

MICROFILMED
OCT 27 1967
GROUND PHOTO LAB

MICROFILMED
OCT 31 1968

STATE OF OHIO DEPARTMENT OF HIGHWAYS RIC-13 - (10.83-13.95)

F-U-527(9)

FED. RD. DIVISION	STATE	PROJECT	216
2	OHIO	F-U-527(9)	

RICHLAND COUNTY
RIC-13 - (10.83-13.95)
MICROFILMED
OCT 27 1967
GROUND PHOTO LAB

RICHLAND COUNTY CITY OF MANSFIELD WASHINGTON AND MADISON TOWNSHIPS

**1963 SPECIFICATIONS
LIMITED ACCESS**

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

CONVENTIONAL SIGNS

COUNTY LINE	
TOWNSHIP LINE	
SECTION LINE	
CORPORATION LINE	
FENCE LINE	
CENTER LINE	
POLE LINE (TELEPHONE & POWER)	
RAILROAD	
GUARD RAIL (EXISTING & PROPOSED)	
PROPERTY LINE	
RIGHT OF WAY	
RIGHT OF WAY - LIMITED ACCESS	
RIGHT OF WAY AND LIMITED ACCESS	

INDEX OF SHEETS

TITLE SHEET	1	FOUNDATION STABILIZATION	99-100
SCHEMATIC PLAN	2	RETAINING WALL (COOK RD.)	101
TYPICAL SECTIONS	3-4		
SUPERELEVATION TABLES	5-6	INTERSECTIONS AND INTERCHANGES	102-145
GENERAL NOTES, TRAFFIC		CULVERTS AND CHANNELS	146-160
NOTES, SUB-SUMMARIES	7-10	UTILITIES	161-165
GENERAL SUMMARY	11-12	STRUCTURES OVER 20FT. SPAN	166-191
PLAN AND PROFILE	13-32	FENCE	192-195
CROSS SECTIONS	33-35, 35A, 36-37	CENTERLINE PLAT	196-200
DETAILS		RIGHT OF WAY	201-216
GENERAL CONSTRUCTION	98		

LINE DATA

RURAL F-527(9)	PROJECT	WORK	
BEGIN STA. 571+03.00	STA. 571+03.00	STA. 571+03.00	
END STA. 692+91.17	STA. 692+91.17	STA. 692+91.17	
GROSS LENGTH 12,128.17 LIN. FT.		12,128.17 LIN. FT.	
ADD EQUATION			
631+00 BK+630+48.77 Ab. +51.23 LIN. FT.		+ 51.23 LIN. FT.	
ADD APPROACHES*		1342.00 LIN. FT.	
NET LENGTH 12,179.40 LIN. FT.		13,521.40 LIN. FT.	
OR 2,306 MILES		OR 2,560 MILES	
URBAN (PT.) U-527(9)			
BEGIN STA. 692+91.17	STA. 692+91.17	STA. 692+91.17	
CORPORATION LINE STA. 755+02.55	STA. 755+02.55	STA. 755+02.55	
GROSS LENGTH 6211.38 LIN. FT.		6211.38 LIN. FT.	
DEDUCT EQUATION			
693+97.47 BK+694+00 Ab.-2.53 LIN. FT.		- 2.53 LIN. FT.	
ADD APPROACHES*		2973.55 LIN. FT.	
NET LENGTH 6208.85 LIN. FT.		9182.40 LIN. FT.	
OR 1.175 MILES		OR 1,739 MILES	
URBAN (PT.) MUNICIPAL U-527(9)			
CORPORATION LINE STA. 755+02.55	STA. 755+02.55	STA. 755+02.55	
END STA. 762+50	STA. 762+50	STA. 762+50	
GROSS LENGTH 747.45 LIN. FT.		822.45 LIN. FT.	
NO ADDITIONS OR DEDUCTIONS			
NET LENGTH 747.45 L.F.=0.11 Mi.		822.45 L.F.=0.155 Mi.	
TOTAL URBAN 6956.30 LIN. FT.		10,004.85 LIN. FT.	
OR 1.317 MILES		1,894 MILES	
TOTAL PROJECT 19,135.70 LIN. FT.		23,526.25 LIN. FT.	
NET LENGTH 3,624 MILES		4,455 MILES	

Sts. 177, 178, 180, 185, and 186 Revised 7-13-64

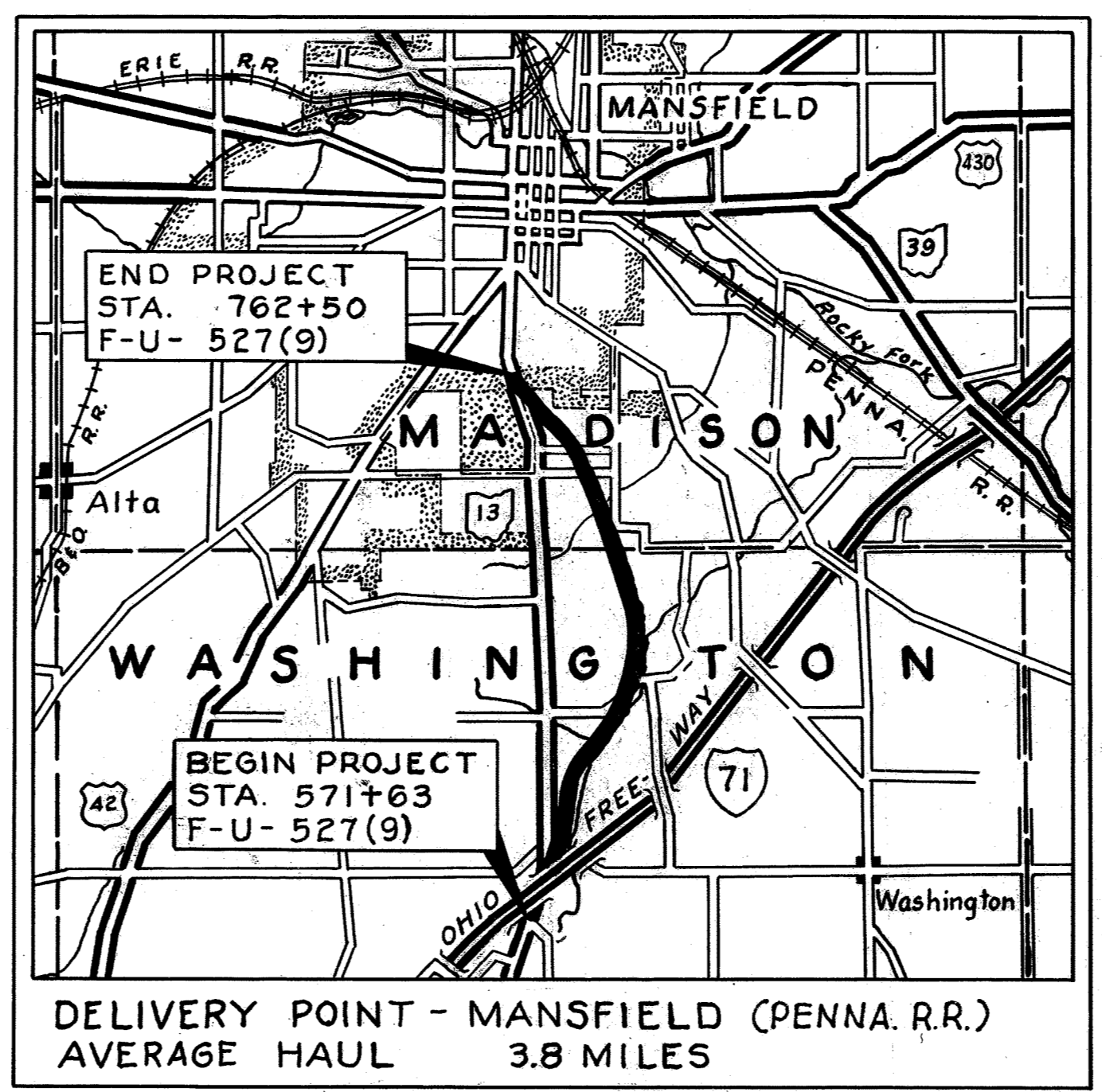
Sheets 167, 169, 170, 174, 176, 177, 178, 179, 180, 181, 182, 184, and 191 Revised 8-14-64.

* See Sheet No. 2

Sheets 175, 176, 177, 178, 179, and 182, Revised 10-29-64

Sheet 179A added 10-29-64

Sheets 179A and 180 revised 11-20-64.



LOCATION MAP

Scale 1 in. = 1 mi.

PORTION TO BE IMPROVED STATE HIGHWAYS
OTHER ROADS

SCALES

PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
PROFILE VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10'
OTHER SHEETS AS SHOWN	

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	
B-T-70-71	11-15-60	I-8CB 2-3&2-4	2-1-63	I-8 M.H.No.2	2-1-63	L-3-A	4-1-50	AS-1-54	7-5-62	C.E.101.04	5-22-56
B-T-71 R	3-2-53	I-8CB 2-5&2-6	2-1-63	I-12	2-1-63	L.J.No.1	7-1-55	SP-53	6-30-61	I-124 Rev.	3-20-61
DR-1	1-3-55	I-8CB No.3	2-1-63	I-14 G	1-22-52	RI-1	7-15-58	FACI-1	2-25-64	L-120 Rev.	1-2-62
F-1	2-1-63	I-8CB No.3-A	2-1-63	I-15 No.1	11-15-60	I-21-23	8-1-56	FACI-2	2-25-64		
F-3	2-1-63	I-8CB No.5	2-1-63	I-15 No.2-A	8-17-60	T-35	1-2-56	I-15 No.6	2-1-63		
G-7.07	4-1-64	I-8CB No.6	2-1-63	I-15 No.4	12-1-54	T.J.	9-12-60	F-2	2-1-63	5-101	7-12-62
HW-E	2-1-63	I-8 I No.1	2-1-63	I-15 No.5B	2-1-63	CSB-2-56(Sh2&3)	2-2-59	SD-1-63 SH1	11-12-63	5-307	8-23-60
I-1	11-15-60	I-8 M.H.No.1	2-1-63	L-1	4-1-50	AR-1-57	4-2-62				
I-8CB 2-2A&B	2-1-63	I-8 M.H.No.1-A	2-1-63	L-3	4-1-50	RB-1-55	2-2-59				

FILE NO.	RICHLAND COUNTY RIC-13-(10.83-13.95)
DATE OF LETTING	
CONTRACT NO.	

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

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

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

Approved: D.H. Zimmer
Date 1-24-63 Division Deputy Director

Approved: A.H. Overman
Date 4-22-64 Engineer of Bridges

Approved: R.N. Ricketts
Date 4-30-64 Engineer of Location and Design

Approved: P.E. Shultz
Date 4-30-64 Deputy Director of Design and Construction

Approved: T.H. Board
Date 4-7-64 Deputy Director of Right of Way

Approved: S.W. Wilam
Date 5-5-64 Deputy Director of Planning and Programming

Approved: _____
Date _____ First Assistant Director

Approved: P.E. White
Date 5/5/64 Director of Highways

**DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS**

APPROVED:

DIVISION ENGINEER DATE

Rev. 5-4-64

MICROFILMED
OCT 31 1988

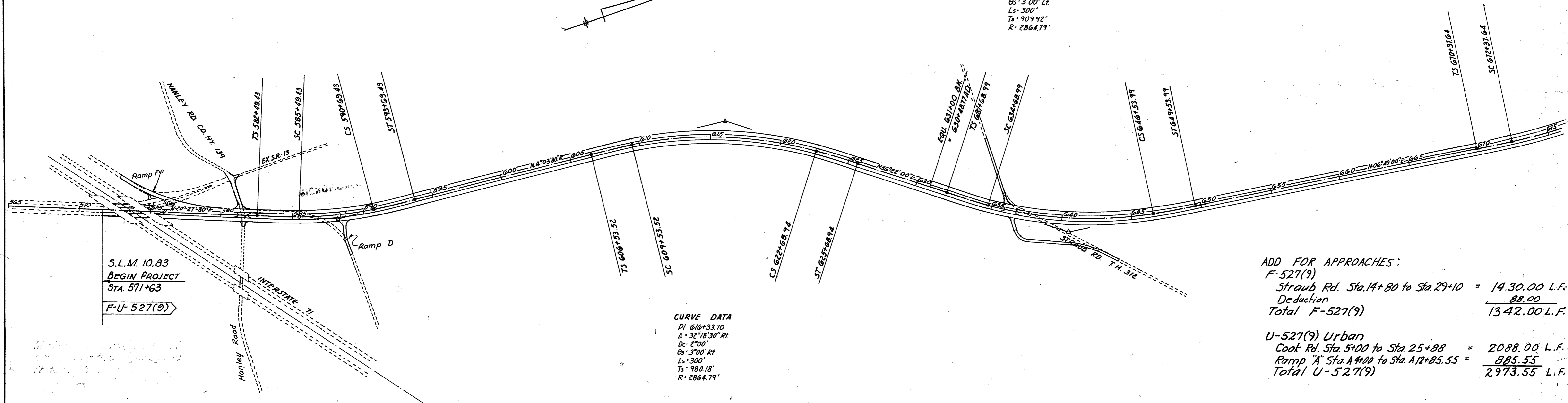
CURVE DATA
 PI 588+12.43
 Δ: 167°42' Lt
 Dc: 2°00'
 Os: 3°00' Lt
 Ls: 300'
 Ts: 563.00'
 R: 2864.79'

CURVE DATA
 PI 640+78.91
 Δ: 29°42' Lt
 Dc: 2°00'
 Os: 3°00' Lt
 Ls: 300'
 Ts: 909.92'
 R: 2864.79'

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

2
216

R/C-137(10.83-13.95)



S.L.M. 10.83
 BEGIN PROJECT
 STA. 571+63
 F-U-527(9)

CURVE DATA
 PI 616+33.70
 Δ: 32°18'30" Rt
 Dc: 2°00'
 Os: 3°00' Rt
 Ls: 300'
 Ts: 980.18'
 R: 2864.79'

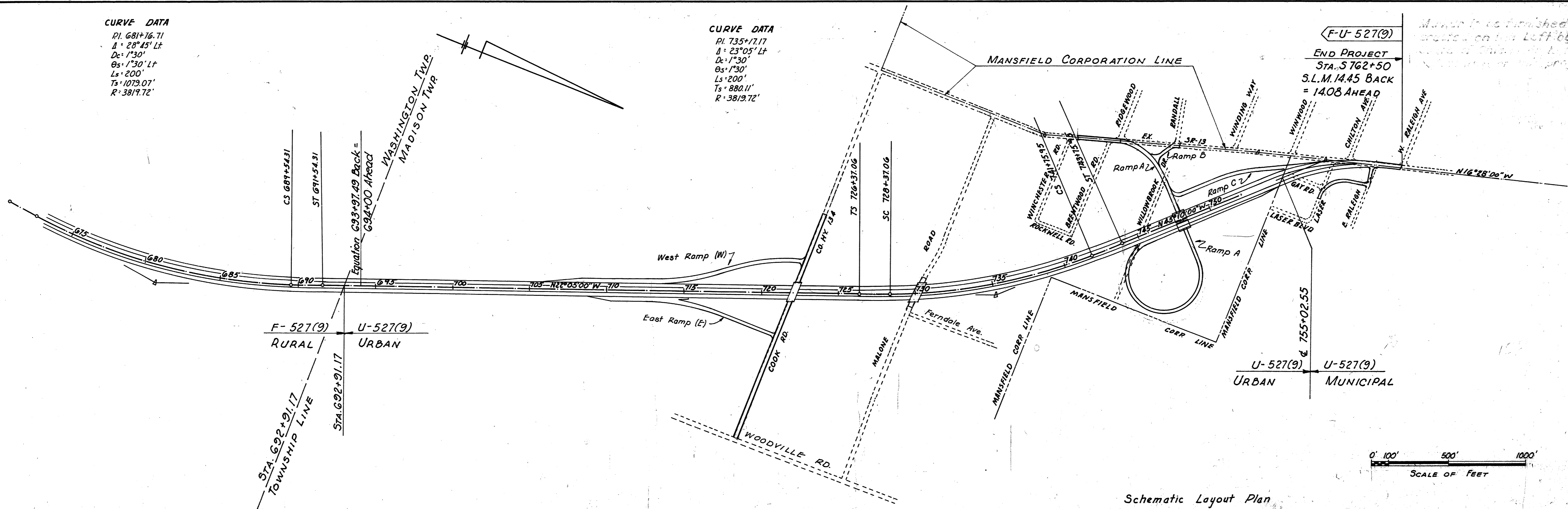
ADD FOR APPROACHES:
 F-527(9)
 Straub Rd. Sta. 14+80 to Sta. 29+10 = 14.30.00 L.F.
 Deduction = 88.00
 Total F-527(9) = 1342.00 L.F.
 U-527(9) Urban
 Cook Rd. Sta. 5+00 to Sta. 25+88 = 2088.00 L.F.
 Ramp "A" Sta. A4+00 to Sta. A12+85.55 = 885.55
 Total U-527(9) = 2973.55 L.F.

CURVE DATA
 PI 681+16.71
 Δ: 28°45' Lt
 Dc: 1°30'
 Os: 1°30' Lt
 Ls: 200'
 Ts: 1079.07'
 R: 3819.72'

CURVE DATA
 PI 735+17.17
 Δ: 23°05' Lt
 Dc: 1°30'
 Os: 1°30'
 Ls: 200'
 Ts: 880.11'
 R: 3819.72'

F-U-527(9)
 END PROJECT
 STA. 5762+50
 S.L.M. 14.45 BACK
 = 1408 AHEAD

Municipal is furnished and
 created on the left by the
 State of Ohio.



F-527(9) RURAL
 U-527(9) URBAN

U-527(9) URBAN
 U-527(9) MUNICIPAL

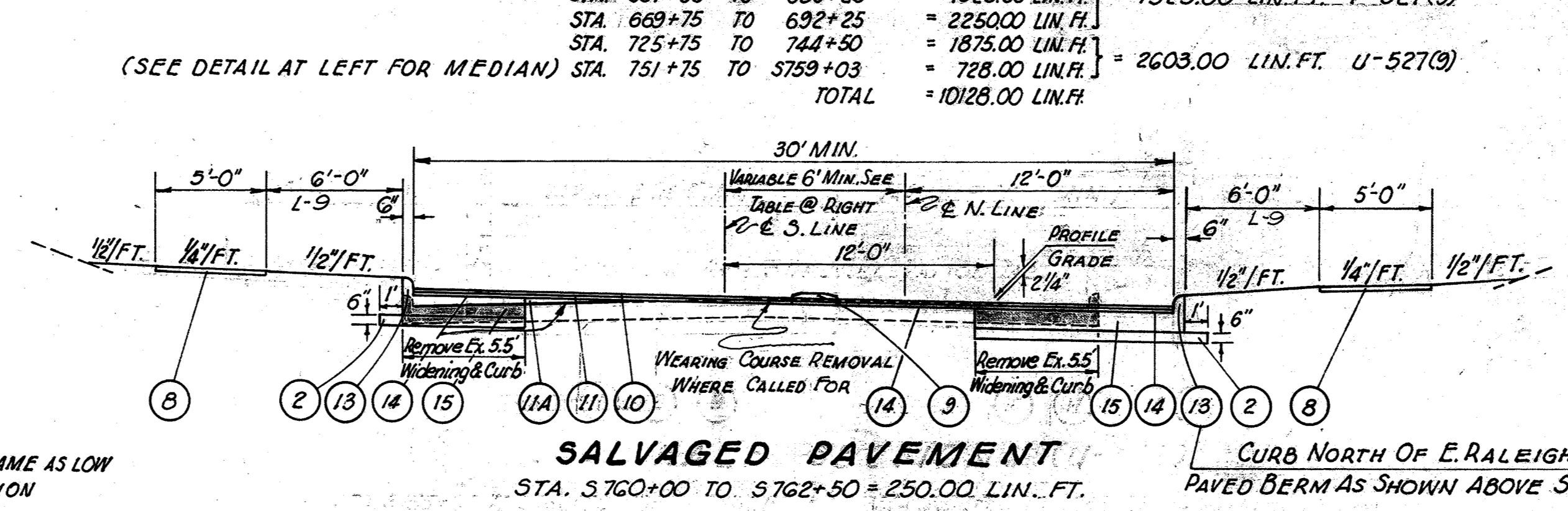
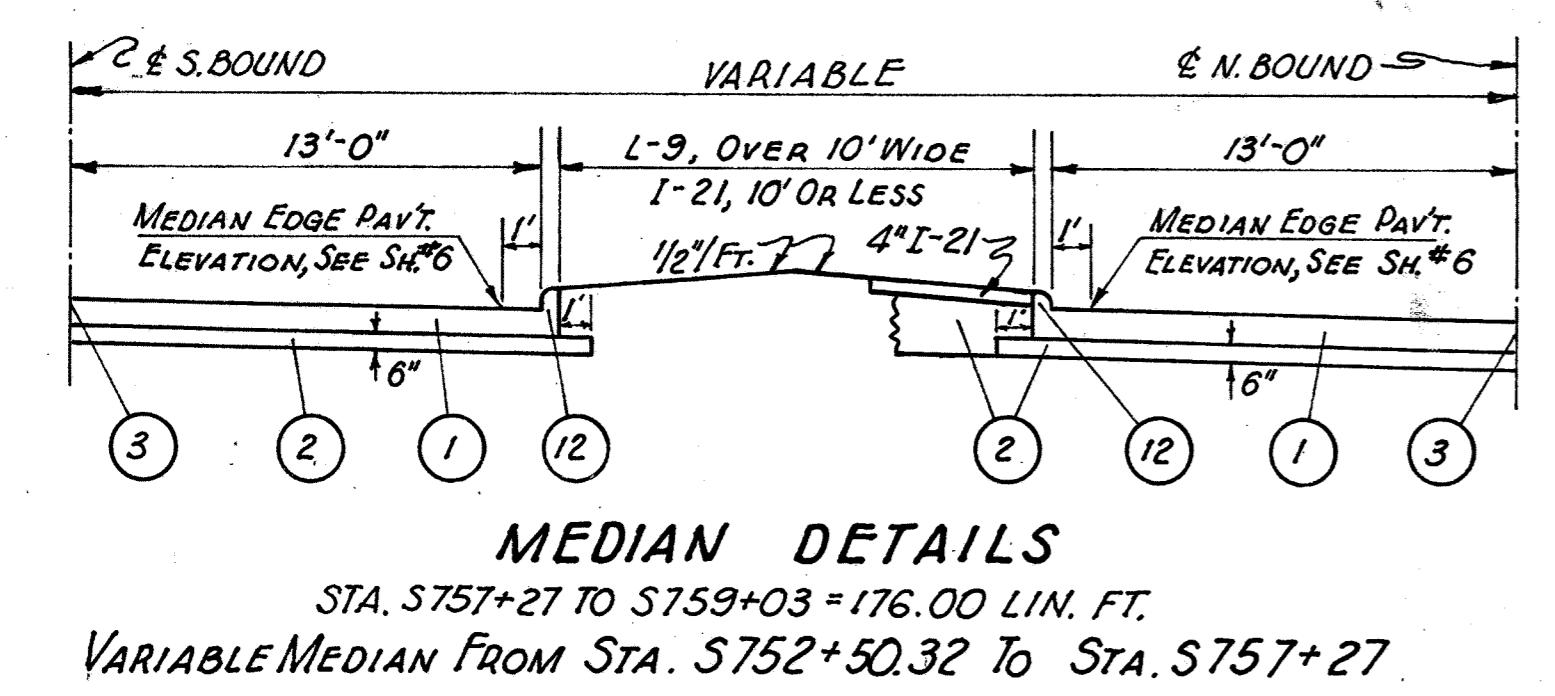
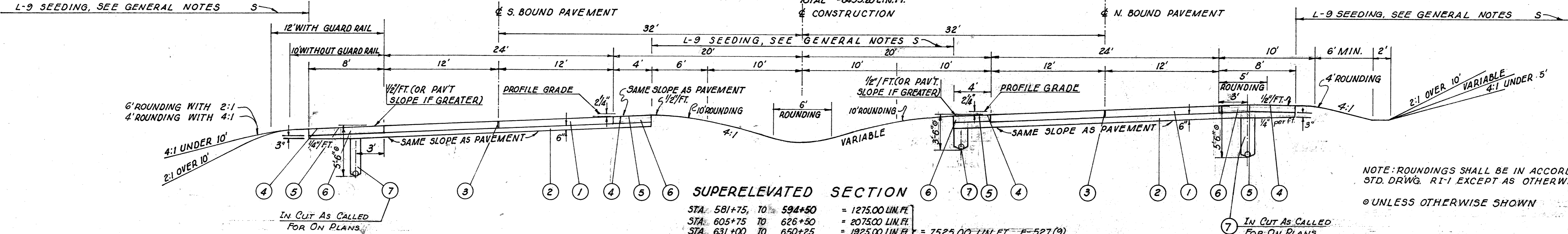
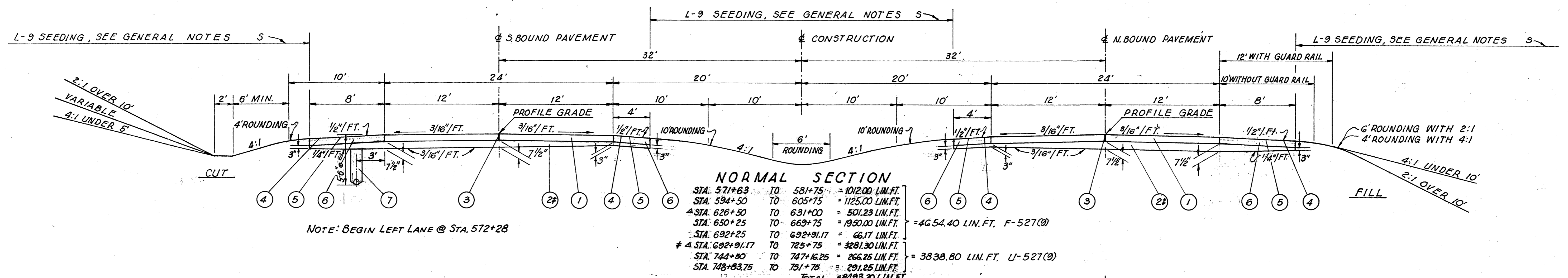
0' 100' 500' 1000'
 SCALE OF FEET

Schematic Layout Plan

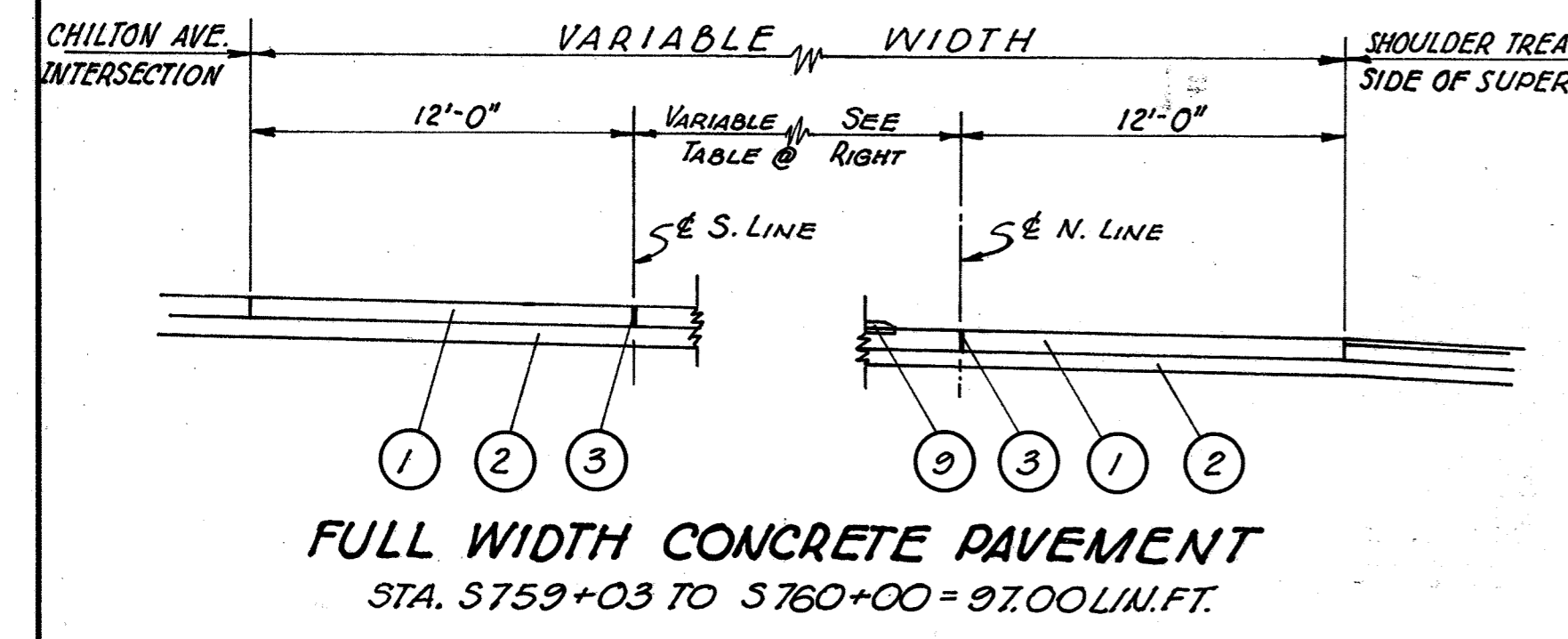
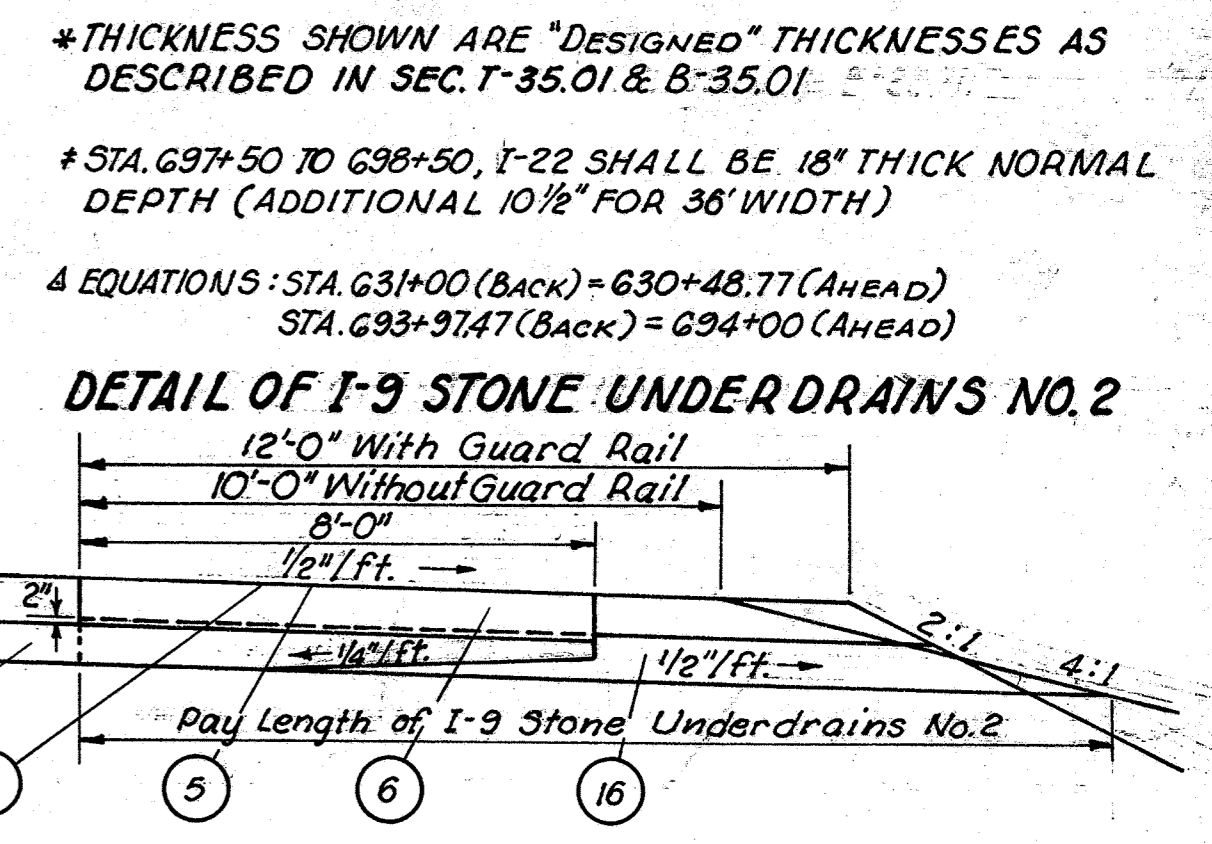
SCALE 1"=330' Rev. 5-4-64

Schematic Diagram

TYPICAL SECTIONS TYPE T-71 Code 7221



STATION	DISTANCE	STATION	DISTANCE
S759+00	29.17'	S761+00	12.67'
+25	27.15'	+1782	11.22'
+50	25.11'	+25	10.63'
+75	23.07'	+50	8.64'
S760+00	21.00'	+75	7.48'
+25	18.93'	S762+00	6.56'
+50	16.86'	+25	6.08'
+75	14.76'	S762+40.14	6.00'



- ⑩ * T-35 1" ASPHALTIC CONCRETE SURFACE COURSE, TYPE C (70-85)
- ⑪ * B-35 1/4" MAX. ASPHALTIC CONCRETE LEVELING COURSE (70-85)
- ⑪A * B-35 0" MIN. ASPHALTIC CONCRETE LEVELING COURSE (70-85)
- ⑫ * T-12 TYPE 2-A CONCRETE CURB
- ⑬ * T-12 TYPE 2-B CONCRETE CURB
- ⑭ * T-30 BITUMINOUS TACK COAT SEC. M-5.5, M/S-2 OR RS-1 OR SEC. M-5.2, RC-1 OR RC-2 AS PER SEC. T-30.02, APPLIED AT THE RATE OF 0.10 GAL. PER SQ. YD.
- ⑮ * B-70 8" PORTLAND CEMENT CONCRETE BASE COURSE
- ⑯ * I-9 STONE UNDERDRAINS NO. 2, WHERE DIRECTED BY THE ENGINEER (SEE GENERAL NOTES SHEET NO. 10)

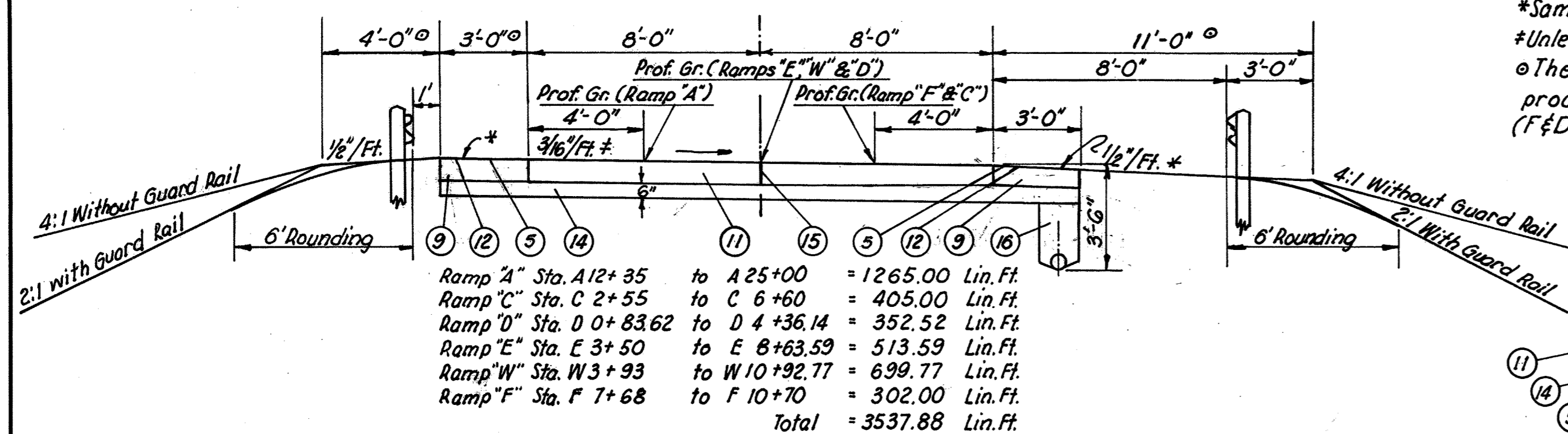
- ① 451 T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- ② I-22 30" SUBBASE (DEPTH AS SHOWN) GRADING "A" OR "B", AS PER PLAN
- ③ STANDARD LONGITUDINAL JOINT
- ④ T-31 BITUMINOUS SURFACE TREATMENT USING 0.008 CU. YD. NO. 6 AGGREGATE PER SQ. YD. AND BITUMINOUS MATERIAL APPLIED AT THE RATE OF 0.30 GAL. PER SQ. YD.; SEC. M-5.7, RT-8 OR RT-9 OR SEC. M-5.12 CBAE-3
- ⑤ T-30 BITUMINOUS PRIME COAT, SEC. M-5.7, RT-2 OR RT-3, APPLIED AT THE RATE OF 0.40 GAL. PER SQ. YD.
- ⑥ B-19 9" AGGREGATE BASE COURSE
- ⑦ T-1 6" PIPE CLASS I-3 (WHERE CALLED FOR ON PLANS)
- ⑧ I-13 4"(6" @ DRIVES) CONCRETE SIDEWALKS (SHOWN ON PLANS)
- ⑨ I-23 PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS

TYPICAL SECTIONS

R/C-13-(10.83-13.95)

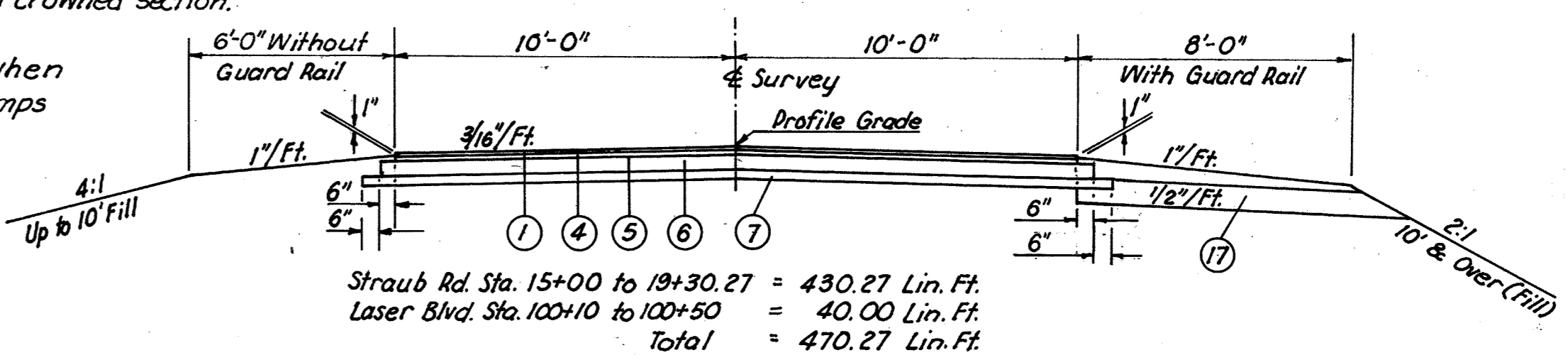
Note: Rounding at slope intersections shall be in accordance with Standard Drawing R-1 unless otherwise shown. For Ditches, see Standard Drawing R-1.
 *Same slope as pavement where superelevation occurs, 1/2"/ft. for normal crowned section.
 *Unless Superelevated, See Superelevation Tables.
 *The 11" normal berm is always on the right and 7" on the left when proceeding in the direction of traffic flow. On Interstate ramps (F&D) the width shall be 12' and 8' respectively.

RAMP SECTION

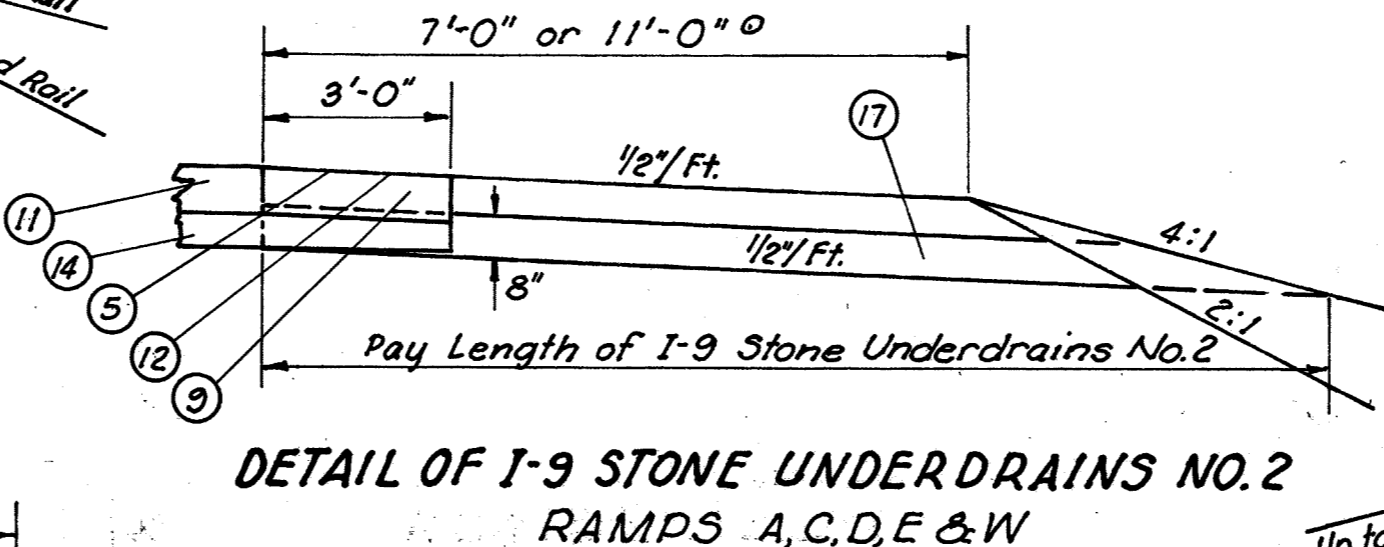


Ramp "A" Sta. A12+35 to A25+00	= 1265.00 Lin.Ft.
Ramp "C" Sta. C2+55 to C6+60	= 405.00 Lin.Ft.
Ramp "D" Sta. D0+83.62 to D4+36.14	= 352.52 Lin.Ft.
Ramp "E" Sta. E3+50 to E8+63.59	= 513.59 Lin.Ft.
Ramp "W" Sta. W3+93 to W10+92.77	= 699.77 Lin.Ft.
Ramp "F" Sta. F7+68 to F10+70	= 302.00 Lin.Ft.
Total	= 3537.88 Lin.Ft.

STRAUB ROAD & LASER BLVD.

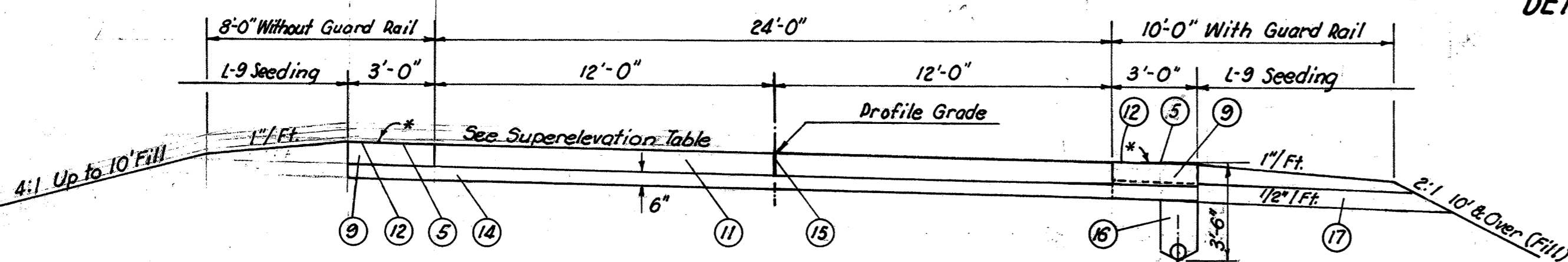


Straub Rd. Sta. 15+00 to 19+30.27	= 430.27 Lin.Ft.
Laser Blvd. Sta. 100+10 to 100+50	= 40.00 Lin.Ft.
Total	= 470.27 Lin.Ft.



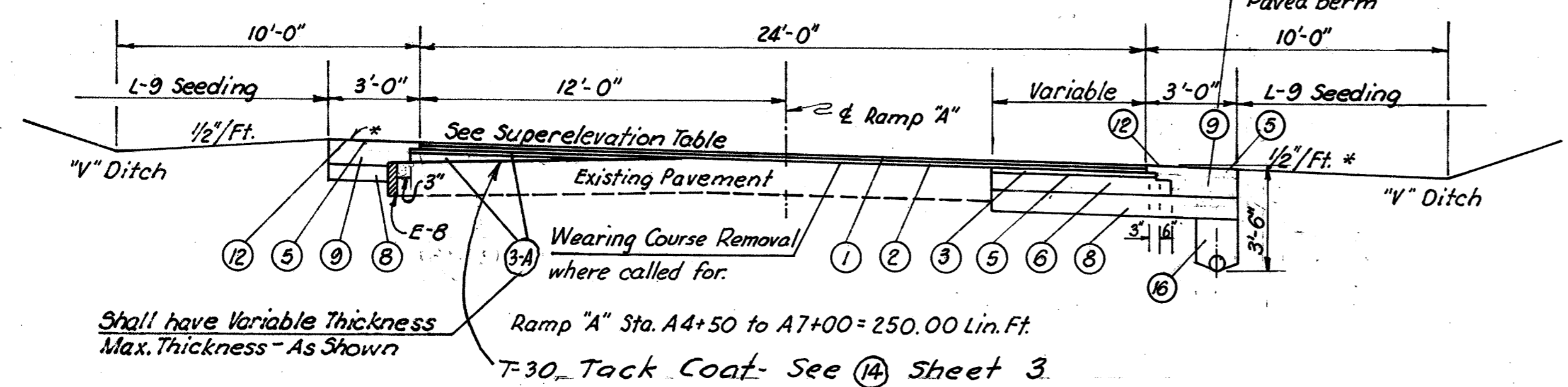
DETAIL OF I-9 STONE UNDERDRAINS NO. 2
RAMP A, C, D, E & W

RAMP "A" - TWO LANE PORTION - TYPE T-71



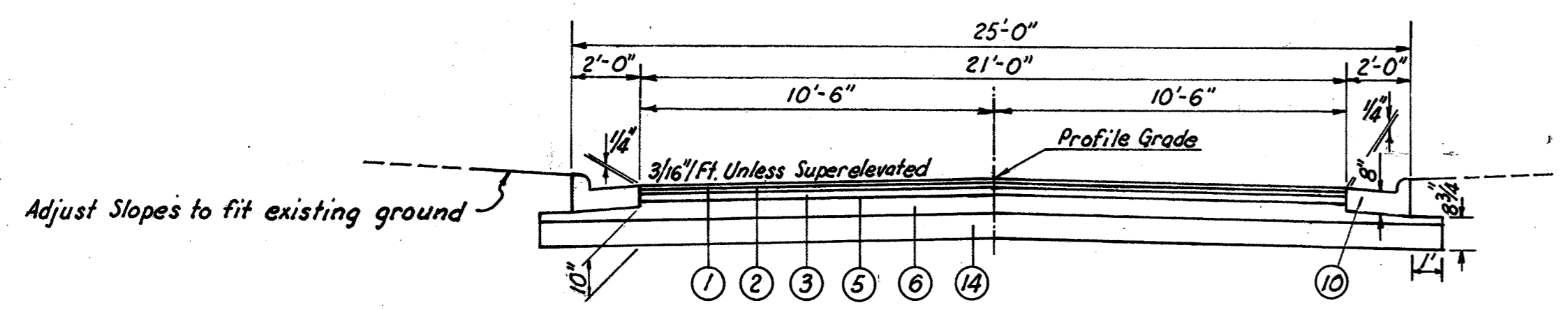
Sta. A7+00 to A10+80	= 380.00 Lin.Ft.
Transition, See Sheet No. 139 - Sta. A10+80 to A12+35	= 155.00 Lin.Ft.
Total (Including Transition)	= 535.00 Lin.Ft.

RAMP "A" - TWO LANE PORTION - TYPE T-35



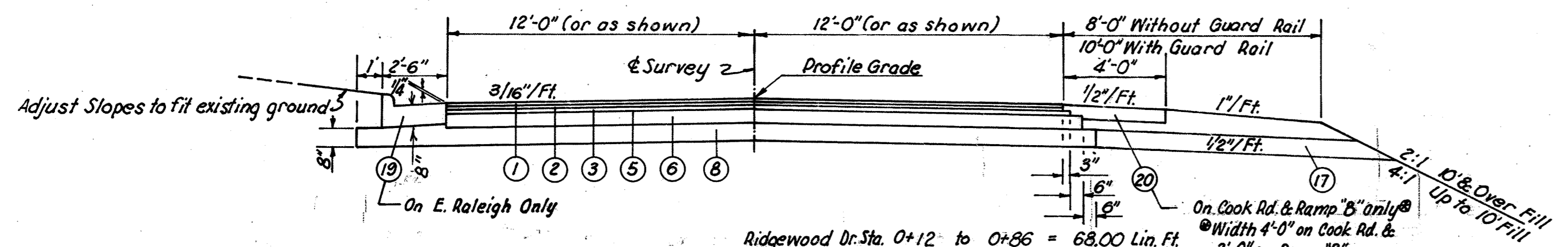
Ramp "A" Sta. A4+50 to A7+00 = 250.00 Lin.Ft.
 T-30 Tack Coat - See (14) Sheet 3.

MALONE ROAD



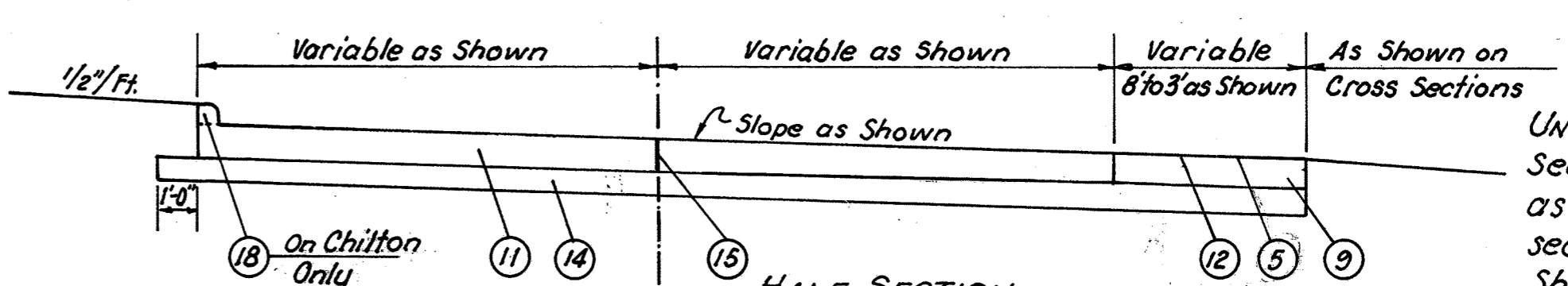
Sta. 10+50 to 11+44.81	= 94.81 Lin.Ft.
Sta. 14+12.50 to 14+54	= 41.50 Lin.Ft.
Total	= 136.31 Lin.Ft.

COOK, E. RALEIGH, BRENTWOOD, RIDGEWOOD AND RAMP "B"



Cook Rd. Sta. 6+00 to 13+70.60	= 770.60 Lin.Ft.
Cook Rd. Sta. 16+29.40 to 25+88	= 958.60 Lin.Ft.
Brentwood Ave. Sta. 0+12 to 0+75	= 63.00 Lin.Ft.
Ridgewood Dr. Sta. 0+12 to 0+86	= 68.00 Lin.Ft.
Ramp "B" Sta. 80+55 to B1+90	= 135.00 Lin.Ft.
E. Raleigh Ave. Sta. 15+25 to 16+94.90	= 169.90 Lin.Ft.
Total	= 2165.10 Lin.Ft.

INTERSECTION FLARES & ADDED LANES



UNDERDRAINS for this Section shall be the same as for adjacent pavement see Typical Sections on Sheet No. 3

Ramp "A" Sta. A25+00 to A28+35.02	= 335.02 Lin.Ft.
Ramp "B" Sta. B0+12 to B0+55	= 43.00 Lin.Ft.
W. Ramp Sta. 705+89.10 to W3+93	= 950.00 Lin.Ft.
W. Ramp Sta. W10+92.77 to W11+34.07	= 41.30 Lin.Ft.
E. Ramp Sta. 708+97.70 to E3+50	= 665.00 Lin.Ft.
Chilton Sta. 0+12 to 0+45	= 33.00 Lin.Ft.
E. Ramp Sta. E8+63.59 to E9+03.76	= 40.17 Lin.Ft.
Hanley Rd. Sta. 9+00.00 to 9+52.82	= 52.82 Lin.Ft.
Hanley Rd. Sta. 10+44 to 11+00	= 56.00 Lin.Ft.
Ramp "D" Sta. D0+44 to D0+83.62	= 39.62 Lin.Ft.
Straub Rd. Sta. 19+30.27 to 19+87	= 56.73 Lin.Ft.
Straub Rd. Sta. 20+86.66 to 21+40.64	= 53.98 Lin.Ft.
Ramp "F" Sta. F10+70 to F15+00	= 430.00 Lin.Ft.
Turning Lanes Sta. 577+94.20 to 586+14.10	= 819.90 Lin.Ft.
Turning Lanes Sta. 632+10.70 to 641+67.80	= 957.10 Lin.Ft.
Ramp "C" Sta. C0+00 to C2+55	= 255.00 Lin.Ft.
Ramp "C" Sta. C6+60 to C10+75.85	= 415.85 Lin.Ft.
Total	= 5244.49 Lin.Ft.

- (3-A) B-35 0" Min. Asphaltic Concrete Leveling Course (70-85)
- (1) A-T-35 1 1/4" Asphaltic Concrete Surface Course, Type "C" (70-85)
- (2) A-B-35 1 1/4" Asphaltic Concrete Leveling Course (70-85)
- (3) A-B-35 1 1/2" Asphaltic Concrete Leveling Course (70-85)
- (4) A-B-35 1 3/4" Asphaltic Concrete Leveling Course (70-85)
- (5) T-30 Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3, Applied at the rate of 0.4 Gal. per Sq. Yd.
- (6) B-19 6" Aggregate Base Course
- (7) I-22 4" Subbase, Grading "A" or "B" As per Plan
- (8) I-22 8" Subbase, Grading "A" or "B" As per Plan
- (9) B-19 3" Aggregate Base Course
- (10) I-12 Type 4 Combination Curb and Gutter
- (11) T-71 9" Reinforced Portland Cement Concrete Pavement
- (12) T-31 Bituminous Surface Treatment Using 0.008 Cu. Yd. No. 6 Aggregate per Sq. Yd. and Bituminous Material Applied at the rate of 0.30 Gal. per Sq. Yd., Sec. M-5.7, RT-8 or RT-9 or Sec. M-5.12 CBAE-3
- (14) I-22 6" Subbase (Unless Otherwise Shown) Grading "A" or "B" As per Plan
- (15) Standard Longitudinal Joint
- (16) I-1 6" Pipe Class I-3 Underdrains, where Called for on Plans
- (17) I-9 Stone Underdrains No. 2 Where Directed by the Engineer (See General Notes Sheet No. 10)
- (18) I-12 Type 2-A Concrete Curb, Where Called for on Plans
- (19) I-12 Type 2 Combination Curb and Gutter.
- (20) I-18 6" Stabilized Crushed Aggregate Shoulders and Approaches (See note in Proposal for additional stabilization of upper 3" of this item with Calcium Chloride)

Thicknesses Shown Are "Designed" Thicknesses As Described in Sec. T-35.01 & B-35.01.

GENERAL NOTES

RIC-13-(10.83-13.95)

DESIGN SPEED: The geometrics for this project have been planned for a design speed of 60 miles per hour.

FIELD OFFICE: The Contractor shall, in accordance with Sec. 5-0.01(b) provide, for the exclusive use of the State's employees, a suitable field office having a minimum of 500 sq. ft. of floor space. The Contractor shall have a telephone installed and maintained in this office during construction of this project. The Contractor shall also provide and install wiring and outlets suitable for connecting electric lights and office equipment in this field office and provide 110-Volt alternating current to the office during the entire period of construction of this project. The office is to be constructed and situated in such a manner so that it can remain intact for the entire duration of the construction.

UNDERGROUND UTILITIES: The location of the underground utilities shown on the plans have been obtained by diligent field checks and searches of available records. It is believed that they are essentially correct, but the State of Ohio makes no guarantee as to their accuracy or completeness.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS: The rounded corners shown on Standard Drawing RI-1, as modified by the typical sections, apply to all cross sections, even though otherwise shown on these plans.

ESTIMATED QUANTITIES: Specific locations and usage of estimated quantities set up on this plan to be used as directed by the Engineer shall be made a matter of record by incorporation into the final change order governing completion of this project.

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

ITEM I-15 GUARD RAIL REMOVED AND STORED AS PER PLAN: This item shall include storage only of the rail elements and incidental hardware. The posts shall become the property of the Contractor and be disposed of by him.

SEEDING: Quantities for seeding are calculated for the soil areas between lines ten (10) feet outside the work limits, as shown on the cross sections, or to the right of way line if such line is less than ten (10) feet from the work limits. Enclosed areas at Cook Rd. & Ramp "A" Interchanges shall be plowed, harrowed and dragged to a smooth grade before being seeded entirely; the cost to be included in Item L-9 Seeding and Protecting, As per Plan.

SEEDING FORMULA: The following seed mixture shall, in lieu of the mixtures listed in Section L-9.11, be used throughout the limits of this project:

60% Creeping Red Fescue, 35% Kentucky Bluegrass, 5% Alsike Clover.

Areas to be seeded or soddled shall be fertilized using commercial fertilizer having a formula of 12-12-12.

REMOVAL OF TREES AND STUMPS: All trees and stumps lying within the construction limits of this project shall be removed under the lump sum price bid for Item E-9, Removal of Trees and Stumps, except that those trees for which protection and preservation work is indicated elsewhere in these plans shall not be removed.

The following is an approximate estimate of the number of trees and stumps to be removed.

SIZES	TREES					STUMPS				
	F-527(9)	U-527(9)			TOTAL	F-527(9)	U-527(9)			TOTAL
		URBAN	MUNICIPAL	TOTAL			URBAN	MUNICIPAL	TOTAL	
12"-18"	656	458	4	462	1118	20	24	6	30	50
18"-24"	179	160	1	161	340	10	10	2	12	22
24"-30"	49	70	2	72	121	4	4	1	5	9
30"-36"	36	46	0	46	82	6	2	2	4	10
36"-42"	26	31	0	31	57	6	1	0	1	7
42"-48"	14	6	0	6	20	0	0	0	0	0
OVER 48"	3	11	0	11	14	1	0	0	0	1

The above estimate is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps outside of the limits of construction but within the right of way and/or easement lines. Payment for the removal of these additional trees or stumps shall be included in the lump sum price bid for Item E-9, Removal of Trees and Stumps. All Elm Trees, living or dead, within the R/W Limits shall be removed.

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS: After the existing pavement has been removed, the old roadway shall be plowed, harrowed, and dragged to a smooth grade, the old ditches filled, and the entire area sloped to drain and left in a neat condition ready for seeding. Payment for this work shall be included in the unit price bid for Pavement Removal, Item E-8. Seeding shall be measured and paid for in accordance with Item L-9.

DRAINAGE OF BASE MATERIAL:

Where the base material is drained by I-9 Stone Underdrains, the Contractor shall finish, seed, and mulch the slopes so as not to impede drainage of the base material.

SANITARY: No drains, either existing or proposed, carrying domestic waste shall be connected to any portion of the proposed drainage system of this project.

CONNECTIONS TO EXISTING PIPE: At places where the plans provide for proposed drainage pipe to be connected to existing pipes, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed pipe. The cost of this operation shall be included in the unit price bid for the pertinent pipe item.

ELONGATION OF C.M.P.: The 48" Corrugated Metal Pipe at Station 645+65 shall be shop elongated to produce and maintain a 5% vertical elongation.

PIPE CONNECTIONS TO AND BENDS IN CORRUGATED METAL PIPE: Connections of proposed longitudinal drainage to and bends in Corrugated Metal Structures shall be shop fabricated. The stub shall meet the requirements of Sec. M-6.4 and have a minimum length of two feet and a minimum gage of 14.

EROSION CONTROL: Items I-10, I-14, and L-10 are provided in these plans for erosion control. Rock of a stable nature will not be removed in order to place any of these items. The Engineer will check and nonperform quantities or adjust locations and quantities for these items where indicated by field conditions during construction.

HEAVY EQUIPMENT: The Contractor shall exercise care in the use of heavy equipment over finished work and will be required to remove and replace any completed work destroyed thereby. Culverts shall be backfilled to a height of four feet before loaded earthmoving equipment is permitted to cross the trench.

Any additional fill and subsequent excavation required to provide this minimum cover shall be made at no additional cost to the State. Heavy equipment shall not be operated over any completed layer of embankment, compacted subgrade or subbase if such operation tends to destroy the soil structure or pipe underdrains; however, if such operation cannot be avoided, the Contractor will be required to reduce the size of loads to an extent that damage does not occur.

CALCULATIONS: All calculations are on file in the Division office.

PAVEMENT REMOVAL: Pavement removal quantities, Item E-8, shall consist of rigid type pavement only. Non-rigid type pavement removal is measured and paid for as E-1, Roadway Excavation. Areas of rigid type pavement removal are indicated on the plan and profile sheets by shading.

MATERIALS REMOVED: Under Item E-12 shall become the property of the Contractor. The Contractor may, in lieu of pipe removal, uncover the pipe, break it, and compact backfill in accordance with Sec. E-1.08 of the Specifications.

CATCH BASIN OUTLETS: Where smooth pipe is used for Catch Basin Outlets, the female or "bell" end of the pipe shall be retained to furnish better hydraulic conditions. The female end of the pipe shall be built flush with the inner face of the basin and any adjustment in pipe length should be made at the male end.

ENCASING EXISTING PIPE AS PER PLAN: This special item shall consist of encasing existing pipe as per details on Sheet No. 162. The bid item shall be per linear foot of encasement which shall include excavating to and along the sides of the existing pipe (except the bottom), cleaning the existing pipe, encasing to plan dimensions, backfilling, compacting, wasting surplus materials, and any incidentals required to complete this item.

MAINTENANCE OF SEWER FLOWS: The Contractor shall conduct his operations so as to maintain at all times sewer flows through existing facilities to remain in place and through existing facilities to be replaced until new facilities are completed and placed in use.

Payment for any additional costs involved in maintaining these flows by pumping or by any other means approved by the Engineer shall be included in the unit prices bid for the respective pipe items.

I-22 SUBBASE GRADING "A" OR "B" AS PER PLAN: Material for this item shall meet the requirements of grading "A" or "B" of Sec. I-22.02 except that for either grading, no more than 10% of the material shall pass a No. 200 Sieve after all operations of placing and compacting have been completed.

ITEM E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN: Material furnished for this item shall be as defined in Sec. E-1.02 except that at least 75 percent by weight of the grains or particles shall be retained on a No. 200 sieve. See Sheet No. 99.

E-4 BORROW USING GRANULAR MATERIAL AS PER PLAN INCLUDING COST OF EXCAVATING UNSUITABLE MATERIAL: Shall consist of removing the unsuitable material between ^{Sta. 585+00 and Sta. 597+50} ~~Sta. 585+00 and Sta. 597+50~~, (approximate depth shown on cross sections) and replacing with granular material, as modified above, to the approximate elevation of the existing ground. The remainder of the roadway embankment shall be standard as per Sec. E-1.08. See sheet No. 100 for total excavation method of swamp treatment. The cost of excavating the unsuitable material, furnishing and placing the granular material and incidentals required to complete this item shall be paid for at the contract unit price bid per cubic yard.

TRAFFIC MAINTENANCE: Traffic shall be maintained as shown on Sheet 8. The cost of all temporary pavements which are covered on Sheets 8, 15, 102, 104, & 128 shall be included in the lump sum bid for Item S-15 Temporary Runaround Class "B".

The following estimated quantities are provided in the General Summary for maintaining local traffic as directed by the Engineer:

- 100 Cu.Yds. T-10 Traffic Compacted Surface Course for Maintaining Traffic.
- 2 Tons I-4 Calcium Chloride, For Dust Control.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS: The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following locations:

1. Sta. 571+60 Rt.
2. Sta. S762+50 Lt.

Sign details shall be as specified on Standard Drawing FACI-1 CODE N-54(1)96(2). The signs shall be erected in accordance with Standard Drawing FACI-2. Additional requirements shall be in accordance with notes in the proposal.

Dust Control: The following quantities are provided for Dust Control to be used as directed by the Engineer.

- 7 Tons I-4 Calcium Chloride for Dust Control.
- 350 M-Gal. I-4 Water for Dust Control.

SUMMARY OF FENCE QUANTITIES - LIN. FT.

FROM SHEET NO.	I-25 TYPE 39 WOVEN WIRE F-527(9)	I-26 CHAIN LINK FENCE U-527(9)		
			URBAN	MUNIC.
192	4993			
199	3668			
194		880	2713	
195			6584	570
Totals	8661	880	9297	570

ROADWAY EARTHWORK - Cu. Yds.

	From Sheet	Excav.	Emb.	Emb.+20%
F-527(9) RURAL	14	2,424	8,664	10,397
	15	2,881	31,111	37,333
	16	5,677	46,792	56,150
	17	11,711	12,021	14,425
	18	75,970	2,436	2,923
	19	6,991	67,401	80,881
	20	21,754	81,871	98,245
	21	2,210	73,312	87,974
	22	17,579	298	358
	23	102,203	824	989
	24	125,376	00	00
	25	60,592	00	00
	36	9,140	13,086	15,703
Total	504,528	332,316*	407,778	
U-527(9) URBAN	25	82,377	2,103	2,620
	26	1,721	109,346	131,935
	27	8,289	77,766	93,319
	28	93,090	6,830	8,196
	29	39,152	33,079	39,695
	30	9,222	170,692	204,830
	120	414	17,258	20,710
	121	2,476	13,971	16,765
Total(Urban)	236,741	431,725	510,070	
U-527(9) MUNICIPAL	30	4,652	67	80
	31	15,281	972	1166
	Total(Municipal)	19,933	1039	1,246
PROJECT TOTAL	761,202	772,080	926,494	

	From Sheet	E-3	Channel Fill	Fill+20%
F-527(9)	147	3664	801	
	150	830		
	152	270	474	
	155	430	8	
	155	112	1	
	157	356	219	
U-527(9)	159	1398	1624	
	Total	7060	3127	3752

Est. Material Available to Reduce Borrow 7060-3752=3308 Cu.Yds.
*Includes 1,500 Cu. Yds. for Counterbarr in Vertical Sand Drain Area, carried from sheet 29

TOTAL PROJECT BORROW

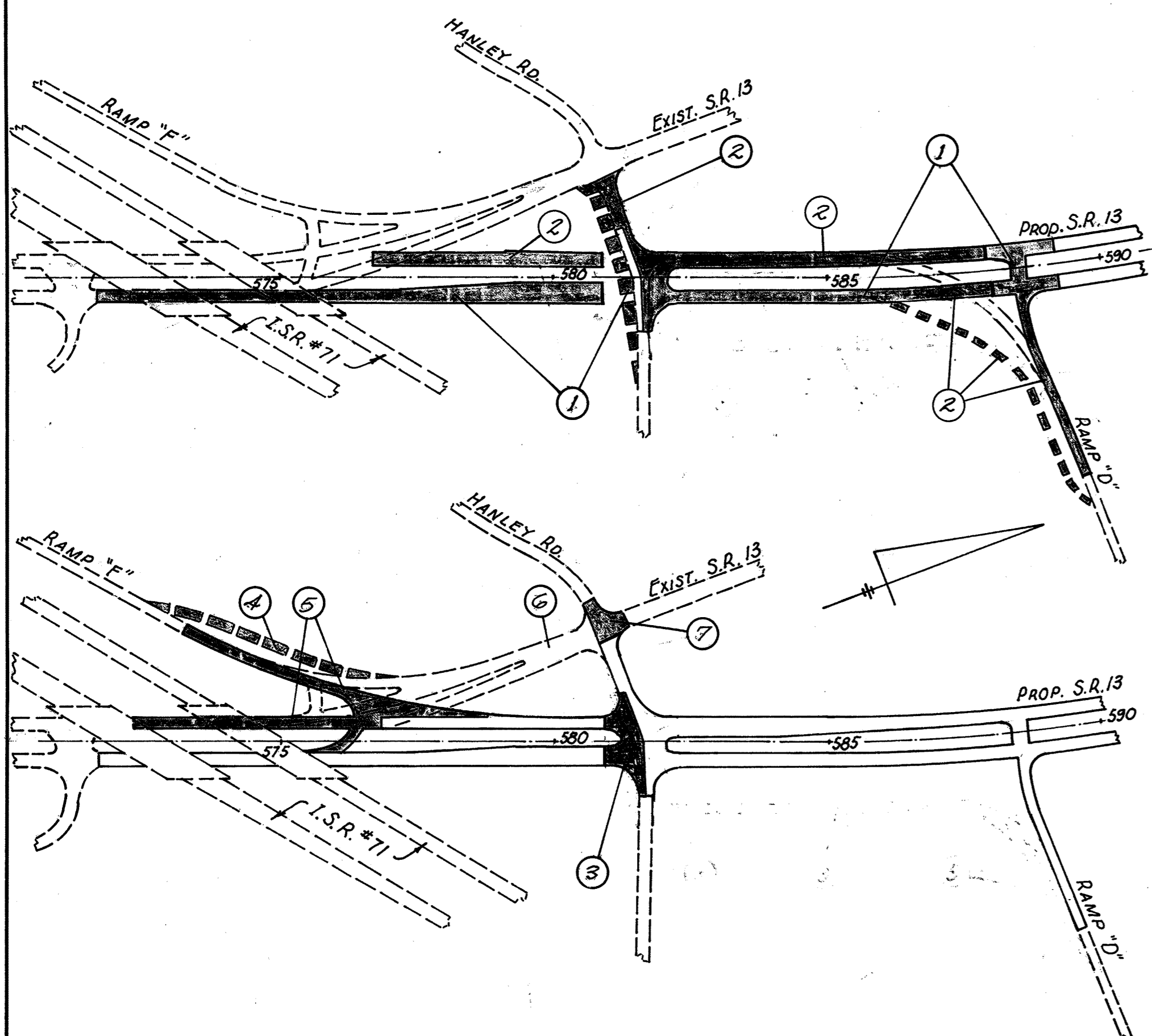
Roadway Earthwork	926,494 - 761,202	= 165,292 Cu.Yd.
Est. Available Material from Channel Excavation		= -3308 Cu.Yd.
Est. Available Material from 6" Pipe Class I-3		= -1,550 Cu.Yd.
ESTIMATED TOTAL BORROW		= 160,434 Cu.Yd.

TRAFFIC NOTES

FED. RD. DIVISION	STATE	PROJECT	8 216
2	OHIO		

RIC-13-(10.83-13.95)

SOUTH END OF PROJECT



GENERAL (CONT.)

It is the intent that S.R. 13 traffic be maintained on existing S.R. 13 without disturbance for as long as is reasonably possible. Therefore the project from Sta. 582+10± to Sta. 575+00 shall be substantially completed prior to performing any work on the connections at the North and South ends of the project that would disturb traffic.

TEMPORARY RUN-AROUND ROAD DETAILS

- Ramp "F" Temporary Road, See Sheets No. 102 & 103
- Ramp "D" Temporary Road, See Sheets No. 15, 35 & 109
- Malone Road Run-around, See Sheet No. 128
- Temporary Median Cross-over (Sta. 156+75), See Sheet No. 31
- Hanley Road Run-around, See Sheets No. 104, 106 & 107

GENERAL

Two way traffic shall be maintained at all times except that one way traffic will be permitted during bituminous paving operations consistent with requirements of the Specifications. New concrete pavement shall be properly cured as per Sec. T-71.24 for the duration stated in Sec. T-71.25 before being used for maintaining traffic.

The following procedure of operations is offered to insure maintenance of traffic during construction. It will be noted that other operations such as utility rearrangements, drainage installations, monument assembling, etc., have not been mentioned but must be accomplished before constructing new pavement. Any other method or procedure of maintaining traffic during construction may be used if approved in writing by the Director at least 10 days before starting the proposed procedure. The Contractor shall make every effort to complete the cross roads as soon as possible in order to keep the detours at a minimum.

STRAUB ROAD shall be closed to traffic for a maximum period of three consecutive months during construction. Two way traffic shall be maintained at all other times.

COOK ROAD shall be closed to traffic.

MALONE ROAD traffic shall be maintained on a temporary run-around road until the proposed MALONE ROAD is open to traffic. A 4' gravel sidewalk shall be constructed and maintained on the North side of the temporary road; the cost to be included in item S-15.

NORTH END OF PROJECT

1. Complete the structures and the main pavement to the following limits: South bound lanes, 24' ft. wide to Sta. 575+00; North bound lanes, 24' ft. wide to Sta. 760+00; all of ramp "A" from Sta. A 7+00; all of ramp "C" to Sta. 575+00; and concrete approach on ramp "B" to Sta. B 0+55. Remove existing widening in North Bound lane and construct B-70 and curb (Rt) to Sta. 5762+90.

2. Remove a portion of the existing wearing course along the right edge of pavement, Sta. A 4+50 to Sta. A 7+00; construct the base and leveling courses on E. Raleigh, Laser Blvd, Brentwood, Ridgewood, Ramp "B", Ramp "A" (Sta. A 4+50 to A 7+00) and the Roll-over* areas on existing pavement (Sta. A 7± & Ramp "B") while maintaining traffic on existing S.R. 13. Construct a temporary 16' crossover for ramp "C" of approximately Sta. 5756+75 in Median.

3. With traffic using Ramps "A" and "C", necessary portions of completed S.R. 13 pavement and temporary median cross-over at Sta. 756+75; complete all concrete paving and curb work on the South Bound Lanes. Remove existing pavement and Roll-over between Ridgewood & Randall Rds.

4. Remove temporary median cross-over; remove necessary existing wearing course Sta. 5760 to 5763; complete the asphaltic courses North of Sta. 5760+00; E. Raleigh and Laser Blvd, Ramp "A" to Sta. A 7+00, Ramp "B", Brentwood and Ridgewood Ave.

Roll-over areas shall be areas where T-35 shall be used to raise the elevation (in steps) of the existing pavement to meet the new pavement while maintaining traffic. A separator, acceptable to the Engineer, shall be used adjacent to the proposed edge of pavement to insure neater removal of the "roll-over" and existing pavement when no longer needed.

SOUTH END OF PROJECT

1. After completion of foundation stabilization operations construct temporary pavement on South side of Hanley Road with S-15 Class B pavement. Construct north bound lane pavement from Sta. 571+63 to South side of Hanley Road temporary and from North side of Hanley Road temporary to as close as practical to existing Ramp "D" and construct proposed Ramp "D" intersection and approach to approximately Ramp "D" Sta. 1+25.

2. Construct temporary pavement (S-15 Class B pavement) for Ramp "D" traffic to recently completed north bound S.R. 13 lanes.

Construct south bound lane from Sta. 576+50± to South side of Hanley Road temporary and from North side of the temporary to Ramp "D" intersection. Also construct pavement on north bound lane in gap left for existing Ramp "D".

Complete Ramp "D"

Resurface Hanley Road

3. Remove Hanley Road temporary and construct remainder of Hanley Road S.R. 13 intersection.

*4. Construct a temporary road, along West side of Ramp "F" (S-15 Class "B", 16' wide).

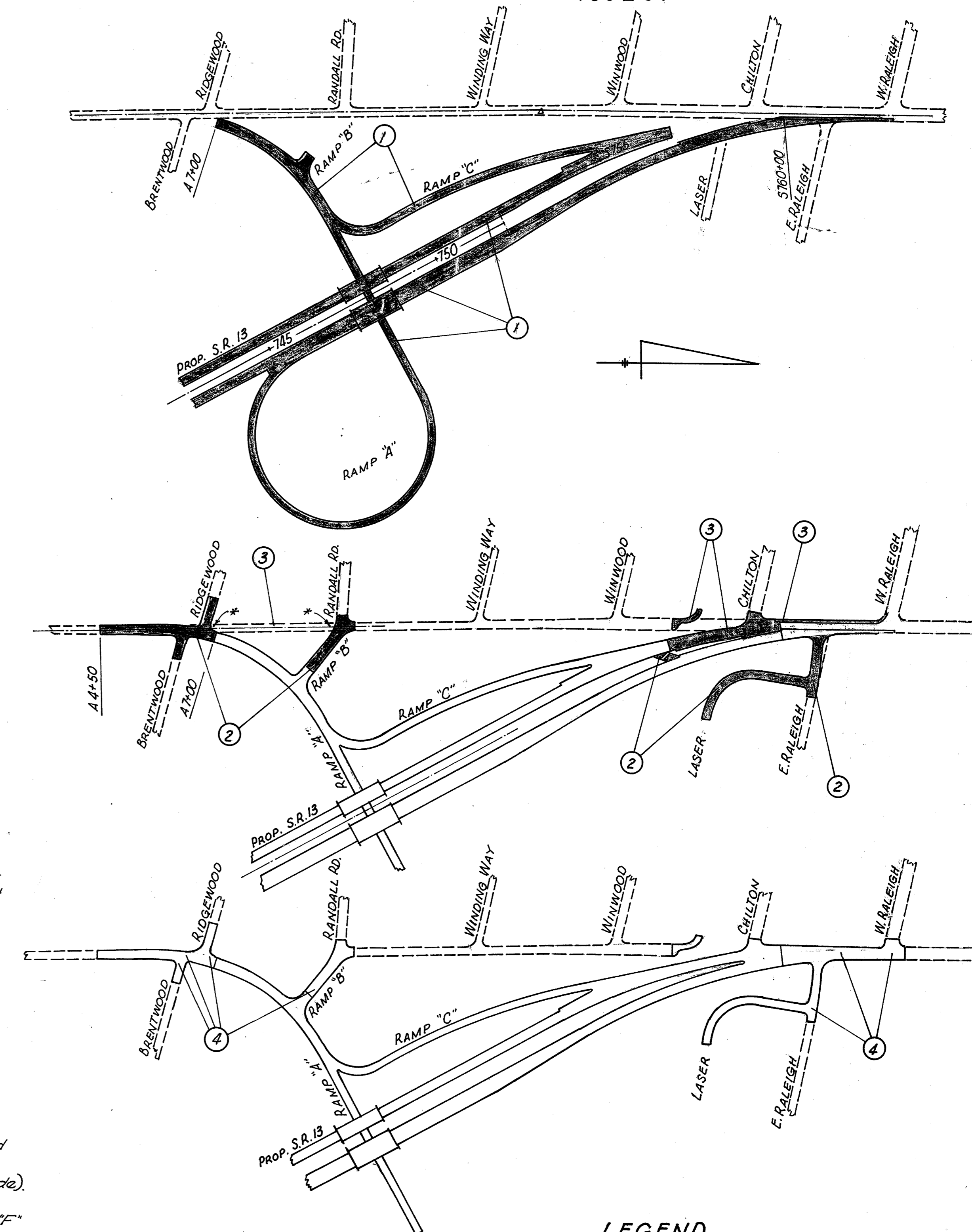
5. When the concrete is sufficiently cured, two way traffic shall be maintained on the new Right lanes to Hanley Road and one way traffic on Ramps "D" and "F". Ramp "F" traffic shall be maintained on temporary Ramp "F" (Stage 4) and the exist pavement between Ramp "F" and Hanley Road. Complete the concrete paving operations on Ramp "F", crossovers, & proposed South bound lanes from Sta. 572+28 to 576+50.

6. Remove all temporary roads and all old pavement South of Ramp "D" within the project.

7. Resurface existing S.R. 13 Hanley Road intersection with minimum amount of traffic disturbance.

⊕ Temporary pavement details, methods of channeling traffic, and any other details not specifically covered by the plan or specifications shall at all times be subject to approval of the Engineer.

NORTH END OF PROJECT



LEGEND

- Proposed pavement
- Completed pavement
- Temporary Road-Paved (Item S-15, Class "B")
- Existing pavement

SCALE 1" = 200'

GENERAL SUMMARY

TYPE CODE 7221

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

11
216

RIC-13-(10.83-13.95)

F-527(9)	U-527(9)				100% MUNIC.	ITEM	PLAN TOTAL	UNITS	DESCRIPTION
	RURAL	URBAN	MUNIC.	TOTAL					
									ROADWAY
504,528	236,741	19,933	256,674		E-1	761,202	Cu.Yds.	Roadway Excavation, Method "B", As per Plan	
108,314	69,152	6,579	75,791		E-1	184,045	Sq.Yds.	Compacted Subgrade	
	160,434		160,434		E-4	160,434	Cu.Yds.	Borrow	
16,312					E-4	16,312	Cu.Yds.	Borrow Using Granular Material, As per Plan (Including Cost of Excavating Unsuitable Material)	
2,668					E-4	2,668	Cu.Yds.	Borrow Using Granular Material, As per Plan	
	845	333	1178		E-8	1178	Lin.Ft.	Removal and Disposal of Existing Curb and Gutter	
7330	770	1192	1962		E-8	9292	Sq.Yds.	Removal and Disposal of Existing Pavement	
		3419	3419		E-8	3419	Sq.Ft.	Removal and Disposal of Existing Sidewalk	
	250	222	472		E-8	472	Sq.Yds.	Removal and Disposal of Existing Wearing Course	
Lump	Lump	Lump	Lump		E-9	Lump	Lump	Removal of Trees and Stumps	
	Lump		Lump		E-10	Lump	Lump	Removal of 1 Frame Shed, Parcel No. 70A LA	
2178	2664	27	2691		E-11	4869	M.Gal.	Water	
168	360		360		E-12	528	Lin.Ft.	Pipe Removed, 15' and Under	
54	100		100		E-12	154	Lin.Ft.	Pipe Removed, Over 15'	
		10	10		S-14	10	Lin.Ft.	Railing, As per Plan	
Lump	Lump	Lump	Lump		S-15	Lump	Lump	Temporary Run Arouds, Class "B" Pavement	
25	25	50	75		T-10	100	Cu.Yds.	Traffic Compacted Surface Course for Maintaining Traffic	
230	120	10	130		I-4	360	M.Gal.	Water for Dust Control	
4.90	2.90	1.20	4.10		I-4	9	Tons	Calcium Chloride for Dust Control	
	1		1		Special	1	Each	Drilled Well Abandoned	
	27	12	13		I-8	40	Each	Centerline Reference Monuments, As Per Plan	
5	4	2	6		I-8	11	Each	Standard Monument Assemblies	
		2049	2049		I-13	2049	Sq.Ft.	4" Concrete Sidewalks	
		320	320		I-13	320	Sq.Ft.	6" Concrete Sidewalks	
		40	40		I-13	40	Lin.Ft.	Concrete Steps, As per Plan	
8402.40	11,447.50	412.50	11,860.00		I-15	20,262.4	Lin.Ft.	Guard Rails, Steel Beam Standard Type, Deep	
	225		225		I-15	225	Lin.Ft.	Guard Rails, Steel Beam Barrier Type, Deep	
1233					I-15	1233	Lin.Ft.	Guard Rail Removed and Stored, as per plan	
1100					I-15	1100	Lin.Ft.	Guard Rail Removed and Rebuilt	
	41	32	73		I-15	73	Each	Wood Guard Rail Posts Without Rail	
225,594	187,049	8032	195,081		L-9	420,675	Sq.Yds.	Seeding and Protecting, As per Plan	
2030	16.84	0.72	17.56		L-9	31.96	Tons	Commercial Fertilizer (12-12-12)	
5556	5783	212	5995		L-10	11,551	Sq.Yds.	Sodding	
	84		84		L-10	84	Sq.Yds.	Sodding for Special Berm and Slope Protection	
1000	1006	42	1048		L-120	2048	Sq.Yds.	Jute Matting	
8661	880		880		I-25	9541	Lin.Ft.	Woven Wire Fence, Type 39	
	9297	570	9867		I-26	9867	Lin.Ft.	Chain Link Fence	
5,460					Special	5,460	Lin.Ft.	Vertical Sand Drains	
3					Special	3	Each	Piezometers	
5					Special	5	Each	Settlement Platforms	
5,639					Special	5,639	Cu.Yds.	Sand Blanket	
182	1566		1566		Special	1748	Sq.Yds.	Furnishing and Mixing Calcium Chloride with Aggregate	
54	35	3	38		SSCE-101.04	92	Hours	Compaction Using Heavy-Pneumatic Tired-Roller	

F-527(9)	U-527(9)				100% MUNIC.	ITEM	PLAN TOTAL	UNITS	DESCRIPTION
	RURAL	URBAN	MUNIC.	TOTAL					
									DRAINAGE
	112			112		E-2	112	Cu.Yds.	Excavation For Structures
5783	2702			2702		E-3	8485	Cu.Yds.	Channel Excavation
	117			117		S-1	117	Cu.Yds.	Concrete For Structures, Class "E"
	27			27		S-3	27	Lin.Ft.	Premoulded Sealing Strip
	2460			2460		S-4	2460	Rounds	Reinforcing Steel
	37			37		S-29	37	Cu.Yds.	Drainage for Structures
150						I-1	150	Lin.Ft.	15" Pipe Class A-1 Sec. M-6.6(b) or Sec. M-6.8 (b)
160						I-1	160	Lin.Ft.	21" Pipe Class A-1 Sec. M-6.6(a) or Sec. M-6.8 (b)
160						I-1	160	Lin.Ft.	24" Pipe Class A-1 Sec. M-6.6(a) or Sec. M-6.8 (b)
166	172		172			I-1	338	Lin.Ft.	30" Pipe Class A-1 Sec. M-6.6(a) or Sec. M-6.8 (b)
288						I-1	288	Lin.Ft.	36" Pipe Class A-1
	154		154			I-1	154	Lin.Ft.	60" Pipe Class A-1
	216		216			I-1	216	Lin.Ft.	15" Pipe Class A-1 Sec. M-6.6(c)
194						I-1	194	Lin.Ft.	24" Pipe Class A-1 Sec. M-6.6(c)
284						I-1	284	Lin.Ft.	48" Pipe Class A-1 Sec. M-6.4(d), 8 Gage, Shop Elongated, as per plan
200	240		240			I-1	440	Lin.Ft.	120" Pipe Class A-1 Sec. M-6.4(g), 8-7 Gage
	734		734			I-1	734	Lin.Ft.	120" Pipe Class A-1 Sec. M-6.4(g), 7-5 Gage
182						I-1	182	Lin.Ft.	108" Pipe Class A-1 Sec. M-6.4(g), 5-3 Gage
148						I-1	148	Lin.Ft.	54" Pipe Class A-1 Sec. M-6.6(a)
548						I-1	548	Lin.Ft.	30" Pipe Class A-1 Sec. M-6.6(d)
	132		132			I-1	132	Lin.Ft.	12" Pipe Class B-1
	198		198			I-1	198	Lin.Ft.	15" Pipe Class B-1 M-6.6(d)
	374		374			I-1	374	Lin.Ft.	18" Pipe Class B-1
	70		70			I-1	70	Lin.Ft.	18" Pipe Class C-1 M-6.4(c)
	276		276			I-1	276	Lin.Ft.	12" Pipe Class D-1
	18		18			I-1	18	Lin.Ft.	15" Pipe Class D-1 M-6.4(c)
	36		36			I-1	36	Lin.Ft.	36" Pipe Class D-1 M-6.4(c)
450	1068		1068			I-1	1518	Lin.Ft.	12" Pipe Class E-1
6	946	306	1252			I-1	1258	Lin.Ft.	15" Pipe Class E-1
491	723		723			I-1	1214	Lin.Ft.	18" Pipe Class E-1
	1238		1238			I-1	1238	Lin.Ft.	21" Pipe Class E-1
	210		210			I-1	210	Lin.Ft.	30" Pipe Class E-1
	178		178			I-1	178	Lin.Ft.	6" Pipe Class F-3, Sec. M-6.4(h) as per plan.
180	100		100			I-1	280	Lin.Ft.	8" Pipe Class F-4 Sec. M-6.4(c)
56	238		238			I-1	294	Lin.Ft.	12" Pipe Class F-4
92	114		114			I-1	206	Lin.Ft.	15" Pipe Class F-4
48						I-1	48	Lin.Ft.	21" Pipe Class F-4
68						I-1	68	Lin.Ft.	30" Pipe Class F-4
60						I-1	60	Lin.Ft.	36" Pipe Class F-4
76						I-1	76	Lin.Ft.	54" Pipe Class F-4
68	140		140			I-1	208	Lin.Ft.	12" Pipe Class H-2
24,448	10,382	926	11,308			I-1	35,756	Lin.Ft.	6" Pipe Class I-3

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

12
216

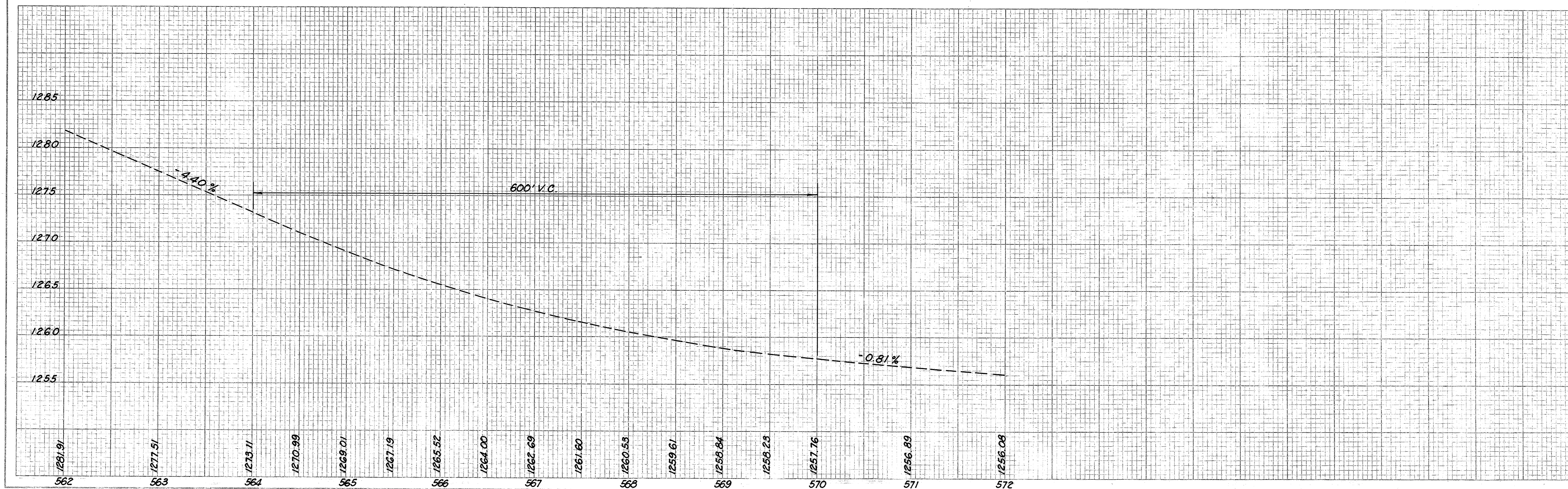
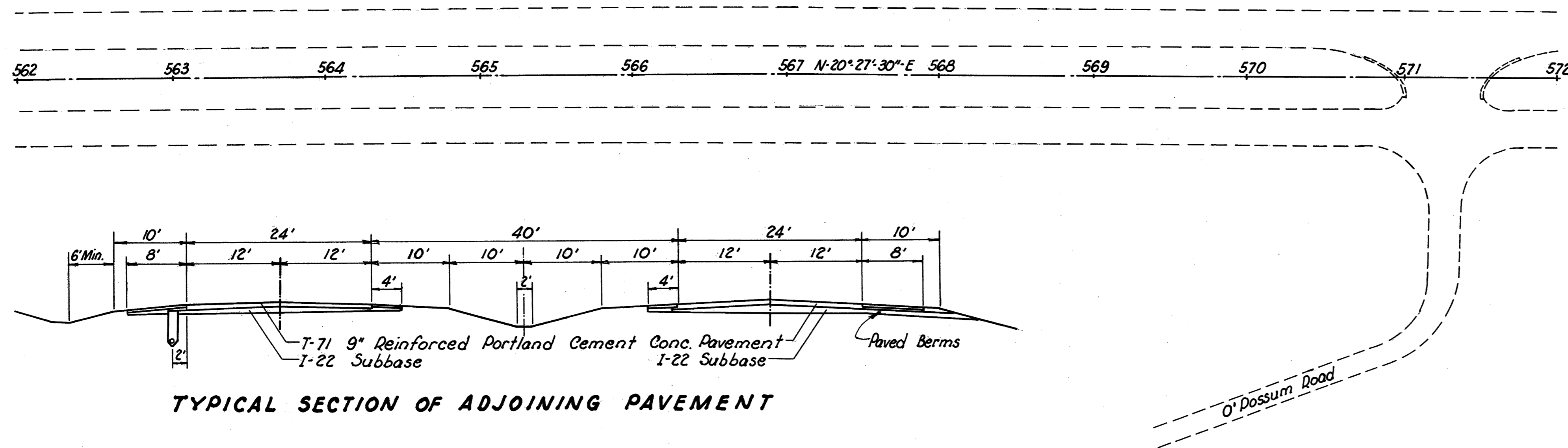
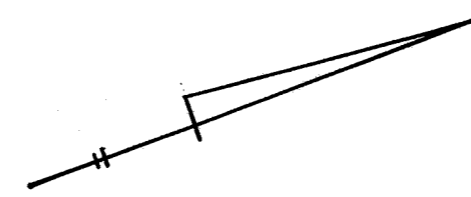
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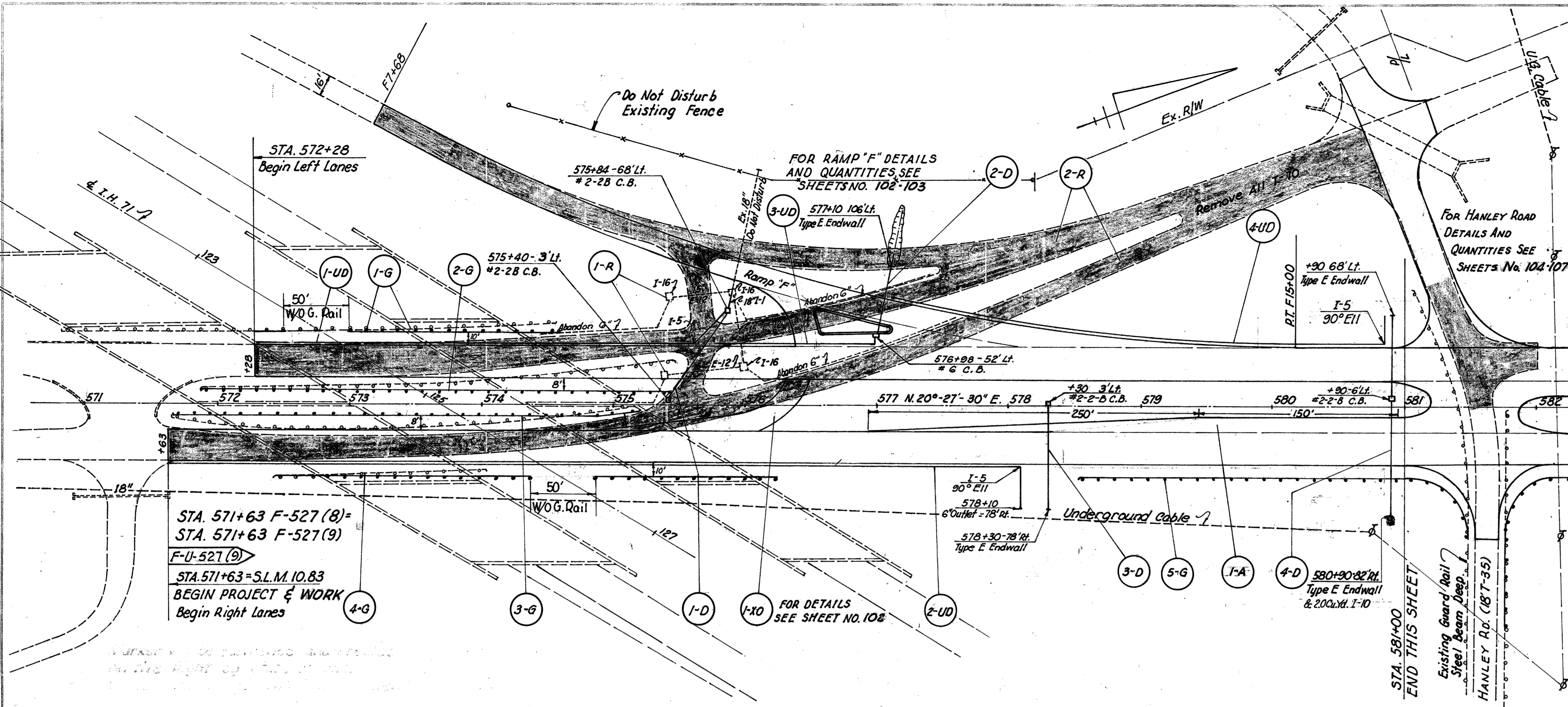
TYPE CODE 7221

F-527(9)	U-527(9)			100% MUNIC.	ITEM	PLAN TOTAL	UNITS	DESCRIPTION
	RURAL	URBAN	MUNIC. TOTAL					
DRAINAGE (Continued)								
302		140	140		I-1	442	Lin.Ft.	12" Pipe Class J-1
764	740		740		I-1	1504	Lin.Ft.	18" Pipe Class J-1
	72		72		I-1	72	Lin.Ft.	15" Pipe Class J-1 Sec. M-6.6(b) or M-6.8(b)
16	120		120		I-1	136	Lin.Ft.	18" Pipe Class J-1
	60		60		I-1	60	Lin.Ft.	30" Pipe Class J-1
130.2	117.17	0.23	117.4		I-2	247.6	Cu.Yds.	Masonry
	4		4		I-5	4	Each	120" Pipe Specials Class A-1 Sec. M-6.4(G) 7-5 Gage As per Plan.
1					I-5	1	Each	36" Pipe Specials Class A-1
4	2		2		I-5	6	Each	15" Pipe Specials Class F-4
1					I-5	1	Each	21" Pipe Specials Class F-4
40	22	1	23		I-5	63	Each	6" Pipe Specials Class I-3
1					I-8	1	Each	Standard No. 2-3 Catch Basin
1	1		1		I-8	2	Each	Standard No. 2-3 Catch Basin, Modified As per Plan
2	2	1	3		I-8	5	Each	Standard No. 2-2 A Catch Basin
5	8		8		I-8	13	Each	Standard No. 2-2 B Catch Basin
3	1		1		I-8	4	Each	Standard No. 2-4 Catch Basin, Modified As per Plan
1					I-8	1	Each	Standard No. 2-5 Catch Basin, Modified As per Plan
	1		1		I-8	1	Each	Standard No. 3 Catch Basin
		1	1		I-8	1	Each	Standard No. 3A Catch Basin
16	20	1	21		I-8	37	Each	Standard No. 5 Catch Basin
1	1		1		I-8	2	Each	Standard No. 6 Catch Basin
	5		5		I-8	5	Each	Standard No. 1 Side Ditch Inlet
		2	2		I-8	2	Each	Catch Basins Adjusted to Grade
	3		3		I-9	3	Lin.Ft.	Stone Underdrains No. 1, As per Plan
3172	5361	157	5518		I-9	8690	Lin.Ft.	Stone Underdrains No. 2
853	206		206		I-10	1059	Cu.Yds.	Dumped Rock Channel Protection
	290		290		I-14	290	Lin.Ft.	Paved Gutter, Special, As per Plan
591	491		491		I-14	1082	Lin.Ft.	Paved Gutter, Standard Type 1
214	537		537		I-14	751	Lin.Ft.	Paved Gutter, Standard Type 1, Modified As per Plan
	140		140		I-14	140	Lin.Ft.	Paved Gutter, Standard Type 5
4	9		9		I-16	13	Each	Catch Basins Abandoned
PAVEMENT								
		522	522		B-70	522	Sq.Yds.	8" Portland Cement Concrete Base Course
		110	110		T-30	110	Gal.	Bituminous Tack Coat, Sec. M-5.5, MS-2 or RS-1 for Sec. M-5.2, RC-1 or RC-2, as per Sec. T-30.02
		440	440		I-12	440	Lin.Ft.	Concrete Curb Standard Type 2-B
8603	6339	524	6863		B-19	15466	Cu.Yds.	Aggregate Base Course
154	491	154	645		B-35	799	Cu.Yds.	Asphaltic Concrete Leveling Course (70-85)
14033	9734	982	10716		T-30	24749	Gal.	Bituminous Prime Coat, Sec. M-5.7, RT-2 or RT-3
9764	5028	740	5768		T-31	15,532	Gal.	Bituminous Surface Treatment, Bituminous Material As per Plan
260	134	20	154		T-31	414	Cu.Yds.	Bituminous Surface Treatment, No. 6 Aggregate
117	367	96	463		T-35	580	Cu.Yds.	Asphaltic Concrete Surface Course Type "C", (70-85)
70595	43282	2862	46844		T-71	117,439	Sq.Yds.	9" Reinforced Portland Cement Concrete Pavement
	636		636		I-7	636	Sq.Yds.	Reinforced Concrete Approach Slabs (T-13)
	44	238	282		I-12	282	Lin.Ft.	Combination Curb And Gutter, Standard Type 2
126		434	434		I-12	560	Lin.Ft.	Concrete Curb Standard Type 2-A
	314		314		I-12	314	Lin.Ft.	Combination Curb And Gutter, Standard Type 4
	630	130	760		I-12	760	Lin.Ft.	Concrete Curb Standard Type 6
	350		350		I-12	350	Lin.Ft.	Concrete Curb Standard Type 7
	100		100		I-12	100	Lin.Ft.	Concrete Curb Standard Type 8
31	247		278		I-18	278	Cu.Yds.	Stabilized Crushed Aggregate Shoulders and Approaches
60	44	60	104		I-21	164	Sq.Yds.	4" Portland Cement Concrete Median or Traffic Island Pavement, Type 1
17,145	12,323	669	12,992		I-22	30,137	Cu.Yds.	Subbase, Grading A or B as per plan
		32	32		I-23	32	Each	Precast White Portland Cement Concrete Traffic Dividers

TYPE CODE Y060

F-527(9)	U-527(9)			100% MUNIC.	ITEM	PLAN TOTAL	UNITS	DESCRIPTION
	RURAL	URBAN	MUNIC. TOTAL					
WATER LINES (100% City of Mansfield)								
					I-124	326	Lin.Ft.	6" Cast Iron Water Main, With Mechanical Joints Class 150
					I-124	170	Lin.Ft.	4" Water Main Lowered
					I-124	3	Each	6" Fittings, 45° Bend
					I-124	1	Each	Fire Hydrant Removed and Stored
					I-124	5	Each	Water Service Boxes Adjusted to Grade
					I-124	2	Each	Water Service Box Removed and Stored
					I-124	1	Each	6" Fittings, 11 1/4° Bend
					I-124	1	Each	6" Fittings, 22 1/2° Bend
					I-124	1	Each	6" Water Valve and Box
					I-1	120	Lin.Ft.	15" Pipe, Class A-1, Sec. M-6.6(a)
					I-1	134	Lin.Ft.	36" Pipe, Class A-1, Sec. M-6.6(a), as per plan
Sanitary Sewer (100% City of Mansfield)								
					I-1	887	Lin.Ft.	8" Pipe Class A-1 Sec. M-6.8(a) With 4" Minimum Class "E" Concrete Encasement
					I-1	469	Lin.Ft.	8" Pipe Class B-1 Sec. M-6.8(b)
					I-1	48	Lin.Ft.	6" Pipe Class E-1 Sec. M-6.8(b)
					I-1	644	Lin.Ft.	8" Pipe Class E-1 Sec. M-6.8(a)
					I-1	138	Lin.Ft.	12" Pipe Class E-1 Sec. M-6.8(b)
					I-8	11	Each	Standard No. 1 Manhole
					I-8	1	Each	Standard No. 2 Manhole
					I-8	1	Each	Sanitary Manholes, Adjusted to Grade
					I-8	2	Each	Sanitary Manholes, Reconstructed to Grade
					I-16	4	Each	Sanitary Manholes Abandoned
					Special	148	Lin.Ft.	12" Existing Pipe Encased As per Plan
					Special	284	Lin.Ft.	21" Existing Pipe Encased As per Plan
					Special	1	Each	6" Sanitary Sewer Cleanout
CODE 7221 (CONT.)								
STRUCTURES OVER 20 FEET								
RIC-13-1369								
FOR SUMMARY OF QUANTITIES SEE SHEET No. 167								
RIC-13-1384								
FOR SUMMARY OF QUANTITIES SEE SHEET No. 176								
RIC-13-1417 1/2								
FOR SUMMARY OF QUANTITIES SEE SHEET No. 184								
Lump	Lump	Lump	Lump		Lump	Lump	Lump	Construction Layout Stakes
Lump	Lump	Lump	Lump		Lump	I-3	Lump	Maintaining Traffic



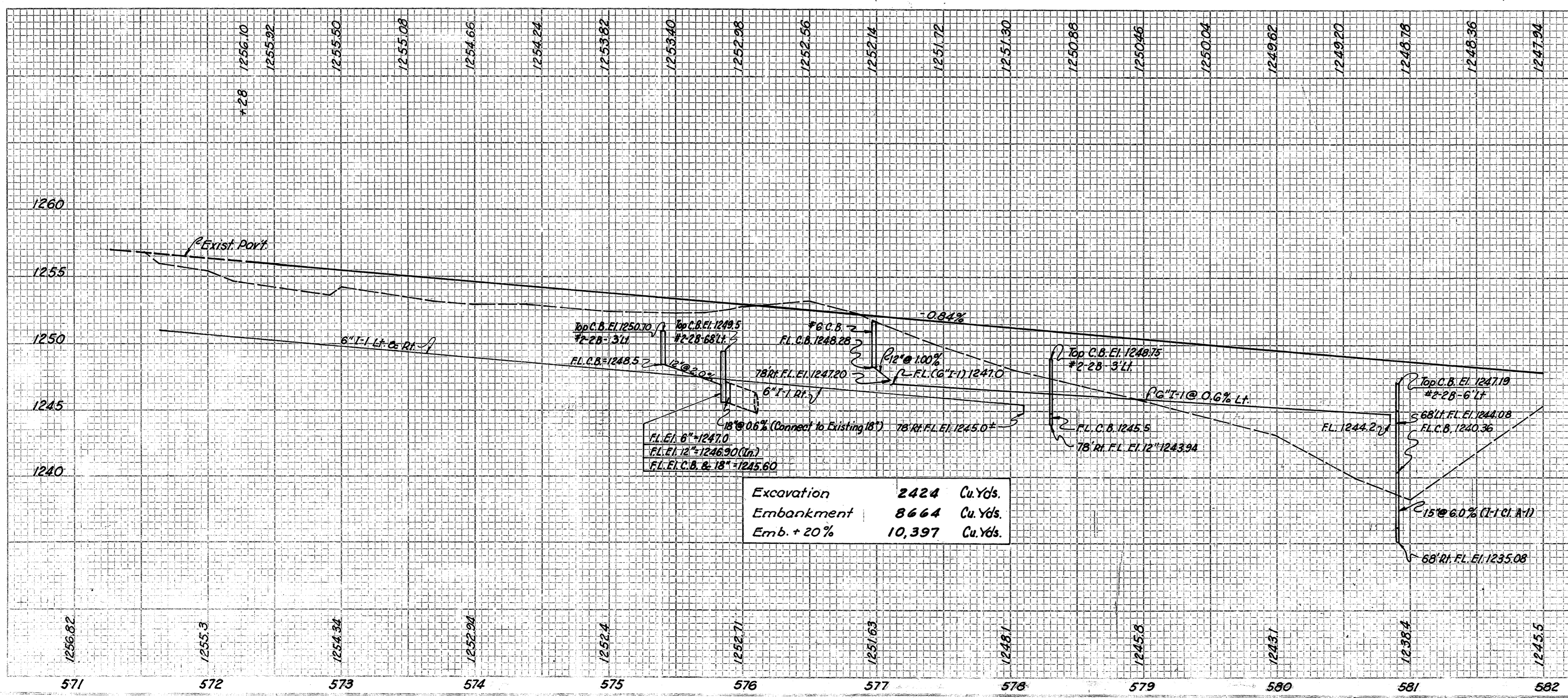


Ref. No.	Station	I-15 Guard Rails Removed & Rebuilt Lin. Ft.	I-1 12" Pipe Class J-1 Lin. Ft.	I-1 18" Pipe Class J-1 Lin. Ft.	I-2 Masonry Endwalls Cu.Yds.	E-3 Channel Excavation Cu.Yds.	I-8 Catch Basins #2-28 #6 Each	I-16 Catch Basins Abandon Each	E-12 Pipe Removed 15' & Under Lin. Ft.	E-8 Pavement Removal Sq.Yds.	I-1 15' Pipe Class M-6A(B) W-6.8(D) Lin. Ft.	I-10 Dismantled Track Cu.Yds.	I-15 Guard Rail Removed & Stored Lin. Ft.		
1-G	572+30 - 574+55 Lt.	175.0													
2-G	571+85 - 575+47.5 Lt.	362.5													
3-G	571+65 - 575+15 Rt.	350.0													
4-G	572+50 - 576+25 Rt.	150.0	175.0												
5-G	578+55 - 581+00	245.0													
1-D	575+40 - 575+84 Lt.		80	16					2						
2-D	576+98 - 577+10 Lt.		54		0.26	* 14			1						
3-D	578+30 Rt.		78		0.26				1						
4-D	580+90				0.52				1			150	2		
1-R	575+40 - 576+00, As Shown									4	148				
2-R	Shaded Existing Pavement										5236				
Totals		1072.5	420.0	212	16	1.04	14	4	1	4	148	5236	150	2	50

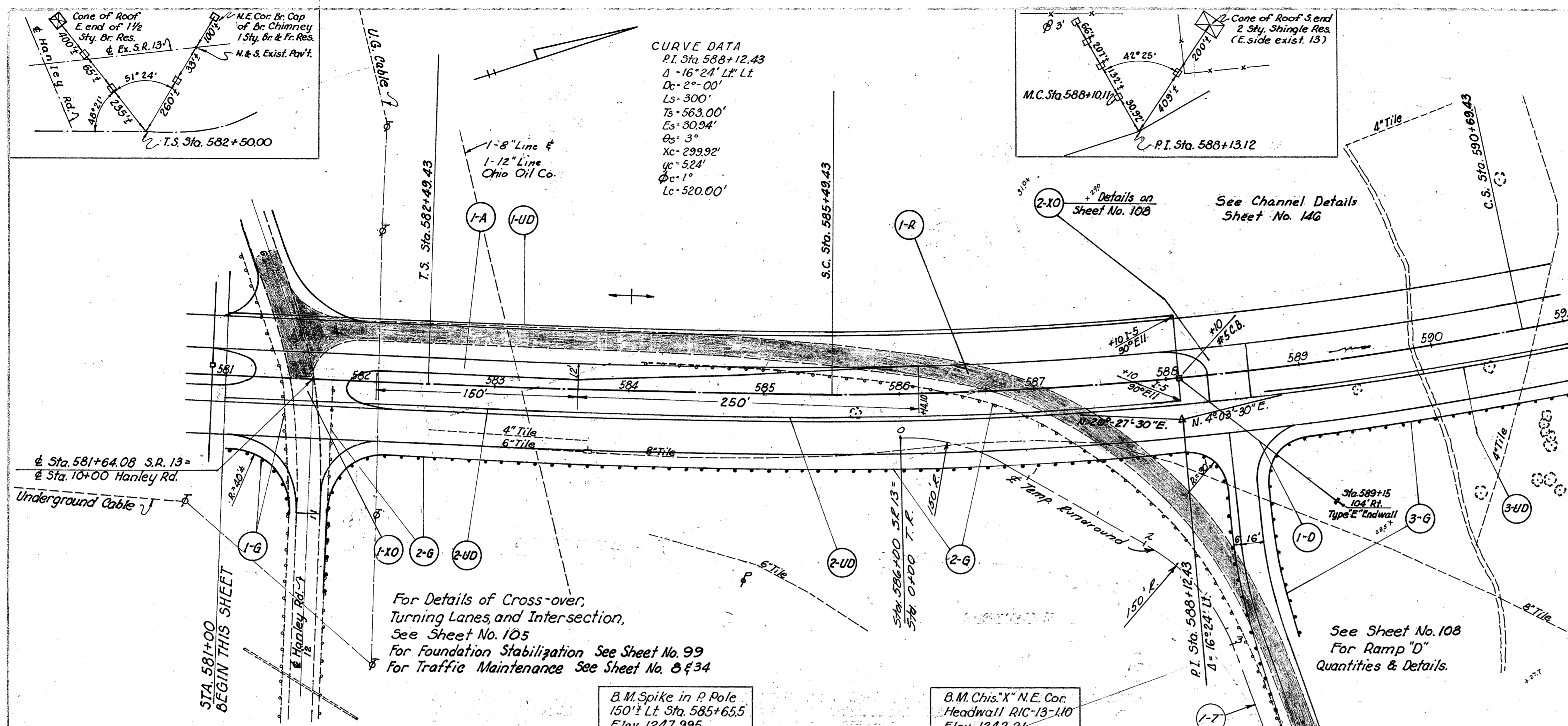
* 2' Ditch bottom, 2:1 Side Slopes, 45' Long as shown on Ramp "F" Cross Sections.

Ref. No.	Station	I-1 6" Pipe Class I-3 Deep Lin. Ft.	I-5 6" Pipe Spec. C13 90' E/I Each	I-1 8" Pipe Class F-4 M-6.4(C) Lin. Ft.	I-22 Subbase 6" Cu.Yds.	T-71 Reinforced Concrete Pavement g' Sq. Yds.	T-31 Bituminous Surface Treatment Aggre- gate gate Cu.Yds.	E-1 Comp. - Subgrade Sq. Yds.	B-19 Aggregate Base Course Cu.Yds.	T-30 Bituminous Prime Coat 90.2 Gal./Sq. Yd. Gal.		
1-A	576+94.2 - 580+94.2 Rt.				64	367		367				
1-XO	576+24*				35	196	0.9°	35°	311	28.9	46.2	
1-UD	572+28 - 575+84 Lt.		364	1								
2-UD	571+65 - 578+10 Rt.		378	1	10							
3-UD	575+80 - 576+98 Lt.		124	1								
4-UD	577+10 - 580+86 Lt.		388	1	10							
Totals		1254	3	1	20	99	563	0.9	35	678	28.9	46.2

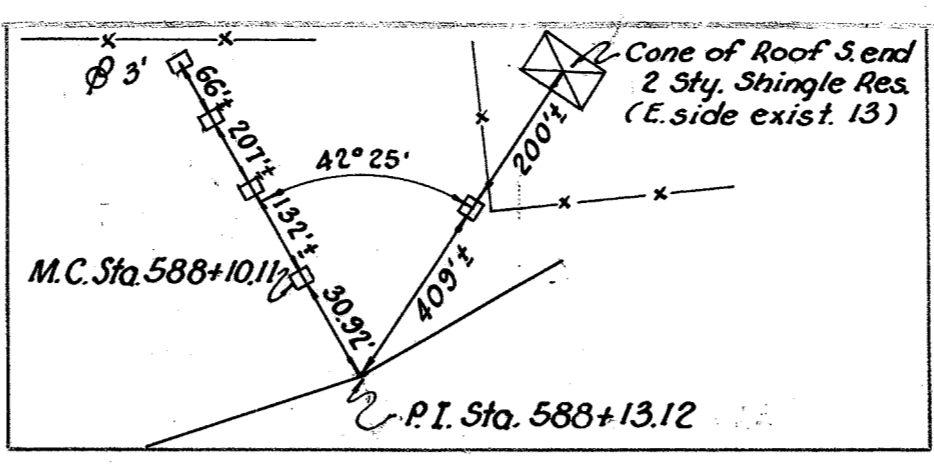
* Quantities in addition to main term quantities.



Excavation	2424	Cu.Yds.
Embankment	8664	Cu.Yds.
Emb. + 20%	10,397	Cu.Yds.



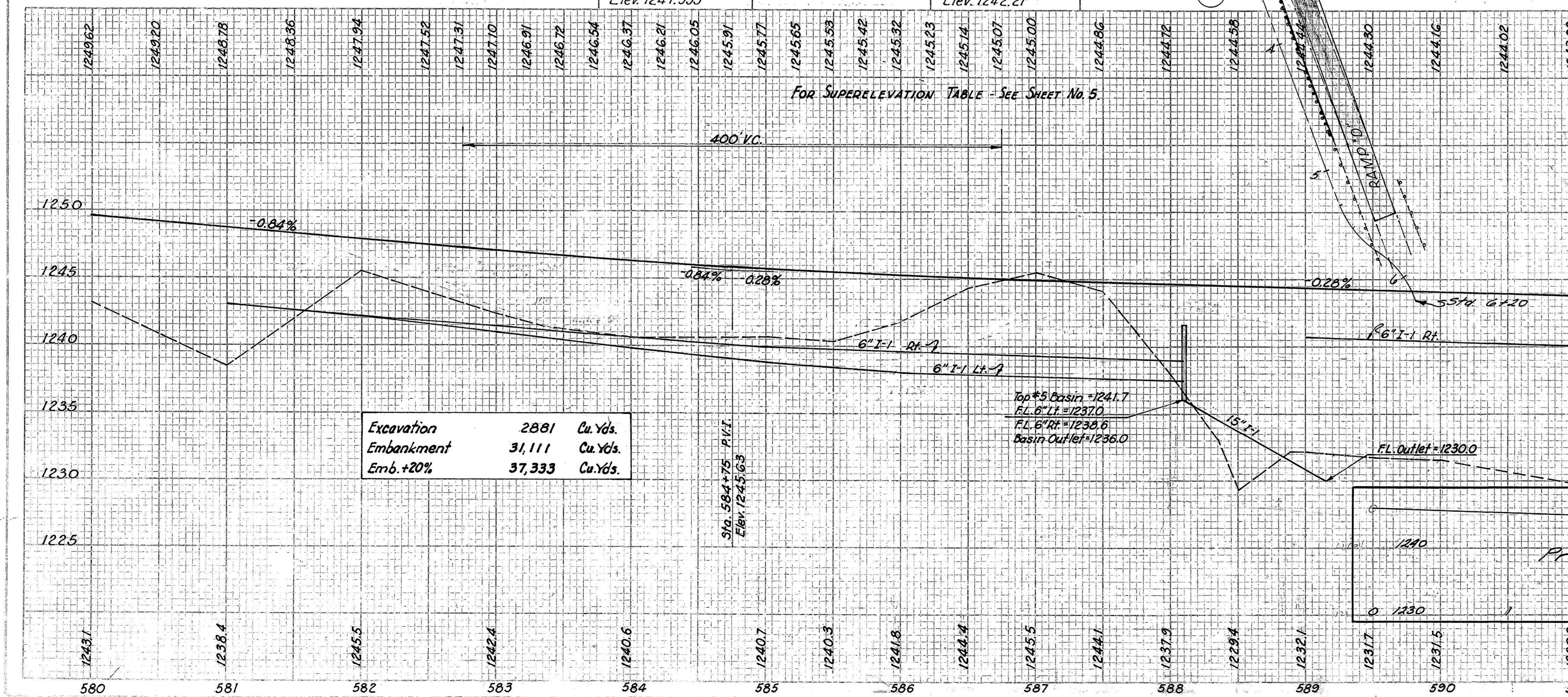
CURVE DATA
 P.I. Sta. 588+12.43
 Δ = 16° 24' Lt.
 Δc = 2° 00'
 Ls = 300'
 Ts = 563.00'
 Es = 30.94'
 Os = 3°
 Xc = 299.92'
 Yc = 524'
 Δc = 1°
 Lc = 520.00'



Ref. No.	Station	I-71 9" Reinforced Concrete Pavement	I-22 6" Subbase	E-1 Compacted Subgrade	E-8 Pavement Removal	I-15 Guard Rail
		Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Steel Beam Type & Depth Removal & Weld Lin. Ft.
1-A	582+14 - 586+14	367	61.1	367		
1-X0	580+94 - 582+14	406	67.7	406		
2-X0	588+50	160	26.7	160		
1-G	581+00 - 11+00 (Hanley Rd.)					80 200*
2-G	11+46 (Hanley Rd.) - D5+01 (Ramp D)					1175 983@
3-G	D2+00* (Ramp D) - 591+00					370
1-R	581+48 to 04+36 (As Shaded)			2094		
Totals		933	155.5	933	2094	1625 1183

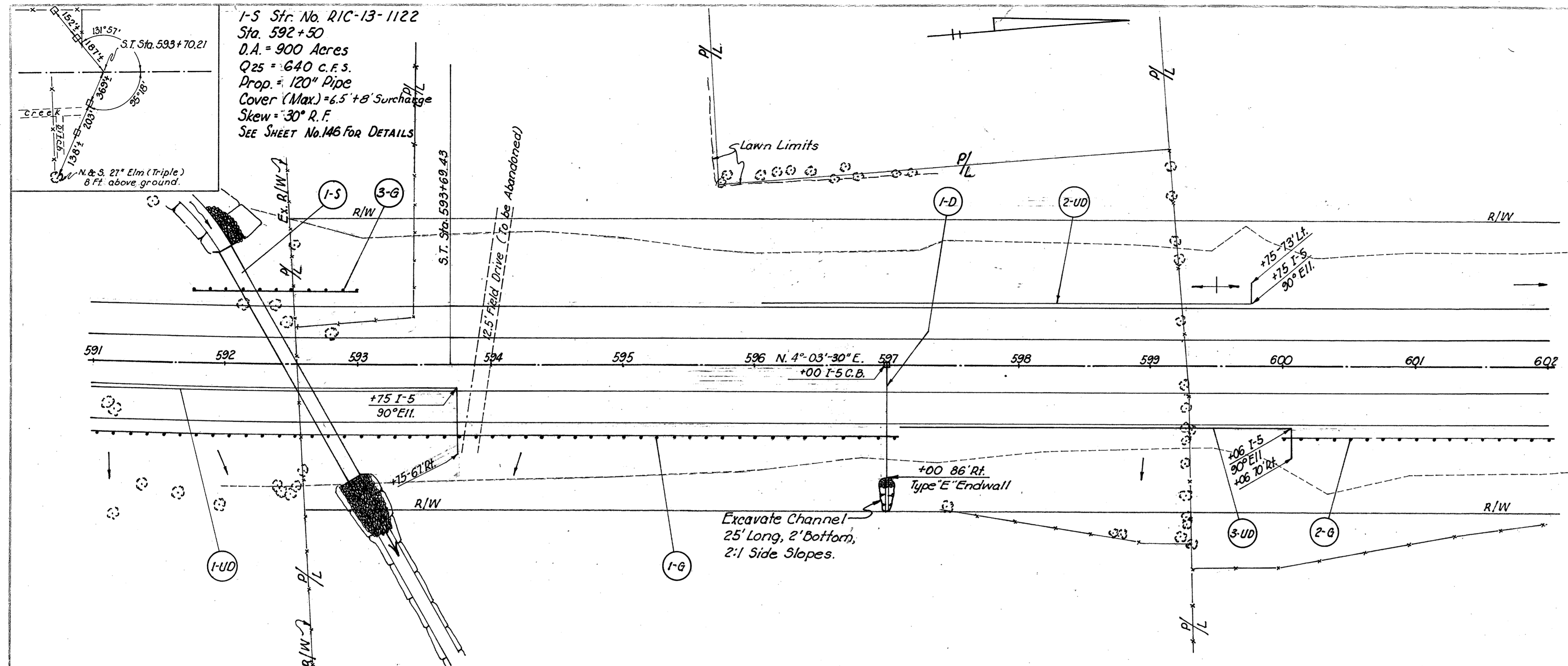
*Sta. 8+94 to Sta. 11+00 on South Side of Hanley Rd.
 @Sta. 10+06 to 11+56 on North Side of Hanley Rd. & Sta. 584+12 to Sta. D5+01 along existing Ramp "D".

Ref. No.	Station	I-1 6" Pipe Class I-3 Deep Shallow	I-2 Headwalls	I-5 6" (CI-3) Pipe Specials 90° Ells Each	I-1 15" Pipe Class I-1	I-8 Catch Basin #5	L-120 Jute Matting	S-15 Temp. Burr- Around As per Plan Lump
		Lin. Ft.	Cu. Yds.	Each	Lin. Ft.	Each	Sq. Yds.	Lump
1-T	0+00 - 6+20							
1-D	588+10		0.3		148	1	125	
1-UD	581+00 - 588+10 Lt.	758		1				
2-UD	581+00 - 588+10 Rt.	728		1				
3-UD	588+70 - 591+00 Rt.	290						
Totals		1484 290	0.3	2	148	1	125	Lump



Profile Ramp "D" Temporary Turnaround

1-5 Str. No. RIC-13-1122
Sta. 592+50
D.A. = 900 Acres
Q25 = 640 c.f.s.
Prop. = 120" Pipe
Cover (Max) = 6.5' + 8' Surcharge
Skew = 30° R.F.
SEE SHEET No. 146 FOR DETAILS

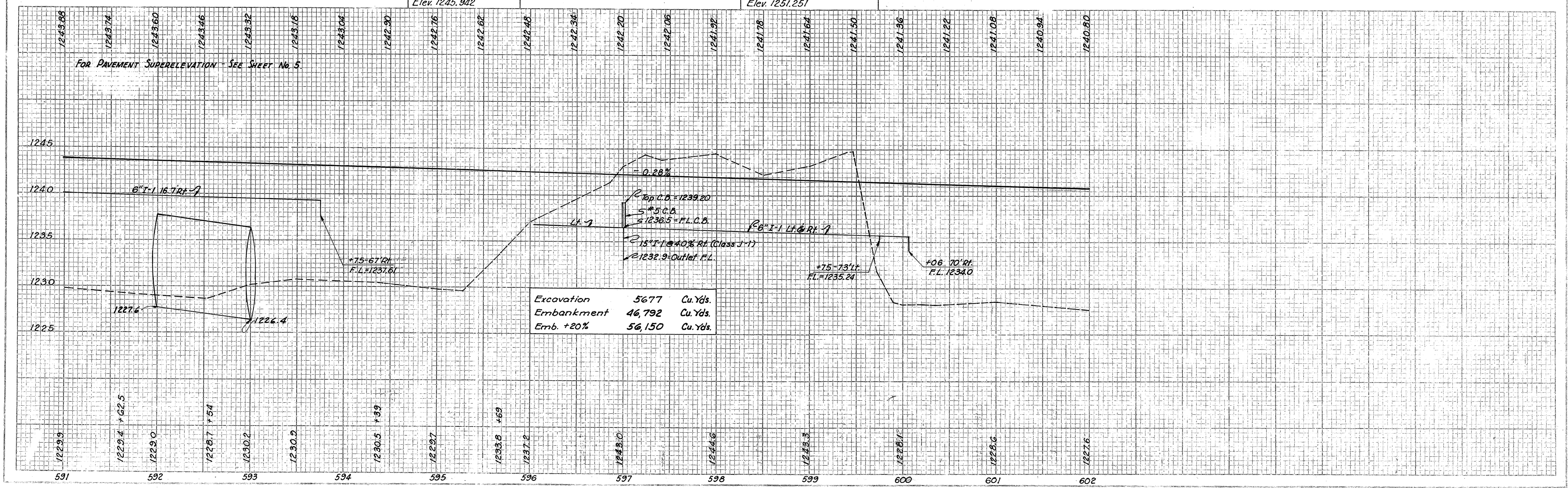


Ref. No.	Station	I-15 Guard Rail Steel Beam Deep Lin. Ft.	I-1 15" Pipe Class J-1 Lin. Ft.	I-8 Catch Basin # 5 Each	L-120 Inlets Sp. Yds.	E-3 Channel Excavation Cu. Yds.	I-2 Masonry (Headwall) Cu. Yds.	J-1 6" Pipe Class J-3 Deep Sillow Lin. Ft.	I-5 6" CI 1-3 Specials Each	I-1 8" Pipe Class F-4 M-6.4(c) 90° Ell. Lin. Ft.	I-1 120" Pipe Cl. A-1 M-6.4(g) Lin. Ft.	I-10 Dumped Rock Channel Protection Cu. Yds.	
1-G	591+00-597+05 Rt.	605											
2-G	600+00-602+00 Rt.	200											
3-G	591+75-593+00 Lt.	125											
1-D	597+00 Rt.		84	1	125	20	0.26					1	
1-UD	591+00-593+75 Rt.							315		1	10		
2-UD	596+02-599+75 Lt.							387		1	10		
3-UD	597+10-600+06 Rt.							309		1	10		
1-5	592+50					3664	33.1				200*	254	
Totals		930	84	1	125	3684	33.36	696	315	3	30	200*	255

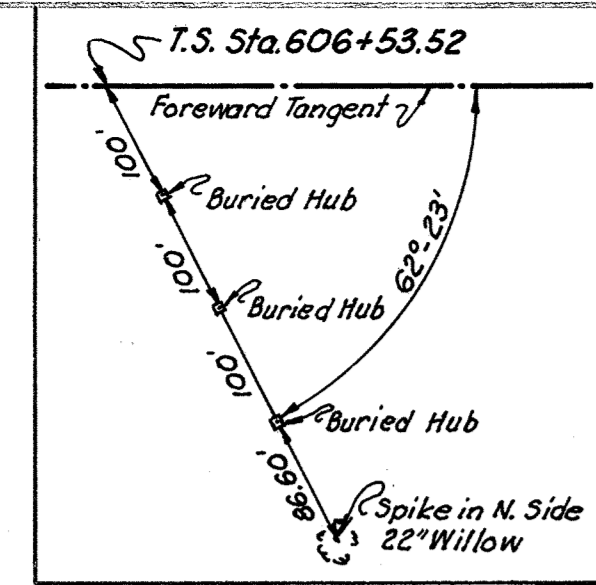
* 8-7 Gage

B.M. Spike in P Pole Lt.
No. 90 D 22 23
Elev. 1245.942

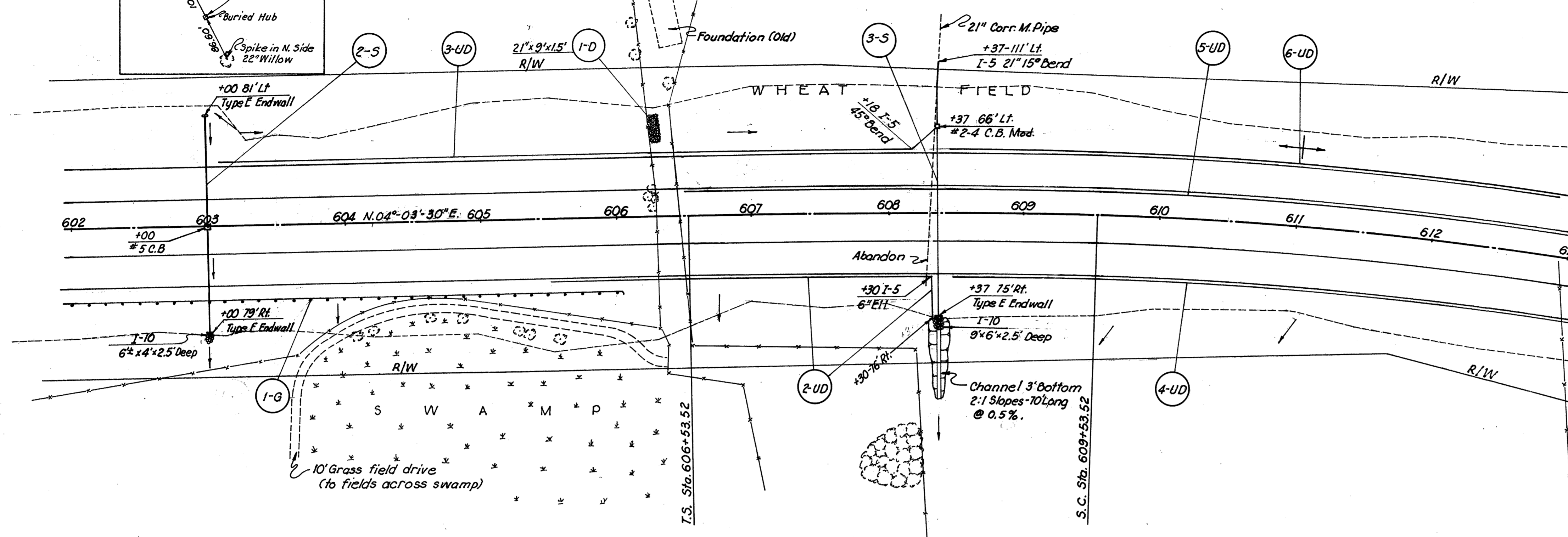
B.M. Spike in root 24" Maple
in P/L 350'± Lt. Sta. 598+60
Elev. 1251.251



2-5 RIC-13-1142
Sta. 603+00
DA = 8 Ac
Exist. Str. = None
Prop. Str. = 24" Pipe
Cover (max.) = 9.3'
Q25 = 22 C.F.S.



3-5 RIC-13-1152
Sta. 608+37
DA = 32 Ac
Exist. Str. = 21" Pipe
Prop. Str. = 36" Pipe Culvert
Cover (max.) = 5.3'
Q25 = 64 C.F.S.

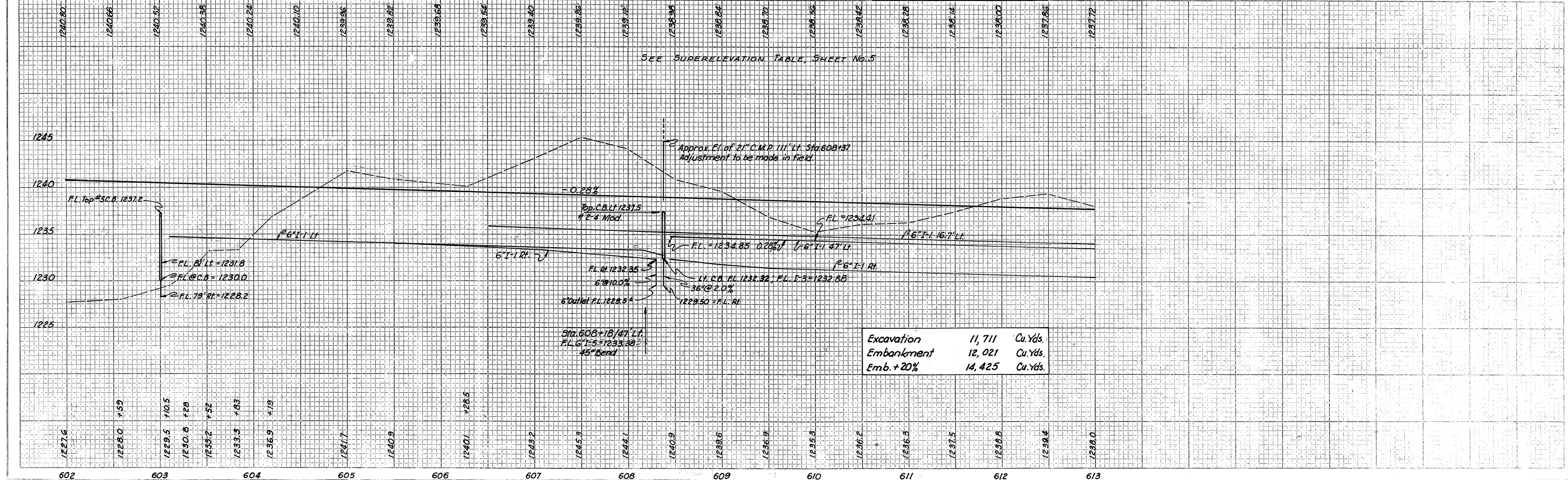


Ref. No.	Station	I-5 Pipe Specials Class I-3 F-4			L-120 Jute Matting		I-1 Pipe Class I-3 F-4		I-2 Masonry Headwalls		I-8 Catch Basins	I-15 Guard Rails	E-3 Channel Excavation	I-10 Dumped Rock Channel Protection			
		6" Dia	6" Bend	15'	Sq. Yds.	Lin. Ft.	24"	21"	Cu. Yds.	Each	Lin. Ft.	Cu. Yds.	Cu. Yds.	Cu. Yds.			
2-5	603+00				125								2	2			
3-5	608+37			1*			138	48	0.82	1			70	5			
1-D	606+30													10			
2-UD	605+50 - 608+30 Rt.	1				299	10										
3-UD	603+10 - 608+37 Lt.	1				534											
4-UD	608+44 - 613+00 Rt.					456											
5-UD	606+50 - 613+00 Lt.					650											
6-UD	608+44 - 613+00 Lt.					456											
1-G	602+00 - 606+00 Rt.										400						
Totals		1	1	1*	125	1745	650	10	160	138	48	1.41	1	1	400	72	17

* 15° Bend
■ Shall be constructed of reinforced concrete as shown on sheet No. 9B.

B.M. Spike in 5" Walnut
175' Lt. Sta. 605+98.5
Elev. 1251.288

B.M. Spike in roof N. side 30" W. Cherry
322' Rt. Sta. 612+11.
Elev. 1229.145



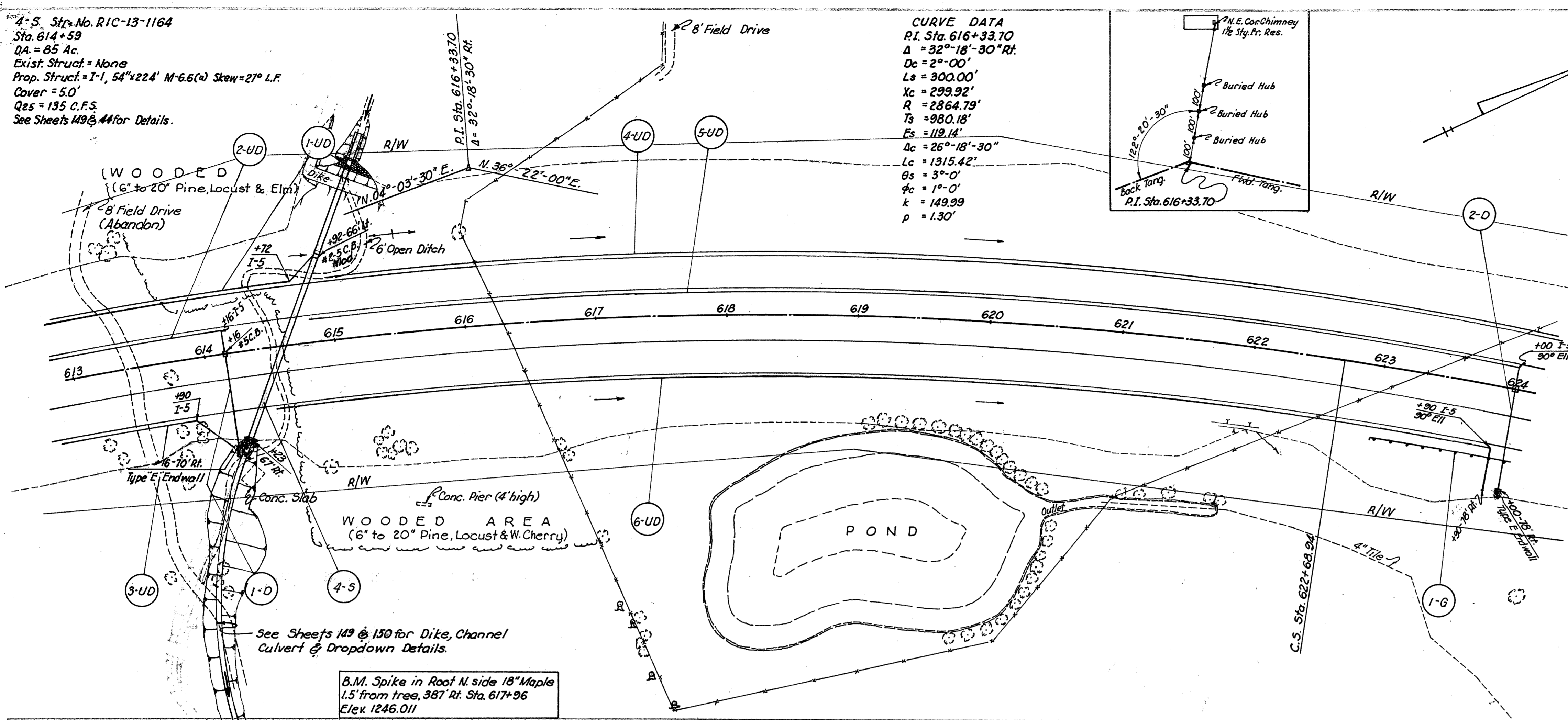
Excavation	11,711	Cu. Yds.
Embankment	12,021	Cu. Yds.
Emb. + 20%	14,425	Cu. Yds.

SEE SUPERELEVATION TABLE, SHEET No. 5

4-S. Str. No. RIC-13-1164
 Sta. 614+59
 QA = 85 Ac.
 Exist. Struct. = None
 Prop. Struct. = I-1, 54"x224" M-6.6(a) Skew=27° L.F.
 Cover = 5.0'
 Qes = 135 C.F.S.
 See Sheets 149 & 144 for Details.

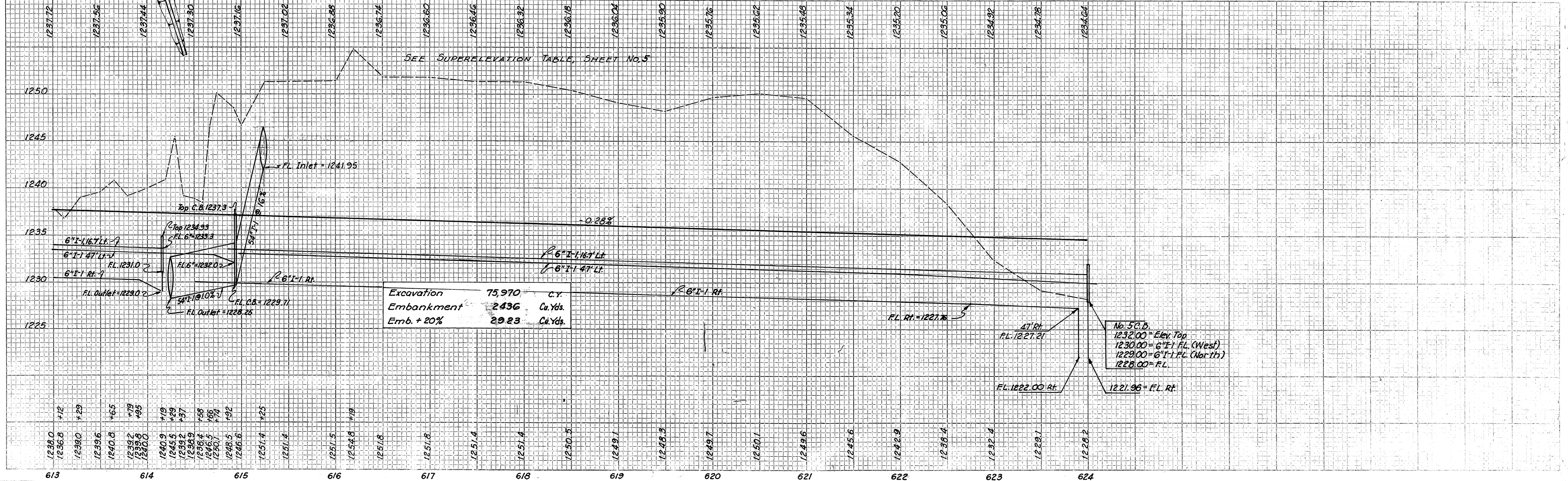
CURVE DATA
 P.I. Sta. 616+33.70
 $\Delta = 32^\circ 18' 30''$ Rt.
 $D_c = 2^\circ 00'$
 $L_s = 300.00'$
 $X_c = 299.92'$
 $R = 2864.79'$
 $T_s = 980.18'$
 $E_s = 119.14'$
 $\Delta_c = 26^\circ 18' 30''$
 $L_c = 1315.42'$
 $\theta_s = 3^\circ 0'$
 $\phi_c = 1^\circ 0'$
 $k = 149.99$
 $p = 1.30'$

RIC-13-(10.83-13.95)



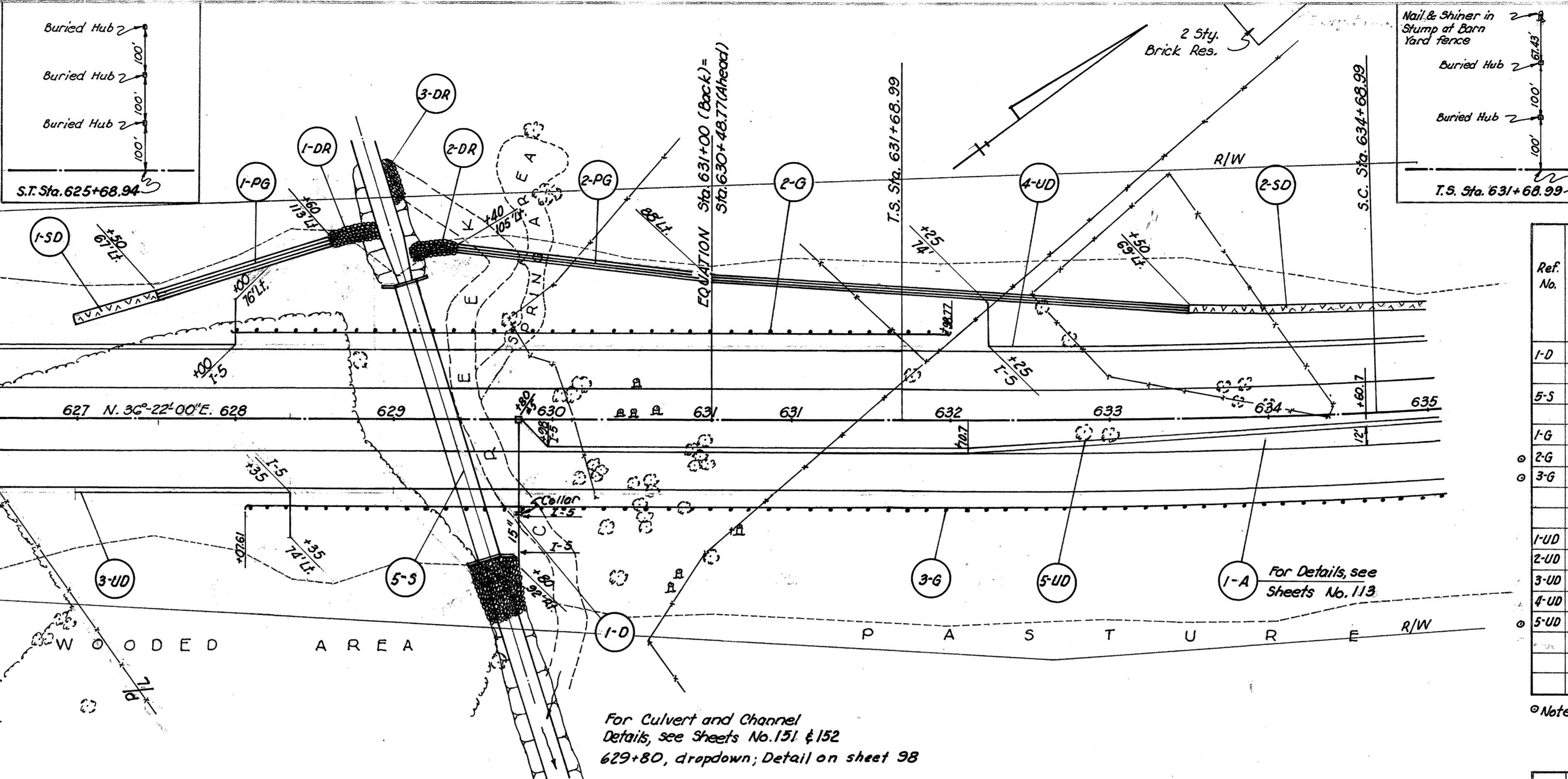
Ref. No.	Station	I-1 Pipe				I-2 Masonry	I-5 6" CI-3 Specials	I-8 Catch Basins	I-15 Guard Rails	E-3 Channel Excavation	E-14 River Gutter Type-1 Mod.	I-10 Dumped Rock Channel Protection	L-120 Life Matting				
		6" Class I-3	8" Class I-4	15" Class I-1	54" Class A-2												
		Deep	Shallow	M-6.6(a)	M-6.6(a)	Cu.Yds.	Each	Each	Lin. Ft.	Cu.Yds.	Lin. Ft.	Cu.Yds.	Sq.Yds.				
4-S	614+59				148	76											
1-D	614+16	18			70		1	1					125				
2-D	624+00	18			78		1	1				1	125				
1-UD	613+00 - 614+88 Lt.							1									
2-UD	613+00 - 614+16 Lt.				116												
3-UD	613+00 - 614+14 Rt.				114	10		1									
4-UD	615+00 - 624+00 Lt.				900												
5-UD	614+84 - 624+00 Lt.				916												
6-UD	614+50 - 623+90 Rt.				10		1										
1-G	623+00 - 624+00 Rt.								100								
		2168	1068	20	148	148	76	5.66	3	2	2	1	100	830	20	33.3	250

* Shall be constructed of Reinforced Concrete as per Standard Drawing.



MICROFILMED
OCT 31 1988

5-S RIC-13-1192
Sta. 629+35
DA = 1980 Ac
Exist. Struct. = None
Prop. Struct. = 14 Pipe M-6.4(g)
Max. Cover = 7.1
Q25 = 1080 C.F.S.



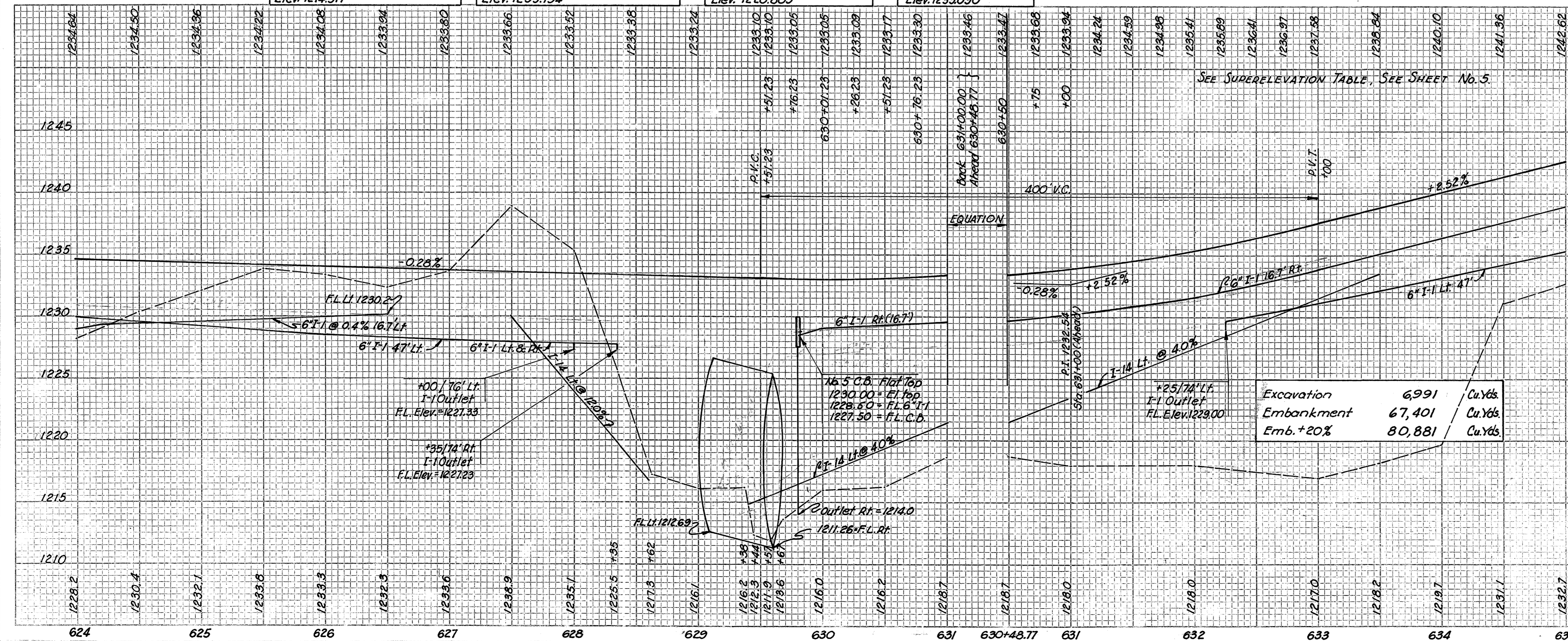
Ref. No.	Station	I-1 Pipe		I-5		I-2	I-8	I-15	E-3	L-120				
		6" C.I. 3	8" C.I. 4	15" Pipe	16" Pipe						Masonry	Basin #5	Guard Rail	Channel Excavation
I-D	629+80 Rt.		56	38		2	0.4	1		125				
5-S	629+35 (See below)				182		68.6			270				
I-G	624+00 - 626+50 Lt.									250				
I-2-G	628+00 - 631+98 Lt.									450				
I-3-G	628+07 - 635+00 Rt.									19.86				
I-UD	624+00 - 626+50 Lt.	256												
I-2-UD	624+00 - 628+00 Lt.	419	10											
I-3-UD	627+00 - 628+35 Rt.	152	10											
I-4-UD	632+25 - 635+00 Lt.	292	10											
I-5-UD	629+80 - 635+00 Rt.	578												
Totals		834	863	30	56	38	182	3	2	69.0	1	1449.86	270	125

For Culvert and Channel Details, see Sheets No. 131 & 132
629+80, dropdown; Detail on sheet 58

B.M. Spike in roof 48" Oak 2' from tree, 439' Rt. Sta. 625+60 Elev. 1214.917
B.M. Spike in E. roof 24" Basswood 226' Lt. Sta. 626+27 Elev. 1239.194
B.M. Spike in 21" Sycamore 226' Lt. Sta. 628+30 Elev. 1220.809
B.M. Spike in 20" Maple 258' Lt. Sta. 630+48 Elev. 1239.090

Ref. No.	Station	I-10 Dumped Rock Channel Protection		I-14 Concrete Paved Gutter Type-1		I-22 Subbase 6"		I-71 9" Rein. Portland Cement Concrete Pavement		I-10 Sodding 6" Wide		E-1 Compacted Subgrade	
		Cu. Yds.	Lin. Ft.	Cu. Yds.	Lin. Ft.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.		
I-A	632+07 - 635+00 Rt.					36.5	219.1					219	
5-S	629+35 (See above)	129.0											
I-SD	627+00 - 627+50 Lt.									33			
I-2-SD	633+50 - 635+00 Lt.									100			
I-PG	627+50 - 628+60 Lt.			110						37*			
I-2-PG	629+40 - 633+50 Lt.			461						154*			
I-DR	628+60 - 628+90 Lt.	16.7											
I-2-DR	628+10 - 629+40 Lt.	16.7											
I-3-DR	629+00 Lt.	12.0											
Totals		174.4	571	36.5	219.1	324	219						

Note Equation
* Sed. strip 18" wide shall be placed on each side of the Paved Gutter.



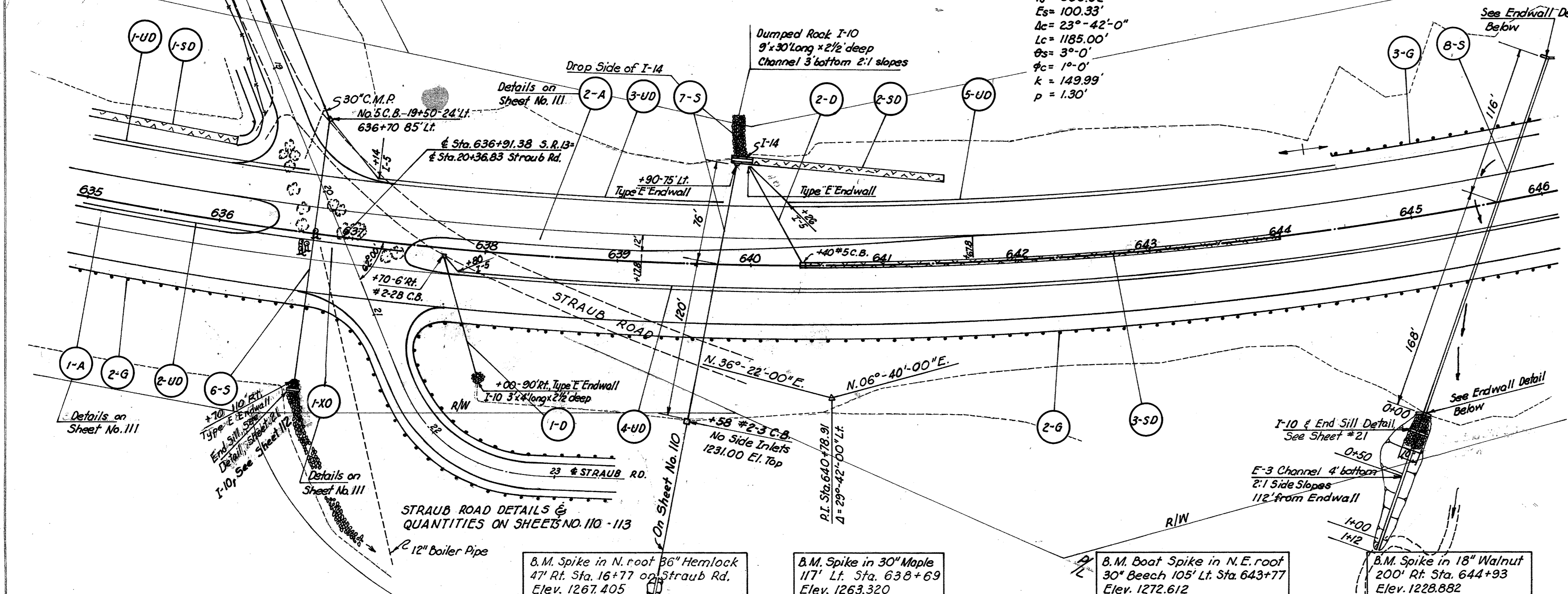
Excavation	6,991	Cu. Yds.
Embankment	67,401	Cu. Yds.
Emb. + 20%	80,881	Cu. Yds.

6-5 RIC-13-1207
Sta. 636+70
D.A. = 8 Ac.
Exist. Str. = 30"
Prop. Str. = 24" M-6.6(G) No Skew
Cover (Max.) = 18.5'
Qes = 28 C.F.S.

7-5 RIC-13-1213
Sta. 639+75
D.A. = 14 Ac.
Exist. Str. = 24"
Prop. Str. = 30" M-6.6(D) 10° L.F. Skew
Cover = 22 Ft.
Qes = 32 C.F.S.

CURVE DATA
P.I. Sta. 640+78.91
Δ = 29°-42'-0" Lt.
Dc = 2°-0'
Ls = 300.00'
Xc = 299.92'
R = 2864.79'
Ts = 909.92'
Es = 100.33'
Δc = 23°-42'-0"
Lc = 1185.00'
φs = 3°-0'
φc = 1°-0'
k = 149.99'
p = 1.30'

8-5 RIC-13-1224
Sta. 645+65
D.A. = 60 Ac.
Exist. Str. = None
Prop. Str. = 48" M-6.4(D) 30° L.F. Skew
Cover (Max.) = 33.0'
Qes = 95 C.F.S.



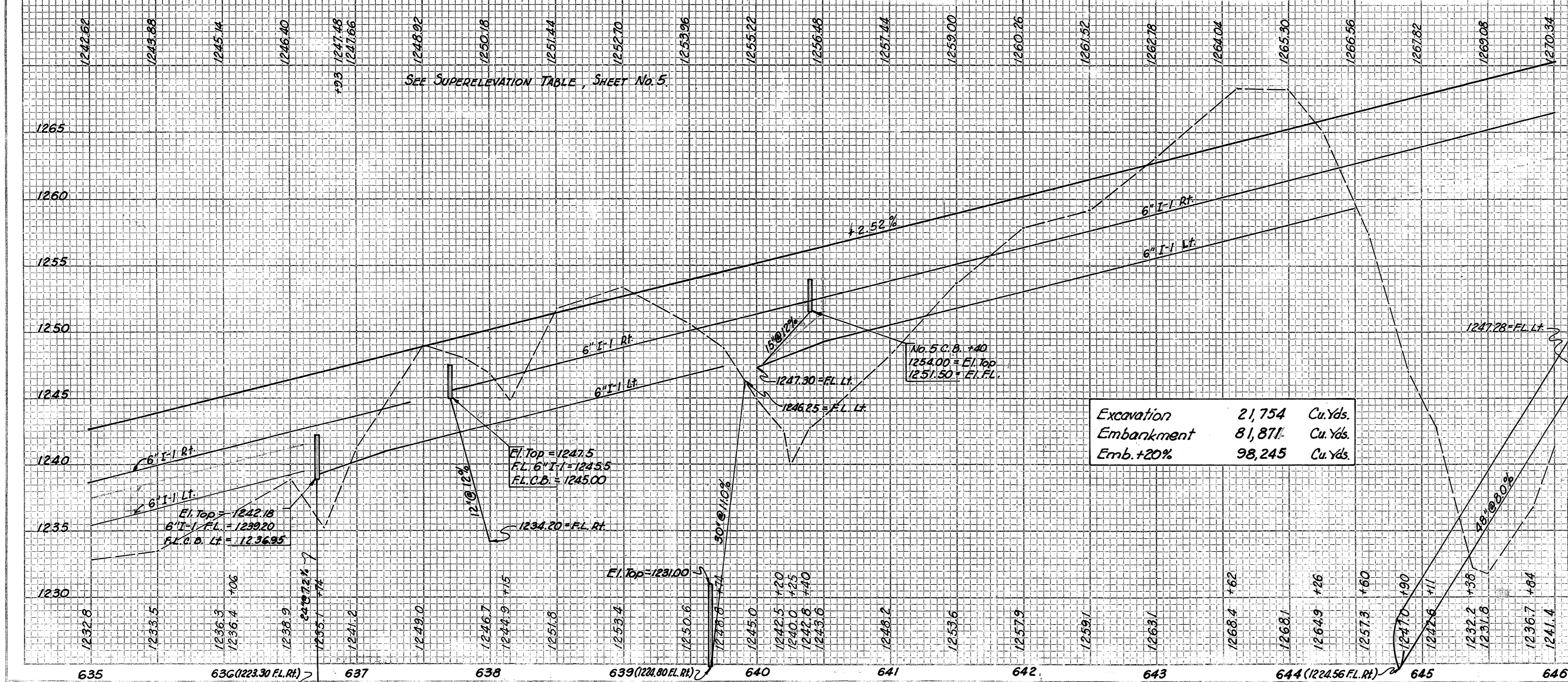
Ref. No.	Station	I-1 6" Pipe Class I-3 Deep Lin. Ft.	I-5 6" CL13 Specials Each	I-15 Guard Rail Steel Beam Deep Lin. Ft.	I-22 Subbase 6" Cu. Yds.	T-71 Reinforced P.C. Concrete Pavement 9" Sq. Yds.	I-1 8" Dipse Class F-4 M-6.4(G) Lin. Ft.	L-10 Jacking 6" Wide Sq. Yds.	E-1 Compacted Subgrade Sq. Yds.
I-A	635+00 - 636+07.7 H.				24.6	147.6			147.6
I-2A	637+67.8 - 641+67.8 Lt.				61.1	366.7			366.7
I-X0	636+07 - 637+67.8				90.5	582.8			582.8
I-G	635+00 - 636+59.63 H.					162.64			
I-2-G	637+72.28 - 646+00 H.					843.22			
I-3-G	644+50 - 646+00 Lt.					150.00			
I-UD	635+00 - 636+60 Lt. 160								
I-2-UD	635+00 - 637+40 H. 240								
I-3-UD	636+70 - 639+76 Lt. 322								
I-4-UD	637+70 - 646+00 H. 840								
I-5-UD	640+00 - 644+50 Lt. 453						10		
I-1-SD	635+00 - 636+03.75 Lt.								69
I-2-SD	640+00 - 641+50 Lt.								100
I-3-SD	640+40 - 644+00 Lt.								240
Totals		935.080	3	1155.86	176.2	1097.1	10	409	1097

B.M. Spike in N. roof 36" Hemlock
47' Rt. Sta. 16+77 on Straub Rd.
Elev. 1267.405

B.M. Spike in 30" Maple
117' Lt. Sta. 638+69
Elev. 1263.320

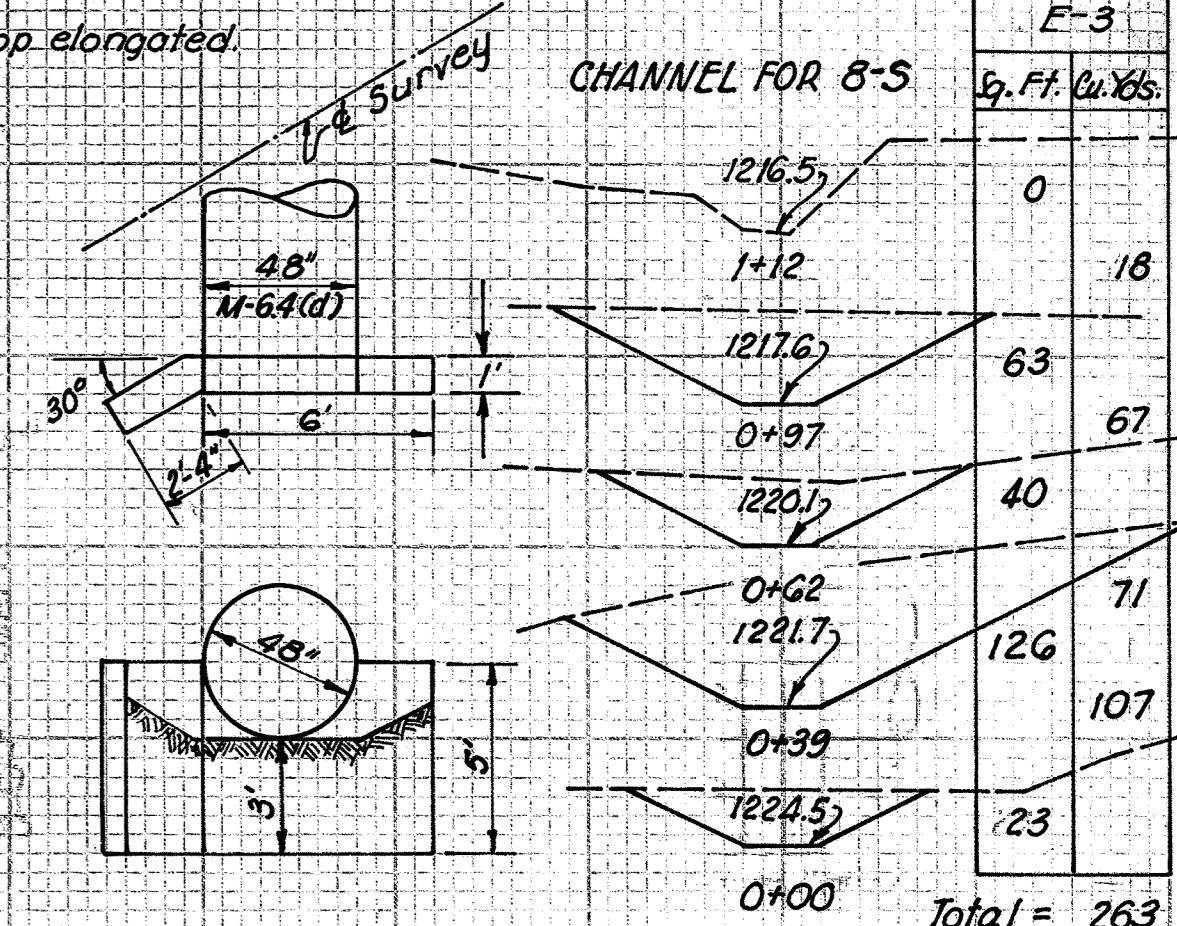
B.M. Boat Spike in N.E. roof
30" Beech 105' Lt. Sta. 643+77
Elev. 1272.612

B.M. Spike in 18" Walnut
200' Rt. Sta. 644+93
Elev. 1228.882



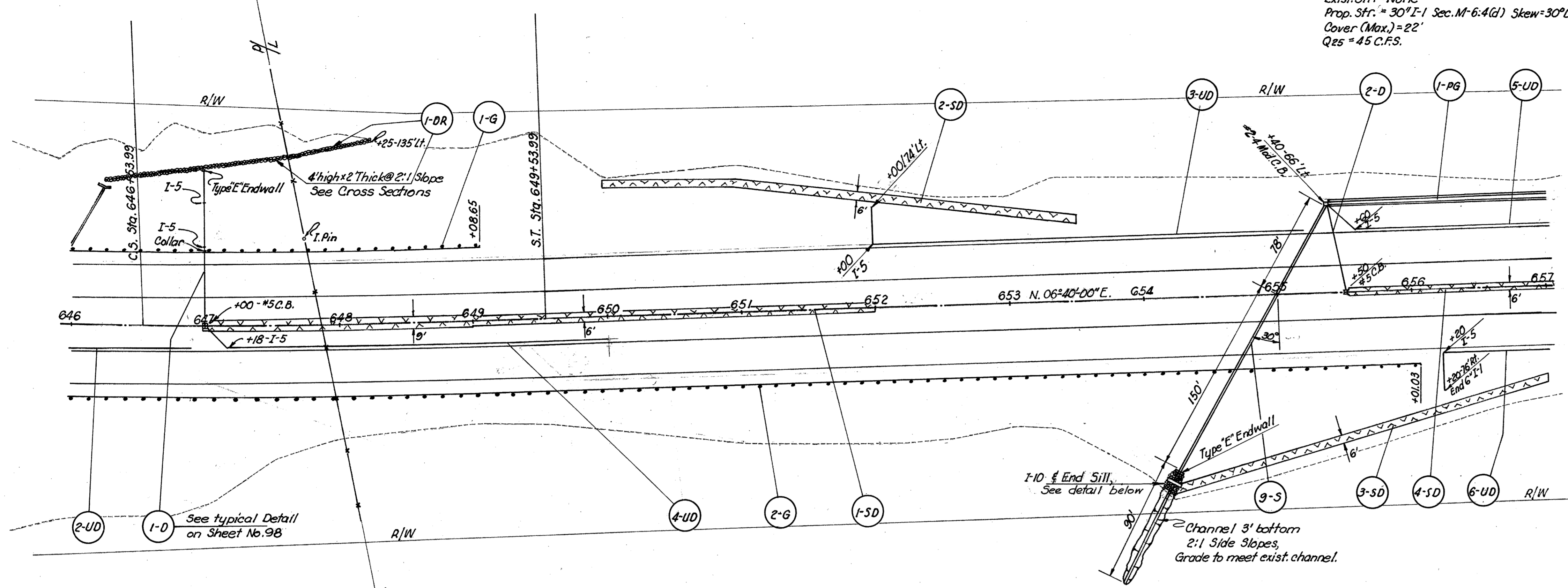
Ref. No.	Station	I-1 Pipe				I-2 Masonry Cu. Yds.	I-3 Catch Basins			I-10 Dumped Rock Channel Protection Cu. Yds.	E-3 Channel Excavation Cu. Yds.	I-12 Paved Gutter Type 1 Lin. Ft.	I-14 Jute Matting Sq. Yds.	
		12" Class I-1 Lin. Ft.	15" Class I-1 Lin. Ft.	24" Class I-1 Lin. Ft.	30" Class I-1 Lin. Ft.		#2-3	#2-8	#5					
I-6-S	636+70			194		1.34		1				125		
I-7-S	639+75				196	0.51	1		25			20		
I-8-S	645+65				284	7.67			19	26.3				
I-1-D	637+70 - 638+00 H.	90				0.26	1		1					
I-2-D	640+00 - 640+40 Lt.	82				0.26	1							
Totals		90	82	194	196	284	10.04	1	1	2	45	263	20	125

*48" Pipe shall be 8 Ga. & shall be shop elongated.



DETAIL OF ENDWALLS
Struct. RIC-13-1224

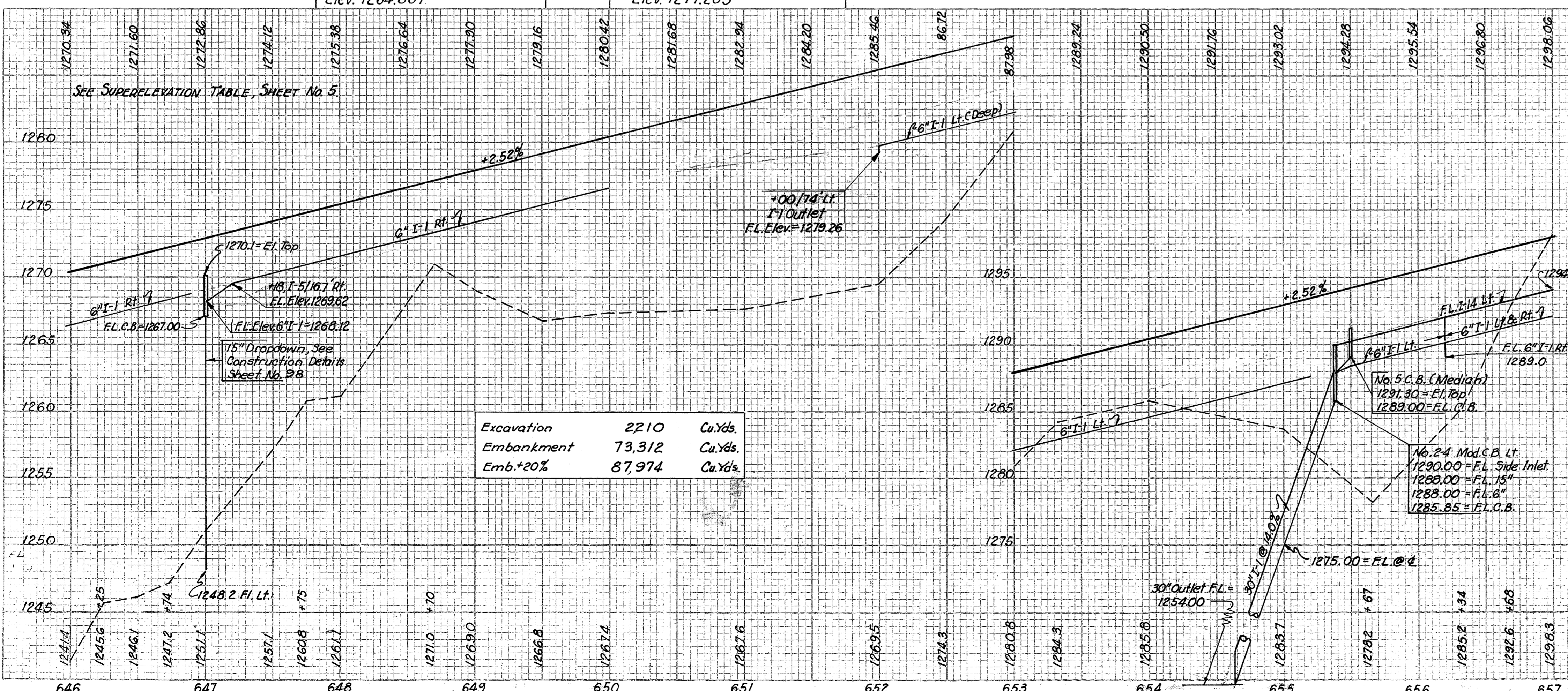
9+5 Str. No. RIC-13-1241
 Sta. 655+00
 D.A. = 20 Ac
 Exist. Str. = None
 Prop. Str. = 30' I-1 Sec. M-6.4(d) Skew = 30° L.F.
 Cover (Max.) = 22'
 Q25 = 45 C.F.S.



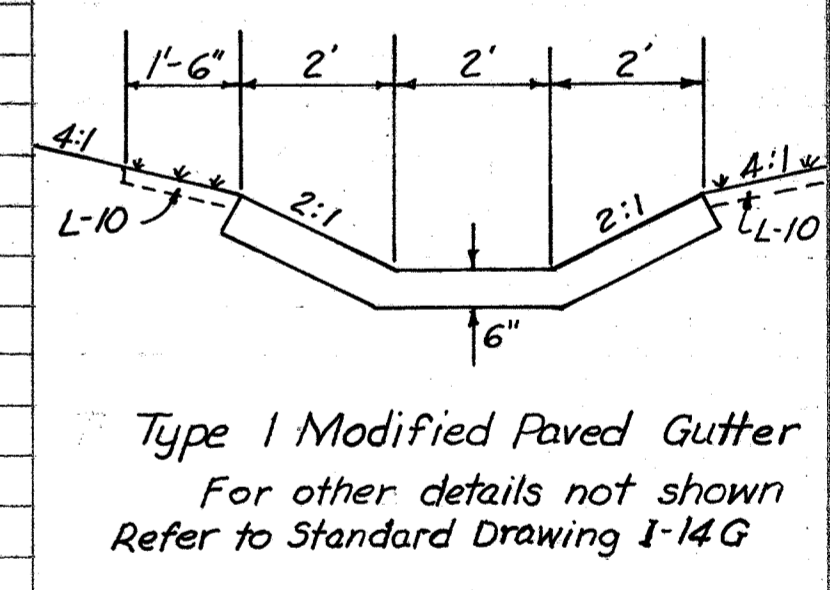
Ref. No.	Station	I-1 Pipe				I-2	I-5		I-8	I-10	E-3	I-6
		6"	8"	15"	30"		Each	Each				
I-1	647+00 Lt.			56	54	0.44	2					
2-D	655+00 Lt.			66				1				
I-DR	646+25-648+25 Lt.								60.0			
9-S	655+00				228	2.0			11.6	75	1	
2-UD	646+00 - 646+90 Rt.	90										
3-UD	652+00 - 655+20 Lt.	337	10									
4-UD	647+00 - 650+00 Rt.	306										
5-UD	653+40 - 657+00 Lt.	168										
6-UD	656+20 - 657+00 Rt.	100	10									
Totals		605,396	20	122	54	228	2.44	2	2	1	71.6	75

B.M. Spike in root N. side 20" Elm
 169' Rt. Sta. 648+75
 Elev. 1264.807

B.M. Boat Spike in root 20" Beech
 200' Lt. Sta. 650+25
 Elev. 1277.203

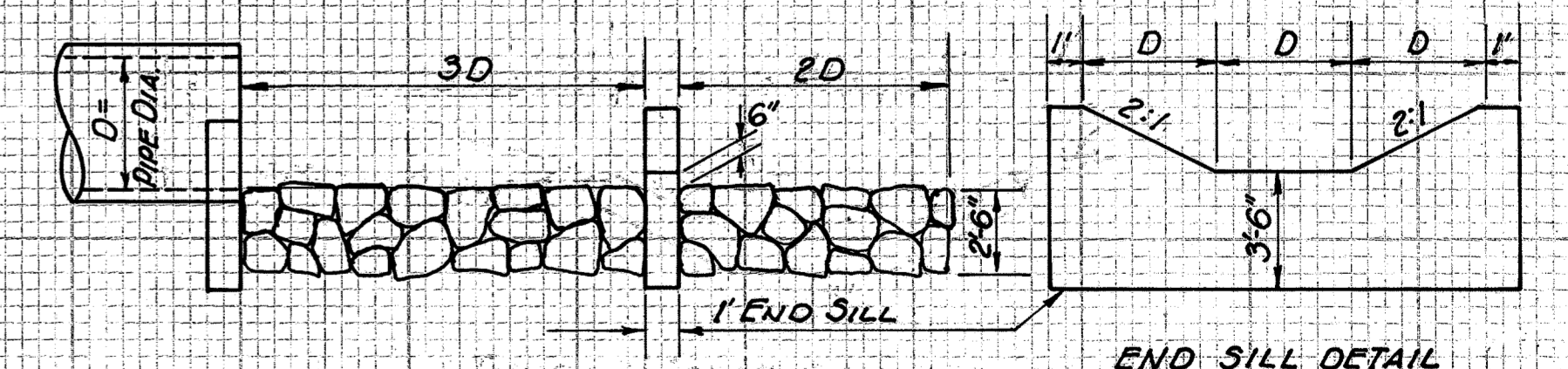


Ref. No.	Station	I-14 Paved Gutter Type 1 Modified	I-15 Guard Rail Steel Beam Deep	L-10 Sodding
I-6	646+00 - 649+08 Lt.		300.00	
2-G	646+00 - 656+01 Rt.		1006.68	
I-PG	655+46 - 657+00	154 *		52 *
I-SD	647+08 - 652+00 E			994 @
2-SD	650+00 - 653+50 Lt.			233
3-SD	654+20 - 657+00 Rt.			167
4-SD	655+56 - 657+00 E			96
Totals		154	1306.68	942



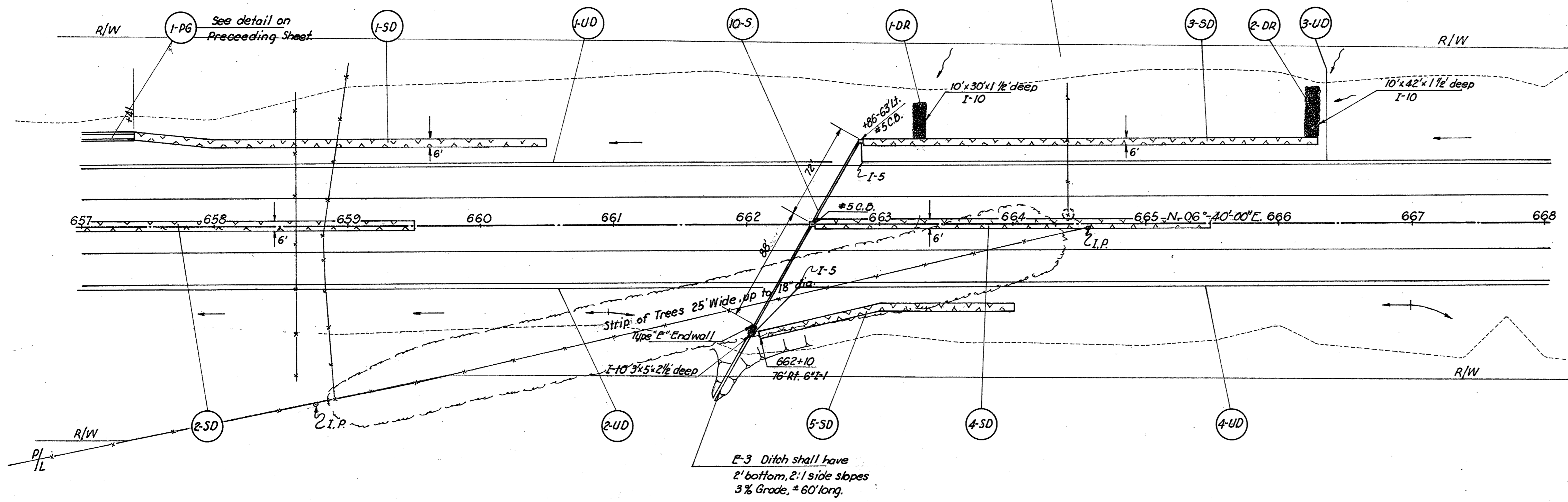
Excavation	2210	Cu. Yds.
Embankment	73,312	Cu. Yds.
Emb. +20%	87,974	Cu. Yds.

* Sod strip 18" wide shall be placed on each side of the paved gutter.
 @ Sod shall be 9" wide in median from Sta. 647+06 to Sta. 649+00. All other sod is 6" wide.



CHANNEL PROTECTION AT CULVERT OUTLET

10-5 Str. No. RIC-13-1255
 Sta. 662+50
 D.A. = 5 Ac
 Exist. Str. = None
 Proposed Str. = 21" x 160' CI-A Skew = 30° L.F.
 Cover = 5.0'
 Q25 = 15 c.f.s.

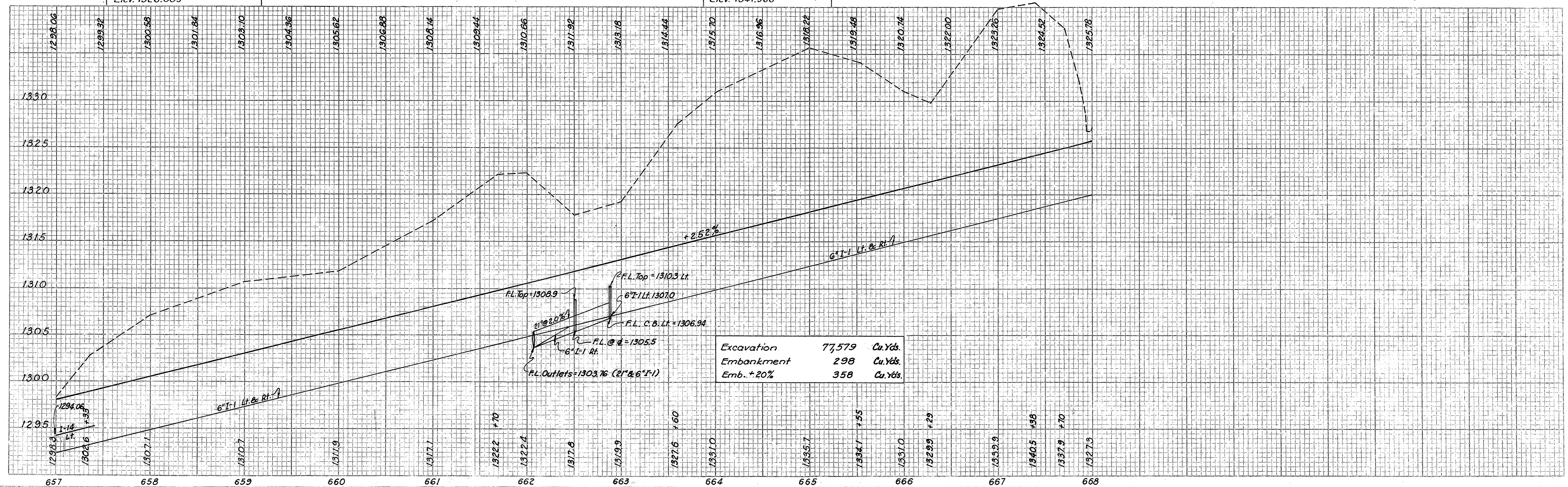


Ref. No.	Station	I-1 Pipe		I-2 Masonry	I-5 6" I-3 Specials 45° 90° #5	I-8 Catch Basins #5	I-10 Dumped Rock Chan. Prof.	I-14 Raved Gutter Type I Modified	E-3 Channel Excavation	L-10 Sodding		
		Class. F-3 6" 8" 21" Pipe	Class. F-4 M-6 (A) C M-6 (B) C									
1-PG	657+00-657+40 Lt.								40	14*		
1-SD	657+40-660+50 Lt.									207		
2-SD	657+00-659+50 Lt.									167		
3-SD	662+02-666+30 Lt.									226		
4-SD	662+56-666+50 Lt.									196		
5-SD	662+10-664+00 Rt.									127		
10-S	662+50		160	0.36		2	1.4			26		
1-UD	657+00-662+64 Lt.	564										
2-UD	657+00-662+10 Rt.	510										
3-UD	662+86-668+00 Lt.	530				1						
4-UD	662+10-668+00 Rt.	592	10		1							
1-DR	663+30 Lt.						16.7					
2-DR	666+24 Lt.						23.3					
Totals		2196	10	160	0.36	1	1	2	41.4	40	26	937

B.M. Spike in N. side 28" Walnut
 250' Lt. Sta. 658+80
 Elev. 1326.009

B.M. Spike in roof 18" Oak
 190' Lt. Sta. 664+30
 Elev. 1341.966

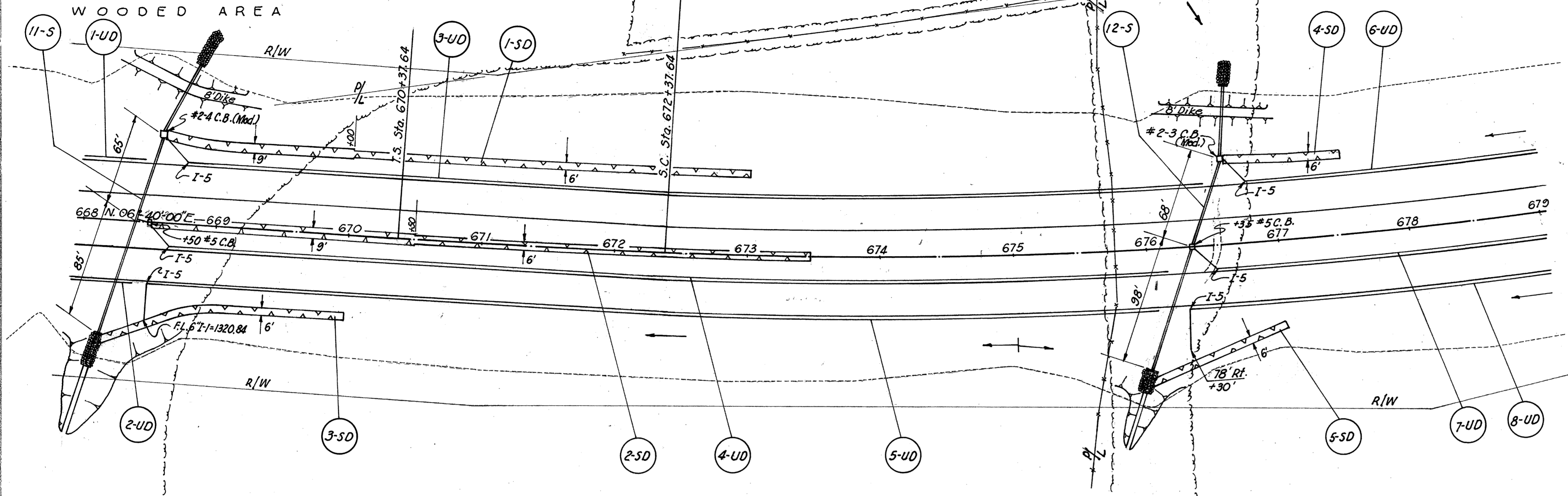
* 6" od strip 18" wide shall be placed on each side of the paved gutter.



RIC-13-(10.83-13.95)

11-3 RIC-13-1266
Sta. 668+40
D.A. = 28 Ac.
Exist. Struct. = None
Prop. Struct. = 36"x210"
Skew = 15° L.F.
Cover (Max.) = 6.5'
Q25 = 58 C.F.S.
Details on Sheets No. 153 & 155

12-5 RIC-13-1281
Sta. 676+35
D.A. = 18 Ac.
Exist. Struct. = None
Prop. Struct. = 30"x234"
Skew = 22° L.F.
Cover (Max.) = 7.8'
Q25 = 44 C.F.S.
Details on Sheets 154 & 155

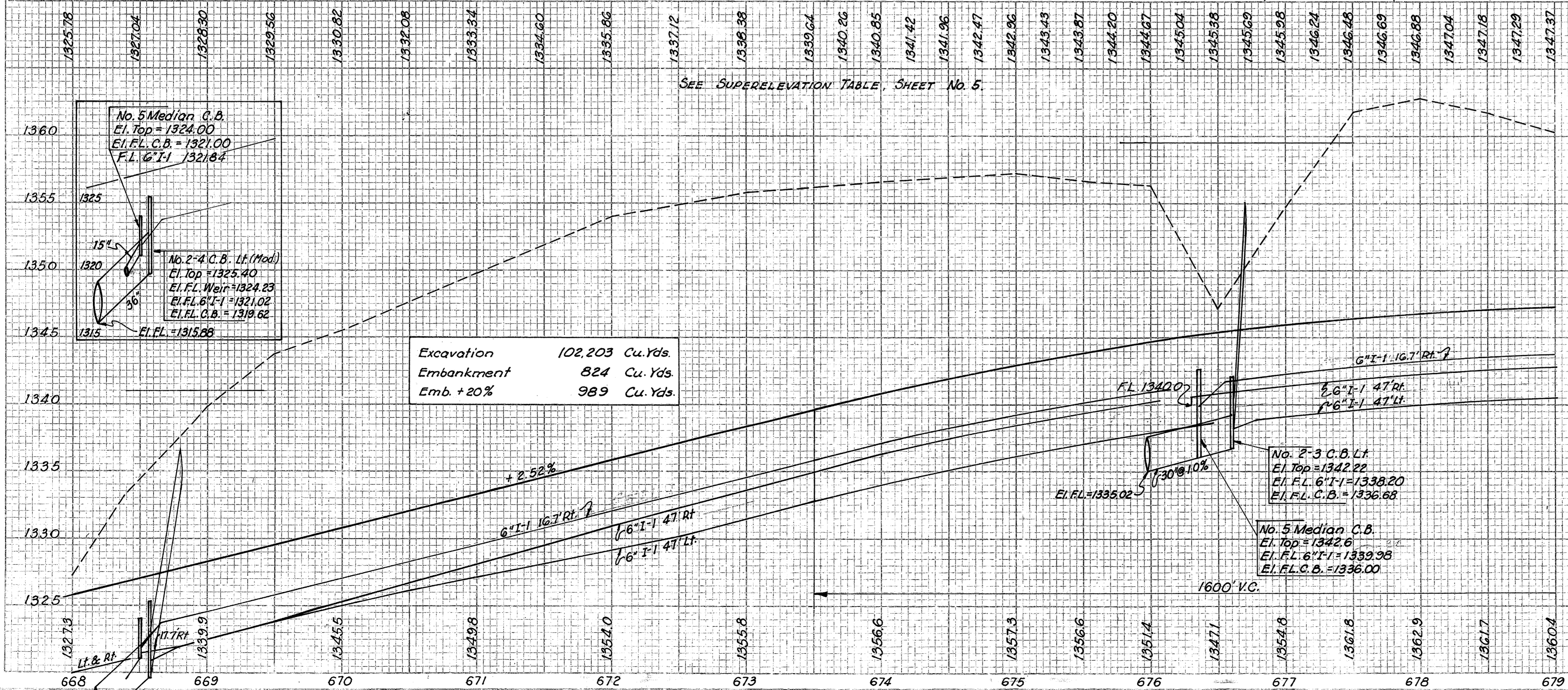


Ref. No.	Station	I-1 Pipe		I-5 6" Pipe Specials	L-10 Soding (Width as Shown)
		6"	8"		
		Class F-3	Class F-4	Class F-4	Class F-4
		Lin. Ft.	Each	Each	Sq.Yds.
1-UD	668+00-668+44 ft.	44			
2-UD	668+00-668+40 ft.	40			
3-UD	668+50-676+46 ft.	788		1	
4-UD	668+50-676+16.67 ft.	876		1	
5-UD	668+50-676+06.47 ft.	780	10	1	
6-UD	676+50-679+00 ft.	248		1	
7-UD	676+35-679+00.67 ft.	272		1	
8-UD	676+30-679+00.47 ft.	292	10	1	
<hr/>					
1-5D	668+60-673+00 ft.				340
2-5D	668+56-673+80 ft.				394
3-5D	668+20-670+00 ft.				120
4-5D	676+63-677+50 ft.				58
5-5D	676+00-677+00 ft.				67
<hr/>					
Totals		2192	1148	20	4 2 979

B.M. Spike in roof E. side
36" Maple 253' Lt. Sta. 669+16
Elev. 1345.366

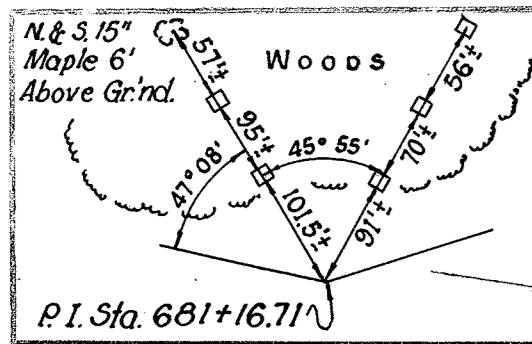
B.M. Spike in Ash
Lt. Sta. 677±
Elev. 1367.210

Ref. No.	Station	I-1 Pipe					I-2 Pipe	I-5 Pipe	I-8 Catch Basins	I-10 Dumped Rock Channel Protection	E-3 Channel Excavation	L-120 Jute Matting
		15"	30"	36"	30"	36"						
		Class E-1	Class A-1	Class A-1	Class F-4	Class F-4	Masonry	36"x18" Length	# 5x5	# 4x4	Cu.Yds.	Sq.Yds.
		Lin. Ft.	Each	Each	Each	Each	Each	Each	Each	Each	Cu.Yds.	Sq.Yds.
11-5	668+40	6	150	60	60	6.08	1	1	1	1	37	430
12-5	676+35	166	68	2.98				1	1		23	112
<hr/>												
Totals		6	166	150	68	60	6.08	1	1	2	60	542

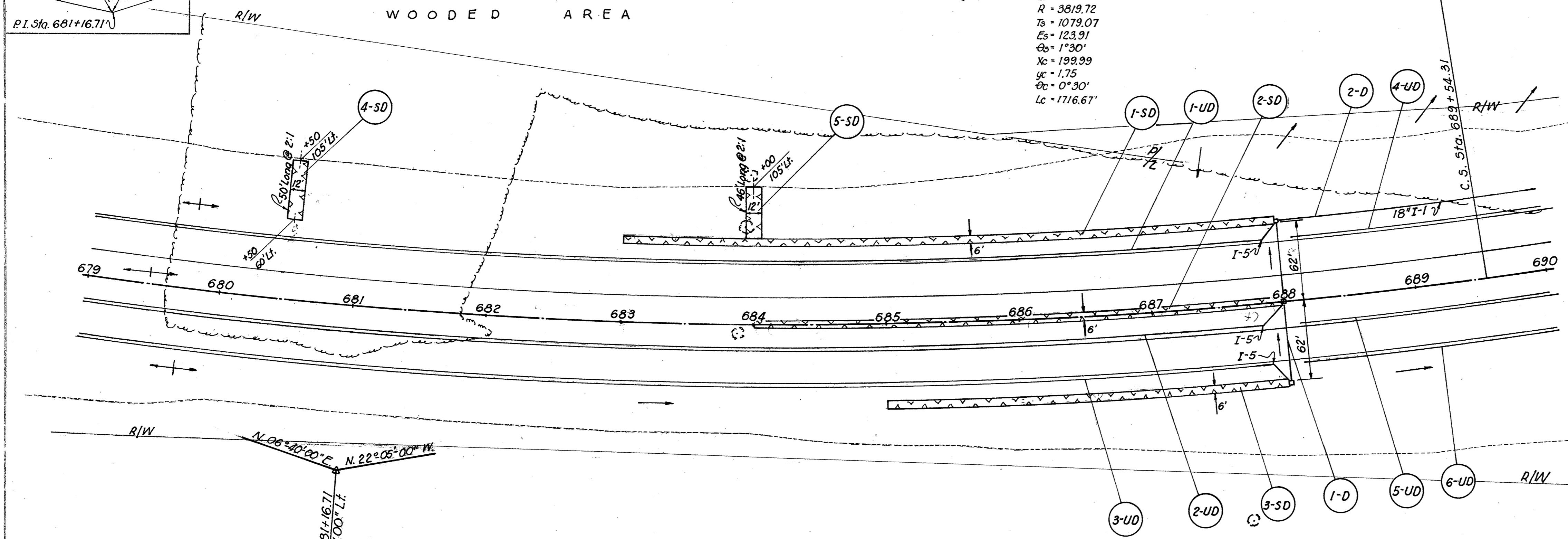


SEE SUPERELEVATION TABLE, SHEET NO. 5.

*Sta. Side Opening. Shall be constructed of Class 'C' Concrete Only.
Shall be constructed of reinforced concrete as shown on Sheet No. 98.



CURVE DATA
 P.I. Sta. 681+16.71
 Δ = 28° 45' 00" Lt.
 Δc = 1° 30'
 Ls = 200'
 R = 3819.72
 T_s = 1079.07
 E_s = 123.91
 Δ_c = 1° 30'
 X_c = 199.99
 Y_c = 1.75
 Δ_c = 0° 30'
 Lc = 1716.67

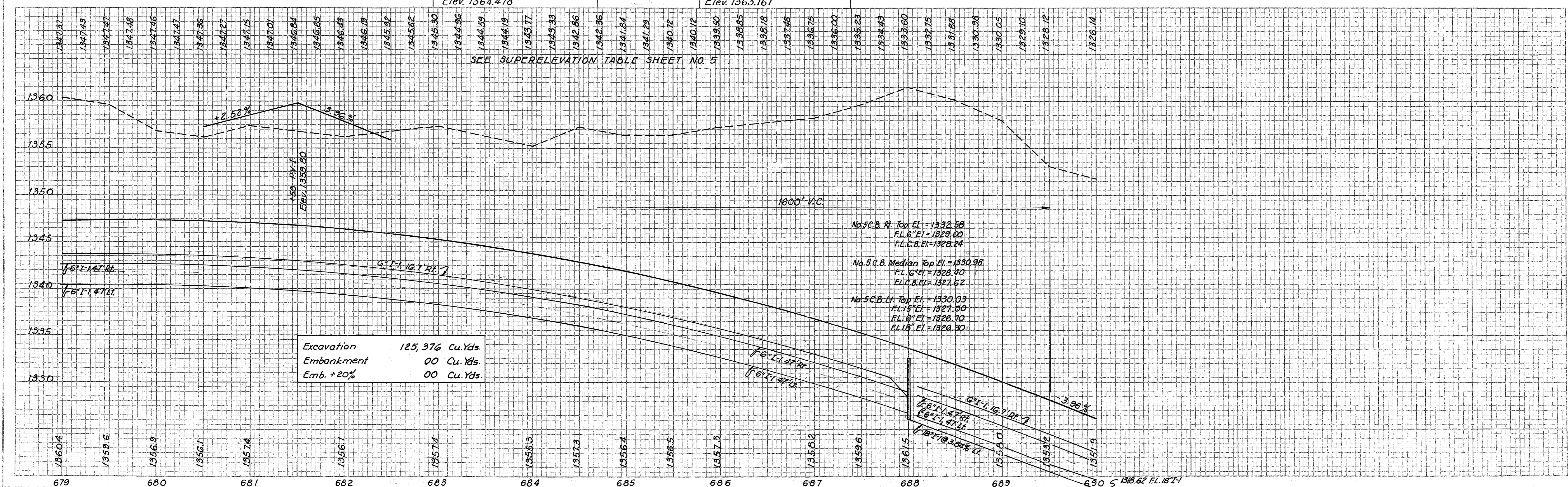


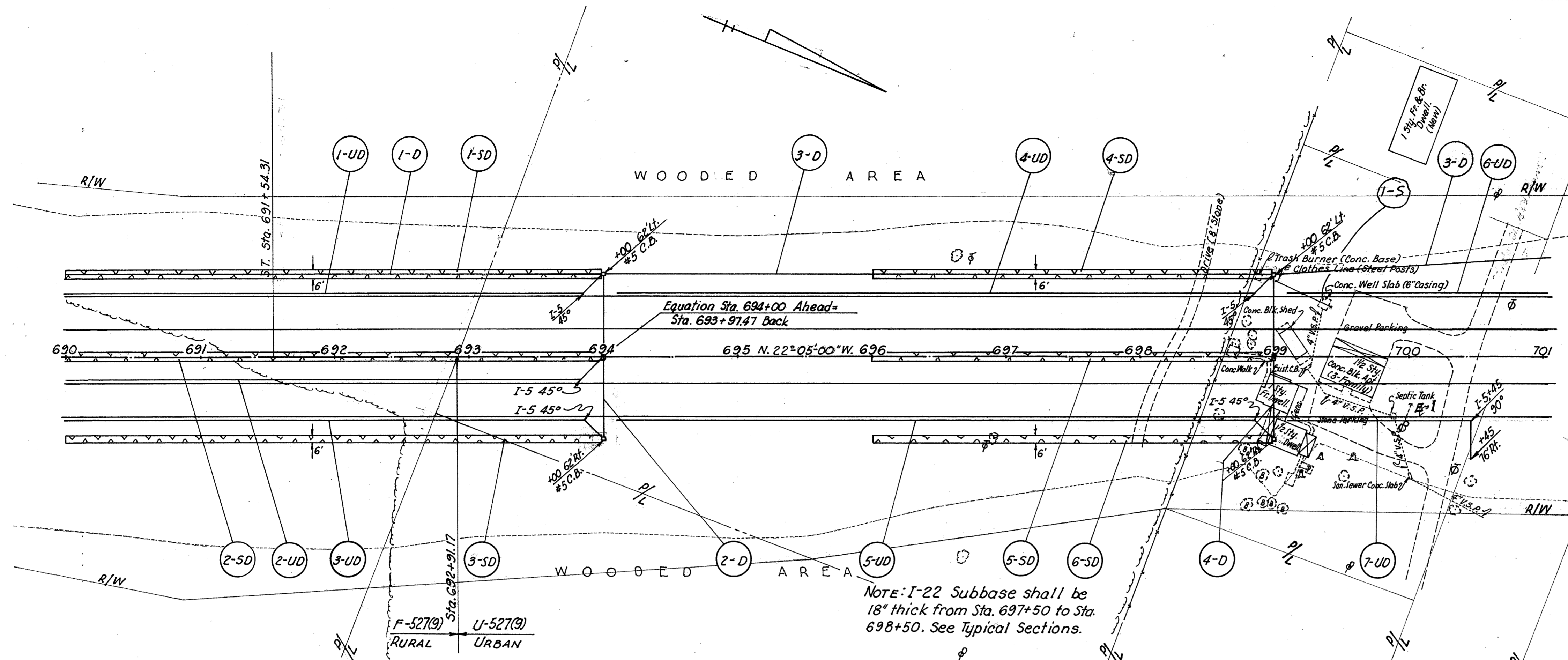
Ref. No.	Station	I-1		I-5 6" Pipe Specials Each	I-8 Catch Basins #5 Each	L-10 Sodding 6' Wide Sq. Yds.		
		6" Pipe Class I-3 Deep	15" Pipe Class I-1 Shallow					
1-D	688+00		124		3			
2-D	688+00-690+00 Lt.		200					
1-SD	683+00-687+94 Lt.					329.3		
2-SD	684+00-687+94 Lt.					262.7		
3-SD	685+00-687+94 Rt.					196.0		
4-SD	680+50 * Lt.					*66.7		
5-SD	684+00 * Lt.					*61.3		
1-UD	679+00-688+00 47' Lt.	896			1			
2-UD	679+00-688+00 16.7' Rt.	912			1			
3-UD	679+00-688+00 47' Rt.	916			1			
4-UD	688+00-690+00 47' Lt.	188						
5-UD	688+00-690+00 16.7' Rt.	190						
6-UD	688+00-690+00 47' Rt.	192						
Totals		2192	1102	124	200	3	3	916

*Sod dropdowns to be located @ natural dropdowns or non-performed if not needed.
 Recess 6" into slope where used.

