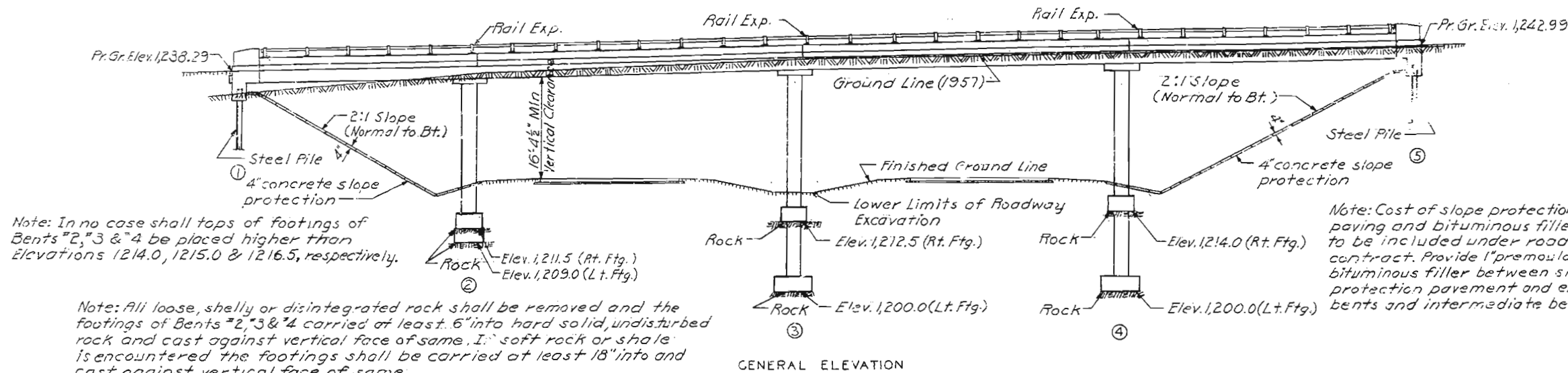


MISSOURI STATE HIGHWAY DEPARTMENT

(46'-64'-64'-58') Cont. Slab Spans (Voided)

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| 5 | MO. | | 19 | 140 | |

+ 2.0 % Grade



Note: All piling shall be 10" bearing pile at 42" and shall conform with the details and notes on sheet No. 3 of design plans. Estimated quantity shown on plans are based on the following lengths 6 @ 35'-0" Bt. No. 1 and 6 @ 43'-0" Bt. No. 5. These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration will be authorized by the Engineer.

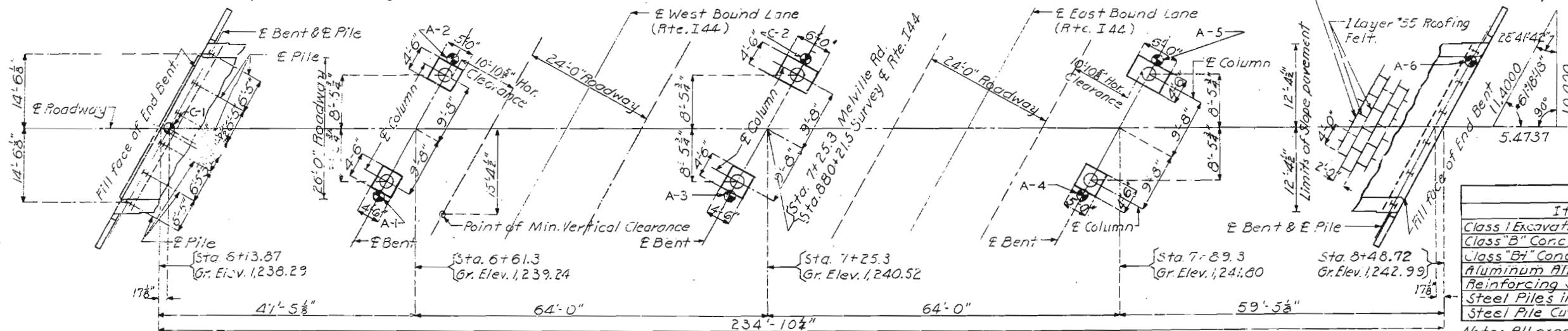
All piles shall be driven four into solid rock, boulders, shale, or cemented gravel or to not less than full length authorized and to sustain a load of at least 37 tons per pile.

All piles shall be driven with a steam hammer.

Note: Cost of slope protection paving and bituminous filler to be included under road contract. Provide 1" premoulded bituminous filler between slope protection pavement and end bents and intermediate bents.

Note: In no case shall tops of footings of Bents 2, 3 & 4 be placed higher than Elevations 1214.0, 1215.0 & 1216.5, respectively.

Note: All loose, shelly or disintegrated rock shall be removed and the footings of Bents 2, 3 & 4 carried at least 6" into hard solid, undisturbed rock and cast against vertical face of same. If soft rock or shale is encountered the footings shall be carried at least 18" into and cast against vertical face of same. Bearing of 11.6 tons/sq. ft. used in design.



Note: Roadway excavation shall be completed adjacent to this site before substructure is started. See Special Provisions.

| ESTIMATED QUANTITIES | | | |
|---|---------|-----------|---------|
| Item | Substr. | Superstr. | Total |
| Class I Excavation for Structure Cu.Yd. | 245 | | 245 |
| Class "B" Concrete Cu.Yd. | 130 | | 130 |
| Class "B1" Concrete Cu.Yd. | | 571.2 | 571.2 |
| Aluminum Alloy Handrail Lin.Ft. | 452 | | 452 |
| Reinforcing Steel Lbs. | 2,080 | 20,640 | 130,720 |
| Steel Piles in Place Lin.Ft. | 432 | | 432 |
| Steel Pile Cutoffs Lin.Ft. | 36 | | 36 |

Note: All excavation for bridge will be paid for as Class I Excavation for Structure.

All concrete and reinforcement above footings is included in Superstructure Quantities.

All concrete and reinforcement in footings is included in Substructure Quantities.

Estimated quantities of Class I Excavation for Structure includes only amount of excavation below lower limits of roadway excavation.

