

DETOUR MAP
(•) = Delivery Point

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-340(3)	74
RIC-545-(6.44) (9.05-9.46) (10.89-11.01)			
ASD-545-2.87			

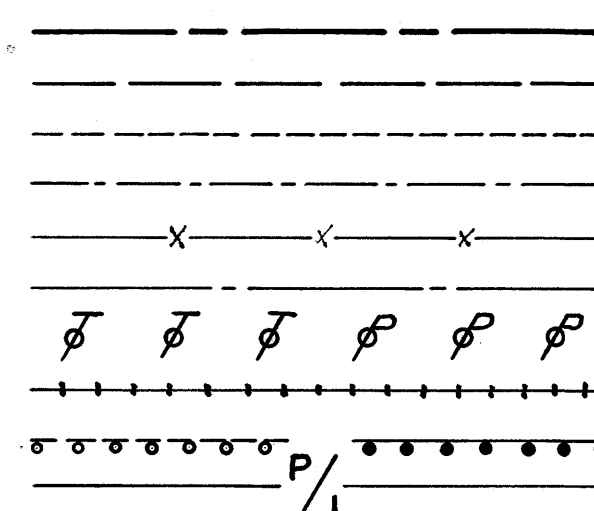
RIC-545-(6.44) (9.05-9.46) (10.89-11.01)
ASD-545-2.87

PART I
PART II
PART III } S-340(3)

RICHLAND AND ASHLAND COUNTIES
WELLER AND CLEAR CREEK TOWNSHIPS

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



INDEX OF SHEETS

TITLE SHEET	1	PLAN AND PROFILE	7-9, 20-23, 42-43 & 50-51
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SCHEMATIC LAYOUT (PART II)	5	RIGHT-OF-WAY PLANS	68-74
GENERAL SUMMARY	6		

LINE DATA

PROJECT	WORK
RIC-545-6.44 (PART I)	
BEGIN STA. 340+00	STA. 339+15
SUSPEND STA. 366+25	STA. 368+85
NO ADDITIONS OR DEDUCTIONS	
NET LENGTH	2625.00 LIN. FT. 2970.00 LIN. FT.

RIC-545-(9.05-9.46) PART II	
RESUME STA. 478+00	STA. 476+75
SUSPEND STA. 517+00	STA. 517+50
NO ADDITIONS OR DEDUCTIONS	
NET LENGTH	3900.00 LIN. FT. 4075.00 LIN. FT.

RIC-545-(10.89-11.01) PART III	
RESUME STA. 575+25	STA. 574+75
SUSPEND STA. 585+50	STA. 586+20
NO ADDITIONS OR DEDUCTIONS	
NET LENGTH	1025.00 LIN. FT. 1145.00 LIN. FT.

TOTAL NET LENGTH	
FOR PARTS I, II & III [S-340(3)]	7550.00 LIN. FT. 8190.00 LIN. FT.
RIC-545-(6.44)-(9.05-9.46)(10.89-11.01) OR 1.429 MILES OR 1.551 MILES	

ASD-545-2.87 (PART IV)	
RESUME STA. 151+50	STA. 151+00
END STA. 168+00	STA. 168+50
NO ADDITIONS OR DEDUCTIONS	
NET LENGTH	1650.00 LIN. FT. 1750.00 LIN. FT.

TOTAL NET LENGTH FOR PARTS I, II, III & IV	
RIC-545-(6.44)-(9.05-9.46)(10.89-11.01) 9200.00 LIN. FT. 9940.00 LIN. FT.	
ASD-545-2.87 OR 1.742 MILES OR 1.882 MILES	

FILE NO	RIC-545-(6.44) (9.05-9.46)(10.89-11.01) ASD-545-2.87
DATE OF LETTING	
CONTRACT NO	

STANDARD CONSTRUCTION DRAWINGS					
L-1	4-1-50	I-8 C.B. 2-2-A & B	8-1-56	CS-1-54 (Sh. 1 & 2)	7-16-56
L-3	4-1-50	I-15 N ^o 1	8-1-55	I-15 N ^o 2	12-1-54
L-3-A	4-1-50	I-15 N ^o 2-A	6-1-57		
DR-1	1-3-55	G-707	6-1-56		
RI-1	7-15-58	SP-53	7-21-53		
T-35	1-2-56	CSB-1-55 (Sh. 1, 2 & 3)	3-1-58		
S-27 P.C. 3	2-20-45	AS-1-54	12-1-54		
S-27 P.C. 4	1-4-54	A-1-54	12-1-54		
I-1, 2, 3, 4 & 5	4-24-58	P-1-54	12-1-54		

SUPPLEMENTAL SPECIFICATIONS					
B-119	Rev.	8-11-57			
E-101		1-1-57			
9		6-24-58			



DELIVERY POINT: Erie RR Siding
(See Detour Map)
AVERAGE HAUL, MI. 4.2
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" = 5'
OTHER SHEETS AS SHOWN

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 require the closing to traffic of the highway, except as noted on Sheet 3, and that detours will be provided as indicated on the plans.

Approved W. R. Lauseman
Date 8-22-58 Division Deputy Director

Approved G. H. Mahoney
Date 9-30-58 Deputy Director of Planning and Programming

Approved W. A. Overman
Date 9-22-58 Engineer of Bridges

Approved P. E. Shultz
Date 9-24-58 Engineer of Location and Design

Approved P. E. Washburn
Date 9-24-58 Deputy Director of Design and Construction

Approved George J. Sherman
Date 9/30/58 First Assistant Director

Approved Charles M. Noble
Date 9/30/58 Director of Highways

JUN 13 1961
GROUND PHOTO LAB

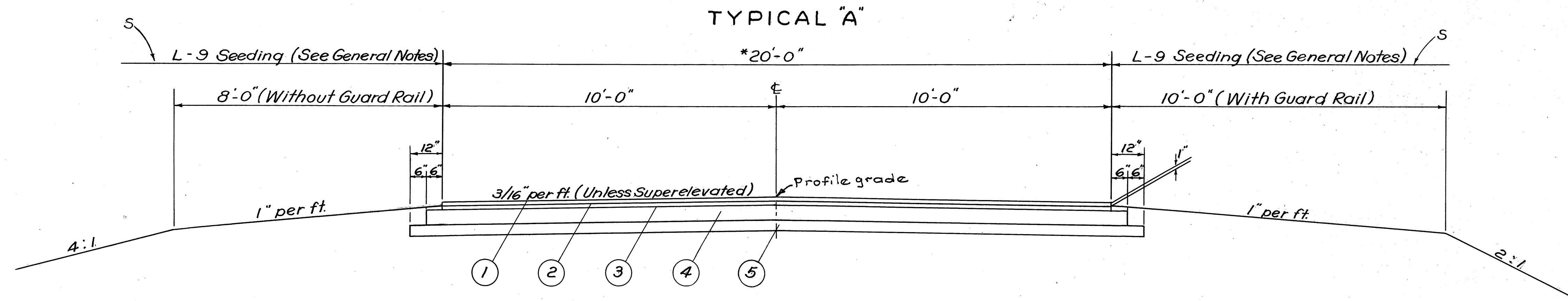
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED:
DIVISION ENGINEER DATE

TYPICAL SECTIONS TYPE T-35 ON B-119

CODE 6201

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87

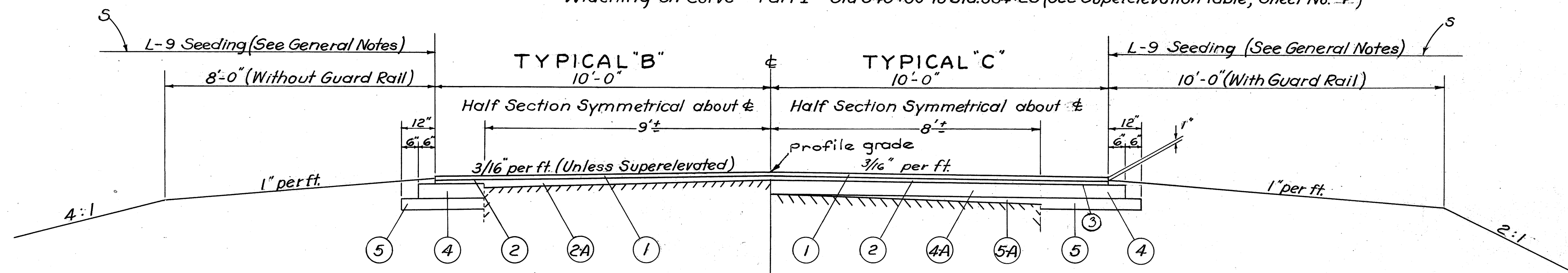


Note: Details of Shoulders, Slopes, and Ditches not shown are to conform with Standard Drawing No RI-1 unless otherwise shown on Cross Sections.

Part I	
* Sta. 342+00 to Sta. 355+91.63	= 1391.63 Lin. Ft.
Sta. 357+08.37 to Sta. 364+50	= 741.63 Lin. Ft.
Total	2133.26 Lin. Ft. (Part I)
Part II	
Sta. 478+00 to Sta. 498+73.25	= 2073.25 Lin. Ft.
Sta. 500+70.75 to Sta. 517+00	= 1629.25 Lin. Ft.
Total	3702.50 Lin. Ft. (Part 2)
Part III	
Sta. 576+00 to Sta. 581+33.89	= 533.89 Lin. Ft.
Sta. 583+02.62 to Sta. 585+50	= 247.38 Lin. Ft.
Total	781.27 Lin. Ft. (Part 3)
Part IV	
Sta. 151+50 to Sta. 168+00	= 1650.0 Lin. Ft. (Part 4)

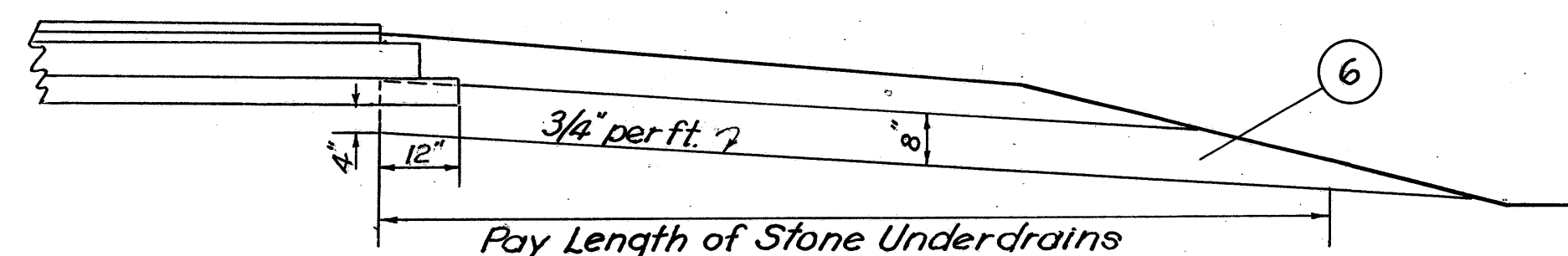
A portion of the embankment within the poorly drained depression at Sta. 502+50 ± shall be constructed of E-4 Granular Borrow as per general note on sheet No. 3 and as shown on sheet No. 32.

* Widening on Curve - Part I - Sta. 340+50 to Sta. 354+25 (See Superelevation Table, Sheet No. 4.)



* Sta. 340+00 to Sta. 342+00	= 200 Lin. Ft.
Sta. 364+50 to Sta. 366+25	= 175 Lin. Ft.
Total	375 Lin. Ft. (Part I)

Sta. 575+25 to Sta. 576+00 = 75 Lin. Ft. (Part 3)



DETAIL OF STONE UNDERDRAINS NO. 2.

- (1) T-35 1 1/2" Asphaltic Concrete Surface Course Type A (85-100)
- (2) B-35 1 1/2" Asphaltic Concrete Leveling Course (85-100)
- (2A) B-35 1 1/2" Minimum Thickness Variable Depth Asphaltic Concrete Leveling Course (85-100)
- (3) T-30 Bituminous Prime Coat Sec M-5.3, MC-0 or MC-1 or Sec M-5.7, RT-2 or RT-3, applied at the rate of 0.35 Gal per Sq. Yd.
- (4) B-119 5" Crushed Aggregate Base Course
- (4A) B-119 Variable Depth Crushed Aggregate Base Course (5" Maximum)
- (5) I-22 4" Subbase
- (5A) I-22 Variable Depth Subbase (4" Maximum)
- (6) I-9 Stone Underdrains No. 2 (Located as directed by Engineer)
- (7) I-4 6" Underdrains (Where called for on Plans) as per Standard Drawing - RI-1

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3

74

RIC-545-(644)-(905-946)-(1089-1101)
ASD-545-2.87

DESIGN SPEED : 50 Miles per hour.

FIELD OFFICE : The Contractor shall provide one suitable "Field Office" to serve all parts of this project, in accordance with Section 5-0.01(b) having a minimum floor area of 300 Square Feet. The Contractor shall have a telephone installed and maintained during construction of this project.

UTILITIES : Any and all work required for the adjustment of Public or Private Utilities will be done by and at the expense of their respective owners unless otherwise shown on these plans.

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

SUBGRADE COMPACTION : Subgrade under drives, approaches, and mailbox turn-outs shall be compacted for a depth of six (6) inches to the density requirements of Table III Section E-101.09 unless otherwise called for. Payment for subgrade compaction, as specified above, shall be included in the price bid for Item E-101 Roadway Excavation.

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

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

I-9 STONE UNDERDRAINS N^o 2 : A quantity of Stone Underdrains N^o 2, to be used as directed by the Engineer, has been estimated on this project at approximately 100 Ft. intervals Left and Right where I-4 Underdrains are not called for. The Contractor shall grade, finish, seed and mulch the slopes so as not to impede the free drainage of the underdrains.

MAINTAINING LOCAL TRAFFIC : The following estimated quantities are included in the General Summary for maintaining local traffic as directed by the Engineer : T-10 Traffic Compacted Surface Course for Maintaining Traffic : Part I, 25 Cu. Yds., Part 2, 35 Cu. Yds., Part 4, 15 Cu. Yds. M-10 Calcium Chloride or Calcium Magnesium Chloride furnished and applied for Maintaining Traffic : Part I 0.5 Tons, Part 2 0.7 Tons, Part 4 0.3 Tons.

REMOVAL OF TREES AND STUMPS : shall be paid for by a lump sum bid. The number of trees and stumps shown in the following table is for estimating purposes only. Sizes under 12" are not listed. The State does not guarantee the accuracy of the table.

SIZE	12"-18"	18"-24"	24"-30"	30"-36"	36"-42"	42"-48"	48"-54"	56"
PART I TREES	1	0	0	0	0	0	0	0
PART I STUMPS	0	0	0	0	0	0	0	0
PART II TREES	23	10	5	2	3	1	0	1
PART II STUMPS	1	1	0	0	0	0	0	0
PART III TREES	2	0	0	0	0	0	0	0
PART III STUMPS	0	0	0	0	0	0	0	0
PART IV TREES	12	3	0	0	0	0	0	0
PART IV STUMPS	0	1	0	0	0	0	0	0

SEEDING : Quantities for seeding are calculated for the soil areas to the work limits as shown on the cross sections.

Areas to be seeded or sodded shall be fertilized using a commercial fertilizer having a formula of 12-12-12 applied at the rate of 20 pounds per 1000 Sq. Ft. and seeded with the following mixture : 75% Kentucky 31 Fescue, 20% Kentucky Bluegrass, and 5% Alsike Clover sown at the rate of 3 pounds per 1000 Sq. Ft.

Seeding limits are indicated on the cross sections by the symbol \propto .

PAVEMENT REMOVAL : All necessary pavement removal is of the non-rigid type and shall be paid for as Item E-101 Roadway Excavation.

On parts I, II and IV all existing pavement outside proposed construction limits shall be removed, except as noted on sheet No. 22. Part II. After the existing pavement has been removed the old roadway shall be plowed, harrowed and dragged to a smooth grade and the entire area left in a neat condition. The area shall then be seeded and mulched. The following estimated quantities of Item E-101 Roadway Excavation are included in the Earthwork Table to provide payment for this pavement removal : 280 Cu. Yds. (Part I) 375 Cu. Yds. (Part II) 55 Cu. Yds. (Part IV). Cost of plowing, harrowing, etc. is included in the unit price bid for Item E-101 Roadway Excavation. Seeding shall be paid for under Item L-9.

E-4 GRANULAR BORROW : Has been provided to construct a portion of the embankment in the poorly drained depression at Sta. 502+50± as shown on sheet no. 32. Granular Borrow shall be end dumped and shall meet the specification requirements of E-101.02 Granular Material, (modified to require at least 75% by weight of the grains or particles to be retained on a No. 200 sieve) If during construction the depression is free of water, and if so directed by the Engineer, the E-4 Granular Borrow shall be non-performed and conventional embankment procedures substituted. Total = 1209 Cu. Yds.

