| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECTS NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UNIT 1 & 664-D & 281 RE. UNIT 1 | 1937 |

1/48

HURON COUNTY
S. H. 290 SEC. O PT, N & G-1 PT.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F.A.P. 52 RE. UN. 1
F.A.P. 664-D
F.A.P. 281-RE.UN.1

# OBERLIN - NORWALK ROAD

## S. H. 290 SEC. O (PT.), N & G-1 (PT.)

## HURON COUNTY

### NORWALK AND TOWNSEND TOWNSHIPS

2-3-4 & 5

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF HIGHWAYS TOGETHER WITH "SPECIAL PROVISIONS FOR FEDERAL AID PROJECTS" AND SUPPLEMENTAL SPECIFICATIONS NO. T-216, T-113, T-190.09(b), B-171, 78, 80, 47, M-110.11, IN FORCE ON DATE OF CONTRACT WILL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THE IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

THE NECESSARY RIGHT OF WAY HAS BEEN PROVIDED.

APPROVED _____
DATE _____ RESIDENT DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 5-20-36 RESIDENT DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ CHIEF ENGINEER BUREAU OF MAINTENANCE

APPROVED _____
DATE 5-28-36 CHIEF ENGINEER BUREAU OF BRIDGES & R.R. X'INGS.

APPROVED _____
DATE 12/2/36 CHIEF ENGINEER LOCATION & DESIGN

APPROVED _____
DATE 12-17-36 FIRST ASST. DIRECTOR & CHIEF ENGINEER

APPROVED _____
DATE 12-17-36 DIRECTOR OF HIGHWAYS

RECOMMENDED FOR APPROVAL _____
DATE _____ CHIEF ENGR. BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL _____
DATE _____ DISTRICT ENGR. BUREAU OF PUBLIC ROADS

APPROVED _____
DATE _____ CHIEF OF BUREAU

CONSTRUCTION BUREAU
AUG 19 1955
GROUND PHOTOLAB

### CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP LINE
- SECTION LINE
- CENTER LINE
- PROPERTY
- CITY OR VILLAGE LINE
- FENCE LINE
- STEAM RAILROAD
- ELECTRIC RAILROAD
- POLE LINE
- GUARD RAIL
- DRAIN PIPE NEW
- DRAIN PIPE OLD

### INDEX OF SHEETS


| | |
|---|---|
| TITLE SHEET | 1 |
| TYPICAL SECTION | 2, 2A, 2B |
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| STRUCTURES (OVER 20' SPAN) | 41-46 |
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| CALCULATIONS & SUMMARY | 48 |


### LINE DATA

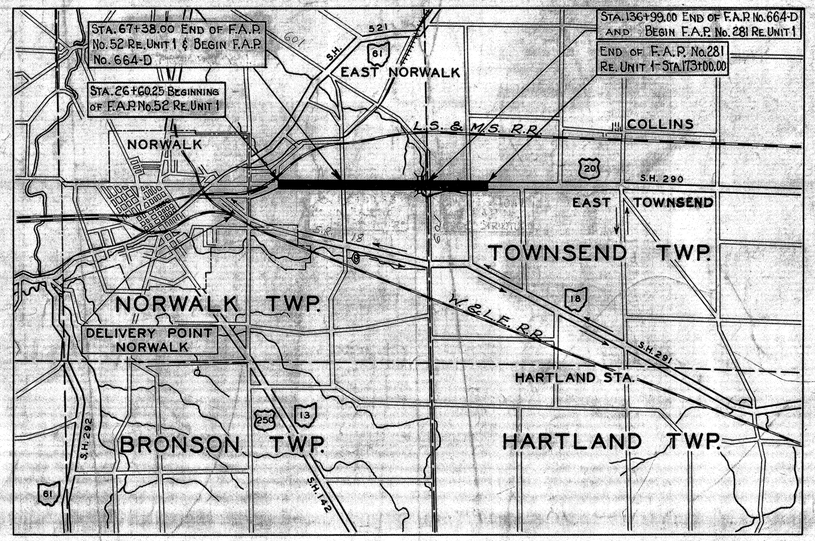
FED. AID PROJ. No. 52 REOPENED UNIT 1
BEGIN STA. 26+60.25; END STA. 67+38.00;
NO ADDITIONS OR DEDUCTIONS;
NET LENGTH OF F.A.P. 52 RE. UNIT 1 = 4,077.75 LIN. FT. OR 0.772 MILES.

FED. AID PROJ. No. 664-D:
BEGIN F.A.P. 664-D STA. 67+38.00;
END F.A.P. 664-D STA. 136+99.00;
TOTAL LENGTH F.A.P. No. 664 D = 6,961.00 LIN. FT. OR 1.318 MILES;
BEGIN STRUCTURE STA. 132+95.83;
END STRUCTURE STA. 133+40.17;
NO ADDITIONS OR DEDUCTIONS;
NET LENGTH OF STRUCTURES = 44.34 LIN. FT. OR .008 MILES;
NET LENGTH OF ROADWAY = 6,916.66 LIN. FT. OR 1.310 MILES;

FED. AID PROJ. No. 281 REOPENED UNIT 1
BEGIN STA. 136+99.00; END STA. 173+00.00;
NO ADDITIONS OR DEDUCTIONS;
NET LENGTH OF F.A.P. No. 281 RE. UN. 1 = 3,601.00 LIN. FT. OR .682 MILES.

TOTAL NET LENGTH OF PROJECT = 14,639.75 LIN. FT. OR 2.772 MILES.

| FILE NO. | HURON COUNTY S.H. 290 SEC. O PT, N & G-1 PT. |
|---|---|
| 102-47 | DATE OF LETTING _____ |
| | CONTRACT NO. _____ |




AVERAGE HAUL - 2.5 MILES

### LOCATION PLAN

0 1 2 3
SCALE OF MILES

- PORTION TO BE IMPROVED
- DETOURS SHOWN THUS
- STATE HIGHWAYS
- IMPROVED COUNTY ROADS
- UNIMPROVED COUNTY ROADS

| SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS | |
|---|---|
| B-40-35 | SEPT 6, 1935 |
| BD-35 | OCT. 9, 1936 |
| MBD-35 | DEC. 11, 1935 |
| AS-35 | SEPT 6, 1935 |
| E-5 | JULY 12, 1935 |
| B-T-71-R | DEC. 21, 1936 |
| S-27 P.C. 1 | APRIL 1, 1936 |
| S-27 P.C. 3 | JAN. 1, 1936 |
| I-1 2 3 4 & 5 | JAN. 1, 1936 |
| I-8 C.B. 1-2 & 2-2 | NOV. 12, 1935 |
| I-8 C.B. 2-3 & 2-4 | JULY. 1, 1936 |
| I-8 C.B. NO. 5 | NOV. 12, 1935 |
| I-8 I NO. 1 | JAN. 1, 1936 |
| G-7.07 | OCT. 1933 |
| B-T-50-70-71E NO. 1 | OCT. 1933 |
| B-T-70-71E NO. 1 | OCT. 1933 |
| B-T-71E NO. 1 | OCT. 1933 |
| T-90E NO. 1 | AUG. 1933 |
| L-1 | JULY 10, 1936 |

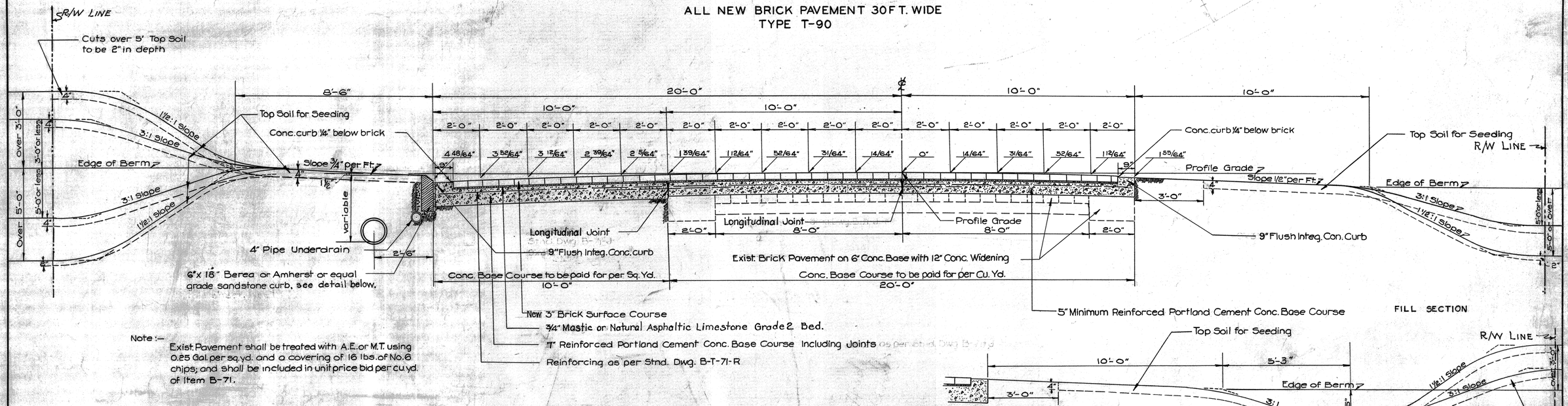
| | |
|---|---|
| PLAN | 1" = 50' |
| PROFILE VERTICAL | 1" = 5' |
| PROFILE HORIZONTAL | 1" = 50' |
| CROSS SECTIONS | 1" = 5' |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT S NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RS UNIT 1<br>604 D<br>281 RE. UNIT 1 | 1937 |

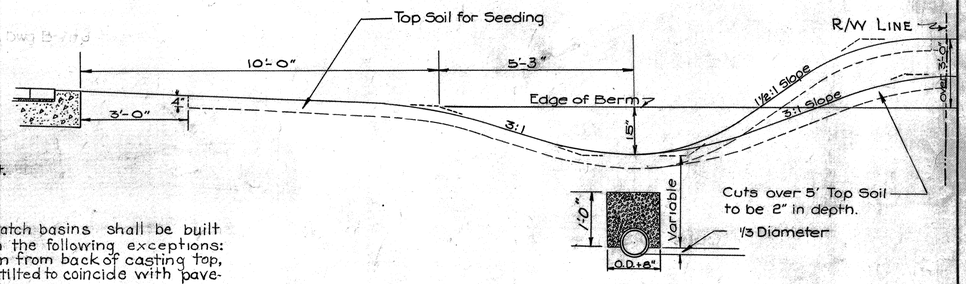
2
48

HURON COUNTY
S. H. 290 SEC. O-PT. N & G-I PT.

# TYPICAL SECTION
## ALL NEW BRICK PAVEMENT 30 FT. WIDE
## TYPE T-90




FILL SECTION

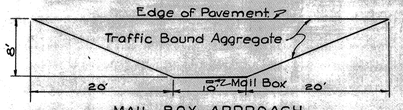



CUT SECTION

Note :— Exist. Pavement shall be treated with A.E. or M.T. using 0.25 Gal. per sq. yd. and a covering of 16 lbs. of No. 6 chips; and shall be included in unit price bid per cu. yd. of Item B-71.

SCHEDULE OF STATIONING

STA. 30+00 TO STA. 128+50 9850.00 Lin. Ft.




MAIL BOX APPROACH

3.0 cu. yds. of Aggreg. required for each box

Note:— After completion of shoulders the Mail Box Approaches are to be excavated to a depth of 4" and 4" of aggregate placed. The cost of resetting the boxes according to sketch above, and the cost of excavation to be included in Unit price bid for "Aggregate for T. B. Approaches."

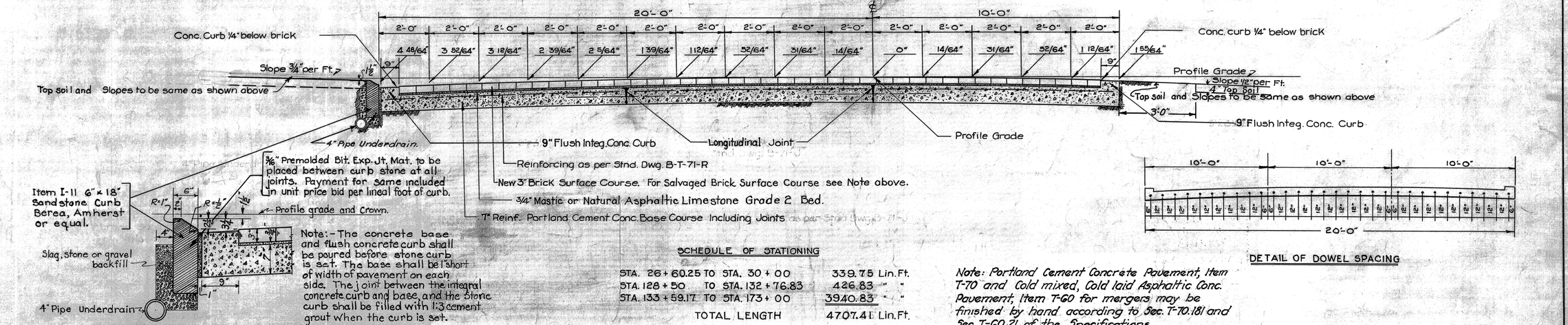
Note:— The longitudinal joint between adjacent lanes poured in separate operations shall be a key joint with American Hook bolts or equal spaced 5'-0" center to center as detailed on sheet No. 2A

Note:— Top soil is to be placed according to typical Sections, augmented by Supplemental Specifications I-21G.

Note:— No tree, even though marked for removal, shall be removed until specifically marked by the Engineer.

Note:— I-8 C.B. No. 5 Standard No. 5 Catch basins shall be built according to standard drawing with the following exceptions: the back of sandstone curb shall be 1" in from back of casting top, instead of flush; and casting shall be tilted to coincide with pavement crown.

Note:— Total of 3926. Sq. Yds. of Brick salvaged surface course to be laid where directed by the Engineer. Depth of header and flush curbs, and elevation of base shall be adjusted to fit the difference in thickness between the new 3" and the salvaged brick surface courses.




DETAIL OF SANDSTONE CURB
SCALE 1"=1'-0"

Note:— The concrete base and flush concrete curb shall be poured before stone curb is set. The base shall be 1" short of width of pavement on each side. The joint between the integral concrete curb and base, and the stone curb shall be filled with 1:3 cement grout when the curb is set.

SCHEDULE OF STATIONING

| | | |
|---|---|---|
| STA. 26+60.25 TO STA. 30+00 | 339.75 | Lin. Ft. |
| STA. 128+50 TO STA. 132+76.83 | 426.83 | " " |
| STA. 133+59.17 TO STA. 173+00 | 3940.83 | " " |
| TOTAL LENGTH | 4707.41 | Lin. Ft. |



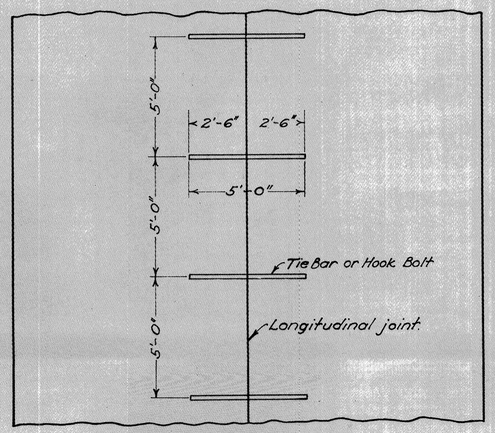

DETAIL OF DOWEL SPACING

*Note: Portland Cement Concrete Pavement, Item T-70 and Cold mixed, Cold laid Asphaltic Conc. Pavement, Item T-60 for mergers may be finished by hand according to Sec. T-70.181 and Sec. T-60.21 of the Specifications.*

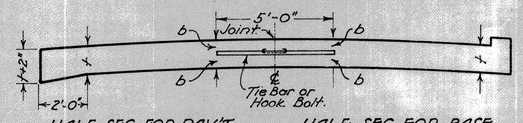
| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR | 2-A |
|---|---|---|---|---|
| 10 | OHIO | 52 RE UN 1 GG4-D 28-1 RE UN 1 | 1936 | 48 |

HURON COUNTY
S.H. 290 SEC. O (Pt.) N & G-1 (Pt.)

# LONGITUDINAL JOINTS

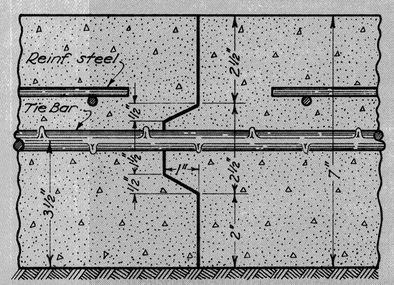



HALF PLAN FOR PAV'T. HALF PLAN FOR BASE




HALF SEC. FOR PAV'T. HALF SEC. FOR BASE

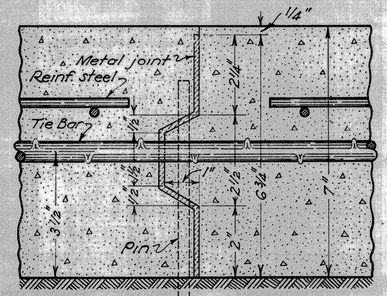
## KEY JOINT




DETAIL OF JOINT

NOTE:- This joint is designed for 7" slab. When a greater or less thickness is used the joint shall be proportionally designed. Other deformations may be used if approved by the engineer.

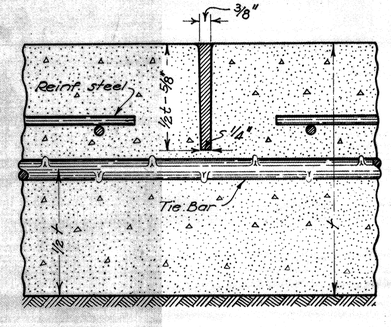
## METAL JOINT




DETAIL OF JOINT

NOTE:- This joint is designed for 7" slab. When a greater or less thickness is used the joint shall be proportionally designed to extend within 1/4" of the surface of the slab. Other deformations may be used if approved by the engineer.

## IMPRESSED JOINT




DETAIL OF JOINT

DESCRIPTION:- This joint shall be formed by impressing a device or bar into the newly deposited concrete before initial setting. The device or bar shall be removed as soon as the concrete is in such condition as to preclude of distortion or injury to the concrete. The groove thus formed shall be on the center line unless otherwise shown on the plans, and of the dimensions as detailed above. After the joint is formed it must be protected from dirt and foreign matter until the filler is placed. The joint shall be filled to the surface with filler as per supplemental specification No. 78, in lieu of the requirements under supplemental specifications Nos. B-171.06 & T-171.07. The filler shall be handled in such a manner that it will be confined to the joint and in nowise mar the surface.

**GENERAL:-** Longitudinal joints shall be used when called for on the typical section, and shall be constructed as shown on this sheet.

The longitudinal joint between adjoining slabs poured in separate operations shall be a key joint with American hook bolts or equal, spaced 5'-0" center to center.

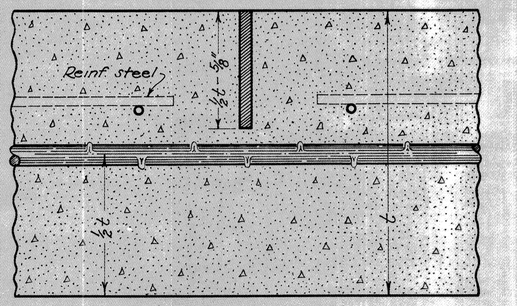
Tie bars to be 1/2 inch round, deformed bars placed 5 foot centers extending across joint.

A satisfactory device shall be used to hold the tie bars in proper position.

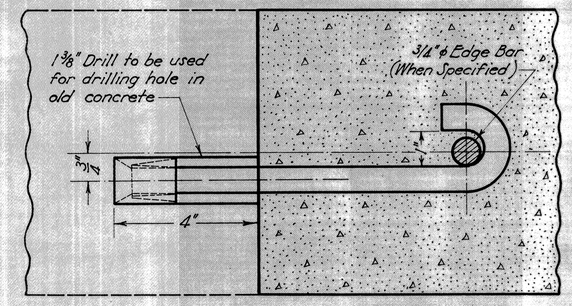
Key joints used in part width construction shall be painted with two coats of Filler as per Supplemental Specification No. 78 before the adjoining slabs are poured.

The Metal, Key, and Premolded Joints shall not be edged.

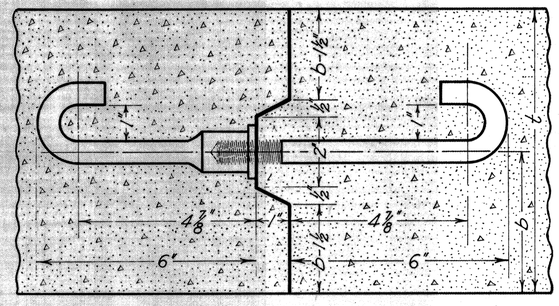
## PREMOLDED JOINT



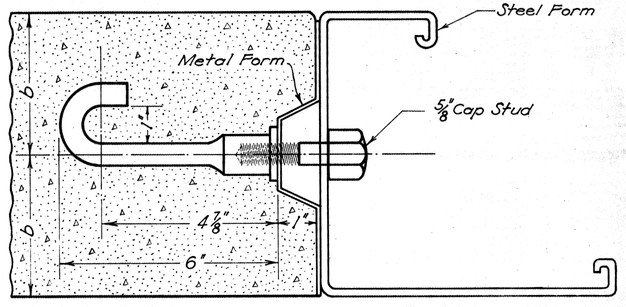

## EXPANSION BOLT JOINT

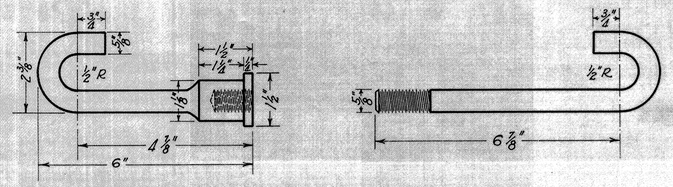



## HOOK BOLT AND KEY JOINT



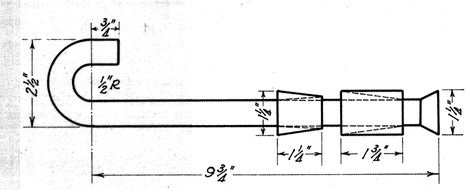

## ACCEPTABLE METHOD OF FORMING JOINT




INSERT J BOLT

HOOK BOLT DETAIL



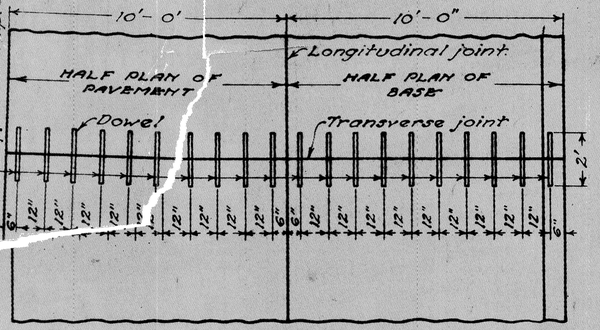

EXPANSION BOLT DETAIL

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT | FISCAL YEAR | 2-B |
|---|---|---|---|---|
| 10 | OHIO | 52 RE UN 1 GG4-D 281 RE UN 1 | 1936 | 48 |

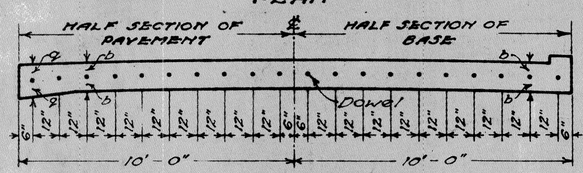
HURON COUNTY
S.H.290 SEC.O-(Pt.), N, & G-1 (Pt.)

# TRANSVERSE JOINTS

## DOWEL SPACING

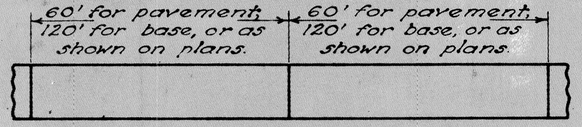



PLAN

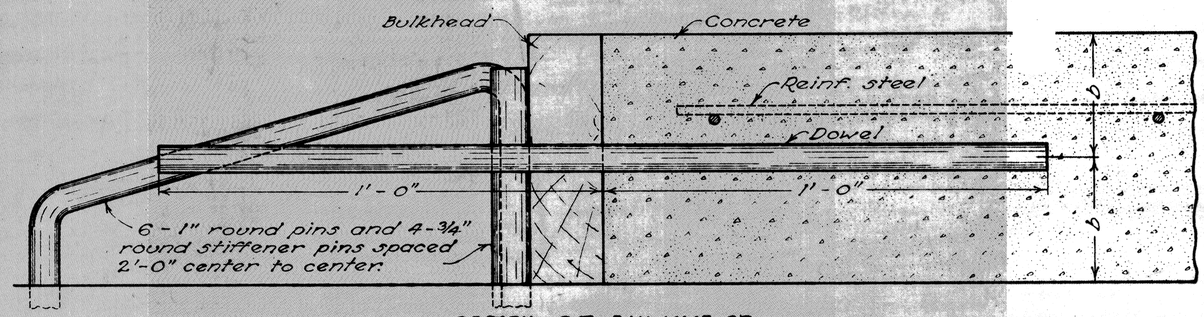



CROSS SECTION

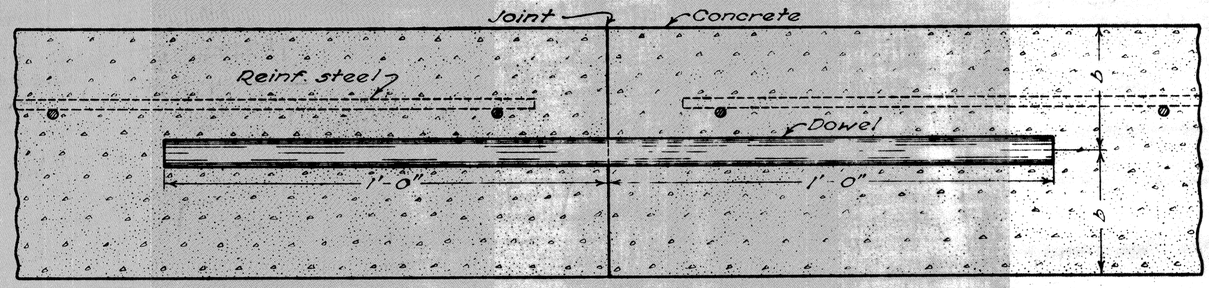
## JOINT SPACING




## CONSTRUCTION JOINT

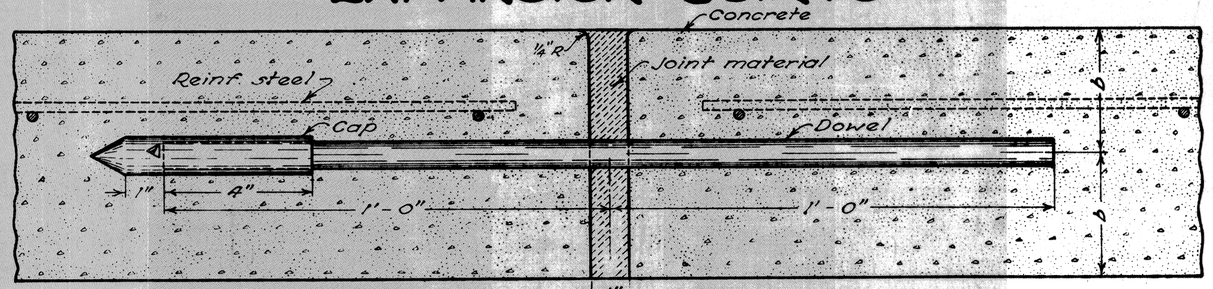



DETAIL OF BULKHEAD

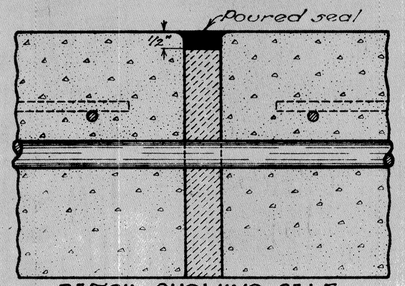



DETAIL OF DOWEL JOINT

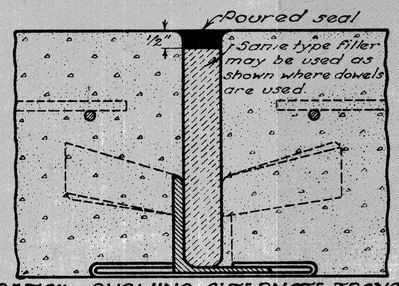
## EXPANSION JOINTS



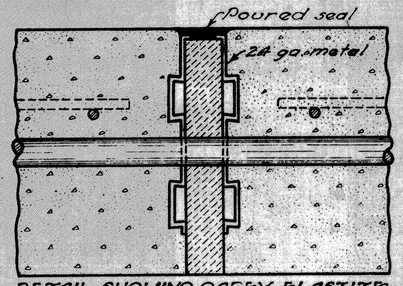

DETAIL SHOWING TRANSFER OF LOAD BY DOWEL




DETAIL SHOWING SELF EXPANDING CORK FILLER




DETAIL SHOWING ALTERNATE TRANSFER OF LOAD DEVICE (TRANSLOAD BASE)




DETAIL SHOWING CAREY ELASTITE NON-EXTRUDING JOINT OR EQUAL

## NOTES

**GENERAL** :- All dowels to be 3/4 inch round smooth bars. The entire dowel shall be greased or one-half of the dowel coated with asphalt (grease or asphalt to be approved by the engineer) to prevent bonding.

All dowels shall be assembled in a unit, (unit to remain in place in base) for either construction or expansion joints, prior to placing and of a unit width not less than the distance between longitudinal joints. Sufficient support shall be provided to hold the dowels accurately perpendicular to the joint, in no case less than five (5) supports to the unit on each side of the joint.

If the width between longitudinal joints varies from 10 feet as shown herewith, the spacing of the dowels will be not greater than 12 inches.

**CONSTRUCTION JOINTS**:- All bulkheads to be constructed to permit dowels to extend through joints.

Care shall be taken in removing bulkheads and placing adjacent concrete to see that dowels are embedded in the concrete without being bent.

**EXPANSION JOINTS**:- To be constructed as shown herewith or as specifically shown on the typical section.

If the premoulded expansion joint material is in two pieces, they shall be cut so that when placed in position their ends shall be closely joined.

All dowel bars shall be equipped with neat fitting metal caps on one end.

Bituminous material for joints requiring a poured seal shall meet the requirements of Supplemental Specification No. 78.

The expansion joints shown are to be considered as alternates and the type of joint to be used shall be optional with the contractor.

The surface width of expansion joints shall be not greater than the width shown on this sheet.

The premoulded expansion joint material used in the Carey Elastite Non-Extruding joint or equal shall meet the requirements of Section M-10.1 of the Material Details.

The joint in monolithic curbs shall be filled with the same type of filler material as is used in the expansion joint.

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| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

4

HURON COUNTY
S.H. 290 SEC. O PT., N & G-I PT.

BEGIN F.A.P. 52 REOPENED UNIT 1
STA. 26+60.25 = STA. 26+59.25 ORIG. F.A.P. 52

BEGIN PROJECT } STA. 26+60.25
BEGIN S.H. 290 SEC. O PT.

NEW YORK CENTRAL R.R.

50°

Sta. 26+61 Remove 28.5 Lin. Ft. of 9" x 3 3/4" Flush Integral Conc. Header

Exist. 15" Tile

Existing 30' Brick Pavement

20'

10'

Note: Marker to be furnished and erected on right by State before acceptance of this project.
Δ = 36° 25'
D = 4° 30'

P.T. 4+30'
25+61.0

Gravel Pit

+79.5 Drive

+56 Drive

+14 Drive

+68 Drive

Barn

Sta 30+00
Remove exist. 12" x 42" V.S.P. at Sta 29+92. Build Std 15" x 64'-3" Pipe Culvert with Std Hdwls Rt & Lt. Connect to C.B. as shown. Excavate channel 15' Rt. and 5' Lt. See Sh. No 38 for details.

F.A. 52 RE. UN. 1

S - 86°-14' - E

STA. 36+00
END SHEET

6'-0" 2'-0" 8'-0" 8'-0" 2'-0" 6'-0"

4" Monolithic Brick with 5" Conc. Base

TYPICAL SECTION OF EXISTING PAVEMENT FROM STA. 26+61 TO STA. 67+40.75

8'-0" 20'-0" 10'-0" 8'-0"

6" Conc. Center Curb

4 3/4" 5 55/64"

7" Conc. Base

3" Brick Surface
3/4" Slag Cushion

TYPICAL SECTION OF PAVEMENT ADJOINING PROJECT STA. 26+61

Superseded by HUR-20-10.51 (1965)

## F.A.P. No. 52 RE. UN. 1
## (A) DRIVES & APPROACHES

| Item No. | Station | Side | Pipe Lin. Ft. 12" | Aggregate For Traffic Bound Appr. CU. YDS. | Pipe Remove & Store Lin. Ft. 10" V.S.P. |
|---|---|---|---|---|---|
| 1-A | 28+79.5 | L | | 3 | |
| 2-A | 31+14 | R | | 3 | 20 |
| 3-A | 31+56 | L | 20 | 3 | 16 |
| 4-A | 31+68 | R | | 3 | |
| | Totals | | 20 | 12 | 36 |

## F.A.P. No. 52 RE. UN. 1
## (D) ROADWAY DRAINAGE

| Item No. | Station From | Station To | Side | Pipe Lin. Ft. 12" | Pipe Outlet Lin. Ft. 12" | Pipe Incl. Agg. Cover Lin. Ft. 10" | Pipe Specials Elbows 12" | Pipe Specials Tees 12"×12" |
|---|---|---|---|---|---|---|---|---|
| 1-D | 25+62 | 26+69 | L | 108* | | | 1 | |
| 2-D | 30+01 | 32+99 | L | 300* | | | | 1 |
| 3-D | 30+03 | 31+99 | R | | 10 | 186 | | |
| 4-D | 32+01 | 34+99 | R | | | 298 | | |
| 5-D | 33+01 | 35+99 | L | 300* | | | 1 | 1 |
| 6-D | 35+01 | 36+00 | R | | | 99 | | |
| | Totals | | | 708 | 10 | 583 | 2 | 2 |

* Incl. 2'×12" Pipe for Connection to C.B.

## F.A.P. No. 52 RE. UN. 1
## (I) CATCH BASINS & INLETS

| Item No. | Station | Side | Catch Basins Std. No. 5 | Catch Basins Std. No. 1-2 | Inlets |
|---|---|---|---|---|---|
| 1-I | 26+70 | L | 1 | | |
| 2-I | 30+00 | L | 1 | | |
| 3-I | 32+00 | R | | 1 | |
| 4-I | 33+00 | L | 1 | | |
| 5-I | 35+00 | R | | 1 | |
| 6-I | 36+00 | L | 1 | | |
| | Totals | | 4 | 2 | |

B.M. Sta. 26+48
Spike in Tel. Pole 29' on Rt.
Elevation 769.55

B.M. Sta. 30+20
Spike in Tel. Pole 37.5 Rt.
Elevation 775.94

B.M. Sta. 35+41
Spike in Tel. Pole 29.5 Rt.
Elevation 786.30

## F.A.P. No. 52 RE. UN. 1
## (P) PAVEMENT REMOVAL

| ITEM NO. | STATION FROM | STATION TO | WIDTH FT. | LENGTH FT. | SQ YDS. |
|---|---|---|---|---|---|
| 1-P | 26+61 | 27+61 | 5' | 100 | 55.6 |
| 2-P | 26+61 | 30+00 | 20 | 339 | 753.3 |
| | TOTAL | | | | 808.9 |

768.60 769.81 771.36 772.91 774.46 775.21 775.93 776.60 777.23 777.82 778.36 778.86 779.33 780.73 780.12 780.45 780.74 781.29

+61

785
780
775
770
765
760

P.I. 779.11

Profile Grade Proposed Pavement

+3.10%

+1.09%

Profile Grade ℄ Exist. Pavement

+1.00% 12" Lt.

+1.00% 10" Rt.

+0.35% 10"

775.00

774.20

777.60

300' V.C.

760.29 760.27 760.46 760.85 761.46 762.27 763.30 764.48 765.80 767.04 768.30 768.60 769.87 771.46 772.91 774.14 775.40 776.56 777.62 778.44 779.28 779.93 780.55 780.92 781.39 781.88 782.42 782.85 783.30 783.61 783.99

+61

22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

F.A.P. No. 52 RE. UN. 1
Sta. 26.61 to Sta. 30+00 Remove 808.9 Sq. Yds. of Exist. Pavement

| | | |
|---|---|---|
| Excav | 474 | Cu. Yds |
| Emb | 364 | " " |
| Emb + 25% | 455 | " " |
| Waste | 19 | " " |

F.A.P. No. 52 RE. UN. 1

| | | |
|---|---|---|
| Excav | 1016 | Cu. Yds |
| Emb | 915 | " " |
| Emb + 25% | 1144 | " " |
| Borrow | 128 | " " |

**NOTE SUPERSEDED BY HUR-20-10.51 (1965)**

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECTS NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>964 D<br>281 RE. UN. 1 | 1937 |

4
48

HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-I PT.

USR 20
Norwalk - by pass enters in at this point.

STA. 36+00 BEGIN SHEET

STA. 52+00 END SHEET

2 Sty. Br. Res.

+10 Drive

+59

+80

+88

+75 Drive

+61

+40

Exist. 6" Tile

Exist. 4" Tile

Exist. 8" Tile

Exist. 5" Tile

+30.95

88°02'

FANNY PENFIELD
MARY E. OSTERLIN

+97 Drive

+78 Drive

+82

Born

Locate to fit field conditions.

2 Sta 47+34
Remove and store exist. 12"x 42" Pipe. Remove exist. Hdwls.
Build Std 10"x 80'-0" Pipe Culvert with No. 2-2 C.B. Rt. & Lt.
Make tile connections as shown. Build Std 15"x 68'-0"
Pipe Culvert with Std Hdwls Rt. & Lt. See Sh. No. 39 for details.

1-A 1-D 1-I 2-D 2-I 2-A 6-D 11-D 9-I 3-I 7-D 1-T 4-I 8-D 9-D 5-I 10-D 8-I 3-D 4-D 3-A 6-I 5-D 4-A 7-I

36 S 86°14' E. 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 S 86°14' E. 52

40' 40' 40' 40'

63' 53'

## F.A.P No. 52 RE. UN. 1
### (I) CATCH BASINS AND INLETS

| Item No. | Station | Side | Catch Basins Std. No. 5 | Std. No. 2-2 | Std. No. 1-2 | Inlets Std. Side D No. 1 |
|---|---|---|---|---|---|---|
| 1 - I | 37+60 | R | | | 1 | |
| 2 - I | 41+50 | L | 1 | | | |
| 3 - I | 44+16 | L | 1 | | | |
| 4 - I | 46+30± | L | 1 | | | |
| 5 - I | 49+00 | L | 1 | | | |
| 6 - I | 51+12 | R | | | | 1 |
| 7 - I | 52+00 | R | | | 1 | |
| 8 - I | 52+00 | L | 1 | | | |
| 9 - I | 43+00 | R | | | 1 | |
| Totals | | | 5 | | 3 | 1 |

## F.A.P No. 52 RE. UN. 1
### (A) DRIVES AND APPROACHES

| Item No. | Station | Side | Remove & Store Lin. Ft. 10" V.S.P. | Aggregate for Tr. Bd. Approaches CU. YDS. |
|---|---|---|---|---|
| 1 - A | 39+10 | Lt. | 18 | 3 |
| 2 - A | 42+75 | Lt. | | 3 |
| 3 - A | 50+97 | Rt. | | 3 |
| 4 - A | 51+78 | Rt. | | 3 |
| Totals | | | 18 | 12 |

## F.A.P No. 52 RE. UN. 1
### (T) TREE REMOVAL

| Item No. | Station | Side | No. | Size | Kind |
|---|---|---|---|---|---|
| 1 - T | 45+57 | L | 1 | 12" | Ash |
| TOTAL | | | 1 | | |

## F.A.P No. 52 RE. UN. 1
### (D) ROADWAY DRAINAGE

| Item No. | Station From | Station To | Side | Pipe Lin. Ft. 12" | 12" Outlets | Pipe Incl. Agg. Cover Lin. Ft. 10" | 8" | Pipe V.S.P. Removed and Stored Lin. Ft. 6" | 8" |
|---|---|---|---|---|---|---|---|---|---|
| 1-D | 36+00 | 37+59 | R | | | 159 | | | |
| 2-D | 41+80 | 42+90 | L | 382 | | | | | 110 |
| 3-D | 47+35 | 51+11 | R | | 20 | 356 | | | 110 |
| 4-D | 50+36 | 52+00 | R | 164 | | | | 164 | |
| 5-D | 51+13 | 51+99 | R | 107 | | 86 | | | |
| 11-D | 37+61 | 42+99 | R | 163 | | | 538 | | |
| Totals | 36+00 | 51+12 | | | 20 | 601 | 538 | 164 | 110 |
| 5-D | 50+36 | 52+00 | R | | | | | 164 | |
| 5-D | 51+12 | 51+62.5 | R | | | | | | |

## F.A.P No. 52 RE. UN. 1
### (D) ROADWAY DRAINAGE (CONT'D)

| Item | Station From | Station To | Side | Pipe - L.F. 8" | 12" | Pipe Specials 12" Elbow | 12" Tees |
|---|---|---|---|---|---|---|---|
| 6-D | 41+50 | 44+15 | L | 10* | 266* | 1 | 1 |
| 7-D | 44+17 | 46+29 | L | | 212 | | 1 |
| 8-D | 46+31 | 47+33 | L | | 104* | | |
| 9-D | 47+35 | 48+99 | L | | 166* | | 1 |
| 10-D | 49+01 | 51+99 | L | | 300* | | 1 |
| 12-D | 39+30 | 41+50 | L | 219 | | | |
| Totals | | | | 219 | 1048 | 1 | 4 |

* Includes 2"x 12" Pipe for C.B. connections

B.M. Sta 40+43
Spike in Tel. Pole 29.5' Rt.
Elev. 787.58

B.M. Sta 45+41
Spike in Tel. Pole 29.5' Rt.
Elev. 781.94

B.M. Sta 51+67
Spike in Tel. Pole 29' Rt.
Elev. 792.52

790
785
780

Profile Grade & Existing Pavement

50'

782.55

+30

-0.85% 8" Pipe Lt.

F.L.El. 782.00

-780.92

12" Pipe Lt. →

-0.64%

+0.35% 10" Pipe Rt.

+0.35% 8" Pipe Rt.

F.L.El. 778.3

+1.67 % 12" Pipe Lt.

F.L.El. 778.00

F.L.El. 782.75

+1.25% 12" Pipe Lt. →

10" Pipe Rt. → +1.30%

On change Order
To be placed upper end
See next Sheet

## F.A.P No. 52 RE. UN. 1

| | | |
|---|---|---|
| Excav | 349 | Cu. Yds |
| Emb | 2007 | " " |
| Emb + 25% | 2509 | " " |
| Borrow | 2160 | " " |

783.99 784.30 784.72 784.98 785.29 785.27 785.34 785.16 785.17 783.06 784.89 784.77 784.67 784.51 784.26 784.12 784.00 783.64 783.70 783.39 783.33 783.34 783.33 785.42 785.68 784.06 784.55 783.23 785.96 786.78 787.63 788.49 789.30

36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECTS NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

5/48

HURON COUNTY
S.H. 290 SEC. O-PT. N. & G-I PT.

Note: Markers to be furnished and erected on right and left by State before acceptance of this project.

END F.A.P. No. 52 RE. UN. 1
BEGIN F.A.P. No. 664-D
STA. 67+38. = STA. 67+37. ORIG. F.A.P. 52.)

F.A. 52 RE. UN. 1

## (D) ROADWAY DRAINAGE (CONT'D)

| Item | Station From | Station To | Side | 12" Pipe Under Rd. Appr. | 12" Pipe Lin. Ft. | Pipe Specials Tees 12"x12" | Tees 12"x10" |
|---|---|---|---|---|---|---|---|
| 10-D | 52+01 | 55+49 | L | | 350* | 1 | |
| 11-D | 55+51 | 59+01 | L | | 350 | | |
| 12-D | 59+19.5 | 62+29 | L | | 310 | | |
| 13-D | 62+31 | 64+99 | L | | 270* | 1 | |
| 14-D | 65+01 | 67+11 | L | | 210 | | |
| 15-D | 67+11 | 67+38 | L | 25 | | | 1 |
| Totals for F.A.P 52 RE. UN. 1 | | | | 25 | 1490 | 2 | 1 |
| 15-D | 67+38 | 67+71 | L | 31 | | | 1 |
| 16-D | 67+71 | 67+99 | L | | 30* | 1 | |
| Totals for F.A.P. No. 664 D | | | | 31 | 30 | 1 | 1 |
| Grand Totals | | | | 56 | 1520 | 3 | 2 |

* Includes 2-12" Pipe for connection to C.B.

End of L.A. for Norwalk by pass

(3) Sta 59+18.5
Remove exist 12" x 44.5 pipe and Hdwls. Build Std 24" x 60'-3" Pipe Culvert with Std Hdwl Lt and Std No. 2-3 C.B. on Rt. Connect to C.B at Lt curb as shown. Connect Exist 8" field tile to " 2-3 C.B on Rt. Excavate channel 10' Lt. See Sh. No. 38 for details.

Construct Aggregate for Tree Aeration

Exist 4" Tile to remain

Exist 4" Tile

Exist 4" Tile

New C.B.

Exist 8" Tile

Exist 15" Tile

9"ø C.I.

18" Tile

Special ditch - See X-Sections

Cherry and Apple Orchard

+50 Drive

+86 Drive

+46

+12 Dr.

+73 Hedge

+74

+40.75

+13.96

P/L

STA. 52+00 BEGIN SHEET

STA. 68+00 END SHEET

END SECTION "O" — BEGIN SECTION "N"

Gas Sta.

Barn

1½ Sty. Fr. Res.