B.M. Elev. 1226.71 N. & W. in root 65" Bl. Oak 246' Rt. Sta. 876+77 (U.S.G.S. Datum)

BRIDGE-MELVILLE ROAD UNDERPASS

STATE ROAD FROM ROUTE 160 EAST TO ROUTE 65

ABOUT 1.5 MILES N. OF SPRINGFIELD

PROJECT NO. I-44-2(20) (RTE. I-44) STA. 880+21.5

GREENE COUNTY

SUBMITTED BY R. A. Currie DATE 2-3-60
 APPROVED BY R. M. Whitten DATE 2-2-60

STD 61107

A-441

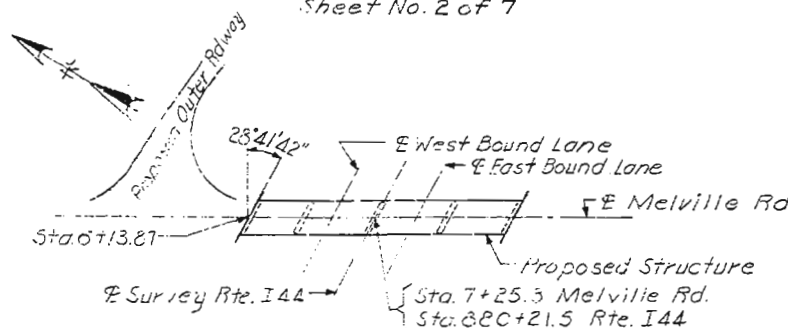
GENERAL NOTES:

- Design Specifications AASHO, 1957.
- Loading H20-44 (15% Future Wearing Surface).
- Reinforcing Steel Stress 20,000 ψ /in.
- Concrete Class "B" Stress 1,200 ψ /in.
- Concrete Class "B1" Stress 1,600 ψ /in.
- Concrete for substructure shall be Class "B" (air-entrained).
- Concrete for superstructure shall be Class "B1" (air-entrained).
- Where joint filler is specified on plans it shall conform with the requirements for Gray Rubber Compound Joints as given in Section 59-22B of the Standard Specifications.
- See Special Provisions for Aluminum Alloy Handrail.
- Superstructure deck to be waterproofed. (See Special Provisions)
- See Section 22-9C of Standard Specifications for required painting of steel piles.

Note: For log of soundings See Sheet No. 2 of 7

PLAN

Note: Dimensions shown are horizontal.



LOCATION SKETCH

Drawn June 1960 by D.J.S.
 Checked July 1960 by J.A.M.

Note: This drawing is not to scale. Follow dimensions.

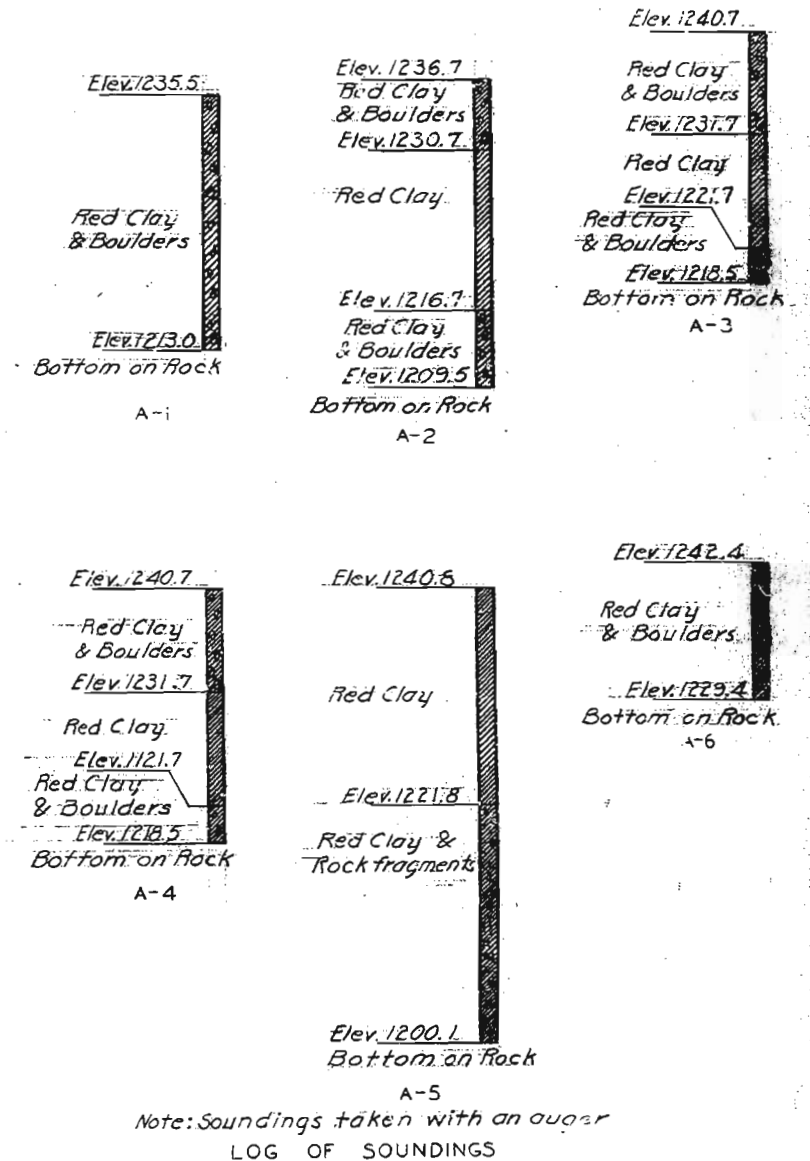
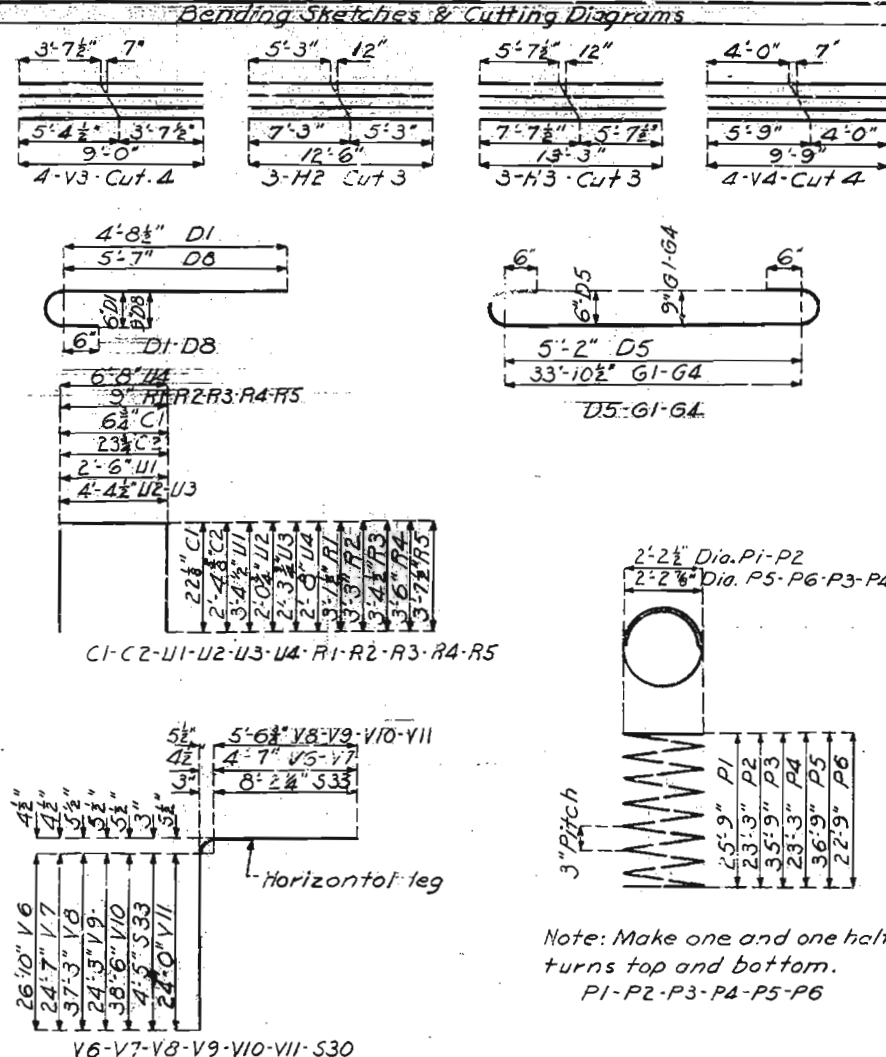
Sheet No. 1 of 7.