B.M. Spike in root E. side 24" Oak
 200'± Lt. Sta. 684+00
 Elev. 1364.478

B.M. Spike in root W. side 24" Maple
 200'± Lt. Sta. 686+00
 Elev. 1363.161





Ref. No.	Station	I-1		I-5 6" x 3" Pipe Specials 45°/90° Bends Each	I-8 Catch Basins #5 Each	L-10 Sodding 6" Wide Sq. Yds.	I-1 8" Pipe M-6.4G Class F-4 Lin. Ft.	Special Drilled Well Aban- doned Each	
		Class I-3 Deep	Class I-3 Shallow						
1-D	690+00 - 694+00 Lt.						400		
2-D	694+00 - Lt. & Rt.		124		3		700		
3-D	694+00 - 701+00 Lt.								
4-D	699+00 - Lt. & Rt.		124		3				
1-SD	690+00 - 693+94 Lt.							262.7	
2-SD	690+00 - 693+94 R.							262.6	
3-SD	690+00 - 693+94 Rt.							262.7	
4-SD	696+00 - 698+94 Lt.							196.0	
5-SD	696+00 - 698+94 R.							196.0	
6-SD	696+00 - 698+94 Rt.							196.0	
1-UD	690+00 - 694+00 47 Lt.	406							
2-UD	690+00 - 694+00 16.7 Rt.	406							
3-UD	690+00 - 694+00 47 Rt.	406							
4-UD	694+10 - 699+00 Lt.	496							
5-UD	694+10 - 699+00 Rt.	496							
6-UD	699+10 - 701+00 Lt.	190						10	
7-UD	699+10 - 701+45 Rt.	154							
I-S	699+37 Lt.							1	
Totals		2148	406	248	400	700	5	1	6
F-527(9)		582	291	0	291	0	0	0	0
U-527(9)		1566	115	248	109	700	5	1	6

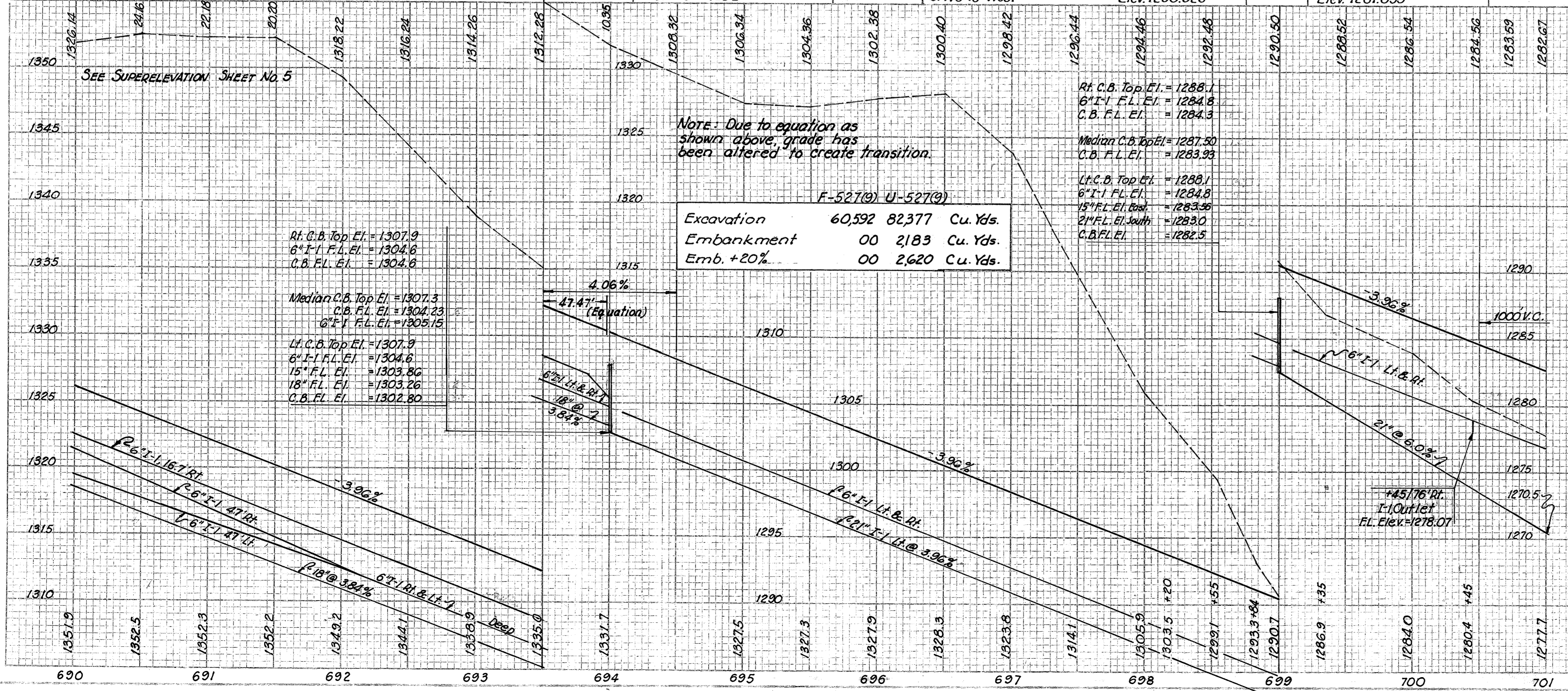
Note: I-22 Subbase shall be 18" thick from Sta. 697+50 to Sta. 698+50. See Typical Sections.

B.M. Spike in S.W. root Maple Clump in Fence row 250' Rt. Sta. 692+70 Elev. 1354.328

B.M. Spike in root W. side 36" Maple 160' Rt. Sta. 697+90 Elev. 1304.252

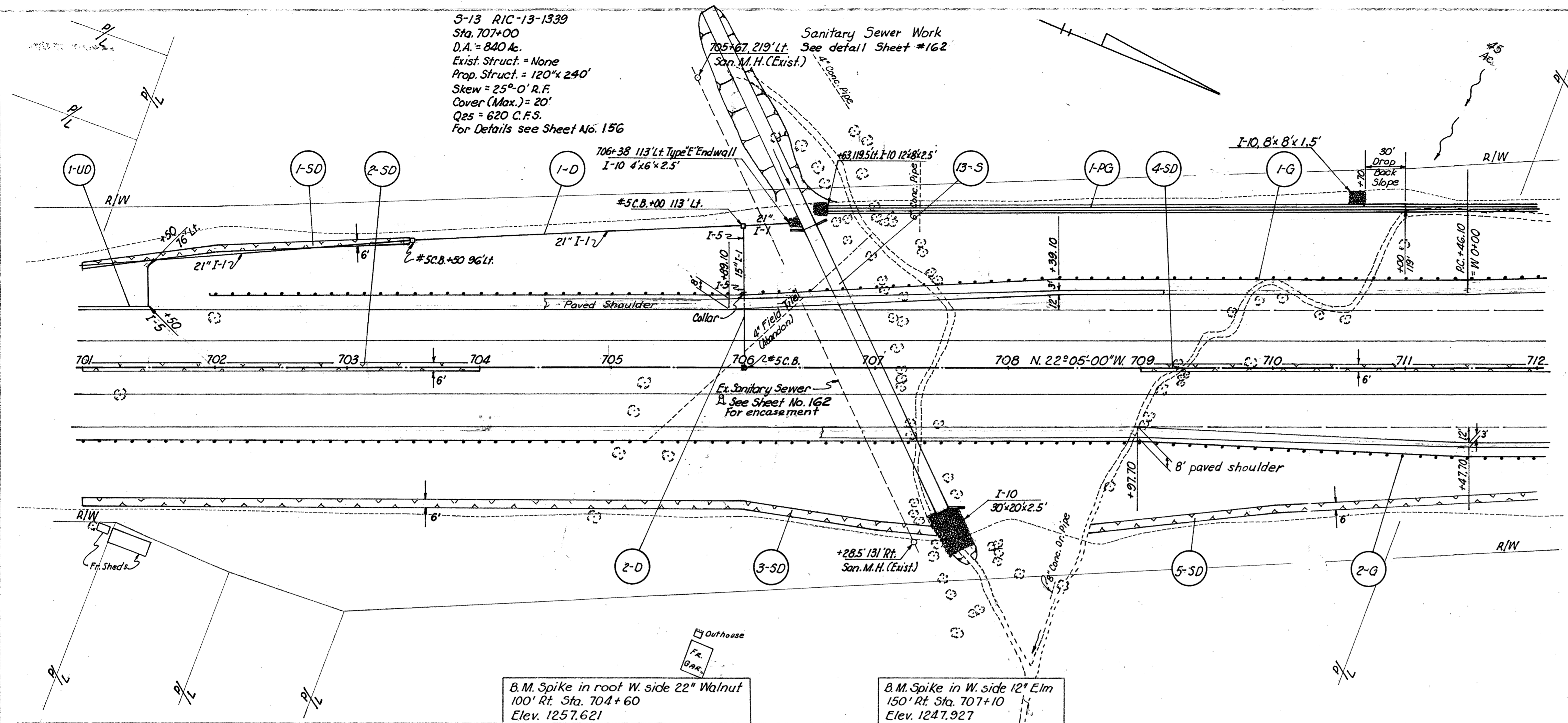
B.M. Spike in 50' Twin Elm Rt. of & Survey in front of Gray Shingle Res., 150' S. of Woodville Road & Drive to West Elev. 1290.526

B.M. Spike in P Pole No. 47 150' Rt. Sta. 699+75 Elev. 1281.035



5-13 RIC-13-1339
Sta. 707+00
D.A. = 840 Ac.
Exist. Struct. = None
Prop. Struct. = 120" x 240"
Skew = 25°-0' R.F.
Cover (Max.) = 20'
Q25 = 620 C.F.S.
For Details see Sheet No. 156

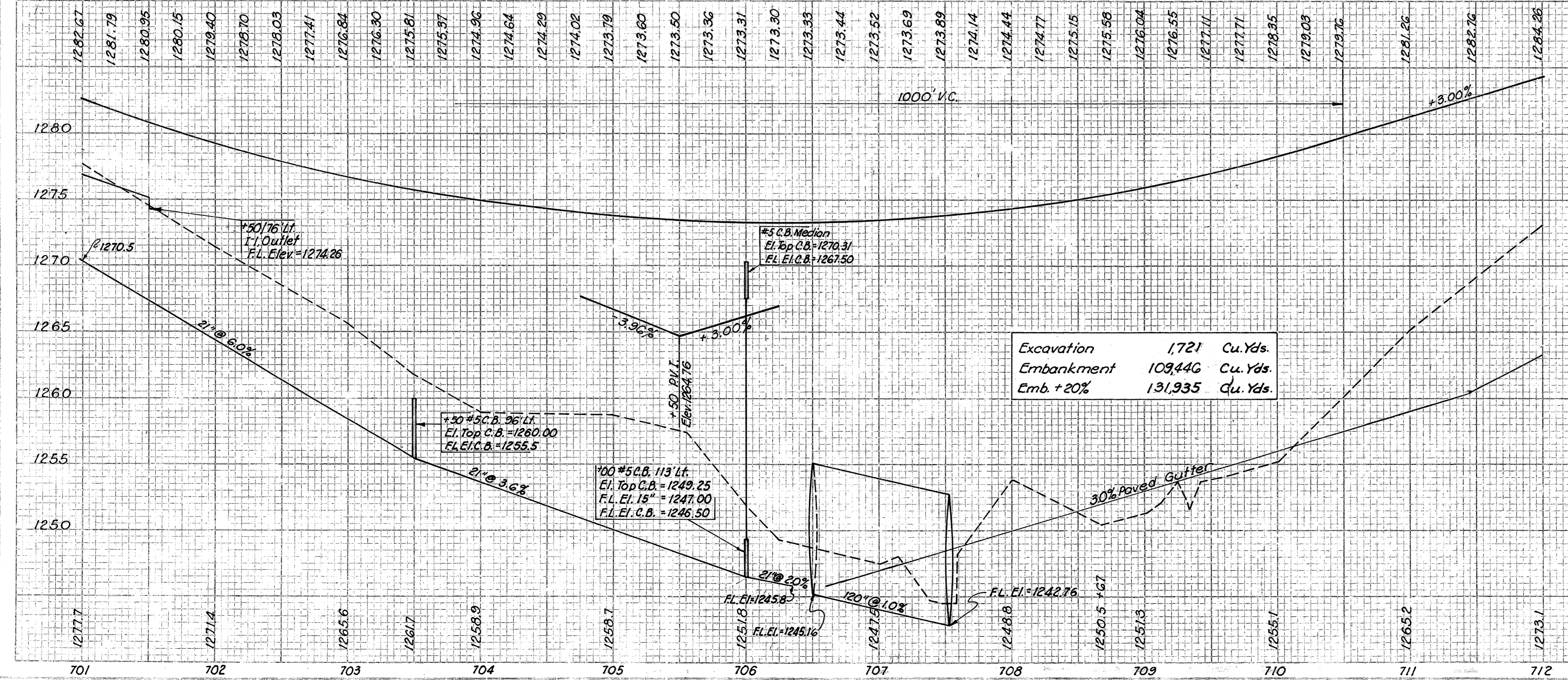
Sanitary Sewer Work
705+67.219' Lt. See detail Sheet #162
San. M.H. (Exist.)



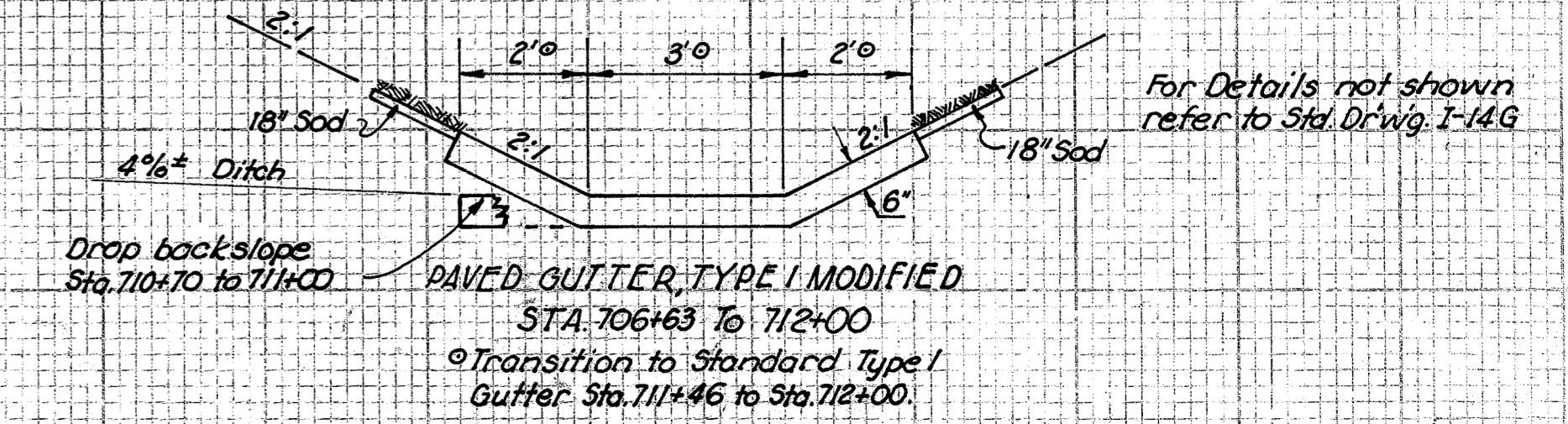
Ref. No.	Station	I-1		I-5 Pipe Specials	I-8 Catch Basins #5	I-10 Dumped Rock Chunnel Protection	I-14 Raved Gutter Type 1 Mod.	E-3 Channel Excavation	I-2 Masonry	L-120 Jute Matting		
		15" Pipe Class J-1	21" Pipe Class E-1									
		Lin. Ft.	Each	Each	Cu. Yds.	Lin. Ft.	Cu. Yds.	Cu. Yds.	Sq. Yds.			
1-D	704+00 - 706+38 Lt.		538		2	2.2			0.36	125		
2-D	706+00 - Lt.	58	58	2	1					125		
1-PG	706+63 - 712+00 Lt.					12.4	537					
13-S	707+00		240			55.6	356		32.24			
Totals		58	58	538	240	2	3	70.2	537	356	32.60	250

Ref. No.	Station	I-1 Pipe		I-5 Pipe Specials	L-10 Sodding 6" Wide	I-15 Guard Rails Steel Beam Deep
		6" Class I-3 Deep	8" Class F-4 Class G M.A.C. 90" EIL 13			
		Lin. Ft.	Each	Sq. Yds.	Lin. Ft.	
1-PG	706+63 - 712+00 Lt.			*169.0		
1-G	708+00 - 712+00 Lt.				1000	
2-G	704+00 - 712+00 Rt.				1100	
1-SD	704+00 - 703+44 Lt.				162.5	
2-SD	704+00 - 704+00 Lt.				200.0	
3-SD	704+00 - 707+48 Rt.				432.0	
4-SD	709+00 - 712+00 Lt.				200.0	
5-SD	708+60 - 712+00 Rt.				226.5	
1-UD	704+00 - 704+50 Lt.	69	10	1		
Totals		69	10	1	1390	2100

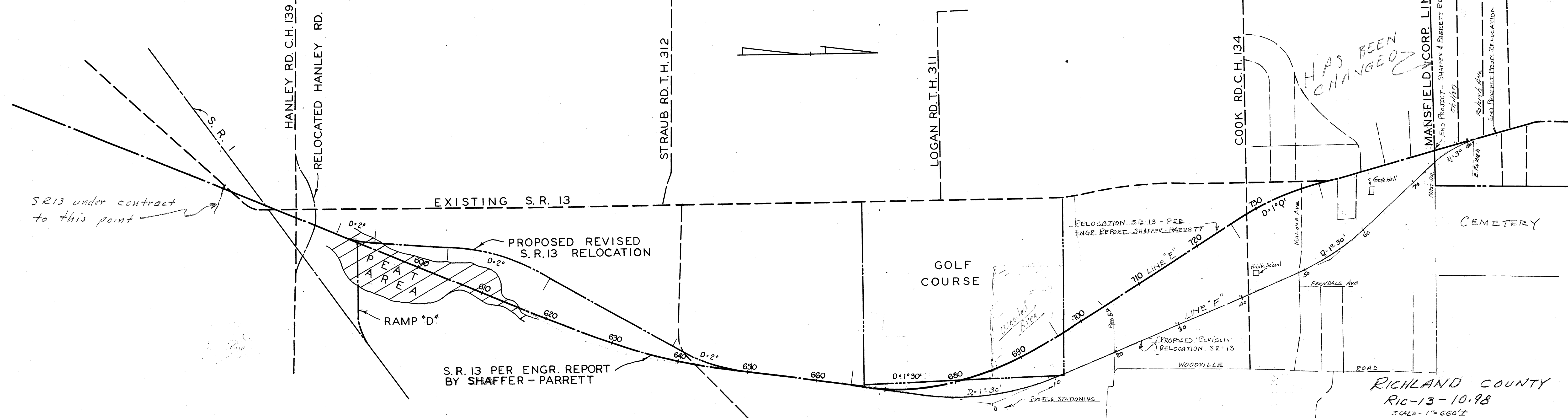
*3rd strip 18" wide shall be placed on each side of paved gutter except where I-10 occurs.



Excavation 1,721 Cu. Yds.
Embankment 109,446 Cu. Yds.
Emb. + 20% 131,935 Cu. Yds.



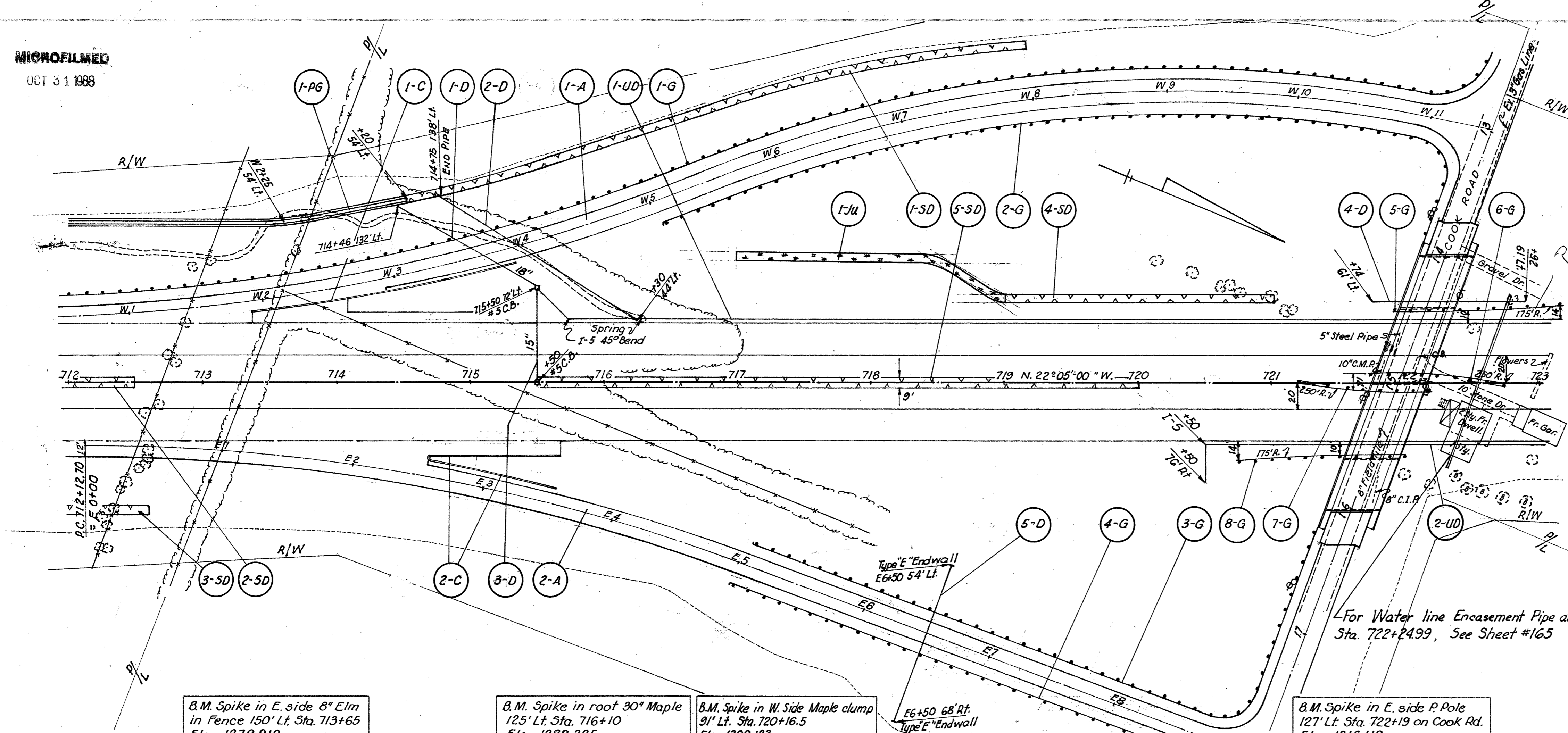
PAVED GUTTER, TYPE I MODIFIED
STA. 706+63 TO 712+00
Transition to Standard Type I
Gutter Sta. 711+46 to Sta. 712+00.



SR13 under contract to this point

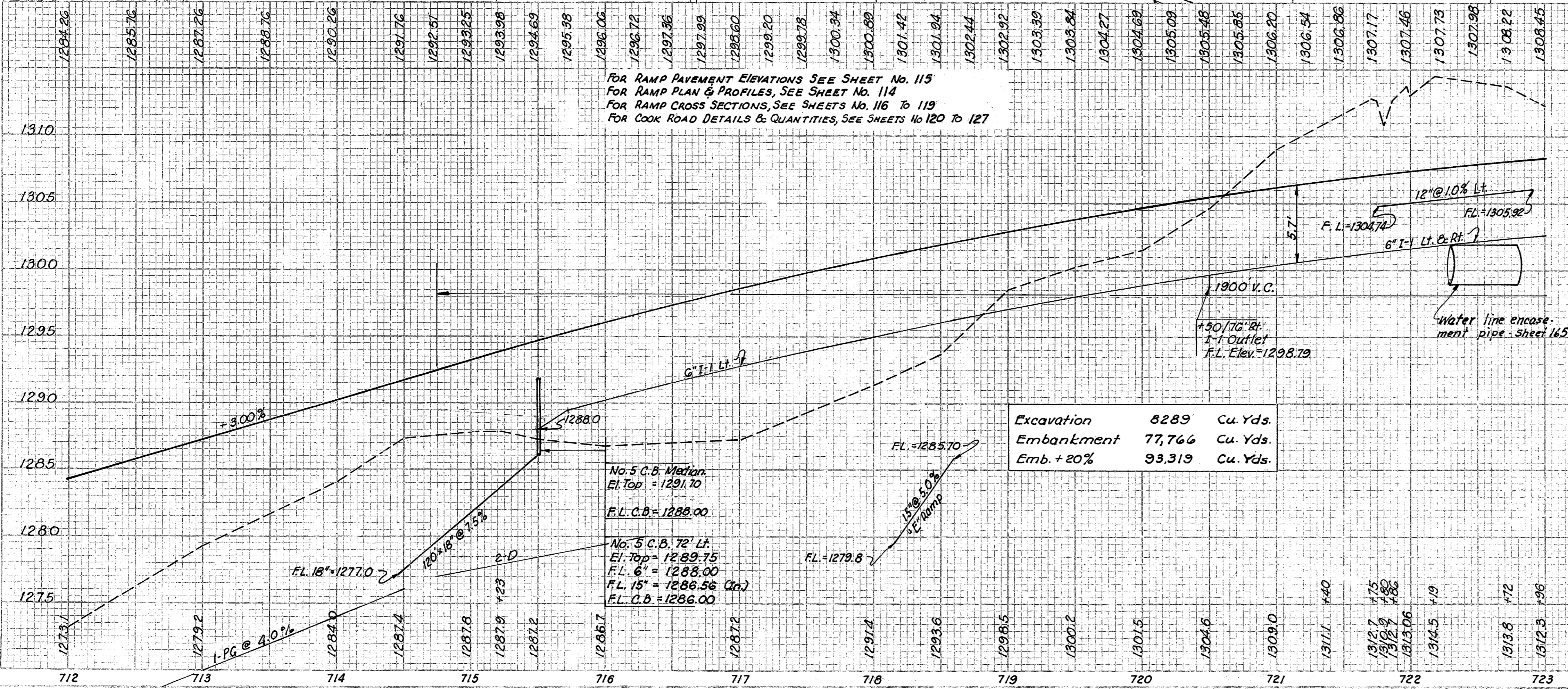
HAS BEEN CHANGED

RICHLAND COUNTY
RIC-13-10.98
SCALE - 1" = 660' ±



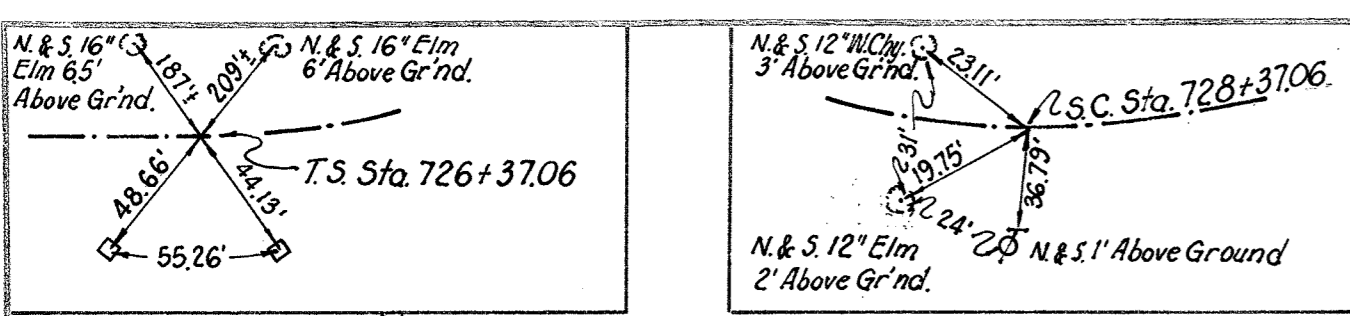
Ref. No.	Station	I-1 Pipe					I-2 Masonry	I-5 6" Pipe Specials	I-8 Catch Basins #5	L-120 Jute Matting	L-10 Sodding 6" Wide	I-14 Concrete Gutter Type 1	I-9			
		Class F-3	Class F-3	Class F-4	Class F-4	Class F-4										
1-D	714+46 - 715+50 Lt.															
2-D	714+75 - 716+30 Lt.		*178									*3				
3-D	715+50 Lt. & Rt.				72			2	125							
4-D	721+74 - 722+92 Lt.			118												
5-D	E6+50					122	0.52									
1-UD	715+50 - 723+00 Lt.															
2-UD	720+50 - 723+00 Rt.			10												
1-PG	712+00 - W3+15 Lt.										87.0	261				
1-SD	W3+15 - W8+00 Lt.											323.2				
2-SD	712+00 - 712+50 Lt.											33.3				
3-SD	712+00 - 712+50 Rt.											33.3				
4-SD	719+00 - 721+00 Lt.											133.2				
5-SD	715+56 - 720+00 Lt.											444.0				
1-Ju	717+00 - 721+00 Lt.									173						
Totals		1031	178	10	118	72	120	122	0.52	1	1	2	298	1054.0	261	3

B.M. Spike in E. side 8" Elm in Fence 150' Lt. Sta. 713+65 Elev. 1279.912
 B.M. Spike in roof 30" Maple 125' Lt. Sta. 716+10 Elev. 1289.225
 B.M. Spike in W. Side Maple clump 91' Lt. Sta. 720+16.5 Elev. 1309.123
 E6+50 68' Rt. Type E Endwall
 B.M. Spike in E. side P. Pole 127' Lt. Sta. 722+19 on Cook Rd. Elev. 1316.119



Ref. No.	Station	I-12 Concrete Curb	I-15 Guard Rail Steel Beam	T-30 Bitum. Prime Coat @ 0.40 Gal./Sq. Yd.	I-21 Concrete Traffic Island Pavement	I-22 Subbase 6"	T-31 Bit. Surface Treatment	T-71 Reinforced P.C. Concrete Pavement 9"	B-19 Aggregate Base Course 9"	I-15 Guard Rail Sfl. Beam Barrier Type	E-1 Compacted Subgrade			
												Lin. Ft.	Lin. Ft.	Gal.
1-A*	W. Ramp & Accel. Lane													
2-A*	E. Ramp & Decel. Lane			36		377.6	0.7	27	2239.7	22.5	2330			
1-G	W4+53.90 Lt. - 12+50 (Cook Rd.)										1096.0			
2-G	W5+06.01 Rt. - 13+45 (Cook Rd.)										530.0			
3-G	E5+07.63 Lt. - 17+62 (Cook Rd.)										400.5			
4-G	E5+02.36 Rt. - 18+48 (Cook Rd.)										412.5			
5-G	721+90 - 723+15 Lt.										125.0			
6-G	721+75 - 722+75 Lt.										75.0			
7-G	721+20 - 722+20 Rt.										75.0			
8-G	720+75 - 722+00 Rt.										125.0			
1-C	W1+93 - W3+93 Rt.										135	65		
2-C	E2+55 - E3+55 Lt.								20					
Totals		200	135	65	2839.0	148	20	858.4	2.9	111	4933.7	92.5	50	5304

*Quantities are in addition to S.R. 13 calculated quantities.
 *Lengths of Guard Rail shall begin at Structure on Cook Rd. and shall be adjusted on Ramps.
 *Location of rail may be shifted to fit between columns, See Anchor Detail.

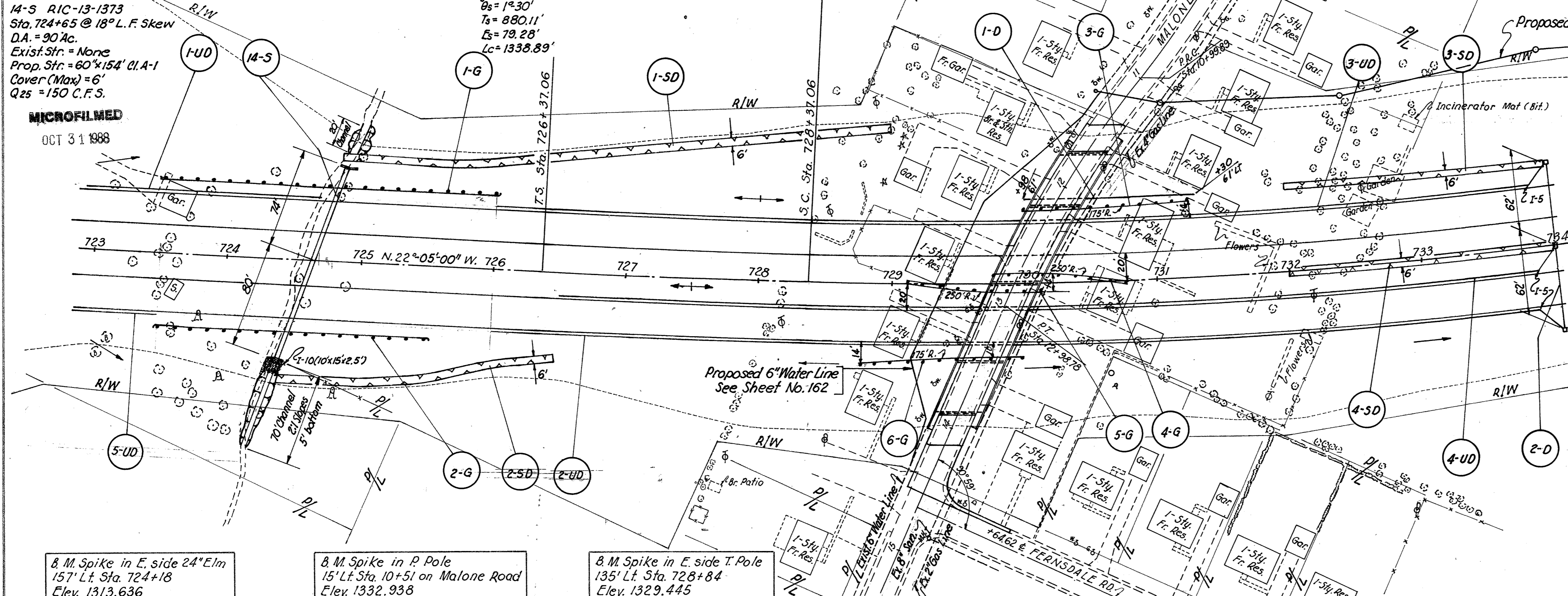


CURVE DATA
 P.I. Sta. 735+17.17
 $\Delta = 23^\circ 05' Lt.$
 $L_s = 1^\circ 30'$
 $R = 3819.72'$
 $X_c = 199.99'$
 $Y_c = 1.75'$
 $\Delta_s = 1^\circ 30'$
 $T_s = 880.11'$
 $E_s = 79.28'$
 $L_c = 1338.89'$

For Temporary Runaround Road and Malone Rd. Details and Quantities See Sheet No. 128

14-S RIC-13-1373
 Sta. 724+65 @ 18° L.F. Skew
 D.A. = 90 Ac.
 Exist. Str. = None
 Prop. Str. = 60' x 154' O.A.-1
 Cover (Max) = 6'
 Q25 = 150 C.F.S.

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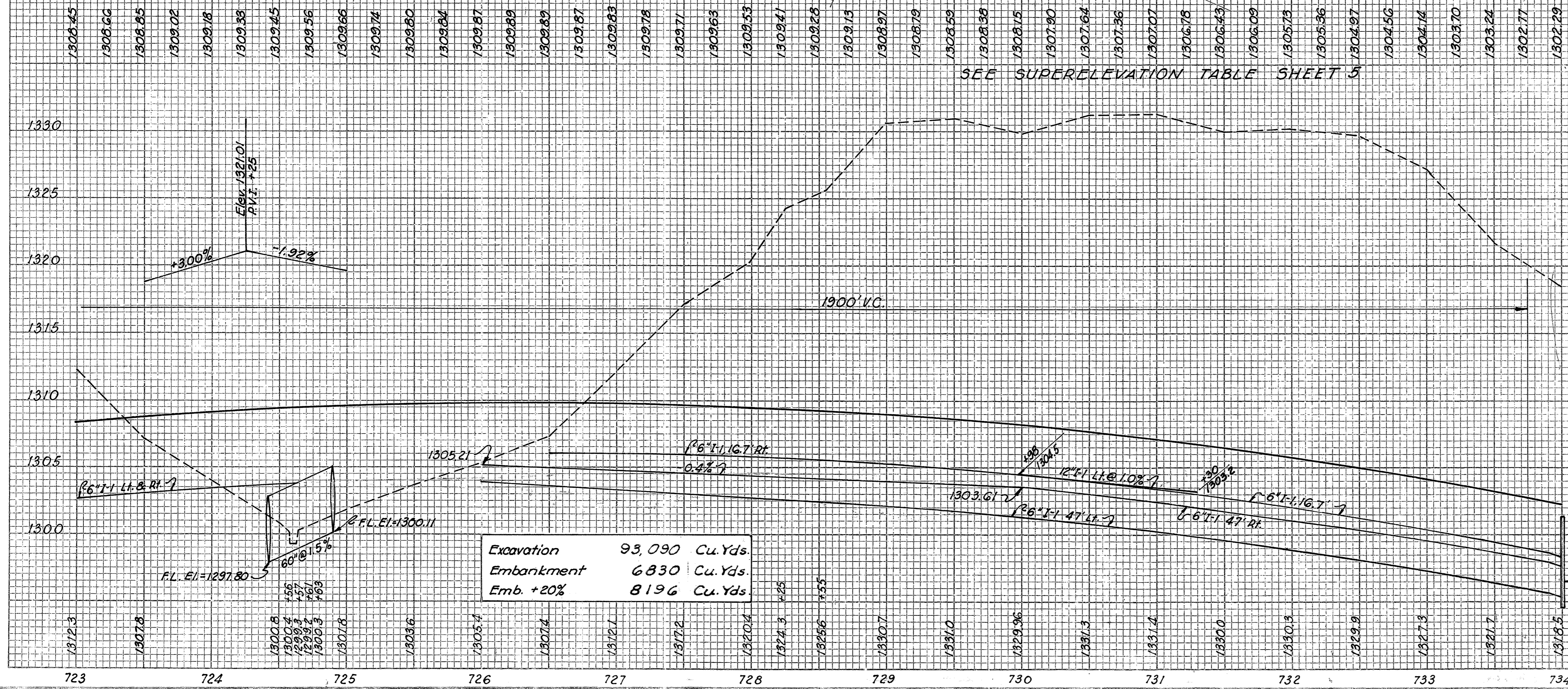


Ref. No.	Station	I-1		I-5	I-8	I-15	I-10	I-2	I-10	E-3	I-15	L-120			
		6" Class I-3 Deep	6" Class I-3 Starflow												
1-D	723+98-73+40 LI		232												
2-D	73+00-RI & LI		124		3							125			
1-G	723+50-726+00 LI					250									
2-G	723+50-725+50 RI					200									
3-G	730+00-734+25 LI					125									
4-G	729+25-730+25 LI					75					25				
5-G	729+10-730+10 RI					75					25				
6-G	728+75-730+00 RI					125									
1-SD	724+84-729+00 LI						277.3								
2-SD	724+40-725+50 RI						140.0								
3-SD	732+00-733+04 LI						129.3								
4-SD	732+00-733+04 LI						129.3								
1-UD	723+00-724+64 LI	164													
2-UD	726+00-734+00 RI	806		1											
3-UD	726+00-734+00 LI	806		1											
4-UD	726+50-734+00 RI	757		1											
5-UD	723+00-723+50 RI	50													
14-S	724+65			154				6.22	*13.9	35					
Totals		1826	757	232	124	154	3	3	850	676	6.22	13.9	35	50	125

B.M. Spike in E. side 24" Elm
 15' Lt. Sta. 724+18
 Elev. 1313.636

B.M. Spike in P. Pole
 15' Lt. Sta. 10+51 on Malone Road
 Elev. 1332.938

B.M. Spike in E. side T. Pole
 135' Lt. Sta. 728+84
 Elev. 1329.445

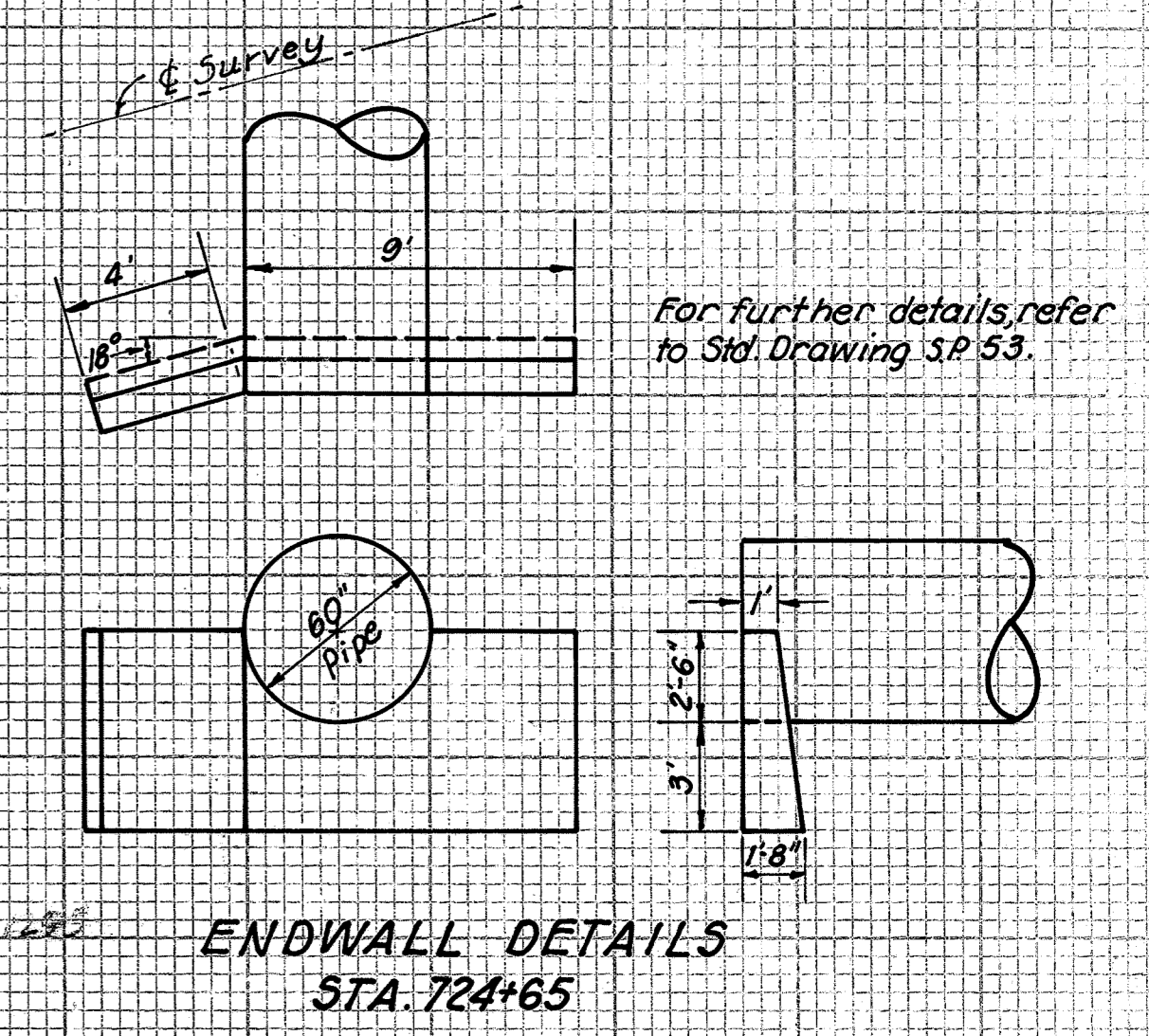


*10' wide, 15" long @ 2.5' deep.
 *Location of rail may be shifted to fit between columns. See Anchor Detail, Sheet 98

RA.C.B.
 El. Top = 1301.31
 F.L. El. 6" = 1297.50
 F.L. El. C.B. = 1296.93

Median C.B.
 El. Top = 1299.67
 F.L. El. 15" = 1295.30
 F.L. El. 6" = 1292.95
 F.L. El. C.B. = 1296.00

LA.C.B.
 El. Top = 1298.72
 F.L. El. 15" = 1295.30
 F.L. El. 6" = 1292.95
 F.L. El. C.B. = 1294.50

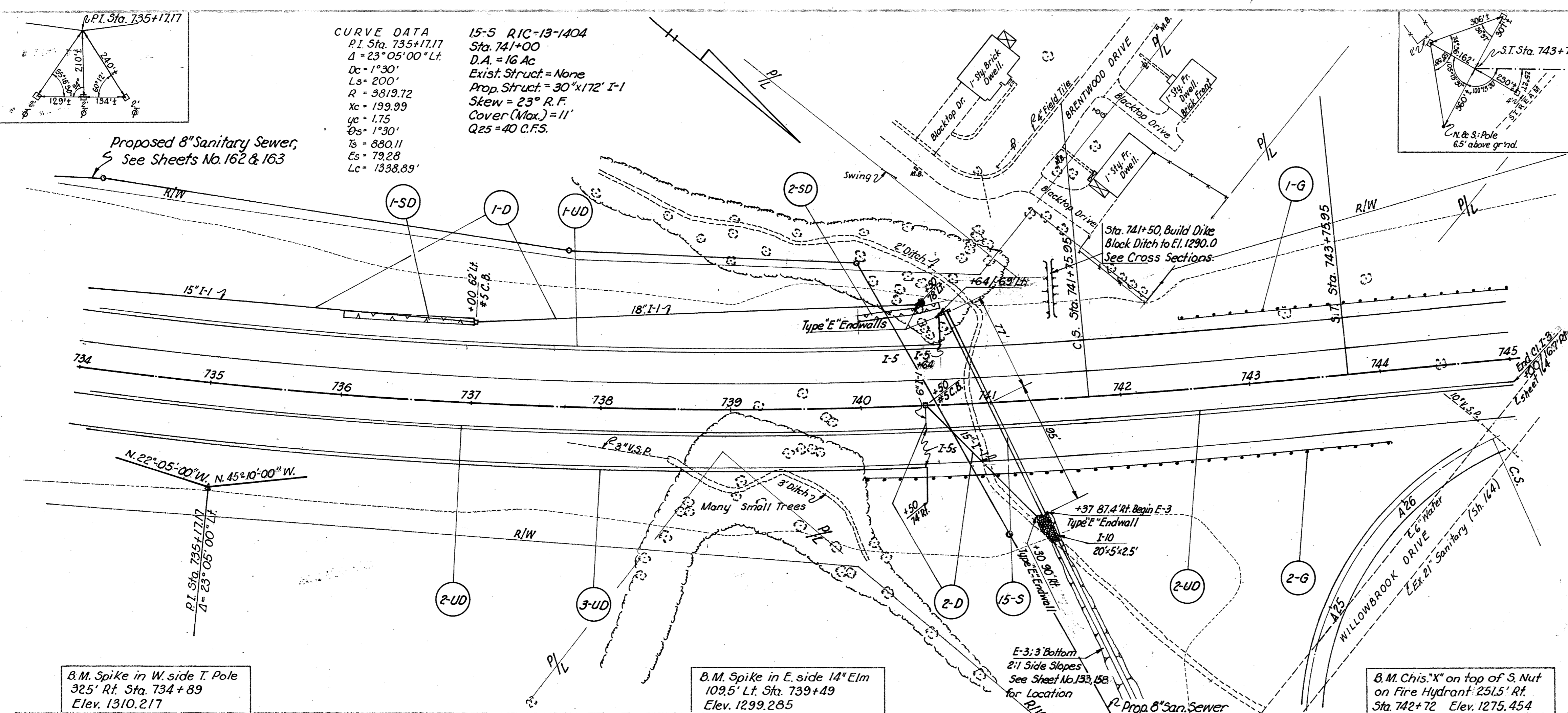


ENDWALL DETAILS
 STA. 724+65

CURVE DATA
 P.I. Sta. 735+17.17
 Δ = 23° 05' 00" Lt.
 Δc = 1° 30'
 Ls = 200'
 R = 3819.72
 Xc = 199.99
 Yc = 1.75
 Δs = 1° 30'
 Ts = 880.11
 Es = 79.28
 Lc = 1398.89'

15-5 RIC-13-140A
 Sta. 741+00
 D.A. = 16 Ac
 Exist. Struct. = None
 Prop. Struct. = 30" x 172" I-1
 Skew = 23° R.F.
 Cover (Max.) = 11'
 Q25 = 40 C.F.S.

Proposed 8" Sanitary Sewer,
 See Sheets No. 162 & 163



Ref. No.	Station	I-1 Pipe				I-2 Manory	I-8 Catch Basins #5	I-10 Dumped Rock Channel Protection	E-3 Channel Excavation	L-120 Jute Matting
		15"	15"	18"	30"					
		Lin. Ft.				Cu. Yds. Each	Cu. Yds.	Cu. Yds.	Sq. Yds.	
1-D	734+00 - 740+50 Lt.	300	350			0.30	1	0.5		250
2-D	740+50	120				0.26	1			
15-5	741+00			172		1.02		9.3	878 *	
Totals		120	300	350	172	1.58	2	9.8	878	250

* A portion of the E-3 shall be used to fill existing channel. The remainder is available for roadway embankment.

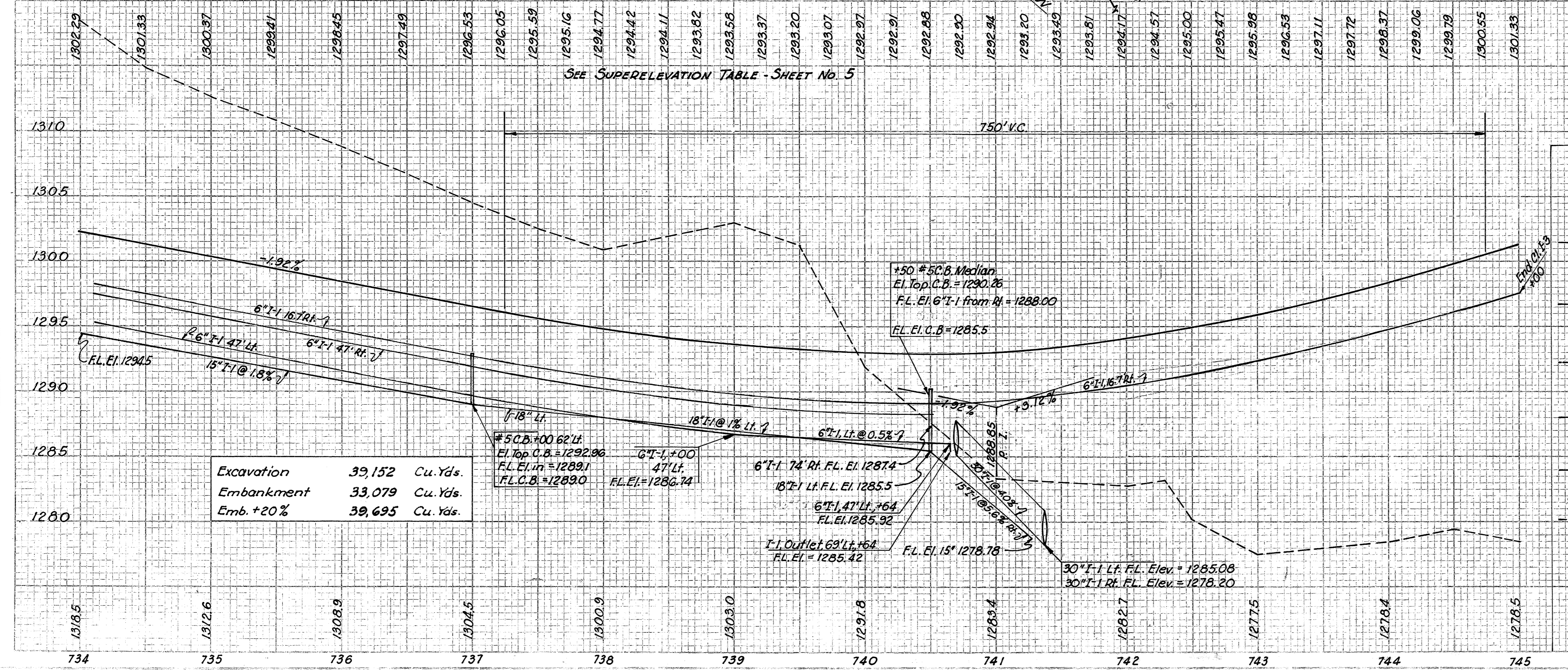
Ref. No.	Station	I-1 Pipe		I-5 6" Pipe Specials	I-15 Guard Rails Steel Beam Deep Lin. Ft.	L-10 Sadding 6" Wide		
		6"	8"					
		Lin. Ft.		Each	Lin. Ft.	Sq. Yds.		
1-UD	734+10 - 740+64 Lt.	656	10	1				
2-UD	734+10 - 745+00 167 Rt.	1107		1				
3-UD	734+10 - 740+50 47 Rt.	657	10	1				
1-G	742+51.5+ - 745+00 Lt.					248.5		
2-G	740+03.5 - 744+00 Rt.					400.0		
1-SD	736+00 - 737+00 Lt.					66.7		
2-SD	740+00 - 740+66 Lt.					44.0		
Totals		1107	1328	20	1	2	648.5	110.7

B.M. Spike in W. side T. Pole
 325' Rt. Sta. 734+89
 Elev. 1310.217

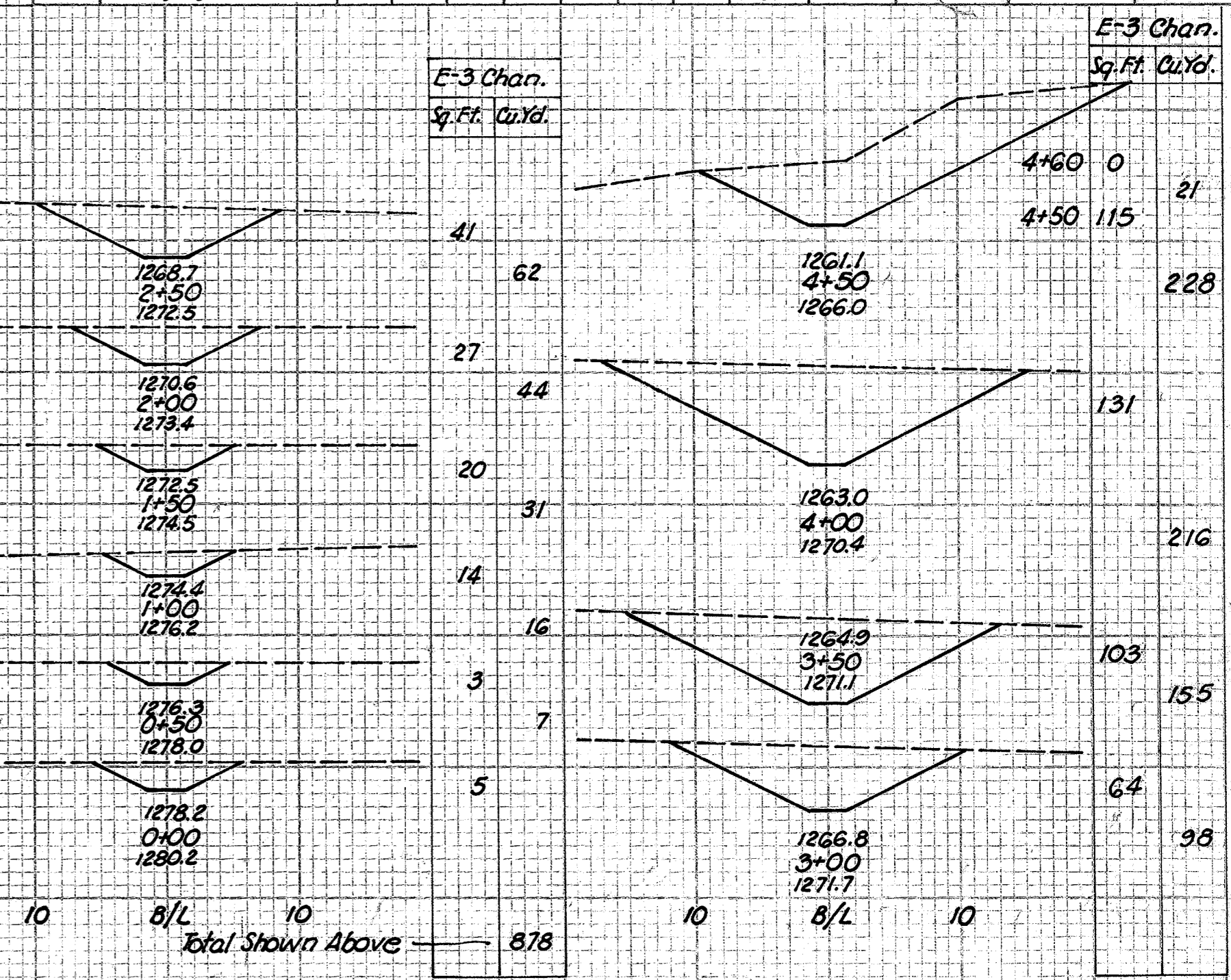
B.M. Spike in E. side 14" Elm
 1095' Lt. Sta. 739+49
 Elev. 1299.285

B.M. Chis. "X" on top of S. Nut
 on Fire Hydrant 251.5' Rt.
 Sta. 742+72 Elev. 1275.454

SEE SUPERELEVATION TABLE - SHEET No. 5

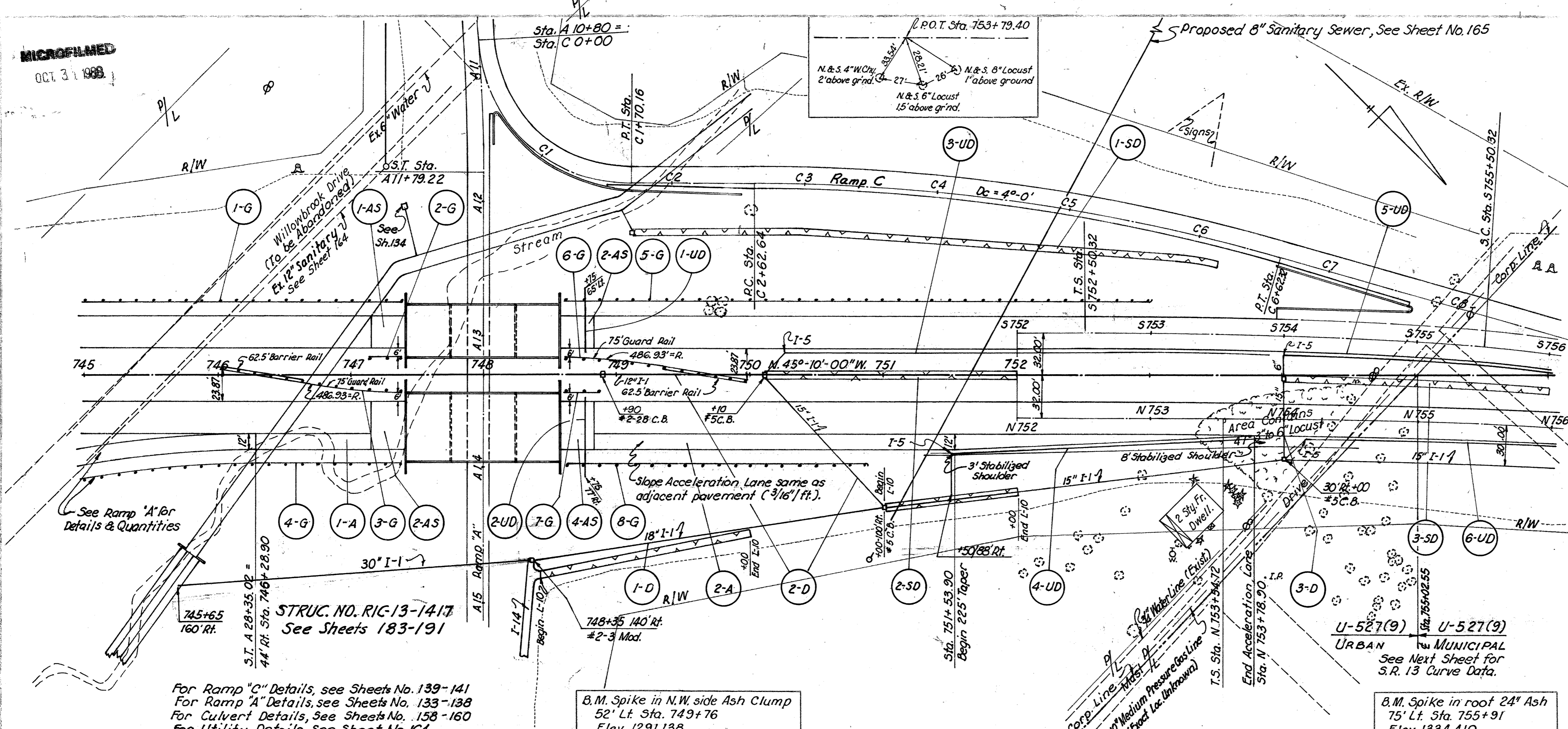


Excavation	39,152	Cu. Yds.
Embankment	33,079	Cu. Yds.
Emb. +20%	39,695	Cu. Yds.



CHANNEL CROSS SECTIONS 15-S, STA. 741+00 RT. (SEE SHEET 133)

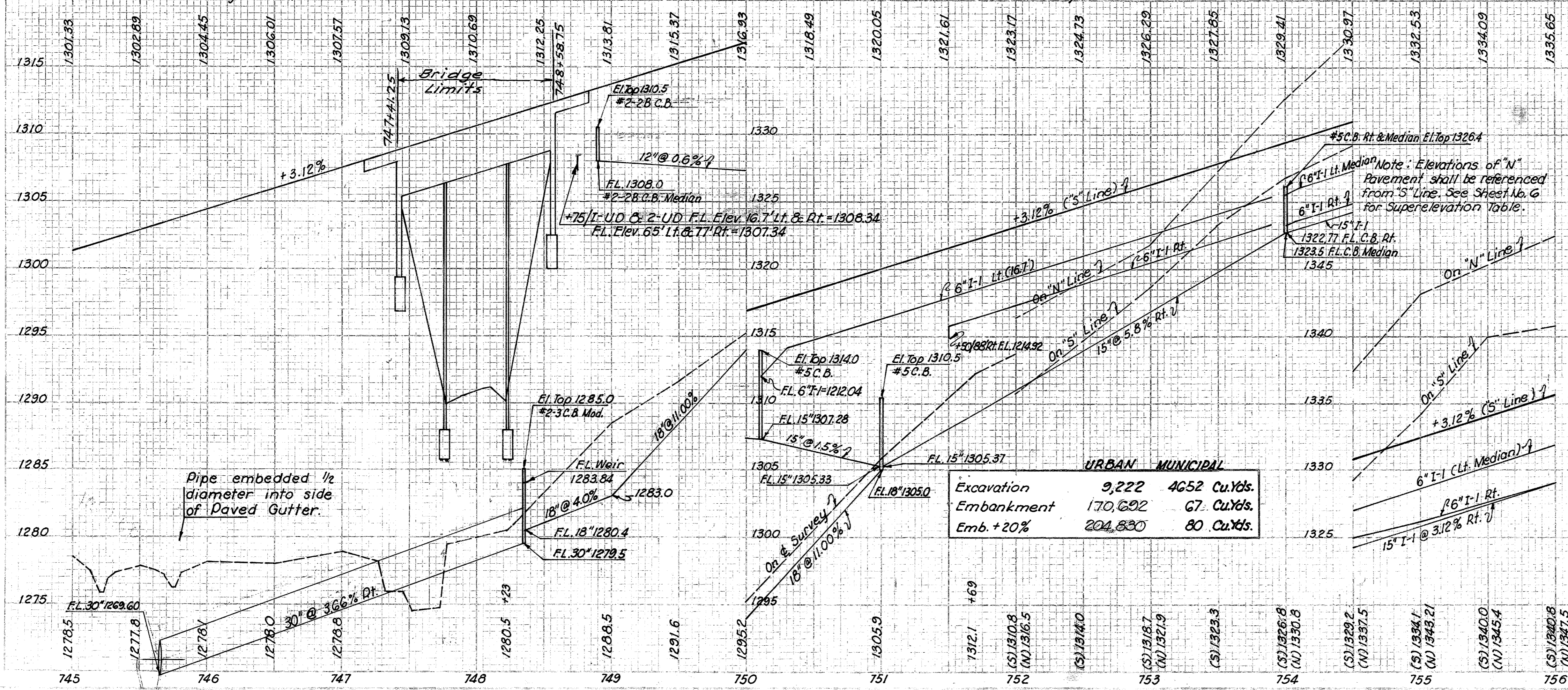
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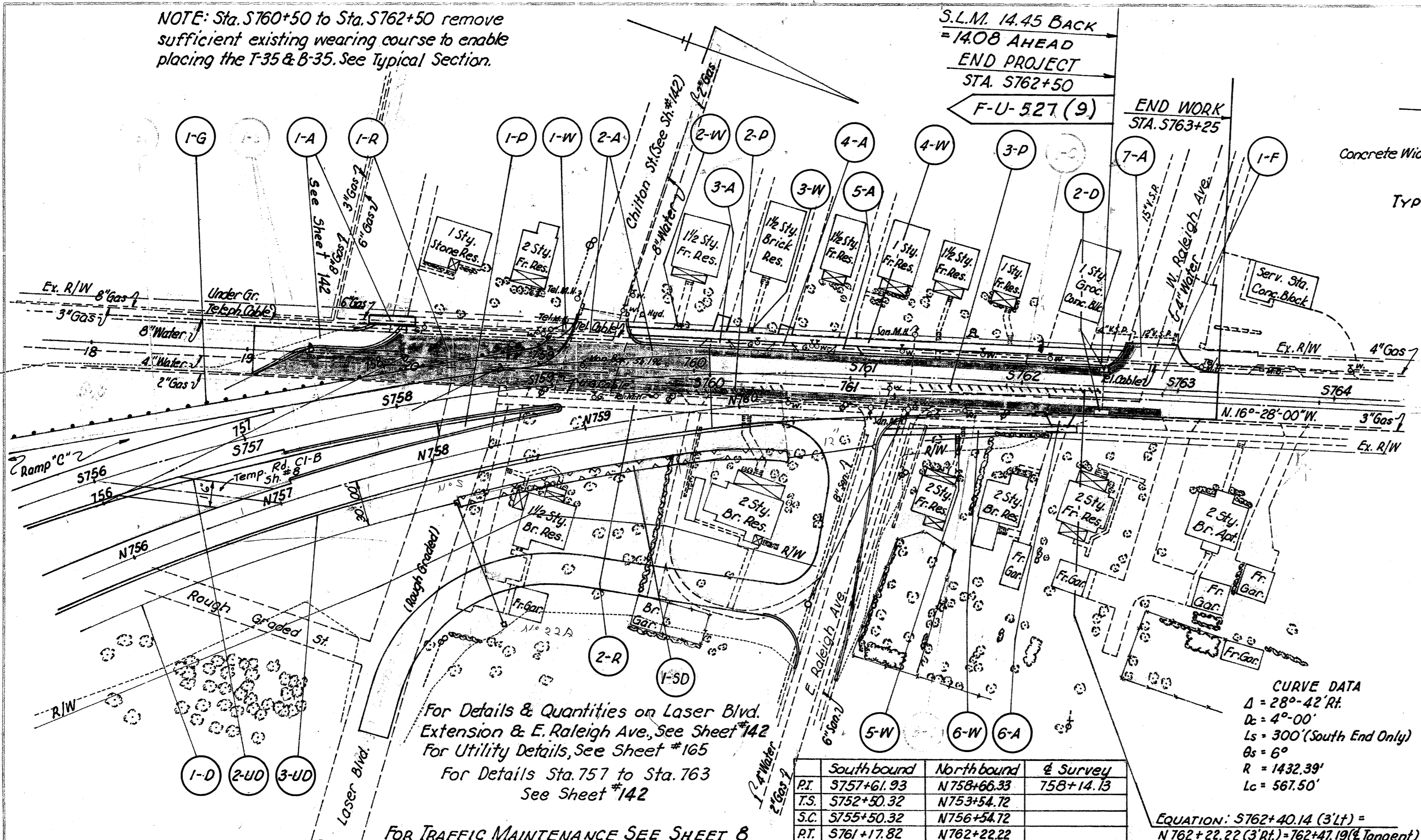
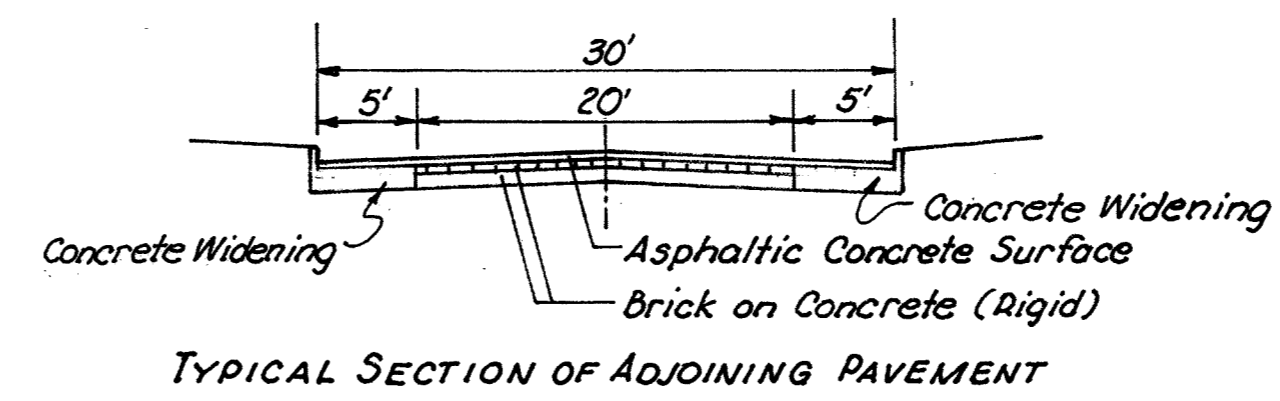
Ref. No.	Station	I-1 Pipe								I-5 Pipe Specials	I-8 Catch Basins	L-10 Sodding G' Wide	L-120 Jute Matting	I-8 Catch Basins No. 2-2B	
		6" Class I-3	6" Class I-3	8" Class I-3	12" Class I-1	15" Class I-1	30" Class I-1	30" Class E-1	18" Class E-1						15" Class E-1
1-D	745+65 - N756+00 Rt.														
2-D	748+90 - 751+00 Rt.			120	130										
3-D	N754+00 - Lt. & Rt.	18			60										
Totals															

*See Sheet No. 98

Ref. No.	Station	I-15 Steel Beam Guard Rail	I-22 Subbase	T-71 Reinforced P.C. Concrete Pavement	I-7 Approach Slabs	E-1 Compacted Subgrade
1-A	746+28.90 - 747+16.25 Rt.		24.3	117		117
2-A	748+83.75 - N753+78.90 Rt.		106.3	510		510
Totals						



NOTE: Sta. S760+50 to Sta. S762+50 remove sufficient existing wearing course to enable placing the T-35 & B-35. See Typical Section.



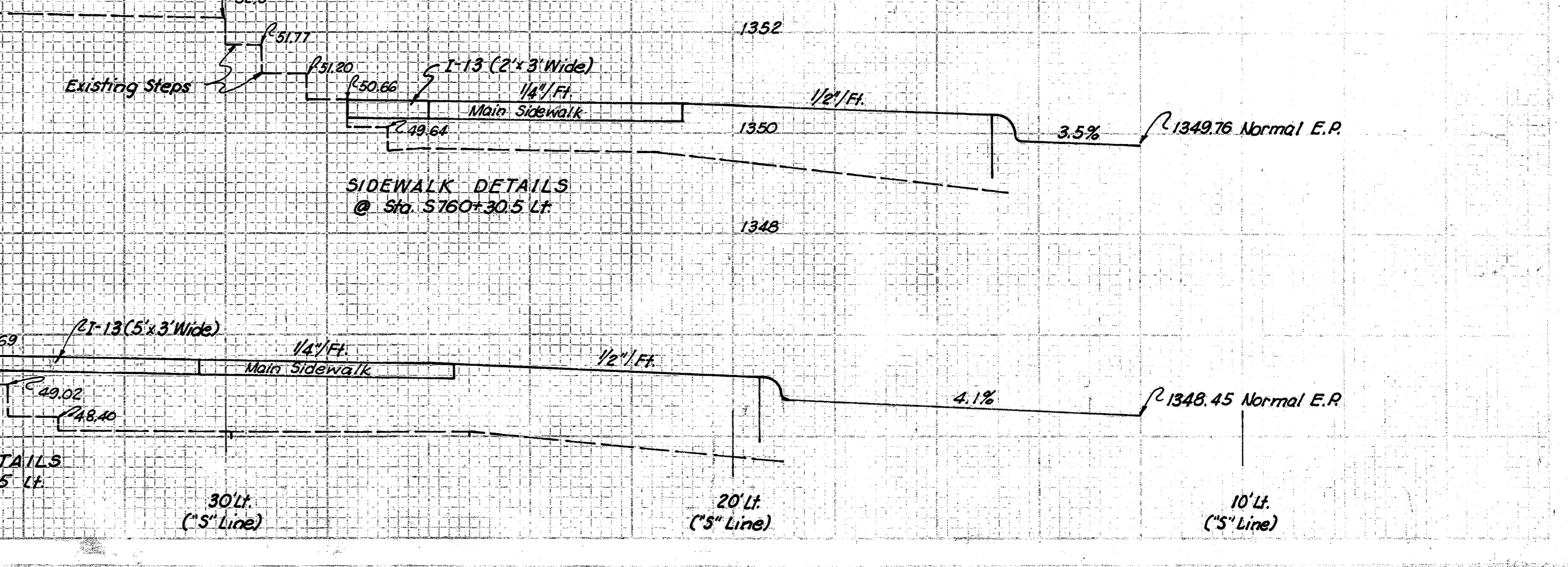
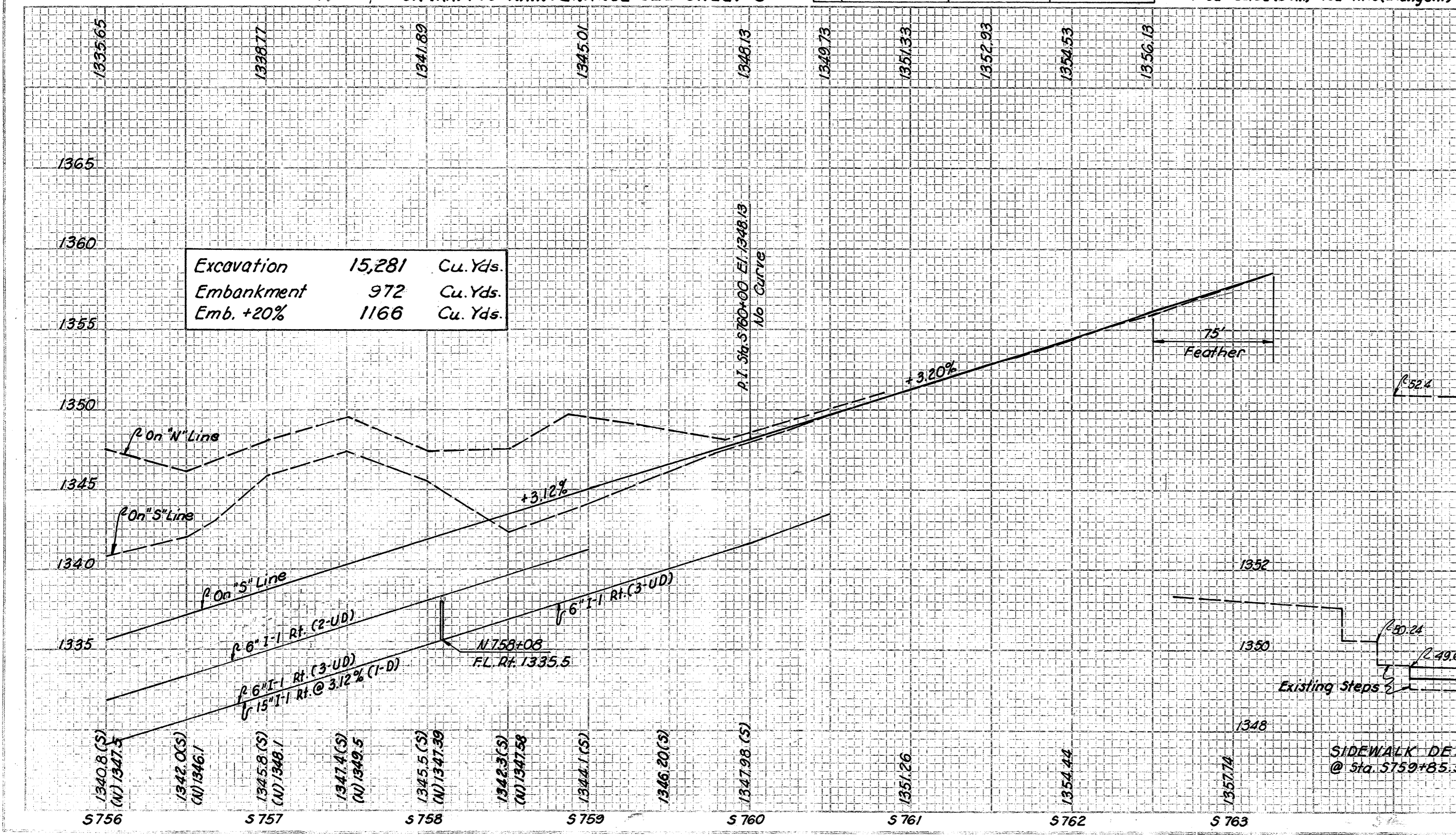
CURVE DATA
 $\Delta = 28^{\circ}-42' R$
 $D = 4^{\circ}-00'$
 $L_s = 300' \text{ (South End Only)}$
 $\theta_s = 6^{\circ}$
 $R = 1432.39'$
 $L_c = 567.50'$

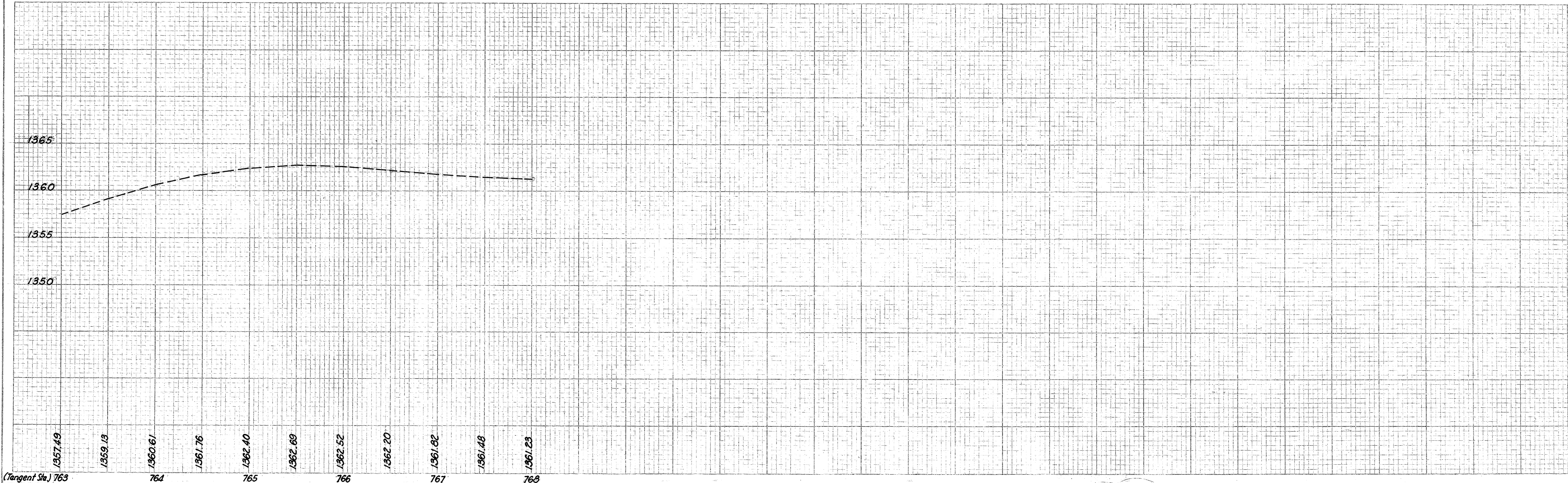
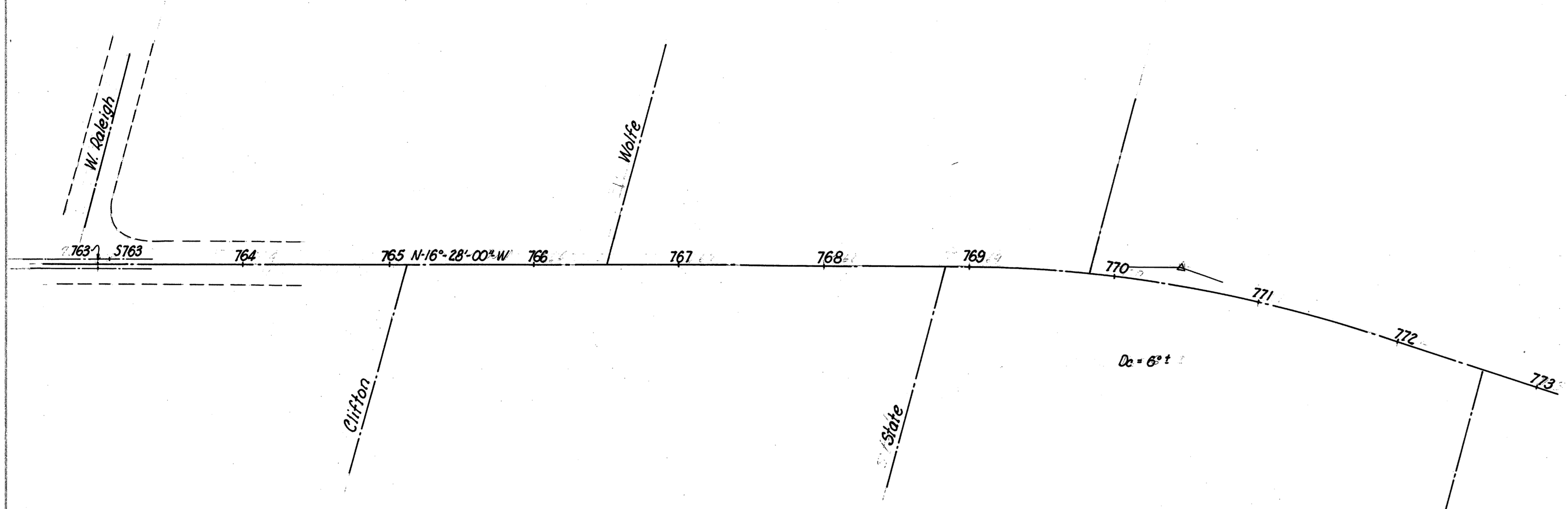
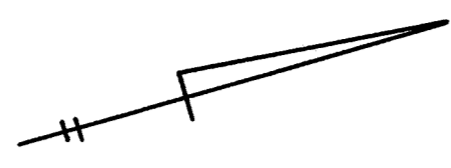
EQUATION: $S762+40.14 (3' L) = N 762+22.22 (3' R) = 762+47.19 (\frac{1}{2} \text{ Tangent})$

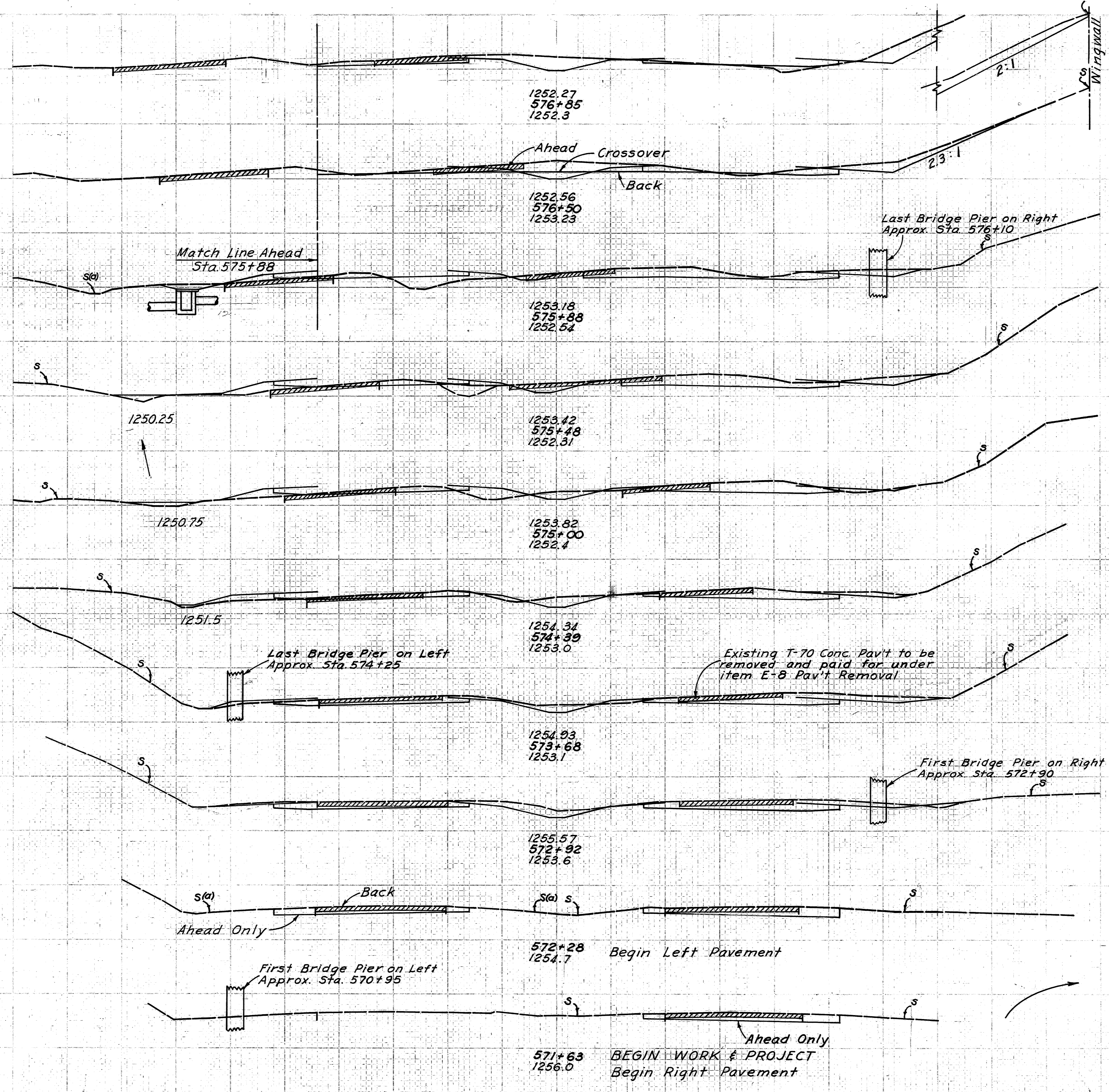
	Southbound	Northbound	& Survey
P.I.	S757+61.93	N758+66.33	758+14.13
T.S.	S752+50.32	N753+54.72	
S.C.	S755+50.32	N756+54.72	
B.T.	S761+17.82	N762+22.22	

Ref. No.	Station	I-12 Concrete Curb			I-13 Concrete Sidewalk		I-15 Guard Rails Steel Beam Type Deep	I-21 Concrete Median Par. 4"	I-22 Concrete Subbase	I-23 Precast Concrete Traffic Dividers	F-8 Removal		B-19 Aggregate Base 9"	T-71 Membraced Conc. Raff. 9"	T-35 Asphaltic Conc. Surface Course	B-35 Asphaltic Conc. Learing Course	I-1 Pipe 6" Class I-3	I-10 Soc. 15" Wide	I-5 Pipe Specials 6" Class I-3	I-8 Catch Basins Adjusted to Grade	S-14 Railing As Per Plan	E-1 Compacted Subgrade	B-70 8" Concrete Pavement				
		Type 2-A	Type 2-B	Type 6	Concrete Steps as per Plan *	4"					6"	Pavement												Sidewalk	Wearing Course	Cu. Yds.	Sq. Yds.
1-A	S757+09 - S758+20 LT.			130		65	80					145	1.5		5.0												
2-A	S759+19 - Chilton	76							26.9					162								162					
3-A	S760+28 L-6+10 LT.												3.6		1.4												
4-A	S760+42 L-6+13 LT.												2.6		1.1												
5-A	S760+90 LT.												1.7		0.7												
6-A	S762+30 RT.												1.7		0.7												
7-A	S762+61 W. Raleigh St. Lt.	30									18			3.1	3.1								18				
1-F	S762+50 - S763+25	40								24					8.7	4.3								24			
1-G	S758+00 - S759+04 LT.							312.5																			
1-P	S758+25 - S759+05 RT.								60	25.4																	
2-P	S759+79 - S760+45 RT.									12																	
3-P	S761+34 - S762+48 RT.									20																	
1-R	S757+09 - S762+50 (Shaded)									1150				222													
2-R	S758+69 - S761+04 RT.												1175														
1-W	S759+13 - S759+20 LT.					35						25															
2-W	S759+85.5 LT.					15						9															
3-W	S760+30.5 LT.					6																					
4-W	S759+54 - S762+65 LT.					1375	180					1555															
5-W	S761+66 RT.					*40	3																	10			
6-W	S761+14 - S762+36 RT.					550	60					510															
2-UD	S756+00 - S759+00 RT.																							300			
3-UD	N756+00 - N760+30 RT.																							430			
1-D	N756+00 - N758+08 RT.																							208			
2-D	S762+50 - LT. & RT.																							146			
1-SD	N758+08 - N760+27 LT.																							2			
Totals		76	70	130	*40	2049	320	312.5	60	52.3	32	1192	3419	222	111	162	207	7.4	430	300	208	146	1	2	10	162	42

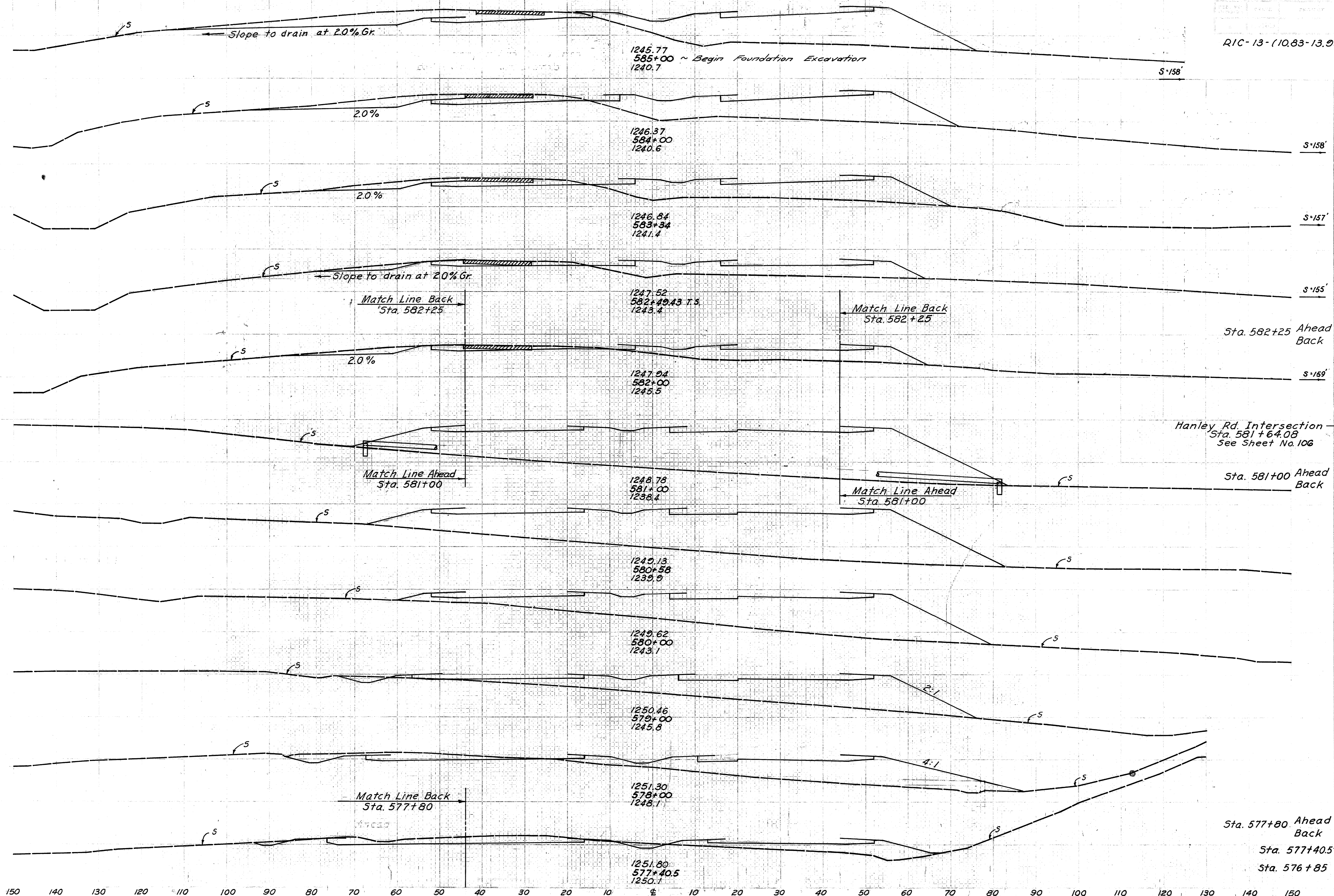
* Includes removal of existing steps, see Sheet No. 98 for step details.
 o Includes Integral Curb.







	END AREA	CU. YDS.	
		CUT	FILL
	133	8	
Ramp F See Sheet No. 103		410	328
Sta. 576+50 Ahead	102	2	152
Back	100	2	7
		202	37
Sta. 575+88 Ahead	76	30	
Back	86	38	
		128	58
Sta. 575+48 Ahead	86	40	
Back	86	26	
		141	58
	72	39	
		164	65
	73	19	
		218	36
	93	8	
		271	15
	100	3	
		186	4
Sta. 572+28 Ahead	57	0	
Back	34	0	
		76	0
Sta. 571+63 Ahead	29	0	



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
180	470		504,1587
92	387		211,853
80	311		195,809
45	206		45,166
55	161		18,107
19	115		35,1659
19	115		217,660
0	781		0,781
0	1211		0,1211
0	1786		0,1786
0	1085		0,1085
0	1944		0,1944
0	725		0,725
19	2246		19,2246
10	488		10,488
150	1598		150,1598
71	375		71,375
61	183		61,183
95	118		95,118
44	117		44,117
44	117		44,117
182	128		182,128
133	8		133,8

Sta. 582+25 Ahead
Back

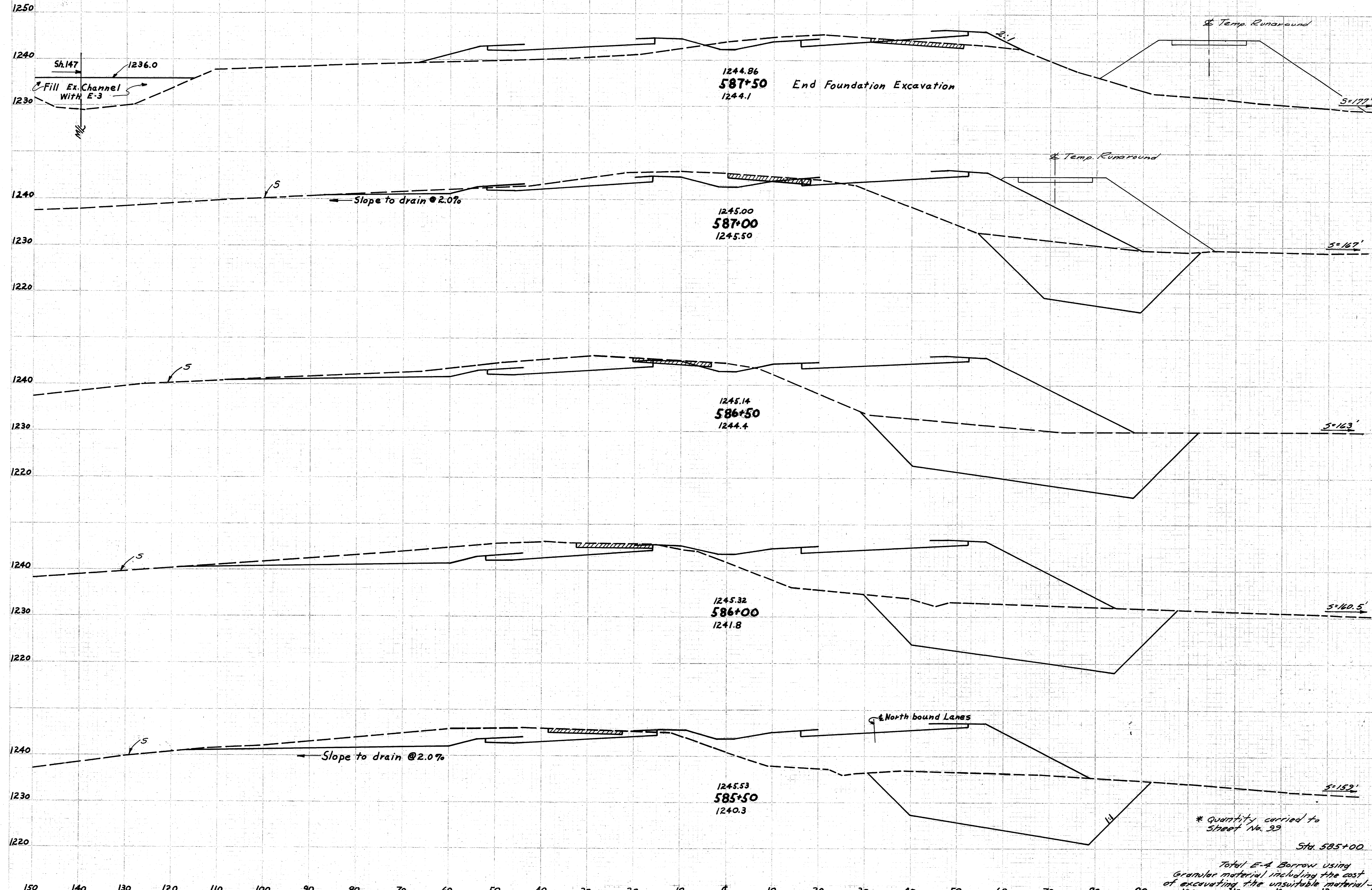
Hanley Rd. Intersection
Sta. 581+64.08
See Sheet No. 106

Sta. 581+00 Ahead
Back

Sta. 577+80 Ahead
Back
Sta. 577+40.5
Sta. 576+85

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

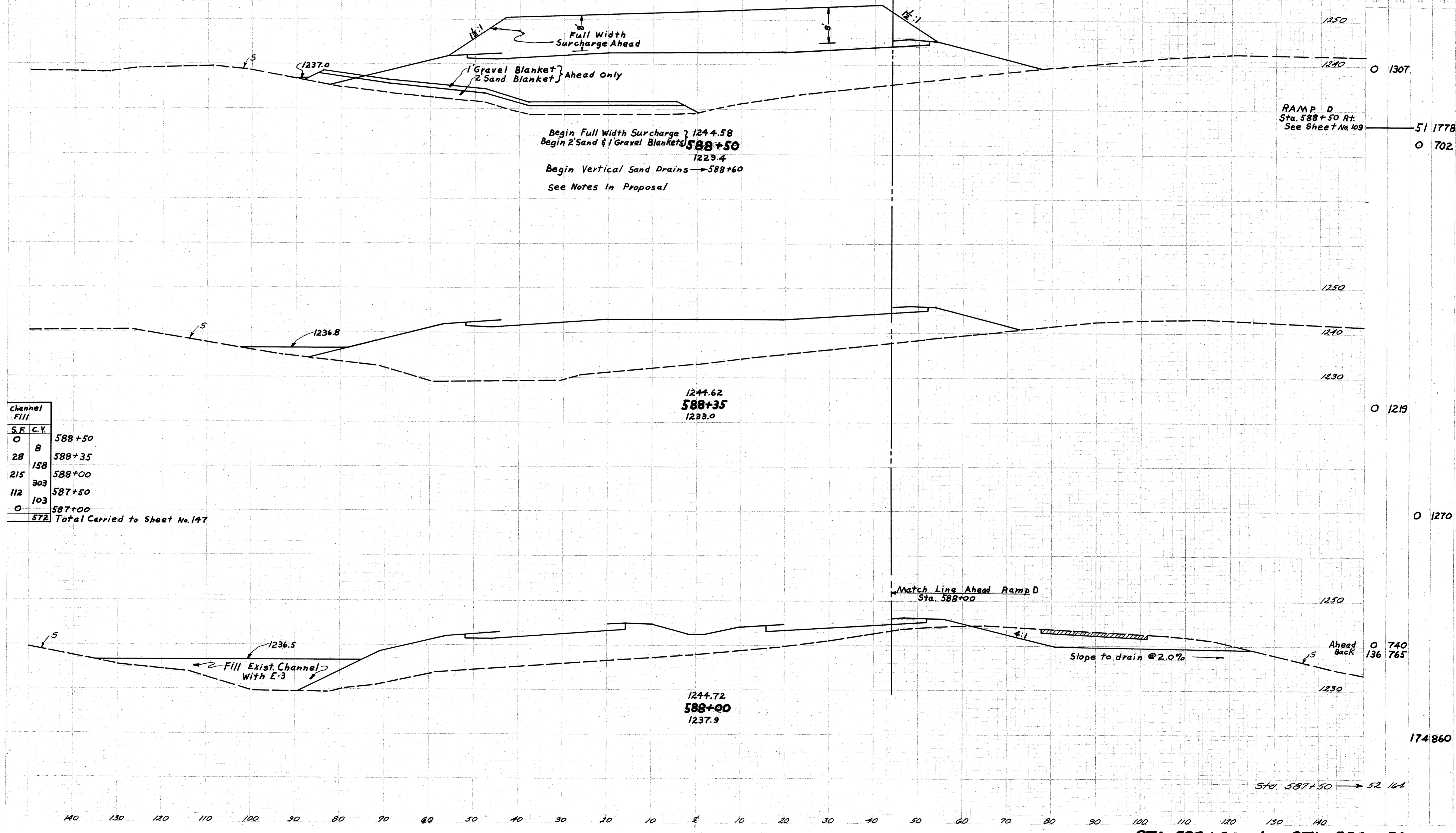
RIC-13-(10.83-13.95)



E-A Granular S.F.	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
0	52	164		
414			154	559
447	114	439		
1136			247	1054
780	152	699		
1354			322	1295
682	196	699		
1207			361	1187
622	194	583		
576			347	975
0	180	470		
1687				

STA 585+50 to STA 587+50

ERD AREA		VOLUME	
CUT	FILL	CUY	CUY



Begin Full Width Surchage } 1244.58
 Begin 2' Sand & 1' Gravel Blankets } **588+50**
 1229.4
 Begin Vertical Sand Drains → 588+60
 See Notes In Proposal

RAMP D
 Sta. 588+50 Rt.
 See Sheet No. 109 → 51 1778
 O 702

Channel Fill		
S.F.	C.Y.	
0	8	588+50
28	158	588+35
215	303	588+00
112	103	587+50
0	0	587+00
572	Total Carried to Sheet No. 147	

174 860

Sta. 587+50 → 52 164

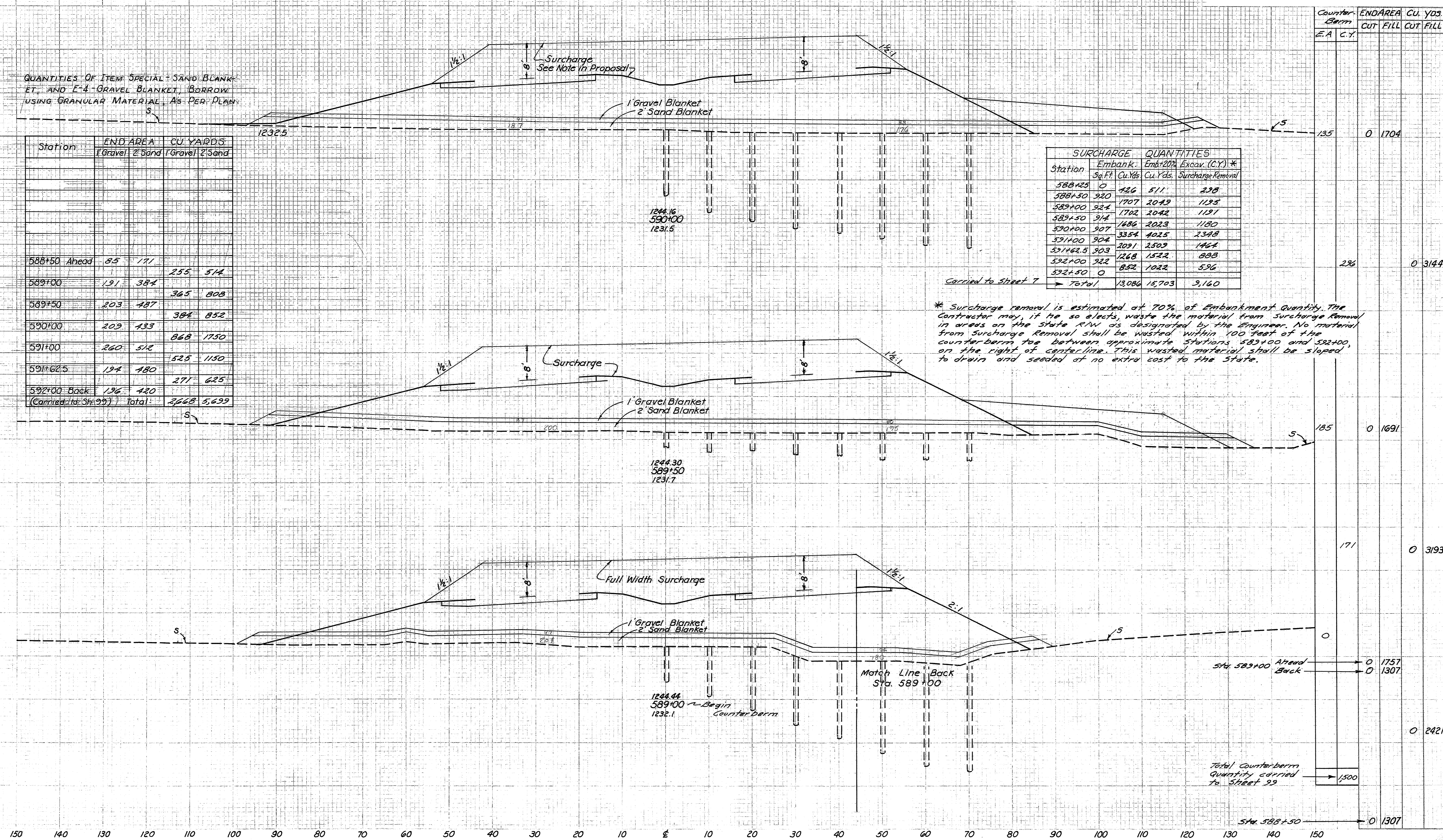
STA 588+00 + STA 588+50

QUANTITIES OF ITEM SPECIAL SAND BLANKET, AND E-4 GRAVEL BLANKET, BORROW USING GRANULAR MATERIAL AS PER PLAN

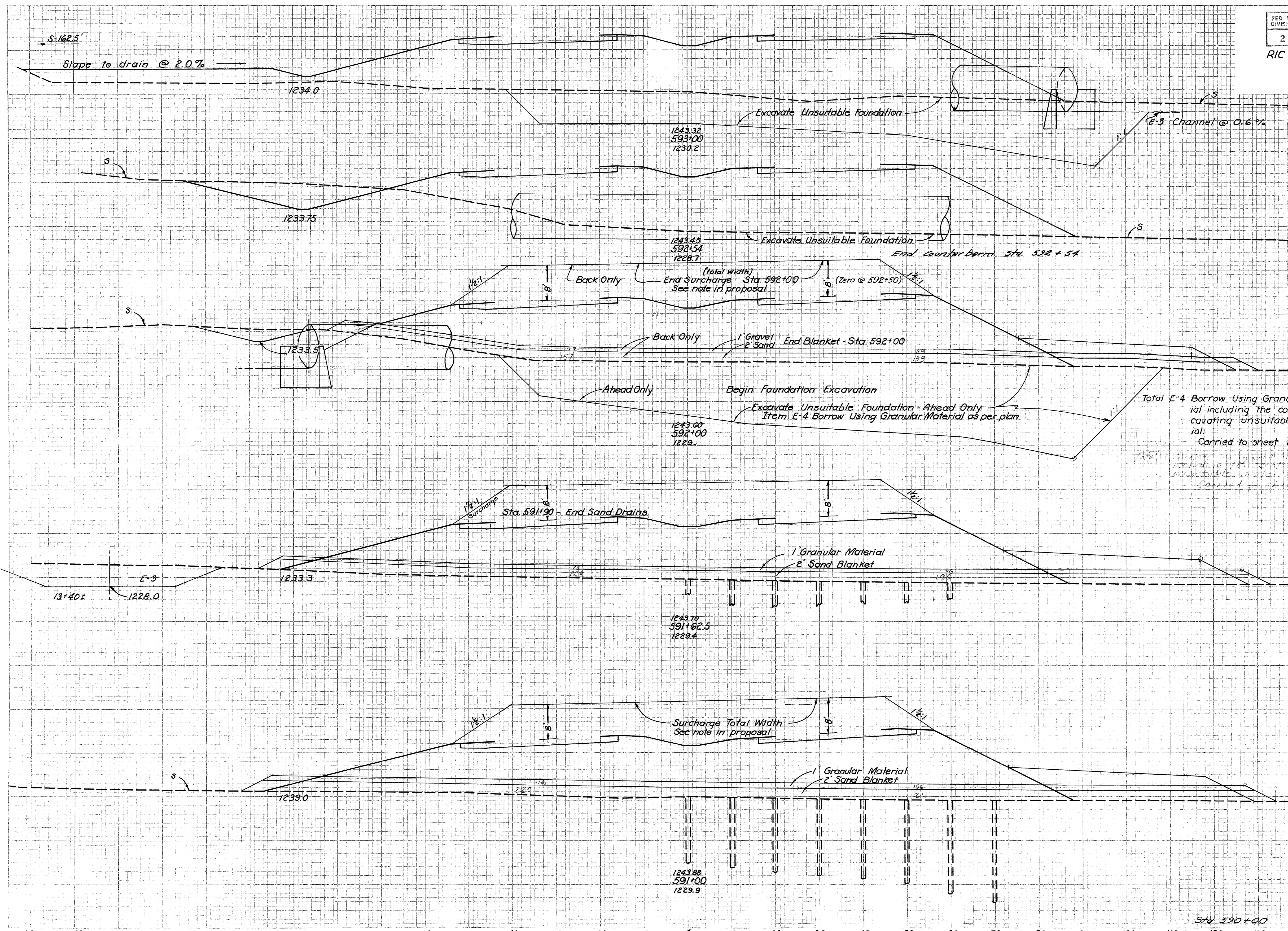
Station	END AREA		CU. YARDS	
	1' Gravel	2' Sand	1' Gravel	2' Sand
588+50 Ahead	85	171	255	514
589+00	131	384	365	808
589+50	203	487	384	852
590+00	209	433	868	1750
591+00	260	512	525	1150
591+62.5	134	480	271	625
592+00 Back	136	420		
(Carried to Sheet 99)				
Total:	2,668	5,699		

Station	SURCHARGE QUANTITIES		
	Embank. Sq. Ft.	Emb+20% Excav. (C.Y.)	Surcharge Removal
588+25	0	486	511
588+50	320	1707	2049
589+00	924	1762	2042
589+50	914	1486	2023
590+00	907	3354	4025
591+00	904	2091	2509
591+62.5	903	1268	1522
592+00	922	852	1022
592+50	0		596
Total	13,086	15,703	3,160

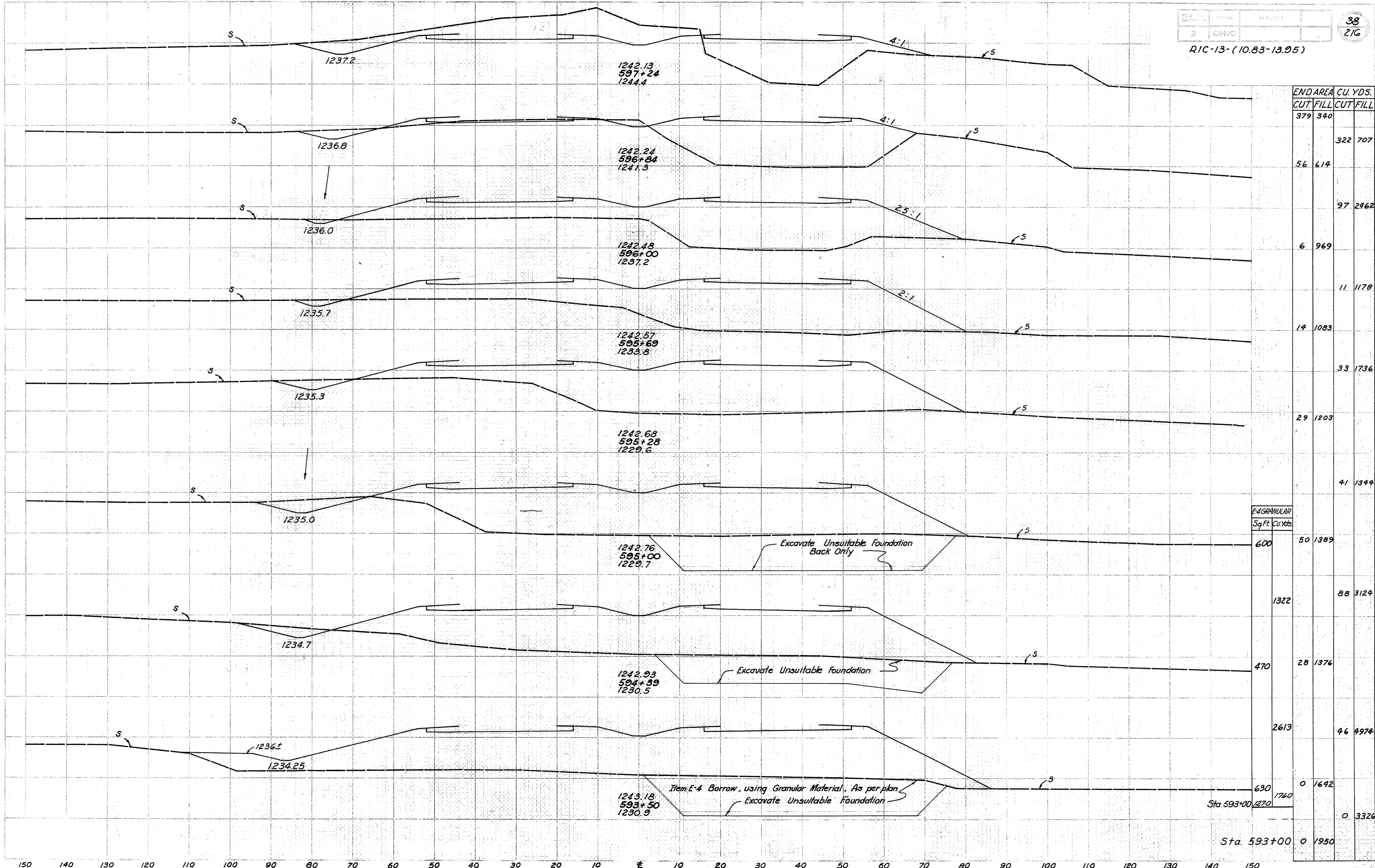
* Surcharge removal is estimated at 70% of Embankment Quantity. The Contractor may, if he so elects, waste the material from Surcharge Removal in areas on the State R/W as designated by the Engineer. No material from Surcharge Removal shall be wasted within 100 feet of the counter berm toe between approximate Stations 589+00 and 592+00, on the right of centerline. This wasted material shall be sloped to drain and seeded at no extra cost to the State.



Counter-Berm E.A.	END AREA CUT	CU. YDS. CUT	CU. YDS. FILL	CU. YDS. CUT	CU. YDS. FILL
	0	1704			
	236		0	3144	
			0	1691	
			0	3193	
	0	1757	0	1307	
			0	2421	
			1500		
			0	1307	



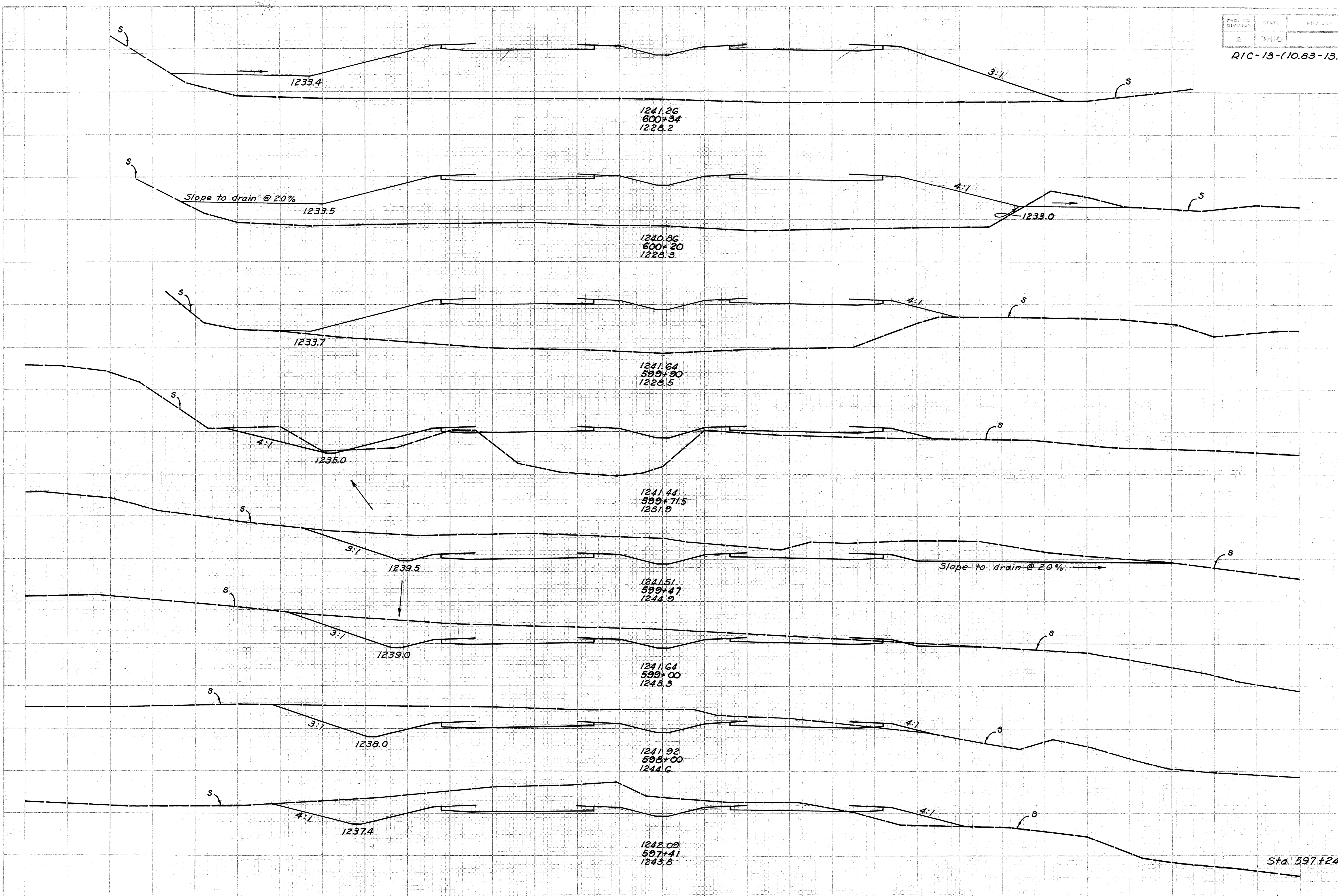
Counter Berm E.A.C.Y.	E-4 GRANULAR END AREA		CU. YDS.	
	Sq. Ft. CUT	Sq. Ft. FILL	CUT	FILL
1270	0	1950		
			121	3089
0	5330	142	1676	
100			183	3473
100				
15	2030	41	1797	
164			29	2582
136		0	1920	
296			0	4520
120		0	1985	
135		0	1704	
			0	6832



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
379	340		
		322	707
56	614		
		97	2462
6	969		
		11	1178
14	1083		
		33	1736
29	1203		
		41	1344
E-4 GRANULAR			
Sq. Ft. CU. Yds.			
600	50	1389	
		88	3124
470	28	1376	
		46	4974
630	0	1740	
		0	3326
		0	1950

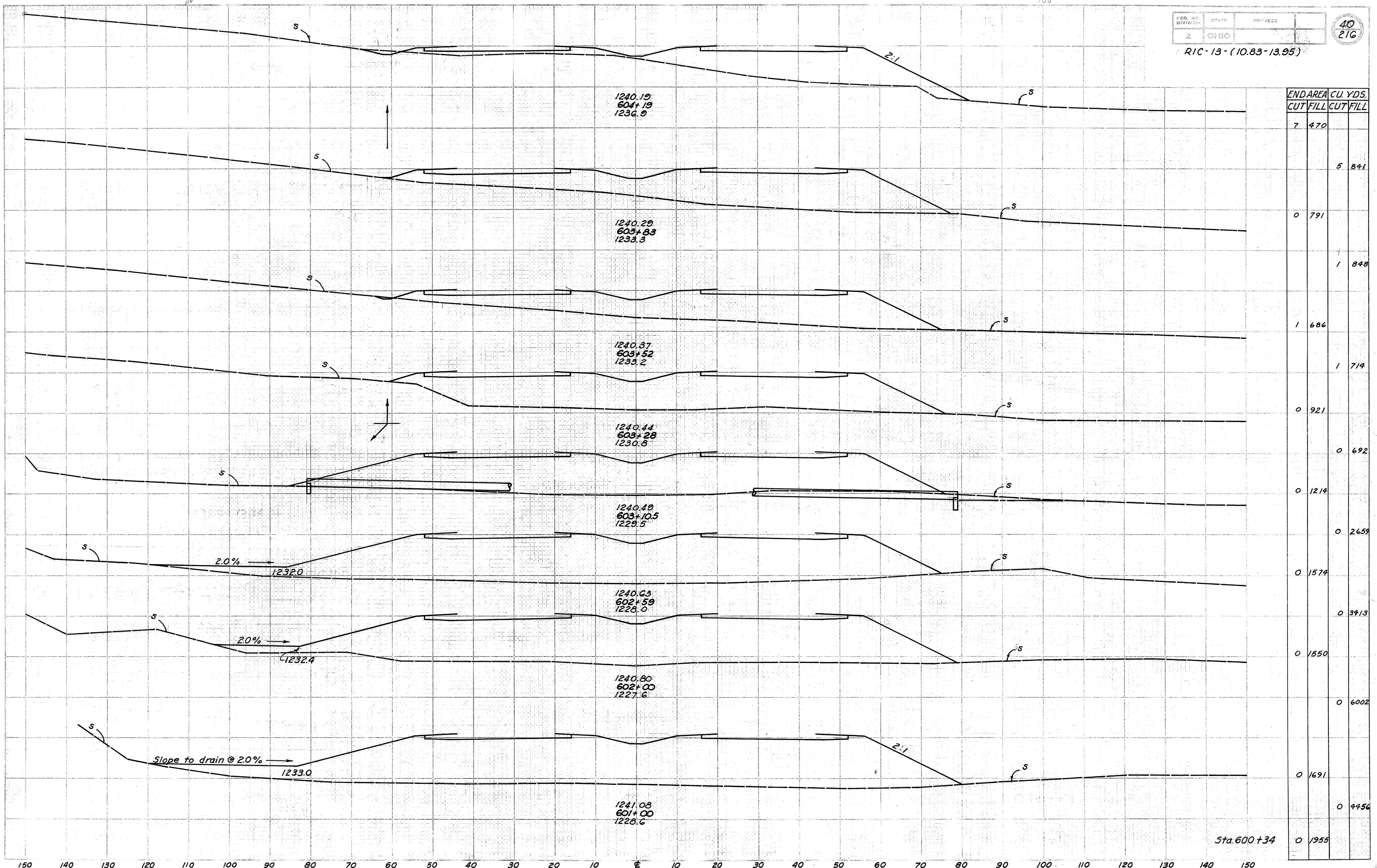
Sta. 593+00

Sta. 593+00



END AREA	CUT	FILL	CUT	FILL	CU. YDS.
0	1955				
				13	979
52	1821				
				29	1763
0	1353				
				16	633
47	496				
				367	225
762	0				
				1046	2
440	2				
				1794	22
529	10				
				1155	71
528	55				
				286	124
				379	340

Sta. 597+24



END AREA	CUT	FILL	CUT	FILL	CU. YDS.
7		470			
			5		841
0		791			
			1		848
1		686			
			1		714
0		921			
			0		692
0		1214			
			0		2659
0		1574			
			0		3913
0		1550			
			0		6002
0		1691			
			0		4456
0		1955			

1240.19
604+19
1236.9

1240.29
603+83
1233.3

1240.37
603+52
1233.2

1240.44
603+28
1230.8

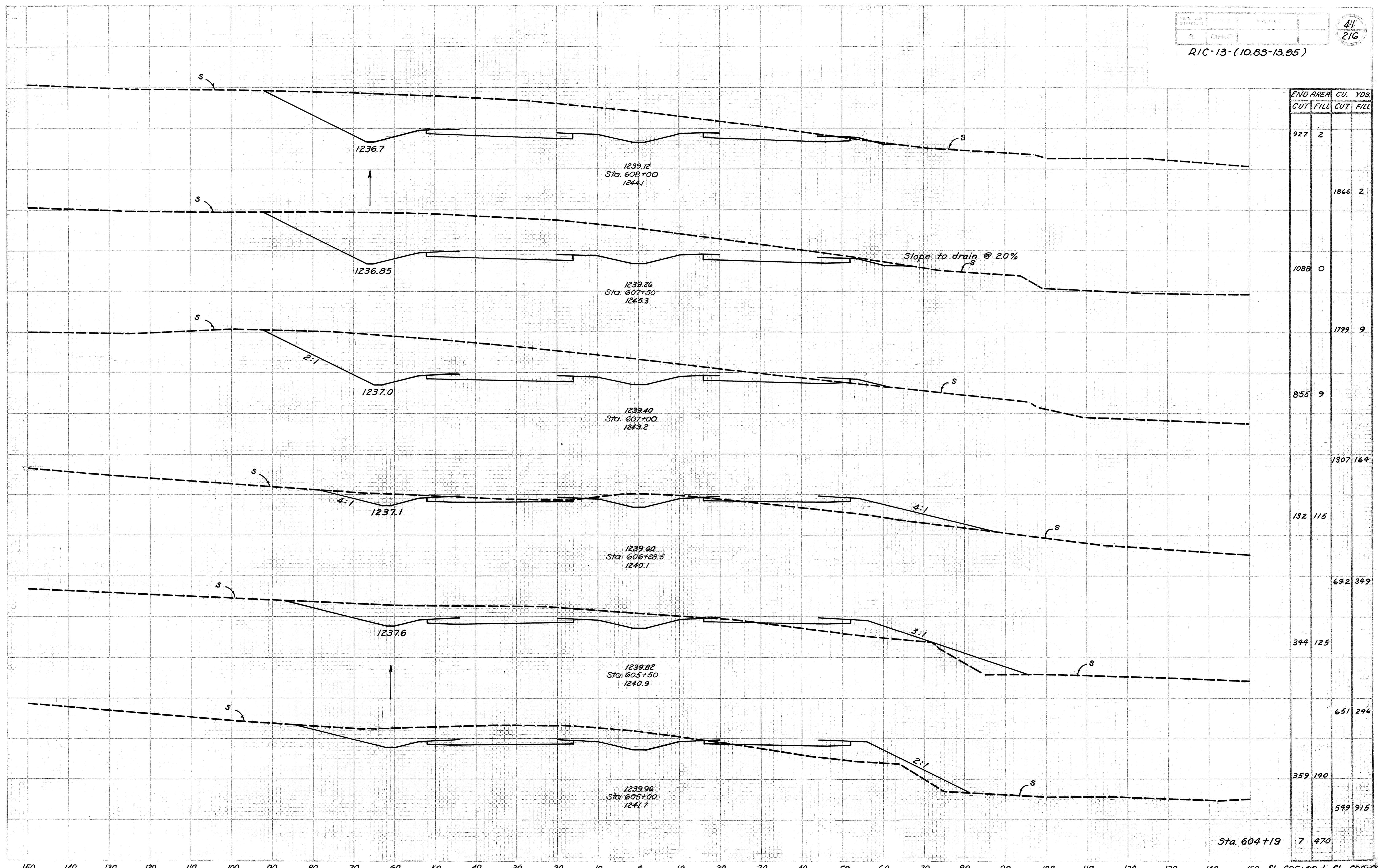
1240.49
603+10.5
1229.5

1240.63
602+59
1228.0

1240.80
602+00
1227.6

1241.08
601+00
1228.6

Sta. 600+34

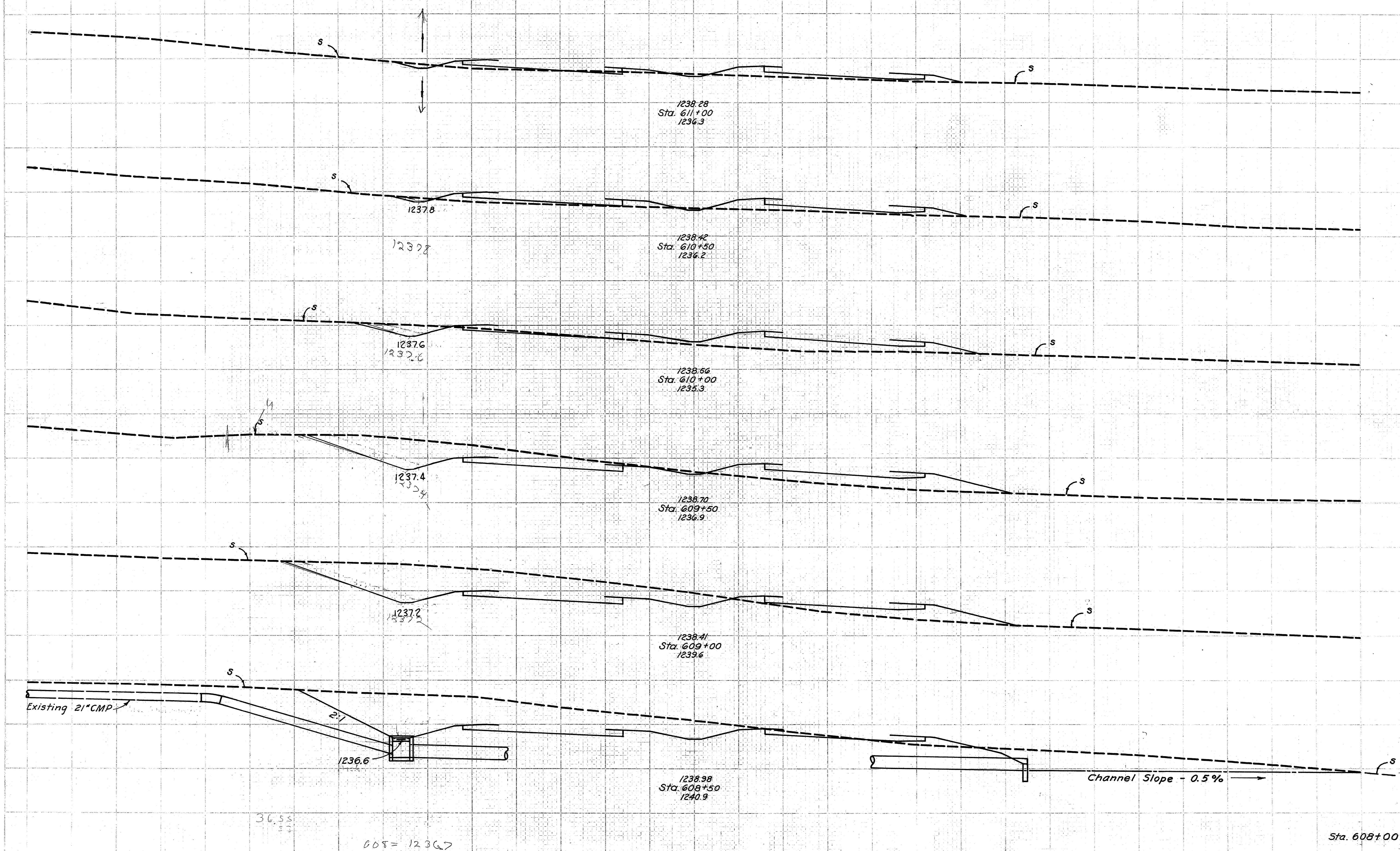


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
927	2		
		1866	2
1088	0		
		1799	9
855	9		
		1307	164
132	115		
		692	349
344	125		
		651	246
359	190		
		599	915
		7	470

Sta. 604+19

Sta. 605+00 to Sta. 608+00

RIC-13 - (10.83-13.95)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
11	83		
		14	176
4	107		
		27	238
25	150		
		215	280
207	152		
		593	234
433	100		
		926	112
567	21		
		1384	22
927	2		

Existing 21" CMP

Channel Slope - 0.5%

36.55

608 = 12367

Sta. 608+00 to Sta. 611+00

1238.28
Sta. 611+00
1236.3

1238.42
Sta. 610+50
1236.2

1238.56
Sta. 610+00
1235.3

1238.70
Sta. 609+50
1236.9

1238.41
Sta. 609+00
1239.6

1238.98
Sta. 608+50
1240.9

1237.8

1237.6

1237.4

1237.2

1236.6

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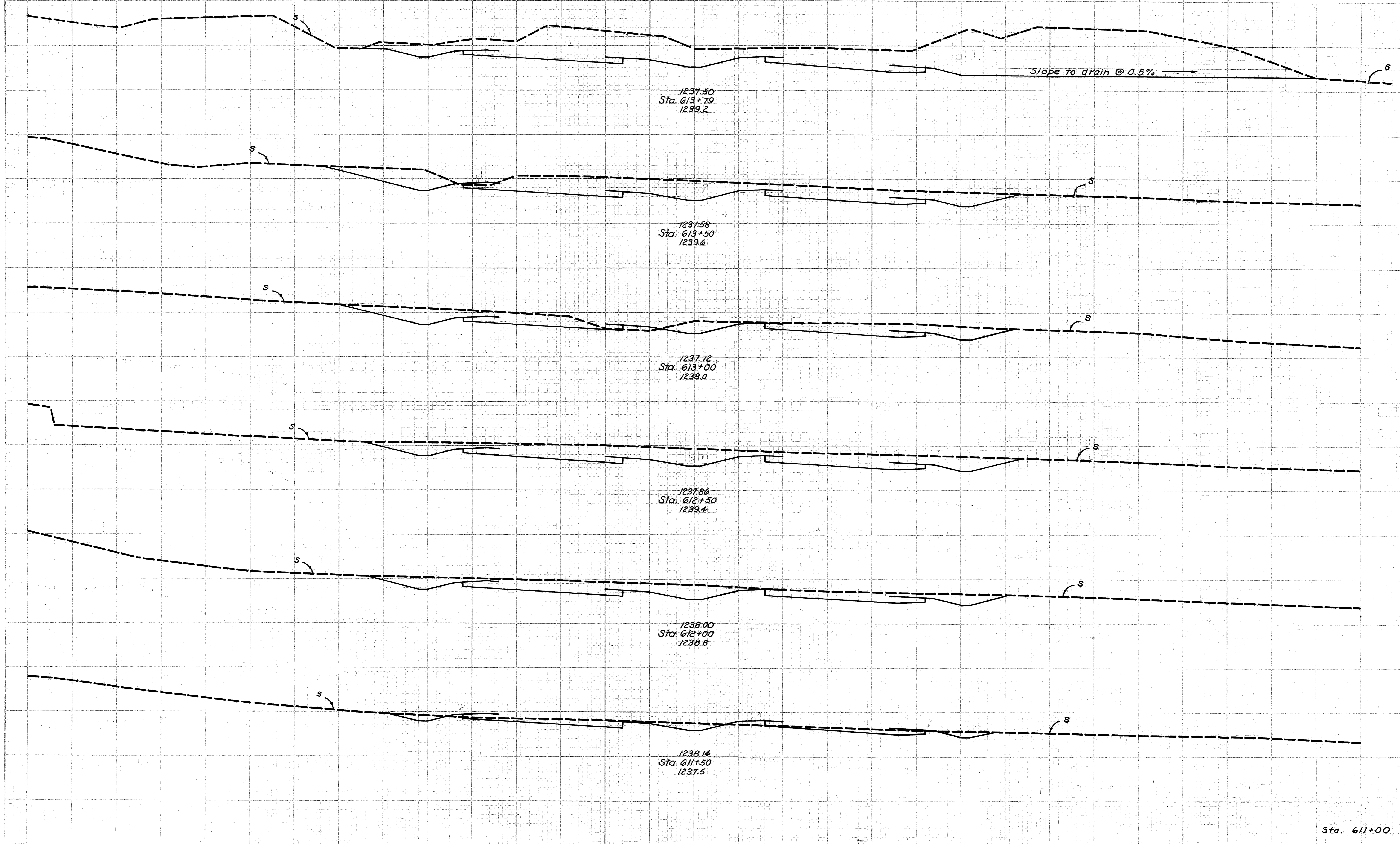
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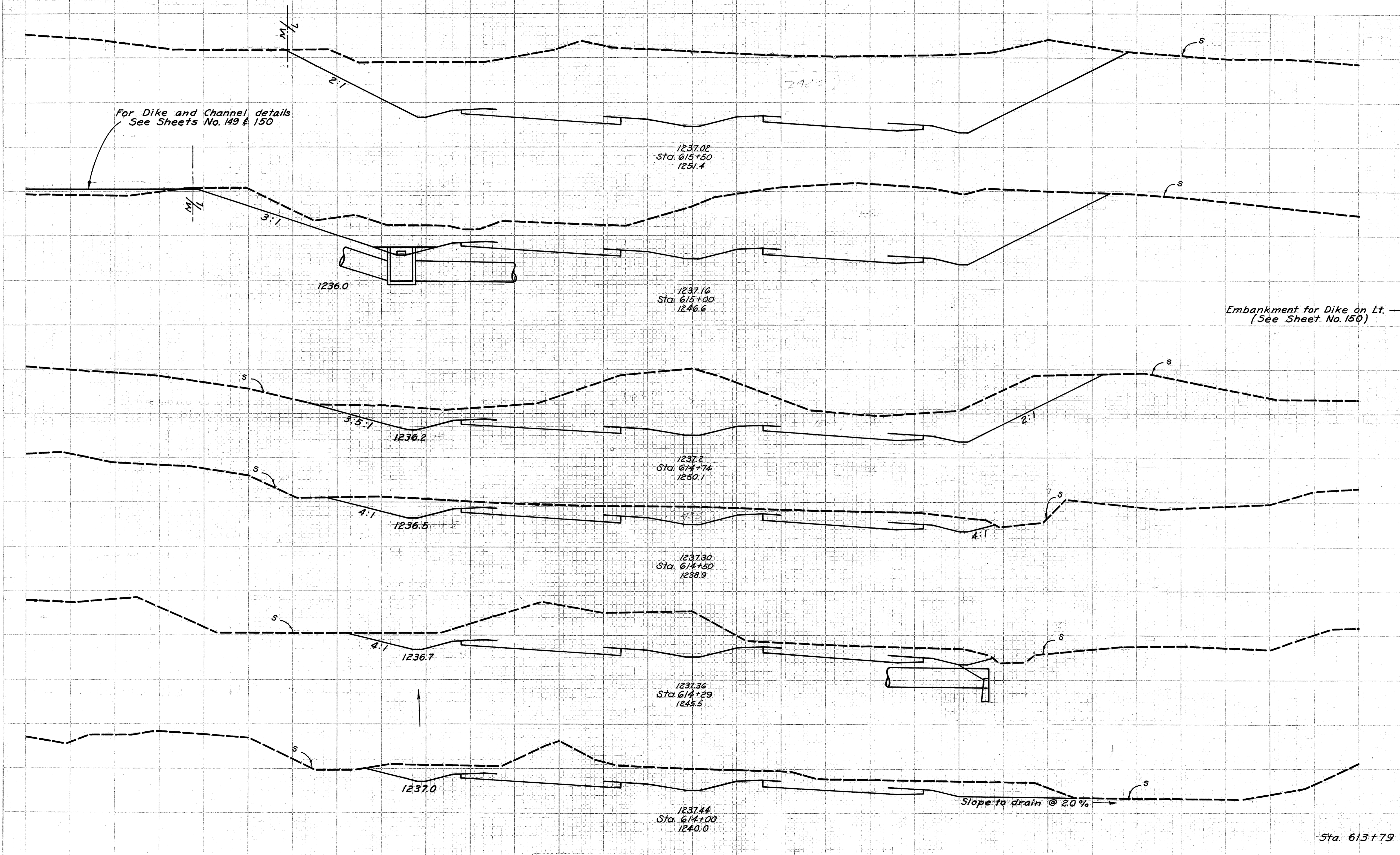
RIC-13- (10.83-13.95)



END AREA	CU. YDS.	
	CUT	FILL
1258	0	
		901 2
423	4	
		648 11
277	8	
		622 8
395	0	
		618 0
273	0	
		342 11
96	12	
		99 88
11	83	

Sta. 611+00

Sta. 611+50 to Sta. 613+70

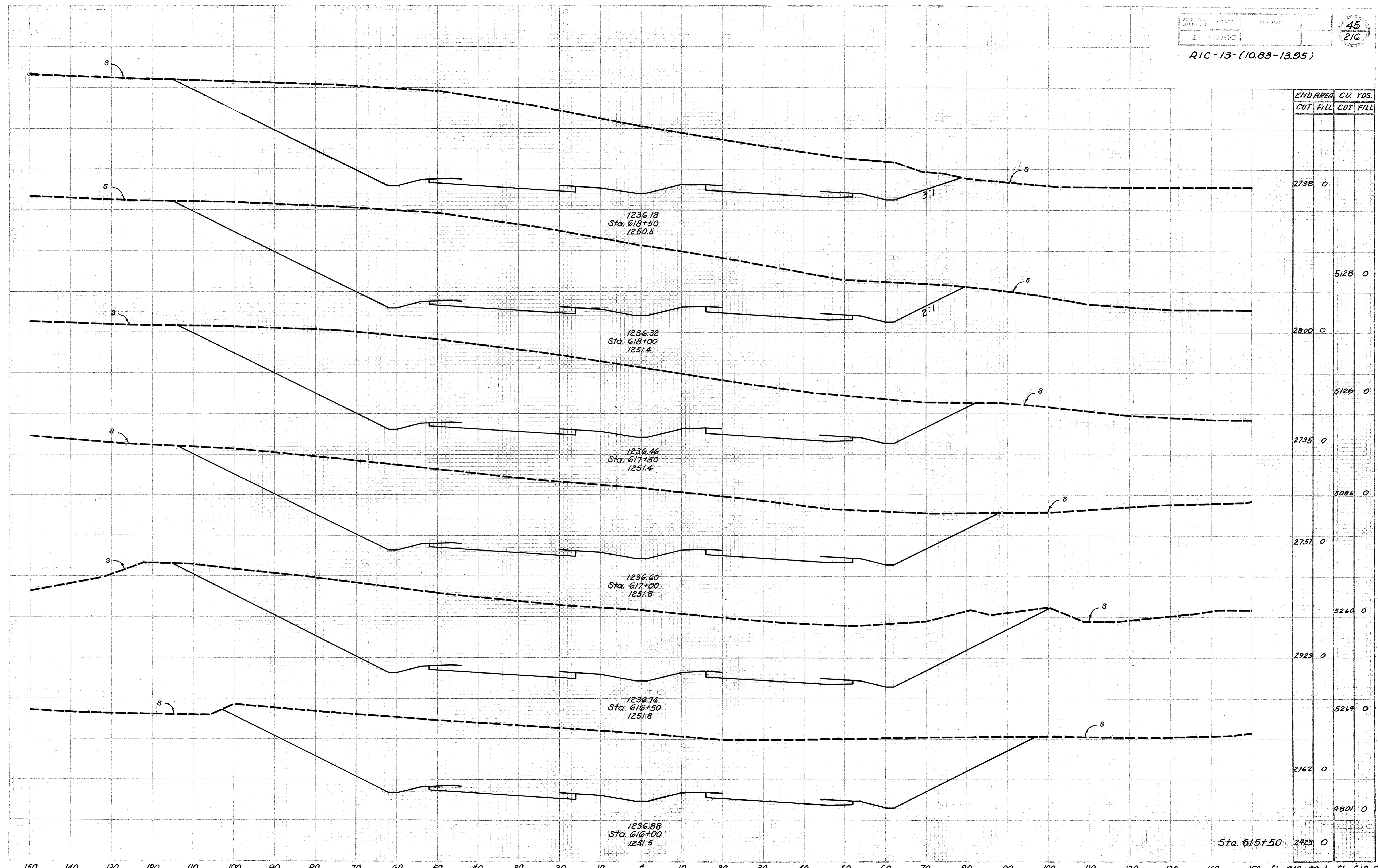


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
2423	0		
		3929	0
1820	0		
		158	0
		1454	0
1200	0		
		727	0
435	0		
		457	0
740	0		
		701	0
565	0		
		708	0
		1255	0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

Sta. 613+79 to Sta. 615+50

RIC-13-(10.83-13.95)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		2738	0
			5128
		2800	0
			5126
		2735	0
			5086
		2757	0
			5260
		2923	0
			5269
		2762	0
			4801
		2423	0

1236.18
Sta. 618+50
1250.5

1236.32
Sta. 618+00
1251.4

1236.46
Sta. 617+50
1251.4

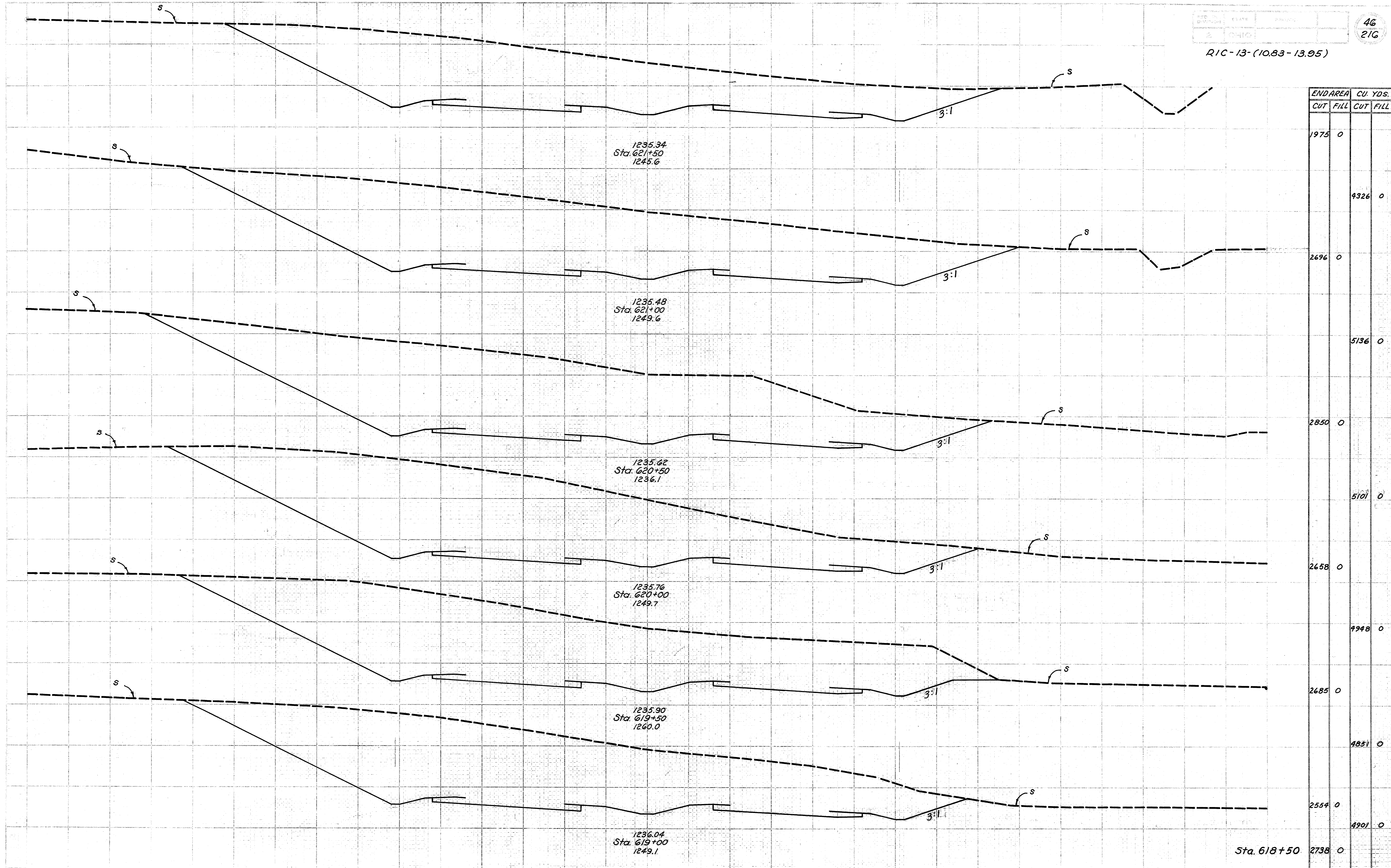
1236.60
Sta. 617+00
1251.8

1236.74
Sta. 616+50
1251.8

1236.88
Sta. 616+00
1251.5

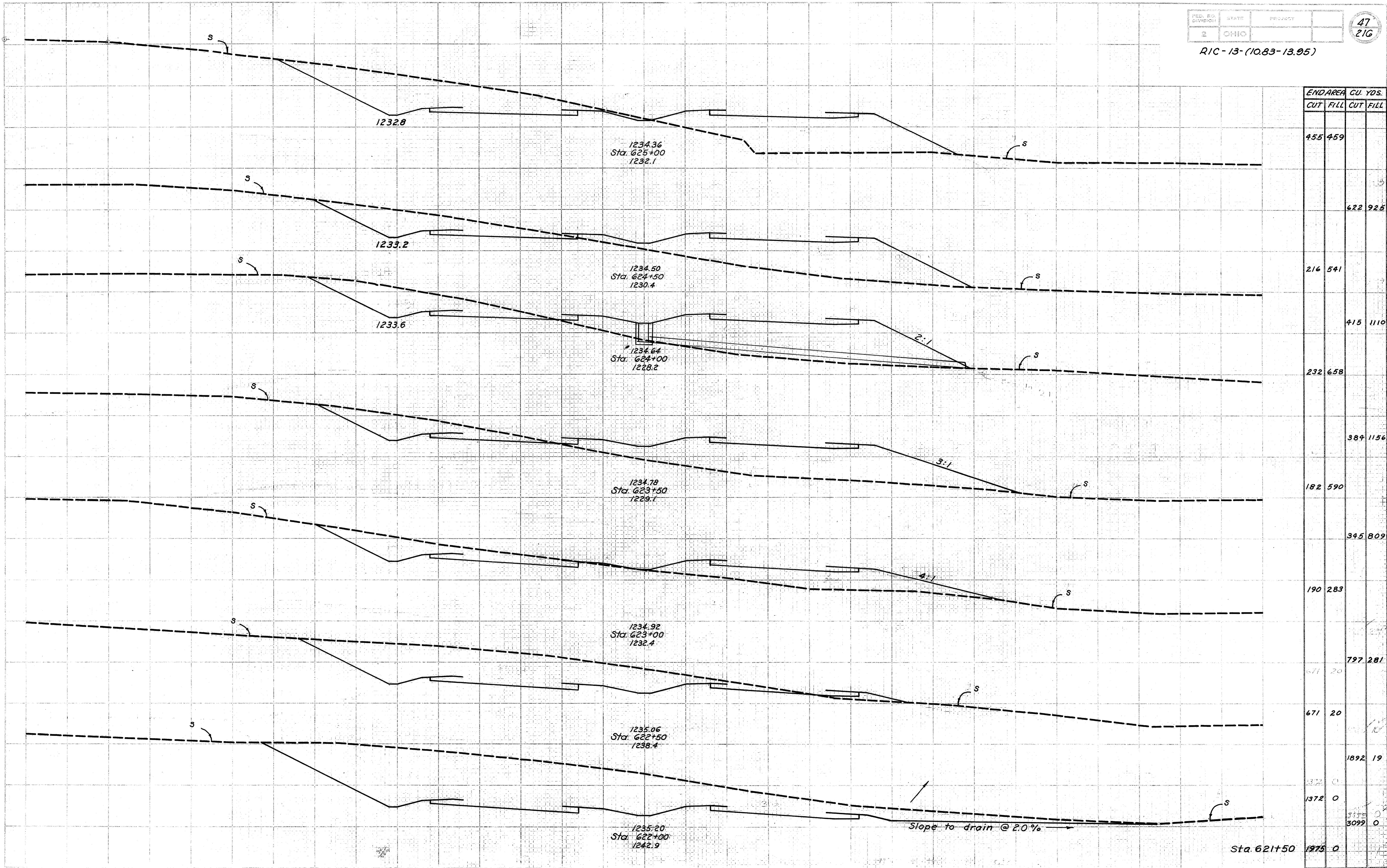
Sta. 615+50

Sta. 618+50

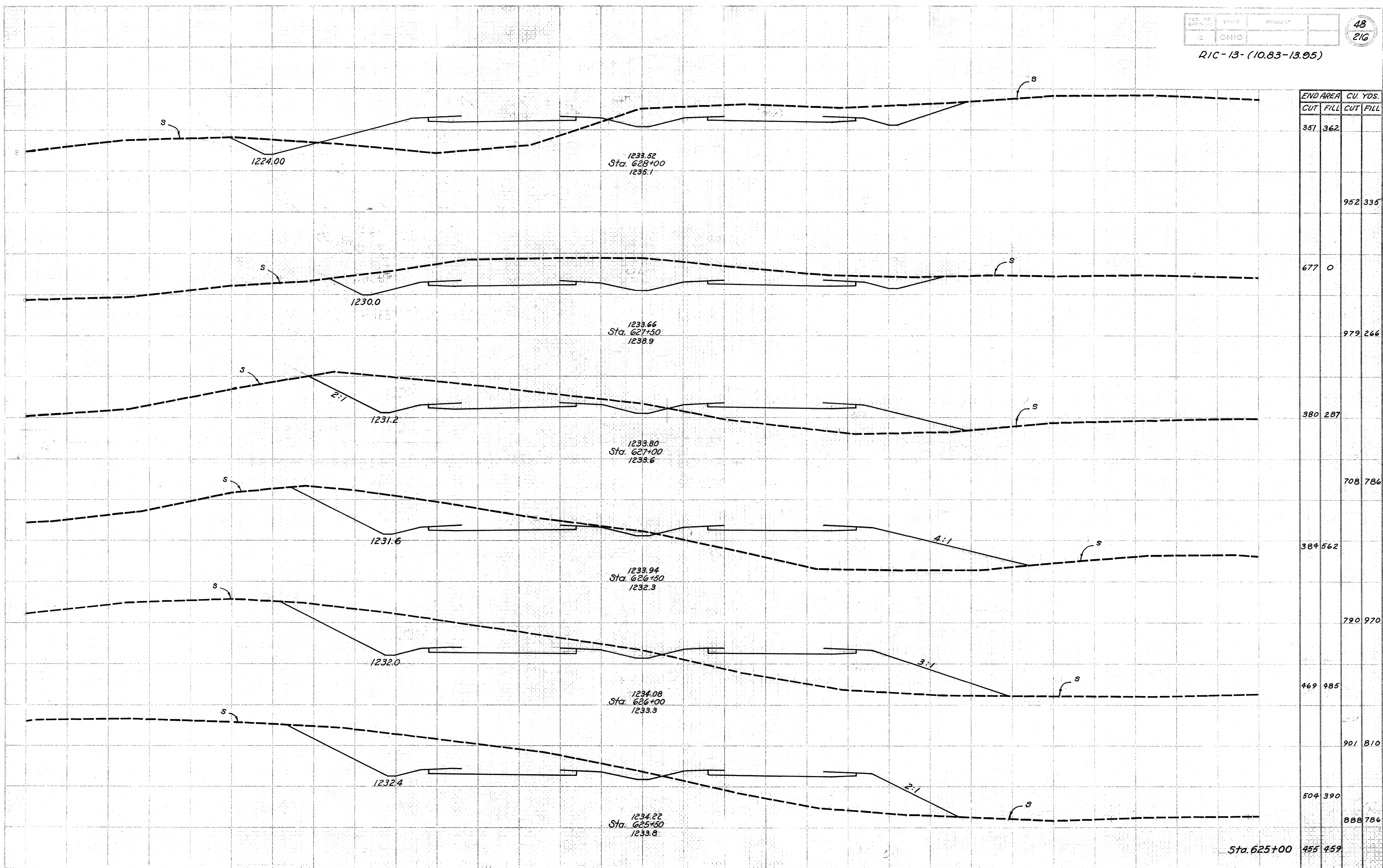


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1975	0		
		4326	0
2696	0		
		5136	0
2850	0		
		5101	0
2658	0		
		4948	0
2685	0		
		4851	0
2554	0		
		4901	0
		2738	0

Sta. 618+50



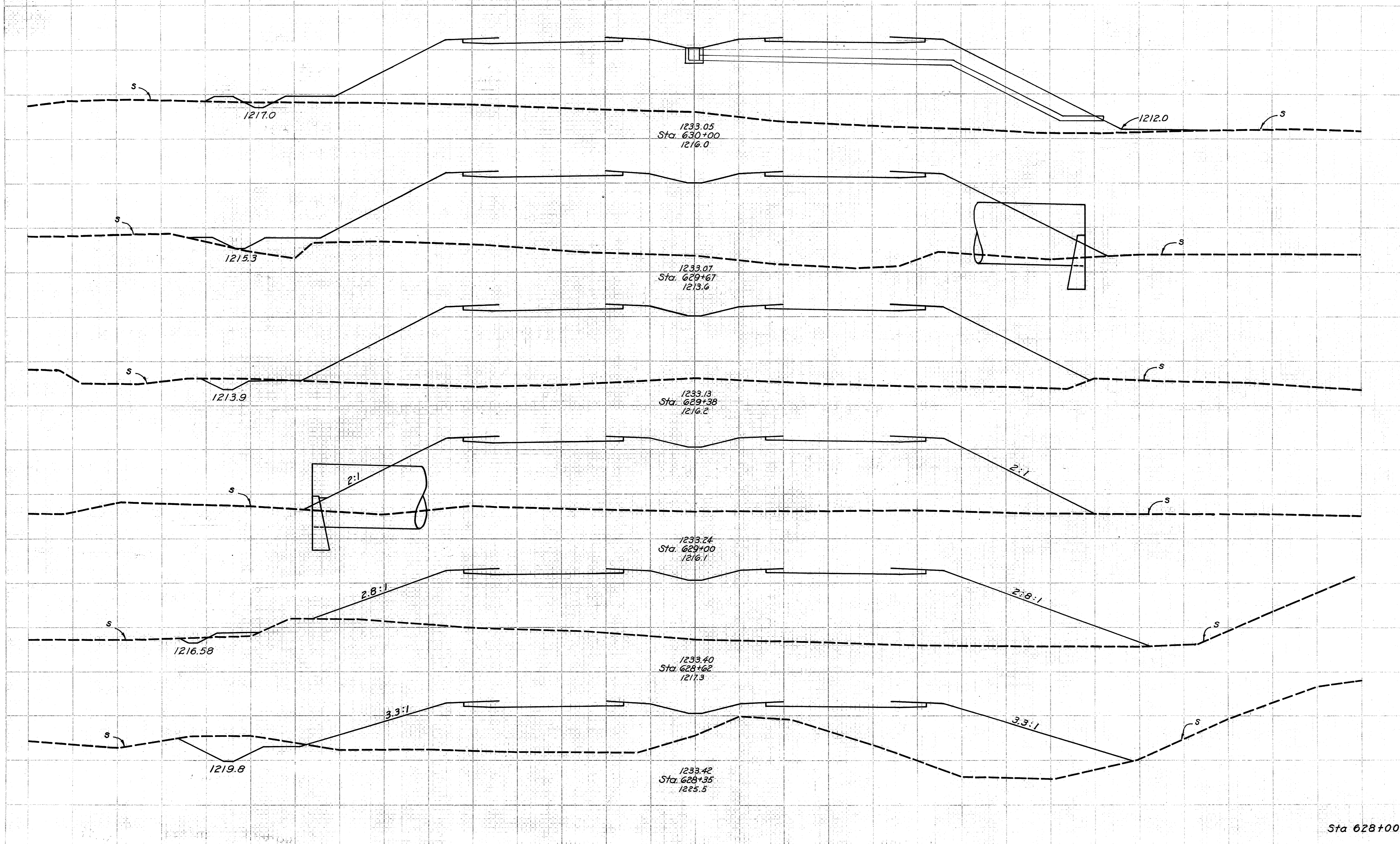
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
455	459		
	622	925	
216	541		
	415	1110	
232	658		
	384	1156	
182	590		
	345	809	
190	283		
	797	281	
671	20		
	671	20	
	1892	19	
1372	0		
1372	0		
	3099	0	
	1975	0	



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
351	362		
		952	335
677	0		
		979	266
380	287		
		708	786
384	562		
		790	970
469	485		
		901	810
504	390		
		888	786
455	459		

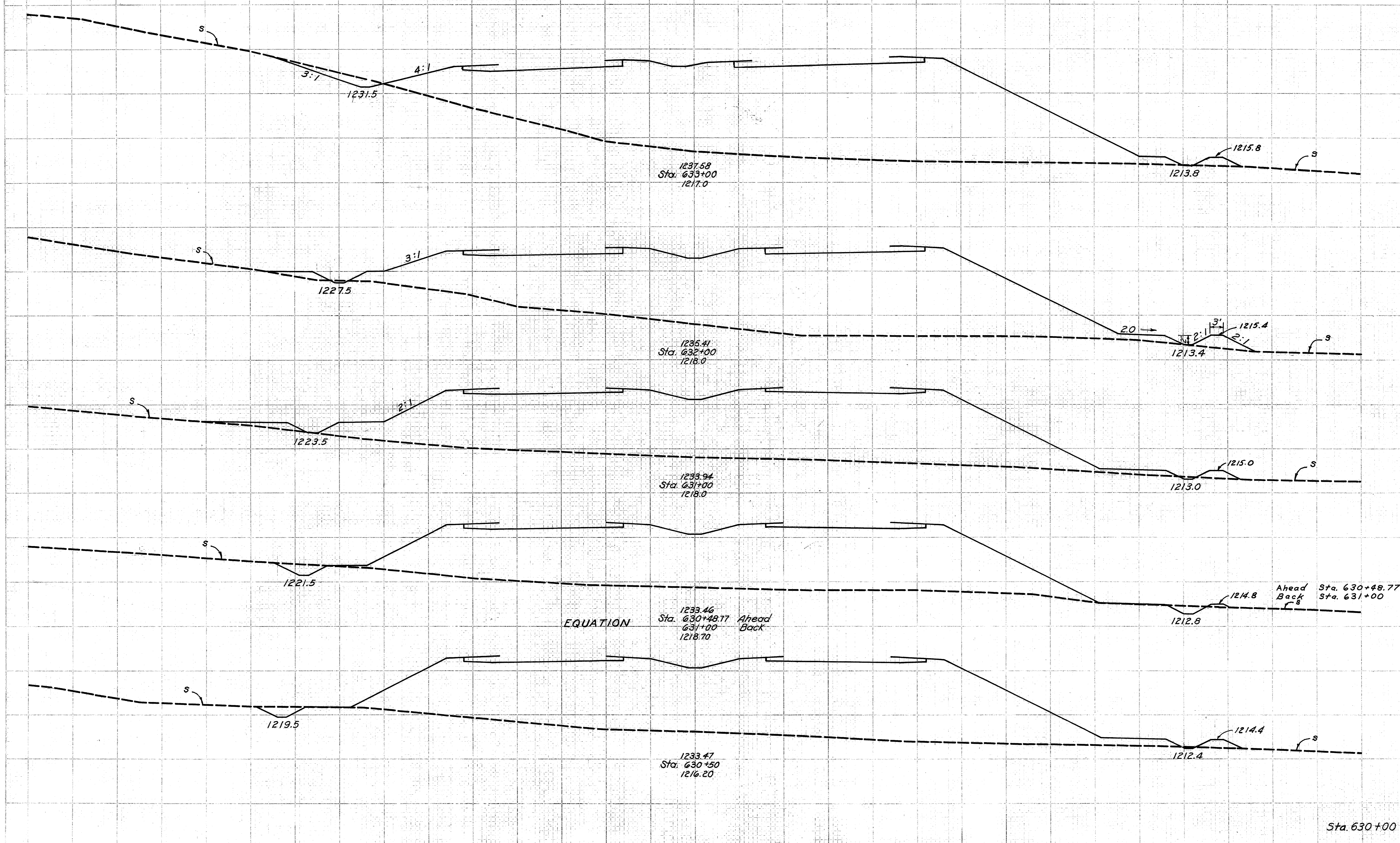
Sta. 625+00

Sta. 625+50 to Sta. 628+00



END AREA	CU. YDS.	
	CUT	FILL
10	2535	
		6 3203
0	2706	
		11 2800
20	2507	
		14 3393
0	2315	
		3 3197
5	2227	
		44 1869
83	1511	
		281 1214
Sta 628+00		351 362

Sta 628+35 to Sta. 630+00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
32	2612		
	61	9147	
1	2327		
	4	8242	
1	2124		
	26	3773	
26	1853		
	41	3885	
18	2342		
	26	4516	
10	2535		

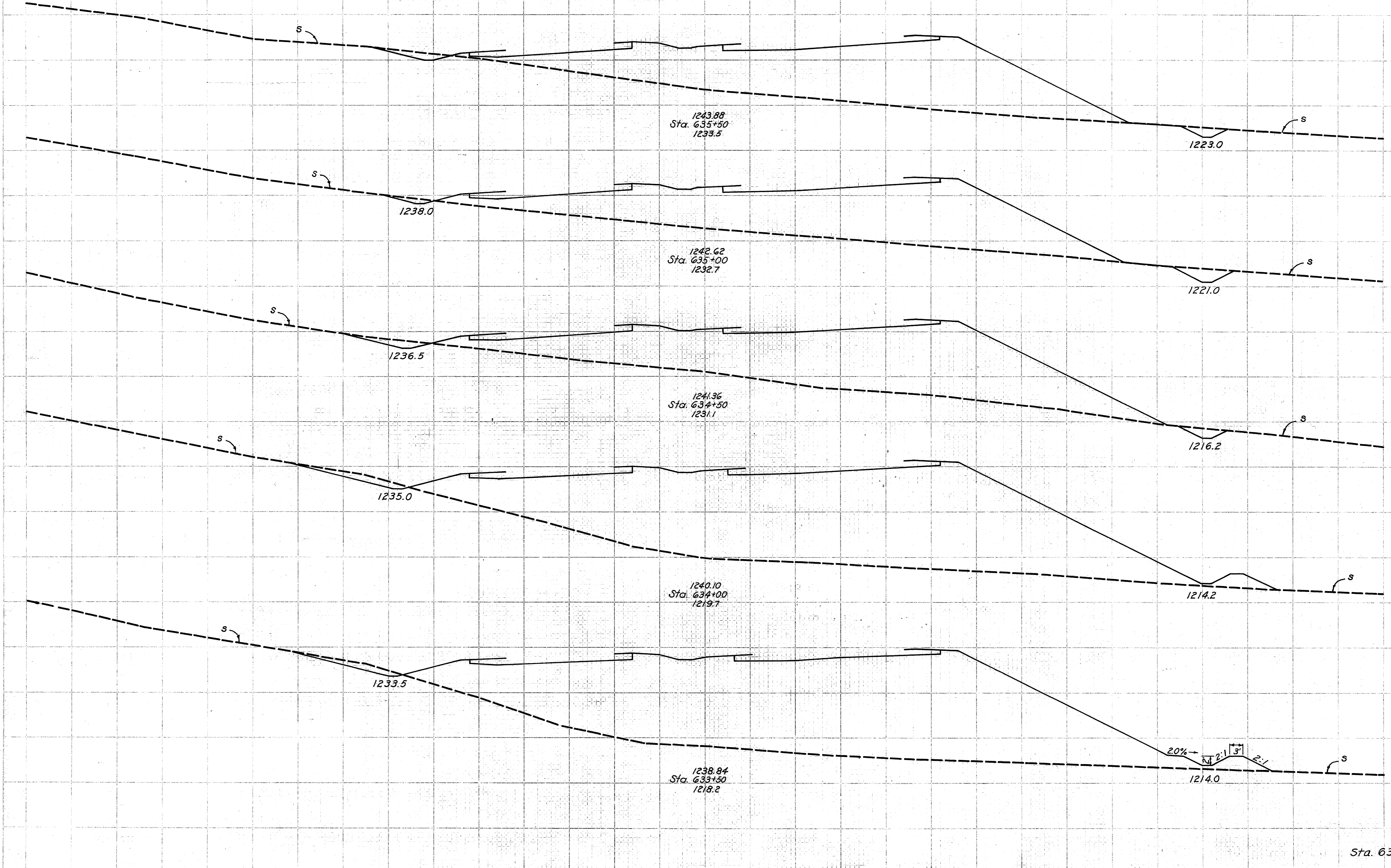
EQUATION
 Sta. 630+48.77 Ahead
 Sta. 631+00 Back
 1233.46
 1218.70

Ahead
 Back
 Sta. 630+48.77
 Sta. 631+00

Sta. 630+00

Sta. 630+50 to Sta. 633+00

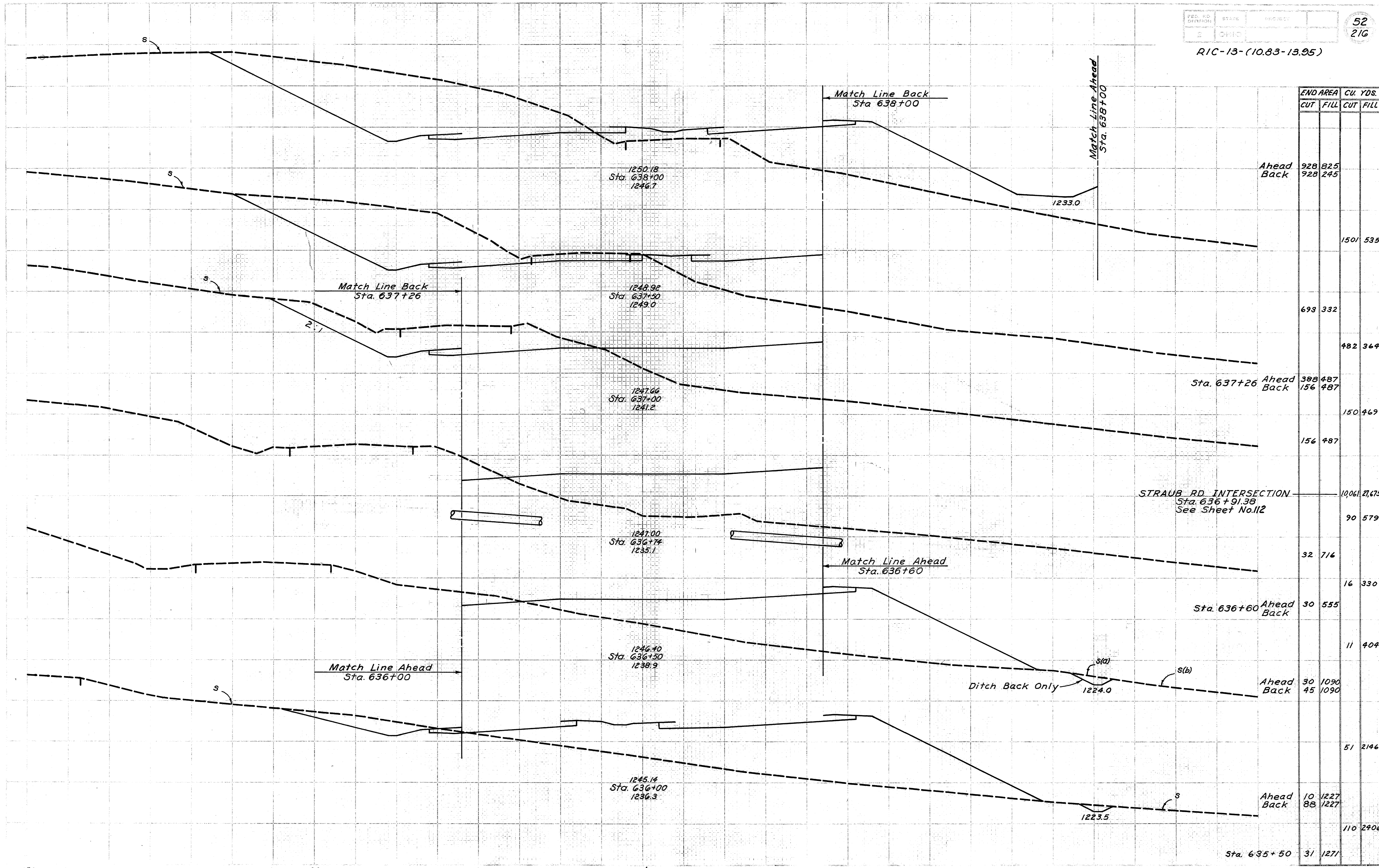
RIC-13-(10.83-13.95)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
31	1271		
		58	2313
31	1227		
		60	2481
33	1452		
		59	3754
30	2602		
		49	4964
23	2760		
		51	4975
		32	2612

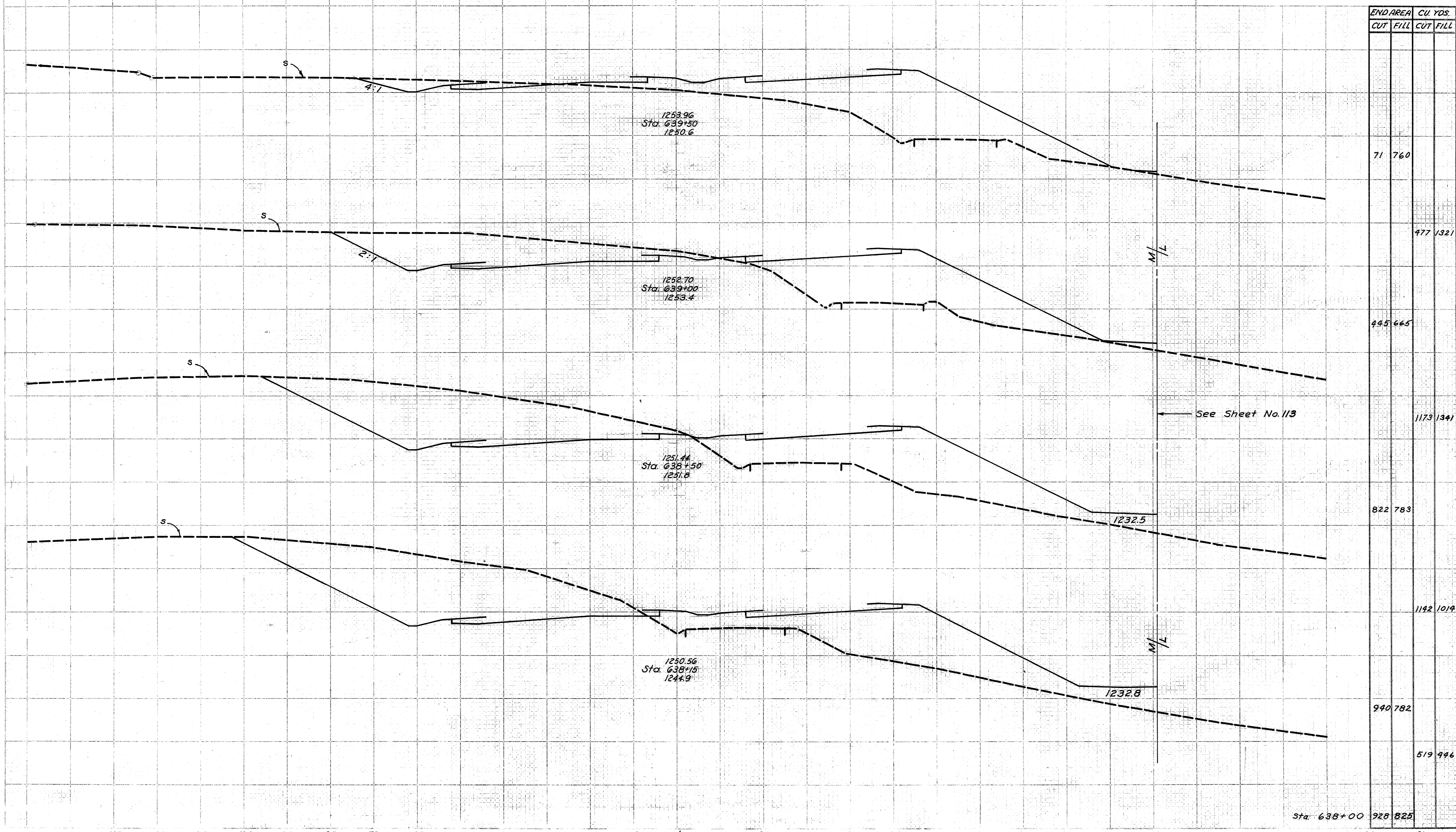
Sta. 633+00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 633+50 to Sta. 635+00



	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Ahead Back	928	825	928	245
			1501	535
	693	332		
			482	364
Sta. 637+26 Ahead Back	388	487	156	487
			150	469
	156	487		
STRAUB RD. INTERSECTION Sta. 636+91.38 See Sheet No. 112			10,061	27,675
			90	579
	32	716		
			16	330
Sta. 636+60 Ahead Back	30	555		
			11	404
Ahead Back	30	1090	45	1090
			51	2146
	10	1227	88	1227
			110	2406
Sta. 635+50	31	1271		

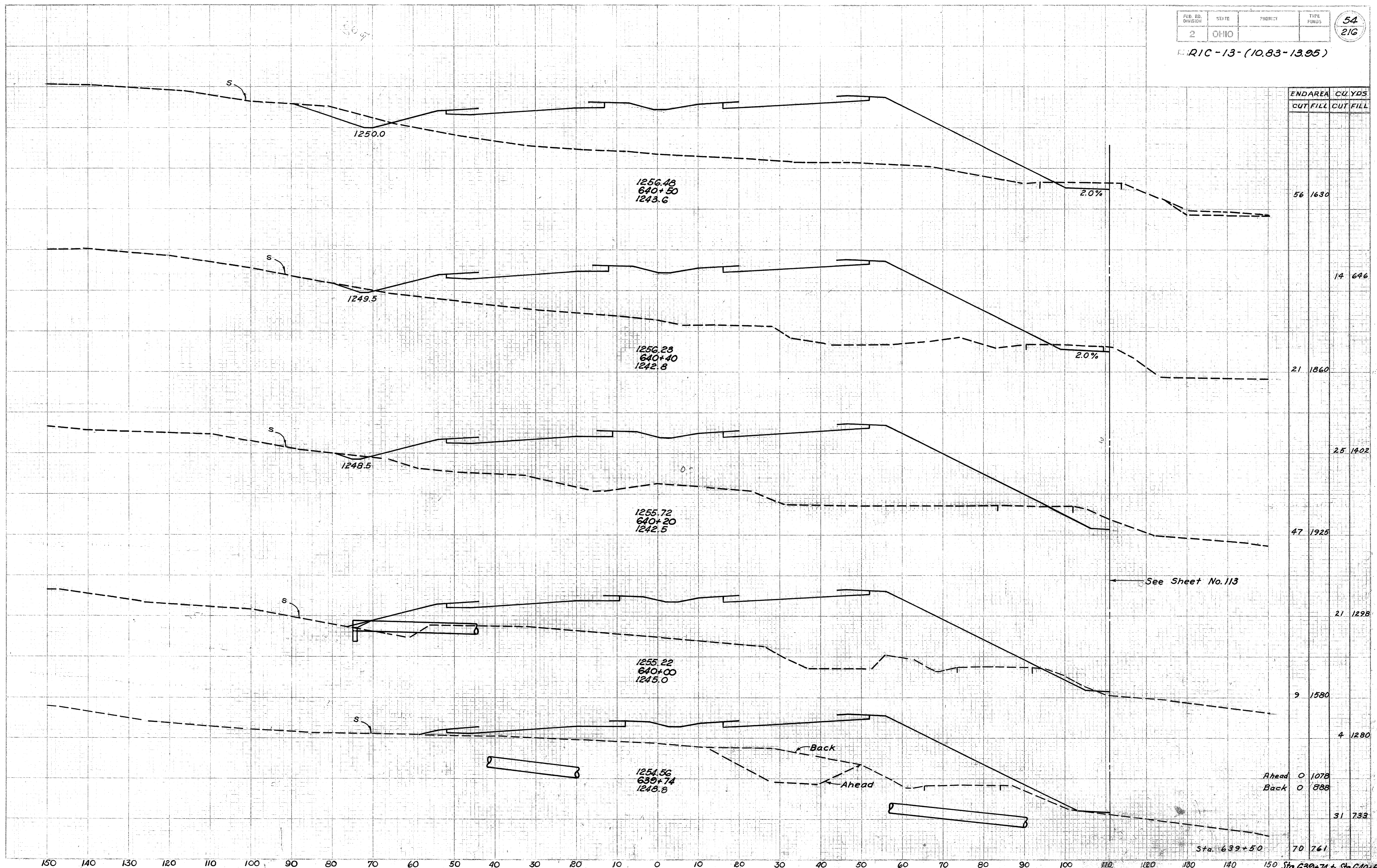
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 636+00 to Sta. 638+00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
71	760		
477	1321		
445	665		
1173	1341		
822	783		
1192	1019		
940	782		
519	996		
928	825		

Sta. 638+00

Sta. 638+15 to Sta. 639+50



509

1250.0

1256.48
640+50
1243.6

2.0%

56 1630

1249.5

1256.28
640+40
1242.8

2.0%

21 1860

14 646

1248.5

1255.72
640+20
1242.5

0%

47 1925

25 1402

See Sheet No. 113

21 1298

1255.22
640+00
1245.0

9 1580

4 1280

1254.56
639+74
1248.8

Back

Ahead

Ahead 0 1078
Back 0 888

31 733

Sta. 639+50

70 761

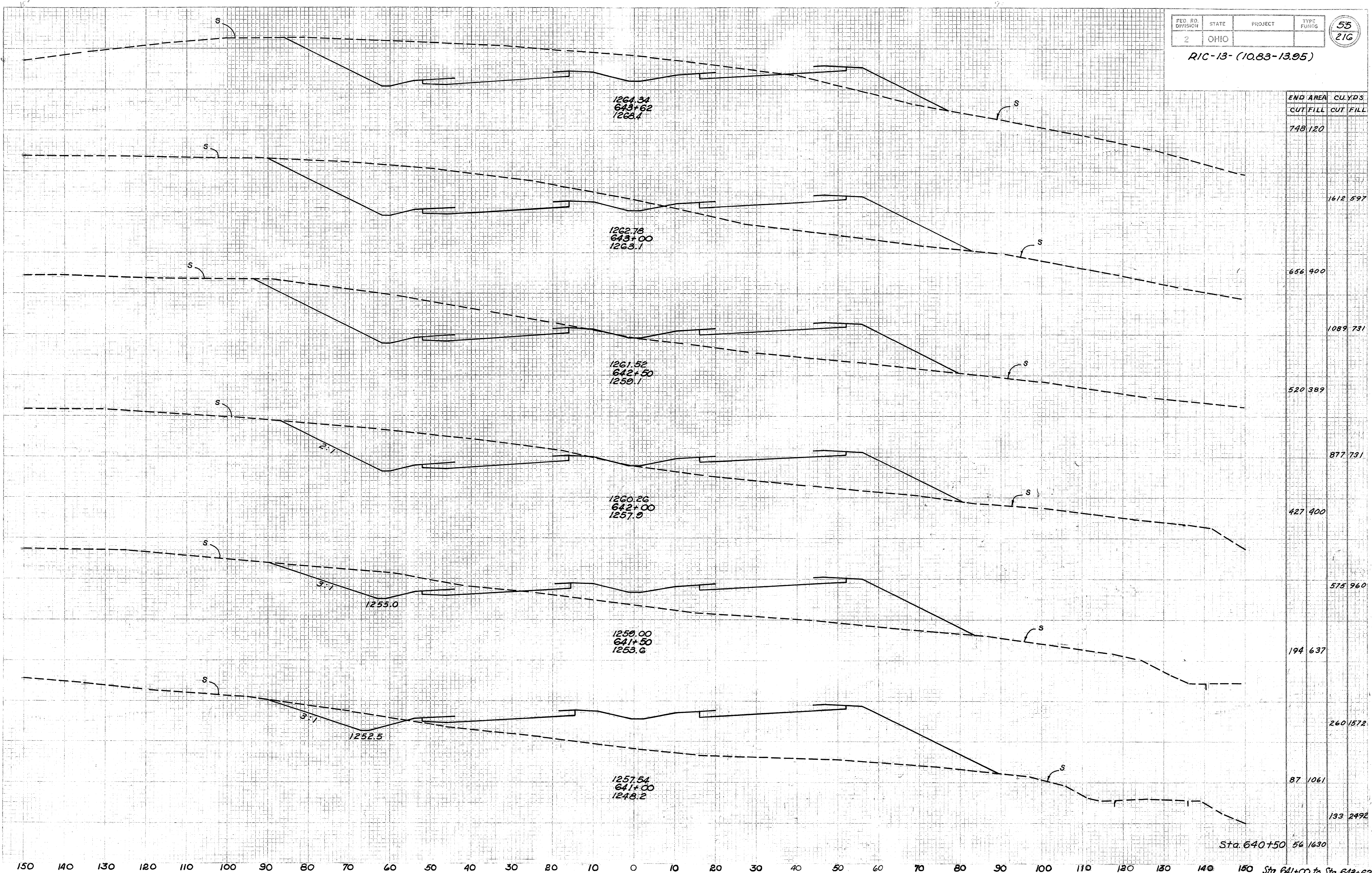
Sta. 639+74 to Sta. 640+50

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

55
21G

RIC-13- (10.83-13.95)



END AREA	CU. YDS.
CUT	FILL
748	120
1612	597
656	900
1089	731
520	389
877	731
427	400
575	960
194	637
260	1572
87	1061
133	2492
	56 1630

1264.34
643+62
1268.1

1262.78
643+00
1263.1

1261.52
642+50
1259.1

1260.26
642+00
1257.9

1259.00
641+50
1253.6

1257.54
641+00
1248.2

1255.0

1252.5

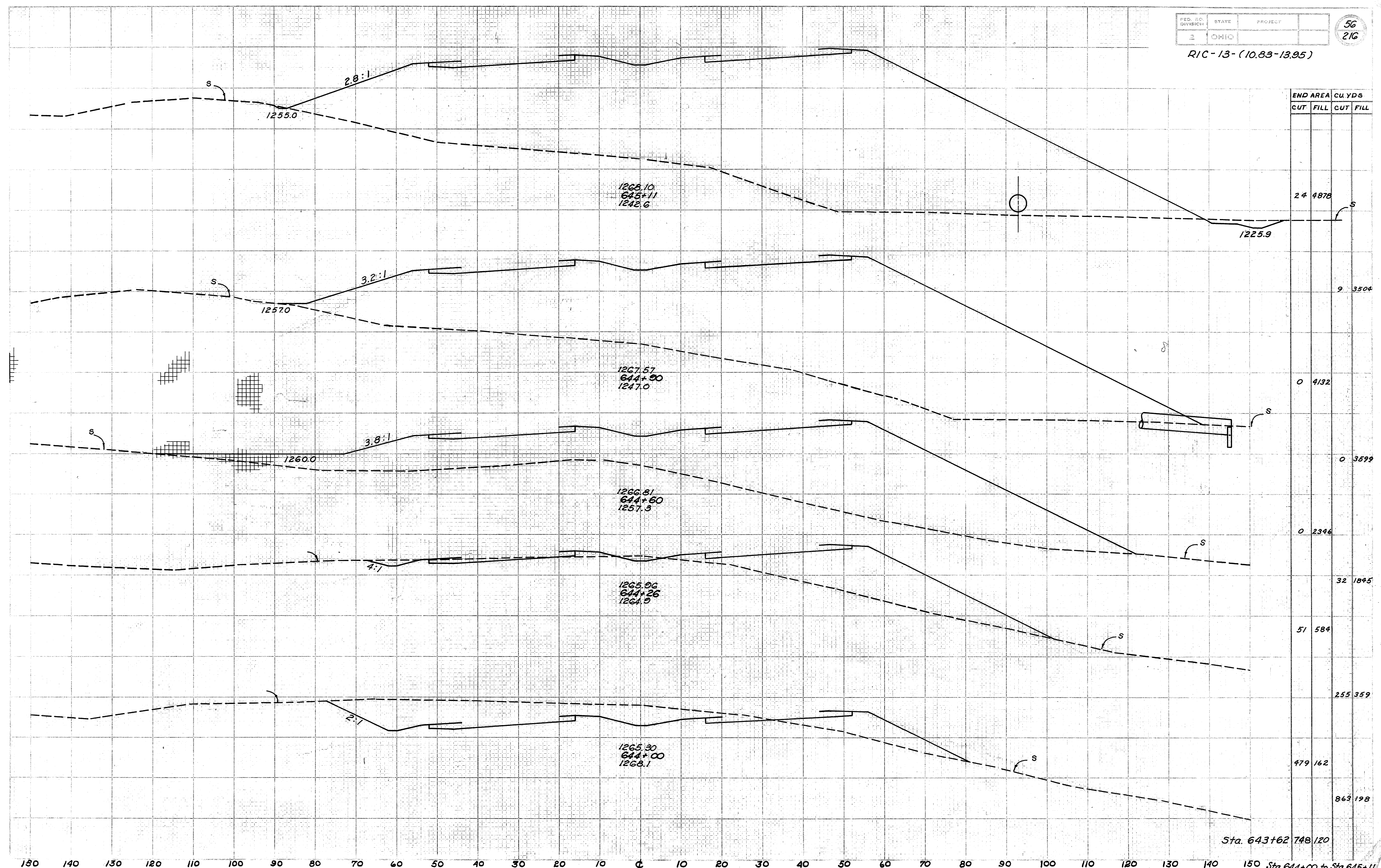
2:1

3:1

3:1

Sta. 640+50 56 1630

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 641+00 to Sta. 643+62

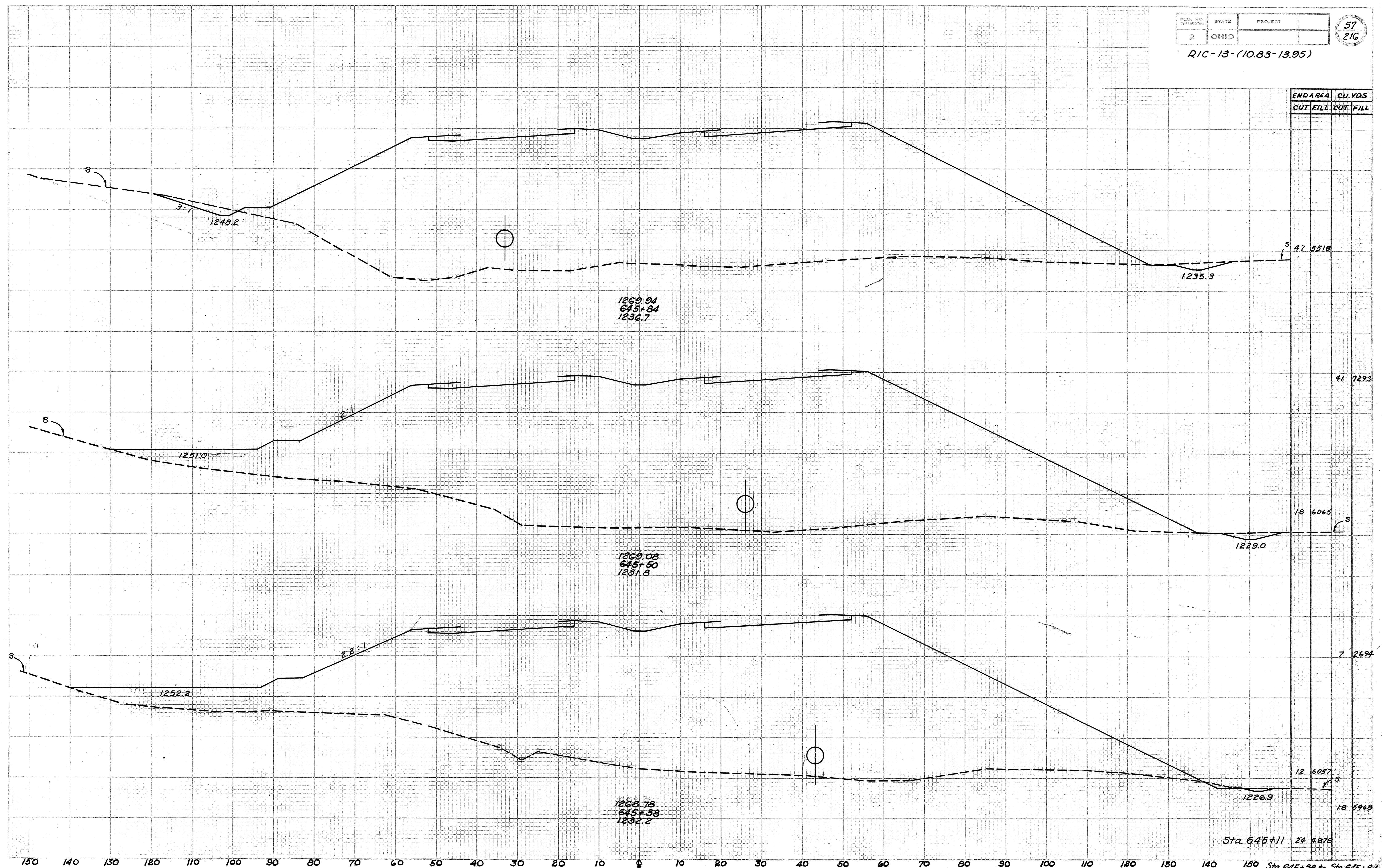


END AREA		CU. YDS	
CUT	FILL	CUT	FILL
		24	4878
9			3504
0			4132
0			3599
0			2346
32			1845
51			584
			255 359
479			162
			863 198

Sta. 643+62 748.120

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 C 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 644+00 to Sta. 645+11

END AREA		CU. YDS	
CUT	FILL	CUT	FILL



1269.94
645+84
1236.7

1269.08
645+80
1231.8

1268.78
645+38
1232.2

47 5518

18 6065

12 6057

41 7293

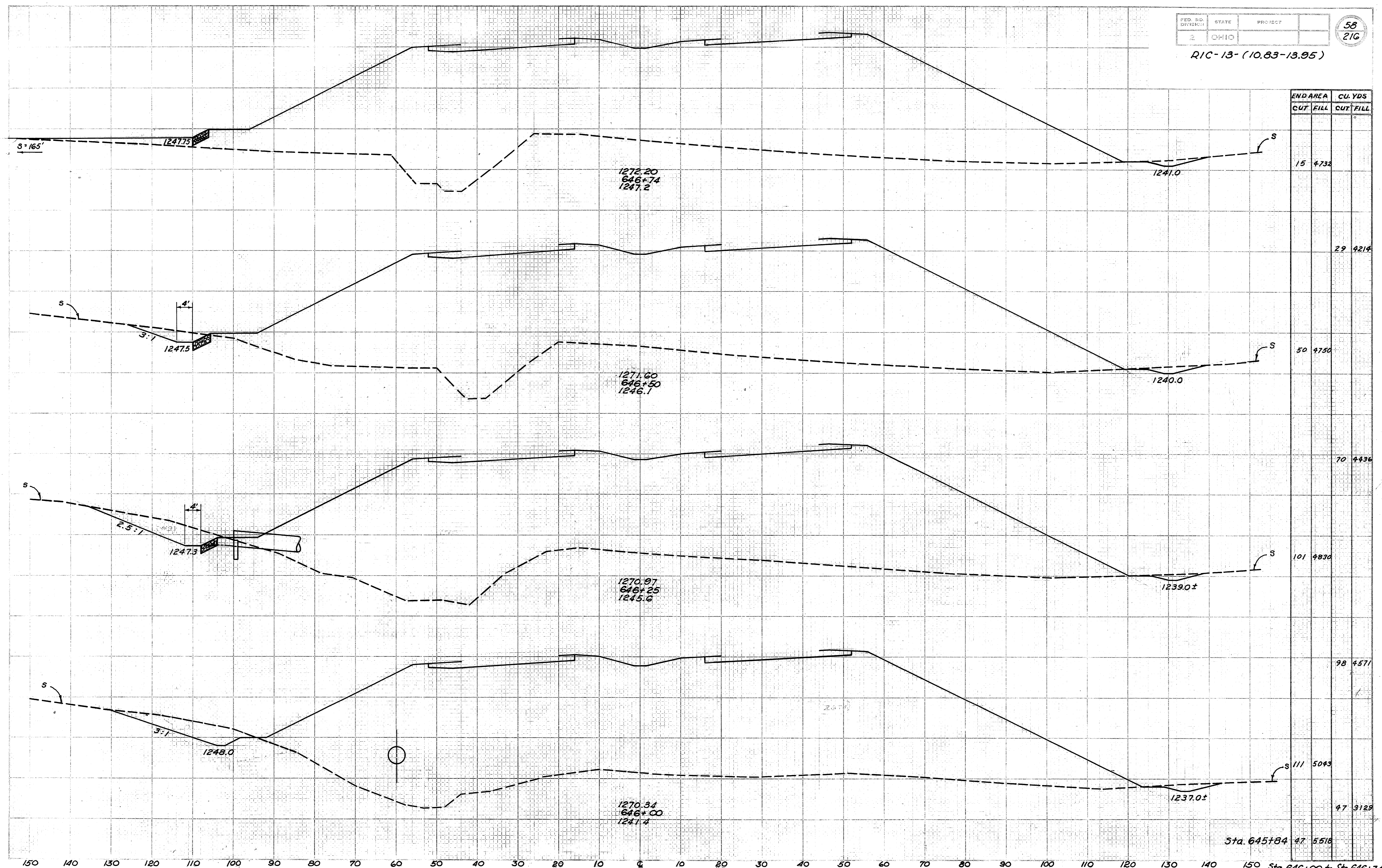
7 2694

18 5468

Sta. 645+11 24 4878

Sta. 645+38 to Sta. 645+84

RIC-13-(10.83-13.95)



3:165

1247.75

1272.20
646+74
1247.2

1241.0

1247.5

1271.60
646+50
1246.1

1240.0

1247.3

1270.97
646+25
1245.6

1239.0±

1248.0

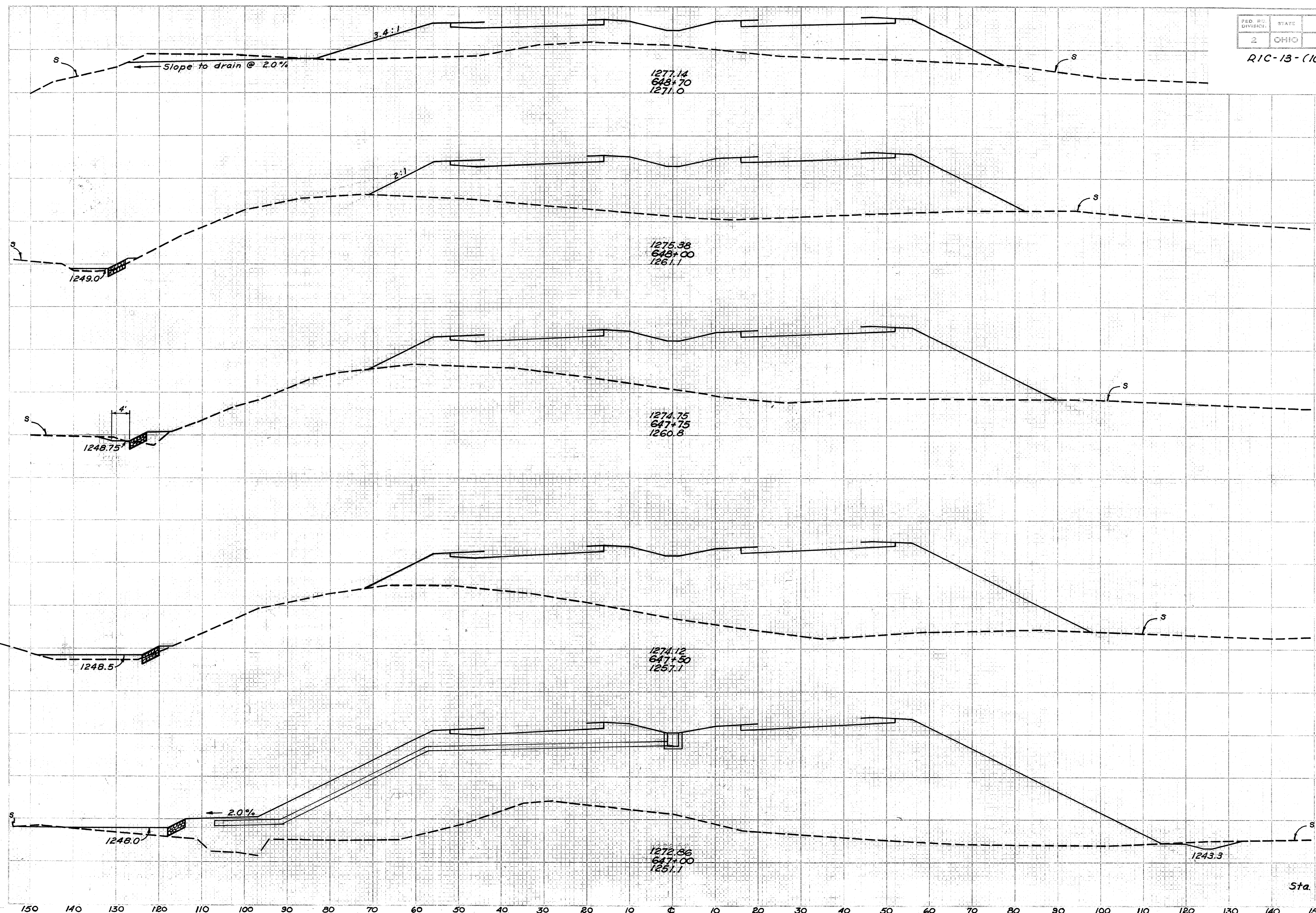
1270.34
646+00
1241.4

1237.0±

Sta. 645+84 47 5518

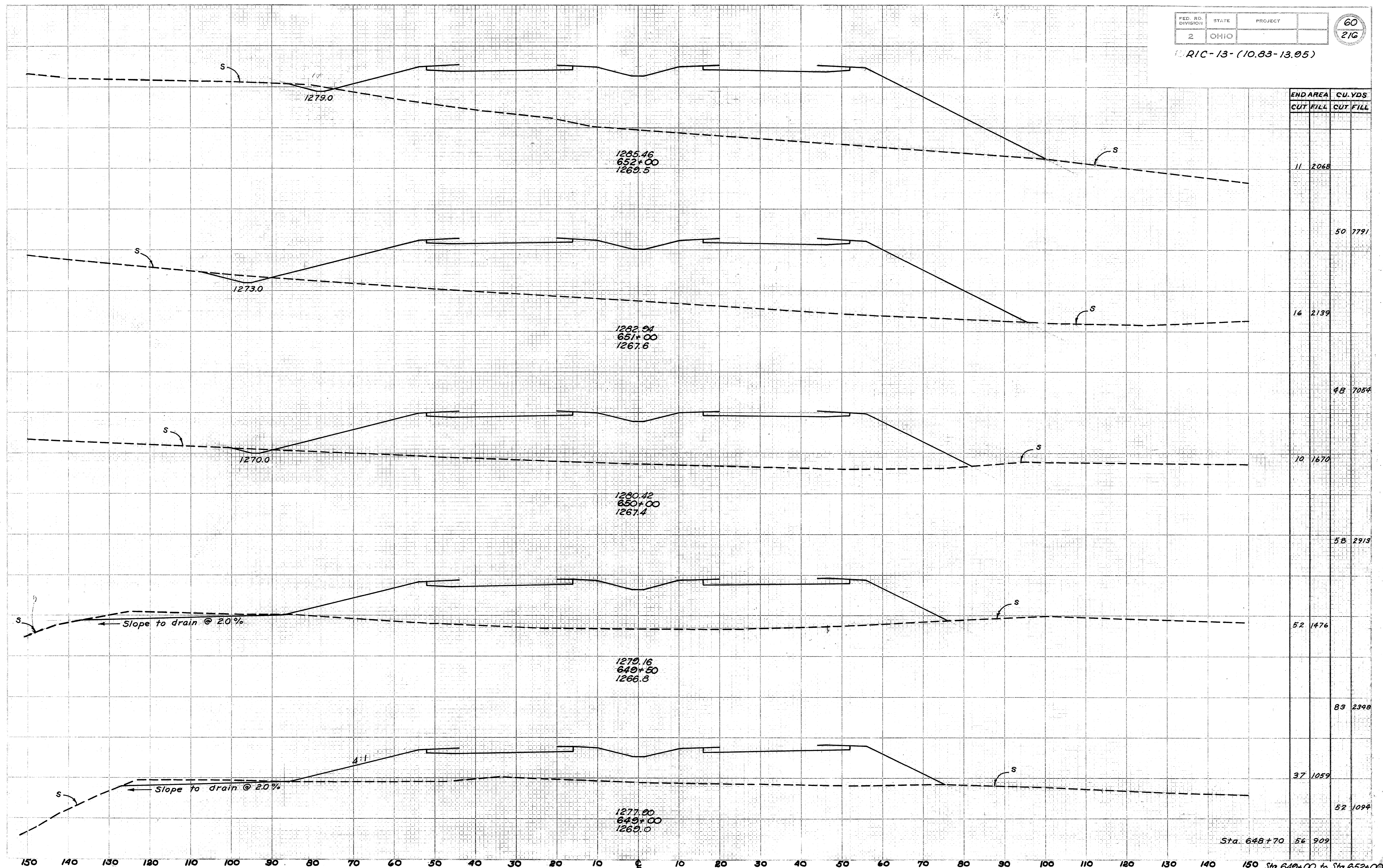
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 646+00 to Sta. 646+74

RIC-13-(10.83-13.95)



END AREA	CUT	FILL	CU. YDS
56	909		
		73	3193
0	1554		
		2	1506
5	1699		
		2	1804
0	2197		
		19	5852
20	4122		
		17	4263
		15	4732

Sta. 646+74



1279.0

1285.46
652+00
1269.5

1273.0

1282.94
651+00
1267.6

1270.0

1280.42
650+00
1267.4

Slope to drain @ 2.0%

1270.16
649+50
1266.8

Slope to drain @ 2.0%

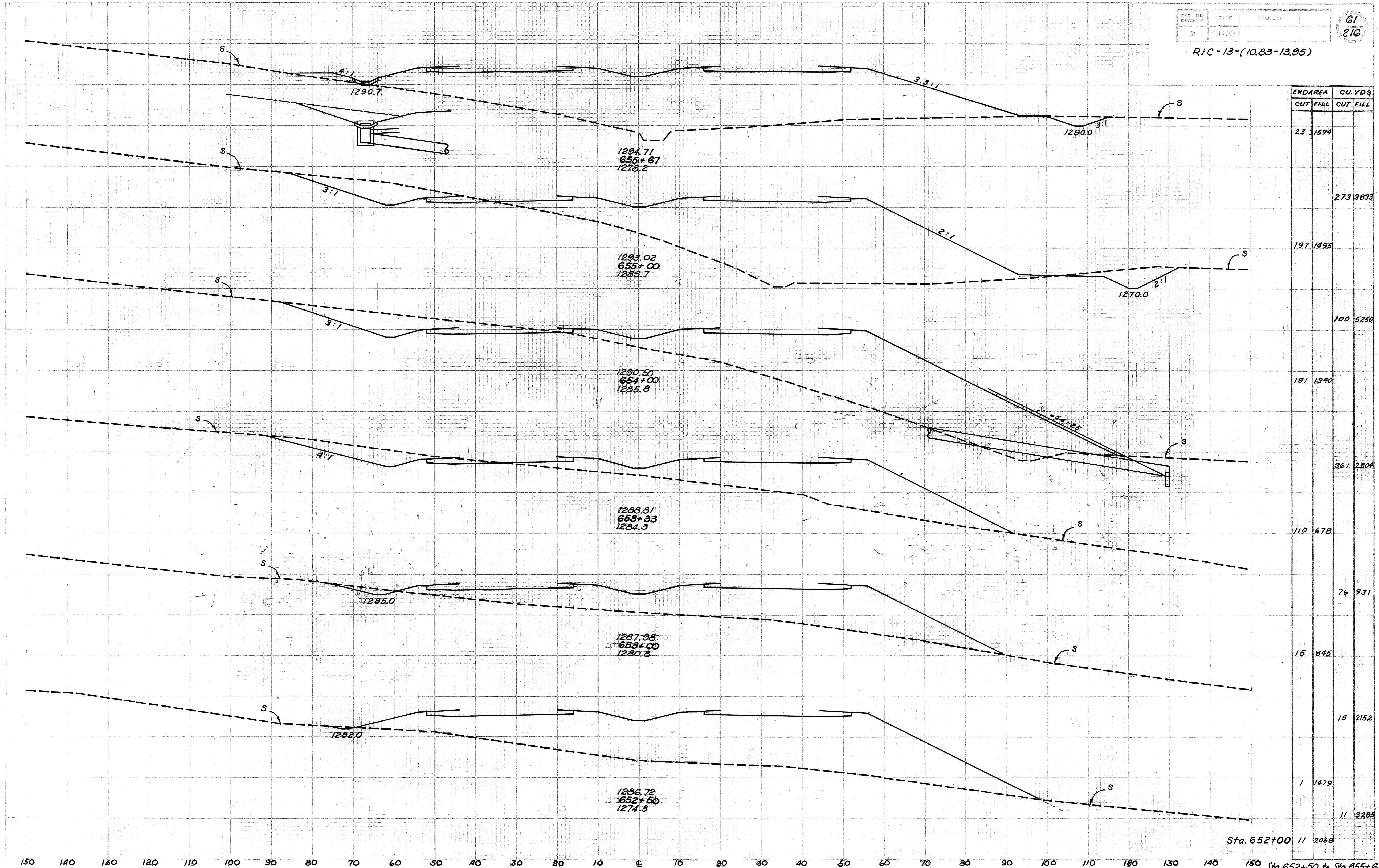
4:1

1277.00
648+00
1269.0

Sta. 648+70 56 909

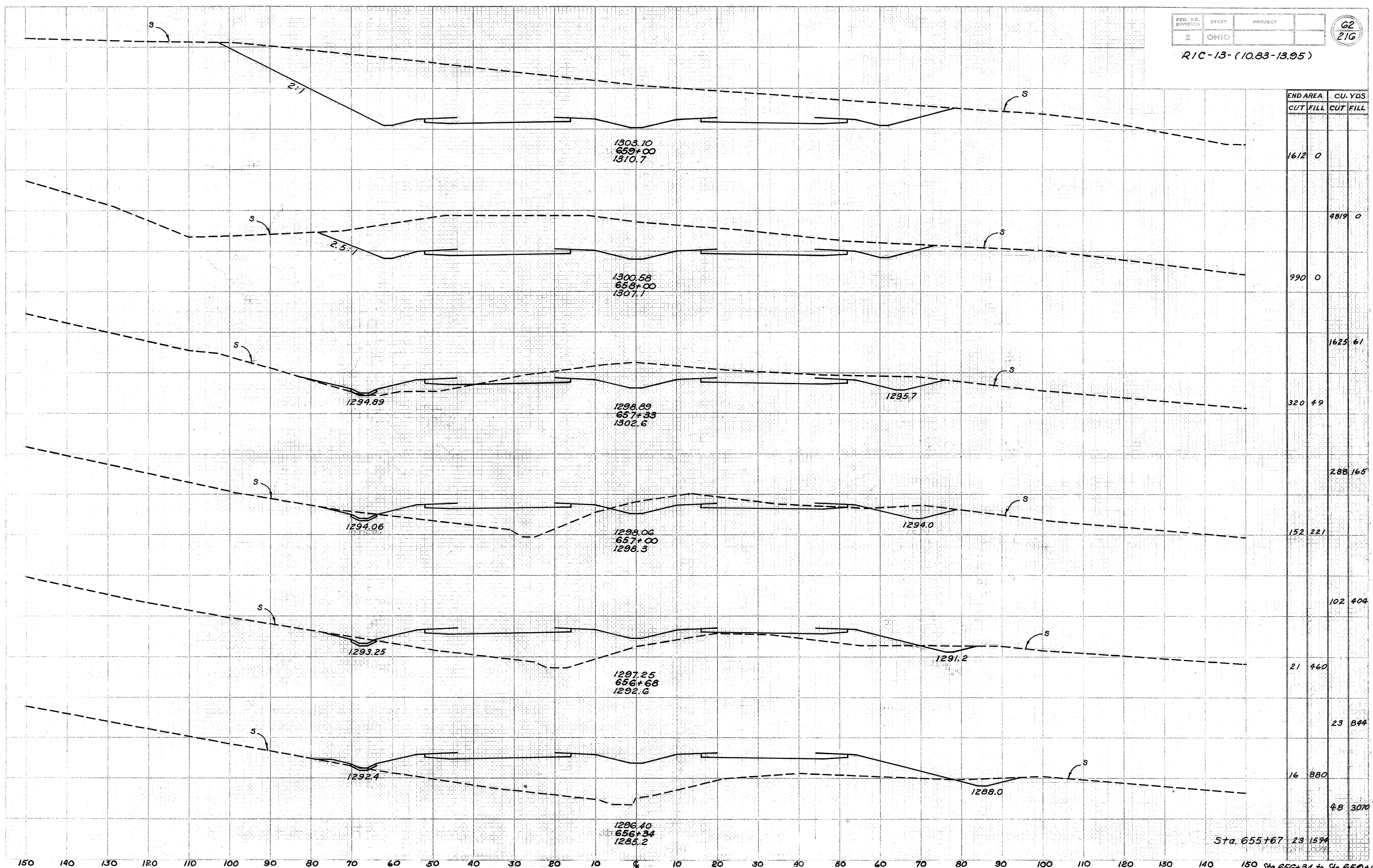
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 640+00 to Sta. 652+00

