FEDERAL AID PROJECT
Nº 586-F(1)

Fed Rd Dist Nº	State	Fed Aid Project	Fiscal Year
10	OHIO	586-F(1)	1939

S.H. 7 SEC. RIPLEY (Pt)
BROWN COUNTY

Box 27

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

OHIO RIVER ROAD

S.H.Nº. 7 SEC. RIPLEY PT.

BROWN COUNTY

VILLAGE OF RIPLEY

CONVENTIONAL SIGNS

- STATE LINE
- TOWNSHIP LINE
- VILLAGE LINE
- CENTER LINE
- RAIL ROAD (STEAM)
- FENCE LINE
- STRUCTURE (OLD)
- STRUCTURE (NEW)
- PRESENT PIPE LINES
- PROPOSED PIPE LINES

INDEX OF SHEETS

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LINE DATA

Begin F.A.P. 586-F(1) Sta. 42+41
End F.A.P. 586-F(1) Sta 58+00
Gross length of F.A.P. 586-F(1) 1559 Lin.Ft.
No deductions or additions
Net length of F.A.P. 586-F(1) 1559 Lin.Ft. or 0.295 Miles.

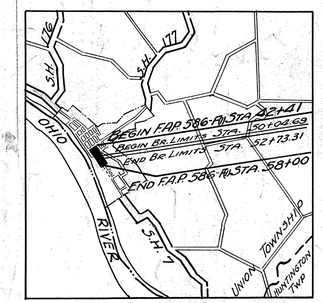
Begin Cherry St. Lt.	0+18.5		
End Cherry St. Lt.	2+50	=	231.5 Lin.Ft.
Begin Cherry St. Rt.	0+18.5		
End Cherry St. Rt.	2+25	=	206.5 Lin.Ft.
Net Length of Work =			1997.0 Lin.Ft. or 0.378 Miles.

289

FILE No.	31 7 SEC. RIPLEY PT. BROWN COUNTY
	DATE OF LETTING ____ 19__
289	CONTRACT Nº ____

SUPPLEMENTAL SPECIFICATIONS
E-305 (Rev. 4-15-39)
T-110 (Rev. 8-3-36)
E-201
M-110.11 (Rev. 9-16-36)

134 (5-31-39)



LOCATION MAP

PORTION TO BE IMPROVED
STATE HIGHWAYS
COUNTY ROADS
DELIVERY POINTS — RIPLEY VIA RIVER, DOVER KY. VIA C&O R.R.
AVERAGE HAUL — 0.5 MILE RIVER, 2 MILE R.R.

SCALES

TYPICAL SECTION	1"=2'
PLAN	1"=20'
PROFILE-HORIZ.	1"=20'
PROFILE-VERT.	1"=4'
CROSS SECTIONS	1"=5'

SUPPLEMENTAL PRINTS

DRAWING Nº	DATE	DRAWING Nº	DATE	DRAWING NO.	DATE
E-5 Nº1	8-25-39	I-8 IN Nº1	3-1-39	3-27 P.C.1	3-1-39
B-T-71R	7-11-38	G-707	10-33	CS5-35	9-6-35
I-8CBN Nº3	3-1-39	B-T-50-70-71E Nº1	10-33	AS-35	3-8-39
I-8CBN Nº7	3-1-39	B-T-70-71EN Nº1	10-33	L-1	2-16-38
I-8 M.H.N Nº1	3-1-39	B-T-71E Nº1	10-33	MBD-36	3-8-39
I-12	2-15-36	T-70-71E	10-33	I-15 No.1	10-1-39
I-1,2,3&5	3-1-39	I-8 C.B. No.6	3-1-39	I-15 No.2	10-1-39
				I-8 M.H. Nº2	3-1-39

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

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that traffic will be maintained as provided by these plans and estimates. See traffic note on sheet 2.

The Right of Way necessary for this improvement will be provided by The Village of Ripley.

Approved Arthur B. Harwood P.E.#4152
Date 4/17/39 Resident District Deputy Director

Approved Guthrie Drake P.E.#4246
Date 4/12/39 Resident Division Deputy Director

Approved _____
Date _____ Chief Engr. Bureau of Maintenance

Approved W.A. Hindman P.E. 2629
Date 6/29/39 Chief Engr. Bureau of Bridges

Approved G.P. Rogue P.E. 25
Date 10-6-39 Chief Engr. Location & Right of Way

Approved _____
Date 10-6-39 Chief Engr., 1st Asst. Director

Approved _____
Date 10-6-39 Director of Highways

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED

COMMISSIONER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

CONSTRUCTION BUREAU
AUG 29 1956
GROUND PHOTOLAB

FED. RD. DIST. NO.	STATE	FEDERAL AID PROJECT	FISCAL YEAR
10	OHIO	586-F(1)	1939

2 / 38

S.H. 7 SEC. RIDLEY (PT.)
BROWN COUNTY

TYPICAL SECTION

TYPE T-71

MAINTENANCE OF TRAFFIC

Traffic will be maintained through this project at all times. Before the old bridge is disturbed, the contractor shall have constructed the temporary run-around bridge and approaches between Sta. 48+50 and Sta. 54+25. As soon as this work is complete, traffic shall be routed over the run-around and the contractor may proceed with any work which does not interfere with traffic using the existing pavement beyond the ends of the run-around.

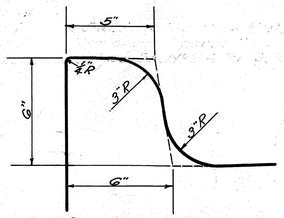
When the contractor has progressed with the work within the limits of the temporary bridge approaches to the extent that this work can be carried on and opened to traffic concurrently with the work on the north half of the pavement on the remainder of the project, he shall first construct the temporary road between Sta. 42+41 and Sta. 48+50 and between Sta. 54+25 and Sta. 58+00 on the right side. (See sheet no. 7) The temporary road shall be 20 feet wide except between Sta. 46+65 and Sta. 47+55 where one way traffic will be permitted. The earthwork on the left side may then be constructed to the 1½ to 1 slope line shown on the cross sections and the new pavement built thereon. When the new structure and the north half of the pavement have been completed, traffic shall be routed thereon; the temporary road, run-around and bridge shall be removed, and the remainder of paving and other work shall be completed.

Where the embankment exceeds 5 feet in height, the contractor shall construct and maintain a suitable guard rail, 3'-6" in height during the time the temporary road is in use.

Temporary roads shall be constructed by the contractor of aggregate, Item T-110, and shall be maintained in a smooth condition by daily dragging and the addition of aggregate as required by the engineer. Chloride shall be applied as a dust preventative.

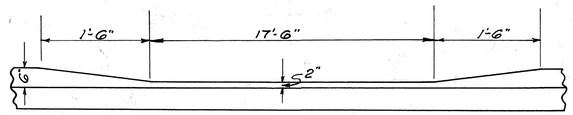
Where necessary to carry traffic in a one-way lane, the contractor shall provide a signalman at each end of each one-way lane at all hours of the day and night.

Payment for all of the above work shall be included in the lump sum bid for "Maintaining Traffic, including lights, signs, barricades and watchmen" except for temporary embankment, bridge, aggregate and chloride which are separate pay items.

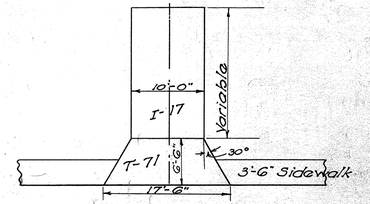


DETAIL OF TYPE 2-A MODIFIED CURB

See Sheet 6 for additional curb and sidewalk details.

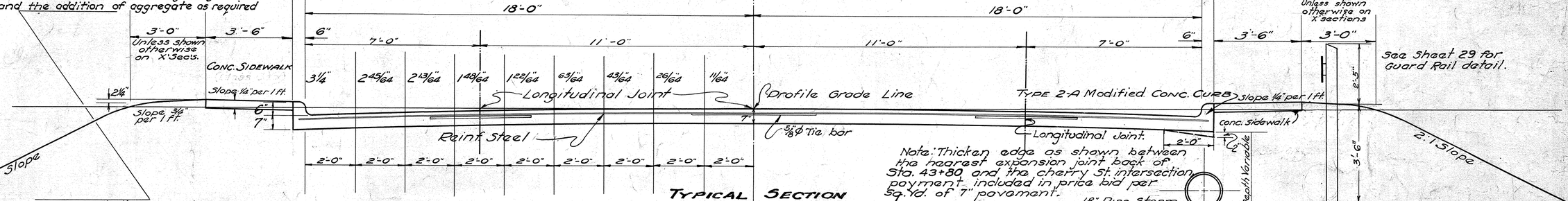


DETAIL OF 2-A CONCRETE CURB AT PRIVATE DRIVES

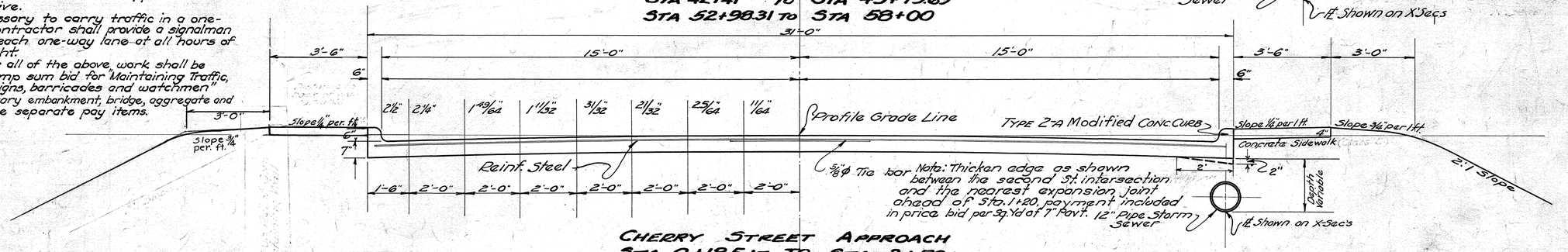


DETAIL OF PRIVATE DRIVES

7" Reinf. Concrete 10 Sq. Yds.
Sidewalk deduction 54 Sq. Ft.

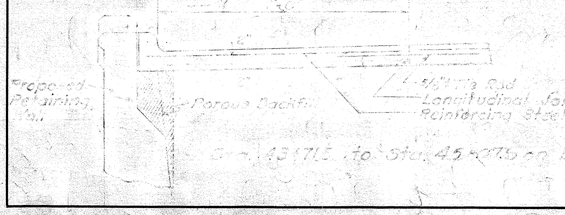


TYPICAL SECTION
STA 42+41 TO STA 49+79.69
STA 52+98.31 TO STA 58+00



CHERRY STREET APPROACH
STA 0+18.5 LT TO STA 2+50 LT
STA 0+18.5 RT TO STA 2+25 RT.

Note~ Wherever pipes are to be placed within or beneath an embankment and the upper extremity of the pipe will be less than two feet below the surface of the original ground, the embankment adjacent to the pipe shall be constructed to an elevation of at least two feet above the upper extremity of the pipe before laying pipe. The trench shall then be excavated to the minimum width necessary for placing pipe and proper backfilling. The pipe shall be laid and trench backfilled before more embankment is placed thereon.



The pavement on Cherry Street may be finished in accordance with Sec. T-70.201.

Pavement shall not be broomed within twelve inches of the back of the curb

Note: Concrete sidewalk shall be separated from the pavement by ½ bituminous premoulded expansion joint material. Payment for joint material included in price bid per Sq. Yd. for item T-71.

Note~"The thickness of the subgrade in cuts to be compacted on this project will be eight inches, loose measurment; the width shall be the width of the pavement plus eighteen inches on each side of the pavement."

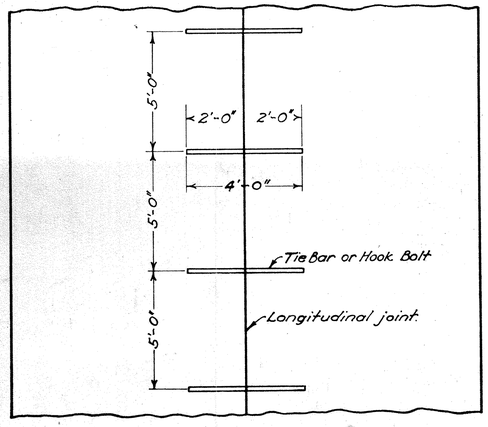
Note:— Seeding shall be done according to E-305 Spec., except that the seed mix shall be as follows:
20% Ky. Blue grass
20% Per. Rye grass
20% Hairy vetch
40% Alsike clover

LONGITUDINAL JOINTS

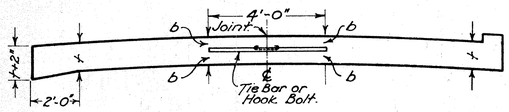
FED. RD. DIST. NO.	STATE	FEDERAL AID PROJECT	FISCAL YEAR
10	OH10	586-F(1)	1939

2-A 38

S.H.T. BROWN — SEC. RIPLEY (PT.) COUNTY

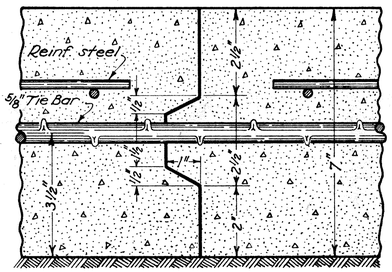


HALF PLAN FOR PAV'T. HALF PLAN FOR BASE



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

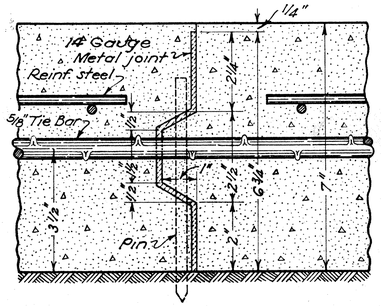
KEY JOINT



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.

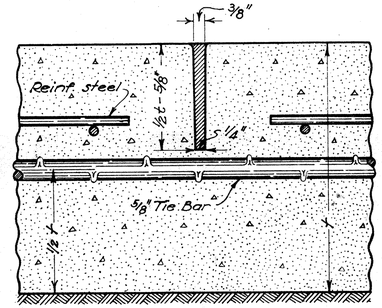
METAL JOINT



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 ¼" 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 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.

Tie bars to be ⅝ inch round, deformed bars.

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

The longitudinal joint between adjoining slabs poured in separate operations shall be a key joint with American hook bolts or equal, or billet steel (Sec. M-7.1) tie bars, unless otherwise shown on the plans.

If tie bars are bent, no portion of the bend shall extend into the first slab poured.

Immediately prior to placing the second slab, bent tie bars shall be straightened by means of a pipe slipped over the free end of the bar.

Key joints used in part width construction shall be painted with two coats of bituminous material as per Section M-5.5 F-2 before adjoining slabs are poured.

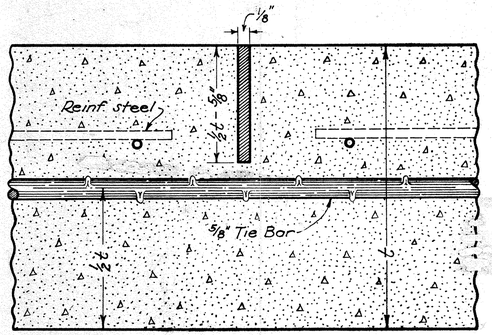
The Metal, Key, and ⅛" Premolded Joints shall not be edged.

Special care shall be exercised in edging Impressed and ⅜" Premolded Joints, that the width of the opening does not exceed that shown.

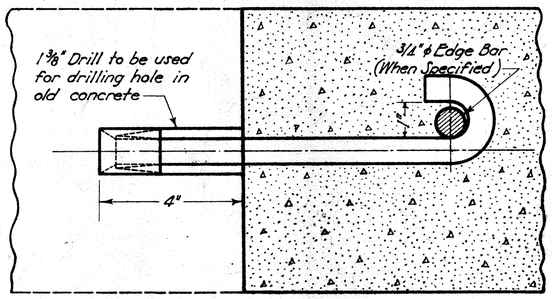
Material for sealing ⅜ inch premolded joints and for filling impressed joints shall meet the requirements of Section M-5.5 F-2. Immediately before placing liquid bituminous seal or filler an application of kerosene shall be applied to the area of the joint to be in contact with the seal or filler.

Application of kerosene shall be by pressure spray, brush or swab.

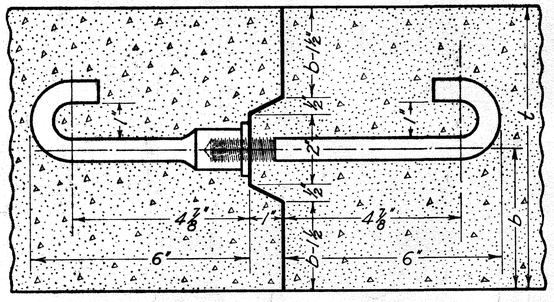
PREMOLDED JOINT



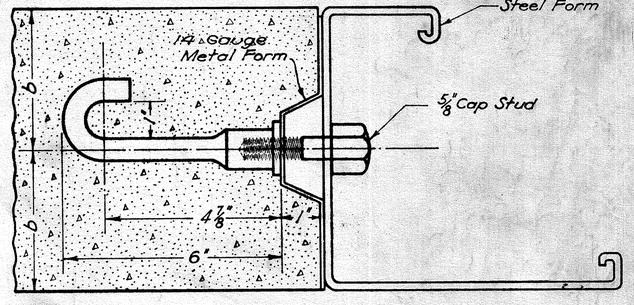
EXPANSION BOLT JOINT



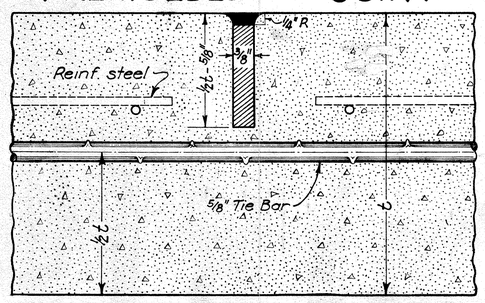
HOOK BOLT AND KEY JOINT

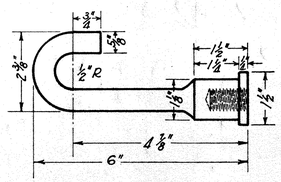


ACCEPTABLE METHOD OF FORMING JOINT



PREMOLDED JOINT





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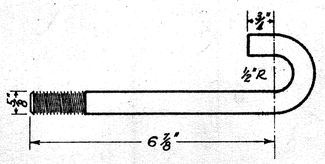
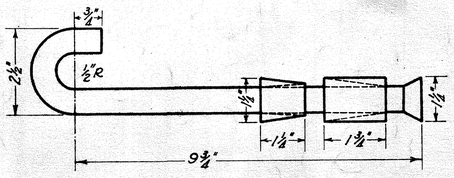


J BOLT

HOOK BOLT DETAIL



EXPANSION BOLT DETAIL

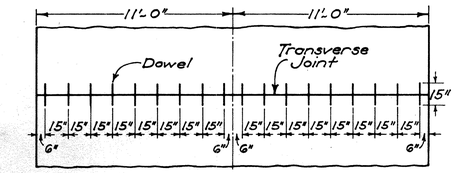
DATE 3-1-39

TRANSVERSE JOINTS

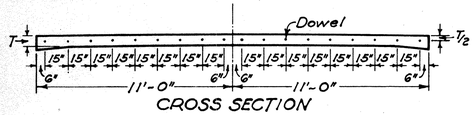
FED. RD DIST. Nº	STATE	FED. AID PROJECT	FISCAL YEAR	2-B 38
10	OHIO	586·F(1)	1939	

S.H. 7 SEC. RIPLEY (PT.) BROWN COUNTY

DOWEL SPACING

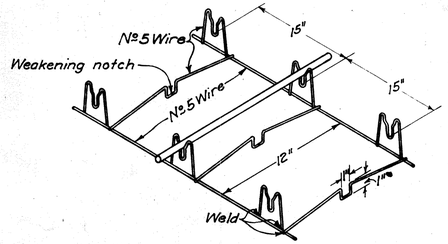


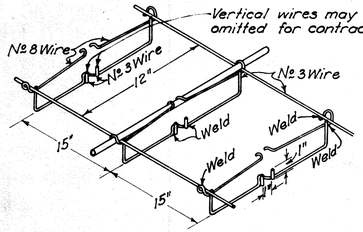
PLAN

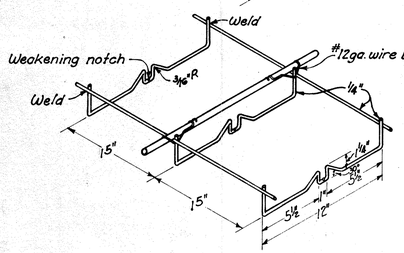


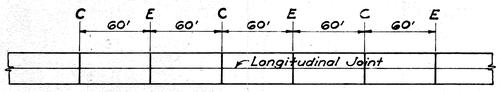
CROSS SECTION

DOWEL SUPPORT UNITS



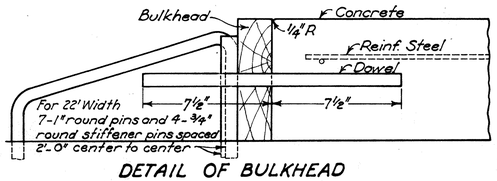




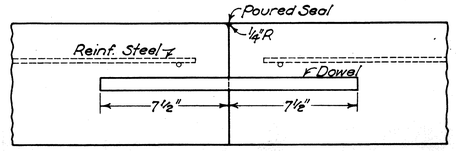


ARRANGEMENT OF TRANSVERSE JOINTS
C = Contraction Joint
E = Expansion Joint

CONSTRUCTION JOINT

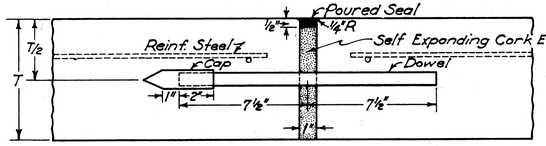


DETAIL OF BULKHEAD

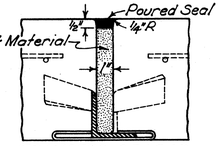


DETAIL OF DOWEL JOINT

SELF EXPANDING CORK EXPANSION JOINT

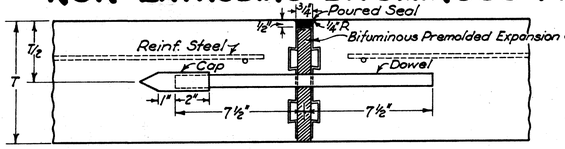


TRANSFER OF LOAD BY DOWEL

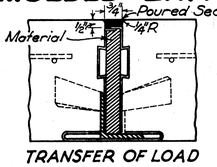


TRANSFER OF LOAD WITH TRANSLODE BASE

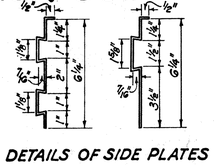
NON-EXTRUDING BITUMINOUS PREMOLDED EXPANSION JOINT



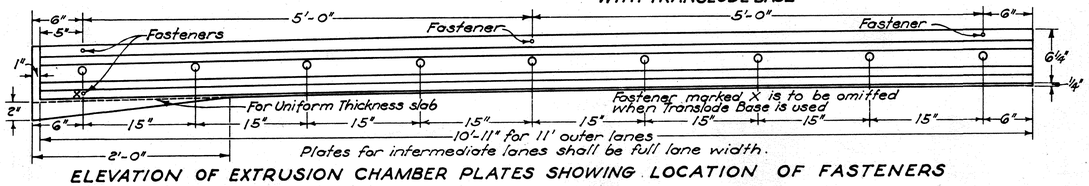
TRANSFER OF LOAD BY DOWEL



TRANSFER OF LOAD WITH TRANSLODE BASE

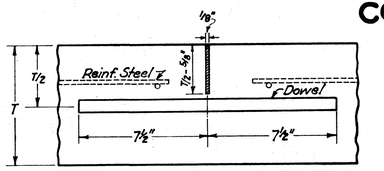


DETAILS OF SIDE PLATES

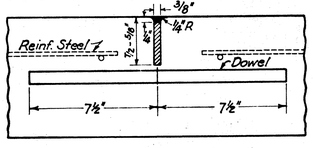


ELEVATION OF EXTRUSION CHAMBER PLATES SHOWING LOCATION OF FASTENERS

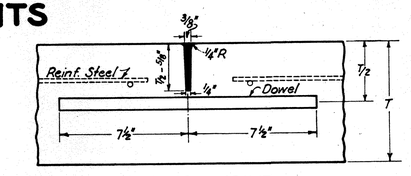
CONTRACTION JOINTS



PREMOLDED JOINT

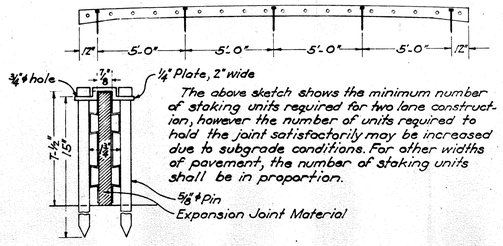


PREMOLDED JOINT



IMPRESSED JOINT

SUGGESTED METHOD OF STAKING JOINTS



The above sketch shows the minimum number of staking units required for two lane construction; however the number of units required to hold the joint satisfactorily may be increased due to subgrade conditions. For other widths of pavement, the number of staking units shall be in proportion.

STAKING UNIT

CONTRACTION JOINTS. Contraction joints shown are to be considered as alternates; the type to be used on any project shall be optional with the contractor; and shall be constructed as shown herewith. Contraction joints shall be spaced so that the length of any slab between transverse joints shall not exceed 60 feet. Joint arrangement at intersections shall be as specifically shown on the plans.

PREMOLDED CONTRACTION JOINTS. The filler material shall meet the requirements of Sec. M-10.1 or Sec. M-10.13. The top edge of contraction joint material shall be shaped to fit the surface of the pavement.

IMPRESSED CONTRACTION JOINT. 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 of dimensions detailed. After the joint is formed it must be protected from dirt and foreign matter until the filler is placed.

· NOTES ·

GENERAL. Expansion joints shown are to be considered as alternates; the type to be used on any project shall be optional with the contractor. The type of joint selected by the contractor and all operations and materials for assembling and installing the joints shall be approved by the engineers.

DOWELS. All dowels shall be 3/4" inch round, straight, smooth bars, free from burring and flattening at ends. The entire dowel shall be thoroughly coated before placing in the pavement using either Bit Mat, Sec. M-5.11 SC-2 or heavier, or an oil such as 600 W or equal.

Prior to placing, all dowels shall be assembled in a unit which is to remain in place for construction, contraction or expansion joints. The length of the unit shall be not less than the distance between longitudinal joints and sufficient support shall be provided to hold the dowels accurately perpendicular to the joint. Expansion joint material shall be forced over the lower cross wires so as to fit snugly on the subgrade. The design of the dowel support unit may be as shown herewith or may be an approved equal, and it shall be shop assembled. When the lane width varies from 11 feet, the spacing of the dowels shall be 15 inches and the 6" end spaces shall be equally increased or decreased and shall be less than 10½" but not less than 3".

CONSTRUCTION JOINTS. A bulkhead shall be constructed to permit dowels to extend through the joint. Care shall be taken in removing bulkhead and placing adjacent concrete to see that dowels are embedded in the concrete without being bent.

EXPANSION JOINTS. Expansion joints shall be constructed as shown herewith. The spacing of the expansion joints shall not exceed 120 feet. The type and arrangement of expansion joints at intersections shall be as specifically shown on the plans.

Each dowel bar shall be equipped with a neat fitting metal cap on one end. The surface width of expansion joints shall not be greater than the width shown herewith. The bituminous material for the poured seal shall meet the requirements of Section M-5.5 F-2.

The top edge of the extrusion chamber plates, and also the edges of all expansion joint materials shall be shaped to fit the section of the pavement.

Joints in monolithic curbs shall be constructed with the some type of filler material as used in the expansion joints. When premolded material is used in curbs over 3 inches in height, sufficient holes shall be provided in the material to prevent extrusion.

SELF EXPANDING CORK JOINT. The filler material for this joint shall meet the requirements of Supplemental Specification Nº M-10.11, and shall be accurately held in place by means of approved steel bulkheads. Dowel holes shall be 5/8 inch in diameter.

NON-EXTRUDING BITUMINOUS PREMOLDED JOINT. The filler material shall meet the requirements of Sec. M-10.1. The extrusion chamber plates shall be constructed of 24 gauge metal rolled to true section. When assembled in the field, a template and protected bench shall be provided for the workmen to insure accuracy in assembling.

Dowel holes shall be punched in the filler material, and shall be 11/16 inch round holes to insure "tight fitting dowels." Dowel holes in the side plates shall be 7/8 inch in diameter. In no case shall dowels interfere with the extrusion chambers. At each edge of the pavement the extrusion chambers shall be bent down to seal the ends of the chambers. The joint shall at all times be protected from heat and other agencies which tend to cause distortion. The assembled joint shall be securely fastened together by 1/8 inch stove bolts or other approved fasteners. The holes for the fasteners may be made in the plates at the factory; when made in the field, they shall be drilled after the joint is assembled. The stove bolts shall be fastened with thin nuts, speed nuts, or rubber tubing screwed on. In order for this joint to function properly, the plates must be fitted snugly against the filler material and held in position while concrete is being deposited so that no mortar enters between the plate and filler, after which the fasteners must function in such a manner as will permit the plates to move with the concrete slab. The use of clinched nails or any such fasteners as would prevent the movement of the plates will not be permitted. The joint shall then be staked rigidly to the subgrade.

