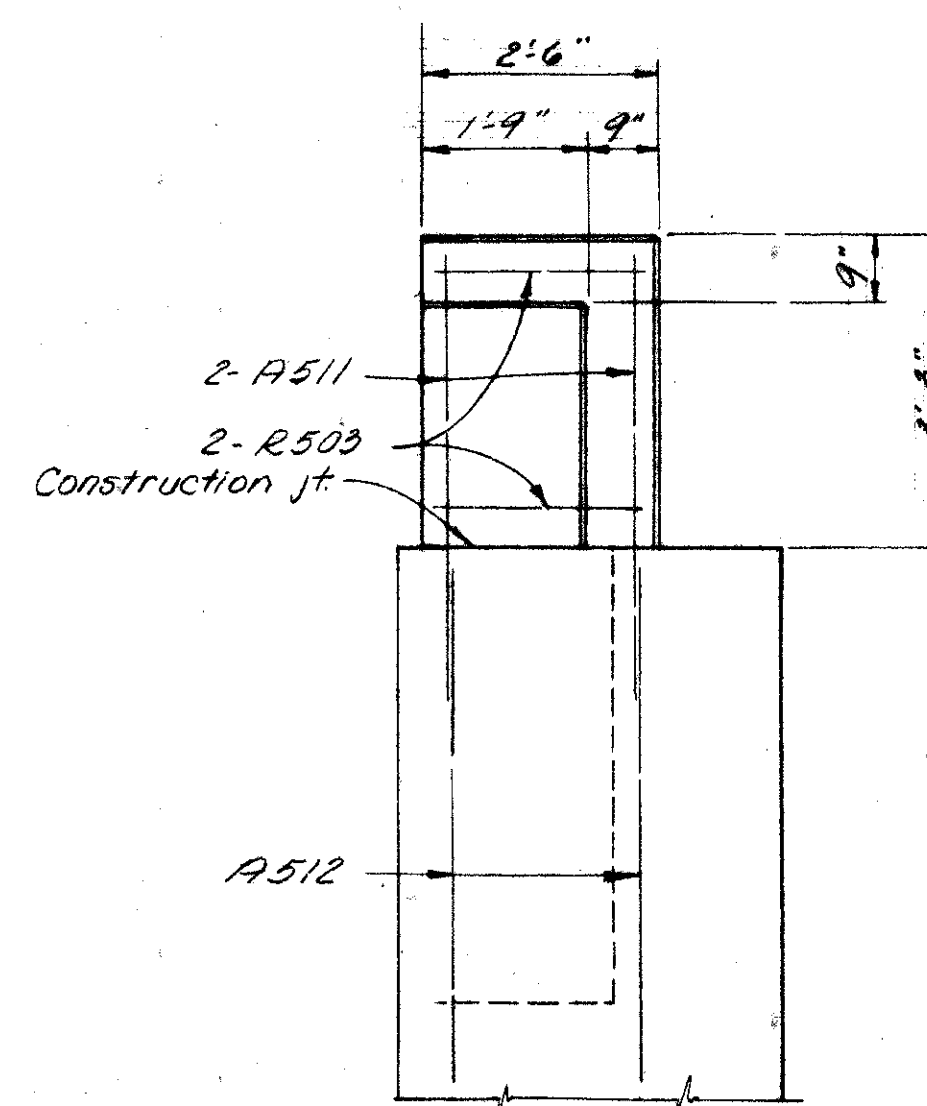
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY  
FRA-40-12.82

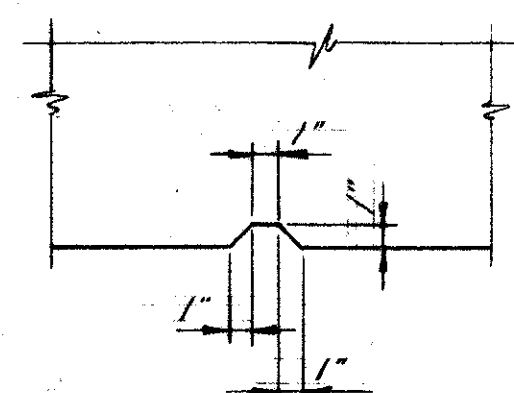
183  
250



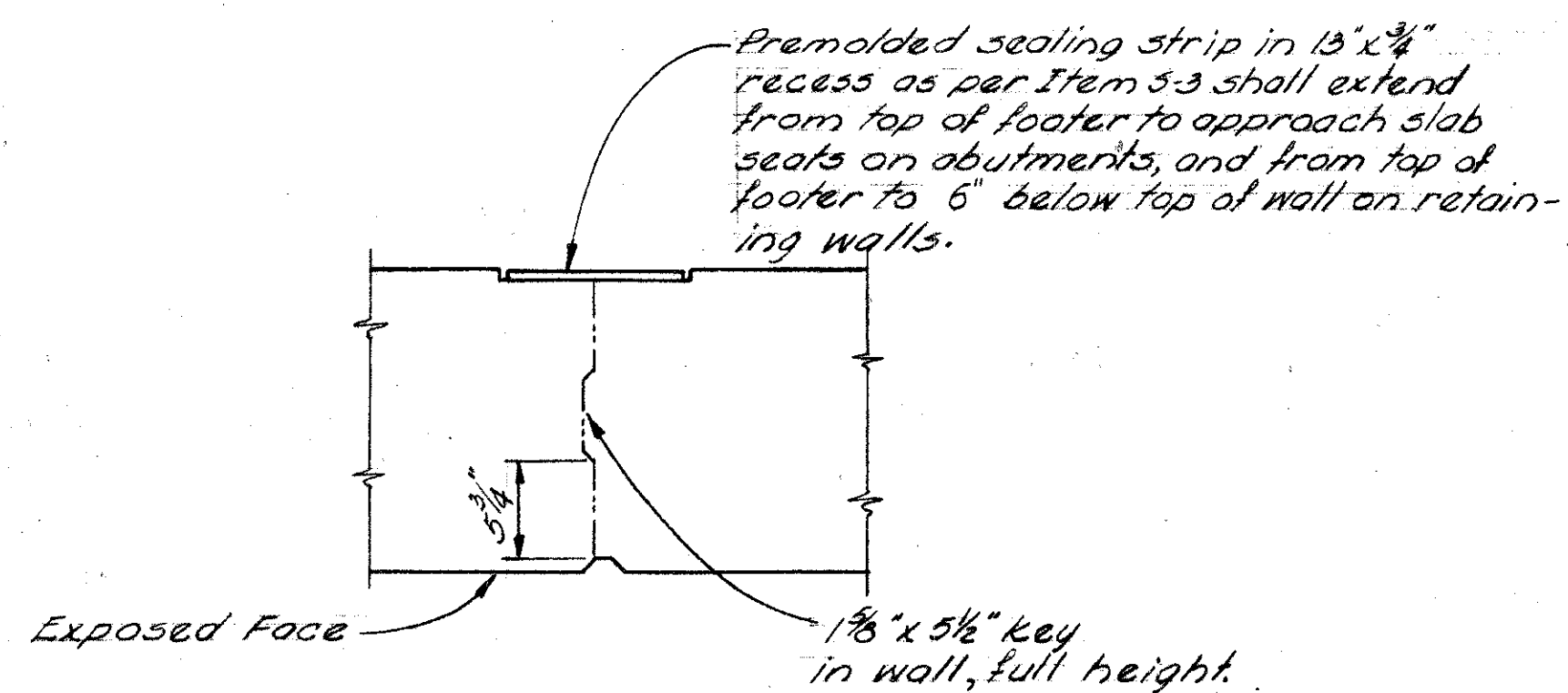
VIEW C-C



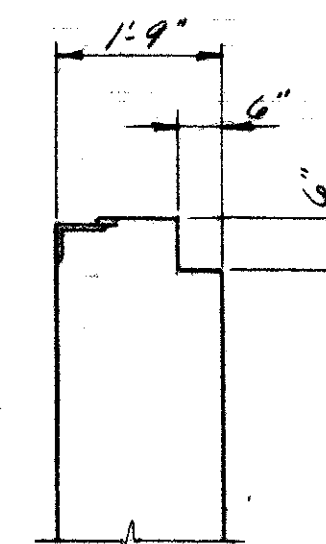
VIEW D-D



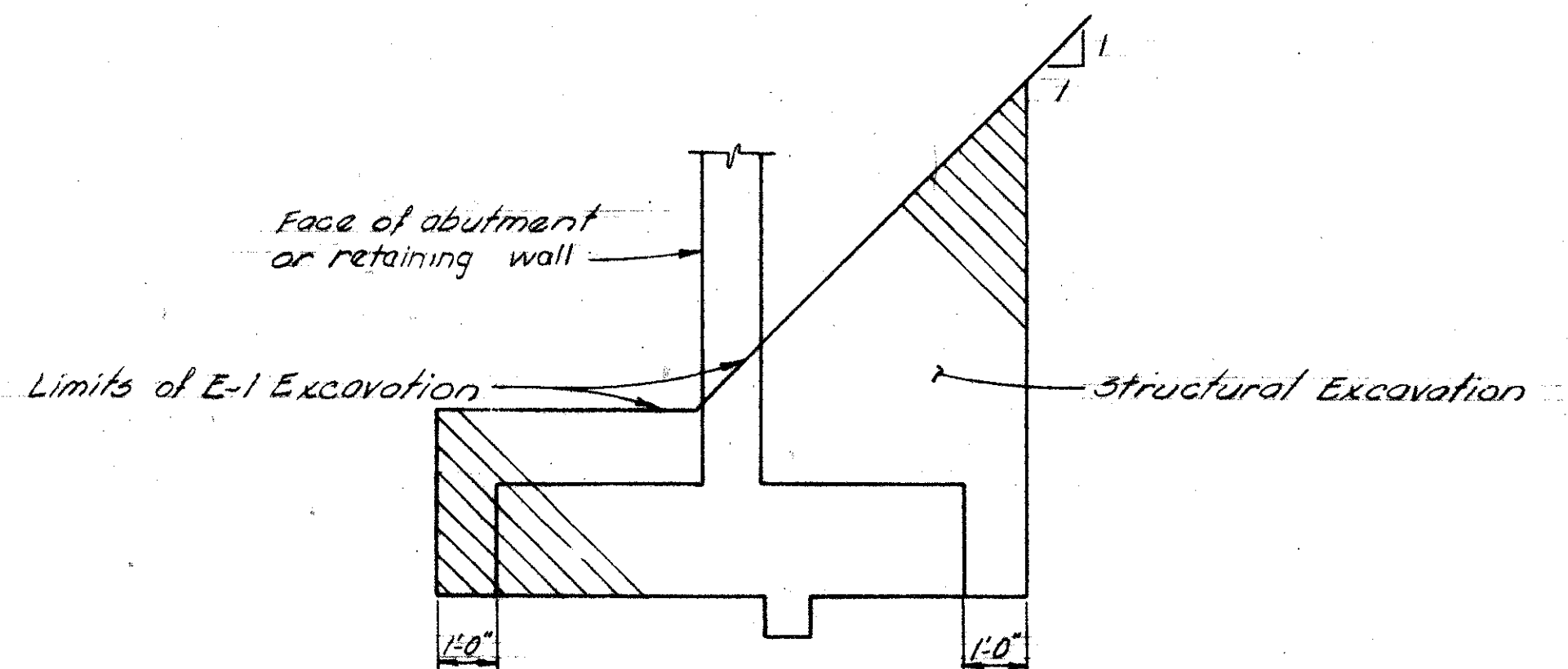
RUSTICATION GROOVE  
DETAIL



CONTRACTION JOINT  
DETAIL

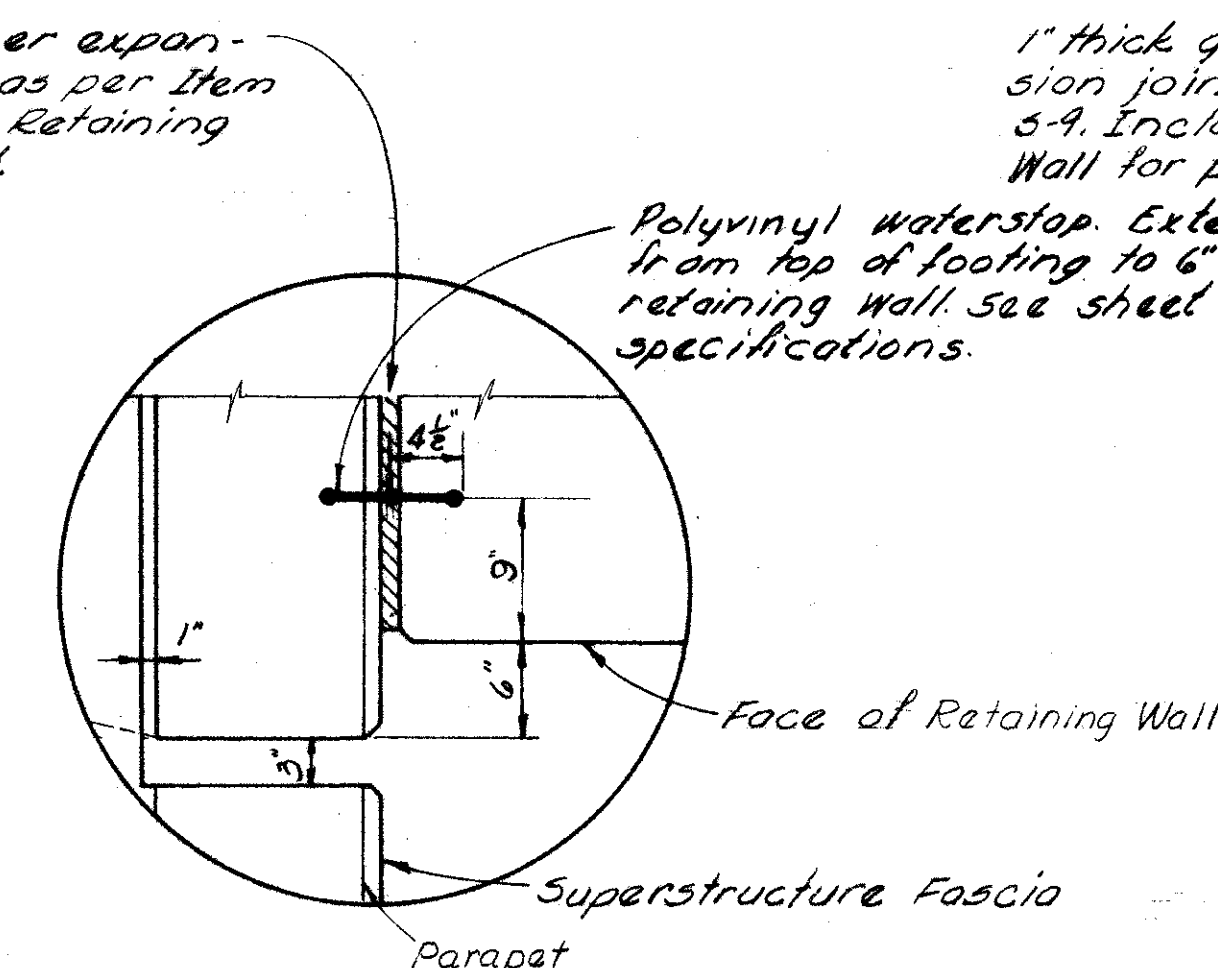


SECTION B-B



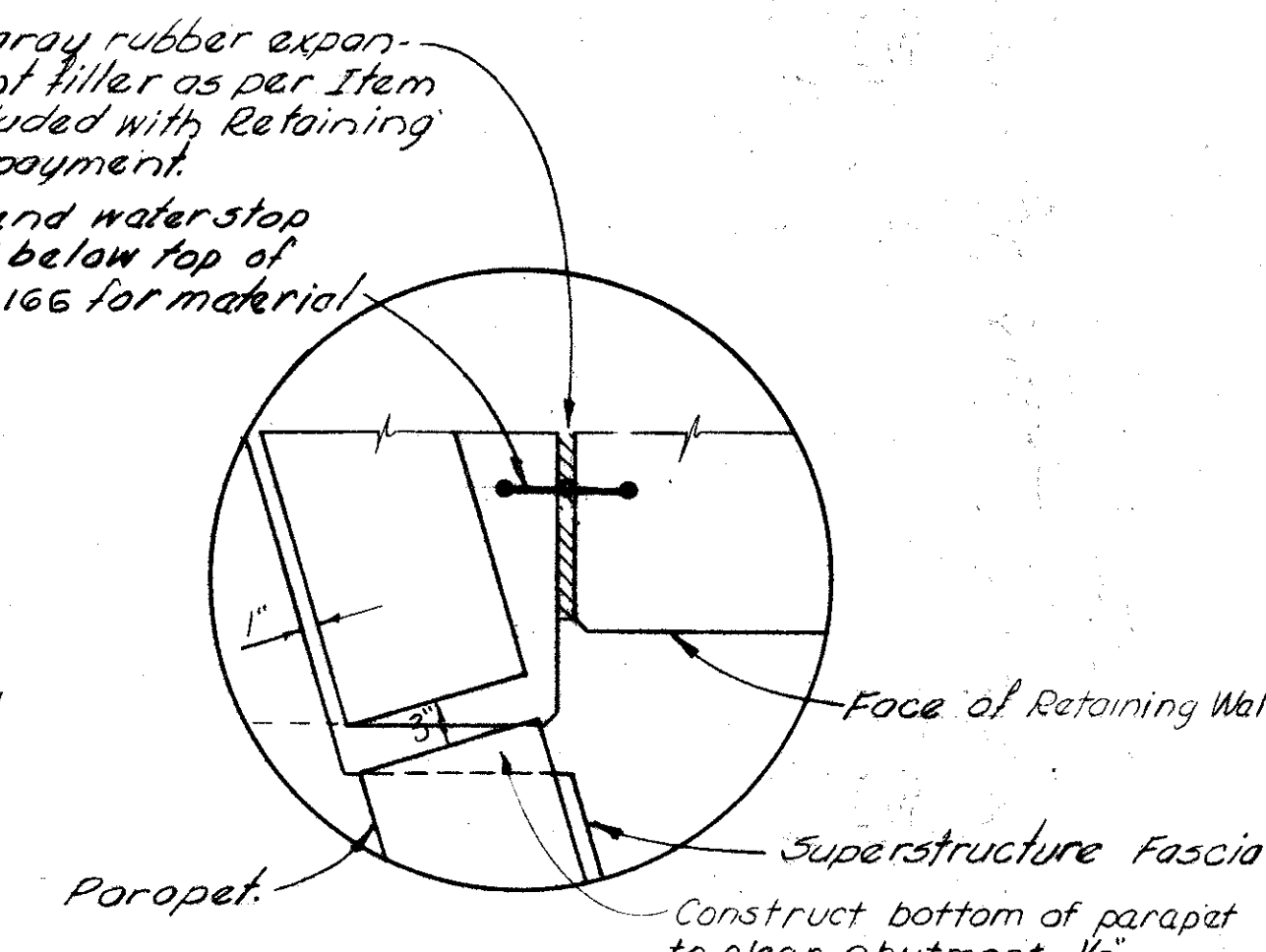
EXCAVATION DETAIL

1" thick gray rubber expansion joint filler as per Item 5-9. Included with Retaining Wall for payment.

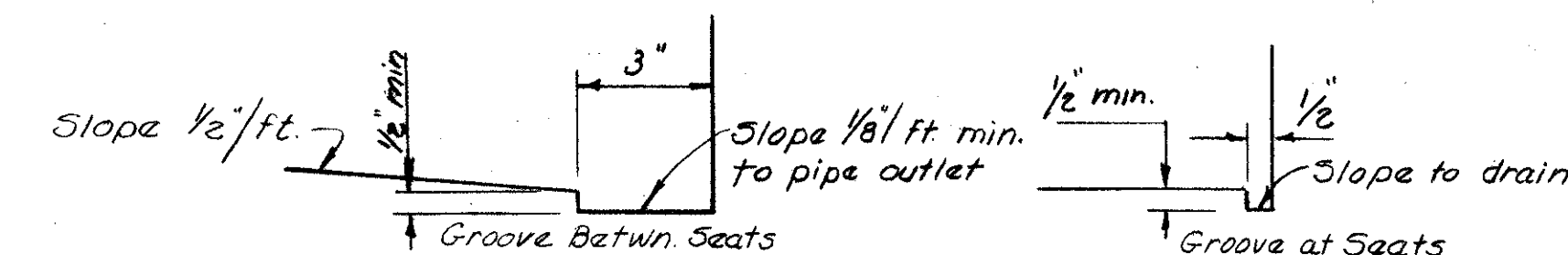


DETAIL "F"

1" thick gray rubber expansion joint filler as per Item 5-9. Included with Retaining Wall for payment.



DETAIL "E"



DETAIL "G"

### NOTES

**PROCEDURE:** Before the backwall is placed the embankment shall be placed and compacted up to the level of the subgrade with a 1:1 slope from the bridge seat to the subgrade.

**CONCRETE END POSTS:** concrete end posts are included with Item 5-14 for payment.

**RIGHT OF WAY FENCE:** For connection of fence to end post see sheet 163 and details for retaining walls B and C.

**POROUS BACKFILL:** Porous backfill shall extend upward to the approach slab or sidewalk for the full length of the abutments and wingwalls.

**JOINTS:** A joint shall be provided in the abutment portion of the end dam of each contraction and expansion joint.

**FOOTING KEY:** The key under the footing shall be placed in a carefully made trench against undisturbed earth.

**ELEVATIONS:** Elevations marked with an asterisk are to the top of the 2 inch edge bar on the end dam.

**Conduit:** 4" steel conduit thru backwall is included with concrete for payment.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

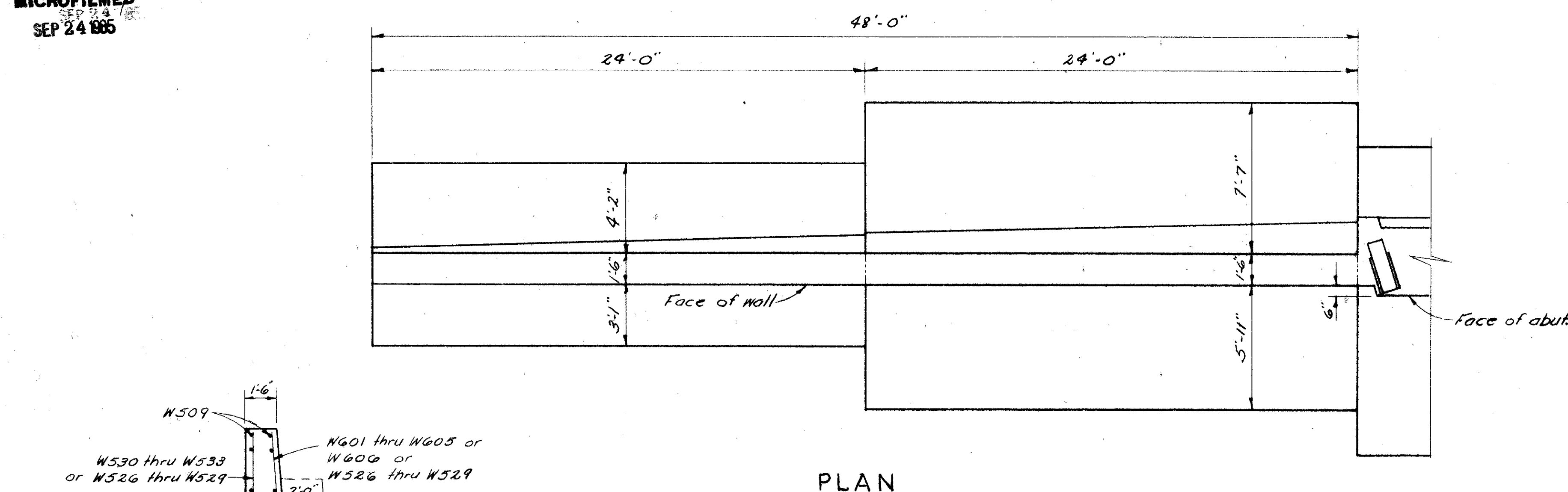
### ABUTMENT DETAILS

BRIDGE No. FRA-40-1300  
SOUTH INNERBELT UNDER FRONT ST.  
FRANKLIN COUNTY

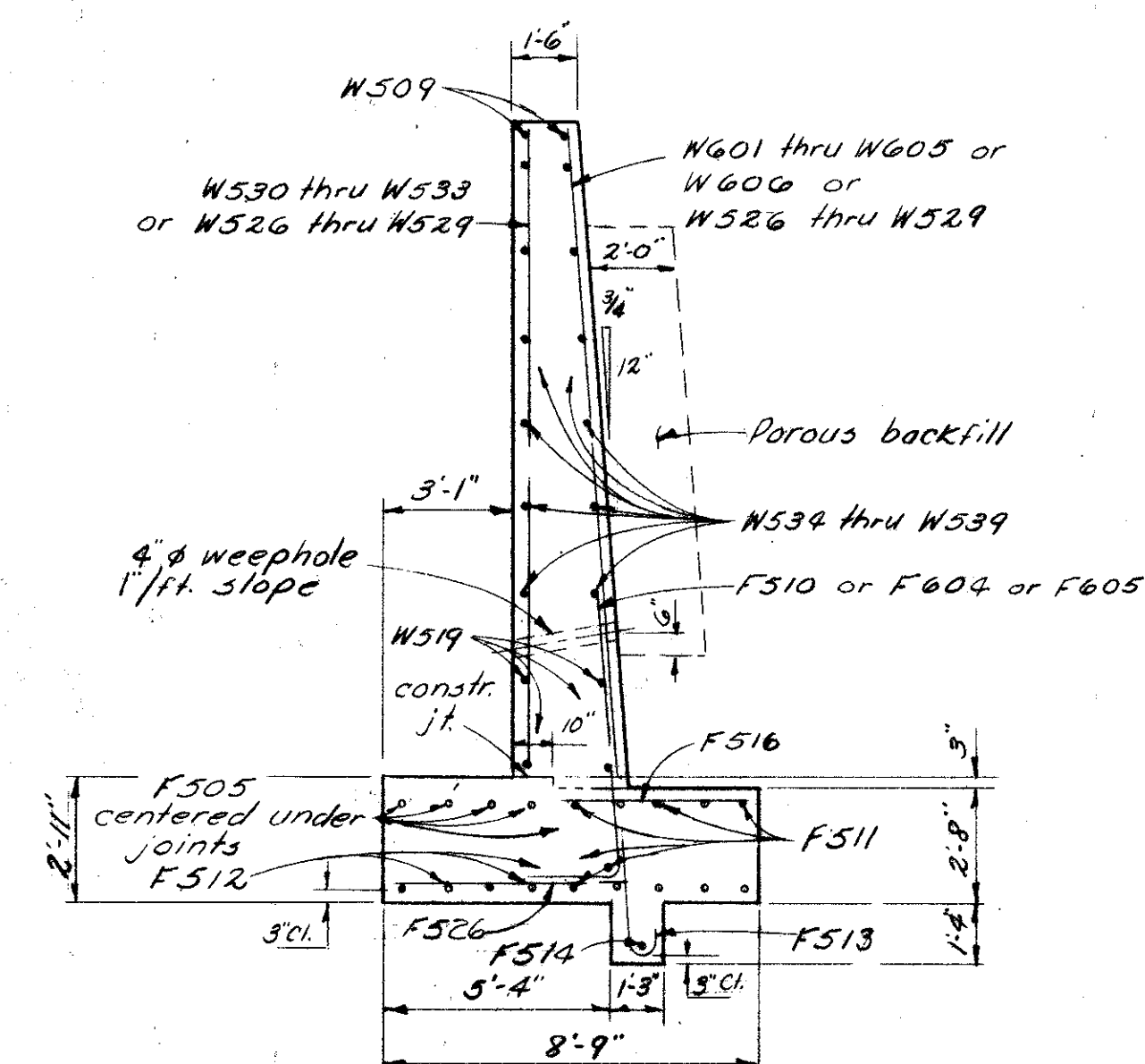
STA-60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Withem	BDB		Pardo	TLU	5-8-62	

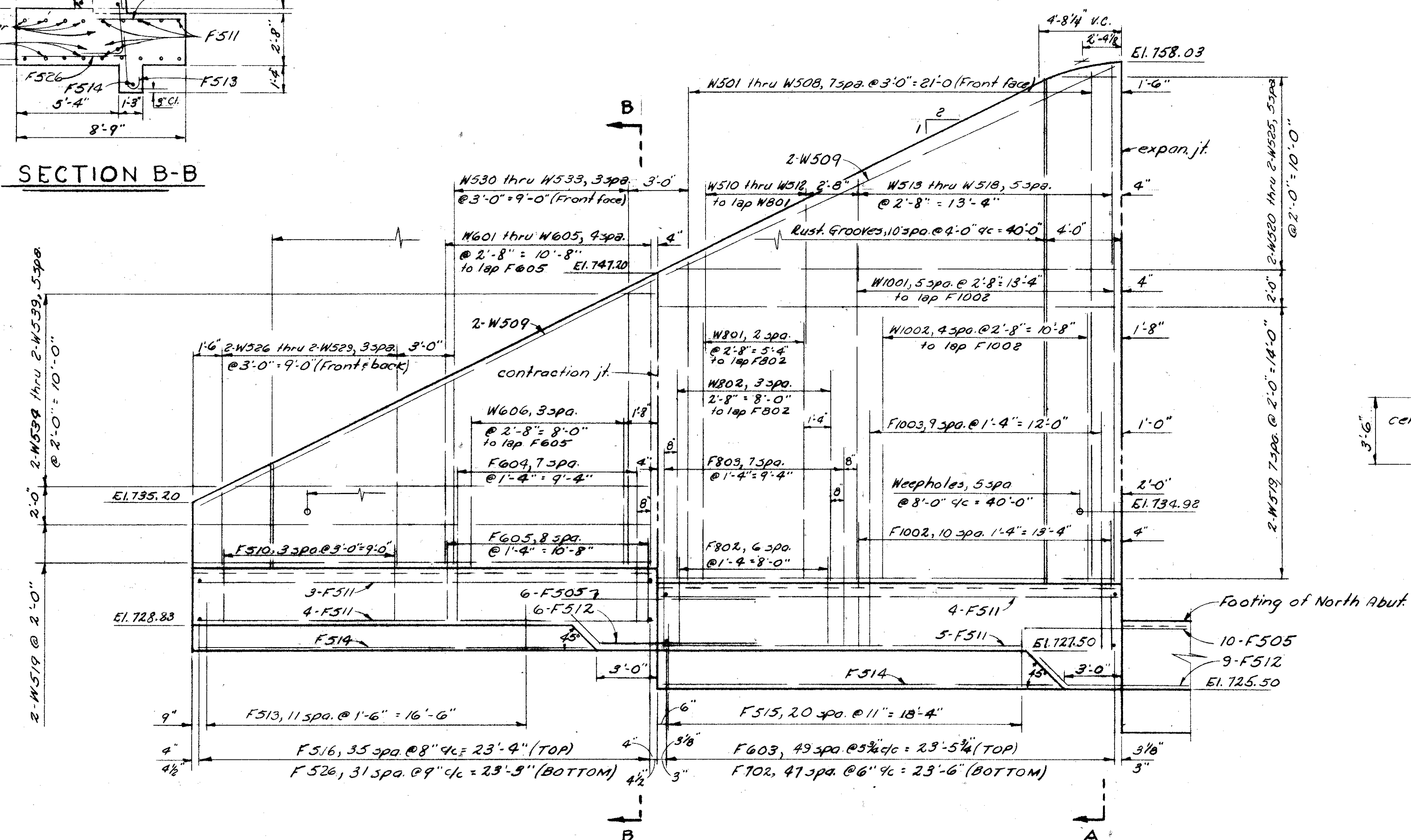
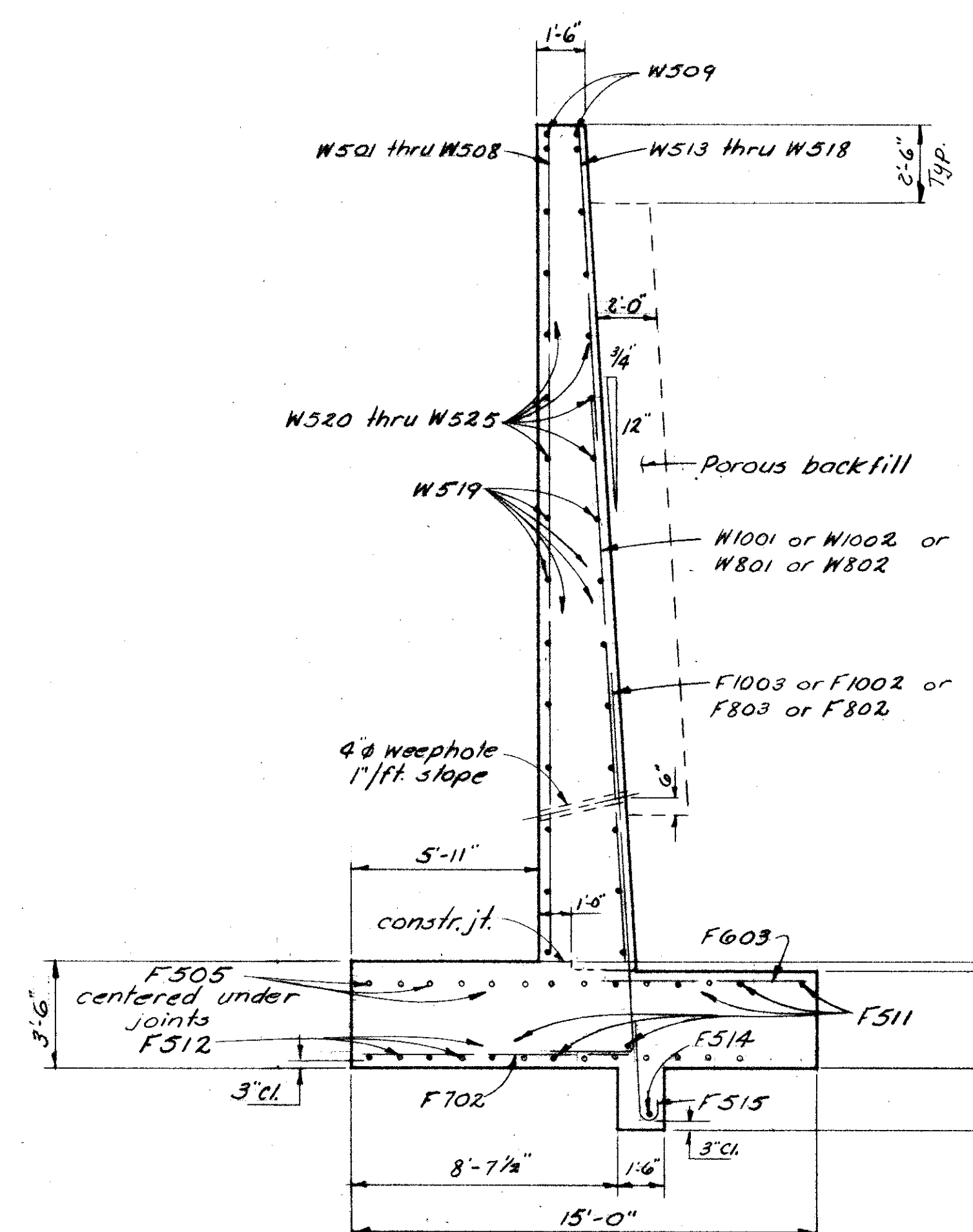
FRANKLIN COUNTY  
FRA-40-12.82



# PLAN



SECTION B-B

ELEVATION

SECTION A-A

NOTES

For common details and additional notes see sheet 183

All vertical stem reinforcing steel is in back of wall unless otherwise noted.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

NORTHWEST RETAINING WALL

BRIDGE N° FRA. 40-1300

SOUTH INNERBELT UNDER FRONT ST.

FRANKLIN COUNTY STA. 60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.R.W.	A.P.		Pardo	TLV	5-8-62	



Face of south abutment

Face of wall

36'-0"

20'-0"

16'-0"

5'-0"

4'-6"

1'-6"

2'-2 3/4"

3'-0 1/4"

185  
250

**Section A-A**

2'-0" VC  
1'-0"  
El. 756.63

1'-0" W540 thru W546, 6 spa. @ 3'-0" = 18'-0" (Front face)

2-W567

3" W553 thru W556, 3 spa. @ 3'-0" = 9'-0" to lap W804

W608 thru W610, 2 spa. @ 3'-0" = 6'-0"

3" W804, 3 spa. @ 3'-0" = 9'-0" to lap F804

1'-9" W803, 2 spa. @ 3'-0" = 6'-0" to lap F804

4'-0"

1'-0" F805, 6 spa. @ 1'-6" = 9'-0"

2'-0" weepholes, 3 spa. @ 8'-0" 4c = 24'-0"

3" F804, 6 spa. @ 1'-6" = 9'-0"

9" 9" W607, 3 spa. @ 3'-0" = 9'-0" to lap F606

F607, 5 spa. @ 1'-6" = 7'-6"

F606, 6 spa. @ 1'-6" = 9'-0"

3" F517, 5 spa. @ 3'-0" = 15'-0"

6" F518, 19 spa. @ 1'-0" = 19'-0"

3" F522, 39 spa. @ 6" 4c = 19'-6" (Heel)

2" F523, 59 spa. @ 4" 4c = 19'-8" (Toe)

3" F519

3-F519  
4-F519

5-F505  
5-F505

2-F521  
3-F521

8-F505  
8-F505

constr. jt.

Footings of south abut.

El. 732.12

**Section B-B**

6" 2-W557 thru 2-W562, 5 spa. @ 3'-0" = 15'-0" (front & back face)

El. 747.13

Rust. Grooves, 7 spa. @ 4'-0" 4c = 28'-0"

2-W568

El. 739.73 (TYP)

El. 739.13

1'-0" 1'-0" 2'-0" 1'-0" 1'-0"

F524

1'-6" F524

3" F517, 5 spa. @ 3'-0" = 15'-0"

6" F518, 19 spa. @ 1'-0" = 19'-0"

3" F522, 39 spa. @ 6" 4c = 19'-6" (Heel)

2" F523, 59 spa. @ 4" 4c = 19'-8" (Toe)

5-F505  
5-F505

2-F521  
3-F521

8-F505  
8-F505

constr. jt.

Footings of south abut.

El. 732.12

Hand-drawn technical drawing of a vertical wall section, likely a retaining wall or foundation. The drawing includes the following dimensions and labels:

- Top Section:**
  - Top width: 1'-6"
  - Top vertical dimension: 2'-6"
  - Section label: W540 thru W546
  - Section label: W567
  - Section label: W553 thru W556
  - Horizontal dimension: 2'-0"
- Central Section:**
  - Vertical dimension: 12"
  - Section label: W548 thru W551
  - Section label: W547
  - Section label: W804 or W803 or W608 thru W610 or W607
  - Section label: Porous backfill
- Bottom Section:**
  - Horizontal dimension: 4'-6"
  - Section label: 4" Weephole 1' ft. slope
  - Section label: F805 or F804 F607 or F606
  - Vertical dimension: 1'-0"
  - Section label: constr. jt.
  - Section label: F522
  - Section label: F519
  - Section label: F518
  - Section label: F523
  - Section label: F505 centered under joint
  - Horizontal dimension: 6'-11"
  - Horizontal dimension: 11'-0"
  - Horizontal dimension: 1'-0"
  - Vertical dimension: 2'-0"
  - Vertical dimension: 1'-0"
  - Vertical dimension: 3' cl.

NOTES

For common details and additional notes see sheet 183.

All vertical stem reinforcing steel is in back of wall unless otherwise noted.

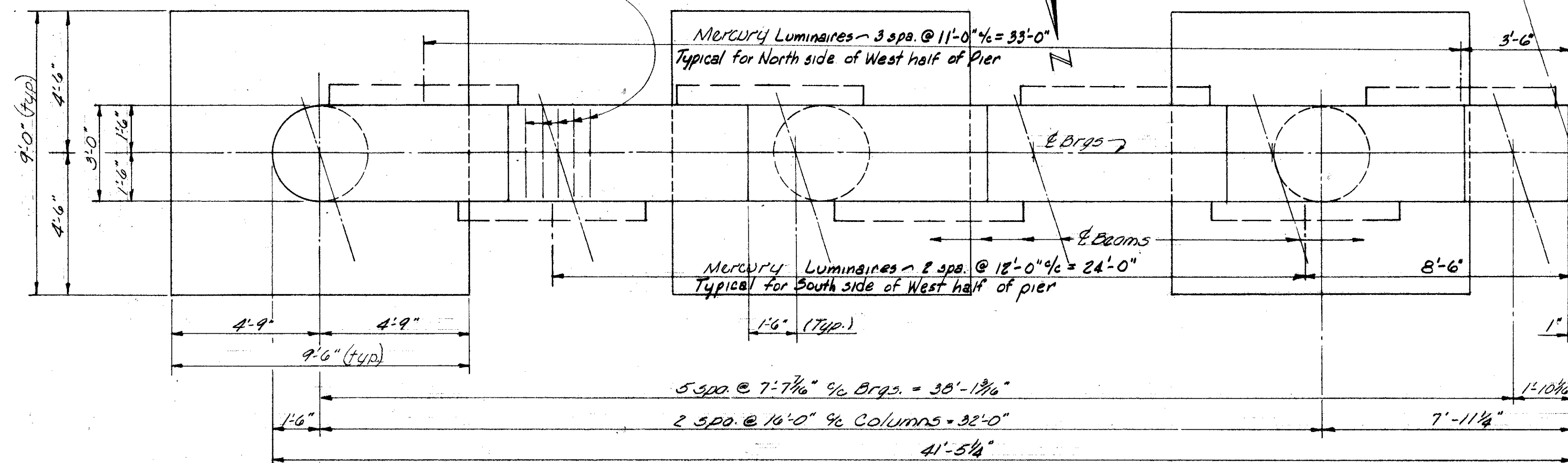
SOUTHWEST RETAINING WALL  
BRIDGE N° FRA 40-1300

SOUTH INNERBELT UNDER FRONT ST.  
FRANKLIN COUNTY STA. 60+80.34

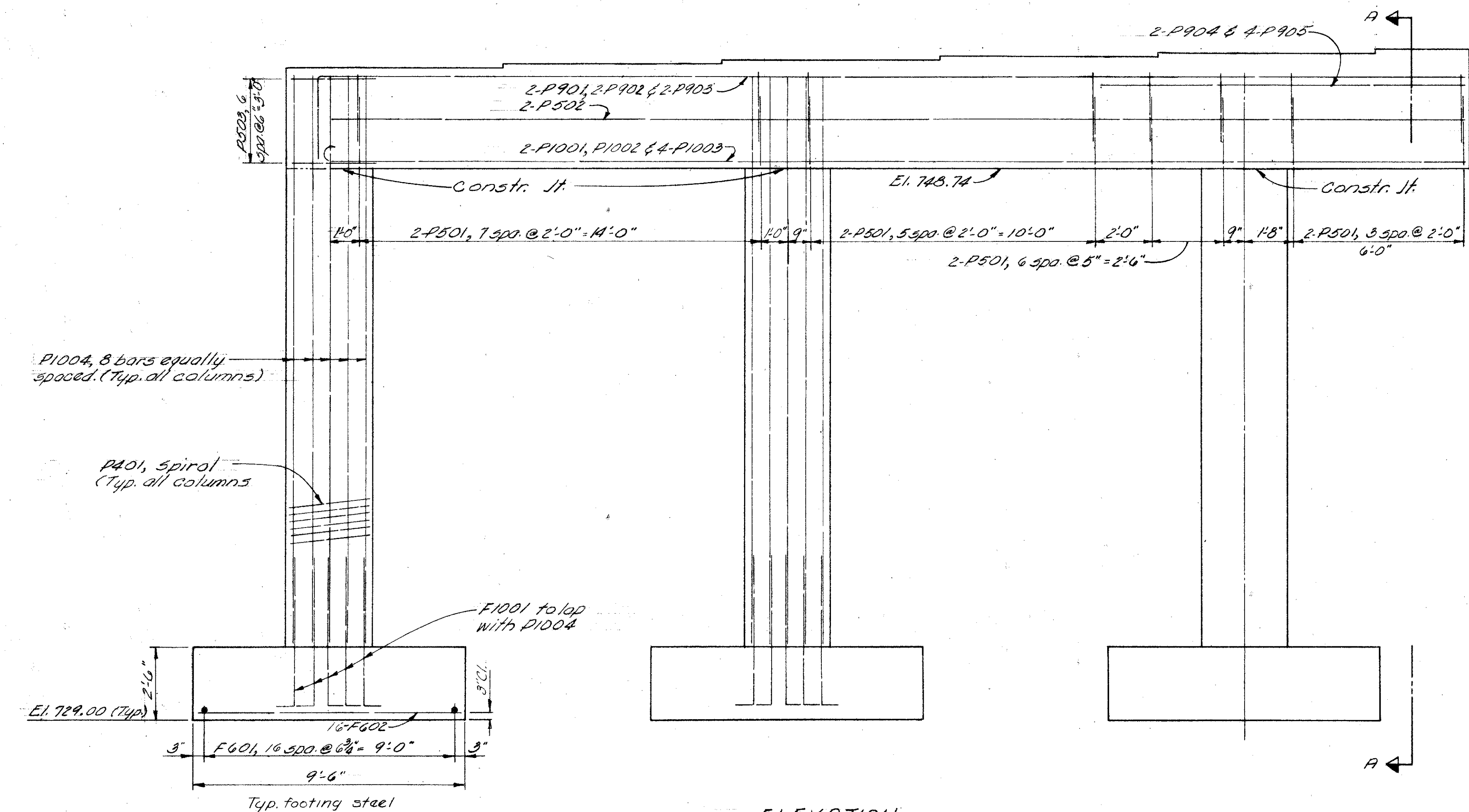
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.R.W.	A.P.		Pardo	TZU	5-8-62	

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SEP 24 1985

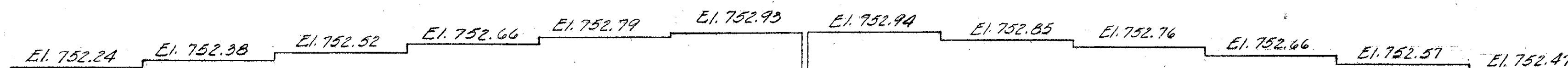
P504, 4 sps. @ 6" % under  
each interior brg. seat  
sps to miss anchor bolts.



PLAN



ELEVATION

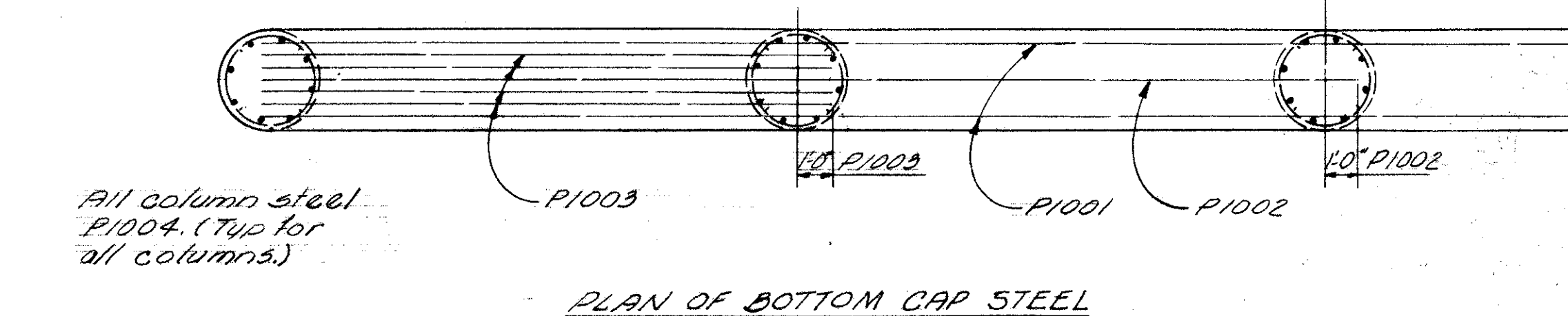
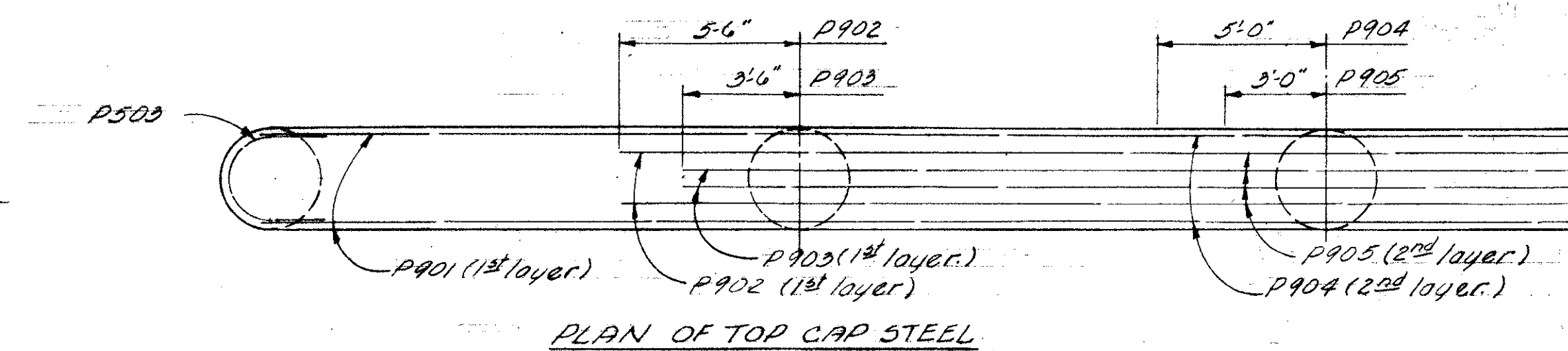


BEAM SEAT ELEVATIONS

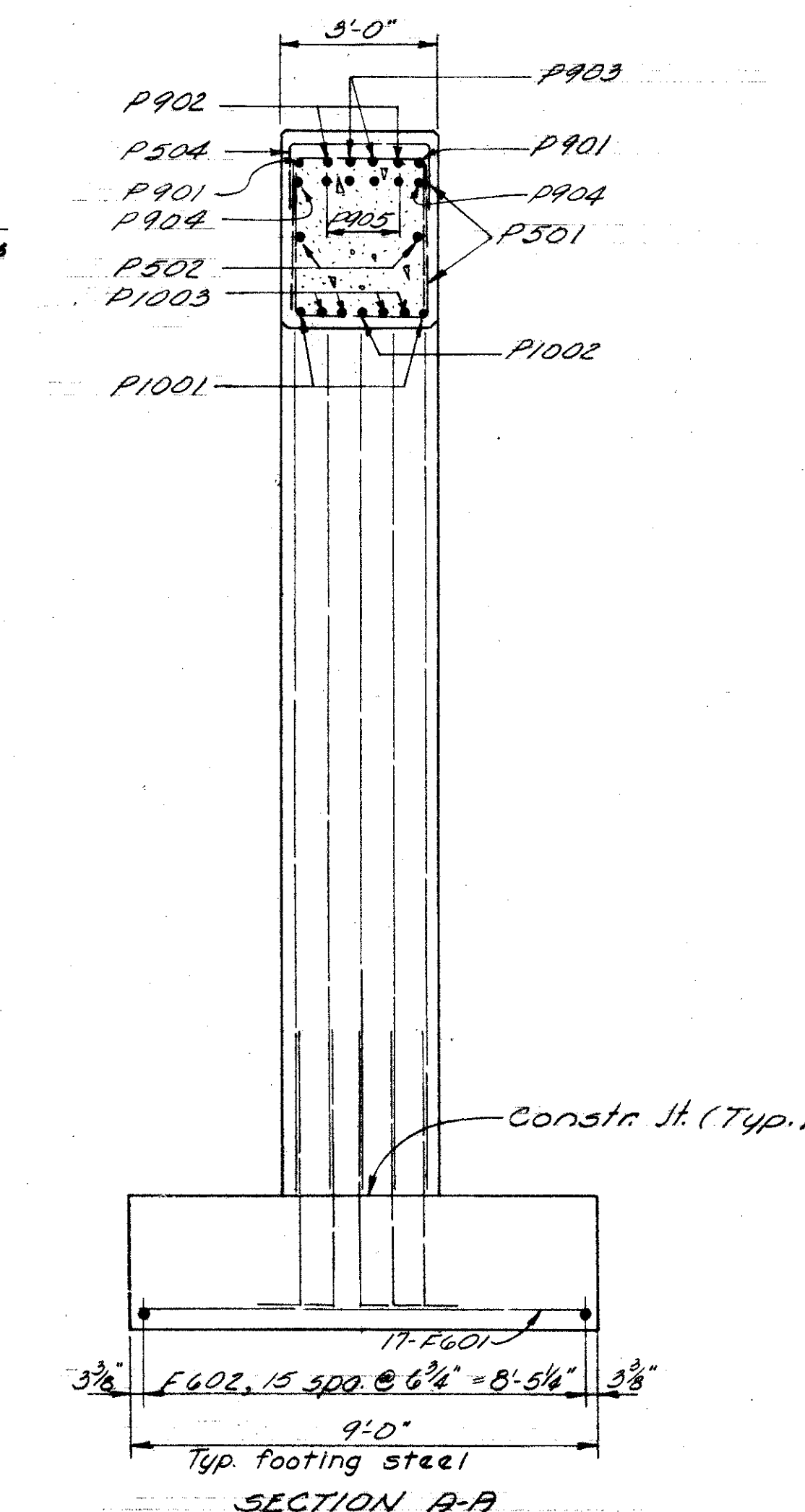
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY  
FRA-40-12.82

186  
250



All column steel  
P1004. (Typ. for  
all columns.)



ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER DETAILS  
BRIDGE No. FRA-40-1300  
SOUTH INNERBELT UNDER FRONT ST.  
FRANKLIN COUNTY  
STA. 60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CRW	BDD		Pardo	TLV	5-8-62	



MICROFILMED

30~0"

Front St.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		



FRANKLIN COUNTY  
FRA-40-12.82

NOTES

1. Concrete in parapet is included with Item 5-14 for payment.
2. All 5-502 bars shall be lapped 1'-7" min. Transverse bars shall be placed normal to construction.
3. \*These are the nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions, even though deviation from them may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.
4. \*\*Deck Slab Haunch: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension with a minimum of 6" and a maximum of 12". Maximum slope of haunch shall be one vertical to four horizontal. Payment shall be based on the 9" width.
5. Subdrainage as per Item 5-29 shall be placed at the face of sidewalk curb.

TRANSVERSE SECTION

## PLACEMENT OF TRANSVERSE SLAB REINFORCING

SECTION A~A

DIAGRAM SHOWING  
STAGGER OF 5001 BARS  
OVER PIER

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS  
BRIDGE No. FRA-40-1300  
SOUTH INNERBELT UNDER  
FRONT ST.

FRANKLIN CO. STA. 60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CRW	OMOL		Pardo	TZU	5-8-62	7-9-63 10-11-63

### BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at the north abutment  $1\frac{1}{8}"$ .
2. Butt-weld beam flanges and web at the pier using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at the pier.
4. Lower end of beam at the north abutment.

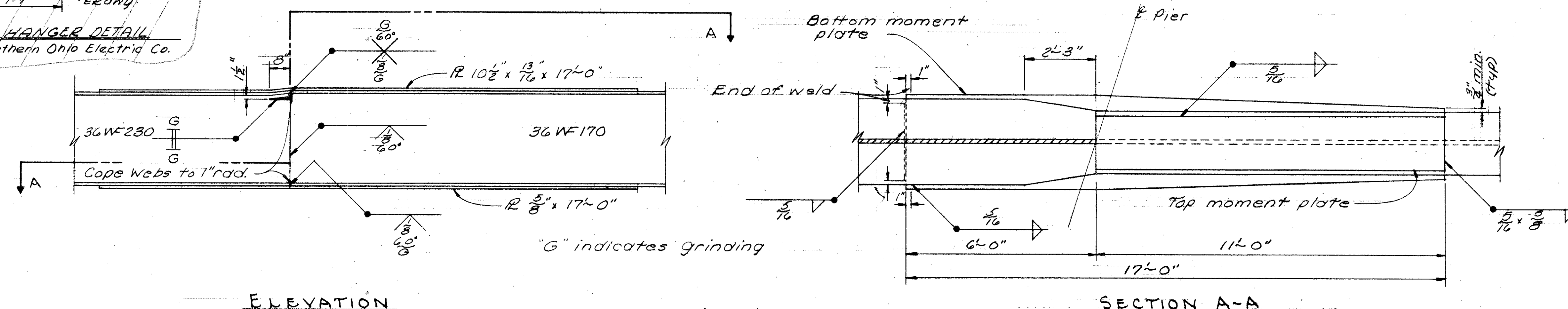
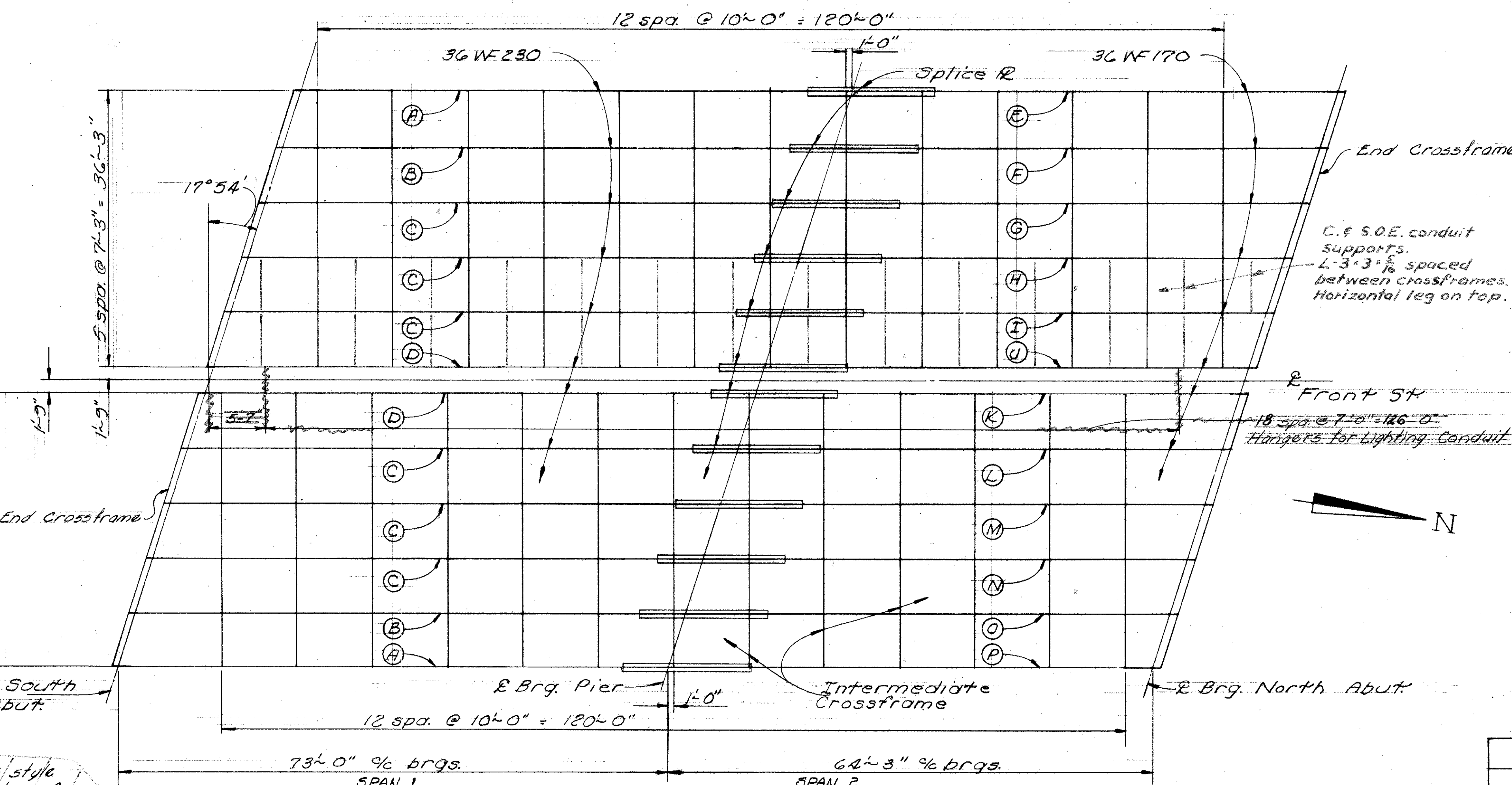
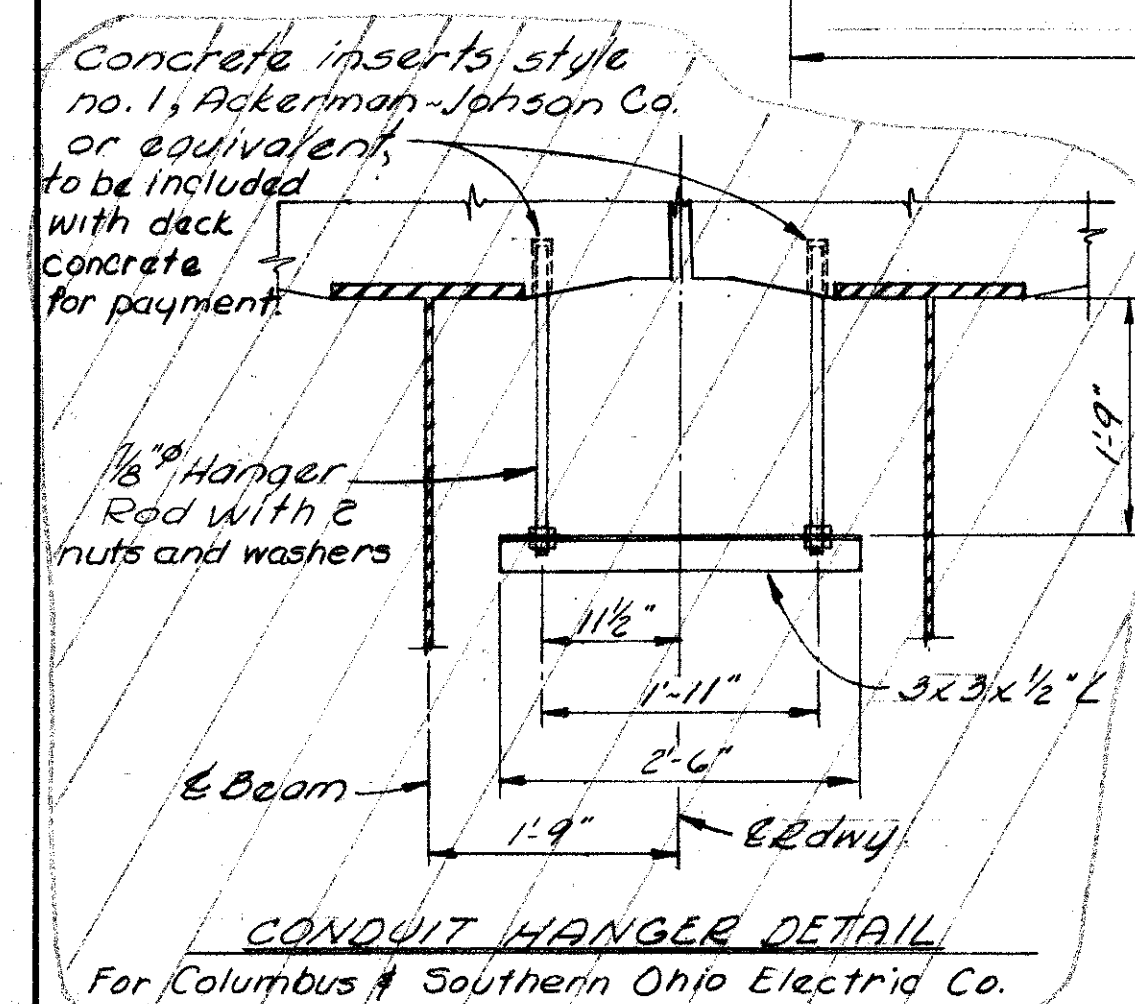
### DEFLECTION AND CAMBER (in inches)

	Beams															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Deflection due to weight of steel	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$
Deflection due to remaining D.L.	1	$\frac{3}{4}$	$\frac{2}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{4}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{4}$	$\frac{1}{16}$
Convexity required for vertical curve	$1\frac{1}{16}$	$1\frac{1}{16}$	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{2}$	$\frac{1}{16}$	$\frac{1}{16}$
Sum of deflection and convexity	3	$2\frac{1}{4}$	$2\frac{1}{16}$	$2\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{4}$	$\frac{1}{8}$	$1\frac{1}{16}$
Required shop Camber	3	$2\frac{3}{4}$	$2\frac{1}{2}$	$2\frac{1}{2}$	0	0	0	0	0	0	0	0	0	1	1	1

Beams with no required shop camber, if curved shall be erected with the convex side up.

### FRAMING PLAN

For bearing plate details, see  
Std. Dwg. No. CSB-2-56, Sheet No. 3



### BEAM SPLICE DETAILS



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## REINFORCING

## STEEL

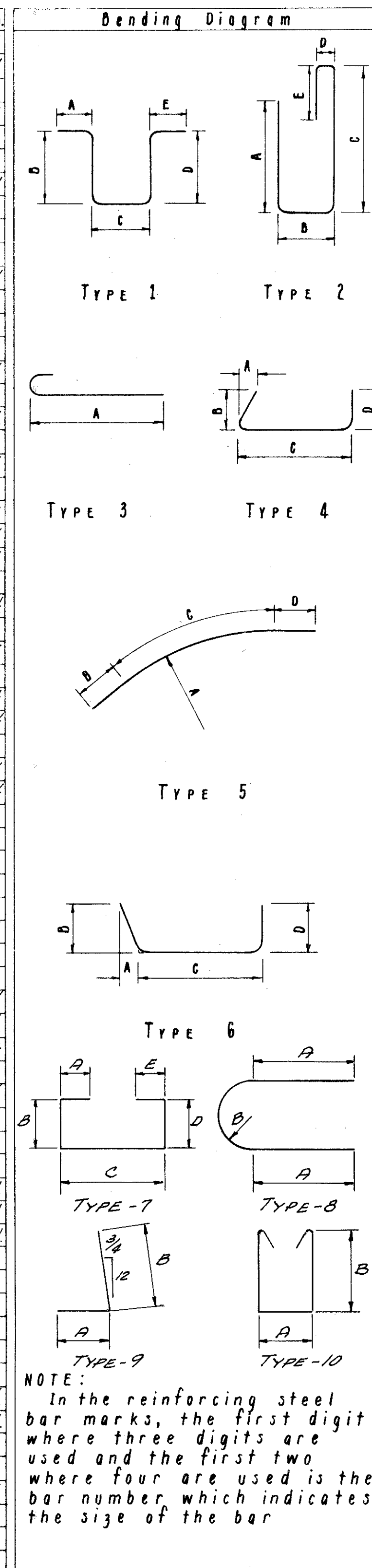
## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

189  
250

FRANKLIN COUNTY  
FRA-40-12.82

Mark	Nº	Length	Weight	Shp.	Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
SUPERSTRUCTURE															
R501	16	11-2	*	st.											
R502	64	13-8	*	st.											
3501	78	30-0	2441	st.											
3502	696	35-10	26012	st.											
3503	248	14-2	3664	7	0-6	1-10	10-8	1-3	0-6	bt.					
3504	248	10-8	2759	st.											
3505	456	40-10	19421	st.											
3506	1	39-3		st.											
thru		Varies by													
		1-8	475												
3526	1	5-11		st.											
3527	248	6-5	1660	10		2-7	0-8	2-7	bt.						
3528	8	39-10	332	st.											
3529	12	3-3	41	st.											
3530	2	38-3		st.											
thru		Varies by													
		1-8	945												
3550	2	4-11		st.											
3601	456	40-10	27967	st.											
3602	1	39-3		st.											
thru		Varies by													
		1-8	712												
3622	1	5-11		st.											
3624	8	39-10	479	st.											
3625	12	3-3	59	st.											
3626	1	38-3		st.											
thru		Varies by													
		1-8	681												
3646	1	4-11		st.											
PIERS															
P501	100	7-7	791	1		2-7	2-8	2-7	bt.						
P502	4	40-0	167	st.											
P503	14	7-2	135	8	1-7	1-3 1/4			bt.						
P504	60	4-5	276	1		1-0	2-8	1-0	bt.						
P901	4	42-3	575	1	2-6	40-0			bt.						
P902	4	29-3	398	st.											
P903	4	27-3	371	st.											
P904	4	12-9	173	st.											
P905	8	10-9	292	st.											
P1001	4	41-1	707	3	39-8				bt.						
P1002	2	34-5	296	3	33-0				bt.						
P1003	8	18-5	634	3	17-0				bt.						
P1004	48	20-5	4217	st.											
F601	102	8-8	1328	st.											
F602	96	9-2	1322	st.											
F1001	48	6-5	1326	1	1-4	5-5			bt.						
ABUTMENTS															
A501	25	27-2	708	st.											
A502	29	27-11	844	st.											
A503	54	30-10	1737	st.											
A504	25	26-7	623	st.											
A505	29	27-2	822	st.											
A506	29	23-5	708	st.											



\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE  
RAILING FOR PAYMENT.

SPIRALS - HOT ROLLED							
Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	6	17-3	32	4 1/2	49	24	1902

### SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.

THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT

SHALL IN OTHER RESPECTS CONFORM TO ITEM S-4

1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER SHALL BE PROVIDED FOR EACH SPIRAL UNIT, THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT. WILL BE PAID FOR AS REINFORCING STEEL, AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

### REINFORCING STEEL LIST

BRIDGE No FRA-40-1300  
SOUTH INNERBELT UNDER FRONT ST.  
FRANKLIN COUNTY STA-60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WITHEM	BDB		Pardo	TLU	5-8-62	





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SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

Franklin County  
FRA-40-12.82

191  
250

#### REFERENCES:

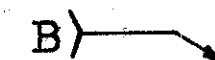
##### Standard Drawings:

End Dam and End Cross Frame Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Scupper Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Railing Details Type C	- AR-1-57, Revised 4-2-62
Rocker and Bolster Details	- RB-1-55, Revised 2-2-59
Approach Slab Details	- AS-1-54, Revised 7-5-62
Supplemental Specification	- S-101 Dated 7-12-62
Common Details:	
Downspout and Conductor Details	- Sheet 166
Lighting Details	- Sheet 165
Railing Details	- Sheet 163
R/W Fence Details	- Sheet 163
Sidewalk End Dam Details	- Sheet 164
Scupper Details	- Sheet 164
Longitudinal Deck Joint	- Sheet 166

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may be, at the option of the contractor, made in the shop. Class "B" welding shown thus:

B) 

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

BEARING SURFACES: The concrete surface under all rockers and bolsters shall be placed a minimum of 1/4-inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

TRAFFIC MAINTENANCE: For details of traffic maintenance, see Roadway Plans.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.98 tons per square foot and abutment footings for 2.60 tons per square foot.

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

WIRING DETAILS: For details and notes for wiring, see Roadway Plans.

ELECTRICAL GROUNDS: A stranded No. 10 AWG bare copper wire electrical ground shall be embedded in the outside column on each side of the structure at the pier. The lower ends of the wires shall terminate in a 25-foot length coil placed under the footing and separated from the concrete by two layers of tar paper and the upper ends shall extend sufficiently above the top of the concrete to provide for an exothermic welded connection to outside beam of the Superstructure. Ground each light pole with a No. 10 AWG stranded bare copper cable. Exothermic weld one end of cable to an anchor bolt and the other end to the top flange of the outside beam.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting, as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning except as noted in the specifications regarding the use of Chromate Primers.

SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats and backwalls.

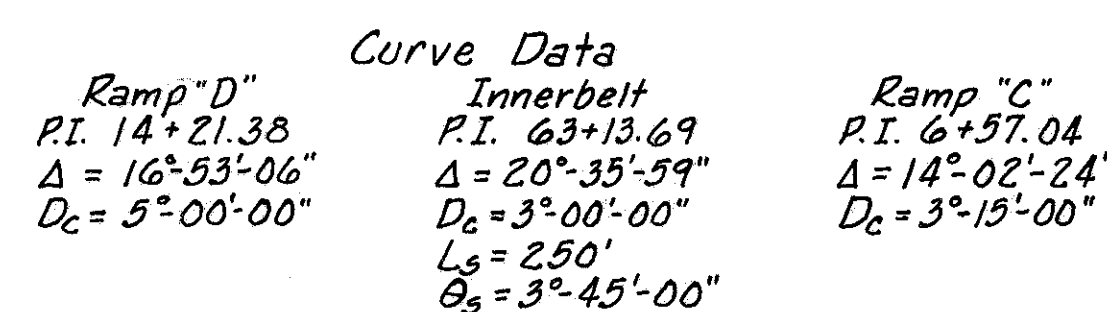
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

#### GENERAL NOTES

BRIDGE No. FRA-40-1300

SOUTH INNERBELT UNDER FRONT ST.  
FRANKLIN COUNTY STA. 60+80.34

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	5-18-62	



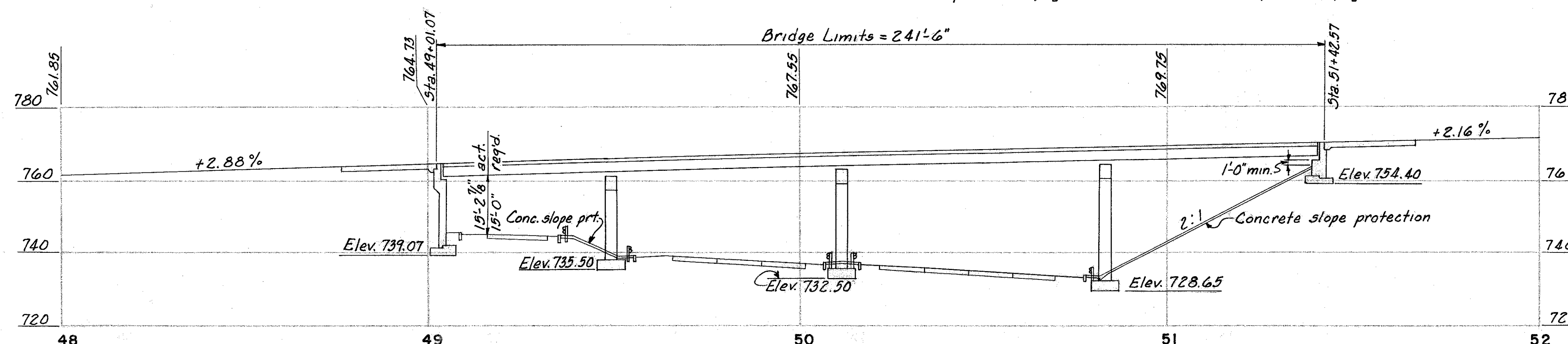
## PLAN

High St.: P.V.I. 49+97.22  
50' V.C.  
Elev. 767.53  
Corr. -0.04'  
P.G. 767.49  
 $G_1 = +2.88\%$ ,  $G_2 = +2.16\%$

Innerbelt: P.V.I. 67+25  
550' v.c.  
Elev. 740.09  
Corr. -2.02'  
P.G. 738.07  
 $G_1 = +1.94\%$ ,  $G_2 = -1.00\%$

### PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure  
SPANS: 46'-3", 62'-3", 71'-6", 57'-0" brgs.  
ROADWAY: 72' f/f curbs with 10'-2" sidewalks and concrete parapets with alum. railing  
LOADING: CF-400 (1957)  
WEARING SURFACE: 2 1/2" asphaltic concrete  
SKEW: 2-55° Lt. Forward  
ALIGNMENT: Tangent  
APPROACH SLABS: 25'-0" long, see Sheet 193



## PROFILE

Along E High St.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

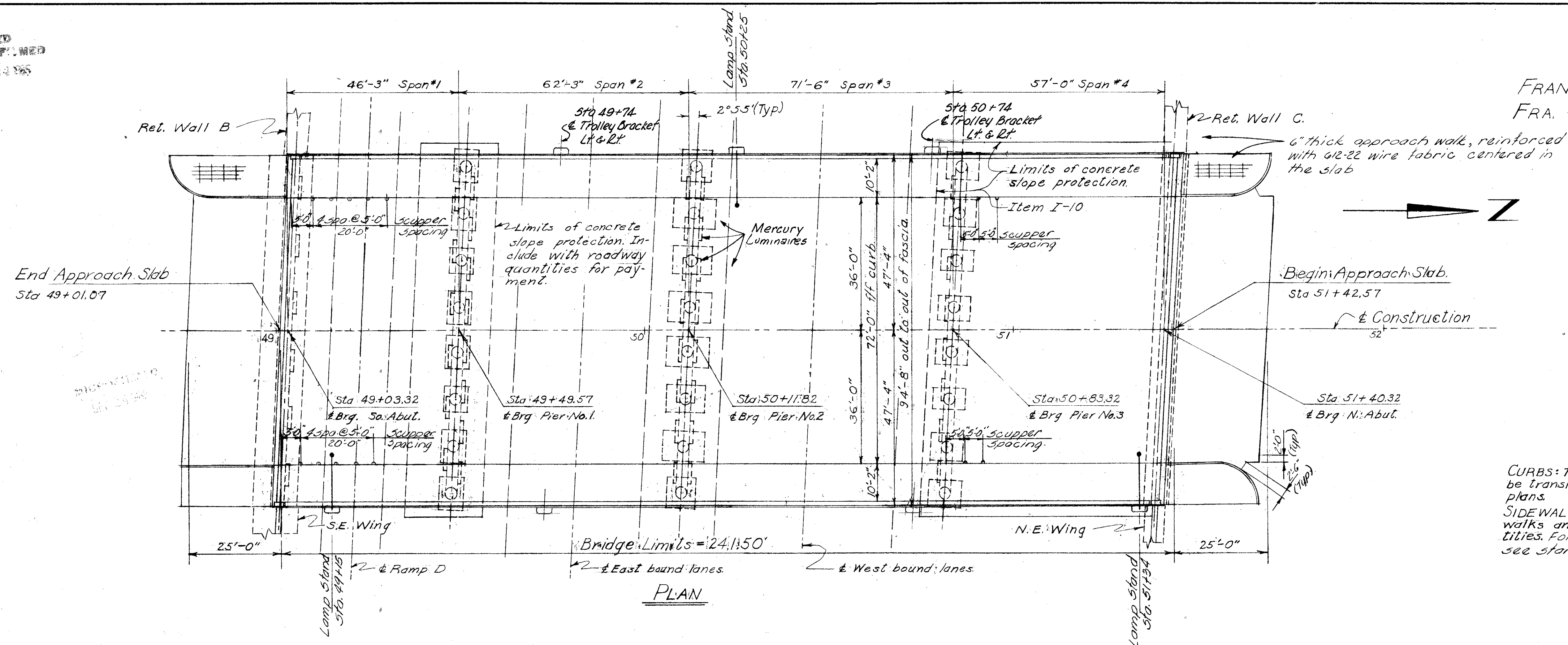
SITE PLAN  
BRIDGE NO. FRA. 40-1310  
SOUTH INNERBELT UNDER HIGH STREET

FRANKLIN COUNTY STA. 65+88.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
R.T.	R.T.	E. D. A.	R.R.M.	TLJ	5-8-62	



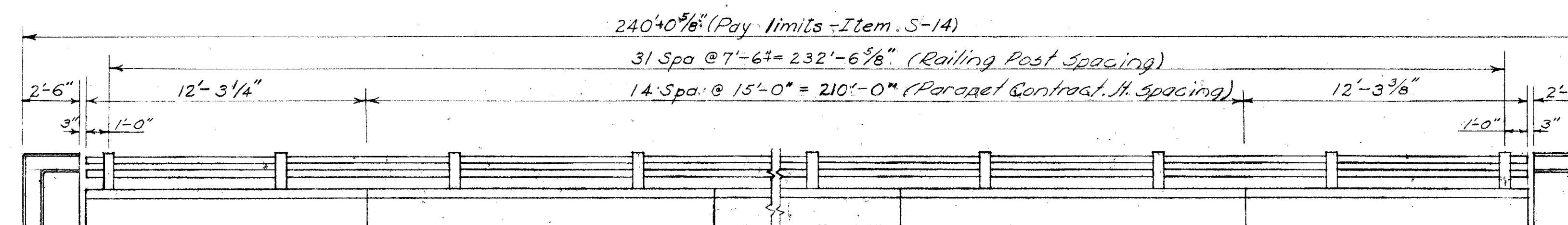
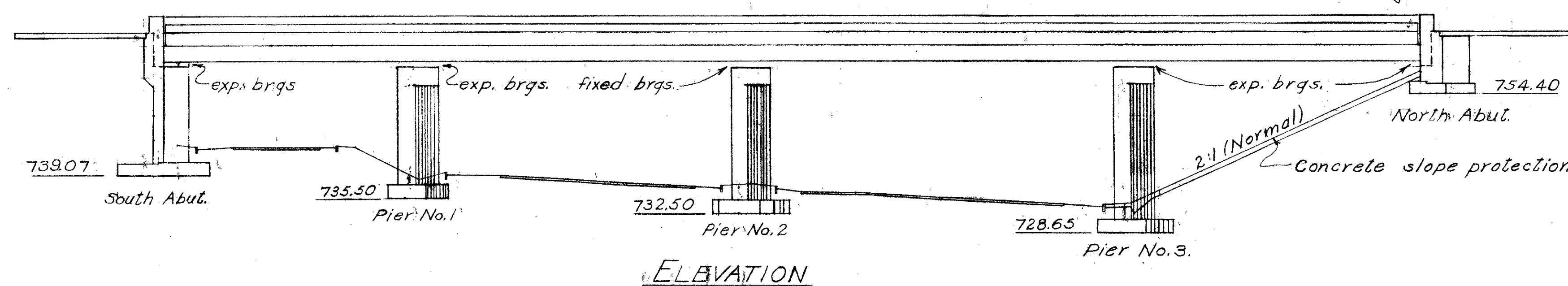
FRANKLIN COUNTY  
FRA. 40-12.82



NOTES

**CURBS:** The curbs on the approach slabs shall be transitioned to match the curbs on the roadway plans.

**SIDEWALK & APPROACH SLAB:** The approach walks and slabs are included with roadway quantities. For additional approach slab details see standard drawing A5-1-54.