RIC-13-(10.83-13.95)



END AREA	CU. YDS	
	CUT	FILL
23	1594	
		273 3833
197	1495	
		700 5250
181	1340	
		361 2504
110	678	
		76 931
15	845	
		15 2152
1	1479	
		11 3285
		Sta. 652+00 11 2068

RIC-13- (10.83-13.95)



END AREA	CU. YDS
CUT	FILL
1612	0
	4819
990	0
	1625
320	49
	288
152	221
	102
21	460
	23
16	880
	48
	3070
Sta. 655+67	23 1594

1303.10
659+00
1310.7

1300.58
658+00
1307.7

1298.89
657+33
1302.6

1298.06
657+00
1298.3

1297.25
656+68
1292.6

1296.40
656+34
1285.2

1294.89

1294.06

1293.25

1292.4

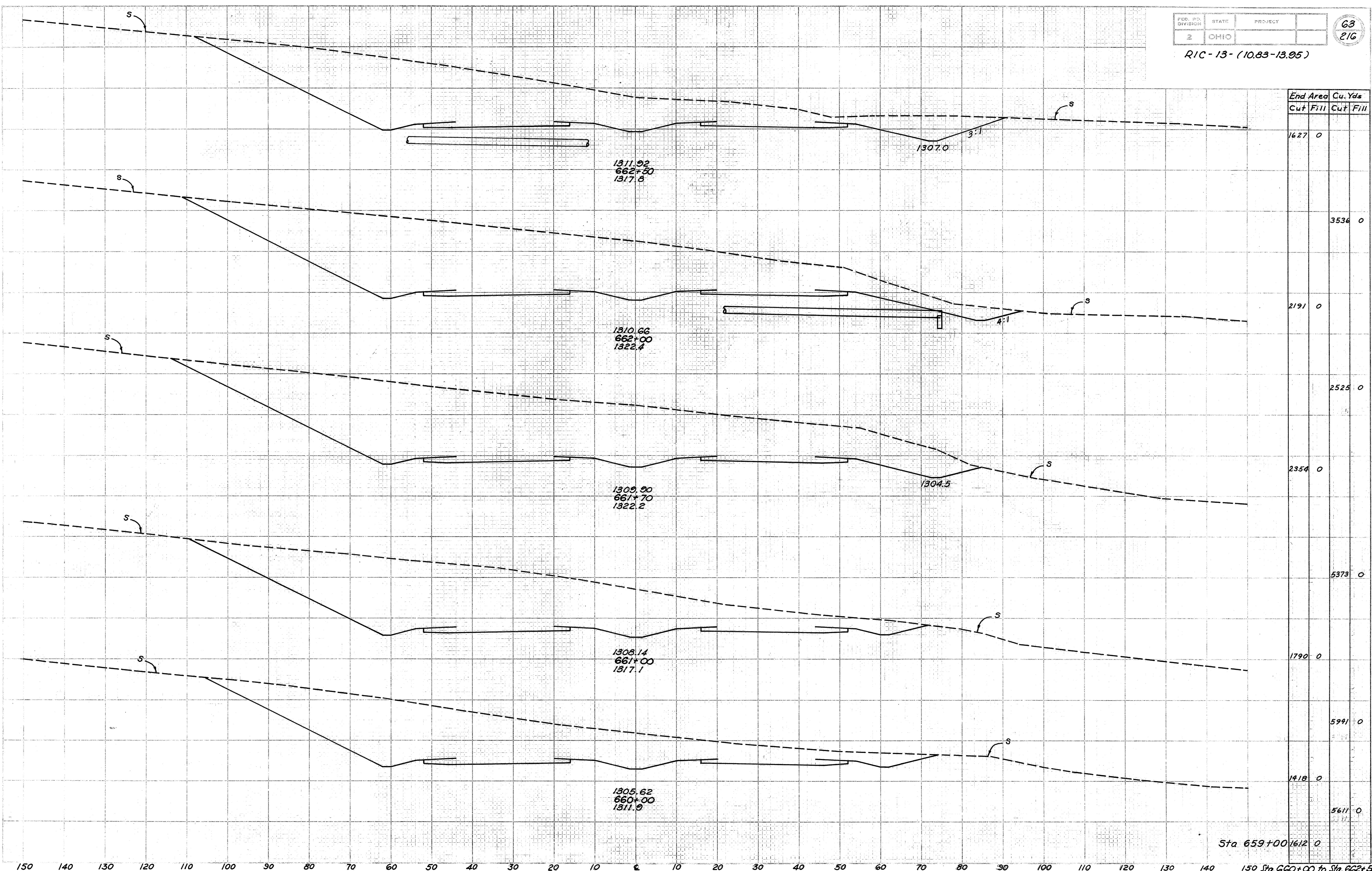
1295.7

1294.0

1291.2

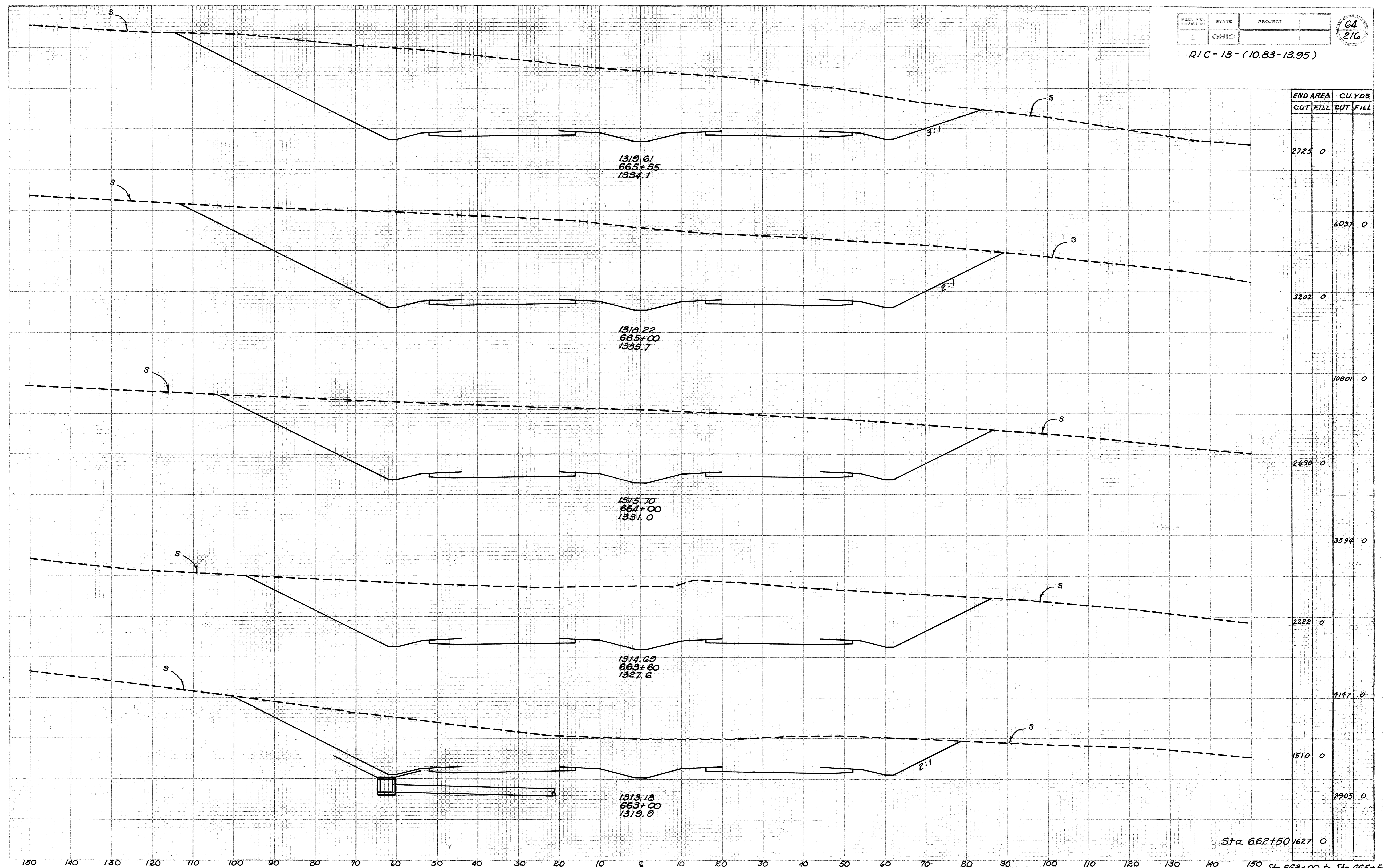
1288.0

Sta. 655+67 23 1594



End Area	Cu. Yds	
	Cut	Fill
1627	0	
		3536
2191	0	
		2525
2354	0	
		5373
1790	0	
		5991
1418	0	
		5611

Sta 659+00 to Sta 662+50



END AREA	CU. YDS
CUT	FILL
2725	0
6037	0
3202	0
10801	0
2630	0
3594	0
2222	0
4147	0
1510	0
2905	0
Sta. 662+50/627 0	

1310.61
665+55
1334.1

1318.22
665+00
1335.7

1315.70
664+00
1331.0

1314.60
663+60
1327.6

1313.18
663+00
1319.9

3:1

2:1

2:1

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S

S

S

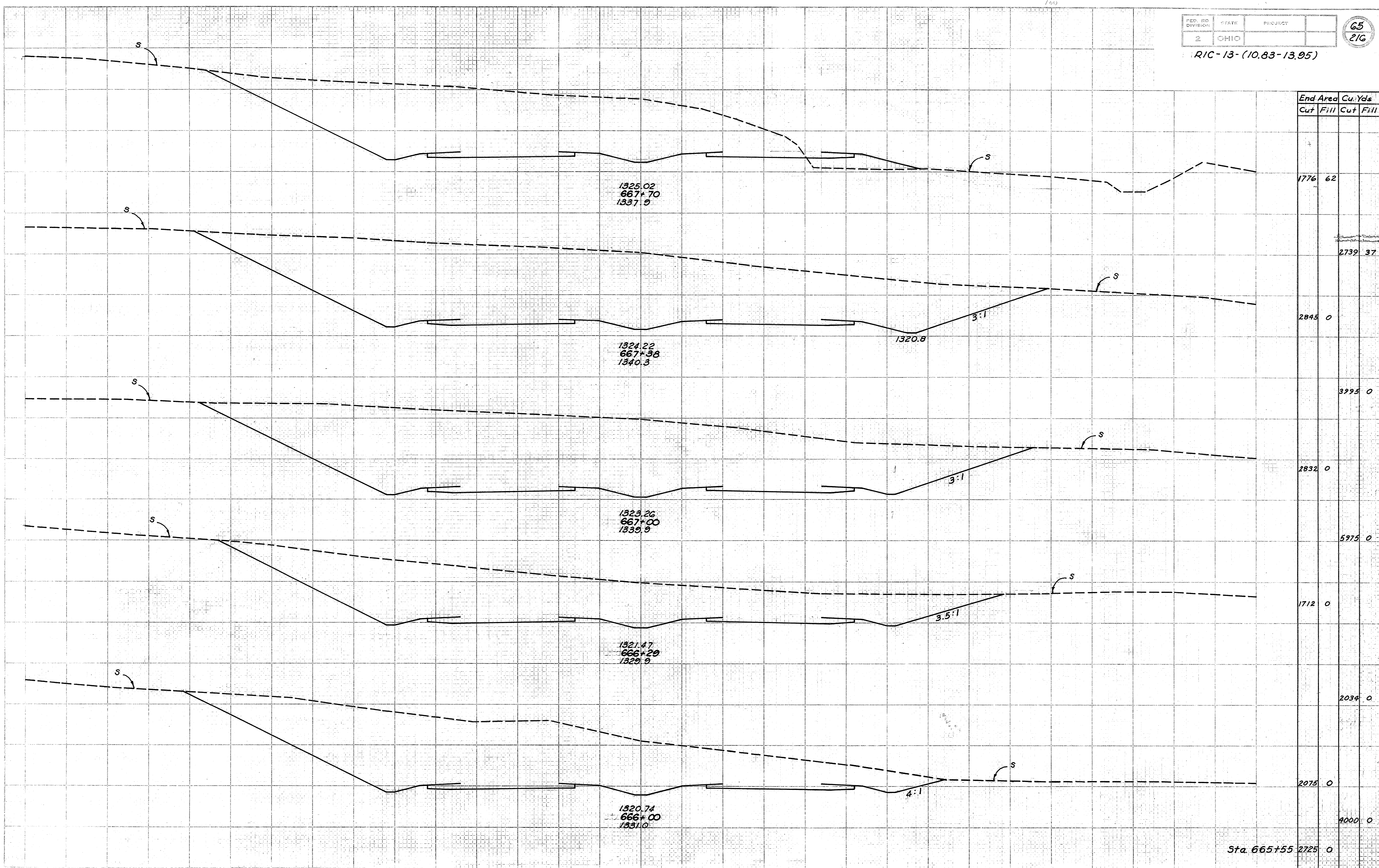
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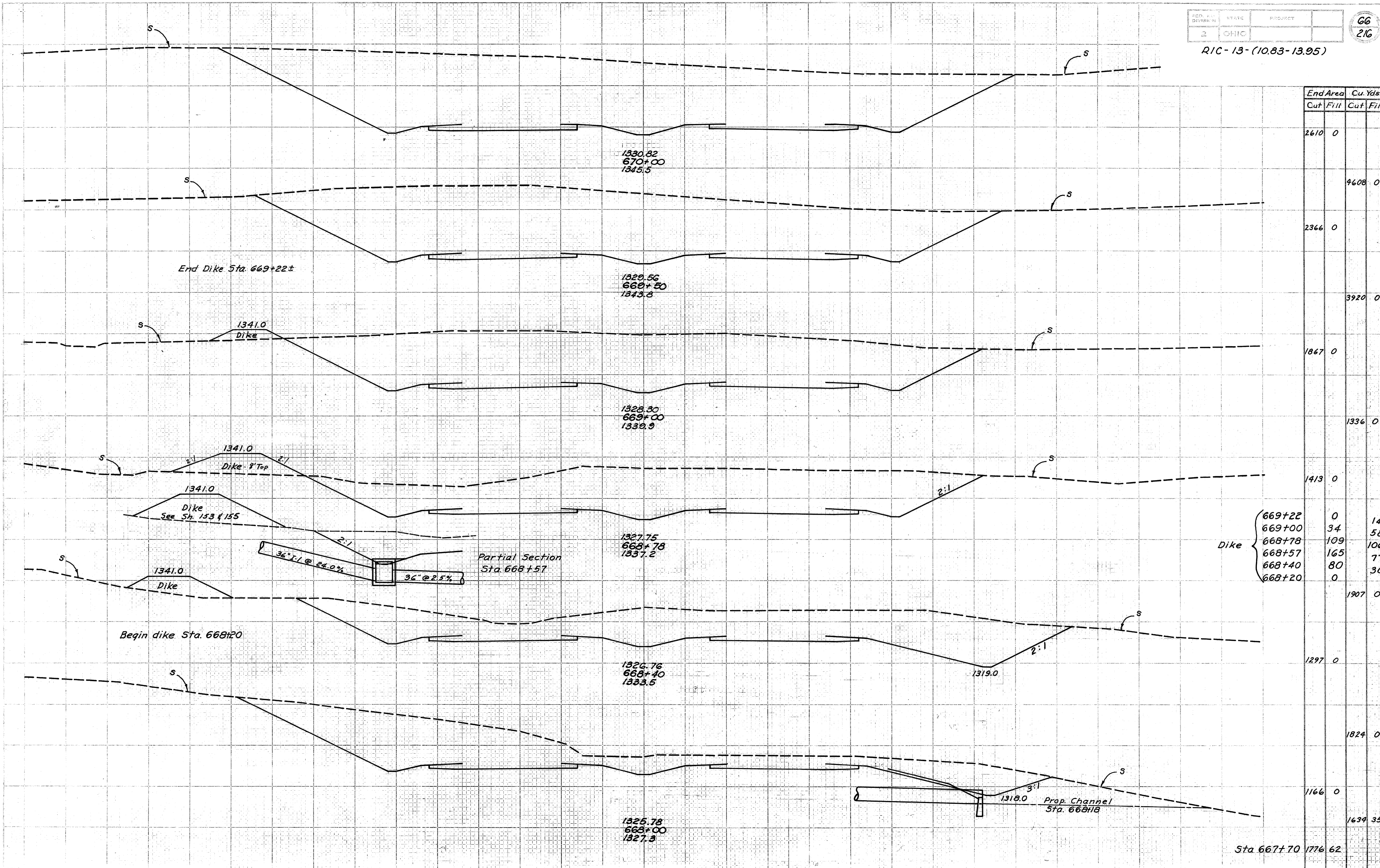
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S

S

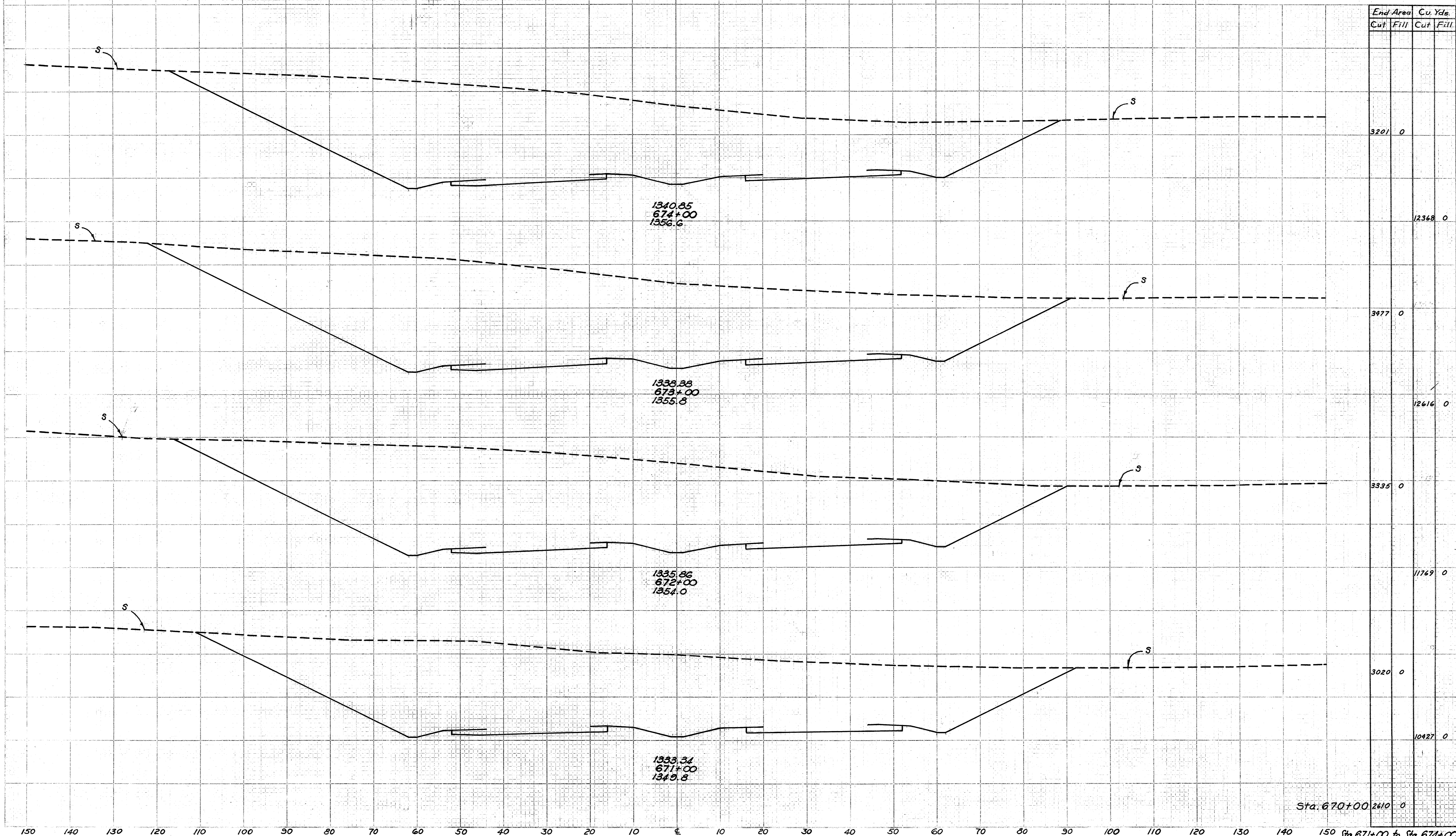
S





Sta.	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
670+00	2610	0		
669+22			4608	0
669+00	2366	0		
668+22			3920	0
668+57	1867	0		
668+40			1336	0
668+20	1413	0		
669+22		0		14
669+00		34		58
668+78		109		106
668+57		165		77
668+40		80		30
668+20		0		
668+20	1907	0		
668+40			1297	0
668+00			1824	0
668+18			1166	0
668+00			1639	35
667+70	1776	62		

RIC-13-(10.83-13.95)



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
3201	0		
		12368	0
3977	0		
		12616	0
3335	0		
		11769	0
3020	0		
		10427	0
		2610	0

1340.85
674+00
1356.6

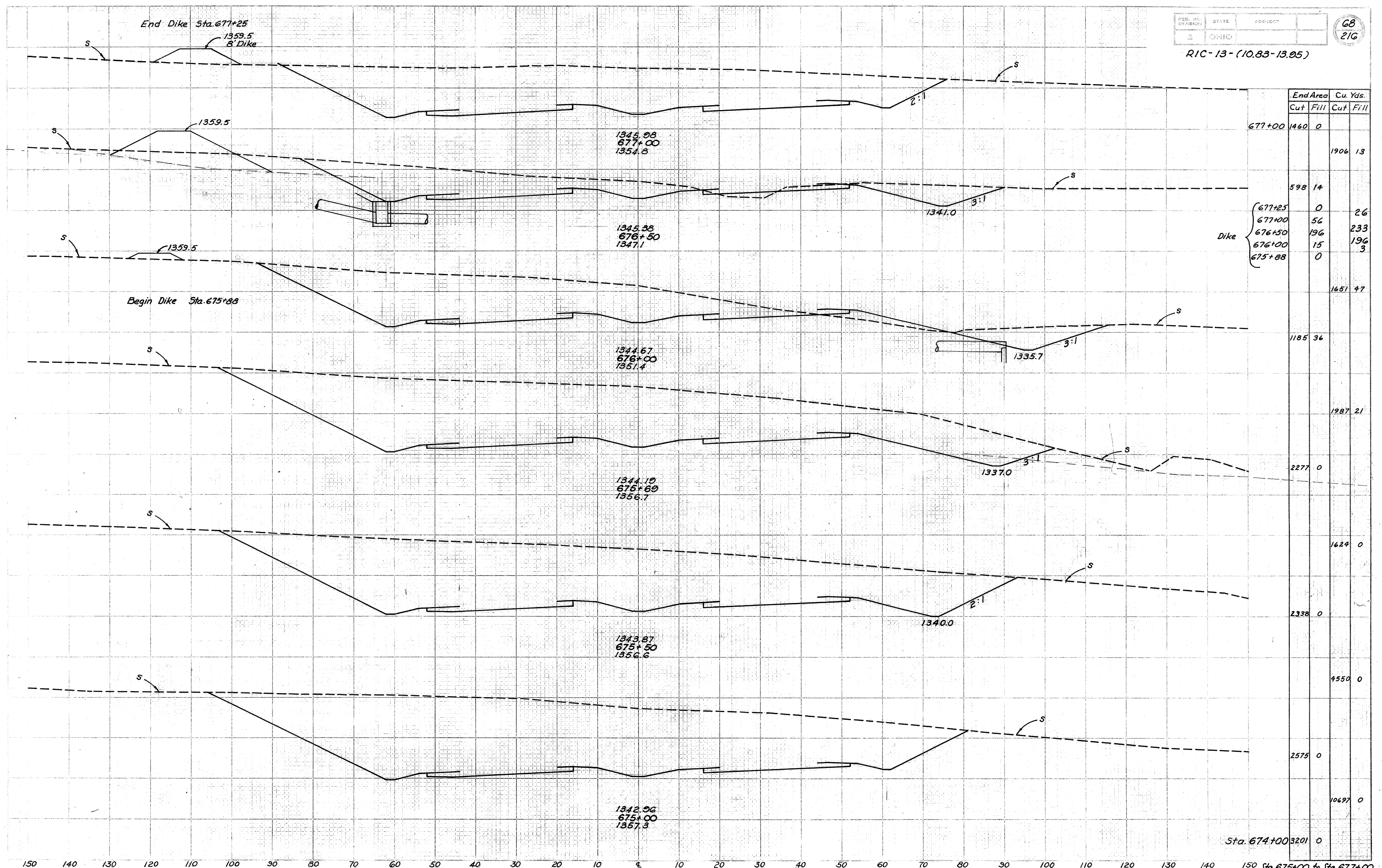
1338.38
673+00
1355.6

1335.86
672+00
1354.0

1333.34
671+00
1349.8

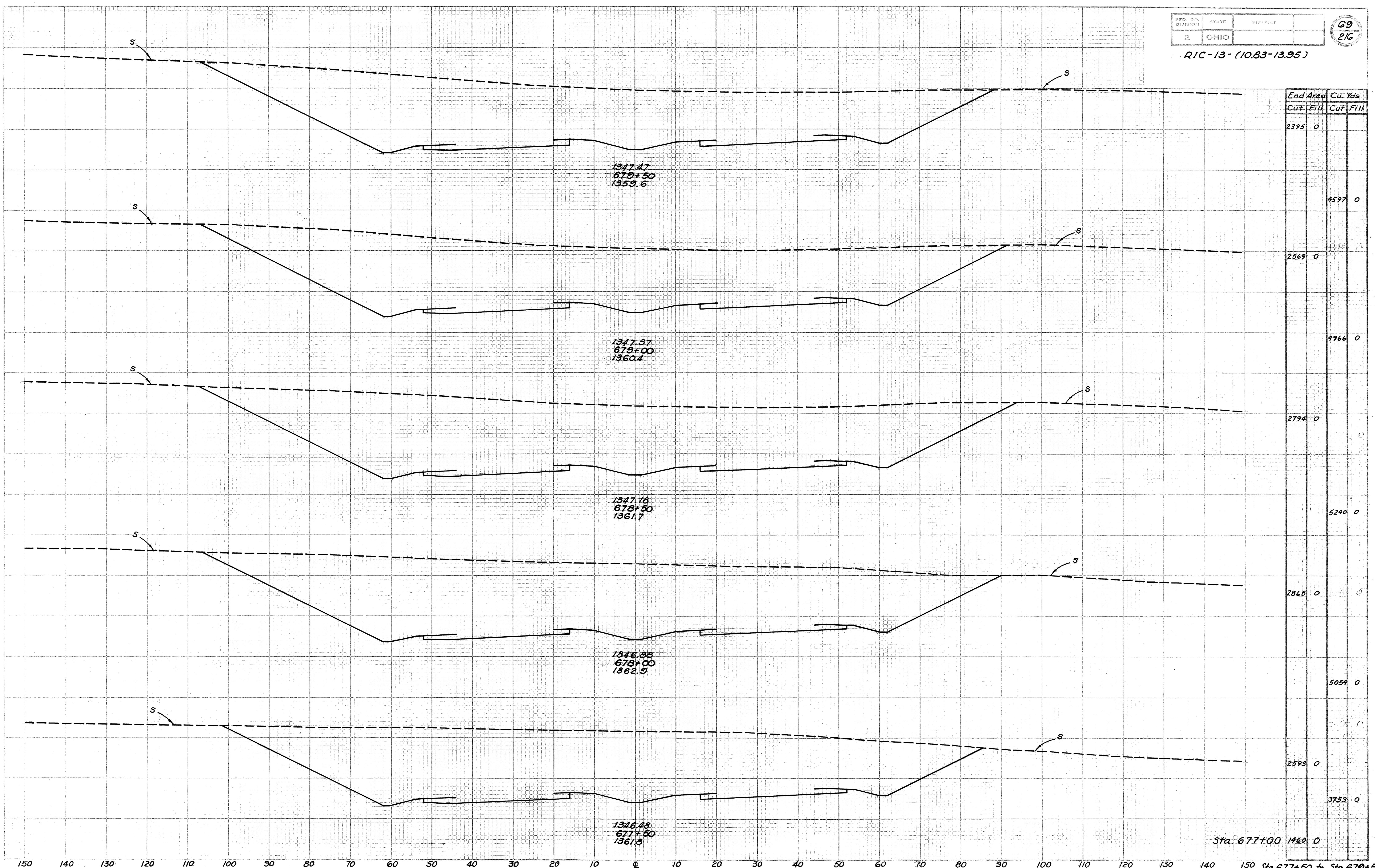
Sta. 670+00 to Sta. 674+00

RIC-13-(10.83-13.05)



Station	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
677+00	1460	0		
			1906	13
			598	14
Dike { 677+25	0			26
677+50	56			233
676+00	15			196
675+88	0			3
			1651	47
			1185	36
			1987	21
			2277	0
			1624	0
			2338	0
			4550	0
			2575	0
			10697	0
Sta. 674+00	3201	0		

RIC-13-(10.83-13.95)



End Area		Cu. Yds	
Cut	Fill	Cut	Fill
2395	0		
		4597	0
2569	0		
		4966	0
2794	0		
		5240	0
2865	0		
		5054	0
2593	0		
		3753	0
		1460	0

1347.47
679+50
1359.6

1347.37
679+00
1360.4

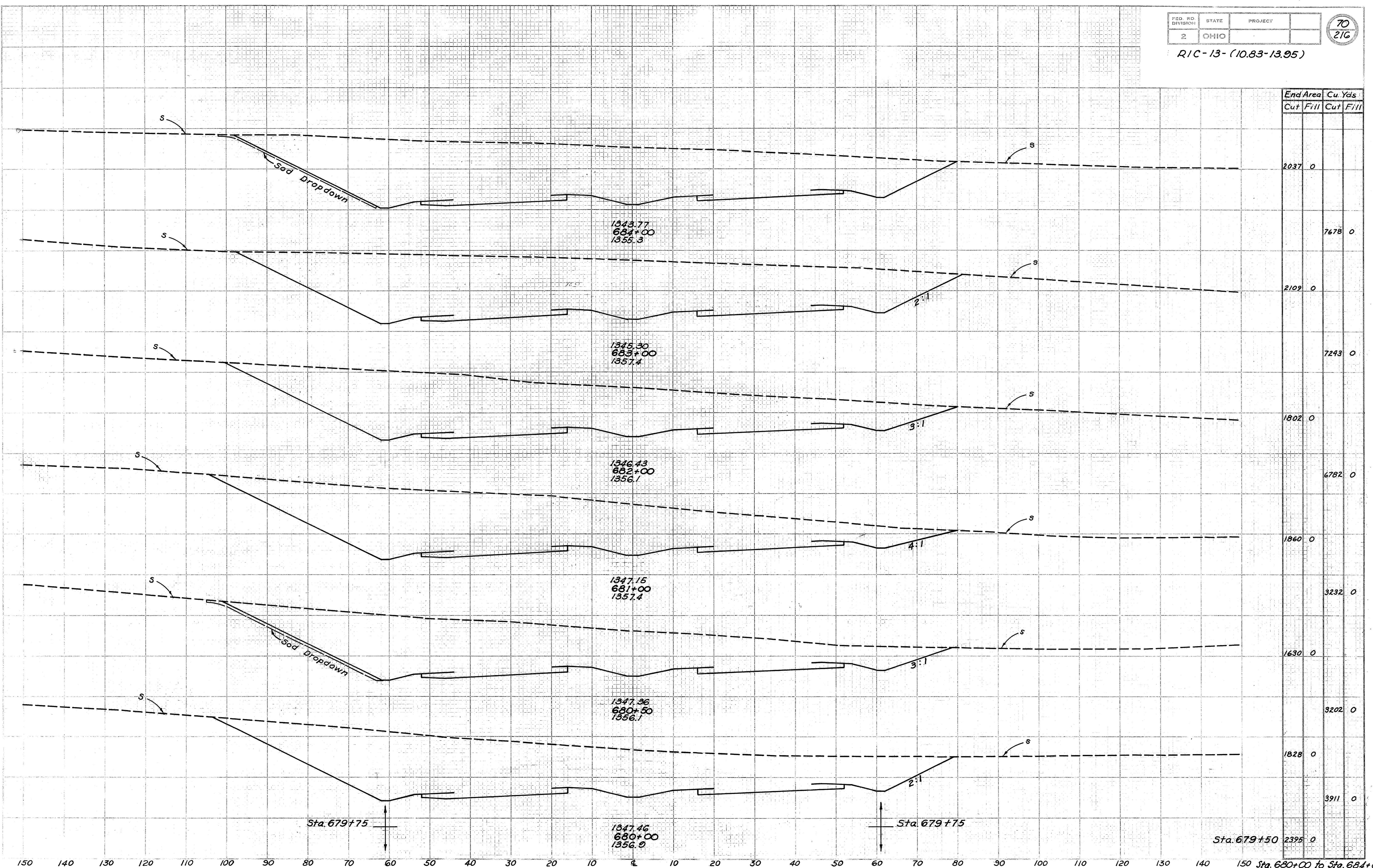
1347.18
678+50
1361.7

1346.88
678+00
1362.9

1346.48
677+50
1361.8

Sta. 677+00 1460 0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 677+50 to Sta. 679+50



End Area		Cu. Yds	
Cut	Fill	Cut	Fill
2037	0		
		7678	0
2109	0		
		7243	0
1802	0		
		6782	0
1860	0		
		3232	0
1630	0		
		3202	0
1828	0		
		3911	0
		2395	0

1343.77
684+00
1355.3

1345.30
683+00
1357.4

1346.43
682+00
1356.1

1347.15
681+00
1357.4

1347.36
680+50
1356.1

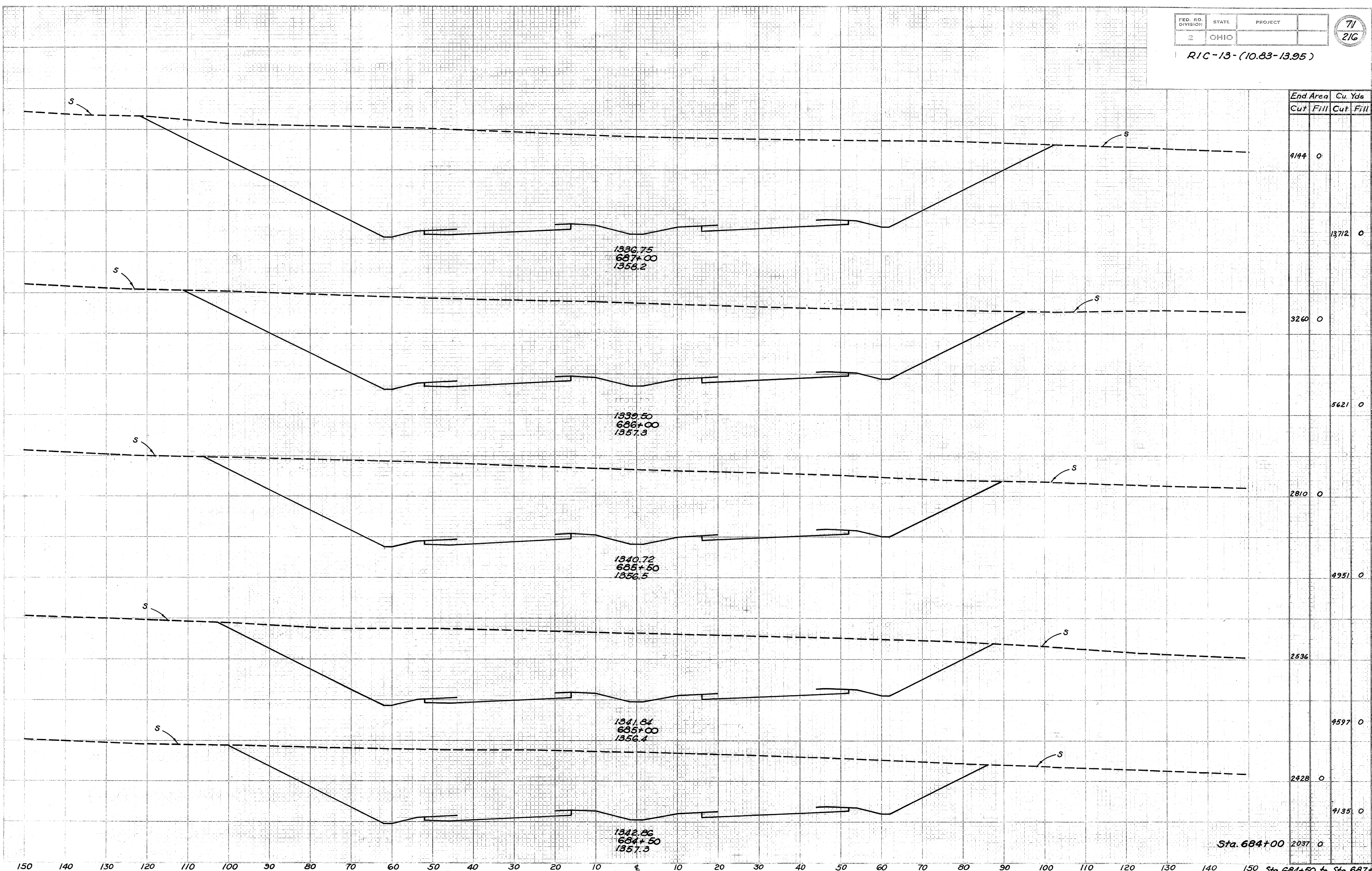
1347.46
680+00
1356.0

Sta. 679+75

Sta. 679+75

Sta. 679+50

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 680+00 to Sta. 684+00



End Area		Cu. Yds	
Cut	Fill	Cut	Fill

4144 0

13712 0

3260 0

5621 0

2810 0

4951 0

2536 0

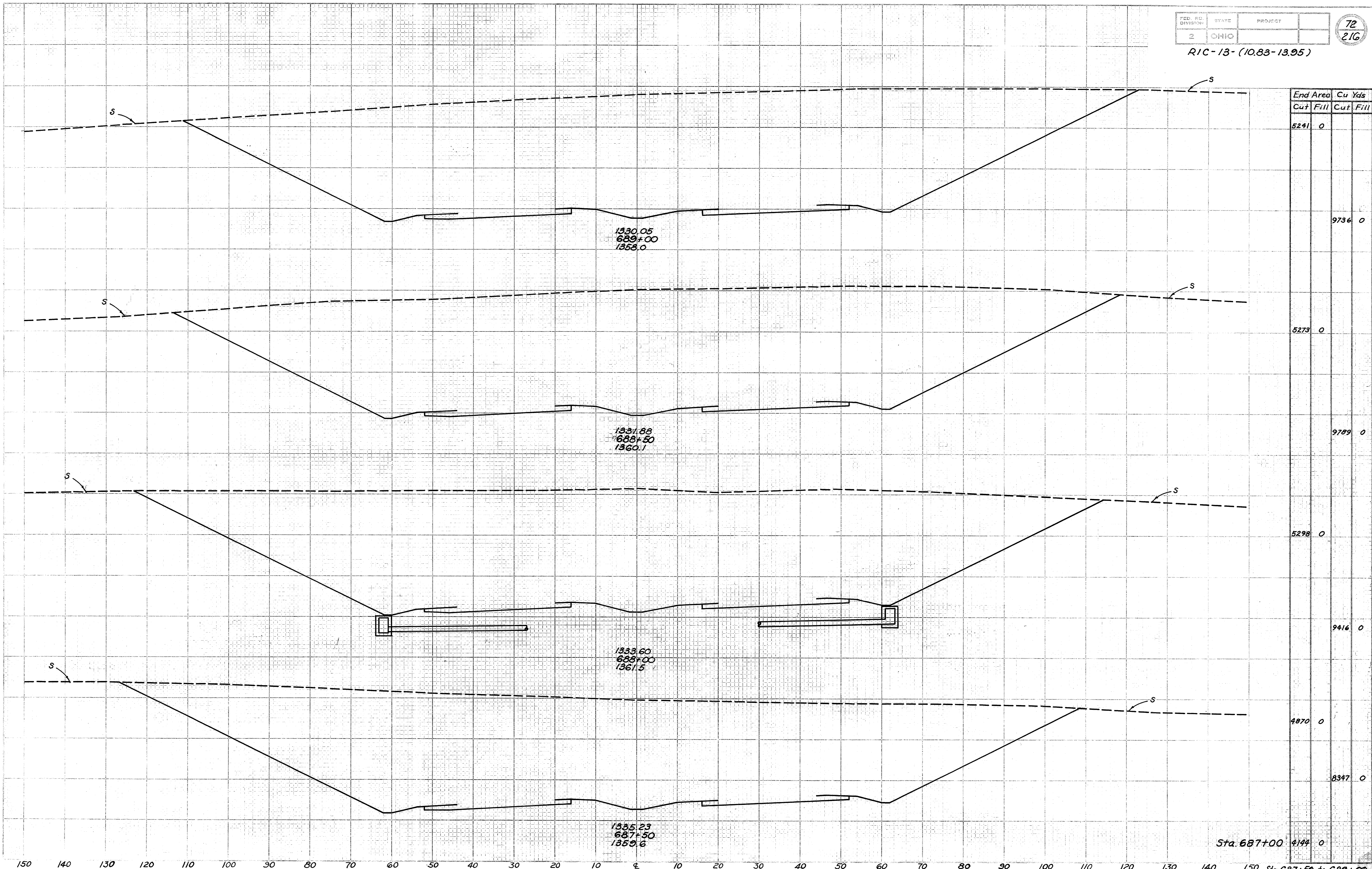
4597 0

2428 0

4135 0

Sta. 684+00 2037 0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 684+50 to Sta. 687+00



End Area		Cu Yds	
Cut	Fill	Cut	Fill
5241	0		
		9736	0
5273	0		
		9799	0
5298	0		
		9416	0
4870	0		
		8347	0
		4144	0

1330.05
689+00
1358.0

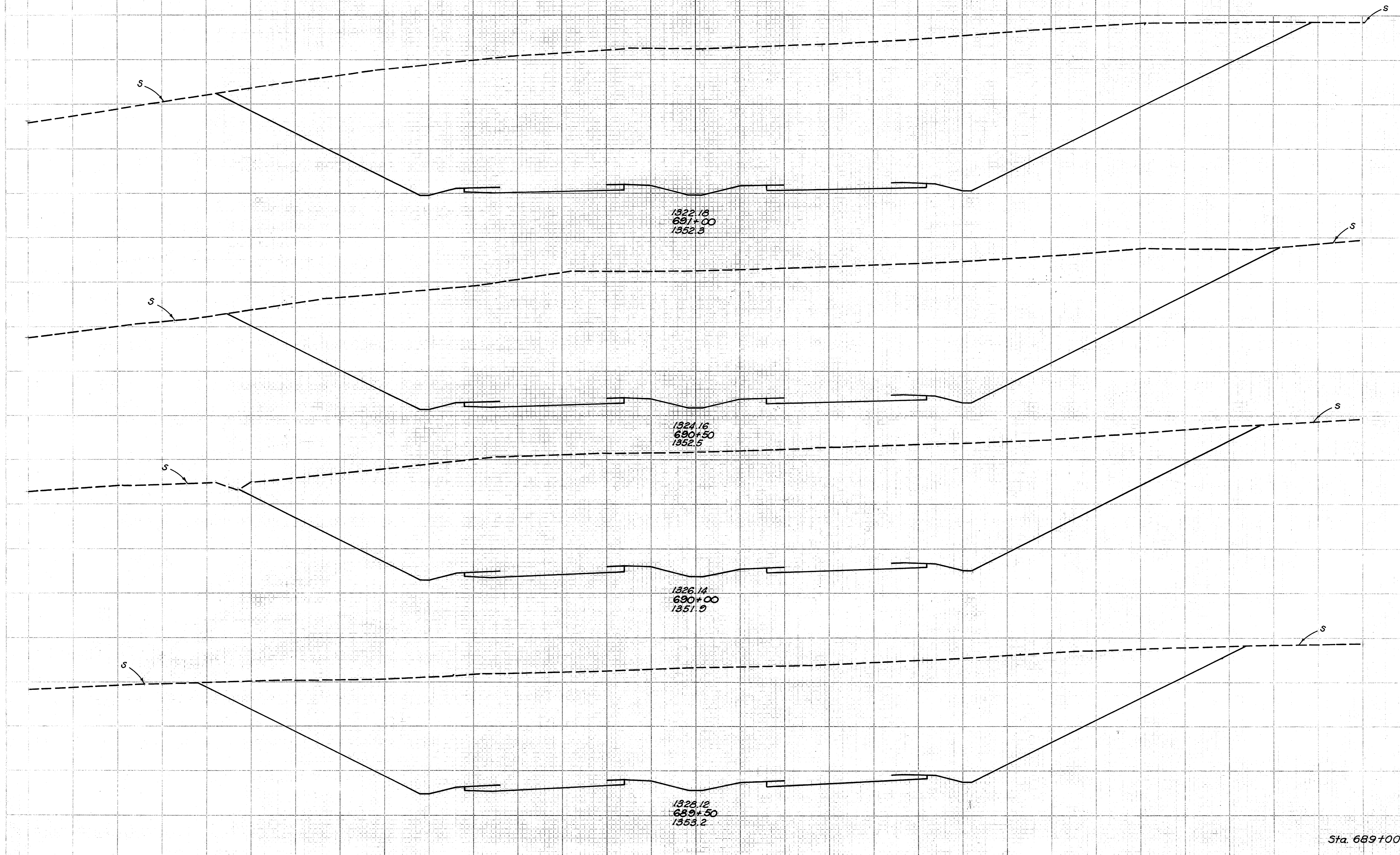
1331.88
688+50
1360.1

1333.60
688+00
1361.5

1335.23
687+50
1359.6

Sta. 687+00

RIC-13-(10.83-13.95)



End Area		Cu. Yds	
Cut	Fill	Cut	Fill
6038	0		
		10,599	0
5908	0		
		9493	0
4843	0		
		9029	0
4908	0		
		9398	0
		5241	0

1322.18
691+00
1352.3

1324.16
690+50
1352.5

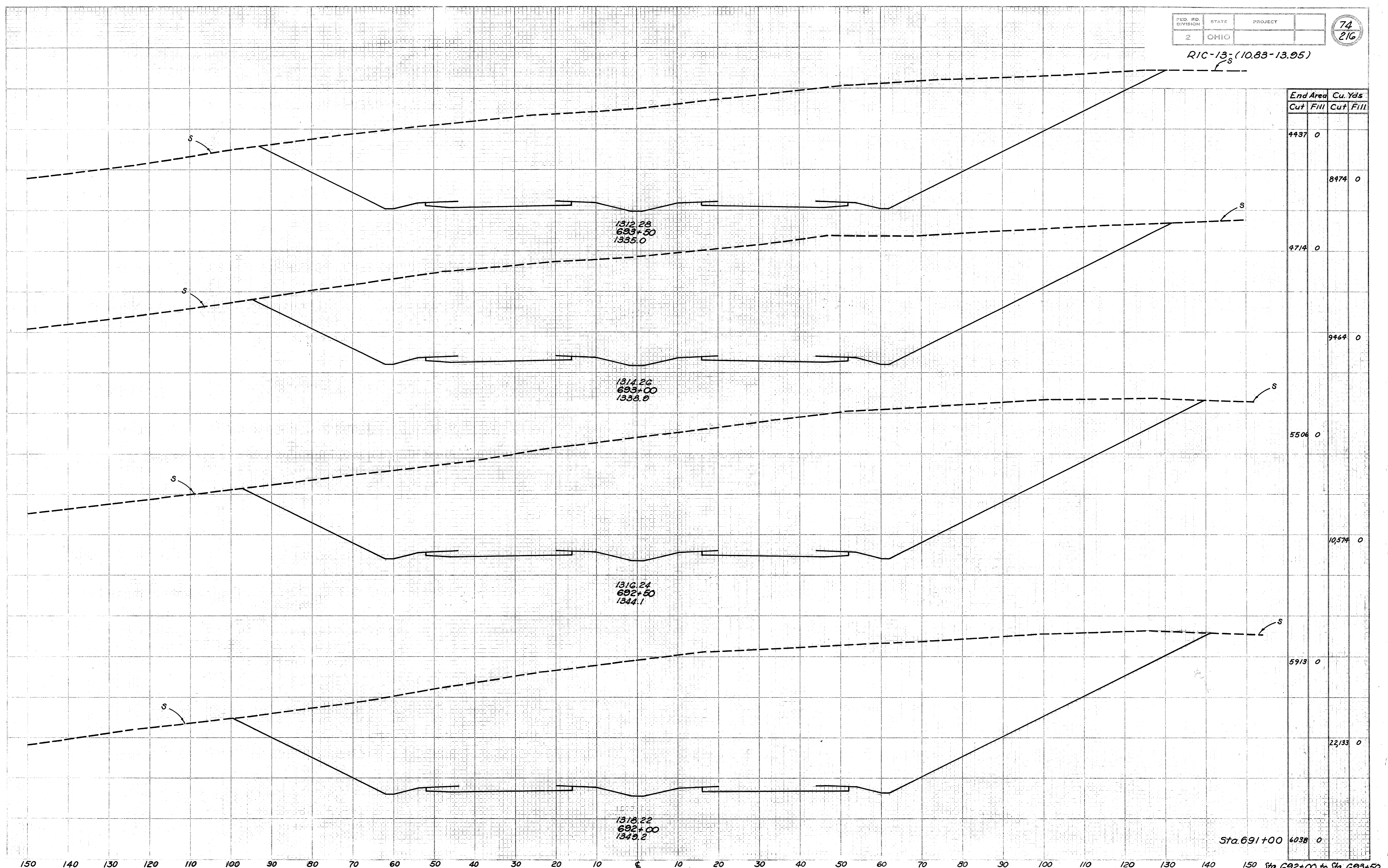
1326.14
690+00
1351.0

1326.12
689+50
1353.2

Sta. 689+00 5241 0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 689+50 to Sta. 691+00

R1C-13-(10.83-13.95)



End Area		Cu. Yds	
Cut	Fill	Cut	Fill
4437	0		
		8474	0
4714	0		
		9464	0
5506	0		
		10574	0
5913	0		
		22133	0
6038	0		

1312.23
693+50
1335.0

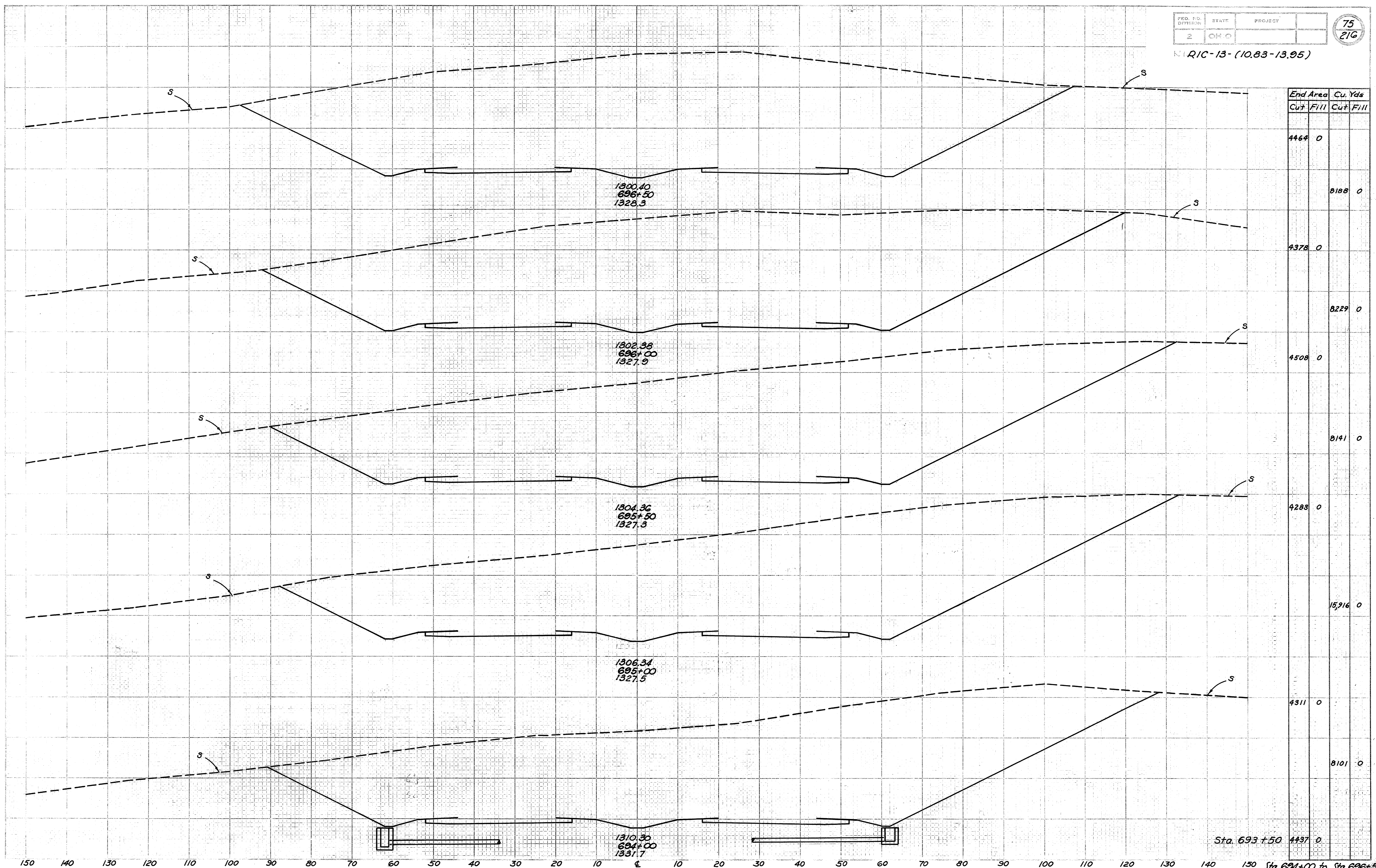
1314.26
693+00
1338.0

1316.24
692+50
1344.1

1318.22
692+00
1349.2

Sta. 691+00 to Sta. 693+50

K(RIC-13-(10.83-13.95)



End Area	Cu. Yds	
	Cut	Fill
4464	0	
		8188
4378	0	
		8229
4508	0	
		8141
4283	0	
		15,916
4311	0	
		8101
		4437

1300.40
696+50
1328.3

1302.38
696+00
1327.9

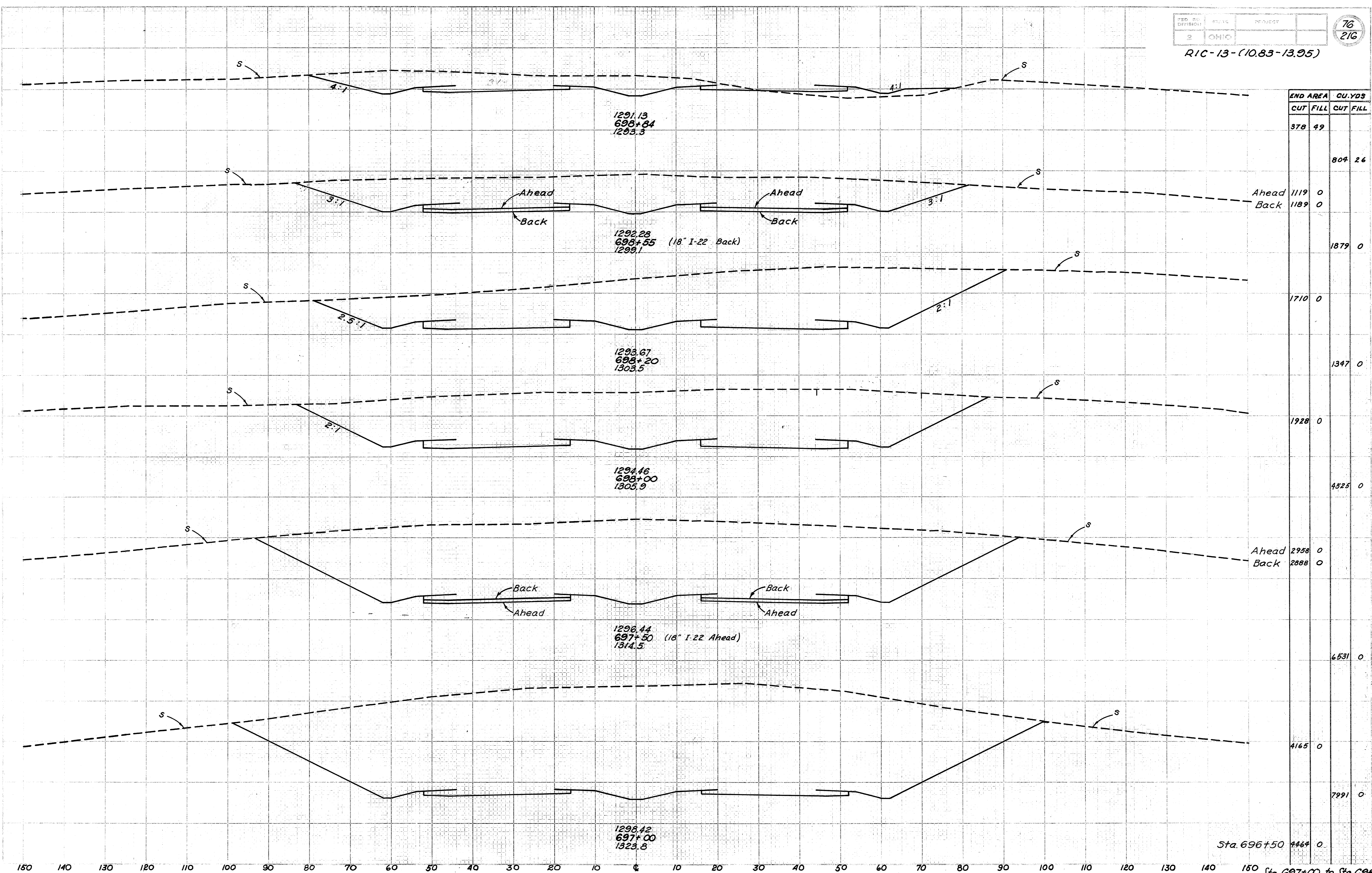
1304.36
695+50
1327.5

1306.34
695+00
1327.5

1310.30
694+00
1331.7

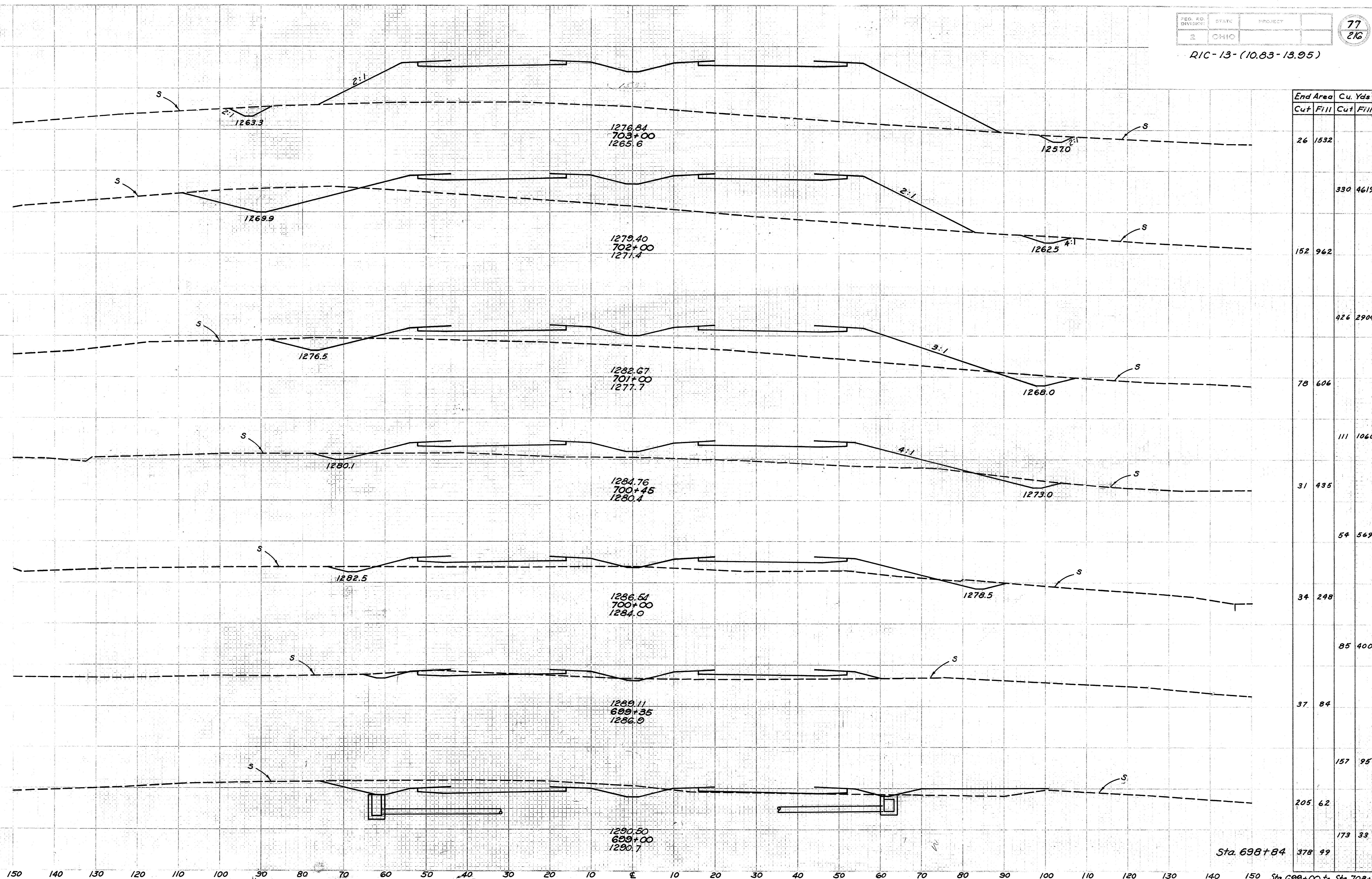
Sta. 693+50

Sta. 694+00 to Sta. 696+50



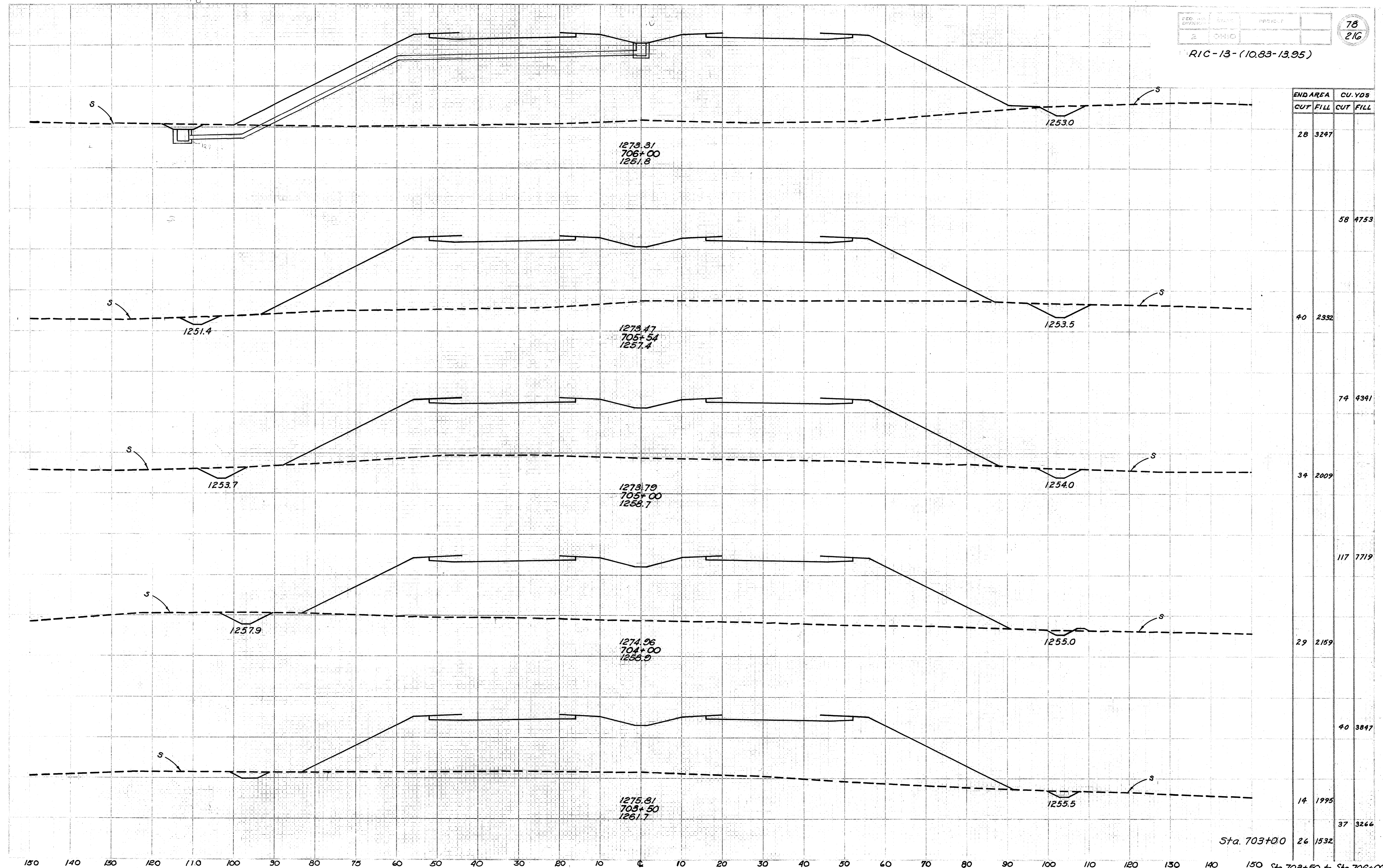
	END AREA		CU. YDS	
	CUT	FILL	CUT	FILL
	378	49		
			804	26
Ahead	1119	0		
Back	1189	0		
			1879	0
	1710	0		
			1347	0
	1928	0		
			4525	0
Ahead	2958	0		
Back	2888	0		
			6531	0
	4165	0		
			7991	0
Sta. 696+50	4464	0		
Sta. 697+00 to Sta. 698+00				

RIC-13-(10.83-13.95)



End Area	Cu. Yds	
	Cut	Fill
26	1532	
		330 4619
152	962	
		426 2904
78	606	
		111 1060
31	435	
		54 569
34	248	
		85 400
37	84	
		157 95
205	62	
		173 33
Sta. 698+84	378	99

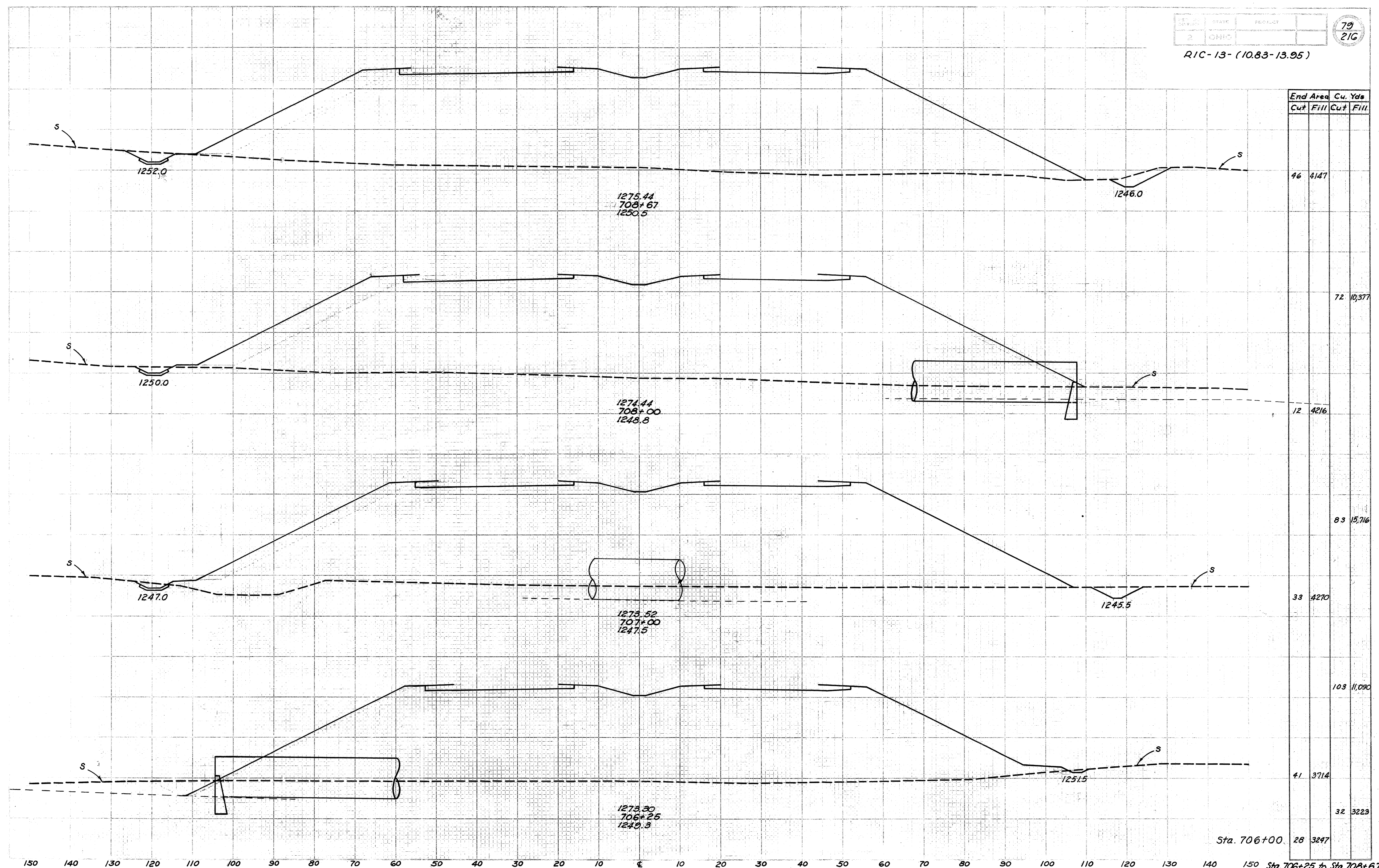
Sta. 699+00 to Sta. 703+00



END AREA	CU. YDS	
CUT	FILL	
28	3297	
		58 4753
40	2332	
		74 4391
34	2009	
		117 7719
29	2159	
		40 3847
14	1995	
		37 3266
26	1532	

Sta. 703+00 to Sta. 706+00

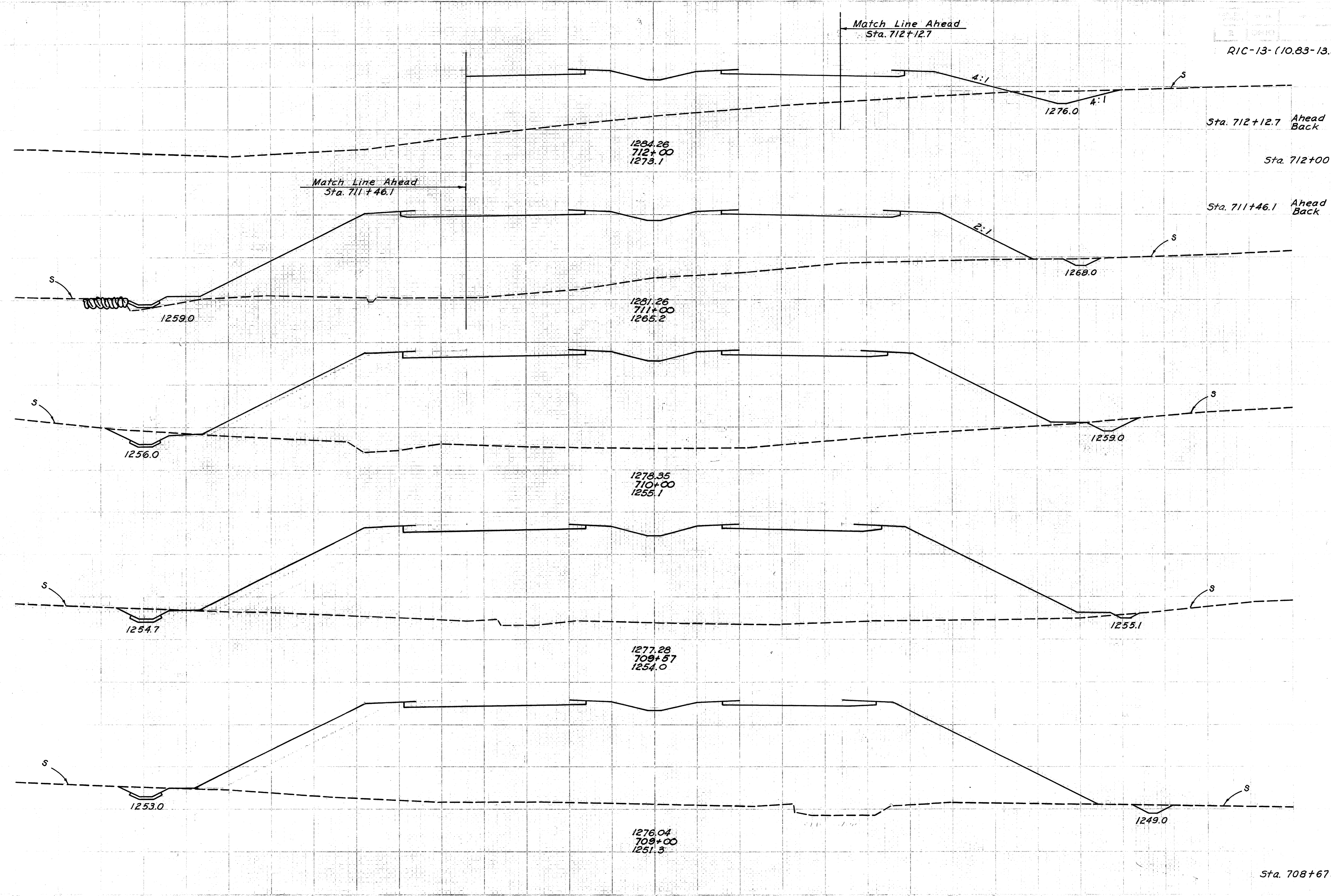
R1C-13- (10.83-13.95)



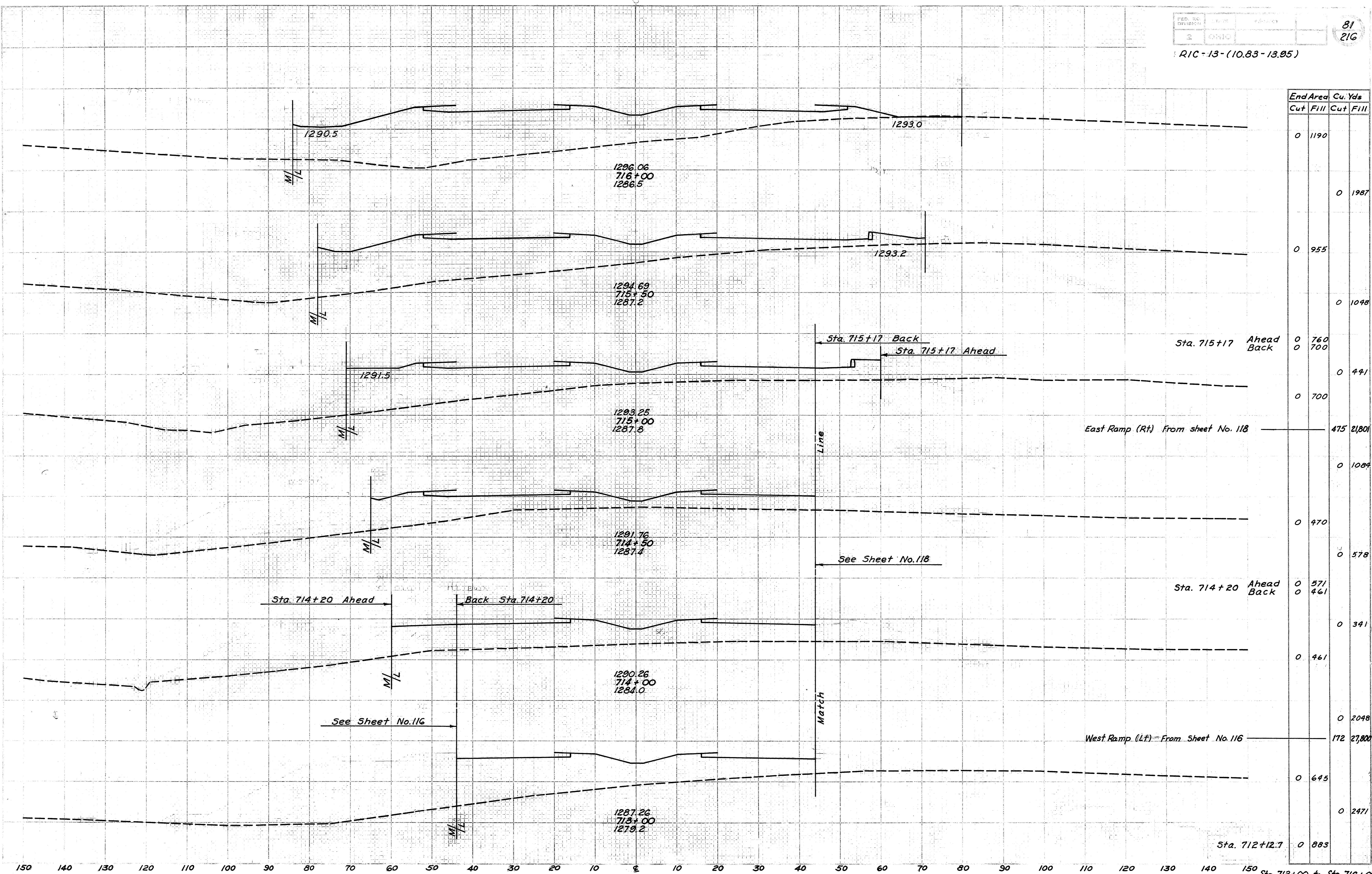
End Area		Cu. Yds	
Cut	Fill	Cut	Fill
46	4147		
		72	10,377
12	4216		
		83	15,716
33	4270		
		103	11,090
41	3714		
		32	3223
28	3247		

Sta. 706+00 to Sta. 708+67

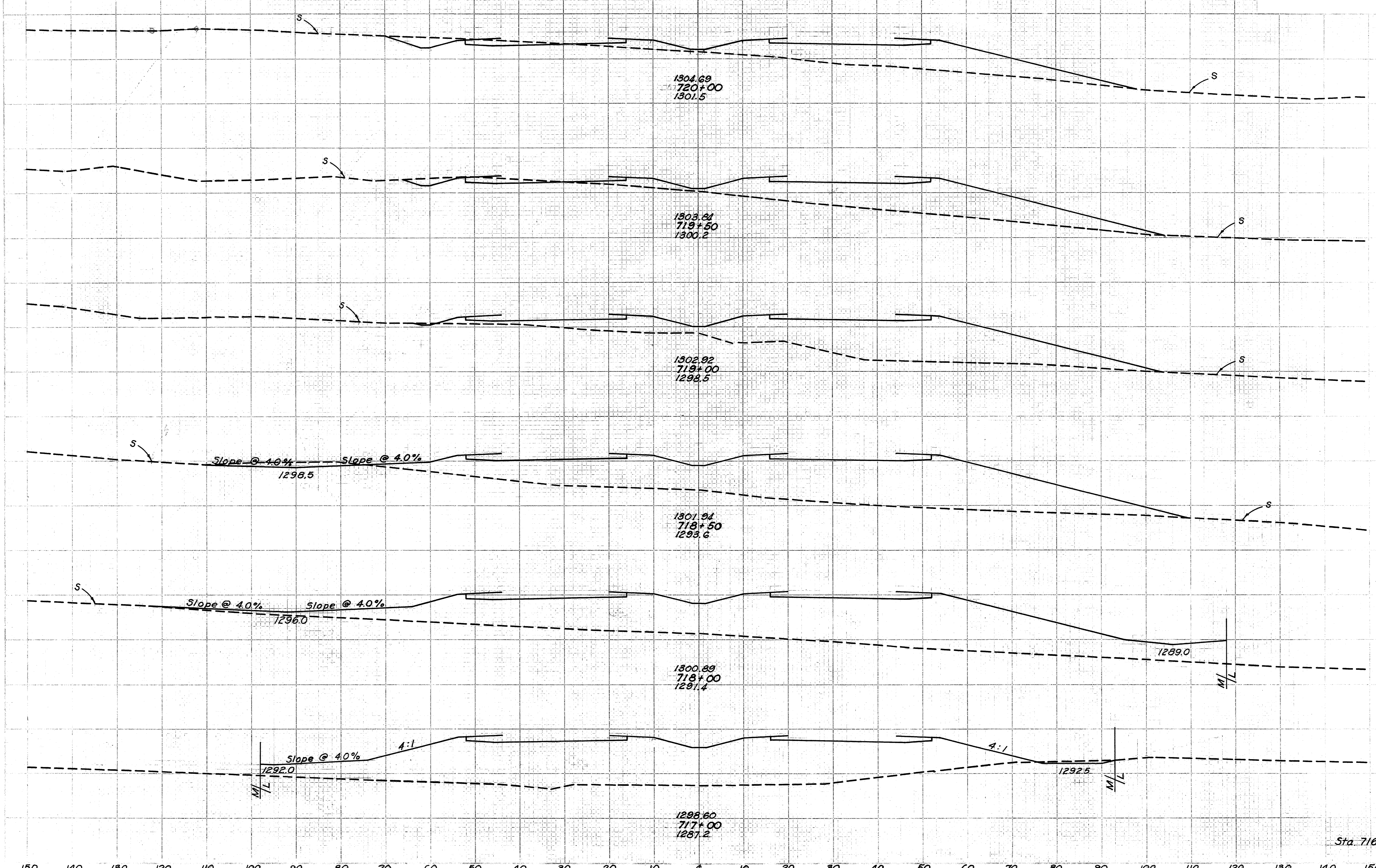
RIC-13- (10.83-13.95)



End Area		Cu. Yds	
Cut	Fill	Cut	Fill
0	883		
37	1063	17	500
		47	2818
10	1760		
10	2649	17	4523
		50	
		58	5729
23	3711		
		54	8154
28	4013		
		45	4987
46	4147		



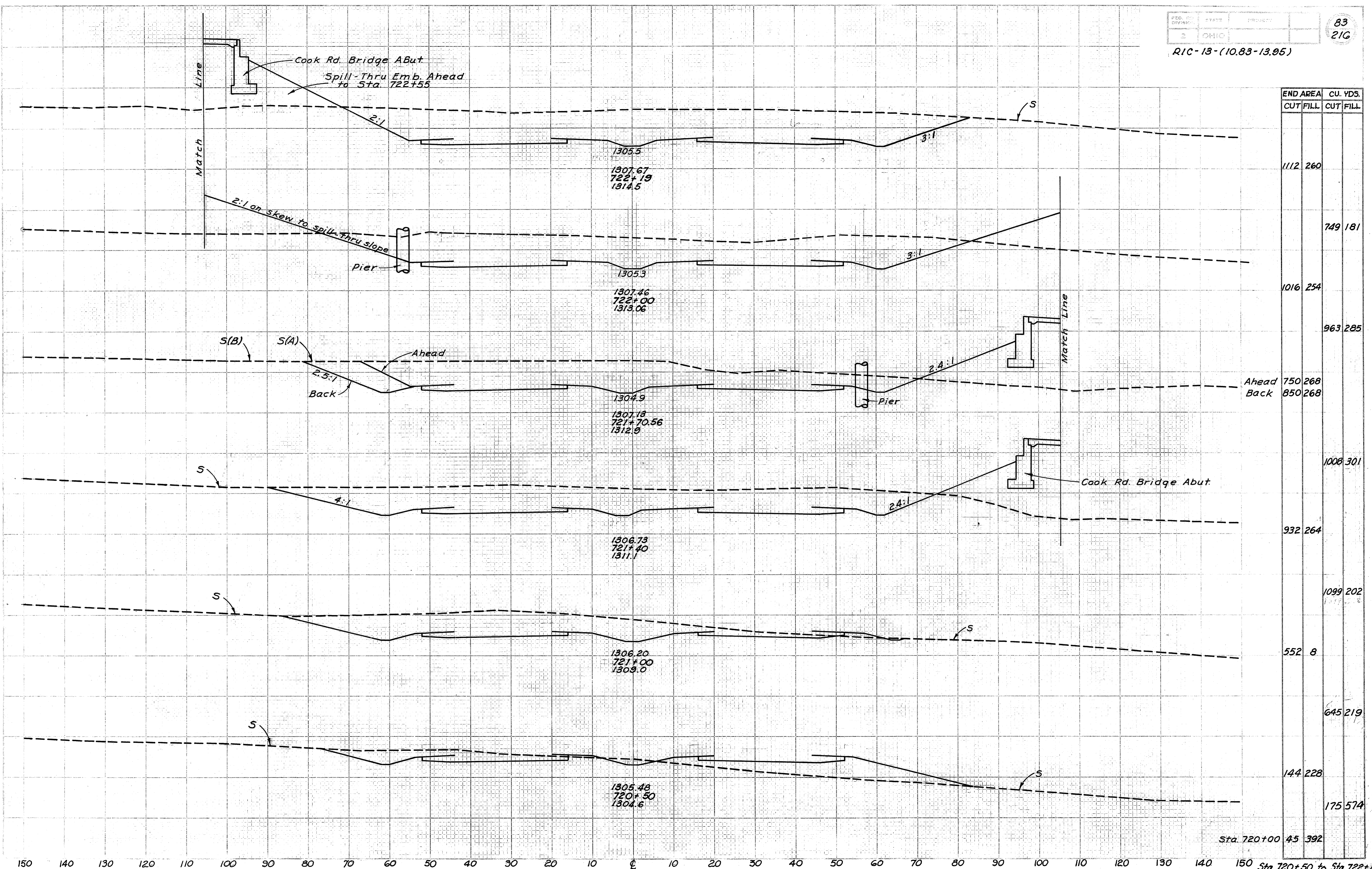
End Area		Cu. Yds	
Cut	Fill	Cut	Fill
0	1190		
		0	1987
0	955		
		0	1048
0	760		
0	700		
		0	441
		0	700
		475	2180
		0	1084
0	470		
		0	578
0	571		
0	461		
		0	341
		0	461
		0	2048
172	27,800		
		0	645
		0	2471
0	883		



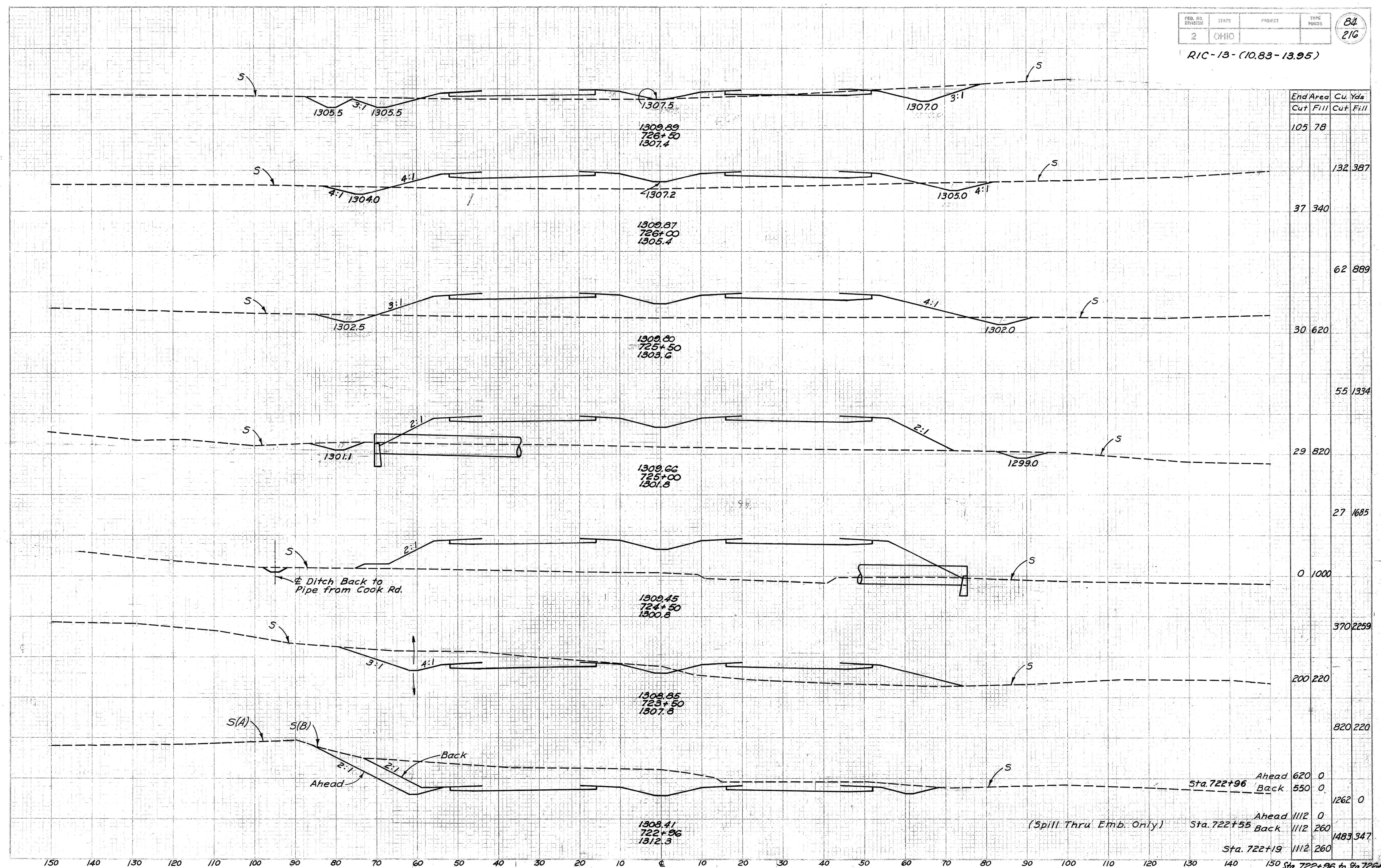
END AREA	CU. YDS.	
	CUT	FILL
45	392	
		73 823
34	497	
		33 1143
1	737	
		27 1775
28	1180	
		26 2457
0	1473	
		19 5184
10	1326	
		19 9660
0	1190	

Sta. 716+00

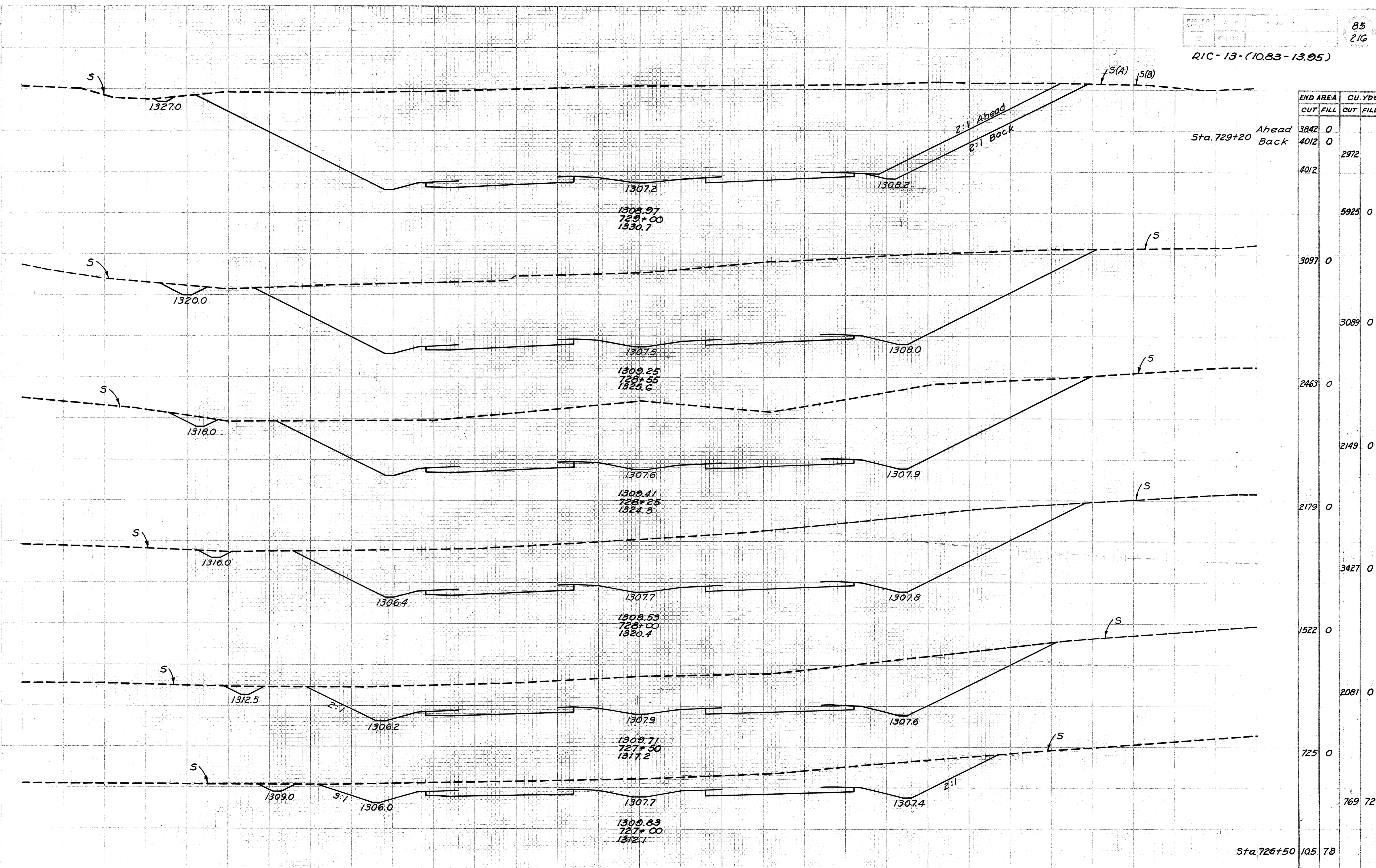
Sta. 717+00 to Sta. 720+00



RIC-13-(10.83-13.95)



Sta.	End Area		Cu Yds	
	Cut	Fill	Cut	Fill
726+50	105	78		
726+00			132	387
725+50	37	340		
725+00			62	889
725+50	30	620		
725+00			55	1334
725+50	29	820		
725+00			27	1685
724+50	0	1000		
724+00			370	2259
723+50	200	220		
723+00			820	220
722+96	Ahead 620	0		
722+96	Back 550	0		
722+55			1262	0
722+55	Ahead 1112	0		
722+55	Back 1112	260		
722+19			1483	347
722+19	1112	260		

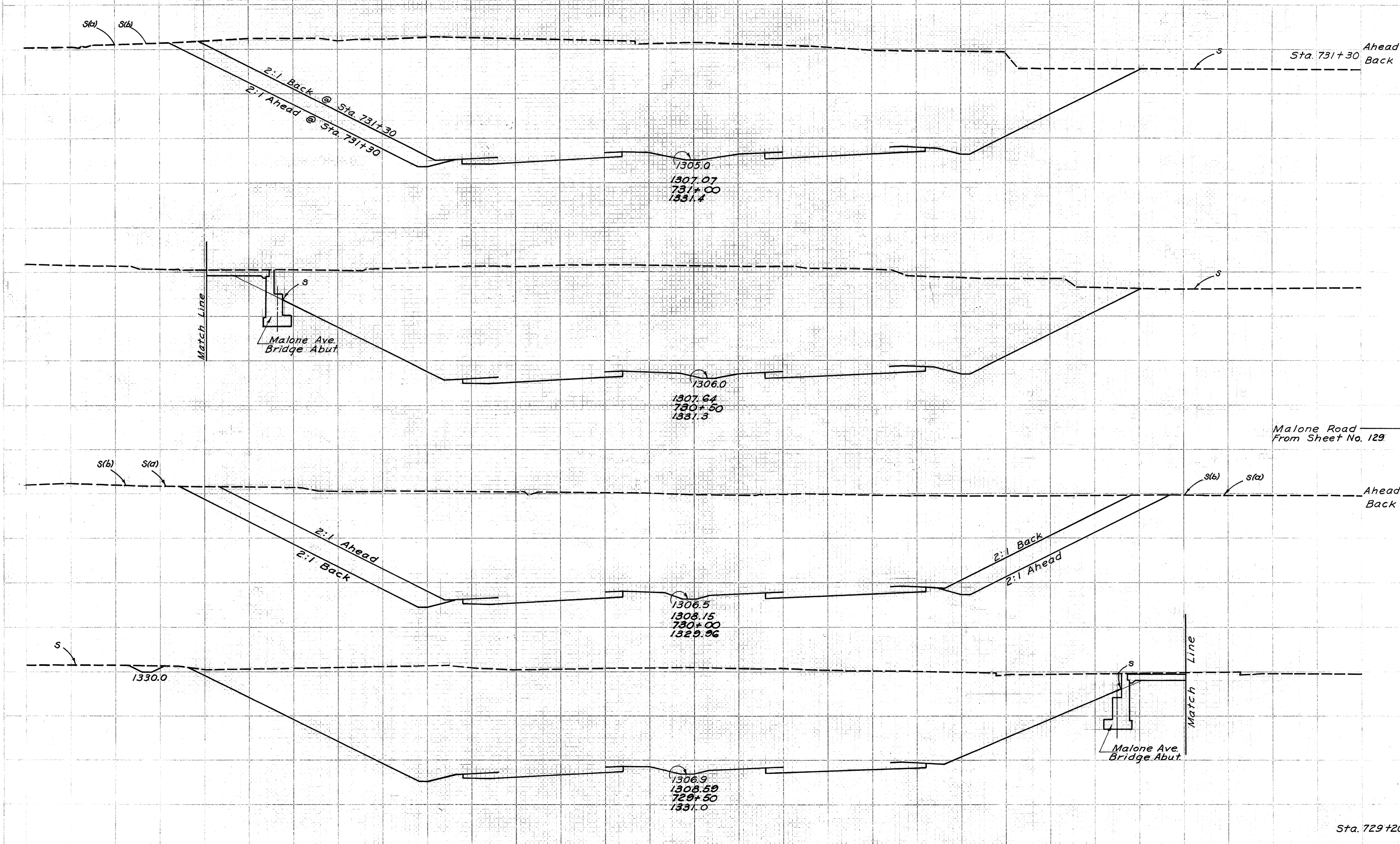


END AREA	CU. YDS	
	CUT	FILL
3842	0	
4012	0	
4012		2972
		5925
3097	0	
		3089
2463	0	
		2149
2179	0	
		3427
1522	0	
		2081
725	0	
		769
105	78	

Sta. 729+20 Ahead Back

Sta. 726+50

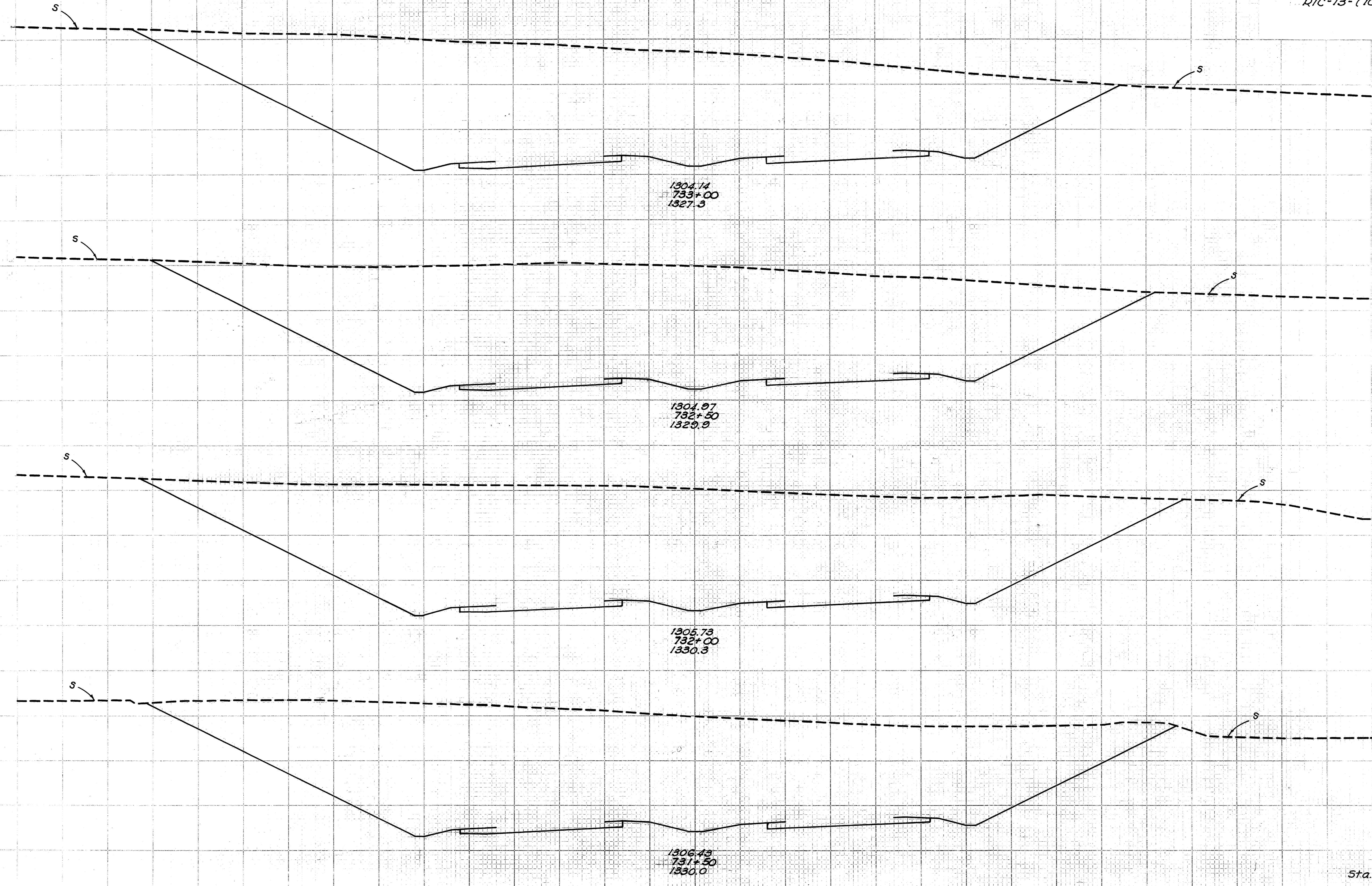
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 727+00 to Sta. 726+00



End Area		Cu. Yds	
Cut	Fill	Cut	Fill
Ahead	4480	0	
Back	4270	0	
		4745	0
	4270		
		7658	0
	4000		
		7297	0
		277	0
Ahead	3880	0	
Back	3940	0	
		7341	0
	3988		
		4350	0
		3842	0

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Sta. 729+50 to Sta. 731+00

RIC-13-(10.83-13.95)



1304.14
733+00
1327.3

1304.07
732+50
1329.0

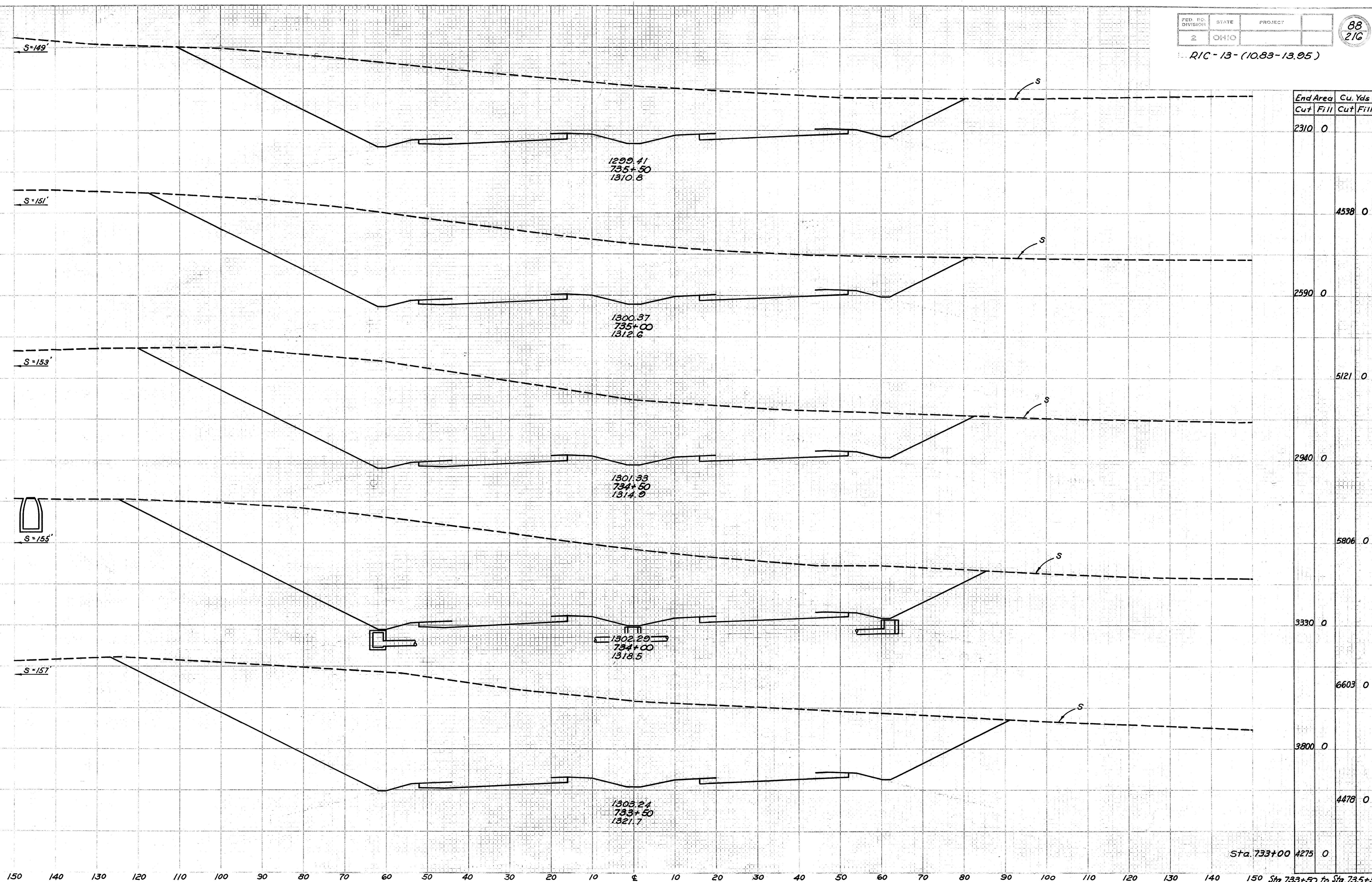
1305.73
732+00
1330.3

1306.43
731+50
1330.0

END AREA	CU. YDS
CUT	FILL
4275	0
8098	0
4470	0
8510	0
4720	0
8575	0
4540	0
3341	0
4480	0

Sta. 731+30 to Sta. 733+00

RIC-13-(10.83-13.95)

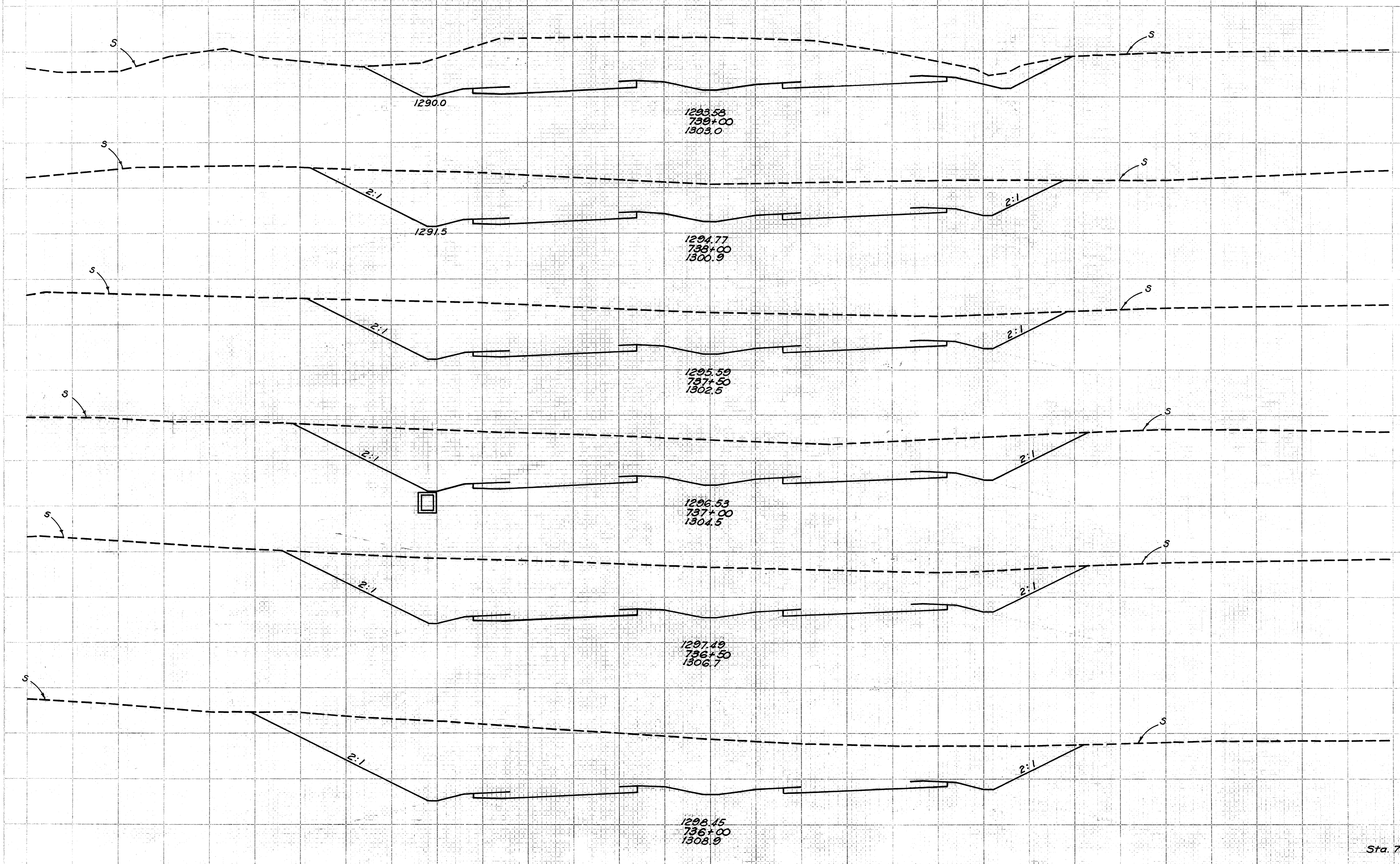


End Area	Cu. Yds	
	Cut	Fill
2310	0	
4538	0	
2590	0	
5121	0	
2940	0	
5806	0	
3330	0	
6603	0	
3800	0	
4478	0	
4275	0	

Sta. 733+00 4275 0

Sta. 733+50 to Sta. 735+50

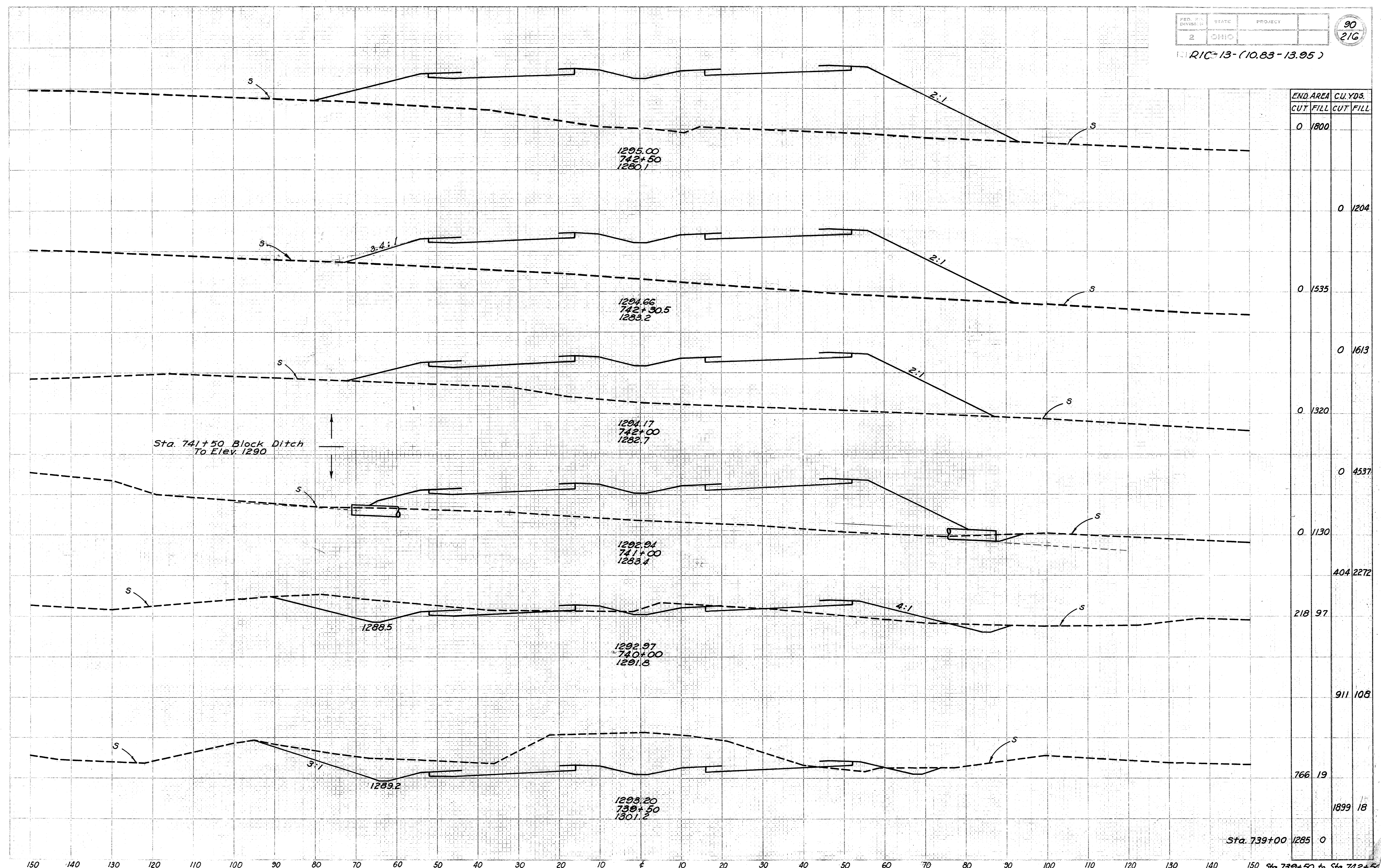
RIC-13-(10.83-13.95)



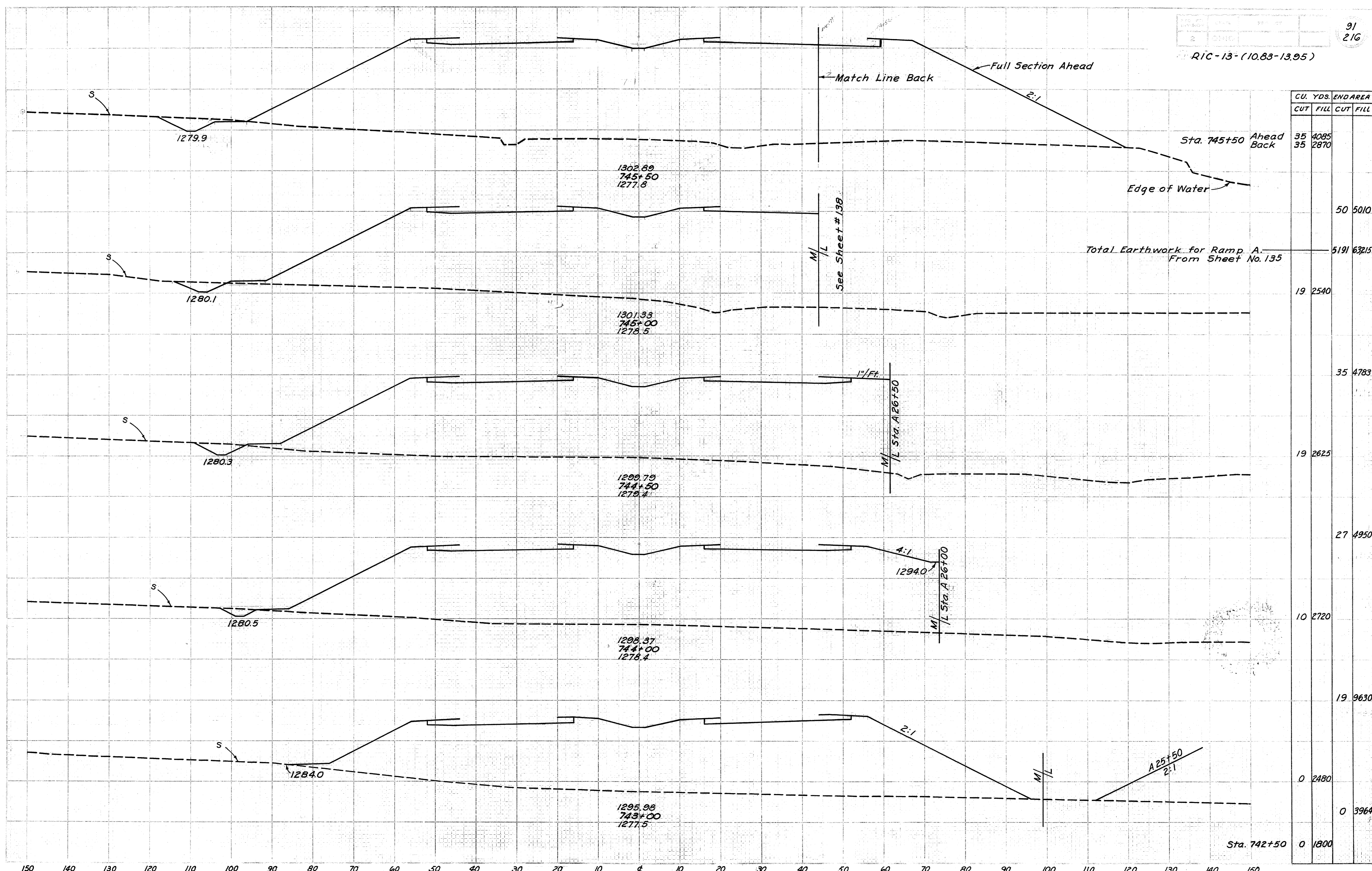
END AREA	CU. YDS.
CUT	FILL
1285	0
	4750
1290	0
	2454
1370	0
	2723
1570	0
	3028
1700	0
	3436
2010	0
	4001
Sta. 735+50	2310
	0

Sta. 735+50 2310 0

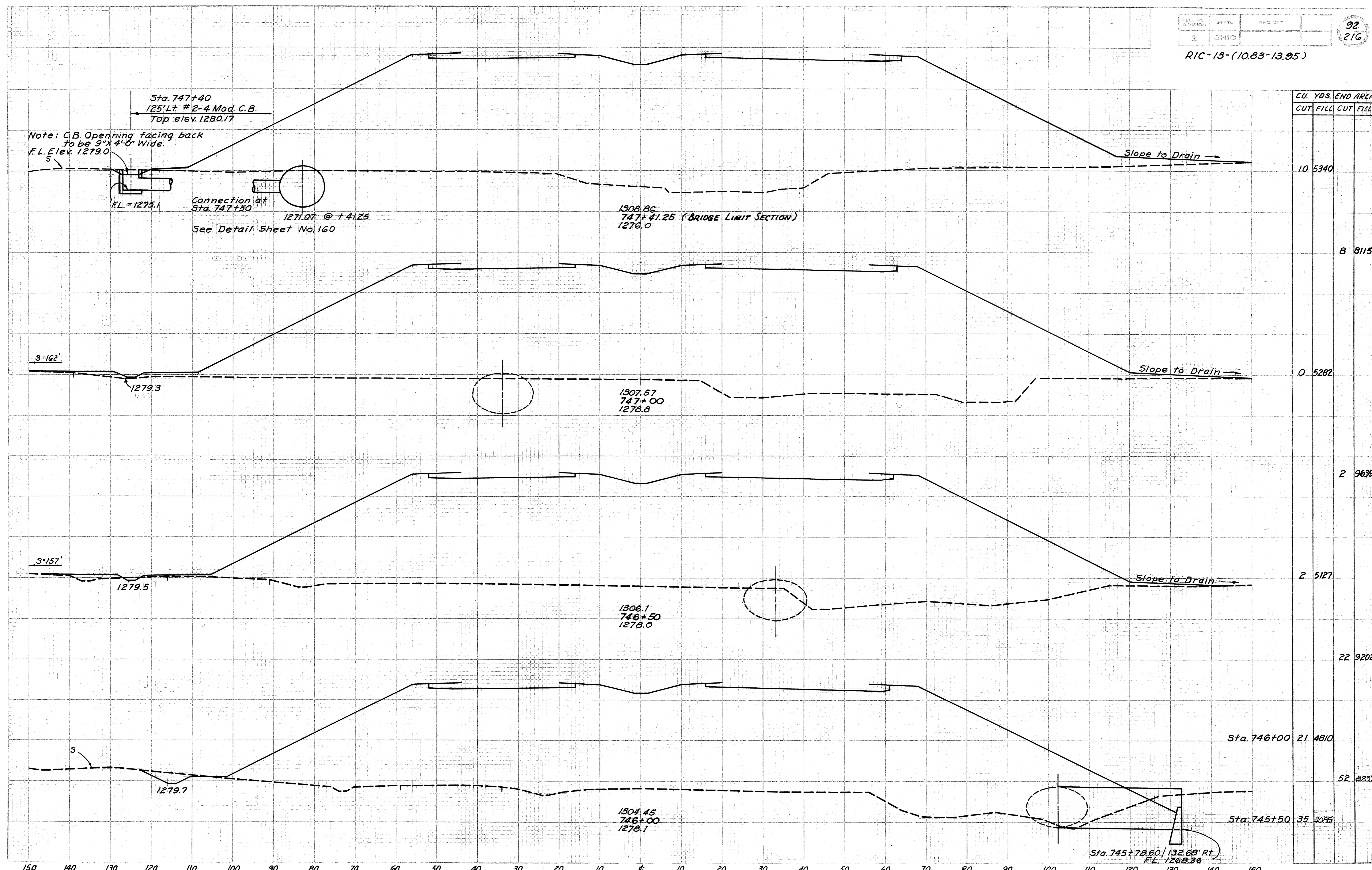
RIC-13-(10.83-13.95)



END AREA	CU. YDS.		
CUT	FILL	CUT	FILL
0	1800		
			0
			1204
0	1535		
			0
			1613
0	1320		
			0
			4537
0	1130		
			404
			2272
218	97		
			911
			108
766	19		
			1899
			18
Sta. 739+00	1285	0	

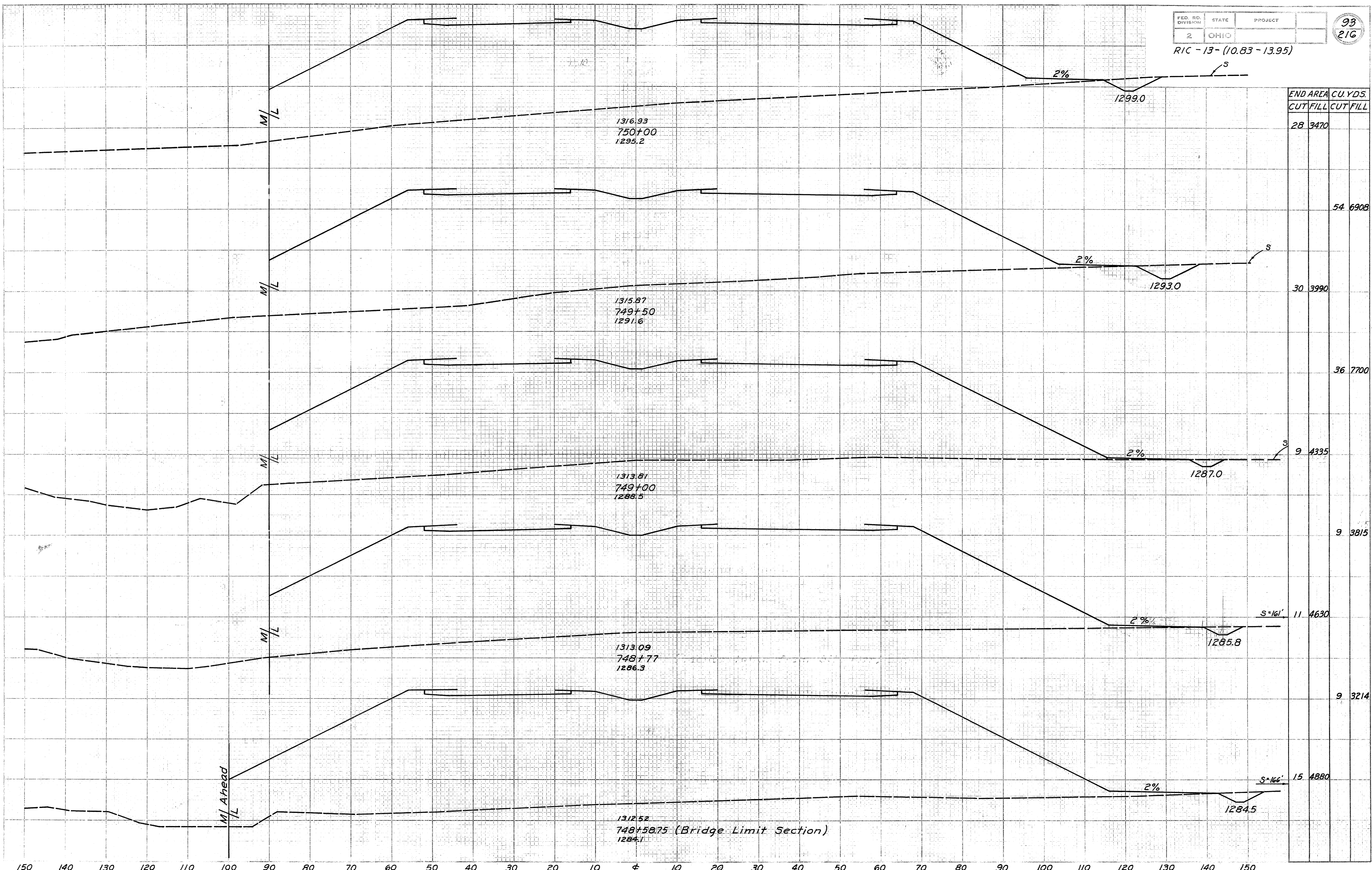


CU. YDS.	END AREA	
	CUT	FILL
35	4085	
35	2870	
		50 5010
Total Earthwork for Ramp A. From Sheet No. 135		
19	2540	
		35 4783
19	2625	
		27 4950
10	2720	
		19 9630
0	2480	
		0 3964
0	1800	



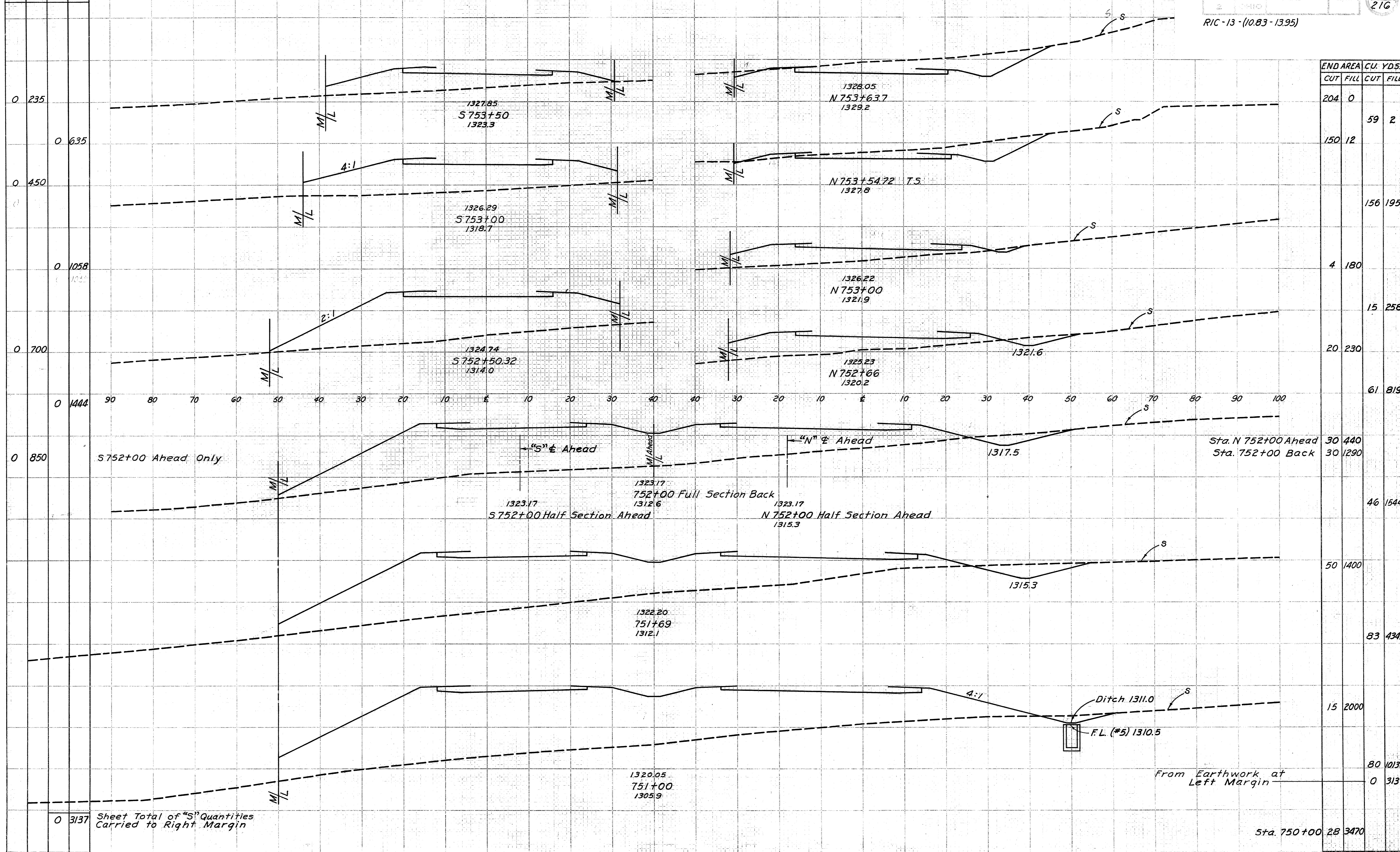
CU. YDS.	END AREA	
	CUT	FILL
10	5340	
8	8115	
0	5282	
2	9639	
2	5127	
22	9202	
		21 4810
52	8237	
		35 4085

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
28	3470		
		54	6908
30	3990		
		36	7700
9	4335		
		9	3815
11	4630		
		9	3214
15	4880		

END AREA CU. YDS.	
CUT	FILL



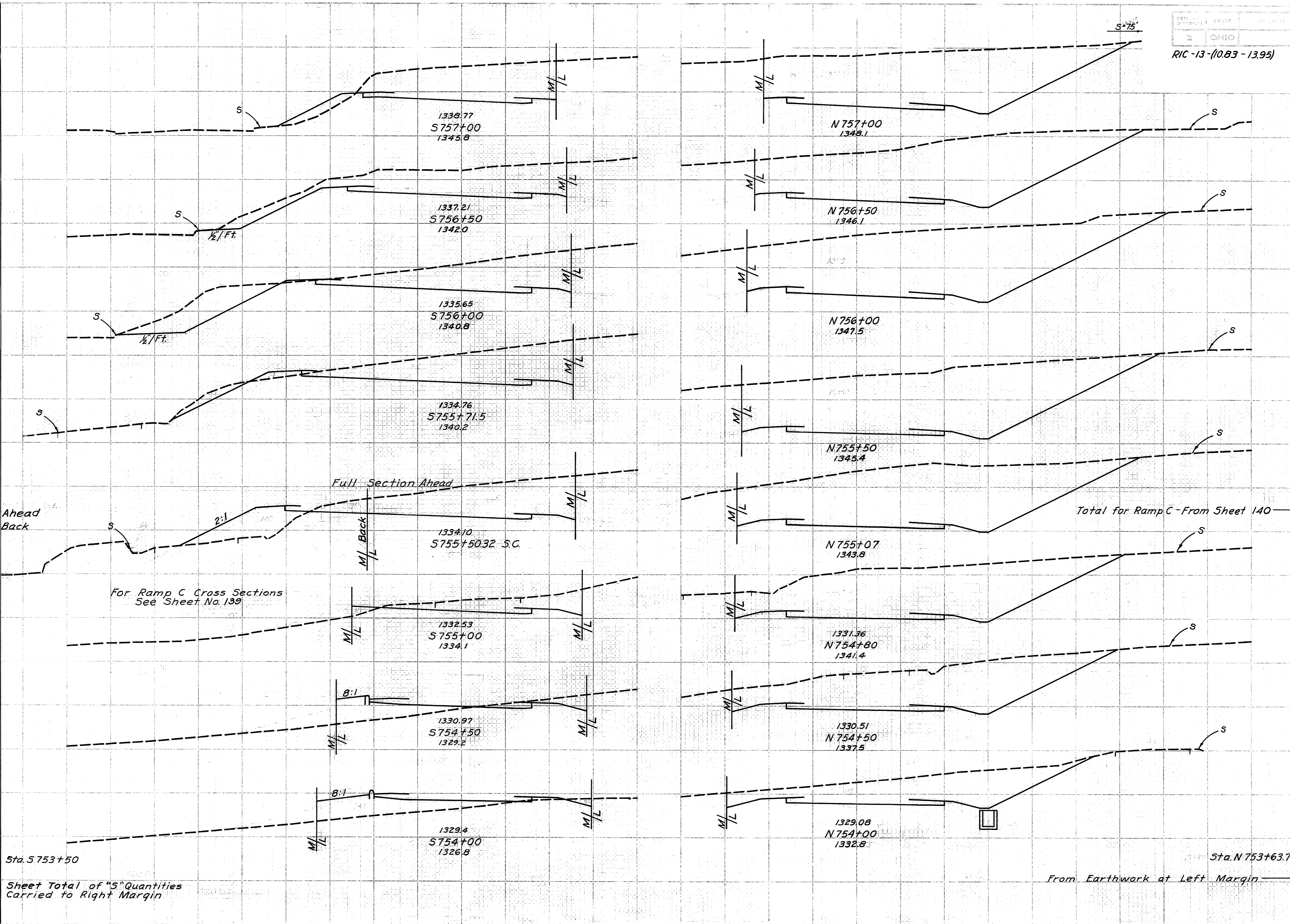
END AREA CU. YDS.	
CUT	FILL
204	0
150	12
4	180
20	230
61	819
30	440
30	1290
46	1544
50	1400
83	4345
15	2000
80	10130
0	3137
Sta. 750+00 28 3470	

Sheet Total of "S" Quantities Carried to Right Margin

From Earthwork at Left Margin

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 To S 753+50

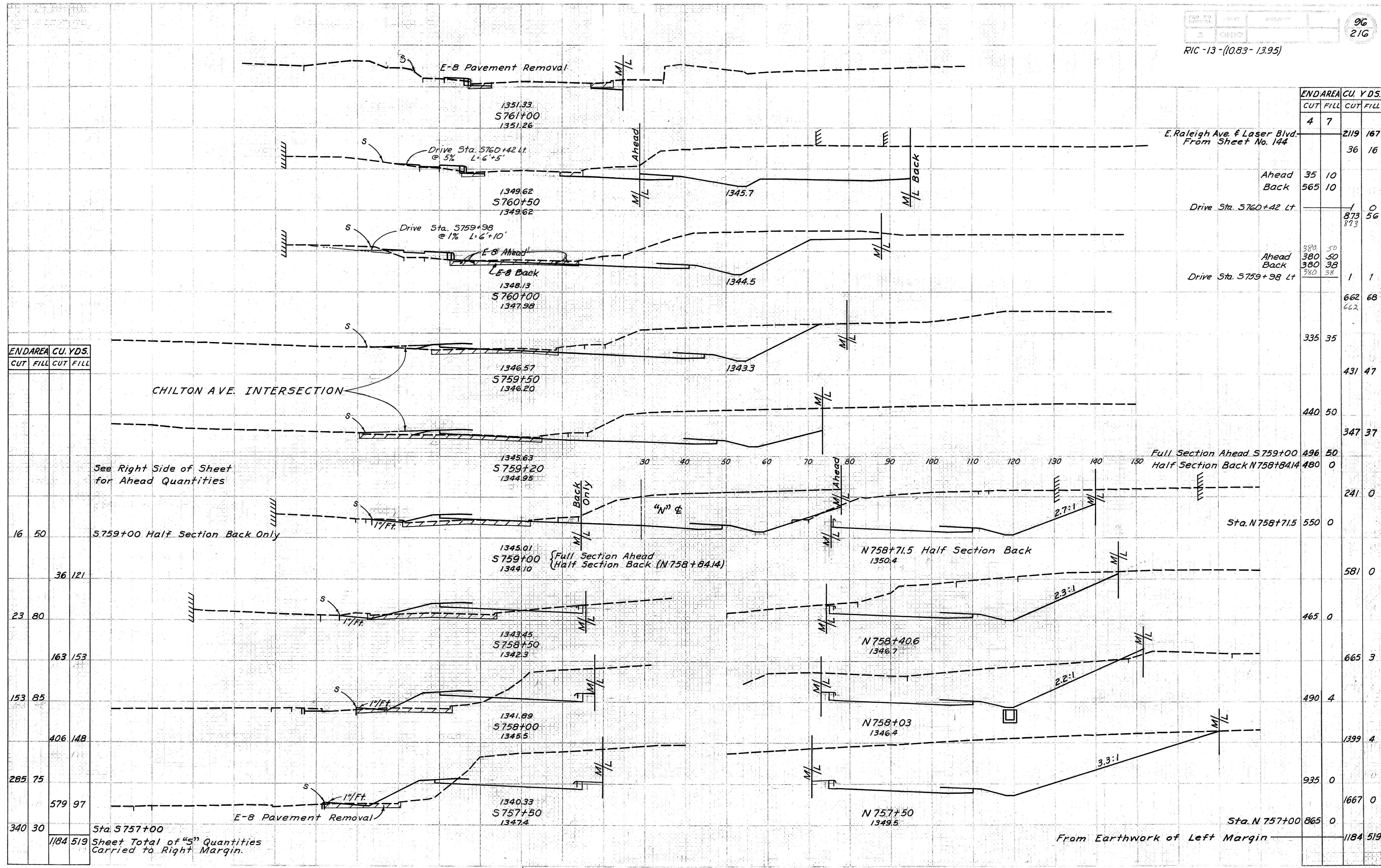
CU. YDS.		END AREA	
CUT	FILL	CUT	FILL
340	30		
	658	28	
370	0		
	769	1	
460	1		
	439	8	
371	14		
	287	49	
360	0		
340	0		
	429	10	
120	10		
	139	93	
30	90		
	35	207	
7	133		
	7	341	
0	235		
	2763	737	



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
865	0		
	1662	0	
930	0		
	1871	0	
1090	0		
	1936	0	
1000	0		
	1561	0	
960	0		
13	24566		
880	0		
800	0		
	811	0	
660	0		
	991	0	
410	0		
	413	0	
204	0		
	2763	737	

Sheet Total of "S" Quantities Carried to Right Margin

From Earthwork at Left Margin



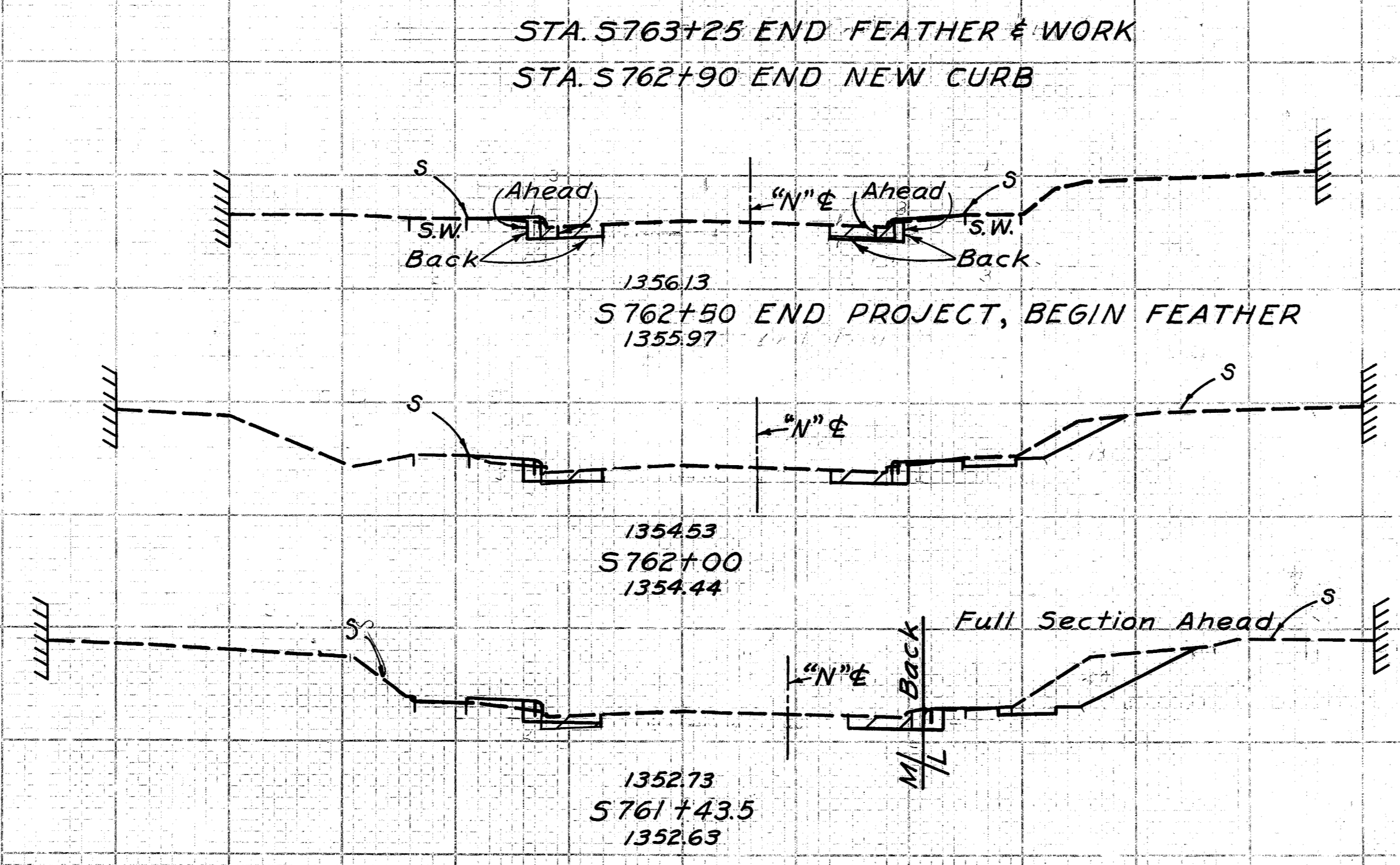
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
16	50		
		36	121
23	80		
		163	153
153	85		
		406	148
285	75		
		579	97
340	30		
		1184	519

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
4	7		
		219	167
		36	16
Ahead	35	10	
Back	565	10	
		1	0
		873	56
Ahead	380	50	
Back	380	50	
		380	38
		380	38
		1	1
		662	68
		662	
		335	35
		431	47
		440	50
		347	37
		496	50
		480	0
		241	0
		550	0
		581	0
		465	0
		665	3
		490	4
		1399	4
		935	0
		1667	0
		865	0
		1184	519

Sta. 5757+00
 Sheet Total of "S" Quantities
 Carried to Right Margin.

From Earthwork of Left Margin

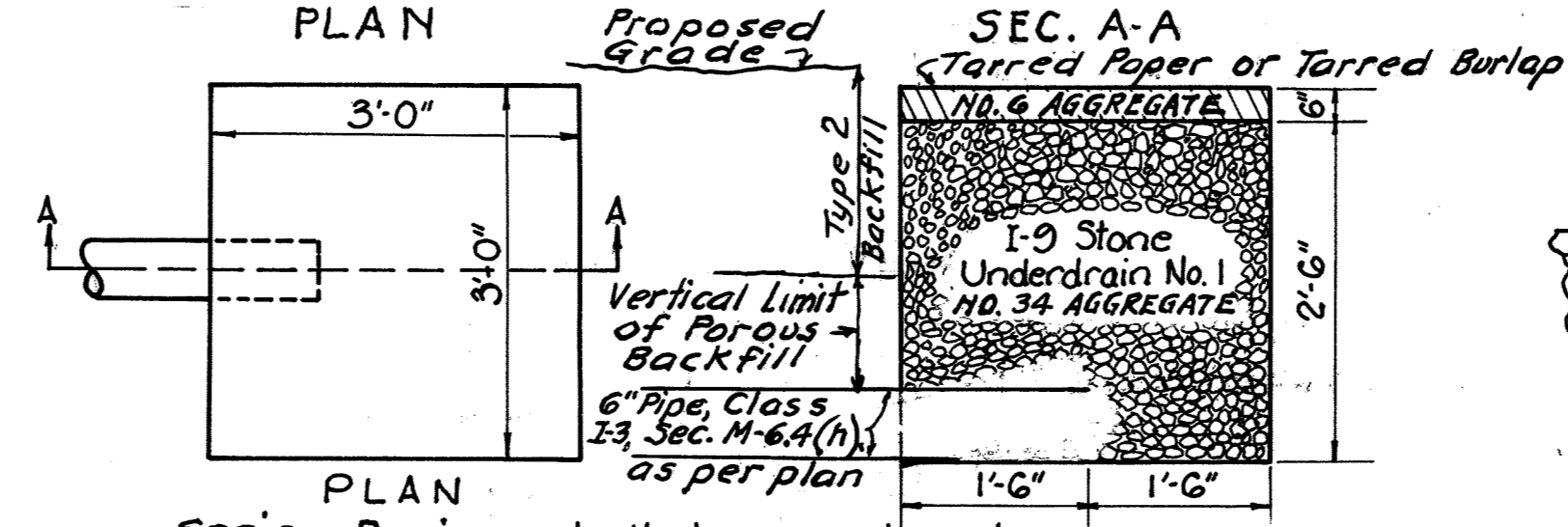
END AREA	CU. YDS.
CUT	FILL



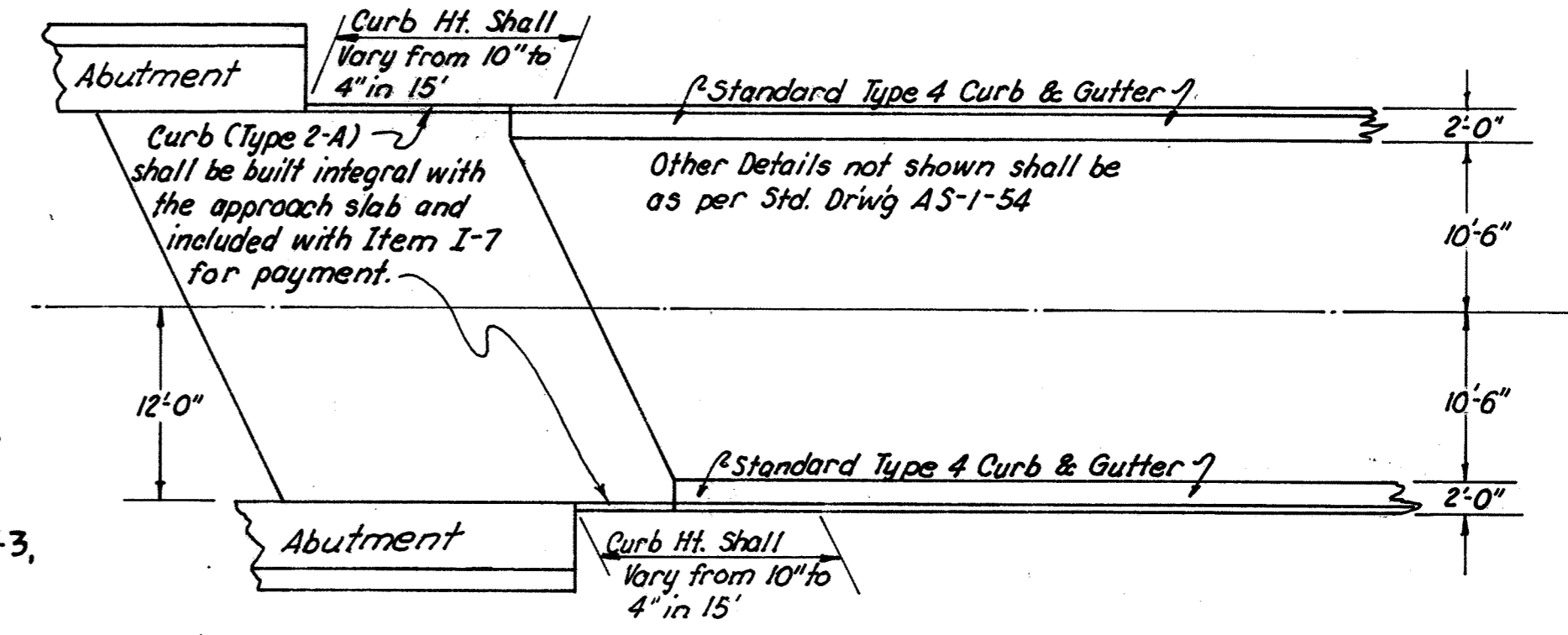
Sta. 5762+90	Ahead	0	0		
	Back	6	1		
				9	2
Sta. 5762+50	Ahead	6	1		
	Back	5	0		
				25	3
				22	3
				73	10
	Ahead	48	6		
	Back	4	6		
				7	10
Sta. 5761+00		4	7		

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80

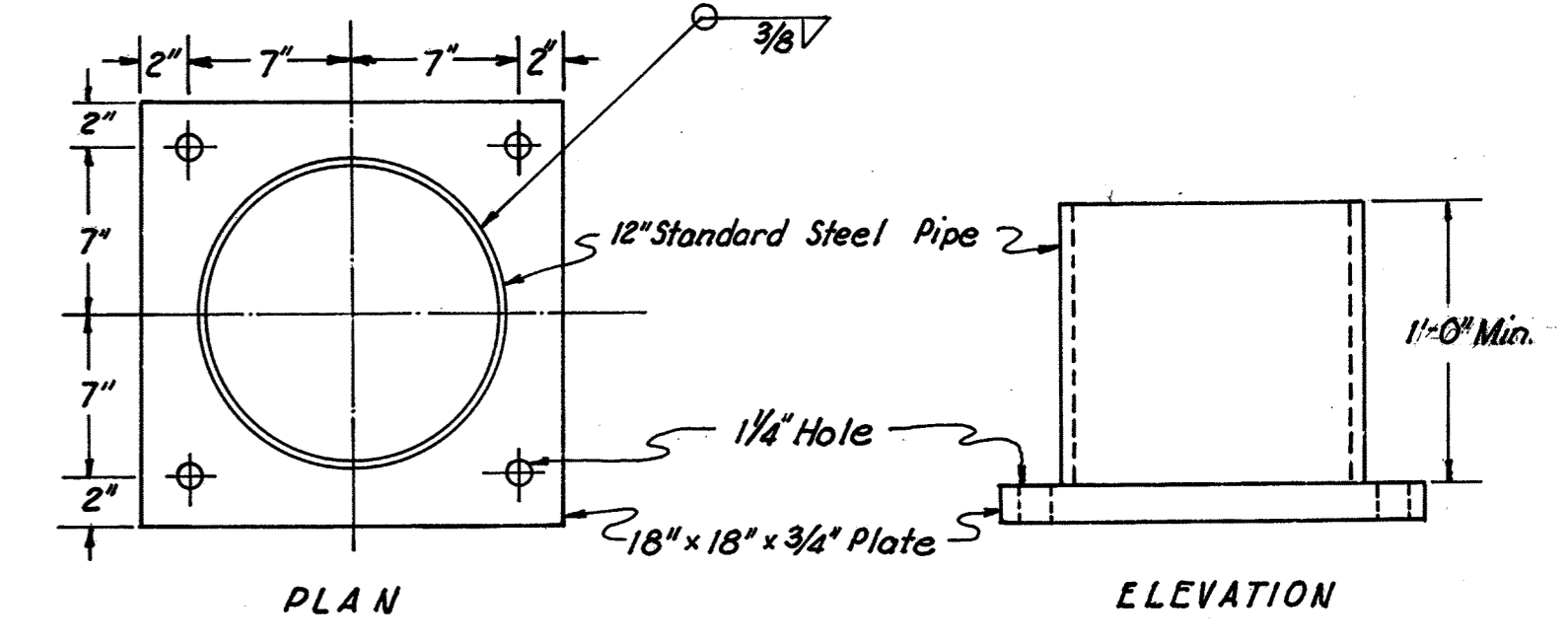
DETAIL SECTION SPRING DRAIN @ STA. 716+30



Spring Drains shall be constructed where and as directed by the Engineer.
 No. 34 Aggregate shall be used with a 6" layer of No. 6 Aggregate over the top and sealed with Tarred Paper or Tarred Burlap. Payment for necessary Excavation, Aggregates, and Tarred Paper or Tarred Burlap shall be included in the unit price bid for Item I-9, Stone Underdrains No. 1, as per plan.
 Quantities of I-9 Stone Underdrains, No. 1 and of 6" pipe, Class I-3, Sec. M-6.4(h) are carried on Sheet No. 27.
 The Spring Drain constitutes 3 Lin. Ft.
 Payment shall be based on final measurement.



APPROACH SLAB DETAIL - MALONE RD.
STRUCTURE No. RIC-13-1384

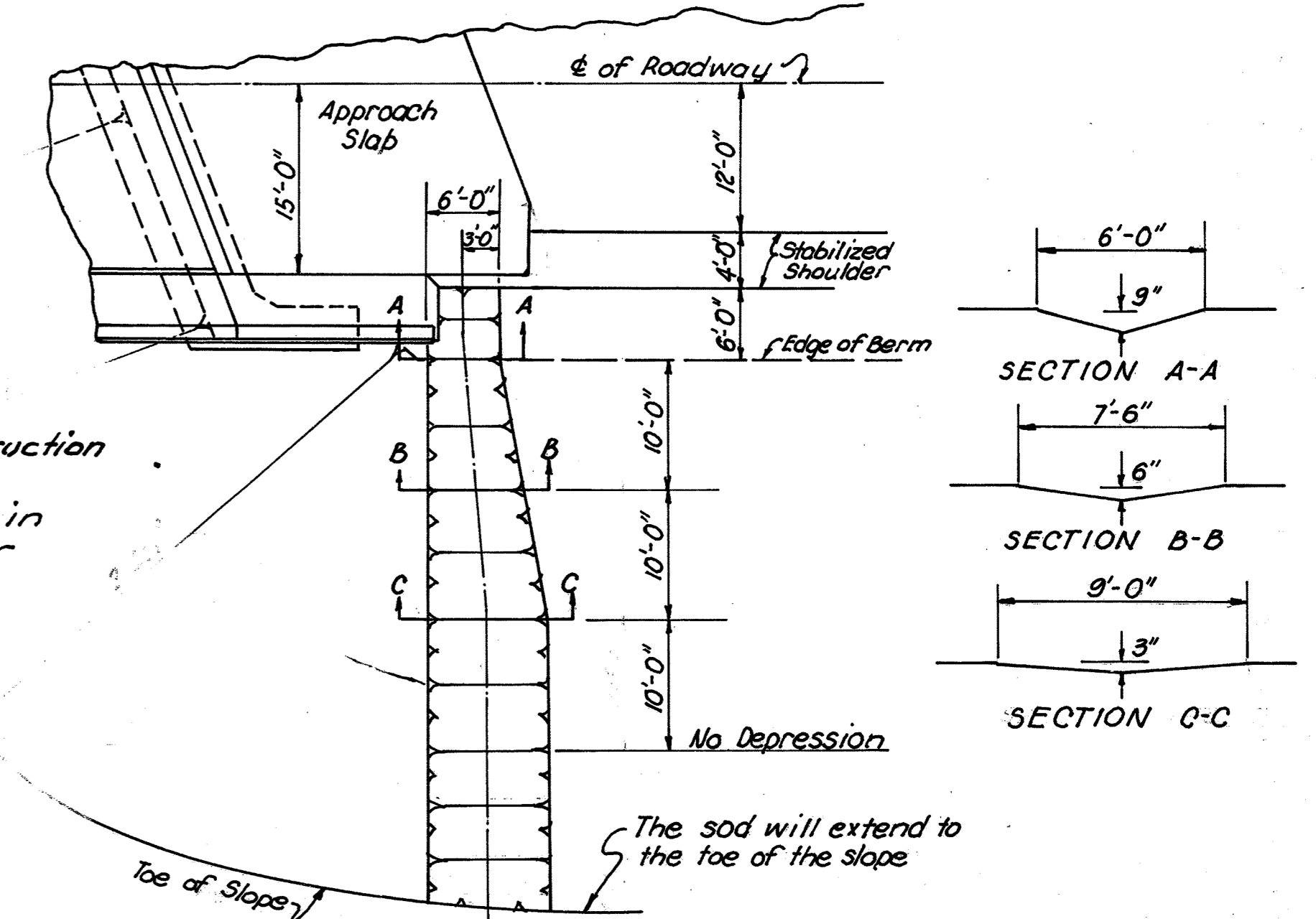


Footing anchor to be used where posts are over footing and less than 3'-0" of earth is provided above the top of the footing.
 Anchors may be set between Pier Columns where necessary.

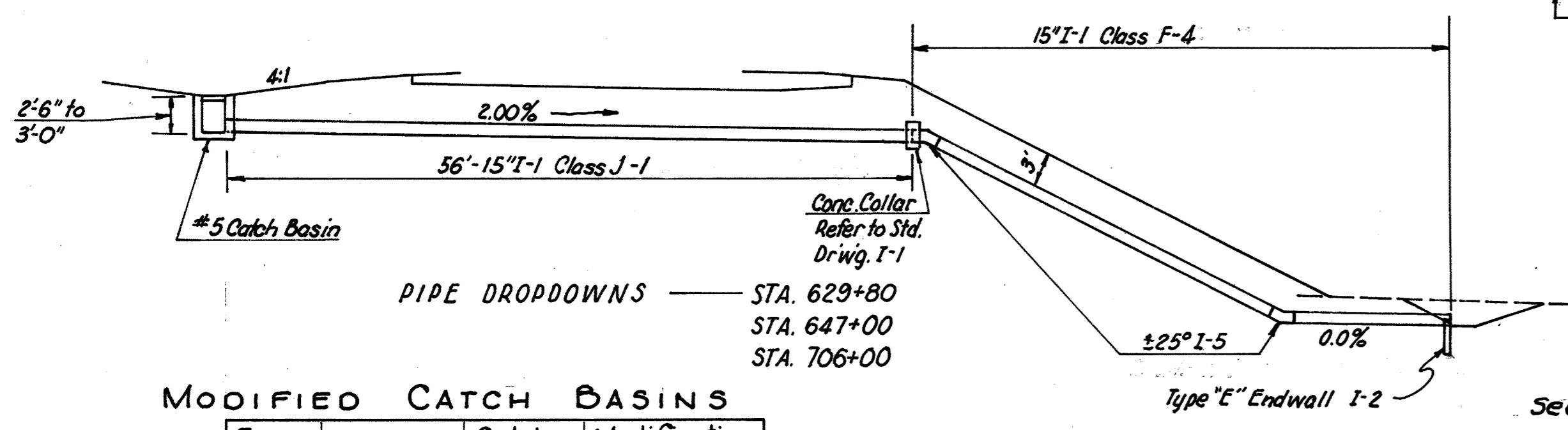
FOOTING ANCHOR DETAIL

SPECIAL BERM AND SLOPE PROTECTION

Prior to placement of sod in the berm and slope, Galvanized Poultry Fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow. Each strand shall be staked securely on top and bottom with stakes placed at four foot intervals and alternated in rows four feet apart. Stakes shall be 1" x 8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.
 The fence shall be straight line poultry fence or equivalent with strand width of four feet having a two inch mesh and all wires No. 20 gage. The strands of fencing shall be fastened together at twelve inch intervals by means of hog rings. The fence shall be secured to the wood stakes by metal staples.
 Sod shall be laid in accordance with the Construction and Materials Specifications Section L-10.07. Payment for all of the above shall be included in the unit price bid for Item L-10, Sodding for Special Berm and Slope Protection.

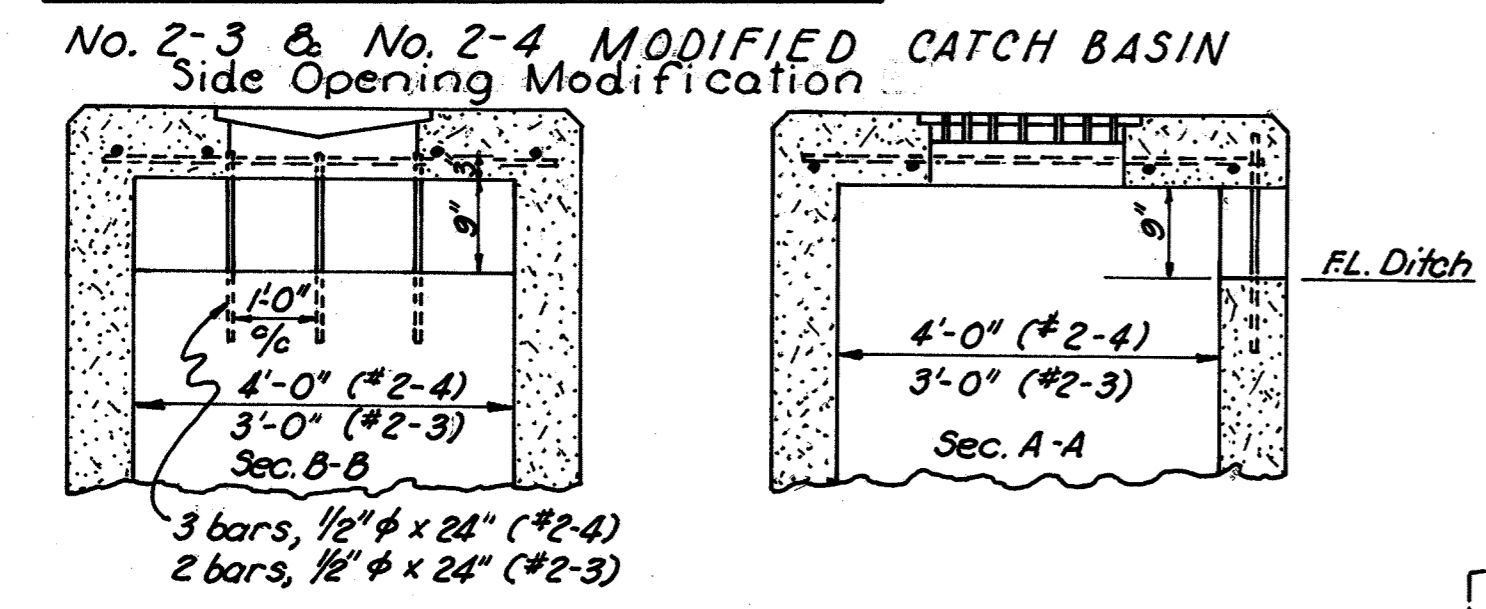


SODDING FOR SPECIAL BERM AND SLOPE PROTECTION



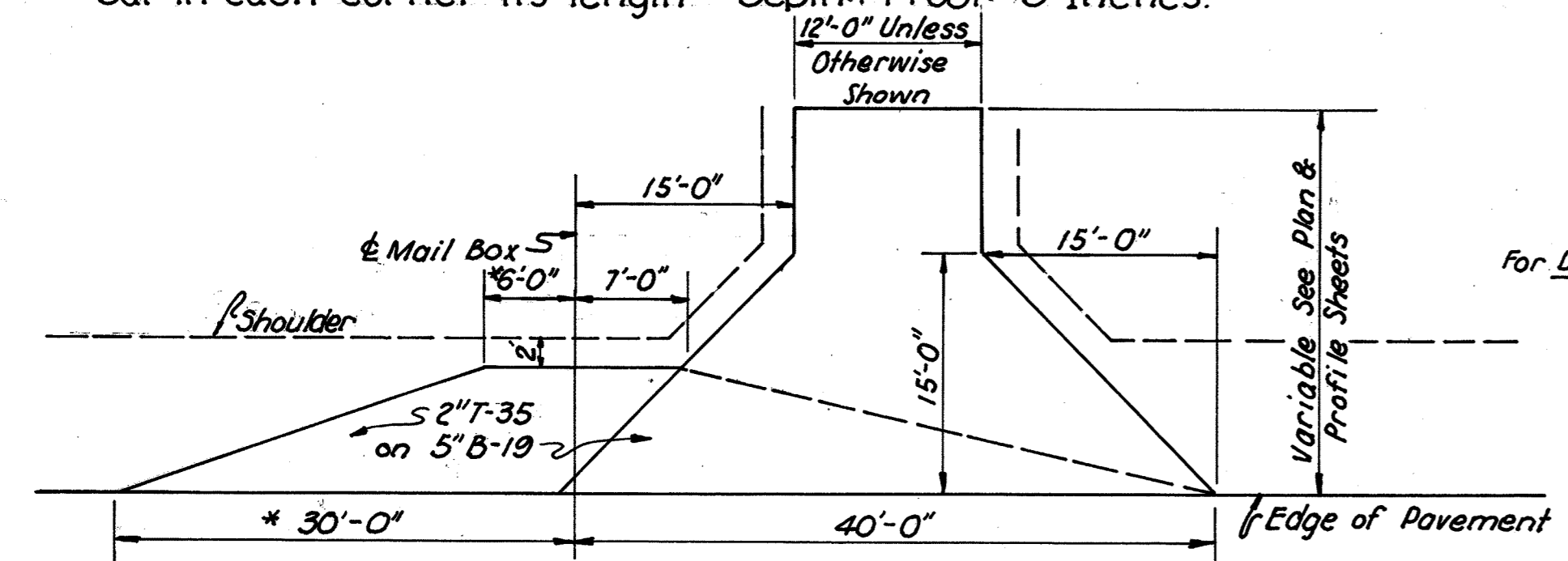
MODIFIED CATCH BASINS

From Sheet No.	Station	Catch Basin Type	Modification Side Opening	Reinf. Conc.
17	608+37	2-4 Mod.	•	•
18	614+59	2-5 Mod.	•	•
21	655+00	2-4 Mod.	•	•
23	668+40	2-4 Mod.	•	•
23	676+35	2-3 Mod.	•	•
30	748+35	2-3 Mod.	•	•
155	747+40	2-4 Mod.	•	•

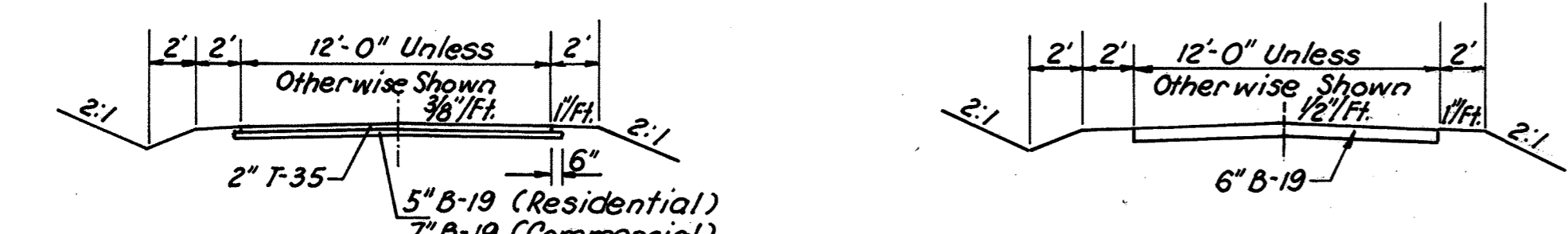


For other details not shown, refer to Std. Drwg. I-8 C.B. 2-3 & 2-4

REINFORCED CONCRETE MODIFICATION:
 Catch Basins listed above shall have side walls constructed of reinforced concrete. The No. 2-5 Modified Basin @ Sta. 614+59 shall have reinforced side walls as per Standard Drawing. For the No. 2-3 & 2-4 Catch Basins requiring reinforced side walls the top will be constructed as shown on the Standard Construction Drawing. Side walls shall be reinforced with 5/8" round bars placed horizontally on 12" c/c. The bars will be 1 Ft. longer than the inside dimension of the Catch Basin. Use a 5/8" round bar in each corner its length = Depth + 1 Foot. 3 Inches.

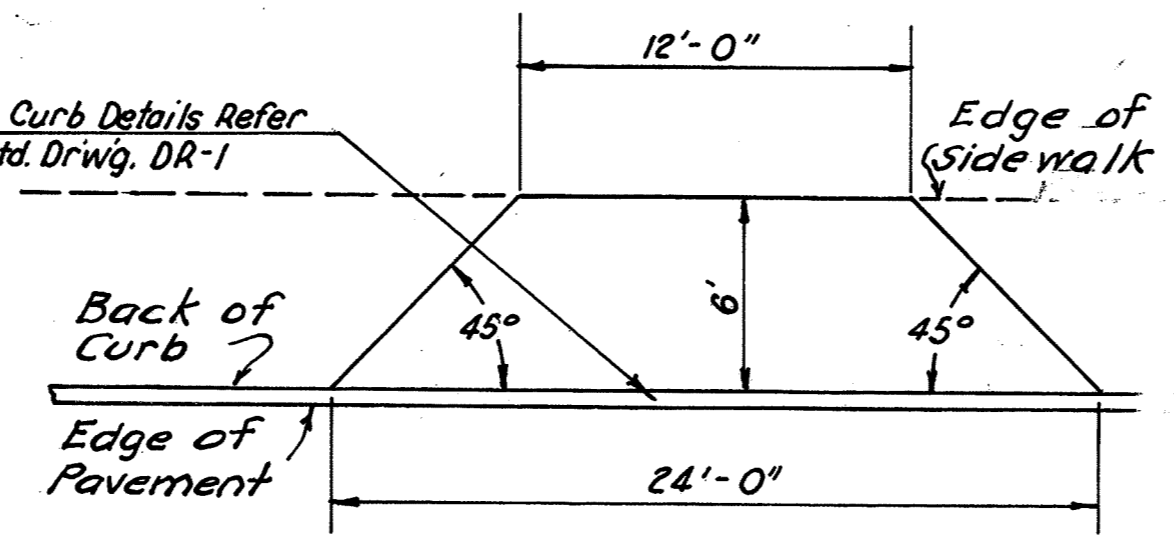


* Add 2' for each additional mailbox
 Where feasible, mailbox turnouts shall be combined with drives as shown. Quantities to be adjusted by the Engineer.
 T-35 2" Asphaltic Concrete Surface Course Est. 11.2 Cu.Yds.
 B-19 5" Aggregate Base Course Est. 30.0 Cu.Yds.



TYPICAL DRIVE SECTION T-35 ON B-19

TYPICAL AGGREGATE DRIVE



DRIVE DETAIL IN CURBED AREA

SEQUENCE OF WORK

①	Total Excavation & Granular E-4								Total Excavation & Granular E-4	
②	Clear & Grub									
③		Install Vertical Sand Drains								
④		Install Piezometers								
⑤		Place 2' Sand Blanket								
⑥		Place 1' Gravel Blanket								
⑦		Install Settlement Platforms								
⑧		Set Emb. Control Stakes								
⑨		Place Embankment								
⑩		Place 8' Surcharge Full Width								
	585+00	587+50	588+50	589+00	589+50	590+00	591+00	591+90	592+00	595+00

See Notes in Proposal for Various Items.

Deviation from this sequence of work will be permitted only by written permission from the Engineer.

**SPECIAL ITEM
PIEZOMETERS**

Station	Side	Dist. from ξ	Elev.	Quan.
589+00	Rt.	55'	1215.0	1
590+00	Rt.	55'	1215.0	1
591+00	Rt.	55'	1210.0	1
Total Quantity				3

See Note in Proposal.
See Detail on next Sheet.

**SPECIAL ITEM
SETTLEMENT PLATFORMS**

Station	Side	Dist. from ξ	Quan.
589+00	Rt.	45'	1
589+50	Lt.	45'	1
590+00	Rt.	45'	1
590+50	Lt.	45'	1
591+00	Rt.	45'	1
Total Quantity			5

See Note in Proposal.
See Detail on next Sheet.

EMBANKMENT CONTROL STAKES

	Quan.
Construct two Lines having Stakes 25 ft. apart from Sta. 589+00 to Sta. 592+00	
Lines shall be 145 ft. Rt. and 185 ft. Rt. of ξ Survey as shown in schematic plan (this sheet).	
No direct compensation will be made	(26)

See Note in Proposal.
See Detail on next Sheet.

OTHER ESTIMATED QUANTITIES

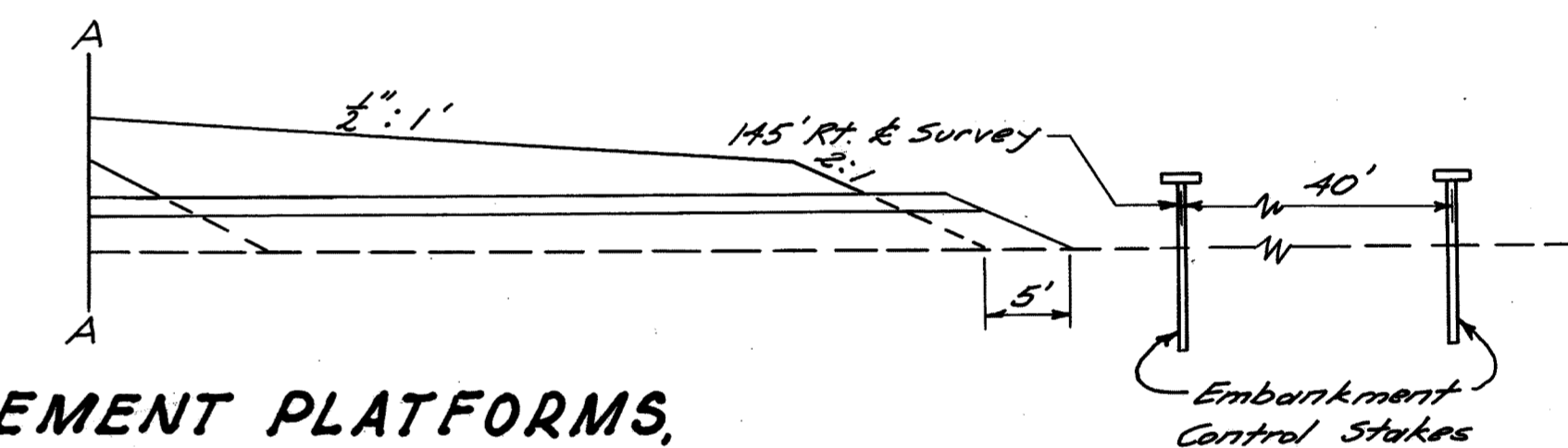
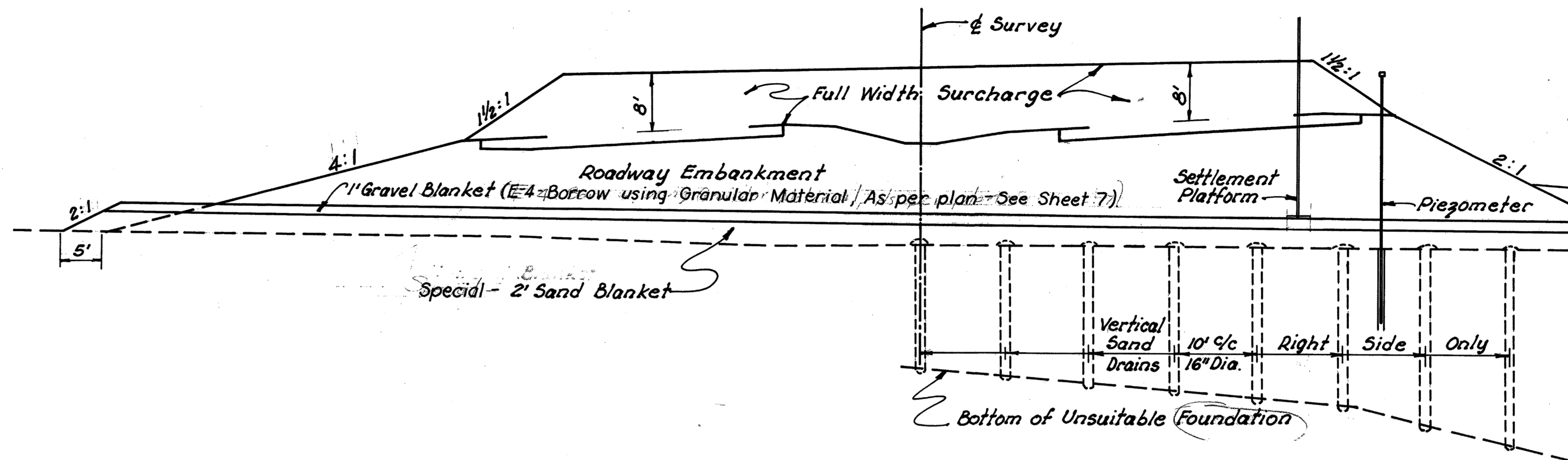
Special - Vertical Sand Drains - 260 Drains x 21' = 5,460 Lin. Ft.
Special - Sand Blanket (See Proposal Note) = 5,699 Cu. Yds. (from Sheet 36)
E-4 - Borrow using Granular Material, As per plan = 2,668 Cu. Yds. (from Sheet 36)
E-4 - Borrow using Granular Material, including the cost of excavating unsuitable material (from Sheets 35 & 37 = 16,312 Cu. Yds.
* Estimated Average Length - See proposal note & Cross Sections.
Embankment for Counterberms = 1,500 Cu. Yds.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

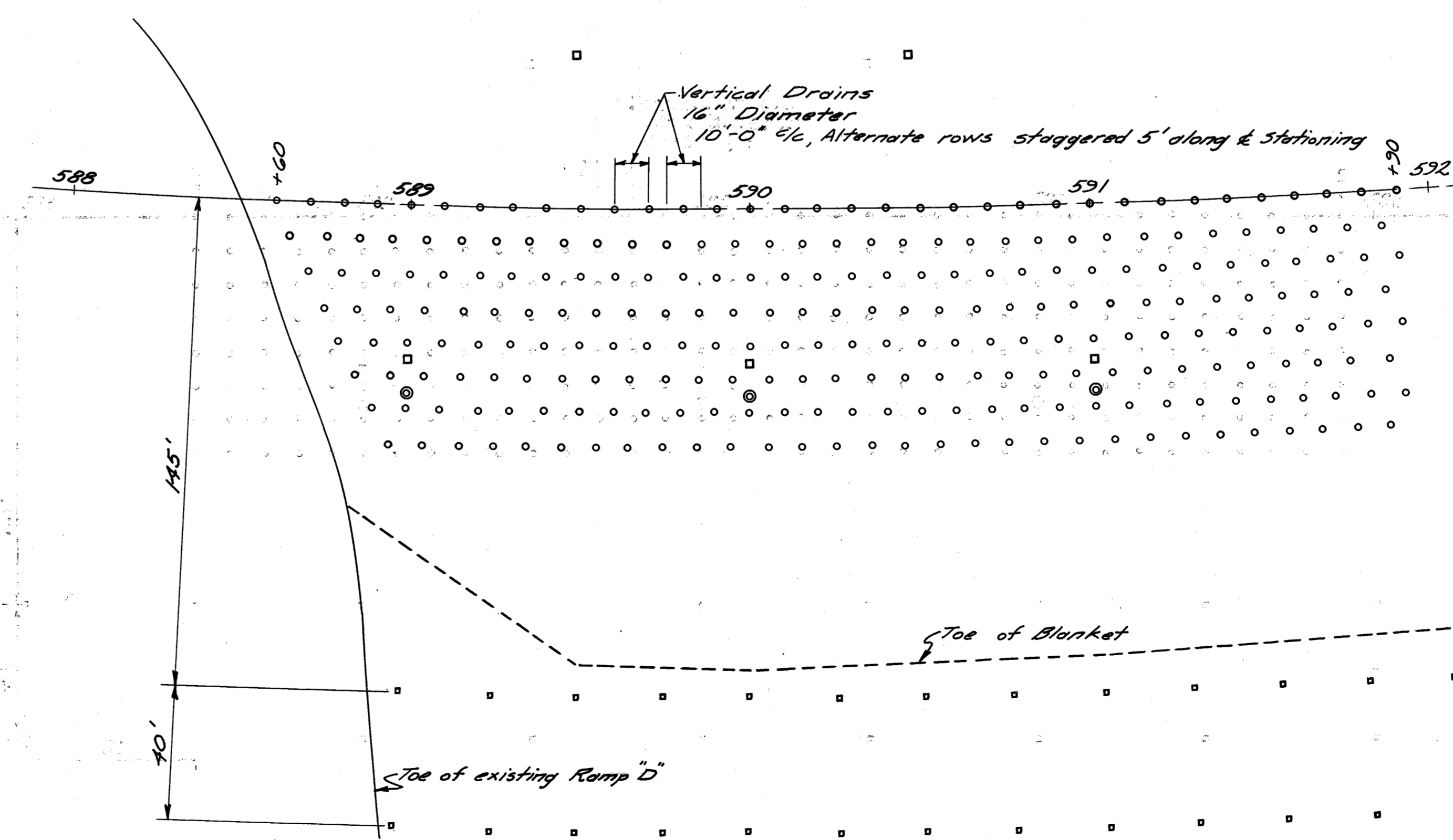
RIC-13-(10.83-13.95)

99
216

**TYPICAL SECTION
SHOWING VERTICAL SAND DRAINS**



**SCHEMATIC PLAN OF SAND DRAINS, SETTLEMENT PLATFORMS,
AND PIEZOMETERS**



- LEGEND**
- Sand Drain Hole (10' 9/16")
 - Piezometer
 - Settlement Platform
 - Embankment Control Stake

Scale 1" = 30'

TOTAL EXCAVATION METHOD SWAMP TREATMENT

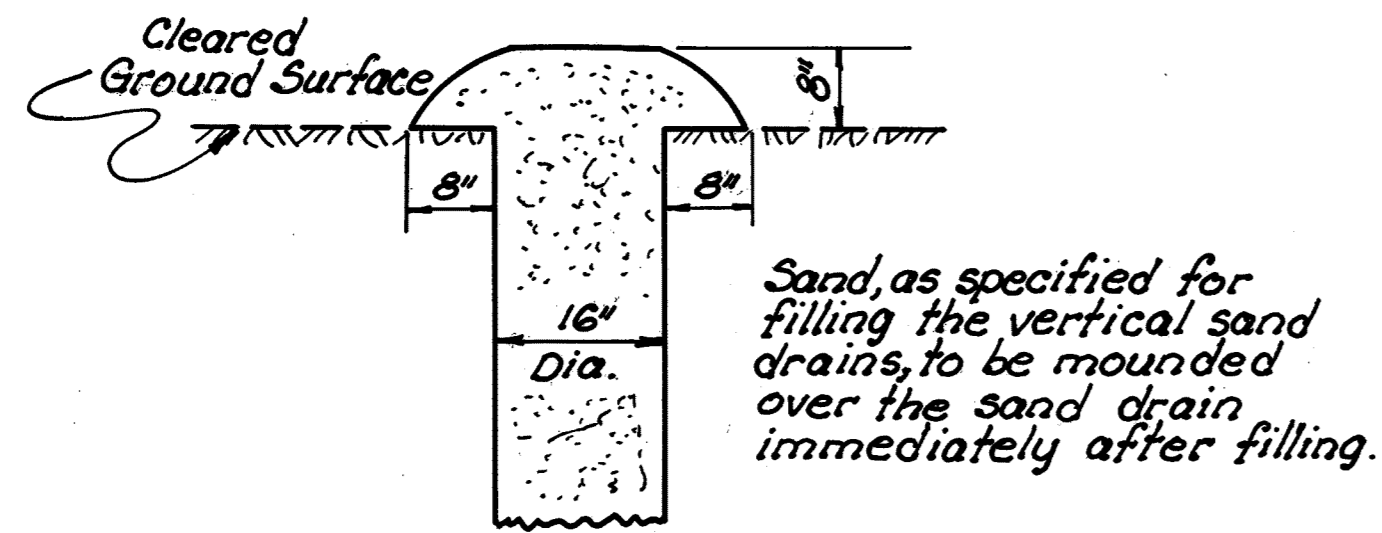
STA. 585+00 to STA. 587+50

STA. 592+00 to STA. 595+00

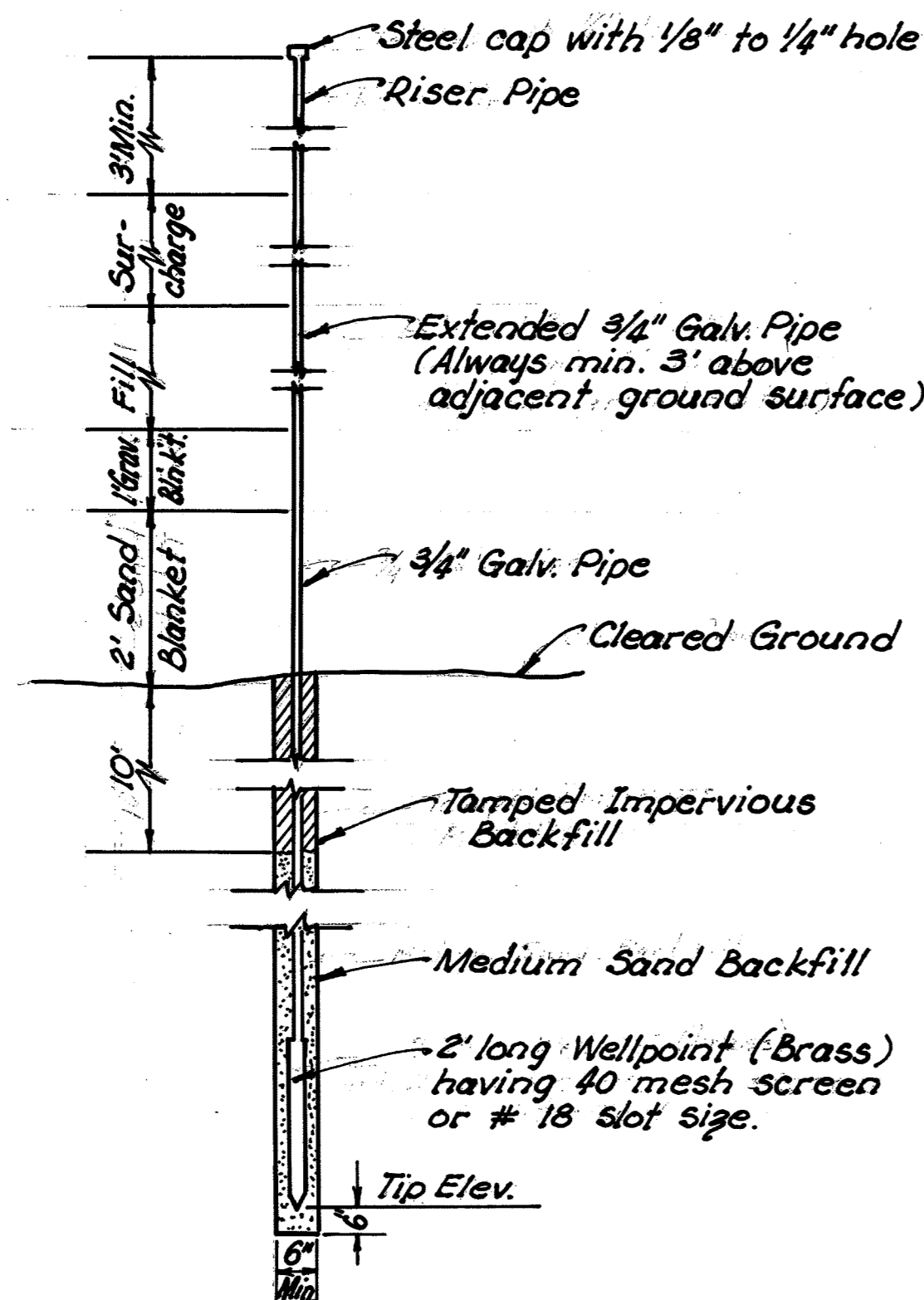
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

100
216

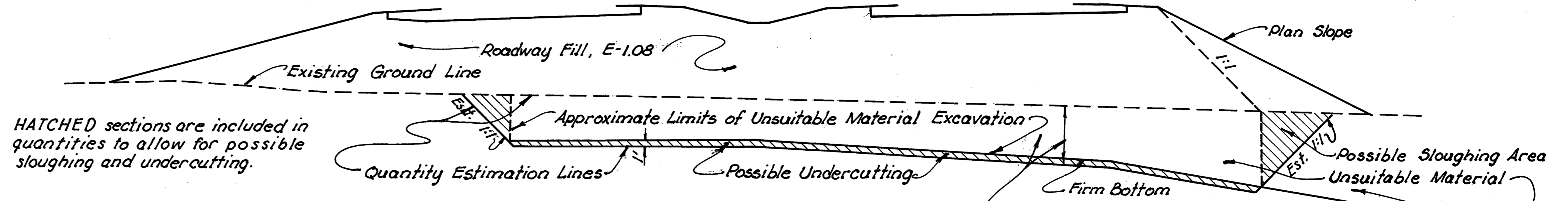
RIC-13-(10.83-13.95)



DETAIL OF VERTICAL SAND DRAIN



PIEZOMETER DETAIL



CROSS SECTION

NOTES

TRENCHING AND BACKFILLING shall be carried progressively across the swamp and so coordinated as to leave an open trench not to exceed in length at any time the working reach of the equipment used for swamp excavation.

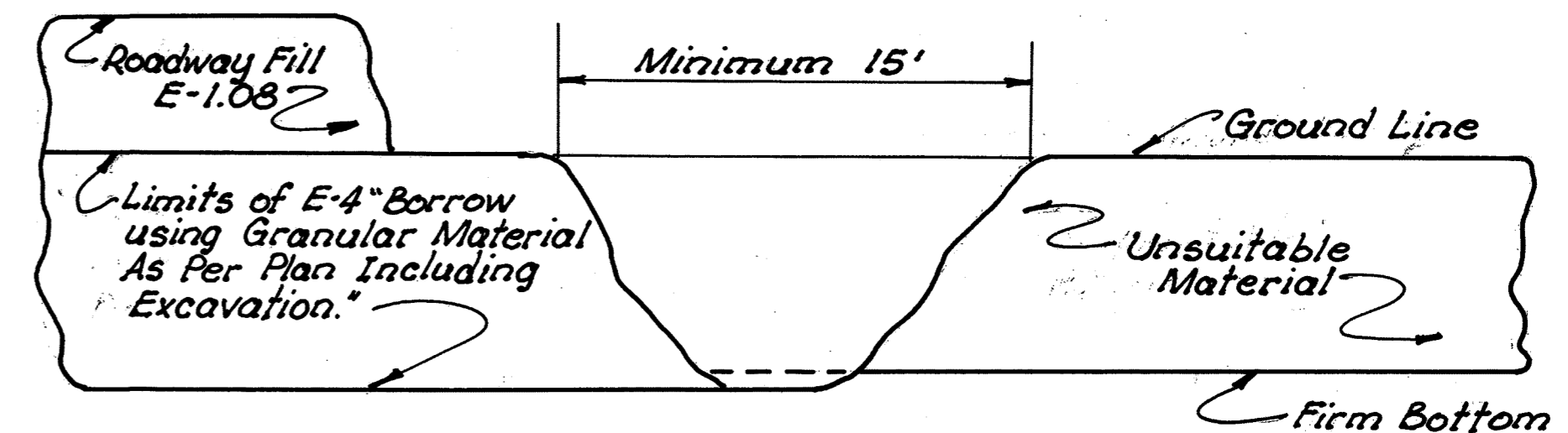
FILL shall be constructed by the method of end dumping, using granular material, up to the elevations designated on the plan. Embankment required above this elevation, if any, shall be constructed in accordance with Sec. E-1.08 of the Construction and Material Specifications.

EXCAVATION of unsuitable material ahead of the fill and end dumping of granular material across the bog area shall be advanced in a straight line for the full embankment width to avoid entrapment of unsuitable material beneath any portion of the fill.

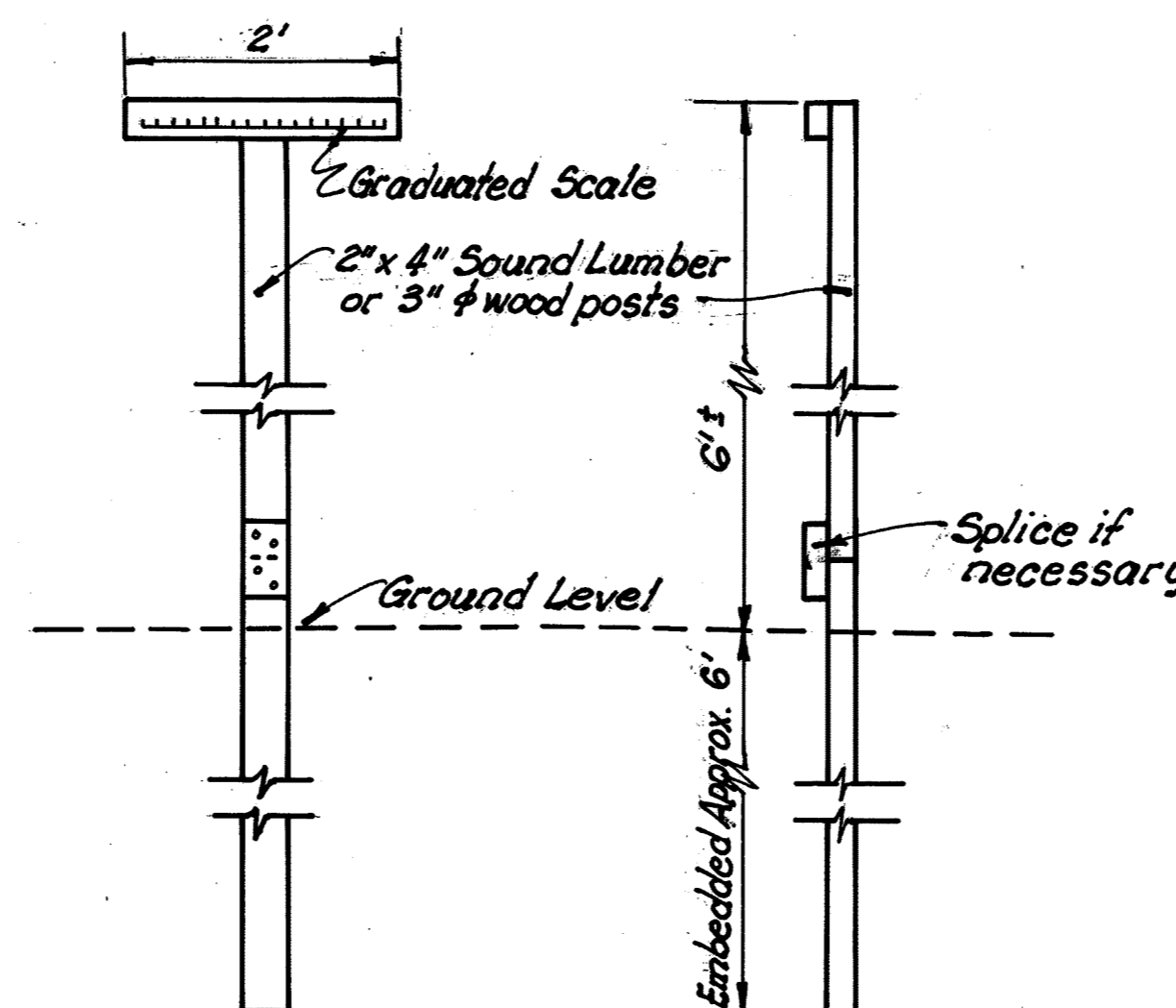
GRANULAR MATERIAL required for swamp treatment shall be specified as "E-4 Borrow using Granular Material as per Plan." The granular material shall meet the requirements of Sec. E-1.02 of the Construction and Material Specifications, modified to require at least 75% by weight of the grains or particles to be retained on the No. 200 sieve.

EXCAVATED UNSUITABLE MATERIAL, which is to be used adjacent to fills for slope flattening or which is piled adjacent to the fill, to be disposed of later in accordance with Sec. E-1.06, shall be shaped to its final position or removed from the area at least two weeks prior to paving operations on the fill.

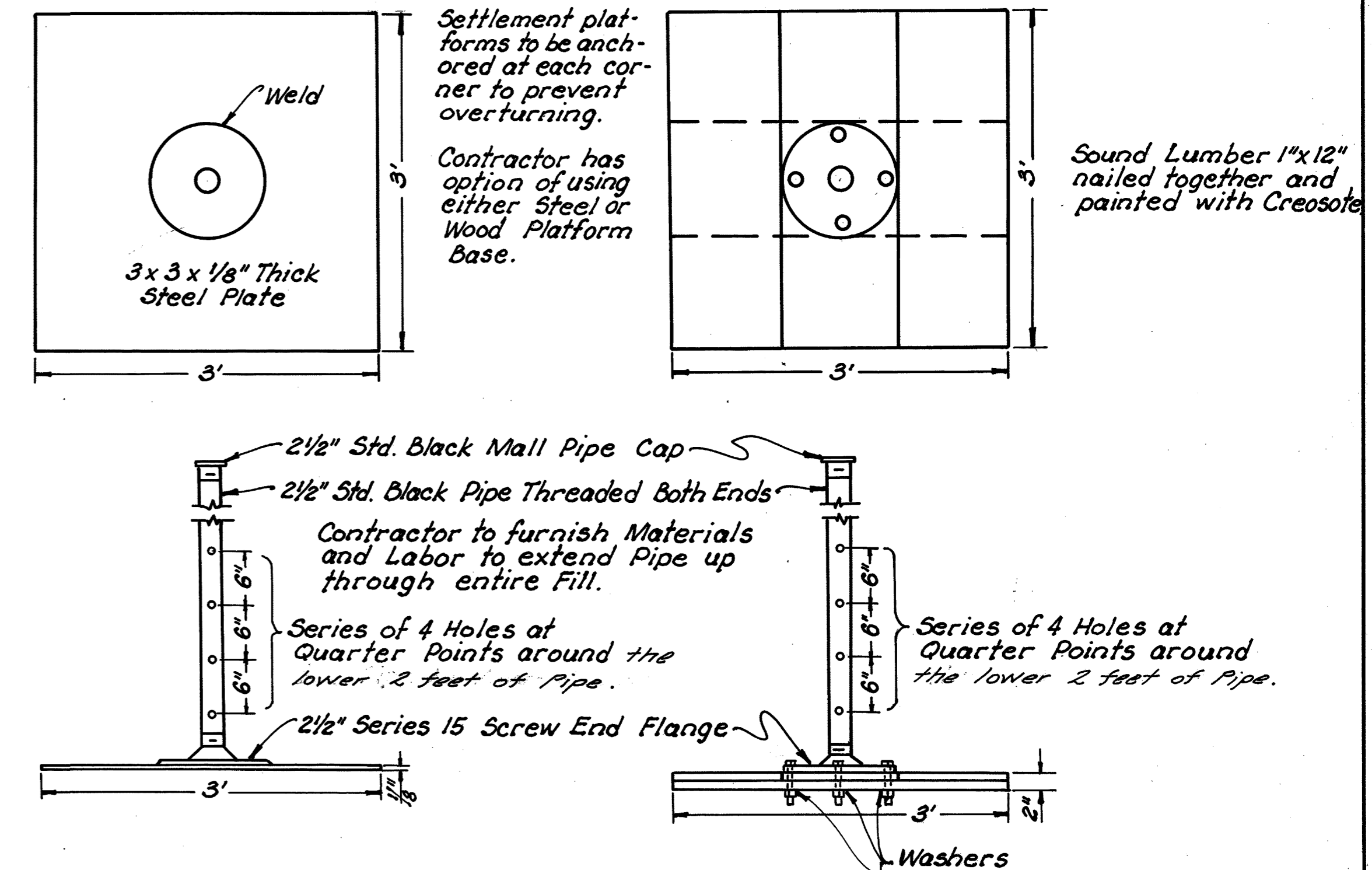
EQUIPMENT used for excavation of unsuitable materials shall be located ahead of the excavation unless otherwise authorized by the Director.



LONGITUDINAL SECTION



EMBANKMENT CONTROL STAKE DETAIL



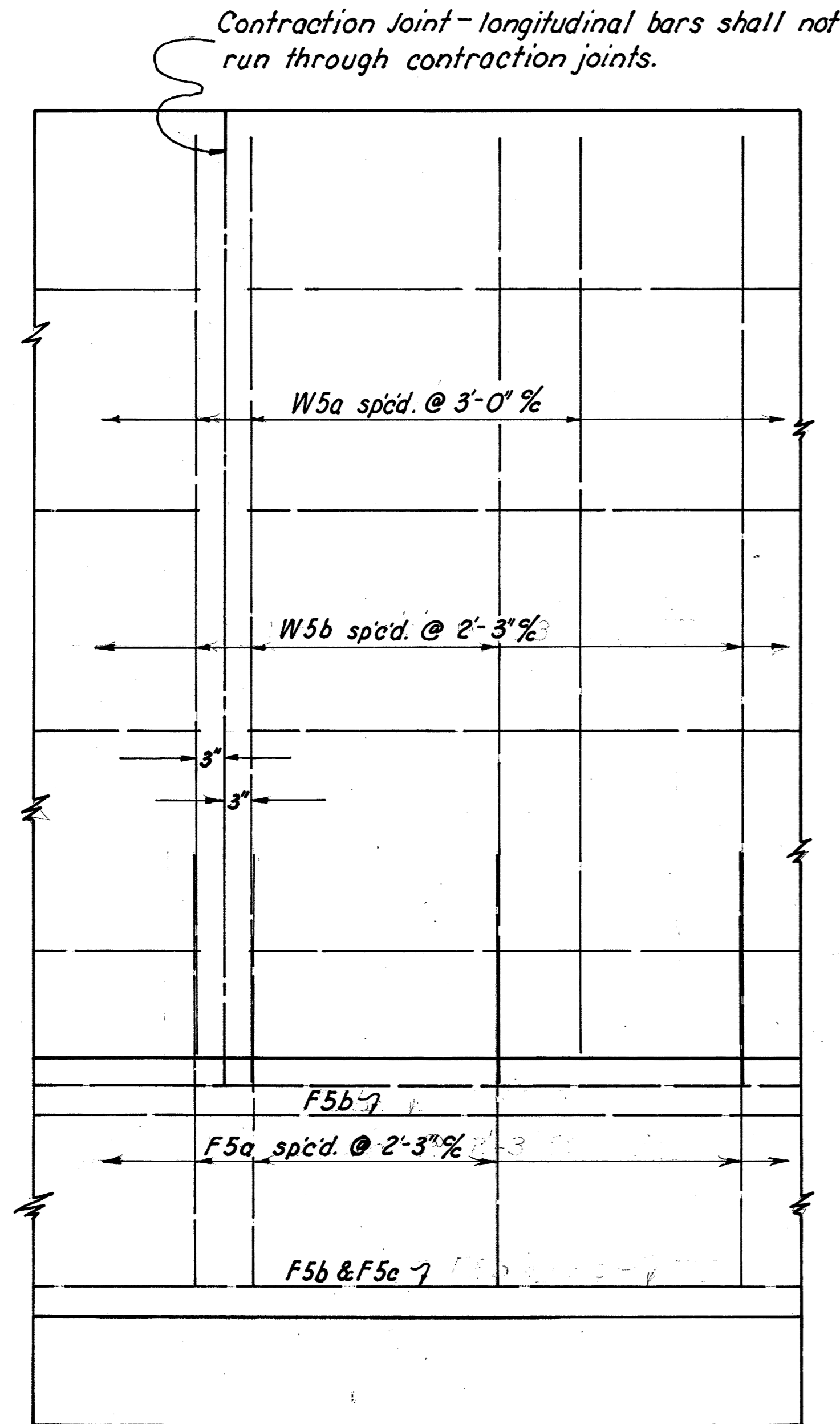
DETAILS OF SETTLEMENT PLATFORMS

SCALE 1"=1'-0"

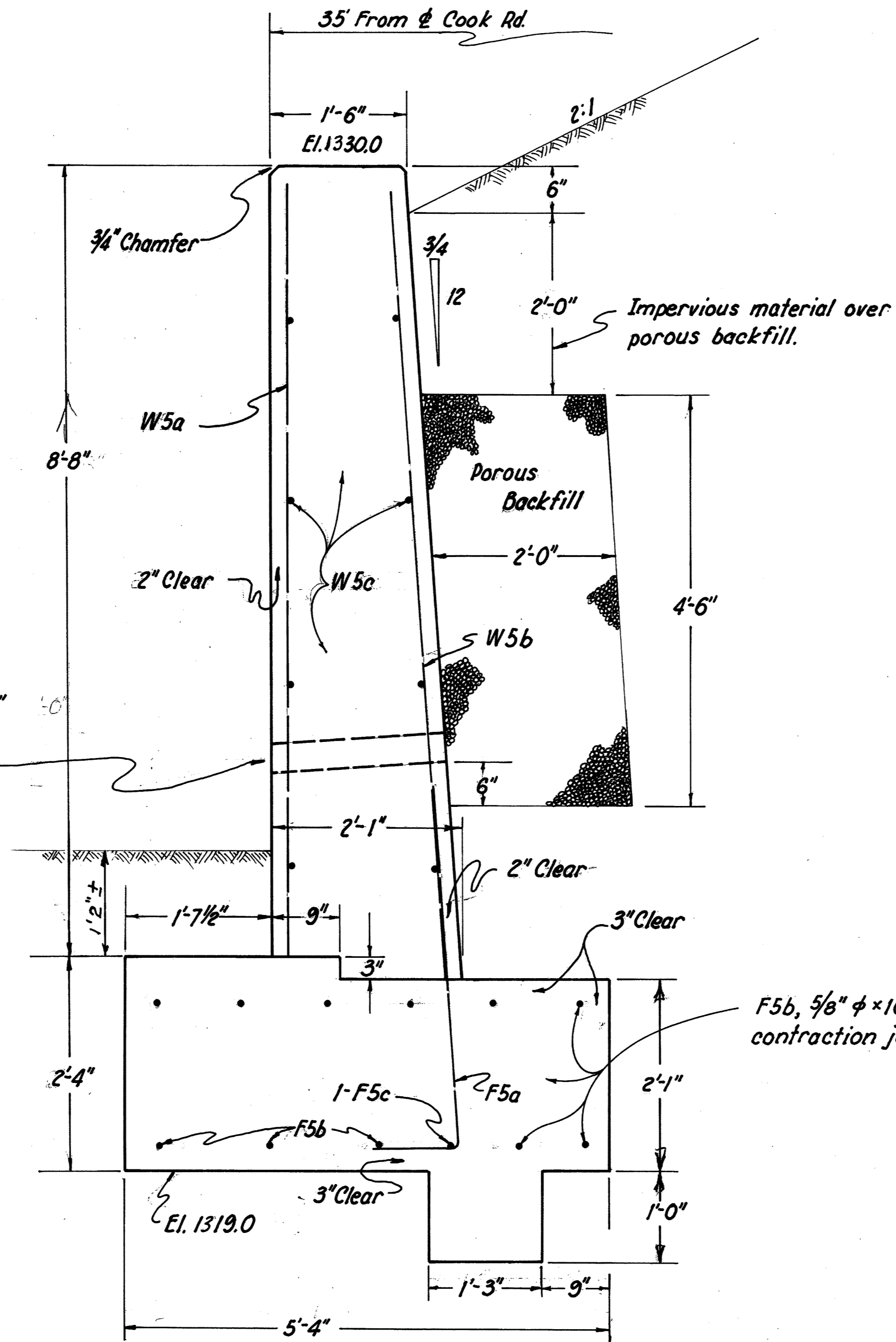
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-13-(10.83-13.95)

101
216



4" ϕ weep holes @ 10'-0"
± 6" to 1'-0" above
ground line.