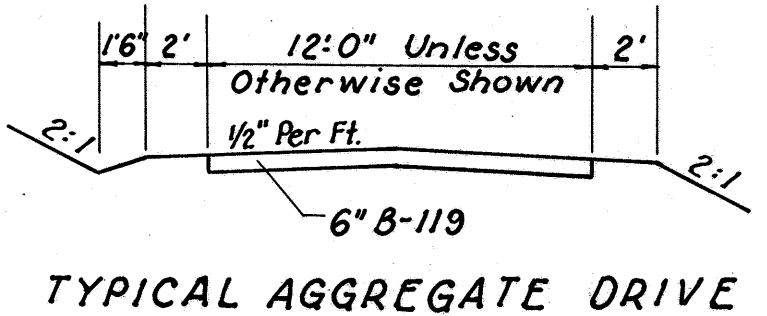
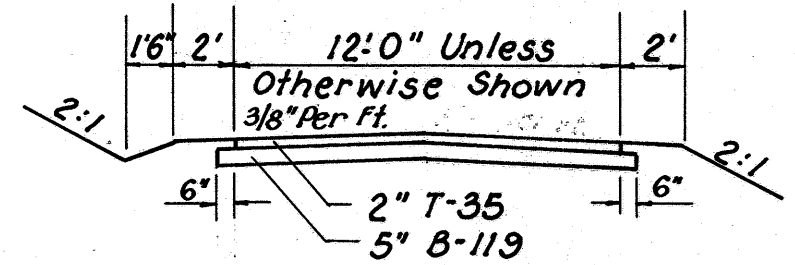
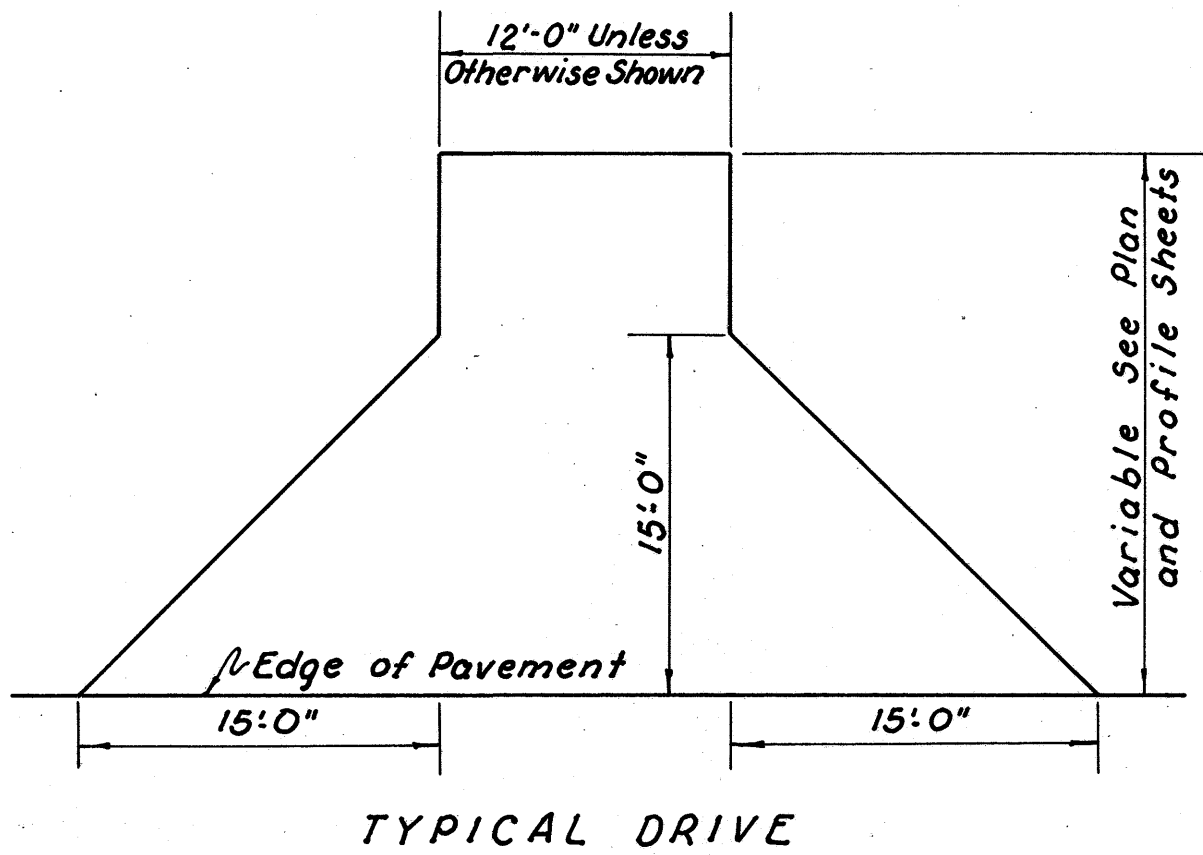
Where end dumping of granular material is permitted, normal clearing and grubbing shall be performed but the requirements of Sec. E-101.04 for scalping and compaction of the foundation shall be waived.

TRAFFIC :

The detour shown on Sheet 1 shall not be placed into effect prior to April 1, 1959 unless otherwise approved in writing by the Director. Two-way traffic shall be maintained at all times the detour is not in effect.

SCHEDULE OF OPERATIONS :

The schedule of operations for Part III shall contemplate a continuous and vigorous construction sequence in which the period of use of the detour for the proposed work north of S.R. 96 shall be held to an absolute minimum. Once work is started which will interfere with the normal use by traffic of the existing pavement and structures on Part IV, the proposed pavement and structure work on this part shall be prosecuted uninterruptedly to a sufficient stage of completion to carry two-way traffic. Thereafter, two-way traffic shall be maintained on the new pavement and structures and the remainder of the contract items for Part IV shall be performed under traffic.



NOTE: Surplus excavation from Part II shall be used to reduce borrow on Part III.

SUPERELEVATION TABLES

PART I

RIC-545-(644)

PI Sta 347+79.48

D_s=6'00" Lt.

L_s=400'

T.S. Sta 340+44.47

CS Sta 350+14.33

SC Sta 344+44.47

ST Sta 354+14.33

Rotate about Normal Rt. Ed. of Pavt (10' Rt. of C Survey)

Station	Lt. Edge	Profile Gr.	*Rt. Edge	Width Rt. L.
339+75				10.
340+00	1084.11	1084.22	1084.06	10.
+25	1084.13	1084.19	1084.03	10.
+50	1084.15	1084.15	1083.99	10.
+75	1084.24	1084.12	1083.96	10.25
341+00	1084.31	1084.08	1083.92	10.50
+25	1084.40	1084.05	1083.89	10.75
+50	1084.47	1084.01	1083.85	11.00
+75	1084.56	1083.98	1083.82	11.25
342+00	1084.63	1083.94	1083.78	11.50
+25	1084.72	1083.91	1083.75	11.75
+50	1084.79	1083.87	1083.71	12.00
+75	1084.87	1083.83	1083.67	12.25
343+00	1084.92	1083.77	1083.61	12.50
+25	1084.96	1083.69	1083.53	12.75
+50	1084.97	1083.59	1083.43	13.00
+75	1084.98	1083.48	1083.32	13.25
344+00	1084.96	1083.35	1083.19	13.50
+25	1084.93	1083.20	1083.04	13.75
+50	1084.87	1083.03	1082.87	14.
+75	1084.69	1082.85	1082.69	14.
345+00	1084.49	1082.65	1082.49	14.
+25	1084.26	1082.42	1082.26	14.
+50	1084.03	1082.19	1082.03	14.
+75	1083.78	1081.94	1081.78	14.
346+00	1083.51	1081.67	1081.51	14.
+25	1083.22	1081.38	1081.22	14.
+50	1082.91	1081.07	1080.91	14.
+75	1082.60	1080.76	1080.60	14.
347+00	1082.28	1080.44	1080.28	14.
+25	1081.97	1080.13	1079.97	14.
+50	1081.65	1079.81	1079.65	14.
+75	1081.34	1079.50	1079.34	14.
348+00	1081.02	1079.18	1079.02	14.
+25	1080.71	1078.87	1078.71	14.
+50	1080.39	1078.55	1078.39	14.
+75	1080.08	1078.24	1078.08	14.
349+00	1079.76	1077.92	1077.76	14.
+25	1079.45	1077.61	1077.45	14.
+50	1079.13	1077.29	1077.13	14.
+75	1078.82	1076.98	1076.82	14.
350+00	1078.50	1076.66	1076.50	14.
+25	1078.19	1076.35	1076.19	14.
+50	1077.76	1076.03	1075.87	13.75
+75	1077.33	1075.72	1075.56	13.50
351+00	1076.90	1075.40	1075.24	13.25
+25	1076.47	1075.09	1074.93	13.00
+50	1076.04	1074.77	1074.61	12.75
+75	1075.61	1074.46	1074.30	12.50
352+00	1075.18	1074.14	1073.98	12.25
+25	1074.75	1073.83	1073.67	12.00
+50	1074.32	1073.51	1073.35	11.75
+75	1073.89	1073.20	1073.04	11.50
353+00	1073.46	1072.88	1072.72	11.25
+25	1073.03	1072.57	1072.41	11.00
+50	1072.60	1072.25	1072.09	10.75
+75	1072.17	1071.94	1071.78	10.50
354+00	1071.74	1071.62	1071.46	10.25
+25	1071.31	1071.31	1071.15	10.
+50	1070.93	1070.99	1070.83	10.
+75	1070.57	1070.68	1070.52	10.
355+00	1070.20	1070.36	1070.20	10.

* Rt. Edge = 10 ft. + widening

PART I

RIC-545-(644)

PI Sta 362+83.76

D_s=4'00" Lt.

L_s=250'

T.S. Sta 360+04.46

CS Sta 363+11.54

SC Sta 362+54.46

ST Sta 365+61.54

Rotate about Lt. Edge

Station	Lt. Edge	Profile Gr.	Rt. Edge
359+25	1064.85	1065.01	1064.85
+50	1064.53	1064.69	1064.58
+75	1064.22	1064.38	1064.32
360+00	1063.90	1064.06	1064.06
+25	1063.60	1063.76	1063.88
+50	1063.31	1063.47	1063.70
+75	1063.02	1063.18	1063.53
361+00	1062.74	1062.90	1063.36
+25	1062.47	1062.63	1063.21
+50	1062.21	1062.37	1063.07
+75	1061.96	1062.12	1062.93
362+00	1061.71	1061.87	1062.80
+25	1061.47	1061.63	1062.67
+50	1061.24	1061.40	1062.56
+75	1061.02	1061.18	1062.34
363+00	1061.81	1060.97	1062.13
+25	1060.60	1060.76	1061.80
+50	1060.40	1060.56	1061.49
+75	1060.22	1060.38	1061.19
364+00	1060.03	1060.19	1060.89
+25	1059.85	1060.01	1060.59
+50	1059.68	1059.82	1060.28
+75	1059.48	1059.64	1059.99
365+00	1059.29	1059.45	1059.68
+25	1059.11	1059.27	1059.39
+50	1058.92	1059.08	1059.08
+75	1058.74	1058.90	1058.86
366+00	1058.55	1058.71	1058.60
+25	1058.37	1058.53	1058.37

PART II

RIC-545-(9.05-9.46)

PI Sta 507+71.57

D_s=2'00" Lt.

L_s=200'

T.S. Sta 504+40.75

CS Sta 509+01.30

SC Sta 506+40.75

ST Sta 511+01.30

Rotate about Lt. Edge

Station	Lt. Edge	Profile Gr.	Rt. Edge
503+75	1023.37	1023.53	1023.37
504+00	1023.69	1023.85	1023.74
+25	1024.06	1024.22	1024.16
+50	1024.50	1024.66	1024.66
+75	1024.99	1025.15	1025.21
505+00	1025.55	1025.71	1025.84
+25	1026.16	1026.32	1026.51
+50	1026.83	1026.99	1027.24
+75	1027.55	1027.71	1028.02
506+00	1028.34	1028.50	1028.88
+25	1029.13	1029.34	1029.78
+50	1030.08	1030.24	1030.74
+75	1031.01	1031.17	1031.67
507+00	1031.94	1032.10	1032.60
+25	1032.87	1033.03	1033.53
+50	1033.80	1033.96	1034.46
+75	1034.73	1034.89	1035.39
508+00	1035.66	1035.82	1036.32
+25	1036.59	1036.75	1037.25
+50	1037.52	1037.68	1038.18
+75	1038.45	1038.61	1039.11
509+00	1039.38	1039.54	1040.04
+25	1040.31	1040.47	1040.91
+50	1041.24	1041.40	1041.78
+75	1042.15	1042.31	1042.62
510+00	1043.03	1043.19	1043.44
+25	1043.88	1044.04	1044.23
+50	1044.69	1044.85	1044.98
+75	1045.46	1045.62	1045.68
511+00	1046.20	1046.36	1046.36
+25	1046.91	1047.07	1047.01
+50	1047.58	1047.74	1047.63
+75	1048.22	1048.38	1048.22

PART II

RIC-545-(9.05-9.46)

PI Sta 490+15.73

D_s=4'00" Lt.

L_s=400'

T.S. Sta 481+09.59

CS Sta 494+18.24

SC Sta 485+09.59

ST Sta 498+18.24

Rotate about Lt. Edge

Station	Lt. Edge	Profile Gr.	Rt. Edge
480+25	1068.72	1068.88	1068.72
+50	1068.49	1068.65	1068.54
+75	1068.22	1068.38	1068.32
481+00	1067.91	1068.07	1068.07
+25	1067.56	1067.72	1067.79
+50	1067.17	1067.33	1067.48
+75	1066.74	1066.90	1067.12
482+00	1066.27	1066.43	1066.72
+25	1065.76	1065.92	1066.28
+50	1065.21	1065.37	1065.81
+75	1064.62	1064.78	1065.29
483+00	1064.00	1064.16	1064.74
+25	1063.33	1063.49	1064.14
+50	1062.63	1062.79	1063.52
+75	1061.89	1062.05	1062.85
484+00	1061.10	1061.26	1062.13
+25	1060.28	1060.44	1061.38
+50	1059.42	1059.58	1060.60
+75	1058.52	1058.68	1059.77
485+00	1057.60	1057.76	1058.92
+25	1056.68	1056.84	1058.09
+50	1055.76	1055.92	1057.08
+75	1054.84	1055.00	1056.16
486+00	1053.92	1054.08	1055.24
+25	1053.00	1053.16	1054.32
+50	1052.08	1052.24	1053.40
+75	1051.16	1051.32	1052.48
487+00	1050.24	1050.40	1051.56
+25	1049.32	1049.48	1050.64
+50	1048.40	1048.56	1049.72
+75	1047.48	1047.64	1048.80
488+00	1046.56	1046.72	1047.88
+25	1045.64	1045.80	1046.96
+50	1044.72	1044.88	1046.04
+75	1043.80	1043.96	1045.12
489+00	1042.88	1043.04	1044.20
+25	1041.96	1042.12	1043.28
+50	1041.04	1041.20	1042.36
+75	1040.12	1040.28	1041.44
490+00	1039.20	1039.36	1040.52
+25	1038.28	1038.44	1039.60
+50	1037.36	1037.52	1038.68
+75	1036.44	1036.60	1037.76
491+00	1035.52	1035.68	1036.84
+25	1034.60	1034.76	1035.92
+50	1033.68	1033.84	1035.00
+75	1032.76	1032.92	1034.08
492+00	1031.84	1032.00	1033.16
+25	1030.92	1031.08	1032.24
+50	1030.00	1030.16	1031.32
+75	1029.11	1029.27	1030.43
493+00	1028.28	1028.44	1029.60
+25	1027.50	1027.66	1028.82
+50	1026.78	1026.94	1028.10
+75	1026.12	1026.28	1027.42
494+00	1025.51	1025.67	1026.83
+25	1024.97	1025.13	1026.29
+50	1024.48	1024.64	1025.73
+75	1024.05	1024.21	1025.23
495+00	1023.67	1023.83	1024.77
+25	1023.36	1023.52	1024.39
+50	1023.10	1023.26	1024.06
+75	1022.90	1023.06	1023.79
496+00	1022.76	1022.92	1023.57
+25	1022.67	1022.83	1023.41
+50	1022.64	1022.80	1023.31
+75	1022.64	1022.80	1023.24
497+00	1022.64	1022.80	1023.16
+25	1022.64	1022.80	1023.09
+50	1022.64	1022.80	1023.02
+75	1022.64	1022.80	1022.95
498+00	1022.64	1022.80	1022.87
+25	1022.64	1022.80	1022.80
+50	1022.64	1022.80	1022.74
+75	1022.64	1022.80	1022.69
499+00	1022.64	1022.80	1022.64

PART IV

ASD-545-2.87

PI. Sta 162+33.83

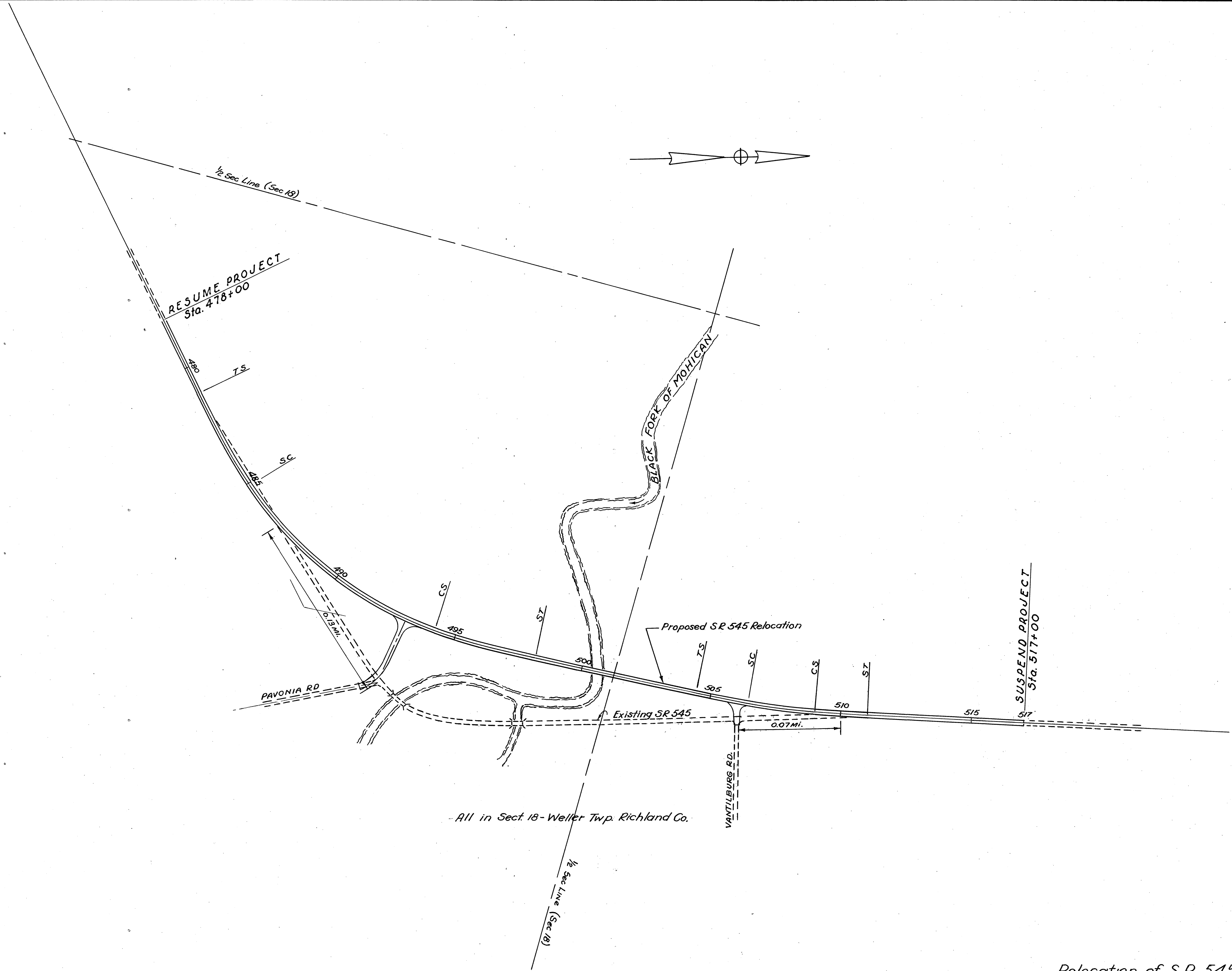
$D_s=1'28"$ Rt.