**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

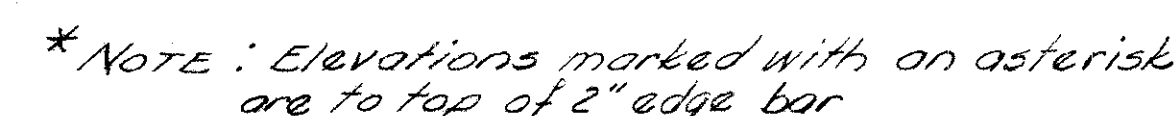
GENERAL PLAN & ELEVATION  
BRIDGE No. FRA 40-1310  
SOUTH INNERBELT UNDER HIGH ST.  
FRANKLIN COUNTY STA 65+88.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIS
P.M.	P.M.		GETTIN	TLU	5-8-62	

FED. BD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		



NOTE: For additional details and notes see sheet - 198

[illegible]

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SOUTH ABUTMENT  
BRIDGE No. FRA-40-1310  
SOUTH INNERBELT UNDER HIGH 57  
FRANKLIN COUNTY

STA-65+88.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	BDB		BE TTN	TLU	5-8-62	



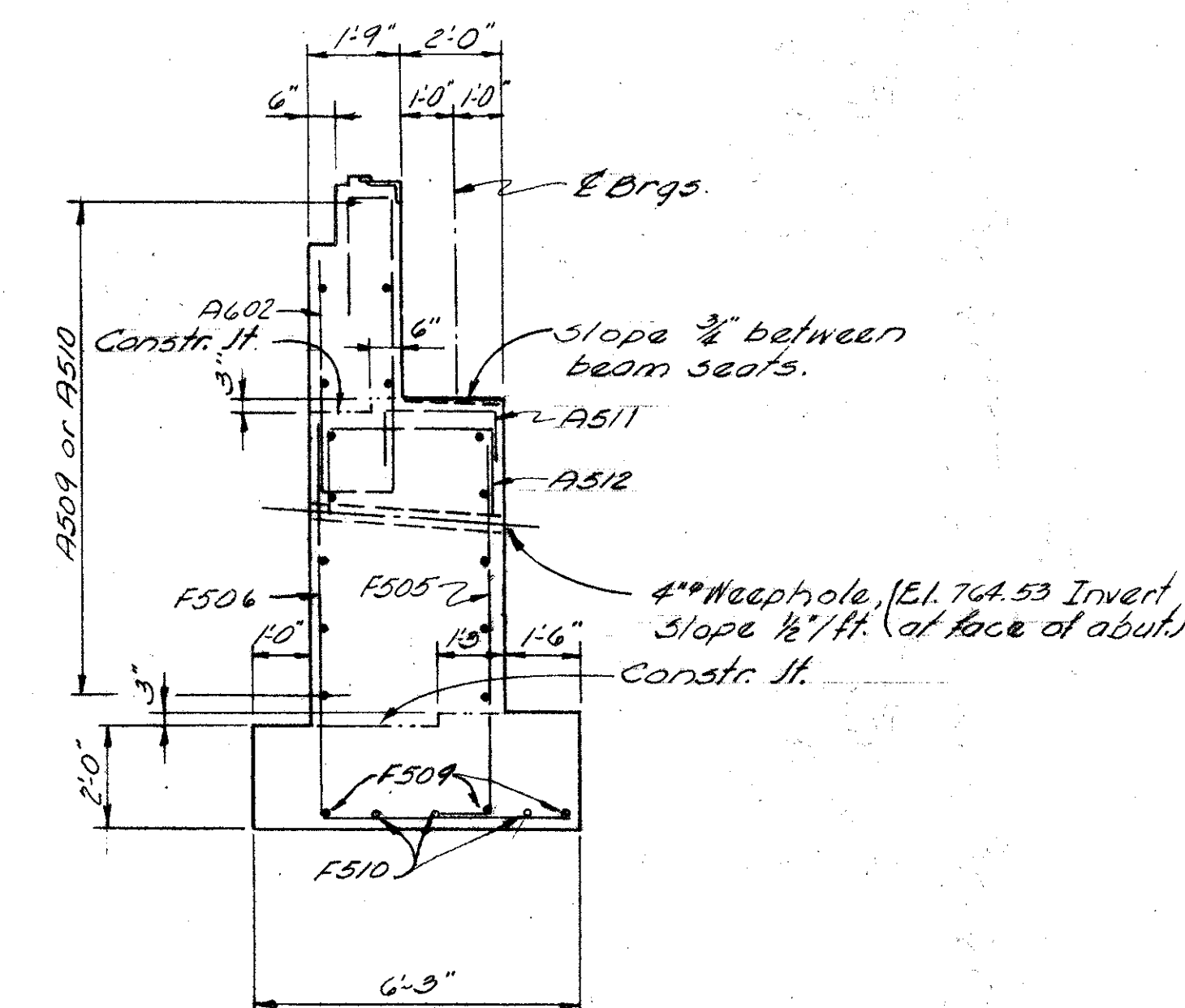
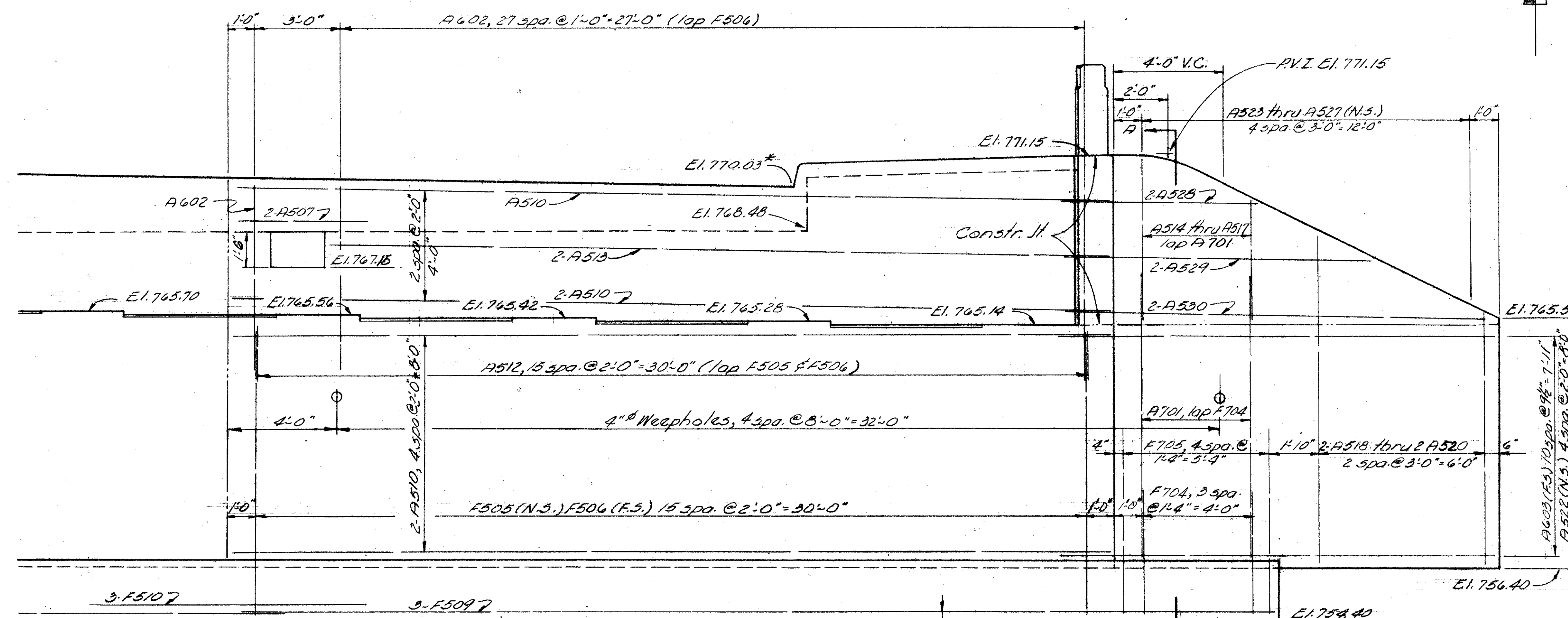
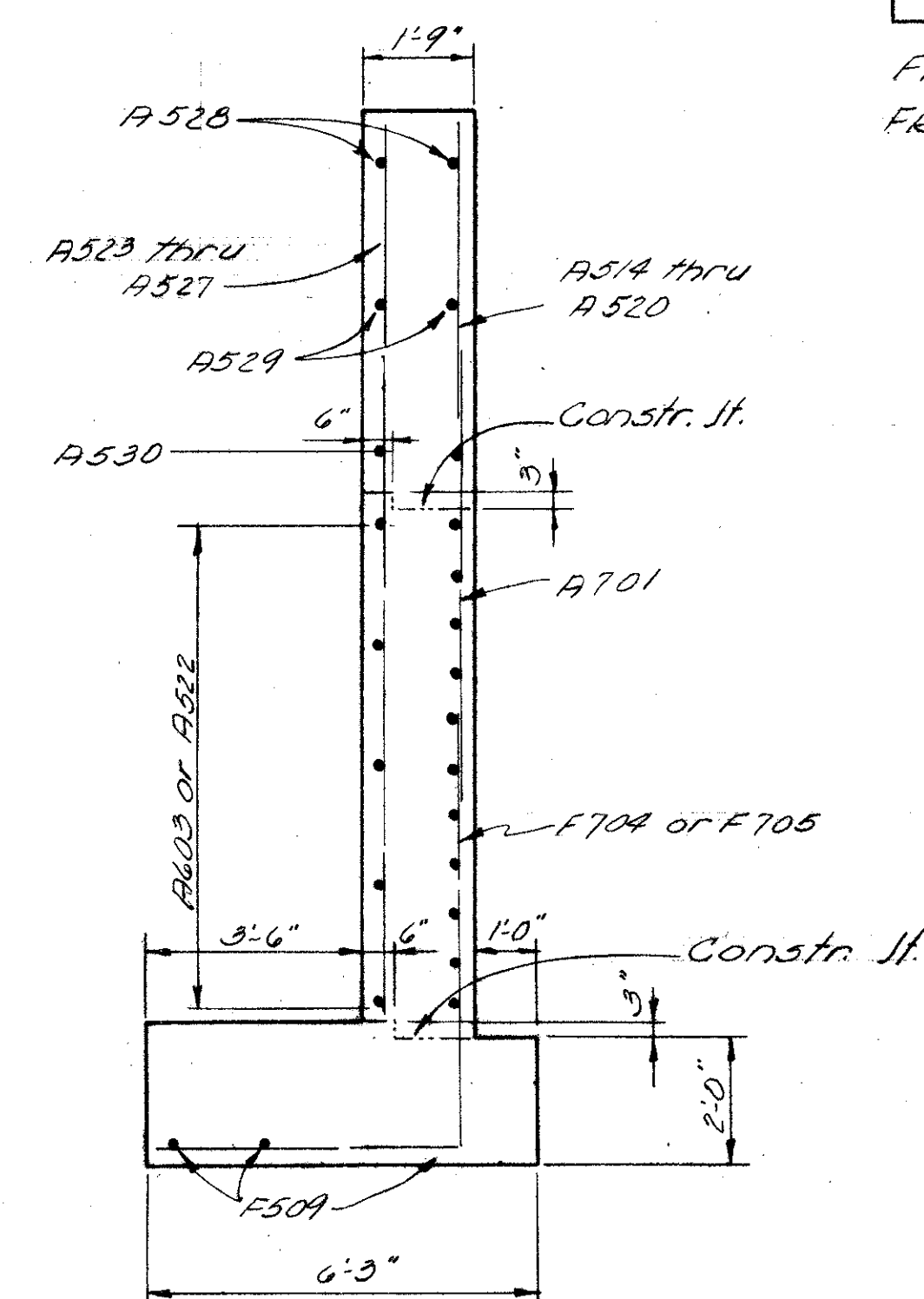
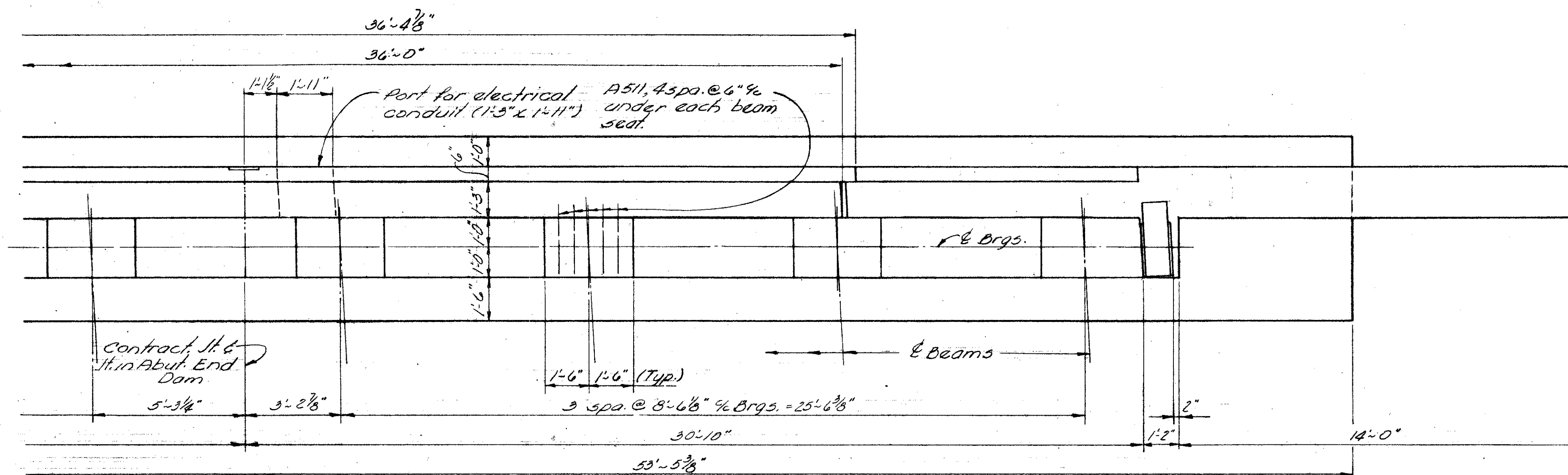


MICROFILMED  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

196  
250

FRANKLIN COUNTY  
FRA-40-12.82



NOTE: Elevations marked with an asterisk are to the top of 2" edge bar.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
NORTH ABUTMENT BRIDGE No. FRA-40-1310 SOUTH INNERBELT UNDER HIGH ST. FRANKLIN COUNTY						
STA. 65+38.29						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
PM	BDB		BETTIN	TKU	5-8-62	

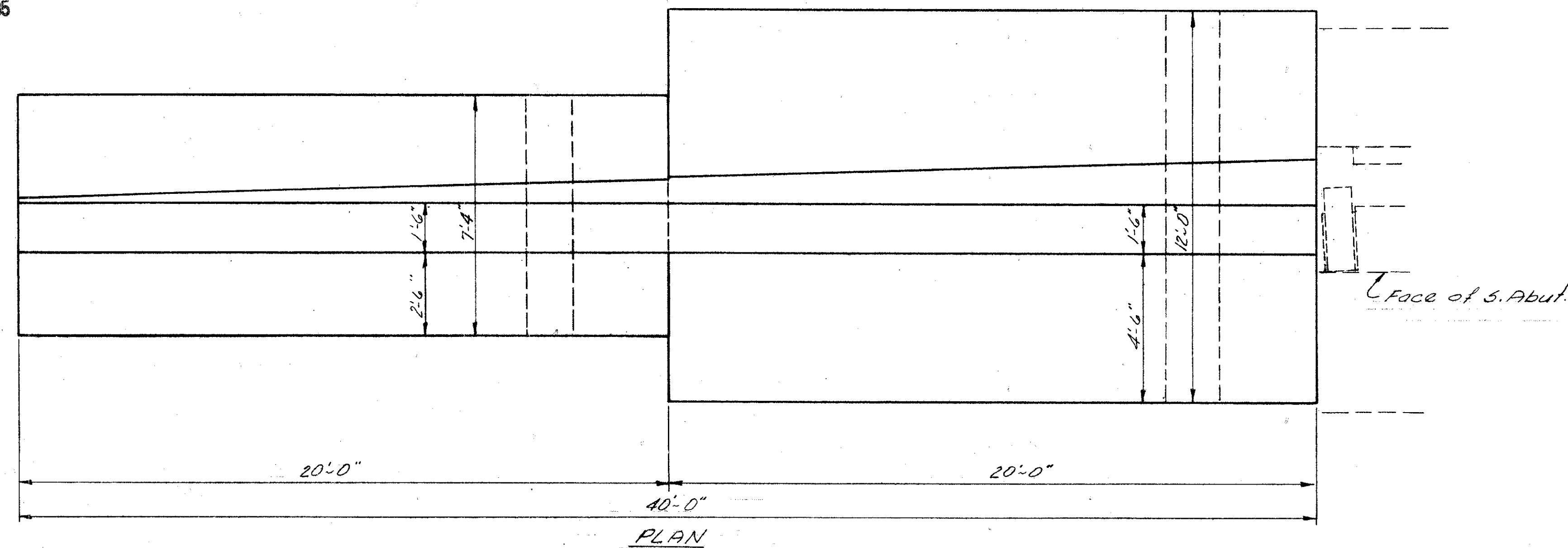


MICROFILMED  
SEP 24 1985

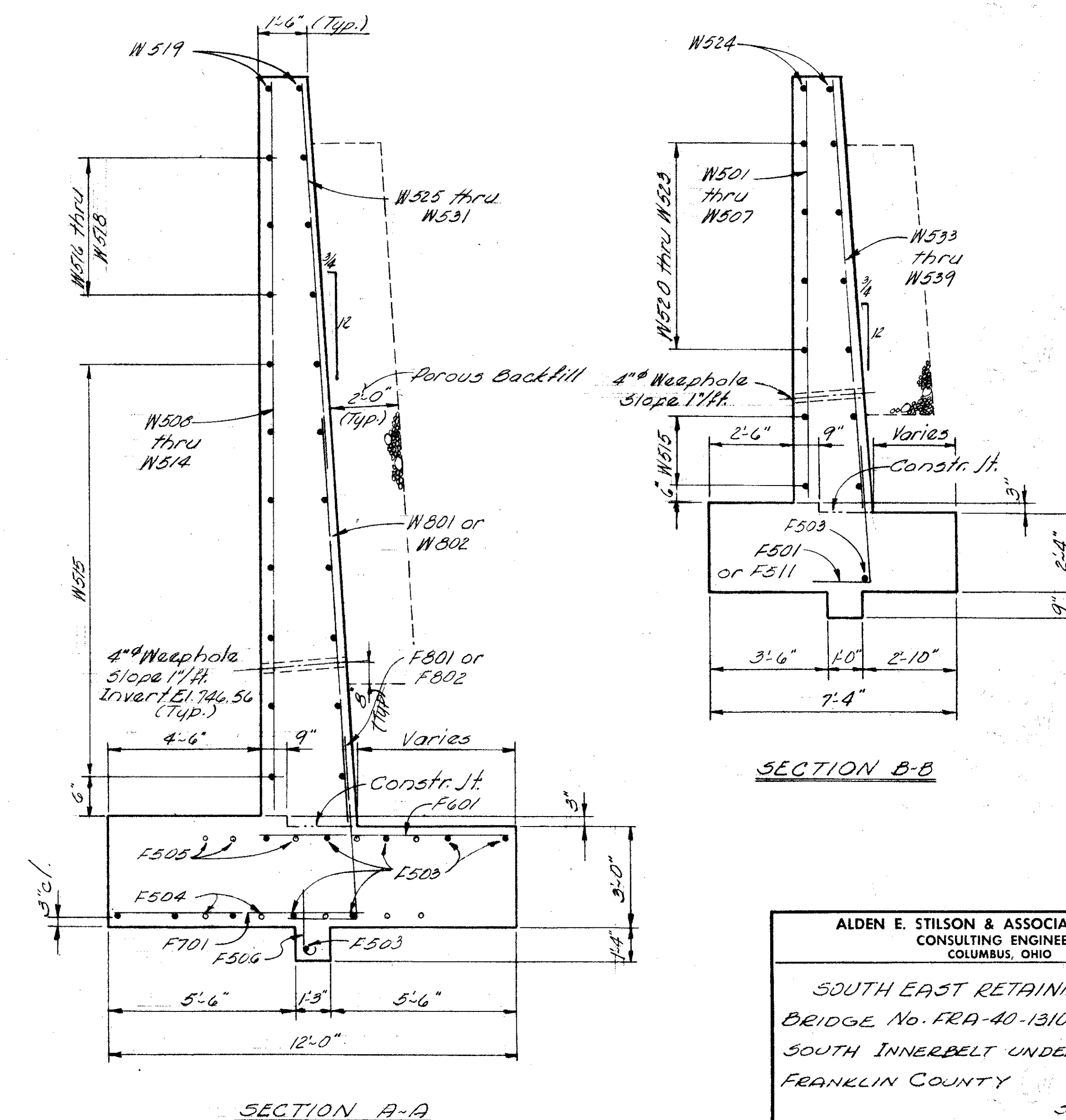
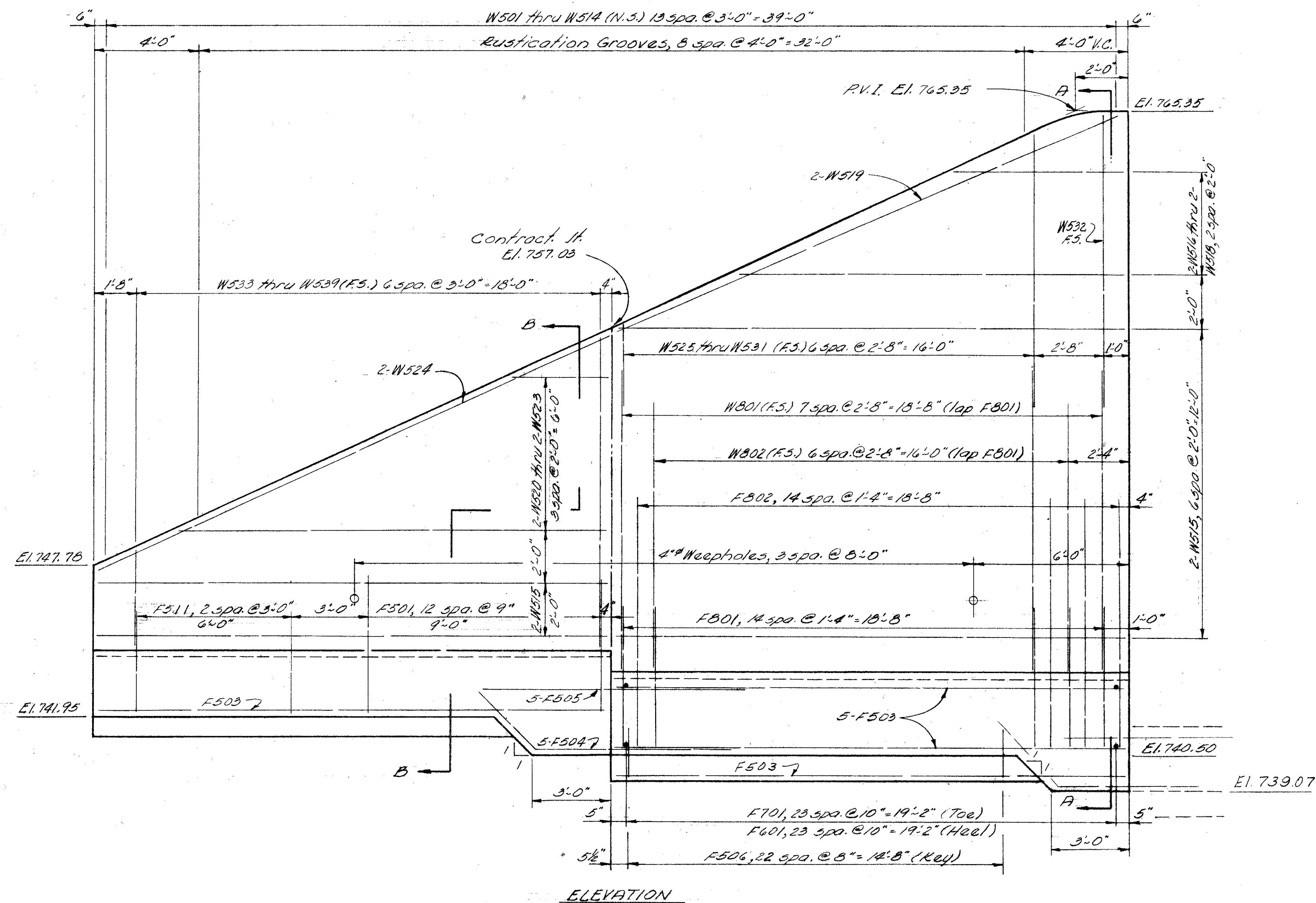
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

197  
250

FRANKLIN COUNTY  
FRA-40-12.82



NOTE:  
For common details and  
additional notes see sheet 198



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SOUTH EAST RETAINING WALL BRIDGE No. FRA-40-1310 SOUTH INNERBELT UNDER HIGH ST. FRANKLIN COUNTY						
STA-65+88.39						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	BDB		BETTIN	TU 5-8-62		

FRANKLIN COUNTY  
FRA. 40-12.82

## NOTES

Procedure:  
Before the back wall of the South Abutment is placed, the backfill shall be placed and compacted up to the level of the subgrade with a 1:1 slope from bridge seat to the subgrade.

### Concrete end posts:

Concrete end posts are included with Item S-14 for payment.

### Porous Backfill (Abutments)

Porous backfill shall extend upward to the approach slab or sidewalk for the full length of the abutments.

### Joints

A joint shall be provided in the abutment portion of the end dam at each contraction joint.

### Footing Key:

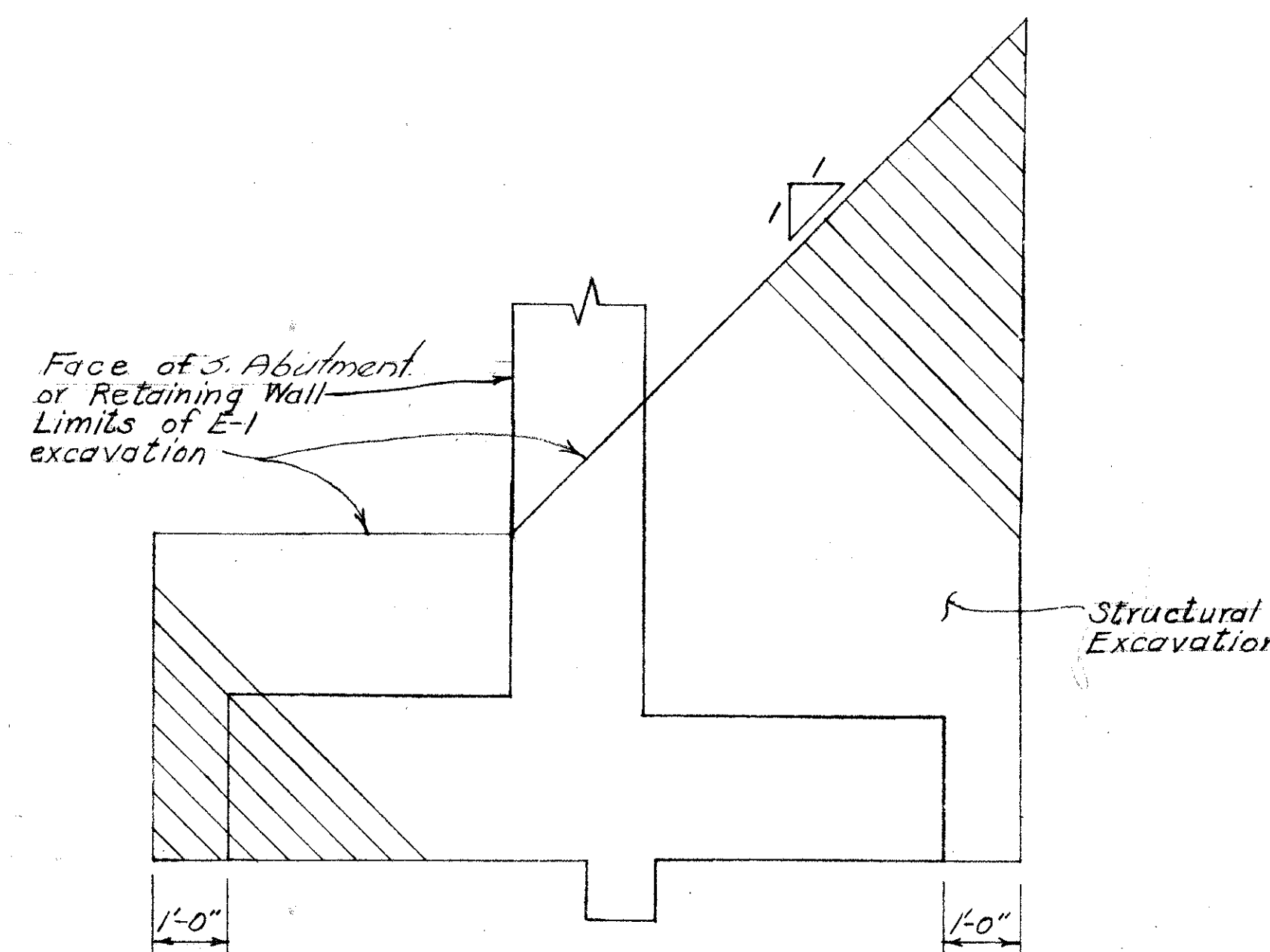
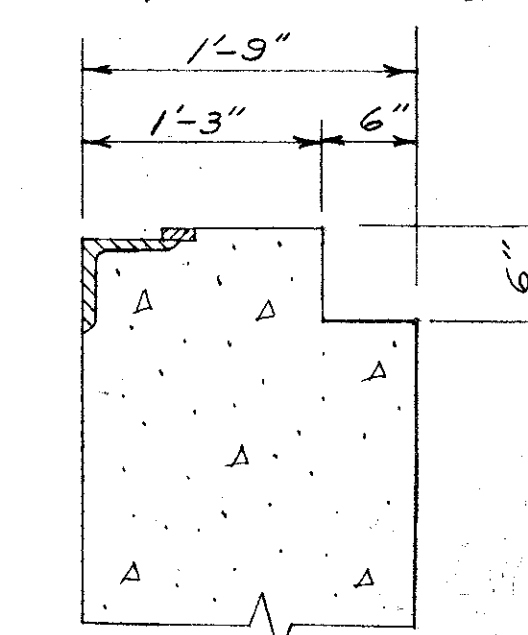
The key under the S. Abutment & Southeast wingwall footing shall be placed in a carefully made trench against undisturbed earth.

### Porous Back fill (Ret. Wall).

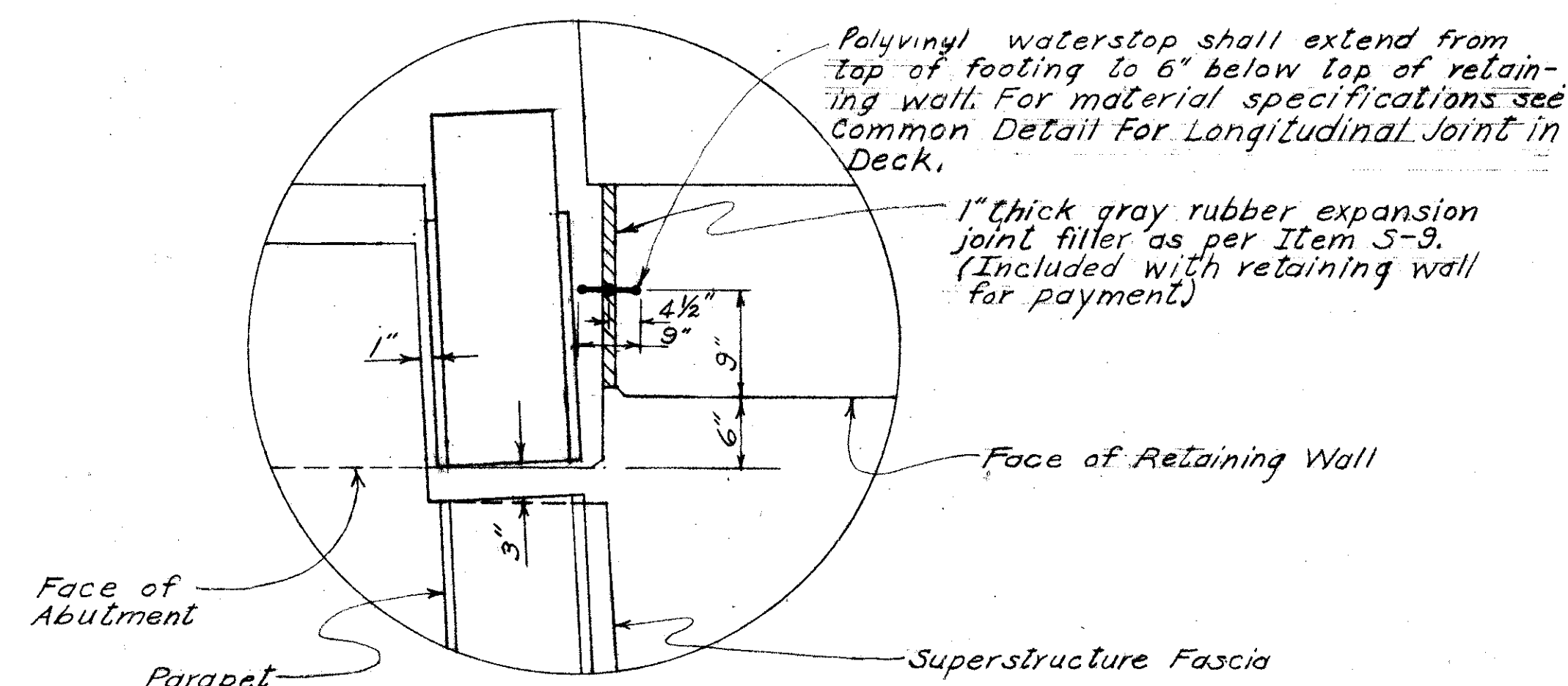
The top of porous backfill shall be 2'-0" below the top of the retaining wall.

Right of Way Fence:  
For connection of fence to end post, see details of retaining walls "B" & "C" and Sheet. 163

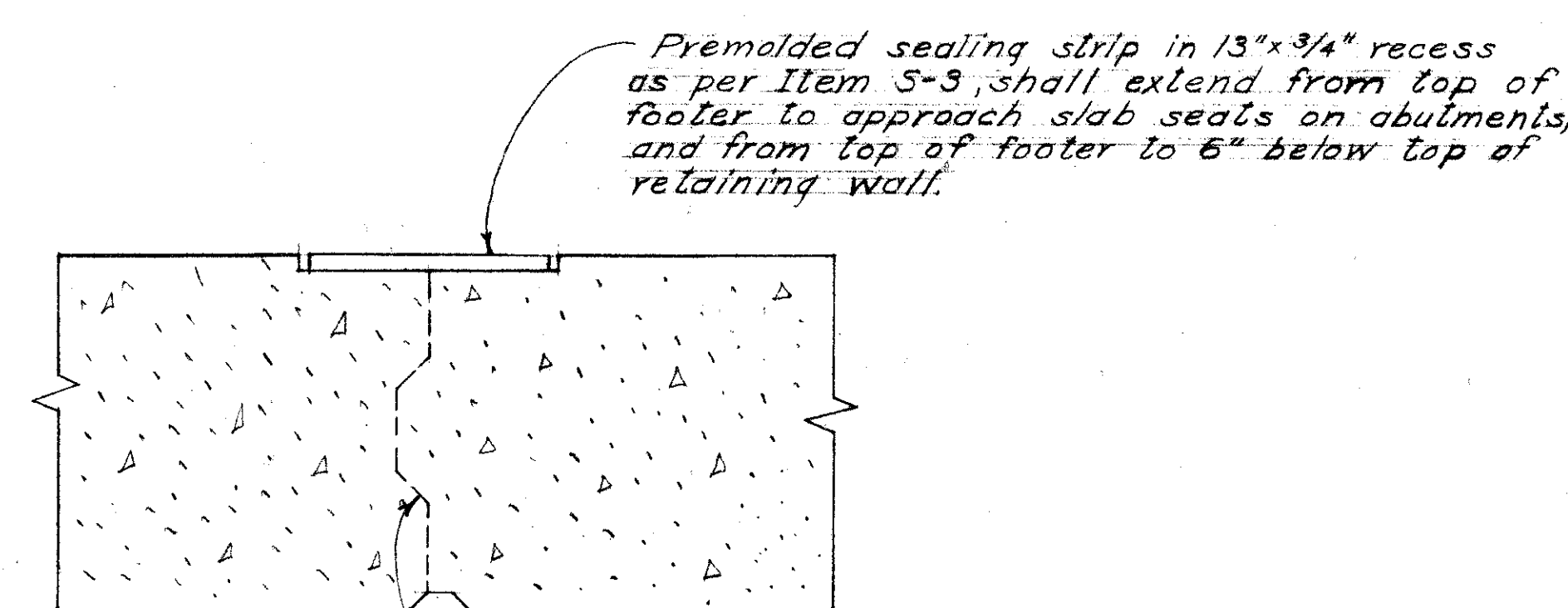
## SECTION A-A



## EXCAVATION DETAIL



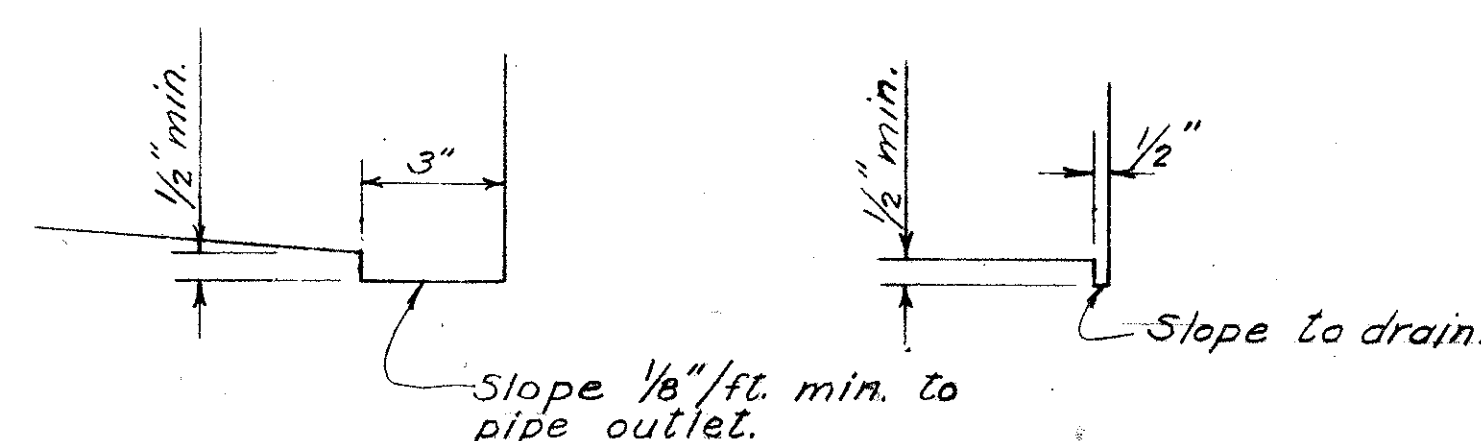
## DETAIL A



## CONTRACTION JOINT DETAIL

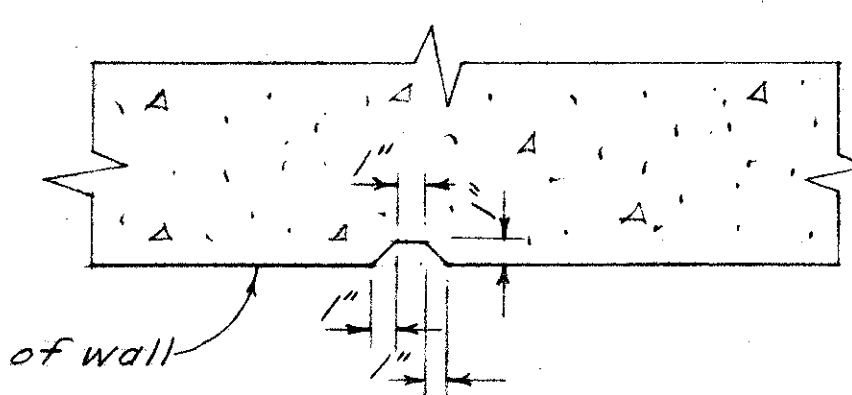
1 5/8" x 5 1/2" key centered in abutment or retaining wall, full height.

Exposed face of wall.

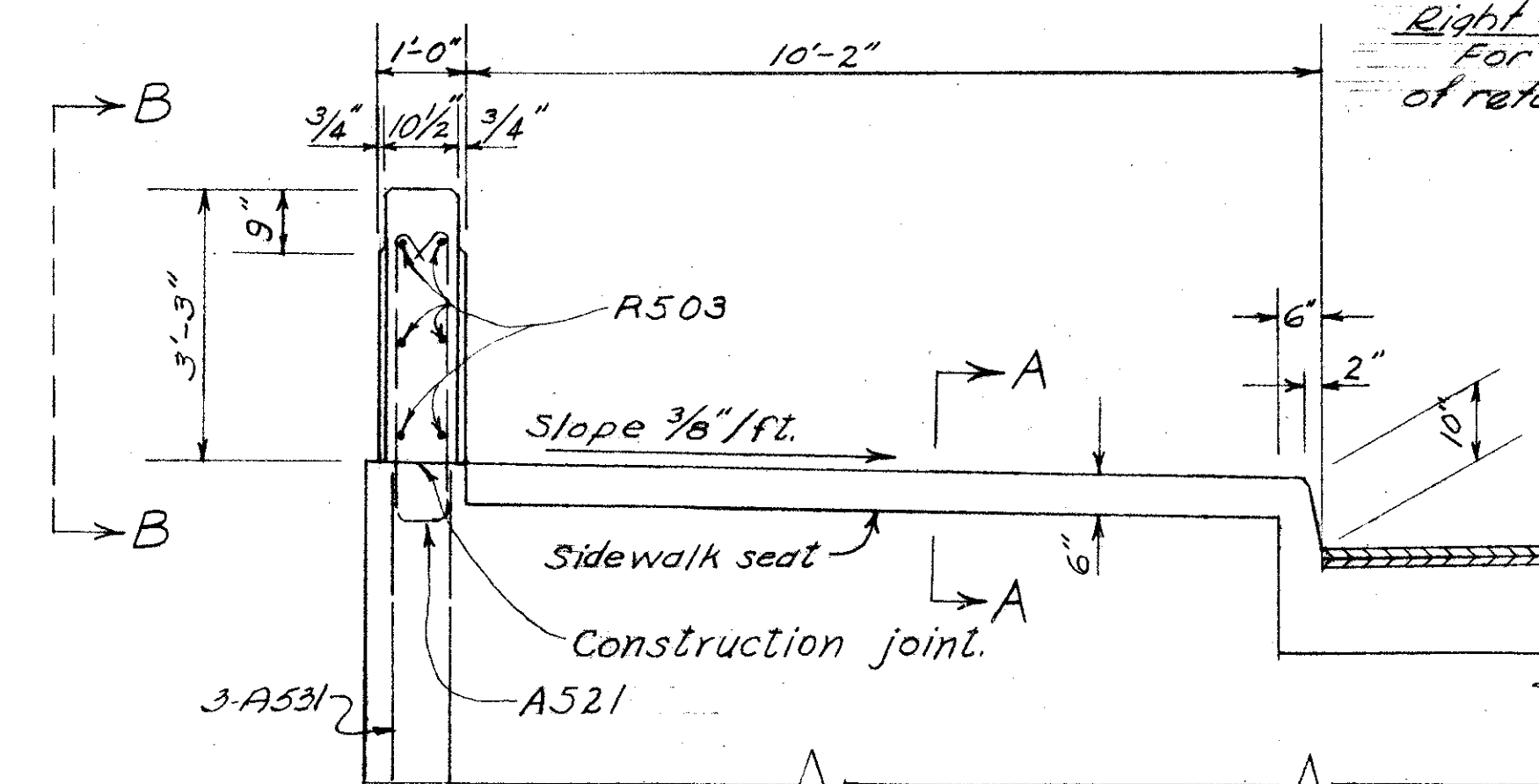


Groove between seats      Groove at seats.

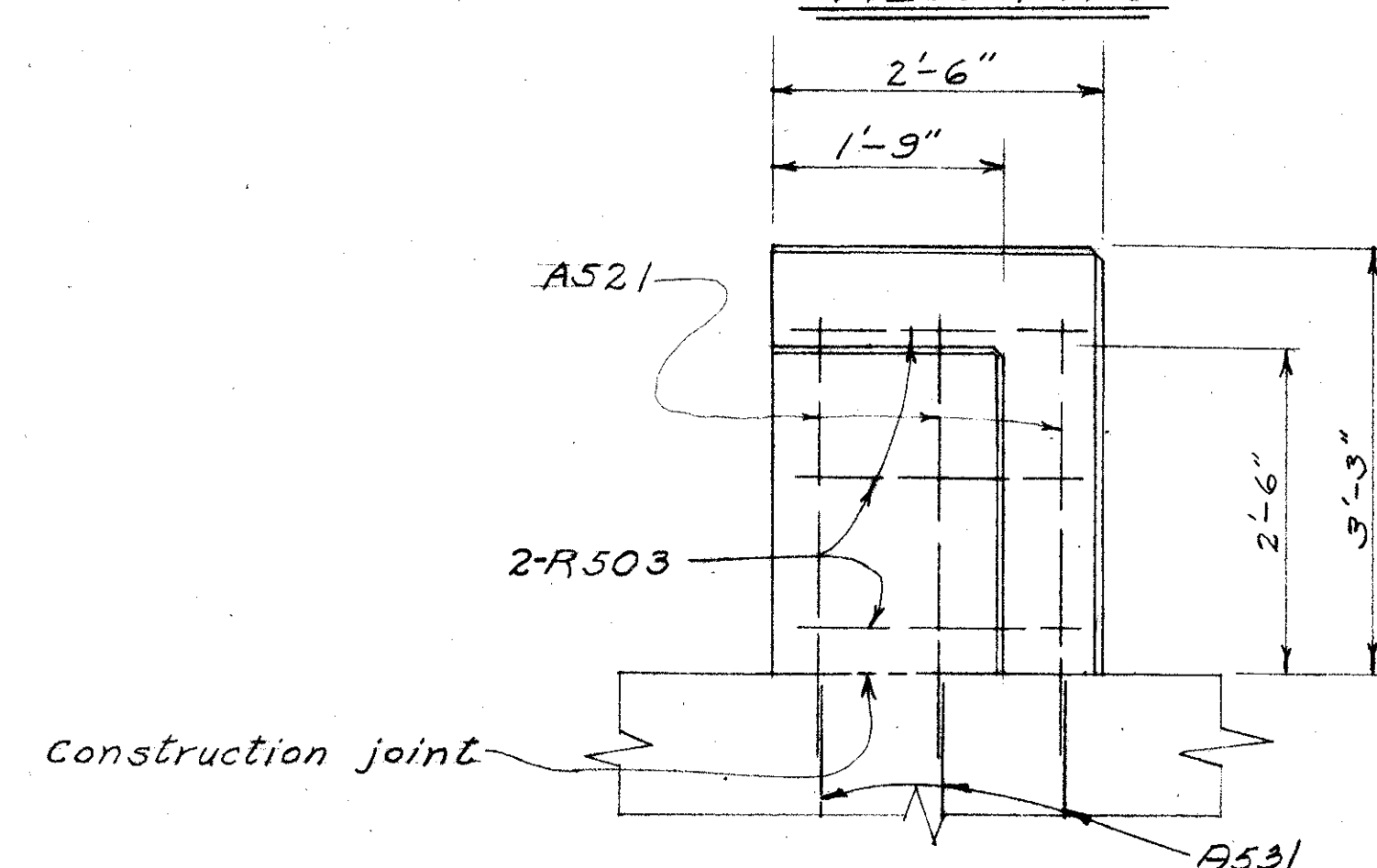
## DRAINAGE GROOVE DETAILS



## RUSTICATION GROOVE DETAIL



## VIEW A-A



## VIEW B-B

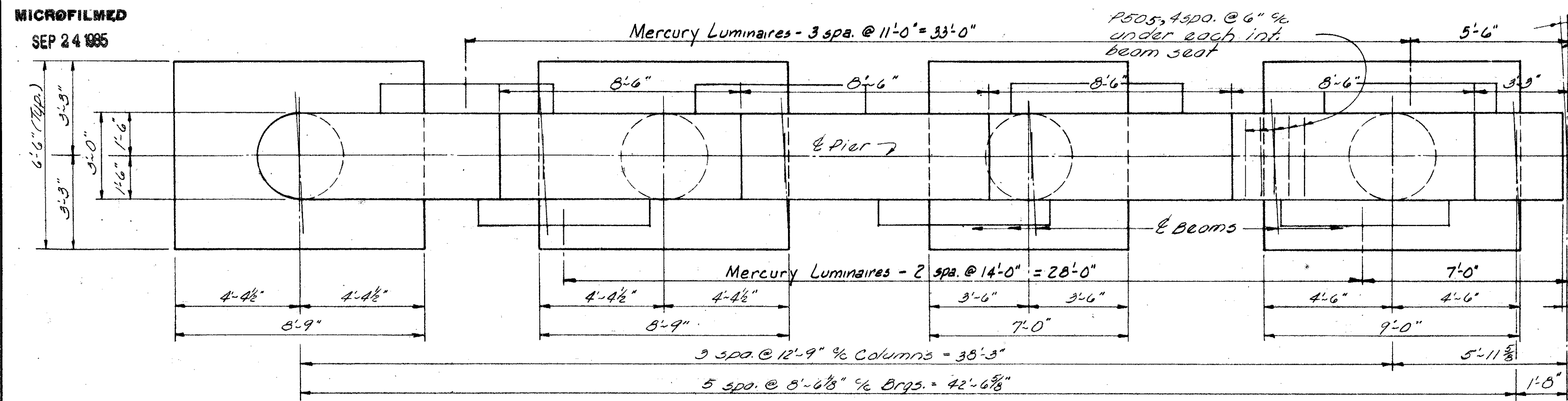
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT & RETAINING WALL DETAILS  
BRIDGE No. FRA-40-1310  
SOUTH INNERBELT UNDER HIGH ST.  
FRANKLIN COUNTY STA. 65+88.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.M.	P.M.		BETTING	TU 5-8-62		

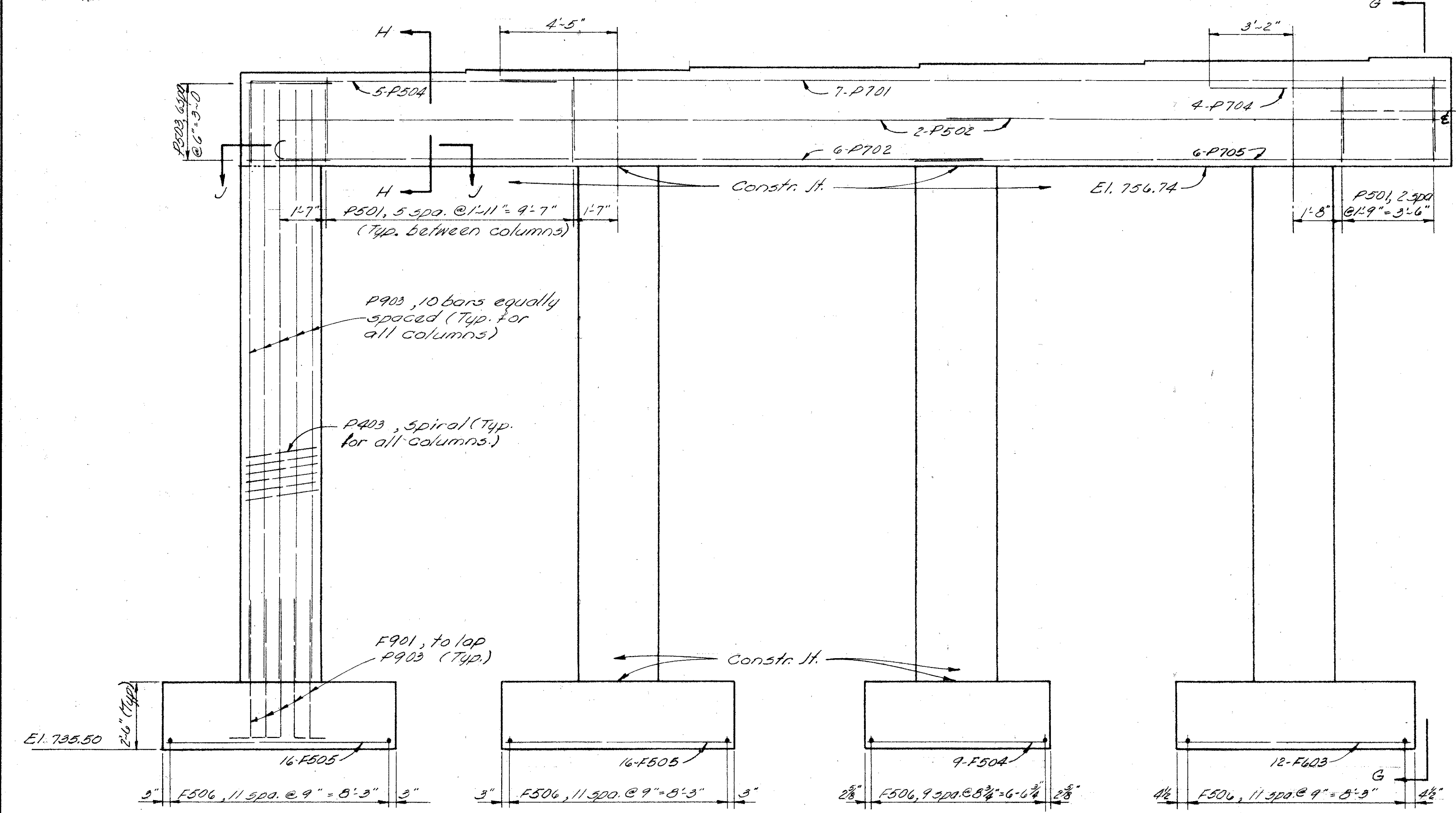


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SEP 24 1985

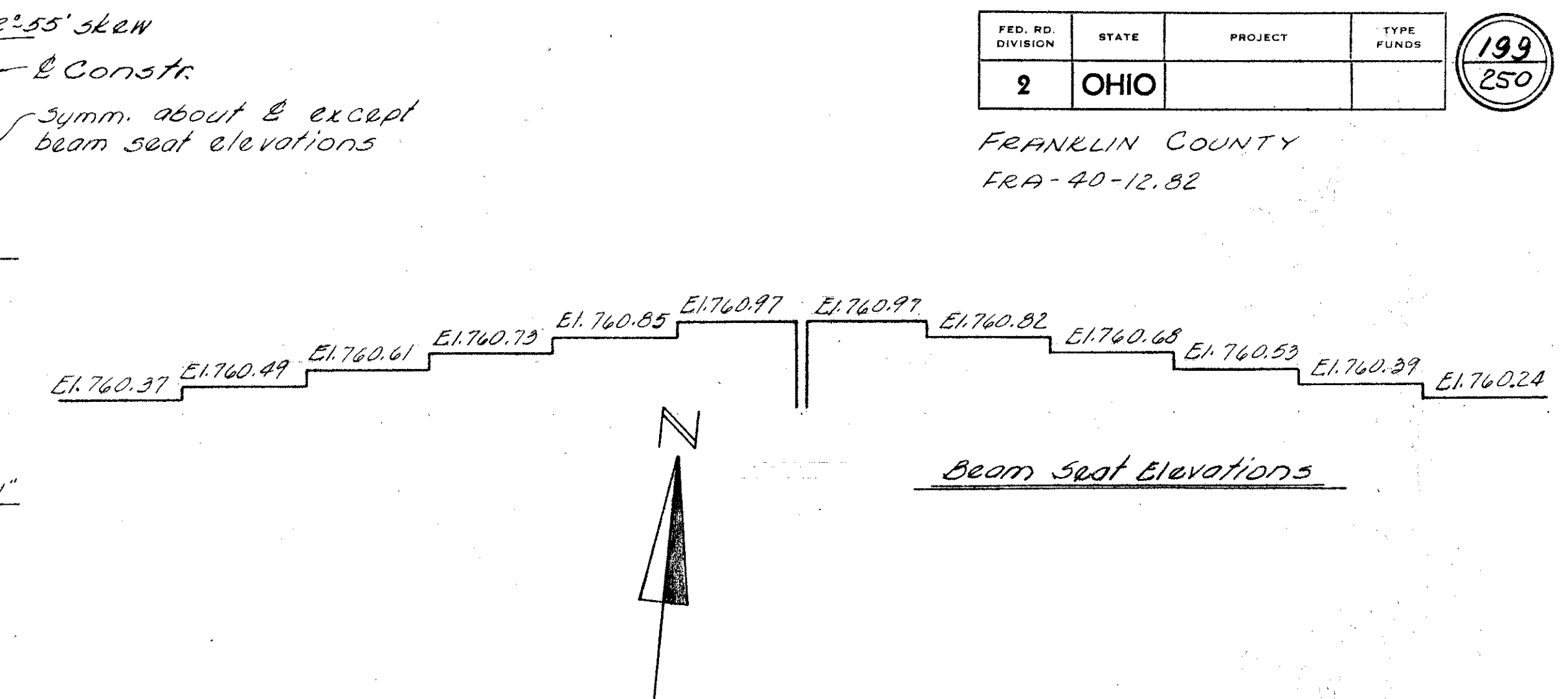


PLAN

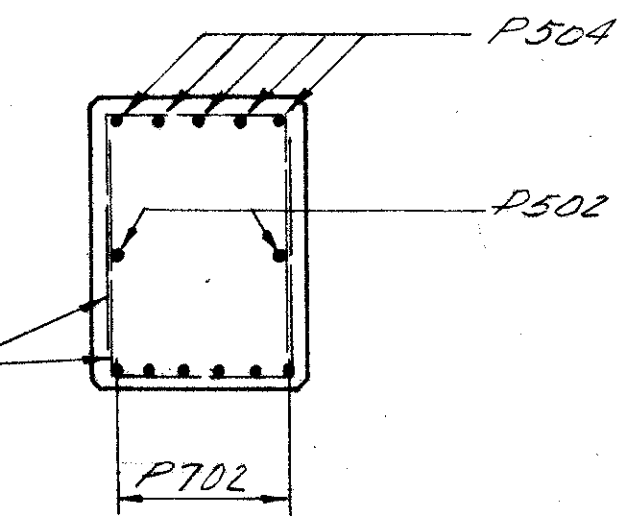
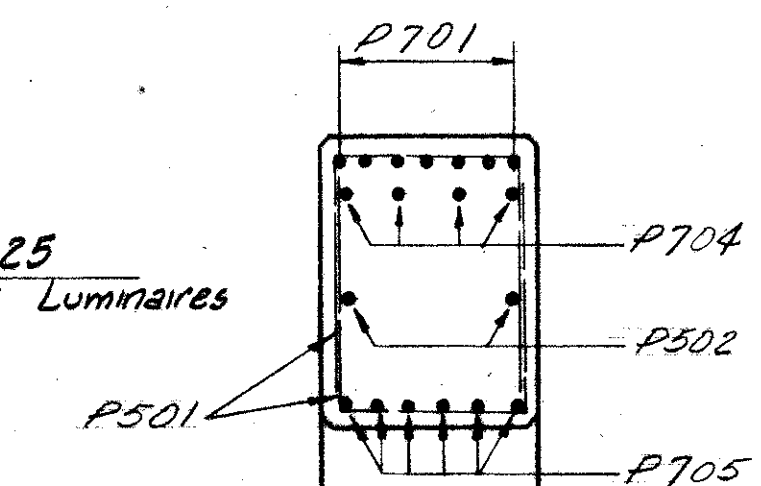
MICROFILMED  
SEP 24 1985



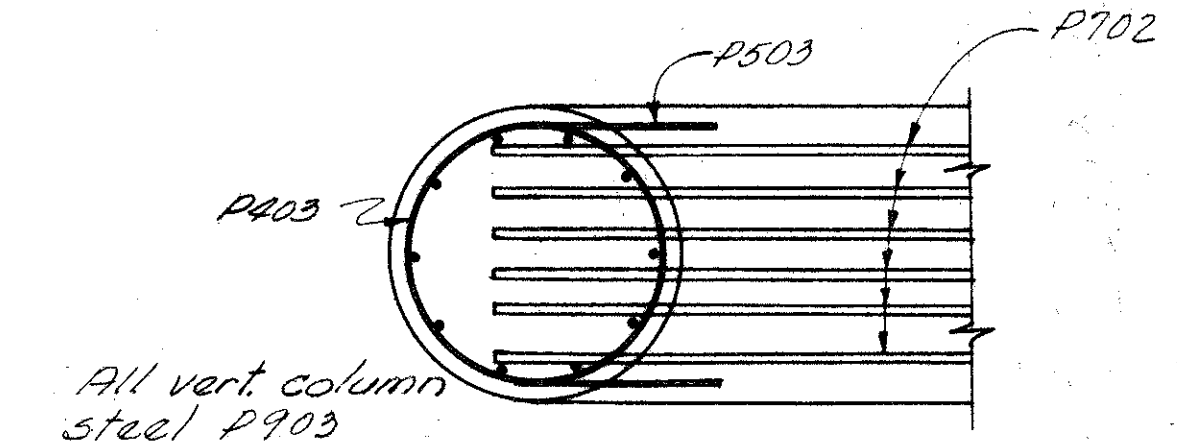
HALF ELEVATION



Beam Seat Elevations

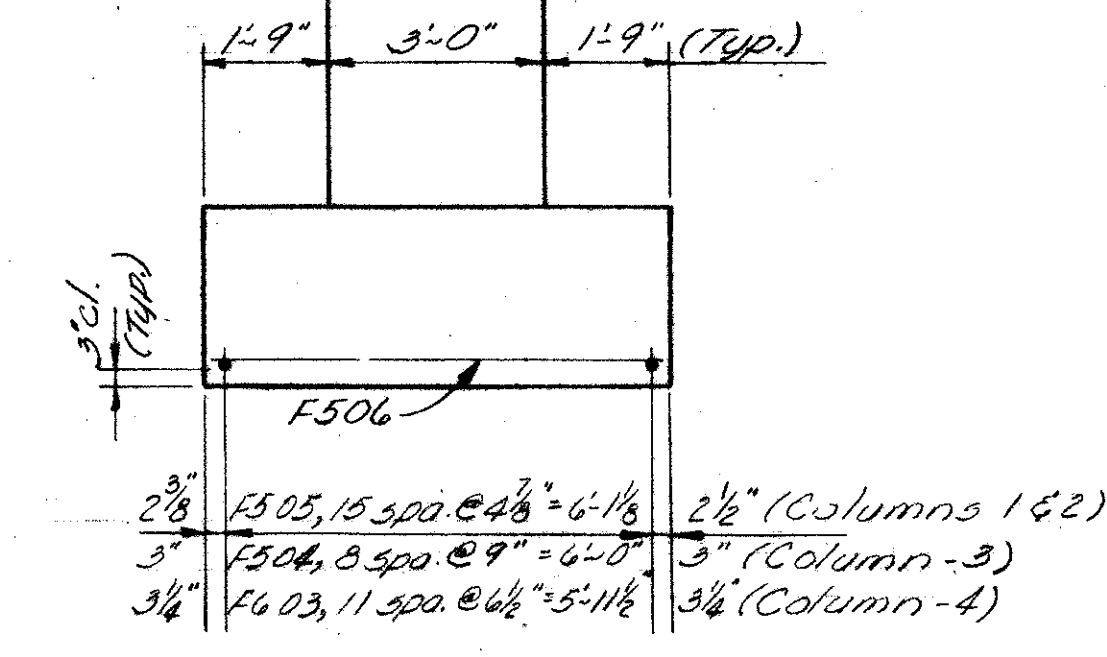


SECTION H-H



All vert. column steel P903

SECTION J-J



SECTION G-G

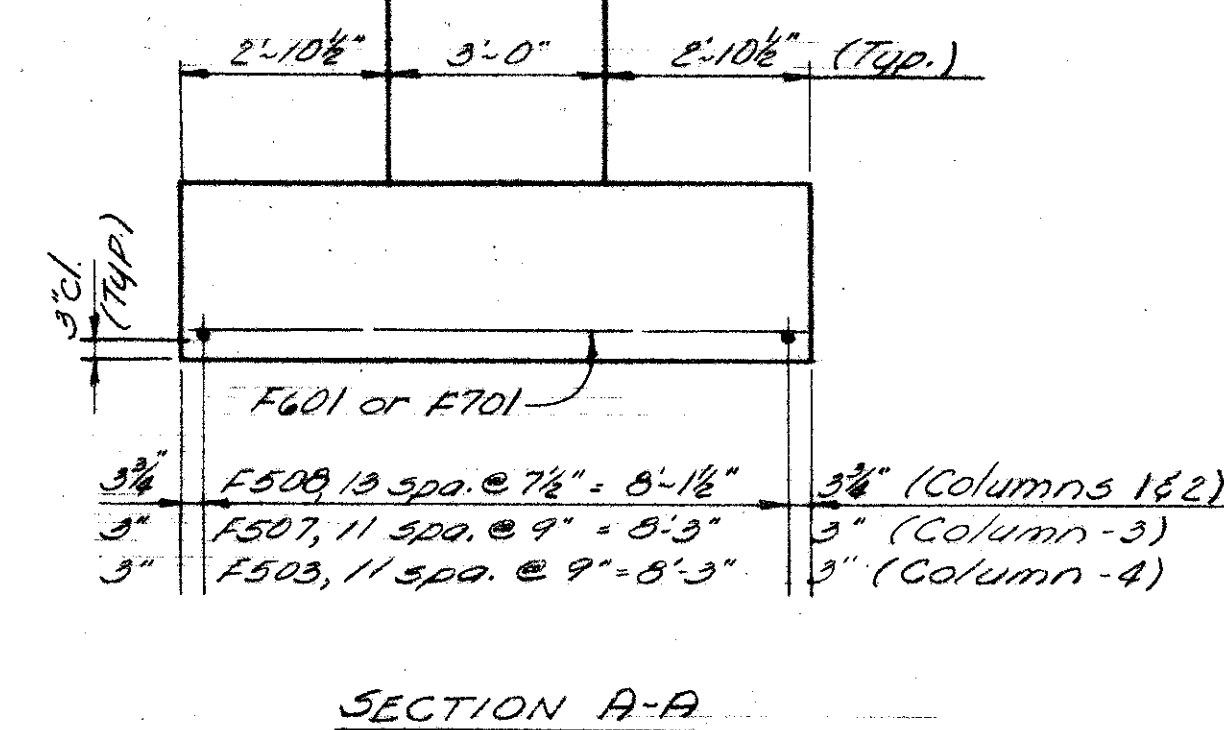
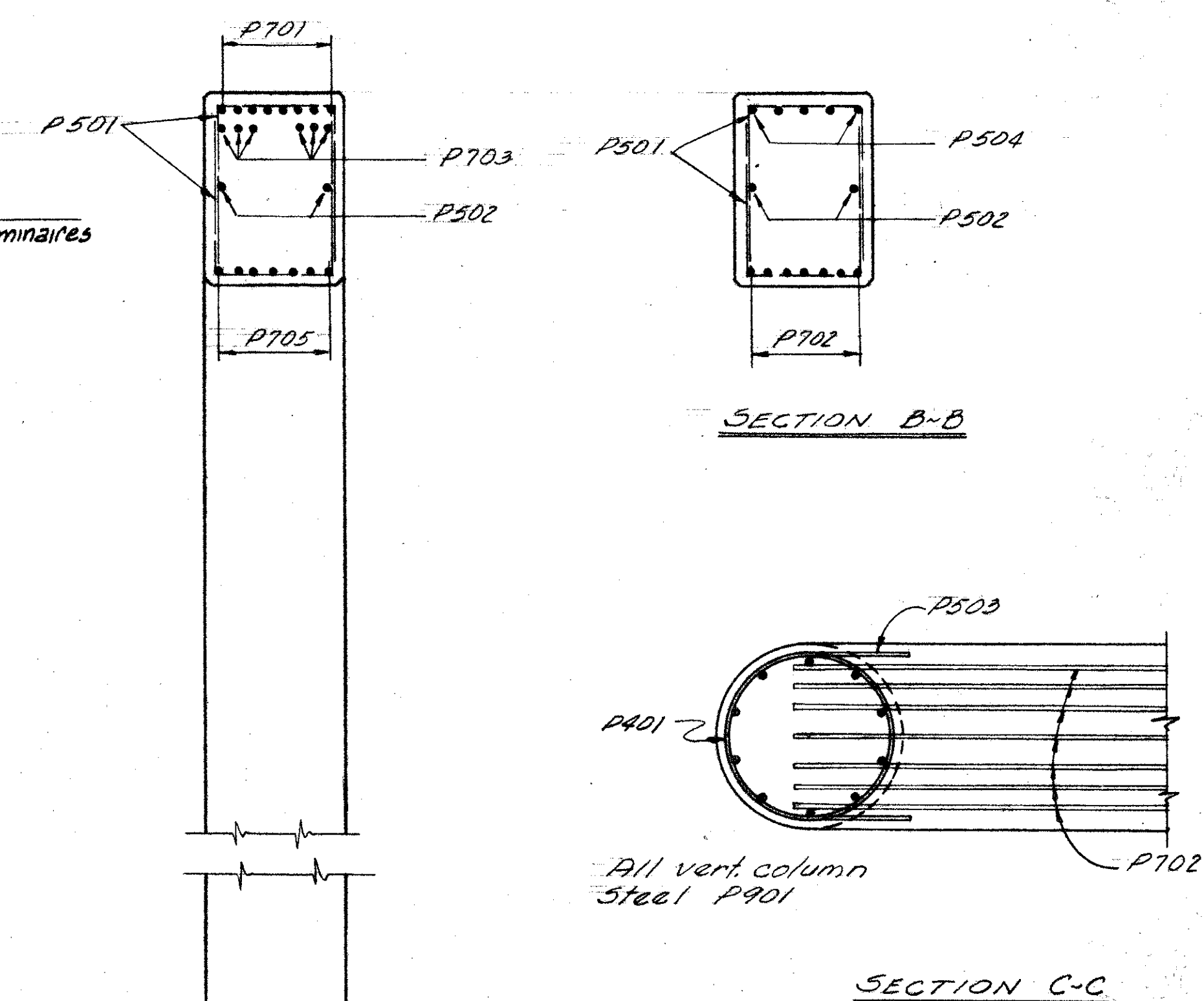
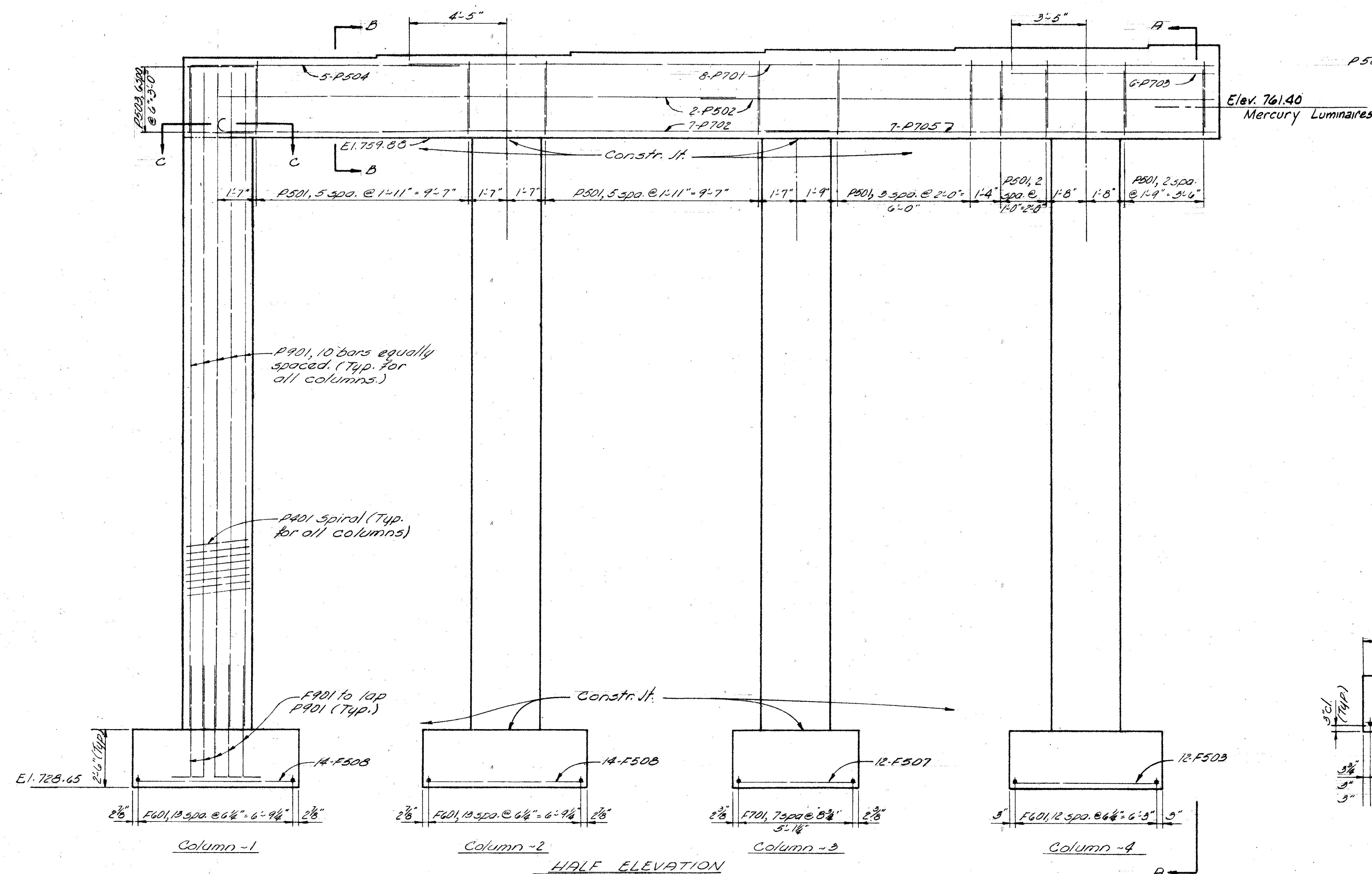
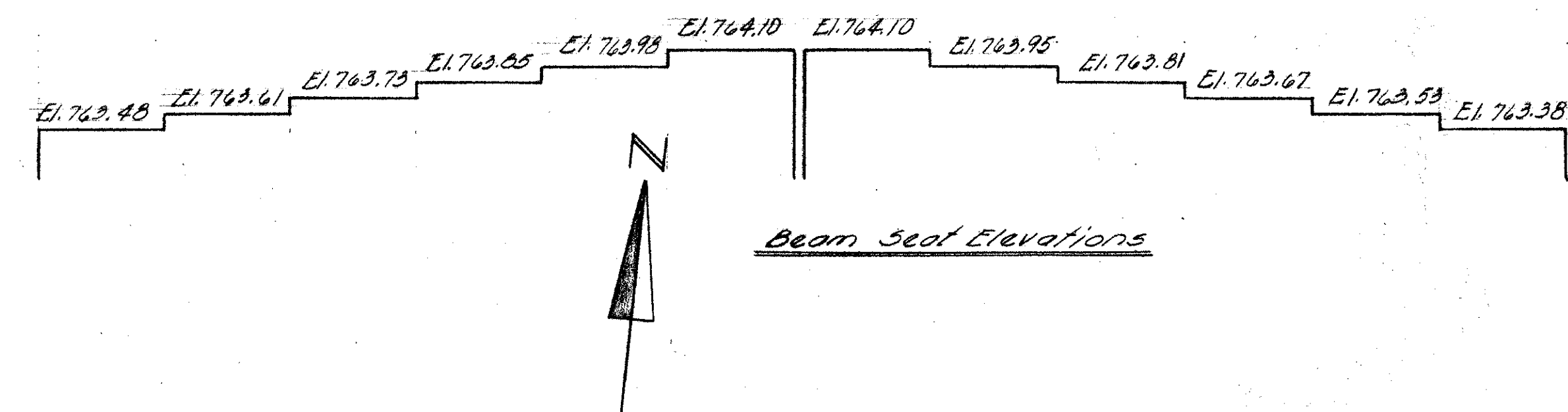
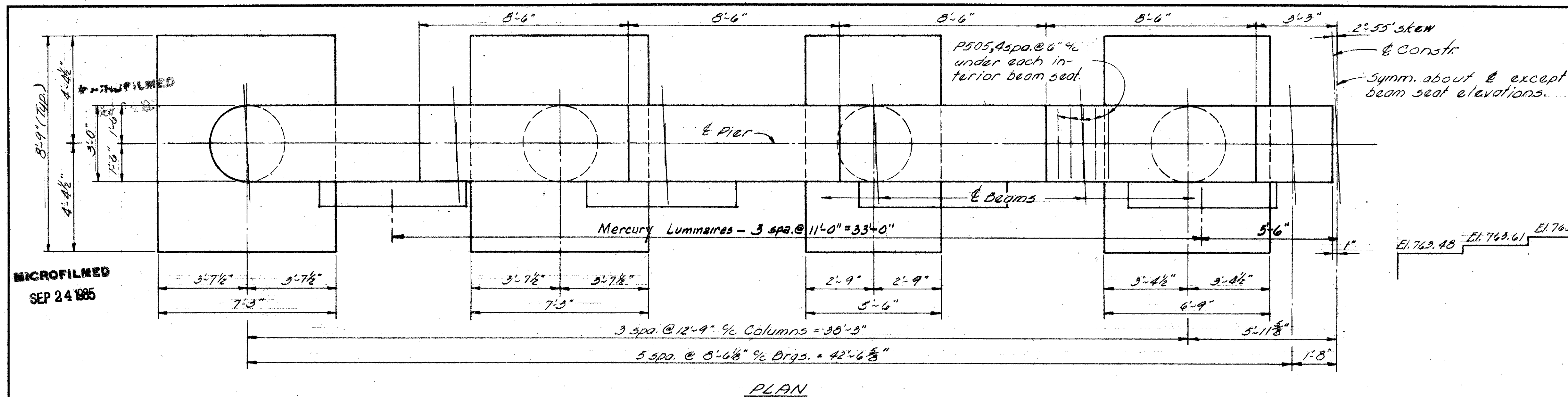
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
PIER - 1 DETAILS					
BRIDGE No. FRA-40-1310					
SOUTH INNERBELT UNDER HIGH ST.					
FRANKLIN COUNTY					
STA-65+88.39					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
P.M.	BDB		BETTIN	TLU	5-8-62





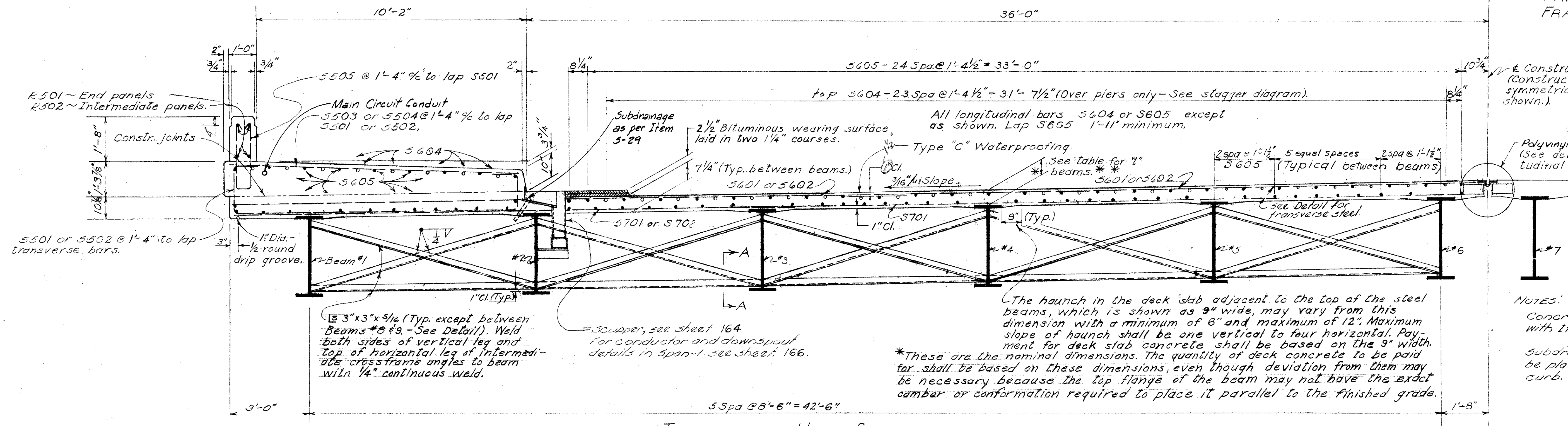


FRANKLIN COUNTY  
FRA-40-12.82

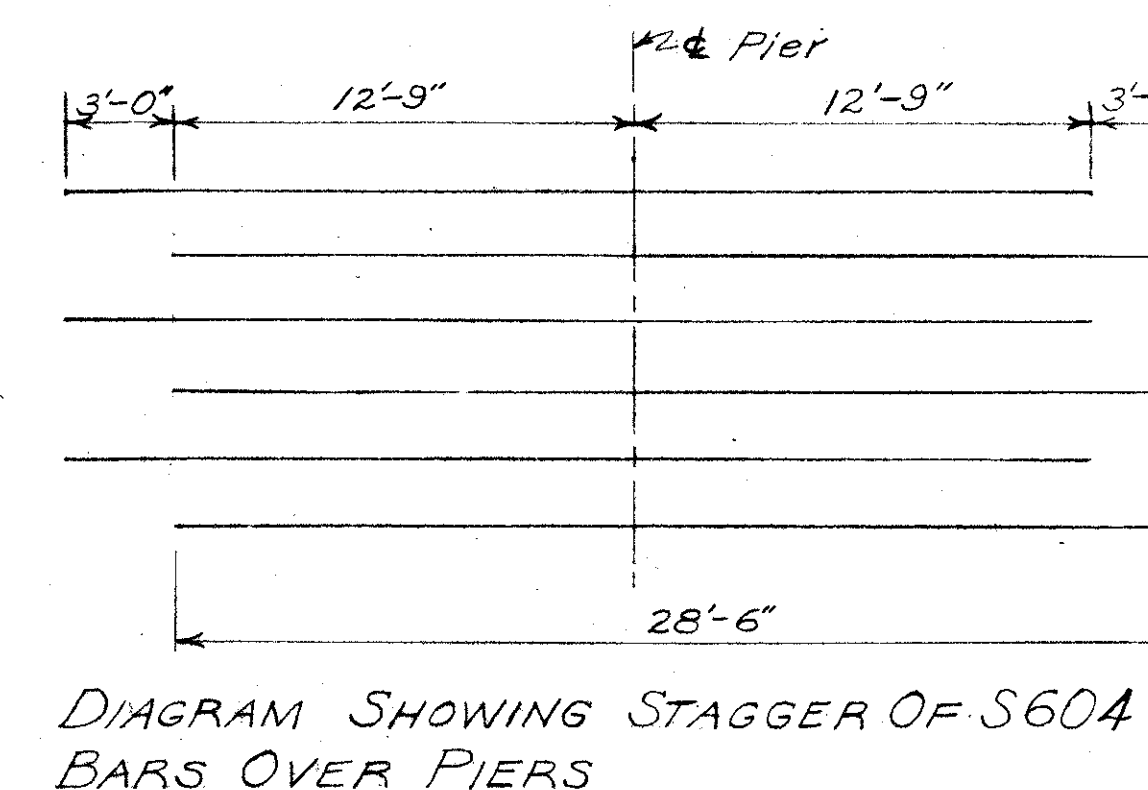
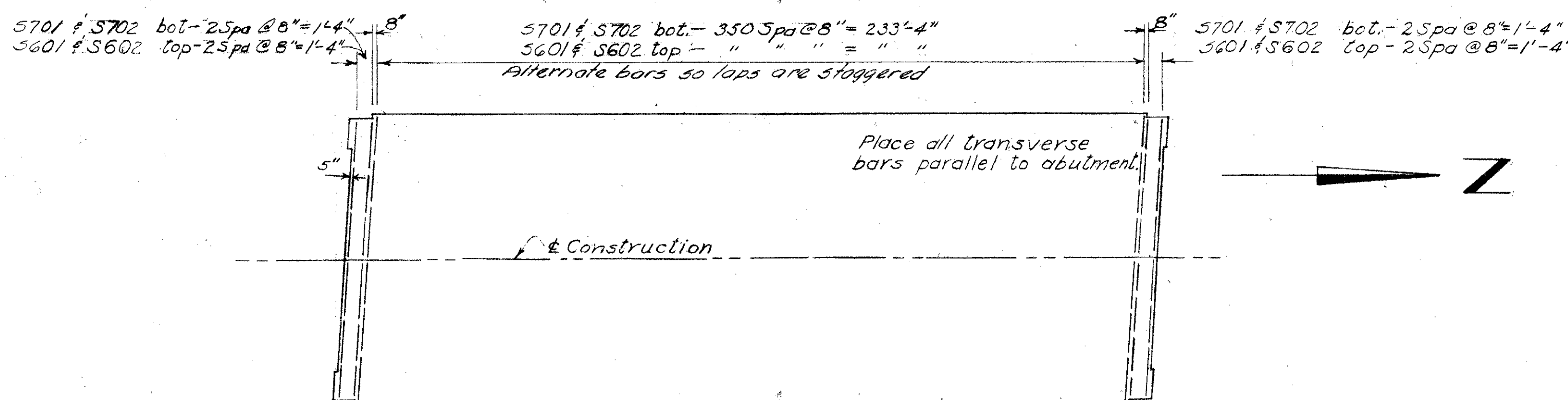
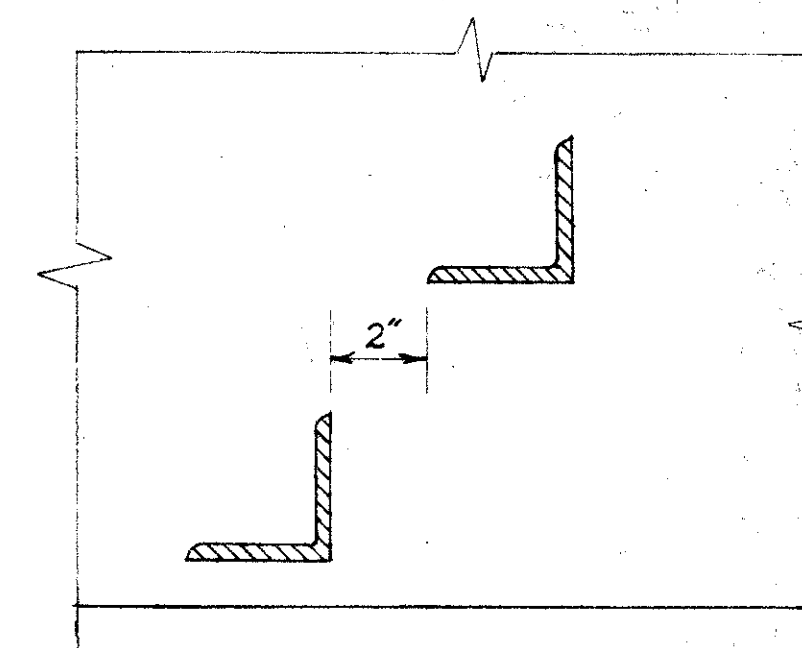
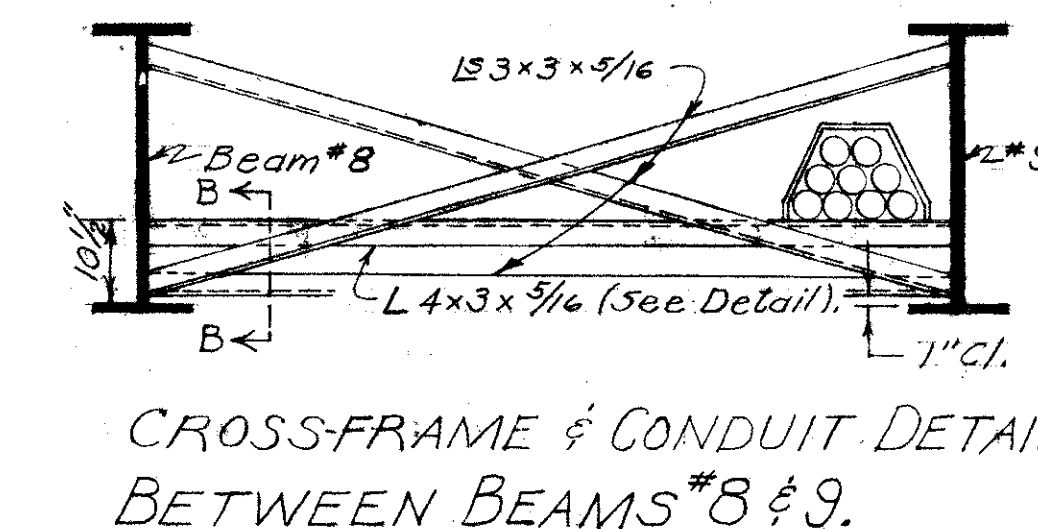
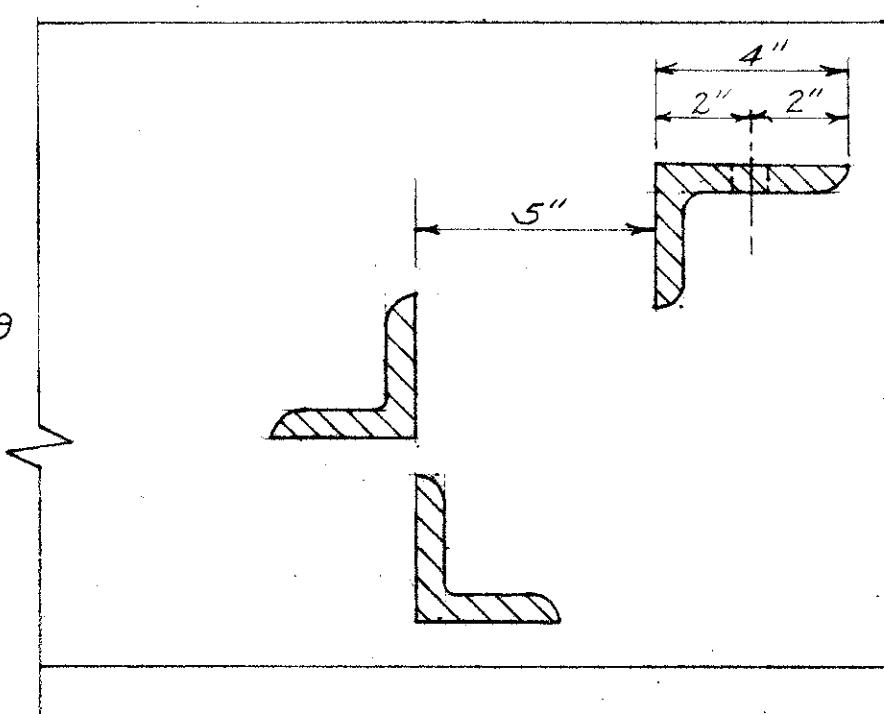
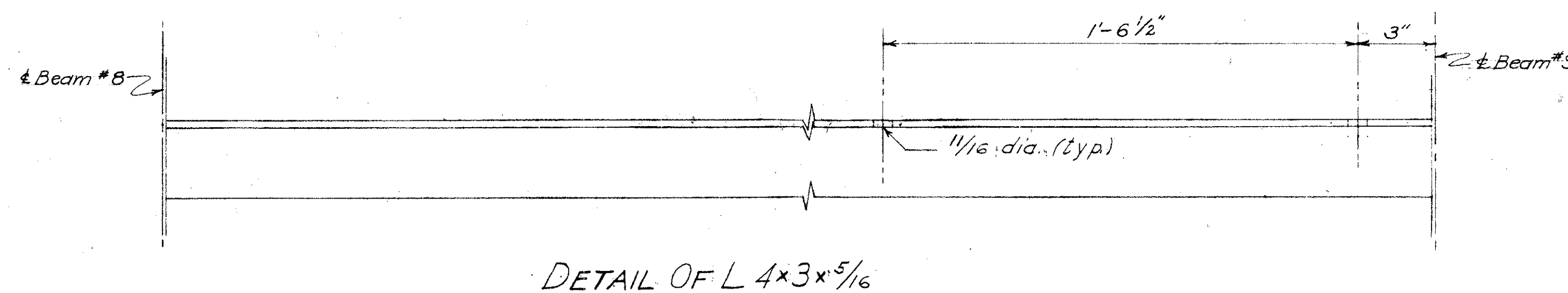