STEEL LIST

MARK	NO.	SIZE	LENGTH	SP'G.	WEIGHT
FOOTING					
F5a #	52	5/8" ϕ	4'-11 1/2"	2'-3"	269
F5b	33	5/8" ϕ	10'-0"	Plan	344
F5c	4	5/8" ϕ	28'-7"	Plan	119
STEM					
W5a	40	5/8" ϕ	8'-5"	3'-0"	351
W5b	52	5/8" ϕ	8'-8"	2'-3"	470
W5c	32	5/8" ϕ	27'-0"	2'-0"	901
REPLACEMENT BAR					
R5a	1	5/8" ϕ	5'-7"	-	6
TOTAL					2460#

* BENT

ESTIMATED QUANTITIES (CARRIED TO SHEET No. 120)

ITEM NO.	TOTAL	UNIT	DESCRIPTION
S-1	117	Cu. Yd.	CLASS "E" CONCRETE FOR STRUCTURE
S-3	27	LIN. FT.	PREMOLDED SEALING STRIP
S-4	2460	Lb.	REINFORCING STEEL
S-29	37	Cu. Yd.	POROUS BACKFILL
E-2	112	Cu. Yd.	EXCAVATION FOR STRUCTURE

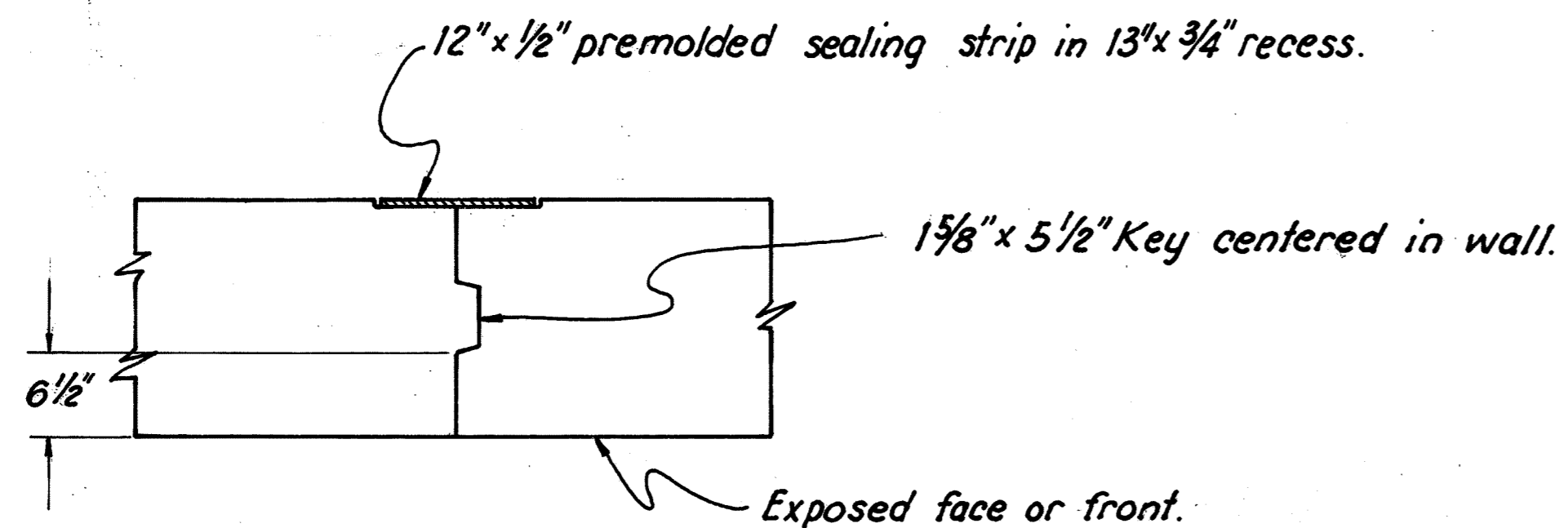
NOTES

THE FOOTER KEY SHALL BE PLACED IN A CAREFULLY MADE TRENCH AGAINST UNDISTURBED EARTH.

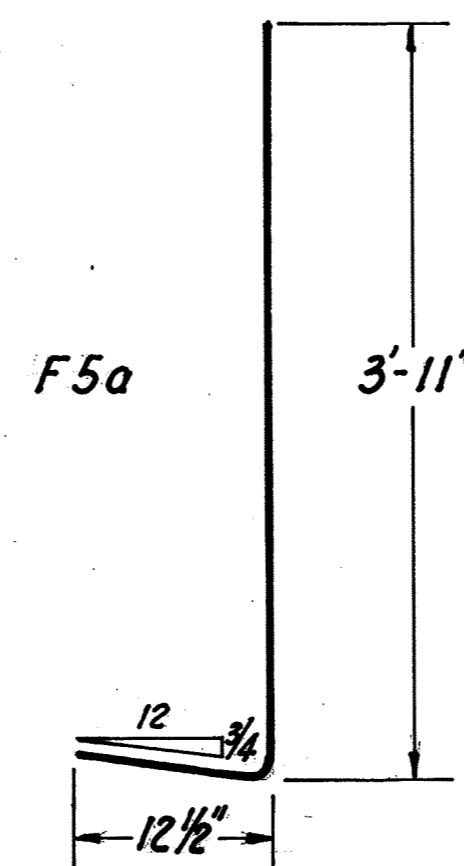
THE WIDTH OF THE FOOTER EXCAVATION SHALL BE THE MINIMUM REQUIRED FOR THE FOOTER FORMS.

THREE CONTRACTION JOINTS SHALL BE PROVIDED, SPACED AT INTERVALS OF 27'-6".

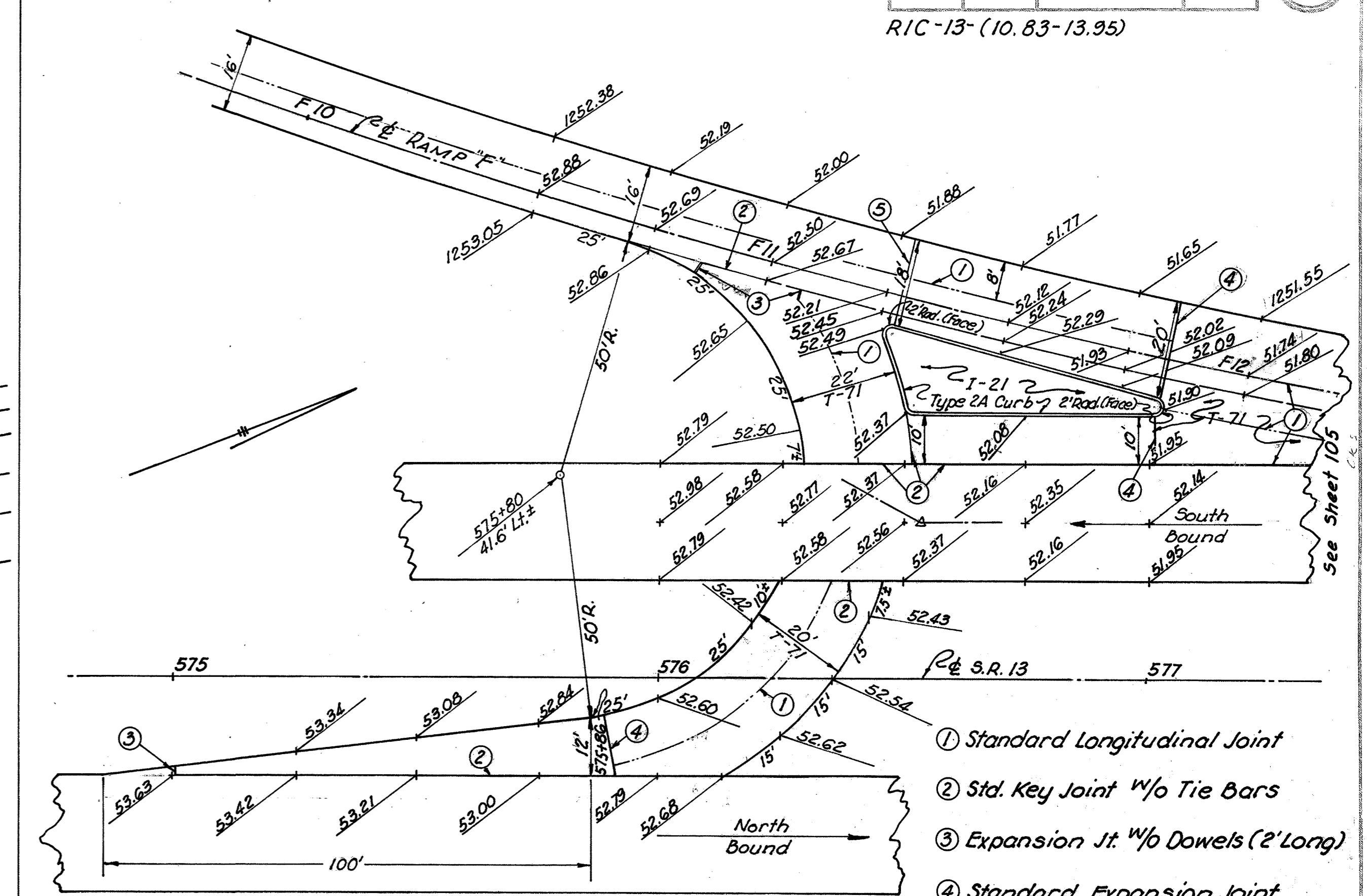
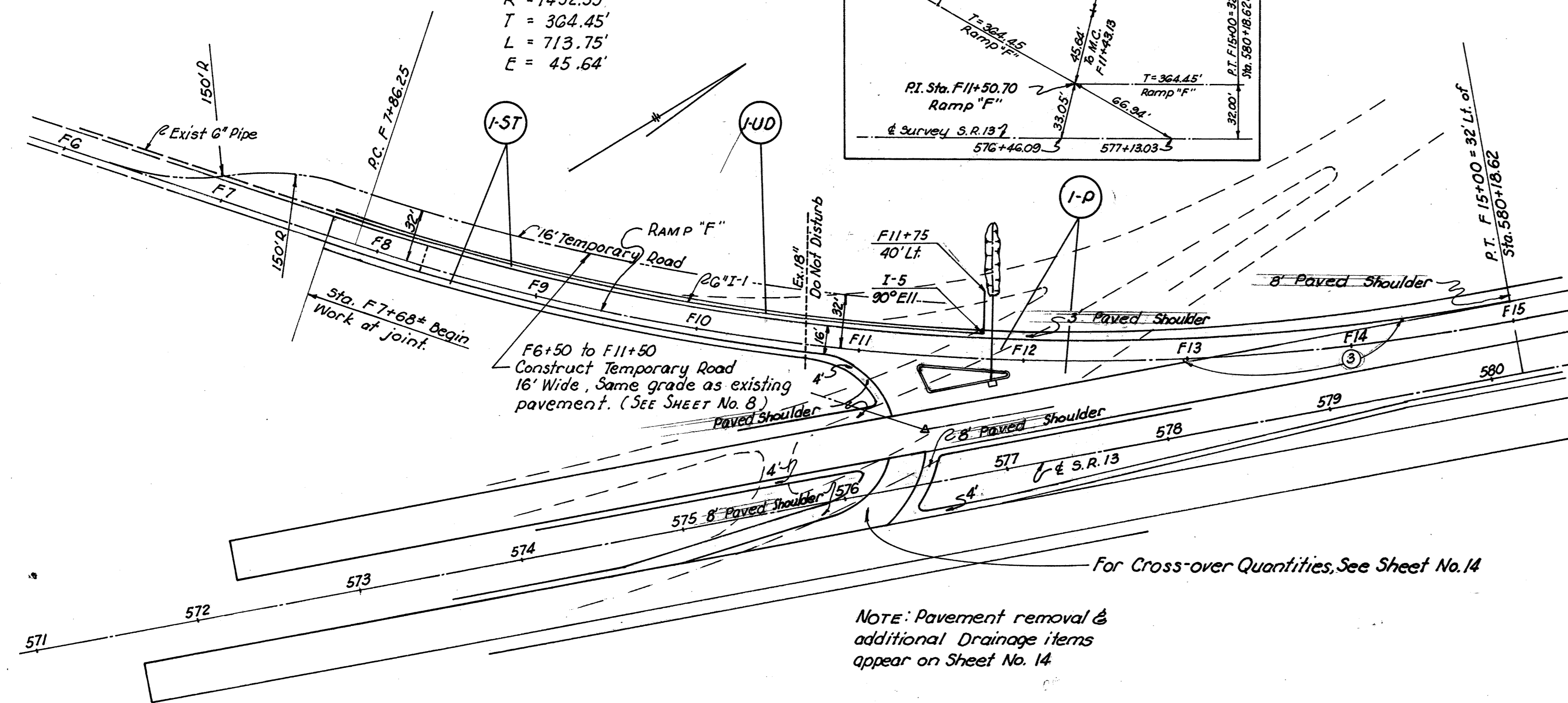
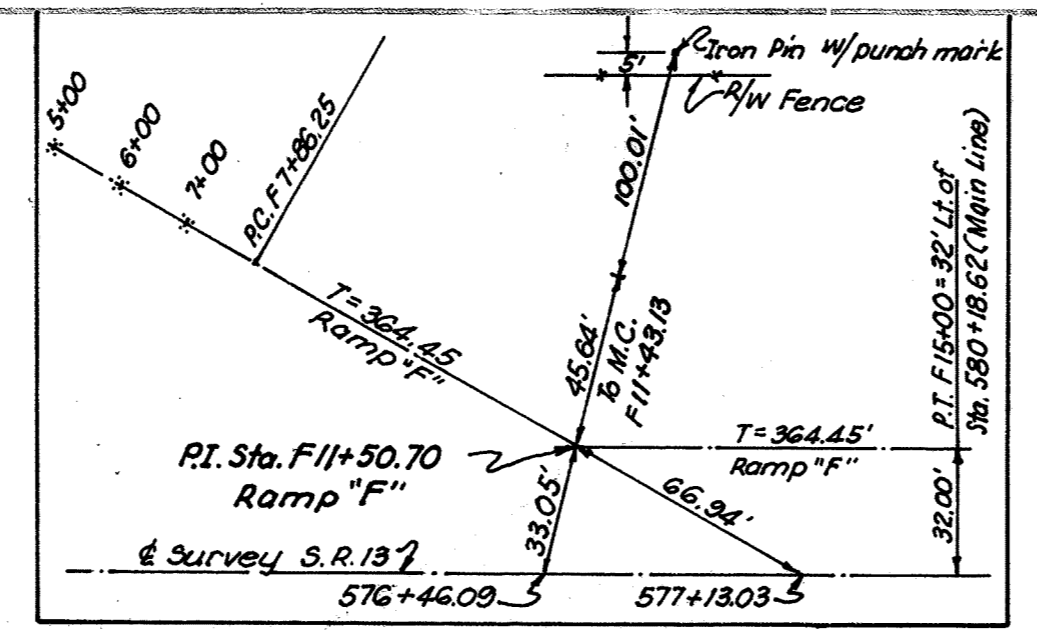
SEE SHEETS 120, 123, 124.



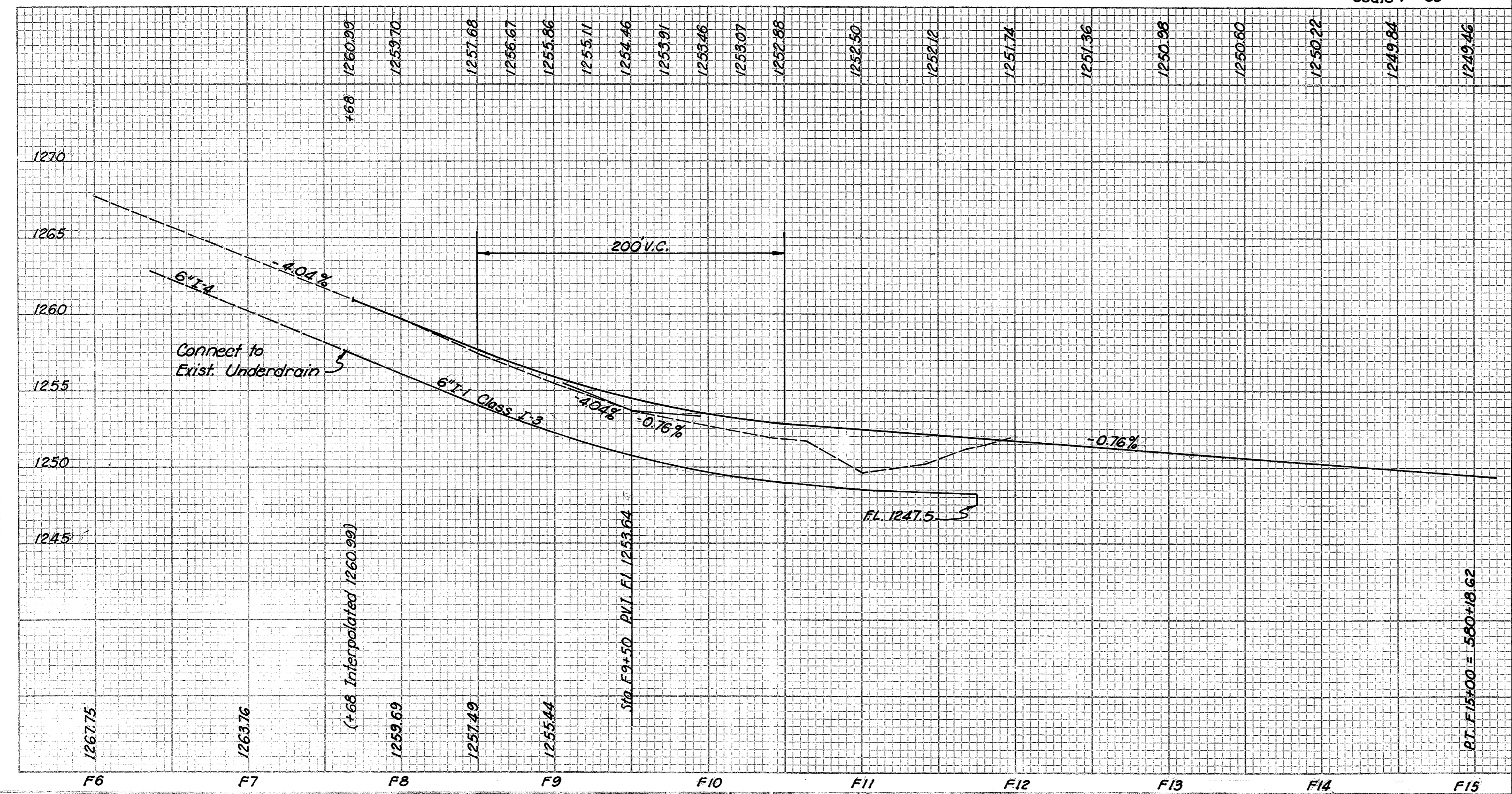
CONTRACTION JOINT DETAIL



CURVE DATA
 P.I. = F11+50.70
 $\Delta = 28^{\circ}-33' Lt.$
 $D_c = 4^{\circ}-00'$
 $R = 1432.39$
 $T = 364.45'$
 $L = 713.75'$
 $E = 45.64'$



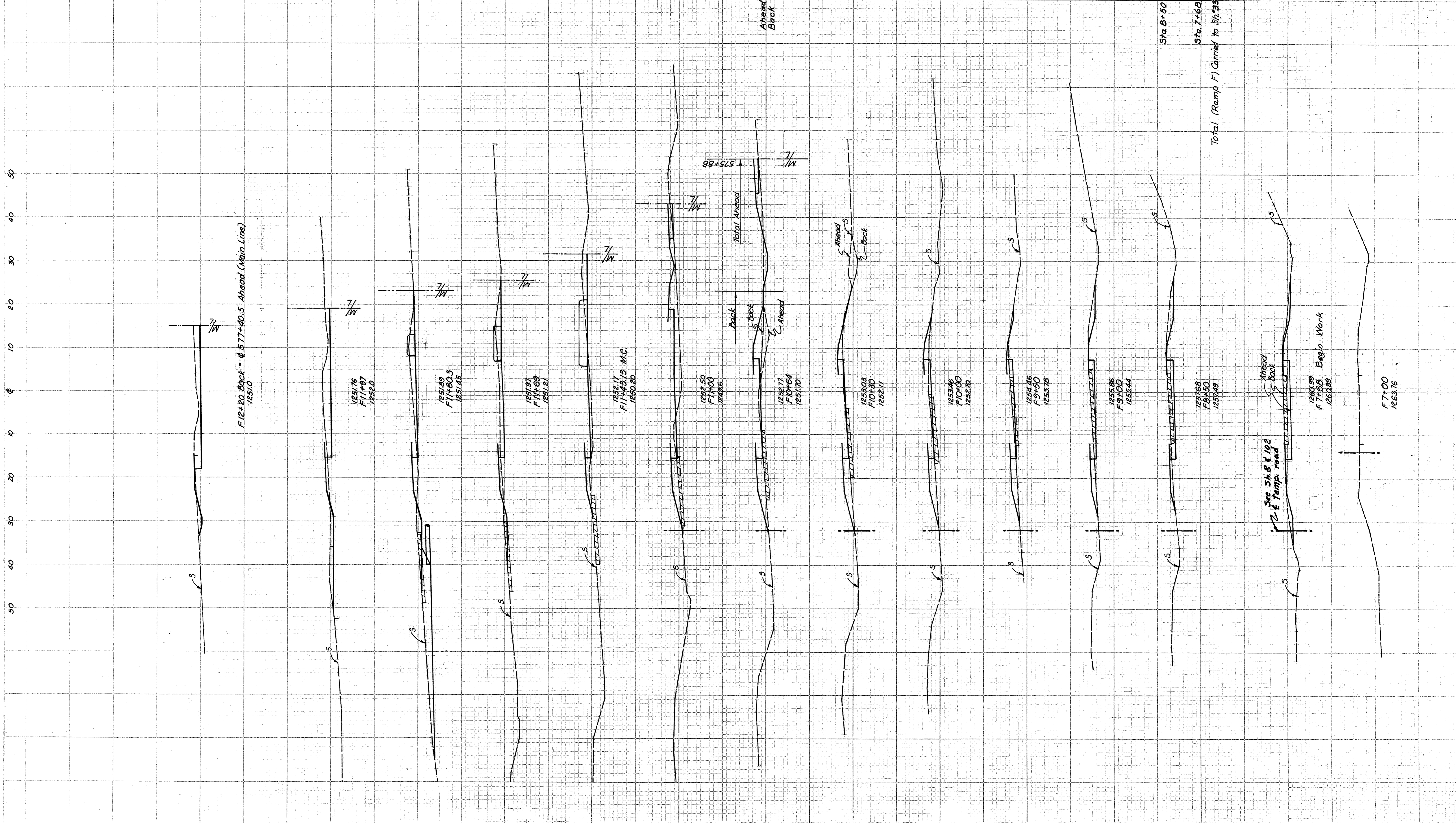
Scale 1" = 50'

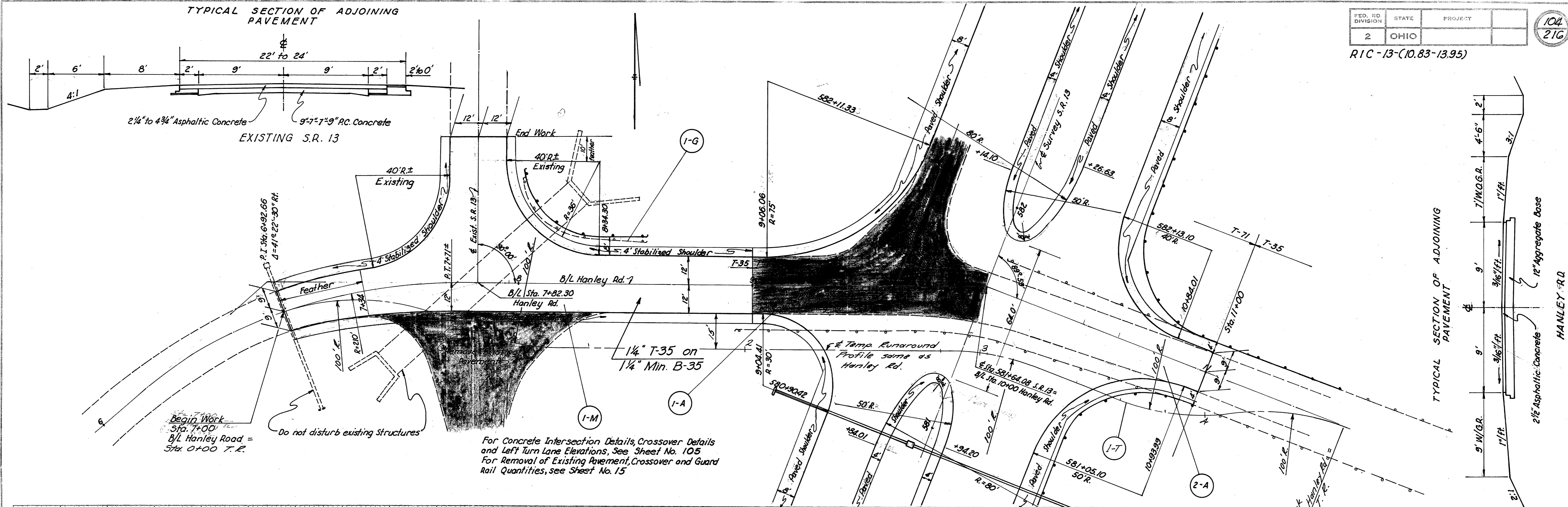


Ref. No.	Station	I-1	I-1	I-5	T-71	I-12	I-22	T-31	E-F	I-21	B-19	T-30	
		6" Pipe Class I-3 Shallow (11-64) Lin. Ft.	6" Pipe Class F-4 (11-64) Lin. Ft.	6" Pipe Class 90° Ell. Each	Reinforced Concrete Pavement 9" Sq. Yds.	Concrete Curb Type 2-A Lin. Ft.	Subbase Cu. Yds.	Bituminous Surface Treatment Aggr. gals. Cu. Yds.		Bit. Material Gal.	Compacted Subgrade Sp. Yds.	Portland Cement Island Pavement 4" Sq. Yds.	Aggregate Base Course Cu. Yds.
I-UD	F7+68 - F11+75	422	10	1									
I-ST	Ramp F Shoulders*						*173	*0.8	*31	104		*26.0	41.6
I-P	Ramp F Pavement				1367	126	256.0			1367	60		
Totals		422	10	1	1367	126	273.3	0.8	31	1471	60	26.0	41.6

*Quantities in addition to main item quantities, Sta. 576+30 to Sta. 580+18.

END AREA	CUT	FILL	CUT	FILL	CUT	FILL
49	0					
50	2					
68	5					
36	8					
17	3					
46	7					
15	18					
16	70					
5	70					
10	85					
Ahead 10	57	Back 3	37			
2	39					
0	25					
4	28					
7	26					
17	38					
11	15					
37	23					
29	10					
Sta. 8+50	40	6	132	9		
Sta. 7+68	47	0				
Total (Ramp F) Carried to Sta. 93						



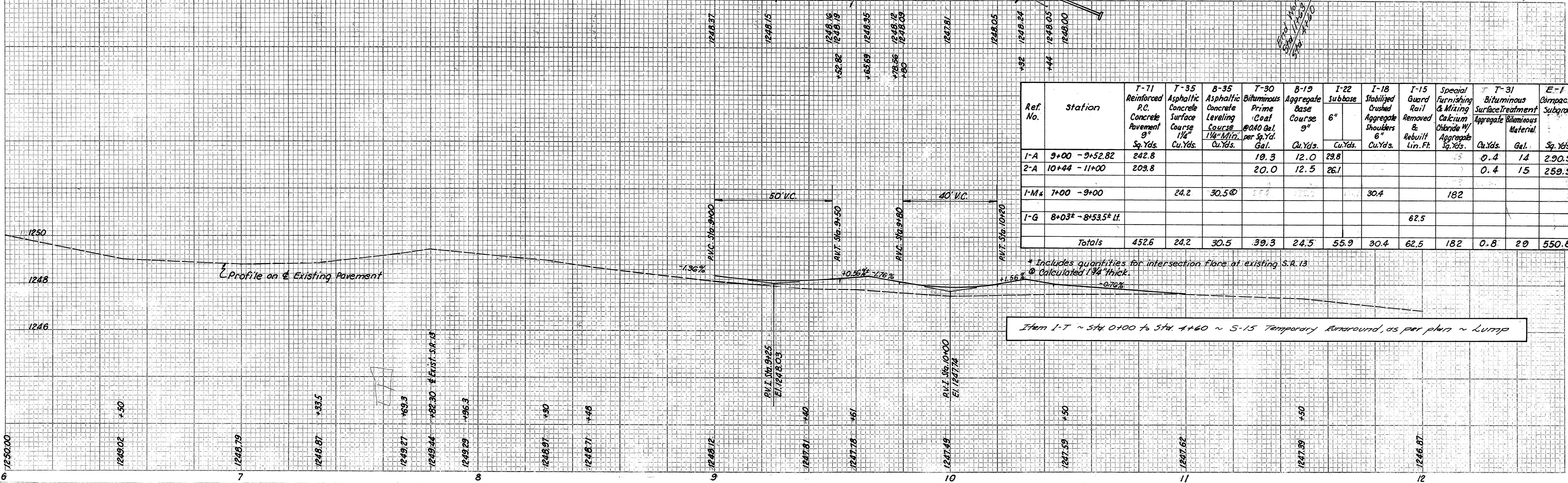
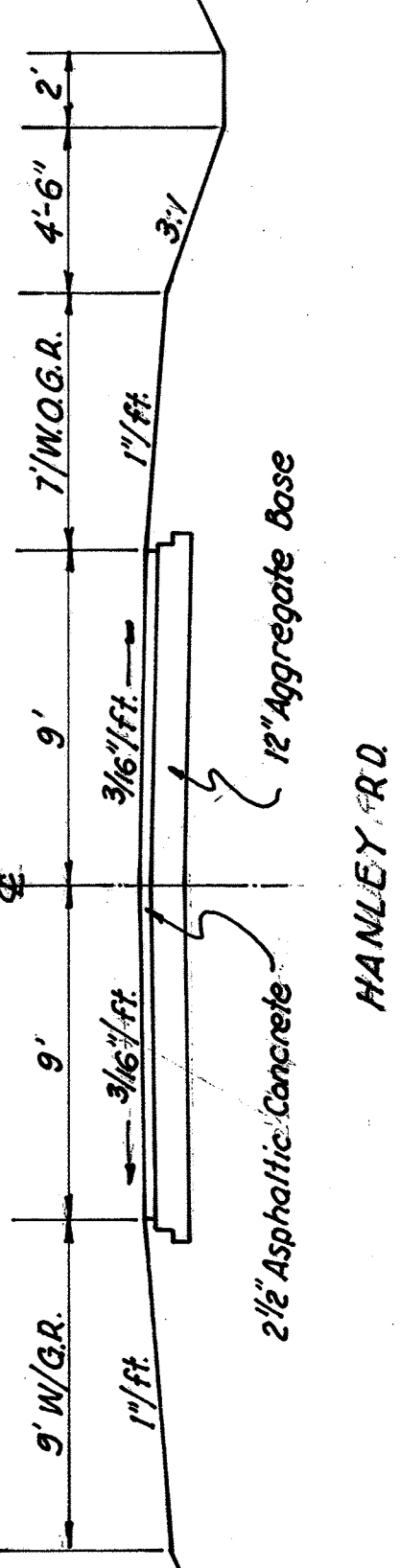


Begin Work
Sta. 7+00
B/L Hanley Road =
Sta. 0+00 T.R.

Do not disturb existing structures

For Concrete Intersection Details, Crossover Details
and Left Turn Lane Elevations, See Sheet No. 105
For Removal of Existing Pavement, Crossover and Guard
Rail Quantities, see Sheet No. 15

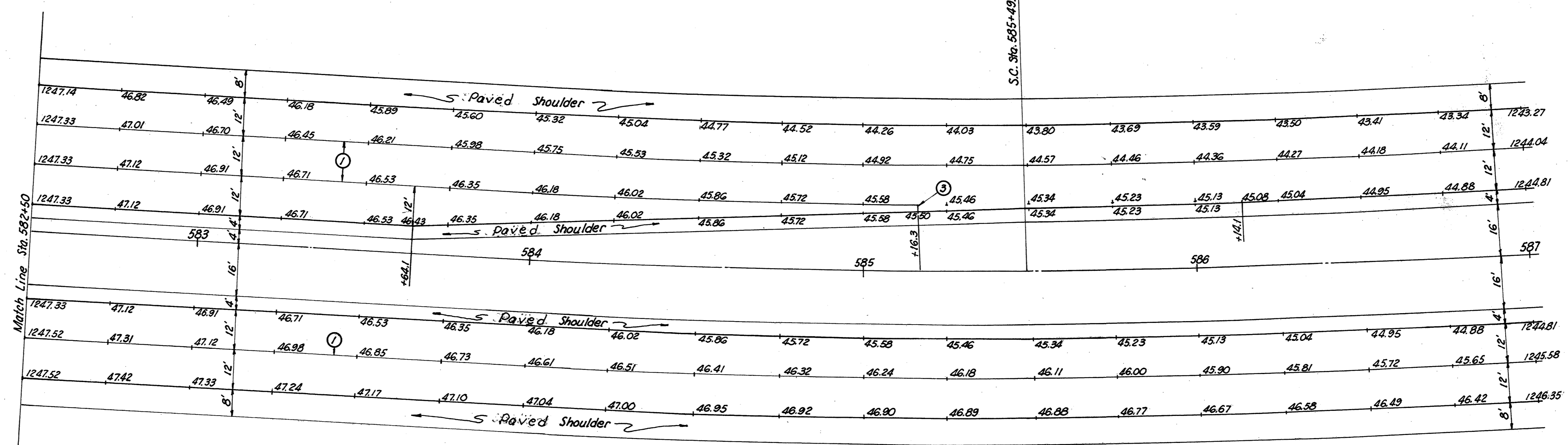
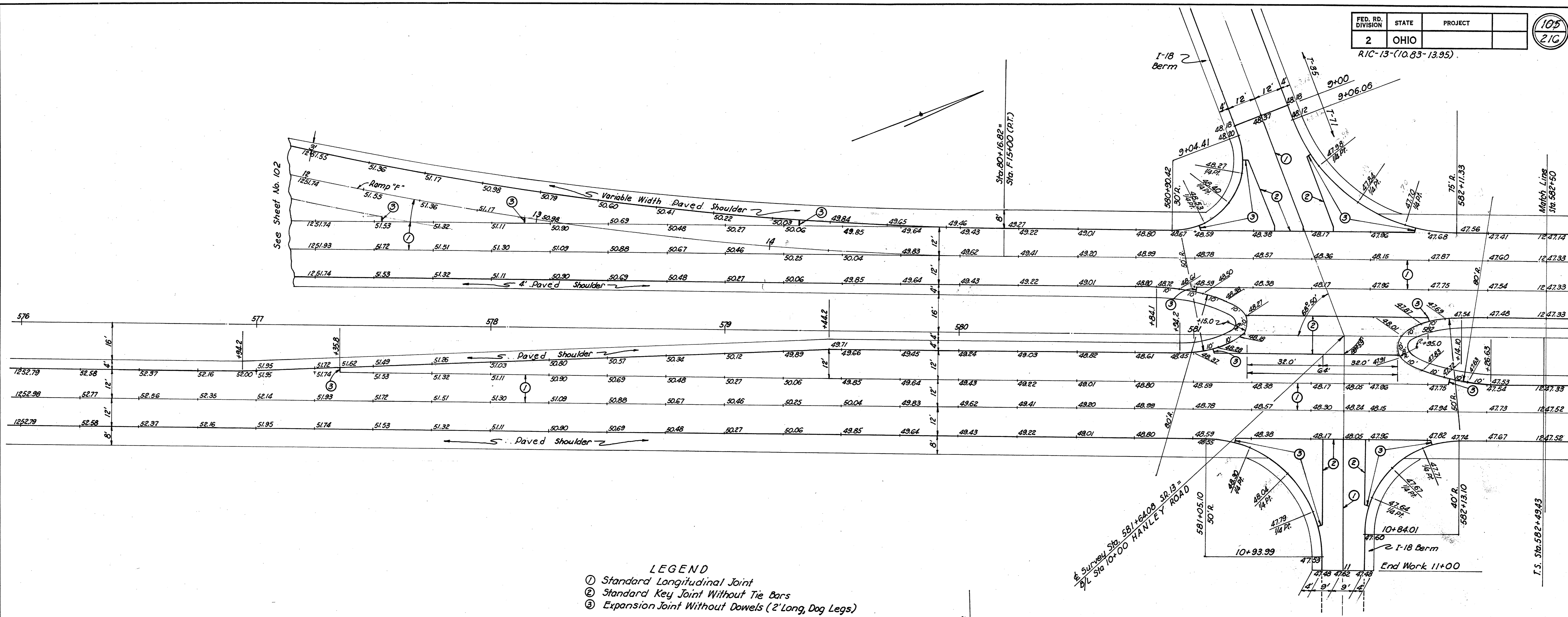
TYPICAL SECTION OF ADJOINING PAVEMENT



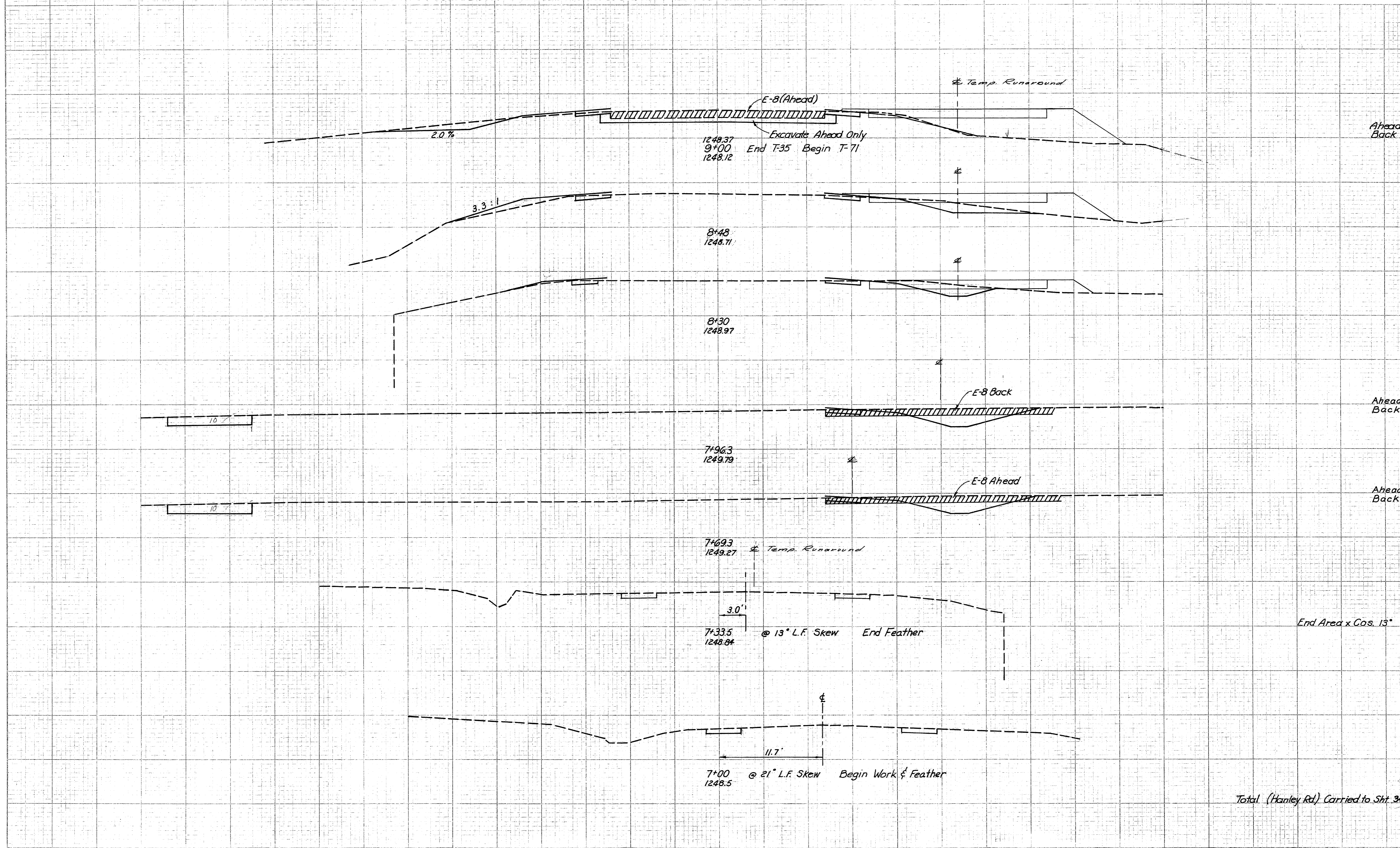
Ref. No.	Station	T-71 Reinforced P.C. Concrete Pavement 9" Sq. Yds.	T-35 Asphaltic Concrete Surface Course 1 1/4" Min. Cu. Yds.	B-35 Asphaltic Concrete Leveling Course 1 1/4" Min. Cu. Yds.	T-30 Bituminous Prime Coat @ 0.40 Gal. per Sq. Yd. Gal.	B-19 Aggregate Base Course 9" Cu. Yds.	I-22 Subbase 6" Cu. Yds.	I-18 Stabilized Crushed Aggregate Shoulders 6" Cu. Yds.	I-15 Guard Rail Removed & Rebuilt Lin. Ft.	Special Furnishing & Mixing Calcium Chloride 1/4" Aggregate Sq. Yds.	T-31 Bituminous Surface Treatment Aggregate Bituminous Material Cu. Yds. Gal.	E-1 Compacted Subgrade Sq. Yds.
1-A	9+00 - 9+52.82	242.8			19.3	12.0	29.8				0.4	14
2-A	10+44 - 11+00	209.8			20.0	12.5	26.1				0.4	15
1-M	7+00 - 9+00		24.2	30.5				30.4		182		
1-G	8+03± - 8+53.5± LI.								62.5			
Totals		452.6	24.2	30.5	39.3	24.5	55.9	30.4	62.5	182	0.8	29

* Includes quantities for intersection flare at existing S.R. 13
 @ Calculated 1 1/4" thick

Item 1-T ~ Sta. 0+00 to Sta. 4+60 ~ 5-15 Temporary Runaround, as per plan ~ Lump



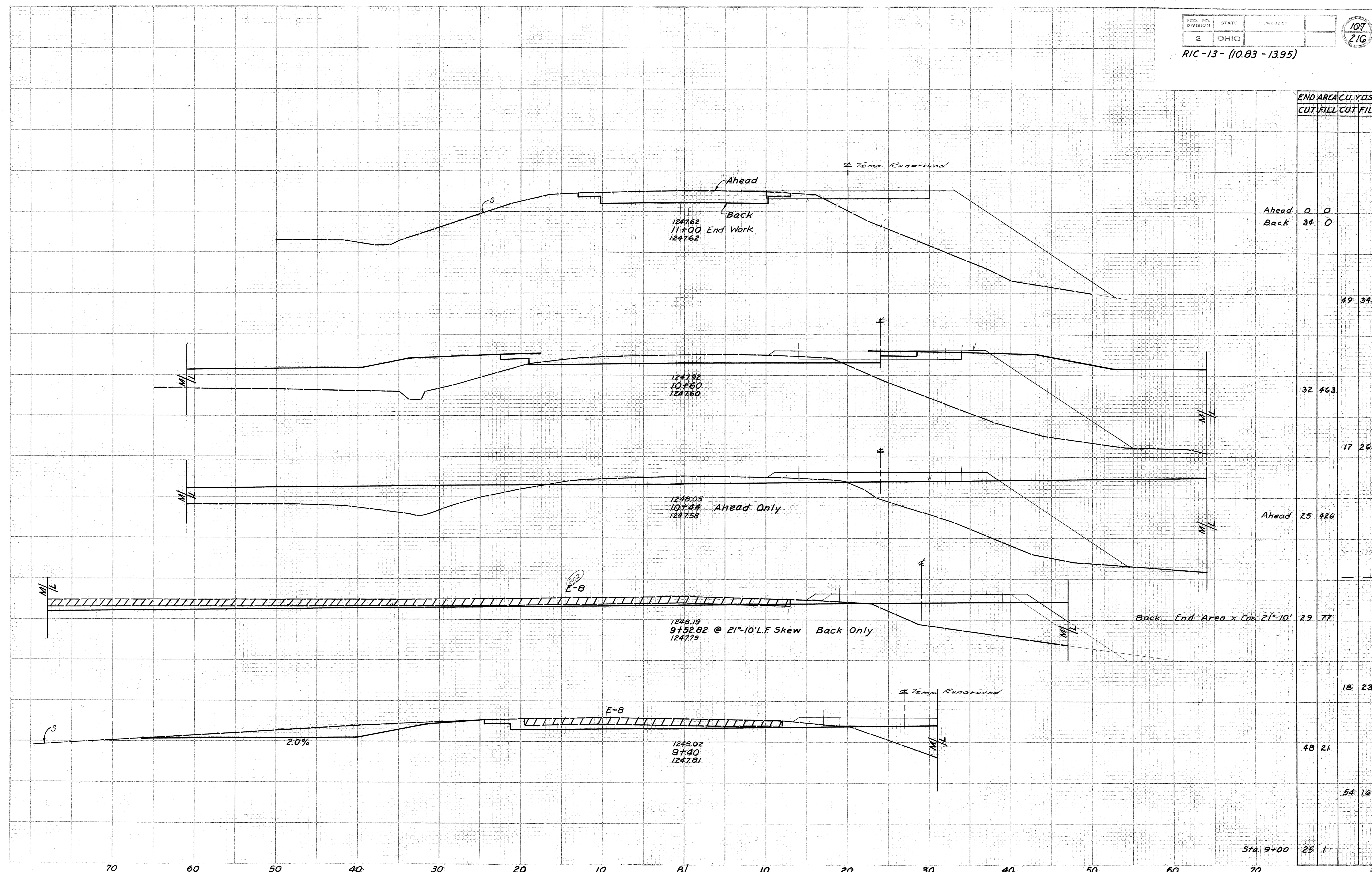
RIC-13-(10.83-13.95)



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
Ahead	25	1	
Back	10	1	
			22 6
	13	5	
			9 2
	15	1	
			28 3
Ahead	30	4	
Back	20	4	
			20 4
Ahead	20	3	
Back	30	3	
			22 2
	4	0	
			5 0
	4	0	
			217 660

End Area x Cos. 13°

Total (Hanley Rd.) Carried to Sht. 34



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
Ahead	0	0	
Back	34	0	
		49	343
		32	463
		17	268
Ahead	25	426	
Back		29	77
		18	23
		48	21
		54	16
Sta. 9+00	25	1	

CURVE DATA
 P.I. = D1+24.02
 $\Delta = 12^\circ-17'-30''$
 $D = 24^\circ-03'-25.9''$
 $T = 25.63'$
 $L = 51.06'$
 $E = 1.38'$
 $\frac{1}{2} R = 238'$

Sta. D3+76.14 = 8' Rt. of
 Sta. 139+04.37 (Ramp "D")
 on Project RIC-1-8.54 (Sheet #133)

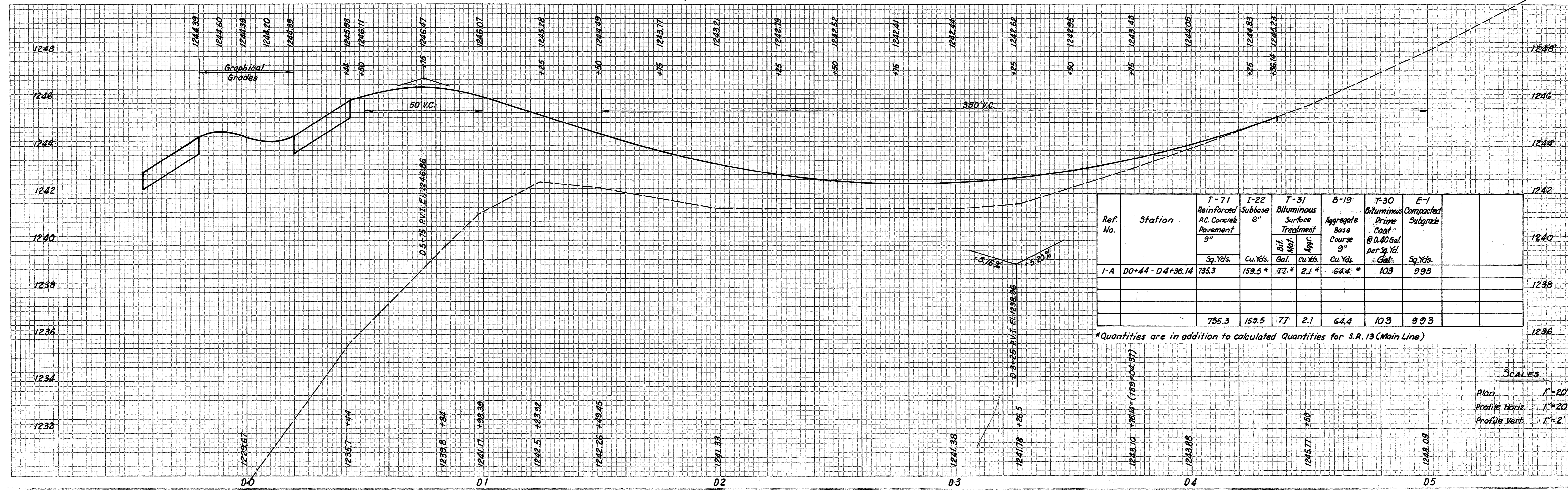
Adjust panel length in
 field if necessary.
 Cost included in unit price
 bid for guard rail, I-15.
 Sta. D4+36.14±
 End New Pavt. at
 Construction Joint

END WORK @
 Sta. 5+00

- ① Standard Longitudinal Joint
- ② Standard Key Joint $\frac{1}{2}$ Tie Bars
- ③ Expansion Joint $\frac{1}{2}$ Dowels (2' Long)

For Traffic Maintenance,
 See Sheets No. 8 & 15

All Pavement Removal and Guard Rail
 Quantities are included on Sheet No. 15

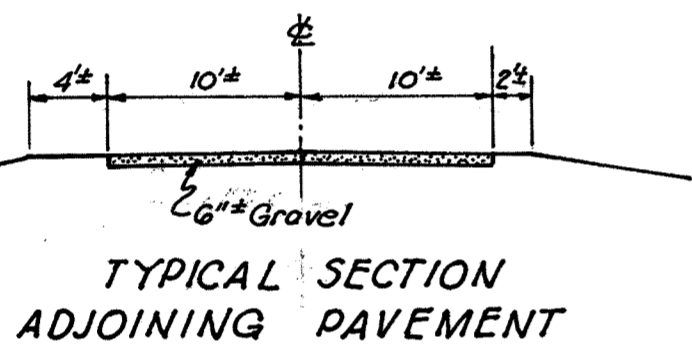
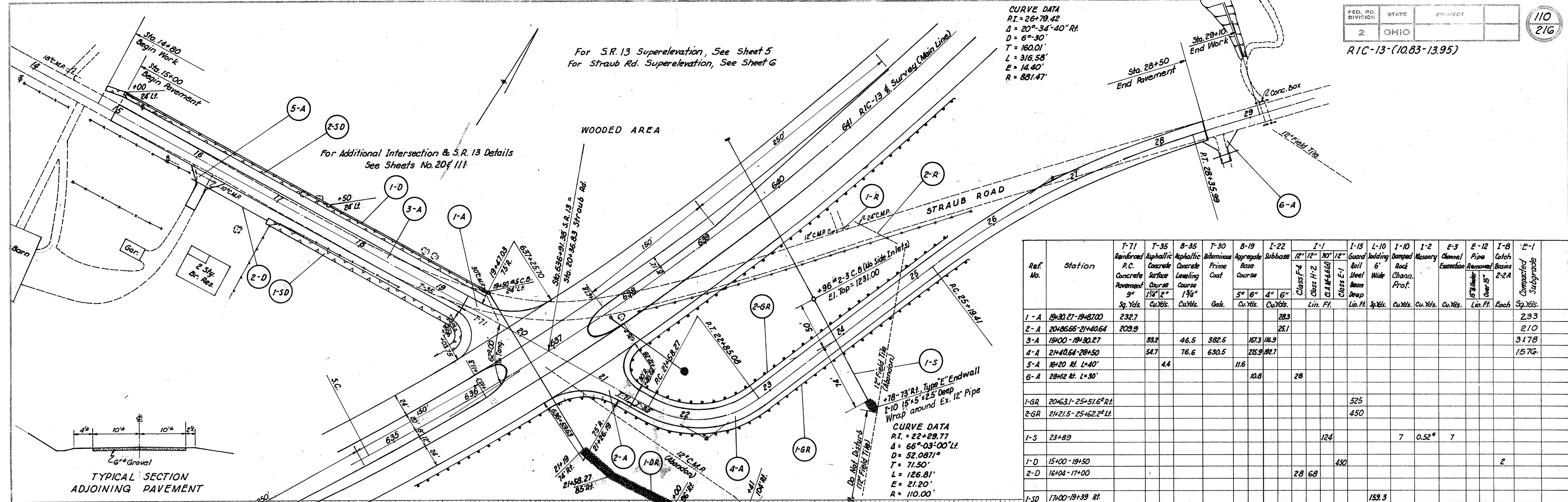


RIC-13-(10.83-13.95)

CURVE DATA
 P.I. = 26+79.42
 Δ = 20°-34'-40" Rt.
 D = 6°-30'
 T = 160.01'
 L = 316.58'
 E = 14.40'
 R = 881.47'

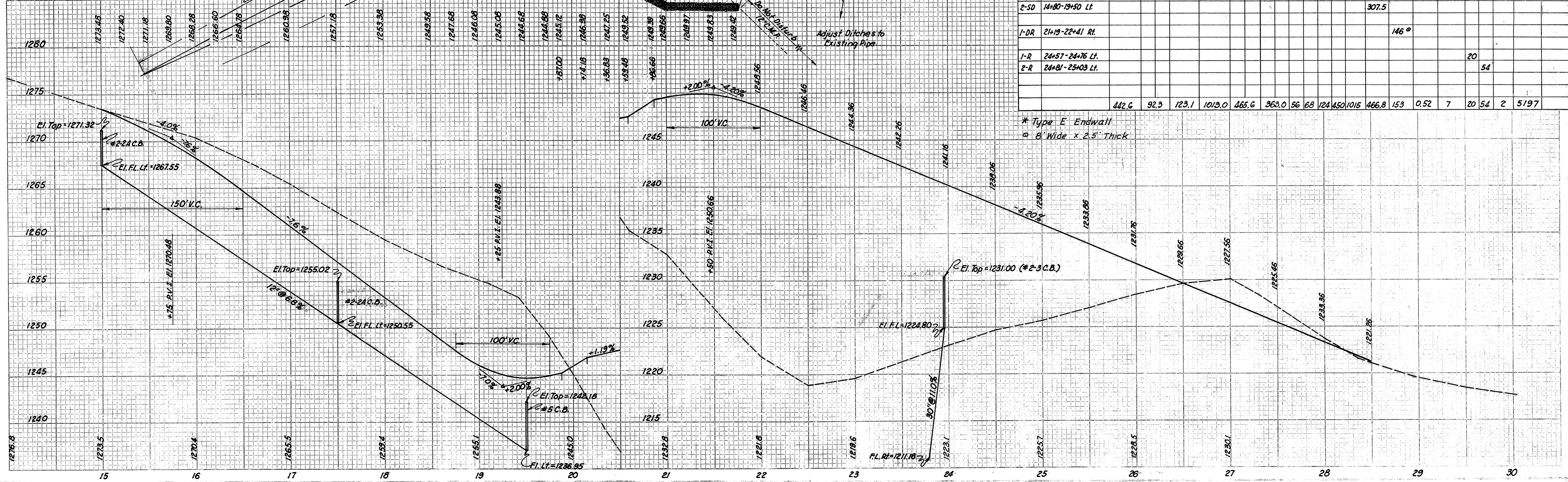
For S.R. 13 Superelevation, See Sheet 5
 For Straub Rd. Superelevation, See Sheet 6

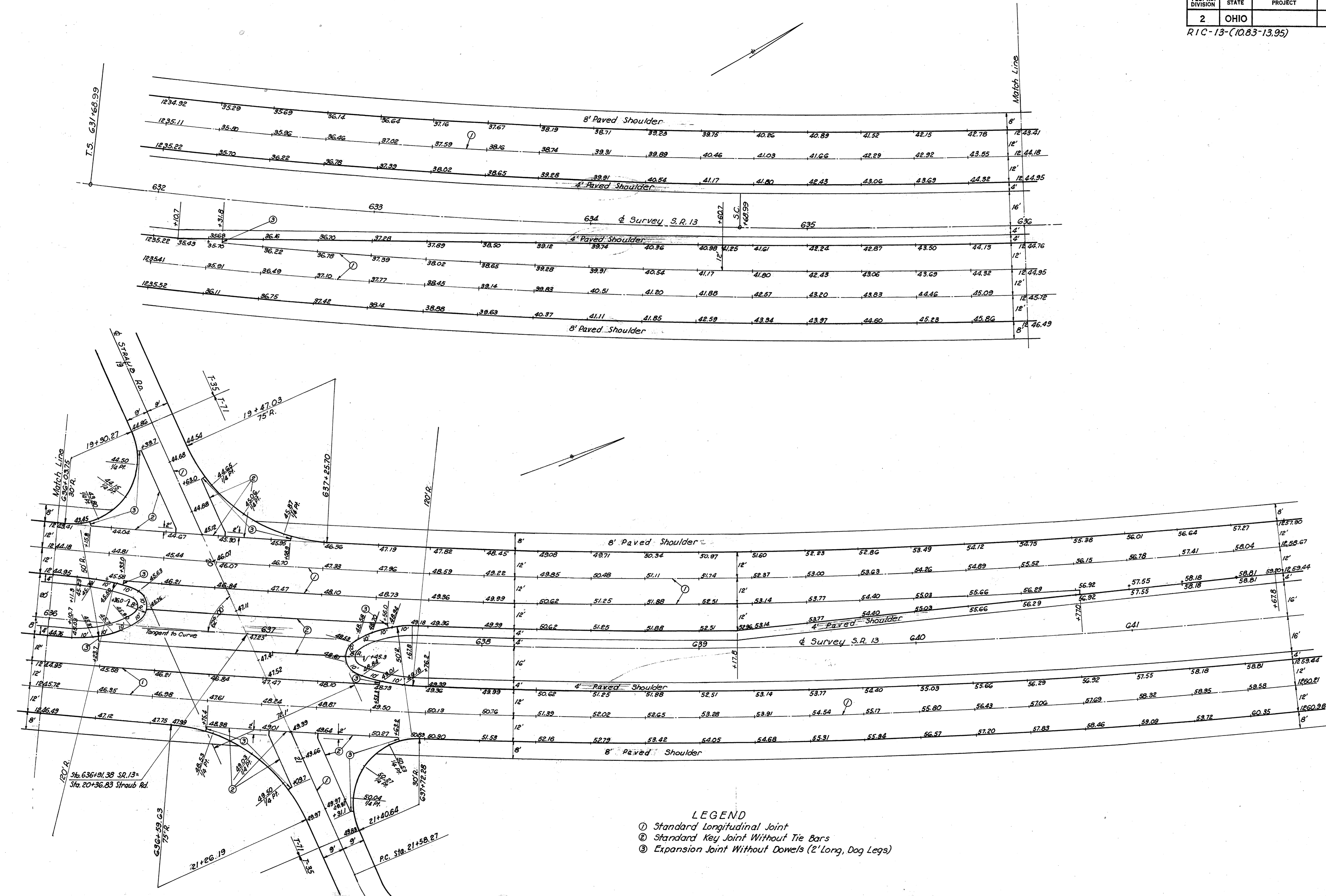
For Additional Intersection & S.R. 13 Details
 See Sheets No. 20 & 111



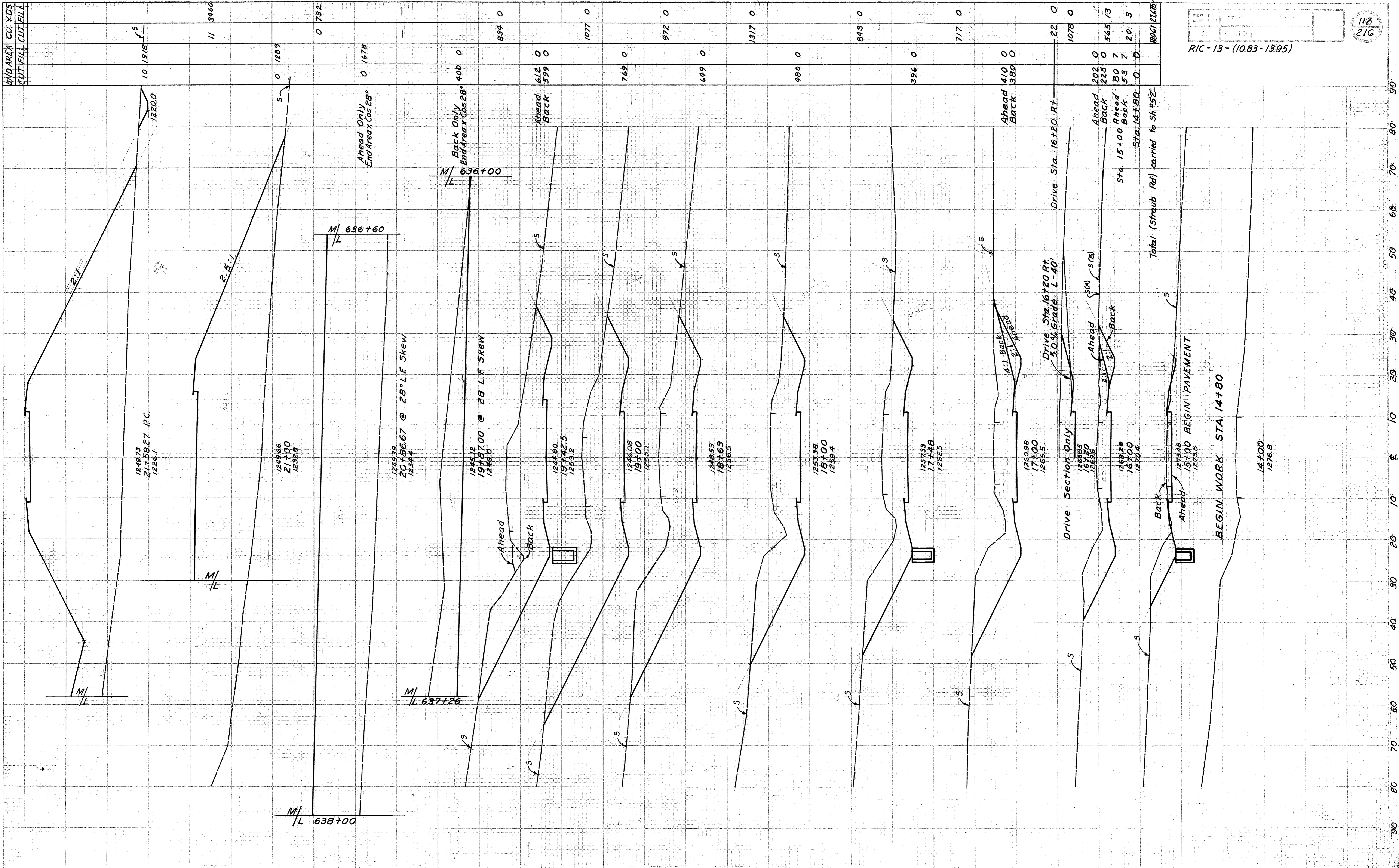
Ref. No.	Station	T-71 Reinforced P.C. Concrete Pavement Sq. Yds.	T-35 Asphaltic Concrete Surface Course Cu. Yds.	B-35 Asphaltic Concrete Leveling Course Cu. Yds.	T-30 Bituminous Prime Coat Gal.	B-19 Aggregate Base Course Cu. Yds.	I-22 Subbase Cu. Yds.	I-1 12" Class F-4 Cu. Yds.	I-1 12" Class H-2 Cu. Yds.	I-15 Guard Rail Class E-1 Lin. Ft.	L-10 Vodding 6" Wide Lin. Ft.	I-10 Damped Rock Chann. Prof. Cu. Yds.	I-2 Masonry Channel Estimation Cu. Yds.	E-3 Channel Estimation Cu. Yds.	E-12 Pipe Removed Over 15" Lin. Ft.	I-8 Catch Basins 2-2A Each	E-1 Compacted Subgrade Sp. Yds.			
1-A	19+30.27-19+82.00	232.7					28.3										233			
2-A	20+86.66-21+40.64	209.9					25.1										210			
3-A	15+00-19+30.27		33.2	46.5	382.5	167.3	116.9										3178			
4-A	21+40.64-28+50		54.7	76.6	630.5	215.9	182.7										1576			
5-A	16+20 Rt. L=40'		4.4			11.6														
6-A	28+62 Rt. L=30'					10.8		28												
1-GR	20+63.1-25+51.6 Rt.									525										
2-GR	21+21.5-25+62.2 Lt.									450										
1-S	23+89								124			7	0.52*	7						
1-D	15+00-19+50									450							2			
2-D	16+04-17+00							28	68											
1-SD	17+00-19+39 Rt.										159.3									
2-SD	14+80-19+50 Lt.										307.5									
1-DR	21+19-22+41 Rt.											146°								
1-R	24+57-24+76 Lt.																20			
2-R	24+81-25+03 Lt.																54			
		442.6	92.3	123.1	1013.0	465.6	363.0	56	68	124	450	1015	466.8	153	0.52	7	20	54	2	5197

* Type E Endwall
 8' Wide x 2.5' Thick





END AREA CU YDS
CUT/FILL CUT/FILL



1249.73
21158.27 P.C.
1226.1

1249.66
211700
1232.8

1249.39
20186.67 @ 28° L.F. Skew
1234.4

1245.12
19197.00 @ 28° L.F. Skew
1248.0

1244.80
19142.5
1253.2

1244.08
19100
1255.7

1248.59
18163
1256.5

1253.38
18100
1259.4

1257.33
17148
1262.5

1260.98
17100
1269.5

1268.28
16100
1270.4

1273.48
15100 BEGIN PAVEMENT
1273.5

14100
1276.8

Ahead Only
End Area x Cos Eg°
0 1678

Back Only
End Area x Cos 28°
400 0

Ahead
Back
612 0
599 0

769 0

649 0

480 0

396 0

717 0

Ahead 410 0
Back 380 0

22 0

Ahead 202 0
Back 225 0

565 13
80 7
53 7
20 3

1078 0

1078 0

1078 0

1078 0

1078 0

Total (Straub Rd) carried to Sh.#52

BEGIN WORK STA 14+80

Drive Sta. 16+20 Rt.
50% Grade L-40

Drive Section Only

4:1 Back
2:1 Ahead

Ahead s(a)
Back s(b)

Back

Ahead

s

s

s

s

s

s

s

s

s

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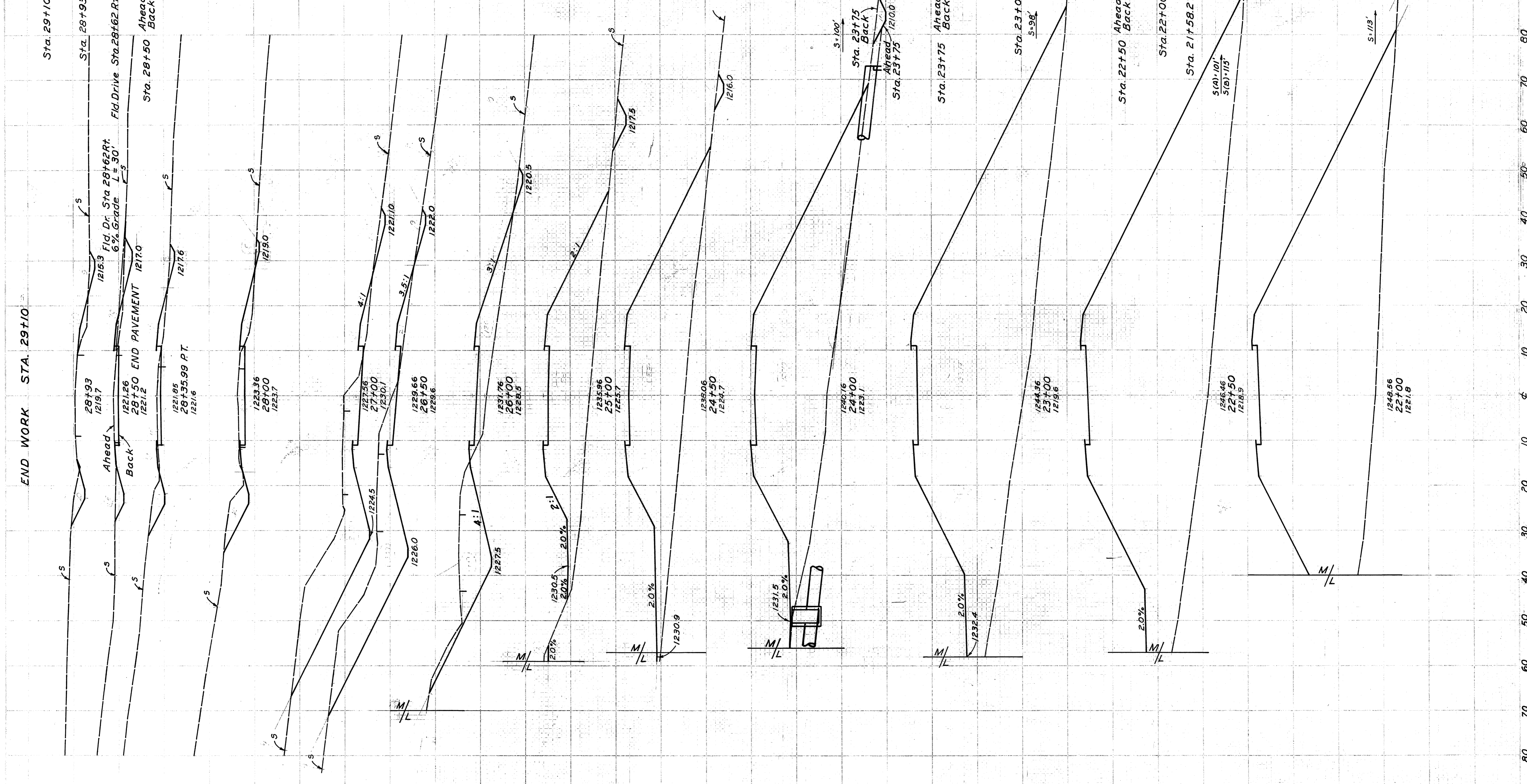
s

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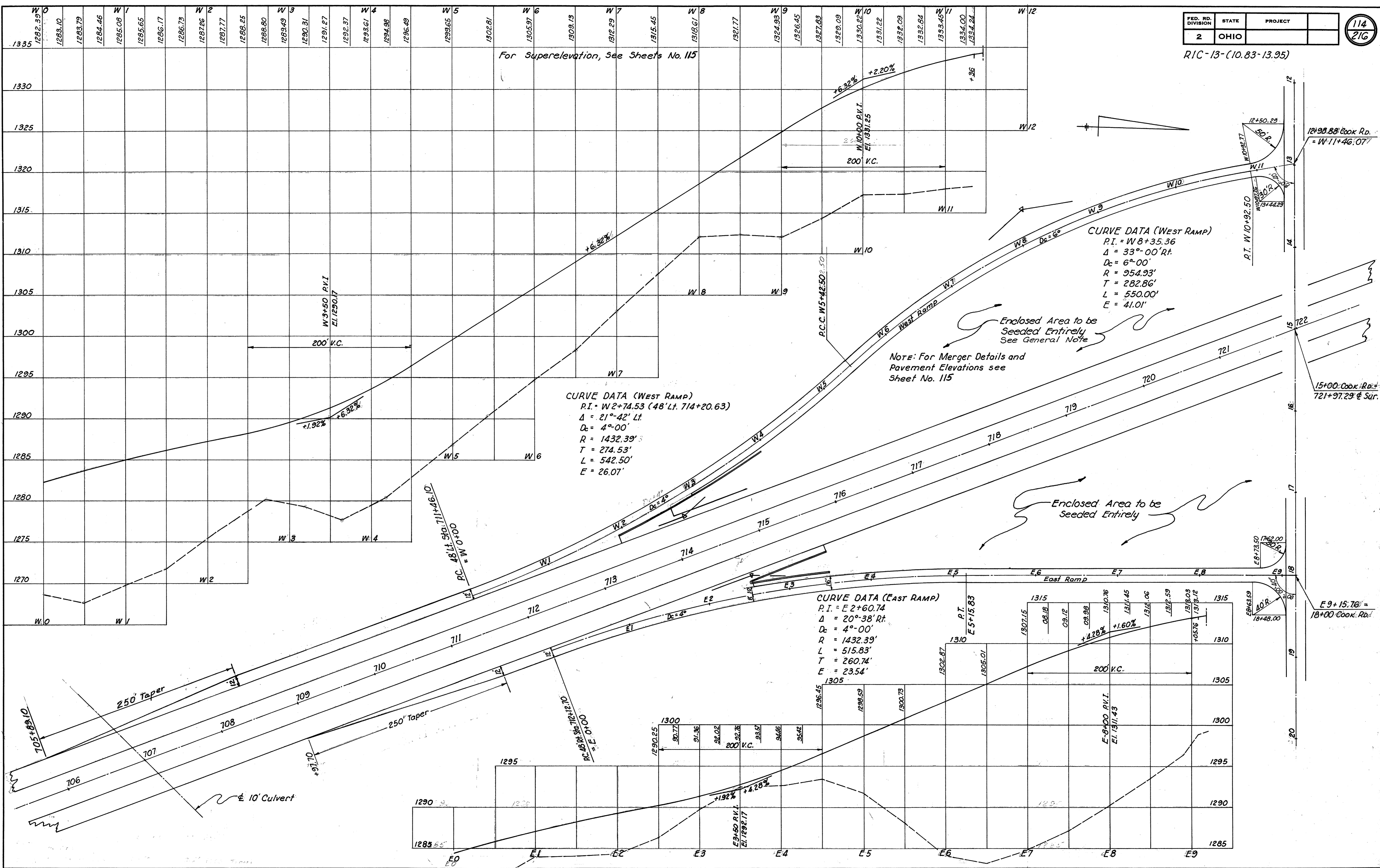
s

END AREA		CU.YDS.	
CUT	FILL	CUT	FILL
0	0	0	9
29	12	44	18
44	10	44	18
46	10	1	3
26	10		
44	13		
23	6		
81	22		
78	20		
824	70		
367	18		
318	27		
188	136		
23	587		
31	1359		
10	880		
16	1279		
15			
0			
0	2219		
0	4407		
0	2540		
17	2540		
20	2198		
10	1918		
Ahead	12080		
Back	12080		



RIC-13-(10.83-13.95)

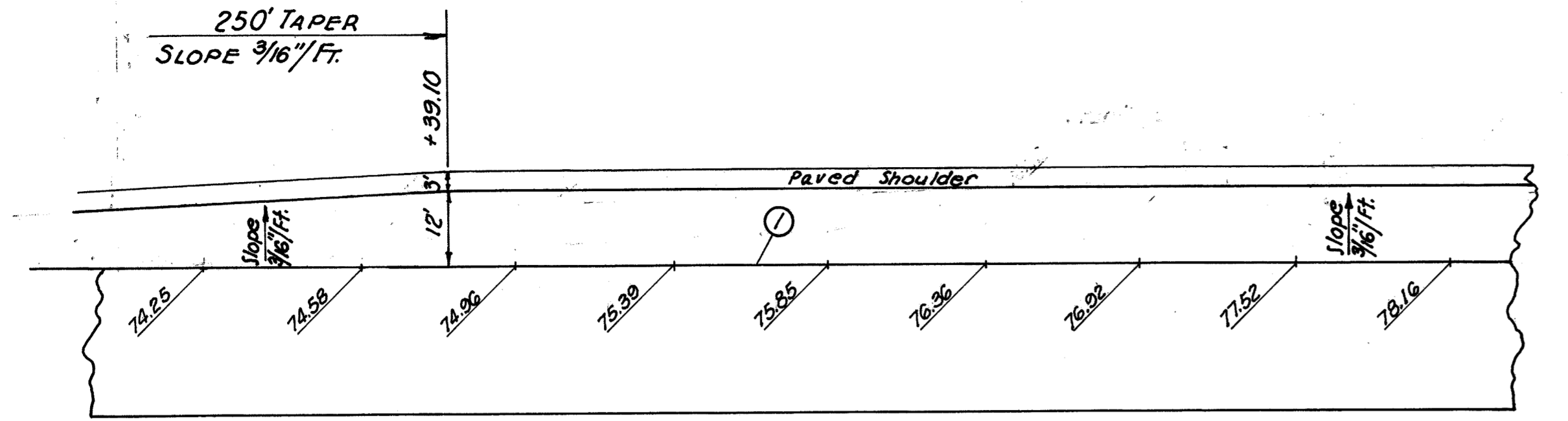
For Superelevation, See Sheets No. 115



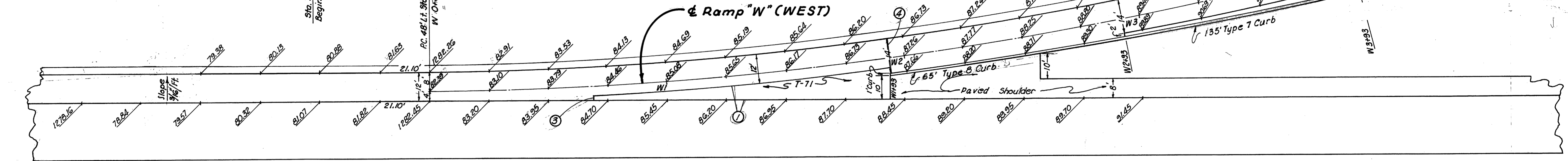
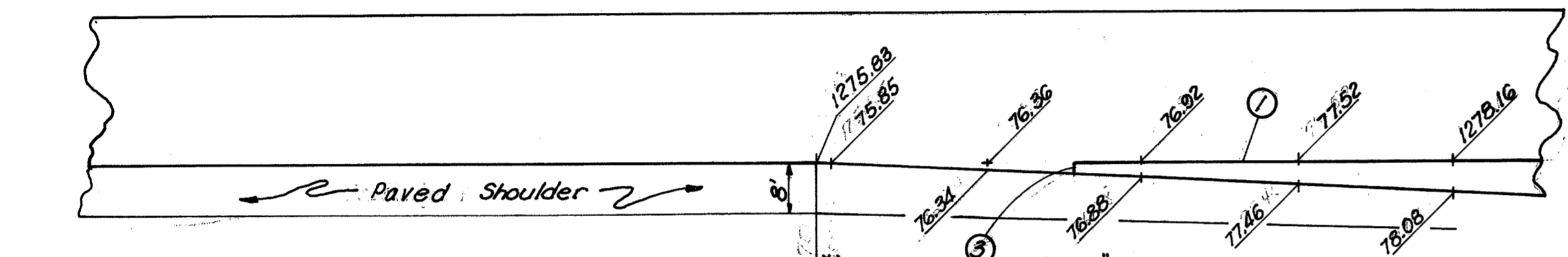
RIC-13-(10.83-13.95)

COOK ROAD INTERCHANGE PAVEMENT ELEVATIONS

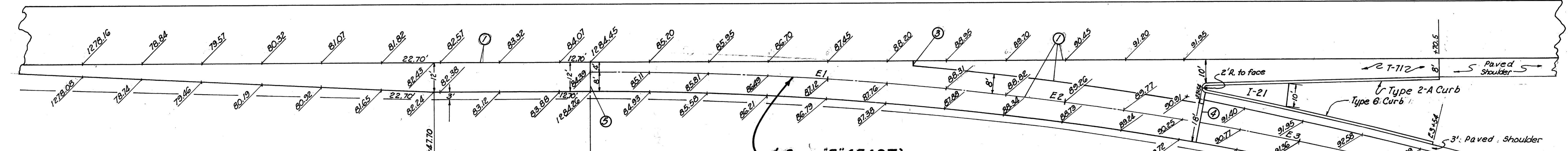
WEST RAMP					EAST RAMP				
Station	Left	℄	Right	Remarks	Station	Left	℄	Right	Remarks
W4+00	1293.29	1293.61	1293.93	Dc = 4'-00" Max. Super. = 0.066 Revolve about ℄ Ramp W.	E4+00	1294.86	1294.46	1294.06	Dc = 4'-00" Max. Super. = 0.066 Revolve about ℄ Ramp E.
+25	94.72	94.98	95.24		+25	95.75	95.42	95.09	
+50	96.28	94.49	96.70		+50	96.71	96.45	96.19	
+75	97.91	98.07	98.23	W5+42.50 Level Sect.	+75	97.72	97.52	97.32	Dc = 4'-00" Max. Super. = 0.066 Revolve about ℄ Ramp E.
W5+00	1299.55	1299.65	1299.75		E5+00	98.72	98.59	98.46	
+25	1301.17	1301.23	1301.29		+25	1299.73	1299.66	1299.53	
+50	02.81	02.81	02.81	Dc = 6'-00" Max. Super. = 0.063 Revolve about ℄ Ramp W.	+50	1300.73	1300.73	1300.60	Standard Crown (3/16"/ft.)
+75	04.45	04.39	04.33		+75	01.76	01.80	01.67	
W6+00	06.10	05.97	05.84		E6+00	02.79	02.87	02.74	
+25	07.74	07.55	07.37	W7+00	+25	03.81	03.94	03.81	Standard Crown (3/16"/ft.)
+50	09.39	09.13	08.87		+50	04.88	05.01	04.88	
+75	11.02	10.71	10.40		+75	05.95	06.08	05.95	
W7+00	12.67	12.29	11.91	W8+00	E7+00	07.02	07.15	07.02	Standard Crown (3/16"/ft.)
+25	14.31	13.87	13.43		+25	08.05	08.18	08.05	
+50	15.95	15.45	14.95		+50	08.99	09.12	08.99	
+75	17.53	17.03	16.53	W8+00	E8+00	10.63	10.76	10.63	Standard Crown (3/16"/ft.)
W8+00	19.11	18.61	18.11		+25	11.32	11.45	11.32	
+25	20.65	20.19	19.73		+50	11.93	12.06	11.93	
+50	22.17	21.77	21.37	W9+00	+75	1312.46	12.59	1312.46	Standard Crown (3/16"/ft.)
+75	23.70	23.35	23.00		E9+00				
W9+00	25.23	24.93	24.63						
+25	26.71	26.45	26.19	W10+00					
+50	28.03	27.83	27.63		+25				
+75	29.24	29.09	28.94		+50				
W10+00	30.32	30.22	30.09	W11+00	+75				
+25	31.27	31.22	31.09		W11+00	1333.37	33.45	1333.32	
+50	32.09	32.09	31.96		+25		34.00		
+75	32.80	32.84	32.71	W11+36.07			1334.24		



708 709 ℄ Survey S.R. 13 710



710 711 712 ℄ Survey S.R. 13 713 714 715 716

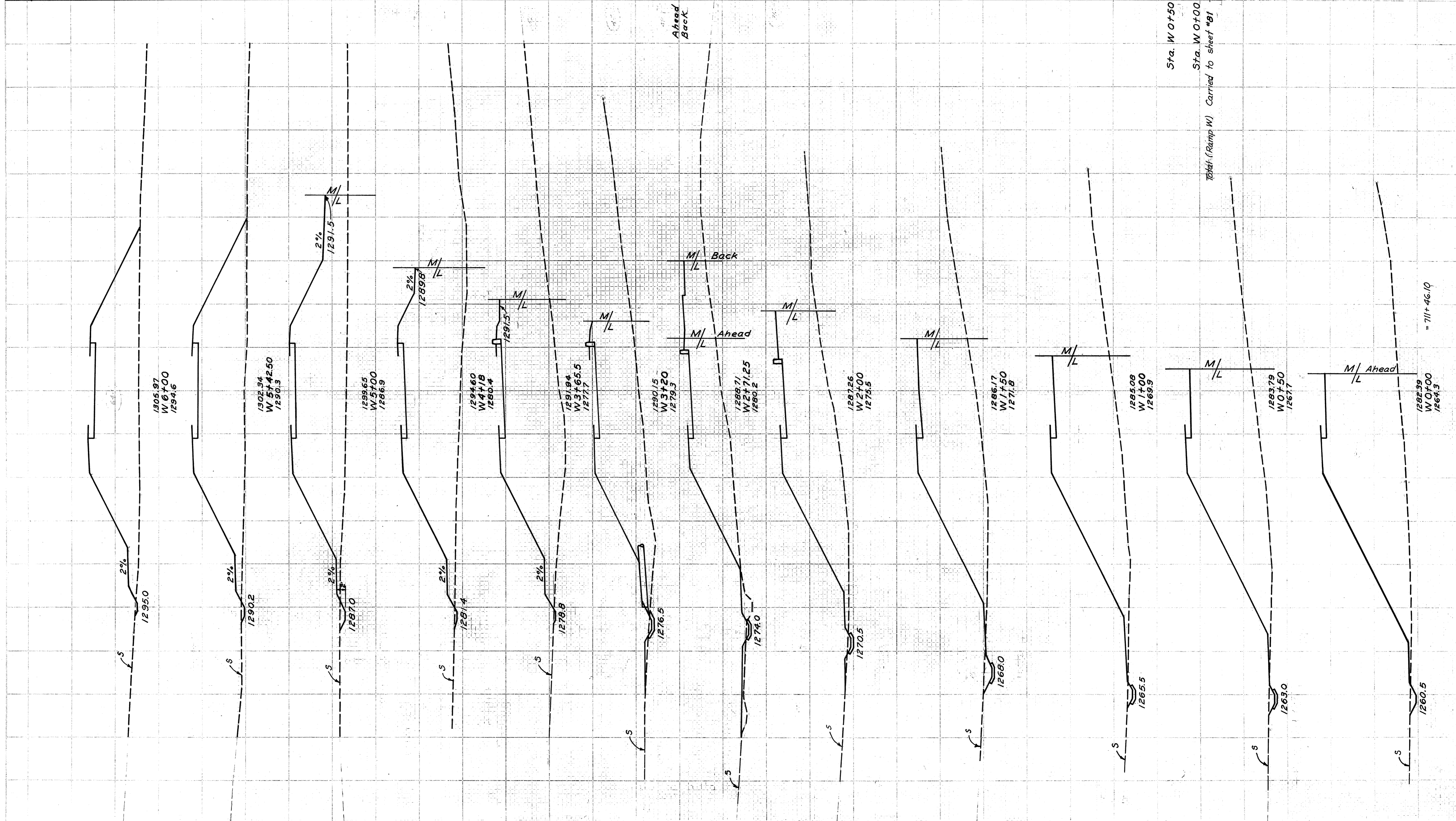


710 711 712 713 714 715 716

- ① Standard Longitudinal Joint
- ② Expansion Joint Without Dowels (2' Long)
- ③ Standard Expansion Joint
- ④ Standard Contraction Joint

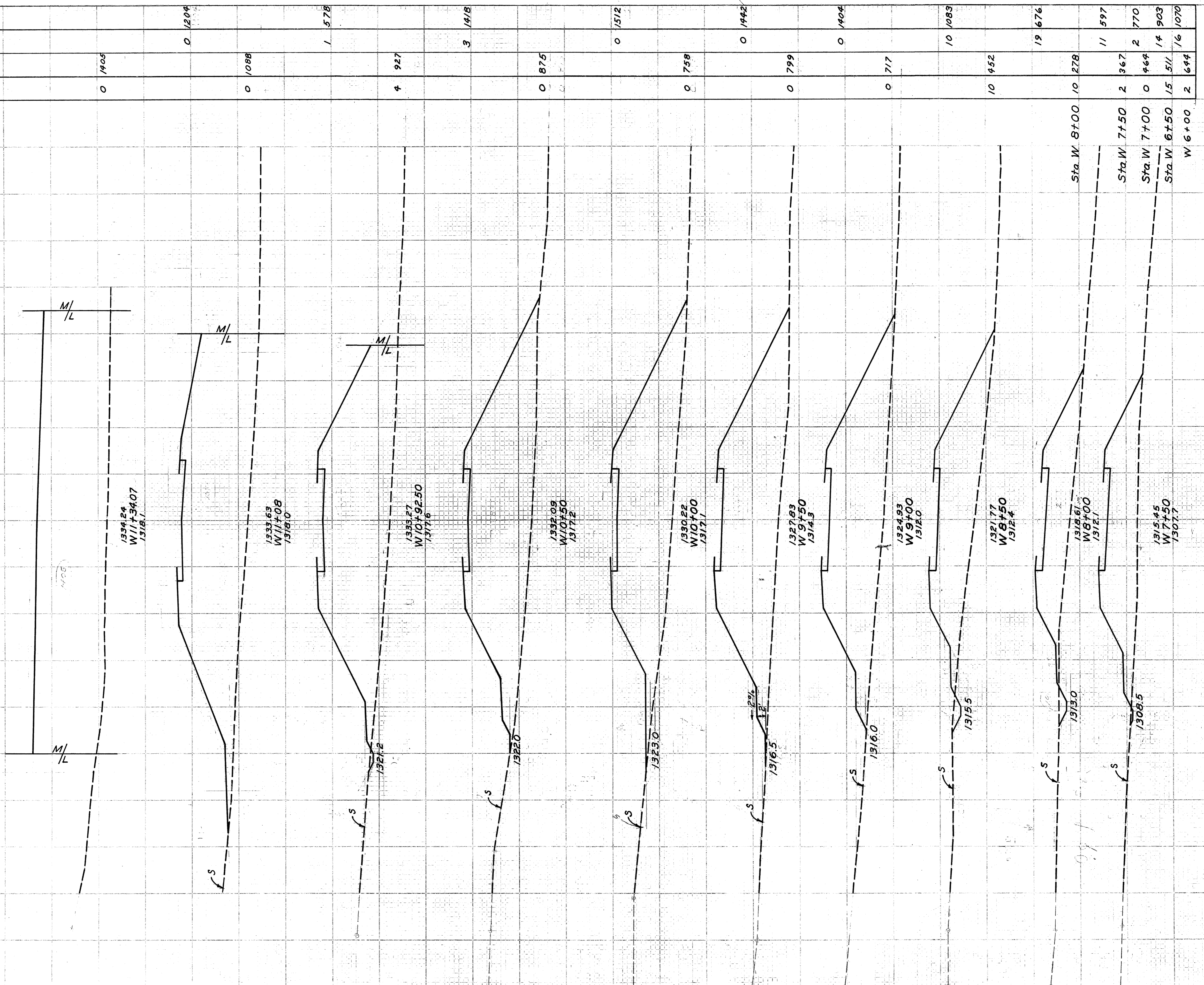
NOTE: Elevations along a Line of Pavement are spaced 25' apart unless otherwise shown.

END AREA	CU. YDS.	CUT	FILL	CUT	FILL	CUT	FILL
	2	694					
	5	1423					
	3	692					
	7	1156					
	6	776					
	14	2362					
	3	779					
	2	730					
	3	551					
	4	1079					
	5	891					
	3	381	Ahead				
	3	986	Back				
	8	1488					
	3	692					
	11	680					
	14	1294					
	10	1360					
	6	751	Sta. W 0+50				
	6	814	Sta. W 0+00				
	172	27800	Total (Ramp W)				Carried to sheet #91



END AREA C.U.Y.D.S.
CUT/FILL CUT/FILL

RIC-13-(10.83-13.95)



1334.24
W 11+34.07
1318.1

1333.63
W 11+08
1318.0

1335.27
W 10+22.50
1317.6

1332.09
W 10+50
1317.2

1330.22
W 10+00
1317.1

1327.83
W 9+50
1314.3

1324.93
W 9+00
1312.0

1321.77
W 8+50
1312.4

1318.61
W 8+00
1312.1

1315.45
W 7+50
1307.7

1312.29
W 7+00
1303.0

1309.13
W 6+50
1298.3

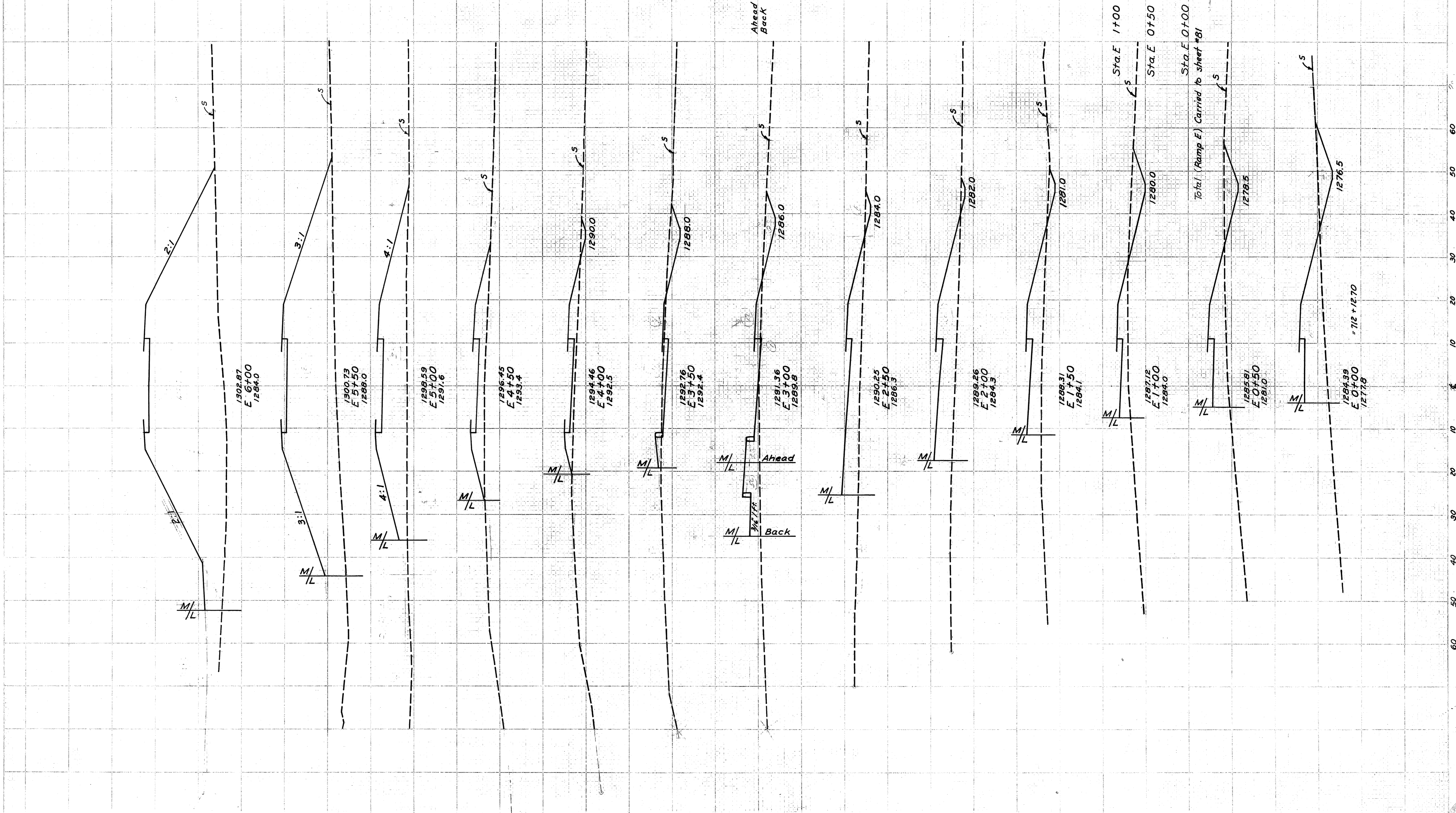
M/L

M/L

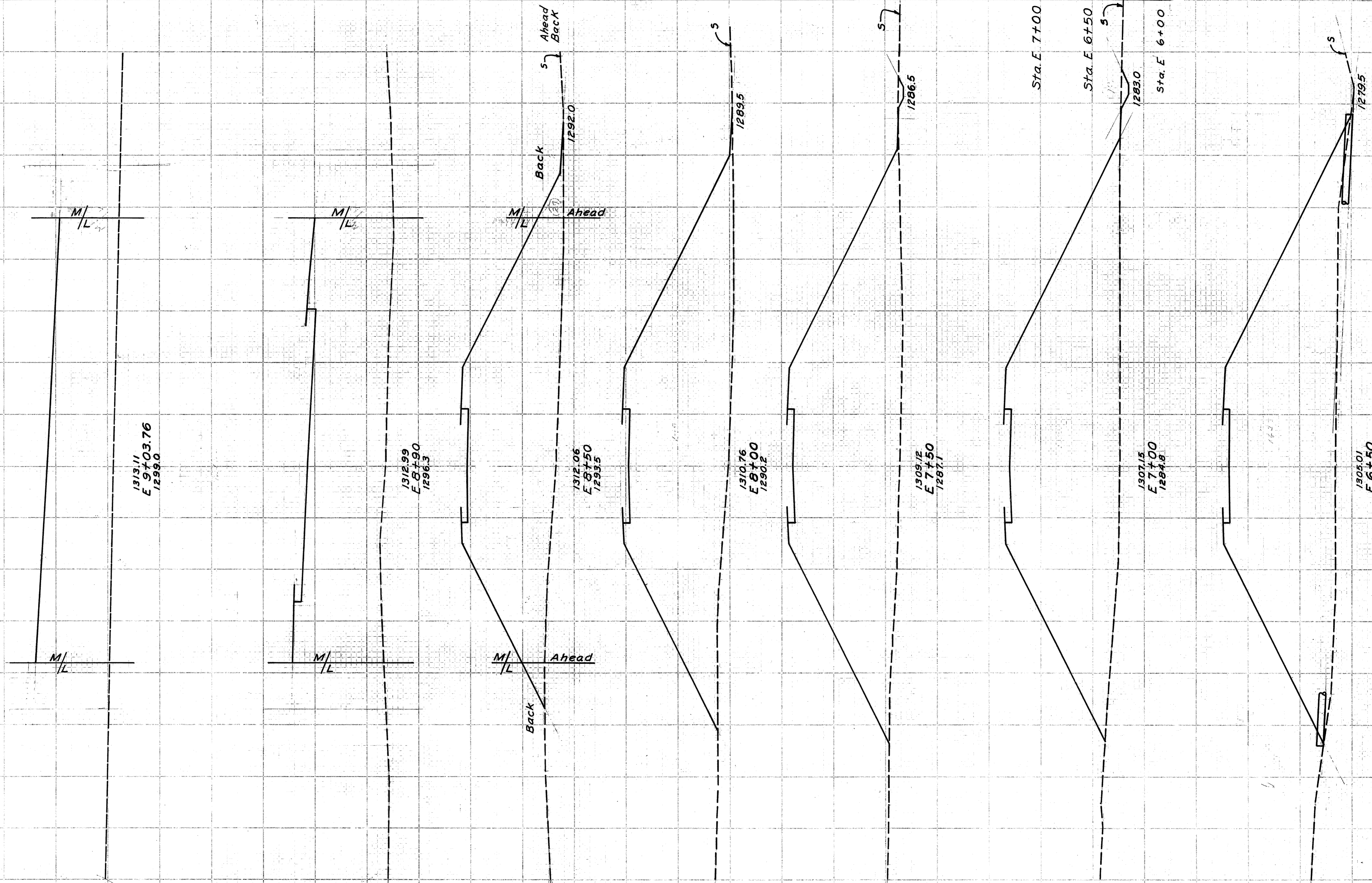
M/L

0	1905	0	1204
0	1088	1	578
4	927	3	1418
0	875	0	1512
0	758	0	1442
0	799	0	1404
0	717	10	1083
10	452	19	676
10	278	11	597
2	367	2	770
0	464	14	903
15	511	16	1070
2	644		

END AREA	CU. YDS.
CUT	FILL
	0 1229
	0 1928
	0 853
	0 1145
	0 383
	0 467
	0 121
	6 166
	54 71
	52 18
Ahead	30 43
Back	30 99
	38 249
	16 397
	6 205
	16 310
	11 130
Sta. E 1+00	50 64
Sta. E 0+50	47 109
Sta. E 0+00	49 169
	475 21801



END AREA	CU. YDS.
CUT	FILL
0	1109
0	0
0	621
0	1329
0	1869
0	2493
0	1449
7	2798
16	2978
10	3044
0	2660
0	1229



1313.11
E 9+03.76
1299.0

1312.99
E 8+90
1296.3

1312.06
E 8+50
1293.5

1310.76
E 8+00
1290.2

1309.12
E 7+50
1287.1

1307.15
E 7+00
1284.8

1282.1
E 6+50
1050.8

Sta. E 7+00

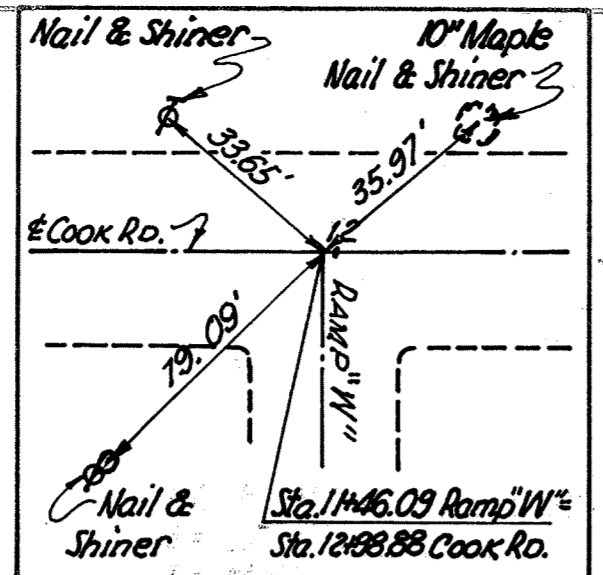
Sta. E 6+50

Sta. E 6+00

1279.5

70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70

MICROFILMED
OCT 31 1988



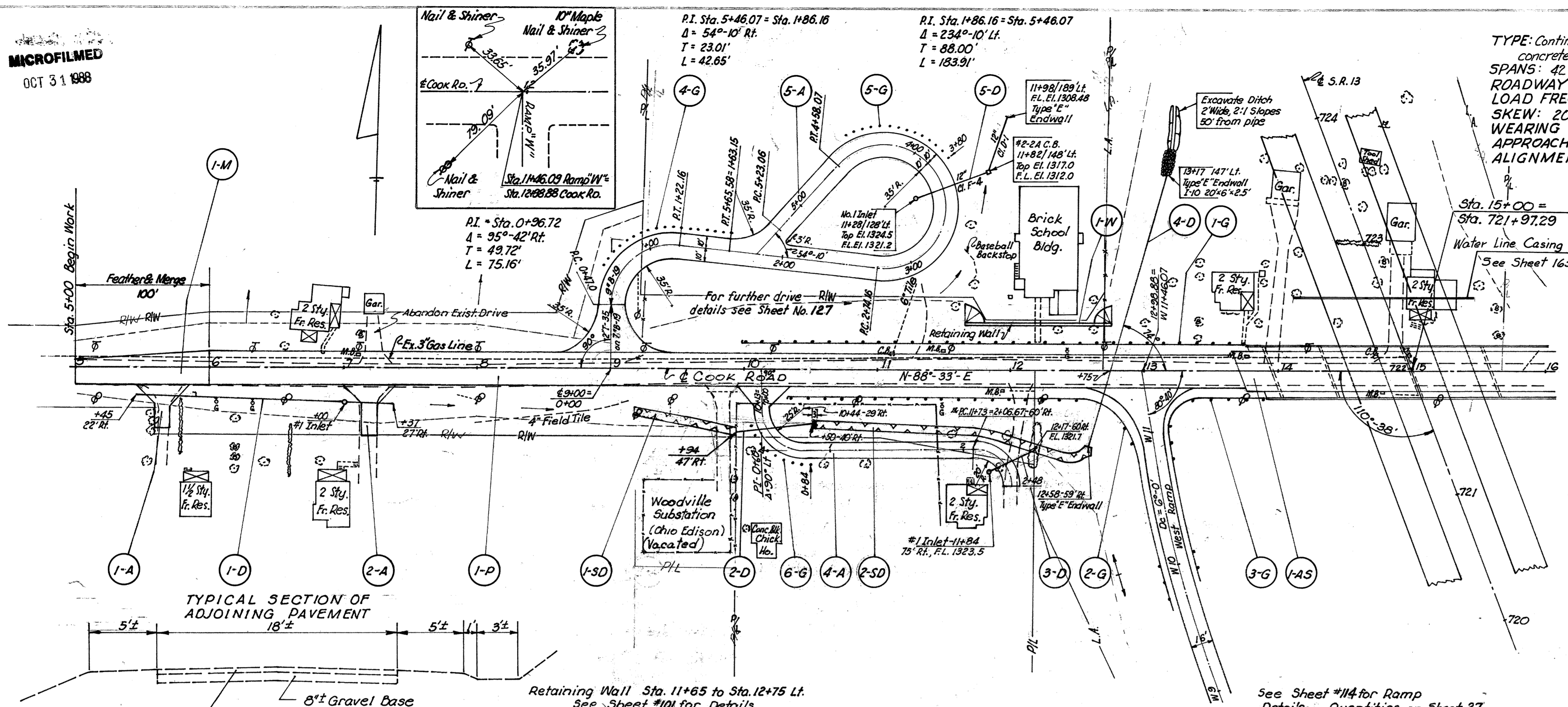
PROPOSED STRUCTURE

TYPE: Continuous steel beams with reinforced concrete deck and substructure
 SPANS: 42'-60'-60'-42' 1/2 brgs.
 ROADWAY: 30'-0" w/ 4'-2" sidewalks
 LOAD FREQUENCY: CF-130(57)
 SKEW: 20°-38' R.F.
 WEARING SURFACE: 3/4" monolithic concrete.
 APPROACH SLABS: AS-1-54 (25' Long)
 ALIGNMENT: Tangent

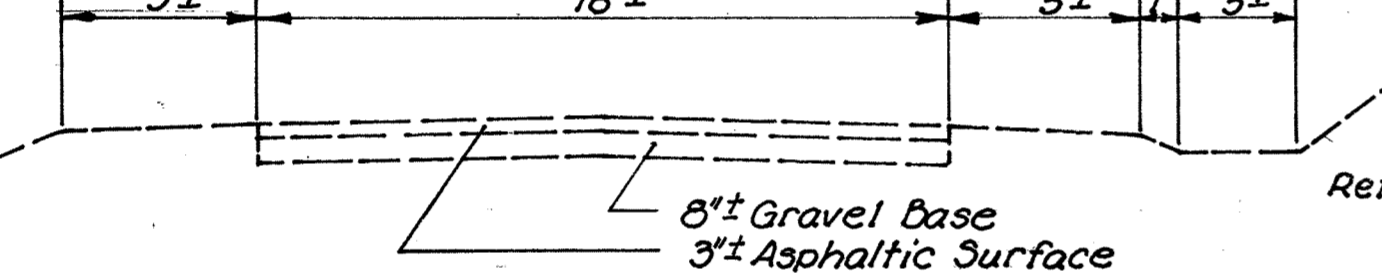
FED. DIST. DIVISION	STATE	PROJECT
2	OHIO	

Ric-13-(10.83-13.95)

120
216



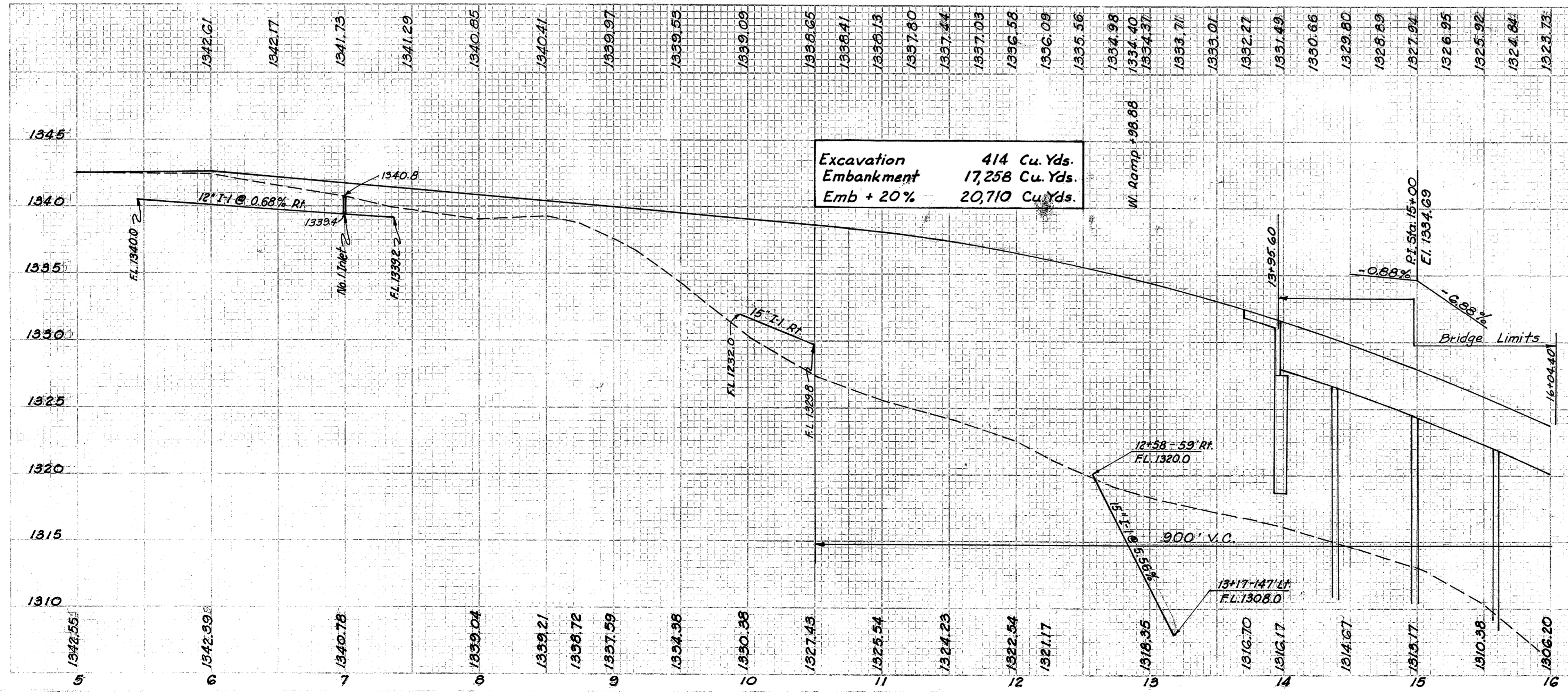
TYPICAL SECTION OF ADJOINING PAVEMENT



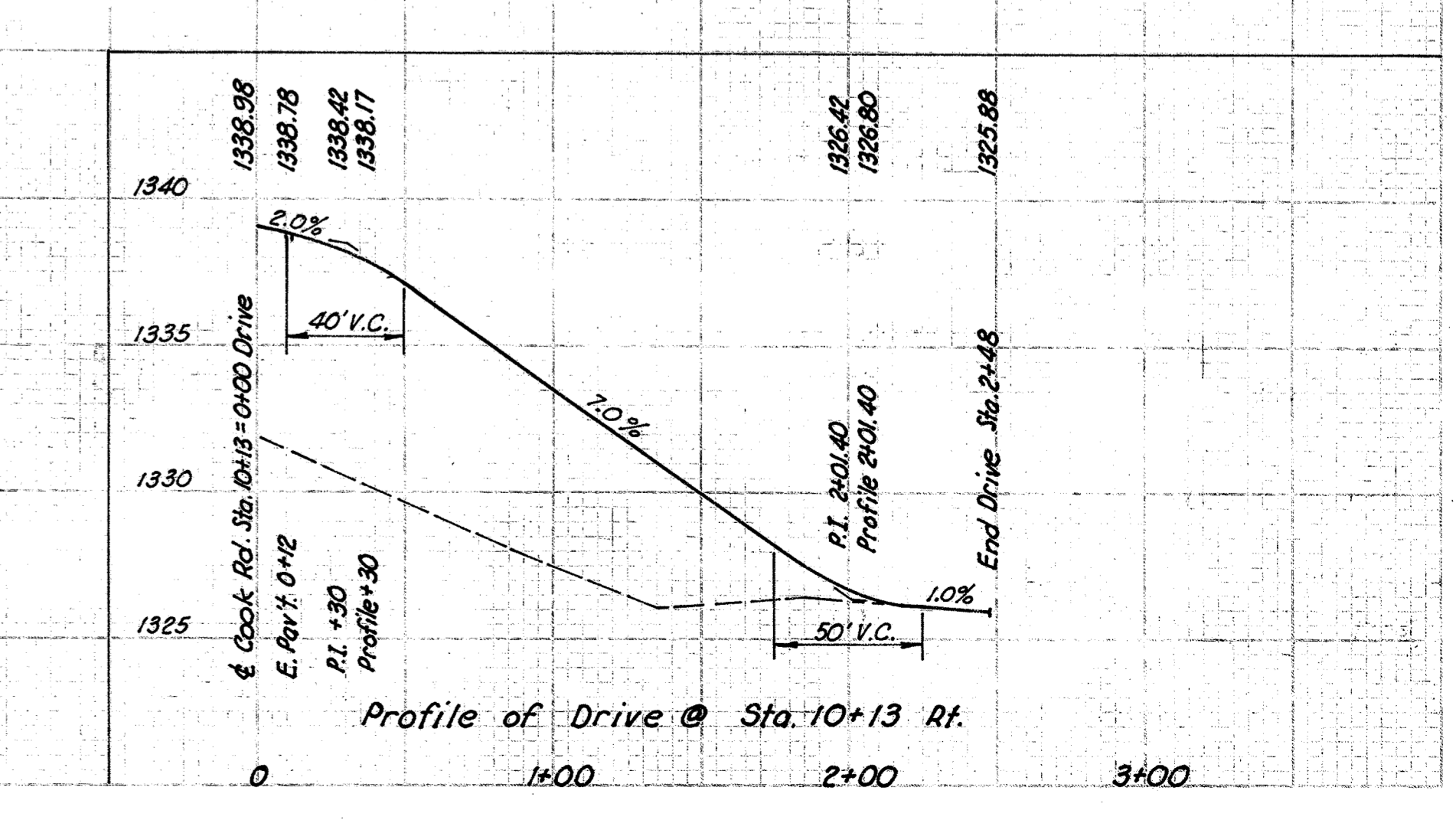
Retaining Wall Sta. 11+65 to Sta. 12+75 Lt. See Sheet #101 for Details

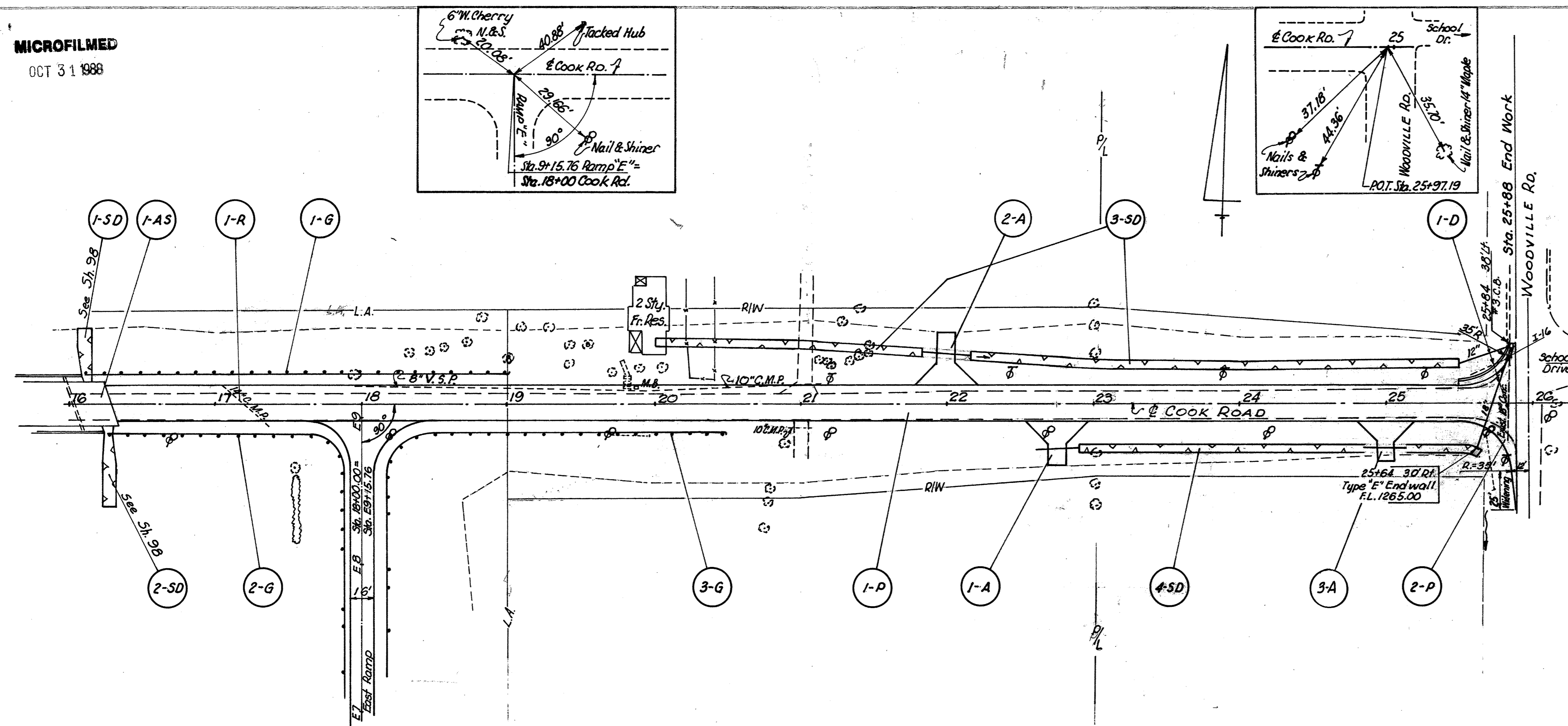
See Sheet #114 for Ramp Details; Quantities on Sheet 27

Ref. No.	Station	T-35 Asphaltic Concrete Surface Course		B-35 Asphaltic Concrete		B-19 Aggregate Base Course	I-22 Subbase	I-7 Approach Slabs T=13'	I-15 Guard Rail	T-30 Bituminous Prime Coat	E-1 Compacted Subgrade	I-18 Stabilized Crushed Shoulders	I-10 Siding	Ipec. Form. etc. Char. Aggr.
		1 1/4" Cu. Yds.	2" Cu. Yds.	1 1/2" Cu. Yds.	1 1/2" Cu. Yds.									
1-M	5+00-6+00	8.1	1.5	1.8	8.3 (6")	12.4 (8")								72
1-A	5+65 Rt. L=35'	4.0			10.6 (6")									
2-A	7+20 Rt. L=38'	4.2			11.2 (6")									
4-A	10+13 Rt. L=236'	18.9			50.8 (5")									
5-A	9+00 Lt. L=565.58'	7.5			301.2 (9'7")									
1-AS	13+70.60-13+95.60					11.6 (5")	83.3				83			
1-P	6+00-13+70.60	71.4	71.4	87.4	363.9 (6")	504.2 (8")				840	2055	95	570	
1-G	10+00-13+75 Lt.													375.0
2-G	10+35.5-12+50 Rt.													216.5
3-G	13+45-13+90 Rt.													45.0
4-G	Begin @ 0+67.5 (5-A)													18
5-G	Begin @ 3+80 (5-A)													14
6-G	End @ 0+84 (4-A)													9
1-SD	9+17-9+94 Rt.													51
2-SD	10+53-12+60 Rt.													138
Totals		114.1	162.1	746.0	528.2	83.3	636.5	41	840	2138	95	189	642	



Ref. No.	Station	Channel Excavation Cu. Yds.	I-1 Pipe				I-8 22" C.B. Inlets	I-10 22" C.B. Channel Prof.	I-2 Alcony (Endwalls)	S-1 Concrete for Structures Class "E"	S-3 Premolded Sealing Strip	S-4 Reinforcing Steel	S-29 Porous Backfill	E-2 Structure Excavation		
			12" Class F-4	12" Class A-1	15" Class F-4	15" Class F-4										
1-W	11+65-12+75 Lt.								117	26.75	2460	37	112			
1-D	5+45-7+37 Rt.	52	140			1		1.6								
2-D	9+94-10+50 Rt.			56												
3-D	11+84-12+17 Rt.	36				1										
4-D	12+75	35		216			11.1	0.52								
5-D	11+28-11+38 Lt.	60	44			1	1	0.23								
Totals		35	148	44	140	216	56	1	3	12.7	0.75	117	26.75	2460	37	112

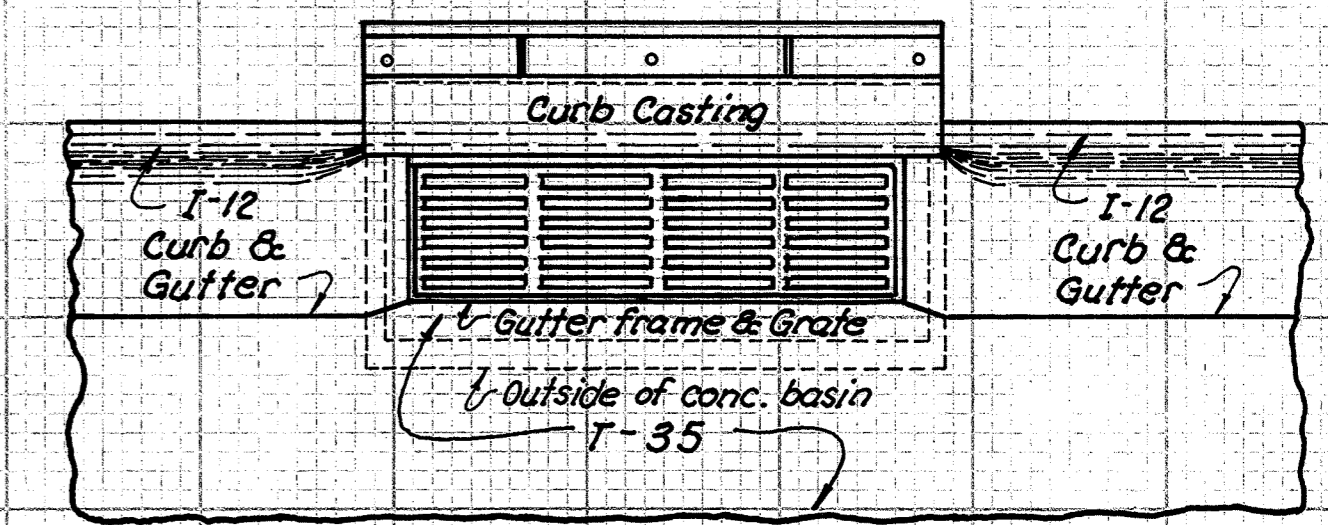
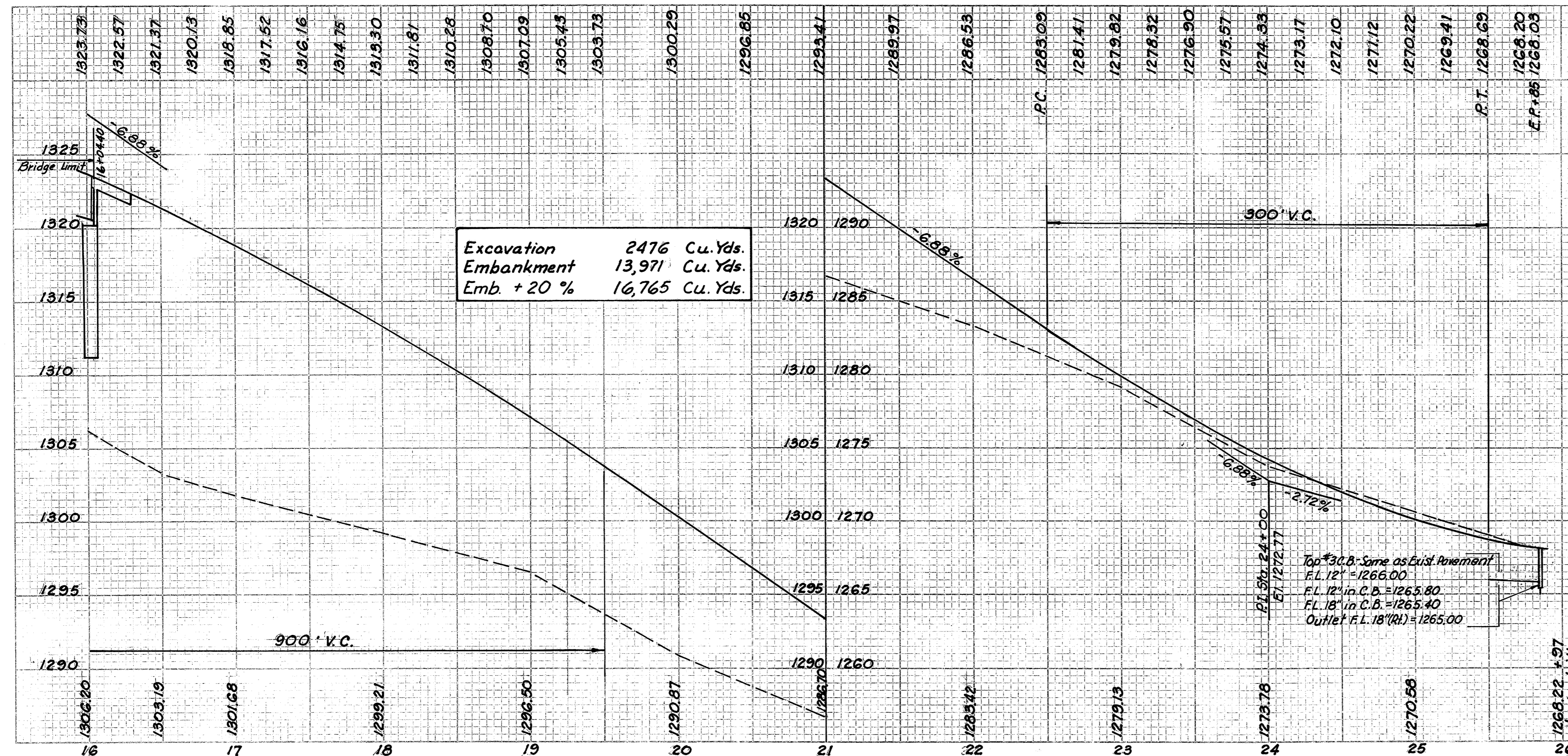




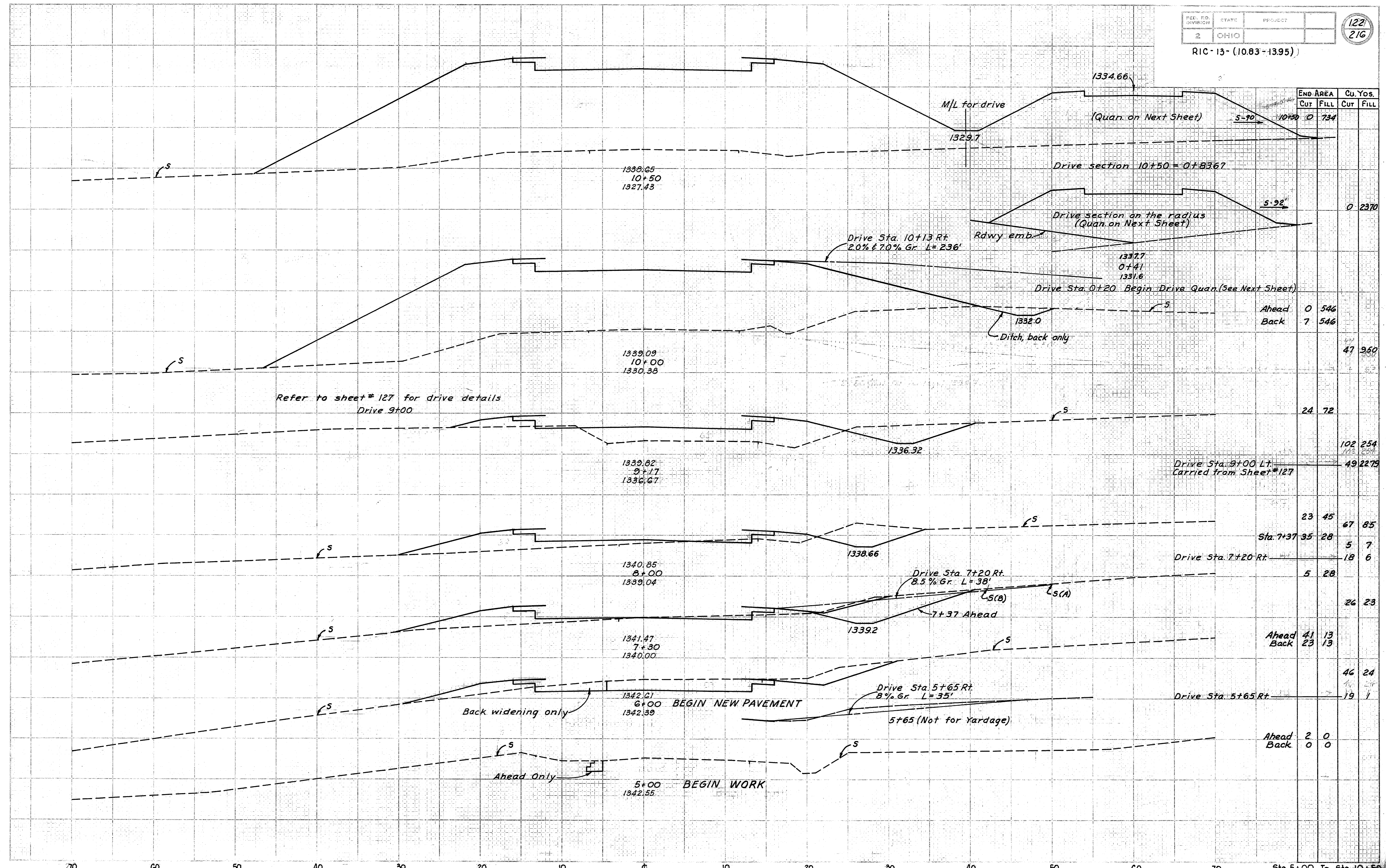
See Sheet #14 for Ramp Details; Quantities on Sh. 27

Ref. No.	Description	8-19	8-35	7-35	F30	E-1	E-12	I-1	I-16	I-2	I-7	I-8	I-12	I-15	I-18	I-22	L-10	Special	
		6" Asphaltic Concrete Leveling Course	1 1/2" Asphaltic Concrete	1 1/2" Asphaltic Concrete	Prime Coat	Subgrade	15" Under	12" 18" 12"	12" 18" 12"	12" 18" 12"	12" 18" 12"	12" 18" 12"	12" 18" 12"	12" 18" 12"	12" 18" 12"	12" 18" 12"	6" Wide	Forming & Milling	
		Cu. Yds.	Cu. Yds.	Cu. Yds.	Gal.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Each	Each	Each	Each	Each	Each	Each	Each	Sq. Yds.	Sq. Yds.	
1-A	22+75 Rt. L=30'	10.8																	
2-A	22+00 Lt. L=35'	11.9																	
1-AS	16+04.40-16+29.40					83						833							116(5)
3-A	25+00 Rt. L=28'	10.4																	
1-D	25+50-25+84 Lt. & Rt.						28	50	36	70									
1-G	16+10-18+27.5 Lt.																		
2-G	16+27-17+62 Rt.																		
3-G	18+48-20+75 Rt.																		
1-P	16+29.40-25+50	434.7	85.3	97.6	85.3	1002	2455												773
2-D	25+50-25+88	27.7	5.7	6.8	5.7	66	164												37
1-SD	16+10																		33
2-SD	16+27																		51
3-SD	20+00-25+50																		347
4-SD	22+89-25+66																		184.7
1-R	17+20						42												
Totals		495.5	195.4	91.0	1068	2702	70	50	36	70	90	1	0.30	833	1*	44	622	135	1651.2

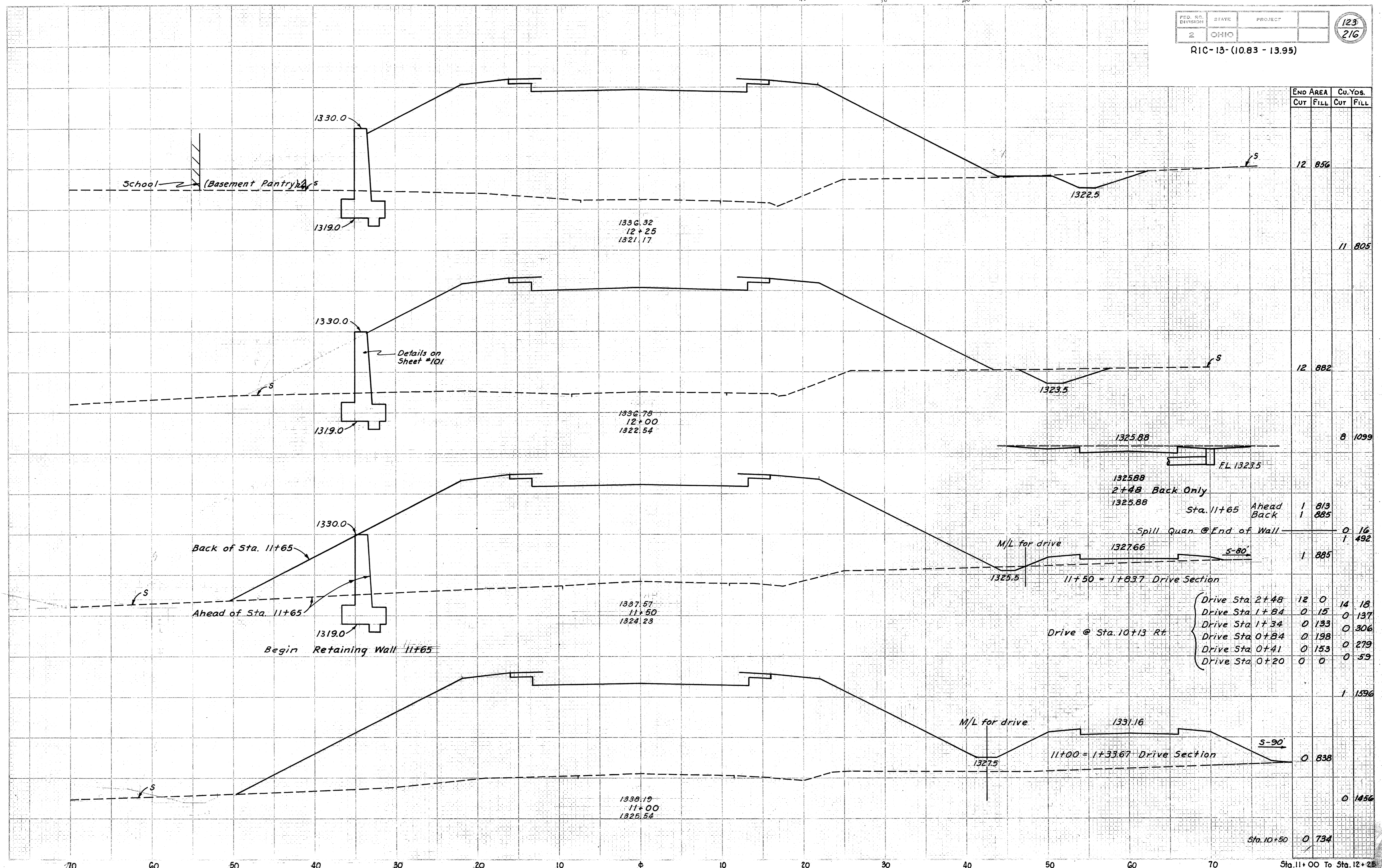
* See Detail Below



PLAN OF TYPE NO. 3 & 3-A CATCH BASINS



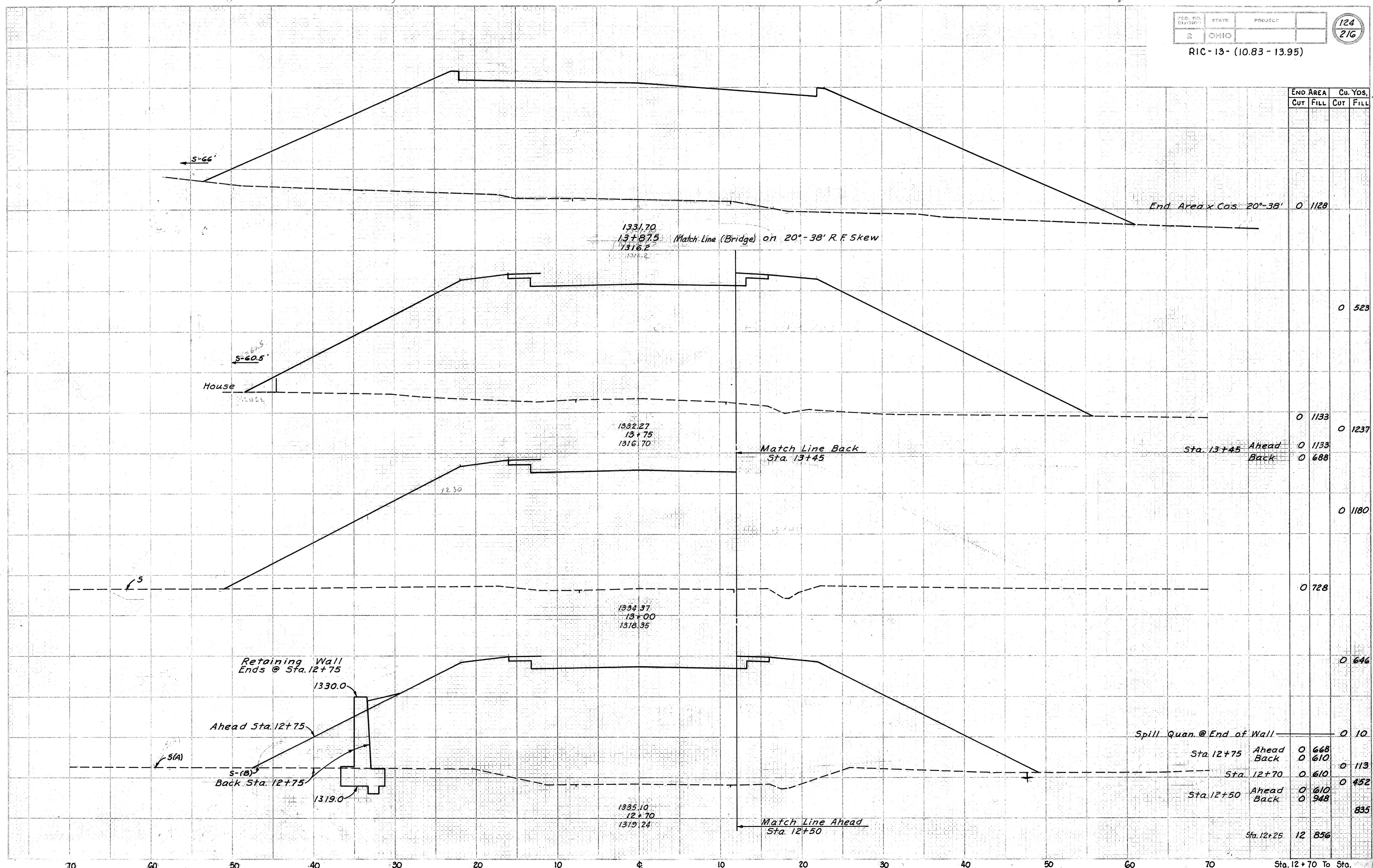
END AREA	CU. YDS.	
	CUT	FILL
0	734	
0	2370	
0	546	
7	546	
47	960	
24	72	
102	254	
49	2275	
23	45	67
35	28	5
5	7	18
5	28	6
		26
41	13	
23	13	
		46
		24
		19
2	0	
0	0	



END AREA	Cu. Yds.	
	CUT	FILL
12 856		
		11 805
12 882		
		8 1099
		1 813
		1 885
		0 16
		1 492
		1 885
		12 0
		0 15
		0 137
		0 133
		0 306
		0 198
		0 279
		0 59
		1 1596
		0 838
		0 1456
		0 734

EBM

RIC-13- (10.83 - 13.95)



END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL

End Area x Cos 20°-38' 0 1128

1331.70
13+87.5
1316.2
1316.2
Match Line (Bridge) on 20°-38' R.F Skew

House
s=60.5'

1332.27
13+75
1316.70
Match Line Back
Sta. 13+45

Sta. 13+45 Ahead 0 1133
Back 0 688

1334.37
13+00
1318.35

Retaining Wall
Ends @ Sta. 12+75

Ahead Sta. 12+75
Back Sta. 12+75
1330.0
1319.0

Match Line Ahead
Sta. 12+50

Spill Quan @ End of Wall 0 10

Sta. 12+75 Ahead 0 668
Back 0 610

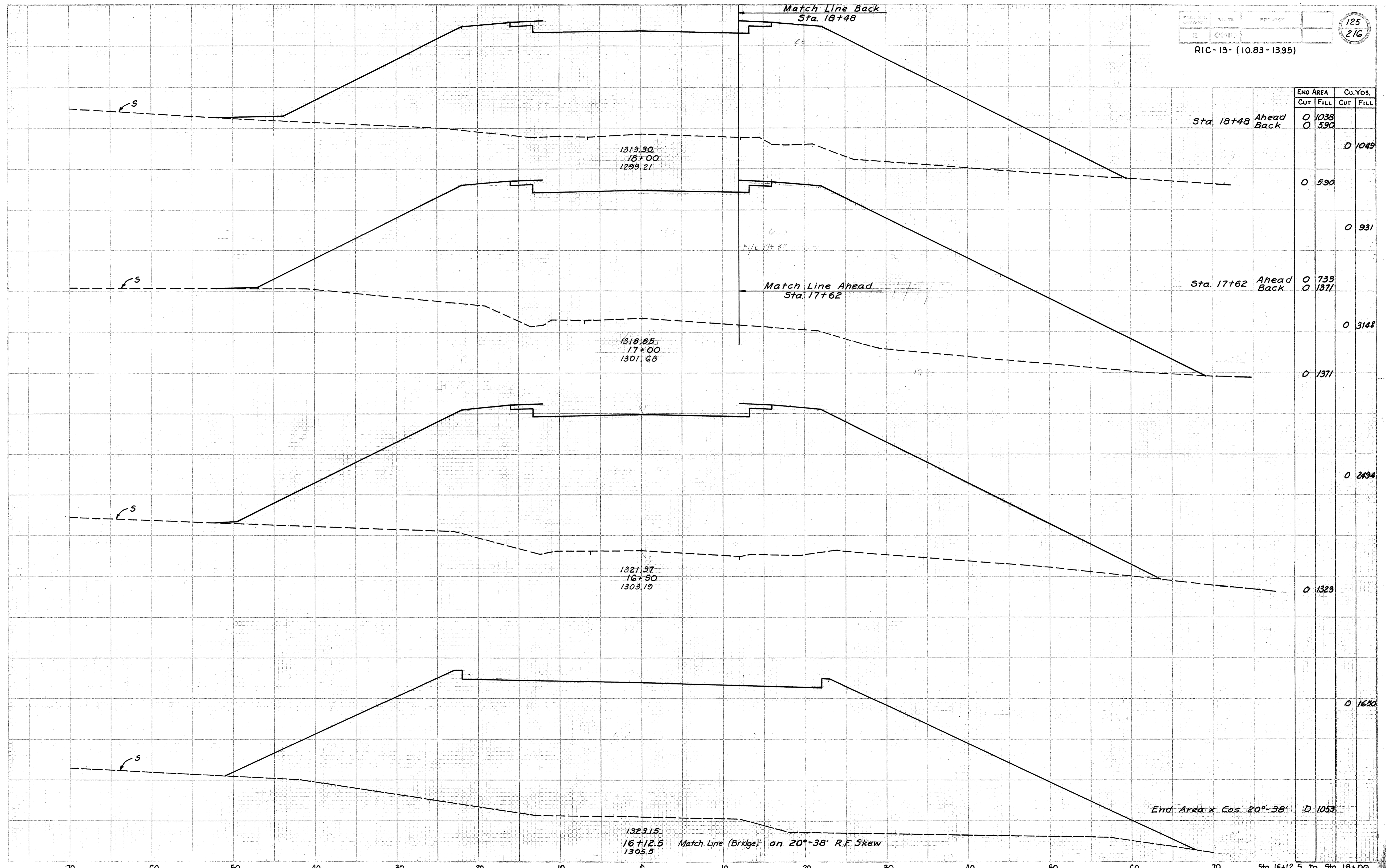
Sta. 12+70 0 610

Sta. 12+50 Ahead 0 610
Back 0 948

Sta. 12+25 12 856

Sta. 12+70 To Sta. 12+25 835

RIC-13- (10.83-1395)



1313.30
18+00
1299.21

1318.85
17+00
1301.68

1321.37
16+50
1303.19

1323.15
16+12.5
1305.5

Match Line Back
Sta. 18+48

Match Line Ahead
Sta. 17+62

Match Line (Bridge) on 20°-38' R.F. Skew

Sta. 18+48 Ahead
Back

Sta. 17+62 Ahead
Back

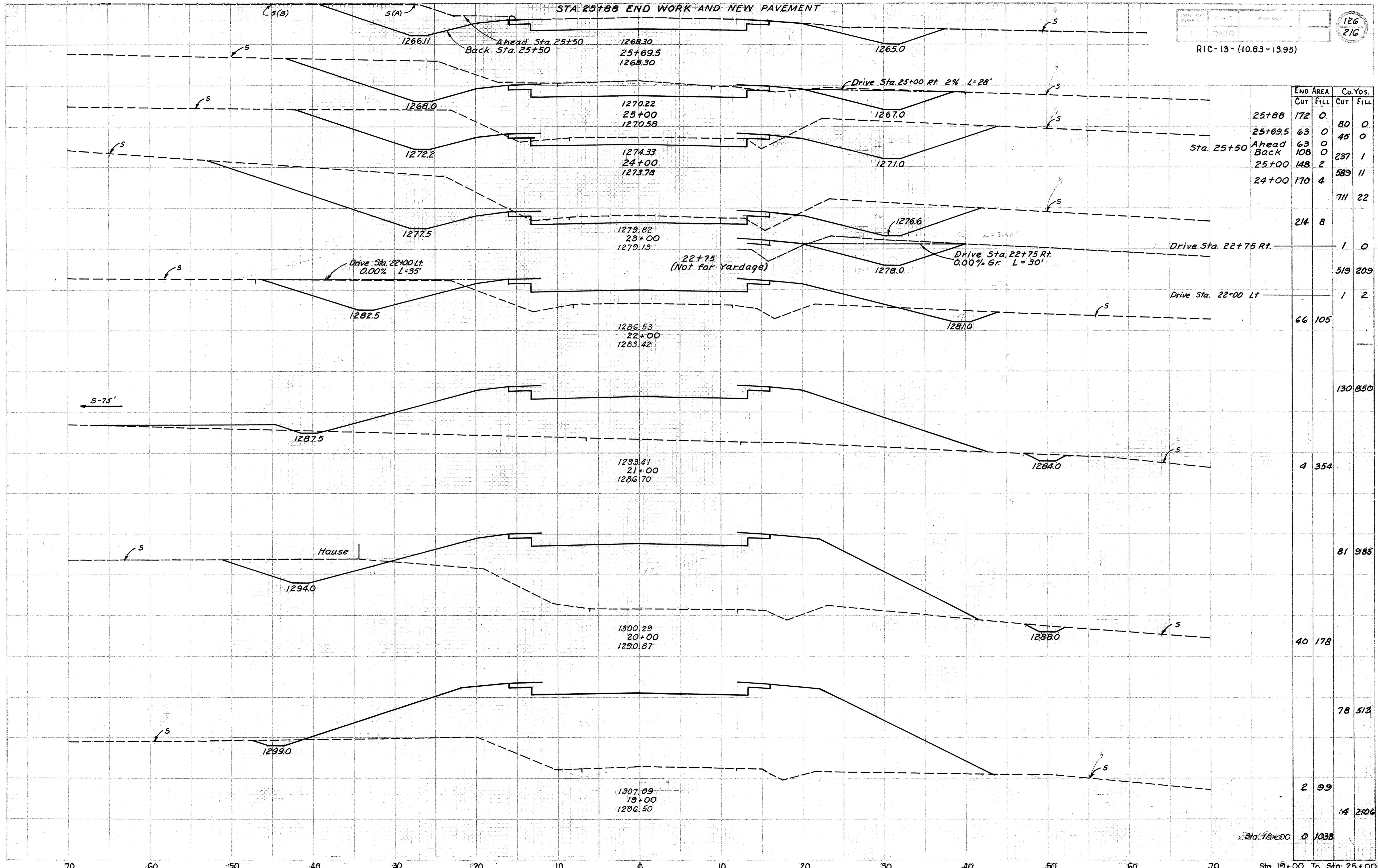
End Area x Cos. 20°-38'

END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
0	1038		
0	330		
		0	1049
0	590		
		0	931
0	733		
0	1371		
		0	3148
0	1371		
		0	2494
0	1323		
		0	1650
0	1053		

Sta. 16+12.5 To Sta. 18+00

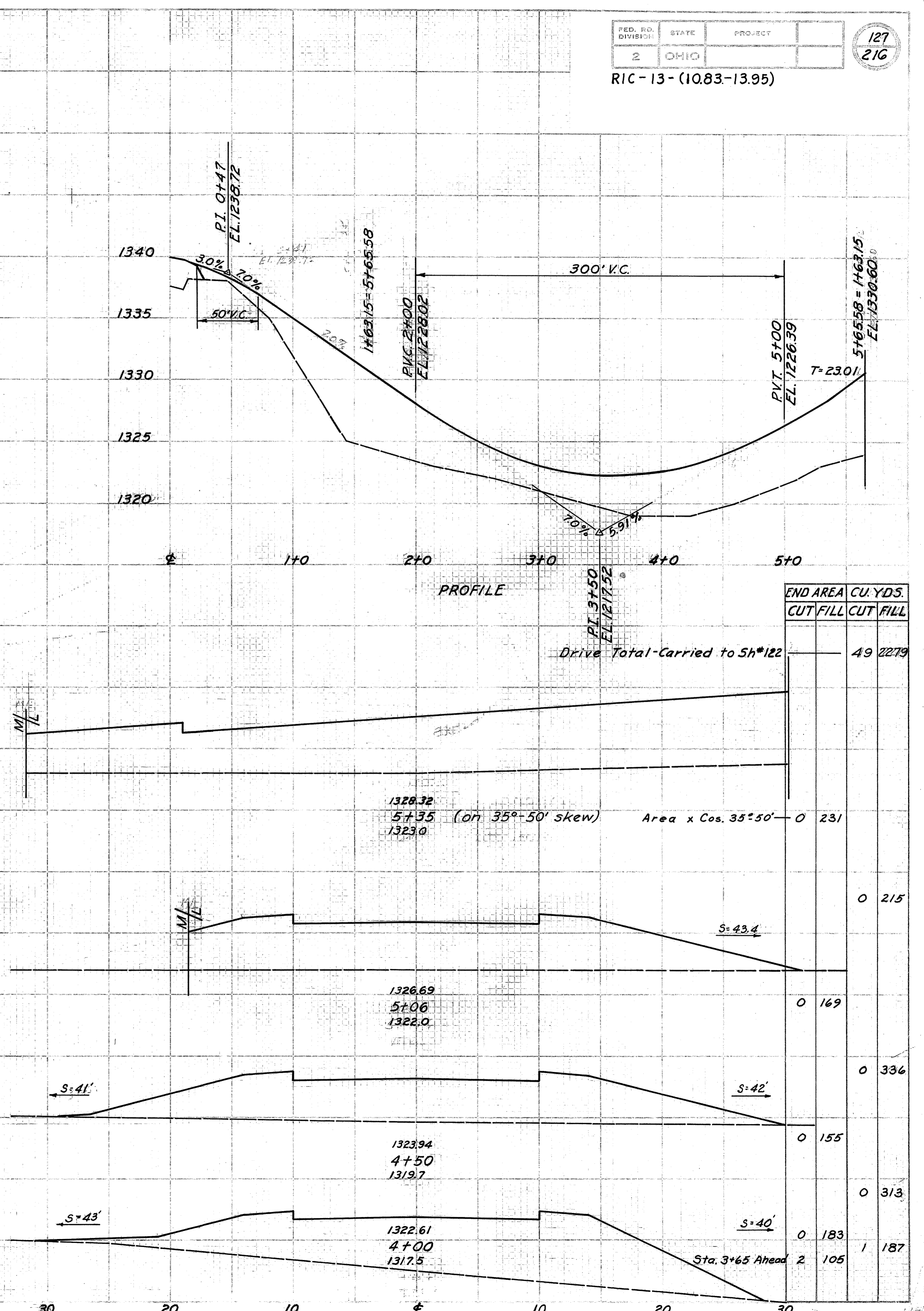
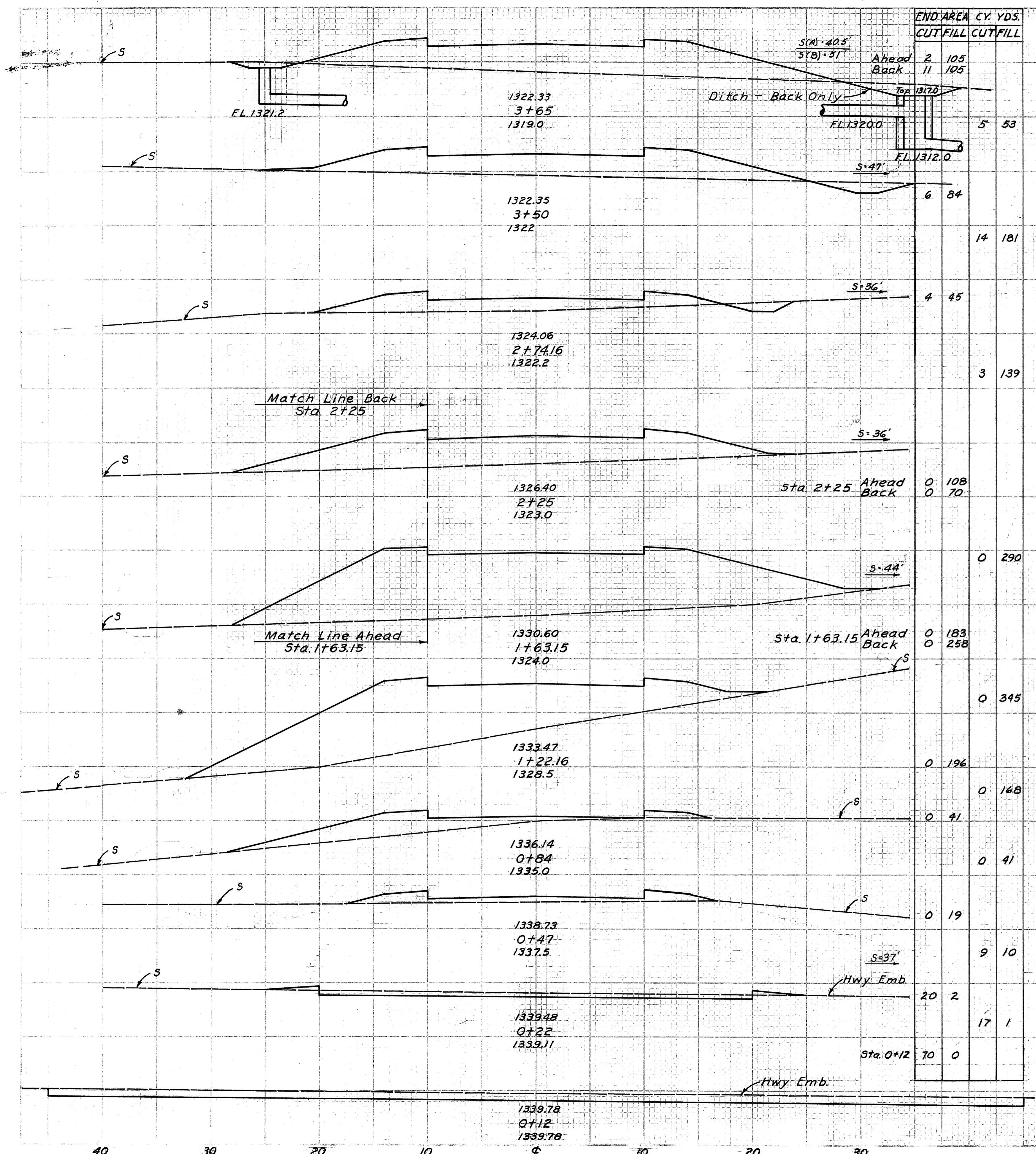
STA. 25+88 END WORK AND NEW PAVEMENT

RIC-13-(10.83-13.95)



Sta.	END AREA		Cu. Yds.	
	CUT	FILL	CUT	FILL
25+88	172	0		
25+69.5	63	0	80	0
Ahead	63	0	45	0
Back	108	0	237	1
25+00	148	2	589	11
24+00	170	4	711	22
	214	8		
			1	0
			519	209
			1	2
	66	105		
			130	850
	4	354		
			81	985
	40	178		
			78	513
	2	99		
			64	2106
Sta. 18+00	0	1038		

Sta. 19+00 To Sta. 25+00

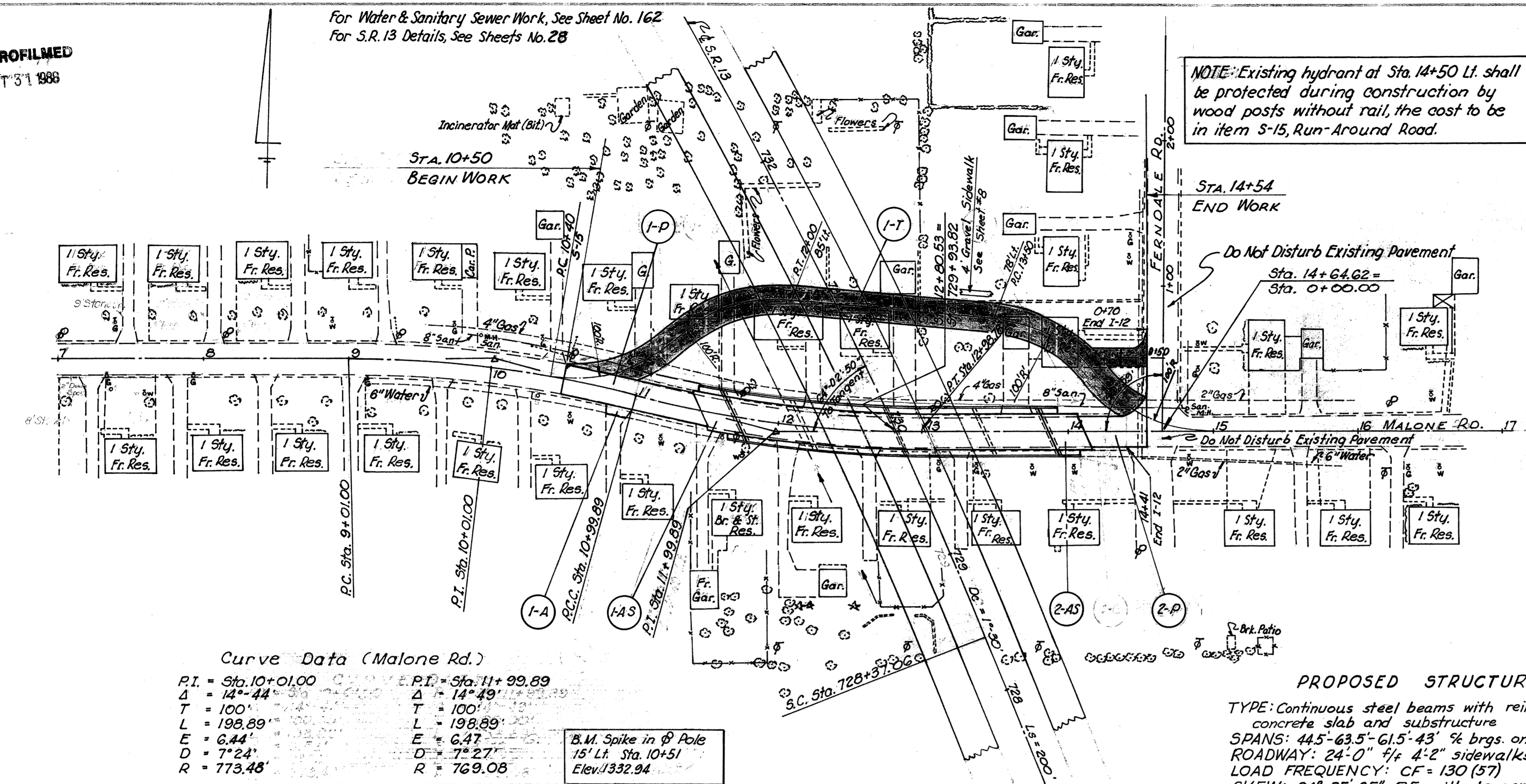


MICROFILMED
OCT 31 1988

For Water & Sanitary Sewer Work, See Sheet No. 162
For S.R.13 Details, See Sheets No. 28

R10-13-(10.83-13.95)

NOTE: Existing hydrant at Sta. 14+50 Lt. shall be protected during construction by wood posts without rail, the cost to be in item S-15, Run-Around Road.



Ref. No.	Station	I-7 Approach Slabs T=13" Sq. Yds.	I-12 Combination Curb & Gutter Type 4 Lin. Ft.	I-22 Subbase 6" Cu. Yds.	T-30 Bituminous Prime Coat Gal.	T-35 Asphaltic Concrete Surface Course 1 1/4" Cu. Yds.	B-19 Aggregate Base Course 6" Cu. Yds.	B-35 Asphaltic Concrete Leveling Course 1 1/4" Cu. Yds.	E-1 Compacted Subgrade Sq. Yds.	F-8 Curb & Gutter Removal Lin. Ft.	S-15 Temporary Run-Around Class "B" Lump
* 1-AS	11+44.81 - 11+69.81	67.7*							67.7		
* 2-AS	13+87.50 - 14+12.50	68.0*							68.0		
I-P	10+50 - 11+44.81		190	47.4	87	7.7	42.5	7.7	9.2	222	462°
2-P	14+12.5 - 14+54		124	24.0	41	3.6	20.7	3.6	4.3	103	383°
I-T	10+50 - 14+54 Lt.										Lump
I-A	10+184 - 1-5+4 Rt.					0.3(2)	0.7(5)				
		135.7	314	71.4	128	11.6	63.9	24.8	461	845	Lump

* See detail on Sheet 98.
o Quantity includes to & SR13

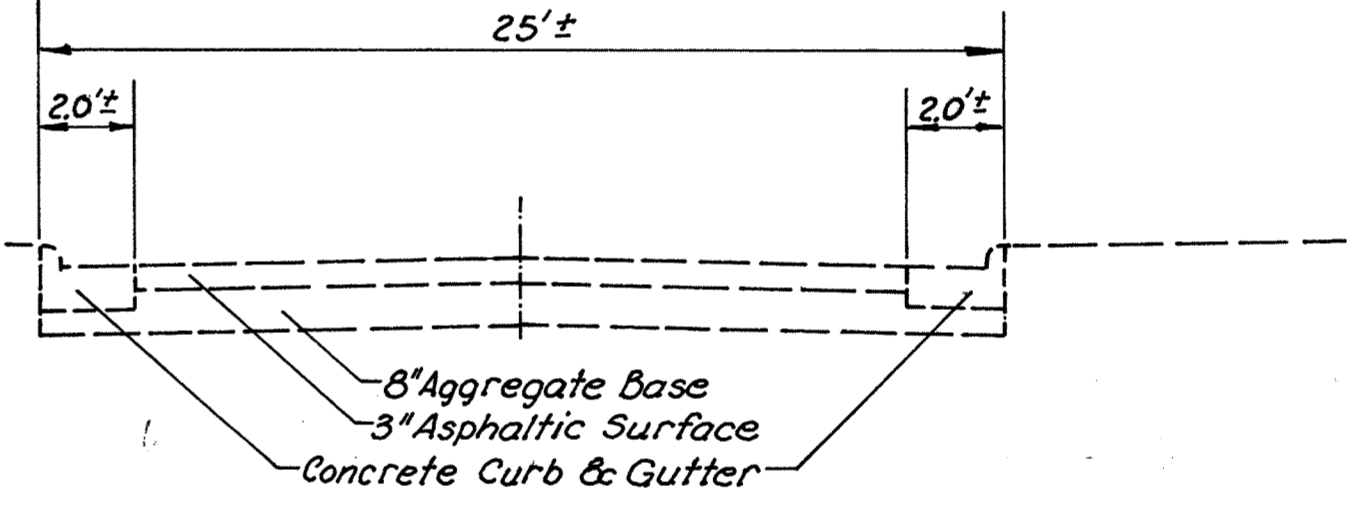
Curve Data (Malone Rd.)

P.I. = Sta. 10+01.00	P.T. = Sta. 11+99.89
Δ = 14°-44'	Δ = 14°-49'
T = 100'	T = 100'
L = 198.89'	L = 198.89'
E = 6.44'	E = 6.47'
D = 7°-24'	D = 7°-27'
R = 773.48'	R = 769.08'

B.M. Spike in Pole
15' Lt. Sta. 10+51
Elev. 1332.94

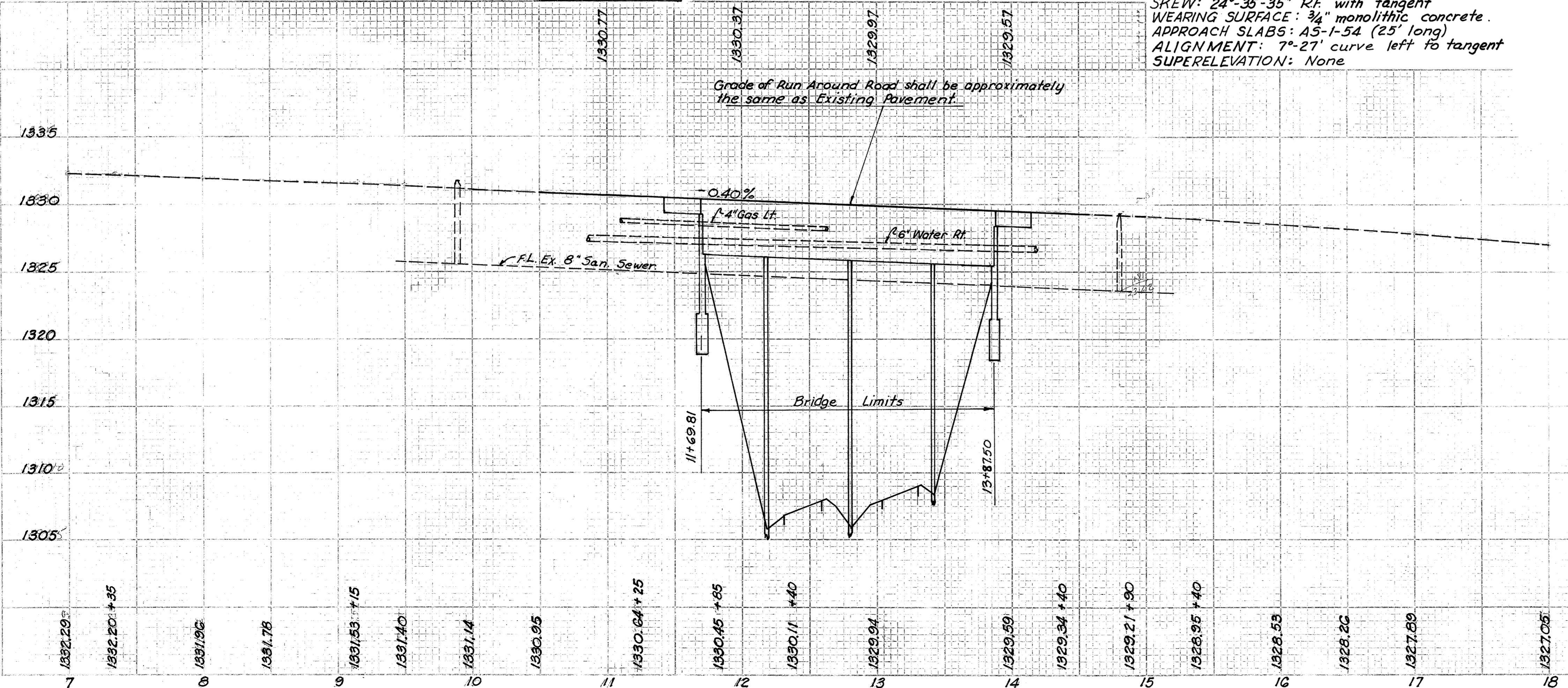
PROPOSED STRUCTURE

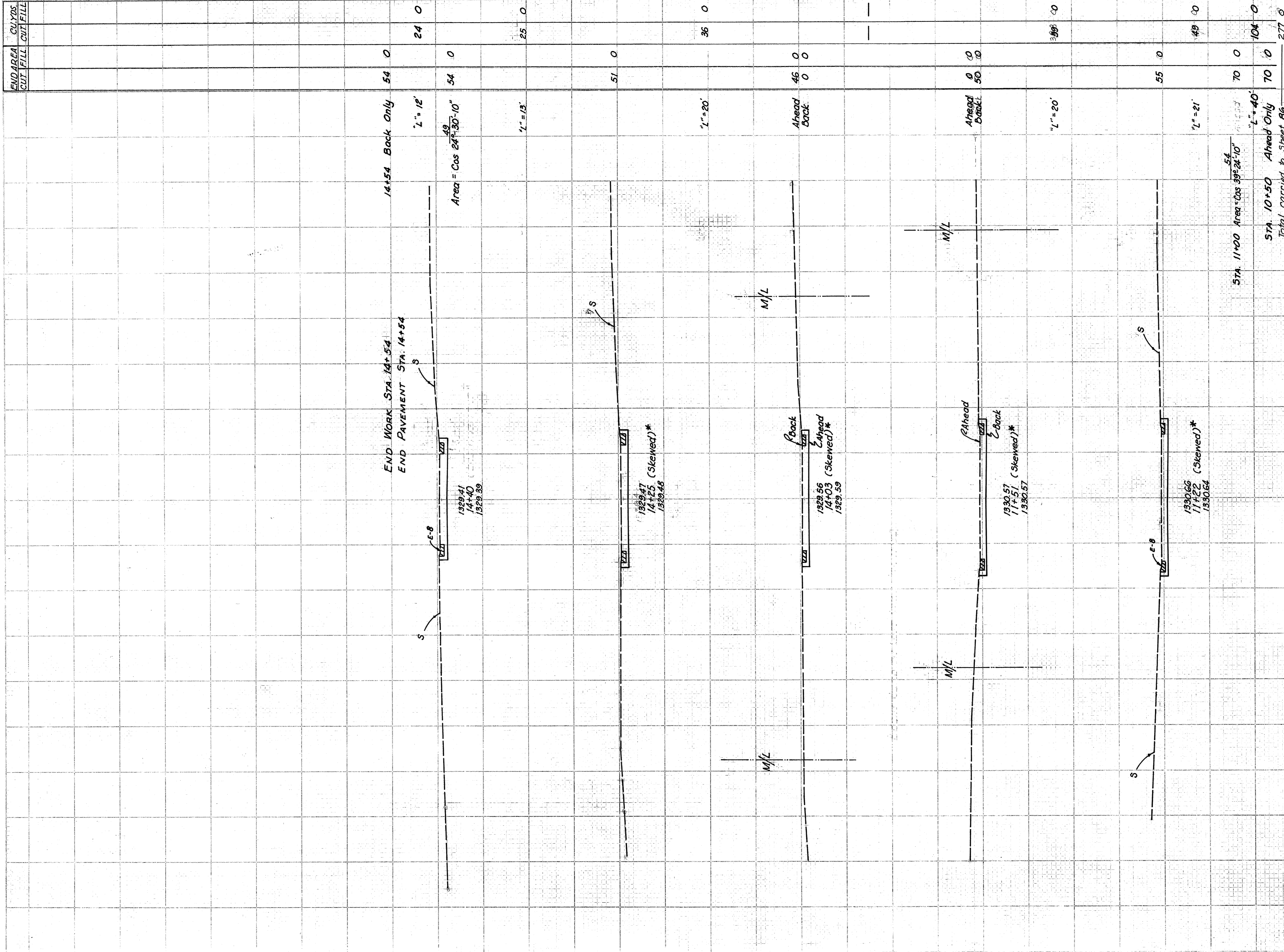
TYPE: Continuous steel beams with reinforced concrete slab and substructure
 SPANS: 44.5'-63.5'-61.5'-43' % brgs. on & Survey
 ROADWAY: 24'-0" 4/4 4'-2" sidewalks
 LOAD FREQUENCY: CF = 130 (57)
 SKEW: 24°-35'-35" R.F. with tangent
 WEARING SURFACE: 3/4" monolithic concrete.
 APPROACH SLABS: AS-1-54 (25' long)
 ALIGNMENT: 7°-27' curve left to tangent
 SUPERELEVATION: None



TYPICAL SECTION OF ADJOINING PAVEMENT

Grade of Run Around Road shall be approximately the same as Existing Pavement.



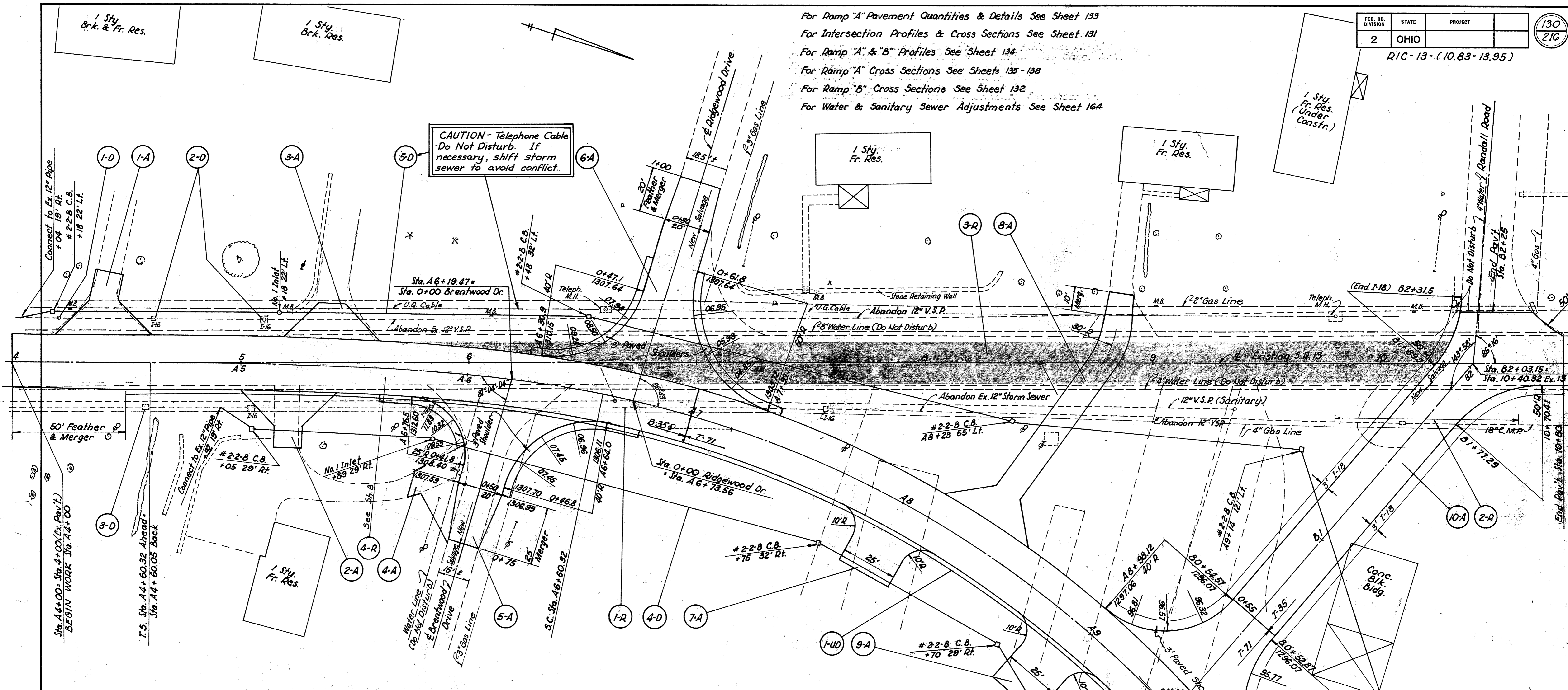


BEGIN PAVEMENT STA. 10+50
 BEGIN WORK STA. 10+50

* Skewed Sections are approximately parallel to § 5R/13

STA. 11+00 Area = $\cos 24^{\circ} 30' 10''$
 STA. 10+50 Ahead Only
 Total carried to sheet 86

For Ramp "A" Pavement Quantities & Details See Sheet 133
 For Intersection Profiles & Cross Sections See Sheet 131
 For Ramp "A" & "B" Profiles See Sheet 134
 For Ramp "A" Cross Sections See Sheets 135-138
 For Ramp "B" Cross Sections See Sheet 132
 For Water & Sanitary Sewer Adjustments See Sheet 164

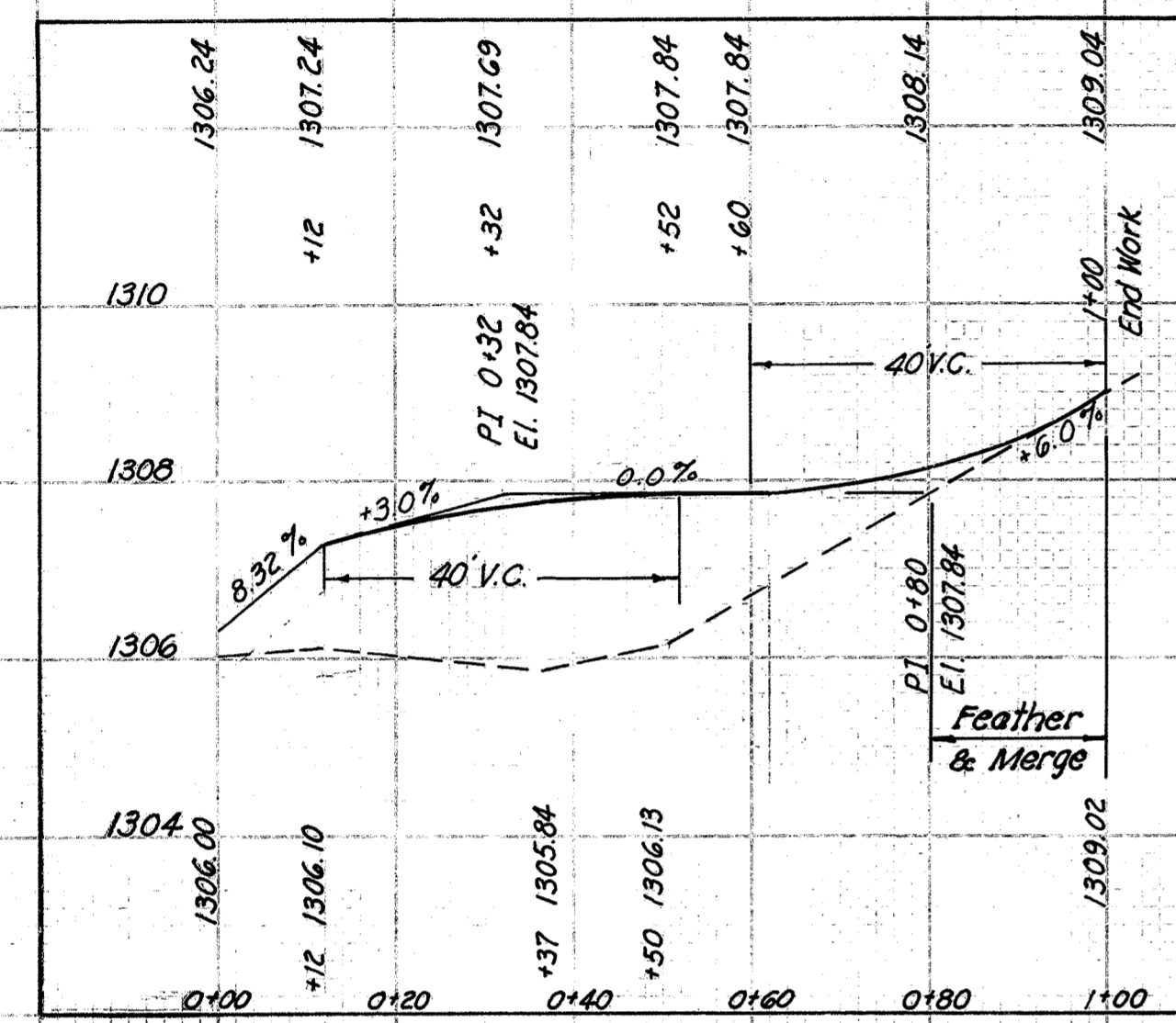


Ref. No.	Station	E-1 Comp. Subg. Sq. Yds.	B-19 Aggregate Base Course Cu. Yds.				B-35 Asph. Conc. Leveling Course Cu. Yds.		T-30 Bitum. Prime Coat * Gal.		T-31 Bitum. Surf. Treat. C.Y.		T-35 Asph. Conc. Surf. Course Cu. Yds.		T-71 Reinf. P.C. Conc. Pav't. Sq. Yds.		I-18 Stab. Crush. Aggr. Should. Cu. Yds.		I-22 Subbase Cu. Yds.		Special Finishing & Milling (Chlor. M/Aggr. Cu. Yds.)
			5"	6"	7"	9"	1 1/2"	1 1/4"	6	10	1 1/2"	2"	9"	6"	6"	8"	6"	8"	Sq. Yds.		
1-A	A4+33 Lt. L=28'	7.3									3.5										
2-A	A5+21 Rt. L=25'	6.8									3.3										
3-A	A5+39 Lt. L=15'	4.8									2.5										
4-A	0+50 Rt. (Brentwood)	7.6									2.9										
5-A	A6+19 Rt. (Brentwood)	212	31.6		7.2	7.6	6.3	8.6	0.3	10	6.3									43.5	
6-A	A6+74 Lt. (Ridgewood)	296	43.7		10.9	10.6	9.4	12.1	0.4	15	10.1									60.2	
7-A	A8+00 Rt. L=23'			11.4							3.9										
8-A	A8+35 Lt. L=117'	25.0									10.2										
9-A	A8+93 Rt. L=30'			14.9							4.9										
10-A	A9+50 Lt. (Ramp "B")	308	96.4		10.8	23.2	19.0	23.6	0.4	13	19.0	20.8	17.0	27.0	123.0	11.4					
TOTALS		1316	278.4	76.1	44.3	1.1	3.8	66.6	20.8	17.0	253.7	11.4									

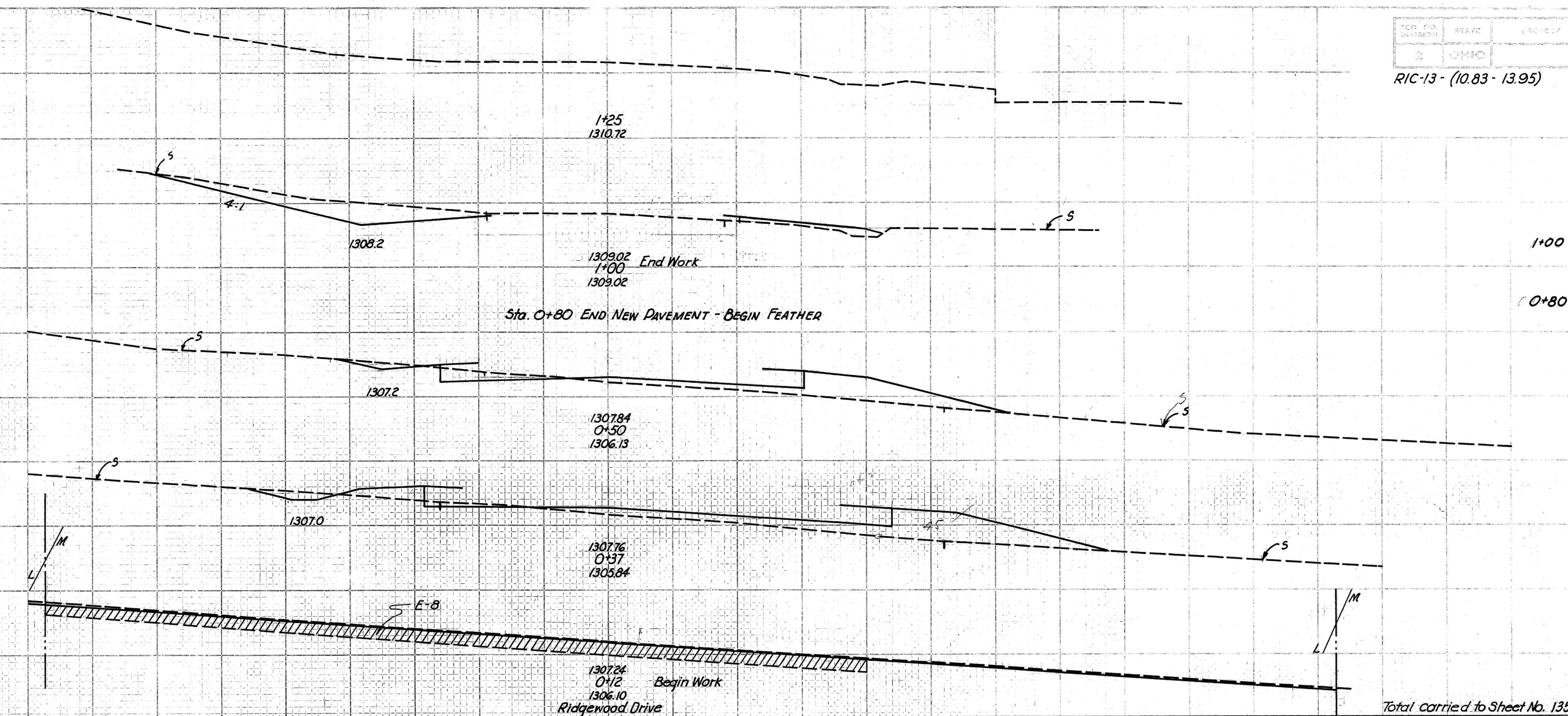
* Includes quantity for Paved Shoulders.

Ref. No.	Station	I-1 Pipe Lin. Ft.					E-12 Pipe Rem. Lin. Ft.		I-8 Each		I-5 Pipe Spec. C.I.-3 90° Ell Each		I-16 Catch Basins Aban. Each		E-8 Rem. & Disp. of Ex. Pav't. Sq. Yds.		E-8 Remov. of Ex. Wearing Course Sq. Yds.		
		Class E-1	Class F-4	Class M-6 (C)	Class B-1	Class M-6 (A)	15" & Under	Over 15"	# 2-2-B Catch Basins	# Inlets	6"	8"	4'	6'	4'	6'	4'	6'	
1-D	A4+20.5 Lt.																		
2-D	A4+61 & A5+10 Lt.																		
3-D	A4+59 Rt.																		
4-D	A4+92-A8+70 Rt.			228	132				3	1									
5-D	A4+04-A9+14 Lt.			248	244	76			4	1									
TOTALS		540	10	476	244	132	76	290	50	7	2	1	8	770.0	250				

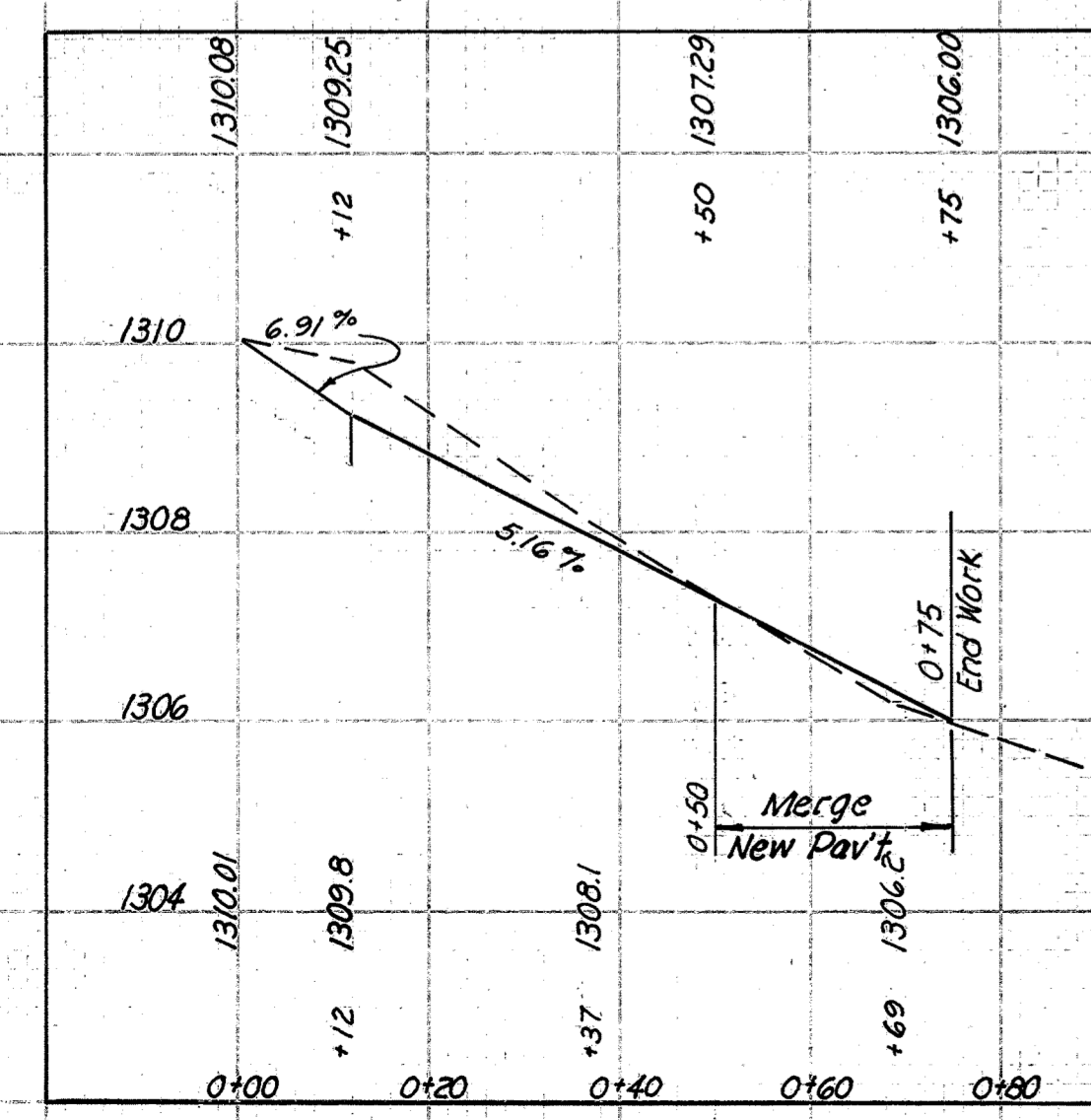
* I-1 15" Class B-1 to be placed from A6+48 to A7+22 Lt.
 * 44' of I-1 12" Class B-1 under Brentwood, 7-A, & 9-A.