SEE FINAL PLANS BROWN-LINES

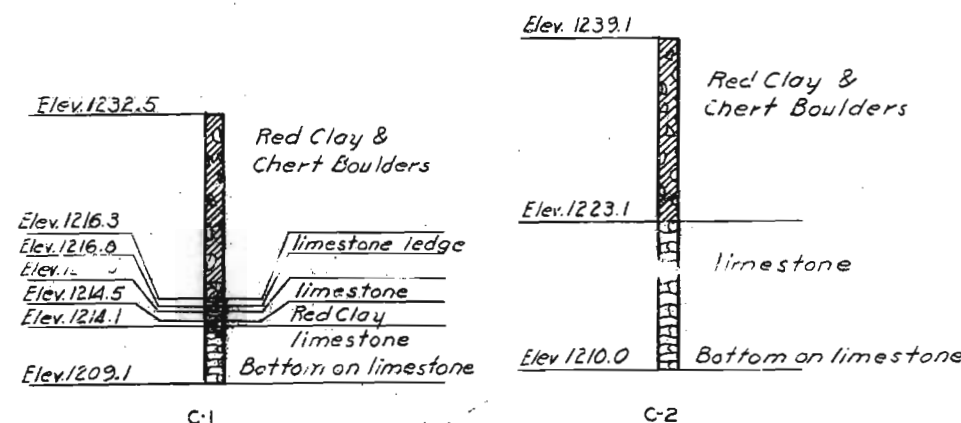
MISSOURI STATE HIGHWAY DEPARTMENT

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| 5 | MO. | | 19 | 141 | |

| COMPLETE BILL OF REINFORCING STEEL | | | | | |
|------------------------------------|------|----------|------|----------|--|
| No. | Size | Length | Mark | Location | |
| 452 | 5 | 4'-3" | C1 | Parapet | |
| 470 | 5 | 6'-9" | C2 | Curb | |
| 8 | 5 | 17'-9" | C3 | Parapet | |
| 24 | 5 | 23'-9" | C4 | " | |
| 12 | 5 | 24'-9" | C5 | Curb | |
| 24 | 5 | 32'-9" | C6 | " | |
| 12 | 5 | 31'-0" | C7 | " | |
| 24 | 5 | 10'-0" | C8 | Parapet | |
| 4 | 4 | 7'-0" | R1 | End Post | |
| 4 | 4 | 7'-3" | R2 | " | |
| 4 | 4 | 7'-6" | R3 | " | |
| 4 | 4 | 7'-9" | R4 | " | |
| 4 | 4 | 8'-0" | R5 | " | |
| 32 | 4 | 3'-9" | R6 | " | |
| 548 | 5 | 34'-9" | S1 | Slab | |
| 21 | 7 | 35'-9" | S2 | " | |
| 20 | 9 | 35'-9" | S3 | " | |
| 20 | 9 | 26'-6" | S4 | " | |
| 21 | 7 | 33'-0" | S5 | " | |
| 42 | 7 | 32'-0" | S6 | " | |
| 20 | 11 | 34'-3" | S7 | " | |
| 20 | 9 | 43'-6" | S8 | " | |
| 21 | 7 | 37'-0" | S9 | " | |
| 20 | 9 | 40'-0" | S11 | " | |
| 20 | 9 | 30'-9" | S12 | " | |
| 21 | 7 | 35'-3" | S13 | " | |
| 21 | 9 | 44'-9" | S14 | " | |
| 20 | 11 | 32'-3" | S15 | " | |
| 20 | 11 | 47'-3" | S16 | " | |
| 21 | 6 | 29'-6" | S17 | " | |
| 21 | 11 | 34'-3" | S18 | " | |
| 20 | 11 | 16'-6" | S19 | " | |
| 20 | 11 | 24'-9" | S20 | " | |
| 21 | 6 | 33'-6" | S21 | " | |
| 21 | 11 | 37'-6" | S22 | " | |
| 20 | 11 | 28'-3" | S23 | " | |
| 20 | 11 | 19'-3" | S24 | " | |
| 21 | 6 | 27'-6" | S25 | " | |
| 21 | 11 | 39'-6" | S26 | " | |
| 20 | 11 | 20'-9" | S27 | " | |
| 20 | 11 | 29'-3" | S28 | " | |
| 21 | 9 | 42'-9" | S29 | " | |
| 3 | 6 | 34'-3" | S30 | " | |
| 3 | 9 | 37'-6" | S31 | " | |
| 3 | 6 | 39'-6" | S32 | " | |
| Substructure | | | | | |
| Int. Bent No. 1 & 5 | | | | | |
| 24 | 6 | 8'-3" | H1 | Wing | |
| 3 | 6 | 12'-6" | H2 | " | |
| 3 | 6 | 13'-3" | H3 | " | |
| 24 | 6 | 35'-0" | H4 | Beam | |
| 82 | 6 | 13'-0" | S33 | Beam | |
| 4 | 6 | 11'-6" | T1 | Wing | |
| 4 | 6 | 11'-9" | T2 | " | |
| 136 | 5 | 9'-3" | U1 | Beam | |
| 2 | 4 | 5'-9" | V1 | Wing | |
| 2 | 4 | 6'-0" | V2 | " | |
| 2 | 4 | 9'-0" | V3 | " | |
| 4 | 4 | 9'-9" | V4 | " | |
| Int. Bent No. 2 | | | | | |
| 1 | 4 | 735'-9" | P1 | Column | |
| 1 | 4 | 666'-6" | P2 | " | |
| Int. Bent No. 3 | | | | | |
| 16 | 11 | 7'-3" | D8 | Footing | |
| 6 | 6 | 4'-3" | D2 | " | |
| 9 | 6 | 7'-9" | D5 | " | |
| Int. Bent No. 4 | | | | | |
| 6 | 6 | 4'-3" | D2 | Footing | |
| 9 | 6 | 7'-9" | D5 | " | |
| 24 | 11 | 7'-3" | D8 | " | |
| 11 | 10 | 37'-3" | G1 | Beam | |
| 8 | 11 | 34'-3" | G2 | " | |
| 8 | 8 | 32'-0" | V6 | Column | |
| 8 | 8 | 29'-9" | V7 | " | |
| Int. Bent No. 3 | | | | | |
| 11 | 10 | 37'-3" | G1 | Beam | |
| 8 | 11 | 34'-3" | G2 | " | |
| 1 | 4 | 1028'-0" | P3 | Column | |
| 1 | 4 | 676'-0" | P4 | " | |
| 140 | 5 | 9'-0" | U3 | Beam | |
| 8 | 11 | 43'-6" | V8 | Column | |
| 8 | 11 | 30'-6" | V9 | " | |



