

S-170(2)

| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|-------------------|-------|----------|------------|
| 2 | OHIO | S-170(2) | Postwar |

HOL-39-(16.69-17.29)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

HOL-39-(16.69-17.29)
HOLMES COUNTY
HARDY TOWNSHIP & VILLAGE OF MILLERSBURG

CONVENTIONAL SIGNS

| | |
|------------------|----------------|
| COUNTY LINE | ----- |
| TOWNSHIP LINE | ----- |
| SECTION LINE | ----- |
| CORPORATION LINE | ----- |
| PROPERTY LINE | ----- |
| FENCE LINE | -x-x-x- |
| CENTER LINE | ----- |
| RAILROADS | ===== ===== |
| POLE LINE | ----- |
| GUARD RAIL | ----- |

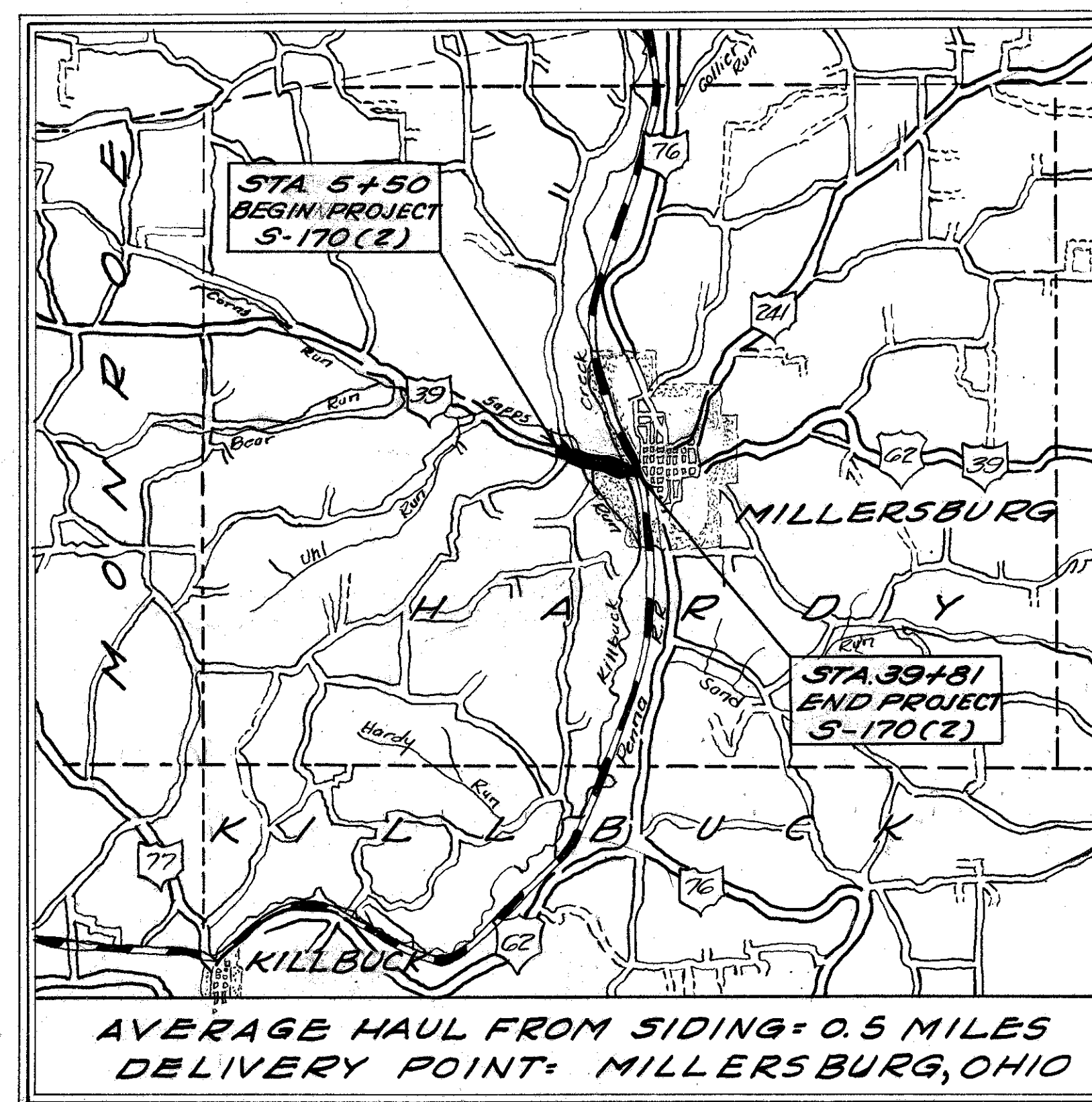
TELEPHONE & POWER
NEW OLD

INDEX OF SHEETS

| | |
|-----------------------------------|---------|
| TITLE SHEET | SHEET 1 |
| TYPICAL SECTIONS | " 2 |
| TYPICAL DETAILS AND GENERAL NOTES | " 3 |
| SUMMARY OF QUANTITIES | " 4-5 |
| PLAN AND PROFILE | " 6-9 |
| CURVE TABLES | " 10 |
| CROSS SECTIONS | " 11-24 |
| APPROACHES | " 25-29 |
| CULVERT | " 30 |
| RETAINING WALL AND APPROACH SLAB | " 31 |
| CHANNEL CHANGES | " 32-34 |
| BRIDGES OVER 20' SPAN | " 35-49 |

LINE DATA

| | |
|----------------------------|-----------------------------|
| Begin Project | Sta. 5+50 |
| End Project | Sta. 39+81 |
| No additions or deductions | |
| Net length of Project | 3431 Lin. Ft. or 0.649 Mile |
| Net length of Rural | 3142 Lin. Ft. or 0.595 Mile |
| Net length of Municipal | 289 Lin. Ft. or 0.054 Mile |



LOCATION PLAN

Scale 1" = 1 Mile

| | |
|------------------------|-------|
| PORTION TO BE IMPROVED | ===== |
| STATE HIGHWAYS | ----- |
| OTHER ROADS | ----- |
| FEDERAL HIGHWAYS | ----- |

SCALES

| | |
|--------------------|----------|
| PLAN | 1" = 50' |
| PROFILE HORIZONTAL | 1" = 50' |
| PROFILE VERTICAL | 1" = 10' |
| CROSS SECTIONS | 1" = 10' |

The Standard Specifications of the State of Ohio Department of Highways including changes and supplemental specifications listed in the proposal shall govern this improvement.

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

The right of way for this improvement will be provided by the State of Ohio.

Approved Richard Bourgeois
Date 12-3-51 Division Deputy Director/Acting

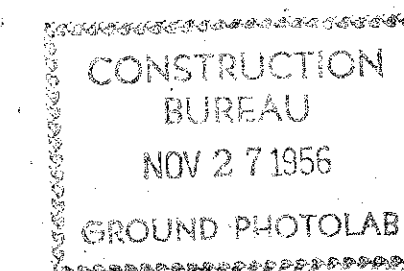
Approved _____
Date _____ Chief Engineer, Bureau of Maintenance.

Approved Richard Orth
Date 11-3-51 Chief Engineer, Bureau of Bridges and R.R. Crossings.

Approved L. F. Schaeublin
Date 11-15-51 Chief Engineer, Bureau of Location & Design.

Approved _____
Date 11-15-51 First Assistant Director & Chief Engineer.

Approved W. H. Miller
Date 11-15-51 Director of Highways.



DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER DATE
APPROVED:

DIVISION ENGINEER DATE

* Submitted to B.P.R. for Approval

| STANDARD DRAWINGS | |
|-------------------|--|
| I-12 | 3-15-48 P-1-49 7-27-49 A-1-49 7-27-49 |
| G-9.07 * | 5-1-51 9-27 P.C. 3 2-20-45 I-15 No. 2 6-17-49 |
| RT-1 * | 5-16-51 I-1, 2, 3, 4 & 5 2-20-45 AS-3-47-A5-A-47 7-27-49 |
| L-3 | 4-1-50 I-8 C.B. 1-2A & B 1-2-51 C5-1-47 1-20-48 |
| L-3-A | 4-1-50 I-8 C.B. No. 3-A * 5-15-51 C9B-1-47Sh & 2 8-25-49 |
| 5-27 P.C. 2 | 3-15-48 T-15 No. 1 3-1-47 L-1 4-1-50 |

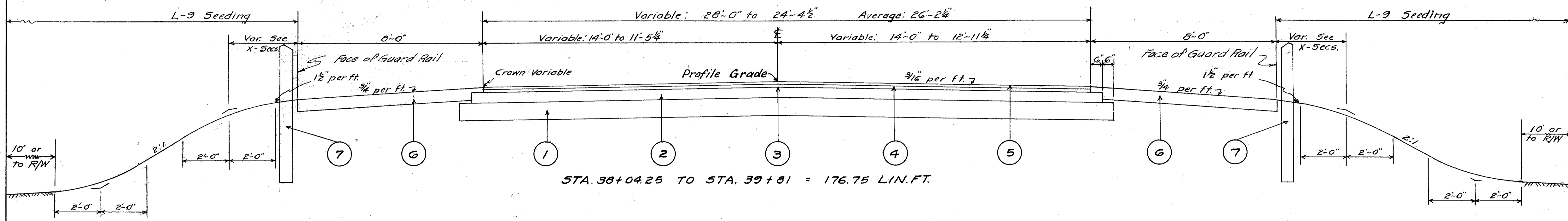
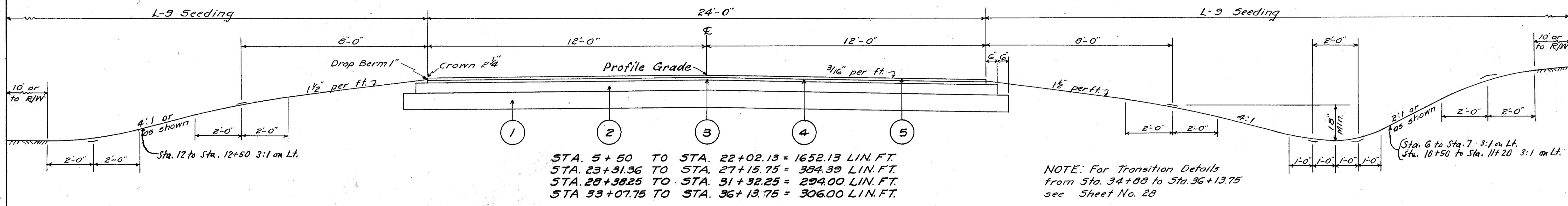
| SUPPLEMENTAL SPECIFICATIONS | |
|-----------------------------|---------|
| 5 | 5-28-48 |
| 31 | 6-13-49 |
| T-171.19 Rev. | 7-31-50 |

| | |
|-----------------|----------------------|
| FILE NO. | HOL-39-(16.69-17.29) |
| DATE OF LETTING | |
| CONTRACT NO. | |

TYPICAL SECTIONS

TYPE T-35 ON B-20

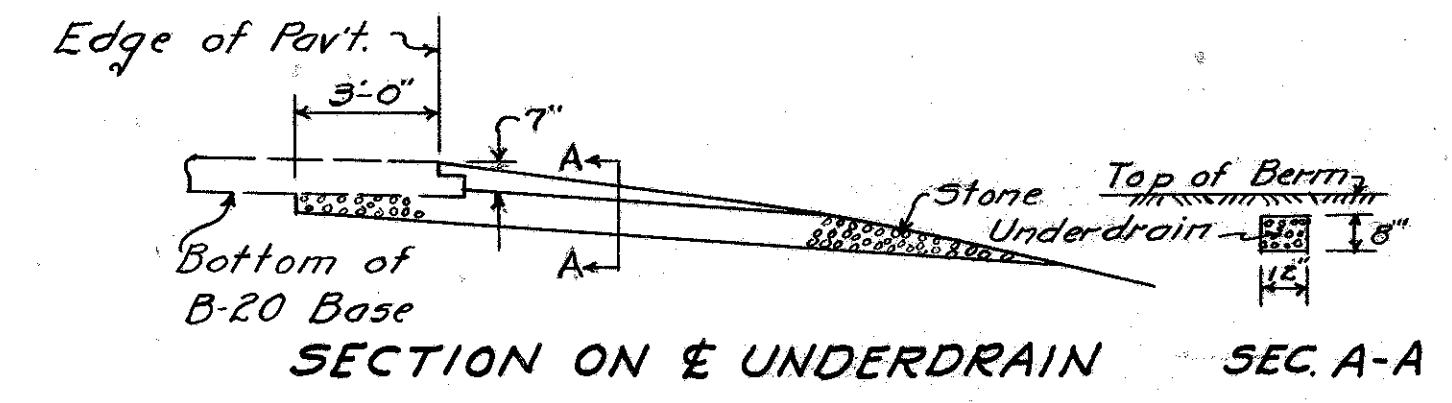
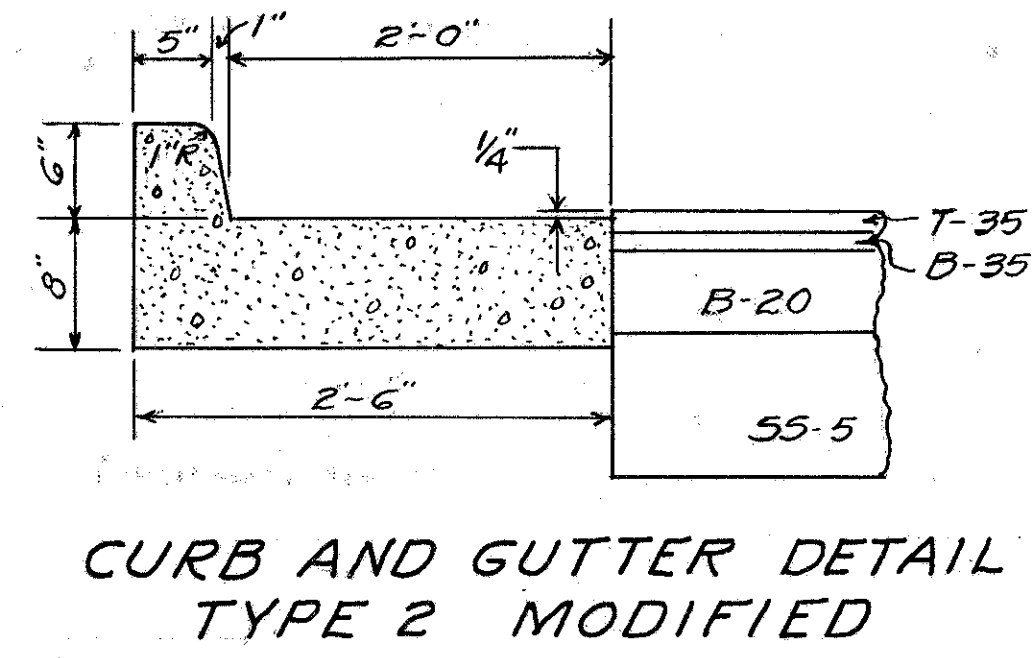
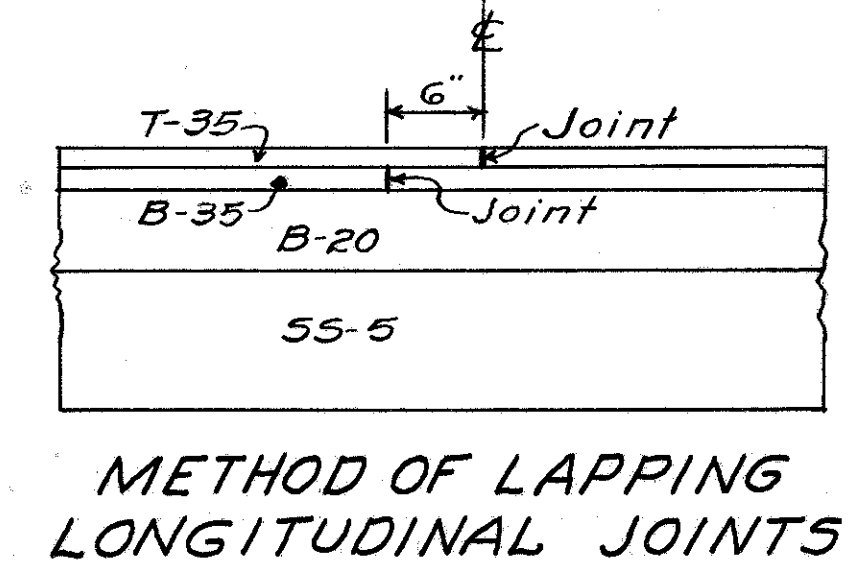
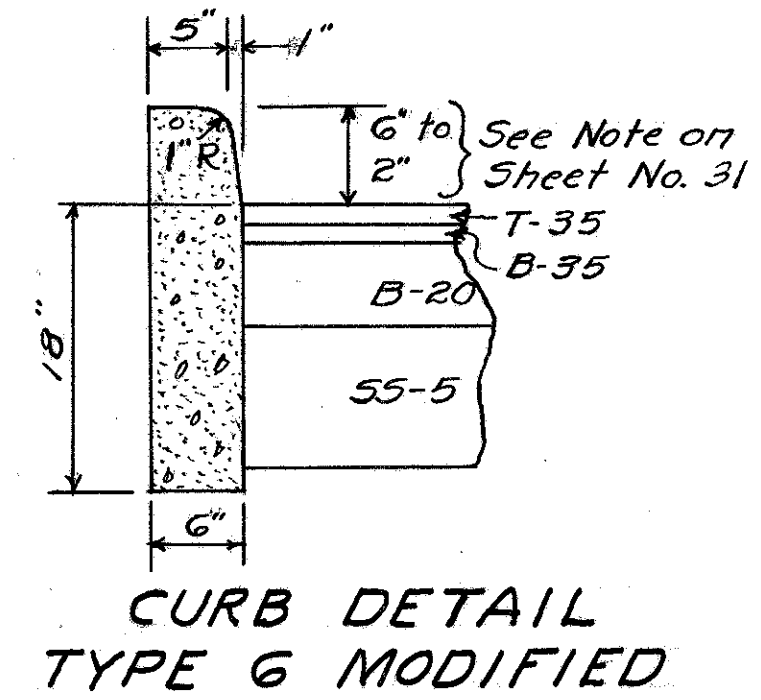
SCALE 1" = 2'-0"



KEY

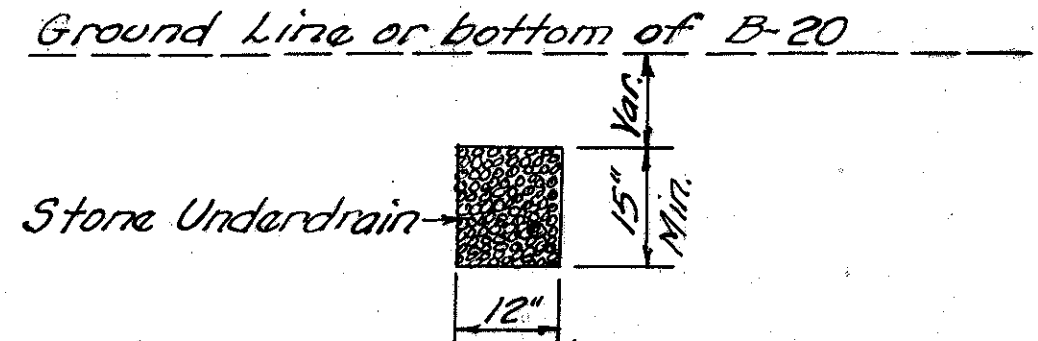
- ① Item 55-5 - 9" 55-5, Grading Cor D.
- ② Item B-20 - 5" Waterbound Macadam Base Course.
- ③ Item T-30 - Bituminous Prime Coat using 0.35 Gal. per Sq. Yd.
- ④ Item B-35 - 1 1/4" min. Asphaltic Concrete Leveling Course.
- ⑤ Item T-35 - 1 1/4" Asphaltic Concrete Surface Course, Type A.
- ⑥ Item I-17 - 6" Berm Material.
- ⑦ Item I-15 - Guard Rail.

TYPICAL DETAILS AND GENERAL NOTES



Stone Underdrain shall be placed as directed by the Engineer at all locations where there is a concentration of water in the subgrade of the pavement, at the low points on vertical curves and at approximately 200' intervals throughout the project. Estimated Quantity: 400 Lin. Ft. Rural and 100 Lin. Ft. Municipal. These quantities are carried direct to the General Summary.

DETAIL OF NO. 2 STONE UNDERDRAIN



NOTE: No. 1 Stone Underdrains shall be placed at the low points in cut sections, at the junction of cuts and fills, and at other locations determined by the Engineer. Estimated Quantity = 200 Lin. Ft. Carried direct to General Summary.

CURVES: ~ Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in that portion between the beginning of the transition and the point where the superelevation equals twice the crown.

BERMS AND SLOPES: ~ Berms and slopes shall be finished in accordance with the typical sections except where otherwise shown on the cross sections. While the cross sections, as drawn, show straight lines and angles, in construction all corners shall be rounded as shown in the typical sections.

TREES: ~ Payment for the removal of trees and stumps shall be included in the bid Item E-1. Excavation, in accordance with Sec. E-1.02. Approximately twenty two (22) trees and stumps, 12 inches or more in diameter, are to be removed.

EMBANKMENT: ~ In lieu of the requirements for full width construction under Sec. E-1.05 the embankment, where traffic is maintained, may be placed in part width construction.

UTILITY ADJUSTMENT: ~ Any and all work required for Public or Private Utilities will be done by the respective owners, and the Contractor shall co-operate with the utility companies by arranging his work in such a manner that needless conflicts will be avoided.

FIELD HOUSE: ~ The Contractor shall provide a suitable "Field Office" in accordance with Sec. 5-0.01(b) having a minimum of 120 square feet of floor space. The Contractor shall have telephone installed and maintained during construction of this project.

I-17 GRADING REQUIREMENTS: ~ The grading requirements for material passing the No. 200 mesh sieve, as specified in Sec. I-17.02 may be modified as follows: ~
Passing 200 mesh - 0% to 20% provided compaction is obtained in accordance with Sec. I-17.02.

RIPRAP: ~ Riprap on outlet end of all structures and drain pipes shall be roughened by placing stones so that they protrude 3 inches above flow line at one (1) foot centers each direction, random position, to retard discharge velocity.

COMPACTION: ~ Compaction will not be required on the top four (4) inches of the areas to be seeded.

SEEDED AREAS: ~ The area of Seeding, Item L-9, is estimated to extend ten (10) feet beyond the slope limits or to the right of way line if it is less than ten (10) feet beyond the limits of work. Areas unnecessarily disturbed by the Contractor, in the opinion of the Engineer, beyond the limits estimated, shall be seeded according to the requirements of Item L-9 at the Contractor's expense.

EXISTING GUARD RAIL: ~ Existing guard rail shall be removed and become the property of the Contractor and shall be disposed of by him. Cost of this work shall be included in the price bid per cubic yard for Roadway Excavation.

DESIGN SPEED: ~ The design speed is fifty (50) miles per hour.

TRAFFIC: ~ The Contractor shall maintain traffic at all times in accordance with the requirements of Sec. 6-8.07. The item of "Maintaining Traffic" shall include furnishing lights, signs, barricades and watchmen necessary to secure the flow of traffic twenty four (24) hours daily.

TEMPORARY RUN-AROUND: ~ Temporary Run-around Bridge and Approaches for Bridge No. HO-39-173 shall be provided within 60 days after the date of the contract since the existing bridge is in poor condition and will then be closed to traffic.

SUMMARY OF QUANTITIES

| Rural | Ref. No. | Station | See Sheet | Removals | | Structure Cu. Yds. | Concrete Cu. Yds. Class "E" | Pipe for Roadway Culverts Lin. Ft. 36" | Riprap Sq. Yds. |
|------------------|----------|---------|-----------|------------------------------------|-----------------------------------|--------------------|-----------------------------|--|-----------------|
| | | | | Dispose of Pipe 15" Under Lin. Ft. | Dispose of Pipe Over 15" Lin. Ft. | | | | |
| | 1-5 | 10+33 | 6 | 47 | | | | | |
| | 2-5 | 12+74 | 30 | | 64 | 5 | 3.3 | 87 | 52 |
| Total to Recap. | | | | 47 | | | | | 52 |
| Total to Summary | | | | | 64 | 5 | 3.3 | 87 | |

| Rural | Station | | Excavation - Cu. Yds. Roadway | Embankment Cu. Yds. | Emb. + 20% Cu. Yds. | Seeding Sq. Yds. | Fertilizer Lbs. | Lime Lbs. |
|--------------------|---------|-------|-------------------------------|---------------------|---------------------|------------------|-----------------|-----------|
| | From | To | | | | | | |
| | 5+50 | 13+73 | 6192 | 3160 | 6192 | 8793 | 1583 | 7914 |
| | 13+73 | 36+92 | 4595 | 44,588 | 53,506 | 45,477 | 8186 | 10,929 |
| | 21+70 | 24+00 | | | | 411 | 74 | 370 |
| | 26+60 | 28+50 | | | | 462 | 83 | 416 |
| Totals (Rural) | | | 10,787 | 49,748 | 59,698 | 55,143 | 9,926 | 49,629 |
| Mun. | 36+92 | 39+81 | 338 | 7,657 | 9,188 | 3,227 | 581 | 2,904 |
| Totals (Municipal) | | | 338 | 7,657 | 9,188 | 3,227 | 581 | 2,904 |

| Rural | Total of Sheet No. | Pipe - Lin. Ft. | | I-17 Aggr. Cu. Yds. | No. 2 (Mod.) Curb & Gutter Lin. Ft. | 4" Concrete Sidewalks Sq. Ft. | No. 3-A Catch Basins Each | Channel Excavation Cu. Yds. | Riprap Sq. Yds. |
|------------------|--------------------|-------------------|-------------------------|---------------------|-------------------------------------|-------------------------------|---------------------------|-----------------------------|-----------------|
| | | For Driveways 15" | Storm Sewer Outlets 12" | | | | | | |
| | 6 | 68 | | 13 | | | | | 5 |
| | 7 | | | 93 | | | | | |
| | 8 | | | 74 | | | | | |
| | 9 | | 50 | | 115 | 688 | 1 | 1 | |
| Total to Recap. | | | | | | 688 | | | 5 |
| Total to Summary | | | | 68 | 50 | 207 | 115 | 1 | |

| Rural | Total of Sheet No. | 4" Concrete Sq. Ft. | Type 6 (Mod.) Curb Lin. Ft. | Remove & Dispose Sq. Ft. |
|-------------------------|--------------------|---------------------|-----------------------------|--------------------------|
| | | | | |
| | 9 | 105 | 4 | |
| Total to Recap. 233 | | | | |
| Total to Summary. 4 208 | | | | |
| Mun. | 9 | 210 | 8 | |
| Total to Summary. 210 8 | | | | |

Borrow (Rural) - 59,698 - 10,787 = 48,911 Cu. Yds. - 1067 Cu. Yds. (50% of E-3) = 47,844 Cu. Yds.
 Borrow (Municipal) - 9,188 - 338 = 8,850 Cu. Yds.

* 15% for Compaction.

| Rural | Total of Sheet No. | Remove & Dispose Lin. Ft. | New Lin. Ft. |
|-----------------------------|--------------------|---------------------------|--------------|
| | | | |
| | 7 | 486 | 39.5 |
| | 8 | 1800 | 36.5 |
| | 9 | 148 | 75 |
| Total to Summary * 2606 151 | | | |
| Mun. | 9 | | 250 |
| Total to Summary. 250 | | | |

| Rural | Total of Sheet No. | Remove & Dispose Sq. Yds. |
|------------------------|--------------------|---------------------------|
| | | |
| | 7 | 2461 |
| | 8 | 2150 |
| | 9 | 303 |
| Total to Summary. 6361 | | |
| Mun. | 9 | 610 |
| Total to Summary. 610 | | |

| Rural | Total of Sheet No. | Slab Sq. Yds. | 7-35 Surface Sq. Yds. | T-30 Tack Coat @ 0.1 gal. per Sq. Yd. Gals. |
|------------------------------------|--------------------|---------------|-----------------------|---|
| | | | | |
| | 8 | 160 | 160 | 16 |
| | 9 | 48.3 | 46.7 | 5 |
| Total to Summary. 288.3 * 286.7 29 | | | | |
| Mun. | 9 | 48.3 | 46.7 | 5 |
| Total to Summary. 48.3 * 46.7 5 | | | | |

* Carried to pavement Calculations. (Sheet No. 5)

* See Note on Sheet 3

| Rural | Total of Sheet No. | Riprap Sq. Yds. |
|---------------------|--------------------|-----------------|
| | | |
| | 7 | 33 |
| Total to Recap. 164 | | |

| Rural | Total of Sheet No. | Removal & Disposal of Pipe 15" Under Lin. Ft. | Pipe 12" Lin. Ft. | 1-2-A Catch Basins Each |
|-------------------------|--------------------|---|-------------------|-------------------------|
| | | | | |
| | 7 | 83 | 82 | |
| Total to Recap. 145 | | | | |
| Total to Summary. 123 1 | | | | |

| Municipal | Total of Sheet No. | Dowel Holes Lin. Ft. | Reinf'g. Steel Lbs. | Class "E" Concrete Cu. Yds. |
|----------------------------|--------------------|----------------------|---------------------|-----------------------------|
| | | | | |
| Total to Recap. | | | | |
| Total to Summary. 6 18 1.7 | | | | |

| Rural | From Table | Remove & Dispose of Pipe 15" Under Lin. Ft. | Riprap Sq. Yds. | 4" Concrete Sidewalks Sq. Ft. |
|-------------------------------|------------|---|-----------------|-------------------------------|
| | | | | |
| A | | | 5 | 688 |
| SW | | | | 233 |
| G | | | 164 | |
| SS | 145 | | | |
| Total to Summary. 192 221 921 | | | | |

SUMMARY OF QUANTITIES

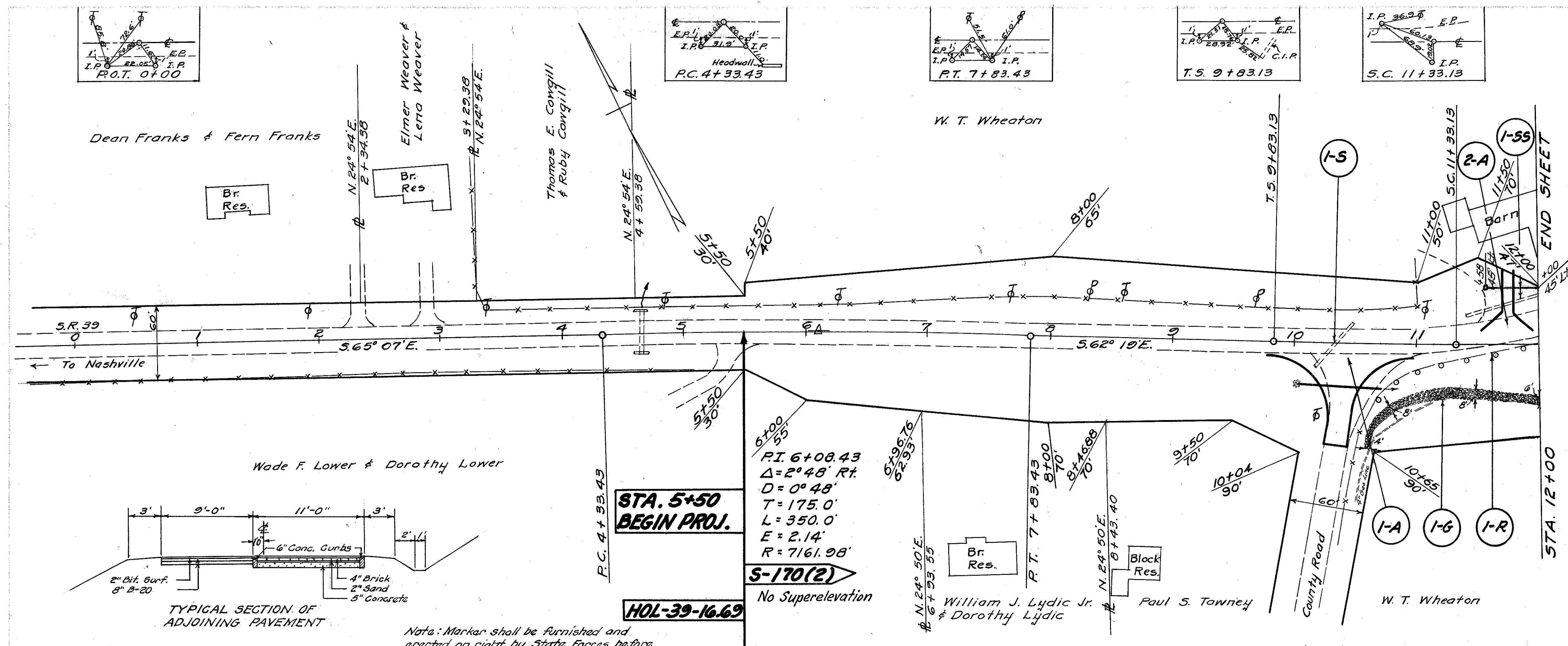
PAVEMENT CALCULATIONS

| | | | |
|---|---|------------------|---------------|
| RURAL | | | |
| Sta. 5+50 to Sta. 22+02.13 | = | 1652.13 Lin. Ft. | |
| Sta. 23+31.36 to Sta. 27+15.75 | = | 384.39 Lin. Ft. | |
| Sta. 28+38.25 to Sta. 31+32.25 | = | 294.00 Lin. Ft. | |
| Sta. 33+07.75 to Sta. 34+88 | = | 180.25 Lin. Ft. | |
| Total length 24' Pavement | = | 2510.77 Lin. Ft. | |
| 2510.77 x 24 ÷ 9 | = | 6695.4 Sq. Yds. | |
| Sta. 34+88 to Sta. 36+13.75 | = | 125.75 Lin. Ft. | |
| 125.75 x 25 (Avg. width) ÷ 9 | = | 349.3 Sq. Yds. | |
| From Approach Sheets. (296+379+480+354) | = | 1509.0 Sq. Yds. | |
| From Approach Slab Table (See sheet 4) | = | 286.7 Sq. Yds. | |
| Total Pavement Area | = | 8840.4 Sq. Yds. | |
| 1 1/4" T-35 Surface Course | = | | 307 Cu. Yds. |
| 8840.4 x 1.25 ÷ 36 | = | | |
| 1 1/4" B-35 Leveling Course | = | | 415 Cu. Yds. |
| 8840.4 x 1.25 ÷ 36 = 307 + Extra leveling (54 x 200) | = | | |
| T-30 Bituminous Prime | = | | |
| 2510.77 x 25 ÷ 9 | = | 6974.4 Sq. Yds. | |
| 125.75 x 26 ÷ 9 | = | 363.3 Sq. Yds. | |
| From Approach Sheets. (300+388+494+354) | = | 1536.0 Sq. Yds. | |
| Total Prime Area | = | 8873.7 Sq. Yds. | |
| 8873.7 x 0.35 | = | | 3106 Gal's. |
| 5" B-20 Base Course | = | | 8874 Sq. Yds. |
| Same as Prime Area | = | | |
| 9" SS-5 | = | | |
| 2510.77 x 26 ÷ 9 | = | 7253.3 Sq. Yds. | |
| 125.75 x 27 ÷ 9 | = | 377.3 Sq. Yds. | |
| From Approach Sheet No. 28 | = | 354.0 Sq. Yds. | |
| Total Area | = | 7984.6 Sq. Yds. | |
| 7984.6 x 9 ÷ 36 + (90 x 26 x 0.75 ÷ 27) + (15 x 30 x 0.75 ÷ 27) | = | | 2074 Cu. Yds. |
| (for approach slabs) | = | | |
| MUNICIPAL | | | |
| Sta. 38+04.25 to Sta. 39+01 | = | 176.75 Lin. Ft. | |
| 176.75 x 26.19 (Avg. width) ÷ 9 | = | 514.3 Sq. Yds. | |
| From Approach Sheet No. 29 | = | 411.0 Sq. Yds. | |
| From Approach Slab Table (See sheet No. 4) | = | 46.7 Sq. Yds. | |
| Total Pavement Area | = | 972.0 Sq. Yds. | |
| 1 1/4" T-35 Surface Course | = | | 34 Cu. Yds. |
| 972 x 1.25 ÷ 36 | = | | |
| 1 1/4" B-35 Leveling Course | = | | 40 Cu. Yds. |
| 972 x 1.25 ÷ 36 = 34 + Extra leveling (0.033 x 200) | = | | |
| T-30 Bituminous Prime | = | | |
| 176.75 x 27.19 (Avg. width) ÷ 9 | = | 534 Sq. Yds. | |
| From Approach Sheet No. 29 | = | 432 Sq. Yds. | |
| Total Prime Area | = | 966 Sq. Yds. | |
| 966 x 0.35 | = | | 338 Gal's. |
| 5" B-20 Base Course | = | | 966 Sq. Yds. |
| 1012.7 - 46.7 (Approach Slab) | = | | |
| 9" SS-5 | = | | |
| 176.75 x 28.19 ÷ 9 | = | 553.7 Sq. Yds. | |
| From Approach Sheet No. 28 | = | 451.0 Sq. Yds. | |
| Total Area | = | 1004.7 Sq. Yds. | |
| 1004.7 x 9 ÷ 36 + (15 x 30 x 0.75 ÷ 27) for approach slabs | = | | 264 Cu. Yds. |
| 6" I-17 Berm Material | = | | |
| L't Side - Sta. 38+04.25 to Sta. 39+25.5 | = | 171.25 Lin. Ft. | |
| 171.25 x 7.5 (Avg. width) x 0.5 ÷ 27 | = | | 23.8 Cu. Yds. |
| R't Side - Sta. 38+04.25 to Sta. 38+29.25 | = | 25.0 Lin. Ft. | |
| Sta. 39+01.5 to Sta. 39+37.5 | = | 86.0 Lin. Ft. | |
| Total | = | 111 Lin. Ft. | |
| 111 x 7.9 (Avg. width) x 0.5 ÷ 27 | = | | 16.2 Cu. Yds. |
| Total I-17 | = | | 40 Cu. Yds. |
| +15% for Compaction = 6 Cu. Yds. Grand Total I-17 | = | | 46 Cu. Yds. |

WATER
 Rural - 5 x 49,748 = 249 M. Gal's.
 Municipal - 5 x 7,657 = 39 M. Gal's.

GENERAL SUMMARY

| ITEM No. | CODE TYPE 6201 QUANTITY | | | UNIT | DESCRIPTION |
|--|-------------------------|------|--------|-----------|--|
| | RURAL | MUN. | TOTAL | | |
| ROADWAY | | | | | |
| E-1 | 10,787 | 338 | 11,125 | Cu. Yds. | Roadway Excavation, as per Plan. |
| E-4 | 47,344 | 8850 | 56,694 | Cu. Yds. | Borrow. |
| E-8 | 6,361 | 610 | 6,971 | Sq. Yds. | Removal and Disposal of Existing Pavement. |
| E-8 | 208 | | 208 | Sq. Ft. | Removal and Disposal of Existing Sidewalk. |
| E-11 | 249 | 39 | 288 | M. Gal's. | Water. |
| E-12 | 192 | | 192 | Lin. Ft. | Pipe Removed and Disposed of, 15" and Under. |
| E-12 | 64 | | 64 | Lin. Ft. | Pipe Removed and Disposed of, Over 15". |
| I-13 | 921 | 210 | 1131 | Sq. Ft. | 4" Concrete Sidewalks. |
| I-15 | 151 | 250 | 401 | Lin. Ft. | Guard Rail, Steel Beam Type (Deep). |
| I-17 | 207 | 46 | 253 | Cu. Yds. | Side Approaches, Mail Box Turnouts and Berm Material, As Per Plan. |
| L-9 | 55,143 | 3227 | 58,370 | Sq. Yds. | Seeding and Protecting, Type "A". |
| L-9 | 4.36 | 0.29 | 5.25 | Tons. | Commercial Fertilizer. (10-6-4) |
| L-9 | 24.81 | 1.45 | 26.26 | Tons. | Agricultural Ground Limestone. |
| M-10 | 14 | 2 | 16 | Tons. | Calcium Chloride for Maintaining Traffic. |
| T-10 | 700 | 100 | 800 | Cu. Yds. | Traffic Compacted Surface Course for Maintaining Traffic. |
| DRAINAGE | | | | | |
| E-2 | 5 | | 5 | Cu. Yds. | Excavation for Structures. |
| E-3 | 1 | | 1 | Cu. Yds. | Channel Excavation. |
| I-1 | 68 | | 68 | Lin. Ft. | 15" Pipe for Driveways. |
| I-2 | 123 | | 123 | Lin. Ft. | 12" Storm Sewers. |
| I-2 | 50 | | 50 | Lin. Ft. | 12" Outlets For Storm Sewers |
| I-9 | 200 | | 200 | Lin. Ft. | Stone Underdrains, No. 1 |
| I-8 | 1 | | 1 | Each | Standard No. 1-2-A Catch Basin |
| I-8 | 1 | | 1 | Each | Standard No. 3-A Catch Basin |
| I-9 | 400 | 100 | 500 | Lin. Ft. | Stone Underdrains, No. 2. |
| I-10 | 221 | | 221 | Sq. Yds. | Riprap, Type "A" Grout Filled, as per plan. |
| S-1 | | 1.7 | 1.7 | Cu. Yds. | Concrete for Structures, Class "E", Retaining Wall as per plan |
| S-1 | 3.3 | | 3.3 | Cu. Yds. | Concrete for Structures, Class "E" |
| S-4 | | 18 | 18 | Lbs. | Reinforcing Steel. |
| S-23 | | 6 | 6 | Lin. Ft. | Dowel Holes. |
| S-27 | | 87 | 87 | Lin. Ft. | 36" Pipe for Roadway Culverts. |
| PAVEMENT | | | | | |
| SS-5 | 2074 | 264 | 2338 | Cu. Yds. | Classified Embankment Material, Grading C or D. |
| B-20 | 8874 | 966 | 9840 | Sq. Yds. | 5" Waterbound Macadam Base Course. |
| B-35 | 415 | 40 | 455 | Cu. Yds. | Asphaltic Concrete Leveling Course. (85-100). |
| T-30 | 3106 | 338 | 3444 | Gal's. | Bituminous Prime Coat, Sec. M-5.7, RT-2 or 3. |
| T-30 | 29 | 5 | 34 | Gal's. | Bituminous Tack Coat, Sec. M-5.5 MS-2 or SS-1 |
| T-35 | 307 | 34 | 341 | Cu. Yds. | Asphaltic Concrete Surface Course, Type "A". (85-100). |
| I-7 | 289 | 48 | 337 | Sq. Yds. | Reinforced Concrete Approach Slabs, as per plan. |
| I-12 | 115 | | 115 | Lin. Ft. | Std. Type 2 Combination Curb and Gutter, Modified As Per Plan |
| I-12 | 4 | 8 | 12 | Lin. Ft. | Std. Type 6 Curb, Modified AS Per Plan. |
| STRUCTURES OVER 20' SPAN | | | | | |
| See Sheet Nos. 36, 40, 43 & 45 for Quantities. | | | | | |



STRUCTURES-20' SPAN & UNDER

| Ref. No. | Station | Sec | Removals | | New Work | | | |
|----------|---------|-----|--------------|------|----------|------|--------|--|
| | | | Type | Size | Type | Size | Length | |
| 1-5 | 10+33 | | C.I.P. #K3.P | 14" | 47' | | | |

APPROACHES

| Ref. No. | Station | Side | Sec | Pipe Lin. Ft. | I-17 Aggr. Cu. Yds. | Riprap Sq. Yds. |
|--------------|---------|------|-----|---------------|---------------------|-----------------|
| | | | | | | |
| 2-A | 11+75 | Lt. | 12 | | 13 | |
| Sheet Totals | | | | 68 | 13 | 5 |

STORM SEWERS

| Ref. No. | Station From | Station To | Side | Remove Lin. Ft. | Pipe Lin. Ft. | I-2A Basins Each |
|--------------|--------------|------------|------|-----------------|---------------|------------------|
| | | | | | | |
| Sheet Totals | | | | 62 | 41 | 1 |

PAVEMENT REMOVAL

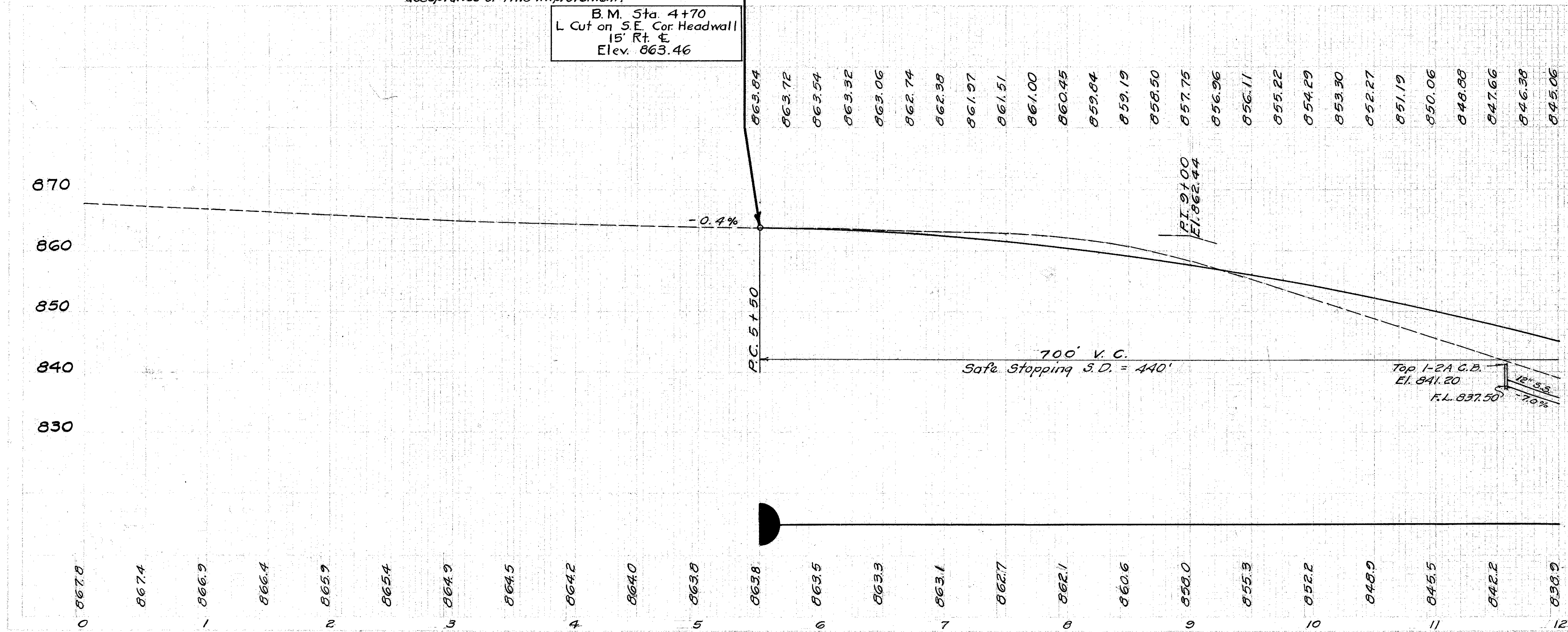
| Station From | Station To | Pavm't Sq. Yds. | |
|--------------|------------|-----------------|------|
| | | | 5+50 |
| Sheet Totals | | | 1447 |

GUARD RAILS

| Ref. No. | Station From | Station To | Side | Remove Lin. Ft. | |
|--------------|--------------|------------|------|-----------------|-----|
| | | | | | 1-R |
| Sheet Totals | | | | | 172 |

GUTTERS

| Ref. No. | Station From | Station To | Side | Riprap Sq. Yds. | |
|--------------|--------------|------------|------|-----------------|-----|
| | | | | | 1-6 |
| Sheet Totals | | | | | 131 |

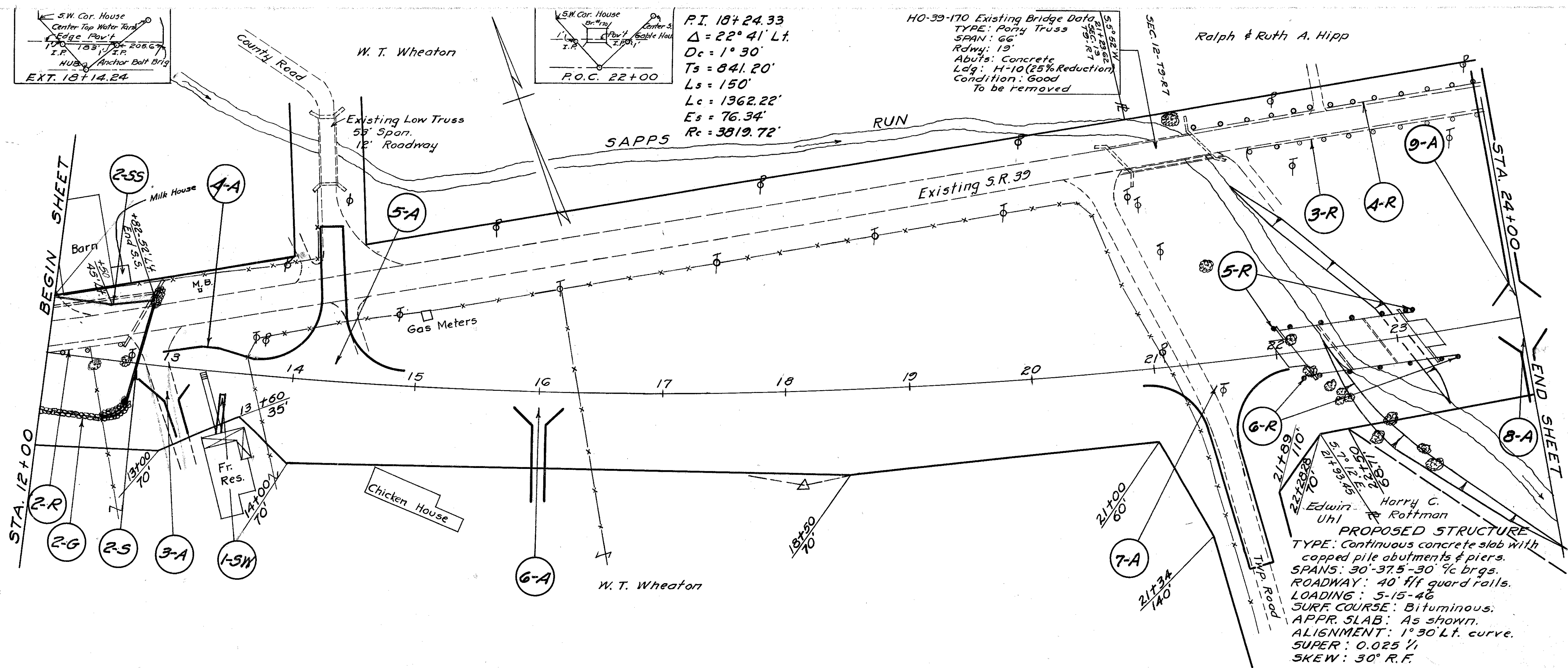


B.M. Sta. 4+70
 L Cut on S.E. Cor. Headwall
 15' Rt. E.
 Elev. 863.46

STA. 5+50 BEGIN PROJ.
HOL-39-16.69
 No Superelevation

William J. Lydic Jr. & Dorothy Lydic
 Paul S. Towney
 W. T. Wheaton

Note: Marker shall be furnished and erected on right by State Forces before acceptance of this improvement.