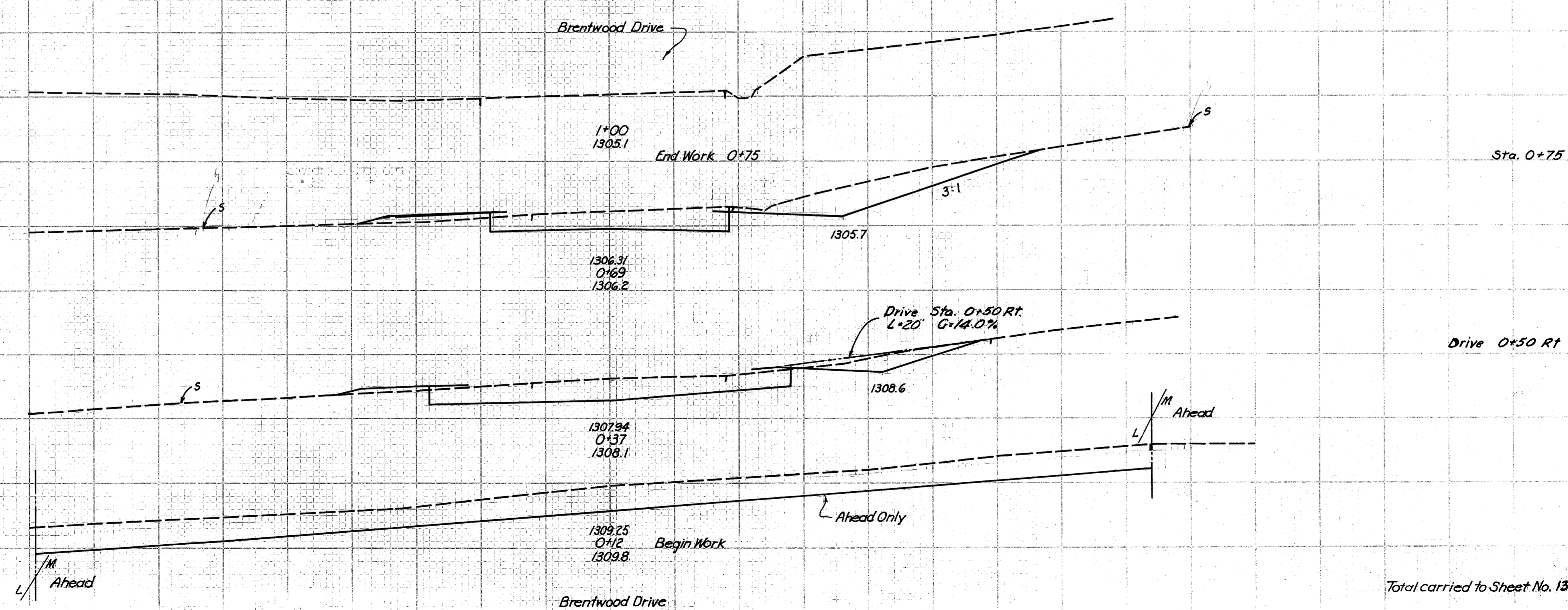
Profile of Ridgewood Drive



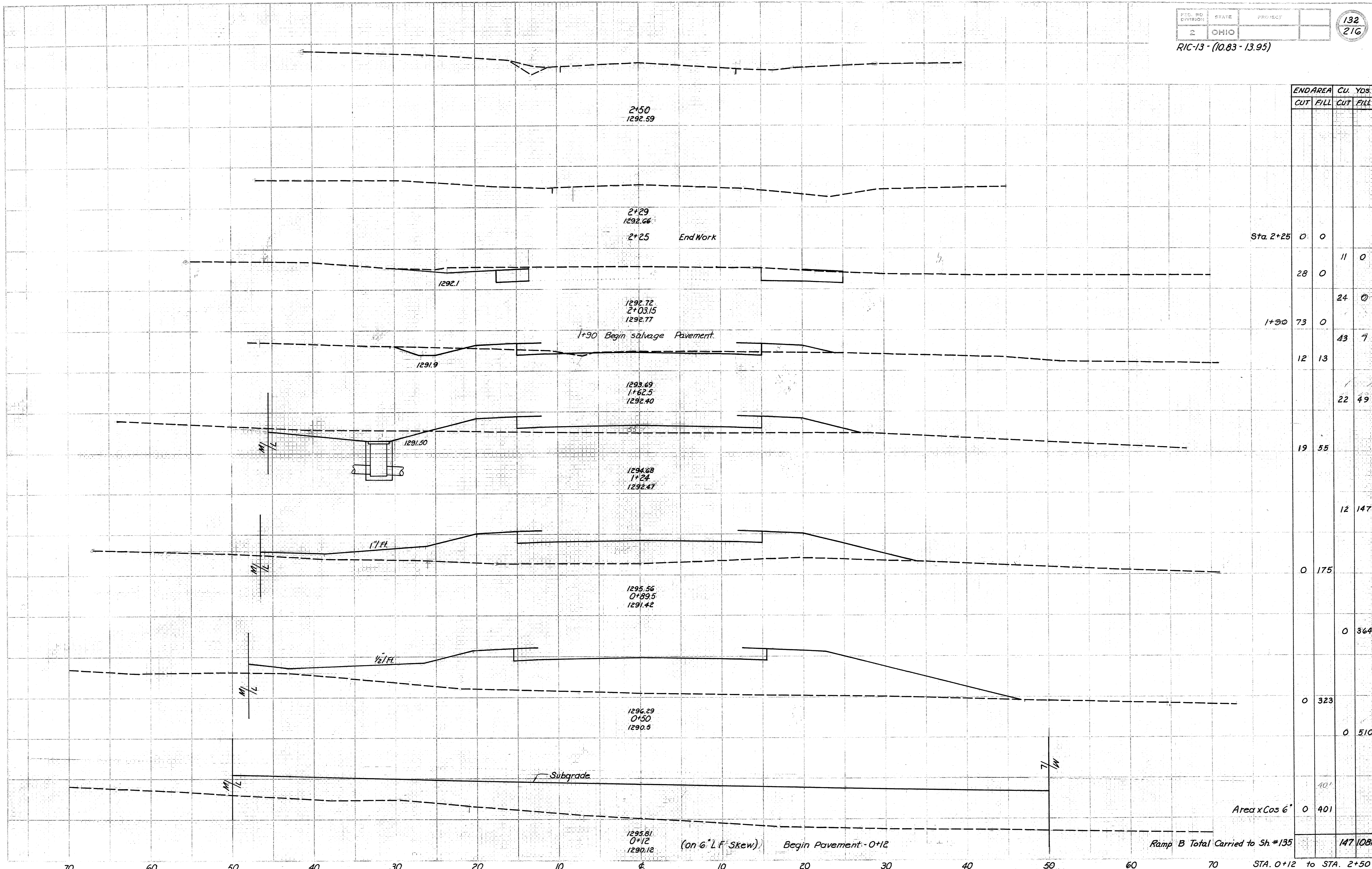
END AREA	CU. YDS.	
	CUT	FILL
1+00	0	0
0+80	55	4
		35
	7	28
		2
	3	50
		2
	0	65
Total carried to Sheet No. 135		59 92



Profile of Brentwood Drive



END AREA	CU. YDS.	
	CUT	FILL
Sta. 0+75	23	0
		9
	58	5
		65
		4
		0
	51	2
		97
	159	0
Total carried to Sheet No. 135		171 8

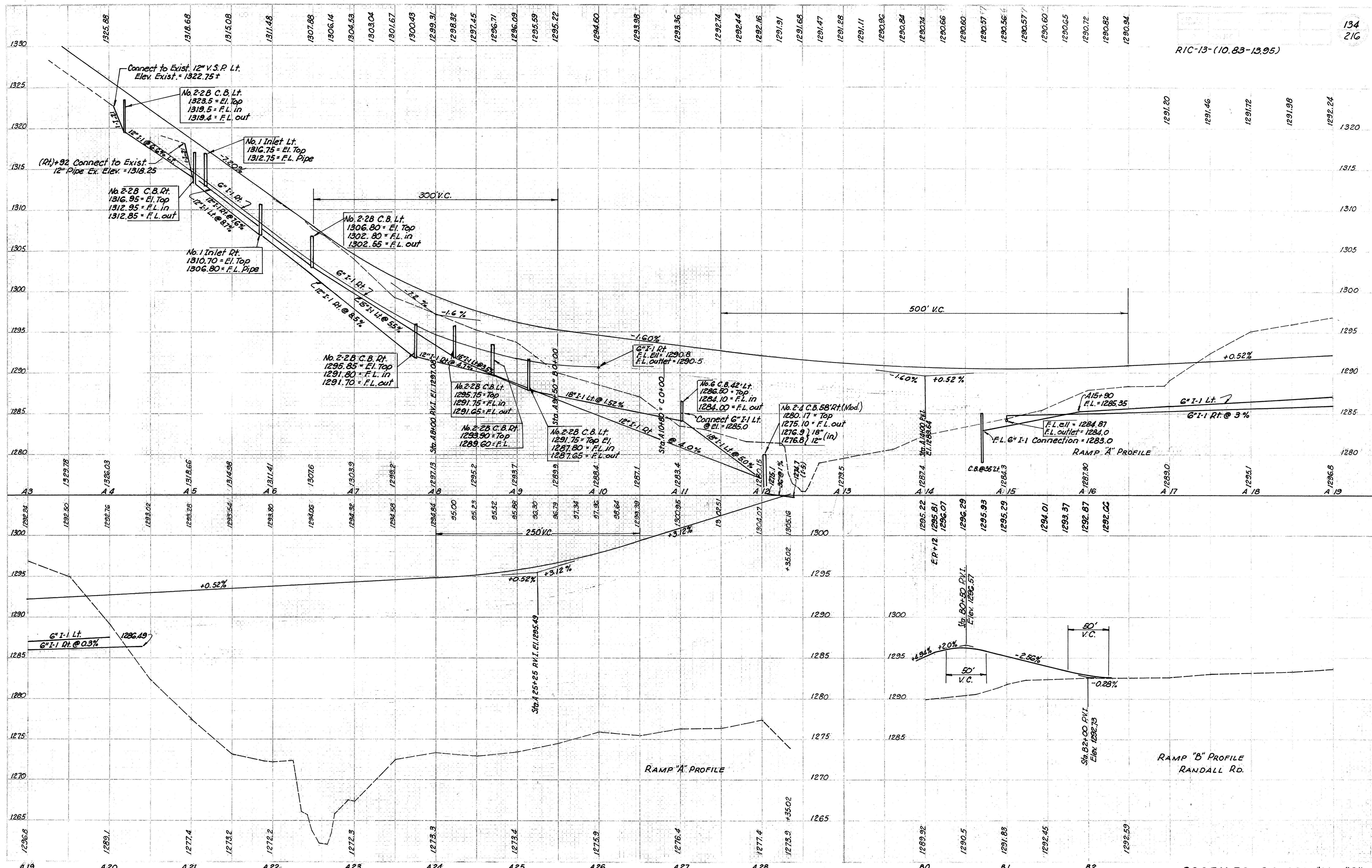


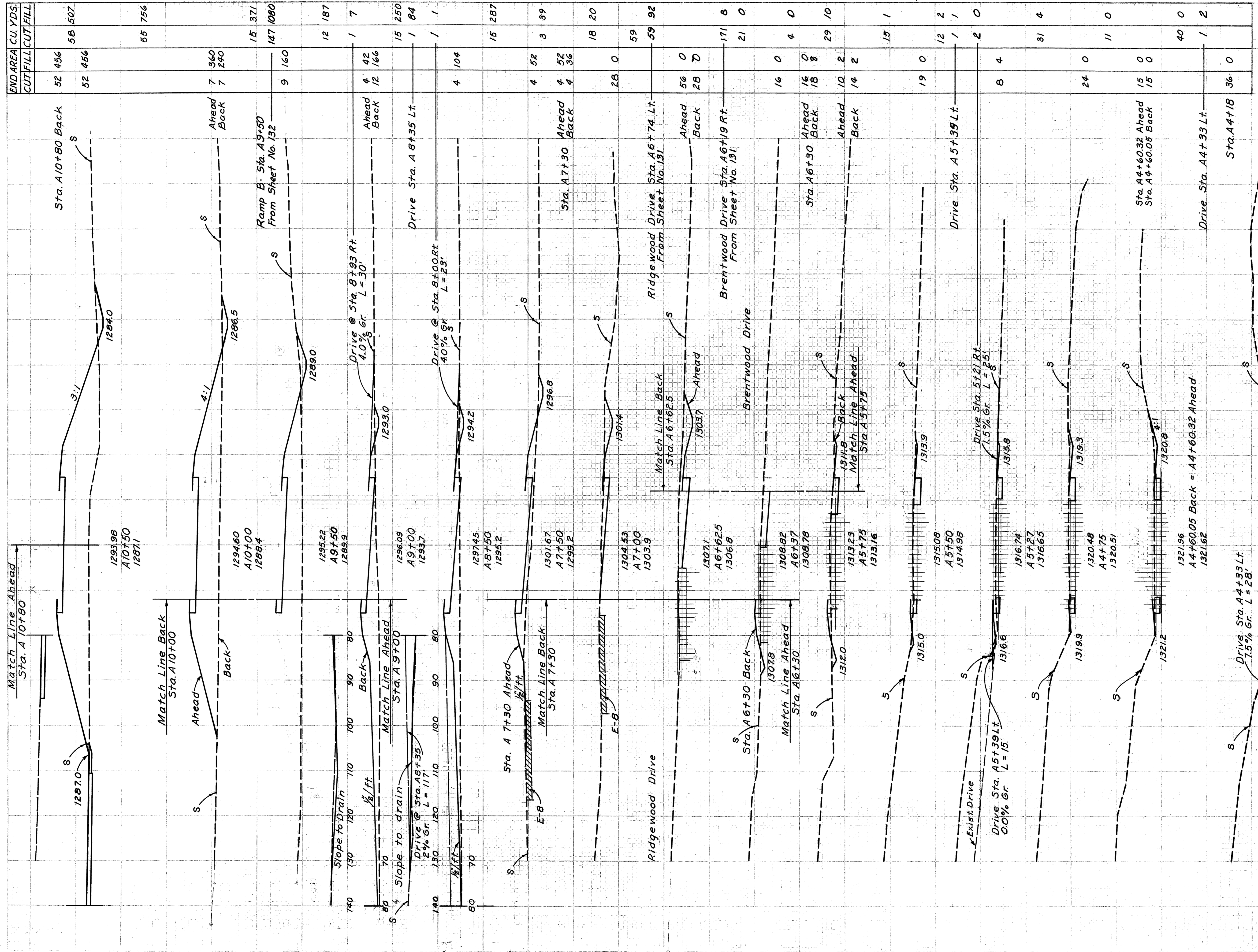
END AREA	CU. YDS.	
	CUT	FILL
Sta. 2+25	0	0
	28	0
		11 0
		24 0
1+90	73	0
		43 7
	12	13
		22 49
	19	55
		12 147
	0	175
		0 364
	0	323
		0 510
		40'
Area x Cos 6°	0	401
Ramp B Total Carried to Sh. #135		147 1080

1295.81
0+12
1290.12 (on 6° L.F. Skew) Begin Pavement - 0+12

Ramp B Total Carried to Sh. #135

STA. 0+12 to STA. 2+50





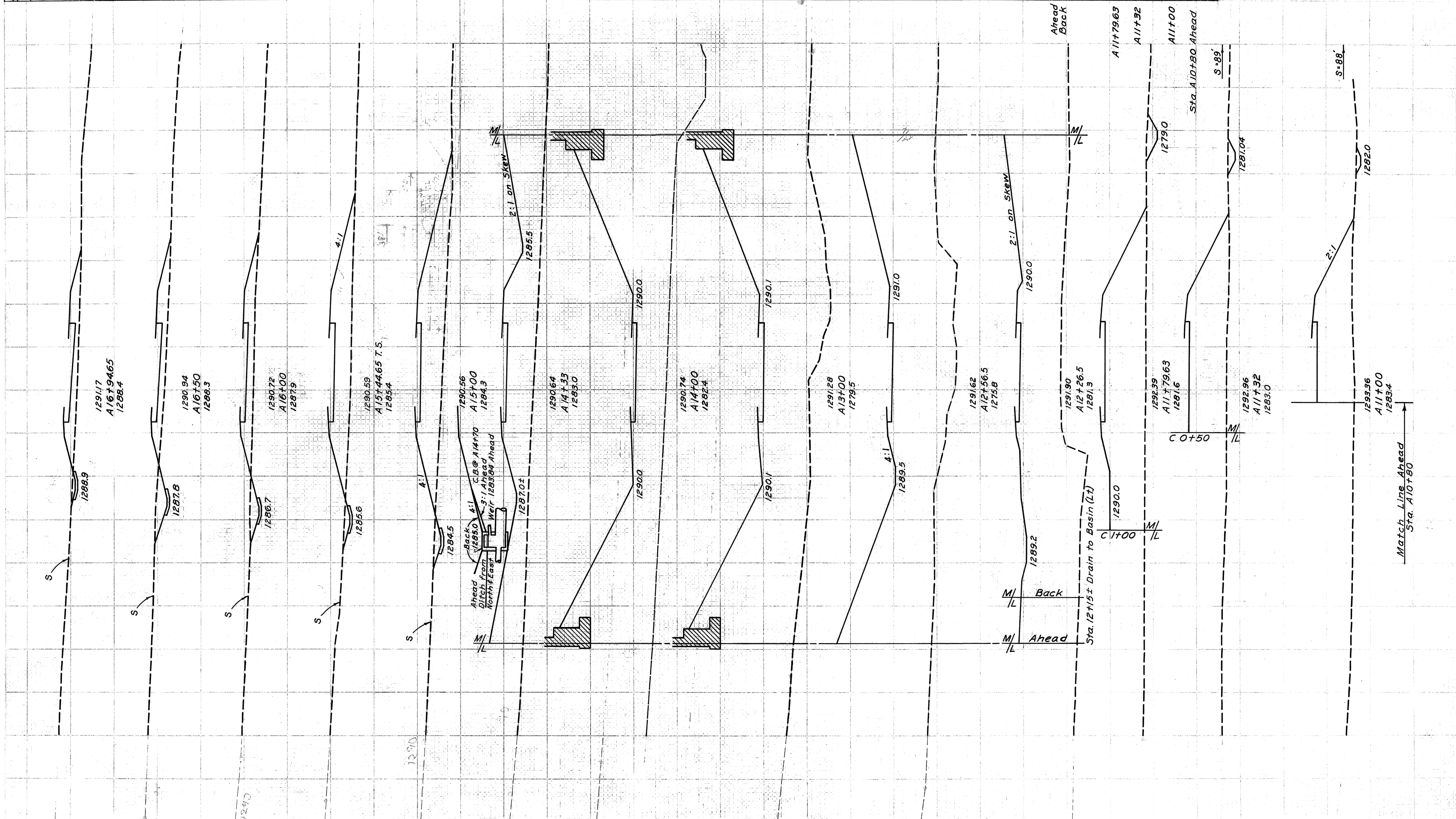
END AREA	CU	YDS.
CUT	FILL	CUT/FILL
52	456	58
52	456	507
		65
		756
		15
		371
		147
		1080
		160
		12
		187
		1
		7
		15
		250
		1
		84
		1
		1
		4
		104
		15
		287
		4
		52
		3
		39
		4
		52
		4
		36
		18
		20
		28
		0
		59
		59
		92
		0
		56
		0
		28
		0
		171
		8
		21
		0
		16
		0
		4
		0
		16
		0
		18
		8
		29
		10
		10
		2
		14
		2
		15
		1
		19
		0
		12
		2
		1
		1
		2
		0
		8
		4
		31
		4
		24
		0
		11
		0
		15
		0
		40
		0
		1
		2
		0
		36
		0
Total for Ramp 'A' to Sheet # 91		
		5191
		43215

RIC-13-(10.83-13.95)

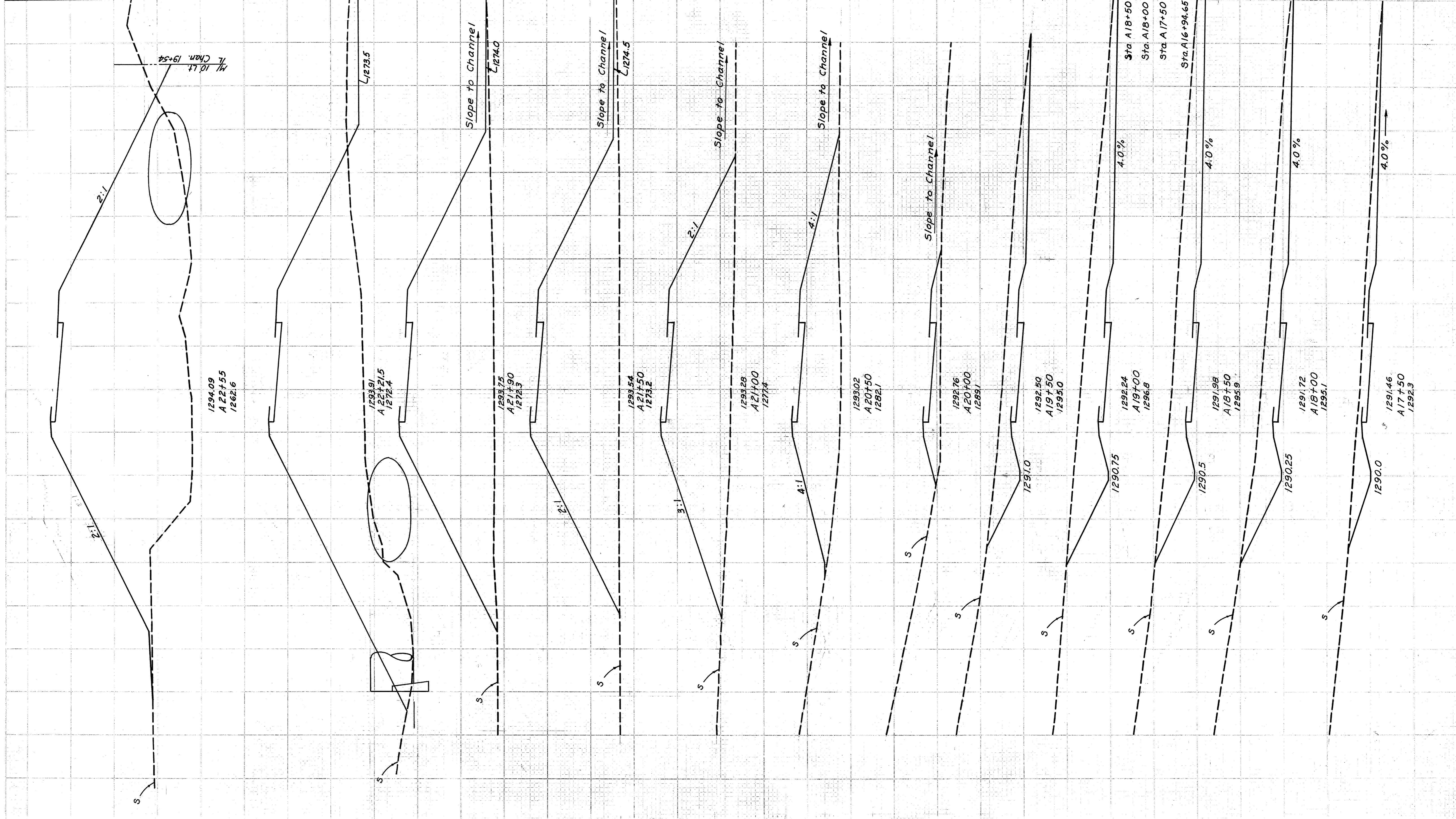
135
216

A4+00 BEGIN WORK

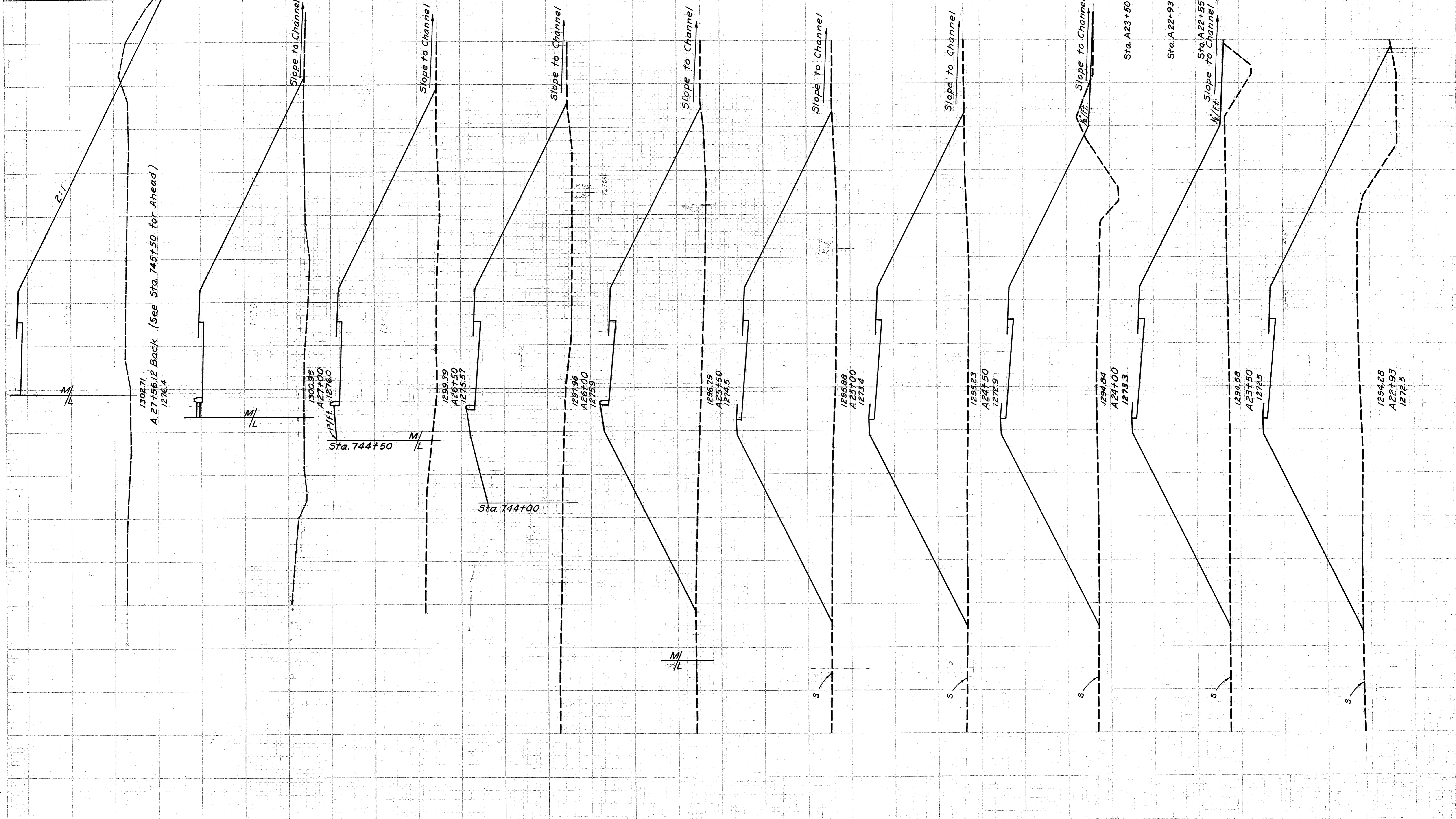
END AREA	CUT	FILL	CUT	FILL	CUT	FILL
2	72					
24	76					
20	92					
28	324					
7	224					
8	352					
0	700					
0	1440					
0	1952					
0	1792					
0	1432					
14	1632					
600	21	864				
380	7	403				
300	4	200				
240	8					



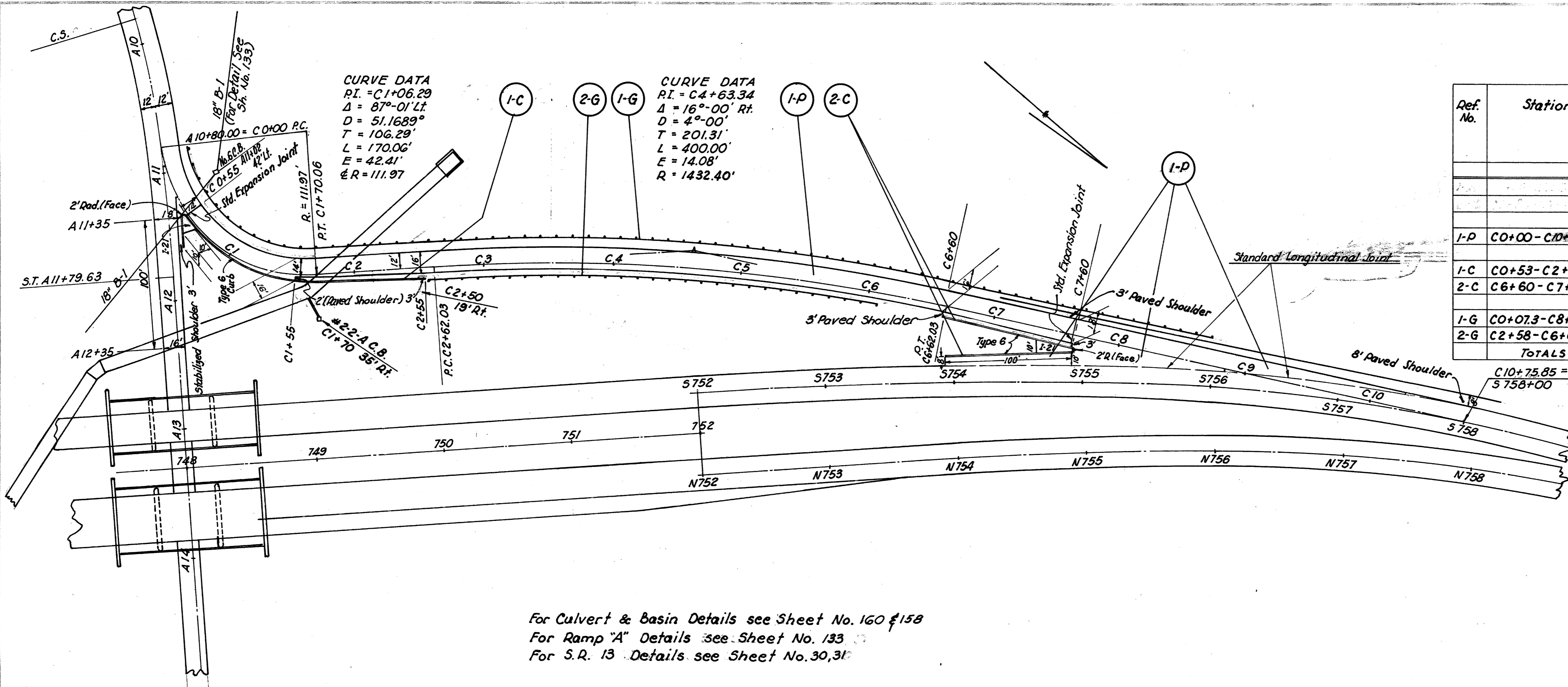
END AREA	CUT	FILL	CUT/FILL	CUT/FILL
60	2540			
89	2678			
83	1776			
0	1572			
0	1420			
0	1100			
0	660			
0	116			
340	0			
560	0			
834	0			
937	0			
604	0			
219	74			
72				



END AREA CU. YDS.	CUT FILL CUT FILL
52 1244	
54 2665	
0 1320	
0 2460	
0 1336	
0 1552	
0 2978	
0 1664	
0 1660	
0 1664	
22 3082	
24 1664	
22 3093	
0 1676	Sta. A23+50
0 1852	Sta. A22+93
42 3091	Sta. A22+55
60 2540	Sta. A22+55



Rem RKT



RIC-13- (10.83-13.95)

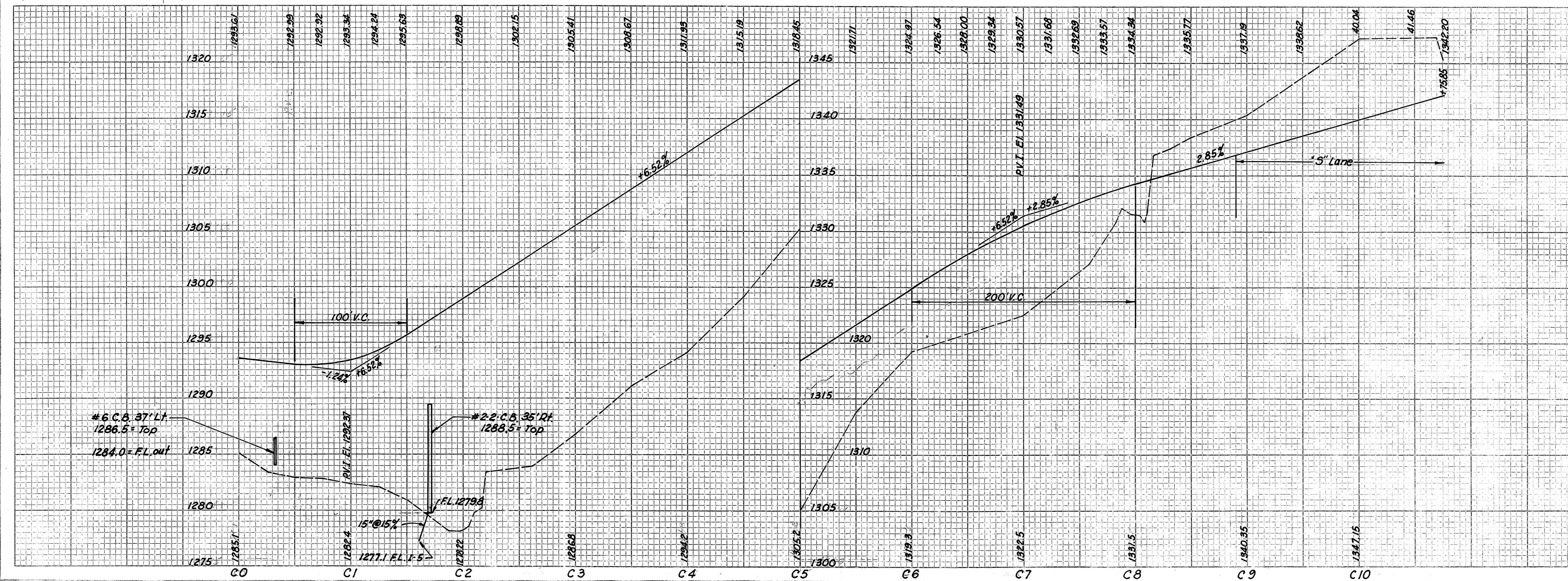
Ref. No.	Station	E-1 Comp. Subg.	Sq. Yds.	T-31 Surf. Treat.		T-71 Reinf. P.C. Conc. Pav't. Sq. Yds.	T-12 Conc. Curb Type 6 Lin. Ft.	T-15 Guard Rail Type Deep Lin. Ft.	B-19 Aggregate base Course Cu. Yds.	I-21 Med. Pav't. Sq. Yds.	I-22 Subbase Cu. Yds.	T-30 Bituminous Prime Coat @ 0.20 Gal. Sq. Yd.
				# 6 Aggr. Cu. Yds.	Bit. Mat. Gal.							
I-P	C0+00 - C10+75.85		2456.7	4.1	154.9	1904			129.1		42.9	20.7
I-C	C0+53 - C2+55 Rt.						227			6.67		
2-C	C6+60 - C7+62 Rt.						203			16.67		
I-G	C0+07.3 - C8+70.0 Lt.							837.5				
2-G	C2+58 - C6+06.7 Rt.							350				
TOTALS			2457	4.1	154.9	1904	430	1187.5	129.1	23.3	42.9	20.7

For Culvert & Basin Details see Sheet No. 160 & 158
 For Ramp "A" Details see Sheet No. 133
 For S.R. 13 Details see Sheet No. 30, 31

SUPERELEVATION RAMP "C"

Station	Pavement Elevations		Remarks
	12' Lt. of C	4' Rt. of C	
C 0+00	1293.61	1293.61	
+25	93.17	93.30	
+50	92.74	92.99	
+75	92.79	92.92	1293.00 2.4' Rt.
C 1+00	92.84	93.34	93.46 2.9' Rt.
+25	93.74	94.24	94.38 3.4' Rt.
+50	95.13	95.63	95.79 3.9' Rt.
+75	96.88	97.26	97.34 2.4' Rt.
C 2+00	1298.64	1298.89	1298.95 2.9' Rt.
+25	1300.39	1300.52	1300.56 3.4' Rt.
+50	02.15	02.15	02.15 3.9' Rt.
+75	03.91	03.78	03.74
C 3+00	05.66	05.41	05.33
+25	07.42	07.04	06.91
+50	09.17	08.67	08.50
+75	10.80	10.30	10.13
C 4+00	12.43	11.93	11.76
+25	14.06	13.56	13.39
+50	15.69	15.19	15.02
+75	17.32	16.82	16.65
C 5+00	18.95	18.45	18.28
+25	20.58	20.08	19.91
+50	22.21	21.71	21.54
+75	23.84	23.34	23.17
C 6+00	25.47	24.97	24.80
+25	27.04	26.54	26.37
+50	28.50	28.00	27.83
+75	29.84	29.34	29.16 4.3' Rt.
C 7+00	31.07	30.57	30.37 4.8' Rt.
+25	32.18	31.68	31.46 5.3' Rt.
+50	33.19	32.69	32.45 5.8' Rt.
+75	34.07	33.57	
C 8+00	34.84	34.34	
+25	35.55	35.05	
+50	36.27	35.77	
+75	36.98	36.48	
C 9+00	37.69	37.19	
+25	38.40	37.90	
+50	39.12	38.62	
+75	39.83	39.33	
C 10+00	40.54	40.04	
+25	41.25	40.75	
+50	41.96	41.46	
+75	42.68	42.18	
C10+75.85	1342.71	1342.20	

* Unless otherwise shown



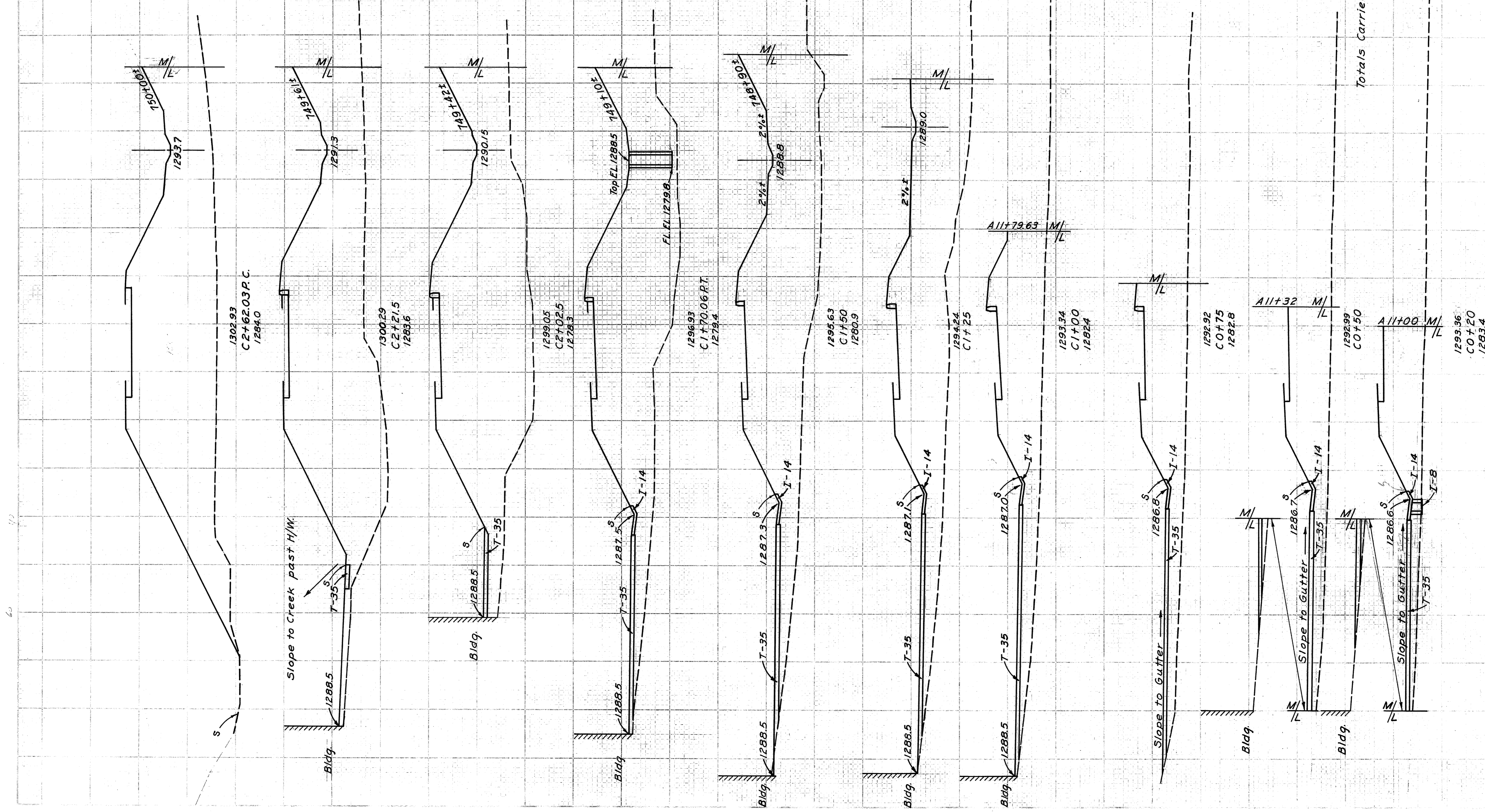
END AREA CU. YDS.	CUT	FILL	CUT	FILL	CUT	FILL
	0	1500				
			0	1520		
			0	1099		
			0	1460		
			0	1679		
			0	1275		
			0	990		
			0	1063		
			0	1020		
			0	600		
			0	505		
			0	490		
			0	417		
			0	410	0	417
			0	390	0	417

Totals Carried to Sheet # 95

13 24.66

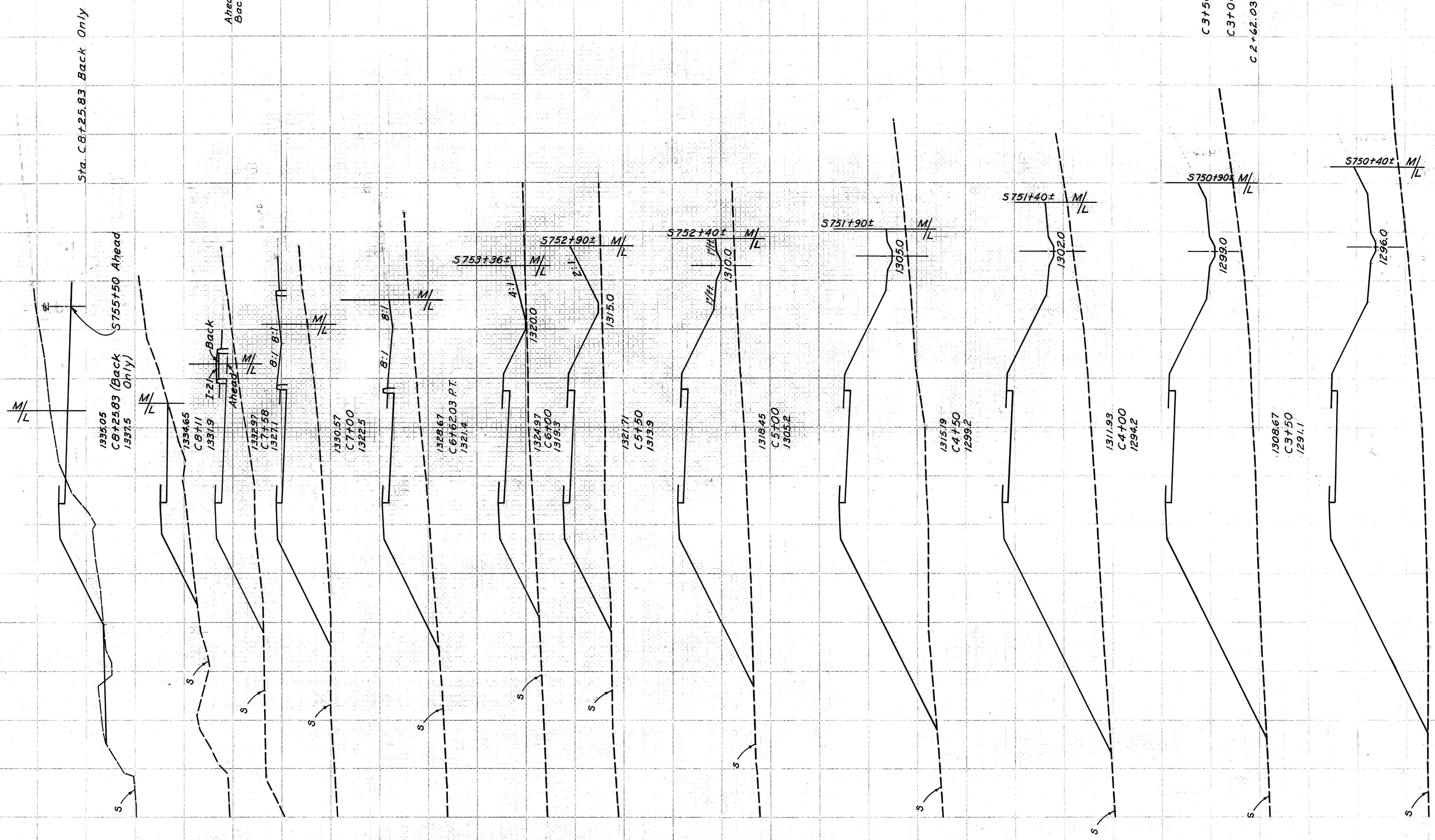
RIC - 13 - (10.83 - 13.95)

140
216



60 70 80 90 100 110 120 130 140 150 160

END AREA	CUT	FILL	CUT	FILL
46	125	13	70	
0	130	0	398	
0	270	0	276	
0	450	0	780	
0	619	0	619	
0	430	0	810	
0	275	0	639	
0	415	0	1144	
0	820	0	1797	
0	1120	0	2250	
0	1310	0	2426	
0	1310	0	2537	
0	1430	0	2060	
0	1500	0		



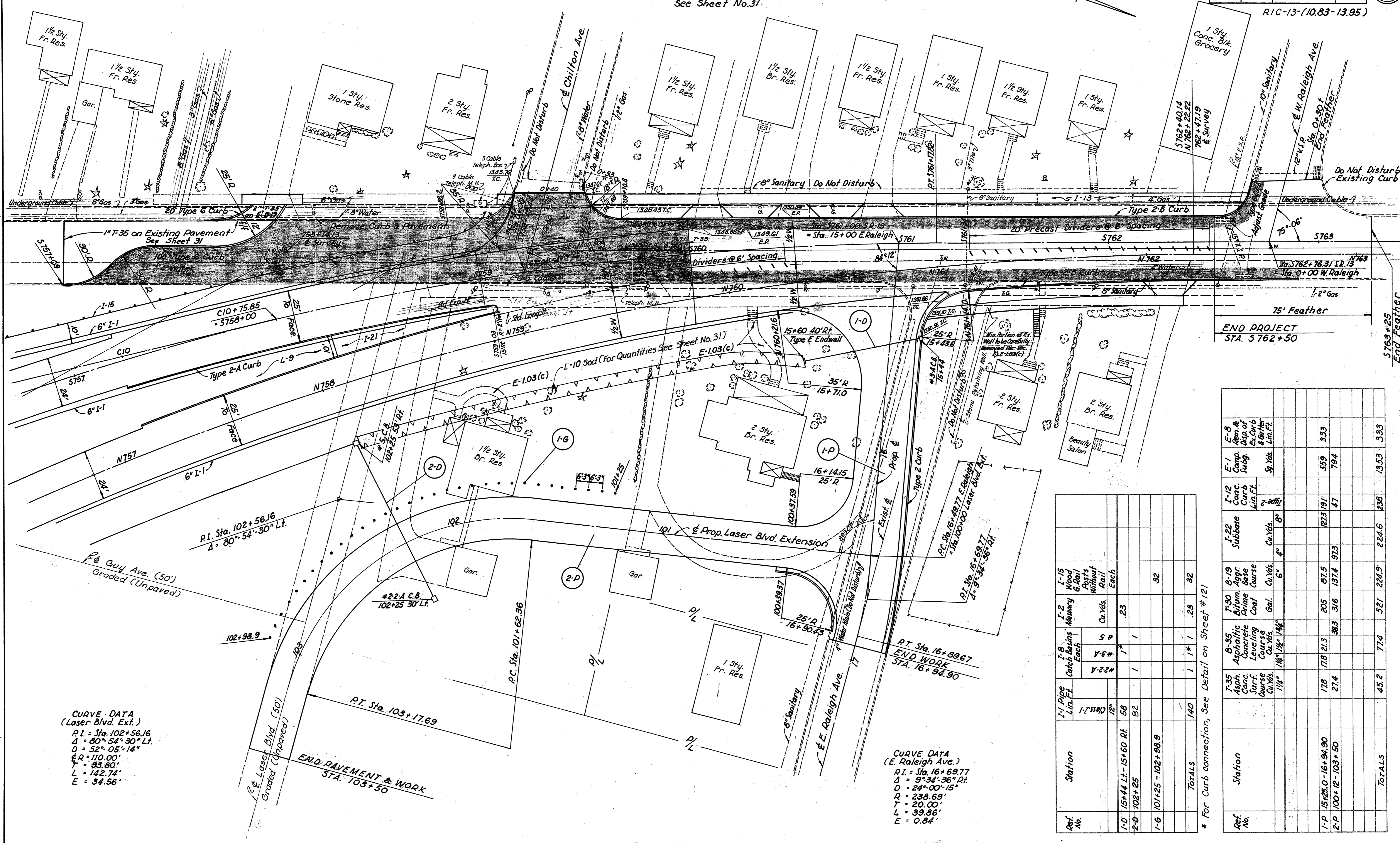
REMY
RKH

For Water & Sanitary Sewer Adjustments
 See Sheets No. 165
 For Quantities of S.R. 13, Chilton Ave. & W. Raleigh Ave.
 See Sheet No. 31

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

142
216

RIC-13-(10.83-13.95)



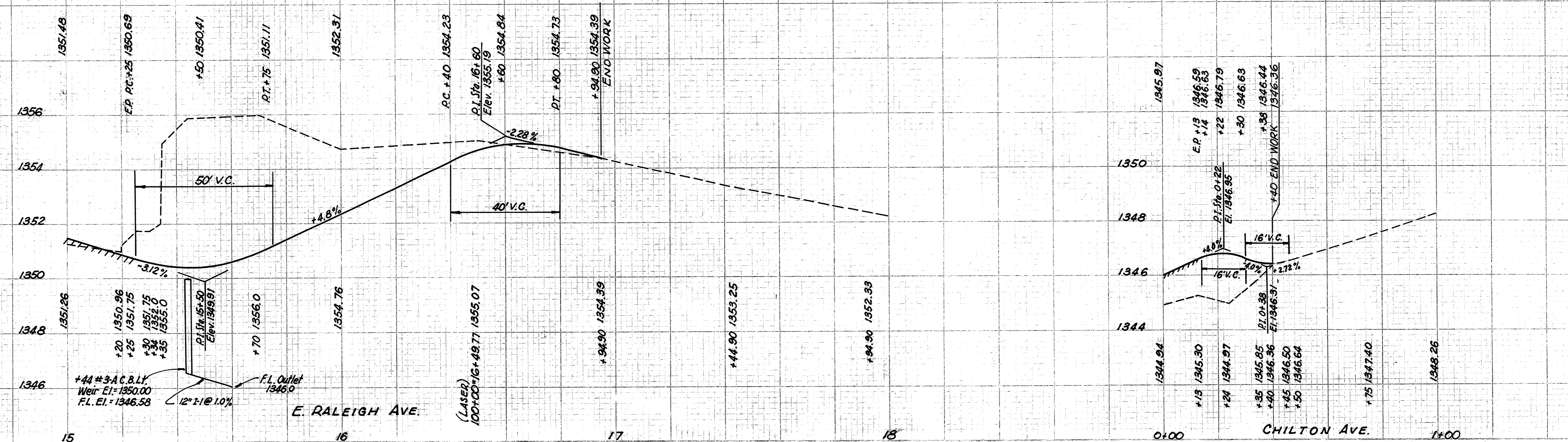
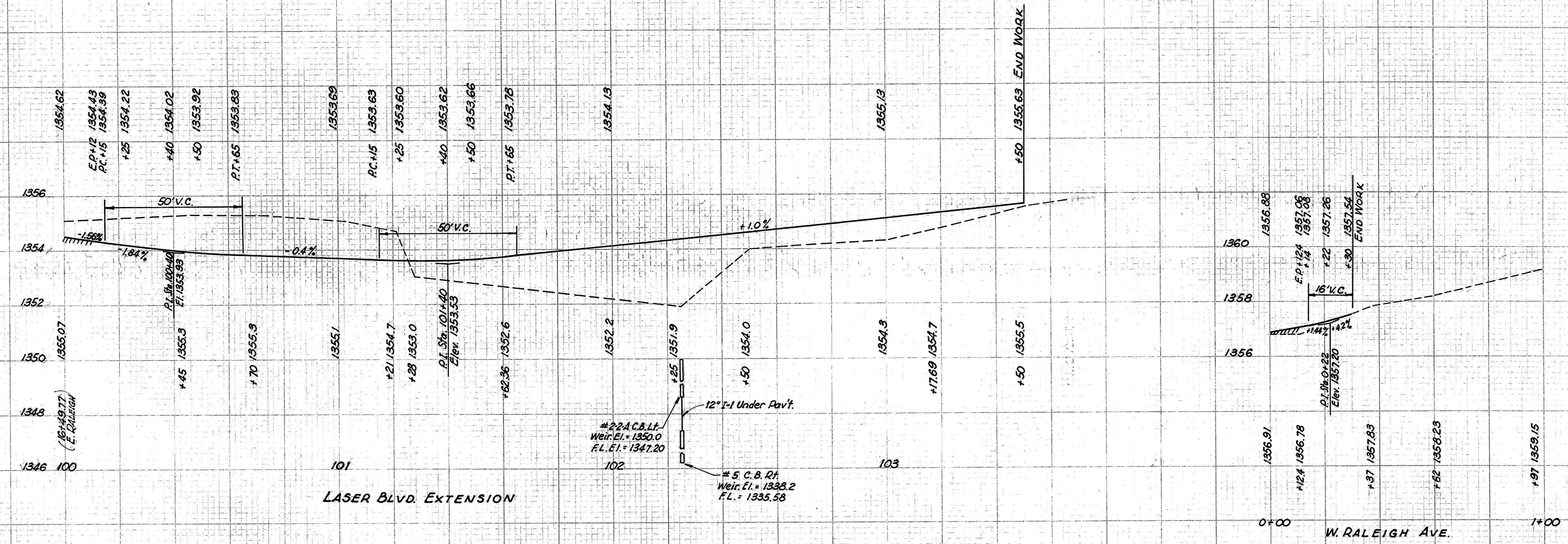
CURVE DATA
 (Laser Blvd. Ext.)
 P.I. = Sta. 102+56.16
 Δ = 80°-54'-30" Lt.
 D = 52'-05'-14"
 R = 110.00'
 T = 93.80'
 L = 142.74'
 E = 34.56'

CURVE DATA
 (E. Raleigh Ave.)
 P.I. = Sta. 16+69.77
 Δ = 9°-34'-36" Rt.
 D = 24'-00'-15"
 R = 238.69'
 T = 20.00'
 L = 39.86'
 E = 0.84'

Ref. No.	Station	F-1 Pipe Lin. Ft.	F-8 Catch Basins Each	F-2 Bitum. Measur. Cu. Yds.	F-15 Wood G. Rail Posts Without Rail Each
1-0	15+44 Lt. - 15+60 Rt.	58	5	.23	32
2-0	102+25	82	3-A		
1-6	101+25 - 102+98.9		2-2-A		
	TOTALS	140	1	.23	32

* For Curb connection, See Detail on Sheet #121

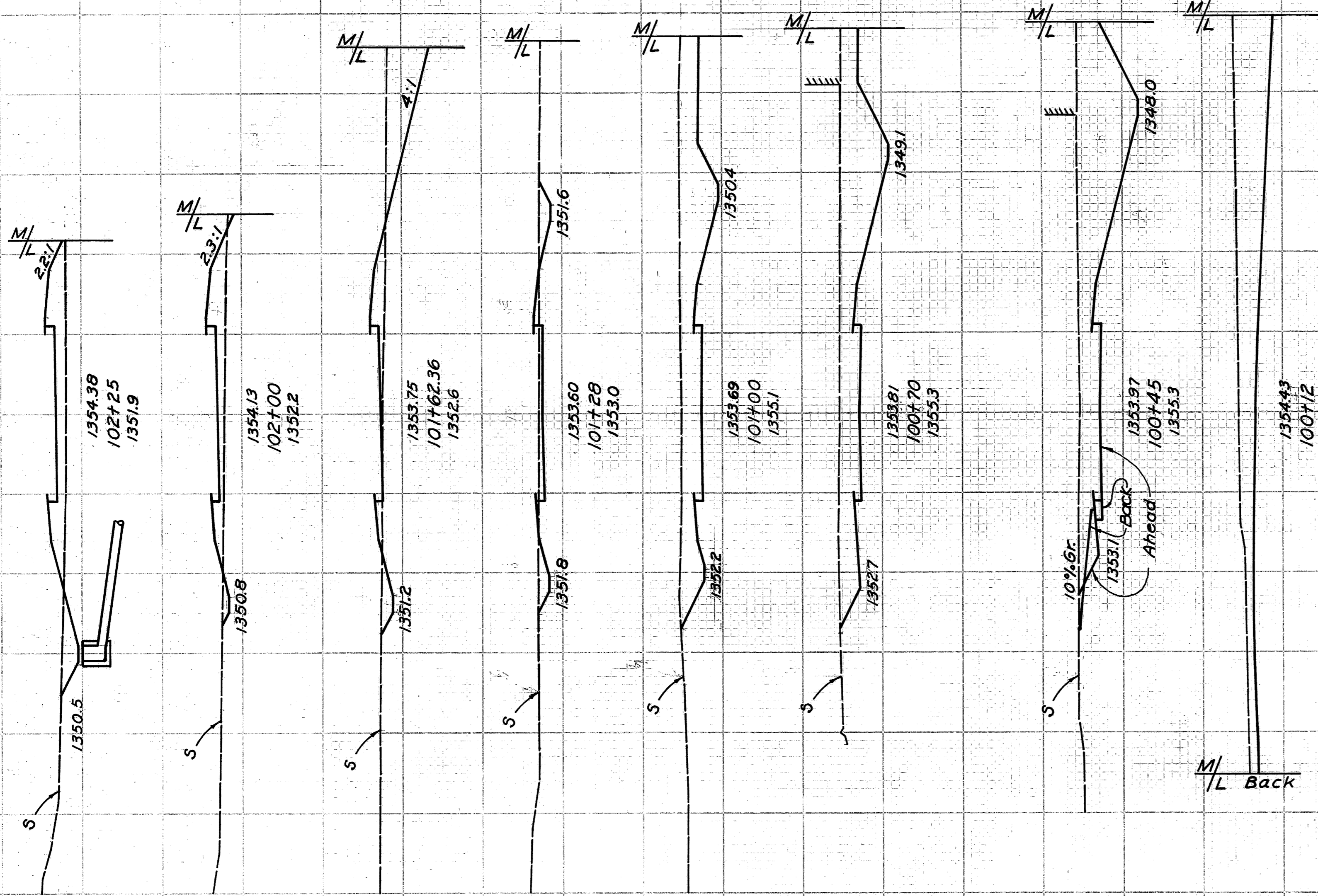
Ref. No.	Station	F-35 Asph. Conc. Surf. Course Cu. Yds.	F-35 Asph. Conc. Leveling Course Cu. Yds.	F-35 Asph. Conc. Base Course Cu. Yds.	F-30 Bitum. Prime Coat Gal.	F-19 Aggr. Course Cu. Yds.	F-22 Subbase Cu. Yds.	F-12 Conc. Curb Lin. Ft.	F-1 Comp. Subg. Sp. Yds.	F-8 Rem. & Disp. of Ex. Curb & Gutter Lin. Ft.
1-P	15+25.0 - 16+94.90	178	178	213	205	87.5	1273	191	559	333
2-P	100+12 - 103+50	274	274	383	316	1374	973	47	794	
	TOTALS	452	452	596	521	2249	2246	238	1353	333



PROFILES: E. RALEIGH AVE., LASER BLVD. EXT., CHILTON AVE., & W. RALEIGH AVE.

END AREA	CUT	FILL	CUT	FILL
16	64	8	50	
2	44	49	46	
68	22	64	15	
32	2	129	1	
216	0	251	0	
236	0	237	0	
Ahead 276	0	Back 272	0	
160	0	1076	165	

Total - Laser Blvd Entered Below

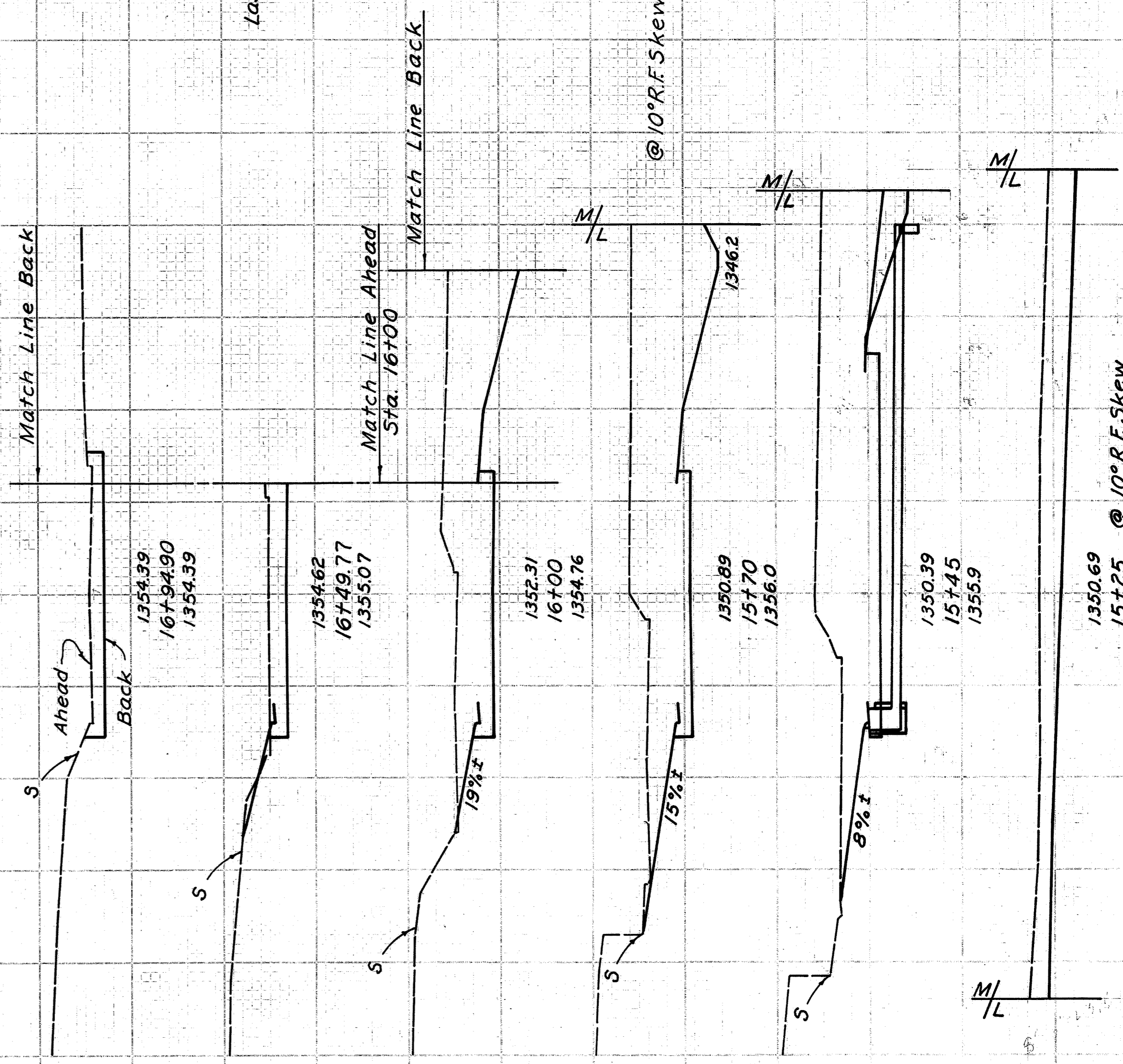


END AREA	CUT	FILL	CUT	FILL
44	0	88	1	
61	1	1076	165	
93	1	93	1	
Ahead 40	0	Back 75	0	
15770	0	400	0	
15745	0	400	0	
15725	0	216	0	

Laser Blvd (from above)

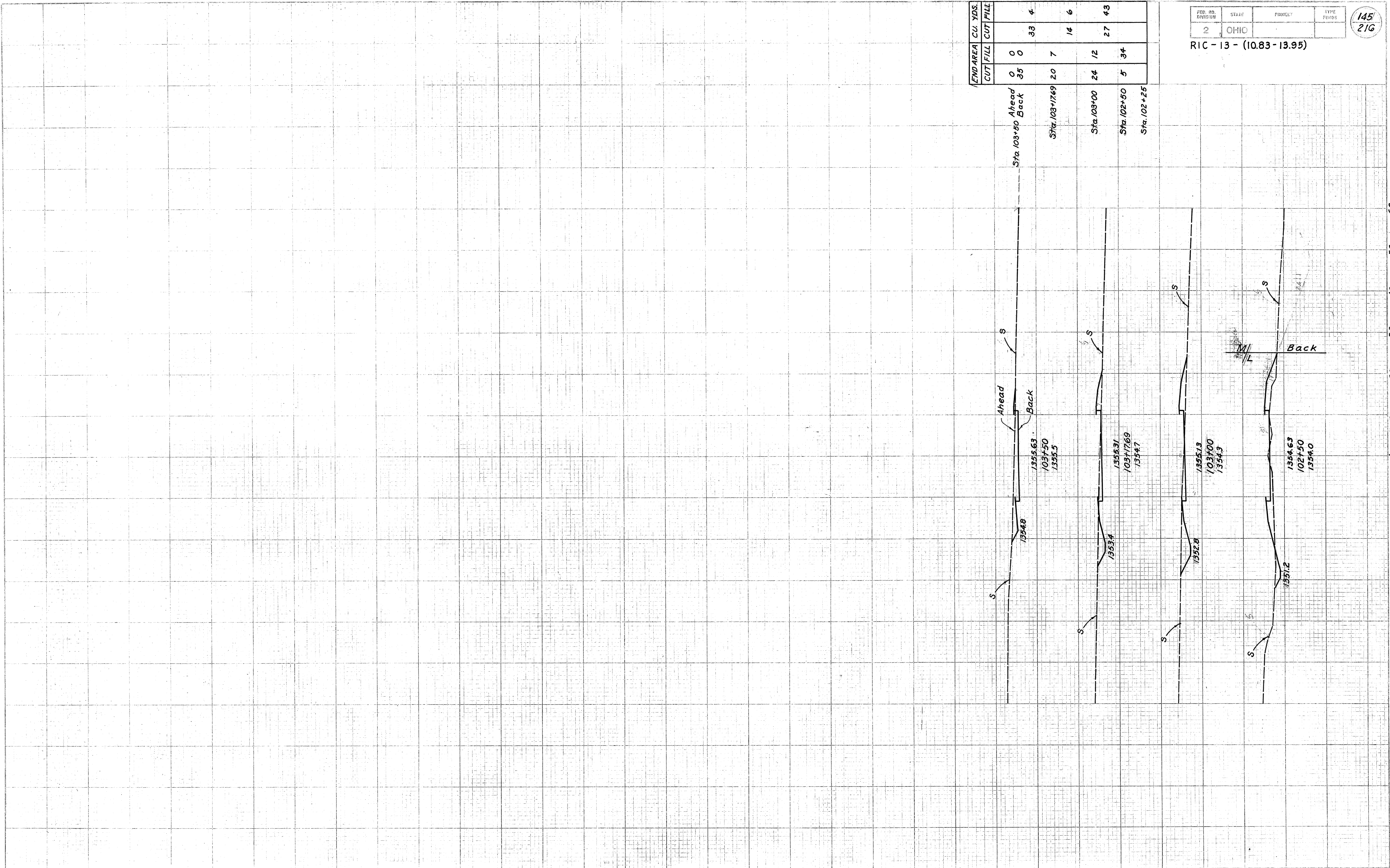
@ 10° R.F. Skew

Total (c. Raleigh & Laser) Carried to sheet 96



RIC-13- (10.83-13.95)

Rem
RKH



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
0	0	0	0
35	0	33	4
20	7	14	6
24	12	27	43
5	34		

Sta. 103+50 Ahead
Back

Sta. 103+769

Sta. 103+00

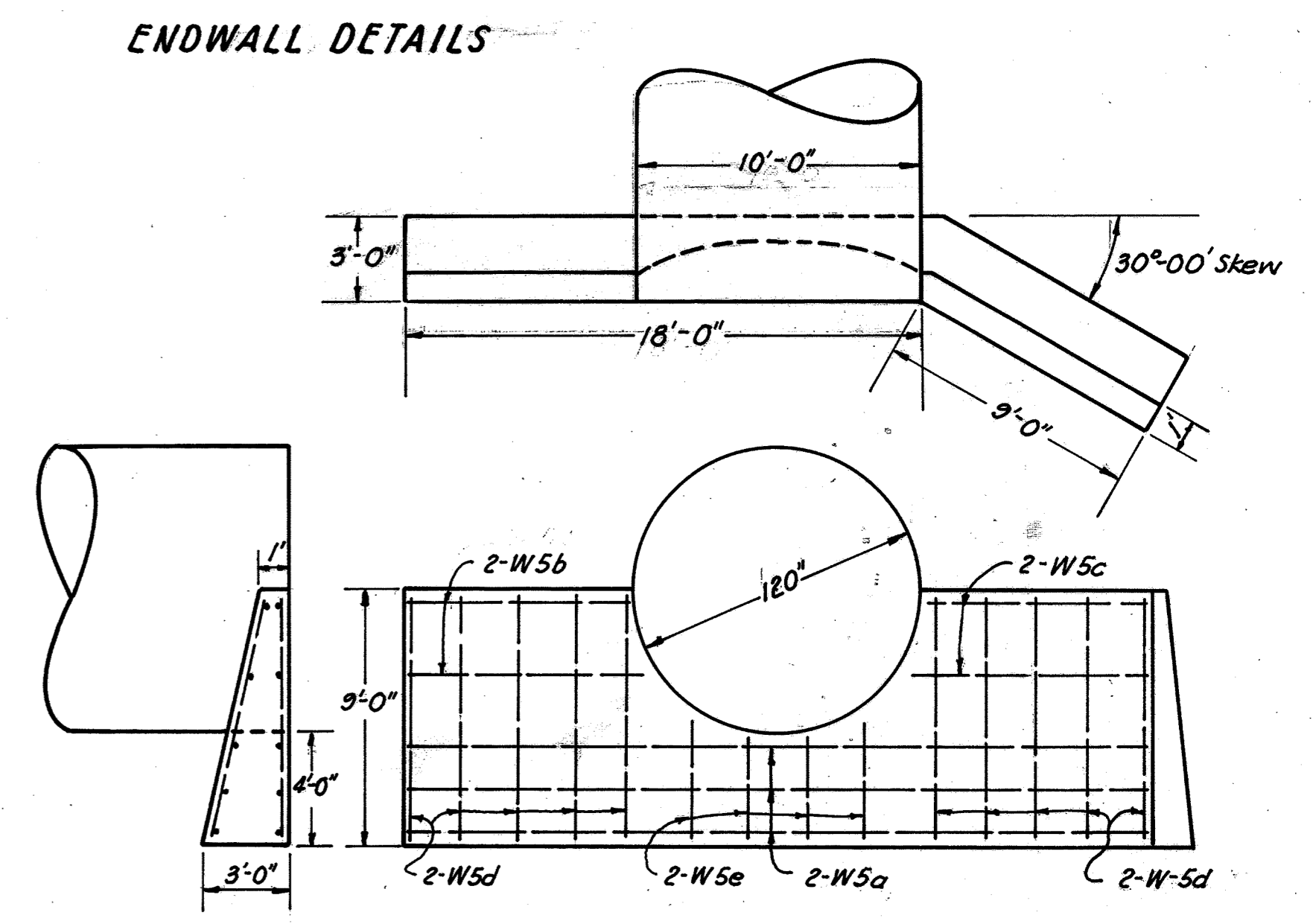
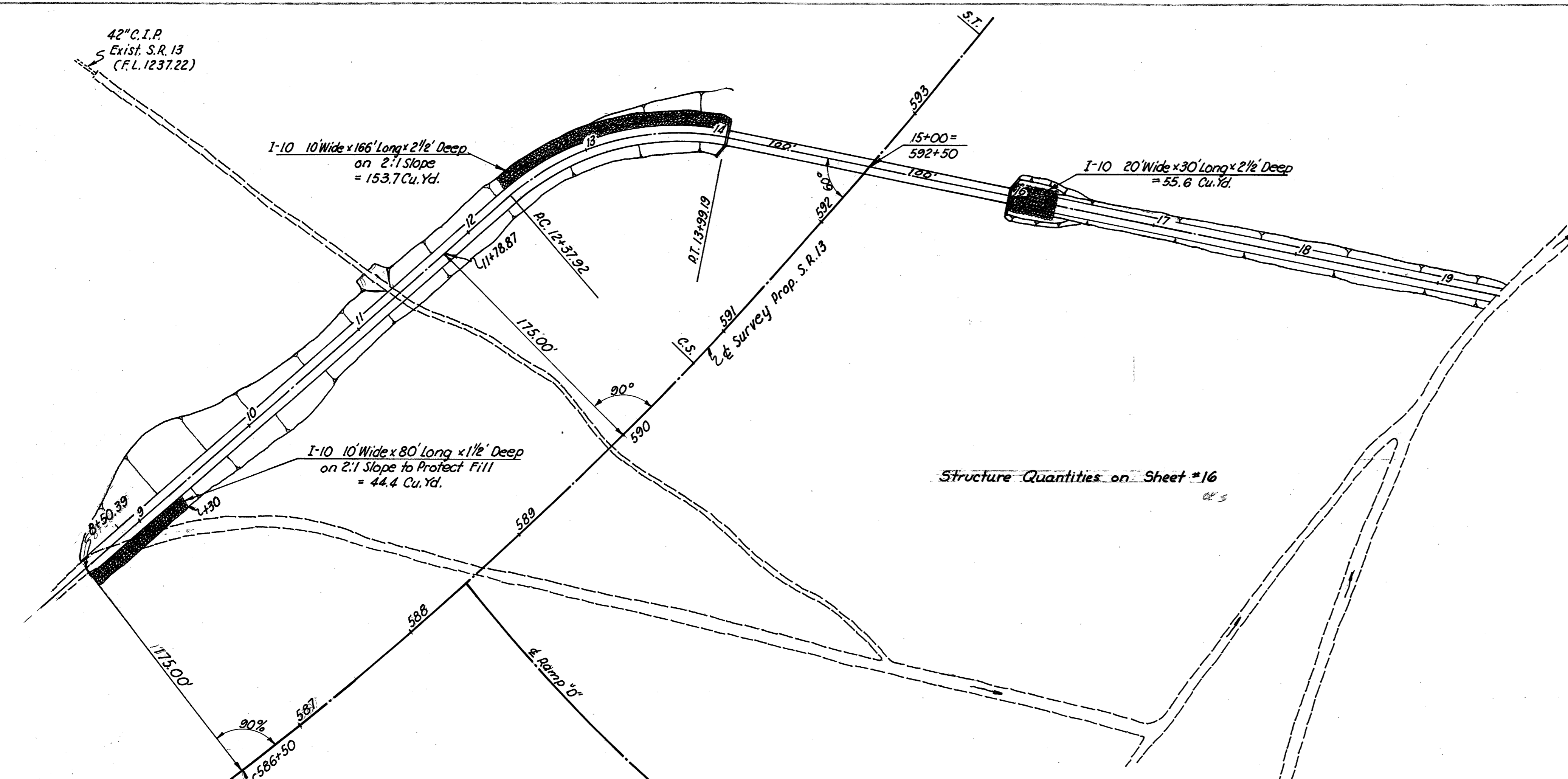
Sta. 102+50

Sta. 102+25

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

RIC - 13 - (10.83 - 13.95)

145
216

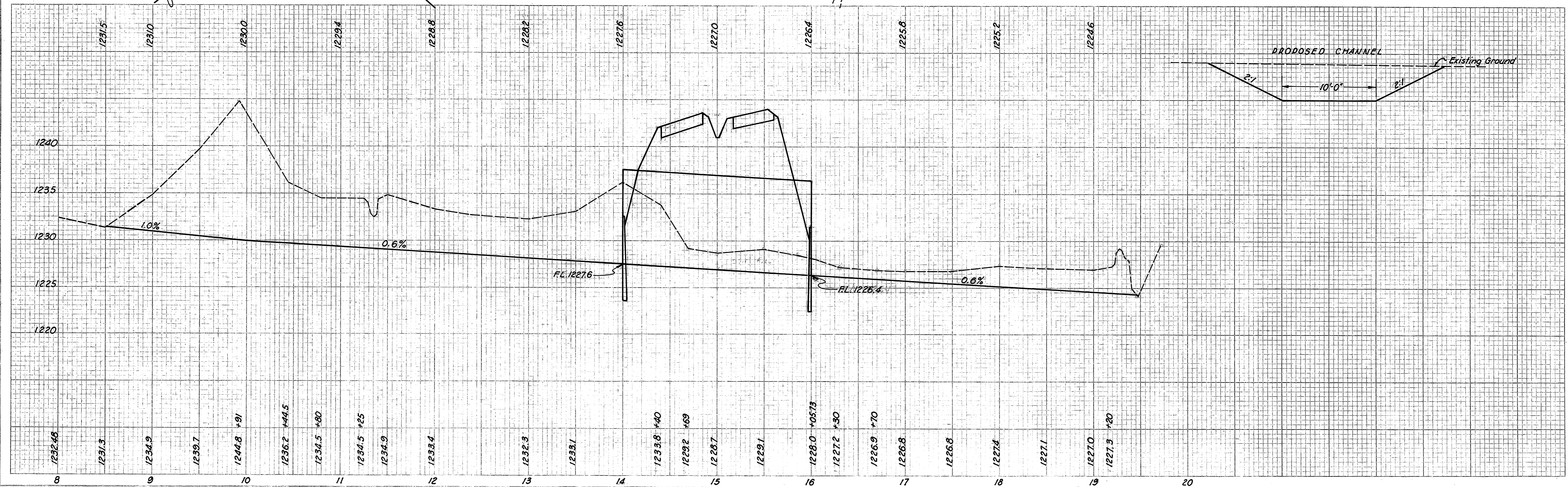


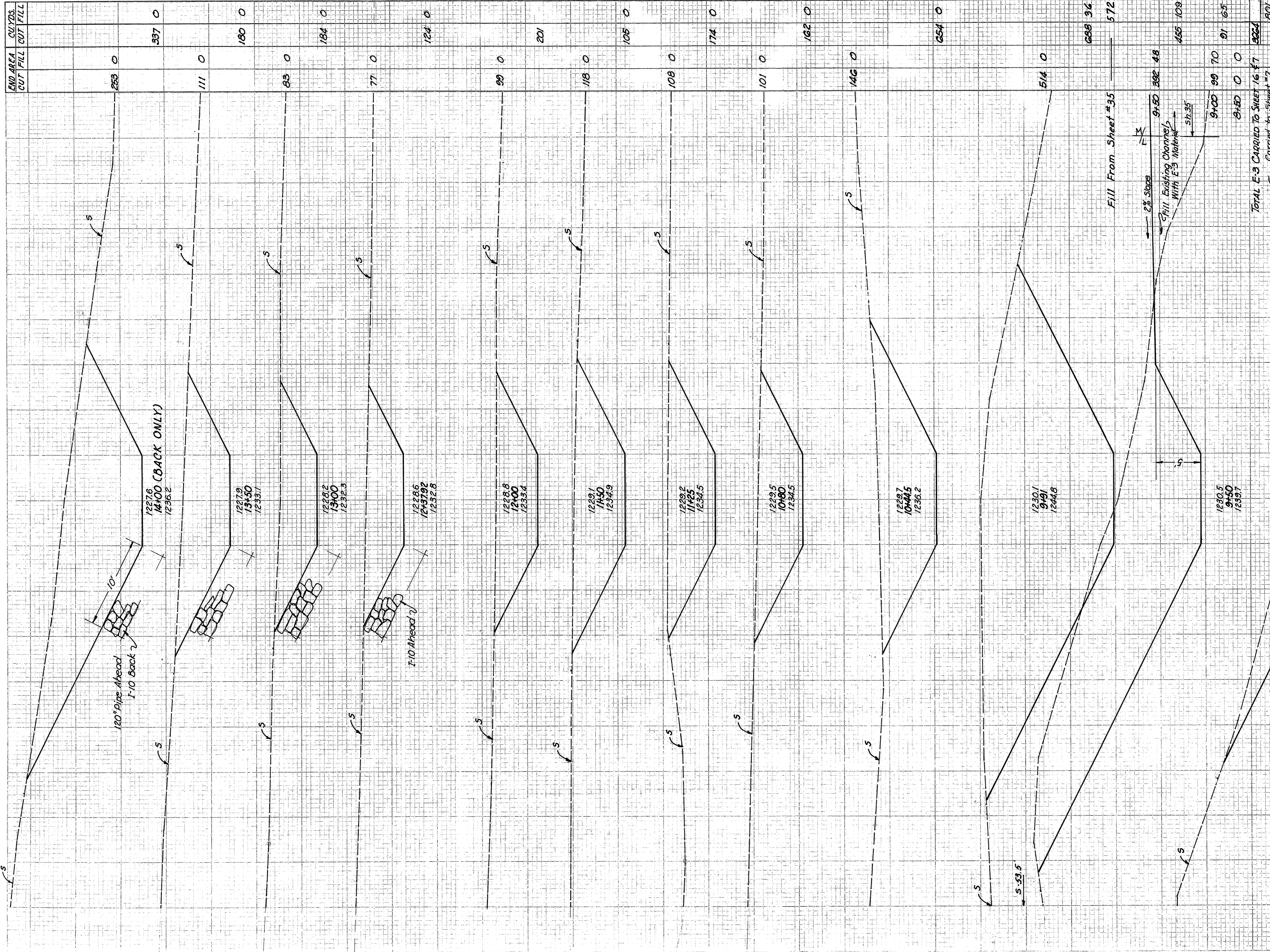
STEEL LIST

Mark	No.	Dia.	Length
W5a	12	5/8"	26'-6"
W5b	8	5/8"	7'-6"
W5c	8	3/8"	8'-6"
W5d	40	5/8"	8'-6"
W5e	16	3/8"	3'-8"

*To be bent in field.

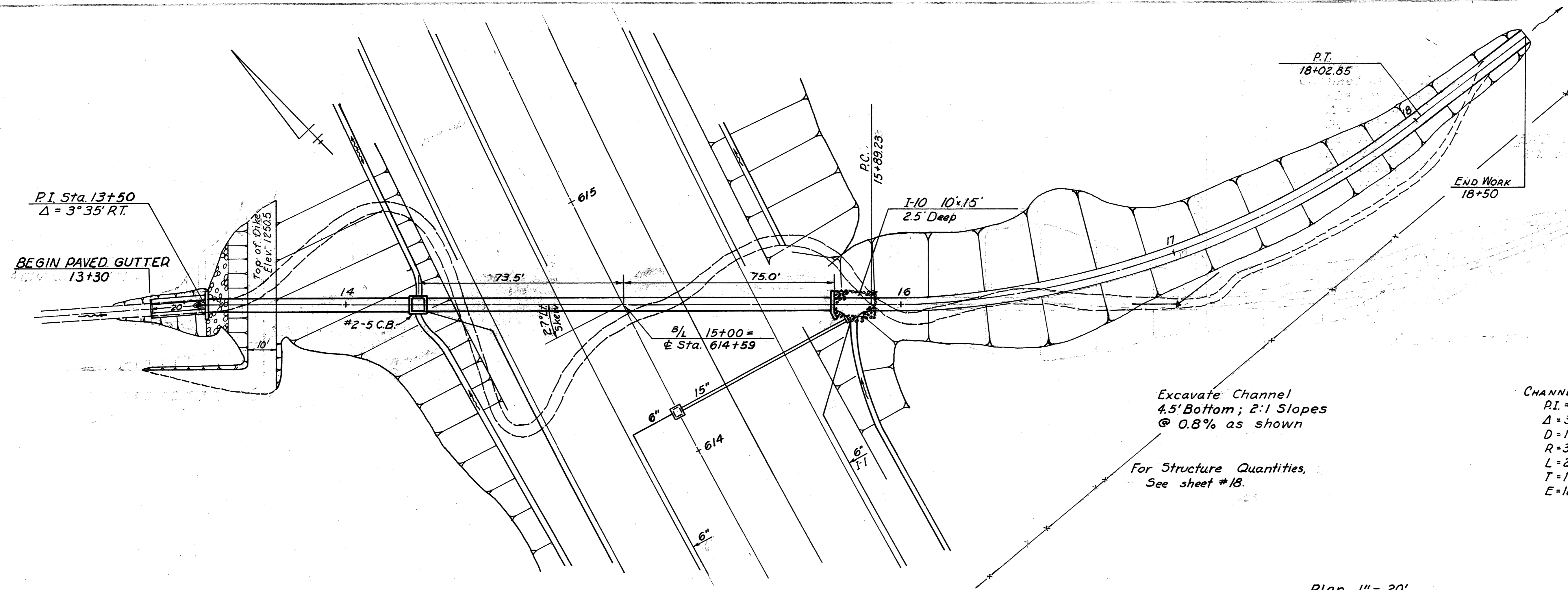
For Other Details and Notes Refer to Std. Drawing SP-53.





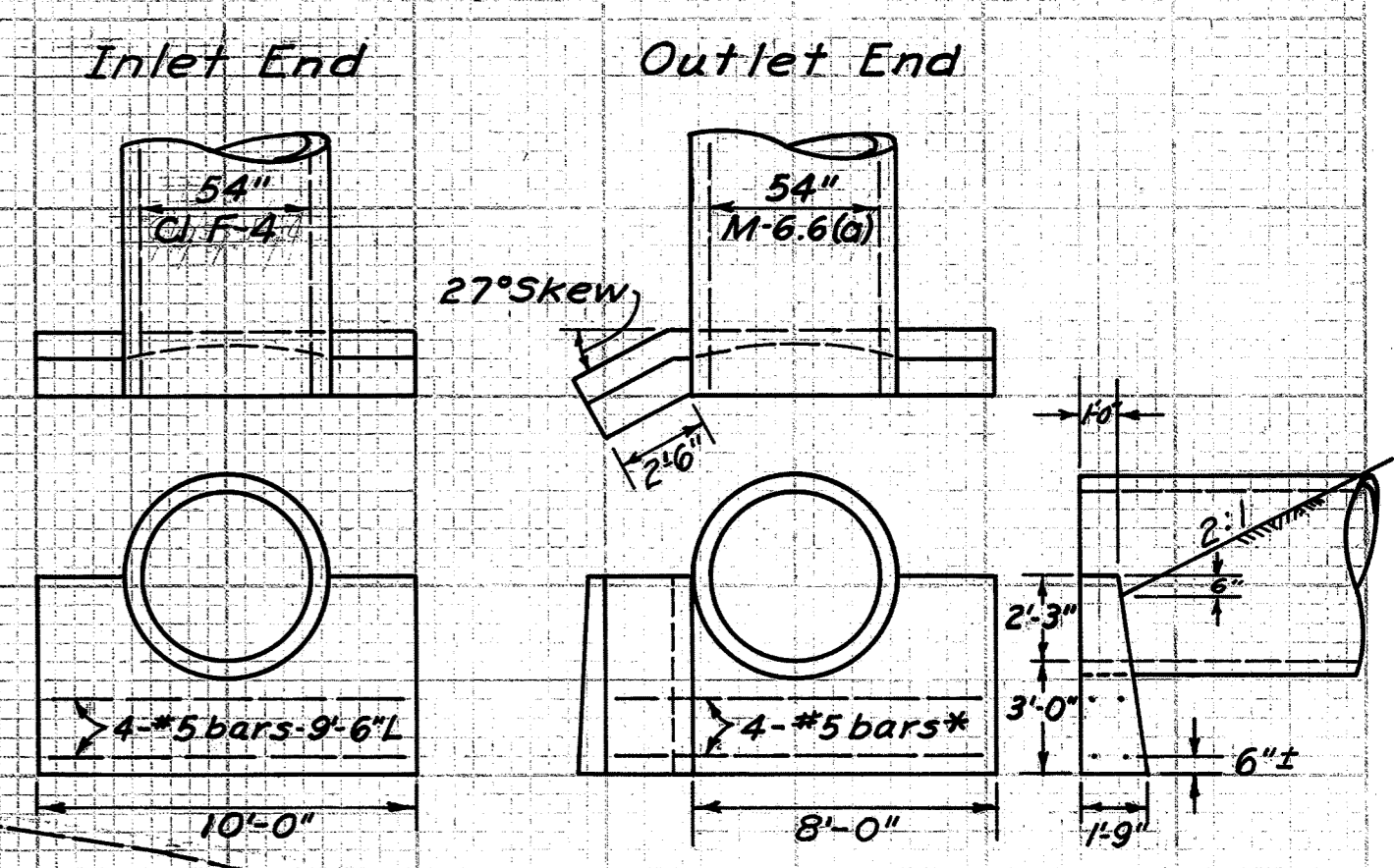
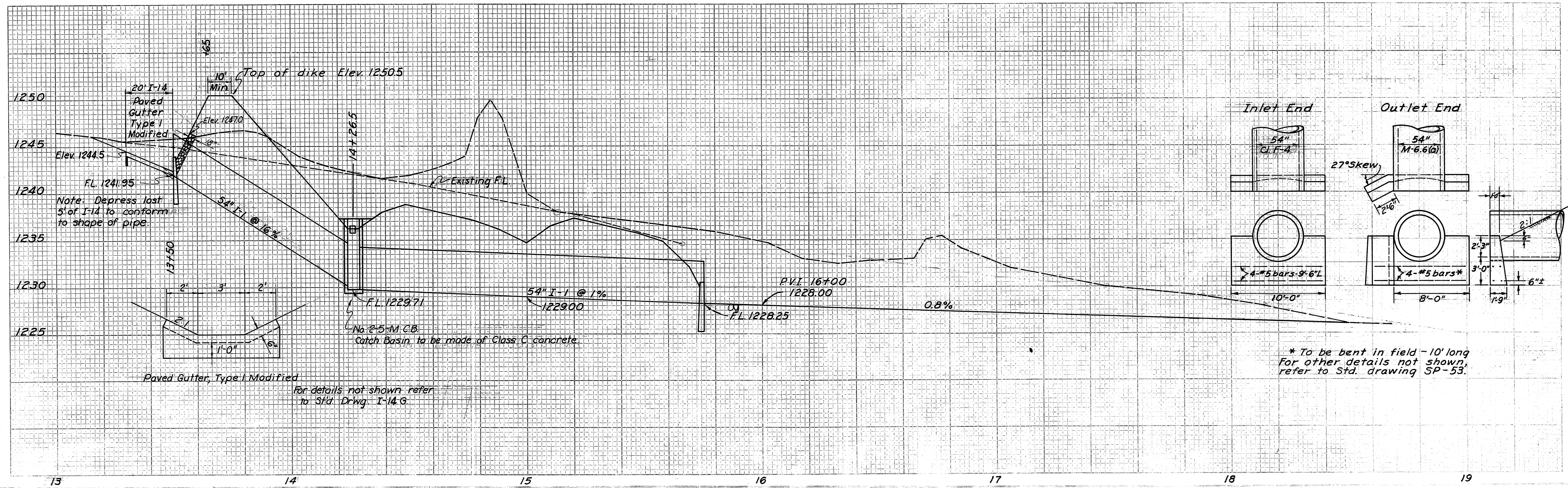
END AREA	CUT	FILL	CUT	FILL
			253 0	
				337 0
			111 0	
				180 0
			83 0	
				184 0
			77 0	
				124 0
			99 0	
				201
			118 0	
				105 0
			108 0	
				174 0
			101 0	
				162 0
			146 0	
				654 0
			514 0	
				688 36
				572
			382 48	
				455 109
			99 70	
				91 65
			84 50 0 0	
				3224
				1807

RIC -13 - (10.83-13.95)

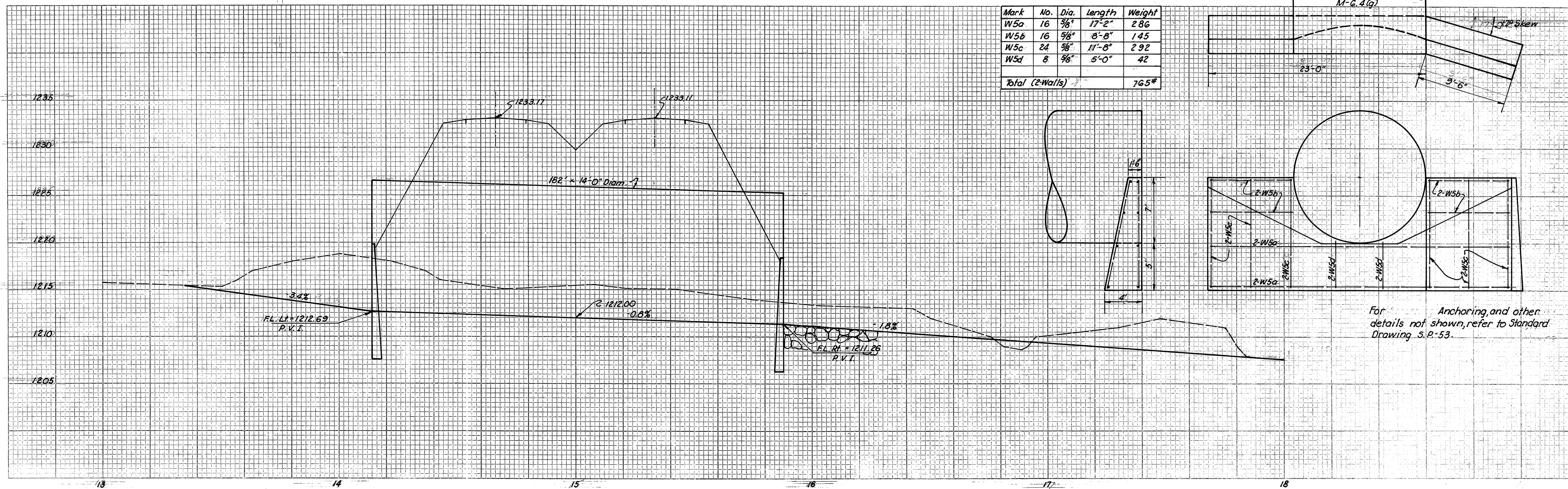
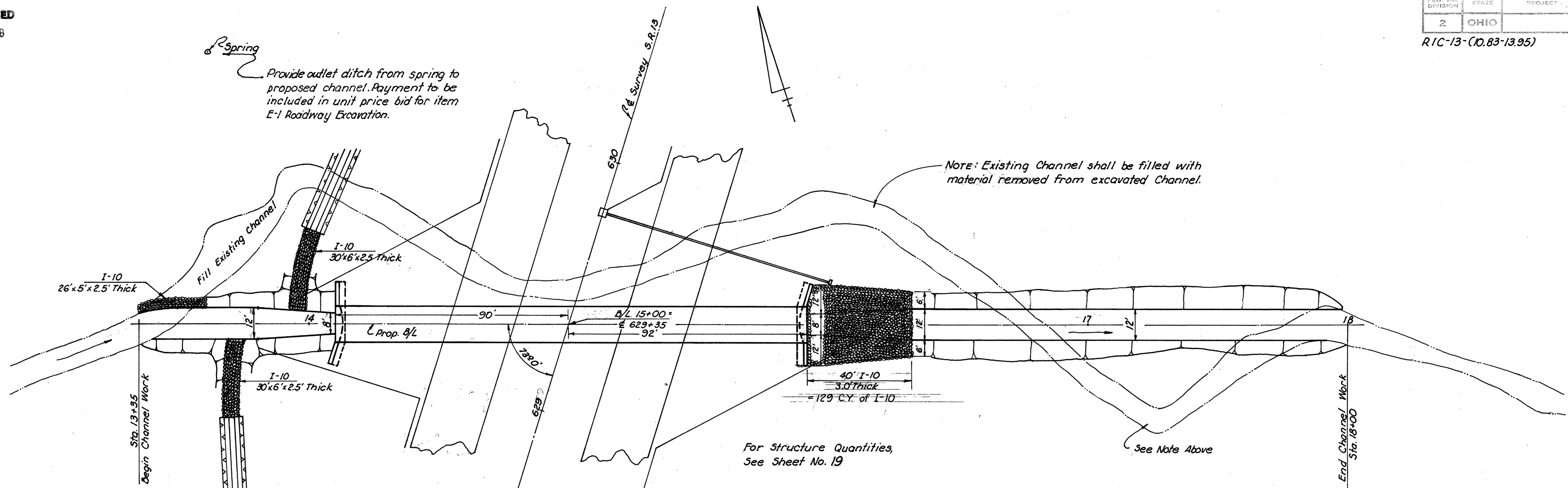


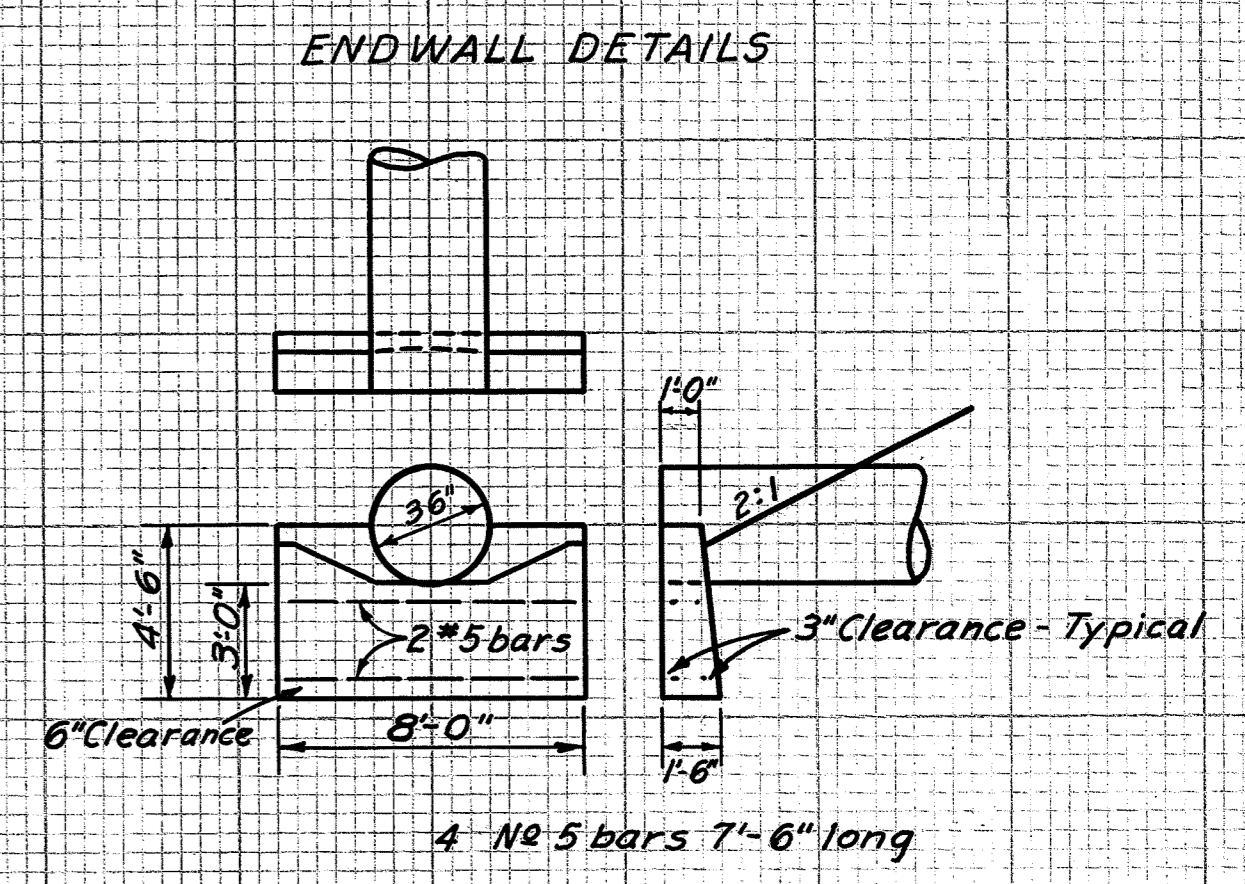
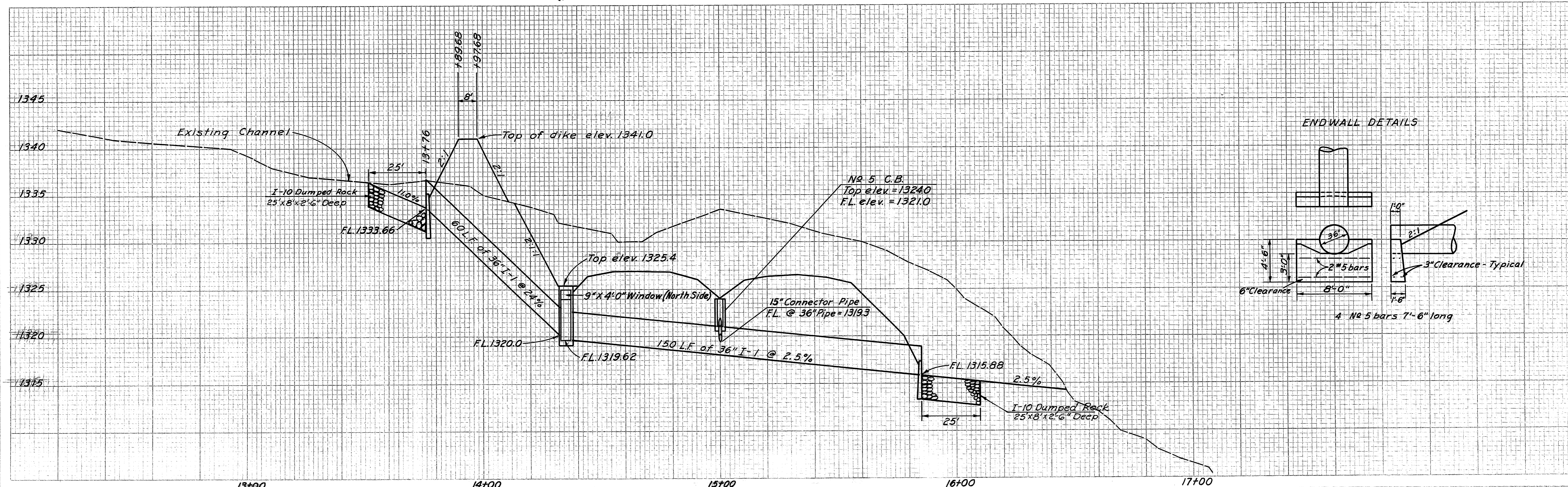
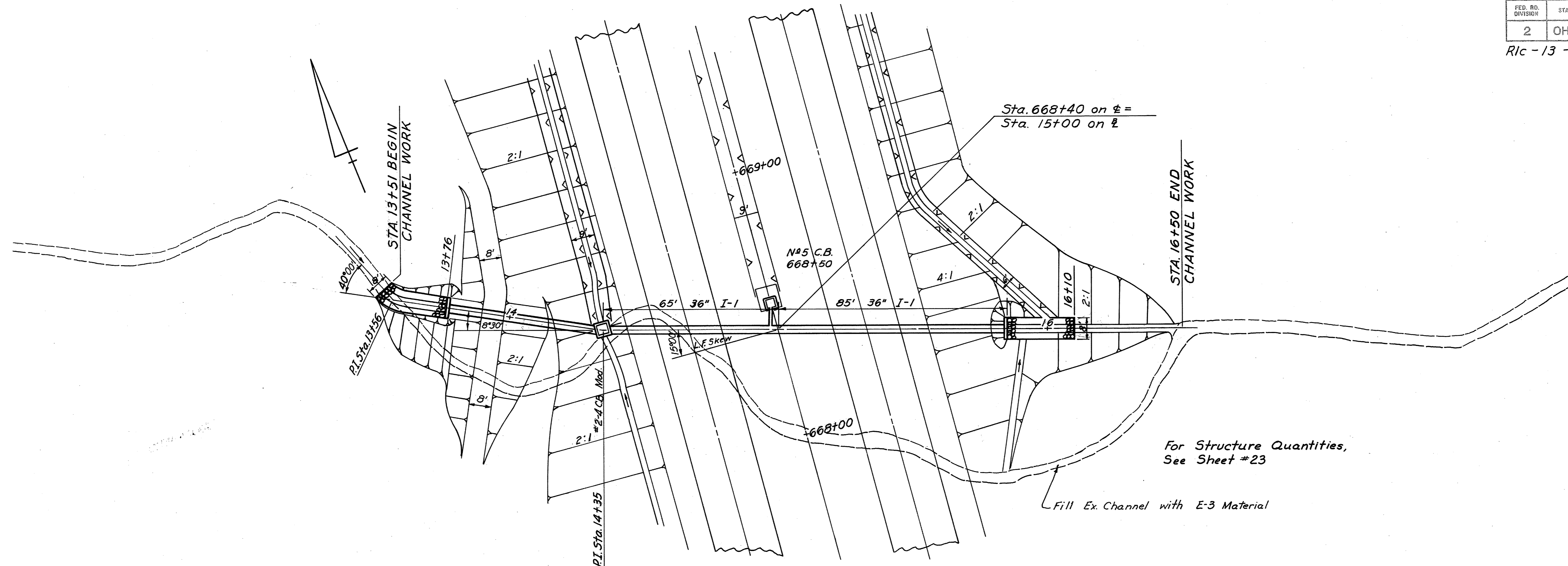
CHANNEL CURVE DATA
 P.I. = Sta. 17+00
 $\Delta = 37^{\circ}-23' Lt.$
 $D = 17^{\circ}-30'$
 $R = 327.40'$
 $L = 213.62'$
 $T = 110.77'$
 $E = 18.23'$

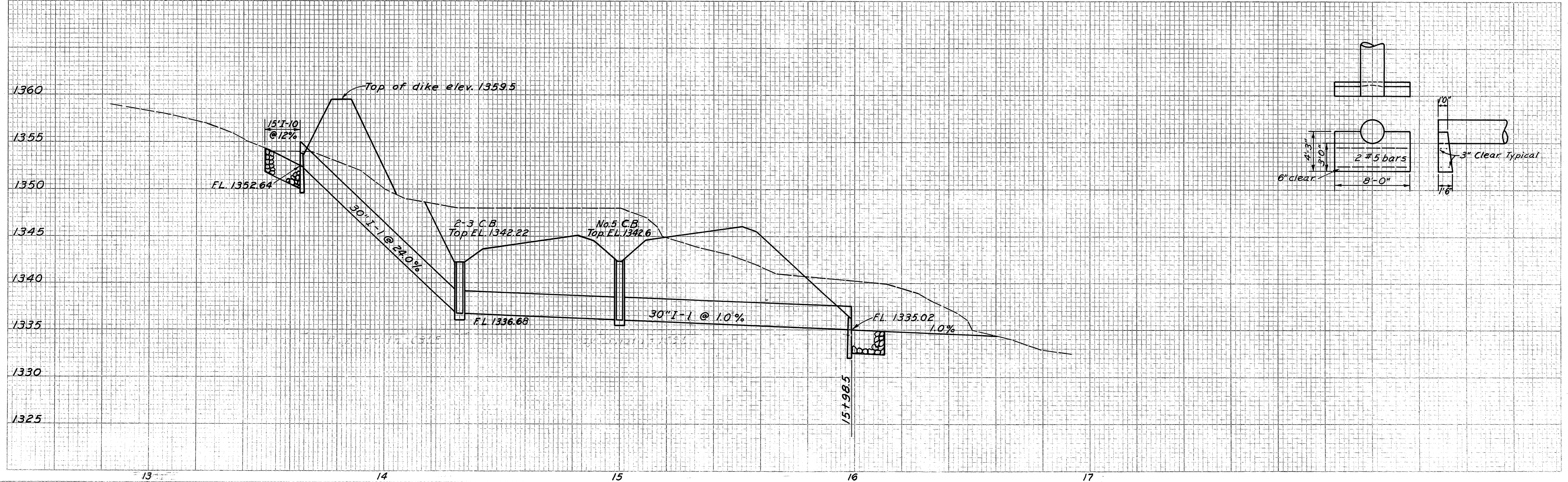
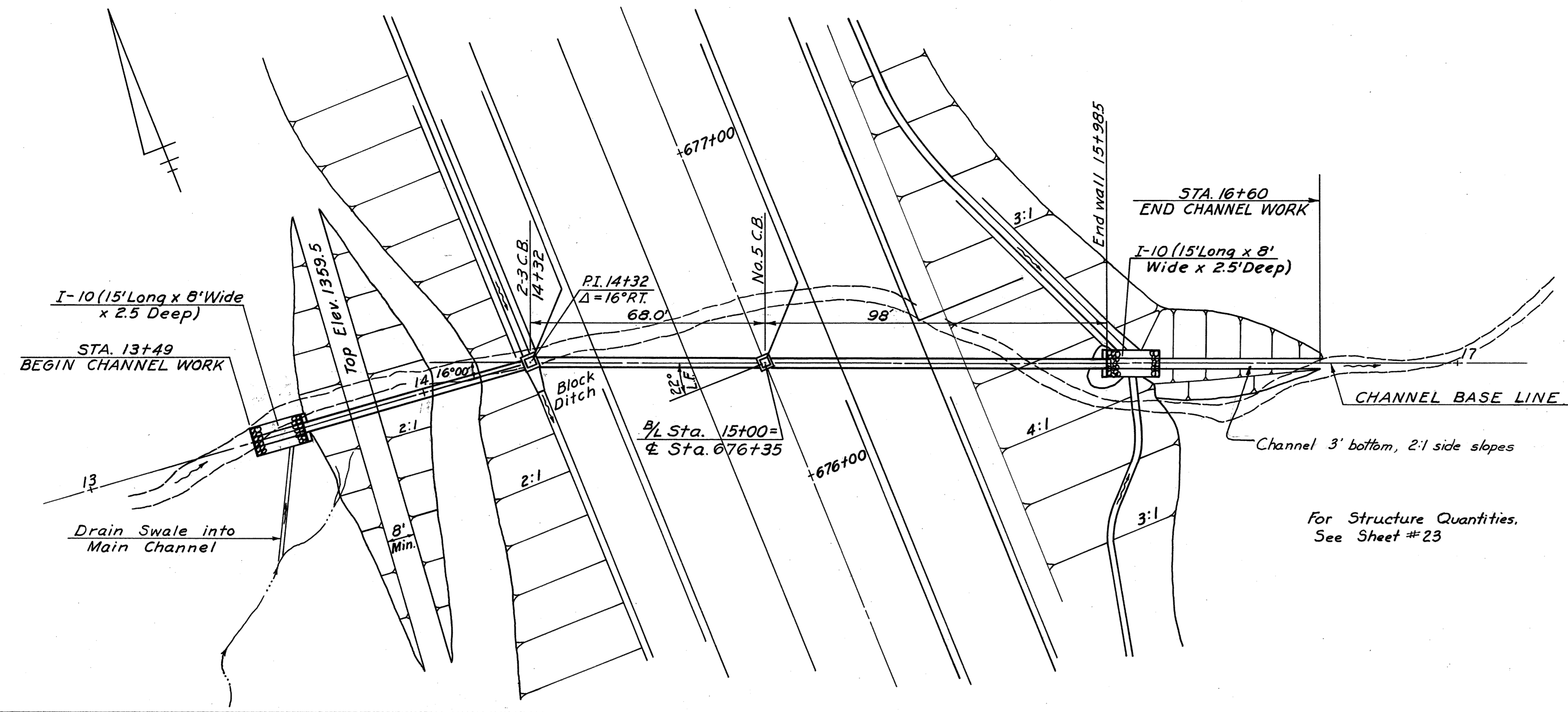
Excavate Channel
 4.5' Bottom; 2:1 Slopes
 @ 0.8% as shown
 For Structure Quantities,
 See sheet #18.

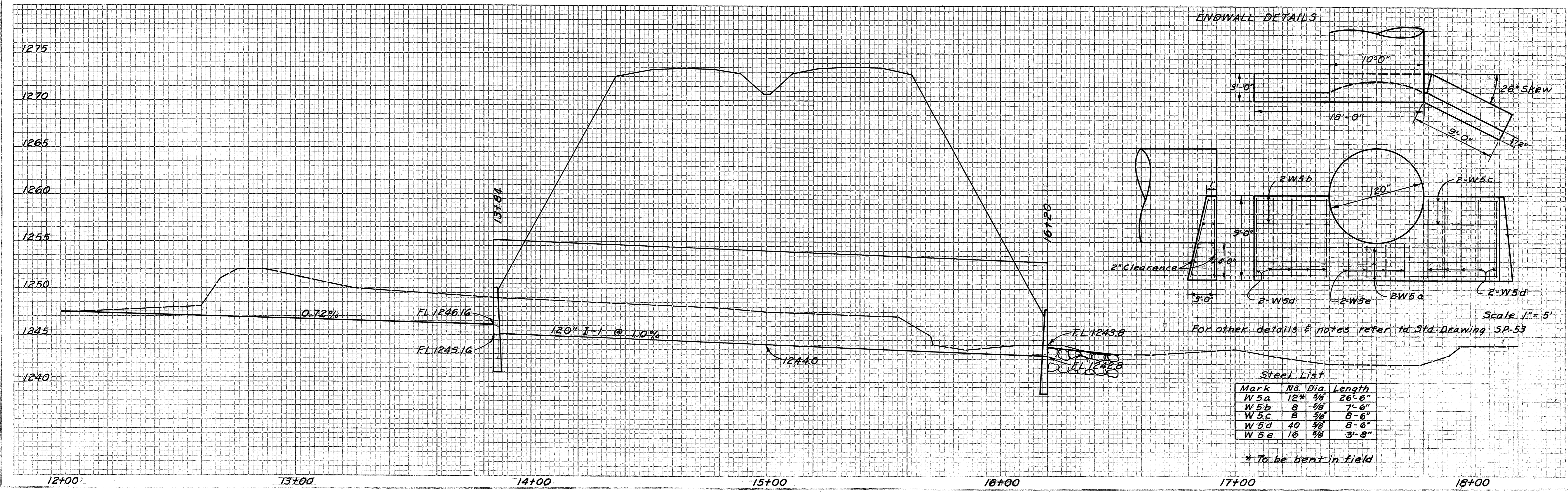
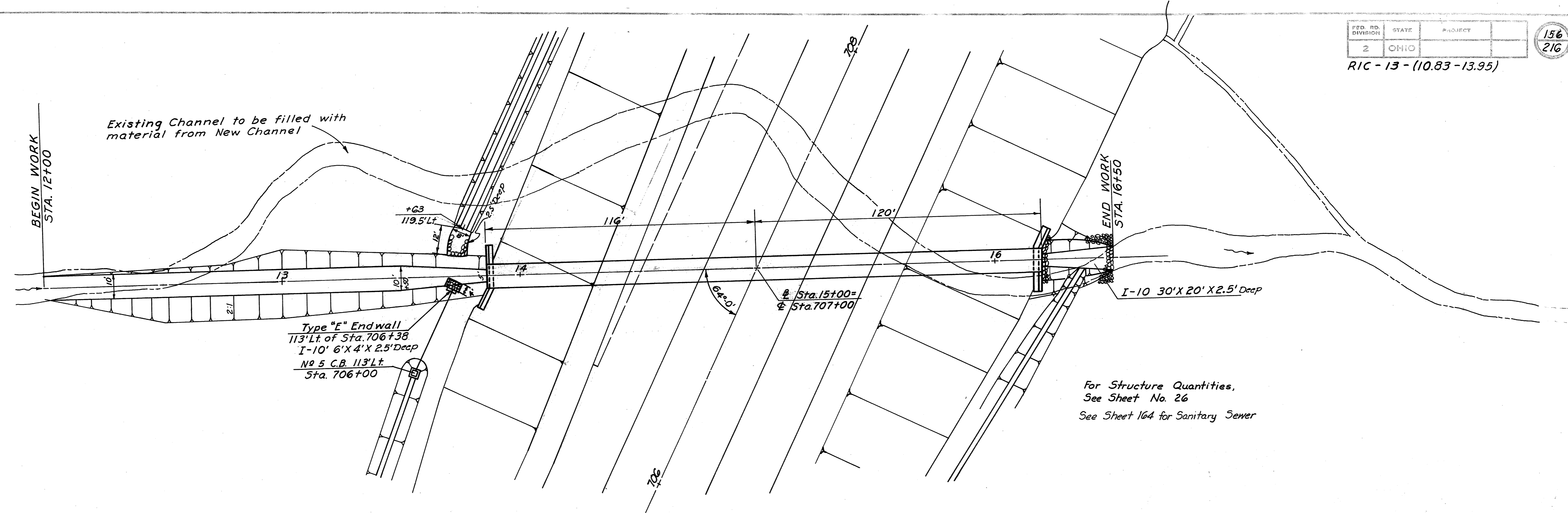


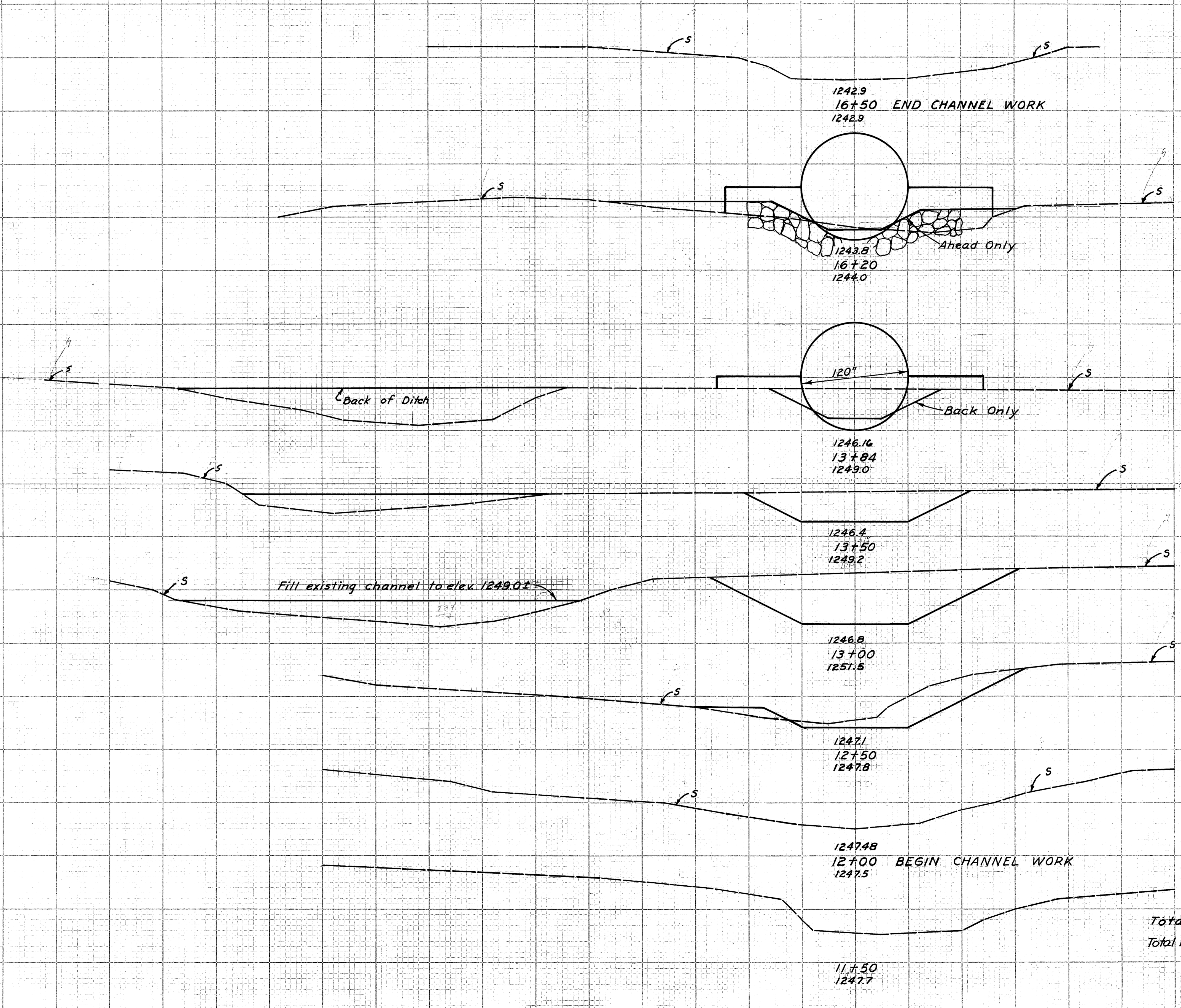
* To be bent in field - 10' long
 For other details not shown,
 refer to Std. drawing SP-53.







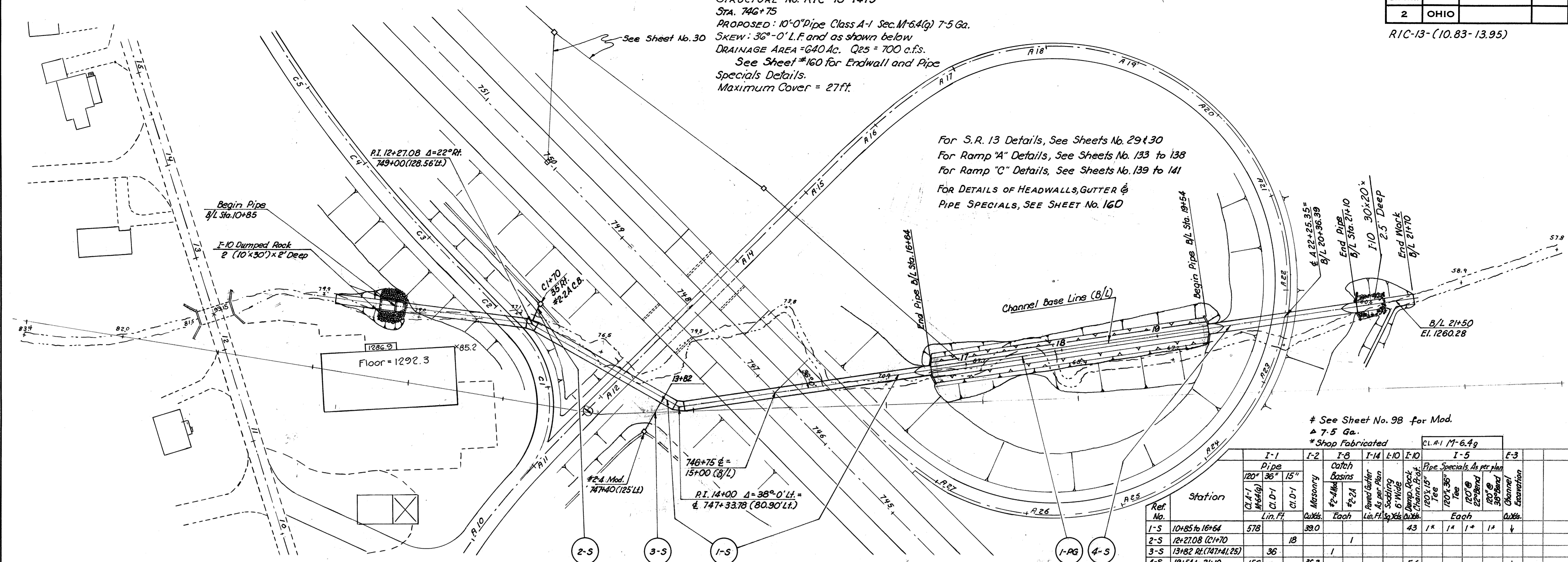




	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
	0	0		
			2	0
Ahead	4	0		
			0	0
Back	32	77		
			51	71
	45	30		
			132	82
	98	59		
			131	60
	43	6		
			40	6
	0	0		
Total E-3 Carried to Sheet 26			356	
Total Fill Carried to Sheet No. 7				219

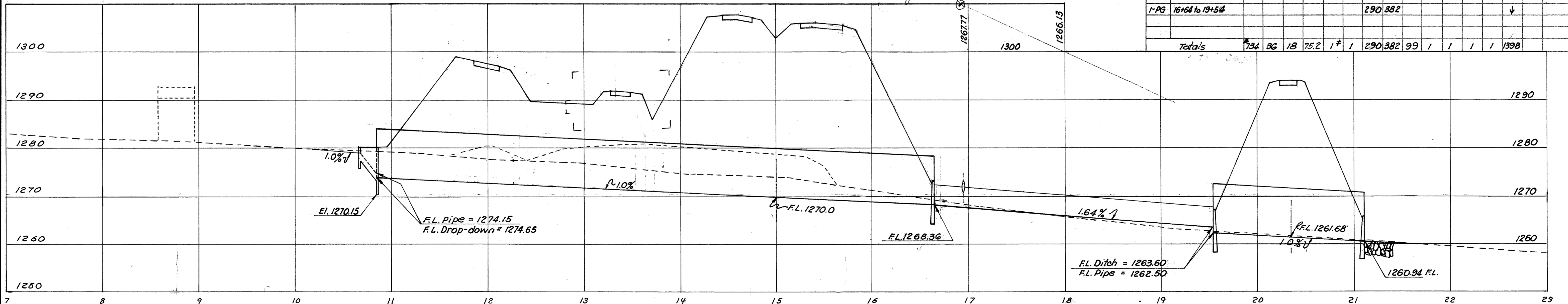
STRUCTURE No. RIC-13-1415
 STA. 746+75
 PROPOSED: 10'-0" Pipe Class A-1 Sec. M-6.4(g) 7-5 Ga.
 SKEW: 36°-0' L.F. and as shown below
 DRAINAGE AREA = 640 Ac. Q25 = 700 c.f.s.
 See Sheet #160 for Endwall and Pipe
 Specials Details.
 Maximum Cover = 27ft.

For S.R. 13 Details, See Sheets No. 29 & 30
 For Ramp "A" Details, See Sheets No. 133 to 138
 For Ramp "C" Details, See Sheets No. 139 to 141
 FOR DETAILS OF HEADWALLS, GUTTER &
 PIPE SPECIALS, SEE SHEET No. 160



See Sheet No. 98 for Mod.
 ▲ 7-5 Ga.
 * Shop Fabricated

Ref. No.	Station	I-1		I-2		I-3		I-4		I-5		I-6
		CL. A-1 M-6.4g	CL. D-1	Masonry	#2-4 Mod.	As per Plan	Soading	Dump Rock	Chain Hook	Pipe Specials	As per plan	
Lin. Ft.	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each
1-S	10+85 to 16+64	578	18	39.0						43	1*	1*
2-S	12+27.08 (C1+70)											
3-S	13+82 Rt. (747+41.25)	36										
4-S	19+54 to 21+10	156		36.2						56		
1-PG	16+64 to 19+54							290	382			
Totals		734	36	18	75.2	1*	1	290	382	99	1	1



END AREA CU. YDS.
CUT/FILL CUT/FILL

B/L Sta. 21+70 END CHANNEL WORK

Sta. 21+70 0 0

125 66

Sta. 21+10 Ahead 113 59

125 66

10'
1260.94
21+10 Ahead Only
1263.0

(Roadway Embankment Ahead)

Sta. 19+54 Back 193 179

1024 1002

1263.60
19+54 Back Only
1269.5

166 173

78 141

1266.13
18+00
1274.2

25 173

7 62

1266.49
17+78
1278.5

7 106

50 123

1266.69
17+66
1267.7

74 95

1267.23
17+33
1269.8

14 38

54 81

1267.77
17+00
1269.0

13 76

1268.36
16+64 Ahead Only
1269.3

80 8

10 30

1274.15 (Pipe F.L.)
10+85 Back Only
1278.9

10 10

10 38

10 38

10 38

1624

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

10+20

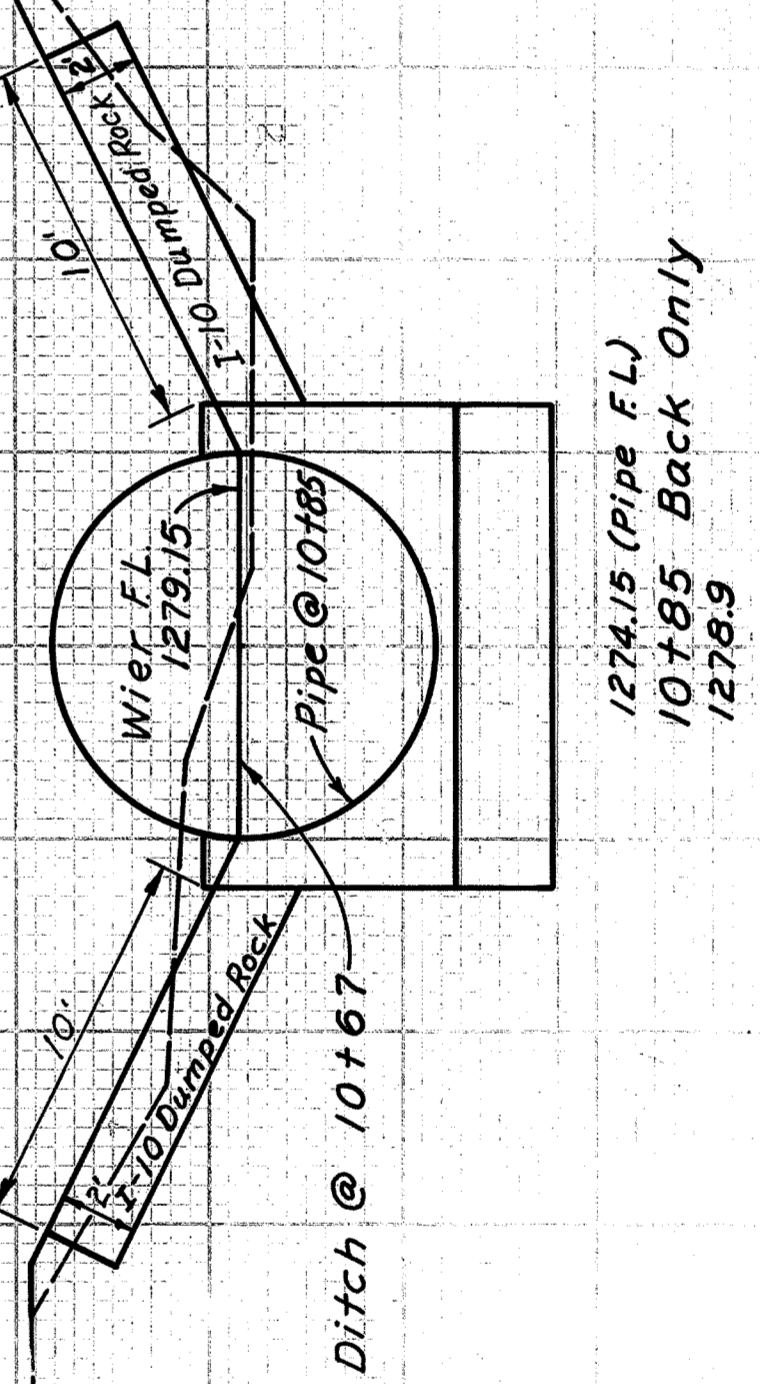
10+20

10+20

10+20

10+20

Note: Seed entire earth area in loop. (Ramp A)



RIC - 13 - (10.83 - 13.95)

B/L Sta. 10+20 BEGIN CHANNEL WORK

Sta. 10+20 80 8

10 30

10 10

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

10 38

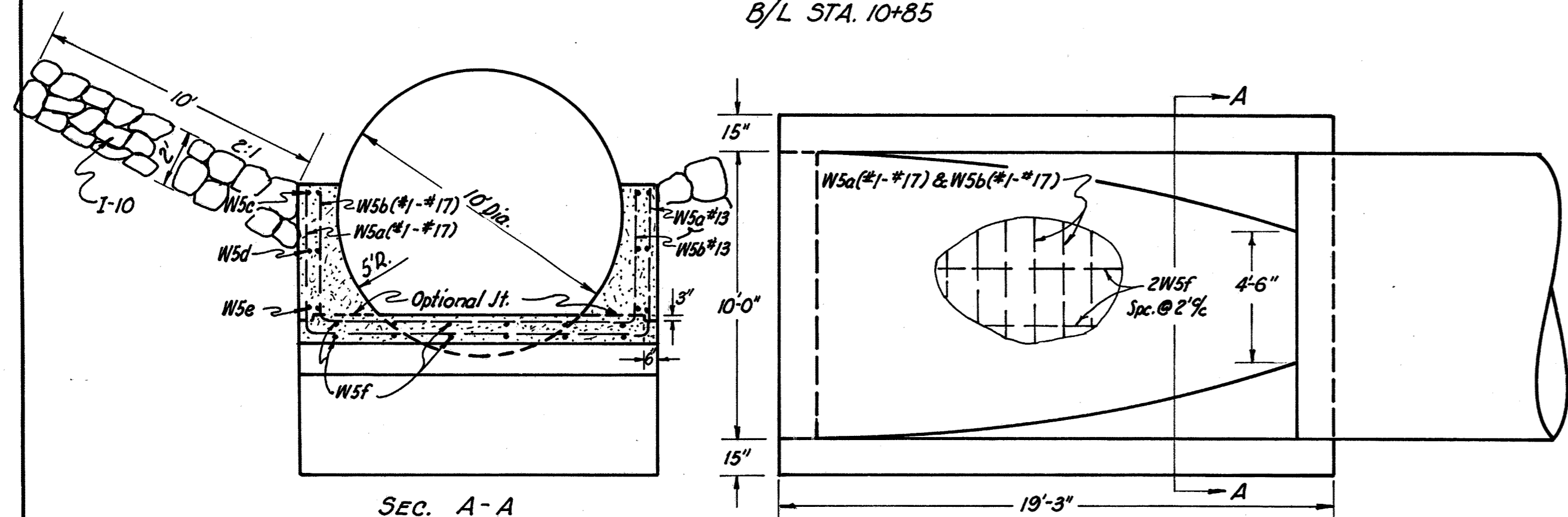
10 38

158
216

RIC-13-(10.83-13.95)

DROP-DOWN DETAIL INLET END

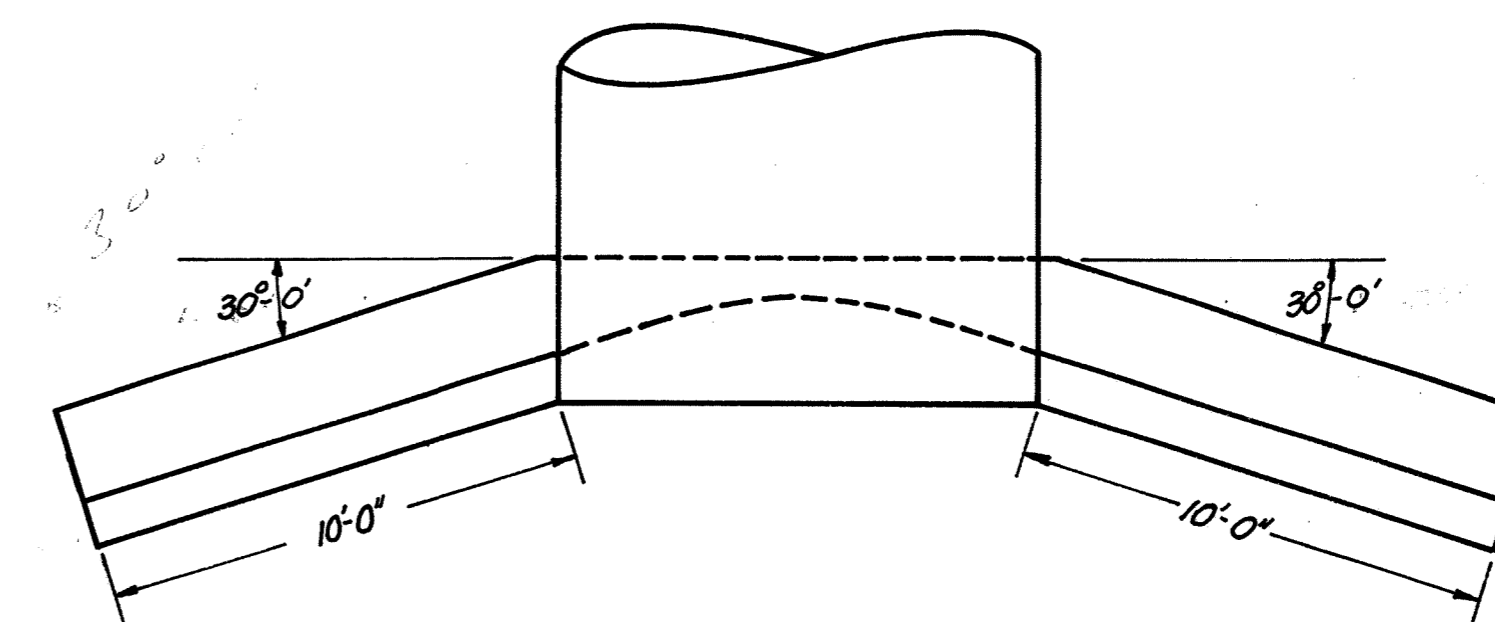
B/L STA. 10+85



SEC. A-A

END-WALL DETAIL

B/L Stas. 16+64, 19+50 & 21+70

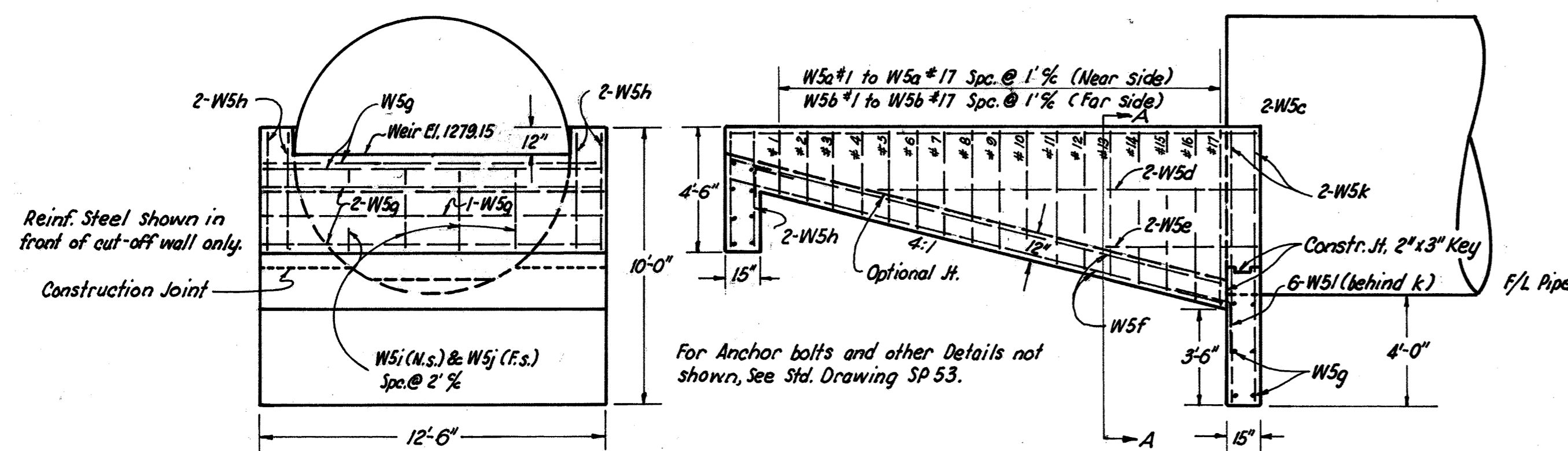


For Anchor bolts and other Details not shown, See Std. Drawing SP 53.

Included in Item 1-2, Masonry
STEEL LIST (3 WALLS)

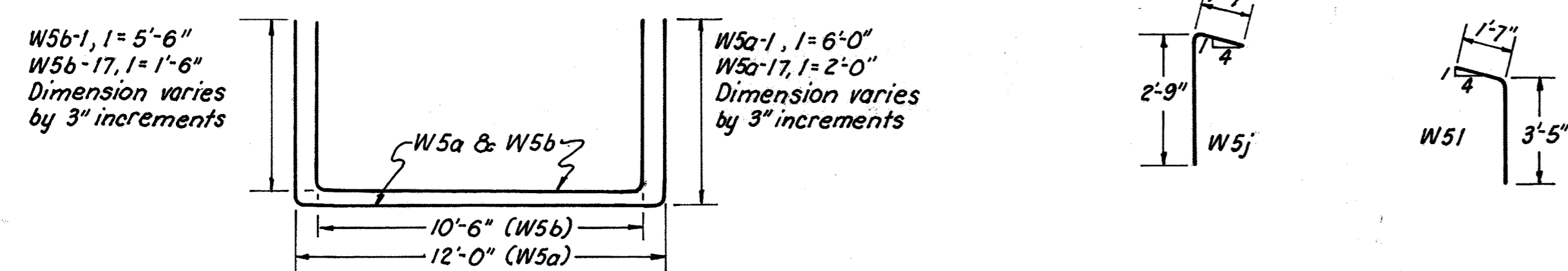
Mark	No.	Size	Length	Spacing
W5a	9	5/8" φ	29'-6"	1'-9"
W5b	3	"	30'-6"	1'-9"±
W5c	6	"	31'-0"	1'-9"±
W5d	24	"	9'-6"	2'-6"
W5e	72	"	8'-6"	2'-0"±
W5f	24	"	4'-0"	2'-0"±

*To be bent in field.



For Anchor bolts and other Details not shown, See Std. Drawing SP 53.

BENDING DIAGRAMS

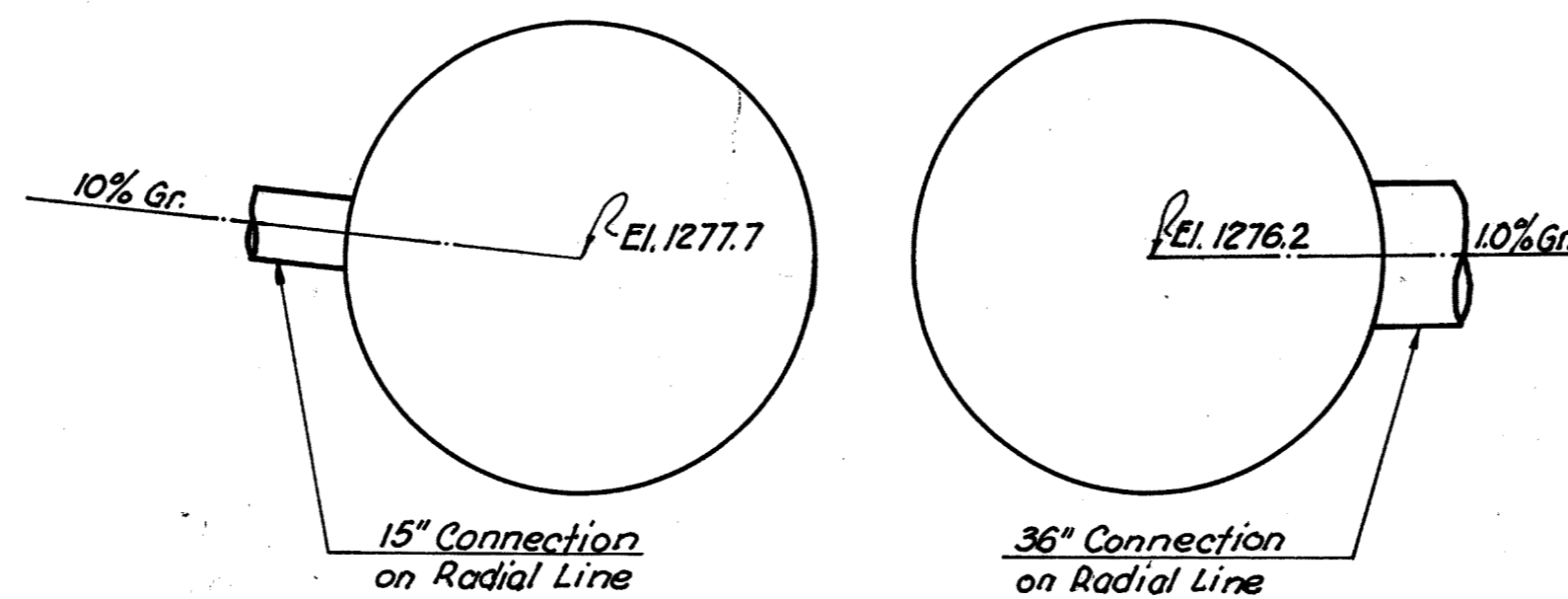


STEEL LIST

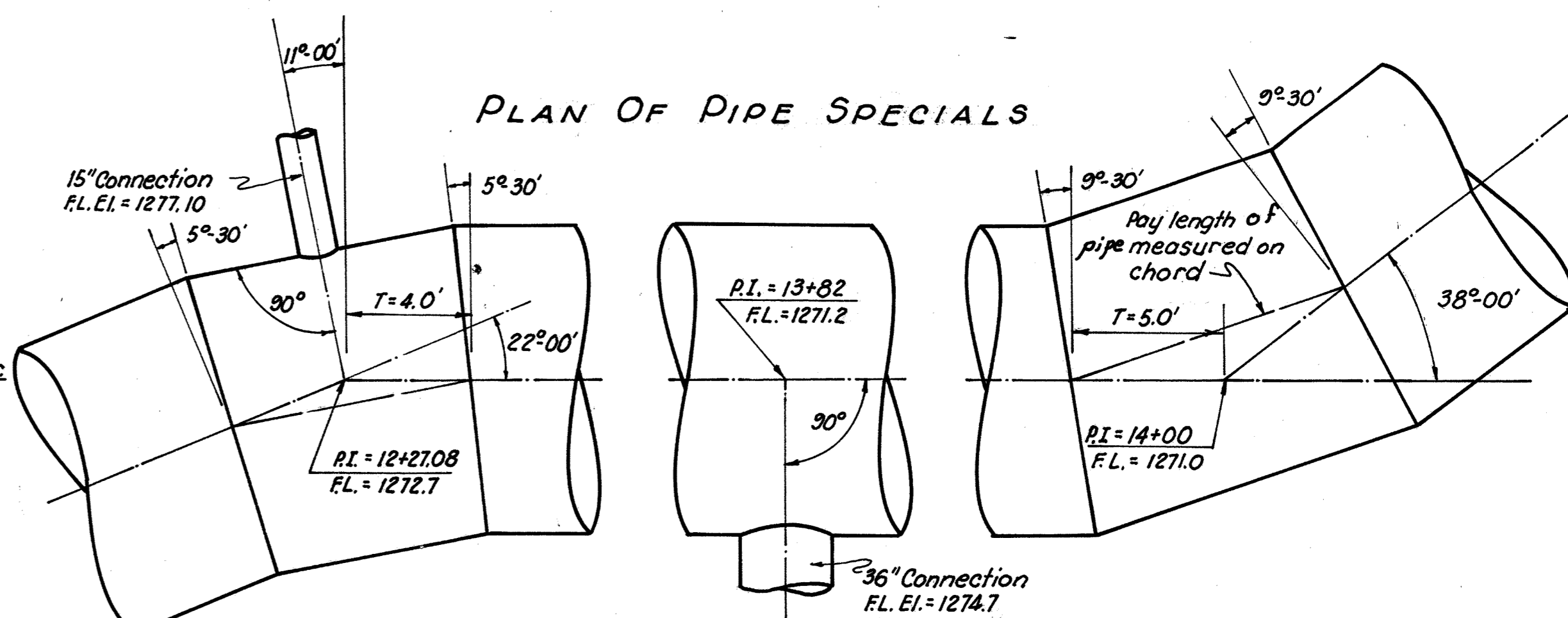
MARK	No.	SIZE	LENGTH	SPACING	REMARKS
W5a	17	5/8"	Varies from 16'-0" to 24'-0"	1'-0"	Increments of 3" in height
W5b	17	"	Varies from 13'-6" to 21'-6"	1'-0"	Increments of 3" in height
W5c	4	"	18'-9"	2'-0"	
W5d	4	"	14'-0"	2'-0"	
W5e	4	"	6'-3"	2'-0"	
W5f	12	"	18'-0"	2'-0"±	
W5g	13	"	9'-6"	Varies	
W5h	3	"	4'-0"	0'-9"	
W5i	4	"	2'-9"	2'-0"	
W5j	4	"	4'-4"	2'-0"	
W5k	8	"	9'-6"	0'-9"	
W5l	6	"	5'-0"	1'-0"	Tie to W5f bars

PROFILE OF PIPE CONNECTIONS

B/L Sta. 12+27.08 B/L Sta. 13+82



PLAN OF PIPE SPECIALS



NOTE: ALL MITERS AND CONNECTIONS TO BE SHOP FABRICATED

SCALE 1" = 4'

RIC - 13 - (10.83 - 13.95)
UTILITY PLAN

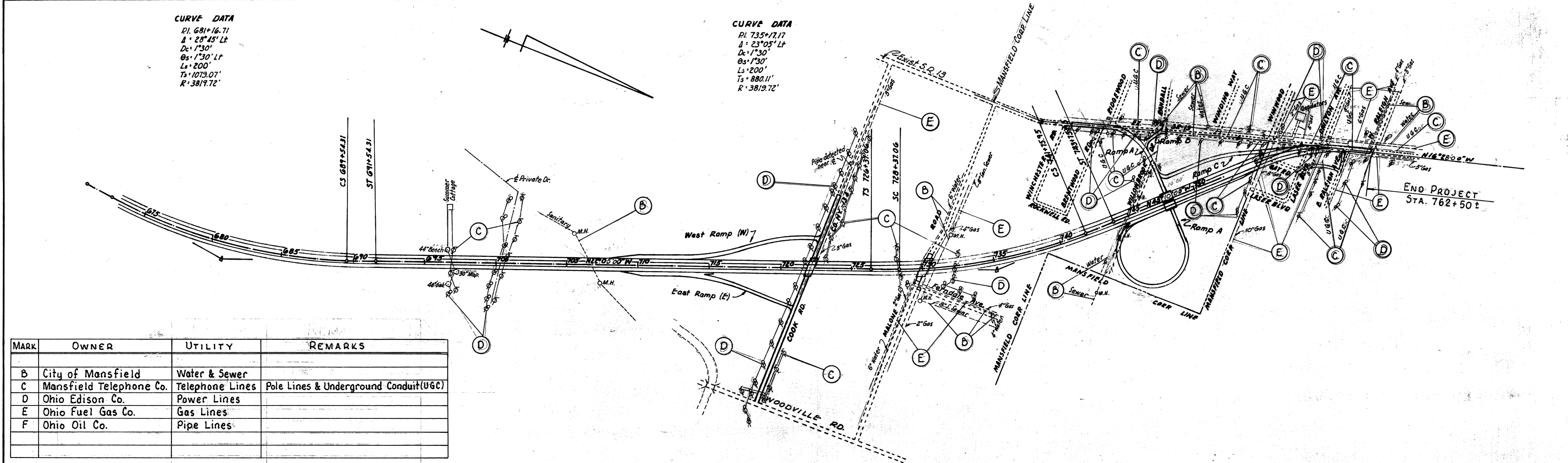
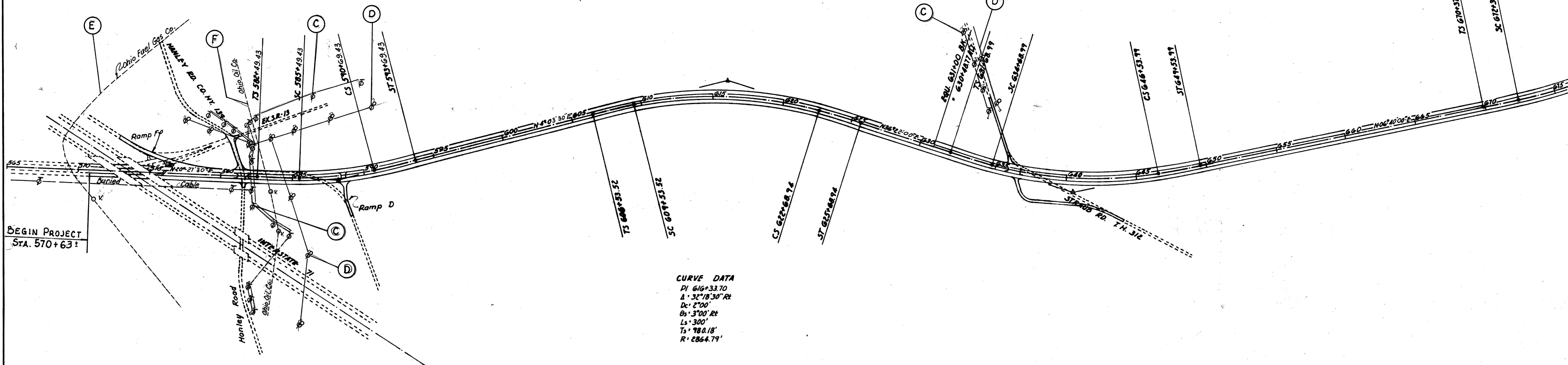
CURVE DATA
 PI 589+12.43
 Δ: 167°42' Lt
 Dc: 2°00'
 Os: 3°00' Lt
 Ls: 300'
 Ts: 563.00'
 R: 2864.79'

CURVE DATA
 PI 640+78.91
 Δ: 29°42' Lt
 Dc: 2°00'
 Os: 3°00' Lt
 Ls: 300'
 Ts: 909.92'
 R: 2864.79'

CURVE DATA
 PI 616+33.70
 Δ: 32°18'30" Rt
 Dc: 2°00'
 Os: 3°00' Rt
 Ls: 300'
 Ts: 780.18'
 R: 2864.79'

CURVE DATA
 PI 681+16.71
 Δ: 28°45' Lt
 Dc: 1°30'
 Os: 1°30' Lt
 Ls: 200'
 Ts: 1079.07'
 R: 3817.72'

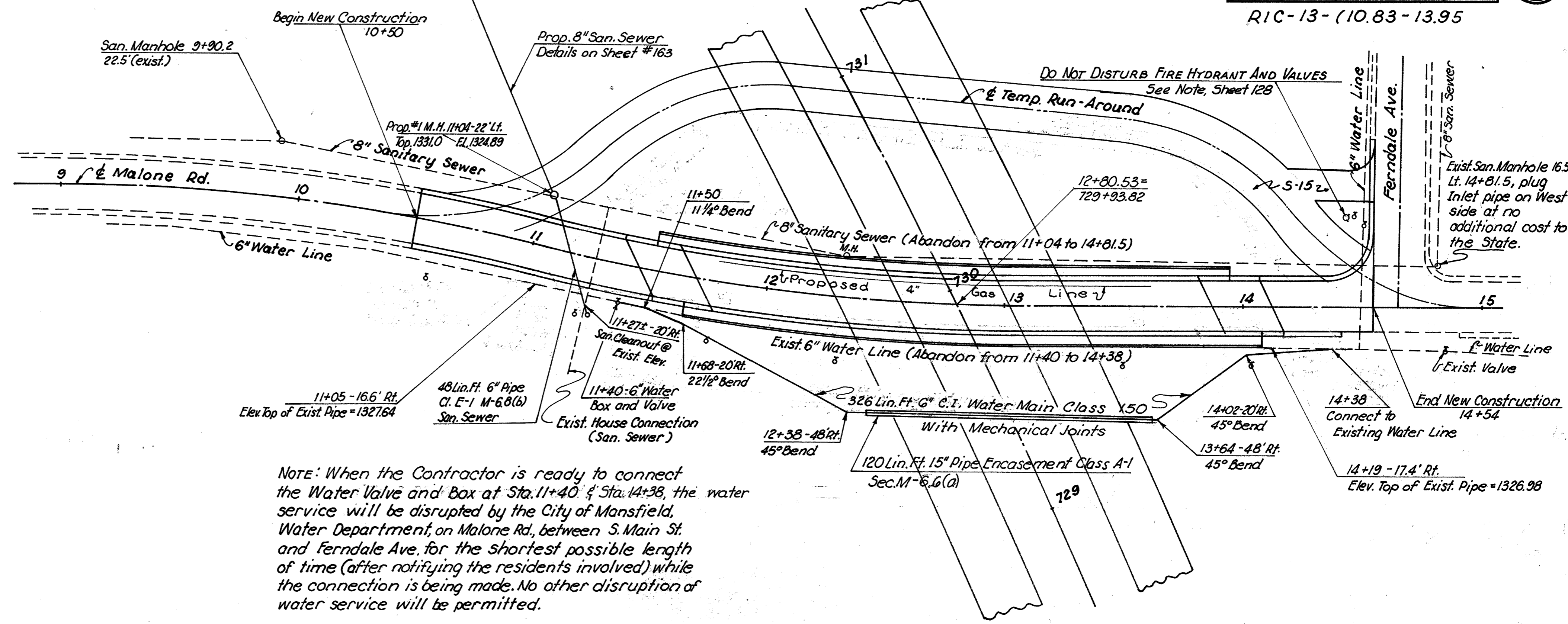
CURVE DATA
 PI 735+17.17
 Δ: 23°05' Lt
 Dc: 1°30'
 Os: 1°30'
 Ls: 200'
 Ts: 880.11'
 R: 3817.72'



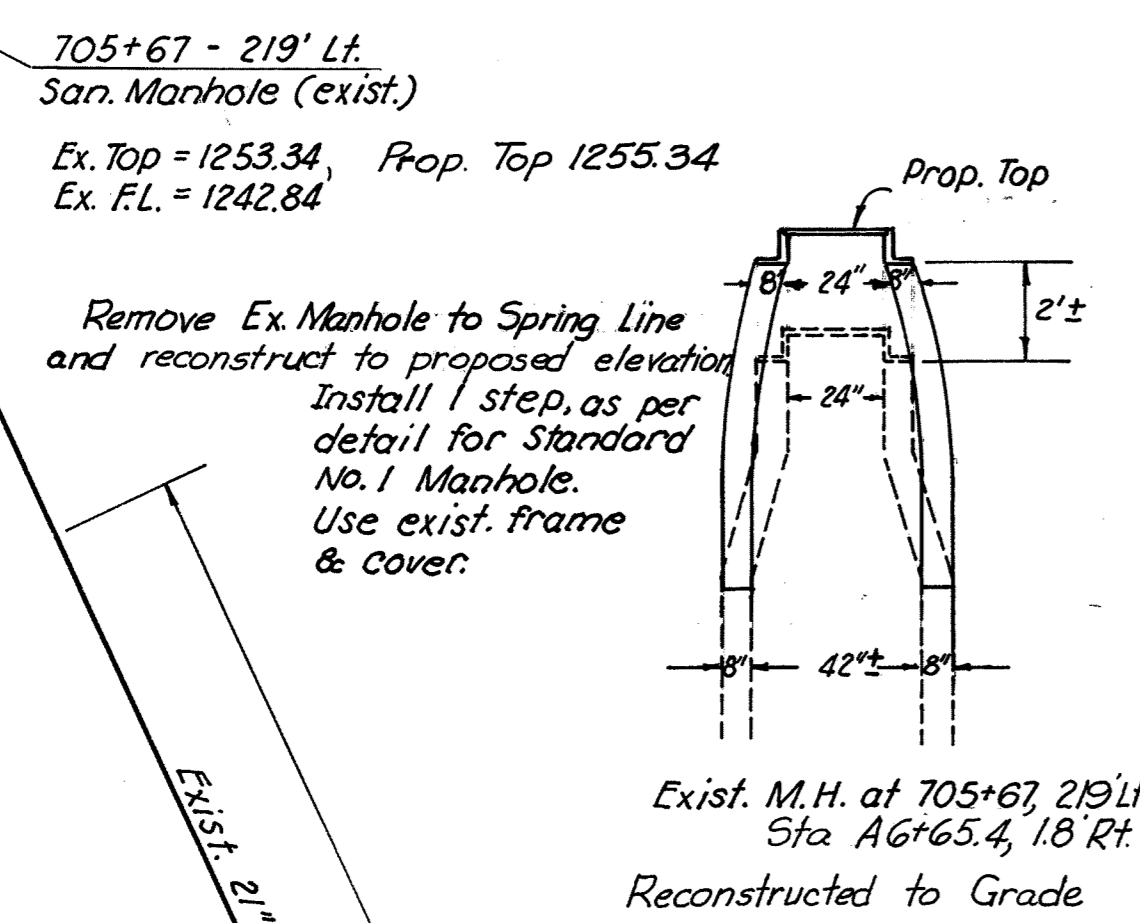
MARK	OWNER	UTILITY	REMARKS
B	City of Mansfield	Water & Sewer	
C	Mansfield Telephone Co.	Telephone Lines	Pole Lines & Underground Conduit(UGC)
D	Ohio Edison Co.	Power Lines	
E	Ohio Fuel Gas Co.	Gas Lines	
F	Ohio Oil Co.	Pipe Lines	

SCALE 1"=330'

MALONE ROAD
Scale 1"=30'

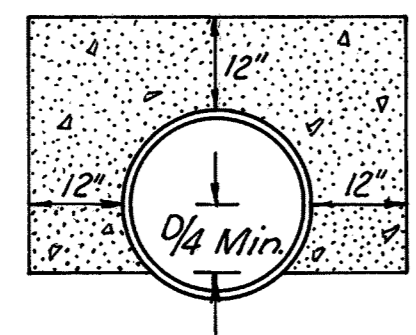


Note: When the Contractor is ready to connect the Water Valve and Box at Sta. 11+40 & Sta. 14+38, the water service will be disrupted by the City of Mansfield, Water Department, on Malone Rd, between S. Main St. and Ferndale Ave. for the shortest possible length of time (after notifying the residents involved) while the connection is being made. No other disruption of water service will be permitted.



Encase existing 21\"/>

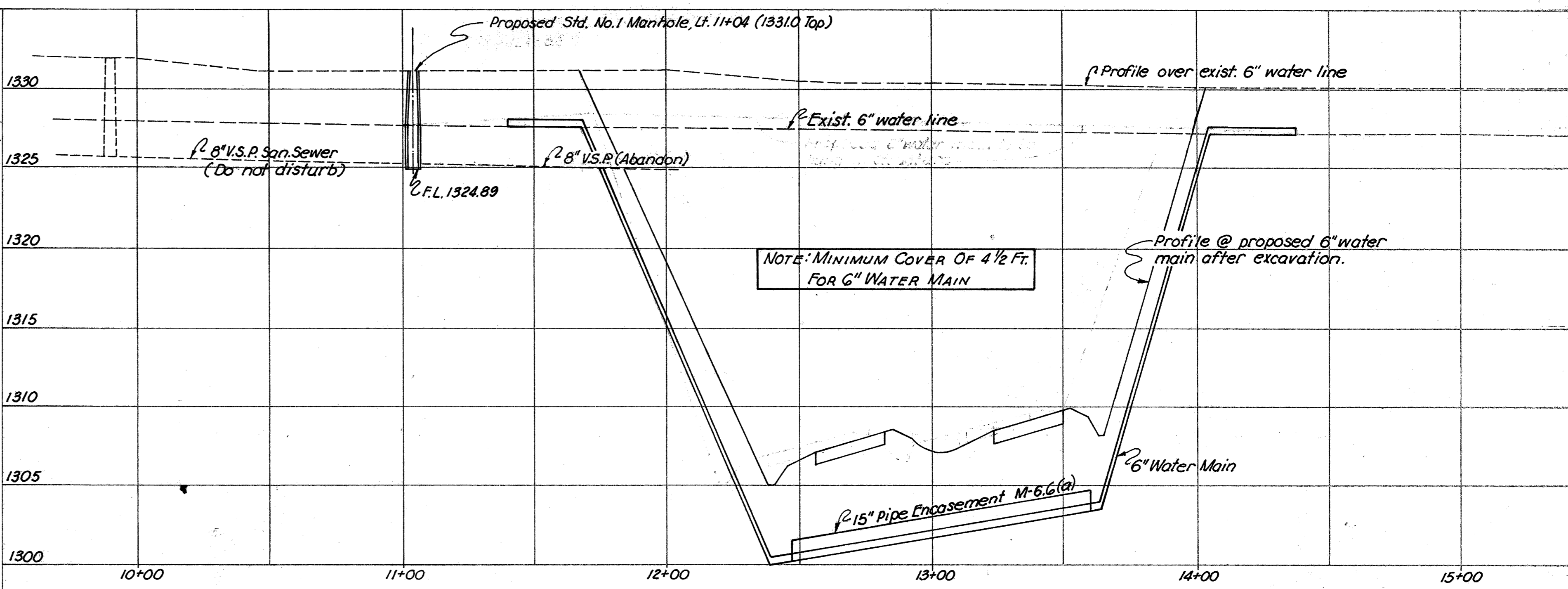
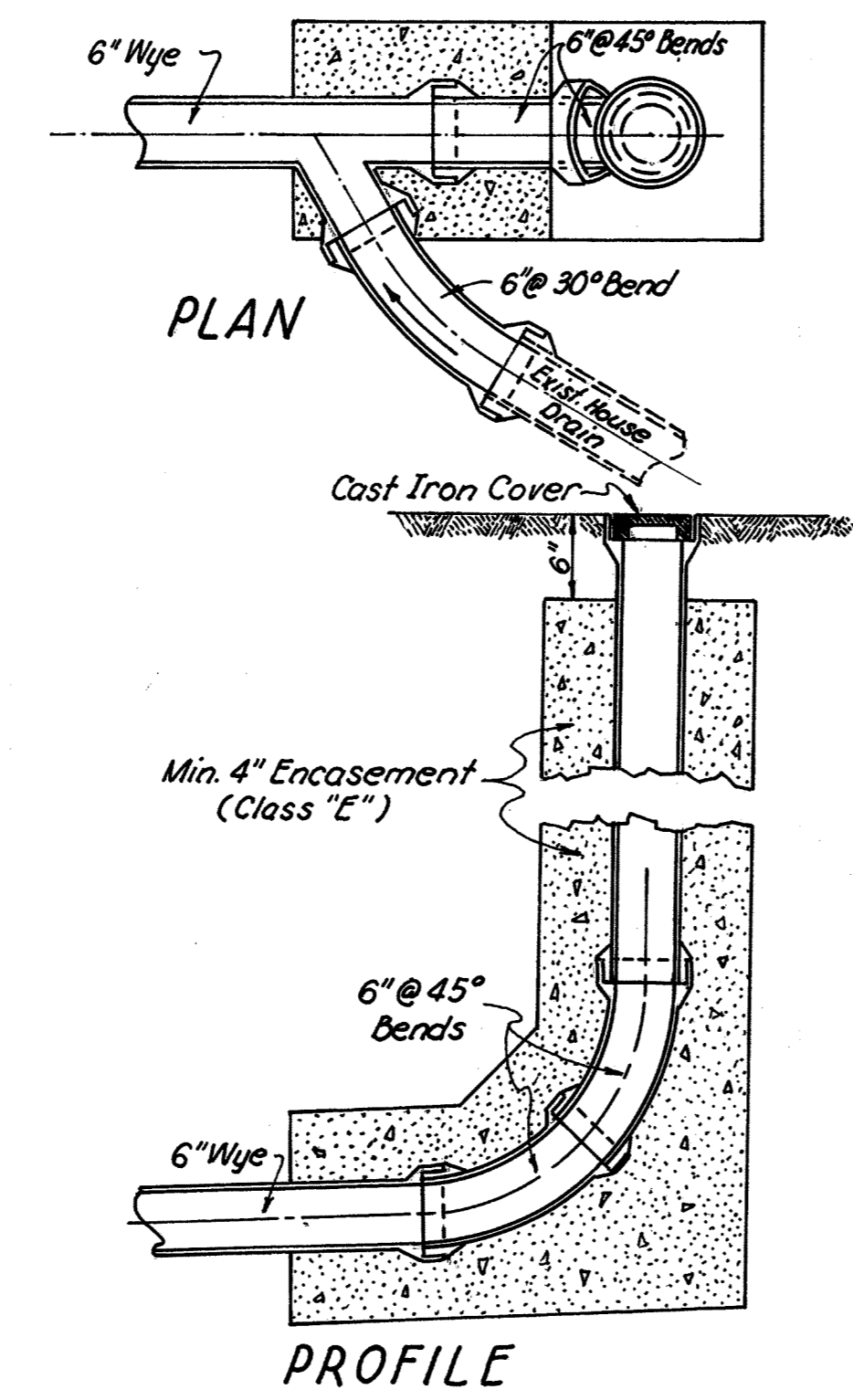
707+28.5 - 131' Rt. San. Manhole (exist.) Ex. Top = 1248.35, Ex. FL. = 1239.01



DETAIL FOR ENCASING EXISTING SANITARY SEWER WITH CLASS "E" CONCRETE

SPECIAL - SANITARY CLEANOUT

The unit price bid for each cleanout shall include the total cost for all pipe specials, concrete, cast iron cover, labor and all incidentals, complete and in place.

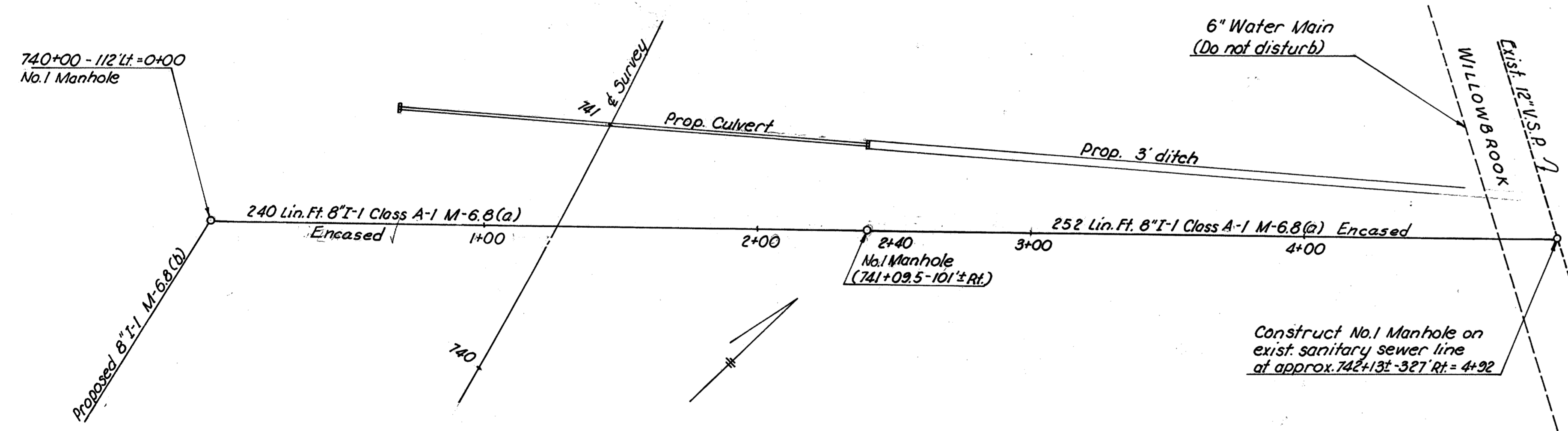
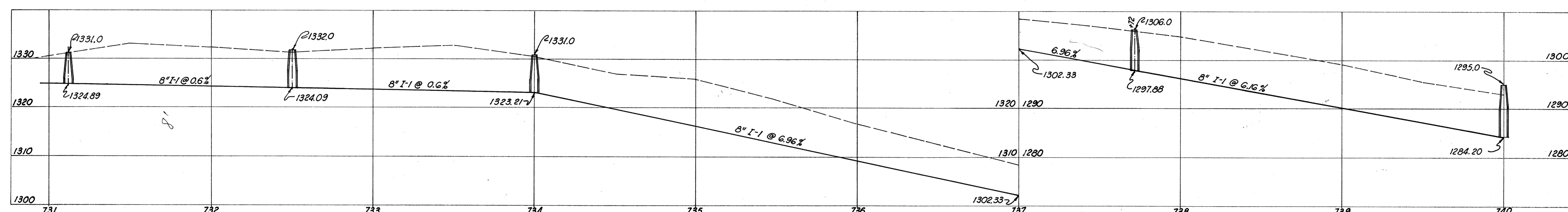
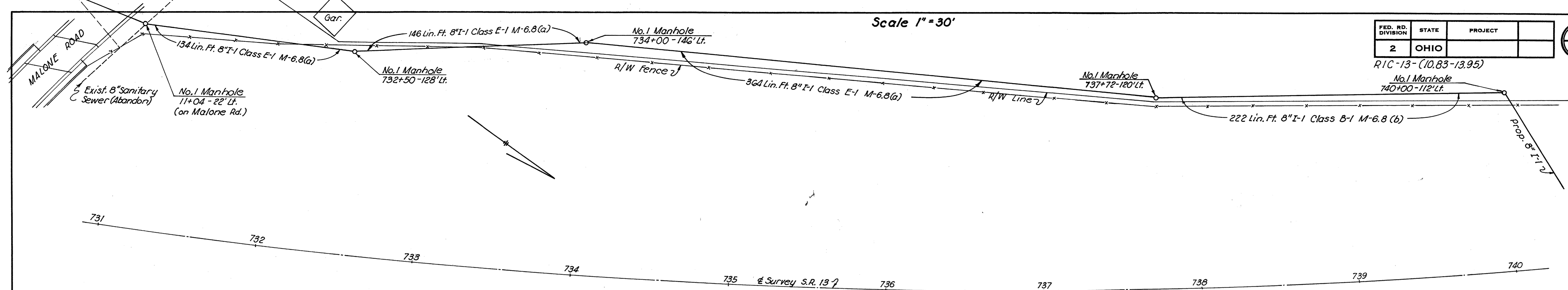


ALL UTILITY QUANTITIES ARE SHOWN ON SHEET #163

Scale 1" = 30'

FED. RD. DIVISION	STATE	PROJECT	163 216
2	OHIO		

RIC-13-(10.83-13.95)

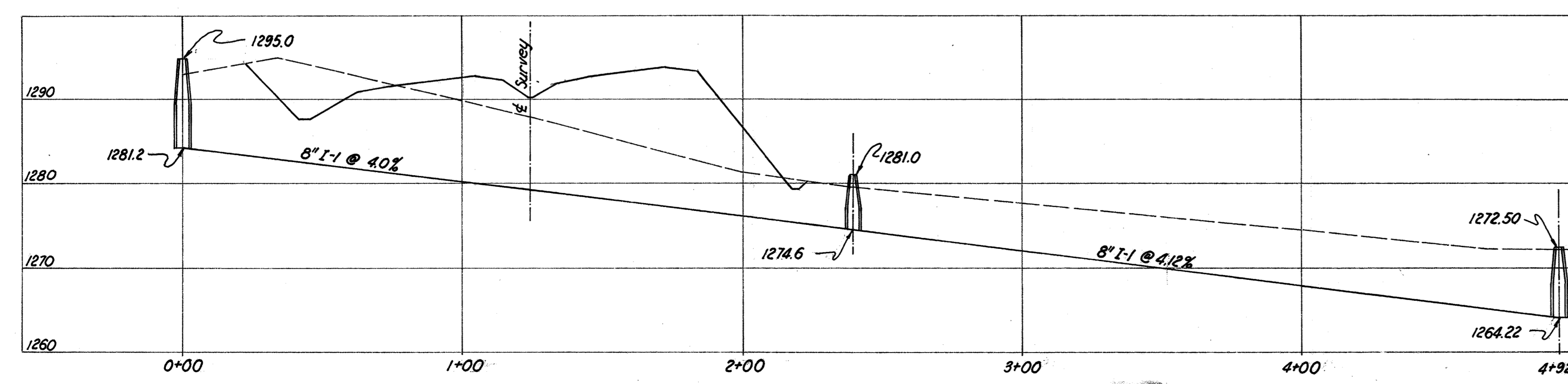


SANITARY SEWER QUANTITIES

Ref. Line	Station	I-1				I-8		I-16	Special		I-8 Manhole Reconstructed to Grade		
		6" Pipe Class E-1 M-6.8(b)	8" Pipe Class B-1 M-6.8(b)	8" Pipe Class E-1 M-6.8(a)	12" Pipe Class E-1 M-6.8(b)	Manhole No. 1	Manhole No. 2	San. Sewer Manhole Adjust to Grade	Sanitary Sewer Manhole Cleanout 6"	Encase Existing Pipe 12"		Encase Existing Pipe 21"	
		Lin. Ft.				Each		Each	Lin. Ft.		Each		
Survey	706+68												
Malone	11+04 Lt. to 11+28 Rt.	48				1				1			
Malone	12+33 Lt.												
Survey	731+15 Lt. to 742+13 Rt.	222	644	747		6							
Ramp A	A6+65.4 Rt.											1	
Ramp A	Sewer 9/4 18+62-20+58				138	2			1				
Ramp A	Sewer 9/4 11+57-14+00						1			148			
Winding M.	0+00 to 5+02	247				1							
Survey	N760+88 Rt.												
E. Raleigh	0+20 Lt. to 10+15 (Laser)		140			1		1	1				
Totals		48	469	644	887	138	11	1	1	4	148	284	2

* See Detail on Sheet #162

WATER LINE QUANTITIES

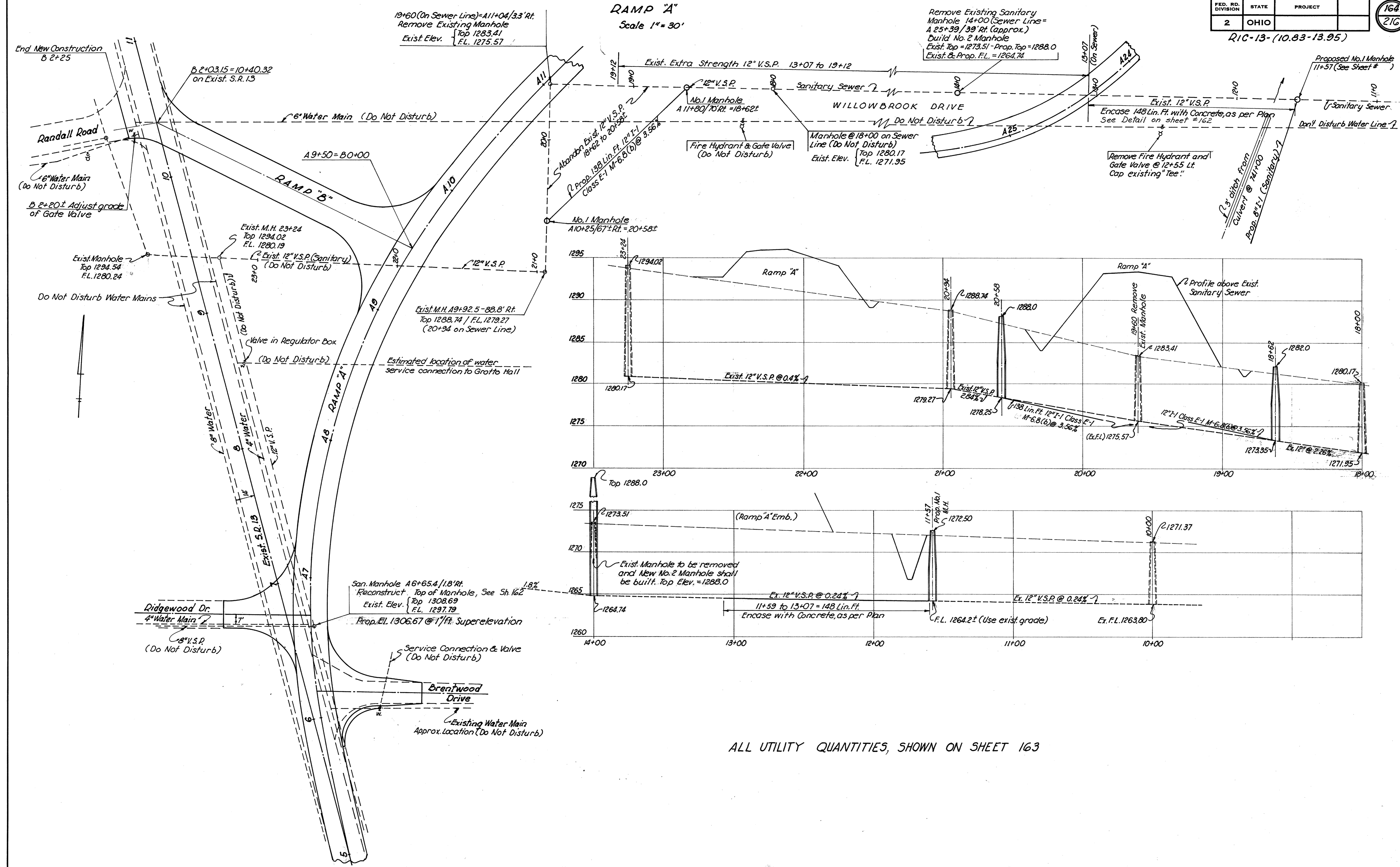


Ref. Line	Station	6" Cast Iron Water Main M-100 Lin. Ft.	4" Water Main Lowered Lin. Ft.	Water Valve & Box G"	Fittings 45° Bend 6"	I-124 Fire Hydrant Removed & Stored Each	Water Service Box Adjusted to Grade Each	Water Service Box Remove & Store Each	Fittings 6" Bends 11/2" 221/2" 15" 36"	I-1 Pipe Steel M-6.64 Class A-1 15" 36"		
											Lin. Ft.	Each
Malone	10+98 to 14+43	326		1	3				1	1	120	
Ramp B	B 2+20 Lt.											
Ramp A	A 24+10 Lt.					1#						
Survey	S759+40± Lt.						2					
Survey	N758+80± Lt.							1				
Survey	N760+35 Rt.								1			
E. Raleigh	0+10 to 1+80	170										
Survey	S761+25± Rt.						2					
Cook	14+13 to 15+47 Lt.										134	
Totals		326	170	1	3	1#	5	2	1	1	120	134

* Cost to include removal of Valve or Hydrant and Capping existing Tee

RIC-13-(10.83-13.95)

RAMP "A"
Scale 1" = 30'



ALL UTILITY QUANTITIES, SHOWN ON SHEET 163

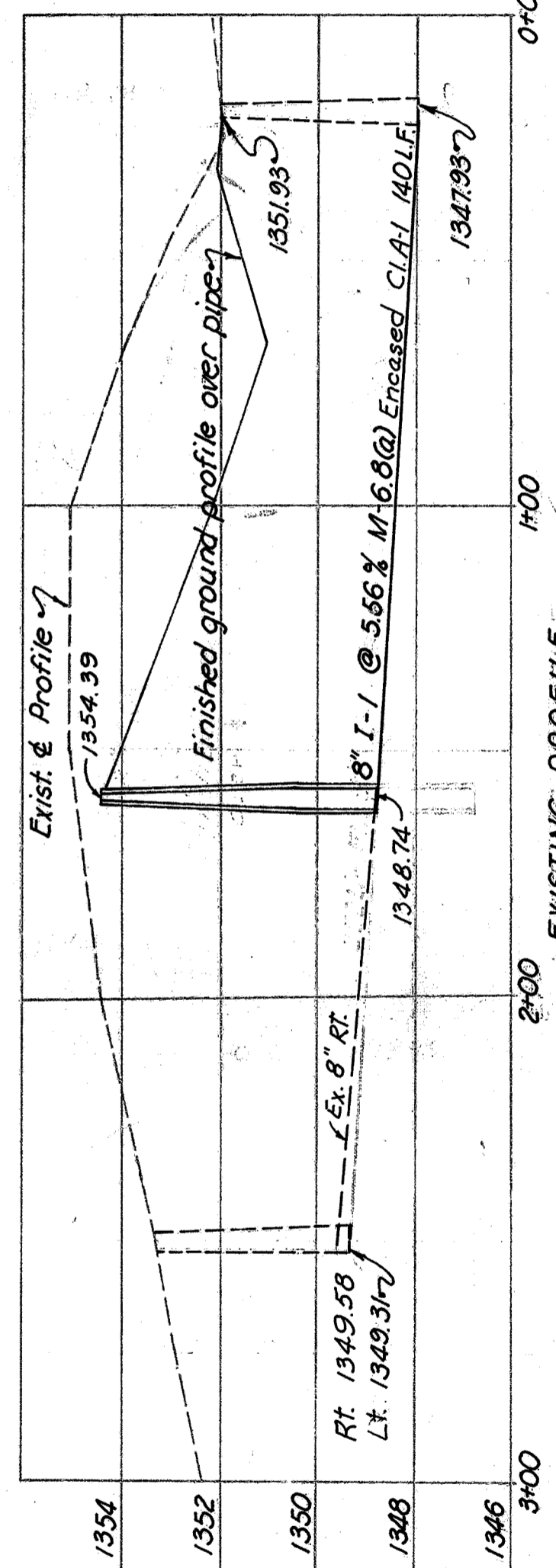
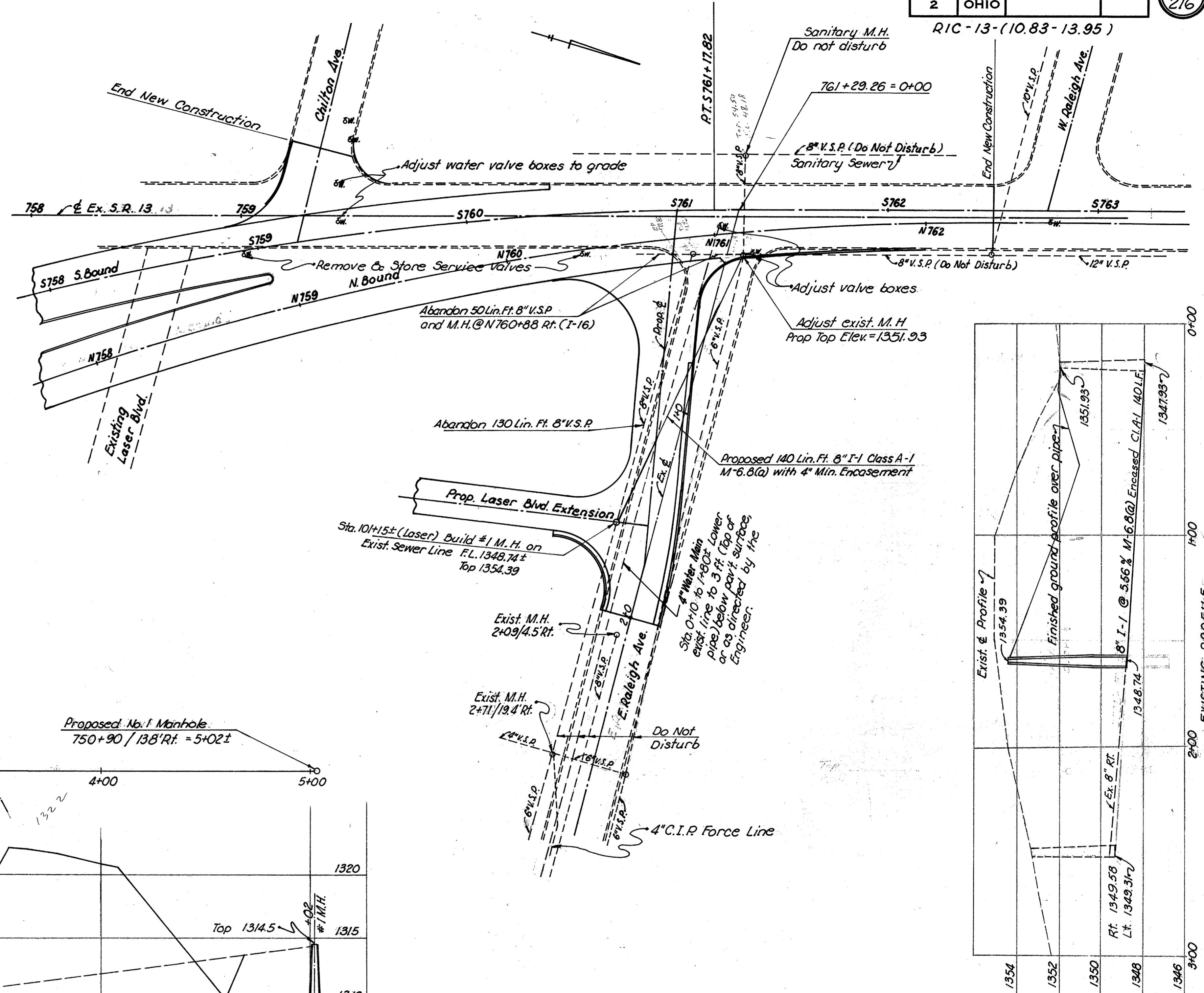
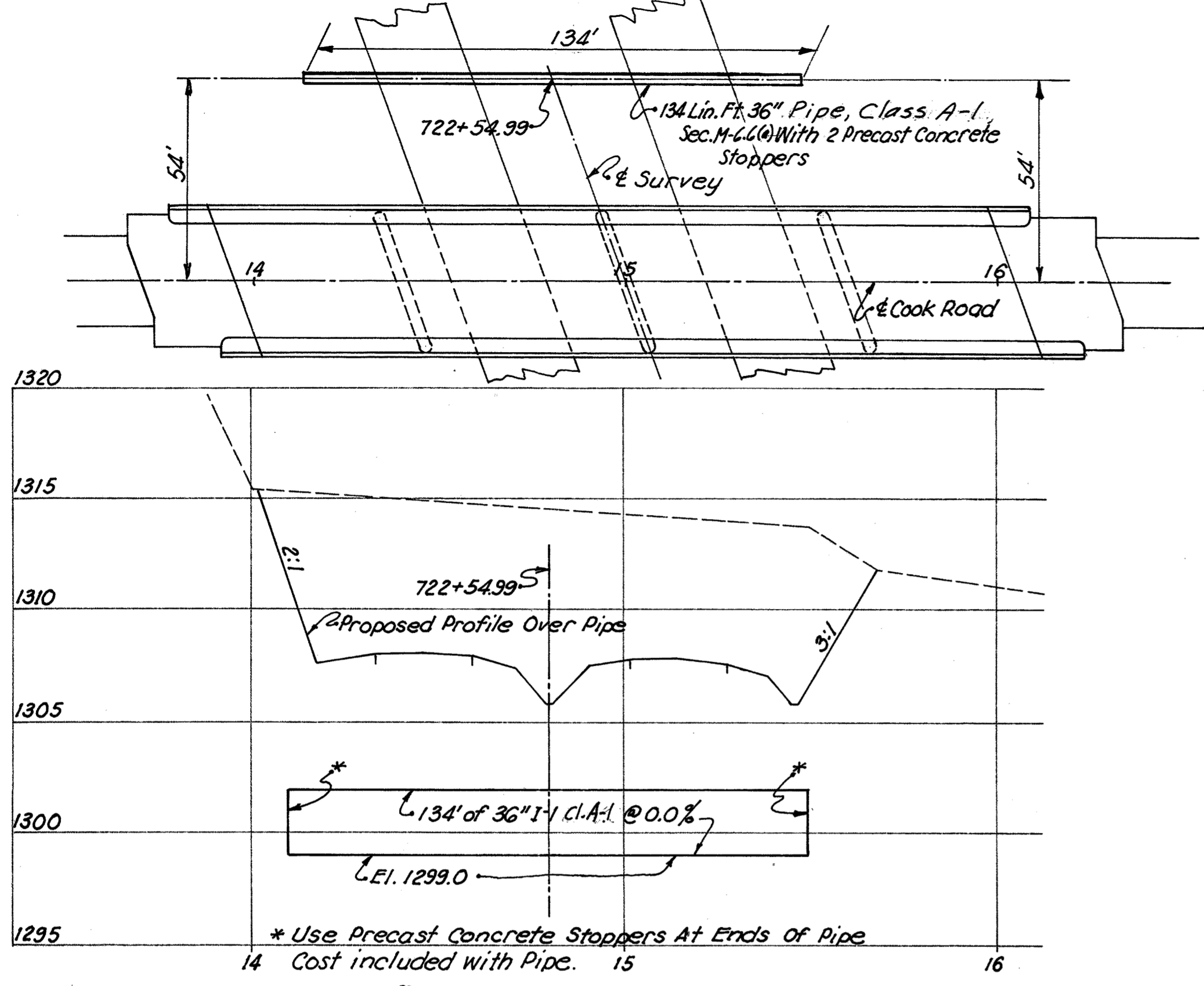
WATER LINE ENCASEMENT AT COOK ROAD

Scale 1" = 30'

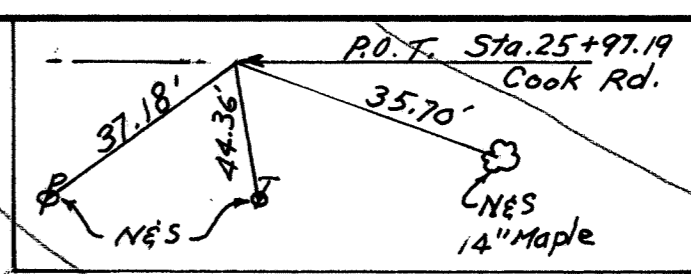
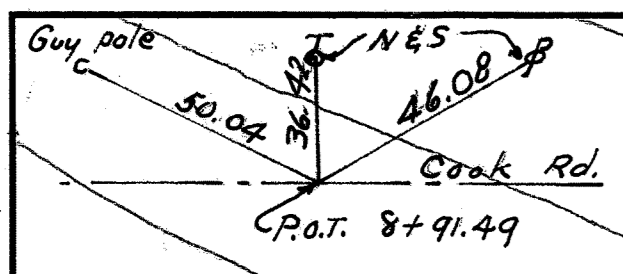
E. RALEIGH AVE, VICINITY

FED. RD. DIVISION	STATE	PROJECT	165 216
2	OHIO		

RIC-13-(10.83-13.95)



ALL UTILITY QUANTITIES, SHOWN ON SHEET 163

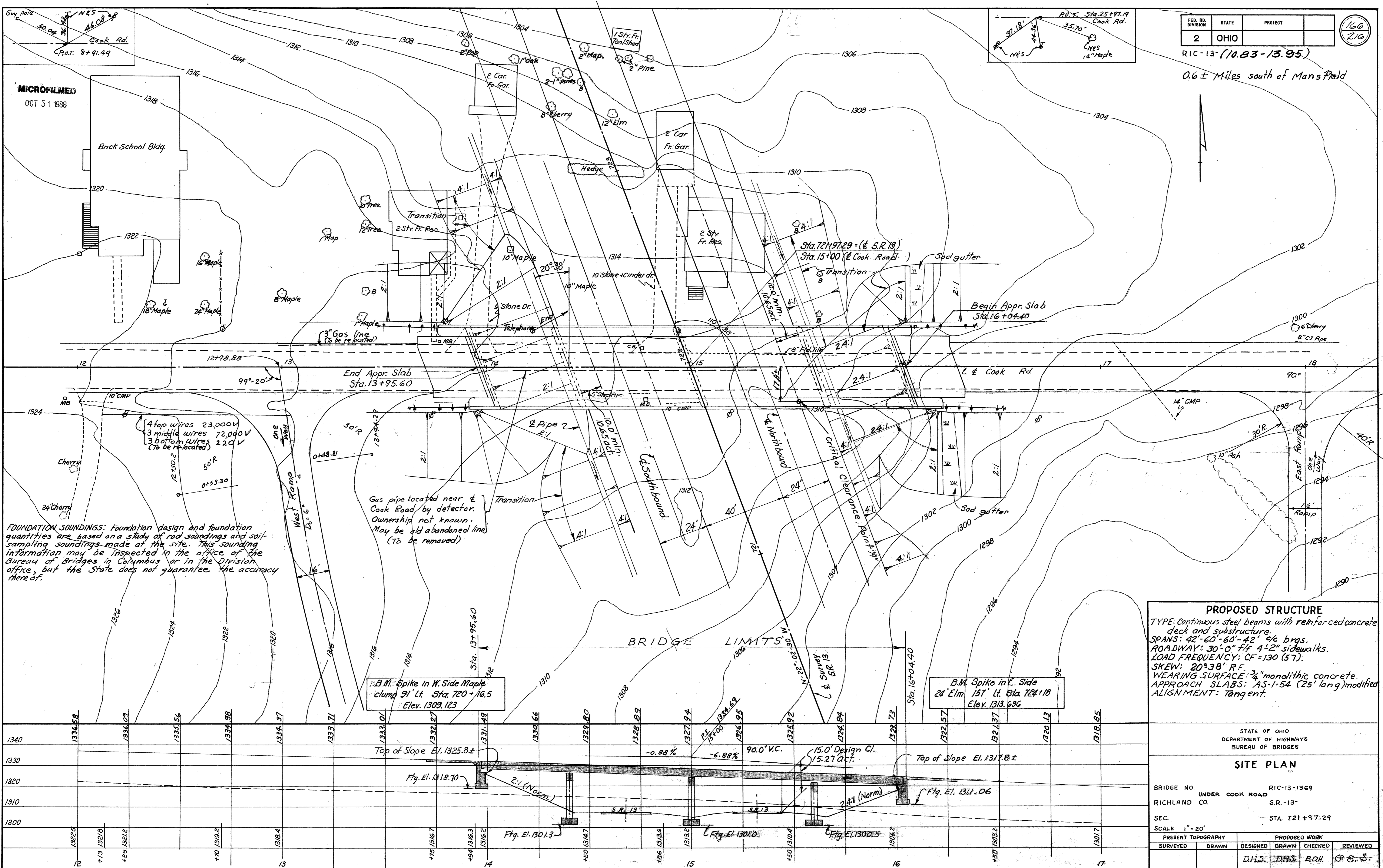


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-13-(10.83-13.95)

0.6 ± Miles south of Mansfield

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FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

Gas pipe located near & Cook Road by detector. Ownership not known. May be old abandoned line. (To be removed)

B.M. Spike in W. Side Maple clump 91' Lt. Sta. 720+16.5 Elev. 1309.123

B.M. Spike in E. Side 24' Elm 151' Lt. Sta. 724+18 Elev. 1313.636

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinforced concrete deck and substructure.
 SPANS: 42'-60'-60'-42' 9/6 brgs.
 ROADWAY: 30'-0" H/F 4'-2" sidewalks.
 LOAD FREQUENCY: CF=130 (S7).
 SKEW: 20°38' R.F.
 WEARING SURFACE: 3/4" monolithic concrete.
 APPROACH SLABS: AS-1-54 (25' long) modified
 ALIGNMENT: Tangent.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

SITE PLAN
 BRIDGE NO. UNDER COOK ROAD RIC-13-1369
 RICHLAND CO. S.R.-13-
 SEC. STA. 721+97.29

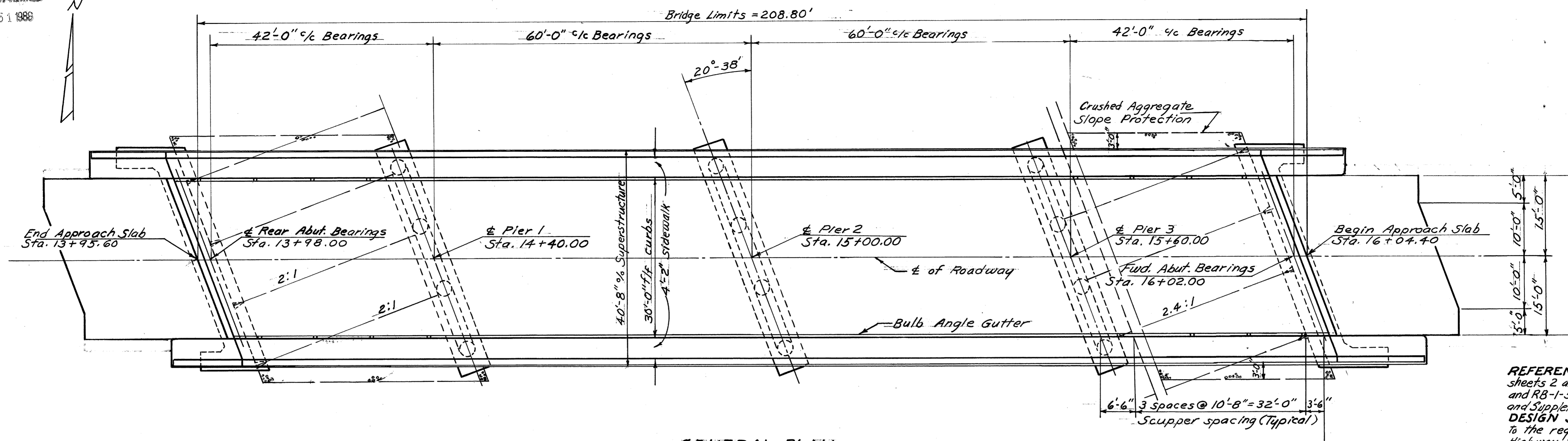
PRESENT TOPOGRAPHY		PROPOSED WORK		
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED
		D.H.S.	D.H.S.	A.D.H.
				G.S.S.

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OCT 31 1988

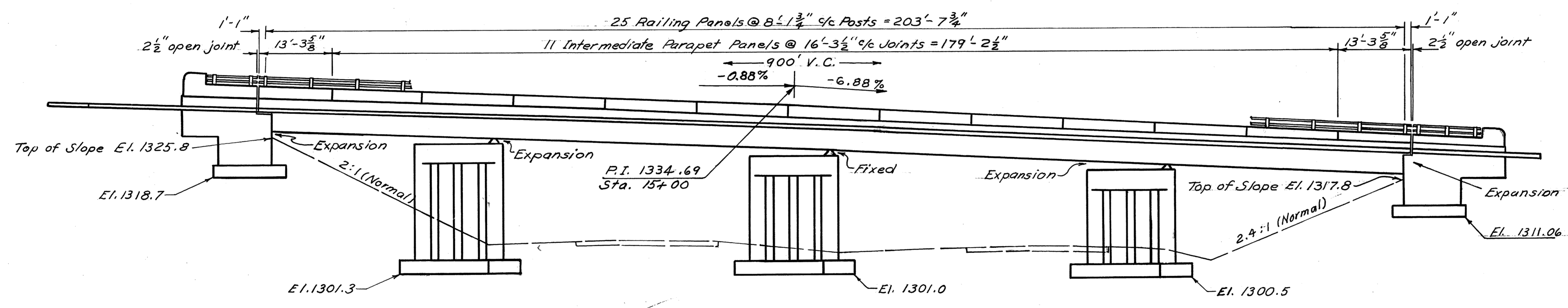
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

167
216

RIC-13-(10.83-13.95)



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abut.	Pier	Gen'l.
E-2	570	Cu. yds.	Unclassified excavation		337	233	
S-1	276	Cu. yds.	Class "C" concrete, superstructure	276			
S-1	101	Cu. yds.	Class "C" concrete, pier caps and columns			101	
S-1	186	Cu. yds.	Class "E" concrete, abutments		186		
S-1	75	Cu. yds.	Class "E" concrete, pier footings		888	75	
S-4	108,391	Lbs.	Reinforcing steel	69,499	2,000	29,892	
S-7	174,500	Lbs.	Structural steel	174,500			
S-8	174,500	Lbs.	Field painting of structural steel	174,500			
S-14	469.63	Lin. ft.	Railing (aluminum rail and supports and concrete parapet and end posts), Type "C"	412.46		57.17	
S-29	39	Cu. yds.	Porous backfill				39
S-29	16	Each	Scuppers, including supports	16			
I-10	414	Sq. yds.	Crushed aggregate slope protection				414
S-101	276	Each	Water-reducing, set-retarding admixture	276			

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CSB-2-56, sheets 2 and 3 revised 2-2-59, AR-1-57 revised 4-2-62 and RB-1-55 revised 2-2-59, SD-1-63 sheet 1 dated 11-12-63 and Supplemental Spec. 3-307 of 8-23-60 & 3-101 of 7-12-63.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 2.0 tons per square foot at the abutments and 2.5 tons per square foot at the piers.

PROCEDURE: In the area of the rear abutment, the existing ground shall be excavated to elevation 1313.0 the full length of the abutment and for a minimum width of 12 feet centered under the abutment footing. The excavated area shall then be backfilled as per Specification E-1.08.

The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade, for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments.

