

MISSOURI  
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED  
STATE ROAD

FEDERAL AID PROJECT

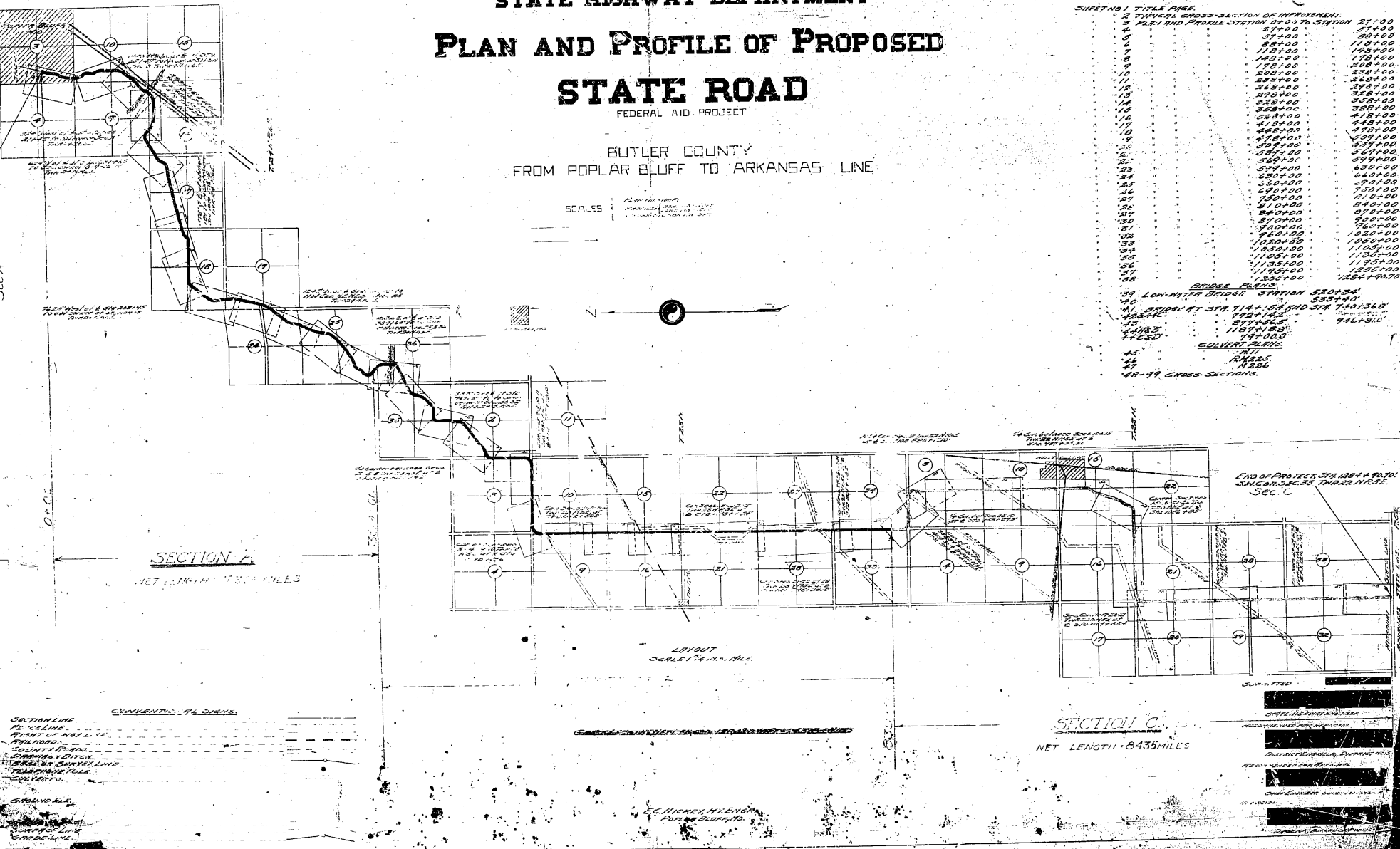
BUTLER COUNTY  
FROM POPLAR BLUFF TO ARKANSAS LINE

SCALE: 1" = 1000'

| FILE NO. | SHEET | DATE | BY | CHKD. | APP'D. |
|----------|-------|------|----|-------|--------|
| 5        | 16    | 58   |    |       |        |

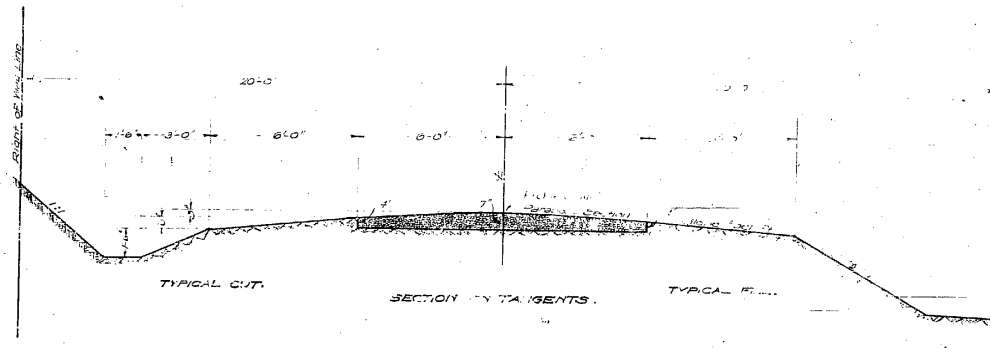
INDEX OF SHEETS

| SHEET NO. | TITLE  |
|-----------|--|
| 1         | TYPICAL CROSS-SECTION OF IMPROVEMENT           |
| 2         | PLAN AND PROFILE STATION 0+00 TO STATION 21+00 |
| 3         | 21+00  |
| 4         | 21+00  |
| 5         | 21+00  |
| 6         | 21+00  |
| 7         | 21+00  |
| 8         | 21+00  |
| 9         | 21+00  |
| 10        | 21+00  |
| 11        | 21+00  |
| 12        | 21+00  |
| 13        | 21+00  |
| 14        | 21+00  |
| 15        | 21+00  |
| 16        | 21+00  |
| 17        | 21+00  |
| 18        | 21+00  |
| 19        | 21+00  |
| 20        | 21+00  |
| 21        | 21+00  |
| 22        | 21+00  |
| 23        | 21+00  |
| 24        | 21+00  |
| 25        | 21+00  |
| 26        | 21+00  |
| 27        | 21+00  |
| 28        | 21+00  |
| 29        | 21+00  |
| 30        | 21+00  |
| 31        | 21+00  |
| 32        | 21+00  |
| 33        | 21+00  |
| 34        | 21+00  |
| 35        | 21+00  |
| 36        | 21+00  |
| 37        | 21+00  |
| 38        | 21+00  |
| 39        | 21+00  |
| 40        | 21+00  |
| 41        | 21+00  |
| 42        | 21+00  |
| 43        | 21+00  |
| 44        | 21+00  |
| 45        | 21+00  |
| 46        | 21+00  |
| 47        | 21+00  |
| 48        | 21+00  |
| 49        | 21+00  |
| 50        | 21+00  |
| 51        | 21+00  |
| 52        | 21+00  |
| 53        | 21+00  |
| 54        | 21+00  |
| 55        | 21+00  |
| 56        | 21+00  |
| 57        | 21+00  |
| 58        | 21+00  |
| 59        | 21+00  |
| 60        | 21+00  |
| 61        | 21+00  |
| 62        | 21+00  |
| 63        | 21+00  |
| 64        | 21+00  |
| 65        | 21+00  |
| 66        | 21+00  |
| 67        | 21+00  |
| 68        | 21+00  |
| 69        | 21+00  |
| 70        | 21+00  |
| 71        | 21+00  |
| 72        | 21+00  |
| 73        | 21+00  |
| 74        | 21+00  |
| 75        | 21+00  |
| 76        | 21+00  |
| 77        | 21+00  |
| 78        | 21+00  |
| 79        | 21+00  |
| 80        | 21+00  |
| 81        | 21+00  |
| 82        | 21+00  |
| 83        | 21+00  |
| 84        | 21+00  |
| 85        | 21+00  |
| 86        | 21+00  |
| 87        | 21+00  |
| 88        | 21+00  |
| 89        | 21+00  |
| 90        | 21+00  |
| 91        | 21+00  |
| 92        | 21+00  |
| 93        | 21+00  |
| 94        | 21+00  |
| 95        | 21+00  |
| 96        | 21+00  |
| 97        | 21+00  |
| 98        | 21+00  |
| 99        | 21+00  |
| 100       | 21+00  |