STRUCTURES - 20' SPAN & UNDER

| Ref. No. | Station | See Sheet | Removals | | New Work | |
|--------------|---------|-----------|----------|------|----------|------|
| | | | Type | Size | Type | Size |
| 2-5 | 12+74 | 30 | C.M.P. | 24" | Pipe | 36" |
| Sheet Totals | | | | | | |

APPROACHES

| Ref. No. | Station | Side | See Sheet | I-17 Appr. | |
|--------------|---------|------|-----------|------------|--|
| | | | | Cu. Yds. | |
| 3-A | 12+91 | Rt. | 13 | 13 | |
| 4-A | 13+30 | Lt. | 6 | 6 | |
| 5-A | 14+36 | Lt. | 26 | 26 | |
| 6-A | 16+00 | Rt. | 13 | 13 | |
| 7-A | 21+40 | Rt. | 27 | 27 | |
| 8-A | 24+00 | Rt. | 17 | 15 | |
| 9-A | 24+00 | Lt. | 17 | 40 | |
| Sheet Totals | | | 93 | | |

STORM SEWERS

| Ref. No. | Station | Side | Remove | | Pipe | |
|--------------|---------|-------|----------|-----|------|-----|
| | | | Lin. Ft. | 15" | 12" | 82" |
| 2-5 | 12+00 | 12+92 | Lt. | 83 | 82 | |
| Sheet Totals | | | 83 | 82 | | |

GUARD RAILS

| Ref. No. | Station | Side | Remove | | New | | Remarks |
|--------------|----------|----------|----------|-------|-------|-----------------------|---------|
| | | | Lin. Ft. | 13.5' | 26' | 39.5' | |
| 2-R | 12+00 | 12+60 | Lt. | 60 | | | |
| 3-R | 21+98 | 24+00 | Lt. | 192 | | | |
| 4-R | 21+54 | 24+00 | Lt. | 234 | | | |
| 5-R | 22+02.08 | 23+44.58 | Lt. | | 13.5' | 39' is Bridge Railing | |
| 6-R | 22+18.92 | 23+43.92 | Rt. | | 26' | 39' is Bridge Railing | |
| Sheet Totals | | | 486 | 39.5 | | | |

PAVEMENT REMOVAL

| Station | From | To | Pavem. Sq. Yds. |
|--------------|-------|------|-----------------|
| 12+00 | 20+20 | 1945 | |
| 21+60 | 24+00 | 516 | |
| Sheet Totals | | | 2461 |

APPROACH SLABS

| Station | From | To | See Sheet | Slab Sq. Yds. | 7-35 Surface Sq. Yds. | Remarks |
|--------------|----------|----|-----------|---------------|-----------------------|---------|
| 22+02.13 | 22+17.13 | 40 | | 40 | | A5-4-47 |
| 23+16.36 | 23+31.36 | 40 | | 40 | | |
| Sheet Totals | | | 80 | 80 | | |

SIDEWALKS

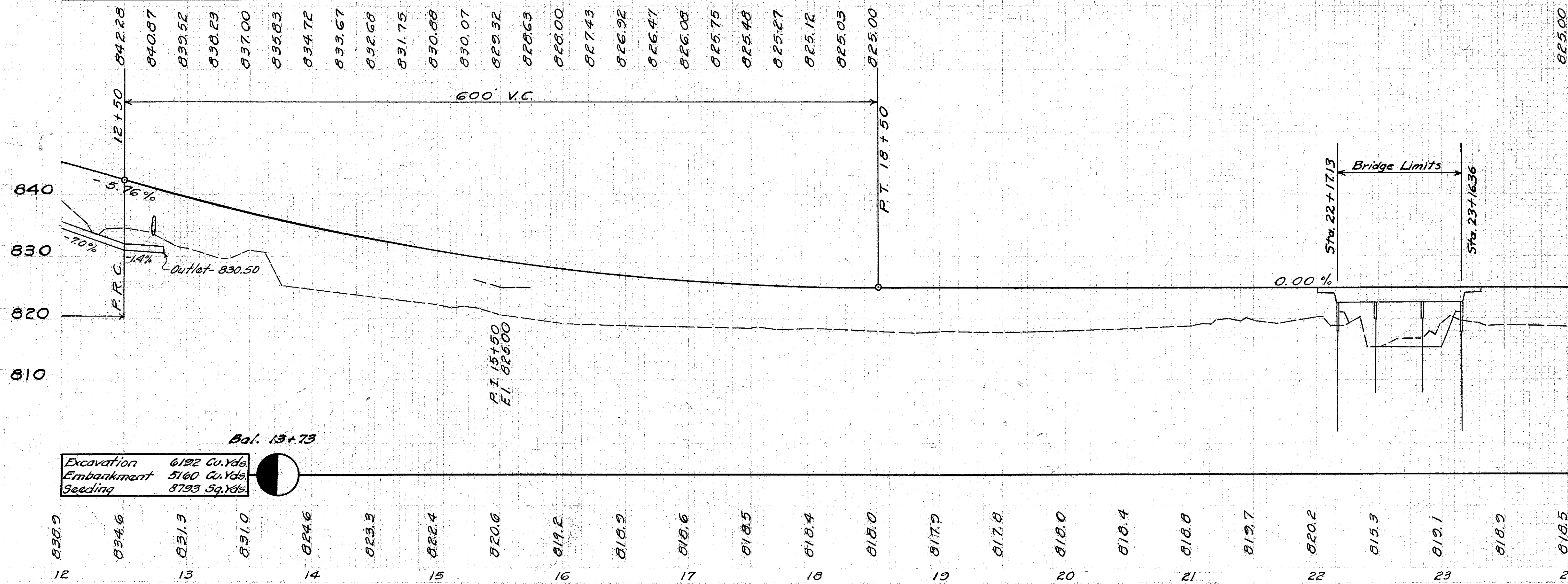
| Ref. No. | Station | Side | Remove Sq. Ft. | New 4'-4' Sq. Ft. |
|--------------|---------|------|----------------|-------------------|
| 1-5W | 13+45 | Rt. | 208 | 128 |
| Sheet Totals | | | 208 | 128 |

GUTTERS

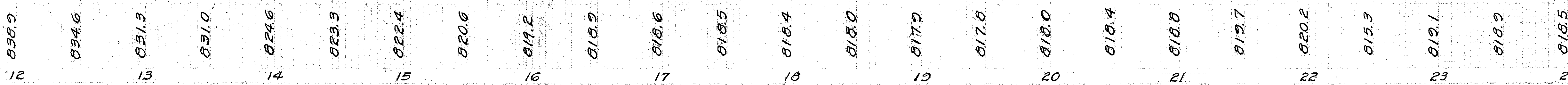
| Ref. No. | Station | Side | Riprap Sq. Yds. |
|--------------|---------|-------|-----------------|
| 2-G | 12+00 | 12+50 | Rt. 33 |
| Sheet Totals | | | 33 |

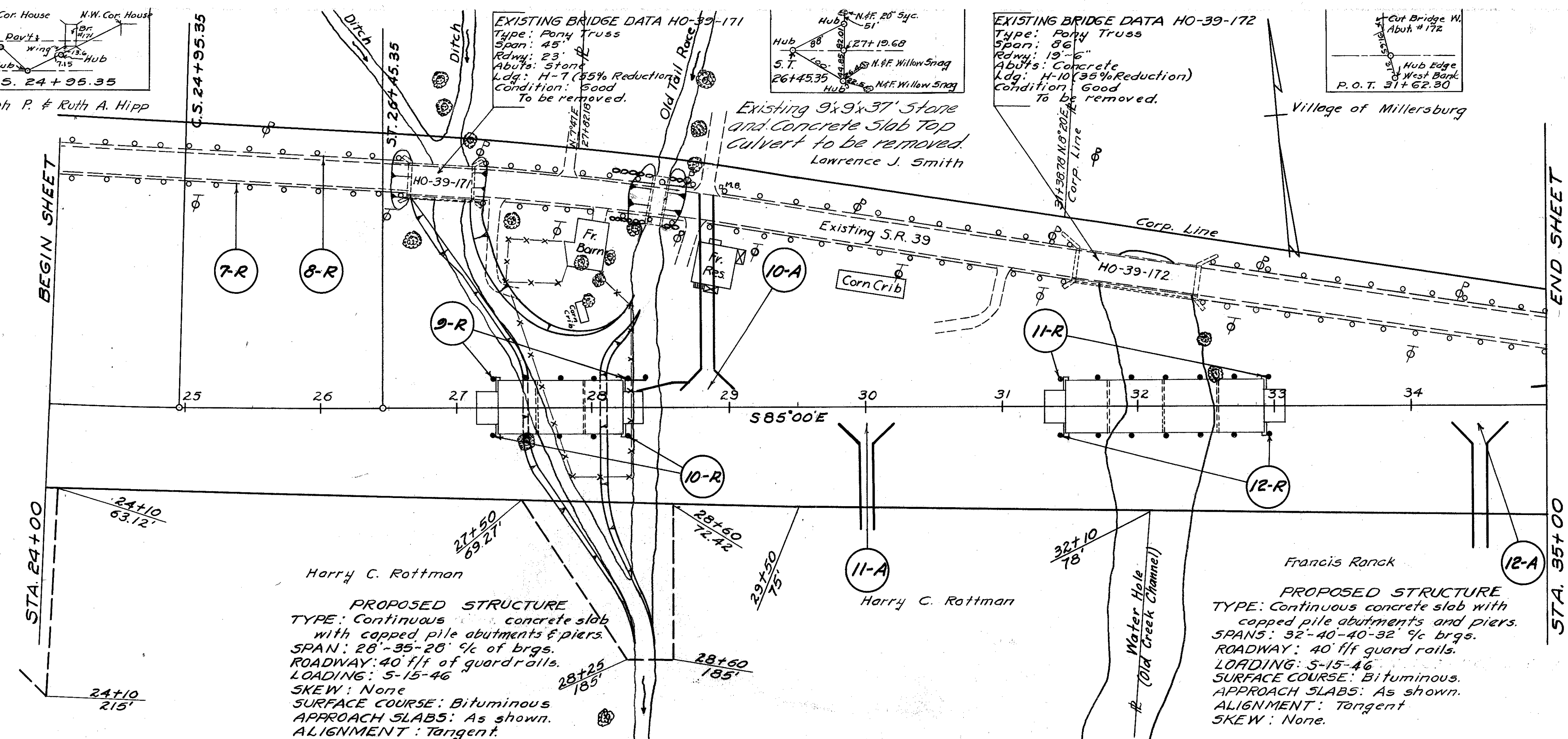
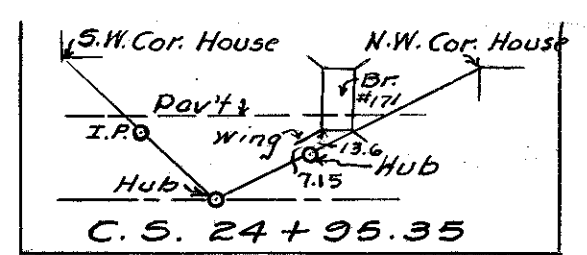
B.M. Sta. 12+05
 Bottom of Weatherboard on Barn
 50' Lt. E.
 Elev. 839.32

B.M. Sta. 21+75
 L. Cut on Cor. of S.E. Wing
 160' Lt. E.
 Elev. 823.17



Excavation 6192 Cu. Yds.
Embankment 5160 Cu. Yds.
Seeding 8793 Sq. Yds.





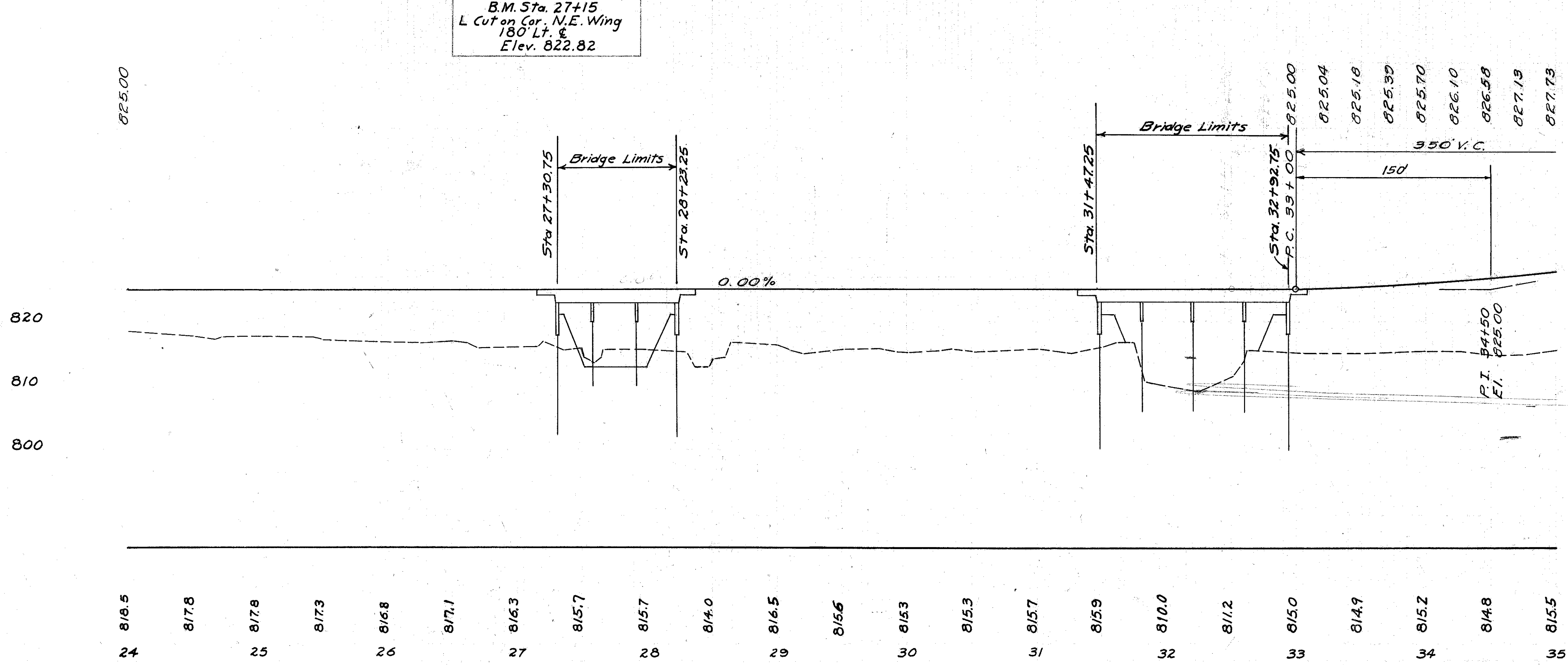
| STRUCTURES - 20' SPAN & UNDER | | | | | | |
|-------------------------------|---------|-----------|---------------|------|--------|---------------|
| Ref. No. | Station | See Sheet | Removals Type | Size | Length | New Work Type |
| | | | | | | Size |
| | | | | | | Length |

| APPROACHES | | | | |
|--------------|---------|------|-----------|---------------------|
| Ref. No. | Station | Side | See Sheet | I-17 Aggr. Cu. Yds. |
| 10-A | 28+85 | LH | 20 | 34 |
| 11-A | 30+00 | RH | 20 | 19 |
| 12-A | 34+50 | RH | 22 | 21 |
| Sheet Totals | | | | 74 |

| GUARD RAILS | | | | | | |
|--------------|--------------|------------|------|-----------------|--------------|--------------------------|
| Ref. No. | Station From | Station To | Side | Remove Lin. Ft. | New Lin. Ft. | Remarks |
| 7-R | 24+00 | 35+00 | LH | 895 | | |
| 8-R | 24+00 | 35+00 | LH | 905 | | |
| 9-R | 27+27.15 | 28+30.65 | LH | | 20 | 92.5' is Bridge Railing |
| 10-R | 27+26.85 | 28+26.85 | RH | | 7.5 | 92.5' is Bridge Railing |
| 11-R | 31+44.85 | 32+21.85 | LH | | 4.5 | 145.5' is Bridge Railing |
| 12-R | 31+45.15 | 32+25.15 | RH | | 4.5 | 145.5' is Bridge Railing |
| Sheet Totals | | | | 1800 | 36.5 | |

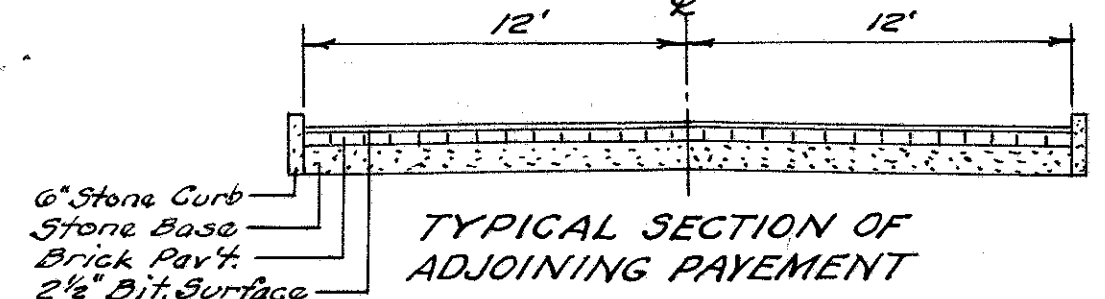
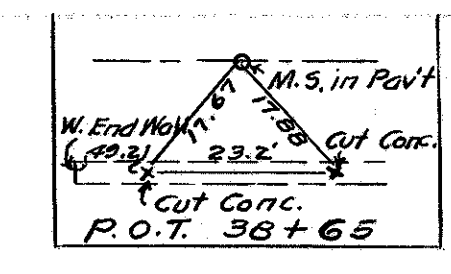
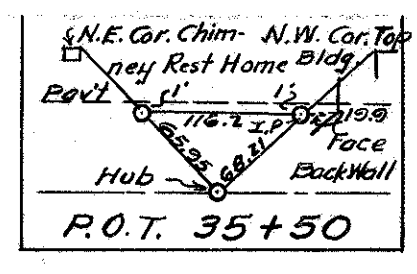
| PAVEMENT REMOVAL | | | |
|------------------|------------|-----------------|--------------------|
| Station From | Station To | Pavmt. Sq. Yds. | Remarks |
| 24+00 | 35+00 | 2150 | Deduct for Bridges |
| Sheet Totals | | 2150 | |

| APPROACH SLABS | | | | | |
|----------------|------------|-----------|---------------|-----------------------|---------|
| Station From | Station To | See Sheet | Slab Sq. Yds. | T-35 Surface Sq. Yds. | Remarks |
| 27+15.75 | 27+30.75 | | 40 | 40 | A5-4-47 |
| 28+23.25 | 28+38.25 | | 40 | 40 | A5-4-47 |
| 31+32.25 | 31+47.25 | | 40 | 40 | A5-4-47 |
| 32+22.75 | 33+07.75 | | 40 | 40 | A5-4-47 |
| Sheet Totals | | | 160 | 160 | |

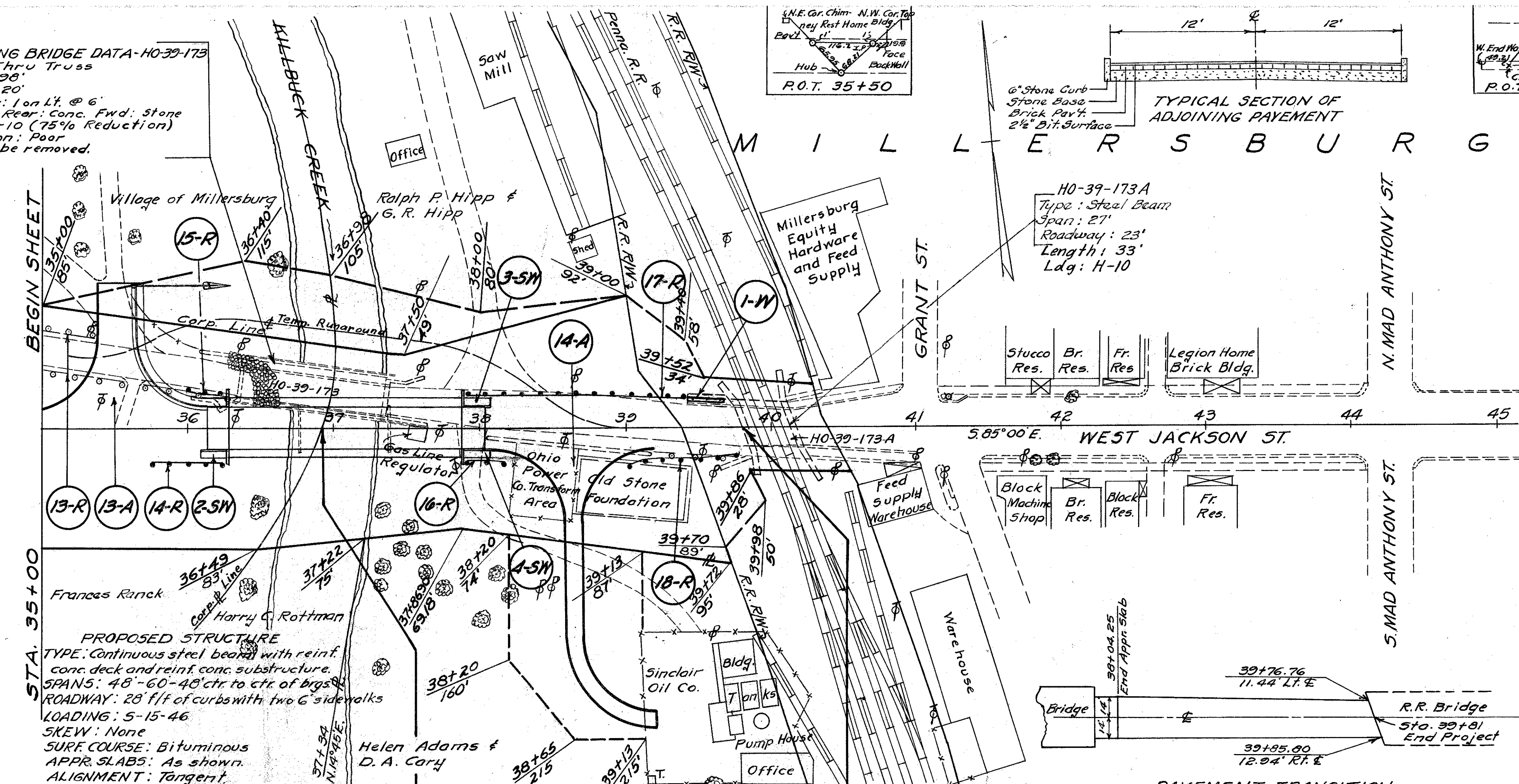


- 816.5 24
- 817.8 25
- 817.8 25
- 817.3 26
- 816.8 26
- 817.1 27
- 816.3 27
- 815.7 28
- 815.7 28
- 814.0 29
- 816.5 29
- 815.6 30
- 815.3 30
- 815.3 31
- 815.7 31
- 815.9 32
- 810.0 32
- 811.2 33
- 815.0 33
- 814.9 34
- 815.2 34
- 814.8 35
- 815.5 35

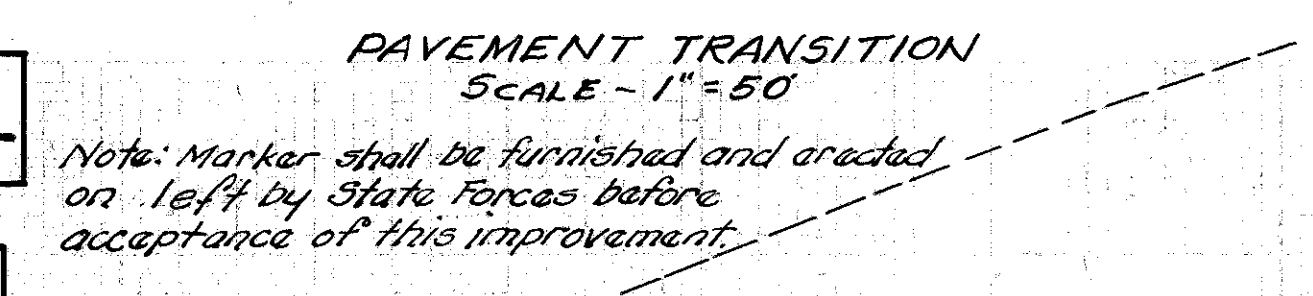
EXISTING BRIDGE DATA-HO-39-173
 Type: Thru Truss
 Span: 30'
 Rdwy: 20'
 Sidewalk: 1 on Lt. @ 6'
 Abuts.: Rear: Conc. Fwd: Stone
 Ldg: H-10 (75% Reduction)
 Condition: Poor
 To be removed.



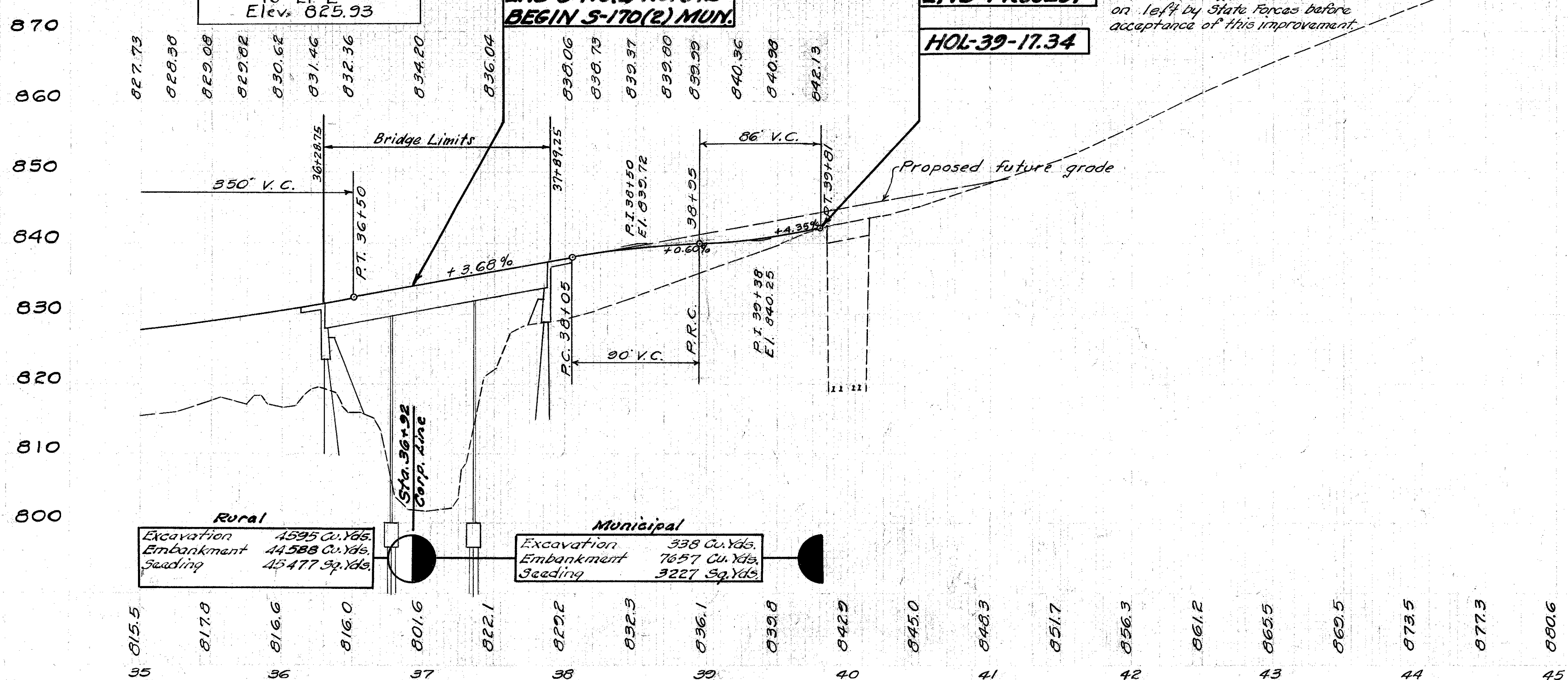
H0-39-173A
 Type: Steel Beam
 Span: 21'
 Roadway: 23'
 Length: 33'
 Ldg: H-10



PROPOSED STRUCTURE
 TYPE: Continuous steel beam with reinf. conc. deck and reinf. conc. substructure.
 SPANS: 48'-60'-48' ctr. to ctr. of bays
 ROADWAY: 28' f.f. of curbs with two 6' sidewalks
 LOADING: S-15-46
 SKEW: None
 SURF COURSE: Bituminous
 APPR. SLABS: As shown.
 ALIGNMENT: Tangent.



Note: Marker shall be furnished and erected on left by State Forces before acceptance of this improvement.



| Station | Excavation | Embankment | Seeding |
|-----------|---------------|----------------|----------------|
| Rural | 1595 Cu. Yds. | 44588 Cu. Yds. | 15477 Sq. Yds. |
| Municipal | 338 Cu. Yds. | 7657 Cu. Yds. | 3227 Sq. Yds. |

| Ref. No. | Station | Side | Sec | No. 2 (Mod) 4" Conc. Curbs/Other Sidewalks Lin. Ft. | Sq. Ft. | No. 3-A Catch Basins/Outlets Each | 12" 3.5. Lin. Ft. | Channel Excavat'n Cu. Yds. |
|----------------------|---------|------|-----|---|---------|-----------------------------------|-------------------|----------------------------|
| 13-A | 35+50 | Lt. | 28 | 115 | 688 | 1 | 50 | 1 |
| 14-A | 38+65 | Rt. | 29 | | | | | |
| Sheet Totals (Rural) | | | | 115 | 688 | 1 | 50 | 1 |
| Sheet Totals (Mun.) | | | | | | | | |

| Ref. No. | Station | Side | Remove Lin. Ft. | New Lin. Ft. | |
|----------------------|---------|------|-----------------|--------------|-----|
| 13-R | 35+00 | Lt. | 148 | | |
| 14-R | 35+77 | Rt. | | 50 | |
| 15-R | 36+02 | Lt. | | 25 | |
| Sheet Totals (Rural) | | | | 148 | 75 |
| 16-R | 37+21 | Rt. | | 25 | |
| 17-R | 37+21 | Lt. | | 150 | |
| 18-R | 39+00 | Rt. | | 75 | |
| Sheet Totals (Mun.) | | | | | 250 |

| Station | From | To | Pavam't. Sq. Yds. |
|----------------------|-------|----|-------------------|
| 35+00 | 36+36 | | 303 |
| 37+37 | 39+81 | | 610 |
| Sheet Totals (Rural) | | | 303 |
| Sheet Totals (Mun.) | | | 610 |

| Station | From | To | Slab Sq. Yds. | T-35 Surface Sq. Yds. | Remarks |
|----------------------|----------|----|---------------|-----------------------|-----------------------|
| 36+13.75 | 36+28.75 | 31 | 48.3 | 46.7 | AS-4-47 (As per plan) |
| 37+89.25 | 38+04.25 | 31 | 48.3 | 46.7 | AS-4-47 (As per plan) |
| Sheet Totals (Rural) | | | 48.3 | 46.7 | |
| Sheet Totals (Mun.) | | | 48.3 | 46.7 | |

| Ref. No. | Station | Side | 4"x5.5' Sq. Ft. | Type 6 (Mod) Curb Lin. Ft. |
|----------------------|----------|------|-----------------|----------------------------|
| 25W | 36+09.75 | Rt. | 105 | 4 |
| 3-SW | 37+89.25 | Lt. | 105 | 4 |
| 4-SW | 37+89.25 | Rt. | 105 | 4 |
| Sheet Totals (Rural) | | | 105 | 4 |
| Sheet Totals (Mun.) | | | 210 | 8 |

| Ref. No. | Station | Sec | Dowel Holes Sheet Lin. Ft. | Reinf'g. Steel Lbs. | Class "E" Concrete Cu. Yds. |
|---------------------|---------|-----|----------------------------|---------------------|-----------------------------|
| 1-W | 39+43.5 | 31 | 6 | 18 | 1.7 |
| Sheet Totals (Mun.) | | | 6 | 18 | 1.7 |

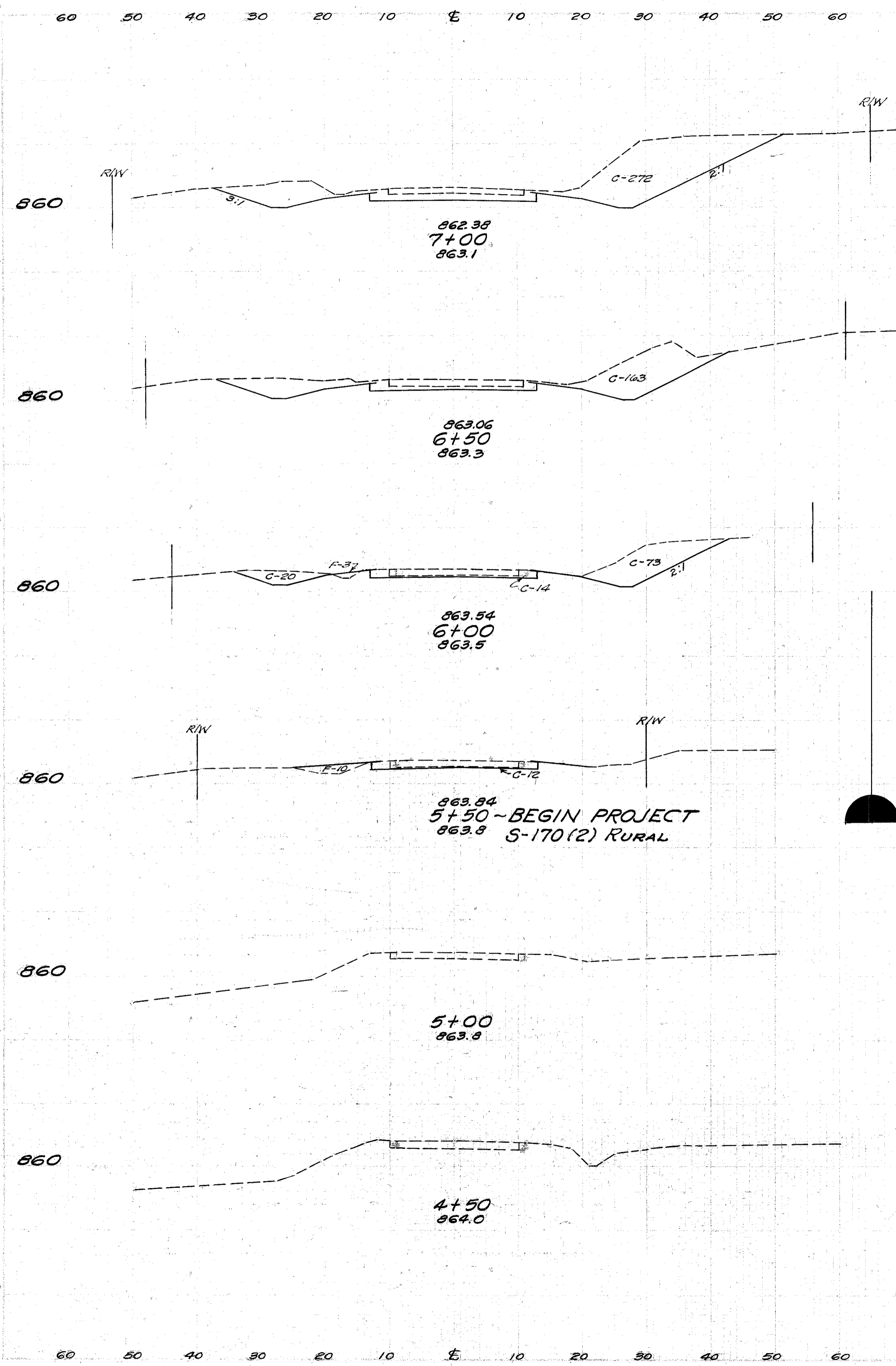
CURVE TABLES

| T.S. 9+83.13 D = 1°30' L.T. | | | | S.T. 26+45.35 | | | |
|-----------------------------|--------------|-------|------------|---------------|-------|-----------|---------------|
| LEFT | | | | RIGHT | | | |
| Edge of Pav't | Deduct Crown | Width | STATION | Profile Grade | Width | Add Super | Edge of Pav't |
| 857.29 | 0.19 | 12.00 | 9+08.88 | 857.48 | 12.00 | 0.00 | 857.29 |
| 856.77 | | | +25 | 856.96 | | 0.04 | 856.81 |
| 855.92 | | | +50 | 856.11 | | 0.10 | 856.02 |
| 855.03 | | | +75 | 855.22 | | 0.16 | 855.19 |
| 854.73 | | | T.S.+83.13 | 854.92 | | 0.19 | 854.92 |
| 854.10 | | | 10+00 | 854.29 | | 0.24 | 854.34 |
| 853.11 | | | +25 | 853.30 | | 0.30 | 853.41 |
| 852.08 | | | +50 | 852.27 | | 0.37 | 852.45 |
| 851.00 | | | +75 | 851.19 | | 0.44 | 851.44 |
| 849.87 | | | 11+00 | 850.06 | | 0.51 | 850.38 |
| 848.69 | | | +25 | 848.88 | | 0.58 | 849.27 |
| 848.30 | | | S.C.+38.13 | 848.49 | | 0.60 | 848.90 |
| 847.47 | | | +50 | 847.66 | | | 848.07 |
| 846.19 | | | +75 | 846.38 | | | 846.79 |
| 844.87 | | | 12+00 | 845.06 | | | 845.47 |
| 843.51 | | | +25 | 843.70 | | | 844.11 |
| 842.09 | | | +50 | 842.28 | | | 842.69 |
| 840.68 | | | +75 | 840.87 | | | 841.28 |
| 839.33 | | | 13+00 | 839.52 | | | 839.93 |
| 838.04 | | | +25 | 838.23 | | | 838.64 |
| 836.81 | | | +50 | 837.00 | | | 837.41 |
| 835.64 | | | +75 | 835.83 | | | 836.24 |
| 834.53 | | | 14+00 | 834.72 | | | 835.13 |
| 833.48 | | | +25 | 833.67 | | | 834.08 |
| 832.49 | | | +50 | 832.68 | | | 833.09 |
| 831.56 | | | +75 | 831.75 | | | 832.16 |
| 830.69 | | | 15+00 | 830.88 | | | 831.29 |
| 829.88 | | | +25 | 830.07 | | | 830.48 |
| 829.13 | | | +50 | 829.32 | | | 829.73 |
| 828.44 | | | +75 | 828.63 | | | 829.04 |
| 827.81 | | | 16+00 | 828.00 | | | 828.41 |
| 827.24 | | | +25 | 827.43 | | | 827.84 |
| 826.73 | | | +50 | 826.92 | | | 827.33 |
| 826.28 | | | +75 | 826.47 | | | 826.88 |
| 825.89 | | | 17+00 | 826.08 | | | 826.49 |
| 825.56 | | | +25 | 825.75 | | | 826.16 |
| 825.29 | | | +50 | 825.48 | | | 825.89 |
| 825.08 | | | +75 | 825.27 | | | 825.68 |
| 824.93 | | | 18+00 | 825.12 | | | 825.53 |
| 824.84 | | | +25 | 825.03 | | | 825.44 |
| 824.81 | | | +50 | 825.00 | | | 825.41 |
| | | | +75 | | | | |
| | | | 19+00 | | | | |
| | | | +25 | | | | |
| | | | +50 | | | | |
| | | | +75 | | | | |
| | | | 20+00 | | | | |
| | | | +25 | | | | |
| | | | +50 | | | | |
| | | | +75 | | | | |
| | | | 21+00 | | | | |
| | | | +25 | | | | |
| | | | +50 | | | | |
| | | | +75 | | | | |
| | | | 22+00 | | | | |
| | | | +25 | | | | |
| | | | +50 | | | | |
| | | | +75 | | | | |
| | | | 23+00 | | | | |
| 824.81 | 0.19 | 12.00 | +25 | 825.00 | 12.00 | 0.60 | 825.41 |