UTILITY LINES: All labor and expense involved in relocation of the affected utility lines shall be borne by the Owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

Design Loading - CF130(57)
Concrete Class C - basic unit stress 1,333 p.s.i.
Concrete Class E - basic unit stress 1,133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.
(ASTM A7 and A373 steel not permitted)
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except spiral reinforcement may be plain, structural grade with basic unit stress of 18,000 p.s.i.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

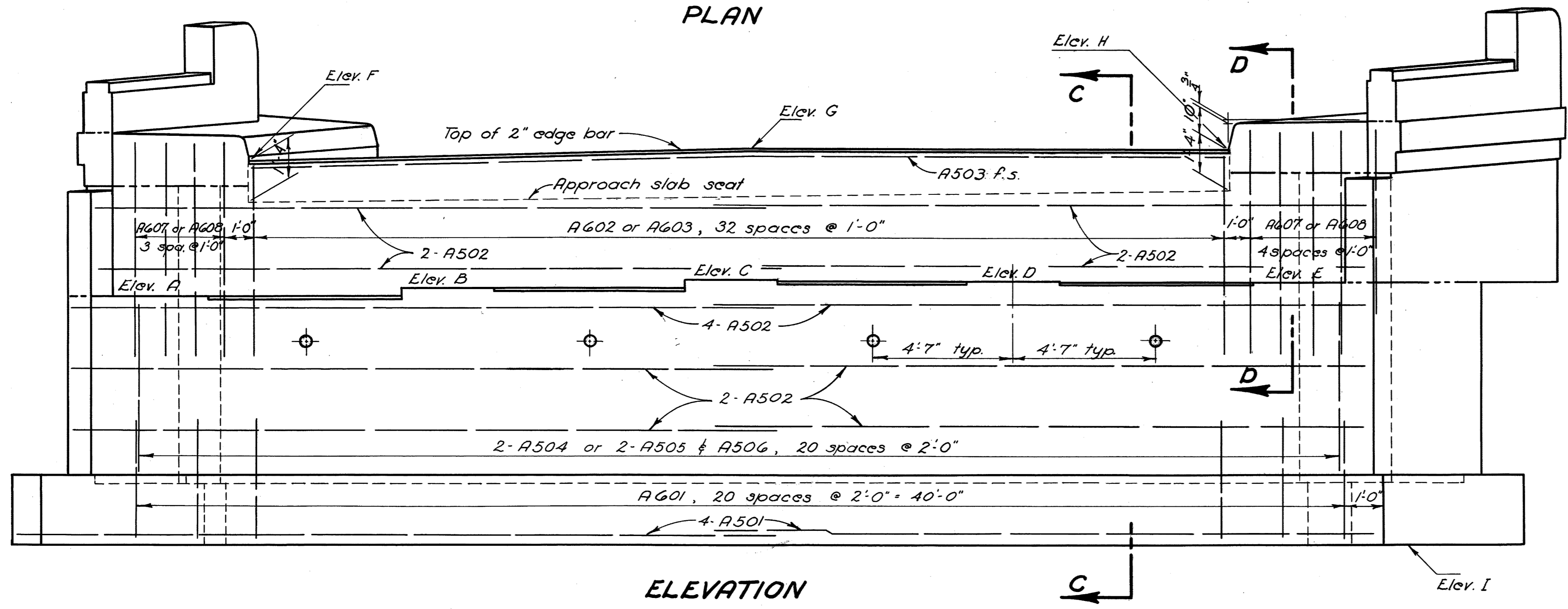
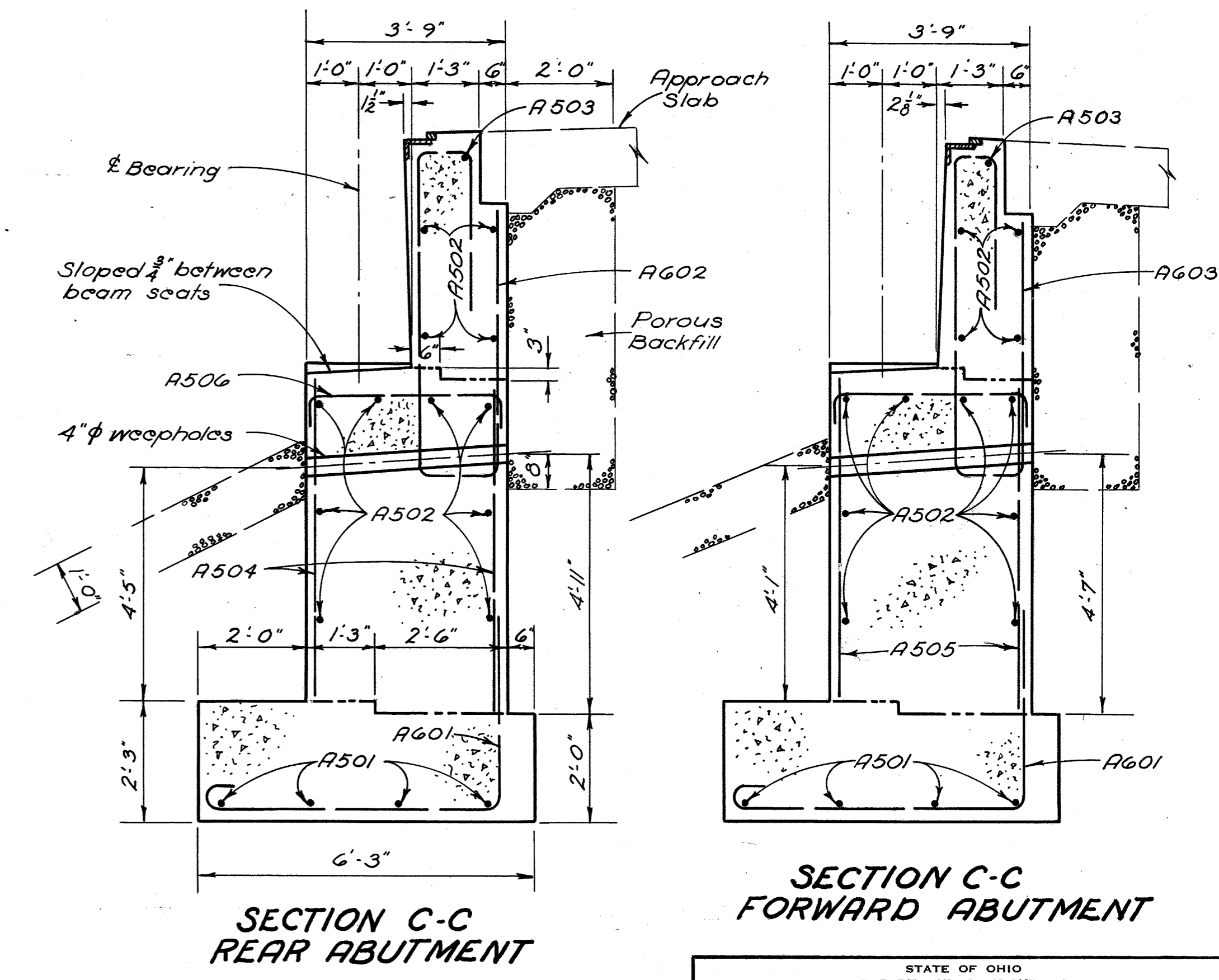
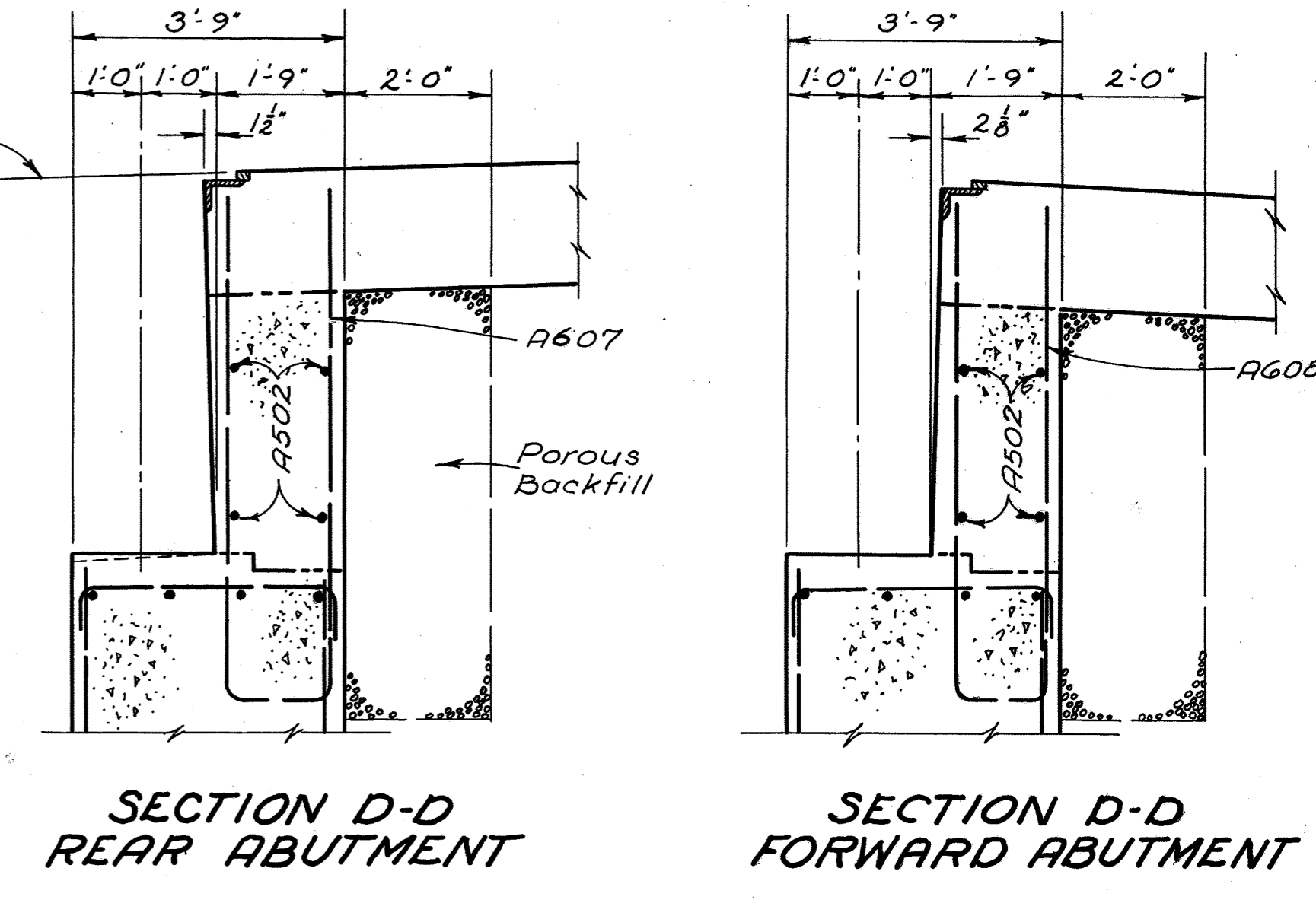
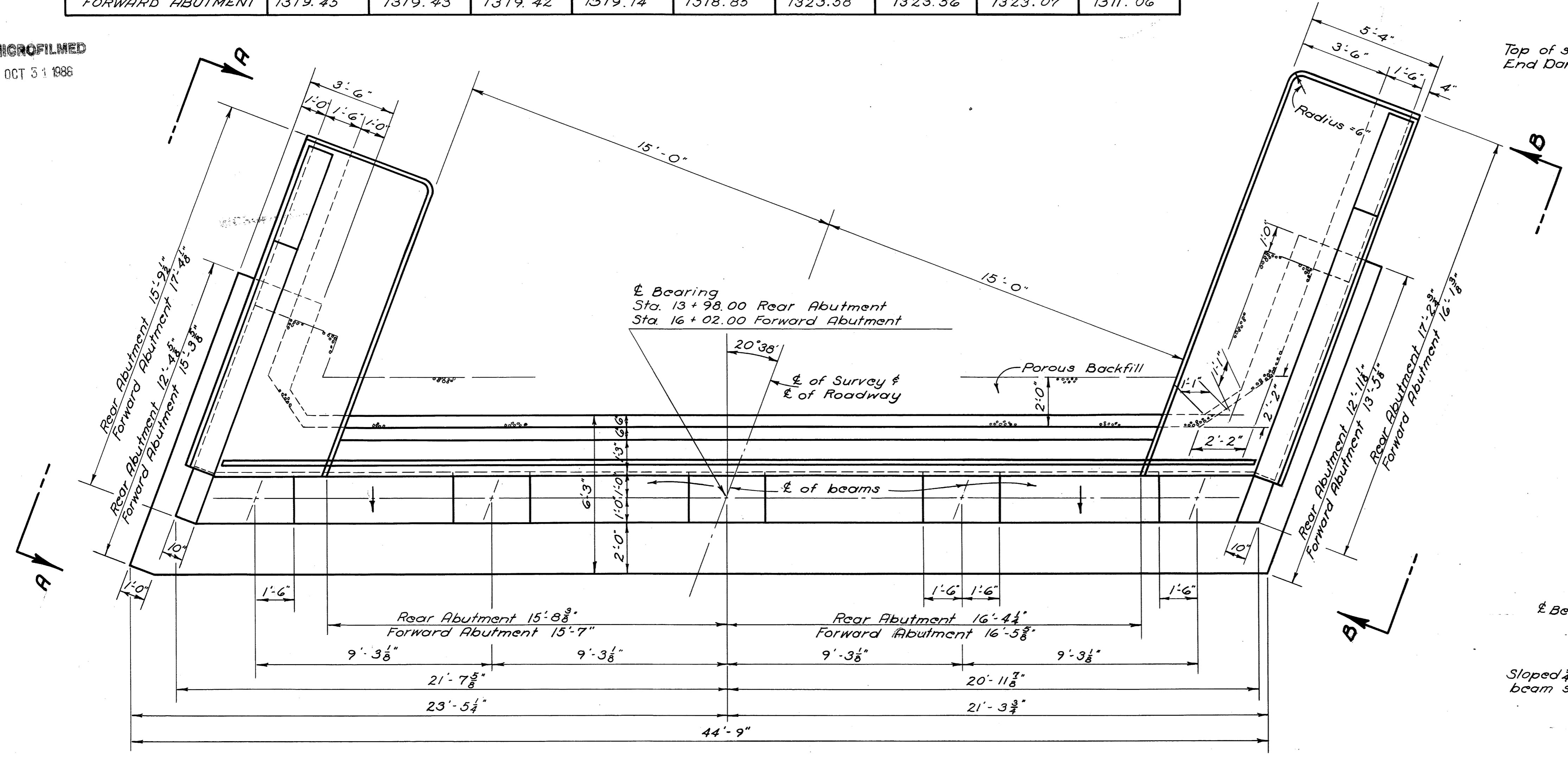
**GENERAL PLAN & ELEVATION,
NOTES & ESTIMATED QUANTITIES**
BRIDGE No. RIC-13-1369
UNDER COOK ROAD
RICHLAND COUNTY S.R. 13
STA. 121+97.29

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	N.L.D.	W.C.K.	BFG	3-30-61	8-14-64

ELEVATIONS

LOCATION	A	B	C	D	E	F	G	H	I
REAR ABUTMENT	1326.85	1327.09	1327.33	1327.30	1327.27	1331.18	1331.60	1331.54	1318.70
FORWARD ABUTMENT	1319.45	1319.43	1319.42	1319.14	1318.85	1323.58	1323.56	1323.07	1311.06

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See sheet 169 for View A-A & B-B Rear Abutment
See sheet 170 for View A-A & B-B Forward Abutment

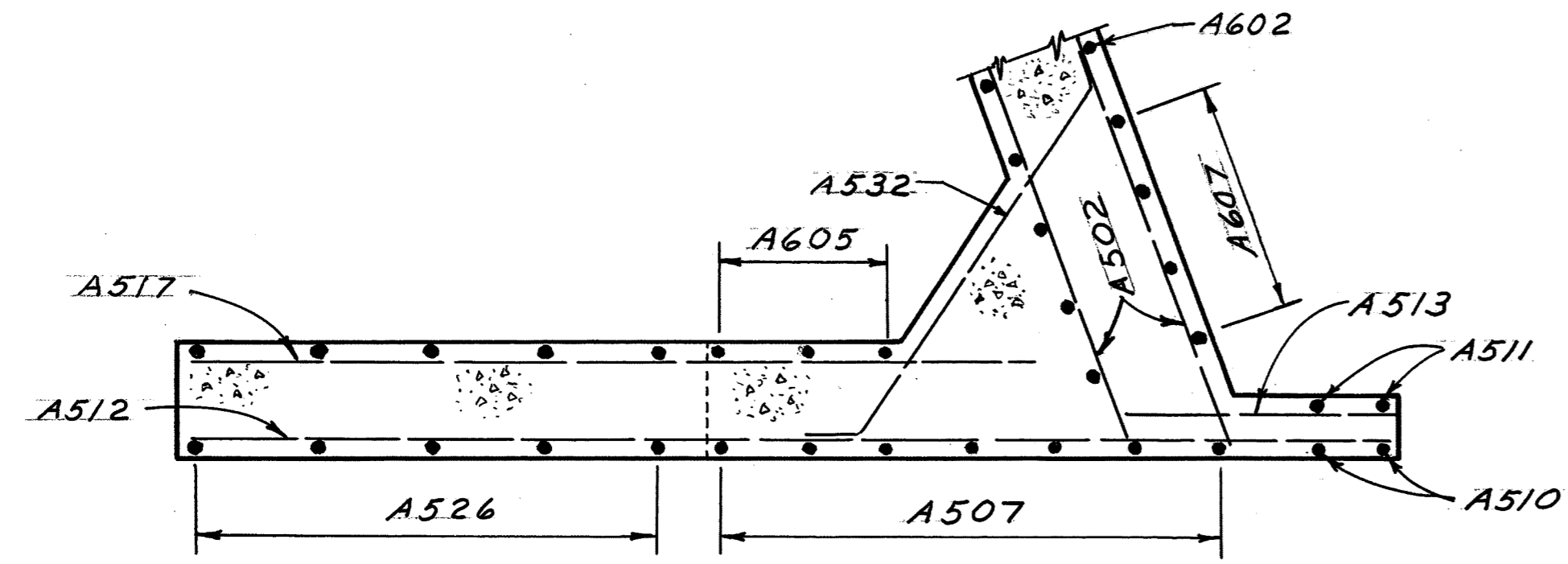
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS

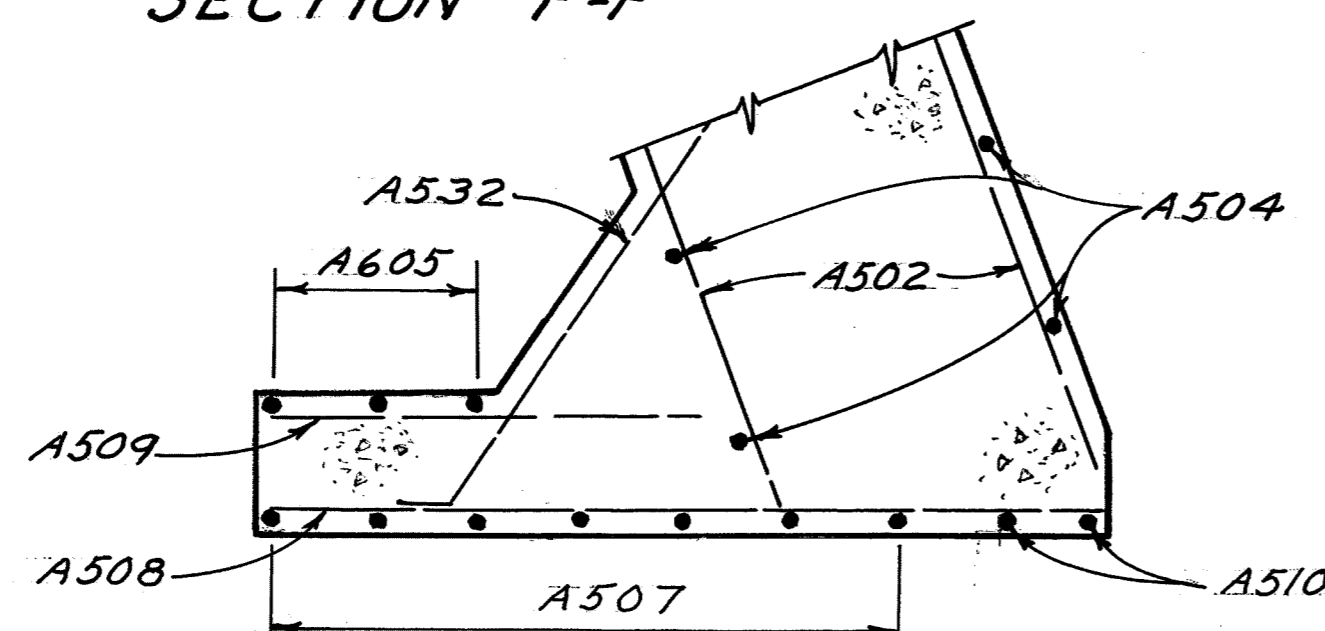
BRIDGE NO. RIC-13-1369
UNDER COOK ROAD

RICHLAND COUNTY S.R. 13
STA. 721 + 97.29

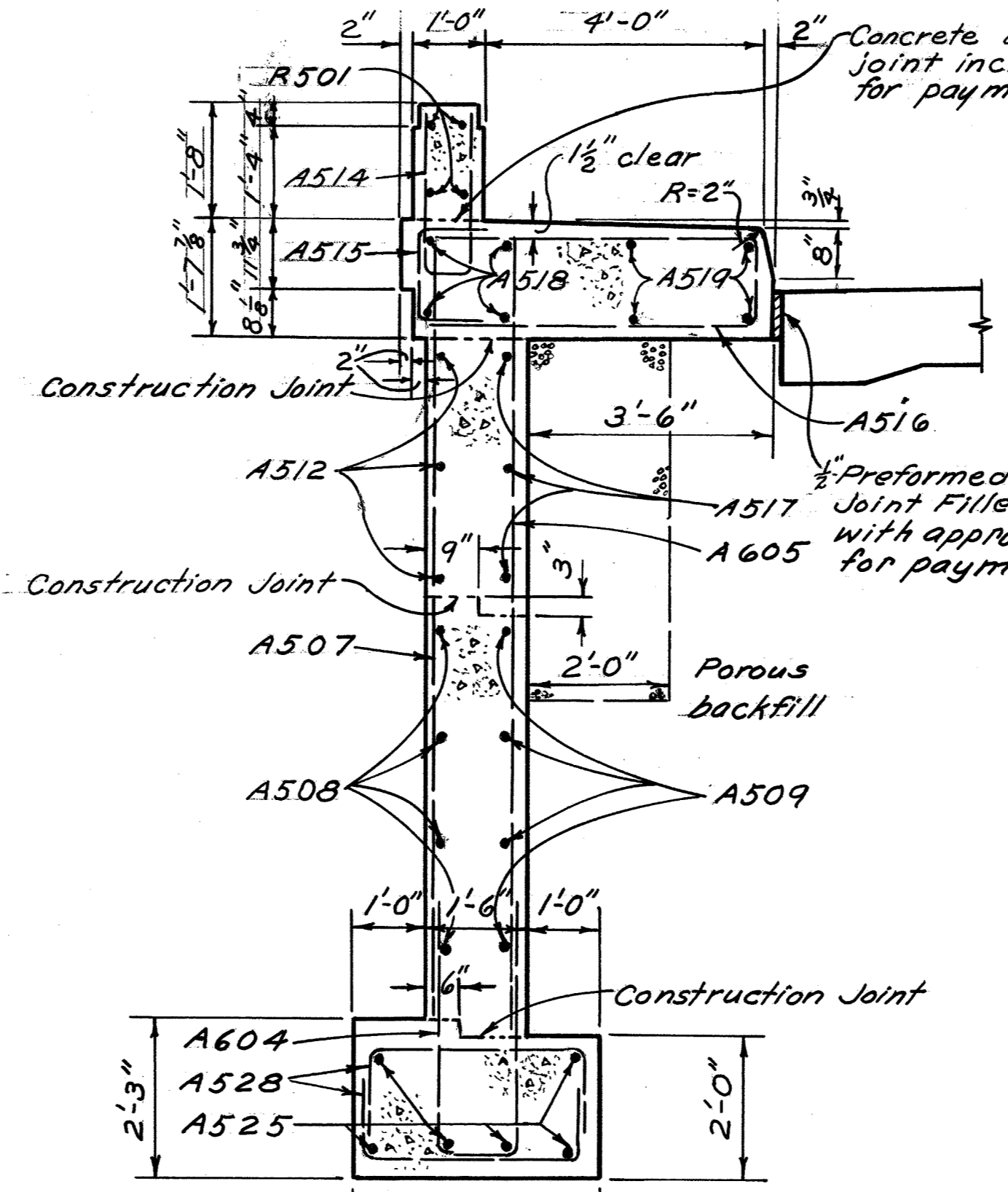
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.		WCK	BFG	3-30-61	



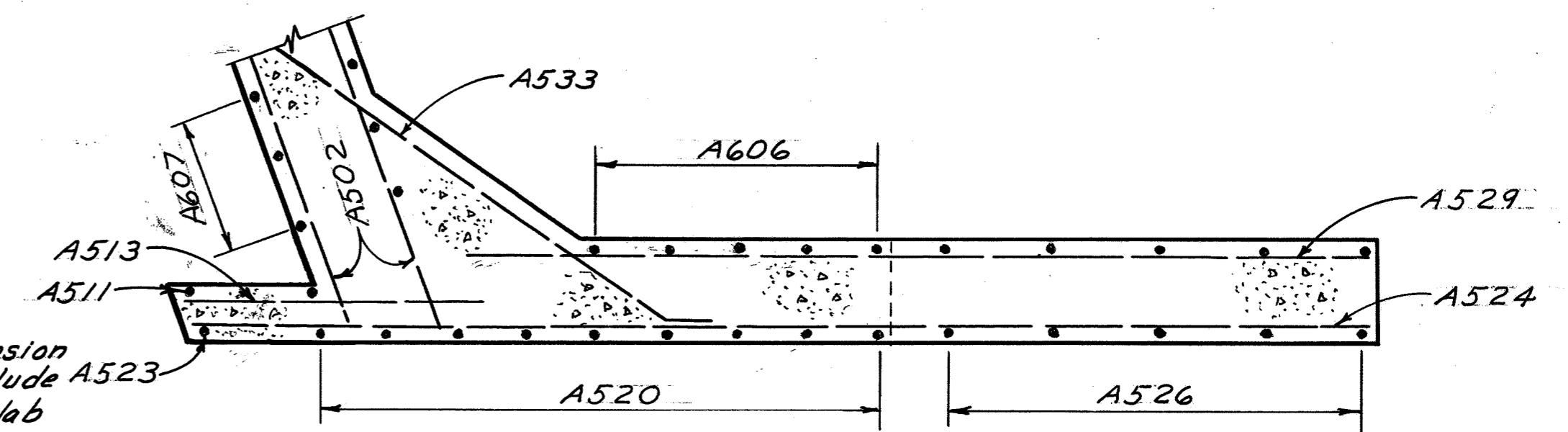
SECTION F-F



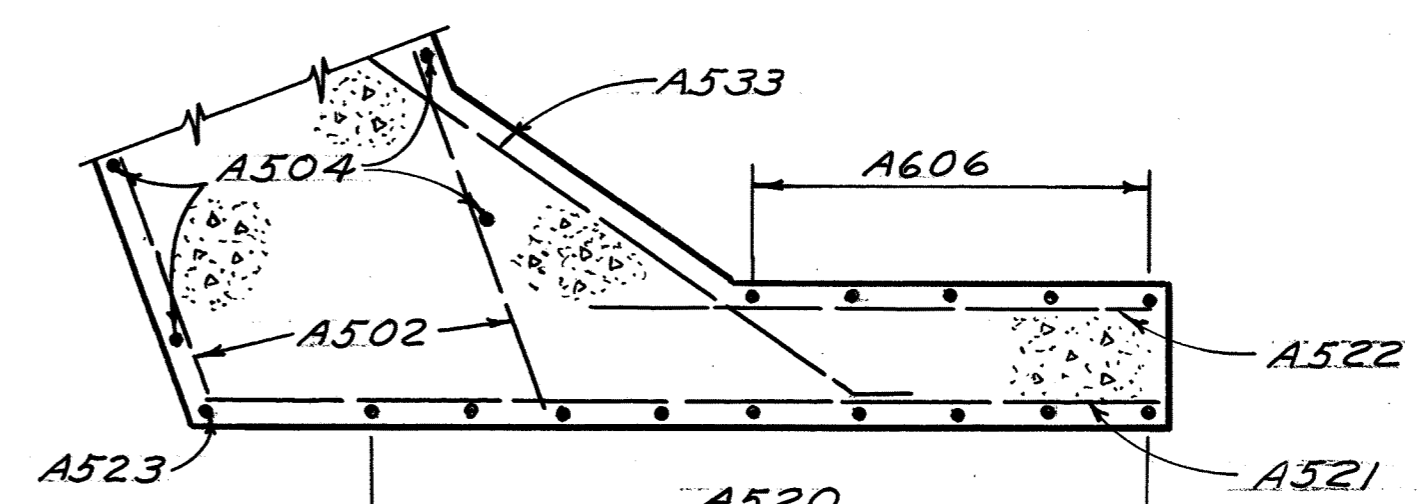
SECTION G-G



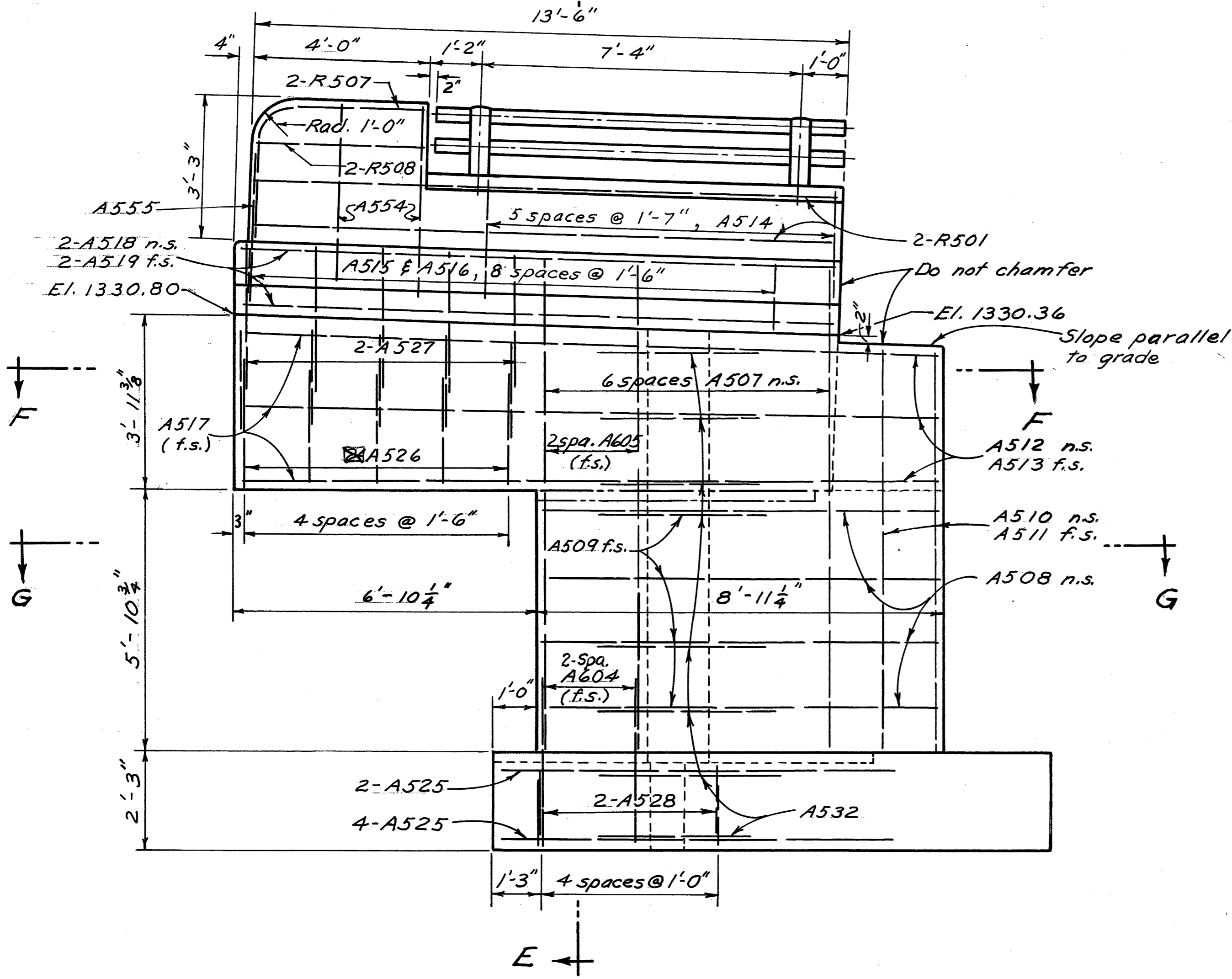
SECTION E-E



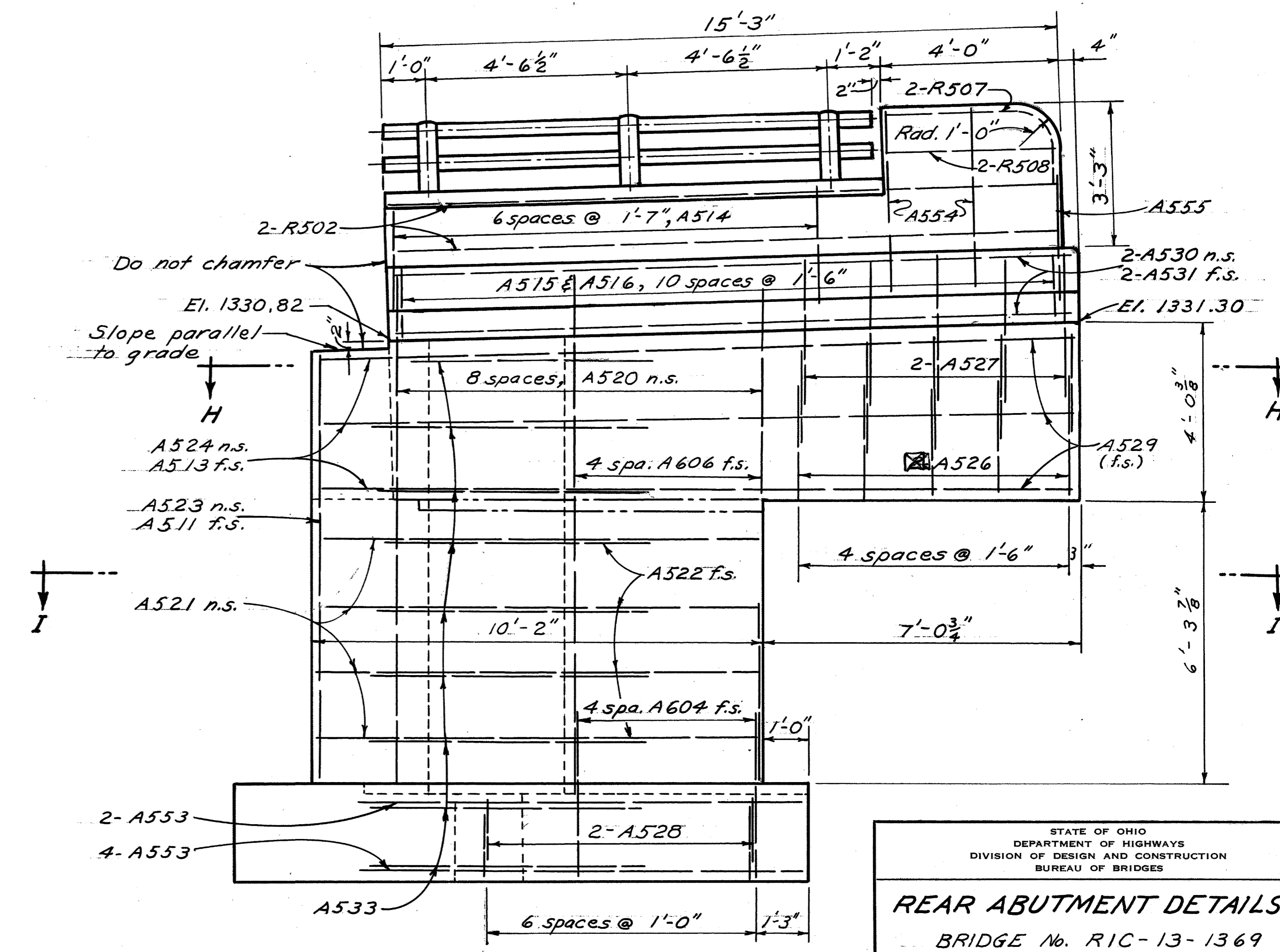
SECTION H-H



SECTION I-I



VIEW A-A



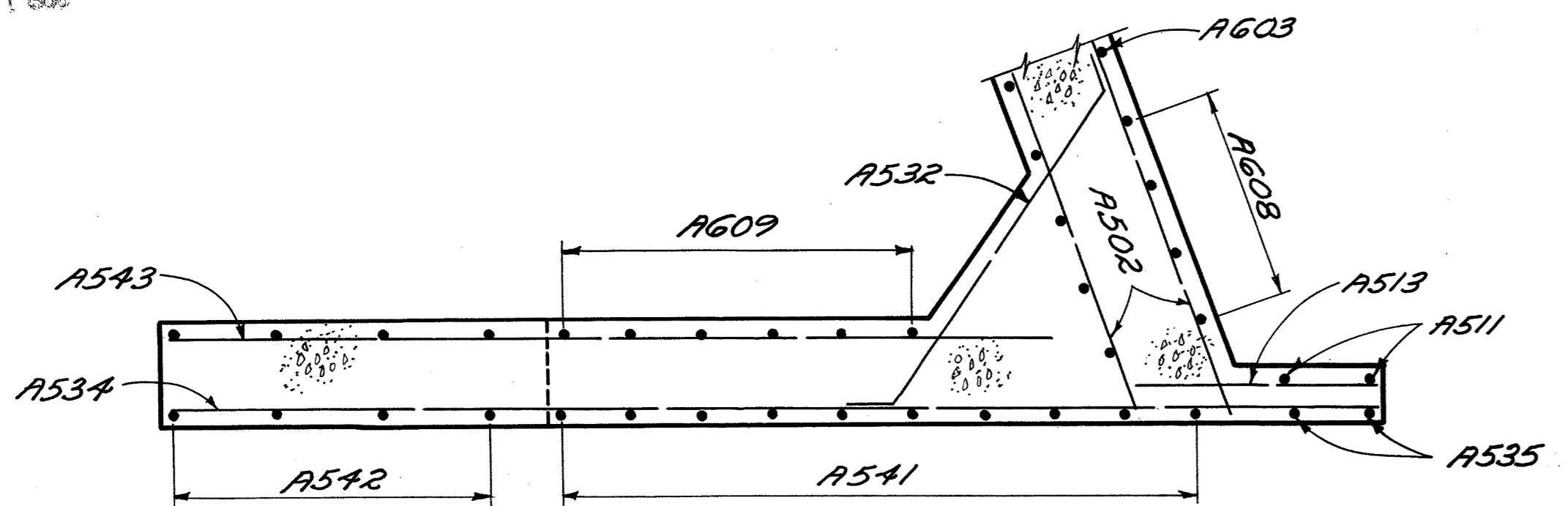
VIEW B-B

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

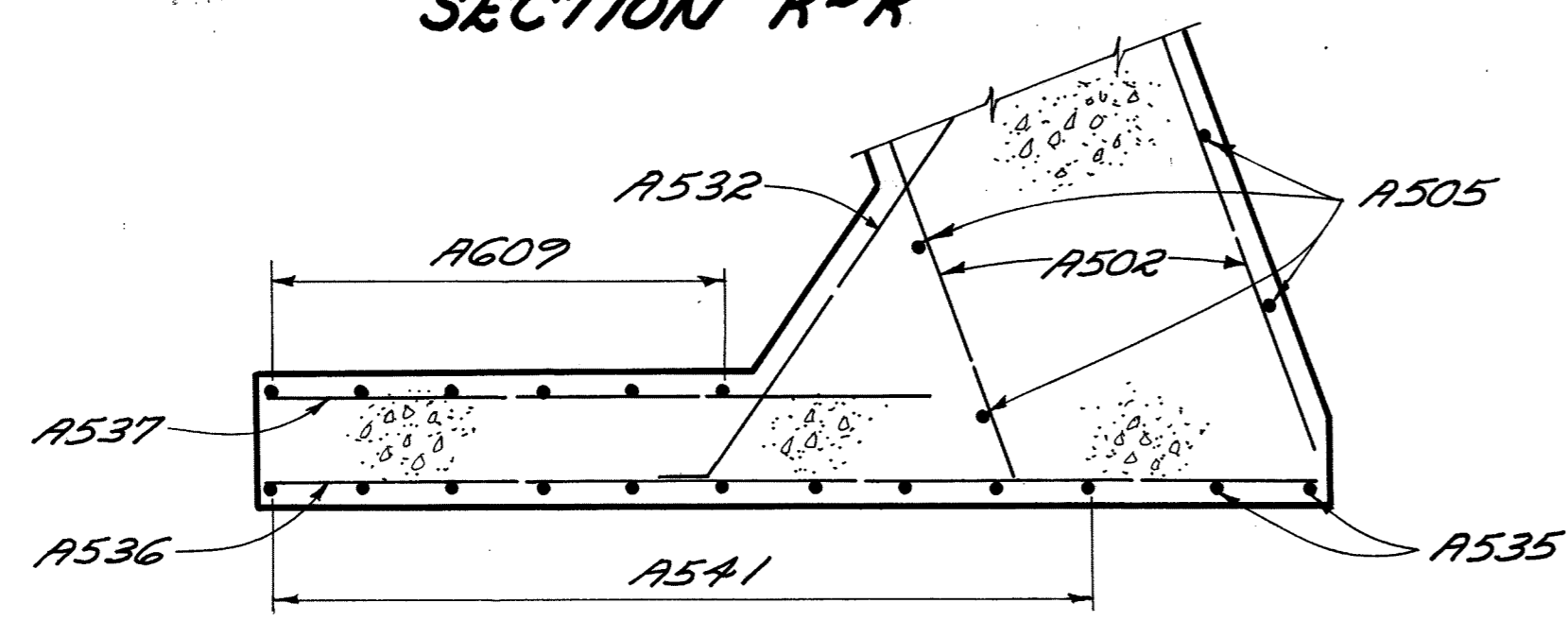
REAR ABUTMENT DETAILS
BRIDGE No. RIC-13-1369
UNDER COOK ROAD

RICHLAND COUNTY S.R.13
STA. 721+97.29

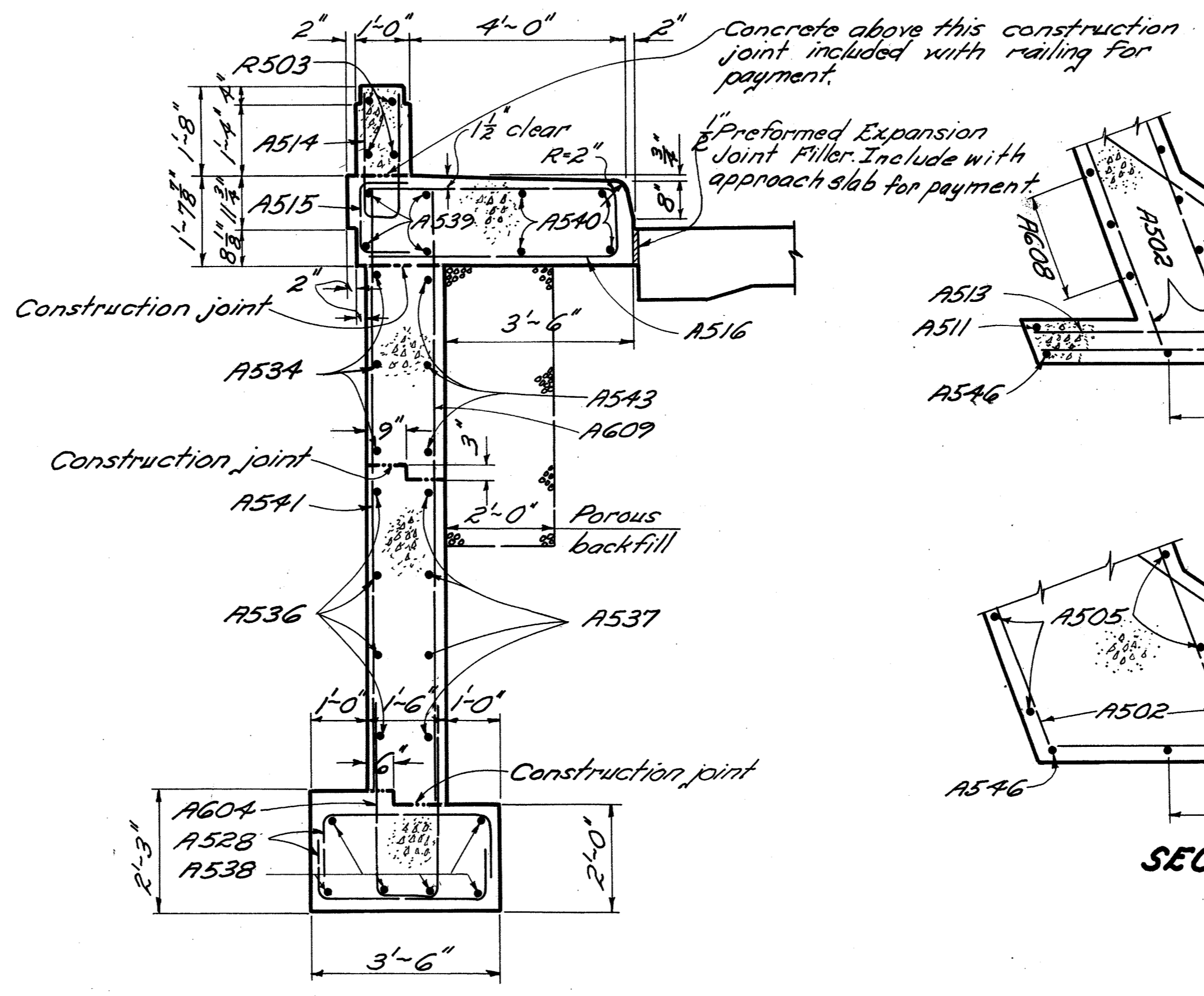
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	M.L.D.	WCK	BFG	3-20-61	8-14-64



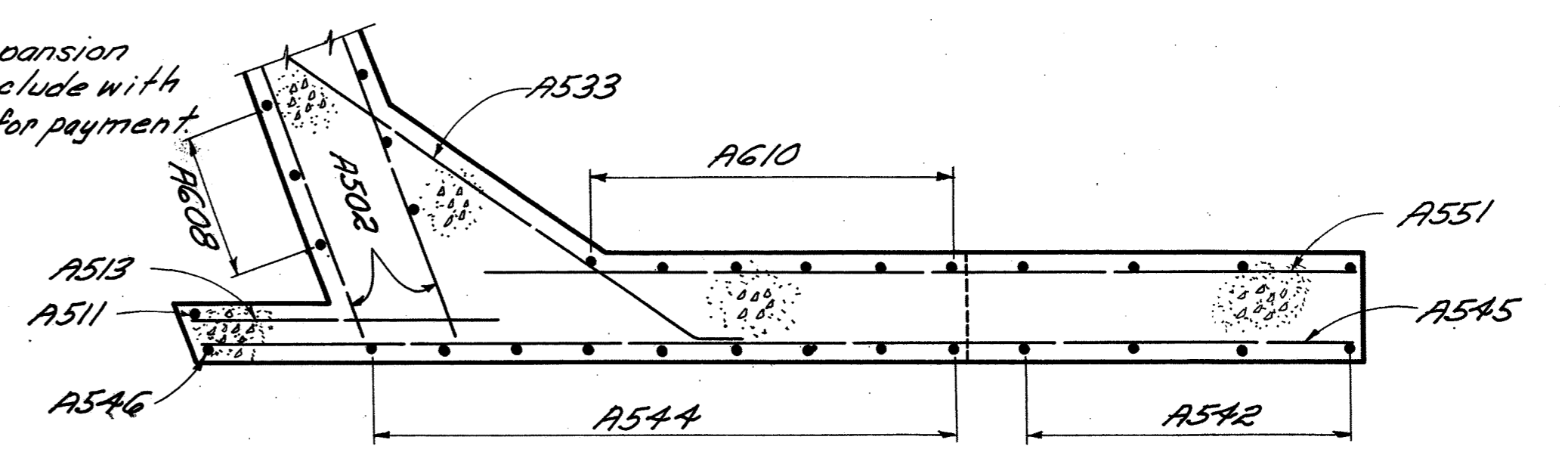
SECTION K-K



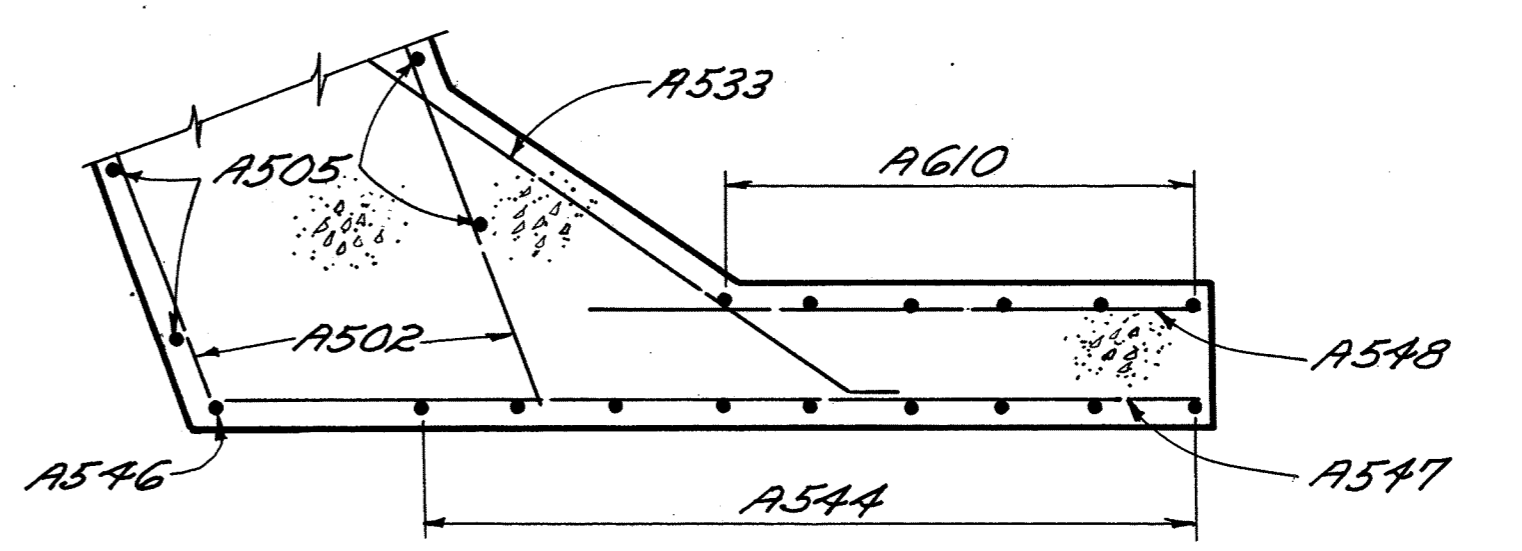
SECTION L-L



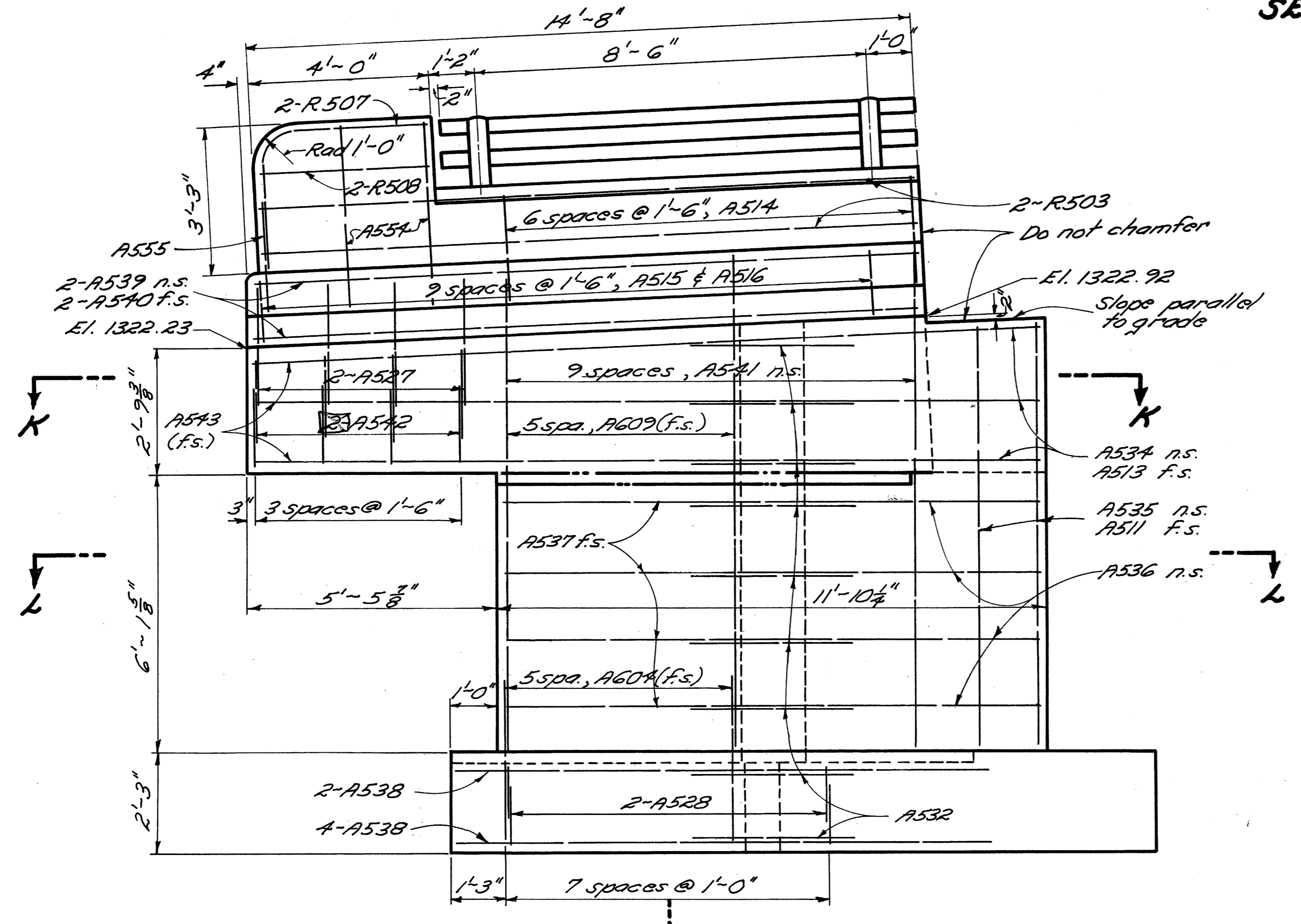
SECTION J-J



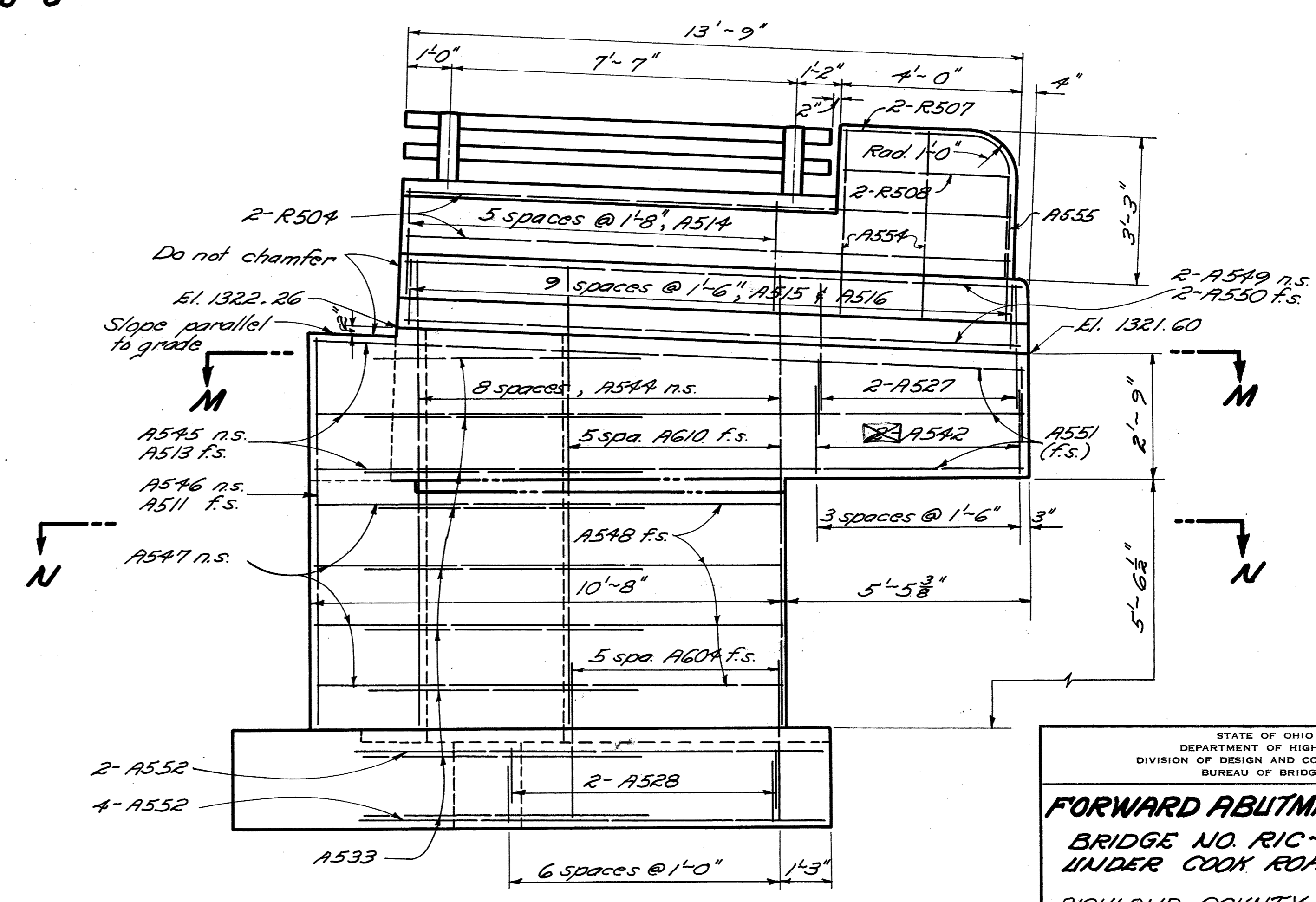
SECTION M-M



SECTION N-N



VIEW A-A



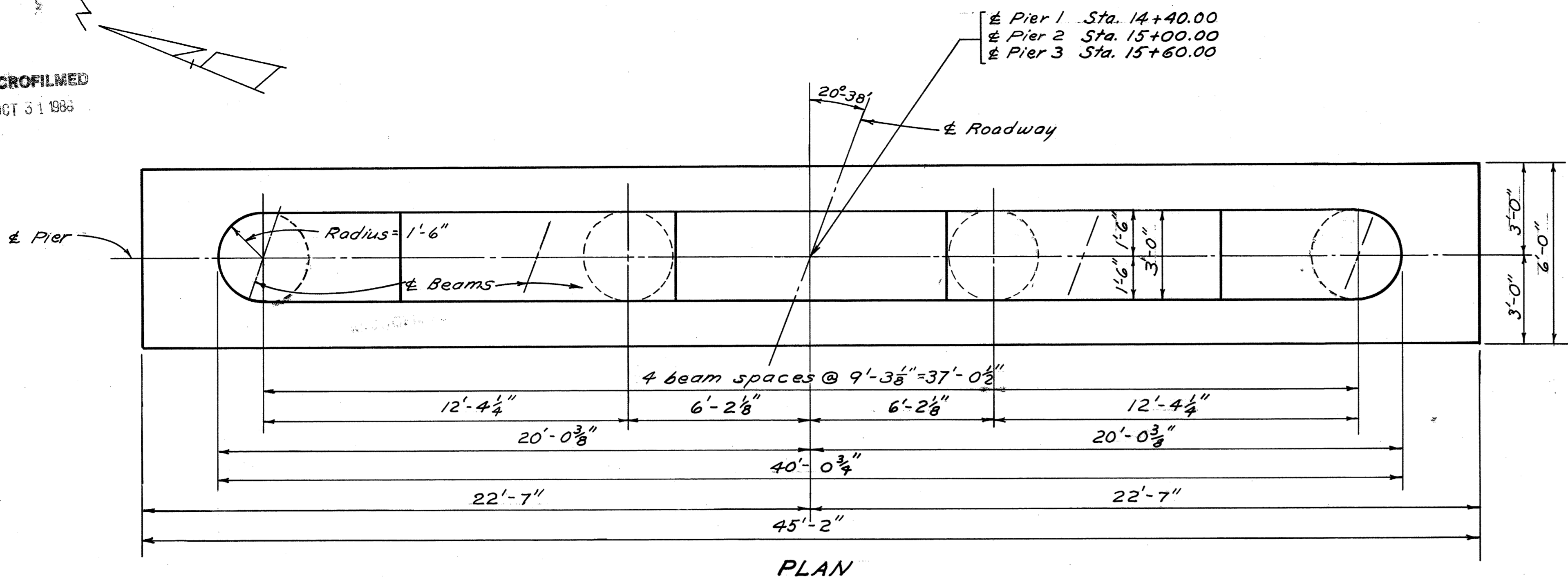
VIEW B-B

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FORWARD ABUTMENT DETAILS
BRIDGE NO. RIC-13-1369
UNDER COOK ROAD
RICHLAND COUNTY S.R. 13
STA. 721+97.29

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	Morgan	WCK	BFG	3-30-61	8-14-64

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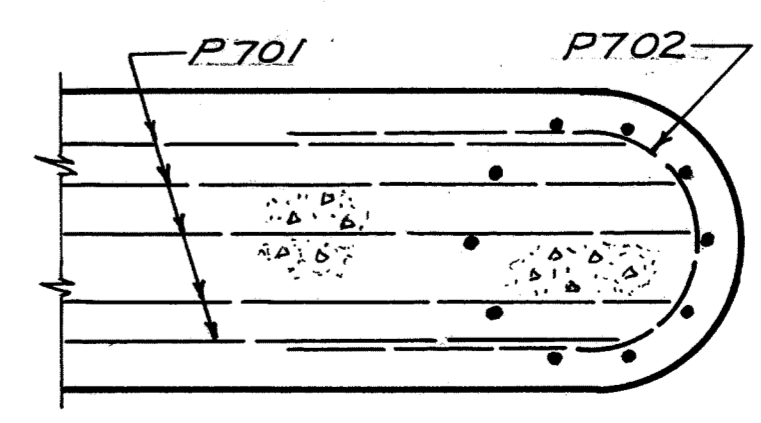
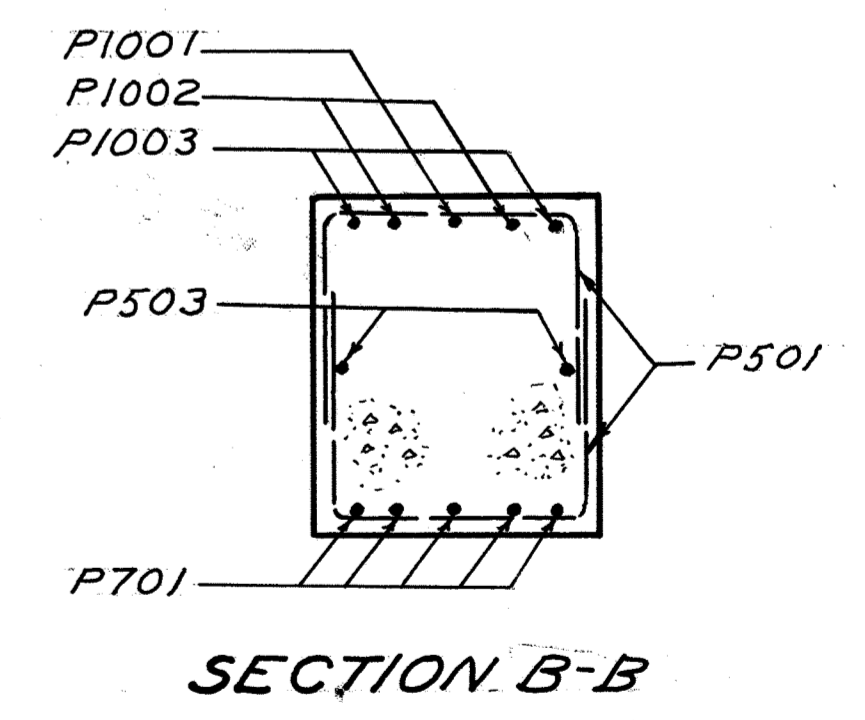
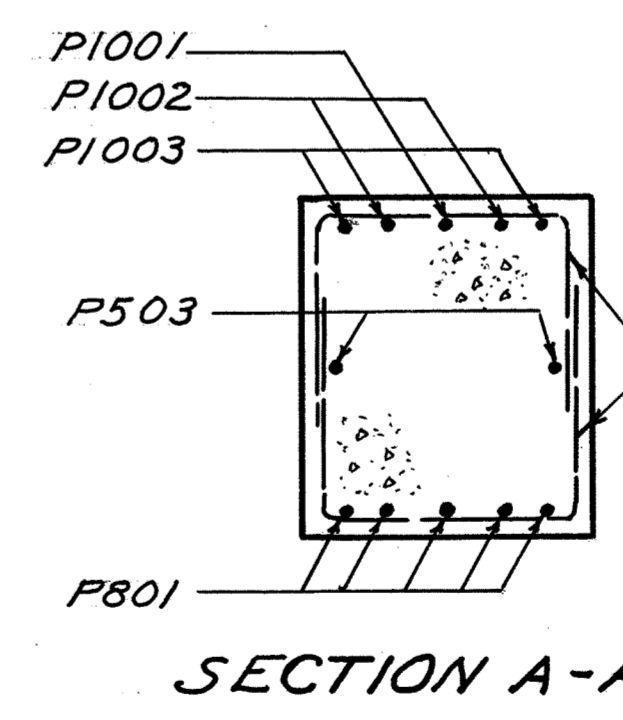
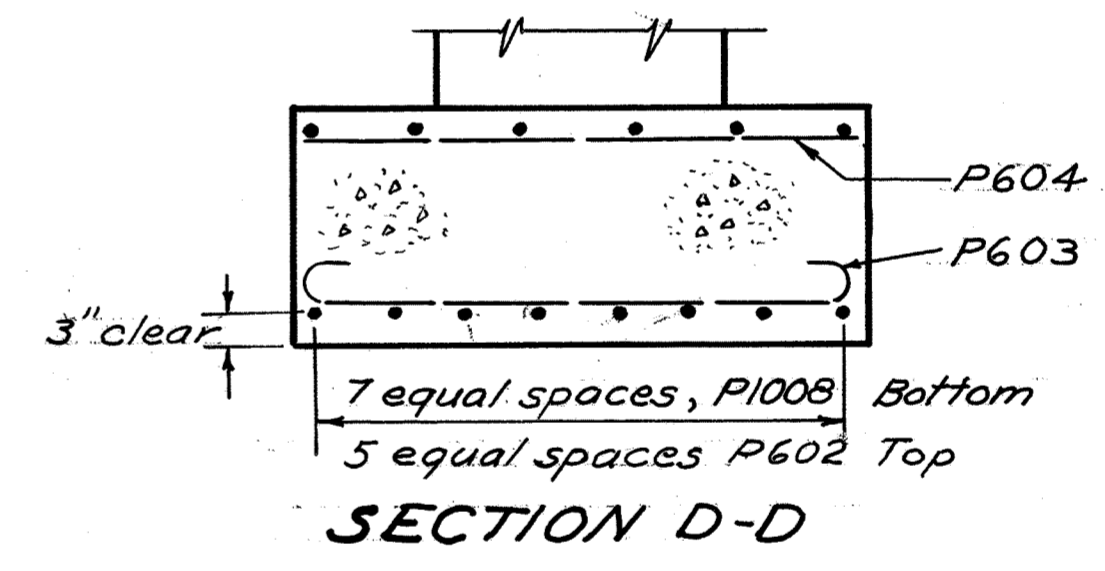
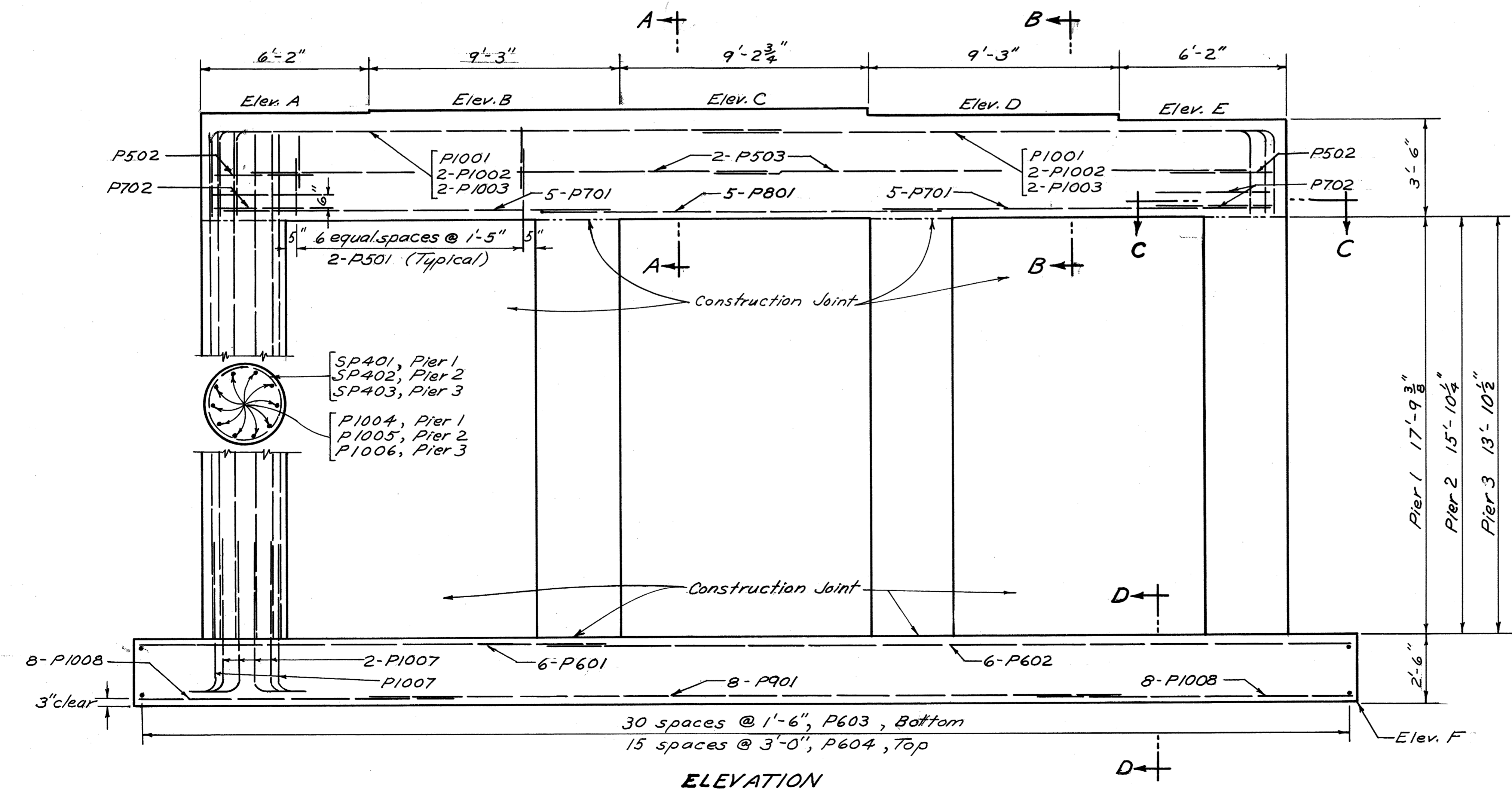
NOTES

The downward leg of the cap reinforcing bars shall be placed in the periphery of the column reinforcing bars and wired thereto.

Special care shall be taken in placing cap reinforcing bars at Pier 2, so as to avoid interference with the anchor bars for the bolsters.

ELEVATIONS

LOCATION	A	B	C	D	E	F
PIER 1	1325.53	1325.55	1325.58	1325.33	1325.08	1301.30
PIER 2	1323.35	1323.36	1323.37	1323.11	1322.85	1301.00
PIER 3	1320.93	1320.92	1320.92	1320.64	1320.37	1300.50



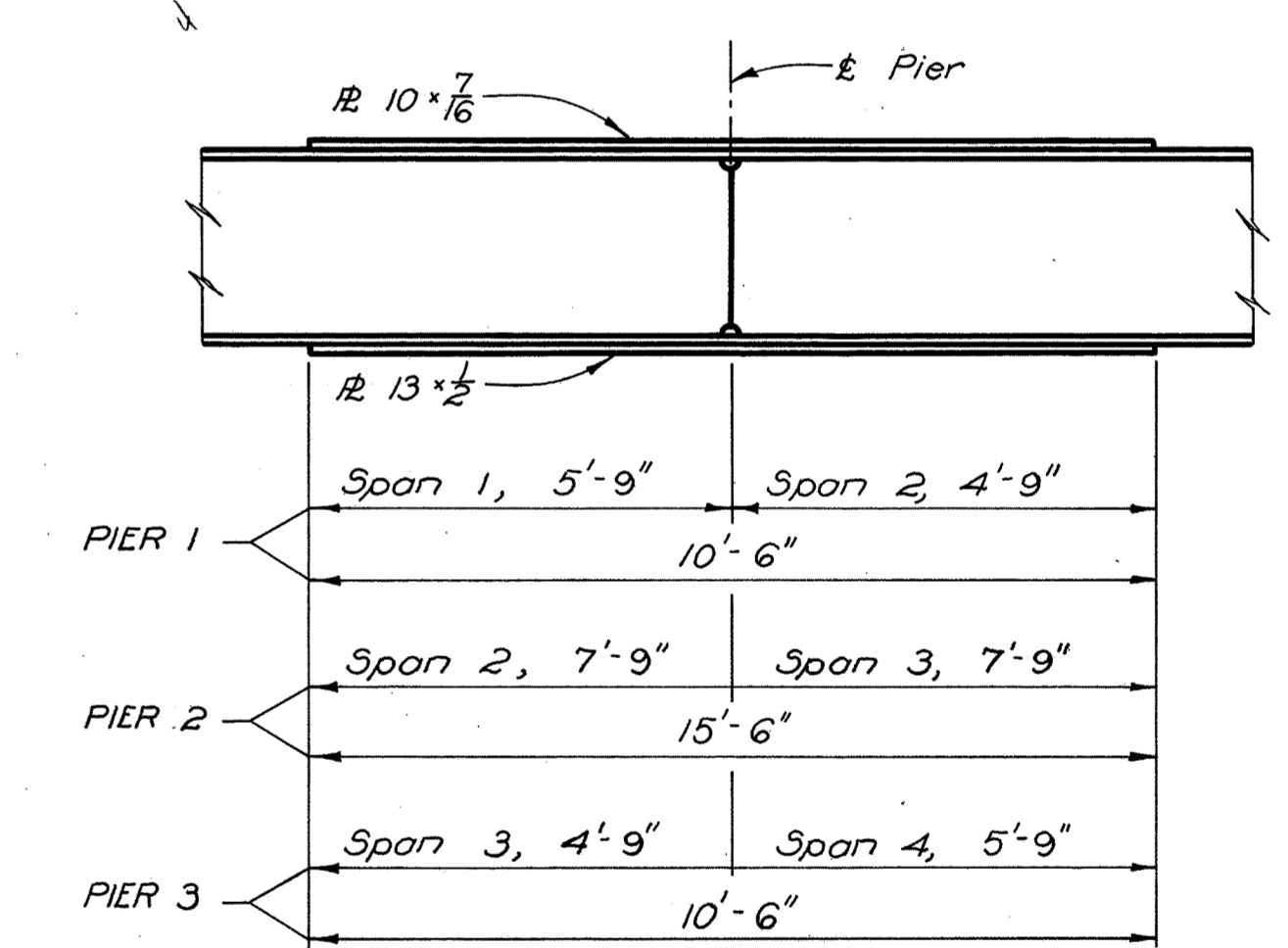
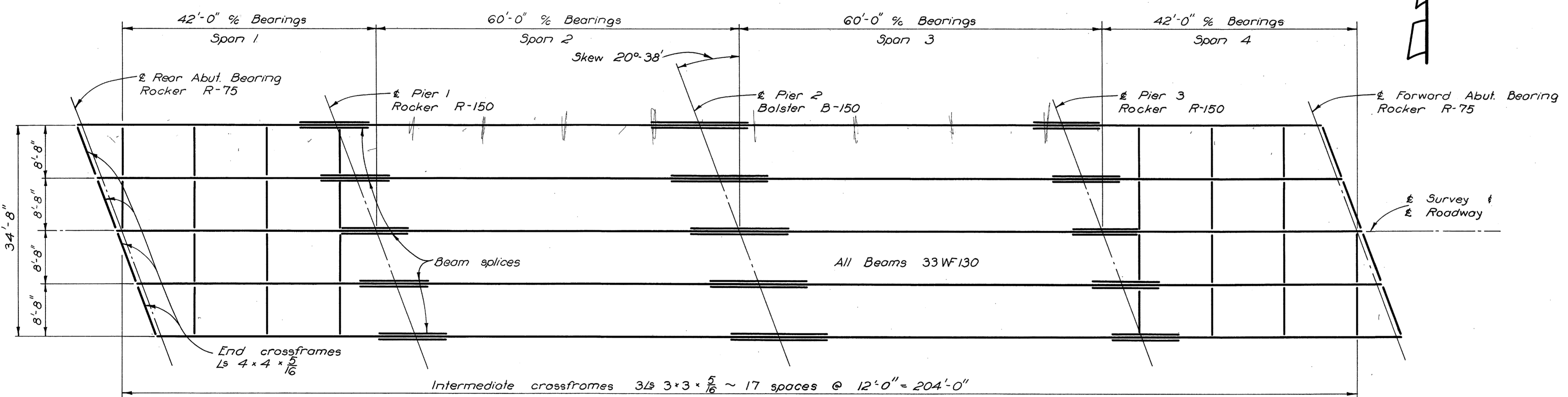
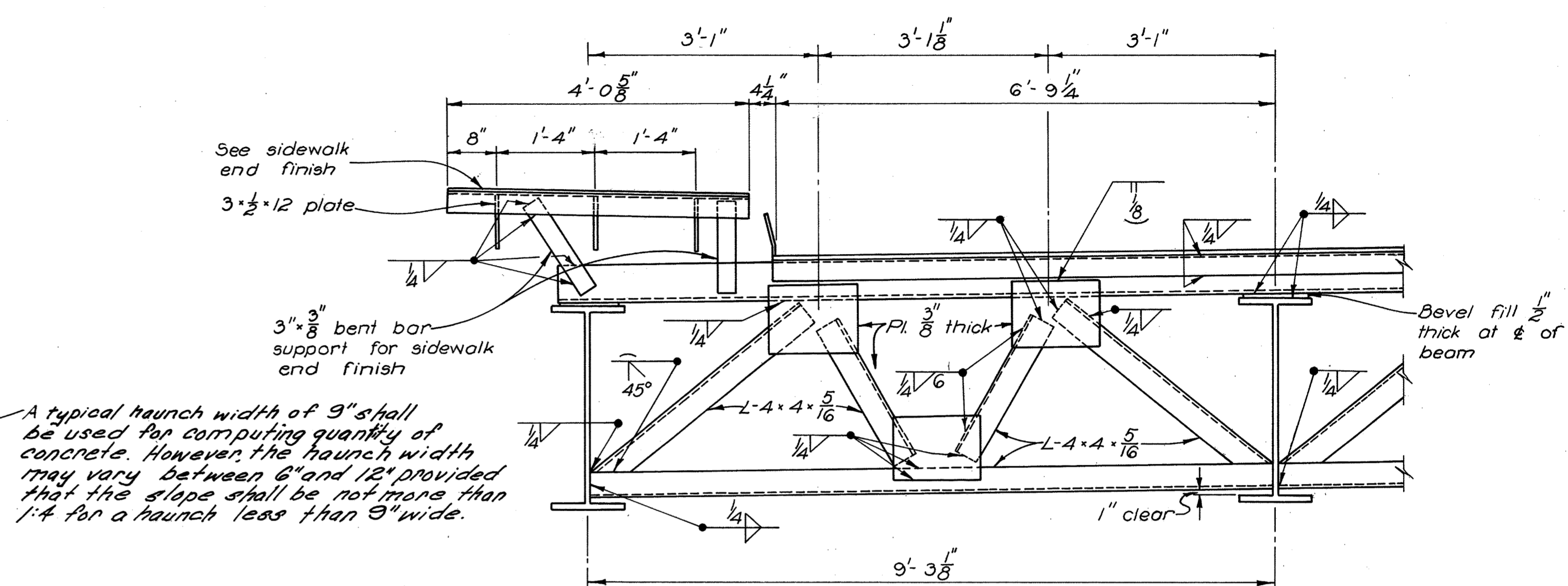
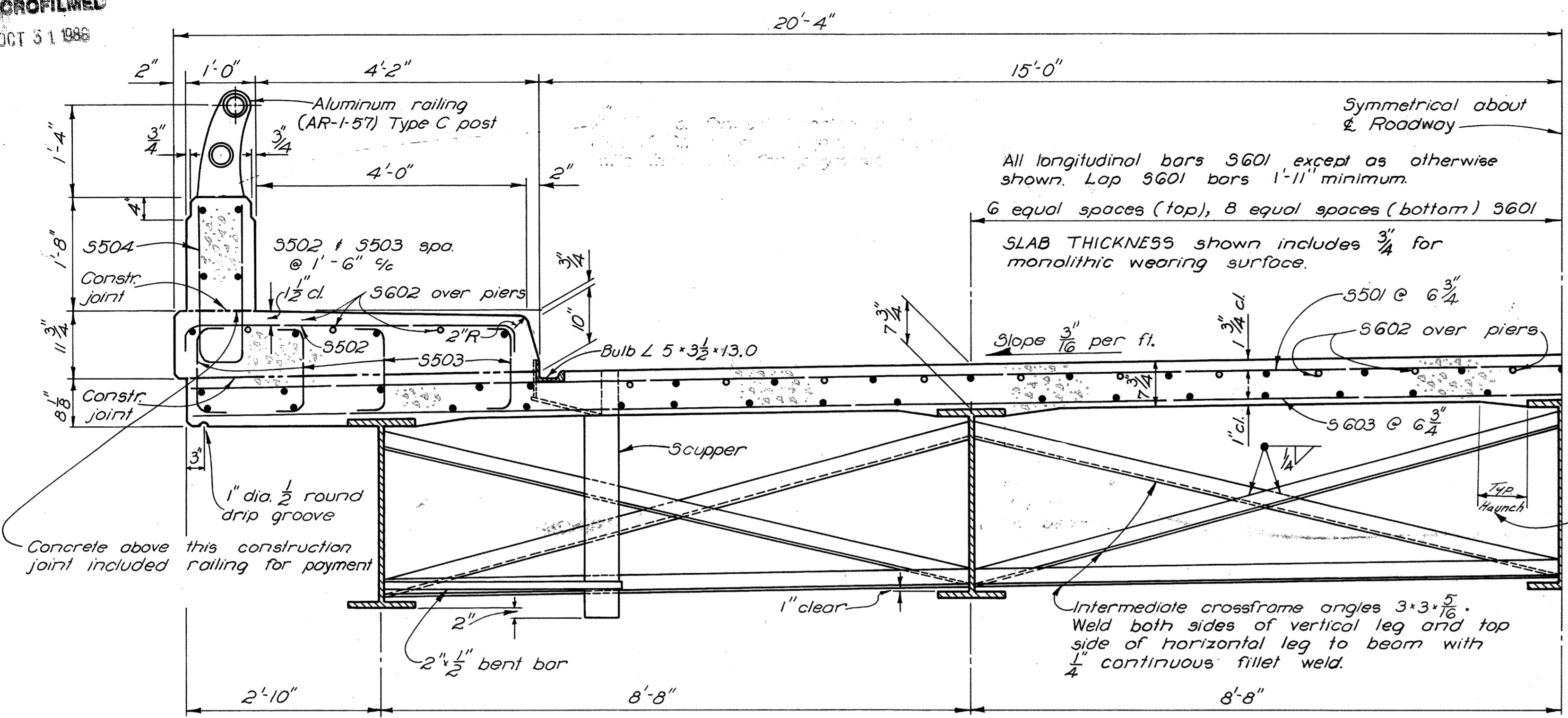
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS

BRIDGE NO. RIC-13-1369
UNDER COOK ROAD

RICHLAND COUNTY S.R. 13
STA. 721+97.29

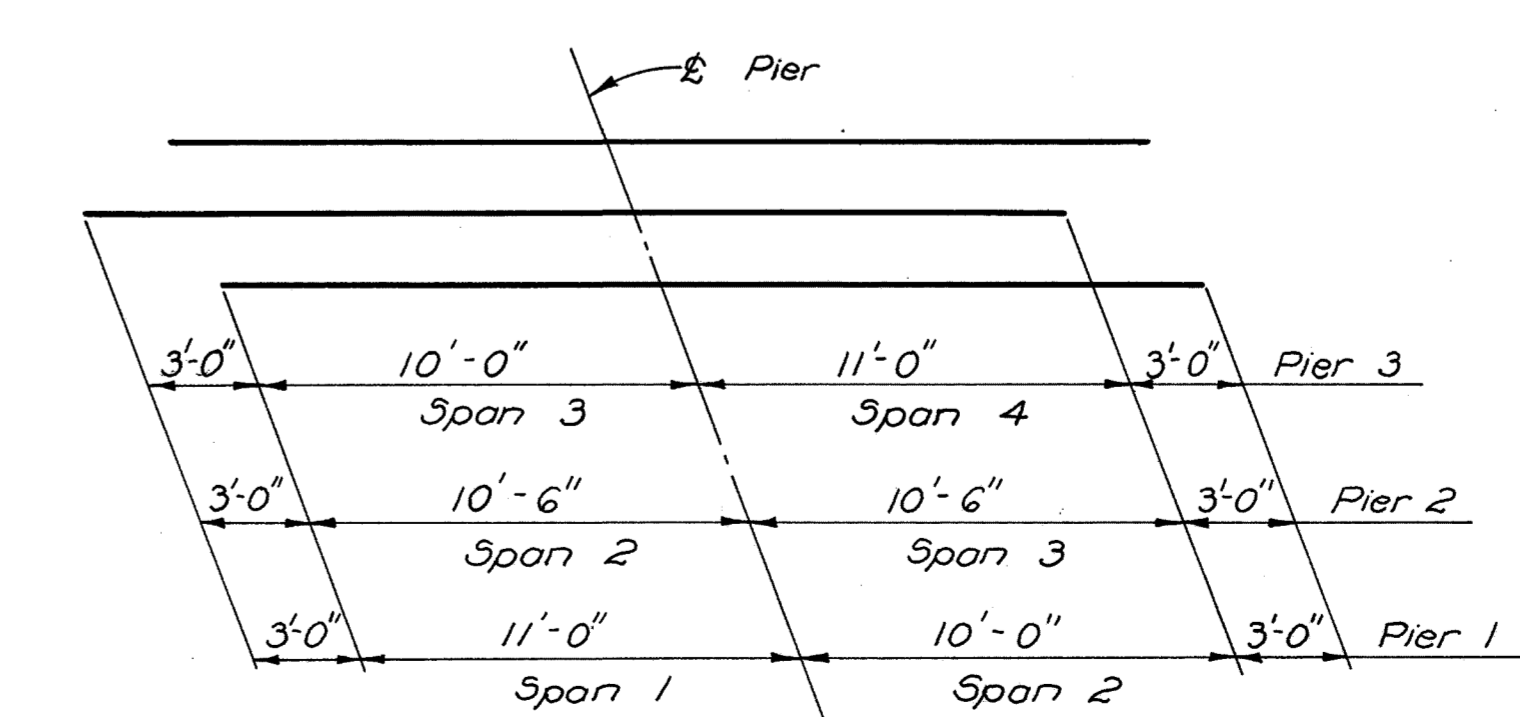
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	N.L.D.	WCK	BFG	3-30-61	



For Beam Splice details see Standard Drawing 5D-1-63 sheet 1

BEAM SPLICE WELDING PROCEDURE

1. Raise beam end at either Pier 1 or Pier 3, $\frac{1}{4}$ "
2. Butt-weld the beam flanges and web at Pier 2 using the following sequence: make two passes on the web, then two each flange; repeat, using one on two passes at each location until welds are completed.
3. Weld the bottom and top moment plates at Pier 2.
4. Lower end of beam at either Pier 1 or 3.
5. Make splices at Pier 1 and Pier 3 in the same manner; do not raise the ends of the beams at the abutments.



DEFLECTION AND CAMBER				
Beam	Outside		Inside	
	Span	Span	Span	Span
Deflection due to weight of steel	0	$\frac{1}{16}$ "	0	$\frac{1}{16}$ "
Deflection due to remaining dead load	$\frac{5}{8}$ "	$\frac{5}{16}$ "	$\frac{1}{16}$ "	$\frac{5}{16}$ "
Convexity required for vertical curve	$\frac{3}{16}$ "	$\frac{3}{8}$ "	$\frac{3}{16}$ "	$\frac{3}{8}$ "
Sum of Deflection and Convexity	$\frac{5}{16}$ "	$\frac{3}{4}$ "	$\frac{1}{4}$ "	$\frac{3}{4}$ "
Required Camber	0	1"	0	1"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

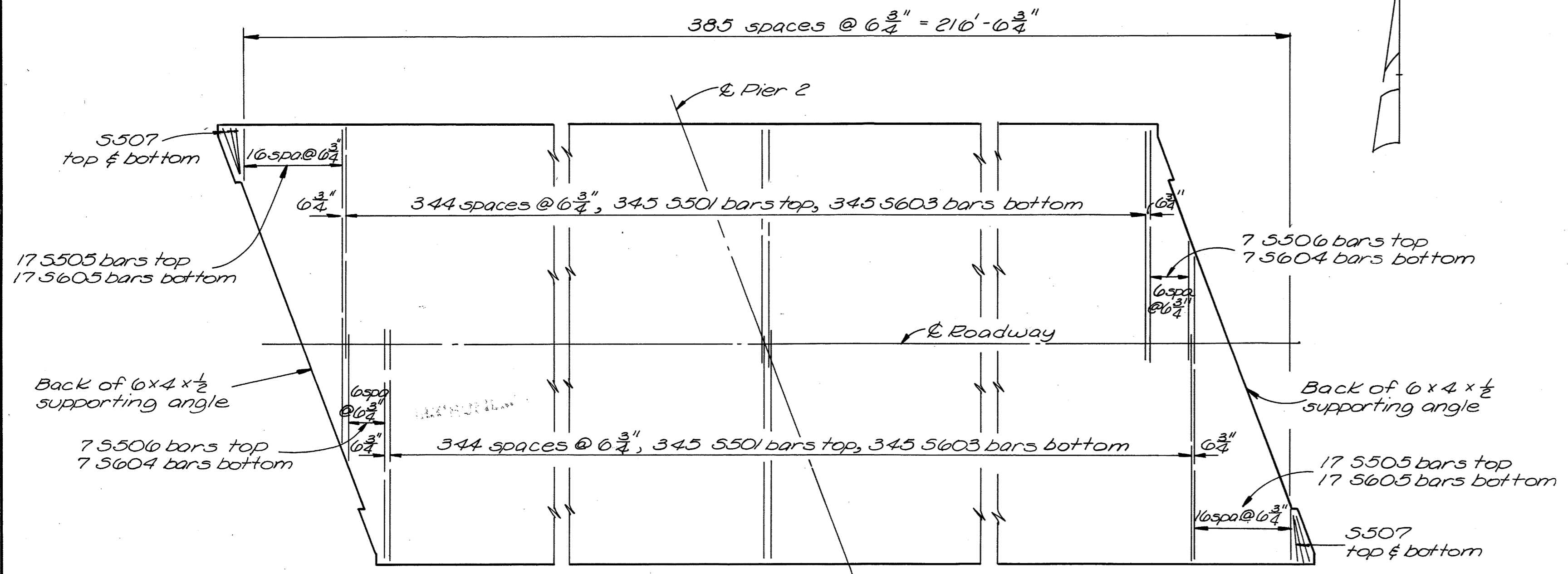
SUPERSTRUCTURE DETAILS

BRIDGE NO. RIC-13-1369
UNDER COOK ROAD

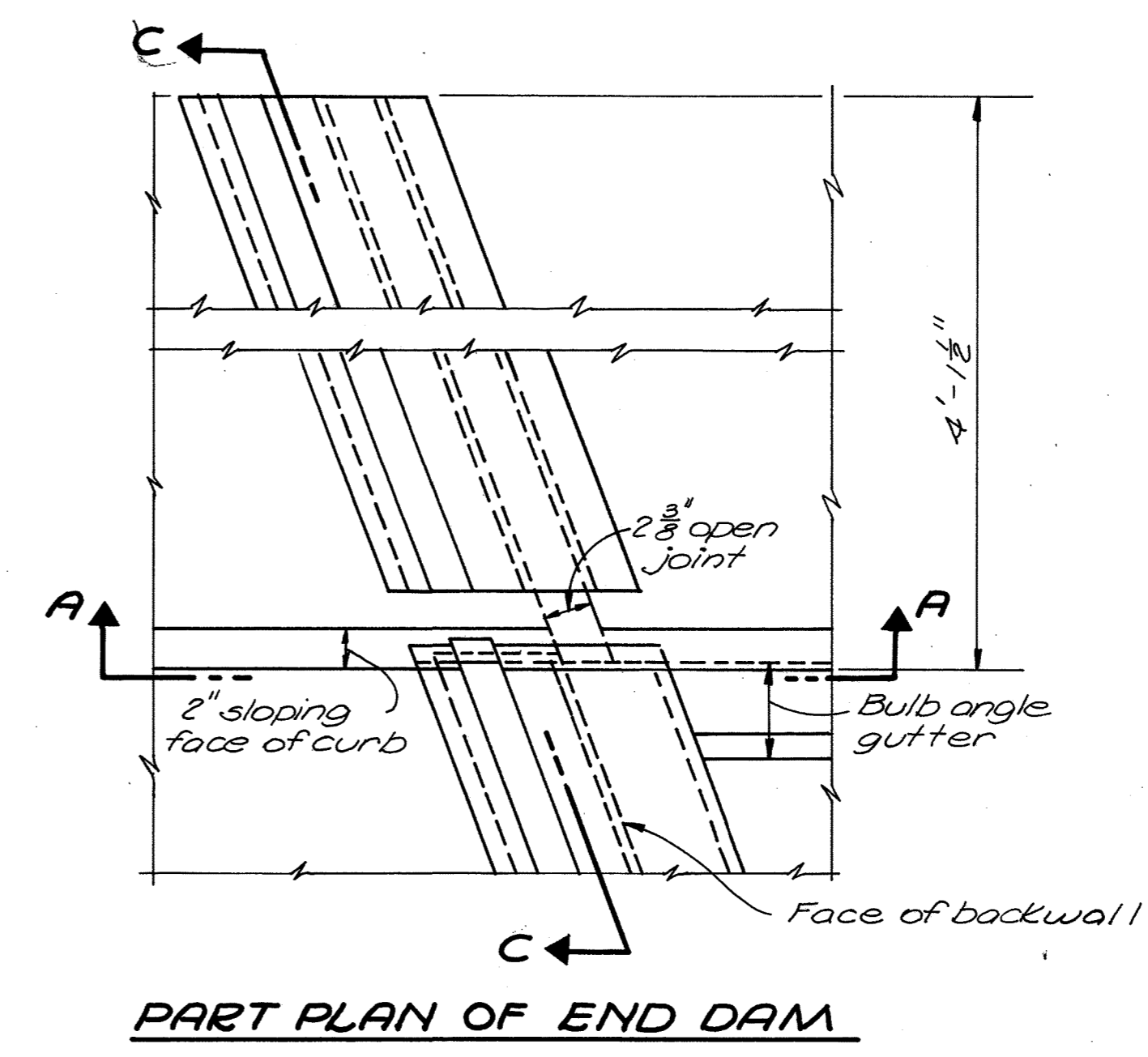
RICHLAND COUNTY S.R. 13
STA 721 + 97.29

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	GP	WCK	BFG	3-30-61	

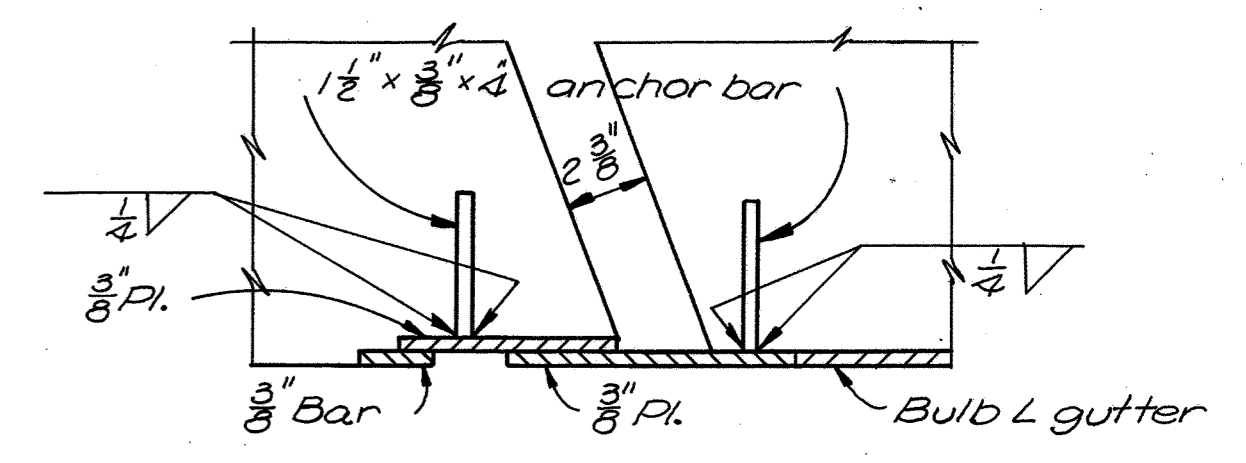
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OCT 5 1985



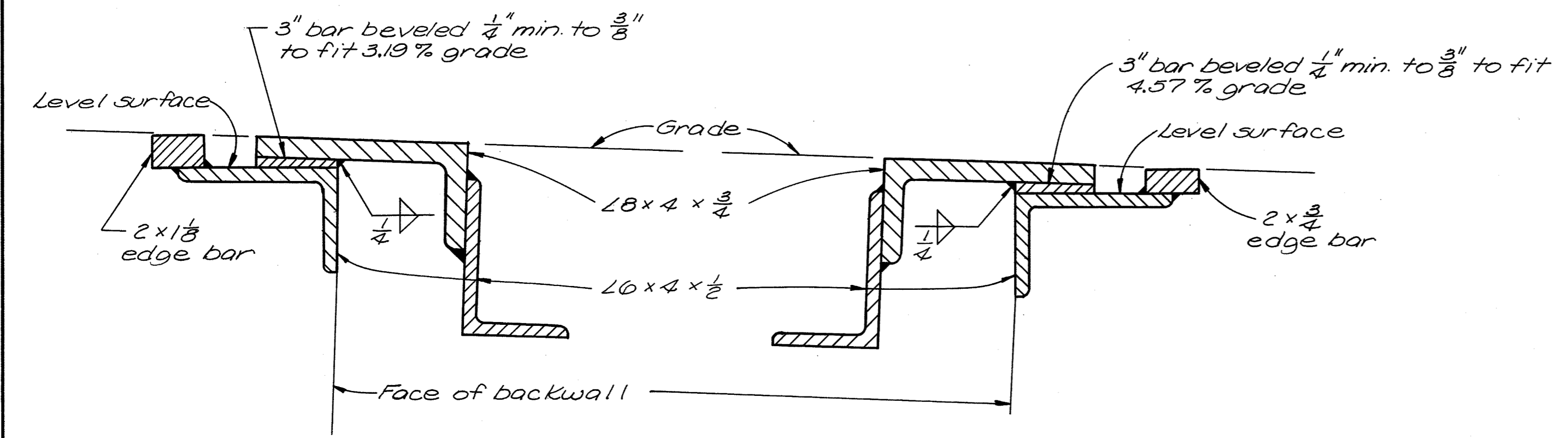
PLAN OF DECK SHOWING PLACING OF TRANSVERSE REINFORCING STEEL



PART PLAN OF END DAM



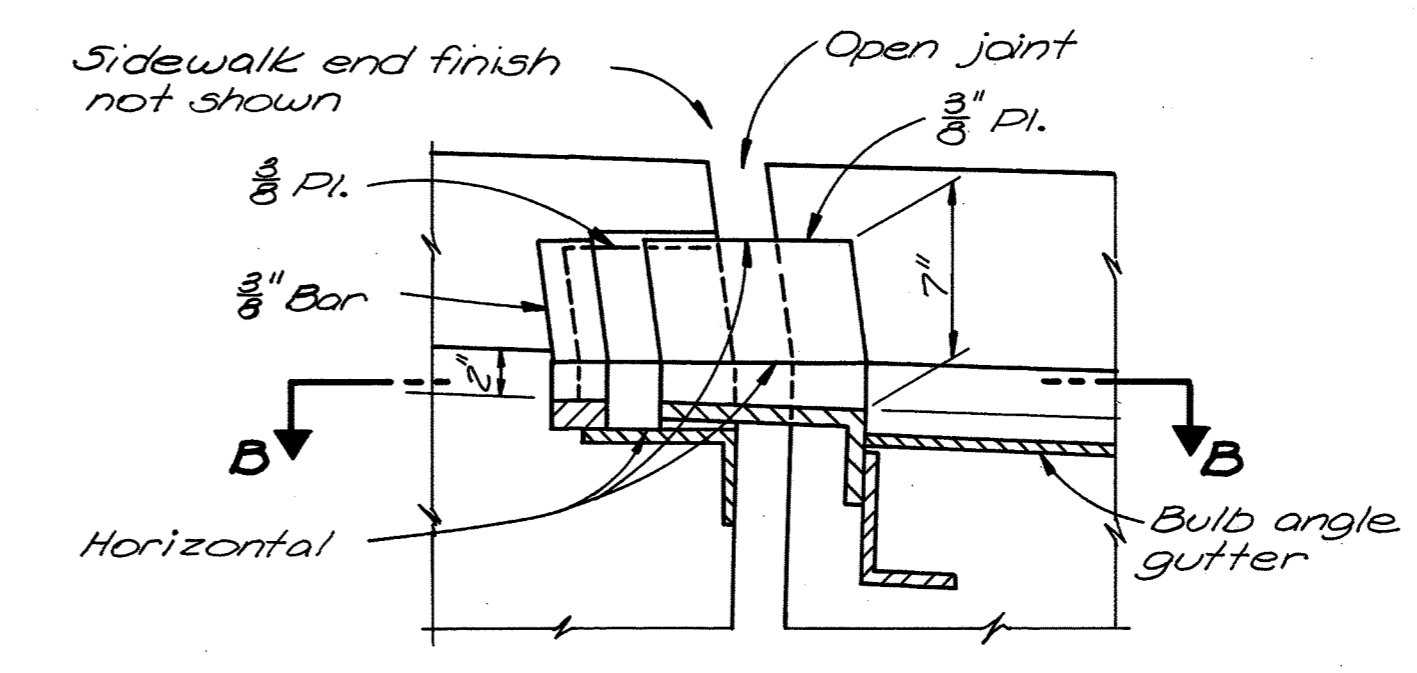
SECTION B-B



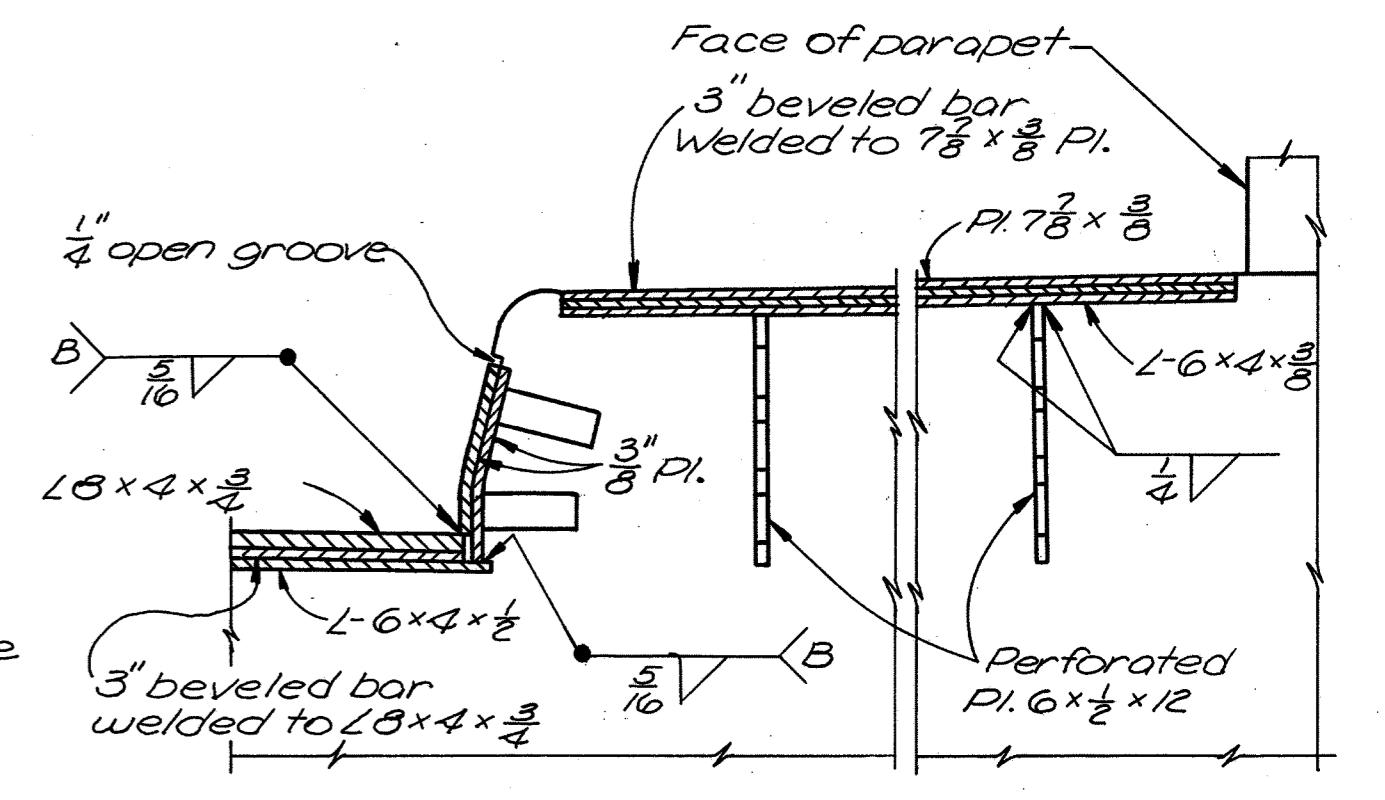
REAR ABUTMENT

FORWARD ABUTMENT

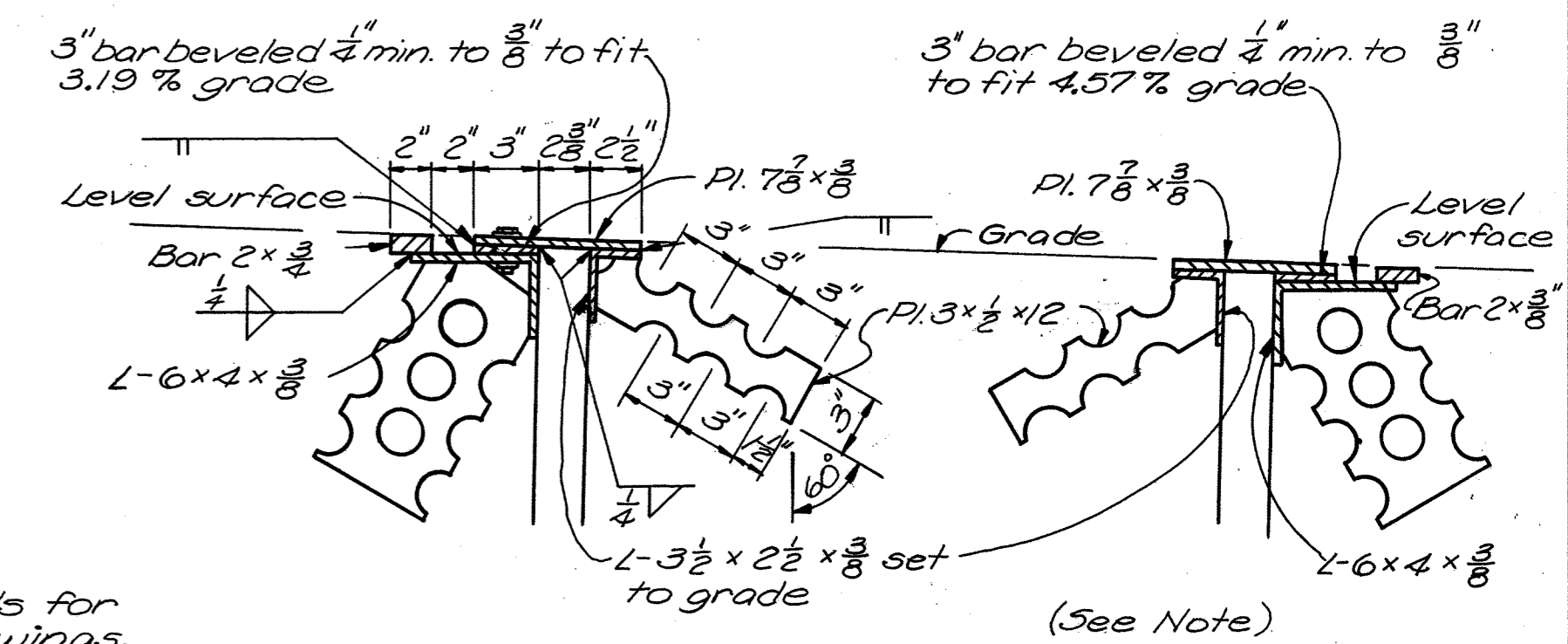
END DAM



SECTION A-A



SECTION C-C



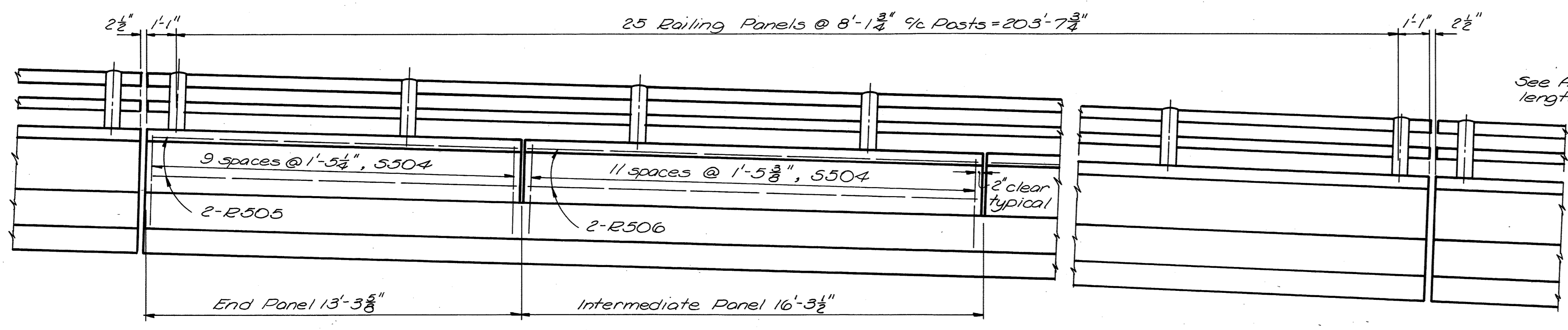
REAR ABUTMENT

FORWARD ABUTMENT

SIDEWALK END FINISH

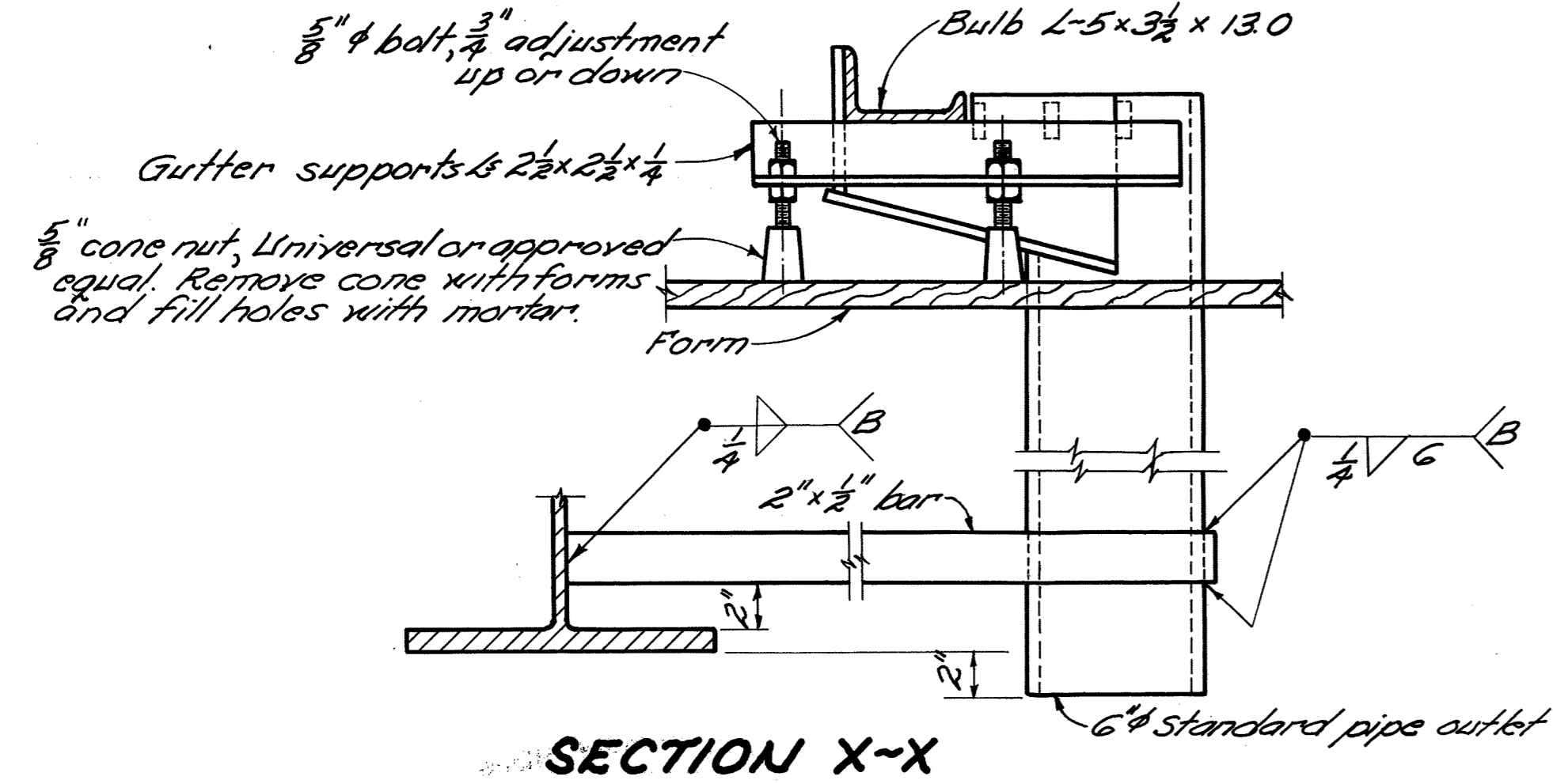
NOTE
For details and notes not shown see SECTION C-C on sheet no. 2 of Standard Drawing C5B-2-56.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. RIC-13-1369 UNDER COOK ROAD					
RICHLAND COUNTY S.R. 13 STA. 721+9729					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
EBL	EBL	M.K.H.	W.C.K.	BFG	3-30-61

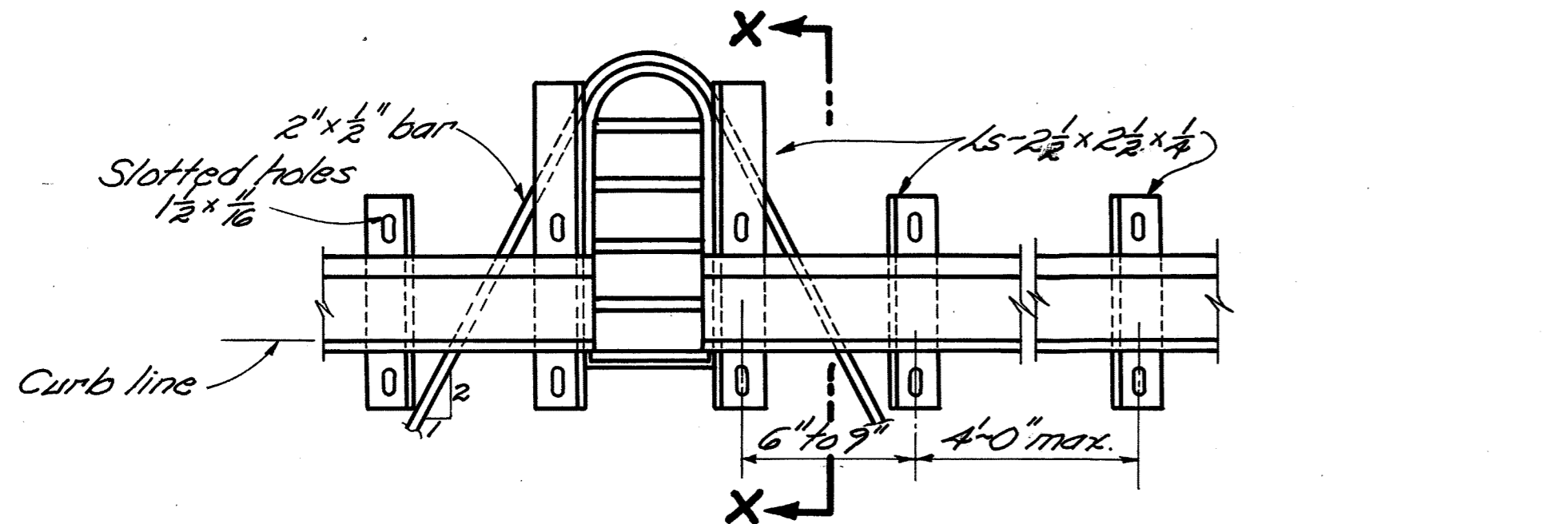


PARAPET AND FASCIA ELEVATION

See Abutment Details for lengths of railing on wings.



SECTION X-X



PART PLAN
GUTTER & SCUPPER DETAILS

NOTES

REFERENCE shall be made to Standard Drawing AR-1-57 for railing and Type C post details, RB-7-55 for rocker and bolster details, and CSB-2-56 sheets 2 & 3 for superstructure details not shown.

DECK SLAB DEPTH: The distance from top of deck slab to top of steel beam (as shown on Half Transverse Section Sheet 172) is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

WELDING shall be Class "A" except as shown. Any welds shown as field welds may, at the option of the contractor, be made in the shop. Class "B" welds are shown thus: B.

DECK PLACING PROCEDURE: In placing the deck concrete, construction joints will be permitted, parallel to the transverse reinforcing steel and near the middle of any span. Because of the flow of curing water from the surface of previously placed deck concrete, the sequence of pours shall be upwards, starting at the forward abutment.

CONCRETE shall be Class "C".

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHA.	NO.	MARK	REAR	FRONT	LENGTH	WEIGHT	SHA.	NO.
PIERS												
P1001	6	24'-5"	630	B								
P1002	12	24'-2"	1248	B								
P1003	12	23'-7"	1218	B								
P1004	40	21'-0"	3615	S								
P1005	40	19'-0"	3270	S								
P1006	40	17'-1"	2940	S								
P1007	120	6'-4"	3270	B								
P1008	18	11'-9"	2427	S								
P901	24	27'-0"	2203	S								
P801	15	14'-6"	581	S								
P701	30	14'-8"	899	S								
P702	12	7'-8"	188	B								
P601	18	17'-4"	469	S								
P602	18	29'-5"	795	S								
P603	23	7'-0"	978	B								
P604	48	5'-8"	409	S								
P501	126	7'-3"	953	B								
P502	6	6'-8"	42	B								
P503	12	19'-4"	242	S								
SPIRAL REINFORCEMENT												
MARK	NO.	LENGTH	PITCH	NO. TURNS	WEIGHT							
SPA01	32"	4	17'-10"	4 1/2"	51	1320						
SPA02	32"	4	15'-10"	4 1/2"	45	1163						
SPA03	32"	4	13'-11"	4 1/2"	40	1032						
SUPERSTRUCTURE												
SG01	552	27'-4"										
SG02	78	24'-0"										
SG03	690	21'-0"										
SG04	2 SERIES OF 7	11'-2" to 20'-2"			329	S	Varies by increments of 1'-6"					
SG05	2 SERIES OF 17	4'-10" to 28'-10"			860	S	Varies by increments of 1'-6"					
SS01	690	20'-10"			14,993	S						
SS02	274	5'-5"			1548	B						
SS03	1096	1'-10"			2096	B						
SS04	304	4'-11"			1559	B						
SS05	2 SERIES OF 17	4'-10" to 28'-10"			597	S	Varies by increments of 1'-6"					
SS06	2 SERIES OF 7	11'-0" to 20'-0"			226	S	Varies by increments of 1'-6"					
SS07	12	4'-3"			53	S						
ABUTMENTS												
AG01	21	21	7'-7"		605	B	42					
AG02	33	-	15'-6"		768	B	33					
AG03	-	33	15'-2"		752	B	33					
AG04	8	12	8'-2"		245	B	20					
AG05	3	-	11'-3"		51	S	3					
AG06	5	-	11'-8"		88	S	5					
AG07	9	-	14'-9"		199	B	9					
AG08	-	9	14'-7"		197	B	9					
AG09	-	6	10'-10"		98	S	6					
AG10	-	6	10'-3"		92	S	6					
AS01	8	8	23'-1"		385	S	16					
AS02	24	24	22'-0"		1101	S	48					
AS03	1	1	31'-8"		66	S	2					
RAILING												
RS01	4	13'-2"				S						
RS02	4	14'-11"				S						
RS03	4	14'-4"				S						
RS04	4	13'-5"				S						
RS05	16	13'-0"				S						
RS06	88	16'-0"				S						
RS07	8	7'-5"				B						
RS08	8	3'-8"				S						
REPLACEMENT BARS												
REU01		7'-2"				S						
REP01		6'-10"				S						
REB01		6'-6"				S						
RET01		6'-2"				S						
REP01		5'-11"				S						
REB01		5'-7"				S						
RET01		5'-3"				S						
ABUTMENTS - Cont.												
AS04	42	-	5'-8"		248	S	42					
AS05	-	42	5'-4"		234	S	42					
AS06	21	21	4'-5"		193	B	42					
AS07	7	-	10'-10"		79	S	7					
AS08	4	-	8'-7"		36	S	4					
AS09	4	-	4'-1"		17	S	4					
AS10	2	-	9'-0"		19	S	2					
AS11	3	3	4'-8"		29	S	6					
AS12	3	-	15'-5"		48	S	3					
AS13	6	6	3'-6"		44	S	12					
AS14	13	13	4'-11"		133	B	26					
AS15	20	20	3'-0"		125	B	40					
AS16	20	20	10'-4"		431	B	40					
AS17	3	-	10'-11"		34	S	3					
AS18	4	-	13'-3"		55	S	4					
AS19	4	-	11'-10"		49	S	4					
AS20	9	-	11'-4"		106	S	9					
AS21	4	-	9'-10"		41	S	4					
AS22	4	-	5'-10"		24	S	4					
AS23	1	-	9'-6"		10	S	1					
AS24	3	-	16'-10"		53	S	3					
AS25	6	-	11'-1"		69	S	6					
AS26	8	-	6'-7"		61	B	16					
AS27	20	16	3'-1"		116	S	36					
AS28	24	30	6'-3"		352	B	54					
AS29	3	-	13'-0"		41	S	3					
AS30	4	-	15'-0"		63	S	4					
AS31	4	-	16'-6"		69	S	4					
AS32	9	9	6'-4"		119	B	18					
AS33	9	9	8'-5"		158	B	18					
AS34	-	3	17'-0"		53	S	3					
AS35	-	2	9'-4"		19	S	2					
AS36	-	4	11'-6"		48	S	4					
AS37	-	4	7'-0"		29	S	4					
AS38	-	6	14'-0"		88	S	6					
AS39	-	4	14'-5"		60	S	4					
AS40	-	4	12'-11"		54	S	4					
AS41	-	10	10'-8"		111	S	10					
AS42	-	8	5'-3"		44	B	8					
AS43	-	3	12'-6"		39	S	3					
AS44	-	9	10'-1"		95	S	9					
AS45	-	3	15'-9"		49	S	3					
AS46	-	1	8'-8"		9	S	1					
AS47	-	4	10'-4"		43	S	4					
AS48	-	4	6'-5"		27	S	4					
AS49	-	4	13'-6"		56	S	4					
AS50	-	4	15'-1"		63	S	4					
AS51	-	3	12'-0"		38	S	3					
AS52	-	6	13'-1"		82	S	6					
AS53	-	6	12'-7"		79	S	6					
AS54	-	4	8'-1"		68	B	8					
AS55	-	2	5'-5"		23	B	4					

BAR SIZE is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used indicate the bar size number. For example AG01 is a No. 6 size bar and P1001 is a No. 10 size.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of turns" shown is the "Length" divided by the pitch, plus 3 turns. (Total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-7. 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

RIC-13-(10.83-13.95)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS
REINFORCING STEEL LIST
BRIDGE NO. RIC-13-1369
UNDER COOK ROAD
RICHLAND COUNTY S.R. 13
STA. 721 + 97.29

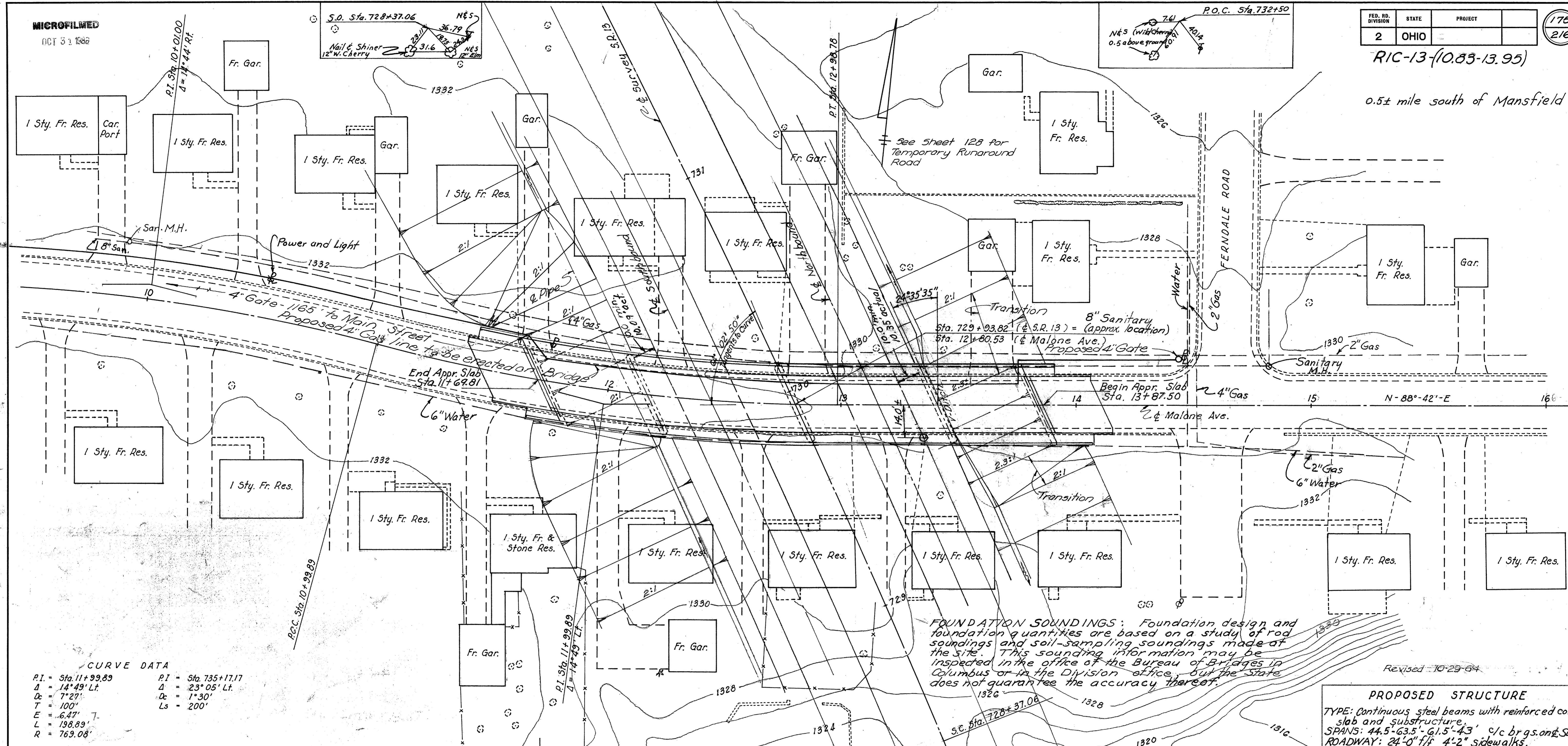
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EBL	EBL	McGowan	WCK	BFG	3-30-61	8-14-64

MICROFILMED
OCT 31 1982

FED. RD. DIVISION	STATE	PROJECT	(175) 216
2	OHIO		

RIC-13-(10.83-13.95)

0.5± mile south of Mansfield



CURVE DATA

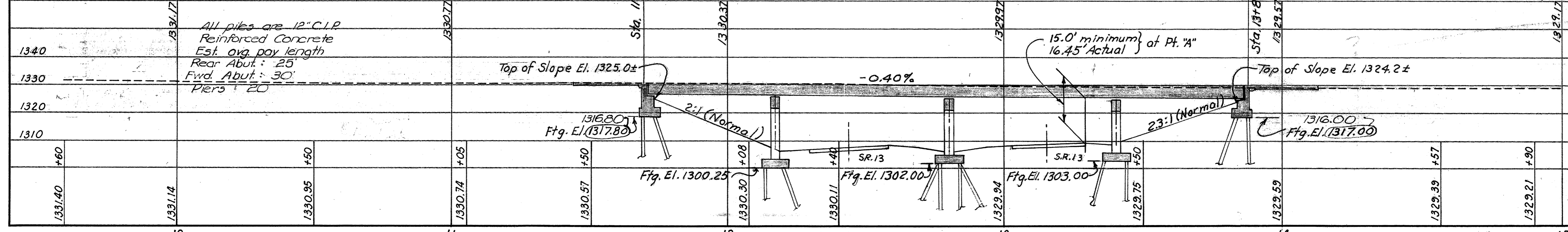
P.I. = Sta. 11+99.89	P.I. = Sta. 735+17.17
A = 14°49' Lt.	A = 23°05' Lt.
Dc = 7°27'	Dc = 1°30'
T = 100'	Ls = 200'
E = 6.47'	
L = 198.89'	
R = 769.08'	

B.M. Spike in E. side T. Pole
135' Lt. Sta. 728+84
Elev. 1329.445

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

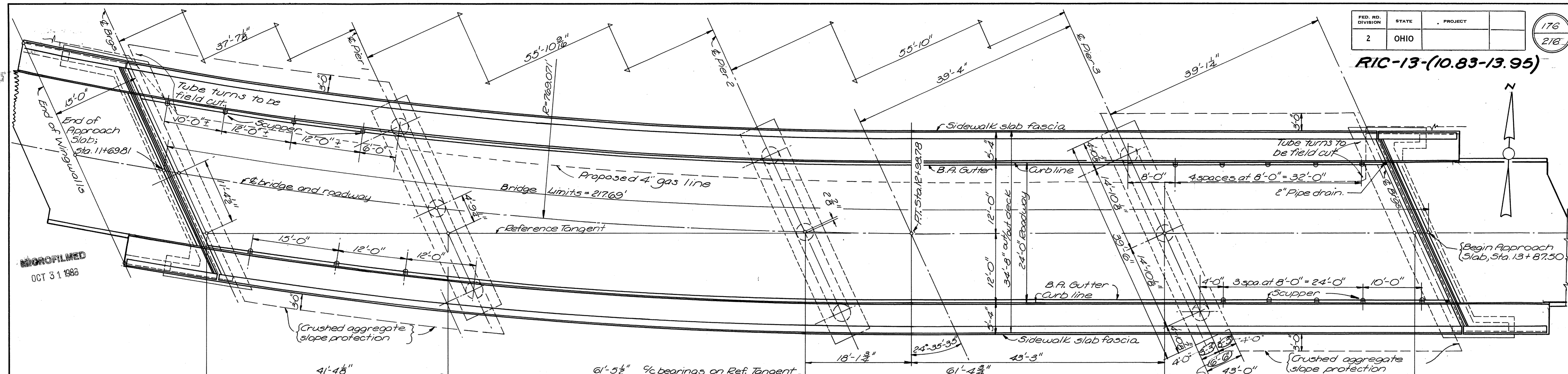
Revised 10-29-64

PROPOSED STRUCTURE
TYPE: Continuous steel beams with reinforced conc. slab and substructure.
SPANS: 44.5'-63.5' - 61.5'-43' c/c brgs. on g. Survey
ROADWAY: 24'-0" f/f 4'-2" sidewalks.
LOAD FREQUENCY: CF = 130(57)
SKEW: 24°35'-35" RF with tangent.
WEARING SURFACE: 3/4" monolithic concrete.
APPROACH SLABS: A.S.-1-54 (25' long)
ALIGNMENT: 7°27' curve left to tangent.
SUPERELEVATION: None



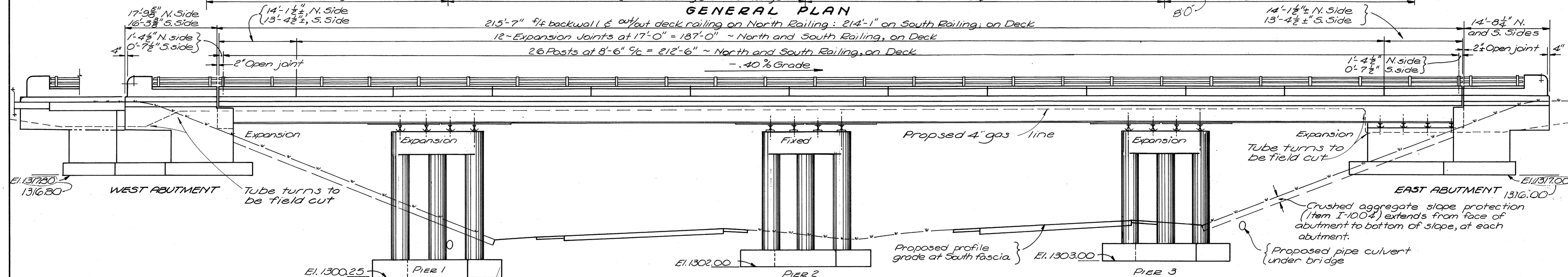
STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES			
SITE PLAN			
BRIDGE NO.	RIC-13-1384	STA.	729+93.82
UNDER MALONE AVE.		SCALE 1"=20' (Sta. 12+80.53 & Malone Ave.)	
RICHLAND CO.	S.R.-13	PRESENT TOPOGRAPHY	PROPOSED WORK
DESIGNED	D.H.S.	DRAWN	D.H.S.
CHECKED	B.D.H.	REVIEWED	C.E.S.

RIC-13-(10.83-13.95)



MICROFILMED
OCT 31 1983

GENERAL PLAN



GENERAL ELEVATION

Refer to sheet 279A for additional ESTIMATED QUANTITIES & additional REINF. STEEL LIST required by the addition of piles.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings RB-1-55, revised 2-2-59, AR-1-57 revised 4-2-62, and C5B-2-56, sheet 2 and 3 of 6 sheets, revised 2-2-59, SD-1-63 sht. 1 dated 11-2-63, and Supplemental Specs. 5-101 of 7-12-63 and 5-307 of 8-23-60.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.5 tons per sq. ft. and abutment footings for a maximum bearing pressure of 2.0 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the piers, and 30 tons for the abutments.

WELDING OF STRUCTURAL STEEL: All welds shall be Class "A" except as shown. Class "B" welds are shown thus . Any weld indicated on the plans as a field weld may, at the option of the contractor, be made in the shop.

UTILITY LINES: All labor and expense involved in relocating and/or installing the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

Reinforcing Steel - ASTM A15, A16, A160, Deformed Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

Design Loading - CF 130 (57)

Concrete Class "C" - basic unit stress 1,333 p.s.i.
Concrete Class "E" - basic unit stress 1,133 p.s.i.

Structural Steel - ASTM A36 - basic unit stress 20,000 psi (ASTM A7 and A373 not permitted)

ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Abuts	Piers	Deck	General
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump
E-2	500	Cu. Yds.	Unclassified excavation	280	220		
5-1	265	Cu. Yds.	Class "C" concrete, superstructure			265	
5-1	85	Cu. Yds.	Class "C" concrete, pier caps and columns		85		
5-1	86	Cu. Yds.	Class "E" concrete, pier footings		86		
5-1	180	Cu. Yds.	Class "E" concrete abutments	180			
5-4	22,865	lbs.	Reinforcing steel	2,457	22,865	56,929	22,562
5-7	168,000	lbs.	Structural Steel			168,000	
5-8	168,000	lbs.	Field painting of structural steel			168,000	
5-14	491.80	lin. ft.	Railing (aluminum railing and supports, concrete parapet and end posts.), Type "C"	62.13		429.67	
5-29	27	Cu. Yds.	Porous backfill	27			
5-29	17	each	Scuppers, including supports			17	
I-10	430	Sq. Yds.	Crushed aggregate slope protection				430
5-101	265	each	Water reducing, Set-retarding admixture			265	

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

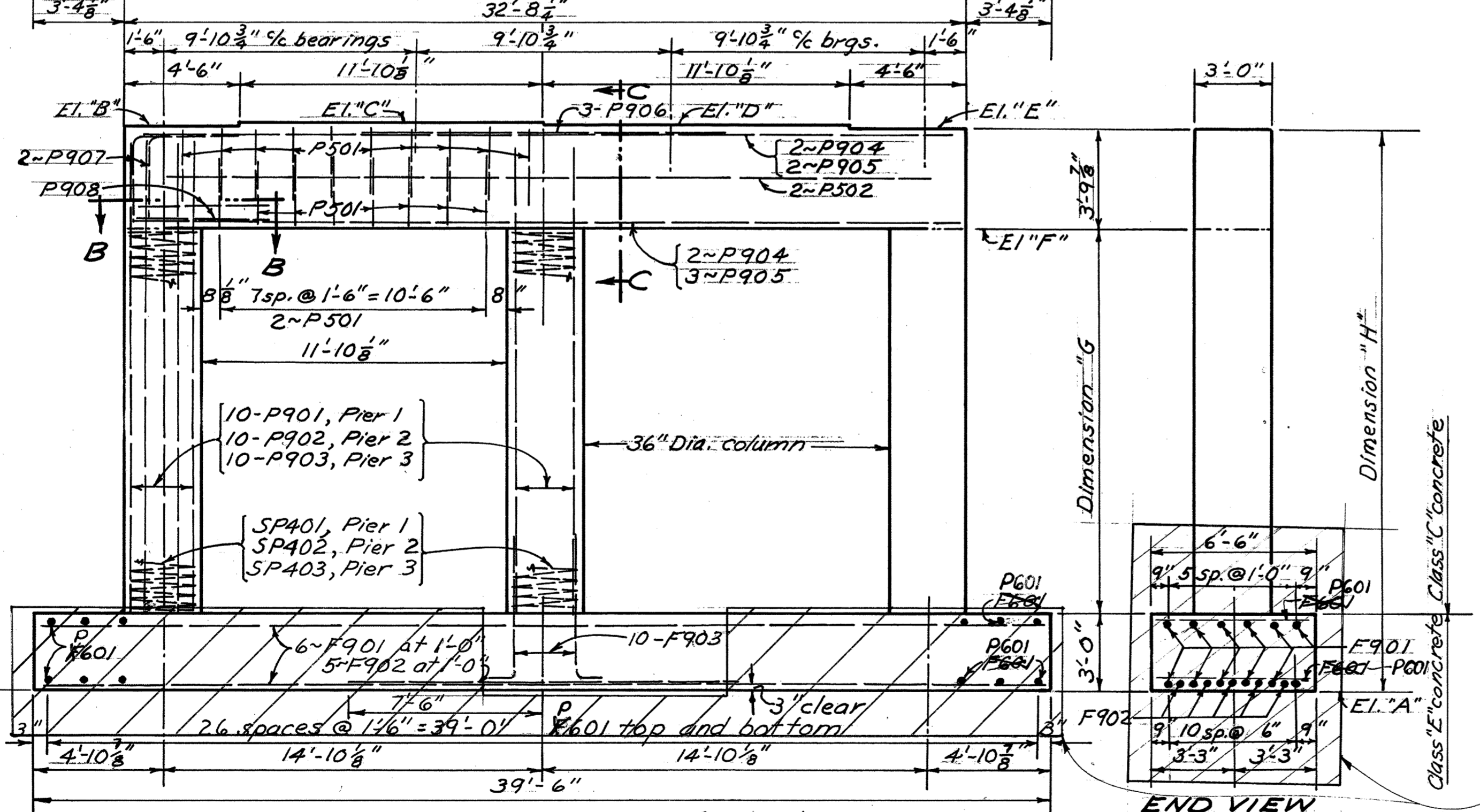
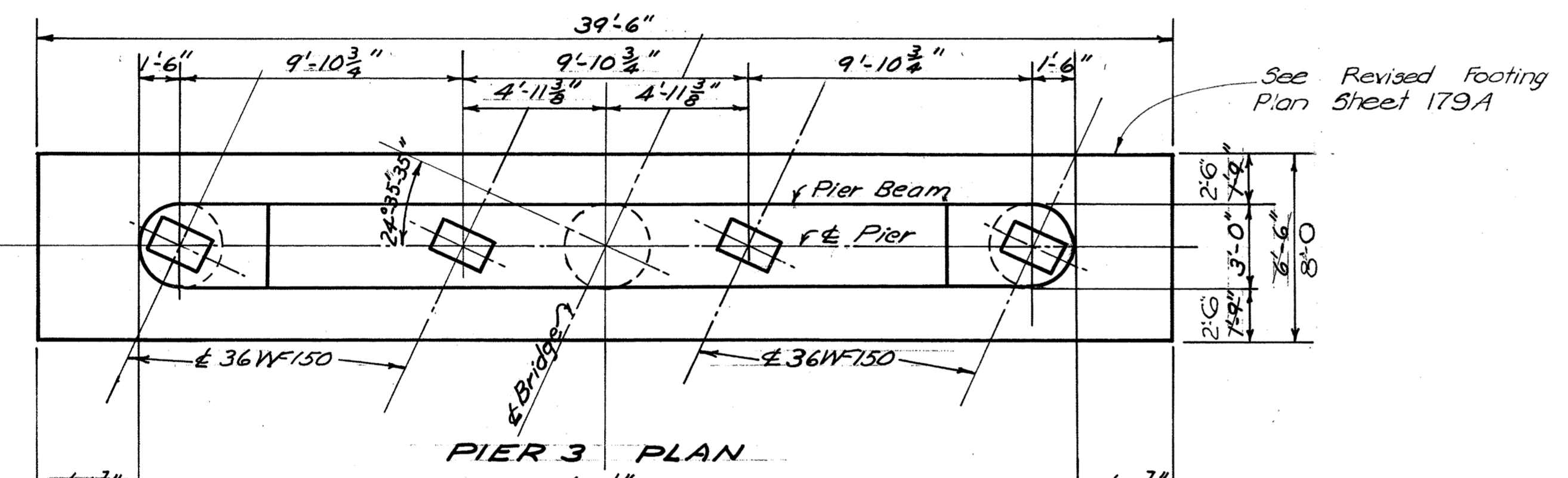
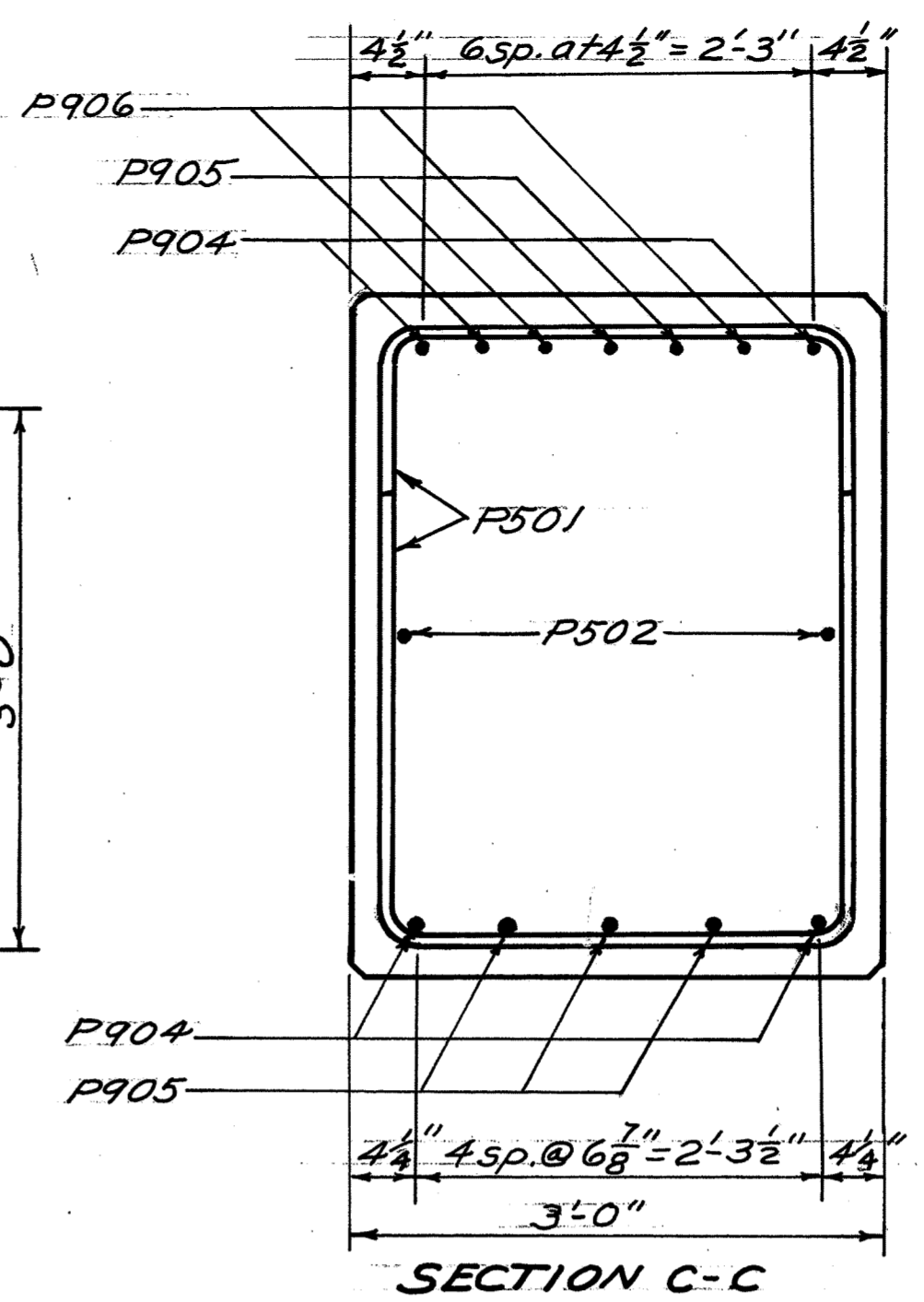
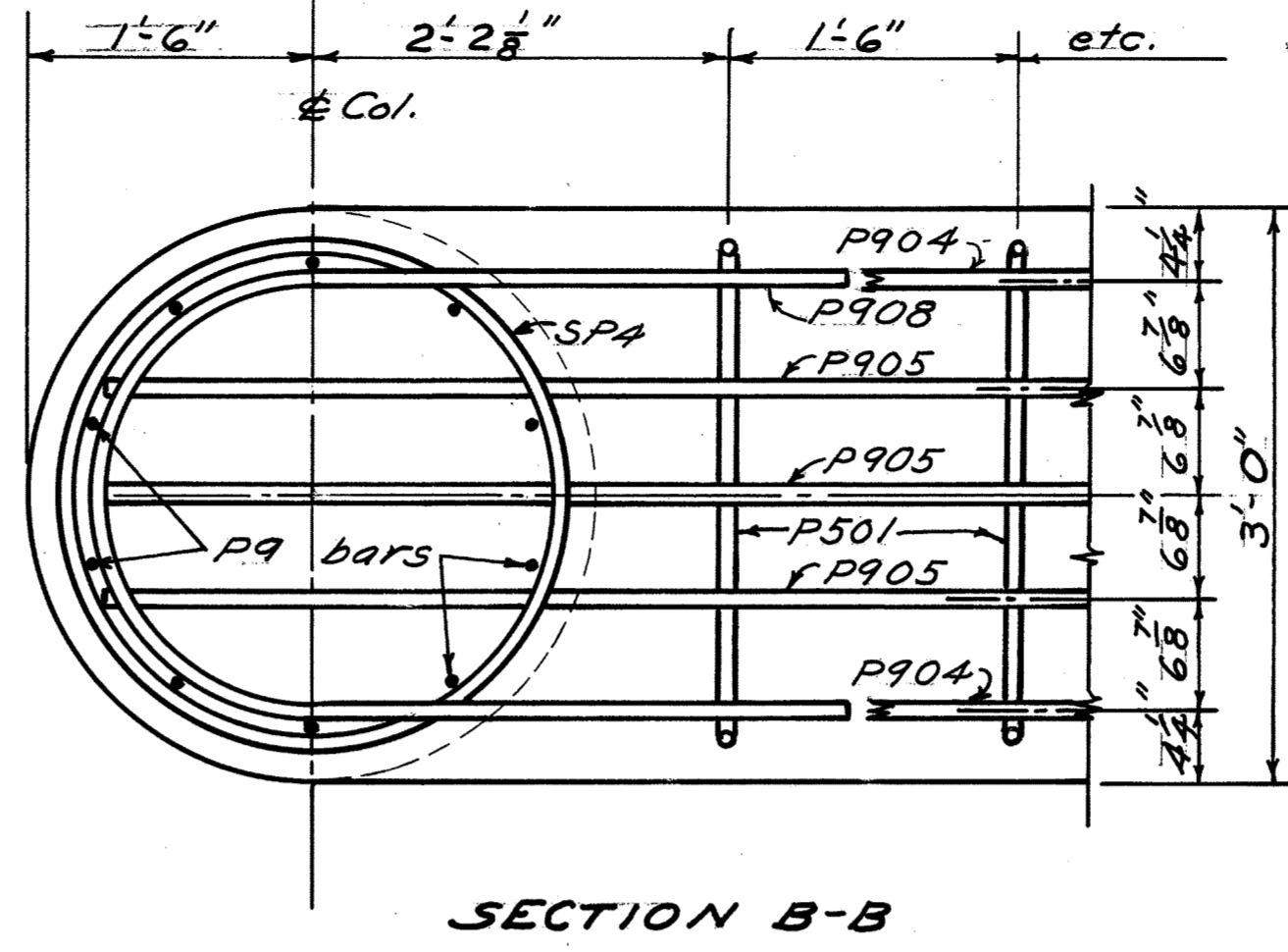
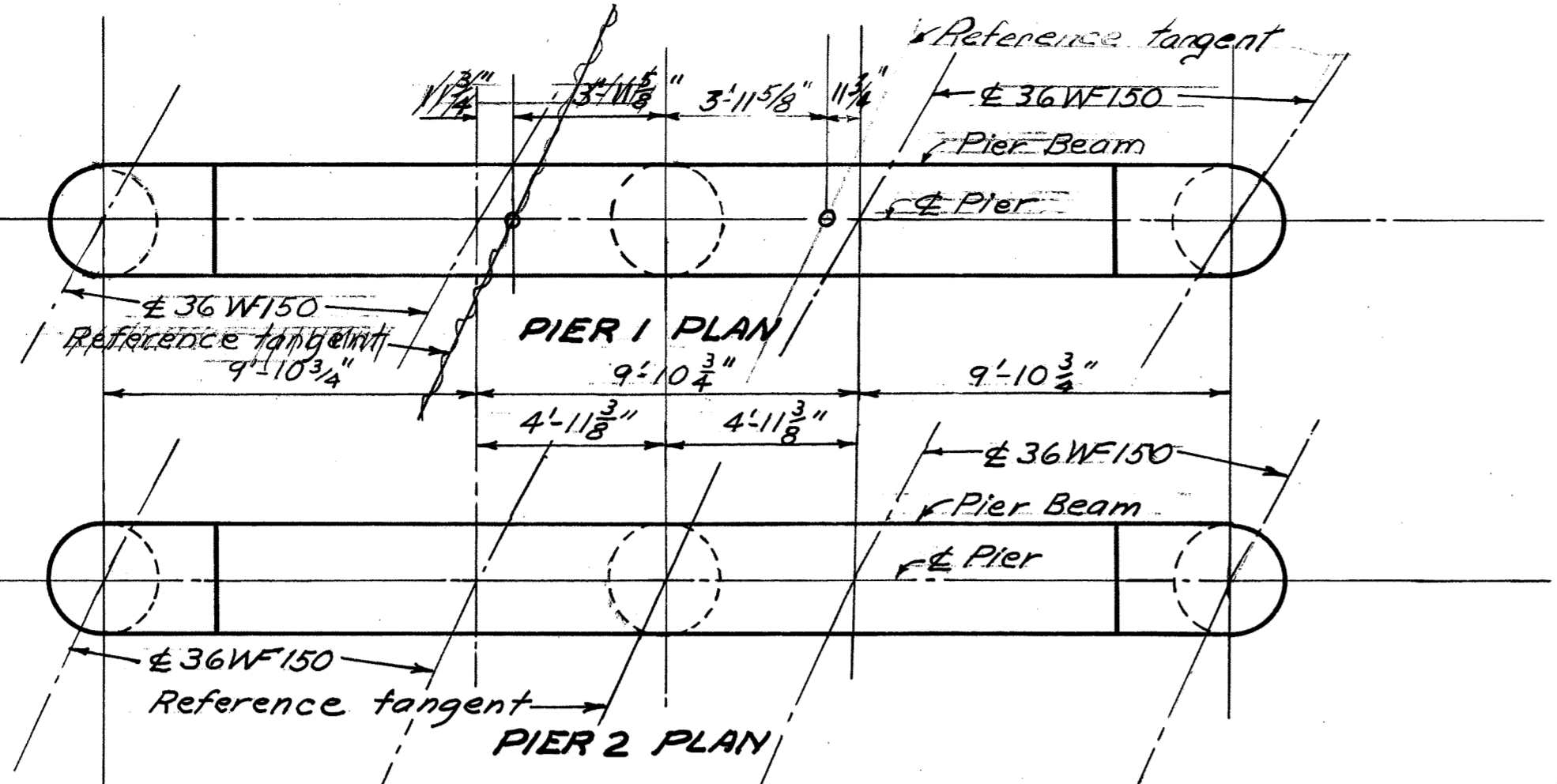
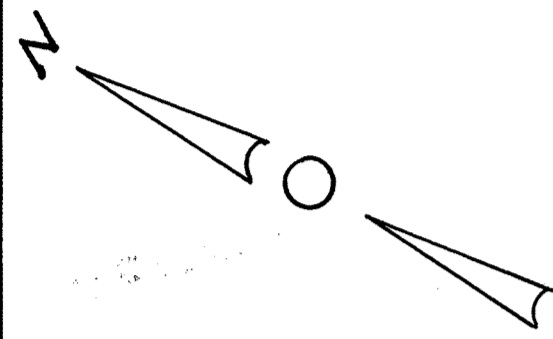
**GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES**

BRIDGE No. RIC-13-1384
under MALONE AVE.

Richland Co. (Sta. 12+80.53 & Malone Ave.)
Sta. 729+93.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KED	KED	M.K.H.	J.M.	BFG	8-14-64	8-14-64
					3-31-61	029-64

RIC-13-(10.83-13.95)



END VIEW

See Revisions sheet 179A

	PIER DATA						DIMEN. "G"	DIMEN. "H"	"P9" COL. BARS	"SP4" COL. BARS
	EL. "A"	EL. "B"	EL. "C"	EL. "D"	EL. "E"	EL. "F"				
Pier 1	1300.25	1325.13	1325.25	1325.23	1325.07	1321.25	18'-0"	24'-9 ⁷ / ₈ "	P901	SP401
Pier 2	1302.00	1324.88	1325.00	1324.98	1324.82	1321.00	16'-0"	22'-9 ⁷ / ₈ "	P902	SP402
Pier 3	1303.00	1324.63	1324.75	1324.73	1324.57	1320.75	14'-9"	21'-6 ⁷ / ₈ "	P903	SP403

Note: Care should be taken in placing the cap reinforcing steel in pier No. 2 to avoid interference with the anchor bolts.

Revised 10-29-64

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIERS

BRIDGE NO. RIC-13-1384
UNDER MALONE AVE.
RICHLAND Co. Sta. 729+93.82
(Sta. 12+80.53 & MALONE AVE.)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KED	RED	M.L.D.	J.M.	BFG	7-13-66	8-14-64

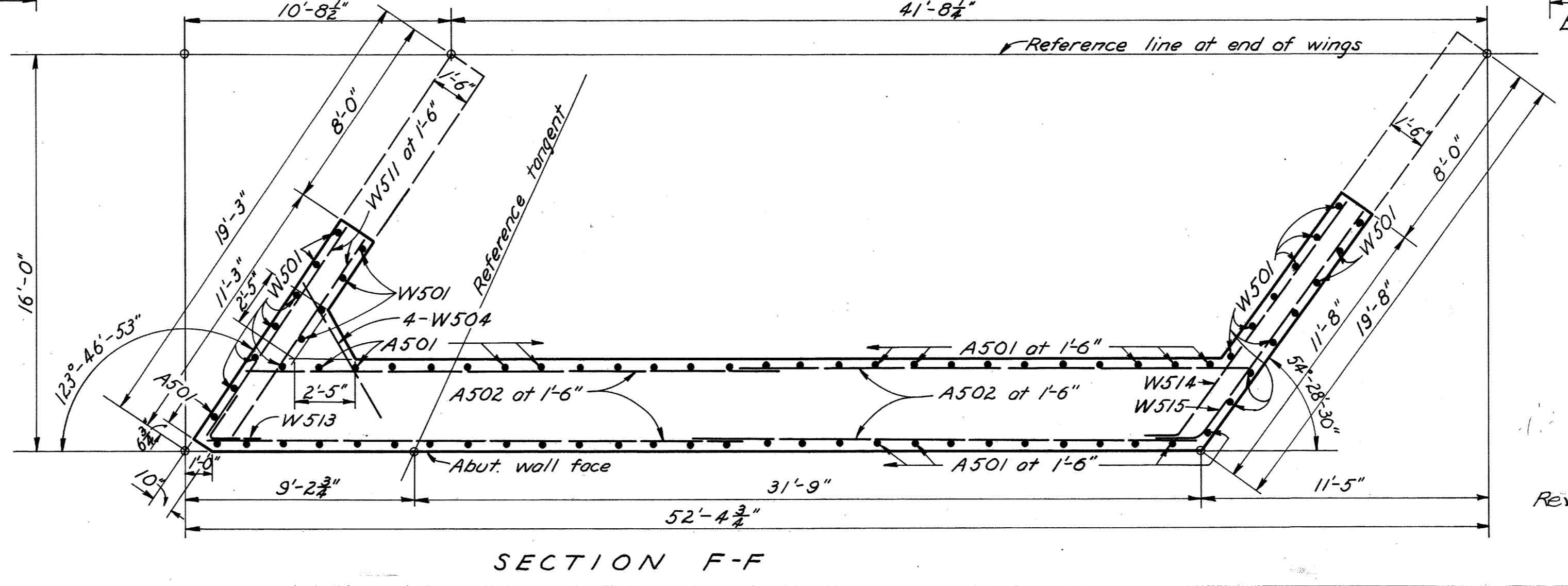
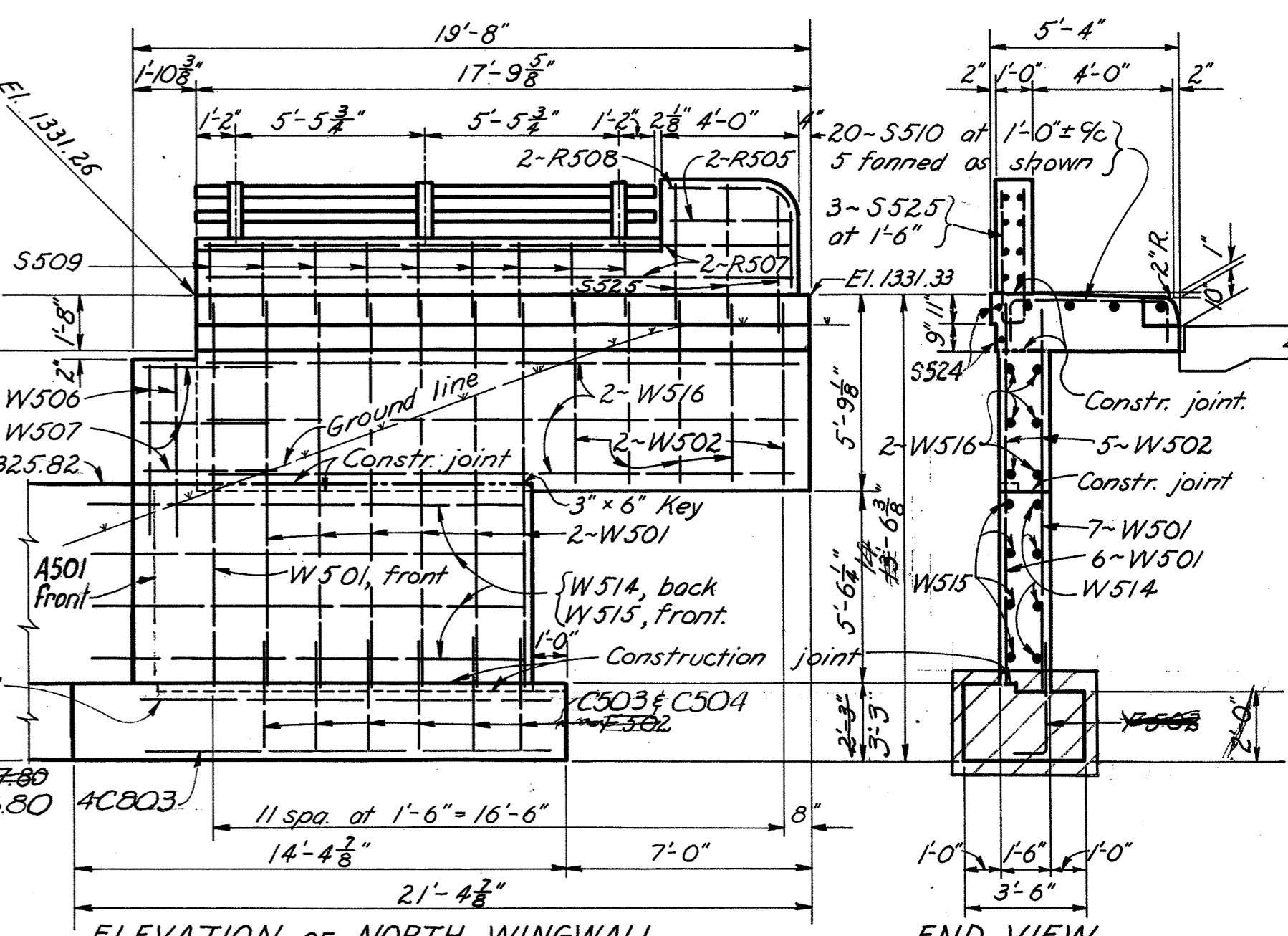
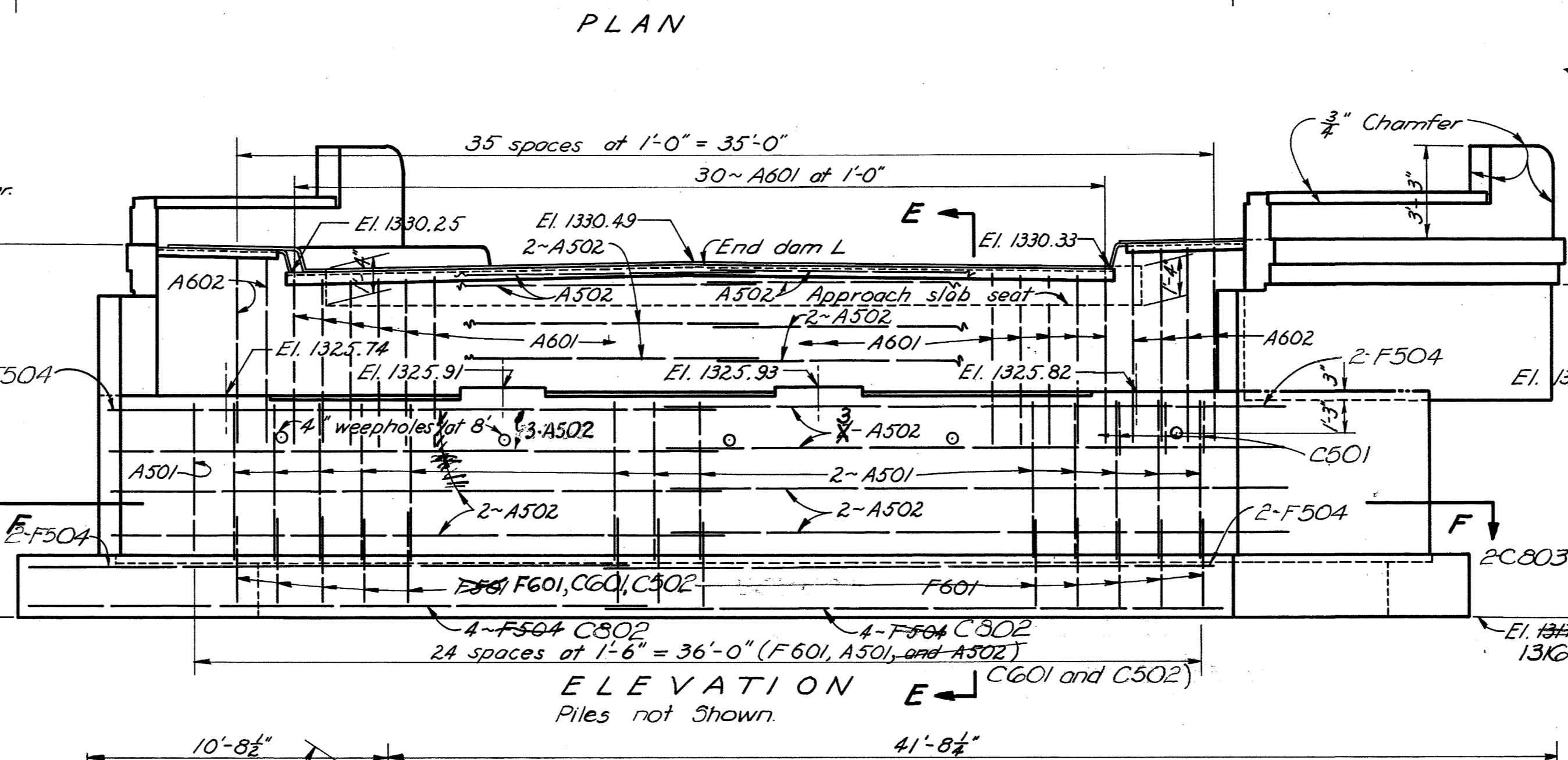
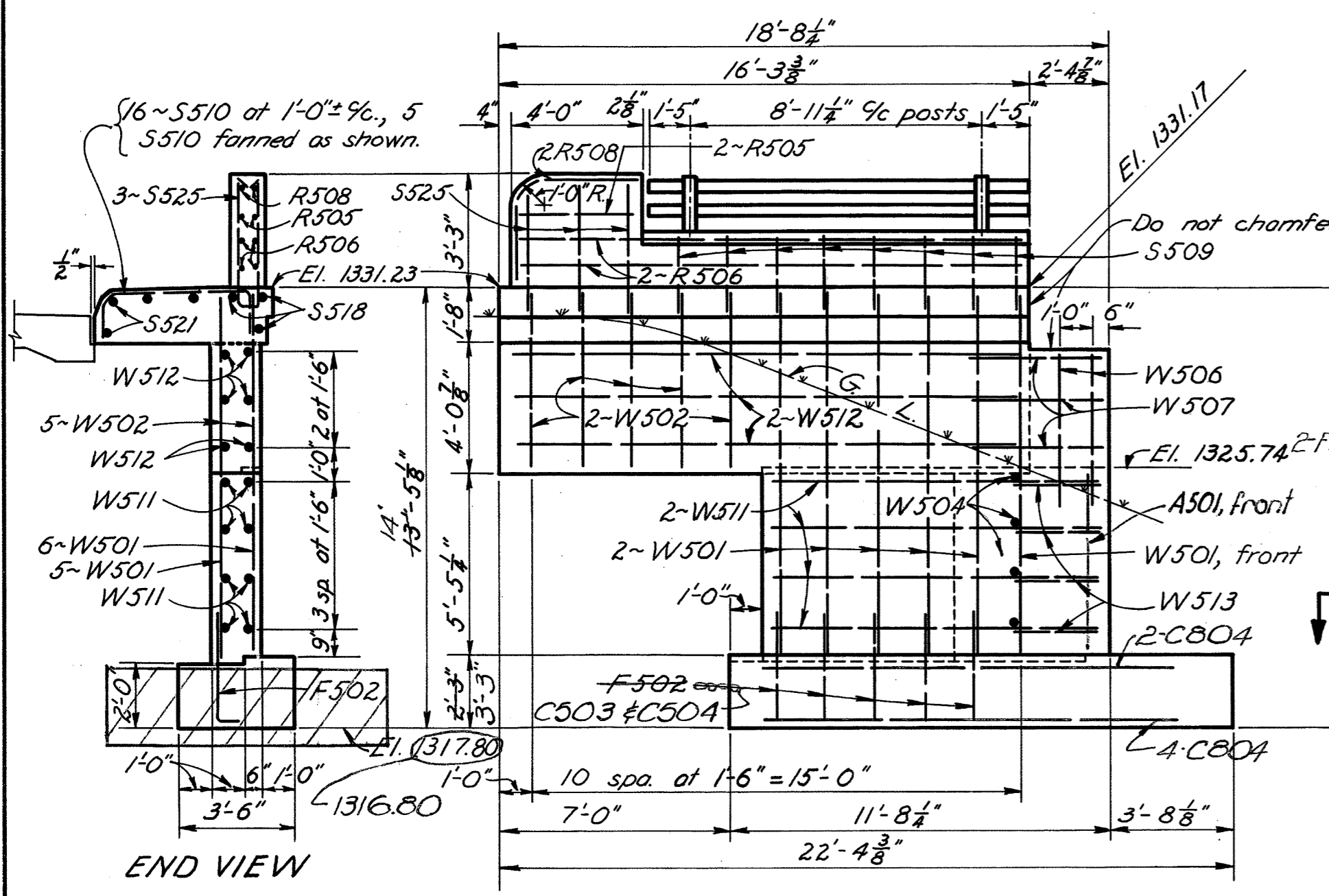
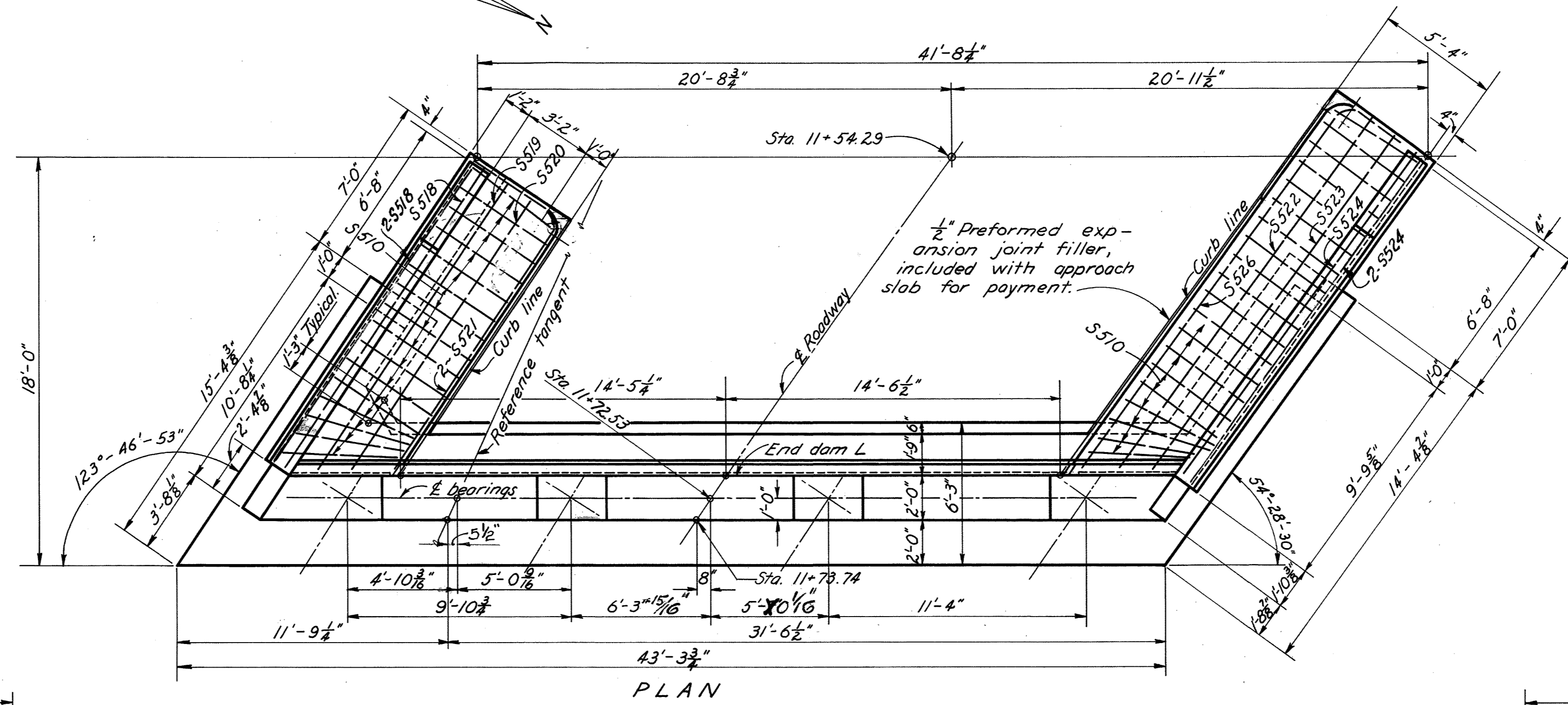
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FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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216

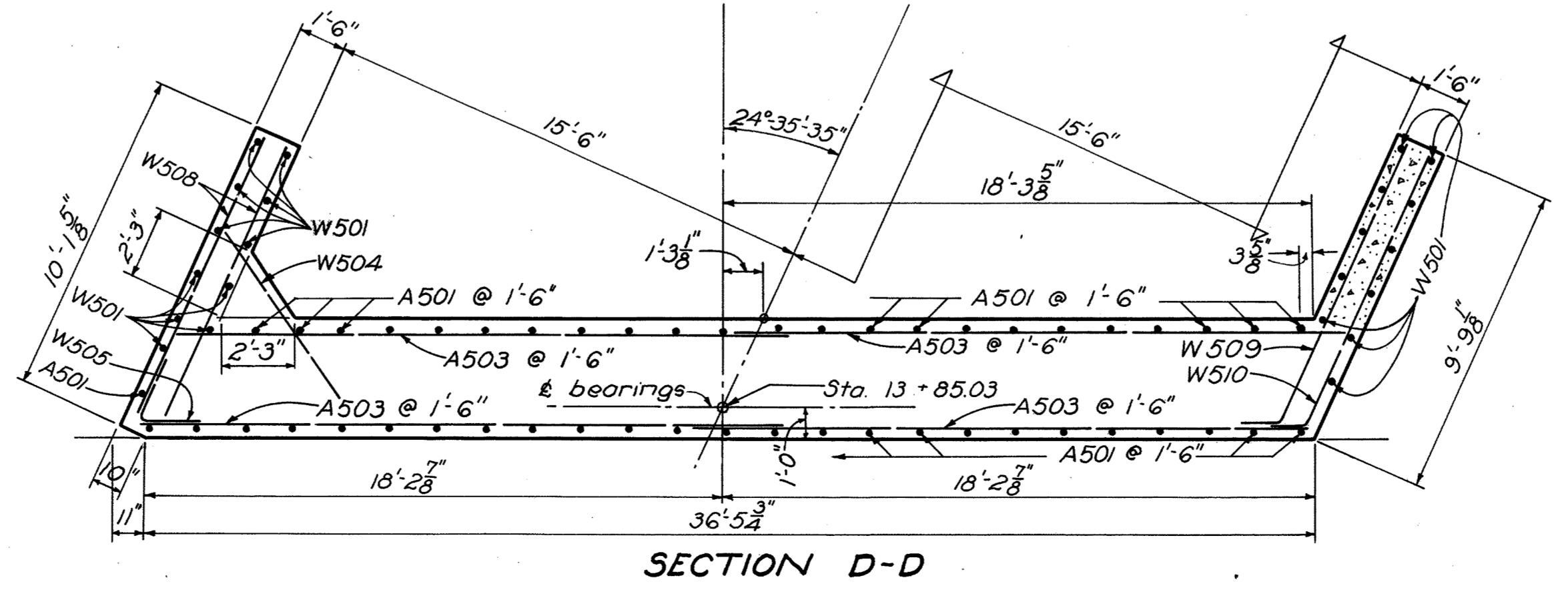
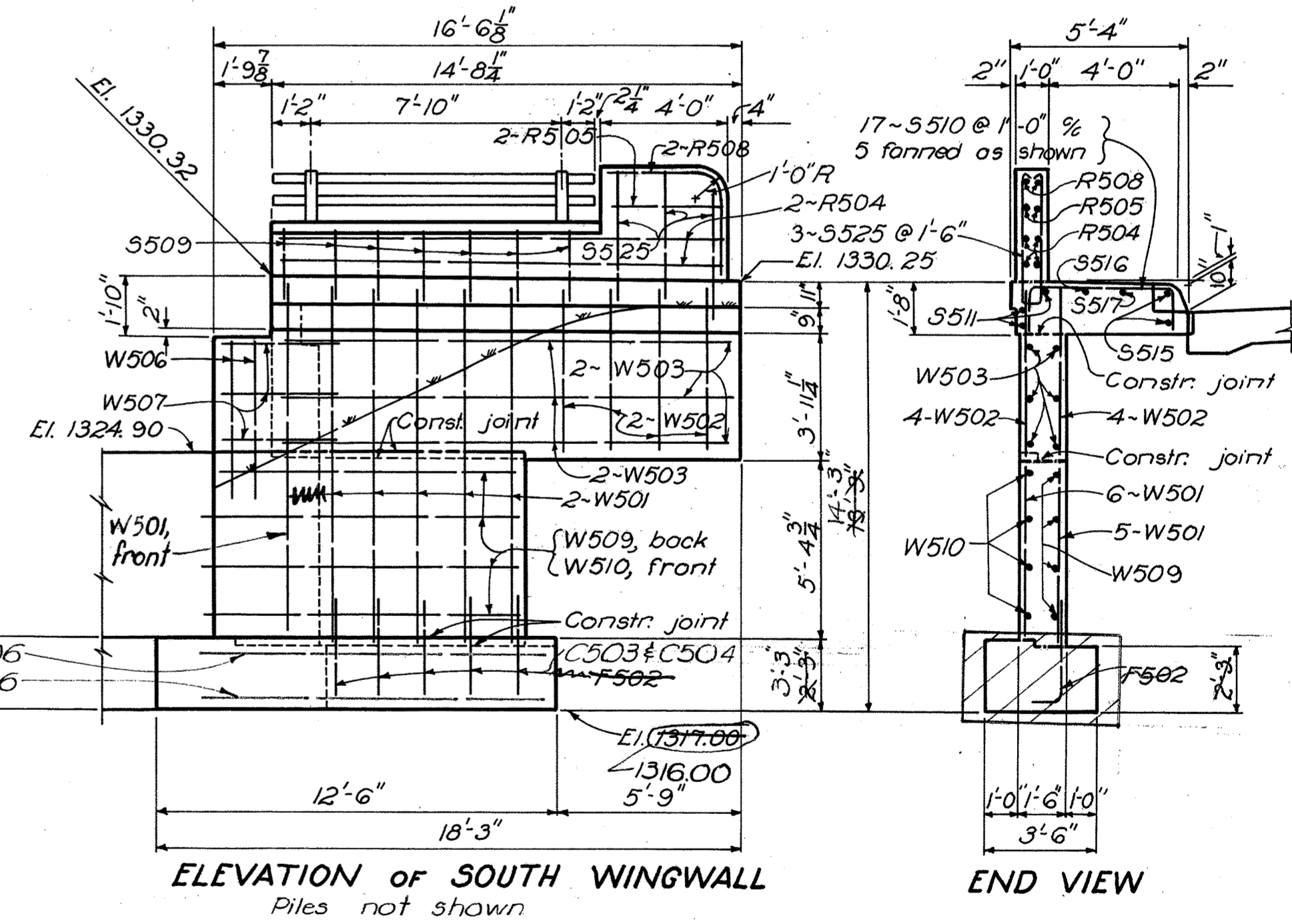
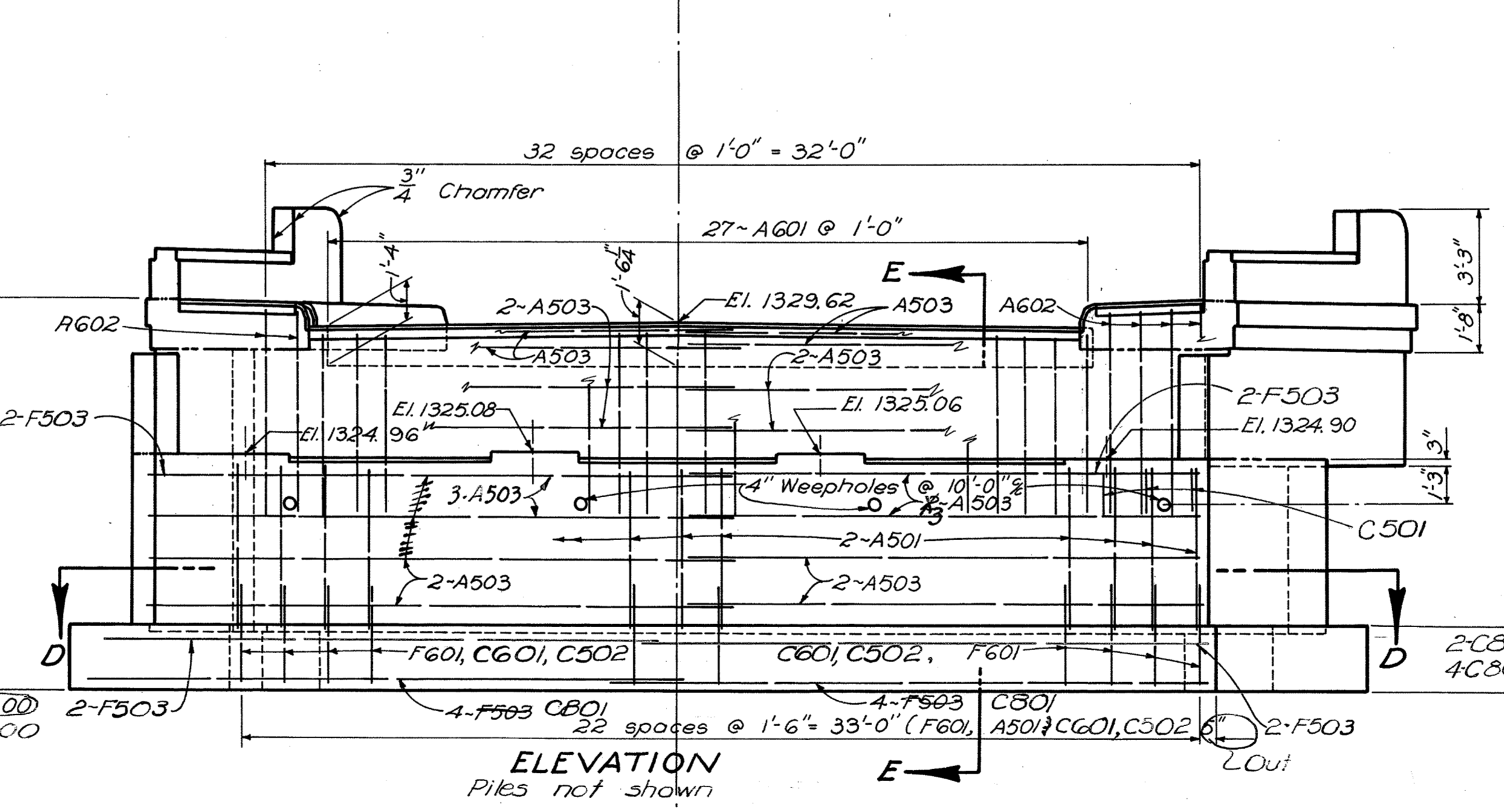
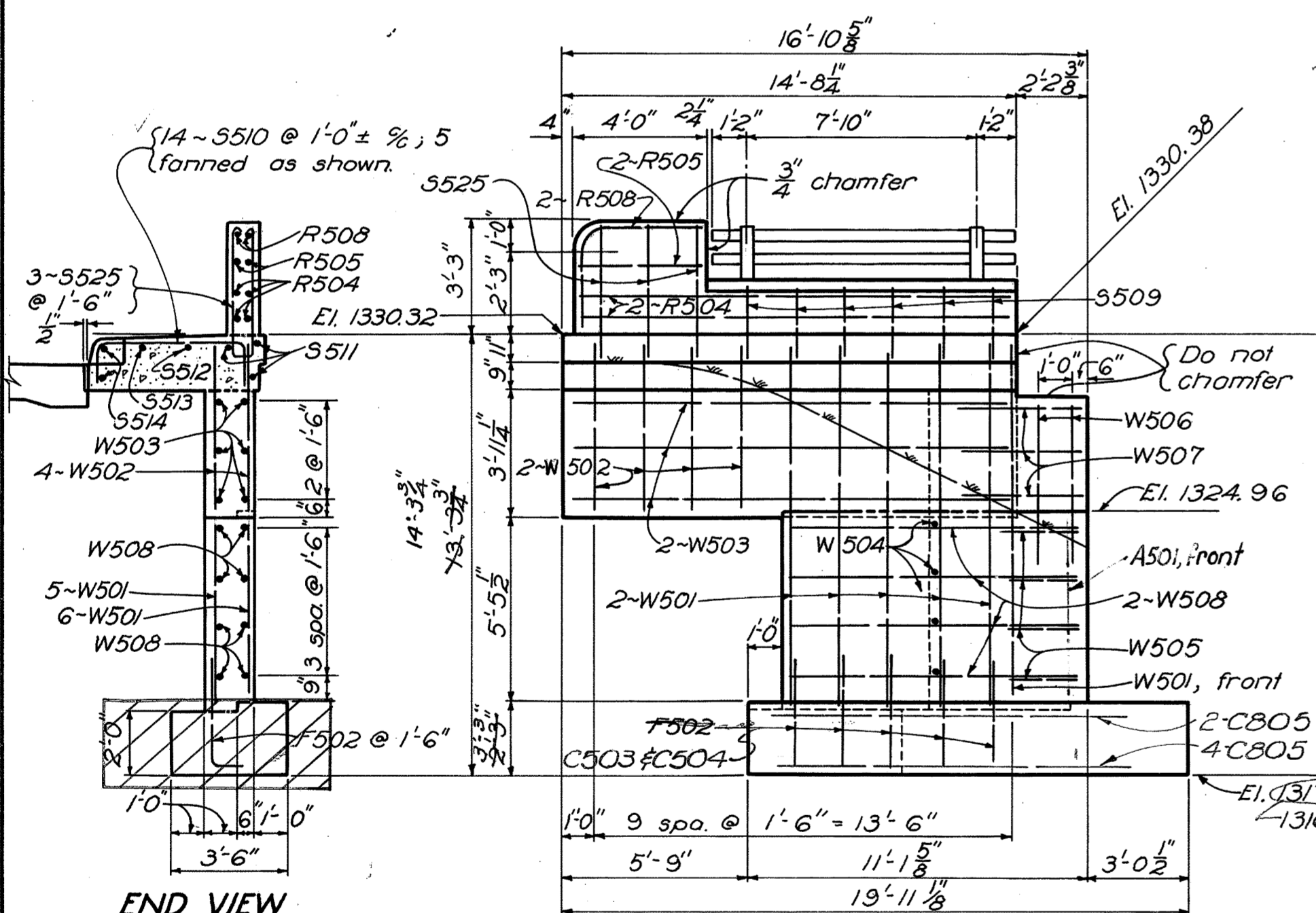
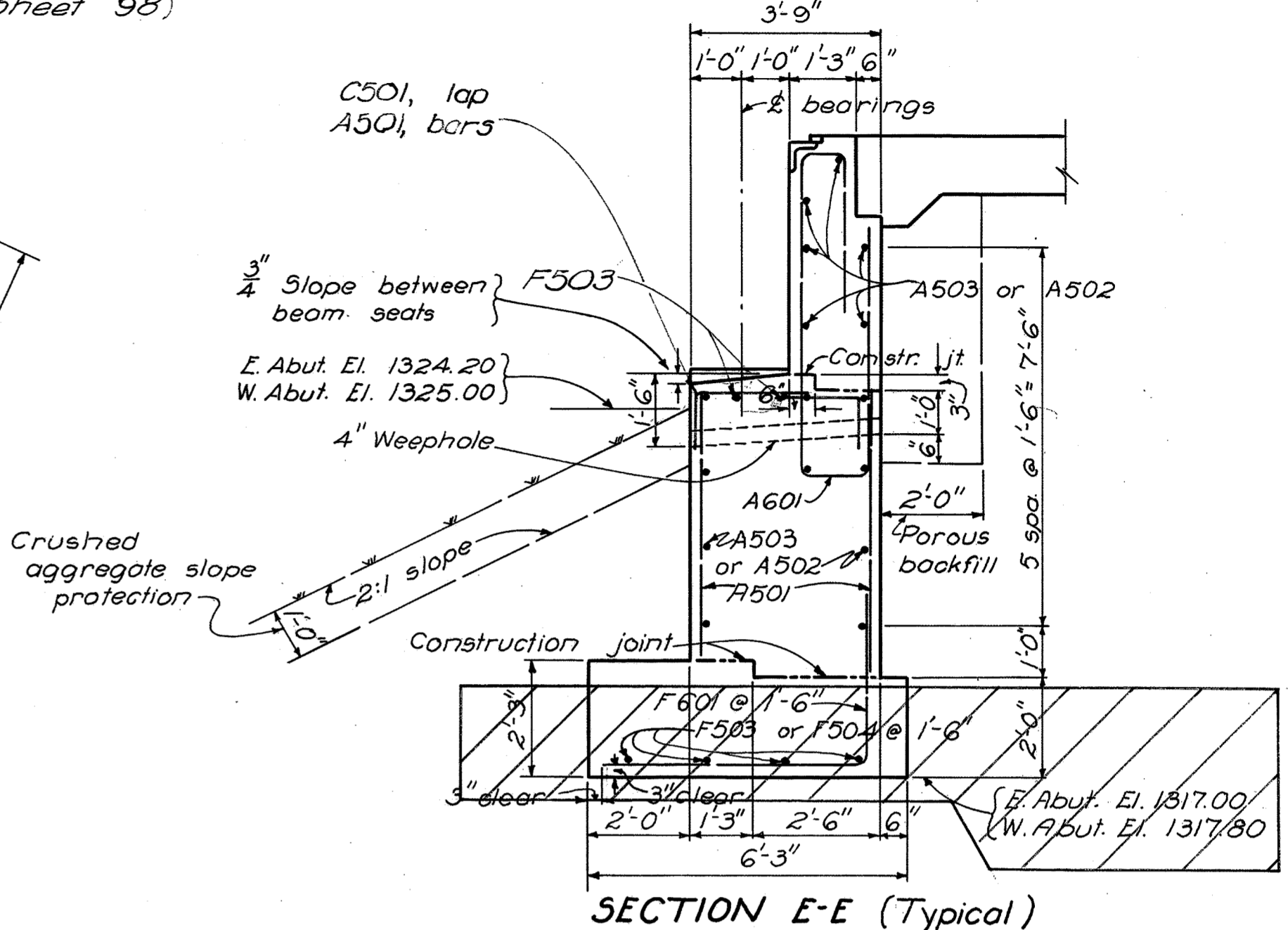
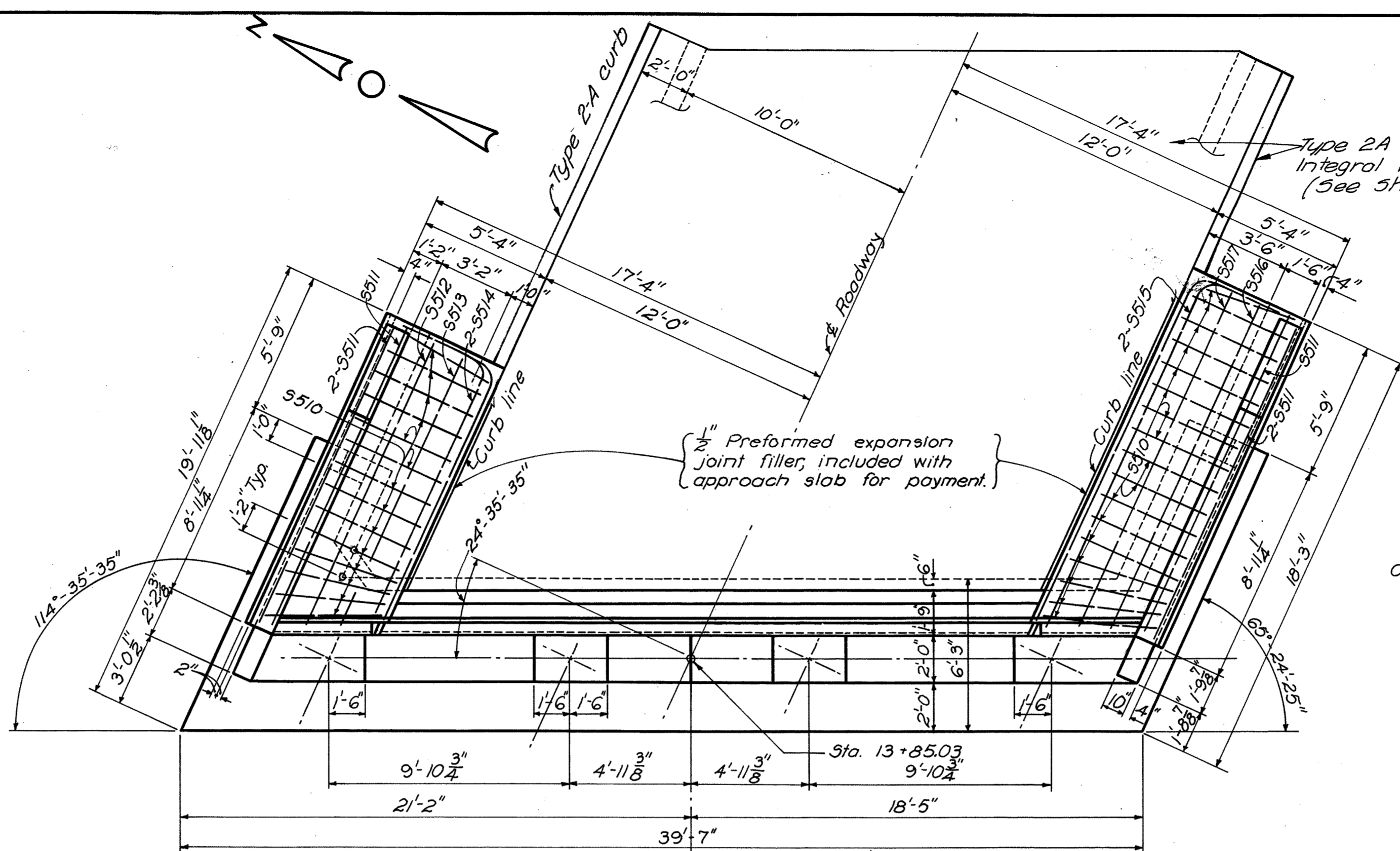
RIC-13-(10.83-13.95)



SEE SHEET No. 179 for SECTION E-E (Typical).

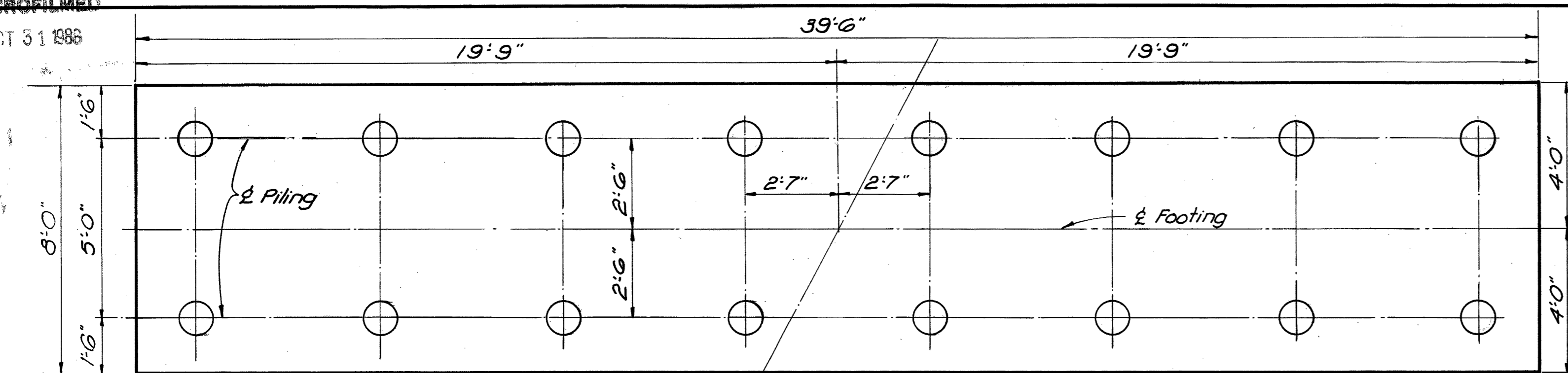
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WEST ABUTMENT					
BRIDGE No. RIC-13-1384 UNDER MALONE AVE.					
RICHLAND Co.			STA. 729 + 93.82 (STA. 12+80.53 ± MALONE AVE)		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
KED	KED	A.A.K.	J.M.	BFG	7/3/64
Revised 10-20-64					

RIC-13-(1083-13.95)



POROUS BACKFILL, 2 ft. thick, full length of each abutment shall extend upward to the underside of the approach slab and sidewalk slab.

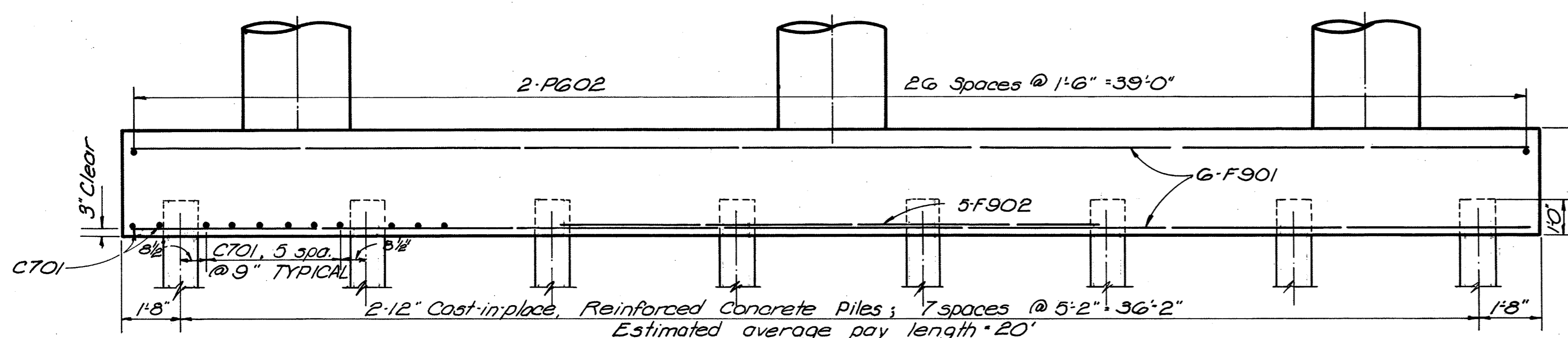
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
EAST ABUTMENT					
BRIDGE No. RIC-13-1384 UNDER MALONE AVE.					
RIGHLAND Co. STA. 729 + 93.82 (STA. 12+80.53 & MALONE AVE.)					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
KED	KED	G.P.G.	J.M.	BFG	8-14-69
				3-31-61	10-23-64



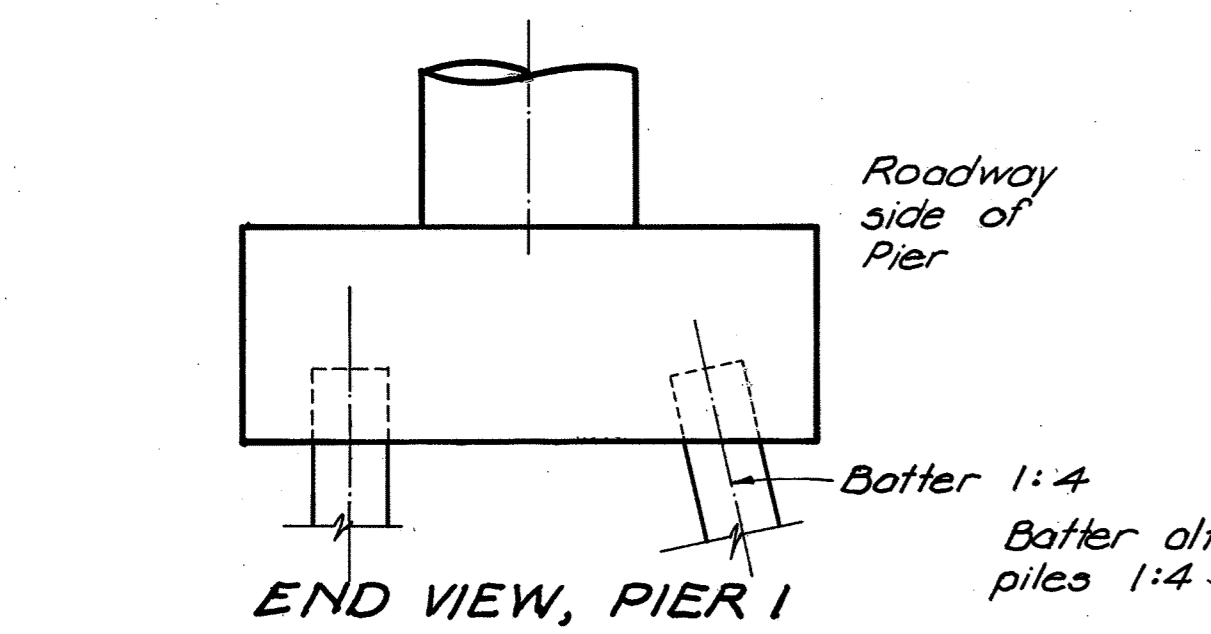
FOOTING PLAN
 For location of center of Piers 1 and 2, refer to Sheet 177.

ADDITIONAL ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Abuts	Piers	Gen'l	As-Built
E-2	75	Cu. Yds.	Unclassified Excavation	35	40		
3-1	40	Cu. Yds.	Class "E" concrete, footings	22	18		
3-4	6188	Lbs.	Reinforcing steel	3555	2633		
3-16	Lump	Sum	First test pile				
3-17	1020	Lin. Ft.	12" cast-in-place reinforced concrete piles	660	960	Lump	

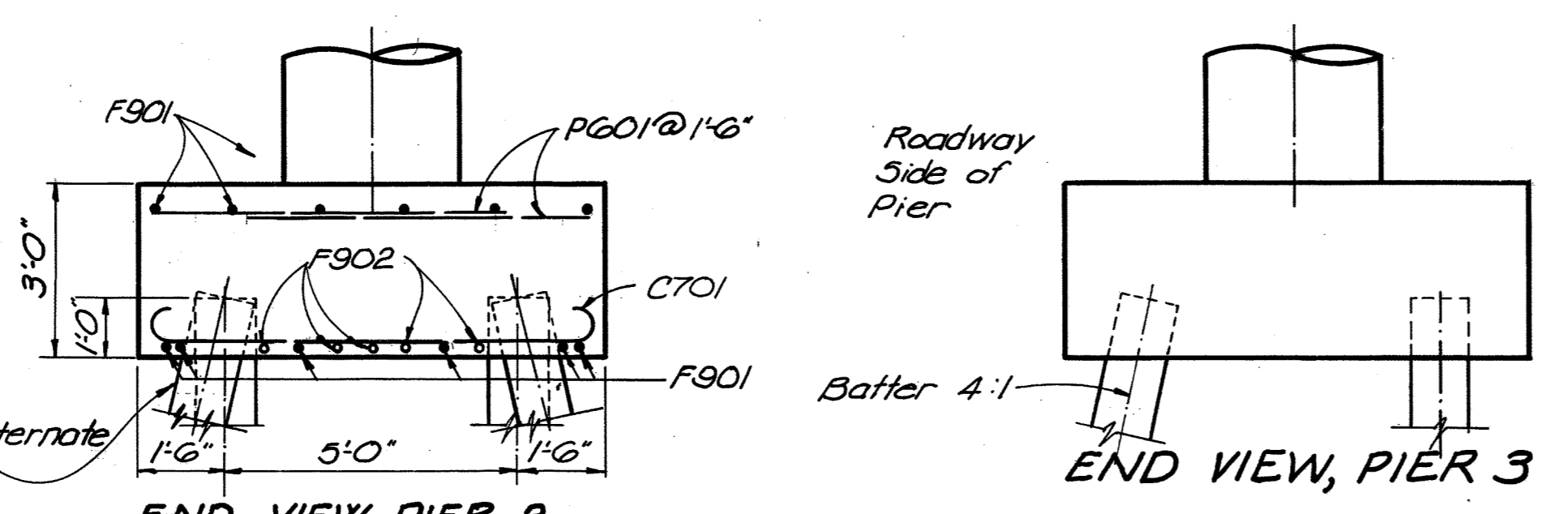
ADDITIONAL REINFORCING STEEL LIST						
Mark	No.	Length	Weight	Shp.	Bending Diagrams	
PIERS						
C701	138	9'-4"	2633	B		
ABUTMENTS						
C801	8	21'-0"	449	5		
C802	8	22'-9"	486	5		
C803	6	14'-0"	224	5		
C804	6	12'-8"	203	5		
C805	6	12'-3"	196	5		
C806	6	12'-0"	192	5		
C601	23	25	11'-10"	853	B	
C501	23	25	4'-3"	221	B	
C502	23	25	5'-1"	254	B	
C503	10	11	9'-9"	214	B	
C504	10	11	12'-0"	263	B	



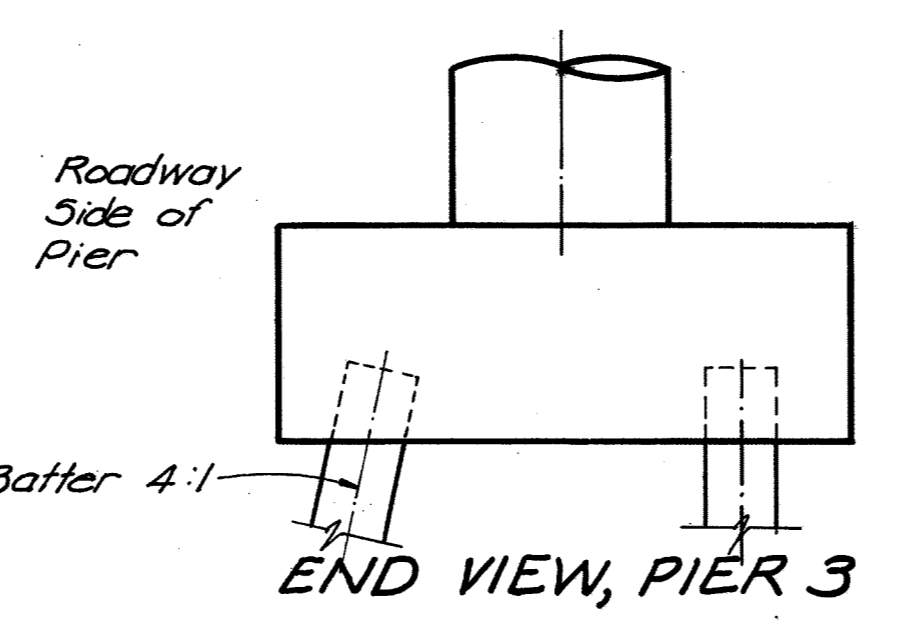
ELEVATION



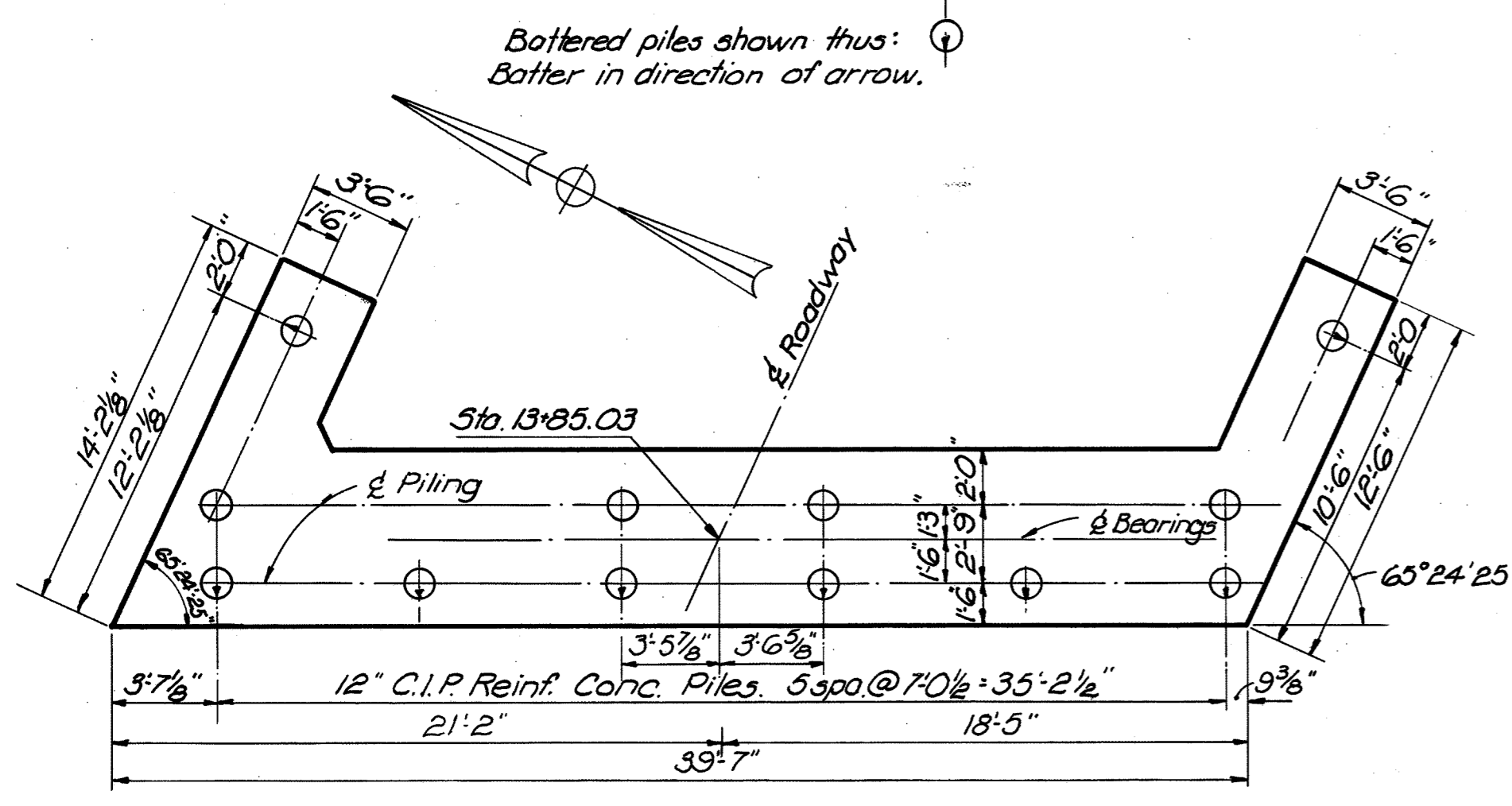
END VIEW, PIER 1



END VIEW, PIER 2
Pier Pile Design Load: 35 tons

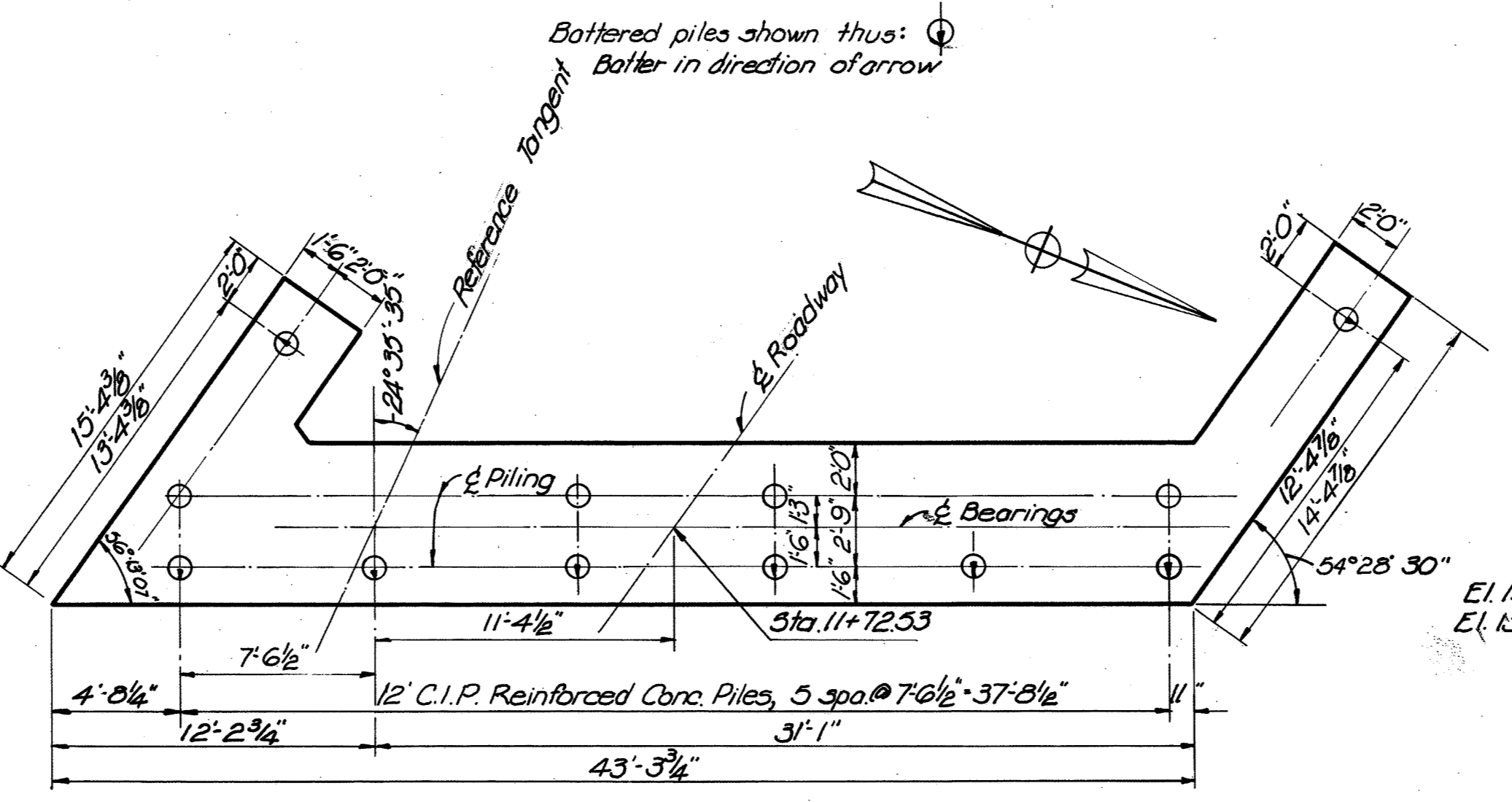


END VIEW, PIER 3



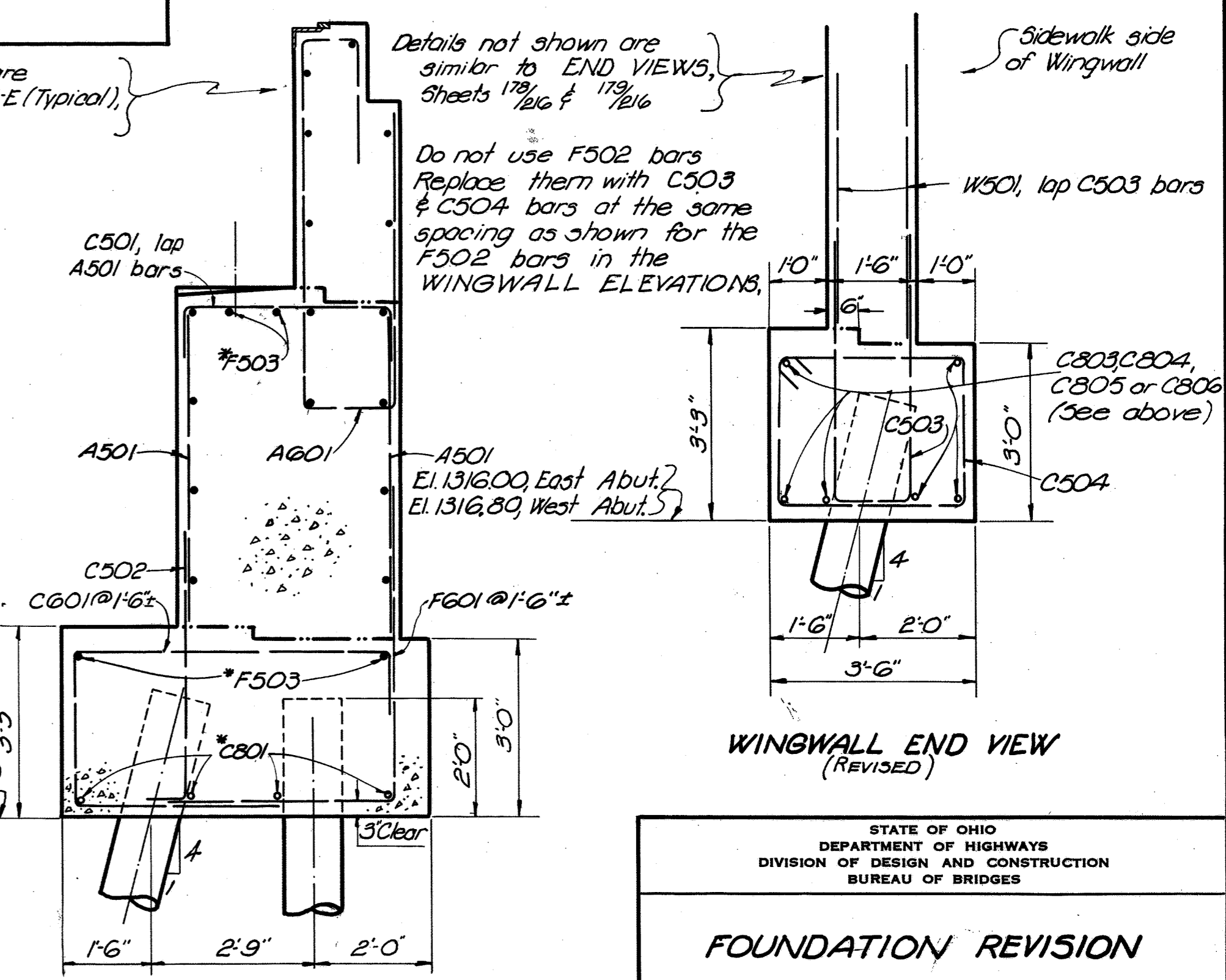
PILING PLAN EAST ABUTMENT

Estimated average pay length = 30'
Abutment Pile Design Load: 30 tons



PILING PLAN WEST ABUTMENT

Estimated average pay length = 25'



SECTION E-E (REVISED)

* Bars shown are for East Abutment. Use F504 & C802 for West Abutment.

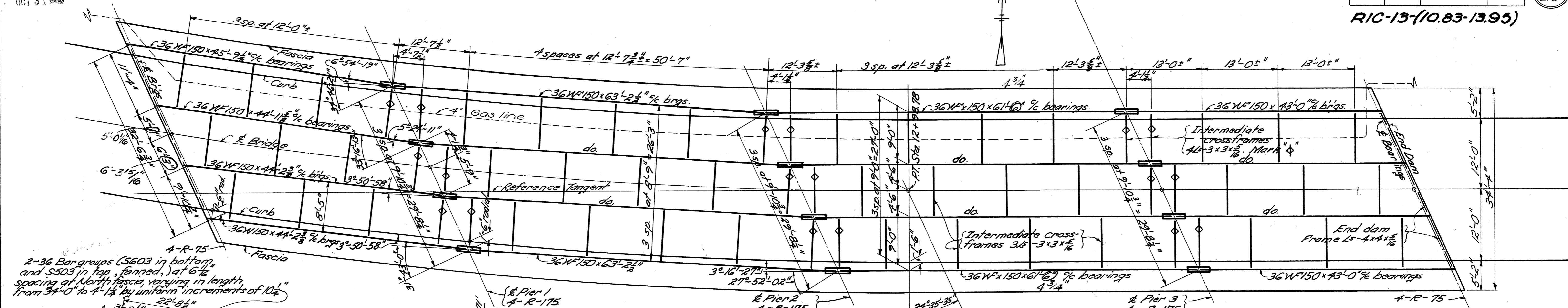
	West Abut.	East Abut.
North Wingwall	C803	C805
South Wingwall	C804	C806

WINGWALL END VIEW (REVISED)

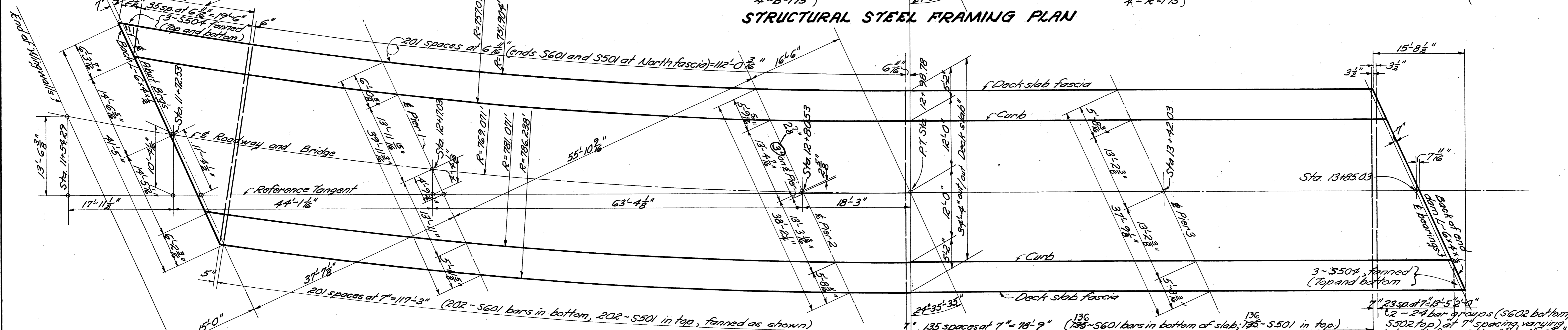
STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 DIVISION OF DESIGN AND CONSTRUCTION
 BUREAU OF BRIDGES

FOUNDATION REVISION
 BRIDGE No. RIC-13-1384
 UNDER MALONE AVE.
 RICHLAND CO. STA. 729+93.82
 (STA. 12+80.53 & MALONE AVE)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	CAM	WCK			11-20-64



STRUCTURAL STEEL FRAMING PLAN



PLAN OF MAIN DECK REINFORCING AND DECK LAYOUT DIMENSIONS

LOCATION	FASCIA BEAMS		INSIDE BEAMS	
	End Spans	Interior Spans	End Spans	Interior Spans
Deflection due to weight of steel	0"	1/16"	0"	1/16"
Deflection due to remaining dead load	1/8"	3/8"	1/8"	3/8"
Convexity required for vertical curve	0"	0"	0"	0"
Sum of Deflection and Convexity	1/8"	7/16"	1/8"	7/16"
Required Camber	0"	0"	0"	0"

No camber is required but the beams shall be so fabricated that any curved beams will be placed convex flange up.

- BEAM SPICE WELDING PROCEDURE:**
- Raise end of beam at Pier 2 one-half inch.
 - Butt-weld beam flanges and web at Pier 1 using the following sequence: make two passes on the web, then two on each flange; repeat using one or two passes at each location, until welds are completed.
 - Weld top and bottom flange moment plates at first pier.
 - Weld all crossframes marked \diamond into place.
 - Lower end of beam at second pier.
 - Make splice at second pier (and third pier) in the same manner raising the end of the beams 1" at Pier 3 and 0" at the abutment.
 - Weld remaining crossframes into place.

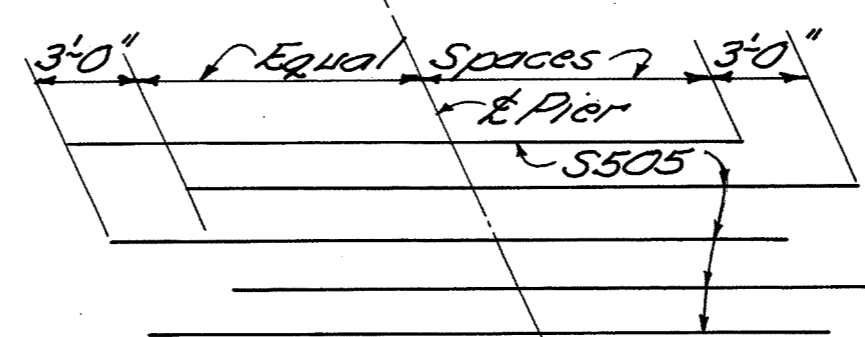


DIAGRAM SHOWING STAGGER OF S505 BARS OVER PIERS

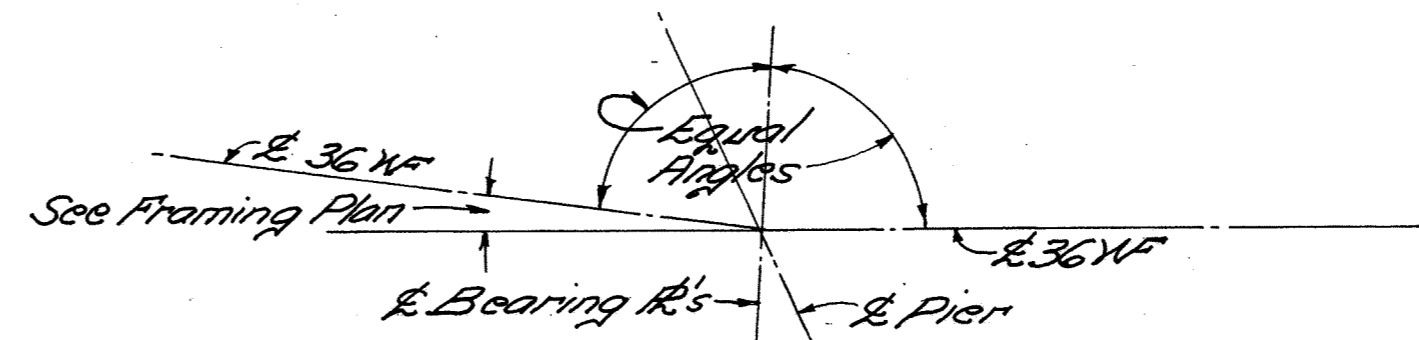


DIAGRAM SHOWING POSITION OF BEARING PLATES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

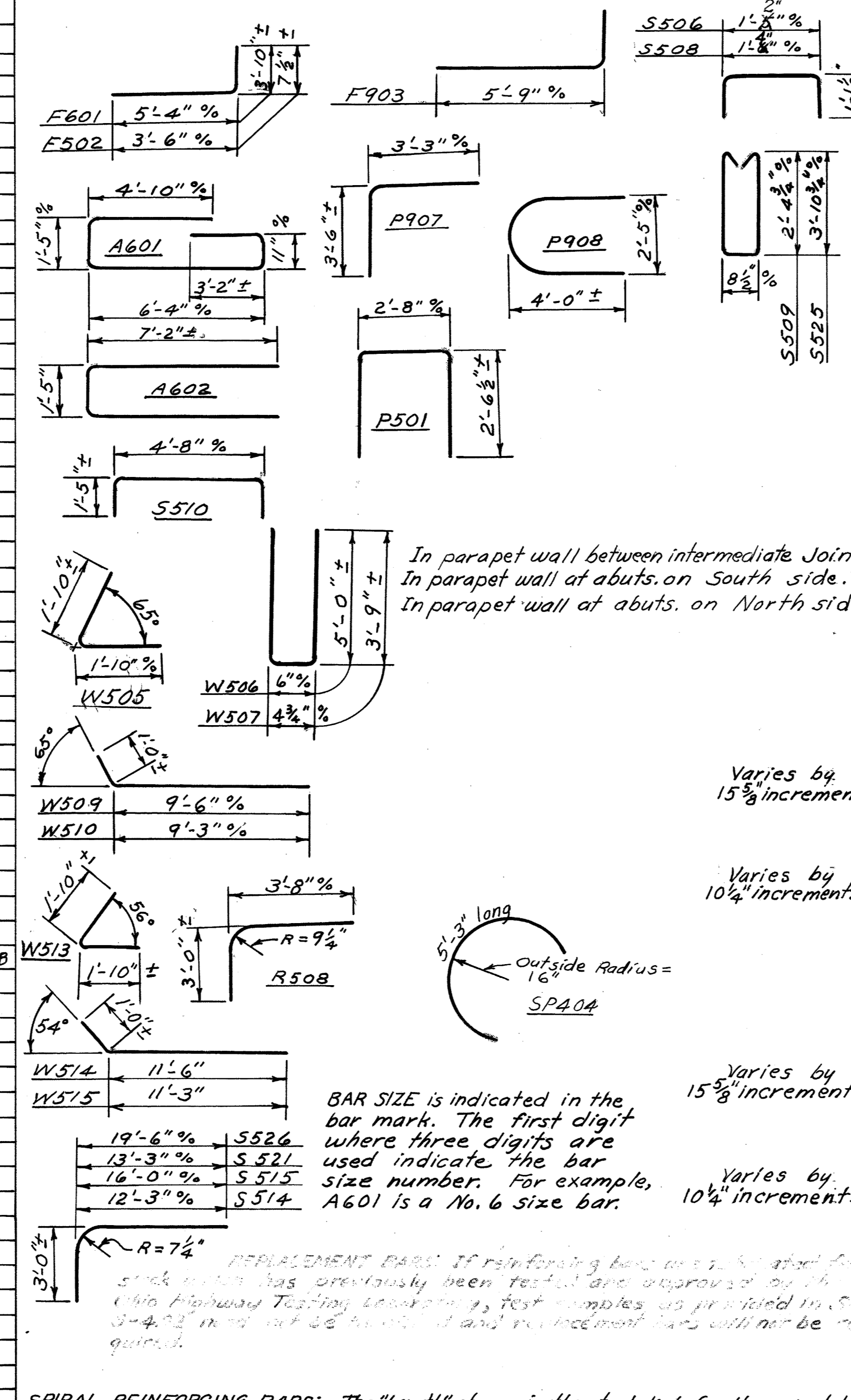
SUPERSTRUCTURE FRAMING AND DECK PLANS
BRIDGE No. RIC-13-1384
UNDER MALONE AVE.