BITUMINOUS SEAL AND FILLER. Material for sealing expansion, construction and contraction joints and for filling impressed contraction joints shall meet the requirements of Section M-5.5 F-2. Immediately before placing liquid bituminous seal or filler an application of kerosene shall be applied to the area of the joint to be in contact with the seal or filler. Application of kerosene shall be by pressure spray, brush or swab.

EDGING JOINTS. Special care shall be exercised in edging joints that the width of the opening does not exceed that shown.

TREATMENT OF EXPANSION JTS. AT LONGITUDINAL JTS.
A positive method to maintain required alignment shall be used in connecting the expansion joints of longitudinal joints. The expansion material and metal plates shall meet in a vertical joint. Longitudinal keys and keyways, where used, shall be omitted for the thickness of the expansion joint.

DATE
3-1-39
3-28-39
5-4-39
7-20-39
9-18-39

TJ-6

10 OHIO 586-F(1) 1939
Fed. Aid.
3
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SH7 Sec. Ripley (Pt)
Brown County
Main Street S.H.177
Sta 42+41
Parcel No. 1
Lot No. 106 (Pt.)
Ripley Nat. Bank Co.
Ripley, Ohio
Parcel No. 2
Lot No. 106 (Pt.)
A.J. Stivers
Ripley, Ohio
Parcel No. 4
Lot No 194
Ripley Oil Co.
Ripley, Ohio
Parcel No. 6
Ripley Nat'l. Bank Co.
Ripley, O.
Parcel No. 8,
Lots No. 196 & 197
Ripley Oil Co.
Ripley, Ohio
Parcel No. 10,
Lots No 198 & 199
Ripley Oil Co.
Ripley, Ohio
2 St. Brick Building
3 St. Brick Residence
2 St. Brick Res.
2 St. Frame Res.
2 St. Brick Residence
Slope Agreement
Slope line
Alley
Concrete Drive
End Wall Sta. 1+50.06
Sta. 2+50 End Pav't.
Cherry Street
Second Street
S 25°-16'E
8" Water Main
Flood Light
Public Library
Shed
Gas Sta.
Parcel No. 3
Lot No. 105
Village of Ripley
Ripley, Ohio
Parcel No. 5
Lot No. 193
Lot No. 192
Ripley Oil Co.
Ripley, Ohio
Parcel No. 9,
Lots No. 190 & 191
Ripley Oil Co.
Ripley, Ohio
Parcel No. 11,
Lots No. 188 & 189
Ripley Oil Co.
Ripley, Ohio
Parcel 7
J.R. Finney
Ripley Ohio
1/2 Lot No. 189
End Sheet 3
Note: The catch basins at Sta. 42+51.87 shall be set low enough to permit depressing the gutter from the beginning of the curb returns to the basins.
Begin F.A.P. 586-F(1)
Marker to be furnished & erected on the Rt. by the State of Ohio, before acceptance of this Project.
F.A. 586-F(1)
Typical Section Adjoining Pavement
8'-6" 16'-0" 16'-0" 8'-6"
Flagstone Walk
Traffic Bound Macadam Surface Treated
FOR QUANTITIES SEE SH. No 6
Station 42+41
Proposed ℄ Profile Grade
+0.30%
Tang. Gr. 0.00%
No. 3 C.B.
El. 502.54
18" Pipe Rt. -1.90%
No. 1 M.H.
El. 501.50
El. 500.50
El. 495.30
12" pipe Rt.
+0.30%
No. 6 C.B.
El. 502.04
Exist. ℄ Profile Grade
200 FT. V.C.
(P.I.V.C. 505.28)
18" Pipe Rt. -0.95%
Sta. 2+25 End Pav't.
No. 2 M.H.
F.L. 501.30
F.L. 501.50
15" Pipe
El. 492.50
El. 492.48
18" Pipe Rt. -0.40%
Sta 48+00
Excav. 1894 Cu.Yds.
Emb. 26,780 Cu.Yds.
Emb. +20% 32,136 Cu.Yds.
508
504
500
496

Fed. Aid.				
10	OHIO	586-F(1)	1939	

SH 7 SEC. Ripley (Pt)
BROWN COUNTY

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PROPOSED STRUCTURE
Type: Cont. Plate Girder With Concrete Deck and Special Substructure.
Spans: 82'-102.5'-82' c/c brgs.
Roadway: 36' + two 5'-0" sidewalks.
Loading: H-15-33.
Skew: 20° R.A.
Wearing Surface: ¾" Monolithic Concrete
Approach Slabs: 25' long by 37' Wide.

EXISTING STRUCTURE
Type ~ Steel High Truss
Span ~ 139'-2" c/c Pins
Roadway ~ 17'-8" plus one 4' sidewk.
Loading ~ H-52
Floor ~ 3" Plank with Wood Block Wearing Surface
Stone Abutments.

10-A
Parcel 10-A,
Lot No. 200 & 201 (Part)
J.R. Finney
Ripley, Ohio

Parcel No. 13
Lot No 201 (Part)
Mary F. Bartley
Ripley, Ohio

Parcel No. 15
Board of Commissioners
Brown County.

Parcel No. 16
Mary Griffith
Ripley, Ohio.

Parcel No. 12
Lots No. 185, 186, & 187
Ripley Oil Co.
Ripley, Ohio

Ripley Oil Co.

Board of Commissioners
Brown County

STREET

GREEK

RED OAK

Slope Agreement

Permanent R/W

Slope Line

Temporary R/W

Slope agreement R/W

Paved Ditch

8" Water main

Guy Pole

2 St. Frame Res.

1 St. Frame Res.

Begin Sheet No 4

End Sheet No 4

Station 48+00

Station 54+00

Br. Limit Sta. 52+73.31

End Approach Slab Sta. 52+95.31

End Approach Slab Sta. 49+72.69

Br. Limit Sta. 50+04.69

S-25°16'-E

S-64°-44'-W

N-64°-44'-E

422.12'

401.92'

408.99'

351.03'

125'

100'

105.5'

32.46'

32.32'

44.02'

32.908'

B.M. Sta. 50+30
U.S.G.S. B.M.
15' Rt. of ℄
Elev. 501.68

FOR QUANTITIES SEE SH. No 6

Proposed ℄ Profile Grade

Exist. ℄ Profile Grade

+0.30%

18" Pipe Rt. -0.40%

18" Pipe Rt. +3.27%

18" Pipe Rt. +3.55%

F.L. 491.02

F.L. 497.49

F.L. 497.26

℄ Br. Sta 51+39.00
℄ Grade Elev. 507.797

Std. No. 1 M.H.

E. Paved Ditch

Bridge Limits Sta 52+73.31

End Approach Slab, Sta 52+95.31

Begin Sheet No 4, Station 48+00

End Sheet No 4, Station 54+00

FED. AID. 5
10 OHIO 586-F(1) 1939 38
SH 7 Sec. Ripley (Pt.)
BROWN COUNTY

F.A. 586-F(1)

Marker to be furnished and erected on the Lt of ℄ by the STATE OF OHIO, DEPT. OF HIGHWAYS, before acceptance of this Project.

Slope agreement R/W
Slope line
422.12'
Ripley Corp.
17
1-G
80'
BEGIN SHEET No 5
STA. 54+00
36" Sycamore
401.92'
Village of Ripley
Oscar Fitch
Parcel No. 18
Oscar Fitch
Ripley, Ohio
18
Parcel No. 19
Chas. Carr
Ripley, Ohio
19
Parcel No. 21
Luella Mefford
Ripley, Ohio
21
Parcel No 23
Lot No. 12
Carl Jackson
Ripley, Ohio
23
12" V.S.P. Storm sewer
Stote to remove to
Limit of construction
Everett Pangburn
Ripley Ohio
1st Frame Res.
Coal House
Slope Agreement
Permit
245'
27'
35'
15'
18" V.S.P.
8" V.S.P. 8' Long
8" Water main
S. 25°16'-E
54
55
56
57
58
END F.A.P. No 586-F(1)
STA. 58+00
Lena Noll
Ripley Ohio
16
Mary Griffith
Ripley, Ohio
Parcel No 16
Mary Griffith
Ripley, Ohio
2 St. Frame Res.
Slope agreement
Fire Hydrant
Parcel No. 20
Lot No. 11
J. W. Beck
Ripley, Ohio
20
Parcel No 22
Lot No. 10
Mrs Katherine Buchanan
Ripley, Ohio
22
2 St. Brick Res.
Slope Agreement R/W
32.08'
Mary Griffith
J. W. Beck
S 68°-44' W
351.08'
56.0'
10" V.S.P.
12" V.S.P.
48" Aspin
36" Maple
40" Maple
36" Sycamore
30" Silver Poplar
36" Silver Poplar
24" Maple
20" Maple
18" Maple
24" Maple
12" Maple
15" Maple
10" Ash
Carl Jackson
Mrs Katherine Buchanan

TYPICAL SECTION PAVEMENT ADJOINING

4'-0" | 7'-0" | 12'-0" | 12'-0" | 7'-0" | 4'-0"

Flagstone Walk
Traffic Bound Macadam Surface Treated

FOR QUANTITIES SEE SH. No 6

BEGIN SHEET No 5
STA. 54+00
END F.A.P. No 586-F(1)
STA. 58+00
Proposed & Profile Grade
Exist. & Profile Grade
Tang. Gr. +0.30%
Tang. Gr. +4.36%
+3.27%
18" Pipe Rt. ?
(P.V.C. 503.8)
400 FT. V.C.
Std. No. 3 C.B. (1)
F.L. 513.00
512
508
504
520
516
512
508
508.58 508.69 508.96 509.10 509.39 509.75 510.17 510.66 511.21 511.82 512.30 513.24 514.05 514.32 515.85 516.84 517.90
503.7 503.7 504.1 504.5 505.3 506.1 507.4 508.0 508.0 509.9 511.0 512.0 513.0 514.3 515.7 516.8 517.9
54 +25 +50 +25 55 +25 +50 +25 56 +25 +50 +25 57 +25 +50 +25 58
59 60
521.8 524.9

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	586 F(1)	1939

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S.H. 7 Sec. RIPLEY (pt)
BROWN COUNTY

QUANTITY TABLES

TREE REMOVALS

SHEET NO.	RT. or LT. or ℄	STATION	DESCRIPTION	TOTAL UNITS
3	LT.	44+70	36" Sycamore	
3	LT.	44+96	36" "	
3	LT.	45+18	36" Maple	
3	LT.	45+37	36" "	
3	LT.	45+71	20" "	
3	LT.	45+86	48" "	
3	RT.	46+83	36" "	
3	L.T.	46+86	18" "	
3	L.T.	47+18	20" "	
3	RT.	47+33	36" "	
3	L.T.	47+40	48" "	
3	RT.	47+66	10" "	
3	LT.	47+79	15" "	
Total Removals for Sheet No. 3				13 Units
4	LT.	48+12	20" Maple	
4	RT.	48+13	48" "	
4	LT.	48+66	24" Coffeenut	
4	LT.	49+22	48" Silver Poplar	
4	LT.	49+62	12" Maple	
4	RT.	50+41	24" "	
4	LT.	51+53	36" "	
4	LT.	51+78	36" "	
4	LT.	51+98	30" "	
4	LT.	52+13	24" Sycamore	
4	LT.	52+37	24" Locust	
4	LT.	52+56	36" Elm	
4	RT.	53+01	36" Sycamore	
4	RT.	53+42	36" Locust	
4	LT.	53+49	10" Elm	
4	RT.	53+71	30" Locust	
Total Removals for Sheet No. 4				16 Units
5	LT.	54+07	36" Sycamore	
5	RT.	54+24	36" Silver Poplar	
5	RT.	54+90	30" " "	
5	RT.	55+11	36" Maple	
5	RT.	55+41	36" "	
5	LT.	55+61	40" "	
5	LT.	55+85	20" "	
5	LT	56+11	36" Sycamore	
5	LT.	56+34	36" Maple	
5	LT	56+57	36" "	
5	LT.	57+22	10" Ash	
5	RT.	57+48	36" Maple	
5	LT.	57+71	15" "	
Total Removals for Sheet No. 5				13 Units
Total Tree Removals				42 Units

DRIVEWAYS

LINE SHEET Nº	ITEM Nº	STATION	RT LT ℄	7" Reinf. Conc. Pavt. Sq. Yds.	Agg. I-17 Cu. Yds.	12" PIPE LIN. FT.
5	1-A	55+15	RT	10	5	32
	2-A	57+31	RT	10	2	
3	1-A	43+75	RT	10	5	
	2-A	43+75	LT	10	5	
		44+40	RT	15.6		
		45+71	RT	15.6		
Total				71.2	17	32

STORM SEWERS

LINE SHEET Nº	ITEM Nº	STATION FROM	STATION TO	RT LT ℄	PIPE LIN. FT. UNDER PAVEMENT 12"	15"	18"	18"x18"x12" Tee UNIT	Standard Manholes No.1	No.2	No.3 CATCH BASINS UNITS	No 7 CATCH BASINS UNITS	No 1 SIDE DITCH INLETS UNITS	CONC. CLASS 'E' CU. YDS.	STONE PAVED GUTTER LIN. FT.	STD. No. 6 CATCH BASINS EACH	SEE SHEET Nº	6" Pipe relaid Lin. Ft	15" V.S. Pipe relaid Lin. Ft.
3	1-S	42+51.87	48+00	℄&L	948	76	536	1	1	1	8	3	1			2	27	20	16
	TOTAL SHEET 3				948	76	536	1	1	1	8	3	1			2		20	16
4	1-S	48+00	51+11.87	RT			242							1.65	73.3		27		
	2-S	51+91	54+00	℄&L		37	141		1		2			1.65	67.4		28		
	TOTAL SHEET 4					37	383		1		2			3.30	140.7				
5	1-S	54+00	57+97.25	℄&L		35	395				2						28		
	TOTAL SHEET 5					35	395				2								
TOTALS					948	148	1314	1	2	1	12	3	1	3.30	140.7	2		20	16

APPROACH STEPS AND WALKS

LINE SHEET Nº	ITEM Nº	STATION	RT LT ℄	REMOVE & DISPOSE WALK SQ. FT. CONC.	FLAGSTONE	CONC. SIDEWALK SQ. FT. 4"	7"	CONC. STEPS LIN. FT. 12" TREAD, 3'6" WIDE 7" RISE	6" RISE	SEE SHEET Nº
3	1-D	43+30.5	Rt	34.5		78.4				29
	TOTAL SH. 3			34.5		78.4				
5	1-D	55+49.25	Rt		20	8.75			35	29
	2-D	55+74.5	Rt	36		8.75			28	29
	7-D	57+03	Rt	28.0		28.0				5
	8-D	57+82.5	Rt			8.75			14	29
	TOTAL SH. 5			64	20	54.25			77	
TOTALS				98.5	20	132.65			77	

PIPE & CATCH BASIN REMOVAL

LINE SHEET Nº	ITEM Nº	STATION FROM	STATION TO	REMOVE & DISPOSE CATCH BASIN LUMP 18"CIRC.	3'x3' STONE	REMOVE & STORE LIN. FT. V. S. P. 8"	10"	12"	18"	CONC. PIPE 10"	SEE SHEET Nº	Pipe removed for re-use 12" V.S.P.	6"
3	1-R	42+50.5	46+85	2	3			310	614	234	25	24	25
	TOTAL SHEET 3			2	3			310	614	234		24	25
5	1-R	57+20	57+46				25			5			
	2-R	57+46	57+65					27		5			
	3-R	57+78	57+86			8				5			
	TOTAL SHEET 5					8	25	27					
TOTALS				2	3	8	25	337	614	234		24	25

Materials listed for removal and storage shall be stored on the right of way at the disposal of State's forces.

GUARD RAIL

Item No	Station From	Station To	Side	Guard Rail Lin. Ft
1-G	52+68	57+32	Lt.	464
2-G	52+85	54+93	Rt.	208
3-G	46+88	50+08	Rt.	320
4-G	46+88	49+92	Lt.	304
TOTAL				1296

SIDEWALK REMOVAL

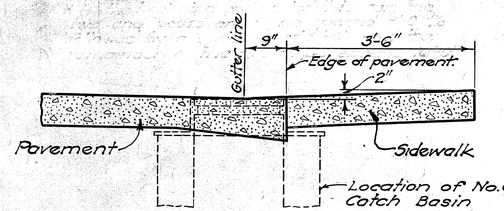
LINE SHEET Nº	ITEM Nº	STATION FROM	STATION TO	RT LT ℄	REMOVE & DISP. CONCRETE WALK. SQ. FT.	REMOVE & STORE FLAGSTONE WALK SQ. FT.
3	1-B	42+41	43+50	Rt	961	
	2-B	43+61	43+69.6	Rt	51	
	3-B	42+41	43+60	Lt	842	
	4-B	46+34	48+38	Lt	828	
	5-B	46+83	46+89	Rt		300
	TOTAL SHEET 3				2682	300
5	1-B	55+20	58+00	Lt		1120
	2-B	55+35	58+00	Rt	1139	
	TOTAL SHEET 5				1139	1120
TOTALS					3821	1420

SEEDING & PROTECTING SHOULDERS, SLOPES & DITCHES

LINE SHEET No	STATION FROM	STATION TO	Sq. Yds.
3	42+41	48+00	1575
4	48+00	54+00	4525
5	54+00	58+00	3200
Deduct for Bridge			2000
TOTALS			7300

TREE PROTECTION

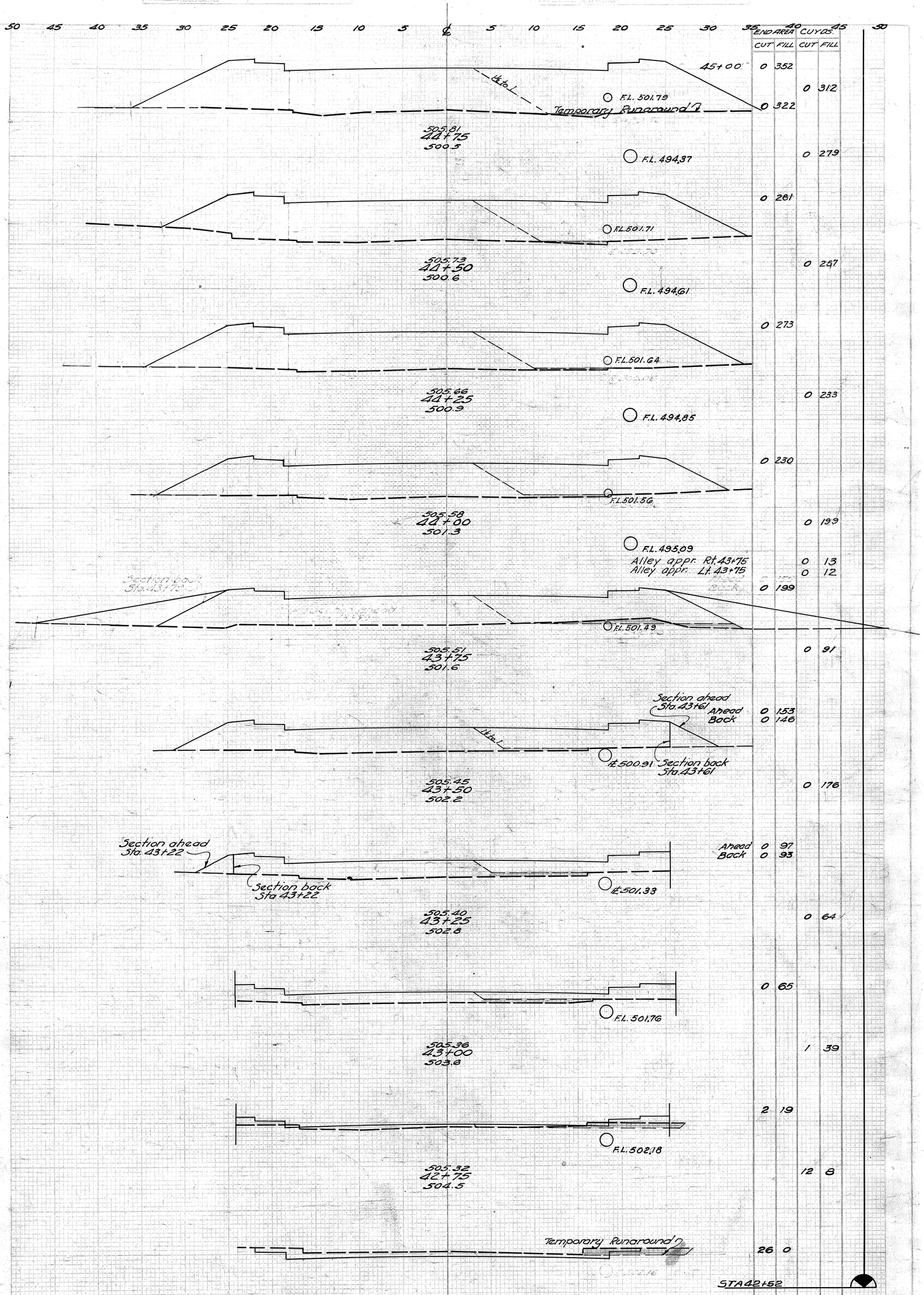
LINE SHEET Nº	STATION	RT LT ℄	RIP RAP 12" MIN SQ YDS	AGGREGATE FOR TREE ROOT AERATION CU. YDS.	SEE SHEET Nº
3	46+29	LT	11	40	8
TOTALS			11	40	



Note:- Concrete sidewalk shall be separated from the pavement by ½ bituminous pre-moulded expansion joint material. Payment for joint material included in price bid per Sq. Yd for item T-11

DETAILS OF PAVEMENT EDGE AND SIDEWALK.

Second St - Between Sta 43+80 and Sta 46+49, Right.
Cherry St - Between Sta 0+18.5W and Sta 1+20 W, Right.
Transition from Type 2-A mod. curb to the above section to be made in five feet.



METHOD OF MAINTAINING TRAFFIC

1. Construct shaded areas
2. Place temporary traffic bound aggregate and route traffic thereon.
3. Construct left side of embankment to 1½ to 1 slope line.
4. Construct left half of pavement and route traffic thereon.
5. Finish right side of embankment.
6. Construct right half of pavement.

NOTE: Chloride shall be applied to the temporary lane in sufficient quantity to lay dust.

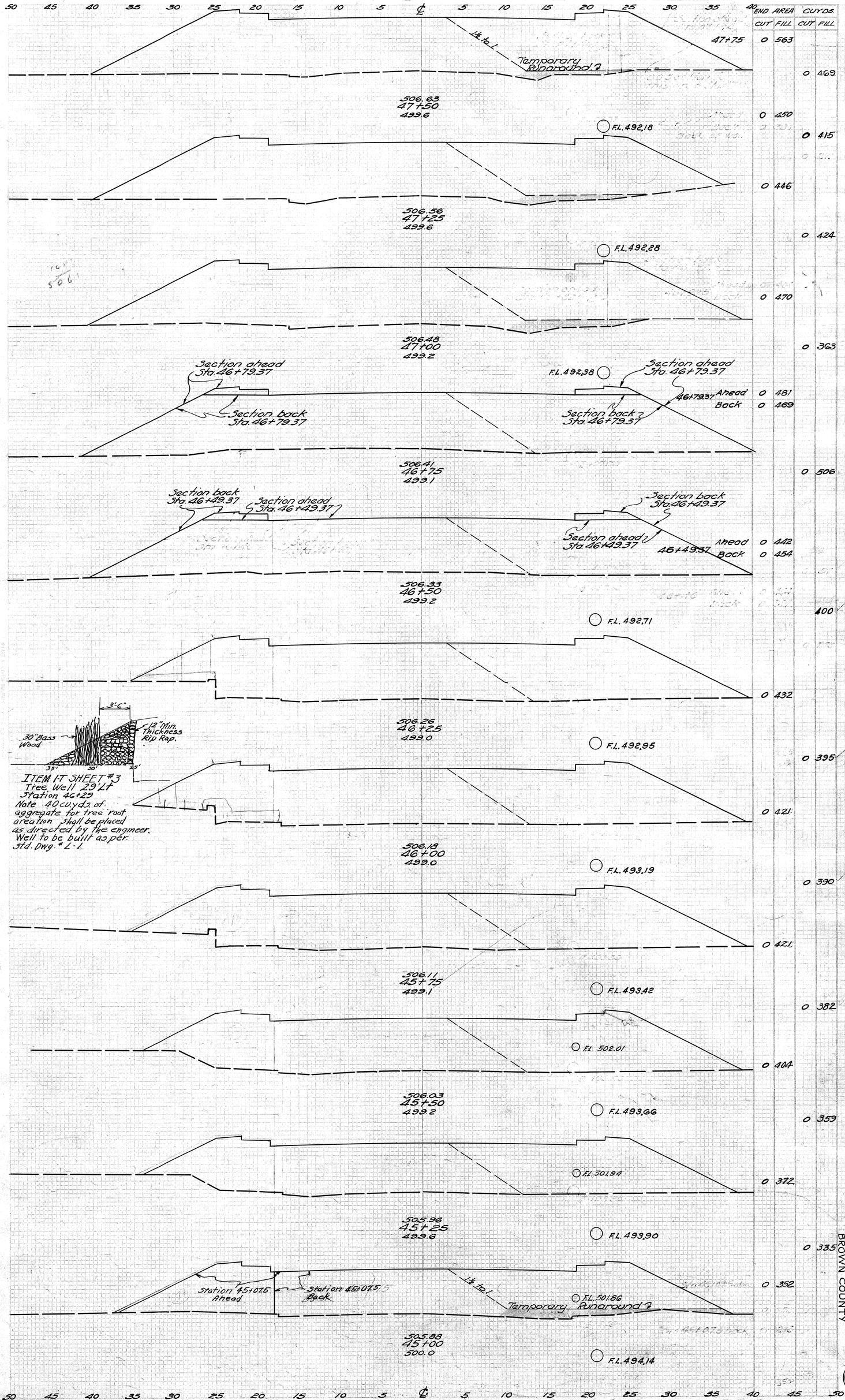
STA. 42+41 BEGIN

F.A.P. No 586-F(1)