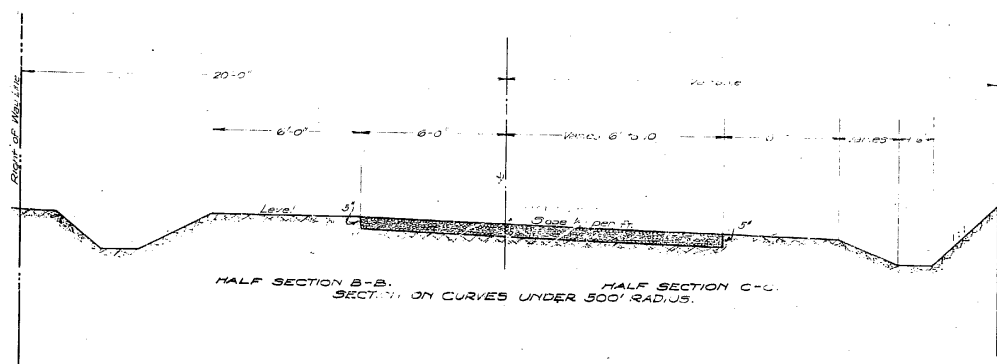
SECTION LINE  
PO. LINE  
POINT OF BEGINNING  
COUNTY ROAD  
DRAINAGE DITCH  
DRAINAGE SURVEY LINE  
TERRACE LINE  
ELEVATION

SECTION C  
NET LENGTH 4.35 MILES  
SHEET NO. 16  
DATE 5/58  
BY [Signature]  
CHKD. [Signature]  
APP'D. [Signature]

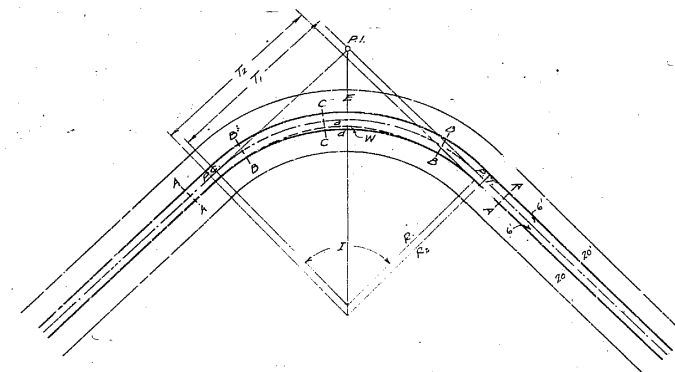


TYPICAL SECTIONS OF GRAVEL PAVEMENT.

THESE SECTIONS ARE BASED ON A 2% GRADE AND A 6" TO 10" DEPTH OF GRAVEL PAVEMENT.



HALF SECTION B-B. HALF SECTION C-C. SECTION ON CURVES UNDER 500' RADIUS.



$W = 24.0'$   
 $R_1 = R_2 = 500'$   
 $L_1 = R_1 \sin \frac{I}{2}$   
 $L_2 = R_2 \sin \frac{I}{2}$   
 $T_1 = R_1 \tan \frac{I}{4}$   
 $T_2 = R_2 \tan \frac{I}{4}$   
 $\text{Area (abode)} = \frac{1}{2} (R_1^2 - R_2^2) + (R_1 + R_2) (T_1 - T_2)$   
 Super-elevation begins at section AA 25' from PC and PT.  
 and attains its full value at section BB 50' from AA.  
 TYPICAL PLAN OF CURVES UNDER 500' RADIUS.

# MISSOURI STATE HIGHWAY DEPARTMENT

## ESTIMATE SHEET

County of BUTLER  
Length 6.435 miles

|       |    |      |      |    |      |
|-------|----|------|------|----|------|
| DATE  | BY | CHKD | DATE | BY | CHKD |
| 5-1-1 |    |      | 1927 | 24 |      |