Note: For location of soundings see Sheet No. 1 of 7.



Note: Soundings taken with a core drill

LOG OF SOUNDINGS

BRIDGE-MELVILLE ROAD UNDERPASS

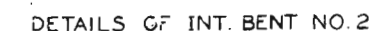
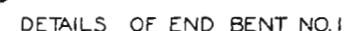
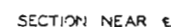
STATE ROAD FROM ROUTE 160 EAST TO ROUTE 65

ABOUT 1.5 MILES N. OF SPRINGFIELD

PROJECT NO. I-44-2(20)(RTE I-44) STA. 830+21.5

GREENE COUNTY

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| 5 | MO. | | 19 | 47 | |



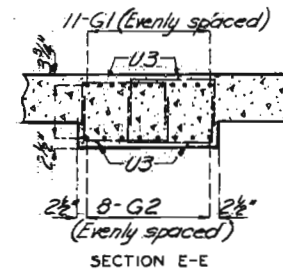
GREENE COUNTY

Note: This drawing is not to scale. Follow dimensions.

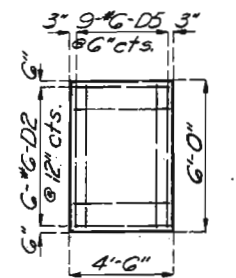
Sheet No. 3 of 7.

A-441

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| 5 | MO. | | 19 | 143 | |

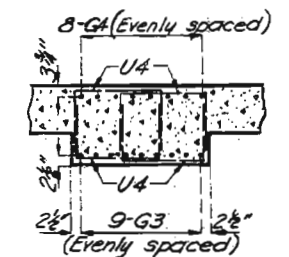


SECTION D-D

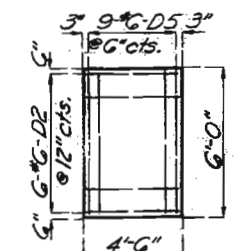


PLAN OF LEFT FOOTING

DETAILS OF INT. BENT NO. 3



SECTION G-G

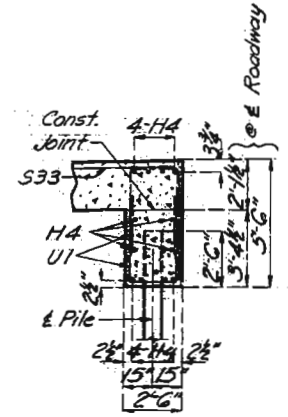


PLAN OF LEFT FOOTING

DETAILS OF INT. BENT NO. 4

GREENE COUNTY

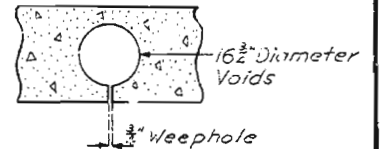
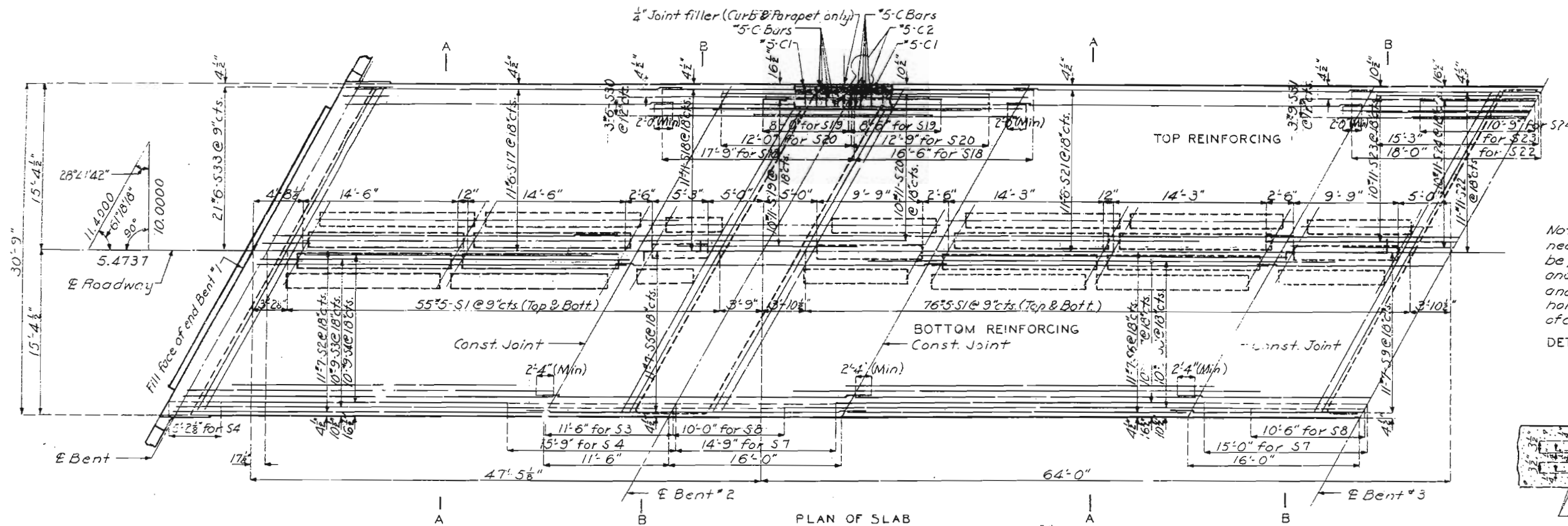
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| 5 | MO. | | 19 | 144 | |