S.H. 7 SEC. RIPLEY (PT.) BROWN COUNTY

FED AID DIST. NO.	STATE	FED AID PROJECT	FISCAL YEAR
10	OHIO	586-F(1)	1939

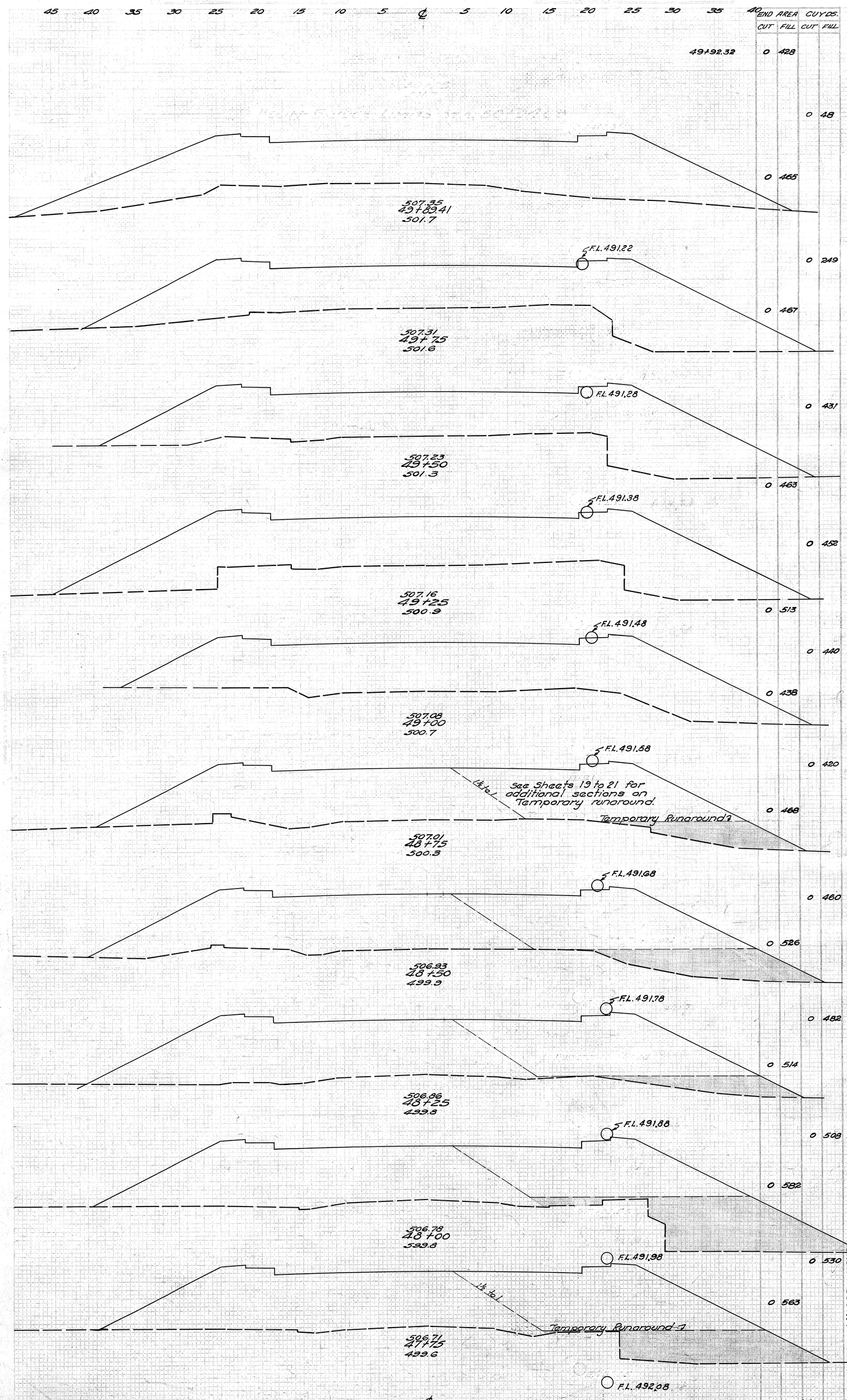
38 7



FED. AID DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	556-F(2)	1939

SH 7 SEC RIPLEY (PT.)
BROWN COUNTY

38



FED. AID DIST. NO. 10 | STATE OHIO | FED. AID PROJECT 386-710 | FISCAL YEAR 1939

S.H. 7 SEC. RIPLEY (PT.) BROWN COUNTY

38 9

FED. AID

10 OH10 586-F(1) 1939

10
38

S.H. 7 Sec. RIPLEY (PT.)
BROWN COUNTY

60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60

0.0 Section
Sta. 50+20.7

507.43
50+17.06
501.1

F.L. 491.11

507.42
50+13.79
501.0

F.L. 491.12

507.37
49+95.59
501.6

F.L. 491.20

507.36
49+92.32
501.6

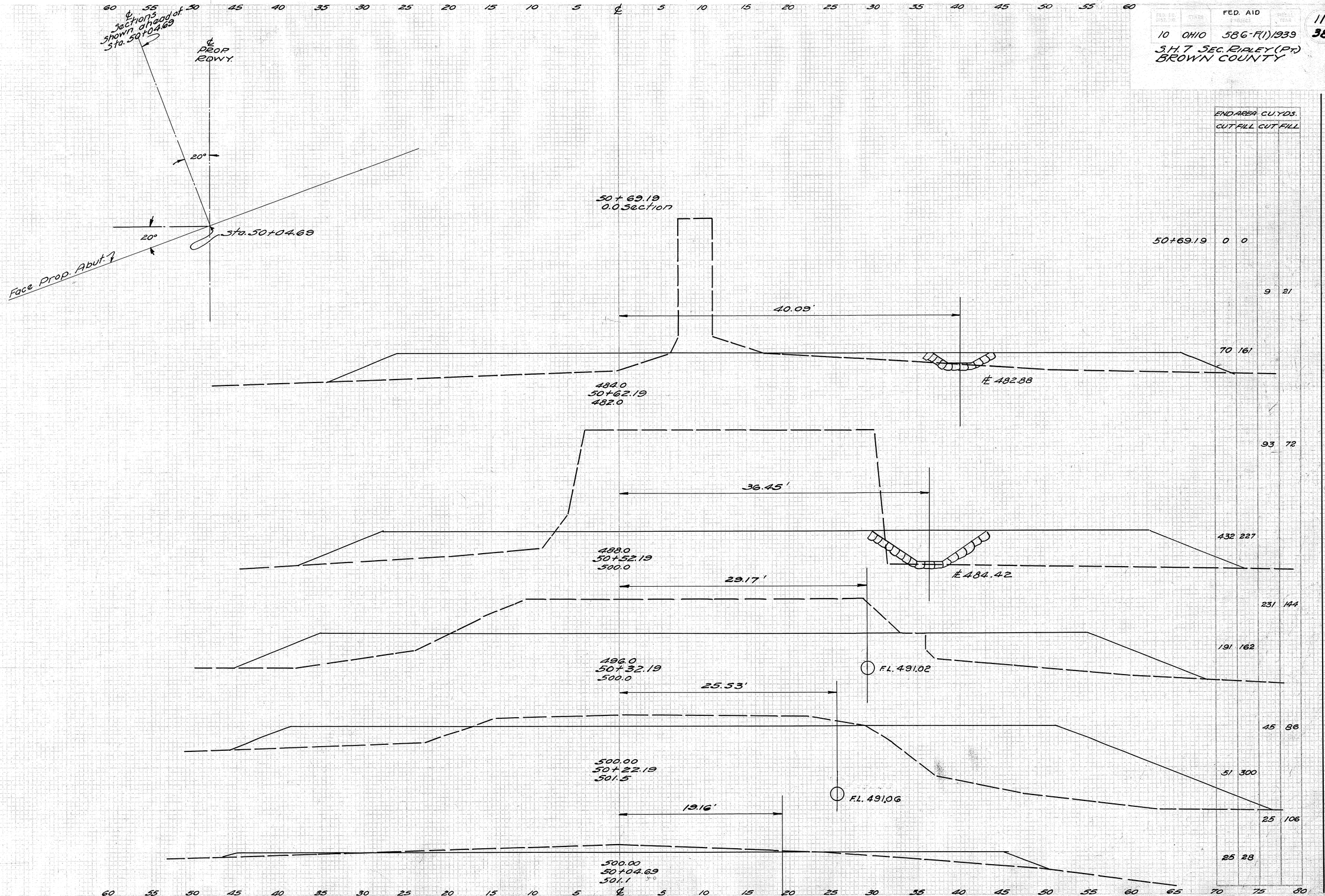
F.L. 491.21

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	0		
		0	2
0	30		
		0	7
0	87		
		0	154
0	371		
		0	48
0	428		

FED. AID

FED. RD. DIST.	STATE	PROJECT	SHEET NO.	SHEET TOTAL
10	OHIO	586-F(1),1939	11	38

S.H. 7 SEC. RIPLEY (PT.)
BROWN COUNTY



	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
50+69.19	0	0		
			9	21
			70	161
			93	72
			432	227
			231	144
			191	162
			45	86
			51	300
			25	106
			25	28

FED. AID
10 OHIO 5BG-F(1) 1939
S.H. 7 SEC. RIPLEY (PT.)
BROWN COUNTY

12
38

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60

19.16'

500.00
52+73.31
502.2

℄ 495.94

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		95	1018

12.98'

500.00
52+56.31
502.0

℄ 495.37

55 650

81 1047

3.87'

℄ 487.33

490.0
52+31.31
500.0

283 568

531 180

52+06.31
0.0 Section for fill.

630 83

Prop. ℄ Rdwy.

℄ 52+73.31

20°

Face Prop. Abut.

20°

603 0

7.04'

℄ 479.41

52+01.31 end Cut Section

℄ SECTIONS shown back of Sta. 52+73.31

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

FED. AID
10 OH10 586-F(1) 1939
S.H. 7 SEC. RIPLEY (Pt.)
BROWN COUNTY

13
38

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60

508.28
53+00
502.6
℄ 496.64

508.24
52+85.68
502.6
℄ 496.14

Section back

Section ahead

508.23
52+82.41
502.5
℄ 496.03

508.17
52+64.21
502.4
℄ 495.37

508.16
52+60.94
502.3
℄ 495.25

52+48
0.0 Section

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
53+10	30	1083		
			G	428
	0	1223		
			0	555
	0	871		
			0	97
Ahead	0	736		
Back	0	691		
			0	383
	0	457		
			0	53
	0	422		
			0	101
52+48	0	0		

FED. AID 14

10 OH10 586-F(1) 1939 38

S.H. 7 SEC. RIPLEY(PT)
BROWN COUNTY

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55

F.L. 498.42

508.43
53+50
503.45

F.L. 497.60

508.36
53+25
503.1

F.L. 497.00

508.31
53+10
502.95

Seal Sheet No 19
for Temporary Bridge run around sections

	END AREA CU. YDS. CUT	FILL	CU. YDS. CUT	FILL
53+75	35	1101		
			33	1011
	37	1082		
			40	1032
	49	1146		
			22	619
	30	1083		

CHERRY ST. APPROACH

	TOTAL CU. YDS.	20 CU. YDS.
EXCAVATION	1894	3656
EMBANKMENT	29,780	43.87
EMBANKMENT +20%	32,136	

ROADWAY

	CU. YDS.	CU. YDS.
EXCAVATION	1874	2324
EMBANKMENT	23,124	27749
EMBANKMENT +20%	27,749	

FED. AID

10 OH10 58G-F(1) 1939

15
38

S.H. 7 SEC. RIPLEY (PT)
BROWN COUNTY

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55

	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
54+50	23	1069		
				41 1068
	65	1171		
				51 1061
				45 1033
				37 988
			35	1101

1½ to 1

Temporary Runaround

F.L. 500.88

509.69
54+25
503.7

F.L. 500.06

See Sheet No. 19 for X-sections of Run Around Road.

509.58
54+00
503.65

1½ to 1

Temporary Runaround

F.L. 499.24

509.51
53+75
503.5

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65

FED. AID

10 OHIO 586-F(1) 1939

S.H. 7 SEC. RIPLEY (DT)
BROWN COUNTY

16

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
55+00	54	647		
			38	485
	65	832		
			10	281
	0	1003		
			11	960
	23	1069		

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55

1½ to 1

Temporary Runaround 3

F.L. 502.78

509.11
52+83
504.8

F.L. 502.52

509.09
52+75
504.3

1½ to 1

Temporary Runaround 2

F.L. 501.70

508.86
52+50
504.05

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65 70

FED. AID

10 OHIO 586-F(1) 1939

17

38

S.H. 7 SEC RIPLEY (PT)
BROWN COUNTY

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55

1½ to 1

Temporary Turnaround ①

F.L. 504.97

510.17
55+50
507.4

509.75
55+25
506.1

F.L. 504.15

509.39
55+00
505.3

1½ to 1

Temporary Turnaround ②

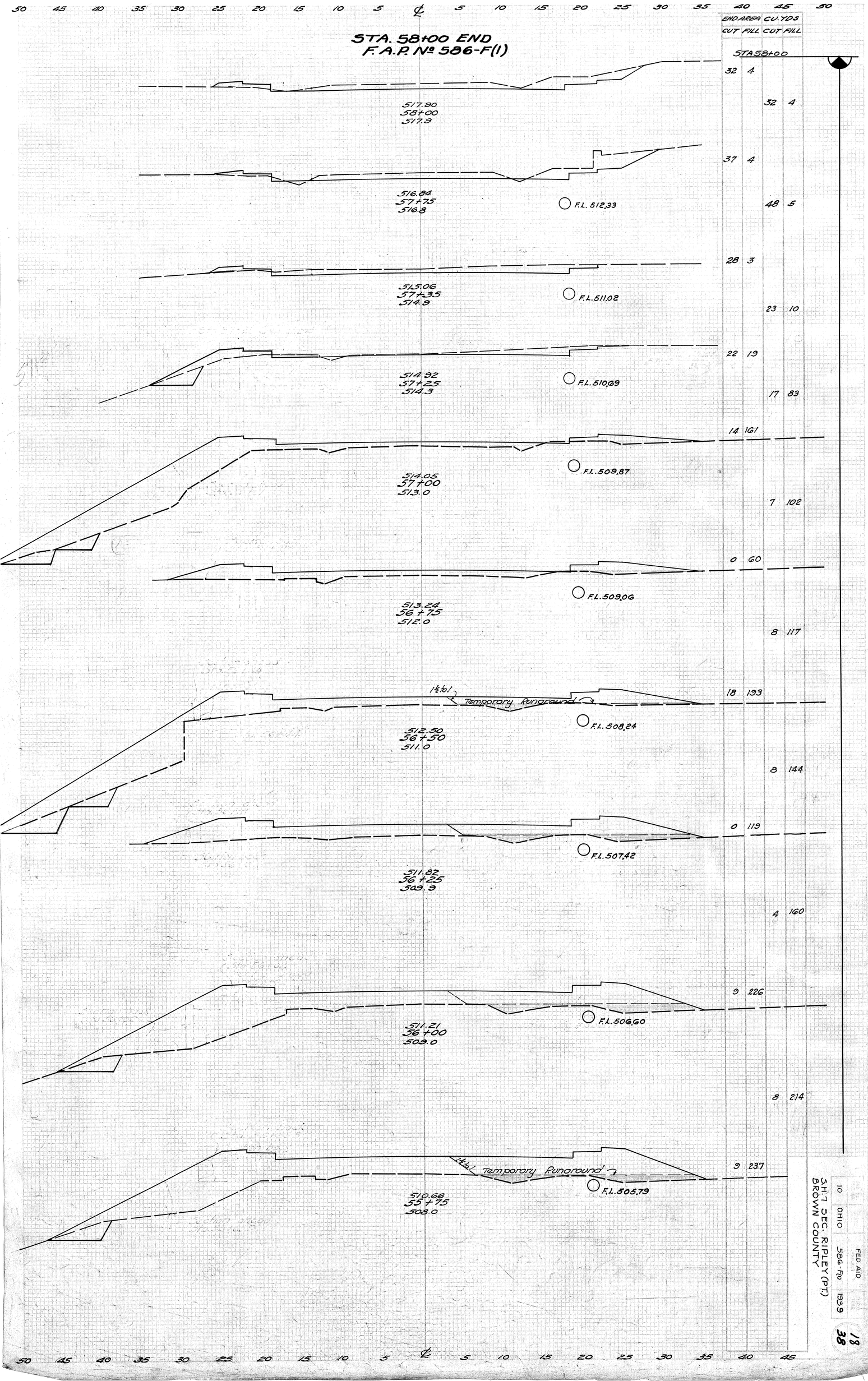
F.L. 503.53

Driveway Section
Sta 55+15

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65

	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
55+75	9	237		
			6	210
	3	216		
			8	306
			15	446
			32	506
Drive			0	69
			54	647

STA. 58+00 END
F.A.P. Nº 586-F(1)



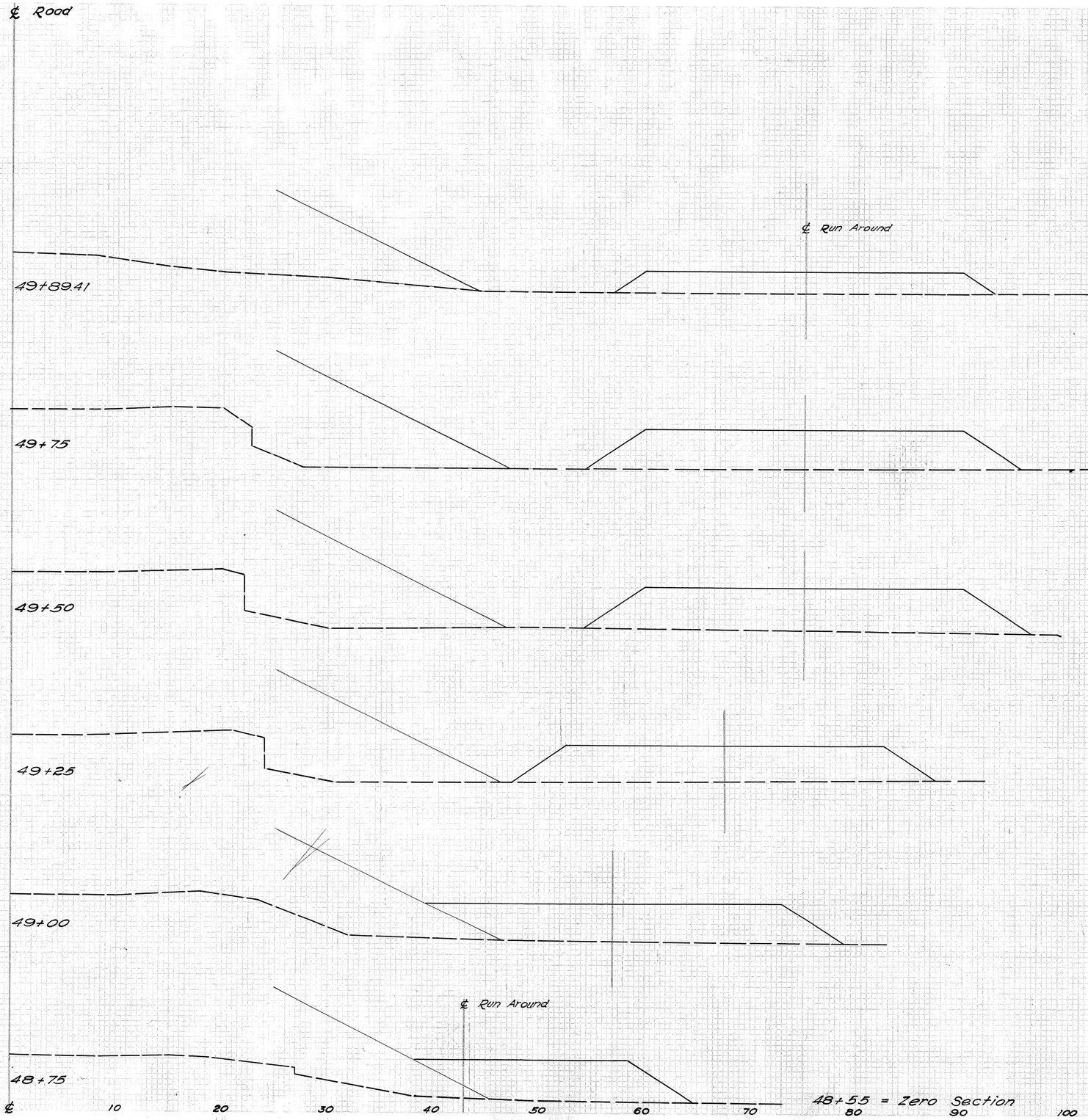
SH. 7 SEC. RIPLEY (PT)
BROWN COUNTY

FED. AID			
10	OHIO	586-F(1)	1939

18
38

FED. RD. DIST. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
10	OHIO	586-F(1)	1939	19 38

S.H. 7 SEC. RIPLEY (PT.)
BROWN COUNTY



	FILL END AREA	FILL CU. YDS.
50+00	47	
		22
	65	
		54
	136	
		131
	198	
		123
	118	
		112
	124	
		92
	76	
		28
48+55	0	

FED. AID				
DISTRICT	STATE	PROJECT		FISCAL YEAR
10	OHIO	58G-F(1)		1939

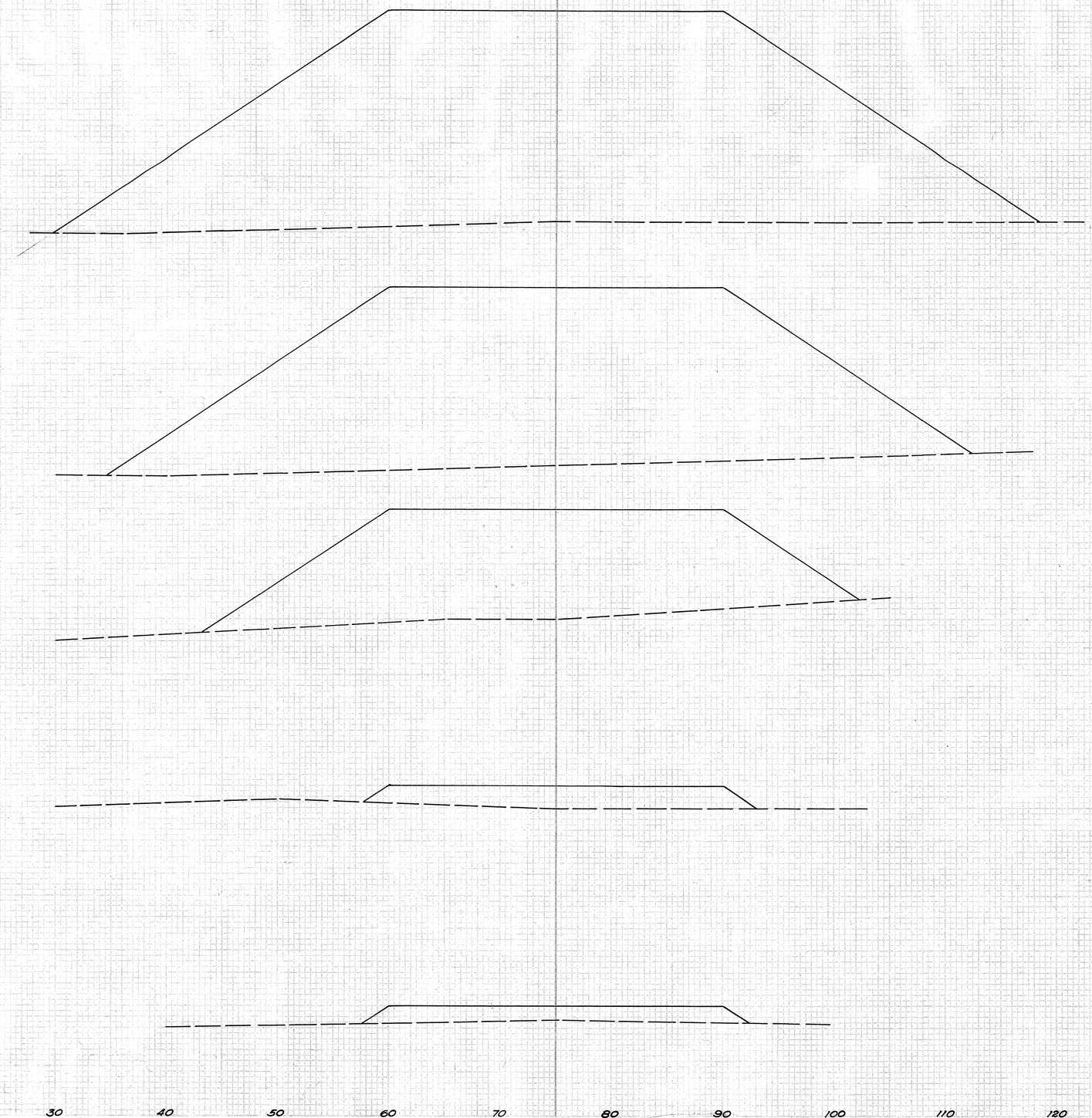
20
38

S.H. 7 BEG. RIPLEY (PT.)
BROWN COUNTY

℄ Road

℄ Run Around

51+21 = Zero Section

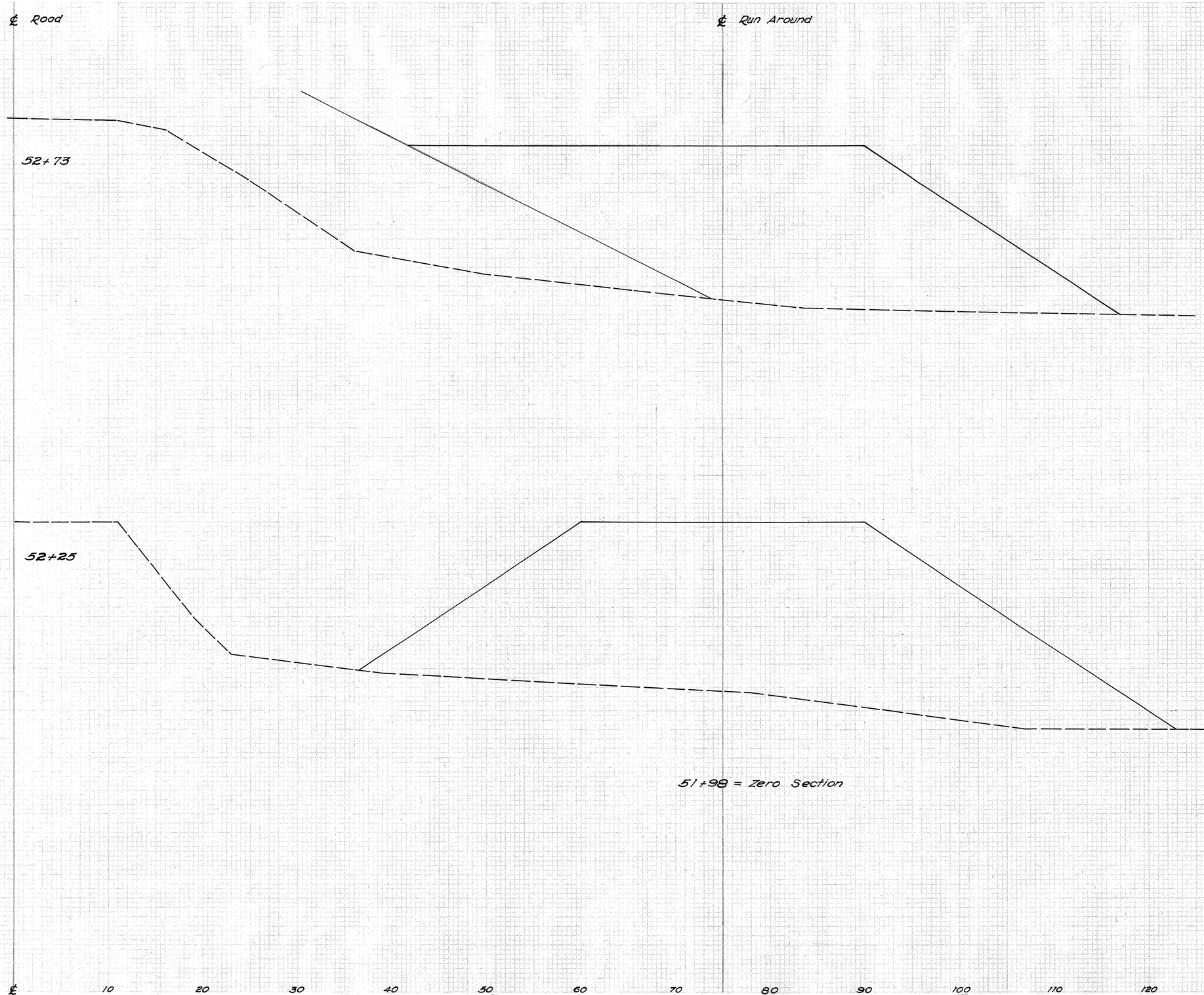


	FILL	
	END AREA	CU. YDS.
51+21	0	
		639
	1151	
		603
	883	
		613
	440	
		232
	62	
		50
	47	

FED. AID

10	OHIO	586-F(1)	1939	21 / 38

S.H 7 SEC. RIPLEY (PT.)
BROWN COUNTY

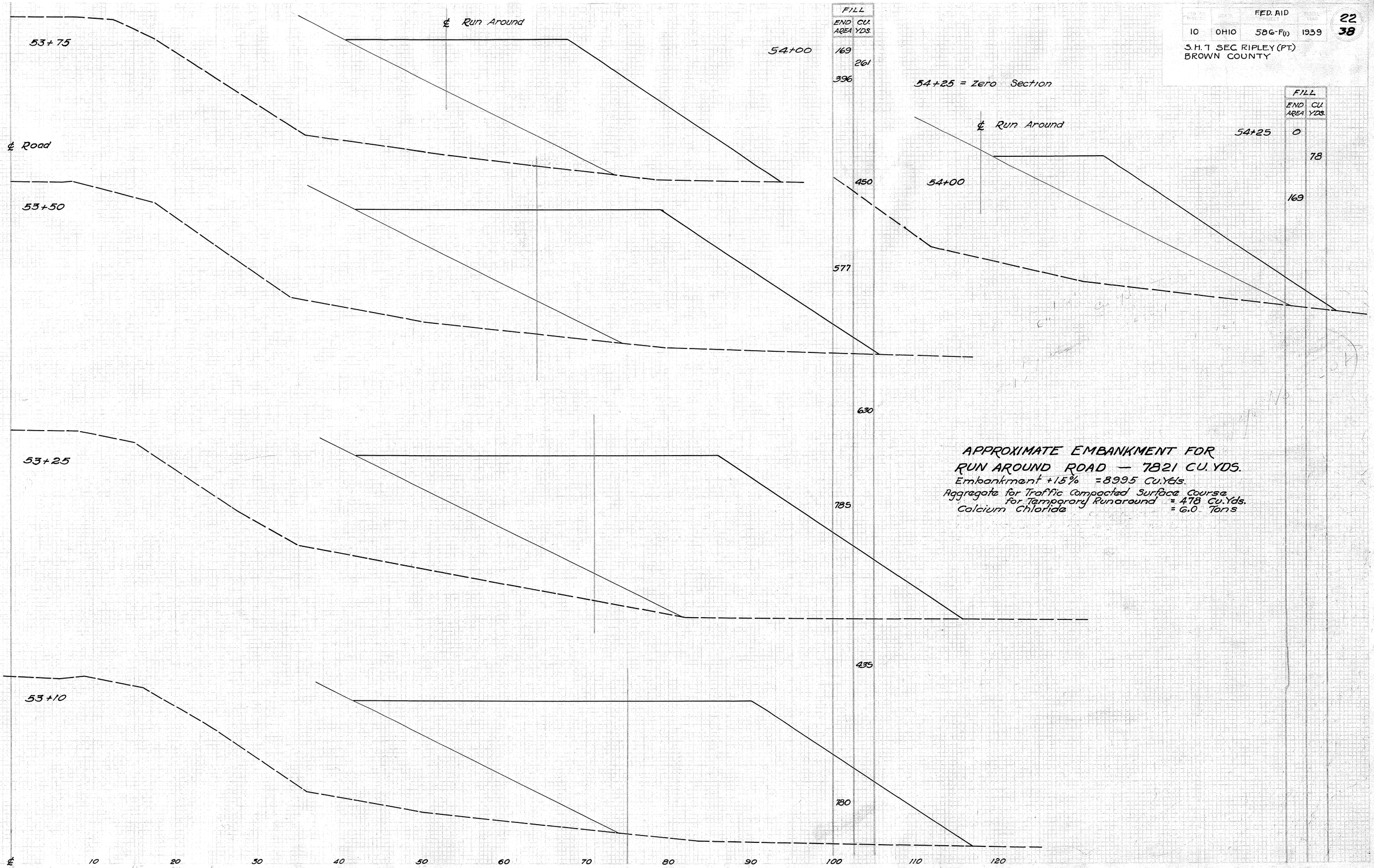


	FILL END AREA	FILL CU. YDS.
53+10	780	
		1065
	774	
		1658
	1091	
		545
51+98	0	

FED. AID

10	OH10	586-F(1)	1939	22 38

S.H. 7 SEC. RIPLEY (PT.)
BROWN COUNTY



	FILL END AREA	FILL CU. YDS.
54+00	169	
		261
	396	
	450	
	577	
	630	
	785	
	435	
	780	

	FILL END AREA	FILL CU. YDS.
54+25	0	
		78
	169	

APPROXIMATE EMBANKMENT FOR RUN AROUND ROAD — 7821 CU. YDS.