Description of paving GRAVEL

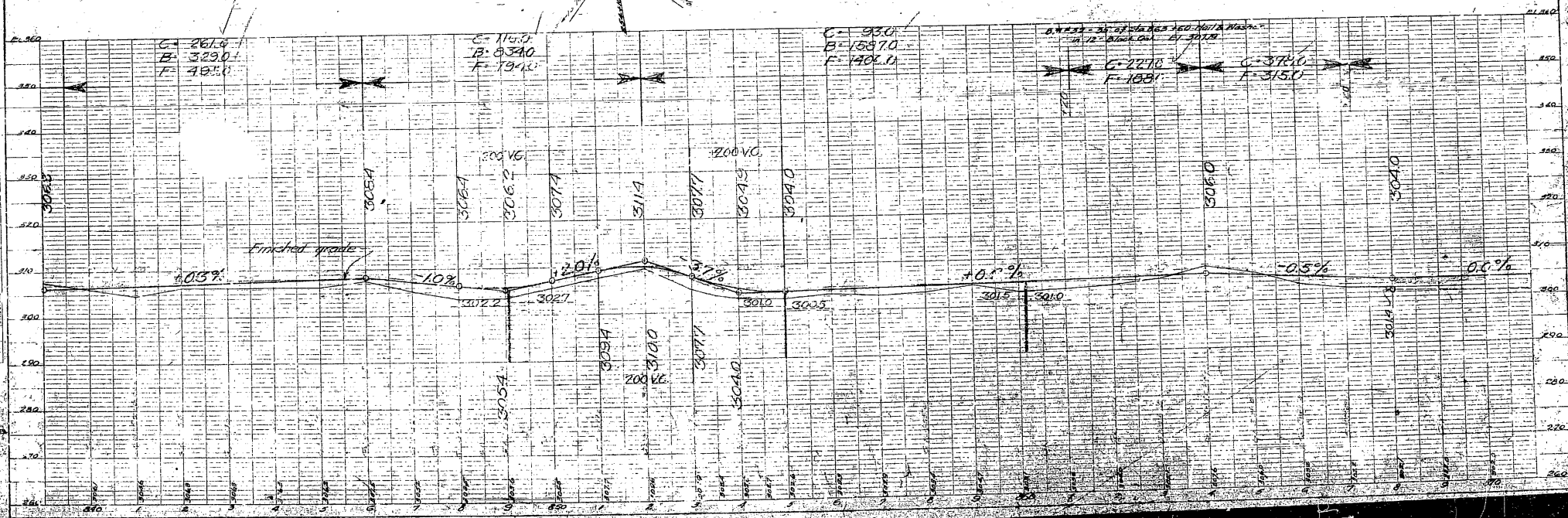
Prepared by *SW*

Date 4-12-22

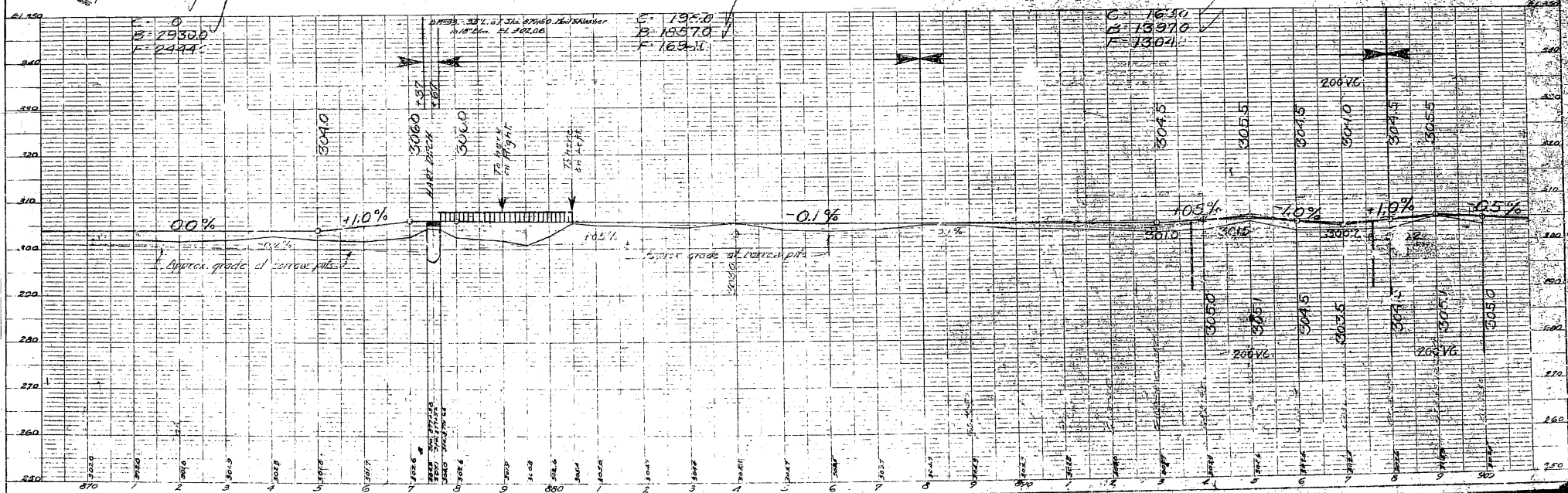
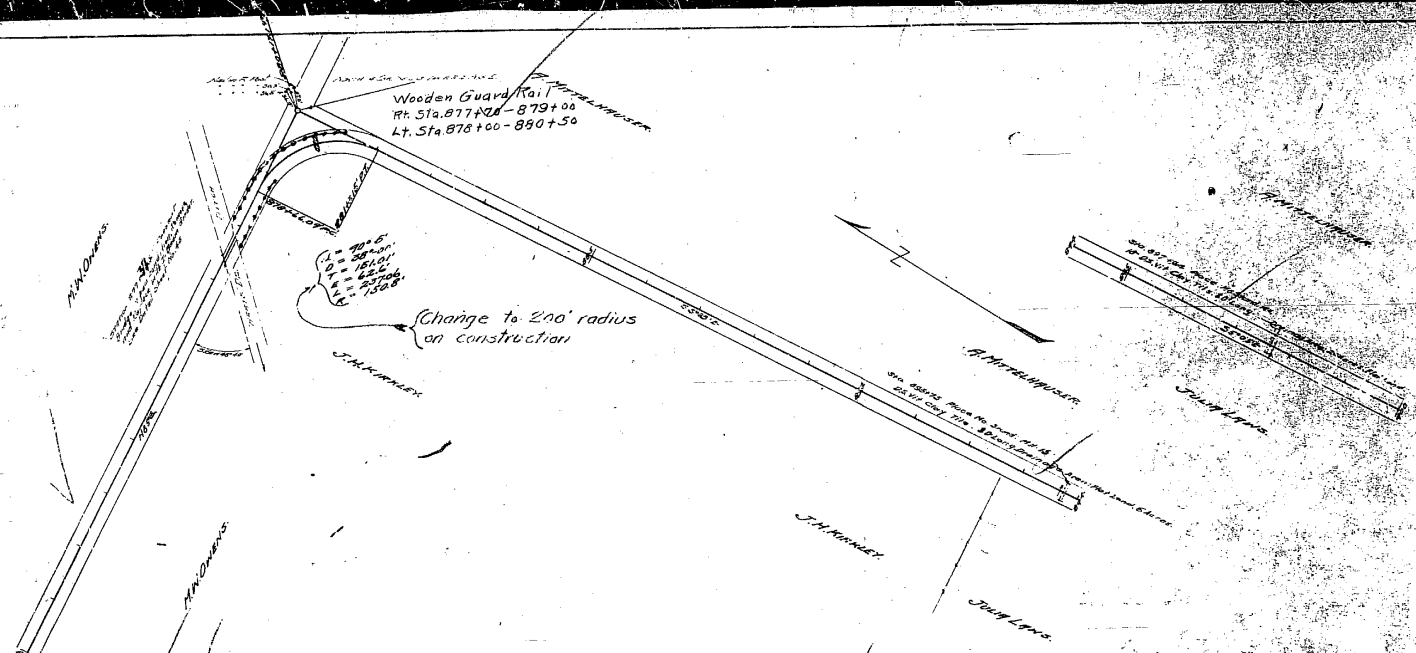
Name of road POPLAR BLUFF ARKANSAS STATE LINE

| EARTHWORK |       |        |  | STANDARD CULVERT |       |        |        | SUMMARY |                     |         |          |
|-----------|-------|--------|--|------------------|-------|--------|--------|---------|---------------------|---------|----------|
| Sta       | Excav | Borrow |  | Sta              | Stand | Length | B-Conc | ITEM    | DESCRIPTION         | UNIT    | QUANTITY |
| 839+50    |       |        |  | 15               | 18    | 4.11   | 24"    | 1       | Earth Excav.        | Cu.Yd   | 11685    |
| 846       | 261.0 | 529.0  |  | 30               |       |        |        | 3       | Backfill            | Cu.Yd   | 47460    |
| 882       | 112.0 | 834.0  |  | 30               |       |        |        | 31      | Class B Conc. Mas   | "       | 1000     |
| 861+20    | 43.0  | 1587.0 |  | 30               |       |        |        | 32      | " " " "             | "       | 24.9     |
| 864       | 27.0  |        |  | 30               |       |        |        | 33      | Reinf for " "       | Lb      | 74.0     |
| 867+20    | 376.0 |        |  | 30               |       |        |        | 50      | 15" V.C.P.C. " "    | Lin.Ft  | 1821     |
| 871+37    |       | 2480.0 |  | 30               |       |        |        | 51      | 18" " " "           | "       | 480      |
| 882       | 198.0 | 157.0  |  | 30               |       |        |        | 66      | Monuments           | "       | 150      |
| 888       | 163.0 | 1377.0 |  | 30               |       |        |        | 77      | Gravel Base Spec. C | Sq.Yd   | 10       |
| 906       | 238.0 | 600.0  |  | 30               |       |        |        | 79      | 24" V.C.P. Cully    | Lin. ft | 2461.8   |
| 911       | 174.0 | 321.0  |  | 30               |       |        |        | 82      | Wooden Guard Rail   | Lin. ft | 380      |
| 912       | 251.0 | 739.0  |  | 30               |       |        |        | 104     | Grass Piles         | Lin.Ft  | 400      |
| 928       | 38.0  | 2372.0 |  | 30               |       |        |        | 109     | Class B Conc. Mas   | Cu.Yd   | 466      |
| 938       | 166.0 | 1169.0 |  | 30               |       |        |        | 110     | " " " "             | "       | 15.1     |
| 946+60    | 408.0 | 603.0  |  | 30               |       |        |        | 112     | Reinf for " "       | Lb      | 1790     |
| 946+50    | 104.0 | 536.0  |  | 30               |       |        |        | 116     | Struct Steel        | "       | 10400    |
| 957       | 57.0  | 20.0   |  | 30               |       |        |        | 119     | Gas Pipe            | Lin.Ft  | 158      |
| 961+80    | 302.0 |        |  | 30               |       |        |        | 120     | Timber              | FLBM    | 4170     |
| 976+30    | 104.0 | 2260.0 |  | 30               |       |        |        | 104     | BRIDGE STA 946+60   |         |          |
| 980       | 257.0 |        |  | 30               |       |        |        | 109     | Grass Timber Piles  | Lin.Ft  | 400      |
| 991       | 342.0 | 778.0  |  | 30               |       |        |        | 109     | Class B Conc. Mas   | Cu.Yd   | 53.7     |
| 1002      | 443.0 | 1117.0 |  | 30               |       |        |        | 110     | " " " "             | "       | 16.2     |
| 1009      | 415.0 |        |  | 30               |       |        |        | 112     | Reinf for " "       | Lb      | 1790     |
| 1020      | 195.0 | 970.0  |  | 30               |       |        |        | 116     | Struct Steel        | Lin.Ft  | 10200    |
| 1030      | 9.0   | 1730.0 |  | 30               |       |        |        | 119     | Gas Pipe            | Lin.Ft  | 158      |
| 1040      | 217.0 | 804.0  |  | 30               |       |        |        | 120     | Timber              | FLBM    | 4240     |
| 1050      | 325.0 | 1105.0 |  | 30               |       |        |        | 104     | BRIDGE STA 1061+89  |         |          |
| 1056+20   | 208.0 | 145.0  |  | 30               |       |        |        | 109     | Grass Timber Piles  | Lin.Ft  | 400      |
| 1064      | 516.0 | 1430.0 |  | 30               |       |        |        | 109     | Class B Conc. Mas   | Cu.Yd   | 478      |
| 1069      | 467.0 |        |  | 30               |       |        |        | 110     | " " " "             | "       | 12.9     |
| 1079      | 212.0 | 903.0  |  | 30               |       |        |        | 112     | Reinf for " "       | Lb      | 3280     |
| 1089      | 136.0 | 1274.0 |  | 30               |       |        |        | 116     | Struct Steel        | "       | 20920    |
| 1099      | 159.0 | 1400.0 |  | 30               |       |        |        | 119     | Gas Pipe            | Lin.Ft  | 211      |
| 1109      | 370.0 | 1000.0 |  | 30               |       |        |        | 120     | Timber              | FLBM    | 5830     |
| 1119      | 143.0 | 1630.0 |  | 30               |       |        |        |         |                     |         |          |
| 1128      | 276.0 | 429.0  |  | 30               |       |        |        |         |                     |         |          |
| 1138      | 175.0 | 580.0  |  | 30               |       |        |        |         |                     |         |          |
| 1150+50   | 34.0  | 1580.0 |  | 30               |       |        |        |         |                     |         |          |
| 1155      | 380.0 |        |  | 30               |       |        |        |         |                     |         |          |
| 1162      | 624.0 |        |  | 30               |       |        |        |         |                     |         |          |
| 1165+20   | 187.0 |        |  | 30               |       |        |        |         |                     |         |          |
| 1180      | 846.0 | 2492.0 |  | 30               |       |        |        |         |                     |         |          |
| 1184+20   | 343.0 |        |  | 30               |       |        |        |         |                     |         |          |
| 1195      | 65.0  | 2645.0 |  | 30               |       |        |        |         |                     |         |          |
| 1205      | 181.0 | 1129.0 |  | 30               |       |        |        |         |                     |         |          |
| 1215      | 30.0  | 1900.0 |  | 30               |       |        |        |         |                     |         |          |
| 1225      | 114.0 | 2140.0 |  | 30               |       |        |        |         |                     |         |          |
| 1235      | 71.0  | 1880.0 |  | 30               |       |        |        |         |                     |         |          |
| 1245      | 64.0  | 1320.0 |  | 30               |       |        |        |         |                     |         |          |
| 1255      | 63.0  | 1180.0 |  | 30               |       |        |        |         |                     |         |          |
| 1265      | 87.0  | 1700.0 |  | 30               |       |        |        |         |                     |         |          |
| 1275      | 105.0 | 1200.0 |  | 30               |       |        |        |         |                     |         |          |
| 1284+00   | 46.0  | 1580.0 |  | 30               |       |        |        |         |                     |         |          |
| 11685     | 49460 |        |  |                  |       |        |        |         |                     |         |          |