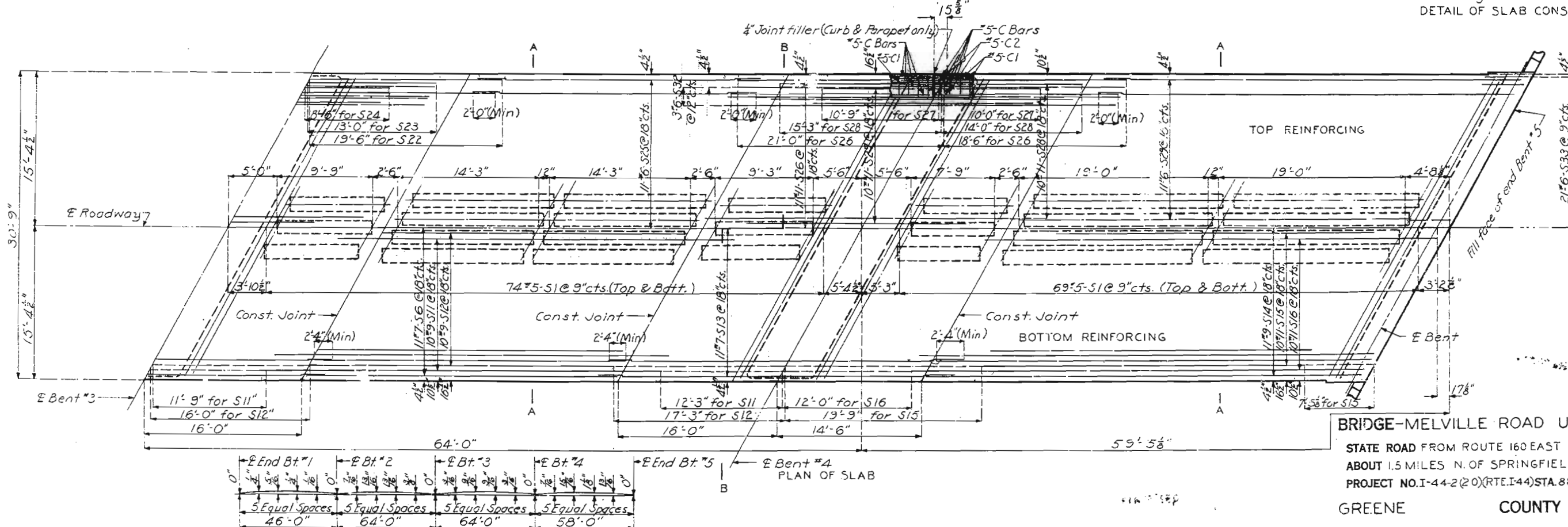
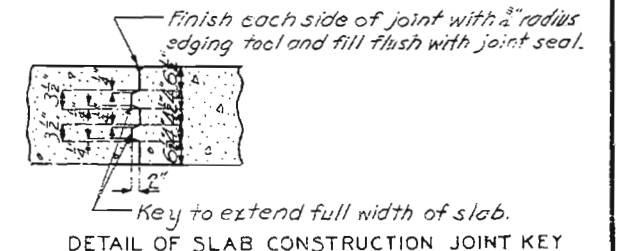
A-441

MISSOURI STATE HIGHWAY DEPARTMENT

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| 5 | MO. | | 19 | 145 | |



DETAIL OF WEEPHOLES IN VOIDS



BRIDGE-MELVILLE ROAD UNDERPASS

STATE ROAD FROM ROUTE 160 EAST TO ROUTE 65
ABOUT 1.5 MILES N. OF SPRINGFIELD
PROJECT NO. I-44-2(20)(RTE. I-44) STA. 860+21.5

GREENE COUNTY

Drawn June 1960 by O. J. S.
Checked July 1960 by J. A. M.

CAMBER DIAGRAM
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 6 of 7

NO CONSTRUCTION CHANGES

A-441

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| 5 | MO. | | 19 | 121 | |



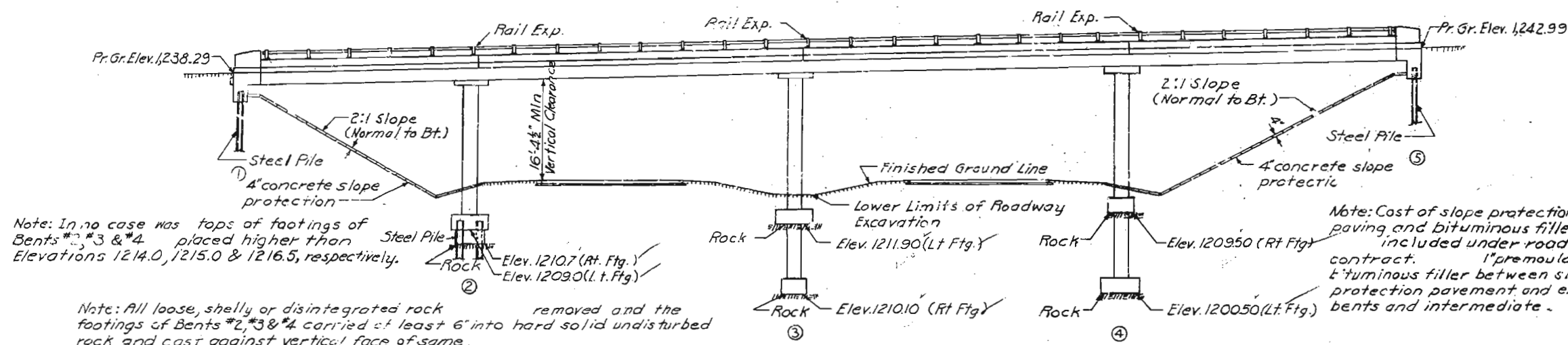
Revised 11/6/39

MISSOURI STATE HIGHWAY DEPARTMENT

(46'-64'-64'-58') Cont. Slab Spans (Voided)

| FED. ROAD DIST. NO. | STATION | NO. | YEAR | TOTAL SHEETS |
|---------------------|---------|------|------|--------------|
| 5 | MO. | 1962 | 140 | |