Embankment +15% = 8995 Cu.Yds.
Aggregate for Traffic Compacted Surface Course for Temporary Runaround = 478 Cu.Yds.
Calcium Chloride = 6.0 Tons

STREET APPROACH CALCULATIONS

Approach Rt ℄ Sta 46+64.37
Begin Street Approach Sta. 0+18.5
End Street Approach Sta. 2+25
Gross length of approach 206.5 lin.ft.
No deductions or additions
Net length of approach 206.5 lin.ft.

Approach Lt. ℄ Sta. 46+64.37
Begin Street Approach Sta. 0+18.5
End Street Approach Sta. 2+50
Gross length of approach 231.5 lin.ft.
No deductions or additions
Net length of approach 231.5 lin.ft.

PAVT. CALCULATIONS

7" Reinf Conc. Pavt. Rt. ℄ Sta. 46+64.37
Net length of approach 206.5 lin.ft.
No deductions or additions
Width of pavt. = 31ft.
$\frac{31 \times 206.5}{9} = \frac{6401.5}{9} = 711.3$ Sq. Yds.

7" Reinf. Conc. Pavt. Lt. ℄ Sta. 46+64.37
Net length of approach 231.5 lin.ft.
No deduction or additions
Width of pavt. = 31 ft.
$\frac{31 \times 231.5}{9} = \frac{7176.5}{9} = 797.39$ Sq. Yds.
Pavt. Area Rt. ℄ Sta. 46+64.37 = 711.30 Sq. Yds.
Pavt. Area Lt. ℄ Sta. 46+64.37 = 797.39 Sq. Yds.
Total Pavt. Area. 1508.69 Sq. Yds.

TYPE 2-A MODIFIED CONC. CURB.

Curb Rt. ℄ Sta. 46+64.37
Gross length of approach 206.5 lin.ft.
Deduction for limits of curb returns at intersections
Sta 0+18.5 to Sta 0+23 = 4.5 lin. ft.
Sta 2+19.5 to Sta 2+25 = 5.5 lin. ft.
Net length of approach curb 199.25 lin. Ft.
Type 2-A Modified Conc. Curb (both sides) 199.25 x 2 = 398.50 lin. ft.

Curb Lt. ℄ Sta. 46+64.37
Gross length of approach 231.5 lin.ft.
Deduction for limits of curb return of intersections
Sta 0+18.5 to Sta. 0+23 = 4.5 lin. ft.
Net length of approach curb 227 lin. ft.
Type 2-A Modified Conc Curb (both sides) 227 x 2 = 454 lin ft.
Type 2-A Mod. Curb Rt ℄ Sta 46+64.37 300.5 lin ft.
Type 2-A Mod. Curb Lt ℄ Sta. 46+64.37 454 lin. ft.
Extra Length for Return Sta 2+19.5 to Sta. 2+25 Rt. Approach 7.46 lin. ft.
TOTAL LENGTH 761.96 LIN. FT.

4" THICK PLAIN CONC SIDEWALK

Sidewalk Rt ℄ Sta 46+64.37 Both Sides
Begin Sidewalk Rt. Appr. ℄ Sta. 0+22
End Sidewalk Rt Appr. ℄ Sta. 2+25
Deduction on Rt. Appr. ℄ Sta. 2+19.5 to 2+25 5½ lin ft.
Net Length Sidewalk 200.25 x 2 = 400.5
Width of sidewalk 3'-6"
3.5 x 400.5 = 1401.75 Sq. Ft.

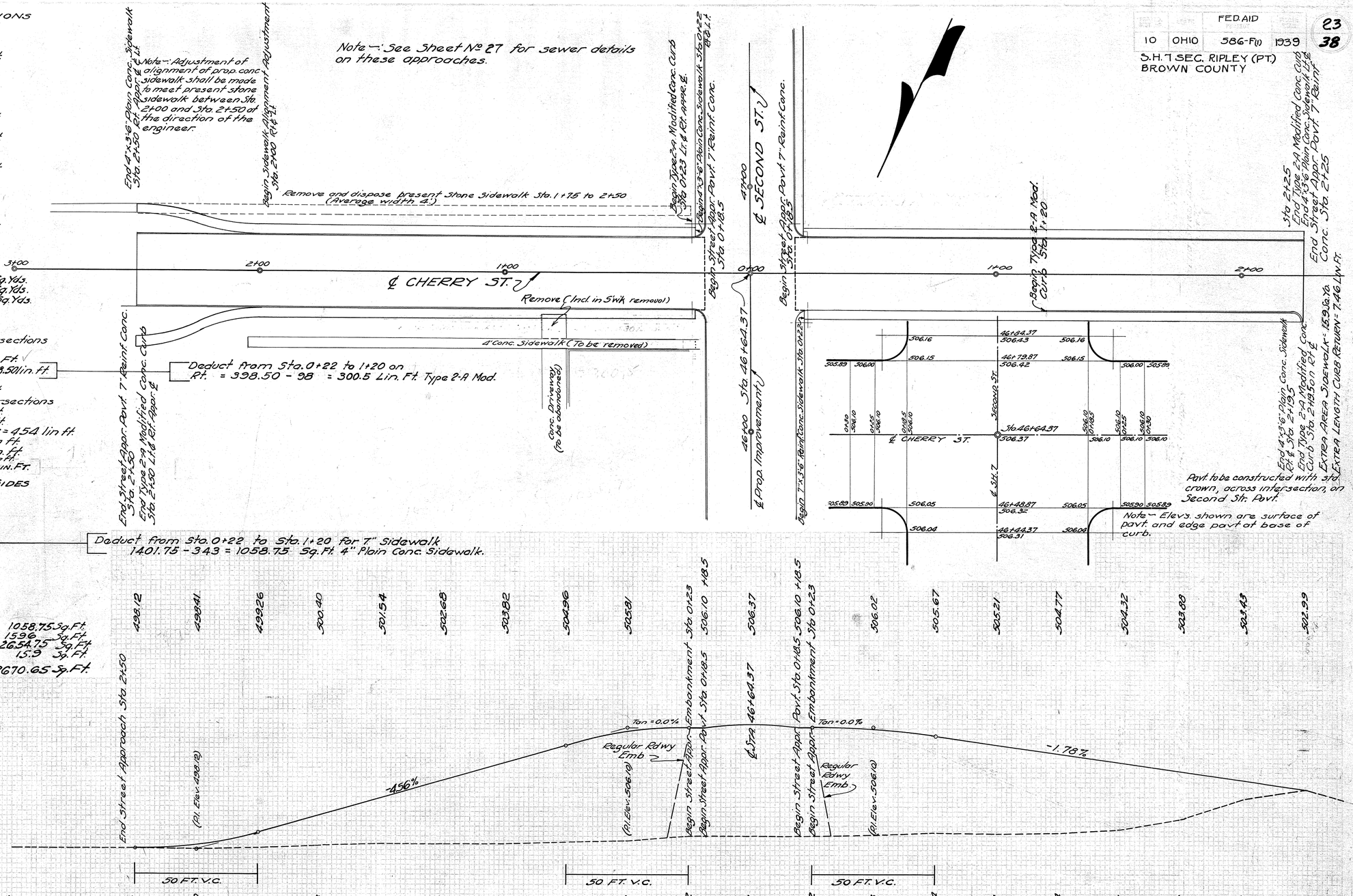
Sidewalk Lt. ℄ Sta 46+64.37
Begin Sidewalk Lt. Appr. ℄ Sta. 0+22
End Sidewalk Lt. Appr. ℄ Sta. 2+50
No deductions or additions.
Net Length Sidewalk 2 x 228 Lin. Ft.
Width of Sidewalk 3'-6"
3.5 x 228 x 2 = 1596 Sq. Ft.
4"x3'-6" Plain Conc. Sidewalk Rt ℄ Sta. 46+64.37 1058.75 Sq. Ft.
4"x3'-6" Plain Conc. Sidewalk Lt ℄ Sta 46+64.37 1596 Sq. Ft.
TOTAL AREA 4"x3'-6" PLAIN CONC SIDEWALK 2654.75 Sq. Ft.
Extra Area 4"x3'-6" Plain Conc Sidewalk Rt ℄ Sta 2+25 15.9 Sq. Ft.
TOTAL AREA 2670.65 Sq. Ft.

7" REINF. CONC. SIDEWALK Rt.

Begin 0+22 on Rt.
End 1+20 on Rt.
Net length = 98 x 3'-6" = 343 Sq. Ft.

Deduct from Sta. 0+22 to 1+20 on Rt. = 398.50 - 98 = 300.5 Lin. Ft. Type 2-A Mod.

Deduct from Sta. 0+22 to Sta. 1+20 for 7" Sidewalk
1401.75 - 343 = 1058.75 Sq. Ft. 4" Plain Conc. Sidewalk.



FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OH10	586-F(1)	1939

23
38

S.H. 7 SEC. RIPLEY (PT.)
BROWN COUNTY

STREET APPROACH CALCULATIONS

Approach Rt ℄ Sta 46+64.37
Begin Street Approach Sta. 0+18.5
End Street Approach Sta. 2+25
Gross length of approach 206.5 lin. ft.
No deductions or additions
Net length of approach 206.5 lin. ft.

Approach Lt. ℄ Sta. 46+64.37
Begin Street Approach Sta. 0+18.5
End Street Approach Sta. 2+50
Gross length of approach 231.5 lin. ft.
No deductions or additions
Net length of approach 231.5 lin. ft.

PAVT. CALCULATIONS

7" Reinf. Conc. Pavt. Rt. ℄ Sta. 46+64.37
Net length of approach 206.5 lin. ft.
No deductions or additions
Width of pavt. = 31 ft.
$\frac{31 \times 206.5}{9} = \frac{6401.5}{9} =$ 711.3 Sq. Yds.

7" Reinf. Conc. Pavt. Lt. ℄ Sta. 46+64.37
Net length of approach 231.5 lin. ft.
No deduction or additions
Width of pavt = 31 ft.
$\frac{31 \times 231.5}{9} = \frac{7176.5}{9} =$ 797.39 Sq. Yds.

Pavt. Area Rt. ℄ Sta. 46+64.37 = 711.30 Sq. Yds.
Pavt. Area Lt. ℄ Sta 46+64.37 = 797.39 Sq. Yds.
Total Pavt. Area 1508.69 Sq. Yds.

TYPE 2-A MODIFIED CONC. CURB.

Curb Rt ℄ Sta. 46+64.37
Gross length of approach 206.5 lin. ft.
Deduction for Limits of curb returns at intersections
Sta 0+18.5 to Sta 0+23 both (sides) 4.5 lin. ft.
Sta. 2+19.5 to Sta. 2+25 Rt ℄ 3.5 lin. ft.
Net length of approach curb 199.25 lin. ft.
Type 2-A Modified Conc. Curb (both sides) 199.25 × 2 = 398.50 lin. ft.

Curb Lt. ℄ Sta. 46+62.37
Gross length of approach 231.5 lin. ft.
Deduction for Limits of curb return of intersections
Sta 0+18.5 to Sta. 0+23 = 4.5 lin. ft.
Net length of approach curb 227 lin. ft.
Type 2-A Modified Conc Curb (both sides) 227 × 2 = 454 lin. ft.
Type 2-A Mod. Curb Rt ℄ Sta 46+64.37 300.5 lin. ft.
Type 2-A Mod. Curb Lt ℄ Sta 46+64.37 454 lin. ft.
Extra Length for Return Sta 2+19.5 to Sta. 2+25 Rt. Approach 7.46 lin. ft.
TOTAL LENGTH 761.96 LIN. FT.

4" THICK PLAIN CONC SIDEWALK

Sidewalk Rt ℄ Sta 46+64.37 Both Sides
Begin Sidewalk Rt Appr. ℄ Sta. 0+22
End Sidewalk Rt Appr. ℄ Sta. 2+25
Deduction on Rt. Appr. ℄ Sta 2+19.5 to 2+25 5½ lin. ft.
Net Length Sidewalk 200.25' × 2 = 400.5
Width of Sidewalk 3'-6"
3.5 × 400.5 = 1401.75 Sq. Ft.

Deduct from Sta. 0+22 to 1+20 on Rt. = 98 - 98 = 300.5 Lin. Ft. Type 2-A Mod.

Deduct from Sta. 0+22 to 1+20 for 7" Sidewalk
1401.75 - 343 = 1058.75 Sq. Ft. 4" Plain Conc Sidewalk.

Sidewalk Lt. ℄ Sta 46+64.37
Begin Sidewalk Lt. Appr. ℄ Sta. 0+22
End Sidewalk Lt. Appr. ℄ Sta. 2+50
No deductions or additions.
Net Length Sidewalk 2 × 228 Lin. Ft.
Width of Sidewalk 3'-6"
3.5 × 228 × 2 = 1596 Sq. Ft.

4"×3'-6" Plain Conc. Sidewalk Rt ℄ Sta. 46+64.37 1058.75 Sq. Ft.
4"×3'-6" Plain Conc. Sidewalk Lt ℄ Sta 46+64.37 1596 Sq. Ft.
TOTAL AREA 4"×3'-6" PLAIN CONC SIDEWALK 2654.75 Sq. Ft.
Extra Area 4"×3'-6" Plain Conc Sidewalk Rt ℄ Sta 2+25 15.9 Sq. Ft.
TOTAL AREA 2670.65 Sq. Ft.

7" REINF CONC SIDEWALK Rt
Begin 0+22 on Rt
End 1+20 on Rt
Net length = 98 × 3.5' = 343 Sq. Ft.

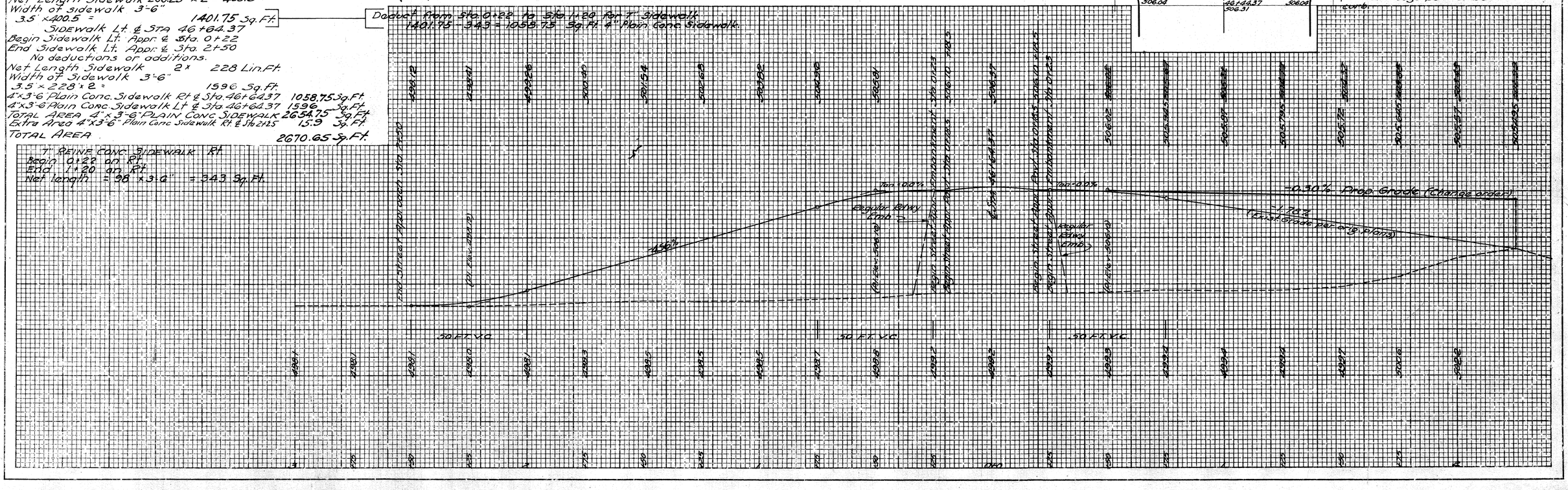
Note — See Sheet No 27 for sewer details on these approaches.

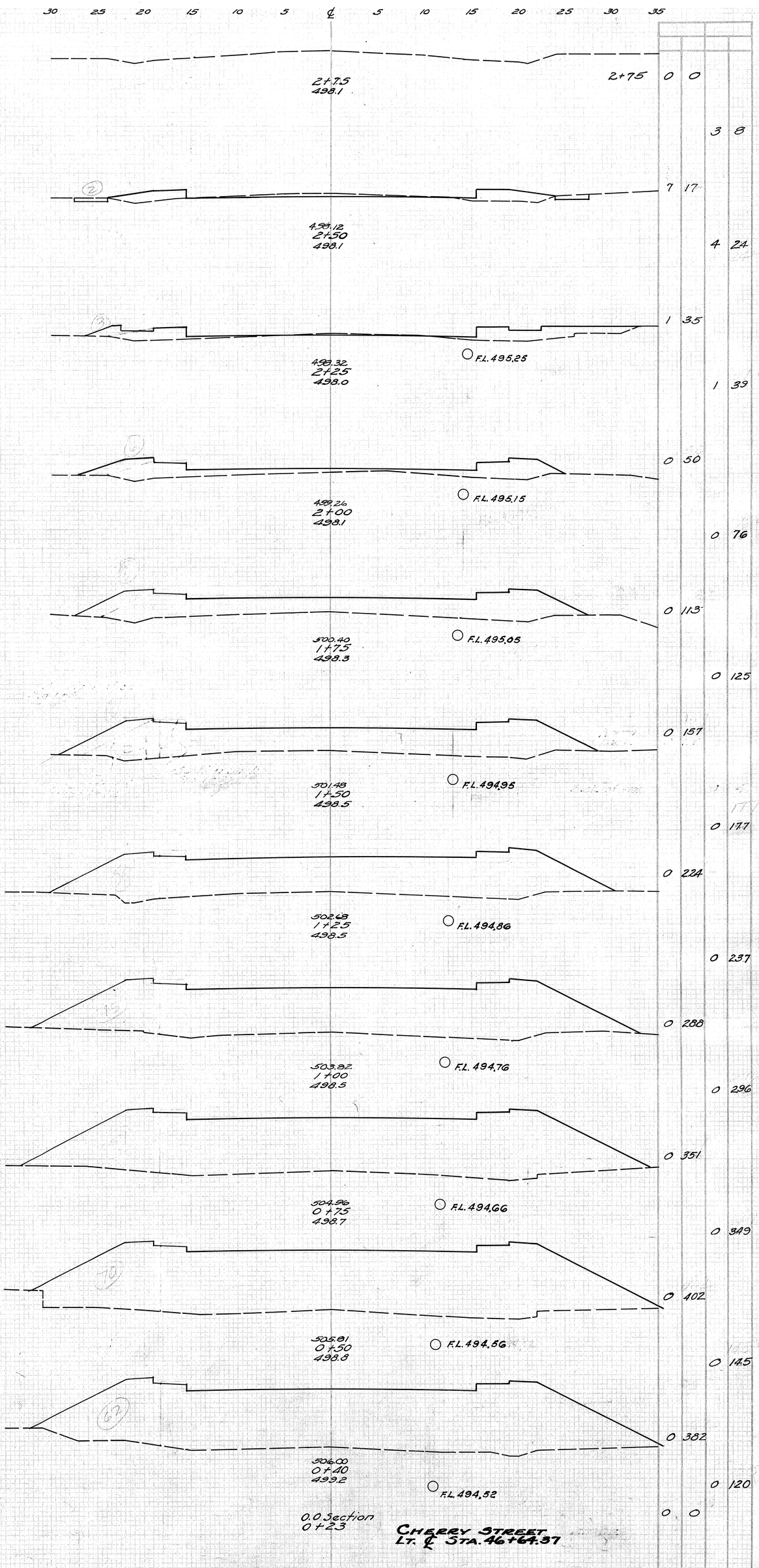
Note — Adjustment of alignment of prop. conc. sidewalk shall be made to meet present stone sidewalk between Sta. 2+00 and Sta. 2+50 at the direction of the engineer.

End 4"×3'-6" Plain Conc. Sidewalk Sta. 2+50 Rt. Appr. ℄ 2.5
End Type 2-A Modified Conc. Curb Sta. 2+50 Lt. ℄ Rt. Appr. ℄
Begin Sidewalk Alignment Adjustment Sta. 2+00 Rt. ℄ 2.5
Remove and dispose present Stone Sidewalk Sta. 1+75 to 2+50 (Average width 4')
Begin Type 2-A Modified Conc. Curb Sta. 0+23 Lt. ℄ Rt. Appr. ℄
Begin 4"×3'-6" Plain Conc. Sidewalk Sta. 0+22
Begin Street Appr. Pavt. 7" Reinf. Conc. Sta. 0+18.5
End Street Appr. Pavt. 7" Reinf. Conc. Sta. 0+23
℄ CHERRY ST.
Remove (Incl. in S'wk removal)
4' Conc. Sidewalk (To be removed)
Conc. Driveway (To be abandoned)
Deduct from Sta. 0+22 to 1+20 on Rt. = 998.50 - 98 = 300.5 Lin. Ft. Type 2-A Mod.
℄ SECOND ST.
℄ Prop. Improvement
Sta 46+00
Sta 46+64.37
Begin Type 2-A Mod. Curb Sta. 1+20
Begin 7"×3'-6" Reinf. Conc. Sidewalk Sta. 0+22
Sta 2+25
End 4"×3'-6" Plain Conc. Sidewalk Lt. ℄
End Type 2-A Modified Conc. Curb Sta. 2+19.5 on ℄
Extra Area Sidewalk = 15.9 Sq. Ft.
Extra Length Curb Return = 7.46 Lin. Ft.

Pavt. to be constructed with std. crown, across intersection, on Second St. Pavt.

Note — Elevs. shown are surface of pavt. and edge pavt at base of curb.



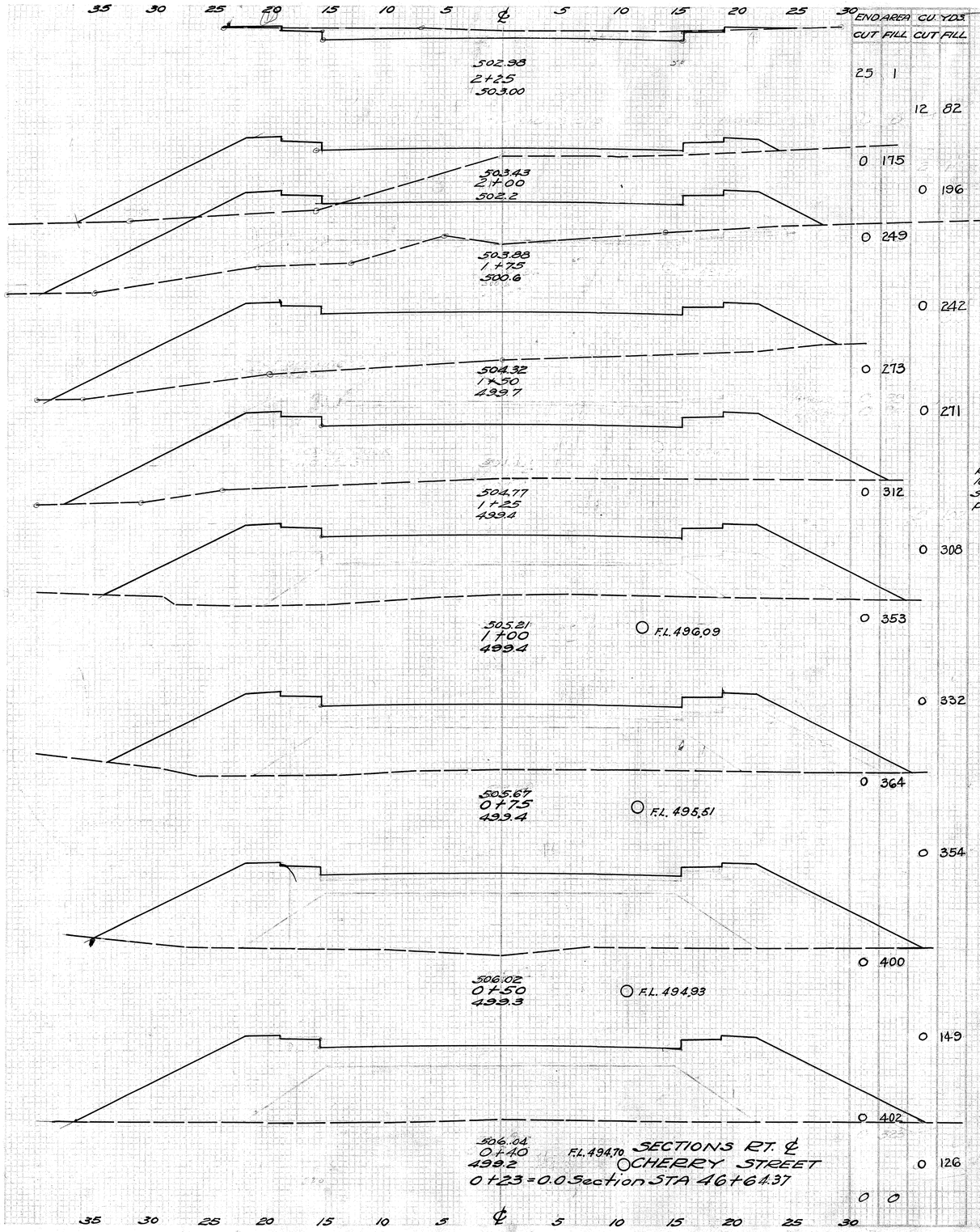


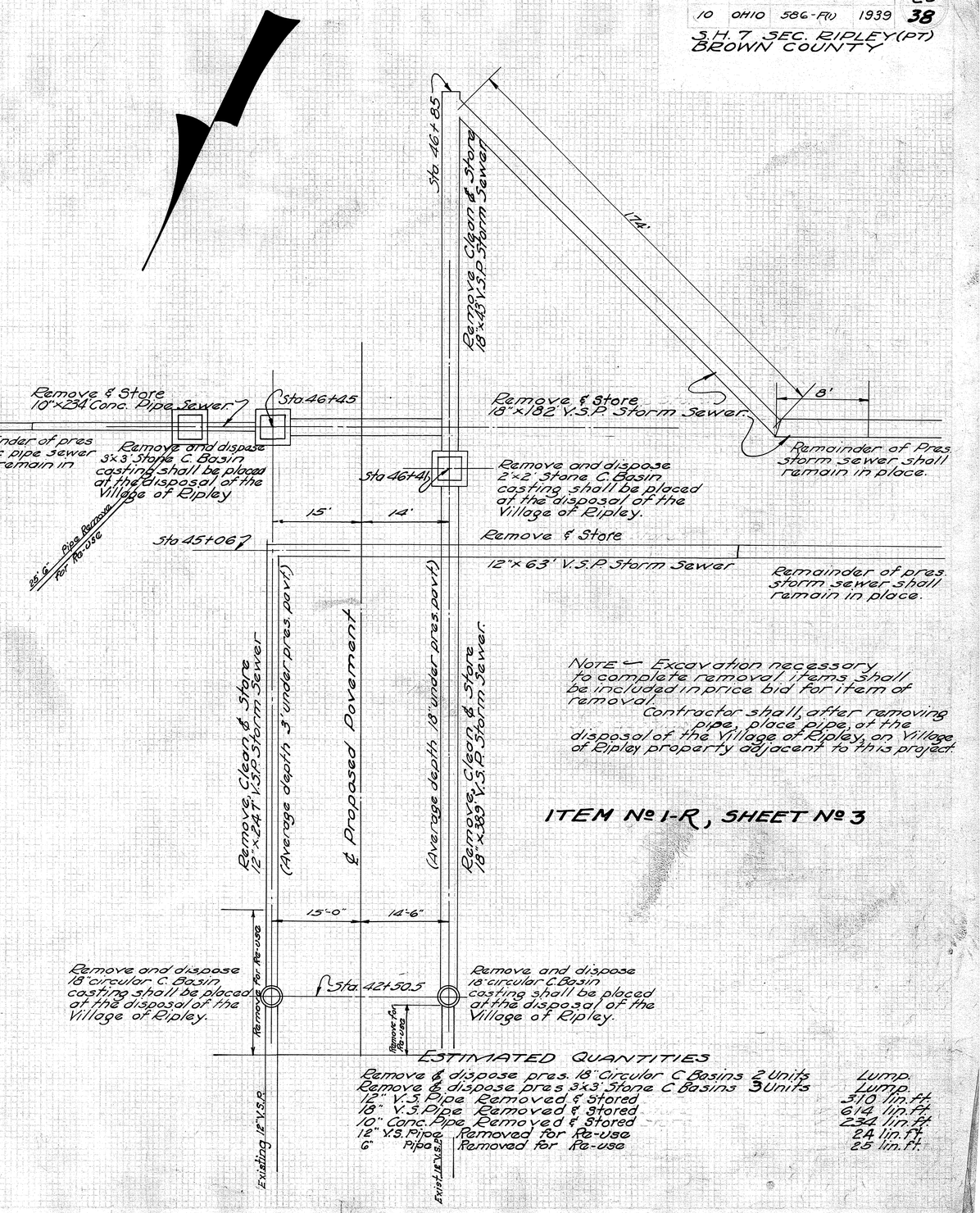
FED. AID
10 OHIO 586-F(1) 1939
S.H.T. SEC. RIPLEY (PT.)
BROWN COUNTY

24
38

FED. AID					25
10	OHIO	586-F(1)	1939		38

S.H. 7 SEC. RIPLEY (PT)
BROWN COUNTY





NOTE — Excavation necessary to complete removal items shall be included in price bid for item of removal.