<p><b>ALDEN E. STILSON &amp; ASSOCIATES, LIMITED</b>  <b>CONSULTING ENGINEERS</b>  <b>COLUMBUS, OHIO</b></p>						
<p>PIER-3 DETAILS</p> <p>BRIDGE No. FRA-40-1310</p> <p>SOUTH INNERBELT UNDER HIGH ST.</p> <p>FRANKLIN COUNTY</p> <p>STA-</p>						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	BDB		GETTIN	TLU	5-8-62	

FRANKLIN COUNTY  
FRA 40-12.82



TRANSVERSE HALF SECTION



SPAN	*
1	7 7/8"
2	7 7/8"
3	7 1/4"
4	7 3/8"

\*\* DECK "I" OVER BEAMS

DEFLECTION AND CAMBER

LOCATION	Beam Rows 1 & 12	Beam Rows 2 & 11	Rows 3, 4, 5, 8, 9 & 10	Rows 6 & 7
	Span 1 2 3 4	Span 1 2 3 4	Span 1 2 3 4	Span 1 2 3 4
Defl. from wt. of beam	0 0 1/8 1/16	0 0 1/8 1/16	0 0 1/8 1/16	0 0 1/8 1/16
Defl. from remaining DL	3/16 5/16 9/16 3/8	1/8 5/16 1/2 3/16	1/8 3/16 3/8 1/4	1/16 1/8 1/4 3/16
Defl. from Ver. Curve	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Total Deflection	3/16 9/16 1 1/16 7/16	1/8 5/16 3/8 1/2	3/16 1/2 5/16 1/16	1/8 3/8 1/4 3/16
Camber	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0

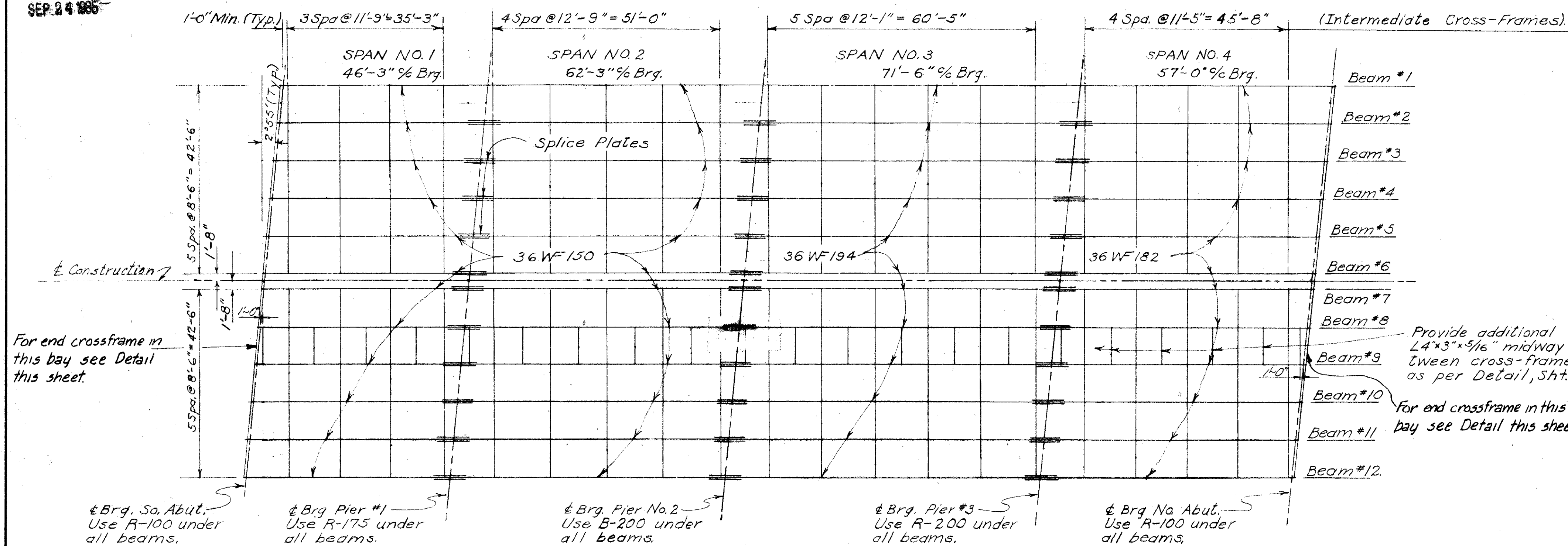
ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS  
BRIDGE No. FRA-40-1310  
SOUTH INNERBELT UNDER HIGH ST.  
FRANKLIN COUNTY STA 65+88.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	PM		GETTIN	TLV	5-8-62	7-9-63



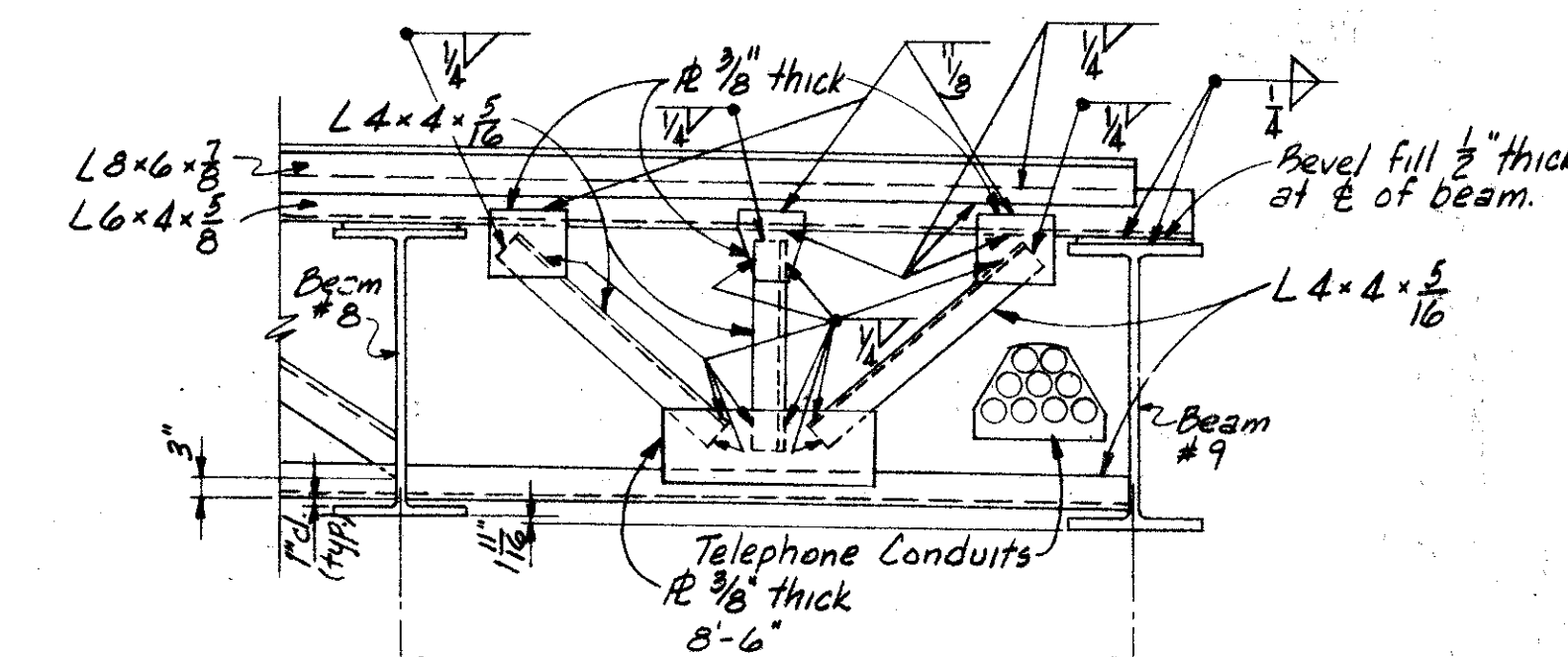
FRANKLIN COUNTY  
FRA-40-12.82



SPlice PLATE DATA				
LOCATION	Top Plate Size	Bot. Plate Size	Length of Pier	Length of Pier.
Pier #1	10 1/2 x 1/2 x 15-5	13 1/2 x 1/2 x 15-5	7'-3"	7'-8"
Pier #2	10 1/2 x 13/16 x 20-5	13 1/2 x 7/8 x 20-5	11'-5"	9'-0"
Pier #3	10 1/2 x 1/2 x 19-4	13 1/2 x 1/2 x 19-4	9'-6"	9'-10"

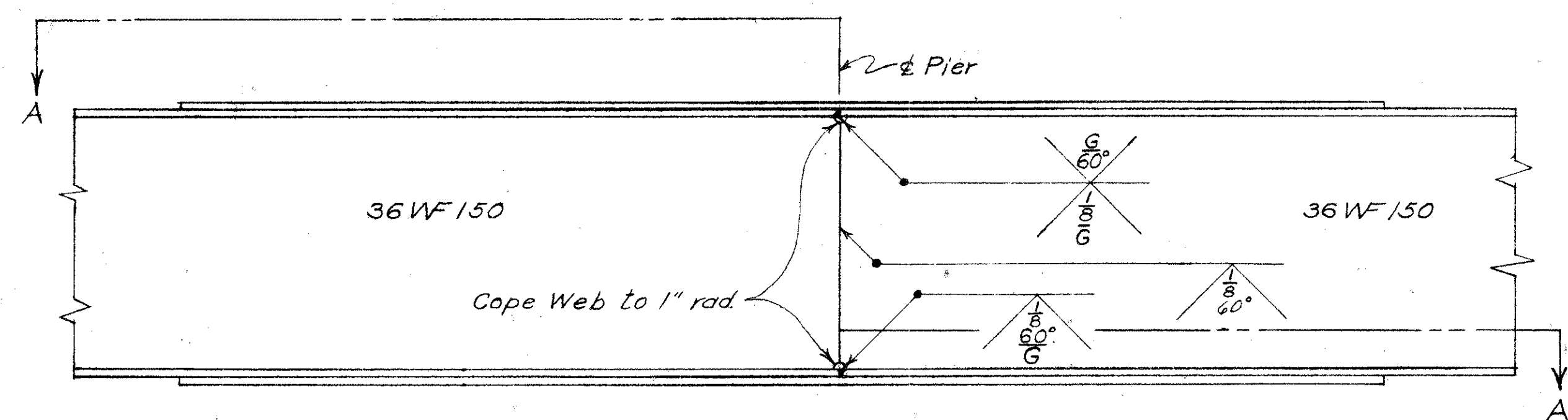
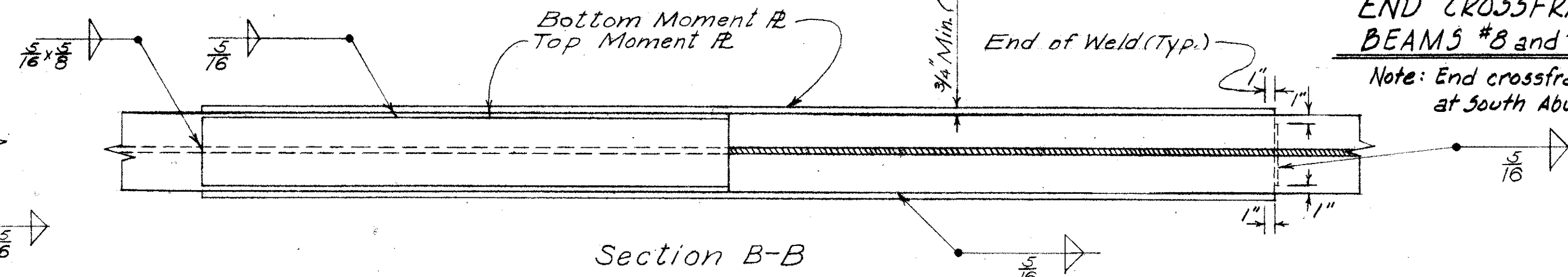
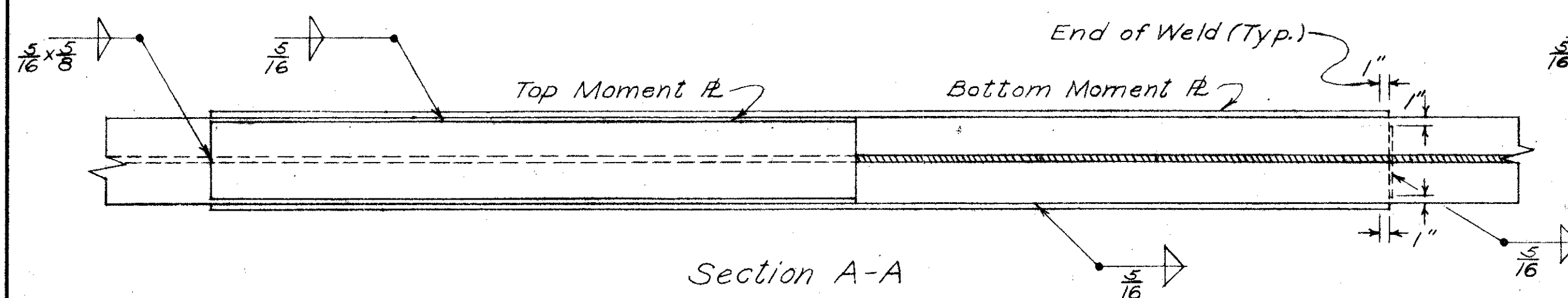
## BEAM SPLICE WELDING PROCEDURE

1. Raise end of beam at Pier #2  $\frac{7}{8}$ ".
2. Butt weld beam flanges and web at Pier #1 using the following sequence: Make one pass on each flange, then two on the web; repeat using one pass at each location, until welds are completed.
3. Weld top and bottom flange moment plates at Pier #1.
4. Lower end of beam at Pier #2.
5. Make splice at Piers #2 and #3 in the same manner, raising the end of the beam at Pier #3  $1\frac{1}{8}$ " and at the North Abutment  $\frac{7}{8}$ ".

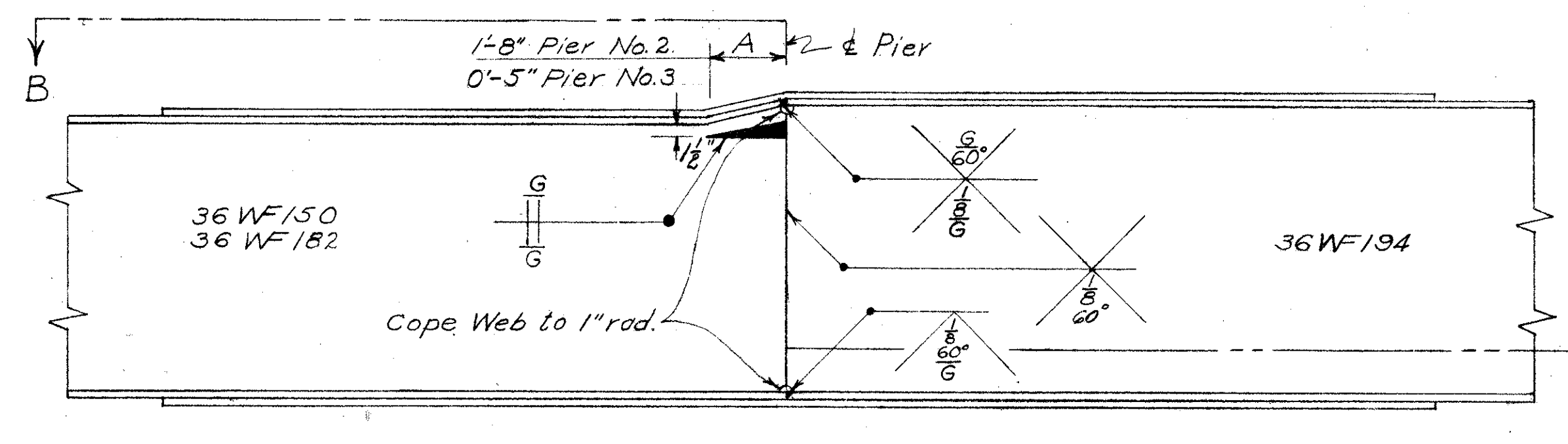


END CROSSFRAME DETAIL BETWEEN  
BEAMS #8 and #9 AT NORTH ABUTMENT

Note: End crossframe between Beams #8 and #9  
at South Abutment is similar.



Pier No. 1



Piers No. 2 & 3

## BEAM SPLICE DETAILS

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS  
BRIDGE No. FRA-40-1310  
SOUTH INNERBELT UNDER HIGH ST.  
FRANKLIN COUNTY STA 65+88.39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	PM		GETTING	TLU	5-8-62	



SEP 24 1985

## REINFORCING

## STEEL

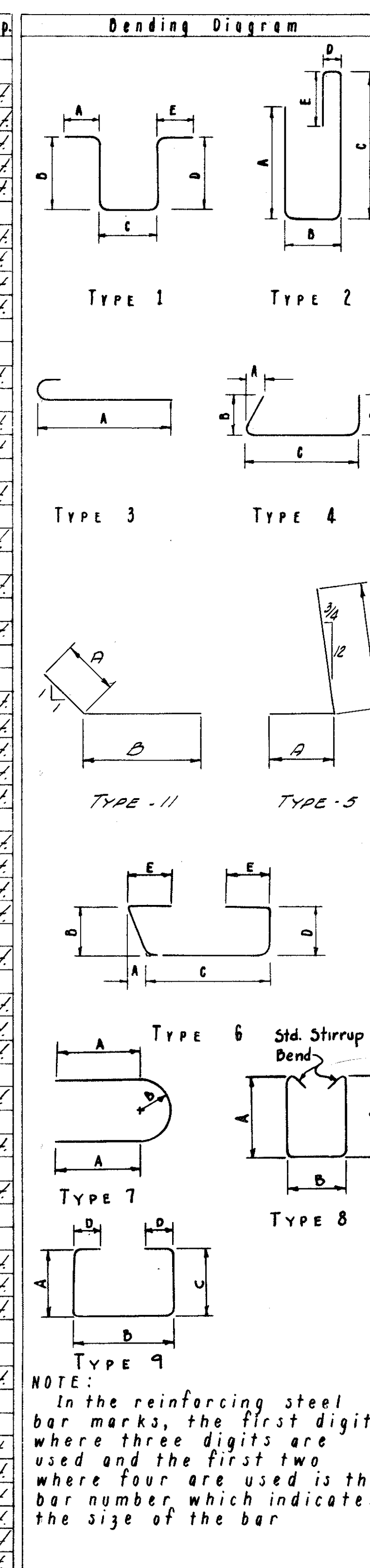
## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

204  
250FRANKLIN COUNTY  
FRA-40-12.02

Mark	N <sup>o</sup>	Length	Weight	Shp.
SUPERSTRUCTURE				
5503	352	10-8	3916	st.
5504	8	9-7	80	st.
5601	714	32-10	35211	st.
5602	714	15-11	17070	st.
5604	192	28-6	8219	st.
5605	1120	35-8	60201	st.
5701	714	20-3	29553	st.
5702	714	28-9	41253	st.
NORTH ABUTMENT				
A701	4	11-0	90	st.
A507	2	5-0	10	st.
A509	15	30-6	477	st.
A510	28	31-8	925	st.
A513	2	28-9	60	st.
A514	1	5-8	6	st.
A515	1	5-5	6	st.
A516	1	5-0	5	st.
A517	1	4-5	5	st.
A518	1	11-10	12	st.
A519	1	10-5	11	st.
A520	1	9-0	9	st.
A522	5	15-6	31	st.
A523	1	14-4	41	st.
Thru Var. by	1-3 1/2	61		st.
A527	1	9-2		st.
A528	2	7-1	15	st.
A529	2	11-3	23	st.
A530	2	15-5	32	st.
A533	11	15-9	260	st.
F509	9	34-7	324	st.
F510	13	10-0	136	st.
SOUTH ABUTMENT				
A501	33	8-0	275	st.
A502	32	17-7	587	st.
A504	52	31-8	1718	st.
A505	27	30-7	861	st.
A506	2	28-5	59	st.
A1001	30	8-9	1130	st.
A1002	33	12-2	1728	st.
F501	24	34-8	368	st.
F502	53	10-0	353	st.
F501	127	7-4	2487	st.
F502	127	7-3	2453	st.
S.E. RETAINING WALL				
W501	1	3-3		st.
Thru Var. by	1-4 3/8	54		st.
W507	1	11-6 1/2		st.
W508	1	13-8		st.
Thru Var. by	1-3	127		st.
W514	1	21-2		st.
W515	13	19-8	369	st.
W516	2	16-5	34	st.
W517	2	12-1	25	st.
W518	2	7-9	16	st.
W519	2	21-3	44	st.
W520	2	17-6		st.
Thru Var. by	8-4	46		st.
W523	2	4-6		st.
W524	2	21-8	45	st.
W525	1	1-9		st.
Thru Var. by	1-3	40		st.
W531	1	9-3		st.
W532	1	10-0	10	st.

Mark	N <sup>o</sup>	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
SUPERSTRUCTURE Cont.										
5501	352	14-3	5231	9	1-10	10-8	1-3	0-6		bt.
5502	8	13-0	108	9	1-9	9-7	1-3	0-6		bt.
5505	352	6-8	2448	8	2-9	0-7	2-9			bt.
NORTH ABUTMENT Cont.										
A511	60	3-1	193	1		0-8	2-0	0-8		bt.
A512	48	4-6	225	1		0-8	3-5	0-8		bt.
A521	6	9-6	59	8		4-2	0-7	4-2		bt.
A602	91	14-7	1949	2	4-4	1-5	5-10	0-11	2-9	bt.
F504	7	11-2	82	11	3-3	8-0				bt.
F505	48	10-9	538	1		10-3	0-8			bt.
F506	48	15-0	751	1		10-3	4-11			bt.
F704	4	4-6	37	1		4-2	0-6			bt.
F705	5	11-4	116	1		6-9	4-9			bt.
A531	6	14-1	88	1		6-10	0-8	6-10		bt.
SOUTH ABUTMENT Cont.										
A503	33	4-6	155	1		0-8	3-5	0-8		bt.
A508	60	3-1	193	1		0-8	2-0	0-8		bt.
A521	6	9-6	59	8		4-2	0-7	4-2		bt.
A601	93	15-10	2212	2	4-5	1-5	6-5	0-11	3-4	bt.
F504	9	11-2	105	11	3-3	8-0				bt.
F501	64	9-0	2379	1	1-7	7-9				bt.
F1002	63	6-5	1739	1	1-7	5-2				bt.
A531	6	14-1	88	1		6-10	0-8	6-10		bt.
S.E. RETAINING WALL Cont.										
W533	1	4-1								st.
Thru Var. by	1-4 3/8	60								st.
W539	1	12-4 3/4								st.
W501	8	10-4	235							st.
W502	7	10-5	195							st.
F501	13	6-2	84	5	0-8	5-8				bt.
F511	3	4-2	13	5	0-8	3-8				bt.
F503	12	19-8	246							st.
F504	5	11-2	58	11	3-3	8-0				bt.
F505	5	10-0	32							st.
F506	23	2-11	70	3	2-4					bt.
F601	24	7-2	253							st.
F701	24	7-8	376							st.
F801	15	6-2	247	5	1-2	5-3				bt.
F802	15	10-4	414	5	1-2	9-5				bt.
PIER-1										
P501	84	8-7	752	1		3-1	2-8	3-1		bt.
P502	8	22-10	191							st.
P503	14	7-6	107	7	1-8	1-4				bt.
P504	10	14-1	147	1		11-3	3-0			bt.
P505	50	3-5	178	1		0-6	2-8	0-6		bt.
P701	14	35-8	1021							st.
P702	14	27-5	785	11	26-7					st.
P703	12	9-2	225							st.
P705	14	19-6	553							st.
P901	80	31-9	8436							st.
F503	24	6-5	161							st.
F507	24	5-2	129							st.
F508	56	6-11	404							st.
F601	82	8-5	1036							st.
F701	16	8-5	275							st.
F901	80	6-0	1632	1		5-0	1-3			bt.
PARAPET										
R501	16	11-11	*							st.
R502	12	14-7	*							st.
R503	24	2-2	*							st.
REPLACEMENT STEEL FOR SPIRAL										
RE401	1	5-3	7			1-3 1/2				bt.
REPLACEMENT STEEL										
RE501	2	5-7								st.
RE601	7	5-11								st.
RE701	5	6-3								st.
RE801	1	6-6								st.
RE901	2	6-10								st.
RE1001	1	7-2								st.



ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Abut.	Pier	Supers.	General	Ret. Walls	
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump		
E-2	1282	Cu. Yd.	Unclassified Excavation	695	468			119	
S-1	755	Cu. Yd.	Class "C" concrete, superstructure			755			
S-1	261	Cu. Yd.	Class "C" concrete, pier caps and columns		261				
S-1	334	Cu. Yd.	Class "E" concrete, abutments above footings	334					
S-1	337	Cu. Yd.	Class "E" concrete, footings	149	142			46	
S-1	39	Cu. Yd.	Class "E" concrete, walls above footings					39	
S-1	1.6	Cu. Yd.	Class "C" Concrete, Trolley Bracket			1.6			
S-3	1906	Sq. Yd.	Type "C" waterproofing			1906			
S-3	82	Lin. Ft.	Waterproofing, premolded sealing strip	69				13	
S-4	289881	Lbs.	Reinforcing steel	26384	56303	204076		3168	
S-4	308	Lbs.	Reinforcing Steel, Trolley Bracket			308			
S-7	64,200	Lbs.	Structural steel			64,200			
S-7	1488	Lbs.	Structural steel, electrical conduit supports			1488			
S-7	336	Lbs.	Structural Steel, Trolley Anchor Rods			336			
S-8	65,688	Lbs.	Field painting of structural steel			65,688			
S-9	36	Sq. Ft.	1" gray sponge rubber preformed exp. jt. filler	36					
S-14	480	Lin. Ft.	Railing, alum. rail, supports, conc. parapet & endposts			480			
S-29	48	Lin. Ft.	Drainage conduits including supports			48			
S-29	199	Cu. Yd.	Porous backfill	163				31	
S-29	476	Lin. Ft.	Subdrainage for wearing surface course			476			
S-29	60	Lin. Ft.	8" perforated bit. coated CMP and cap	60					
S-29	33	Lin. Ft.	6" std. pipe downspout galv. steel or wrought iron, incl. spacers			33			
S-29	14	Each	Scuppers, including supports			14			
S-10	780	Sq. Yd.	Concrete Slope Protection			780			
S-25	132	Cu. Yd.	Asphaltic conc. surface course, type "C" (60-70)			132			
S-25	Lump	Sum	Electric Grounding System				Lump		
S-25	239	Lin. Ft.	Polyvinyl waterstop in deck joint			239			
S-25	22	Lin. Ft.	Polyvinyl waterstop in abutment joint	22					
S-101	755	Each	Water-reducing, set-retarding admixture			755			
S-25	3	Each	Lamp Standards					3	
S-25	3	Each	Mercury Vapor Luminaires					3	
S-25	44	Each	Mercury Underpass Luminaires					44	
S-25	246	Lin. Ft.	Pole and Bracket Cable (single conductor)					246	
S-25	804	Lin. Ft.	Main Circuit Cable (single conductor)					804	
S-25	402	Lin. Ft.	Main Circuit Conduit & Fittings, 2" φ					402	
S-25	1778	Lin. Ft.	Mercury Underpass Cable (single conductor)					1778	
S-25	450	Lin. Ft.	Mercury Underpass Conduit					450	

\*\* Non-participating by State of Ohio and Bureau of Public Roads

LAMP STANDARD REINFORCING										
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Sh
L570	12	1'-10	24							3
L571	6	1'-4	9							3
L572	9	4'-1	39	1		0'-8	3'-0	0'-8		6
L573	9	5'-1	48	1		1'-2	3'-0	1'-2		6
L574	6	3'-10	24	1		0'-8	2'-9	0'-8		6
L575	6	4'-10	30	1		1'-2	2'-9	1'-2		6
L576	9	3'-10	36	1	1'-10	2'-2				6
L577	6	3'-7	21	1	1'-7	2'-2				6



REFERENCES:

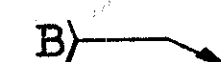
Standard Drawings:

End Dam and End Cross Frame Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Scupper Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Railing Details Type C	- AR-1-57, Revised 4-2-62
Rocker and Bolster Details	- RB-1-55, Revised 2-2-59
Approach Slab Details	- AS-1-54, Revised 7-5-62
Supplemental Specification	- 5-101 Dated 7-12-62
Common Details:	
Downspout and Conductor Details	- Sheet 166
Lighting Details	- Sheet 165
Railing Details	- Sheet 163
Concrete Slope Protection Details	- Sheet 163
End Dam Details	- Sheet 163
R/W Fence Details	- Sheet 163
Sidewalk End Dam Details	- Sheet 164
Scupper Details	- Sheet 164
Longitudinal Deck Joint	- Sheet 166

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may be, at the option of the contractor, made in the shop. Class "B" welding shown thus:

B) 

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

CONCRETE SLOPE PROTECTION shall be provided under the structure as indicated on the General Plan.

BEARING SURFACES: The concrete surface under all rockers and bolsters shall be placed a minimum of 1/4-inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

TRAFFIC MAINTENANCE: For details of traffic maintenance, see Roadway Plans.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3 tons per square foot and abutment footings for 3 tons per square foot for South Abutment and 2 tons per square foot for North Abutment.

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

WIRING DETAILS: For details and notes for wiring, see Roadway Plans.

ELECTRICAL GROUNDS: A stranded No. 10 AWG bare copper wire electrical ground shall be embedded in the outside column on each side of the structure at pier No. 2. The lower ends of the wires shall terminate in a 25-foot length coil placed under the footing and separated from the concrete by two layers of tar paper and the upper ends shall extend sufficiently above the top of the concrete to provide for an exothermic welded connection to outside beam of the superstructure. Ground each light pole and trolley bracket with a No. 10 AWG stranded bare copper cable. Exothermic weld one end of cable to an anchor bolt and the other end to the top flange of the outside beam.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.

CONTINUOUS BEAM SPLICES: If beams having depths differing by more than 1/8" are to be spliced by butt welding, the depth of the smaller depth beam shall be increased by splitting the web longitudinally at a distance of 1-1/2" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats, backwalls, and the face of spill-thru abutment between outside beams.

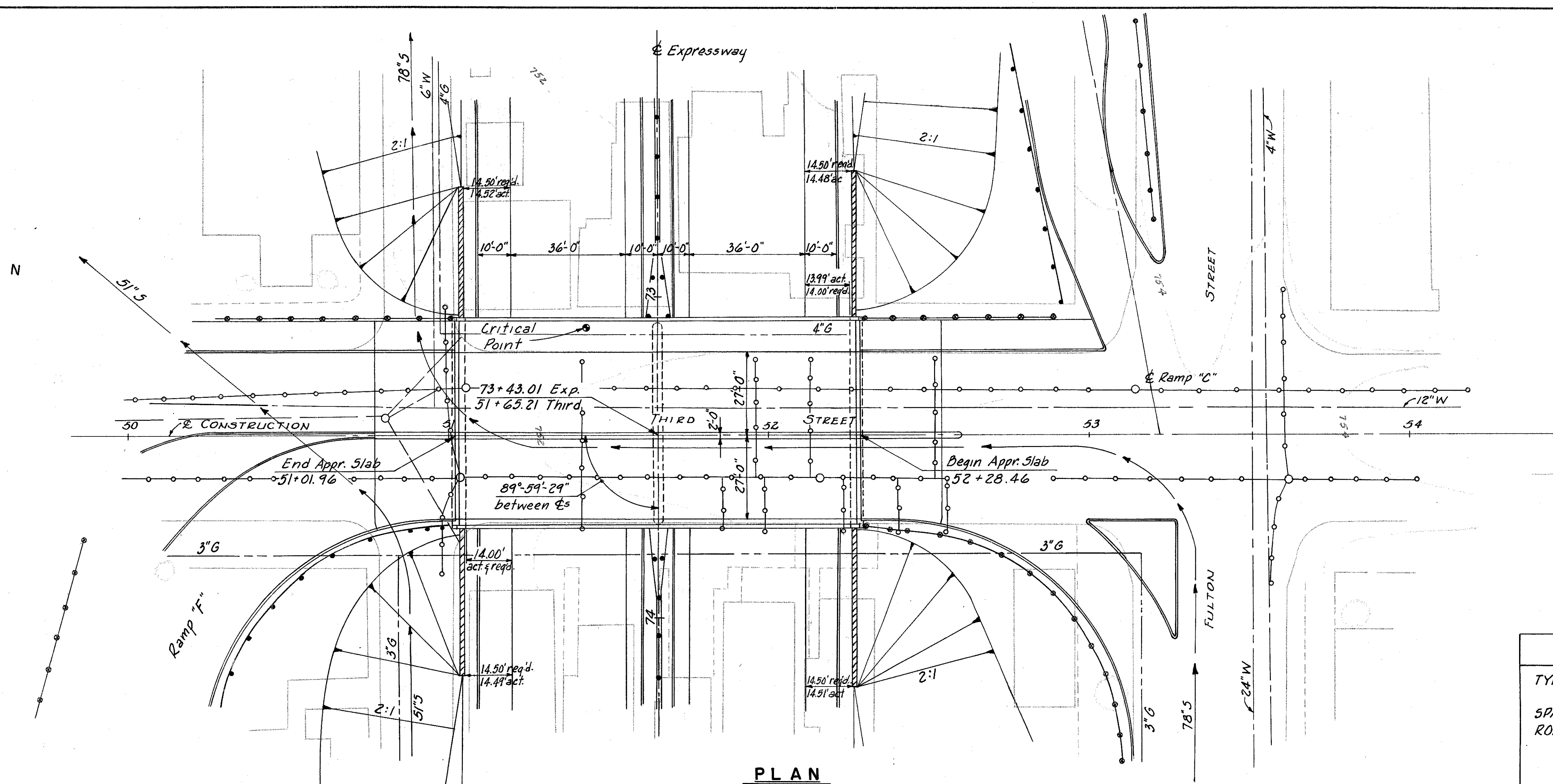
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
GENERAL NOTES							
BRIDGE No. FRA-40-1310							
SOUTH INNERBELT UNDER HIGH ST.							
FRANKLIN COUNTY STA. 65+85.39							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
				TLU	5-18-62		

MICROFILMED  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY  
FRA.-40-12.82

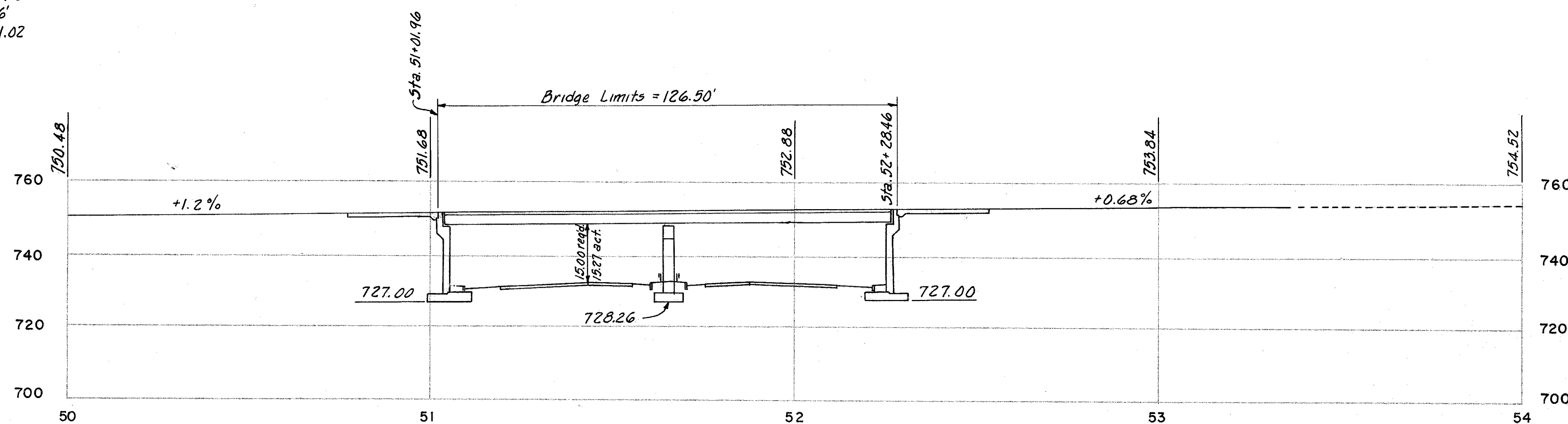
206  
250



PLAN

3rd St.  
P.V.I. - 52+53.85  
50' V.C.  
Elev. - 753.53  
Corr. - 0.03'  
P.G. - 753.50

Innerbelt  
P.V.I. - 75+00  
400' V.C.  
Elev. - 729.86  
Corr. - 1.16'  
P.G. - 731.02



PROFILE

PROPOSED STRUCTURE

TYPE - Continuous steel beam with reinforced concrete deck and substructure.  
SPANS: 61'-0", 61'-0" % brgs.  
ROADWAY: 54'-0" f/f curbs with 2' concrete median, 10'-2" sidewalk on West side, 2' safety curb on East side, and concrete parapets and aluminum railing.  
LOADING: CF-400 (1957)  
WEARING SURFACE: 2" asphaltic concrete  
SKEW: None  
ALIGNMENT: Tangent  
APPROACH SLABS: 25' long, see sheet 207.

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SITE PLAN  
BRIDGE NO. FRA.-40-1325  
SOUTH INNERBELT UNDER THIRD STREET

FRANKLIN COUNTY STA. 73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
T.L.U.	T.L.U.	H.T.	R.R.M.	T.L.U.	5-9-62	7-5-63

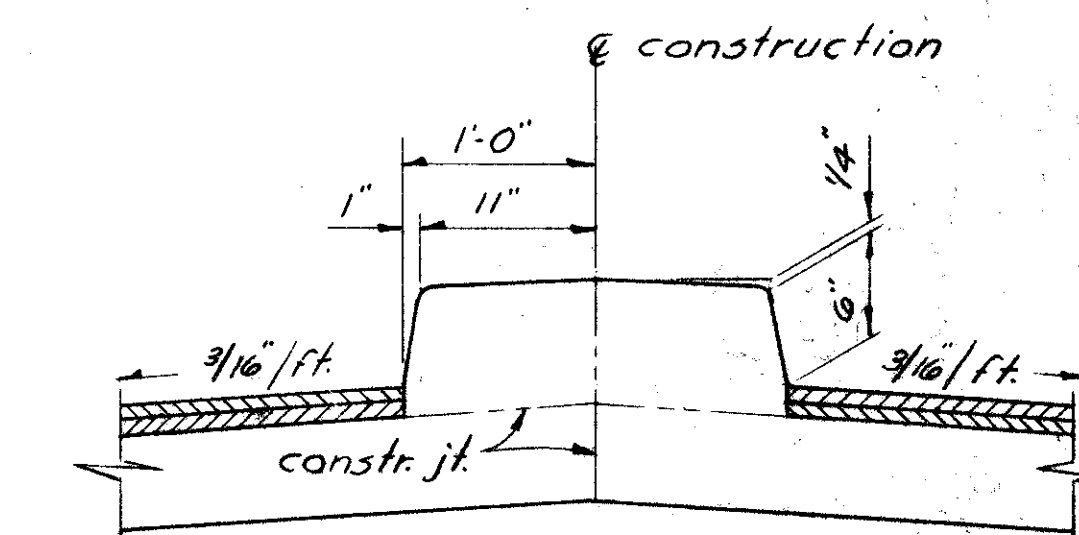


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SEP 24 1985

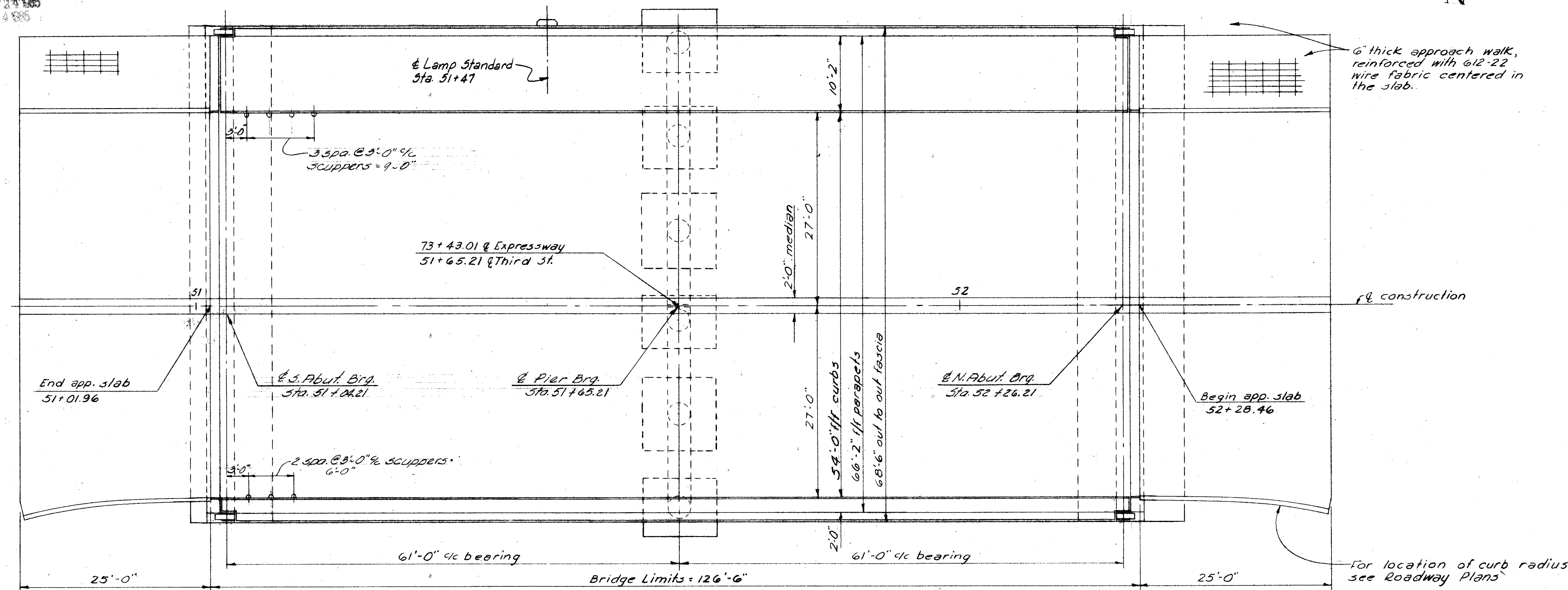
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

207  
250

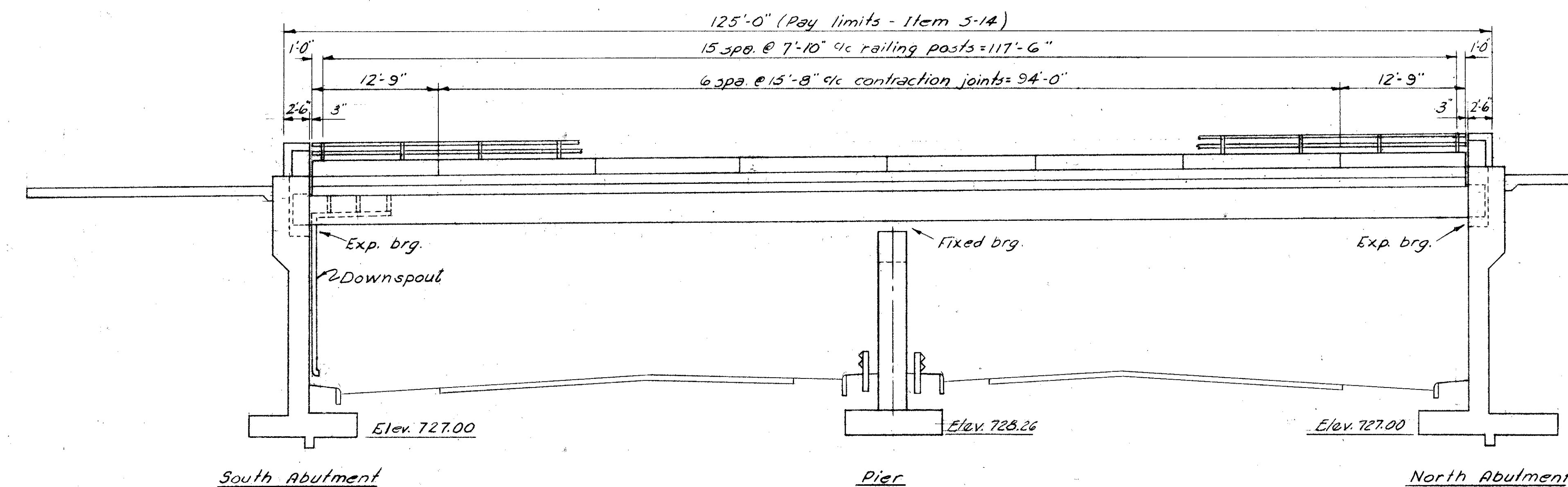
FRANKLIN COUNTY  
FRA. 40-12.82



APPROACH SLAB MEDIAN DETAIL



PLAN  
(Wingwalls not shown)



GENERAL ELEVATION

# NOTES

**CURBS:** The curbs on the approach slab shall be transitioned to match the curbs on the roadway plans.

**SIDEWALK & APPROACH SLAB:** The approach walks and slabs are included with roadway quantities, for additional approach slab details see standard drawing A5-1-54.

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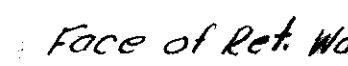
GENERAL PLAN & ELEVATION  
BRIDGE NO. FRA. 40-1925  
SOUTH INNERBELT UNDER 3RD ST.  
FRANKLIN COUNTY STA. 73+43.01

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PM	A.P.		Demuth	TLU	5-9-62	

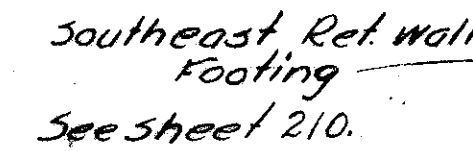
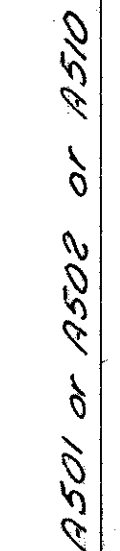
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208  
250

FRANKLIN COUNTY  
FPA 40-12.82



PLAN

ELEVATION

TYPICAL SECTION

NOTES

For details, views, and additional notes see sheet 2/4.

All vertical stem reinforcing steel is in back of wall unless otherwise noted.

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COLUMBUS, OHIO

SOUTH ABUTMENT

BRIDGE N° FRA 40-1325

SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

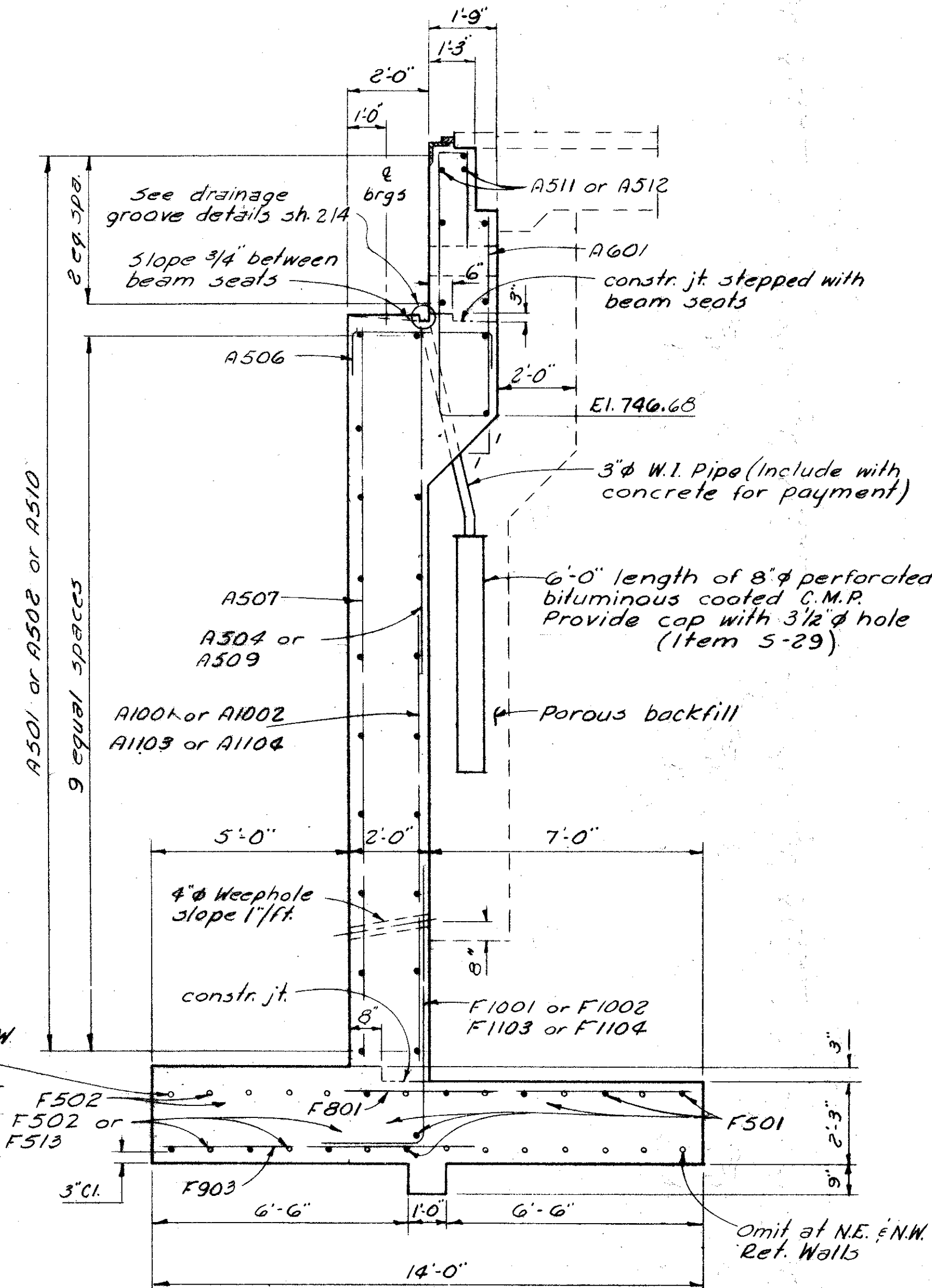

FRANKLIN COUNTY STA 73+43.01

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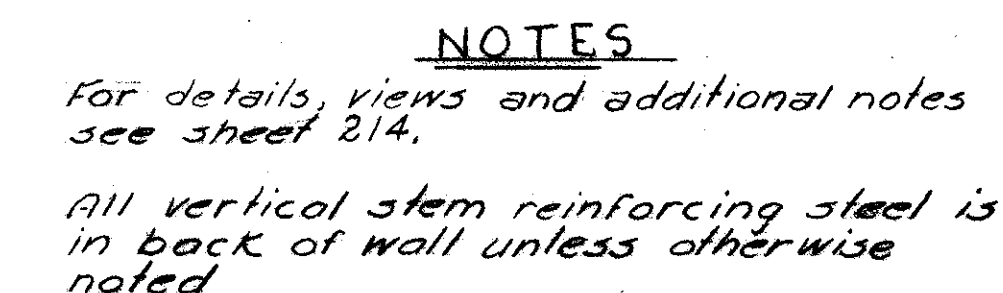


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		





TYPICAL SECTION



## ELEVATION

NORTH ABUTMENT

SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

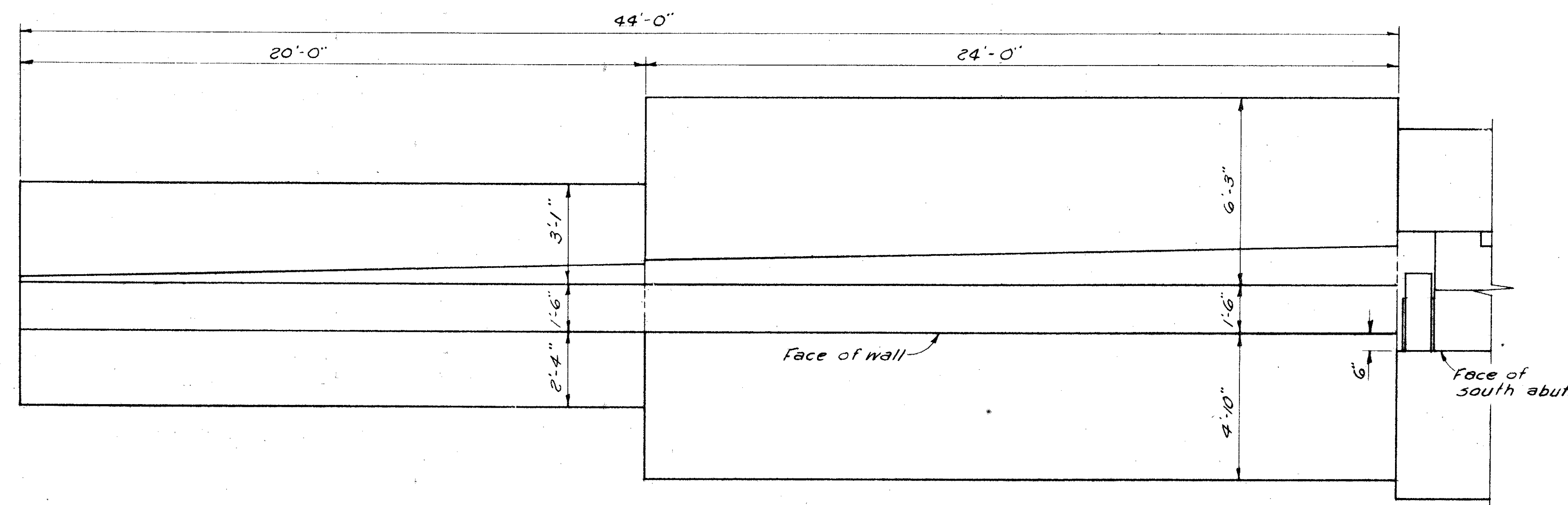
FRANKLIN COUNTY STA 79+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
PM	A.P		Demuts	TLU	5-9-62	

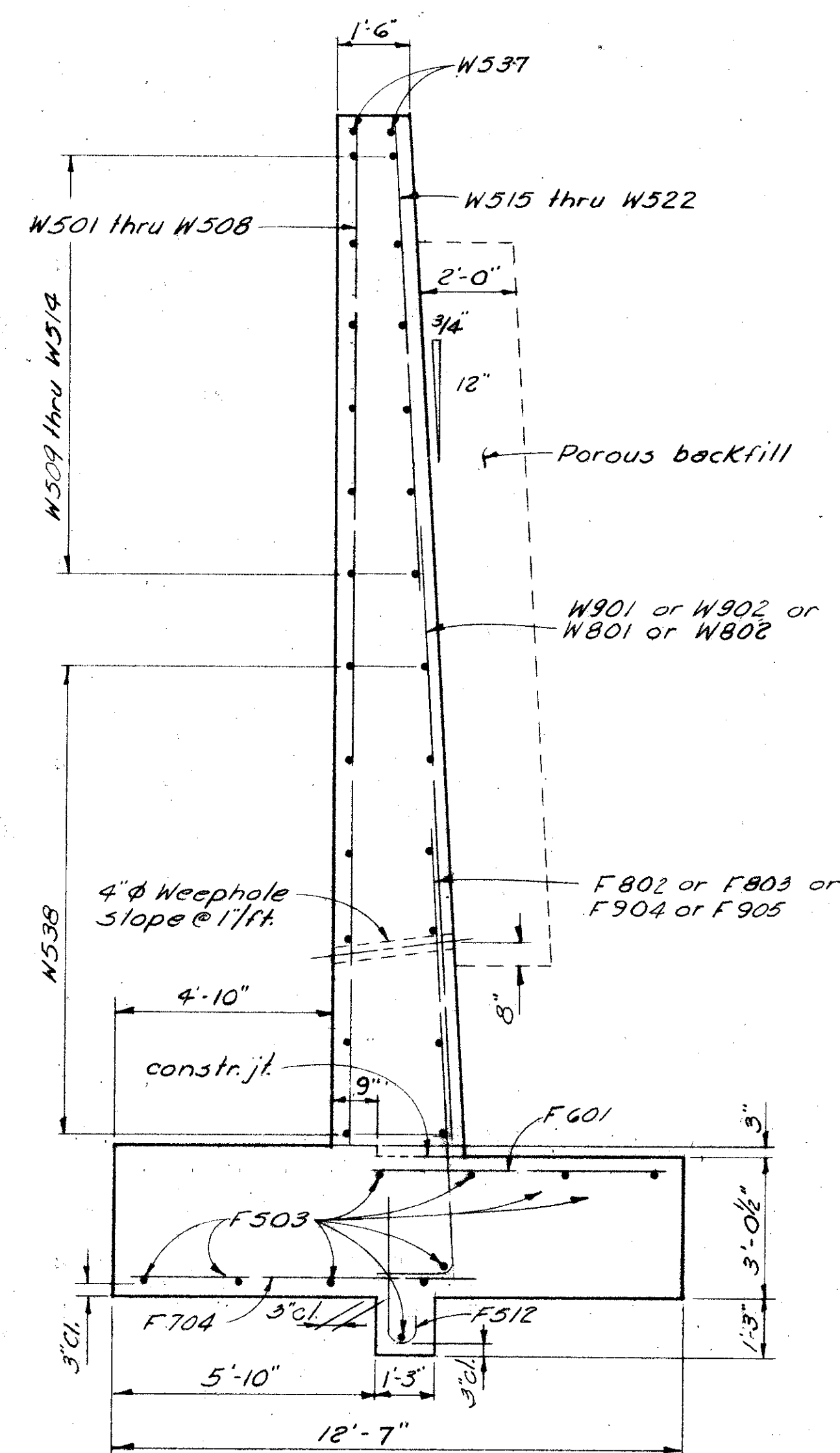
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2	OHIO		

210  
 250

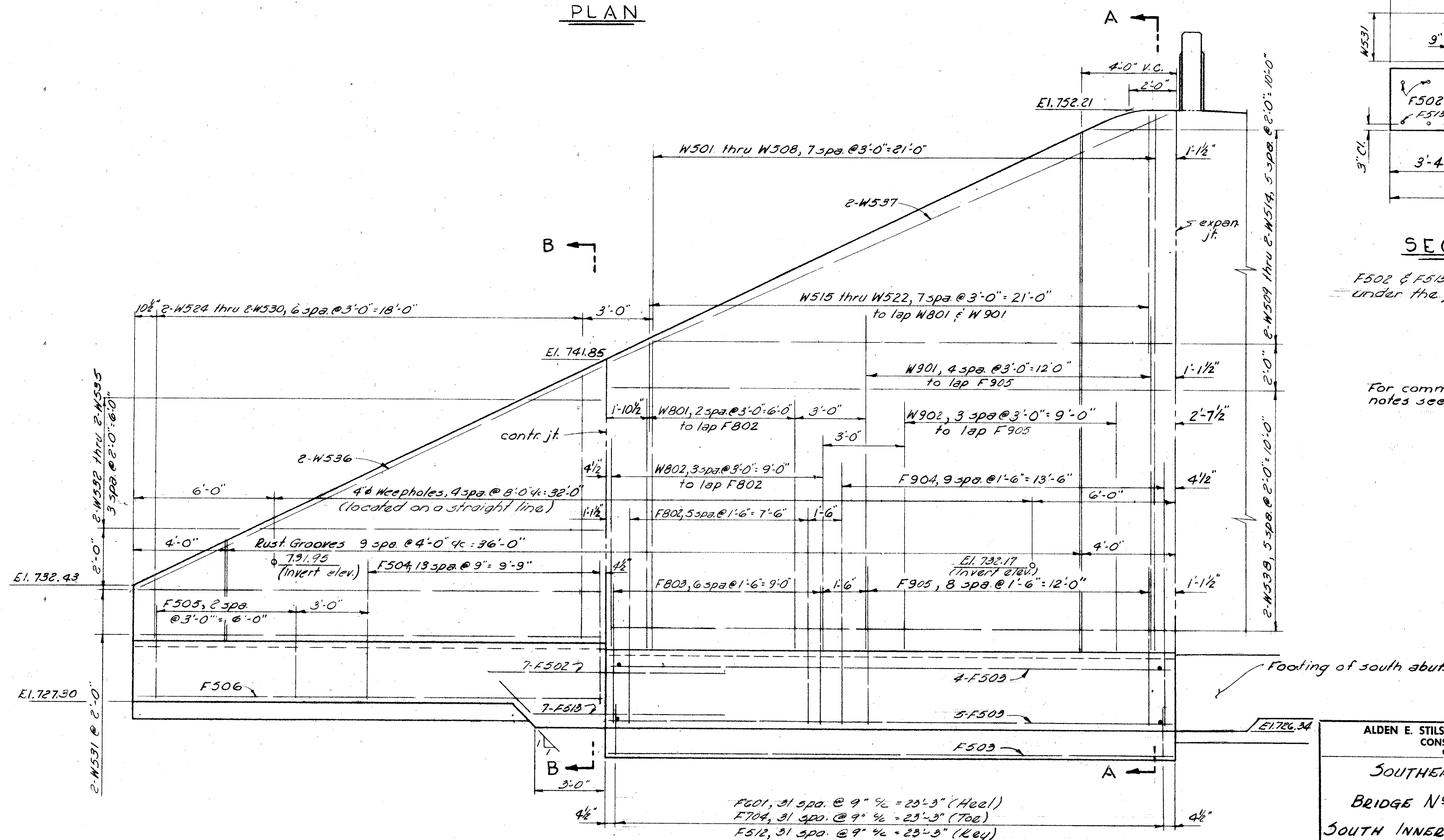
FRANKLIN COUNTY  
FRA - 40 - 12.82



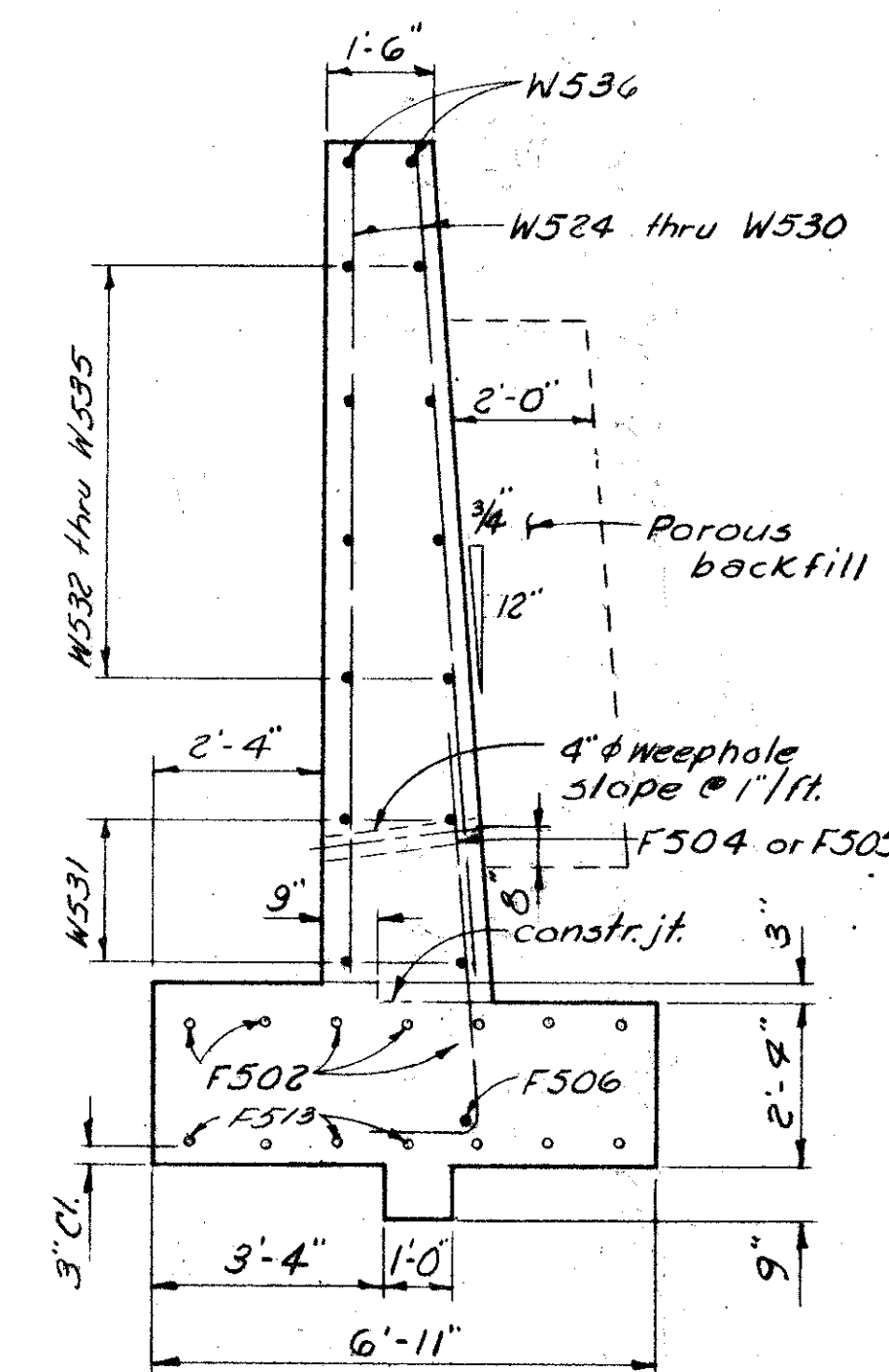
## PLAN



SECTION A-A



### ELEVATION



SECTION B-B

F502 & F513 bars are centered under the joint.

NOTES

For common details and additional notes see sheet 214.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
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COLUMBUS, OHIO

SOUTHEAST RETAINING WALL

BRIDGE N° FRA. 40-1325

SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

FRANKLIN COUNTY STA. 73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	AP		Demuts	TLU	5-9-62	



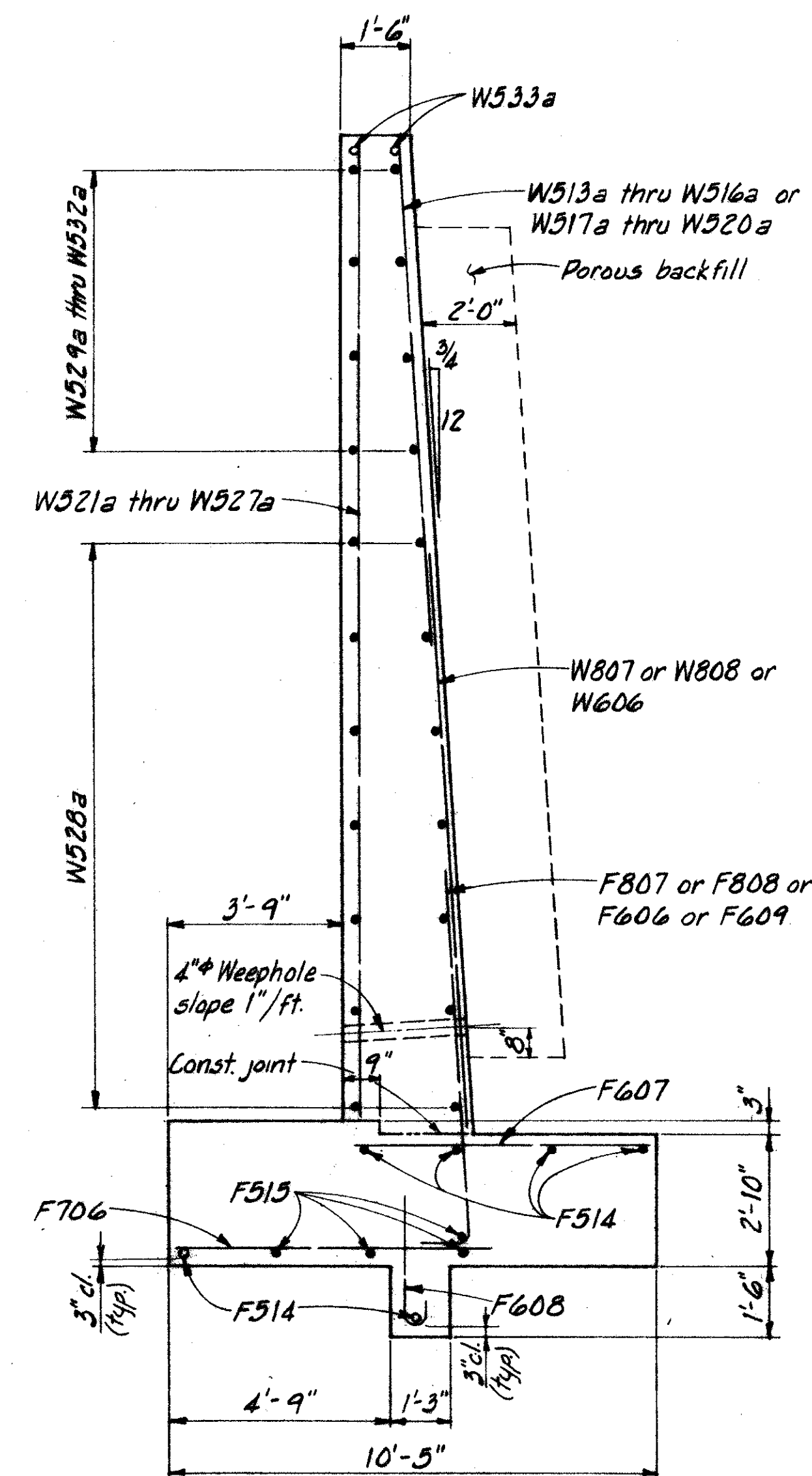
Face of South Abut.

Face of wall

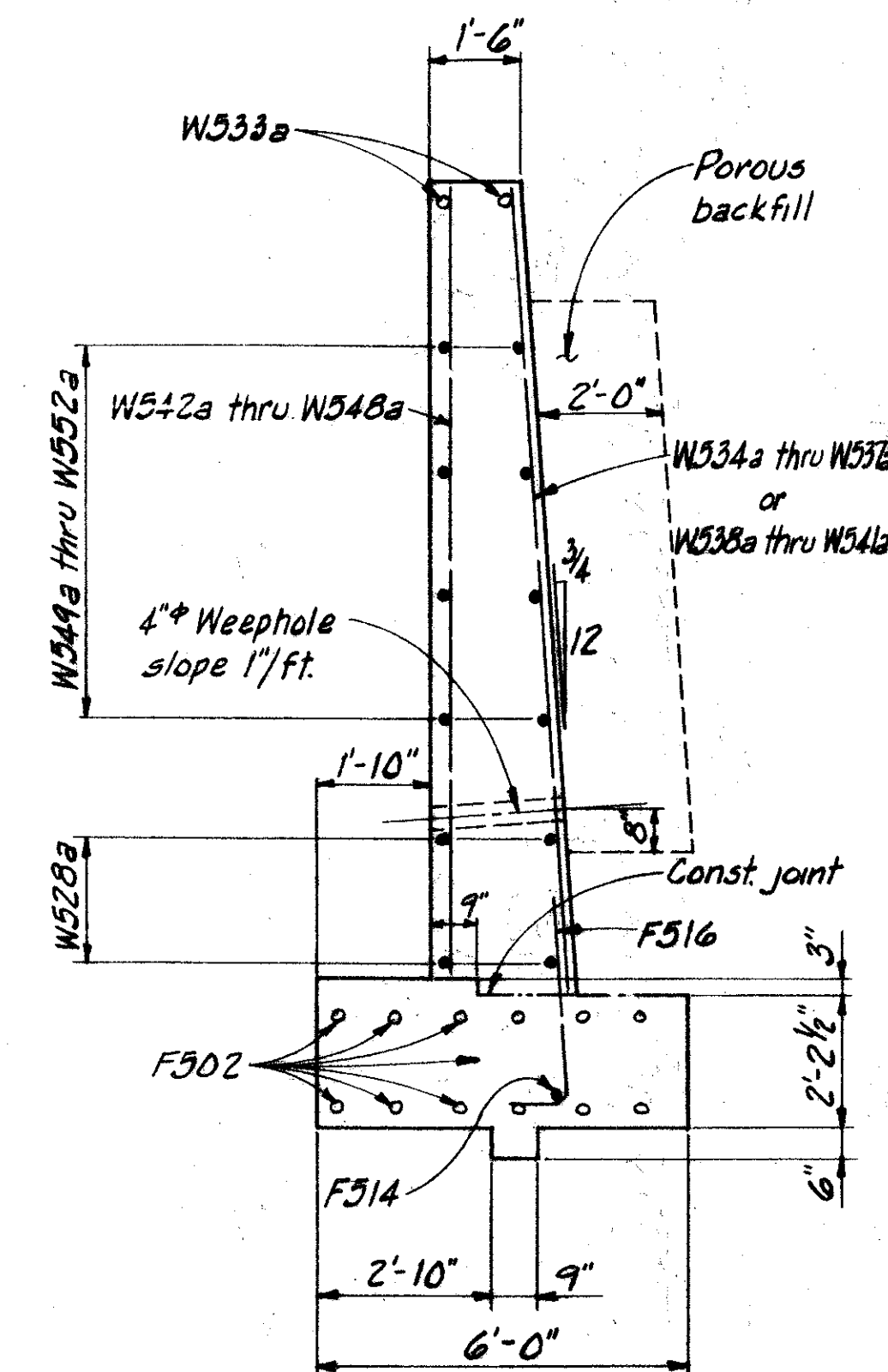
PLAN



ELEVATION



SECTION A-A



SECTION B-B

F502 bars are centered under joint

NOTE

For common details and additional notes, see sheet 214.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SOUTHWEST RETAINING WALL


BRIDGE NO FRA-40-1325  
SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

FRANKLIN COUNTY STA. 73+43.01

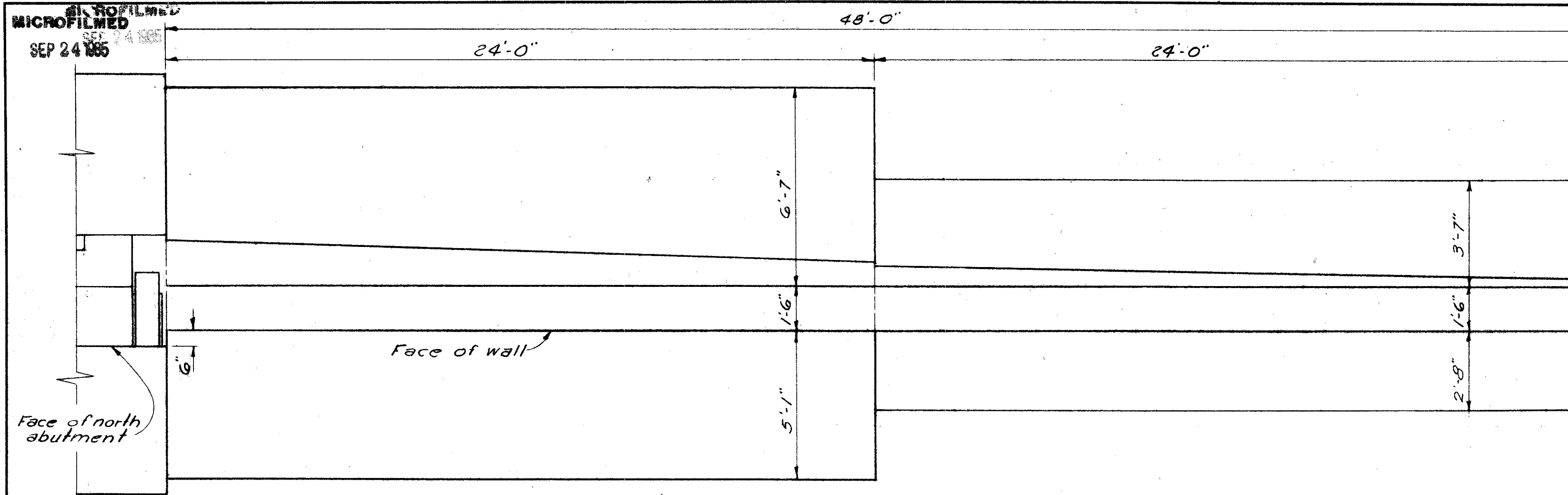
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SEP 24 1995

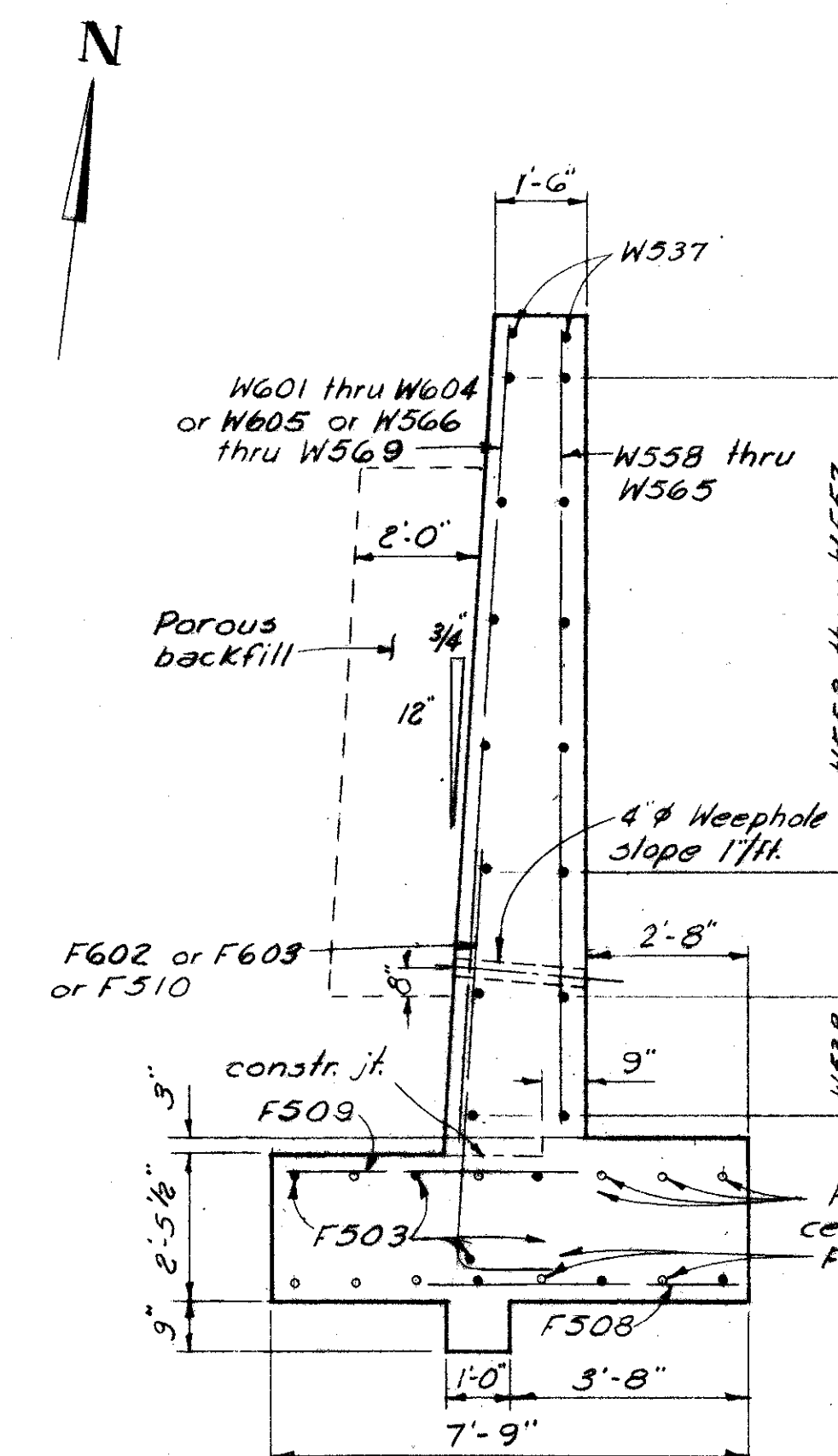
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		



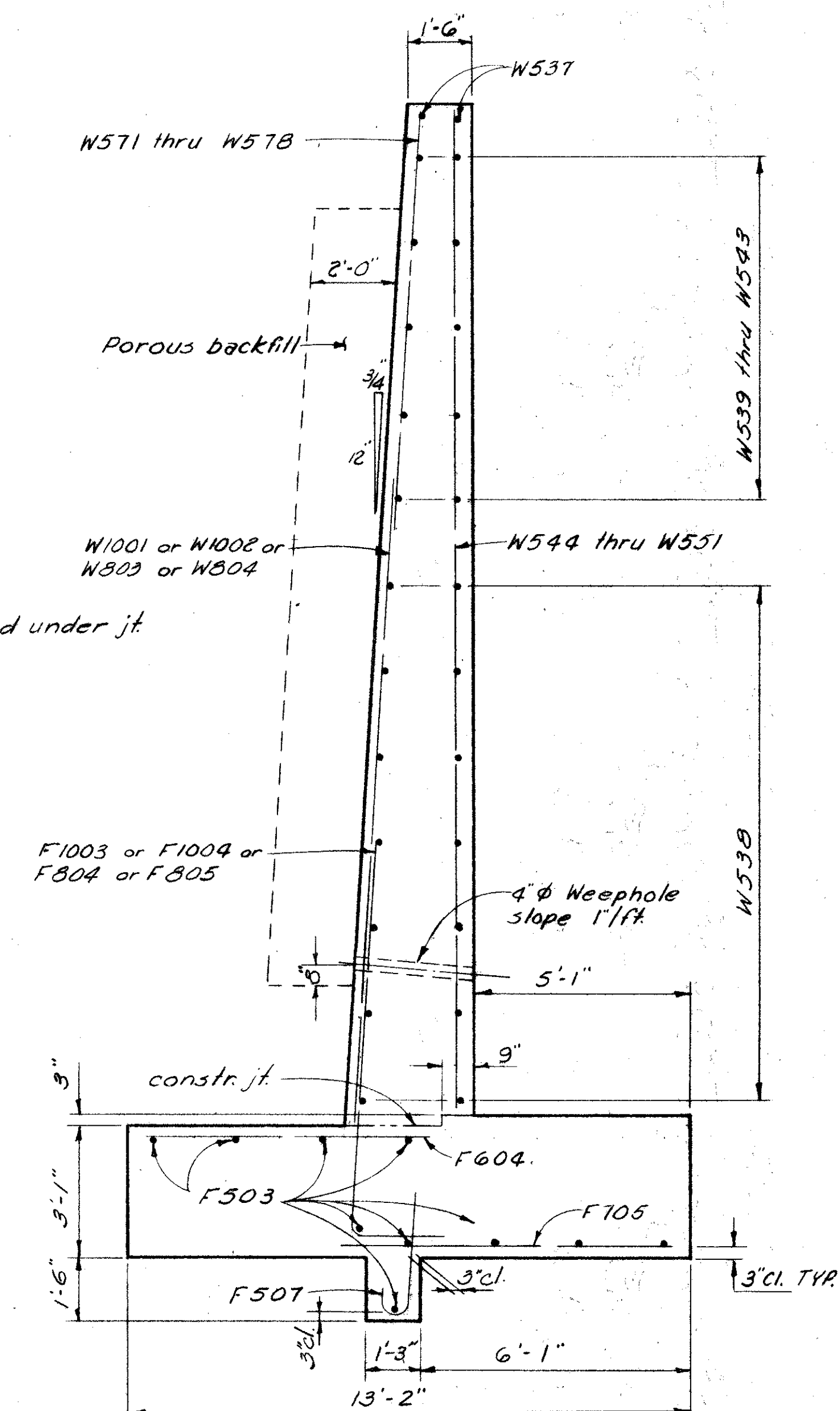
FRANKLIN COUNTY  
FRA 40-12.82



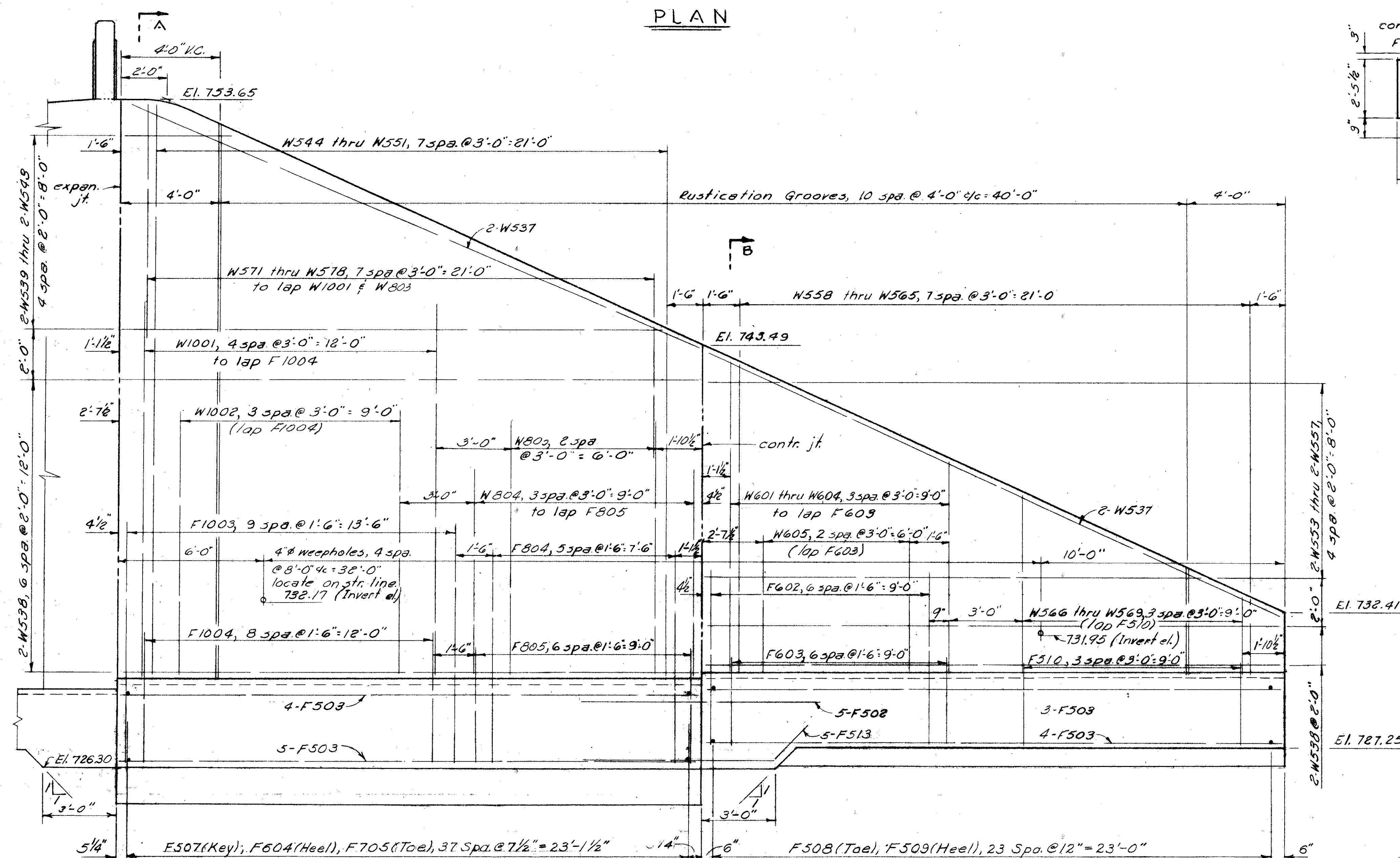
## PLAN



SECTION B-B



SECTION A-A



ELEVATION

NOTES

For common details and additional notes see sheet 214.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

NORTHEAST RETAINING WALL  
BRIDGE N<sup>o</sup> FRA 40-1325  
SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.  
FRANKLIN COUNTY STA. 73+43.01

DESIGNED <i>PM</i>	DRAWN <i>A.P</i>	TRACED	CHECKED <i>Demuts</i>	REVIEWED <i>TLU</i>	DATE <i>5-9-62</i>	REVISED
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2000

FRANKLIN COUNTY  
FRA 40 - 12.82

Elevation drawing of a bridge structure. The drawing shows a cross-section with various dimensions and labels.