+ 2.0 % Grade



Note: All piling, except where noted, are 10' bearing pile at 42° and conforms with all details of this Plan.

All piles driven to or into solid rock, boulders shale or cemented gravel

All piles driven with a steam hammer.

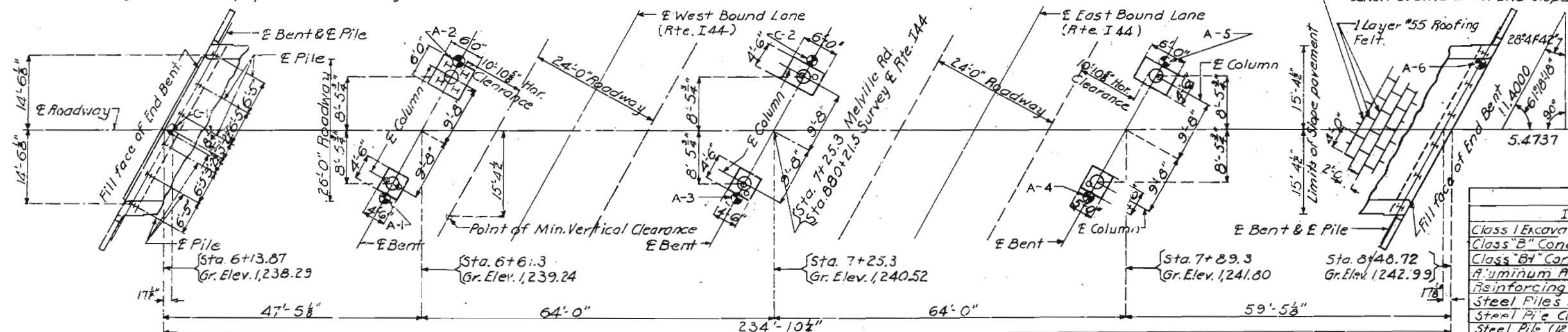
Note: In no case was tops of footings of Bents #2, #3 & #4 placed higher than Elevations 1214.0, 1215.0 & 1216.5, respectively.

Note: Cost of slope protection paving and bituminous filler included under road contract. 1" premoulded bituminous filler between slope protection pavement and end bents and intermediate.

Note: All loose, shelly or disintegrated rock removed and the footings of Bents #2, #3 & #4 carried at least 6' into hard solid undisturbed rock and cast against vertical face of same.

GENERAL ELEVATION

Bearing of 11.6 tons/sq. ft. used in design.



Note: Roadway excavation completed adjacent to this site before substructure started. See Special Provisions.

| QUANTITIES | | | |
|---|---------|-----------|--------|
| Item | Substr. | Superstr. | Total |
| Class I Excavation for Structure Cu.Yd. | 1875 | | 1875 |
| Class "B" Concrete Cu.Yd. | 168 | | 168 |
| Class "B1" Concrete Cu.Yd. | | 5763 | 5763 |
| Aluminum Alloy Handrail Lin.Ft. | | 452 | 452 |
| Reinforcing Steel Lbs. | 2250 | 129880 | 132130 |
| Steel Piles in Place Lin.Ft. | 395 | | 395 |
| Steel Pile Cutoffs Lin.Ft. | 89 | | 89 |
| Steel Pile (12 BP 53) (State Furn.) Lin.Ft. | 78 | | 78 |
| Test Hole Lin.Ft. | 48 | | 48 |
| Class I Excavation +25% Gr.Yd. | 160 | | 160 |
| Hauling State Furnished Piles Lump Sum | 1 | | 1 |

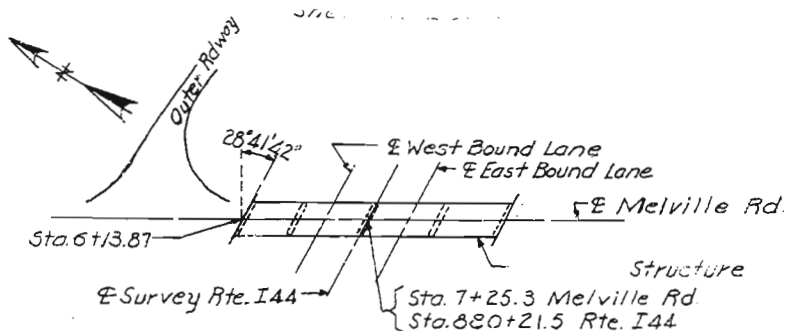
Note: For info. of contractor, see Special Provisions.

Note: Dimensions shown are horizontal.

Note: Test holes indicated thus on plans

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1957.
 Loading H20-44 (15% Future Wearing Surface).
 Reinforcing Steel Stress 20,000 #/sq. in.
 Concrete Class "B" Stress 1,200 #/sq. in.
 Concrete Class "B1" Stress 1,600 #/sq. in.
 Concrete for substructure Class "B" (air-entrained).
 Concrete for superstructure Class "B1" (air-entrained).
 Where joint filler is specified on plans it conforms with the requirements for Gray Rubber Compound Joints as given in Section 59-22B of the Standard Specifications.
 See Special Provisions for Aluminum Alloy Handrail.
 Superstructure deck waterproofed (See Special Provisions).
 See Section 22-9C of Standard Specifications for painting of steel piles.



LOCATION SKETCH

Class I Excavation for Bridge and for Class I Excavation for Structure.
 All concrete and reinforcement above footings is included in Superstructure Quantities.
 All concrete and reinforcement in footings is included in Substructure Quantities.
 Class I Excavation includes only amount of excavation below lower limits of roadway excavation.