Contractor shall, after removing pipe, place pipe, at the disposal of the Village of Ripley, on Village of Ripley property adjacent to this project.

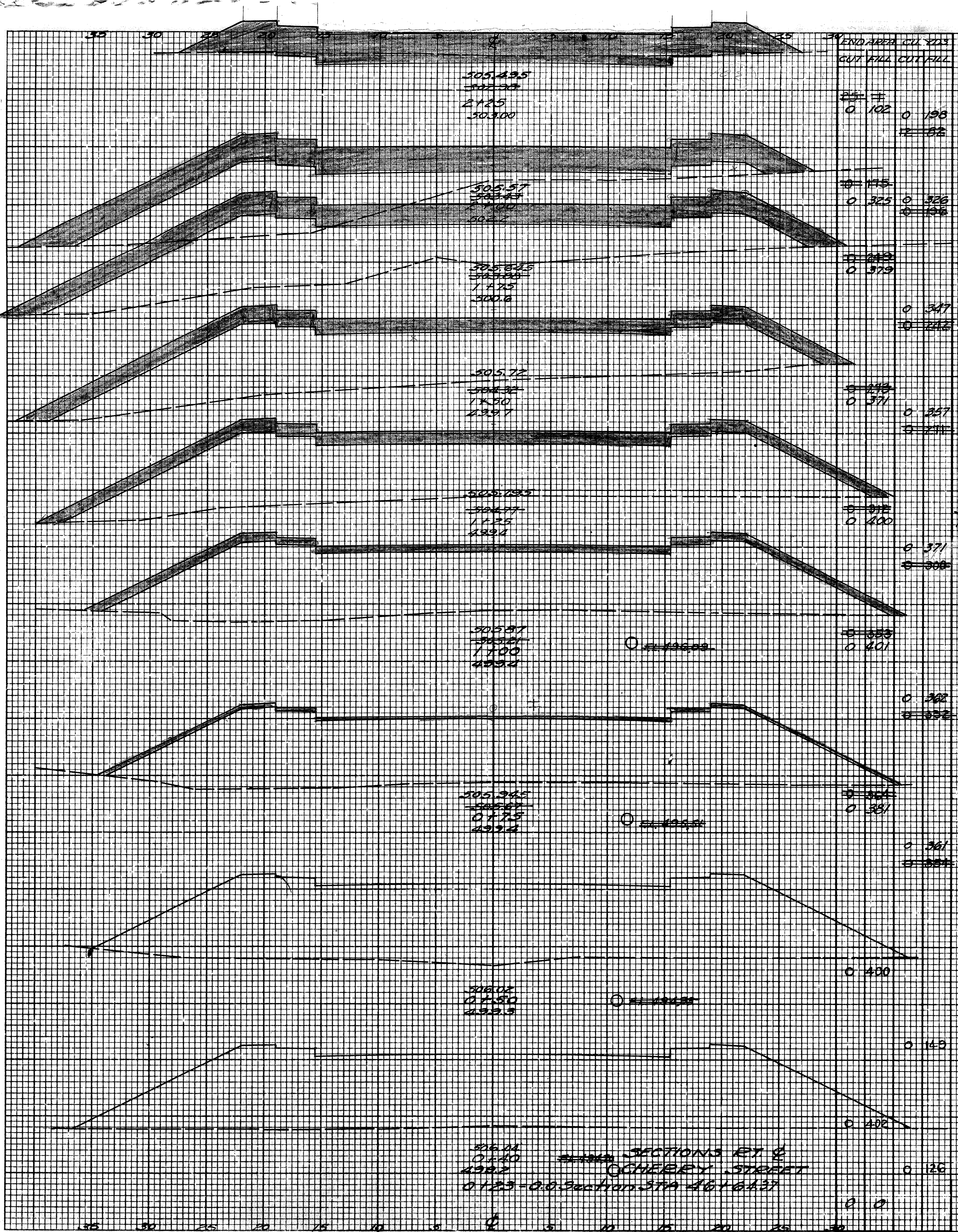
ITEM Nº 1-R, SHEET Nº 3

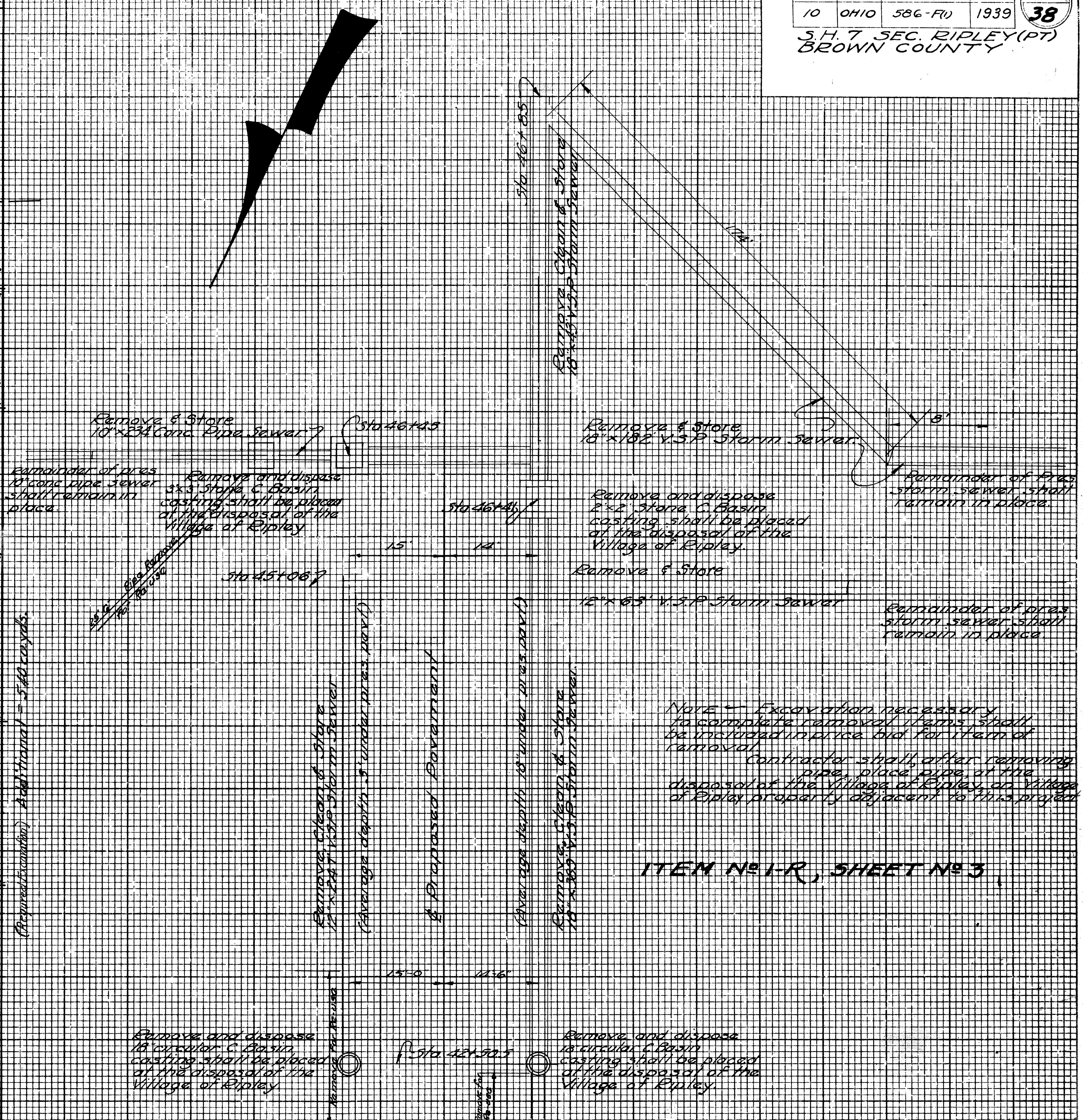
ESTIMATED QUANTITIES

Remove & dispose pres. 18" Circular C. Basins	2 Units
Remove & dispose pres. 3'x 3' Stone C. Basins	3 Units
12" V.S. Pipe Removed & Stored	Lump.
18" V.S. Pipe Removed & Stored	Lump.
10" Conc. Pipe Removed & Stored	310 lin. ft.
12" V.S. Pipe Removed for Re-use	614 lin. ft.
6" Pipe Removed for Re-use	234 lin. ft.
	24 lin. ft.
	25 lin. ft.

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	
10	OHIO	586-F(1)	1939	25 / 38

S.H. 7 SEC. RIPLEY (PT)
BROWN COUNTY





NOTE — Excavation necessary to complete removal items shall be included in price bid for item of removal.

Contractor shall, after removing pipe, place pipe at the disposal of the Village of Ripley, on Village of Ripley property adjacent to this project.

ITEM Nº 1-R, SHEET Nº 3

ESTIMATED QUANTITIES

Remove & dispose pres. 18" Circular C. Basins	2 Units	Lump
Remove & dispose pres. 3×3 Stone C. Basins	3 Units	Lump
12" V.S. Pipe Removed & Stored		310 lin. ft.
18" V.S. Pipe Removed & Stored		614 lin. ft.
10" Conc. Pipe Removed & Stored		234 lin. ft.
12" V.S. Pipe Removed for Re-use		24 lin. ft.
6" Pipe Removed for Re-use		25 lin. ft.

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	586-F(1)	193

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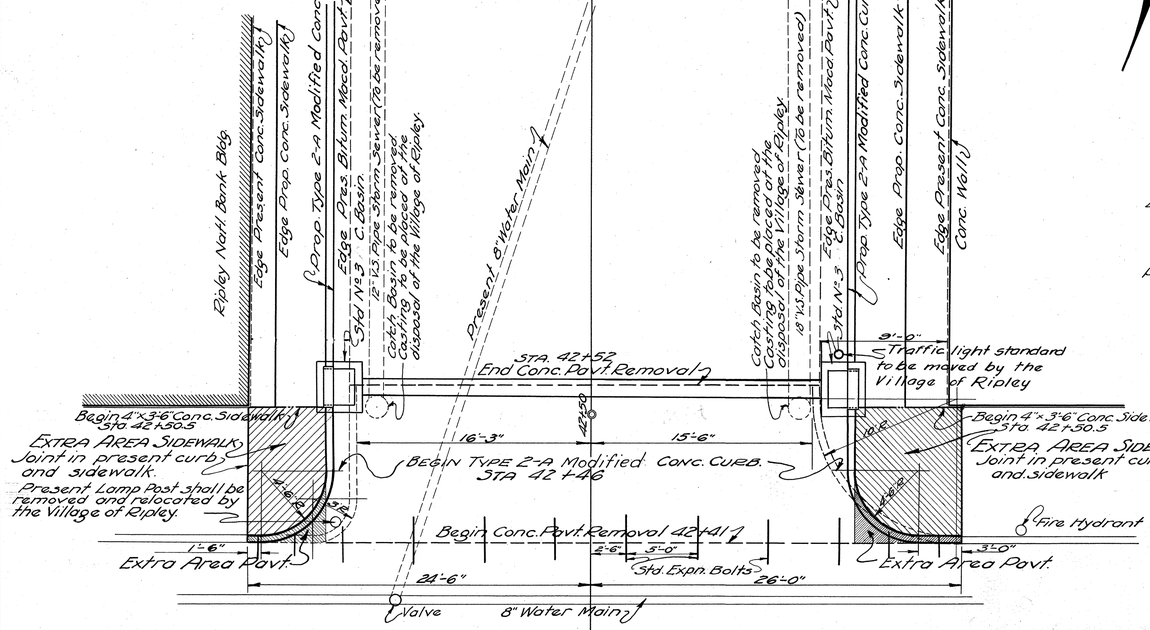
S.H. 7 SEC. RIPLEY (PT.)
BROWN COUNTY



NOTES

Proposed work shall be doweled to present pavt with Std. Expan. bolts as shown. (To be included in pavt. item.

Proposed extra pavt. area and curb shall be constructed integral with normal pavt. of Sta. 42+41.

Payment for removal and disposal of present 6"x6" Integral Conc. Curb shall be included for payment in item for removal and disposal of pres. 7" conc. pavt.

Removal of present sidewalk and curb shall be made at joints as shown on plan. Contractor shall exercise care in removing to these joints and shall not disturb adjacent present curb and sidewalk, any curb or sidewalk so disturbed shall be replaced at contractors expense, satisfactory to the engineer. Removal and disposal of pres. sidewalks shall be paid for in Item E-8. (See Sheet No 29)

Estimated Extra Pavt. Area is the area of pavt. as shown by crosshatched area.

Estimated Extra Sidewalk Area is the area of sidewalk as shown by crosshatched area.

Estimated Type 2-A Modified Conc. Curb is the Lin. Ft. of circular curb as shown by curb returns, together with necessary curb to meet pres. curb at Sta. 42+41

All sewer removals included in item for pipe removals See Sheet No 25 for details.

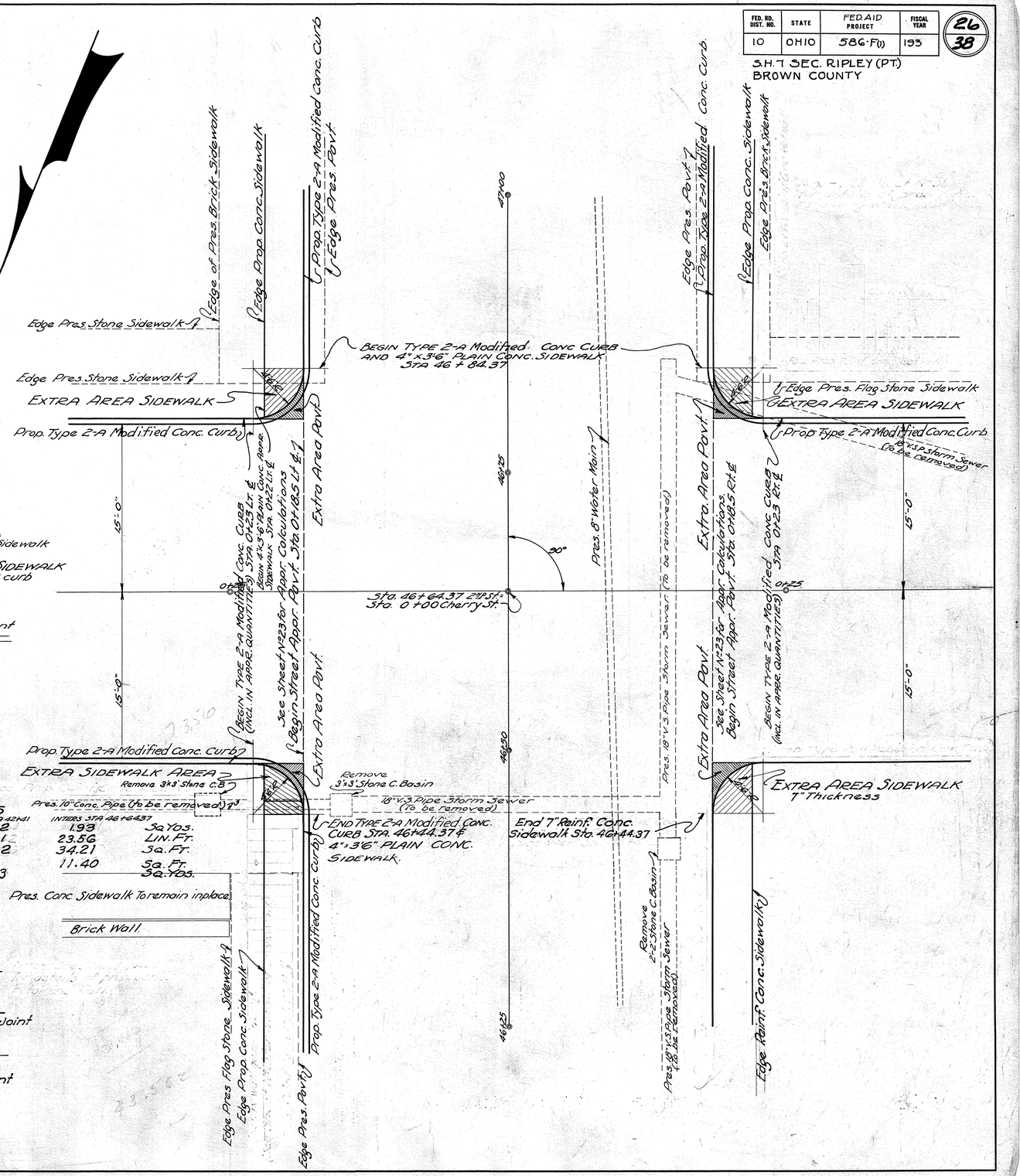
Street Approach Quantities for street at Sta. 46+64.37 detailed on Sheet No 23

NOTE:- Catch basins at Sta. 42+51.87 shall be set low enough to permit depressing the gutter from the beginning of the curb returns to the basins.

ESTIMATED QUANTITIES

	INTERS. STA 42+41	INTERS STA 46+64.37	
Area 7" Reinf. Conc. Pavt.	1.22	1.93	Sq. Yds.
Type 2-A Modified Conc. Curb	20.21	23.56	Lin. Ft.
Area 4" Plain Conc. Sidewalk	112.82	34.21	Sq. Ft.
Area 7" Reinf. Conc. Sidewalk		11.40	Sq. Ft.
Removal & Disposal 7" Plain Conc. Pavt.	43		Sq. Yds.

JOINT DETAIL AT INTERSECTION OF CHERRY & SECOND STREETS



FED. RD. DIST. NO	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	586-F(1)	1939

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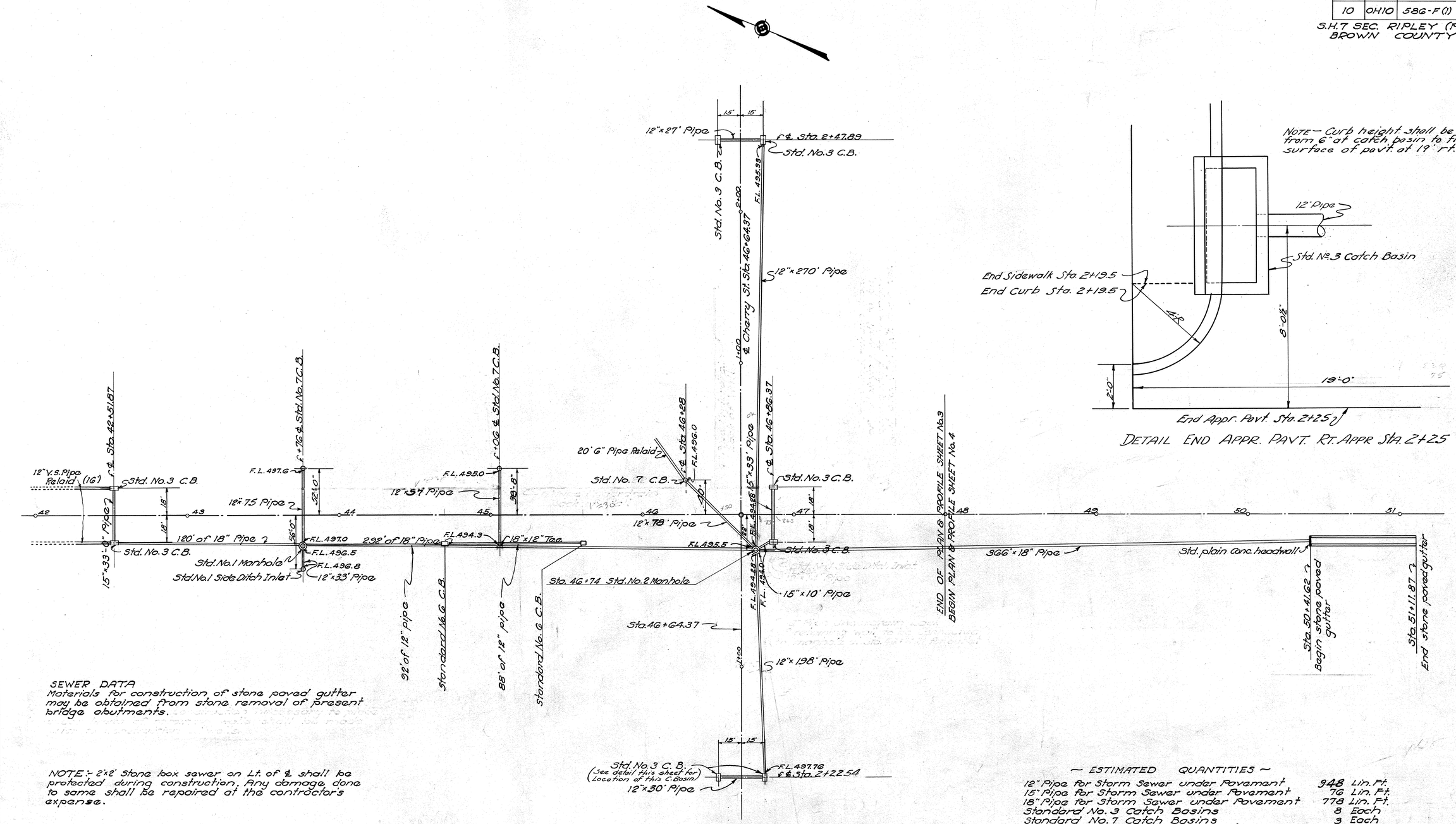
S.H.7 SEC. RIPLEY (PT.)
BROWN COUNTY



DETAIL END APPR. PAVT. RT. APPR STA. 2+25

SEWER DATA
Materials for construction of stone paved gutter may be obtained from stone removal of present bridge abutments.

NOTE:- 2'x2' Stone box sewer on Lt. of ℄ shall be protected during construction. Any damage done to same shall be repaired at the contractor's expense.

— ESTIMATED QUANTITIES —

12" Pipe for Storm Sewer under Pavement	948 Lin. Ft.
15" Pipe for Storm Sewer under Pavement	76 Lin. Ft.
18" Pipe for Storm Sewer under Pavement	778 Lin. Ft.
Standard No. 3 Catch Basins	8 Each
Standard No. 7 Catch Basins	3 Each
Standard No. 7 Side Ditch Inlets	1 Each
Standard No. 2 Manhole	1 Each
18"x12" Tee for Storm Sewer under Pavement	1 Each
Standard No. 1 Manhole	1 Each
Class "E" Concrete for Headwall	1.65 Cu. Yds.
Stone paved Gutter	73.3. Lin. Ft.
12" V.S. Pipe Relaid	16 Lin. Ft.
6" Pipe Relaid	20 Lin. Ft.
Standard No. 6 Catch Basins	2 Each

FED. RD. DIST. NO	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	586-F(1)	1939

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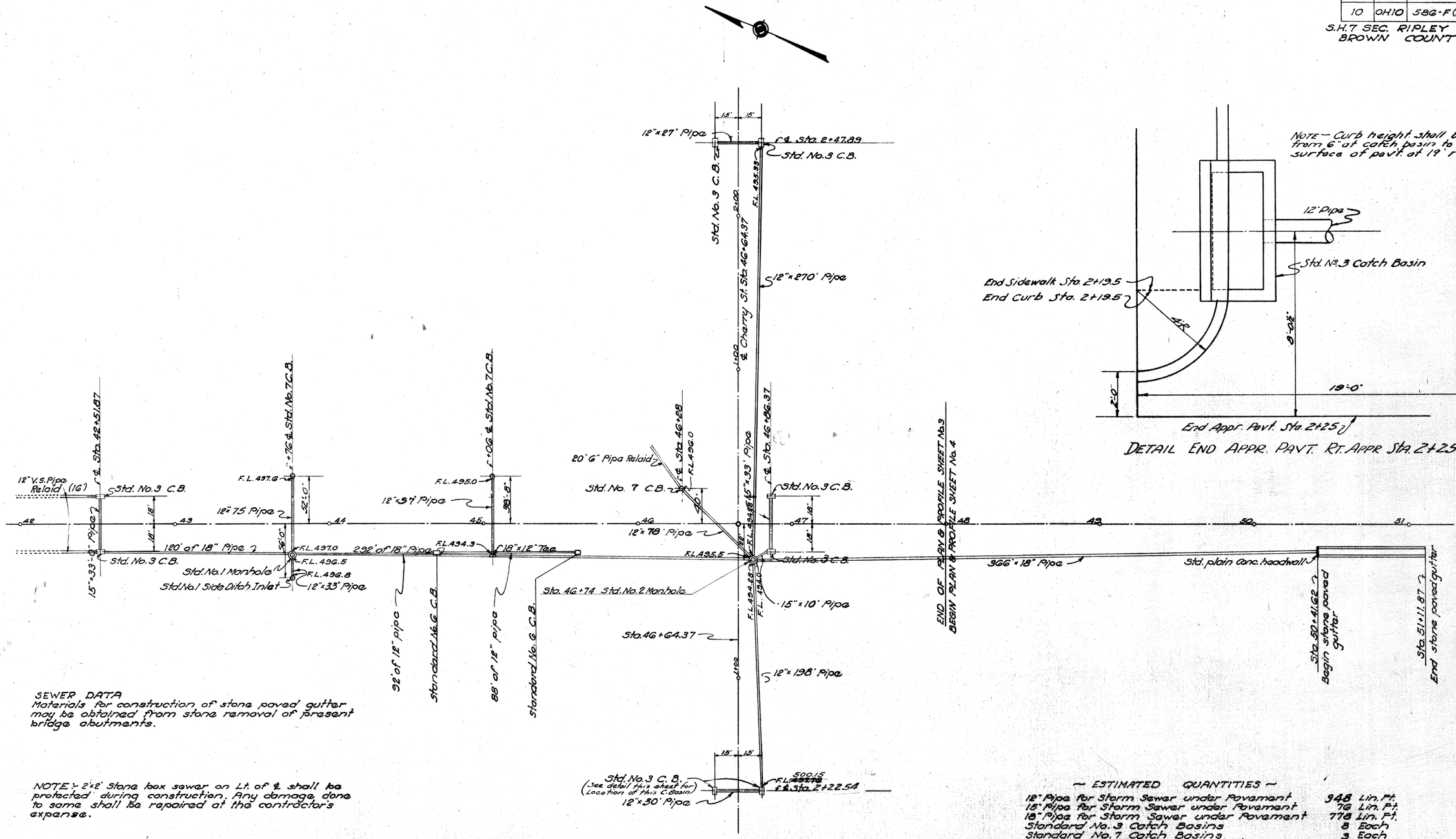
S.H.T SEC. RIPLEY (PT.)
BROWN COUNTY



NOTE— Curb height shall be diminished from 6" at catch basin to flush with surface of pavt. at 19' rt. sta. 2+23.5.

DETAIL END APPR. PAVT. RT. APPR STA. 2+25

SEWER DATA
Materials for construction of stone paved gutter may be obtained from stone removal of present bridge abutments.

NOTE:- 2'x2' Stone box sewer on Lt. of ℄ shall be protected during construction. Any damage done to same shall be repaired at the contractor's expense.