Dimensions (from left to right):

- Top horizontal dimension: 20'-0"
- Top horizontal dimension: 44'-0"
- Top horizontal dimension: 24'-0"

Vertical dimensions (from bottom to top):

- Bottom vertical dimension: 5'-0"
- Bottom vertical dimension: 1'-6"
- Bottom vertical dimension: 6'-6"

Labels:

- Face of wall (pointing to the vertical line separating the 20'-0" and 44'-0" sections)
- Face of north abutment (pointing to the vertical line separating the 44'-0" and 24'-0" sections)

Technical drawing of a vertical wall cross-section, likely a retaining wall or foundation, showing various components and dimensions.

**Dimensions and Labels:**

- Top Section:**
  - Width: 1'-6"
  - Height: 2'-0"
  - Component: W537
  - Component: W587 thru W591 or W592 thru W595
- Middle Section:**
  - Height: 5'-0"
  - Component: W579 thru W586
  - Component: W903 or W904 or W805 or W806
  - Feature: Porous backfill
  - Feature: 4" Weephole slope 1'/ft.
  - Feature: constr. jt. (construction joint)
  - Feature: 9"
  - Feature: 9"
  - Feature: 9"
- Bottom Section:**
  - Height: 3'-0"
  - Width: 13'-0"
  - Component: F503
  - Component: F703
  - Component: F512
  - Component: F605
  - Component: F503
  - Feature: 3'-0"
  - Feature: 3'-1"
  - Feature: 1'-3"
  - Feature: 3'-0"

Hand-drawn cross-section diagram of a foundation wall and footing. The wall is 1'6" thick at the top and has a vertical height of W596 thru W599. A 4" diameter weephole is shown with a slope of 1"/ft. The footing is 3'0" wide and has a 3'4" section on the left. Various reinforcement bars are labeled: W536, W506 thru W512, W531, F502, F513, F511 or F510, and F506. A "constr. jt." (construction joint) is indicated. The footing is labeled "3' C.I. TYPE". Dimensions for the footing include 3'4", 1'0", and 7'0". A "Porous backfill" area is shown with a 2'0" width and a 9" depth. A 12" vertical dimension is also shown.

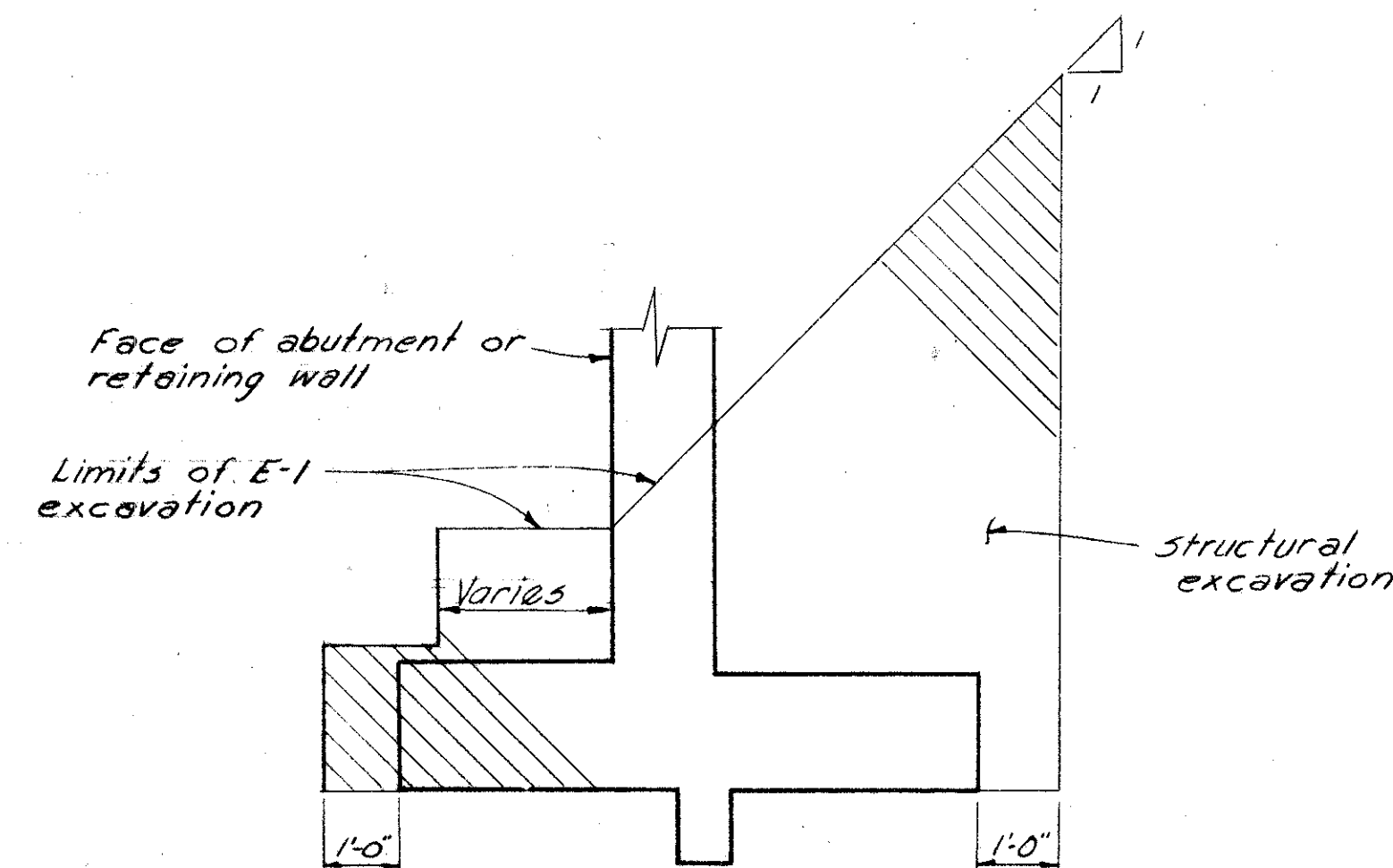
SECTION B-B

NOTES  
For common details and  
additional notes see sheet  
214.

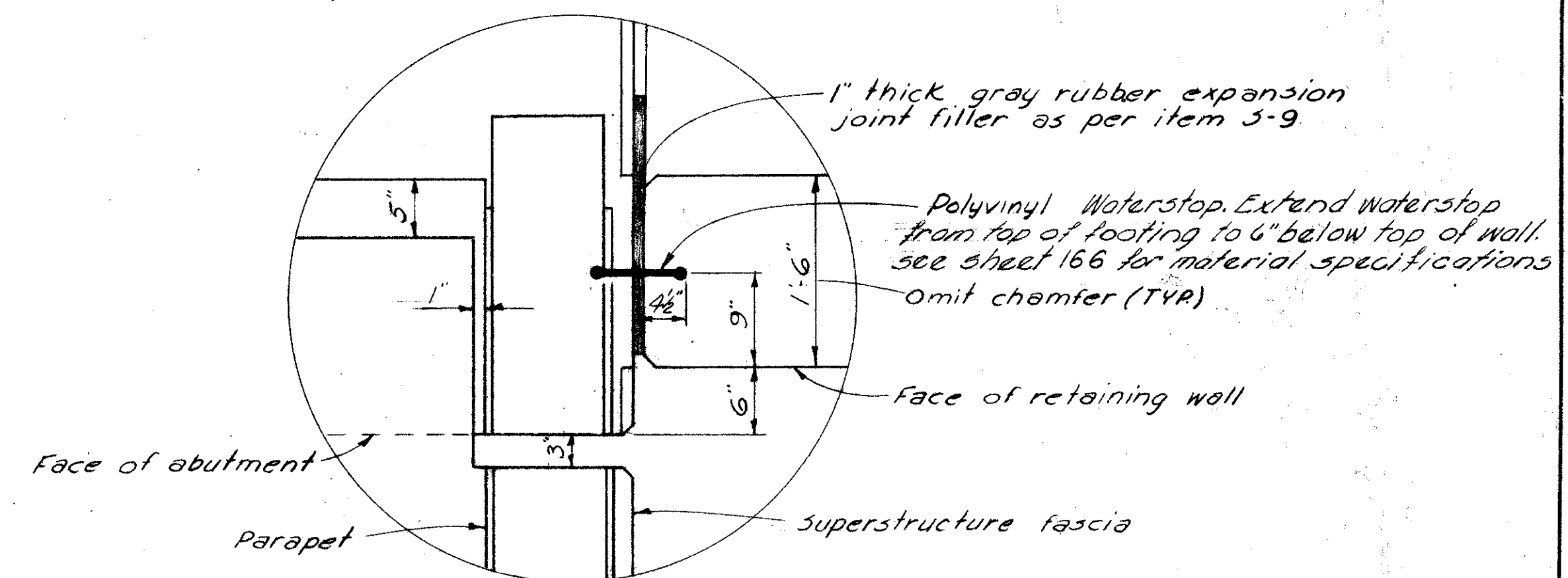
PM	D.P	Demuts TLU	5-9-62
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FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		



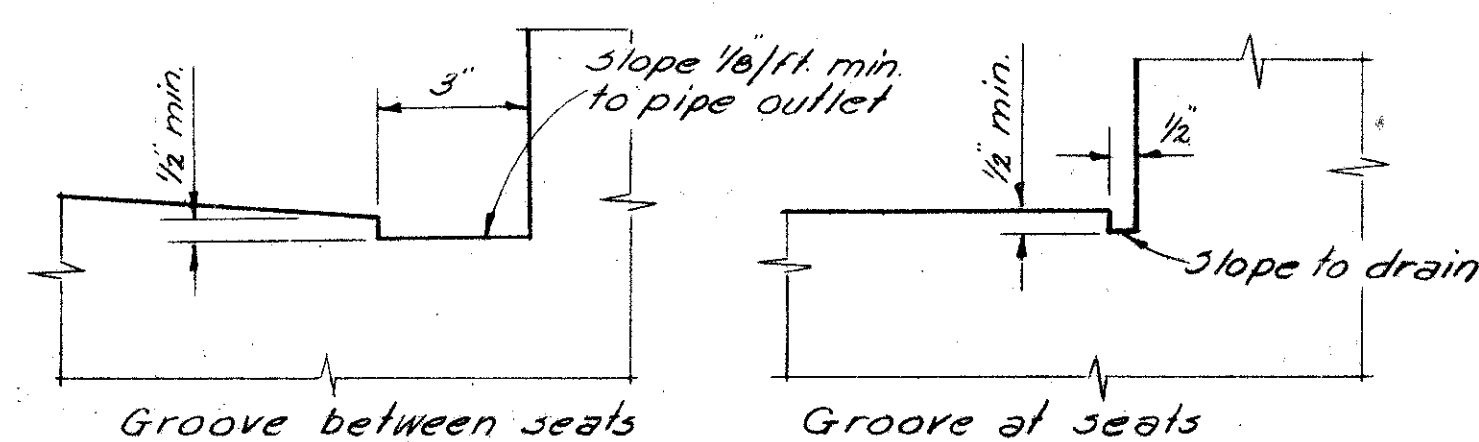


### EXCAVATION DETAIL



Exposed face of wall

VIEW B-B



2'-6"

1'-9"

2'-6"

3'-9"

2-#503

#508

construction joint  
slope parallel to grade

face of abutment

SECTION A-A

PROCEDURE: Before the back walls of the abutments are placed, the backfill shall be placed and compacted up to the level of the subgrade with 1:1 slope from the bridge seat to the subgrade.

CONCRETE END POSTS:  
Concrete end posts are included with  
Item 3-14 for payment.

Porous backfill for abutments  
Porous backfill, 2'-0" thick, full length of  
abutment, shall extend up to the approach slab  
or sidewalk.

JOINTS: A joint shall be provided in the abutment portion of the end dam at each contraction joint

FOOTING KEY: The key under the footing shall be placed in a carefully made trench against undisturbed earth.

ELEVATIONS:  
Elevations marked with an asterisk (\*) are  
at the top of the 2" edge bar of the end dam.

POROUS BACKFILL FOR RETAINING WALLS:  
The top of the porous backfill shall  
be 2'-6" below the top of the retaining wall.

RIGHT OF WAY FENCE: For fence connection to end post see sheet 163.

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT & RETAINING  
WALL DETAILS

BRIDGE N° FRA. 40-1325

SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

FRANKLIN COUNTY STA. 73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	A.P		Demuts	TLU	5-9-62	



**P E R S O N**

**MICROFILMED**

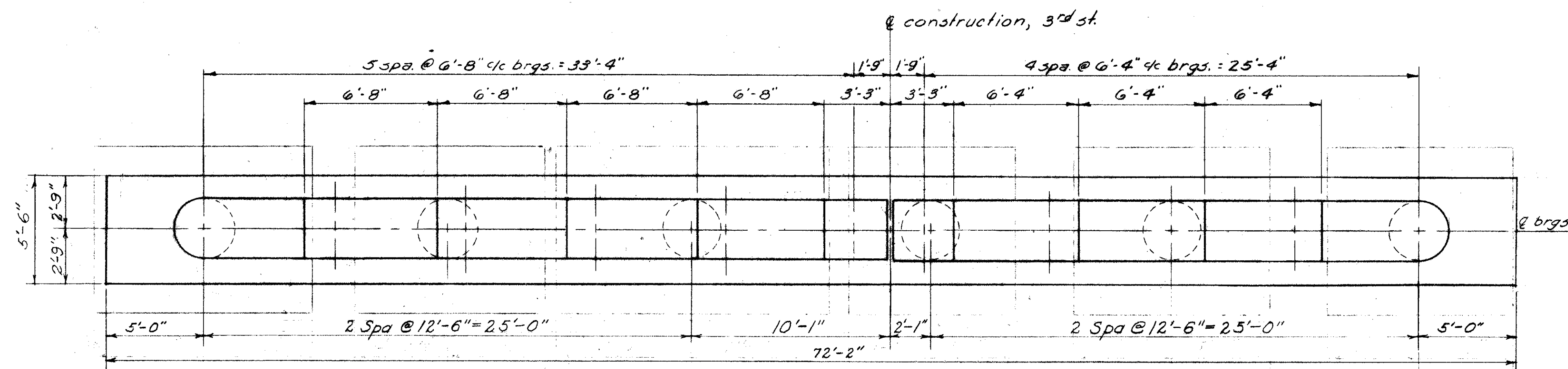
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

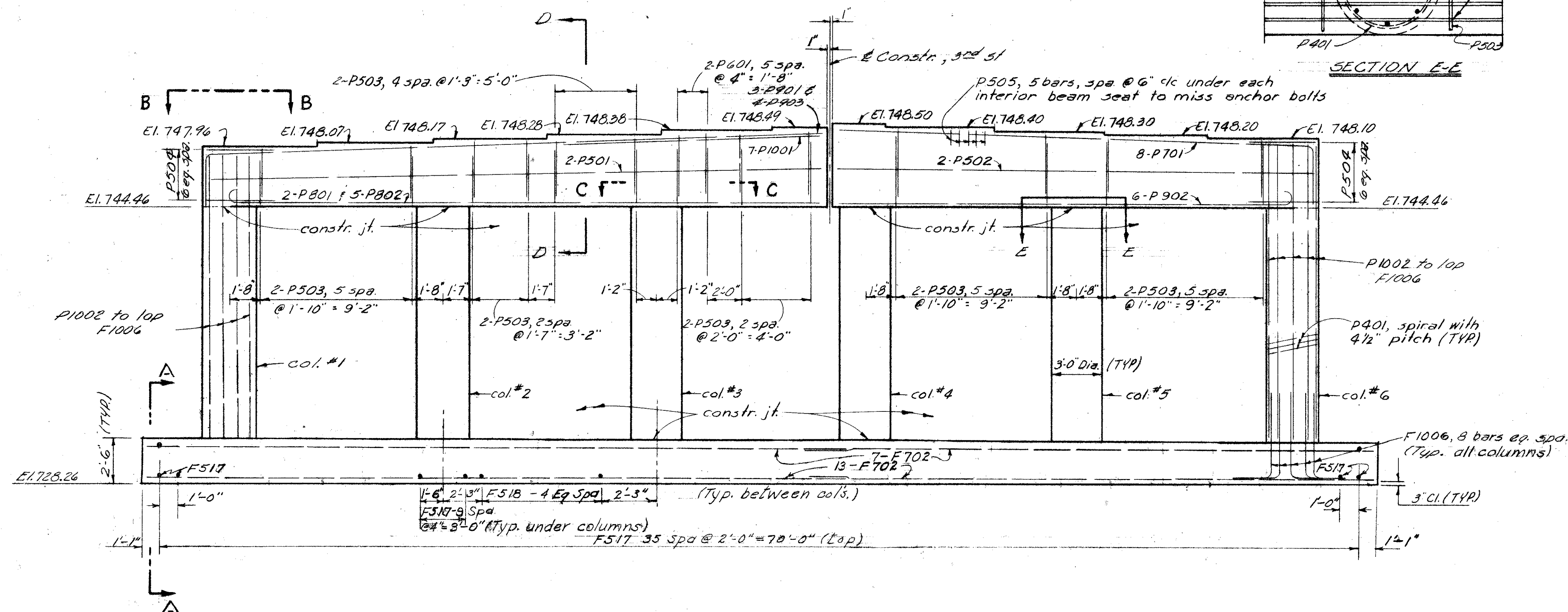
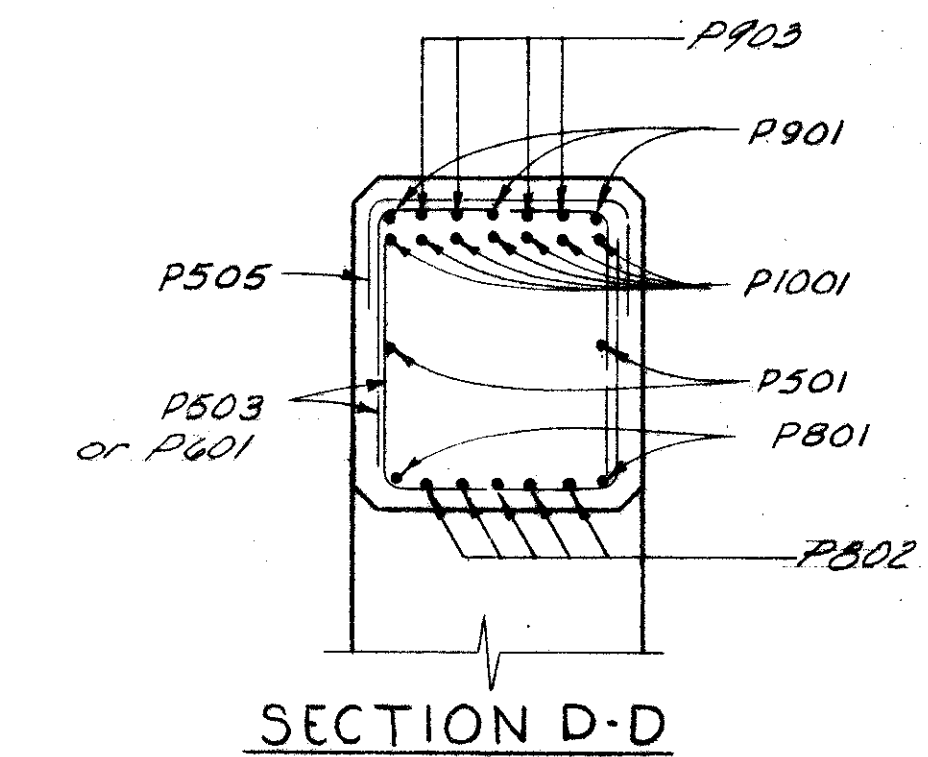
215  
250

FRANKLIN COUNTY  
FRA 40-12.82

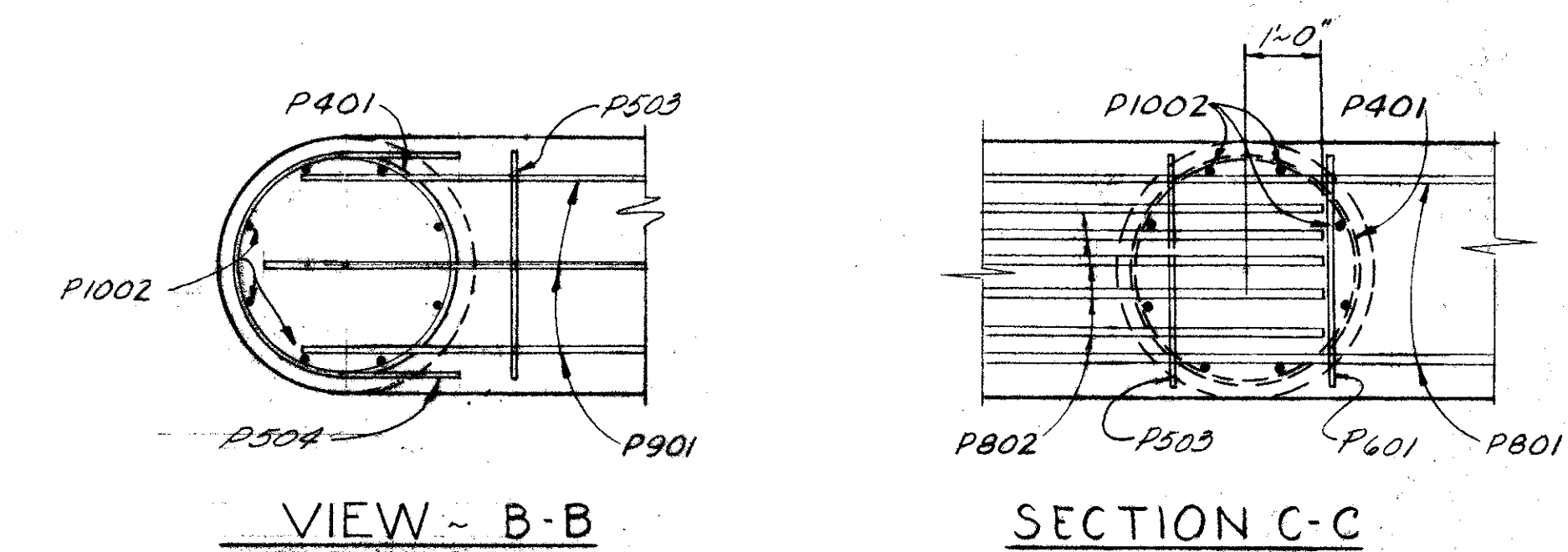
215  
250



## PLAN

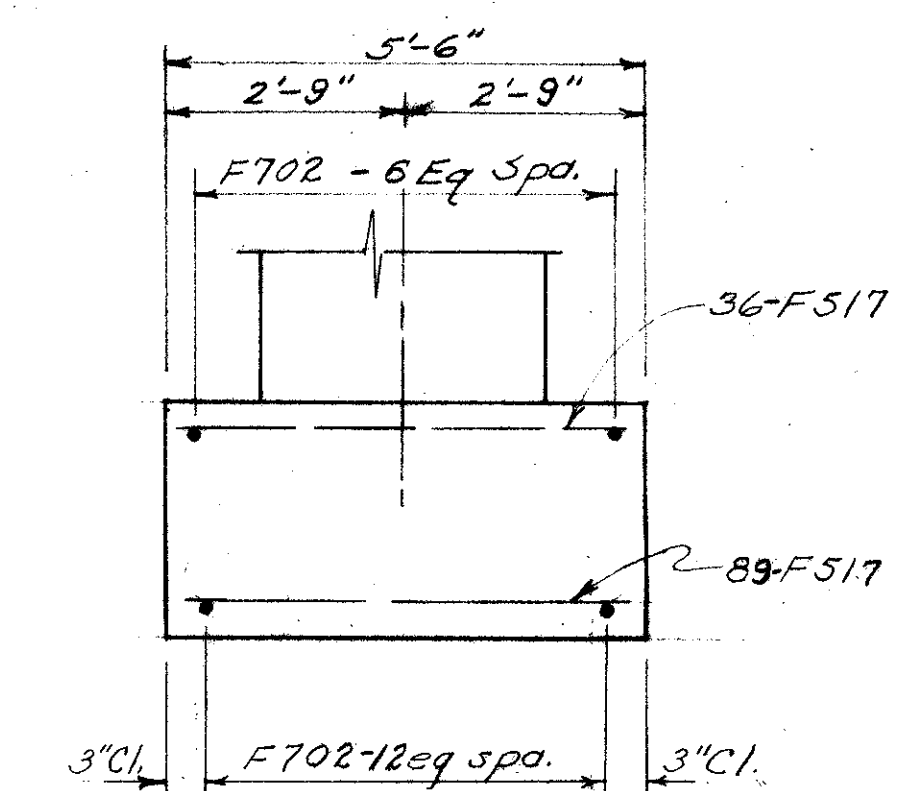
ELEVATION

SECTION D-D



VIEW ~ B-B

SECTION C-C



SECTION A-A

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER

BRIDGE N° FRA 40-1325  
SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

FRANKLIN COUNTY STA. 73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	A.P		Demuts	TLU	5-9-62	

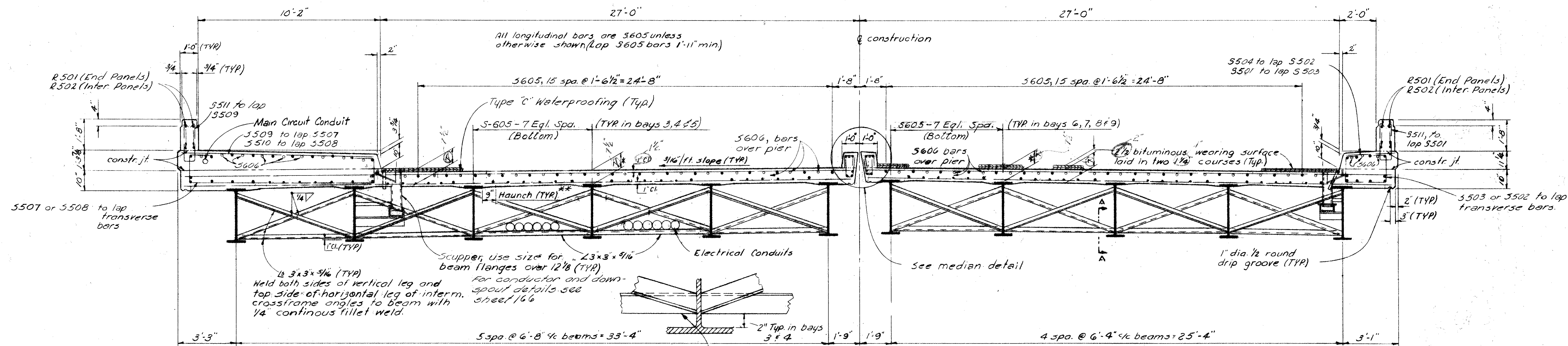
MICROFILMED

SEP 24 1985

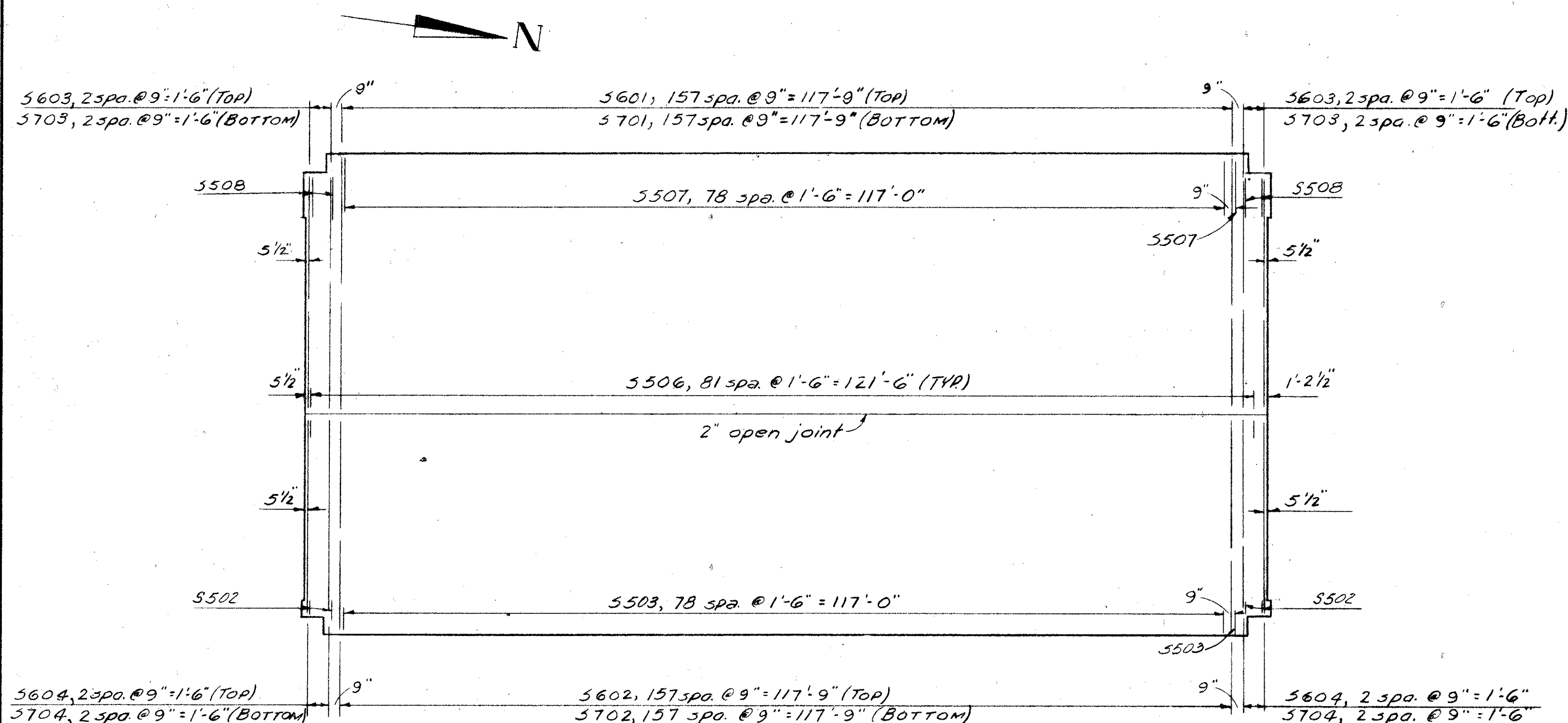
MICROFILMED

SEP 24 1985

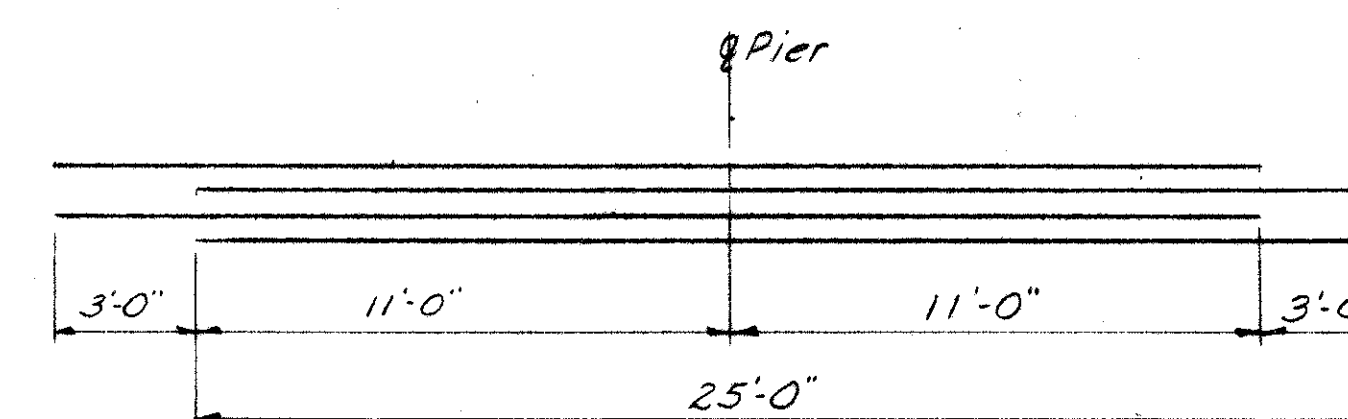
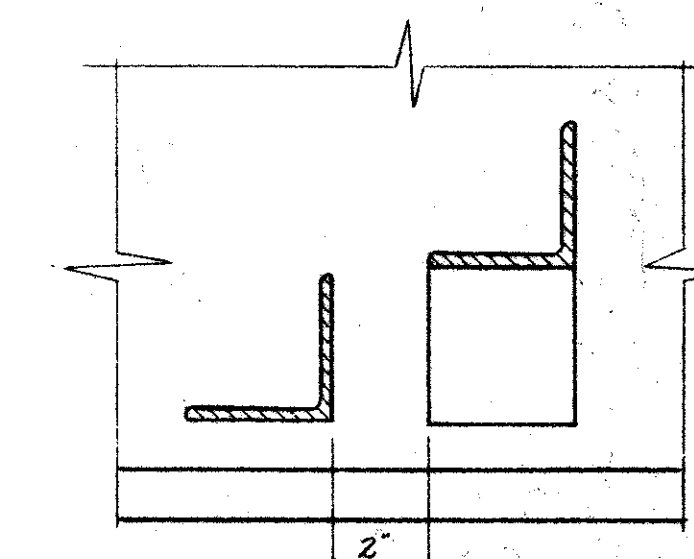
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY  
FRA 40-12.82216  
250

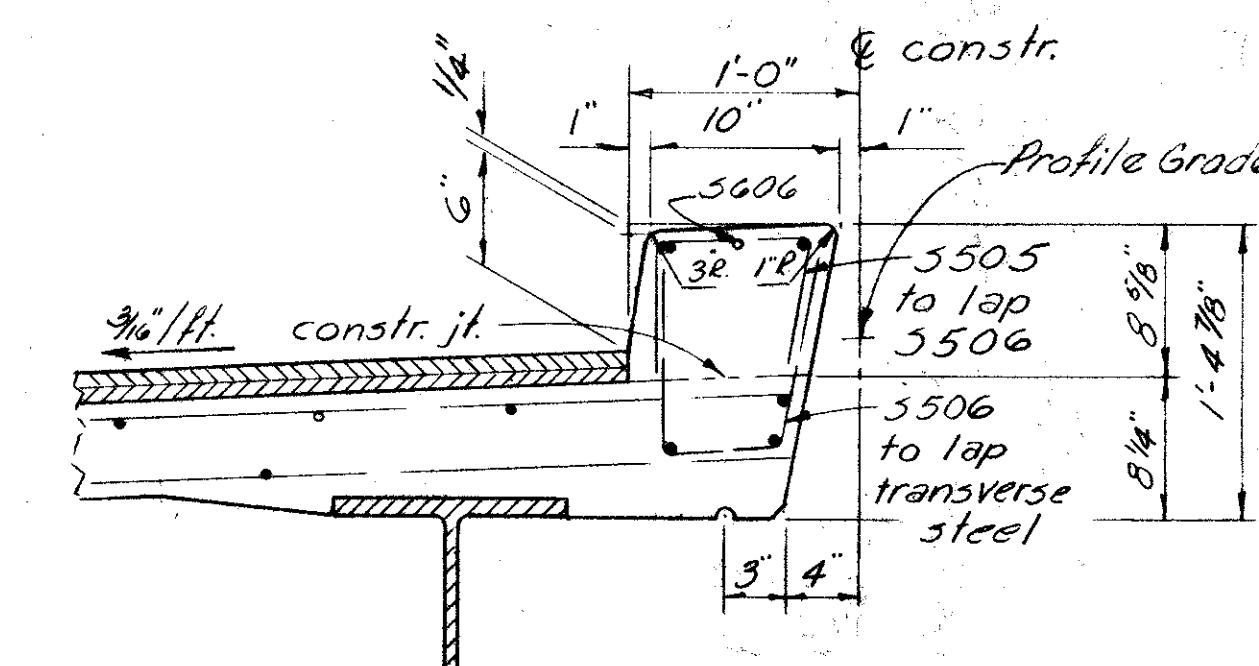
## TRANSVERSE SECTION



## PLACEMENT OF TRANSVERSE SLAB REINFORCING

DIAGRAM SHOWING STAGGER OF 5606 BARS  
OVER PIER

## SECTION A-A



## TYPICAL MEDIAN DETAIL

\* These are the nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions, even though deviation from them may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

\*\*DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension with a min. of 6" and a max. of 12". Max. slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 9" width.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

## SUPERSTRUCTURE DETAILS

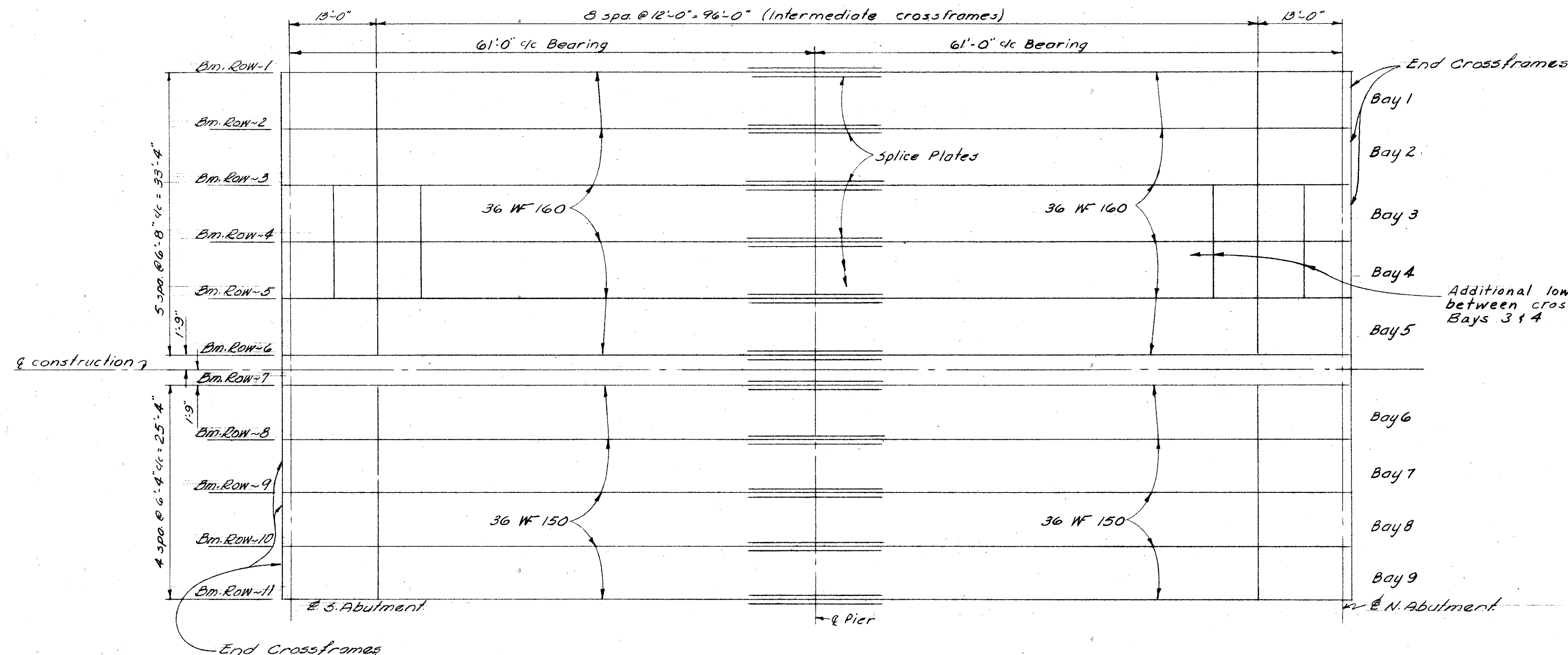
BRIDGE N° FRA 40-1325

SOUTH INNERBELT UNDER 3<sup>RD</sup> ST.

FRANKLIN COUNTY STA. 73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	A.P.		Demuts	TLU	5-9-82	5-9-83



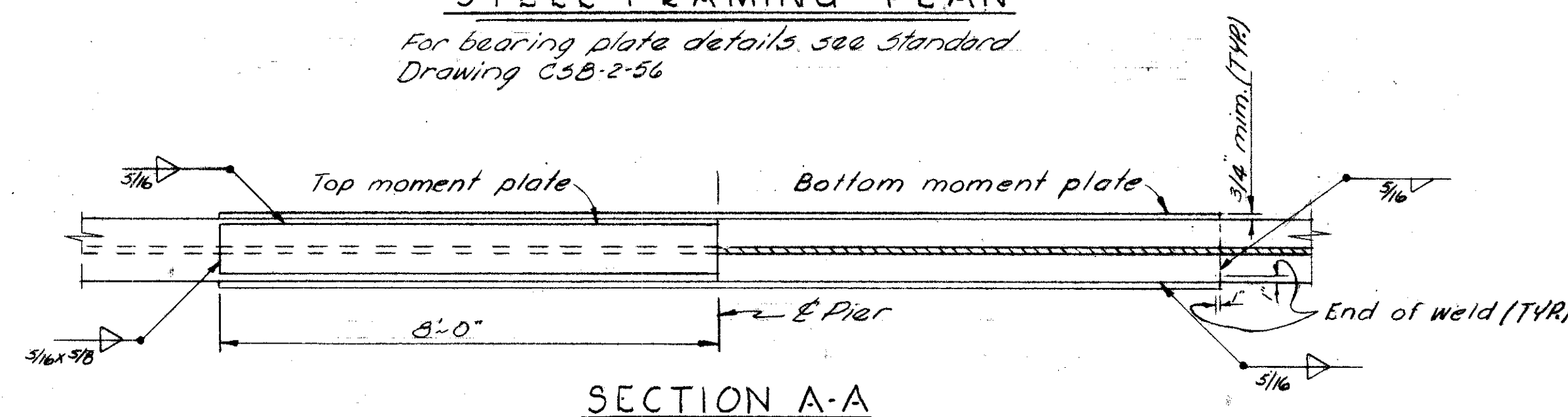


DEAD LOAD DEFLECTION							
	ROW 1	ROW 2	ROWS 3-4-5	ROW 6	ROW 7	ROWS 8-9-10	ROW 11
Defl. due to wt. of steel	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
Defl. due to remaining DL	9/16"	5/16"	5/16"	1/4"	1/4"	5/16"	1/2"
Total D.L. deflection	5/8"	3/8"	3/8"	5/16"	5/16"	3/8"	5/16"

Note: No camber is required.

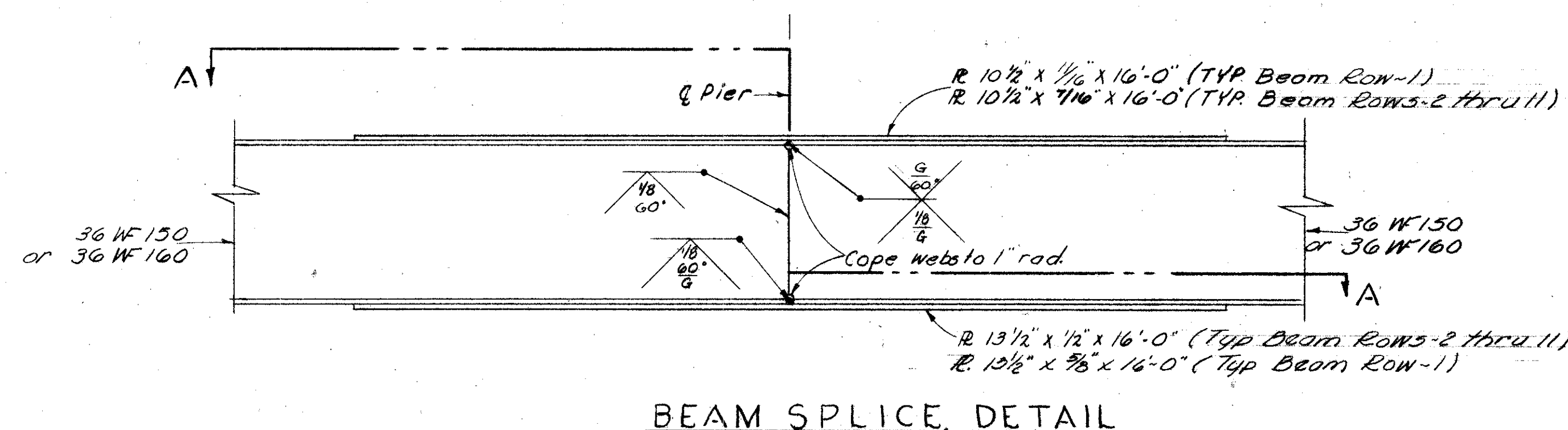
### STEEL FRAMING PLAN

For bearing plate details see Standard Drawing CSB-2-56



### BEAM SPLICE WELDING PROCEDURE

- ALL ROWS
- Place beams on both spans, raise end of beam at either north or south abutment 1/4"
  - Butt-weld beam flanges and web at pier using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
  - Weld top and bottom flange moment plates at pier
  - Lower end of beam at the abutment.



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SUPERSTRUCTURE DETAILS						
BRIDGE NO. FRA-40-1325						
SOUTH INNERBELT UNDER 3 <sup>RD</sup> ST.						
FRANKLIN COUNTY STA. 73+43.01						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	A.P.		Demuts	FLU	5-9-62	

## REINFORCING

## STEEL

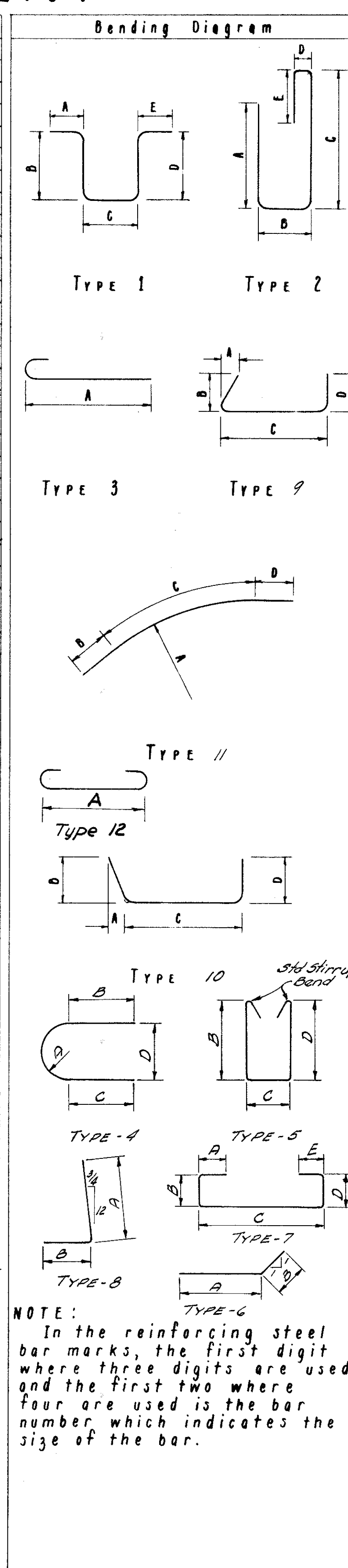
## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

 218  
250

 FRANKLIN COUNTY  
FRA-40-12-82

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
SUPERSTRUCTURE										
R501	16	12-5	*							st.
R502	48	16-4	*							st.
S501	80	2-6	209							st.
S502	4	4-9	20	7	0-6	1-5	1-5	1-5	0-6	bt.
S503	80	5-10	487	7	0-6	1-5	2-6	1-5	0-6	bt.
S504	4	1-5	6							st.
S505	164	1-3	214	9	0-1	0-6	0-6 1/2	0-6		bt.
S506	164	2-2	371	10	0-2	1-0	0-4 1/2	1-0		bt.
S507	80	14-3	1189	7	0-6	1-8	10-8	1-5	0-6	bt.
S508	4	13-2	55	7	0-6	1-8	9-7	1-5	0-6	bt.
S509	80	10-8	890							st.
S510	4	9-7	40							st.
S511	160	5-11	987	5		2-4	0-8	2-4		bt.
S601	158	37-7	8919							st.
S602	158	29-5	6981							st.
S603	6	36-6	329							st.
S604	6	28-4	255							st.
S605	492	32-2	23,771							st.
S606	46	25-0	1727							st.
S701	158	37-7	12,138							st.
S702	158	29-5	9500							st.
S703	6	36-6	448							st.
S704	6	28-4	347							st.
PIER										
P501	2	24-10	73							st.
P502	2	26-11	56							st.
P503	58	8-7	519	1		3-1	2-8	3-1		bt.
P504	14	7-3	106	4	1-3 1/2	1-7	1-7	2-8		bt.
P505	45	3-9	176	1		0-8	2-8	0-8		bt.
P601	12	8-6	153	1		3-1	2-8	3-1		bt.
P701	8	29-9	436	1		26-11	3-0			bt.
P801	2	36-0	192	3		34-11				bt.
P802	5	27-1	362	3		26-0				bt.
P901	3	38-1	388	1		35-4	3-0			bt.
P902	6	28-1	573	3		26-10				bt.
P903	4	22-5	305							st.
P1001	7	15-3	459							st.
P1002	48	16-9	3460							st.
F 517	125	5-2	674							st.
F702	40	37-0	3025							st.
F1006	48	6-5	1325	1		S-4	1-5			bt.
ABUTMENT										
A501	50	23-8	1234							st.
A502	50	19-8	1026							st.
A503	23	17-6	420							st.
A504	32	9-9	325							st.
A505	7	7-5	54							st.
A506	110	6-0	688	1		1-6	3-3	1-6		bt.
A507	23	19-0	456							st.
A508	12	9-1	114	5		3-11	0-8	3-11		bt.
A509	7	7-9	57							st.
A510	50	24-2	1260							st.
A511	4	9-3	39							st.
A512	4	2-9	11							st.
A601	126	13-1	2476	2	3-11	1-5	5-8	0-11	1-9	bt.
A602	12	6-1	110	1		2-6	1-5	2-6		bt.
A901	16	10-3	558							st.
A902	16	7-8	417							st.
A1001	16	11-7	797							st.
A1002	16	7-11	545							st.
A1101	7	12-2	453							st.
A1102	7	8-1	301							st.
A1103	7	13-2	490							st.
A1104	7	8-9	325							st.
F501	40	35-0	1460							st.
F502	102	10-0	1064							st.
F512	87	2-10	257	3	2-3					bt.
F513	27	10-0	281	6	8-0	2-0				bt.
F701	87	7-0	1245							st.
F801	103	9-0	2475							st.
F901	31	7-11	834	1		7-0	1-2			bt.
F902	32	5-9	626	1		4-10	1-2			bt.
F903	174	8-1	4782							st.
F1001	31	8-1	1078	1		6-11	1-6			bt.
F1002	32	6-4	872	1		5-2	1-6			bt.
F1101	15	8-6	677	1		7-0	1-10			bt.
F1102	28	7-0	1041	1		5-6	1-10			bt.
F1103	15	9-2	731	1		7-8	1-10			bt.
R503	12	2-2	*							st.
RETAINING WALL										
W501	1	22-5								st.
thru		Var. by								
W508	1	12-9 1/2	147							st.
W509	2	23-5								st.
thru		Var. by								
W514	2	2-2								st.
W515	1	6-2								st.
thru		Var. by								
W517	1	9-0	24							st.
W518	1	5-6								st.
thru		Var. by								
W522	1	11-2								st.
W524	2	2-10								st.
thru		Var. by								
W530	2	11-4								st.
W531	4	19-8	82							st.
W532	2	15-10								st.
thru		Var. by								
W535	2	3-1								st.



Mark	Nº	Length	Weight	Type	A	B	C	D	E	Shape
RETAINING WALL (Cont.)										
F514	7	19-6	142							st.
F515	4	21-5	89							st.
F516	17	1-11	34	8	1-7	0-6				bt.
F606	7	5-1	53	8	4-5	0-10				bt.
F607	27	6-0	243							st.
F608	27	3-5	139	3	2-9					bt.
F609	6	7-9	70	8	7-1	0-10				bt.
F706	27	6-6	359							st.
F807	7	5-11	111	8	5-0	1-2				bt.
F808	7	9-1	170	8	8-2	1-2				bt.
W513a	1	12-9								st.
thru		Var. by								
W516a	1	9-3								st.
W517a	1	12-5								st.
thru		Var. by								
W520a	1	7-11								st.
W521a		20-11								st.
thru		Var. by								
W527a		12-5								st.
W528a	18	19-8	369							st.
W529a	2	15-6								st.
thru		Var. by								
W532a	2	3-0								st.
W533a	4	21-2	88							st.
W534a	1	12-6								st.
thru		Var. by								
W537a	1	8-0								st.
W538a	1	7-8								st.
thru		Var. by								
W541a	1	3-5								st.
W542a	1	12-3								st.
thru		Var. by								
W548a	1	3-3								st.
W549a	1	17-5								st.
thru		Var. by								
W552a	1	4-11								st.
W606	7	6-0	63							st.
W807	3	9-0	72							st.
W808	4	10-0	107							st.

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE  
RAILING FOR PAYMENT.

## SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	6	13-9	32"	4 1/2"	40	24	1548

## SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.

THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL

IN OTHER RESPECTS CONFORM TO ITEM S-4, 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

 ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

## REINFORCING STEEL LIST

BRIDGE No. FRA-40-1335

SOUTH INNERBELT UNDER THIRD ST.

FRANKLIN COUNTY

STA-73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PM	BDB		Demits	TLU	5-23-62	



REINFORCING  
SEP 24 1985

# REINFORCING

# STEEL

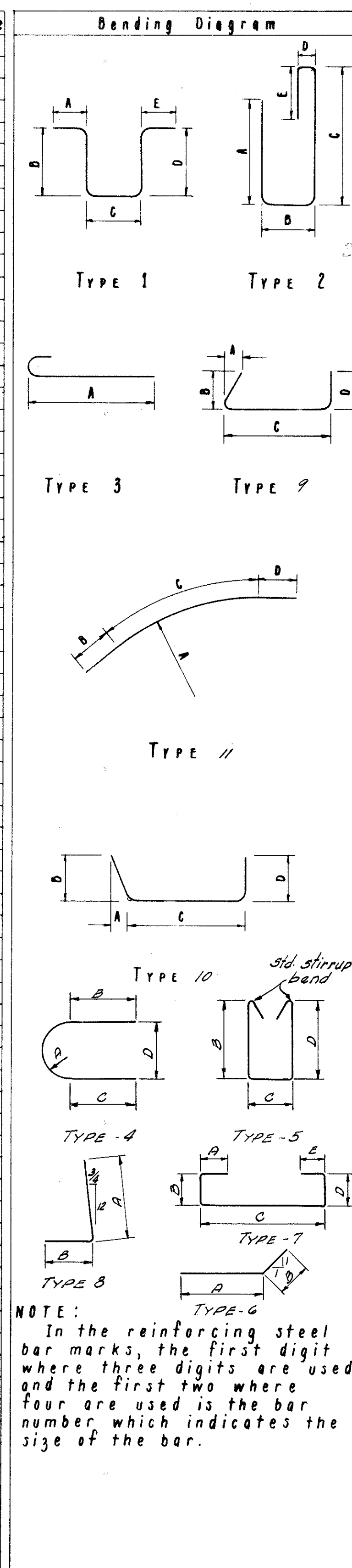
# LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

219  
250

FRANKLIN COUNTY  
FRA - 40-1282

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
RETAINING WALL (Cont.)										
W536	4	21-8	90							st.
W537	8	25-10	224							st.
W538	44	23-8	1086							st.
W539	2	22-6								st.
thru		Var. by								
		4-4	144							
W543	2	5-2								st.
W544	1	23-10								st.
thru		Var. by								
		1-4 1/2	159							
W551	1	14-4 1/2								st.
W553	2	19-6								st.
thru		Var. by								
		4-4	113							
W557	2	2-2								st.
W558	1	12-8								st.
thru		Var. by								
		1-4 1/2	65							
W565	1	2-10 3/4								st.
W566	1	7-6								st.
thru		Var. by								
		1-4 1/2	23							
W569	1	3-3 1/2								st.
W571	1	10-6								st.
thru		Var. by								
		1-3 1/2	41							
W575	1	5-4								st.
W576	1	9-0								st.
thru		Var. by								
		1-4 1/2	24							
W578	1	6-2 1/2								st.
W579	1	13-11								st.
thru		Var. by								
		1-4 1/2	156							
W586	1	23-4 1/2								st.
W587	1	5-10								st.
thru		Var. by								
		1-2 1/4	43							
W591	1	10-9								st.
W592	1	5-5								st.
thru		Var. by								
		1-4	31							
W595	1	9-5								st.
W596	2	16-4								st.
thru		Var. by								
		4-3	83							
W599	2	3-7								st.
W5010	2	21-2								st.
thru		Var. by								
		4-3	132							
W5050	2	4-2								st.
W5060	2	3-1								st.
thru		Var. by								
		1-5	107							
W5120	2	11-7								st.
W601	1	13-1								st.
thru		Var. by								
		1-4 1/2	66							
W604	1	8-10 1/2								st.
W605	3	4-9	21							st.
W801	3	8-7	69							st.
W802	4	7-9	83							st.
W803	3	10-2	81							st.
W804	4	9-4	100							st.
W805	4	9-7	102							st.
W806	3	8-10	71							st.
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
W901	5	13-6	230							st.
W902	4	11-2	152							st.
W903	5	14-6	247							st.
W904	5	11-10	201							st.
W1001	5	15-2	326							st.
W1002	4	11-7	199							st.
F502	31	10-0	323							st.
F503	37	23-8	913							st.
F504	14	5-6	80	8	5-0	0-8				bt.
F505	3	4-1	13	8	3-7	0-8				bt.
F506	2	19-8	41							st.
F507	38	3-2	126	3	2-7					bt.
F508	24	5-1	127							st.
F509	24	4-9	119							st.
F510	7	4-3	31	8	3-9	0-8				bt.
F511	14	5-11	86	8	5-5	0-8				bt.
F512	64	2-10	189	3	2-3					bt.
F513	19	10-0	193	6	8-0	2-0				bt.
F601	32	7-0	336							st.
F602	7	6-2	65	8	5-6	0-10				bt.
F603	7	4-9	50	8	4-1	0-10				bt.
F604	38	7-4	419							st.
F605	36	7-3	392							st.
F703	36	8-2	601							st.
F704	32	7-10	512							st.
F705	38	8-3	641							st.
F802	6	8-4	133	8	7-5	1-2				bt.
F803	7	6-2	115	8	5-3	1-2				bt.
F804	6	10-2	163	8	9-3	1-2				bt.
F805	14	6-6	243	8	5-7	1-2				bt.
F806	7	9-8	131	8	8-9	1-2				bt.
F904	10	10-10	368	8	9-10	1-3				bt.
F905	9	6-7	201	8	5-7	1-3				bt.
F906	10	6-8	227	8	5-8	1-3				bt.
F907	10	11-6	391	8	10-6	1-3				bt.
F1003	10	11-0	473	8	9-11	1-5				bt.
F1004	9	7-2	278	8	6-1	1-5				bt.
REPLACEMENT STEEL										
RE501	1	5-7								st.
RE601	3	5-11								st.
RE701	2	6-2								st.
RE801	1	6-6								st.
RE901	1	6-10								st.
RE1001	1	7-2								st.
RE1101	1	7-6								st.
REPLACEMENT STEEL FOR SPIRALS										
RE401	1	5-3		11	1-3 1/2		5-3			bt.
LAMP STANDARD REINFORCING										
L570	4	1-10	8							st.
L571	2	1-4	3							st.
L572	3	4-1	13	1		0-8	3-0	0-8		bt.
L573	3	5-1	16	1		1-2	3-0	1-2		bt.
L574	2	3-10	8	1		0-8	2-9	0-8		bt.
L575	2	4-10	10	1		1-2	2-9	1-2		bt.
L576	3	3-10	12	1	1-10	2-2				bt.
L577	2	3-7	7	1	1-7	2-2				bt.



SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight

## SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.

THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL

IN OTHER RESPECTS CONFORM TO ITEM S-4, 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

## ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL	RET. WALL
E-2	1192	Cu. Yd.	Unclassified Excavation	578	62			532
E-2	Lump	Sum	Cofferdams, cribs & sheeting				Lump	
S-1	272	Cu. Yd.	Class "C" concrete, superstructure			272		
S-1	50	Cu. Yd.	Class "C" concrete, pier caps and columns		50			
S-1	246	Cu. Yd.	Class "E" concrete, abutments above footings	246				
S-1	392	Cu. Yd.	Class "E" concrete, footings	163	37			192
S-1	176	Cu. Yd.	Class "E" concrete, retaining walls above footings					176
S-3	713	Sq. Yds.	Type "C" waterproofing			713		
S-3	140	Lin. Ft.	Waterproofing, premolded sealing strip	88				52
S-4	128,126	Lbs.	Reinforcing steel	29,579	13,880	68,960		15,707
S-7	244,800	Lbs.	Structural steel			244,800		
S-7	814	Lbs.	Structural steel, electrical conduit supports**			814		
S-8	245,614	Lbs.	Field painting of structural steel			245,614		
S-9	140	Sq. Ft.	1" gray rubber preformed exp. jt. filler	140				
S-14	250	Lin. Ft.	Railing (alum. rail & supports, conc. parapet & end posts)	10		240		276
S-29	19	Lin. Ft.	Drainage conductor including supports			19		
S-29	319	Cu. Yd.	Porous Backfill	193				121
S-29	246	Lin. Ft.	Subdrainage for wearing surface course			246		
S-29	108	Lin. Ft.	8" perforated bit coated CMP	108				
S-29	30	Lin. Ft.	6" standard pipe downspouts, galv. steel or wrought iron, incl. specials				30	
S-29	7	Each	Scuppers, including supports			7		
T-35	60	Cu. Yd.	Asphaltic concrete surface course, Type "C" (60-70)			60		138
Spec.	96	Lin. Ft.	Polyvinyl waterstop in abutment joints	96				
S-101	272	Each	Water-reducing, set-retarding admixture			272		
S-25	Lump	Sum	Electric Grounding System				Lump	
S-25	1	Each	Lamp Standard			1		
S-25	1	Each	Mercury Vapor Luminaire			1		
S-25	82	Lin. Ft.	Pole and Bracket Cable (single conductor)			82		
S-25	276	Lin. Ft.	Main Circuit Cable (single conductor)			276		
S-25	138	Lin. Ft.	Main Circuit Conduit & Fittings, 2" φ			138		

\*\* Non-participating by State of Ohio and Bureau of Public Roads

## \* HORIZONTAL PARAPET REINFORCING

THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST AND  
ESTIMATED QUANTITIES  
BRIDGE

#### REFERENCES:

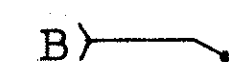
##### Standard Drawings:

End Dam and End Cross Frame Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Scupper Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Railing Details Type C Bearing Plate Details	- AR-1-57, Revised 4-2-62 - CSB-2-56, Sheet 3 Revised 2-2-59
Approach Slab Details Supplemental Specifications Common Details:	- AS-1-54, Revised 7-5-62 - S-101 Dated 7-12-62
Conductor and Downspout Detail	- Sheet 166
Railing Details	- Sheet 163
R/W Fence Details	- Sheet 163
Sidewalk and Median End Dam Details	- Sheet 164
Scupper Details	- Sheet 164
Lighting Details	- Sheet 165

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may be, at the option of the contractor, made in the shop. Class "B" welding shown thus:

B) 

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

BEARING SURFACES: The concrete surface under all rockers and bolsters shall be placed a minimum of 1/4-inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

TRAFFIC MAINTENANCE: For details of traffic maintenance, see Roadway Plans.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.5 tons per square foot and abutment footings for 2.5 tons per square foot.

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

WIRING DETAILS: For details and notes for wiring, see Roadway Plans.

ELECTRICAL GROUNDS: A stranded No. 10 AWG bare copper wire electrical ground shall be embedded in the outside column on each side of the structure at the pier. The lower ends of the wires shall terminate in a 25-foot length coil placed under the footing and separated from the concrete by two layers of tar paper and the upper ends shall extend sufficiently above the top of the concrete to provide for an exothermic welded connection to outside beam of the superstructure. Ground each light pole with a No. 10 AWG stranded bare copper cable. Exothermic weld one end of cable to an anchor bolt and the other end to the top flange of the outside beam.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

ELECTRICAL CONDUITS to be installed and paid for by the Columbus & Southern Ohio Electric Company.

SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting, as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning except as noted in the specifications regarding the use of Chromate Primers.

SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats and backwalls.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

#### GENERAL NOTES

BRIDGE No. FRA-40-1325

SOUTH INNERBELT UNDER THIRD ST.  
FRANKLIN COUNTY STA. 73+43.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	5-18-62	

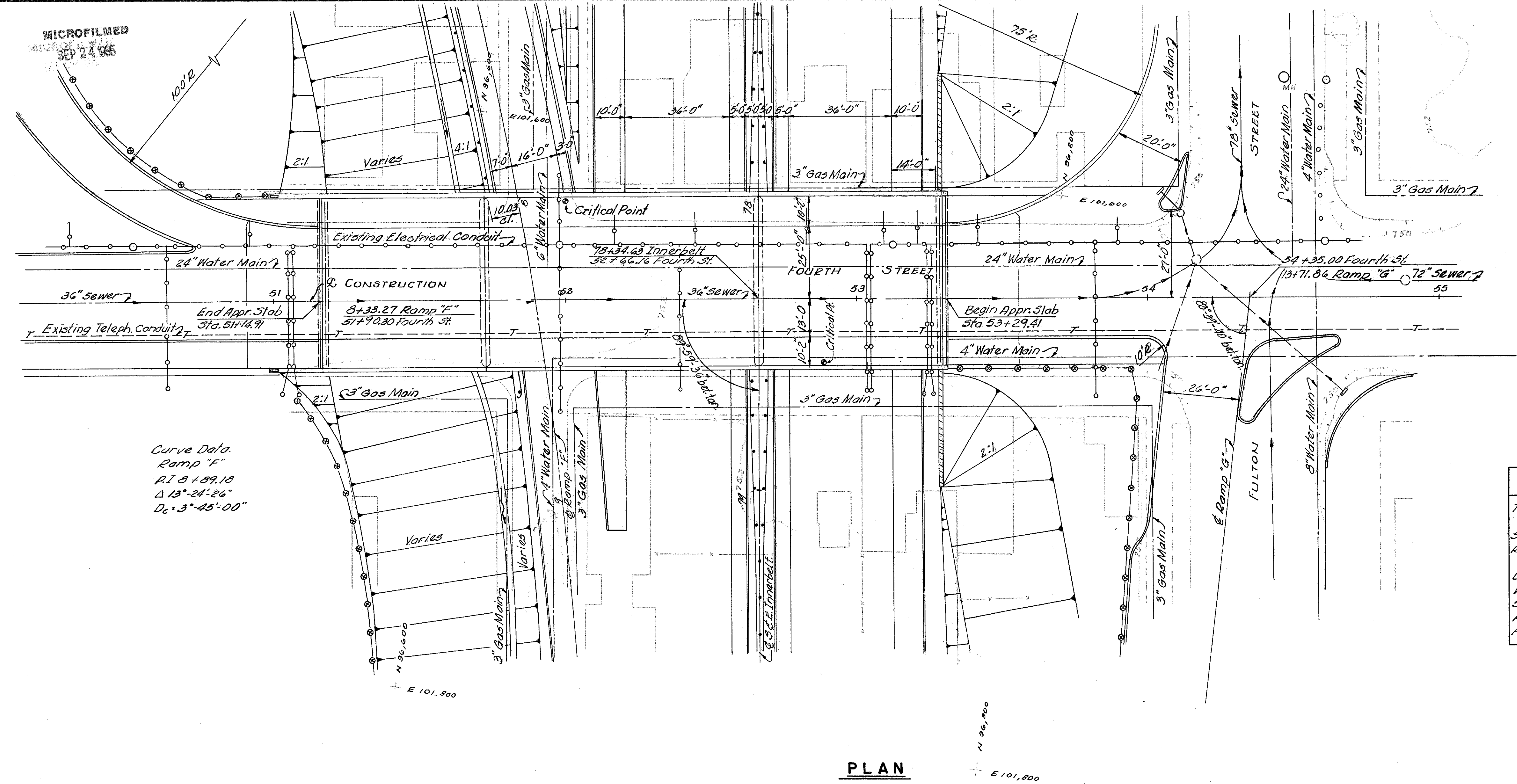


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SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

221  
250

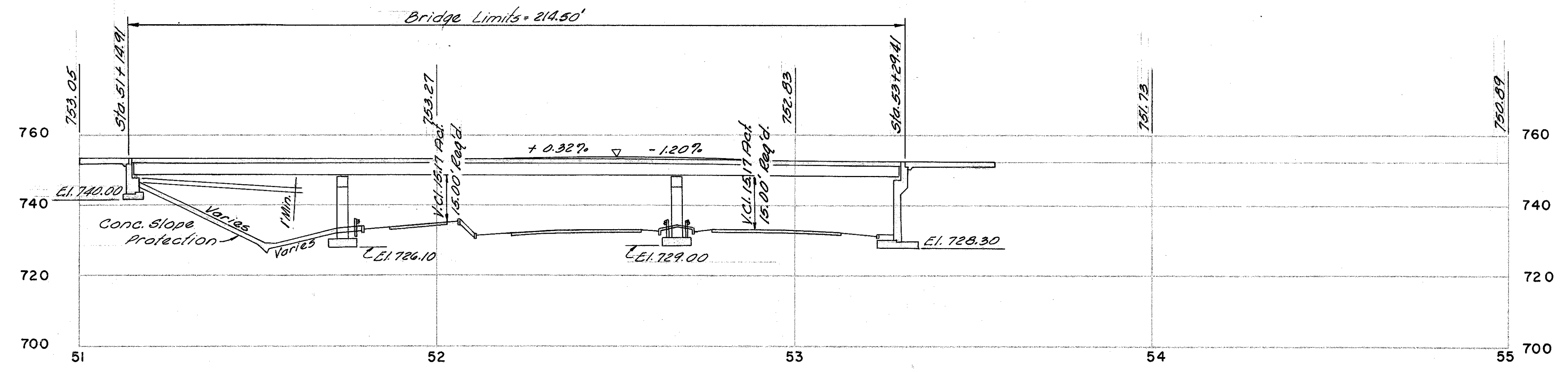
FRANKLIN COUNTY  
FRA - 40-12.82



Curve Data  
Ramp "F"  
P.I. 5+89.13  
 $\Delta 13^\circ 24' 26''$   
 $D_c = 3^\circ 45' 00''$

PLAN

P.V.I. Sta. 52+50  
200' V.C.  
E.I. 753.53  
 $\theta = 0.38$   
P.G. E.I. 753.15



PROFILE

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinf. conc. deck and substructure.  
SPANS: 56'-0"; 93'-0"; 61'-0" c/c brgs.  
ROADWAY: 38'-0" fl/ curbs with 10'-2" sidewalks and conc. parapets with aluminum railing  
LOADING: C.F-400 (1957)  
WEARING SURFACE: 2" asphaltic concrete  
SCREW: None  
ALIGNMENT: Tangent  
APPROACH SLABS: 25'-0" long, see sheet-222

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SITE PLAN						
BRIDGE NO. FRA - 40-1334						
SOUTH INNERBELT UNDER FOURTH STREET						
FRANKLIN COUNTY STA. 78+34.63						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	R.T.	E.D.A.	R.R.M.	T.L.U.	5-8-62	7-9-62

MICROFILMED  
SEP 24 1985

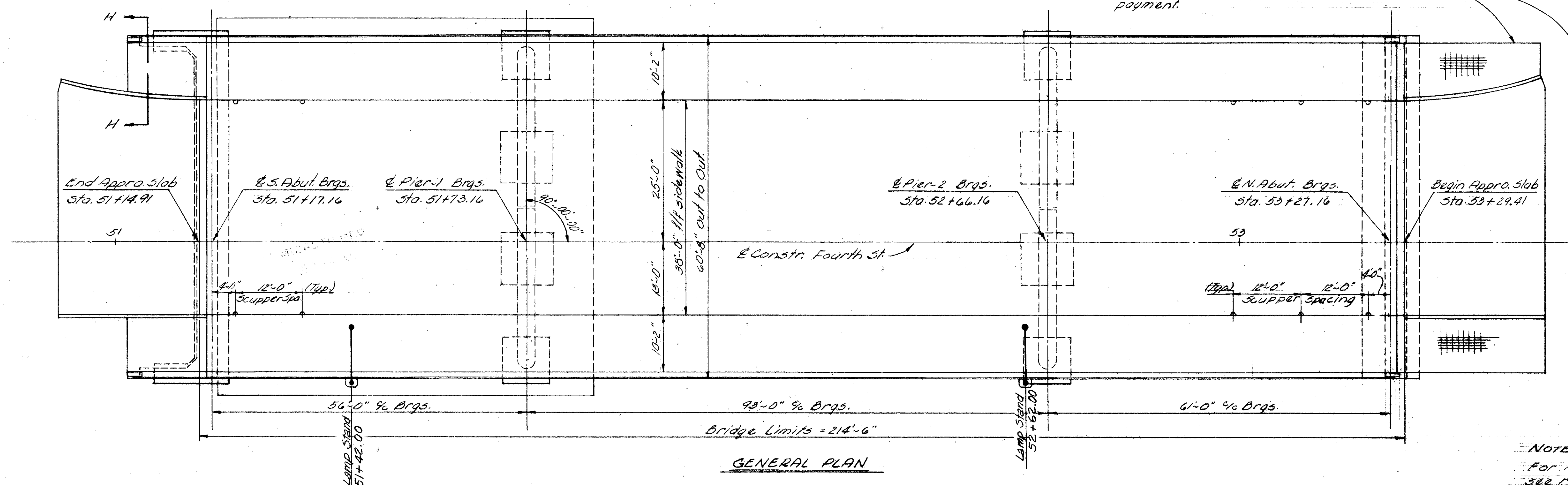
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

222  
850

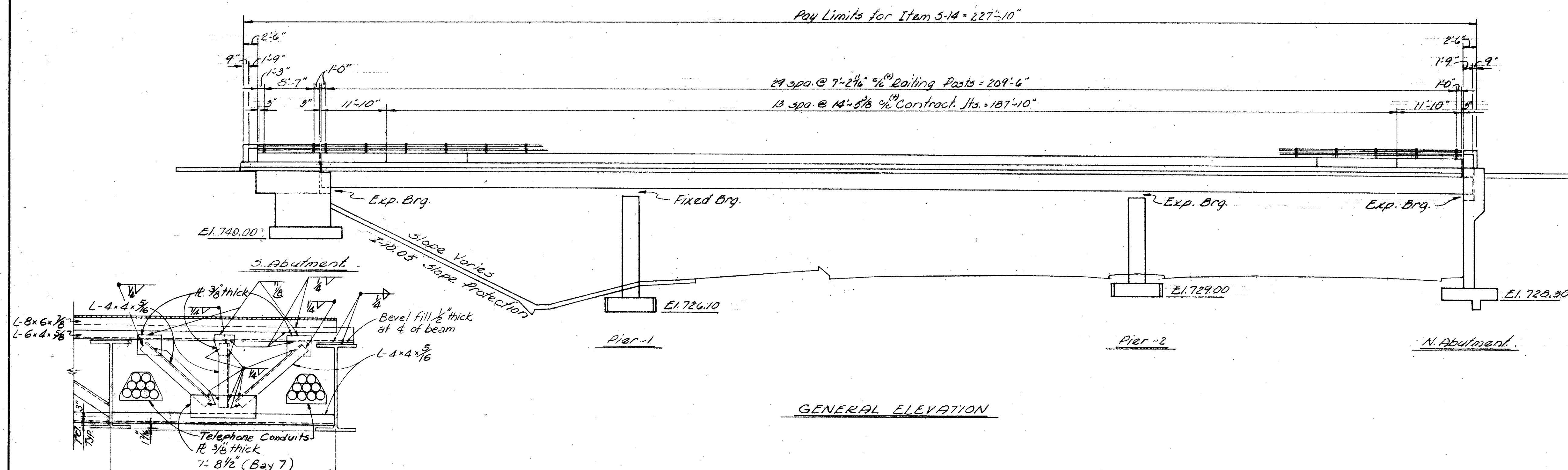
FRANKLIN COUNTY  
FRA-40-12.82

Approach Walk quantities are included with roadway quantities for payment.

6" thick approach walk, reinforced with #12-22 wire fabric centered in the slab. Included with roadway quantities for payment.