PC Sta 157+47.25

PT. Sta 167+15.43

Rotate about Rt. Edge

Station	Lt. Edge	Profile Gr.	Rt. Edge
156+50	1119.38	1119.54	1119.38
+75	1118.98	1119.06	1118.90
157+00	1118.63	1118.63	1118.47
+25	1118.33	1118.25	1118.09
+50	1118.10	1117.93	1117.77
+75	1117.92	1117.66	1117.50
158+00	1117.78	1117.44	1117.28
+25	1117.62	1117.28	1117.12
+50	1117.51	1117.17	1117.01
+75	1117.45	1117.11	1116.95
159+00	1117.45	1117.11	1116.95
+25	1117.50	1117.16	1117.00
+50	1117.60	1117.26	1117.10
+75	1117.76	1117.42	1117.26
160+00	1117.97	1117.63	1117.47
+25	1118.23	1117.89	1117.73
+50	1118.52	1118.18	1118.02
+75	1118.81	1118.47	1118.31
161+00	1119.10	1118.76	1118.60
+25	1119.39	1119.05	1118.89
+50	1119.68	1119.34	1119.18
+75	1119.97	1119.63	1119.47
162+00	1120.26	1119.92	1119.76
+25	1120.55	1120.21	1120.05
+50	1120.84	1120.50	1120.34
+75	1121.13	1120.79	1120.63
163+00	1121.42	1121.08	1120.92
+25	1121.71	1121.37	1121.21
+50	1122.00	1121.66	1121.50
+75	1122.29	1121.95	1121.79
164+00	1122.58	1122.24	1122.08
+25	1122.87	1122.53	1122.37
+50	1123.16	1122.82	1122.66
+75	1123.45	1123.11	1122.95
165+00	1123.74	1123.40	1123.24
+25	1124.03	1123.69	1123.53
+50	1124.32	1123.98	1123.82
+75	1124.61	1124.27	1124.11
166+00	1124.90	1124.56	1124.40
+25	1125.19	1124.85	1124.69
+50	1125.48	1125.14	1124.98
+75	1125.77	1125.43	1125.27
167+00	1125.98	1125.72	1125.56
+25	1126.17	1126.01	1125.85
+50	1126.38	1126.30	1126.14
+75	1126.53	1126.53	1126.37
168+00	1126.59	1126.67	1126.51
+25	1126.55	1126.71	1126.55



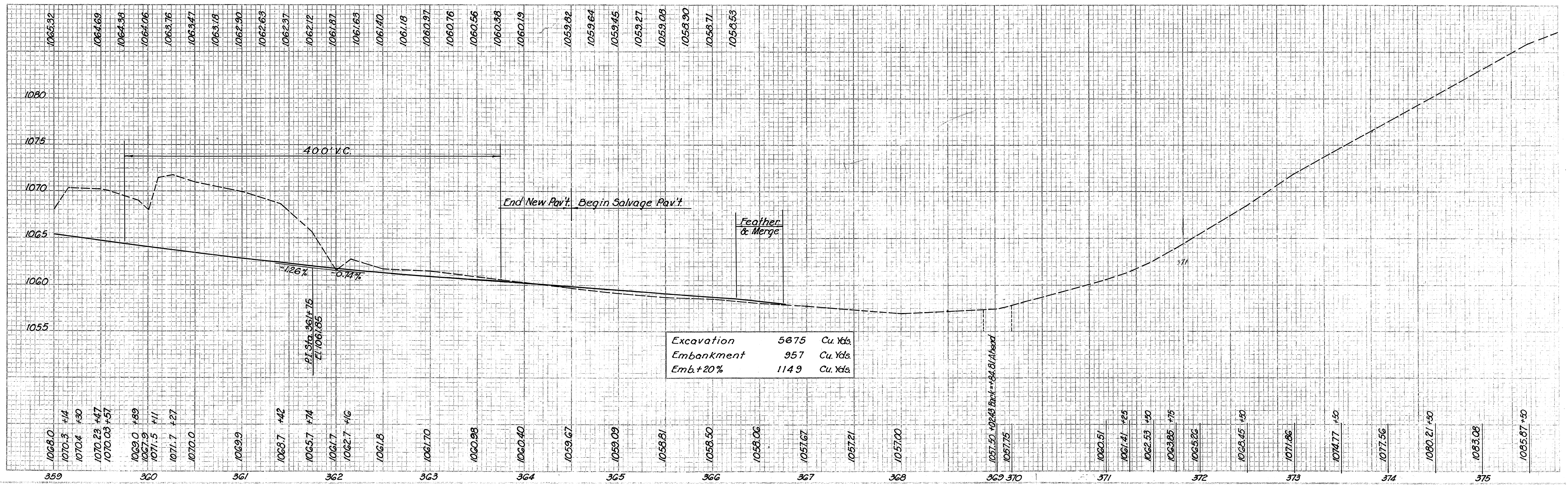
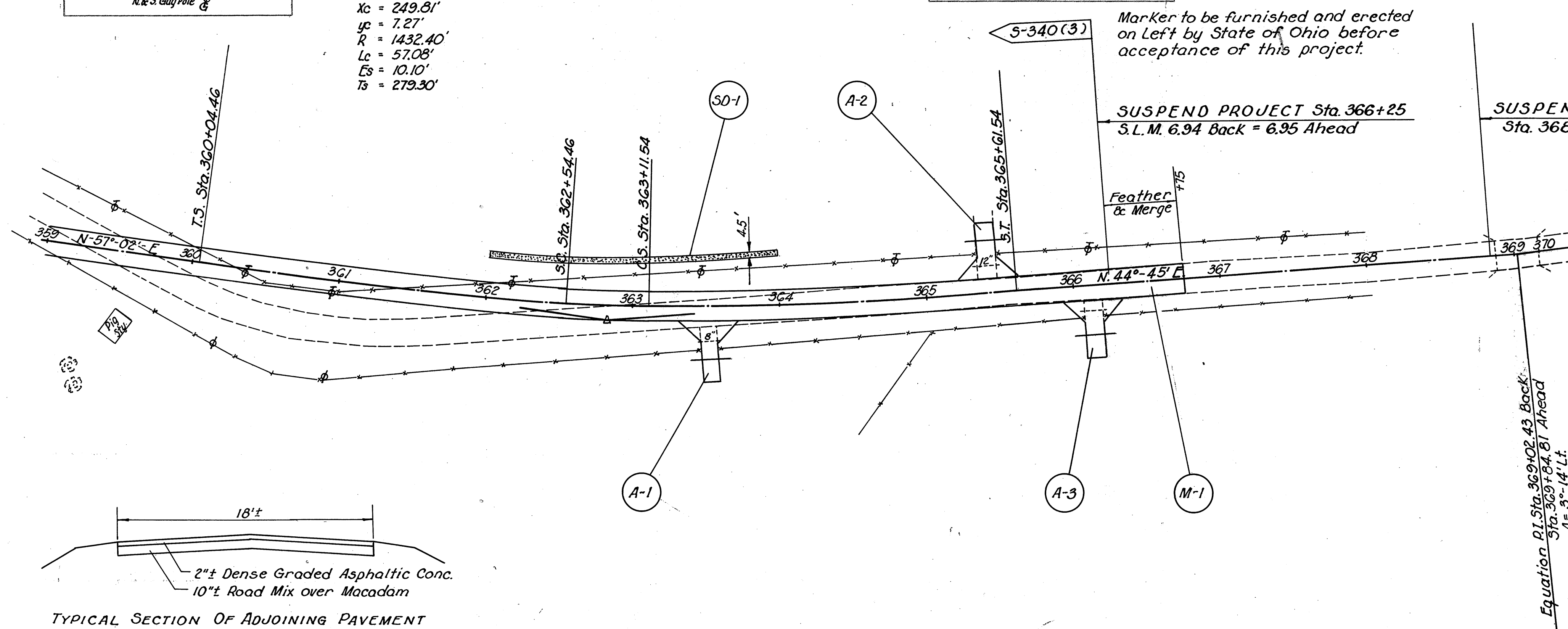
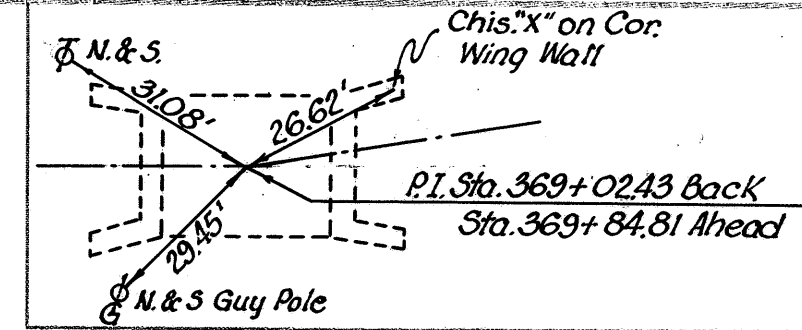
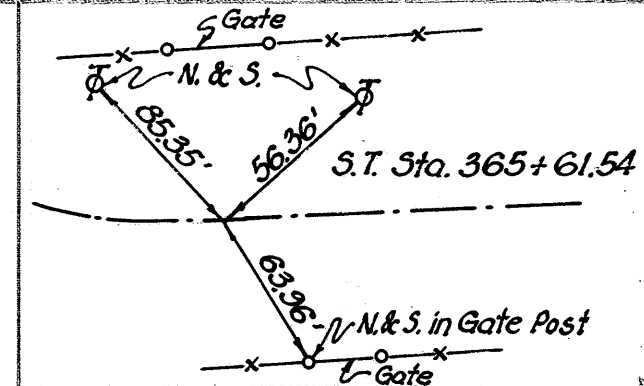
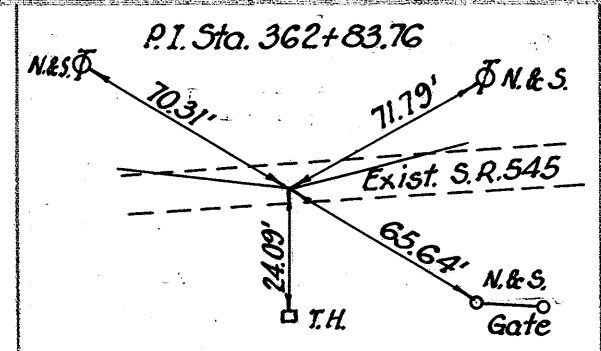
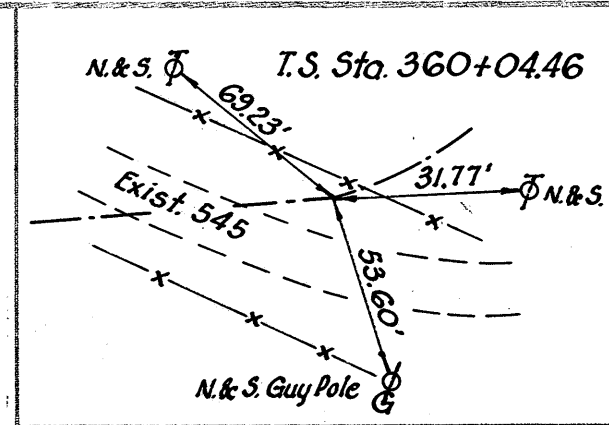
Relocation of S.R. 545 Richland Co.
 Weller Twp. T-22, R-17

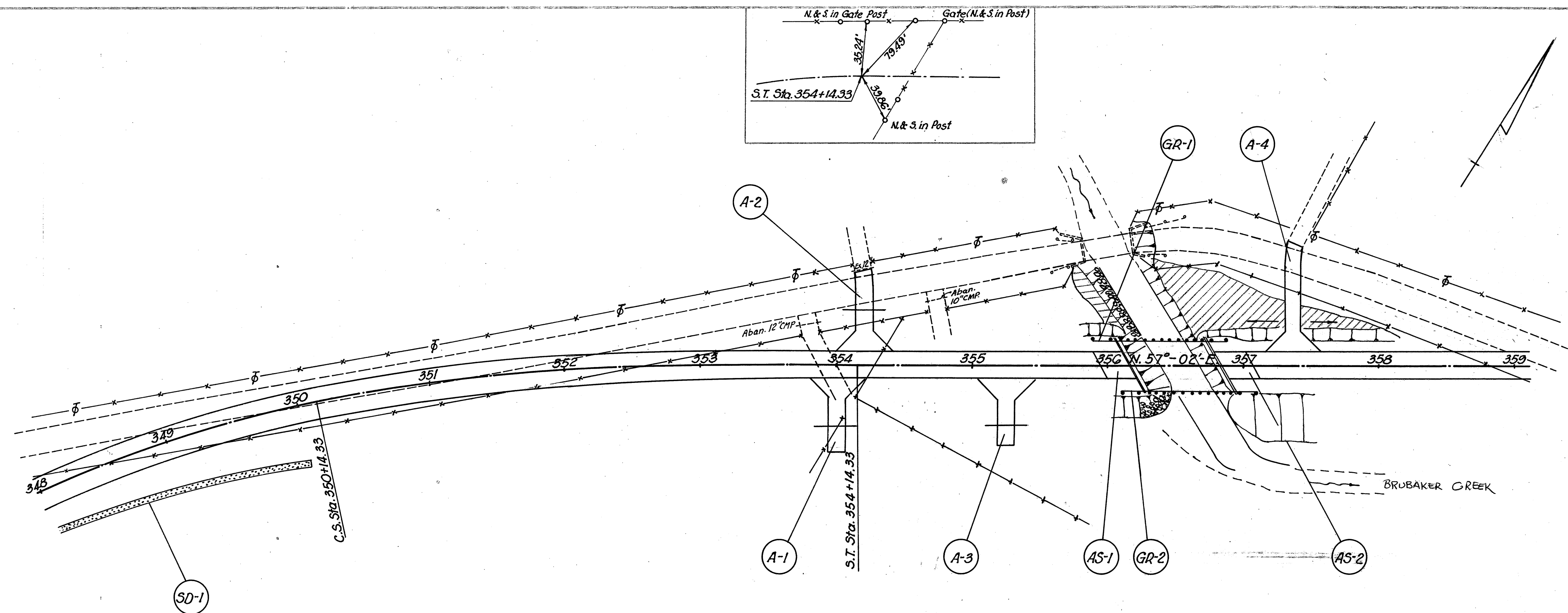
Scale 1" = 200' (Approx.)