— ESTIMATED QUANTITIES —

12" Pipe for Storm Sewer under Pavement	948 Lin. Ft.
15" Pipe for Storm Sewer under Pavement	76 Lin. Ft.
18" Pipe for Storm Sewer under Pavement	778 Lin. Ft.
Standard No. 3 Catch Basins	8 Each
Standard No. 7 Catch Basins	3 Each
Standard No. 7 Side Ditch Inlets	1 Each
Standard No. 2 Manhole	1 Each
18"x12" Tee for Storm Sewer under Pavement	1 Each
Standard No. 1 Manhole	1 Each
Class "E" Concrete for Headwall	1.65 Cu. Yds.
Stone paved Gutter	73.3 Lin. Ft.
12" V.S. Pipe Relaid	16 Lin. Ft.
6" Pipe Relaid	20 Lin. Ft.
Standard No. 6 Catch Basins	2 Each

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	PRECN. YEAR
10	OH10	586-F(1)	1939

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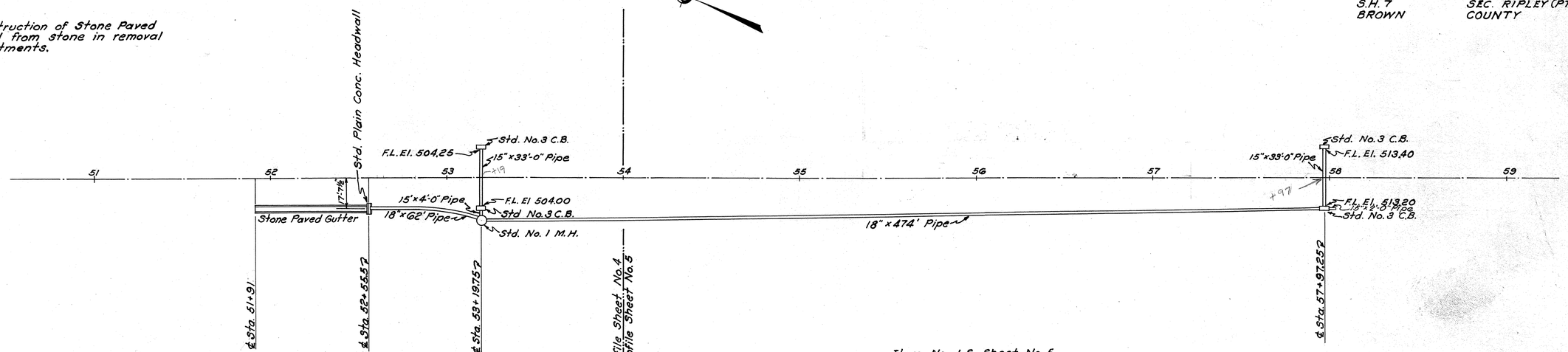
S.H. 7
BROWN

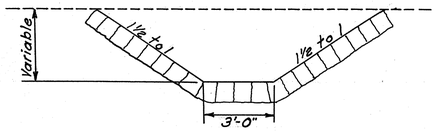
SEC. RIPLEY (PT)
COUNTY

Note~ Material for construction of Stone Paved Gutter may be obtained from stone in removal of present bridge abutments.



Item 2-S Sheet No. 4

Item No. 1-S Sheet No. 5

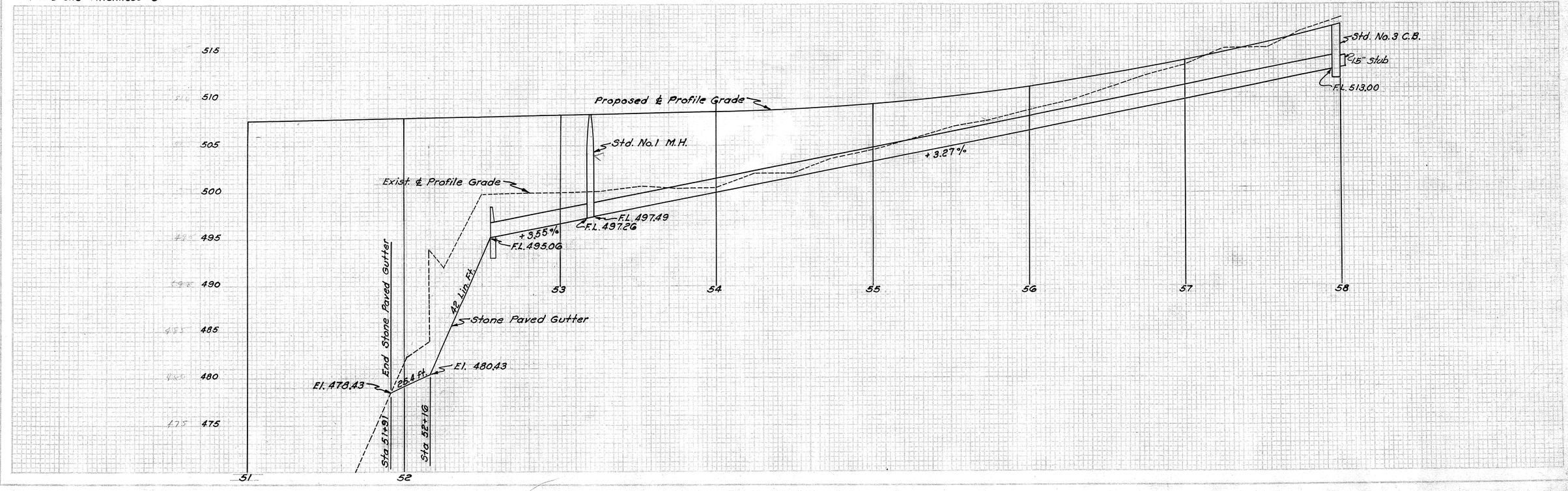


TYPICAL SECTION
STONE PAVED GUTTER

Note~ All necessary excavation to complete construction of this item shall be paid for in price bid per Lin. Ft. Stone Paved Gutter. Min. stone thickness 8"

ESTIMATED QUANTITIES

	Sheet No. 4	Sheet No. 5	Totals.
15" Pipe for Storm Sewer under Pav't.	37	35	72 Lin. Ft.
18" Pipe for Storm Sewer under Pav't.	141	395	536 Lin. Ft.
Std. No. 3 Catch Basins	2	2	4 Unit
Std. No. 1 Man Hole	1		1 Unit
Class E Concrete for Headwall	1.65		1.65 Cu Yd.
Stone Paved Gutter.	67.4		67.4 Lin. Ft.



HIGHWAY PLAN-PROFILE PLATES
THE MCGRAW-HILL COMPANY, INC.

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	586-F(1)	1939

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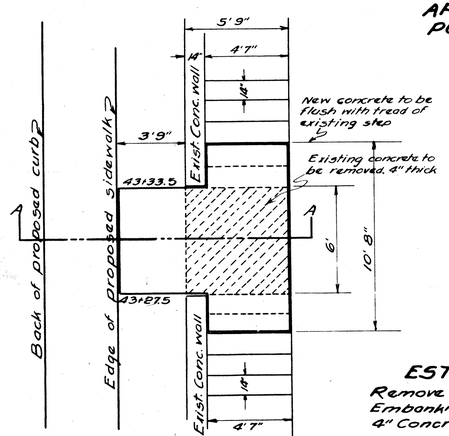
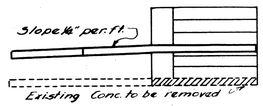
SH. 7 SEC. RIPLEY (PT)
BROWN COUNTY

APPROACH SIDEWALK TO PUBLIC LIBRARY STA. 43+30.5 Rt.



ITEM - 1-D
SHEET NO. 3



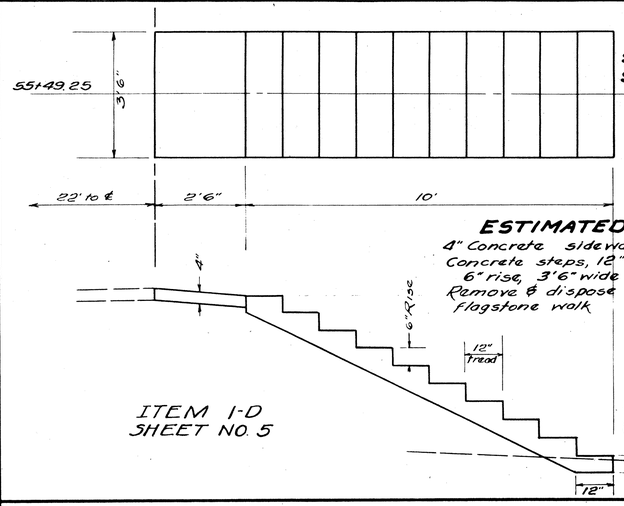
SECTION A-A

ESTIMATED QUANTITIES

Remove & dispose Exist. concrete	34.5 Sq. Ft.
Embankment	3 Cu. Yds.
4" Concrete sidewalk	78.4 Sq. Ft.

NOTE:- Embankment included in roadway quantities.

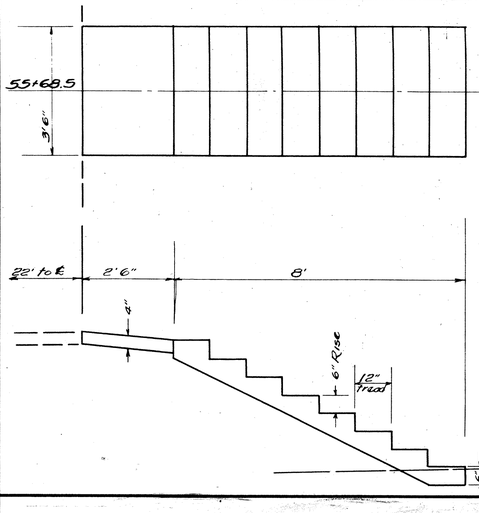
APPROACH STEPS TO RES. STA. 55+49.25 Rt.



ITEM 1-D
SHEET NO. 5

ESTIMATED QUANTITIES

4" Concrete sidewalk	8.75 Sq. Ft.
Concrete steps, 12" tread, 6" rise, 3'6" wide	35 Lin. Ft.
Remove & dispose flagstone walk	20 Sq. Ft.

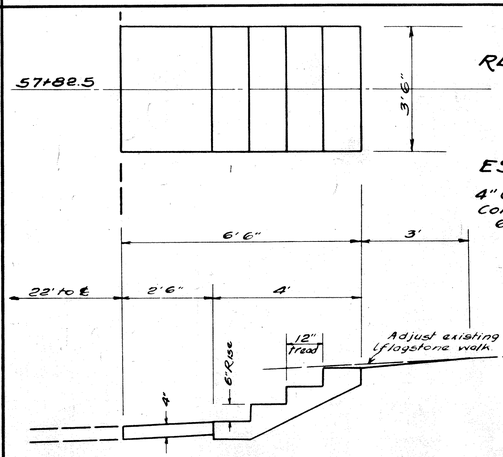


ITEM - 2-D
SHEET NO. 5

ESTIMATED QUANTITIES

4" Concrete sidewalk	8.75 Sq. Ft.
Concrete steps 12" tread, 6" rise, 3'6" wide	28 Lin. Ft.
Remove & Dispose concrete walk	36 Sq. Ft.

APPROACH STEPS TO RESIDENCE STA. 57+82.5 Rt.



ITEM 8-D
SHEET NO. 5

ESTIMATED QUANTITIES

4" Concrete sidewalk	8.75 Sq. Ft.
Concrete steps, 12" tread, 6" rise, 3'6" wide	14 Lin. Ft.

FED. RD. DIST. NO.	STATE	FEDERAL AID PROJECT	FISCAL YEAR
10	OHIO	FA-586-F(1)	1939

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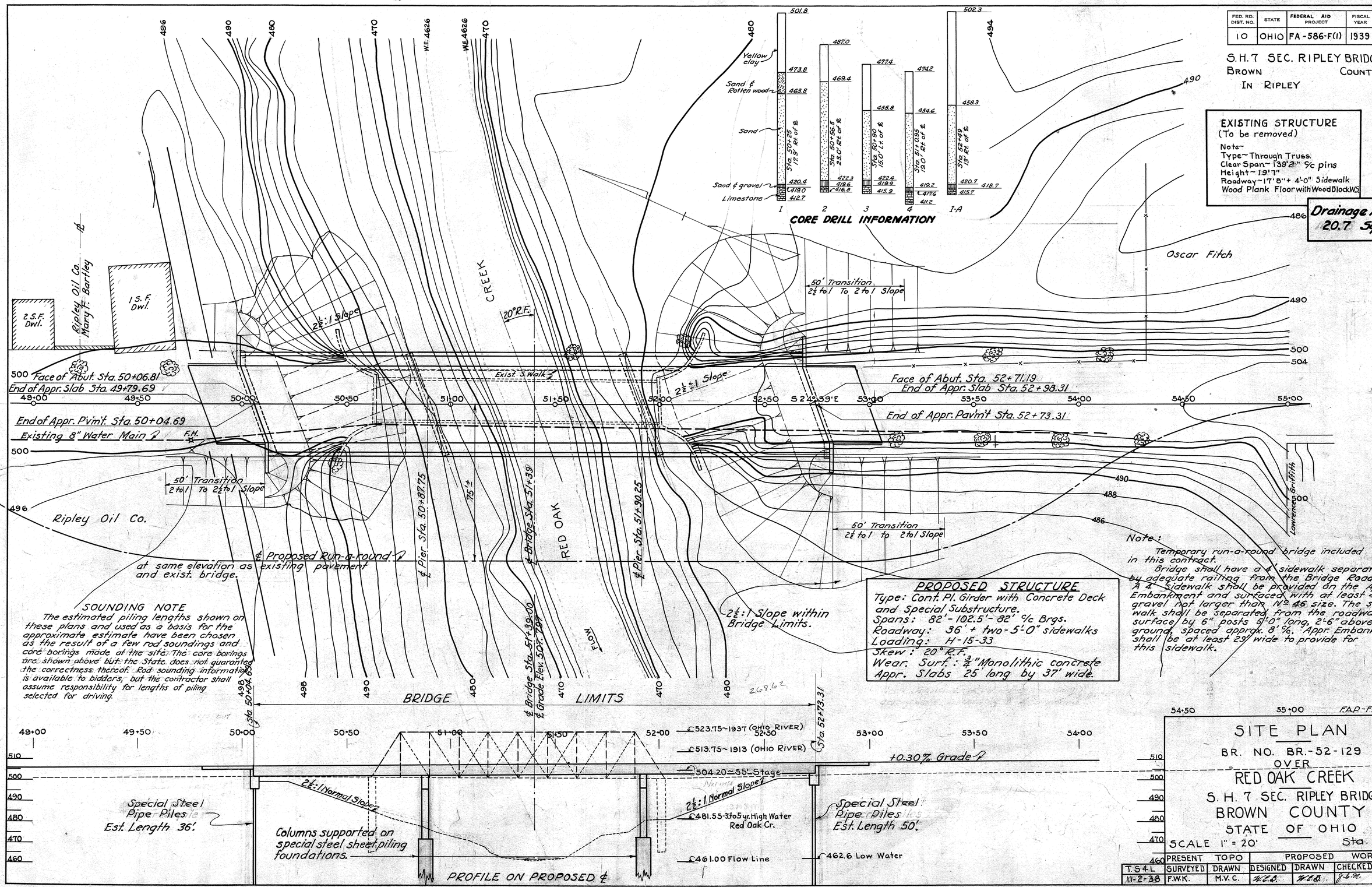
S.H.7 SEC. RIPLEY BRIDGE
BROWN COUNTY.
IN RIPLEY

EXISTING STRUCTURE
(To be removed)
Note~
Type~ Through Truss.
Clear Span~ 139'2" c/c pins
Height~ 19'7"
Roadway~17'8"+ 4'-0" Sidewalk
Wood Plank Floor with Wood Block W.S.

Drainage Area 20.7 Sq. Mi.

CORE DRILL INFORMATION



PROPOSED STRUCTURE
Type: Cont. Pl. Girder with Concrete Deck and Special Substructure.
Spans: 82'-102.5'-82' c/c Brgs.
Roadway: 36' + two-5'-0" sidewalks
Loading: H-15-33
Skew: 20° R.F.
Wear. Surf.: ¾" Monolithic concrete Appr. Slabs 25' long by 37' wide.

Note:
Temporary run-a-round bridge included in this contract.
Bridge shall have a 4' sidewalk separated by adequate railing from the Bridge Roadway A 4' sidewalk shall be provided on the Appr. Embankment and surfaced with at least 4" of gravel not larger than No 46 size. The sidewalk shall be separated from the roadway surface by 6" posts 5'-0" long, 2'-6" above ground, spaced approx. 8' c/c. Appr. Embankment shall be at least 28' wide to provide for this sidewalk.

SOUNDING NOTE
The estimated piling lengths shown on these plans and used as a basis for the approximate estimate have been chosen as the result of a few rod soundings and core borings made at the site. The core borings are shown above but the State does not guarantee the correctness thereof. Rod sounding information is available to bidders, but the contractor shall assume responsibility for lengths of piling selected for driving.

FAP-FA-586F(1)

SITE PLAN

BR. NO. BR-52-129
OVER
RED OAK CREEK
S. H. 7 SEC. RIPLEY BRIDGE
BROWN COUNTY
STATE OF OHIO
SCALE 1" = 20'
Sta. 51+39

	PRESENT TOPO		PROPOSED WORK			
T.S & L	SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
11-2-38	F.W.K.	M.V.C.	W.E.S.	W.E.S.	J.L.M.	6/5/39

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA Sec'(I)	1939

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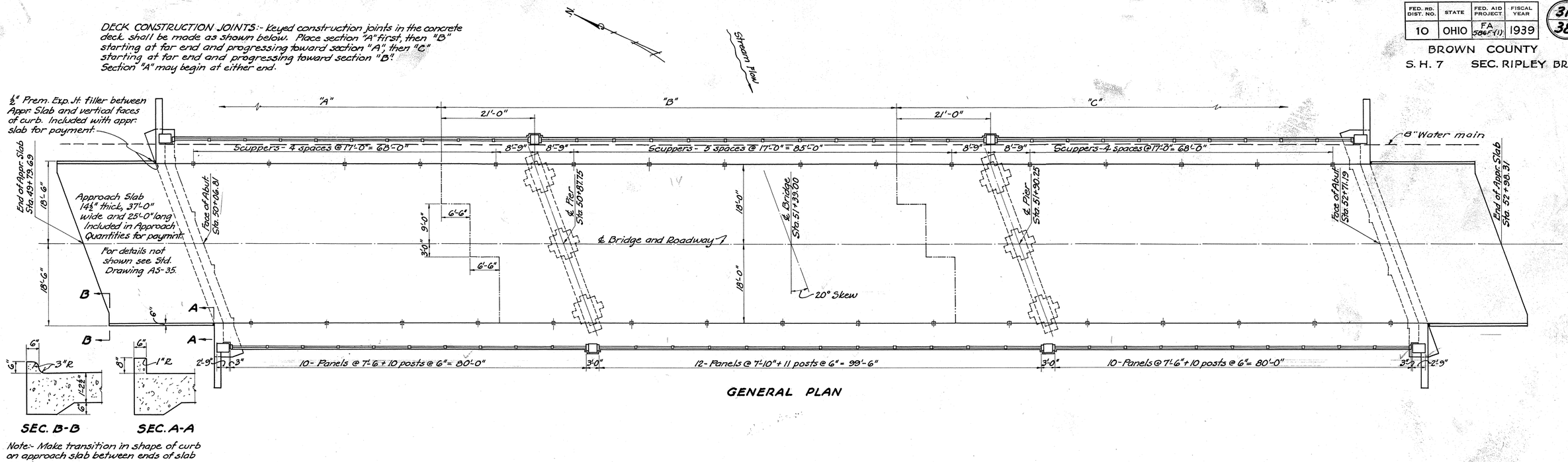
BROWN COUNTY
S. H. 7 SEC. RIPLEY BR.

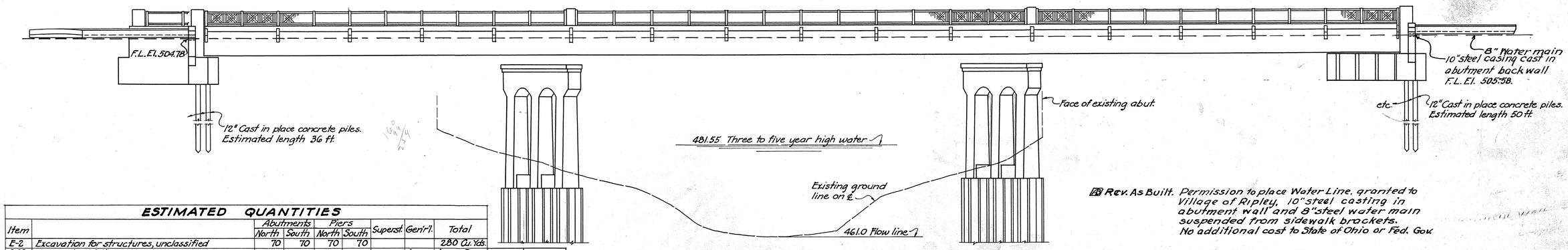
DECK CONSTRUCTION JOINTS:- Keyed construction joints in the concrete deck shall be made as shown below. Place section "A" first, then "B" starting at far end and progressing toward section "A", then "C" starting at far end and progressing toward section "B". Section "A" may begin at either end.



SEC. B-B SEC. A-A

GENERAL PLAN

Note:- Make transition in shape of curb an approach slab between ends of slab as shown.



GENERAL ELEVATION

ESTIMATED QUANTITIES

Item		Abutments North	Abutments South	Piers North	Piers South	Superst.	Gen'l.	Total	CHANGE ORD. NO	REVISIONS AS BUILT
E-2	Excavation for structures, unclassified	70	70	70	70			280 Cu. Yds.		
S-29	Porous backfill						Lump	Lump Sum		
S-1	Class "C" concrete, superstructure					305		305 Cu. Yds.		
S-1	Class "E" concrete, piers			90	86			176 Cu. Yds.		
S-1	Class "E" concrete, abutments	83	83					166 Cu. Yds.		
S-3	Type "D" water proofing	18	18					36 Sq. Yds.		
S-4	Reinforcing steel	17,460		19,640		55,150	130	92,380 Lbs.		
S-7	Structural steel (except field painting)					453000		453,000 Lbs.		
S-7	Steel castings (except field painting)					7,520		7,520 Lbs.		
S-8	Field painting of structural steel & steel castings					460,520		460,520 Lbs.		
S-9	1" Premolded expansion joint filler	5	5					10 Sq. Ft.		
S-14	Bridge railing (Steel)					543		543 Lin. Ft.		
S-15	Temporary run-around bridge						Lump	Lump Sum		
S-24	Removal of existing superstructure						Lump	Lump Sum		
S-25	Bridge lighting system, except conduit						Lump	Lump Sum		
S-25	2" Galvanized conduit					~~830~~	~~830~~	~~830~~ Lin. Ft.	#4 -50	780 Lin. Ft.
S-29	6" Perforated, corrugated metal pipe underdrains, incl. pipe Specials. Sec. N-6.4b (b-3)	113	113					226 Lin. Ft.		
S-16	First test pile, steel pipe pile,						Lump	Lump Sum		
							Lump	Lump Sum		
S-19	Special steel pipe piling, (incl. pile points & concrete)	~~648~~	~~900~~					~~1548~~ Lin. Ft.	#4 -263	1521.7 Lin. Ft.
SS-134	First test pile, special steel sheet piling (One Zee Section)						Lump	Lump Sum		
SS-134	Subsequent test pile, special steel sheet piling (One Zee Section)						Lump	Lump Sum		
SS-134	First test load, special steel sheet piling (on One Zee Section)						~~Lump~~	~~Lump Sum~~	#4 -Lump	
SS-134	Subsequent test load, special steel sheet piling (on One Zee Section)						~~Lump~~	~~Lump Sum~~	#4 -Lump	
SS-134	Special steel sheet piling (copper bearing)			~~4,673~~	~~4,673~~			~~9346~~ Sq. Ft.	#4 +11723	9518.3 Sq. Ft.
E-3	Channel Excavation						1500	1500 Cu. Yds.		

Rev. As Built. Permission to place Water Line, granted to Village of Ripley, 10" steel casting in abutment wall and 8" steel water main suspended from sidewalk brackets. No additional cost to State of Ohio or Fed. Gov.

GENERAL NOTES

LOADING:- This bridge is designed for H-15-33 loading.

FOR DETAILS of cast steel shoes, approach slabs, and miscellaneous details not shown on these drawings, reference shall be made to Std. Drwgs. CSS-35, AS-35, and MBD-36.

WELDING:- Class "A" shall be used.

SERVICE LINES:- The contractor shall cooperate with utility agency in the moving and installation of water lines. Plans showing the method of installation of such lines will be submitted by the utility agency to the Chief Engineer of Bridges for approval.

EXCAVATION for piers below top of steel sheet piling measured inside of steel sheet piling, 5'-0" deep. Above top of sheeting excavation is measured as a prism with base 9 ft. square.

EXISTING SUPERSTRUCTURE shall be carefully dismantled, match-marked, small parts boxed, and piled at the disposal of the County Commissioners.

EXISTING ABUTMENTS to be removed to at least one foot below finished ground line.

CHANNEL EXCAVATION includes removal of existing embankment and substructure as shown on sheet No. 30

F.A.P.-FA.-586-F(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN AND ELEVATION NOTES AND ESTIMATED QUANTITIES

BRIDGE NO. BR-52-129
OVER RED OAK CREEK.

BROWN COUNTY S. H. 7
SECTION RIPLEY BR. STA. 51+39.00

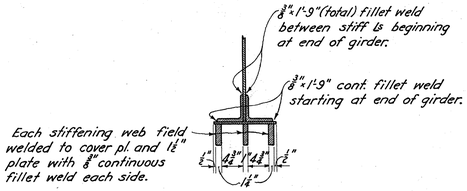
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.F.	A.J.F.	J.F.R.	J.H.B.	C.H.B. W.H.B.	6/5/39	

Revised As-Built 9-23-41

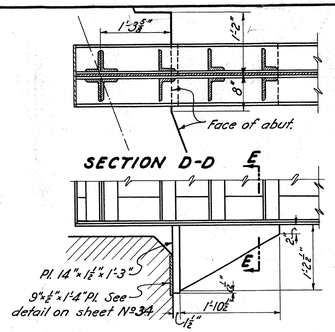
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA 586 F-(1)	1939

32
38

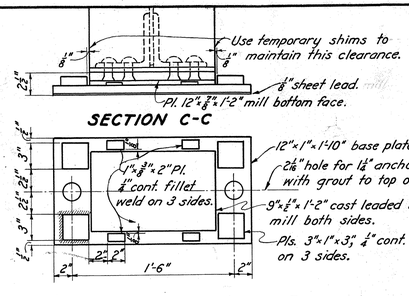
BROWN COUNTY
S.H. 7 SEC. RIPLEY (BR.)



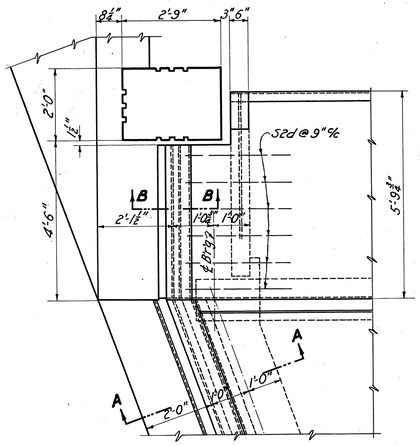
SEC. E-E



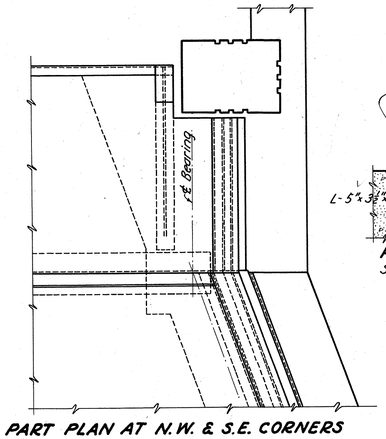
DETAILS OF ABUTMENT BUMPER



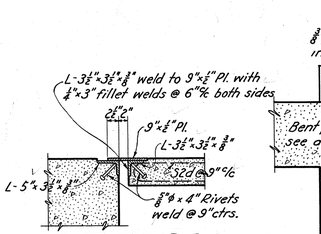
PLAN OF BEARING PLATE
AT ABUTMENTS



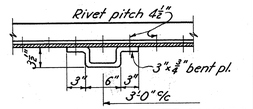
PART PLAN AT N.E. & S.W. CORNERS



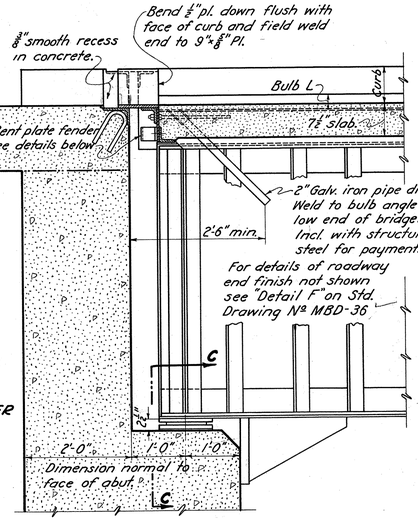
PART PLAN AT N.W. & S.E. CORNERS



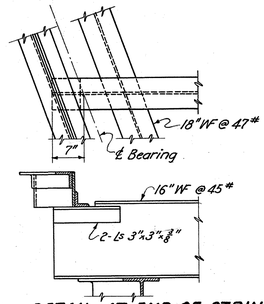
PART SEC. B-B
Sidewalk End Finish



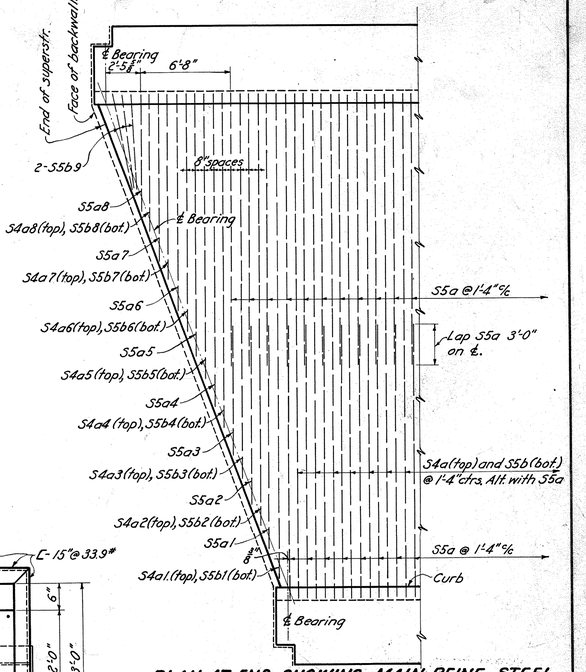
DETAIL OF BENT PLATE FENDER



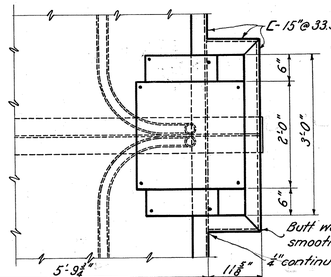
SECTION A-A

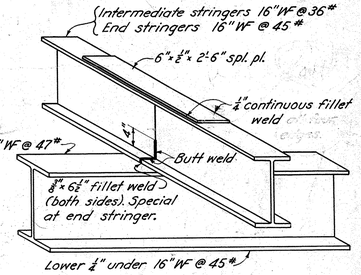


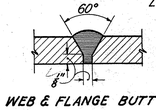
DETAIL AT END OF STRINGER



PLAN AT END SHOWING MAIN REINF. STEEL







WEB & FLANGE BUTT WELD

Stringers may be fabricated in lengths, between splices, of two, but not more than three panel lengths.