JOHN & MARY KLUDING #12

J.E. & MARGARET HAFNER

JOE & ANNA SALYI

MARY OSTERLIN

MARY SHIPMAN

Sta. 67+40 to E. Coolin Road

Construct Aggregate for Tree Aeration

## (I) CATCH BASINS AND INLETS

| | Item No. | Station | Side | Catch Basins Std. No. 1-2 | Std. No. 5 | Std. #5 Mod. | Inlets Std. Side D No. 1 |
|---|---|---|---|---|---|---|---|
| F.A.P. No. 52 RE. UN. 1 | 1-I | 55+00 | R | / | | | |
| | 2-I | 55+50 | L | | / | | |
| | 3-I | 59+18.5 | L | | | / | |
| | 4-I | 62+30 | L | | / | | |
| | 5-I | 65+00 | L | | / | | |
| | 6-I | 66+01 | R | | | | / |
| F.A.P. 664-D | 7-I | 67+25 | L | / | | | |
| | 8-I | 67+55 | L | / | | | |
| | 9-I | 67+83 | R | / | | | |
| | 10-I | 68+00 | L | | / | | |
| Totals | | | | 4 | 4 | / | / |
| F.A.P. No. 52 RE. UN. 1 | | | | 2 | 3 | / | / |
| F.A.P. No. 664-D | | | | 2 | / | | |

B.M. Sta. 56+77.5
Spike in Tel. Pole 29' Rt.
Elev. 796.62

## (A) DRIVES AND APPROACHES

| Item No. | Station | Side | Pipe Lin. Ft. 12" | Aggregate For Tr. Bound Approaches CU. YDS. | Remove & Store Lin. Ft. V.S.P. 10" | Remove & Store Lin. Ft. C.M.P. 10" |
|---|---|---|---|---|---|---|
| 1-A | 54+12 | L | | 3 | 16 | |
| 2-A | 58+50 | L | 20 | 3 | 16 | |
| 3-A | 65+86 | R | | 3 | | |
| 4-A | 67+40.75 | R | | 5 | | |
| 5-A | 67+40.75 | L | | 5 | | 46 |
| Totals | | | 20 | 19 | 32 | 46 |
| F.A.P. No. 52 RE. UN. 1 | | | 20 | 14 | 32 | 20 |
| F.A.P. No. 664-D | | | | 5 | | 26 |

## (D) ROADWAY DRAINAGE

| Item No. | Station From | Station To | Side | Pipe 12" Under 15" Rd. Appr. Outlet | Pipe Incl. Agg Cover Lin. Ft. 10" | Pipe Incl. Agg Cover Lin. Ft. 12" | Remove & Store Lin. Ft. Pipe 6" | Remove & Store Lin. Ft. Pipe 12" |
|---|---|---|---|---|---|---|---|---|
| 1-D | 52+01 | 54+99 | R | | | 298 | 174 | |
| 2-D | 55+01 | 59+01 | R | | | 400 | 174 | |
| 3-D | 62+10 | 66+00 | R | 345 10 | | 350 | | |
| 4-D | 65+56 | 67+80 | R | 327 | | | 224 | |
| 5-D | 66+02 | 67+12 | R | 285 | | 110 | | |
| 6-D | 67+12 | 67+38 | R | 26 | | 330 | | |
| 7-D | 67+25 | 67+12 | L | 210 | | 20 | | |
| TOTAL FOR F.A.P No. 52 RE. UN. 1 | | | | 26 10 | 20 | 1188 | 174 | 224 |
| 6-D | 67+38 | 67+82 | R | 44 | | | | |
| 8-D | 67+55 | 67+52 | R | 70 | | 20 | | 70 |
| 9-D | 67+84 | 68+00 | R | 60 | | 16 | | 60 |
| 10-D | 67+25 | | L | | | 20 | | |
| TOTAL FOR F.A.P No. 664-D | | | L | 44 | | 20 | 16 | |
| GRAND TOTALS | | | | 70 10 | 40 | 1204 | 174 | 224 |

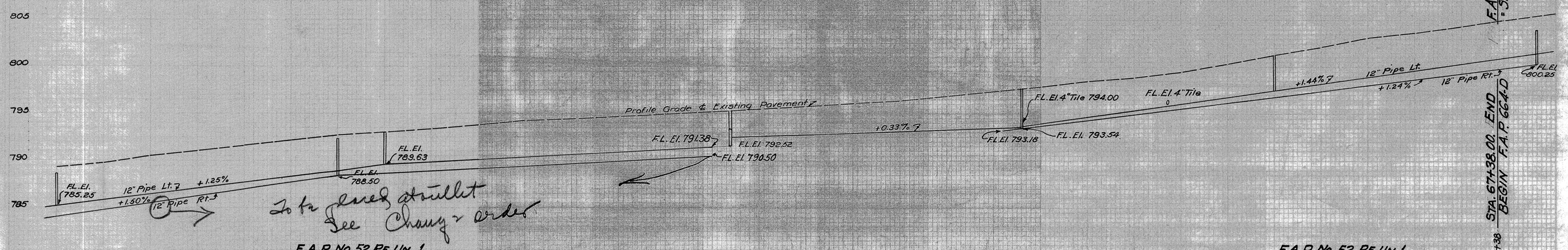
B.M. Sta. 66+76
N.W. Cor. of Gas Pump Platf.
Elev. 804.43

F.A.P. No. 52 RE. UN. 1 = Sta. 67+37 ORIG. F.A.P. 52

END F.A.P. 664-D

STA. 67+38.00 BEGIN F.A.P. 664-D

F.A. 664-D




F.A.P. No. 52 RE. UN. 1

| | | |
|---|---|---|
| Excav. | 954 | Cu. Yds |
| Emb | 973 | " " |
| Emb + 25% | 1216 | " " |
| Borrow | 262 | " " |

F.A.P. No. 52 RE. UN. 1

| | | |
|---|---|---|
| Excav | 138 | Cu. Yds |
| Emb | 1218 | " " |
| Emb + 25% | 1522 | " " |
| Borrow | 1384 | " " |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. Un. 1 | 1937 |

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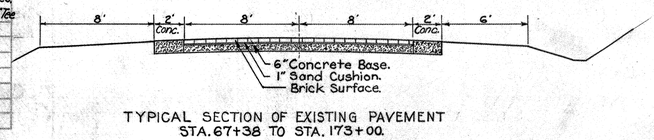
48

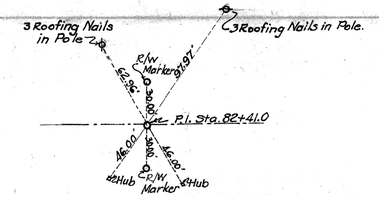
HURON COUNTY
S.H. 290 SEC. O-P.T., N. & G-I P.T.

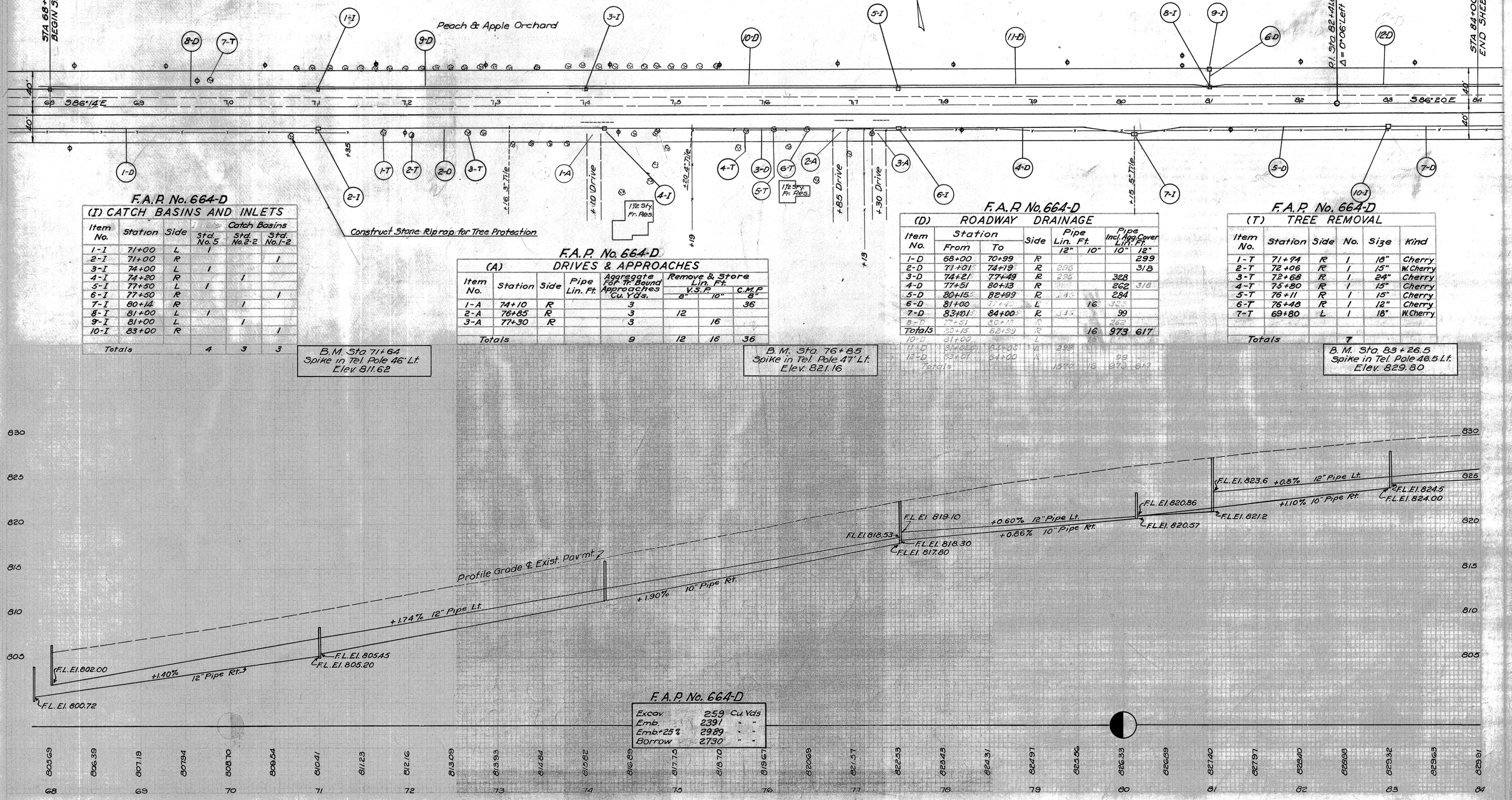
## F.A.P. No. 664-D
### (D) ROADWAY DRAINAGE (CONT'D)

| Item | Station From | Station To | Side | Pipe 12" | P.S.PEC 12"x12"Tee |
|---|---|---|---|---|---|
| 8-D | 68+01 | 70+99 | L | 300* | 1 |
| 9-D | 71+01 | 73+99 | L | 300* | 1 |
| 10-D | 74+01 | 77+49 | L | 350* | 1 |
| 11-D | 77+51 | 80+99 | L | 348 | |
| 12-D | 81+01 | 84+00 | L | 299 | |
| Totals | | | | 1597 | 3 |




TYPICAL SECTION OF EXISTING PAVEMENT
STA. 67+38 TO STA. 173+00.




## F.A.P. No. 664-D
### (I) CATCH BASINS AND INLETS

| Item No. | Station | Side | Catch Basins Std. No. 5 | Std. No. 2-2 | Std. No. 1-2 |
|---|---|---|---|---|---|
| 1-I | 71+00 | L | 1 | | |
| 2-I | 71+00 | R | | | 1 |
| 3-I | 74+00 | L | 1 | | |
| 4-I | 74+20 | R | | 1 | |
| 5-I | 77+50 | L | 1 | | |
| 6-I | 77+50 | R | | | 1 |
| 7-I | 80+14 | R | | 1 | |
| 8-I | 81+00 | L | 1 | | |
| 9-I | 81+00 | L | | 1 | |
| 10-I | 83+00 | R | | | 1 |
| Totals | | | 4 | 3 | 3 |

B.M. Sta 71+64
Spike in Tel. Pole 46' Lt.
Elev 811.62

## F.A.P. No. 664-D
### (A) DRIVES & APPROACHES

| Item No. | Station | Side | Pipe Lin. Ft. | Aggregate for Tr. Bound Approaches Cu. Yds. | Remove & Store Lin. Ft. V.S.P. 8" | V.S.P. 10" | C.M.P. 8" |
|---|---|---|---|---|---|---|---|
| 1-A | 74+10 | R | | 3 | | | 36 |
| 2-A | 76+85 | R | | 3 | 12 | | |
| 3-A | 77+30 | R | | 3 | | 16 | |
| Totals | | | | 9 | 12 | 16 | 36 |

B.M. Sta. 76+85
Spike in Tel. Pole 47' Lt.
Elev. 821.16

## F.A.P. No. 664-D
### (D) ROADWAY DRAINAGE

| Item No. | Station From | Station To | Side | Pipe Lin. Ft. 12" | Pipe Lin. Ft. 10" | Pipe Incl. Hgt. Cover Lin. Ft. 10" | Pipe Incl. Hgt. Cover Lin. Ft. 12" |
|---|---|---|---|---|---|---|---|
| 1-D | 68+00 | 70+99 | R | | | | 299 |
| 2-D | 71+01 | 74+19 | R | 296 | | | 318 |
| 3-D | 74+21 | 77+49 | R | 296 | | 328 | |
| 4-D | 77+51 | 80+13 | R | | | 262 | 318 |
| 5-D | 80+15 | 82+99 | R | 284 | | | |
| 6-D | 81+00 | 83+01 | L | | 16 | 323 | |
| 7-D | 83+01 | 84+00 | R | 345 | | 99 | |
| 8-D | 77+51 | 80+13 | R | | | 262 | |
| Totals | 80+15 | 82+99 | R | | 16 | 973 | 617 |
| 10-D | 81+00 | | L | | | | |
| 11-D | 77+51 | 81+00 | R | 348 | | | |
| 12-D | 83+01 | 84+00 | R | 299 | | | |
| Totals | | | | 1592 | 16 | 973 | 617 |

B.M. Sta. 82+41.0
Spike in Tel. Pole 47' Lt.
Elev. 821.16

## F.A.P. No. 664-D
### (T) TREE REMOVAL

| Item No. | Station | Side | No. | Size | Kind |
|---|---|---|---|---|---|
| 1-T | 71+74 | R | 1 | 18" | Cherry |
| 2-T | 72+06 | R | 1 | 15" | W. Cherry |
| 3-T | 72+68 | R | 1 | 24" | Cherry |
| 4-T | 75+80 | R | 1 | 15" | Cherry |
| 5-T | 76+11 | R | 1 | 15" | Cherry |
| 6-T | 76+48 | R | 1 | 12" | Cherry |
| 7-T | 69+80 | L | 1 | 18" | W. Cherry |
| Totals | | | 7 | | |

B.M. Sta. 83+26.5
Spike in Tel. Pole 46.5 Lt.
Elev. 829.80




## F.A.P. No. 664-D

| | | |
|---|---|---|
| Excav | 259 | Cu Yds |
| Emb. | 2391 | " " |
| Emb*25% | 2989 | " " |
| Borrow | 2730 | " " |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECTS NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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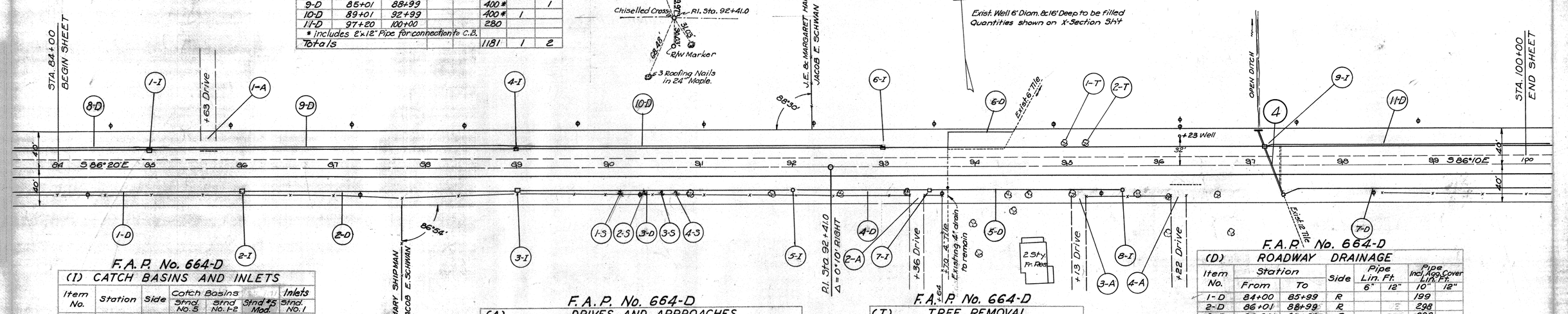
HURON COUNTY
S.H. 290 SEC. O-P.T., N, & G-I P.T.

## F.A.P. No. 664-D
### (D) ROADWAY DRAINAGE (CONT'D)

| Item | Station From | Station To | Side | Pipe 10" | Pipe 12" | Pipe Specials 12" Elbow | Pipe Specials 12"x12" Tee |
|---|---|---|---|---|---|---|---|
| 8-D | 84+00 | 84+99 | | | 101 * | | 1 |
| 9-D | 85+01 | 88+99 | | | 400 * | | 1 |
| 10-D | 89+01 | 92+99 | | | 400 * | 1 | |
| 11-D | 97+20 | 100+00 | | | 280 | | |
| * includes 2-12" Pipe for connection to C.B. | | | | | | | |
| Totals | | | | | 1181 | 1 | 2 |

4 Sta. 97+24.9 Remove exist. headwalls, Remove and store existing 12"x43'-0" Culvert Pipe at Sta 97+32 Remove exist. 12"x74'-6" V.S.P. at Sta. 97+24.9. Build Std. 18"x74'-4½" Pipe Culvert with Std Hdwl Lt. and Std No. 2-2C.B.Et. Connect to 12" field drain on Rt. Connect to C.B. at Lt Curb as shown. See Sh. No. 38 for details.

Exist. Well 6' Diam. & 16' Deep to be filled Quantities shown on X-Section Sh't




## F.A.P. No. 664-D
### (I) CATCH BASINS AND INLETS

| Item No. | Station | Side | Catch Basins Stnd. No. 5 | Stnd No. 1-2 | Stnd #5 Mod. | Inlets Stnd. No. 1 |
|---|---|---|---|---|---|---|
| 1-I | 85+00 | L | 1 | | | |
| 2-I | 86+00 | R | | 1 | | |
| 3-I | 89+00 | R | | 1 | | |
| 4-I | 89+00 | L | 1 | | | |
| 5-I | 92+00 | R | | | | 1 |
| 6-I | 93+00 | L | 1 | | | |
| 7-I | 93+50 | R | | 1 | | |
| 8-I | 95+60 | R | | | | 1 |
| 9-I | 97+18 | L | | | 1 | |
| Totals | | | 3 | 3 | 1 | 2 |

## F.A.P. No. 664-D
### (S) STUMP REMOVAL

| Item | Sta. To Sta. | | Side | 18" Stumps |
|---|---|---|---|---|
| 1 to 45 | 90+00 | 91+00 | Rt. | 4 |
| Total | | | | 4 |

## F.A.P. No. 664-D
### (A) DRIVES AND APPROACHES

| Item No. | Station | Side | Pipe Lin. Ft. 12" | Aggregate for Tr. Bound Approaches Cu. Yds. | Remove & Store Lin. Ft. V.S.P. 10" | Drain 6" | Tile 10" |
|---|---|---|---|---|---|---|---|
| 1-A | 85+63 | L | | 3 | 16 | | |
| 2-A | 93+36 | R | | 3 | | | |
| 3-A | 95+13 | R | | 3 | | | |
| 4-A | 96+22 | R | 20 | 3 | | 16 | 20 |
| Totals | | | 20 | 12 | 16 | 16 | 20 |

## F.A.P. No. 664-D
### (T) TREE REMOVAL

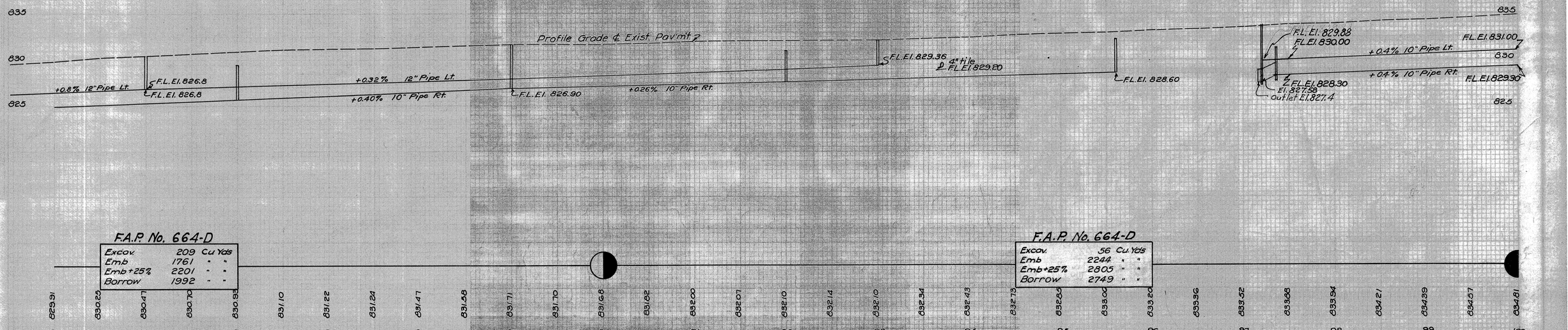
| Item No. | Station | Side | No. | Size | Kind |
|---|---|---|---|---|---|
| 1-T | 94+97 | L | 1 | 10" | Cherry |
| 2-T | 95+21 | L | 1 | 12" | Cherry |
| Totals | | | 2 | | |

## F.A.P. No. 664-D
### (D) ROADWAY DRAINAGE

| Item No. | Station From | Station To | Side | Pipe Lin. Ft. 6" | Pipe Lin. Ft. 12" | Pipe Incl. Mod. Cover Lin. Ft. 10" | Pipe Incl. Mod. Cover Lin. Ft. 12" |
|---|---|---|---|---|---|---|---|
| 1-D | 84+00 | 85+99 | R | | | 199 | |
| 2-D | 86+01 | 88+99 | R | | | 298 | |
| 3-D | 89+01 | 91+99 | R | | | 298 | |
| 4-D | 92+01 | 93+49 | R | | | 148 | |
| 5-D | 93+51 | 95+60 | R | | | 208 | |
| 6-D | 93+70 | 94+42 | L | 88 | | | |
| 7-D | 97+32 | 100+00 | R | | | 268 | |
| 8-D | 84+52 | 85+60 | R | | | 208 | |
| Totals | 93+70 | 94+60 | L | 88 | | 1419 | |
| 10-D | 89+20 | 100+00 | L | | 280 | 520 | |
| 11-D | 97+52 | 100+00 | R | | | 248 | |
| | | | | 88 | 113" | 1425 | |

B.M. 89+66
Spike in Tel. Pole 46' Lt.
Elev. 832.29

B.M. Sta. 96+24
Spike in Tel. Pole 43' Lt.
Elev. 833.23




## F.A.P. No. 664-D

| | | |
|---|---|---|
| Excav. | 209 | Cu Yds |
| Emb | 1761 | " " |
| Emb+25% | 2201 | " " |
| Borrow | 1992 | " " |

## F.A.P. No. 664-D

| | | |
|---|---|---|
| Excav. | 56 | Cu Yds |
| Emb | 2244 | " " |
| Emb+25% | 2805 | " " |
| Borrow | 2749 | " " |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECTS NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY
S.H.290 SEC. O-P T., N, & G-I P.T.

## F.A.P. No. 664-D
### (T) TREE REMOVAL

| Item No. | Station | Side | No | Size | Kind |
|---|---|---|---|---|---|
| 1-T | 111+85 | Rt | 1 | 8" | Box Elder |
| 2-T | 114+90 | Lt | 1 | 8" | Cherry |
| | Totals | | 2 | | |

## F.A.P. No. 664-D
### (A) DRIVES & APPROACHES

| ITEM NO | STATION | SIDE | Pipe Lin. Ft. 12" | Aggregate For T.B. Side Approaches C.U.YDS | Remove & Store LIN. FT. 6" V.S.P. | |
|---|---|---|---|---|---|---|
| 1-A | 111+19 | R | | 3 | | |
| 2-A | 115+00 | L | 20 | 3 | 18 | |
| TOTALS | | | 20 | 6 | 18 | |

(5) Sta 113+49.45
Remove and store exist. 12"x45'-0" Culvert Pipe. Remove exist Hdwls. Build Std 15"x62'-3" Pipe Culvert with Std. Hdwls. Rt & Lt. Connect to C.B. at curb on Lt. Excavate channel Rt and Lt as shown. See Sh No. 39 for details.

Construct Aggregate for Tree Aeration

STA. 100+00 BEGIN SHEET

STA. 116+00 END SHEET

S86°10'E

Transplant 5" Oak to Sta 109+50-32' Rt. of ℄.

JACOB E. SCHWAN
CARRIE A. SMITH
87°43'
P/L +93.5

CARRIE A. SMITH
JOHN TIEN
86°10'
P/L +51.55

+00 Drive
+19 Drive
+34 Drive

2 St'y. Fr. Res.
1½ St'y. Fr. Res.

## F.A.P. No. 664-D
### (I) CATCH BASINS & INLETS

| Item No. | Station | Side | Catch Basins Std No. 5 | Catch Basins Std No. 1-2 | Inlets Std No. 1-M Mod | Inlets Std No. 1 |
|---|---|---|---|---|---|---|
| 1-I | 100+50 | R | | 1 | | |
| 2-I | 100+50 | L | 1 | | | |
| 3-I | 103+50 | R | | 1 | | |
| 4-I | 104+00 | L | 1 | | | |
| 5-I | 106+50 | R | | 1 | | |
| 6-I | 107+00 | L | 1 | | | |
| 7-I | 109+50 | R | | 1 | | |
| 8-I | 110+50 | L | 1 | | | |
| 9-I | 111+30 | R | | | | 1 |
| 10-I | 113+50 | L | 1 | | | |
| TOTALS | | | 5 | 4 | 4 | 1 |

## F.A.P. No. 664-D
### (D) ROADWAY DRAINAGE

| Item No. | Station From | Station To | Side | Pipe Lin. Ft. 10" | Pipe Lin. Ft. 12" | Pipe Incl. Agg. Cover Lin. Ft. 10" | Pipe Incl. Agg. Cover Lin. Ft. 12" |
|---|---|---|---|---|---|---|---|
| 1-D | 100+00 | 100+49 | R | | | 49 | |
| 2-D | 100+51 | 103+49 | R | | 47 | 298 | |
| 3-D | 103+51 | 106+49 | R | | 345 | 298 | |
| 4-D | 106+51 | 109+49 | R | | | 298 | |
| 5-D | 109+51 | 111+29 | R | | | 178 | |
| 6-D | 104+02 | 105+87 | L | | 294 | | |
| Totals | 106+51 | 109+49 | R | | | 1121 | |
| 8-D | 107+02 | 110+48 | L | | 346 | | |
| 9-D | 108+61 | 111+28 | R | | | 218 | |
| | TOTALS | | | | 1032 | 1121 | |

## F.A.P. No. 664-D
### (D) ROADWAY DRAINAGE (CONT'D)

| Item | Station From | Station To | Side | Pipe 10" | Pipe 12" | Pipe Specials 12" Elbow | Pipe Specials 12"x12" Tee |
|---|---|---|---|---|---|---|---|
| 6-D | 100+00 | 100+49 | L | | 51 * | | 1 |
| 7-D | 100+51 | 103+99 | L | | 350 * | | 1 |
| 8-D | 104+01 | 106+99 | L | | 300 * | | 1 |
| 9-D | 107+01 | 110+49 | L | | 350 * | 1 | |
| * includes 2'-12" Pipe for connection to C.B. | | | | | | | |
| Totals | | | | 1051 | | 1 | 3 |

B.M. Sta. 102+64
Spike in Tel. Pole 46.5 Lt.
Elev. 834.82

B.M. Sta. 109+18
Spike in Tel. Pole 46.5 Lt.
Elev. 837.87

B.M. Sta. 115+70
Spike in Tel. Pole 46.5 Lt.
Elev. 841.32

840
835
830

Profile Grade ℄ Exist. Pavmt.
+0.40% Pipe Lt.
+0.40% Pipe Rt.
El. 831.0
El. 829.3
El. 835.2
El. 833.84

## F.A.P. No. 664-D

| | | |
|---|---|---|
| Excav. | 51 | Cu. Yds |
| Emb. | 1963 | " " |
| Emb. +25% | 2454 | " " |
| Borrow | 2403 | " " |

## F.A.P. No. 664-D

| | | |
|---|---|---|
| Excav | 122 | Cu. Yds |
| Emb | 1872 | " " |
| Emb+25% | 2340 | " " |
| Borrow | 2218 | " " |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 834.81 | 835.00 | 835.22 | 835.31 | 835.35 | 835.44 | 835.56 | 835.78 | 836.03 | 836.17 | 836.29 | 836.58 | 836.77 | 836.91 | 837.07 | 837.32 | 837.53 | 837.71 | 837.92 | 838.01 | 838.10 | 838.17 | 838.34 | 838.46 | 838.61 | 838.76 | 839.01 | 839.29 | 839.54 | 839.76 | 840.01 | 840.23 | 840.48 |
| 100 | | 101 | | 102 | | 103 | | 104 | | 105 | | 106 | | 107 | | 108 | | 109 | | 110 | | 111 | | 112 | | 113 | | 114 | | 115 | | 116 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 22 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-I PT.

## F.A.P. No. 664-D
## (P) PAVEMENT REMOVAL

| ITEM NO. | STATION FROM | STATION TO | WIDTH FT. | LENGTH FT. | EXIST. CON. BASE INCL. CURBS SQ. YDS. | TAKE UP, CLEAN & HACK EXIST. BR. SQ. YDS. |
|---|---|---|---|---|---|---|
| 1-P | 128+50 | 132+00 | 20' | 350 | 777.8 | |
| 1-P | 128+50 | 132+00 | 16' | 350 | | 622.2 |
| | | | | | | |
| TOTALS | | | | | 777.8 | 622.2 |

## F.A.P. No. 664-D
## (D) ROADWAY DRAINAGE (CONT'D)

| Item No. | Station From | Station To | Side | Pipe 10" | Pipe 12" | Pipe Specials 12" Elbow | Pipe Specials 12"x12" Tee |
|---|---|---|---|---|---|---|---|
| 5-D | 120+01 | 122+99 | L | 300* | 1 | | |
| 6-D | 123+01 | 125+99 | L | 300* | | 1 | |
| 7-D | 126+01 | 128+99 | L | 300* | | 1 | |
| 8-D | 129+01 | 130+99 | L | 200* | | 1 | |
| 9-D | 131+01 | 132+00 | L | 99 | | | |
| * includes 2x 12" Pipe for connection to C.B. | | | | | | | |
| Totals | | | | 1,199 | 1 | 3 | |

6 Sta. 127+20.8
Remove and store exist 12" Culvert Pipe at Sta. 127+12. Remove exist. Hdwls. Remove exist. 12" Tile at Sta. 127+20.8. Build Std 12"x74°-0" Pipe Culvert with Std No. 2-2 C.B. Rt & Lt. Connect exist tile drain. See Sh. No. 38 for details.

3 Roofing Nails in 12" Apple Tree, 6' Rt. Marker
3 Roofing Nails in pole.
Chiseled Cross
P.I. Sta. 117+41.0
Transplant 10" Elm Tree to 38' from ℄.
R/W Marker
3 Roofing Nails in pole.
STA. 116+00 BEGIN SHEET
Sta. 117+41.0 Δ = 0°03' Left
JOHN TIEN
APPOLINA GORETZKI
P/L +38.85
MATILDA M. PAPE
P/L +39.42
FRED KNOLL
P/L +42
Construct Aggregate for Tree Aeration.
Special Ditch - See X Sections
Existing Tile
Construct Stone Rip rap for Tree Protection.
Transplant 30-2" Norway Spruce Trees to 35' from ℄.
STA. 132+00 END SHEET
1½ Sty. Fr. Res.
2½ Sty. Fr. Res.
+60 Drive
+47 Drive
+08 Drive
+12 Drive
+84 Drive
+33 Drive
+27 Drive
91°30'
92°28'
88°00'
86°00'
S 86°10' E
S 86°13' E
P/L +68.85

## F.A.P. No. 664-D
## (I) CATCH BASINS & INLETS

| ITEM NO | STATION | SIDE | CATCH BASINS Std. #5 | CATCH BASINS Std #2-2 | CATCH BASINS Std #1-2 | INLETS Std # |
|---|---|---|---|---|---|---|
| 1-I | 120+00 | L | 1 | | | |
| 2-I | 123+00 | L | | 1 | | |
| 3-I | 123+00 | L | 1 | | | |
| 4-I | 125+30 | R | | | 1 | |
| 5-I | 126+00 | L | 1 | | | |
| 6-I | 129+00 | L | 1 | | | |
| 7-I | 130+35 | R | | 1 | | |
| 8-I | 131+00 | L | 1 | | | |
| Totals | | | 5 | 2 | 1 | |

## F.A.P. No. 664-D
## (D) ROADWAY DRAINAGE

| ITEM NO. | STATION FROM | STATION TO | SIDE | PIPE LIN. FT. 10" | PIPE LIN. FT. 12" | PIPE INCL. ARCH CON. LIN. FT. 10" | PIPE INCL. ARCH CON. LIN. FT. 12" |
|---|---|---|---|---|---|---|---|
| 1-D | 123+00 | 122+98 | L | | 298 | 16 | |
| 2-D | 125+31 | 127+29 | R | | | 198 | |
| 3-D | 127+31 | 130+34 | R | | 286 | | 304 |
| 4-D | 130+36 | 132+00 | R | | 136 | | 164 |
| 5-D | 126+02.5 | 128+98 | L | | 283 | | |
| Totals | 121+81 | 130+34 | R | | | 214 | 468 |
| 7-D | 129+02.5 | 130+98.5 | L | | 196 | | |
| 8-D | 130+36 | 132+00 | R | | | | 164 |
| 9-D | 131+02.5 | 132+00 | L | | 98 | | |
| Totals | | | | | 1132 | 812 | 468 |

## F.A.P. No. 664-D
## (A) DRIVES & APPROACHES

| ITEM NO | STATION | SIDE | PIPE LIN. FT. 12" | AGG. FOR T.B. SIDE APPR. CU. YDS | REM. & STORE LIN. FT. 6" V.S.P. | REM. & STORE LIN. FT. 10" C.M.P. |
|---|---|---|---|---|---|---|
| 1-A | 116+60 | R | | 3 | | |
| 2-A | 120+27 | L | 20 | 3 | 46 | |
| 3-A | 122+08 | R | 20 | 3 | | 16 |
| 4-A | 124+12 | L | | 3 | 100 | |
| 5-A | 127+84 | L | 20 | 3 | | |
| 6-A | 129+33 | L | | 3 | | |
| 7-A | 130+47 | R | | 3 | | |
| Totals | | | 60 | 21 | 146 | 16 |

## F.A.P. No. 664-D
## (T) TREE REMOVAL

| ITEM NO. | STATION | SIDE | NO | SIZE | KIND |
|---|---|---|---|---|---|
| 1-T | 116+55 | Lt | 1 | 12" | Apple |
| 2-T | 117+24 | Lt | 1 | 10" | Elm |
| 3-T | 119+75 | Lt | 1 | 10" | Peach |
| Total | | | 2 | | |

B.M. Sta 122+10
Spike in Tel. Pole 46 Lt.
Elev 839.28

B.M. Sta 128+25
Spike in Tel. Pole 46.5 Lt.
Elev 839.26

Profile Grade ℄ Exist. Pavmt.
F.L. El. 836.64
F.L. El. 835.68
-0.32% Pipe Lt.
F.L. El. 834.72
F.L. El. 834.1
Pipe Rt. 0.50%
El. 833.13
El. 832.6 Rt
El. 832.45 Lt.
El. 833.76
Pipe Lt. - 0.32%
0.34%
El. 832.10
F.L. El. 833.12
F.L. 832.8
F.L. 831.5
P.C.
200' V.C.
P.T.
P.I.
-0.5%
Profile Grade Prop. Pavement
Sta. 128+50 to Sta. 132+00 Remove 777.8 sq yds. Exist Pvmt.

840 / 835 / 830

38.73 38.58 38.43 38.28 38.22 38.17 38.15 38.15 38.16 38.21 38.27 38.36

840.43 840.80 841.02 840.96 840.84 840.76 840.61 840.47 840.34 840.33 840.17 840.10 839.95 839.80 839.65 839.48 839.32 839.17 839.04 838.90 838.73 838.70 838.60 837.91 837.85 837.72 837.45 837.18 837.03 836.89 836.63

116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132

## F.A.P. No. 664-D

| | | |
|---|---|---|
| Excav | 216 | Cu. Yds |
| Emb | 2038 | " " |
| Emb +25% | 2548 | " " |
| Borrow | 2332 | " " |

| FED. RD. DIST. NO | STATE | FEDERAL AID PROJECT NO.S | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN.1<br>664-D<br>281 RE. UN.1 | 1937 |

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HURON COUNTY
S.H.290 SEC. O-PT. N. & G-I PT.

F.A.P. No. 664-D

F.A.P. No. 281 RE. UN. 1

Sta. 132+76.83 & Sta. 133+59.17. Build 66' Lin Ft. 9'-X 3 3/4" Flush Integral Conc. Header.

PRESENT STRUCTURE DATA
Type: Concrete Beam.
Skew: 1°-00' R.H.F.
Abutments: Concrete Gravity.
Roadway: 30'-0"
Area of Opening 122 Sq. Ft.

BRIDGE LIMITS
STA. 132+95.83
STA. 133+40.17
44.34

STA. 132+00 BEGIN SHEET

STA. 136+82.2 N 8°24' W TO MILAN

S.R. 601

F.A.664-D

NORWALK TWP.

TOWNSEND TWP.

W.J. BURKE
F. RICE

Res.

Res. & Fill. Sta.

+0.5 Drive

+24 Drive

Exist. 4" Tile

Exist. Tile to remain

Exist. 20' Brick Pavement

Construct Aggregate for Tree Aeration

RATTLE SNAKE CREEK

+86 Drive

7 Sta 132+51.4 Build new 15"-48'-0" Pipe culv. on 25° Lt. Fwd. Skew & connect with C.B. on Lt. & Rt.

END F.A.P. No. 664-D
BEGIN F.A.P. No. 281 RE. UN. 1
STA. 136+99 = STA. 0+00 ORIG. F.A.P. 281.

F.A. 281-RE. UN. 1

F.K. KNOLL

END SEC. N-1 BEGIN SEC. G-1

S 1°22' W
STA. 136+99.0

GREENWICH-MILAN TWP. LINE ROAD

MARY A. BARTOW

El. 346

8 STA. 144+65.8
Remove 53' of exist. 34'x2'-0"x45° Con. Slab Structure. Build 24'-X 7'4" Pipe Culvert with Std. Headwall at Lt. Connect to C.B. at Lt. Curb as shown. See Sh. No. 40 for details.
Note: The size of culv. reduced to 24" Pipe due to drainage area being small (4½ Acres).

STA. 144+00 END SHEET

Proposed Channel Change - For details & quantities See Sheet No. 31

Construct Aggregate for Tree Aeration.

RATTLE SNAKE CREEK

S 86°13' E

(P) PAVEMENT REMOVAL

| ITEM NO. | STATION FROM | STATION TO | WIDTH FT. | LENGTH FT. | EXIST. CON. BASE INCL. CURBS SQ. YDS. | TAKE UP, CLEAN & HACK EXIST. BR. SQ. YDS. |
|---|---|---|---|---|---|---|
| 1-P | 132+00 | 132+97.58 | 20 | 97.58 | 216.8 | |
| 1-P | 132+00 | 132+97.58 | 16 | 97.58 | | 173.5 |
| 2-P | 133+29.75 | 148+00 | 20 | | 3267.2 | |
| 2-P | 133+29.75 | 148+00 | 16 | | | 2613.5 |
| TOTALS | | | | | 3484.0 | 2787.0 |
| F.A.P. No. 664-D | | | | | 1037.4 | 829.7 |
| F.A.P. No. 281-RE. UN. 1 | | | | | 2446.6 | 1957.3 |

(I) CATCH BASINS & INLETS

| ITEM NO. | STATION | SIDE | CATCH BASINS STND.# 1-2 | CATCH BASINS STND.# 5 | INLETS STND.# 5 MOD. | |
|---|---|---|---|---|---|---|
| 1-I | 132+40 | R | 1 | | | F.A.P. No. 664-D |
| 2-I | 132+60 | L | | 1 | | |
| 3-I | 133+54 | L | | 1 | | |
| 4-I | 136+30 | L | | 1 | | |
| 5-I | 136+55 | L | 1 | | | |
| 6-I | 137+20 | R | 1 | | | |
| 7-I | 138+50 | L | | 1 | | |
| 8-I | 140+00 | R | 1 | | | |
| 9-I | 141+50 | L | | 1 | | |
| 10-I | 144+66 | L | | | 1 | |
| 11-I | 148+00 | L | | 1 | | |
| 12-I | 148+00 | R | 1 | | | F.A.P. No. 281 RE. UN. 1 |
| TOTALS | | | 5 | 6 | 1 | |
| F.A.P. No. 664-D | | | 2 | 3 | | |
| F.A.P. No. 281 RE. UN. 1 | | | 3 | 3 | 1 | |

F.A.P. No. 664-D
APPROACH SLABS (S)

| ITEM No. | STATION TO STATION | 3" BRICK SURF. & 1ST COURSE | 12" REIN. CONC. APPR. SLAB S.Y. |
|---|---|---|---|
| 1-AS | 132+76.83 | 132+95.83 | 58.1 | 63.3 |
| 2-AS | 133+40.17 | 133+59.17 | 58.1 | 63.3 |
| TOTALS F.A.P. 664-D | | | 116.2 | 126.6 |

F.A.P. No. 281 RE. UN. 1

(T) TREE REMOVAL

| Item No. | Station | Side | No. | Size | Kind |
|---|---|---|---|---|---|
| 1-T | 143+36 | R | 1 | 10" | Walnut |
| 2-T | 144+15 | R | 1 | 8" | Ash |
| TOTAL | | | 2 | | |

Note: Markers to be furnished and erected on right and left by State before acceptance of this project.

B.M. Sta. 139+10 Lt
Spike & Nut in 36" Ash Tree
Elev. 844.01

(D) ROADWAY DRAINAGE

| ITEM NO. | STATION FROM | STATION TO | SIDE | PIPE LIN. FT. 6" | 8" | 12" | DIPE INCL. AGG. COV. LIN. FT. 8" | 12" |
|---|---|---|---|---|---|---|---|---|
| 1-D | 132+00 | 132+39 | R | | | | | 39 |
| 2-D | 136+30 | 136+54 | L | | | 24 | | |
| 3-D | 136+54 | 136+68 | L | | 14 | | | |
| Totals for F.A.P. No. 664-D | | | | | 14 | 24 | | 39 |
| 4-D | 137+20 | South | R | | 180 | | | |
| 5-D | 137+21 | 139+99 | R | | | 278 | | |
| 6-D | 139+85 | North | L | 46 | | | | |
| 7-D | 146+10 | 147+99 | R | | | | | 190 |
| 10-D | 137+20 | South | R | | 180 | | | |
| Totals for F.A.P. No. 281 RE. UN. 1 | | | | 46 | 180 | | 278 | 190 |
| Grand Totals | | | | 46 | 194 | 24 | 278 | 229 |

(A) DRIVES & APPROACHES

| ITEM NO. | STATION | SIDE | AGG. FOR T.B. SIDE. APP'R CU. YDS. | REM. & STORE LIN. FT. CORR M.P. |
|---|---|---|---|---|
| | | | | 8" |
| 1-A | 132+86 | L | 3 | |
| 2-A | 136+05 | L | 3 | 20 |
| 3-A | 136+92 | L | 5 | |
| 4-A | 137+00 | R | 5 | |
| 5-A | 137+40 | L | 20 | |
| 6-A | 139+24 | L | 3 | |
| TOTALS | | | 39 | 20 |
| F.A.P. No. 664-D | | | 11 | 20 |
| F.A.P. No. 281 RE. UN. 1 | | | 28 | |

F.A.P. 664-D
F.A.P. 281 RE. UN. 1

PROPOSED STRUCTURE
Type: Concrete Beam.
Span: 40' (Nominal)
Roadway: 34'-0" (22' Left; 12' Rt. of ℄)
Loading: H-15-33
Skew: 30°00' R.F.
Surface Course: 3" Brick Complete.
Approach Slabs: 19' long; 30' Wide

BRIDGE LIMITS 44.34'
STA. 132+95.83
STA. 133+40.17
+18 & Bk.

+0.38%
+0.90% Pipe Lt. 7
Pipe Lt. 7 -0.32%
Pipe Rt. 7 -0.34%
El. 832.61
El. 831.40
El. 831.25
HIGH WATER EL. 830.5
NOR. WATER EL. 828.5

END F.A.P. 664-D
281 RE. UN. 1
ORIG. F.A.P. No. 281.

STA. 136+99
BEGIN F.A.P. No. 281 RE. UN. 1
= STA. 0+00

F.L. El. 835.5
F.L. El. 837.0
+0.4 Pipe Lt. 7
+0.4 Pipe Rt. 7
F.L. El. 838.2
Profile along ℄ of Reloc.
+0.38% Profile Grade Proposed Pav'mt.
Profile ℄ Exist Pavement
F.L. El. 838.1
+1.2% Pipe Lt. 7
+2.0%
Pipe Rt. 7
P.I. 44.06
F.L. El. 836.7
200' V.C.

(D) ROADWAY DRAINAGE (CONT'D)

| Item No. | Station From | Station To | Side | Pipe Lin. Ft. 12" | 24" | 15" Outlet | 24" Outlet | 12" Grate & Ap. | Pipe Specials 12"x12" Tees | 12"x6" Tees | 12" Elbow | 24"x45° Bend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-D | 132+00 | 132+59 | L | 59 | | | | | | | | |
| 9-D | 132+61 | 132+85 | L | | 24 | | 12 | | | | | 1 |
| 10-D | 133+15 | 133+53 | L | 30 | | 12 | | | | | | |
| 11-D | 133+55 | 136+29 | L | 274 | | | | | | | | |
| 12-D | 136+31 | 136+99 | L | | | | | 68 | | | | |
| Totals for F.A.P. No. 664-D | | | | 363 | 24 | 12 | 12 | 68 | | | | 1 |
| 12-D | 136+99 | 138+49 | L | 52* | | | | 100 | | | | |
| 13-D | 138+51 | 141+49 | L | 298* | | | | | | 1 | 1 | |
| 14-D | 144+67 | 147+99 | L | 334* | | | | | 1 | | | |
| Totals for F.A.P. No. 281 RE. UN. 1 | | | | 684 | | | | 100 | 1 | 1 | 1 | |
| Grand Totals | | | | 1047 | 24 | 12 | 12 | 168 | 1 | 1 | 1 | 1 |

* Includes 2x12" Pipe for connections to C.B.

F.A.P. No. 664-D

| | |
|---|---|
| Excav | 208. Cu. Yds |
| Emb | 2,355. " " |
| Emb+25% | 2944. " " |
| Borrow | 2,736. " " |

F.A.P. No. 281 RE. UN. 1

| | |
|---|---|
| Excav | 2,980. Cu. Yds |
| Emb | 8,429. " " |
| Emb+25% | 10,536. " " |
| Borrow | 7,556. " " |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECTS NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>264-D<br>281 RE. UN. 1 | 1937 |

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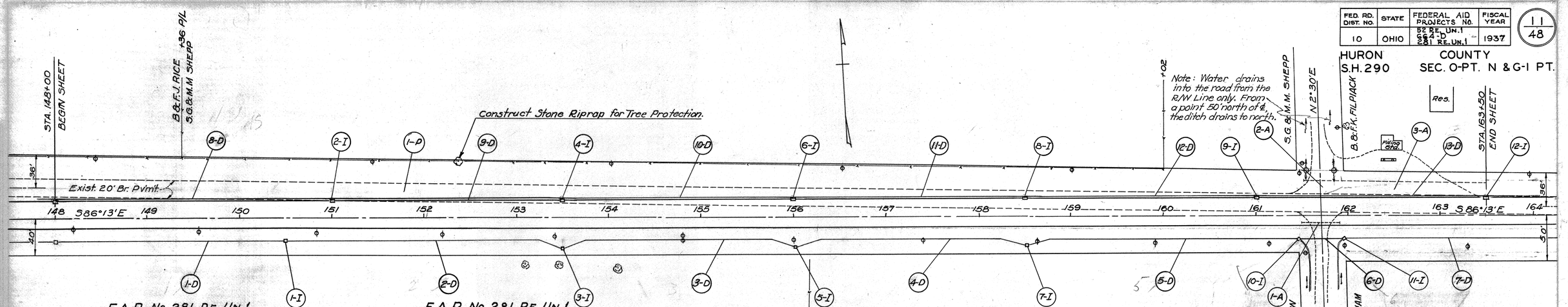
HURON COUNTY
S.H. 290 SEC. O-PT. N & G-I PT.