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87

ESTIMATED QUANTITIES FOR STRUCTURES OVER 20 FT. SPAN

Bridge No. RIC - 545 - 0675	(See Sheet No.60)
Bridge No. RIC - 545 - 0945	(See Sheet No.63)
Bridge No. RIC - 545 - 1101	(See Sheet No.66)

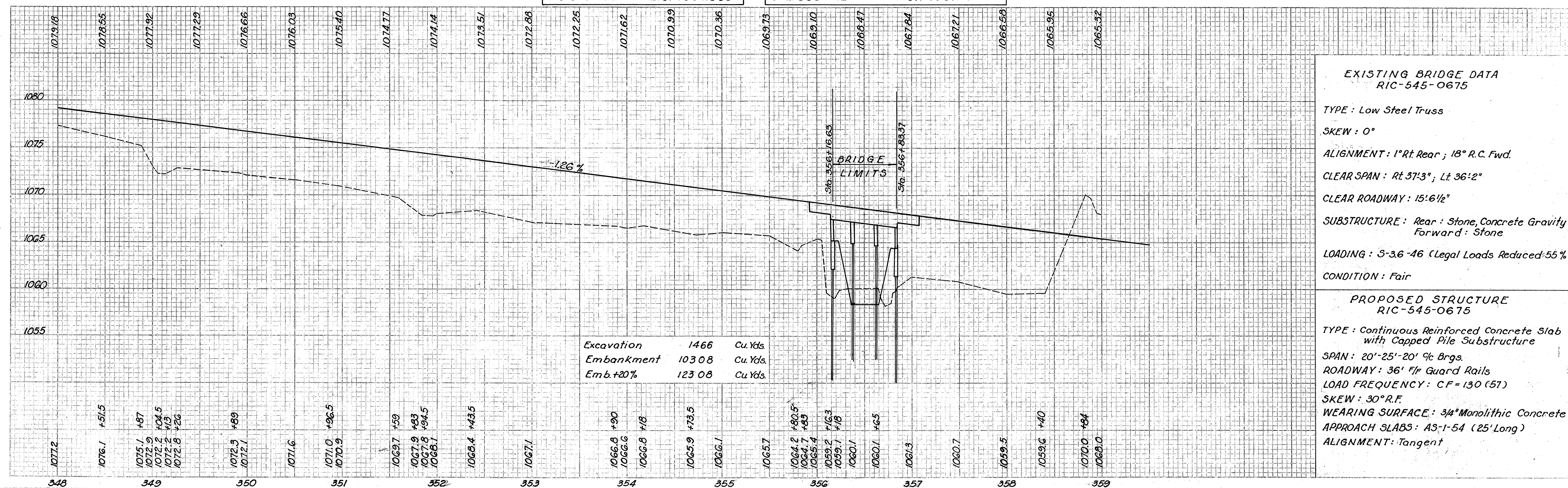




Ref. No.	Station	8-119 Crushed Aggregate Base Course Cu. Yds.	1-7 Reinforc. Concrete Approach Slabs Sq. Yds.	1-1 Drive Pipe Lin. Ft.	1-15 Guard Rail Steel Deep Lin. Ft.	1-10 Sodding 1/2 Yard per Ft. Sq. Yds.
		5"	6"	15"		
A-1	354+00 Rt.	16.4		32		
A-2	354+18 Lt.	17.5		32		
A-3	355+25 Rt.	15.3		32		
A-4	357+37 Lt.	22.0				
GR-1	355+89.76-356+89.76				33.26	
GR-2	356+10.24-357+10.24				33.26	
AS-1	355+91.63-356+16.63		55.56			
AS-2	356+83.37-357+08.37		55.56			
SD-1	348+00-350+00					100
Totals		71.2	111.12	96	66.52	100

BM. Spike in 16" Maple 350 Lt.
 Sta. 355+42 Elev. 1064.385

BM. Chis X on S.W. Wing Wall 102' Lt.
 Sta. 355+63 Elev. 1067.41



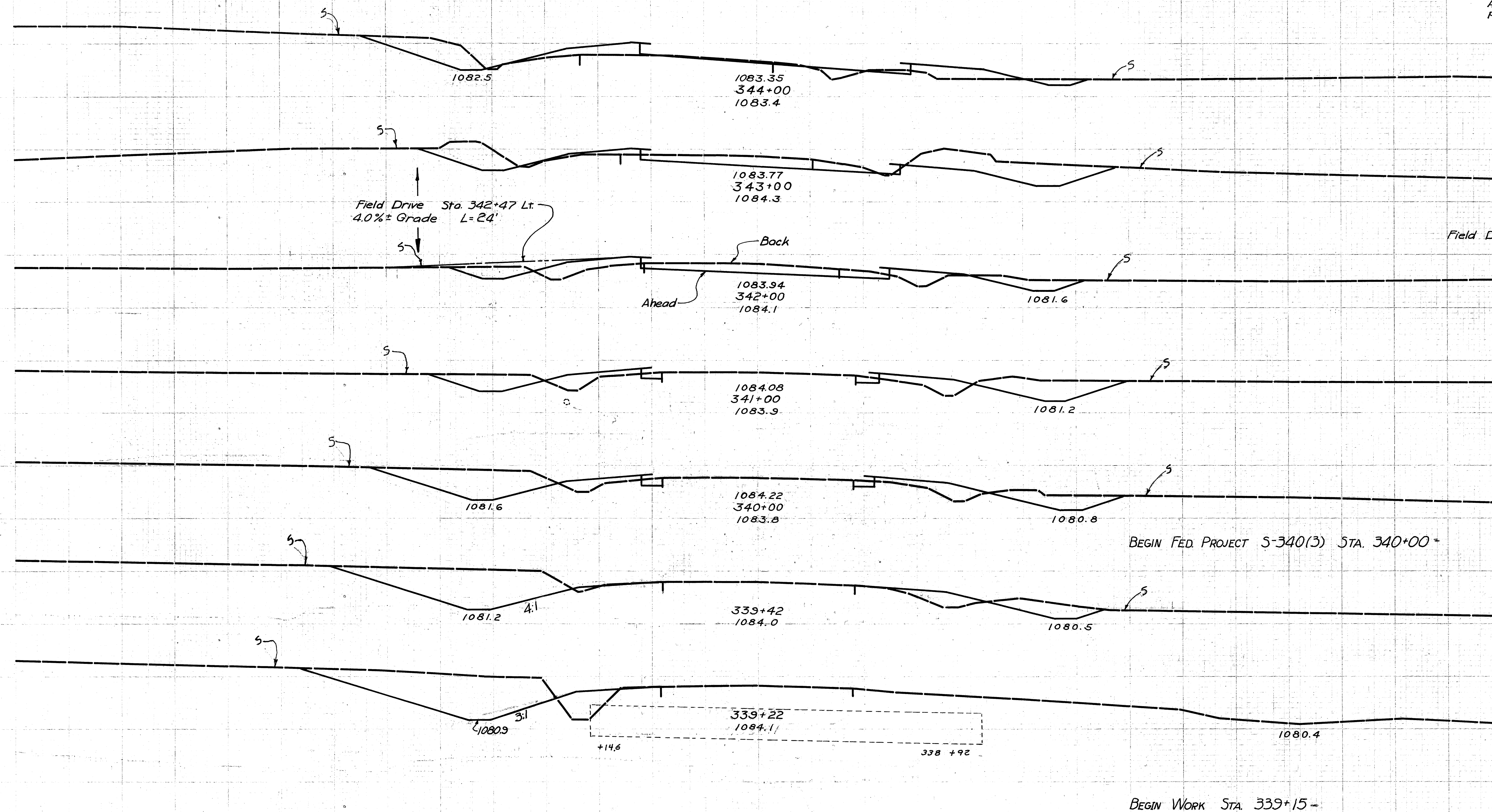
EXISTING BRIDGE DATA RIC-545-0675

TYPE : Low Steel Truss
 SKEW : 0°
 ALIGNMENT : 1° Rt. Rear ; 18° R.C. Fwd.
 CLEAR SPAN : Rt 37'3", Lt 36'2"
 CLEAR ROADWAY : 15'6 1/2"
 SUBSTRUCTURE : Rear : Stone, Concrete Gravity
 Forward : Stone
 LOADING : 3-3.6-46 (Legal Loads Reduced 55%)
 CONDITION : Fair

PROPOSED STRUCTURE RIC-545-0675

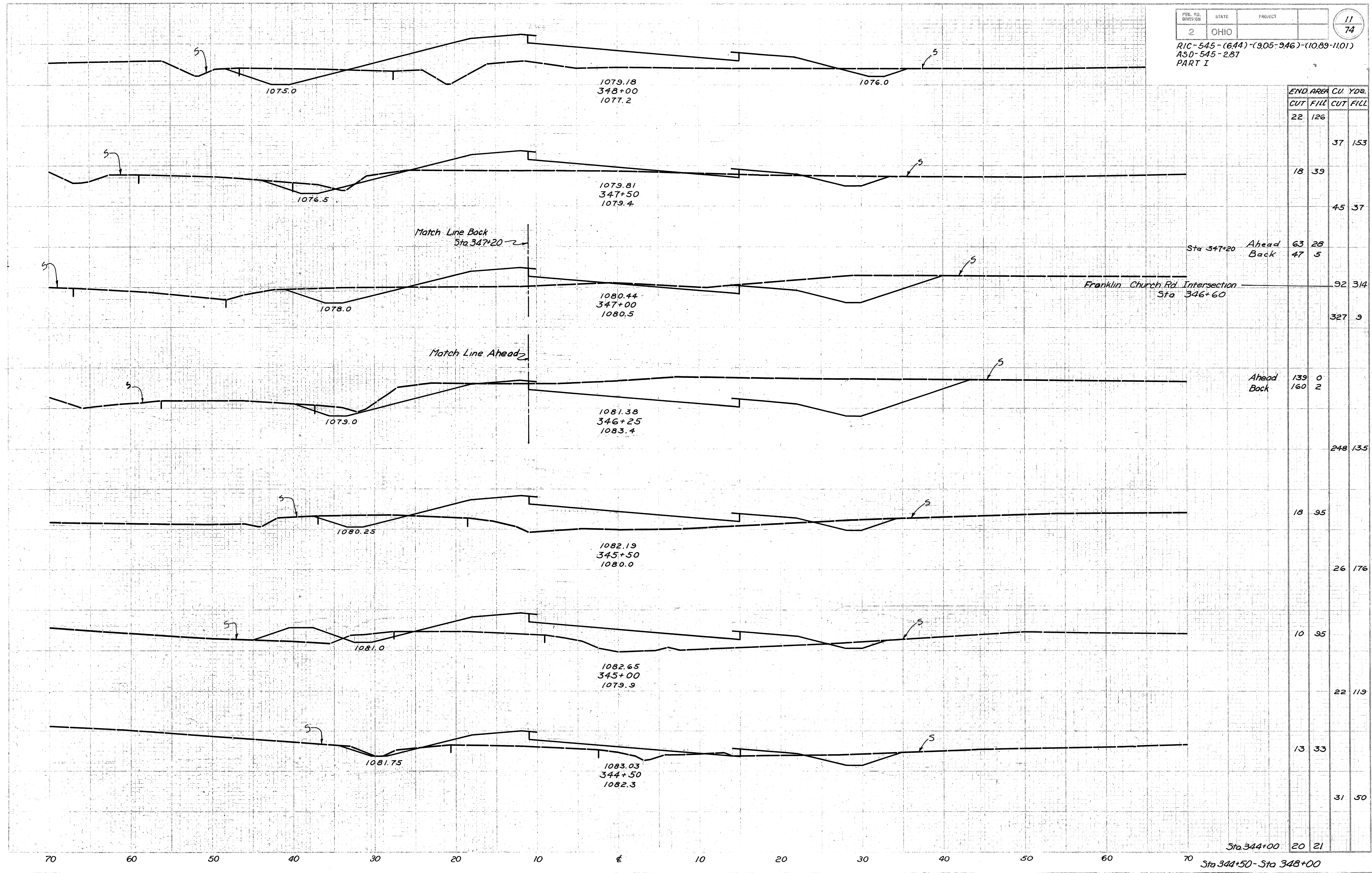
TYPE : Continuous Reinforced Concrete Slab
 with Capped Pile Substructure
 SPAN : 20'-25'-20' % Brgs.
 ROADWAY : 36' f/f Guard Rails
 LOAD FREQUENCY : CF=130 (57)
 SKEW : 30° R.F.
 WEARING SURFACE : 3/4" Monolithic Concrete
 APPROACH SLABS : AS-1-54 (25' Long)
 ALIGNMENT : Tangent

RIC-545-(644)-(9.05-946)-(10.89-11.01)
 ASD-545-2.87
 PART I

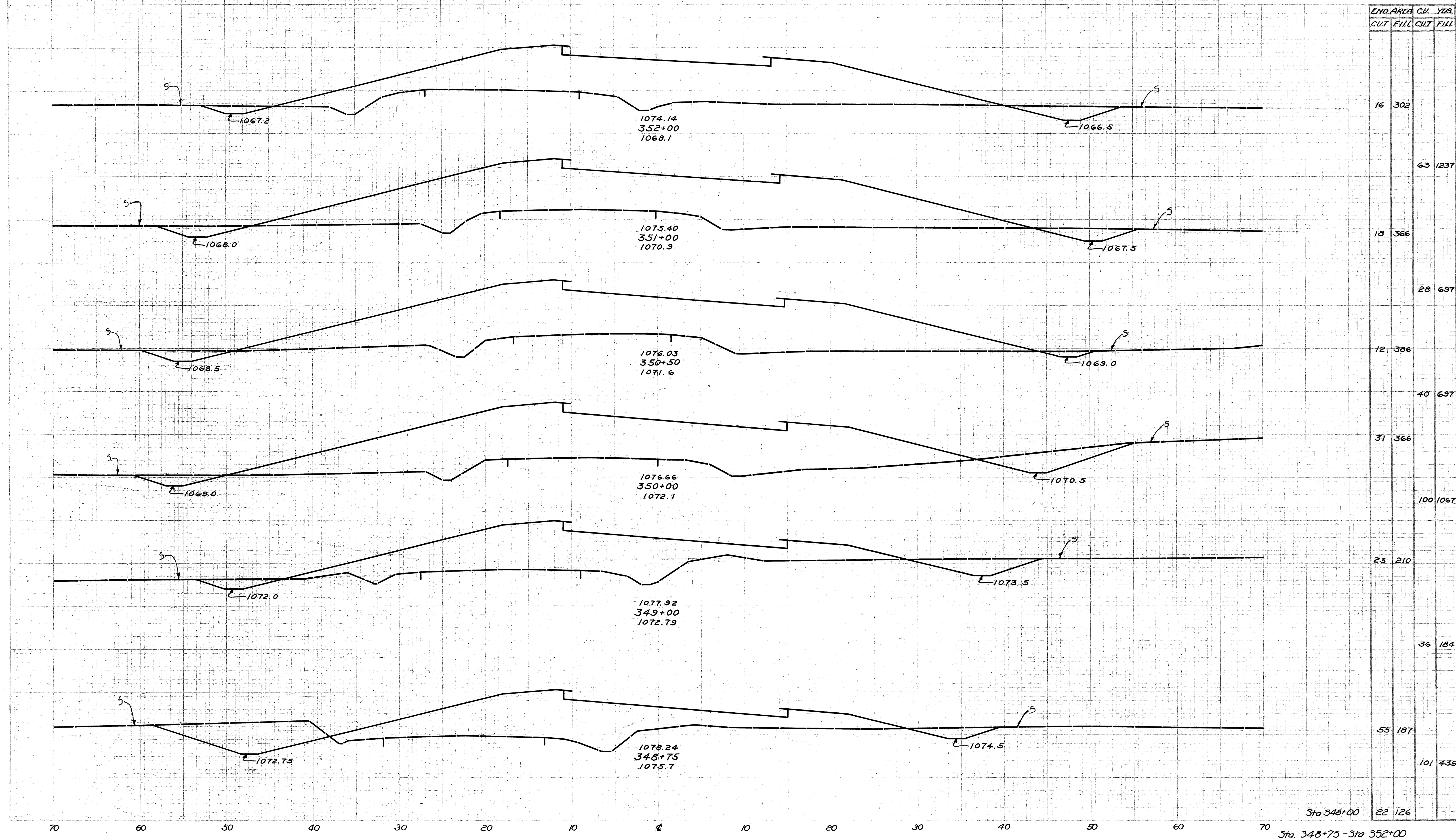


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
20	21		
		152	46
62	4		
		174	39
Ahead	Back	32	17
19	17		
		94	59
32	15		
		143	54
45	14		
		117	24
64	8		
		45	7
58	10		
		7	1
0	0		

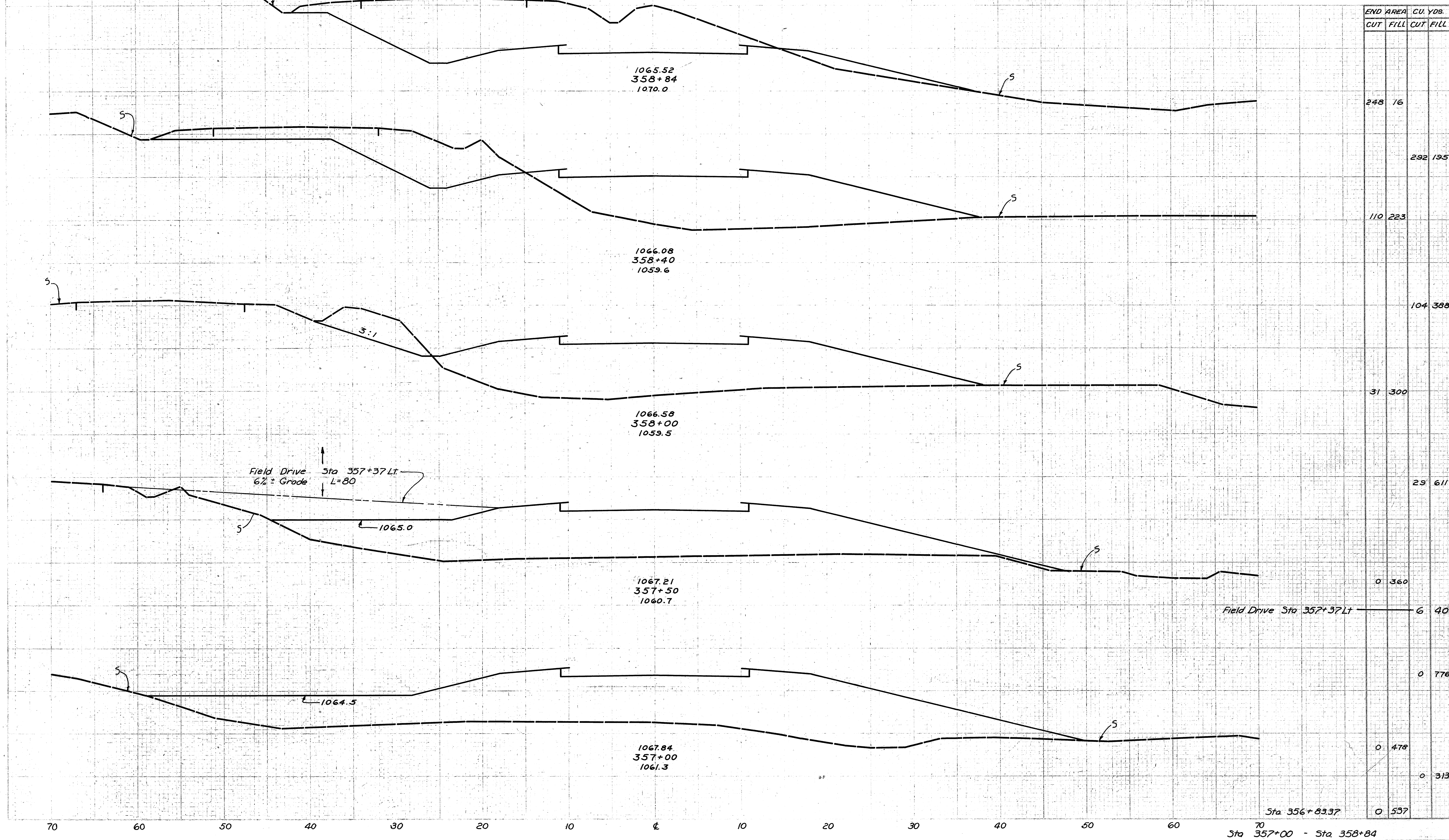
RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
PART I