DETAIL OF WELDED STRINGER SPLICE

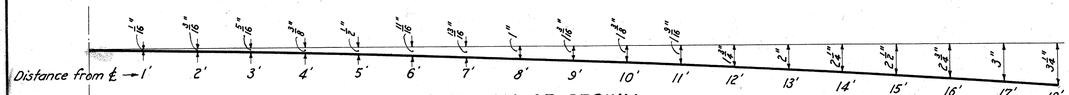
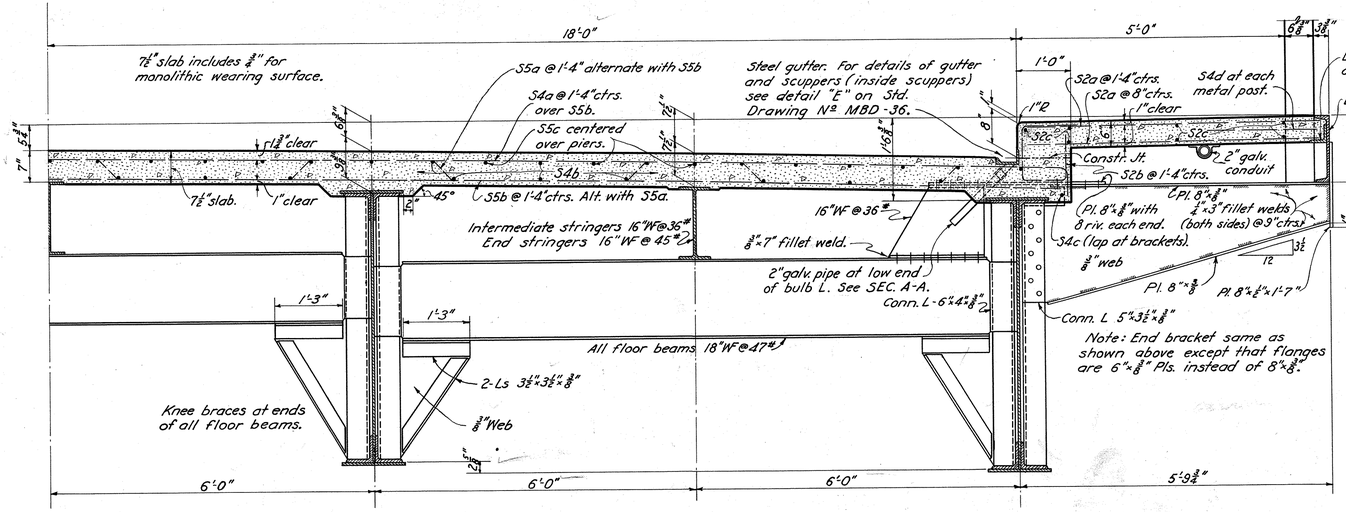
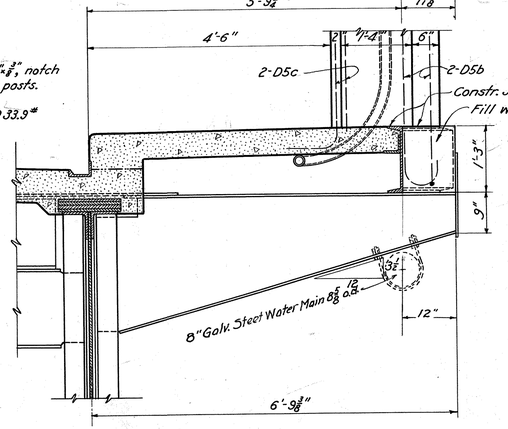


DIAGRAM OF CROWN



HALF TYPICAL SECTION



BRACKET DETAILS AT PIERS

Note: All connections not otherwise shown shall be riveted

For additional notes see Sheets Nº 34 & 35

F.A.P. FA-586-F(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

BRIDGE Nº BR-52-129
OVER
RED OAK CREEK

BROWN COUNTY S.H. 7
SEC. RIPLEY (BR.) STA. 51+39

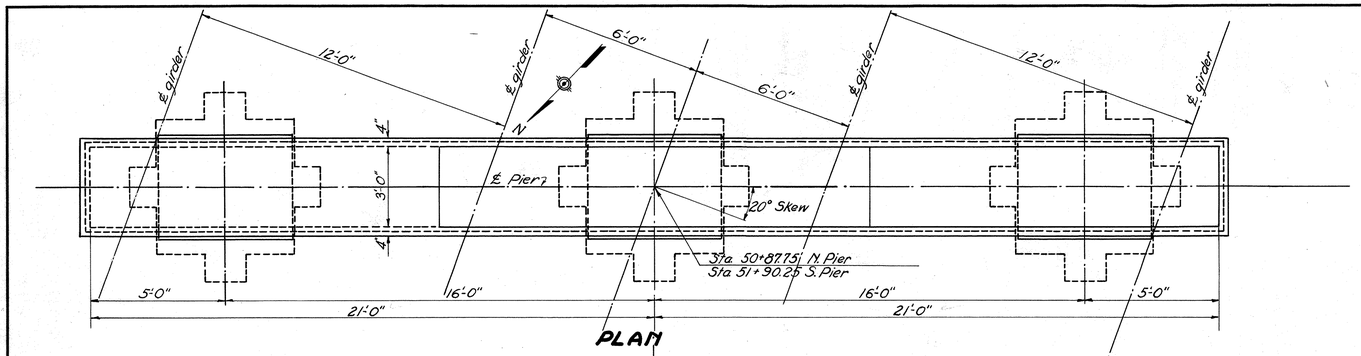
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.F.	A.J.F.	G.W.S.	J.H.B.	E.V.S. J.H.B.	6/5/39	

Revised As Built 9-25-41

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA 586F(1)	1939

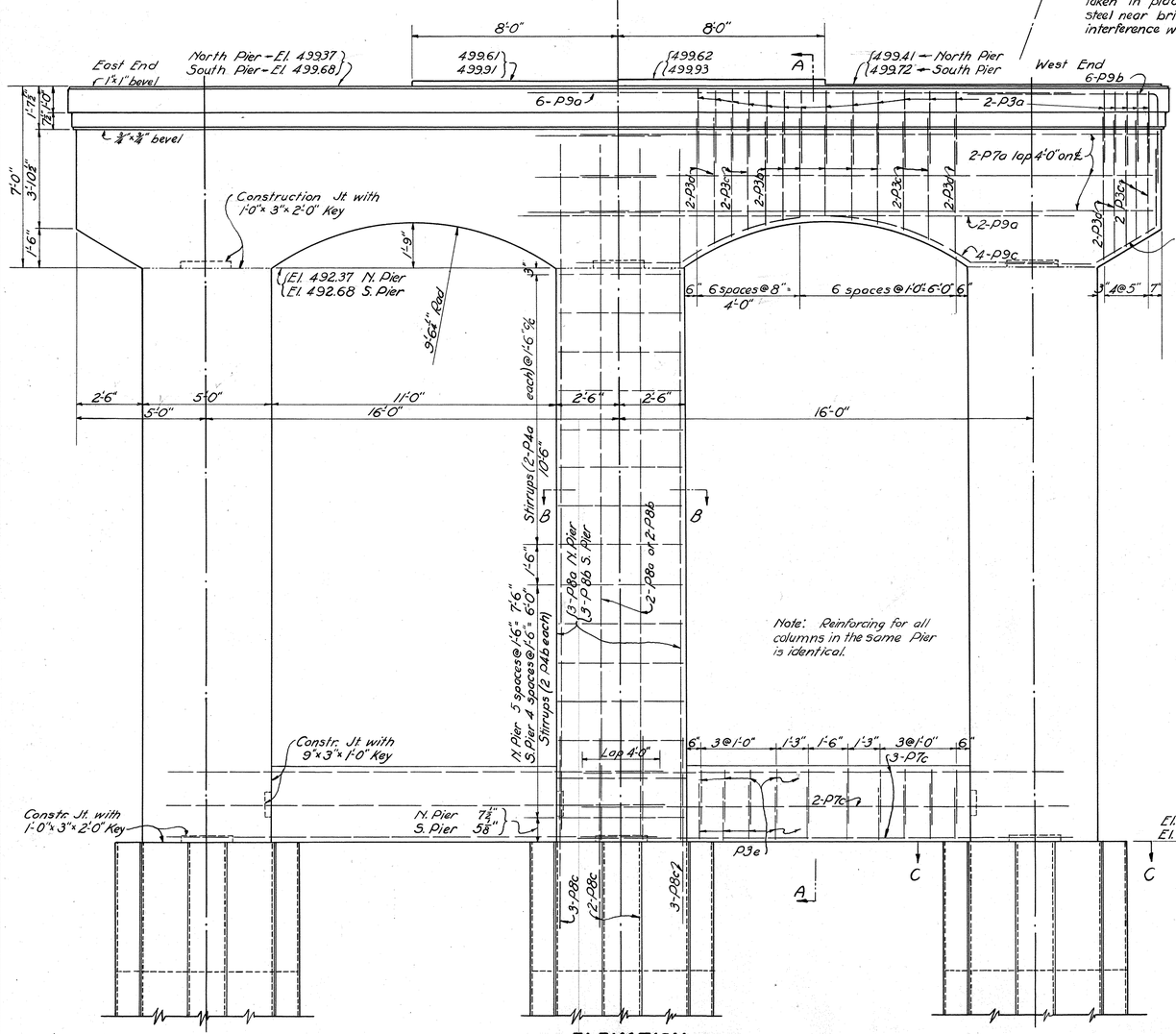
33
38

BROWN COUNTY
SH 7 SEC. RIPLEY BR.

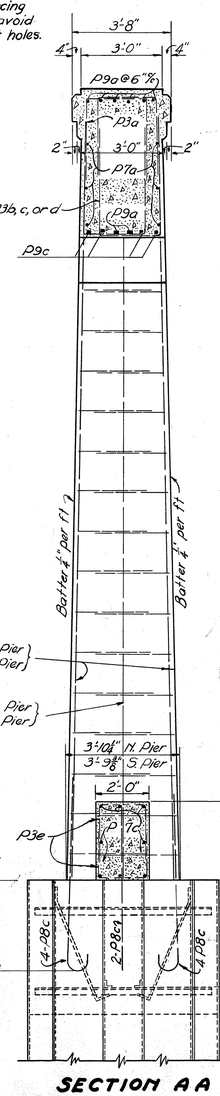


PLAN

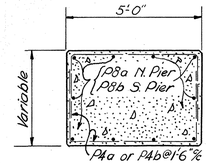
Note: Special care shall be taken in placing of reinforcing steel near bridge seat to avoid interference with anchor bolt holes.



ELEVATION

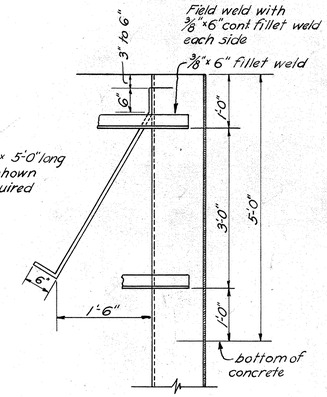


SECTION AA

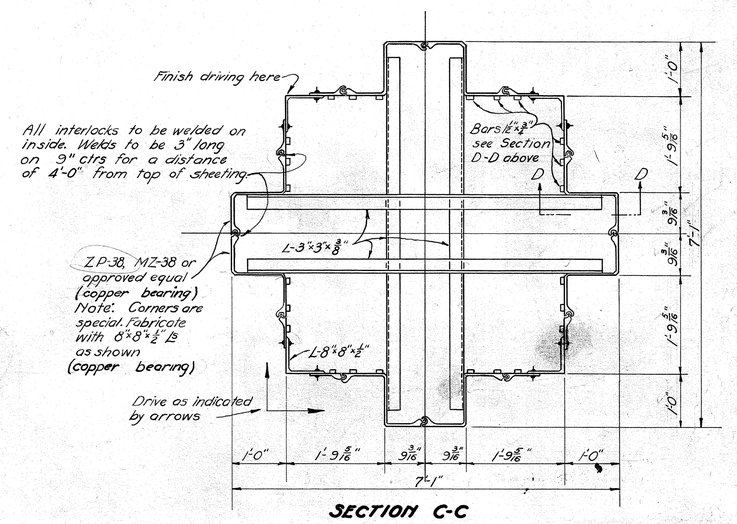


SECTION B-B

Note 3"×3"×⅜" angles and 1½"×¾" bars included in structural steel for payment.
Welding on piling and anchorages included in piling for payment.
Excavation and concrete included in pier excavation and pier concrete for payment.



PART SECTION D-D



SECTION C-C

-Note-

Steel sheet piling is to be driven to bearing capacity of 27 tons and preferably 30 tons. Estimated length of steel sheet piling is 55 ft. unless test loads indicate that longer lengths shall be used.

Test pile shall be driven and test loads applied before actual piling lengths are determined.

Test pile shall not be a service pile and shall be pulled after test loadings have been completed.

FAP FA-586-F(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PIER DETAILS

BRIDGE No BR-52-129
OVER
RED OAK CREEK

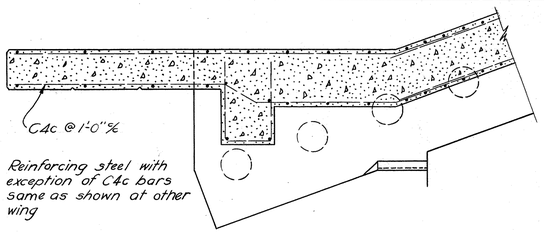
BROWN COUNTY SH 7
SEC. RIPLEY BR. STA 51+39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.S.	A.J.S.		J.A.B.	M.H.C.	6/5/39	

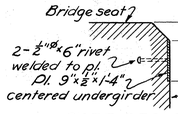
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA 586 F-(1)	1939

34
38

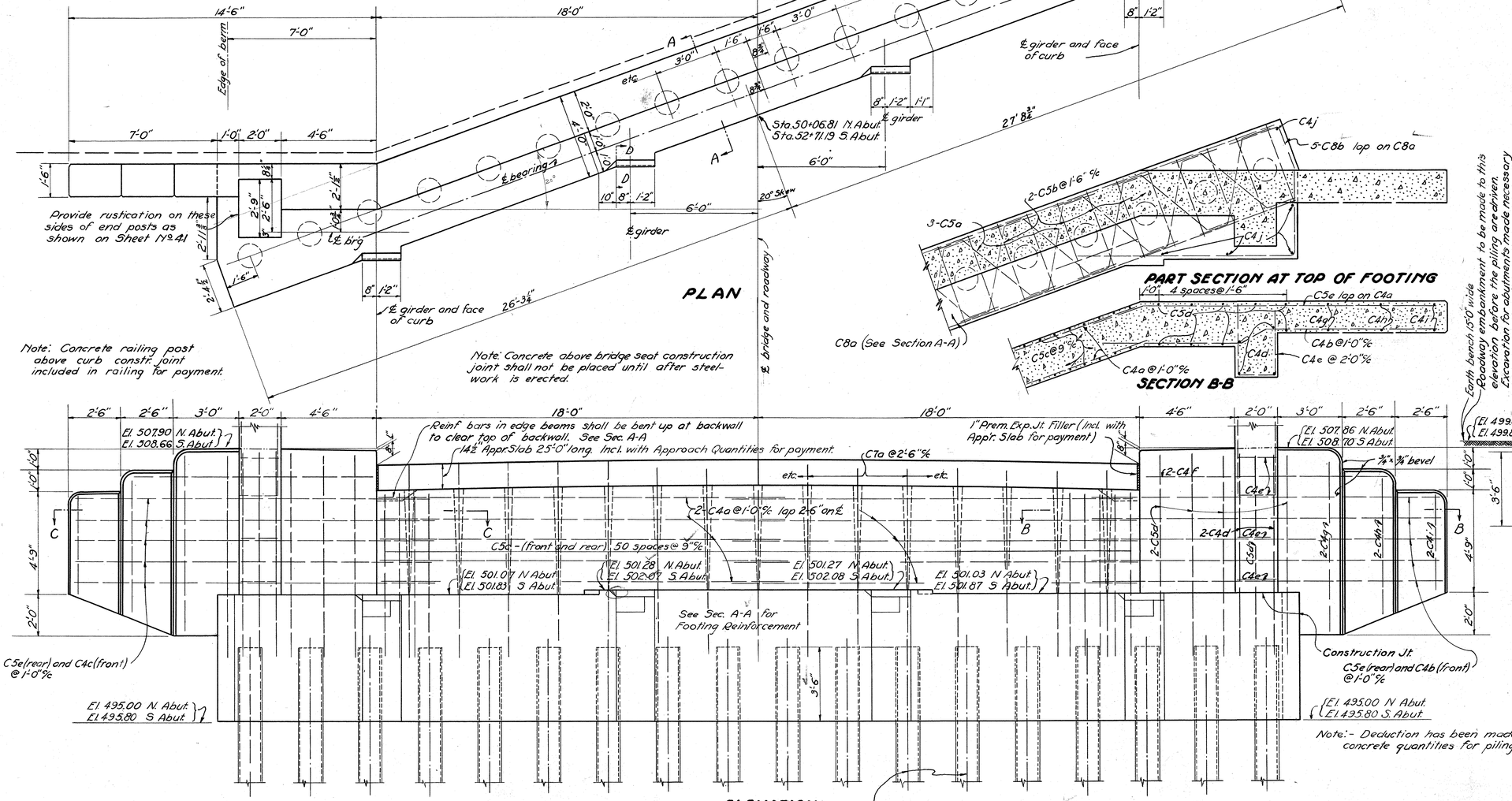
BROWN COUNTY
SH 7 SEC. RIPLEY BR.



PART SECTION C-C



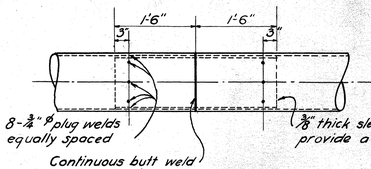
PART SEC. D-D



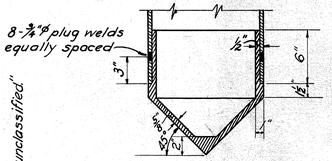
PLAN

PART SECTION AT TOP OF FOOTING

SECTION B-B

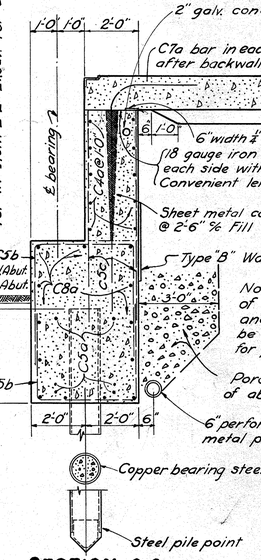


SPLICE DETAIL FOR STEEL PIPE PILING
To be used if splicing is necessary



DETAIL OF CAST STEEL PILE POINTS
36 Required

Earth bench 13'-0" wide
Roadway embankment to be made to this elevation before the piling are driven. Excavation for abutments made necessary by this placing of embankment to be paid for in Item E-2 Excav. for Structures, unclassified"



SECTION A-A

ELEVATION

Note:- Provide 1" Prem. Exp. Jt. Filler full perimeter of water pipe through abutment backwall

Copper bearing steel pipe (48.5" per ft. min.) piling 12" inside diameter, 12¾" outside diameter ⅜" wall thickness.

Piles shall be driven to 25 ton and preferably 28 ton bearing capacity. Piles to be filled with Class "C" concrete.

Piling, pile points and concrete in pile included in piling for payment.

F.A.P. F.A.-586-F(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

ABUTMENT DETAILS
BRIDGE No. BR-52-129
OVER
RED OAK CREEK

BROWN COUNTY SH 7
SEC. RIPLEY BR. STA. 51+39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.F.	A.J.F.	E.D.C.	J.H.B.	C.V.S. H.H.C.	6/5/39	

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA 586F(1)	1939

35
38

BROWN COUNTY
S.H. 7 SEC. RIPLEY (Br.)

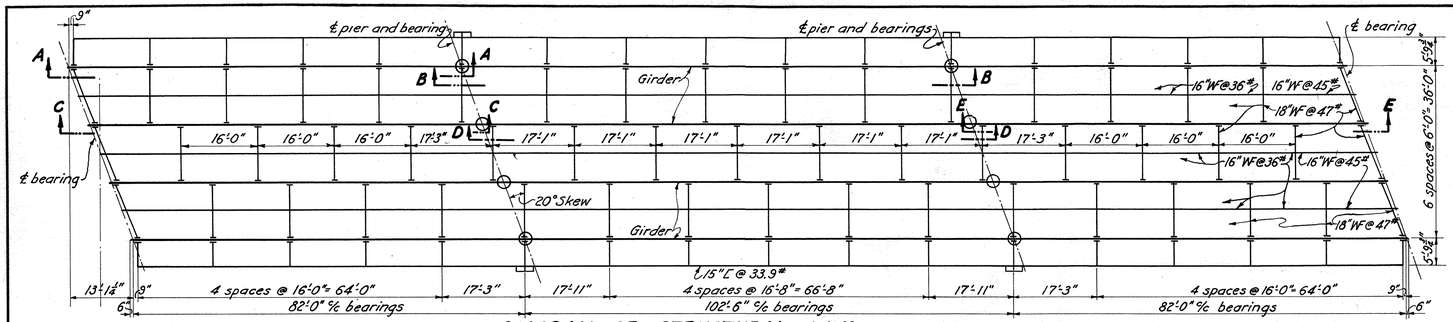
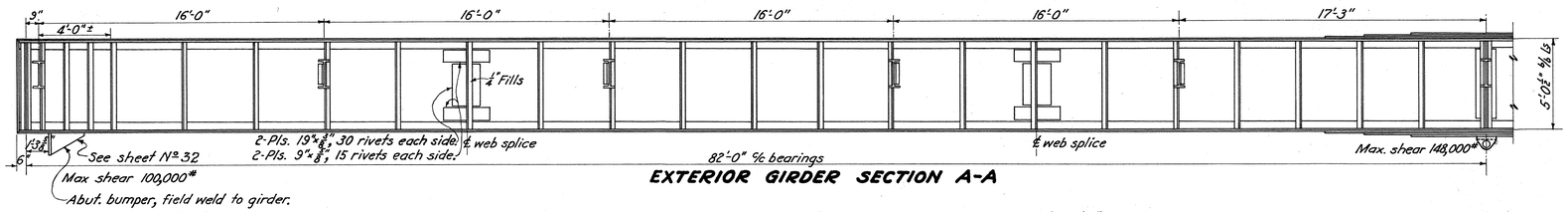
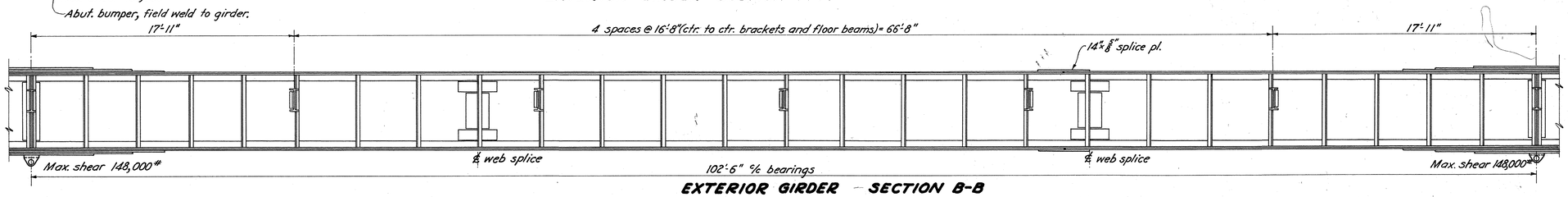


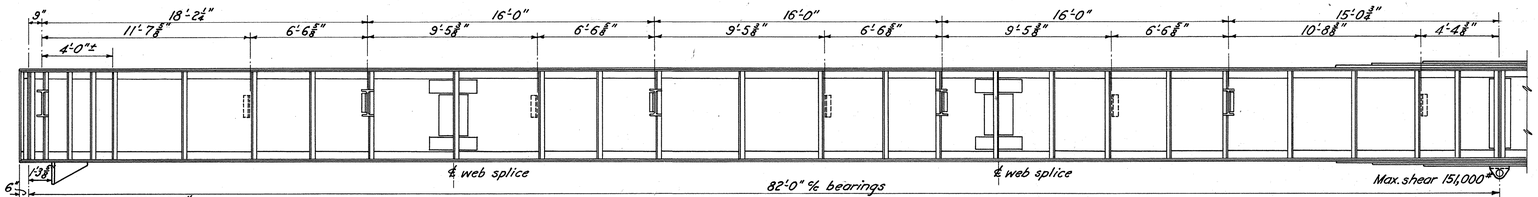
DIAGRAM OF STRUCTURAL LAYOUT ○ denotes Bolster B-280 and girder splice at ℄ pier.



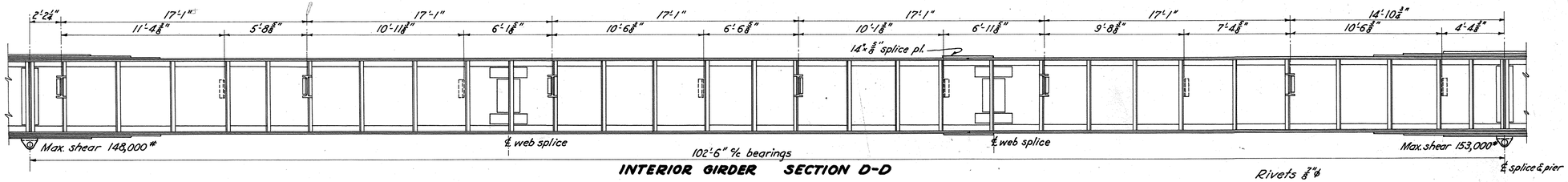
EXTERIOR GIRDER SECTION A-A



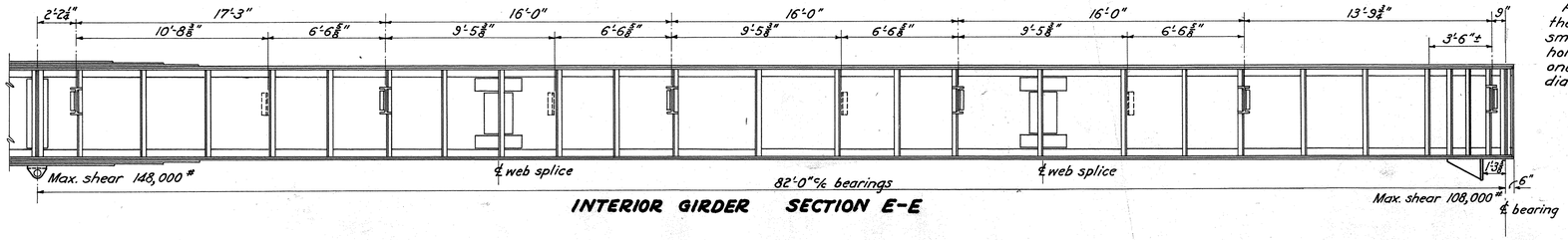
EXTERIOR GIRDER — SECTION B-B



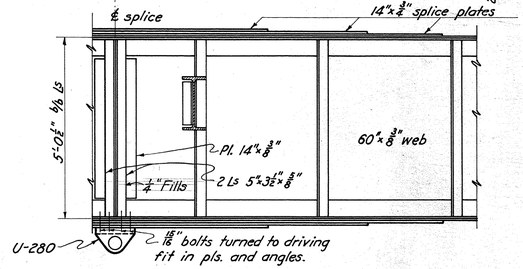
INTERIOR GIRDER SECTION C-C



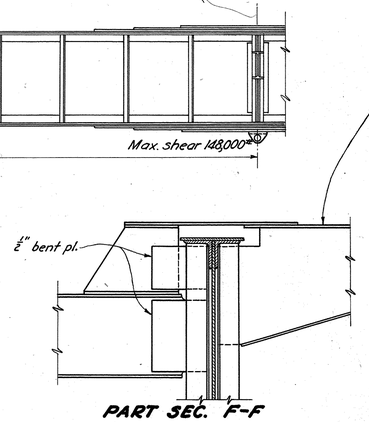
INTERIOR GIRDER SECTION D-D



INTERIOR GIRDER SECTION E-E



GIRDER SPLICE AT ℄ PIER



DETAIL AT END OF GIRDER
Interior girder similar

PART SEC. F-F

GIRDER DATA:-
Flange section:- {Cover pl. 14"×½" full length. 2-Ls 6"×6"×⅞"
Web - 60"×⅜" Pl.
All intermediate stiffeners 2-Ls 5"×3½"×⅝" crimped. At floor beam connection and at abutment bearings use 2-Ls 5"×3½"×⅞" with fills. Use 6"×4"×⅞" conn. Ls at floor beams.