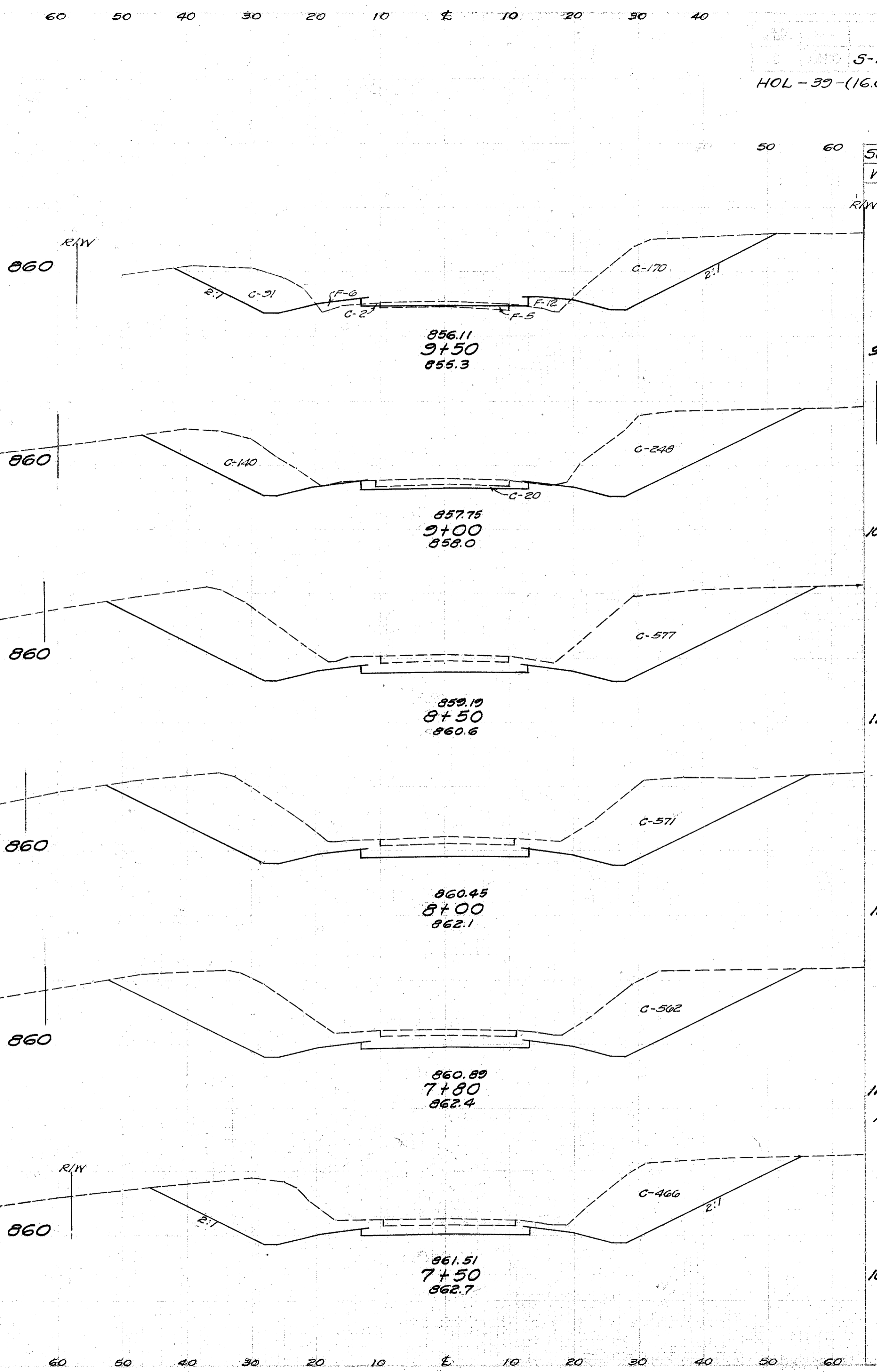
CONTINUED IN COLUMN ON RIGHT

| LEFT | | | RIGHT | | | | |
|---------------|--------------|-------|------------|---------------|-------|-----------|---------------|
| Edge of Pav't | Deduct Crown | Width | STATION | Profile Grade | Width | Add Super | Edge of Pav't |
| 824.81 | 0.19 | 12.00 | 23+50 | 825.00 | 12.00 | 0.60 | 825.41 |
| | | | +75 | | | | |
| | | | 24+00 | | | | |
| | | | +25 | | | | |
| | | | +50 | | | | |
| | | | +75 | | | | |
| | | | C.S.+95.35 | | | 0.60 | 825.41 |
| | | | 25+00 | | | 0.59 | 825.40 |
| | | | +25 | | | 0.52 | 825.33 |
| | | | +50 | | | 0.45 | 825.26 |
| | | | +75 | | | 0.38 | 825.19 |
| | | | 26+00 | | | 0.31 | 825.12 |
| | | | +25 | | | 0.24 | 825.05 |
| | | | S.T.+45.35 | | | 0.19 | 825.00 |
| | | | +50 | | | 0.18 | 824.99 |
| | | | +75 | | | 0.11 | 824.92 |
| | | | 27+00 | | | 0.05 | 824.86 |
| | | | +19.60 | | | | 824.83 |
| | | | +25 | | | | 824.82 |
| 824.81 | 0.19 | 12.00 | +50 | 825.00 | 12.00 | | 824.81 |

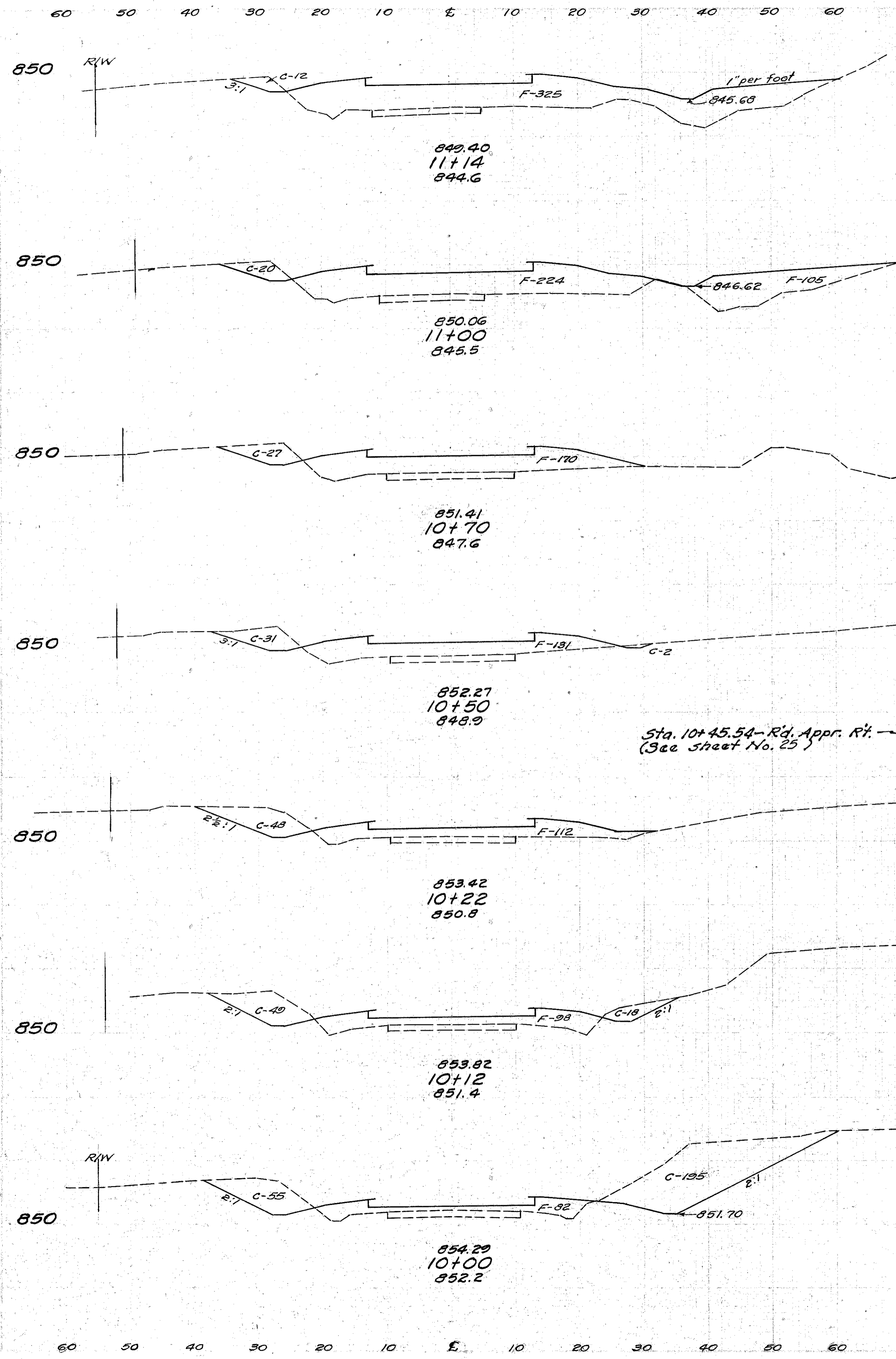
NOTE: The design speed is 50 Mph.



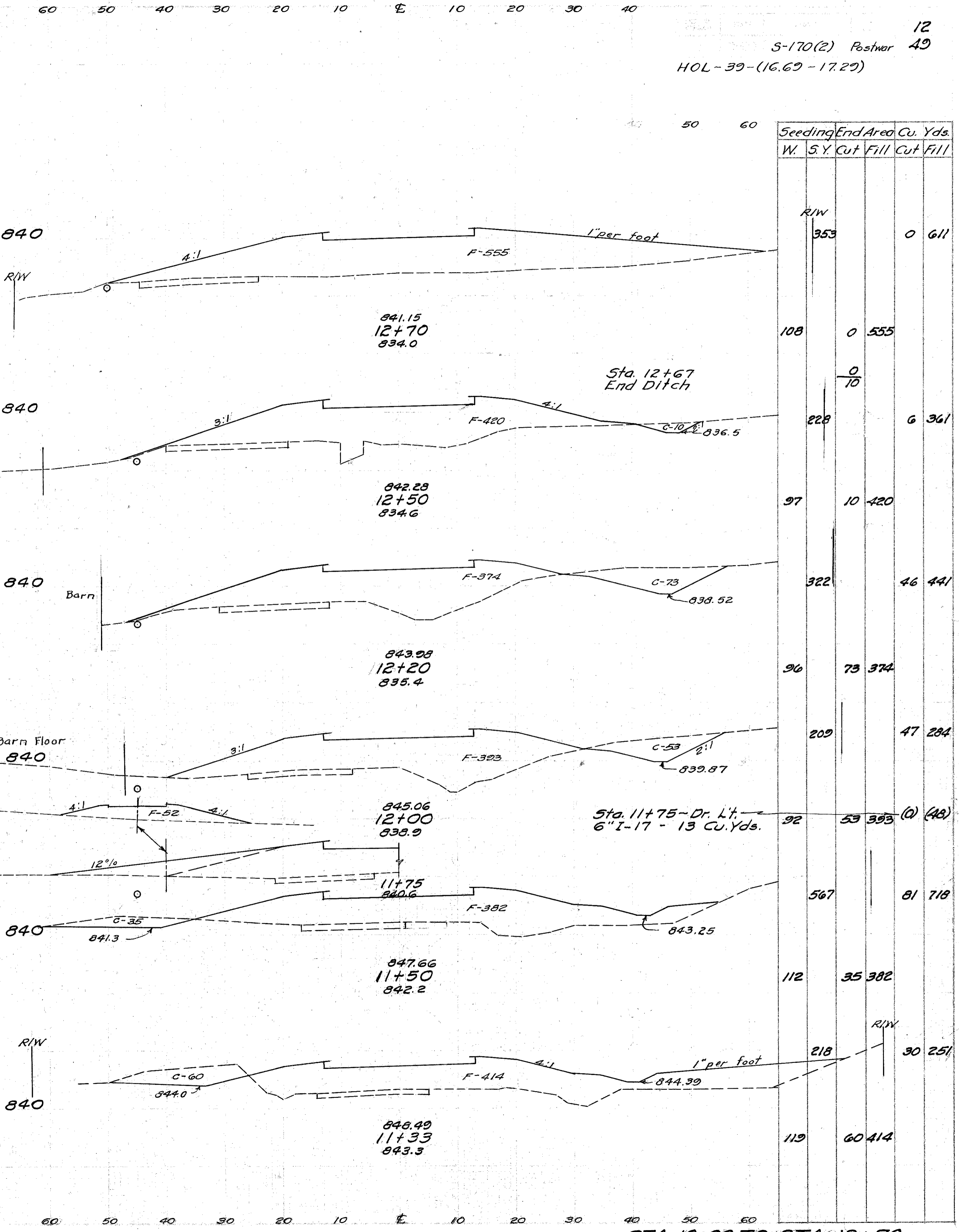
| Seeding | End Area | Cu. Yds. |
|-------------|----------|----------|
| W. S.Y. Cut | Fill | Cut Fill |
| 528 | 683 | 0 |
| 88 | 272 | 0 |
| 458 | 403 | 0 |
| 77 | 163 | 0 |
| 422 | 250 | 3 |
| 75 | 107 | 3 |
| 319 | 110 | 12 |
| 40 | 12 | 10 |



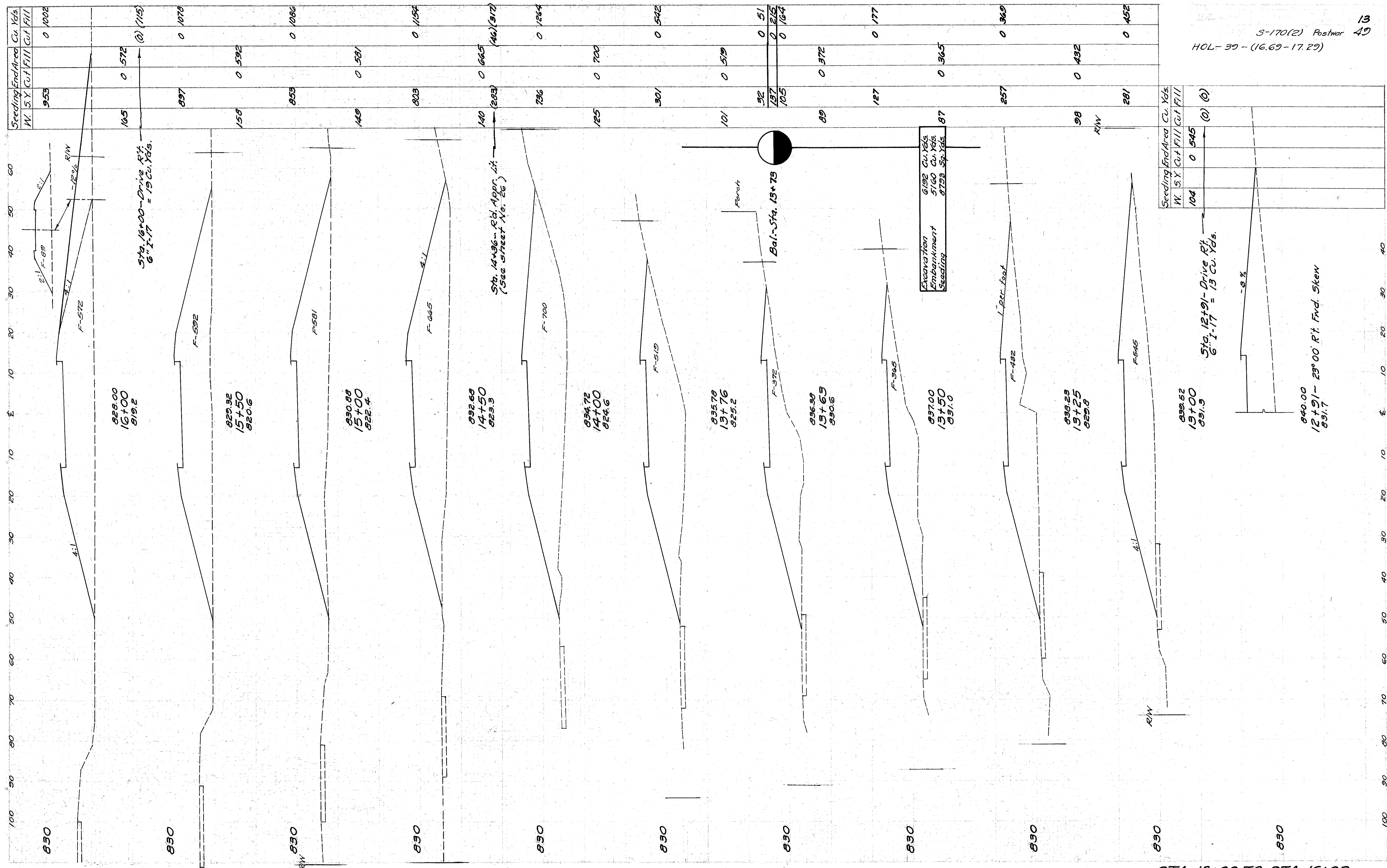
| Seeding | End Area | Cu. Yds. |
|-------------|----------|----------|
| W. S.Y. Cut | Fill | Cut Fill |
| 536 | 475 | 97 |
| 94 | 263 | 23 |
| 550 | 621 | 21 |
| 104 | 408 | 0 |
| 623 | 912 | 0 |
| 113 | 577 | 0 |
| 622 | 1063 | 0 |
| 111 | 571 | 0 |
| 246 | 420 | 0 |
| 110 | 562 | 0 |
| 353 | 571 | 0 |
| 102 | 466 | 0 |



| Stationing | Seeding | | End Area | | Cu. Yds. | |
|--|---------|------|----------|------|----------|------|
| | W. | S.Y. | Cut | Fill | Cut | Fill |
| 850 11+14 | 222 | R/W | 25 | 260 | | |
| 849.40 11+14 844.6 | 91 | | 12 | 325 | | |
| 850 11+00 | 151 | | 8 | 170 | | |
| 850.06 11+00 845.5 | 103 | | 20 | 329 | | |
| 850 10+70 | 278 | | 26 | 277 | | |
| 851.41 10+70 847.6 | 64 | | 27 | 170 | | |
| 850 10+50 | 144 | | 22 | 111 | | |
| 852.27 10+50 848.9 | 66 | | 33 | 131 | | |
| Sta. 10+45.54 - Rd. Appr. Rt. (See Sheet No. 25) | | | | | | |
| 850 10+22 | 210 | | 42 | 126 | | |
| 853.42 10+22 850.8 | 69 | | 48 | 112 | | |
| 850 10+12 | 78 | | 21 | 39 | | |
| 853.82 10+12 851.4 | 71 | | 67 | 98 | | |
| 850 10+00 | 113 | | 70 | 40 | | |
| 854.29 10+00 852.2 | 99 | | 250 | 82 | | |



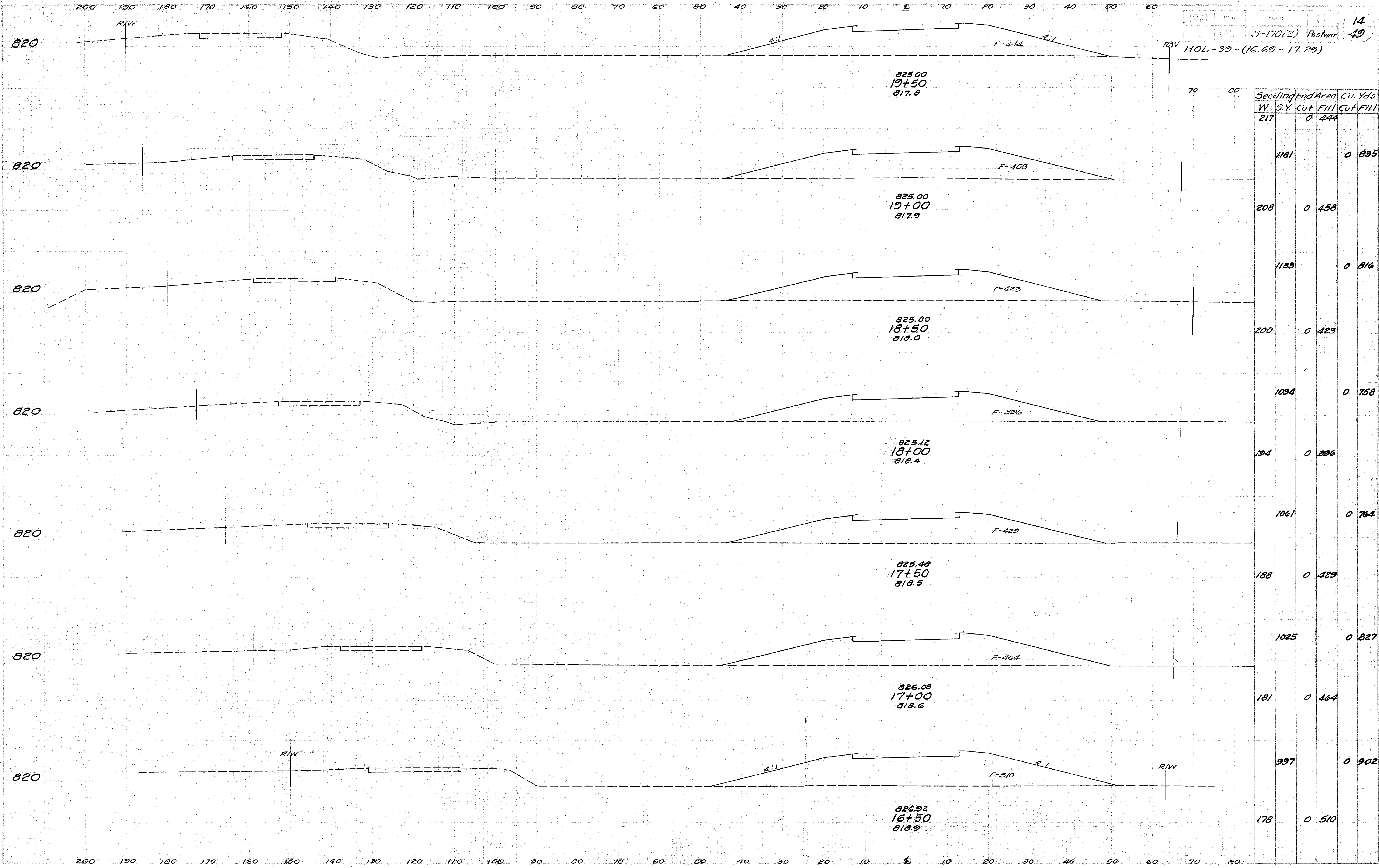
| Stationing | Seeding | | End Area | | Cu. Yds. | |
|--|---------|------|----------|------|----------|------|
| | W. | S.Y. | Cut | Fill | Cut | Fill |
| 840 12+70 | 353 | | 0 | 611 | | |
| 841.15 12+70 834.0 | 108 | | 0 | 555 | | |
| Sta. 12+67 End Ditch | | | | | | |
| 840 12+50 | 228 | | 0 | 10 | 6 | 361 |
| 842.28 12+50 834.6 | 97 | | 10 | 420 | | |
| 840 12+20 | 322 | | 46 | 441 | | |
| 843.98 12+20 835.4 | 96 | | 73 | 374 | | |
| 840 12+00 | 209 | | 47 | 294 | | |
| 845.06 12+00 838.9 | 92 | | 53 | 393 | 0 | 48 |
| Sta. 11+75 - Dr. Lt. 6" I-17 - 13 Cu. Yds. | | | | | | |
| 840 11+75 | 567 | | 81 | 718 | | |
| 847.66 11+50 842.2 | 112 | | 35 | 382 | | |
| 840 11+33 | 218 | | 30 | 251 | | |
| 848.49 11+33 843.3 | 119 | | 60 | 414 | | |



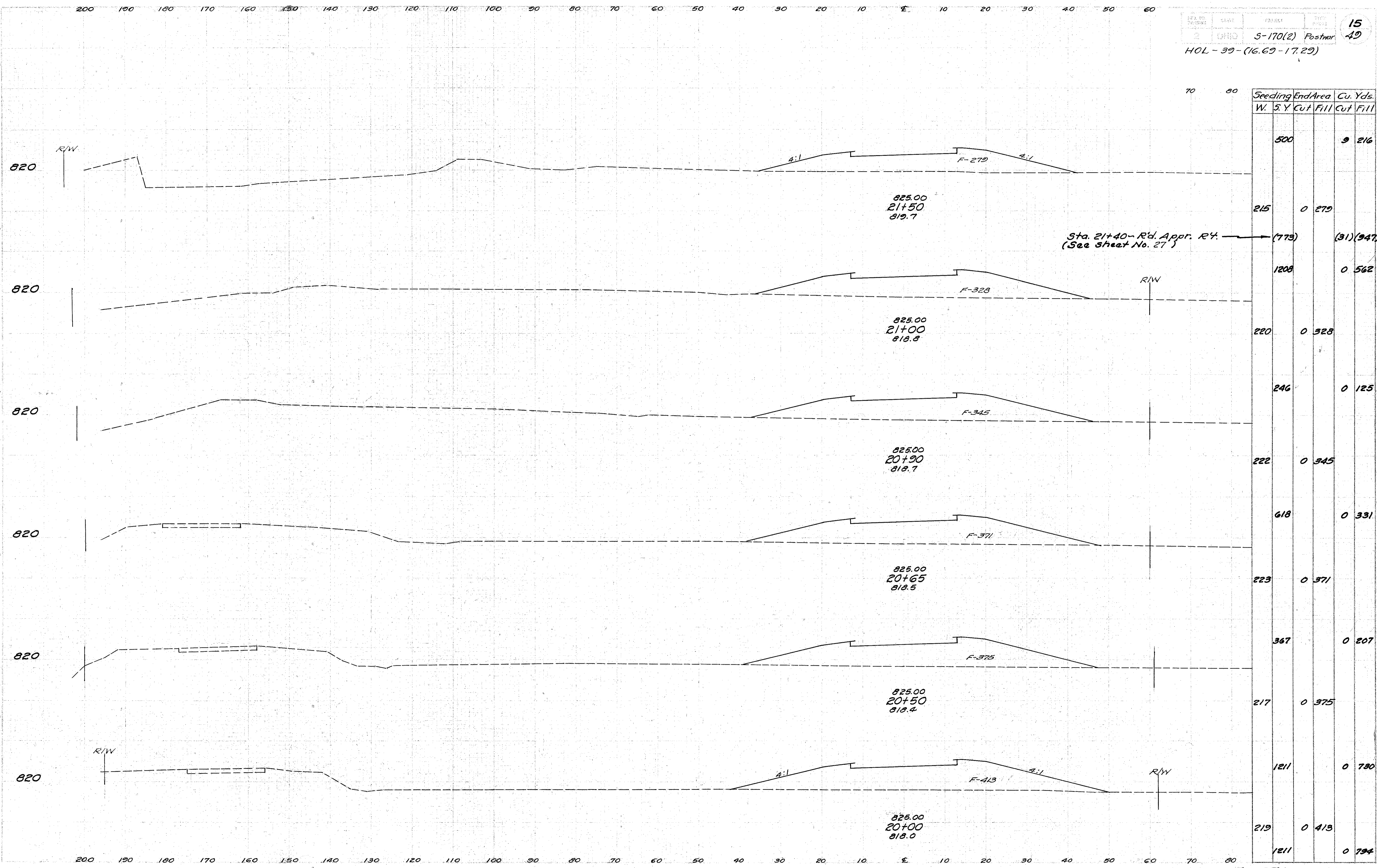
| Stn. | Seeding | End Area | Cu. Yds. |
|---------|----------|----------|-----------|
| W. S.Y. | Cut/Fill | Cut/Fill | Cut/Fill |
| 953 | 0 | 0 | 1002 |
| 105 | 0 | 572 | (0) (115) |
| 897 | 0 | 0 | 1078 |
| 158 | 0 | 592 | 0 |
| 853 | 0 | 0 | 1086 |
| 149 | 0 | 581 | 0 |
| 803 | 0 | 665 | 0 |
| 140 | (283) | 0 | (46)(317) |
| 736 | 0 | 0 | 1264 |
| 125 | 0 | 700 | 0 |
| 301 | 0 | 0 | 1542 |
| 101 | 0 | 519 | 0 |
| 32 | 0 | 51 | 0 |
| 137 | 0 | 1215 | 0 |
| 105 | 0 | 0 | 164 |
| 89 | 0 | 372 | 0 |
| 127 | 0 | 0 | 177 |
| 257 | 0 | 0 | 369 |
| 98 | 0 | 432 | 0 |
| 281 | 0 | 0 | 452 |

| Stn. | Seeding | End Area | Cu. Yds. |
|---------|----------|----------|----------|
| W. S.Y. | Cut/Fill | Cut/Fill | Cut/Fill |
| 104 | 0 | 545 | (0) (0) |

5-170(2) Postwar
 HOL-39 - (16.69-17.29)

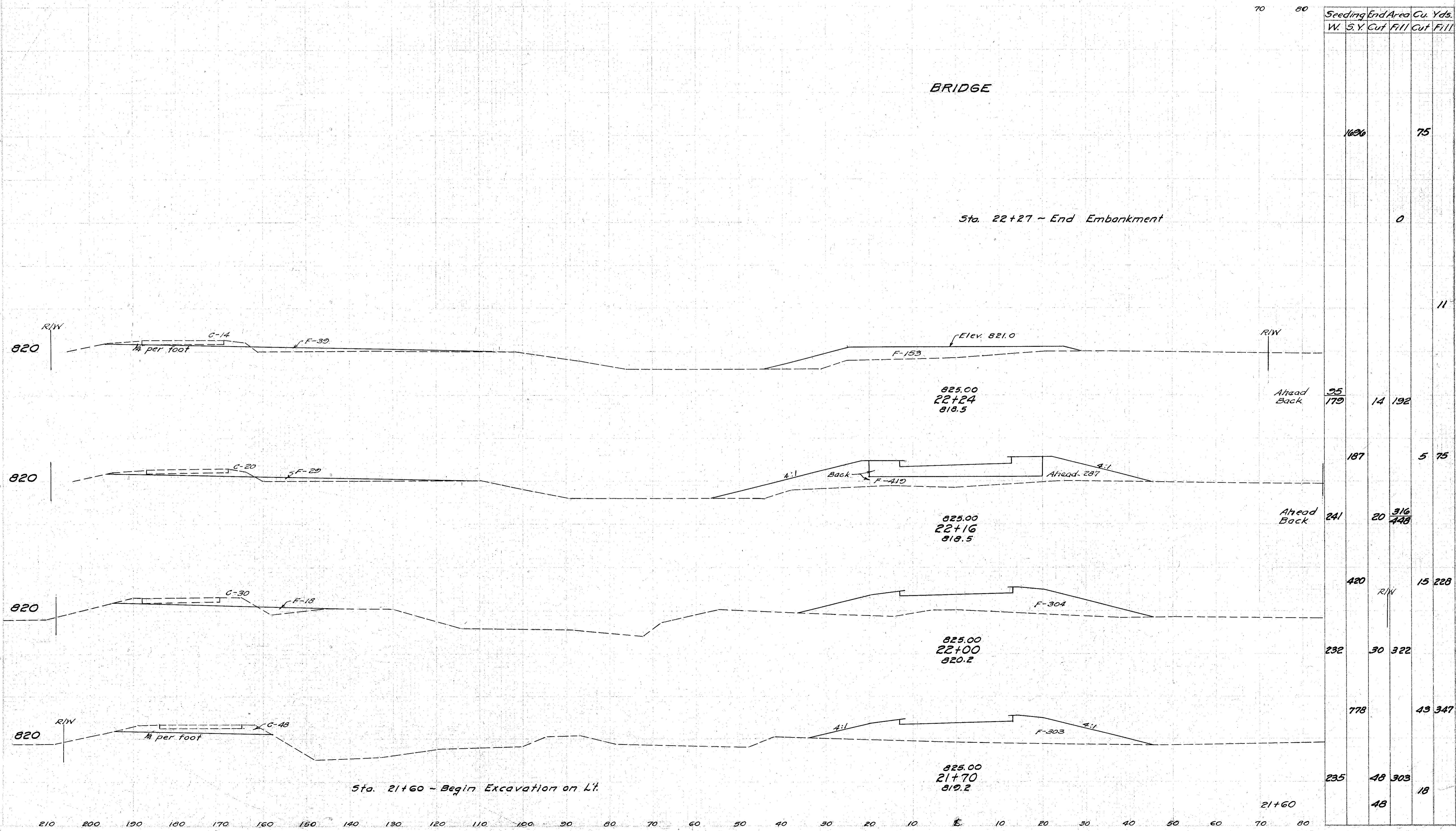


STA. 16+50 TO STA. 19+50



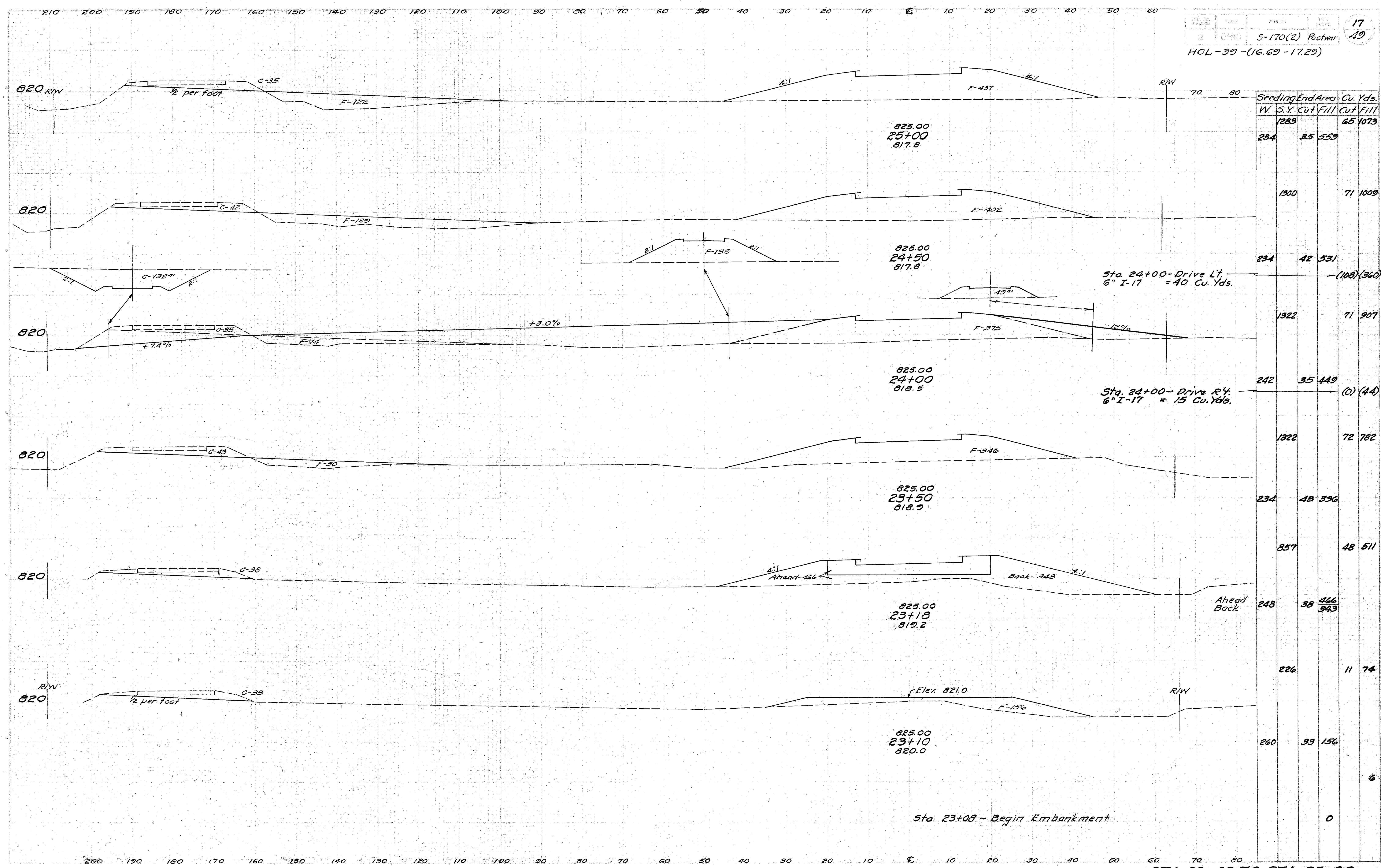
| Seeding W. | End Area | | Cu. Yds. | |
|------------|----------|----------|----------|-------|
| | 5.Y | Cut/Fill | Cut | Fill |
| 500 | | | 9 | 216 |
| 215 | 0 | 279 | | |
| | | (773) | (31) | (947) |
| 1208 | | | 0 | 562 |
| 220 | 0 | 328 | | |
| 246 | | | 0 | 125 |
| 222 | 0 | 345 | | |
| 618 | | | 0 | 331 |
| 223 | 0 | 371 | | |
| 367 | | | 0 | 207 |
| 217 | 0 | 375 | | |
| 1211 | | | 0 | 730 |
| 219 | 0 | 413 | | |
| 1211 | | | 0 | 794 |

STA. 20+00 TO STA. 21+50



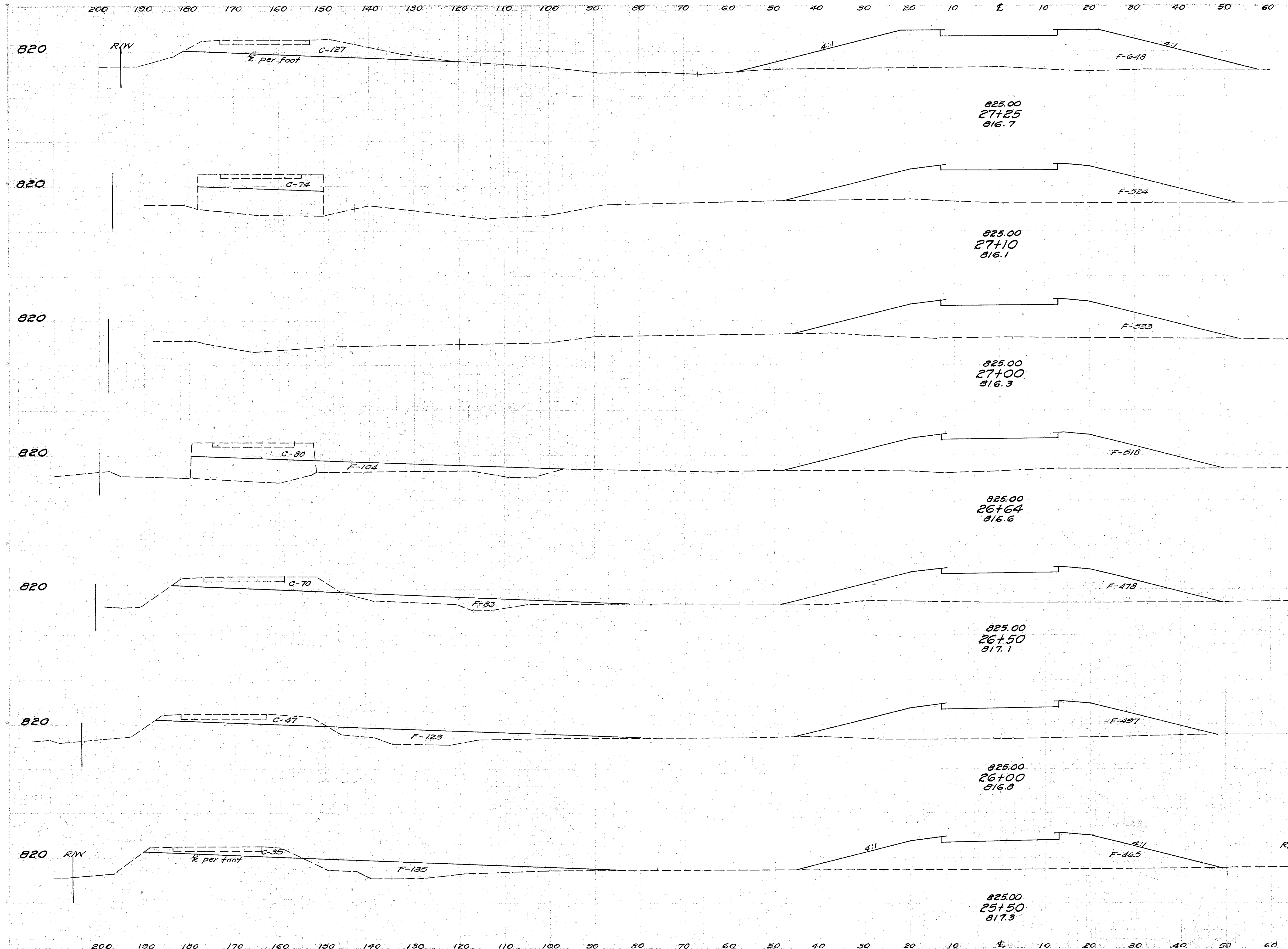
| Seeding | End Area | | Cu. Yds. | |
|---------|----------|-----|----------|----------|
| | W. S.Y. | Cut | Fill | Cut Fill |
| | | | 1626 | 75 |
| | | | | 0 |
| | | | | 11 |
| Ahead | 25 | 14 | 192 | |
| Back | 179 | | | |
| | | | 187 | 5 75 |
| Ahead | 241 | 20 | 316 | |
| Back | | | 448 | |
| | | | 420 | 15 228 |
| | | | | R/W |
| | | | 232 | 30 322 |
| | | | 778 | 43 347 |
| | | | 235 | 48 303 |
| | | | | 18 |
| | | | 48 | |

STA. 21+70 TO STA. 22+27



| Sta. | W. | S.Y. | End Area | | Cu. Yds. | |
|-------|------|------|----------|------|----------|-------|
| | | | Cut | Fill | Cut | Fill |
| 23+00 | 1283 | | | | 65 | 1073 |
| 23+10 | 234 | 35 | 553 | | | |
| 23+50 | 1300 | | | | 71 | 1009 |
| 23+50 | 234 | 42 | 531 | | (108) | (360) |
| 24+00 | 1322 | | | | 71 | 907 |
| 24+00 | 242 | 35 | 449 | | (0) | (44) |
| 23+50 | 1322 | | | | 72 | 782 |
| 23+50 | 234 | 43 | 396 | | | |
| 23+18 | 857 | | | | 48 | 511 |
| 23+18 | 248 | 38 | 466 | | 343 | |
| 23+10 | 226 | | | | 11 | 74 |
| 23+10 | 260 | 33 | 156 | | | |
| 23+08 | | | | | 0 | |