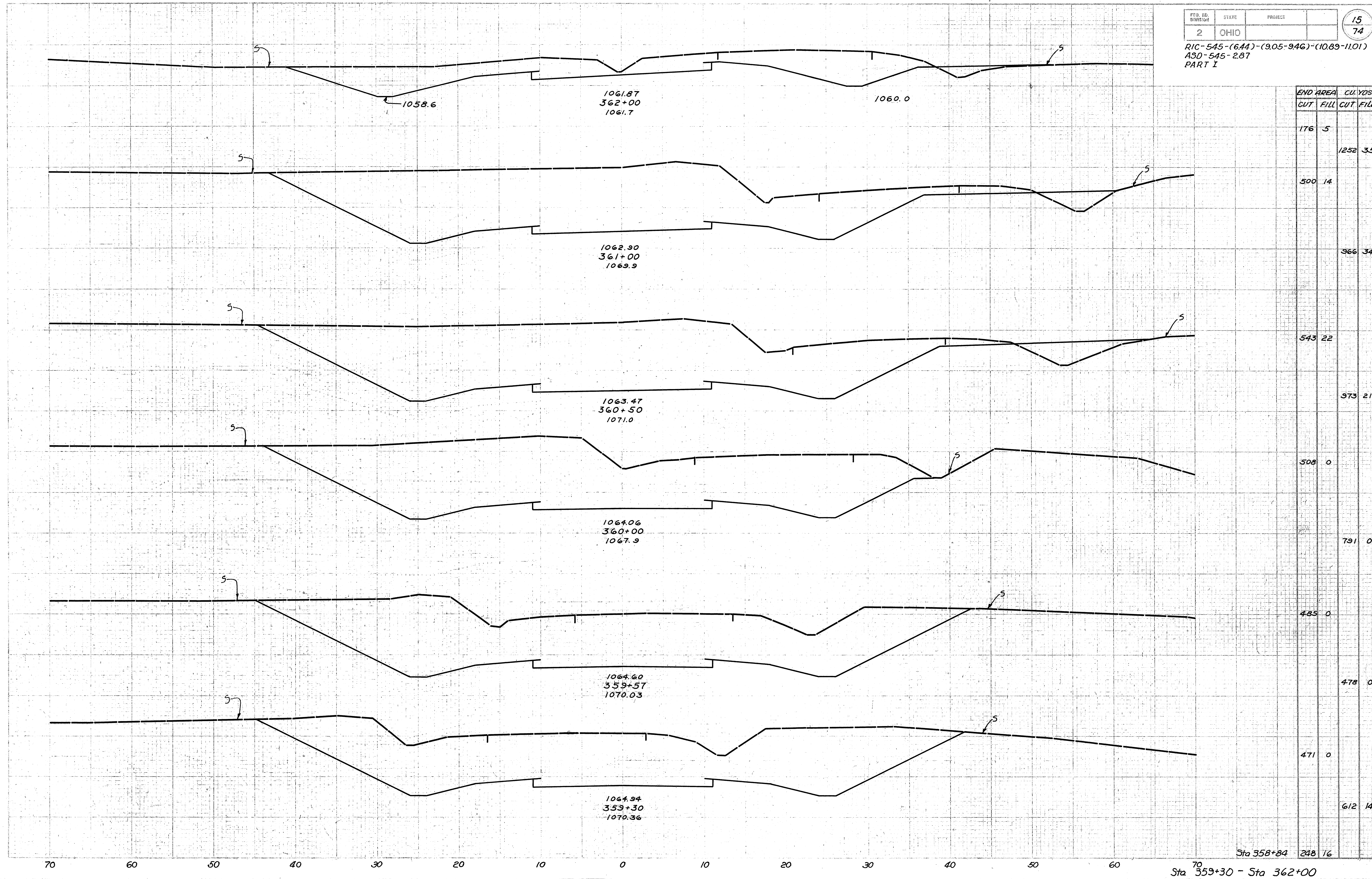
RIC-545-(644)-(905-946)-(1089-1101)
ASD-545-2.87
PART I



RIC-545-(644)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART I



RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
PART I



SUSPEND Work Sta. 368+85

PED. RD.
DIVISION

2

STATE

OHIO

PROJECT

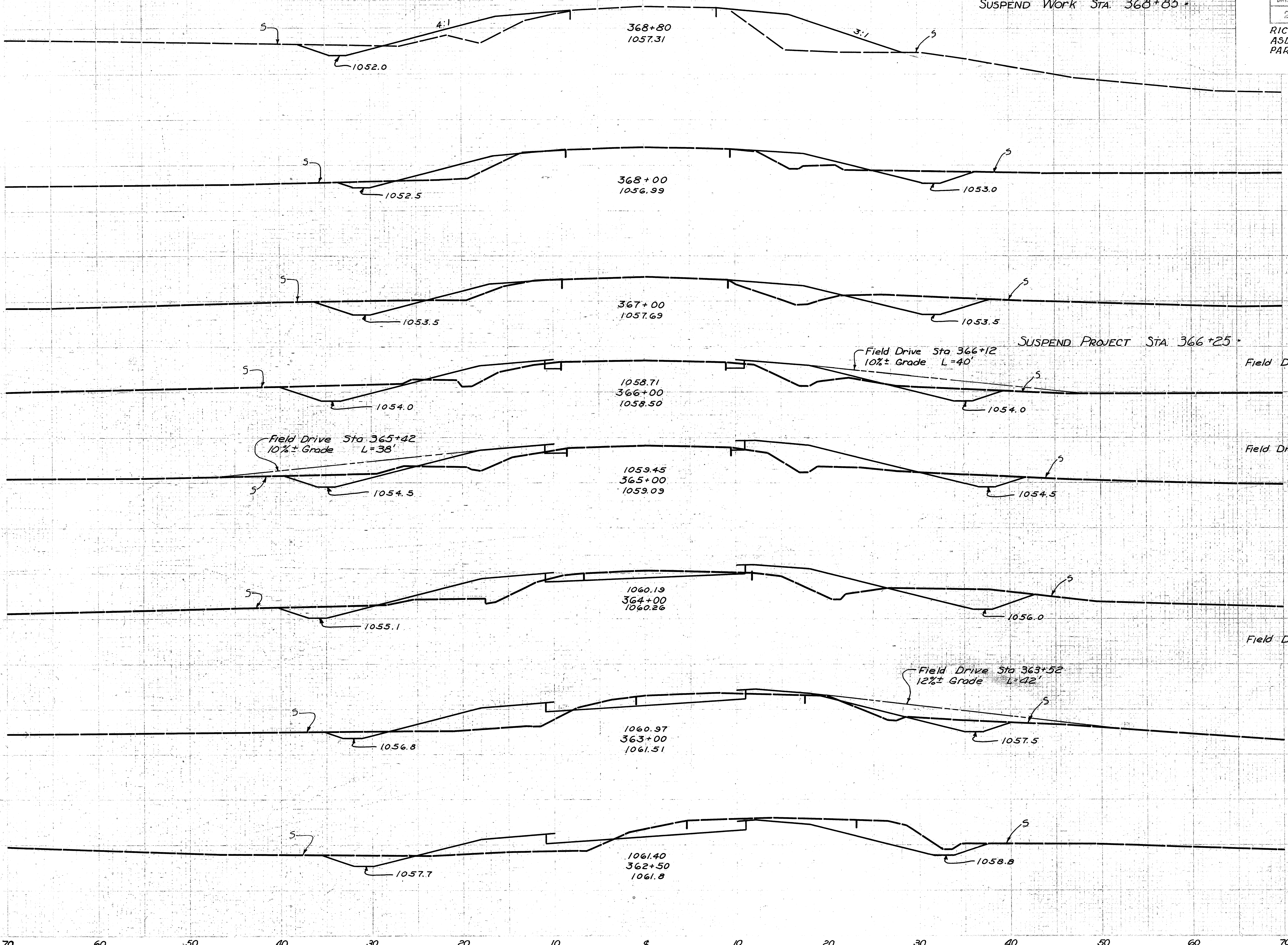
16

74

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)

ASD-545-2.87

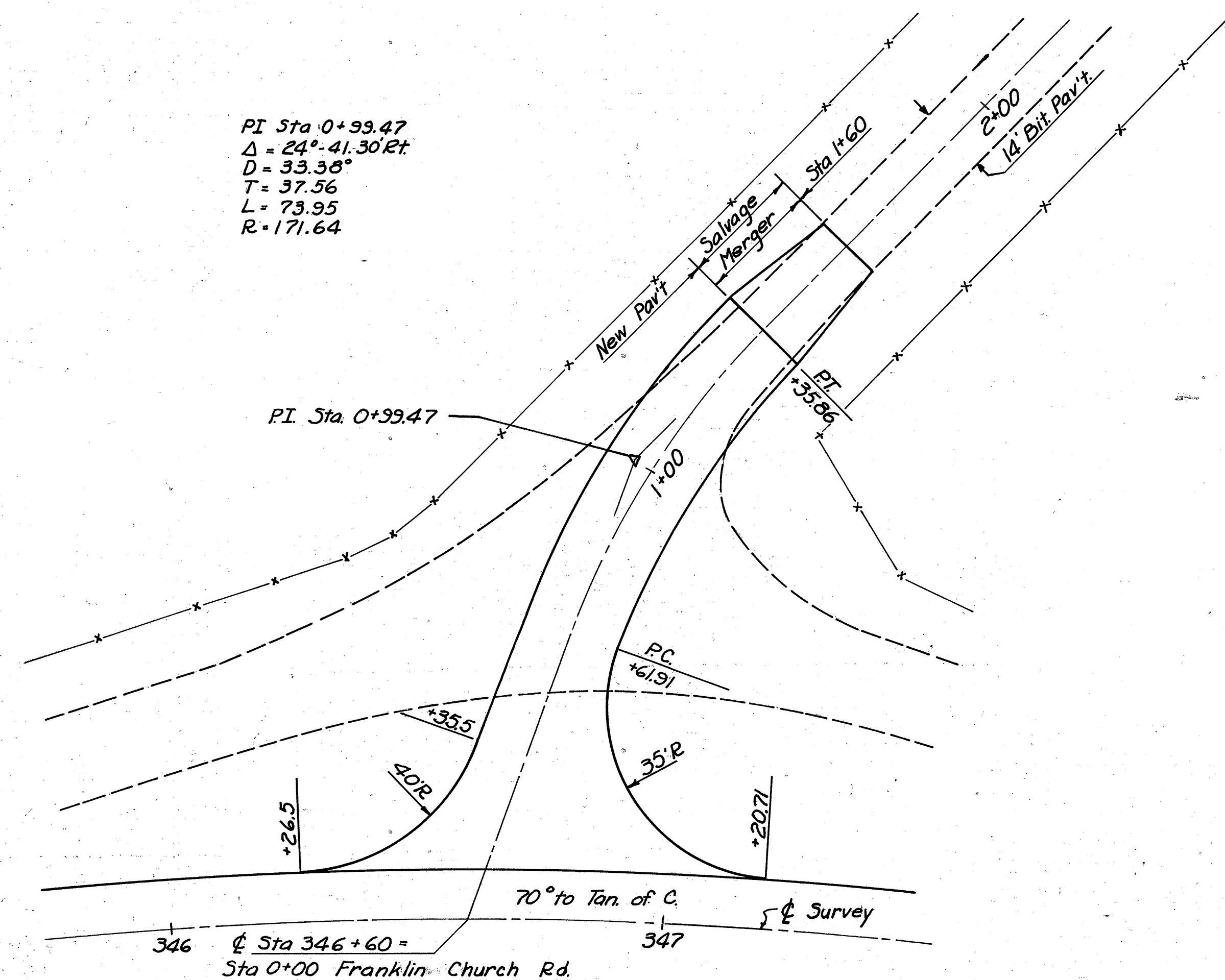
PART I



	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Sta 368+85	0	0		
			1	5
Sta 368+80	6	58	25	122
	11	24		
			76	80
	30	19		
			107	87
Field Drive Sta 366+12 Rt.			1	9
	28	28		
			85	133
Field Drive Sta 365+42 Lt.			1	10
	18	44		
			109	167
	41	46		
Field Drive Sta 363+52 Rt.			1	9
			126	154
	27	37		
			73	56
	52	23		
			211	26
Sta 362+00	176	5		

Sta 362+50 - Sta 368+80

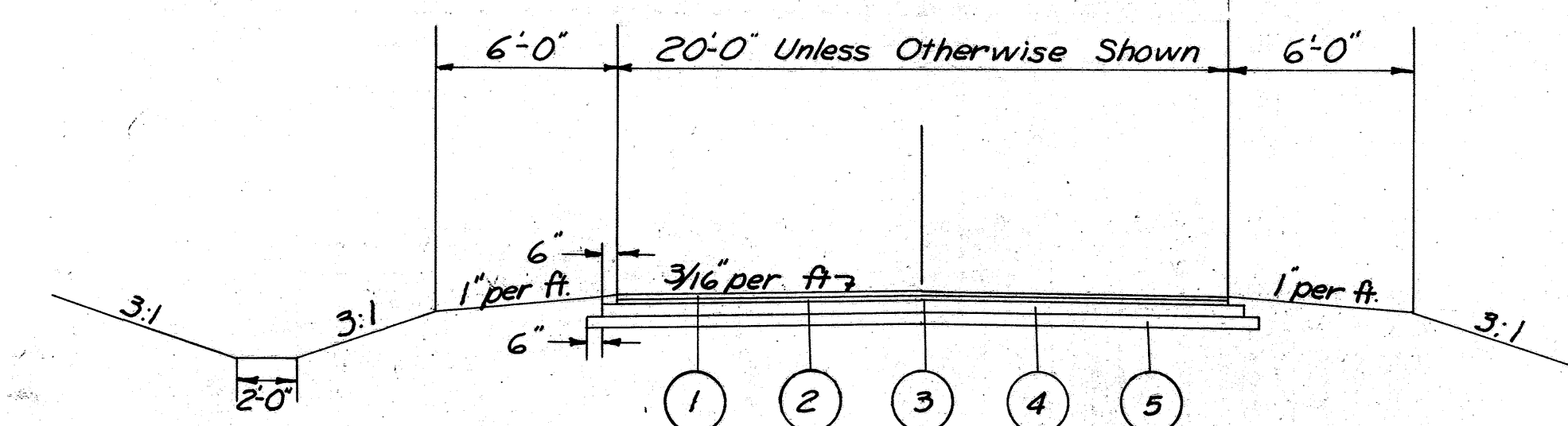
PI Sta 0+99.47
 $\Delta = 24^\circ 41' 30''$
 $D = 33.38'$
 $T = 37.56'$
 $L = 73.95'$
 $R = 171.64'$