500



Sec 6



DRAWN BY: J. H. BOOR  
 CHECKED BY: J. H. BOOR  
 DATE: 10/25/23  
 PROJECT: 100' x 30' V.C.P.  
 SHEET: 1 OF 1  
 SCALE: 1" = 100'

| DATE     | BY        | CHKD      | APP'D     | DATE     | BY        | CHKD      | APP'D     |
|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|
| 10/25/23 | J.H. Boor | J.H. Boor | J.H. Boor | 10/25/23 | J.H. Boor | J.H. Boor | J.H. Boor |

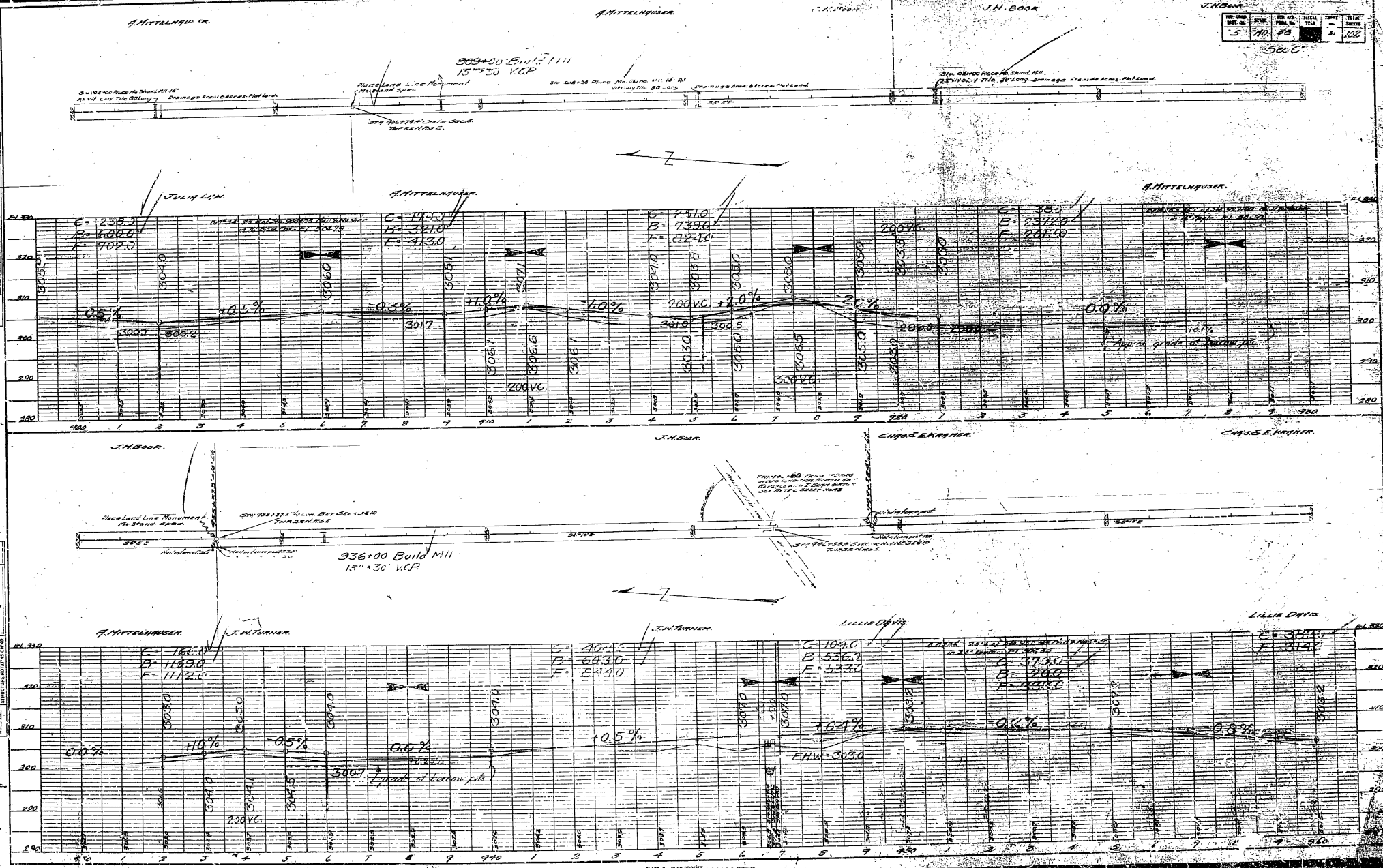


PLATE 2 - PLAN PROFILE



CHAS. E. CHAMBER

CHAS. E. CHAMBER

| NO. | DATE | BY | CHKD. | APP'D. | REMARKS |
|-----|------|----|-------|--------|---------|
| 5   | 10   | 50 |       |        | 102     |