B.M. Elev. 1226.55 N.F.W. in Root 36 Hickory 165' Rt Sta 876+40
BRIDGE-MELVILLE ROAD UNDERPASS

STATE ROAD FROM ROUTE 160 EAST TO ROUTE 65
 ABOUT 1.5 MILES N. OF SPRINGFIELD
 PROJECT NO. I-44-2(20) (RTE I-44) STA. 330+21.5

GREENE COUNTY FINISHED

SUBMITTED BY R.A. Currie DATE 8-2-60
 APPROVED BY R.A. Currie DATE 8-2-60

STD 61087
 A-441

Drawn by 19-00 by J. J. J.
 Checked July 1960 by U.A.M.

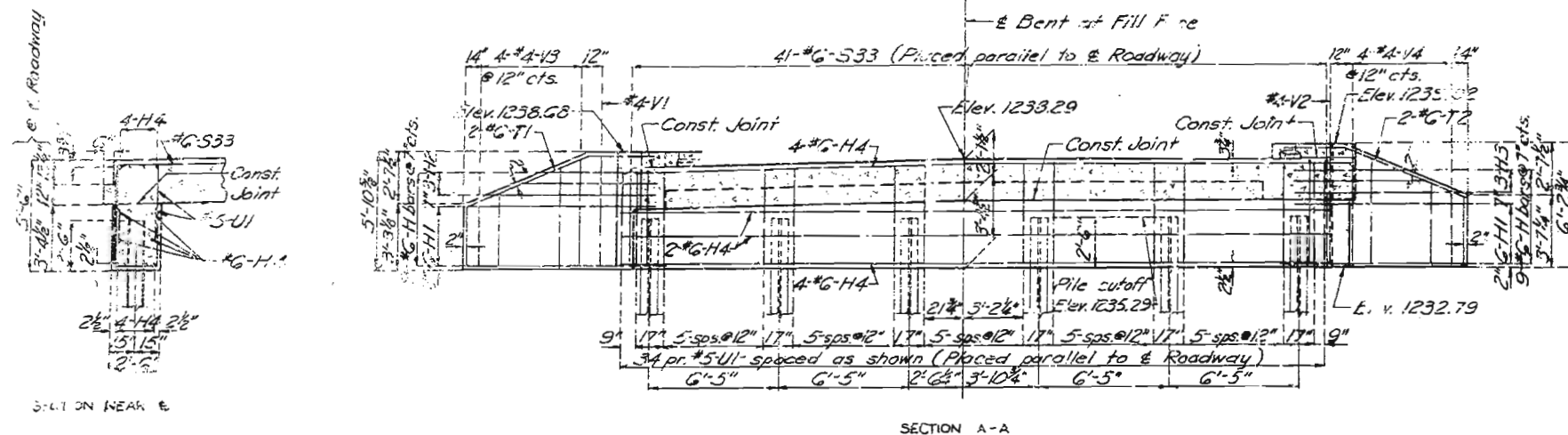
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1A of 3

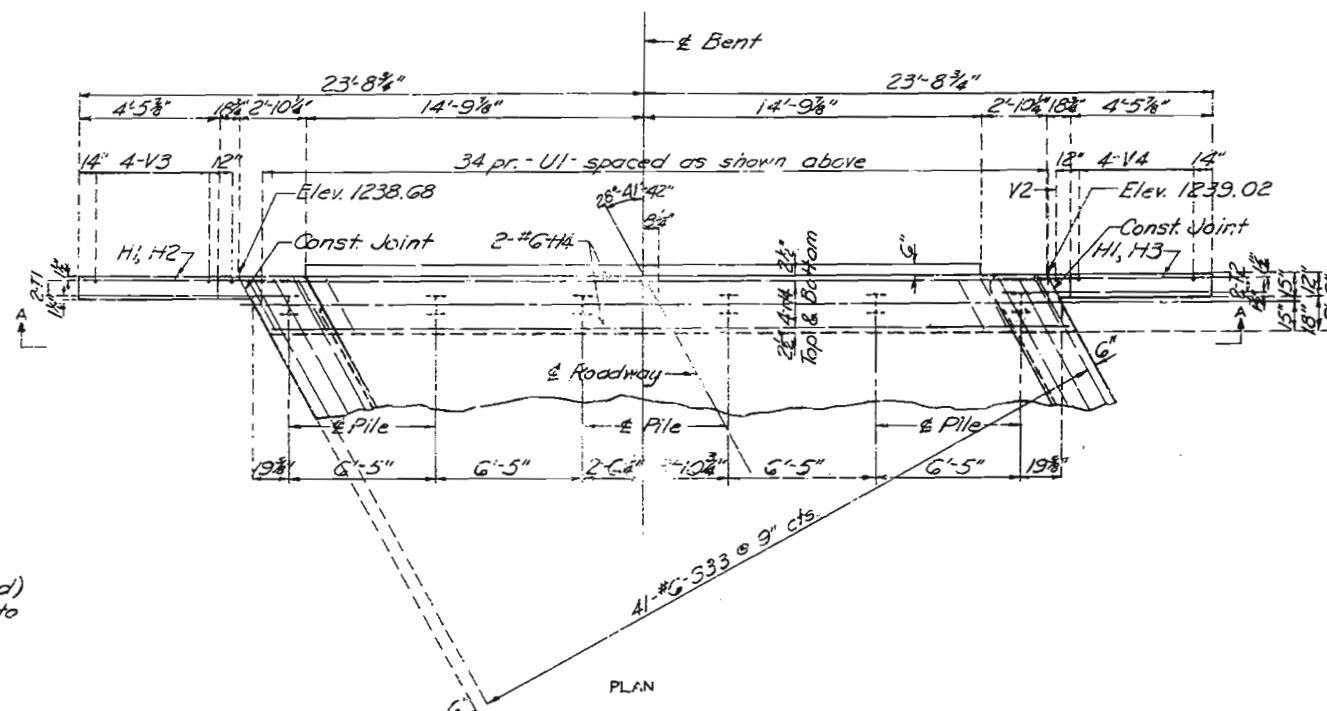
FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

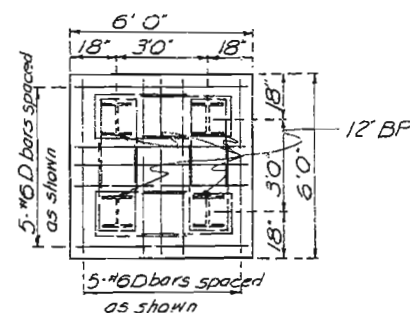
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| 5 | MO. | | 1942 | 42 | |