- NOTES:
- For Approach Slab geometries see roadway plans.
  - For additional Approach Slab details see A3-1-54
  - For Approach Walk details at South Abutment see sheet 225



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
GENERAL PLAN & ELEVATION BRIDGE No. FRA-40-1334 SOUTH INNERBELT UNDER FOURTH ST. FRANKLIN COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
R.T.	BOB		Pardo	TLV	5-8-62

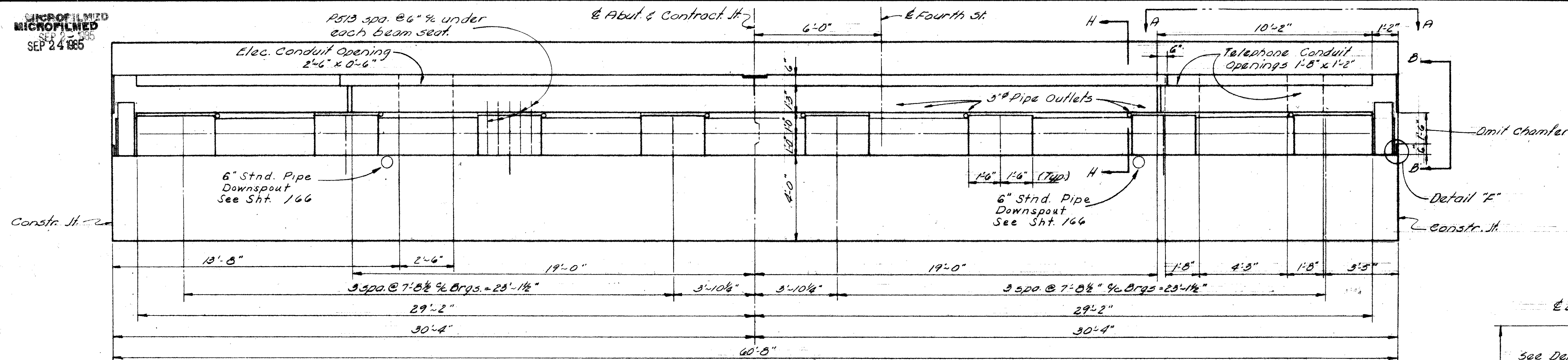


MICROFILMED  
SEP 24 1985

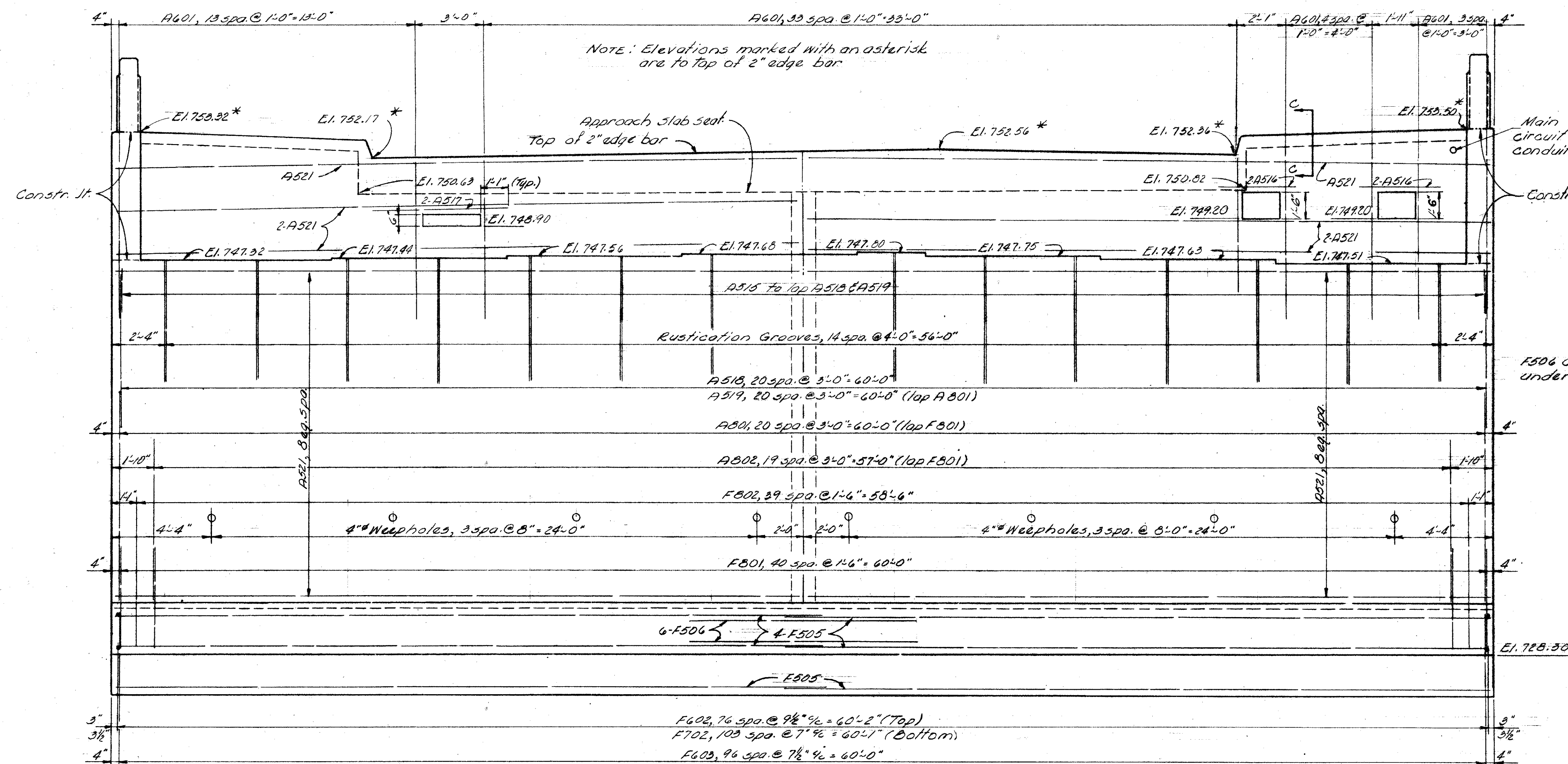
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

223  
250

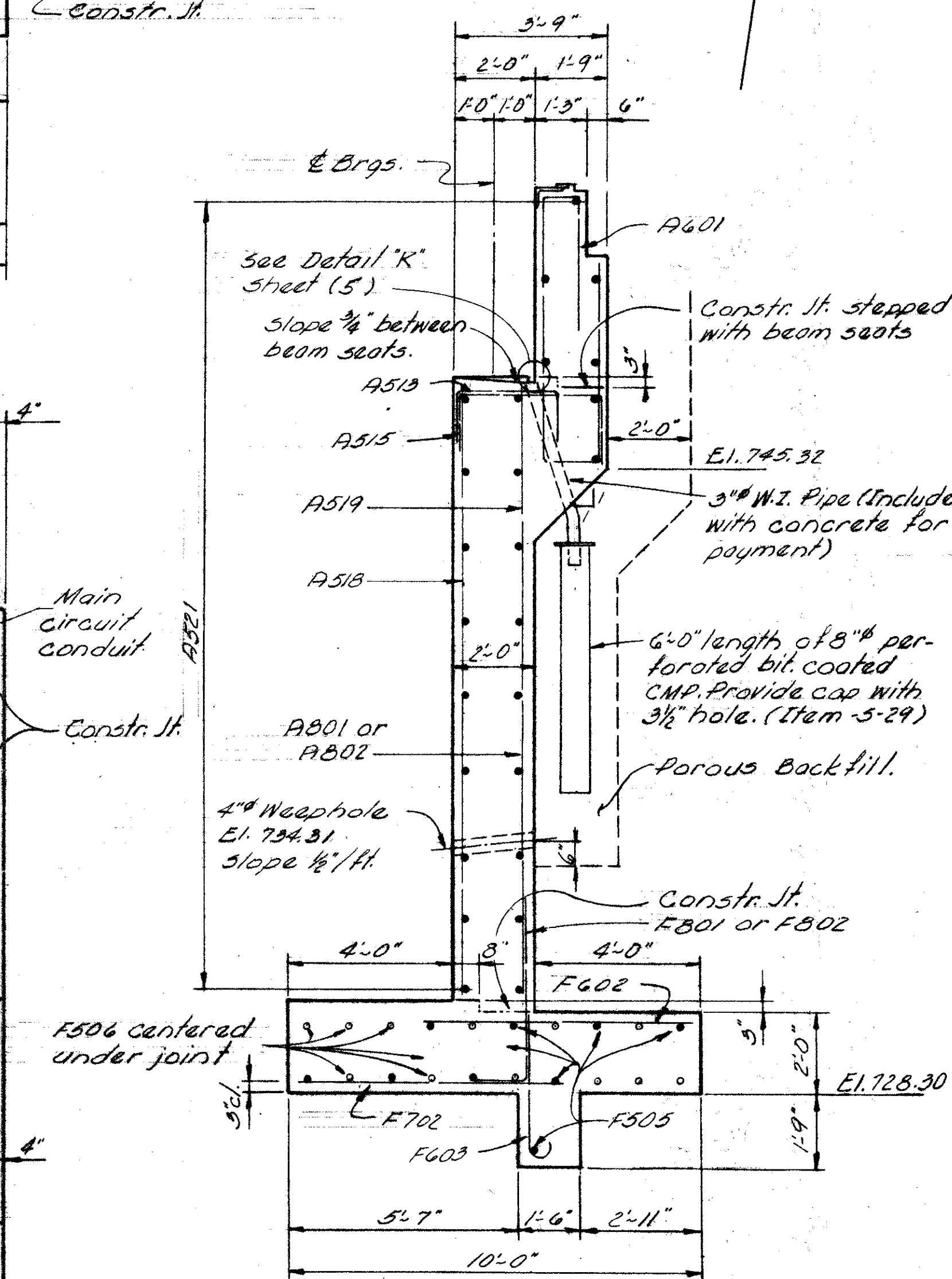
FRANKLIN COUNTY  
FRA-40-12.82



PLAN



ELEVATION

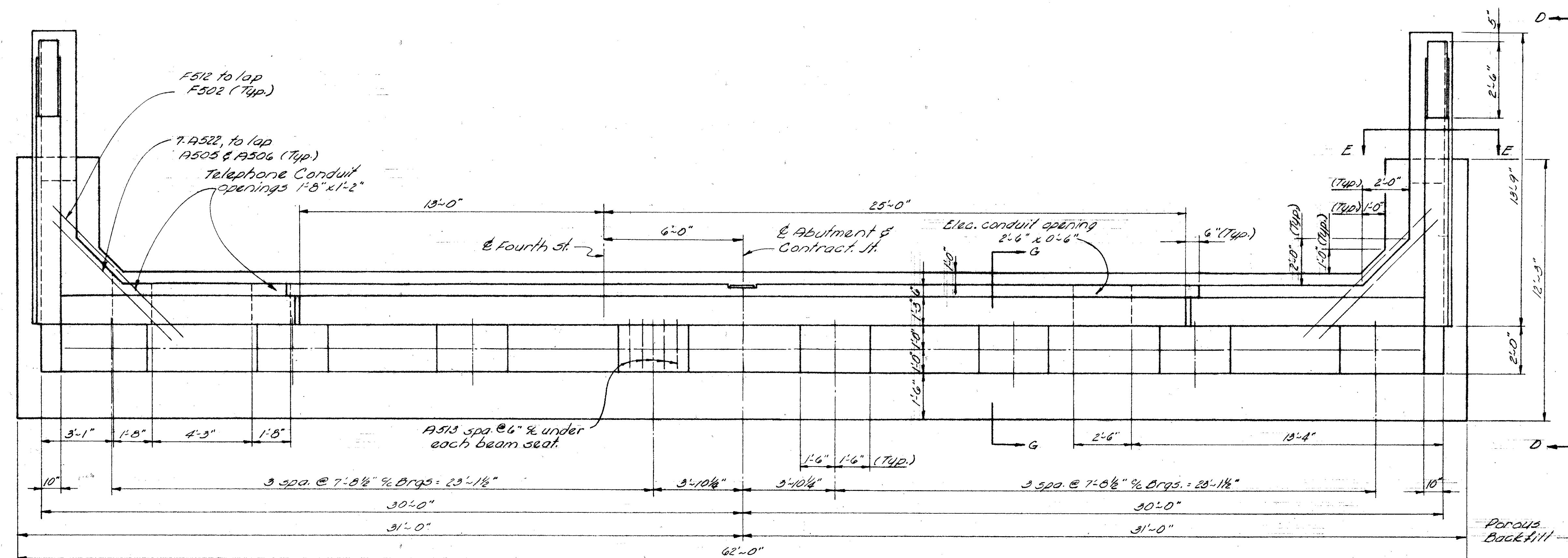


SECTION H-H

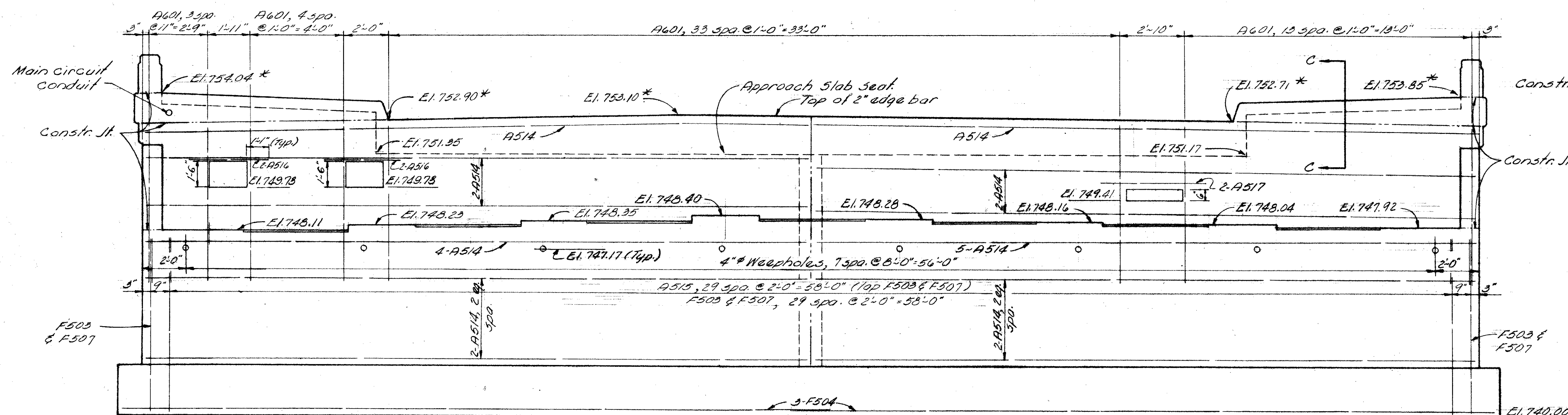
NOTE: For additional notes and details see sheet 225.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
NORTH ABUTMENT BRIDGE No. FRA-40-1334 SOUTH INNERBELT UNDER FOURTH ST. FRANKLIN COUNTY STA-78+34.63						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	BOB		Pardo	TLU	5-8-62	

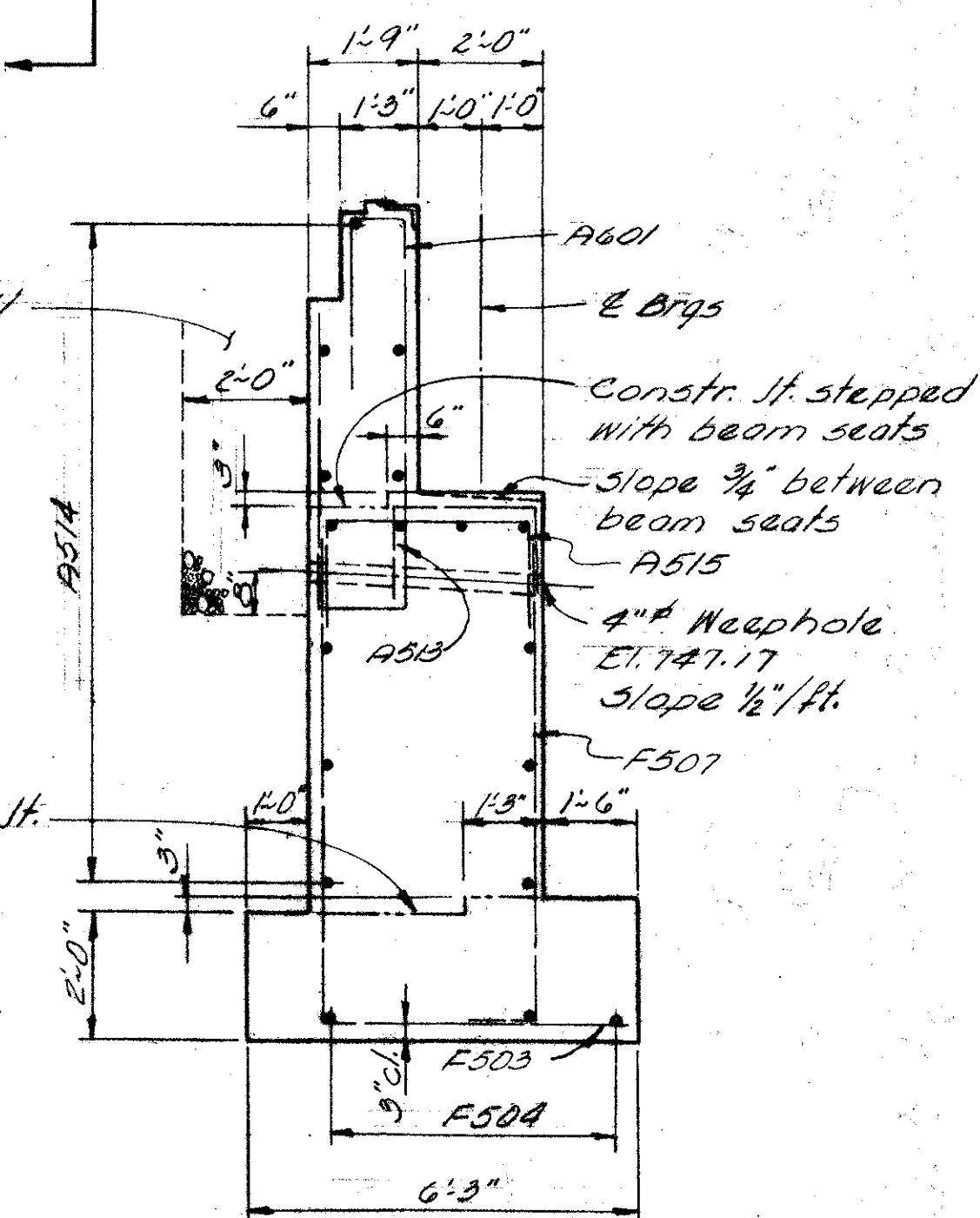
FRANKLIN COUNTY  
FRA-40-12.82



PLAN



ELEVATION



SECTION G-G.

NOTE: Elevations marked with an asterisk are to the top of the 2" edge bar on the end dam.

For additional details and notes  
see sheet 225

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SOUTH ABUTMENT  
BRIDGE No- FRA-40-1334  
SOUTH INNERBELT UNDER FOURTH ST  
FRANKLIN COUNTY

57A-78+34.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	BDB		Pardo	TLU	5-8-62	



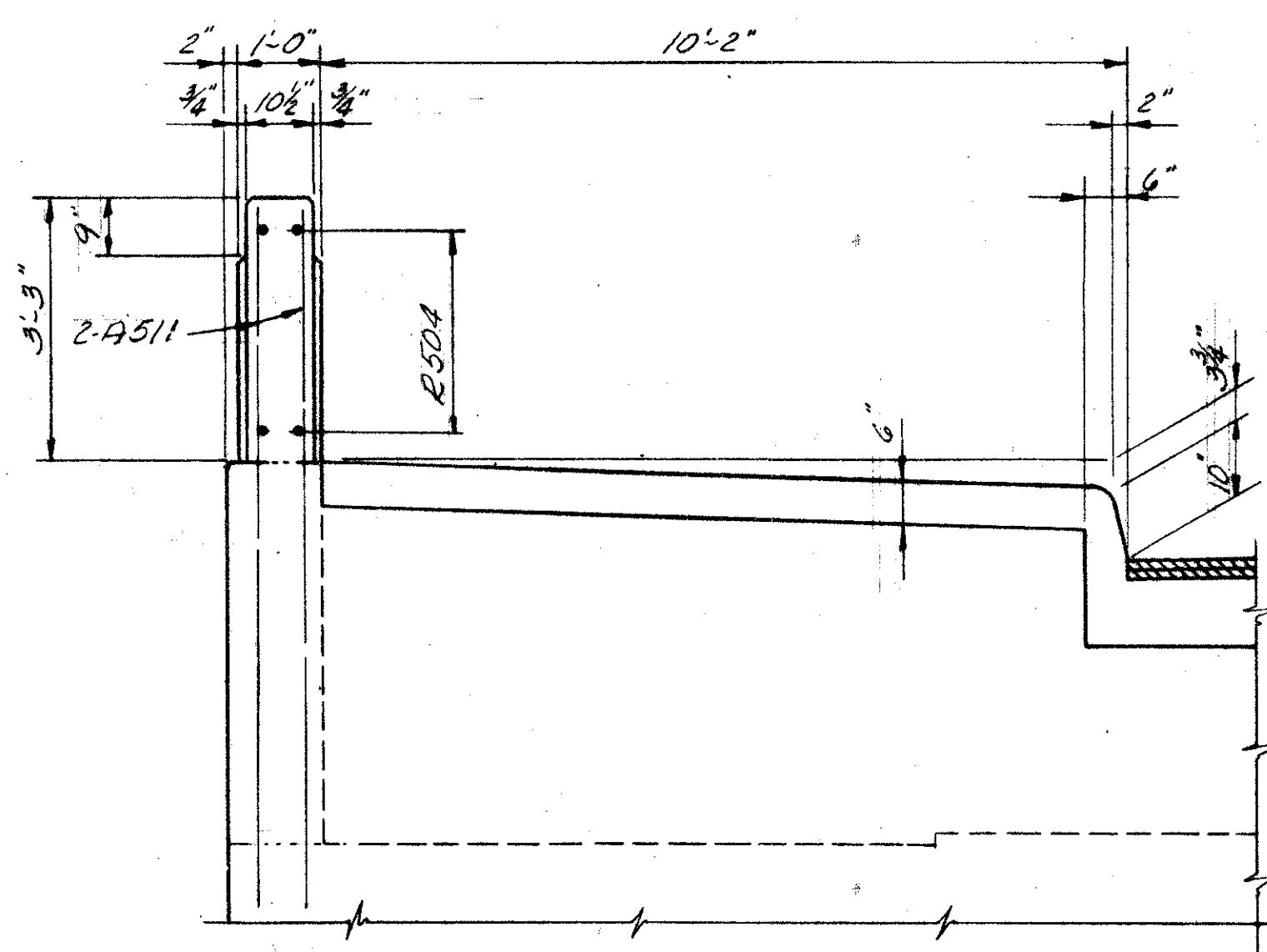
MICROFILMED  
SEP 24 1985  
SEP 24 1985

FIG. NO.	DIVISION	DATE	PROJECT	TYPE	PLANS
2	OHIO				

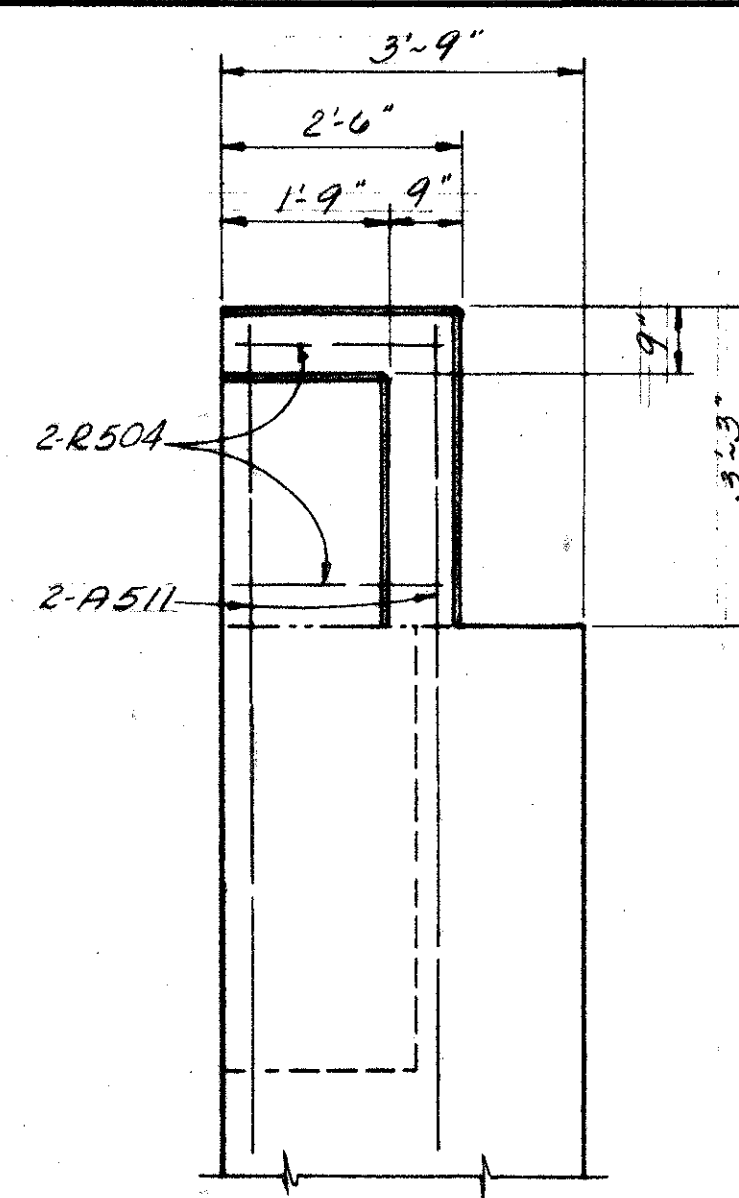
225  
250

FRANKLIN COUNTY  
FRA-40-12.82

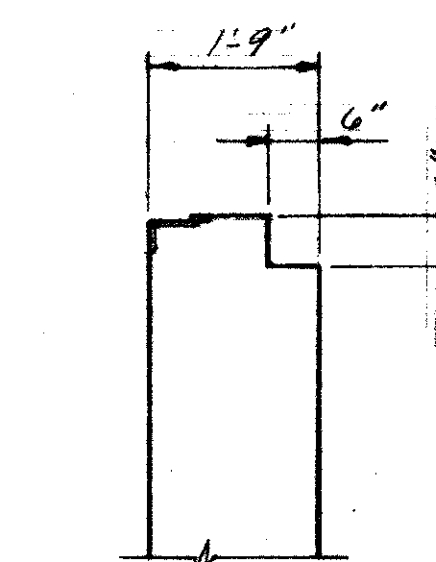
Polyvinyl Waterstop. Extend waterstop from top of footing to 6" below top of retaining wall sheet 166 for material specifications.



VIEW A-A

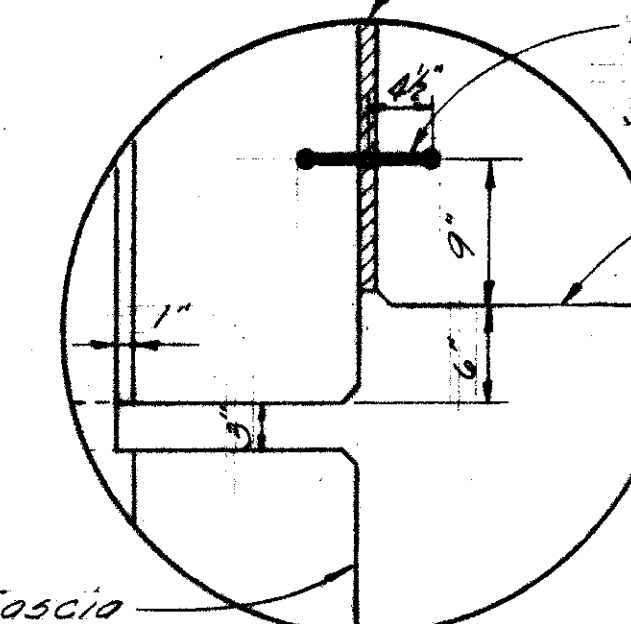


VIEW B-B

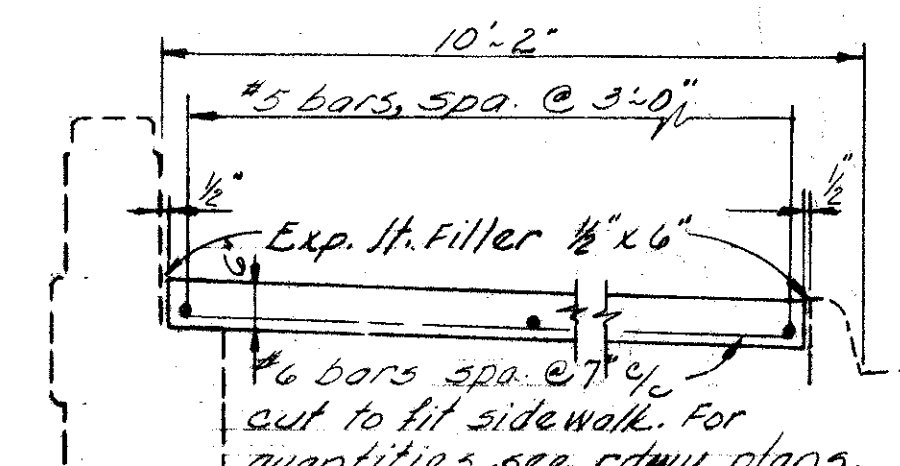


SECTION C-C

Superstructure Fascia

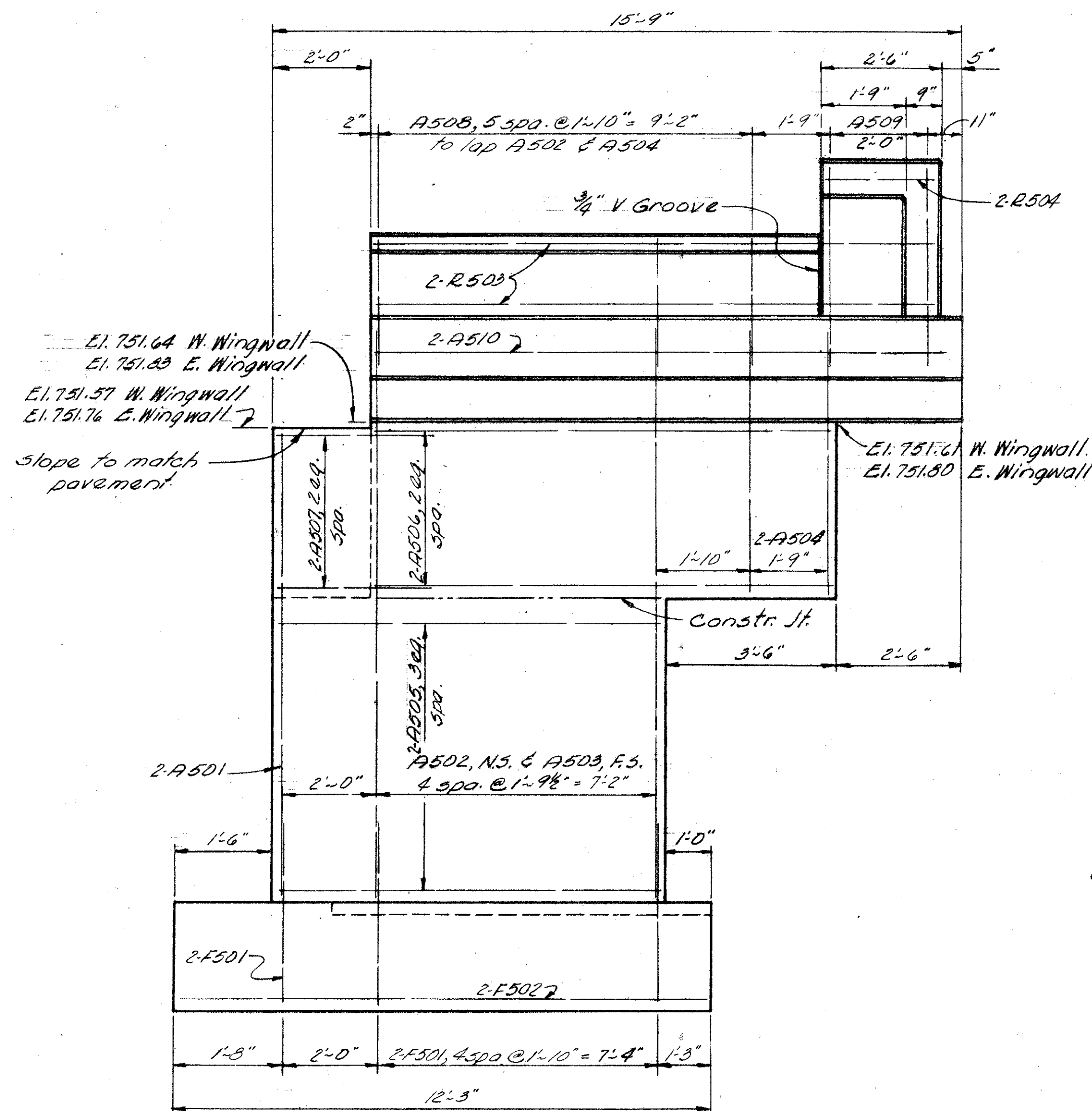


DETAIL F

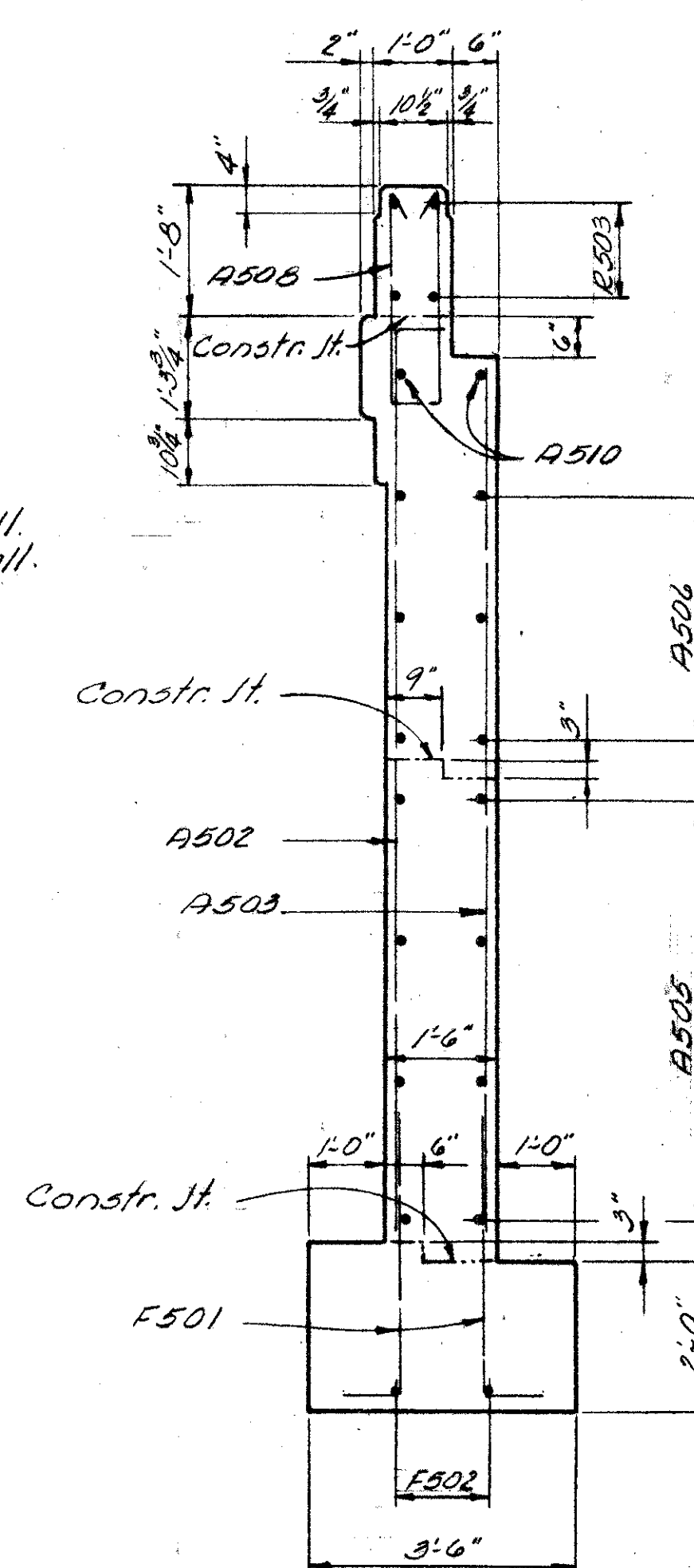


SECTION H-H

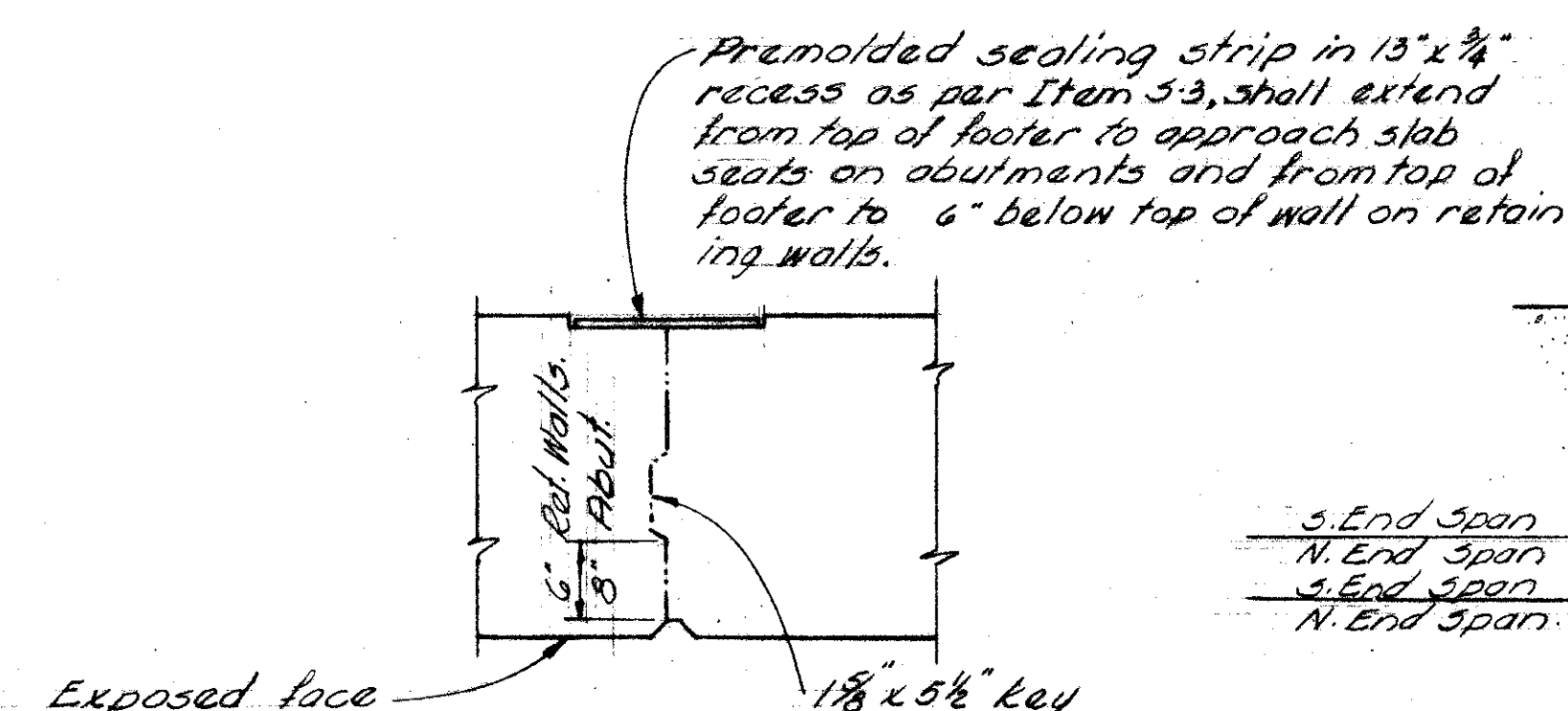
SIDEWALK DETAIL



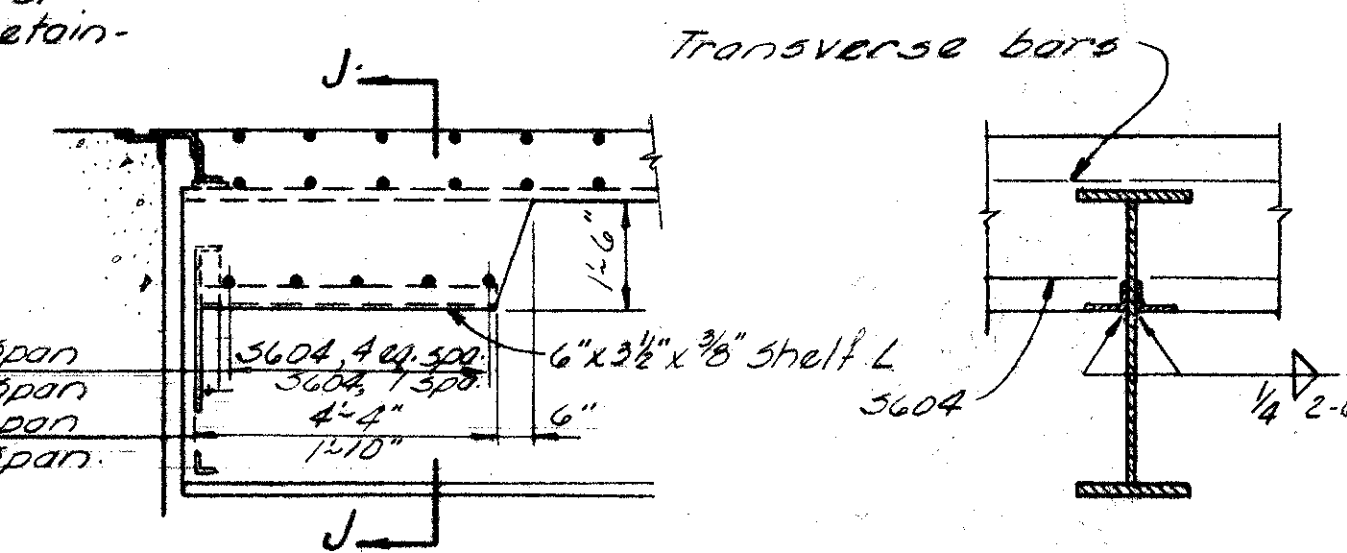
VIEW D-D



SECTION E-E



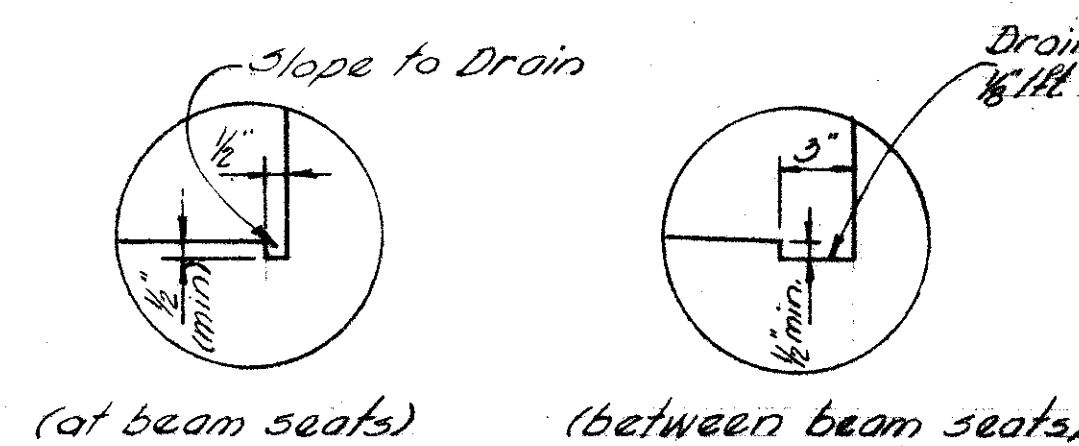
CONTRACTION JOINT DETAIL



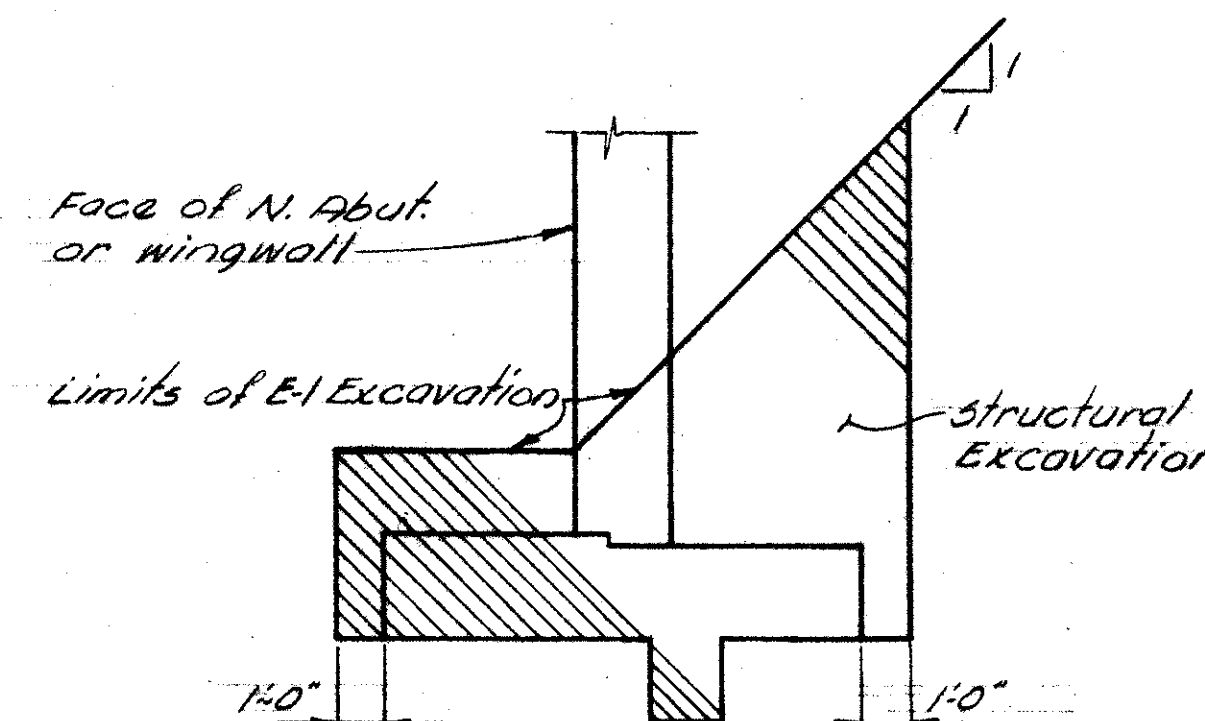
COUNTER WEIGHT DETAIL

SECTION J-J

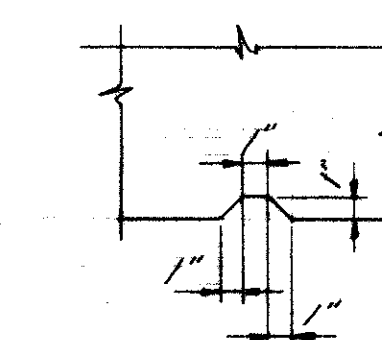
Note: Counter weight shall extend between exterior beams



DETAIL K



EXCAVATION DETAIL



RUSTICATION GROOVE DETAIL

**NOTES**  
**PROCEDURE:** Before the backwall of the N. Abutment is placed the backfill shall be placed and compacted up to the level of the subgrade with a 1:1 slope from the bridge seat to the subgrade.  
**CONCRETE END POSTS:** Concrete end posts are included with Item 5-A for payment.  
**POROUS BACKFILL:** Porous Backfill shall extend upward to the approach slab or sidewalk for the full length of the abutments.  
**JOINTS:** A joint shall be provided in the abutment portion of the end dam at each contraction joint.  
**FOOTING KEY:** The key under the footing shall be placed in a carefully made trench against undisturbed earth.  
**RIGHT OF WAY FENCE:** For fence connection to end post see sheet 163.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
ABUTMENT DETAILS BRIDGE No. FRA-40-1334 SOUTH INNERBELT UNDER FOURTH ST. FRANKLIN COUNTY STA 78+34.63					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
R.T.	BDB		Pardo	TLU	5-8-62

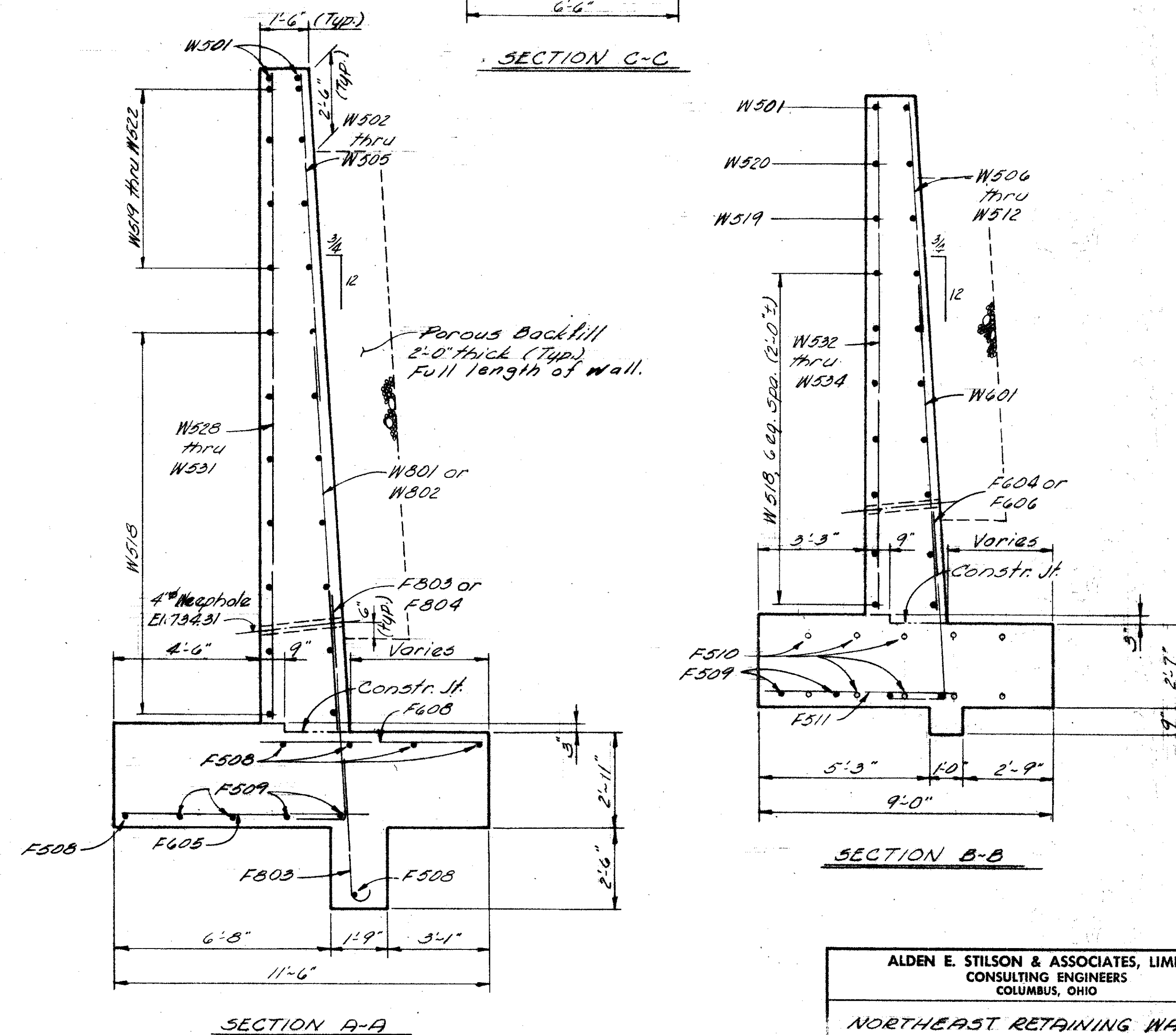
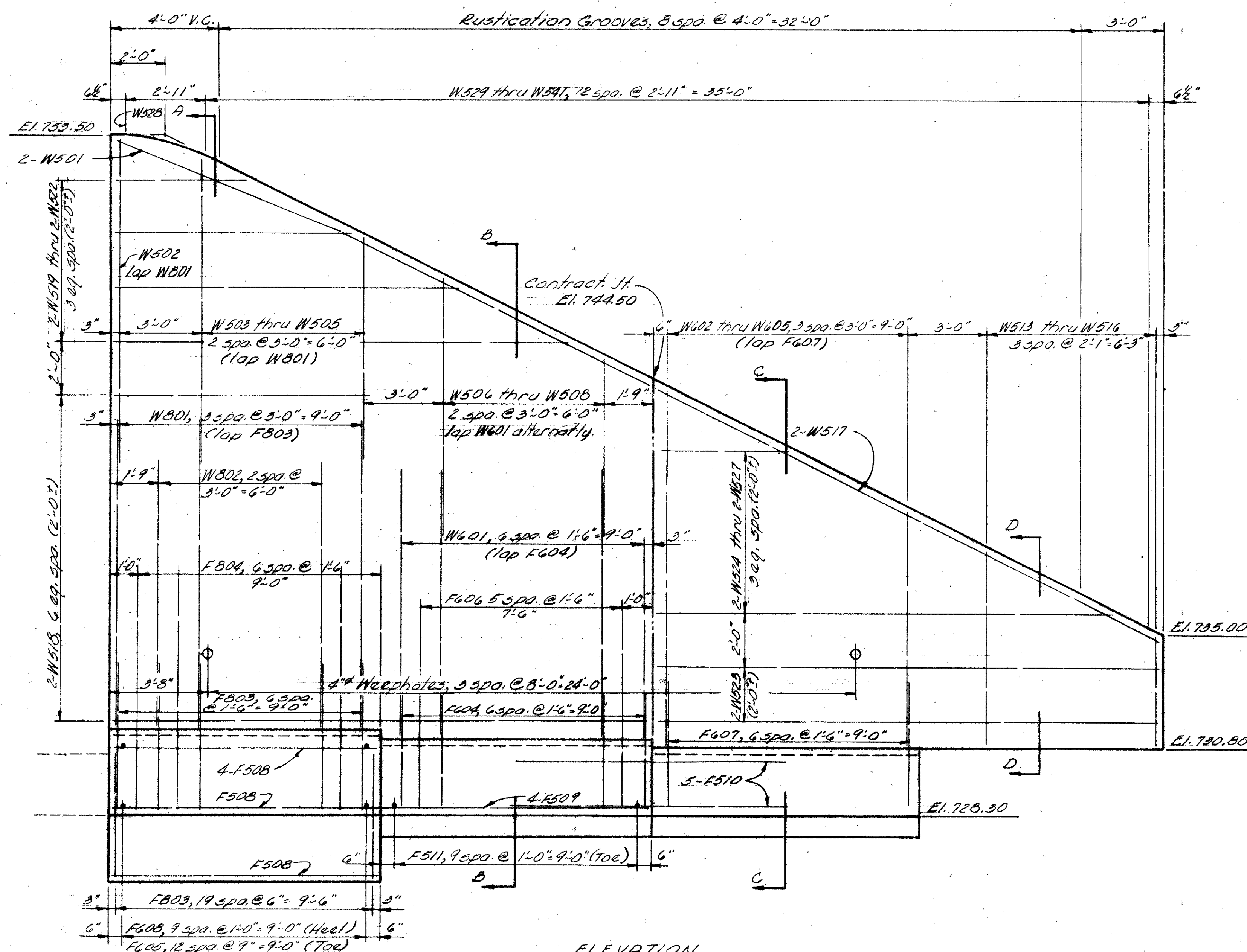
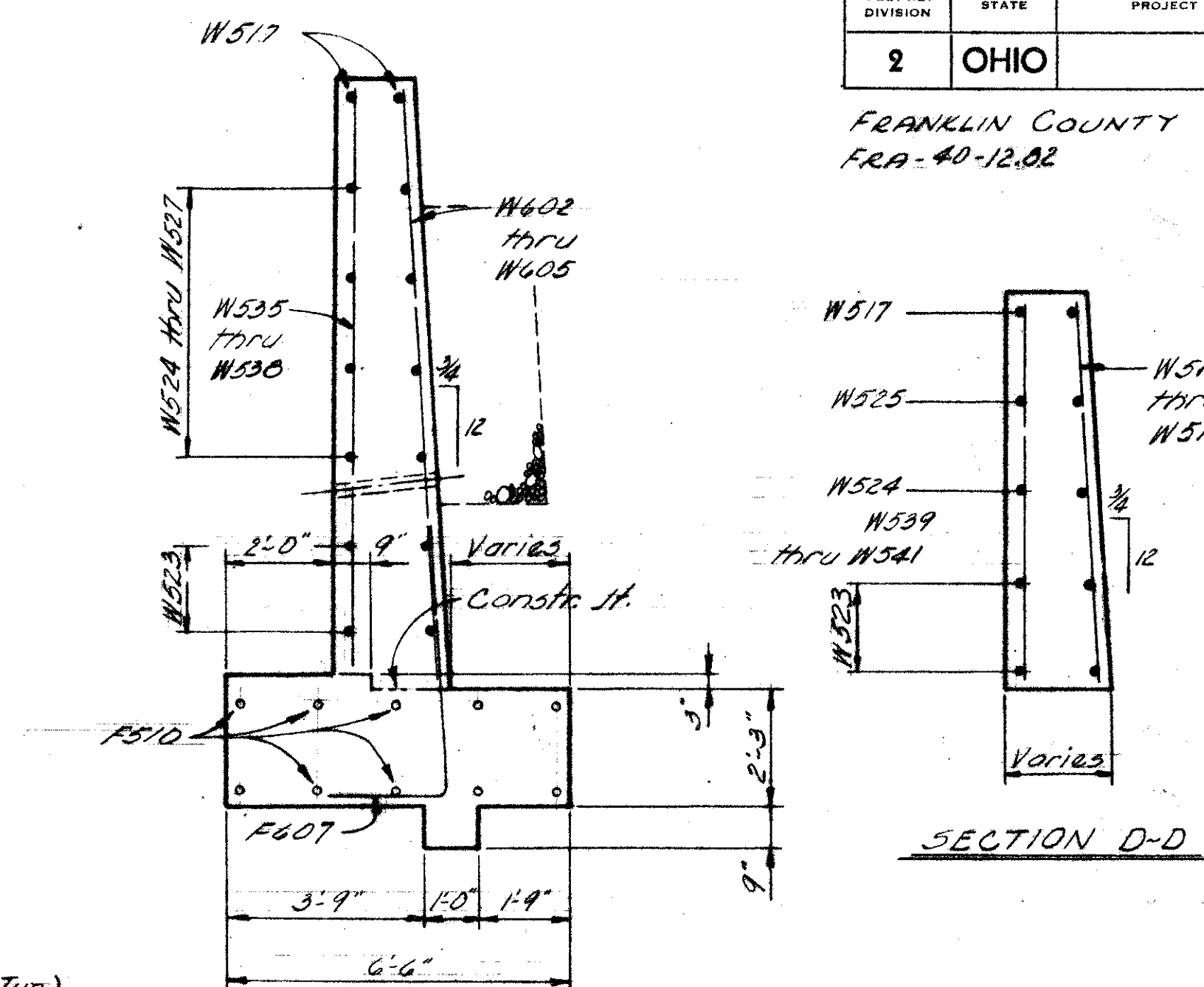
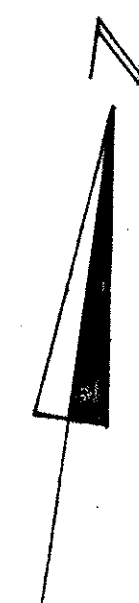
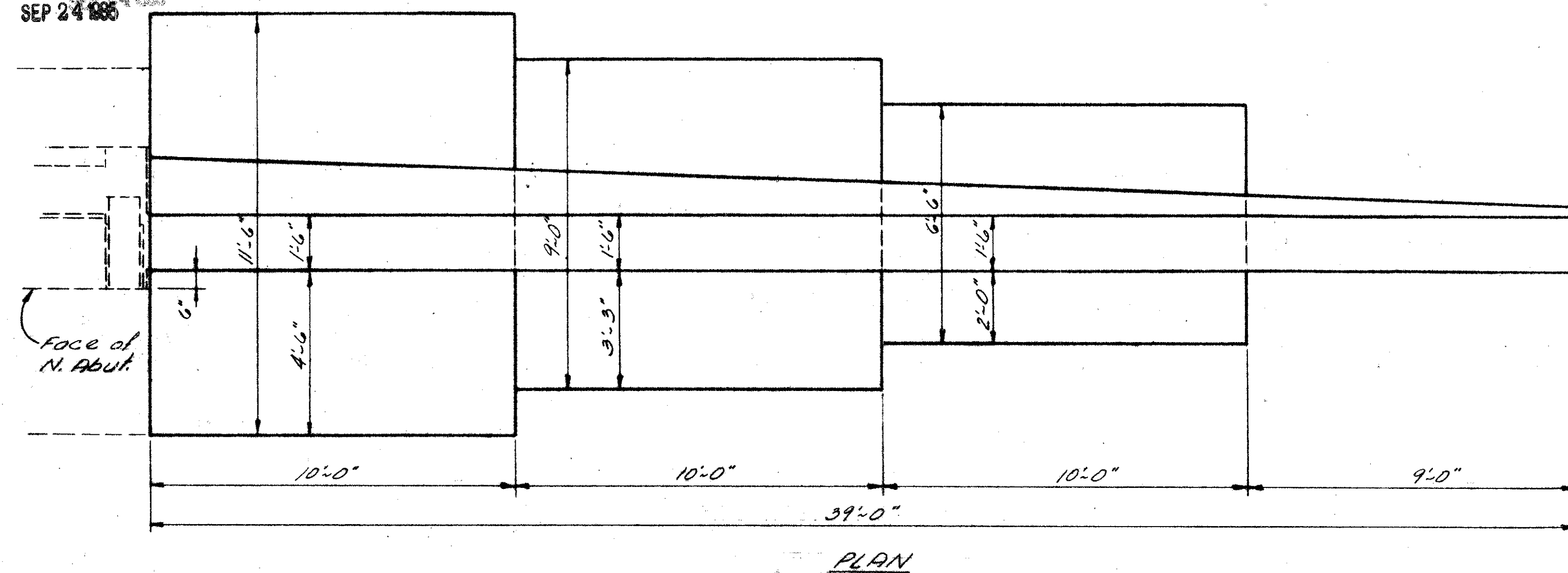
**MICROFILMED**  
SEP 24 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

226

250

FRANKLIN COUNTY  
FRA-40-12.02




ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
NORTHEAST RETAINING WALL BRIDGE No. FRA-40-1334 SOUTH INNERBELT UNDER FOURTH ST. FRANKLIN COUNTY STA - 78 + 34.63					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
R.T.	BDB		Pardo	TLO	5-8-62
				REVISED	

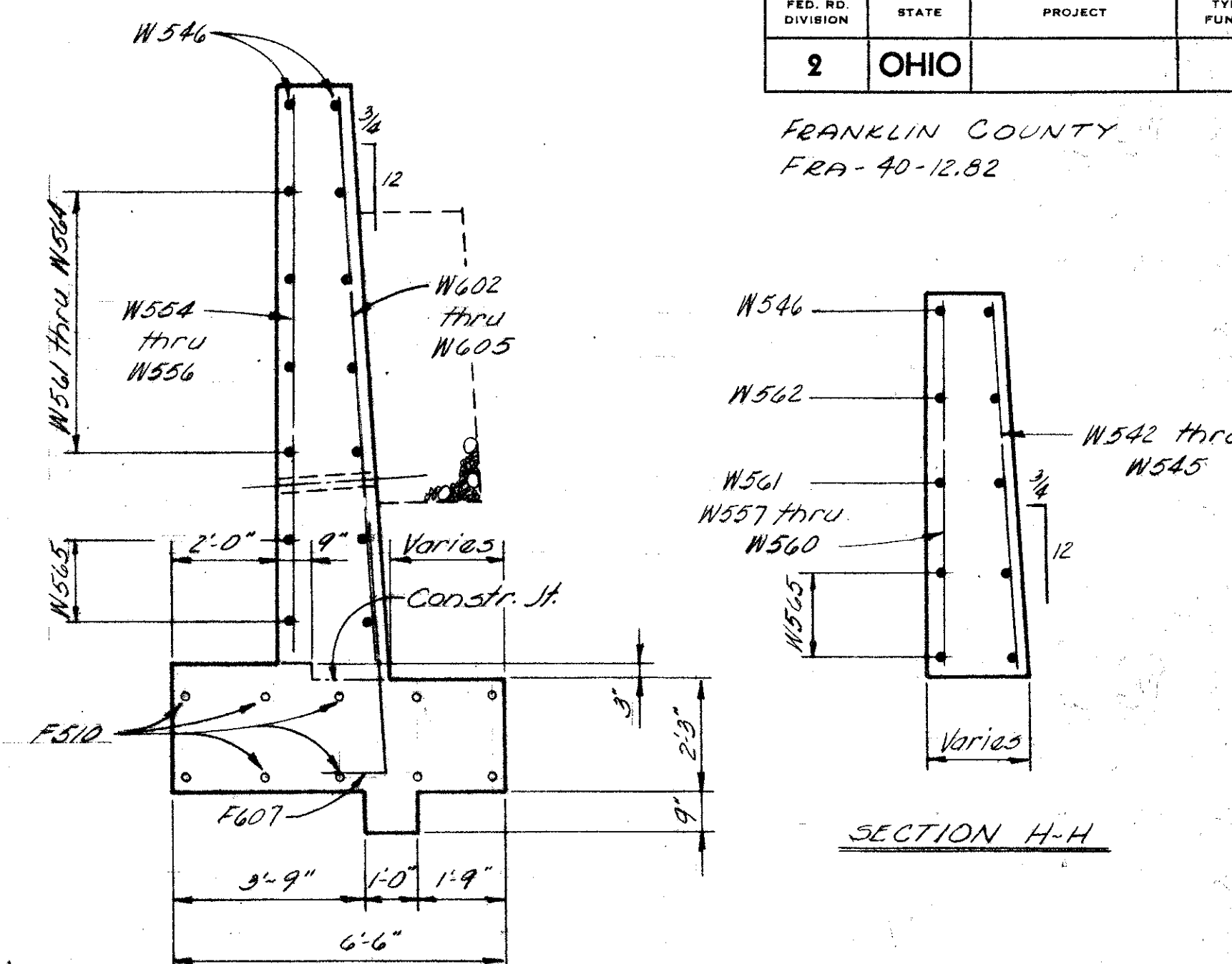
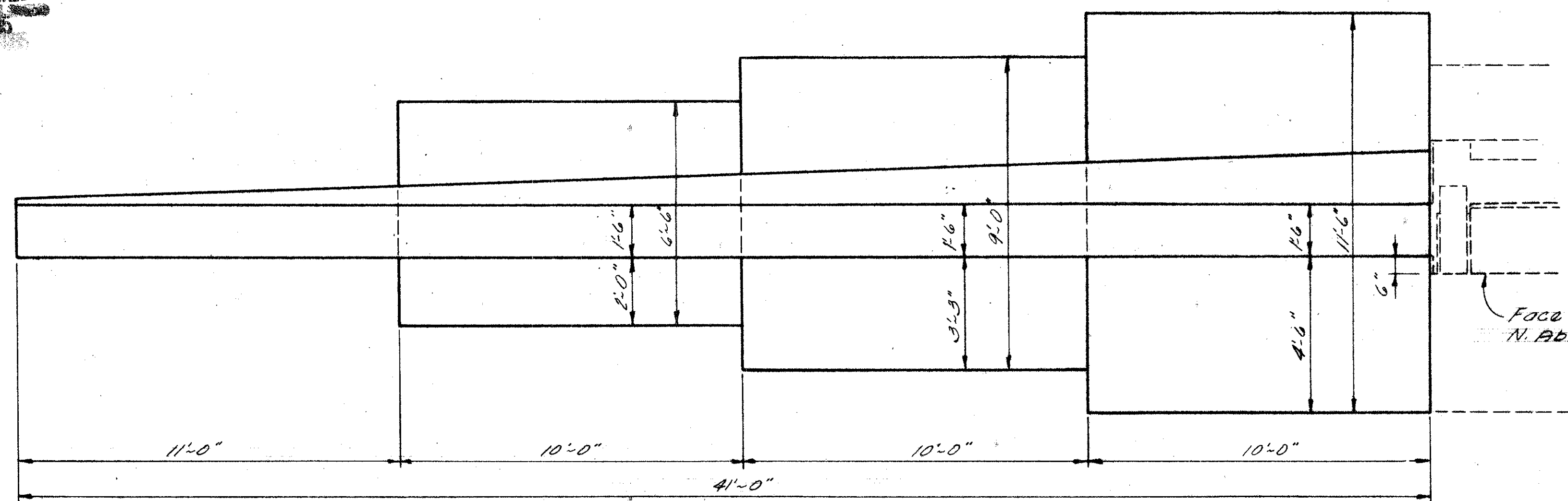


**MICROFILMED**  
**SEP 24 1985**

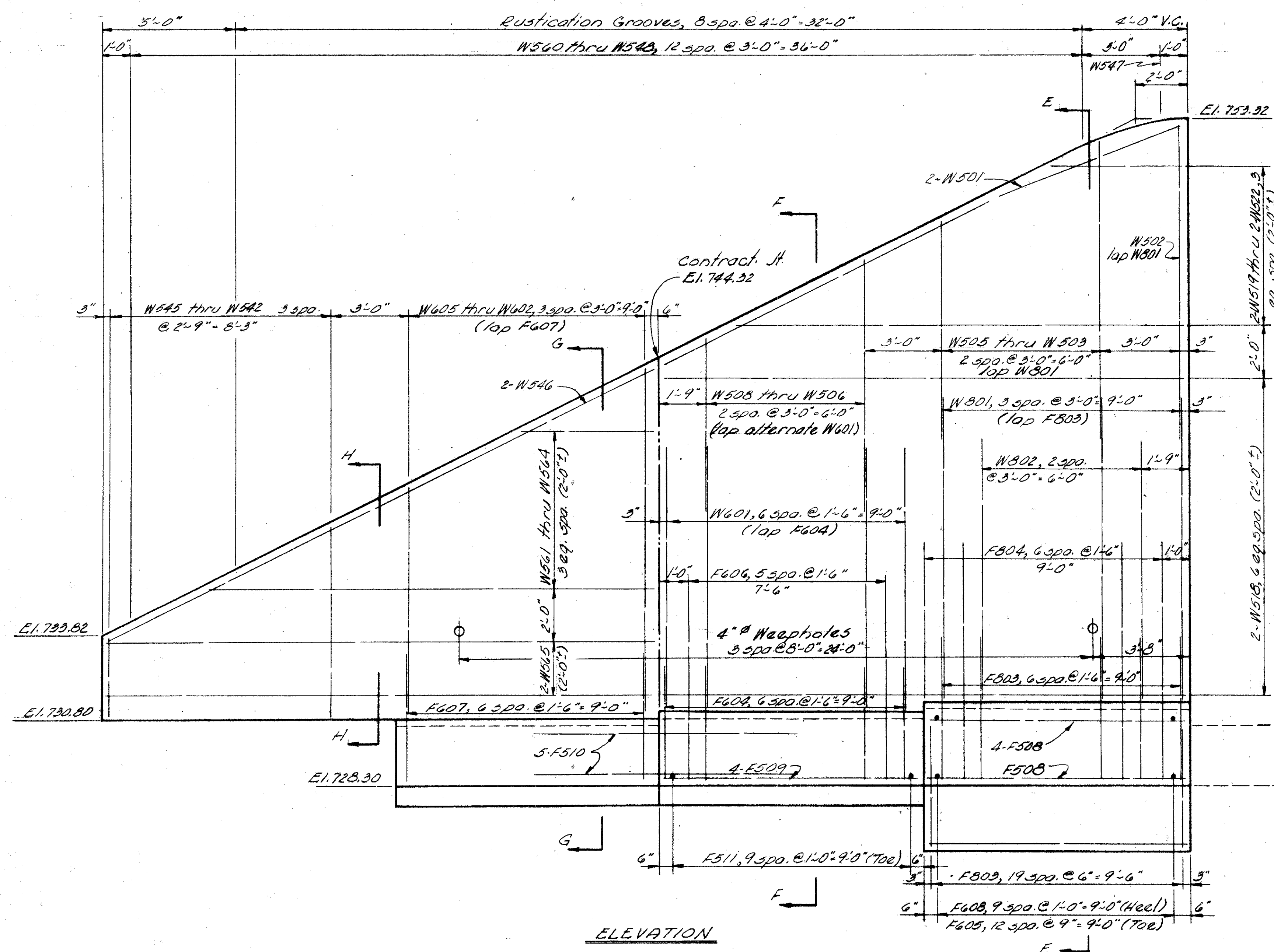
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		



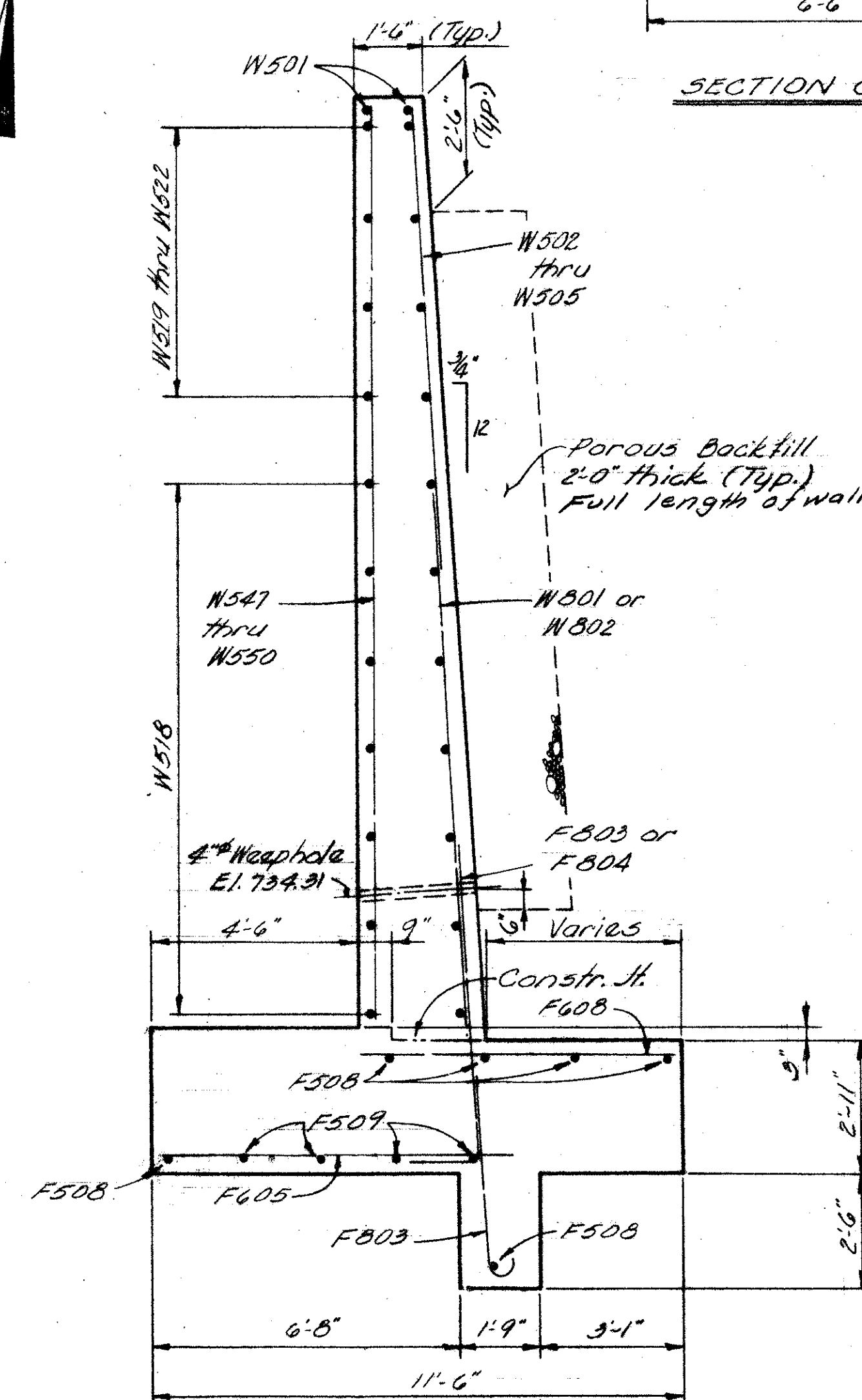
FRANKLIN COUNTY  
FRA-40-12.82



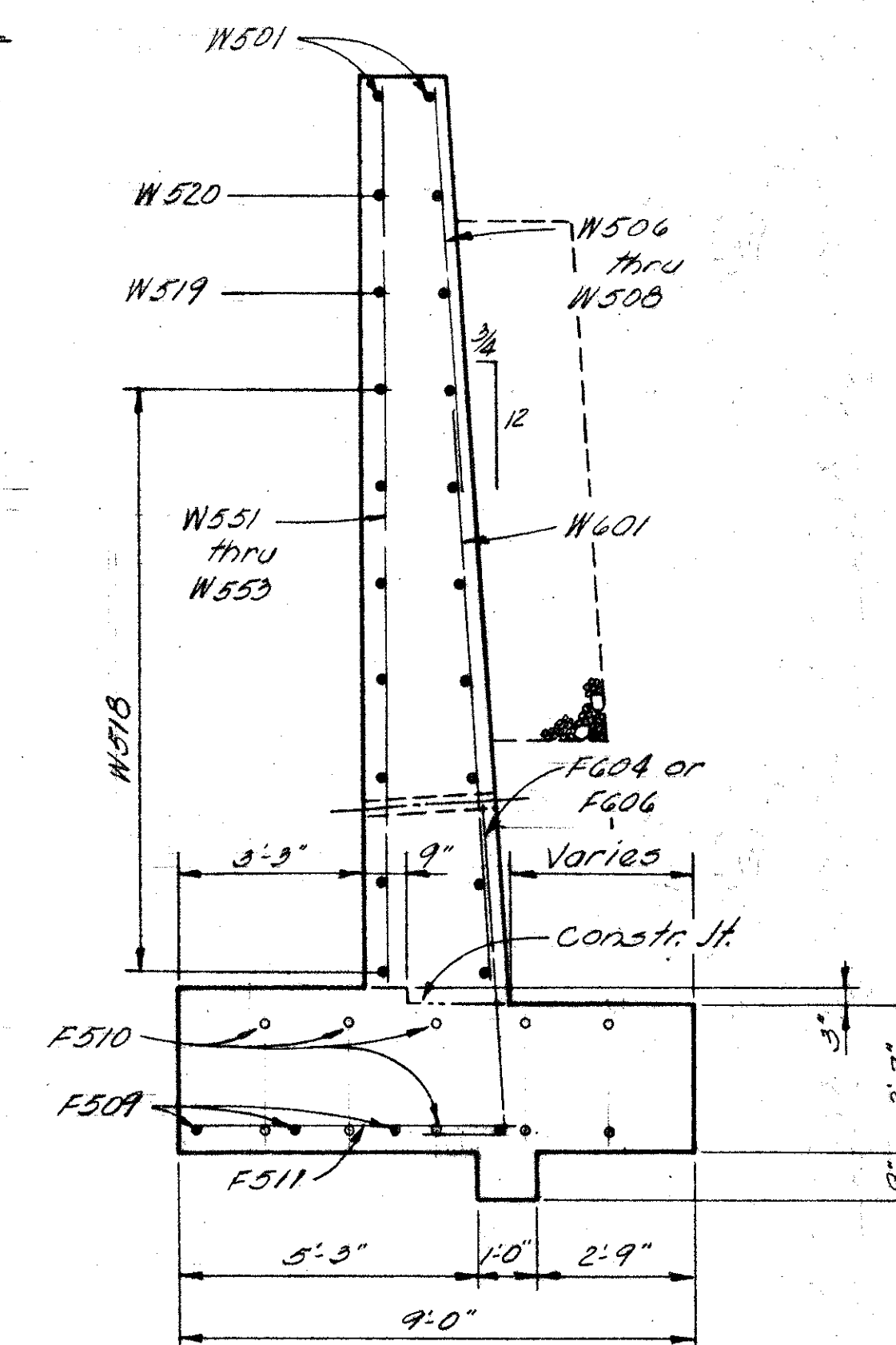
SECTION H-H



ELEVATION



SECTION E-E



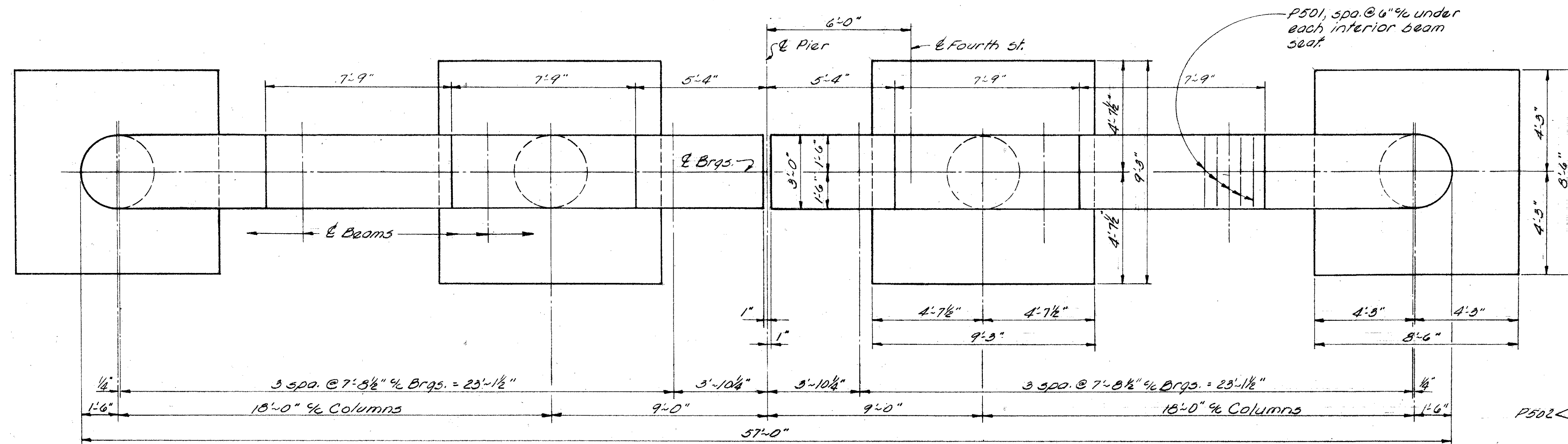
SECTION F-F

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

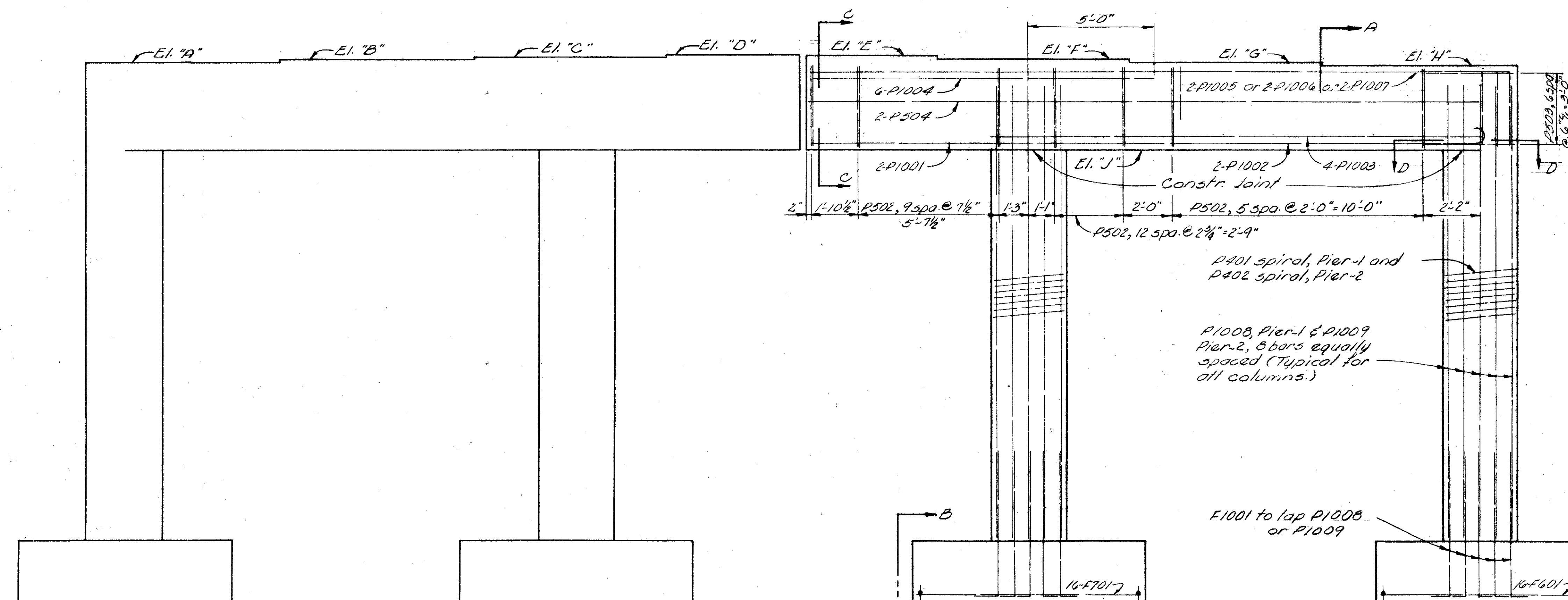
NORTHWEST RETAINING WALL  
BRIDGE No. FRA-40-1934  
SOUTH INNERBELT UNDER FOURTH ST.  
FRANKLIN COUNTY STA-7B+34.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	BDB		Pardo	TLU	5-8-62	

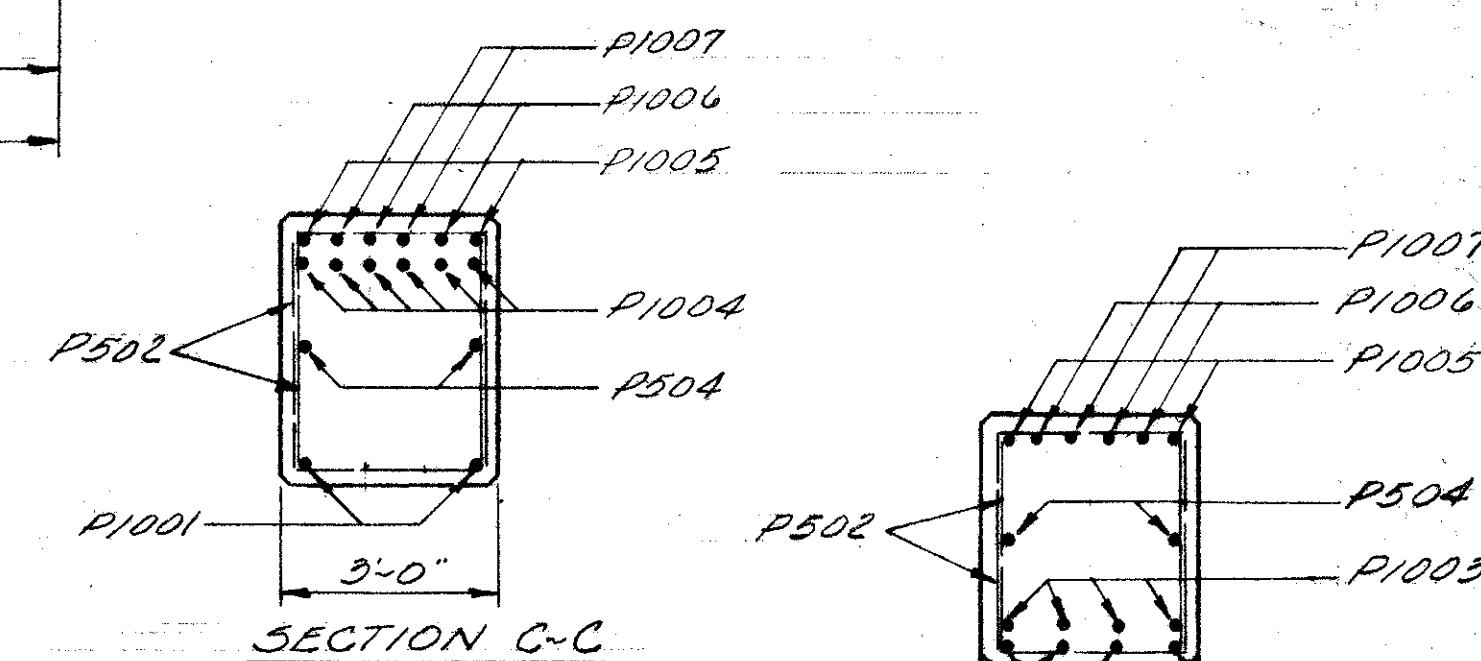
FRANKLIN COUNTY  
FRA-40-12.82



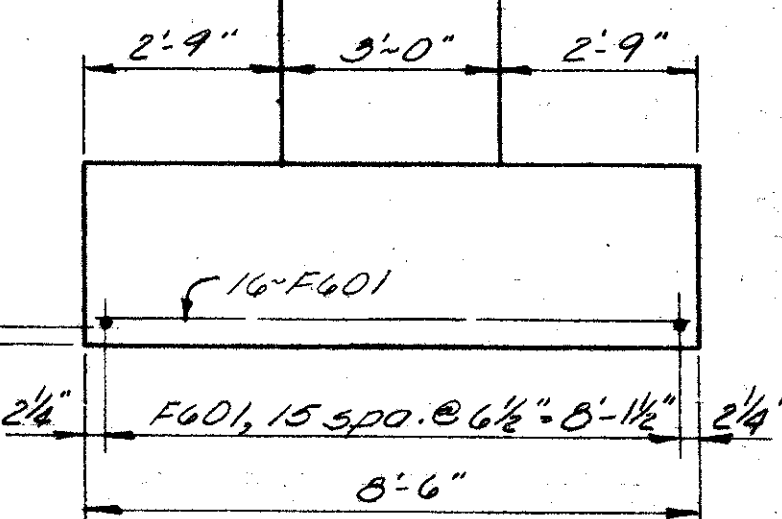
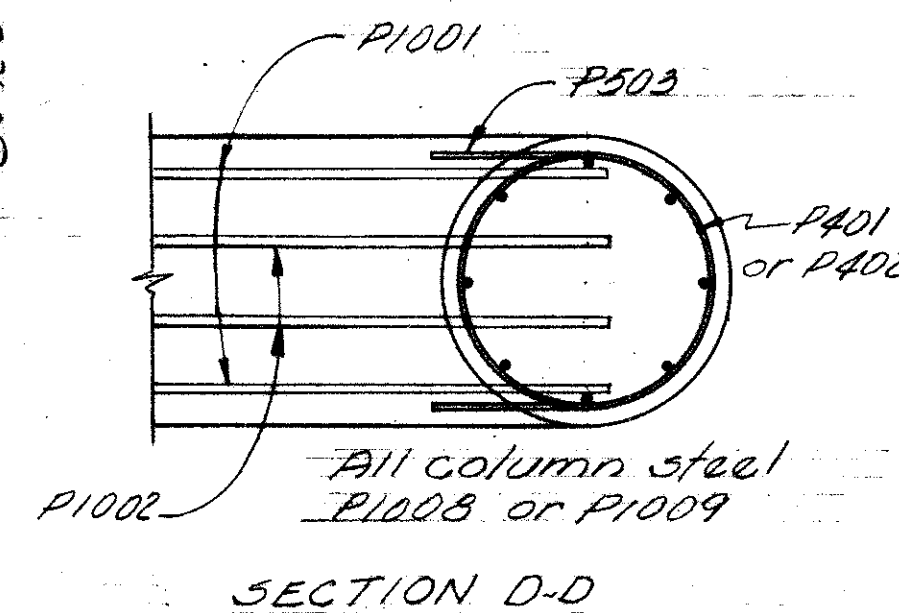
PLAN

ELEVATION

	ELEVATION TABLE									
LOCATION	A <sup>40</sup> <sub>(50)</sub>	B <sup>52</sup> <sub>(62)</sub>	C <sup>54</sup> <sub>(74)</sub>	D <sup>56</sup> <sub>(86)</sub>	E <sup>58</sup> <sub>(98)</sub>	F <sup>62</sup> <sub>(92)</sub>	G <sup>70</sup> <sub>(10)</sub>	H <sup>58</sup> <sub>(68)</sub>	J <sup>744.00</sup>	K <sup>743.30</sup>
Pier - 1	747.40	747.52	747.54	747.56	747.58	747.62	747.70	747.58	743.90	726.10
Pier - 2	747.23	747.25	747.27	747.29	747.31	747.36	747.44	747.32	743.53	729.00
	.13	.25	.37	.49	.61	.56	.44	.32	.63	



VIEW B-B  
(Typ. interior footing steel.)