## F.A.P. No. 281 RE. UN. 1

### (I) CATCH BASINS & INLETS

| ITEM NO. | STATION | SIDE | CATCH BASINS STND.*1-2 | CATCH BASINS STND.*2-2 | INLETS STND.*5 |
|---|---|---|---|---|---|
| 1-I | 150+50 | R | 1 | | |
| 2-I | 151+00 | L | | | 1 |
| 3-I | 153+50 | R | | 1 | |
| 4-I | 153+50 | L | | | 1 |
| 5-I | 156+00 | R | | 1 | |
| 6-I | 156+00 | L | | | 1 |
| 7-I | 158+50 | R | | 1 | |
| 8-I | 158+50 | L | | | 1 |
| 9-I | 161+00 | L | | | 1 |
| 10-I | 161+45 | R | 1 | | |
| 11-I | 161+93 | R | 1 | | |
| 12-I | 163+50 | L | | | 1 |
| TOTAL | | | 3 | 3 | 6 |

## F.A.P. No. 281 RE. UN. 1

### (D) ROADWAY DRAINAGE

| ITEM NO. | STATION FROM | STATION TO | SIDE | PIPE 12" Under Rd. Ap. | PIPE 12" | PIPE INCL. AGG. COV. LIN. FT. 10" | PIPE INCL. AGG. COV. LIN. FT. 12" |
|---|---|---|---|---|---|---|---|
| 1-D | 148+01 | 150+49 | R | | 156 | | 248 |
| 2-D | 150+51 | 153+49 | R | | | | 300 |
| 3-D | 153+51 | 155+99 | R | | | | 252 |
| 4-D | 156+01 | 158+49 | R | | 215 | | 252 |
| 5-D | 158+51 | 161+44 | R | | | | 295 |
| 6-D | 161+46 | 161+92 | R | 46 | 215 | | |
| 7-D | 161+94 | 163+50 | R | | | | 156 |
| 8-D | 150+01 | 150+49 | L | | 215 | | |
| Totals | | | | 46 | | | 1503 |
| 10-D | 150+51 | 153+49 | L | | 215 | | |
| 11-D | 155+01 | 155+99 | L | | 141 | | |
| 12-D | 158+51 | 161+92 | L | | 141 | | |
| 13-D | 161+94 | 163+50 | L | | | | 156 |
| TOTAL | | | | | 1356 | | 1500 |

## F.A.P. No. 281 RE. UN. 1

### (A) DRIVES & APPROACHES

| ITEM NO. | STATION | SIDE | | AGG. FOR T.B. SIDE APP'R. CU. YDS. | REM. & STORE LIN. FT. CORR M.P. 8" | 12" | V.S.P. 10" |
|---|---|---|---|---|---|---|---|
| 1-A | 161+70.8 | R | | 5 | | 40 | |
| 2-A | 161+70.8 | L | | 5 | | | 40 |
| 3-A | 162+50 | L | | 20 | 40 | | 120 |
| TOTAL | | | | 30' | 40 | 40 | 160 |

## F.A.P. No. 281 RE. UN. 1

### (P) PAVEMENT REMOVAL

| ITEM NO. | STATION FROM | STATION TO | W'DTH. FT. | LENGTH FT. | EXIST. CON. BASE INCL. CURBS SQ. YDS. | TAKE UP, CLEAN & HACK EXIST. BR. SQ. YDS. |
|---|---|---|---|---|---|---|
| 1-P | 148+00 | 163+50 | 20 | 1550 | 3444.4 | |
| 1-P | 148+00 | 163+50 | 16 | 1550 | | 2755.5 |
| TOTAL | | | | | 3444.4 | 2755.5 |

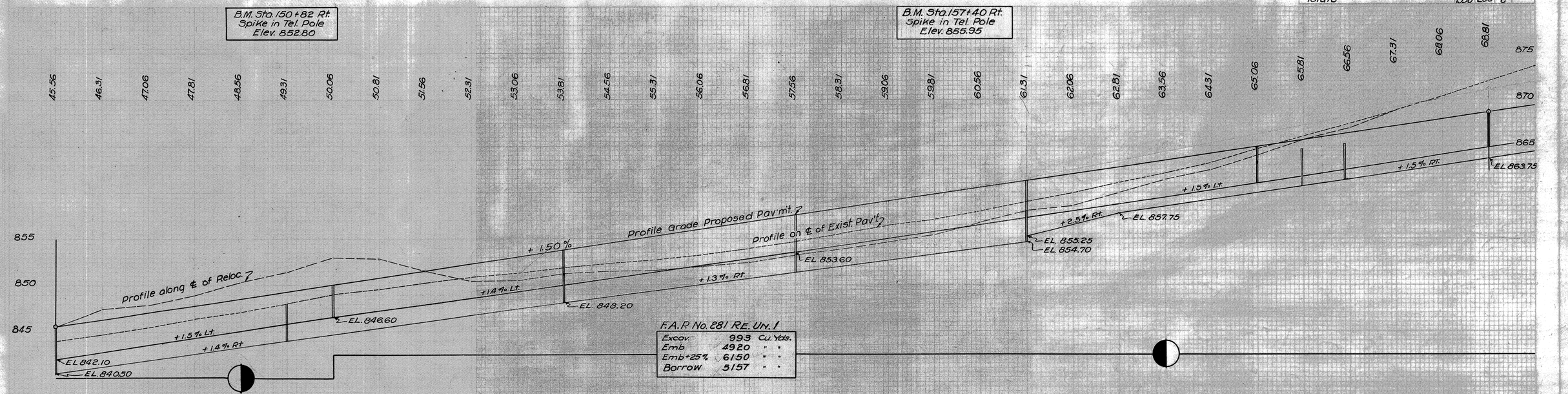
## F.A.P. No. 281 RE. UN. 1

### (D) ROADWAY DRAINAGE (CONTD)

| Item No. | Station From | Station To | Side | Pipe 18" | Pipe 12" Under Rd. Ap. | Pipe 12"x12" Tees | Pipe Spec'ls 12" Elbows |
|---|---|---|---|---|---|---|---|
| 8-D | 148+01 | 150+99 | L | 300* | | 1 | |
| 9-D | 151+01 | 153+49 | L | 250* | | 1 | |
| 10-D | 153+51 | 155+99 | L | 250* | | 1 | |
| 11-D | 156+01 | 158+49 | L | 250* | | 1 | |
| 12-D | 158+51 | 160+99 | L | 250* | | 1 | |
| 13-D | 161+01 | 163+49 | L | 50* | 200 | 1 | |
| * Includes 2-12" Pipe for connection to C.B. | | | | | | | |
| Totals | | | | 1350 | 200 | 6 | |

B.M. Sta. 150+82 Rt.
Spike in Tel. Pole
Elev. 852.80

B.M. Sta. 157+40 Rt.
Spike in Tel. Pole
Elev. 855.95




## F.A.P. No. 281 RE. UN. 1

| | | |
|---|---|---|
| Excav. | 993 | Cu. Yds. |
| Emb | 4920 | " " |
| Emb+25% | 6150 | " " |
| Borrow | 5157 | " " |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | FA RE. UN. 1 284-D 281 RE. UN. 1 | 1937 |

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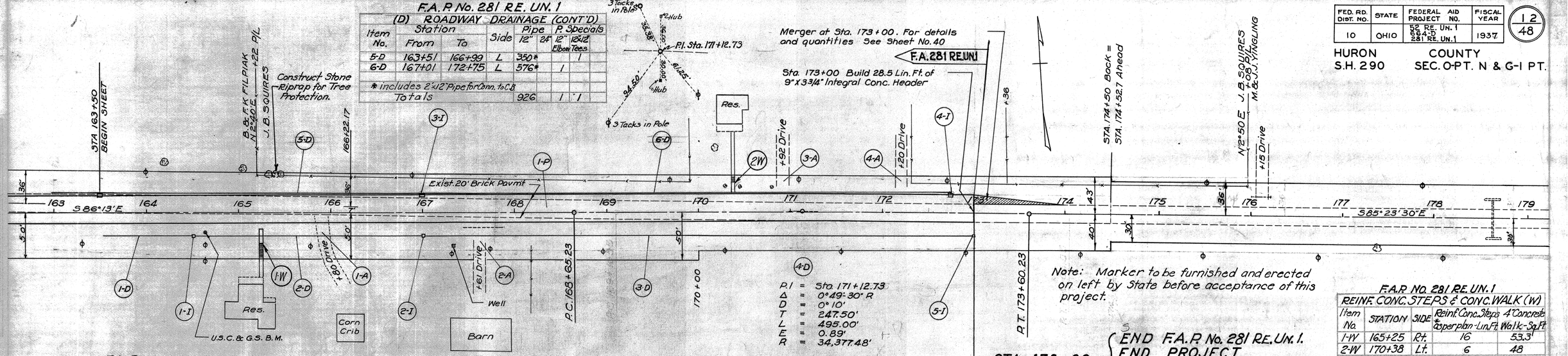
HURON COUNTY
S.H. 290 SEC. O-PT. N & G-1 PT.

## F.A.P. No. 281 RE. UN. 1
(D) ROADWAY DRAINAGE (CONT'D)

| Item No. | Station From | Station To | Side | Pipe 12" | Pipe 24" | P. Specials 12" 12x12 Elbow Tees |
|---|---|---|---|---|---|---|
| 5-D | 163+51 | 166+99 | L | 350* | | 1 |
| 6-D | 167+01 | 172+75 | L | 576* | | 1 |
| * Includes 2-12" Pipe for Conn. to C.B. | | | | | | |
| Totals | | | | 926 | | 1 1 |




Merger at Sta. 173+00. For details and quantities See Sheet No. 40

F.A. 281 RE. UN. 1

Sta. 173+00 Build 28.5 Lin. Ft. of 9"x33¼" Integral Conc. Header

P.I = Sta. 171+12.73
Δ = 0°49' 30" R
D = 0° 10'
T = 247.50'
L = 495.00'
E = 0.89'
R = 34,377.48'

Note: Marker to be furnished and erected on left by State before acceptance of this project.

STA 173+00
END F.A.P. No. 281 RE. UN. 1.
END PROJECT
END S.H. 290 SEC. G-1 PT.
= STA. 36+09.0218, F.A.P. 281

## F.A.P. No. 281 RE. UN. 1
REINF. CONC. STEPS & CONC. WALK (W)

| Item No. | STATION | SIDE | Reinf. Conc. Steps & Concrete * as per plan - Lin. Ft. | Walk - Sq. Ft. |
|---|---|---|---|---|
| 1-W | 165+25 | Rt. | 16 | 53.3 |
| 2-W | 170+38 | Lt. | 6 | 48 |
| Totals | | | 22 | 101.3 |

* For Details see Sheet No. 39.

## F.A.P. No. 281 RE. UN. 1
(I) CATCH BASINS & INLETS

| ITEM NO | STATION | SIDE | CATCH BASINS Std.#5 | Std.#2-2 | Std.#1-2 | INLETS Std.# |
|---|---|---|---|---|---|---|
| 1-1 | 164+50 | R | | | 1 | |
| 2-1 | 167+00 | R | | | 1 | |
| 3-1 | 167+00 | L | 1 | | | |
| 4-1 | 172+75 | L | 1 | | | |
| 5-1 | 173+00 | R | | | 1 | |
| TOTAL | | | 2 | | 3 | |

## F.A.P. No. 281 RE. UN. 1
(D) ROADWAY DRAINAGE

| ITEM NO | STATION FROM | STATION TO | SIDE | PIPE LIN. FT. 10" | PIPE LIN. FT. 12" | PIPE INCL. AGG. COV. LIN. FT. 8" | PIPE INCL. AGG. COV. LIN. FT. 12" | PIPE INCL. FULL AGG. COV. LIN. FT. 8" |
|---|---|---|---|---|---|---|---|---|
| 1-D | 163+50 | 164+49 | R | | | | 99 | |
| 2-D | 164+51 | 166+99 | R | | 248 | | 248 | |
| 3-D | 167+01 | 170+01 | R | | | 300 | 248 | |
| 4-D | 170+01 | 172+99 | R | | | 298 | | 298 |
| 5-D | 163+51 | 172+75 | L | | 576 | | | |
| 6-D | 170+01 | 172+99 | L | | | | | 298 |
| TOTAL | | | | | 824 | 30.0 | 347 | 298 |

## F.A.P. No. 281 RE. UN. 1
(A) DRIVES & APPROACHES

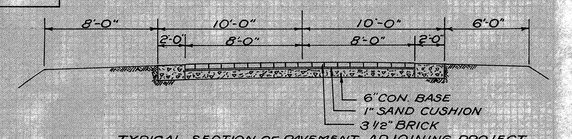
| ITEM NO | STATION | SIDE | PIPE LIN. FT. 12" | AGG. FOR T.B. SIDE APPR. CU. YDS. | REM. & STORE LIN. FT. 8" C.M.P. |
|---|---|---|---|---|---|
| 1-A | 165+80 | R | 20 | 3 | |
| 2-A | 167+61 | R | 20 | 3 | 40 |
| 3-A | 170+92 | L | | 3 | |
| 4-A | 172+20 | L | | 3 | |
| TOTAL | | | 40 | 12 | 40 |

## F.A.P. No. 281 RE. UN. 1
(P) PAVEMENT REMOVAL

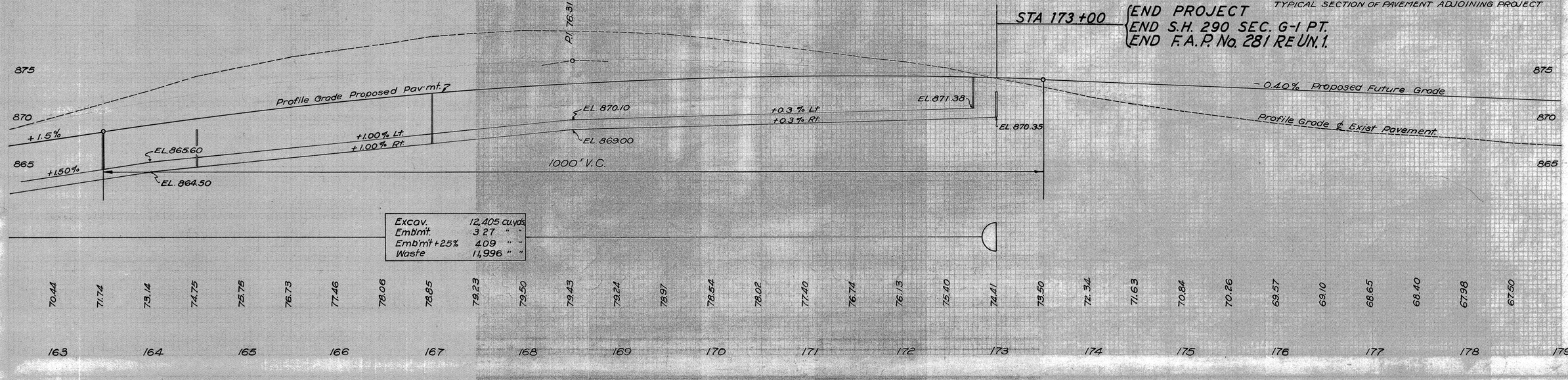
| ITEM NO | STATION FROM | STATION TO | WDTH FT. | LENGTH FT. | EXIST. CON. BASE INCL. CURBS SQ. YDS. | TAKE UP, CLEAN & HACK EXIST. BR. SQ. YDS. |
|---|---|---|---|---|---|---|
| 1-P | 163+50 | 173+00 | 20 | 950 | 2,111.1 | |
| 1-P | 163+50 | 173+00 | 16 | 950 | | 1,688.8 |
| TOTAL | | | | | 2,111.1 | 1,688.8 |

U.S.C. & G.S. B.M.
Sta. 164+63 Rt.
Elev. 878.15

B.M. Sta 174+15
Spike in Tel. pole 43' Rt.
Elev. 874.64




TYPICAL SECTION OF PAVEMENT ADJOINING PROJECT




| | |
|---|---|
| Excav. | 12,405 cu.yds. |
| Emb'm't. | 327 " " |
| Emb'm't +25% | 409 " " |
| Waste | 11,996 " " |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>694-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY.
S.H. 290 SEC. O-PT. N. & G-1 PT.

32+00
780.55

31+50
779.93

31+00
779.28

30+50
778.44

778.36
30+00
777.62

777.23
29+50
776.56

775.93
29+00
775.40

774.46
28+50
774.14

772.91
28+00
772.91

771.36
27+50
771.46

769.91
27+00
769.97

768.60
26+61
768.60

BEGIN F.A.P. No. 52 RE. UN. 1
BEGIN PROJECT
BEGIN S.H. 290 SEC. O-PT.
STA. 26+61

| | Excavation | Embankment | Emb + 25 % | Waste |
|---|---|---|---|---|
| | 474 Cu. Yds. | 364 Cu. Yds. | 455 Cu. Yds. | 19 Cu. Yds. |

| | End Area | | Cu. Yds. | |
|---|---|---|---|---|
| | Cut | Fill | Cut | Fill |
| 32+00 | 28 | 12 | | |
| | | | 32 | 31 |
| 31+50 | 7 | 21 | | |
| | | | 7 | 78 |
| 31+00 | 1 | 63 | | |
| | | | 2 | 135 |
| 30+50 | 1 | 83 | | |
| | | | 1 | 147 |
| 30+00 | 0 | 76 | | |
| | 0 | 96 | | |
| 29+50 | 4 | 37 | | |
| | | | 4 | 123 |
| 29+00 | 33 | 32 | | |
| | | | 34 | 64 |
| 28+50 | 29 | 29 | | |
| | | | 57 | 56 |
| 28+00 | 56 | 26 | | |
| | | | 79 | 51 |
| 27+50 | 83 | 13 | | |
| | | | 129 | 36 |
| 27+00 | 49 | 9 | | |
| | | | 122 | 20 |
| 26+61 | 19 | 11 | | |
| | | | 49 | 14 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52-R.E. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-I PT.

| | | | |
|---|---|---|---|
| Excavation | 1016 | Cu. Yds. | |
| Embankment | 915 | Cu. Yds. | |
| Emb + 25 % | 1144 | Cu. Yds. | |
| Borrow | 128 | Cu. Yds. | |

| STA. | END AREA CUT | END AREA FILL | CU. YDS. CUT | CU. YDS. FILL |
|---|---|---|---|---|
| 39+50 | 33 | 7 | | 16 |
| | | | 44 | |
| 39+00 | 14 | 10 | | 30 |
| | | | 17 | |
| 38+50 | 4 | 22 | | 68 |
| | | | 4 | |
| 38+00 | 0 | 51 | | 92 |
| | | | 0 | |
| 37+50 | 0 | 48 | | 89 |
| | | | 0 | |
| 37+00 | 0 | 48 | | 69 |
| | | | 1 | |
| 36+50 | 1 | 27 | | 34 |
| | | | 28 | |
| 36+00 | 29 | 10 | | 15 |
| | | | 71 | |
| 35+50 | 48 | 6 | | 11 |
| | | | 100 | |
| 35+00 | 60 | 6 | | 10 |
| | | | 128 | |
| 34+50 | 78 | 5 | | 9 |
| | | | 141 | |
| 34+00 | 74 | 5 | | 15 |
| | | | 122 | |
| 33+50 | 58 | 11 | | 16 |
| | | | 104 | |
| 33+00 | 54 | 6 | | 15 |
| | | | 85 | |
| 32+50 | 38 | 10 | | 20 |
| | | | 61 | |

PLATE 2 - CROSS SECTION
THE H. ISSLER CO., COLUMBUS, OHIO

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | | FISCAL YEAR |
|---|---|---|---|---|
| 10 | OHIO | 52 RE. 664-D 281 RE. | UN. 1 UN. 1 | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-PT. N. & G-1 PT.

| Station | Elevation |
|---|---|
| 47+00 | 783.33 |
| 46+50 | 783.34 |
| 46+00 | 783.35 |
| 45+50 | 783.39 |
| 45+00 | 783.70 |
| 44+50 | 783.94 |
| 44+00 | 784.00 |
| 43+50 | 784.12 |
| 43+00 | 784.26 |
| 42+50 | 784.51 |
| 42+00 | 784.67 |
| 41+50 | 784.77 |
| 41+00 | 784.89 |
| 40+50 | 785.06 |
| 40+00 | 785.17 |

Sta 45+57 12" Ash (To Remove)

| | | |
|---|---|---|
| Excavation | 349 | Cu. Yds. |
| Embonkment | 2007 | Cu. Yds. |
| Emb + 25% | 2509 | Cu. Yds. |
| Borrow | 2160 | Cu. Yds. |

| End Area Cut | End Area Fill | Cu. Yds. Cut | Cu. Yds. Fill |
|---|---|---|---|
| 0 | 104 | 0 | 181 |
| 0 | 91 | 0 | 154 |
| 0 | 75 | 0 | 129 |
| 0 | 64 | 0 | 122 |
| 0 | 68 | 1 | 117 |
| 1 | 58 | 3 | 102 |
| 2 | 52 | 3 | 76 |
| 1 | 30 | 14 | 39 |
| 14 | 12 | 41 | 20 |
| 30 | 10 | 46 | 19 |
| 20 | 10 | 37 | 19 |
| 20 | 11 | 53 | 18 |
| 37 | 8 | 69 | 16 |
| 38 | 9 | 72 | 17 |
| 40 | 9 | 68 | 15 |

PLATE 2 - CROSS SECTION
THE H. CASE CO., COLUMBUS, OHIO

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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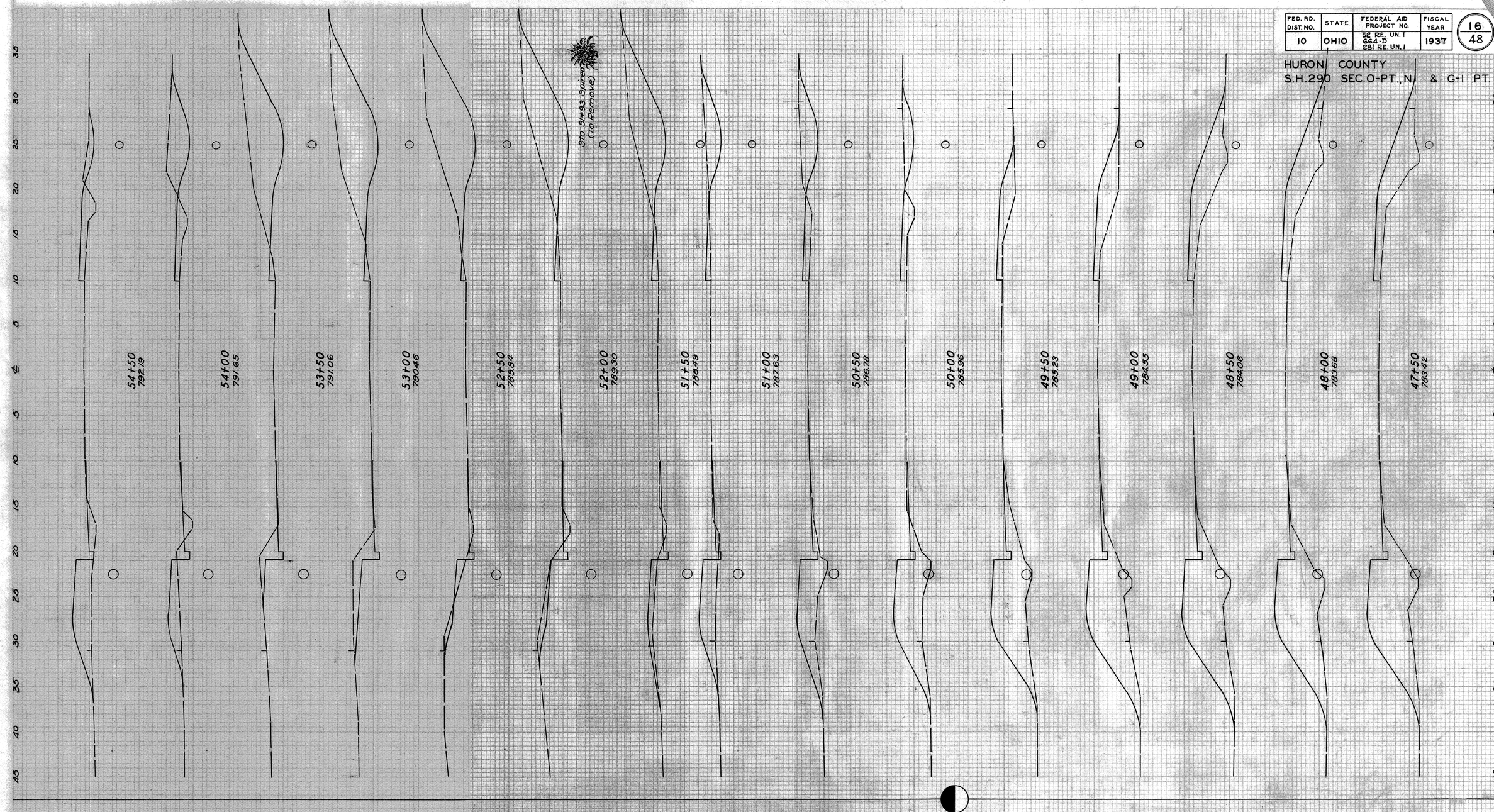
HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-1 PT.




| | 54+50 | 54+00 | 53+50 | 53+00 | 52+50 | 52+00 | 51+50 | 51+00 | 50+50 | 50+00 | 49+50 | 49+00 | 48+50 | 48+00 | 47+50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yds. Fill | 52 | 20 | 2 | 6 | 8 | 15 | 33 | 56 | 82 | 112 | 139 | 166 | 184 | 187 | 190 |
| Cu. Yds. Cut | 25 | 79 | 125 | 131 | 115 | 92 | 55 | 30 | 26 | 10 | 0 | 0 | 0 | 0 | 0 |
| End Area Fill | 35 | 21 | 1 | 1 | 5 | 4 | 12 | 24 | 37 | 52 | 69 | 81 | 98 | 101 | 101 |
| End Area Cut | 5 | 22 | 63 | 72 | 69 | 55 | 44 | 15 | 17 | 11 | 0 | 0 | 0 | 0 | 0 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>934-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-PT, N. & G-1 PT.

| Sta. | End Area Cut | End Area Fill | Cu. Yds. Cut | Cu. Yds. Fill |
|---|---|---|---|---|
| 62+00 797.37 | 4.59 | | 7 | 93 |
| 61+50 796.91 | 4.41 | | 27 | 58 |
| 61+00 796.45 | 25.22 | | 23 | 61 |
| 60+50 796.11 | 0.44 | | 0 | 96 |
| 60+00 795.77 | 0.60 | | 0 | 115 |
| 59+50 795.50 | 0.64 | | 0 | 113 |
| 59+00 795.17 | 0.58 | | 3 | 79 |
| 58+50 794.98 | 3.27 | | 19 | 31 |
| 58+00 794.70 | 18.7 | | 43 | 21 |
| 57+50 794.47 | 28.16 | | 63 | 32 |
| 57+00 794.28 | 40.19 | | 66 | 30 |
| 56+50 793.92 | 31.13 | | 39 | 50 |
| 56+00 793.43 | 11.41 | | 19 | 71 |
| 55+50 793.05 | 9.36 | | 14 | 79 |
| 55+00 792.73 | 6.49 | | 10 | 78 |

Sta 61+23 4" Peach (To Remain)

Sta 58+68 6" Mulberry (To Remain)

| | | |
|---|---|---|
| Excavation | 954 | Cu. Yds. |
| Embankment | 973 | Cu. Yds. |
| Emb. + 25% | 1216 | Cu. Yds. |
| Borrow | 262 | Cu. Yds. |

PLATE 9 - CROSS SECTION
THE H. GOLF CO., COLUMBUS, OHIO

| End Area Cut | End Area Fill | Cu. Yds. Cut | Cu. Yds. Fill |
|---|---|---|---|
| 0 | 28 | | |
| | | 2 | |
| | | 1 | 13 |
| | | 1 | 11 |
| 1 | 17 | | |
| | | 3 | 27 |
| 5 | 42 | | |
| | | 13 | 60 |
| 9 | 23 | | |
| | | 18 | 32 |
| 18 | 26 | | |
| | | 9 | 16 |
| 14 | 32 | | |
| | | 18 | 81 |
| 5 | 55 | | |
| | | 6 | 108 |
| 1 | 62 | | |
| | | 2 | 108 |
| 1 | 55 | | |
| | | 4 | 81 |
| 3 | 33 | | |
| | | 3 | 68 |
| 0 | 40 | | |
| | | 0 | 91 |
| 0 | 58 | | |
| | | 0 | 113 |
| 0 | 64 | | |
| | | 4 | 114 |

Excavation 138 Cu. Yds.
Embankment 1218 Cu. Yds.
Emb+25% 1522 Cu. Yds.
Borrow 1384 Cu. Yds.

45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35

+38 STA. 67+38 BEGIN
END
F.A.P. No. 664-D
F.A.P. No. 52 RE. UN. 1

67+41.0
804.98

STA. 67+40.75 BEGIN S.H. 290 SEC. N
END S.H. 290 SEC. 0-PT.

67+25
804.68

67+00
804.43

Sta 66+41 4" Walnut
(To Remain)

66+50
803.71

66+15
803.24

66+00
803.13

65+50
802.10

Sta 65+18 10" Cherry
(To Remain)

Sta 64+96
6" Cherry
(To Remain)

65+00
801.25

Sta 64+72 6" Cherry
(To Remain)

Sta 64+53 6" Cherry
(To Remain)

64+50
800.29

Sta 64+32 3" Cherry
(To Remain)

64+00
799.48

63+50
798.86

63+00
798.49

62+50
797.85

45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30

HURON COUNTY
S.H. 290 SEC. 0-PT. N. & G-1 PT.

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | S.P. RE. UN. 1 664-D RE. UN. 1 | 1937 |

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| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-I PT.

| End Area Cut | End Area Fill | Cu Yds. Cut | Cu Yds. Fill |
|---|---|---|---|
| 15 | 55 | | |
| | | 22 | 104 |
| 9 | 57 | | |
| | | 17 | 93 |
| 9 | 43 | | |
| | | 22 | 70 |
| 15 | 33 | | |
| | | 25 | 68 |
| 12 | 40 | | |
| | | 14 | 86 |
| 3 | 53 | | |
| | | 8 | 101 |
| 6 | 36 | | |
| | | 11 | 105 |
| 6 | 57 | | |
| | | 6 | 112 |
| 0 | 64 | | |
| | | 0 | 130 |
| 0 | 76 | | |
| | | 0 | 151 |
| 0 | 87 | | |
| | | 0 | 156 |
| 0 | 82 | | |
| | | 0 | 146 |
| 0 | 76 | | |
| | | 0 | 76 |
| 0 | 27 | | |
| | | 0 | 19 |

74+00
813.82

73+50
814.84

73+00
813.93
Sta 72+86 5" Apple (To Remove)
Sta 72+68 24" Cherry (To Remove)

72+50
813.09
Sta 72+06 13" W. Cherry (To Remove)

72+00
812.16
Sta 71+74 8" W. Cherry (To Remove)

7.1+50
811.23

7.1+00
810.41
Sta 70+71 10" Walnut (To Remain)

7.0+50
809.54

7.0+00
808.70

6.9+50
807.94

6.9+00
807.19

6.8+50
806.39

6.8+00
805.69

6.7+60
805.42

Sta 69+80 10" W. Cherry (To Remove)

Sta 67+75 20" Maple (To Remain)

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>684 D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY

S.H. 290, SEC. O-PT. N. & G-I PT

Sta 77+22 14" Hickory (To Remain)

Sta 76+48 12" Cherry (To Remove)

Sta 76+11 15" Cherry (To Remove)

Sta 75+80 15" Cherry (To Remove)

Sta 74+77 18" Maple (To Remain)

Sta 74+54 24" Maple (To Remain)

| | | |
|---|---|---|
| Excavation | 259 | Cu. Yds. |
| Embankment | 2391 | Cu. Yds. |
| Emb + 25% | 2989 | Cu. Yds. |
| Borrow | 2,730 | Cu. Yds. |

| Sta | End Area Cut | End Area Fill | Cu. Yds. Cut | Cu. Yds. Fill |
|---|---|---|---|---|
| 81+50 | 0 | 110 | | |
| | | | 0 | 198 |
| 81+00 | 0 | 104 | | |
| | | | 0 | 194 |
| 80+50 | 0 | 106 | | |
| | | | 0 | 170 |
| 80+00 | 0 | 78 | | |
| | | | 0 | 119 |
| 79+50 | 0 | 51 | | |
| | | | 5 | 90 |
| 79+00 | 5 | 46 | | |
| | | | 13 | 81 |
| 78+50 | 9 | 42 | | |
| | | | 19 | 78 |
| 78+00 | 11 | 42 | | |
| | | | 14 | 77 |
| 77+50 | 4 | 41 | | |
| | | | 10 | 70 |
| 77+00 | 7 | 35 | | |
| | | | 14 | 63 |
| 76+50 | 8 | 33 | | |
| | | | 19 | 53 |
| 76+00 | 12 | 24 | | |
| | | | 16 | 34 |
| 75+50 | 5 | 34 | | |
| | | | 6 | 81 |
| 75+00 | 2 | 53 | | |
| | | | 3 | 102 |
| 74+50 | 1 | 57 | | |
| | | | 15 | 104 |

PART 2 - CROSS SECTIONS
THE H. BAKE CO., COLUMBUS, OHIO

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 58 RE. UN.1<br>664-D<br>281 RE. UN.1 | 1937 |

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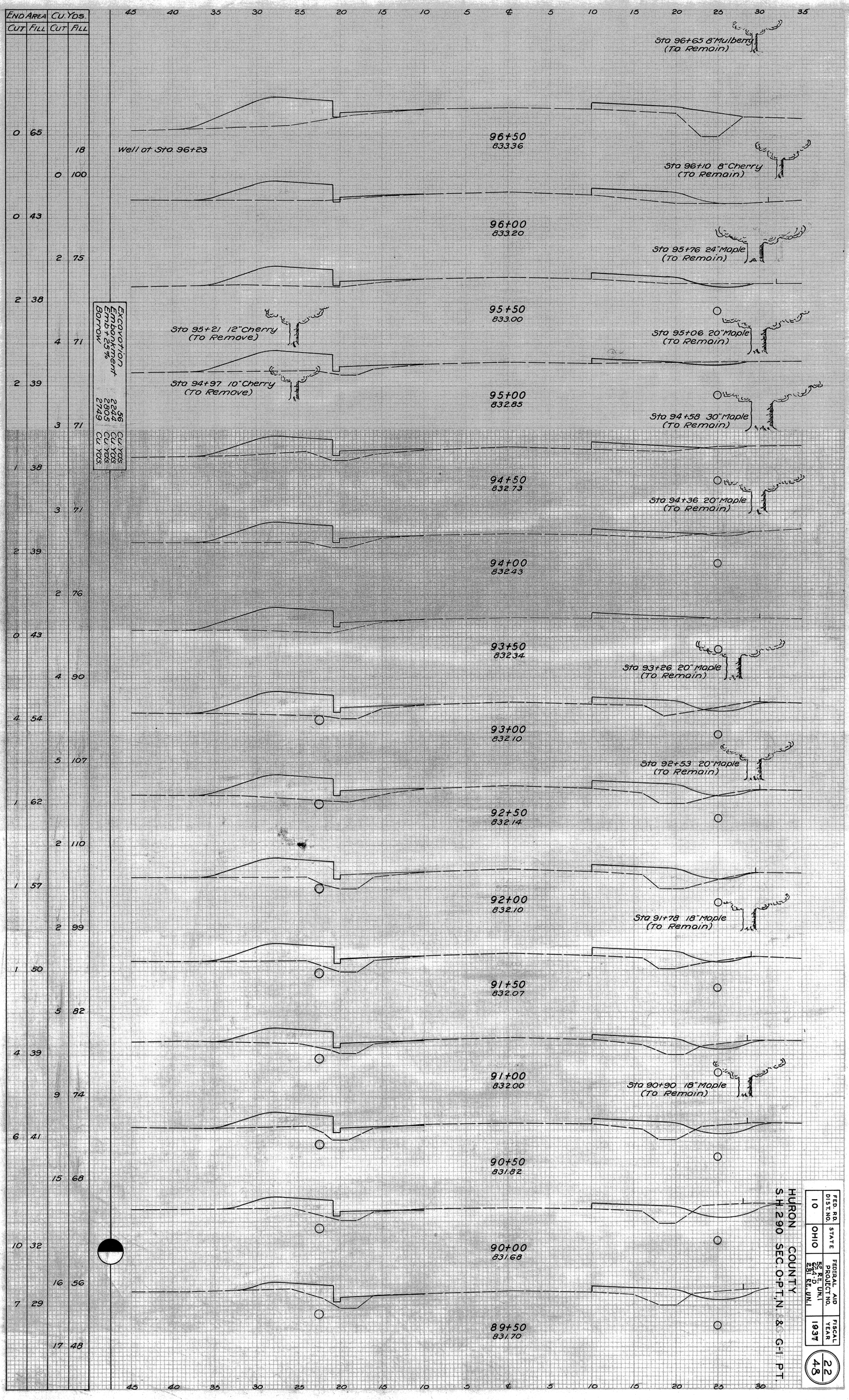
HURON COUNTY
S.H. 290 SEC. O-P.T., N. & G-I P.T.

| | | |



END AREA
CUT FILL
CU. YDS.
CUT FILL
0 65
18
0 100
0 43
2 75
2 38
4 71
2 39
3 71
1 38
3 71
2 39
2 76
0 43
4 90
4 54
5 107
1 62
2 110
1 57
2 99
1 50
5 82
4 39
9 74
6 41
15 68
10 32
16 56
7 29
17 48
Excavation 56 Cu. Yds.
Embankment 2244 Cu. Yds.
Emb+25% 2805 Cu. Yds.
Borrow 2749 Cu. Yds.
45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35
Sta 96+65 8" Mulberry (To Remain)
Well at Sta. 96+23
96+50 833.36
Sta 96+10 8" Cherry (To Remain)
96+00 833.20
Sta 95+76 24" Maple (To Remain)
95+50 833.00
Sta 95+21 12" Cherry (To Remove)
Sta 95+06 20" Maple (To Remain)
Sta 94+97 10" Cherry (To Remove)
95+00 832.85
Sta 94+58 30" Maple (To Remain)
94+50 832.73
Sta 94+36 20" Maple (To Remain)
94+00 832.43
93+50 832.34
Sta 93+26 20" Maple (To Remain)
93+00 832.10
Sta 92+53 20" Maple (To Remain)
92+50 832.14
92+00 832.10
Sta 91+78 18" Maple (To Remain)
91+50 832.07
91+00 832.00
Sta 90+90 18" Maple (To Remain)
90+50 831.82
90+00 831.68
89+50 831.70
HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-1 PT.
FED. RD. DIST. NO. 10
STATE OHIO
FEDERAL AID PROJECT NO. 52 RE. UN.1 66-A-D 281 RE. UN.1
FISCAL YEAR 1937
22
48

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 82 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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48

HURON COUNTY
S.H. 290 SEC. O-P T., N. & G-1 PT.

| STA. | END AREA CUT | END AREA FILL | CU. YDS. CUT | CU. YDS. FILL |
|---|---|---|---|---|
| 104+50 836.17 | 3 | 37 | | |
| | | | 6 | 64 |
| 104+00 836.03 | 4 | 32 | | |
| | | | 6 | 69 |
| 103+50 835.78 | 2 | 43 | | |
| | | | 2 | 92 |
| 103+00 835.56 | 0 | 56 | | |
| | | | 0 | 111 |
| 102+50 835.44 | 0 | 64 | | |
| | | | 0 | 120 |
| 102+00 835.35 | 0 | 66 | | |
| | | | 0 | 125 |
| 101+50 835.31 | 0 | 69 | | |
| | | | 0 | 143 |
| 101+00 835.22 | 0 | 85 | | |
| | | | 0 | 160 |
| 100+50 835.00 | 0 | 88 | | |
| | | | 0 | 156 |
| 100+00 834.81 | 0 | 80 | | |
| | | | 0 | 148 |
| 99+50 834.57 | 0 | 80 | | |
| | | | 0 | 163 |
| 99+00 834.39 | 0 | 96 | | |
| | | | 0 | 176 |
| 98+50 834.21 | 0 | 94 | | |
| | | | 0 | 169 |
| 98+00 833.94 | 0 | 88 | | |
| | | | 0 | 168 |
| 97+50 833.88 | 0 | 93 | | |
| | | | 0 | 167 |
| 97+00 833.52 | 0 | 87 | | |
| | | | 0 | 141 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN.1<br>224-D<br>281-RE. UN.1 | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-P.T., N. & G-I PT.

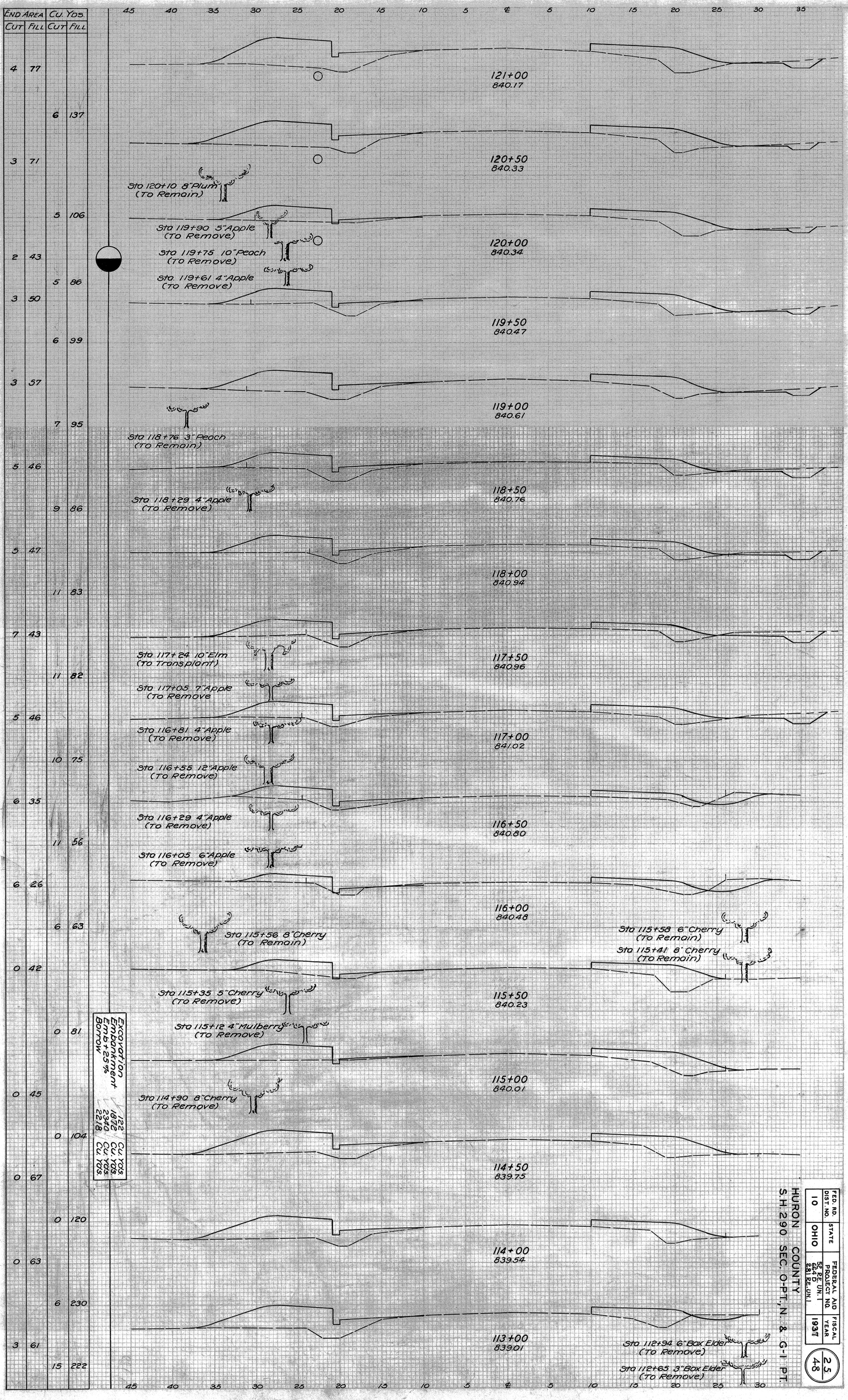
Sta 112+48 4" Box Elder (To Remove)
Sta 112+29 6" Box Elder (To Remove)
Sta 112+04 6" Box Elder (To Remove)
Sta 111+85 8" Box Elder (To Remove)
Sta 111+73 5" Oak (To Transplant)
Sta 111+43 8" Cherry (To Remain)
Sta 111+23 10" Cherry (To Remain)
Sta 101+68 Lilac (To Remain)

| Sta | Elev. |
|---|---|
| 112+00 | 838.61 |
| 111+50 | 838.48 |
| 111+00 | 838.34 |
| 110+50 | 838.17 |
| 110+00 | 838.10 |
| 109+50 | 838.01 |
| 109+00 | 837.92 |
| 108+50 | 837.71 |
| 108+00 | 837.53 |
| 107+50 | 837.32 |
| 107+00 | 836.07 |
| 106+50 | 836.91 |
| 106+00 | 836.77 |
| 105+50 | 836.58 |
| 105+00 | 836.29 |

| | | |
|---|---|---|
| Excavation | 51 | Cu. Yds. |
| Embankment | 1963 | Cu. Yds. |
| Emb + 25% | 2454 | Cu. Yds. |
| Borrow | 2403 | Cu. Yds. |

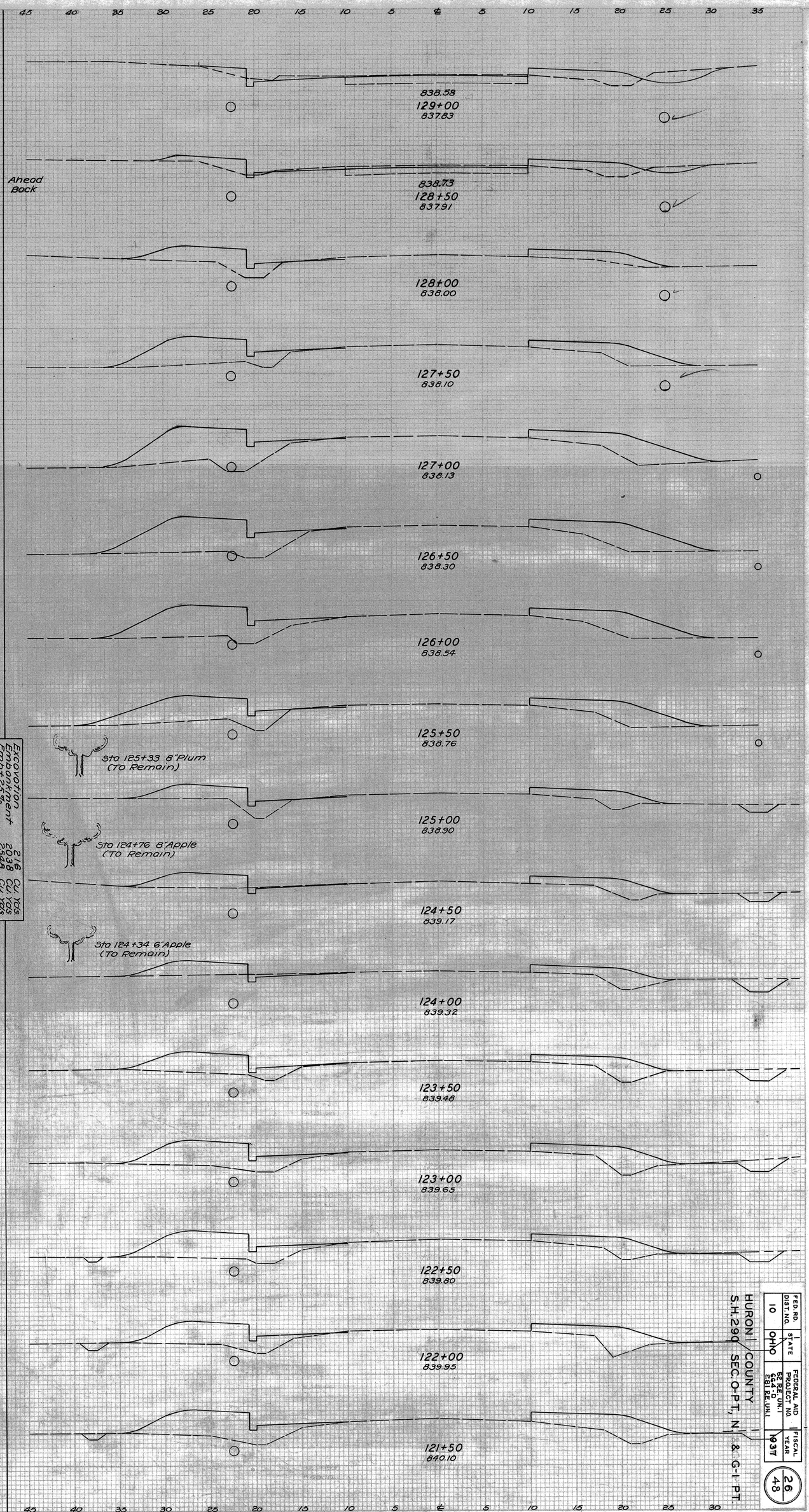
| Sta | End Area Cut | End Area Fill | Cu. Yds. Cut | Cu. Yds. Fill |
|---|---|---|---|---|
| 112+00 | 5.39 | | | |
| | | | 12 | 101 |
| 111+50 | 8.50 | | | |
| | | | 9 | 85 |
| 111+00 | 2.42 | | | |
| | | | 3 | 94 |
| 110+50 | 1.60 | | | |
| | | | 1 | 110 |
| 110+00 | 0.59 | | | |
| | | | 0 | 102 |
| 109+50 | 0.51 | | | |
| | | | 0 | 89 |
| 109+00 | 0.45 | | | |
| | | | 1 | 83 |
| 108+50 | 1.45 | | | |
| | | | 2 | 81 |
| 108+00 | 1.43 | | | |
| | | | 2 | 81 |
| 107+50 | 1.45 | | | |
| | | | 3 | 86 |
| 107+00 | 2.48 | | | |
| | | | 6 | 86 |
| 106+50 | 4.45 | | | |
| | | | 8 | 82 |
| 106+00 | 5.44 | | | |
| | | | 6 | 78 |
| 105+50 | 2.40 | | | |
| | | | 4 | 79 |
| 105+00 | 2.45 | | | |
| | | | 5 | 76 |

PLATE 2 - CROSS SECTION
THE H. COLE CO., COLUMBUS, OHIO



End Area
Cut Fill
Cu. Yds.
Cut Fill
4 77
6 137
3 71
5 106
2 43
5 86
3 50
6 99
3 57
7 95
5 46
9 86
5 47
11 83
7 43
11 82
5 46
10 75
6 35
11 56
6 26
6 63
0 42
0 81
0 45
0 104
0 67
0 120
0 63
6 230
3 61
15 222
45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35
121+00
840.17
120+50
840.33
Sta 120+10 8" Plum (To Remain)
Sta 119+90 5" Apple (To Remove)
Sta 119+75 10" Peach (To Remove)
Sta. 119+61 4" Apple (To Remove)
120+00
840.34
119+50
840.47
119+00
840.61
Sta 118+76 3" Peach (To Remain)
Sta 118+29 4" Apple (To Remove)
118+50
840.76
118+00
840.94
Sta 117+24 10" Elm (To Transplant)
117+50
840.96
Sta 117+05 7" Apple (To Remove
Sta 116+81 4" Apple (To Remove)
117+00
841.02
Sta 116+55 12" Apple (To Remove)
Sta 116+29 4" Apple (To Remove)
116+50
840.80
Sta 116+05 6" Apple (To Remove)
116+00
840.48
Sta 115+56 8" Cherry (To Remain)
Sta 115+58 6" Cherry (To Remain)
Sta 115+41 8" Cherry (To Remain)
Sta 115+35 5" Cherry (To Remove)
115+50
840.23
Sta 115+12 4" Mulberry (To Remove)
115+00
840.01
Sta 114+90 8" Cherry (To Remove)
114+50
839.75
114+00
839.54
113+00
839.01
Sta 112+94 6" Box Elder (To Remove)
Sta 112+65 3" Box Elder (To Remove)
Excavation 122 Cu. Yds.
Embankment 1872 Cu. Yds.
Emb+25% 2340 Cu. Yds.
Borrow 2218 Cu. Yds.
HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-1 PT.
FED. RD. DIST. NO. 10
STATE OHIO
FEDERAL AID PROJECT NO. 52 RE. UN. 1 664 D 281 RE. UN. 1
FISCAL YEAR 1937
25
48

| End Area Cut | End Area Fill | Cu. Yds. Cut | Cu. Yds. Fill |
|---|---|---|---|
| 12 | 32 | | |
| | | 17 | 63 |
| 6 | 36 | | |
| 6 | 23 | | |
| | | 6 | 56 |
| 1 | 38 | | |
| | | 2 | 92 |
| 1 | 61 | | |
| | | 1 | 135 |
| 0 | 85 | | |
| | | 0 | 164 |
| 0 | 92 | | |
| | | 0 | 163 |
| 0 | 84 | | |
| | | 1 | 142 |
| 1 | 69 | | |
| | | 5 | 101 |
| 4 | 40 | | |
| | | 8 | 68 |
| 5 | 33 | | |
| | | 12 | 61 |
| 8 | 33 | | |
| | | 12 | 77 |
| 5 | 50 | | |
| | | 9 | 107 |
| 5 | 66 | | |
| | | 9 | 119 |
| 5 | 63 | | |
| | | 9 | 110 |
| 5 | 56 | | |
| | | 8 | 114 |
| 4 | 67 | | |
| | | 7 | 133 |




Excavation 216 Cu. Yds.
Embankment 2038 Cu. Yds.
Emb+25% 2548 Cu. Yds.
Borrow 2332 Cu. Yds.