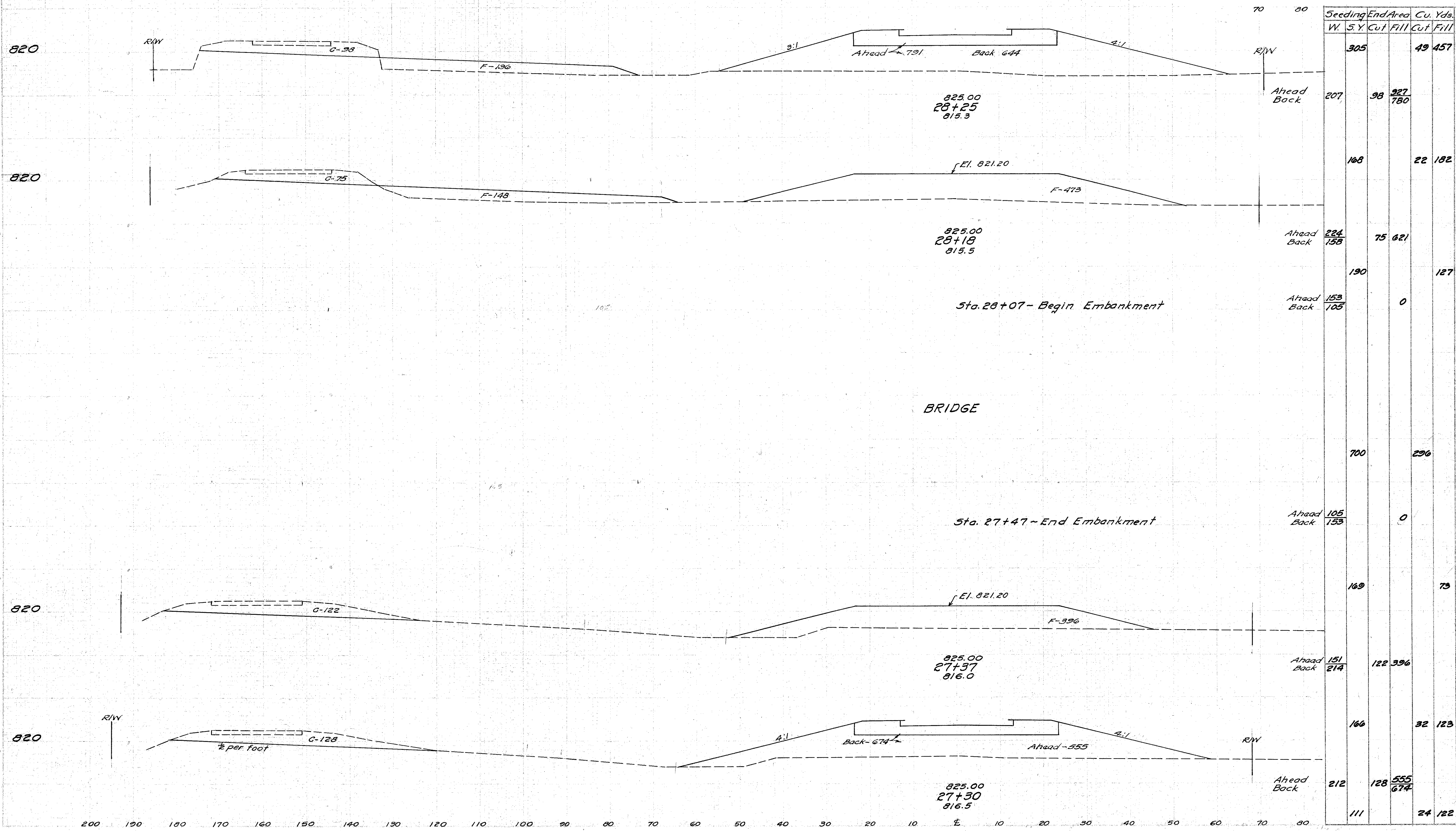
STA. 23+09 TO STA. 25+00



18
49
5-170(2) Postwar
HOL-39-(16.69-17.29)
R/W

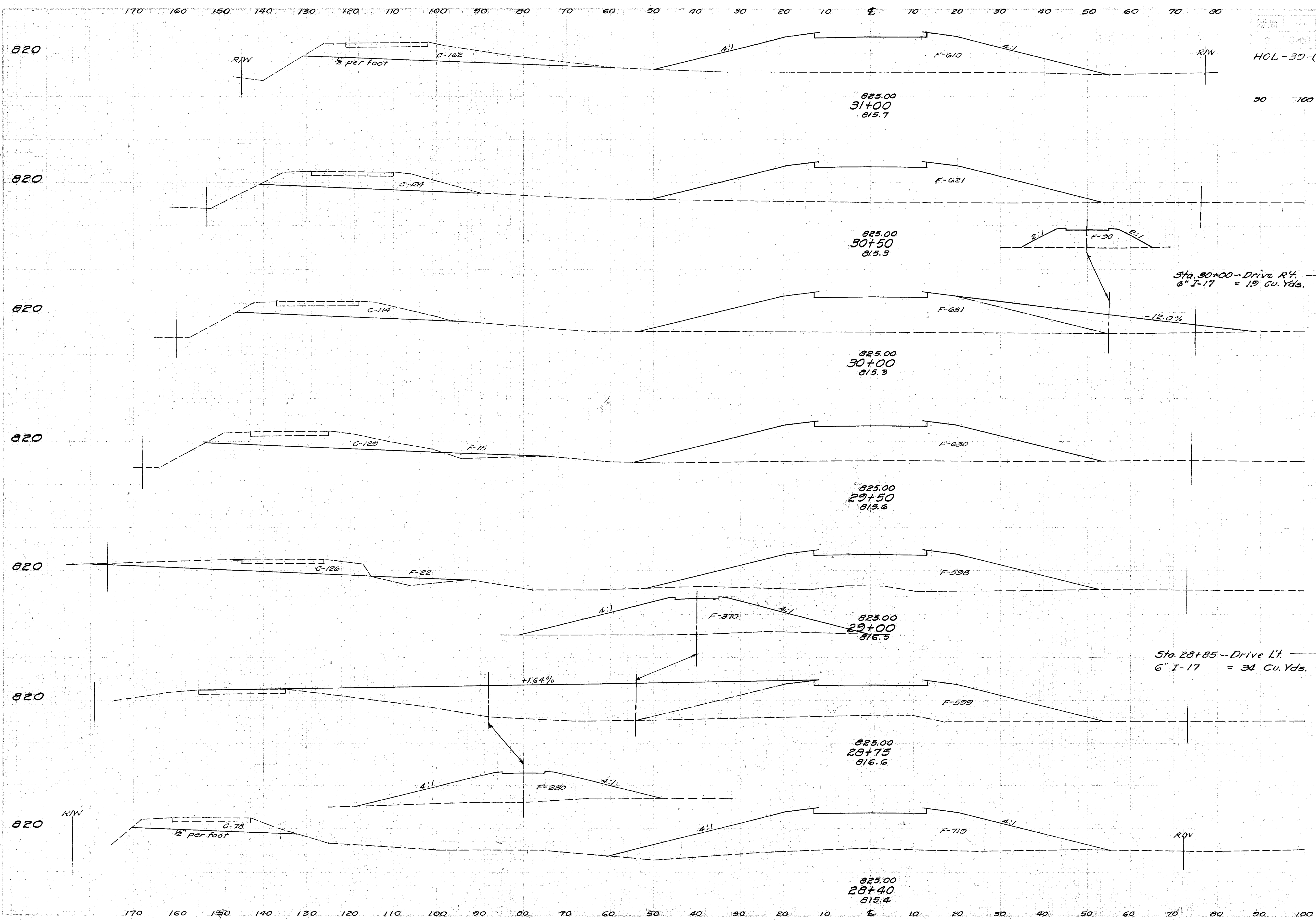
| Stn. | Seeding | | End Area | | Cu. Yds. | |
|-------|---------|-------|----------|------|----------|------|
| | W. | S. Y. | Cut | Fill | Cut | Fill |
| 27+25 | 186 | | 127 | 648 | | |
| 27+25 | | 293 | | | 56 | 326 |
| 27+10 | 186 | | 74 | 524 | | |
| 27+10 | | 161 | 0 | | 0 | 196 |
| 27+00 | 163 | | 0 | 533 | | |
| 27+00 | | 774 | | | 0 | 701 |
| 26+64 | 224 | | 0 | 518 | | |
| 26+64 | | 352 | 80 | 622 | | |
| 26+50 | 228 | | 70 | 561 | | |
| 26+50 | | 1272 | | | 108 | 1034 |
| 26+00 | 230 | | 47 | 620 | | |
| 26+00 | | 1272 | | | 76 | 1130 |
| 25+50 | 228 | | 35 | 600 | | |

STA. 25+50 TO STA. 27+25



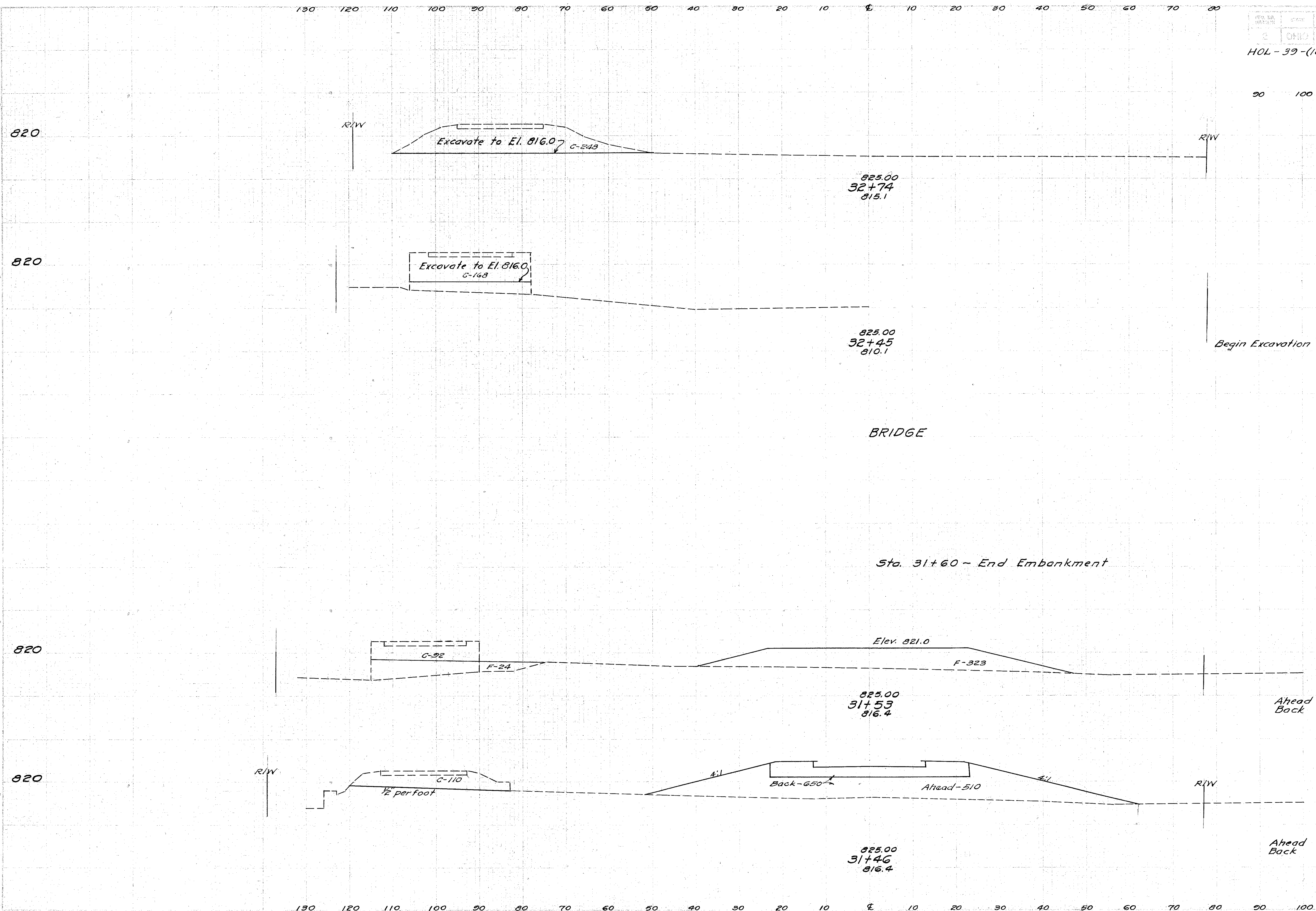
| Seeding W. | End Area | | Cu. Yds. | |
|------------|----------|------|----------|------|
| | 5.Y. Cut | Fill | Cut | Fill |
| 305 | | | 49 | 457 |
| 207 | 98 | 927 | 780 | |
| 168 | | | 22 | 182 |
| 224 | 75 | 621 | | |
| 153 | | | 127 | |
| 190 | | | | |
| 153 | 0 | 0 | | |
| 105 | | | 296 | |
| 700 | | | | |
| 105 | 0 | 0 | | |
| 169 | | | 73 | |
| 151 | 122 | 396 | | |
| 214 | | | | |
| 166 | | | 32 | 123 |
| 212 | 128 | 555 | 674 | |
| 111 | | | 24 | 122 |

STA. 27+30 TO STA. 28+25

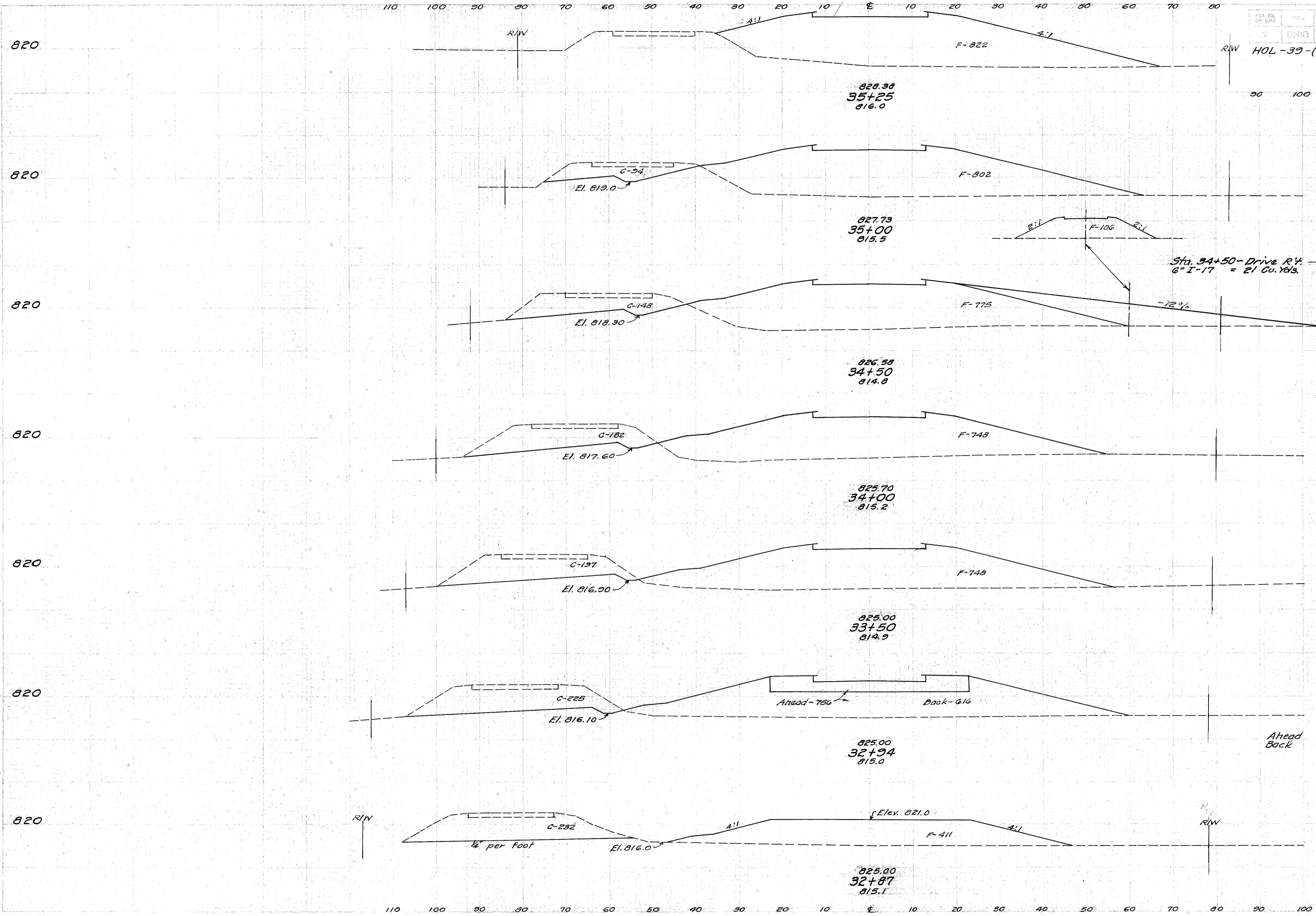


| Station | Seeding | End Area | Area | Cu. Yds. |
|---------|---------|----------|------|----------|
| W. S.Y. | Cut | Fill | Cut | Fill |
| 182 | 162 | 610 | | |
| | 1031 | | 274 | 1140 |
| 189 | 134 | 621 | | |
| | 1069 | | 230 | 1159 |
| 196 | 114 | 631 | | |
| | 1106 | | 225 | 1181 |
| 202 | 129 | 645 | | |
| | 1156 | | 236 | 1171 |
| 214 | 126 | 620 | | |
| | 579 | | 58 | 564 |
| 203 | 0 | 599 | | |
| | 704 | | 51 | 854 |
| 159 | 78 | 719 | | |

STA. 28+40 TO STA. 31+00

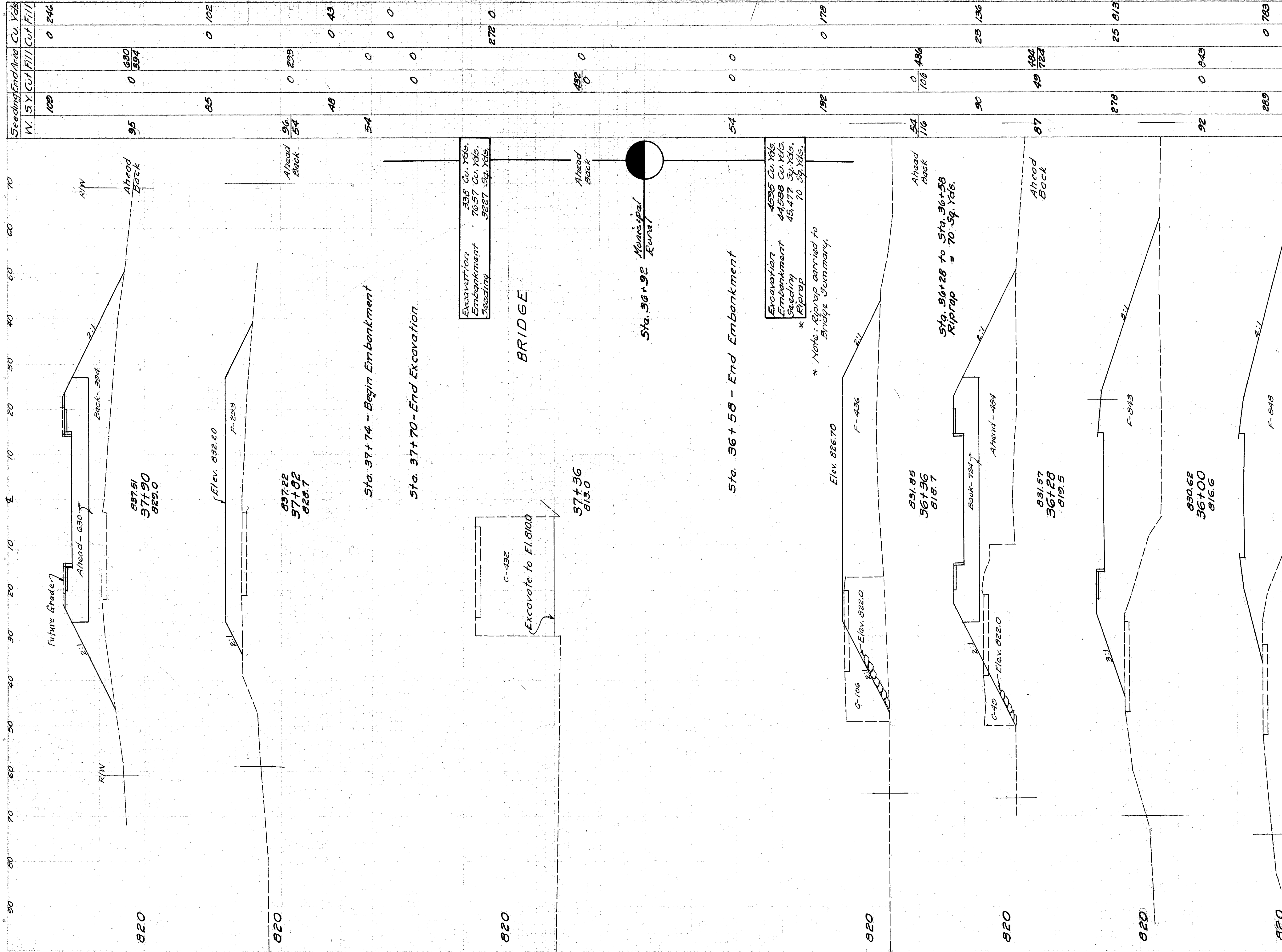


| Stn. | Seeding W. | End Area | | Cu. Yds. | |
|-------|----------------------|----------|------|----------|------|
| | | 5 Y. Cut | Fill | Cut | Fill |
| 31+46 | 245 | | | 116 | 99 |
| 31+53 | 171 | 248 | 0 | | |
| 31+60 | 321 | | | 223 | 0 |
| 31+74 | 28 | 168 | 0 | | |
| 31+80 | | | | 0 | 0 |
| 31+90 | 48 | 0 | 0 | | |
| 31+95 | 37 | | | 0 | 45 |
| 32+00 | Ahead 48 Back 180 | 0 | 92 | 347 | |
| 32+05 | 130 | | | 26 | 111 |
| 32+10 | Ahead 178 Back | 110 | 510 | 650 | |
| 32+74 | 920 | | | 232 | 1073 |



| Sta. | Seeding | | End Area | | Cu. Yds. | |
|------|---------|------|----------|------|----------|------|
| | W. | S.Y. | Cut | Fill | Cut | Fill |
| 124 | | | 0 | 822 | | |
| | | | 347 | | 44 | 752 |
| 126 | | | 94 | 802 | | |
| | | | 719 | | 224 | 1460 |
| 128 | | | 148 | 775 | | |
| | | | 725 | | 306 | 1410 |
| 128 | | | 182 | 748 | | |
| | | | 767 | | 351 | 1385 |
| 148 | | | 197 | 748 | | |
| | | | 343 | | 438 | 1560 |
| 155 | | | 225 | 756 | | |
| | | | 155 | 676 | | |
| 126 | | | | | 59 | 133 |
| 168 | | | 232 | 411 | | |

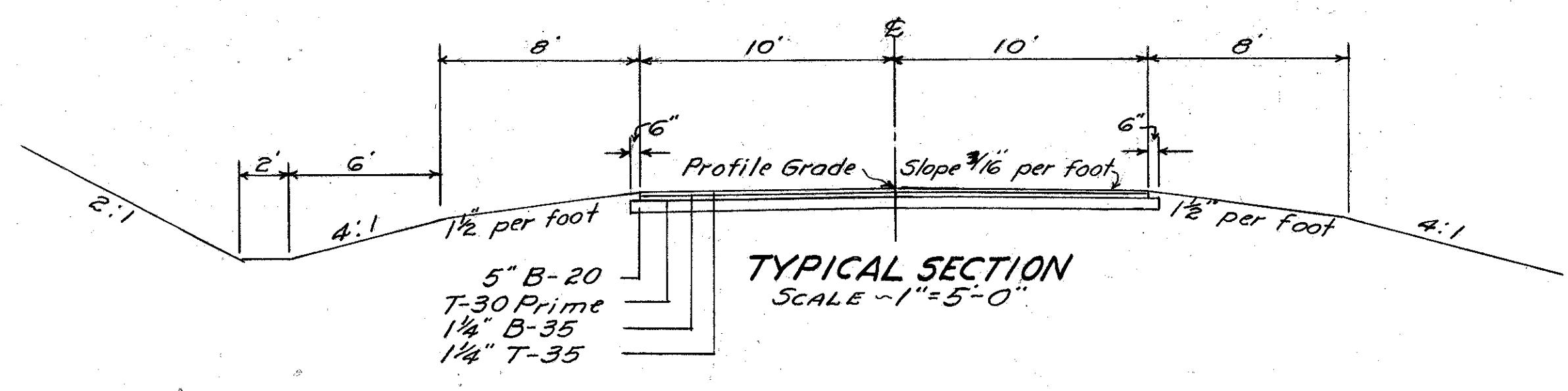
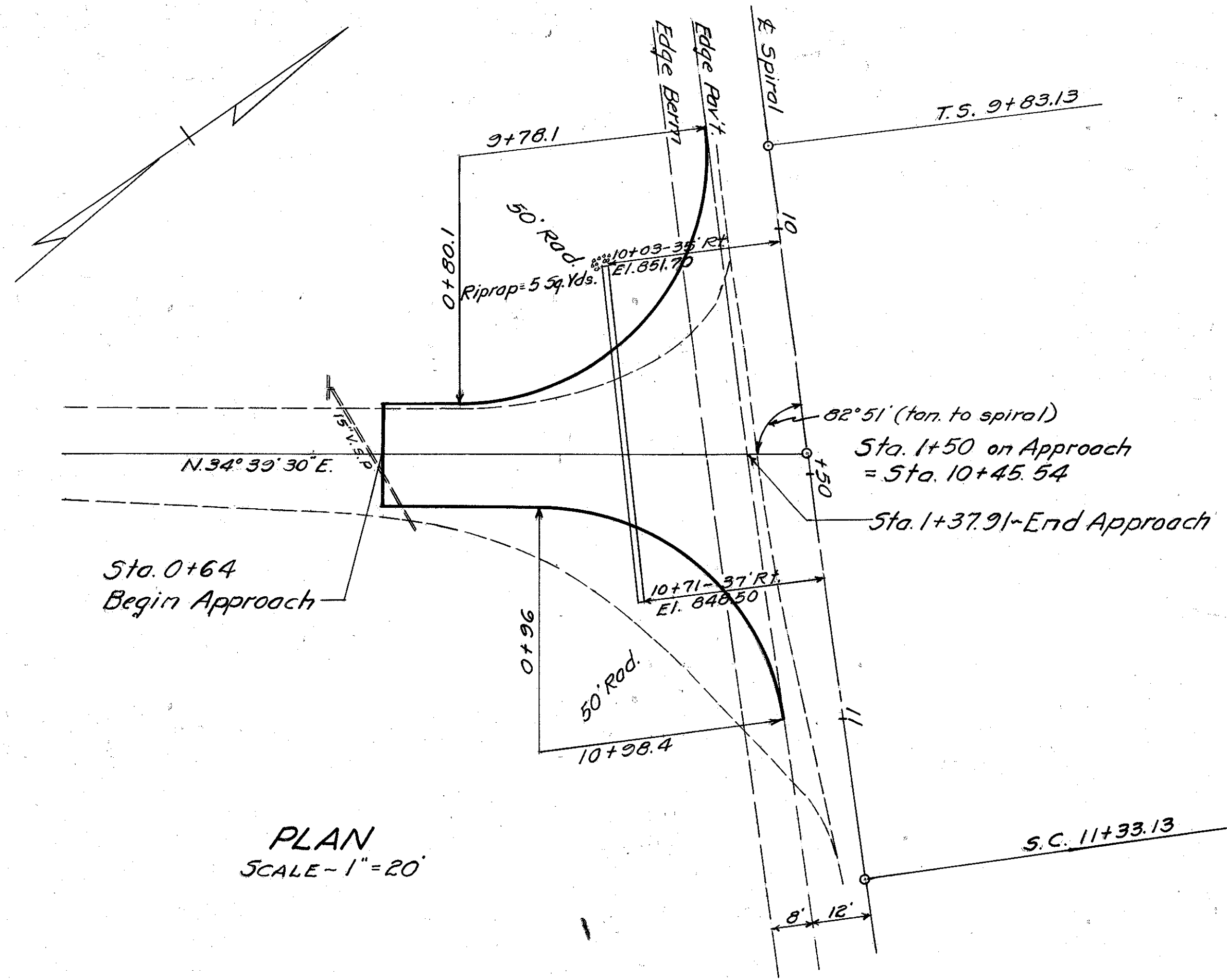
STA. 32+87 TO STA. 35+25



| Stn. | Seeding | End Area | Cu. Yds. |
|-------|---------|----------|----------|
| 35+50 | 109 | 0 | 0 |
| 36+00 | 85 | 630 | 246 |
| 36+50 | 54 | 394 | 102 |
| 37+00 | 48 | 293 | 43 |
| 37+50 | 54 | 0 | 0 |
| 37+90 | 492 | 0 | 272 |
| 38+00 | 192 | 0 | 179 |
| 38+50 | 54 | 436 | 136 |
| 39+00 | 87 | 404 | 133 |
| 39+50 | 278 | 49 | 813 |
| 40+00 | 92 | 0 | 783 |
| 40+50 | 289 | 0 | 0 |

| Stn. | Seeding | End Area | Cu. Yds. |
|-------|---------|----------|----------|
| 35+50 | 116 | 0 | 0 |
| 36+00 | 926 | 0 | 848 |
| 36+50 | 119 | 0 | 790 |
| 37+00 | 338 | (64) | (220) |
| 37+50 | 0 | 0 | 0 |
| 37+90 | 0 | 0 | 0 |

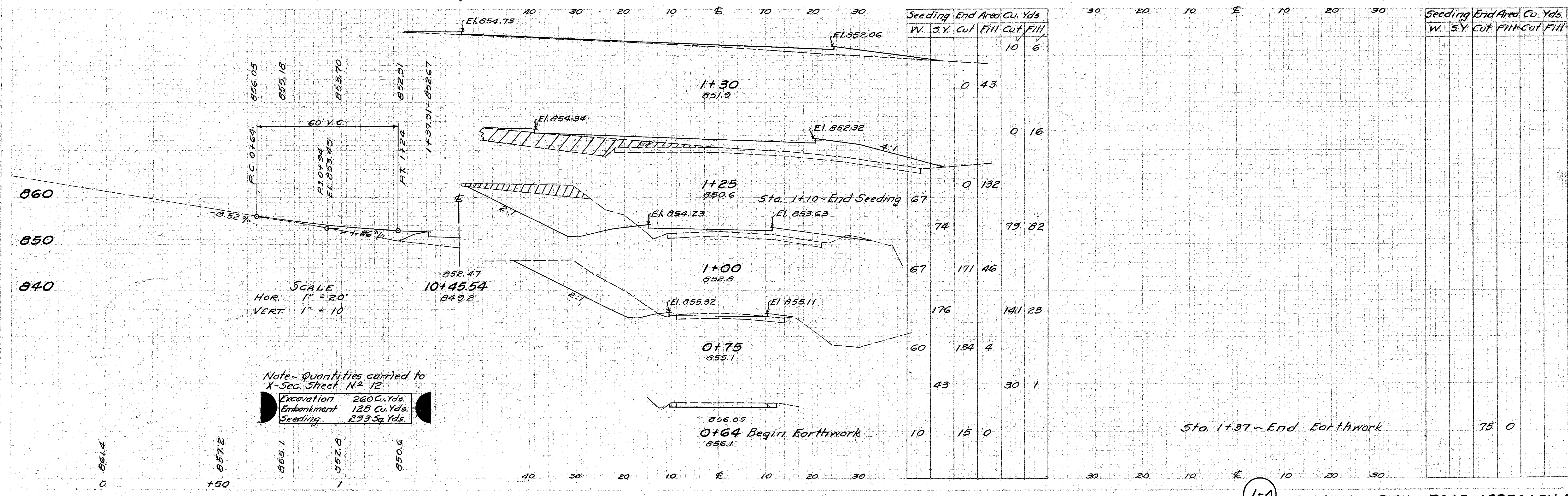
STA. 35+50 TO STA. 37+90

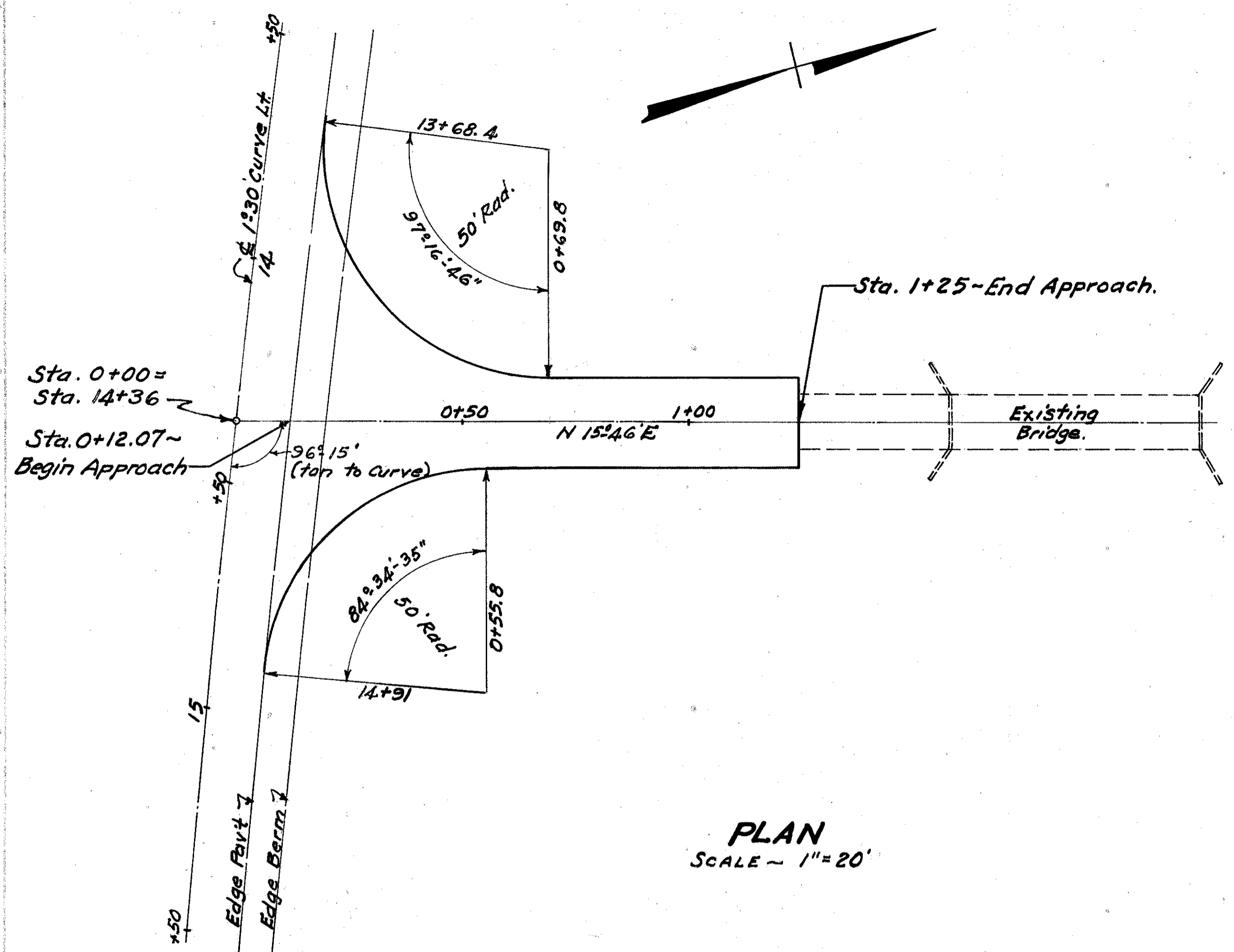
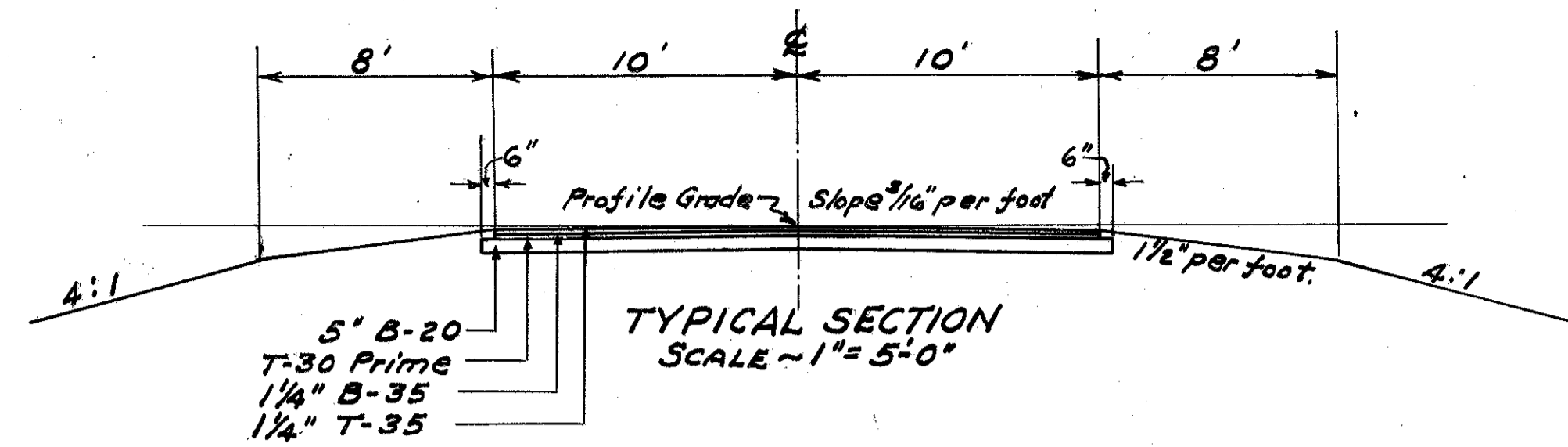


ESTIMATED QUANTITIES

| | |
|------------------------------------|--------------|
| * Pavement Area | 296 Sq. Yds. |
| * 5" Water-bound Macadam Base Area | 300 Sq. Yds. |
| * Bituminous Prime Area | 300 Sq. Yds. |
| 15" Pipe for Driveways | 68 Lin. Ft. |
| Riprap | 5 Sq. Yds. |

* Carried to pavement calculations. (Sheet 5)



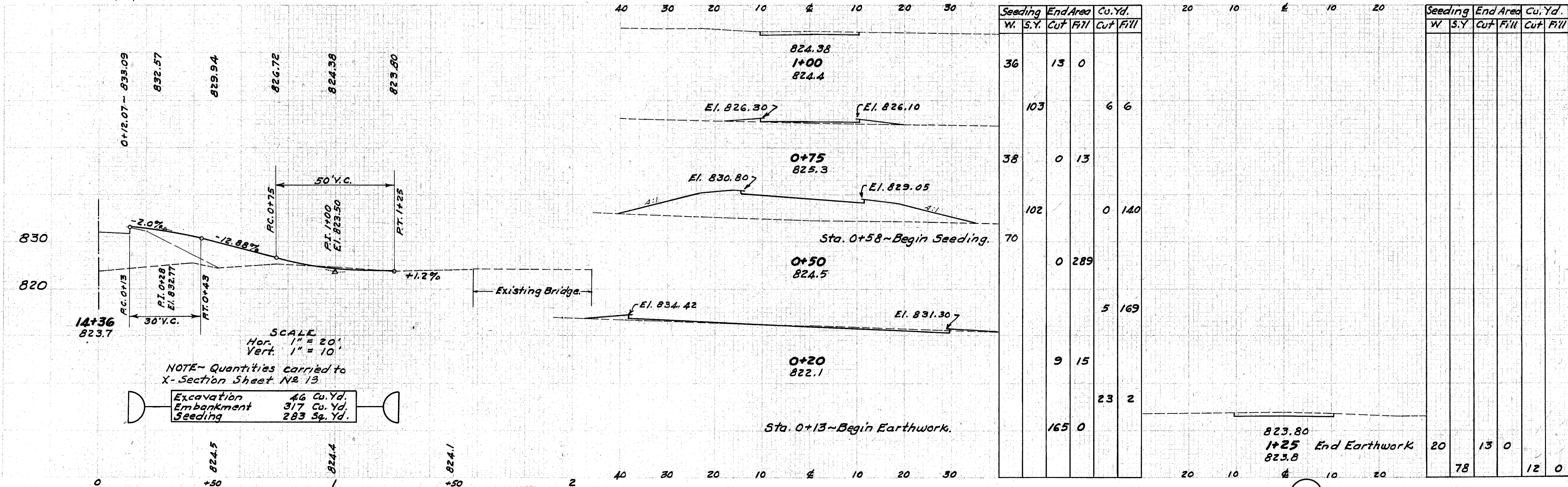


PLAN
SCALE ~ 1" = 20'

ESTIMATED QUANTITIES

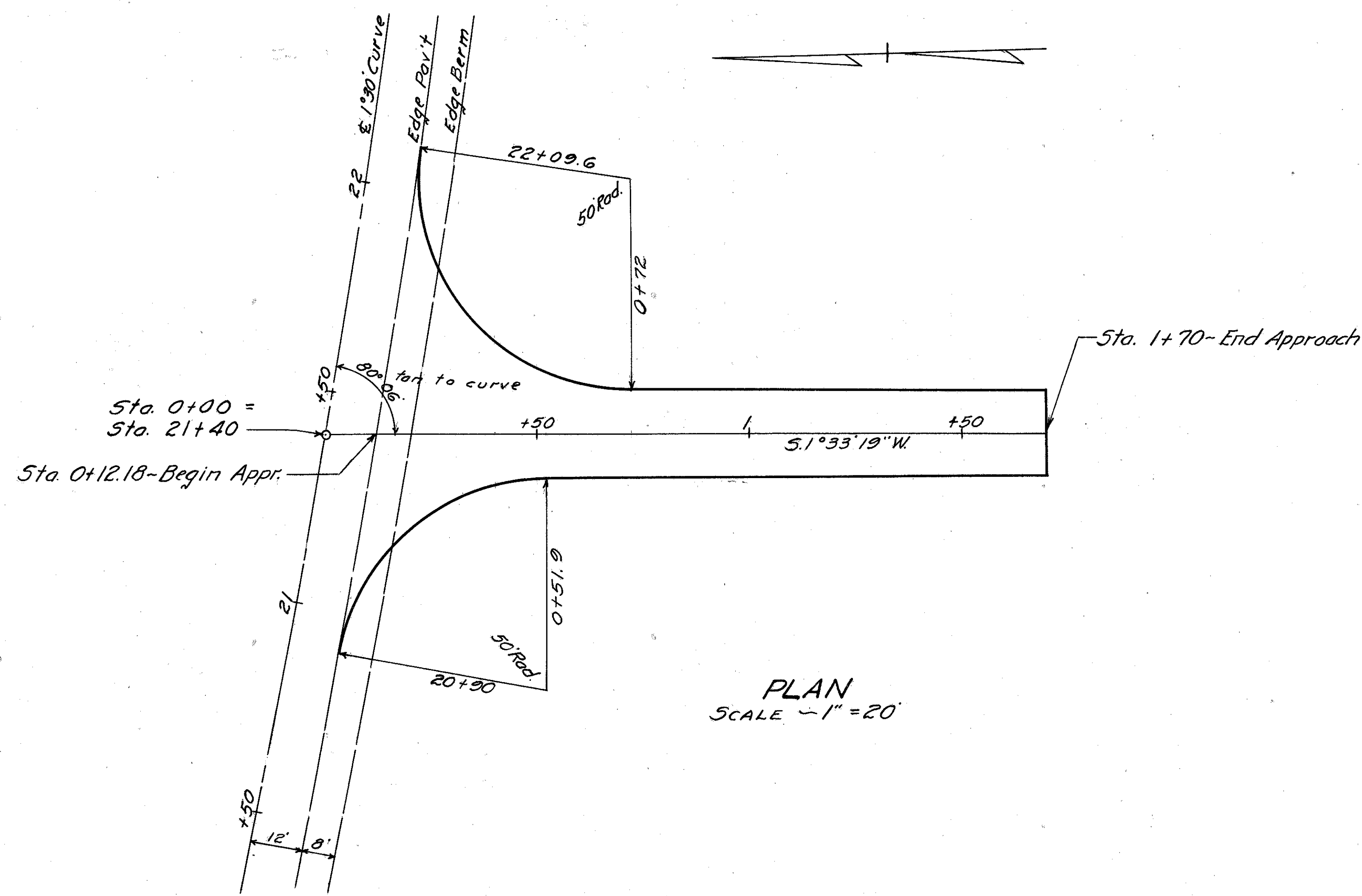
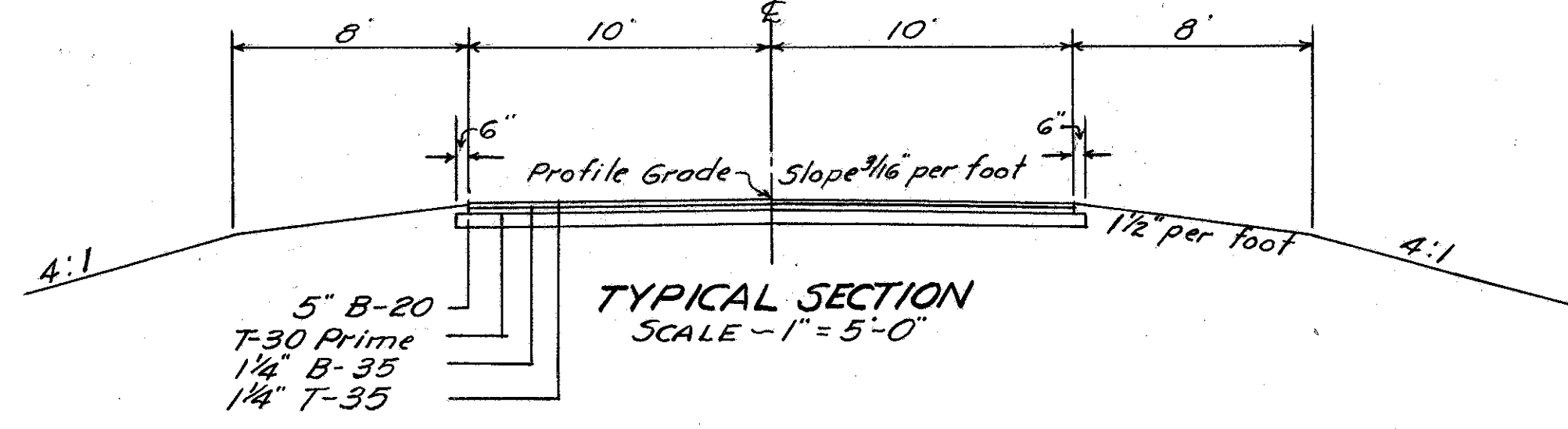
| | | |
|-------------------------------------|-----|---------|
| * Pavement Area. | 379 | Sq. Yd. |
| * 5" Water bound Macadam Base Area. | 388 | Sq. Yd. |
| * Bituminous Prime Area. | 388 | Sq. Yd. |

* Carried to pavement calculations. (Sheet No. 5)