Riveting procedure for field splices of main girders shall be as follows:
(1) Lightly pin and bolt together all structural steel.
(2) Thoroughly pin, bolt, and rivet bottom flange splice at first pier.
(3) Raise end of girders at first abut. 3 inches.
(4) Rivet top flange splice at first pier.
(5) Thoroughly pin, bolt and rivet bottom flange splice at second pier.
(6) Raise end of girders at second abut. 3 inches.
(7) Rivet top flange splice at second pier.
(8) Lower ends of girders at abutments.

FAP. FA-586-F(1)

Rivets ⅞"ϕ

Punching structural steel:- Where reaming is required, the punched holes shall be three-sixteenths (3/16) inches smaller than the nominal diameter of the rivet and the holes shall then be reamed to a diameter not more than one sixteenth (1/16) inch greater than the nominal diameter of the rivet.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GIRDER DETAILS

BRIDGE No. BR-52-129
OVER
RED OAK CREEK

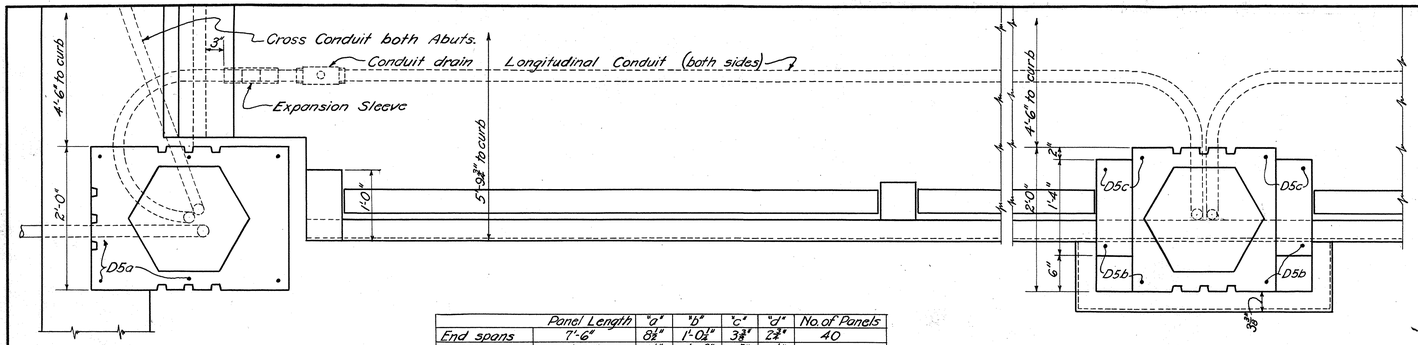
BROWN COUNTY S.H. 7
SEC. RIPLEY (Br.) STA. 51+39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.F.	A.J.F.	G.W.S.	J.H.B.	W.H.C.	6/5/39	

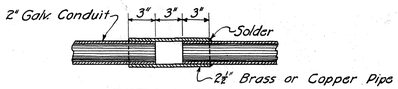
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA 586 F(1)	1939

36
38

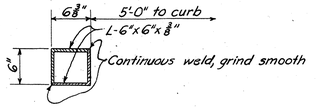
BROWN COUNTY
S.H. 7 SEC. **RIPLEY BR.**



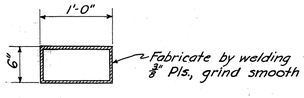
	Panel Length	"a"	"b"	"c"	"d"	No. of Panels
End spans	7'-6"	8⅛"	1'-0¼"	3⅜"	2⅛"	40
Middle span	7'-10"	9½"	1'-1⅜"	3⅝"	3¼"	24



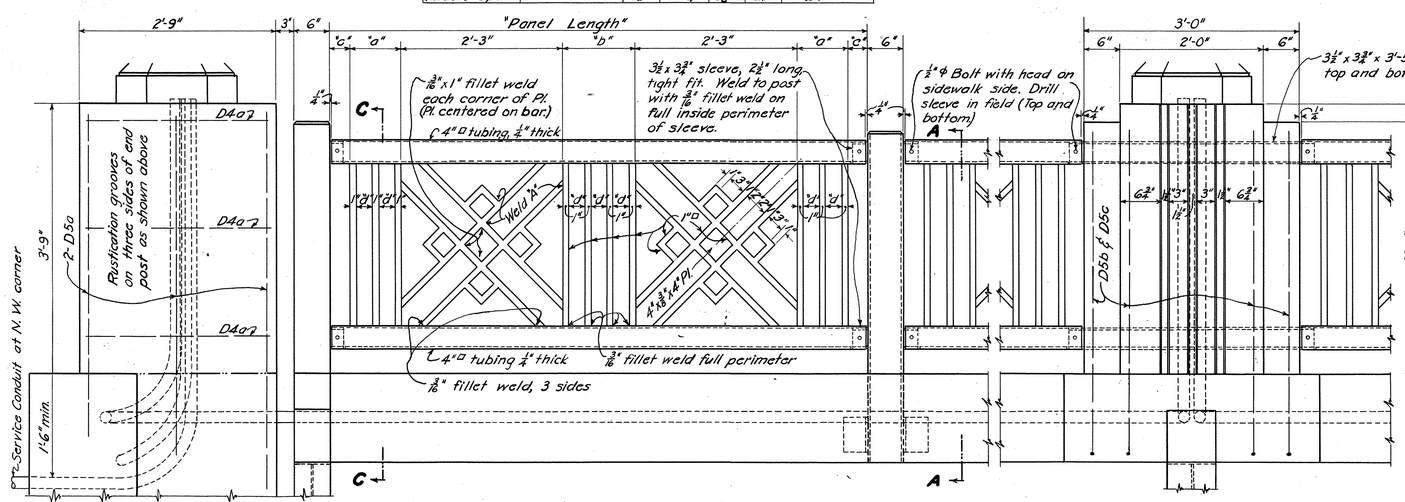
DETAIL OF EXPANSION SLEEVES



SECTION B-B INTERMEDIATE POST



SECTION D-D

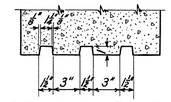


ABUTMENT POST **TYPICAL PANEL** **INTERMEDIATE POST** **PIER POST**

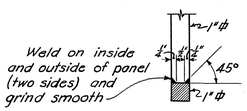
Place loop of 54d bar against post

TYPICAL SECTION AT POST OVER BRACKET

PART SEC. C-C

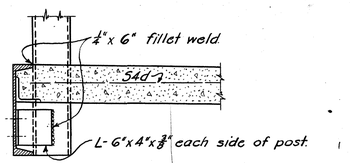


DETAIL OF GROOVES

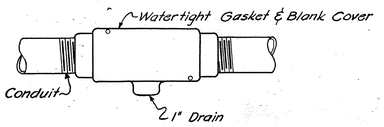


WELD "A"

RAILING NOTE. All sleeves shall be fabricated by bending and/or welding ¼" material.



PART SECTION A-A AT INTERMEDIATE POST



CONDUIT DRAIN

Insert T-fitting with reduced side outlet and drain at low point of all runs of conduit which do not drain naturally. Fittings included with conduit for payment.

LIGHTING SYSTEM NOTES

SYSTEM. The system shall be a 60 cycle 6.6 ampere constant current series circuit.

CONDUIT. Two-inch galvanized conduit shall be used throughout. To extend 30 ft. up the service pole.

CABLE. Cables shall be single conductor copper, No 6 B&S guage with rubber insulation for 600 volts, encased in a lead sheath. No splices permitted in cable below lamp connections at top of standards.

TRANSFORMER. A 2 kw. Aerial Type S.L. Series Transformer, 6.6 ampere Primary and Secondary with transformer cut out shall be furnished. To be mounted approximately 50 ft. from the N.W. corner of the bridge on a pole furnished by others.

(A) REV. AS BUILT Service was changed from N.W. to N.E. corner of the bridge and 50 ft of conduit nonperformed

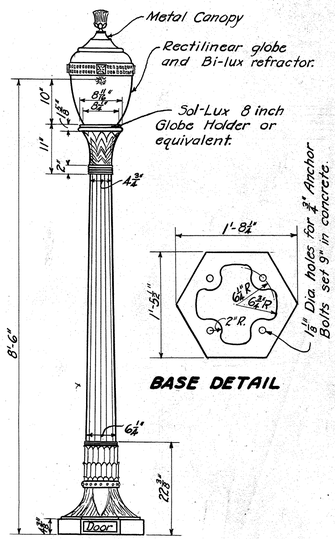
LIGHTING UNITS. The lighting units shall consist of 8 cast iron standards surmounted by luminaires, with refractors and ajustable film cut-out receptacles, as shown on this drawing.

LAMPS shall be 2500 lumen Mazda 6.6 ampere, series type.

CONDUIT HANGERS. Conduit shall be supported from sidewalk slab by galvanized iron hangers at not more than 4'-0" c/c.

POWER AND MAINTENANCE for this lighting system will be furnished by the Village of Ripley, Ohio.

PAINTING. After the lighting units have been erected true and plumb, they shall be painted two coats of Aluminum paint.



C.I. LAMP STANDARD

8 Req'd. with Egyptian Jr. Luminaire as manufactured by Westinghouse E. & M. Co. or equivalent.

F.A.P. FA - 586 - F(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

RAILING AND LIGHTING SYSTEM

BRIDGE No BR-52-129
OVER
RED OAK CREEK

BROWN COUNTY S.H.-7
SECTION RIPLEY BR STA. 51+39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.T.	A.J.T.	E.D.J.	J.H.B.	H.H.B.	6/5/39	

(A) Revised As-Built 9-23-41

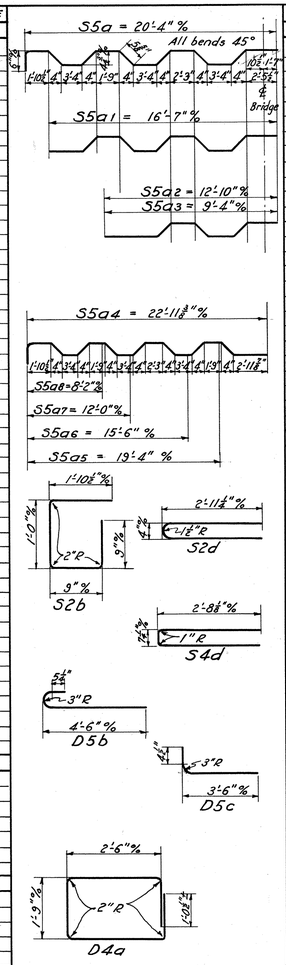
FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	FA 586 F (1)	1939

37
38

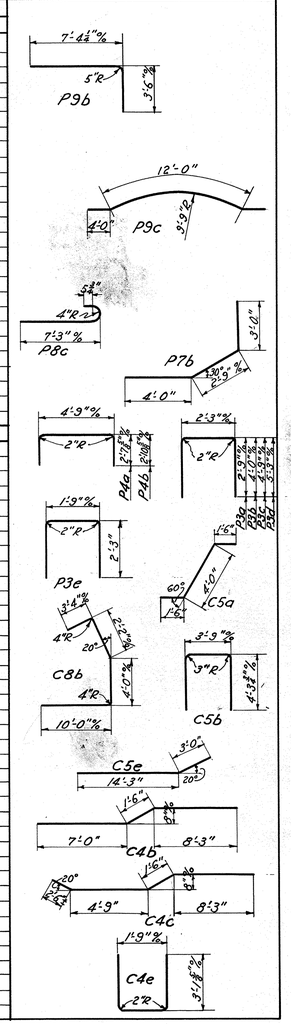
BROWN COUNTY
S.H. 7 SEC. RIPLEY (Br.)

REINFORCING STEEL LIST

MARK	SIZE	NUMBER	LENGTH	WEIGHT	SHAPE
SUPERSTRUCTURE STEEL					
S5a	⅞"ø	388	21'-6"	12540	Bt.
S5a1	⅞"ø	2	17'-3"	50	Bt.
S5a2	⅞"ø	2	13'-3"	40	Bt.
S5a3	⅞"ø	2	9'-9"	30	Bt.
S5a4	⅞"ø	2	24'-3"	70	Bt.
S5a5	⅞"ø	2	20'-6"	60	Bt.
S5a6	⅞"ø	2	16'-6"	50	Bt.
S5a7	⅞"ø	2	12'-9"	40	Bt.
S5a8	⅞"ø	2	8'-9"	30	Bt.
S5b	⅞"ø	190	37'-6"	10710	Str.
S5b1	⅞"ø	2	35'-9"	110	Str.
S5b2	⅞"ø	2	32'-0"	100	Str.
S5b3	⅞"ø	2	28'-3"	80	Str.
S5b4	⅞"ø	2	24'-9"	70	Str.
S5b5	⅞"ø	2	21'-0"	60	Str.
S5b6	⅞"ø	2	17'-3"	50	Str.
S5b7	⅞"ø	2	13'-9"	40	Str.
S5b8	⅞"ø	2	10'-0"	30	Str.
S5b9	⅞"ø	12	7'-0"	130	Str.
S5c	⅞"ø	34	38'-0"	1940	Str.
S4a	⅞"ø	190	37'-6"	7440	Str.
S4a1	⅞"ø	2	35'-9"	70	Str.
S4a2	⅞"ø	2	32'-0"	70	Str.
S4a3	⅞"ø	2	28'-3"	60	Str.
S4a4	⅞"ø	2	24'-9"	50	Str.
S4a5	⅞"ø	2	21'-0"	40	Str.
S4a6	⅞"ø	2	17'-3"	40	Str.
S4a7	⅞"ø	2	13'-9"	30	Str.
S4a8	⅞"ø	2	10'-0"	20	Str.
S4b	⅞"ø	304	35'-6"	11270	Str.
S4c	⅞"ø	32	20'-0"	670	Str.
S4d	⅞"ø	62	5'-9"	370	Bt.
S2a	½"ø	1200	5'-6"	4410	Str.
S2b	½"ø	400	4'-0"	1070	Bt.
S2c	½"ø	126	31'-6"	2650	Str.
S2d	½"ø	24	6'-0"	100	Bt.
RAILING STEEL					
D5a	⅝"ø	24	6'-0"	220	Str.
D5b	⅝"ø	16	5'-6"	130	Bt.
D5c	⅝"ø	16	4'-0"	100	Bt.
D4a	⅝"ø	12	9'-0"	110	Bt.
REPLACEMENT STEEL					
RE9	1⅛"□	1	8'-6"	40	Str.
RE8	1"□	1	8'-0"	30	Str.
RE7	1"ø	1	8'-0"	20	Str.
RE5	⅝"ø	2	7'-0"	20	Str.
RE4	⅝"ø	1	6'-6"	10	Str.
RE3	½"□	1	6'-0"	10	Str.
RE2	½"ø	1	6'-0"	—	Str.



MARK	SIZE	NUMBER	LENGTH	WEIGHT	SHAPE
PIER STEEL					
P9a	1⅛"□	16	35'-0"	2410	Str.
P9b	1⅛"□	24	10'-6"	1090	Bt.
P9c	1⅛"□	16	20'-0"	1380	Bt.
P8a	1"□	30	26'-0"	2650	Str.
P8b	1"□	30	24'-0"	2450	Str.
P8c	1"□	60	8'-6"	1740	Bt.
P7a	1"ø	24	22'-9"	1460	Str.
P7b	1"ø	16	9'-9"	420	Bt.
P7c	1"ø	32	19'-0"	1630	Str.
P4a	⅝"ø	96	9'-9"	980	Bt.
P4b	⅝"ø	66	10'-3"	710	Bt.
P3a	¾"□	144	7'-6"	920	Bt.
P3b	¾"□	48	10'-0"	410	Bt.
P3c	¾"□	56	11'-6"	550	Bt.
P3d	¾"□	40	12'-6"	430	Bt.
P3e	¾"□	80	6'-0"	410	Bt.
ABUTMENT STEEL					
C8a	1"□	52	29'-0"	5130	Str.
C8b	1"□	20	19'-0"	1290	Bt.
C7a	1"ø	30	12'-0"	960	Bend in Field
C5a	¾"ø	204	7'-0"	2150	Bt.
C5b	¾"ø	144	12'-0"	2600	Bt.
C5c	¾"ø	204	7'-9"	2380	Str.
C5d	¾"ø	36	9'-6"	510	Str.
C5e	¾"ø	20	17'-3"	520	Bt.
C4a	⅝"ø	40	22'-0"	920	Str.
C4b	⅝"ø	10	16'-9"	170	Bt.
C4c	⅝"ø	10	17'-0"	180	Bt.
C4d	⅝"ø	16	9'-0"	150	Str.
C4e	⅝"ø	16	7'-9"	130	Bt.
C4f	⅝"ø	8	11'-0"	90	Str.
C4g	⅝"ø	8	8'-0"	70	Str.
C4h	⅝"ø	8	6'-6"	50	Str.
C4i	⅝"ø	8	4'-6"	40	Str.
C4j	⅝"ø	20	5'-9"	120	Str.
	TOTAL	REINF.	STEEL	92,380	



F.A.P. FA-586-F(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING STEEL LIST

BRIDGE Nº BR-52-129
OVER
RED OAK CREEK

BROWN COUNTY S.H. 7
SECTION - RIPLEY (Br.) STA. 51+39

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.F.	A.J.F.	G.W.S.	J.A.C.	C.V.S. H.H.C.	6/5/39	

SUMMARY QUANTITIES

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR
10	OHIO	586 F (1)	1939

S.H 7 BROWN — Sec. RIPLEY (pt) COUNTY

TREE REMOVAL

SHEET Nº	TREE REMOVAL UNITS
3	13
4	16
5	13
TOTAL	42

DRIVEWAYS

SHEET Nº	ITEM Nº	7" Reinf. Conc. Pavt. Sq. Yds	Agg. I-17 Cu. Yds.	12" PIPE LIN. FT.
5	1-A to 2-A	20	7	32
3	1-A to 2-A	51.2	10	
TOTALS		71.2	17	32

SIDEWALK REMOVAL

SHEET Nº	ITEM Nº	REMOVE & DISP. CONCRETE WALK. SQ. FT.	REMOVE & STORE FLAGSTONE WALK. SQ. FT.
3	1-B to 5-B	2682	300
5	1-B to 2-B	1139	1120
TOTALS		3821	1420

SEEDING & PROTECTING SHOULDERS SLOPES & DITCHES.

SHEET Nº	SEEDING & PROTECTING SHOULDERS, SLOPES & DITCHES. SQ. YDS.
3	1575
4	4525
5	3200
TOTAL	7300

2000 Sq. Yds deducted for bridge (Sheet No. 4)

PIPE & CATCH BASIN REMOVAL

SHEET Nº	ITEM Nº	REMOVE & DISPOSE CATCH BASINS LUMP		REMOVE & STORE V.S.P.				G. Pipe Conc. Pipe	12" V.S. P. Removed for Reuse	12" V.S. P. Removed for Reuse
		18" CIRC.	3'x3' STONE	8"	10"	12"	18"	10"		
3	1-R	2	3			3/0	6/4	23.4	25	24
5	1-R to 3-R			8	25	27				
TOTALS		2	3	8	25	33.7	6/4	23.4	25	24

APPROACH STEPS & WALKS

SHEET Nº	ITEM Nº	REMOVE & DISPOSE WALK. SQ. FT.		CONCRETE WALK SQ. FT.		CONC. STEPS. LIN. FT.	
		CONC.	FLAGSTONE	4"	7"	7" RISE 12" TREAD-3'6" WIDE	6" RISE
3	1-D	34.5		78.4			
5	1-D to 8-D	64	20	54.25			77
TOTALS		98.5	20	132.65			77

TREE PROTECTION

SHEET NO.	ITEM NO	AGG. FOR TREE ROOT AERATION CU. YDS.	12" MAIN RIP RAP FOR TREE WELL SQ. YDS.
3	1-T	40	11
TOTALS		40	11

STORM SEWERS

SHEET Nº	ITEM Nº	PIPE Pav't. Under 12"	15"	18"	18"x18"x12" Tee UNIT.	Standard Manholes No.1	No.2	No.3 CATCH BASINS UNITS	Nº7 CATCH BASIN UNIT	Nº1 SIDE DITCH INLETS UNITS	CONC. CLASS 'E' CU YDS.	STONE PAVED GUTTER LIN. FT.	STD. No.6 CATCH BASINS UNITS	12" V.S.P. G" Reland Pipe Lin. Ft.	relaid Lin. Ft.
3	1-S	948	76	536	1	1	1	8	3	1			2	16	20
4	1-S to 2-S		37	383		1		2			3.30	140.7			
5	1-S		35	395				2							
TOTALS		948	148	1314	1	2	1	12	3	1	3.30	140.7	2	16	20

ROADWAY EXCAV. & EMBANKMENT

STATION FROM	STATION TO	EXCAVATION CU. YDS.	EMBANKMENT CU. YDS.	EMBANKMENT +20.% CU. YDS.
42+52	58+00	1894	26,780	32,136
Removal of Run-around		8995		
Totals		10,889	26,780	32,136

Borrow (32,136 − 10,889) = 21,247 Cu. Yds.

GUARD RAIL

Sheet No	Item No	Lin. Ft.
6	1-G to 4-G	1296
TOTAL		1296

PROJECT CALCULATIONS

Begin F.A.P. Nº 586-F(1) Sta. 42+41
End F.A.P. Nº 586-F(1) Sta. 58+00
Gross length F.A.P. Nº 586-F(1) 1559.00 Lin. Ft.
No additions or deductions
Net length F.A.P. Nº 586-F(1) 1559.00 Lin. Ft. or 0.295 Miles.

7" CONCRETE PAVEMENT 37' WIDE

Gross length pavement	1559.00 Lin. Ft.	
Additions	None	
Deductions		
Bridge Sta. 50+04.69 to Sta. 52+73.31	268.62 Lin. Ft.	
2-25° approach slabs	50.00 Lin. Ft.	
Total deductions	318.62 Lin. Ft.	
Net length pavement 1240.38 × 37 ÷ 9	1240.38 Lin. Ft.	5099.34 Sq. Yds.
Intersection Sta. 42+41		1.22 Sq. Yds.
Intersection Sta. 46+64.37		1.93 Sq. Yds.
Cherry St. approach (See Sh. Nº 23)		1508.69 Sq. Yds.
Driveways (From table)		71.20 Sq. Yds.
7" Reinf. Conc. Sidewalk (See below)		142.23 Sq. Yds.
Total 7" Concrete Pavement		6824.58 Sq. Yds.

TYPE 2-A MODIFIED CONCRETE CURB

Gross length	1240.38 Lin. Ft.	
Deductions		
Intersection Sta 42+41	5.00 Lin. Ft.	
Intersection Sta 46+64.37	40.00 Lin. Ft.	
Total deductions	45.00 Lin. Ft.	
Net length	1195.38 Lin. Ft.	
1195.38 × 2 = 2390.76 − 264.37	DEDUCT FROM STA. 43+80 to Sta. 46+44.37 on Rt. = 2126.39 LIN. FT.	
Additions		
Intersection Sta. 42+41	20.21 Lin. Ft.	
Intersection Sta 46+64.37	23.56 Lin. Ft.	
Cherry St. approach See Sh. Nº 23)	761.22 Lin. Ft.	
TOTAL TYPE 2-A MODIFIED CONC. CURB		2932.12 Lin. Ft.

4"x3'6" CONCRETE SIDEWALK

Begin Sta. 42+50.5 Rt		
End Sta. 43+80 Rt	129.5 Lin. Ft.	
129.5 × 3.5		453.25 Sq. Ft.
Begin Sta. 42+50.5 Lt.		
End Sta. 46+44.37 Lt.	393.87 Lin. Ft.	
393.87 × 3.5		1378.55 Sq. Ft.
Begin Sta 46+84.37 Rt & Lt		
End Sta. 50+04.69 Rt & Lt.	320.32 Lin. Ft.	
320.32 × 2 × 3.5		2242.24 Sq. Ft.
Begin Sta. 52+73.31 Rt & Lt.		
End Sta 58+00 Rt & Lt.	526.69 Lin. Ft.	
526.69 × 2 × 3.5		3686.83 Sq. Ft.
Cherry St. approach (See Sh. Nº 23)		2670.65 Sq. Ft.
Intersection (See Sheet 26)		147.03 Sq. Ft.
Total 4"x3'-6" Concrete Sidewalk		10,255 Sq. Ft.
Deduct for drives 496 Sq. Ft.	Net Total	10,255.33 Sq. Ft.

7"x3'-6" REINF. CONC. SIDEWALK

Begin Sta. 43+80 on Rt.
End Sta. 46+44.37 on Rt. = 264.37 Lin. Ft.
264.37 × 3.5 = 925.3 Sq. Ft.
Add for Intersection (see sheet 26) 11.4 Sq. Ft.
Cherry St. Approach (see sheet 23) 343.0 Sq. Ft.
Total = 1279.7 Sq. Ft.
1279.7 ÷ 9 = 142.2 Sq. Yds. add to T-71 above

GENERAL SUMMARY QUANTITIES

ITEM	QUANT.	UNIT	DESCRIPTION
			ROADWAY
E-1	10,889	CU. YD	Roadway excavation (Unclassified)
E-4	21,247	Cu. Yd.	Borrow (Contractor to furnish)
E-8	43	Sq. Yd.	Removal & disposal of existing concrete pavement
E-9	42	Units	Removal of Trees and Stumps
E-11	133	M. Gal.	Water
I-1	32	Lin. Ft.	18" Pipe for driveways
I-2	948	Lin. Ft.	12" Pipe for storm sewers under Pavement
I-2	143	Lin. Ft.	15" Pipe for storm sewers under Pavement
I-2	1314	Lin. Ft.	18" Pipe for storm sewers under Pavement
I-5	1	Units	18"x18"x12" Tee for storm sewer under Pavement
E-12	25	Lin. Ft.	6" Pipe removed for reuse
E-12	1218	Lin. Ft.	Pipe removed & stored (Various sizes.)
S-1	3.3	Cu. Yd.	Concrete for headwalls. Class 'E'
I-8	1	Unit	Standard No. 2 Manhole
I-8	2	Units	Standard No. 1 Manholes
I-8	12	Units	Catch basins, Std. Nº 3
I-8	3	Units	Catch basins, Std. Nº 7
I-8	1	Units	Side ditch inlets, Std. Nº 1
I-13	10,083	Sq. Ft.	4" Concrete sidewalk. (One course construction)
I-17	17	Cu. Yd.	Aggregate for Traffic bound side Approaches
E-8	3919.5	Sq. Ft.	Remove & dispose concrete sidewalk
E-8	1440	Sq. Ft.	Remove & store Flagstone sidewalk
S-22	Lump	Lump	Remove & dispose of 3 existing catch basins.
I-15	129.8	Lin. Ft.	Standard Strength Flexible Steel Plate Tension Type Guard Rail Sec. 1.6.03 or Steel Beam Type Guard Rail Sec. 1.5.05.
I-14	140.7	Lin. Ft.	Stone paved gutter as per plan
I-G	20	Lin. Ft.	6" Pipe reloid for storm sewer.
I-G	316	Lin. Ft.	12" Vitrified sewer pipe reloid for storm sewer
E-305	7300	Sq. Yds.	Seeding & Protecting Shoulders, Slopes & Ditches.
I-8	2	Units	Standard No. 6 Catch Basins
I-13	77	Lin. Ft.	Concrete steps, 3'-6" wide, 12" tread, 6" rise.
E-12	24	Lin. Ft.	12" V.S. Pipe removed for re-use
L-7	11	Sq. Yds.	Rip Rap for tree protection. (12" Min. thickness)
L-8	40	Cu. Yds.	Aggregate for tree root aeration.
E-201	8995	Cu. Yds.	Borrow for Secondary Construction
T-110	478	Cu. Yds.	Aggregate for Traffic Compacted Surface for Temp. runaround
M-10	6.0	Tons	Calcium Chloride for temporary runaround
			PAVEMENT
T-71	6824.5	Sq. Yds	7" Reinforced Portland Cement Concrete Pavement
T-12	2933	Lin. Ft.	Type 2-A Modified Concrete Curb
S-5	205.5	Sq. Yds.	14" Reinforced Portland Cement Conc. Appr. Slab.
			STRUCTURE OVER 20 FT. SPAN
			For Summary of Quantities see Sheet No. 31

BRO-7H-1.61 (pt.) 31 31