HURON COUNTY
S.H. 290 SEC. O-PT., N. & G-1 PT.

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 62 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1.<br>664-D<br>281-RE. UN. 1. | 1937 |

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HURON COUNTY
S.H. 290 SEC. O-PT, N, & G-1 PT.

839.18
134+00
837.07

838.93
133+50
836.55

838.85
133+40.17
836.46

838.73
132+95.83
836.49

838.68
132+83
836.53

838.61
132+67
836.55

838.55
132+50
836.54

838.36
132+00
836.63

838.21
131+50
836.89

838.15
131+00
837.08

838.17
130+50
837.18

838.28
130+00
837.45

838.43
129+50
837.72

Sta 134+76 24" Maple
(To Remain)

Sta 133+40.17

Sta 132+95.83

Sta 130+91 to Sta 132+00
Transplant 30 2"
Norway Spruce

Sta 130+91 10' Cedar
(To Remain)

Sta 129+90 22" Maple
(To Remain)

Bridge Limits No Excavation

| | |
|---|---|
| Excavation | 208 Cu. Yds. |
| Embankment | 2355 Cu. Yds. |
| Emb + 25% | 2944 Cu. Yds. |
| Borrow | 2736 Cu. Yds. |

| End Area | | Cu Yds | |
|---|---|---|---|
| Cut | Fill | Cut | Fill |
| 0 | 184 | 0 | 385 |
| 0 | 231 | 0 | 105 |
| 0 | 345 | | |
| 8 | 311 | 4 | 160 |
| 9 | 364 | 8 | 141 |
| 18 | 112 | 10 | 66 |
| 14 | 98 | 22 | 160 |
| 10 | 74 | 22 | 124 |
| 14 | 60 | 21 | 110 |
| 9 | 39 | 24 | 83 |
| 17 | 31 | 48 | 50 |
| 35 | 23 | 60 | 41 |
| 30 | 21 | 39 | 49 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO: | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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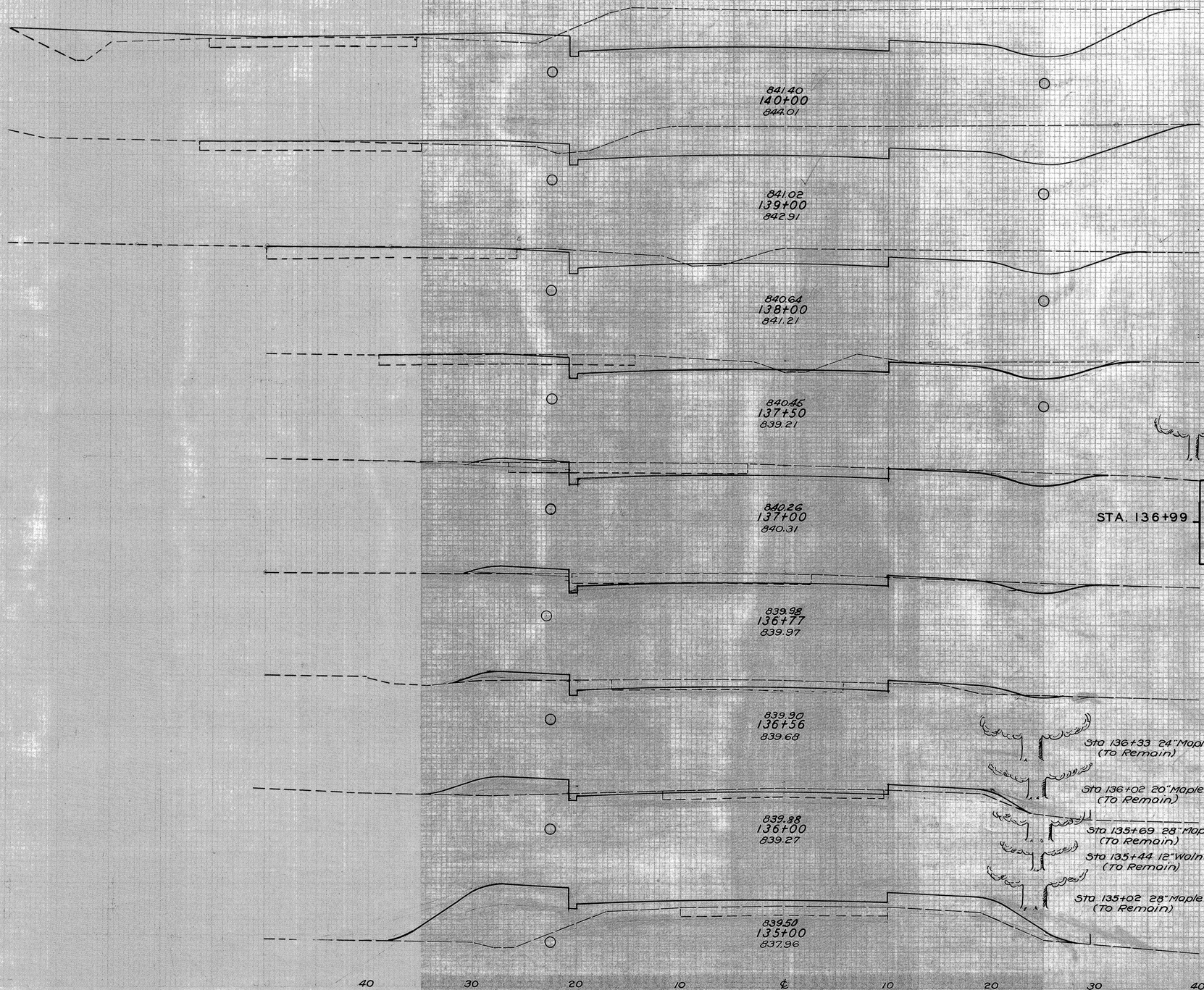
HURON COUNTY

S.H. 290 SEC. O-P.T. N. & G-I P.T.




Sta 137+23 10" Cherry (To Remain)

BEGIN F.A.P. 281 RE. UN. 1
STA. 136+99 — BEGIN S.H. 290 SEC. G-I
END S.H. 290 SEG. N
END F.A.P. 664-D

Sta 136+33 24" Maple (To Remain)

Sta 136+02 20" Maple (To Remain)

Sta 135+69 28" Maple (To Remain)

Sta 135+44 12" Walnut (To Remain)

Sta 135+02 28" Maple (To Remain)

| | END AREA | | CU YDS. | |
|---|---|---|---|---|
| | CUT | FILL | CUT | FILL |
| | 200 | 55 | | |
| | | | 646 | 154 |
| | 149 | 28 | | |
| | | | 393 | 93 |
| | 63 | 22 | | |
| | | | 101 | 38 |
| | 46 | 19 | | |
| | | | 72 | 25 |
| Sta 136+99 | 32 | 8 | | |
| | | | 20 | 7 |
| | 15 | 8 | | |
| | | | 10 | 11 |
| | 10 | 20 | | |
| | | | 13 | 59 |
| | 3 | 37 | | |
| | | | 6 | 311 |
| | 0 | 131 | | |
| | | | 0 | 583 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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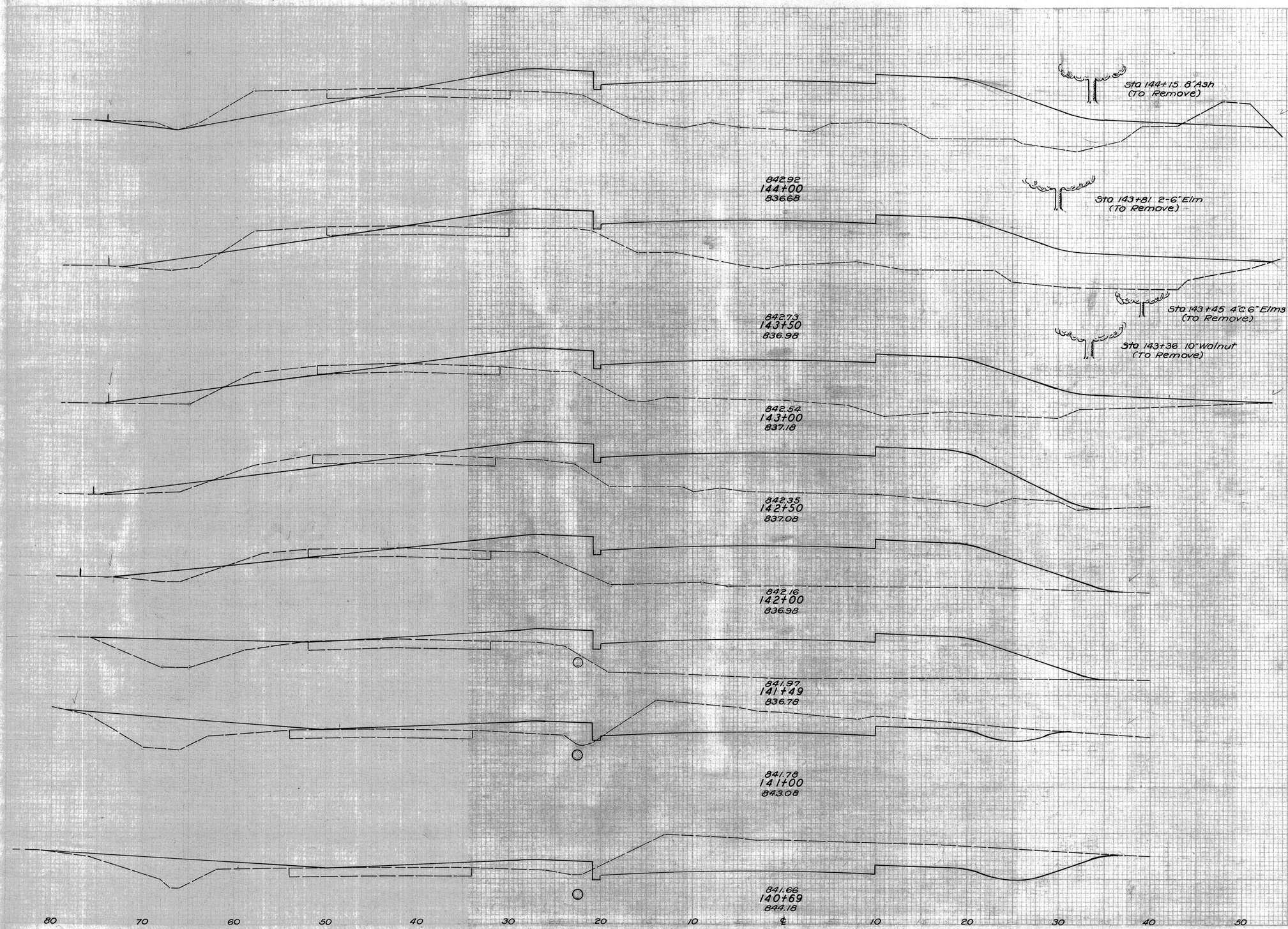
HURON COUNTY
S.H. 290 SEC. O-PT. N & G-I PT.

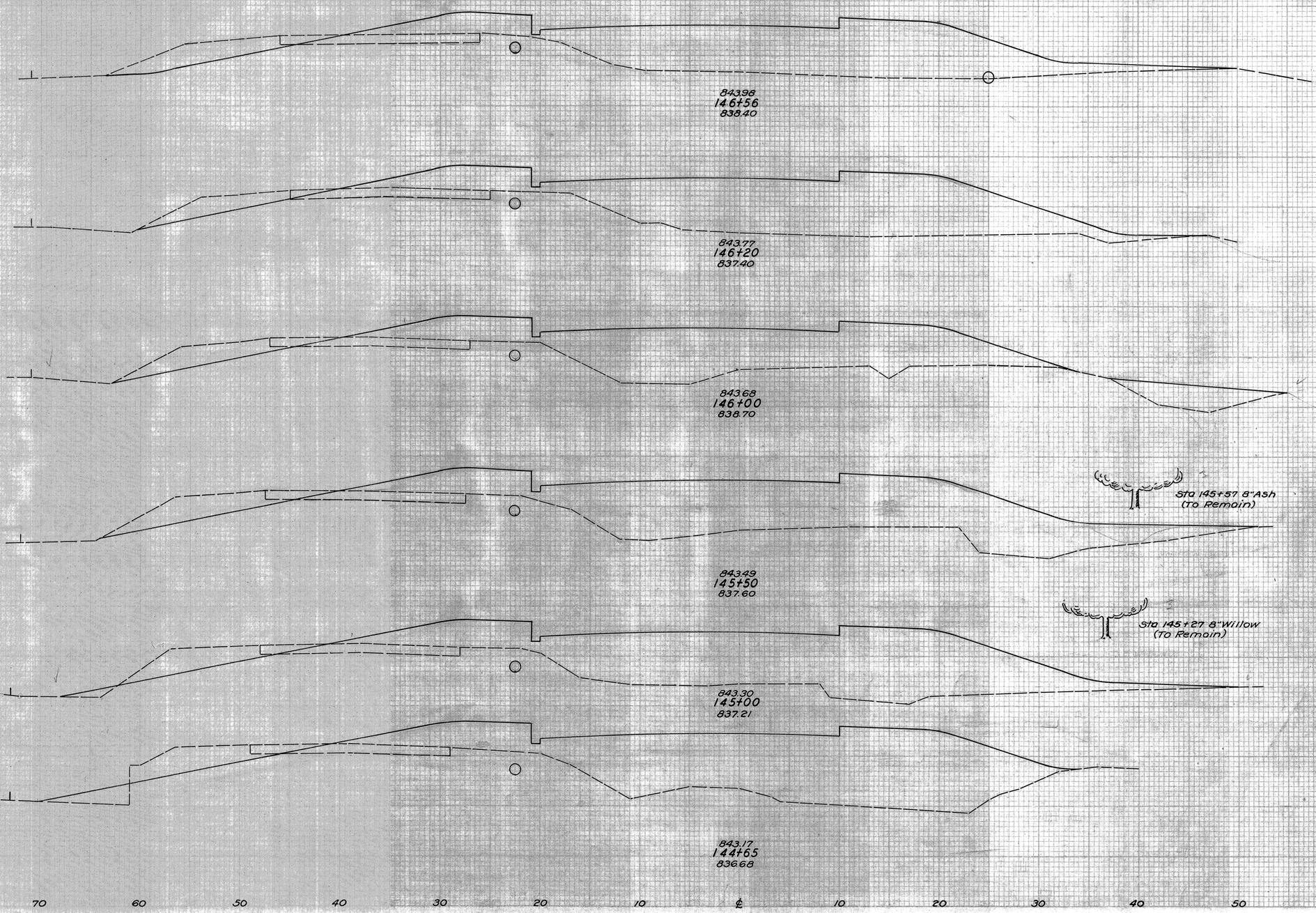



| END AREA CUT | END AREA FILL | CU. YDS. CUT | CU. YDS. FILL |
|---|---|---|---|
| | | | |
| 50 | 329 | | |
| | | | |
| | | 61 | 632 |
| | | | |
| 16 | 354 | | |
| | | | |
| | | 24 | 632 |
| | | | |
| 10 | 329 | | |
| | | | |
| | | 20 | 543 |
| 12 | 257 | | |
| | | | |
| | | 17 | 494 |
| 6 | 276 | | |
| | | | |
| | | 6 | 533 |
| 0 | 288 | | |
| | | | |
| | | 84 | 339 |
| 93 | 86 | | |
| | | | |
| | | 147 | 89 |
| 163 | 69 | | |
| | | | |
| | | 464 | 158 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281-RE. UN. 1 | 1937 |

30
48

HURON COUNTY
S.H. 290 SEC. O-PT. N & G-1 PT.




| END AREA CUT | END AREA FILL | CU. YDS. CUT | CU. YDS. FILL |
|---|---|---|---|
| 27 | 273 | | |
| | | 31 | 383 |
| 19 | 302 | | |
| | | 16 | 212 |
| 25 | 271 | | |
| | | 50 | 562 |
| 29 | 336 | | |
| | | 50 | 631 |
| 25 | 346 | | |
| | | 34 | 463 |
| 28 | 368 | | |
| | | 94 | 839 |

| | |
|---|---|
| Excavation | 2380 Cu. Yds. |
| Embankment | 8429 Cu. Yds. |
| Emb. 25 % | 14336 Cu. Yds. |
| Borrow | 7,556 Cu. Yds. |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>681 RE. UN. 1 | 1937 |

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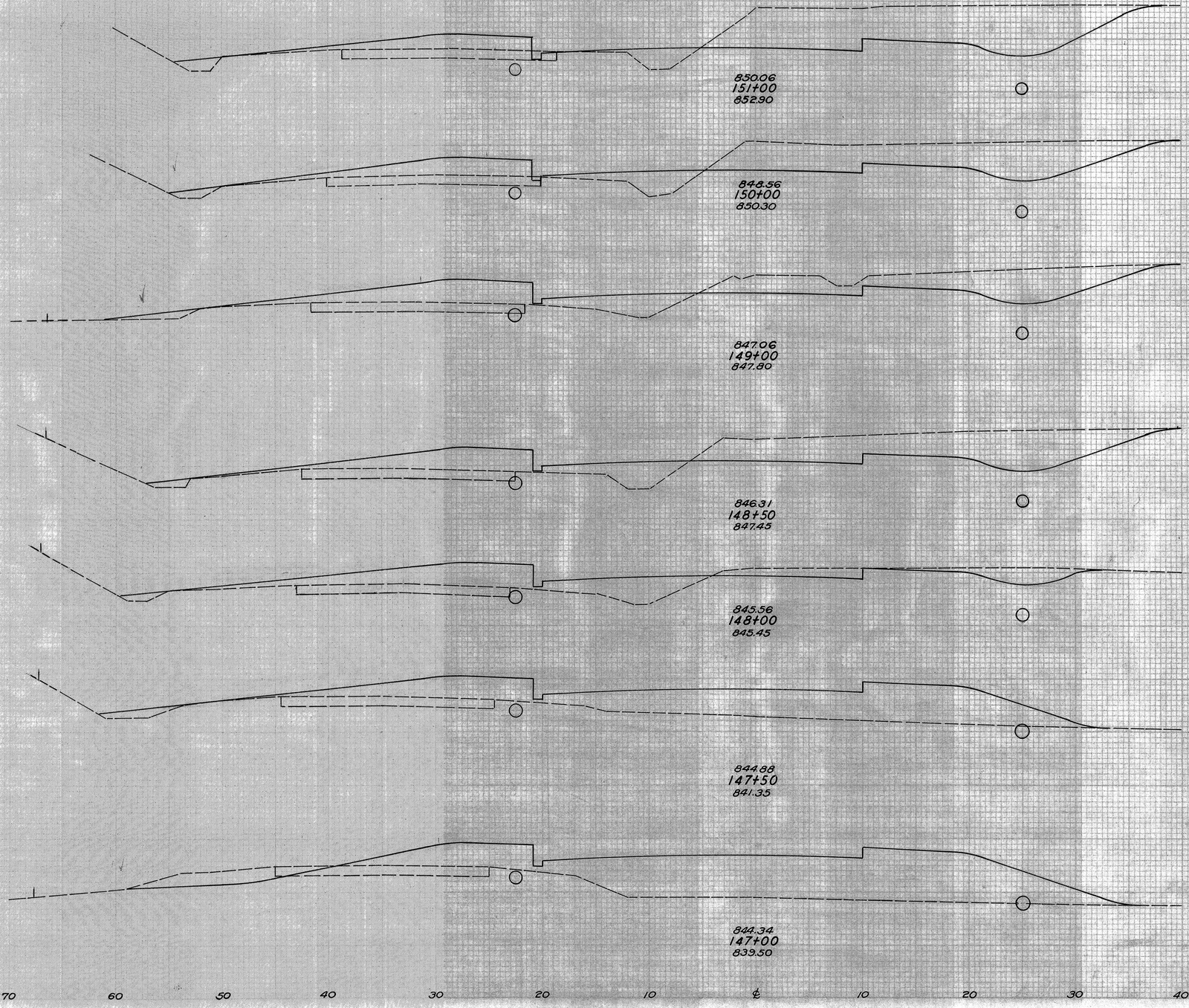
48

HURON COUNTY
S.H. 290 SEC. O-PT. N & G-1 PT.




| END AREA | | CU YDS. | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 138 | 51 | | |
| | | 441 | 217 |
| 100 | 66 | | |
| | | 317 | 269 |
| 71 | 79 | | |
| | | 158 | 143 |
| 100 | 75 | | |
| | | 118 | 150 |
| 27 | 87 | | |
| | | 25 | 251 |
| 0 | 184 | | |
| | | 16 | 385 |
| 17 | 232 | | |
| | | 36 | 411 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 R.E. UN. 1<br>664-D<br>281 R.E. UN. 1 | 1937 |

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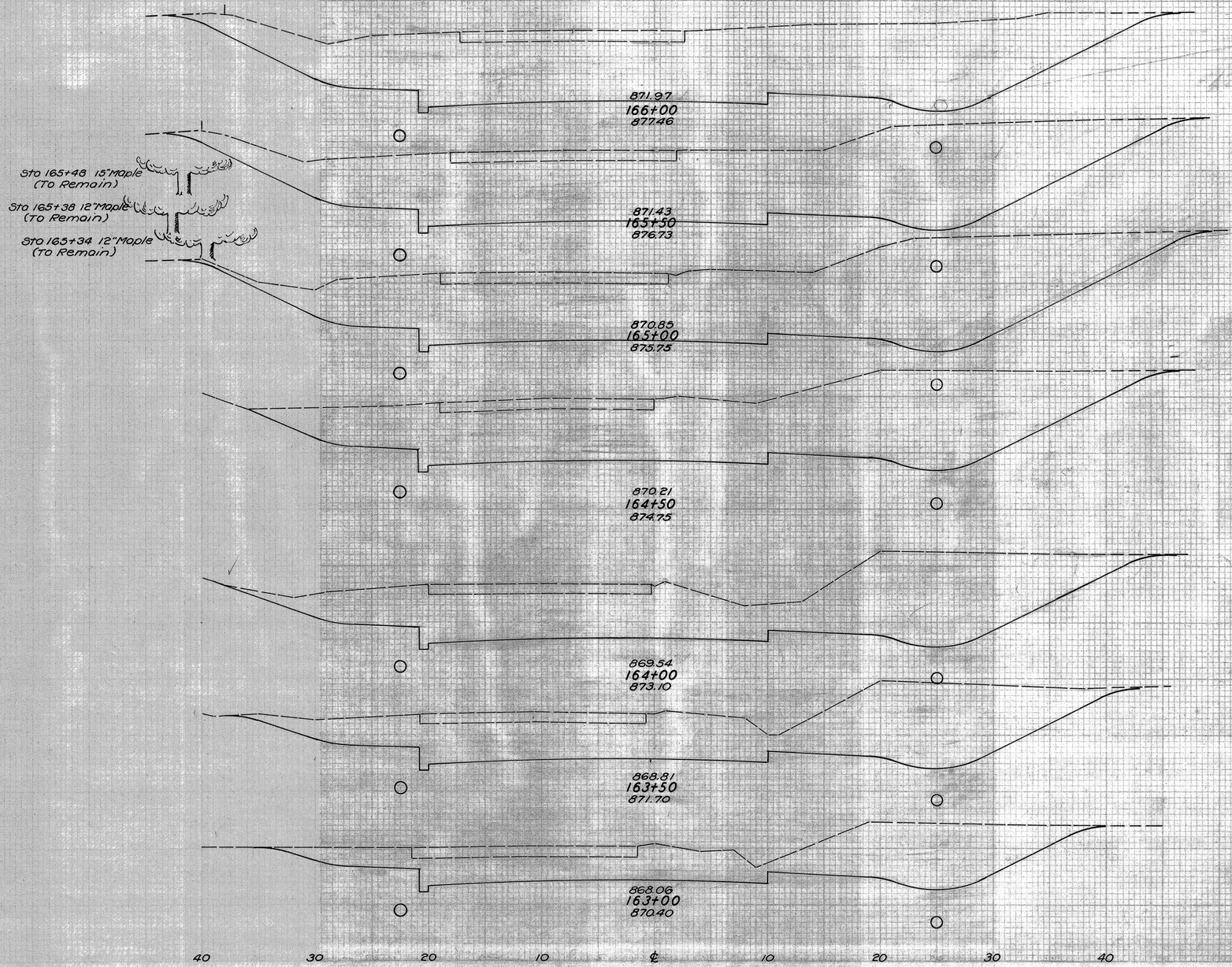
48

HURON COUNTY
S.H. 290 SEC. O-PT. N & G-I PT.




| | | | ENDAREA | | CU YDS. | |
|---|---|---|---|---|---|---|
| | | | CUT | FILL | CUT | FILL |
| | | | | | | |
| | | | 437 | 0 | | |
| Sto 165+80 | Drive | Rt. | | | 50 | |
| | | | | | 830 | 0 |
| | | | 459 | 0 | | |
| | | | | | 853 | 0 |
| | | | 462 | 0 | | |
| | | | | | 795 | 0 |
| | | | 397 | 0 | | |
| | | | | | 675 | 0 |
| | | | 332 | 0 | | |
| | | | | | 572 | 0 |
| | | | 286 | 0 | | |
| | | | | | 448 | 0 |
| | | | 198 | 0 | | |
| | | | | | 381 | 0 |

Excavation 12,405 Cu Yds
Embankment 1,327 Cu Yds
Emb + 25% 409 Cu Yds
Waste 1,996 Cu Yds

| FED. RD DIST. NO | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>624-D<br>281 RE. UN. 1 | 1937 |

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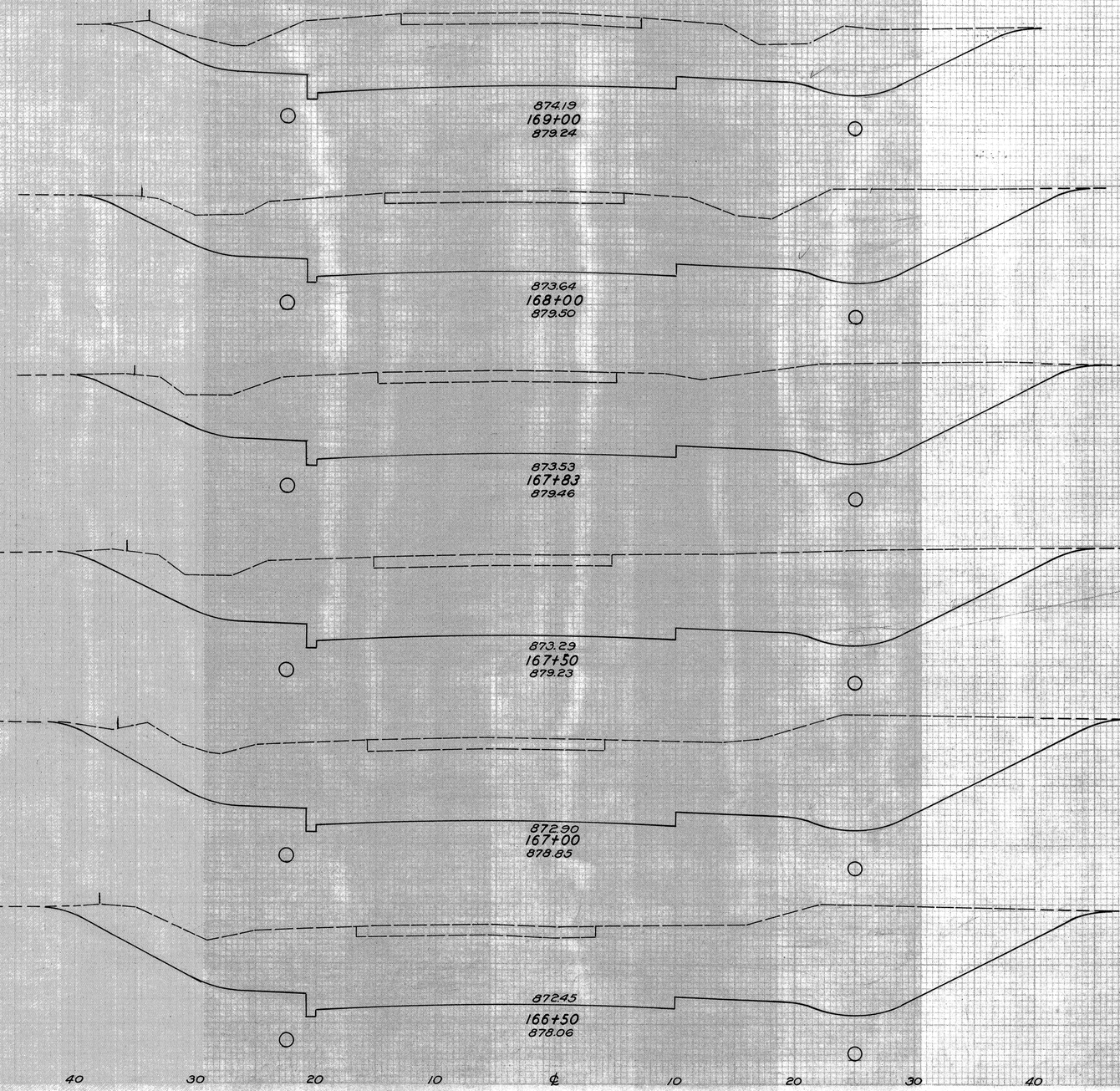
48

HURON COUNTY
S.H. 290 SEC. O PT. N & G-1 PT.

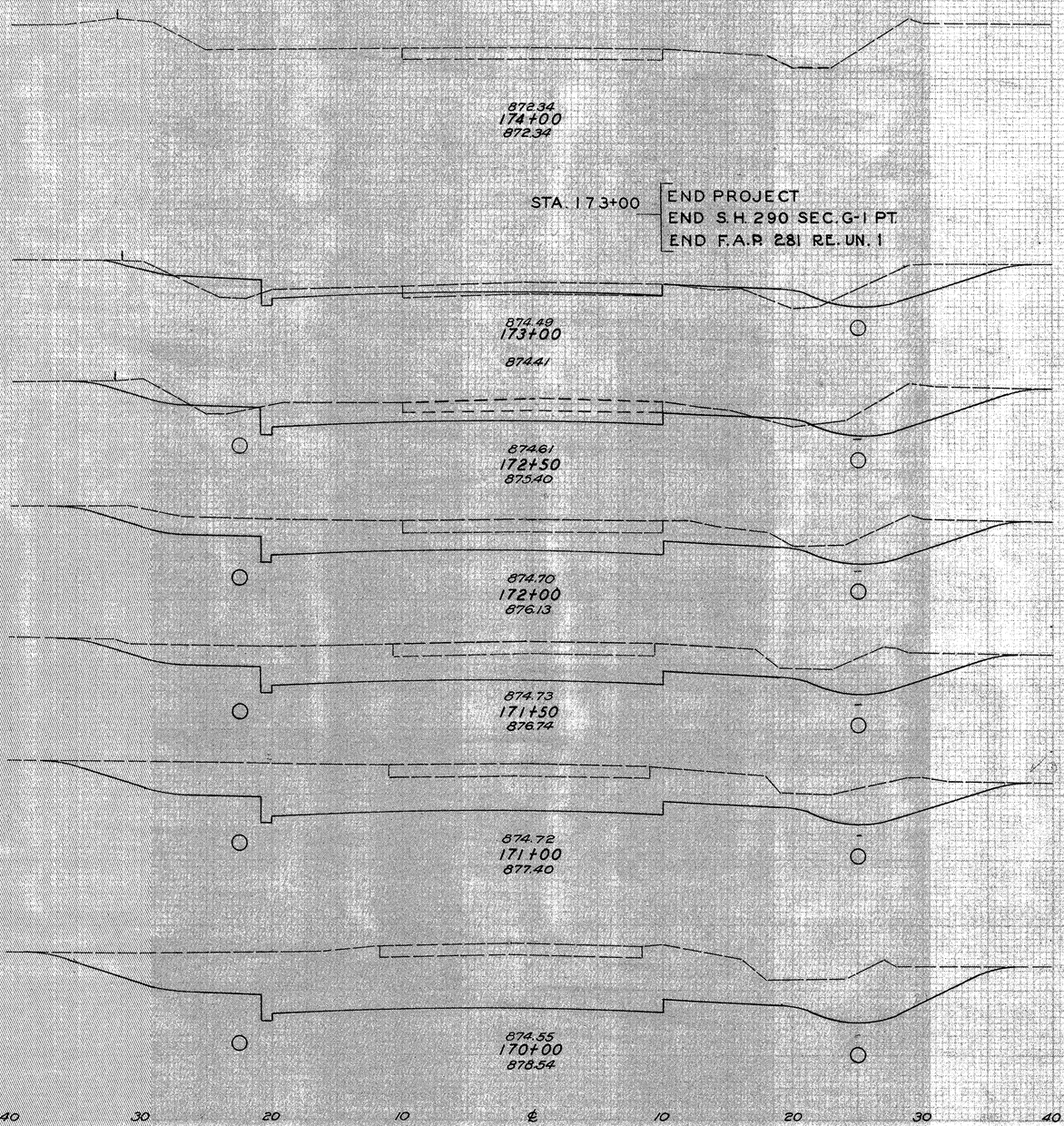



| END AREA | | CU. YDS. | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 314 | 0 | | |
| | | 1324 | 0 |
| 401 | 0 | | |
| | | 264 | 0 |
| 439 | 0 | | |
| | | 25 | |
| | | 541 | 0 |
| 446 | 0 | | |
| | | 864 | 0 |
| 487 | 0 | | |
| | | 892 | 0 |
| 476 | 0 | | |
| | | 845 | 0 |

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 R.E. UN.1<br>264 D<br>281 R.E. UN.1 | 1937 |

36
48

HURON COUNTY
S.H. 290 SEC. O-PT. N & G-1 PT.



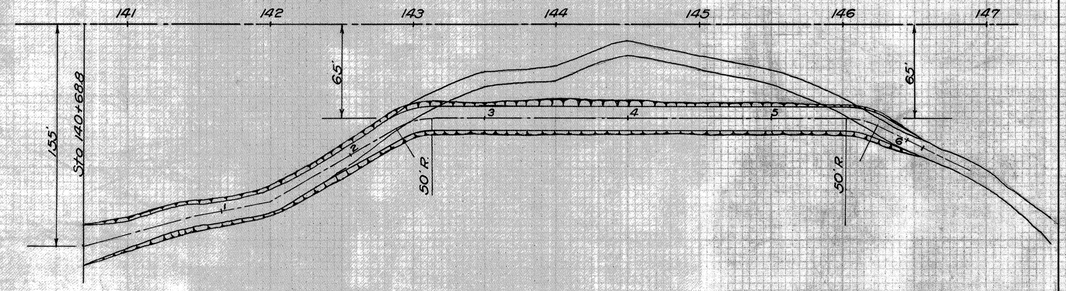

| | END AREA CUT | END AREA FILL | CU. YDS. CUT | CU. YDS. FILL |
|---|---|---|---|---|
| | 0 | 0 | | |
| | | | 57 | 20 |
| Ahead | 31 | 11 | | |
| Back | 31 | 19 | | |
| | | | 97 | 20 |
| | 74 | 3 | | |
| | | | 175 | 3 |
| | 115 | 0 | | |
| | | | 236 | 0 |
| | 140 | 0 | | |
| | | | 297 | 0 |
| | 181 | 0 | | |
| | | | 794 | 0 |
| | 248 | 0 | | |
| | | | 1041 | 0 |

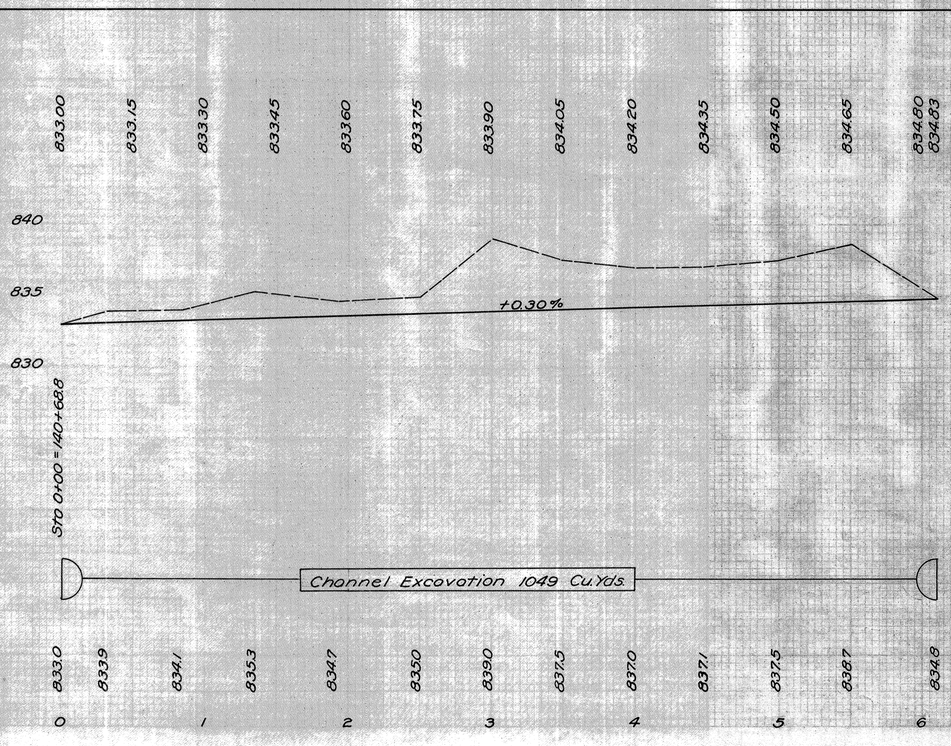
| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664 D<br>281 RE. UN. 1 | 1937 |

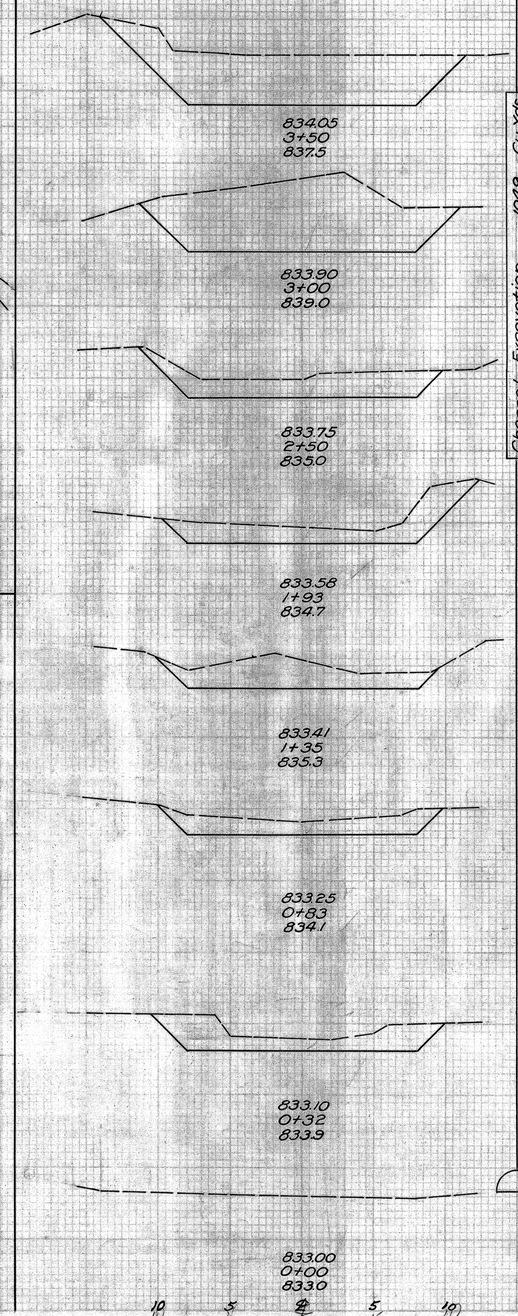
37
48

HURON COUNTY
S.H. 290 SEC. O-PT. N & G-I PT.

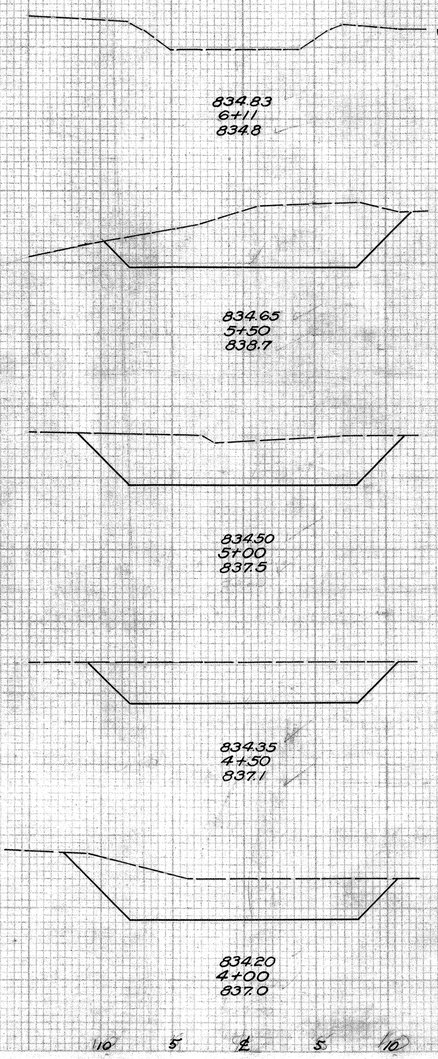
# CHANNEL RELOCATION
STA. 140+68.8 TO STA. 146+56



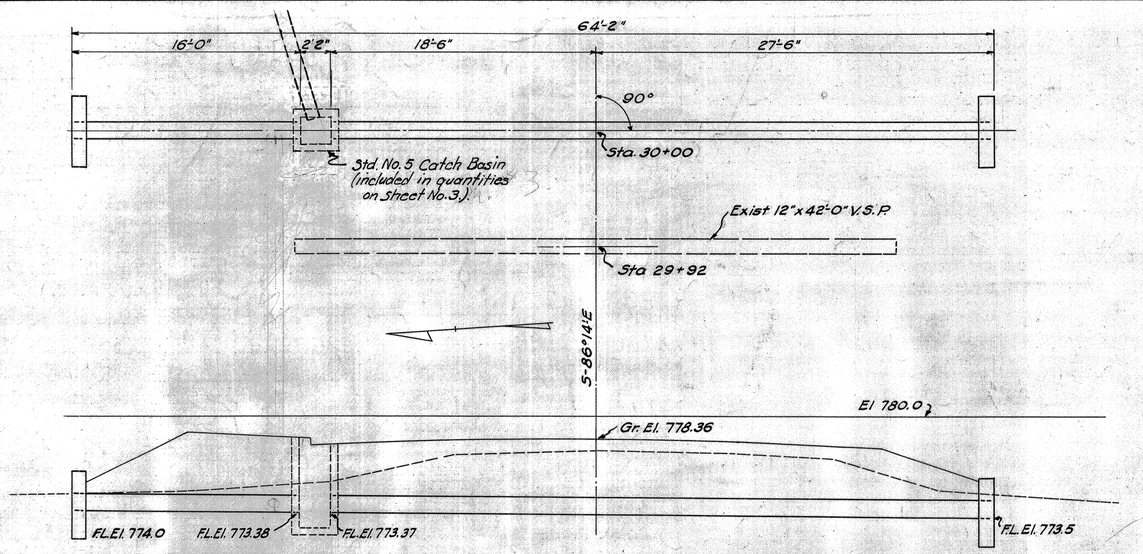

| EAREA CUT | CU.YDS CUT |
|---|---|
| 78 | |
| | 152 |
| 86 | |
| | 107 |
| 30 | |
| | 62 |
| 29 | |
| | 61 |
| 28 | |
| | 49 |
| 23 | |
| | 48 |
| 28 | |
| | 17 |
| 0 | |




| EAREA CUT | CU.YDS CUT |
|---|---|
| | 0 |
| 78 | |
| | 69 |
| 125 | |
| | 66 |
| 113 | |
| | 56 |
| 108 | |
| | 61 |
| 129 | |

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR | 38 / 48 |
|---|---|---|---|---|
| 10 | OHIO | 52 RE. UN1 694-D 281 RE. UN1 | 1937 | |

HURON **COUNTY**
S. H. 290 **SEC.** O-PT. N & G-I PT.