NOTE - Quantities carried to X-Section Sheet No. 13

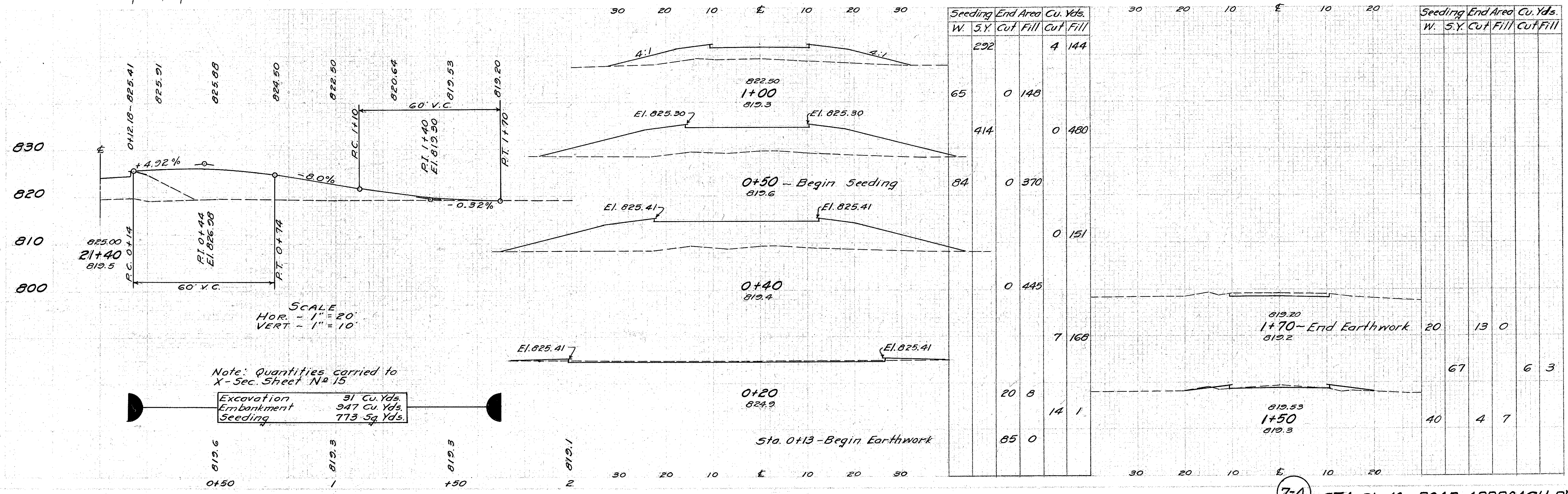
| | | |
|------------|-----|---------|
| Excavation | 46 | Cu. Yd. |
| Embarkment | 317 | Cu. Yd. |
| Seeding | 283 | Sq. Yd. |

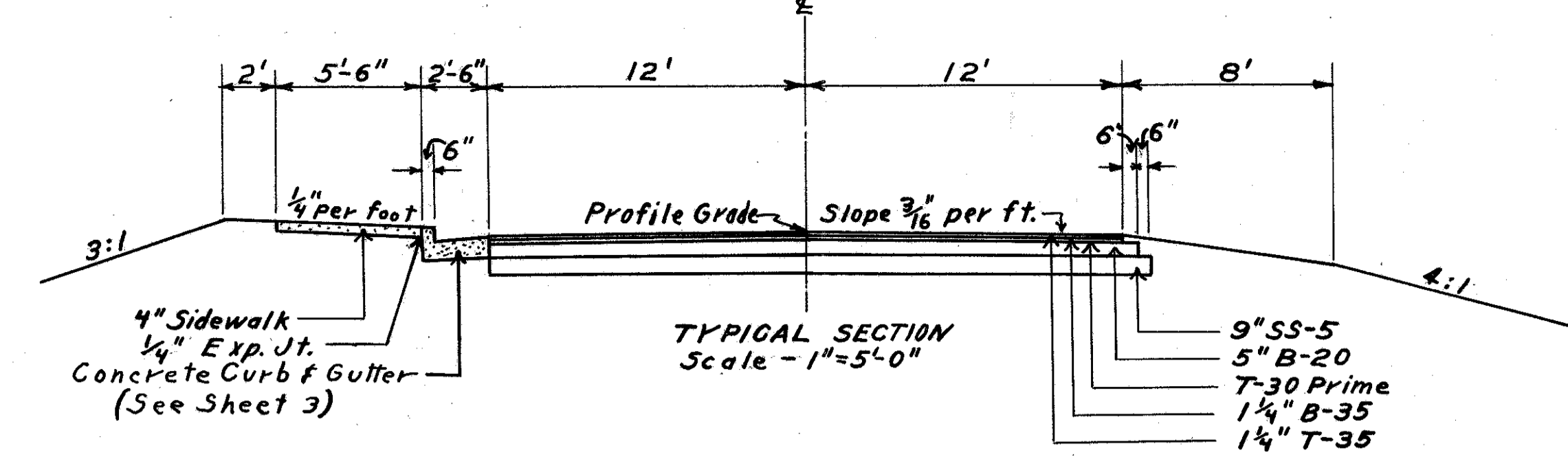
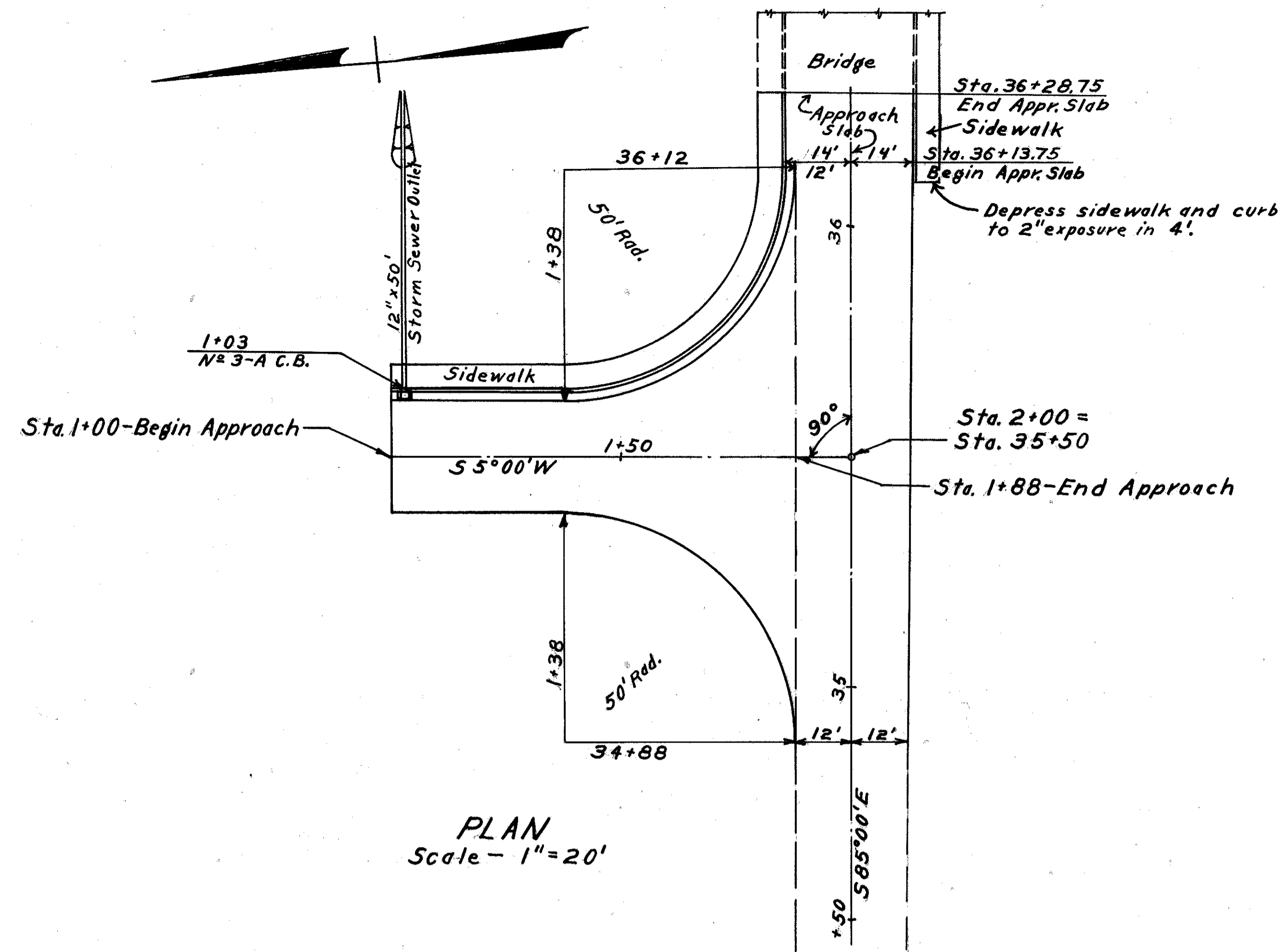


ESTIMATED QUANTITIES

- * Pavement Area 480 Sq. Yds.
- * 5" Waterbound Macadam Base Area 494 Sq. Yds.
- * Bituminous Prime Area 494 Sq. Yds.

* Carried to pavement calculations. (Sheet No. 5)

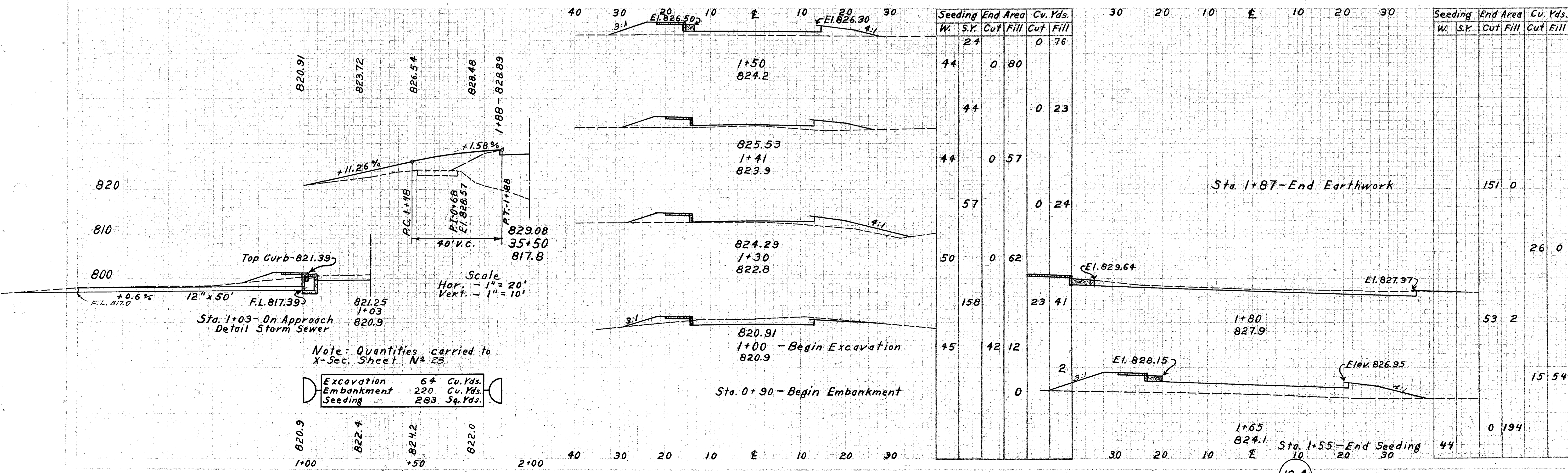


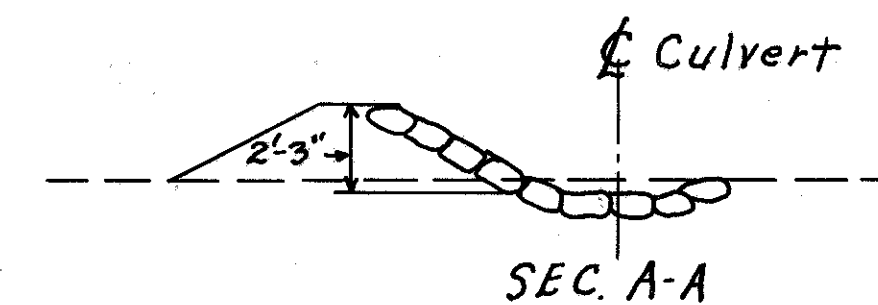
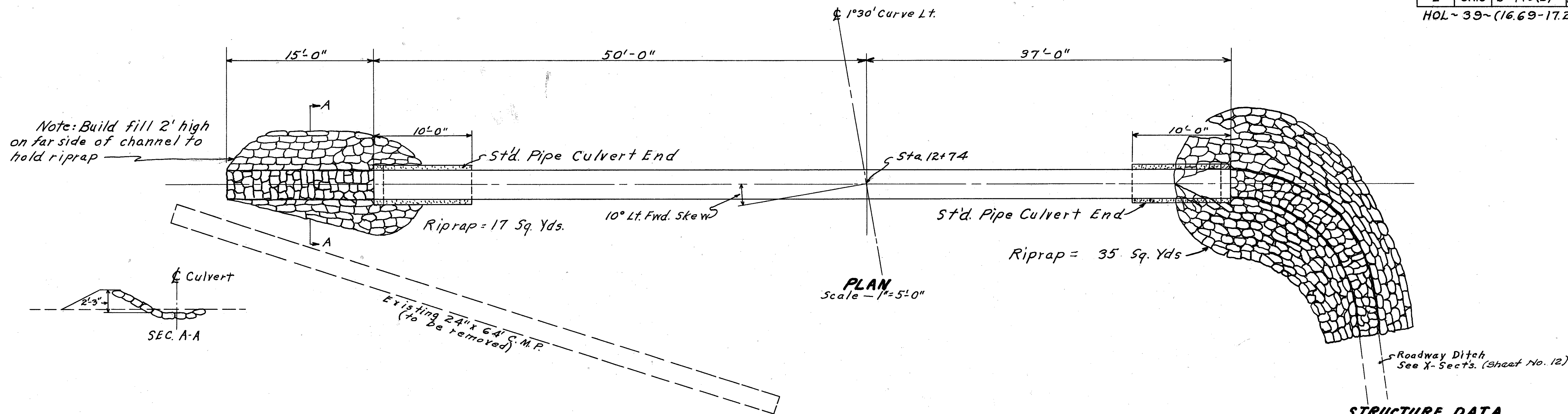


ESTIMATED QUANTITIES

| | |
|-----------------------------------|--------------|
| * Pavement Area | 354 Sq. Yds. |
| * 5" Waterbound Macadam Base Area | 354 Sq. Yds. |
| * 9" SS-5 Area | 354 Sq. Yds. |
| * Bituminous Prime Area | 354 Sq. Yds. |
| N#2 (Mod) Curb and Gutter | 115 Lin. Ft. |
| 4" Sidewalks | 688 Sq. Ft. |
| N#3-A Catch Basins | 1 Each |
| 12" Storm Sewer Outlet Pipe | 50 Lin. Ft. |
| Channel Excavation | 1 Cu. Yds. |

* Carried to pavement calculations. (Sheet No. 5)



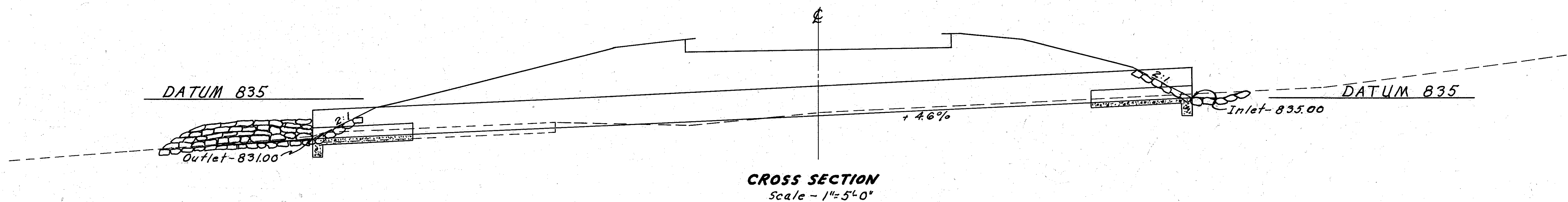


STRUCTURE DATA
TYPE - Pipe Culvert
SIZE - 36" x 87'-0"
WORK REQ'D. - Remove existing 24" x 64' C.M. Pipe. Build new 36" x 87' pipe culvert with Std. pipe culvert ends. Riprap ends as shown.

REFERENCE DRAWINGS
 Pipe Culverts S-27 P.C. 2 & 3

ESTIMATED QUANTITIES

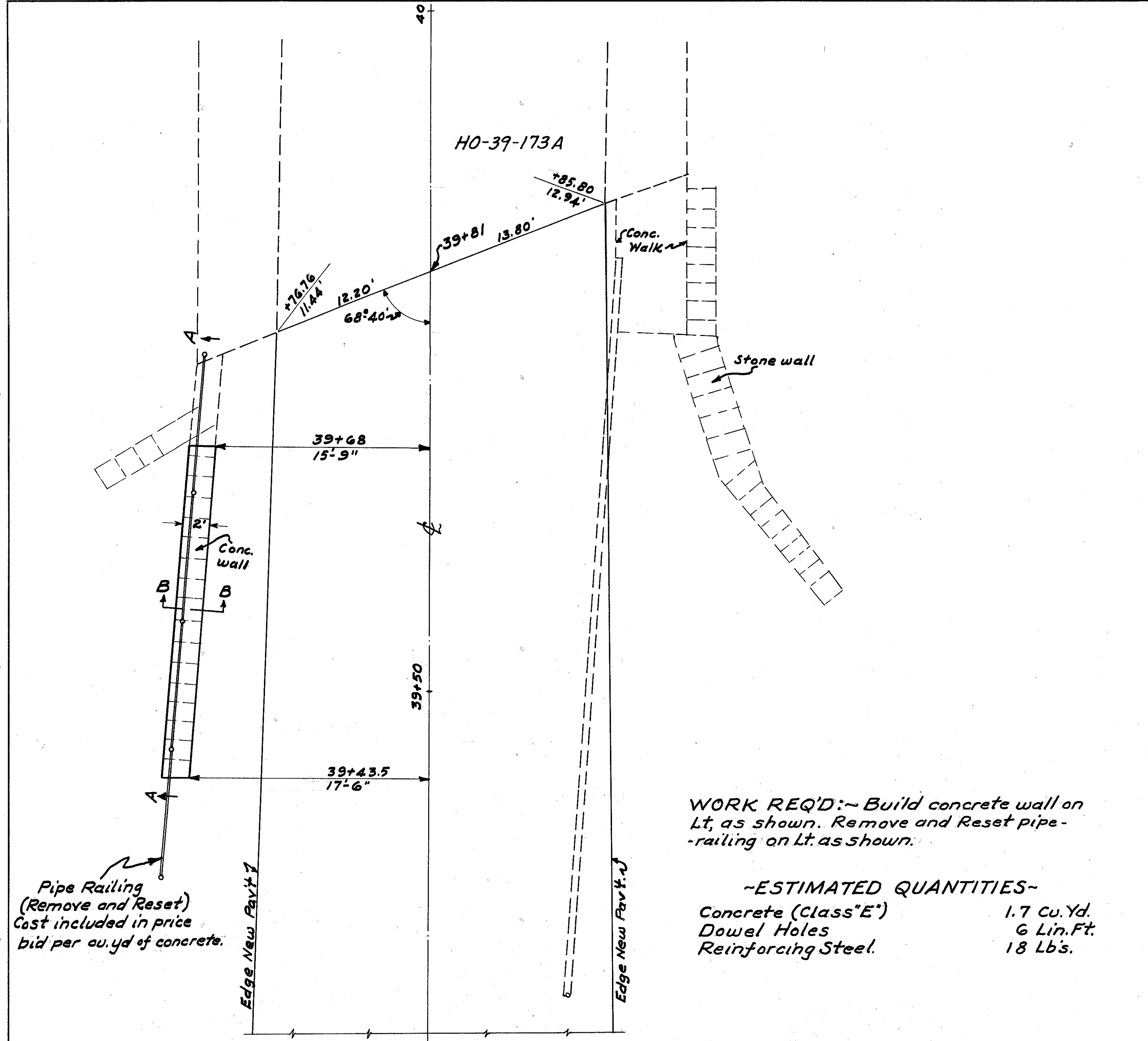
| | |
|---------------------------------|--------------|
| Excavation for Structures | 5 Cu. Yds. |
| 36" Pipe for Roadway Culverts | 87 Lin. Ft. |
| Concrete for Structures-Class E | 3.3 Cu. Yds. |
| Riprap | 52 Sq. Yds. |
| 24" Pipe Removed & disposed of | 64 Lin. Ft. |



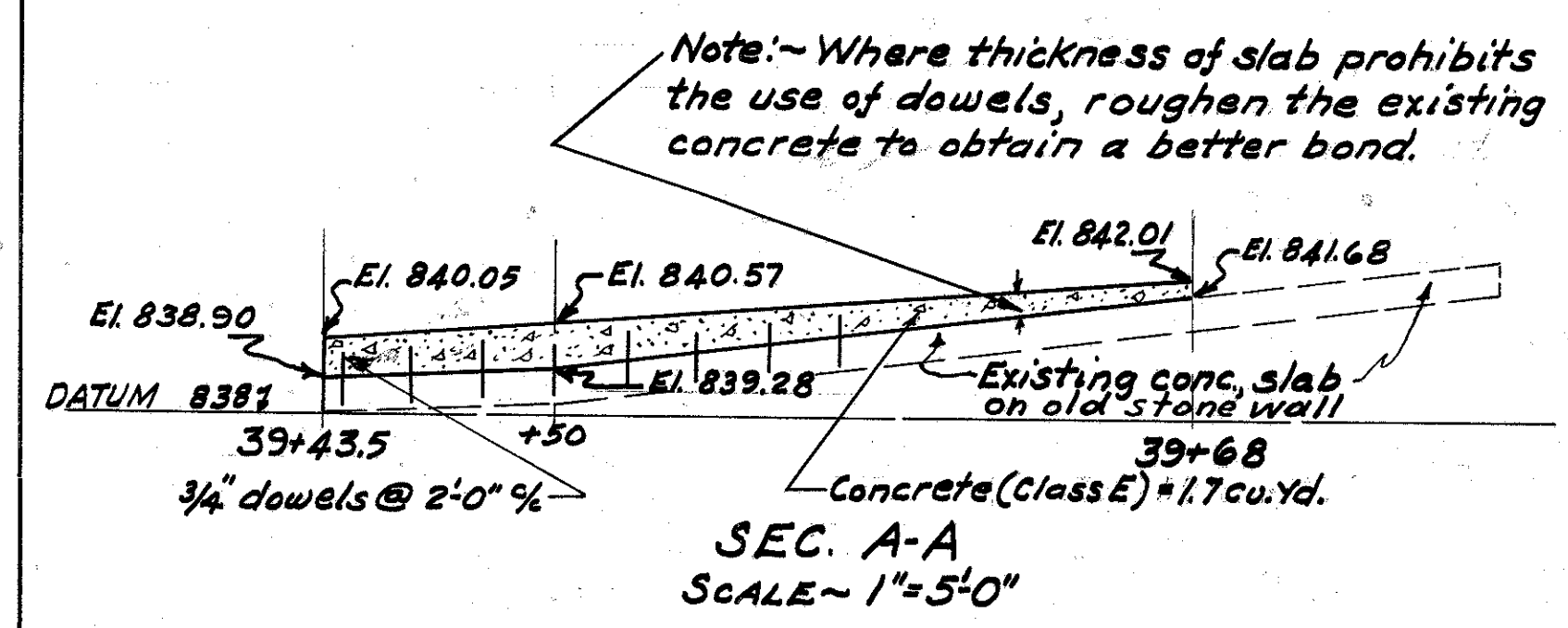
840.93
12+74
833.6

2-5

STA. 12+74
36" x 87'-0" PIPE CULVERT

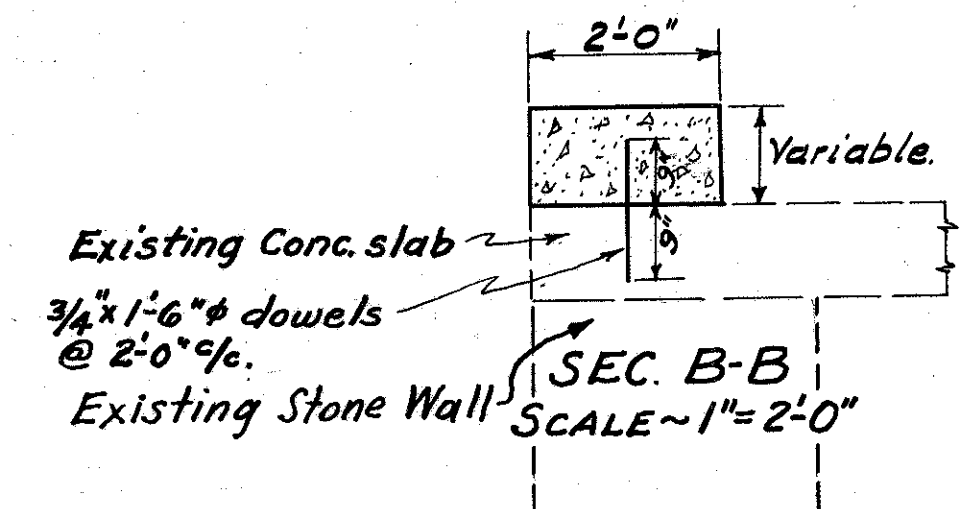


Resetting of existing railing shall be in accordance with Item 5-14 of the Construction and Material Specifications. SCALE 1"=5'-0"

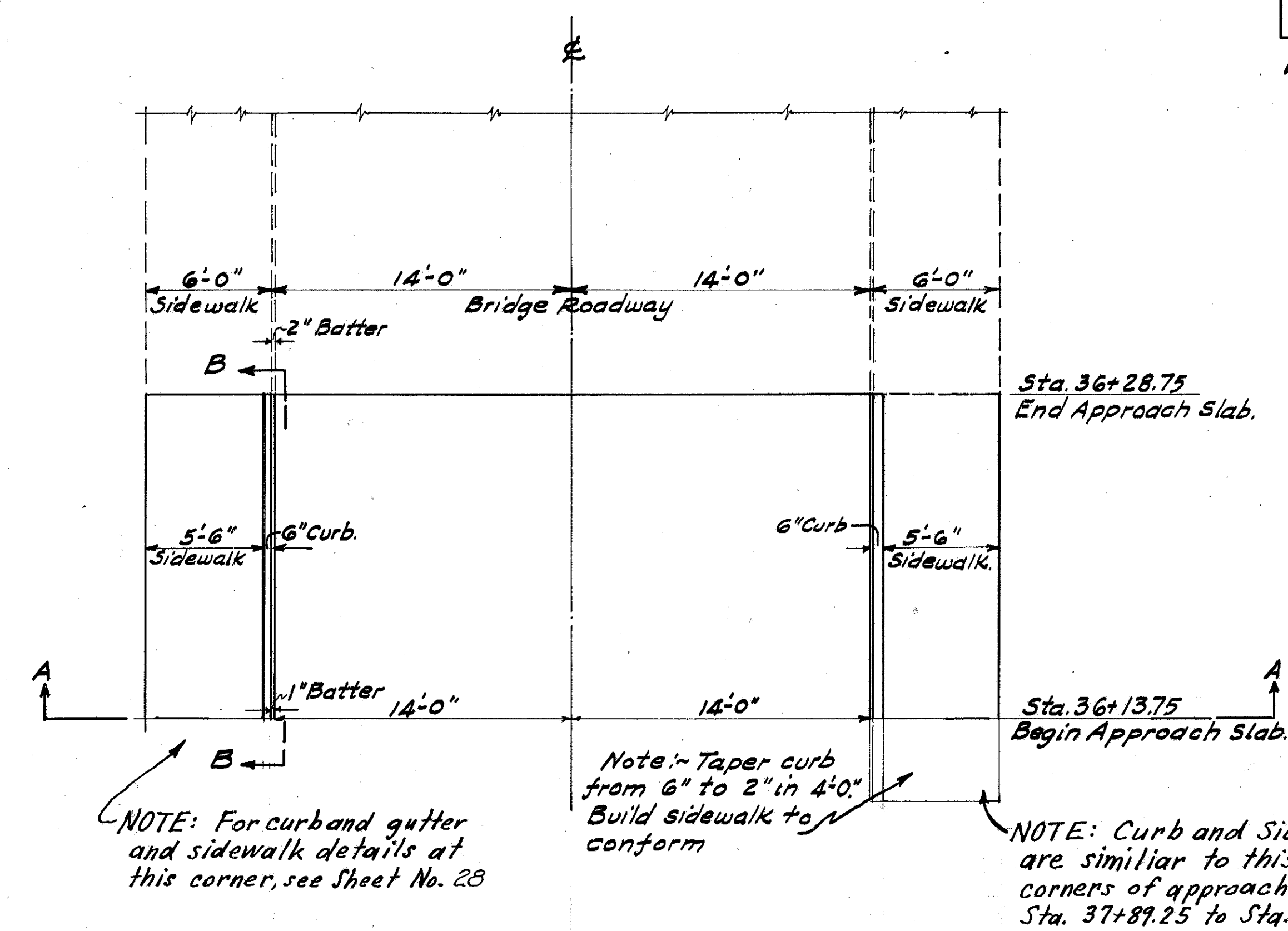


WORK REQ'D:~ Build concrete wall on Lt. as shown. Remove and Reset pipe-railing on Lt. as shown.

-ESTIMATED QUANTITIES-
 Concrete (Class "E") 1.7 Cu.Yd.
 Dowel Holes 6 Lin.Ft.
 Reinforcing Steel 18 Lb's.



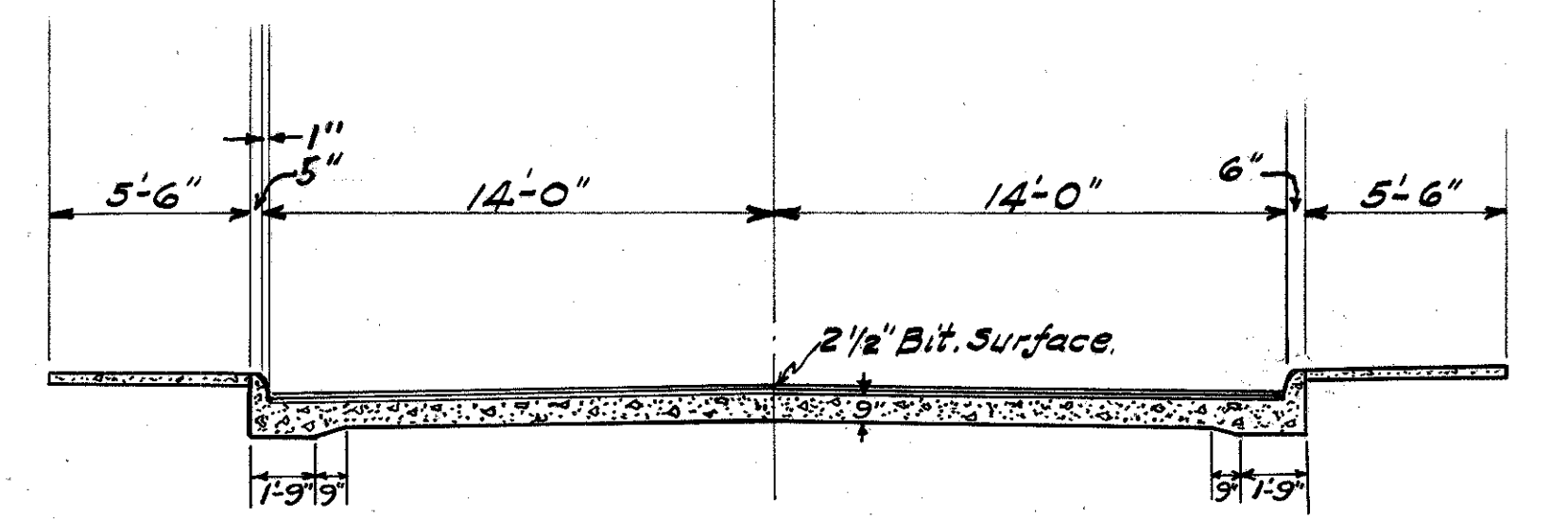
STA. 39+43.5 TO STA. 39+68
RETAINING WALL.



NOTE: For curb and gutter and sidewalk details at this corner, see Sheet No. 28

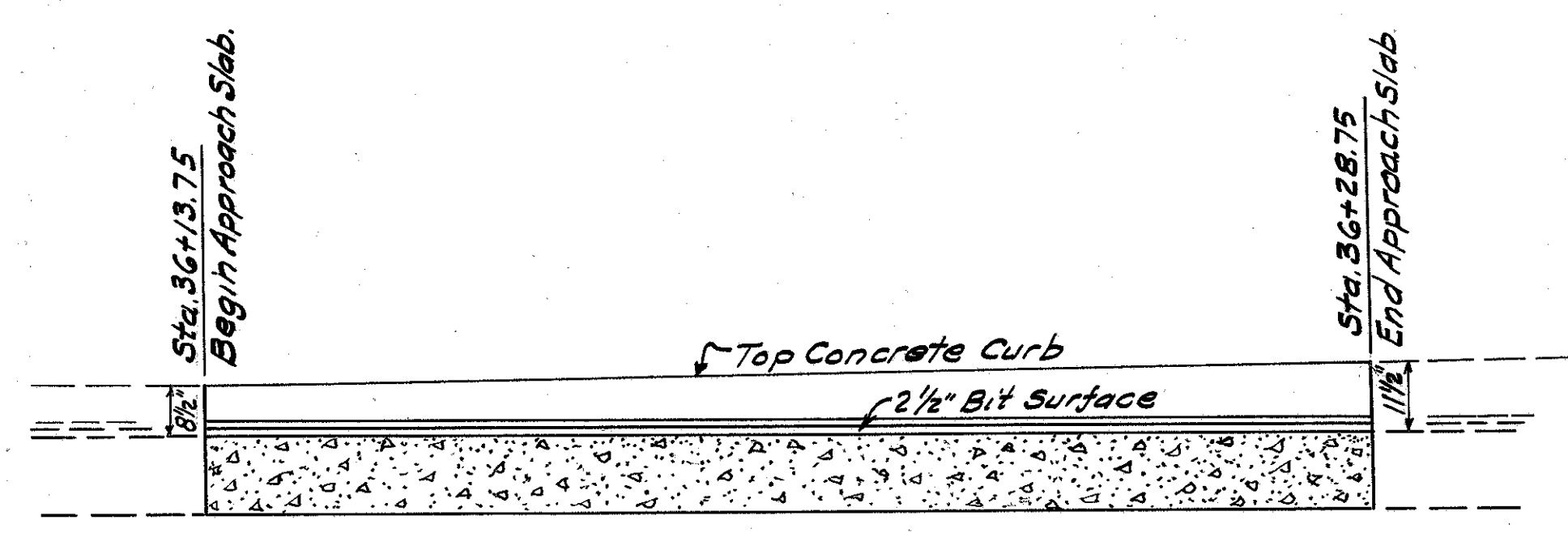
Note:~ Taper curb from 6" to 2" in 4'-0". Build sidewalk to conform

NOTE: Curb and Sidewalk details are similar to this at both corners of approach slab from Sta. 37+89.25 to Sta. 38+04.25.



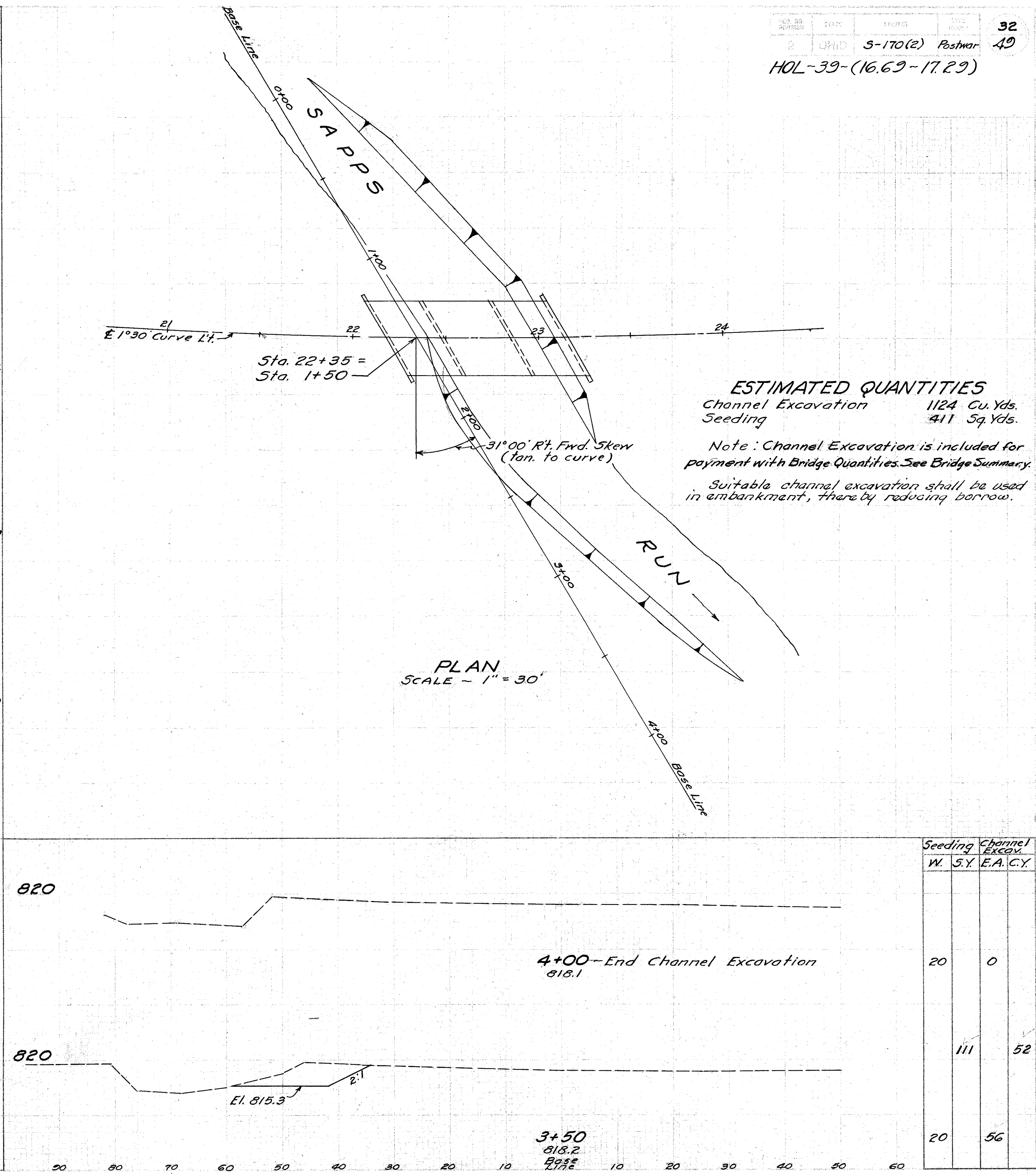
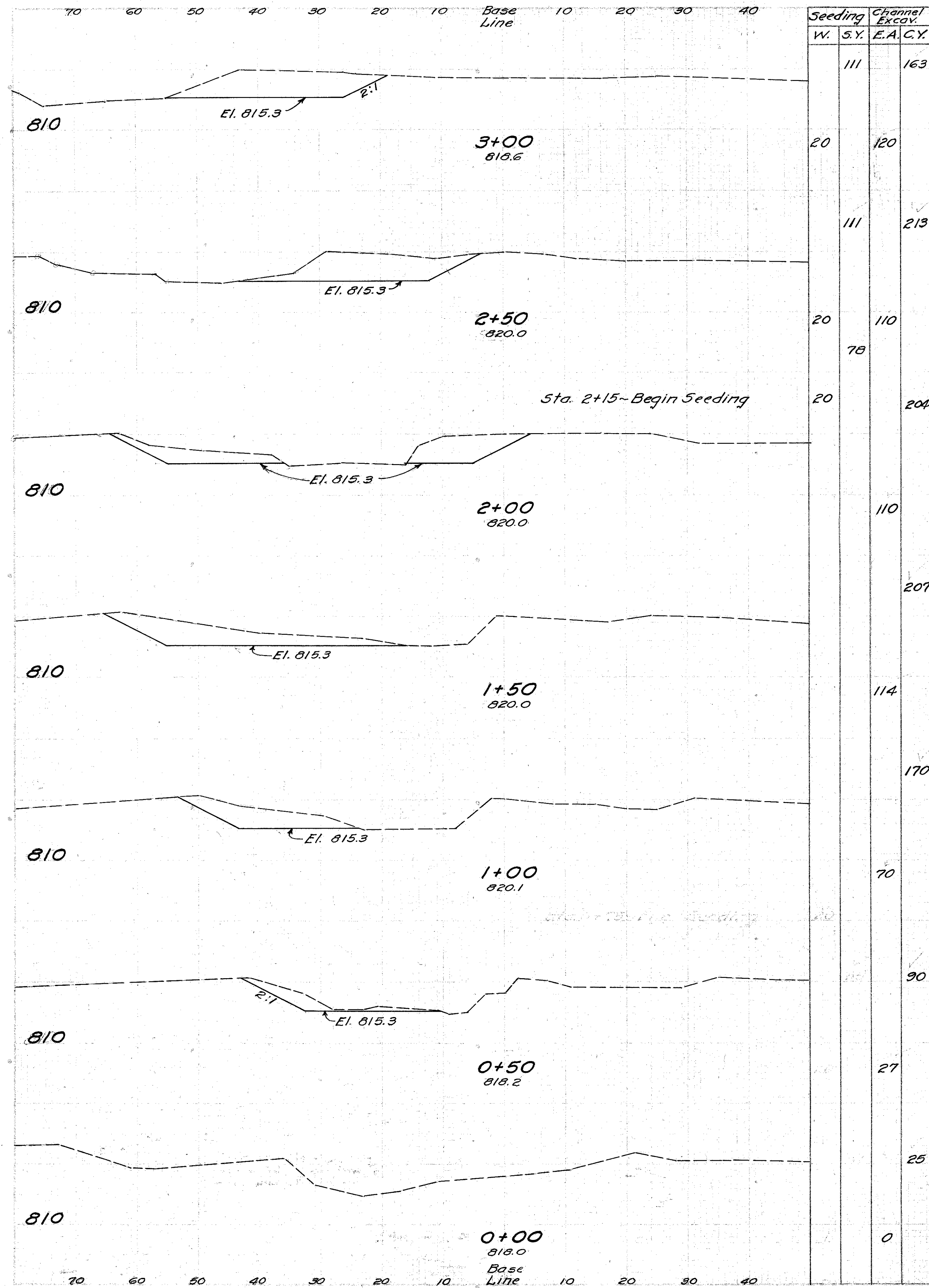
ESTIMATED QUANTITIES
 Approach Slab 48.3 Sq.Yd.