SECTION A-A  
(Typ. exterior footing steel)

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER DETAILS  
BRIDGE No. FRA-40-1934  
SOUTH INNERBELT UNDER FOURTH ST.  
FRANKLIN COUNTY

57A 78+3463

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	BDB		Pardo	TLU	5-8-62	10-31-62 11-27-63







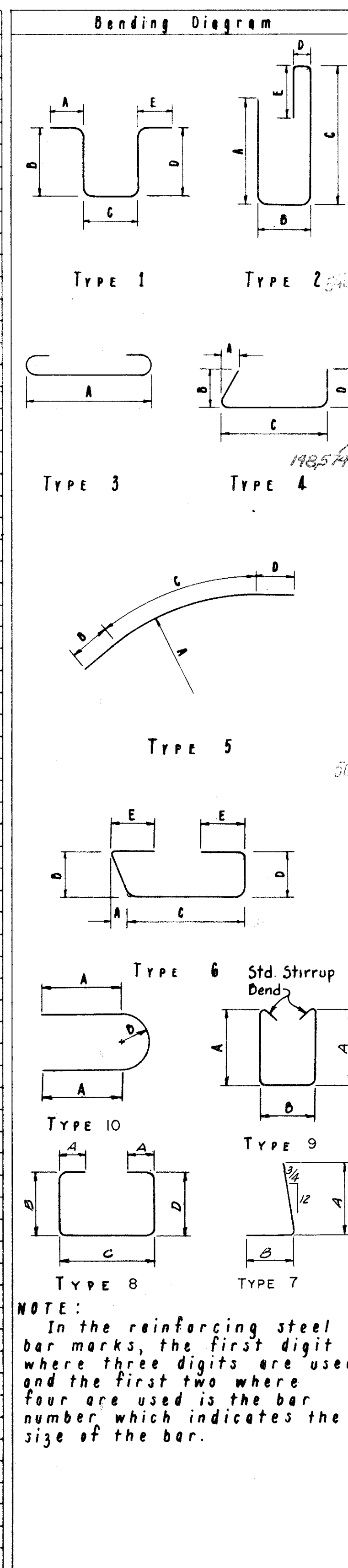
## REINFORCING

## STEEL

## LIST

FRANKLIN COUNTY  
FRA-40-12.82

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
SUPERSTRUCTURE										
R501	104	14.2	*							st.
R502	16	11.6	*							st.
R503	8	13.0	*							st.
R504	12	2.2	*							st.
ABUTMENTS (Cont.)										
F507	30	8.2	256	1				7-4	1-0	bt.
F602	77	5.6	636							st.
F603	97	3-11	571	3	3-3					bt.
F702	104	6.9	1435							st.
F801	41	5.3	575	1				4-3	1-2	bt.
F802	40	7.6	801	1				6-7	1-2	bt.
WINGWALLS										
W501	4	21.7	90							st.
W502	2	12.0	25							st.
W503	2	11.6								st.
thru	Varbyl-6	63								
W505	2	8.6								st.
W506	2	9.0								st.
thru	Varbyl-6	47								
W508	2	6.0								st.
W513	1	7.0								st.
thru	Varbyl-6	23								
W516	1	3-11								st.
W517	2	20.7	43							st.
W518	28	19.8	575							st.
W519	4	17.0								st.
thru	Varbyl-6	184								
W522	4	5.0								st.
W523	4	18.8	78							st.
W524	2	17.0								st.
thru	Varbyl-6	92								
W527	2	5.0								st.
W528	1	21-11	23							st.
W529	1	21.0								st.
thru	Varbyl-5	169								
W541	1	4.0								st.
W542	1	6-11								st.
thru	Varbyl-4	20								
W545	1	2-10								st.
W546	2	23.2	48							st.
W547	1	21.9	23							st.
W548	1	20.9								st.
thru	Varbyl-5	163								
W560	1	3-3								st.
W561	2	16-10								st.
thru	Varbyl-4	90								
W564	2	4-10								st.
W565	4	20.8	86							st.
W601	14	10.0	210							st.
W602	2	13.2								st.
thru	Varbyl-6	131								
W605	2	8-8								st.
W801	8	11.6	246							st.
W802	6	10.0	160							st.
F508	12	6.0	75							st.
F509	8	19.8	164							st.
F510	20	10.0	209							st.
F511	20	3-1	64							st.
F604	14	5-1	107	7	4-3	1-0				bt.
F605	26	7.4	286							st.
F606	12	8.7	155	7	7-9	1-0				bt.
F607	14	5.5	114	7	4-9	1-0				bt.
F608	20	6.0	180							st.
F803	14	6-1	227	7	5-2	1-2				bt.
F804	14	9-11	371	7	9-0	1-2				bt.
F805	40	5-9	614	3	4-3					bt.



SPIRALS - NOT ROLLED						
Mark	Nº	Length	Core	Pitch	Turns	Weight
P401	4	15.4	32	4 1/2	44	1137
P402	4	12.0	32	4 1/2	35	903

## SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.

THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL

IN OTHER RESPECTS CONFORM TO ITEM S-4, 1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

ESTIMATED QUANTITIES										
ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	RET. WALL	GENERAL	AS BUILT	
E-2	684	Cu Yd.	Unclassified Excavation	363	148		173			
E-2	Lump	Sum	Cofferdams cribs & sheeting					Lump		
S-1	79	Cu Yd.	Class "E" concrete, retaining walls above footings					79		
S-1	530	Cu Yd.	Class "C" concrete, superstructure					530		
S-1	77	Cu Yd.	Class "C" concrete, pier caps and columns		77					
S-1	202	Cu Yd.	Class "E" concrete, footings	87	59			56		
S-1	187	Cu Yd.	Class "E" concrete, abutments above footings	187						
S-3	895	Sq. Yd.	Type "C" waterproofing			895				
S-3	47	Lin. Ft.	Waterproofing, premolded sealing strip	21			26			
S-4	133,226	Lbs.	Reinforcing Steel	13,841	22,779	91,451	5,155			
S-7	439,300	Lbs.	Structural Steel			439,300				
S-7	847	Lbs.	Structural steel (electrical conduit support)					847		
S-7	1050	Lbs.	Structural steel (telephone conduit support)					1050		
S-8	441,197	Lbs.	Field painting of structural steel			441,197				
S-9	94	Sq. Ft.	1" gray rubber preformed exp. jt. filler				94			
S-14	456	Lin. Ft.	Railing (alum. rail, supports, conc. parapets & end posts)	32		424				
S-25	2	Each	Mercury Vapor Luminaire			2				
S-25	2	Each	Lamp Standard			2				
S-25	164	Lin. Ft.	Pole and bracket cable (Single Conductor)			164				
S-25	460	Lin. Ft.	Main Circuit cable (Single Conductor)			460				
S-29	57	Lin. Ft.	Drainage conductor including supports					57		
S-29	422	Lin. Ft.	Subdrainage for wearing surface course			422				
S-29	143	Cu Yd.	Porous Backfill	100			43			
S-29	42	Lin. Ft.	8" perforated bituminous coated CMP	42						
S-29	14	Each	Scuppers, including supports			14				
S-29	30	Lin. Ft.	6" galv. pipe downspout, galv. stk. or W.I. incl. spec.	30						
S-29	62	Cu Yd.	Asphaltic conc. surface course, type "C" (60-70)			62	50			
S-10	499	Sq. Yd.	Concrete Slope Protection					499		
Spec.	43	Lin. Ft.	Polyvinyl waterstop				43			
S-101	530	Each	Water reducing, set retarding admixture			530				
S-25	230	Lin. Ft.	Main circuit conduit & fittings, 2" φ			230				
S-25	Lump	Sum	Electric grounding system					Lump		

Replacement Steel										
Mark	Nº	Length	Weight	Type	A	B	C	D	E	Shape
RE501	2	5.7								st.
RE601	3	5-11								st.
RE701	2	6.2								st.
RE801	1	6.6								st.
RE1001	1	7.2								st.
Replacement Steel for Spirals										
RE401	1	5-3		5	1-3/2					bt.
Lamp Standard Reinforcing										
L570	8	1-10	16							st.
L571	4	1-4	6							st.
L572	6	4-1	26	1		0.8	3.0	0.8		bt.
L573	6	5-1	32	1		1.2	3.0	1.2		bt.
L574	4	3-10	16	1		0.8	2.9	0.8		bt.
L575	4	4-10	20	1		1.2	2.9	1.2		bt.
L576	6	3-10	24	1	1-10	2.2				bt.
L577	4	3-7	14	1	1-7	2.2				bt.

\* Non-participating by State of Ohio or Bureau of Public Roads.

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

Revised As-Built  
3/16/66 J.V.A.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST  
AND ESTIMATED QUANTITIES  
BRIDGE No. FRA-40-1334  
SOUTH INNERBELT UNDER FOURTH ST.  
FRANKLIN COUNTY STA-78+34.63

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.T.	BDB		Pardo	TLU	5-8-62	7-3-63



REFERENCES:

Standard Drawings:

End Dam and End Cross Frame Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Scupper Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Railing Details Type C Rocker and Bolster Details	- AR-1-57, Revised 4-2-62 - RB-1-55, Revised 2-2-59
Approach Slab Details Supplemental Specification Common Details:	- AS-1-54, Revised 7-5-62 - S-101 Dated 7-12-62
Scupper Details	- Sheet 164
Downspout and Conductor Details	- Sheet 166
Lighting Details	- Sheet 165
Railing Details	- Sheet 163
Concrete Slope Protection Details	- Sheet 163
R/W Fence Details	- Sheet 163
Sidewalk End Dam Details	- Sheet 164

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may be, at the option of the contractor, made in the shop. Class "B" welding shown thus:

B) —

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

BEARING SURFACES: The concrete surface under all rockers and bolsters shall be placed a minimum of 1/4-inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

TRAFFIC MAINTENANCE: For details of traffic maintenance, see Roadway Plans.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3.5 tons per square foot, the north abutment footing for 3.0 tons per square foot, and the south abutment footing for 2.0 tons per square foot.

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

WIRING DETAILS: For details and notes for wiring, see Roadway Plans.

ELECTRICAL GROUNDS: A stranded No. 10 AWG bare copper wire electrical ground shall be embedded in the outside column on one side of the structure at Pier No. 1. The lower end of the wire shall terminate in a 25-foot length coil placed under the footing and separated from the concrete by two layers of tar paper and the upper end shall extend sufficiently above the top of the concrete to provide for an exothermic welded connection to outside beam of the superstructure. Ground each light pole with a No. 10 AWG stranded bare copper cable. Exothermic weld one end of cable to an anchor bolt and the other end to the top flange of the outside beam.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SHOP PAINTING STEEL: The surface preparation of all steel requiring shop painting, as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning except as noted in the specifications regarding the use of Chromate Primers.

SHEET LEAD shall conform to the requirements of ASTM Designation B29 without restriction to the Common Desilverized type.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

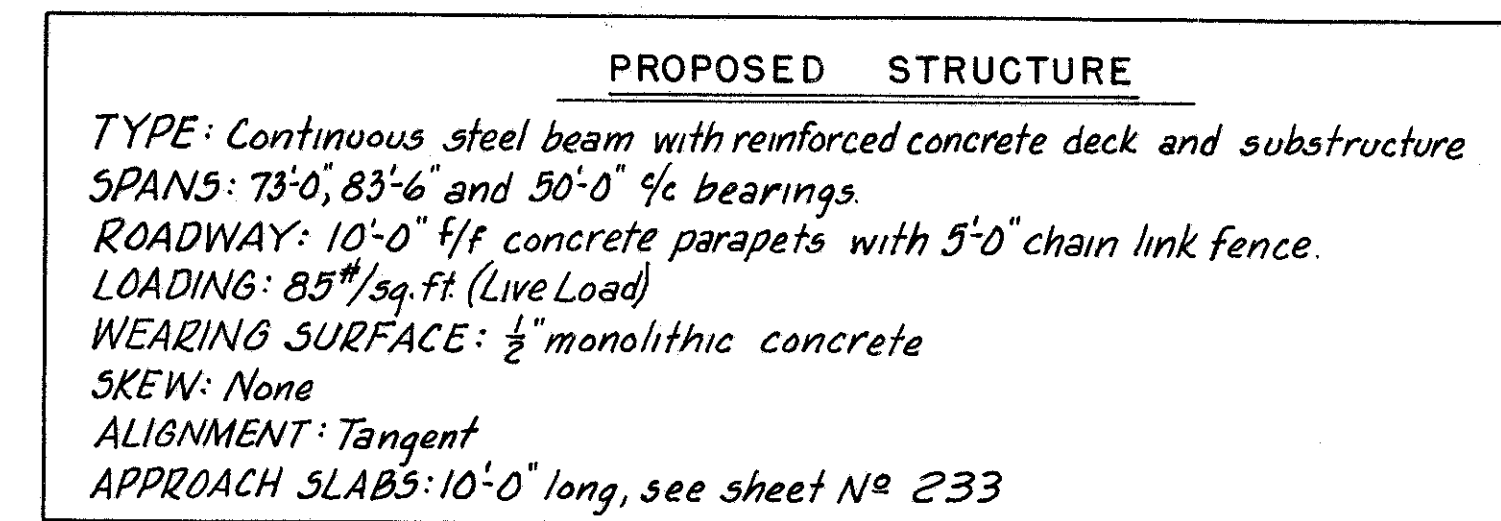
- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats, backwalls, and the face of spill-thru abutment between outside beams.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
GENERAL NOTES							
BRIDGE No. FRA-40-1334							
SOUTH INNERBELT UNDER FOURTH ST.							
FRANKLIN COUNTY STA.-78+34.63							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
				TLU	5-18-62		

+ N 96,600  
E 102,600

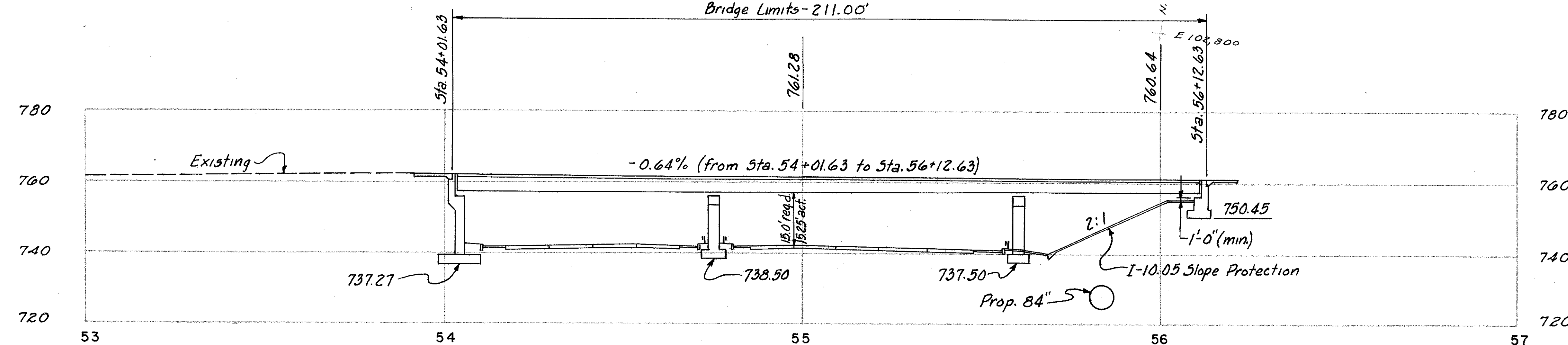
232  
250

Figure N



Curve Data-Ramp "G"  
P.I. - 2+58.47  
D - 2°00'  
 $\Delta$  - 6°-19'-56"

Bridge Limits - 211.00'



PROFILE  
(along & construction)

FRANKLIN COUNTY STA. 88 + 24.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVIEWED
RJW	RJW	HT	E.D.	TLU	2-13-62	

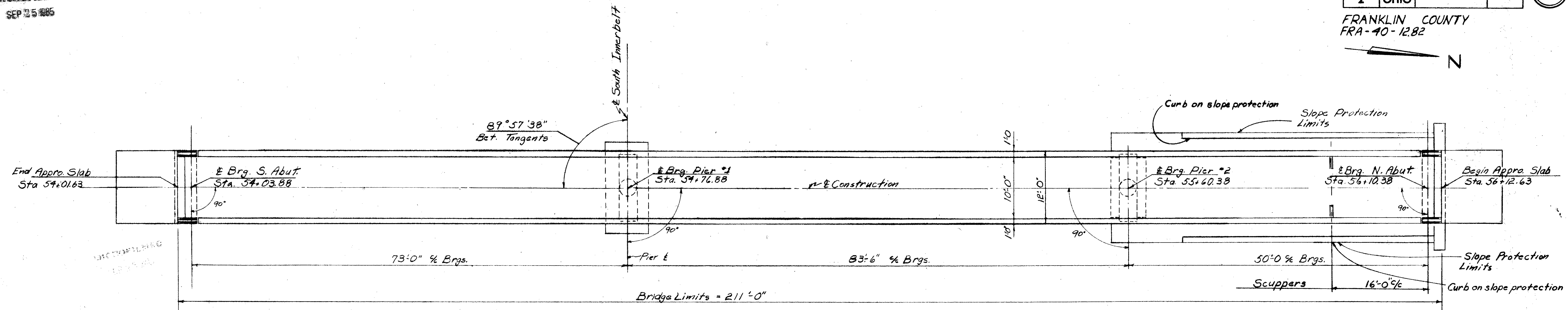
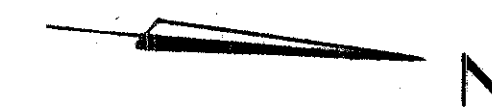


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SEP 25 1985

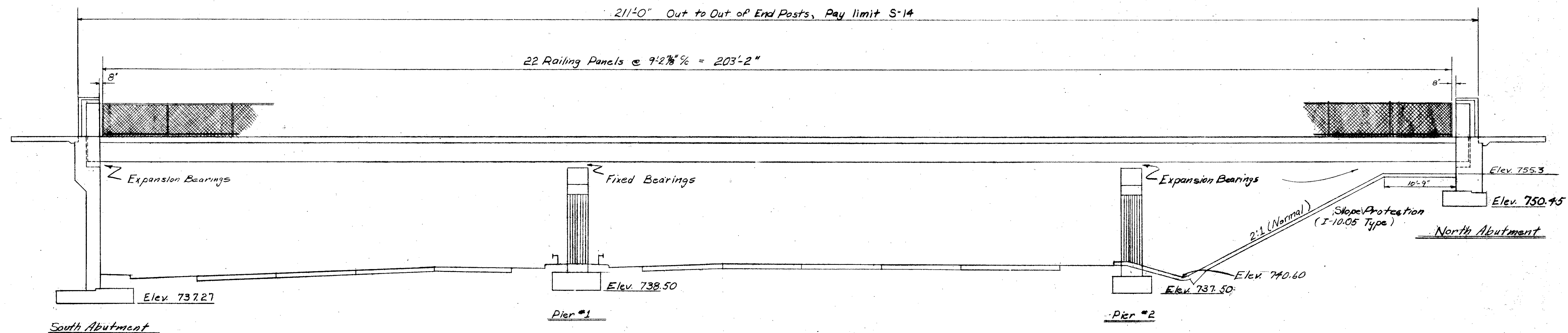
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

233  
250

FRANKLIN COUNTY  
FRA-40-12.82



PLAN



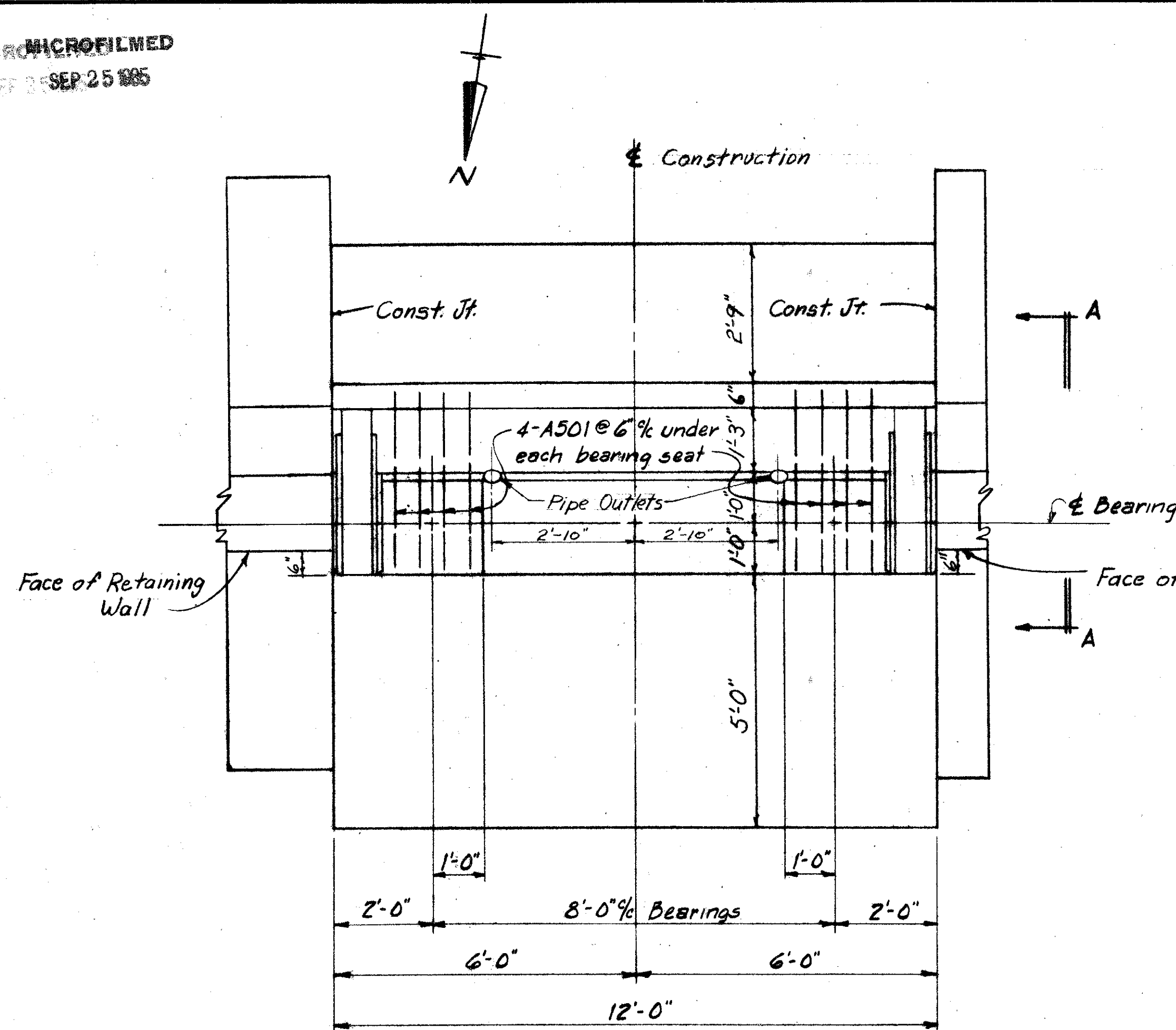
ELEVATION

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION  
BRIDGE NO. FRA-40-13.53  
SOUTH INNERBELT UNDER SIXTH ST.

FRANKLIN COUNTY STA. 88+24.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PF	PF		DEF	TLU	2-13-62	



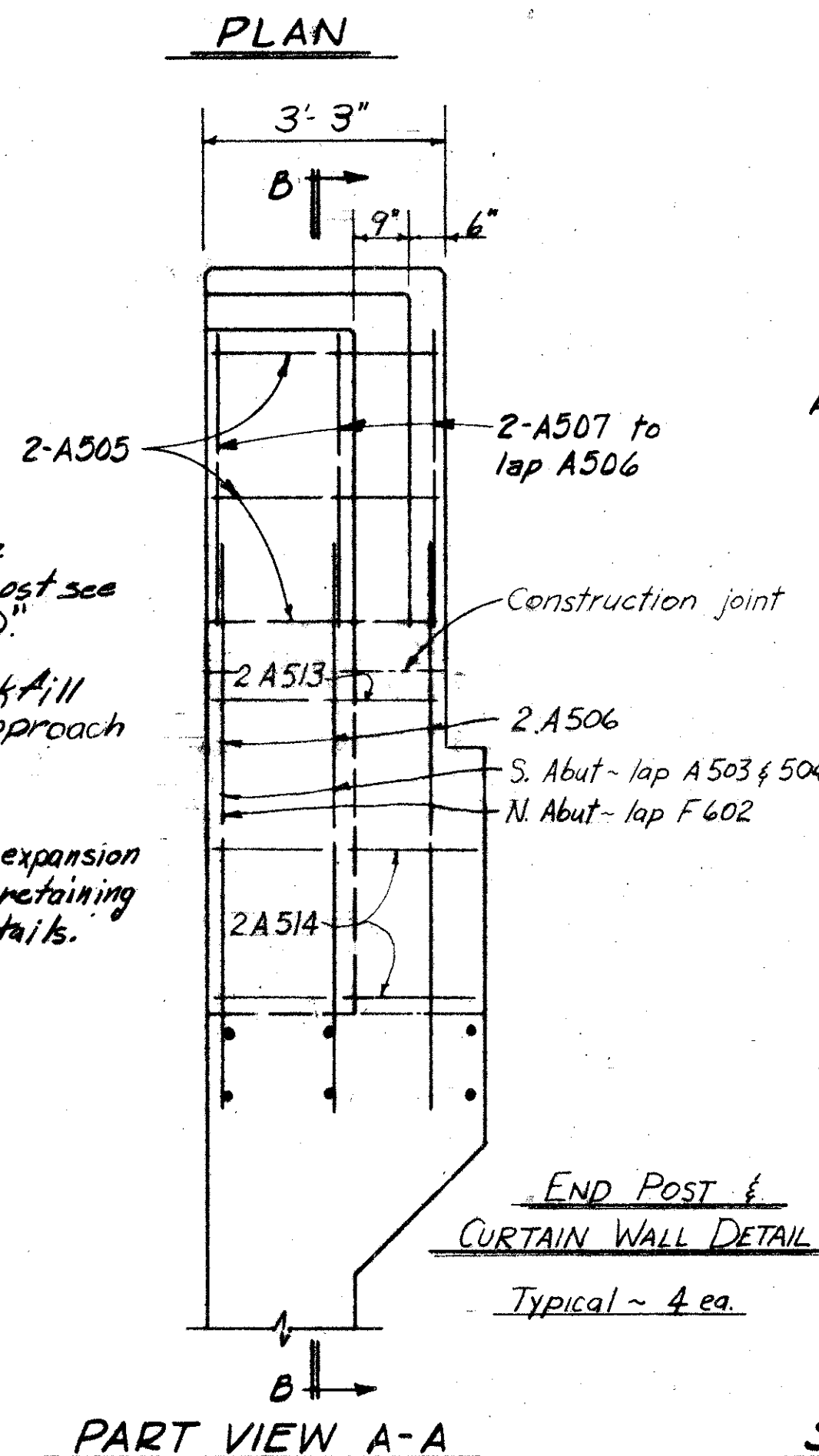
PLAN

Notes:

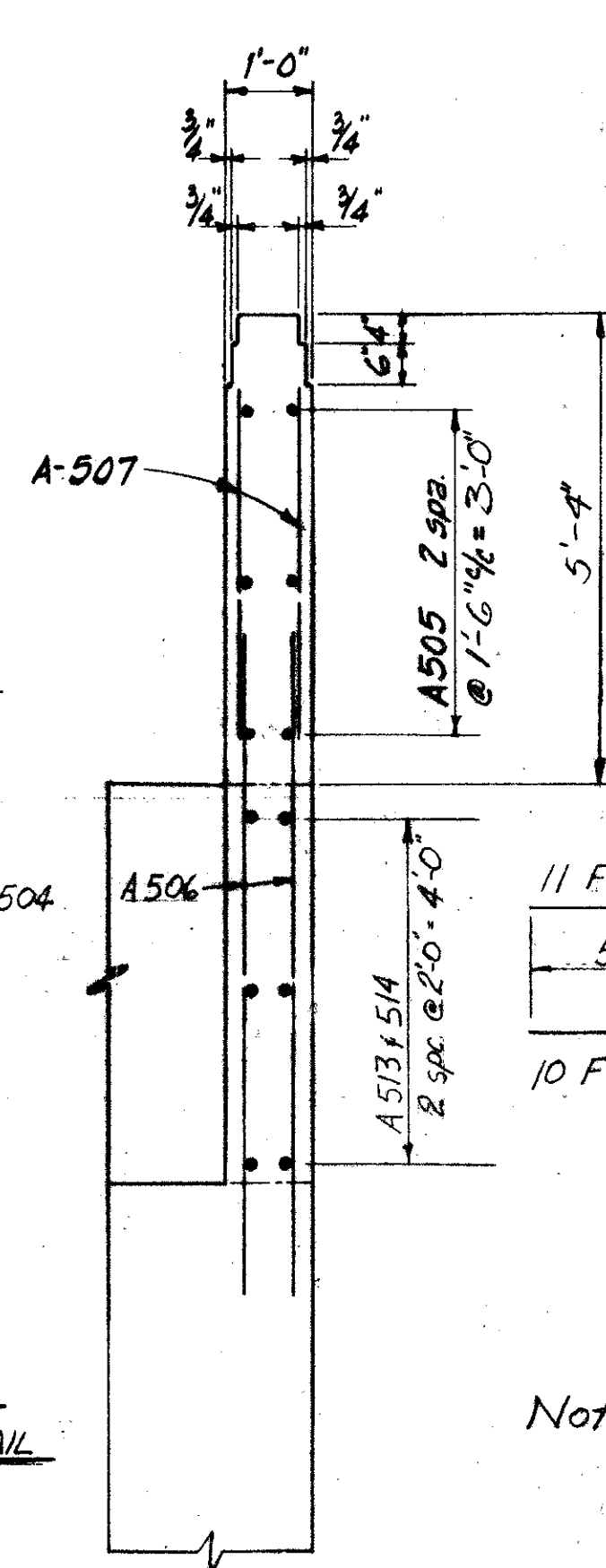
Right of Way Fence: For the connection of fences to end post see details of retaining wall "D".

Porous Backfill: Porous backfill shall extend upward to the approach slab for the full length of the abutment.

Retaining Wall: For details of expansion joints between abutment and retaining wall, see Retaining Wall "D" Details.



PART VIEW A-A



SECTION B-B

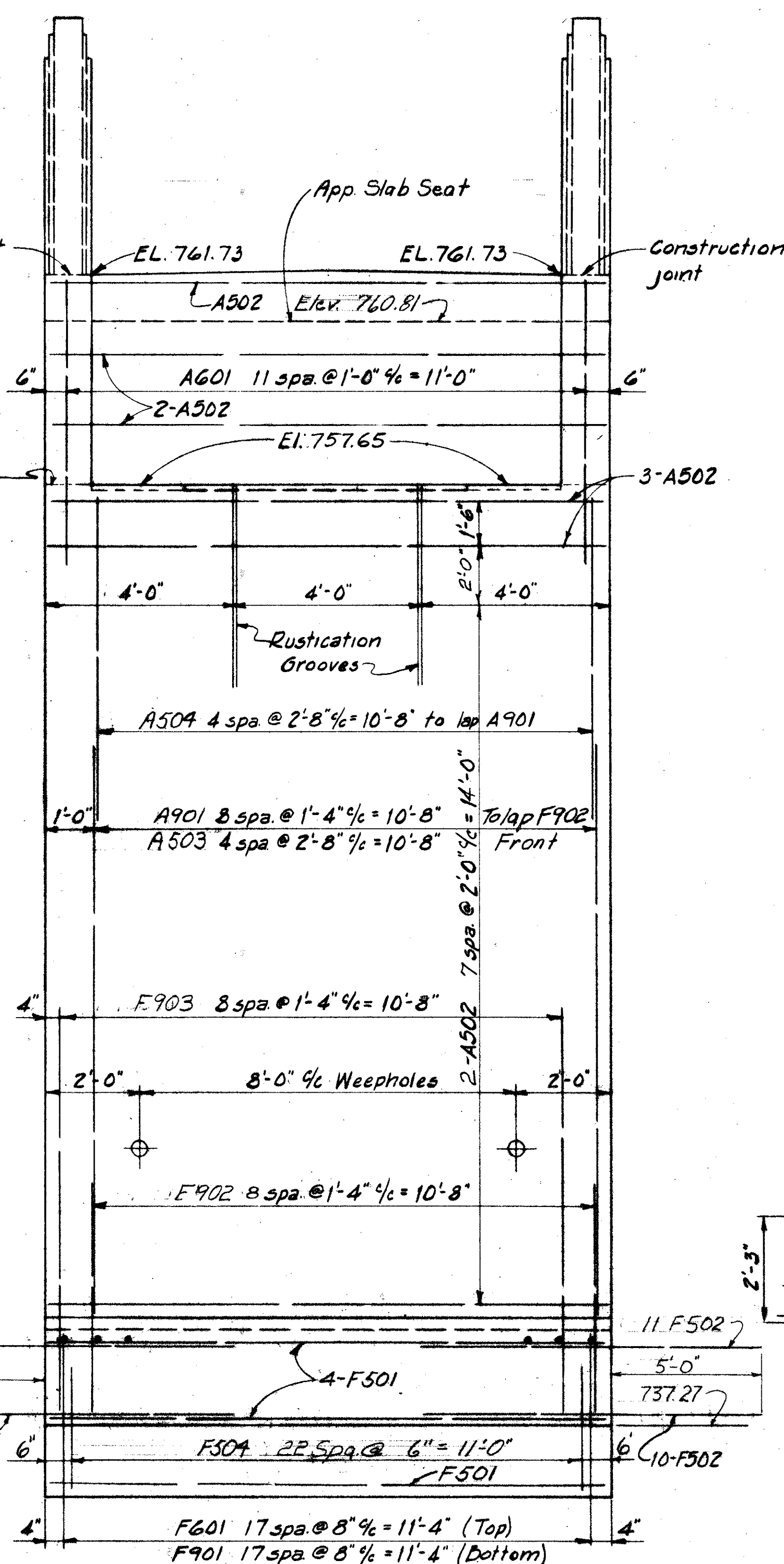
Notes:

Footings Key: The key under the footing shall be placed in a carefully made trench against undisturbed earth.

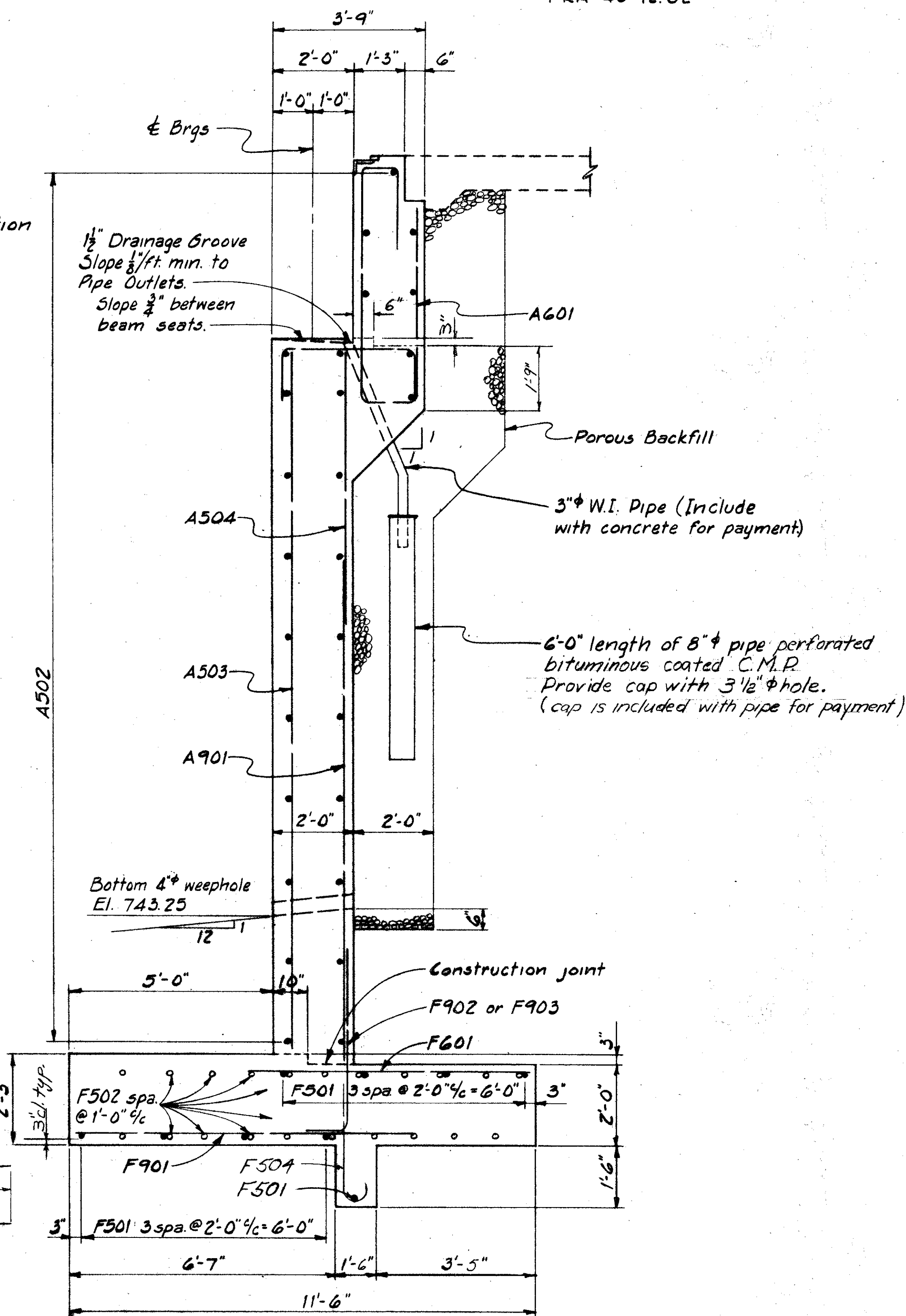
Procedure: Before the backwalls of the abutments are placed, the backfill shall be placed & compacted up to the level at the subgrade with a 3:1 slope from the bridge seat to subgrade.

Vertical Steel: All vertical stem reinforcing steel is in back of wall unless otherwise noted.

Concrete End Posts: End posts are included with S-14 for payment.



ELEVATION



TYPICAL SECTION

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

SOUTH ABUTMENT DETAILS  
BRIDGE No FRA-40-1353

SOUTH INNERBELT UNDER SIXTH ST.  
FRANKLIN COUNTY STA. 88+24.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RF	HT		DFH	TLU	2-15-62	

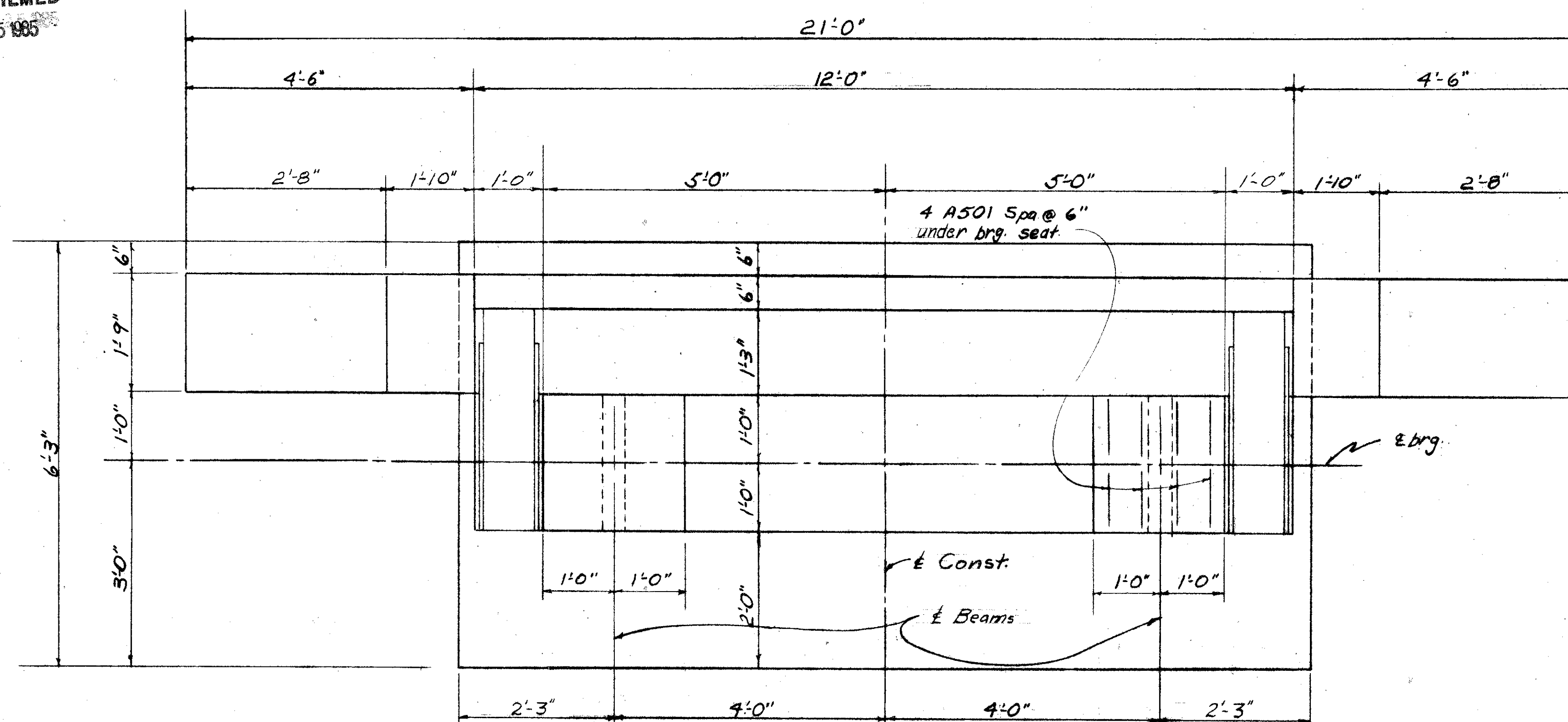


MICROFILMED  
SEP 25 1985

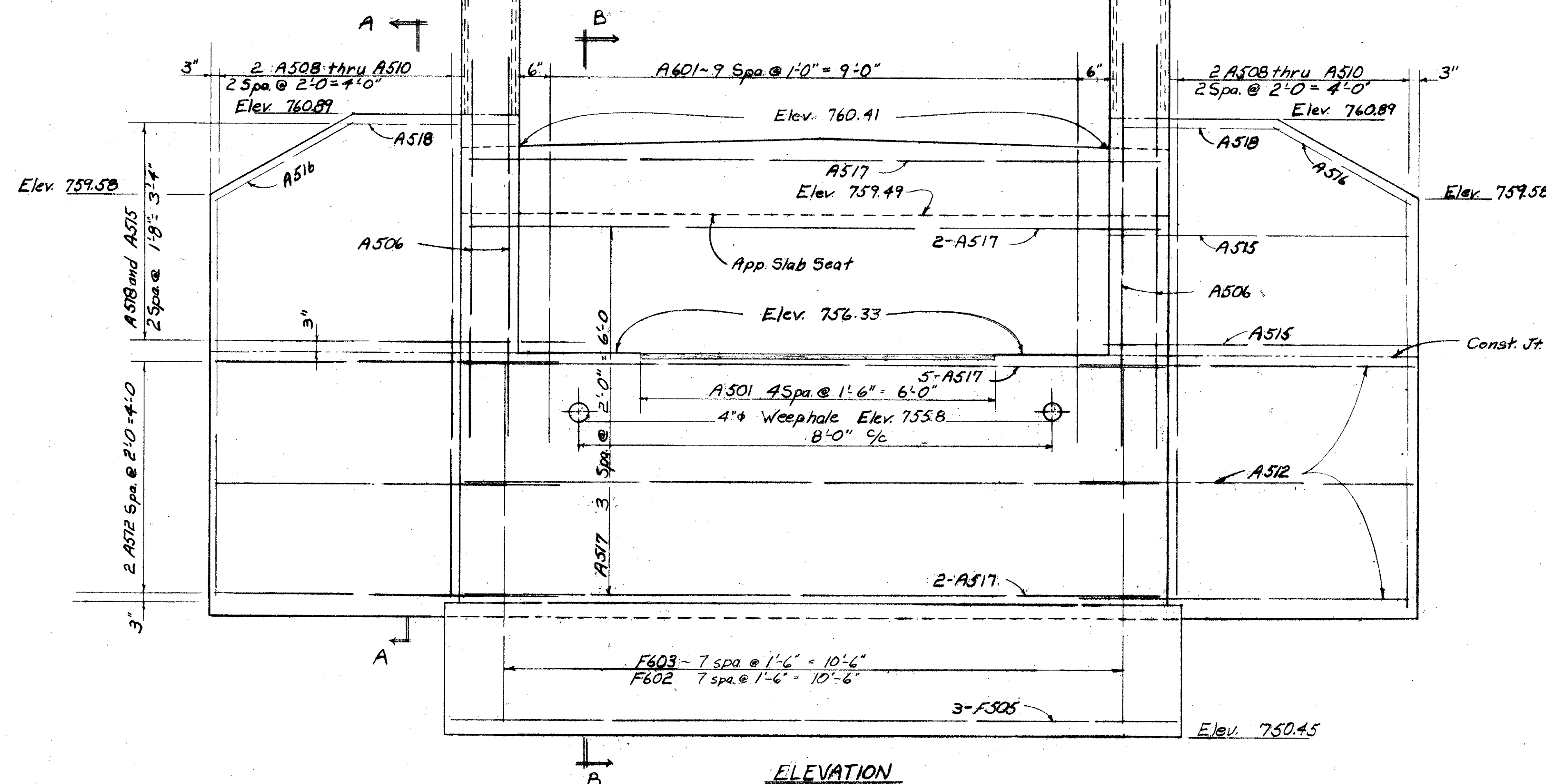
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

235  
250

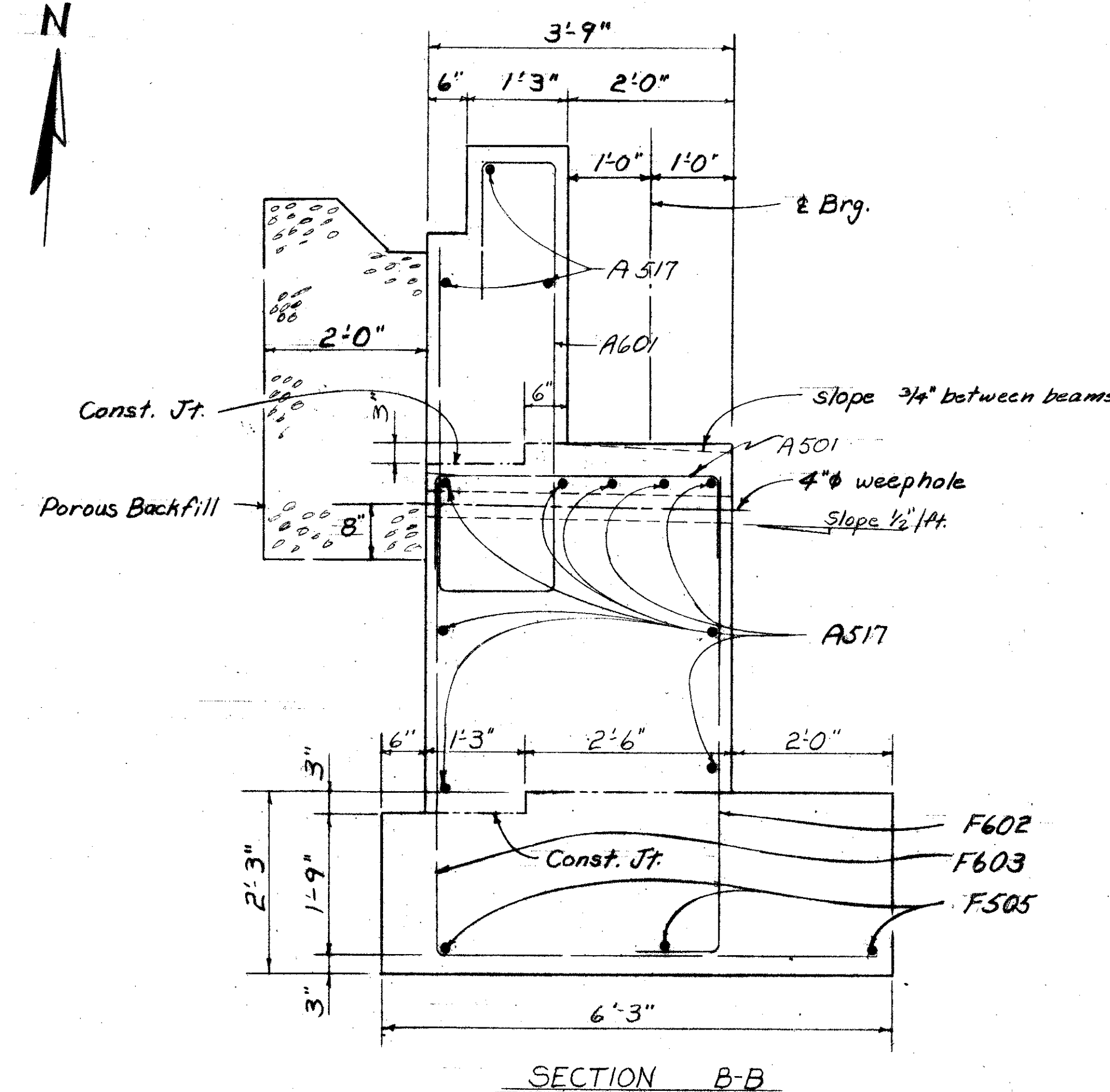
FRANKLIN COUNTY  
FRA-40-12.82



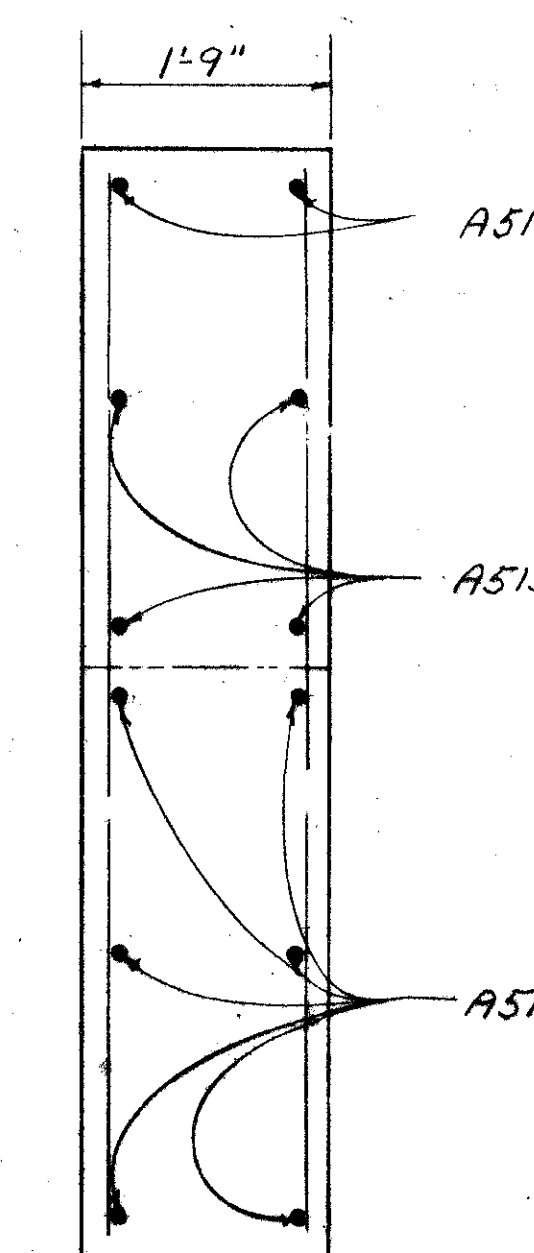
PLAN



ELEVATION



SECTION B-B



SECTION A-A

Notes  
For end post details see sheet N° 234

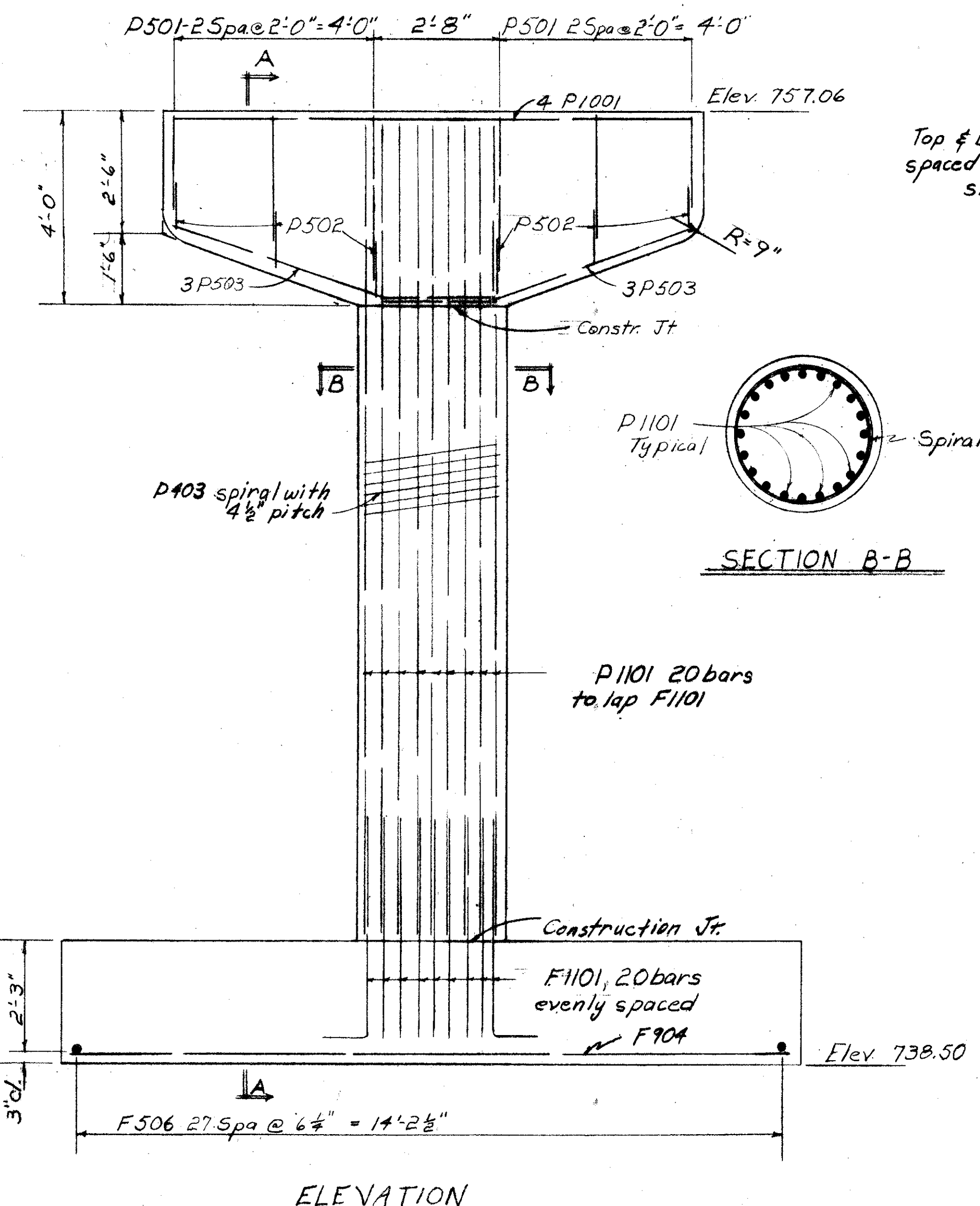
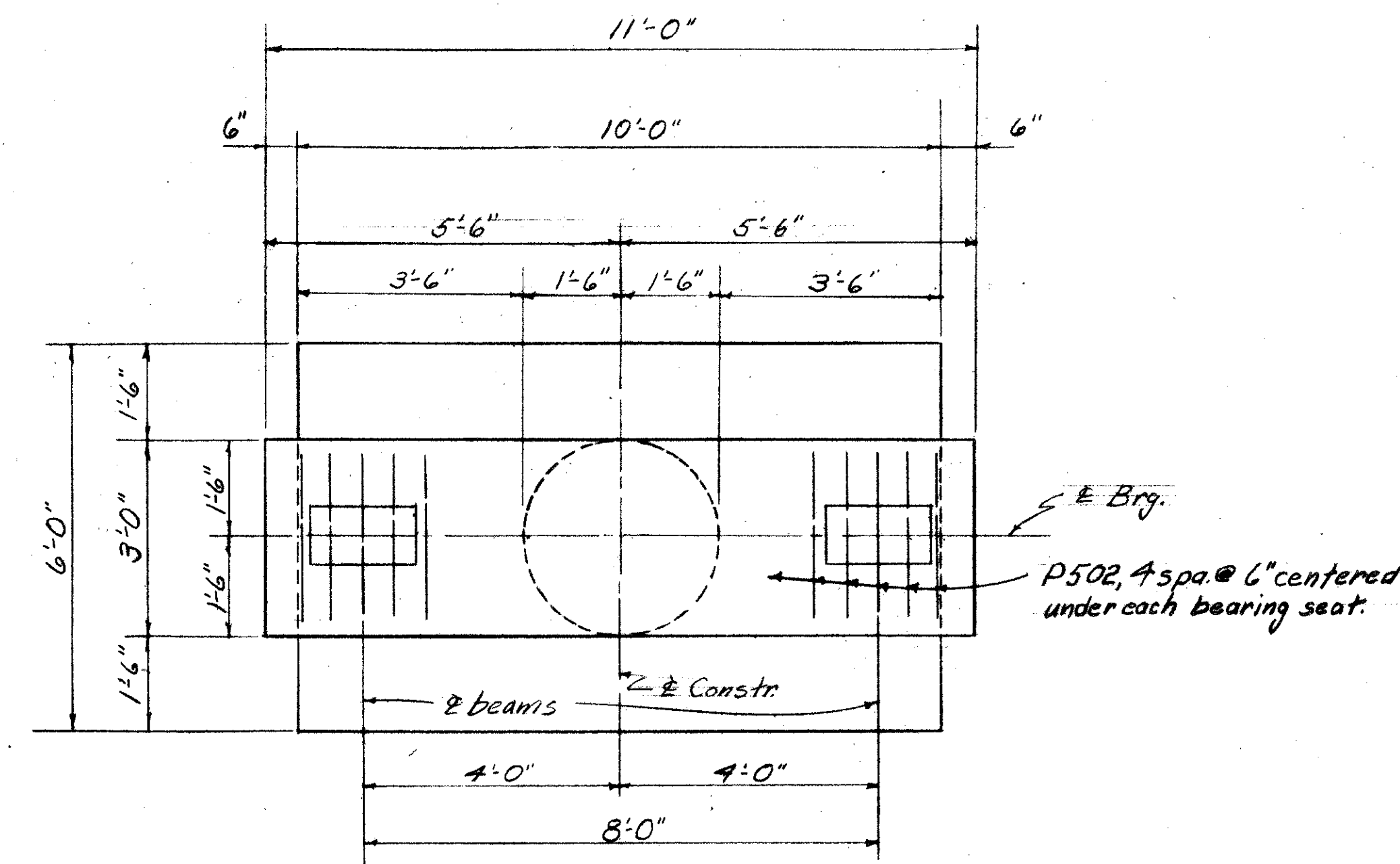
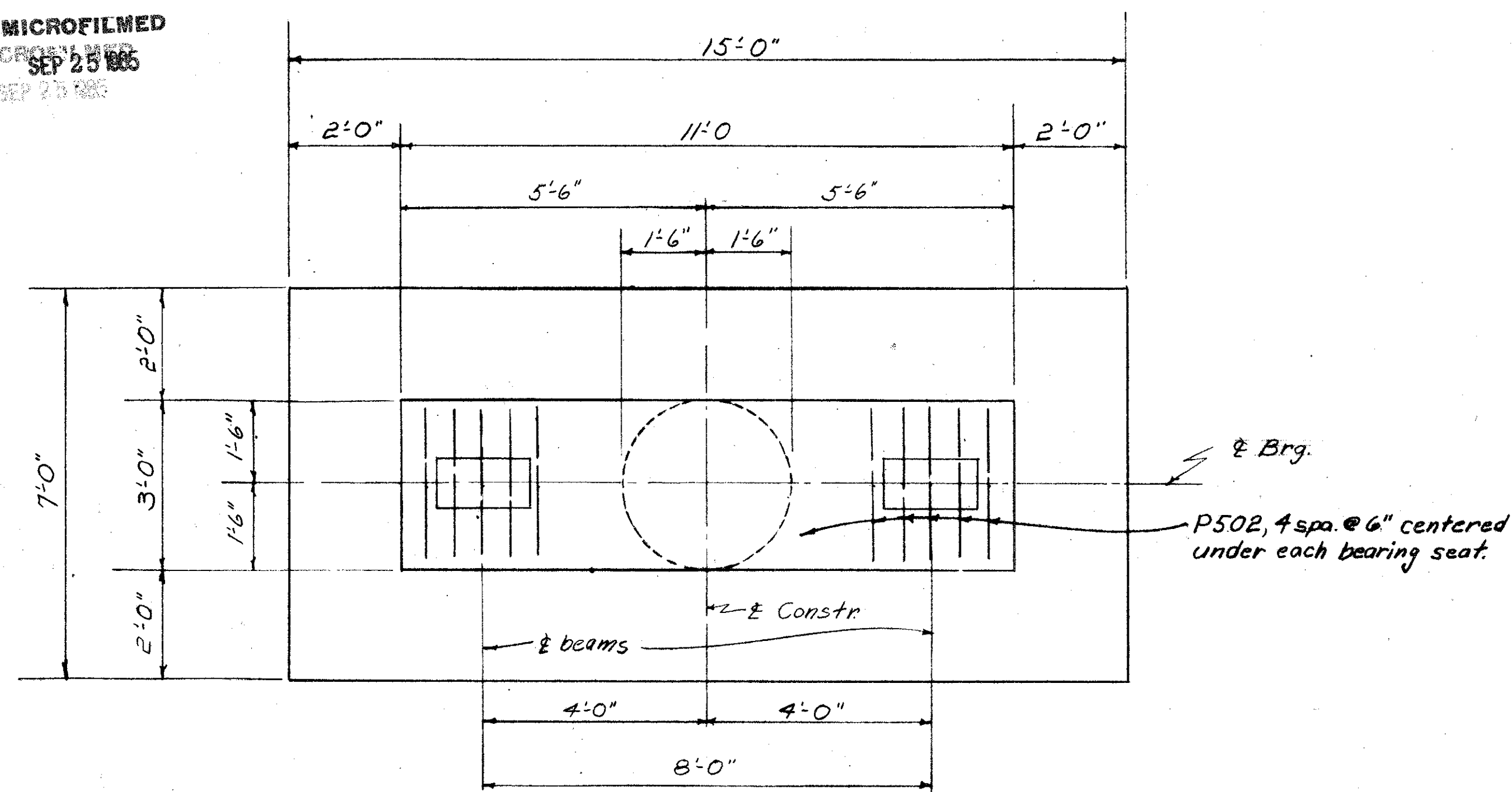
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
NORTH ABUTMENT DETAILS BRIDGE NO. FRA-40-1353 SOUTH INNERBELT UNDER SIXTH ST. FRANKLIN COUNTY STA. 88+24.01						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.F.	P.F.		DFH	TLU	2/15/62	

MICROFILMED  
SEP 25 1985  
SEP 25 1985

FED. ID. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

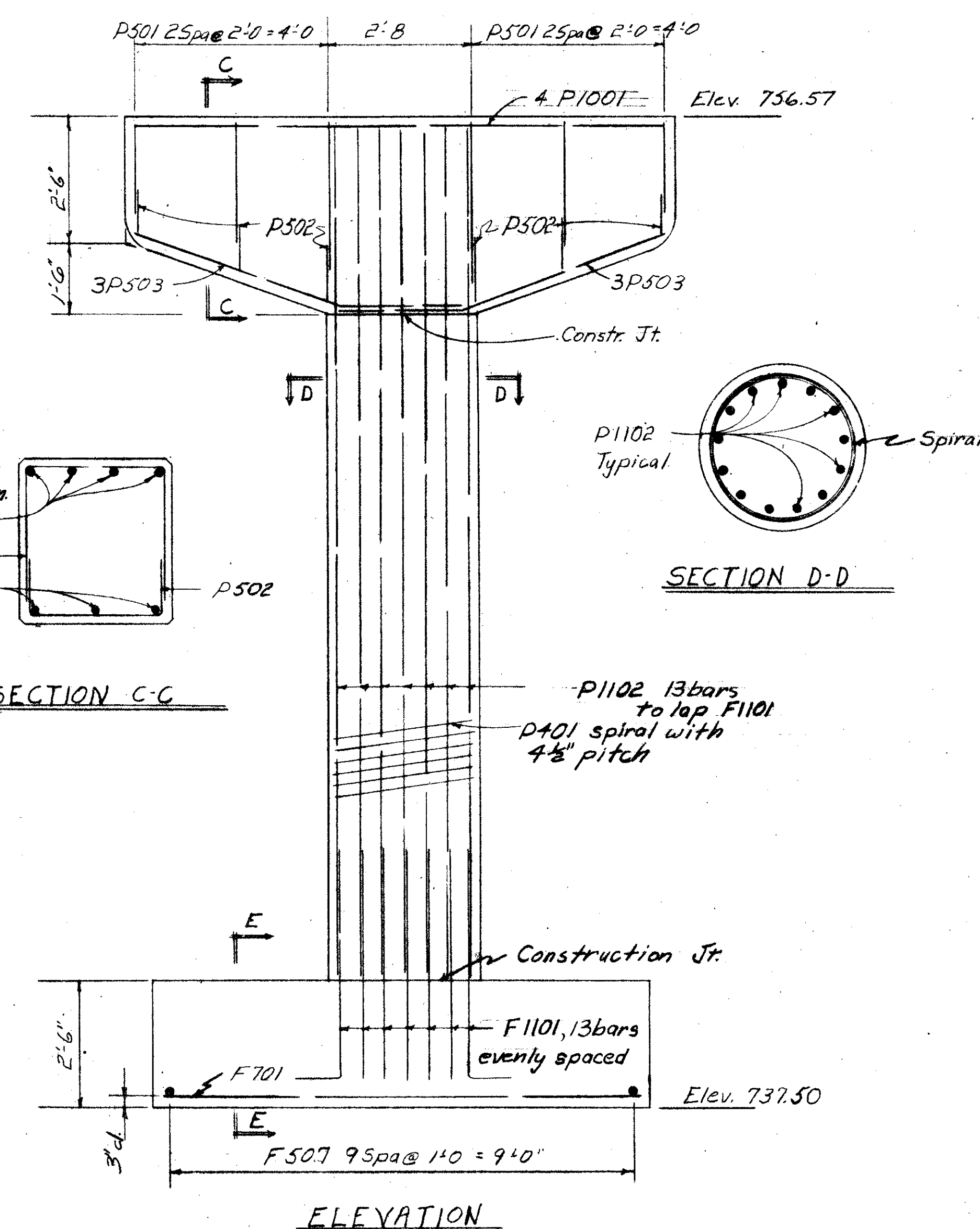
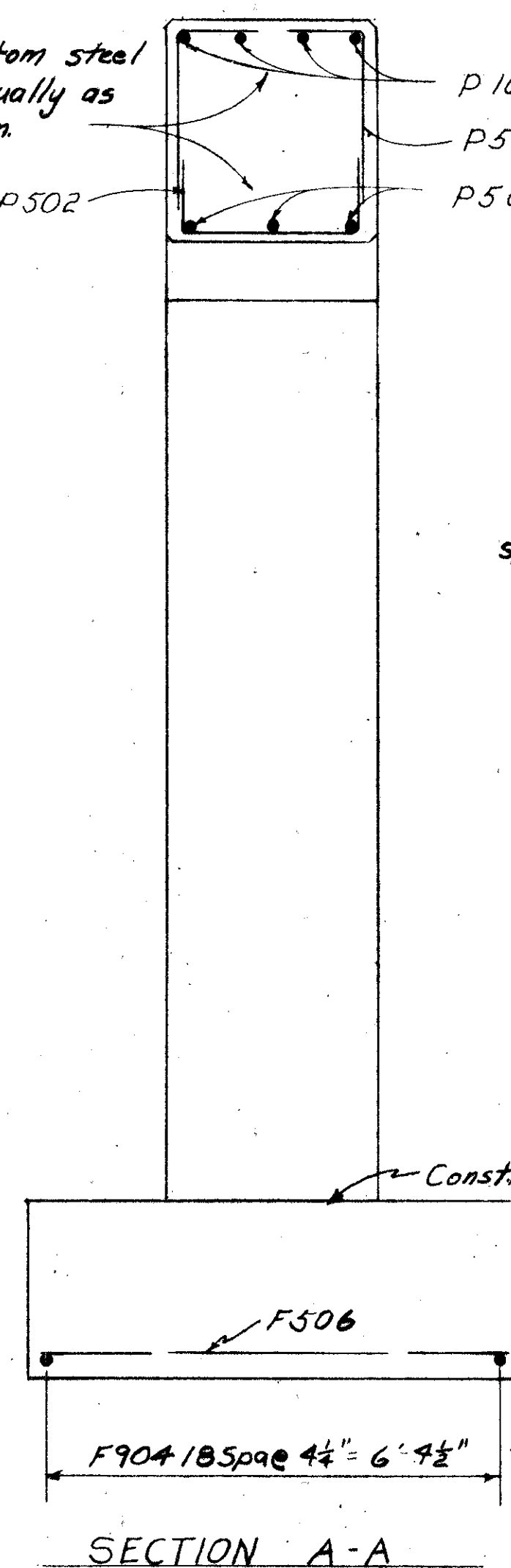
236  
250

FRANKLIN COUNTY  
FRA-40-12.82



Top & bottom steel  
spaced equally as  
shown.

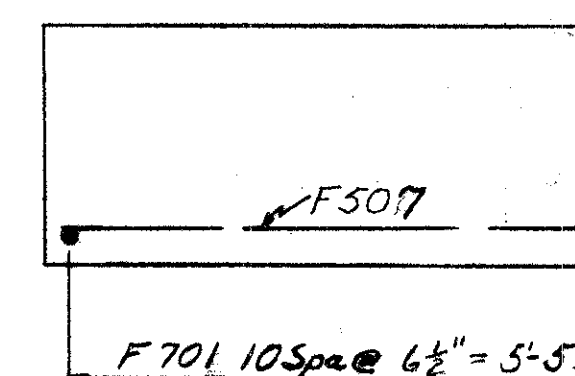
P1001  
P501  
P502  
P503



Top & bottom steel  
spaced equally as shown.

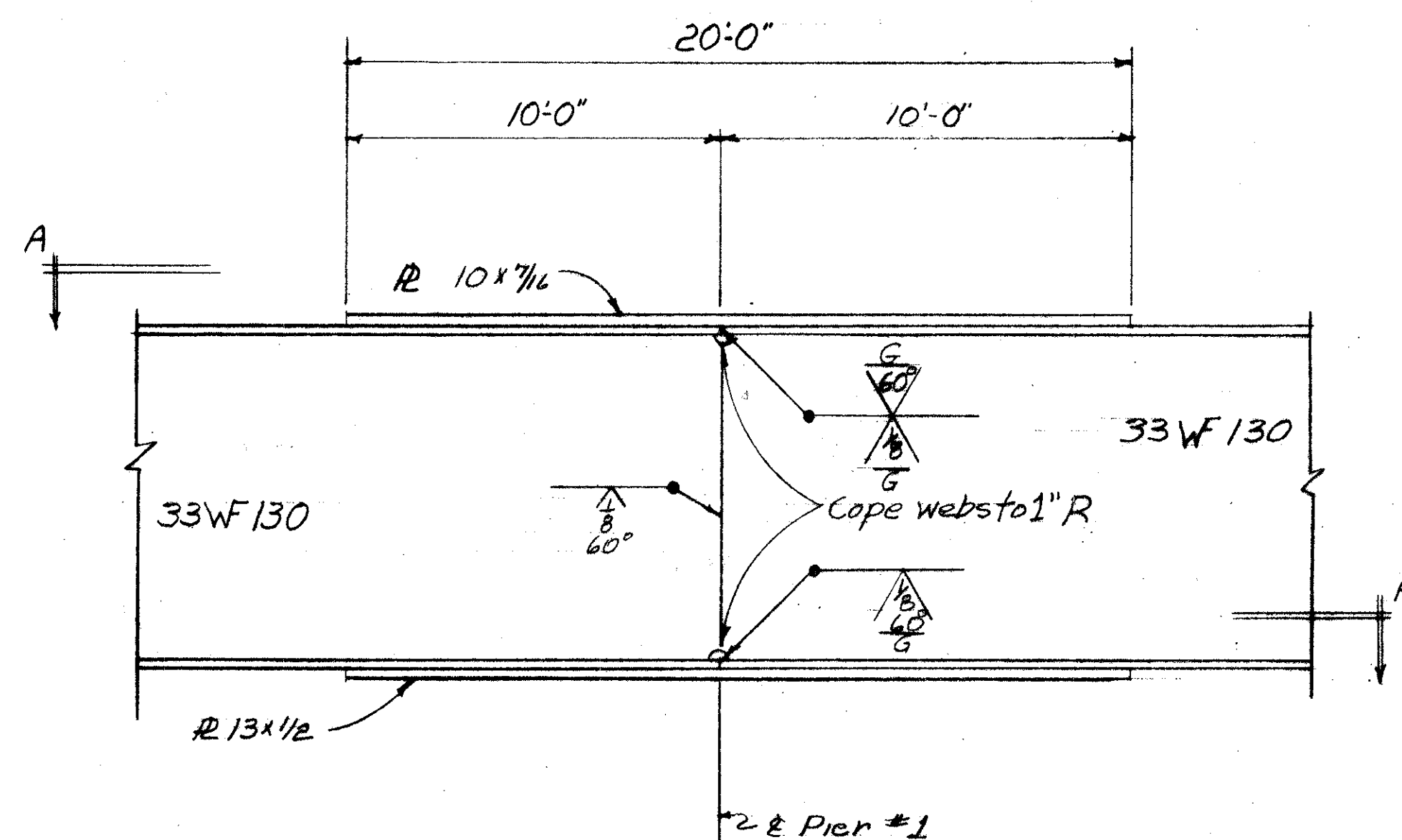
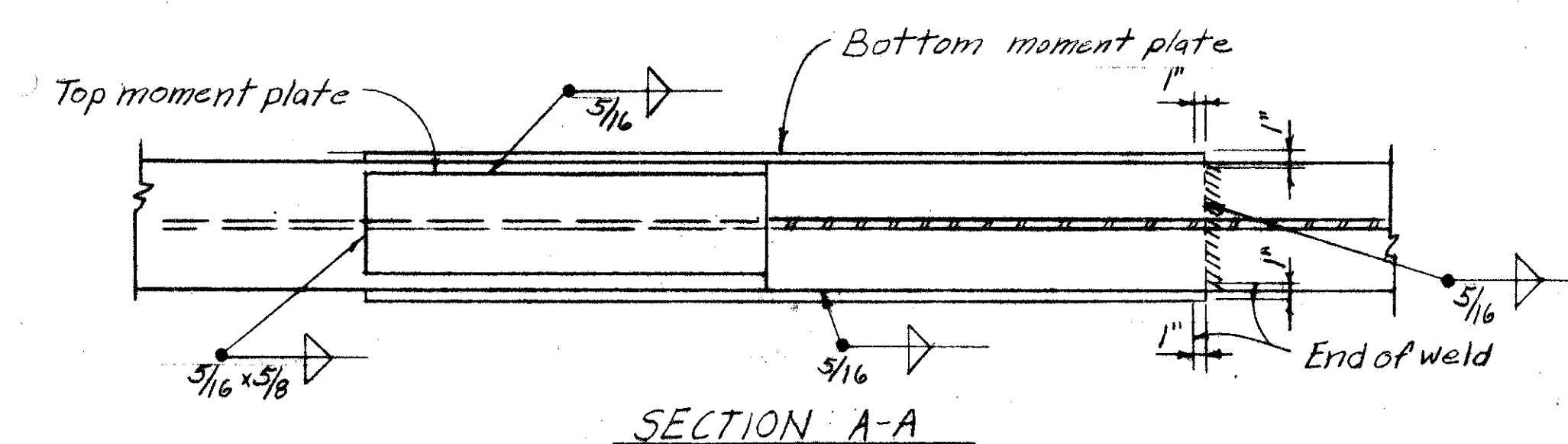
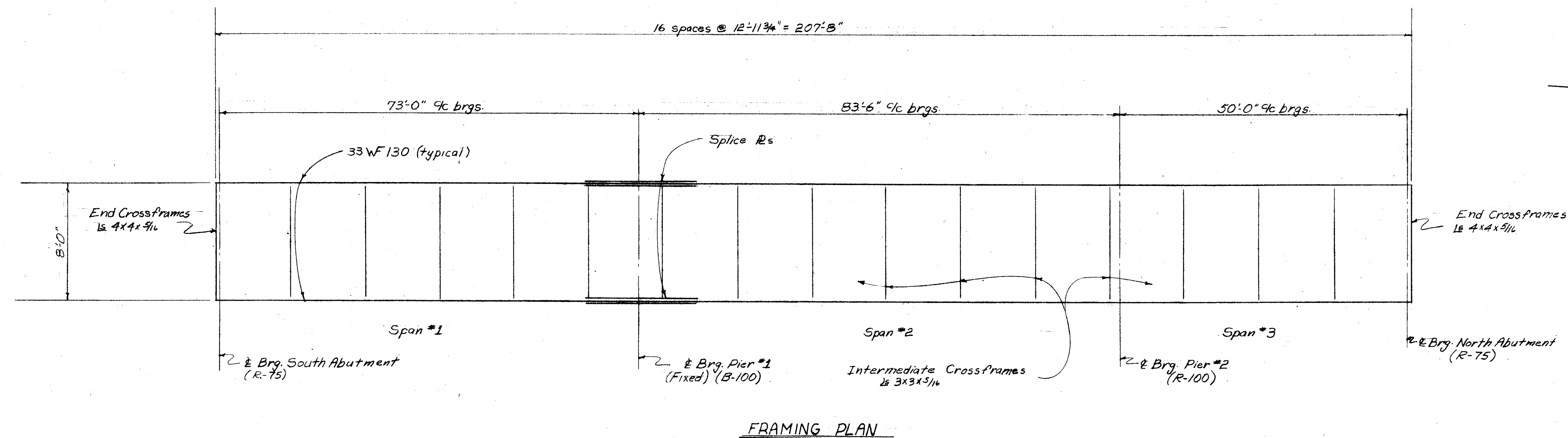
P1001  
P501  
P502  
P503

Note:  
Cap steel shall be spaced to  
miss anchor bolts.



ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
PIERS 1 & 2 DETAILS BRIDGE NO. FRA-40-1353 SOUTH INNERBELT UNDER SIXTH ST.						
FRANKLIN COUNTY STA 88+24.01						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RF	RF		DFH	TLU	2/13-62	





DEFLECTION and CAMBER			
Location	Span #1	Span #2	Span #3
Defl. due to wgt of steel	3/16	3/16	0
Defl. due to remaining D.L.	1/16	1/16	1/16
Total Deflection	7/8	7/8	1/16
Req'd Shop Camber	1"	1"	0

BEAM SPLICE WELDING PROCEDURE

- 1- Raise end of beam at south abutment 3 3/8" and at north abutment 1 1/8".
- 2- Butt weld beam flanges and webs at Piers #1 & 2 using following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
- 3- Weld top and bottom flange moment plates at Pier #1
- 4- Lower ends of beams at both abutments.

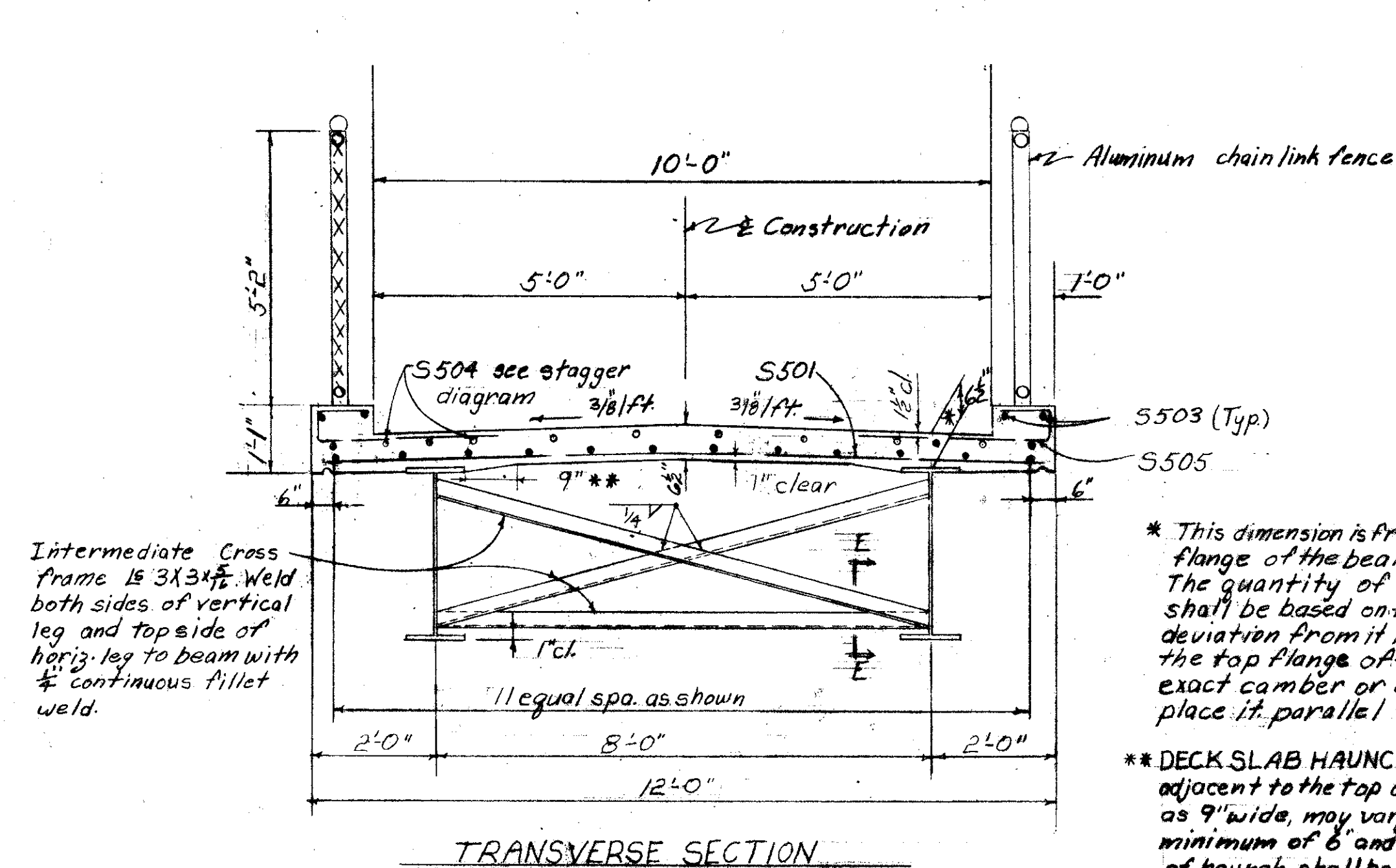
All longitudinal steel is S503 unless otherwise noted, lap S503, 1'-7" minimum.