CULVERT DATA

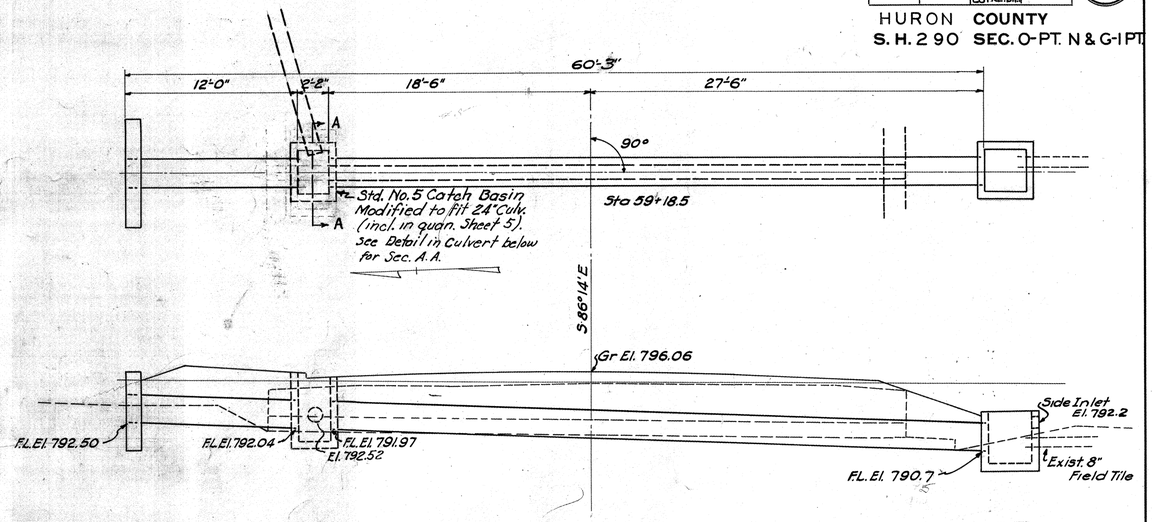
TYPE : Pipe
SIZE : 15"x 64'-2"
WORK REQUIRED: Remove existing 12"x 42'V S P at Sta. 29+92. Build Std 15"x 64'-2" Pipe Culvert with Std Hdwls Rt and Lt. Connect to C.B as shown. Excavate Channel 15' Rt and 5' Lt.

STD. DRWG. NO. S-27 P.C.1, S-27 P.C.3

ESTIMATED QUANTITIES

| | | |
|---|---|---|
| Excavation | 24 | Cu. Yds |
| Channel Excav. | 4 | Cu. Yds |
| 1:5½ Conc. | 1.7 | Cu. Yds |
| Rein. Steel | 41.0 | Lbs |
| 15" Culvert Pipe | 62 | Lin Ft. |
| Removal of existing 12" pipe | 42 | Lin Ft. |

STA 30+00
STRUCTURE NO.1
F. A. P. No. 52 RE. UN. 1



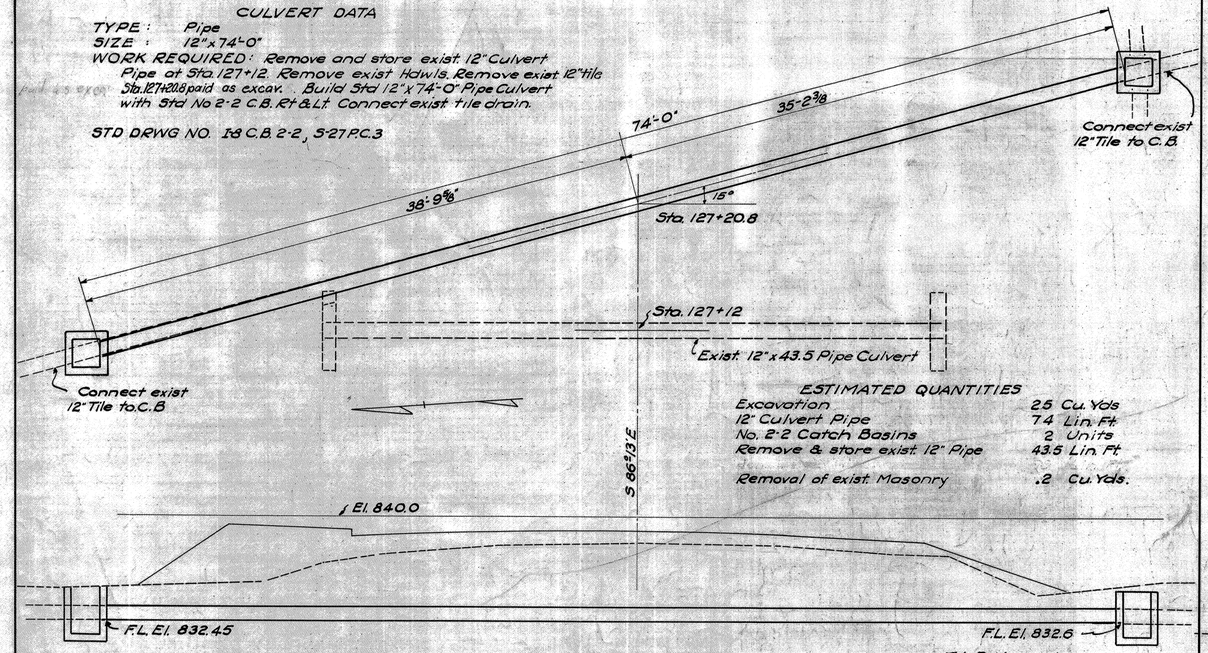

CULVERT DATA

TYPE : Pipe
SIZE : 24"x 60'-2"
WORK REQUIRED : Remove existing 12"x 44.5' pipe paid as excavation. 1:5½ Conc. Build Std. 24"x 60'-2" Pipe Culvert with Std. Hdwl. Lt and Std. No 2-3 C.B. on Rt. Connect to C.B at Lt curb as shown. Conn. Exist 8" field tile to #2-3 C.B. on Rt. Excavate channel 10' Lt. Remove existing headwalls.
STD. DRWG. NO.: S-27 P.C.1, S-27 P.C.3, I-8 C.B 2-3

ESTIMATED QUANTITIES

| | | |
|---|---|---|
| Excavation | 27.0 | Cu. Yds |
| Channel Excav. | 2.0 | Cu. Yds |
| 1:5½ Conc. | 1.4 | Cu. Yds |
| Rein. Steel | 32.0 | Lbs |
| 24" Culvert Pipe | 58 | Lin. Ft |
| No. 2-3 Catch Basin | 1 | Unit |
| Removal exist. Masonry | 3.0 | Cu. Yds |

F.A.P. No. 52 RE. UN. 1
STA 59+18.5
STRUCTURE NO. 3




CULVERT DATA

TYPE : Pipe
SIZE : 12"x 74'-0"
WORK REQUIRED: Remove and store exist. 12" Culvert Pipe at Sta. 127+12. Remove exist Hdwls. Remove exist 12" tile Sta. 127+20.8 paid as excav. Build Std 12"x 74'-0" Pipe Culvert with Std No 2-2 C.B. Rt & Lt Connect exist. tile drain.

STD. DRWG. NO. I-8 C.B. 2-2, S-27 P.C.3

ESTIMATED QUANTITIES

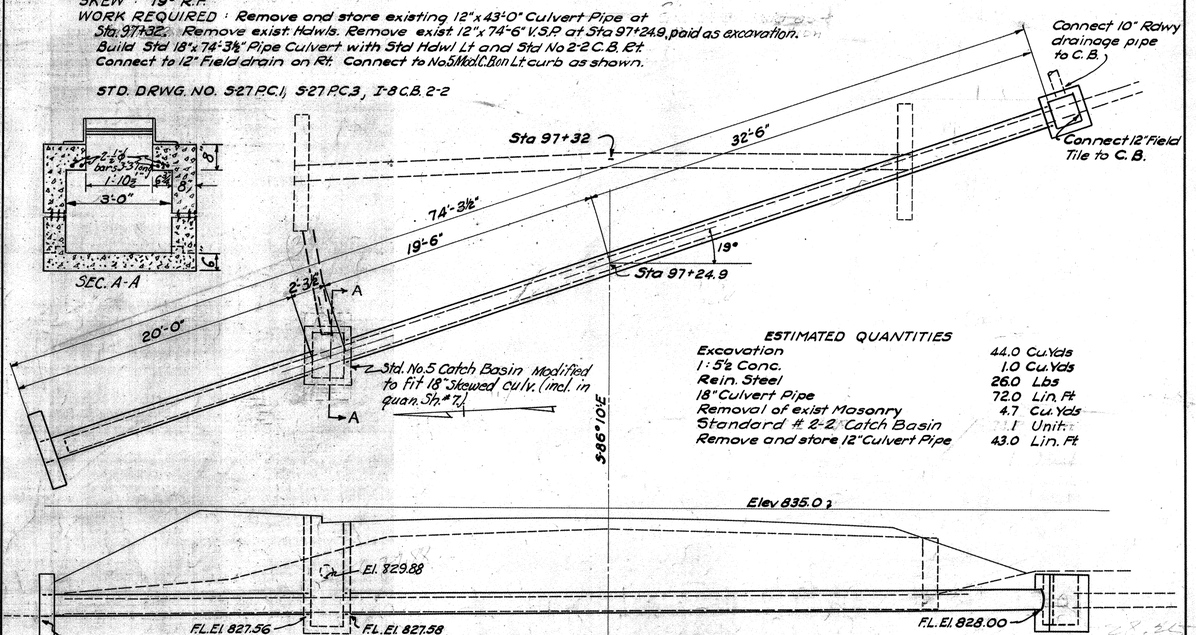
| | | |
|---|---|---|
| Excavation | 25 | Cu. Yds |
| 12" Culvert Pipe | 74 | Lin. Ft. |
| No. 2-2 Catch Basins | 2 | Units |
| Remove & store exist. 12" Pipe | 43.5 | Lin. Ft. |
| Removal of exist. Masonry | .2 | Cu. Yds. |

F.A.P. No. 66A-D
STA 127+20.8
STRUCTURE NO. 6

CULVERT DATA

TYPE : Pipe
SIZE : 18"x 74'-3½"
SKEW : 19° R.F.
WORK REQUIRED : Remove and store existing 12"x 43'-0" Culvert Pipe at Sta. 97+32. Remove exist. Hdwls. Remove exist. 12"x 74'-6" V.S.P. at Sta 97+24.9, paid as excavation. Build Std 18"x 74'-3½" Pipe Culvert with Std Hdwl Lt and Std No 2-2 C.B. Rt. Connect to 12" Field drain on Rt. Connect to No. 5 Mod. C.B on Lt. curb as shown.

STD. DRWG. NO. S-27 P.C.1, S-27 P.C.3, I-8 C.B. 2-2




SEC. A-A

ESTIMATED QUANTITIES

| | | |
|---|---|---|
| Excavation | 44.0 | Cu.Yds |
| 1:5½ Conc. | 1.0 | Cu.Yds |
| Rein. Steel | 26.0 | Lbs |
| 18" Culvert Pipe | 72.0 | Lin. Ft |
| Removal of exist Masonry | 4.7 | Cu. Yds |
| Standard # 2-2 Catch Basin | 1 | Unit. |
| Remove and store 12" Culvert Pipe | 43.0 | Lin. Ft |

F.A.P. No. 66A-D
STA 97+24.9
STRUCTURE NO. 4

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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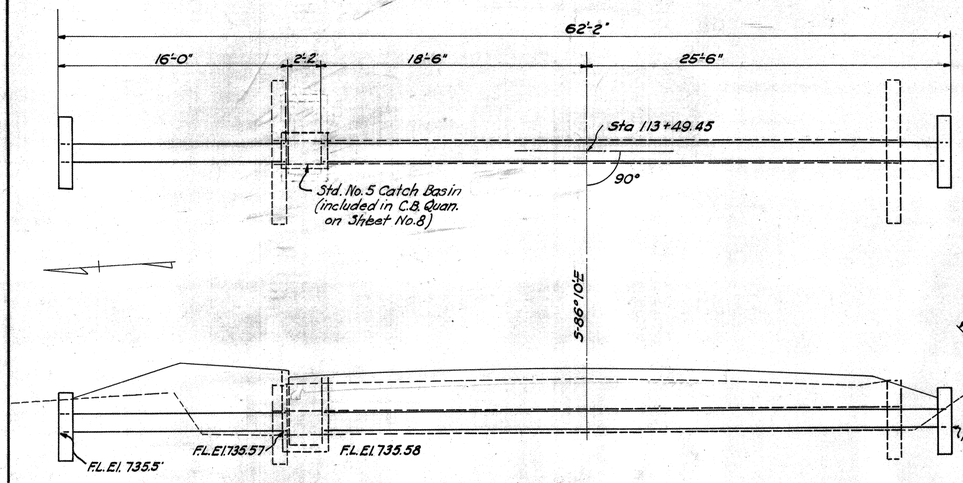
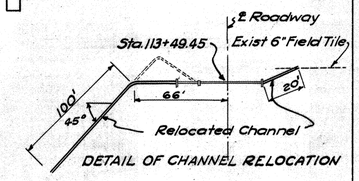
48

HURON COUNTY
S. H. 290 SEC. O PT. N & G-1 PT.




DETAIL OF CHANNEL RELOCATION

CULVERT DATA

TYPE : Pipe
SIZE : 15"x 62'-2'
WORK REQUIRED: Remove and store existing 12"x 45'-0" pipe. Paid as excav. Remove exist. Hdwls. Build Std 15"x 62'-2" Pipe Culvert with Std Hdwls Rt and Lt. Connect to C.B. at curb on Lt. Excavate channel Rt and Lt as shown.

STD. DRWG. NO. S-27.P.C.1, S-27.P.C.3

ESTIMATED QUANTITIES

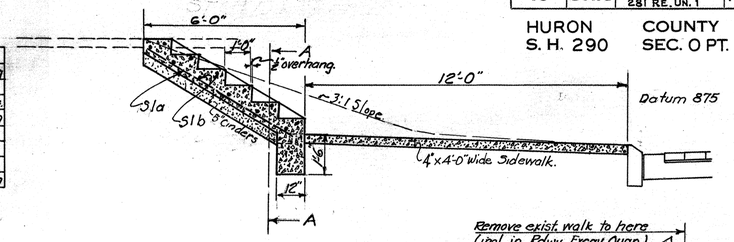
| | |
|---|---|
| Excavation | 18.0 Cu. Yds |
| Channel Excav. | 34.0 Cu. Yds |
| 1:5½ Mix Conc. | 1.7 Cu. Yds |
| Rein. Steel | 47.0 Lbs |
| 15" Culvert Pipe | 60.0 Lin. Ft. |
| Removal of exist. masonry | 4.4 Cu. Yds |

STA 113+49.45
STRUCTURE NO. 5
F.A.P. No. 664-D

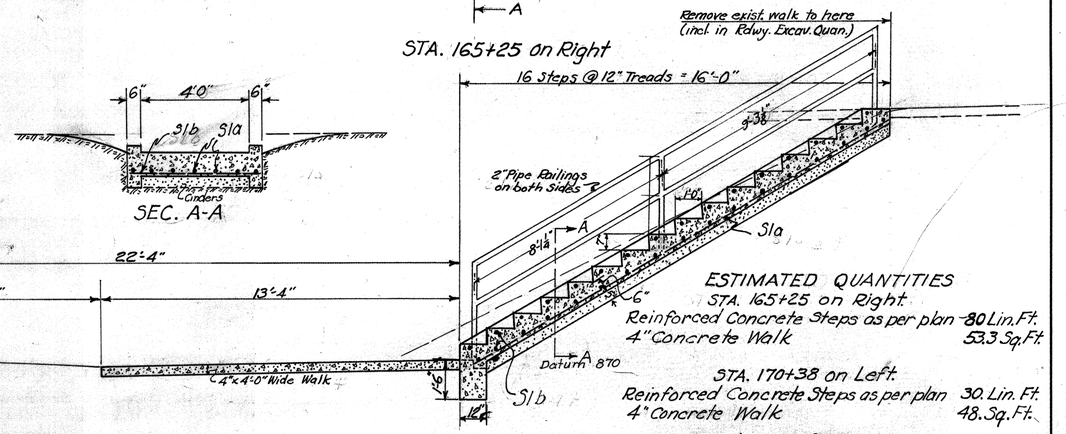
## REINFORCED CONCRETE STEPS DETAILS

STA. 170+38 on Left.

| REINF. STEEL LIST | | | | |
|---|---|---|---|---|
| Mark | No. | Size | Length | Spacing |
| STA. 165+25 Rt. | | | | |
| S-1-a | 7 | ⅜ ϕ | 18'-0" | 9" Ctrs. |
| S-1-b | 33 | ⅜ ϕ | 4'-9" | as shown |
| STA 170+38 Lt. | | | | |
| S1a | 7 | ⅜" ϕ | 6'-0" | 9" Ctrs |
| S1b | 12 | ⅜" ϕ | 4'-9" | as shown |




STA. 165+25 on Right




ESTIMATED QUANTITIES

STA. 165+25 on Right
Reinforced Concrete Steps as per plan 80 Lin. Ft.
4" Concrete Walk 53.3 Sq. Ft.

STA. 170+38 on Left.
Reinforced Concrete Steps as per plan 30 Lin. Ft.
4" Concrete Walk 48. Sq. Ft.

Note: Necessary Cinders, reinforcing steel, pipe railings, and excavation are included in price bid per lineal foot of Reinforced Concrete Steps as per plan.

5/46-18 21 · 24 18/30 24

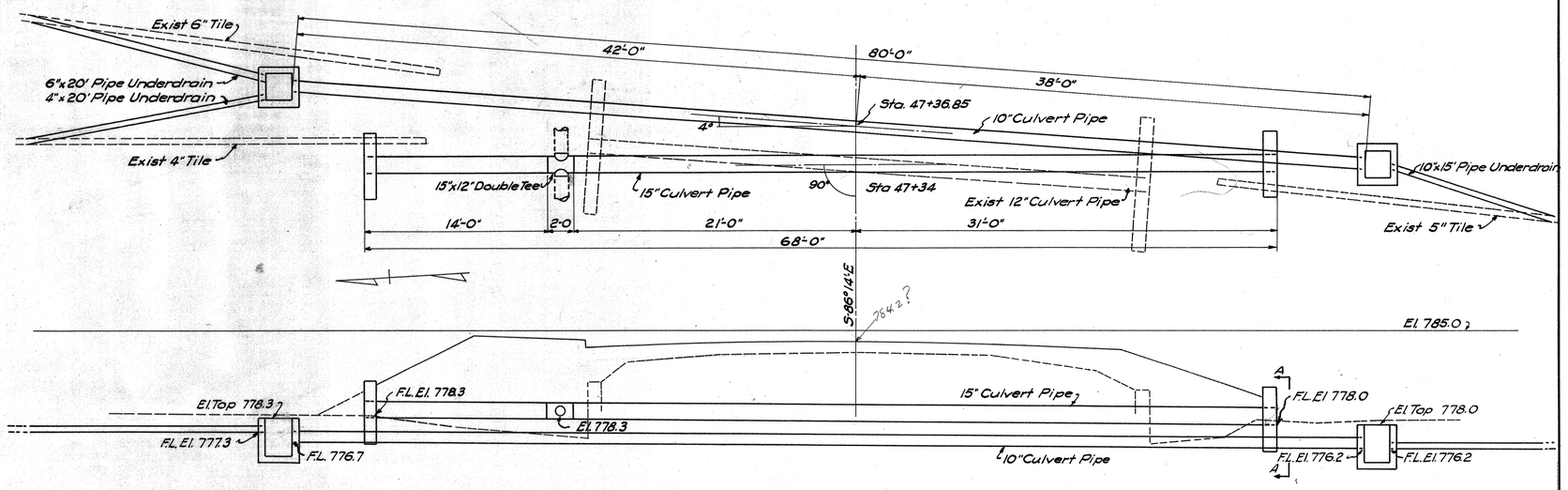
CULVERT DATA

TYPE: Pipe
SIZE : 15"x 68'-0" & 10"x 80'-0"
WORK REQUIRED: Remove and store existing 12"x 42'-0" Pipe. Remove exist. Hdwls. Build Std 10"x 80'-0" Pipe Culvert with Std No 2-2 C. B. Rt. & Lt. Make tile connections as shown. Build Std 15"x 68'-0" Pipe Culvert with Std Hdwls Rt. & Lt.

STD. DRWG. NO. S-27.P.C.1, S-27.P.C.3, I8 C.B.2-2

ESTIMATED QUANTITIES

| | |
|---|---|
| Excavation | 40 Cu. Yds |
| 1:5½ mix Conc. | 1.7 Cu. Yds |
| Rein. Steel | 47.0 Lbs |
| 15" Culvert Pipe | 66.0 Lin. Ft. |
| 10" Culvert Pipe | 80.0 Lin. Ft. |
| No. 2-2 Catch Basins | 2 Units |
| Pipe Specials (15"x 12" Double Tee) | 1 Unit |
| 6" Pipe Underdrain | 20.0 Lin. Ft. |
| 10" " " | 15.0 Lin. Ft. |
| 4" " " | 20.0 Lin. Ft. |
| Remove and store exist. 12" Culvert pipe | 42.0 Lin. Ft. |
| Removal of exist. Masonry. | 4.4 Cu. Yds |




STA 47+34
STRUCTURE NO. 2
F.A.P. No. 52 RE. UN. 1

SEC. A-A

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664 D<br>281 RE. UN. 1 | 1937 |

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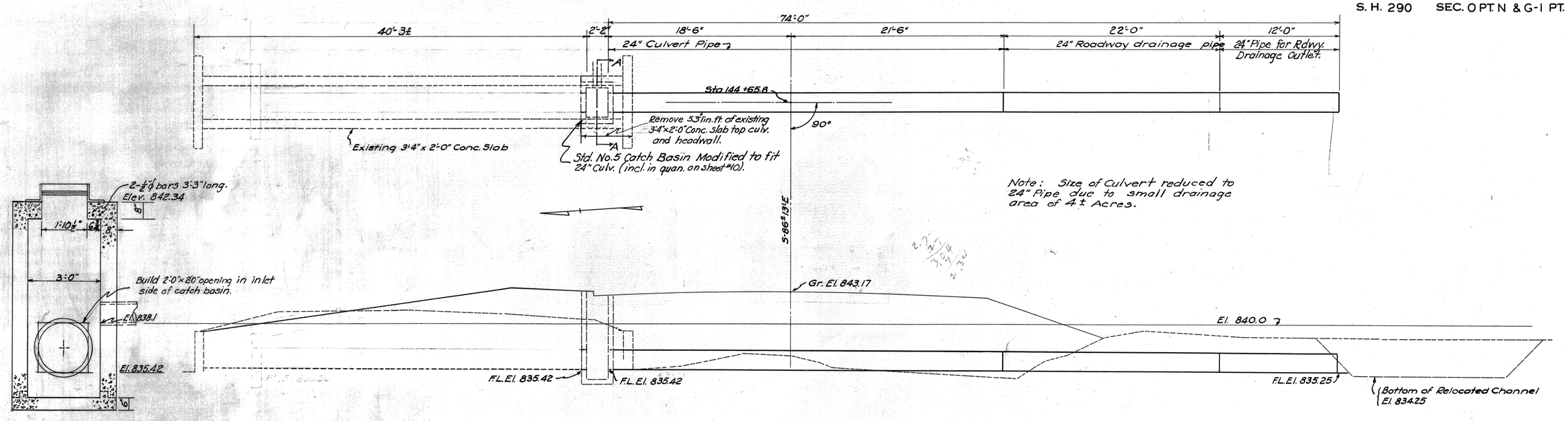
HURON COUNTY
S. H. 290 SEC. O PT. N & G-1 PT.




SEC. A-A
Scale ½"=1'-0"

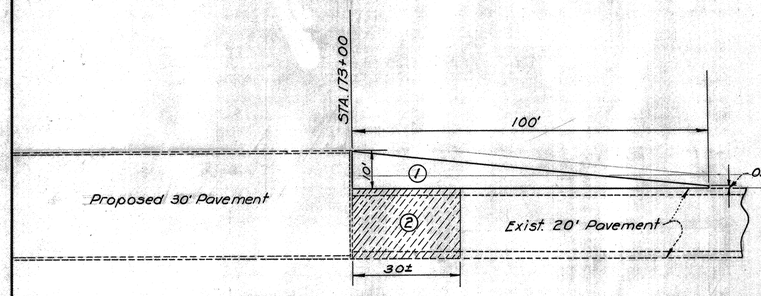
CULVERT DATA
TYPE: Pipe & Slab Top Conc.
SIZE: 24"x 74'-0" & 3'-4"x 2'-0"x 40'-3"±
WORK REQUIRED: Remove 5'-4"± of Existing 3'-4"x 2'-0" Slab Top Concrete Structure. Build 24"x 74'-0" Pipe Culvert. Connect to C.B. at Lt. Curb as shown.

STD DRWG NO. 5-27 P.C.3.

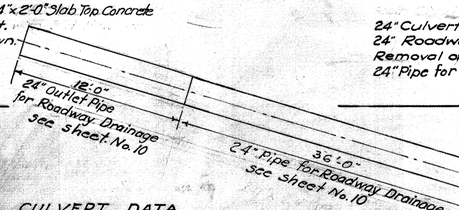
ESTIMATED QUANTITIES

| | |
|---|---|
| Excavation | 4.0 Cu. Yds |
| 24" Culvert Pipe | 4.0. Lin. Ft. |
| 24" Roadway Drainage Pipe | 22.0 Lin. Ft. |
| Removal of Portions of Existing Structure | 4.5 Cu. Yds. |
| 24" Pipe for Roadway Drainage Outlet | 12.0 Lin. Ft. |

F.A.P. No. 281 RE. Un. 1
STA 144+65.8
STRUCTURE NO. 8



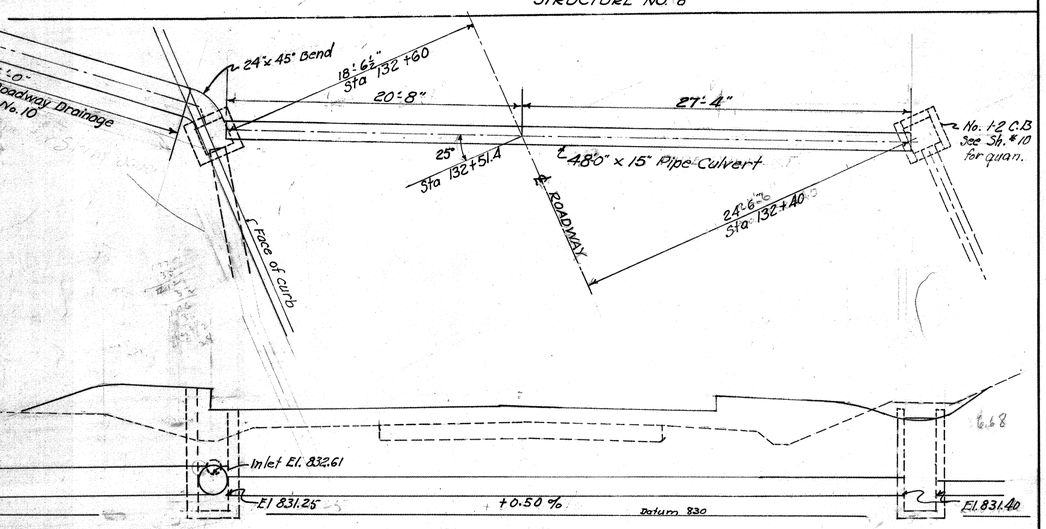

MERGER AT STA. 173+00
F.A.P. No. 281 RE. Un. 1
① T-70 7" Conc. Pavement = 10+0.5÷ 2 x 100 = 525 sq. ft = 58.3 sq. yds.
② T-60 Asphaltic Conc. Surface Course (Estimated) 2.0 cu. yds.




CULVERT DATA
TYPE: PIPE
SIZE: 15"x 48'-0 Skew 25° Lt. Fd.
WORK REQUIRED: Build new 15"x 48'-0" Pipe Culvert and connect with new catch basins as shown.

ESTIMATED QUANTITIES.

| | |
|---|---|
| Excavation | 30 Cu. Yds. |
| 15" Culvert Pipe | 48 Lin. Ft. |



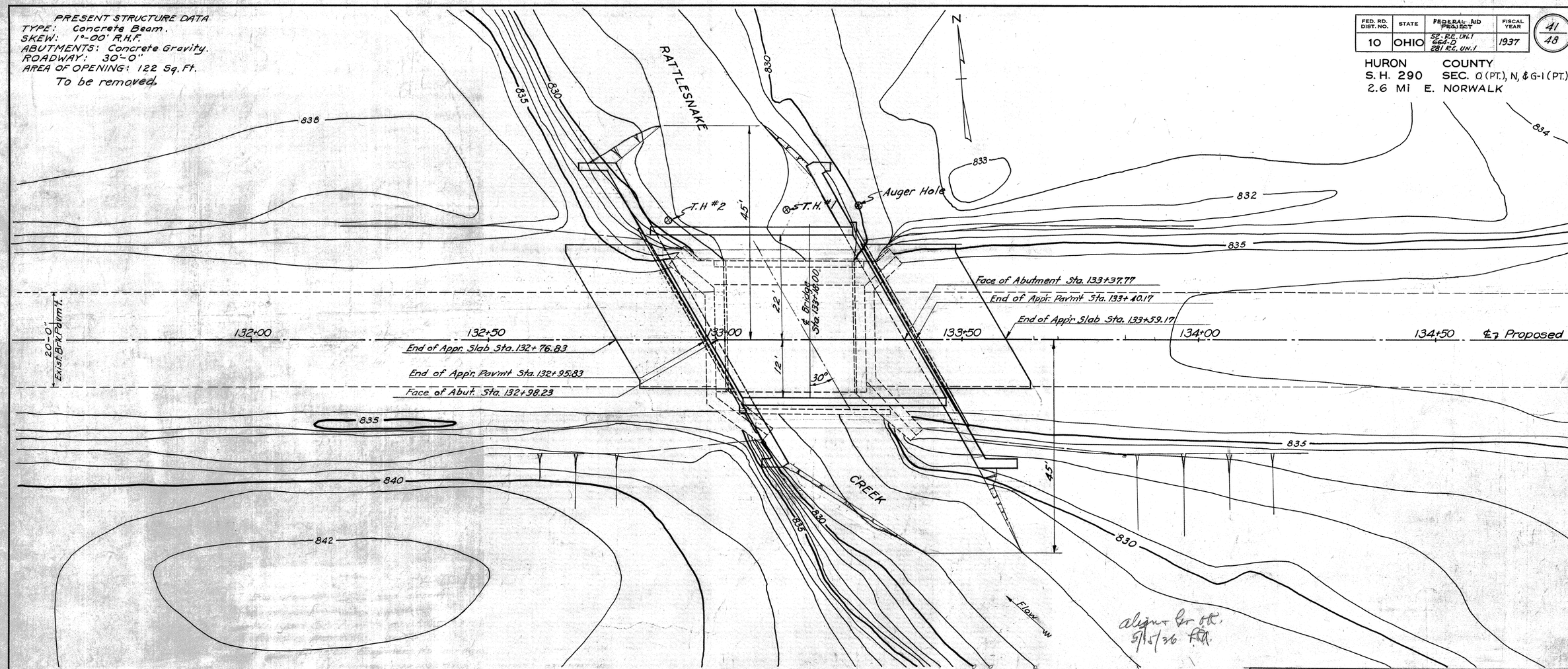

F.A.P. No. 664-D
Sta. 132+51.4
STRUCTURE NO. 7

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52-RE. UN.1 664-D 281 RE. UN.1 | 1937 |

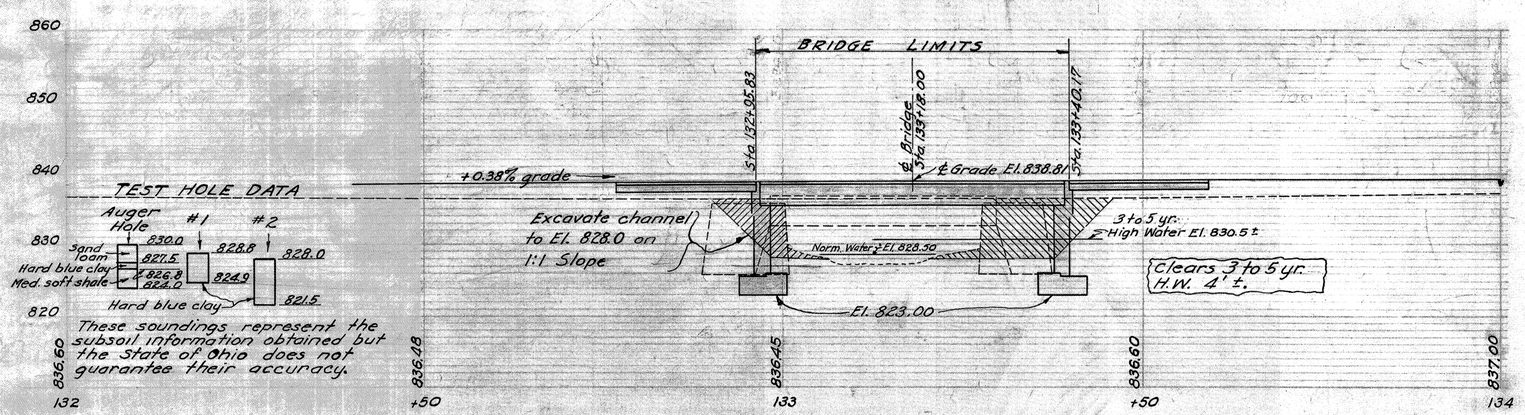
41/48

HURON COUNTY
S.H. 290 SEC. O (PT.), N, & G-1 (PT.)
2.6 Mi E. NORWALK

PRESENT STRUCTURE DATA
TYPE: Concrete Beam.
SKEW: 1°-00' R.H.F.
ABUTMENTS: Concrete Gravity.
ROADWAY: 30'-0"
AREA OF OPENING: 122 Sq. Ft.
To be removed.




Drainage Area – 5 Sq. Mi.




TEST HOLE DATA




These soundings represent the subsoil information obtained but the State of Ohio does not guarantee their accuracy.

PROPOSED STRUCTURE
Type: Concrete Beam
Span: 40' (Nominal)
Roadway: 34' (22' Left; 12' Right of ℄)
Loading: H-15-33
Skew: 30° R.F.
Surface Course: 3" Brick Surface Course Complete
Approach Slabs: 19' long by 30' wide.

SITE PLAN
BR. NO. HU.-20-168
OVER
RATTLESNAKE CREEK
S.H. 290 SEC. N.
HURON COUNTY
STATE OF OHIO

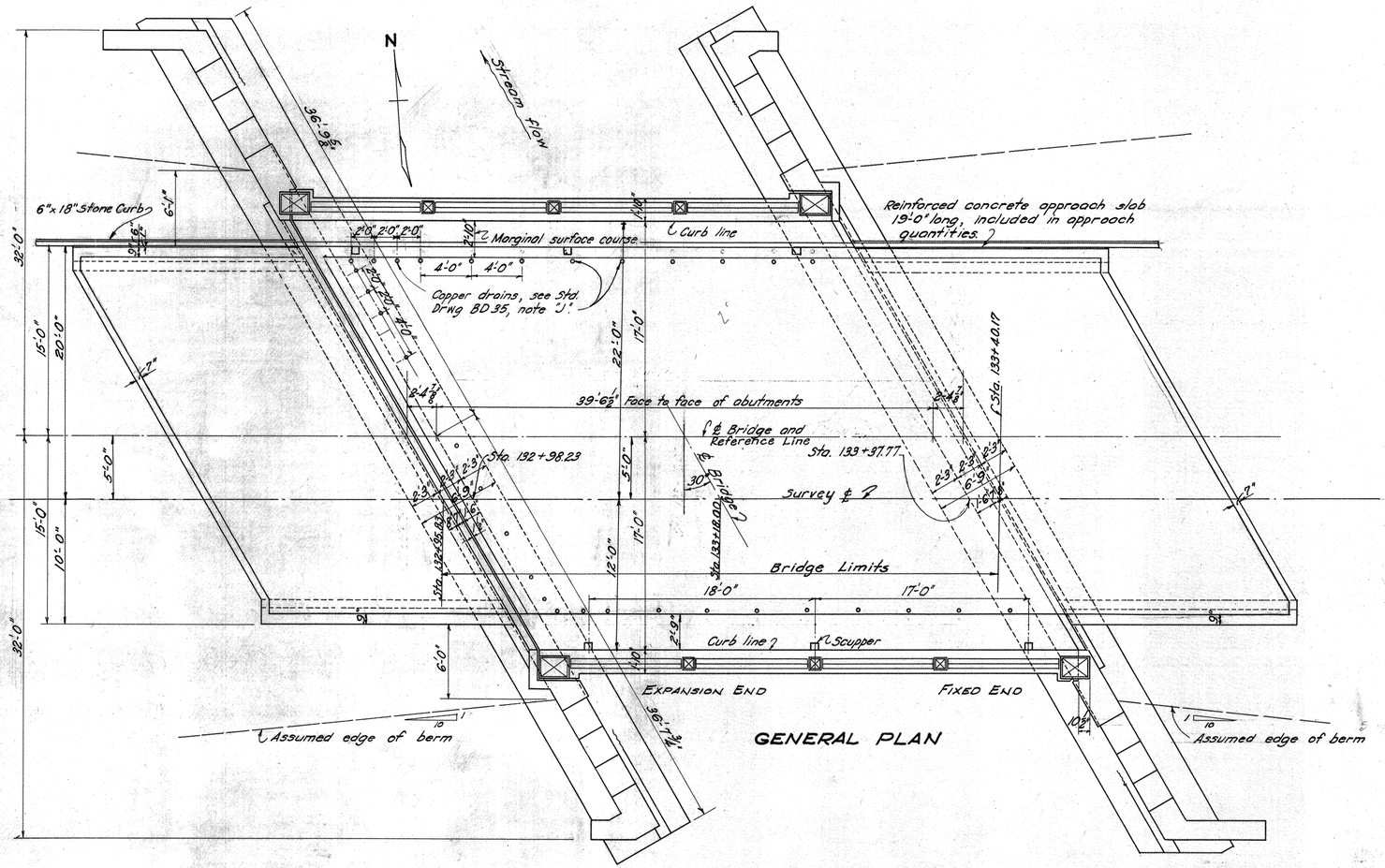
SCALE – 1" = 10' STA. 133+18.00

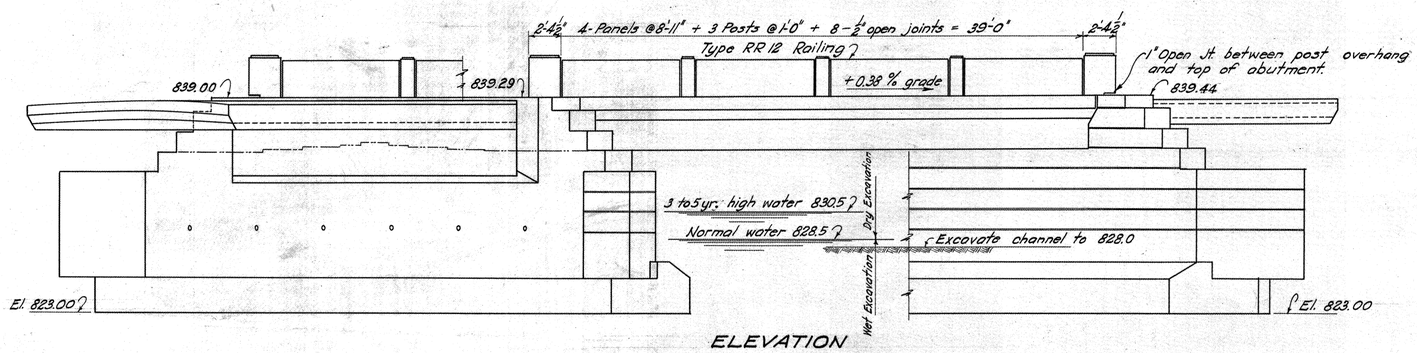
| PRES. TOPOGRAPHY | | PROPOSED WORK | | | |
|---|---|---|---|---|---|
| SURVEYED | DRAWN | DESIGNED | DRAWN | CHECKED | REVIEWED |
| R.L.W. | J.E.H. | C.H.A. | C.H.A. | [illegible] | J.E.M. 8/27/36 H.H.C. |

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | SF 82-1(4) 664-D 281-B&I(4) | 1937 |

42
48

HURON COUNTY
S. H. 290 SEC. O (PT.), N & G-1 (PT.)




## GENERAL NOTES

For details not shown on these drawings, reference shall be made to Standard Drawings; B-40-35, BD-35, MBD-35, and AS-35.

Existing bridge shall be removed and disposed of as bank protection or as otherwise directed by the Engineer.

F.A.P. No. 664-D

## ESTIMATED QUANTITIES

| Item | | West Abutment | East Abutment | Superstructure | General | Total Quantity |
|---|---|---|---|---|---|---|
| E-2 | Cofferdams and Pumping | | | | Lump | Lump Sum |
| E-2 | Excavation for Structures, wet (including shale) | 135 | 135 | | | 270 Cu. Yds. |
| E-2 | Excavation for Structures, dry | 40 | 35 | | | 75 Cu. Yds. |
| E-2 | Porous Backfill | | | | Lump | Lump Sum |
| E-3 | Channel Excavation | | | | 299 | 299 Cu. Yds. |
| S-1 | 1:5⅔ Concrete, superstructure | | | 90 | | 90 Cu. Yds. |
| S-1 | 1:6½ Concrete, walls | 72 | 73 | | | 145 Cu. Yds. |
| S-1 | 1:6½ Concrete, footings | 56.5 | 56.5 | | | 113 Cu. Yds. |
| S-3 | Type "B" Waterproofing | 23 | 23 | | | 46 Sq. Yds. |
| S-3 | Type "C" Waterproofing | | | 137 | | 137 Sq. Yds. |
| S-4 | Reinforcing Steel | 2750 | 2750 | 24,840 | 90 | 30,430 Lbs. |
| * | 1½"x3" Poured Rubber Exp. Joint | | | | 47 | 47 Lin. Ft. |
| S-9 | Folded Copper Strip (12"- 24 oz.) | 11 | 11 | | | 22 Lin. Ft. |
| S-9 | Sheet Copper - 18"- 12 oz. | | | 36 | | 36 Lin. Ft. |
| S-9 | ½" Premolded Expansion Jt. Filler | 16.5 | 9.5 | | | 26 Sq. Ft. |
| S-9 | ½" Cast Leaded Bronze Sliding Plates | | | | 210 | 210 Lbs. |
| S-14 | Bridge Railing, concrete | | | 87.5 | | 87.5 Lin. Ft. |
| S-24 | Removal of Existing Bridge | | | | Lump | Lump Sum |
| I-8 | Cast Iron Scuppers, Type B-55 | | | 6 | | 6 Pcs. |
| T-90 | 3" Brick Surface Course Complete | | | 133.2 | | 133.2 Sq. Yds. |
| | | | | | | |

* Supplemental Specification No. 80.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

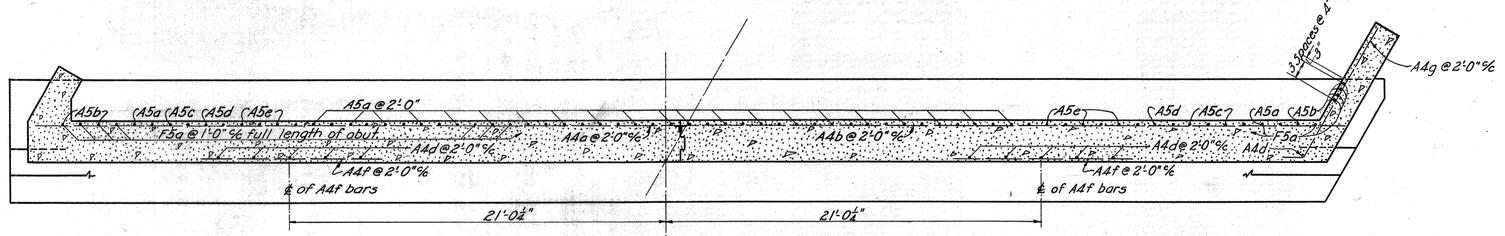
# GENERAL PLAN AND ELEVATION NOTES AND QUANTITIES

BRIDGE No. HU-20-168
OVER
RATTLESNAKE CREEK
HURON CO. SH 290 SEC. 'N'

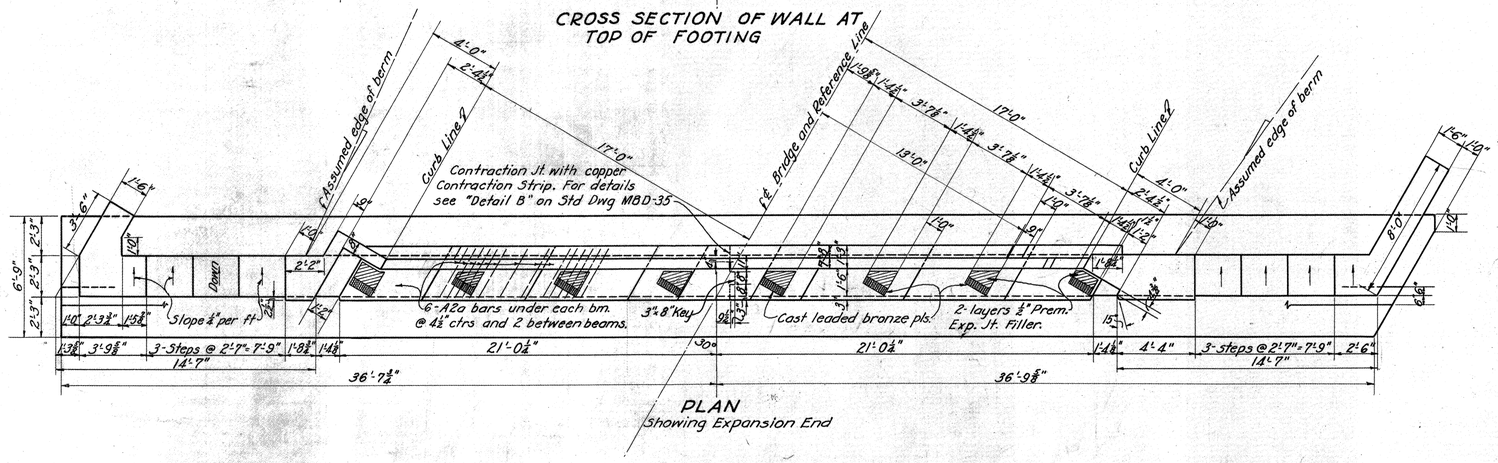
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
|---|---|---|---|---|---|---|
| A.J.F. | A.J.F. | C.E.O. | C.E.O. | W.H.M. W.H.G. | 9/27/36 | |

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR | 43 / 48 |
|---|---|---|---|---|
| 10 | OHIO | 52 REJN.1 664-D 281 RE.JN.1 | 1937 | |

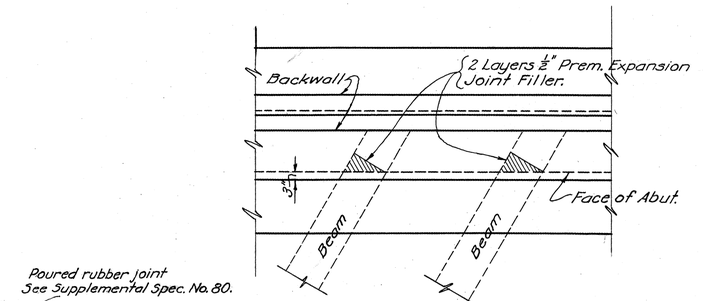
HURON COUNTY
S. H. 290 SEC. O(PT.), N & G-1(PT.)