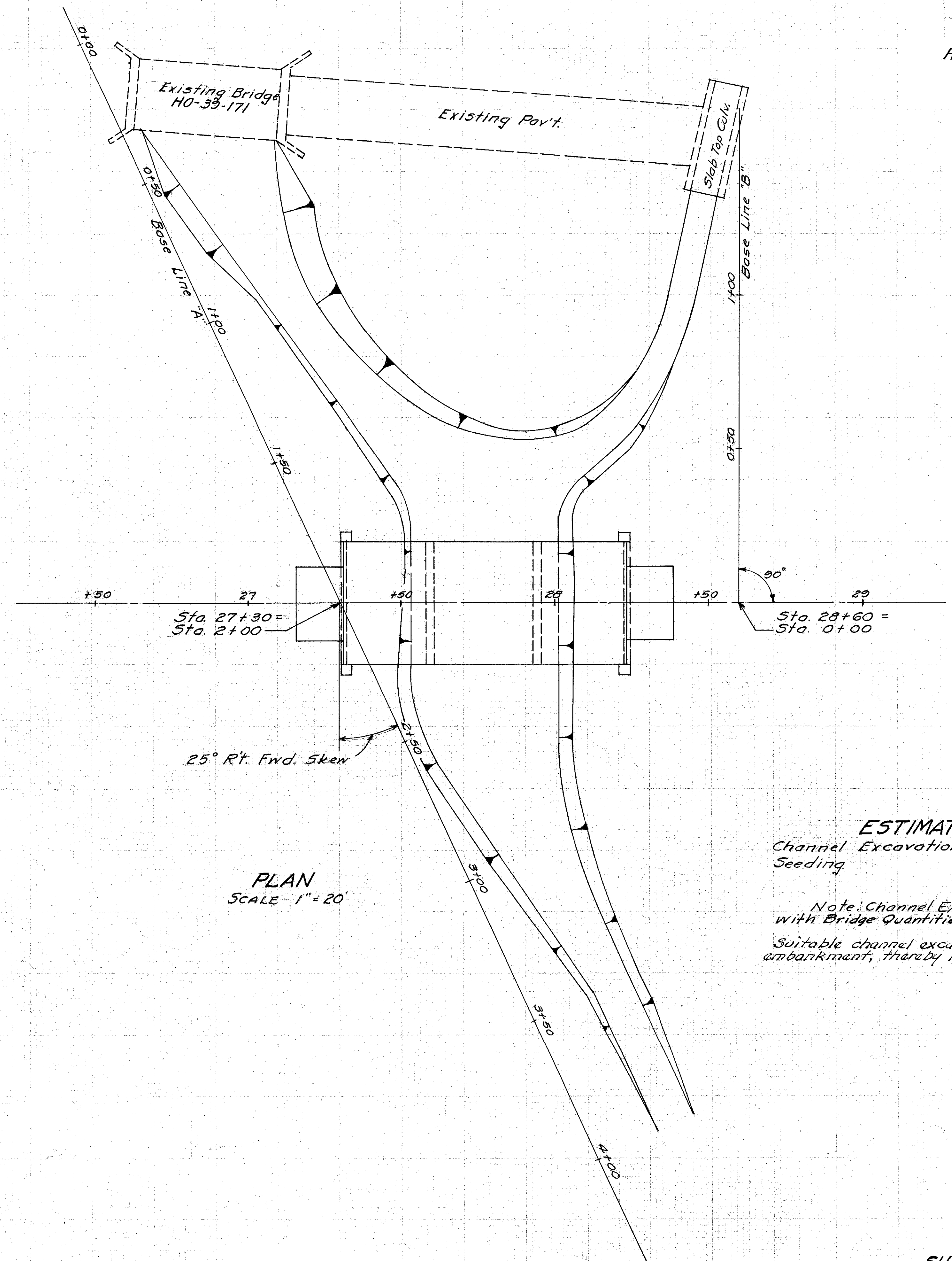
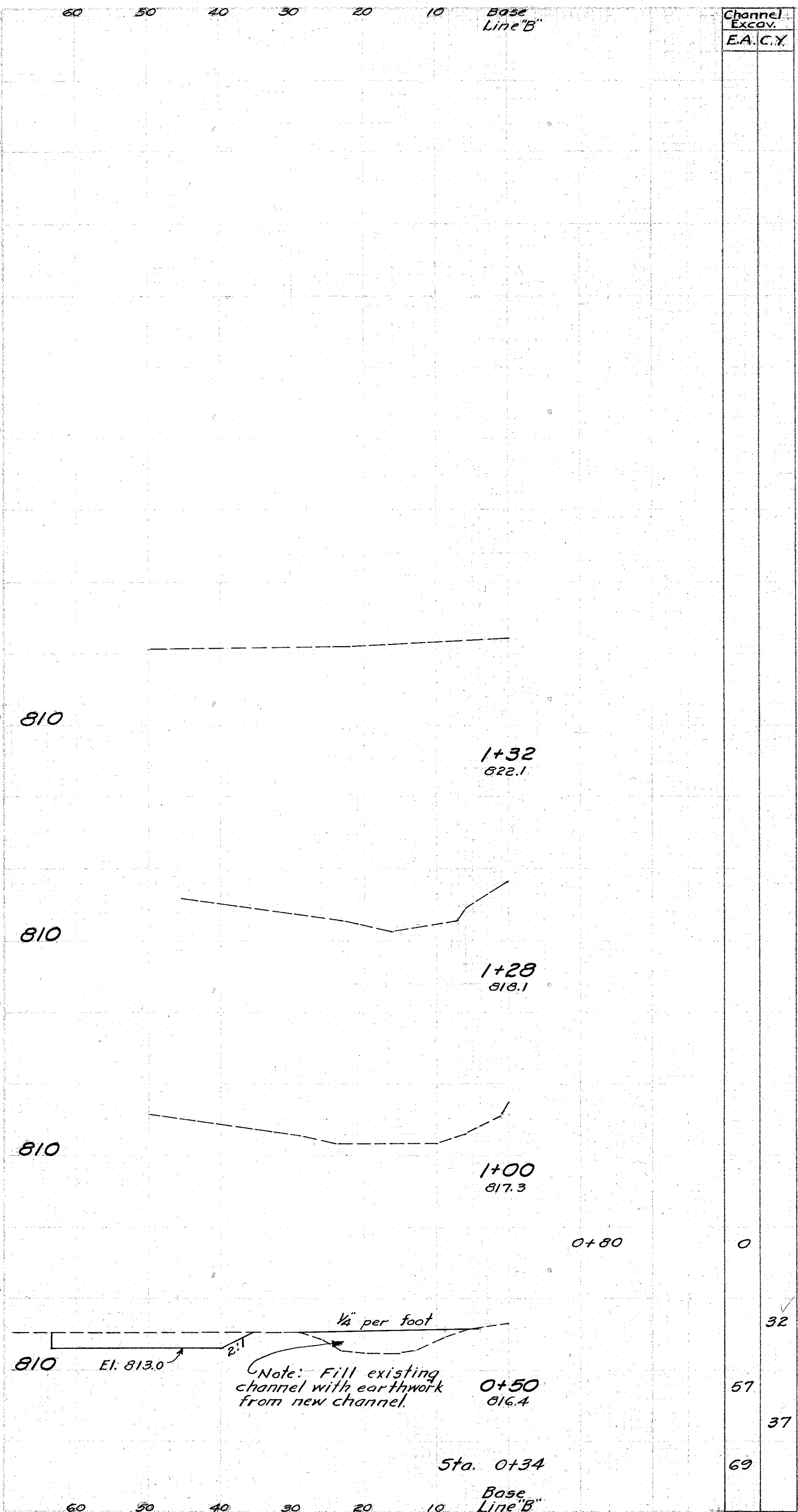
NOTE: Approach Slab from Sta. 37+89.25 to Sta. 38+04.25 is similar to slab detailed on this sheet.



NOTE: For approach slab details not shown hereon refer to Std. Dwg. AS-4-47.

STA. 36+13.75 TO STA. 36+28.75
APPROACH SLAB.



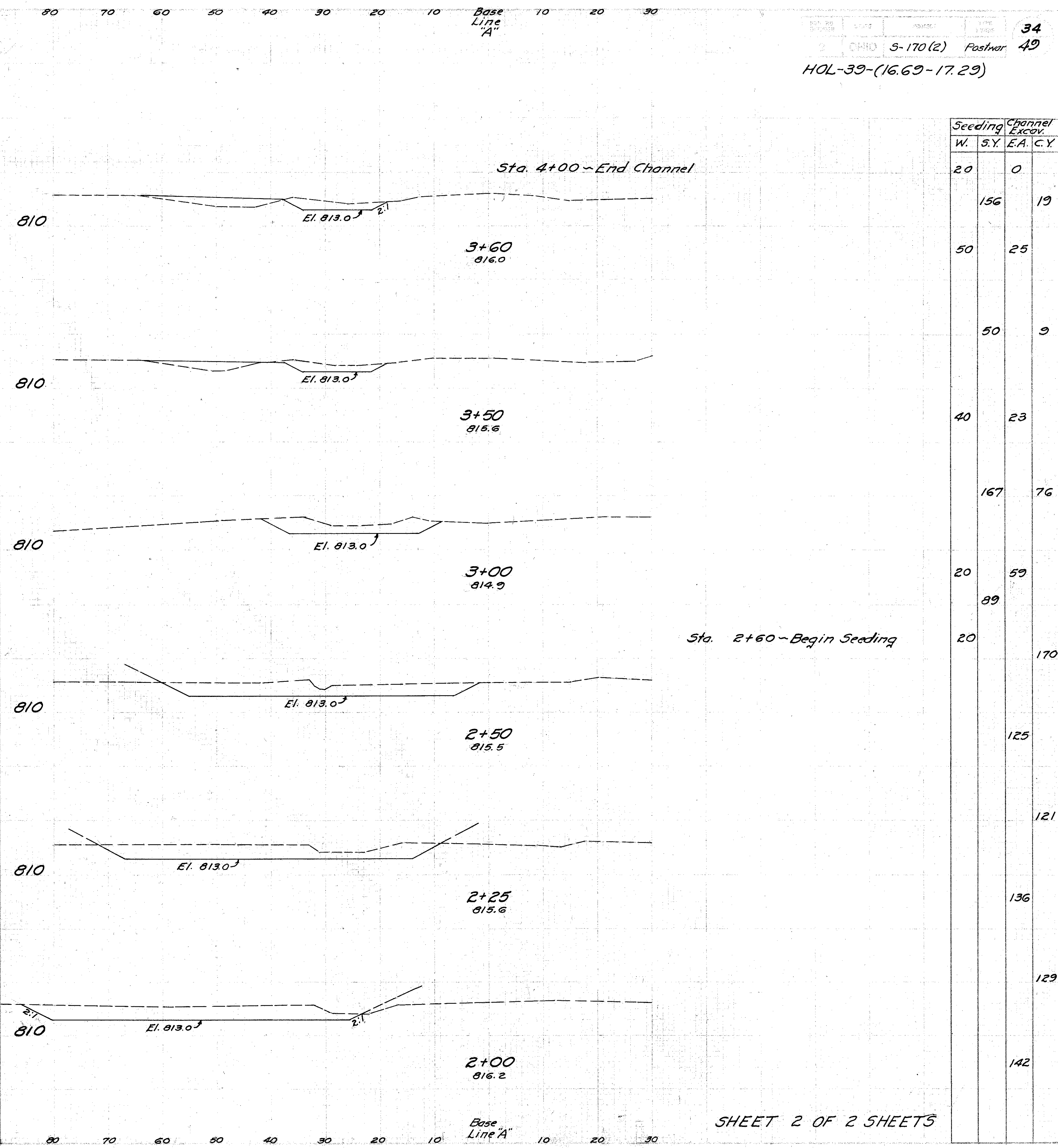
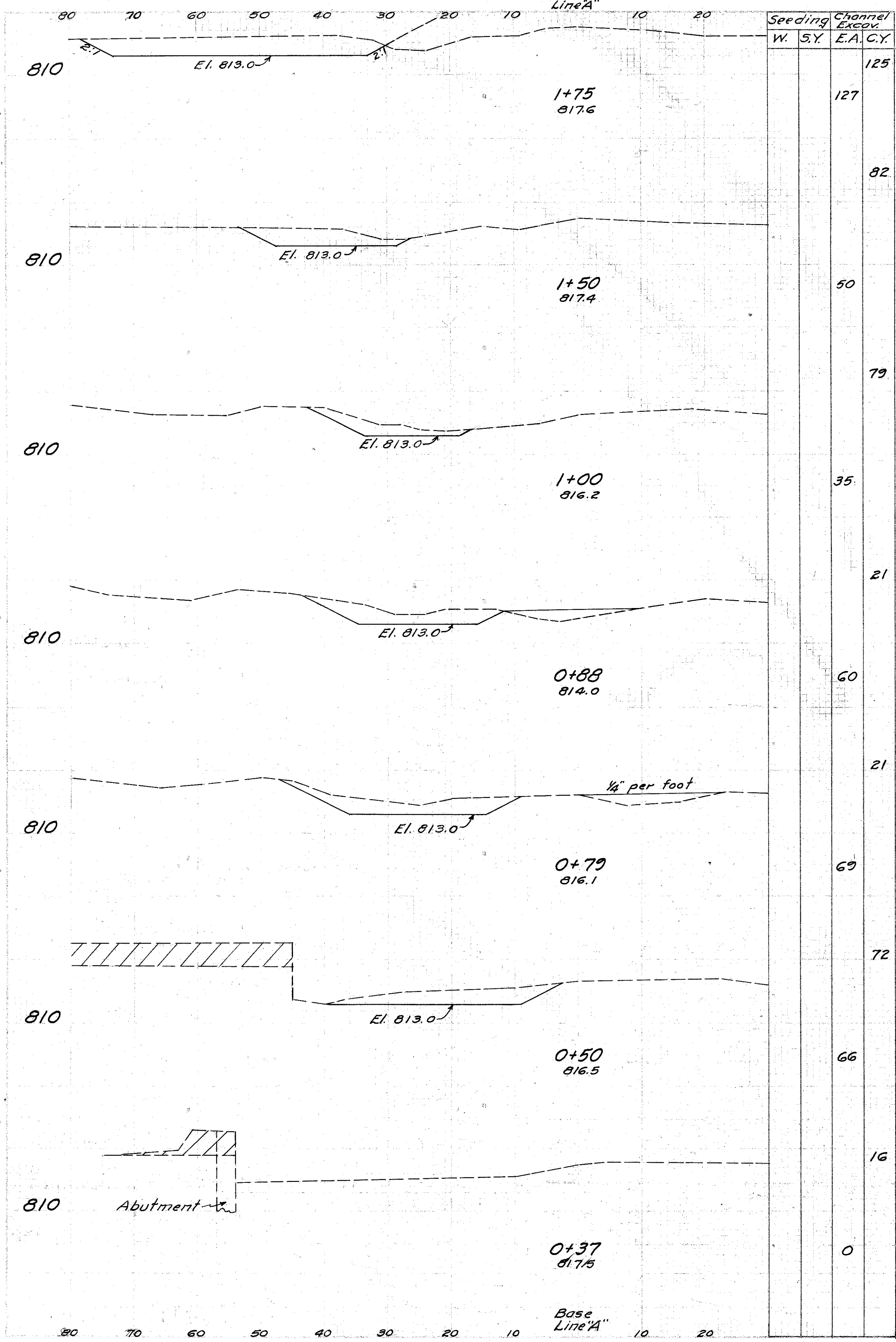


ESTIMATED QUANTITIES

| | |
|--------------------|---------------|
| Channel Excavation | 1009 Cu. Yds. |
| Seeding | 462 Sq. Yds. |

Note: Channel Excavation is included for payment with Bridge Quantities. See Bridge Summary.

Suitable channel excavation shall be used in embankment, thereby reducing borrow.

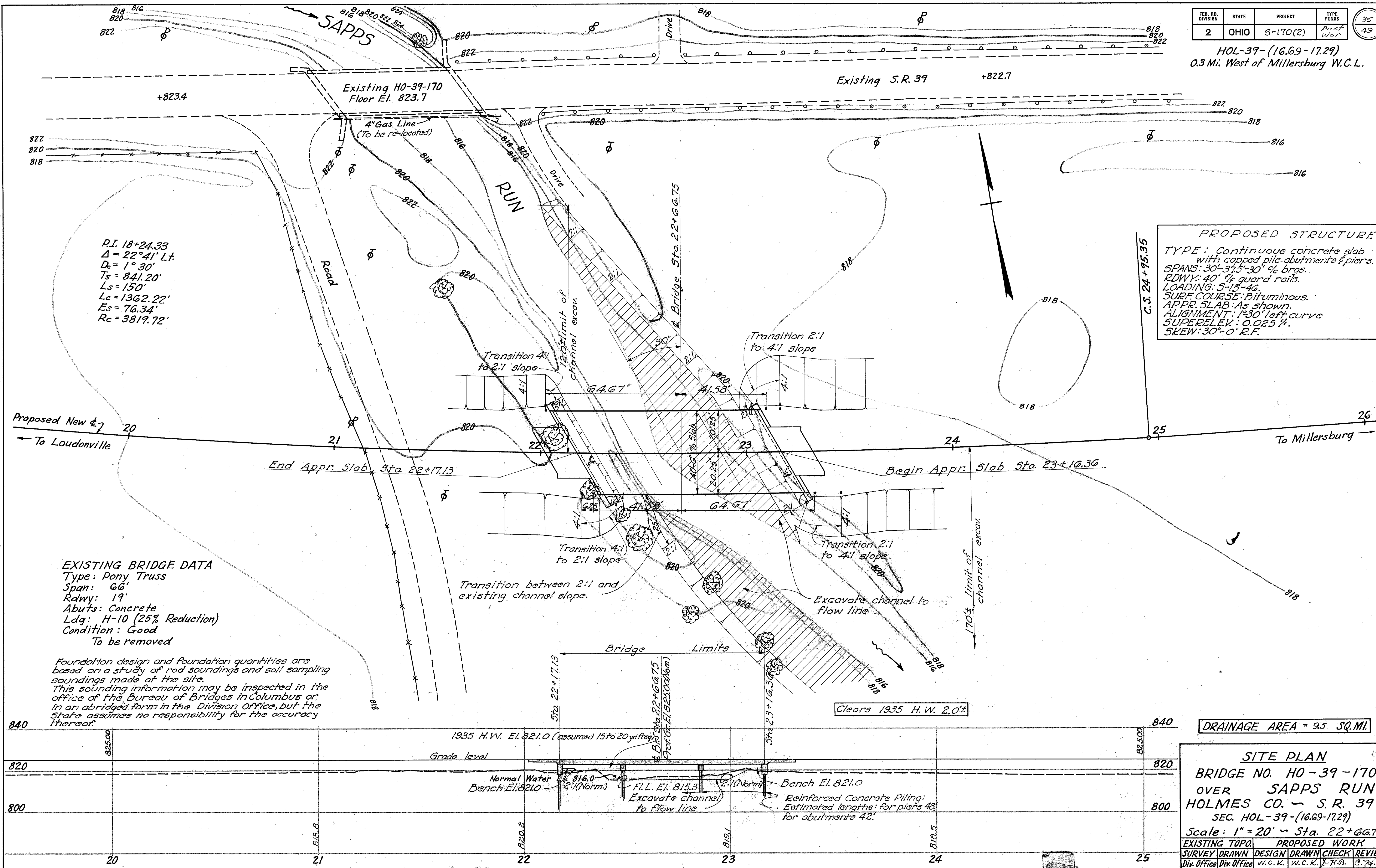


| Station | Seeding | | Channel Excav. | |
|---------------------------|---------|------|----------------|------|
| | W. | S.Y. | E.A. | C.Y. |
| 2+00 | 20 | 0 | 125 | 125 |
| 2+25 | 50 | 25 | 82 | 82 |
| 2+50 | 50 | 25 | 50 | 50 |
| 3+00 | 40 | 23 | 79 | 79 |
| 3+25 | 20 | 59 | 35 | 35 |
| 3+50 | 89 | 76 | 21 | 21 |
| 3+60 | 20 | 59 | 60 | 60 |
| 4+00 | 20 | 170 | 21 | 21 |
| End Channel | 125 | 125 | 72 | 72 |
| Sta. 2+60 - Begin Seeding | 136 | 136 | 66 | 66 |
| Abutment | 129 | 129 | 16 | 16 |
| 0+37 | 142 | 142 | 0 | 0 |

| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|-------------------|-------|----------|------------|
| 2 | OHIO | S-170(2) | Post War |

35
49

HOL-39-(16.69-17.29)
0.3 Mi. West of Millersburg W.C.L.



P.I. 18+24.33
Δ = 22°41' Lt.
Dc = 1°30'
Ts = 841.20'
Ls = 150'
Lc = 1362.22'
Es = 76.34'
Rc = 3819.72'

PROPOSED STRUCTURE
TYPE: Continuous concrete slab with capped pile abutments & piers.
SPANS: 30'-37.5'-30' ¾ brgs.
RDWY: 40' ¼ guard rails.
LOADING: S-15-46.
SURF COURSE: Bituminous.
APPR. SLAB: As shown.
ALIGNMENT: 1°30' left curve
SUPERELEV: 0.025 1/4".
SKEW: 30°-0' R.F.

EXISTING BRIDGE DATA
Type: Pony Truss
Span: 66'
Rdwy: 19'
Abuts: Concrete
Ldg: H-10 (25% Reduction)
Condition: Good
To be removed

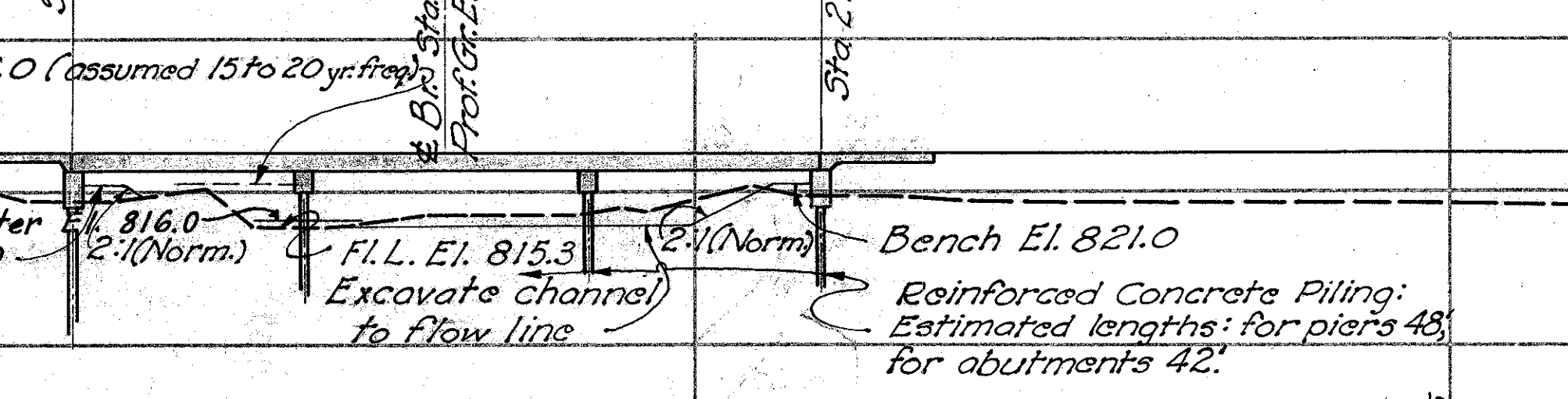
Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility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

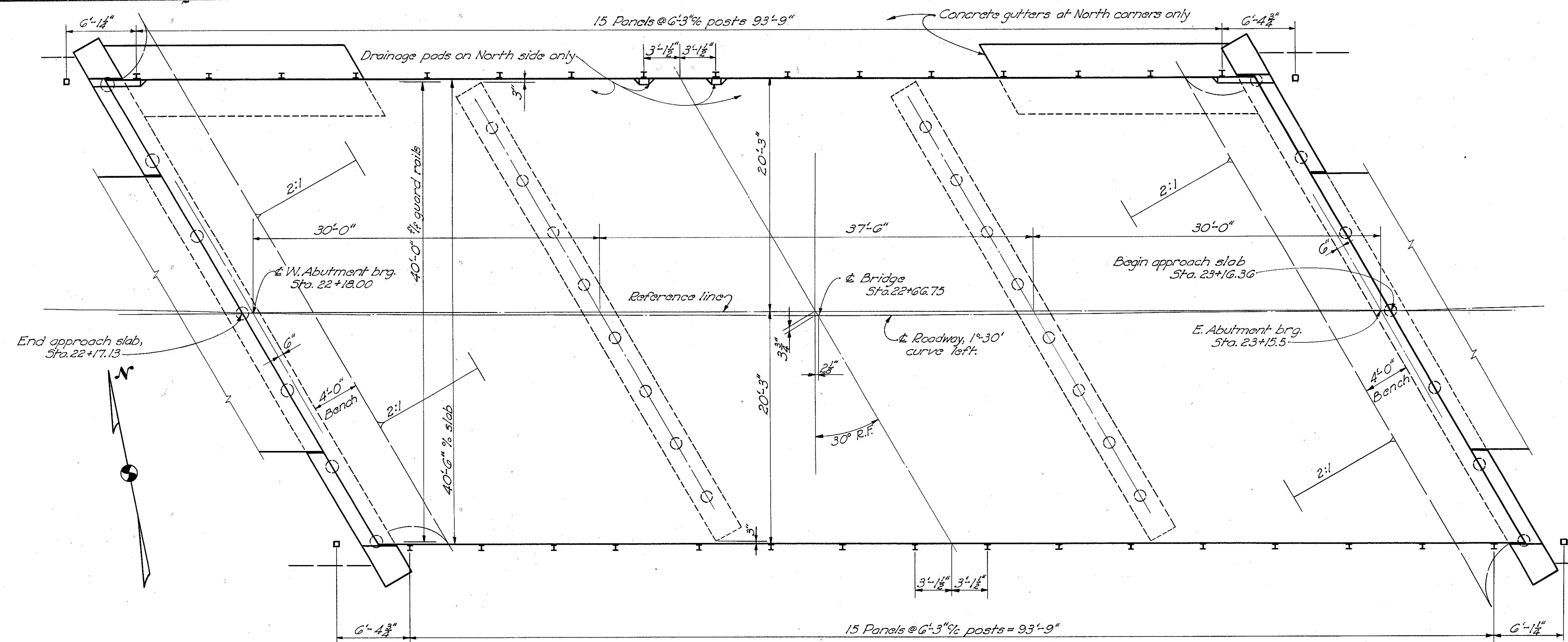
DRAINAGE AREA = 9.5 SQ. MI.

SITE PLAN
BRIDGE NO. HO-39-170
OVER SAPP'S RUN
HOLMES CO. - S.R. 39
SEC. HOL-39-(16.69-17.29)
Scale: 1" = 20' - Sta. 22+66.75

| | |
|----------------|---------------|
| EXISTING TOPG. | PROPOSED WORK |
| SURVEY | DRAWN |
| DESIGN | DRAWN |
| CHECK | REVIEW |
| Div. Office | Div. Office |

W.C.K. W.C.K. J.H.B. C.F.A.
BFG J.M.R. 8-24-51





GENERAL PLAN

GENERAL NOTES

REFERENCE shall be made to Standard Drawings C5-1-47 revised 1-20-48; and P-1-49, dated 7-27-49.

PILING shall be driven to a minimum bearing capacity of 25 tons at the abutments and 35 tons at the piers.

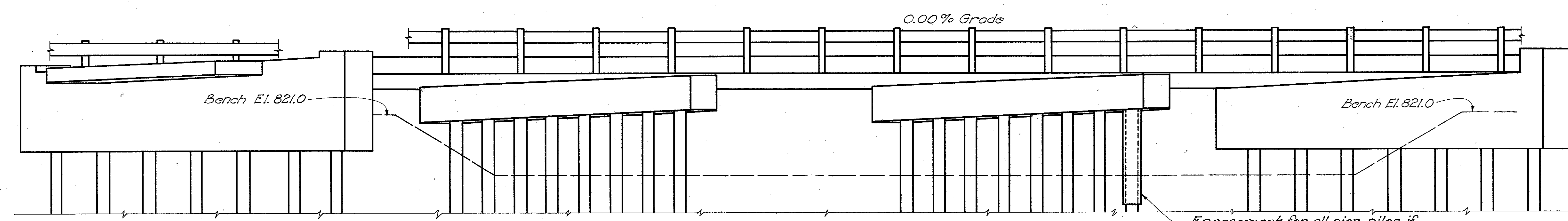
CONCRETE GUTTERS shall be 6 ft wide and 6 in. thick, and shall be depressed 6 in. at the center. They shall extend from face of abutment down to El. 814.0 and shall be centered under edge of deck. Reinforcing bars 1/2" #1-6" centers, both directions, included in price per lin. ft.

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

BITUMINOUS SURFACE COURSE: 2 1/2" Asphaltic concrete surface course, Item T-35, laid in two 1 1/4" courses.

EXCAVATION quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

REMOVAL OF EXISTING BRIDGE: When no longer needed to maintain traffic the existing structure shall be removed. Floor beams, stringers and trusses shall be piled along the right-of-way at the disposal of Holmes County. Trusses shall be left assembled. The remainder of the removed materials shall become the property of the Contractor. The existing abutments shall be left in place. The 4" gas line carried on the existing structure will be removed and re-located by the owner of the line before the superstructure is removed.



GENERAL ELEVATION

Encasement for all pier piles if the cast-in-place type is used. Encasement shall extend from 3 feet below flow line to bottom of pier cap.

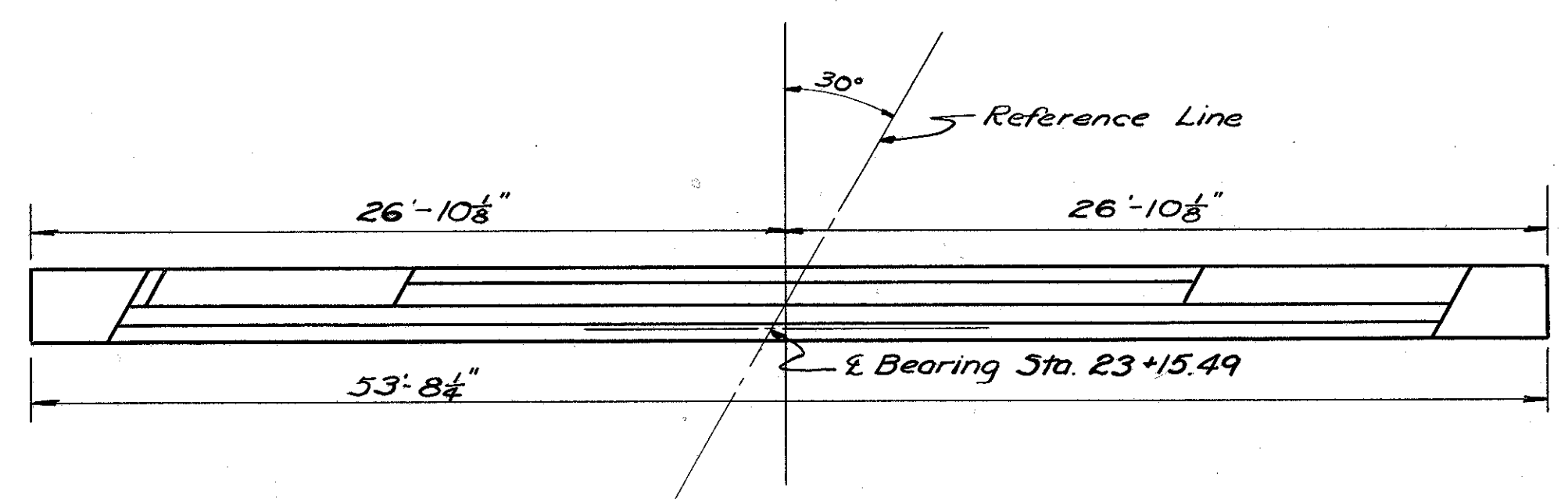
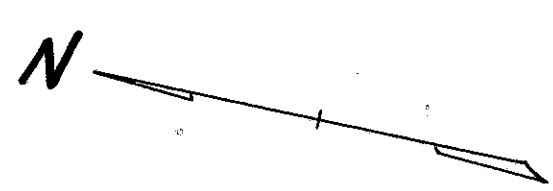
| ESTIMATED QUANTITIES | | | | | | | | |
|----------------------|--------|----------|--|----------|--------|-------|---------|--------------------------|
| ITEM | TOTAL | UNIT | DESCRIPTION | SUPERSTR | ABUTS. | PIERS | GENERAL | REMARKS |
| E-2 | 60 | Cu. Yd. | Unclassified excavation | | 60 | | | |
| E-3 | 1124 | Cu. Yd. | Channel excavation | | | | 1124 | C.O. 7 + 6 1130 |
| S-1 | 226 | Cu. Yd. | Class "C" concrete, superstructure (including pier caps) | 201 | | 25 | | |
| S-1 | 60 | Cu. Yd. | Class "C" concrete, abutments | | 60 | | | |
| S-3 | 447 | Sq. Yd. | Type "C" waterproofing | 447 | | | | |
| S-4 | 61,768 | Lbs. | Reinforcing steel | 51,617 | 6212 | 3,739 | 150 | |
| S-9 | 17 | Sq. Ft. | 1/2" Premolded expansion joint filler | | | | 17 | |
| S-14 | 198 | Lin. Ft. | Railing (Type I-15.13 guard rail with steel posts) | 198 | | | | |
| S-16 | Lump | Sum | First test pile | | | | Lump | |
| S-18 | 1356 | Lin. Ft. | Reinforced concrete piling, 12" cast-in-place or 14" precast | | 588 | 768 | | C.O. 7 + 162.25 1,193.75 |
| S-24 | Lump | Sum | Removal of existing structure | | | | Lump | |
| I-14 | 45 | Lin. Ft. | Concrete gutter | | | | 45 | |
| T-35 | 31 | Cu. Yd. | Asphaltic concrete surface course, Type "A" or "C" (85-100) | 31 | | | | |

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

**GENERAL PLAN AND ELEVATION,
NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. HO-39-170
OVER SAPP'S RUN**

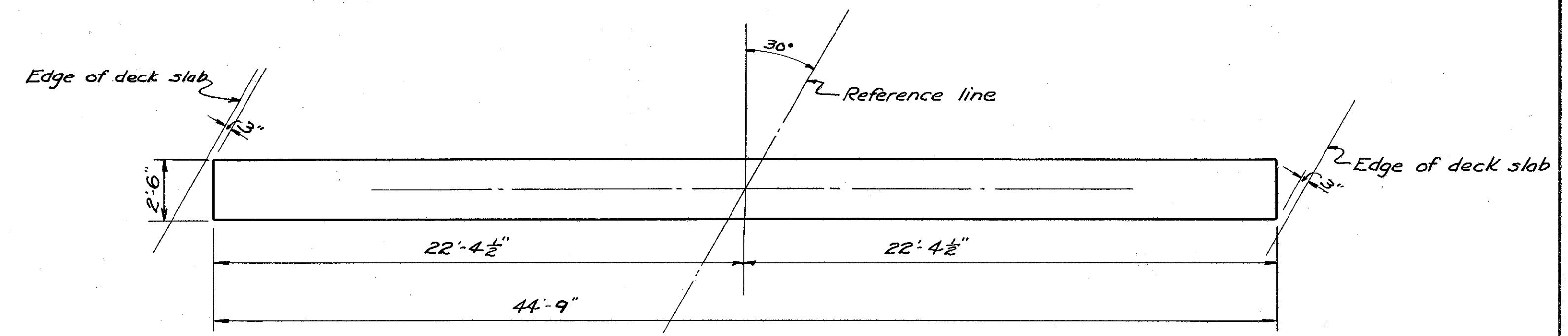
HOLMES COUNTY
SEC. HOL-39-(16.69-17.29) STA. 22+66.75

| | | | | | | |
|----------|-------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| JWS | JWS | GPH | V.A.E. | WJR | 8-24-51 | |



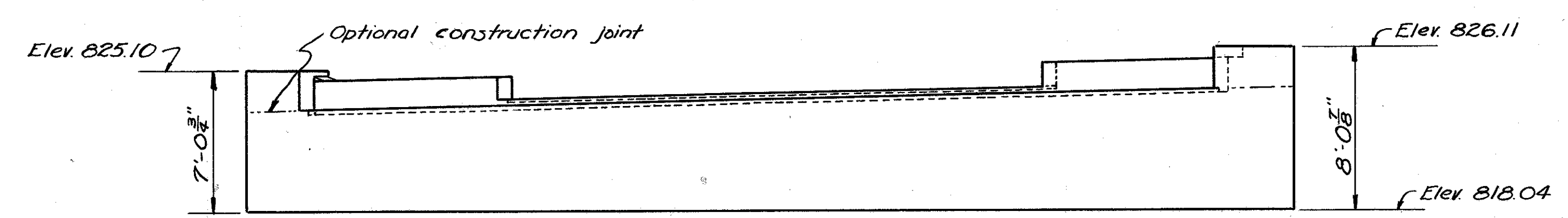
PART PLAN EAST ABUTMENT

NOTE: For details not shown see West Abutment Detail Sheet.

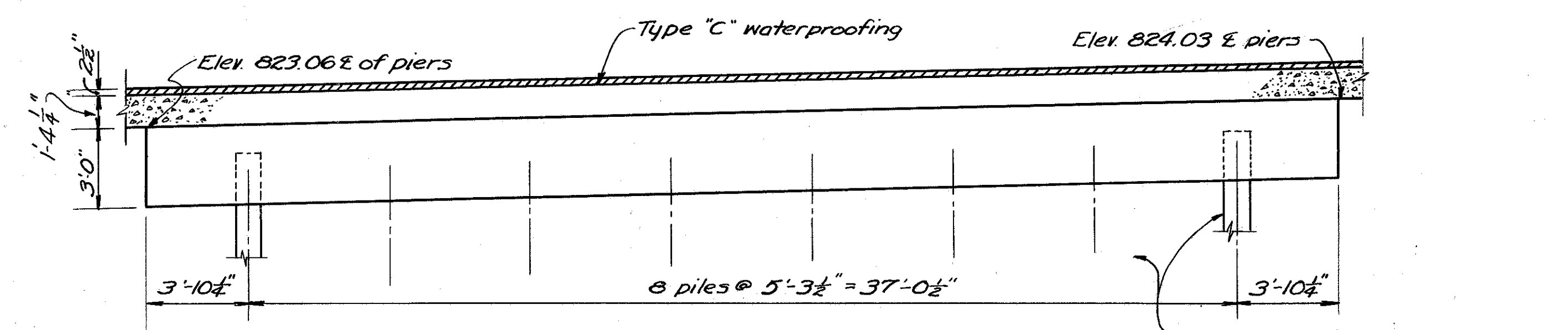


PIER PART PLAN

NOTE: For pier details not shown, see Std. Drg. P-1-49.



PART ELEVATION EAST ABUTMENT



PIER PART ELEVATION

REINFORCING STEEL LIST

| SUPERSTRUCTURE | | | | | BENDING DIAGRAMS | | | | | ABUTMENTS | | | | | | | | | | |
|----------------|--------|-----|---------|--------|------------------|--|--|--|--|-----------|------|--------|-----|--------|--------|------------------|--------|---|-------|----|
| MARK | SIZE | NO. | LENGTH | WEIGHT | SHAPE | | | | | | MARK | SIZE | NO. | LENGTH | WEIGHT | SHAPE | | | | |
| A | 1 1/8" | 90 | 35'-3" | 13,650 | S | | | | | | A7a | 1" | 48 | 28'-4" | 3,631 | S | | | | |
| B | 1 1/8" | 30 | 25'-10" | 3,335 | B | | | | | | A7a | 1" | 44 | 10'-3" | 470 | B | | | | |
| C | 1 1/8" | 30 | 22'-10" | 2,948 | B | | | | | | A7b | 1" | 56 | 9'-7" | 560 | B | | | | |
| D | 1 1/8" | 15 | 22'-9" | 1,468 | S | | | | | | A7c | 1" | 56 | 8'-11" | 521 | B | | | | |
| E | 1 1/8" | 15 | 18'-9" | 1,210 | S | | | | | | A7d | 1" | 44 | 8'-3" | 379 | B | | | | |
| F | 1 1/8" | 74 | 28'-7" | 9,101 | S | | | | | | A7e | 1" | 38 | 3'-0" | 119 | S | | | | |
| G | 1 1/8" | 38 | 17'-4" | 2,834 | S | | | | | | A2a | 1/2" | 56 | 5'-3" | 197 | B | | | | |
| H | 1 1/8" | 36 | 13'-7" | 2,104 | S | | | | | | A2b | 1/2" | 8 | 6'-8" | 36 | B | | | | |
| J | 3/4" | 38 | 21'-6" | 1,227 | S | | | | | | A2c | 1/2" | 8 | 7'-0" | 37 | B | | | | |
| K | 3/4" | 19 | 20'-3" | 578 | S | | | | | | A2d | 1/2" | 88 | 3'-6" | 206 | S | | | | |
| L | 3/4" | 252 | 24'-4" | 8,482 | S | | | | | | A2e | 1/2" | 8 | 10'-5" | 56 | S | | | | |
| M | 3/4" | 128 | 24'-4" | 4,680 | S | | | | | | | | | | | REPLACEMENT BARS | | | | |
| PIERS | | | | | | | | | | | | | | | | RE0 | 1 1/2" | 1 | 8'-2" | 43 |
| POa | 1 1/2" | 8 | 25'-0" | 1,063 | S | | | | | | RE9 | 1 1/2" | 2 | 7'-9" | 67 | S | | | | |
| PTa | 1" | 32 | 24'-7" | 2,100 | S | | | | | | RE7 | 1" | 1 | 7'-6" | 20 | S | | | | |
| P2a | 1/2" | 64 | 5'-3" | 225 | B | | | | | | RES | 3/4" | 1 | 6'-6" | 10 | S | | | | |
| P2b | 1/2" | 58 | 10'-4" | 401 | B | | | | | | RE4 | 3/8" | 1 | 6'-1" | 6 | S | | | | |
| | | | | | | | | | | | RE2 | 1/2" | 1 | 5'-8" | 4 | S | | | | |

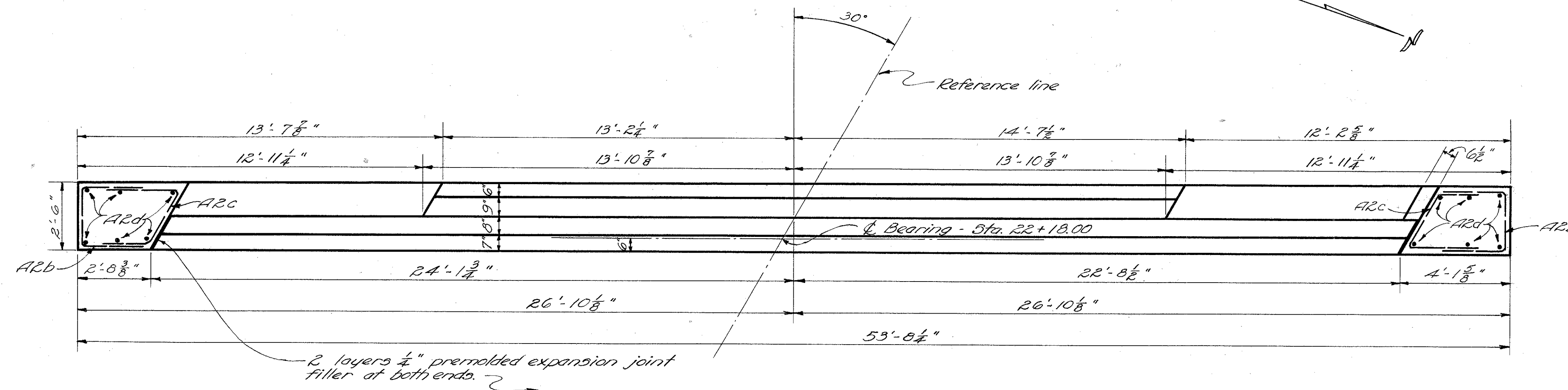
NOTE: The bar size designations shown in the Steel List do not correspond with the size designations given in the January 1, 1951 edition of the Construction and Material Specifications.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

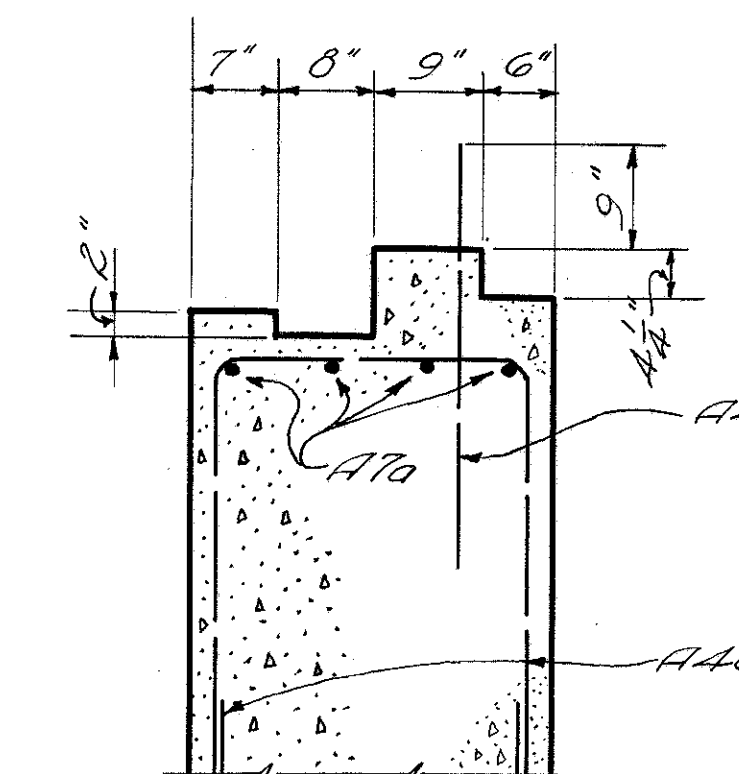
PART PLAN & ELEVATION of PIER & EAST ABUTMENT, & STEEL LIST
BRIDGE NO HO-39-170
over SAPP'S RUN

HOLMES COUNTY
SEC. HOL-39-(16.69-17.29) STA. 22+66.75

| | | | | | | |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| Jewell | Jewell | E.M.P. | V.A.E. | BFG | 8-24-51 | |

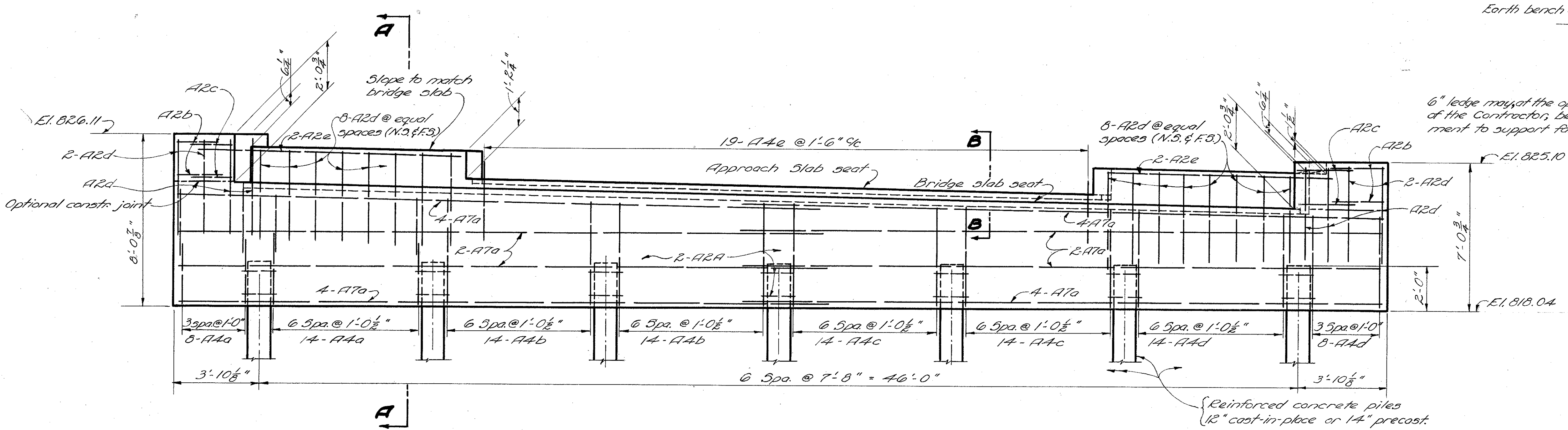


PLAN

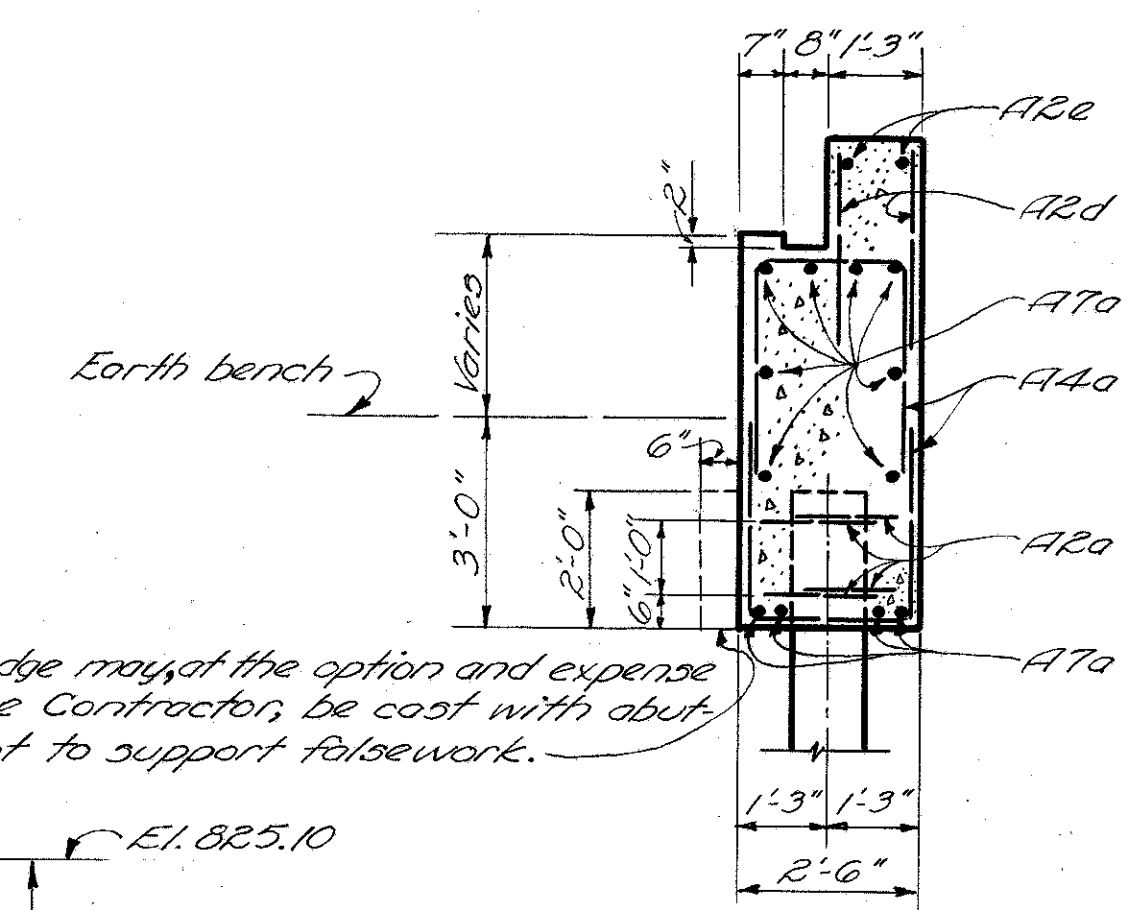


SECTION B-B

ABUTMENT NOTE
PROCEDURE: All earth fill around abutments shall be made full height of earth bench. Excavation shall then be made for abutment cap, after which piling shall be driven. If bottom forms for abutment cap are used, they shall be left in place.
STEEL CLEARANCE from face of concrete shall be 2 inches.