RICHLAND COUNTY STA. 729+93.82
(Sta. 12+80.53 E. MALONE AVE.)

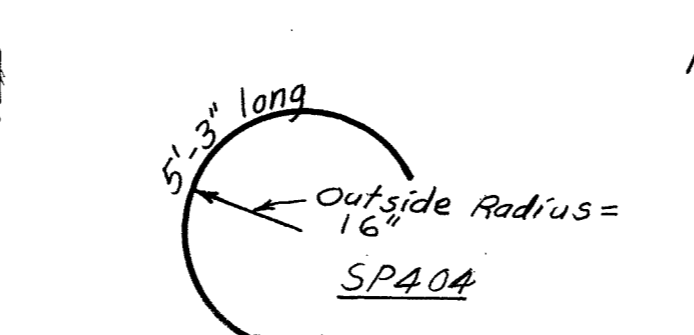
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.C.B.	K.C.B.	Neglan	J.M.	BFG	7/13/64	8/16/64

RIC-13-(10.83-13.95)

Size	No.	Length	Weight	E.Ab.	W.Ab.	Shp.
Abutments						
F601	48	9'-0"	649	23	25	B
F502	21	4'-0"	88	10	11	B
F503	8	20'-3"	169	8		S
F504	8	22'-3"	186		8	S
A601	57	16'-0"	1370	27	30	B
A602	12	15'-6"	279	6	6	B
A501	103	5'-6"	591	49	54	S
A502	3228	21'-0"	6370	3228	S	
A503	3228	19'-3"	568	2832	S	
S509	30	6'-1"	190	13	17	B
S510	67	7'-3"	507	31	36	B
S511	6	14'-3"	89	6		S
S512	1	13'-9"	14	1		S
S513	1	13'-0"	14	1		S
S514	2	15'-0"	31	2		B
S515	2	18'-9"	39	2		B
S516	1	14'-11"	16	1		S
S517	1	15'-6"	16	1		S
W501	46	11'-0"	528	22	24	S
W502	36	5'-3"	197	16	20	S
W503	12	14'-4"	179	12		S
W504	8	6'-6"	54	4	4	S
W505	4	3'-6"	15	4		B
W506	8	10'-3"	86	4	4	B
W507	12	7'-8"	96	6	6	B
W508	8	9'-8"	81	8		S
W509	4	10'-6"	44	4		B
W510	4	10'-3"	43	4		B
S518	3	15'-9"	50	3		S
S519	1	15'-0"	16	1		S
S520	1	14'-0"	15	1		S
S521	2	16'-0"	33	2		B
S522	1	18'-9"	20	1		S
S523	1	18'-0"	19	1		S
S524	3	17'-6"	18	3		S
S525	12	9'-1"	14	6		B
S526	2	22'-3"	46	2		B
W511	8	9'-6"	79	8		S
W512	6	15'-9"	99	6		S
W513	4	3'-6"	15	4		B
W514	4	12'-6"	52	4		B
W515	4	12'-3"	51	4		B
W516	6	17'-3"	108	6		S
R504	8	14'-0"	Included	8		S
R505	8	3'-8"	with	4		S
R506	4	15'-6"	railing	4		S
R507	4	17'-0"	for pay	4		S
R508	8	6'-3"	ment	4		B
Reinforcement Bars						
Size	No.	Length	Weight	Shp.		
RE901	1	6'-10"	-	S		
RE601	2	5'-11"	-	S		
RE501	2	5'-7"	-	S		
SP404	1	5'-3"	-	B		



In parapet wall between intermediate joints.
In parapet wall at abuts. on South side.
In parapet wall at abuts. on North side.



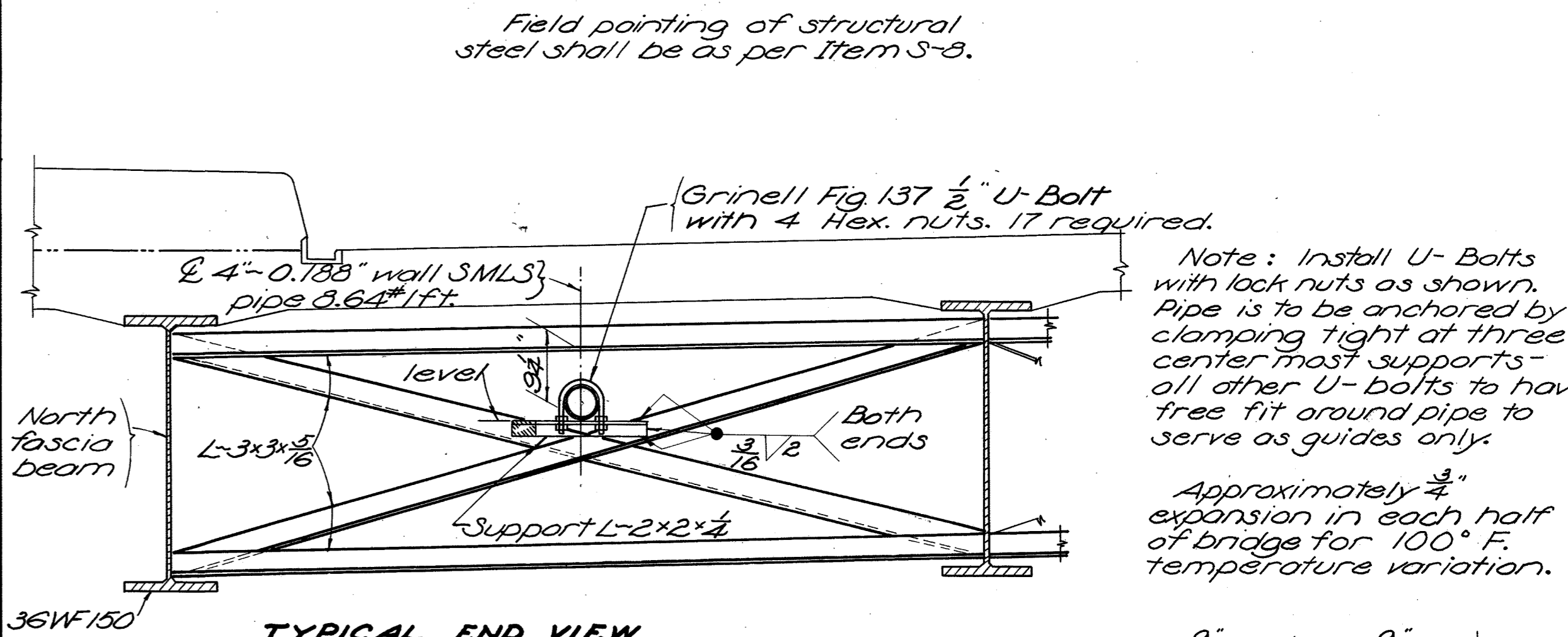
BAR SIZE is indicated in the bar mark. The first digit where three digits are used indicate the bar size number. For example, A601 is a No. 6 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1/2 closed coils shall be provided at the ends of each spiral unit.
Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

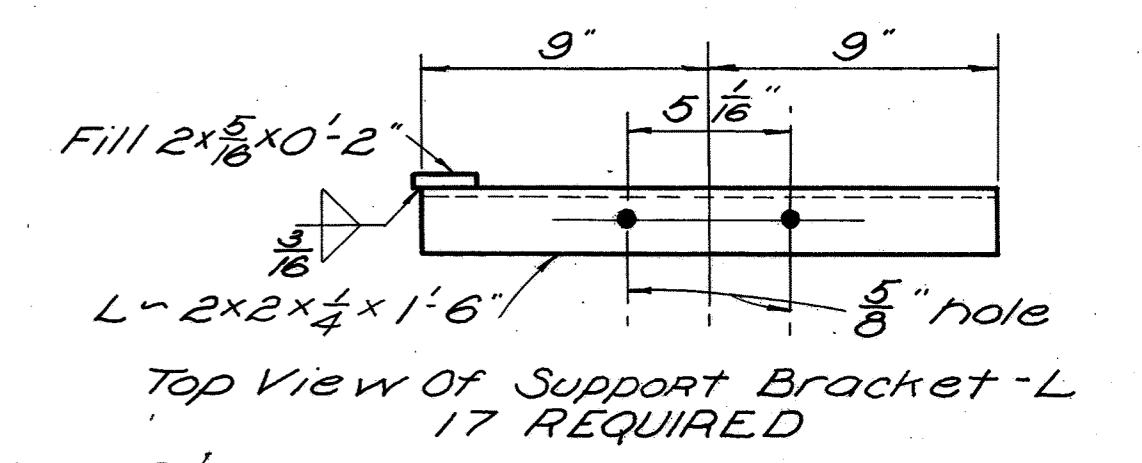
Mark	No.	Length	Weight	Shp.
Three Piers				
F901	36	39'-0"	4774	S
F902	15	15'-0"	765	S
F903	90	6'-9"	2066	B
P901	162	6'-0"	1460	S
P902	30	21'-0"	2142	S
P903	30	19'-0"	1938	S
P904	12	30'-0"	1224	S
P905	15	31'-9"	1619	S
P906	9	14'-0"	428	S
P907	24	6'-6"	530	B
P908	12	9'-3"	377	B
P501	108	7'-6"	845	B
P502	6	29'-8"	186	S

Mark	No.	Length	Weight	Shp.
Superstructure				
R501	88	16'-8"	Included	S
R502	8	13'-0"	with	S
R503	8	13'-9"	railing	S
for payment				
S601	338	34'-0"	17,261	S
	202		12,500	
S602	series of 24 bars	34'-0" to 4'-0 3/8"	685	S
S603	series of 36 bars	34'-0" to 4'-1 1/2"	1030	S
S604	175	32'-3 3/4"	8477	S
	338	202	11,986	
S501	202	34'-0"	2,263	S
S502	series of 24 bars	34'-0" to 4'-0 5/8"	476	S
S503	series of 36 bars	34'-0" to 4'-1 1/4"	715	S
S504	273	32'-0"	2,412	S
	202	32'-6"	8,509	
S505	84	22'-0"	1,927	S
S506	291	3'-3 1/2"	1,887	B
S507	291	4'-9"	1,441	S
S508	291	3'-3 1/2"	1,862	B
S509	291	6'-1"	1,846	B

Mark	No.	Core Dia.	Length	Pitch	Each No. Turns	Weight
SP401	3	32"	18'-0"	4 1/2"	51	990
SP402	3	32"	16'-0"	4 1/2"	46	890
SP403	3	32"	14'-9"	4 1/2"	42	820



ESTIMATED WEIGHT OF STRUCTURAL STEEL IN GAS LINE CONTRACTED ON BRIDGE:
Approx. 200 ft. of 4" Pipe 1730 lbs.
25.5 ft. of L-2x2x1/2 95 lbs.
17 U-Bolts complete 25 lbs.
* Total 1850 lbs.



NOTE: Gate Valve to be installed on this line at Main St. & Ferndale Rd. Mansfield, O map 3299-P. S.R.13 under Malone Rd.

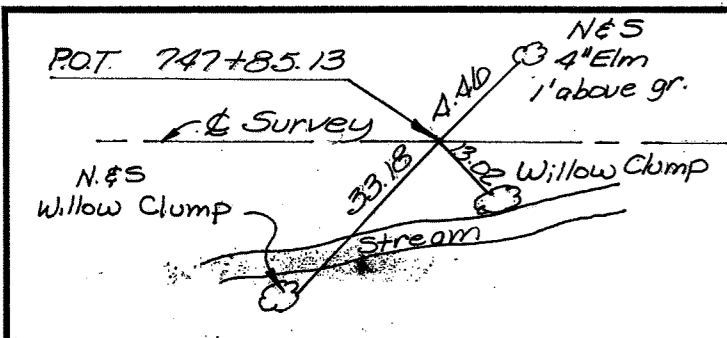
DETAIL OF 4" GAS LINE SUPPORT ON SUPERSTRUCTURE
*Structural steel for gas line shall be furnished and paid for by the Ohio Fuel Gas Co.

Refer to sheet 179A for additional Reinforcing Steel List required by the addition of piles

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

**REINFORCING STEEL LIST
GAS LINE SUPPORTS**
BRIDGE No. RIC-13-1384
UNDER MALONE AVE.
Sta. 729 + 93.82
RICHLAND COUNTY (Sta. 12+80.53 @ MALONE AVE.)

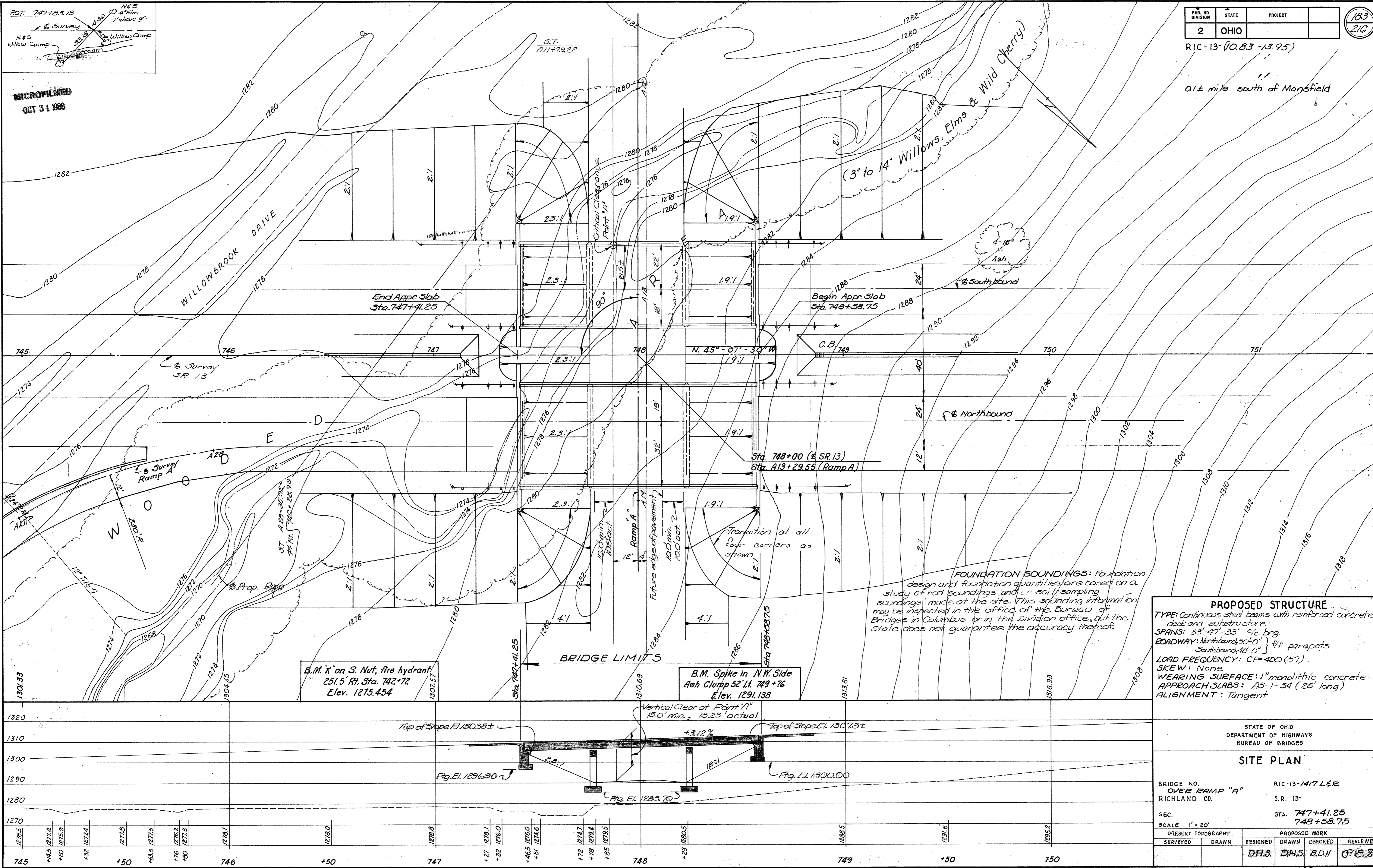
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KED	KED	N.L.D.	J.M.	BFG	8-14-64	10-25-64



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-13 (10.83-13.95)
0.1 ± mile south of Mansfield

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OCT 31 1988



FOUNDATION BOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinforced concrete deck and substructure.
 SPANS: 33'-47" - 33' c/c brg.
 ROADWAY: Northbound 50'-0" } 4" parapets
 Southbound 40'-0" }
 LOAD FREQUENCY: CF-400 (57)
 SKEW: None
 WEARING SURFACE: 1" monolithic concrete
 APPROACH SLABS: AS-1-54 (25' long)
 ALIGNMENT: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN
 BRIDGE NO. RIC-13-1417 L&E
 OVER RAMP "A" S.R. 13
 RICHLAND CO. STA. 747+41.25
 SEC. 748+58.75
 SCALE 1" = 20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
		DHS	DHS	B.D.H.	P.E.S.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CSB-2-56, sheet no's 2 & 3 of 6, revised 2-2-59 and AR-1-57 revised 4-2-22; SD-1-63 (sht 1) dated 11-12-63 and Supplemental Specifications S-101 of 7-12-63 and S-307 of 8-23-60.
DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and the piers.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.6 tons per sq. ft. and pier footings for 1.8 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

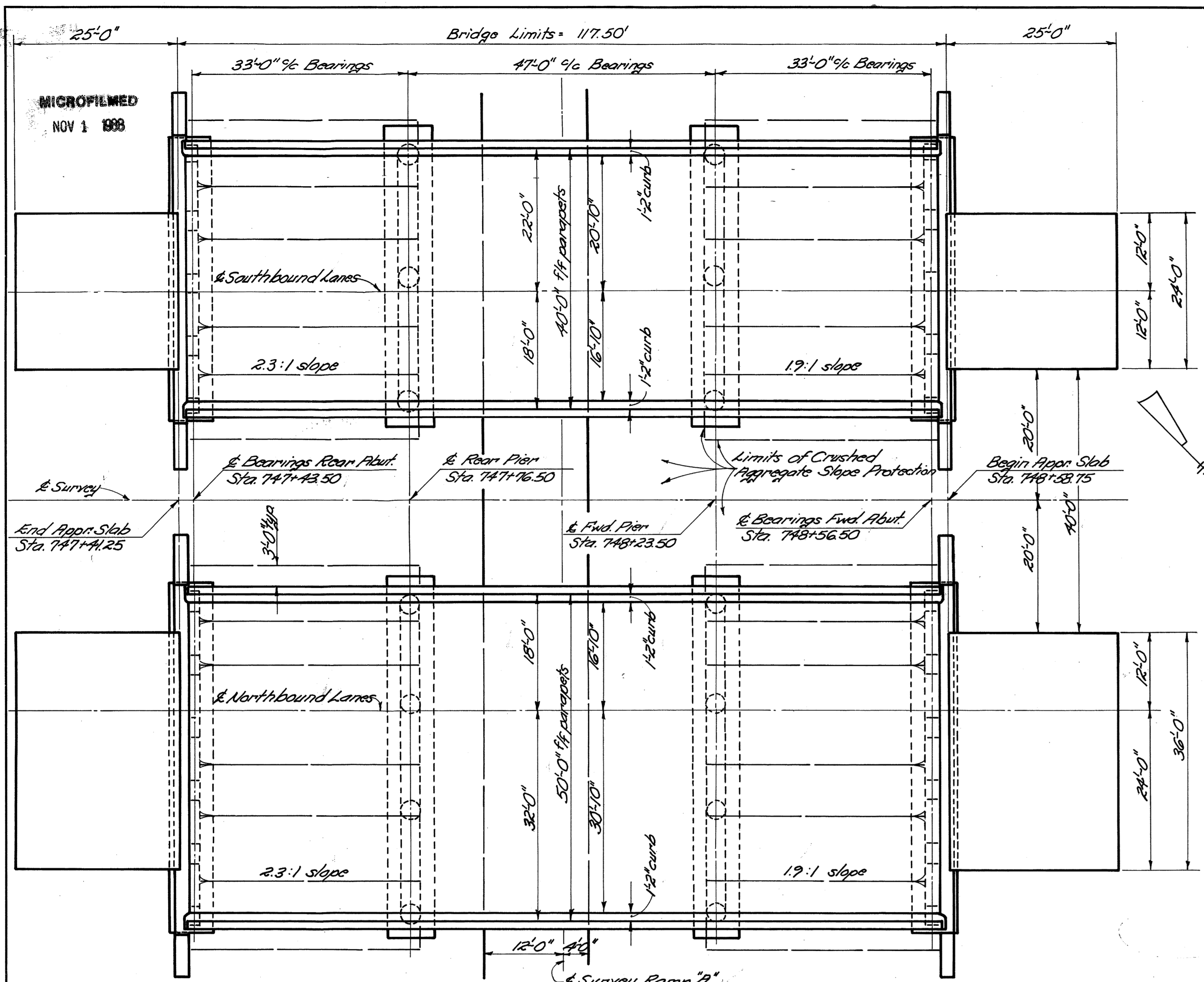
WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

MACHINE FINISH: The concrete bridge decks shall be finished by the use of a finishing machine.

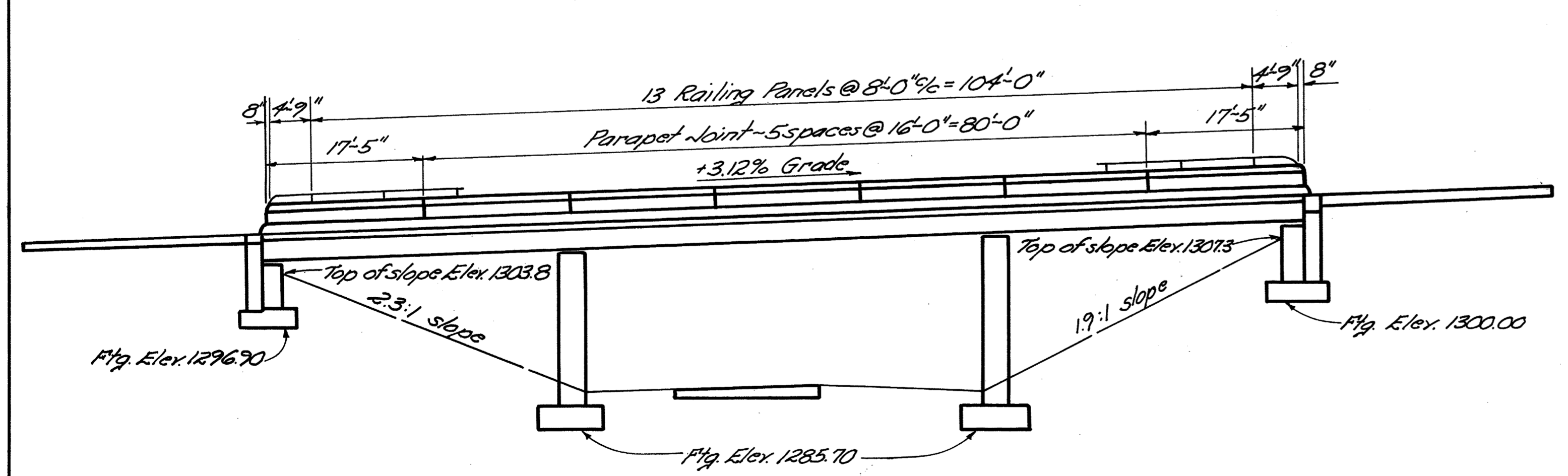
Design Loading - CF 400 (57)

Concrete Class C - basic unit stress 1,333 p.s.i.
 Concrete Class E - basic unit stress 1,133 p.s.i.
 Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i. (ASTM A7 & A375 steel not permitted)

Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade.
 Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.



GENERAL PLAN



ELEVATION

ITEM	TOTAL	UNIT	DESCRIPTION	SOUTHBOUND LANES		NORTHBOUND LANES		GEN'L
				ABUT'S	PIERS	PIERS	SUPER.	
E-2	928	Cu. Yds.	Unclassified excavation	242	184	286	216	
S-1	330	Cu. Yds.	Class "C" concrete, superstructure			150		180
S-1	128	Cu. Yds.	Class "C" concrete, pier caps and columns		56		72	
S-1	167	Cu. Yds.	Class "E" concrete, pier footings		78		89	
S-1	334	Cu. Yds.	Class "E" concrete, abutments	152		182		
S-7	158,987	Lbs.	Reinforcing steel	6,452	22,359	43,007	7,915	51,952
S-7	213,900	Lbs.	Structural steel			98,100		115,800
S-8	213,900	Lbs.	Field painting of structural steel			98,100		115,800
S-14	459.36	Lin. Ft.	Railing (aluminum rail and supports, concrete, parapet)			229.68		229.68
S-27	65	Cu. Yds.	Porous Backfill	30			35	
S-27	24	Each	Scuppers, including supports			12		12
Z-10	851	Sq. Yds.	Crushed aggregate slope protection					851
S-101	330	Each	Water-reducing, set-retarding admixture			150		180

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 DIVISION OF DESIGN AND CONSTRUCTION
 BUREAU OF BRIDGES

**GENERAL PLAN & ELEVATION,
 NOTES & ESTIMATED QUANTITIES**
 BRIDGE NO. RIC-13-1417 L&R
 OVER RAMP "A"
 RICHLAND COUNTY STA. 747+41.25
 STA. 749+58.75

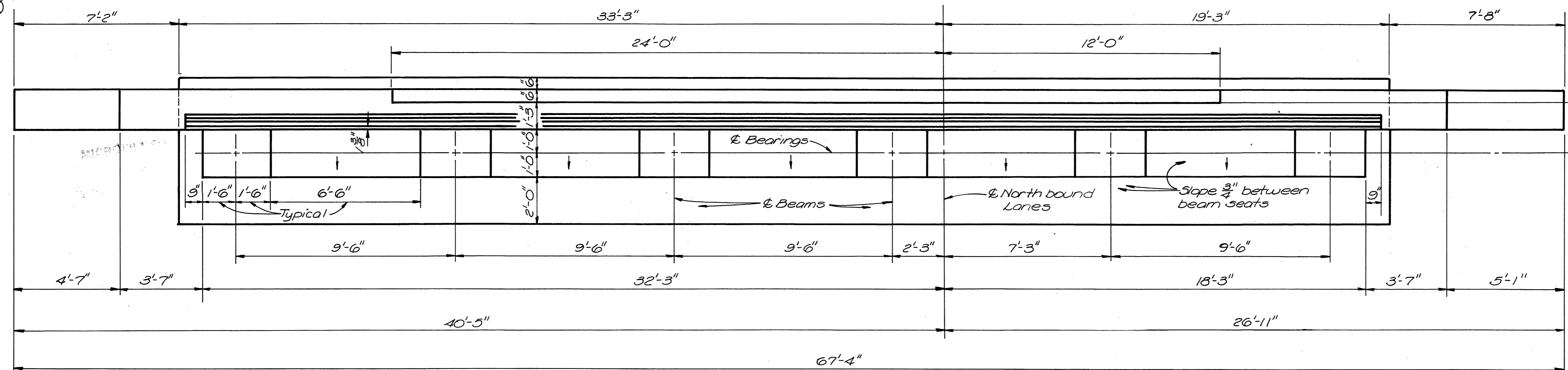
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGB	JGB	Neget	DL	BFG	9-7-66	8-14-68

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FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

186
2/6

RIC-13 (10.83-13.95)



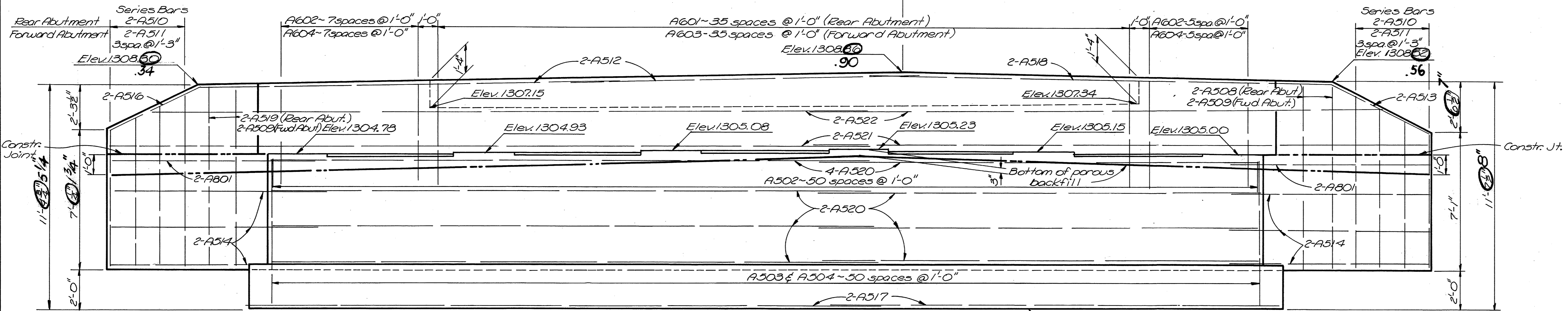
End Approach Slab
Sta. 747+41.25

& Survey

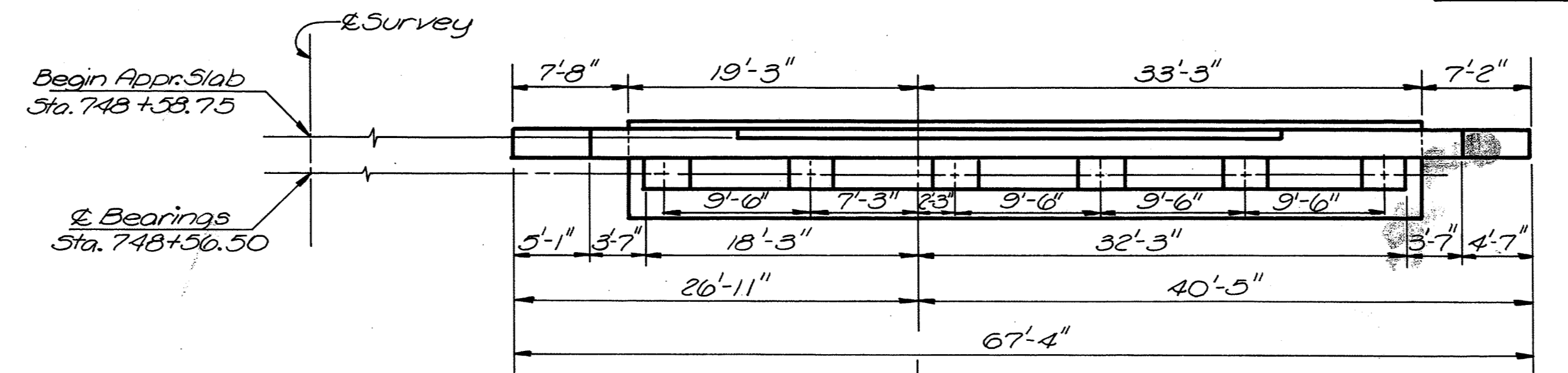
& Bearings
Sta. 747+43.50

PLAN

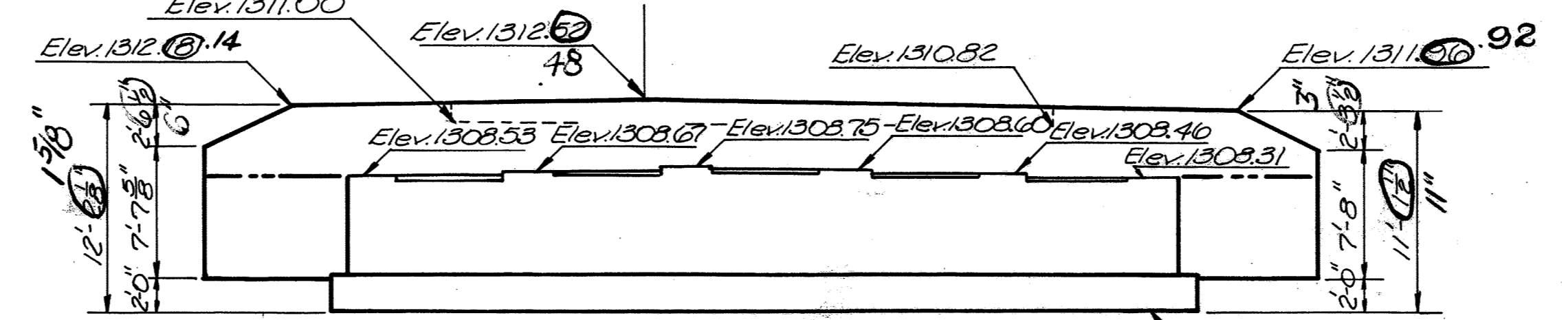
(Rear Abutment shown,
Forward Abutment opposite hand)



ELEVATION



FORWARD ABUTMENT PLAN



FORWARD ABUTMENT ELEVATION

(For additional details, see above views)

See sheet 185 "Abutment Details Southbound Lanes" for additional details & notes.

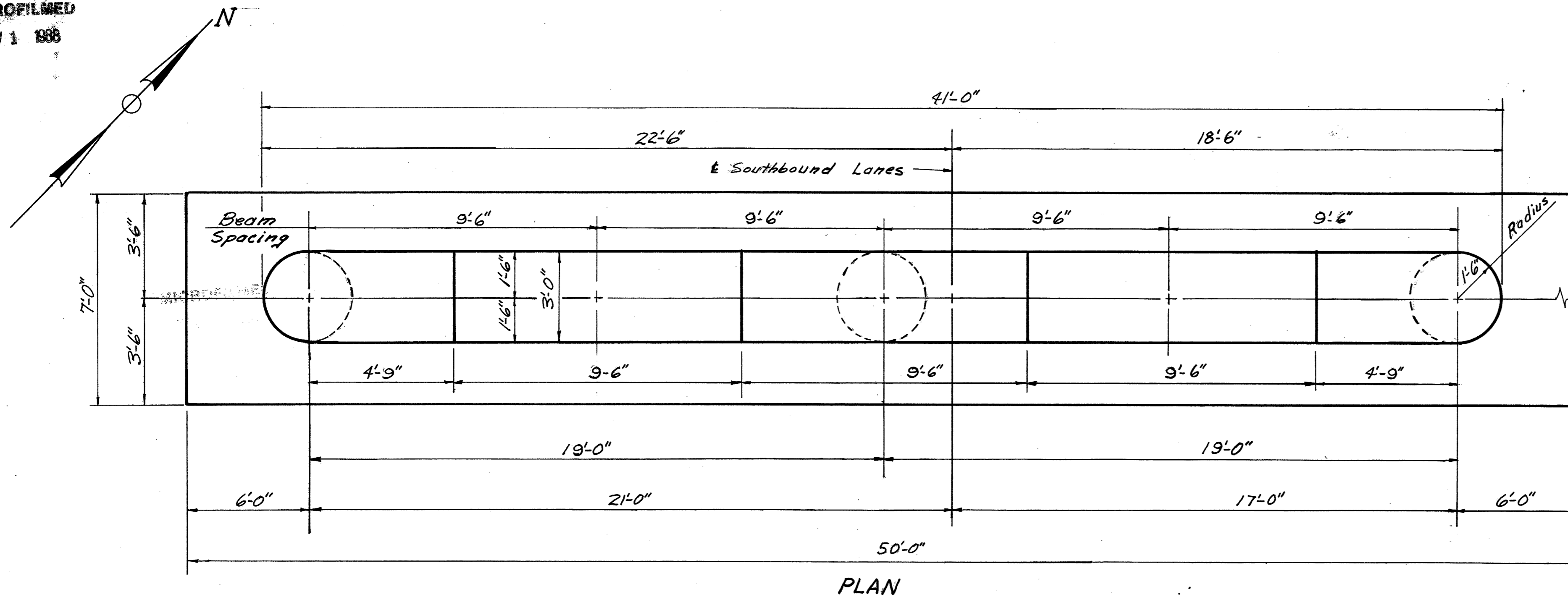
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
ABUTMENT DETAILS NORTHBOUND LANES					
Bridge No. RIC-13-1417L&R OVER RAMP "A"					
RICHLAND COUNTY				STA. 747+41.25 STA. 748+58.75	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JGB	JGB	MKH	DM	BFG	4-6-61
					7/13/64

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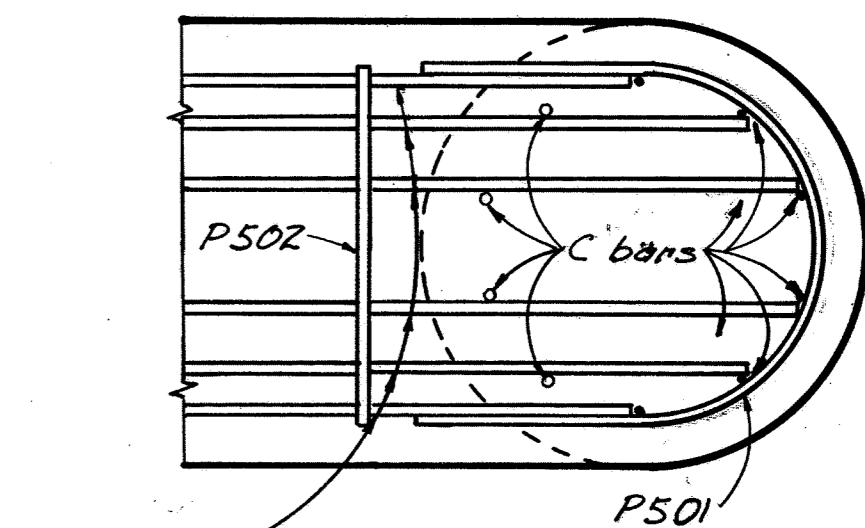
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

187
216

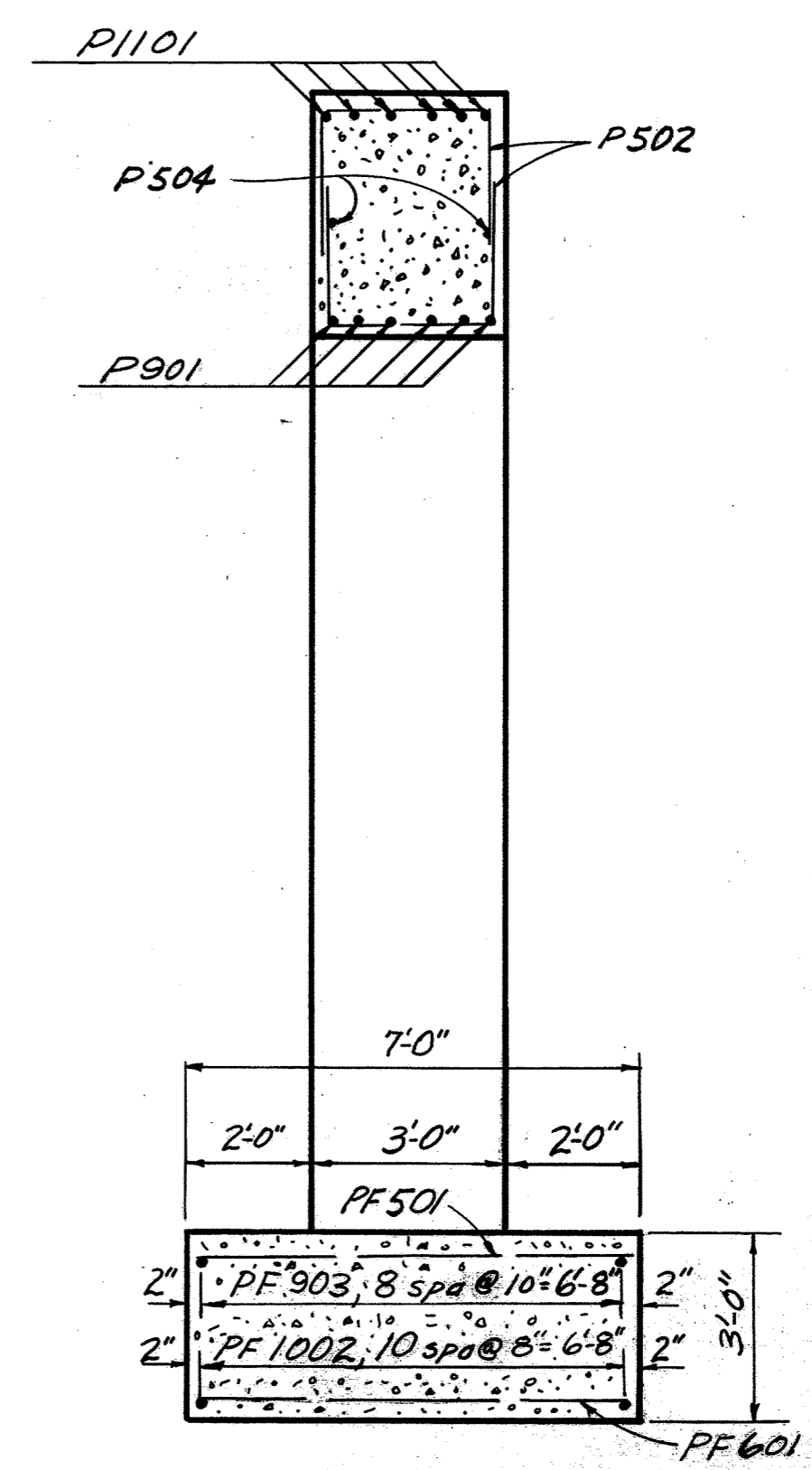
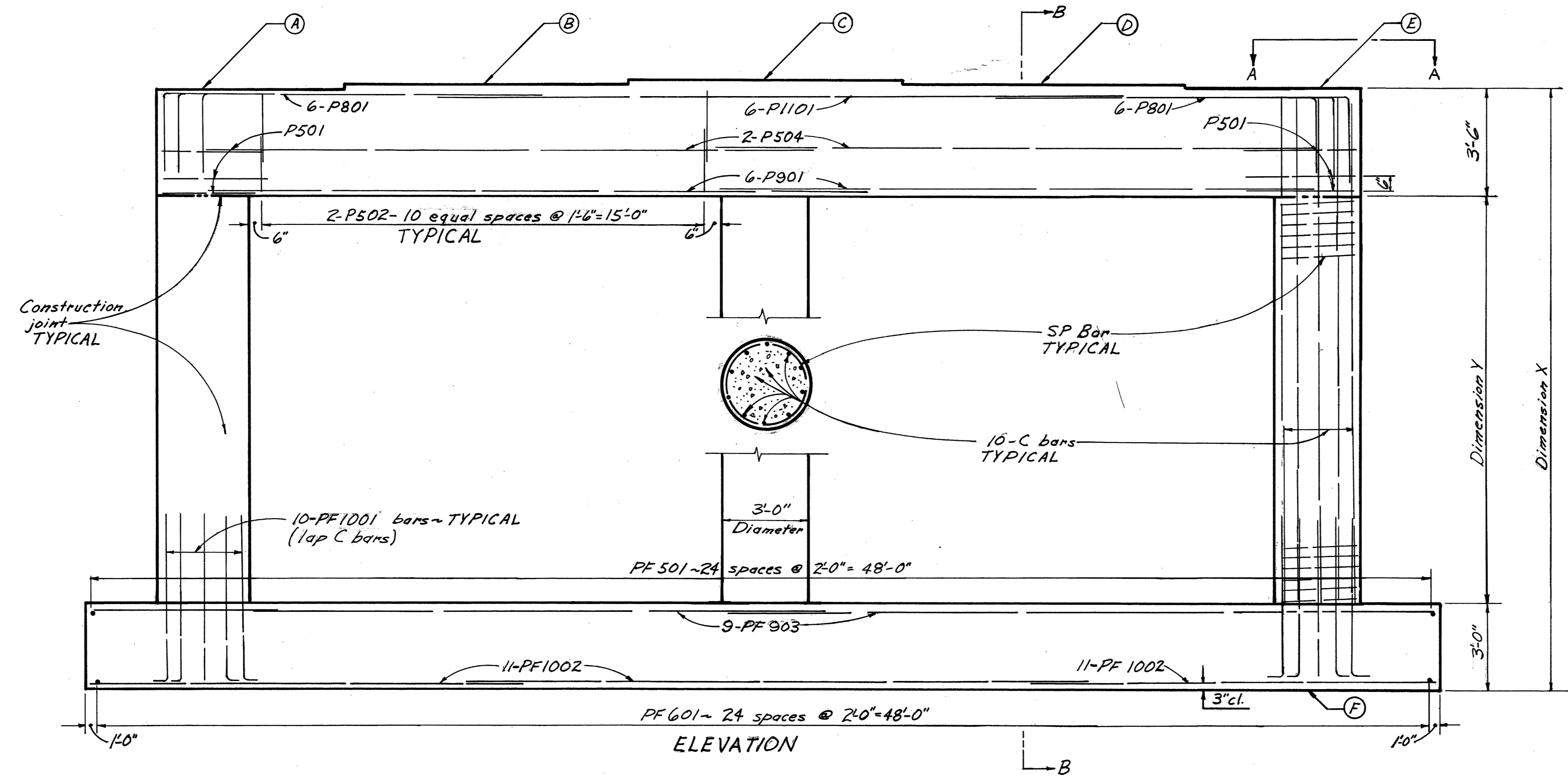
RIC-13(10.83-13.95)



Survey
Rear Pier Sta. 747+76.50
Fwd. Pier Sta. 748+23.50



VIEW A-A



SECTION B-B

EXCAVATION PROCEDURE In order to have a uniform thickness of embankment fill below the pier footings, the following construction procedure shall be required:
The existing ground in the area of the piers shall be excavated to elevation 1279.00 within these minimum limits:
between station 747+69 and 747+89 and offset 10' right to 70' right
between station 748+16 and 748+31 and offset 60' left to 70' right
The excavated areas shall then be backfilled as per Specifications E-108.
REFERENCE shall be made to sheet 185 "Abutment Details - Southbound Lanes" for embankment procedure note.

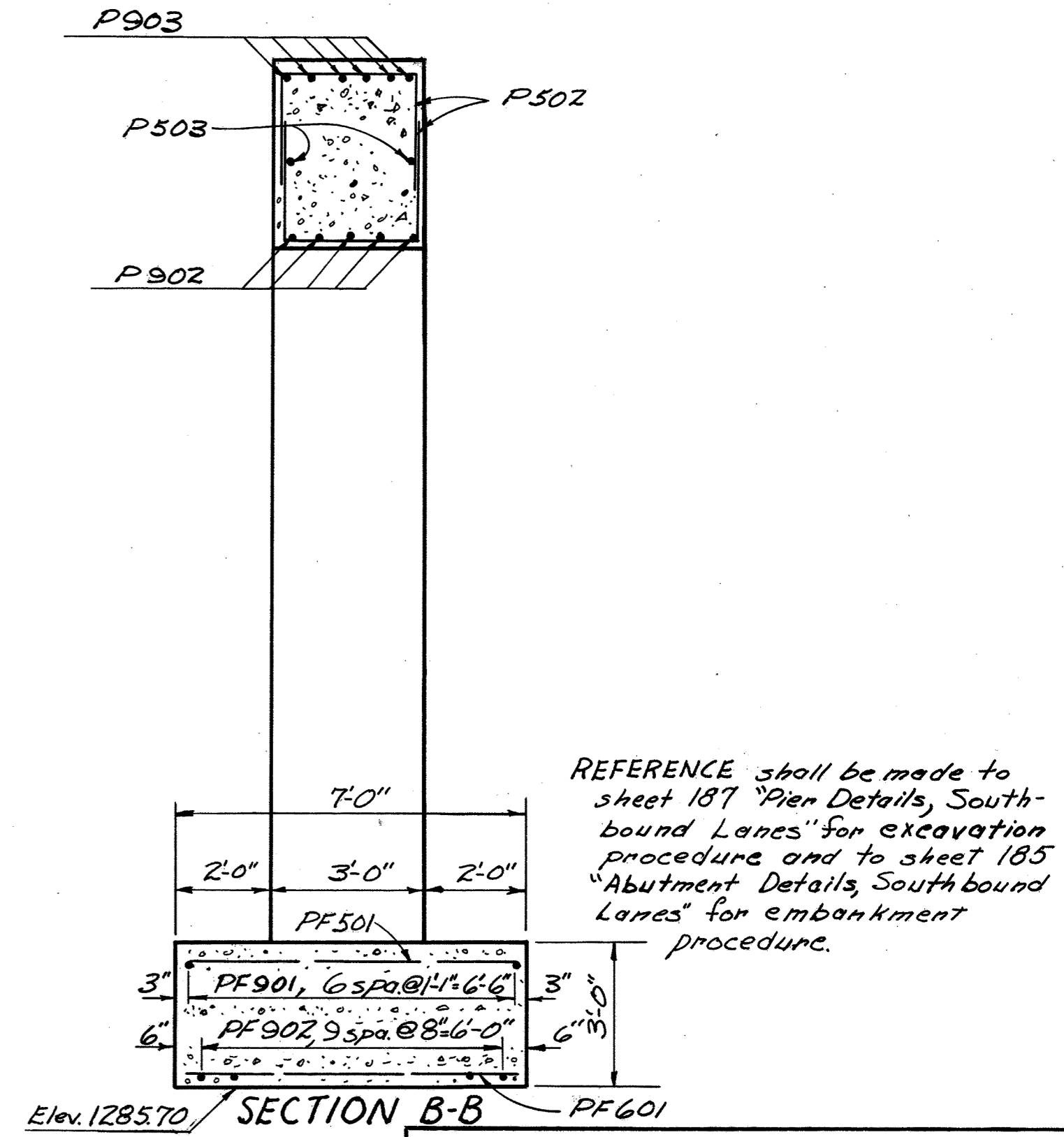
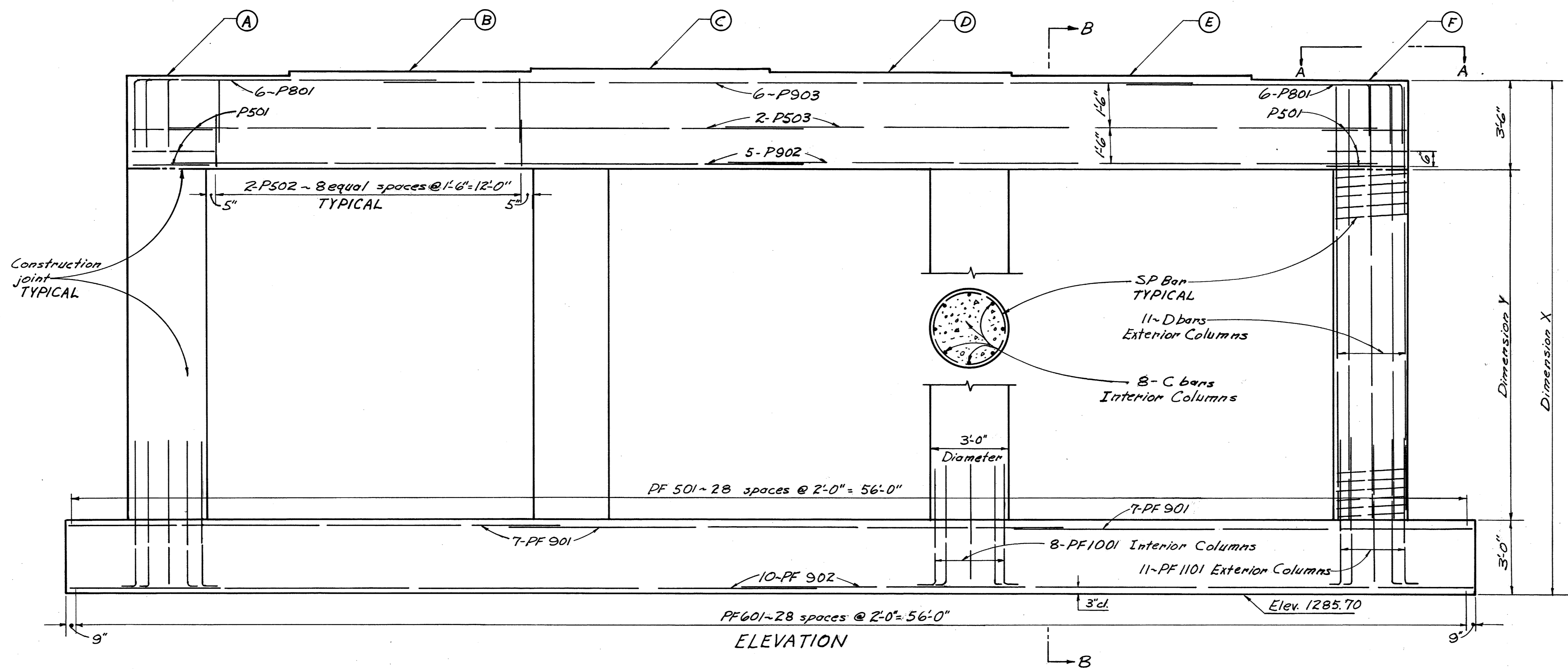
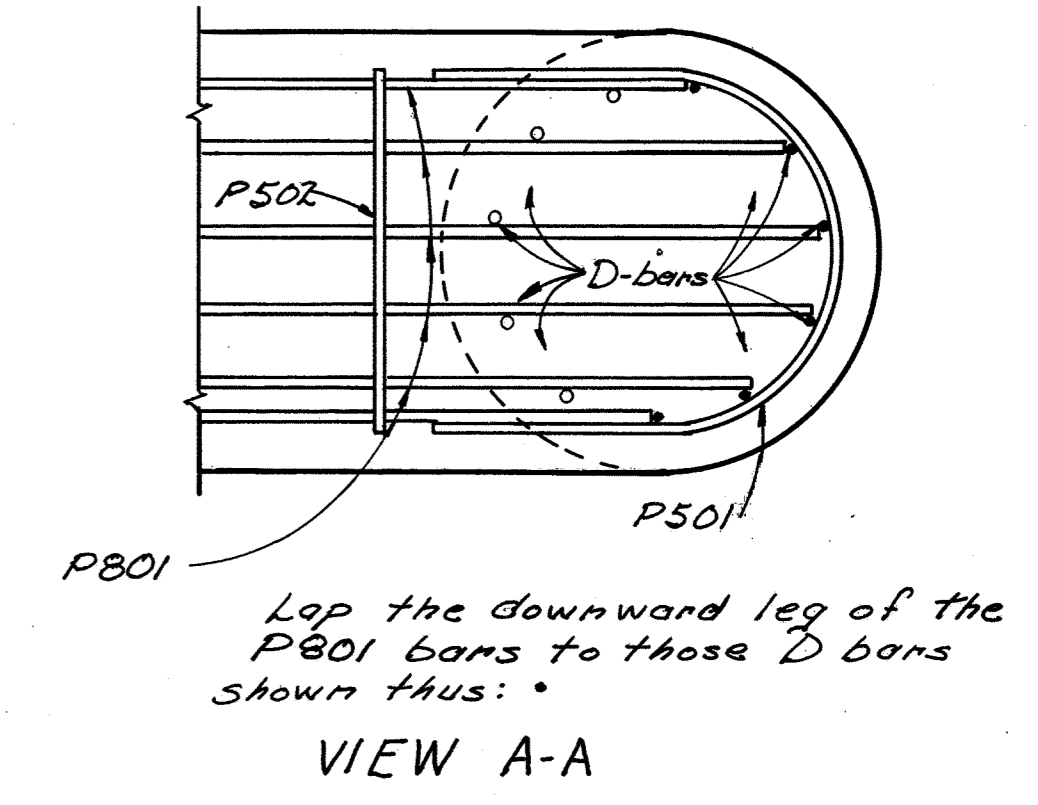
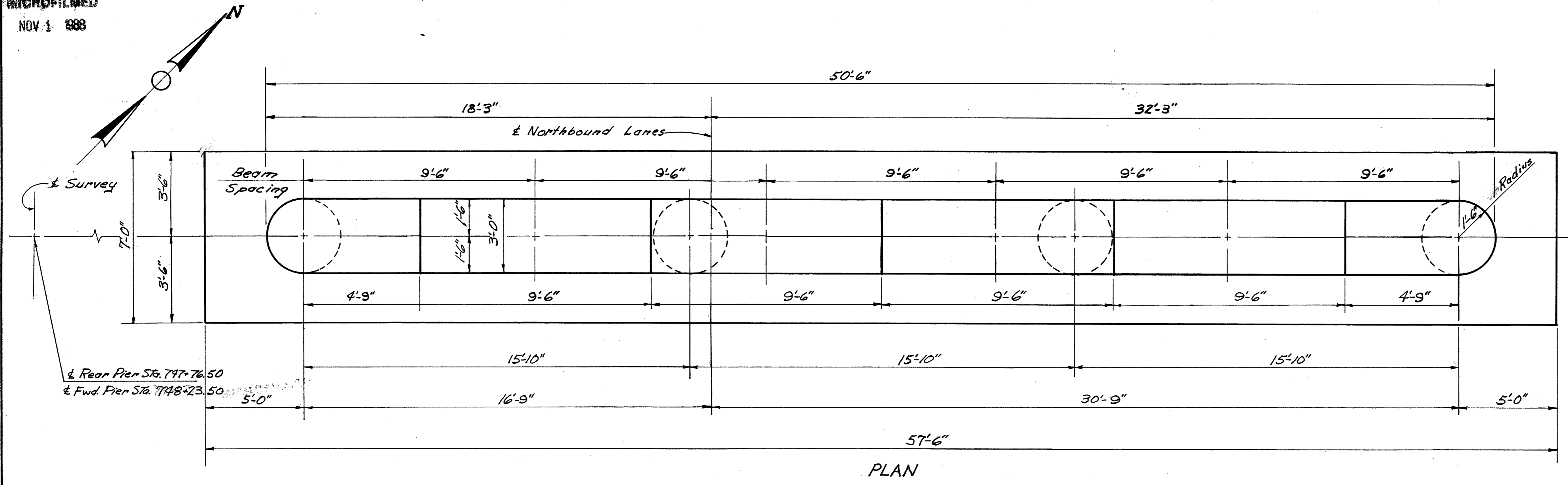
SPECIAL CARE shall be taken in the placing of reinforcing steel in the pier cap so as to avoid interference with the drilling of anchor bar holes.
CONCRETE above the footings shall be Class "C". Footing concrete shall be Class "E" and payment will be made on that basis but Class "C" concrete may be used for any or all parts of the footings.

Location	ELEVATIONS						BAR MARKS		DIMENSIONS	
	A	B	C	D	E	F	C bar	SP bar	X	Y
Rear Pier	1306.03	1306.17	1306.32	1306.24	1306.09	1285.70	P100Z	SP401	20'-4"	13'-10"
Forward Pier	1307.41	1307.56	1307.71	1307.62	1307.47	1285.70	P1003	SP402	21'-9"	15'-3"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS
SOUTHBOUND LANES
BRIDGE No. RIC-13-1417 L&R
OVER RAMP "A"
RICHLAND COUNTY STA. 747+4125
STA. 748+58.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGB	JGB	PE.M	DM	BFG	4-6-61	



REFERENCE shall be made to sheet 187 "Pier Details, Southbound Lanes" for excavation procedure and to sheet 185 "Abutment Details, Southbound Lanes" for embankment procedure.

SPECIAL CARE shall be taken in the placing of reinforcing steel in the pier cap so as to avoid interference with the drilling of anchor bar holes.

CONCRETE above the footings shall be Class "C". Footing concrete shall be Class "E" and payment will be made on that basis but Class "C" concrete may be used for any or all parts of the footings.

Location	ELEVATIONS						BAR MARKS			DIMENSIONS	
	A	B	C	D	E	F	D bar	C bar	SP bar	X	Y
Rear Pier	1306.09	1306.24	1306.32	1306.17	1306.02	1305.87	P1102	P1002	SP901	20'-2"	13'-8"
Forward Pier	1307.47	1307.62	1307.70	1307.55	1307.41	1307.26	P1103	P1003	SP902	21'-6 3/4"	15'-0 3/4"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

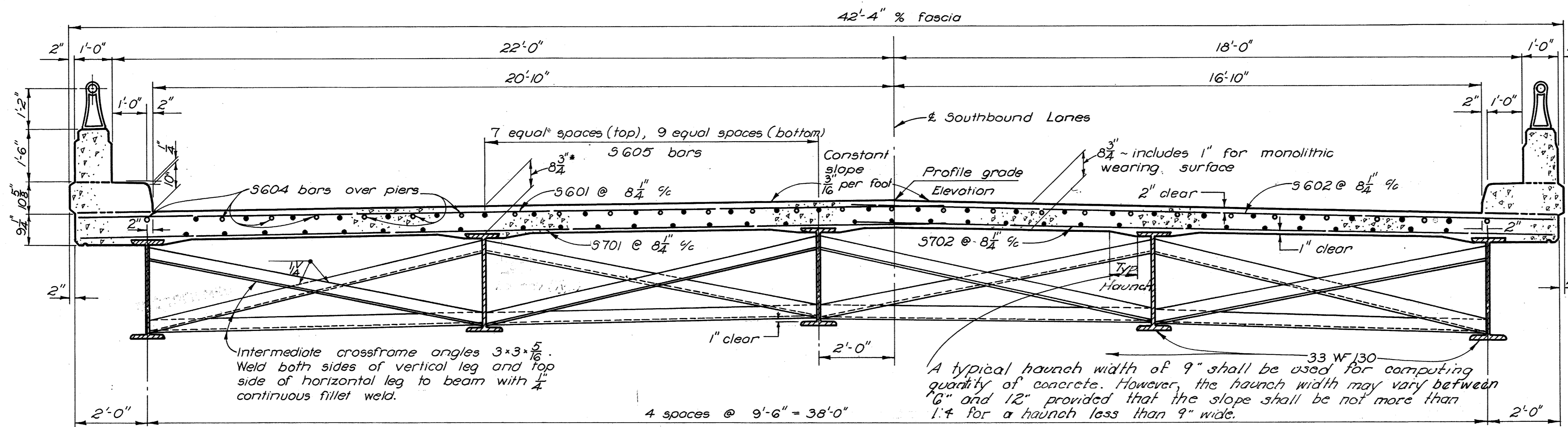
PIER DETAILS
NORTHBOUND LANES
BRIDGE No. RIC-13-1417 L&R
RAMP "A"

RICHLAND COUNTY STA. 747+41.25
STA. 748+58.75

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
JGB	JGB	P.E.M.	D.M.	BFG	4-6-61	

See Std. Dwg. AR-1-57 for railing details (Type "A" posts)

RIC-13 (10.83-13.95)

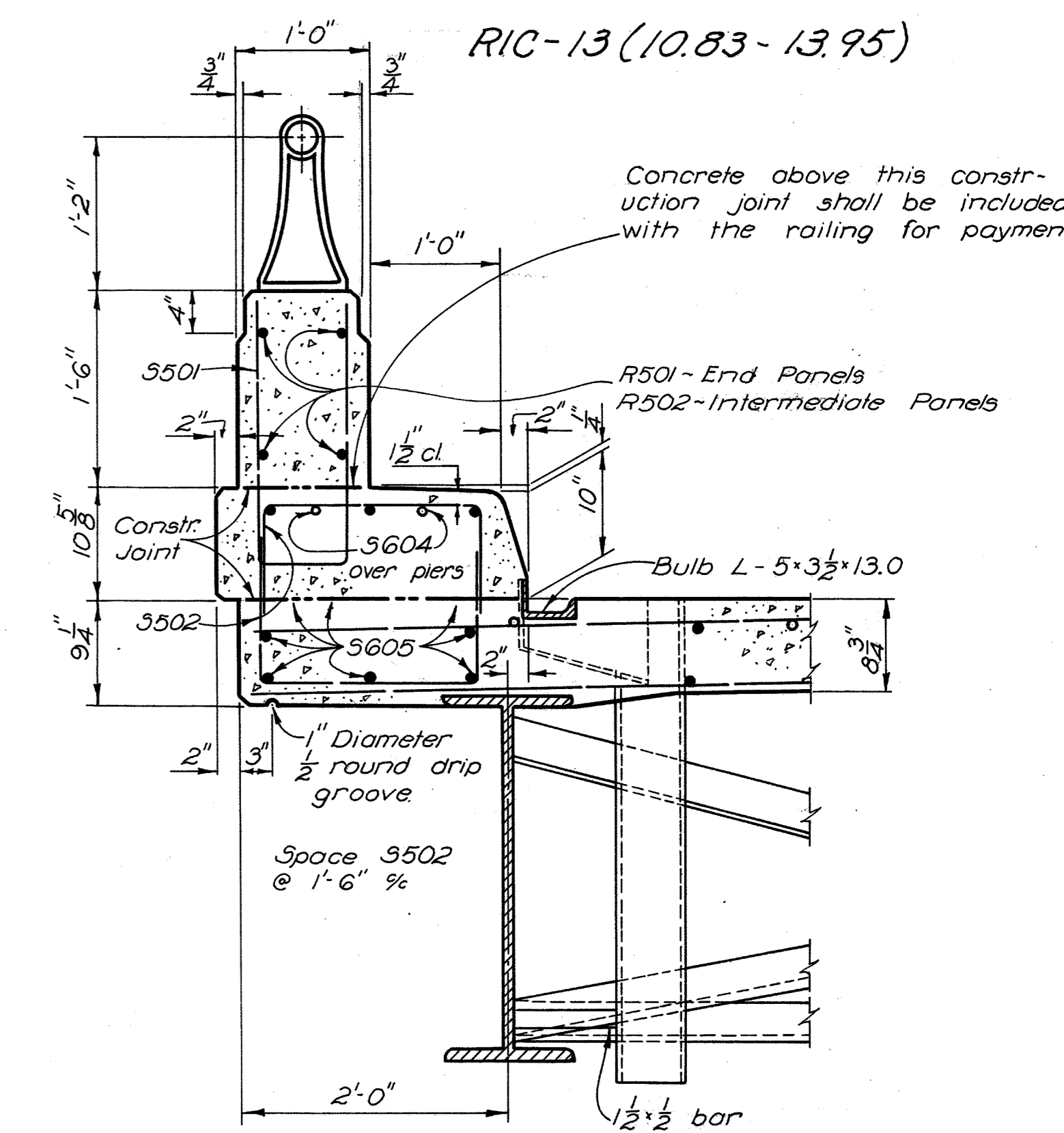


* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

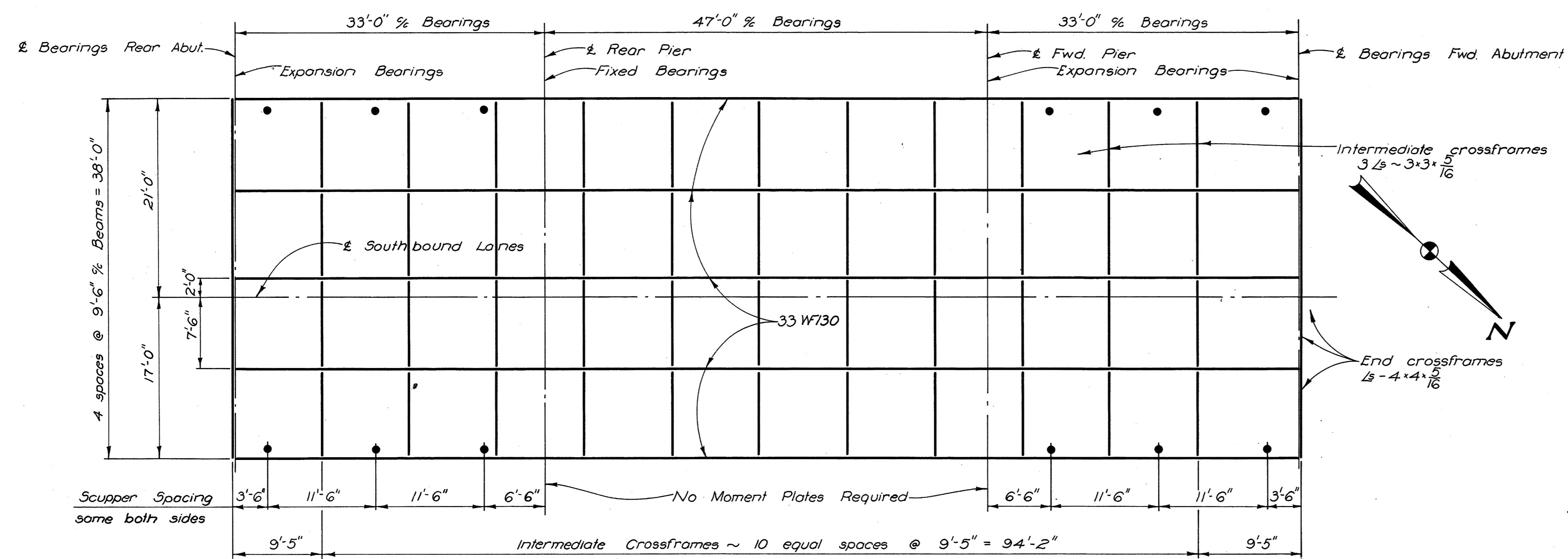
TRANSVERSE SECTION

CONCRETE shall be Class "C".

ADDITIONAL DETAILS: For additional details see Standard Drawing CSB-2-56.



PART TRANSVERSE SECTION



STEEL FRAMING PLAN

LOCATION	Outside Beams		Inside Beams	
	End Span	Center Span	End Span	Center Span
Deflection due to weight of steel	-	-	-	-
Deflection due to remaining dead load	-	1/8"	-	3/16"
Sum of Deflection	-	1/8"	-	3/16"
Required Camber	0	0	0	0

BEAM SPLICE WELDING PROCEDURE

1. Raising of the beams at the abutments is not required.
2. Butt-weld the beam flanges and web, using the following sequence: make two passes on the web, then two on each flange; repeat, using one or two passes at each location, until welds are completed.

For end-preparation of beams and additional splice details see Std. Dwg. SD-163, Sht. 1.

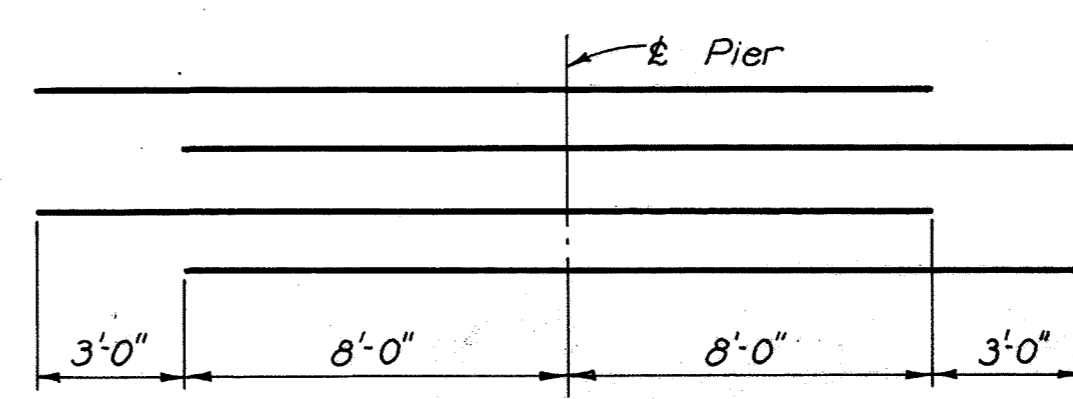


DIAGRAM SHOWING PLACEMENT OF S604 BARS OVER PIERS

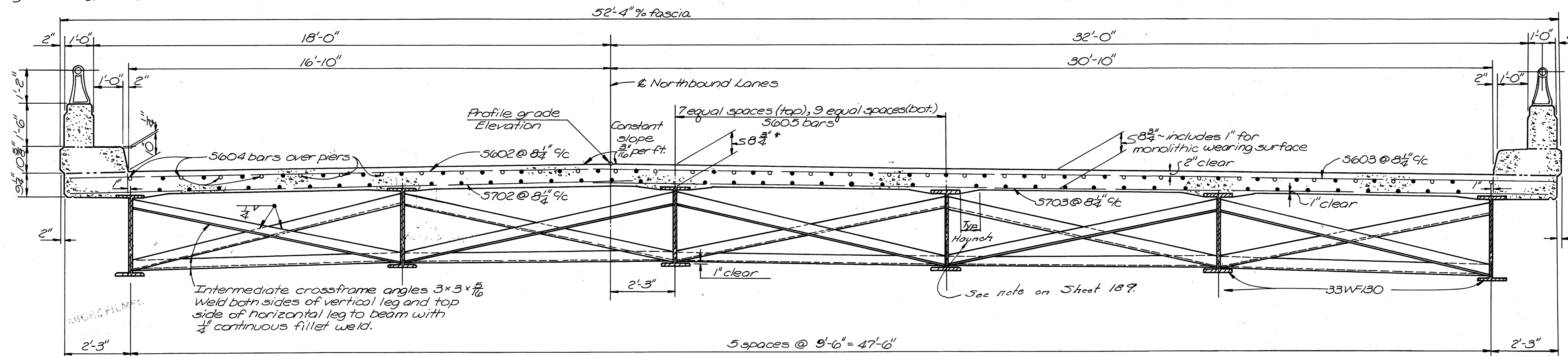
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS
SOUTHBOUND LANES
BRIDGE No. RIC-13-1417 L & R
OVER RAMP "A"

RICHLAND COUNTY STA. 747 + 41.25
STA. 748 + 58.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGB	JGB	G.P.G.	DM	BFG	9/17/66	

See Std. Dwg. AP-1-57 for railing details (Type "A" posts.)

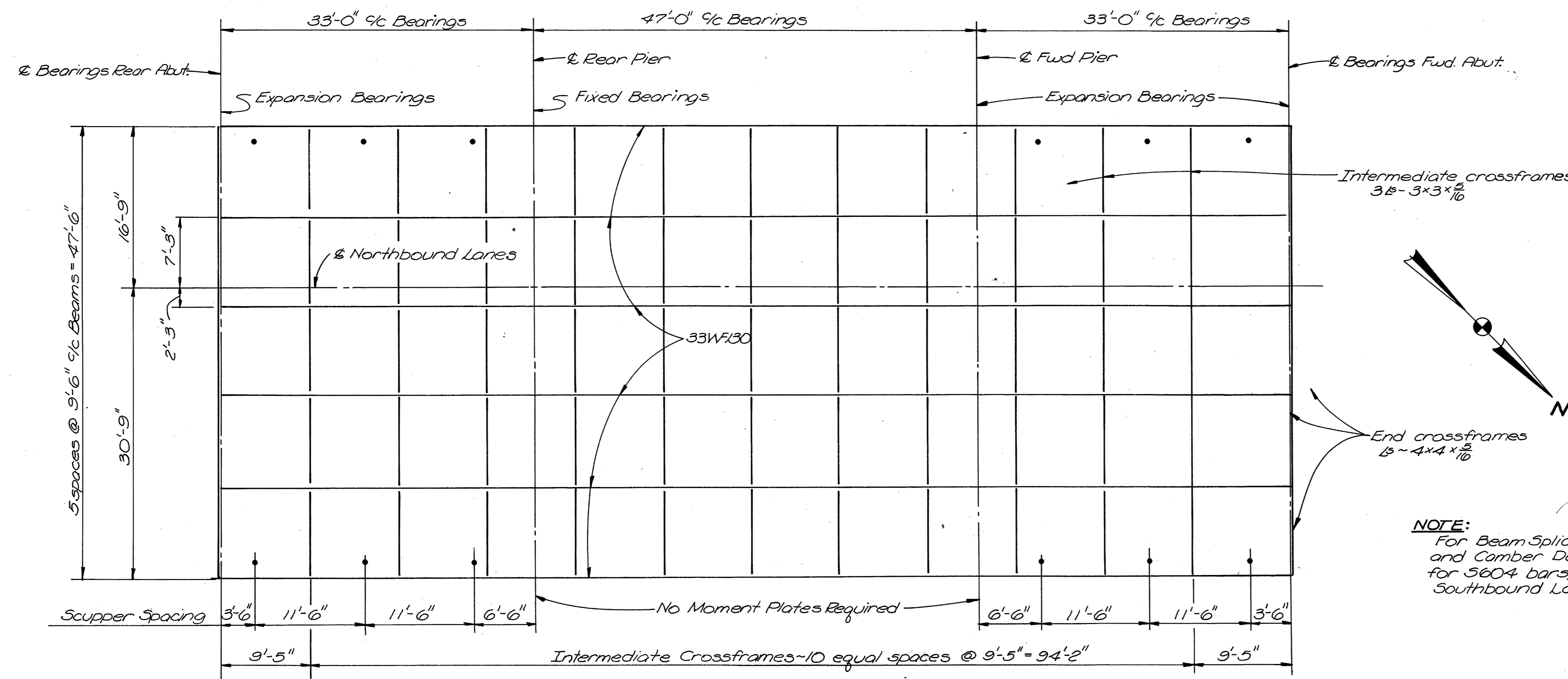


*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

TRANSVERSE SECTION

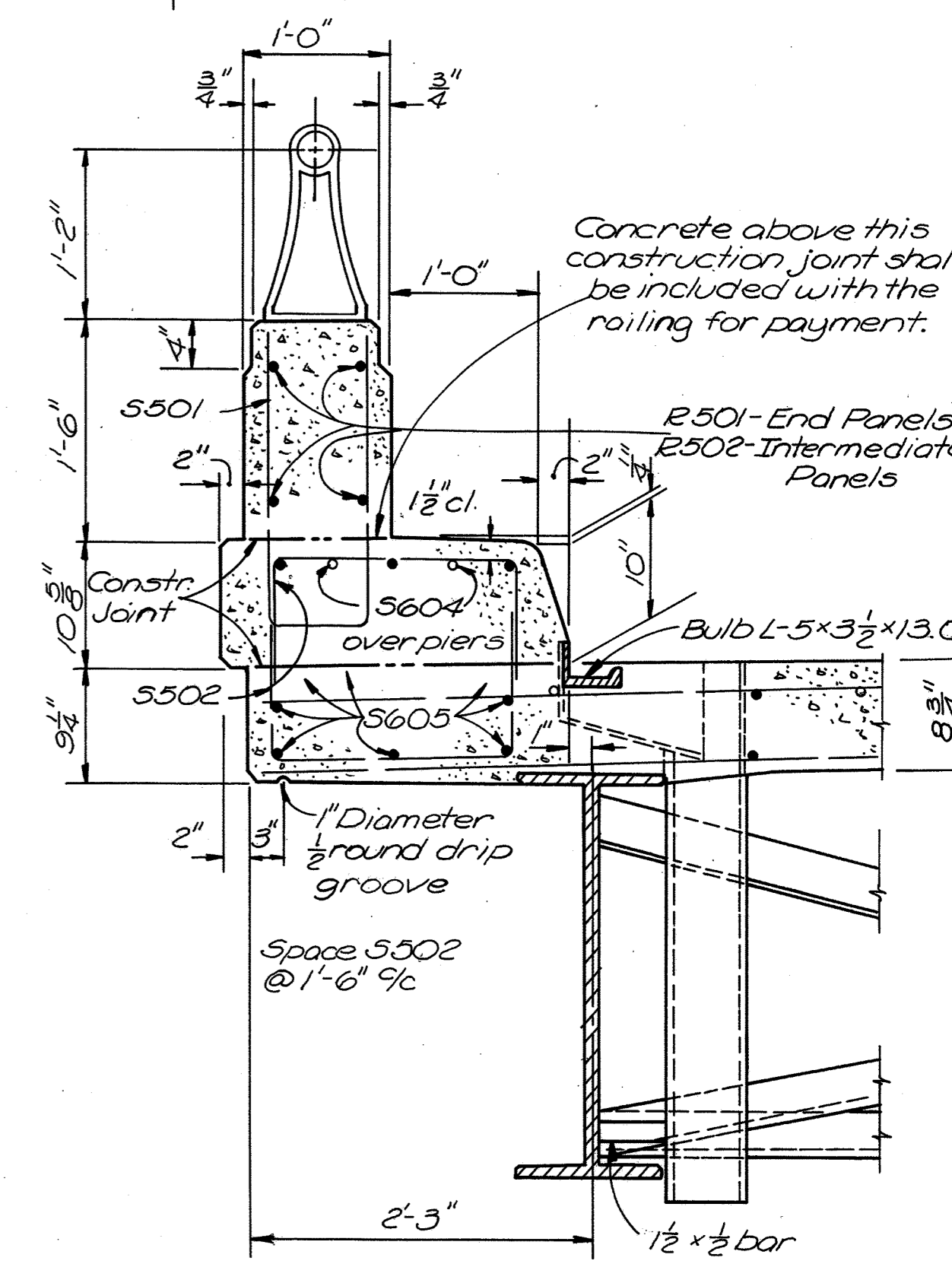
CONCRETE shall be Class "C".

ADDITIONAL DETAILS: For additional details see Standard Drawing C5B-2-56.



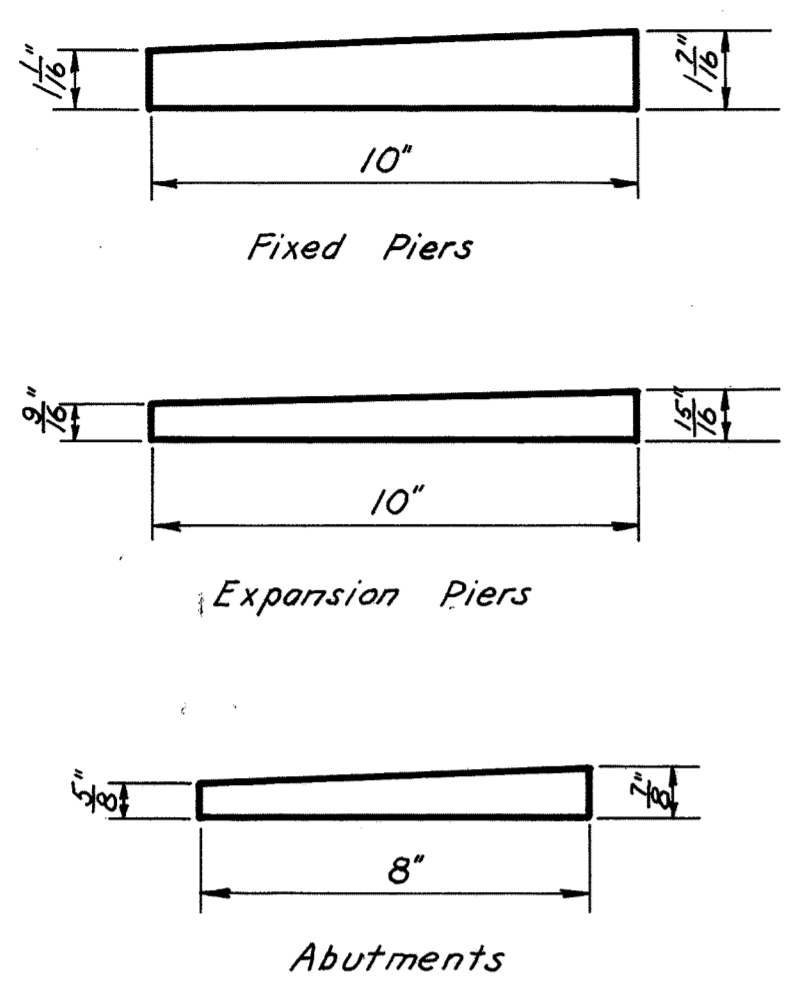
STEEL FRAMING PLAN

NOTE:
For Beam Splice Welding Procedure, Deflection and Camber Details, and Placement Diagram for 5604 bars, see "Superstructure Details - Southbound Lanes".

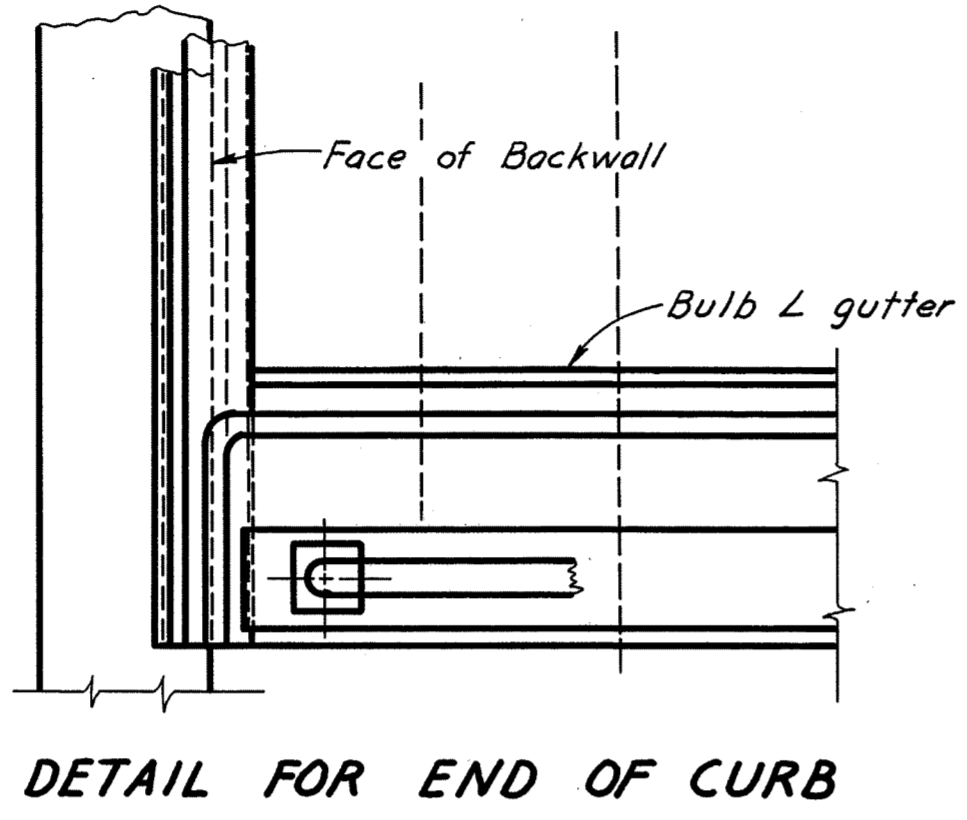


PART TRANSVERSE SECTION

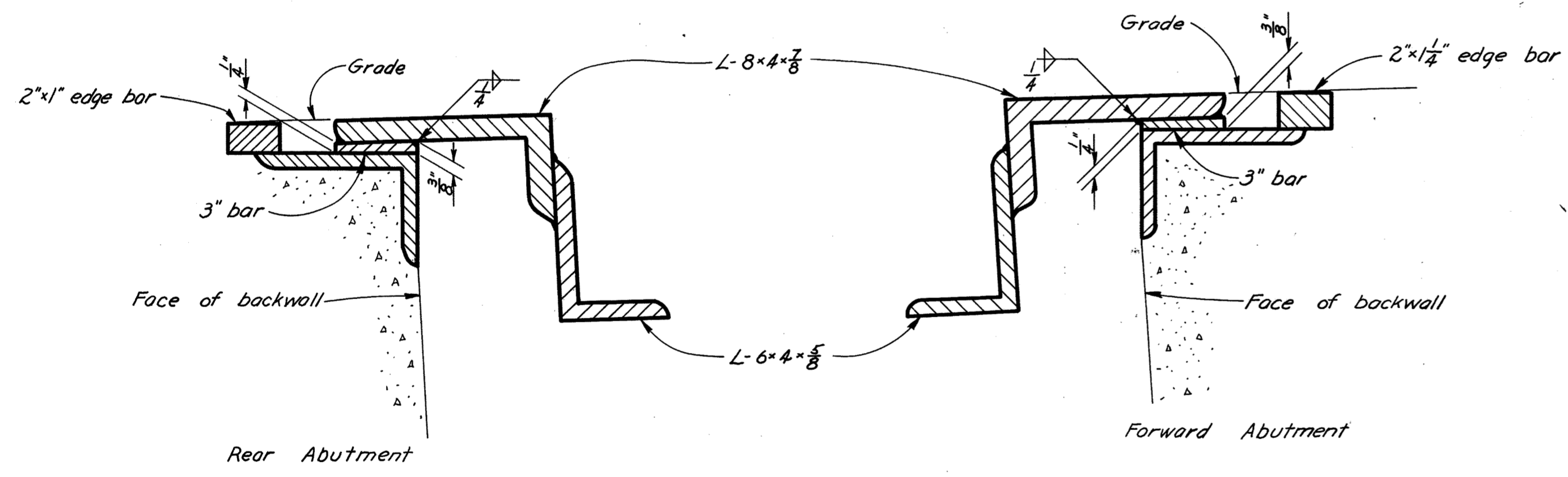
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SUPERSTRUCTURE DETAILS						
NORTH BOUND LANES						
Bridge No. RIC-13-1417 L & R over EAMP "A"						
RICHLAND COUNTY STA. 747+41.25 STA. 748+58.75						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGB	JGB	M.K.H.	J.M.	B.F.G.	4-6-61	



SOLE PLATES



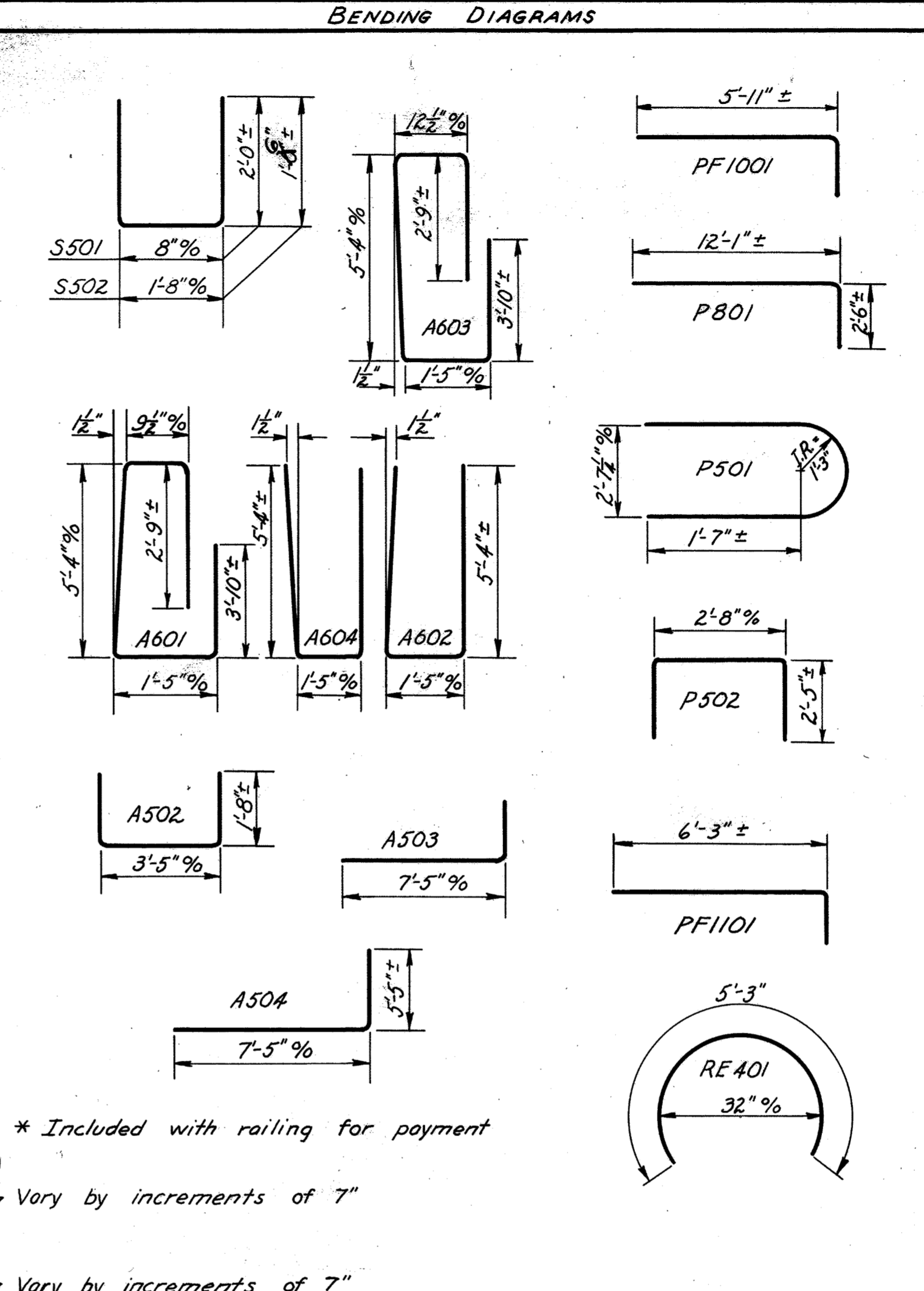
DETAIL FOR END OF CURB



MODIFICATION OF END DAM
(For additional End Dam Details see Std. Dwg. C.S.B-2-56.)

REINFORCING STEEL LIST

MARK	No.		TOTAL LENGTH	WEIGHT		SHR
	S.B. LANES	N.B. LANES		S.B. LANES	N.B. LANES	
Superstructure						
S701	166	166	23'-11"	8,115		S
S702	166	166	19'-11"	6,758	6,758	S
S703	166	166	33'-11"		11,508	S
S601	166	166	23'-10"	5,942		S
S602	166	166	19'-10"	4,945	4,945	S
S603	166	166	33'-10"		8,436	S
S604	64	78	142	19'-0"	1,826	S
S605	225	270	495	39'-4"	13,293	S
S501	158	158	316	4'-5"	728	B
S502	304	304	608	3'-5"	1,983	B
				4'-5"	1,400	
Railing						
R501	16	16	32	17'-1"	*	S
R502	40	40	80	15'-8"	*	S
Abutments						
A801	8	8	16	10'-9"	230	S
A601	24	36	60	13'-6"	487	B
A602	18	14	32	11'-9"	318	B
A603	24	36	60	13'-9"	496	B
A604	18	14	32	11'-9"	318	B
A501	40	40	80	21'-2"	883	S
A502	82	102	184	6'-6"	556	B
A503	82	102	184	7'-11"	677	B
A504	82	102	184	12'-8"	1,083	B
A505	8	8	16	29'-6"	246	S
A506	8	8	16	27'-2"	227	S
A507	8	8	16	24'-6"	204	S
A508	8	4	12	9'-2"	76	S
A509	8	8	16	9'-9"	81	S
A510	4	4	8	6'-9"	127	S
				8'-6"		
A511	4	4	8	7'-3"	136	S
				9'-0"		
A512	8	8	16	19'-0"	758	S
A513	8	4	12	5'-2"	43	S
A514	24	24	48	10'-3"	257	S
A515	8	8	16	22'-2"	185	S
A516	4	4	8	4'-9"	20	S
A517	8	8	16	24'-11"	225	S
A518	4	4	8	22'-6"	94	S
A519	4	4	8	9'-0"	38	S
A520	40	40	80	25'-11"	1,081	S
A521	8	8	16	34'-4"	286	S
A522	8	8	16	32'-7"	272	S



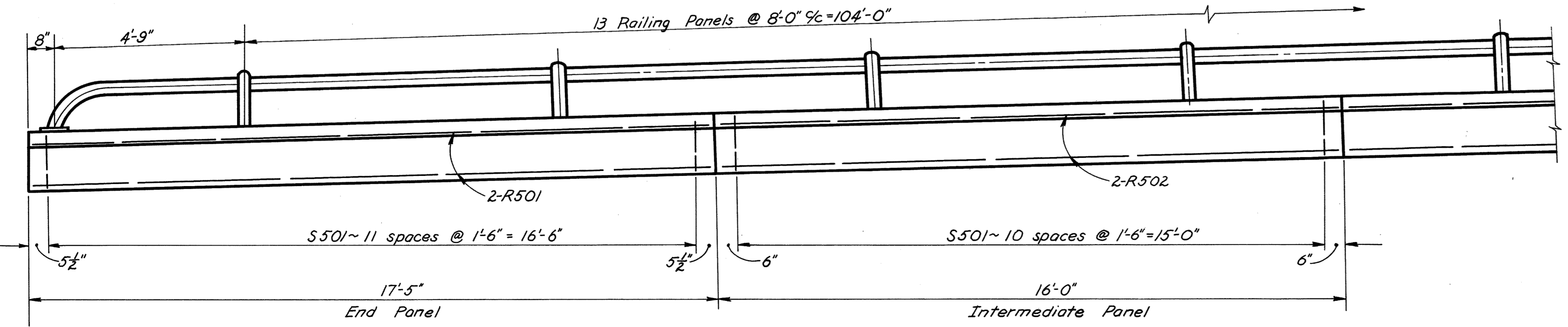
* Included with railing for payment
Vary by increments of 7"
Vary by increments of 7"

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A601 is a No. 6 size bar and P1001 is a No. 10 size.

MARK	No.		TOTAL LENGTH	WEIGHT		SHR		
	S.B. LANES	N.B. LANES		S.B. LANES	N.B. LANES			
Piers								
PF1101	44	44	7'-5"		1,734	B		
PF1001	60	32	92	7'-0"	1,807	B		
PF1002	66	66	18'-8"		5,301	S		
PF901	42	42	20'-11"		2,987	S		
PF902	40	40	30'-0"		4,080	S		
PF903	36	36	26'-3"		3,213	S		
PF601	50	58	108	6'-8"	501	S		
PF501	50	58	108	6'-8"	348	S		
P1101	12		12	2'-6"	1,371	S		
P1102	22	22	44	16'-11"	1,977	S		
P1103	22	22	44	18'-4"	2,143	S		
P1002	30	16	46	16'-11"	2,184	S		
P1003	30	16	46	18'-4"	2,367	S		
P901	24	24	48	21'-9"	1,775	S		
P902	20	20	40	26'-6"	1,802	S		
P903	12	12	24	31'-0"	1,265	S		
P801	24	24	48	14'-5"	924	B		
P501	12	12	24	7'-3"	91	B		
P502	88	108	196	7'-3"	665	B		
P503	8	8	16	24'-7"	205	S		
P504	8	8	16	19'-10"	165	S		
Replacement Bars								
RE1101		1	7'-6"			S		
RE1001		1	7'-2"			S		
RE901		1	6'-10"			S		
RE801		1	6'-6"			S		
RE701		2	6'-2"			S		
RE601		3	5'-11"			S		
RE501		1	5'-7"			S		
RE401		1	5'-3"			B		
Spiral Reinforcement								
MARK	No. S.B. LANES	Total No. N.B. LANES	Core Dia.	Length	Pitch	No. of Turns	WEIGHT S.B. LANES	N.B. LANES
SP401	3	4	7	32"	13'-10"	4 1/2	40	774
SP402	3	4	7	32"	15'-3"	4 1/2	44	853

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4. 1/2" closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.



STEEL PLACEMENT DIAGRAM FOR PARAPET

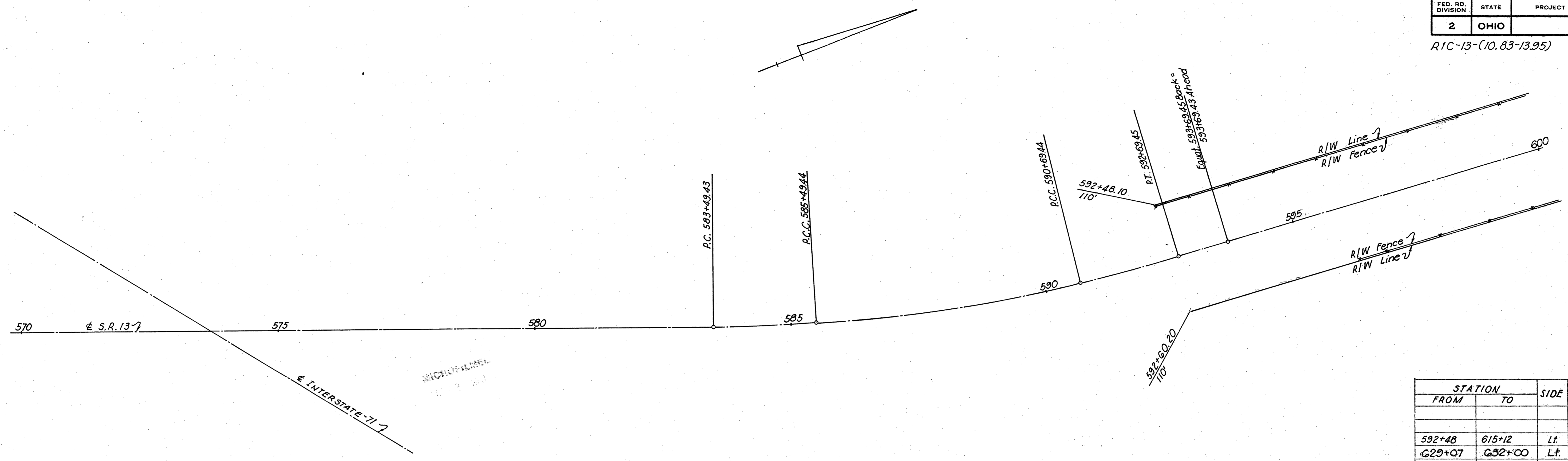
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

MISCELLANEOUS DETAILS
REINFORCING STEEL LIST

BRIDGE NO. RIC-13-1417 L&R
OVER RAMP "A"
RICHLAND COUNTY STA. 747+41.25
STA. 748+58.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGB	JGB	A.A.K.	DM	BFG	4-6-61	8-14-68

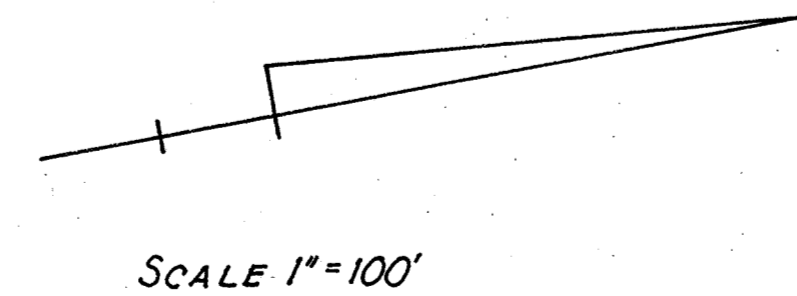
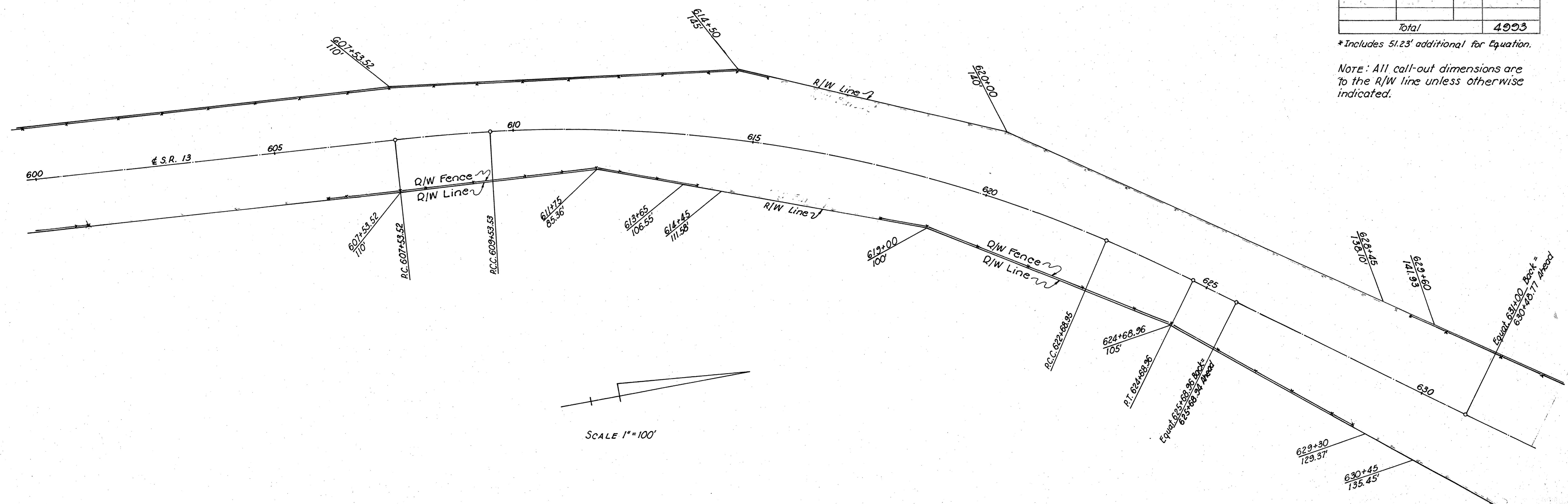
R1C-13-(10.83-13.95)

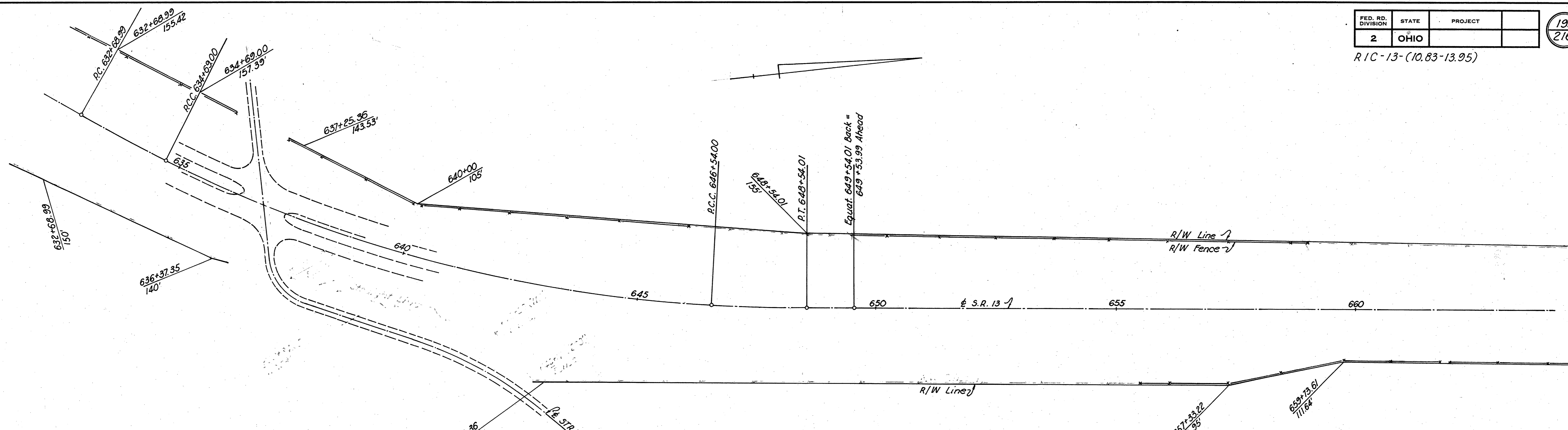


STATION FROM	STATION TO	SIDE	T-25 WOVEN WIRE FENCE TYPE 39 LIN. FT.
592+48	615+12	Lt.	2295
629+07	632+00	Lt.	* 344
596+00	601+00	Rt.	500
602+00	613+87	Rt.	774
618+00	629+00	Rt.	1080
Total			4993

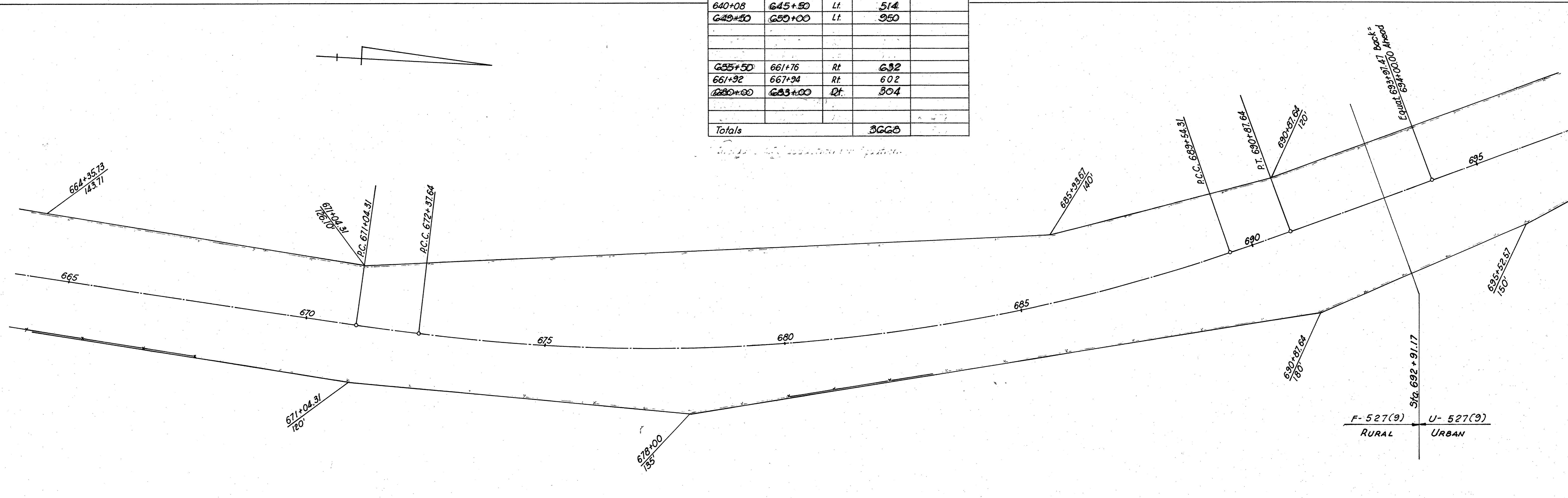
*Includes 51.23' additional for Equation.

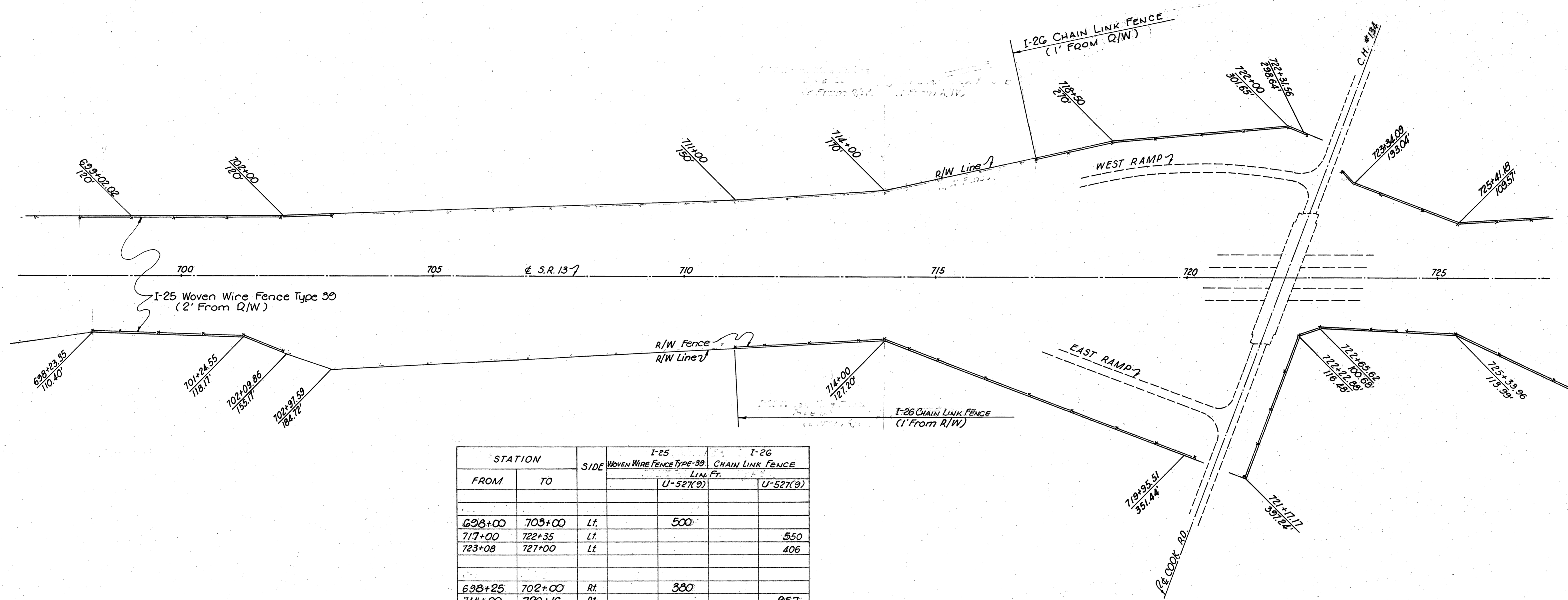
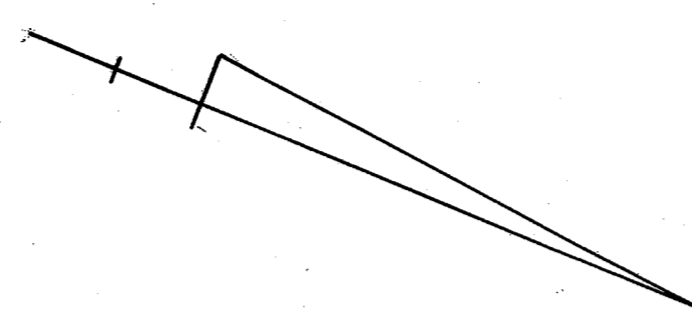
Note: All call-out dimensions are to the R/W line unless otherwise indicated.





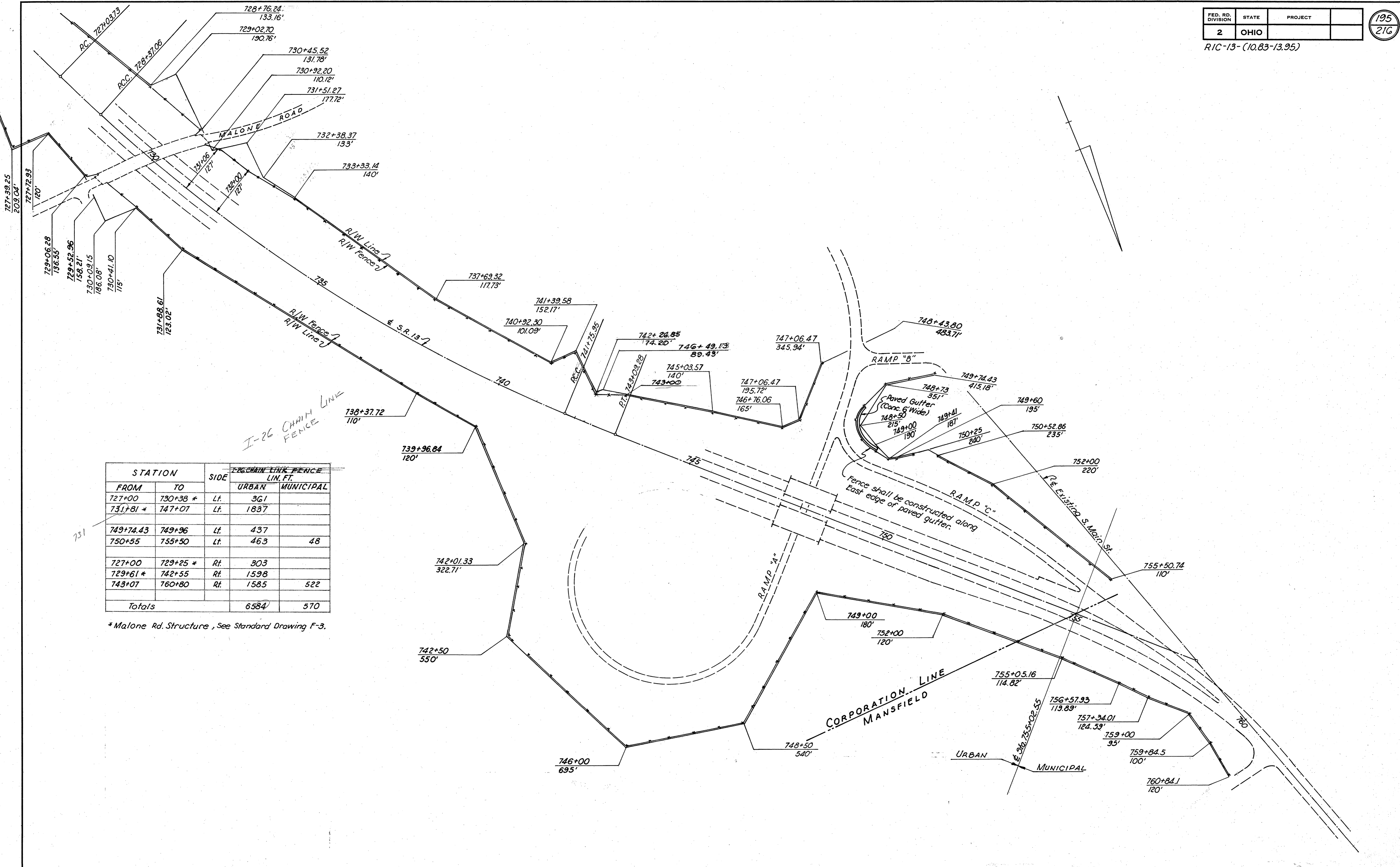
STATION		SIDE	I-25 WOVEN WIRE FENCE TYPE-30 LIN. FT.	
FROM	TO		F- 527(9)	U- 527(9)
632+00	635+62	Lt.	362	
636+88	639+92	Lt.	304	
640+08	645+50	Lt.	514	
649+50	650+00	Lt.	950	
Totals			3668	





STATION		SIDE	I-25 WOVEN WIRE FENCE TYPE 39		I-26 CHAIN LINK FENCE	
FROM	TO		LIN. FT.		LIN. FT.	
			U-527(9)		U-527(9)	
698+00	703+00	Lt.	500			
717+00	722+35	Lt.			550	
723+08	727+00	Lt.			406	
698+25	702+00	Rt.	380			
711+00	720+16	Rt.			957	
721+17	724+20	Rt.			522	
724+36	727+00	Rt.			278	
Totals			880		2713	

RIC-13-(10.83-13.95)



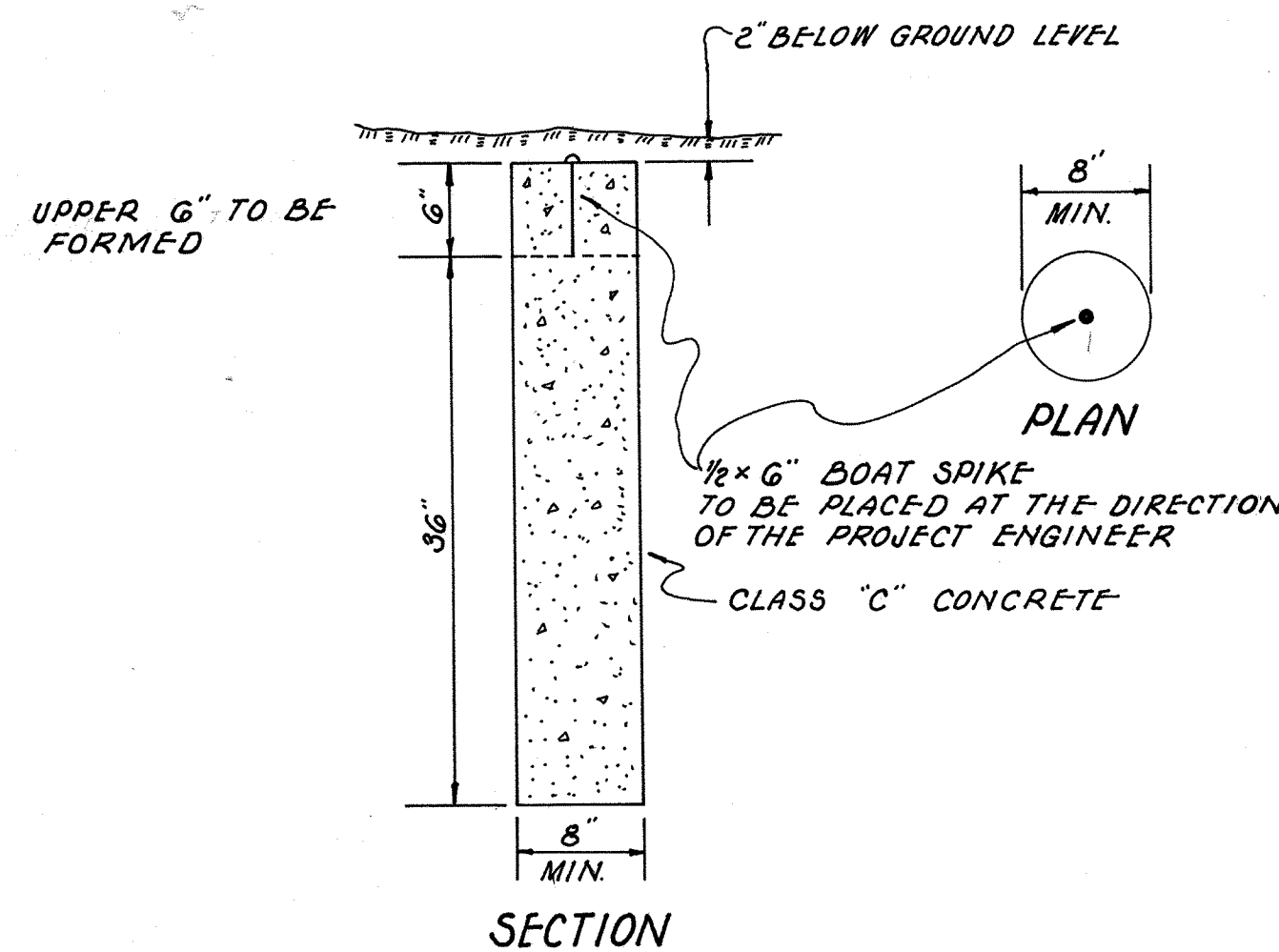
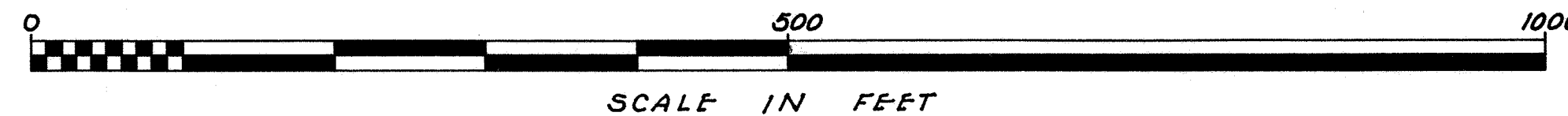
STATION		SIDE	I-26 CHAIN LINK FENCE LIN. FT.	
FROM	TO		URBAN	MUNICIPAL
727+00	730+38 *	Lf.	361	
731+81 *	747+07	Lf.	1837	
749+74.43	749+96	Lf.	437	
750+55	755+50	Lf.	463	48
727+00	729+25 *	Rt.	303	
729+61 *	742+55	Rt.	1598	
743+07	760+80	Rt.	1585	522
Totals			6584	570

* Malone Rd. Structure, See Standard Drawing F-3.

CENTERLINE LOCATION PLAN

RIC-13 - (10.83-13.95)

CITY OF MANSFIELD, WASHINGTON,
AND MADISON TOWNSHIPS
RICHLAND COUNTY, OHIO



QUAN.	STATION	LOCATION	REMARKS
	577+00	R.O.T.	# SURVEY
	583+49.43	P.C.	
	585+49.44	P.C.C.	
	590+69.44	P.C.C.	
	592+69.45	P.T.	
	600+00	R.O.T.	# SURVEY
	607+53.52	P.C.	
	609+53.53	P.C.C.	
	616+00	P.O.C.	
	622+68.95	P.C.C.	
	624+68.96	P.T.	
	631+00 BK. * 630+48.77 AD.	R.O.T.	# SURVEY
	632+68.99	P.C.	
	634+69.00	P.C.C.	
	640+00	P.O.C.	
	646+54.00	P.C.C.	
	648+54.01	P.T.	
	656+00	R.O.T.	# SURVEY
	664+00	R.O.T.	# SURVEY
	664+57.71	SEE DETAIL	CENTER OF SEC-3
	671+04.31	P.C.	# SURVEY
	672+37.64	P.C.C.	
	678+00	P.O.C.	
	684+00	P.O.C.	
	689+54.31	P.C.C.	
	690+87.64	P.T.	
	692+51.06	R.O.T.	# SURVEY
	693+00.06		
	698+00		
	705+00		
	712+00		
	720+00	R.O.T.	# SURVEY
	727+03.73	P.C.	
	728+37.06	P.C.C.	
	735+00	P.O.C.	
	741+75.95	P.C.C.	
	743+09.28	P.T.	
	750+00	R.O.T.	# SURVEY
	755+00	R.O.T.	# SURVEY
	758+14.13	P.I. (ANGLE RIGHT)	# SURVEY

QUAN.	STATION	LOCATION	REMARKS
	4+55.05	R.O.T.	# SOUTH MAIN (EX. SR-13)
	15+54.75	P.I. (ANGLE RIGHT)	# SOUTH MAIN (EX. SR-13)
*	759+29.86	R.O.T.	REPLACING EX. MONUMENT
*	762+47.19	R.O.T.	# SURVEY
STRAUB ROAD			
	17+00	R.O.T.	# SURVEY
	21+58.27	P.C.	
	22+85.08	P.T.	
	25+19.41	P.C.	
	28+35.99	P.T.	# SURVEY
COOK ROAD			
	13+00	R.O.T.	# SURVEY
	17+00	R.O.T.	# SURVEY

RECEIVED July 12 1961
RECORDED July 12 1961
PLAT BOOK 20 PAGE 122, 123, 124, 125 + 126
FEE PAID 9.00

A.D. Orndorff
RICHLAND COUNTY RECORDER

RECEIVED Dec 17 1965
RECORDED Dec 17 1965
PLAT BOOK 21 PAGE 116
FEE PAID 2.00 84300

W.H. Caspary
RICHLAND COUNTY RECORDER

This Improvement has been declared a Limited Access Highway by action of the Director of Highways and recorded in Volume 44 Page 834 of the Director's Journal.

I HEREBY CERTIFY THAT THE ACCOMPANYING PLAT IS A TRUE DELINEATION OF A SURVEY MADE BY THE DEPARTMENT OF HIGHWAYS STATE OF OHIO.

E. L. Johnson 6/29/61
DIVISION DEPUTY DIRECTOR - DIVISION No-3
REGISTERED SURVEYOR No. 2690

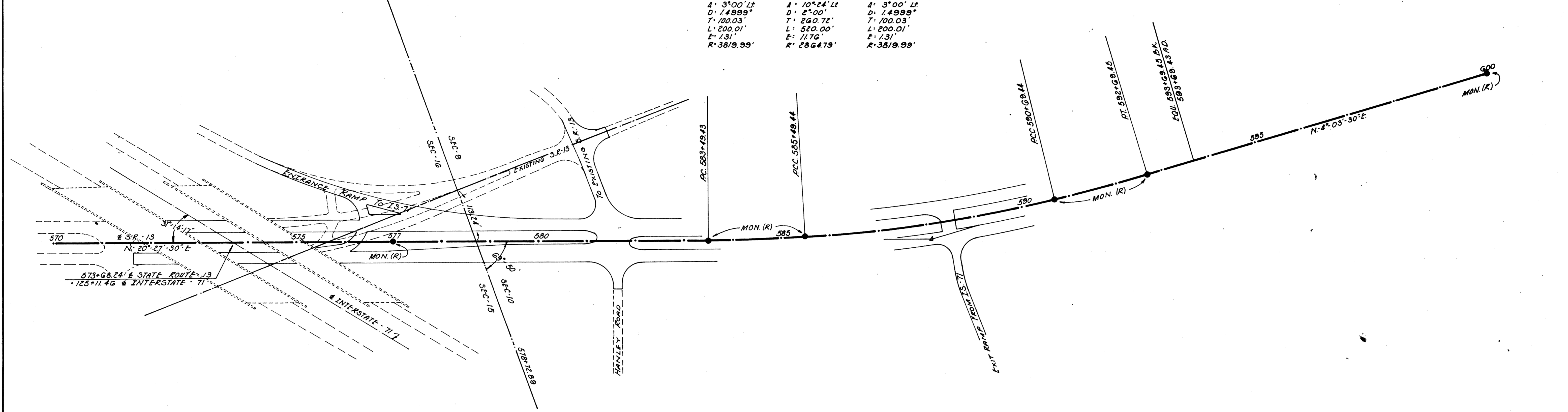
* MONUMENT ASSEMBLIES, AS SHOWN ON STANDARD CONSTRUCTION DRAWING R.I. 1 (REVISED 7/15/58) OF THE DEPARTMENT OF HIGHWAYS, ARE TO BE PLACED DURING CONSTRUCTION. ALL OTHER MONUMENTS ARE TO BE PLACED AFTER CONSTRUCTION.

MONUMENT SYMBOL ●

QUANTITIES
40 MONUMENT REFERENCE
11 MONUMENT ASSEMBLIES

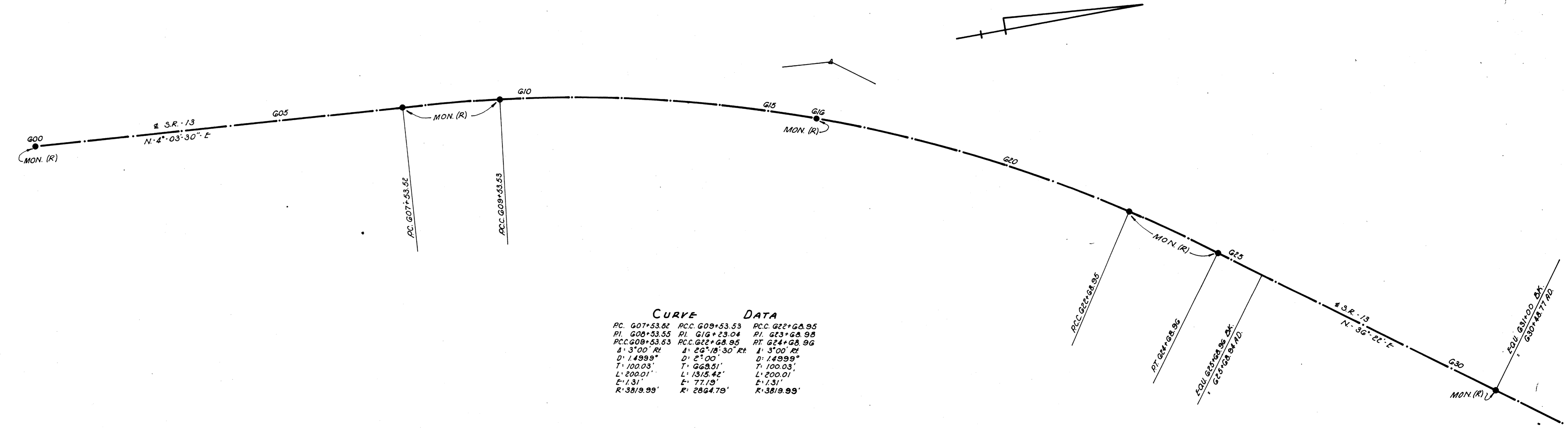
CURVE DATA

PC 583+49.43	PCC 585+49.44	PCC 590+69.44
PI 584+49.46	PI 588+10.16	PI 591+69.47
PCC 585+49.44	PCC 590+69.44	PT 592+69.45
A: 3°00' Lt	A: 10°24' Lt	A: 3°00' Lt
D: 14999'	D: 2°00'	D: 14999'
T: 100.03'	T: 260.72'	T: 100.03'
L: 200.01'	L: 520.00'	L: 200.01'
E: 1.31'	E: 1176'	E: 1.31'
R: 3819.99'	R: 2864.79'	R: 3819.99'



CURVE DATA

PC 607+53.02	PCC 609+53.53	PCC 622+68.95
PI 608+53.55	PI 616+23.04	PI 623+68.98
PCC 609+53.53	PCC 622+68.95	PT 624+68.96
A: 3°00' Rt	A: 26° 18' 30" Rt	A: 3°00' Rt
D: 14999'	D: 2°00'	D: 14999'
T: 100.03'	T: 669.51'	T: 100.03'
L: 200.01'	L: 1315.42'	L: 200.01'
E: 1.31'	E: 77.19'	E: 1.31'
R: 3819.99'	R: 2864.79'	R: 3819.99'



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

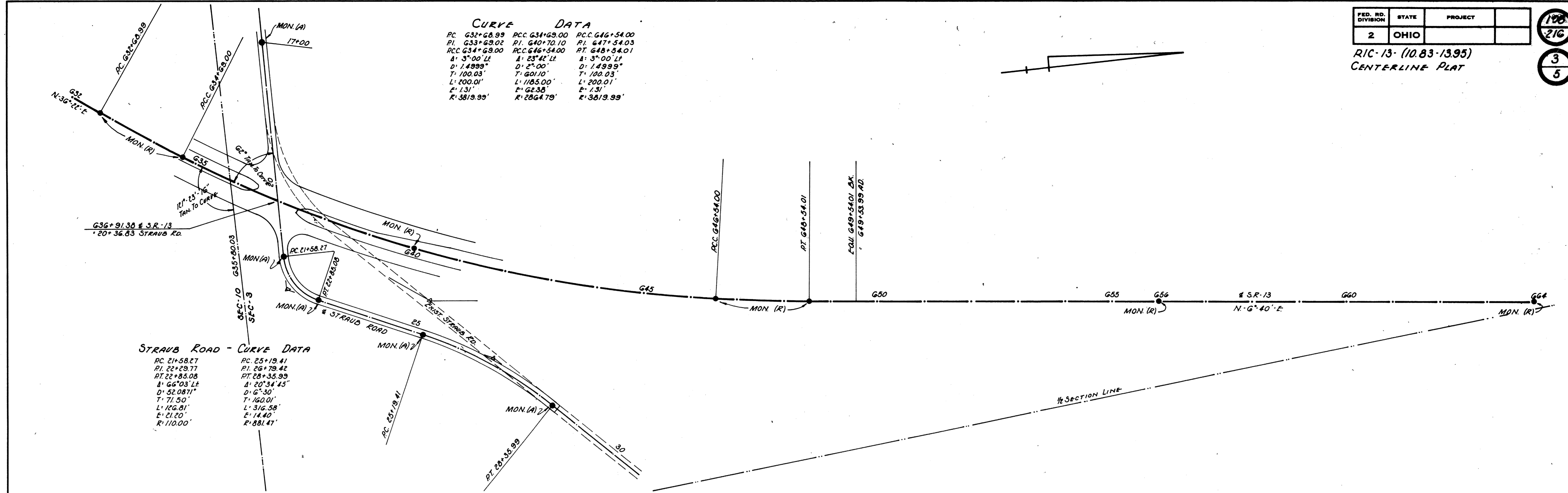
100
216

3
5

RIC-13- (10.83-13.95)
CENTERLINE PLAT

CURVE DATA

PC. 632+68.99	PCC. 634+69.00	PT. 646+54.00
PI. 633+69.02	PI. 640+70.10	PI. 647+54.03
PCC. 634+69.00	PCC. 646+54.00	PT. 648+54.01
A: 3°00' LT	A: 23°42' LT	A: 3°00' LT
D: 149.99'	D: 2°00'	D: 149.99'
T: 100.03'	T: 601.10'	T: 100.03'
L: 200.01'	L: 1185.00'	L: 200.01'
E: 1.31'	E: 62.38'	E: 1.31'
R: 3819.99'	R: 2864.79'	R: 3819.99'

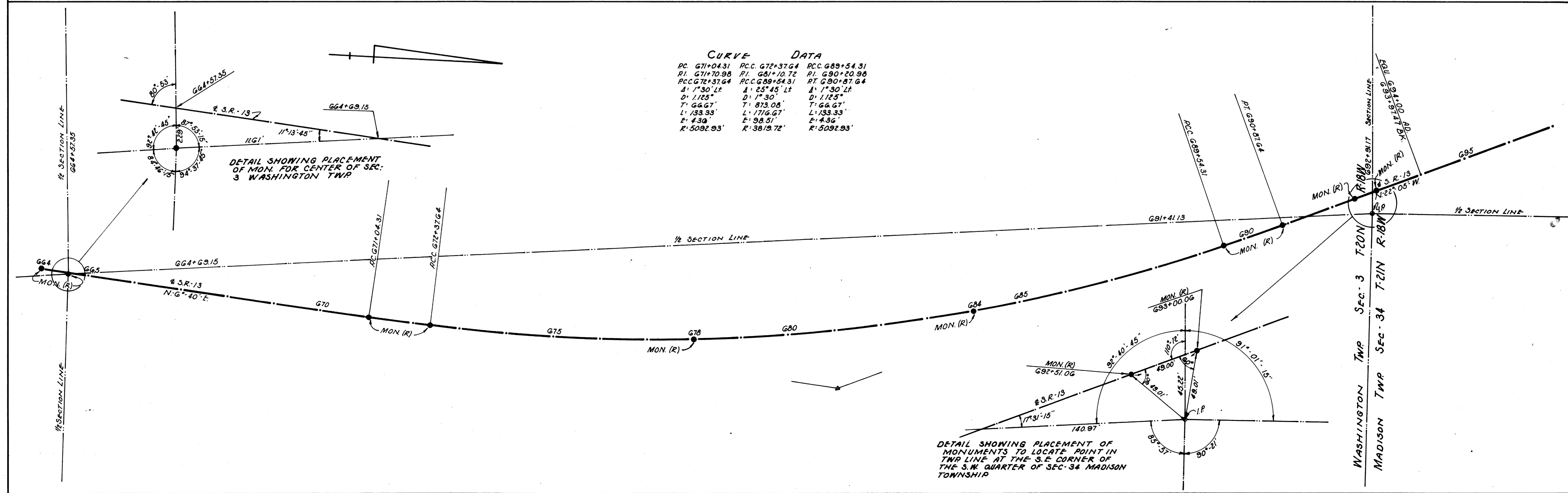


STRAUB ROAD - CURVE DATA

PC. 21+58.27	PC. 25+19.41
PI. 22+29.77	PI. 26+79.42
PT. 22+85.08	PT. 28+35.99
A: 66°03' LT	A: 20°34' 45"
D: 52.0871'	D: 6°30'
T: 71.50'	T: 160.01'
L: 126.81'	L: 316.58'
E: 21.20'	E: 14.40'
R: 110.00'	R: 881.41'

CURVE DATA

PC. 671+04.31	PCC. 672+37.64	PT. 689+54.31
PI. 671+70.98	PI. 681+10.72	PI. 690+20.98
PCC. 672+37.64	PCC. 689+54.31	PT. 690+87.64
A: 1°30' LT	A: 25°45' LT	A: 1°30' LT
D: 1125'	D: 1°30'	D: 1125'
T: 66.67'	T: 873.08'	T: 66.67'
L: 133.33'	L: 1716.67'	L: 133.33'
E: 4.30'	E: 98.51'	E: 4.36'
R: 5092.93'	R: 3819.72'	R: 5092.93'



DETAIL SHOWING PLACEMENT OF MON. FOR CENTER OF SEC. 3 WASHINGTON TWP

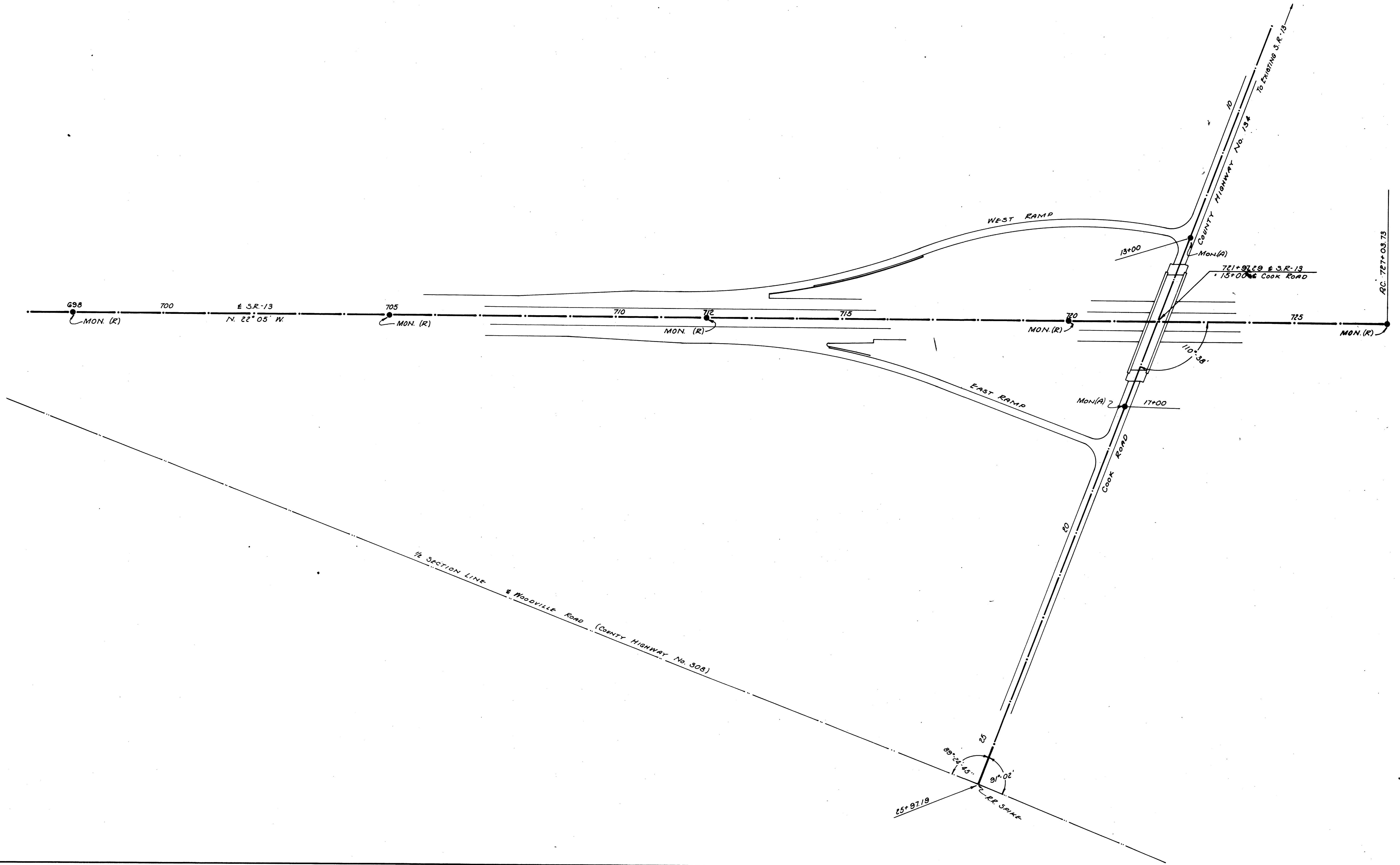
DETAIL SHOWING PLACEMENT OF MONUMENTS TO LOCATE POINT IN TWP LINE AT THE S.E. CORNER OF THE S.W. QUARTER OF SEC. 34 MADISON TOWNSHIP

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

198
21G

RIC-13-(1083-13.95)
CENTERLINE PLAT

4
5



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

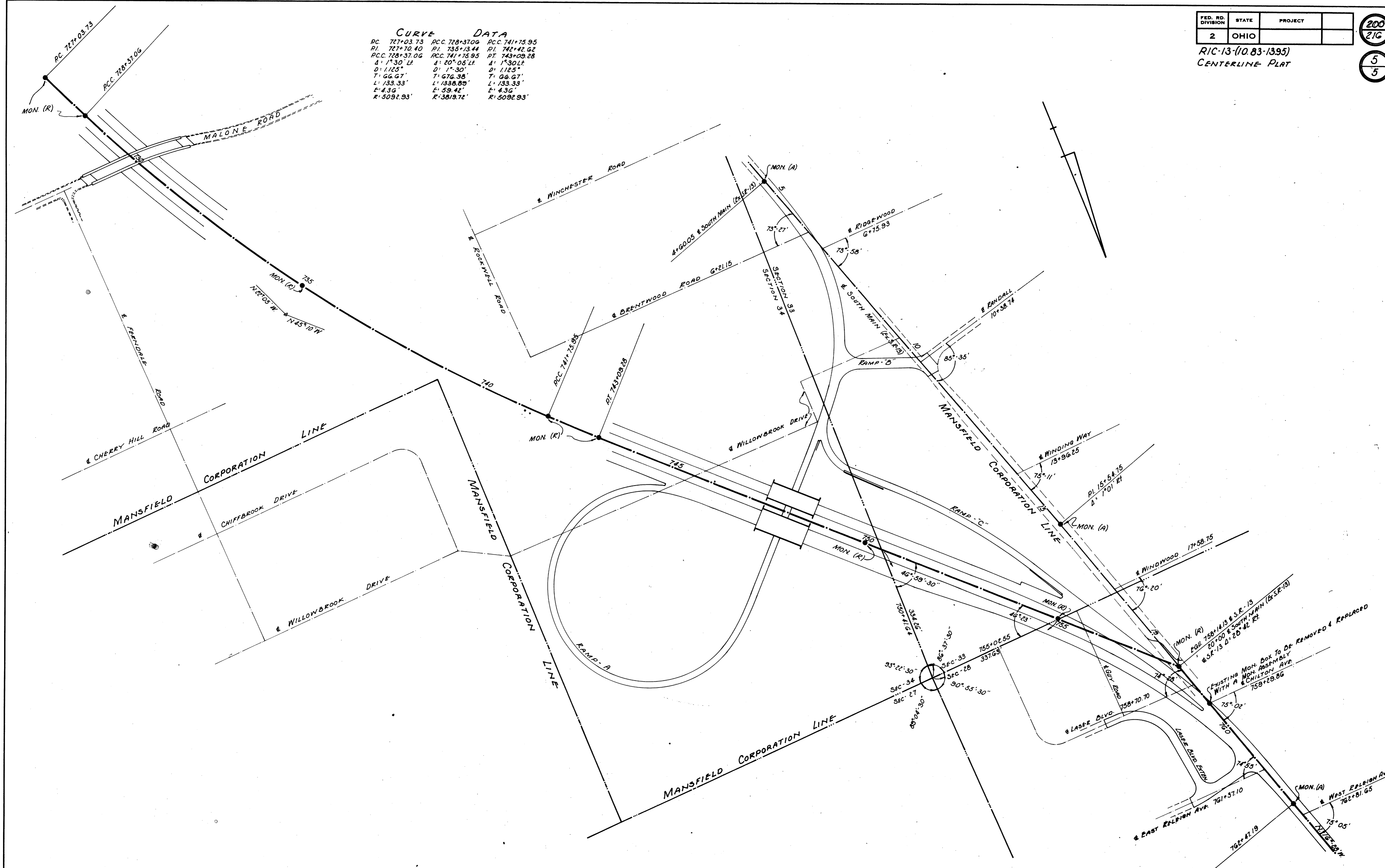
200
21C

RIC-13-(10.83-1395)
CENTERLINE PLAT

5
5

CURVE DATA

PC	PCC	PT	PC	PCC	PT	PC	PCC	PT
717+03.73	728+37.06	741+75.95	728+37.06	741+75.95	755+02.65	741+75.95	755+02.65	762+81.65
717+70.40	735+73.44	742+42.62	741+75.95	755+02.65	762+81.65	741+75.95	755+02.65	762+81.65
728+37.06	741+75.95	743+00.28	741+75.95	755+02.65	762+81.65	741+75.95	755+02.65	762+81.65
$\Delta: 1^{\circ}30'14''$	$\Delta: 20^{\circ}05'14''$	$\Delta: 1^{\circ}30'14''$	$\Delta: 1^{\circ}30'14''$	$\Delta: 1^{\circ}30'14''$	$\Delta: 1^{\circ}30'14''$	$\Delta: 1^{\circ}30'14''$	$\Delta: 1^{\circ}30'14''$	$\Delta: 1^{\circ}30'14''$
$D: 1125'$	$D: 1^{\circ}30'$	$D: 1125'$	$D: 1^{\circ}30'$	$D: 1125'$	$D: 1^{\circ}30'$	$D: 1125'$	$D: 1^{\circ}30'$	$D: 1125'$
$T: 66.67'$	$T: 676.38'$	$T: 66.67'$	$T: 66.67'$	$T: 66.67'$	$T: 66.67'$	$T: 66.67'$	$T: 66.67'$	$T: 66.67'$
$L: 133.33'$	$L: 1338.80'$	$L: 133.33'$	$L: 133.33'$	$L: 133.33'$	$L: 133.33'$	$L: 133.33'$	$L: 133.33'$	$L: 133.33'$
$E: 4.36'$	$E: 59.42'$	$E: 4.36'$	$E: 4.36'$	$E: 4.36'$	$E: 4.36'$	$E: 4.36'$	$E: 4.36'$	$E: 4.36'$
$R: 5092.93'$	$R: 3819.72'$	$R: 5092.93'$	$R: 5092.93'$	$R: 5092.93'$	$R: 5092.93'$	$R: 5092.93'$	$R: 5092.93'$	$R: 5092.93'$



S.R. 13 Sec. 10.98 RICHLAND COUNTY, OHIO
SUMMARY OF ADDITIONAL

TOTAL No OF OWNERS 74
RIGHT OF WAY REQUIRED

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-13-10.98
RIGHT OF WAY PLANS
Sold as RIC-13-(10.83-13.95)

201
216

1
16

PARCEL NO.	PROPERTY OWNER	DEED RECORD BOOK/PAGE	DEED AREA	TO BE ACQUIRED LAND/BLDGs	RESIDUE LEFT/RIGHT	SHEET NO.	REMARKS
1 LA	MILDRED REED NEDROW	482 60	1.32	0.18	1.14	4	
1 WA	" " "	300 37		0.12		4	
2 LA	JOHN J. & DEPTHANA CUNNING	363 504	33.12	3.20	2.92	4 & 5	
2 X	" " " " "			0.02		5	
2 Y	" " " " "			0.54		4	
2 WA	" " " " "			0.04		4	
3 LA	HARVEY W. FLECK	269 533	131.403	14.03	37.37	5, 6, 7	
3 X	" " " " "	156 279		0.01		5	
3 Y	" " " " "	241 549		0.06		5	
3 Z	" " " " "			0.17		6	
3 Z-1	" " " " "			0.40		6	
3 WA	" " " " "			0.22		5	
3 WA-1	" " " " "			0.05		5	
3 WA-2	" " " " "			0.07		6	
4 LA	RUSSELL W. BOLESKY	405 295	145.06	7.19	77.87	7 & 8	
4	" " " " "			0.21		7	
4 A	" " " " "			1.82		8	
4 X	" " " " "			0.16		7	
4 Y	" " " " "			0.42		7	
4 WA	" " " " "			0.01		7	
6 LA	" " " " "			10.34		8	
6 X	" " " " "			0.10		8	
5 LA	ORA A. & ROSEMARY YOHA	235 107	102	6.28	93.72	7 & 8	
5	" " " " "	425 487		0.42		7	
5 A	" " " " "			0.05		8	
5 X	" " " " "			0.03		7 & 8	
5 Y	" " " " "			0.15		8	
7 LA	MICHAEL F. & VIOLA IRENE CHILLEMI	311 521	120.55	6.21	114.34	8 & 9	
7 X	" " " " "			0.06		8	
7 Y	" " " " "			0.14		8	
8 LA	ARNOLD S., LEE R., FLORENCE E. & LEOPOLD ADAMS	379 151	160	1.05	157.6	8 & 9	
8A-LA	" " " " " " " " " " " "			1.25		9	
8 X	" " " " " " " " " " " "			0.10		8	
9 LA	CHARLES E. BROOKS	191 121	52.5	10.09	42.57	9	
9 X	" " " " "			.09		9	
10 LA	PAUL R. & ETHEL J. BOWDEN	348 355	6.11	0.47	5.64	9	
11 LA	ELOISE S. BUCHAN	253 527	8.23	3.44	4.79	9 & 10	
12	PAUL R. STIMENS	288 125	0.51	0.00		9 & 10	No R/W Needed
13 LA	JEANNE ANN WISE	428 141	0.53	0.39	YES	0.14	9 & 10
14 LA	PAUL R. STIMENS	288 125	0.74	0.69	YES	0.05	9 & 10
15 LA	JEWELL L. SALSGIVER	444 34	0.408	0.03	YES	0.378	9 & 10
16 LA	PAUL R. STIMENS	288 125	0.31	0.00		0.31	9 & 10
16A-LA	DUANE L. STIMENS	388 495	6.176			6.176	No R/W Taken
16B-LA	RUSSELL R. EVERMAN	496 61	0.984			0.984	No R/W Taken
17 LA	HENRY P. & LORAIN BARR	305 144	.50	0.03		0.47	9 & 10
18	HARRY J. JR. & ZELA MAE WELSH	454 146	.5				9 & 10
19	ALBON KARL RIEDER	303 313	.5				9 & 10
20 LA	MINNIE A. STIMENS	141 124	27.79	7.15	14.64	9, 10 & 11	
20 X	" " " " "	208 25		0.27		10	
21 LA	GLENN D. & ELIZABETH A. STIMENS	305 194	5.32	1.32	4.00	2.50	10
22	MAUD ADDLESPERGER	348 272	7.75	0.12		7.63	10 & 11
23 LA	W. F. BEAM	147 248	20.32	3.16	YES	16.55	10 & 11
23	" " " " "			0.61			11 & 16
23 WA	" " " " "			0.02			16

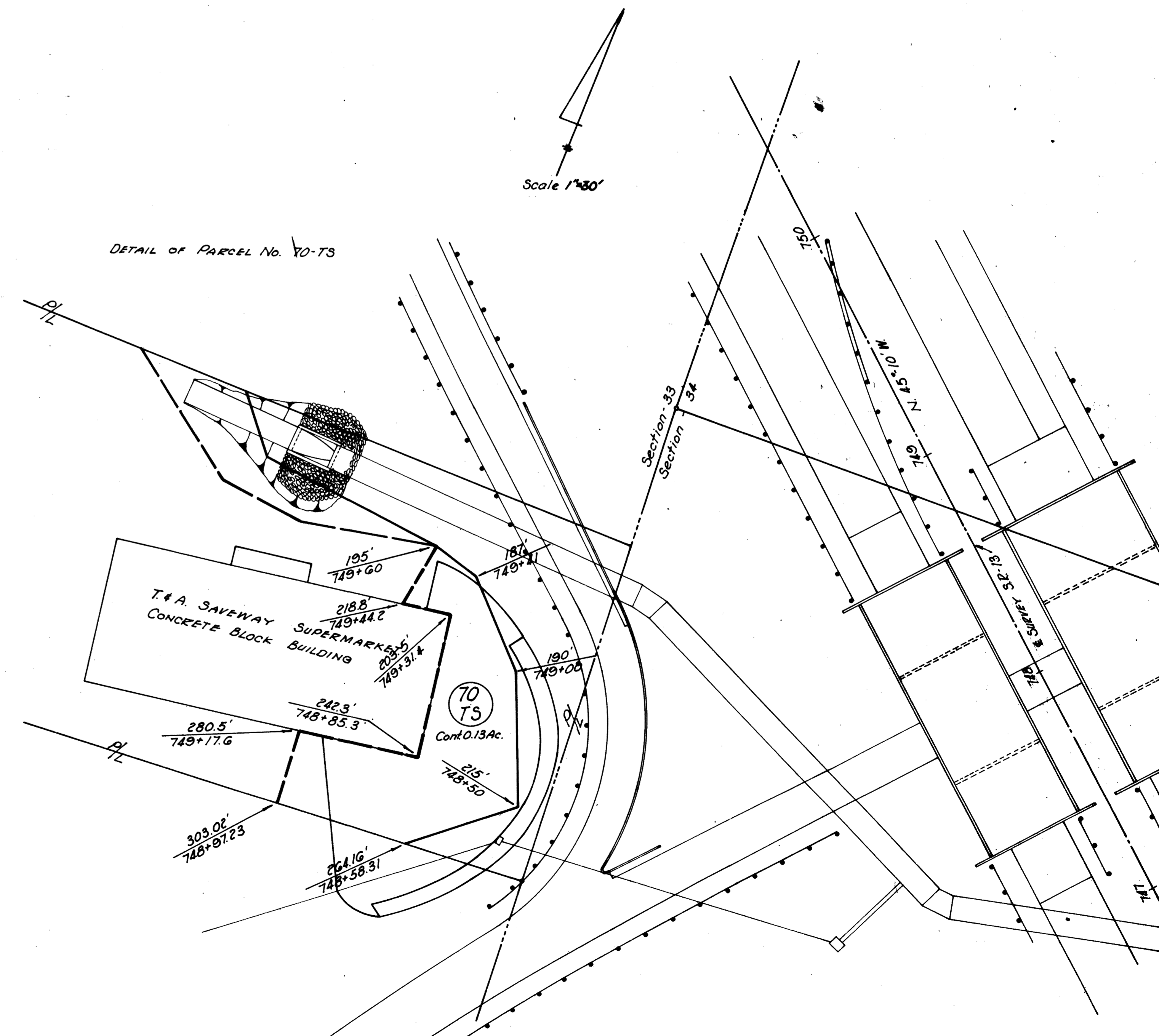
(4) Indicates residual lands that are landlocked

PARCEL NO.	PROPERTY OWNER	DEED RECORD BOOK/PAGE	DEED AREA	TO BE ACQUIRED LAND/BLDGs	RESIDUE LEFT/RIGHT	SHEET NO.	REMARKS
24 LA	THOMAS & JAMES T. DELOFF	406 363	10	6.34	3.66	10 & 11	
25	GABRIEL A. & MILDRED I. DOLCE	451 184	4	0.13	3.72	11	
25 WA	" " " " " " " " "			0.17		11	
26	OHIO EDISON CO.	259 459	0.249	0.03	0.169	11	
27	LEWIS J. CASHELL	399 597	15.43	0.13	YES	15.12	11 & 16
27 A	" " " " "	186 99		0.18			11 & 16
28	Not Assigned						
29	IRA MORGAN	459 257	0.39	0.03		0.32	16
30	COMMUNITY BAPTIST CHURCH	467 124	3.89				16
31	Not Assigned						No R/W Needed
32	BOARD OF EDUCATION, MADISON TWP.	220 408	2.11	0.17		1.94	11
32 TS	" " " " " " " " "	174 88		.76			11
32 TS-1	" " " " " " " " "	86 56		.03			11
32 TS-1	" " " " " " " " "	42 130					11
33 LA	ELDEN E. & ELINORE S. CUNNING	241 31	4.16	3.24	YES	0.92	11
34 LA	LEONA BROOKER	184 41	0.68	0.41	YES	0.27	11
34 X	" " " " "	201 289		.07			11
35	Not Assigned						
36	CURT J. BURKHART	339 156	2.66	0.15		2.51	16
37	DALLAS & PEGGY STARNES	363 571					11
38 LA	HAZEL L. MURDOCK & JOHN E. MURDOCK	392 58		ALL	YES		11
39 LA	JOHN GRAY & DOROTHY N. STEVENS	393 489		ALL	YES		11
40 LA	DOUGLAS L. & ERMA L. MOON	393 493		ALL	YES		11
41 LA	JAMES E. & LUCILLE MAYNARD	416 188		ALL	YES		11
42 LA	JOHN HOLLIS & ERA V. GLOVER	379 508	.32	.32	YES		11
43	MAX & MARJORIE ARNOLD	372 243					11
44	JAMES M. & BETTY MAHONEY	457 29					11
45	PAUL E. WHIPP	432 7					11
46 LA	JAMES G. & MARJORIE J. SHEADS	366 176	0.2286	0.04		0.1886	11
47 LA	WALTER L. BANKS, Guardian for NELSON H. BANKS	491 151	0.24	ALL	YES		11
48 LA	ROBERT DAVID & HELEN L. WALTER	364 549		ALL	YES		11
49 LA	ROCCO V. & CATHERINE NESTA	364 365		ALL	YES		11
50 LA	EDMOND & RUTH E. ROGERS	363 388		ALL	YES		11
51 LA	ROBERT ADAMS & CATHERINE EILEEN HARTER	356 371	.21	ALL	YES		11
52 LA	FRANK & GOLDIE SCHLUTER	475 305		0.07		.14	11
52 T	" " " " " " " " "			.01			11
53 LA	ARLIN J. SCOTT	491 550		.03		.18	11
54 LA	LLOYD G. & LUCILLE M. HARBAUGH	355 438		48.5 ft		.21	11
55 LA	ELMER F. MAST	132 69	19.80	11.78	YES	4.96	11, 12, 13
55 S	" " " " " " " " "	135 157		.26		0.37	11 & 12
56 LA	JACK A. MORRISON	466 78	0.38	.11		.29	12
56A-LA	" " " " " " " " "	466 78	.25	.04		.21	12
56B-LA	" " " " " " " " "	466 78	.20	.12		.08	12 & 13
57	OLEN H. & LEETA L. SHUTT	319 5					12
58	RAYMOND B. & TERESA CARROLL	379 238					12
59	CLIFFORD E. & ROSE MARY E. Mc GINTY	403 534					12
60	JOHN H. & MARJORIE O. HUBER	395 34					12
61 LA	TRUSTEES FOR BAKU GROTTO	398 272					12
61	" " " " " " " " "	306 214	2.76	0.63		1.75	12 & 13
62	HAROLD G. & RUBY B. LEBKISHER	429 460	.27	.02		.25	12
62 TS	" " " " " " " " "			.02			12
63	PAUL G. & FRANCES G. HENSLER	332 39					12
64	TRUSTEES of The OPEN BIBLE CHURCH	348 256					12 & 13
65	JOHN & ELIZABETH KNAPP	465 135	.38	0.13		.25	12
66 LA	RALPH B. GRIFFITH	351 88	.56	46	YES	.10	13
67	JAMES M. & V. AILEEN MOORE	343 150					13
68	CLIFTON G. & MARGARET L. LASER & GUY L. & BETTY A. WALKER	468 335					13

* Indicates that a parcel has been added at the end of the summary

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	PROPERTY OWNER	DEED RECORD		DEED AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	REMARKS
		BOOK	PAGE		LAND	BLDGS	LEFT	RIGHT		
69	CARL W. & MARY T. McDONALD	429	111						13	No R/W Needed
* 70LA	CLIFTON C. & MARGARET L. LASER	496	375	1.02	.20		.82		13	Irregular Lot -
70X	" " " " "				.05				13	Computed Area
70TS	" " " " "				.13				2 & 13	
71LA	P. J. & MARY H. KINKEL	267	154	8.097	.51			7.59	13	
72LA	HOWARD A. MAST	136	506	5.87	3.81			1.96	13&14	
72A-LA	" " " " "				.10				13&14	
73LA	ISALY DAIRY CO.	452	205	8	5.04	YES	.82	0.214	13&14	
73S	" " " " "				.05				13	
73X	" " " " "				.01				13	
74	RICHARD L. & BETTY JEAN HAMILTON SR.	462	81	.049					13	No R/W Needed
75TS	ROY M. & IONA MILLER	336	579	.31	.01				12	
76	JOHN C. & DORIS M. LEIBFRITZ	369	86						12	No R/W Needed
77TS	ROBERT R. & EVELYN B. HOFFMAN	413	551	.31	.02				12	
78	REX G. & IDELLA C. WILCOX	457	403	.39					12	No R/W Needed
79	ERNEST C. & LAVALIA HARMON								13&14	No R/W Needed
80LA	CLIFTON C. LASER & GUY L. WALKER	450	188	4.48	.32			2.33	14	Subdivision Streets P.R.O. = 1.23 Ac.
80A-LA	" " " " "				.51				14	
80	" " " " "				.03				14	
81LA	META M. GROAK	223	324	0.48	0.18	YES		0.06	14&15	
81	" " " " "	228	256						14&15	
82	CARL S. & ROSEMARY MUSILLE	439	143						14	No R/W Needed
83	GEORGE M. & LULA B. JEWELL	387	585						14	No R/W Needed
84	RICHARD EUGENE & SHIRLEY R. WEDDELL	395	501						14	No R/W Needed
85	ANNA M. BENNINGHOFF	361	51						14	No R/W Needed
86	CLYDE W. BENNINGHOFF	223	538						14	No R/W Needed
87	CLYDE W. & ANNA MAE BENNINGHOFF	208	382						14	No R/W Needed
* 88ATS	NELDA M. KOPPERT	310	400	.11	.01				14&15	
89TS	PAUL L. & MARY E. STEWART	199	2	.20	.01				14&15	
89WA	" " " " "					755sqft			15	
90TS	LEE E. & RUTH E. FETTERS	469	149	.19	.01				15	
91TS	THELMA & LEONARD FREDERICK FROST JR. & MARY JANE GARYER	408	297	.17	.01				15	
92	CHARLES C. & NORA E. SOWASH	200	281	.16					15	No R/W Needed
93	WALTER J. & ALTA M. BRANDT	261	320						15	No R/W Needed
94	MARY, LOIS M. & PAUL HANNEWALD & VERA D. FLOWERS	261	299						15	No R/W Needed
95LA	CARL W. GORDON	350	105	0.36	0.17	YES		0.02	14&15	
95	" " " " "				0.17				14&15	
96	THERMAN N. ZERBY	265	169	0.16	1205sqft			.16	15	
96TS	" " " " "				.02				15	
97TS	RAY C. & ETHEL B. UNDERWOOD	243	293	0.17	.01				15	
98	JAMES W. & BERNICE PEYTON	212	159						15	No R/W Needed
99	CARL R. & KATHLEEN FISCHER	309	142						15	No R/W Needed
100	DORIS CAMPBELL	368	107						15	No R/W Needed
101	DONALD A. & STELLA M. QUINN	379	506						15	No R/W Needed
102	LESTER A. & GRACE A. REMY	240	275						15	No R/W Needed
		240	276							
65A	JOSEF & SUSANNA HOFFMAN	400	428						12&13	No R/W Needed
70ALA	CLIFTON C. & MARGARET L. LASER	473	187	.34	ALL	YES			13	Computed Area
88	DORIS N. GLOES	423	192						14&15	No R/W Needed

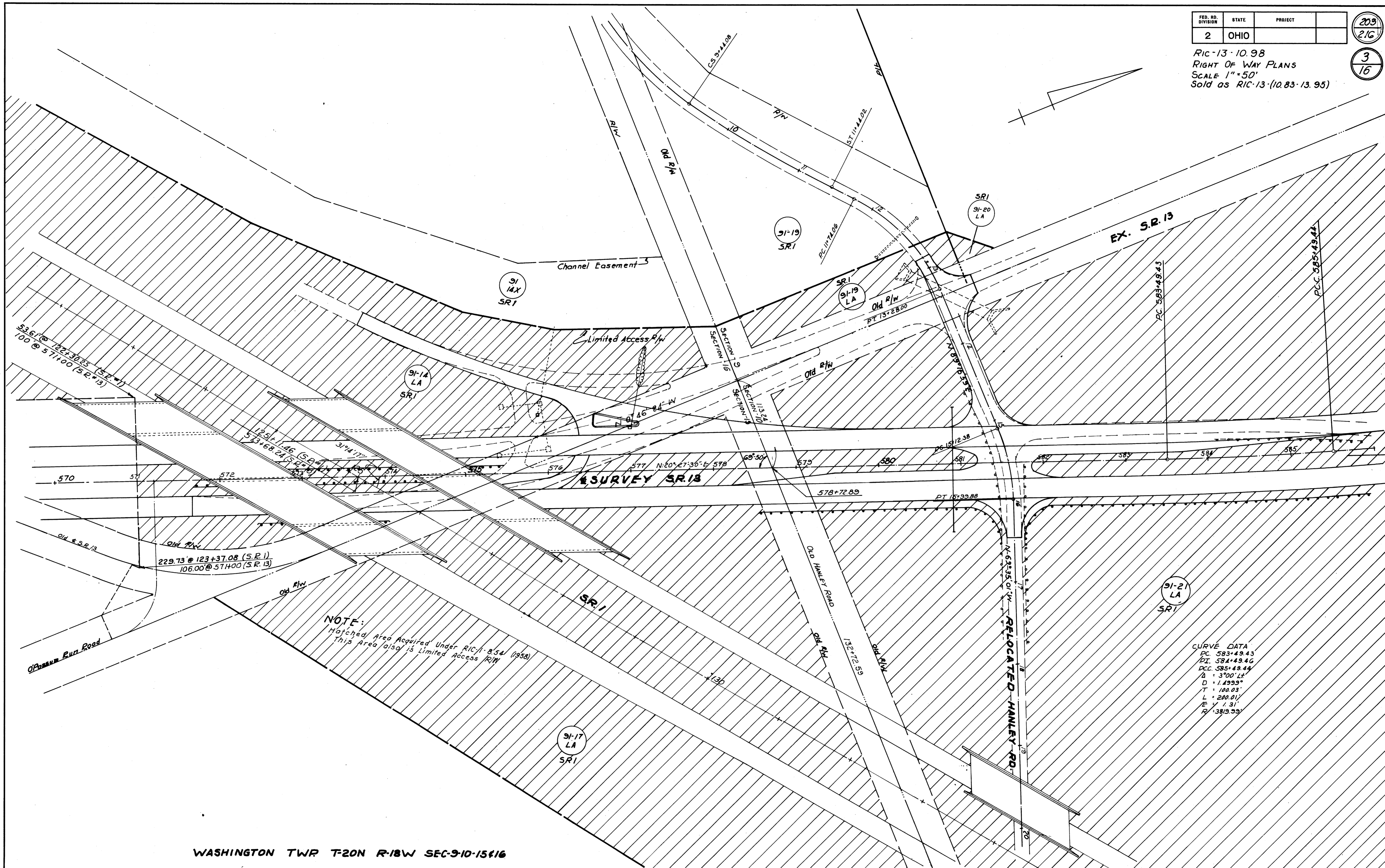


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

209
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RIC-13-10.98
RIGHT OF WAY PLANS
SCALE 1"=50'
Sold as RIC-13-(10.83-13.95)



CURVE DATA
 PC 583+49.43
 PI 584+49.46
 PCC 585+49.44
 Δ = 3°00' L.
 D = 1.4993
 T = 100.03
 L = 200.01
 E = 1.31
 R = 3813.59

NOTE:
 Hatched Area Acquired Under RIC-1-8.54 (1958)
 This Area also is Limited Access R/W

WASHINGTON TWP T20N R18W SEC-9-10-15&16

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

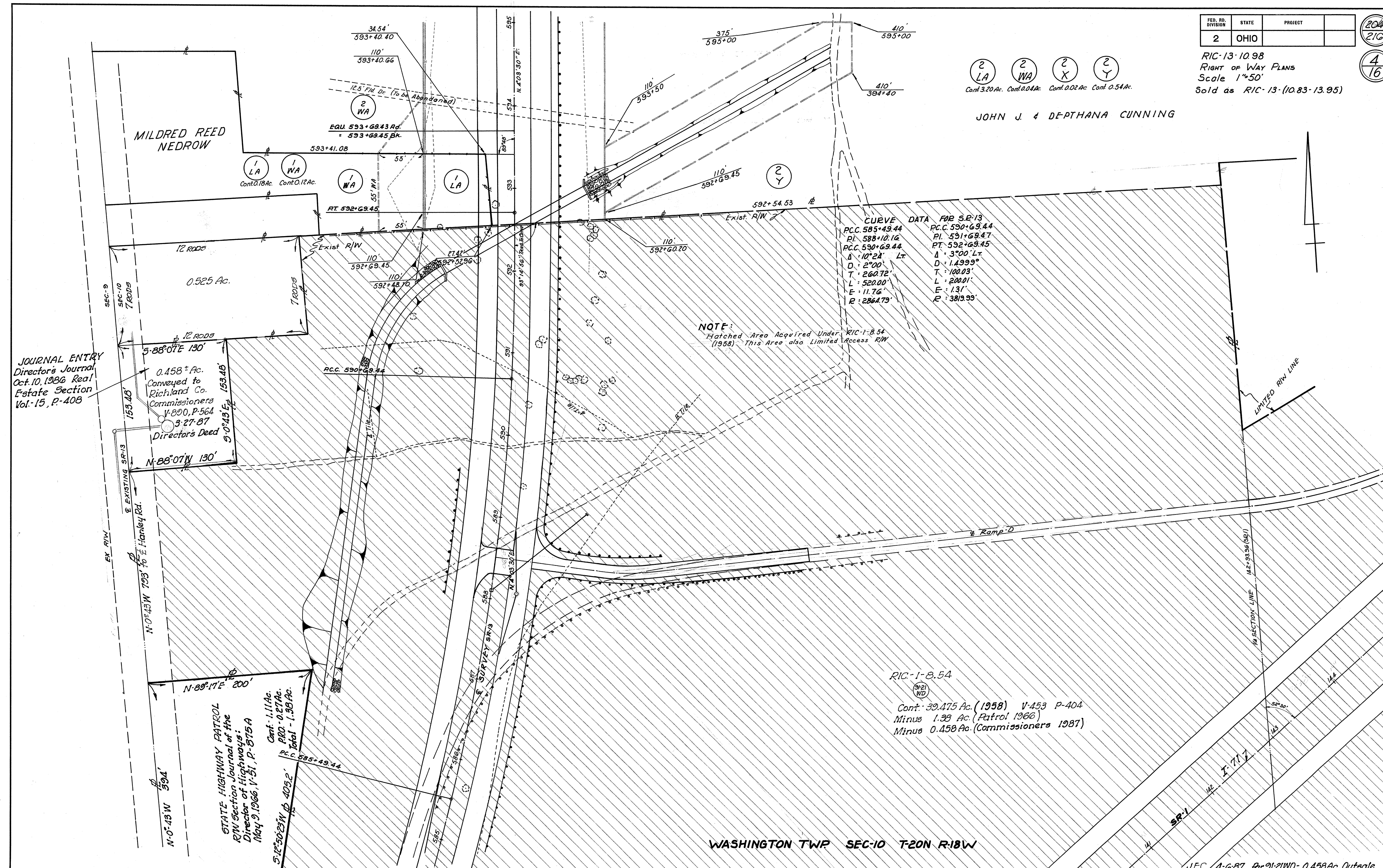
204
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RIC-13-10.98
RIGHT OF WAY PLANS
Scale 1"=50'
Sold as RIC-13-(10.83-13.95)

(2) LA Cont. 3.20 Ac.
(2) WA Cont. 0.04 Ac.
(2) X Cont. 0.02 Ac.
(2) Y Cont. 0.54 Ac.

JOHN J. & DEPTHANA CUNNING

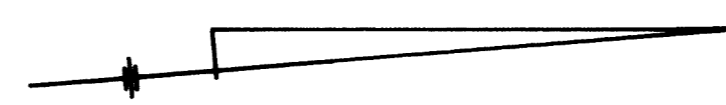


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

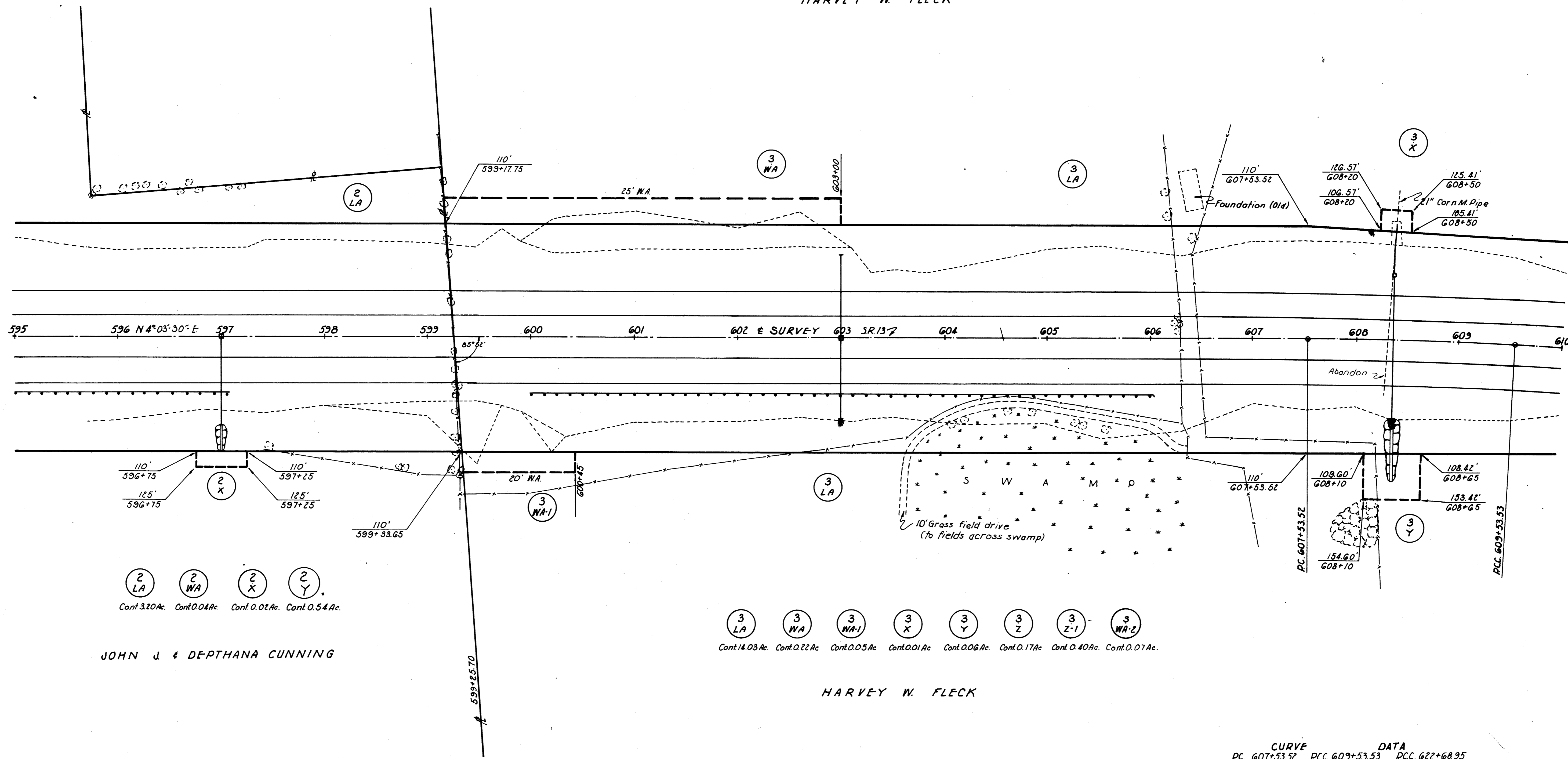
205
216

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Ric. 13-10.98
Right of Way Plans
Scale 1"=50'
Sold as RIC-13-(1083-13.95)



HARVEY W FLECK



(2 LA) Cont. 3.20 Ac.
 (2 WA) Cont. 0.04 Ac.
 (2 X) Cont. 0.02 Ac.
 (2 Y) Cont. 0.54 Ac.

JOHN J & DEPTHANA CUNNING

(3 LA) Cont. 14.03 Ac.
 (3 WA) Cont. 0.22 Ac.
 (3 WA-1) Cont. 0.05 Ac.
 (3 X) Cont. 0.01 Ac.
 (3 Y) Cont. 0.06 Ac.
 (3 Z) Cont. 0.17 Ac.
 (3 Z-1) Cont. 0.40 Ac.
 (3 WA-2) Cont. 0.07 Ac.

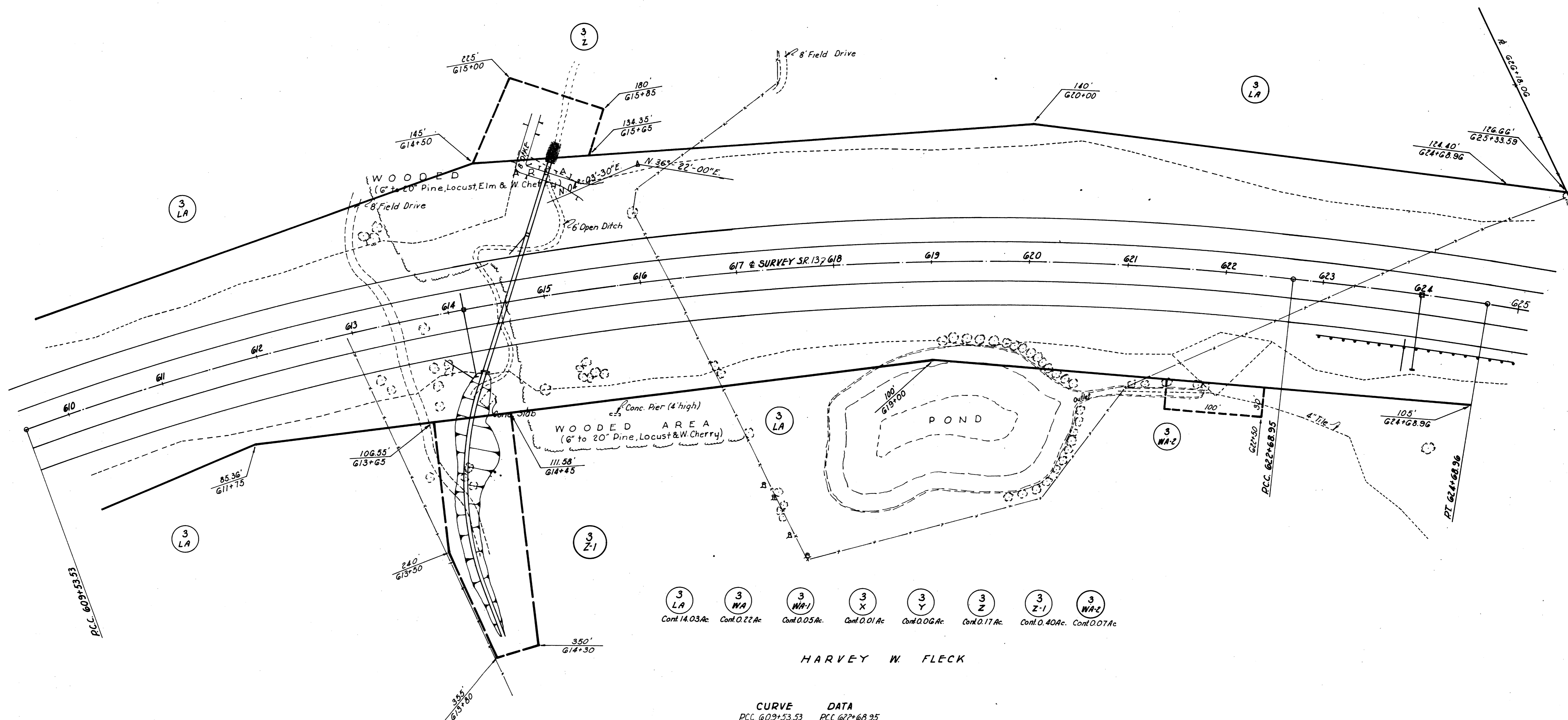
HARVEY W. FLECK

CURVE		DATA	
PC 607+53.52	PCC 609+53.53	PCC 622+68.95	
PI 608+53.55	PI 616+23.04	PI 623+68.98	
PCC 609+53.53	PCC 622+68.95	PT 624+68.96	
Δ : 3°00' Rt	Δ : 26°18'30" Rt	Δ : 3°00' Rt	
D: 149.99'	D: 2°00'	D: 149.99'	
T: 100.03'	T: 66.9.51'	T: 100.03'	
L: 200.01'	L: 131.5.42'	L: 200.01'	
E: 1.31'	E: 77.19'	E: 1.31'	
R: 381.999'	R: 286.4.79'	R: 381.9.99'	

WASHINGTON TWP SEC-10 T-20N R-18W

Ric-13-10.98
Right of Way Plans
Scale 1"=50'
Sold as RIC-13-(10.83-13.95)

HARVEY W FLECK



- 3
LA
Cont. 14.03 Ac.
- 3
WA
Cont. 0.22 Ac.
- 3
WA-1
Cont. 0.05 Ac.
- 3
X
Cont. 0.01 Ac.
- 3
Y
Cont. 0.06 Ac.
- 3
Z
Cont. 0.17 Ac.
- 3
Z-1
Cont. 0.40 Ac.
- 3
WA-2
Cont. 0.07 Ac.

HARVEY W FLECK

CURVE	DATA
PCC. 609+53.53	PCC. 622+68.95
PI. 616+23.04	PI. 623+68.98
PCC. 622+68.95	PT. 624+68.96
$\Delta = 26^{\circ}18'30''$ Rt.	$\Delta = 3^{\circ}00''$ Rt.
D = 2'00"	D = 1.4999'
T = 669.51'	T = 100.03'
L = 1315.42'	L = 200.01'
E = 77.19'	E = 1.31'
R = 2864.79'	R = 3819.99'

WASHINGTON TWP SEC-10 T-20N R-18W

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

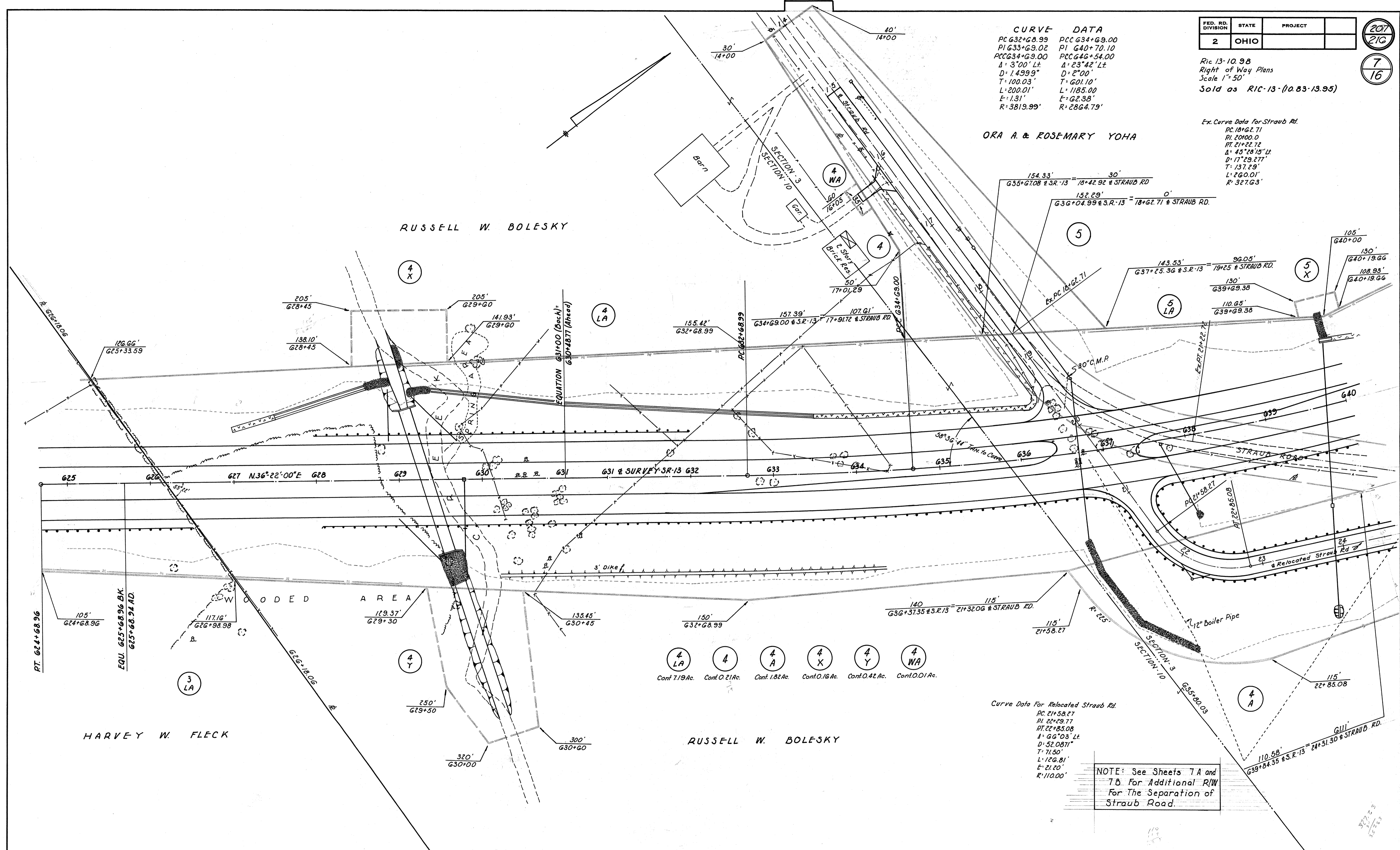
207
210
7
16

Ric 13-10.98
Right of Way Plans
Scale 1"=50'
Sold as RIC-13-(10.83-13.95)

CURVE DATA
 PC 632+68.99 PCC 634+69.00
 PI 633+69.02 PI 640+70.10
 PCC 634+69.00 PCC 646+54.00
 Δ: 3°00' Lt Δ: 23°42' Lt
 D: 1,499.9' D: 2°00'
 T: 100.03' T: 601.10'
 L: 200.01' L: 1185.00
 E: 1.31' E: 62.38'
 R: 3819.99' R: 2864.79'

Ex. Curve Data for Straub Rd.
 PC 18+62.71
 PI 20+00.0
 PT 21+22.72
 Δ: 45°28'15" Lt
 D: 17°29'27"
 T: 137.29'
 L: 260.01'
 R: 327.63'

ORA A. & ROSEMARY YOHA



- (4 LA)
Cont. 7.19 Ac.
- (4)
Cont. 0.21 Ac.
- (4 A)
Cont. 1.82 Ac.
- (4 X)
Cont. 0.16 Ac.
- (4 Y)
Cont. 0.42 Ac.
- (4 WA)
Cont. 0.01 Ac.

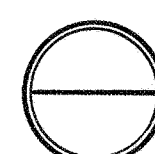
Curve Data for Relocated Straub Rd.
 PC 21+58.27
 PI 22+29.77
 PT 22+85.08
 Δ: 66°03' Lt
 D: 52.0871'
 T: 11.50'
 L: 126.81'
 E: 21.20'
 R: 110.00'

NOTE: See Sheets 7A and 7B for Additional R/W For The Separation of Straub Road.

WASHINGTON TWP SEC 10 & 3 T20N R-18W

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-13-10.98
Right of Way Plan
Scale 1" = 50'



7 A
16

Ora A. and Rosemary Yaha

5B
LA

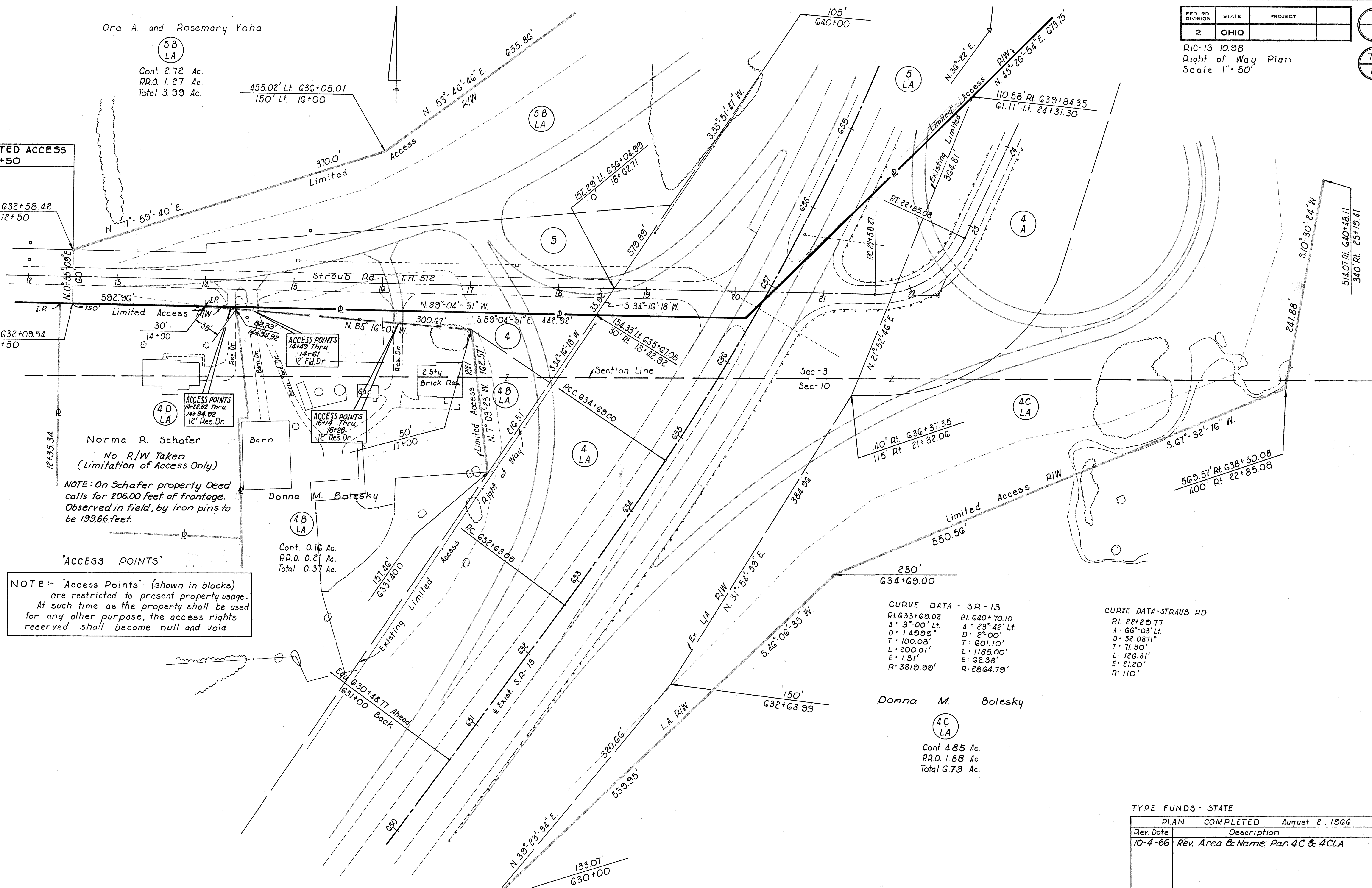
Cont. 2.72 Ac.
P.R.O. 1.27 Ac.
Total 3.99 Ac.

455.02' Lt. G36+05.01
150' Lt. 16+00

BEGIN LIMITED ACCESS
STA. 12+50

683.86' Lt. G32+58.42
30' Lt. 12+50

649.07' Lt. G32+09.54
30' Rt. 12+50



Norma R. Schafer
No R/W Taken
(Limitation of Access Only)

NOTE: On Schafer property Deed calls for 206.00 feet of frontage. Observed in field, by iron pins to be 199.66 feet.

'ACCESS POINTS'

NOTE: "Access Points" (shown in blocks) are restricted to present property usage. At such time as the property shall be used for any other purpose, the access rights reserved shall become null and void

CURVE DATA - SR-13
 P.I. 633+69.02 P.I. 640+70.10
 Δ: 3°-00' Lt. Δ: 23°-42' Lt.
 D: 1.4999° D: 2°-00'
 T: 100.03' T: 601.10'
 L: 200.01' L: 1185.00'
 E: 1.31' E: 62.38'
 R: 3810.00' R: 2864.79'

CURVE DATA- STRAUB RD.
 P.I. 22+29.77
 Δ: 66°-03' Lt.
 D: 52.0871°
 T: 71.50'
 L: 126.81'
 E: 21.20'
 R: 110'

Donna M. Balesky

4C
LA

Cont. 4.85 Ac.
P.R.O. 1.88 Ac.
Total 6.73 Ac.

TYPE FUNDS - STATE	
PLAN	COMPLETED August 2, 1966
Rev. Date	Description
10-4-66	Rev. Area & Name Par. 4C & 4CLA

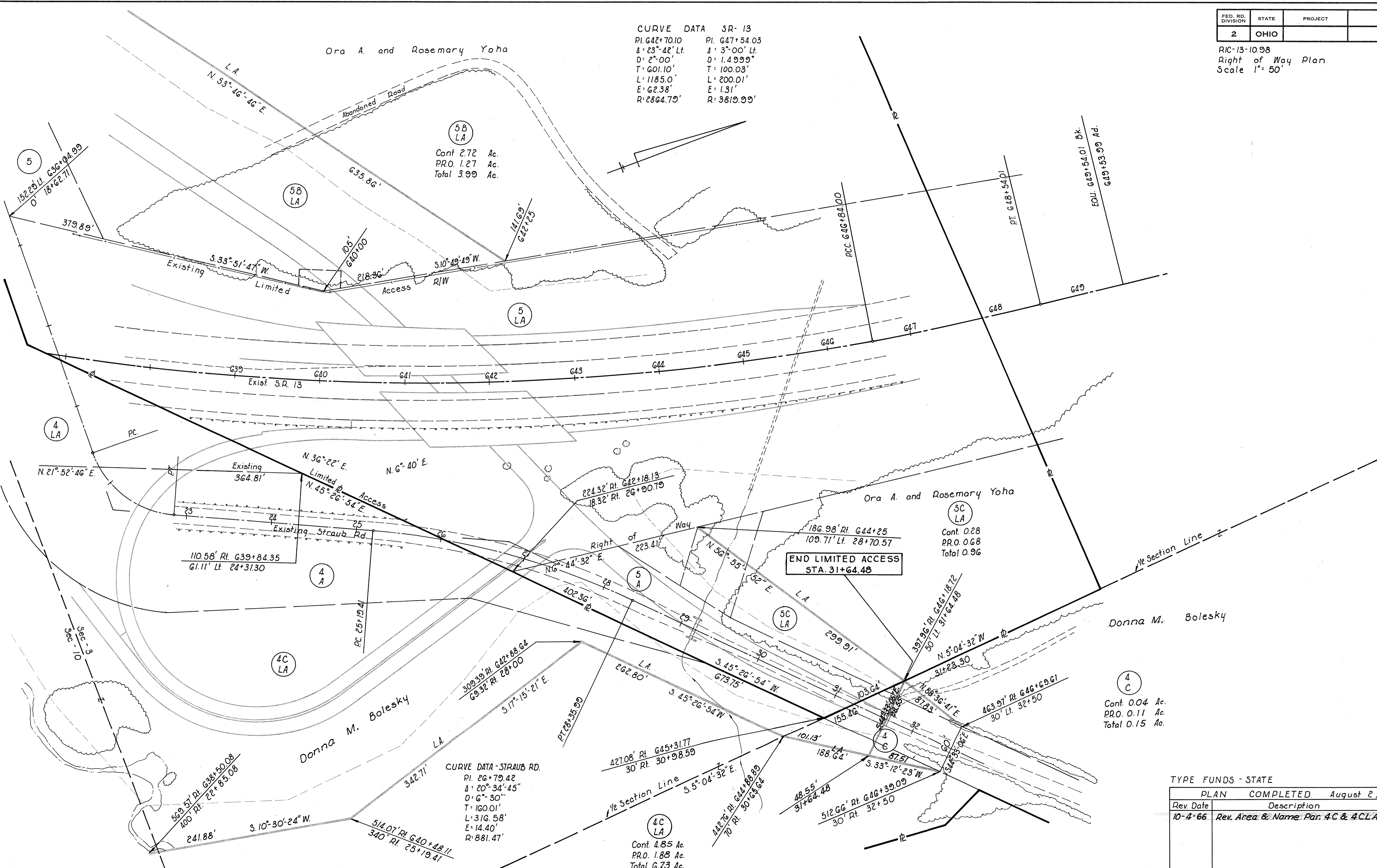
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-13-10.98
Right of Way Plan
Scale 1" = 50'

7B
16

CURVE DATA SR-13
 PI. 642+70.10 PI. 647+54.03
 Δ: 23°-42' Lt. Δ: 3°-00' Lt.
 D: 2°-00' D: 1.4999"
 T: 601.10' T: 100.03'
 L: 1185.0' L: 200.01'
 E: 62.38' E: 1.31'
 R: 2864.79' R: 3819.99'

Ora A. and Rosemary Yoha



CURVE DATA - STRAUB RD.
 PI. 26+79.42
 Δ: 20°-34'-45"
 D: 6°-30'
 T: 160.01'
 L: 316.58'
 E: 14.40'
 R: 881.47'

Ora A. and Rosemary Yoha
 5C LA
 Cont. 0.28 Ac.
 PR.O. 0.68 Ac.
 Total 0.96 Ac.

4C
 Cont. 0.04 Ac.
 PR.O. 0.11 Ac.
 Total 0.15 Ac.

4C LA
 Cont. 4.85 Ac.
 PR.O. 1.88 Ac.
 Total 6.73 Ac.

TYPE FUNDS - STATE

PLAN	COMPLETED	August 2, 1966
Rev. Date	Description	
10-4-66	Rev. Area & Name: Par. 4C & 4CLA	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

208
210

8
16

RIC-13-10.98
RIGHT OF WAY PLANS
Scale 1"=50'
Sold as RIC-13-(10.83-13.95)

RUSSELL W. BOLESKY

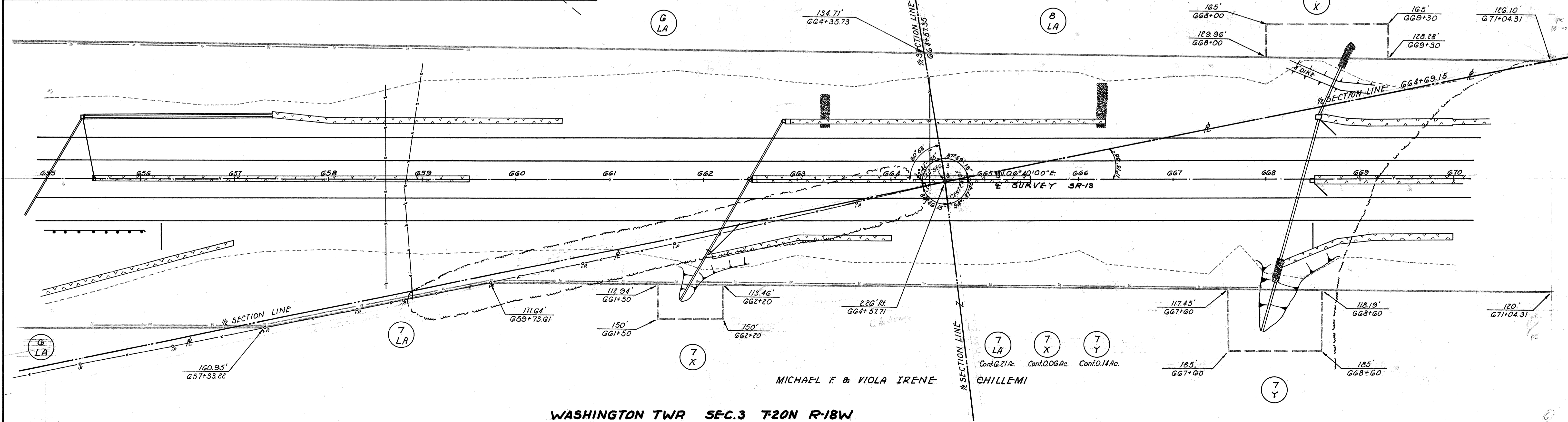
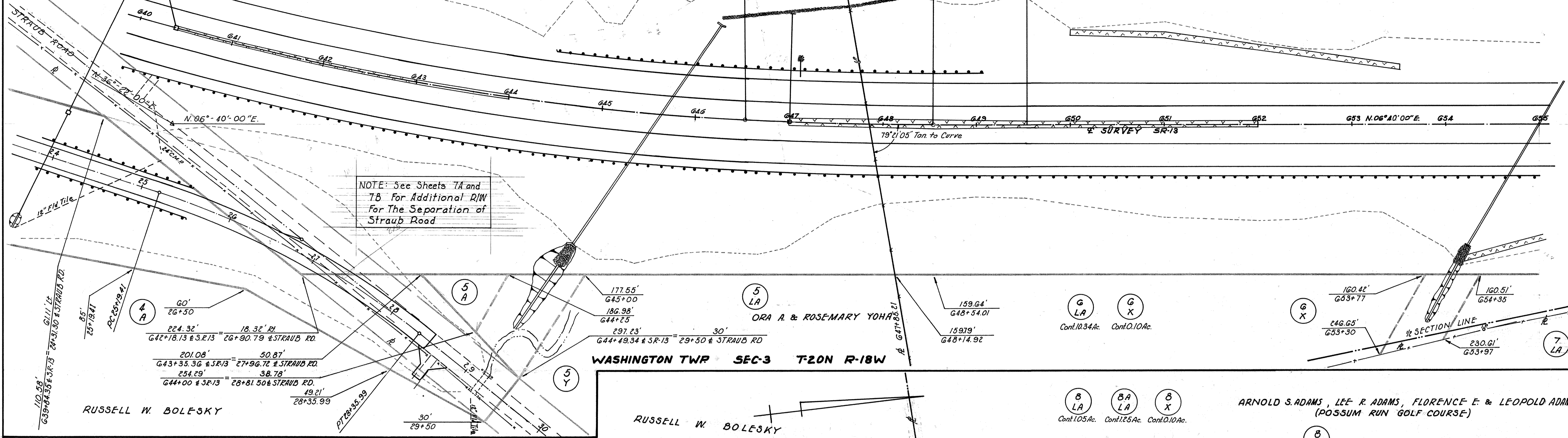
(G LA)

CURVE DATA
P.C.C. 638+69.00
P.I. 642+70.10
P.C.C. 646+54.00
Δ: 23°42' Lt.
D: 2°00'
T: 601.10'
L: 1185.0'
E: 62.38'
R: 2864.79'

DATA
P.C.C. 646+54.00
P.I. 647+54.03
P.T. 648+54.01
Δ: 3°00' Lt.
D: 14999°
T: 100.03'
L: 20001'
E: 131'
R: 3819.99'

(5 X) 105' 640+00
(5 LA) Cont. G. 28 Ac. PRD. 1.07 Ac. Total 7.35 Ac.
(5) Cont. D. 42 Ac. PRD. 0.64 Ac. Total 1.06 Ac.
(5 A) Cont. D. 05 Ac. PRD. 0.29 Ac. Total 0.34 Ac.
(5 X) Cont. D. 03 Ac.
(5 Y) Cont. D. 15 Ac.