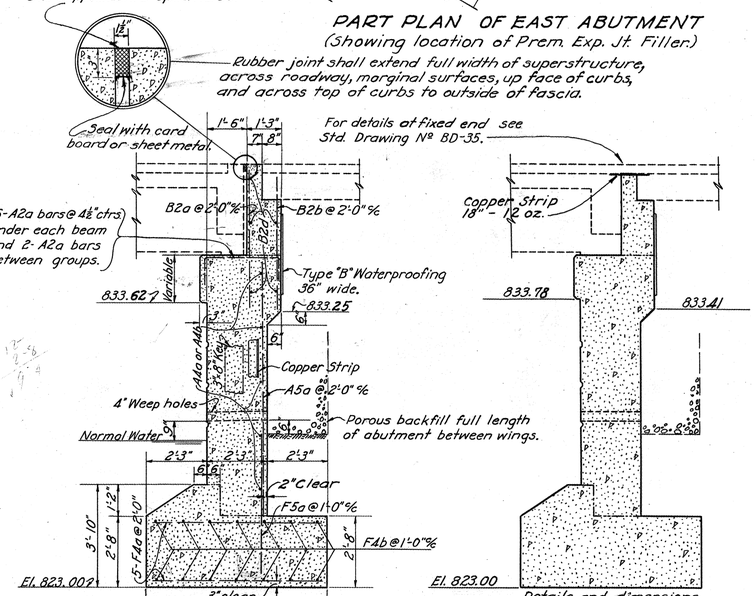

CROSS SECTION OF WALL AT TOP OF FOOTING

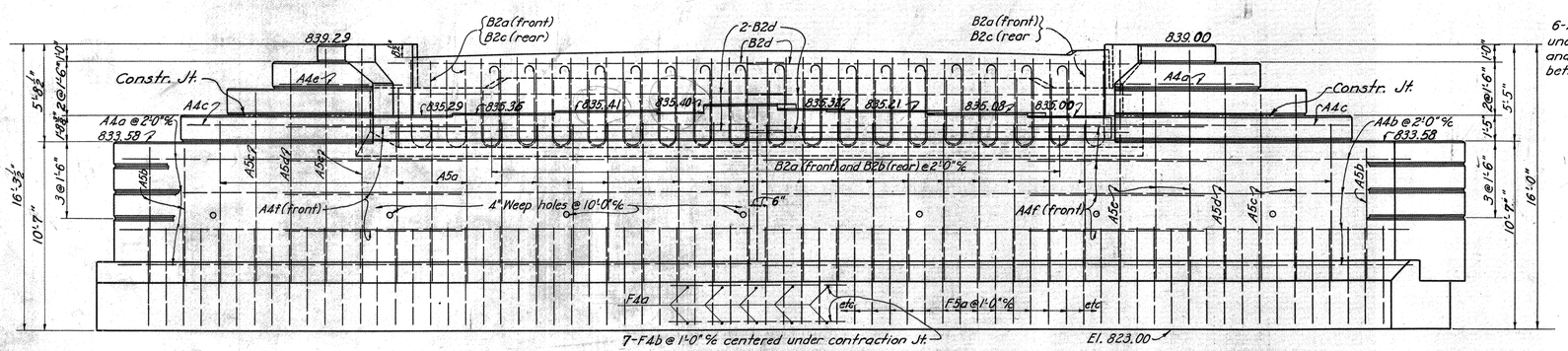



PLAN
Showing Expansion End




PART PLAN OF EAST ABUTMENT
(Showing location of Prem. Exp. Jt. Filler.)

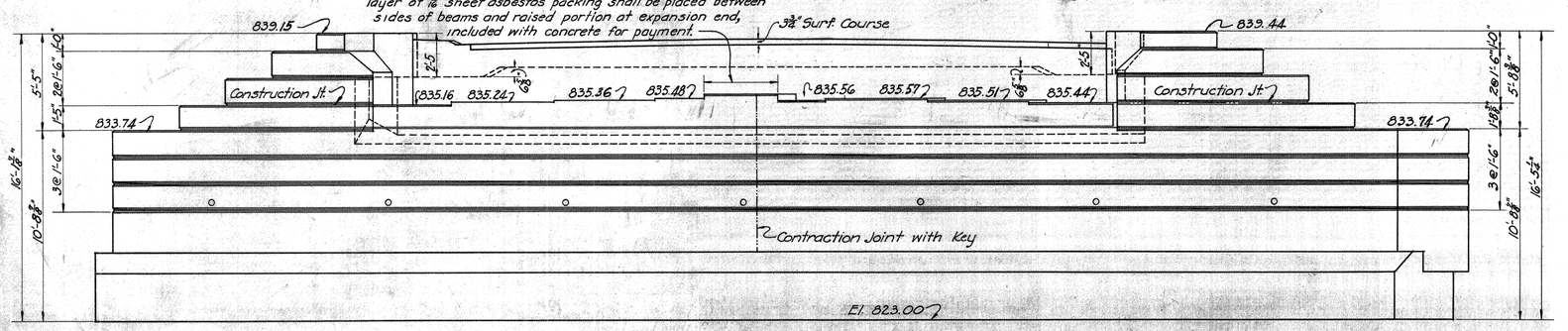


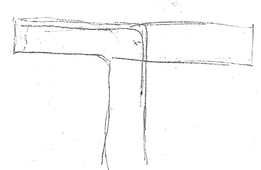

ELEVATION OF WEST ABUTMENT

Bridge seat on both abutments between two center beams shall be constructed 3" higher than bearing area. One layer of ⅛" sheet asbestos packing shall be placed between sides of beams and raised portion at expansion end, included with concrete for payment.

Note: For rustication details see "Detail D" on Std Drawing Nº MBD-35.




ELEVATION OF EAST ABUTMENT



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

# ABUTMENT DETAILS
## BRIDGE Nº HU-20-168
## OVER
## RATTLESNAKE CREEK

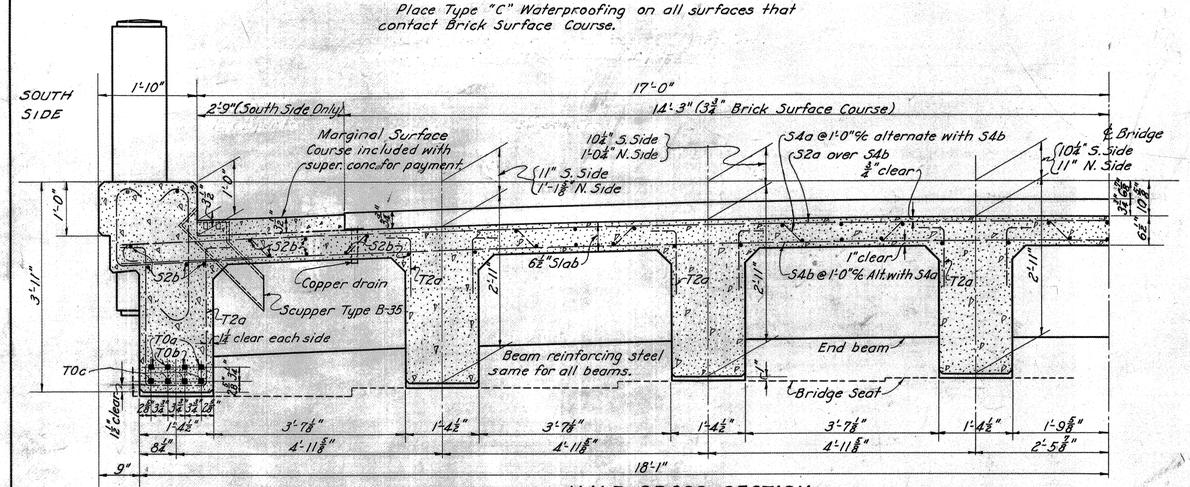
HURON COUNTY S. H. 290
SEC. N STA. 133+18

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
|---|---|---|---|---|---|---|
| A.J.F. | A.J.F. | GWS | C.E.O. | H.H.B. | 2/21/36 | |

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR | 44 / 48 |
|---|---|---|---|---|
| 10 | OHIO | 52 RE,IM, CC4-D 28 RE,IM, | 1937 | |

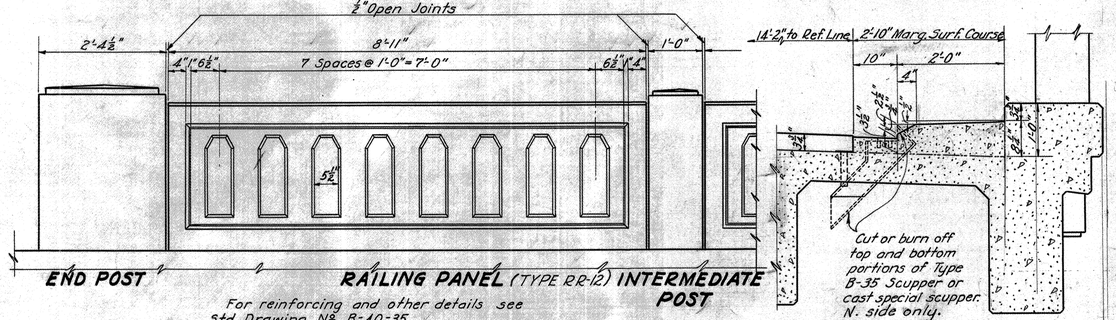
HURON COUNTY
S. H. 290 SEC. O (PT.), N & G-I (PT.)

Place Type "C" Waterproofing on all surfaces that contact Brick Surface Course.




## HALF CROSS SECTION

For dimensions and details not shown see Standard Drawing Nº B-40-35

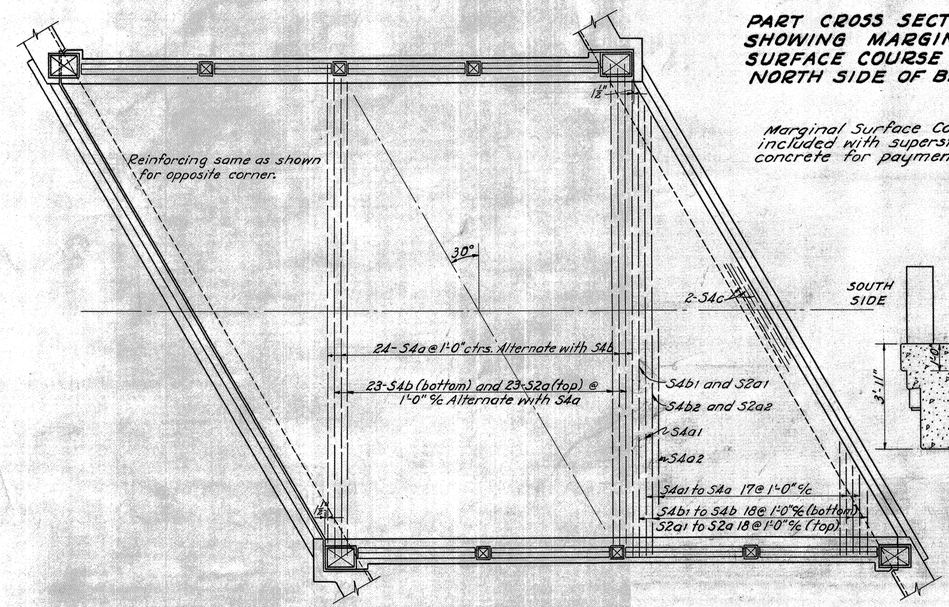



For reinforcing and other details see Std Drawing Nº B-40-35.

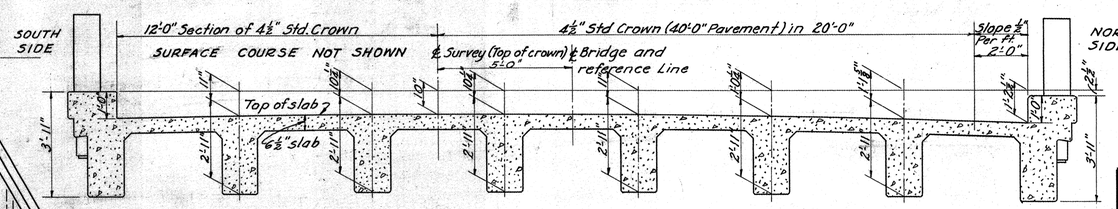



## PART CROSS SECTION SHOWING MARGINAL SURFACE COURSE ON NORTH SIDE OF BRIDGE

Marginal Surface Course included with superstructure concrete for payment.



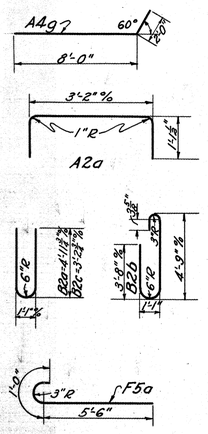

## PLAN SHOWING TRANSVERSE SLAB REINFORCING




## CROSS SECTION SHOWING CROWN

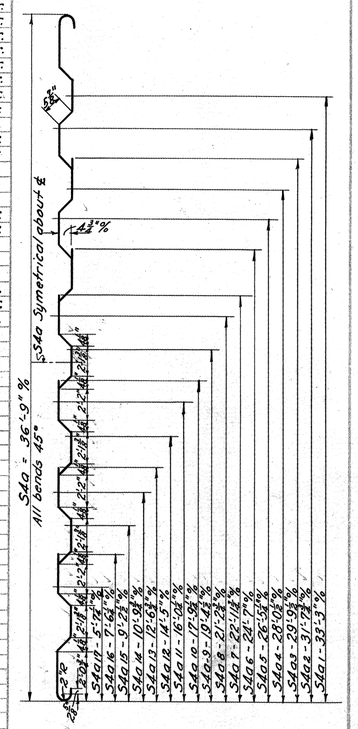
## REINFORCING STEEL LIST

| MARK | SIZE | NO. | LENGTH | WEIGHT | SHAPE |
|---|---|---|---|---|---|
| ABUTMENT STEEL | | | | | |
| A5a | ¾"ϕ | 46 | 9'-0" | 620 | Str. |
| A5b | ¾"ϕ | 14 | 7'-6" | 160 | Str. |
| A5c | ¾"ϕ | 6 | 10'-6" | 90 | Str. |
| A5d | ¾"ϕ | 4 | 12'-0" | 70 | Str. |
| A5e | ¾"ϕ | 10 | 13'-0" | 200 | Str. |
| A4a | ⅝"ϕ | 8 | 36'-0" | 300 | Str. |
| A4b | ⅝"ϕ | 8 | 37'-0" | 310 | Str. |
| A4c | ⅝"ϕ | 4 | 33'-0" | 140 | Str. |
| A4d | ⅝"ϕ | 24 | 8'-0" | 200 | Str. |
| A4e | ⅝"ϕ | 2 | 5'-0" | 10 | Str. |
| A4f | ⅝"ϕ | 16 | 10'-0" | 170 | Str. |
| A4g | ⅝"ϕ | 8 | 10'-0" | 80 | Bt. |
| A2a | ½"ϕ | 124 | 5'-3" | 430 | Bt. |
| B2a | ½"ϕ | 40 | 10'-6" | 280 | Bt. |
| B2b | ½"ϕ | 34 | 9'-9" | 220 | Bt. |
| B2c | ½"ϕ | 6 | 7'-0" | 30 | Bt. |
| B2d | ½"ϕ | 20 | 22'-6" | 300 | Str. |
| F5a | ¾"ϕ | 150 | 6'-6" | 1470 | Bt. |
| F4a | ⅝"ϕ | 20 | 6'-0" | 130 | Str. |
| F4b | ⅝"ϕ | 28 | 10'-0" | 290 | Str. |
| SUPERSTRUCTURE STEEL | | | | | |
| T0a | 1¼"ϕ | 16 | 45'-0" | 3830 | * |
| T0b | 1¼"ϕ | 16 | 38'-6" | 3280 | * |
| T0c | 1¼"ϕ | 32 | 44'-9" | 7610 | * |
| T2a | ½"ϕ | 320 | 7'-0" | 1500 | * |
| C4a | ⅝"ϕ | 86 | 3'-6" | 310 | * |
| C4b | ⅝"ϕ | 8 | 22'-6" | 190 | Str. |
| S4a | ⅝"ϕ | 24 | 40'-0" | 1000 | Bt. |
| S4a1 | ⅝"ϕ | 2 | 35'-9" | 70 | Bt. |
| S4a2 | ⅝"ϕ | 2 | 34'-0" | 70 | Bt. |
| S4a3 | ⅝"ϕ | 2 | 32'-0" | 70 | Bt. |
| S4a4 | ⅝"ϕ | 2 | 30'-3" | 60 | Bt. |
| S4a5 | ⅝"ϕ | 2 | 28'-6" | 60 | Bt. |
| S4a6 | ⅝"ϕ | 2 | 26'-6" | 60 | Bt. |
| S4a7 | ⅝"ϕ | 2 | 24'-9" | 50 | Bt. |
| S4a8 | ⅝"ϕ | 2 | 23'-0" | 50 | Bt. |
| S4a9 | ⅝"ϕ | 2 | 21'-0" | 40 | Bt. |
| S4a10 | ⅝"ϕ | 2 | 19'-3" | 40 | Bt. |
| S4a11 | ⅝"ϕ | 2 | 17'-6" | 40 | Bt. |
| S4a12 | ⅝"ϕ | 2 | 15'-9" | 30 | Bt. |
| S4a13 | ⅝"ϕ | 2 | 13'-9" | 30 | Bt. |
| S4a14 | ⅝"ϕ | 2 | 12'-0" | 30 | Bt. |
| S4a15 | ⅝"ϕ | 2 | 10'-3" | 20 | Bt. |
| S4a16 | ⅝"ϕ | 2 | 8'-6" | 20 | Bt. |
| S4a17 | ⅝"ϕ | 2 | 6'-6" | 10 | Bt. |
| S4b | ⅝"ϕ | 23 | 36'-9" | 880 | Str. |
| S4b1 | ⅝"ϕ | 2 | 34'-3" | 70 | Str. |
| S4b2 | ⅝"ϕ | 2 | 32'-6" | 70 | Str. |




* See Std. Dwg B-40-35 for bending diagram.

| MARK | SIZE | NO. | LENGTH | WEIGHT | SHAPE |
|---|---|---|---|---|---|
| SUPERSTRUCTURE STEEL (CONT'D) | | | | | |
| S4b3 | ⅝"ϕ | 2 | 30'-9" | 60 | Str. |
| S4b4 | ⅝"ϕ | 2 | 29'-0" | 60 | Str. |
| S4b5 | ⅝"ϕ | 2 | 27'-3" | 60 | Str. |
| S4b6 | ⅝"ϕ | 2 | 25'-6" | 50 | Str. |
| S4b7 | ⅝"ϕ | 2 | 23'-9" | 50 | Str. |
| S4b8 | ⅝"ϕ | 2 | 22'-0" | 40 | Str. |
| S4b9 | ⅝"ϕ | 2 | 20'-6" | 40 | Str. |
| S4b10 | ⅝"ϕ | 2 | 18'-9" | 40 | Str. |
| S4b11 | ⅝"ϕ | 2 | 17'-0" | 40 | Str. |
| S4b12 | ⅝"ϕ | 2 | 15'-3" | 30 | Str. |
| S4b13 | ⅝"ϕ | 2 | 13'-6" | 30 | Str. |
| S4b14 | ⅝"ϕ | 2 | 11'-9" | 20 | Str. |
| S4b15 | ⅝"ϕ | 2 | 10'-0" | 20 | Str. |
| S4b16 | ⅝"ϕ | 2 | 8'-3" | 20 | Str. |
| S4b17 | ⅝"ϕ | 2 | 6'-6" | 10 | Str. |
| S4b18 | ⅝"ϕ | 2 | 4'-9" | 10 | Str. |
| S4c | ⅝"ϕ | 12 | 41'-3" | 520 | Str. |
| S4d | ⅝"ϕ | 80 | 4'-3" | 350 | * |
| S2a | ½"ϕ | 23 | 36'-9" | 560 | Str. |
| S2a1 | ½"ϕ | 2 | 34'-3" | 50 | Str. |
| S2a2 | ½"ϕ | 2 | 32'-6" | 40 | Str. |
| S2a3 | ½"ϕ | 2 | 30'-9" | 40 | Str. |
| S2a4 | ½"ϕ | 2 | 29'-0" | 40 | Str. |
| S2a5 | ½"ϕ | 2 | 27'-3" | 40 | Str. |
| S2a6 | ½"ϕ | 2 | 25'-6" | 30 | Str. |
| S2a7 | ½"ϕ | 2 | 23'-9" | 30 | Str. |
| S2a8 | ½"ϕ | 2 | 22'-0" | 30 | Str. |
| S2a9 | ½"ϕ | 2 | 20'-6" | 30 | Str. |
| S2a10 | ½"ϕ | 2 | 18'-9" | 30 | Str. |
| S2a11 | ½"ϕ | 2 | 17'-0" | 20 | Str. |
| S2a12 | ½"ϕ | 2 | 15'-3" | 20 | Str. |
| S2a13 | ½"ϕ | 2 | 13'-6" | 20 | Str. |
| S2a14 | ½"ϕ | 2 | 11'-9" | 20 | Str. |
| S2a15 | ½"ϕ | 2 | 10'-0" | 10 | Str. |
| S2a16 | ½"ϕ | 2 | 8'-3" | 10 | Str. |
| S2a17 | ½"ϕ | 2 | 6'-6" | 10 | Str. |
| S2a18 | ½"ϕ | 2 | 4'-9" | 10 | Str. |
| S2b | ½"ϕ | 124 | 22'-6" | 1860 | Str. |
| S2c | ½"ϕ | 98 | 5'-3" | 340 | * |
| S2d | ½"ϕ | 98 | 4'-9" | 310 | * |
| D5a | ¾"ϕ | 16 | 6'-9" | 160 | * |
| D5b | ¾"ϕ | 8 | 8'-0" | 100 | * |
| D4a | ⅝"ϕ | 12 | 7'-3" | 90 | * |
| R5a | ¾"ϕ | 16 | 10'-6" | Incl. with Railing for Payment | Bt. |
| R1a | ⅜"ϕ | 32 | 8'-9" | | Str. |
| R1b | ⅜"ϕ | 72 | 2'-6" | | Str. |
| REPLACEMENT STEEL | | | | | |
| RE0 | 1¼"ϕ | 1 | 14'-0" | 70 | |
| RE5 | ¾"ϕ | 1 | 7'-0" | 10 | |
| RE4 | ⅝"ϕ | 1 | 6'-6" | 10 | |
| RE2 | ½"ϕ | 1 | 6'-0" | 0 | |
| RE1 | ⅜"ϕ | 1 | 5'-6" | 0 | |
| Grand Total = | | | | 30,430 | |

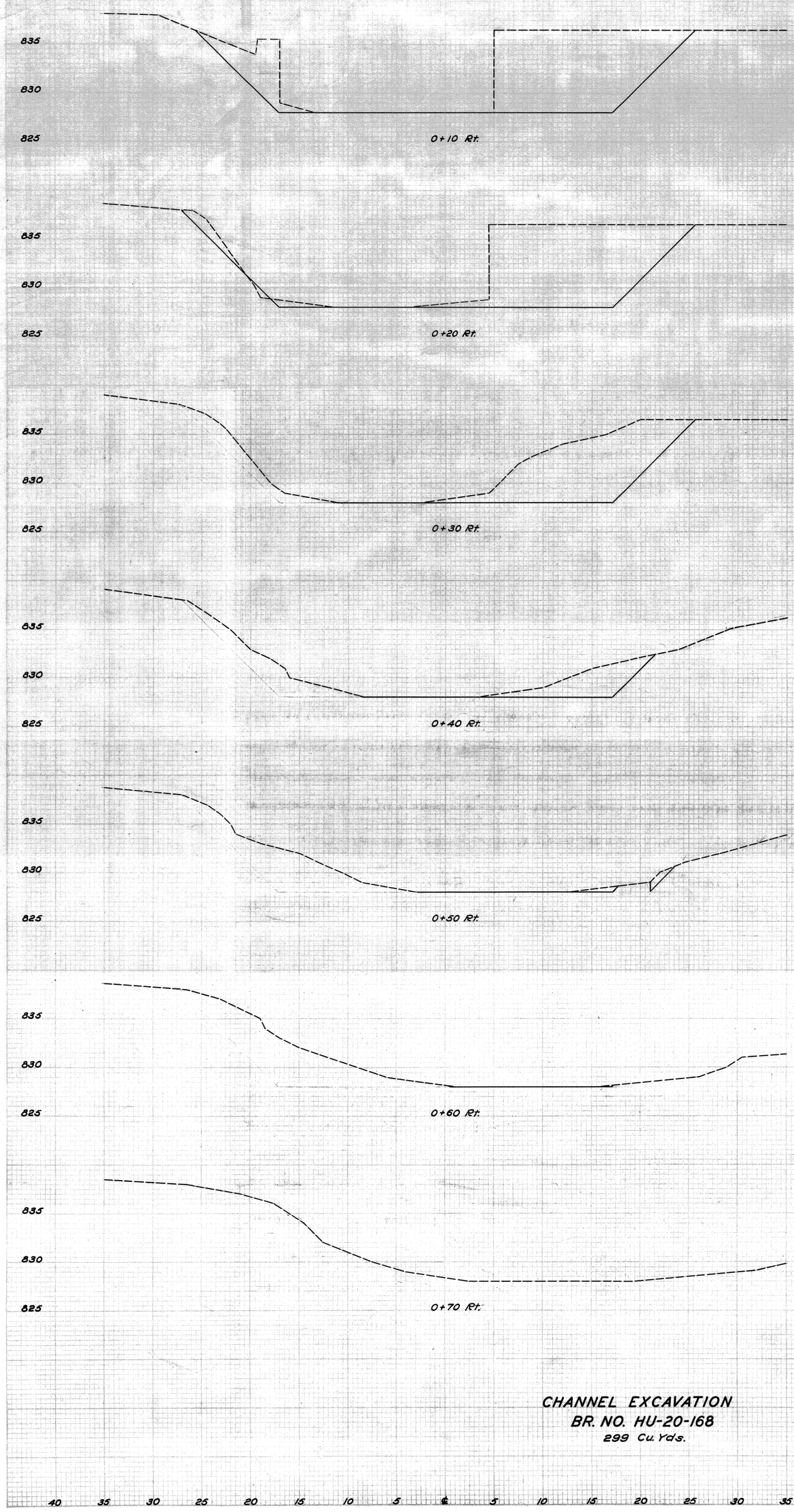



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

# SUPERSTRUCTURE DETAILS AND STEEL LIST

BR. NO. HU-20-168
OVER RATTLESNAKE CREEK
HURON COUNTY S.H. 290
SEC. N STA. 133 + 18.00

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED | DATE | REVISED |
|---|---|---|---|---|---|---|
| A.J.F. | A.J.F. | G.W.S. | C.E.O. | J.L.M. M.H.C. | 5/12/36 | |




| END AREA | | CU. YDS. | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 170 | 0 | | |
| | | 60 | 0 |
| 156 | 0 | | |
| | | 48 | 0 |
| 101 | 0 | | |
| | | 24 | 0 |
| 27 | 0 | | |
| | | 6 | 0 |
| 3 | 0 | | |
| | | 1 | 0 |
| 1 | 0 | | |
| | | 0 | 0 |
| 0 | 0 | | |

CHANNEL EXCAVATION
BR. NO. HU-20-168
299 Cu. Yds.

HURON COUNTY
S.H. 290 SEC. 0 PT., N, & G-1 PT.

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 50 R.E. UN.1 66 A.D. 281 R.E. UN.1 | 1937 |

45
48

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>282-D<br>281 RE. UN. 1 | 1937 |

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48

HURON COUNTY
S.H. 290 SEC. O PT, N, & G-1 PT.

| END AREA | | CU. YDS. | |
|---|---|---|---|
| CUT | FILL | CUT | FILL |
| 0 | 0 | 1 | 0 |
| 5 | 0 | 3 | 0 |
| 11 | 0 | 14 | 0 |
| 64 | 0 | 31 | 0 |
| 103 | 0 | 31 | 0 |
| 63 | 0 | 30 | 0 |
| 99 | 0 | 30 | 0 |

0+60 Lt.

0+50 Lt.

0+40 Lt.

0+30 Lt.

0+20 Lt.

0+10 Lt.

0+00

835
830
825
5
10
15
20
25
30
35
40

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52-RE. UN. 1<br>664-D<br>281-RE. UN. 1 | 1937 |

47
48

HURON COUNTY
S. H. 290 SEC. O PT. N & G-I PT.

# SUMMARY TABLES

## TABLE NO 1 STRUCTURES 20 FT. SPAN & UNDER

| F.A.P. No. | STRUCT. NO. | DETAILS ON SHEET NO | STATION | ST'D. DRWG NO'S | EXCAV. | CHANNEL EXCAV. | 1-5½ MIX CONC. | REINF. STEEL | CULVERT PIPE 10" | 12" | 15" | 18" | 24" | 24" RDWY. DRAINAGE PIPE | OUTLET | PIPE UNDERDRAIN 4" | 6" | 10" | PIPE SPECIAL 15"-12" Double | CATCH BASINS NO 2-2 | NO 2-3 | REMOVAL EXISTING 12" PIPE | REMOVE & STORE EXIST. 12" PIPE | REMOVAL EXISTING MASONRY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | CU. YDS. | CU. YDS. | CU. YDS. | LBS. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | LIN. FT. | LIN. FT. | LIN. FT. | UNITS. | UNITS | UNITS | LIN. FT. | LIN. FT. | CU. YDS. |
| 52 RE. UN. 1 | 1 | 38 | 30+00 | S-27 RC 1&3 | 24 | 4 | 1.7 | 47 | | | 62 | | | | | | | | | | | 42 | | |
| | 2 | 39 | 47+34 | S-27 RC 1&3<br>1-6 CB 2-2 | 40 | | 1.7 | 47 | 80 | | 66 | | | | | 20 | 20 | 15 | 1 | 2 | | | 42 | 4.4 |
| | 3 | 38 | 58+18.5 | S-27 RC 1<br>1-2 CB 2-3 | 27 | 2 | 1.4 | 32 | | | | | 58 | | | | | | | | 1 | | | 3.0 |
| 664-D | 4 | 38 | 97+24.9 | S-27 RC 3<br>1-8 CB 2-2 | 44 | | 1.0 | 26 | | | | 72 | | | | | | | | 1 | | | 43 | 4.7 |
| | 5 | 39 | 113+49.45 | S-27 RC 1&3 | 18 | 34 | 1.7 | 47 | | | 60 | | | | | | | | | | | | | 4.4 |
| | 6 | 38 | 127+20.8 | 1-6 CB 2-2<br>S-27 RC-3 | 25 | | | | | 74 | | | | | | | | | | 2 | | | 43.5 | 0.2 |
| | 7 | 40 | 132+51.4 | S-27 RC 3 | 30 | | | | | | 48 | | | | | | | | | | | | | |
| 281-RE. UN. 1 | 8 | 40 | 144+65.8 | S-27 RC 1&3 | 4 | | | | | | | | 40 | 22 | 12 | | | | | | | | | 4.5 |
| 52 RE. UN. 1 | Totals | | | | 91 | 6 | 4.8 | 126. | 80 | | 128 | | 58 | | | 20 | 20 | 15 | 1 | 2 | 1 | 42 | 42 | 7.4 |
| 664-D | Totals | | | | 117 | 34 | 2.7 | 73. | | 74 | 108 | 72 | | | | | | | | 3 | | | 86.5 | 9.3 |
| GRAND TOTALS | | | | | 212 | 40 | 7.5 | 199. | 80 | 74 | 236 | 72 | 98 | 22 | 12 | 20 | 20 | 15 | 1 | 5 | 1 | 42 | 128.5 | 21.2 |

## TABLE NO 5 CONCRETE HEADERS

| F.A.P. No. | TOTAL FROM SHEET NO. | 9" CONC. HEADER LIN. FT. |
|---|---|---|
| 52 RE. UN. 1 | 3 | |
| 664-D | 10 | 66.0 |
| 281 RE. UN. 1 | 12 | 28.5 |
| | | |
| GRAND TOTALS | | 94.5 |

## TABLE NO 2 EXCAVATION & EMBANKMENT

| F.A.P. No. | STATION FROM | STATION TO | EXC. CU. YDS. | EMB. CU. YDS. | EMB + 25% CU. YDS. | WASTE CU. YDS. | BORROW CU. YDS. |
|---|---|---|---|---|---|---|---|
| 52 RE. UN. 1 | 26+61 | 30+00 | 474 | 364 | 455 | 19 | |
| | 30+00 | 40+00 | 1016 | 915 | 1144 | | 128 |
| | 40+00 | 50+00 | 349 | 2007 | 2509 | | 2160 |
| | 50+00 | 60+00 | 954 | 973 | 1216 | | 262 |
| | 60+00 | 67+38 | 138 | 1218 | 1522 | | 1,384 |
| 664-D | 67+38 | 80+00 | 259 | 2,391 | 2989 | | 2,730 |
| | 80+00 | 90+00 | 209 | 1761 | 2201 | | 1,992 |
| | 90+00 | 100+00 | 56 | 2244 | 2805 | | 2,749 |
| | 100+00 | 110+00 | 51 | 1963 | 2454 | | 2,403 |
| | 110+00 | 120+00 | 122 | 1872 | 2340 | | 2,218 |
| | 120+00 | 130+00 | 216 | 2038 | 2548 | | 2,332 |
| | 130+00 | 136+99 | 208 | 2355 | 2944 | | 2,736 |
| 281 RE. UN. 1 | 136+99 | 150+00 | 2,980 | 8,429 | 10,536 | | 7,556 |
| | 150+00 | 160+00 | 993 | 4920 | 6150 | | 5157 |
| | 160+00 | 173+00 | 12405 | 327 | 409 | 11,996 | |
| 52 RE. UN. 1 | TOTALS | | 2,931 | 5,477 | 6,846 | 19 | 3,934 |
| 664-D | TOTALS | | 1,121 | 14,624 | 18,281 | | 17,160 |
| 281 RE. UN. 1 | TOTALS | | 16,378 | 13,676 | 17,095 | 11,996 | 12,713 |
| GRAND TOTALS | | | 20,430 | 33,777 | 42,222 | 12,015 | 33,807 |

NET BORROW: 3,915; 17,160; 717; 21,792

## TABLE NO 3 ROADWAY DRAINAGE

| F.A.P. No. | TOTAL FROM SHEET NO. | PIPE 6" | 8" | 10" | 12" OUTLET 12" | 15" | PIPE INCLUDING AGGREGATE COVER LIN. FT. 10" | 12" | 8" PIPE INCL. FULL AGGREGATE COVER | PIPE UNDER R.D. APPR. 12" | REMOVE & STORE V.S.P. 6" | 8" | 12" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 RE. UN. 1 | 3 | | | | 10 | | 583 | | | | | | |
| | 4 | | 219 | | 20 | | 601 | | 538 | | 164 | 110 | |
| | 5 | | | | 10 | | 20 | 1188 | | 26 | 174 | | 224 |
| 664-D | 5 | | | | | | 20 | 16 | | 44 | | | |
| | 6 | | | 16 | | | 973 | 617 | | | | | |
| | 7 | 88 | | | | | 1419 | | | | | | |
| | 8 | | | | | | 1121 | | | | | | |
| | 9 | | | | | | 214 | 468 | | | | | |
| | 10 | | 14 | | 24 | | | 39 | | | | | |
| 281 RE. UN. 1 | 10 | 46 | 180 | | | | | 190 | 278 | | | | |
| | 11 | | | | | | | 1,503 | | 46 | | | |
| | 12 | | | | | | | 347 | 300 | 298 | | | |
| 52 RE. UN. 1 | TOTALS | | | | 30 | 10 | 1,204 | 1,188 | | 26 | 338 | 110 | 224 |
| 664-D | TOTALS | 88 | 14 | 16 | 24 | | 3,747 | 1,140 | | 44 | | | |
| 281 RE. UN. 1 | TOTALS | 46 | 180 | | | | | 2,040 | 578 | 298 | 46 | | |
| GRAND TOTALS | | 134 | 413 | 16 | 24 | 30 | 10 | 4,951 | 4,368 | 1116 | 298 | 116 | 338 | 110 | 224 |

## TABLE NO 4 DRIVES & APPROACHES

| F.A.P. NO. | TOTAL FROM SHEET NO. | PIPE LIN. FT. 12" | PIPE REMOVED & STORED LIN. FT. V.S.P. 6" | 8" | 10" | 12" | C.M.P. 8" | 10" | 12" | DRAINTILE 6" | 10" | AGGREGATE FOR T.B. SIDE APPROACHES CU. YDS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 RE. UN. 1 | 3 | 20 | | | 36 | | | | | | | 12 |
| | 4 | | | | 18 | | | | | | | 12 |
| | 5 | 20 | | | 32 | | | 20 | | | | 14 |
| 664-D | 5 | | | | | | | 26 | | | | 5 |
| | 6 | | | 12 | 16 | | 36 | | | | | 9 |
| | 7 | 20 | | | 16 | | | | | 16 | 20 | 12 |
| | 8 | 20 | 18 | | | | | | | | | 6 |
| | 9 | 60 | 146 | | | | | 16 | | | | 21 |
| | 10 | | | | | | 20 | | | | | 11 |
| 281 RE. UN. 1 | 11 | | | | 160 | | 40 | | 40 | | | 30 |
| | 12 | 40 | | | | | 40 | | | | | 12 |
| 52 RE. UN. 1 | TOTALS | 40 | | | 86 | | | 20 | | | | 38 |
| 664-D | TOTAL | 100 | 164 | 12 | 32 | | 56 | 42 | | 16 | 20 | 64 |
| 281 RE. UN. 1 | | 40 | | | 160 | | 80 | | 40 | | | 70 |
| GRAND TOTALS | | 180 | 164 | 12 | 278 | | 136 | 62 | 40 | 16 | 20 | 172 |

## TABLE NO 6 CATCH BASINS & INLETS

| F.A.P. NO. | TOTAL FROM SHEET NO. | STD NO. 5 (MOD.) CATCH BASIN UNITS | STD NO. 5 CATCH BASIN UNITS | STD NO 1-2 CATCH BASIN UNITS | STD NO 2-2 CATCH BASIN UNITS | STD NO 1 SIDE D INLETS UNITS |
|---|---|---|---|---|---|---|
| 52 RE. UN. 1 | 3 | | 4 | 2 | | |
| | 4 | | 5 | 3 | | 1 |
| | 5 | 1 | 3 | 2 | | 1 |
| 664-D | 6 | | 1 | 2 | | |
| | 7 | 1 | 4 | 3 | 3 | |
| | 8 | | 3 | 3 | | 2 |
| | 9 | | 5 | 4 | | 1 |
| | 10 | | 5 | 1 | 2 | |
| 281-RE. UN. 1 | 11 | 1 | 3 | 3 | | |
| | 12 | | 6 | 3 | 3 | |
| 52 RE. UN. 1 | TOTALS | | 2 | 3 | | |
| 664 D | TOTALS | 1 | 12 | 6 | | 2 |
| 281 RE. UN. 1 | TOTALS | 1 | 21 | 15 | 5 | 3 |
| GRAND TOTALS | | 1 | 11 | 9 | 3 | |
| | | 3 | 44 | 31 | 8 | 5 |

## TABLE NO 7 PAVEMENT REMOVAL

| F.A.P. NO. | TOTAL FROM SHEET NO | REMOVAL OF EXISTING PAVEMENT SQ YDS. | REMOVAL OF EXIST CONC. BASE INCL CURBS SQ YDS. | TAKE UP CLEAN & HACK EXIST. BRICK SQ YDS. |
|---|---|---|---|---|
| 52 RE. UN. 1 | 3 | 808.9 | | |
| | TOTALS | 808.9 | | |
| 664-D | 9 | | 777.8 | 622.2 |
| | 10 | | 1,037.4 | 829.7 |
| | TOTALS | | 1,815.2 | 1,451.9 |
| 281-RE. UN. 1 | 10 | | 2,446.6 | 1,957.3 |
| | 11 | | 3,444.4 | 2,755.5 |
| | 12 | | 2,111.1 | 1,688.8 |
| | TOTALS | | 8,002.1 | 6,401.6 |
| GRAND TOTALS | | 808.9 | 9,817.3 | 7,853.5 |

## TABLE NO 8 CHANNEL EXCAVATION

| TOTAL FROM SHEET NO | CHANNEL EXCAVATION CU YDS |
|---|---|
| 37 | 1049 |
| F.A.P. 281 RE. UN. 1 | 1049 |
| TOTAL | 1049 |

Note
Channel Excavation to be used as directed by Engineer

## TABLE NO. 8 ROADWAY DRAINAGE (CONT'D)

| F.A.P. NO. | Total FROM SHEET No. | PIPE FOR ROADWAY DRAINAGE 12" 24" | 12" PIPE UNDER ROAD APPROACH LIN. FT. | OUTLET Pipe 15" | 24" | PIPE SPECIALS TEES LIN. FT. 12"x6" | 12"x10" | 12"x12" EACH | BENDS 24"x45" EACH | 12"x90" EACH |
|---|---|---|---|---|---|---|---|---|---|---|
| 52 RE. UN. 1 | 3 | 708 | | | | | | 2 | | 2 |
| | 4 | 1048 | | | | | | 4 | | 1 |
| | 5 | 1490 | 25 | | | | 1 | 2 | | |
| | TOTALS | 3,246 | 25 | | | | 1 | 8 | | 3 |
| 664-D | 5 | 30 | 31 | | | | 1 | 1 | | |
| | 6 | 1,597 | | | | | | 3 | | |
| | 7 | 1,181 | | | | | | 2 | | 1 |
| | 8 | 1,051 | | | | | | 3 | | 1 |
| | 9 | 1,199 | | | | | | 3 | | 1 |
| | 10 | 363 | 24 | 68 | 12 | 12 | | | 1 | |
| | TOTALS | 5,421 | 24 | 99 | 12 | 12 | 1 | 12 | 1 | 3 |
| 281 RE. UN. 1 | 10 | 684 | | 100 | | | 1 | 1 | | 1 |
| | 11 | 1,350 | | 200 | | | | 6 | | |
| | 12 | 926 | | | | | | 1 | | 1 |
| | TOTALS | 2,960 | | 300 | | | 1 | 8 | | 2 |
| GRAND TOTAL | | 11,627 | 24 | 424 | 12 | 12 | 1 | 28 | 1 | 8 |

## TABLE NO. 9 APPROACH SLABS

| F.A.P. NO. | TOTAL FROM SHEET NO. | 3" BRICK SURFACE COURSE S.Y. | 12" REINF. CONC. APPR. SLAB S.Y. |
|---|---|---|---|
| 664-D | 10 | 116.2 | 126.6 |
| 664-D | TOTAL | 116.2 | 126.6 |

## TABLE NO. 10 TREES REMOVED

| F.A.P. NO. | TOT. FROM SHEET NO. | TREE REMOVAL NO. OF TREES |
|---|---|---|
| 52 RE. UN. 1 | 4 | 1 |
| | TOTAL | 1 |
| 664-D | 6 | 7 |
| | 7 | 2 |
| | 8 | 2 |
| | 9 | 2 |
| | TOTAL | 13 |
| 281 RE. UN. 1 | 10 | 2 |
| | TOTAL | 2 |
| GRAND TOTAL | | 16 |

## TABLE NO. 11 CONCRETE STEPS & WALKS

| F.A.P. NO. | TOTAL FROM SHEET NO. | REINF. CONC. STEPS AS PER PLAN LIN. FT. | 4" CONCRETE WALK SQ. FT. |
|---|---|---|---|
| 281 RE. UN. 1 | 12 | 110 | 101.3 |
| TOTAL | | 110 | 101.3 |

## TABLE NO. 12 STUMPS REMOVED

| F.A.P. NO. | TOTAL FROM SHEET NO. | STUMP REMOVAL NO. OF STUMPS |
|---|---|---|
| 664-D | 7 | 4 |
| TOTAL TOTAL | | 4 |
| GRAND TOTAL | | 4 |

## TABLE NOS. 3 & 8 COMBINED ROADWAY DRAINAGE

| F.A.P. NO. | TABLE NO. | PIPE 6" | 8" | 10" | 12" | 24" | OUTLET PIPE 12" | 15" | 24" | 12" PIPE UNDER ROAD APPR. | PIPE INCL. AGGR. COV'R 8" | 10" | 12" | 8" PIPE INCL. FULL AGGR. COV'R | REMOVE & STORE VITRIFIED SEWER PIPE 6" | 8" | 12" | PIPE SPECIALS TEES 12"x6" | 12"x10" | 12"x12" | BENDS 24"x45" | 12"x90" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 RE. UNIT 1 | 3 | | 219 | | | | 30 | 10 | | 26 | 538 | 1,204 | 1,188 | | 338 | 110 | 224 | | | | | |
| | 8 | | | | 3,246 | | | | | 25 | | | | | | | | | 1 | 8 | | 3 |
| | TOTALS | | | | 3,246 | | 30 | 10 | | 51 | | 1,204 | 1,188 | | 338 | 110 | 224 | | 1 | 8 | | 3 |
| 664-D | 3 | 88 | 14 | 16 | 24 | | | | | 44 | | 3,747 | 1,140 | | | | | | | | | |
| | 8 | | | | 5,421 | 24 | | 12 | 12 | 99 | | | | | | | | 1 | 12 | 1 | 3 |
| | TOTAL | 88 | 14 | 16 | 5,445 | 24 | | 12 | 12 | 143 | | 3,747 | 1,140 | | | | | 1 | 12 | 1 | 3 |
| 281 RE. UNIT 1 | 3 | 46 | 180 | | | | | | | 46 | 578 | | 2,040 | 298 | | | | | | | | |
| | 8 | | | | 2,960 | | | | | 300 | | | | | | | | 1 | 8 | | 2 |
| | TOTAL | 46 | 180 | | 2,960 | | | | | 346 | 578 | | 2,040 | 298 | | | | 1 | 8 | | 2 |
| GRAND TOTALS | | 134 | 413 | 16 | 11651 | 24 | 30 | 22 | 12 | 540 | 1116 | 4,951 | 4,368 | 298 | 338 | 110 | 224 | 1 | 2 | 28 | 1 | 8 |

# SUMMARY OF QUANTITIES

| FED. RD. DIST. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | 52 RE. UN. 1<br>664-D<br>281 RE. UN. 1 | 1937 |

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HURON COUNTY
S. H. 290 SEC. O PT N. & G-1 PT.