ELEVATION



SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

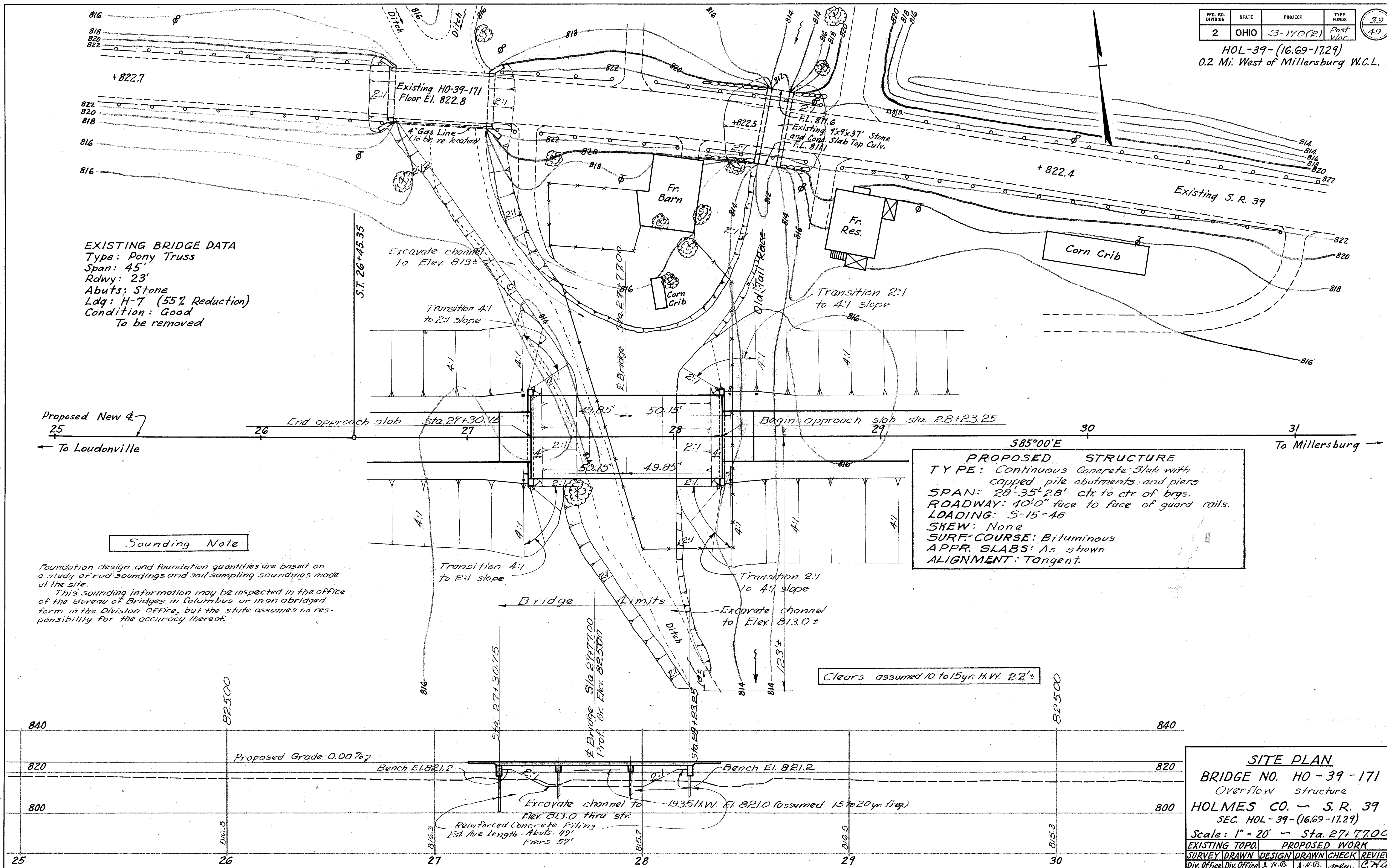
WEST ABUTMENT DETAILS
BRIDGE NO. **HO-39-170**
OVER **SAPPY RUN**
HOLMES COUNTY
SEC. **HOL-39-(16.69-17.29)** STA. **22+66.75**

| | | | | | | |
|----------|-------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| Jwb | Jwb | S.J.S. | V.A.E. | BFG | 8-24-51 | |

| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|-------------------|-------|----------|------------|
| 2 | OHIO | S-170(R) | Post War |

3.9
4.9

HOL-39-(16.69-17.29)
0.2 Mi. West of Millersburg W.C.L.



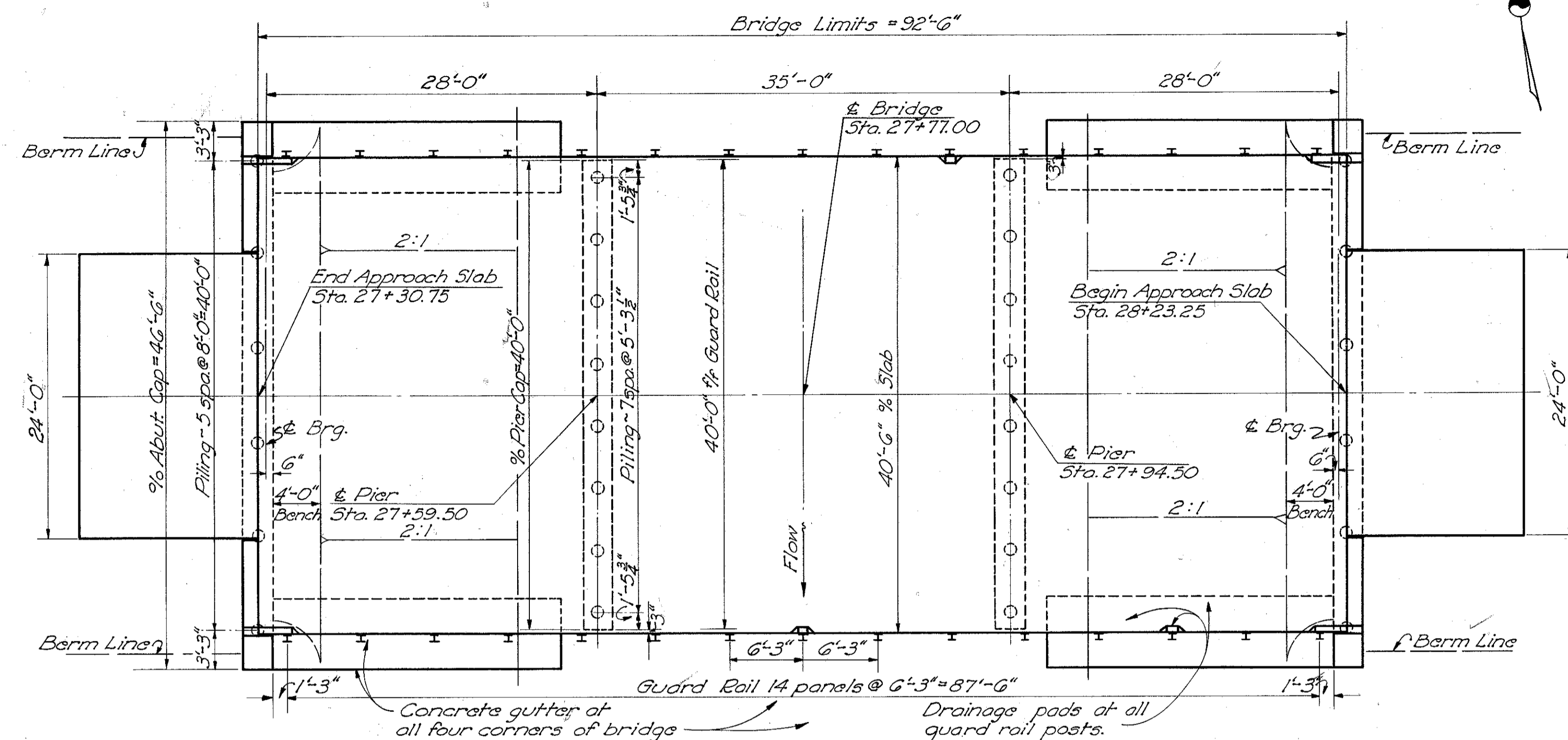
EXISTING BRIDGE DATA
 Type: Pony Truss
 Span: 45'
 Rdwy: 23'
 Abuts: Stone
 Ldg: H-7 (55% Reduction)
 Condition: Good
 To be removed

Sounding Note

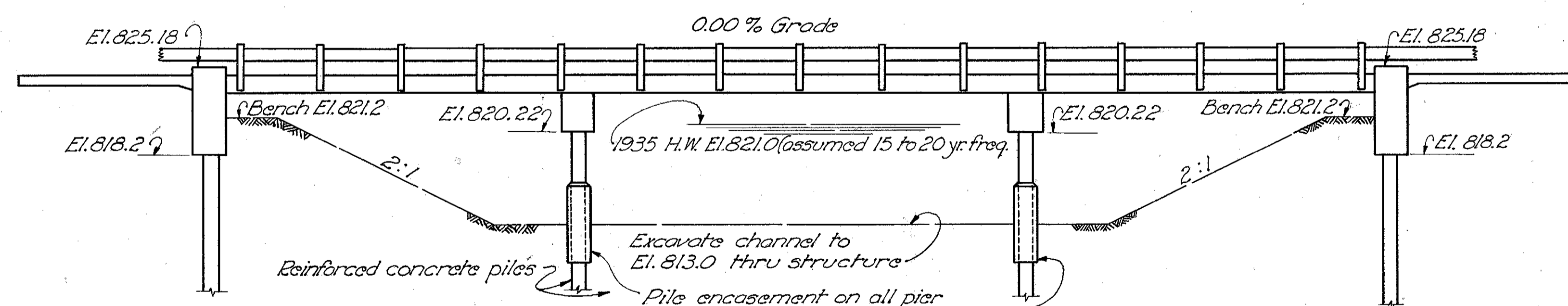
Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site.
 This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the state assumes no responsibility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

PROPOSED STRUCTURE
 TYPE: Continuous Concrete Slab with copped pile abutments and piers
 SPAN: 28'-35'-28" ctr to ctr of brgs.
 ROADWAY: 40'-0" face to face of guard rails.
 LOADING: S-15-46
 SKEW: None
 SURF COURSE: Bituminous
 APPR. SLABS: As shown
 ALIGNMENT: Tangent.

SITE PLAN
 BRIDGE NO. HO-39-171
 Overflow structure
 HOLMES CO. - S. R. 39
 SEC. HOL-39-(16.69-17.29)
 Scale: 1" = 20' - Sta. 27+77.00
 EXISTING TOPO. PROPOSED WORK
 SURVEY DRAWN DESIGN DRAWN CHECK REVIEW
 Div. Office Div. Office J. N. B. J. N. B. mfw. C. N. A.
 BFG W.K. 8-24-51



GENERAL PLAN



GENERAL ELEVATION
GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-47 revised 1-20-48, A-1-49 dated 7-27-49, and P-1-49 dated 7-27-49.

REMOVAL OF EXISTING STRUCTURES: When no longer needed to maintain traffic, existing structure No. HO-39-171 and existing 9'x9' box culvert shall be removed. Floor beams, stringers and trusses shall be piled along the right-of-way at the disposal of Holmes County. Trusses shall be left assembled. The remainder of removed materials shall become the property of the Contractor. The abutments for bridge No. HO-39-171 shall be removed to El. 816.0 and banks dressed back at 2:1 slope. The walls of the 9'x9' box culvert shall be removed to the existing flow line and the banks dressed back at 2:1 slope. Dressing of banks at both structures shall be included with Removal of Existing Structures for payment. Suitable waste masonry may be disposed of as bank protection as directed by the Engineer. The 4" gas line carried on the existing structures, will be removed and re-located by the owner of the line before the structures are removed.

PILING shall be driven to a minimum bearing capacity of 35 tons at the piers and 24 tons at the abutments.

CONCRETE GUTTERS shall be 6' wide and 6" thick and shall be depressed 6" at the center; they shall extend from face of abutment down to El. 811.0, and shall be centered under edges of deck. Reinforcing bars $\frac{1}{2}$ " @ 1'-6" centers, both directions, included in price per lin. ft. of gutter.

EXCAVATION quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

ASPHALTIC CONCRETE SURFACE COURSE Item T-35, $2\frac{1}{2}$ " thick, shall be laid in two $1\frac{1}{2}$ " courses.

| REINFORCING STEEL LIST | | | | | BENDING DIAGRAM | | |
|-------------------------|-----------------|-----|---------|--------|-----------------|--|--|
| MARK | SIZE | NO. | LENGTH | WEIGHT | SHP. | | |
| SUPERSTRUCTURE | | | | | | | |
| A | 1" | 99 | 33'-0" | 11,108 | S | | |
| B | 1" | 34 | 24'-3" | 2803 | B | | |
| C | 1" | 34 | 21'-5" | 2476 | B | | |
| D | 1" | 17 | 21'-6" | 1243 | S | | |
| E | 1" | 17 | 18'-3" | 1055 | S | | |
| F | 1" | 86 | 21'-0" | 6140 | S | | |
| G | 1" | 44 | 10'-6" | 1571 | S | | |
| H | 1" | 44 | 7'-3" | 1085 | S | | |
| J | $\frac{3}{8}$ " | 44 | 20'-3" | 1338 | S | | |
| K | $\frac{3}{8}$ " | 22 | 19'-6" | 644 | S | | |
| L | $\frac{3}{8}$ " | 94 | 40'-0" | 5648 | S | | |
| M | $\frac{3}{8}$ " | 60 | 40'-0" | 3605 | S | | |
| ABUTMENTS | | | | | | | |
| A7a | 1" | 48 | 24'-9" | 3172 | S | | |
| A4a | $\frac{3}{8}$ " | 128 | 8'-5" | 1124 | B | | |
| A4b | $\frac{3}{8}$ " | 30 | 3'-0" | 94 | S | | |
| A2a | $\frac{3}{8}$ " | 48 | 5'-3" | 168 | B | | |
| A2b | $\frac{3}{8}$ " | 8 | 6'-8" | 36 | B | | |
| A2c | $\frac{3}{8}$ " | 8 | 6'-0" | 32 | B | | |
| A2d | $\frac{3}{8}$ " | 88 | 3'-6" | 206 | S | | |
| A2e | $\frac{3}{8}$ " | 8 | 9'-0" | 48 | S | | |
| PIERS | | | | | | | |
| P0a | $\frac{1}{2}$ " | 8 | 21'-11" | 932 | S | | |
| P7a | 1" | 32 | 21'-6" | 1837 | S | | |
| P2a | $\frac{1}{2}$ " | 64 | 5'-3" | 225 | B | | |
| P2b | $\frac{1}{2}$ " | 58 | 10'-4" | 400 | B | | |
| REPLACEMENT BARS | | | | | | | |
| RE0 | $\frac{1}{2}$ " | 1 | 8'-2" | 43 | S | | |
| RE8 | 1" | 1 | 7'-4" | 25 | S | | |
| RE7 | 1" | 1 | 7'-4" | 20 | S | | |
| RE5 | $\frac{3}{8}$ " | 1 | 6'-6" | 10 | S | | |
| RE4 | $\frac{3}{8}$ " | 1 | 6'-1" | 6 | S | | |
| RE2 | $\frac{3}{8}$ " | 1 | 5'-8" | 4 | S | | |

NOTE: The bar size designations shown here do not correspond with the size designations given in the January 1, 1951 edition of the Construction and Material Specifications.

| ESTIMATED QUANTITIES | | | | | | |
|----------------------|--------|----------|--|-------|-------|-----------|
| ITEM | TOTAL | UNIT | DESCRIPTION | ABUT. | PIER | SUPERSTR. |
| E-2 | 49 | Cu. Yd. | Unclassified excavation | 49 | | |
| E-3 | 1009 | Cu. Yd. | Channel excavation | | | 1009 |
| 5-1 | 197 | Cu. Yd. | Class "C" concrete, superstructure and pier caps | | 23 | 174 |
| 5-1 | 47 | Cu. Yd. | Class "C" concrete, abutments | 47 | | |
| 5-3 | 417 | Sq. Yd. | Type "C" waterproofing | | | 417 |
| 5-4 | 47,098 | Lbs. | Reinforcing steel | 4880 | 33,94 | 38,716 |
| 5-9 | 14 | Sq. Ft. | $\frac{1}{2}$ " premolded expansion joint filler | | | 14 |
| 5-14 | 185 | Lin. Ft. | Railing (Type I-15.13 guard rail with steel posts) | | | 185 |
| 5-16 | Lump | Sum | First test pile | | | Lump |
| 5-18 | 1500 | Lin. Ft. | Reinforced concrete piling, 12" cast-in-place or 14" precast | 588 | 912 | |
| 5-24 | Lump | Sum | Removal of existing structures | | | Lump |
| I-14 | 107 | Lin. Ft. | Concrete gutter | | | 107 |
| T-35 | 29 | Cu. Yd. | Asphaltic concrete surface course, Type "A" or "C" (85-100) | | | 29 |

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

**GENERAL PLAN & ELEVATION, NOTES
ESTIMATED QUANTITIES & STEEL LIST
BRIDGE NO. HO-39-171
OVERFLOW STRUCTURE**

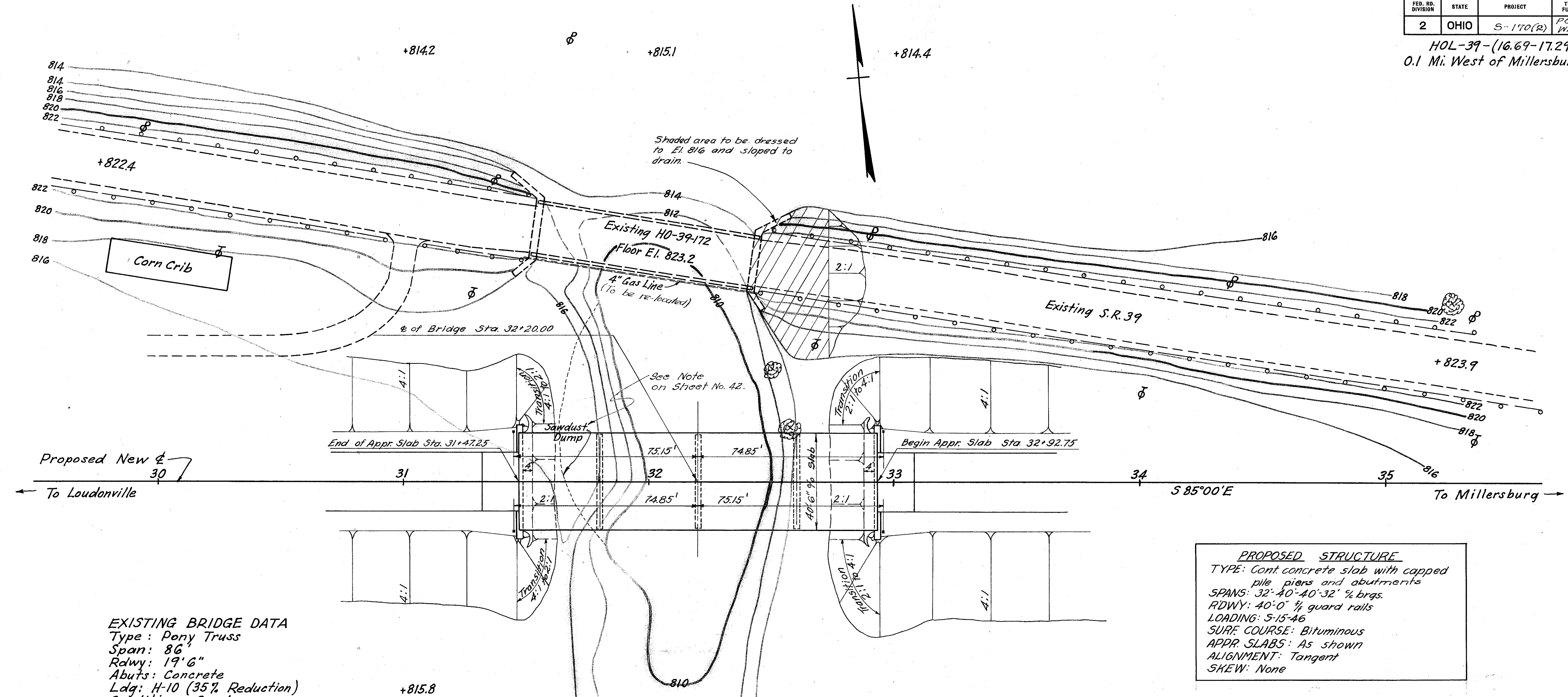
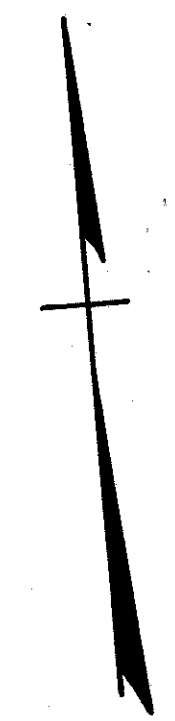
HOLMES COUNTY
SEC. HOL-39-(16.6.9-17.2.9) STA. 27+77.00

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISION |
|----------|-------|--------|---------|----------|---------|----------|
| RH | RH | GPH | V.A.E. | WMC | 8-24-51 | |

| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
|-------------------|-------|----------|------------|
| 2 | OHIO | S-170(R) | POST WAR |

41
49

HOL-39-(16.69-17.29)
0.1 Mi. West of Millersburg W.C.L.

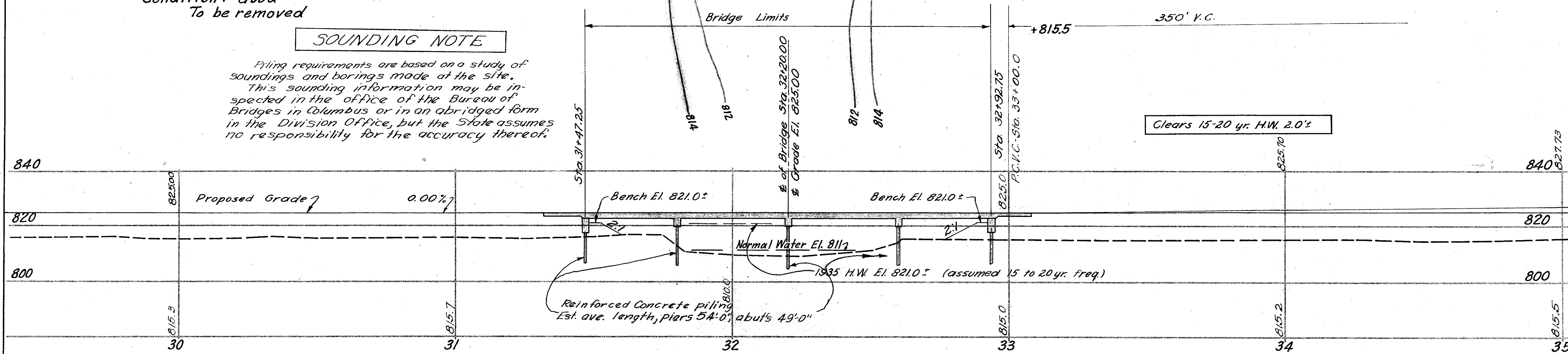


EXISTING BRIDGE DATA
 Type: Pony Truss
 Span: 86'
 Rdwy: 19'6"
 Abuts: Concrete
 Ldg: H-10 (35% Reduction)
 Condition: Good
 To be removed

PROPOSED STRUCTURE
 TYPE: Cont concrete slab with capped pile piers and abutments
 SPANS: 32'-40'-40'-32' % brgs.
 RDWY: 40'-0" 1/4 guard rails
 LOADING: S-15-46
 SURF COURSE: Bituminous
 APPR. SLABS: As shown
 ALIGNMENT: Tangent
 SKEW: None

SOUNDING NOTE

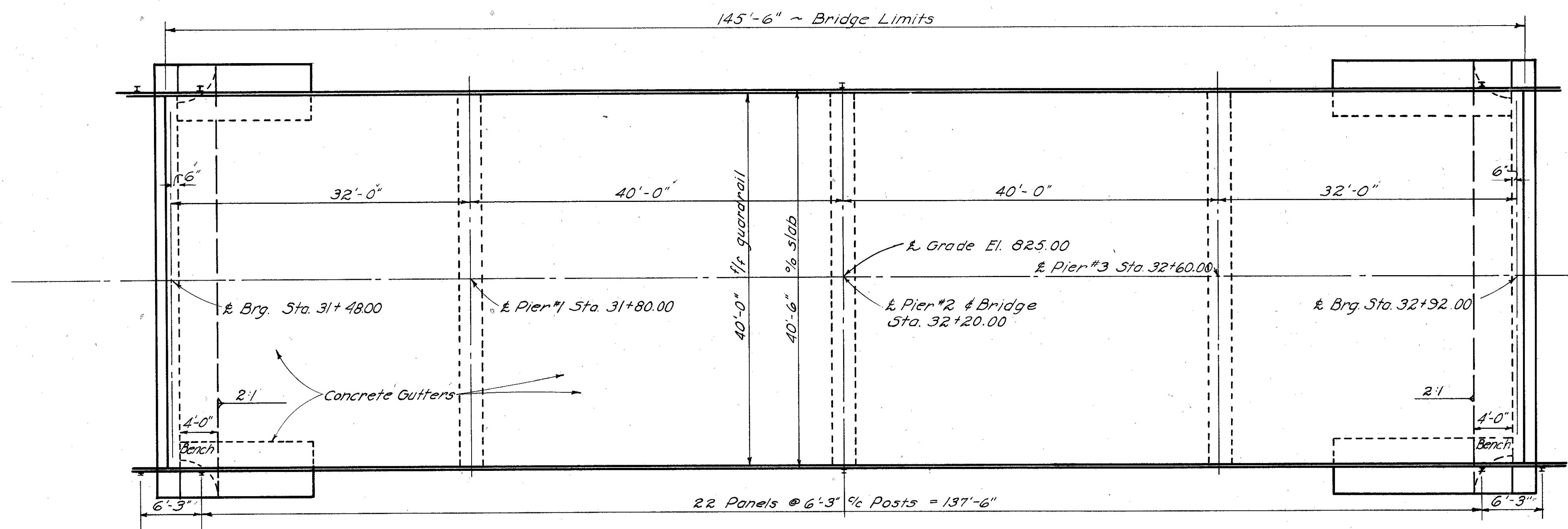
Piling requirements are based on a study of soundings and borings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.



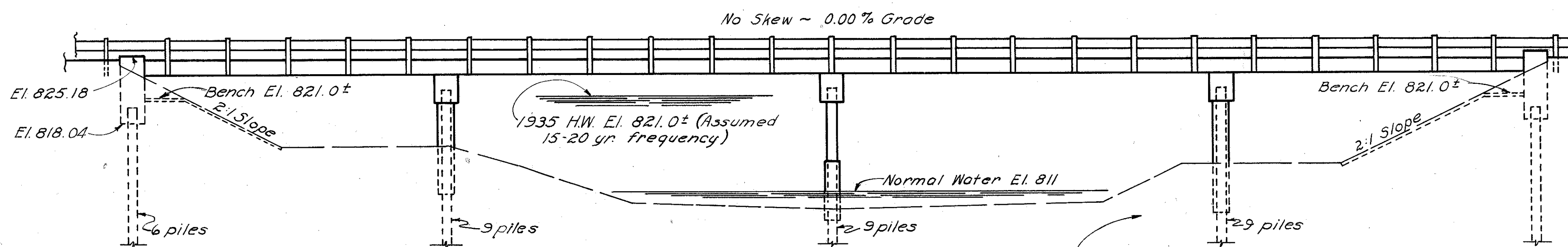
SITE PLAN
 BRIDGE NO. HO-39-172
 OVER KILLBUCK CR. OVERFLOW
 HOLMES CO. - S. R. 39
 SEC. HOL-39-(16.69-17.29)
 Scale: 1" = 20' - Sta. 32+20.0

| | |
|----------------|---------------|
| EXISTING TOPD. | PROPOSED WORK |
| SURVEY | DRAWN |
| DESIGN | DRAWN |
| CHECK | REVIEW |
| Div. Office | Div. Office |

8-24-51



GENERAL PLAN



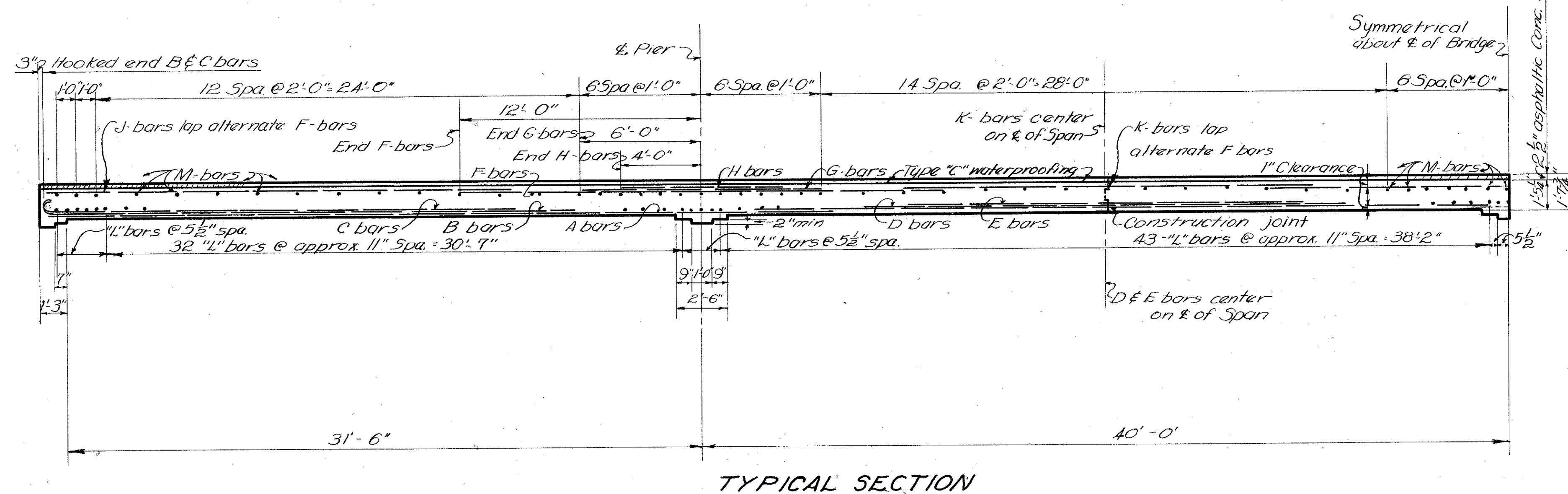
GENERAL ELEVATION

GENERAL NOTES

- REFERENCE shall be made to Standard Drawings CS-1-47 revised 1-20-48, A-1-49 dated 7-27-49 and P1-49 dated 7-27-49.
- CONSTRUCTION JOINTS. One transverse construction joint in bridge slab shall be placed at center of both interior spans.
- EXCAVATION quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.
- PILING shall be driven to a minimum bearing capacity of 27 tons at abutments and 35 tons at piers.
- CONCRETE GUTTERS shall be 6ft. wide and 6 in. thick, and shall be depressed 6 in. at the center. They shall extend from face of abutment down to El. 816.0 at West abutment and El. 814.0 at East abutment. They shall be centered under edge of the deck. Reinforcing bars $\frac{1}{2}$ " ϕ @ 1'-6" centers, both directions, included in price per lin. ft. of gutter.
- BITUMINOUS SURFACE COURSE - $2\frac{1}{2}$ " Asphaltic concrete surface course, Item T-35; laid in two $\frac{1}{4}$ " courses.
- REMOVAL OF EXISTING BRIDGE. When no longer needed to maintain traffic the existing structure shall be removed. Floor beams, stringers and trusses shall be piled along the right-of-way at the disposal of Holmes County. Trusses shall be left assembled. The remainder of the removed materials shall become the property of the Contractor. The existing west abutment shall be removed to ground line in front of abutment. The east abutment shall be removed to Elevation 812. Embankment back of east abutment shall be removed to El. 815 and dressed back as shown on Site Plan. Removal of earth back of abutment included with "Removal of Existing Structure" for payment. Suitable waste masonry may be disposed of as bank protection as directed by the Engineer. The 4 inch gas line carried on the existing structure will be removed and relocated by the owner of the line before the structure is removed.
- ENCASEMENT for piles in piers #1 and #3 shall extend from bottom of pier cap to 5 ft. below finished ground line; in pier #2 from 3 ft. above to 3 ft. below normal water.
- SURFACE FINISH OF CONCRETE. Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.
- SAWDUST DUMP. The sawdust dump shall be carefully investigated by the Engineer before starting embankment. In the event the sawdust pile extends back under or near the proposed fill, the unsuitable material shall be removed and disposed of prior to construction of the new fill. The number of cubic yards of such sawdust dump removed will be paid for at the contract unit price per cu. yd. bid for "Special - Removal of sawdust dump." A quantity of 150 cu. yds. has been estimated for this item in anticipation of a need for some such removal. Payment will be made for the actual quantity removed.

| | | | | | | |
|---|-------|--------|---------|----------|---------|---------|
| STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS | | | | | | |
| GENERAL PLAN & ELEVATION GENERAL NOTES | | | | | | |
| BRIDGE No HO-39-172 over KILLBUCK CREEK OVERFLOW | | | | | | |
| HOLMES Co Sta. 32+20.00 HOL-39-(16.69-17.29) | | | | | | |
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| REJ | REJ | W.H.T. | V.A.E. | W.H.K. | 8-24-51 | |

HOL-39-(16.69-17.29)



TYPICAL SECTION

| REINFORCING STEEL LIST | | | | | Bending Diagram | |
|-------------------------|------|-----|---------|--------|-----------------|--|
| Mark | Size | No. | Length | Weight | Sp. | |
| Superstructure | | | | | | |
| A | 1/8" | 132 | 39'-1" | 22,197 | S | |
| B | 1/8" | 32 | 27'-6" | 3,786 | B | |
| C | 1/8" | 32 | 24'-3" | 3,339 | B | |
| D | 1/8" | 32 | 24'-0" | 3,305 | S | |
| E | 1/8" | 32 | 19'-3" | 2,650 | S | |
| F | 1/8" | 123 | 24'-3" | 12,835 | S | |
| G | 1/8" | 63 | 12'-0" | 3,253 | S | |
| H | 1/8" | 57 | 7'-9" | 1,901 | S | |
| J | 3/4" | 42 | 23'-0" | 1,451 | S | |
| K | 3/4" | 42 | 20'-3" | 1,277 | S | |
| L | 3/4" | 169 | 40'-0" | 10,153 | S | |
| M | 3/4" | 93 | 40'-0" | 5,587 | S | |
| Abutments | | | | | | |
| A7a | 1" | 48 | 24'-9" | 3,172 | S | |
| A4a | 3/8" | 128 | 8'-5" | 1,124 | B | |
| A4b | 5/8" | 30 | 3'-0" | 94 | S | |
| A2a | 1/2" | 48 | 5'-3" | 168 | B | |
| A2b | 1/2" | 8 | 6'-8" | 36 | B | |
| A2c | 1/2" | 8 | 6'-0" | 32 | B | |
| A2d | 1/2" | 88 | 3'-6" | 205 | S | |
| A2e | 1/2" | 8 | 9'-0" | 48 | S | |
| P2a | 1/2" | 108 | 5'-3" | 379 | B | |
| P2b | 1/2" | 87 | 10'-4" | 601 | B | |
| Piers (3) | | | | | | |
| PCa | 1/4" | 12 | 21'-11" | 1,397 | S | |
| PTa | 1" | 48 | 21'-6" | 2,756 | S | |
| PEa | 1/2" | 108 | 5'-3" | 379 | B | |
| PCd | 1/2" | 87 | 10'-4" | 601 | B | |
| Replacement Bars | | | | | | |
| RE0 | 1/4" | 1 | 8'-2" | 43 | | |
| RE9 | 1/8" | 3 | 7'-9" | 100 | | |
| RE7 | 1" | 1 | 7'-4" | 25 | | |
| RE8 | 3/4" | 1 | 6'-6" | 10 | | |
| RE4 | 3/8" | 1 | 6'-1" | 6 | | |
| RE2 | 1/2" | 1 | 5'-8" | 4 | | |

| ESTIMATED QUANTITIES | | | | | | |
|----------------------|----------|----------|---|--------|-------|---------|
| Item | Total | Unit | Description | Abuts. | Piers | Supers. |
| E-2 | 50 | cu yds. | Unclassified excavation | 50 | | |
| S-1 | 354 | Cu Yds. | Class "C" concrete superstructure, including pier caps | | 36 | 318 |
| S-1 | 48 | Cu Yds. | Class "C" concrete abutments | 48 | | |
| S-3 | 660 | Sq. Yds. | Type "C" waterproofing | | | 660 |
| S-4 | 81,934 | Lb. | Reinforcing steel | 4879 | 5,133 | 71,734 |
| S-9 | 18 | Sq. Ft. | 1/4" precast expansion joint filler | | | 18 |
| S-14 | 291 | Lin. Ft. | Railing (Type 1-13, 13 guard rail with steel posts) | | | 291 |
| S-16 | Lump sum | | First test pile | | | Lump |
| S-18 | 2050 | Lin. Ft. | Reinforced concrete piling 12" cast-in-place or 14" precast | 590 | 1,460 | |
| S-24 | Lump sum | | Removal of existing structure | | | Lump |
| I-14 | 64 | Lin. Ft. | Concrete gutter | | | 64 |
| T-35 | 46 | Cu Yds. | Asphaltic concrete surface course, type "A" or "C" (85-100) | | | 46 |
| Special | 150 | Cu Yds. | Removal of sawdust dust dump | | | 150 |

Note: The bar size designations shown above do not correspond with the size designations given in the January 1, 1951 edition of the Construction and Material Specifications.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

TYPICAL SECTION, STEEL LIST, & ESTIMATED QUANTITIES
BRIDGE No. HO-39-172
over KILLBUCK CREEK OVERFLOW

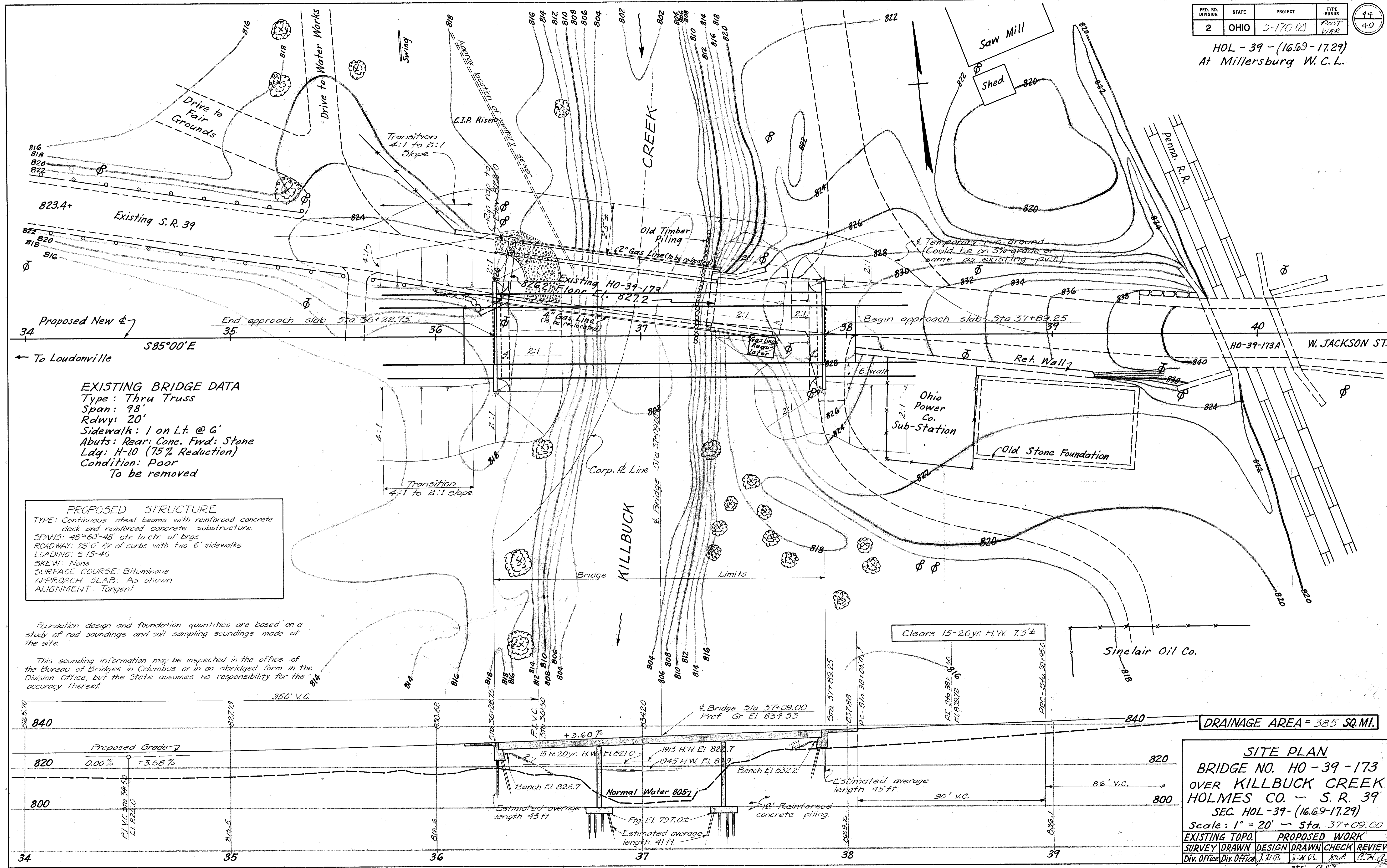
HOLMES COUNTY
HOL-39-(16.69-17.29) Sta. 32+20.0

| | | | | | | |
|----------|-------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| REJ | REJ | RA | U.A.E. | BFG | 8-24-51 | |

| | | | |
|-------------------|-------|-----------|------------|
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
| 2 | OHIO | 5-170 (2) | POST WAR |

44
49

HOL - 39 - (16.69 - 17.29)
At Millersburg W.C.L.