Curve Data For Abandoned Straub Rd
P.C. 19+41
P.I. 29+99
P.T. 39+99
D: 6°30'
L: 1200.1'
E: 44.40'
R: 881.47'

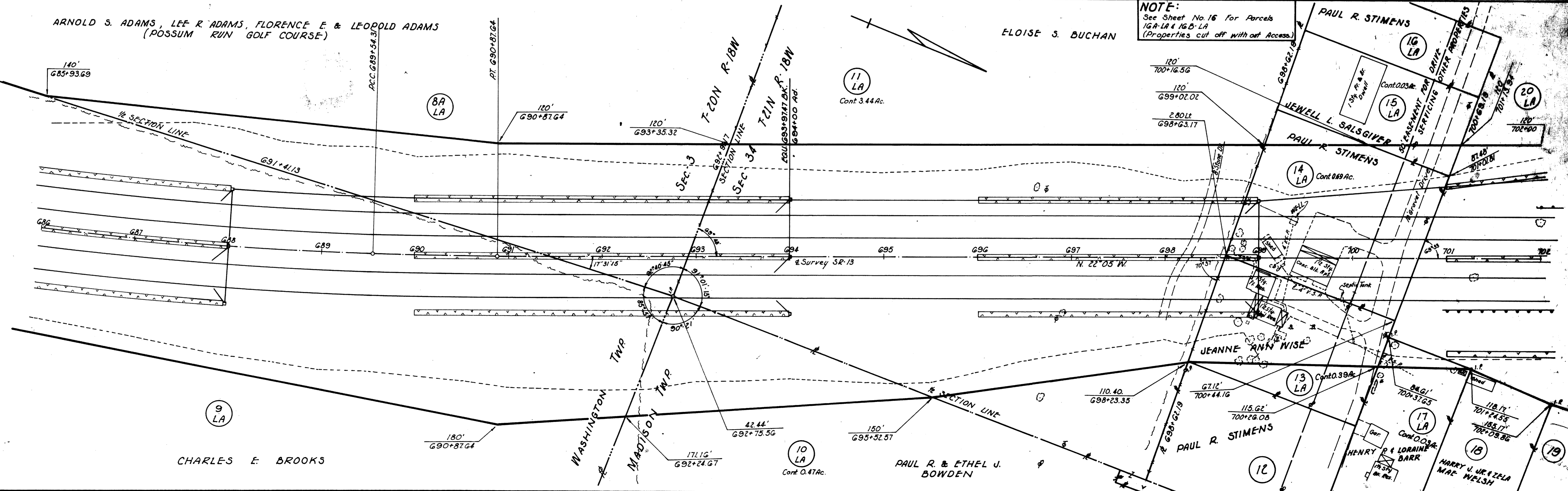
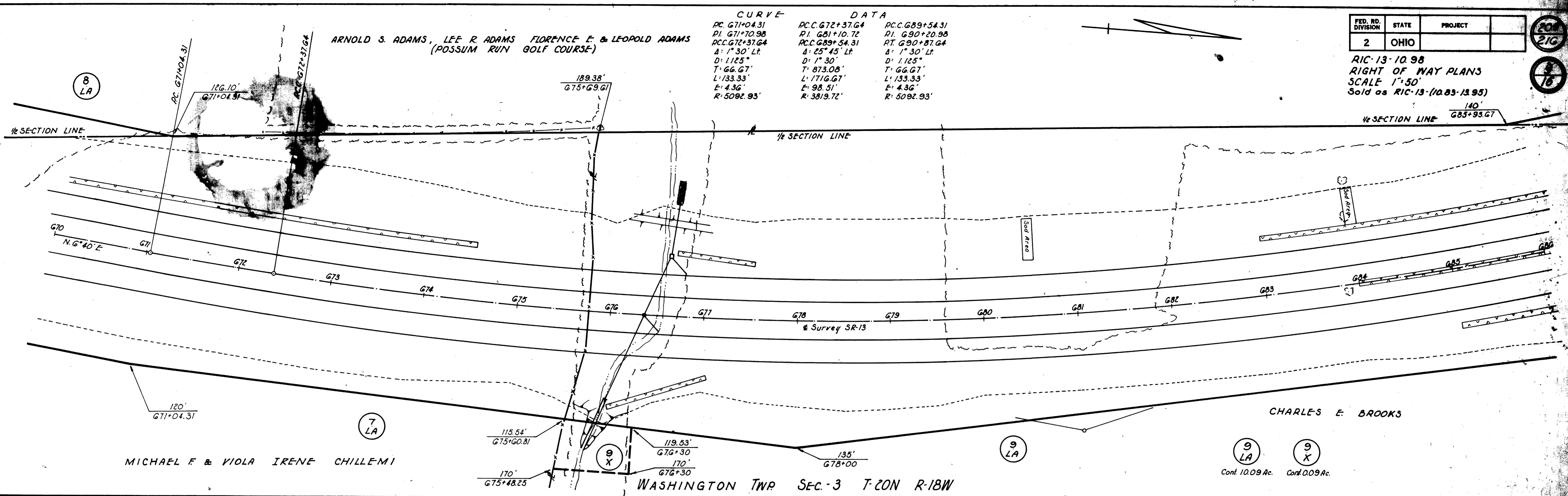


ARNOLD S. ADAMS, LEE R. ADAMS, FLORENCE E. & LEOPOLD ADAMS
(POSSUM RUN GOLF COURSE)

CURVE		DATA	
PC: 671+04.31	PCC: 672+37.64	PC: 689+54.31	PI: 690+20.98
PI: 671+70.98	PCC: 681+10.72	PI: 689+54.31	PT: 690+87.64
PCC: 672+37.64	PCC: 689+54.31	PT: 690+87.64	
A: 1° 30' Lt.	A: 25° 45' Lt.	A: 1° 30' Lt.	
D: 1125'	D: 1° 30'	D: 1125'	
T: 66.67'	T: 873.08'	T: 66.67'	
L: 133.33'	L: 1716.67'	L: 133.33'	
E: 4.36'	E: 98.51'	E: 4.36'	
R: 5092.93'	R: 3819.72'	R: 5092.93'	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-13-10.98
RIGHT OF WAY PLANS
SCALE 1"=50'
Sold as RIC-13-(10.83-13.95)



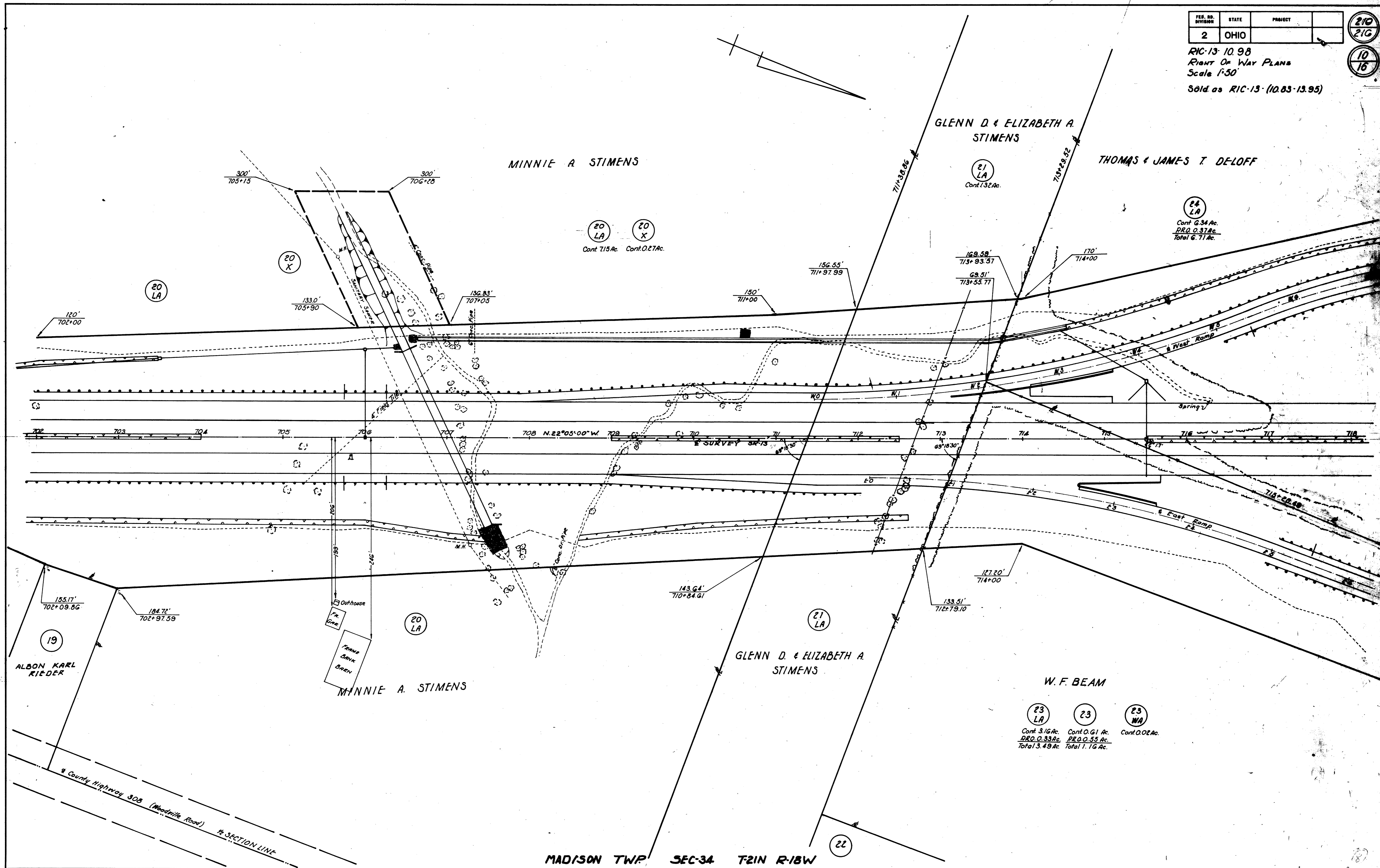
NOTE:
See Sheet No. 16 For Parcels
16A-LA & 16B-LA
(Properties cut off with out Access.)

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

210
216

10
16

RIC-13-10-98
Right Of Way Plans
Scale 1"=30'
Sold as RIC-13-10-83-13-95



MINNIE A. STIMENS

GLENN D. & ELIZABETH A. STIMENS

THOMAS & JAMES T. DELOFF

ALDON KARL RIEDER

MINNIE A. STIMENS

GLENN D. & ELIZABETH A. STIMENS

W. F. BEAM

MADISON TWP SEC-34 T21N R-18W

OHIO EDISON CO.

26

Cont. 0.03 Ac.
PR.O. 0.05 Ac.
Total 0.08 Ac.

NOTE:
See Sheet No. 16 for balance
of R/W on Cook Road.

CURVE
PC. 727+03.73
PI. 727+70.40
PCC. 728+37.06
 $\Delta = 1^{\circ}30' Lt.$
D: 1125'
T: 66.67'
L: 133.33'
E: 4.36'
R: 5092.93'

DATA
PCC. 728+37.06
PI. 735+13.44
PCC. 741+75.95
 $\Delta = 20^{\circ}05' Lt.$
D: 1730'
T: 676.38'
L: 1338.89'
E: 59.42'
R: 3819.72'

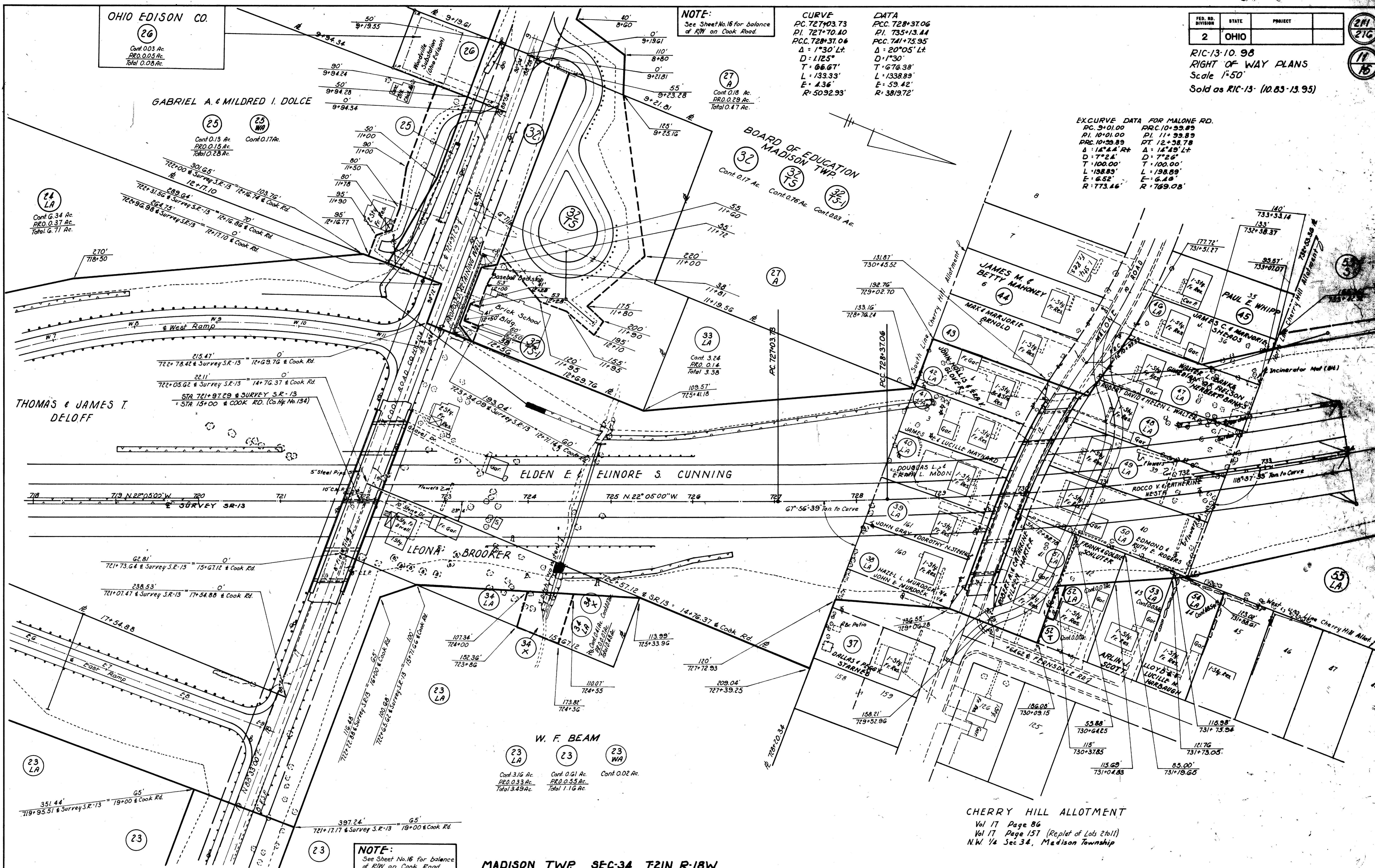
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

211
21C

11
16

RIC-13-10.98
RIGHT OF WAY PLANS
Scale 1"=50'
Sold as RIC-13- (10.83-13.95)

EXCURVE DATA FOR MALONE RD.
PC. 9+01.00 PRC. 10+99.89
PI. 10+01.00 PI. 11+99.89
PCC. 10+99.89 RT. 12+98.78
 $\Delta = 18^{\circ}44' Rt.$ $\Delta = 14^{\circ}49' Lt.$
D: 772.1' D: 772.6'
T: 100.00' T: 100.00'
L: 198.89' L: 198.89'
E: 6.52' E: 6.48'
R: 773.46' R: 769.08'



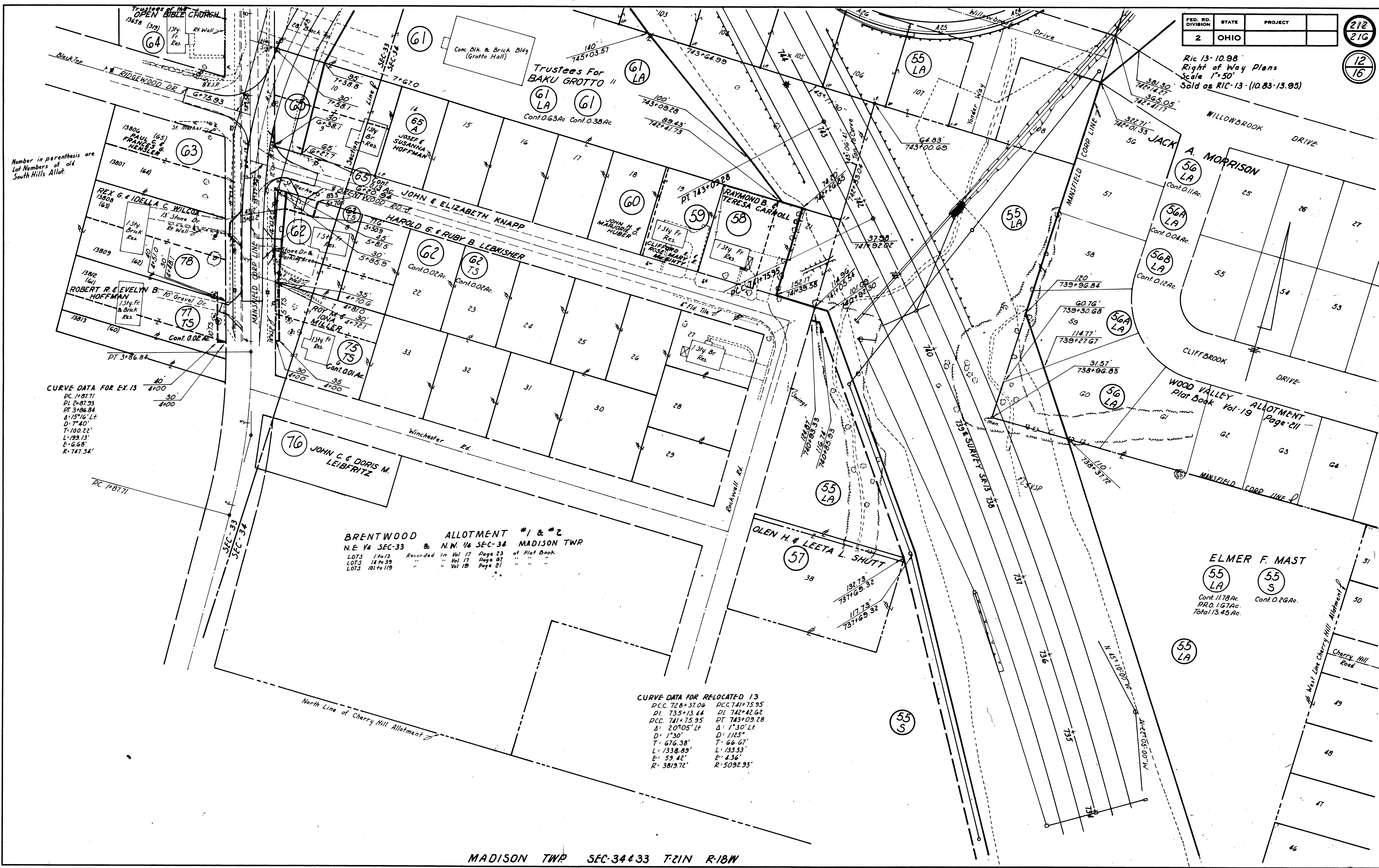
NOTE:
See Sheet No. 16 for balance
of R/W on Cook Road

Number in parenthesis are Lot Numbers of old South Hills Allot.

CURVE DATA FOR EX. 13
 PC 1487.71
 PI 2487.93
 PT 3486.84
 Δ 15°16' Lt
 D 7°40'
 T 100.22'
 L 193.13'
 E 6.68'
 R 747.34'

CURVE DATA FOR RELOCATED 13
 P.C. 728+37.06 P.C. 741+75.95
 P.I. 735+13.44 P.I. 742+42.62
 P.T. 741+75.95 P.T. 743+09.28
 Δ: 20°05' Lt Δ: 1°30' Lt
 D: 1°30' D: 1125'
 T: 676.38' T: 66.67'
 L: 1338.89' L: 133.33'
 E: 59.42' E: 4.36'
 R: 3819.72' R: 5092.93'

BRENTWOOD ALLOTMENT #1 & #2
 N.E. 1/4 SEC-33 & N.W. 1/4 SEC-34 MADISON TWP
 LOTS 1 to 13 Recorded in Vol 17 Page 23 of Plat Book
 LOTS 14 to 39 " " Vol 17 Page 27 " " " "
 LOTS 101 to 119 " " Vol 19 Page 21 " " " "

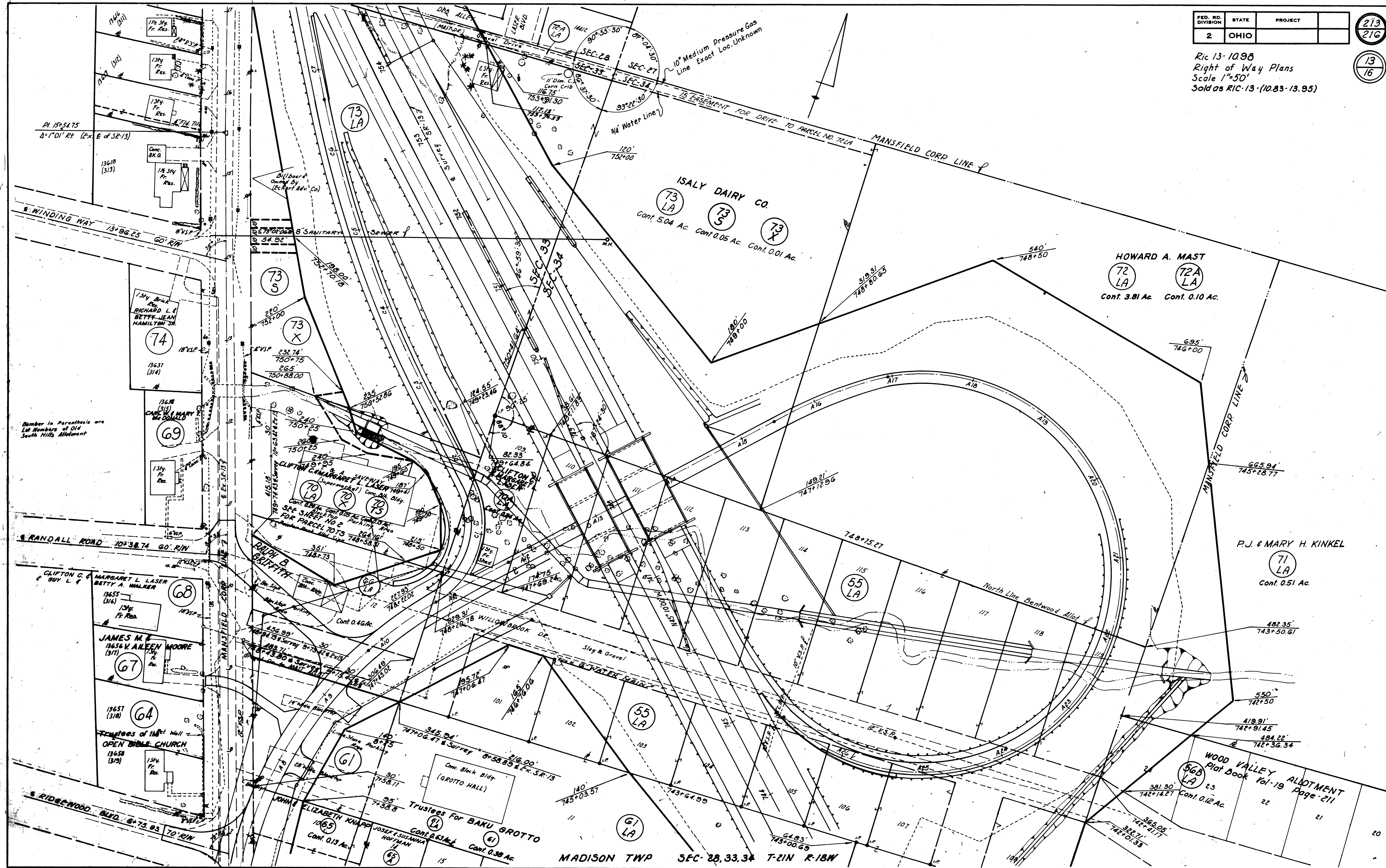


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

213
216

13
16

Ric 13-10.98
Right of Way Plans
Scale 1"=50'
Sold as RIC-13-(10.83-13.95)

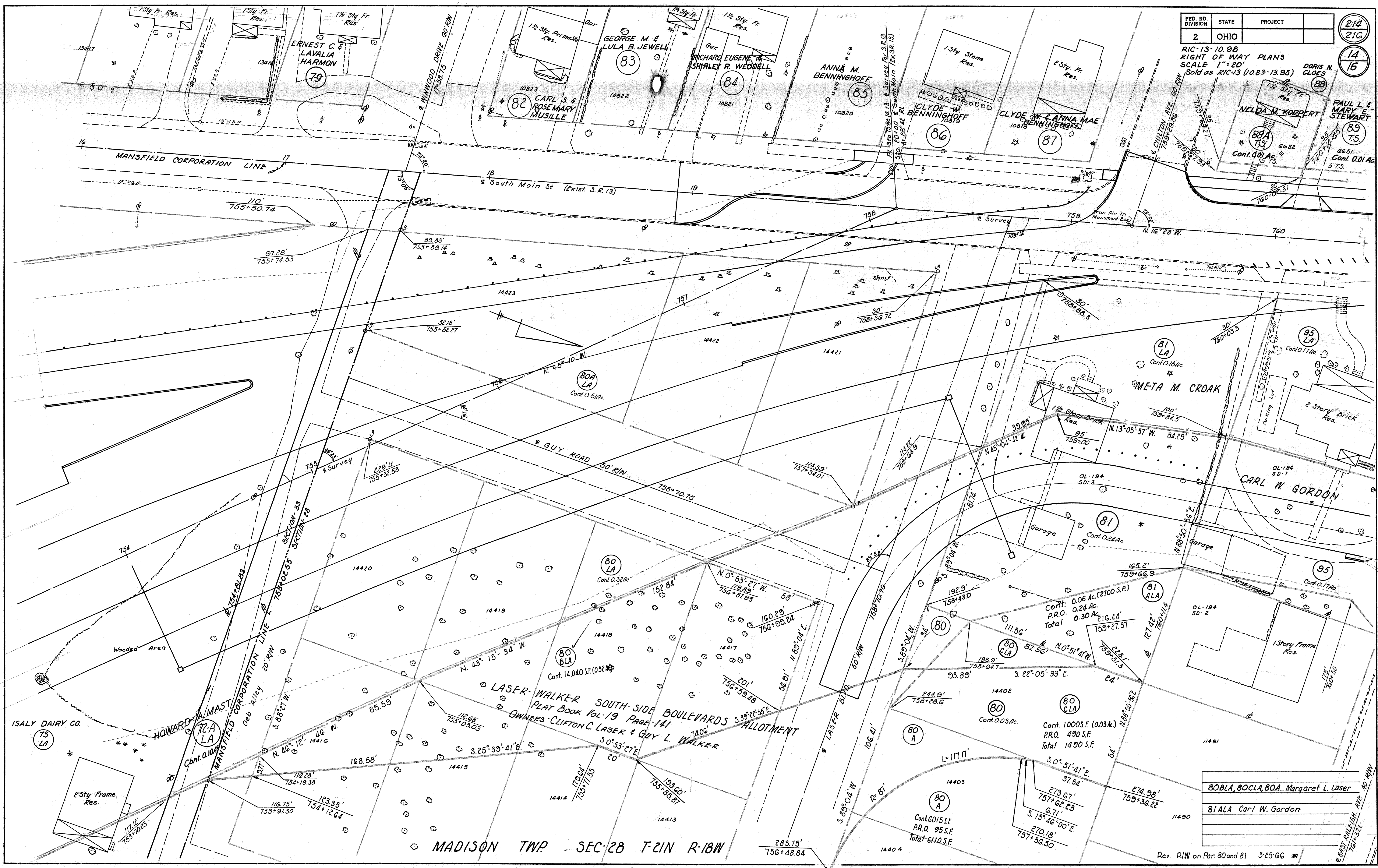


WOOD VALLEY ALLOTMENT
Plot Book 101-19 Page 211

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-13-10.98
 RIGHT OF WAY PLANS
 SCALE 1"=20'
 Sold as RIC-13 (10.83-13.95)

214
 216
 14
 16



80BLA, 80CLA, 80A	Margaret L. Laser
81ALA	Carl W. Gordon

Rev. P/W on Par. 80 and 81 3-25-66

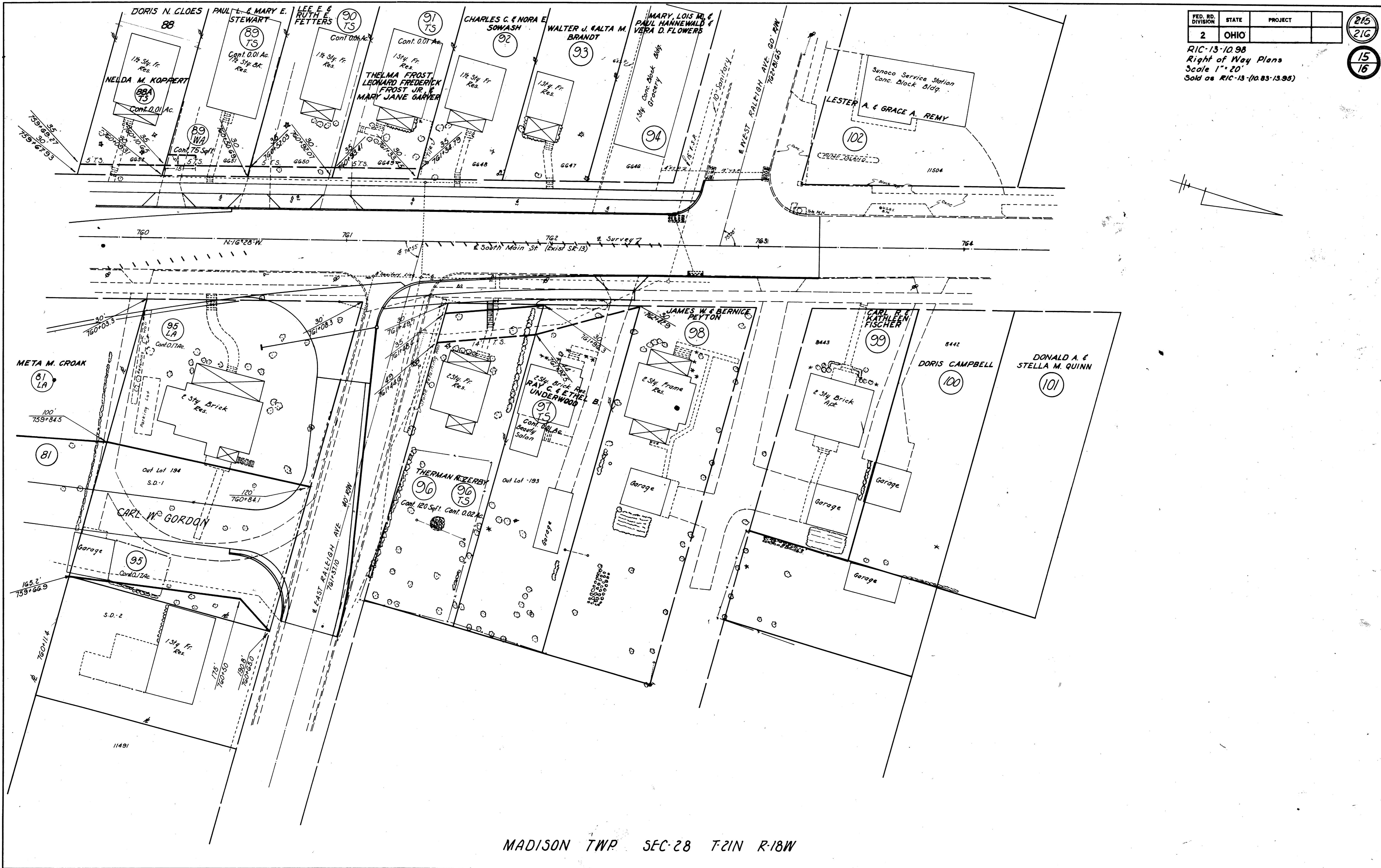
MADISON TWP SEC-28 T-21N R-18W

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

215
216

RIC-13-10.98
Right of Way Plans
Scale 1"=20'
Sold as RIC-13-(10.83-13.95)

15
16

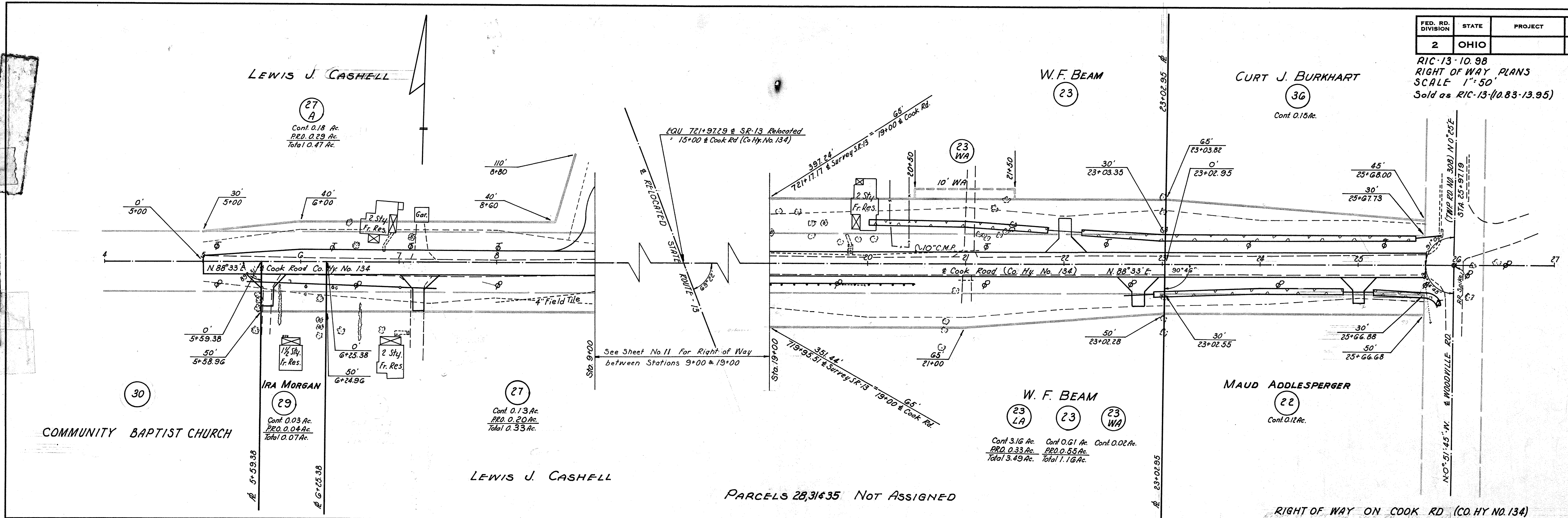


MADISON TWP SEC-28 T-21N R-18W

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

216
21C
16
16

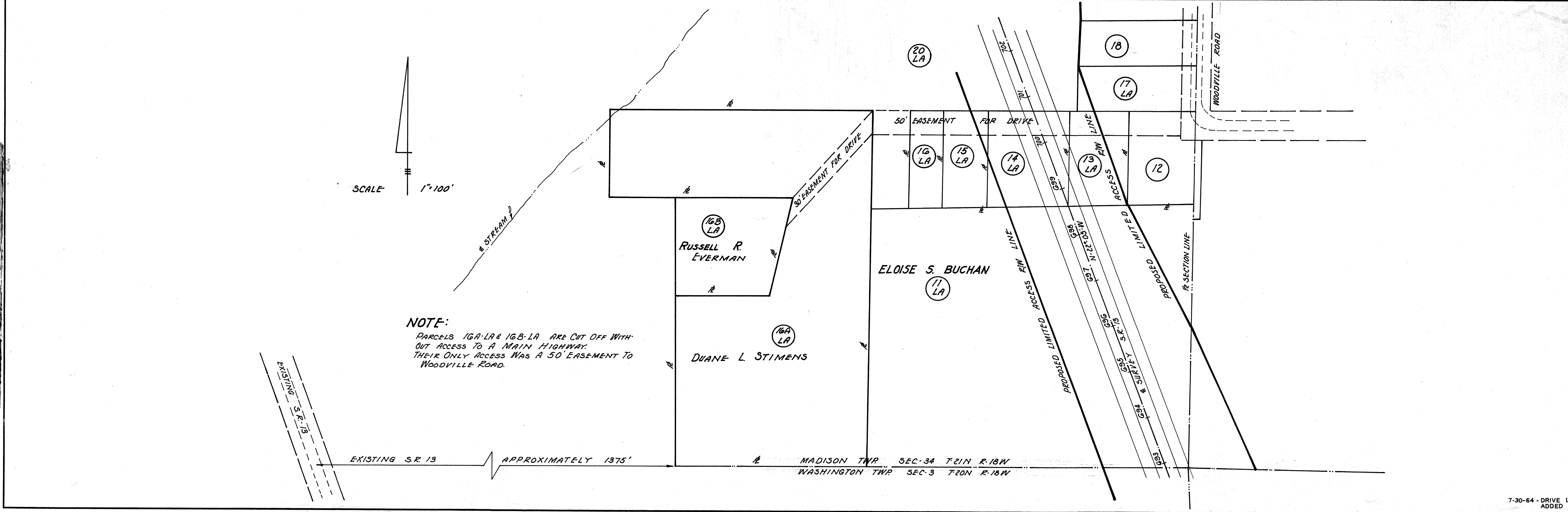
RIC-13-10.98
RIGHT OF WAY PLANS
SCALE 1"=50'
Sold as RIC-13-(10.83-13.95)



COMMUNITY BAPTIST CHURCH

PARCELS 28,31&35 NOT ASSIGNED

RIGHT OF WAY ON COOK RD (CO. HY NO. 134)



SCALE 1"=100'

NOTE:
PARCELS 16A-LA & 16B-LA ARE CUT OFF WITH
OUT ACCESS TO A MAIN HIGHWAY.
THEIR ONLY ACCESS WAS A 50' EASEMENT TO
WOODVILLE ROAD.

EXISTING S.R. 13 APPROXIMATELY 1375'

MADISON TWP SEC. 34 T21N R.18W
WASHINGTON TWP SEC. 3 T20N R.18W

NOV 3 1968

GENERAL INFORMATION

INTRODUCTION

The project consists of the major relocation of 3.5 miles of SR 13 as well as 1.5 miles of intersecting roads and associated ramps. The project begins south of Mansfield, at the intersection of Interstate 71 and existing SR 13, extends northward, generally paralleling existing SR 13, 0.5 mile to the east, and terminates approximately 300 feet north of the Mansfield corporation line (Mart Drive).

The proposed grades indicate the following:

- MAINLINE - cuts, maximum 35 feet in depth; fills, maximum 37 feet in height.
- COCK ROAD - fill, maximum 16 feet in height.
- RAMP E - fill, maximum 22 feet in height.
- RAMP W - fill, maximum 16 feet in height.
- MALONE ROAD - widening and resurfacing.
- RAMP A - cut, less than 5 feet in depth; fills, maximum 33 feet in height.
- RAMP B - fill, maximum 6 feet in height.
- RAMP C - cut, maximum 7 feet in depth; fill, maximum 20 feet in height.

GEOLOGY OF THE SITE

The alignment traverses a glaciated, moderately-dissected portion of the Allegheny Plateau. The initial 1.2 miles are situated along the lower west valley wall and on the poorly-drained flood plain of a deeply-filled valley. The alignment ascends the valley wall and the final 2.3 miles crosses predominantly well-drained uplands. Local bedrock consists of sandstones and shales, Mississippian in age.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical earth auger, hand auger and peat sampler (in areas of difficult access), and rotary type drill rig, between the following dates: January 9 and 31, 1958, January 2 and February 12, 1958, October 7 and 27, 1958, December 14, 1960 and January 11, 1961. Soil profile borings were supplemented by foundation investigation borings made in conjunction with the proposed structures at Cook Road, Malone Road, and Ramp A.

INVESTIGATIONAL DISCLOSURES

Borings disclose the following:

MAINLINE - Materials immediately below grade consist of gravels, silts, and silt clays, in the A-1-a, A-1-u, A-2-u, A-2-s, A-4, and A-5 classifications. Wet silts were encountered at grade, at station 660+00. Frost susceptible silts occur within 3 feet of grade at stations 605+50, 613+50, 639+00, 671+00, 682+00, 680+00, 729+00, 736+00, 736+00, 751+50, and 757+50. It is noted that fine-textured peat, wet silts, clays, and elastic clays, contaminated with organic materials, were encountered just beyond the limits of construction, but near grade, between 10 and 75 feet right of centerline in the vicinity of stations 610+00 and 610+50.

In the embankment foundation, materials consist predominantly of gravels, silts, and silt clays, in the A-1-a, A-1-u, A-2-u, A-2-s, A-4, and A-6 classifications. Between approximately stations 505+00 and 506+00, the alignment passes through the west edge of an extensive deposit of soft, wet, compressible, low strength peats and organic soils. The soft deposit is of greatest thickness to the right of centerline and of decreasing thickness to the left; it is overlain by sand and gravel, and between stations 505+00 and 502+50, is overlain by silts and silt clays on the order of 5 to 10 feet in thickness. Immediately below the proposed embankment, the soft deposit is as much as 10 to 15 feet thick, on the right of centerline, and 5 feet or less, on the left of centerline. To the right of the proposed embankment, borings encountered as much as 30 feet of peat.

Between approximately stations 604+00 and 605+00, borings disclosed 3 to 5 feet of soft wet, peat and organic soils at-surface, below the toe of the proposed embankment, 75 to 110 feet right of centerline.

STRAUB ROAD - Materials immediately below grade, consist of gravel, sandy silt, and silt clay, in the A-2-6, A-4a, and A-6a classifications. Frost susceptible silts were encountered within 3 feet of grade at stations 11+00 and 14+75. In the embankment area, foundation materials consist of sandy silt and silt clay, in the A-4a and A-6 classifications.

COCK ROAD - Materials in the embankment foundation consist of sandy silt and silt clay, in the A-4a and A-6 classifications. Frost susceptible silts were found to occur within 3 feet of grade at station 7+50.

RAMP W - Materials in the embankment foundation consist of sandy silt, in the A-4a classification.

RAMP E - In the embankment foundation, materials consist of silt clays and clay, in the A-6a and A-7-5 classifications.

MALONE ROAD - Materials immediately below grade are comprised of sandy silts, in the A-4a classification. Frost susceptible silts were encountered within 3 feet of grade along the entire length of improvement.

RAMP A INTERCHANGE

Ramp A - Directly beneath grade, materials consist of sandy silt, in the A-4a classification. Frost susceptible silt was encountered within 3 feet of grade at station 6+10, 17+00 and 18+13.

In the embankment foundation areas, materials consist of gravels and sandy silt, in the A-1-u, A-2-u, and A-4a classifications.

Ramp B - Material in the embankment foundation and immediately below grade consists of sandy silt, in the A-4a classification. Frost susceptible silt was found to occur within 3 feet of proposed grade at station 2+45.

Ramp C - Directly below grade, material consists of silt clay, in the A-6a classification.

In the embankment foundation area, soils are comprised of silt clays, in the A-4 and A-6a classifications. Wet silts were encountered at-surface, up to 9 feet in depth, at stations 1+00 and 3+55.

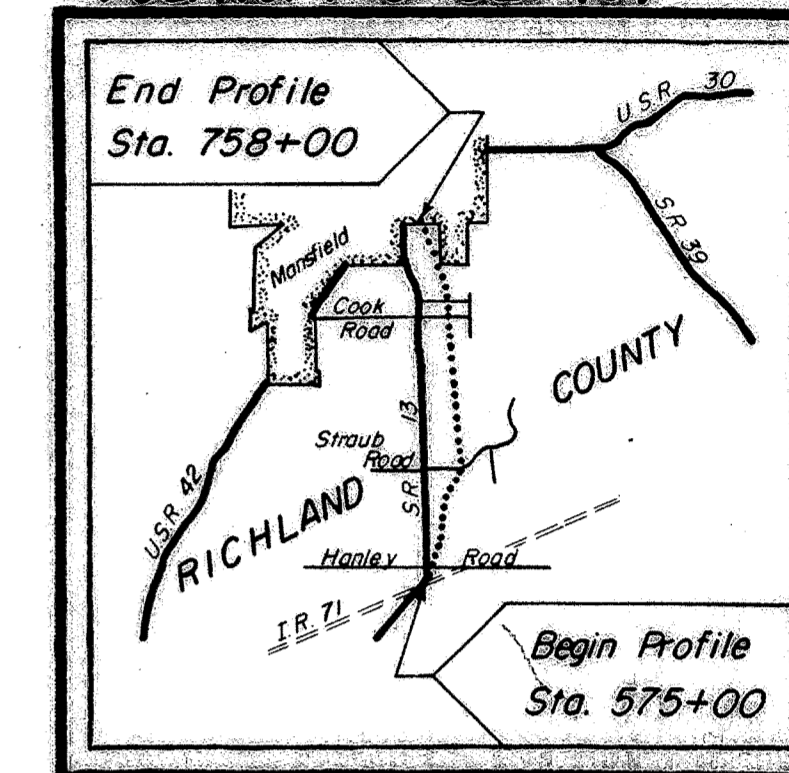
LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 1126 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel and/or stone fragments	A-1-a(0)	A-1-a	61	19	11	5	4	MP	MP	13	104
Gravel and/or stone fragments with sand	A-1-u(0)	A-1-u	13	20	16	10	6	MP	MP	14	123
Fine sand	A-3(0)	A-3	1	10	70	1	3	MP	MP	20	1
Coarse and fine sand	---	A-3a	9	13	52	15	11	MP	MP	20	7
Gravel and/or stone fragments with sand and silt	A-2-u(0)	A-2-u	39	14	17	18	12	13	3	16	96
Gravel and/or stone fragments with sand, silt and clay	A-2-s(1)	A-2-s	14	14	14	12	16	34	16	23	10
Sandy silt	A-4(4)	A-4a	10	9	19	32	21	17	5	10	342
Silt	A-4(0)	A-4b	2	2	9	62	25	16	1	26	114
Elastic silt and clay without organic material unless otherwise noted	A-5(0)	A-5	0	2	8	56	34	47	9	50	3
Silt and clay	A-6(0)	A-6a	13	5	10	40	32	33	13	23	101
Silty clay	A-6(11)	A-6u	7	4	11	43	35	30	10	24	24
Elastic clay without organic material unless otherwise noted	A-7-5(0)	A-7-5	0	0	12	46	26	62	22	40	18
Clay	A-7-6(15)	A-7-6	10	3	6	40	32	49	21	33	31
Unclassified material											14
Rouidery zone											1
Compact peat											4
Fibrous peat											4
Fine-Textured peat											45
Compact sedimentary peat											4
Marly sedimentary peat											16
Silty sedimentary peat											10
Sedimentary peat											9
Sandstone											
Weathered sandstone											
Soil and/or Topsoil - Approximate depth.											
Ferr material.											
Drive sample-core boring - plan view.											
Auger boring - plan view.											
Auger boring plotted to vertical scale only.											
Drive sample - core boring plotted to vertical scale only.											
Number of blows for "Standard Penetration" test.											
X = number of blows for the first 6 inches.											
Y = number of blows for the second 6 inches.											
Water content nearly equal to or greater than liquid limit.											
Indicates a non-plastic material with high water content.											
Free water.											
Static water level.											
NOTE: Small vertical figures beside borings indicate loss on ignition. e.g. 15%.											
NOTE: Figures beside borings indicate water content in percent. e.g. 15.											

SOIL PROFILE
RICHLAND COUNTY
RIC-13-(10.83-13.95)
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 O. S. U. CAMPUS, COLUMBUS, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

Fed. No. F-U-327 (9)



LOCATION MAP

Recon - I.M. - 12/18/58 and 12/23/60

Drilling Auger - CEG, JAG, RDR, CAC - 1/9/58 to 1/31/58, 1/8/59 to 2/12/59, 10/7/59 to 10/27/59, and 12/14/60 to 1/11/61

Core - WLT - 10/20/59 to 10/27/59

Drafting - D.M., C.L.E. - 3/31/61

PROJECT INDEX

MAIN LINE	PLAN VIEW SHEET	PROFILE SHEET
Sta. 575+00 to Sta. 607+00	6	6
Sta. 607+00 to Sta. 638+00	7	7
Sta. 638+00 to Sta. 670+00	8	8
Sta. 670+00 to Sta. 702+00	9	9
Sta. 702+00 to Sta. 734+00	10	10
Sta. 734+00 to Sta. 758+00	11	11
Proposed Straub Road	12	12
Proposed Cook Road	12	12
Proposed Malone Road	13	13
Ramp W	10	13
Ramp E	10	13
RAMP A INTERCHANGE		
Ramp A	14	15
Ramp B	14	15
Ramp C	14	15

Summary of Soil Test Data

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
 * Denotes sample taken at or near grade.

Station & Offset	Depth From-To	% Agg	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class
578+00 CL	0.0-5.0	56	11	11	6	6	NP	NP	6	A-1-b
	5.0-10.0	53	32	10	-5	NP	NP	6	6	A-1-a
	10.0-15.0	49	24	13	-14	NP	NP	10	10	A-1-b
	15.0-20.0	50	17	20	-13	NP	NP	18	18	A-1-b
	20.0-24.0	14	3	13	57	13	NP	NP	24	A-4b
	24.0-28.0	70	11	11	-8	NP	NP	14	14	A-1-a
578+15 55'Lt	0.0-4.0	20	12	18	30	20	25	6	9	A-4a
	4.0-6.0	6	4	19	50	21	23	2	17	A-4b
	6.0-12.0	59	13	15	9	4	NP	NP	11	A-1-a
	12.0-15.0	29	24	20	14	13	23	6	14	A-2-4
	15.0-19.0	49	17	11	15	8	NP	NP	18	A-1-b
	19.0-24.0	52	21	11	11	5	NP	NP	15	A-1-b
	24.0-26.0	50	17	23	-10	NP	NP	16	16	A-1-b
578+35 70'Rt	0.0-4.0	38	11	18	22	11	NP	NP	6	A-2-4
	4.0-9.0	52	28	8	-12	NP	NP	7	7	A-1-b
	9.0-10.0	3	15	65	-17	NP	NP	25	25	A-3a
	10.0-15.0	42	26	18	-14	NP	NP	13	13	A-1-b
	15.0-20.0	38	20	27	-15	NP	NP	13	13	A-1-b
	20.0-22.0	38	17	27	-18	NP	NP	13	13	A-1-b
578+50 8'Lt	0.0-7.0	Boulders								Visual
578+98 19'Lt	0.0-6.0	39	13	19	18	11	NP	NP	6	A-2-4
	6.0-9.0	32	20	16	14	18	NP	NP	13	A-2-4
	9.0-11.0	45	18	11	16	10	NP	NP	11	A-2-4
	11.0-14.0	29	34	22	-15	NP	NP	10	10	A-1-b
	14.0-20.0	44	23	18	-15	NP	NP	16	16	A-1-b
	20.0-22.0	27	10	30	25	8	NP	NP	15	A-2-4
579+50 60'Lt	0.0-2.0	3	7	13	47	30	25	6	14	A-4a
	2.0-4.0	43	5	30	10	12	NP	NP	10	A-2-4
	4.0-9.0	39	19	14	18	10	NP	NP	11	A-2-4
	9.0-12.0	47	25	13	-15	NP	NP	9	9	A-1-b
	12.0-17.0	36	24	9	14	17	NP	NP	20	A-2-4
	17.0-18.0	48	18	13	14	7	NP	NP	18	A-1-b
	18.0-22.0	6	7	30	48	9	NP	NP	17	A-4a
579+50 CL	0.0-7.0	19	10	16	36	19	NP	NP	19	A-4a
	7.0-10.0	20	10	30	23	17	NP	NP	15	A-4a
	10.0-15.0	41	28	18	-13	NP	NP	9	9	A-1-b
	15.0-20.0	45	31	13	-11	NP	NP	11	11	A-1-c
	20.0-22.0	52	24	11	-13	NP	NP	17	17	A-1-c
	22.0-24.0	45	31	12	-12	NP	NP	18	18	A-1-b
	24.0-26.0	3	3	32	55	7	NP	NP	20	A-4c
579+90 74'Rt	0.4-1.5	17	16	24	28	15	NP	NP	20	A-4a
	1.5-4.0	8	10	24	42	16	NP	NP	21	A-4a
	4.0-5.0	Brown Peat and Soil Mixture								Visual
	5.0-9.0	35	15	18	21	11	NP	NP	27	A-2-4
	9.0-13.0	51	15	14	15	5	NP	NP	18	A-4a
	13.0-15.0	44	11	43	17	5	NP	NP	20	A-3a
	16.0-20.0	44	24	17	10	5	NP	NP	14	A-1-b
580+00 60'Lt	0.0-3.0	34	13	18	22	13	21	3	15	A-2-4
	3.0-4.0	38	9	16	25	12	23	15	15	A-6a
	4.0-7.0	44	11	17	-6	NP	NP	12	12	A-2-4
	7.0-13.0	40	36	16	-8	NP	NP	7	7	A-1-b
	13.0-17.0	48	21	16	-15	NP	NP	13	13	A-1-b
	17.0-18.0	39	26	13	14	8	NP	NP	18	A-1-b
	18.0-22.0	0	3	20	65	12	NP	NP	21	A-4b
580+45 63'Rt	1.0-3.0	Brown Peat and Soil Mixture								Visual
	3.0-5.0	14	13	37	24	12	NP	NP	20	A-4a
	5.0-10.0	57	16	11	11	5	NP	NP	16	A-1-b
	10.0-15.0	28	23	45	-4	NP	NP	18	18	A-1-b
	15.0-17.0	21	7	26	36	10	NP	NP	18	A-4a
	17.0-20.0	63	14	14	-9	NP	NP	17	17	A-1-a
581+00 50'Lt	0.0-3.0	14	11	26	28	21	20	6	12	A-4a
	3.0-6.0	30	17	16	22	15	21	8	14	A-4a
	6.0-7.0	14	10	19	39	18	NP	NP	19	A-4a
	7.0-9.0	0	20	10	40	30	NP	NP	34	A-4a
	9.0-10.0	0	6	12	50	32	36	9	31	A-4b
	10.0-13.0	0	3	8	59	39	34	17	28	A-6b
	13.0-17.0	0	3	23	56	16	NP	NP	19	A-4b
	17.0-20.0	15	3	16	57	9	NP	NP	22	A-4b
581+05 5'Lt	0.0-3.0	39	17	17	19	8	20	6	12	A-2-4
	3.0-6.0	35	16	19	14	25	4	14	14	A-2-4
	6.0-7.0	12	12	23	29	24	30	11	25	A-6a
	7.0-10.0	37	18	15	16	14	26	10	27	A-2-4
	10.0-14.0	0	5	20	60	15	NP	NP	23	A-4b
	14.0-17.0	0	1	2	56	41	23	6	22	A-4b
	17.0-18.0	5	16	34	28	17	NP	NP	16	A-4a
581+42 CL	0.0-3.0	23	10	18	31	18	21	6	14	A-4a
	3.0-6.0	21	17	16	27	19	NP	NP	11	A-4a
	6.0-10.0	24	9	18	28	21	17	4	10	A-4a
	10.0-14.0	53	28	9	-10	NP	NP	8	8	A-1-a
	14.0-15.0	5	16	56	8	15	NP	NP	17	A-3a
	15.0-22.0	49	12	12	-11	NP	NP	16	16	A-1-b
581+42 45'Rt	0.0-7.0	19	13	21	25	22	19	4	20	A-4a
	7.0-10.0	15	9	9	41	26	18	8	13	A-4a
	10.0-12.0	10	8	20	35	27	22	4	13	A-4a
	12.0-13.0	2	8	20	47	23	NP	NP	30	A-4b
	13.0-15.0	5	5	17	53	26	4	30	30	A-4b
	15.0-16.0	5	9	19	41	26	NP	NP	34	A-4a
	16.0-18.0	5	9	19	41	26	NP	NP	34	A-4a
	18.0-21.0	18	13	18	31	20	NP	NP	23	A-4a
	21.0-25.0	40	21	17	11	11	NP	NP	17	A-1-b
	25.0-28.0	25	18	32	20	5	NP	NP	15	A-3a
581+42 60'Rt	0.0-3.0	19	13	21	25	22	19	4	11	A-4a
	3.0-7.0	18	8	17	34	23	18	6	11	A-4a
582+00 CL	0.0-3.0	25	7	14	30	24	27	11	25	A-6a*
	3.0-5.0	0	1	3	84	12	22	4	13	A-4b
	5.0-10.0	16	9	28	28	25	11	24	24	A-6a
	10.0-14.0	35	22	13	-10	NP	NP	7	7	A-1-b
	14.0-20.0	42	22	14	14	8	NP	NP	16	A-1-b
582+50 CL	0.0-4.0	46	18	15	11	10	NP	NP	13	A-1-b
	4.0-9.0	27	16	20	20	17	21	8	13	A-4a
	9.0-11.0	30	25	15	17	13	24	8	17	A-2-4
	11.0-16.0	41	33	17	-9	NP	NP	20	20	A-1-b
	16.0-20.0	51	25	14	-10	NP	NP	18	18	A-1-a
582+50 70'Rt	0.0-5.0	51	13	16	13	7	NP	NP	9	A-1-b
	5.0-10.0	50	19	16	7	8	NP	NP	10	A-1-b
	10.0-13.0	36	9	21	23	11	NP	NP	13	A-2-4
	13.0-15.0	9	24	24	27	16	NP	NP	43	A-4a
	15.0-16.0	29	22	23	15	68	16	40	40	A-7-5
	16.0-18.0	29	22	29	5	13	NP	NP	24	A-1-b
	18.0-24.0	48	32	11	-9	NP	NP	17	17	A-1-b
	24.0-30.0	61	22	12	-5	NP	NP	16	16	A-1-a
582+50 125'Rt	0.2-5.0	31	12	17	24	16	20	7	10	A-4a
	5.0-9.0	42	10	17	18	13	NP	NP	8	A-2-4
	9.5-14.0	0	2	9	51	38	63	30	33	A-7-5
	14.0-15.0	Dark Brown Fine-Textured Peat								Visual
	15.0-21.5	Gray Marly Sedimentary Peat								Visual
	21.5-26.0	47	12	14	15	12	NP	NP	13	A-2-4
583+00 CL	0.0-5.0	43	21	14	15	7	NP	NP	11	A-1-b
	5.0-10.0	36	16	18	18	12	20	6	16	A-2-4
	10.0-15.0	35	4	6	40	15	24	10	25	A-4a
	15.0-18.0	43	9	15	23	10	22	6	18	A-2-4
	18.0-24.0	70	12	9	-9	NP	NP	17	17	A-1-a
	24.0-30.0	69	16	8	-7	NP	NP	14	14	A-1-a
583+00 85'Rt	0.0-5.0	35	12	19	20	14	21	6	11	A-2-4
	5.0-10.0	32	13	18						



Summary of Soil Test Data (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

NOTE: Classification characteristics in parentheses indicate test data for a sample determined by visual examination. Those characteristics essentially the same as the sample obtained as representative of the given interval.

Table with columns for Station & Offset, Depth, % Agg, % C S, % F S, % Silt, % Clay, LL, PI, % WC, SHTL Class. It contains multiple columns of soil test data for various stations and depths, including soil descriptions like 'Black Compact Fine-Textured Peat' and 'Gray Marly Sedimentary Peat'.

Summary of Soil Test Data (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

NOTE: Classification characteristics in parentheses indicate test data for a sample determined by visual examination to have characteristics essentially the same as the sample obtained as representative of the given interval.

Station & Offset	Depth From-To	% Agg	% C S	% F S	% Silt	% Clay	LL	PI	WC	SHTL Class
620+50 187 Rt	0.5-3.0	10	22	21	35	25	25	2	22	A-4a
	3.0-6.0	28	17	19	14	31	6	26	26	A-2-4
	6.0-10.0	4	1	3	63	29	33	15	22	A-6a
623+50 60 Lt	0.5-2.0	12	4	5	25	54	47	21	20	A-7-6
	2.0-6.0	56	15	11	9	9	NP	NP	5	A-1-b
623+50 CL	0.3-2.0	38	14	10	19	19	40	19	24	A-6b
	2.0-3.0	0	2	5	32	61	42	17	19	A-7-6
	3.0-8.0	56	23	12	9	NP	NP	NP	13	A-1-a
	8.0-12.0	53	23	10	14	NP	NP	13	13	A-1-a
	12.0-14.0	55	11	14	15	5	NP	NP	13	A-1-b
623+50 50 Rt	0.3-4.0	0	6	10	53	31	29	8	21	A-4b
	4.0-6.0	0	1	3	46	50	41	14	22	A-7-6
	6.0-9.0	21	22	24	23	10	28	9	20	A-2-4
	9.0-13.0	67	19	7	7	NP	NP	NP	18	A-1-a
	13.0-18.0	15	14	14	36	21	20	6	14	A-4a
	18.0-22.0	12	5	14	44	25	23	6	15	A-4a
	22.0-25.0	11	8	19	53	9	NP	NP	17	A-4b
623+50 114 Rt	0.4-2.0	17	8	10	43	22	26	2	23	A-4a
	2.0-7.0	10	1	4	47	38	47	27	27	A-7-6
	7.0-12.0	Grayish-Brown Compact Fine-Textured Peat								Visual
	12.0-14.0	6	8	6	55	25	34	11	38	A-6a
	14.0-19.0	33	9	12	34	12	25	5	23	A-4a
	19.0-22.0	(75)	11	6	6	2	NP	NP		A-1-a
623+55 170 Rt	0.4-2.5	17	8	10	43	22	26	2	23	A-4a
	2.5-5.0	18	2	5	40	35	43	14	28	A-7-6
	5.0-8.0	0	0	1	60	39	41	17	33	A-7-6
	8.0-20.0	75	11	6	6	2	NP	NP	11	A-1-a
624+00 165 Rt	0.4-3.0	18	10	19	33	20	26	6	22	A-4a
	3.0-4.0	Black Compact Fine-Textured Peat								Visual
	4.0-7.0	0	1	7	50	42	39	2	56	A-4b
	7.0-13.0	Gray Sedimentary Peat								Visual
	13.0-16.0	78	9	5	6	2	NP	NP	12	A-1-a
624+05 115 Rt	0.4-5.0	18	10	19	33	20	26	6	22	A-4a
	5.0-8.0	11	3	5	46	35	49	26	31	A-7-6
	8.0-12.0	62	9	10	12	7	26	7	20	A-2-4
624+10 215 Rt	0.0-3.0	(18)	10	19	23	20	26	6	22	A-4a
	3.0-4.0	(Black Compact Fine-Textured Peat)								Visual
	4.0-7.0	0	1	7	50	42	39	2	56	A-4b
	7.0-10.0	0	1	15	51	33	NP	NP	66	A-4b
	10.0-13.0	0	1	1	60	38	54	28	56	A-7-6
	13.0-16.0	(78)	9	5	6	2	NP	NP		A-1-a
624+15 265 Rt	0.4-2.0	18	10	19	33	20	26	6	22	A-4a
	2.0-5.0	0	0	4	53	43	39	9	48	A-4b
	5.0-9.5	0	0	2	71	27	33	8	31	A-4b
	9.5-12.0	(78)	9	5	6	2	NP	NP		A-1-a
624+45 160 Rt	0.4-2.5	18	10	19	33	20	26	6	22	A-4a
	2.5-8.0	40	5	9	17	29	52	27	38	A-7-6
	8.0-10.0	(78)	9	5	6	2	NP	NP		A-1-a
624+63 232 Rt	0.4-1.5	14	6	8	43	22	26	2	23	A-4a
	1.5-4.0	6	8	25	47	26	22	41	17	A-7-6
	4.0-14.0	62	11	9	14	4	32	11	18	A-1-b
	14.0-16.0	7	2	3	44	44	32	11	18	A-6a
626+00 CL	0.5-5.0	62	26	7	5	NP	NP	6	6	A-1-a*
	5.0-8.0	66	16	11	7	NP	NP	6	6	A-1-a
	8.0-10.0	31	12	20	29	8	NP	NP	7	A-4a
626+05 90 Rt	0.4-1.0	(31)	14	13	20	22	34	14	22	A-6a
	1.0-4.0	3	1	4	52	40	40	18	24	A-6b
	4.0-8.0	28	14	23	17	18	32	14	21	A-2-6
	8.0-13.0	2	4	4	41	48	32	12	18	A-6a
	13.0-15.0	49	7	7	17	20	34	23	28	A-7-6
626+10 138 Rt	0.4-6.0	31	14	13	20	22	34	14	22	A-6a
	6.0-7.0	0	1	3	58	38	40	18	18	A-6b
	7.0-12.0	55	14	11	13	7	NP	NP	15	A-1-b
	12.0-15.0	9	6	20	43	22	23	2	14	A-4a
627+80 CL	0.5-3.0	28	19	19	21	13	22	5	13	A-2-4*
627+90 112 Rt	0.4-5.0	38	10	21	18	13	21	3	16	A-2-4
	5.0-12.0	68	15	8	7	2	NP	NP	9	A-1-a
628+80 100 Rt	0.4-5.5	65	7	13	7	8	32	7	16	A-2-4
	5.5-13.0	0	0	1	72	27	24	1	27	A-4b
	13.0-20.0	70	11	6	11	2	NP	NP	12	A-1-a
629+50 28 Rt	0.4-3.5	70	11	11	4	4	NP	NP	21	A-1-a
	3.5-7.0	0	1	3	67	29	NP	NP	25	A-4b
629+70 145 Rt	0.4-4.0	(65)	7	13	7	8	32	7	16	A-2-4
	4.0-10.0	0	1	8	73	18	NP	NP	23	A-4b
	10.0-16.0	0	0	2	73	25	NP	NP	23	A-4b
	16.0-20.0	(70)	11	6	11	2	NP	NP		A-1-a
630+00 CL	0.5-2.0	5	8	27	47	13	NP	NP	18	A-4a
	2.0-4.0	76	9	10	5	NP	NP	13	13	A-1-a
	4.0-9.0	18	9	16	33	24	23	7	13	A-4a
	9.0-14.0	19	10	17	36	18	21	5	10	A-4a
	14.0-19.0	22	9	18	34	17	17	2	10	A-4a
	19.0-23.0	28	7	16	33	16	21	6	11	A-4a
	23.0-26.0	32	25	29	14	NP	NP	16	16	A-1-b
	26.0-30.0	16	2	20	43	19	18	4	13	A-4a
630+60 73 Rt	0.4-5.0	(70)	11	11	4	4	NP	NP		A-1-a
	5.0-11.0	1	3	67	29	NP	NP			A-4b
632+60 40 Rt	0.4-5.0	68	9	12	5	6	NP	NP	18	A-1-a
	5.0-10.0	3	1	2	60	34	23	3	25	A-4b
	10.0-17.0	0	1	2	61	36	25	6	24	A-4b
	17.0-25.0	0	0	1	62	37	28	5	24	A-4b
632+70 CL	1.0-3.0	68	8	7	11	6	21	5	13	A-1-b
	3.0-4.0	0	2	3	57	38	36	16	21	A-6b
	4.0-7.0	0	1	2	62	35	32	10	29	A-4b
	7.0-10.0	0	1	9	71	19	NP	NP	24	A-4b
	10.0-15.0	22	30	37	11	NP	NP	16	16	A-1-b
	15.0-20.0	26	37	27	10	NP	NP	20	20	A-1-b
	20.0-24.0	51	23	15	11	NP	NP	12	12	A-1-a
	24.0-26.0	36	9	11	28	16	24	8	15	A-4a
	26.0-30.0	20	11	17	34	18	20	5	12	A-4a
632+70 140 Rt	0.4-4.0	23	13	28	21	15	23	4	20	A-4a
	4.0-6.0	13	11	27	27	28	8	27	26	A-4a
	6.0-12.0	0	1	13	57	29	21	3	27	A-4b
	12.0-17.0	0	0	18	53	29	NP	NP	23	A-4b
	17.0-25.0	0	0	6	57	37	30	7	24	A-4b
635+05 10 Rt	0.4-4.0	35	8	10	26	31	35	14	20	A-6a
	4.0-8.0	0	0	1	57	42	38	10	26	A-4b
	8.0-12.0	0	0	2	69	29	27	3	20	A-4b
635+10 90 Rt	0.4-3.0	40	10	19	17	14	25	6	22	A-2-4
	3.0-9.0	0	0	1	66	33	29	7	26	A-4b
	9.0-15.0	0	0	2	68	30	25	6	24	A-4b
637+90 CL	0.3-2.0	30	5	10	30	25	32	11	17	A-6a
	2.0-7.0	25	7	14	35	26	32	6	14	A-4a
	7.0-12.0	0	1	5	56	38	30	9	18	A-4a
	12.0-17.0	30	8	15	29	18	23	5	12	A-4a
	17.0-20.0	22	8	19	36	15	NP	NP	12	A-4a
640+30 10 Lt	0.5-5.0	8	8	15	40	29	32	9	17	A-4a
	5.0-11.0	12	8	17	34	29	28	9	20	A-4a
	11.0-12.0	29	21	23	19	8	NP	NP	16	A-2-4
	12.0-14.0	7	7	6	70	10	NP	NP	22	A-4b
643+40 75 Rt	0.5-5.0	35	16	9	12	28	55	29	28	A-7-6
	5.0-8.0	14	5	14	34	33	28	7	16	A-4a
	8.0-12.0	19	7	19	29	26				


Summary of Soil Test Data (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
 * Denotes sample taken at or near grade.

Station & Offset	Depth From-To	% Agg	% C S	% FS	% Silt	% Clay	LL	PI	% WC	SHTL Class
754+80 15* Rt	0.3-3.0	15	4	20	39	22	24	8	18	A-4a
	3.0-5.0	27	7	14	34	18	20	7	13	A-4a*
	5.0-12.0	15	7	18	31	29	27	10	14	A-4a*
	12.0-14.0	8	4	26	39	23	NP	NP	18	A-4a
14.0-15.0	16	7	21	30	26	24	6	16	A-4a	
757+50 CL	0.3-5.0	18	4	16	31	31	30	13	14	A-6a*
	5.0-10.0	15	6	20	37	22	24	9	14	A-4a*
	10.0-14.0	27	5	14	28	26	27	11	12	A-6a
	14.0-18.0	29	7	28	16	20	NP	NP	11	A-4a
	18.0-23.0	37	8	16	26	13	NP	NP	14	A-4a
	23.0-25.0	44	5	11	23	16	23	5	13	A-4a
	25.0-30.0	33	7	16	27	17	NP	NP	13	A-4a
PROPOSED STRAUB ROAD										
11+00 10* Rt	0.3-5.0	17	6	24	35	18	NP	NP	17	A-4a*
	5.0-8.0	64	7	16	8	5	NP	NP	12	A-1-a
14+75 10* Rt	0.4-5.5	20	10	20	31	19	25	5	18	A-4a*
	5.5-10.0	45	10	17	17	11	22	4	15	A-2-4
17+50 10* Rt	0.3-5.0	19	6	19	37	19	NP	NP	22	A-4a
	5.0-11.5	60	17	7	4	12	37	18	22	A-2-6*
	11.5-15.0	59	16	10	11	4	NP	NP	15	A-1-a
	15.0-20.0	12	3	12	51	22	25	8	17	A-4b
21+50 130* Lt	0.3-5.0	15	10	19	30	26	25	8	11	A-4a
	5.0-9.0	25	12	20	26	17	19	2	8	A-4a
	9.0-14.5	24	10	14	35	17	23	4	20	A-4a
	14.5-16.5	18	4	11	39	28	24	11	14	A-6a
	16.5-19.0	25	10	20	28	17	22	7	13	A-4a
19.0-25.0	25	7	19	32	17	21	5	12	A-4a	
22+65 45* Lt	0.4-6.0	0	1	2	53	44	38	16	21	A-6b
	6.0-14.0	26	9	14	31	20	23	4	23	A-4a
	14.0-19.0	17	4	13	28	38	25	11	14	A-6a
	19.0-25.0	0	1	3	54	42	34	14	20	A-6a
24+70 CL	0.4-5.0	21	9	13	31	26	33	21	20	A-6b
	5.0-8.0	39	9	17	24	11	NP	NP	17	A-2-4
	8.0-12.0	0	1	8	76	15	NP	NP	21	A-4b
	12.0-14.0	28	9	16	31	16	22	3	16	A-4a
	14.0-18.0	0	1	6	66	27	24	7	16	A-4b
	18.0-25.0	2	2	13	72	11	NP	NP	22	A-4b
25+00 80* Lt	0.3-6.5	15	8	17	32	28	28	10	16	A-4a
	6.5-13.5	0	1	40	41	18	NP	NP	9	A-4a
	13.5-16.0	0	0	2	59	39	29	8	18	A-4b
27+75 8* Rt	0.3-3.0	11	4	11	43	31	32	11	20	A-6a*
	3.0-8.5	0	0	2	56	42	38	17	24	A-6b*
	8.5-12.0	30	6	18	24	22	31	12	20	A-6a
	12.0-15.0	15	9	16	35	25	24	8	17	A-4a
PROPOSED COOK ROAD										
5+00 10* Lt	0.3-4.0	26	5	21	27	21	26	7	17	A-4a*
	4.0-8.0	13	8	24	34	21	22	5	12	A-4a
7+50 10* Lt	0.3-5.0	7	3	24	43	23	26	4	25	A-4a*
	5.0-8.0	16	8	22	31	23	24	4	17	A-4a
10+75 10* Lt	0.3-3.5	10	5	14	45	26	27	2	23	A-4a
	3.5-7.0	10	3	13	50	24	30	10	23	A-4b
	7.0-10.0	15	6	21	34	24	26	7	13	A-4a
13+00 10* Lt	0.3-5.0	9	6	20	34	31	28	12	17	A-6a
	5.0-12.5	16	7	23	32	22	22	6	17	A-4a
	12.5-15.0	16	8	22	32	22	22	1	15	A-4a
	15.0-20.0	17	8	19	34	22	22	8	13	A-4a
17+00 10* Lt	0.3-6.0	5	3	14	34	44	38	16	26	A-6b
	6.0-15.5	18	7	19	32	24	26	6	15	A-4a
	15.5-20.0	15	7	20	34	24	23	7	14	A-4a
20+00 10* Lt	0.3-6.0	10	5	21	36	28	30	12	18	A-6a
	6.0-8.0	8	5	20	43	24	27	7	16	A-4a
PROPOSED MALONE ROAD										
2+00 13* Rt	0.3-5.5	8	7	18	38	29	26	10	14	A-4a*
	5.5-8.0	15	9	17	33	26	25	7	12	A-4a
6+25 13* Rt	0.3-3.0	5	4	14	46	31	28	8	19	A-4a*
	3.0-8.0	17	7	17	31	27	8	24		A-4a

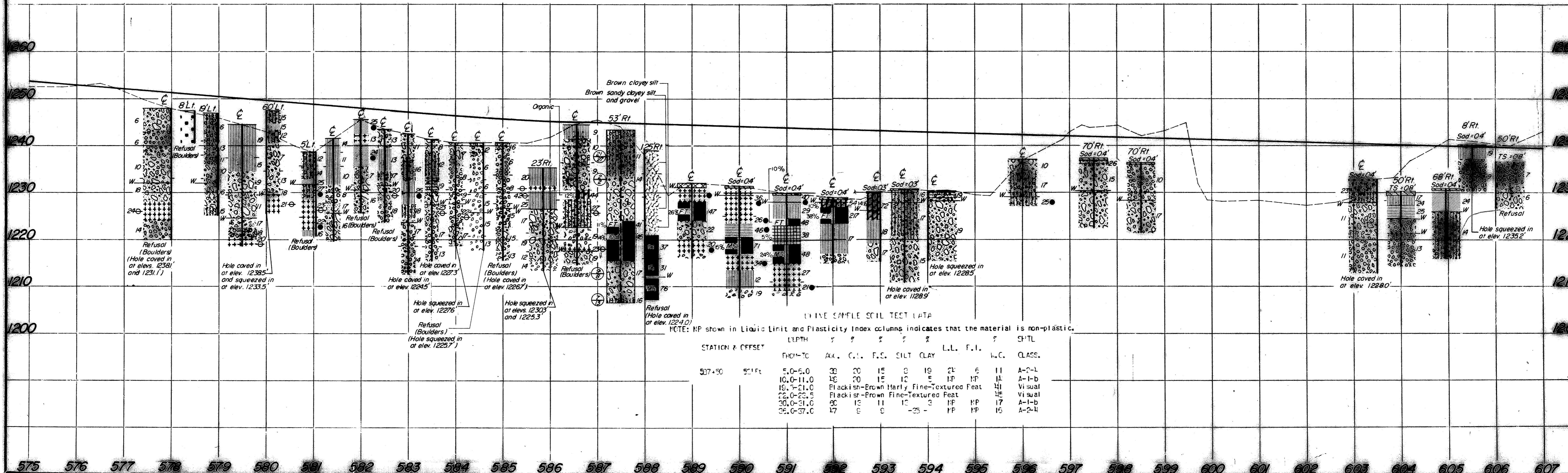
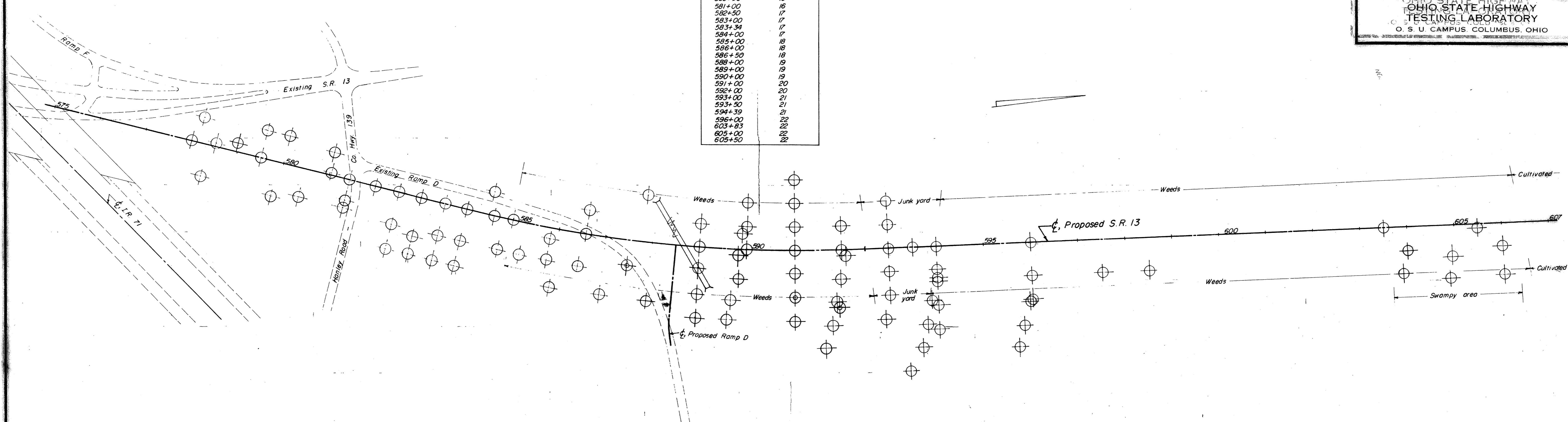
Station & Offset	Depth From-To	% Agg	% C S	% FS	% Silt	% Clay	LL	PI	% WC	SHTL Class
PROPOSED MALONE ROAD (CONT'D)										
11+00 13* Rt	0.3-5.0	9	4	19	37	31	28	9	18	A-4a*
	5.0-10.0	5	5	20	39	31	28	11	13	A-6a
	10.0-15.0	5	5	20	40	30	22	3	12	A-4a
	15.0-20.0	6	5	20	40	29	24	7	12	A-4a
15+00 13* Rt	0.3-5.0	25	7	16	30	22	22	5	15	A-4a*
	5.0-10.0	7	7	24	43	19	19	4	16	A-4a
	10.0-15.0	(5)	5	20	40	30	22	(3)		A-4a
	15.0-20.0	(6)	5	20	40	29	24	(7)		A-4a
19+00 13* Rt	0.3-5.5	15	6	16	39	24	22	2	11	A-4a*
	5.5-8.0	23	7	18	32	20	24	6	16	A-4a
PROPOSED RAMP W										
6+00 CL	0.6-5.0	10	5	14	40	31	NP	NP	21	A-4a
	5.0-10.0	31	6	14	25	24	24	7	14	A-4a
	10.0-14.0	0	2	18	64	16	NP	NP	23	A-4b
	14.0-18.0	58	9	13	14	6	NP	NP	13	A-1-b
9+00 CL	0.6-5.0	9	8	22	35	26	25	9	18	A-4a
	5.0-8.0	14	9	20	28	29	17	2	15	A-4a
	8.0-14.0	21	7	15	32	25	23	8	13	A-4a
	14.0-20.0	29	6	15	26	24	NP	NP	13	A-4a
PROPOSED RAMP E										
4+00 CL	0.6-4.0	0	3	8	45	44	35	13	24	A-6a*
	4.0-6.0	28	15	23	11	23	33	14	22	A-2-6
	6.0-8.0	37	5	9	27	22	24	6	16	A-4a
	8.0-15.0	12	5	11	40	32	NP	NP	14	A-4a
7+00 CL	0.3-4.0	25	24	12	16	23	42	18	25	A-7-6
	4.0-7.0	0	1	4	49	46	39	21	23	A-6b
	7.0-9.0	0	1	5	73	21	NP	NP	22	A-4b
	9.0-14.0	11	6	14	33	36	NP	NP	16	A-4a
	14.0-19.0	18	11	20	29	22	NP	NP	11	A-4a
	19.0-25.0	13	8	18	34	27	23	8	12	A-4a
25.0-30.0	20	5	15	35	25	22	6	16	A-4a	
PROPOSED RAMP A										
6+40 50* Rt	0.3-3.0	5	7	17	44	27	33	9	29	A-4a
	3.0-8.0	3	4	13	41	39	33	11	19	A-6a
	8.0-12.0	4	4	16	38	38	28	11	18	A-6a
	12.0-15.0	7	5	15	39	34	25	5	15	A-4a
	15.0-18.0	5	6	19	43	27	24	9	13	A-4a
	18.0-20.0	6	7	20	40	27	20	2	15	A-4a
9+85 CL	0.3-2.0	25	12	22	24	17	NP	NP	14	A-4a
	2.0-3.0	0	1	19	43	37	NP	NP	22	A-4a
	3.0-6.0	0	1	36	41	22	NP	NP	20	A-4a
	6.0-8.0	57	8	15	11	9	NP	NP	21	A-1-b
	8.0-13.0	3	1	11	60	25	NP	NP	32	A-4b
	13.0-17.0	35	1	5	42	17	33	7	33	A-4a
17.0-21.0	41	6	15	24	14	NP	NP	12	A-4a	
10+40 107* Lt	0.0-2.0	29	8	14	31	18	31	10	16	A-4a
	2.0-7.0	0	4	37	35	24	26	7	22	A-4a
	7.0-11.0	0	3	5	40	52	42	14	31	A-7-6
	11.0-16.0	0	1	9	61	29	23	1	28	A-4b
	16.0-20.0	14	7	22	37	20	21	5	12	A-4a
12+00 110* Rt	0.5-3.0	32	6	15	27	20	30	8	25	A-4a
	3.0-5.0	31	8	22	25	25	14	20	4	A-4a
	5.0-10.0	25	10	18	28	18	19	5	12	A-4a
	10.0-15.0	40	5	14	24	17	19	4	12	A-4a
	15.0-20.0	35	6	13	28	18	19	7	13	A-4a
16+20 103* Lt	0.4-6.0	0	2	10	55	33	40	21	24	A-6b
	6.0-12.0	0	6	21	44	29	22	6	14	A-4a
	12.0-16.0	9	5	19	42	25	19	4	12	A-4a
	16.0-20.0	16	7	21	34					

SOIL PROFILE
RICHLAND COUNTY
RIC-13-(0.63-13.95)
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 O. S. U. CAMPUS COLUMBUS, OHIO



CROSS SECTION INDEX

STATION	SHEET
578+00	16
579+00	16
580+00	16
581+00	16
582+50	17
583+00	17
583+34	17
584+00	17
585+00	18
586+00	18
586+50	18
588+00	19
589+00	19
590+00	19
591+00	20
592+00	20
593+00	21
593+50	21
594+39	21
596+00	22
603+83	22
605+00	22
605+50	22

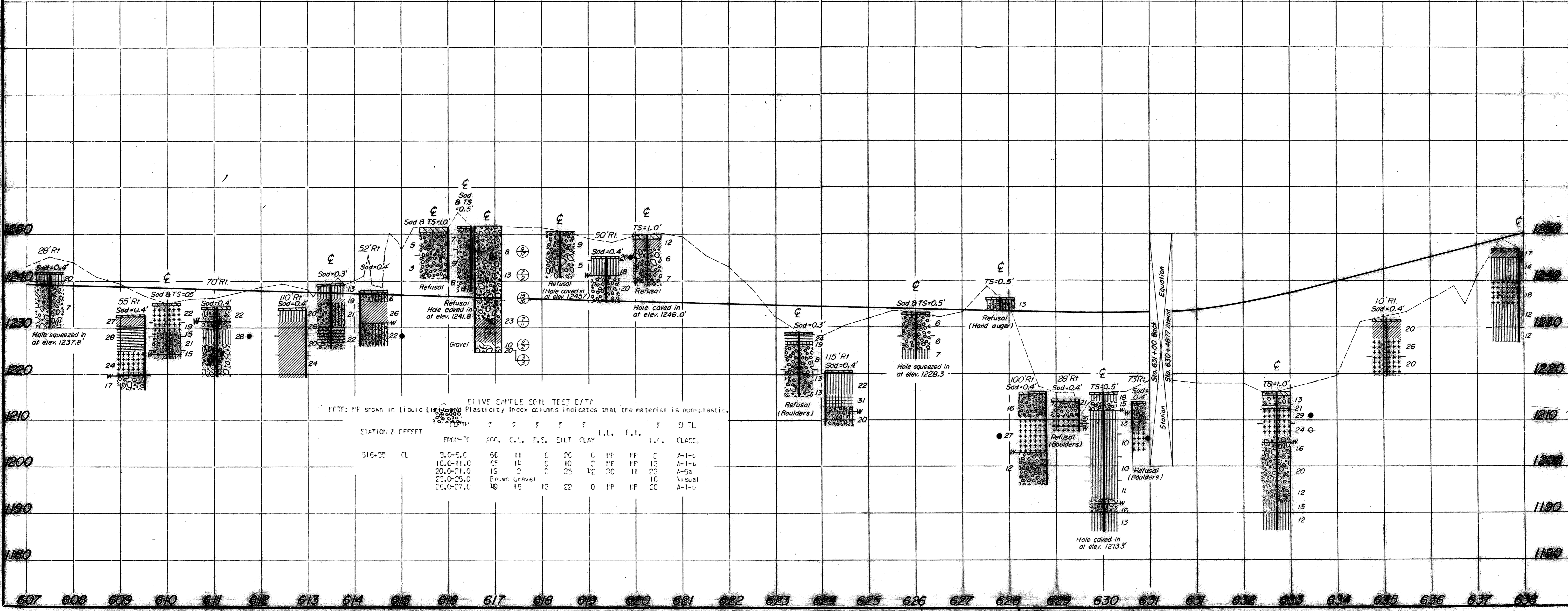
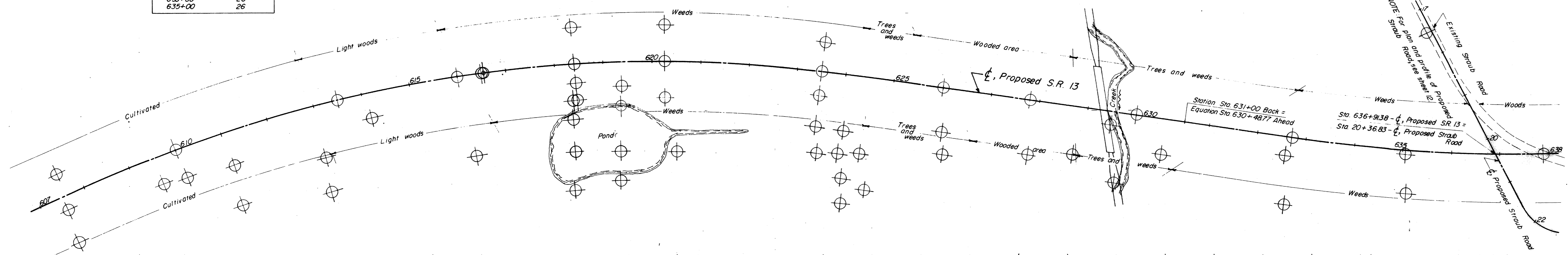


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NOV 3 1989

CROSS SECTION INDEX	
STATION	SHEET
607+00	23
610+00	23
611+00	23
613+00	23
616+00	24
618+50	24
619+50	24
620+50	25
623+50	25
624+00	25
626+00	26
628+00	26
629+67	26
633+00	26
635+00	26

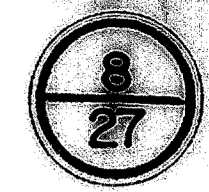
SOIL PROFILE
RICHLAND COUNTY
RIC-13-(10.83-13.95)

OHIO STATE HIGHWAY
TESTING LABORATORY
O. S. U. CAMPUS COLUMBUS, OHIO

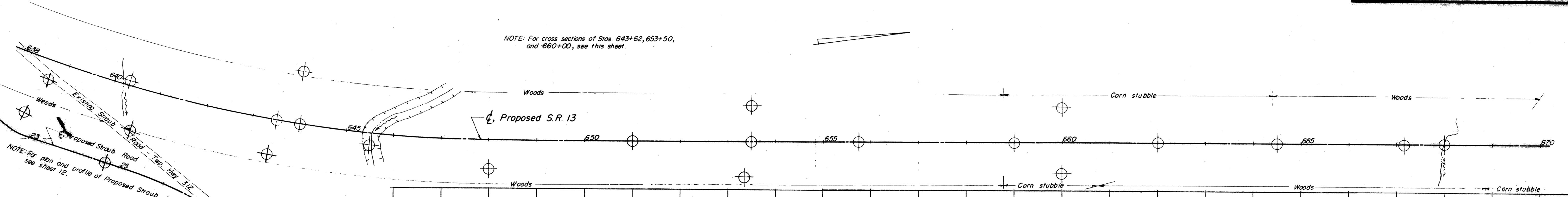


NOTE: If shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.

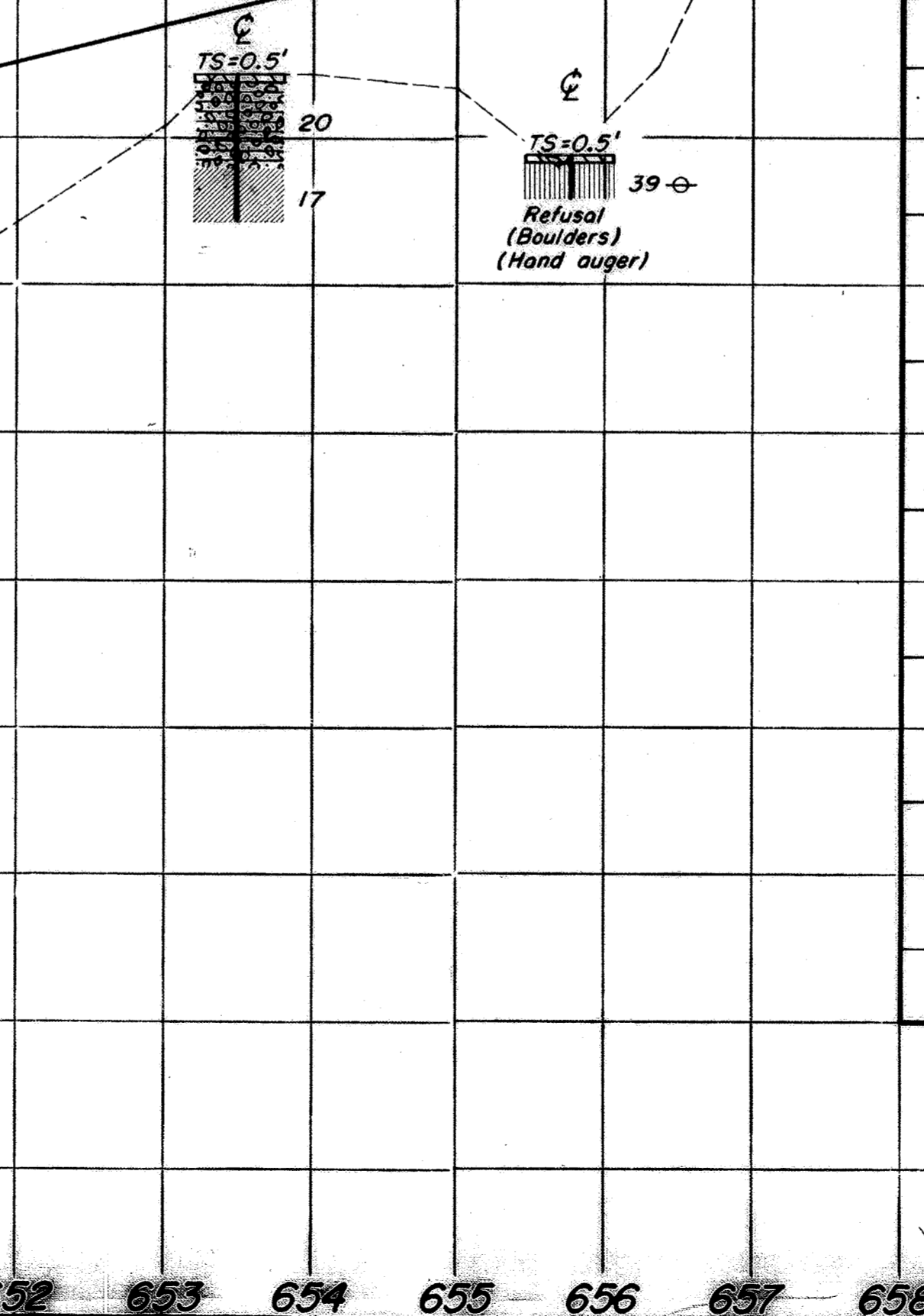
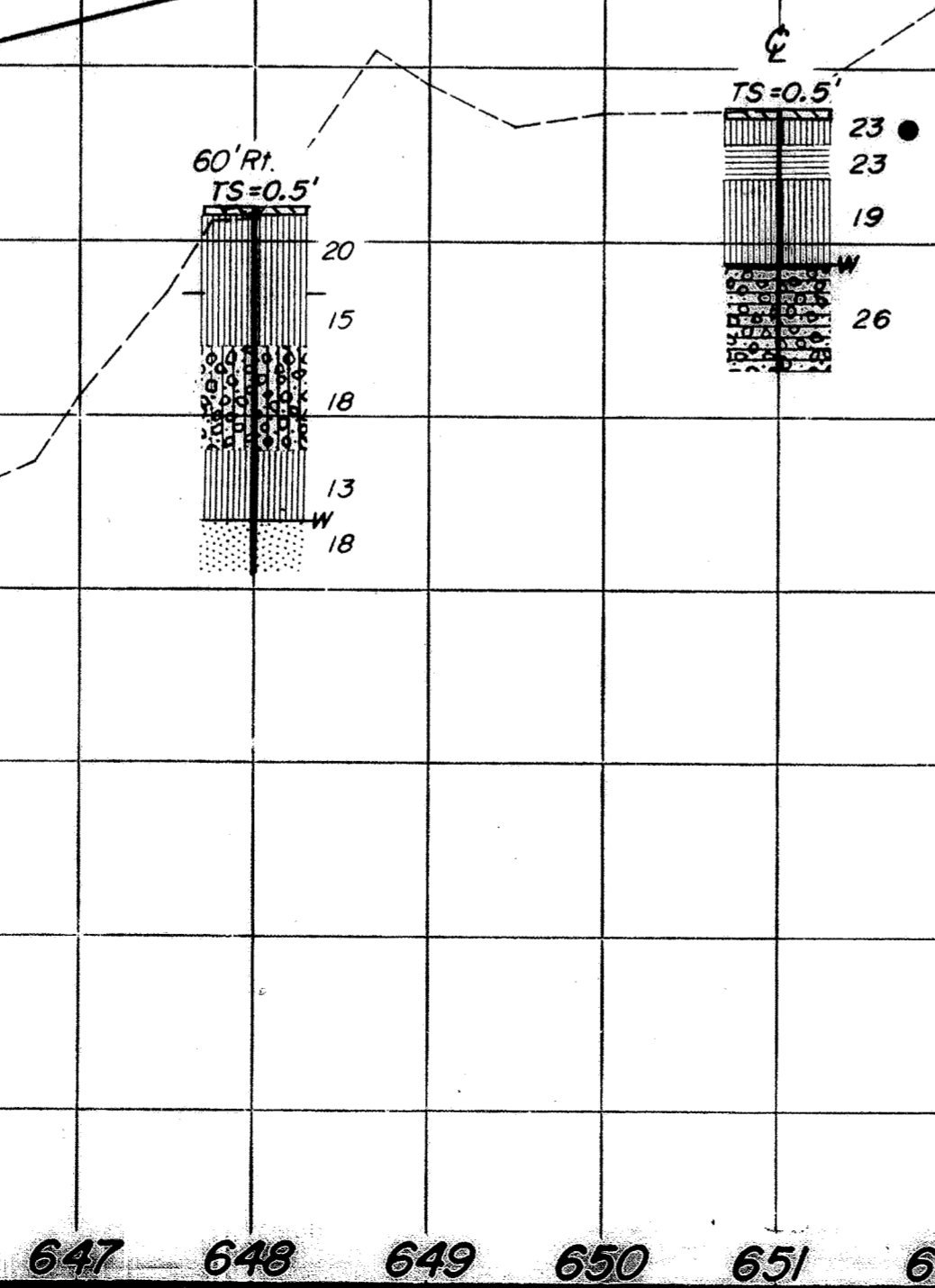
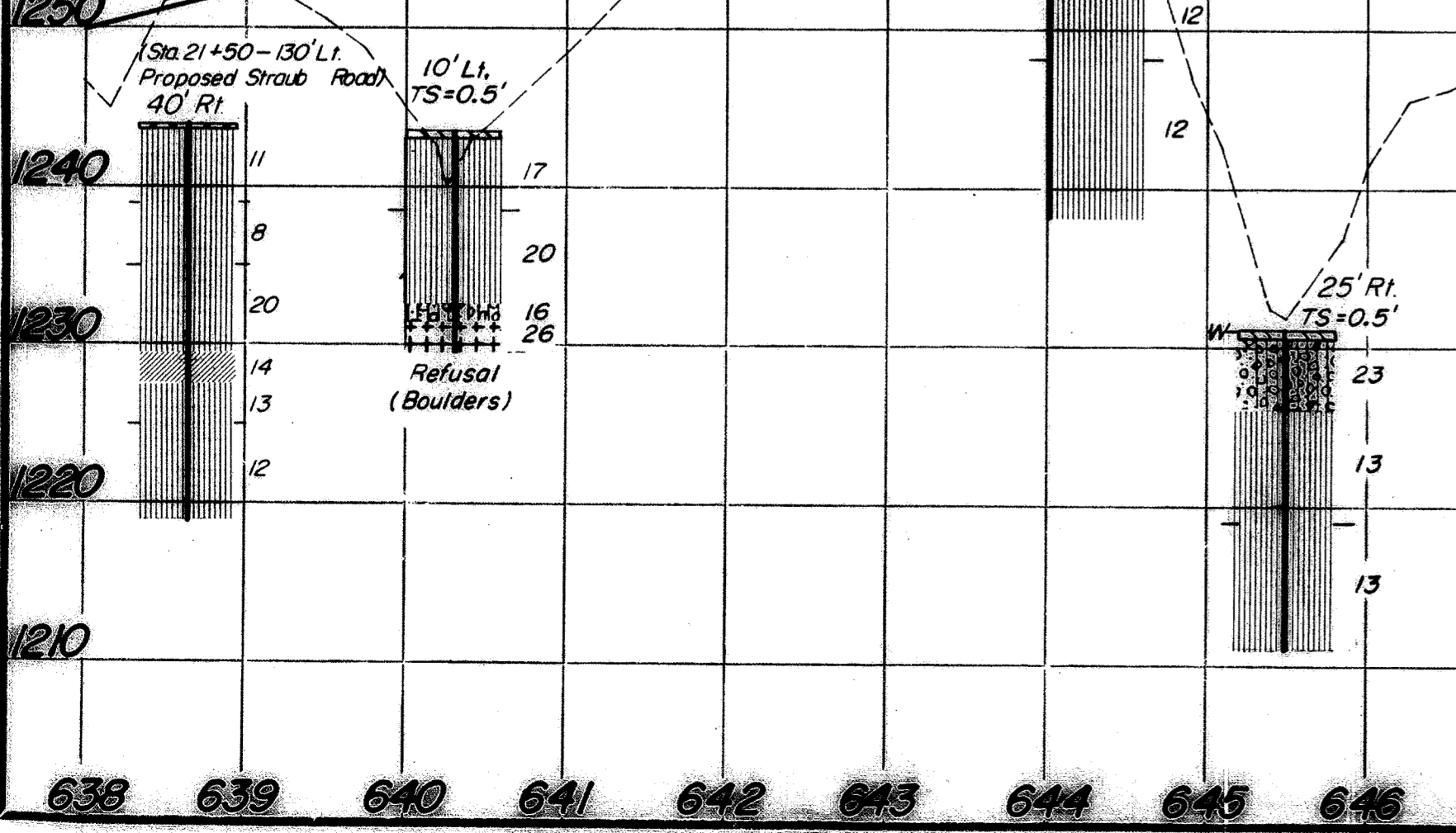
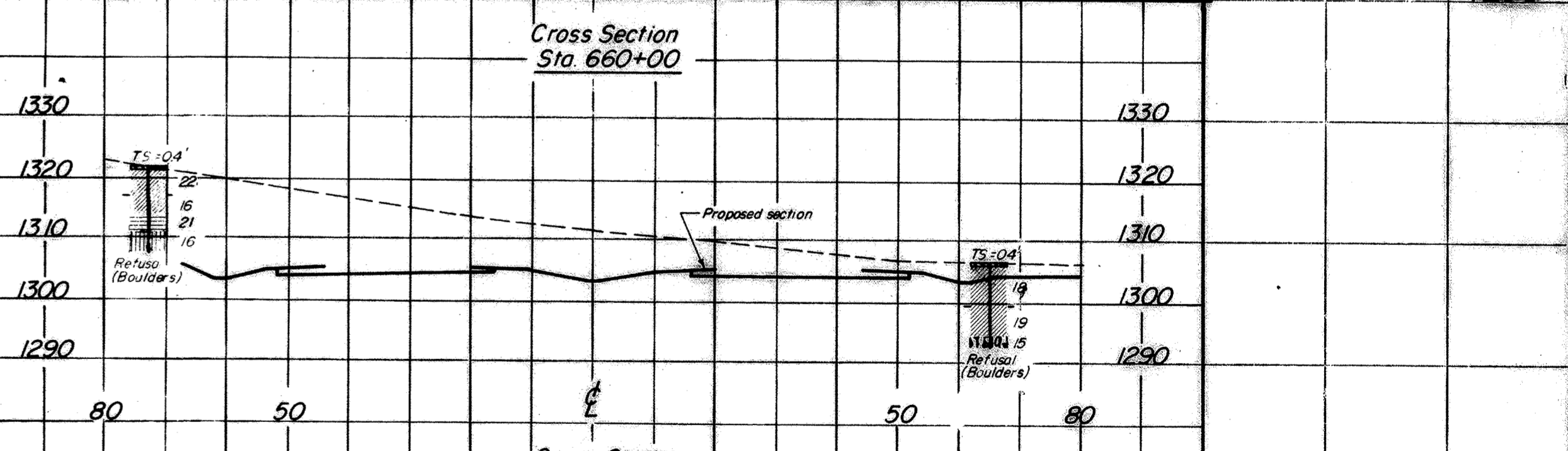
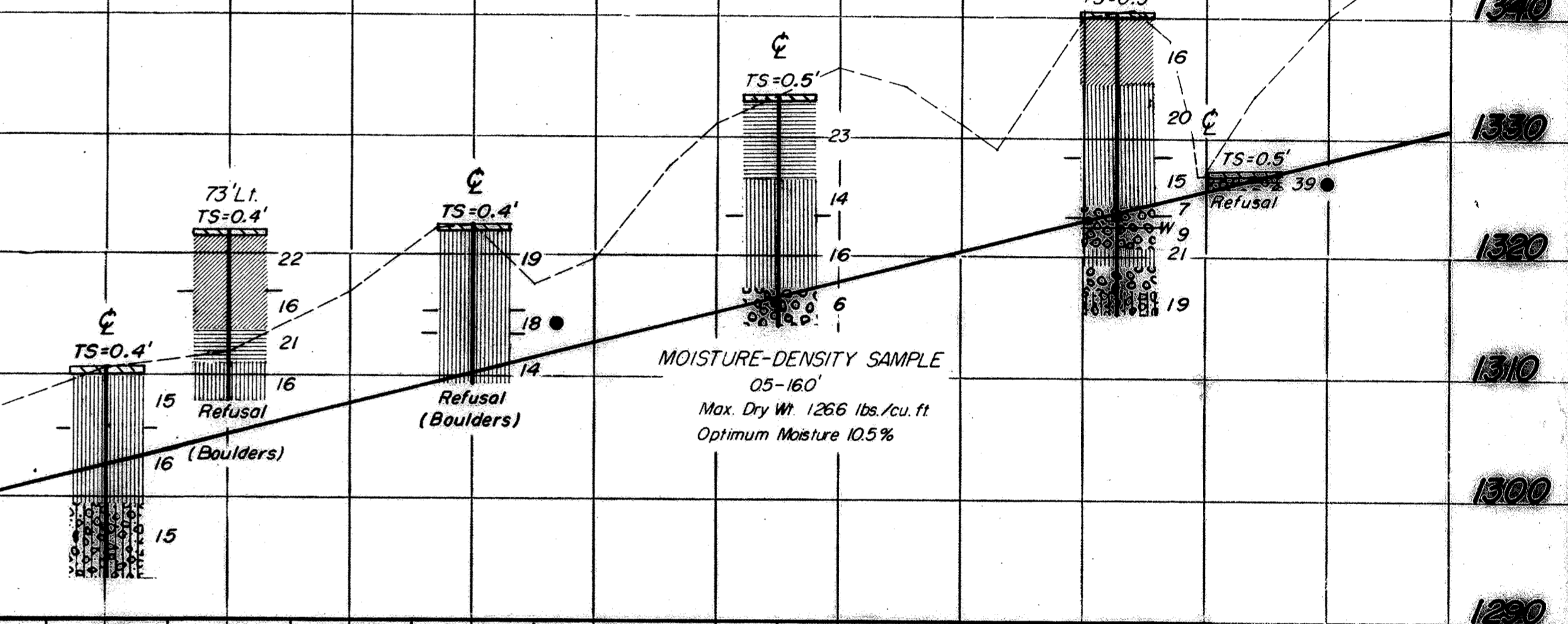
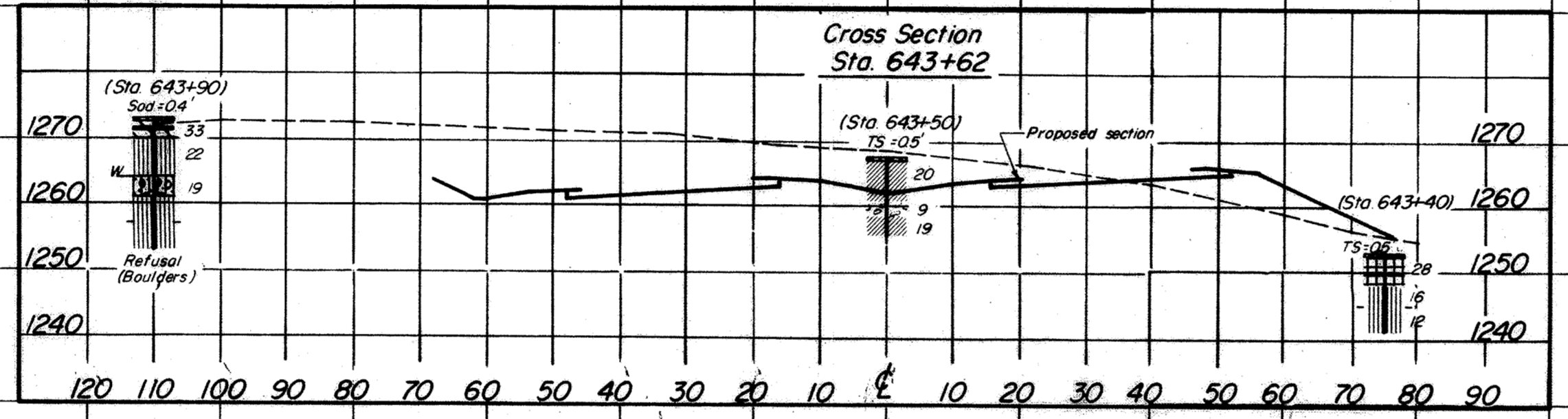
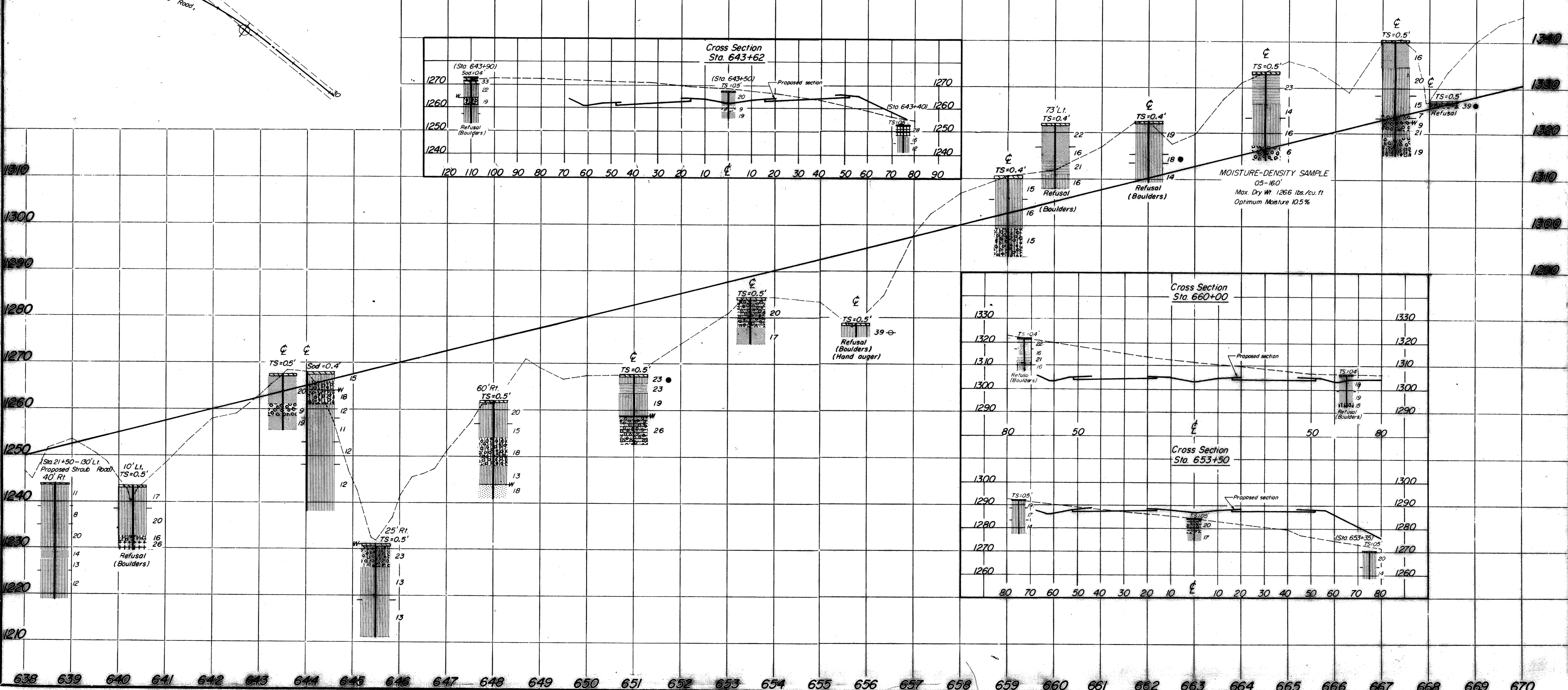
STATION & OFFSET	FROM-TO	APC.	C.L.	F.C.	SILT	CLAY	L.L.	P.L.	CLASS.
616+55	CL	5.0-6.0	60	11	0	20	0	11	HP
		10.0-11.0	65	11	0	10	0	11	HP
		20.0-21.0	65	0	35	12	30	11	A-5a
		25.0-25.0	From Gravel					10	Visual
		25.0-27.0	18	15	13	22	0	11	HP



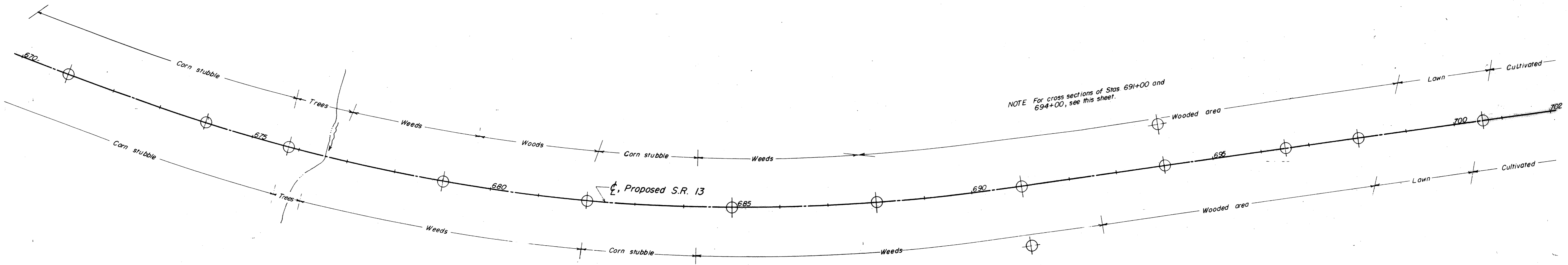
NOTE: For cross sections of Stas. 643+62, 653+50, and 660+00, see this sheet.



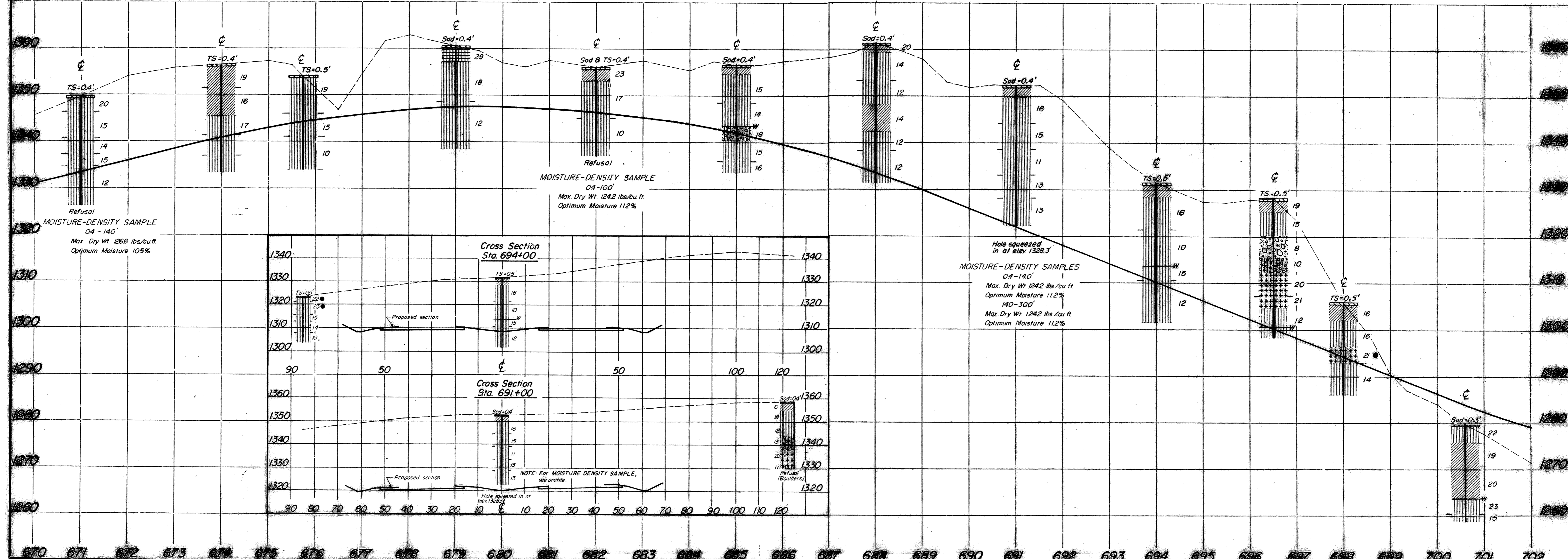
NOTE: For plan and profile of Proposed Straub Road, see sheet 12.



SOIL PROFILE
RICHLAND COUNTY
RIC-13-(10.83-13.95)
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 O. S. U. CAMPUS, COLUMBUS, OHIO

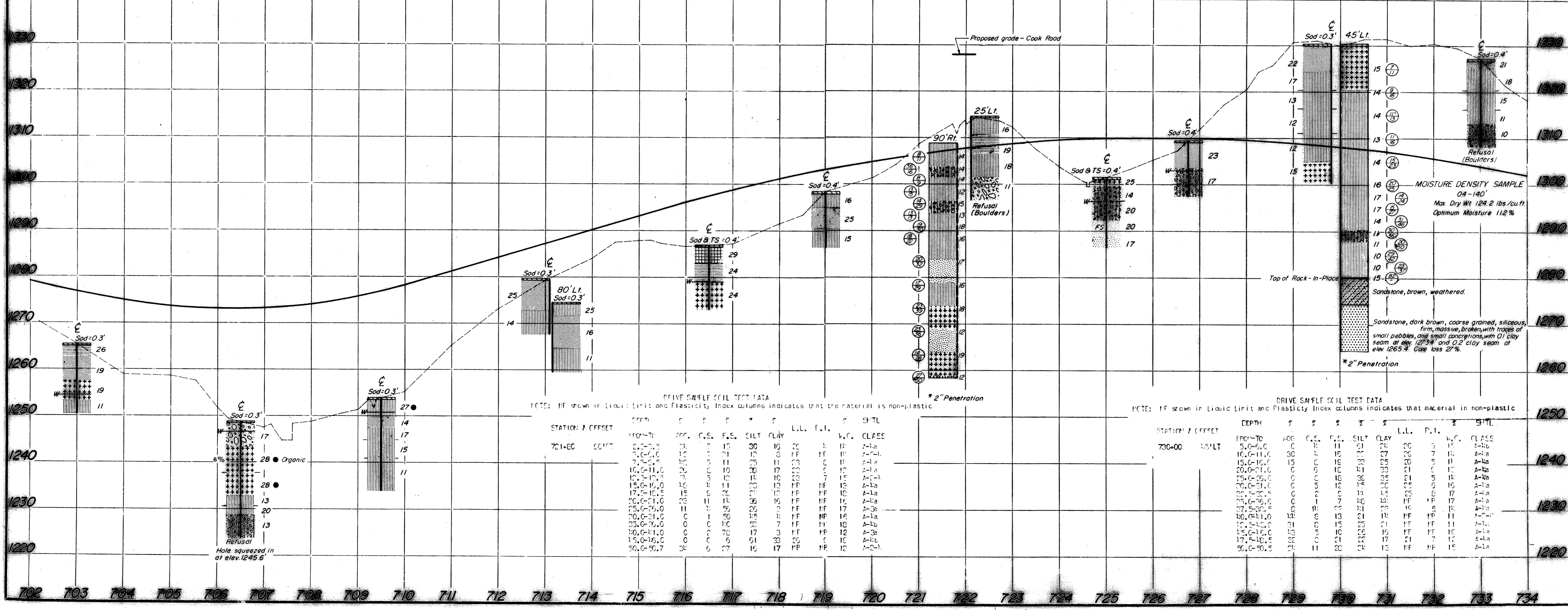
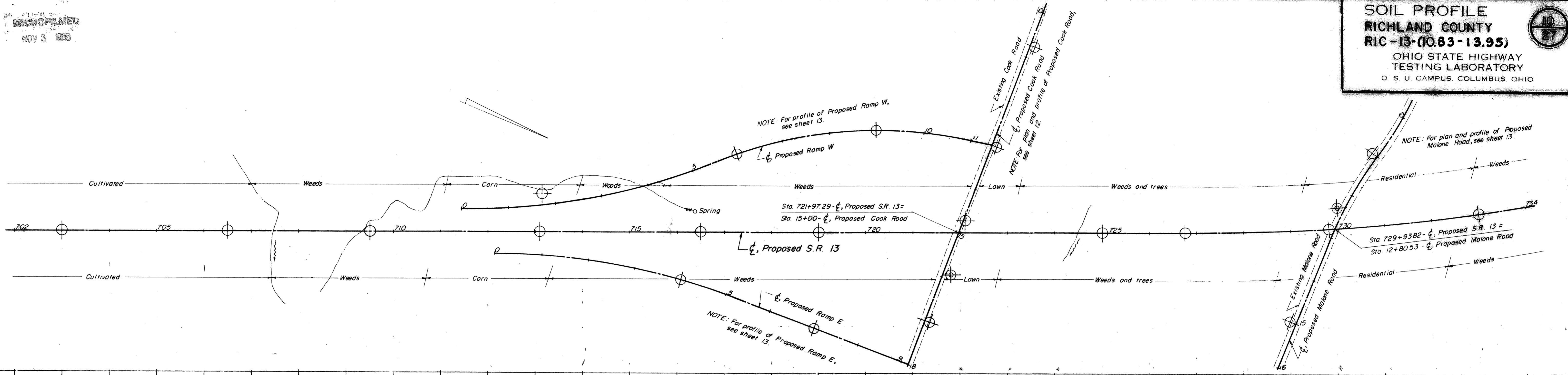
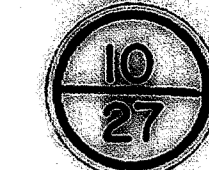


NOTE For cross sections of Stas 691+00 and 694+00, see this sheet.



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NOV 3 1988

SOIL PROFILE
RICHLAND COUNTY
RIC-13-(10.83-13.95)
OHIO STATE HIGHWAY
TESTING LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO



DRIVE SAMPLE SOIL TEST DATA
NOTE: IF shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic

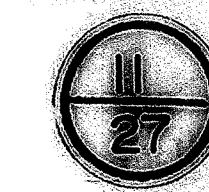
STATION & OFFSET	DEPTH	W.C.	L.L.	P.I.	S.T.	CLASS
701+00	0.0-0.5	12	21	9	16	A-1-a
701+00	0.5-1.0	10	19	9	16	A-1-a
701+00	1.0-1.5	10	19	9	16	A-1-a
701+00	1.5-2.0	10	19	9	16	A-1-a
701+00	2.0-2.5	10	19	9	16	A-1-a
701+00	2.5-3.0	10	19	9	16	A-1-a
701+00	3.0-3.5	10	19	9	16	A-1-a
701+00	3.5-4.0	10	19	9	16	A-1-a
701+00	4.0-4.5	10	19	9	16	A-1-a
701+00	4.5-5.0	10	19	9	16	A-1-a
701+00	5.0-5.5	10	19	9	16	A-1-a
701+00	5.5-6.0	10	19	9	16	A-1-a
701+00	6.0-6.5	10	19	9	16	A-1-a
701+00	6.5-7.0	10	19	9	16	A-1-a
701+00	7.0-7.5	10	19	9	16	A-1-a
701+00	7.5-8.0	10	19	9	16	A-1-a
701+00	8.0-8.5	10	19	9	16	A-1-a
701+00	8.5-9.0	10	19	9	16	A-1-a
701+00	9.0-9.5	10	19	9	16	A-1-a
701+00	9.5-10.0	10	19	9	16	A-1-a
701+00	10.0-10.5	10	19	9	16	A-1-a
701+00	10.5-11.0	10	19	9	16	A-1-a
701+00	11.0-11.5	10	19	9	16	A-1-a
701+00	11.5-12.0	10	19	9	16	A-1-a
701+00	12.0-12.5	10	19	9	16	A-1-a
701+00	12.5-13.0	10	19	9	16	A-1-a
701+00	13.0-13.5	10	19	9	16	A-1-a
701+00	13.5-14.0	10	19	9	16	A-1-a
701+00	14.0-14.5	10	19	9	16	A-1-a
701+00	14.5-15.0	10	19	9	16	A-1-a
701+00	15.0-15.5	10	19	9	16	A-1-a
701+00	15.5-16.0	10	19	9	16	A-1-a
701+00	16.0-16.5	10	19	9	16	A-1-a
701+00	16.5-17.0	10	19	9	16	A-1-a
701+00	17.0-17.5	10	19	9	16	A-1-a
701+00	17.5-18.0	10	19	9	16	A-1-a
701+00	18.0-18.5	10	19	9	16	A-1-a
701+00	18.5-19.0	10	19	9	16	A-1-a
701+00	19.0-19.5	10	19	9	16	A-1-a
701+00	19.5-20.0	10	19	9	16	A-1-a
701+00	20.0-20.5	10	19	9	16	A-1-a
701+00	20.5-21.0	10	19	9	16	A-1-a
701+00	21.0-21.5	10	19	9	16	A-1-a
701+00	21.5-22.0	10	19	9	16	A-1-a
701+00	22.0-22.5	10	19	9	16	A-1-a
701+00	22.5-23.0	10	19	9	16	A-1-a
701+00	23.0-23.5	10	19	9	16	A-1-a
701+00	23.5-24.0	10	19	9	16	A-1-a
701+00	24.0-24.5	10	19	9	16	A-1-a
701+00	24.5-25.0	10	19	9	16	A-1-a
701+00	25.0-25.5	10	19	9	16	A-1-a
701+00	25.5-26.0	10	19	9	16	A-1-a
701+00	26.0-26.5	10	19	9	16	A-1-a
701+00	26.5-27.0	10	19	9	16	A-1-a
701+00	27.0-27.5	10	19	9	16	A-1-a
701+00	27.5-28.0	10	19	9	16	A-1-a
701+00	28.0-28.5	10	19	9	16	A-1-a
701+00	28.5-29.0	10	19	9	16	A-1-a
701+00	29.0-29.5	10	19	9	16	A-1-a
701+00	29.5-30.0	10	19	9	16	A-1-a
701+00	30.0-30.5	10	19	9	16	A-1-a
701+00	30.5-31.0	10	19	9	16	A-1-a
701+00	31.0-31.5	10	19	9	16	A-1-a
701+00	31.5-32.0	10	19	9	16	A-1-a
701+00	32.0-32.5	10	19	9	16	A-1-a
701+00	32.5-33.0	10	19	9	16	A-1-a
701+00	33.0-33.5	10	19	9	16	A-1-a
701+00	33.5-34.0	10	19	9	16	A-1-a
701+00	34.0-34.5	10	19	9	16	A-1-a
701+00	34.5-35.0	10	19	9	16	A-1-a
701+00	35.0-35.5	10	19	9	16	A-1-a
701+00	35.5-36.0	10	19	9	16	A-1-a
701+00	36.0-36.5	10	19	9	16	A-1-a
701+00	36.5-37.0	10	19	9	16	A-1-a
701+00	37.0-37.5	10	19	9	16	A-1-a
701+00	37.5-38.0	10	19	9	16	A-1-a
701+00	38.0-38.5	10	19	9	16	A-1-a
701+00	38.5-39.0	10	19	9	16	A-1-a
701+00	39.0-39.5	10	19	9	16	A-1-a
701+00	39.5-40.0	10	19	9	16	A-1-a
701+00	40.0-40.5	10	19	9	16	A-1-a
701+00	40.5-41.0	10	19	9	16	A-1-a
701+00	41.0-41.5	10	19	9	16	A-1-a
701+00	41.5-42.0	10	19	9	16	A-1-a
701+00	42.0-42.5	10	19	9	16	A-1-a
701+00	42.5-43.0	10	19	9	16	A-1-a
701+00	43.0-43.5	10	19	9	16	A-1-a
701+00	43.5-44.0	10	19	9	16	A-1-a
701+00	44.0-44.5	10	19	9	16	A-1-a
701+00	44.5-45.0	10	19	9	16	A-1-a
701+00	45.0-45.5	10	19	9	16	A-1-a
701+00	45.5-46.0	10	19	9	16	A-1-a
701+00	46.0-46.5	10	19	9	16	A-1-a
701+00	46.5-47.0	10	19	9	16	A-1-a
701+00	47.0-47.5	10	19	9	16	A-1-a
701+00	47.5-48.0	10	19	9	16	A-1-a
701+00	48.0-48.5	10	19	9	16	A-1-a
701+00	48.5-49.0	10	19	9	16	A-1-a
701+00	49.0-49.5	10	19	9	16	A-1-a
701+00	49.5-50.0	10	19	9	16	A-1-a

DRIVE SAMPLE SOIL TEST DATA
NOTE: IF shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic

STATION & OFFSET	DEPTH	W.C.	L.L.	P.I.	S.T.	CLASS
730+00	0.0-0.5	12	21	9	16	A-1-a
730+00	0.5-1.0	10	19	9	16	A-1-a
730+00	1.0-1.5	10	19	9	16	A-1-a
730+00	1.5-2.0	10	19	9	16	A-1-a
730+00	2.0-2.5	10	19	9	16	A-1-a
730+00	2.5-3.0	10	19	9	16	A-1-a
730+00	3.0-3.5	10	19	9	16	A-1-a
730+00	3.5-4.0	10	19	9	16	A-1-a
730+00	4.0-4.5	10	19	9	16	A-1-a
730+00	4.5-5.0	10	19	9	16	A-1-a
730+00	5.0-5.5	10	19	9	16	A-1-a
730+00	5.5-6.0	10	19	9	16	A-1-a
730+00	6.0-6.5	10	19	9	16	A-1-a
730+00	6.5-7.0	10	19	9	16	A-1-a
730+00	7.0-7.5	10	19	9	16	A-1-a
730+00	7.5-8.0	10	19	9	16	A-1-a
730+00	8.0-8.5	10	19	9	16	A-1-a
730+00	8.5-9.0	10	19	9	16	A-1-a
730+00	9.0-9.5	10	19	9	16	A-1-a
730+00	9.5-10.0	10	19	9	16	A-1-a
730+00	10.0-10.5	10	19	9	16	A-1-a
730+00	10.5-11.0	10	19	9	16	A-1-a
730+00	11.0-11.5	10	19	9	16	A-1-a
730+00	11.5-12.0	10	19	9	16	A-1-a
730+00	12.0-12.5	10	19	9	16	A-1-a
730+00	12.5-13.0	10	19	9	16	A-1-a
730+00	13.0-13.5	10	19	9	16	A-1-a
730+00	13.5-14.0	10	19	9	16	A-1-a
730+00	14.0-14.5	10	19	9	16	A-1-a
730+00	14.5-15.0	10	19	9	16	A-1-a
730+00	15.0-15.5	10	19	9	16	A-1-a
730+00	15.5-16.0	10	19	9	16	A-1-a
730+00	16.0-16.5	10	19	9	16	A-1-a
730+00	16.5-17.0	10	19	9	16	A-1-a
730+00	17.0-17.5	10	19	9	16	A-1-a
730+00	17.5-18.0	10	19	9	16	A-1-a
730+00	18.0-18.5	10	19	9	16	A-1-a
730+00	18.5-19.0	10	19	9	16	A-1-a
730+00	19.0-19.5	10	19	9	16	A-1-a
730+00	19.5-20.0	10	19	9	16	A-1-a
730+00	20.0-20.5	10	19	9	16	A-1-a
730+00	20.5-21.0	10	19	9	16	A-1-a
730+00	21.0-21.5	10	19	9	16	A-1-a
730+00	21.5-22.0	10	19	9	16	A-1-a
730+00	22.0-22.5	10	19	9	16	A-1-a
730+00	22.5-23.0	10	19	9	16	A-1-a
730+00	23.0-23.5	10	19	9	16	A-1-a
730+00	23.5-24.0	10	19	9	16	A-1-a
730+00	24.0-24.5	10	19	9	16	A-1-a
730+00	24.5-25.0	10	19	9	16	A-1-a
730+00	25.0-25.5	10	19	9	16	A-1-a
730+00	25.5-26.0	10	19	9	16	A-1-a
730+00	26.0-26.5	10	19	9	16	A-1-a
730+00	26.5-27.0	10	19	9	16	A-1-a
730+00	27.0-27.5	10	19	9	16	A-1-a
730+00	27.5-28.0	10	19	9	16	A-1-a

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NOV 3 1968

SOIL PROFILE
RICHLAND COUNTY
RIC - 13-(10.83-13.95)
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 O. S. U. CAMPUS, COLUMBUS, OHIO



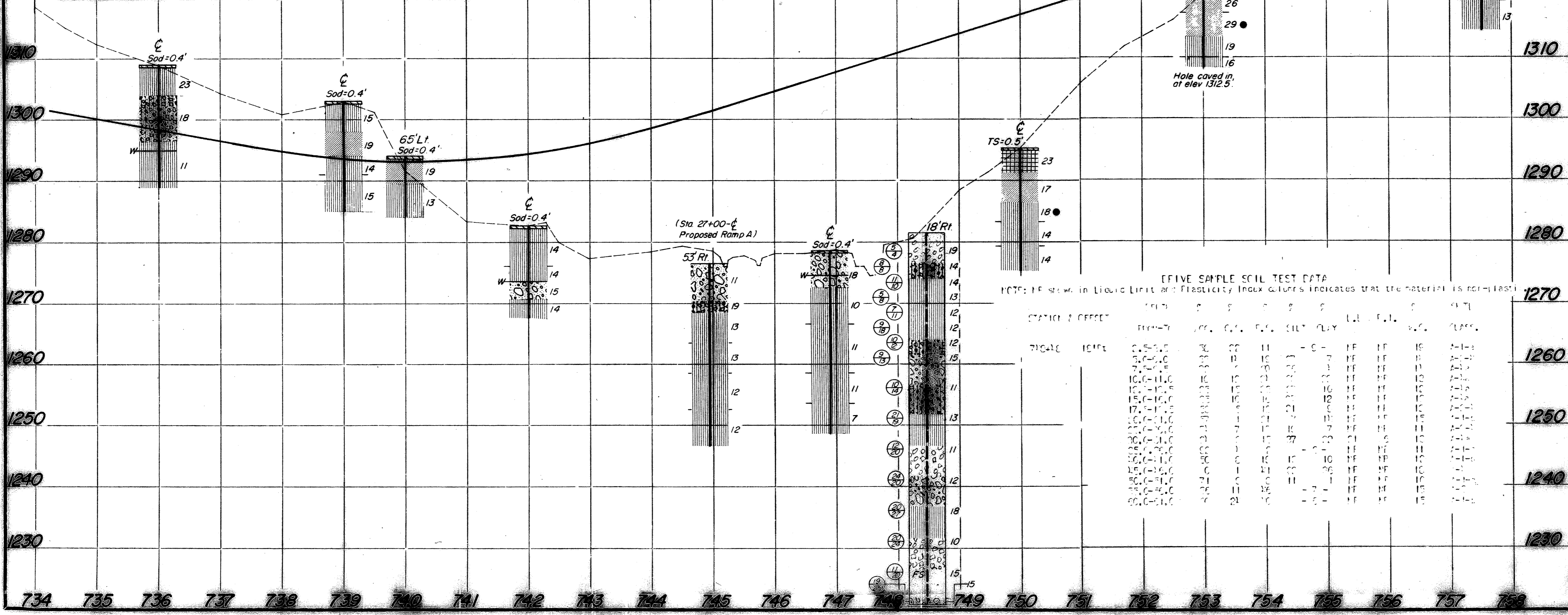
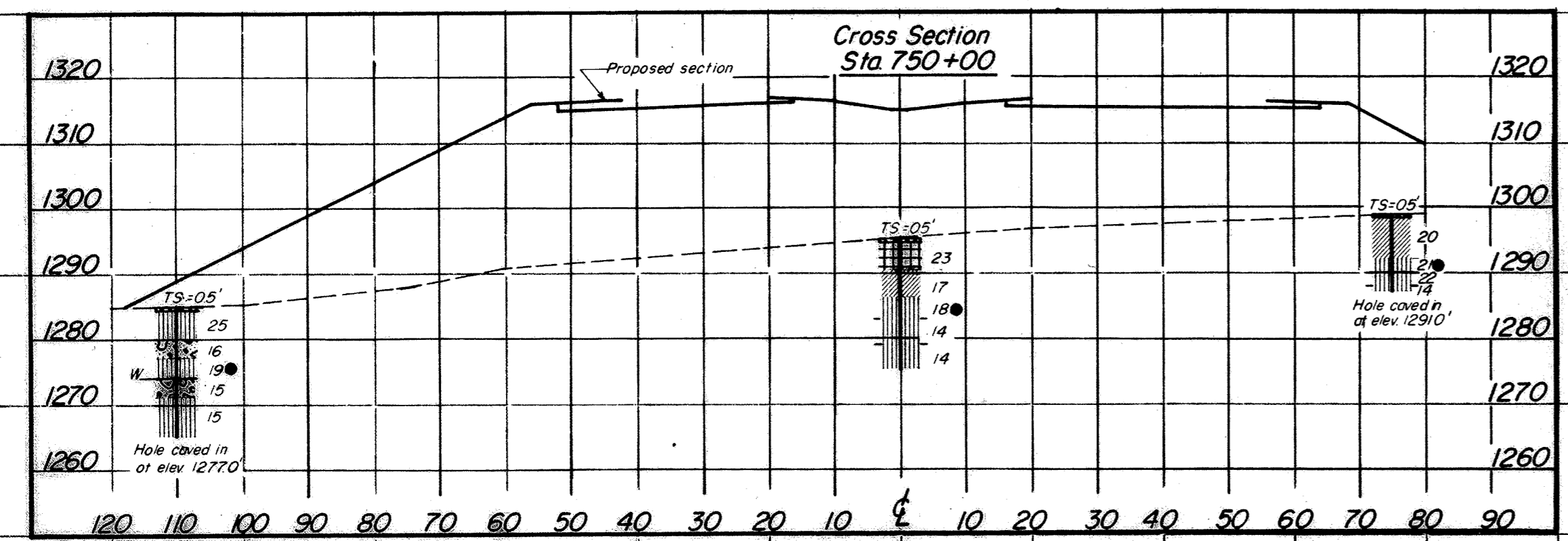
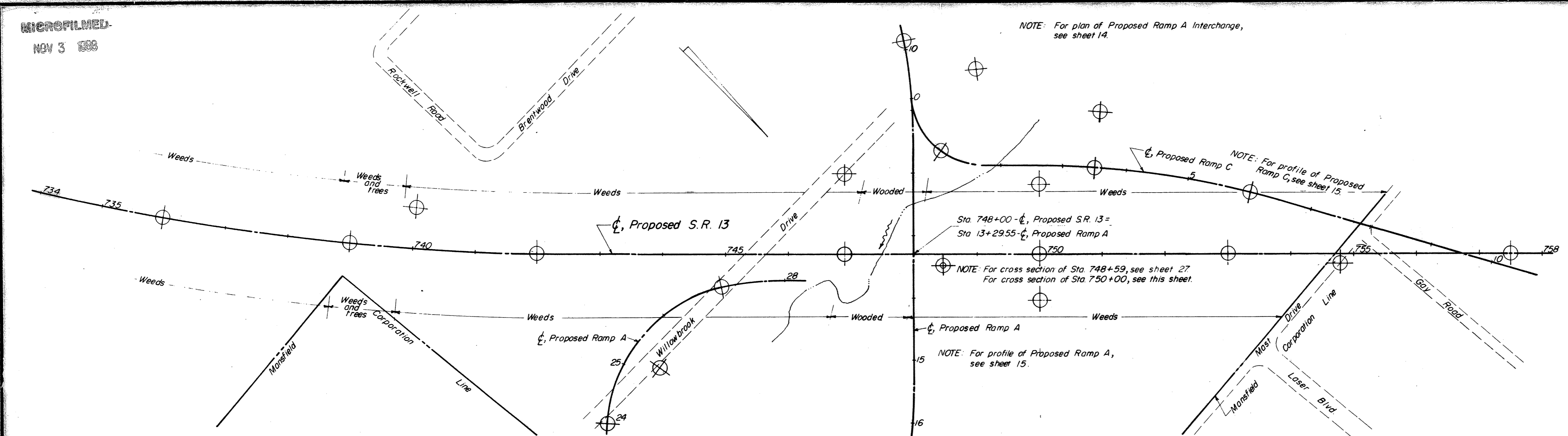
NOTE: For plan of Proposed Ramp A Interchange, see sheet 14.

NOTE: For profile of Proposed Ramp C, see sheet 15.

Sta. 748+00 - E, Proposed S.R. 13 = Sta. 13+29.55 - E, Proposed Ramp A

NOTE: For cross section of Sta. 748+59, see sheet 27. For cross section of Sta. 750+00, see this sheet.

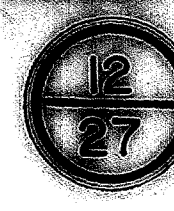
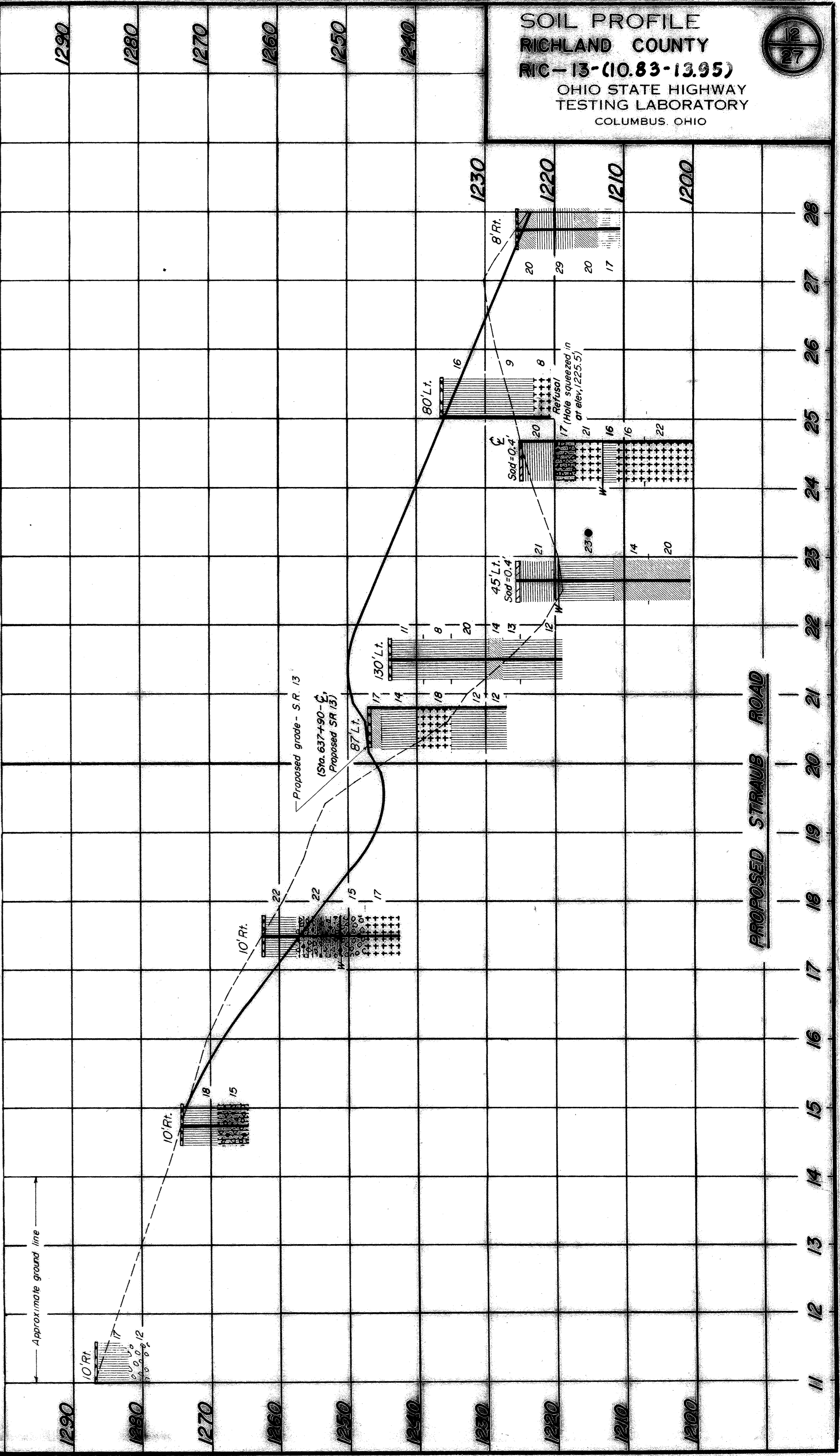
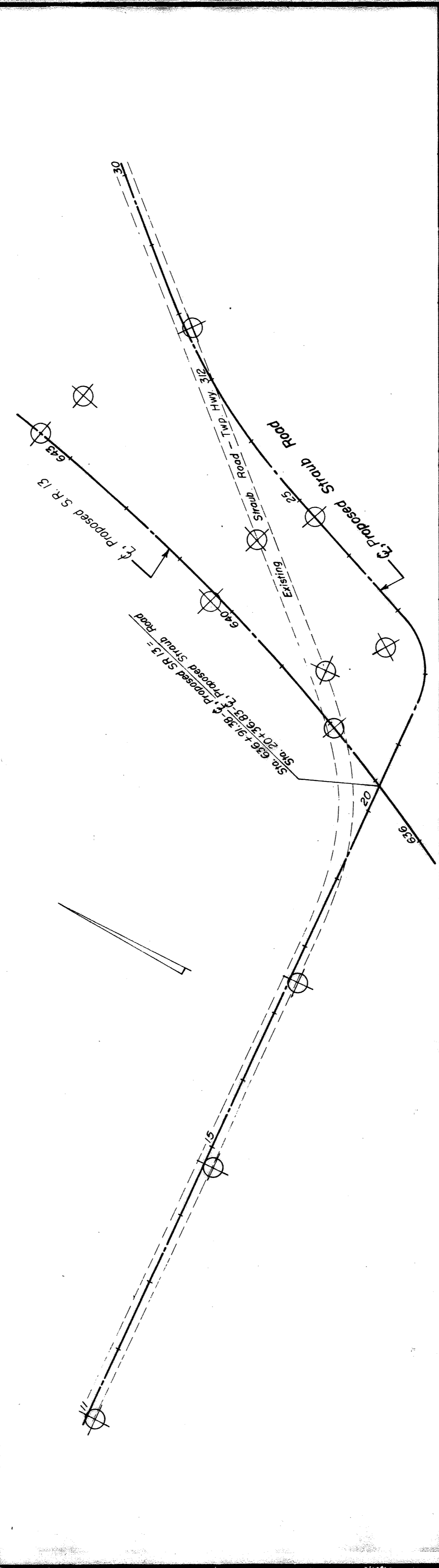
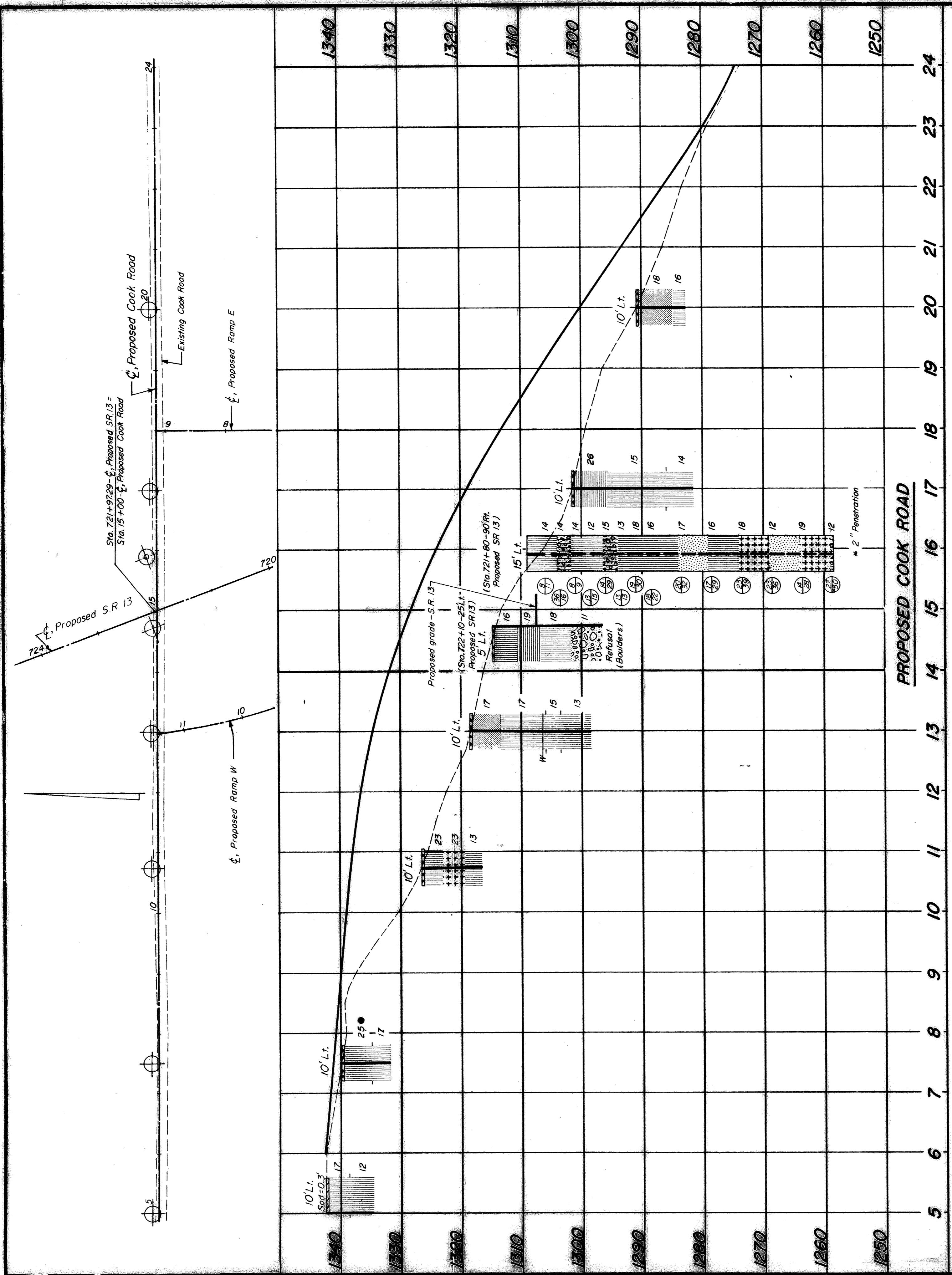
NOTE: For profile of Proposed Ramp A, see sheet 15.

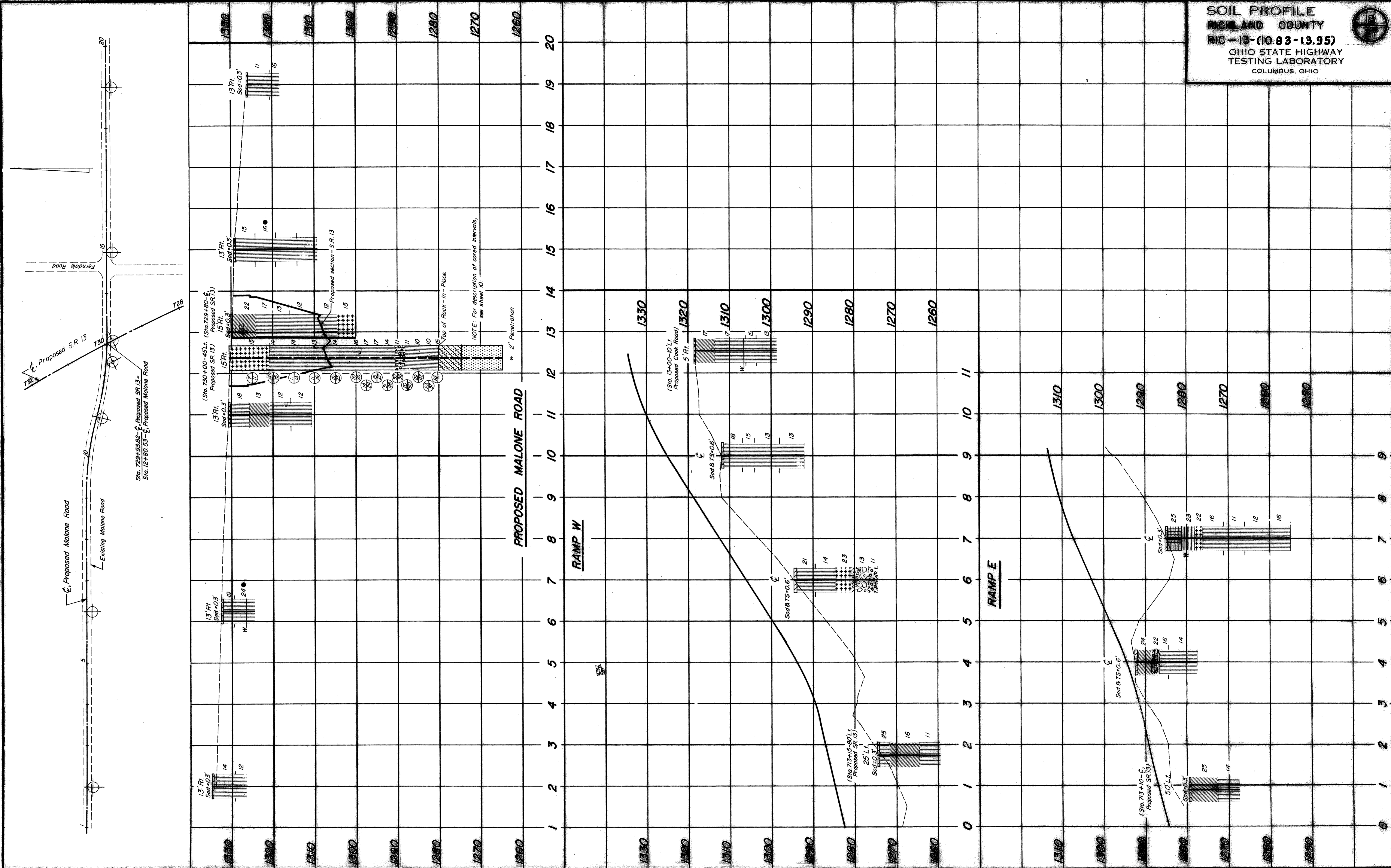


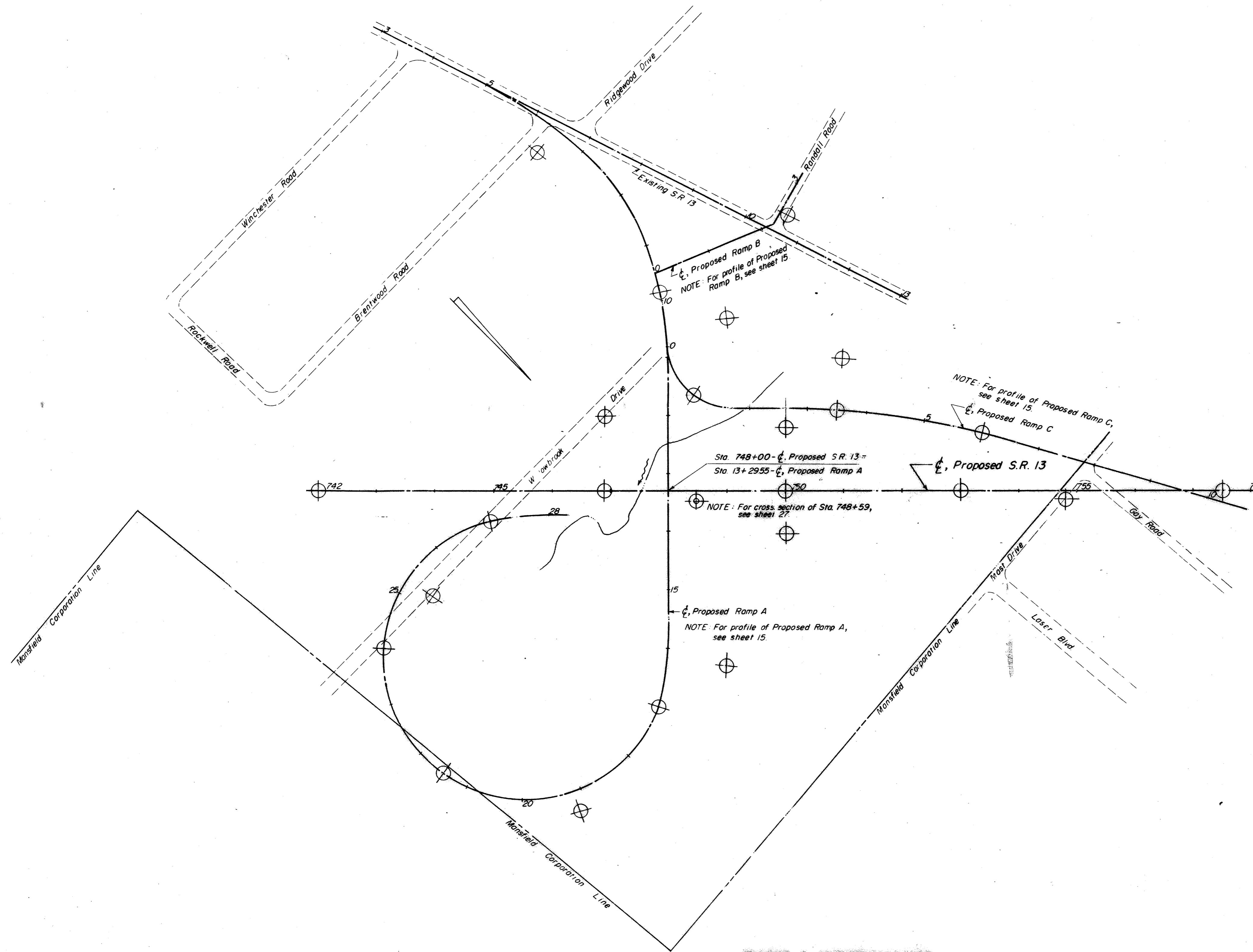
FIVE SAMPLE SOIL TEST DATA
 NOTE: If shown in Liquid Limit and Plasticity Index charts indicates that the material is non-plastic.

STATION & DEPTH	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL CLASS.	U.C.	L.C.	P.C.	CLASS.
734-735	24.5-25.0	20	11	CL	16	11	11	CL-ML
735-736	24.0-25.0	20	11	CL	16	11	11	CL-ML
736-737	24.0-25.0	20	11	CL	16	11	11	CL-ML
737-738	24.0-25.0	20	11	CL	16	11	11	CL-ML
738-739	24.0-25.0	20	11	CL	16	11	11	CL-ML
739-740	24.0-25.0	20	11	CL	16	11	11	CL-ML
740-741	24.0-25.0	20	11	CL	16	11	11	CL-ML
741-742	24.0-25.0	20	11	CL	16	11	11	CL-ML
742-743	24.0-25.0	20	11	CL	16	11	11	CL-ML
743-744	24.0-25.0	20	11	CL	16	11	11	CL-ML
744-745	24.0-25.0	20	11	CL	16	11	11	CL-ML
745-746	24.0-25.0	20	11	CL	16	11	11	CL-ML
746-747	24.0-25.0	20	11	CL	16	11	11	CL-ML
747-748	24.0-25.0	20	11	CL	16	11	11	CL-ML
748-749	24.0-25.0	20	11	CL	16	11	11	CL-ML
749-750	24.0-25.0	20	11	CL	16	11	11	CL-ML
750-751	24.0-25.0	20	11	CL	16	11	11	CL-ML
751-752	24.0-25.0	20	11	CL	16	11	11	CL-ML
752-753	24.0-25.0	20	11	CL	16	11	11	CL-ML
753-754	24.0-25.0	20	11	CL	16	11	11	CL-ML
754-755	24.0-25.0	20	11	CL	16	11	11	CL-ML
755-756	24.0-25.0	20	11	CL	16	11	11	CL-ML
756-757	24.0-25.0	20	11	CL	16	11	11	CL-ML
757-758	24.0-25.0	20	11	CL	16	11	11	CL-ML

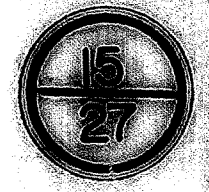
SOIL PROFILE
RICHLAND COUNTY
RIC-13-(10.83-13.95)
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 COLUMBUS OHIO





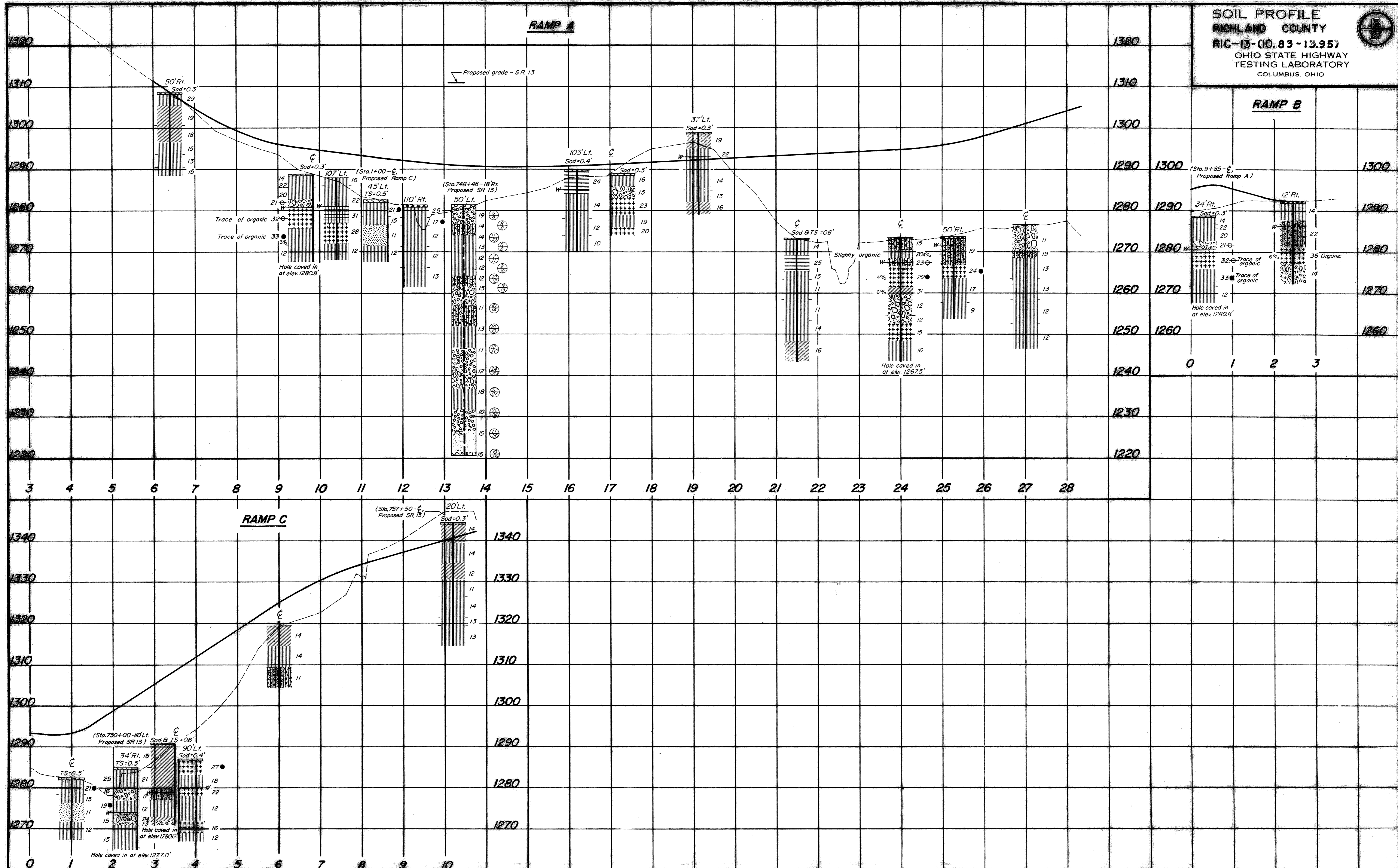
RAMP A INTERCHANGE



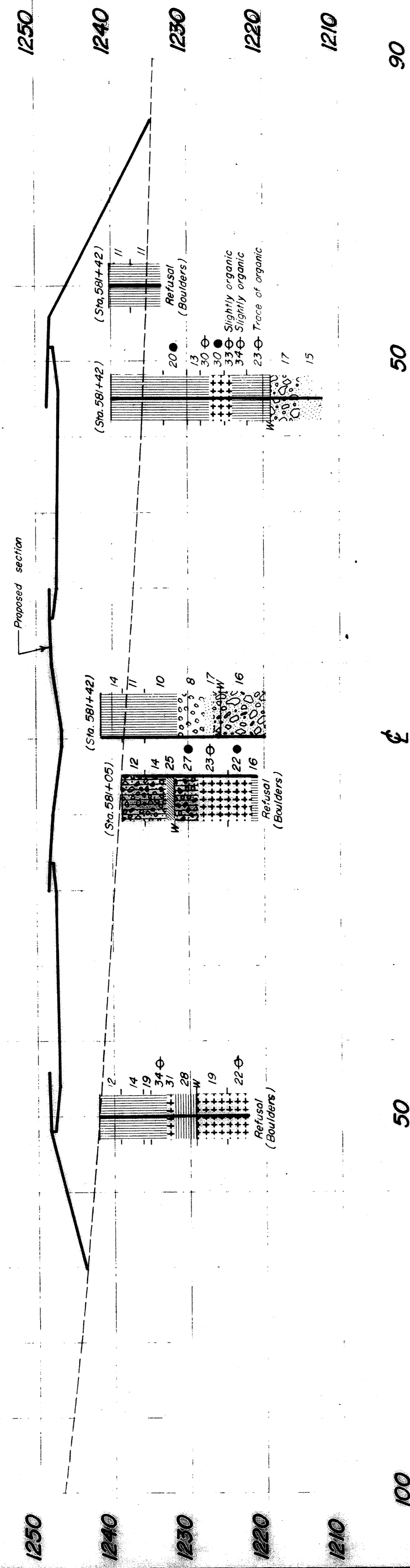
RAMP A

RAMP B

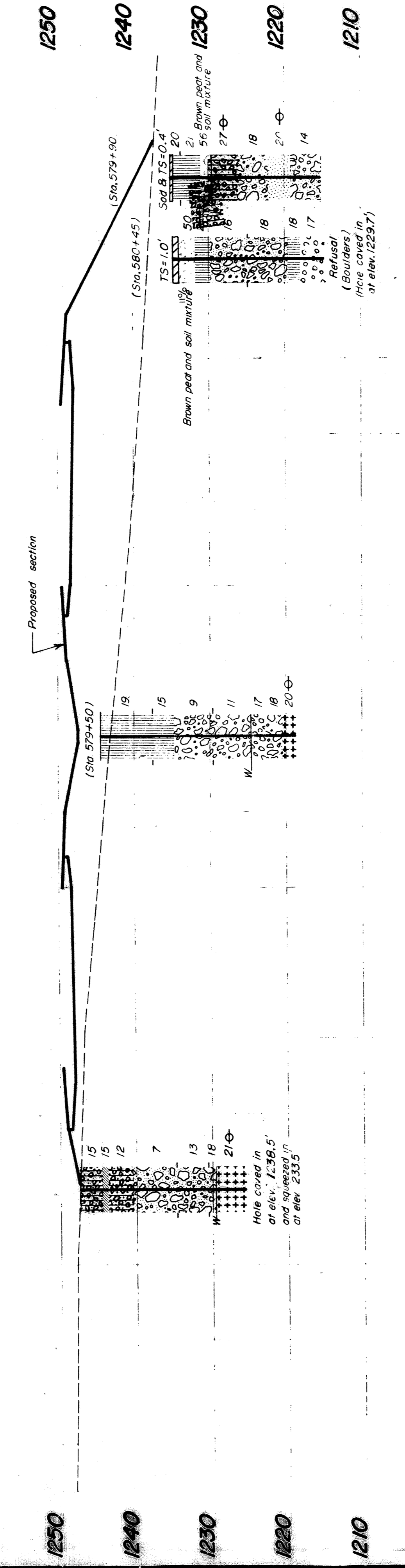
RAMP C



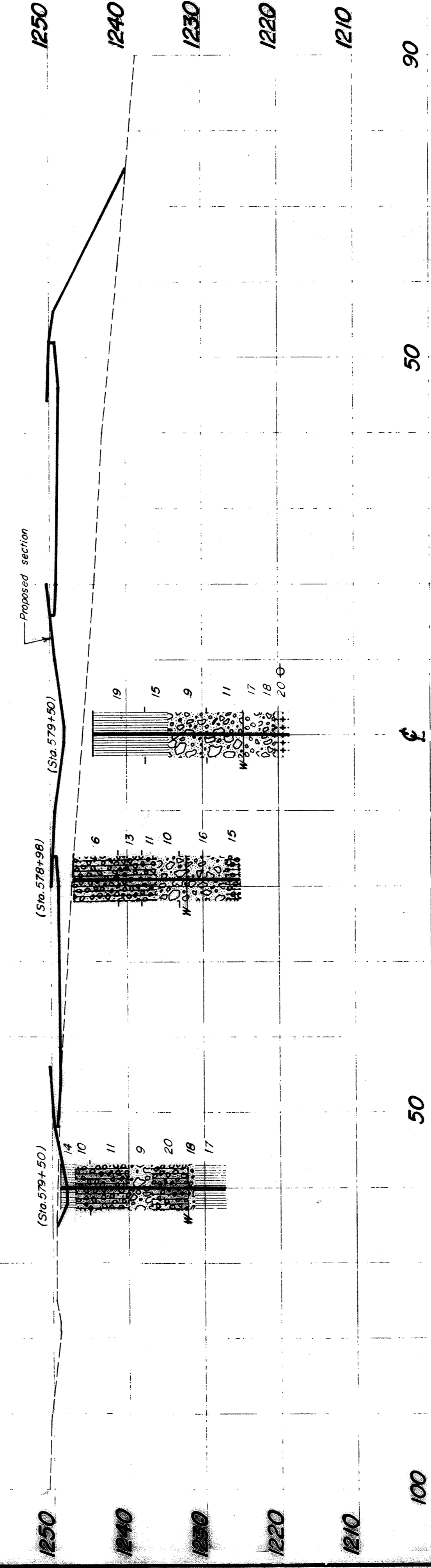
**Cross Section
Sta. 581+00**



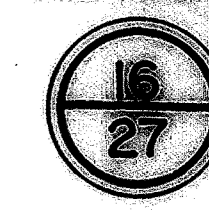
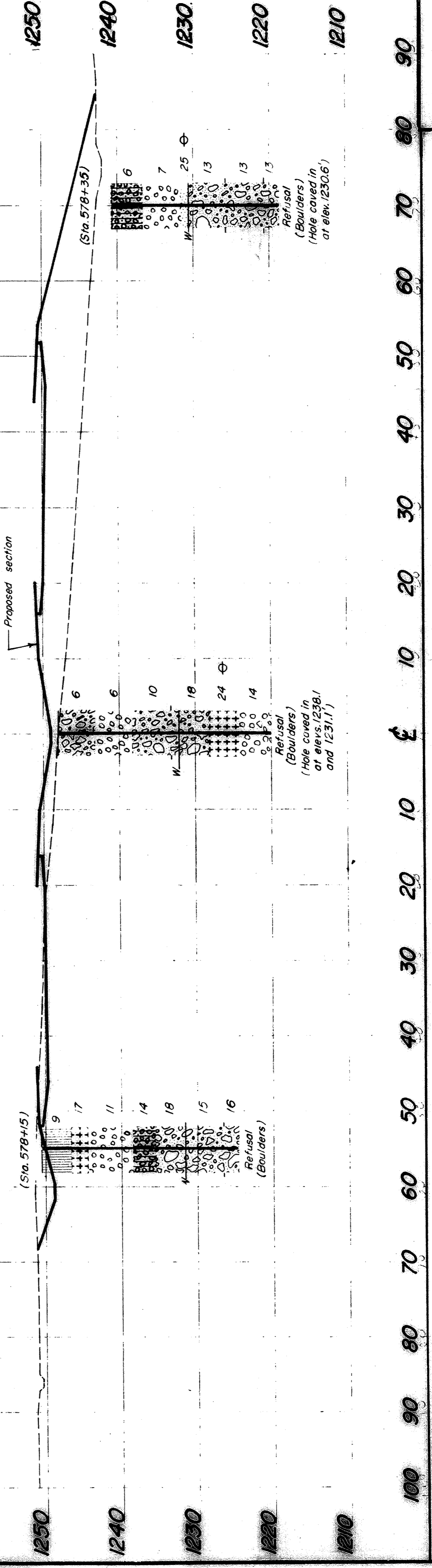
**Cross Section
Sta. 580+00**



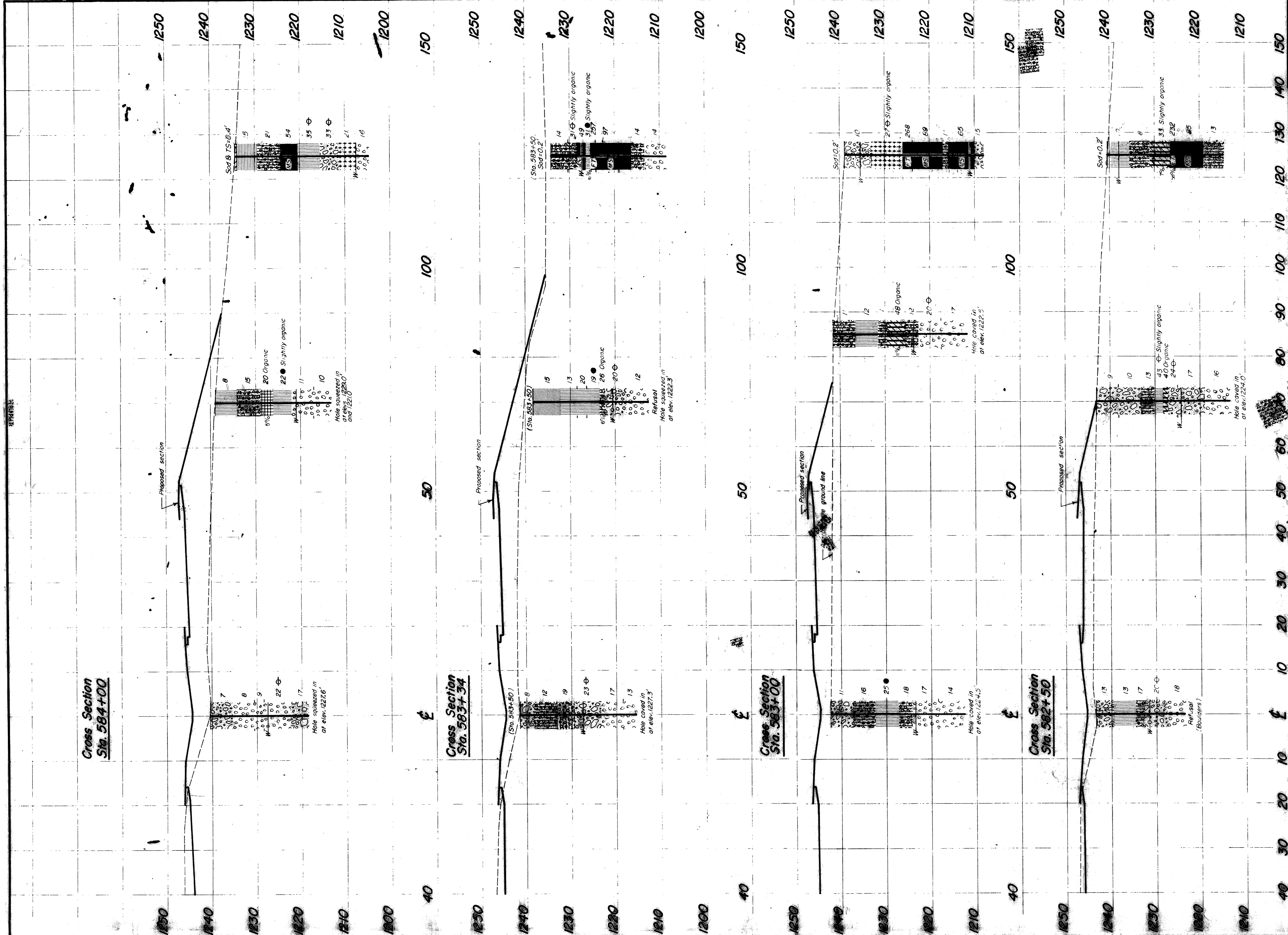
**Cross Section
Sta. 579+00**



**Cross Section
Sta. 578+00**

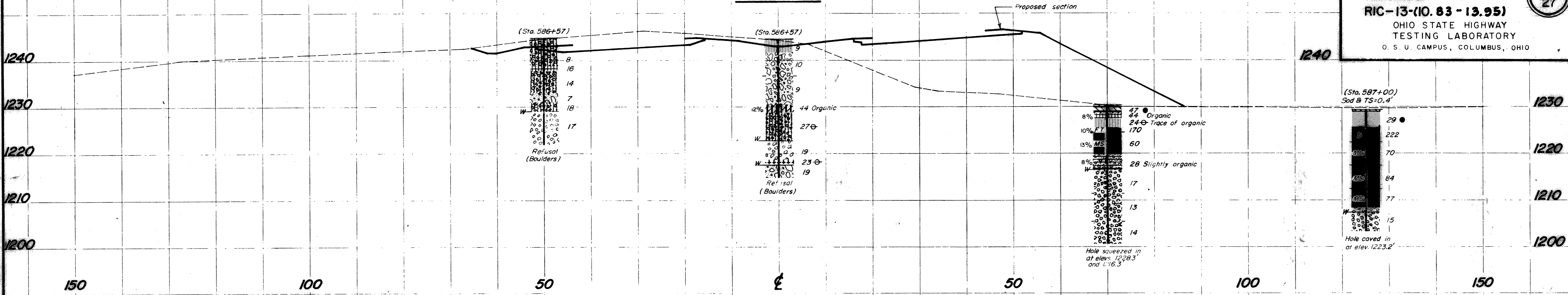


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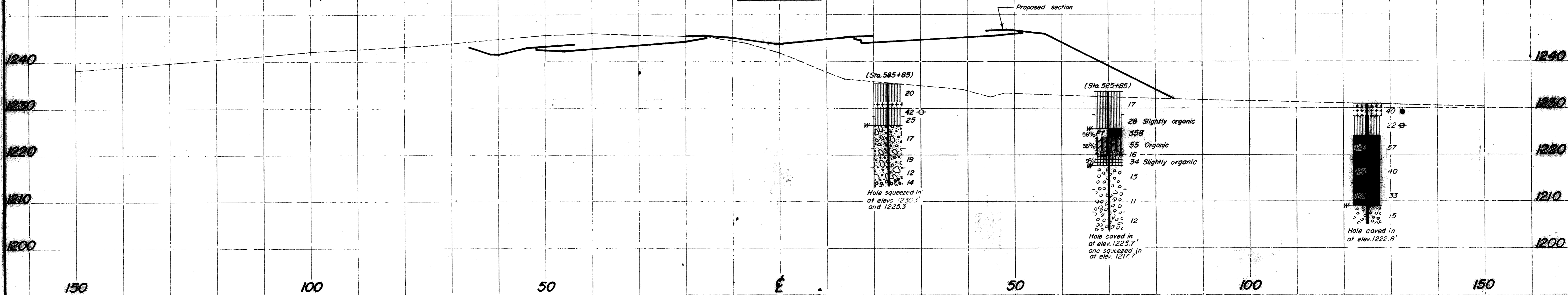


150
140
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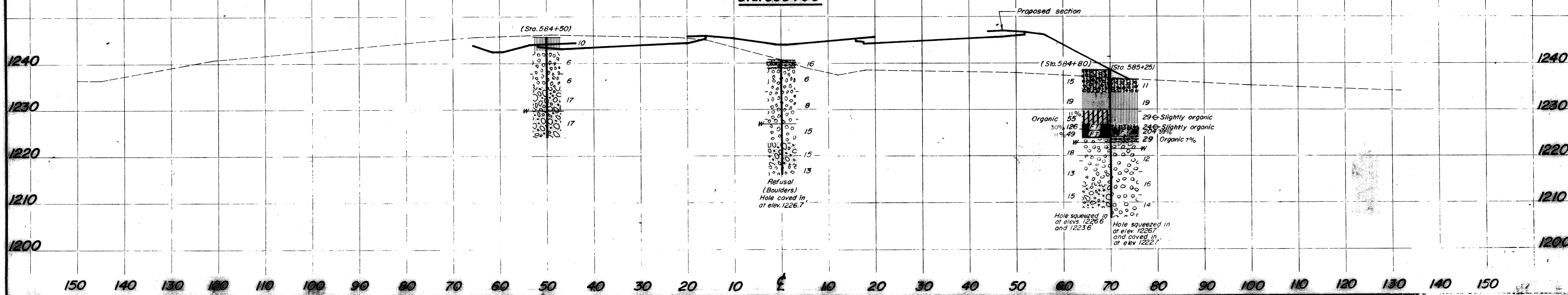
Cross Section
Sta. 586+50



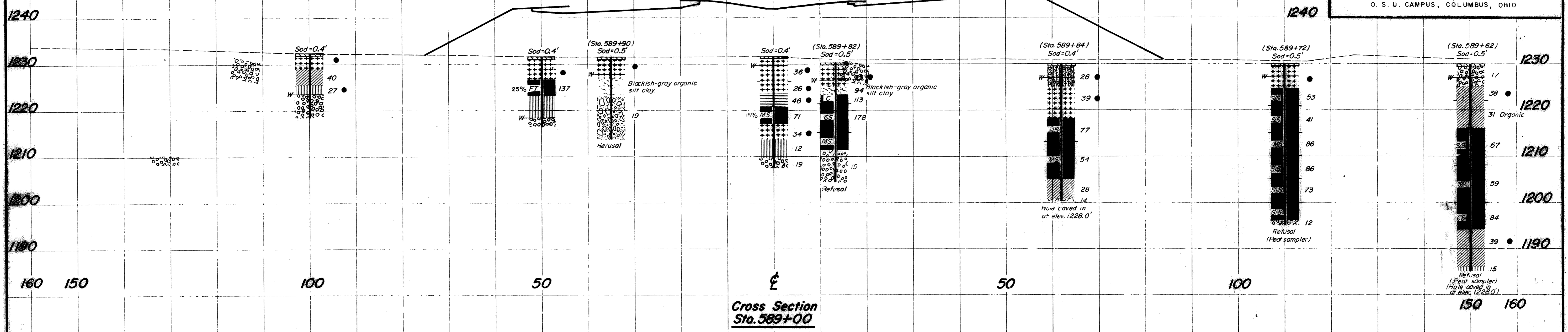
Cross Section
Sta. 586+00



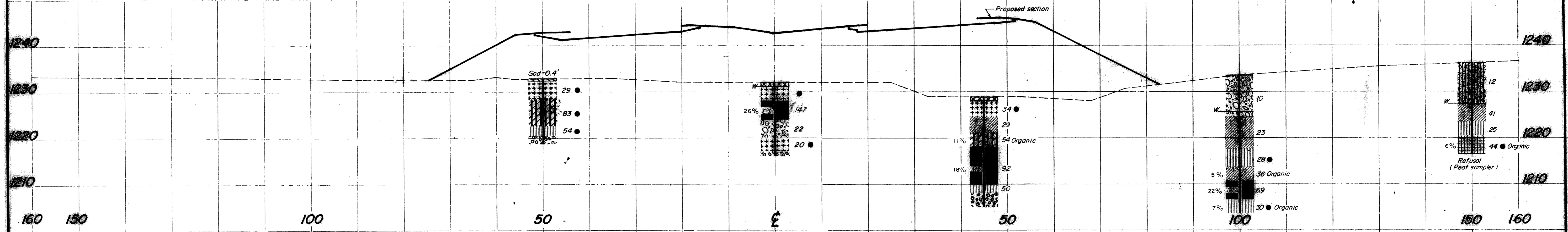
Cross Section
Sta. 585+00



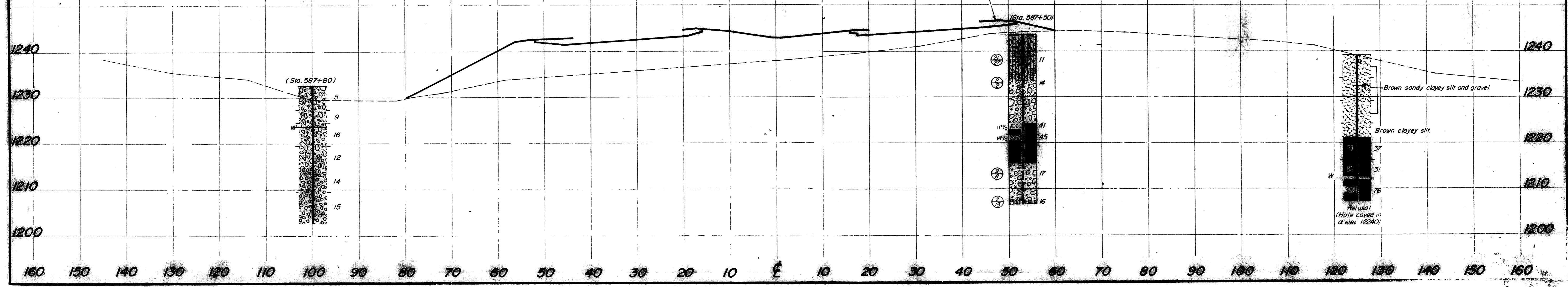
Cross Section
 Sta. 590+00



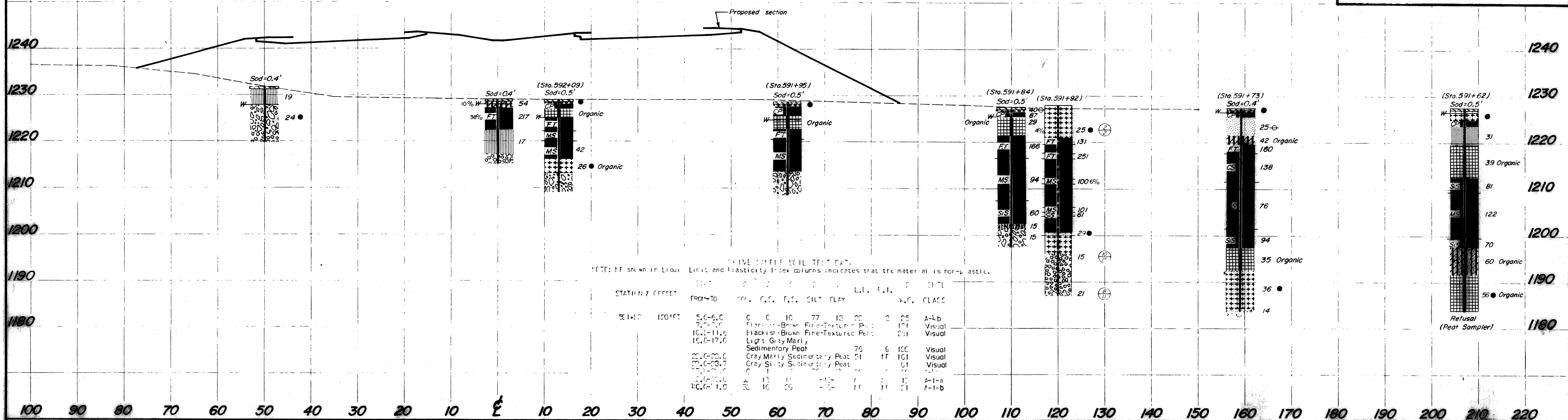
Cross Section
 Sta. 589+00



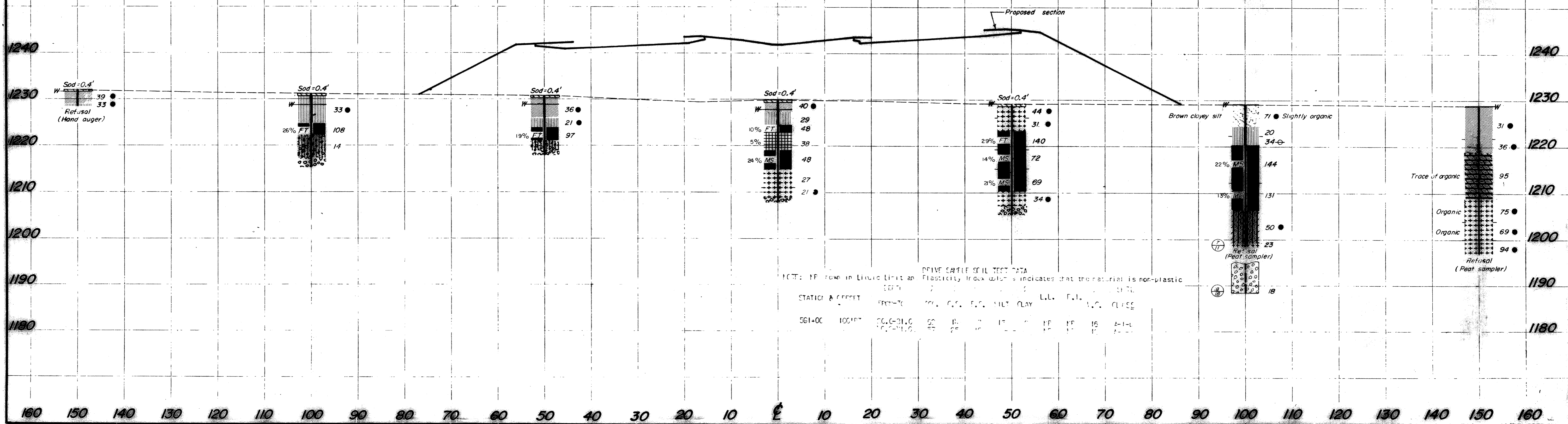
Cross Section
 Sta. 588+00

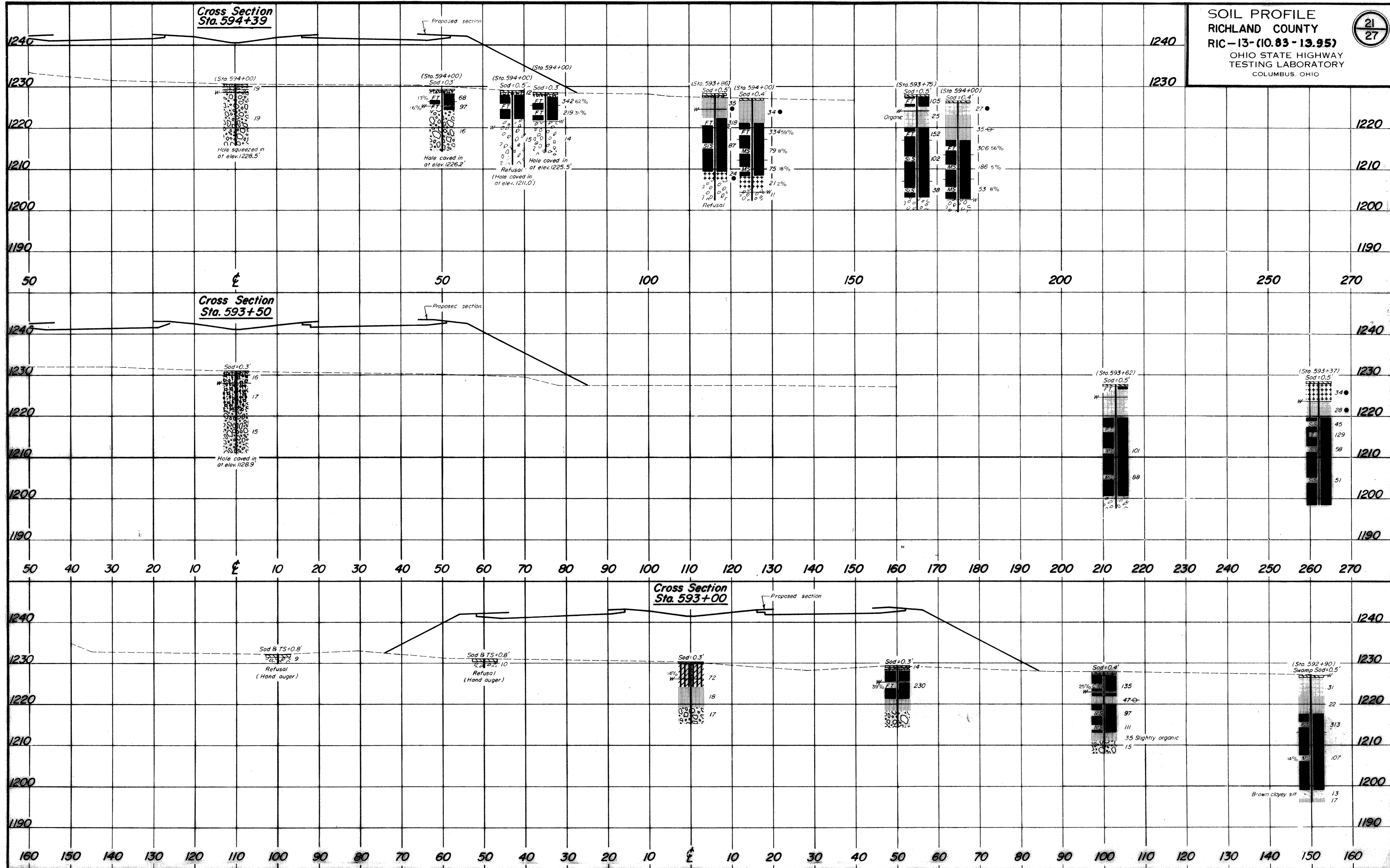


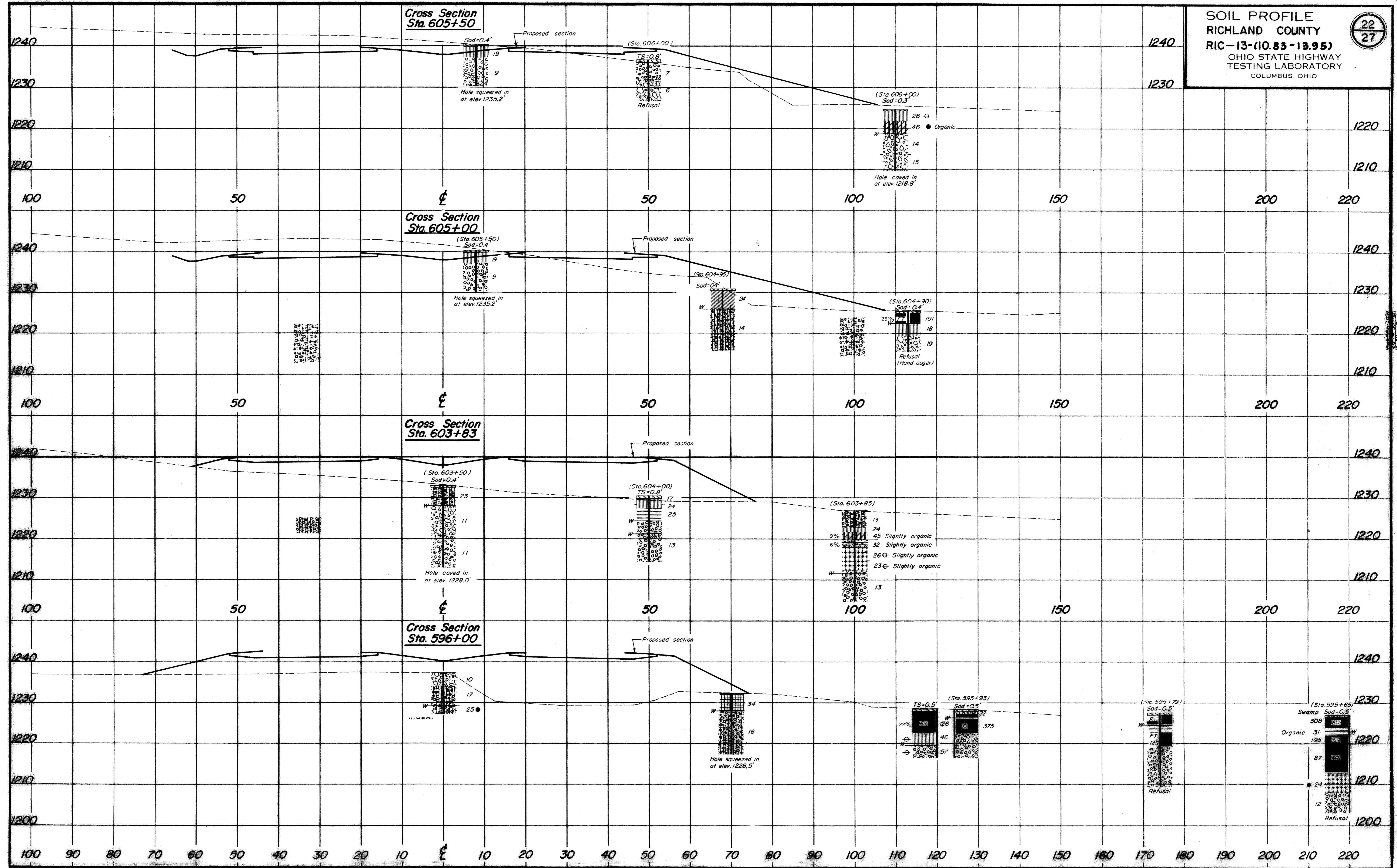
Cross Section
Sta. 592+00

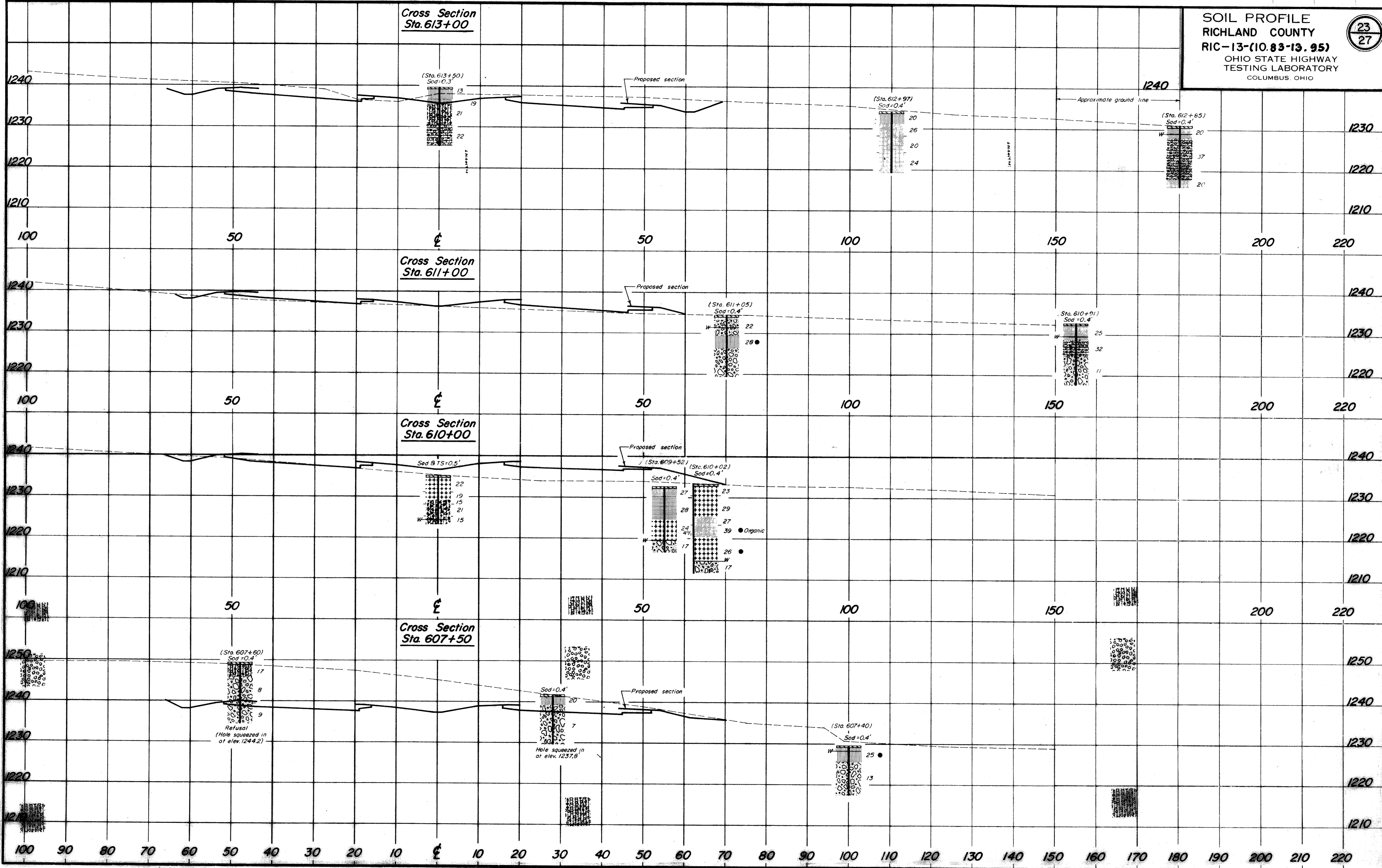


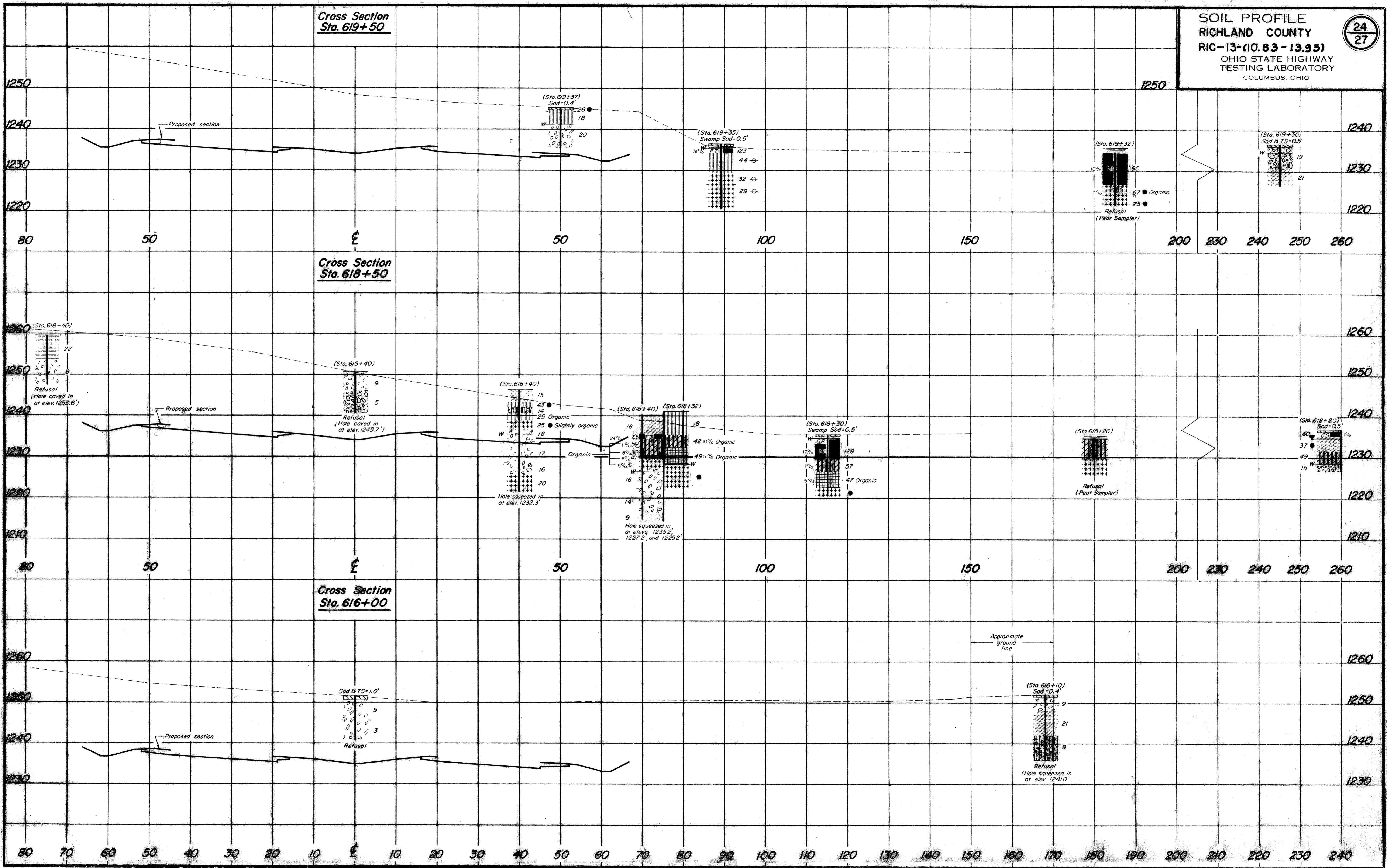
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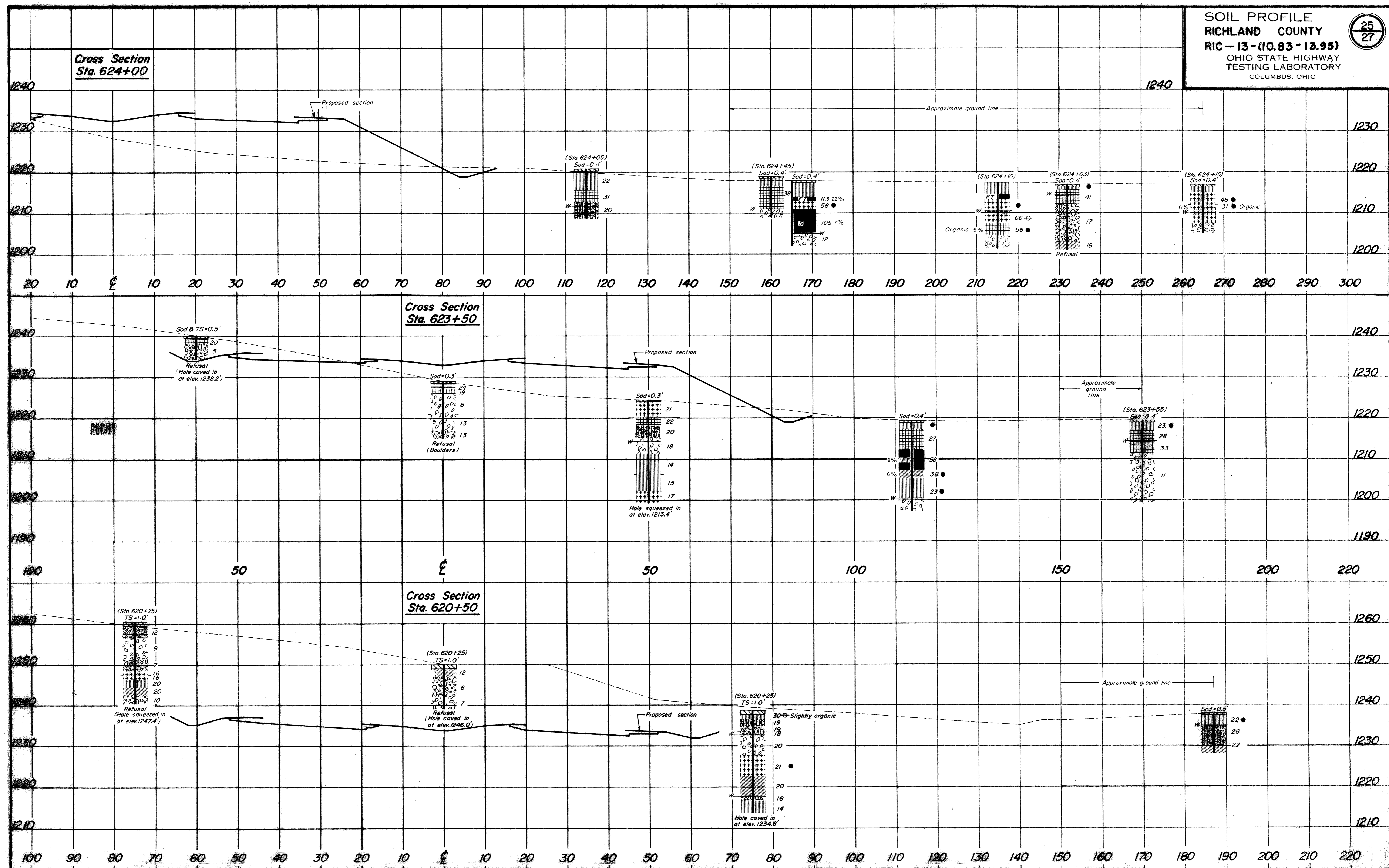


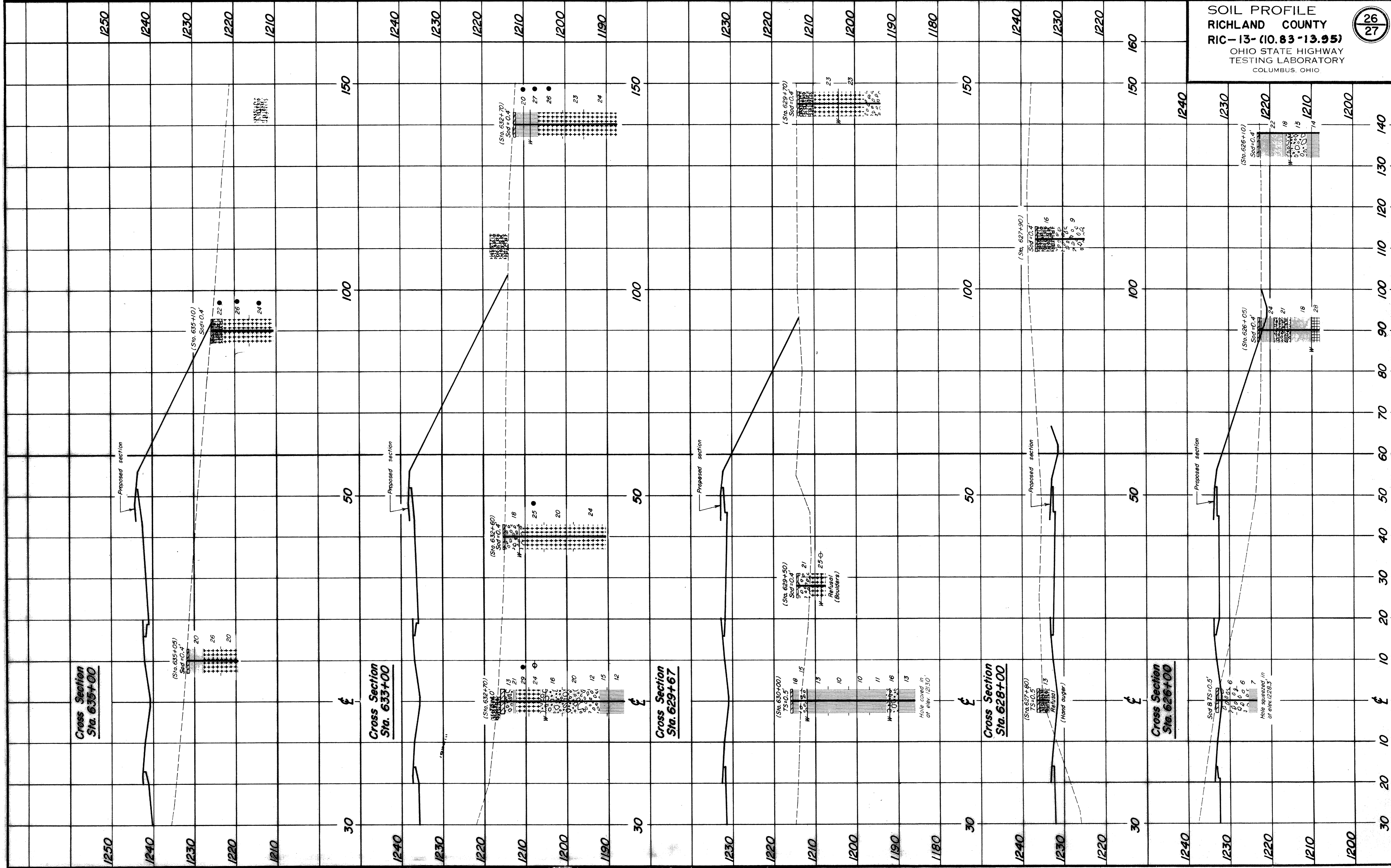












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1500 10 60

331116
3/11/67

331116
3/11/67

Cross Section
 Sta. 748+59