| LINE | CALCULATIONS | | F.A.P. NO. 52 RE.UN.1 | F.A.P. NO. 664-D | F.A.P. NO. 281 RE.UN.1 | TOTALS | UNITS |
|---|---|---|---|---|---|---|---|
| 1 | LENGTH OF PAVEMENT BASE | Stations | 26+61-67+38 | 67+38-136+99 | 136+99-173+00 | | |
| 2 | Total Lengths | | 4077.00 | 6,961.00 | 3,601.00 | 14,639.00 | LIN. FT. |
| 3 | Less Approach Slabs for Structure | | | 38.00 | | 38.00 | LIN. FT. |
| 4 | Less Length of Structure (See Sheet No. 1) | | | 44.34 | | 44.34 | LIN. FT. |
| 5 | Length of Pavement Base | | 4,077.00 | 6,878.66 | 3,601.00 | 14,556.66 | LIN. FT. |
| 6 | 4" PIPE UNDERDRAIN (Back of Curb) Aggregate backfill | | | | | | |
| 7 | included with Stone Curb) Length (See Line 59) | | 4,051.00 | 6,872.66 | 3,577.00 | 14,500.66 | LIN. FT. |
| 8 | | | | | | | |
| 9 | 7" REINFORCED PORTLAND CEMENT CONC. BASE COURSE (30' WIDE) | | | | | | |
| 10 | Length | Sta. 26+61 to Sta. 30+00 | 339.00 | | | | |
| 11 | | Sta. 128+50 to Sta. 132+76.83 | | 426.83 | | | |
| 12 | | Sta. 133+59.17 to Sta. 136+99 | | 339.83 | | | |
| 13 | Total Length | Sta. 136+99.00 to Sta. 173+00. | | | 3,601.00 | | |
| 14 | Total Length | | 339.00 | 766.66 | 3,601.00 | 4,706.66 | LIN. FT. |
| 15 | Areas (Length × 30 ÷ 9) | | 1,130.00 | 2,555.53 | 12,003.33 | 15,688.86 | SQ. YDS. |
| 16 | | | | | | | |
| 17 | 7" REINFORCED PORTLAND CEMENT CONC. BASE COURSE (10' WIDE) | | | | | | |
| 18 | Length = (Line 5 – Line 14) | | 3,738.00 | 6,112.00 | | 9,850.00 | LIN. FT. |
| 19 | Areas (Length × 10 ÷ 9) | | 4,153.33 | 6,791.11 | | 10,944.44 | SQ. YDS. |
| 20 | | | | | | | |
| 21 | 5" MINIMUM REINFORCED PORTLAND CEMENT CONC. BASE COURSE (7" Average Thickness Est.) | | | | | | |
| 22 | Length (Line 18) | | 3,738.00 | 6,112.00 | | 9,850.00 | LIN. FT. |
| 23 | Volumes: (Length × 20' × 7) ÷ (12 × 27) | | 1,615.19 | 2,640.99 | | 4,256.18 | Cu. YDS. |
| 24 | ASPHALTIC CONCRETE SURFACE COURSE | | | | | | |
| 25 | Merger at Sta. 173+00 (See Sheet No. 40) | | | | 2.0 | 2.0 | Cu. Yds. |
| 26 | 7" PORTLAND CEMENT CONC. PAVEMENT | | | | | | |
| 27 | Merger at Sta. 173+00 (See Sheet No. 40) | | | | 58.3 | 58.3 | SQ. YDS. |
| 28 | AGGREGATE FOR TRAFFIC BOUND SIDE APPROACHES & MAIL BOX RETURNS | | | | | | |
| 29 | From Table No. 4 Sheet No. 47 | | 38.00 | 64.00 | 70.00 | 172.00 | CU. YDS. |
| 30 | 11- Mail Returns @ 3 cu. yds. on Rt. side only | | 12.00 | 18.00 | 3.00 | 33.00 | CU. YDS. |
| 31 | Totals | | 50.00 | 82.00 | 73.00 | 205.00 | CU. YDS. |
| 32 | SALVAGED BRICK SURFACE COURSE | | | 726.00 | 3,200.00 | 3,926.00 | SQ. YDS. |
| 33 | NEW 3" BRICK SURFACE COURSE (LINE 40 – LINE 32) | | 12,912.88 | 21,167.87 | 8,200.80 | 42,281.55 | SQ. YDS. |
| 34 | TOTAL BRICK SURFACE COURSE COMPLETE | | | | | | |
| 35 | Length | Sta. 26+60.25 to Sta. 132+76.08 | 4,077.75 | 6,538.08 | | 10,615.83 | LIN. FT. |
| 36 | | Sta. 133+59.92 to Sta. 172+99.25 | | 339.08 | 3,600.25 | 3,939.33 | LIN. FT. |
| 37 | Total Length | | 4,077.75 | 6,877.16 | 3,600.25 | 14,555.16 | LIN. FT. |
| 38 | Total Area (Length × 28.5 ÷ 9) | | 12,912.88 | 21,777.67 | 11,400.80 | 46,091.35 | SQ. YDS. |
| 39 | Add 3" Brick Surface Course over Bridge Appr. Slabs (Table 9 Sh. 47) | | | 116.20 | | 116.20 | SQ. YDS. |
| 40 | Total Areas | | 12,912.88 | 21,893.87 | 11,400.80 | 46,207.55 | SQ. YDS. |
| 41 | REINF. PORTLAND CEMENT CONC. BASE COURSE (For Patching Exist. Pavement) | | | | | | |
| 42 | Sta. 30+00 to Sta. 128+50 (Estimated) | | 115. | 185. | | 300 | CU. YDS. |
| 43 | 4" PIPE UNDERDRAIN INCLUDING STONE BACKFILL | | | | | | |
| 44 | (For Subgrade Drainage) Sta. 26+61 to Sta. 173+00 (Estimated) | | 1,670.00 | 2,850.00 | 1,480.00 | 6,000.00 | LIN. FT. |
| 45 | PAVEMENT REMOVAL (Including Conc. curbs & Exist. Br. Surface) | | | | | | |
| 46 | Sta. 30+00 to Sta. 128+50 (Estimated) | | 700.00 | 1,150.00 | | 1,850.00 | SQ. YDS. |
| 47 | From Table No. 7 | | 808.9 | | | 808.9 | SQ. YDS. |
| 48 | Totals | | 1,508.9 | 1,150.00 | | 2,658.9 | SQ. YDS. |
| 49 | | | | | | | |
| 50 | 9" X 3 1/2" FLUSH INTEGRAL CONC. CURB | | | | | | |
| 51 | Length Rt. side (See Line No. 5) | | 4,077.00 | 6,878.66 | 3,601.00 | 14,556.66 | LIN. FT. |
| 52 | Length Lt. side (See Line No. 5) | | 4,077.00 | 6,878.66 | 3,601.00 | 14,556.66 | LIN. FT. |
| 53 | Total Length | | 8,154.00 | 13,757.32 | 7,202.00 | 29,113.32 | LIN. FT. |
| 54 | | | | | | | |
| 55 | 6" X 18" SANDSTONE CURB (see Detail on Sheet No. 2) | | | | | | |
| 56 | Length (See Line No. 5) | | 4,077.00 | 6,878.66 | 3,601.00 | 14,556.66 | LIN. FT. |
| 57 | Deduct for C.B.s (2' per No. 5 or No. 5 (Mod.) C.B) | | 26.00 | 44.00 | 24.00 | 94.00 | LIN. FT. |
| 58 | Add Length of Approach Slabs. | | | 38.00 | | 38.00 | LIN. FT. |
| 59 | Net Length | | 4,051.00 | 6,872.66 | 3,577.00 | 14,500.66 | LIN. FT. |

## SUMMARY (CONCLUDED)

| | | | | | | |
|---|---|---|---|---|---|---|
| | ROADSIDE IMPROVEMENT | | | | | |
| I-216 | Furnishing, placing, and dressing of Top Soil for seeding and Sodding | 4,077.00 | 6,961.00 | 3,601.00 | 14,639.00 | Lin. Ft. |
| I-216 | Stone Riprap for Tree Protection | | 14.00 | 32.00 | 46.00 | Sq. Yds. |
| I-216 | Aggregate for Tree Aeration | 2.00 | 19.00 | 16.00 | 37.00 | Cu. Yds. |
| I-216 | Planting Salvaged Plants | | 31 | | 31 | Units |
| I-216 | Moving Large Trees | | 1 | | 1 | Units |

FOR STRUCTURE OVER 20' SPAN SEE SHEET NO. 42

| ITEM | SUMMARY | TOTALS FOR F.A.P. NO. 52 RE.UN.1 | 664-D | 281 RE.UN.1 | GRAND TOTALS | UNITS |
|---|---|---|---|---|---|---|
| | ROADWAY | | | | | |
| E - 1 | Roadway Excavation (Unclassified) | 2,931. | 1,121. | 16,378. | 20,430 | Cu. Yds. |
| E - 3 | Channel Excavation | | | 1,049 | 1,049 | Cu. Yds. |
| E - 4 | Borrow (Contractor to furnish) | 3,915. | 17,160. | 717. | 21,792 | Cu. Yds. |
| E - 8 | Removal & Disposal of Exist. Pavmt. including exist. brick wearing surface. | 1,508.9 | 1,150. | | 2,658.9 | Sq. Yds. |
| E - 8 | Removal & Disposal of Exist. Con. Base (Including 2' Conc. curbs.) | | 1,815.2 | 8,002.1 | 9,817.3 | Sq. Yds. |
| E - 8 | Removing, Cleaning & Hacking Exist. Brick Wearing Surface | | 1,451.9 | 6,401.6 | 7,853.5 | Sq. Yds. |
| E - 9 | Removal of Trees | 1 | 13 | 2 | 16 | Units |
| E - 11 | Watering Embankments (Estimated) | 27.4 | 73.1 | 68.5 | 169. | M. Gals. |
| I - 1 | 12" Pipe for Driveways | 40. | 100. | 40. | 180 | Lin. Ft. |
| I - 3 | 6" Pipe for Roadway Drainage | | 88 | 46. | 134 | Lin. Ft. |
| I - 3 | 8" Pipe for " " | 219 | 14 | 180. | 413 | Lin. Ft. |
| I - 3 | 10" Pipe for " " | | 16 | | 16 | Lin. Ft. |
| I - 3 | 12" Pipe for " " | 3,246. | 5,445. | 2,960 | 11,651. | Lin. Ft. |
| I - 3 | 8" Pipe for Roadway Drainage Including Aggregate Cover | 538 | | 578 | 1,116 | Lin. Ft. |
| I - 3 | 10" Pipe for " " " " " " | 1,204. | 3,747 | | 4,951. | Lin. Ft. |
| I - 3 | 12" Pipe for " " " " " " | 1,188 | 1,140 | 2,040. | 4,368. | Lin. Ft. |
| I - 3 | 8" Pipe for Roadway Drainage Including Full Aggregate Backfill | | | 298. | 298 | Lin. Ft. |
| I - 4 | 4" Pipe Underdrain | 4,051. | 6,872. | 3,577. | 14,500. | Lin. Ft. |
| I - 4 | 4" Pipe Underdrain Including Stone Backfill | 1,670. | 2,850. | 1,480. | 6,000. | Lin. Ft. |
| I - 6 | 6" V.S.P. Removed & Stored | 338. | 164 | | 502. | Lin. Ft. |
| I - 6 | 8" V.S.P. " " | 110. | 12. | | 122. | Lin. Ft. |
| I - 6 | 10" V.S.P. " " | 86. | 32. | 160. | 278. | Lin. Ft. |
| I - 6 | 12" V.S.P. " " | 224. | | | 224. | Lin. Ft. |
| I - 6 | 6" Drain Tile Removed & Stored | | 16. | | 16 | Lin. Ft. |
| I - 6 | 10" " " " " " | | 20. | | 20 | Lin. Ft. |
| I - 6 | 8" Corr. M.P. Removed & Stored | | 56. | 80. | 136 | Lin. Ft. |
| I - 6 | 10" " M.P. " " | 20. | 42. | | 62 | Lin. Ft. |
| I - 6 | 12" " M.P. " " | | | 40. | 40 | Lin. Ft. |
| I - 8 | Stnd. No. 1-2 Catch Basins | 7 | 15. | 9. | 31 | Units |
| I - 8 | Stnd. No. 2-2 " " | | 5. | 3 | 8 | Units |
| I - 8 | Stnd. No. 5 " " | 12. | 21. | 11. | 44 | Units |
| I - 8 | Stnd. No. 5 (Modified) Catch Basins | 1. | 1. | 1. | 3 | Units |
| I - 8 | Stnd. No. 1 S.D. Inlets | 2. | 3. | | 5 | Units |
| I - 3 | 12" Pipe under Road Approaches for Roadway Drainage | 51. | 143. | 346. | 540 | Lin. Ft. |
| I - 17 | Aggregate for Traffic Bound Side Approaches & Mail Box Returns | 50. | 82. | 73. | 205 | Cu. Yds. |
| I - 3 | 12" Outlet Pipe for Roadway Drainage | 30. | | | 30 | Lin. Ft. |
| I - 3 | 15" Outlet Pipe for Roadway Drainage | 10 | 12. | | 22 | Lin. Ft. |
| I - 3 | 24" Pipe for Roadway Drainage | | 24. | | 24. | Lin. Ft. |
| I - 3 | 24" Outlet Pipe for Roadway Drainage | | 12. | | 12. | Lin. Ft. |
| I - 13 | 4" Concrete Walk | | | 101.3 | 101.3 | Sq. Ft. |
| I - 113 | Reinforced Concrete Steps as per plan | | | 110. | 110. | Lin. Ft. |
| I - 5 | Pipe Specials - 12" x 6" Tees | | | 1. | 1. | Units |
| I - 5 | Pipe Specials 12" x 10" Tees | 1. | 1. | | 2 | Units |
| I - 5 | Pipe Specials 12" x 12" Tees | 8 | 12. | 8. | 28 | Units |
| I - 5 | Pipe Specials 24" x 45° Bends | | 1 | | 1 | Units |
| I - 5 | Pipe Specials 12" x 90° Bends | 3 | 3 | 2. | 8 | Units |
| E - 9 | Removal of Stumps (18") | | 4 | | 4 | Units |
| | PAVEMENT | | | | | |
| T - 90 | Salvaged Brick Surface Course (estimated) | | 726. | 3,200. | 3,926. | Sq. Yds. |
| S - 5 | 12" Reinforced Concrete Approach Slabs | | 126.6 | | 126.6 | Sq. Yds. |
| B-171 | 7" Reinforced Portland Cement Conc. Base Course 30' Wide | 1,130.00 | 2,555.53 | 12,003.33 | 15,688.86 | Sq. Yds. |
| B-171 | 7" Reinforced Portland Cement Conc. Base Course 10' Wide | 4,153.33 | 6,791.11 | | 10,944.4 | Sq. Yds. |
| B-171 | 5" Minimum Reinforced Portland Cement Conc. Base Course | 1,615.2 | 2,641. | | 4,256.2 | Cu. Yds. |
| B-171 | Reinf. Portland Cement Conc. Base Course for Patching Exist. Pavement (Estimated) | 115. | 185. | | 300 | Cu. Yds. |
| T - 90 | 3" New Brick Surface Course Complete | 12,912.88 | 21,167.87 | 8,200.80 | 42,281.55 | Sq. Yds. |
| T - 70 | 7" Portland Cement Conc. Pavement | | | 58.3 | 58.3 | Sq. Yds. |
| T - 60 | Asphaltic Conc. Surface Course | | | 2. | 2. | Cu. Yds. |
| I - 11 | 6" x 18" Sandstone Curb | 4,051. | 6,873 | 3,577. | 14,501. | Lin. Ft. |
| I - 12 | 9" Flush Integral Conc. Curb (Depth 3 1/2" min, 4 1/2" max) | 8,154.00 | 13,757.32 | 7,202.00 | 29,113.32 | Lin. Ft. |
| I - 12 | 9" " Flush Integral Conc. Header (Depth 3 1/2" min, 4 3/4" max) | | 66.0 | 28.5 | 94.5 | Lin. Ft. |
| | STRUCTURES - 20' SPAN AND UNDER | | | | | |
| E - 2 | Excavation for Structures (Unclassified) | 91. | 117. | 4. | 212. | Cu. Yds. |
| E - 3 | Channel Excavation | 6. | 34 | | 40 | Cu. Yds. |
| S - 1 | Concrete for Headwalls 1:5 1/2 mix | 4.8 | 2.7 | | 7.5 | Cu. Yds. |
| S - 4 | Reinforcing Steel | 126. | 73. | | 199. | Lbs. |
| S - 22 | Removal of Portions of Existing Structures | 7.4 | 9.3 | 4.5 | 21.2 | Cu. Yds. |
| S - 27 | 10" Pipe for Roadway Culverts | 80. | | | 80. | Lin. Ft. |
| S - 27 | 12" " " " " | | 74. | | 74. | Lin. Ft. |
| S - 27 | 15" " " " " | 128. | 108. | | 236. | Lin. Ft. |
| S - 27 | 18" " " " " | | 72. | | 72. | Lin. Ft. |
| S - 27 | 24" " " " " | 58. | | 40. | 98. | Lin. Ft. |
| I - 3 | 24" Pipe for Roadway Drainage | | | 22. | 22. | Lin. Ft. |
| I - 4 | 4" Pipe Under drain | 20. | | | 20. | Lin. Ft. |
| I - 4 | 6" " " | 20. | | | 20. | Lin. Ft. |
| I - 4 | 10" " " | 15. | | | 15. | Lin. Ft. |
| I - 5 | Pipe Special 15" X 12" Double Tee | 1 | | | 1. | Unit |
| I - 6 | 12" Pipe Removed | 42. | | | 42. | Lin. Ft. |
| I - 6 | 12" Pipe Removed & Stored | 42. | 86.5 | | 128.5 | Lin. Ft. |
| I - 8 | Stnd. No. 2-2 Catch Basins | 2. | 3. | | 5. | Units |
| I - 8 | Stnd. No. 2-3 " " | 1. | | | 1. | Units |
| I - 3 | 24" Pipe for Roadway Drainage Outlet | | | 12 | 12 | Lin. Ft. |

HURON CO.

HURON COUNTY
S.H. 290 SEC. O-P.T.
R/W PLANS

1/21

DATE 5-20-36 DRAWN BY A.F.V.
REVISED
LENGTH OF PROJECT 2.772 MILES

Former Route now abandoned as U.S.# 20

TOWNSEND AVE.

20+58

Sta 21 to 25
10' left
Parcel #1A

Parcel #1
10 ft left
from ~~Sta~~ 63+72.75 (25+40)
and Sta 65+34.67

(1) O.K.

JOHN KLUDING
113 E. MAIN ST.
NORWALK, O.

N 3°46 E

(1B) ok

4077.85'
2038.10'

S 86°14 E

(1A)

65

40'

30

1670.08'
1670.42'

(2B)

N89°50E 182'

N89°50'E 300'

161.9'

10'

20'

60

114'

662.58'

Note:- The Right of Way shown above up to Sta. 26+61.9 was secured prior to the making of these plans, for the relocation of SH. No. 290 Sec. O & Norwalk.

P.I. = Sta. 60+44.24
Δ = 36° 25'
D = 4° 30'
T = 418.83'
E = 67.11'
L = 809.26'
R = 1273.24'

P.T. 64+34.67

Equality Sta 65+34.67 Bk.
= Sta. 26+61.9 Ahead

(2) O.K.

FANNY F. PENFIELD
2057 WALDECK AVE.
COLUMBUS, O.

STA. 26+61
BEGIN PROJECT
BEGIN SEC. "O-P.T."

Parcel #2A
30' from RR to
43+29
Sta 22 to 25
10 ft left

N 2°09 W

127'

50'
57+45

#2

R
V

* Entire sheet is Huron Co. TR 224 *

(1) O.K.

JOHN KLUDING
113 E. MAIN ST.
NORWALK, O.

R/W for 60' width secured by easement in 1932
Sta. 26+61.9 to Sta. 67+40.75

(1B) ok

2058.10'
4077.85'

Present R/w Line

S 86°14 E

(1A)

(2)

Present R/w Line

1670.08'
1670.42'

(2B) ok

F+160.5
Dr.+56
Dr.+14
F+56
Dr.+67
+56

Dr.+10
+46 F.
F+80
131'
+75 Dr.
+86 F.
Brick Res.

30
35
40
45

43+31.98
43+32.32
+30.95

Fanny F. Penfield
Mary E. Osterlin

N 1°48 E

(2) ok

FANNY F. PENFIELD
2057 WALDECK AVE.
COLUMBUS, O.

R/W for 60' width secured by easement in 1932
Sta. 26+61.9 to Sta. 43+30.95

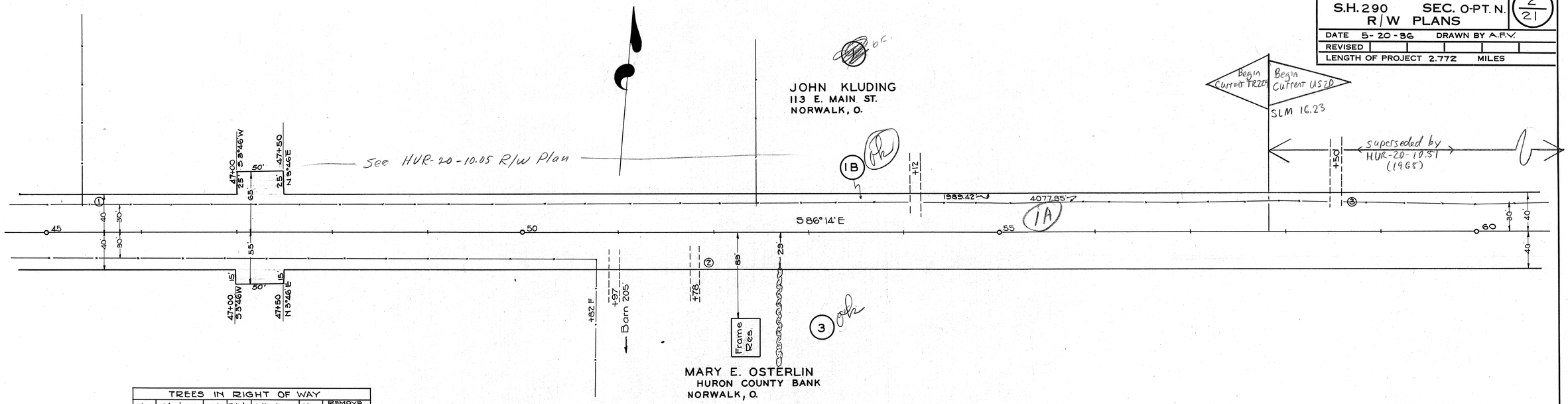
(3) ok

parts superseded
HUR 20
9

HURON COUNTY
S.H. 290 SEC. O-PT. N.
R/W PLANS

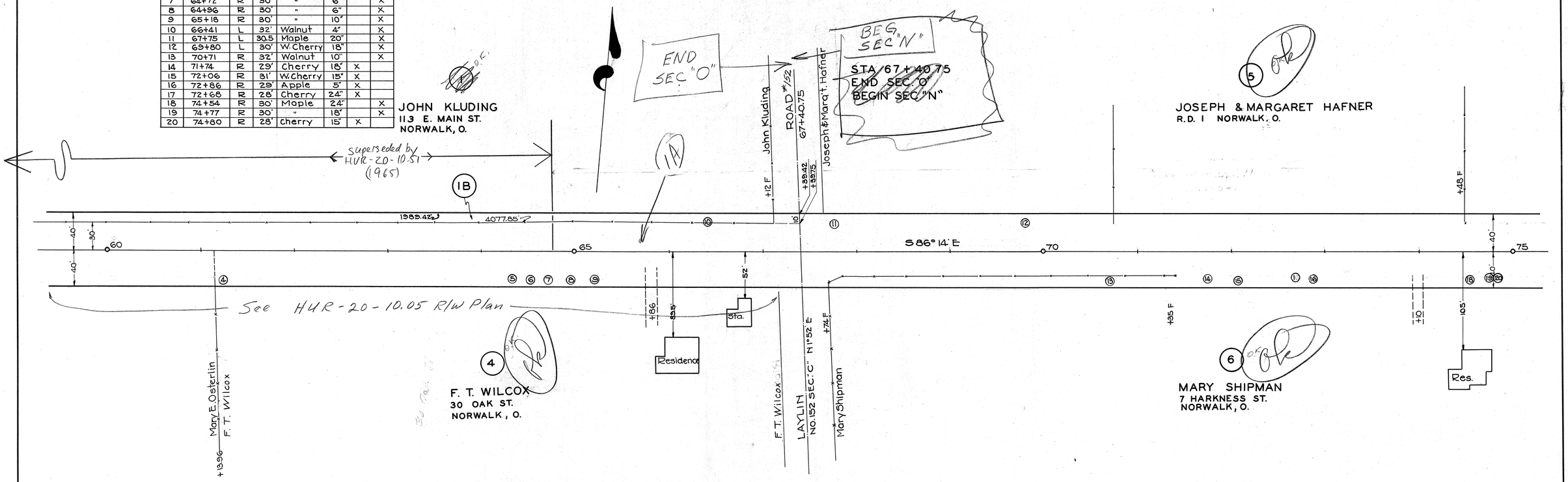
2/21

DATE 5-20-36 DRAWN BY A.F.V.
REVISED
LENGTH OF PROJECT 2.772 MILES




TREES IN RIGHT OF WAY

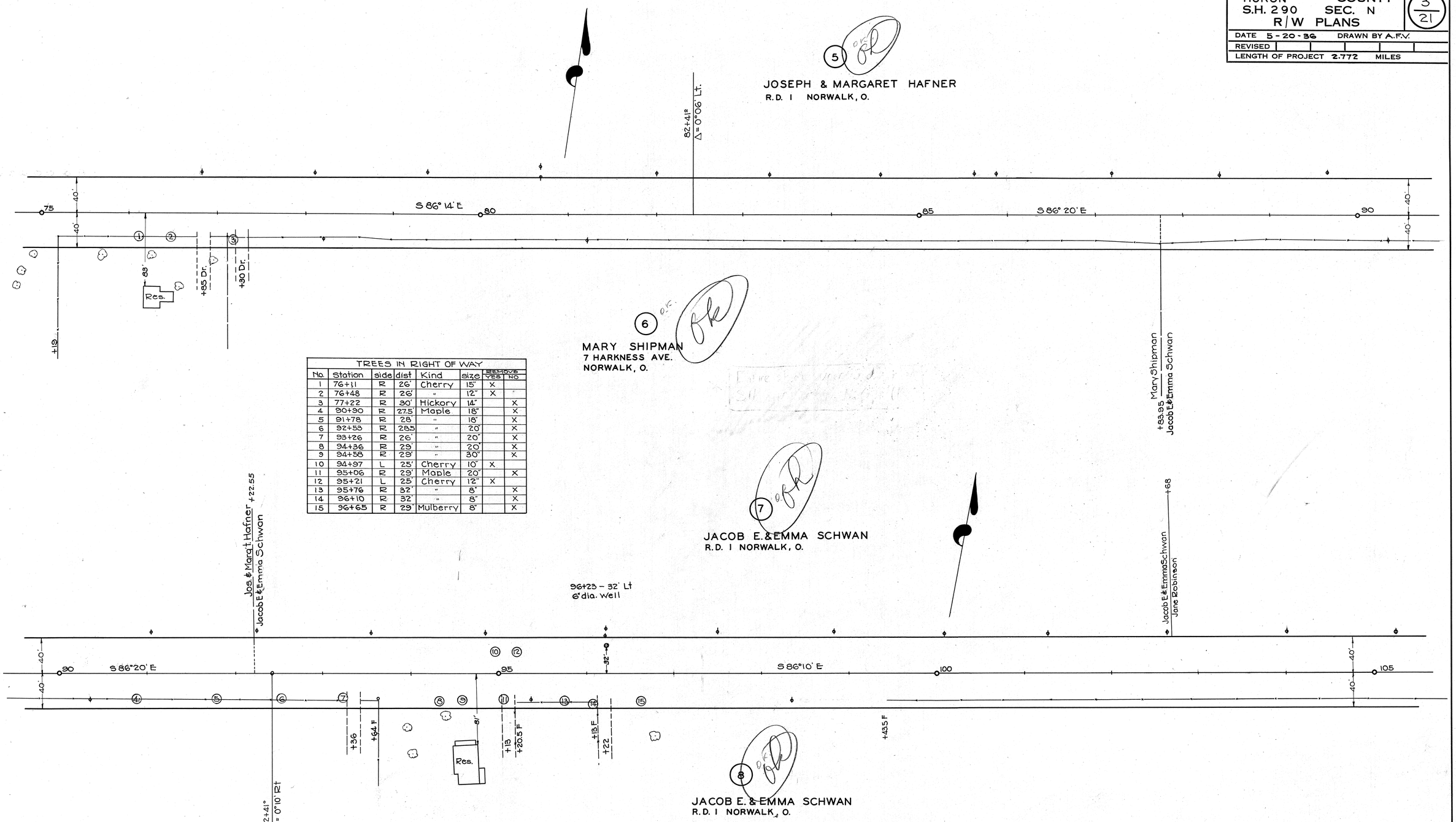
| No. | Station | Side | Dist. | Kind | Size | Remove YES | Remove NO |
|---|---|---|---|---|---|---|---|
| 1 | 45+57 | L | 31' | Ash | 12" | | X |
| 2 | 51+93 | R | 34' | Spirea | | X | |
| 3 | 58+66 | L | 31' | Mulberry | 6" | | X |
| 4 | 61+23 | R | 32' | Peach | | | X |
| 5 | 64+32 | R | 30' | Cherry | 3" | | X |
| 6 | 64+55 | R | 30' | " | 6" | | X |
| 7 | 64+72 | R | 30' | " | 6" | | X |
| 8 | 64+96 | R | 30' | " | 6" | | X |
| 9 | 65+18 | R | 30' | " | 10" | | X |
| 10 | 66+41 | L | 32' | Walnut | 4" | | X |
| 11 | 67+75 | L | 30.5 | Maple | 20" | | X |
| 12 | 69+80 | L | 30' | W. Cherry | 18" | | X |
| 13 | 70+71 | R | 32' | Walnut | 10" | | X |
| 14 | 71+74 | R | 29' | Cherry | 18" | X | |
| 15 | 72+06 | R | 31' | W. Cherry | 15" | X | |
| 16 | 72+86 | R | 29' | Apple | 5" | X | |
| 17 | 72+68 | R | 28' | Cherry | 24" | X | |
| 18 | 74+54 | R | 30' | Maple | 24" | | X |
| 19 | 74+77 | R | 30' | " | 18" | | X |
| 20 | 74+80 | R | 28' | Cherry | 15" | X | |



HURON COUNTY
S.H. 290 SEC. N
R/W PLANS

3/21

DATE 5-20-36 DRAWN BY A.F.V.
REVISED
LENGTH OF PROJECT 2.772 MILES



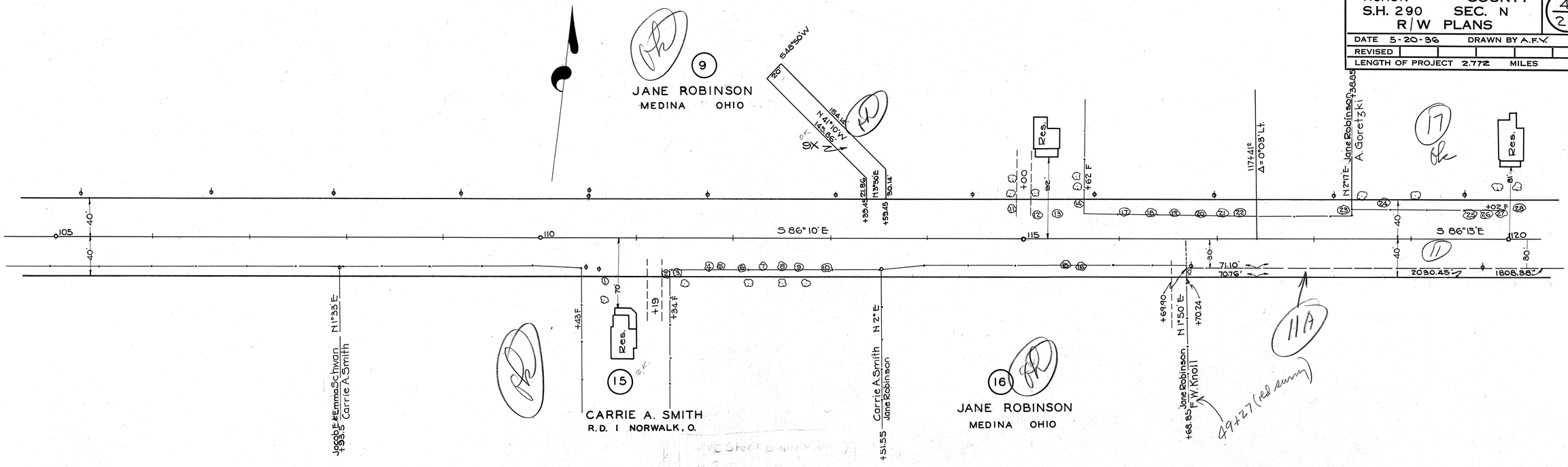

TREES IN RIGHT OF WAY

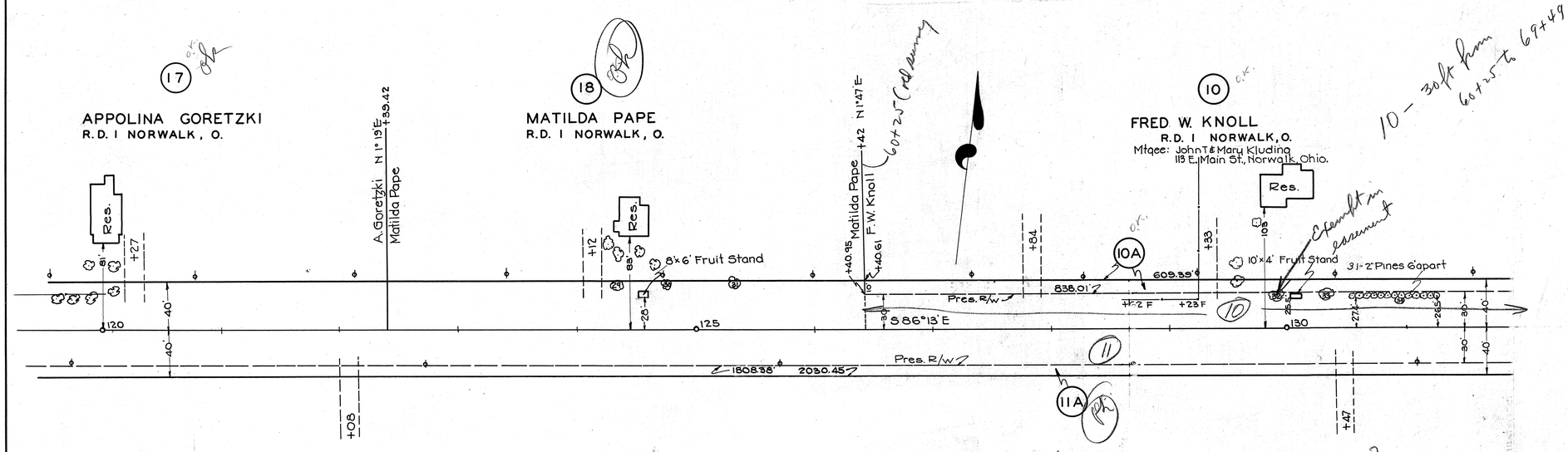
| No. | Station | side | dist | Kind | size | REMOVE YES | REMOVE NO |
|---|---|---|---|---|---|---|---|
| 1 | 76+11 | R | 26' | Cherry | 15" | X | |
| 2 | 76+48 | R | 26' | " | 12" | X | " |
| 3 | 77+22 | R | 30' | Hickory | 14" | | X |
| 4 | 90+90 | R | 27.5 | Maple | 18" | | X |
| 5 | 91+78 | R | 28 | " | 18" | | X |
| 6 | 92+53 | R | 28.5 | " | 20" | | X |
| 7 | 93+26 | R | 26' | " | 20" | | X |
| 8 | 94+36 | R | 29' | " | 20" | | X |
| 9 | 94+58 | R | 29' | " | 30" | | X |
| 10 | 94+97 | L | 25' | Cherry | 10" | X | |
| 11 | 95+06 | R | 29' | Maple | 20" | | X |
| 12 | 95+21 | L | 25' | Cherry | 12" | X | |
| 13 | 95+76 | R | 32' | " | 8" | | X |
| 14 | 96+10 | R | 32' | " | 8" | | X |
| 15 | 96+65 | R | 29' | Mulberry | 8" | | X |

HURON COUNTY
S.H. 290 SEC. N
R/W PLANS

4/21

DATE 5-20-36 DRAWN BY A.F.V.
REVISED
LENGTH OF PROJECT 2.772 MILES




TREES IN RIGHT OF WAY

| NO | STATION | SIDE | DIST | KIND | SIZE | REMOVE YES | REMOVE NO |
|---|---|---|---|---|---|---|---|
| 1 | 110+68 | R | 29' | Lilac | | | X |
| 2 | 111+29 | R | 36 | Cherry | 10" | | X |
| 3 | 111+43 | R | 31.5 | " | 8" | | X |
| 4 | 111+73 | R | 28' | Oak | 5" | X | |
| 5 | 111+85 | R | 29' | Box Elder | 8" | X | |
| 6 | 112+04 | R | 29' | " " | 6" | X | |
| 7 | 112+29 | R | 28' | " " | 6" | X | |
| 8 | 112+48 | R | 28' | " " | 4" | X | |
| 9 | 112+65 | R | 28' | " " | 3" | X | |
| 10 | 112+94 | R | 28' | " " | 6" | X | |
| 11 | 114+90 | L | 30' | Cherry | 8" | X | |
| 12 | 115+12 | L | 24' | Mulberry | 4" | X | |
| 13 | 115+35 | L | 26' | Cherry | 5" | X | |
| 14 | 115+56 | L | 36' | " | 8" | | X |
| 15 | 115+41 | R | 28' | " | 8" | | X |
| 16 | 115+58 | R | 28' | " | 6" | | X |
| 17 | 116+05 | L | 28' | Apple | 6" | X | |
| 18 | 116+29 | L | 28' | " | 4" | X | |
| 19 | 116+55 | L | 28' | " | 12" | X | |
| 20 | 116+81 | L | 28' | " | 4" | X | |
| 21 | 117+05 | L | 28' | " | 4" | X | |
| 22 | 117+24 | L | 26' | Elm | 10" | | X |
| 23 | 118+29 | L | 30.5 | Apple | 4" | X | |
| 24 | 118+76 | L | 38' | Peach | 3" | | X |
| 25 | 119+61 | L | 26' | Apple | 4" | X | |
| 26 | 119+75 | L | 26' | Peach | 10" | X | |
| 27 | 119+90 | L | 28' | Apple | 5" | X | |
| 28 | 120+10 | L | 33.5 | Plum | 8" | | X |
| 29 | 124+34 | L | 40' | Apple | 6" | | X |
| 30 | 124+76 | L | 40' | " | 8" | | X |
| 31 | 125+33 | L | 39" | Plum | 8" | | X |
| 32 | 129+90 | L | 28.5 | Maple | 22" | | X |
| 33 | 130+31 | L | 29' | Cedar | 10" | | X |
| 34 | 130+95 | L | 27' | Peach | 3" | | X |

HURON COUNTY
S.H. 290 SEC. N, G-1 PT
R/W PLANS
5/21

DATE 5/20/36 DRAWN BY A.F.V.
REVISED 5/1/36
LENGTH OF PROJECT 2.772 MILES

FRED W. KNOLL
R.D. 1 NORWALK, O.

W.J. & BERTHA BURKE
3601 Clinton, Av.,
Cleveland, O.

BYRON & FLORENCE J. RICE
R.D. 1 NORWALK, O.

FRED W. KNOLL
R.D. 1 NORWALK, O.

MARY A. BARTOW
R.D. 1 NORWALK, O.

STANLEY G. & MARGARET M. SHEPP
R.D. 1 NORWALK, O.

MARY A. BARTOW
R.D. 1 NORWALK, O.

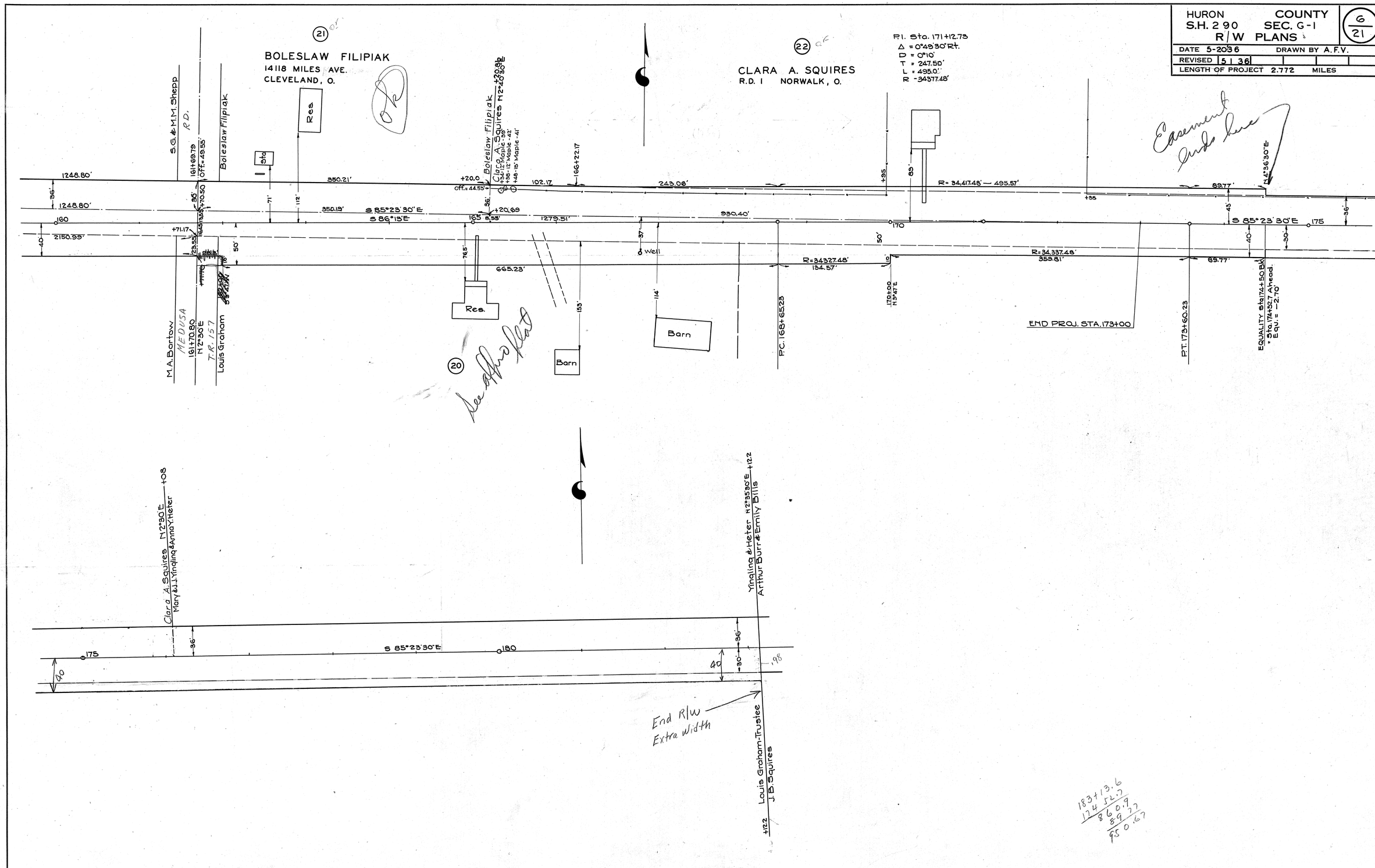
Mtgee – Federal Land Bank, Louisville, Ky.

TOWN LINE ROAD
NORWALK TWP.
TOWNSEND TWP.
S.R. 601
GREENWICH – MILAN
F.W. Knoll
Mary A. Bartow
W.J. & Bertha Burke
Byron & Florence J. Rice
B. & F.J. Rice
S.G. & M.M. Shepp

TREES IN RIGHT OF WAY

| NO | STATION | SIDE | DIST. | SIZE | KIND | REMOVE YES | REMOVE NO |
|---|---|---|---|---|---|---|---|
| 1 | 134+76 | R | 22' | 24" | Maple | | X |
| 2 | 135+02 | R | 23' | 28" | " | | X |
| 3 | 135+45 | R | 24' | 12" | Walnut | | X |
| 4 | 135+69 | R | 23.5 | 28" | Maple | | X |
| 5 | 136+33 | R | 22.8 | 24" | " | | X |
| 6 | 136+51 | R | 42.4 | 15" | Hickory | | X |
| 7 | 136+72 | R | 54' | 30" | Maple | | X |
| 8 | 137+23 | R | 39' | 10" | Cherry | | X |
| 9 | 141+78' | R | 93 | 10" | Walnut | | X |
| 10 | 141+91 | R | 108 | 10" | " | | X |
| 11 | 142+04 | R | 864 | 12" | " | | X |
| 12 | 142+55 | R | 685 | 12" | " | | X |
| 13 | 143+36 | R | 33 | 10" | " | X | |
| 14 | 143+43 | R | 45' | 12" | Cherry | | X |
| 15 | 144+15 | R | 33' | 8" | Ash | X | |
| 16 | 144+36 | R | 28 | | " | X | |
| 17 | 144+42 | R | 35 | | " | X | |
| 18 | 145+16 | R | 445 | 8" | Willows(3) | | X |
| 19 | 145+27 | R | 56 | 8" | " | | X |
| 20 | 145+28 | R | 47 | 8" | " | | X |
| 21 | 145+39 | R | 49 | 8" | " (3) | | X |
| 22 | 146+19 | R | 42 | 14" | Elm | | X |
| 23 | 152+37 | L | 61 | 12" | Cherry | | X |
| 24 | 153+10 | R | 50 | 12" | Apple | | X |
| 25 | 153+45 | R | 50 | 24" | " | | X |
| 26 | 154+10 | R | 54 | 20" | " | | X |
| 27 | 139+11 | L | 82 | 4" | Ash | | X |
| 28 | 141+76 | R | 99 | 15" | Walnut | | X |

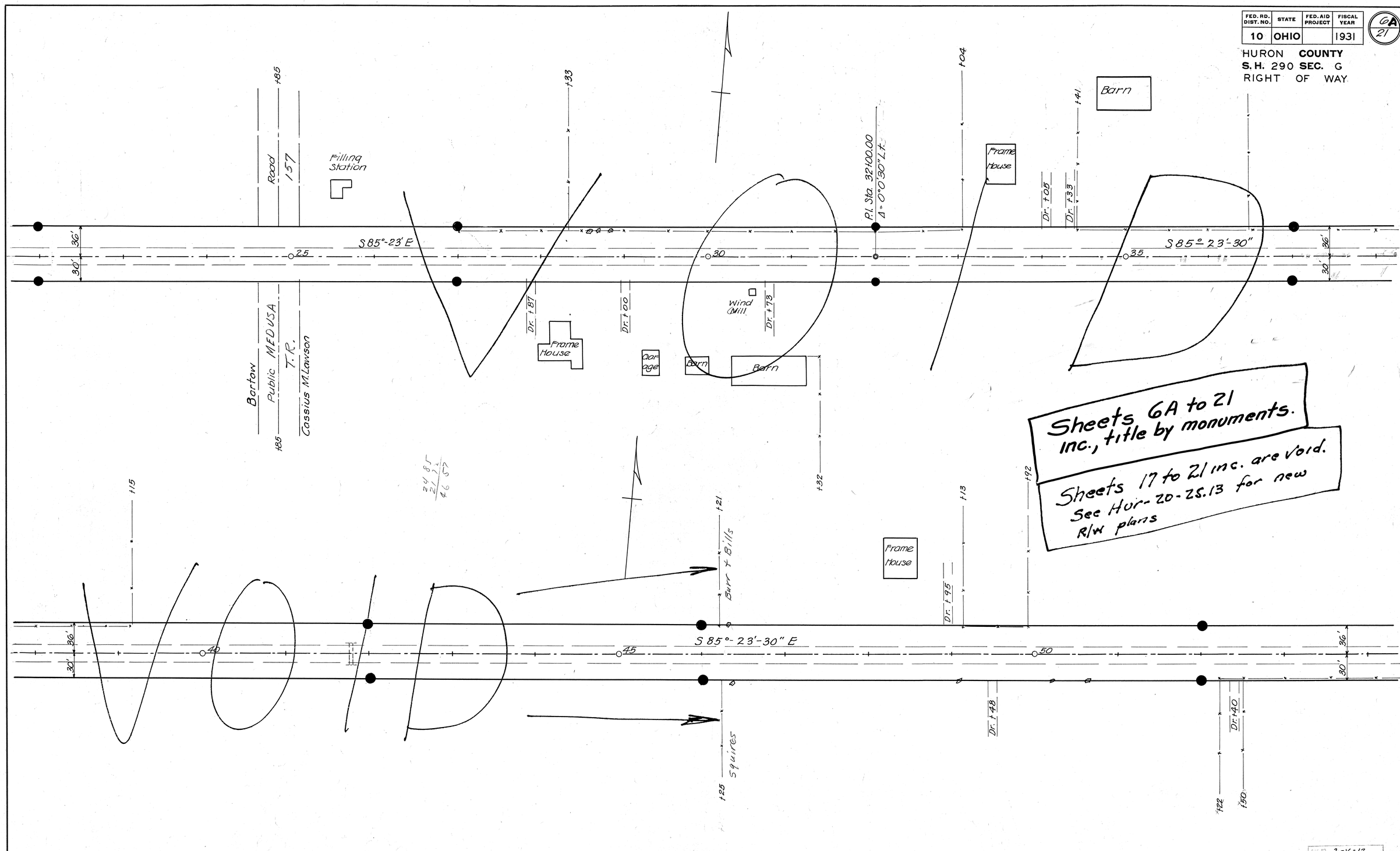
S.H. 290 SEC. N & G-PT. HURON CO.