EXISTING BRIDGE DATA
 Type: Thru Truss
 Span: 98'
 Rdwy: 20'
 Sidewalk: 1 on Lt. @ 6'
 Abuts: Rear: Conc. Fwd: Stone
 Ldg: H-10 (75% Reduction)
 Condition: Poor
 To be removed

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinforced concrete deck and reinforced concrete substructure.
 SPANS: 48'-60'-48' ctr to ctr. of brgs.
 ROADWAY: 28'-0" 4' of curbs with two 6' sidewalks.
 LOADING: 5-15-46
 SKEW: None
 SURFACE COURSE: Bituminous
 APPROACH SLAB: As shown
 ALIGNMENT: Tangent

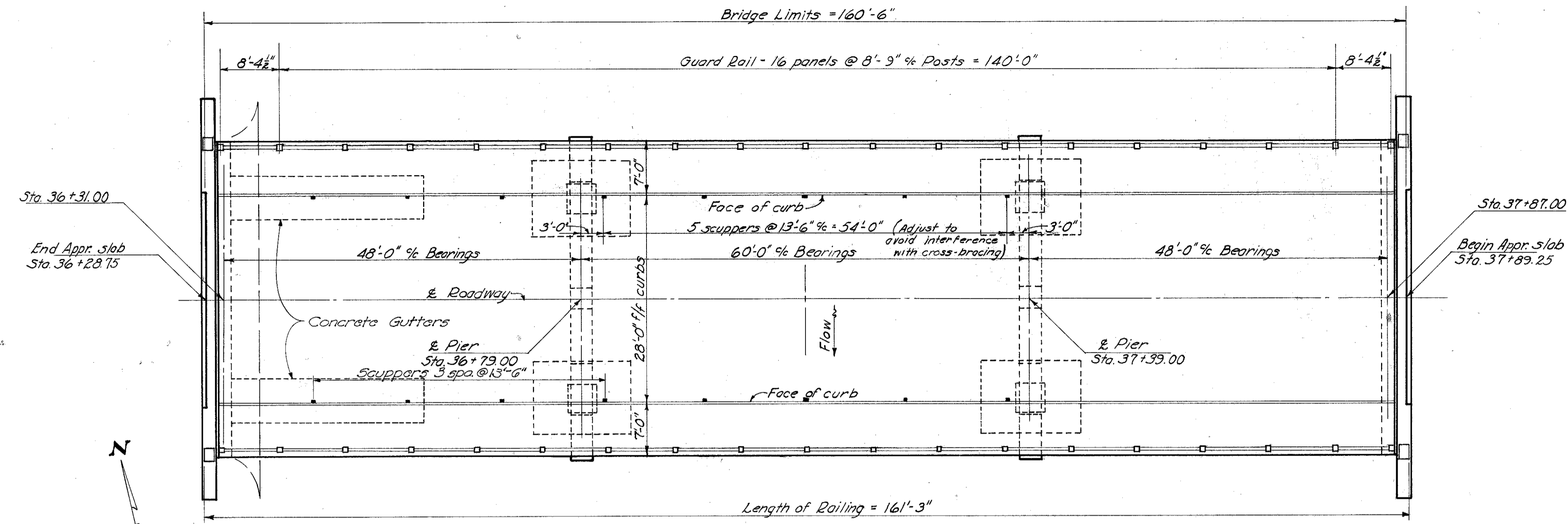
Foundation design and foundation quantities are based on a study of red soundings and soil sampling soundings made at the site.
 This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility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

DRAINAGE AREA = 385 SQ. MI.

SITE PLAN
 BRIDGE NO. HO - 39 - 173
 OVER KILLBUCK CREEK
 HOLMES CO. - S.R. 39
 SEC. HOL - 39 - (16.69-17.29)
 Scale: 1" = 20' - Sta. 37+09.00

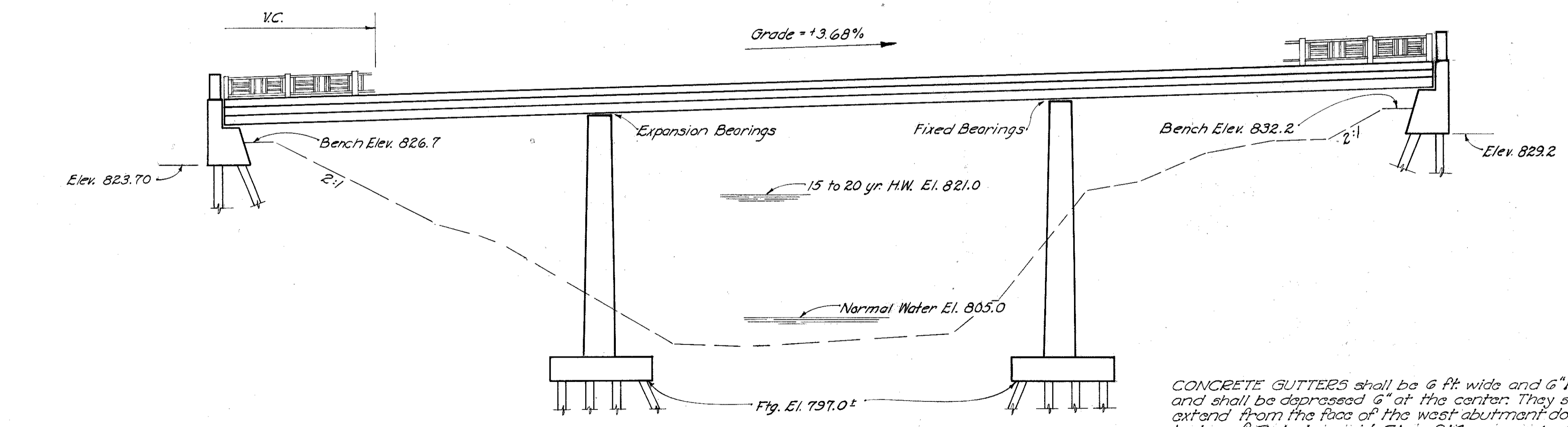
| | |
|----------------|---------------|
| EXISTING TOPD. | PROPOSED WORK |
| SURVEY DRAWN | DESIGN DRAWN |
| Div. Office | Div. Office |
| J. B. O'S. | J. W. O'S. |
| J. W. O'S. | J. W. O'S. |
| J. W. O'S. | J. W. O'S. |

BFG 983



PLAN

| ESTIMATED QUANTITIES | | | | | | | | | |
|----------------------|---------|----------|--|----------|---------|--------|---------|-------|------|
| Item | Total | Unit | Description | Superst. | Abutts. | Piers | General | Notes | Cost |
| E-2 | Lump | Sum | Cofferdams, cribs & sheeting | | | | | | |
| E-2 | 540 | cu. yd. | Unclassified excavation | | 92 | 448 | Lump | | |
| S-1 | 177 | cu. yd. | Class "C" concrete, superstructure | 177 | | | | | |
| S-1 | 95 | cu. yd. | Class "C" concrete, abutments | | 95 | | | | |
| S-1 | 119 | cu. yd. | Class "C" concrete, pier columns, caps & struts | | | 119 | | | |
| S-1 | 59 | cu. yd. | Class "C" concrete, pier footings | | | 59 | | | |
| S-3 | 484 | sq. yd. | Type "C" waterproofing | 484 | | | | | |
| S-4 | 72,626 | lb. | Reinforcing steel | 37,076 | 9504 | 25,934 | 112 | | |
| S-7 | 156,900 | lb. | Structural steel | 156,900 | | | | | |
| S-8 | 156,900 | lb. | Field painting of structural steel | 156,900 | | | | | |
| S-14 | 322.5 | lin. ft. | Railing (Steel with concrete endposts) | 322.5 | | | | | |
| S-15 | Lump | Sum | Temporary run-around bridge & approaches | | | | Lump | | |
| S-16 | Lump | Sum | First test pile | | | | Lump | | |
| S-18 | 3200 | lin. ft. | 12" Reinforced concrete piling, cast-in-place or precast | | 1230 | 1970 | | | |
| S-24 | Lump | Sum | Removal of existing structure | | | | Lump | | |
| S-29 | 316 | lin. ft. | Subdrainage for wearing surface course | 316 | | | | | |
| I-10 | 70 | sq. yd. | Type "A" riprap | | | | 70 | | |
| I-14 | 66 | lin. ft. | Concrete gutter | | | | 66 | | |
| T-35 | 33 | cu. yd. | Asphaltic concrete surface course, Type AorC, (85-100) | 33 | | | | | |



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CSB-1-47, sheets 1&2, revised 8-25-49.

REMOVAL OF EXISTING UTILITIES. Contractor shall make arrangements with utilities concerned, for removal of their equipment from the existing structure before the structure is removed.

REMOVAL OF EXISTING BRIDGE. Existing superstructure shall be dismantled, match-marked and piled along the right-of-way at the disposal of Holmes county. Remainder of removed materials shall become the property of the Contractor.

Existing west abutment to be removed to 1ft. below finished ground line and where necessary for new construction. East abutment to be removed to 1ft. below existing ground line at face of abutment, and where necessary for new construction, and slopes dressed 2:1; dressing slopes included with removal of existing structure for payment. Suitable waste masonry may be used as riprap where shown on plans.

Old timber piling to be removed where necessary for new construction.

TEMPORARY RUN-AROUND BRIDGE AND APPROACHES shall be paid for as lump sum under Item S-15, except furnishing and placing approach surface course. Surface course aggregate shall be paid for per cu. yd. and be governed by Item T-10, except that rolling will be required. Calcium chloride (M-10) applied to surface course, shall be paid for per ton. Amount of surface material applied and paid for, to be directed by the Engineer. Embankment to be substantially in accordance with E-1.05 with side slopes not steeper than 1 1/2:1. Items T-10 and M-10 are included in roadway quantities for payment. WELDING shall be Class "A" except as shown.

EXCAVATION QUANTITY includes the removal of fill material between top of earth bench and bottom of abutment cross beam.

PILING shall be driven to a minimum bearing capacity of 25 tons at the abutments and 35 tons at the piers. (See note below.)

SURFACE FINISH OF CONCRETE. Railing end posts, curb faces and fascias of deck shall receive a rubbed surface finish. Bottom of deck slab and sidewalk surface shall be governed by the provisions of Item S-1. All other exposed surfaces shall be grout cleaned as per Section S-1.22. Form liner shall be reused for all surfaces to be grout cleaned.

COPPER-BEARING STEEL requirement for certain items detailed on the Standard Drawing CSB-1-47, is waived.

Note: PIER PILING shall not be driven until after all piles in adjacent abutment have been driven.

CONCRETE GUTTERS shall be 6 ft wide and 6" thick and shall be depressed 6" at the center. They shall extend from the face of the west abutment down to toe of 2:1 slope, at Elev. 814, approximately, and shall be centered under the scuppers. Reinforcing bars #6 @ 1'-6" centers, both directions included in price, per lin. ft.

*See note on sheet no. 3

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

**GENERAL PLAN AND ELEVATION
NOTES AND ESTIMATED QUANTITIES
BRIDGE N° HO-39-173
OVER KILLBUCK CREEK**

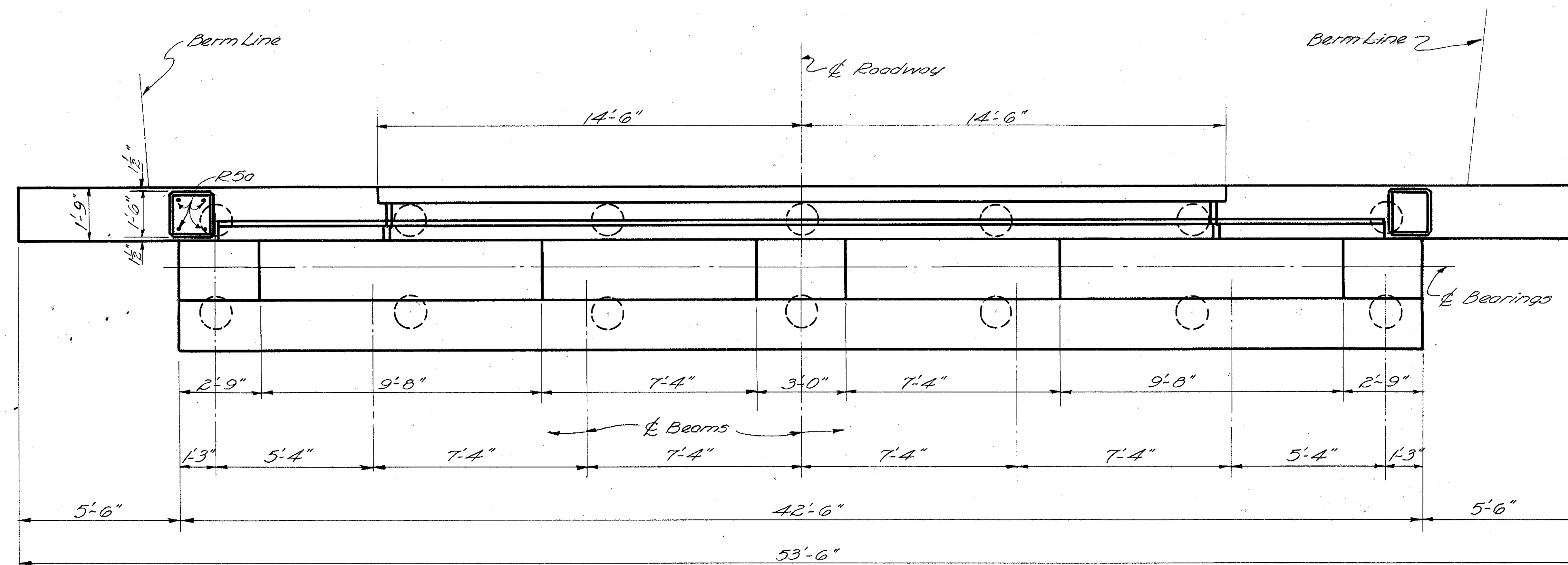
HOLMES COUNTY
SEC. HOL-39-(16.69-17.29) STA. 37+09.0

| | | | | | | |
|----------|--------|--------|---------|----------|---------|----|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | BY |
| D.J.M. | D.J.M. | W.H.T. | R.J.C. | a.g. | 9/27/51 | |

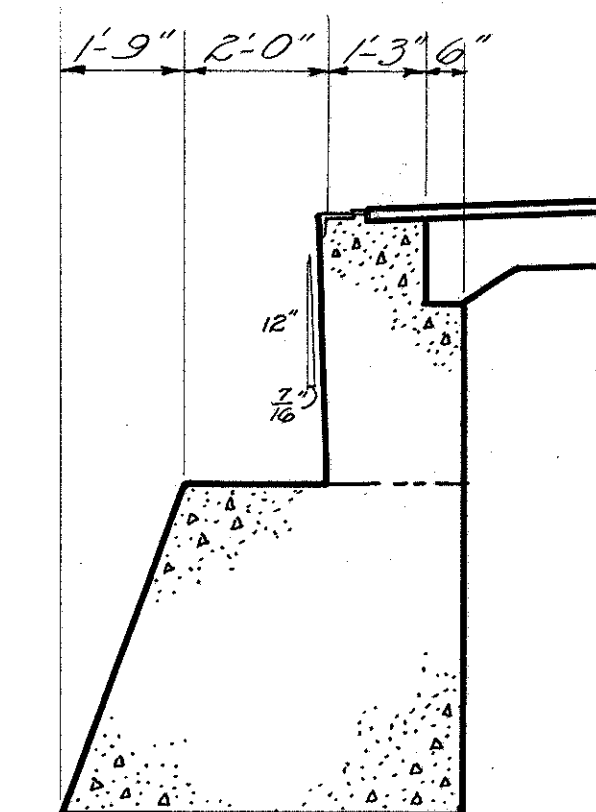
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|-------------------|-------|----------|------------|
| FED. RD. DIVISION | STATE | PROJECT | TYPE FUNDS |
| 2 | OHIO | 5-170(2) | Post War |

46
49

HOL-39-(16.69-17.29)

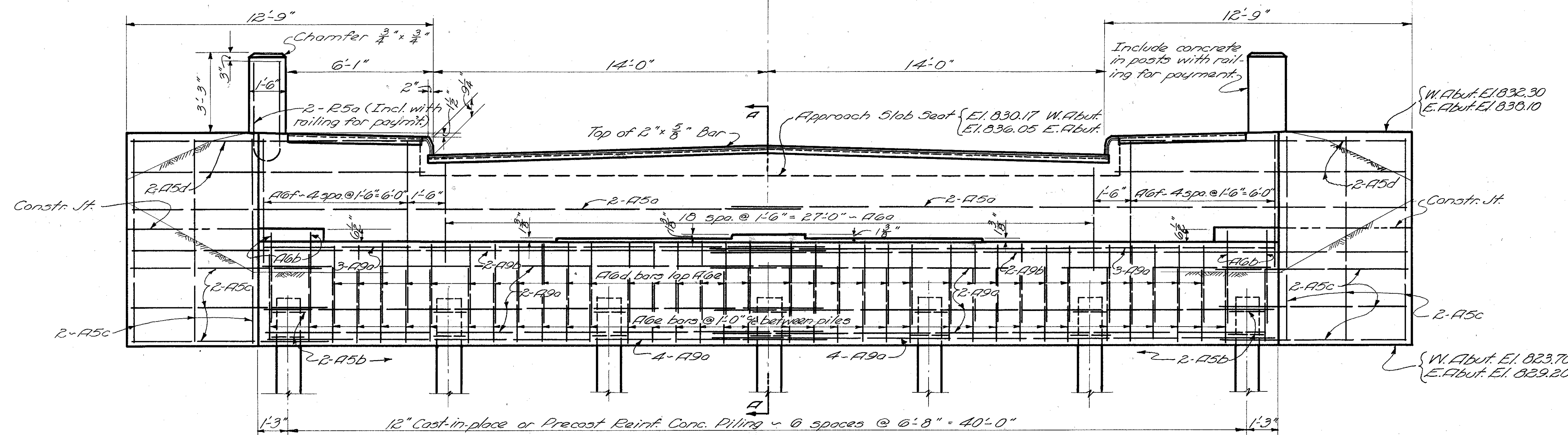


PLAN

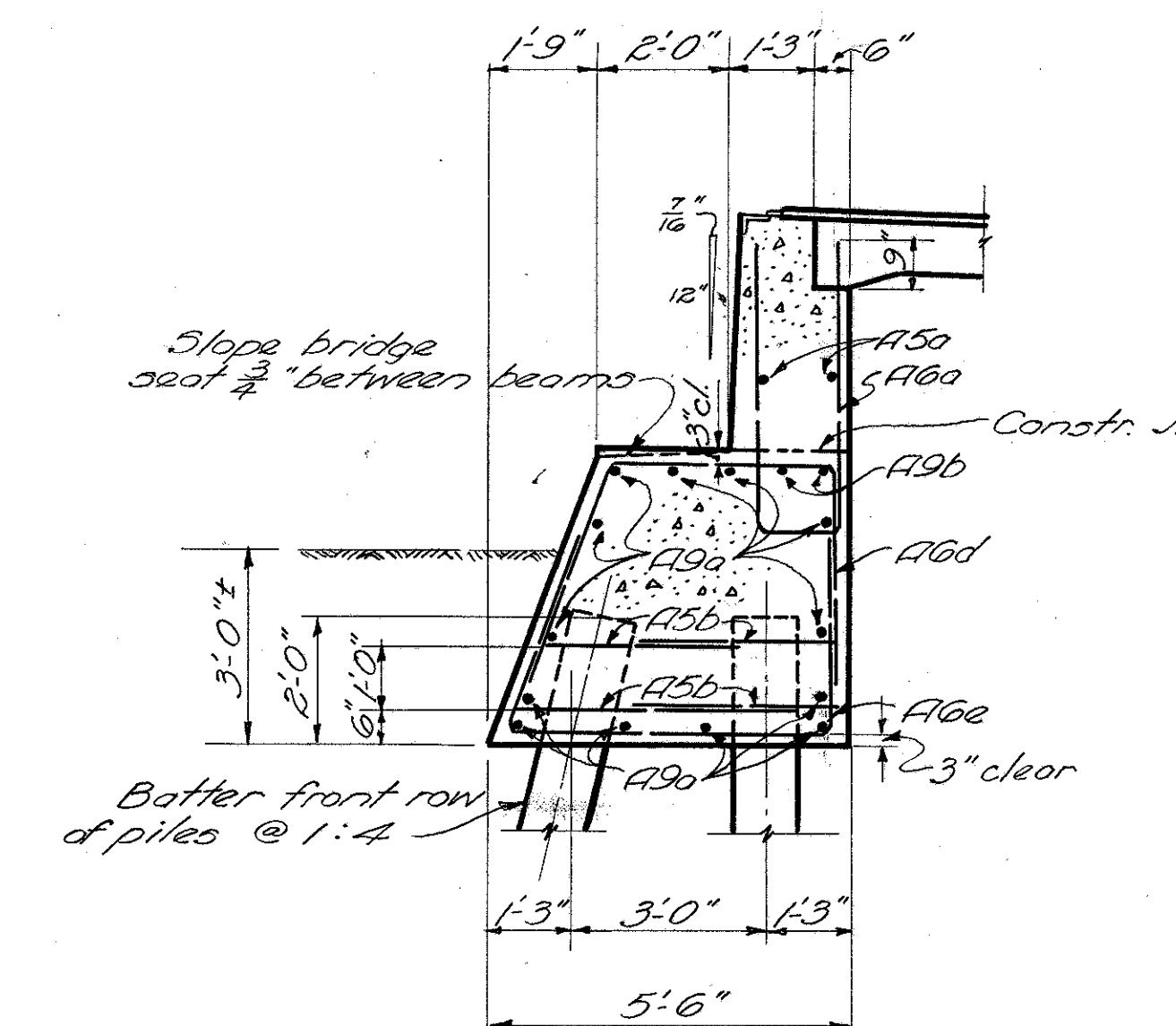


**SECTION A-A
EAST ABUTMENT**

Details not shown same as Sec. A-A, W. Abut.



ELEVATION



**SECTION A-A
WEST ABUTMENT**

Note: All earth fill around abutments shall be made full height of earth bench. Excavation shall then be made for abutment cap, after which piling shall be driven. If bottom forms for abutment cap are used, they shall be left in place.
Concrete above bridge seat construction joint shall not be placed until after steel work is erected. Steel end finish shall be used as a template for top of backwall.
All reinforcing steel 2" clear unless otherwise indicated.

| | | | | | | | |
|---------------|--------|--------|--------|--------|--------|--------|--------|
| West Abutment | 828.30 | 827.76 | 827.88 | 827.99 | 827.08 | 827.76 | 828.30 |
| East Abutment | 834.02 | 833.48 | 833.60 | 833.71 | 833.60 | 833.48 | 834.02 |

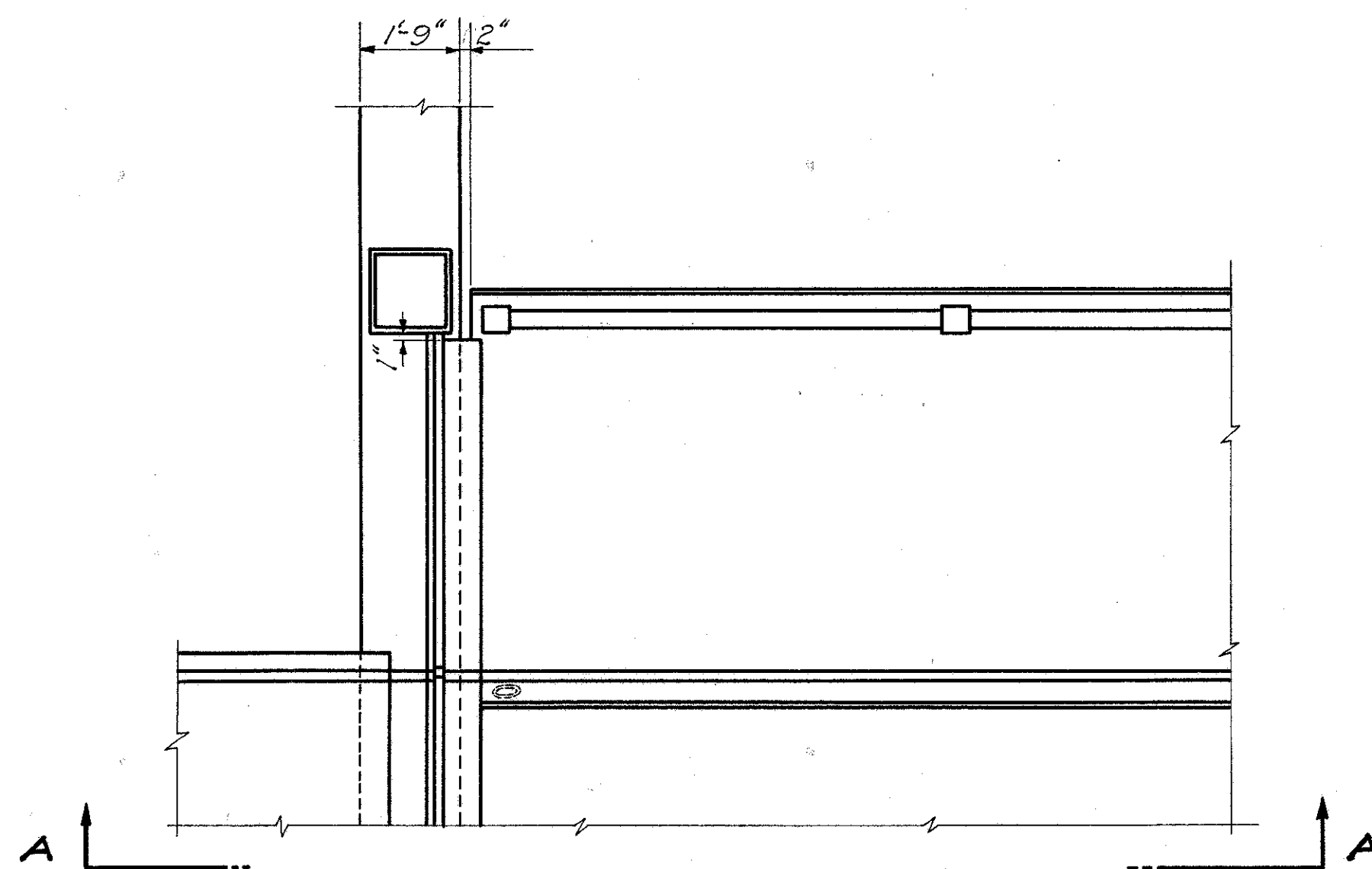
ABUTMENT ELEVATIONS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

ABUTMENT DETAILS
BRIDGE NO. **HO-39-173**
OVER KILLBUCK CREEK

HOLMES COUNTY
SEC. HOL-39-(16.69-17.29) 572.37+09.00

| | | | | | | |
|----------|--------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| D.J.M. | D.J.M. | S.P. | R.J.C. | B.P.G. | 9/27/57 | |



PLAN AT ABUTMENT

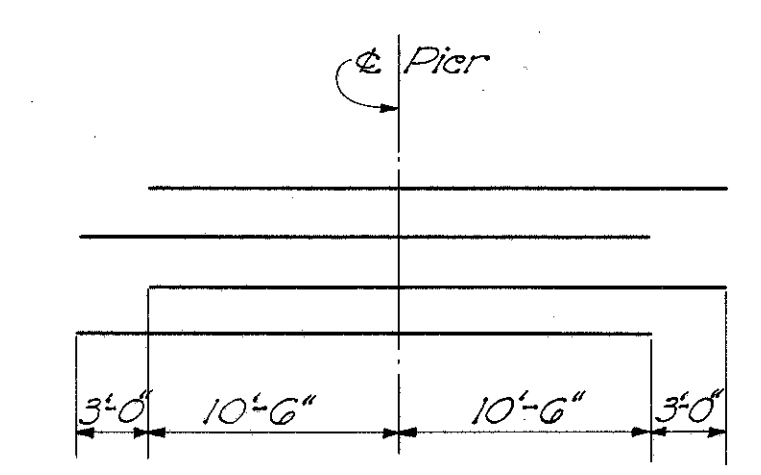
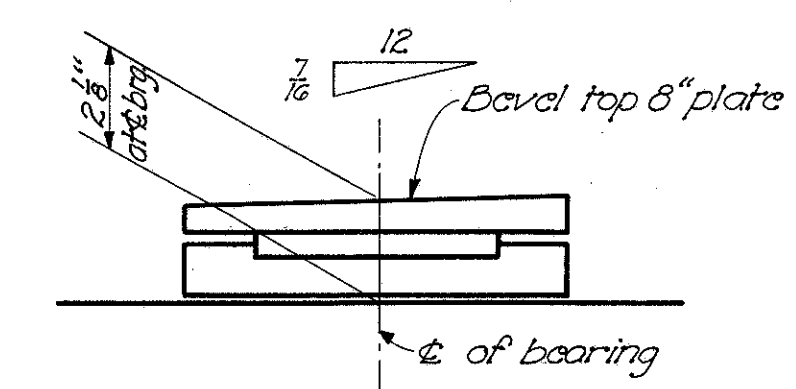
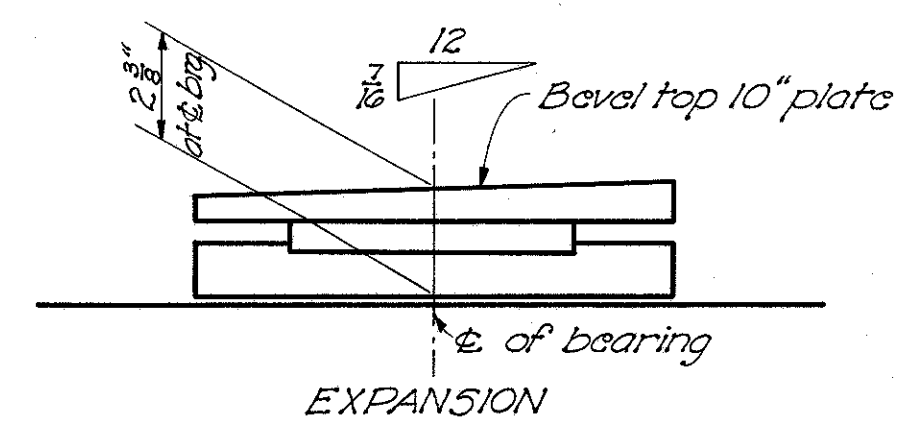


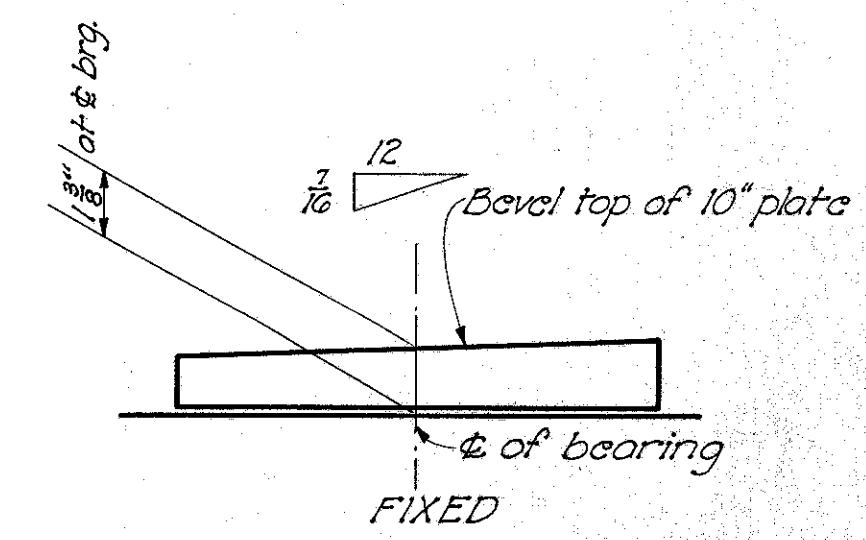
DIAGRAM SHOWING STAGGER OF S5b BARS OVER PIERS



ABUTMENT BEARING PLATES
Detail showing bevel of top plate. For additional details see Dwg. CSB-1-47, sh. 2. Bumper angles are not required.

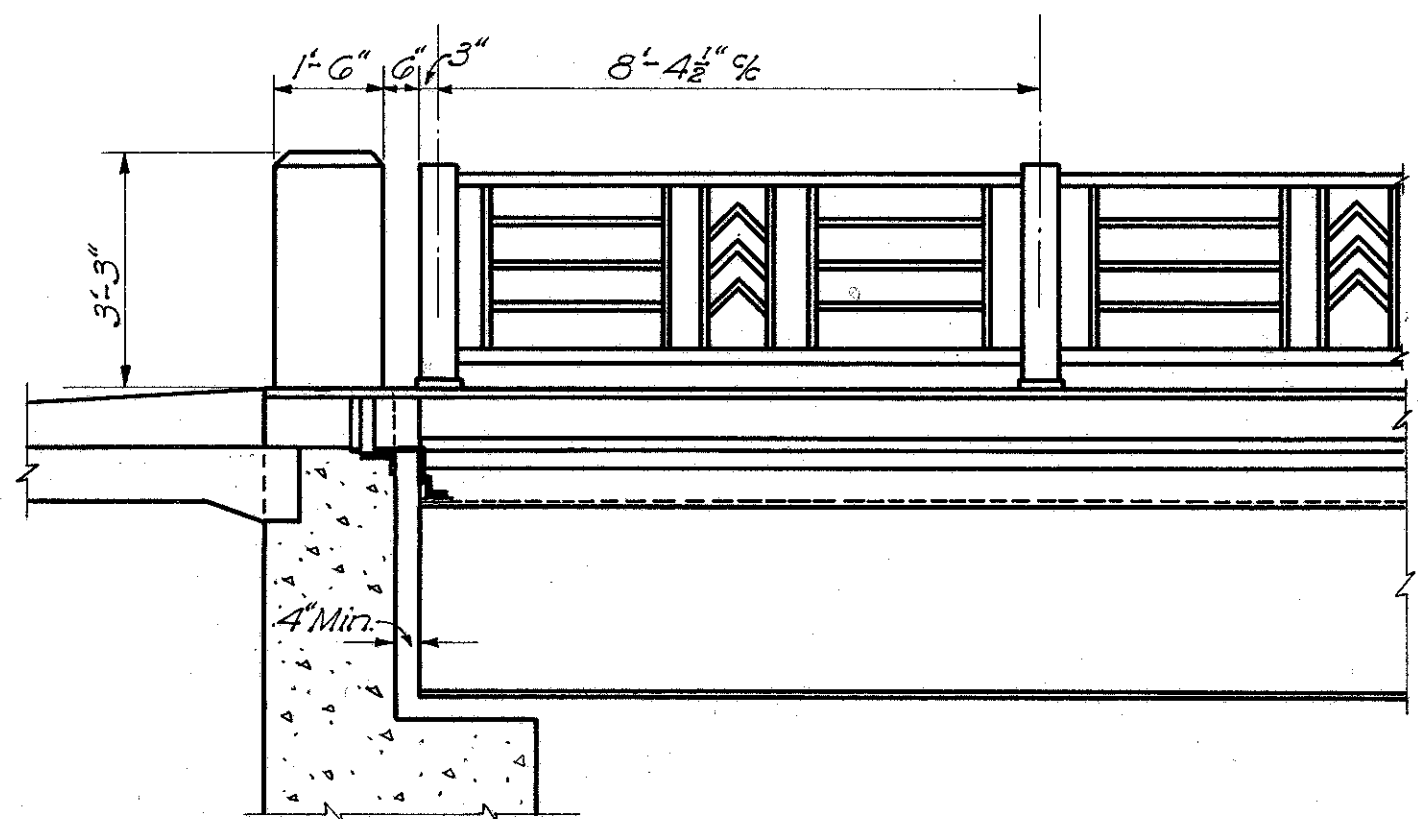


PIER BEARING PLATES
Details showing bevel of plates. For additional details see Dwg. CSB-1-47, sh. 2.



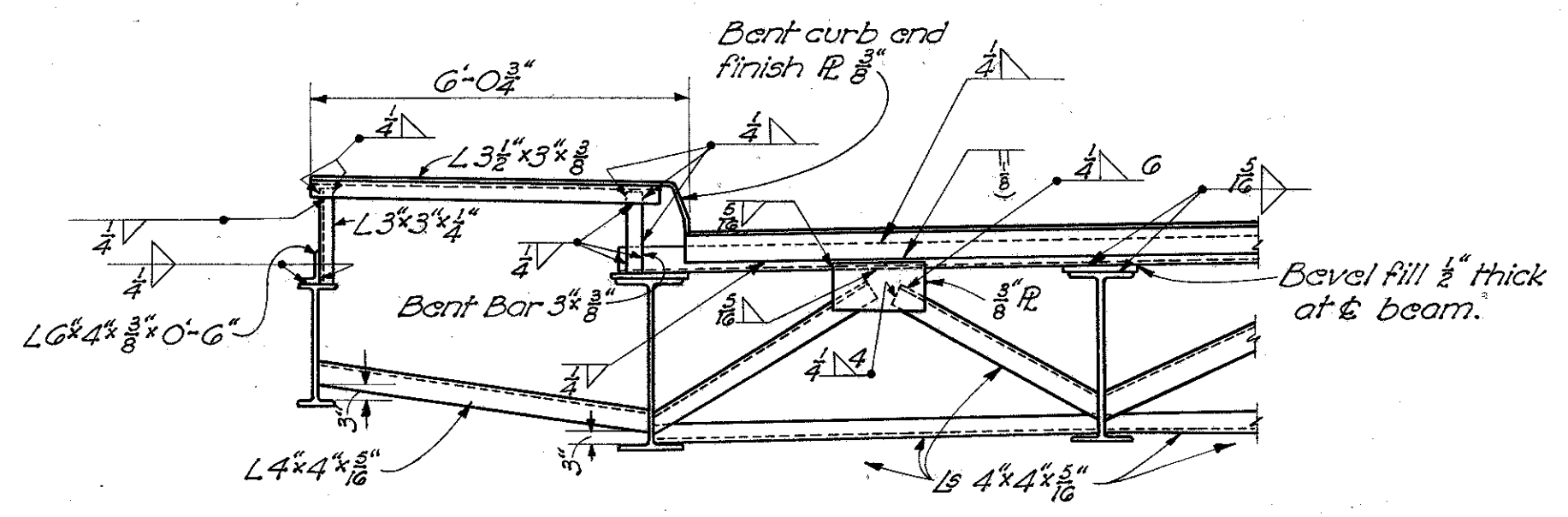
PIER BEARING PLATES
Details showing bevel of plates. For additional details see Dwg. CSB-1-47, sh. 2.

NOTE: Cast leaded bronze bearing plates and sheet lead are included with Structural Steel for payment.



SECTION A-A

For details of curb plate, roadway and finish, gutters and scuppers see sheet 2, CSB-1-47.

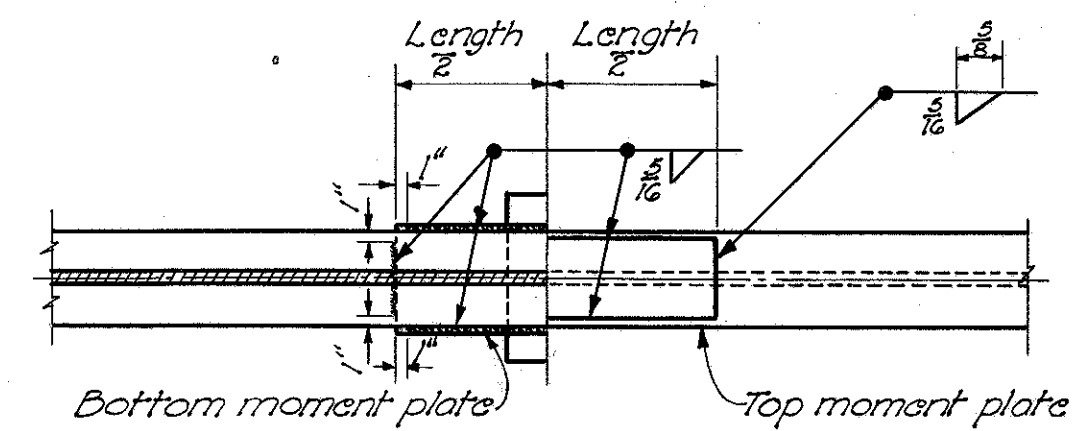


END CROSS FRAME

| BEAM SPLICE DETAILS | | | |
|---------------------|------------------------|------------------------|--------|
| BEAM | TOP PLATE | BOTTOM PLATE | "R" |
| 24" WF 76" | 7" x 3/8" x 13'-6" | 10 1/2" x 11'-4" | 1 1/2" |
| 33" WF 130" | 10 1/2" x 7/8" x 3'-6" | 12 1/2" x 3/8" x 3'-7" | 3/4" |

WELDING PROCEDURE

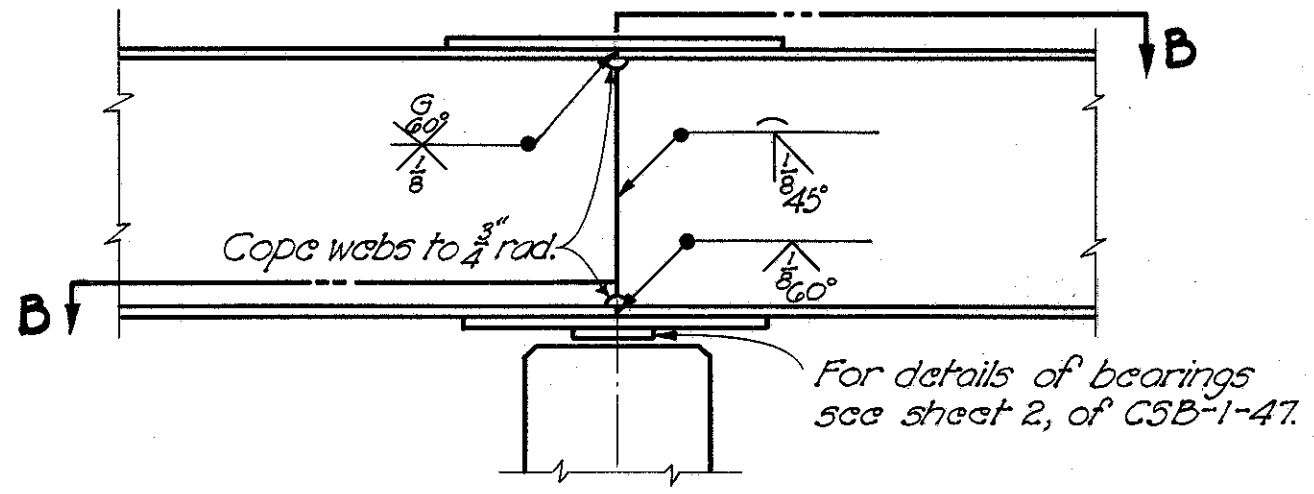
- At first pier, weld bottom flange splice plate to beam on middle span side of joint only.
- Raise end of beam at first abutment "R" inches.
- Weld beam flanges and web at first pier.
- Weld top flange splice plate at first pier (both sides of joint) and complete welding of bottom flange splice plate at first pier.
- Repeat steps 1 to 4 inclusive at second pier and second abutment.
- Lower ends of beams at both abutments.



SECTION B-B

| | 24 WF 76 | | 33 WF 130 | |
|-------------------------------|----------|-------------|-----------|-------------|
| | END SPAN | CENTER SPAN | END SPAN | CENTER SPAN |
| Deflec. due to wt. of steel | 0.06" | 0.07" | 0.03" | 0.04" |
| Deflec. due to remaining D.L. | 0.54" | 0.63" | 0.20" | 0.24" |
| Required Shop Camber | 3/8" | 3/8" | None | |

NOTE: Erect beams with convex side up.



SPLICE ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

SUPERSTRUCTURE DETAILS

BRIDGE NO. HO-39-173
OVER KILLBUCK CREEK

HOLMES CO.
Sec. HOL-39-(16.69-17.29) STA. 37+09.00

| | | | | | | |
|----------|-------|--------|---------|----------|---------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
| DJM | DJM | GPH | luc | BFG | 9/17/51 | |