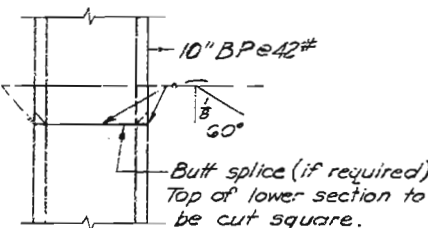
SECTION A-A



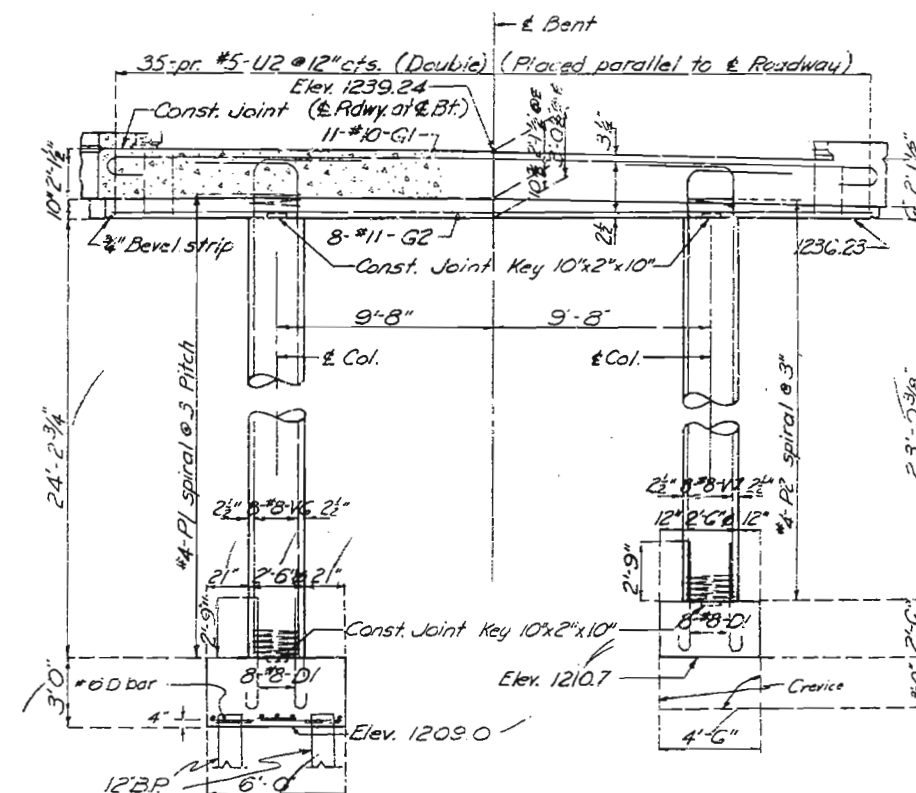
PLAN



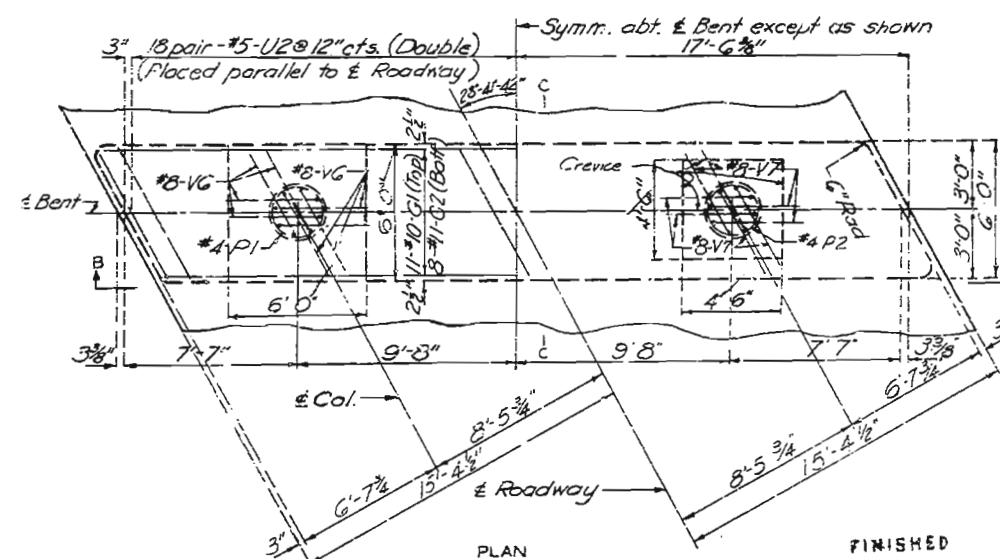
PLAN
LEFT FOOTING
BENT #2



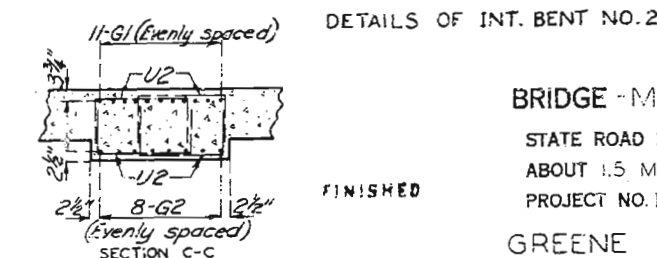
DETAILS OF STEEL PILE SPLICE



SECTION B-B



PLAN



Sheet No. 3A of 3

FINAL PLANS

BRIDGE - MELVILLE ROAD UNDERPASS

STATE ROAD FROM ROUTE 160 EAST TO ROUTE 65

ABOUT 1.5 MILES N. OF SPRINGFIELD

PROJECT NO. I-44-2 (20) RTE. I-44 STA. 880+21.5

GREENE COUNTY

FINISHED

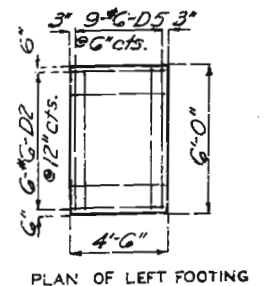
Drawn May 1955 by H.M.M.
Checked July 1956 by J.A.M.

Note: This drawing is not to scale. Follow dimensions.

A-441

300

FINISHED



FINISHED

COUNTY

A-441