6 1/2" slab thickness includes 1/2" monolithic concrete wearing surface.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

238  
250

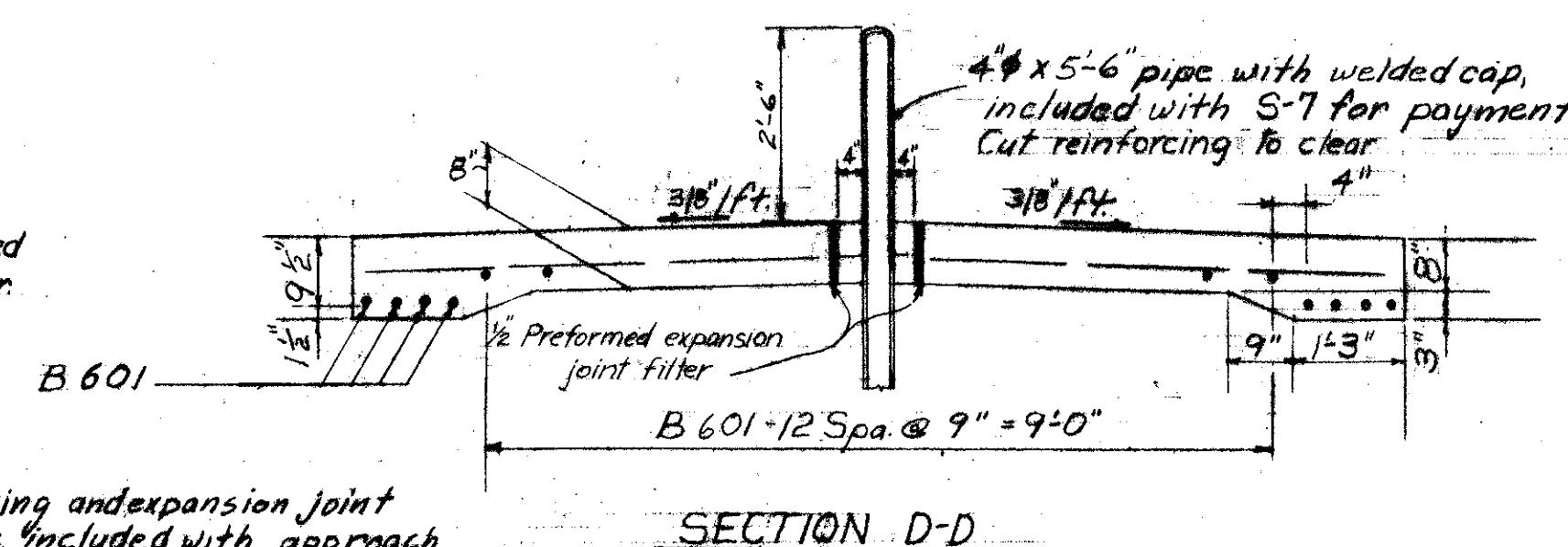
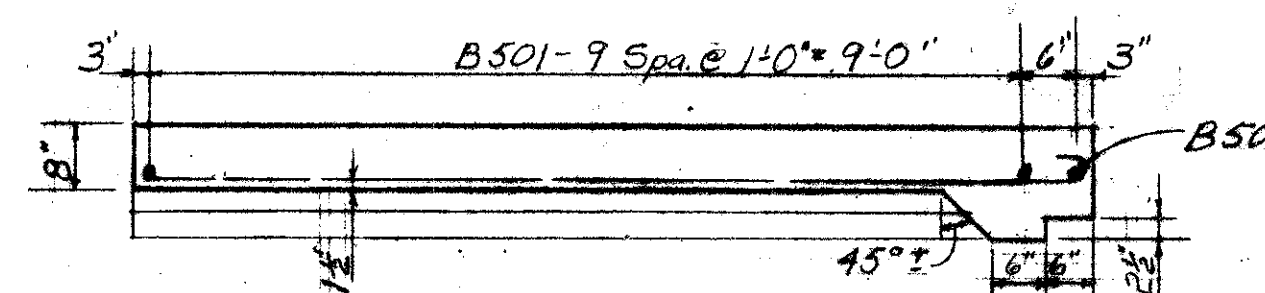
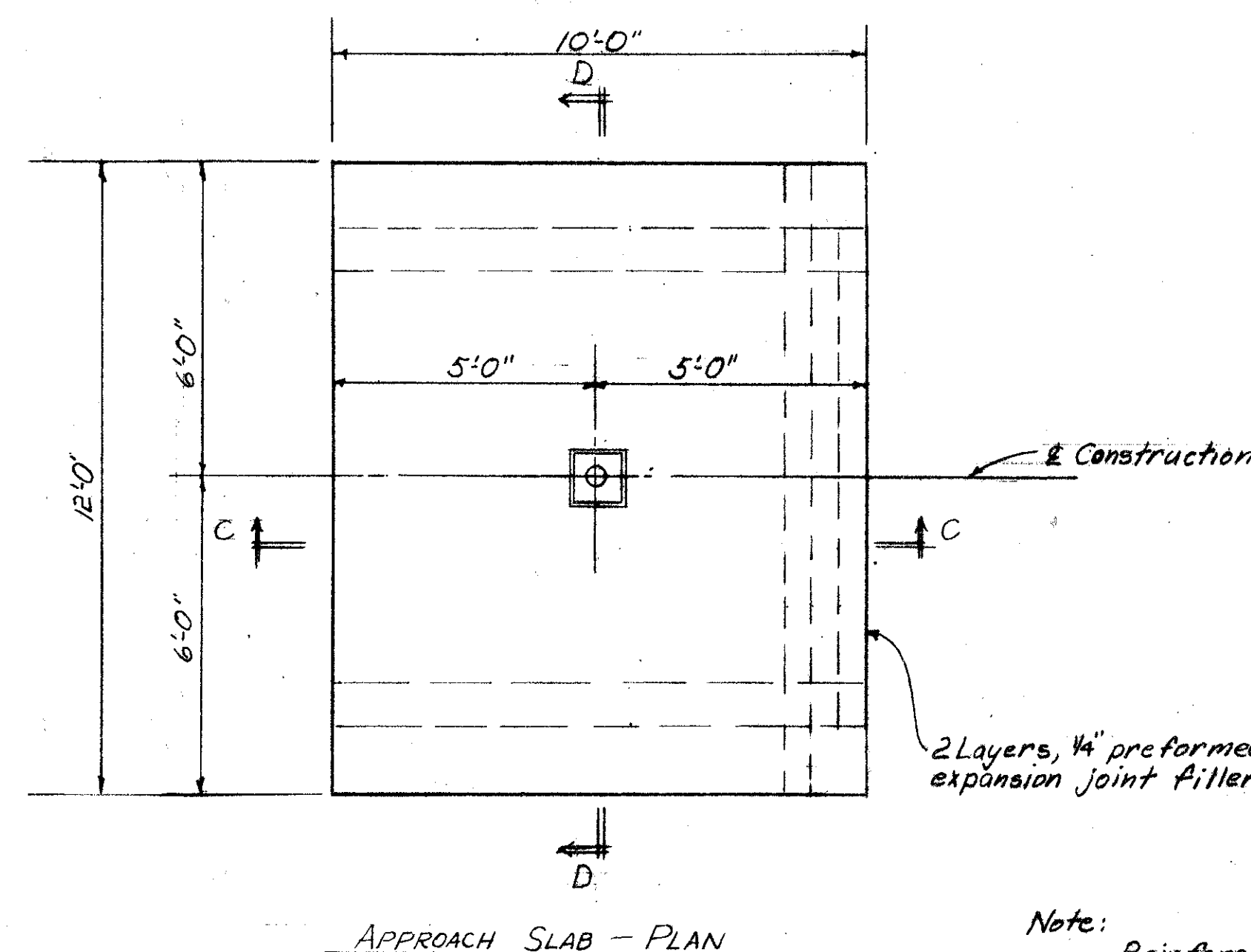
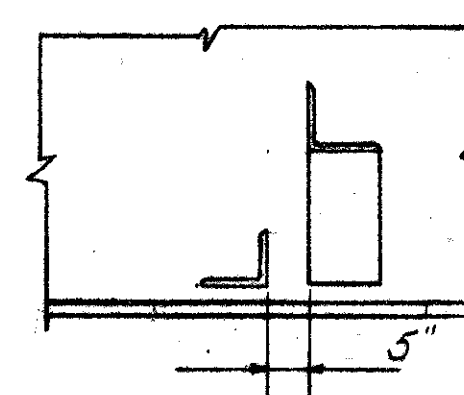
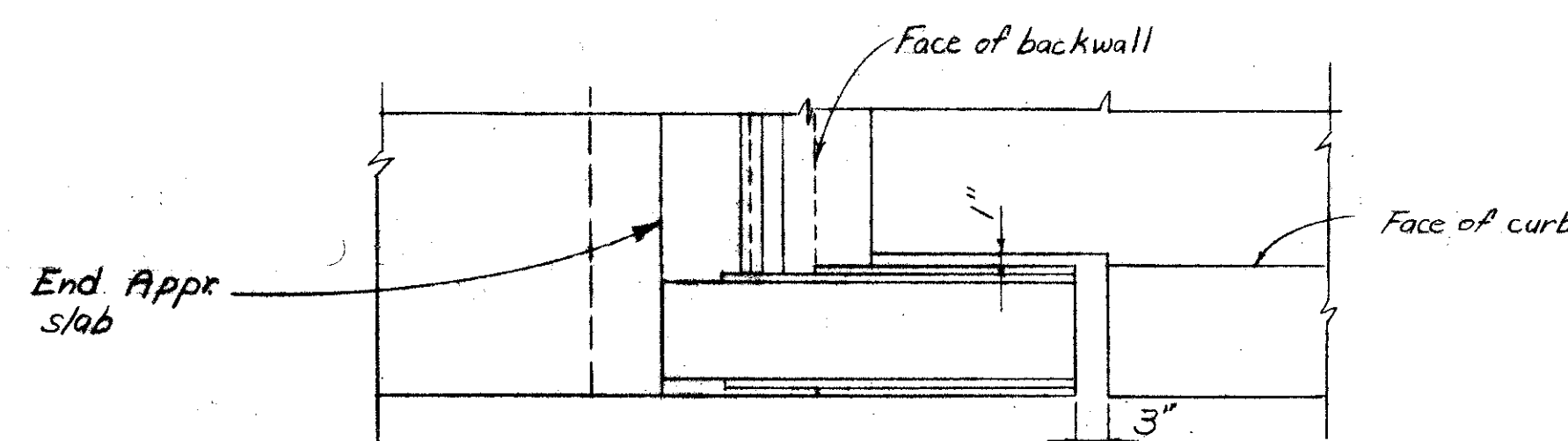
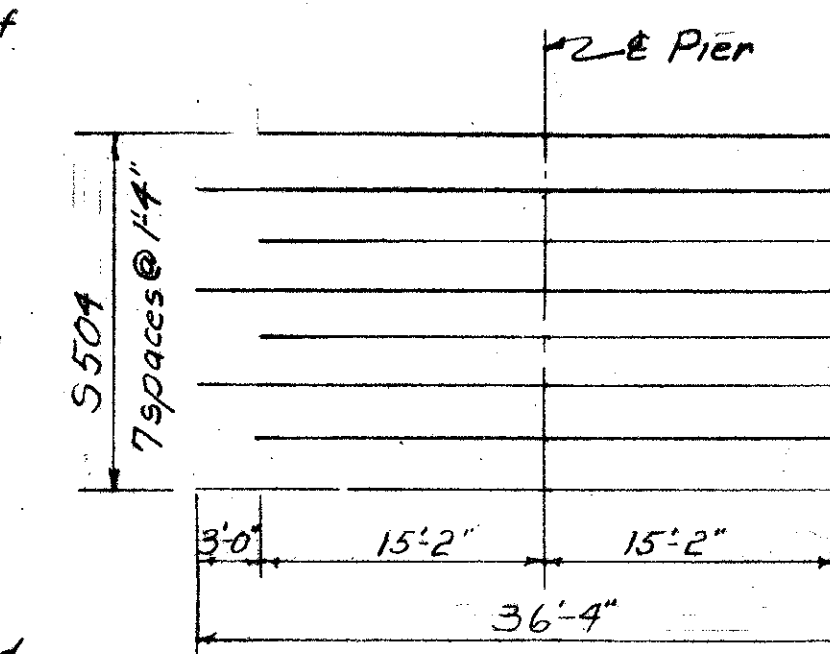
FRANKLIN COUNTY  
FRA-40-1232



\* This dimension is from the top of the slab to the flange of the beam, and is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

\*\* DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide, may vary from this dimension with a minimum of 6" and maximum of 12". Maximum slope of haunch shall be one vertical to four horizontal. Payment for deck slab concrete shall be based on the 9" width.

### PLACEMENT OF TRANSVERSE SLAB REINFORCING



### SECTION B-B

REINFORCING STEEL	Mark	Length	No. req'd	"A"
B501	11'-8"	22	—	—
B601	10'-4"	42	9'-8"	—

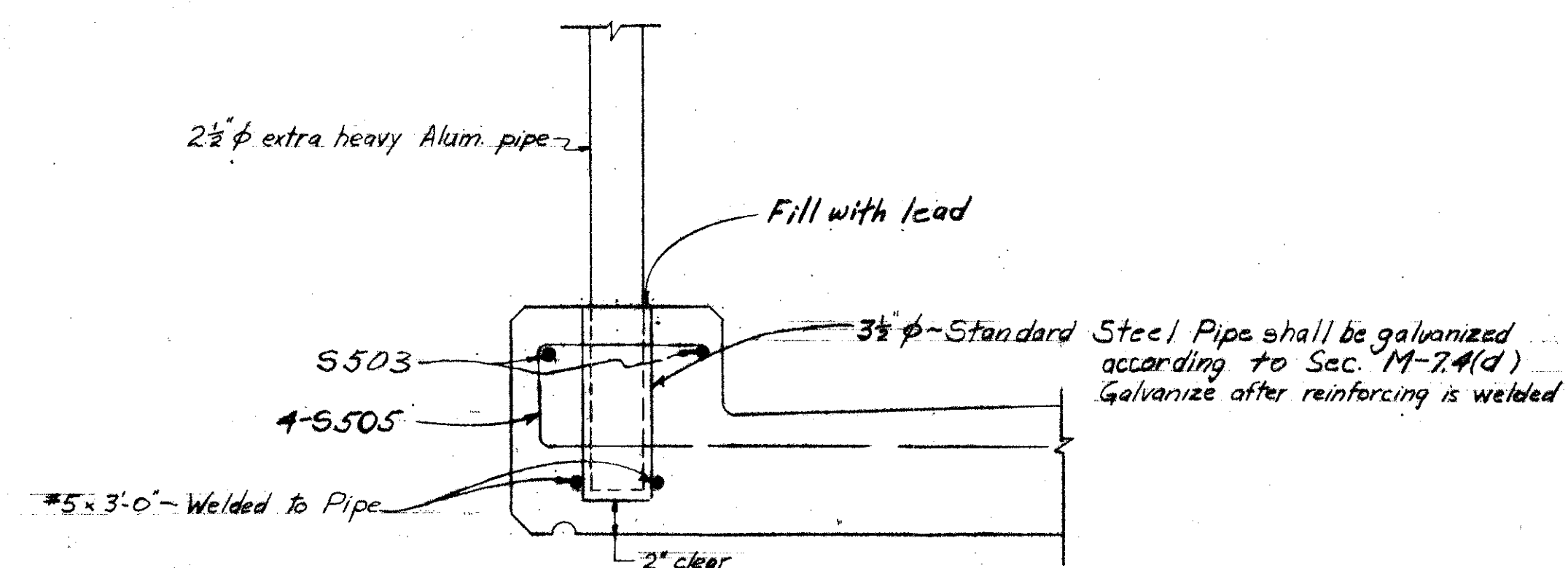
### Notes

Transverse bars shall be field bent to fit crown.  
Cost is included in Item 5-4.  
Approach slabs will be included in roadway quantities.

Note: Reinforcing and expansion joint filler are included with approach slab for payment.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO					
SUPERSTRUCTURE & MISCELLANEOUS DETAILS					
BRIDGE NO. FRA-40-1353 SOUTH INNERBELT UNDER SIXTH ST.					
FRANKLIN COUNTY			STA. 88+24.01		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
PF	PF		DFH	TLU	2/13/62



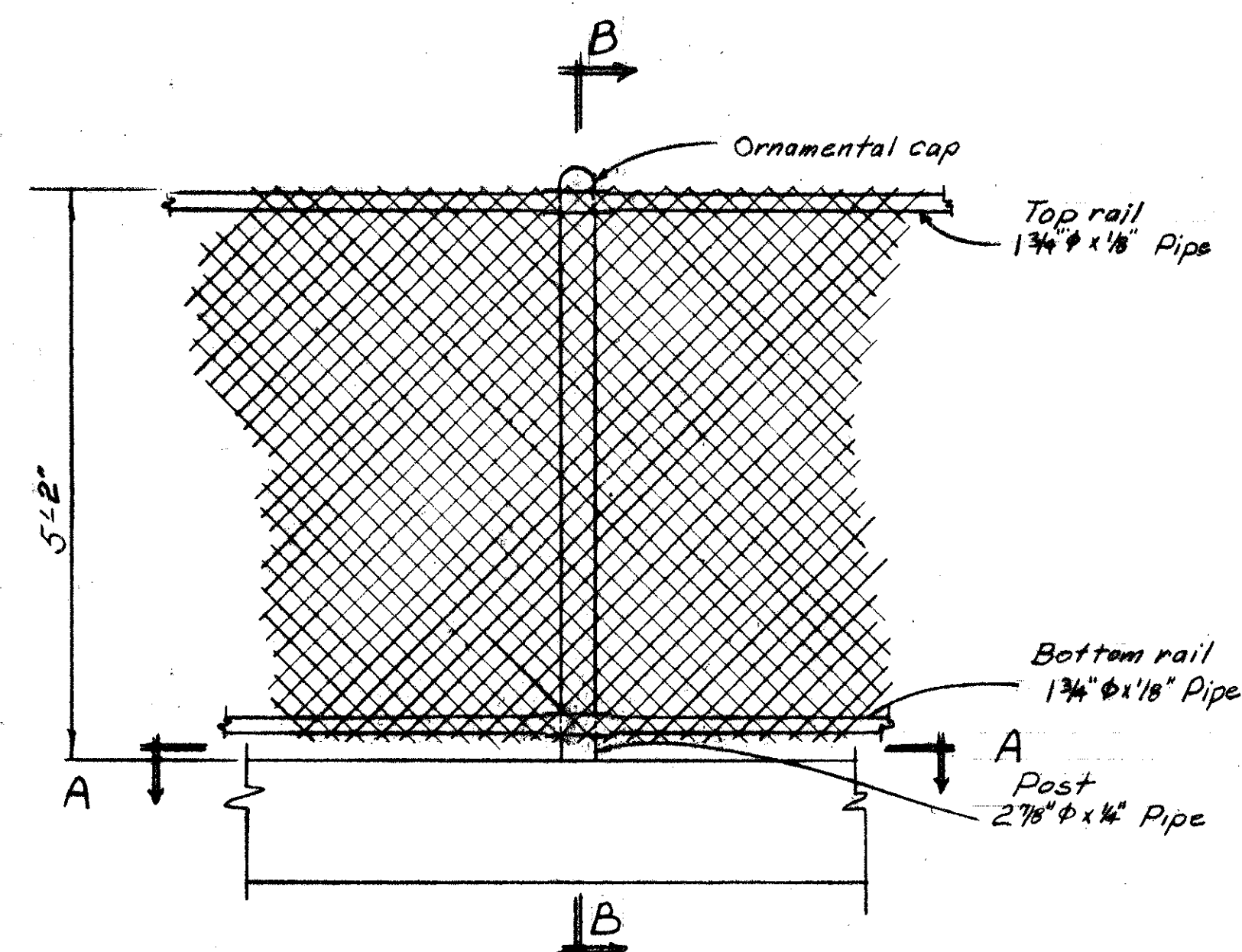
FRANKLIN COUNTY  
FRA-40-12.82

SECTION B-B

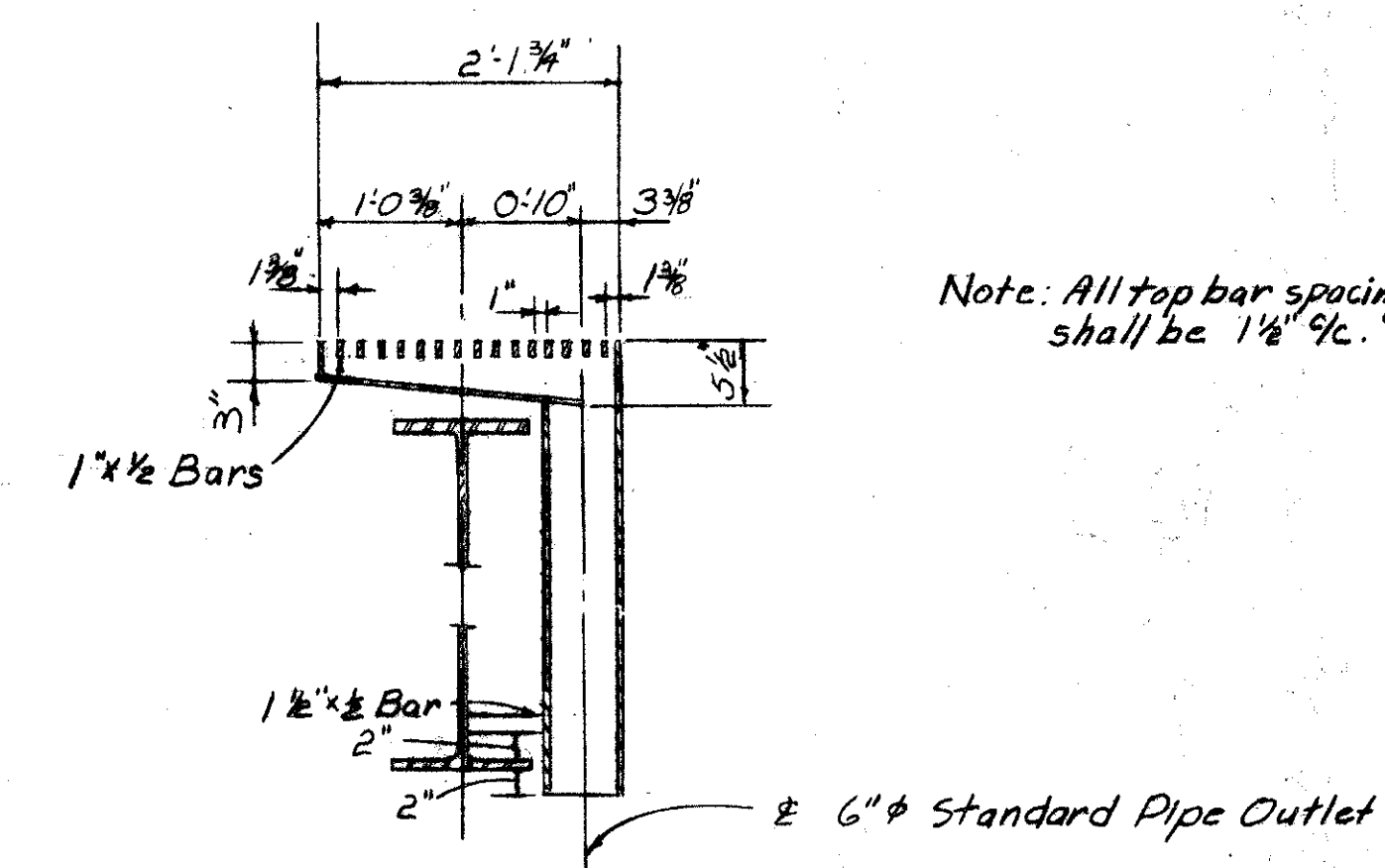
Note: Fence to be I-26 with knuckle finish.

Fence to be fabricated and erected according to standard construction drawings F-1 and F-3 dated 2-1-63 and according to supplemental specs. 1B revised 2-1-63 except that all components shall be aluminum conforming to Sec. M-7.19.

Lead joint, reinforcing bars and pipe to be included with fence for payment.

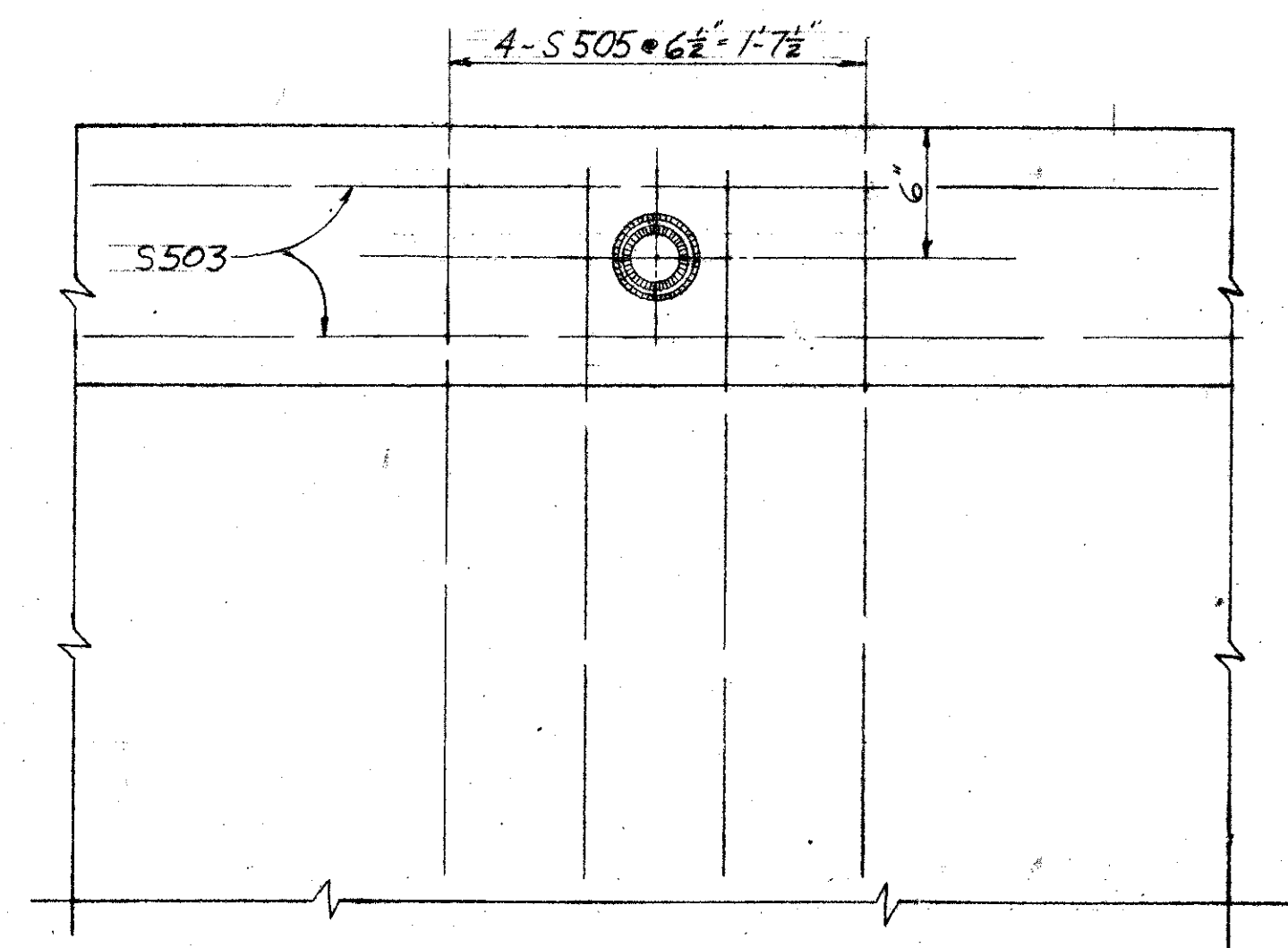


FENCE ALUMINUM CHAIN LINK



SCUPPER DETAIL

Note: Use standard scupper CSB-2-56 except for dimensions and details shown.



SECTION A-A

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

FENCE DETAILS

BRIDGE NO. FRA-40-13.53  
SOUTH INNERBELT UNDER SIXTH ST.

FRANKLIN COUNTY STA. 88+24.01

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PF	PF		DFH	JLU	2-13-62	

## REINFORCING

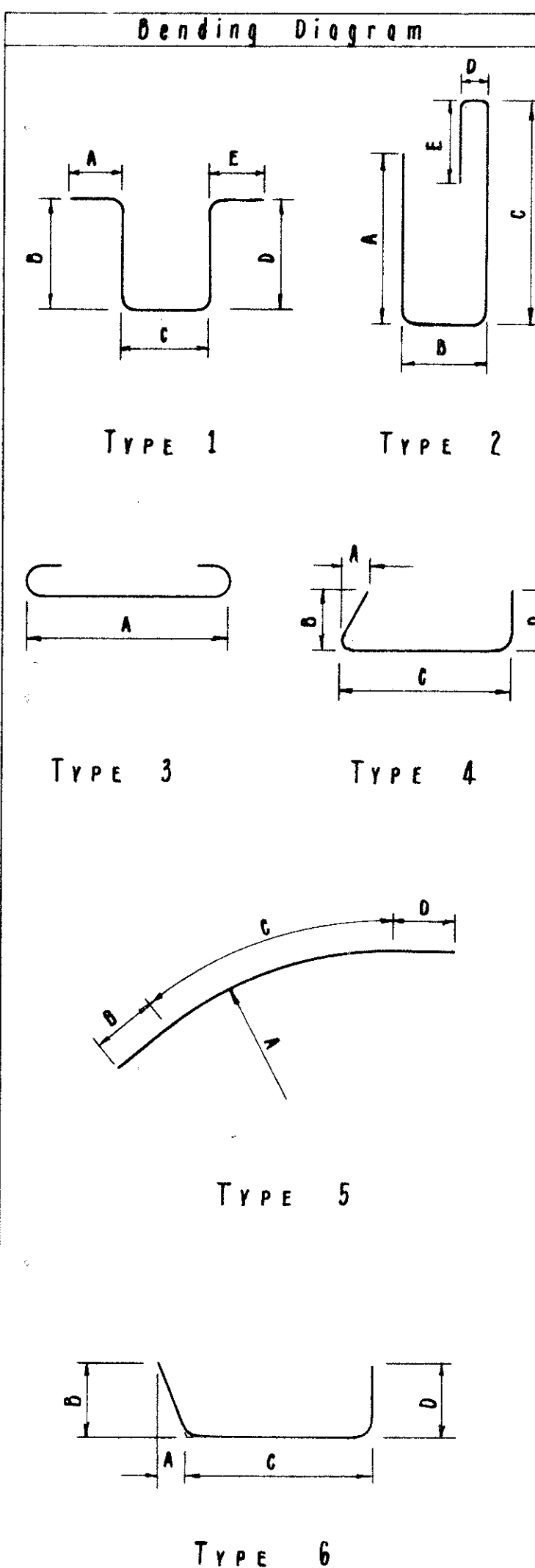
## STEEL

## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

240  
250FRANKLIN COUNTY  
FRA-40-1282

Mark	Nº	Length	Weight	Shp.	Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
ABUTMENTS															
A501	21	6-4	139	1			1-7	3-5	1-7						bt
A502	27	11-8	329												st
A503	5	17-6	91												st
A504	5	7-1	37												st
A505	24	2-11	73												st
A506	24	8-2	205												st
A507	24	4-4	108												st
A508	4	6-6	27												st
A509	4	7-6	31												st
A510	4	7-10	33												st
A512	12	6-3	78												st
A513	8	2-11	24												st
A514	16	3-5	57												st
A515	8	6-3	52												st
A516	4	2-8	11												st
A517	12	11-8	146												st
A518	4	2-7	11												st
PIERS															
A601	22	13-0	430	2			4-3	1-8	5-1	0-11	1-11				bt
A901	9	13-1	400												st
F501	9	11-8	110												st
F502	42	10-0	438												st
F504	23	3-6	84	3			2-11								bt
F505	3	12-2	38												st
F601	18	7-0	189												st
F602	8	7-2	86	1			5-2	2-2							bt
F603	8	10-5	125	1			5-2	5-5							bt
SUPERSTRUCTURE															
S501	377	11-8	4589												st
S502	6	9-6	59												st
S503	120	35-10	4485												st
S504	16	33-4	556												st
S505	180	3-8	689	1			0-8	0-6	2-9						bt
REPLACEMENT STEEL															
RE501	1	5-7													st
RE601	1	5-11													st
RE701	1	6-2													st
RE901	1	6-10													st
RE1001	1	7-2													st
RE1101	1	7-6													st
REPLACEMENT STEEL FOR SPIRAL															
RE401	1	5-3													st



NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar

ESTIMATED				QUANTITIES			
Item	Total	Unit	Description	Abut.	Pier	Supers.	General
E-2	132	Cu. Yd.	Unclassified Excavation	95	37		
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump
S-1	59	Cu. Yd.	Class "C" concrete, superstructure			59	
S-1	15	Cu. Yd.	Class "C" concrete, Pier caps & columns		15		
S-1	36	Cu. Yd.	Class "E" concrete, Abutments above footings	36			
S-1	31	Cu. Yd.	Class "E" concrete, footings	16	15		
S-4	21,058	Lbs.	Reinforcing Steel.	3536	7144	10,378	
S-7	61,800	Lbs.	Structural Steel			61,800	
S-8	61,800	Lbs.	Field painting of structural steel			61,800	
S-9	46	Lin. Ft.	Polyvinyl Plastic Waterstop	46			
S-14	423	Lin. Ft.	Aluminum fence, (I-26), with conc. end posts.	13		410	
S-29	23	Cu. Yd.	Porous Backfill	23			
S-29	12	Lin. Ft.	8" Perforated Bituminous coated CMP	12			
S-29	2	Each	Scuppers, including supports			2	
I-10	96	Sq. Yd.	Concrete slope protection	96			
S-101	59	Each	Water reducing set retarding admixture			59	

\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE  
RAILING FOR PAYMENT

SPIRALS - HOT ROLLED							
Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	1	12-10	32	4 1/2	35	4	226
P403	1	11-6	32	4 1/2	34	4	219

## SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.

THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT

SHALL IN OTHER RESPECTS CONFORM TO ITEM S-4  
1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT  
FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER SHALL BE PROVIDED FOR EACH SPIRAL UNIT, THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT. WILL BE PAID FOR AS REINFORCING STEEL, AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST AND  
ESTIMATED QUANTITIES  
BRIDGE No FRA-40-1353  
SOUTH INNERBELT UNDER SIXTH ST.  
FRANKLIN COUNTY STA-88+2401

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DF	BDB		DFH	TLU	2-13-62	



REFERENCES:

Standard Drawings:

End Dam and End Cross Frame Details	-	CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Rocker and Bolster Details	-	RB-1-55, Revised 2-2-59
Fence Details	-	F-1, Revised 2-1-63
Fence Details	-	F-3, Revised 2-1-63
Supplemental Specification	-	S-101 Dated 7-12-62
Concrete Slope Protection Details	-	Sheet 163
R/W Fence Details	-	Sheet 163

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may be, at the option of the contractor, made in the shop. Class "B" welding shown thus:

B

SURFACE FINISH OF CONCRETE: The south abutment walls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

CONCRETE SLOPE PROTECTION shall be provided under the structure as indicated on the General Plan.

BEARING SURFACES: The concrete surface under all bearing plates shall be placed a minimum of 1/4-inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

TRAFFIC MAINTENANCE: For details of maintaining pedestrian traffic, see Roadway Plans.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3.0 tons per square foot, the north abutment footing for 1.2 tons per square foot, and the south abutment footing for 1.8 tons per square foot.

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL, if used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

SHEET LEAD: Shall conform to the requirements of A.S.T.M. Designation B29 without restriction to the Common Desilverized type.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats, backwalls, and the face of spill-thru abutment between outside beams.

CONTINUOUS BEAM SPLICES: If beams having depths differing by more than 1/8" are to be spliced by butt welding, the depth of the smaller depth beam shall be increased by splitting the web longitudinally at a distance of 1 1/2" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush.

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL NOTES

BRIDGE NO. FRA-40-13 53

SOUTH INNERBELT UNDER SIXTH STREET

FRANKLIN COUNTY STA. 88+24.01

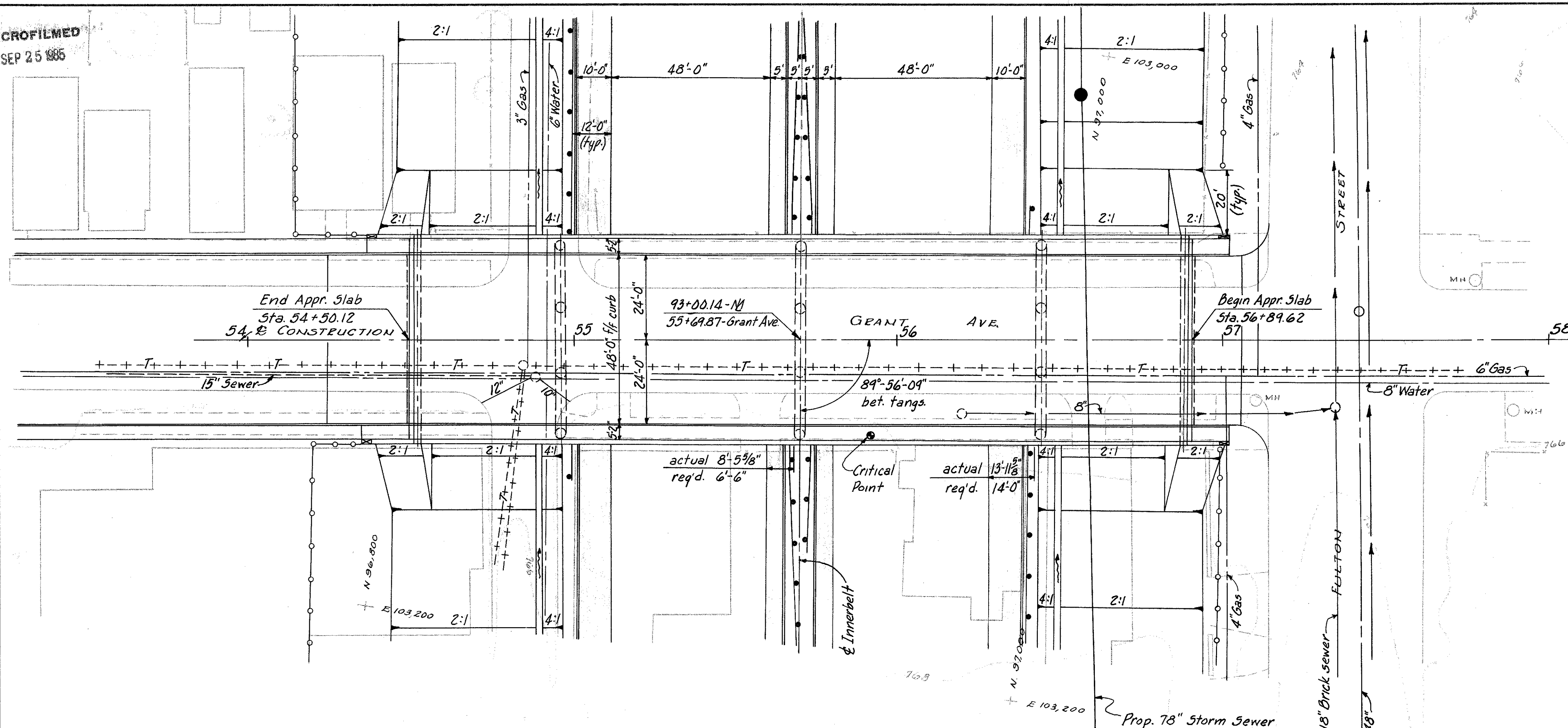
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					TLU 5-9-62	

MICROFILMED  
SEP 25 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

242  
250

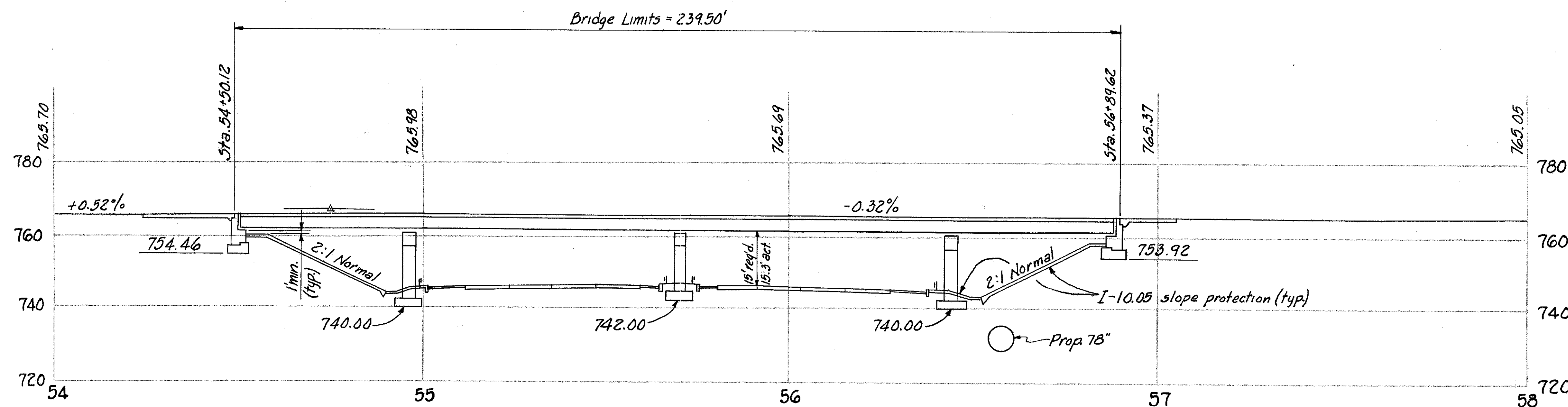
FRANKLIN COUNTY  
FRA.- 40-12.82



Grant Ave.- PVI = 54+75  
100' V.C.  
Elev. = 766.09  
Corr. = 0.11'  
P.G. = 765.98

PLAN

**PROPOSED STRUCTURE**  
TYPE: Continuous steel beam with reinforced concrete deck & substructure  
SPANS: 44'-0", 73'-6", 73'-6" and 44'-0" %c bearings  
ROADWAY: 48'-0" ffr 5'-2" sidewalks with concrete parapets and aluminum railing  
LOADING: CF 400 (1957)  
WEARING SURFACE: (2 1/2") asphaltic concrete  
SKEW: None  
ALIGNMENT: Tangent  
APPROACH SLABS: A5+1-54; South-25' long, North-15' long



PROFILE

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SITE PLAN BRIDGE NO. FRA.-40-1361 SOUTH INNERBELT UNDER GRANT AVE.						
FRANKLIN COUNTY STA. 93+00.14						
DESIGNED RJW	DRAWN RJW	TRACED HT	CHECKED E.D.	REVIEWED TLJ	DATE 2-13-62	REVISED 7-9-63

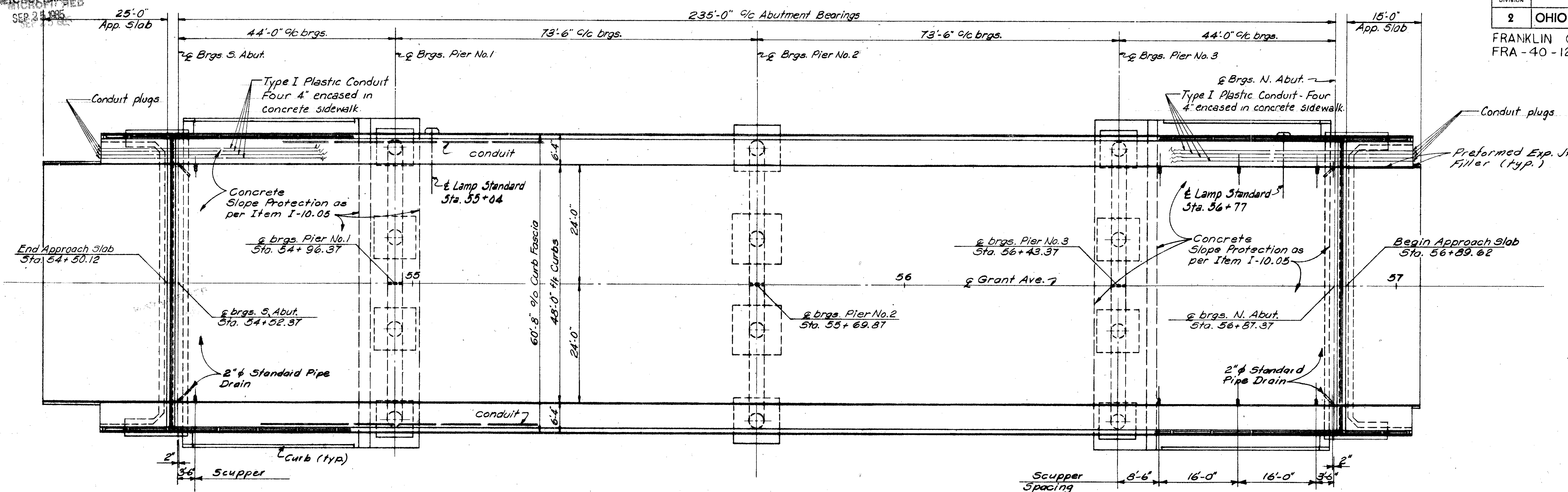


MICROFILMED  
SEP 21 1985

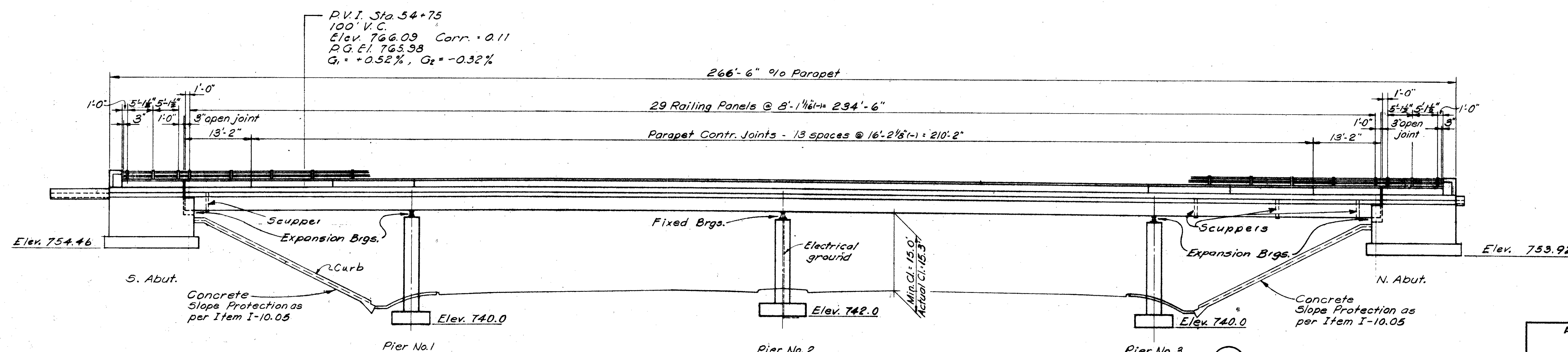
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

293  
250

FRANKLIN COUNTY  
FRA-40-12.82



GENERAL PLAN



EAST ELEVATION

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION  
BRIDGE NO. FRA-40-1361  
SOUTH INNERBELT UNDER GRANT AVE.

FRANKLIN COUNTY STA. 93+00.14

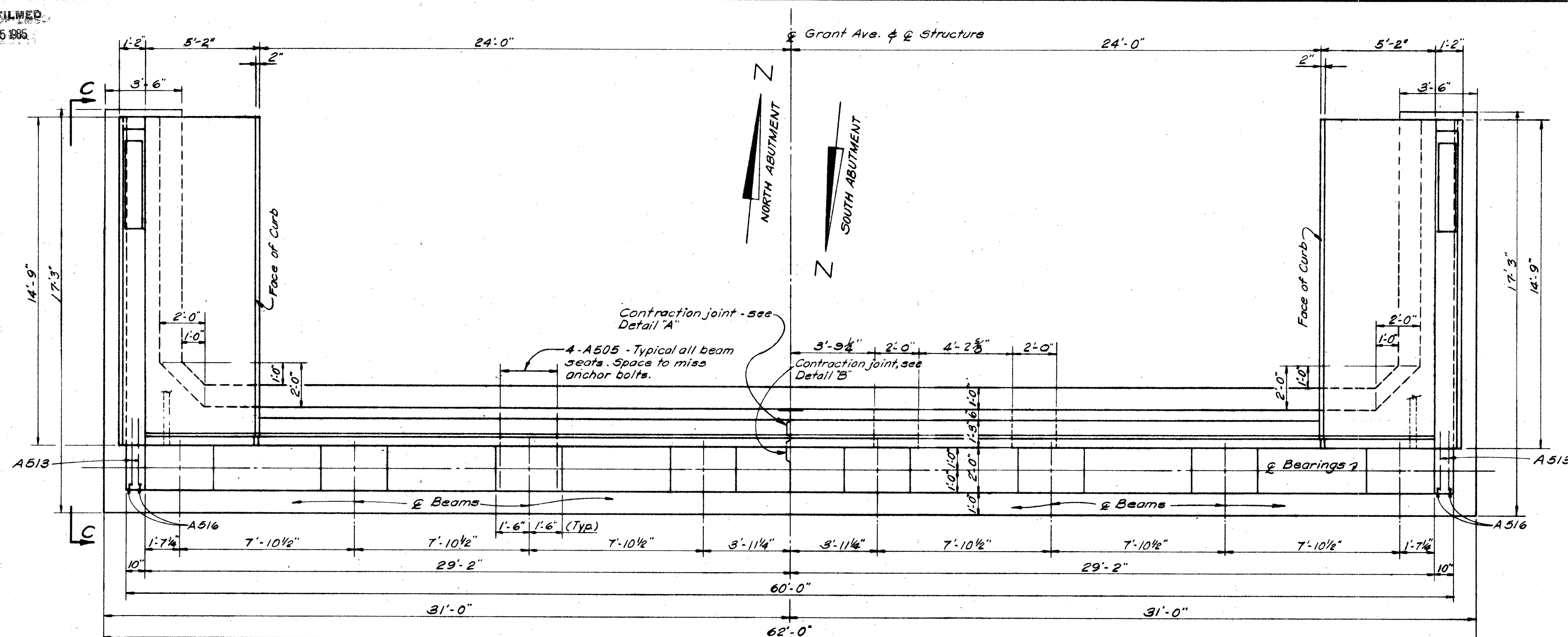
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MICROFILMED  
SEP 25 1985

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

244  
250

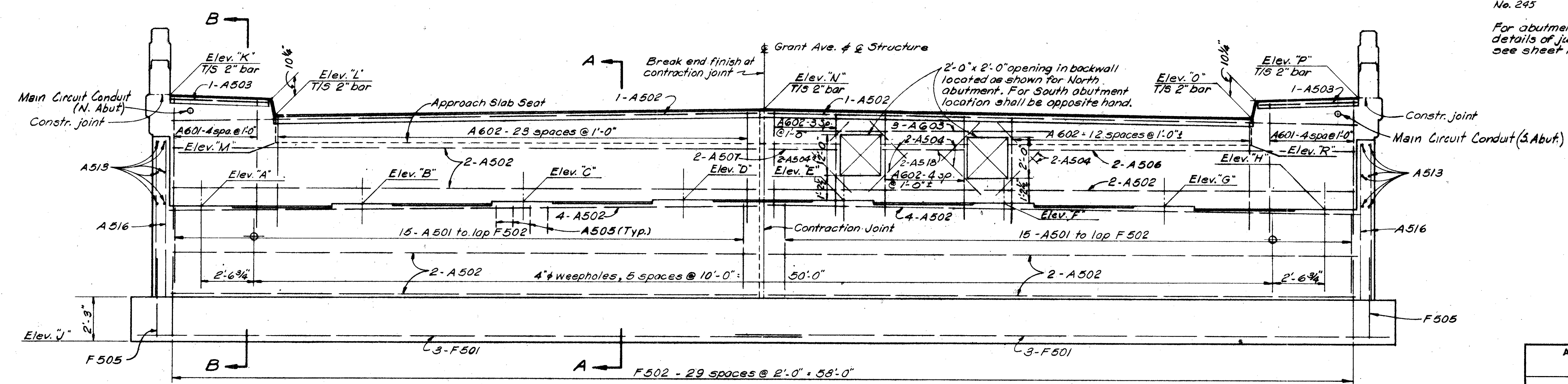
FRANKLIN COUNTY  
FRA-40-12.82



ABUTMENT PLAN

NOTES

For Sections A-A, B-B, and C-C see sheet No. 245  
For abutment wall details, wingwall details and details of junction of wingwalls and abutment see sheet No. 245



ABUTMENT ELEVATION

ELEVATION TABLE

Elev.	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"	"O"	"P"	"R"
N. Abut.	760.59	760.71	760.84	760.96	760.96	760.84	760.71	760.59	753.92	766.01	765.00	763.69	765.98	765.00	766.01	763.69
S. Abut.	761.13	761.25	761.37	761.50	761.50	761.37	761.25	761.13	754.46	766.55	765.54	764.23	765.91	765.54	766.55	764.23

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CONSULTING ENGINEERS  
COLUMBUS, OHIO

ABUTMENT PLAN & ELEVATION  
BRIDGE NO. FRA-40-1361  
SOUTH INNERBELT UNDER GRANT AVE.

FRANKLIN COUNTY STA. 93+00.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.W.M.	G.W.M.		S.V.C.	T.L.U.	2-13-62	



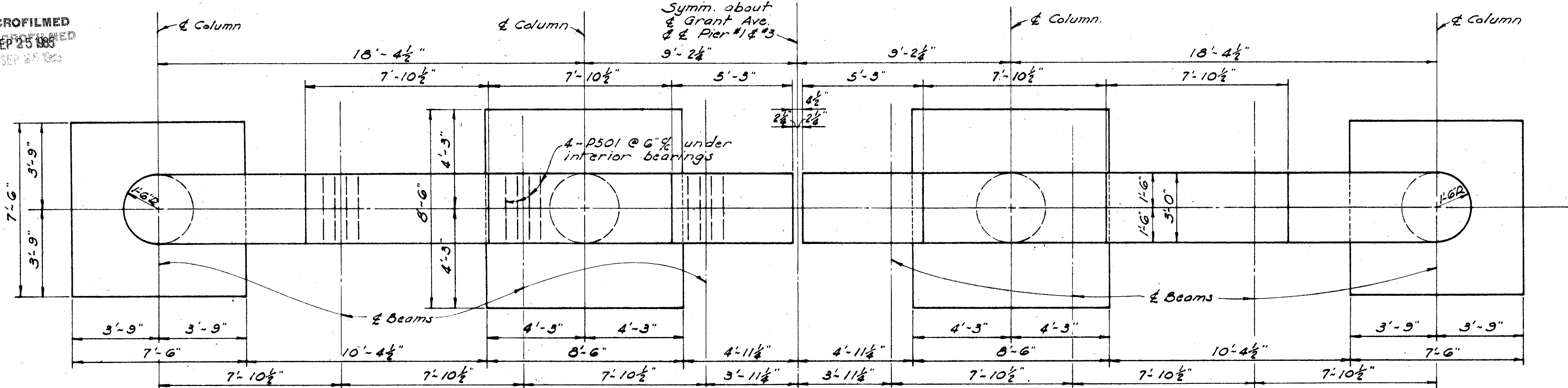
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MICROFILMED  
SEP 25 1985  
SEP 25 1985

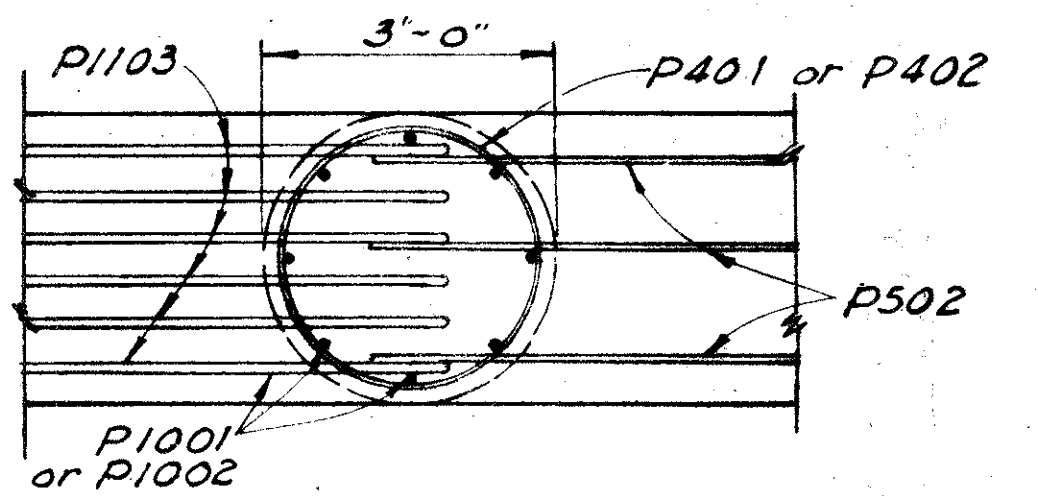
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2	OHIO		

246  
250

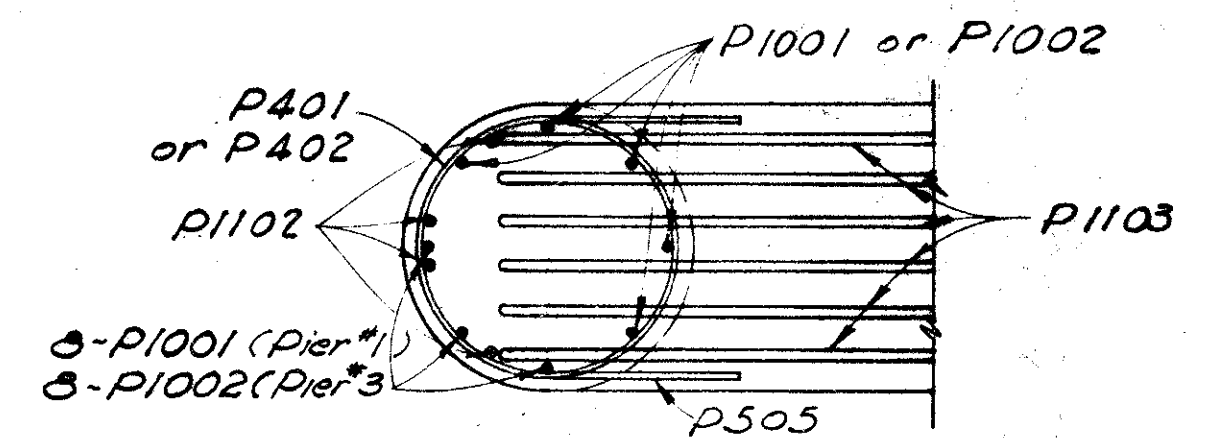
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FRA-40-12.82



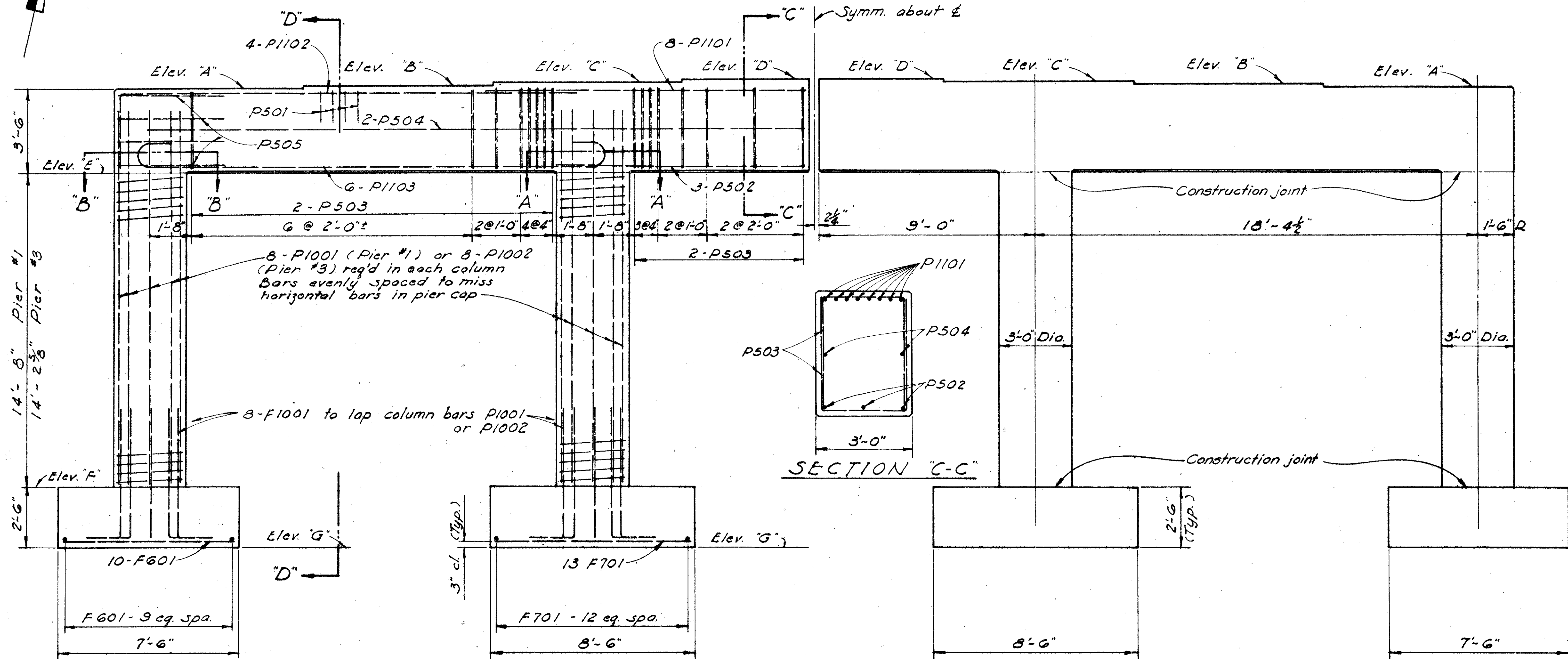
PLAN  
PIER #1 & #3



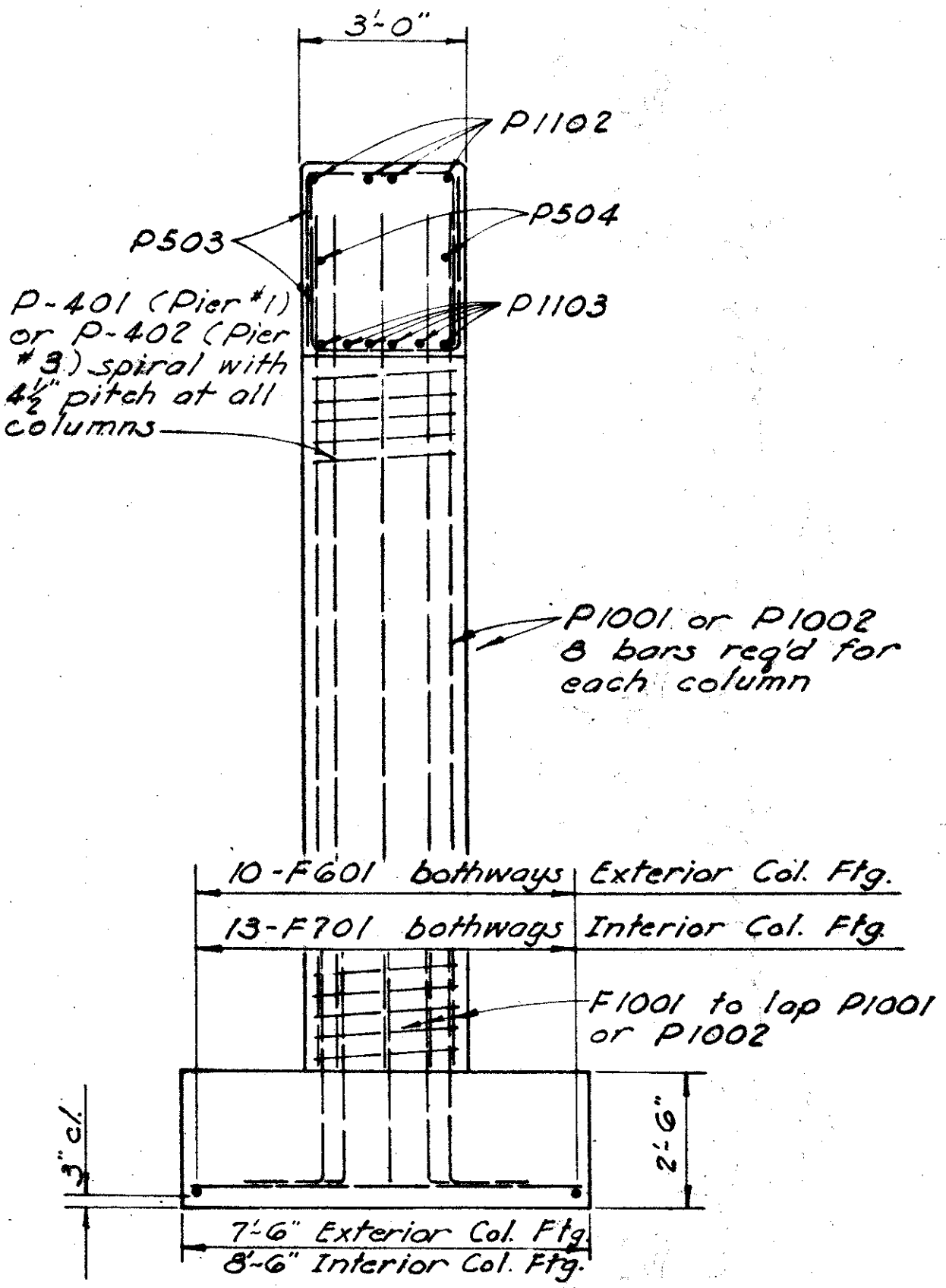
SECTION "A-A"



SECTION "B-B"



SECTION "C-C"



SECTION "D-D"

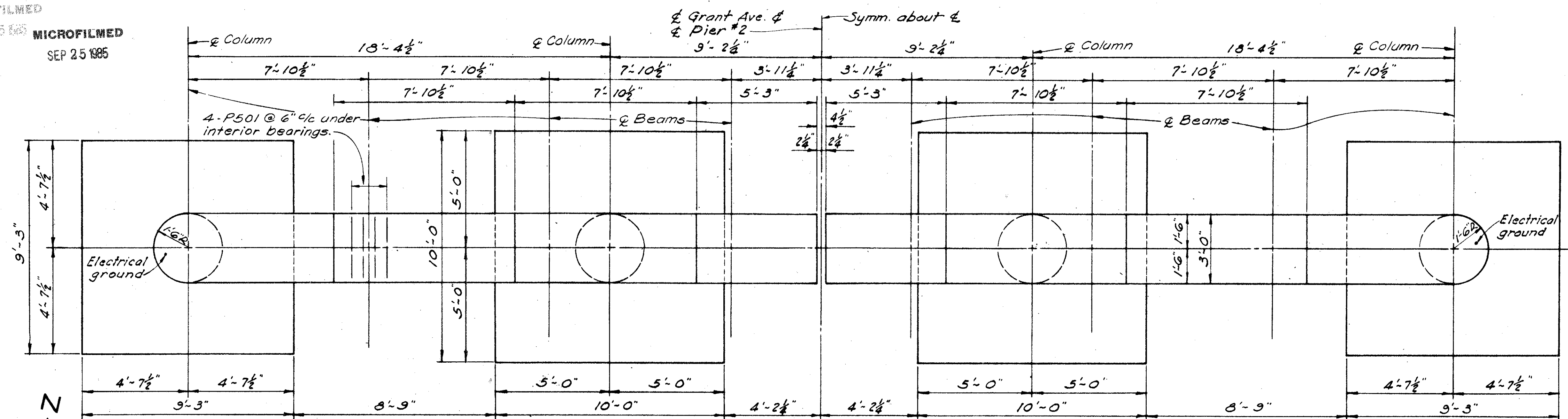
ELEVATION	"A"	"B"	"C"	"D"	"E"	"F"	"G"
PIER #1	760.66	760.78	761.90	761.03	757.16	742.5	740.0
PIER #3	760.22	760.34	760.47	760.59	756.72	742.5	740.0

ELEVATION  
PIER #1 & #3

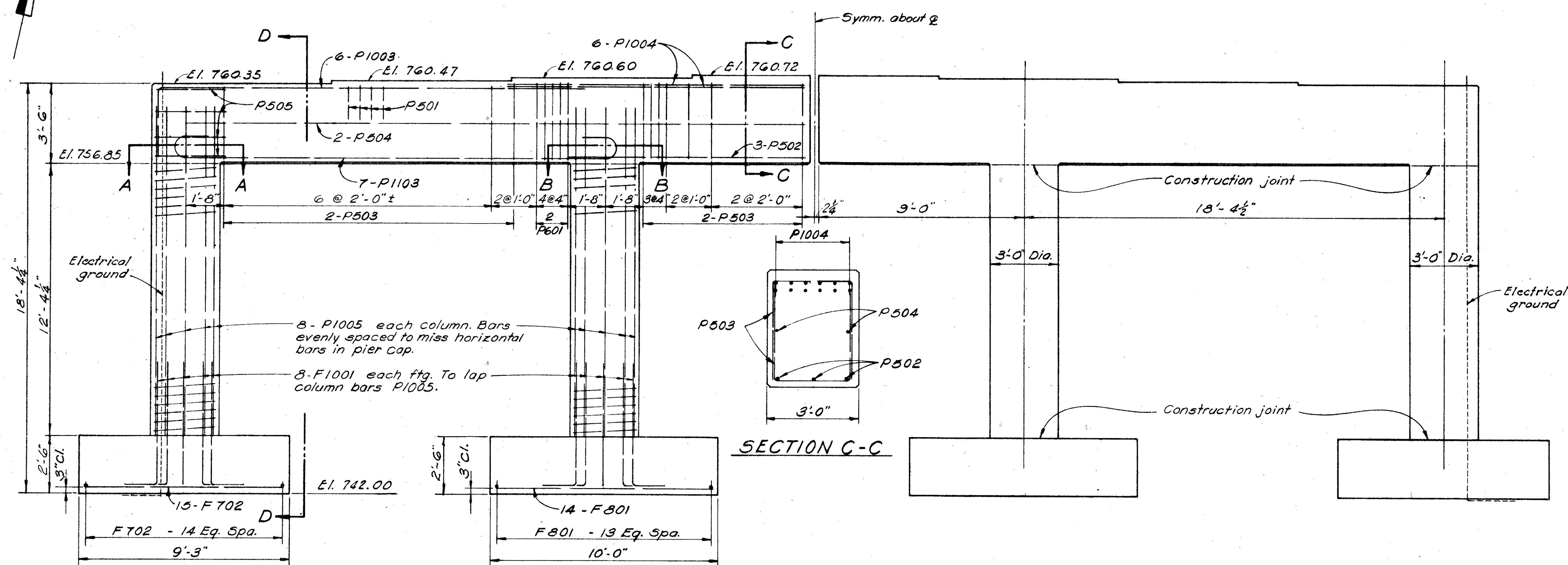
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
PIER DETAILS BRIDGE NO. FRA-40-1361 SOUTH INNERBELT UNDER GRANT AVE.						
FRANKLIN COUNTY				STA. 93+00.14		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.	R.C.		SVC.	TLU	2-13-62	



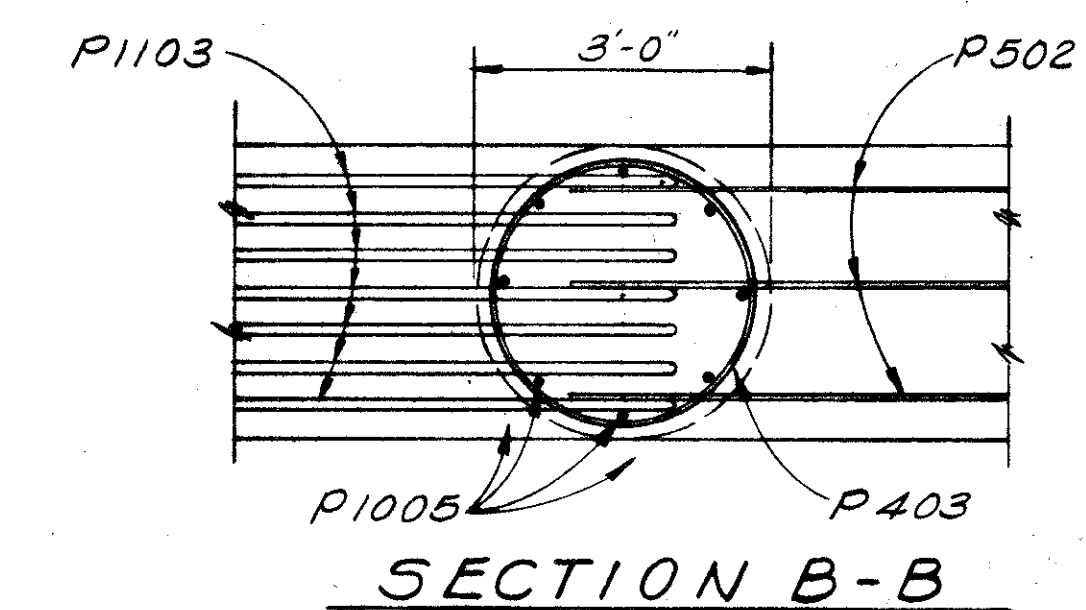
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FRA-40-12.82



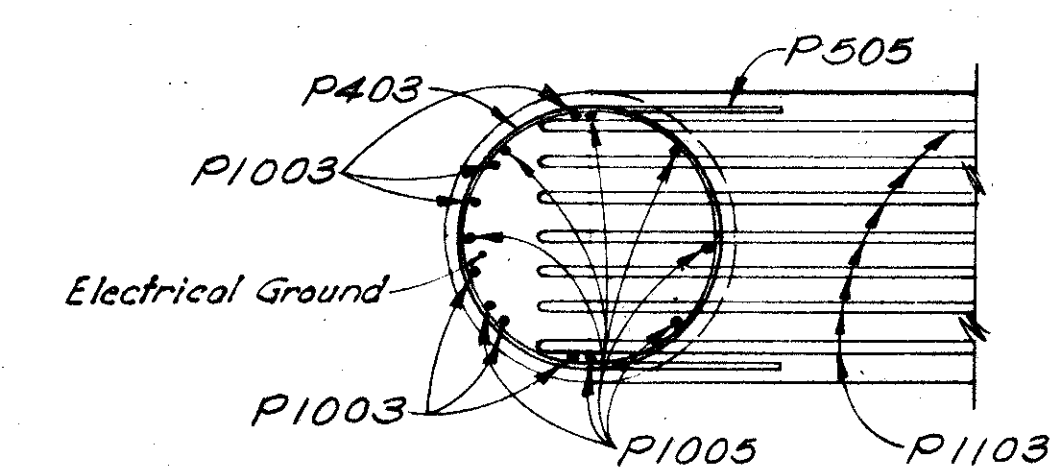
PLAN  
PIER #2



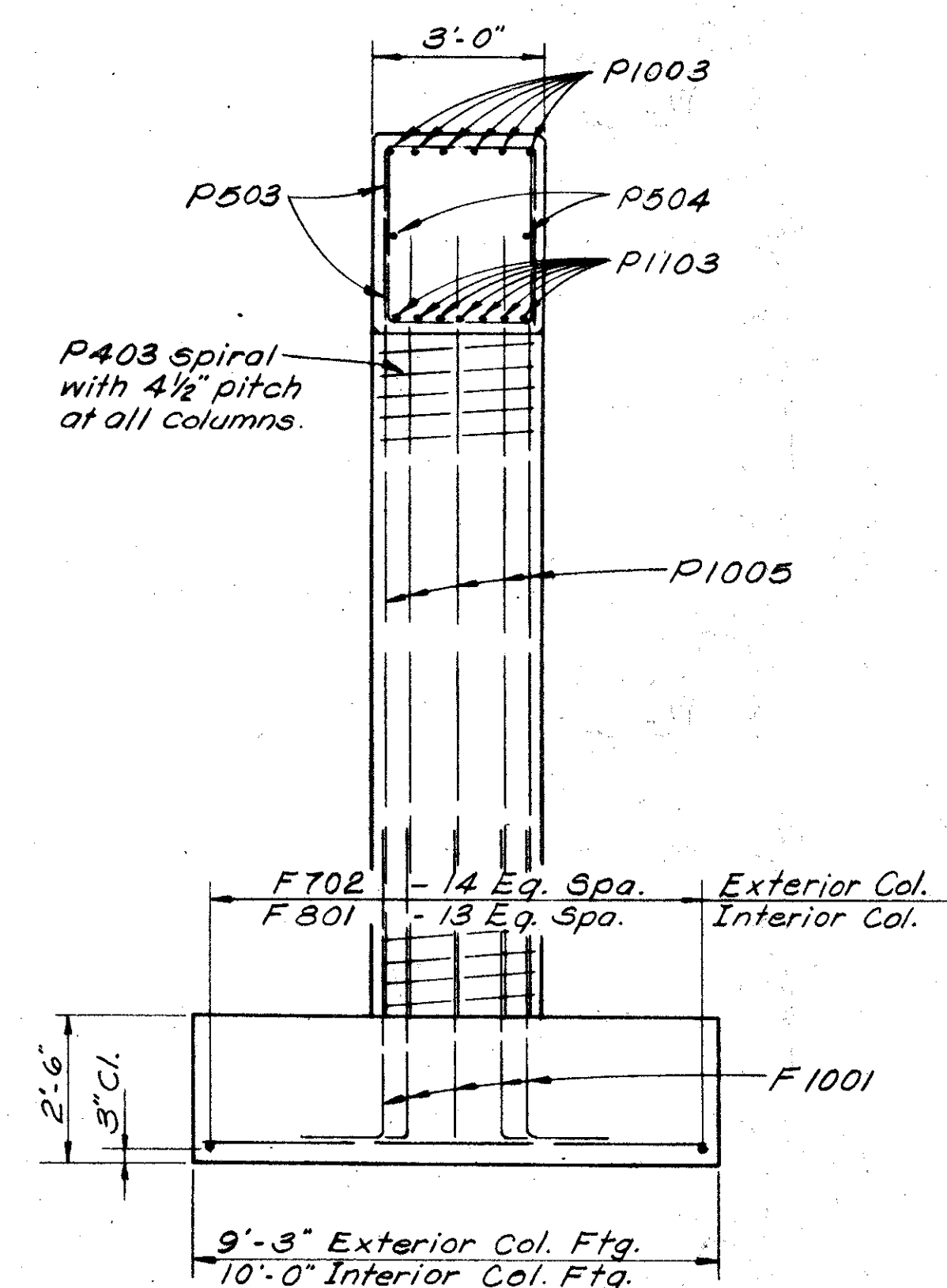
ELEVATION  
PIER #2



SECTION B-B



SECTION A-A



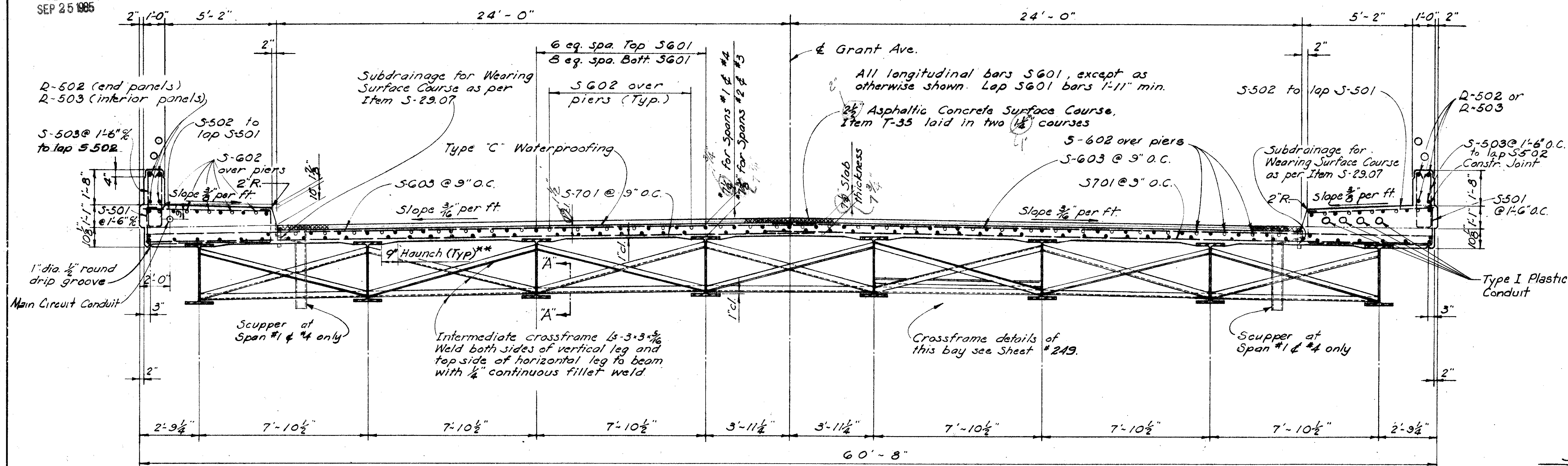
SECTION D-D

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

PIER DETAILS  
BRIDGE NO. FRA.-40-1361  
SOUTH INNERBELT UNDER GRANT AVE.

FRANKLIN COUNTY STA. 93+00.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
R.C.	R.C.		SVC.	TLU	2-13-62	



TRANSVERSE SECTION

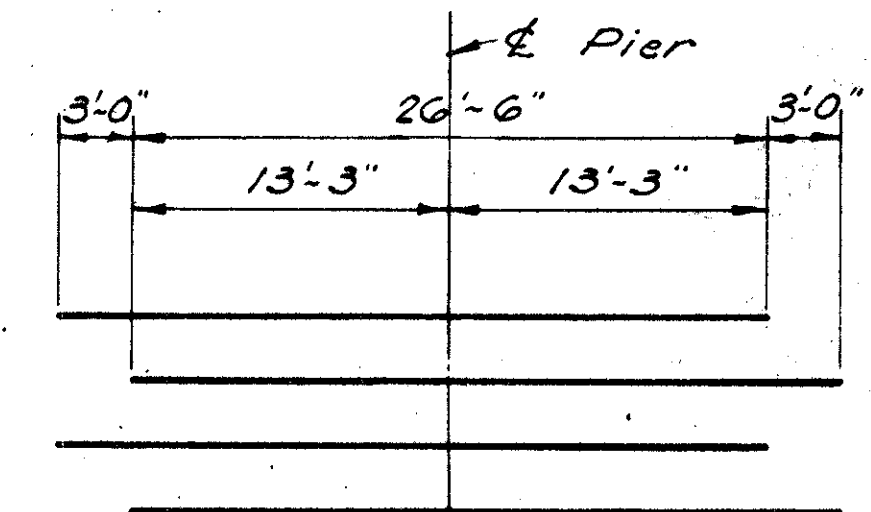
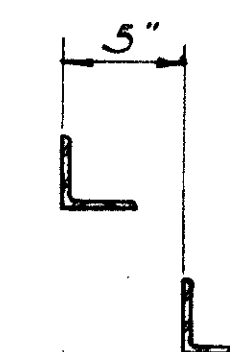
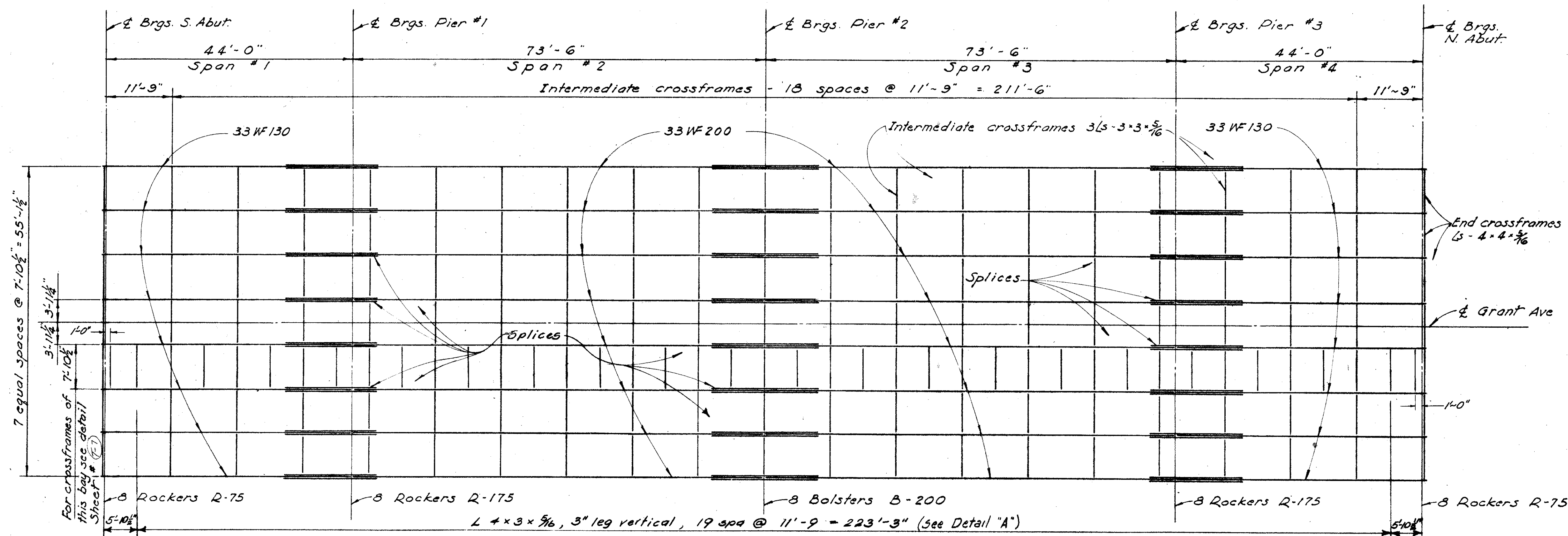


DIAGRAM SHOWING STAGGER  
OF 5602 BARS OVER PIERS



SECTION "A-A"



# STEEL FRAMING PLAN

\* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

**\*\* The haunch in the deck slab adjacent to the top of the steel beams, which is shown as 9" wide may vary from this dimension with a minimum of 6" and maximum of 12". The maximum slope of haunch shall be one vertical to four horizontal. The quantity of deck slab concrete to be paid for shall be based on the 9" width.**

**ALDEN E. STILSON & ASSOCIATES, LIMITED**  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

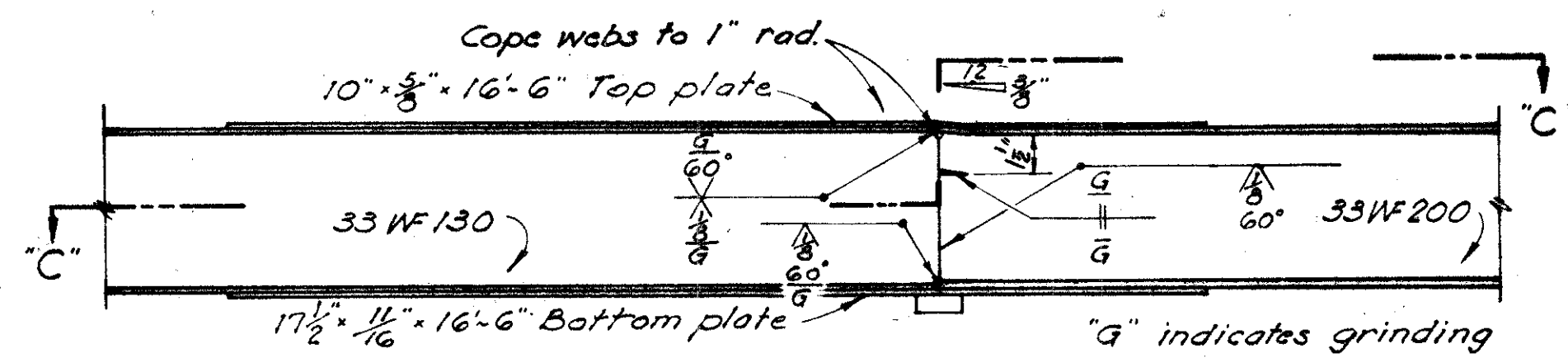
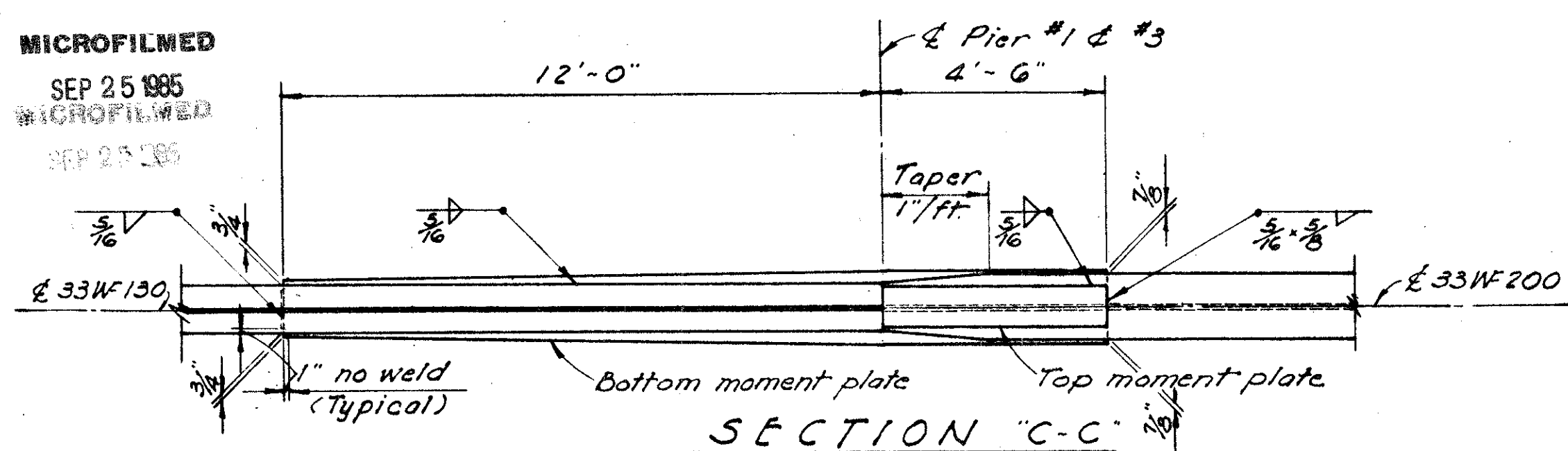
SUPERSTRUCTURE DETAILS  
BRIDGE NO. FRA-40-1361  
SOUTH INNERBELT UNDER GRANT AVE.