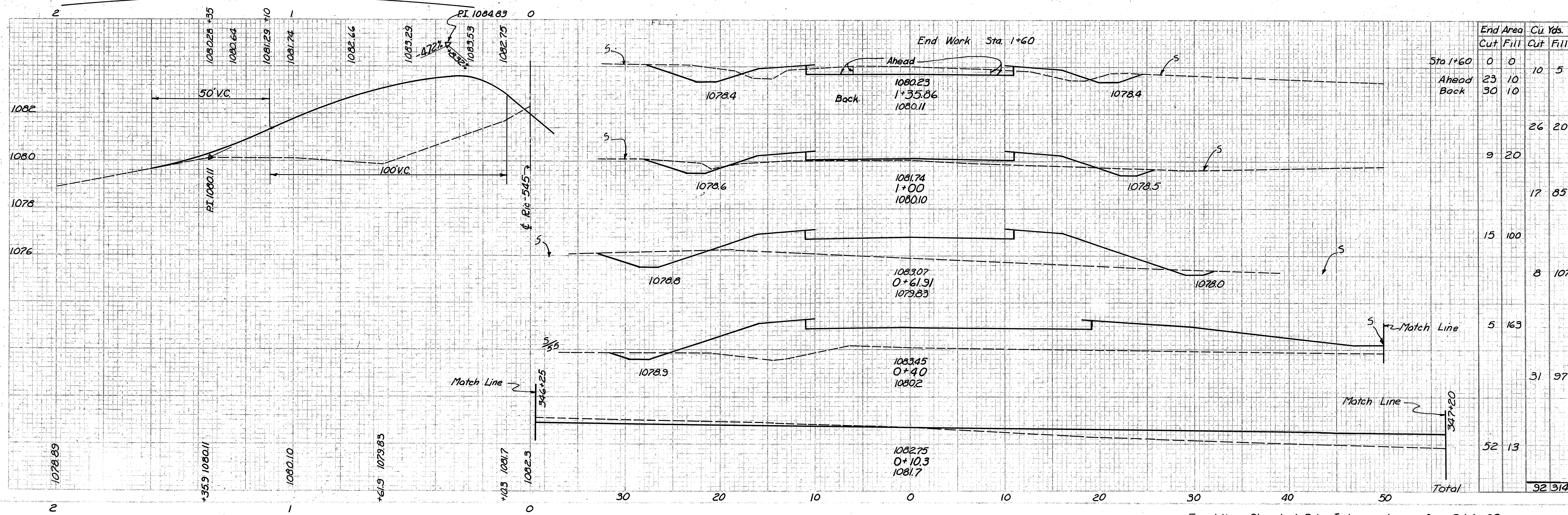
ESTIMATED QUANTITIES				
15.7	Cu.Yds	T-35	1 1/2" Asphaltic Conc. Surface Course	
15.1	Cu.Yds	B-35	1 1/2" Asphaltic Conc. Leveling Course	
124.0	Gal.	T-30	Bituminous Prime Coat	
51.7	Cu.Yds	B-119	5" Crushed Aggregate Base Course	
42.8	Cu.Yds	I-22	4" Subbase	

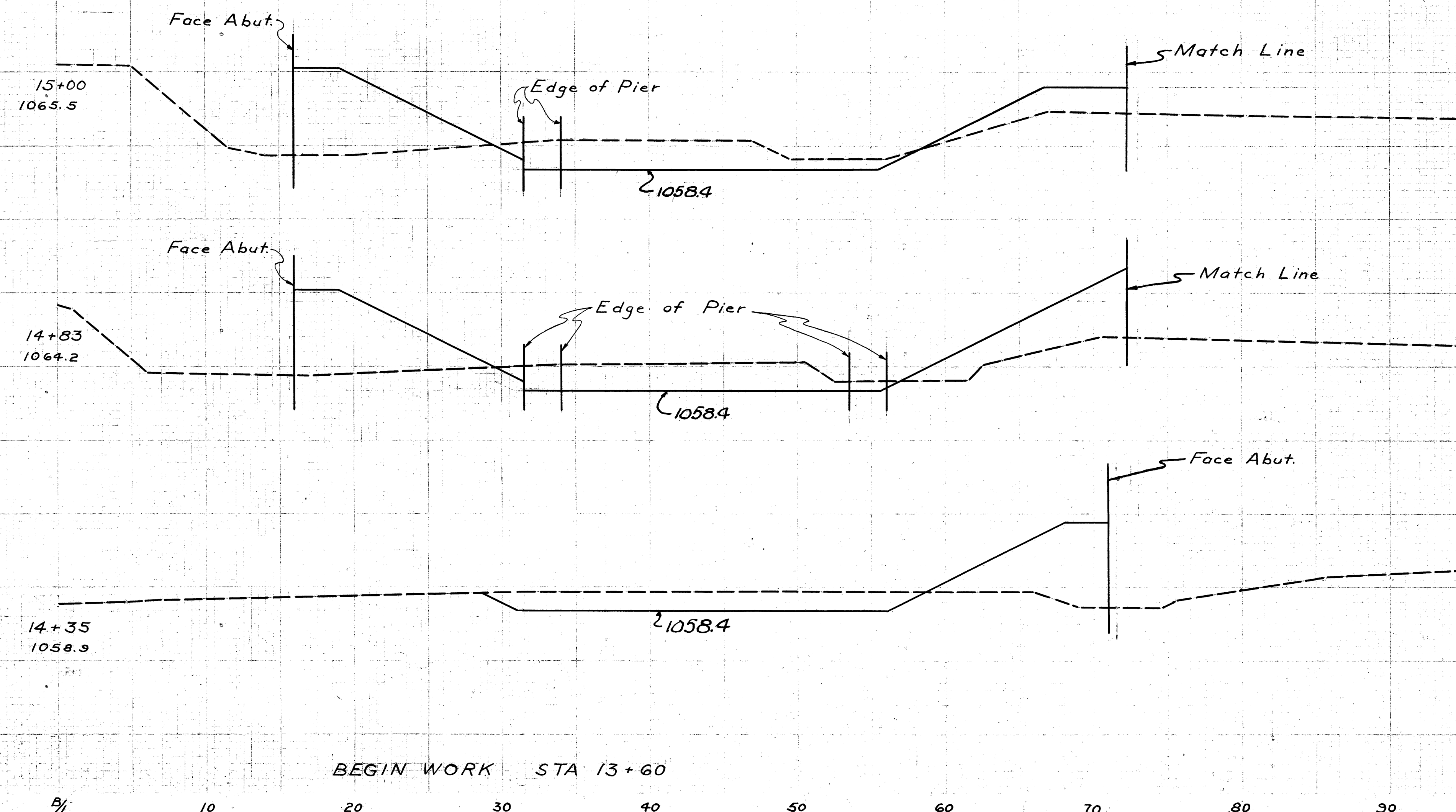
Note: Quantities for Merger & Feather Included in the above quantities.

TYPICAL SECTION



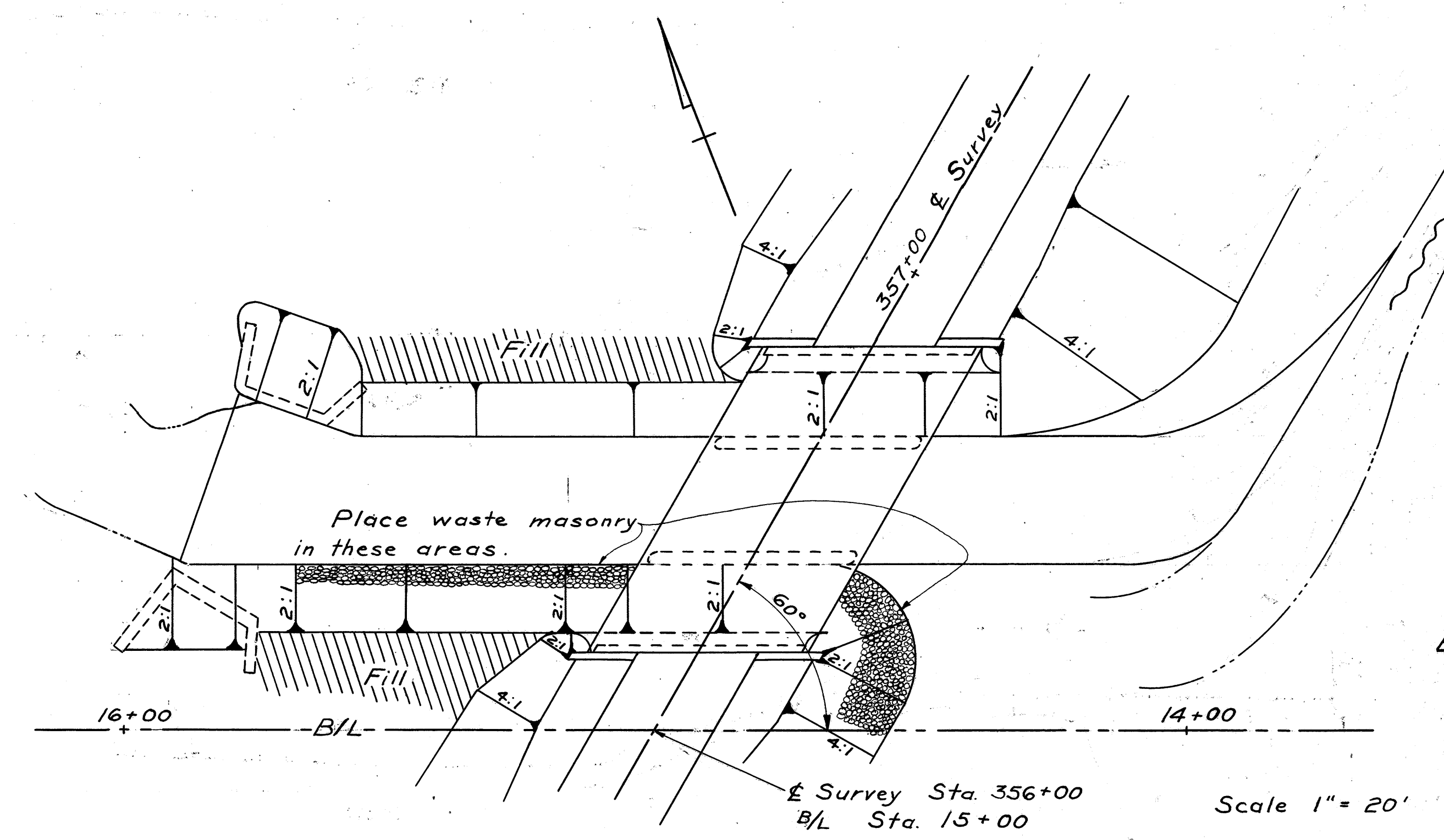
- 1 T-35 1 1/2" Asphaltic Conc. Surface Course
- 2 B-35 1 1/2" Asphaltic Conc. Leveling Course
- 3 T-30 Bituminous Prime Coat applied at rate of 0.35 Gal per Sq.Yd.
- 4 B-119 5" Crushed Aggregate Base Course
- 5 I-22 4" Subbase





End Area		Cu. Yds	
Cut	Fill	Cut	Fill
42	67		
		26	48
41	85		
		69	112
37	41		
		52	27
Zero Fill @ 14+00		0	0
13+60		0	0

Note: Channel Grade From
 Sta. 13+60 to Sta. 15+16 = 0%
 Sta. 15+16 to Sta. 15+90 = 1.0%



Estimated Quantities
 E-3 Channel Excavation 325 Cu. Yds (Carried to Sheet No. 80)
 Channel Embankment 329 Cu. Yds

Scale 1" = 20'

16+00
1067.24 END WORK

Match Line

15+90
1067.44

Match Line

Match Line

1069.1

15+80
1067.2

Match Line

Cross-hatched areas are removed under S-24

Match Line

1058.4

15+60
1064.7

Match Line

Match Line

1058.8

15+50
1065.2

Match Line

Match Line

1058.7

15+16
1065.7

Match Line

Match Line

1058.4

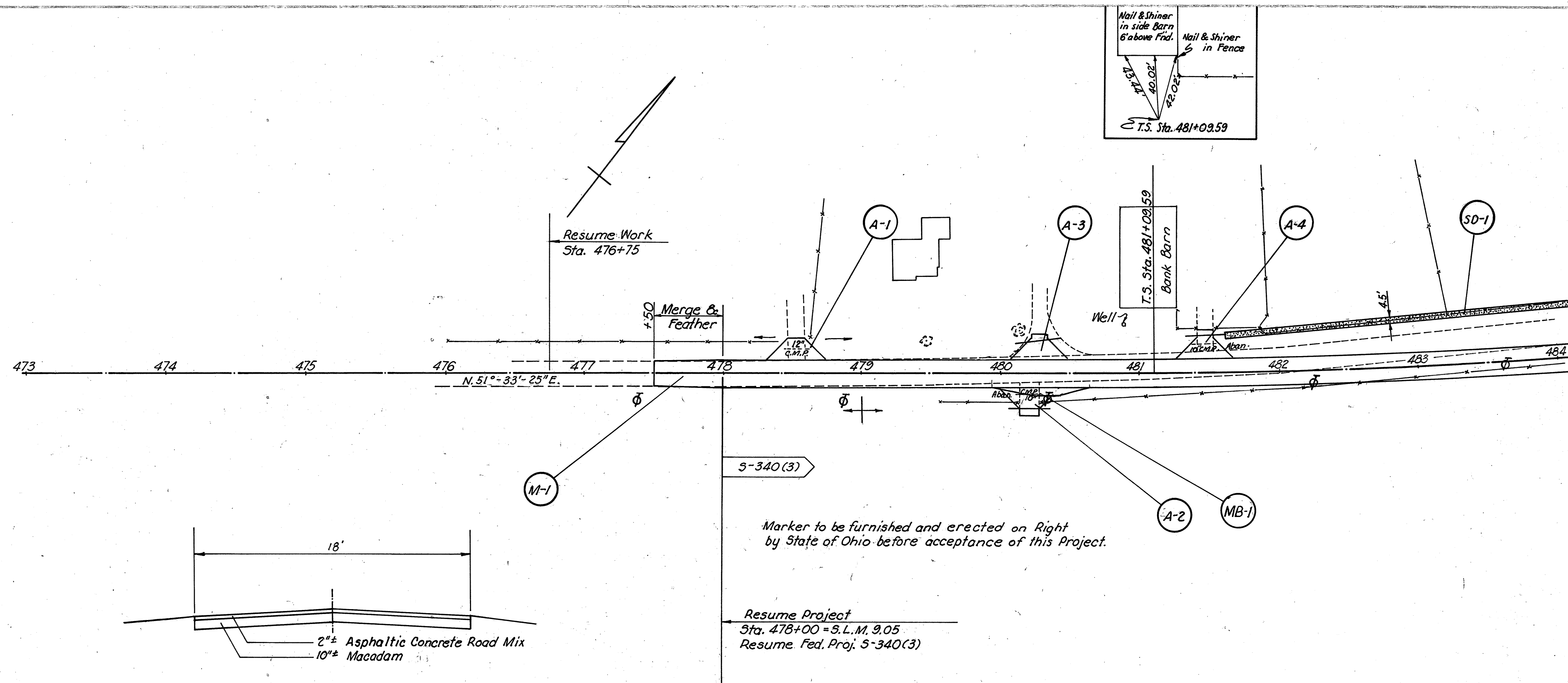
End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
0	0		
		14	0
75	0		
		24	1
57	6		
		47	19
69	44		
		19	16
34	44		
		49	68
41	61		
		25	38
42	67		

Sta 15+00

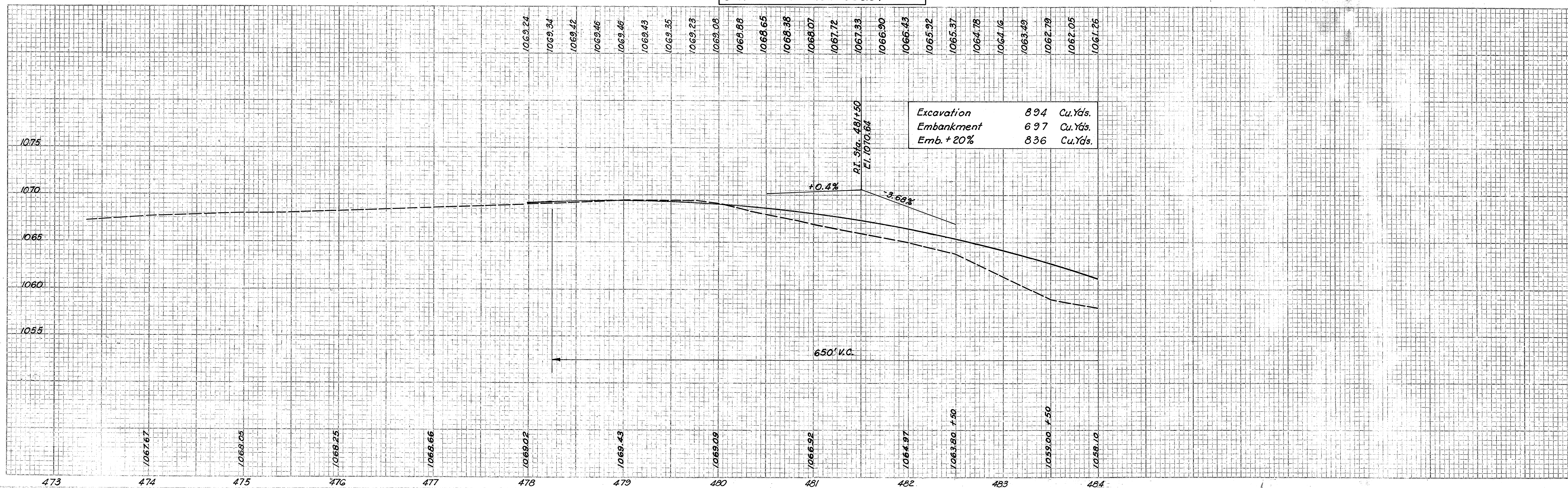
20 10 5/L 10 20 30 40 50 60 70 80 90 100