HURON COUNTY
S.H. 290 SEC. G-1
R/W PLANS
6/21
DATE 5-20-36 DRAWN BY A.F.V.
REVISED 5 1 36
LENGTH OF PROJECT 2.772 MILES
21
BOLESLAW FILIPIAK
14118 MILES AVE.
CLEVELAND, O.
22
CLARA A. SQUIRES
R.D. 1 NORWALK, O.
P.I. Sta. 171+12.73
Δ = 0°49'30" Rt.
D = 0°10'
T = 247.50'
L = 495.0'
R = 34377.48'
S.G. & M.M. Shepp
R.D.
Boleslaw Filipiak
Clara A. Squires
Res.
Sta.
Barn
Well
M.A. Bartow
MEDUSA
161+70.80
N2°30'E
T.R. 157
Louis Graham
P.C. 168+65.23
END PROJ. STA. 173+00
P.T. 173+60.23
EQUALITY Sta. 174+50 Bk. = Sta. 174+52.7 Ahead. Equ. = -2.70'
Easement ends here
See affidavit
Clara A. Squires N2°30'E
Mary & J.J. Yingling & Anna Y. Heter
Yingling & Heter N2°35'30"E
Arthur Burr & Emily Bills
Louis Graham-Trustee
J.B. Squires
End R/W
Extra Width
S 85°23'30"E
S 86°13'E
S 85°23'30"E
1248.80'
2150.99'
350.21'
350.19'
102.17
243.08'
930.40'
665.23'
R= 34,417.48' — 495.57'
R=34327.48'
R=34,337.48'
359.81'
89.77'
183+13.6
174 52.7
860.9
89.77
950.67

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

6A
21

HURON COUNTY
S.H. 290 SEC. G
RIGHT OF WAY




Sheets 6A to 21 inc., title by monuments.

Sheets 17 to 21 inc. are void. See Hur-20-25.13 for new R/W plans

VOID

HURON 290 G1(pt) G2, H, P & I

290 Huron G R/W

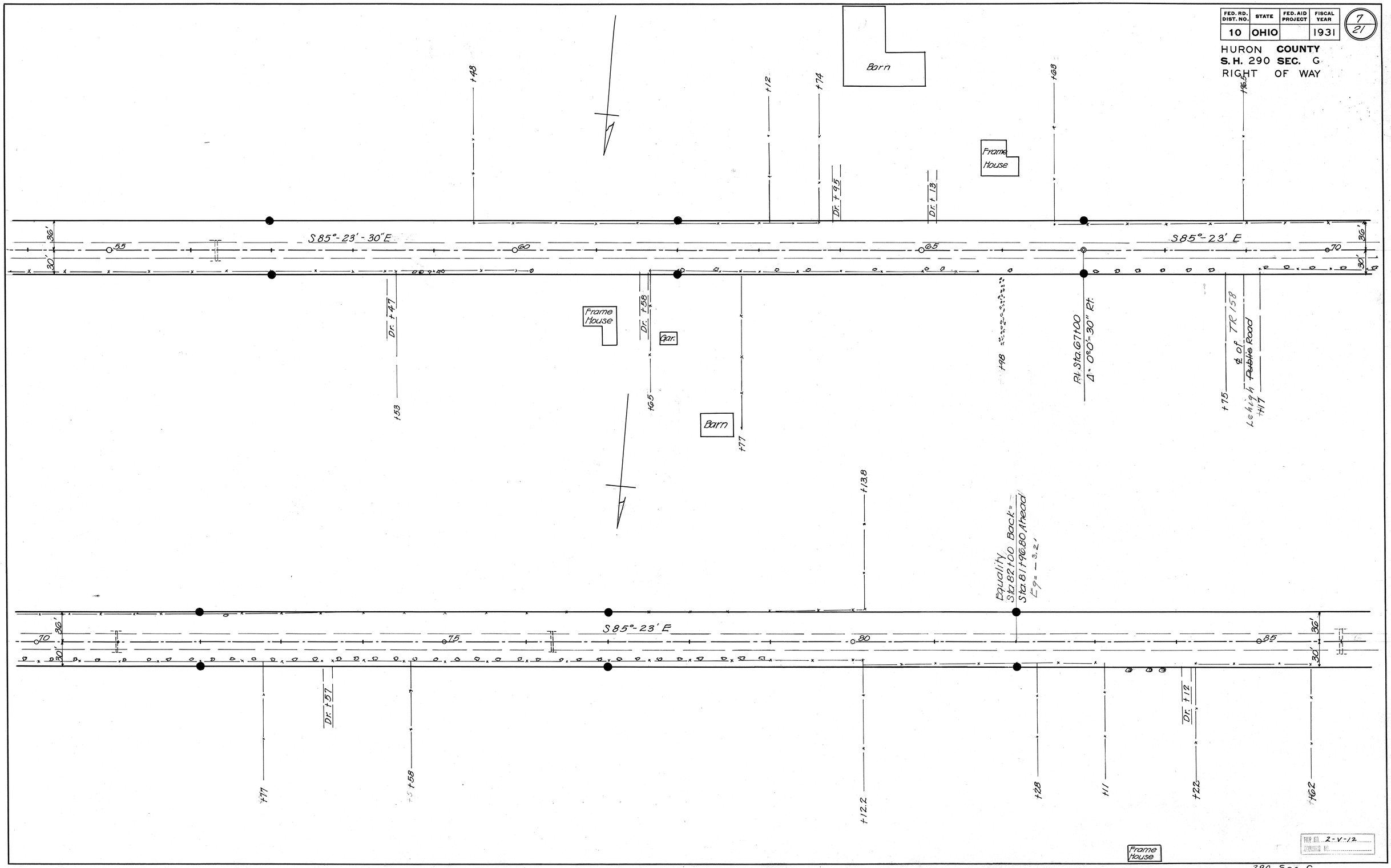
290 O.N.G.H.P.I
HURON CO.

2-V-12

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

7/21

HURON **COUNTY**
**S. H. 290 SEC. G**
RIGHT OF WAY




FILE NO. 2-V-12
DRAWING NO.

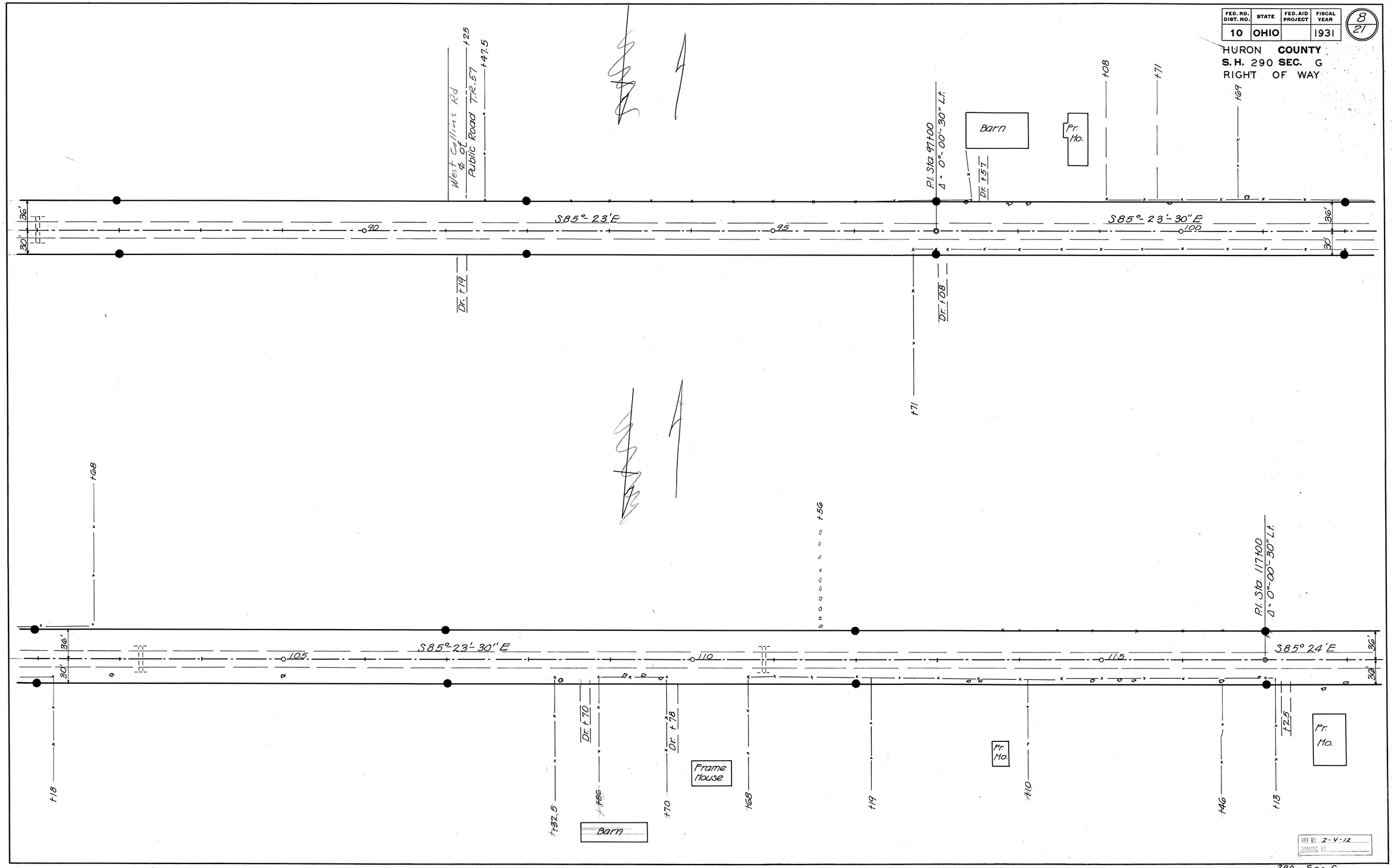
290 Huron G R/W

290 Sec. G
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

8/21

HURON COUNTY
S.H. 290 SEC. G
RIGHT OF WAY




FILE NO. 2-V-12
DRAWING NO.

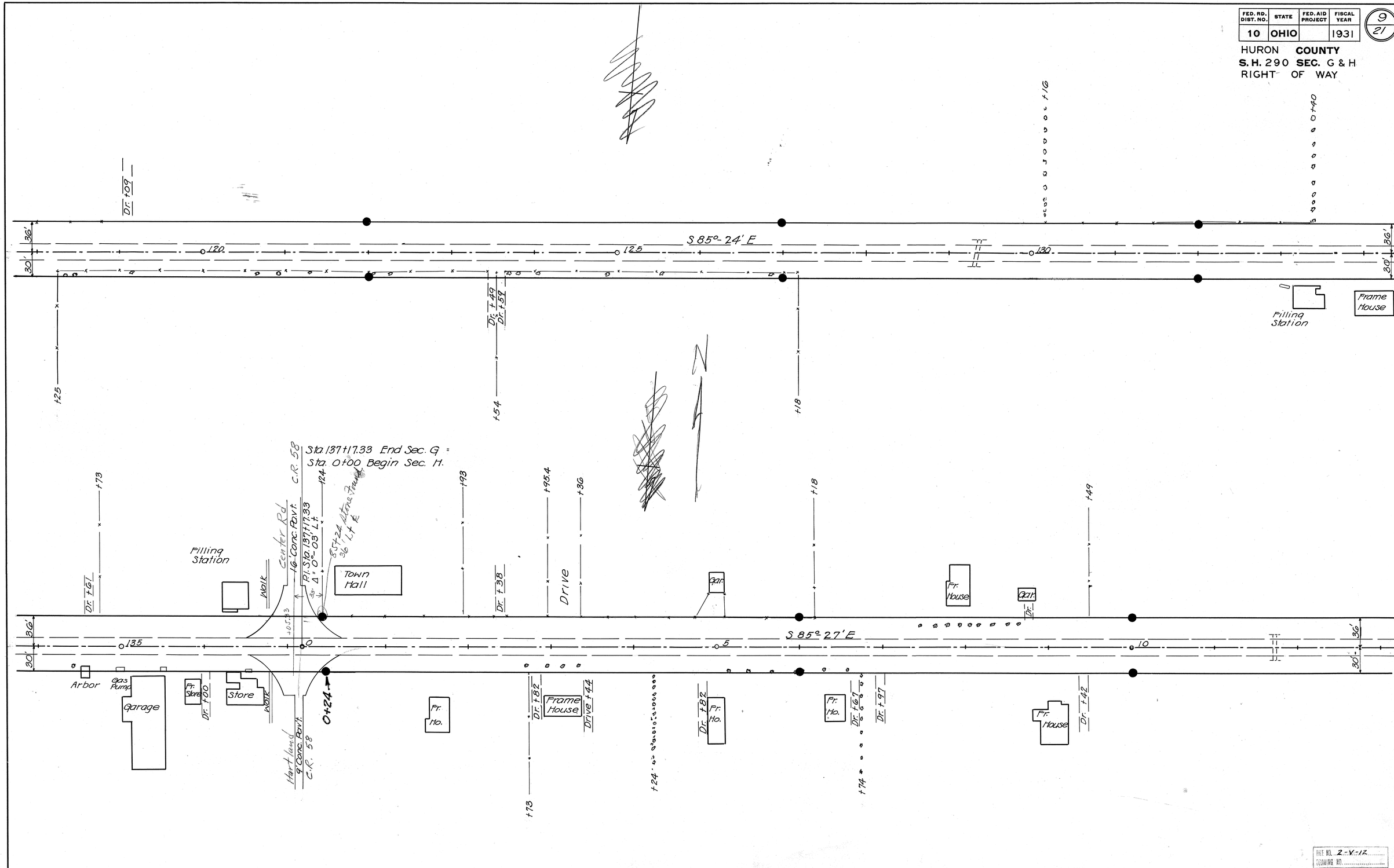
290 Huron G R/W

290 Sec. G
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

9/21

HURON COUNTY
S.H. 290 SEC. G & H
RIGHT OF WAY




FILE NO. 2-V-12
DRAWING NO.

290 Huron G&H B/W

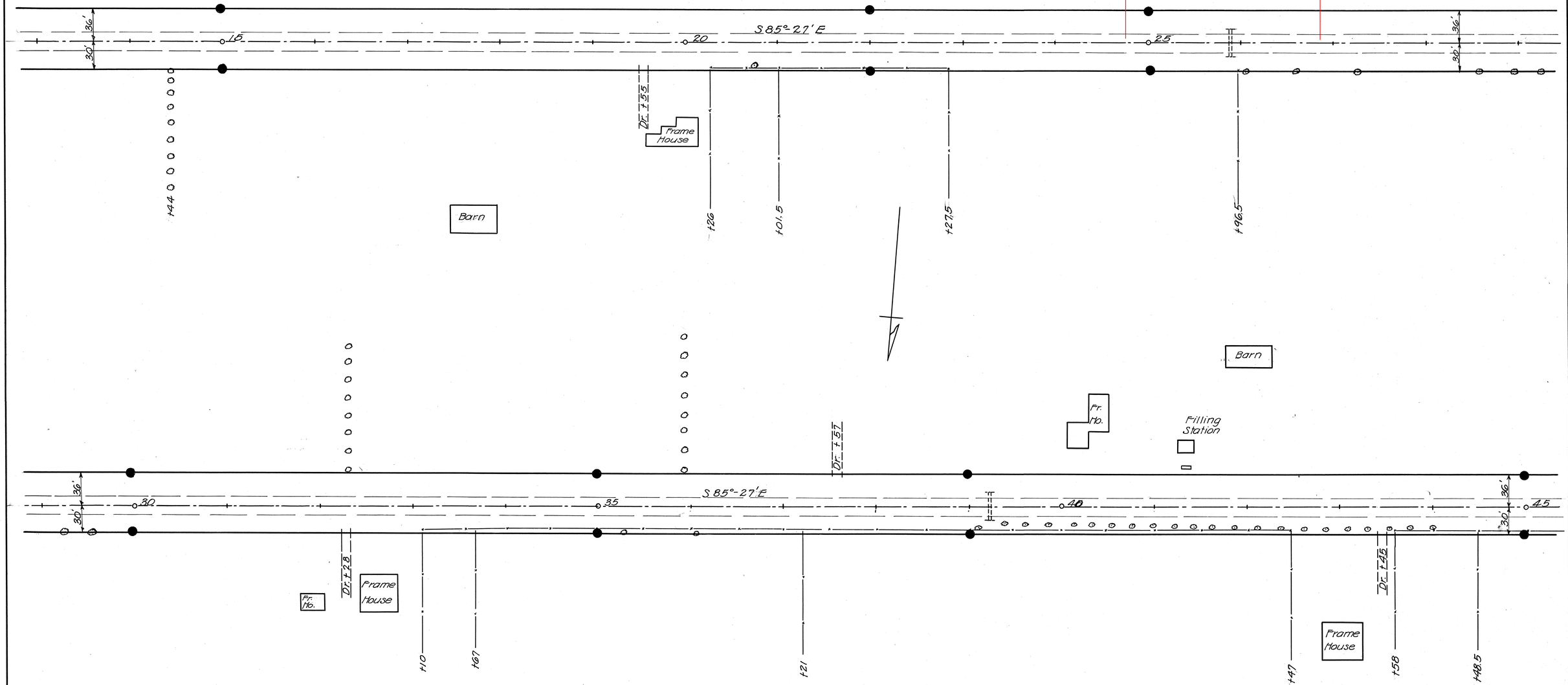
290 Section G & H
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

10
21

HURON **COUNTY**
**S. H.** 290 **SEC.** H
RIGHT OF WAY

Superseded by HUR-20-20.91 (2012)




FILE NO. 2-V-12
DRAWING NO.

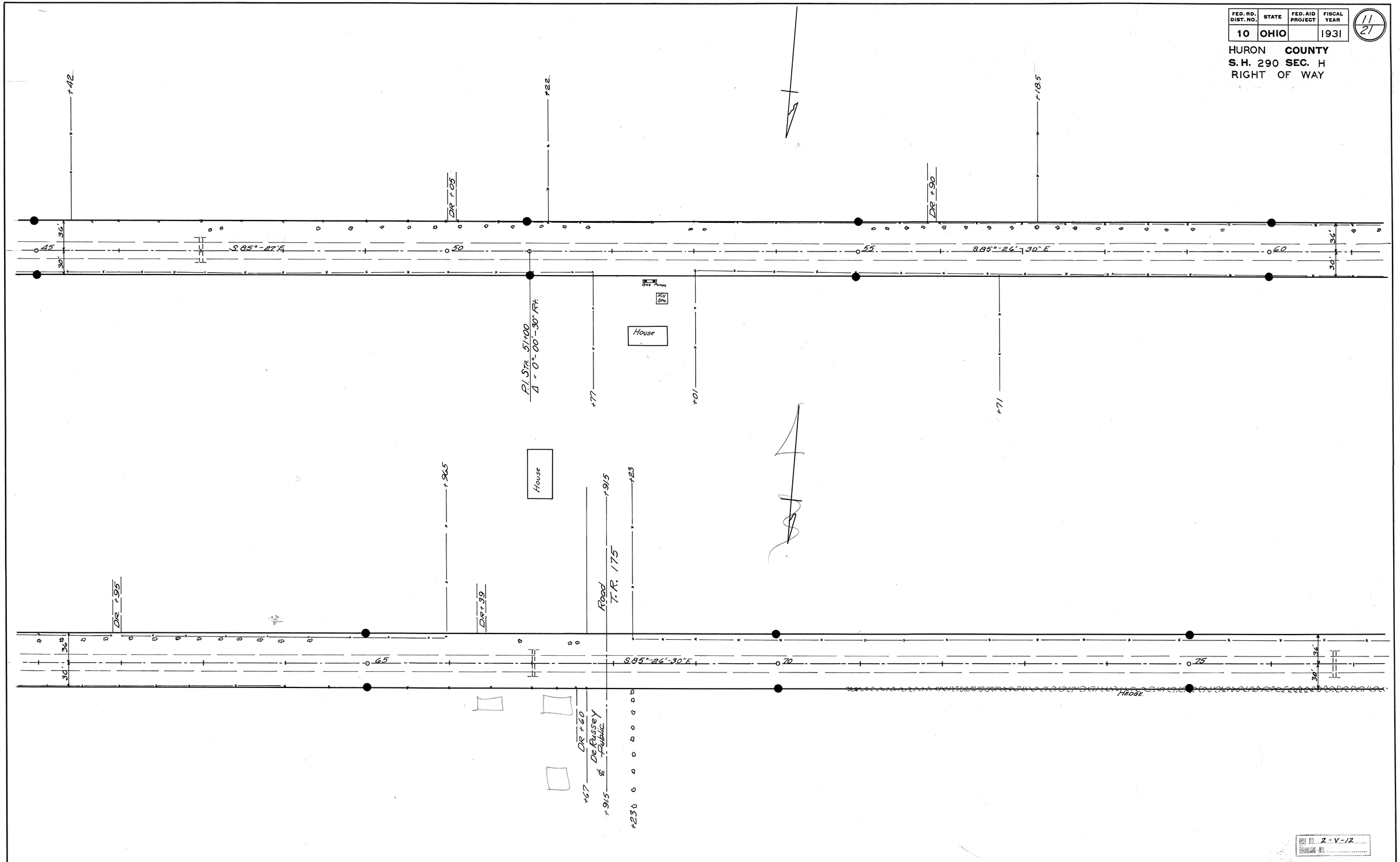
290 Huron H R/W

290 Section H
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

11/21

HURON COUNTY
S.H. 290 SEC. H
RIGHT OF WAY




FILE NO. 2-V-12
DRAWING NO.

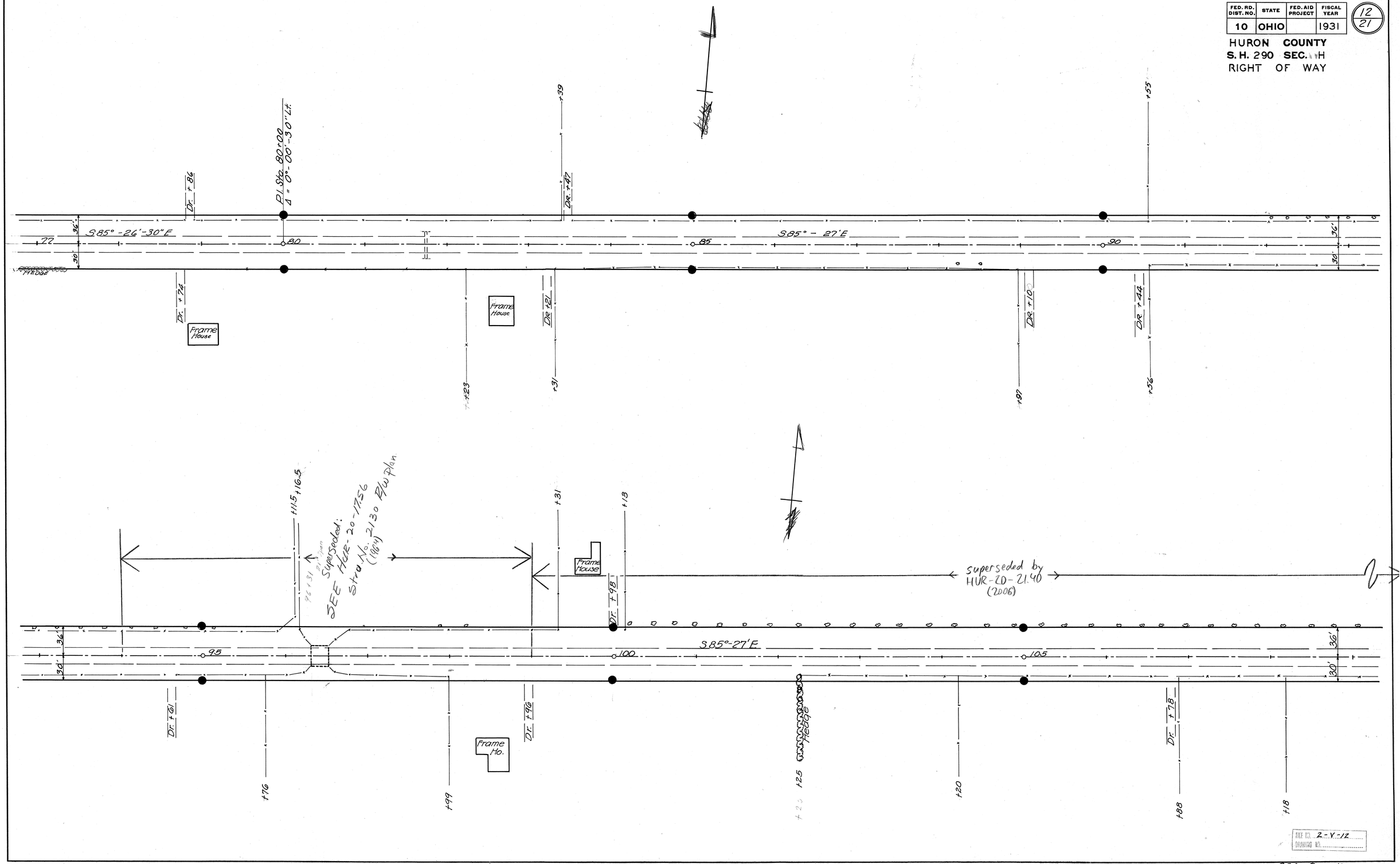
290 Huron H B/W

290 Sec. H
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

12
21

HURON COUNTY
S. H. 290 SEC. H
RIGHT OF WAY




FILE NO. 2-Y-12
DRAWING NO.

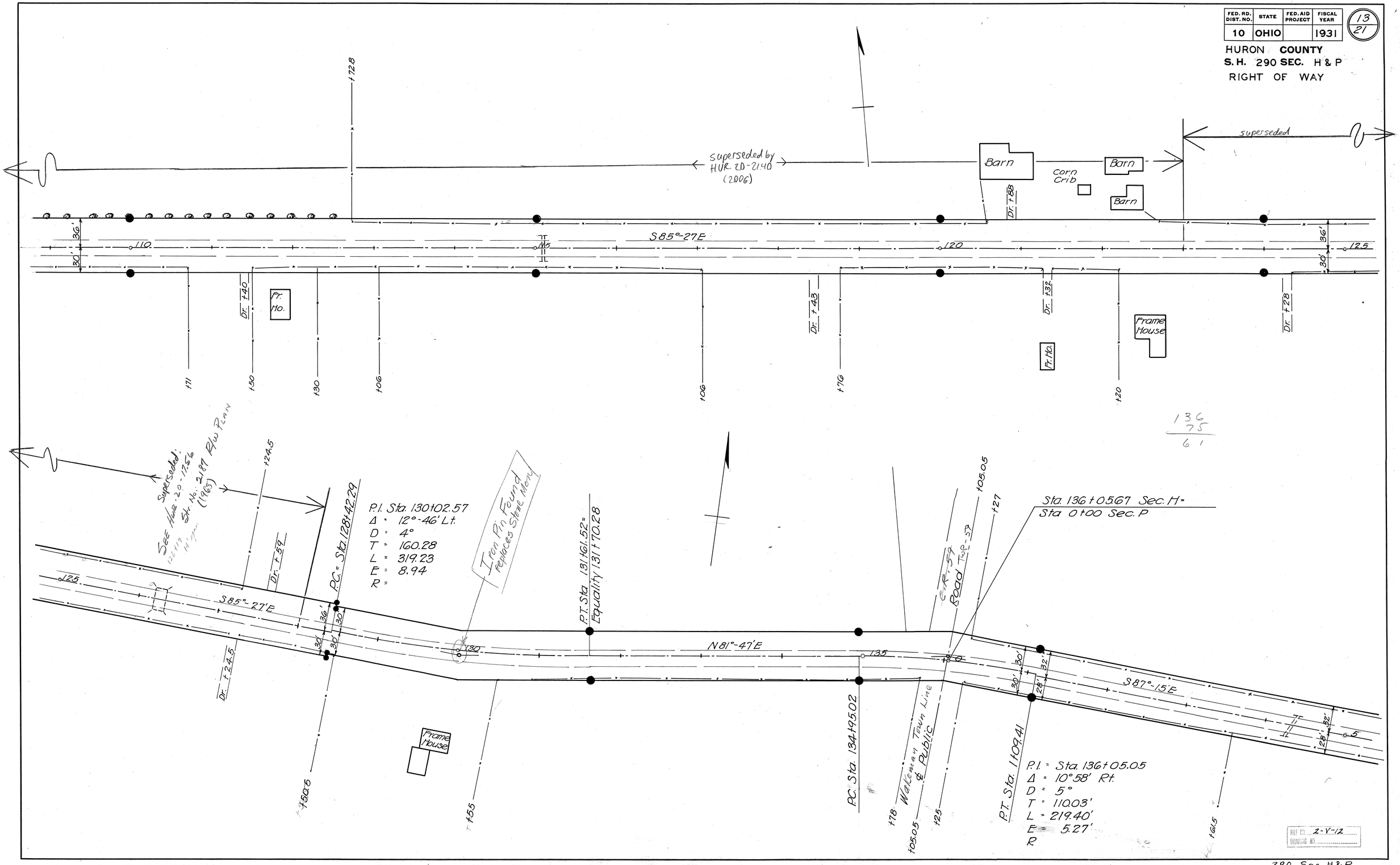
290 Huron H R/W

290 Sec. H
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

13/21

HURON COUNTY
S.H. 290 SEC. H & P
RIGHT OF WAY




290 Huron H&P R/W

290 Sec. H&P
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

14/21

HURON **COUNTY**
**S. H. 290 SEC. P**
RIGHT OF WAY

141.5
Frame House
Dr. ± 25.5
154
Dr. ± 46
S 87°-15' E
5
32'
26'
10
15
20
28'
32'
187.5
195.5
182.5
151.5
House
Dr. ± 40.5
147.5

161
Dr. ± 53
172
House
Dr. ± 42
165
183
S 87°-15' E
25
30
S 87°-12' E
35
28'
32'
Dr. ± 37
Dr. ± 54
Shed
164
157
P.I. Sta. 27+16.500
Δ = 0°08' Rt.
179

FILE NO. 2-Y-12
DRAWING NO.

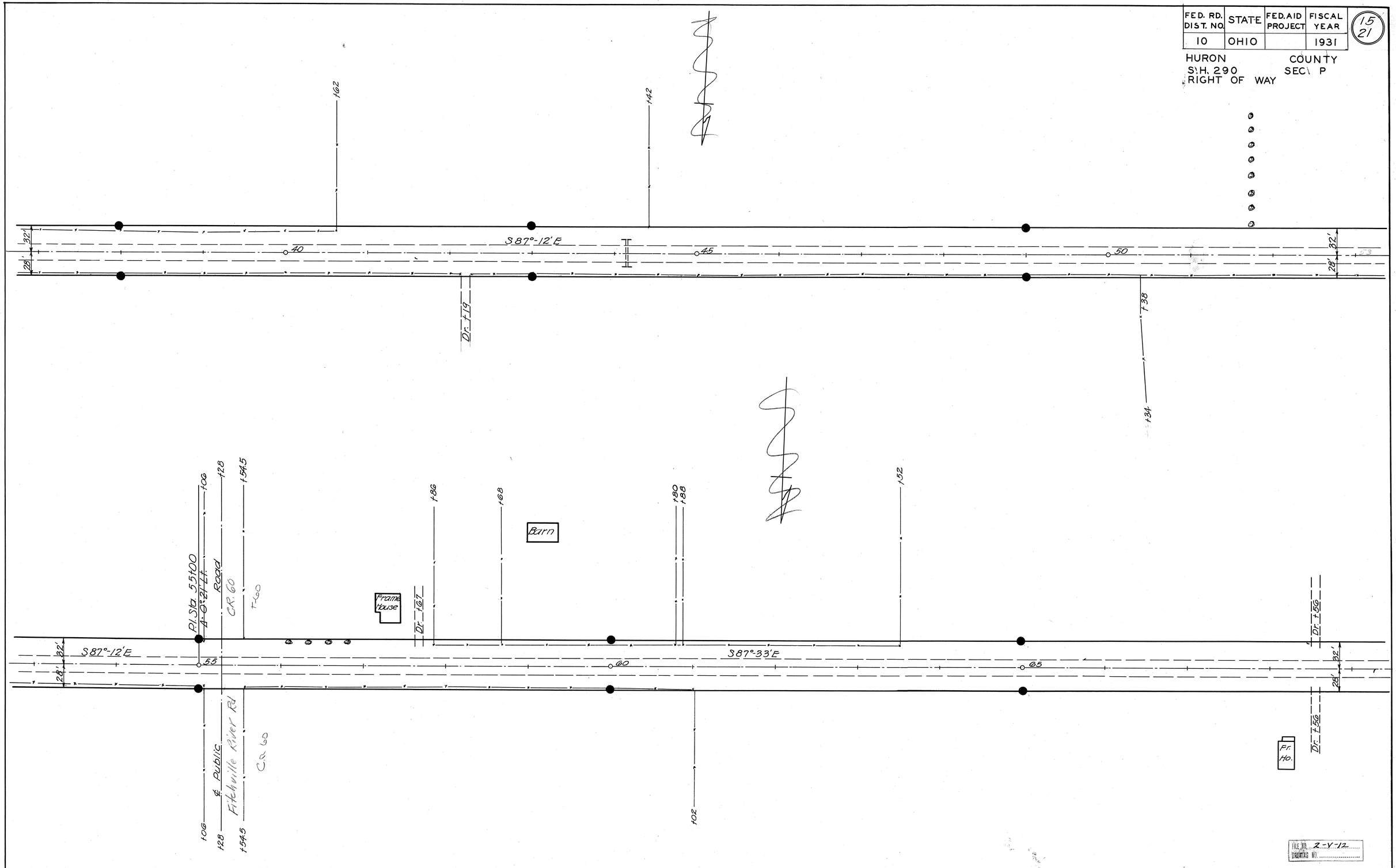
290 Huron P B/W

290 Sec. P
Huron Co.

| FED. RD. DIST. NO. | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

15
21

HURON COUNTY
S.H. 290 SEC. P
RIGHT OF WAY




FILE NO. 2-V-12
DRAWING NO.

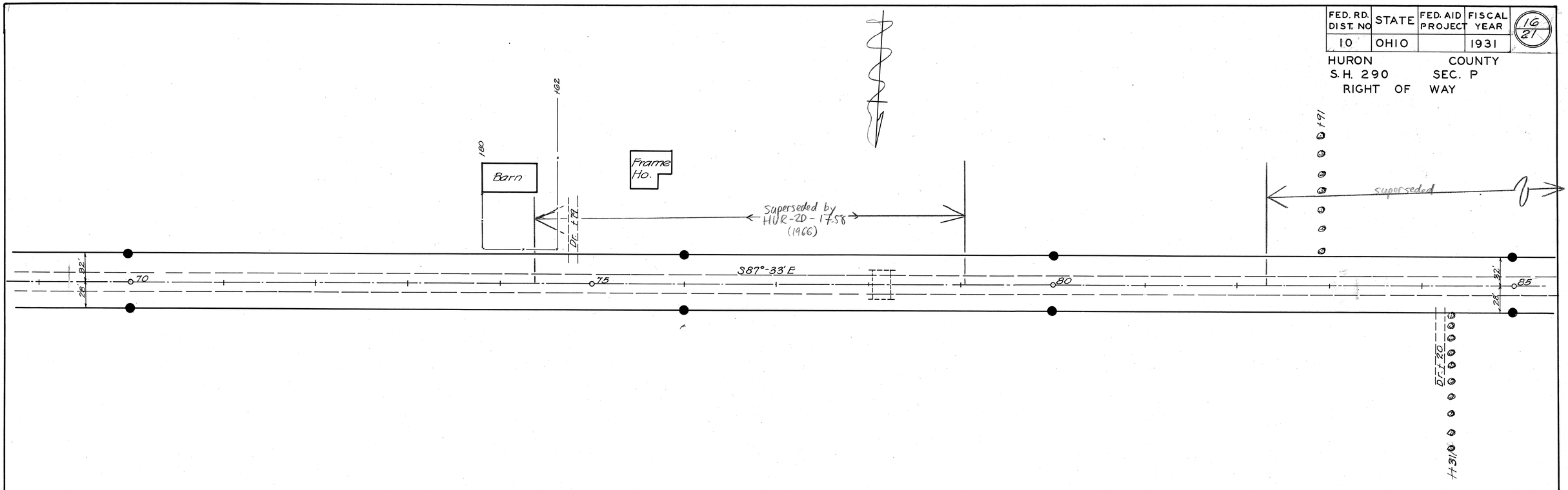
290 Huron P B/W

290 Sec. P
Huron Co.

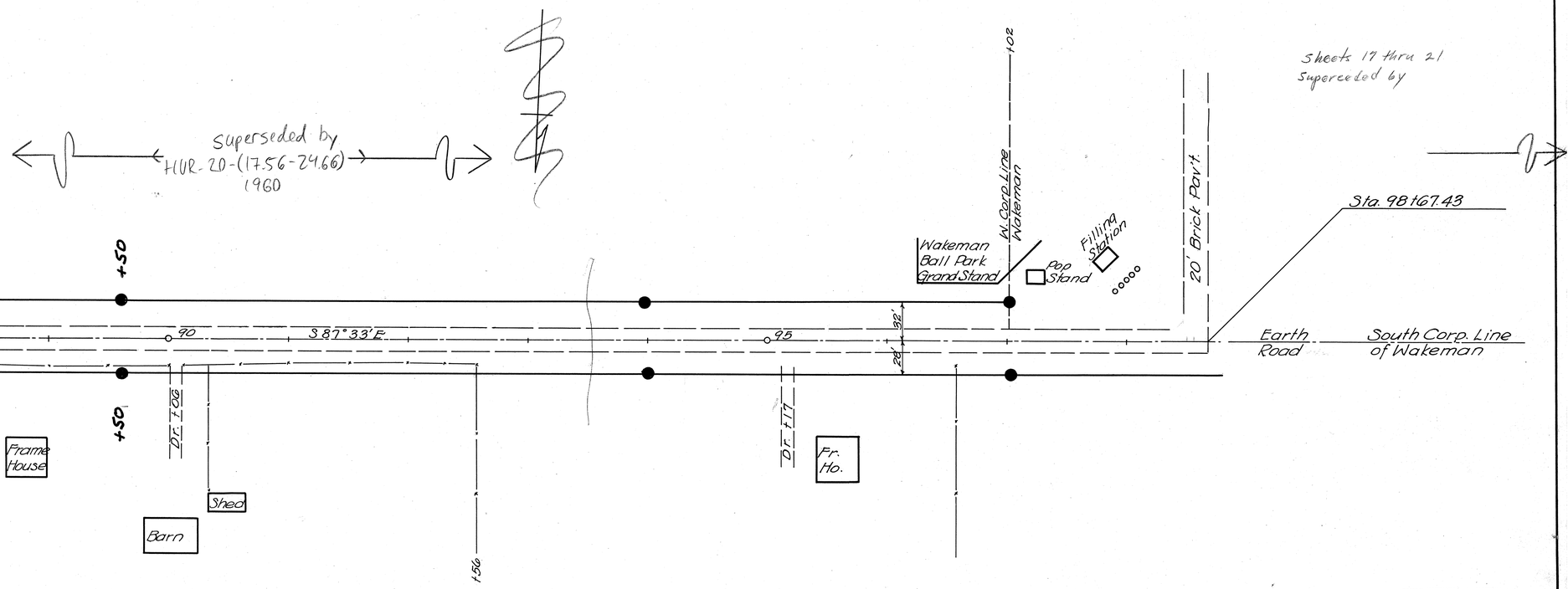
| FED. RD. DIST. NO | STATE | FED. AID PROJECT | FISCAL YEAR |
|---|---|---|---|
| 10 | OHIO | | 1931 |

16/21

HURON COUNTY
S.H. 290 SEC. P
RIGHT OF WAY




Sheets 17 thru 21 Superseded by



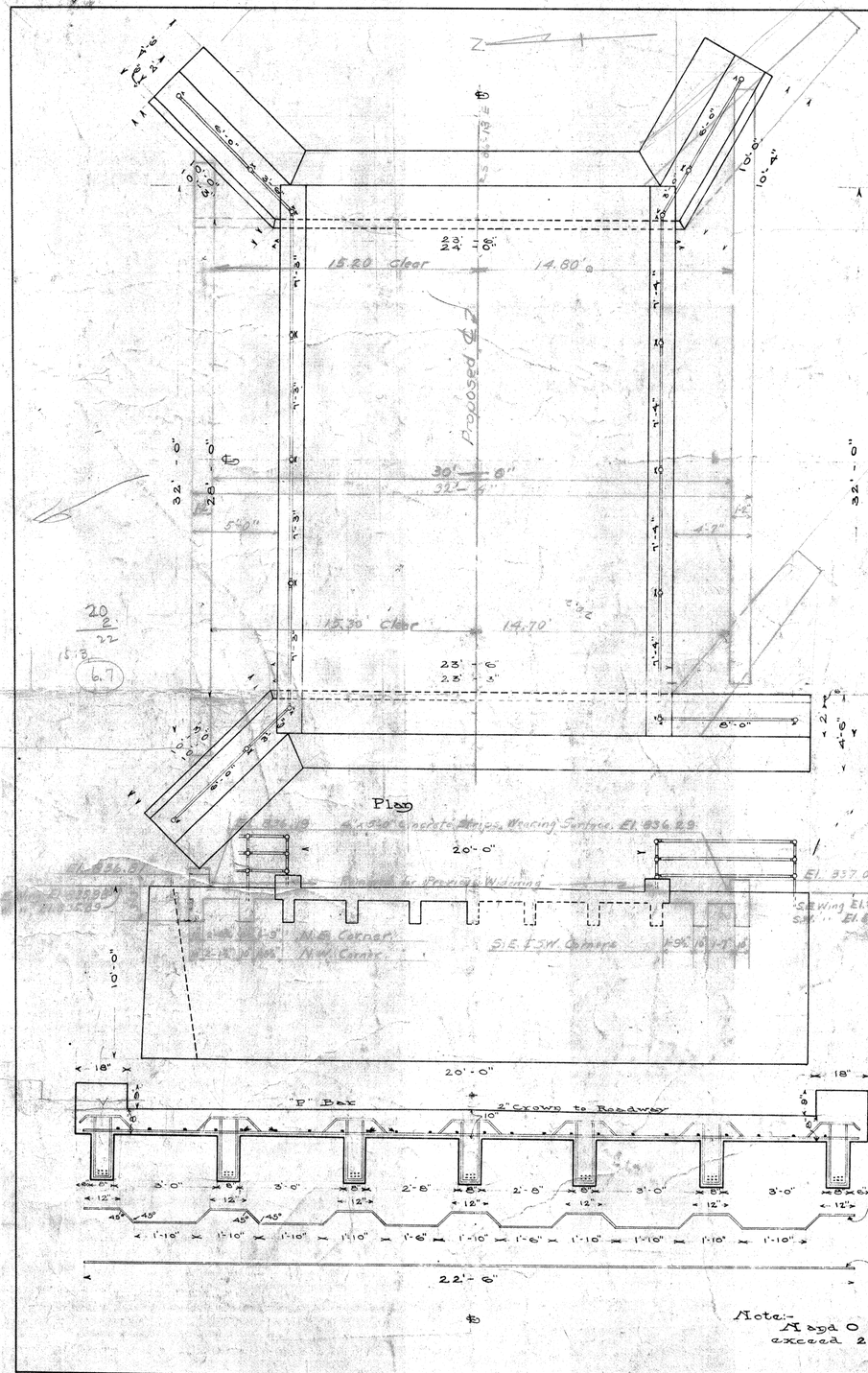

FILE NO. 2-V-12
DRAWING NO.

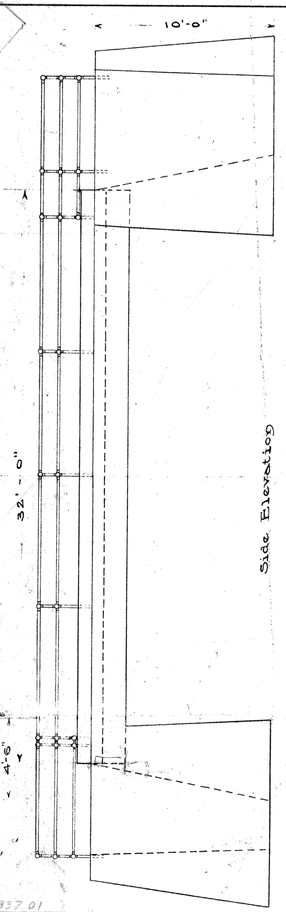
290 Huron P.B./W

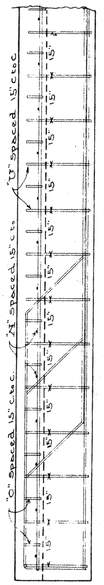
290 Sec. P
Huron Co.

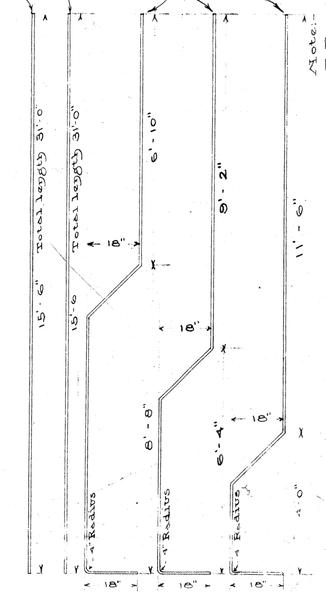
Note: [illegible]
New railings on both sides recommended

? possibility of further widening
of curve to [illegible] at this point
Curb on south side to be 2'
from new ℄.

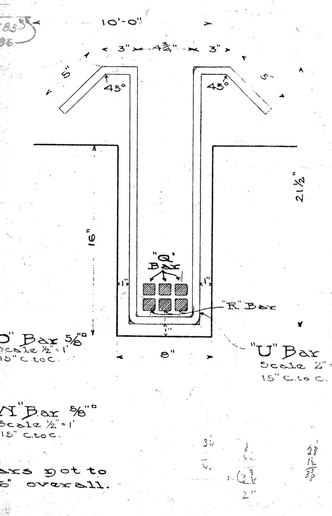



| Bill of Materials | | | | |
|---|---|---|---|---|
| 94.0 Cu. Yds. Concrete in Walls. | | | | |
| 30.5 Cu. Yds. Concrete in Top. | | | | |
| 84.3 Ft. Standard Railing "A" Bell Fittings 2" Gas Pipe | | | | |
| Steel Reinforcement | | | | |
| Bar | Size | Length | No. | Weight |
| N | ⅝" ▫ | 22'-6" | 25 | 748.125 |
| O | ⅝" ▫ | 25'-0" | 25 | 831.25 |
| P | ⅜" ▫ | 31'-0" | 24 | 357.12 |
| Q | 1" ▫ | 35'-2" | 21 | 2513.28 |
| R | 1" ▫ | 31'-0" | 21 | 2213.4 |
| U | ⅝" ▫ | 5'-4" | 182 | 1307.125 |
| | | Total | | 7870.3 |




C-1-140
BRIDGE
HURON COUNTY DEPT. of HIGHWAYS & BRIDGE
Court House Norwalk, Ohio
E.C. Herrick, Co. Highway Supt'd.
Scale ¼" to 1'

371