Sec. 6

Land Area Measurement

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

1/4 Sec. 6

LULLA DRIVE

P. ALBERTS

SCHOOL LOT

FRANK BAKER

C = 102.5  
B = 2260.0  
F = 1956.0

C = 155.0  
B = 3300.0  
F = 2850.0

C = 312.0  
B = 7100.0  
F = 6040.0

0.0%

10.3%

0.2%

J. R. BAYDEN

H. E. BOWMAN

J. R. BAYDEN

J. R. BAYDEN

FRANK BAKER

C = 343.0  
B = 1117.0  
F = 1214.0

C = 415.0  
B = 1315.0  
F = 1415.0

C = 105.0  
B = 310.0  
F = 272.0

0.0%

10.5%

0.0%

0.57%

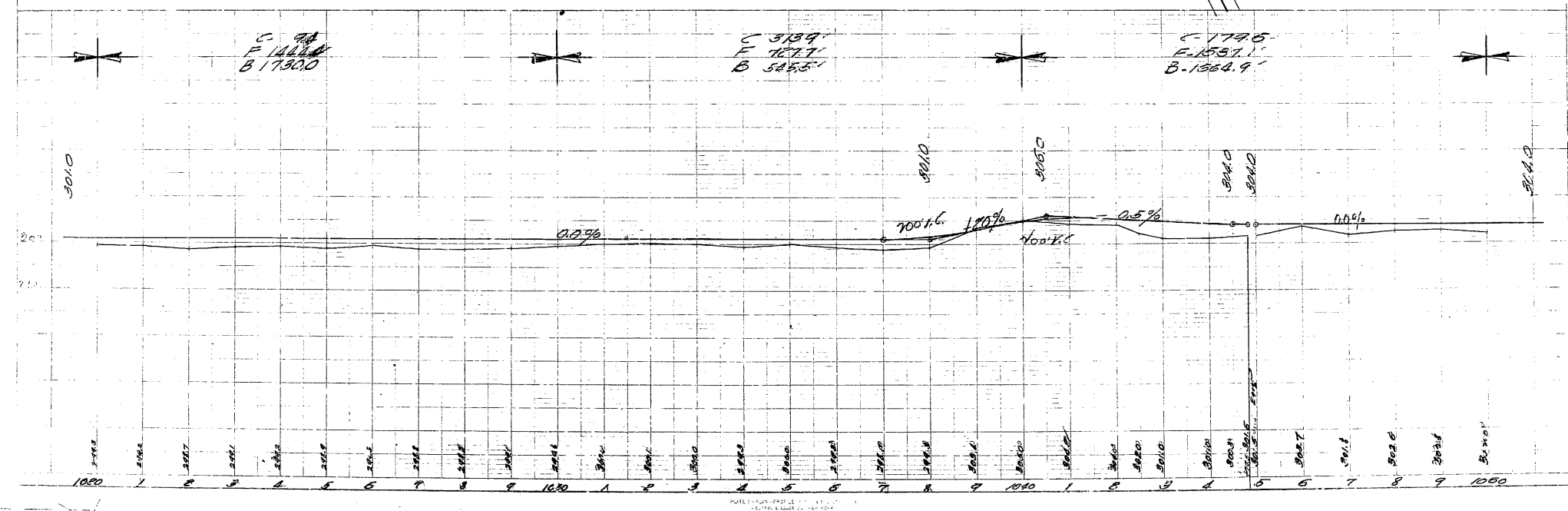
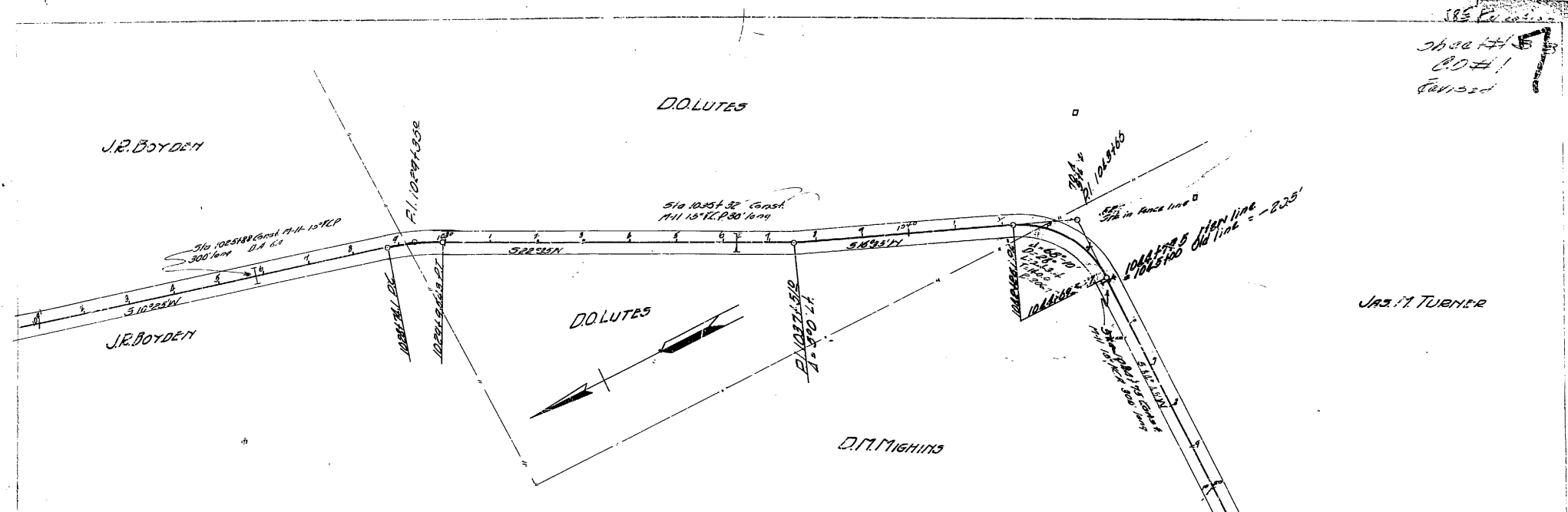
10.0%