FRANKLIN COUNTY STA. 93+00.14

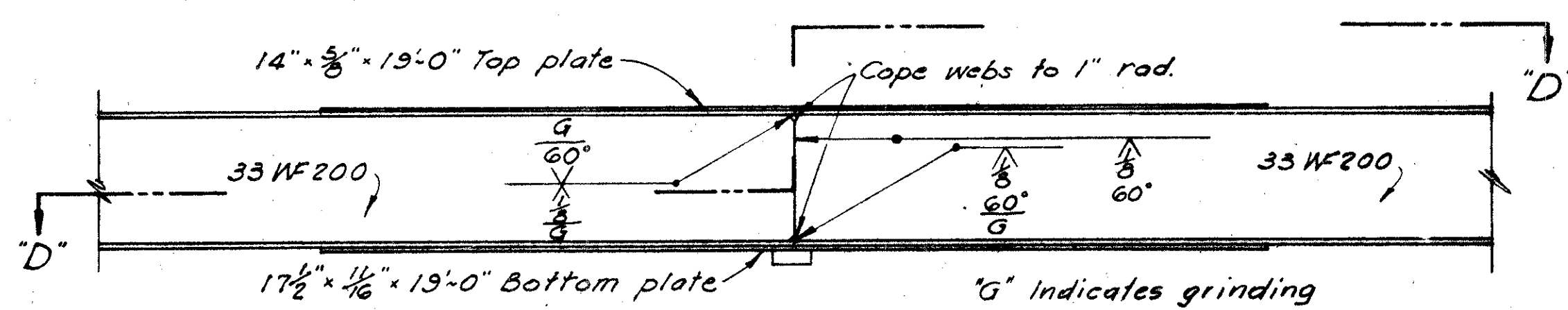
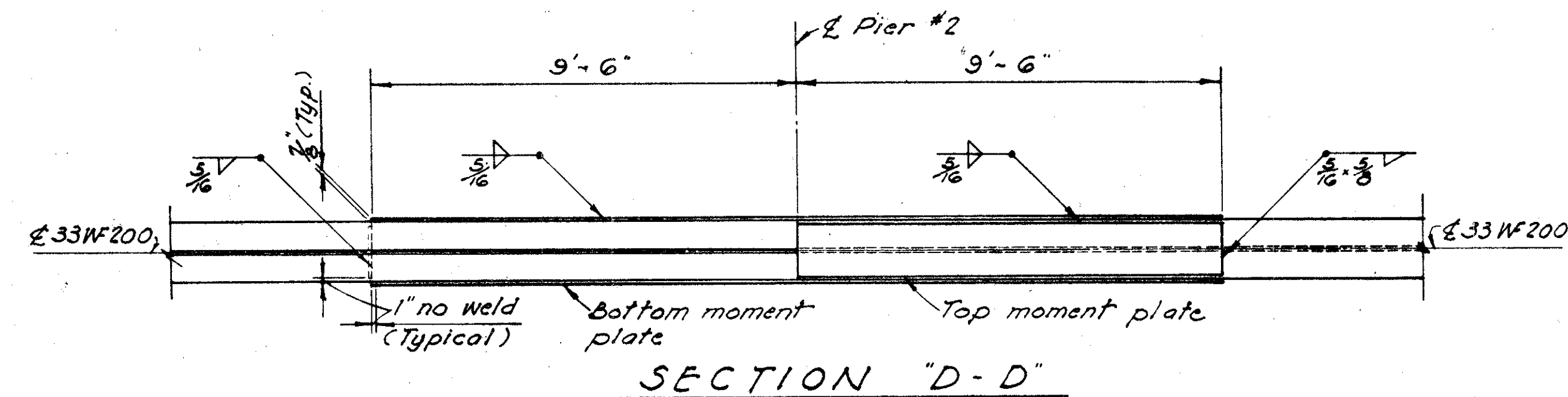
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.	R.C.		G.W.M.	TLV	2-13-62	7-9-62



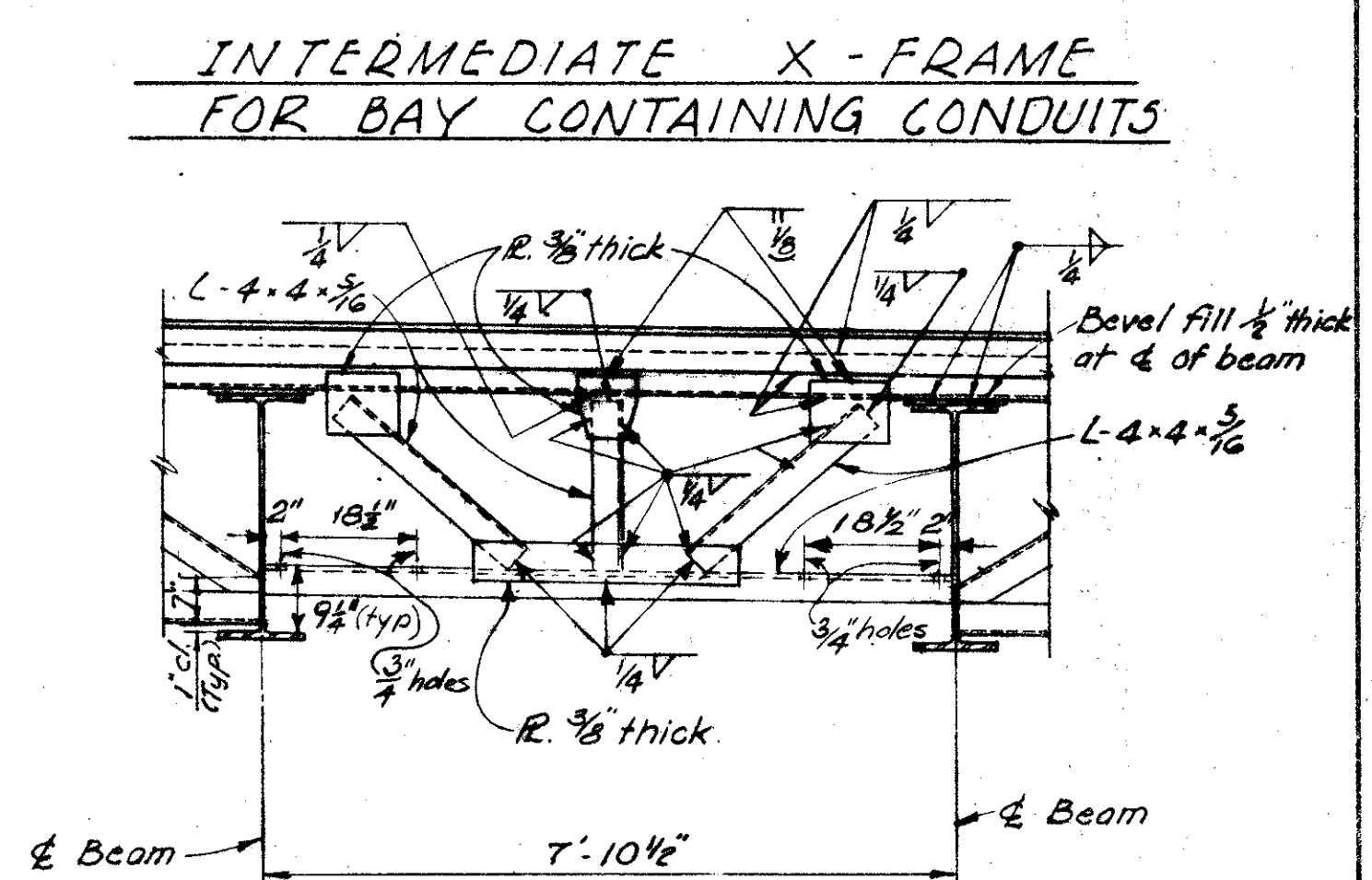
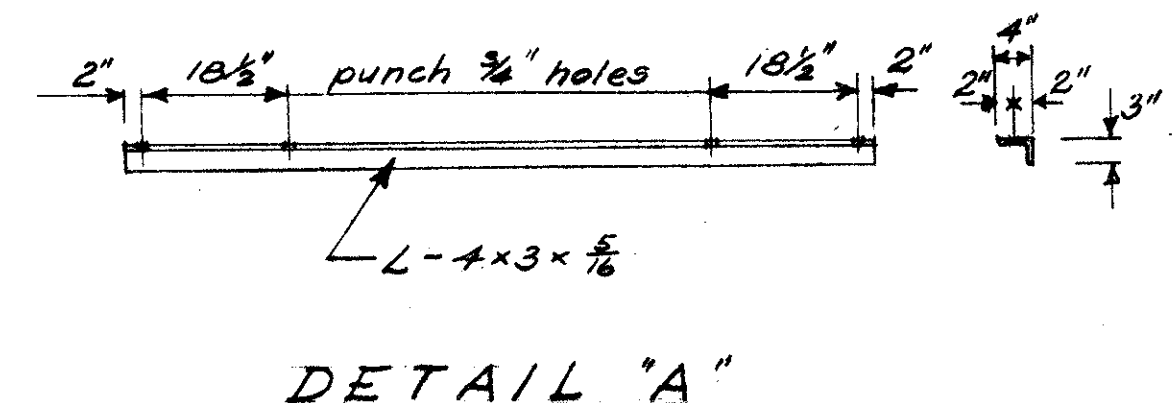
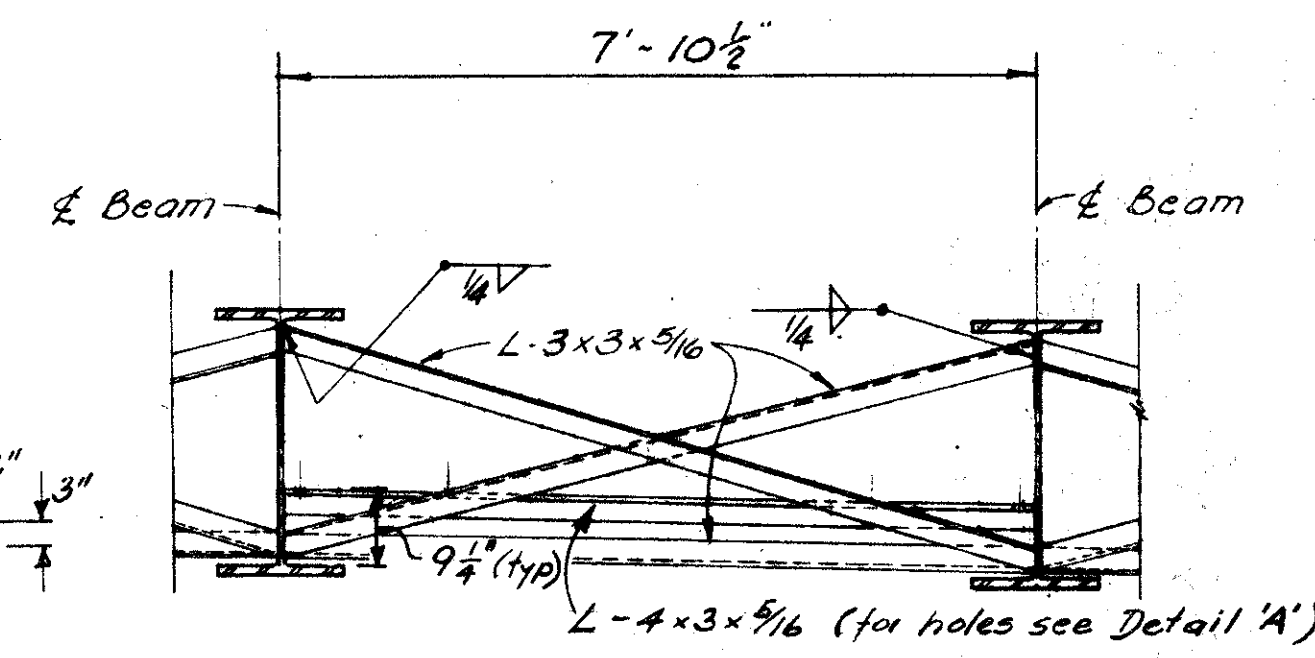
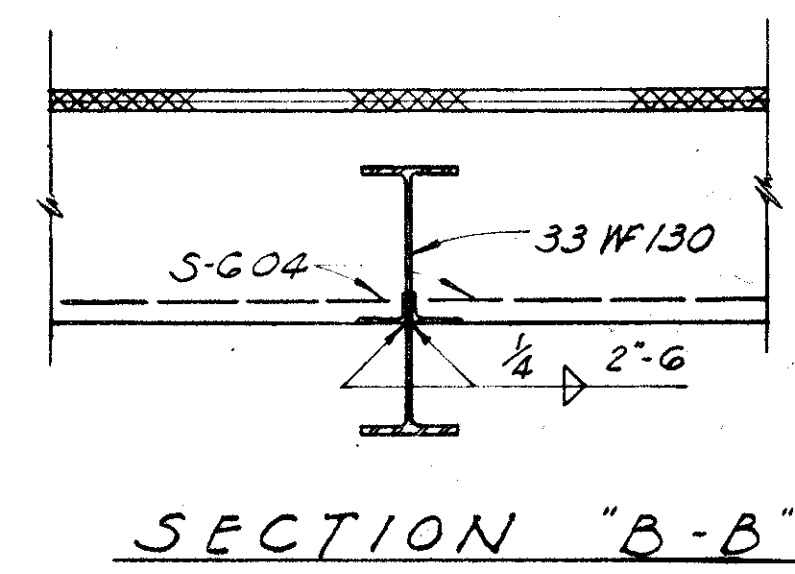
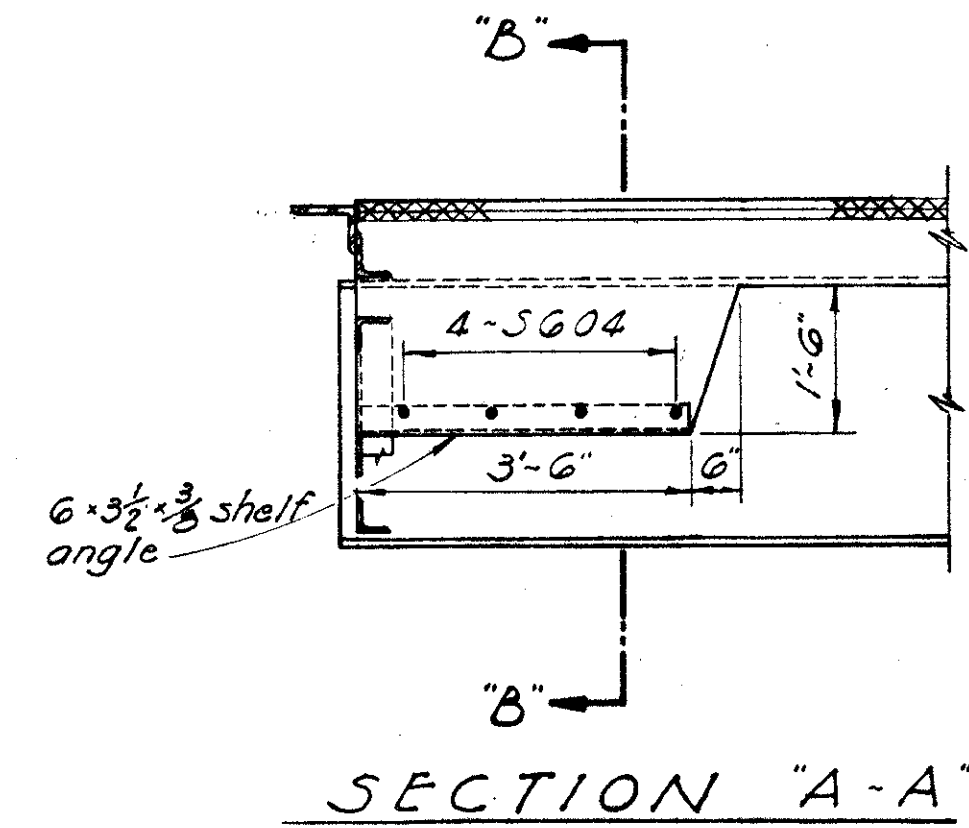
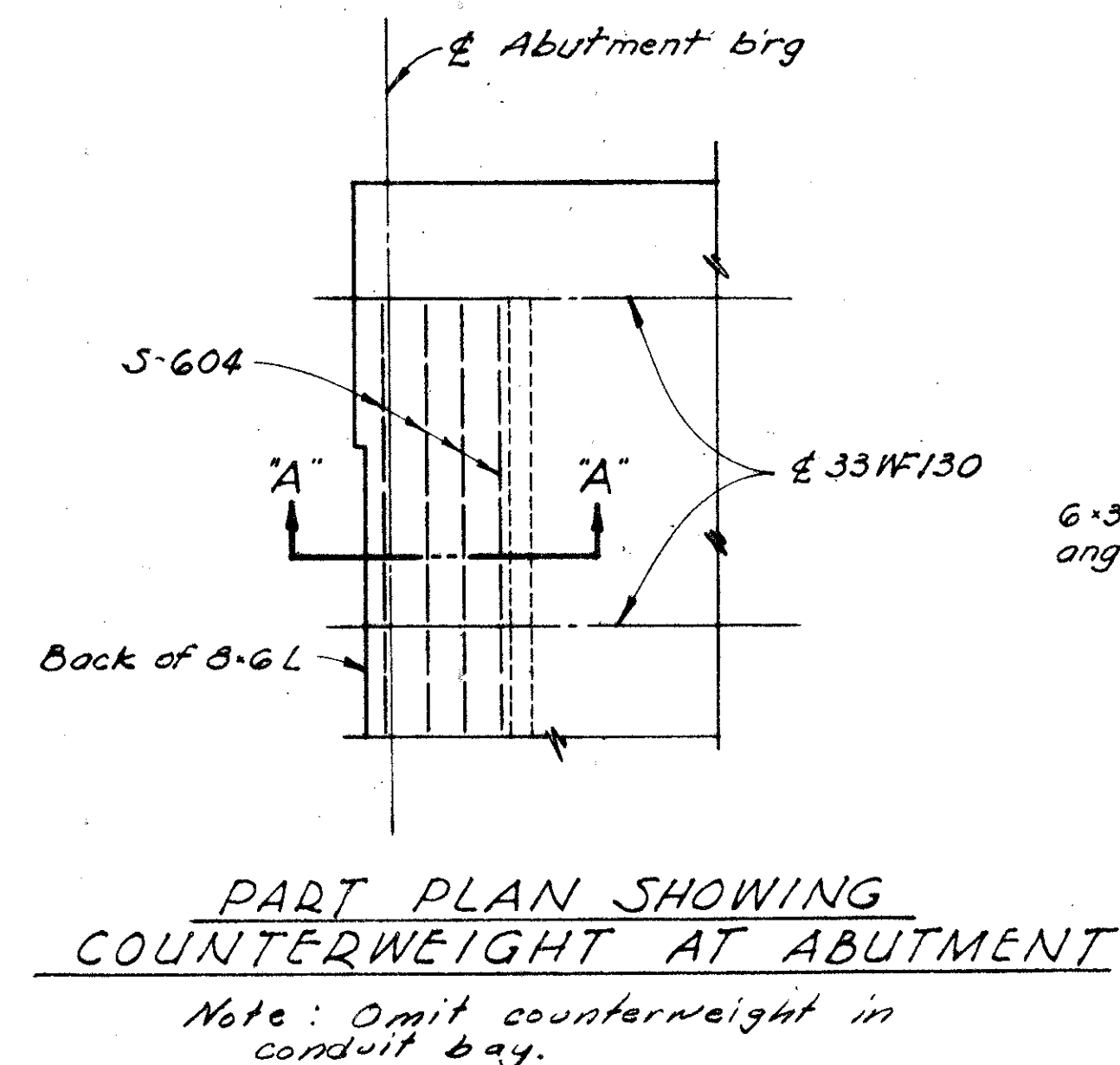
MICROFILMED  
SEP 25 1985  
MICROFILMED  
SEP 25 1985



BEAM SPLICE DETAILS  
PIER #1 & #3



BEAM SPLICE DETAILS  
PIER #2



BEAM SPLICE WELDING PROCEDURE

1. Raise ends of the beams  $1\frac{1}{8}$ " at Pier #2.
2. Butt-weld the beam flanges and web at Pier #1, using the following sequence: make one pass on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates at Pier #1.
4. Lower the beam ends at Pier #2.
5. Make splice at Pier #2 & #3 in the same manner raising the ends of the beams  $2\frac{1}{8}$ " at Pier #3 and  $\frac{3}{8}$ " at the North Abutment.

END CROSS FRAME  
(Section parallel to end finish)

Note: For location of this bay see Sheet # 248. For cross frames of all other bays see Std. Dwg. No. CSB-2-56.

DEFLECTION AND CAMBER								
LOCATION	Span #1		Span #2		Span #3		Span #4	
	Inside	Outside	Inside	Outside	Inside	Outside	Inside	Outside
Deflection due to weight of steel	0	0	$+\frac{1}{8}$ "	$+\frac{1}{8}$ "	$+\frac{1}{8}$ "	$+\frac{1}{8}$ "	0	0
Deflection due to remaining dead load	$+\frac{1}{16}$ "	$+\frac{1}{16}$ "	$+\frac{1}{16}$ "	$+\frac{3}{16}$ "	$+\frac{1}{16}$ "	$+\frac{3}{16}$ "	$+\frac{1}{16}$ "	$+\frac{1}{16}$ "
Convexity required for vertical curve	$+\frac{1}{4}$ "	$+\frac{1}{4}$ "	$+\frac{1}{8}$ "	$+\frac{1}{8}$ "	0	0	$-\frac{1}{8}$ "	$-\frac{1}{8}$ "
Sum of Deflection and Convexity	$+\frac{5}{16}$ "	$+\frac{5}{16}$ "	$+\frac{11}{16}$ "	$+\frac{13}{16}$ "	$+\frac{3}{16}$ "	$+\frac{11}{16}$ "	$-\frac{1}{16}$ "	$-\frac{1}{16}$ "
Required Camber	0	0	+1"	+1"	0	0	0	0

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

BEAM SPLICE, COUNTERWEIGHT, &  
GUTTER SUPPORT DETAILS  
BRIDGE NO. FRA-40-1361  
SOUTH INNERBELT UNDER GRANT AVE.

FRANKLIN COUNTY STA. 97+00.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.	R.C.		G.W.M.	T.L.U.	2-13-62	

SEP 25 1985

SEP 25 1985

## REINFORCING

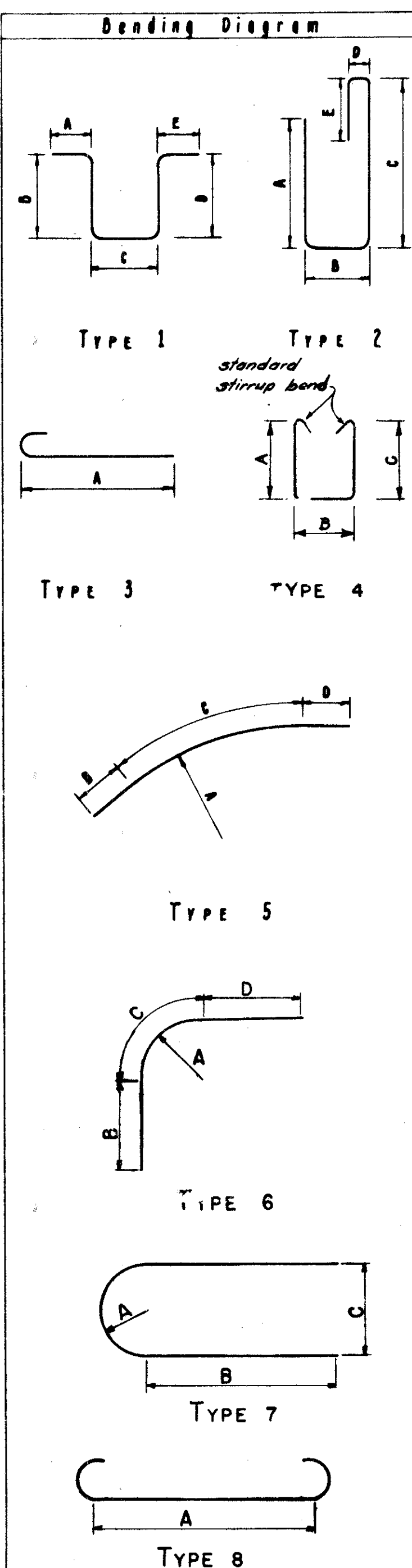
## STEEL

## LIST

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

250  
250FRANKLIN COUNTY  
FRA-40-12.82

Mark	Nº	Length	Weight	Shp.	Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
ABUTMENTS															
A515	24	5-1	127	ST											
A501	60	11-6	720	1						4-2	3-5	4-2			BT
A502	48	29-6	1477	ST											ST
A503	4	5-0	21	ST											ST
A504	32	2-3	92	ST											ST
A505	64	6-4	423	1						1-7	3-5	1-7			BT
A506	4	16-8	70	ST											ST
A507	4	3-6	15	ST											ST
A508	40	6-5	268	1						5-0	1-7				BT
A509	36	9-6	367	ST											ST
A510	36	7-9	291	2						5-8	0-9	1-7			BT
A511	32	6-5	214	4						2-7	0-8	2-7			BT
A512	52	14-7	791	ST											ST
A513	24	3-7	90	ST											ST
A514	16	16-7	277	ST											ST
A516	28	7-9	226	ST											ST
A517	20	6-0	125	ST											ST
A518	4	3-10	16	ST											ST
A601	20	14-10	446	2						5-8	1-5	6-6	0-11	1-0	BT
A602	92	12-8	1750	2						3-10	1-5	5-6	0-11	1-8	BT
A603	6	12-3	110	ST											ST
A604	100	9-3	1389	ST											ST
A701	100	6-10	1397	1						1-6	5-6				BT
F501	12	31-7	335	ST											ST
F502	60	11-2	699	1						4-0	3-5	4-0			BT
F503	36	4-5	166	1						3-4	1-2				BT
F504	8	18-3	152	ST											ST
F505	4	4-5	18	1						3-7	1-0				BT
F506	8	5-0	42	ST											ST
F601	100	4-11	739	1						3-11	1-2				BT
R504	8	2-2	**	ST											ST
R501	16	14-5	*	ST											ST
R502	16	12-10	*	ST											ST
R503	104	15-10	*	ST											ST
SUPERSTRUCTURE															
S503	316	6-5	2115	4						2-7	0-8	2-7			BT
S501	316	9-4	3076	4						1-3	5-8	1-5	0-9		BT
S502	316	5-10	1923	ST											ST
S601	742	35-4	39378	ST											ST
S602	138	29-6	6115	ST											ST
S603	630	31-0	29334	ST											ST
S604	56	7-8	643	ST											ST
S701	630	31-2	40134	ST											ST
PIERS															
P501	72	4-11	369	1						1-3	2-8	1-3			BT
P502	18	5-7	180	ST											ST
P503	232	8-9	2117	1						3-2	2-8	3-2			BT
P504	12	27-0	338	ST											ST
P505	24	7-4	184	7						1-4	1-7	2-8			BT
P601	20	7-8	230	1						2-8	2-8	2-8			BT
P1001	32	18-0	2479	ST											ST
P1002	32	17-6	2410	ST											ST
P1003	12	21-9	1123	1						3-4	18-9				BT
P1004	24	13-1	1351	ST											ST
P1005	32	15-10	2180	ST											ST
P1101	32	13-3	2253	ST											ST
P1102	16	21-11	1863	1						3-4	18-11				BT
P1103	38	22-7	4559	8						19-5					BT
F601	80	7-2	861	ST											ST
F701	104	8-2	1736	ST											ST
F702	60	8-11	1094	ST											ST
F801	56	9-8	1445	ST											ST
F1001	96	6-5	2651	1						1-5	5-4				BT
REPLACEMENT STEEL															
RE501	1	5-7		ST											ST
RE601	5	5-11		ST											ST
RE701	3	6-3		ST											ST
RE801	1	6-6		ST											ST
RE1001	1	7-3		ST											ST
RE1101	1	7-7		ST											ST
REPLACEMENT STEEL FOR SPIRALS															
RE402	1	5-4		ST						5	1-4	5-4			BT
LAMP STANDARD REINFORCING															
L570	8	1-10	16	ST											ST
L571	4	1-4	6	ST											ST
L572	6	4-1	26	1						0-8	3-0	0-8			BT
L573	6	5-1	32	1						1-2	3-0	1-2			BT
L574	4	3-10	16	1						0-8	2-9	0-8			BT
L575	4	4-10	20	1						1-2	2-9	1-2			BT
L576	6	3-10	24	1						1-10	2-2				BT
L577	4	3-7	14	1						1-7	2-2				BT



NOTE:  
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number, which indicates the size of the bar.

\*\* END POST REINFORCING AND  
\* HORIZONTAL PARAPET REINFORCING  
THESE BARS ARE INCLUDED WITH THE  
RAILING FOR PAYMENT

Revised As-Built  
3-16-66 MVA.

ESTIMATED				QUANTITIES				
Item	Total	Unit	Description	Abut.	Pier	Supers.	General	AS BUILT
E-2	586	C.Y.	Unclassified Excavation	356	230			
S-1	474	C.Y.	Class "C" Concrete - Superstructure			474		
S-1	114	C.Y.	Class "C" Concrete - Pier Cap & Cols		114			
S-1	138	C.Y.	Class "E" Concrete - Abutments above Footing	138				
S-1	146	C.Y.	Class "E" Concrete - Footings	64	82			
S-3	16	L.F.	Waterproofing, Premolded Sealing Strip	16				
S-3	1255	S.Y.	Type "C" Waterproofing			1255		
S-4	168,324	Lbs.	Reinforcing Steel	12,903	32,547	122,720	154	
S-7	1413	Lbs.	Structural Steel, Conduit Support			1413		
S-7	409,900	Lbs.	Structural Steel			409,900		CO 2 8/26/61 401,836
S-8	411,313	Lbs.	Field Painting of Structural Steel			411,313		
S-14	533	L.F.	Railing (aluminum rail & supports, conc. parapet & end posts)				533	
S-29	472	L.F.	Subdrainage for Wearing Surface Course			472		
S-29	43	C.Y.	Porous Backfill	43				
S-29	8	Each	Scuppers, including supports				8	
S-101	474	Each	Water reducing, set-retarding admixture			474		
I-10	773	S.Y.	Concrete Slope Protection				773	
S-25	1066	Lin. Ft.	4" Lighting Conduit & Fittings				1066	
T-35	87	C.Y.	Asphaltic Concrete Surface Course, Type "C" (60-70)			87		
S-25	Lump	Sum	Electric Grounding System				Lump	
S-25	2	Each	Mercury Vapor Luminaires				2	
S-25	2	Each	Lamp Standards				2	
S-25	164	Lin. Ft.	Pole and Bracket Cable (single conductor)				164	
S-25	552	Lin. Ft.	Main Circuit Cable (single conductor)				552	
S-25	276	Lin. Ft.	Main Circuit Conduit & Fittings, 2"φ				276	

Ⓢ Non-participating by State of Ohio and Bureau of Public Roads

SPIRALS - HOT ROLLED							
Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	4	14-10 1/2	32	4 1/2	43	16	1111
P402	4	14-3 3/4	32	4 1/2	41	16	1060
P403	4	12-7 3/8	32	4 1/2	37	16	953

## SPIRALS

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.  
THE NO. OF TURNS SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.  
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT

SHALL IN OTHER RESPECTS CONFORM TO ITEM S-4  
1 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT  
FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER SHALL BE PROVIDED FOR EACH SPIRAL UNIT, THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT. WILL BE PAID FOR AS REINFORCING STEEL, AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS

ALDEN E. STILSON & ASSOCIATES, LIMITED  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

REINFORCING STEEL LIST  
AND ESTIMATED QUANTITIES  
BRIDGE NO. FRA-40-1361  
SOUTH INNERBELT UNDER GRANT AVE.

FRANKLIN COUNTY STA. 93+00.14

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.W.M.	E.M.		J.V.C.	J.L.V.	2-13-62	7-9-63



# REFERENCES:

## Standard Drawings:

End Dam and End Cross Frame Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Scupper Details	- CSB-2-56, Sheets 2 & 3 Revised 2-2-59
Railing Details Type C	- AR-1-57, Revised 4-2-62
Rocker and Bolster Details	- RB-1-55, Revised 2-2-59
Approach Slab Details	- AS-1-54, Revised 7-5-62
Supplemental Specification	- S-101 Dated 7-12-62
Concrete Slope Protection Details	- Sheet 163
Scupper Details	- Sheet 164
Lighting Details	- Sheet 165
R/W Details	- Sheet 163
Sidewalk End Dam Details	- Sheet 164

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 revisions thereof dated 2-21-58.

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welding shown thus

B

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

CONCRETE SLOPE PROTECTION shall be provided under the structure as indicated on the General Plan.

TRAFFIC MAINTENANCE: For details of traffic maintenance, see Roadway Plans.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3.0 tons per square foot and abutment footings for 1.7 tons per square foot.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the Owners. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

BEARING SURFACES: The concrete surface under all rockers and bolsters shall be placed a minimum of 1/4 inch above the required elevation and accurately ground to the final elevation. Cost shall be included with the pertinent concrete Item S-1.

ELECTRICAL GROUNDS: A stranded No. 10 AWG bare copper wire electrical ground shall be embedded in the outside column on one side of the structure at pier No. 2. The lower end of the wire shall terminate in a 25 foot length coil placed under the footing and separated from the concrete by two layers of tar paper and the upper end shall extend sufficiently above the top of the concrete to provide for an exothermic welded connection to outside beam of the Superstructure. Ground each light pole with a No. 10 AWG stranded bare copper cable. Exothermic weld one end of cable to an anchor bolt and the other end to the top flange of the outside beam.

WIRING DETAILS: For details and notes for wiring, see Roadway Plans.

CURING: Deck concrete shall be cured in accordance with Sec. S-1.21 Method (a) using a continuous application of water. Plastic coated burlap or mats shall not be used.

GRAVEL: If used as the coarse aggregate, shall be in accordance with Sec. M-3.93 instead of M-3.92 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

SHEET LEAD: Shall conform to the requirements of A.S.T.M. Designation B29 without restriction to the Common Desilverized type.

SURFACE FINISH OF CONCRETE: The requirements of Sec. S-1.22, Rubbed Finish, shall apply to the following exposed concrete surfaces:

- The entire superstructure except the top and bottom surfaces of roadways and sidewalks.
- All surfaces of piers and abutments which will be exposed upon completion of the construction except bridge seats, backwalls and the face of spill-thru abutments between outside beams.

CONTINUOUS BEAM SPLICES: If beams having depths differing by more than 1/4" are to be spliced by butt welding, the depth of the smaller depth beam shall be increased by splitting the web longitudinally at a distance of 1/2" below the bottom of the top flange and for a distance sufficient to allow the flange to be bent up at a slope of not more than 3/8" per foot, after which the split in the web shall be completely welded with full depth penetration and ground flush.

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO							
GENERAL NOTES							
BRIDGE No. FRA-40-1361							
SOUTH INNERBELT UNDER GRANT AVE.							
FRANKLIN COUNTY STA. 93+00.14							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
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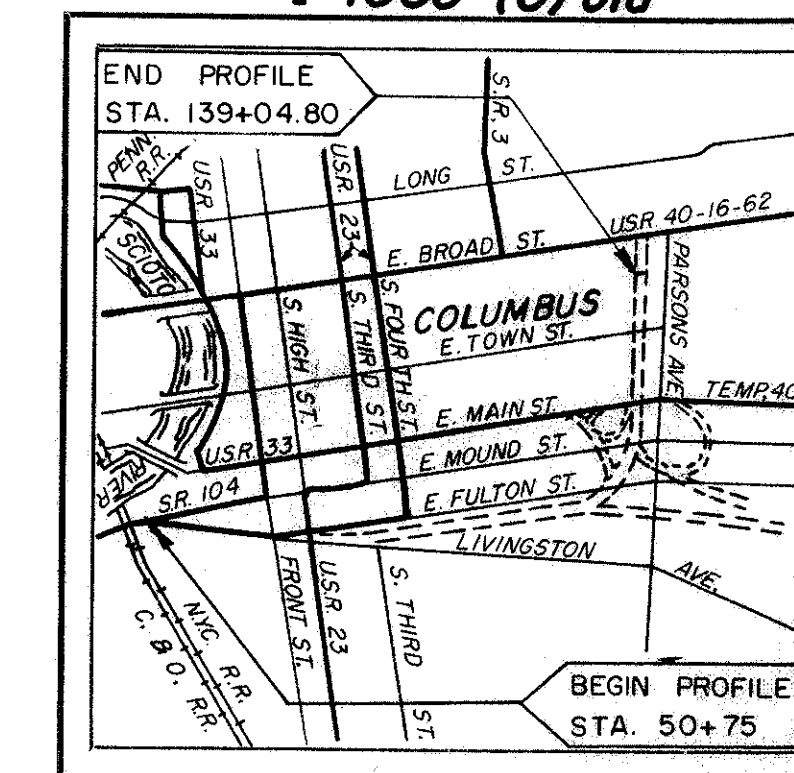
LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS\* 306 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel or stone fragments	A-1-a <sub>(r)</sub>	A-1-a	67	17	7	5	4	NP	NP	6	15
Gravel or stone fragments with sand	A-1-b <sub>(r)</sub>	A-1-b	47	23	12	12	6	NP	NP	7	26
Coarse and fine sand	---	A-3a	22	26	32	13	17	NP	NP	18	3
Gravel with sand and silt	A-2-a <sub>(r)</sub>	A-2-a	46	14	13	18	9	22	6	8	16
Gravel with sand, silt, and clay	A-2-b <sub>(r)</sub>	A-2-b	40	10	14	15	12	30	13	17	3
Sandy silt	A-4 <sub>(r)</sub>	A-4a	18	11	12	32	21	22	6	11	144
Silt	A-4 <sub>(r)</sub>	A-4b	0	4	11	53	23	23	5	16	6
Silt and clay	A-6 <sub>(r)</sub>	A-6a	14	8	14	36	28	27	12	15	53
Silty clay	A-6 <sub>(r)</sub>	A-6b	0	6	13	35	37	37	19	20	25
Clay	A-7-5 <sub>(r)</sub>	A-7-5	8	5	10	35	42	44	22	23	15
Auger boring-plan view.											
Drive sample boring-plan view.											
Auger boring plotted to vertical scale only.											
Water content nearly equal to or greater than liquid limit.											
Number of blows for "Standard Penetration" test. X=number of blows for the first 6 inches. Y=number of blows for the second 6 inches.											
NOTE: Figures beside borings indicate water content in percent, eg. 15											
Sod and/or Topsoil=X'=Approximate depth.											
Berm material											
Free water											
Brick and sidewalk material											
Indicates a non-plastic material with high water content.											
Auger samples only. Drive samples taken for structure foundation investigations.											

SOIL PROFILE  
FRANKLIN COUNTY  
FRA-40- 12.82  
OHIO STATE HIGHWAY  
TESTING LABORATORY  
O. S. U. CAMPUS, COLUMBUS, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PFC-  
FILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING  
DESIGN CONTROLS FOR THE PROJECT. THE STATE OF  
OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS  
DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF  
THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

FED. NO. 1-70-3-(4)99  
1-1085-(3) old



LOCATION MAP

Recon—H.E.L.— Mar. 24, 1959 to Apr. 7, 1959  
Auger—C.A.C.—Apr. 14, 1959 to Apr. 24, 1959  
Drilling—Drive Sample—A.V., L.M.D., L.E.S., W.A.R., C.S.C.,  
E.F.M., K.J.F.—May 4, 1959 to  
July 29, 1959  
Drafting—P.A.H., R.A.W.— Aug. 25, 1959



SOIL PROFILE  
FRANKLIN COUNTY2  
10

FRA-40- 12.82

OHIO STATE HIGHWAY  
TESTING LABORATORY  
O. S. U. CAMPUS, COLUMBUS, OHIO

## SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.  
\*Denotes sample taken at or near grade.

STATION & OFFSET	DEPTH FROM-TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	SHTL CLASS.
Boring No. 1	0.4-4.0	72	10	4	10	4	22	7	20	A-2-4
	4.0-8.5	11	8	14	42	25	26	7	20	A-4a
	8.5-12.0	17	8	9	37	29	39	18	28	A-6b
	12.0-17.0	11	4	10	40	35	42	23	21	A-7-6
Boring No. 2	0.4-3.0	6	4	11	42	37	33	11	19	A-6a
	3.0-7.0	13	11	14	38	24	23	6	14	A-4a
	7.0-14.0	4	2	0	18	76	44	22	21	A-7-6
	14.0-16.0	0	1	0	59	40	25	9	19	A-4b
	16.0-20.5	30	18	36	8	8	NP	NP	9	A-3a
	20.5-24.0	68	22	4	3	3	NP	NP	7	A-1-a
	24.0-26.0	67	15	5	6	7	19	3	5	A-1-a
Boring No. 3	0.4-2.0	53	15	9	18	4	NP	NP	10	A-1-c*
	2.0-7.0	30	12	12	27	19	24	10	10	A-4a
	7.0-12.0	41	10	10	26	13	21	8	9	A-4a
Boring No. 4	0.4-2.5	27	16	9	16	32	49	26	25	A-7-6
	2.5-5.0	30	20	14	23	13	NP	NP	9	A-4a
	5.0-7.5	72	10	5	8	5	NP	NP	6	A-1-a
Boring No. 5	0.4-5.0	8	11	16	36	29	32	14	18	A-6a
	5.0-11.0	34	36	13	9	8	NP	NP	7	A-1-b
	11.0-15.0	54	23	6	12	5	NP	NP	6	A-1-c
Boring No. 6	0.5-5.5	56	17	12	8	7	NP	NP	15	A-1-a
	5.5-10.0	44	11	11	21	13	21	6	11	A-2-4
	10.0-15.0	58	18	7	11	6	NP	NP	8	A-1-b
Boring No. 7	0.5-3.0	5	6	14	33	42	43	19	20	A-7-6
	3.0-9.0	27	10	13	32	18	22	5	13	A-4a
	9.0-12.5	69	9	5	12	5	24	7	9	A-2-4
Boring No. 8	0.5-5.0	13	13	12	39	23	26	8	18	A-4a
	5.0-10.0	45	7	10	22	16	25	9	14	A-4a
	10.0-18.0	15	15	18	31	21	22	7	12	A-4a
	18.0-21.0	77	14	4	3	2	NP	NP	7	A-1-a
Boring No. 9	0.5-4.5	7	7	9	50	27	30	8	20	A-4b
	4.5-10.0	36	5	12	25	22	28	10	19	A-4a
	10.0-16.0	8	12	16	36	28	29	12	12	A-6a
	16.0-21.5	11	12	15	37	25	25	12	10	A-6a
	21.5-22.5	9	0	15	36	31	23	11	9	A-6a
	22.5-23.0	87	3	3	4	3	NP	NP	3	A-1-a
Boring No. 10	0.5-5.0	12	11	14	34	29	28	12	15	A-6a*
	5.0-8.0	11	12	15	35	27	26	7	14	A-4a
	8.0-13.0	35	19	9	27	11	20	9	19	A-4a
	13.0-18.0	60	11	6	14	9	25	7	11	A-2-4*
	18.0-23.0	61	15	6	12	5	12	3	9	A-1-b*
Boring No. 11	0.5-4.0	3	7	11	45	34	37	14	25	A-6a
	4.0-8.0	6	2	0	40	43	39	15	21	A-6a
	8.0-12.0	22	12	10	29	18	28	9	20	A-4a
	12.0-15.0	9	11	20	37	23	22	7	9	A-4a
Boring No. 12	0.5-7.0	0	5	8	66	21	43	24	20	A-7-6
	7.0-10.0	17	10	10	34	23	25	5	15	A-4a
	10.0-15.0	14	11	19	35	21	22	6	10	A-4a
	15.0-20.0	16	12	18	34	20	22	6	10	A-4a
	20.0-25.0	16	0	17	35	21	23	6	9	A-4a
	25.0-30.0	13	12	20	35	20	21	6	10	A-4a
Boring No. 13	0.6-4.0	23	8	11	31	27	46	21	24	A-7-6
	4.0-7.0	12	5	13	30	40	40	20	22	A-6b
	7.0-13.0	15	9	17	31	28	32	15	15	A-6a
	13.0-21.0	16	10	18	34	22	23	10	19	A-4a*
	21.0-25.0	18	12	18	34	18	22	9	8	A-4a*
	25.0-30.0	20	12	27	29	12	19	6	11	A-4a
Boring No. 14	3.0-5.0	8	8	16	36	32	35	15	18	A-6a
	5.0-9.0	19	14	16	28	23	25	9	13	A-4a
	9.0-15.0	12	11	20	34	23	22	8	9	A-4a
	15.0-21.5	17	11	19	36	17	22	8	8	A-4a*
	21.5-23.0	46	20	15	15	4	NP	NP	7	A-1-b
	23.0-30.0	15	11	19	38	17	22	10	8	A-4a
Boring No. 15	0.5-8.0	2	3	8	44	43	43	18	22	A-7-6
	8.0-11.0	18	9	18	32	23	27	8	10	A-4a
	11.0-17.0	19	9	18	33	21	24	7	11	A-4a
	17.0-24.0	11	10	19	33	27	25	10	11	A-4a*
	24.0-30.0	21	13	28	19	19	23	8	10	A-4a
Boring No. 16	0.5-8.0	8	3	12	35	44	41	22	26	A-7-6
	8.0-13.0	17	8	13	37	25	22	8	16	A-4a
	13.0-17.0	9	7	11	43	30	20	11	13	A-6a
	17.0-23.0	59	20	11	6	4	NP	NP	10	A-1-a*
Boring No. 17	0.4-4.0	7	4	10	25	54	41	23	24	A-7-6
	4.0-8.0	0	3	9	34	54	36	26	24	A-6b
	8.0-14.0	22	9	16	32	21	20	7	18	A-4a
	14.0-19.0	43	24	17	11	5	NP	NP	8	A-1-a
	19.0-23.0	38	12	21	20	9	NP	NP	8	A-2-4
	23.0-26.0	18	17	35	18	12	NP	NP	7	A-3a
	26.0-30.0	24	39	18	11	8	NP	NP	7	A-1-b
Boring No. 18	0.0-4.0	27	7	13	20	24	23	7	16	A-4a
	4.0-9.0	23	8	13	32	24	22	11	15	A-6a
	9.0-17.0	17	11	15	34	23	20	11	11	A-6a
	17.0-22.0	18	10	15	47	10	18	10	8	A-4a
	22.0-26.0	58	14	12	5	11	NP	NP	8	A-1-b
Boring No. 19	0.5-4.5	7	6	12	34	41	36	21	14	A-6b
	4.5-8.0	41	7	10	25	17	21	12	12	A-6a
	8.0-13.0	14	9	16	37	24	17	6	9	A-4a
	13.0-15.0	22	10	16	32	20	17	6	9	A-4a
	15.0-21.5	18	12	16	31	23	20	10	10	A-4a
	21.5-25.0	49	15	13	15	8	NP	NP	5	A-1-b
	25.0-30.0	36	24	16	17	7	NP	NP	6	A-1-b
Boring No. 20	0.5-6.0	6	4	12	36	42	38	19	15	A-6b
	6.0-12.0	20	7	16	26	22	28	12	16	A-6a
	12.0-18.0	16	13	18	33	20	21	9	8	A-4a
	18.0-20.0	26	22	14	24	14	27	15	10	A-6a
	20.0-23.0	25	13	16	30	16	24	9	7	A-4a
Boring No. 21	0.4-5.0	7	6	13	35	39	36	18	18	A-6b
	5.0-9.0	17	11	17	33	22	23	7	14	A-4a
	9.0-15.0	38	10	12	24	16	22	11	10	A-6a*
	15.0-19.5	22	10	17	35	16	21	8	8	A-4a*
Boring No. 22	0.5-5.0	0	4	14	35	47	35	19	20	A-6b
	5.0-9.0	7	6	15	41	31	25	11	13	A-6a
	9.0-14.5	21	21	17	20	21	25	11	15	A-6a
	14.5-18.0	38	31	12	14	5	NP	NP	9	A-1-b
	18.0-20.5	17	11	19	32	21	20	10	9	A-4a
	20.5-25.0	63	15	7	11	4	NP	NP	5	A-1-a
Boring No. 23	0.5-3.0	9	15	28	25	23	22	10	11	A-4a
	3.0-7.5	63	13	5	8	11	NP	NP	7	A-1-b
	7.5-18.0	50	20	9	15	6	NP	NP	7	A-1-b
Boring No. 24	0.5-3.0	8	6	13	43	30	NP	NP	22	A-4a
	3.0-10.0	33	12	12	19	24	33	15	16	A-6a
	10.0-15.0	47	19	10	13	11	34	17	19	A-2-6
	15.0-22.0	35	28	14	12	11	28	11	17	A-2-6*
	22.0-30.0	48	28	10	7	7	NP	NP	6	A-1-b*
Boring No. 25	0.5-4.0	8	6	15	48	23	31	15	17	A-6a
	4.0-10.0	9	8	18	31	37	30	15	18	A-6a
	10.0-15.5	52	21	7	14	6	NP	NP	8	A-1-b
	15.5-20.0	23	14	24	29	10	NP	NP	10	A-4a
	20.0-26.0	53	23	13	8	3	NP	NP	5	A-1-a
Boring No. 26	0.4-5.5	4	2	7	50	37	33	9	23	A-4b
	5.5-11.0	6	5	15	40	34	28	13	14	A-6a
	11.0-19.0	22	38	18	13	9	NP	NP	11	A-1-b
	19.0-22.0	28	12	24	25	11	NP	NP	15	A-4a
	22.0-25.0	34	37	19	1	9	NP	NP	8	A-1-b*
	25.0-30.0	48	25	13	9	5	NP	NP	8	A-1-b
Boring No. 27	0.5-4.0	6	6	13	32	43	37	19	24	A-6b
	4.0-10.0	6	6	13	41	31	26	8	15	A-4a
	10.0-15.0	17	19	29	21	14	20	6	9	A-2-4
	15.0-17.0	30	17	16	25	12	20	9	13	A-4a
	17.0-23.0	13	9	18	41	19	NP	NP	7	A-4a
	23.0-28.0	22	12	18	33	15	25	11	11	A-6a
	28.0-30.0	76	13	6	4	7	NP	NP	4	A-1-a
Boring No. 28	0.5-5.0	3	4	11	34	48	47	24	23	A-7-6
	5.0-19.0	7	6	13	46	28	34	13	13	A-6a
	19.0-14.0	16	9	16	33	26	27	4	11	A-4a
	14.0-20.0	20	14	16	30	20	24	7	10	A-4a
	20.0-25.0	39	8	18	21	14	27	6	7	A-2-4
	25.0-28.0	10	11	19	36	24	24	7	8	A-4a
	28.0-30.0	31	27	19	9	6	NP	NP	5	A-1-b
Boring No. 29	0.4-5.0	5	7	16	30	33	31	13	13	A-6a
	5.0-10.0	7	16	30	30	30	11	12	12	A-6a
	10.0-15.0	21	15	26	20	18	24	1	11	A-4a



SOIL PROFILE  
FRANKLIN COUNTY3  
10FRA-40-12.82  
OHIO STATE HIGHWAY  
TESTING LABORATORY  
O. S. U. CAMPUS, COLUMBUS, OHIO

## DRIVE SAMPLE SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.  
\*Denotes sample taken at or near grade.

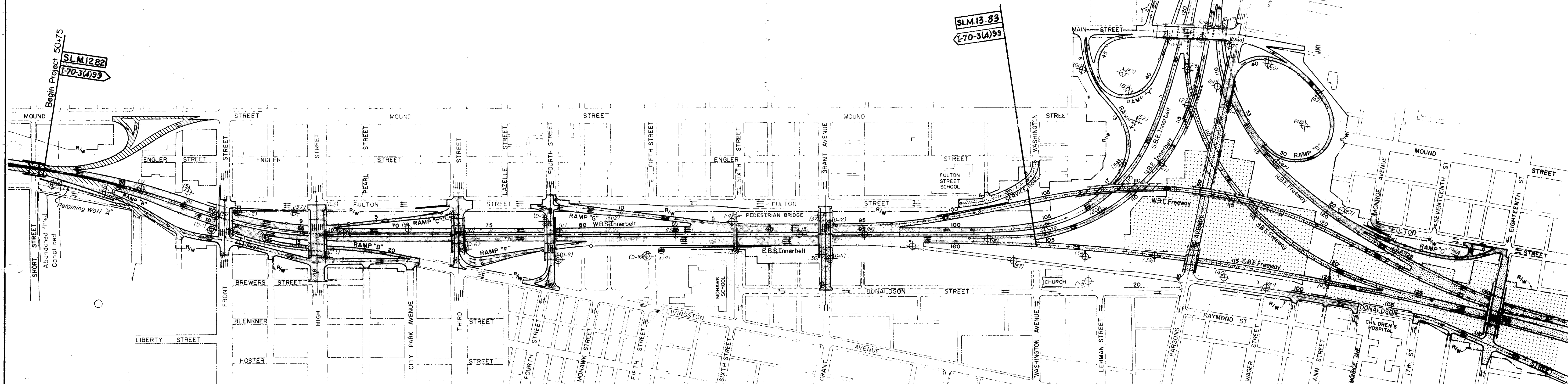
STATION & OFFSET													STATION & OFFSET													STATION & OFFSET													STATION & OFFSET												
DEPTH		FROM-TO		AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	SHTL CLASS.	DEPTH		FROM-TO		AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	SHTL CLASS.	DEPTH		FROM-TO		AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	SHTL CLASS.	DEPTH		FROM-TO		AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	SHTL CLASS.
Boring No. (D-1)													Boring No. (D-6)													Boring No. (D-11)													Boring No. (D-16)												
5.0-6.0 65 17 7 -11- NP NP 20 A-1-a													5.0-6.0 57 10 8 13 12 32 13 17 A-2-b													5.0-6.0 10 4 12 52 22 33 11 19 A-6a													5.0-6.0 37 7 10 21 25 43 21 25 A-7-b												
10.0-11.0 46 31 10 -13- NP NP 13 A-1-b													12.5-13.5 59 17 6 8 10 30 12 22 A-2-b													10.0-11.0 4 8 41 43 4 NP NP 17 A-4a													10.0-11.0 49 19 12 13 5 NP NP 10 A-1-b												
15.0-16.0 59 16 7 13 5 NP NP 12 A-1-b													15.0-16.0 64 9 7 14 6 NP NP 10 A-1-b													12.5-13.5 44 18 14 17 7 NP NP 10 A-1-b													15.0-16.0 46 17 12 11 14 31 13 18 A-2-b												
20.0-21.0 45 26 7 15 7 NP NP 14 A-1-b													17.5-18.5 45 15 9 25 6 NP NP 17 A-1-b													15.0-16.0 12 11 19 38 20 22 6 10 A-4a													20.0-21.0 52 29 13 -6- NP NP 14 A-1-a												
22.5-23.5 75 16 3 0 6 NP NP 10 A-1-a													20.0-21.0 47 16 7 22 6 NP NP 14 A-2-d													17.5-18.5 16 11 19 33 21 23 7 10 A-4a													25.0-26.0 57 17 10 11 5 NP NP 8 A-1-b												
25.0-26.0 39 26 0 10 7 NP NP 14 A-2-d													22.5-23.5 48 27 7 17 6 NP NP 7 A-1-b													20.0-21.0 16 8 17 39 20 21 5 11 A-4a													27.5-28.5 57 23 0 -11- NP NP 9 A-1-a												
27.5-28.5 45 19 10 19 7 NP NP 10 A-2-d													25.0-26.0 61 20 6 -13- NP NP 8 A-1-a													22.5-23.5 22 13 17 29 19 22 7 9 A-4a													30.0-31.0 27 32 18 15 8 NP NP 11 A-1-b												
30.0-31.0 40 26 7 11 7 NP NP 13 A-1-b													27.5-28.5 52 20 5 16 7 NP NP 15 A-1-b													25.0-26.0 19 15 20 29 17 22 7 8 A-4a													32.5-33.5 38 30 14 -18- NP NP 11 A-1-b												
32.5-33.5 45 19 11 14 7 NP NP 8 A-1-b													30.0-31.0 54 24 7 11 4 NP NP 15 A-1-a													27.5-28.5 22 13 20 29 14 NP NP 10 A-4a													35.0-36.0 46 23 17 -14- NP NP 11 A-1-b												
35.0-36.0 45 25 8 16 6 NP NP 9 A-1-b													35.0-36.0 52 20 8 17 3 NP NP 15 A-1-b													30.0-31.0 49 21 14 13 3 NP NP 10 A-1-b													37.5-38.5 27 22 13 -18- NP NP 14 A-3a												
37.5-38.5 52 23 13 8 4 NP NP 10 A-1-a													40.0-41.0 26 41 11 17 5 NP NP 15 A-1-b													35.0-36.0 46 10 12 24 8 NP NP 9 A-2-d													40.0-41.0 30 32 20 -18- NP NP 11 A-1-b												
40.0-41.0 51 18 16 11 4 NP NP 8 A-1-a													45.0-46.0 58 23 6 -12- NP NP 10 A-1-b													40.0-41.0 44 9 12 24 8 NP NP 6 A-4a													42.5-43.5 19 24 37 -20- NP NP 10 A-1-b												
42.5-43.5 60 17 8 11 4 NP NP 9 A-1-a													50.0-51.0 47 32 9 -13- NP NP 9 A-1-b													45.0-46.0 14 14 17 33 22 19 5 11 A-4a													45.0-46.0 31 33 18 -18- NP NP 9 A-1-a												
45.0-46.0 54 24 10 5 6 NP NP 9 A-1-a													55.0-56.0 15 12 18 34 19 20 7 9 A-4a													50.0-51.0 17 12 18 34 21 21 8 9 A-4a													47.5-48.5 56 27 10 -12- NP NP 9 A-1-a												
50.0-51.0 74 12 8 -6- NP NP 10 A-1-a													60.0-61.0 25 18 35 18 4 NP NP 13 A-3a													55.0-56.0 64 16 10 -10- NP NP 0 A-1-a													50.0-51.0 41 31 14 -14- NP NP 0 A-1-a												
60.0-61.0 43 15 29 -13- NP NP 18 A-1-b																																																			
65.0-66.0 31 17 41 -11- NP NP 15 A-3a																																																			
72.0-73.0 40 15 8 29 8 NP NP 12 A-4a																																																			
Boring No. (D-2)													Boring No. (D-7)													Boring No. (D-12)													Boring No. (D-17)												
5.0-6.0 12 9 14 41 24 26 8 24 A-4a													4.5-5.5 31 9 14 27 19 29 10 15 A-4a													5.0-6.0 17 13 12 32 26 26 9 12 A-4a													5.0-6.0 35 14 11 24 16 25 6 20 A-4a												
10.0-11.0 56 13 12 13 6 NP NP 15 A-1-b													10.0-11.0 69 10 6 9 6 24 5 11 A-1-a													10.0-11.0 20 19 23 30 8 NP NP 14 A-4a													10.0-11.0 49 19 12 13 5 NP NP 10 A-1-b												
15.0-16.0 65 18 7 -2- NP NP 14 A-1-a													12.5-13.5 56 9 8 13 14 NP NP 30 A-2-d													15.0-16.0 26 19 14 30 11 19 4 11 A-4a													15.0-16.0 15 13 19 12 13 19 20 NP NP 14 A-1-b												
20.0-21.0 55 18 7 12 8 NP NP 12 A-1-b													15.0-16.0 66 10 10 13 7 NP NP 10 A-1-b													25.0-26.0 16 17 19 35 13 18 4 11 A-4a													20.0-21.0 18 12 19 33 18 22 9 7 A-4a												
25.0-26.0 47 23 9 13 8 NP NP 15 A-1-b													18.5-19.5 55 19 8 12 6 NP NP 9 A-1-b													30.0-31.0 20 12 17 35 16 19 6 10 A-4a													25.0-26.0 39 25 19 13 6 NP NP 12 A-1-b												
30.0-31.0 71 14 17 28 20 23 5 12 A-4a													20.0-21.0 51 35 23 20 7 NP NP 11 A-3a													32.5-33.5 15 14 18 32 21 19 5 13 A-4a													30.0-31.0 36 22 19 17 6 NP NP 10 A-1-b												
32.0-33.0 7 12 22 33 26 21 5 10 A-4a													22.5-23.5 51 19 8 16 6 NP NP 8 A-1-b													35.0-36.0 17 14 20 34 15 20 6 11 A-4a													32.5-33.5 29 26 24 12 7 NP NP 14 A-1-b												
35.0-36.0 11 8 18 41 22 NP NP 14 A-4a													25.0-26.0 65 19 7 6 3 NP NP 11 A-1-b													37.5-38.5 14 12 19 28 27 21 7 10 A-4a													35.0-36.0 53 19 15 10 3 NP NP 10 A-1-a												
37.5-38.5 26 28 26 13 7 NP NP 11 A-1-b													27.5-28.5 17 68 9 -6- NP NP 15 A-3a													40.0-41.0 12 14 16 33 22 10 7 11 A-4a													37.5-38.5 67 18 7 8 0 NP NP 8 A-1-a												
40.0-41.0 72 17 7 -4- NP NP 11 A-1-a													30.0-31.0 39 33 12 -16- NP NP 9 A-1-b													42.5-43.5 27 11 14 31 17 22 5 11 A-4a													40.0-41.0 26 51 12 -11- NP NP 12 A-1-b												
42.5-43.5 73 20 4 -3- NP NP 10 A-1-a													35.0-36.0 0 80 12 -8- NP NP 15 A-1-b													45.0-46.0 18 13 17 33 19 21 6 10 A-4a													42.5-43.5 33 48 11 -8- NP NP 11 A-1-b												
45.0-46.0 74 12 8 5 6 NP NP 13 A-1-b													40.0-41.0 2 36 31 21 10 NP NP 12 A-3a													47.5-48.5 18 12 18 35 17 -20 6 10 A-4a													45.0-46.0 46 33 12 -9- NP NP 9 A-1-b												
47.5-48.5 75 20 4 -3- NP NP 10 A-1-a													50.0-51.0 31 32 19 16 2 NP NP 14 A-1-b													50.0-51.0 17 14 18 32 19 21 8 10 A-4a													55.0-56.0 32 35 18 -15- NP NP 14 A-1-b												
50.0-51.0 43 33 10 8 6 NP NP 13 A-1-b													54.0-55.0 9 61 19 -11- NP NP 13 A-3a													55.0-56.0 8 12 24 32 24 NP NP 10 A-4a													60.0-61.0 2 56 28 -14- NP NP 16 A-1-b												
52.0-53.0 54 23 16 8 5 NP NP 10 A-1-a																																																			
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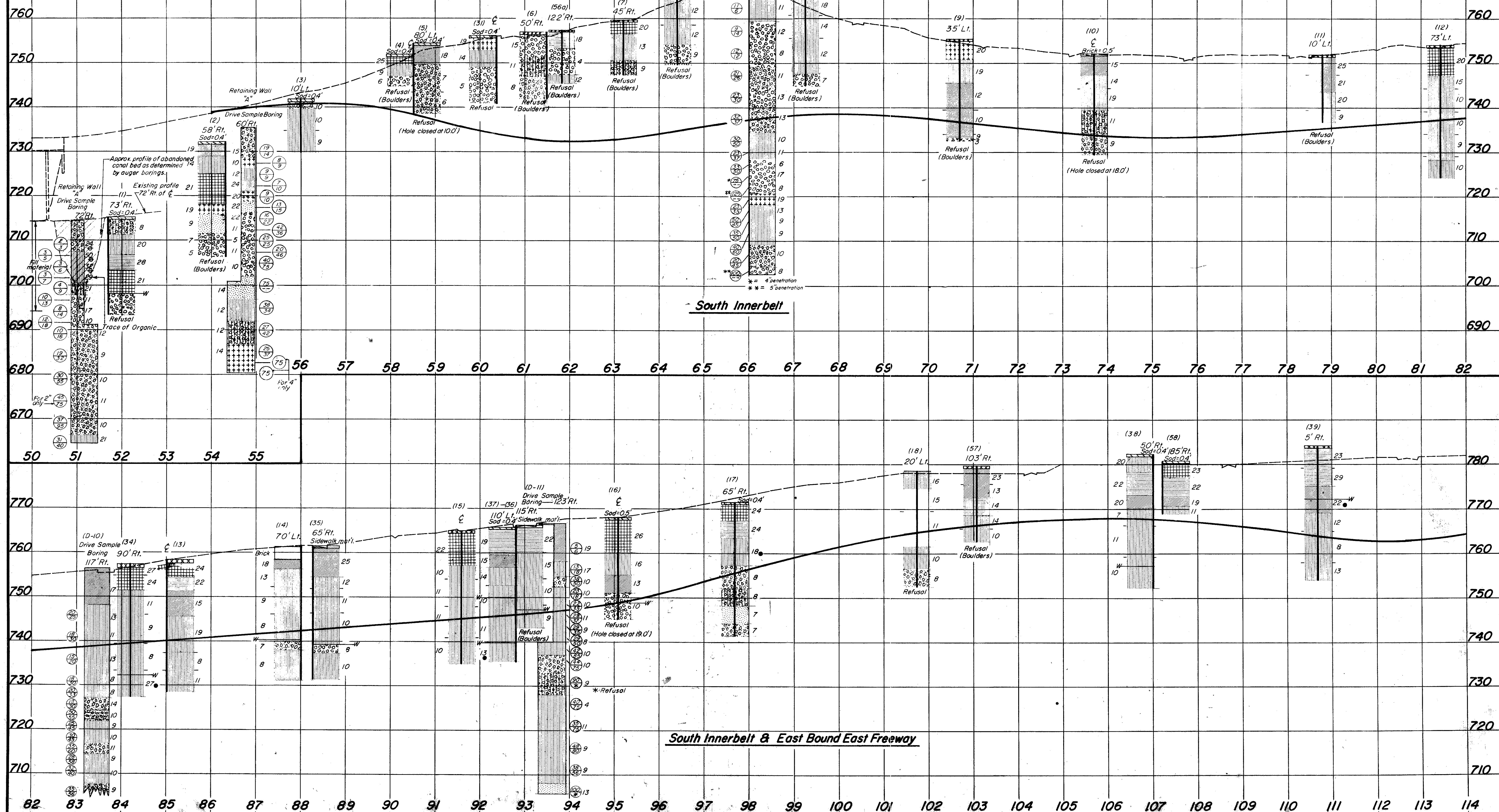
PROFILE INDEX	
Sheet No.	
5	South Innerbelt South Innerbelt and East Bound East Freeway
6	North Bound East Innerbelt East Bound East Freeway (Cont'd.) Ramp "A" and Service Road "A" Ramp "C"
7	Ramp "B" Ramp "F" Ramp "G" Ramp "H" Ramp "M" Ramp "O"
8	Ramp "S" Ramp "X" Ramp "Y" Livingston Avenue Relocation Donaldson Street Relocation Parsons Avenue
9	Main Street Service Road - Main - Oak East Innerbelt - South Bound East Freeway - North Bound
10	Front Street High Street Third Street Fourth Street Grant Avenue Town Street Oak Street

### BORING PLAN

Scale: 1" = 250'  
Figures in parentheses indicate auger boring location number, e.g. (15)  
Figures in parentheses with letter "D" prefix indicate drive sample boring location number, e.g. D-15'  
NOTE: Original general plan prepared by Alden E. Stilson & Associates and was reproduced for use with soil profile investigation.





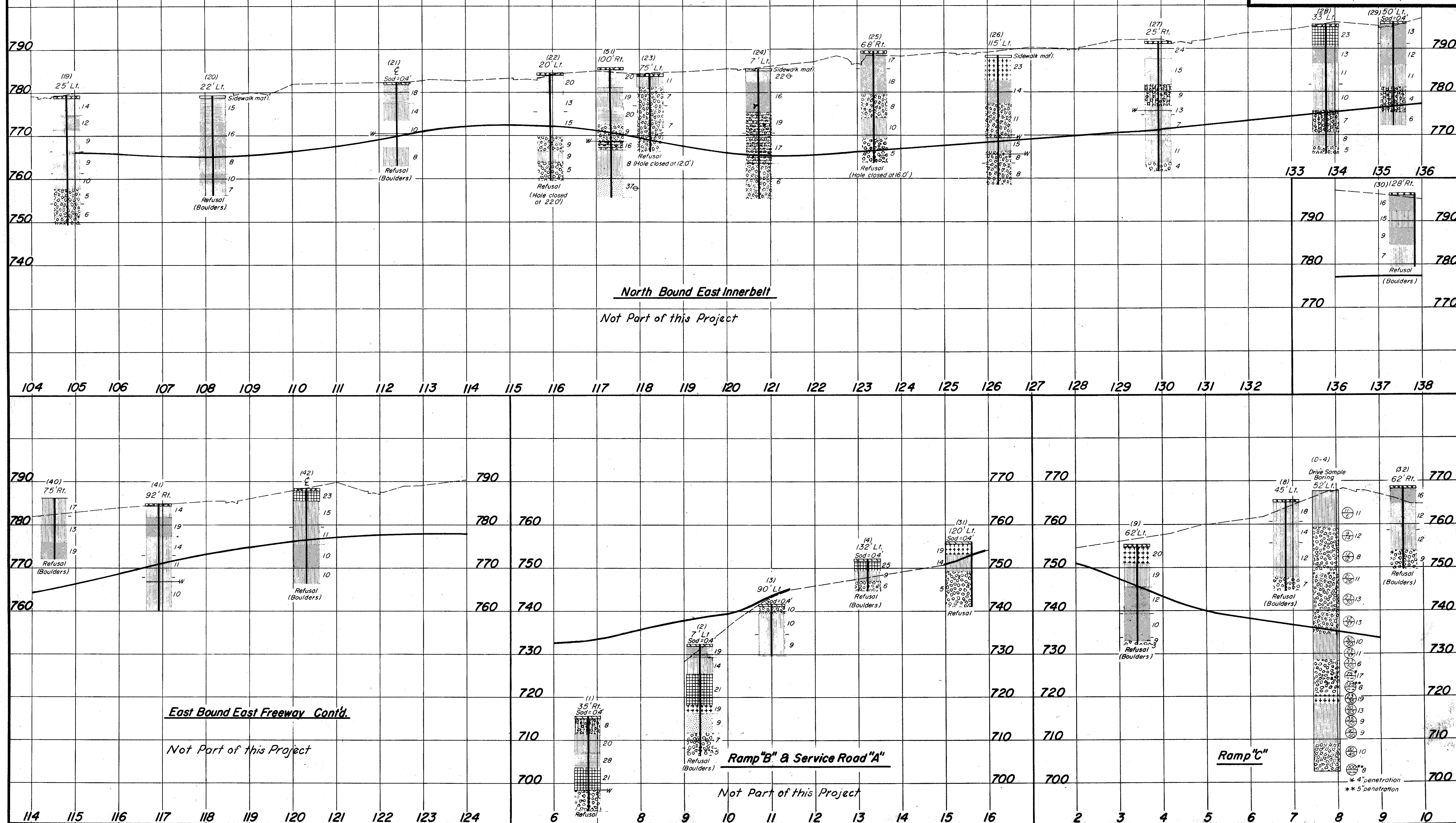


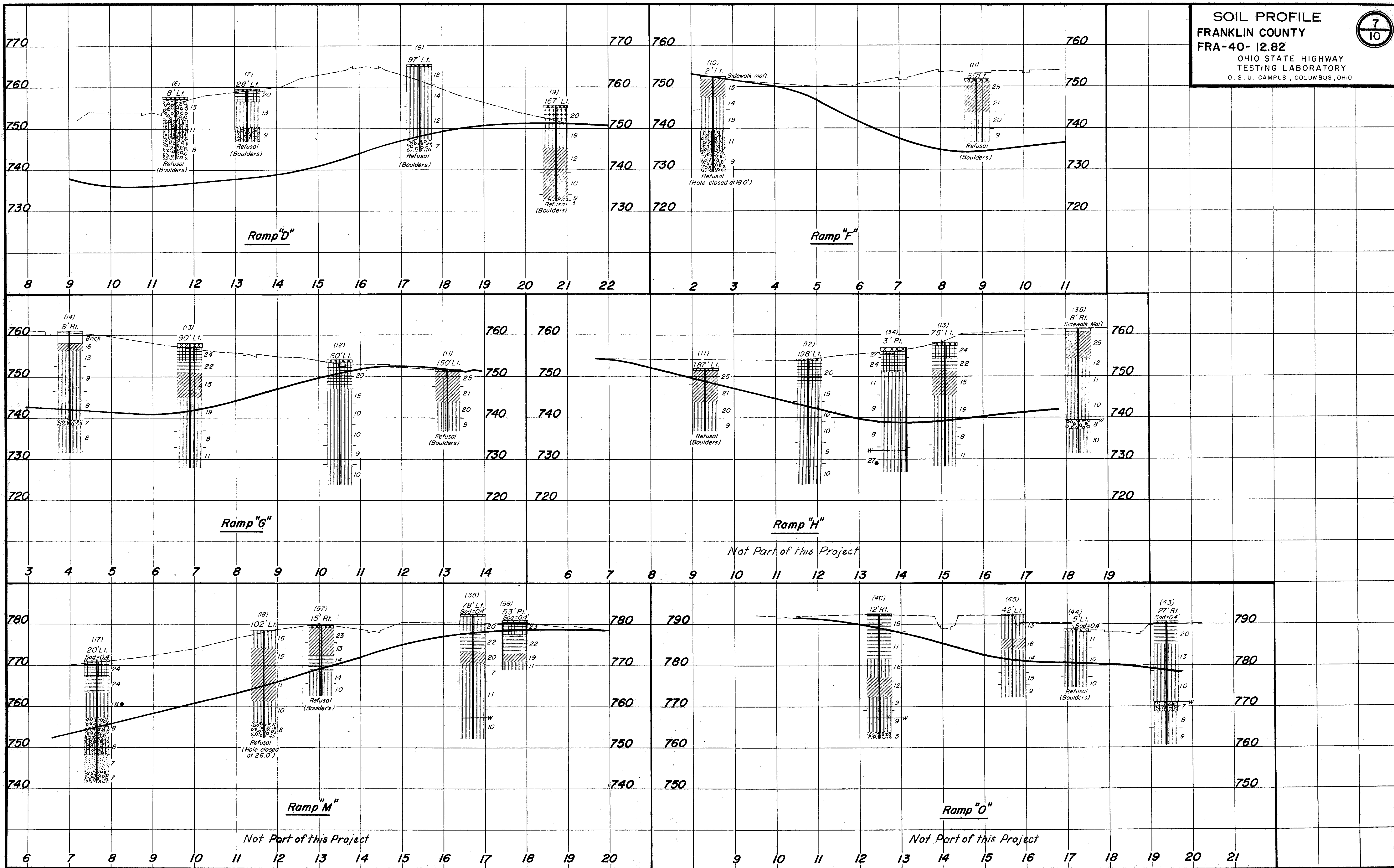


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FRA-40-12.82

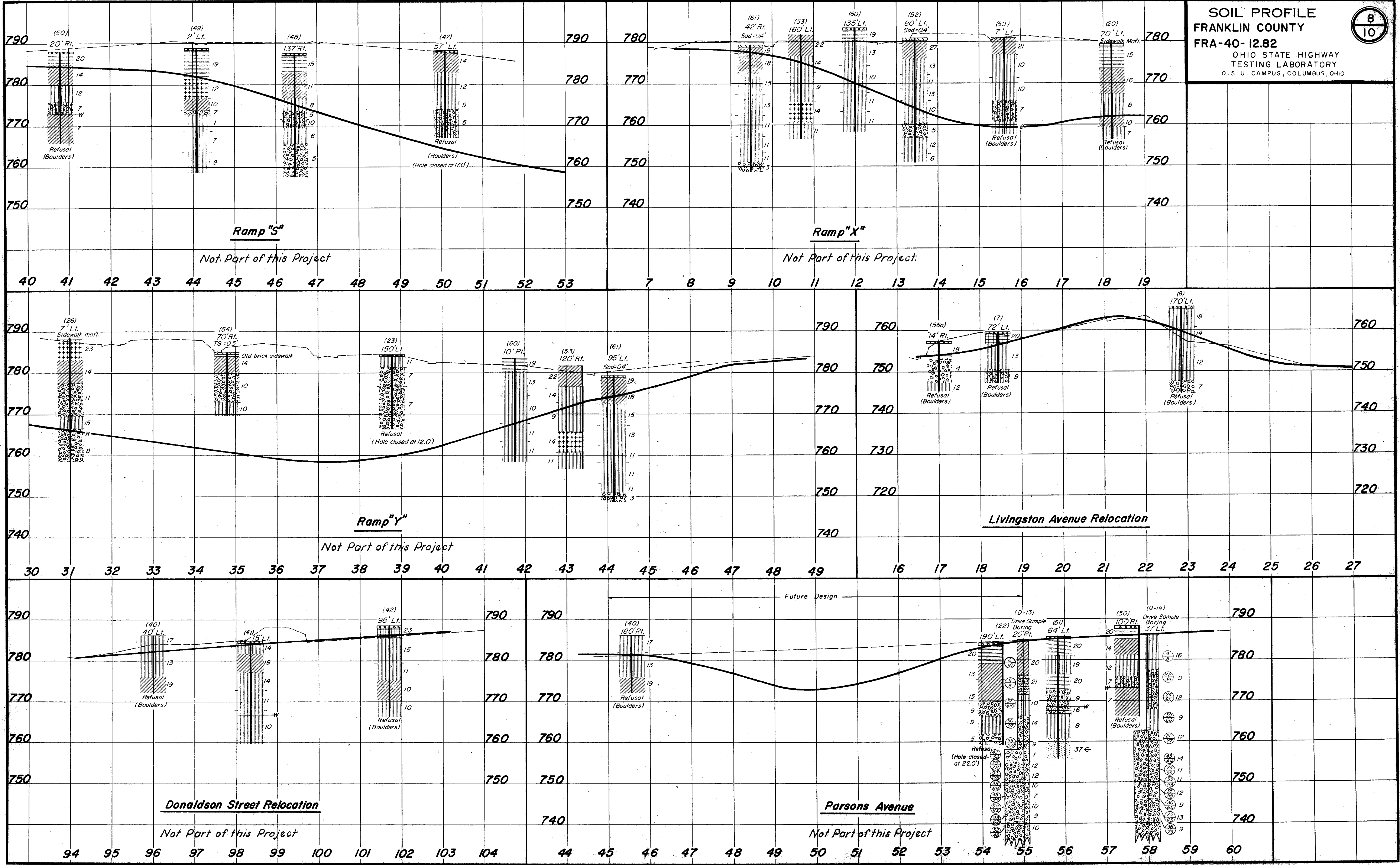
OHIO STATE HIGHWAY  
TESTING LABORATORY  
O. S. U. CAMPUS, COLUMBUS, OHIO

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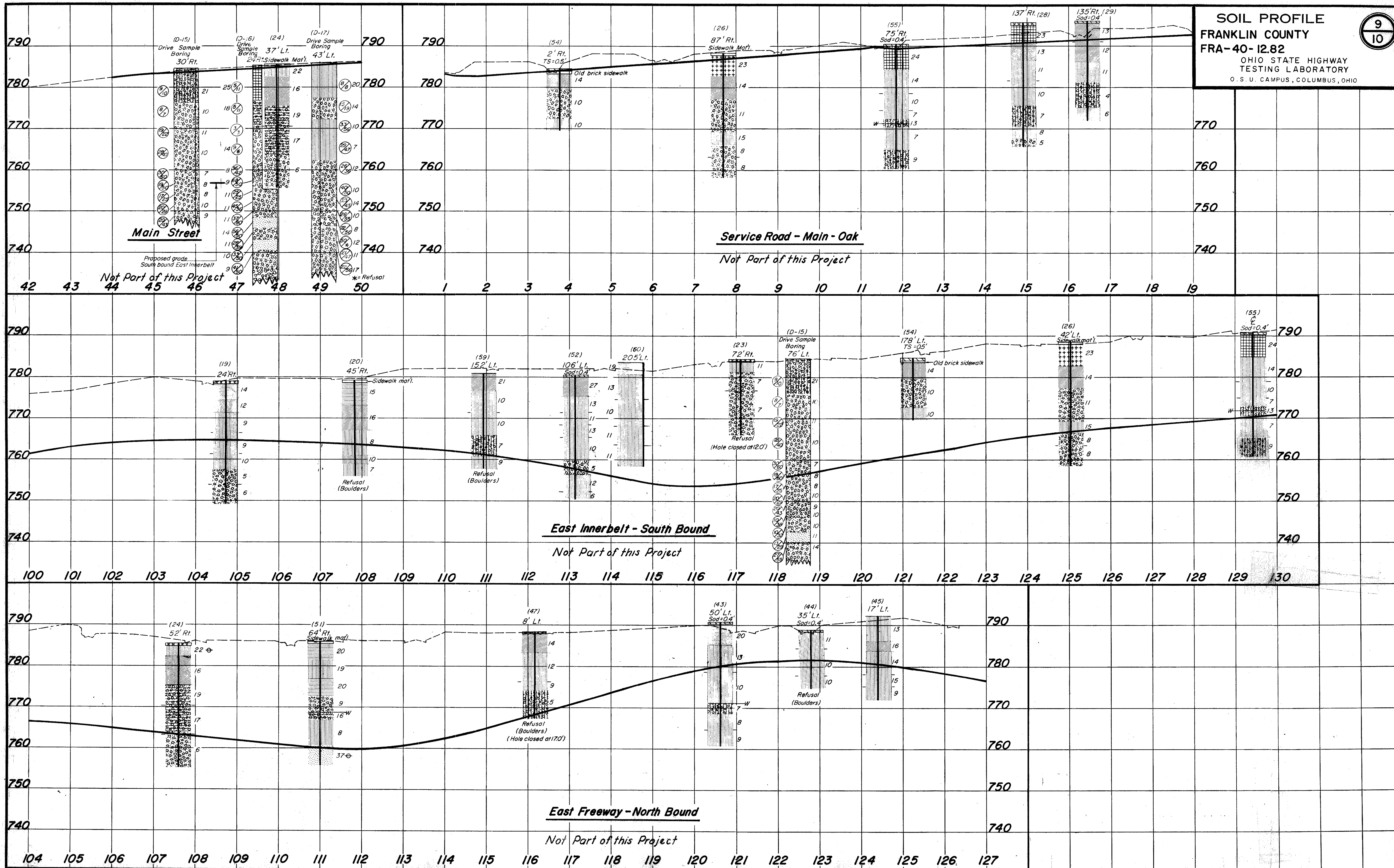














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