R/C-545-(644)-(9.05-9.46)-(10.69-11.01)
ASD-545-2.87
PART-II

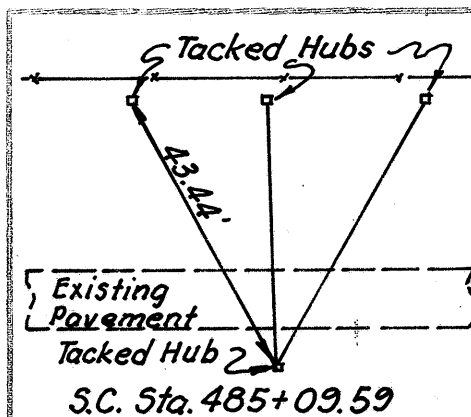
Ref. No.	Station	8-119 Crushed Aggregate Base Course Cu. Yds.	8-35 Asphaltic Concrete Surface Course Cu. Yds.	8-35 Asphaltic Concrete Leveling Course Cu. Yds.	I-1 Pipe for Driveways Lin. Ft.	I-22 Subbase Cu. Yds.	E-12 Pipe Removed 15" & Under Lin. Ft.	L-10 Sodding Sq. Yds.			
A-1	478+53 Lt. L=15'	7.5					18				
A-2	480+22 Rt. L=22'-W=14'	9.8			30						
A-3	480+28 Lt. L=18'	6.9	2.7		30						
A-4	481+48 Lt. L=20'	8.6			28						
MB-1	400+29 Rt.	5.3	2.0								
M-1	477+50 - 488+00	1.7	3.4	1.3		1.6					
SD-1	481+62 - 484+10 Lt.							124			
TOTALS		39.8	8.1	1.3	60	28	1.6	18	124		



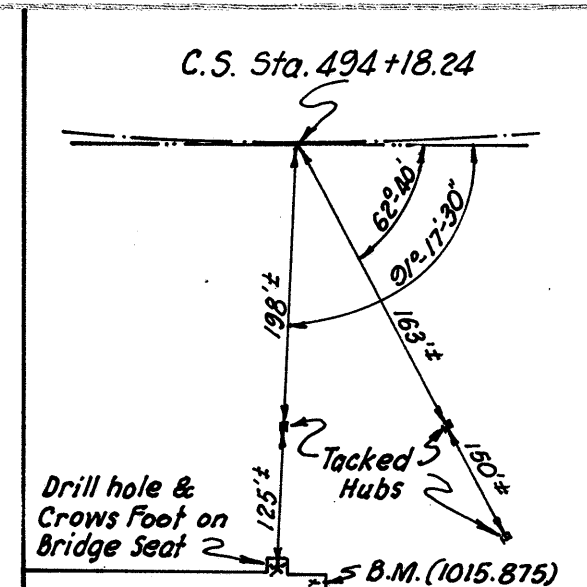
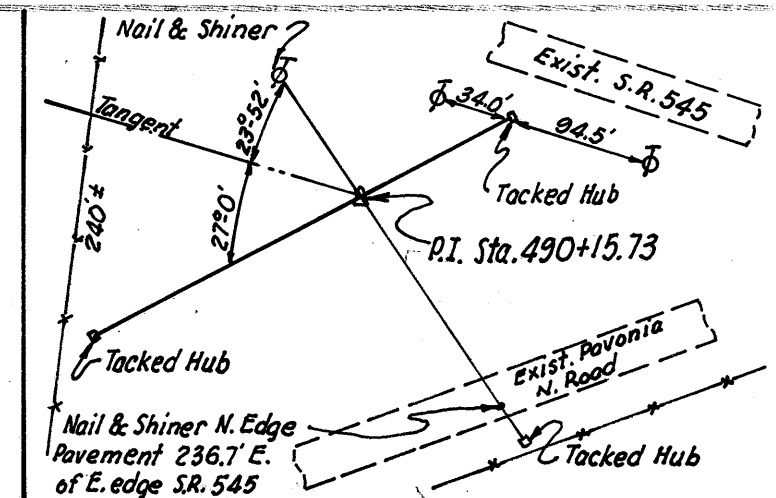
B.M. Chis. X in Conc. Form for
Door Well at S.E. Cor. Barn 44.5' Lt.
Sta. 480+89 Elev. 1068.07



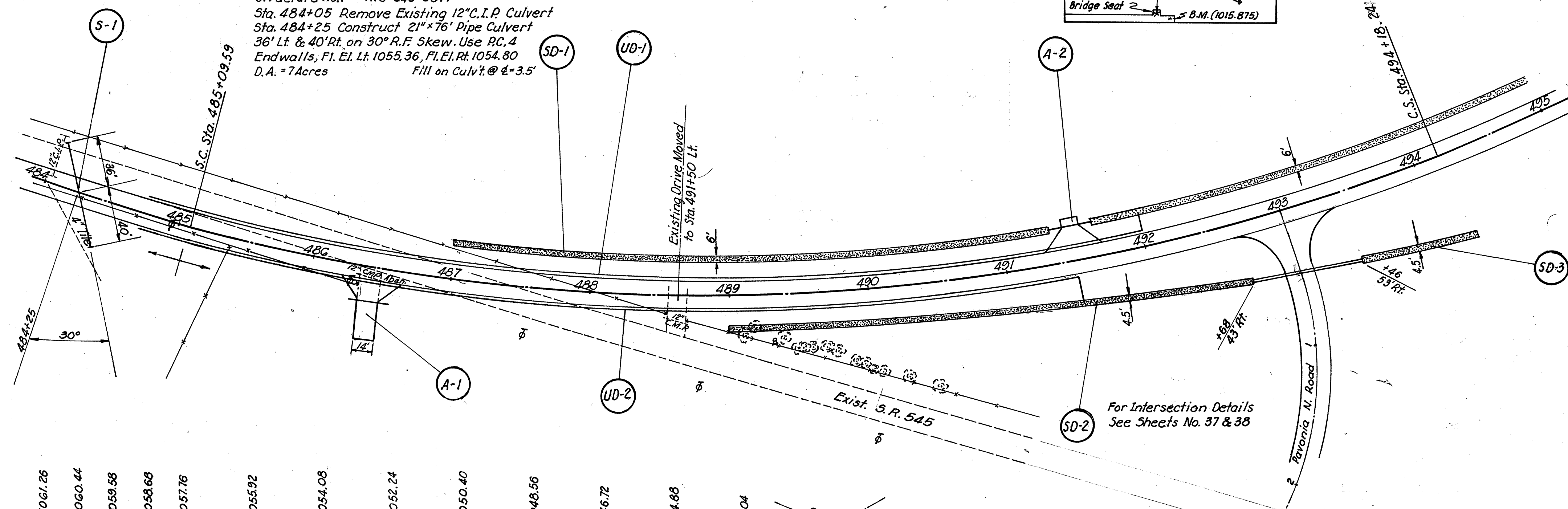
Excavation 894 Cu. Yds.
Embankment 697 Cu. Yds.
Emb. + 20% 836 Cu. Yds.



CURVE DATA
 P.I. Sta. 490+15.73
 $\Delta = 52^\circ 20' 45''$ Lt.
 $D_c = 4^\circ 0'$
 $L_s = 400.0'$
 $T_s = 906.14'$
 $E_s = 168.63'$
 $X_c = 399.22'$
 $L_c = 908.65'$
 $Y_c = 18.59'$
 $R_c = 1432.40'$



Structure No.1 RIC-545-0917
 Sta. 484+05 Remove Existing 12" C.I.P. Culvert
 Sta. 484+25 Construct 21" x 76" Pipe Culvert
 36' Lt. & 40' Rt. on 30° R.F. Skew. Use RC. 4
 Endwalls; Fl. El. Lt. 1055.36, Fl. El. Rt. 1054.80
 D.A. = 7 Acres Fill on Culvert @ 4.35'

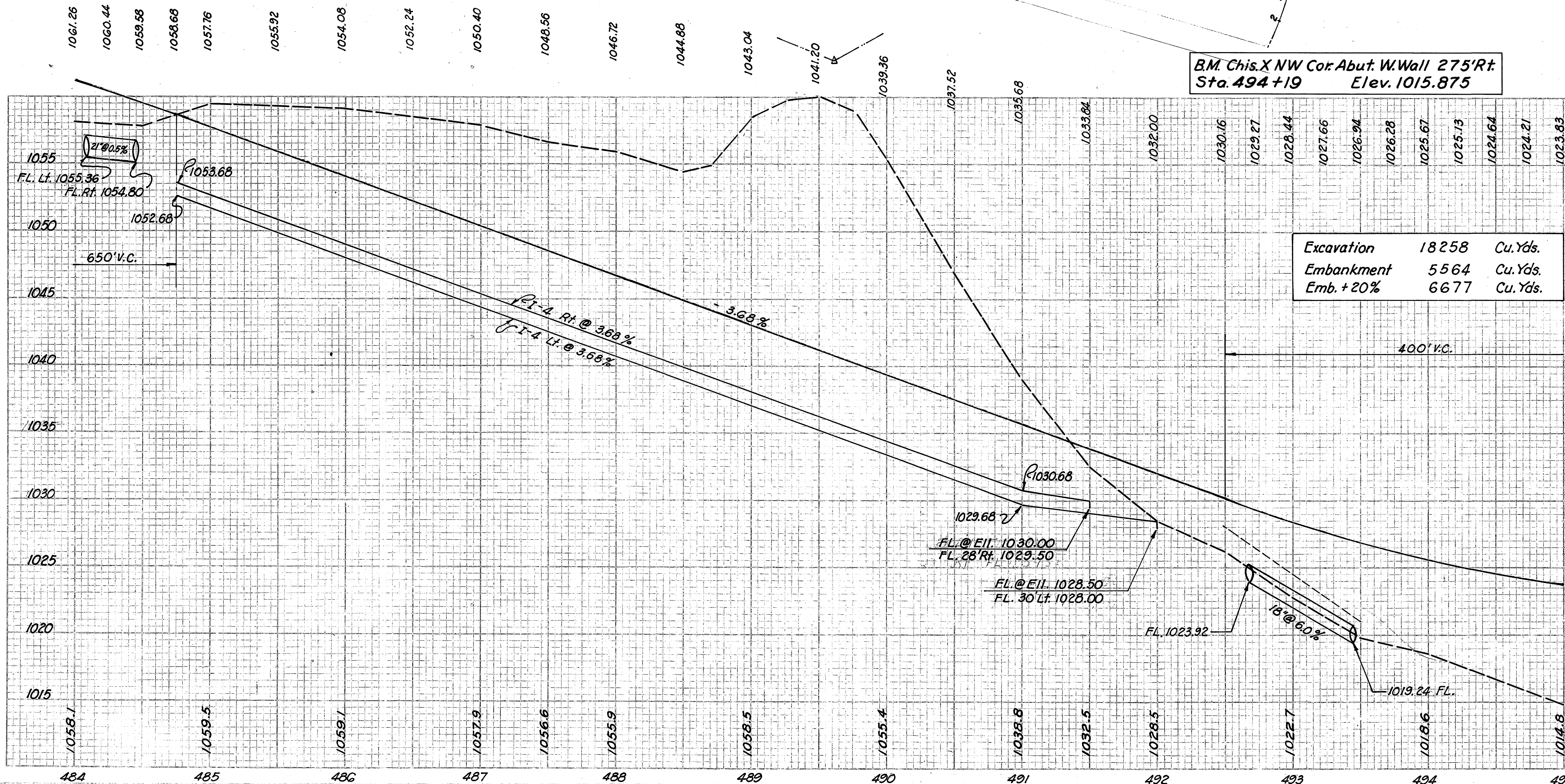


Ref. No.	Station	8-1/9 Crushed Aggregate Base Course Cu.Yds.	I-1 Pipe for Driveways Lin. Ft.	I-4 Pipe Under- drains Lin. Ft.	I-5 Pipe Specials Each	L-10 Sodding Sq.Yds.
A-1	486+42 Rt. L=42' W=14'	6	12"	15"	6"	
A-2	491+50 Lt. L=22'	9.9	30	30		
SD-1	487+00 - 495+00 Lt.					514
SD-2	489+00 - 492+68 Rt.				* 1	184
SD-3	493+46 - 494+25 Rt.				* 1	52
UD-1	484+75 - 492+00 Lt.			724	10	
UD-2	484+75 - 491+50 Rt.			674	20	
TOTALS		23.5	30	30	1390	30

* 6" Ells for Underdrains

Ref. No.	Station	E-2 Structure Excavation Cu.Yds.	E-3 Channel Excavation Cu.Yds.	S-27 Roadway Culverts Lin. Ft.	S-1 Concrete for Structure Class "E" Cu.Yds.	S-24 Structure Removal Lump
S-1	484+25	38	1	76	0.8	1
TOTALS		38	1	76	0.8	1

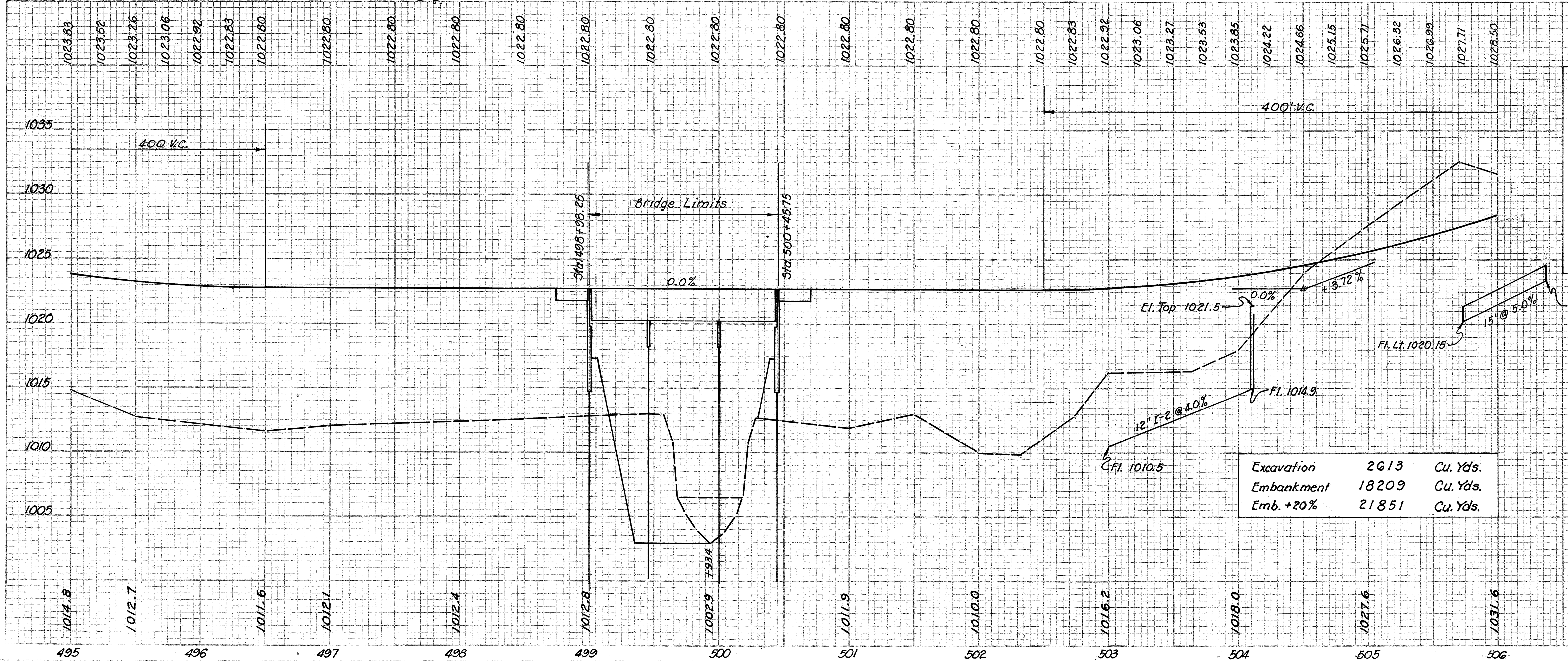
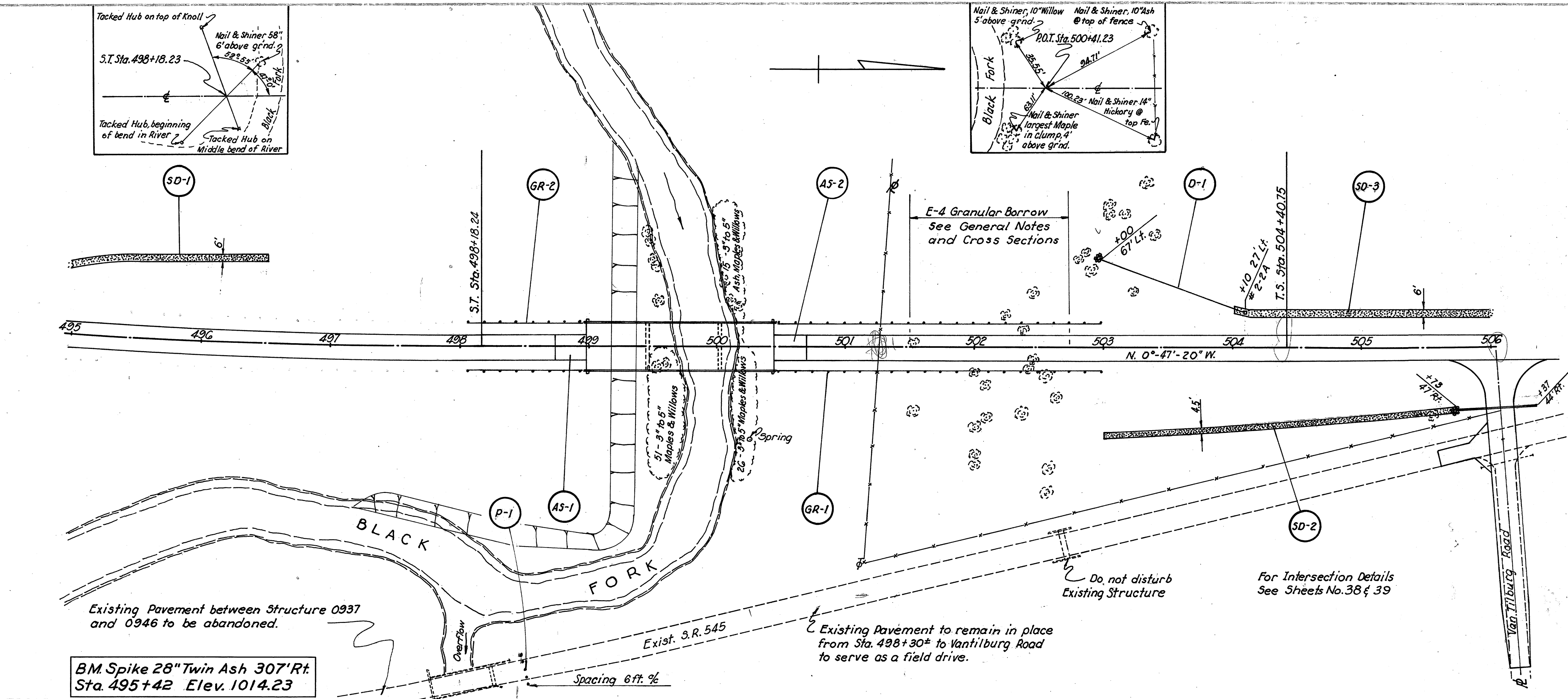
B.M. Chis. X NW Cor. Abut. W. Wall 275' Rt.
 Sta. 494+19 Elev. 1015.875



Excavation 18258 Cu.Yds.
 Embankment 5564 Cu.Yds.
 Emb. + 20% 6677 Cu.Yds.