0.3%

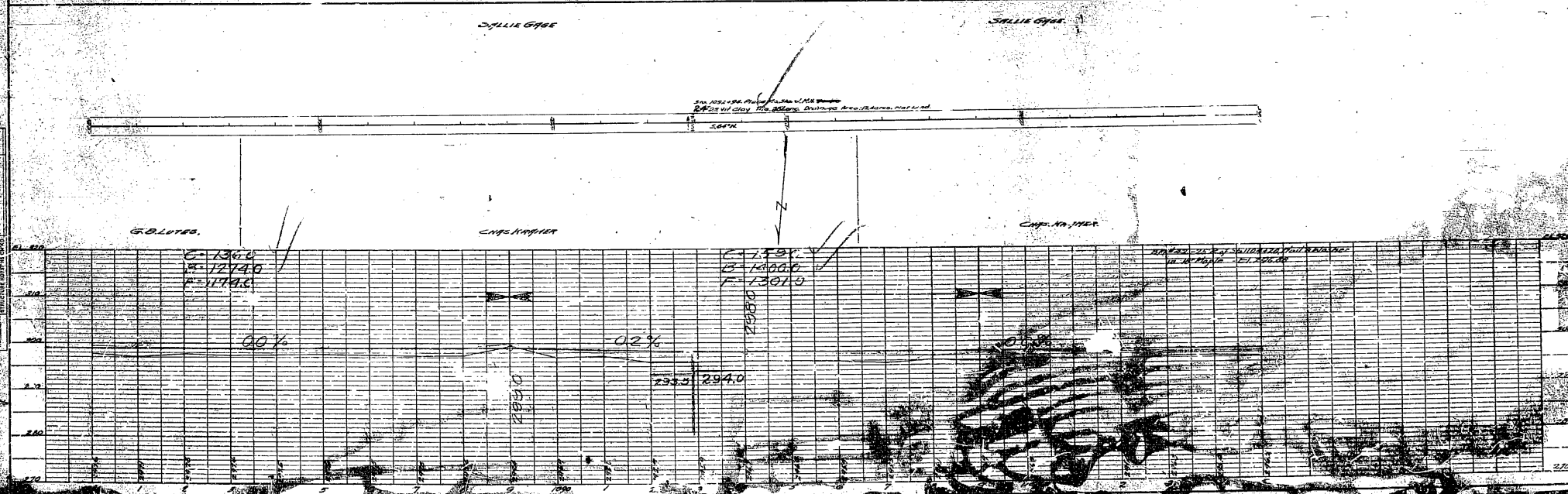
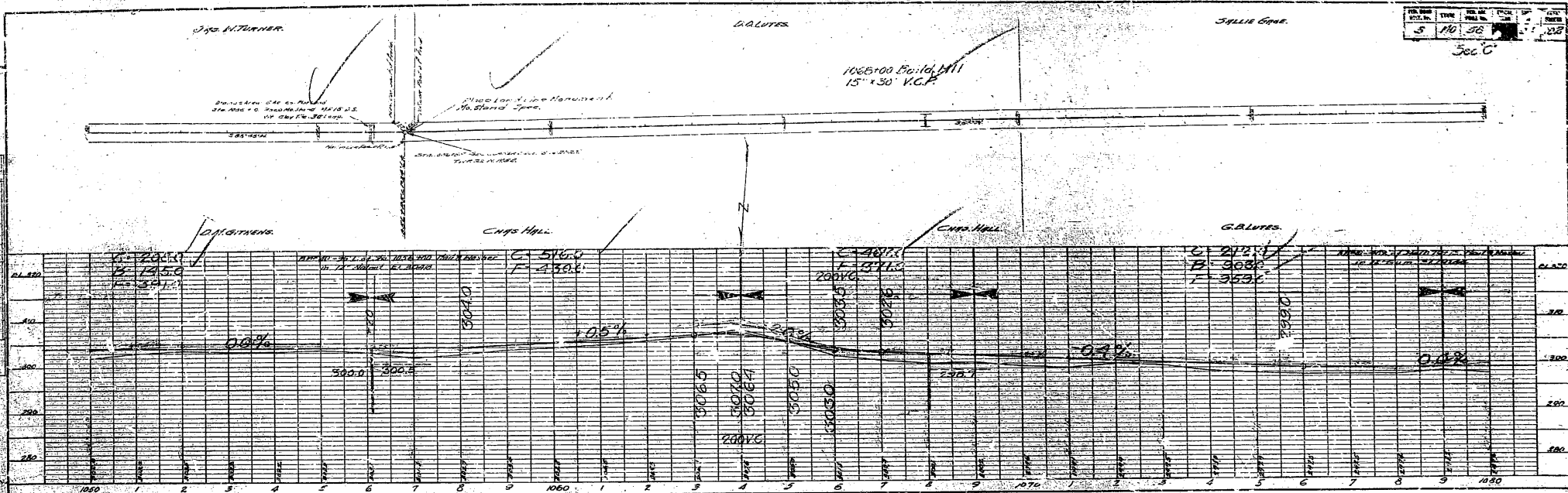
0.2%

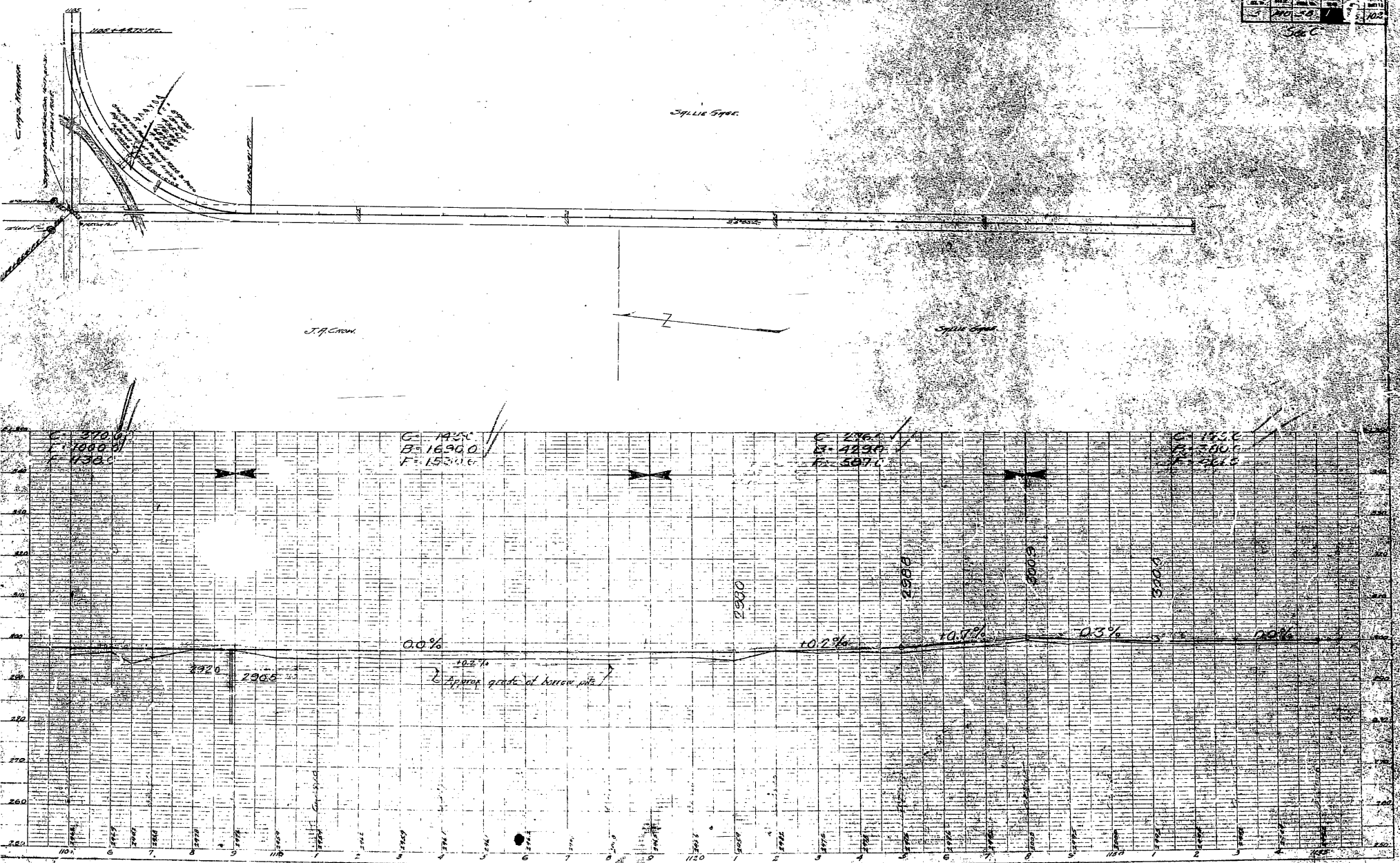
0.0%

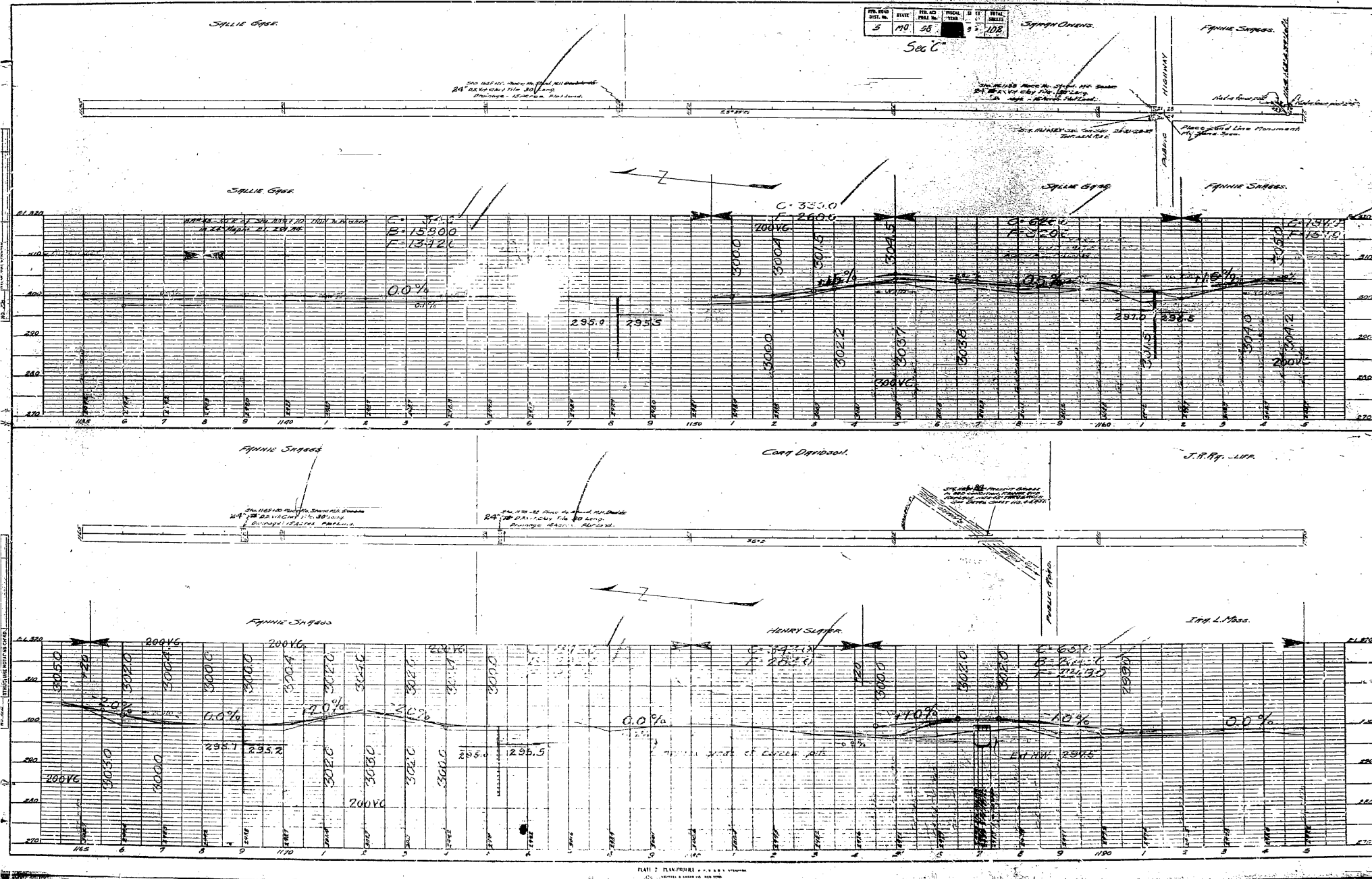
Sheet #1  
C.D.#1  
Ex 132











Camp Davidson

J.R. PETERSON

R.H. HARRINGTON

| NO. | DATE | BY | CHKD. | APP'D. | TITLE |
|-----|------|----|-------|--------|-------|
| 8   | 10   | 58 |       |        | 7     |

556 C

1205+00 Build Mill  
15" x 30" V.C.P.

Sta. 12+25 Paved to 3+100, Mill 10' x 10'.  
1st Clay No. 35 Lanes.  
Drainage: 25 Acres. Full Lane.

Place Line Monument  
Sta. 12+25 Paved to 3+100, Mill 10' x 10'.  
1st Clay No. 35 Lanes.  
Drainage: 25 Acres. Full Lane.

Eng. L. Hoss.

S.T. Hoss.

R.H. HARRINGTON

C = 131.0  
B = 1124.0  
F = 1055.0

C = 130.1  
B = 1300.0  
F = 1012.0

C = 131.0  
B = 1124.0  
F = 1055.0

0.0%

285.5

284.8

285.0

283.8

284.3

R.H. HARRINGTON

R.H. Scott

CH. LUMPKINS

Place Line Monument  
Sta. 12+25 Paved to 3+100, Mill 10' x 10'.  
1st Clay No. 35 Lanes.  
Drainage: 25 Acres. Full Lane.

Place Line Monument  
Sta. 12+25 Paved to 3+100, Mill 10' x 10'.  
1st Clay No. 35 Lanes.  
Drainage: 25 Acres. Full Lane.

Original 1958 1/2" x 1/2" V.C.P. for 25' V.C.P.

R.H. HARRINGTON

S.T. Hoss.

CH. LUMPKINS EST.

LUTHER LUMPKINS

C = 131.0  
B = 1124.0  
F = 1055.0

C = 131.0  
B = 1124.0  
F = 1055.0

C = 131.0  
B = 1124.0  
F = 1055.0

0.0%

285.0

285.5

283.8

PLATE 2 - PLAN/PROFILE

| PLAN<br>NO. | DATE | BY | CHKD. | APP'D. | SCALE |
|-------------|------|----|-------|--------|-------|
| 5           | 10   | SB |       | H      | 100'  |

Sec C

GNLUMINS.

File Sept

SHOOTING POINT  
Sec C

Box. HENNING

Boxing LUMINS.

C = 81.0  
B = 1100.0  
F = 303.0

C = 10.71  
B = 1200.0  
F = 1088.0

C = 74.0  
B = 1300.0  
F = 1100.0

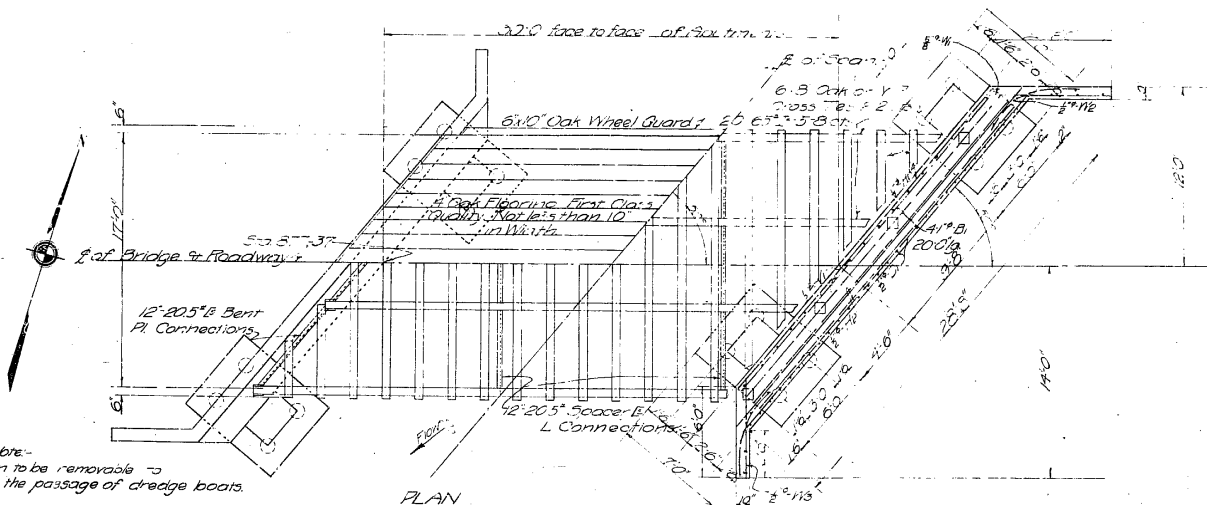
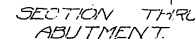
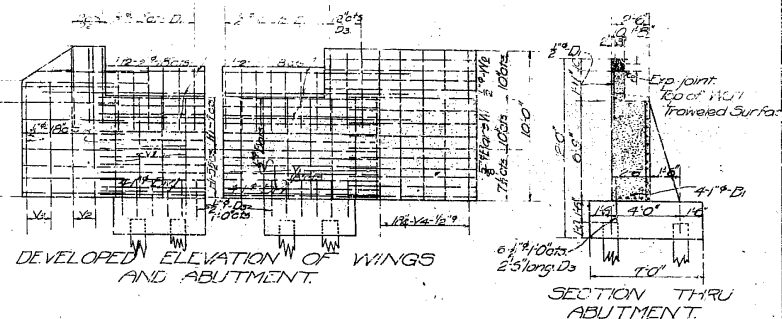
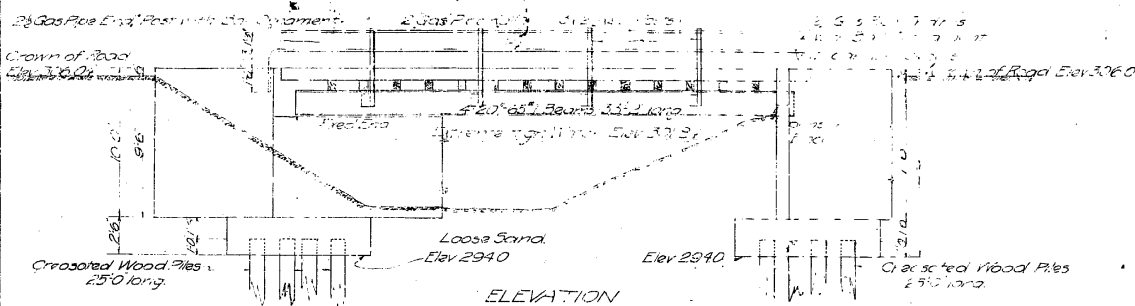
0.1%

294.8 294.3

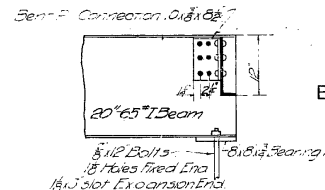
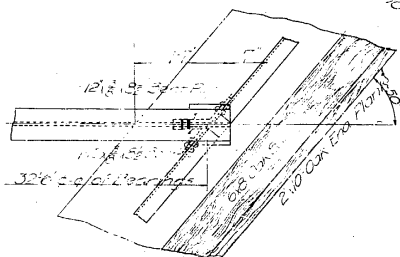
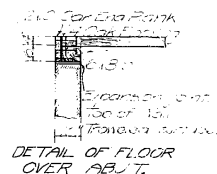
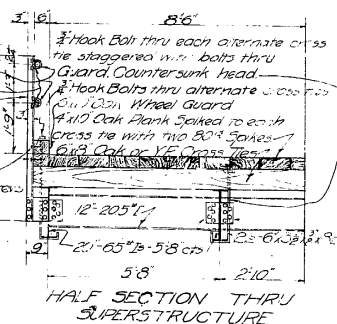
293.5 294.0

296.0





Note:-  
Span to be removable to allow the passage of dredge boats.



### GENERAL NOTES

Concentrated Load 15-ton tractor with 10-ton trailers 25% impact.  
Detail shop drawings shall be submitted to the State Highway Department  
in quadruplicate and shall receive its approval before steel work is  
fabricated.

All bolts and rivets. Dam except as shown. Shgo connections riveted.  
Field connections turned bolts, driving fit in cut-punched matched and  
reamed ends.

All metal to be painted one shop coat of red lead and two field coats of an approved brand as per specifications.

Finish, no plastering permitted.

Reinforcing rods of billet steel, structural grade, deformed type  
other than twisted squares. Net sectional areas not less than that of  
plain rods of the sizes given.

Cross 1 to 5 of first class quality Oak or Long Leaf Yellow Pine. All other lumber of first class quality Oak.

Required bearing capacity of Piles 20 tons per pile.

### ESTIMATED QUANTITIES

|                           |              |
|---------------------------|--------------|
| Structural Steel          | 10,900 Lbs.  |
| Reinf. Steel              | 1790 Lbs.    |
| 13.5 Concrete             | 151 Cu.Yds.  |
| 12.4 Concrete             | 46.6 Cu.Yds. |
| Lumber                    | 4170 Ft.B.M. |
| 2" Gas Pipe Rail          | 142 Lin.Ft.  |
| 2 1/2" Gas Pipe End Posts | 16 Lin. Ft.  |
| Cresosoted Wood Piles     | 400 Lin.Ft.  |

| BILL OF REINFORCING STEEL |        |        |               |
|---------------------------|--------|--------|---------------|
| NO.                       | SIZE   | LENGTH | REMARKS       |
| 1                         | 3/8" D | 20'0"  | Straight      |
| 2                         | 3/8" D | 4'0"   | "             |
| 3                         | 3/8" D | 3'4"   | "             |
| 34                        | 3/8" D | 2'0"   | "             |
| 25                        | 3/8" D | 2'0"   | "             |
| 3                         | 1/2" D | 5'0"   | Bend in field |
| 34                        | 1/2" D | 6'5"   | Straight      |
| 4                         | 1/2" D | 9'6"   | Straight      |
| 4                         | 1/2" D | 7'6"   | "             |
| 10                        | 1/2" D | 9'9"   | "             |
| 20                        | 1/2" D | 9'0"   | "             |
| 5                         | 1/2" D | 9'0"   | Bend in field |
| 14                        | 1/2" D | 6'0"   | Straight      |
| 4                         | 1/2" D | 8'0"   | Bend in field |

MISSOURI STATE HIGHWAY DEPARTMENT  
BRIDGE OVER HART'S DRAINAGE DITCH  
STATE ROAD FROM POPLAR BLUFF TO ARKANSAS STATE LINE  
ABOUT 1 MILE FROM BOOSER

BUTLER COUNTY

OUTLER COUNTY

Four



Concrete grade 15th on tractor and 10' on trailers with 25% repeat  
Concrete in footings 15-35 psi. All other concrete 2-4 psi.  
Sub exposed surface free from form marks to a smooth and uniform  
appearance. No plastering permitted.  
Bevel exposed edges 1/2" where no other bevel is shown.  
Roads to be blacktop to proper elevation, wired at intersections and positively  
secured against displacement. Arrangement and spacing to be approved by  
the engineer before the concrete is poured.

to 1/2 inch diameter. Field connections 3/4" turned bolts.  
All steel to be painted one shop coat of red lead and two coats of an approved brand as per specifications, lead coats to be of different colors.  
Cross ties to be of either Oak or Long Leaf Yellow Pines to be of lumber 4 in. of Oak of first class quality.  
All piles to be cross-tied and shall be driven to sustain without settlement a load of 20 tons.

| BILL OF REINFORCING STEEL |        |        |      |               |
|---------------------------|--------|--------|------|---------------|
| No.                       | Size   | Length | Mark | Remarks       |
| 10                        | 2 1/2" | 26'-0" | 1    | Straight      |
| 22                        | 2 1/2" | 26'-0" | 2    | "             |
| 22                        | 2 1/2" | 9'-0"  | 3    | "             |
| 9                         | 1 1/2" | 9'-0"  | 4    | Bent in place |
| 18                        | 1 1/2" | 9'-0"  | 5    | Straight      |
| 9                         | 1 1/2" | 6'-0"  | 6    | Bent in place |
| 9                         | 1 1/2" | 34'-6" | 7    | "             |
| 10                        | 1 1/2" | 10'-9" | 8    | Straight      |
| 33                        | 2 1/2" | 7'-6"  | 9    | "             |
| 2                         | 1 1/2" | 9'-6"  | 10   | "             |
| 2                         | 2 1/2" | 6'-4"  | 11   | "             |
| 20                        | 1 1/2" | 5'-3"  | 12   | "             |
| 46                        | 1 1/2" | 4'-0"  | 13   | "             |
| 24                        | 1 1/2" | 2'-6"  | 14   | "             |

| ESTIMATED QUANTITIES                       |              |
|--|--------------|
| Concrete-1:2:4 mix                         | 539 cu. yd.  |
| Concrete-1:3:5 mix                         | 102 cu. yd.  |
| Reinforcing Steel                          | 1790 #       |
| Structural Steel                           | 10900 #      |
| Lumber                                     | 4240 bd. ft. |
| Gas Pipe Ectil                             | 158 lin. ft. |
| Crested Wood Piles 16 @ 25' - 400 lin. ft. |              |

STATE ROAD FROM POPLAR BLUFF TO ARKANSAS STATE LINE  
ABOUT 2 MILES FROM NEELYVILLE

BUTLER COUNTY

Submitted by John D. Turner  
BRIDGE ENGINEER

Approved by \_\_\_\_\_

...and the

\_\_\_\_\_



TYPE SEC. Earthwork

STANDARDS

Route 67  
County Butler  
Sheet 15

SURFACE-CURB-GUTTER  
APPROACHES

DRAINAGE

BRIDGES

CONC.-REINF.-APPURTS,  
FINISH EXC.

MISC.