Ref. No.	Station	I-7 Reinforced Concrete Approach Slabs Sq.Yds.	I-15 Guard Rail Steel Beam Type Deep Lin.Ft.	L-10 Sodding Sq.Yds.	I-2 Class "A" Storm Sewer Lin. Ft.	I-8 Catch Basin #2-2A Each	I-10 Dumped Rock Channel Protection Cu.Yds.	I-15 Guard Rail Posts Only Each
AS-1	498+73.25 to 498+98.25	55.6						
AS-2	500+45.75 to 500+70.75	55.6						
GR-1	498+08.40 to 502+98.40 Rt.		342.50					
GR-2	498+08.40 to 502+98.40 Lt.		342.50					
SD-1	495+00 to 496+50	Lt.		100				
SD-2	503+00 to 505+73	Rt.		137				
SD-3	504+00 to 506+00	Lt.		133				
D-1	503+00 to 504+10	Lt.		118		1	* 0.7	
P-1	498+50	Rt.						5
TOTALS		111.2	685.00	370	118	1	* 1.4	5

* 2' Thick, 2 1/2' Long, 3' Wide at pipe outlet



EXISTING OVERFLOW BRIDGE DATA

RIC-545-0946

TYPE: Low Steel Truss

SKEW: 0°

ALIGNMENT: 1° L.C.

CLEAR SPAN: 44'-9"

CLEAR ROADWAY: 12'-8"

SUBSTRUCTURE: Stone

LOADING: 5-9, 5-11 FB, 5-13.2 Joists

CONDITION: Fair

EXISTING BRIDGE DATA

RIC-545-0937

TYPE: Low Steel Truss

SKEW: 0°

ALIGNMENT: 21° L.F.

CLEAR SPAN: Rt. 59'-0" Lt. 58'-8"

CLEAR ROADWAY: 12'-6 1/2"

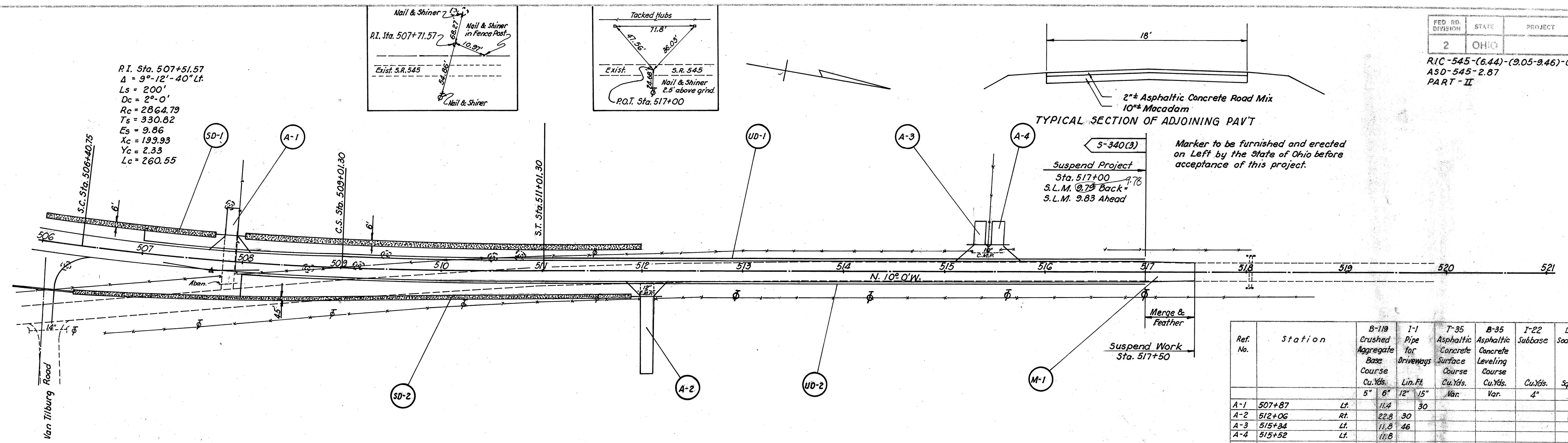
SUBSTRUCTURE: Conc. Gravity

LOADING: 5-12

CONDITION: Extremely Critical

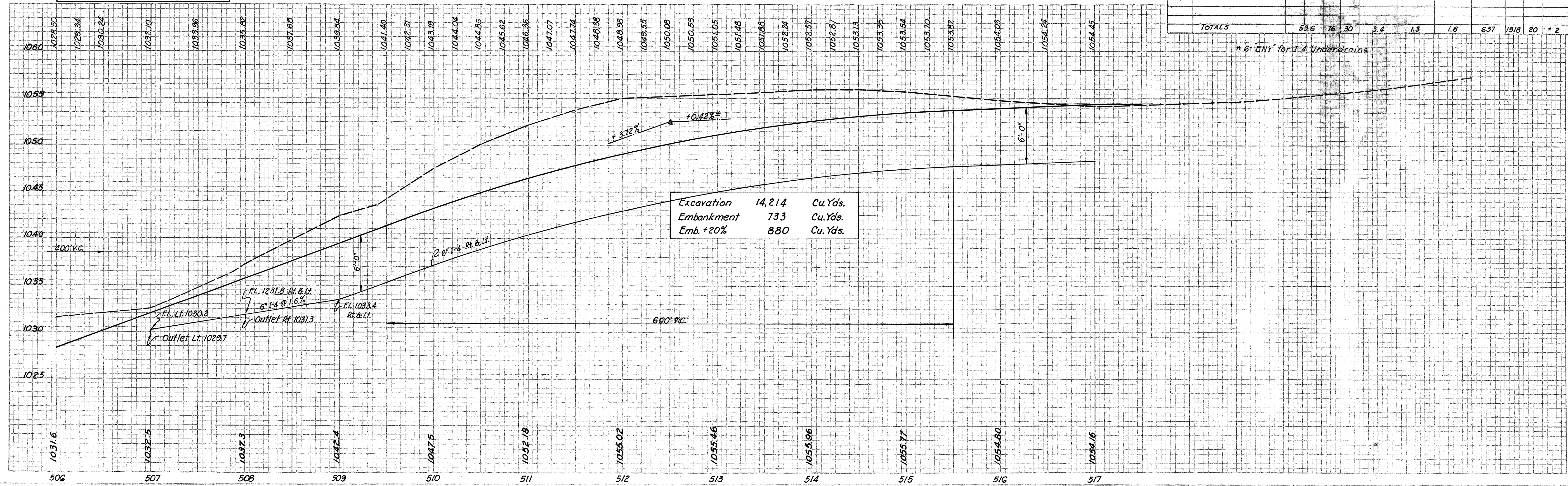
PROPOSED STRUCTURE
 RIC-545-0945
 TYPE: Continuous Steel Beam with reinf. conc. deck and capped pile substr.
 SPANS: 44'-55'-44' % Brigs.
 ROADWAY: 36'-0" % Guard Rails
 LOAD FREQUENCY: CF=130 (57)
 SKEW: None
 WEARING SURFACE: 3/4" Monolithic Concrete
 APPROACH SLAB: AS-1-54 (25' Long)
 ALIGNMENT: Tangent

Excavation	2613	Cu. Yds.
Embankment	18209	Cu. Yds.
Emb. +20%	21851	Cu. Yds.

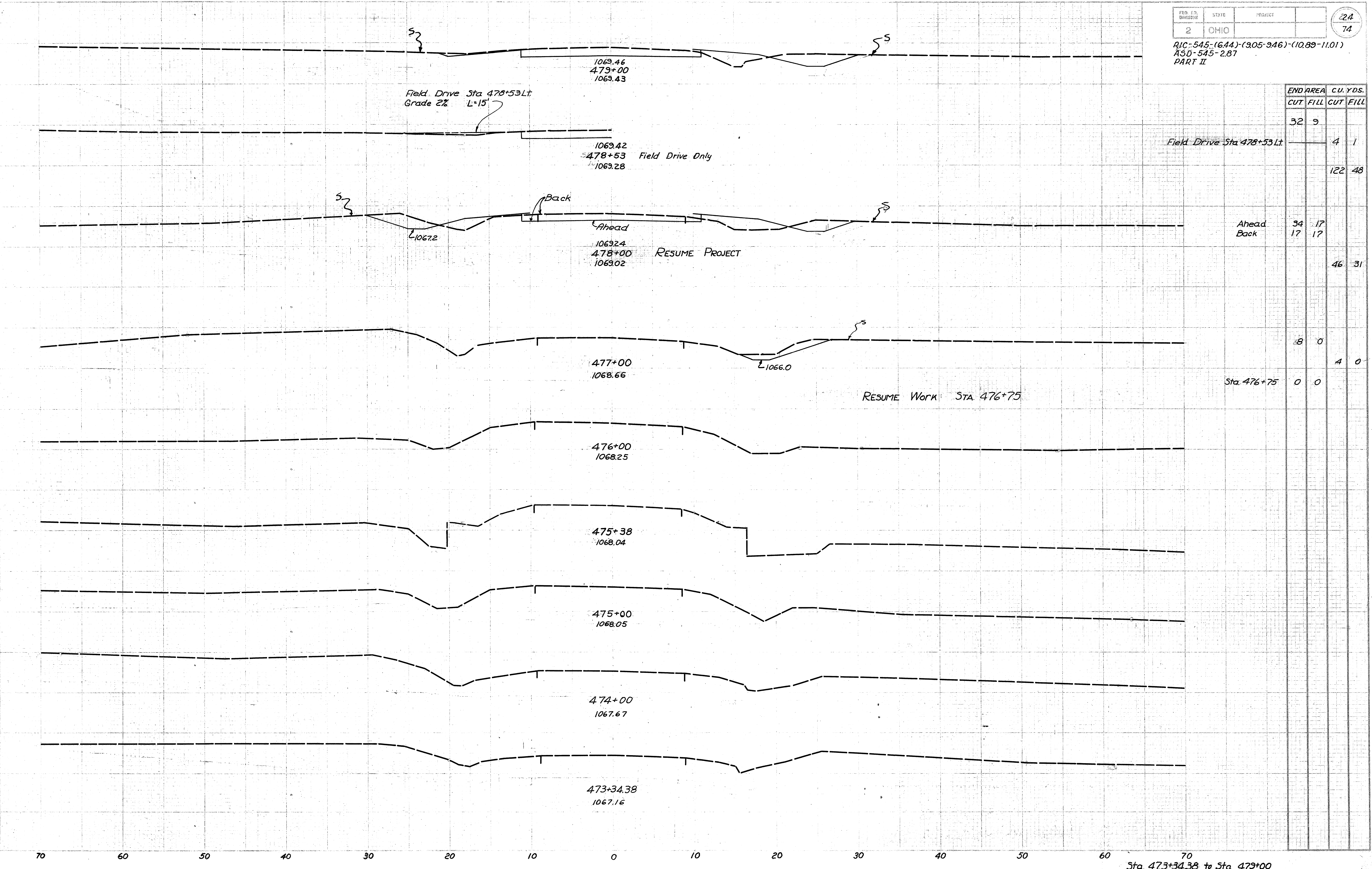


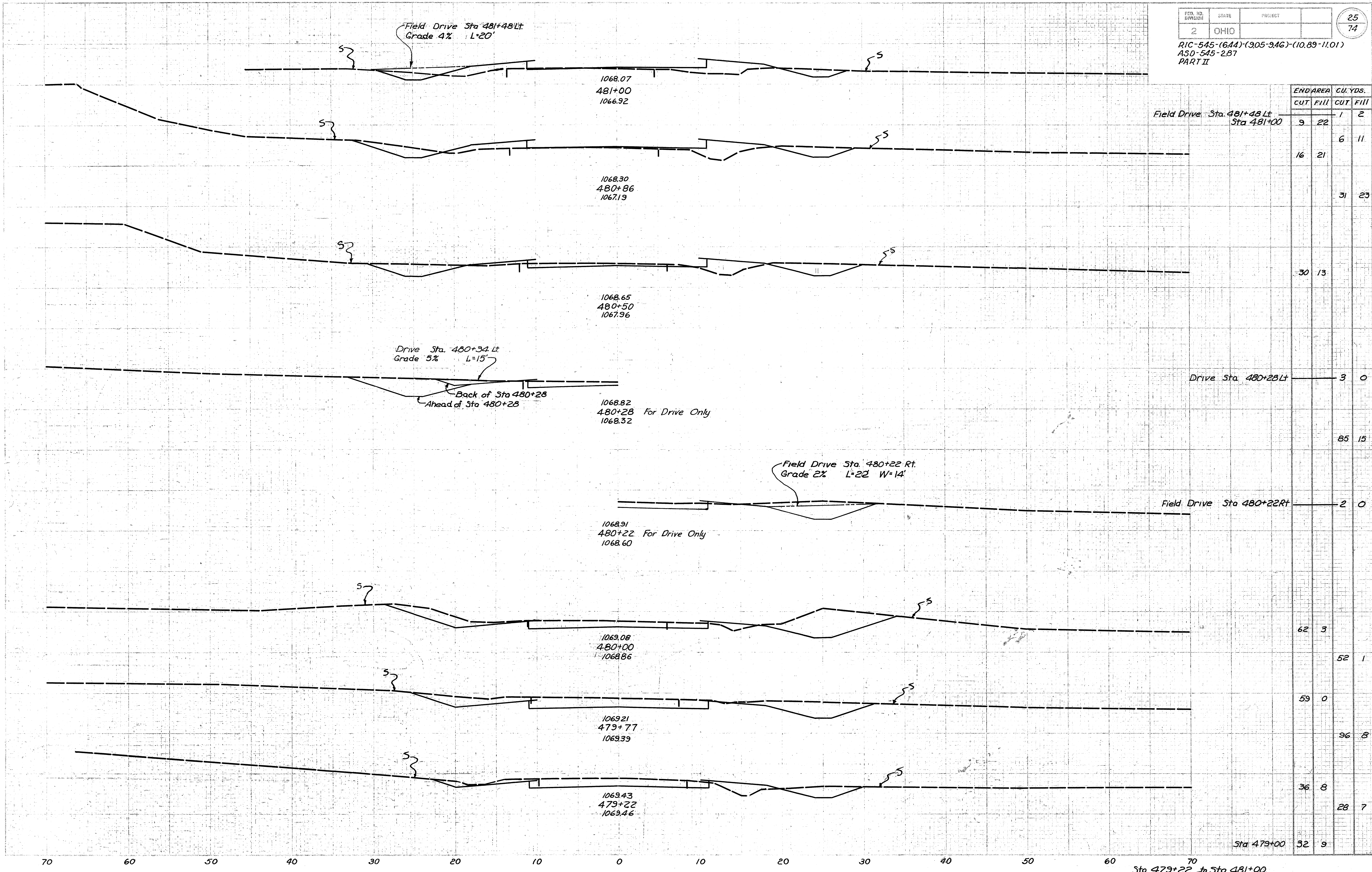
Ref. No.	Station	B-119 Crushed Aggregate Base Course		I-1 Pipe for Driveways		T-35 Asphaltic Concrete Surface Course	B-35 Asphaltic Concrete Leveling Course	I-22 Subbase	L-10 Sodding	I-4 Pipe Underdrains		I-5 Pipe Specials
		Cu.Yds.	5' 6'	12' 15'	Lin.Ft.	Cu.Yds.	Cu.Yds.	Cu.Yds.	Sq.Yds.	Lin.Ft.	Outlet	Each
A-1	507+87	Lt.		11.4	30							
A-2	512+06	Rt.		22.8	30							
A-3	515+34	Lt.		11.8	46							
A-4	515+52	Lt.		11.8								
M-1	517+00 to 517+50		1.8			3.4	1.3	1.6				
SD-1	506+00 to 512+00	Lt.										
SD-2	506+37 to 511+91	Rt.							380			
									277			
UD-1	507+00 to 517+00	Lt.								1008	10	* 1
UD-2	508+00 to 517+00	Rt.								210	10	* 1
TOTALS			59.6	76	30	3.4	1.3	1.6	6.57	1918	20	* 2

B.M. Spike in 8" Elm 132' Rt.
 Sta. 506+68 Elev. 1021.705



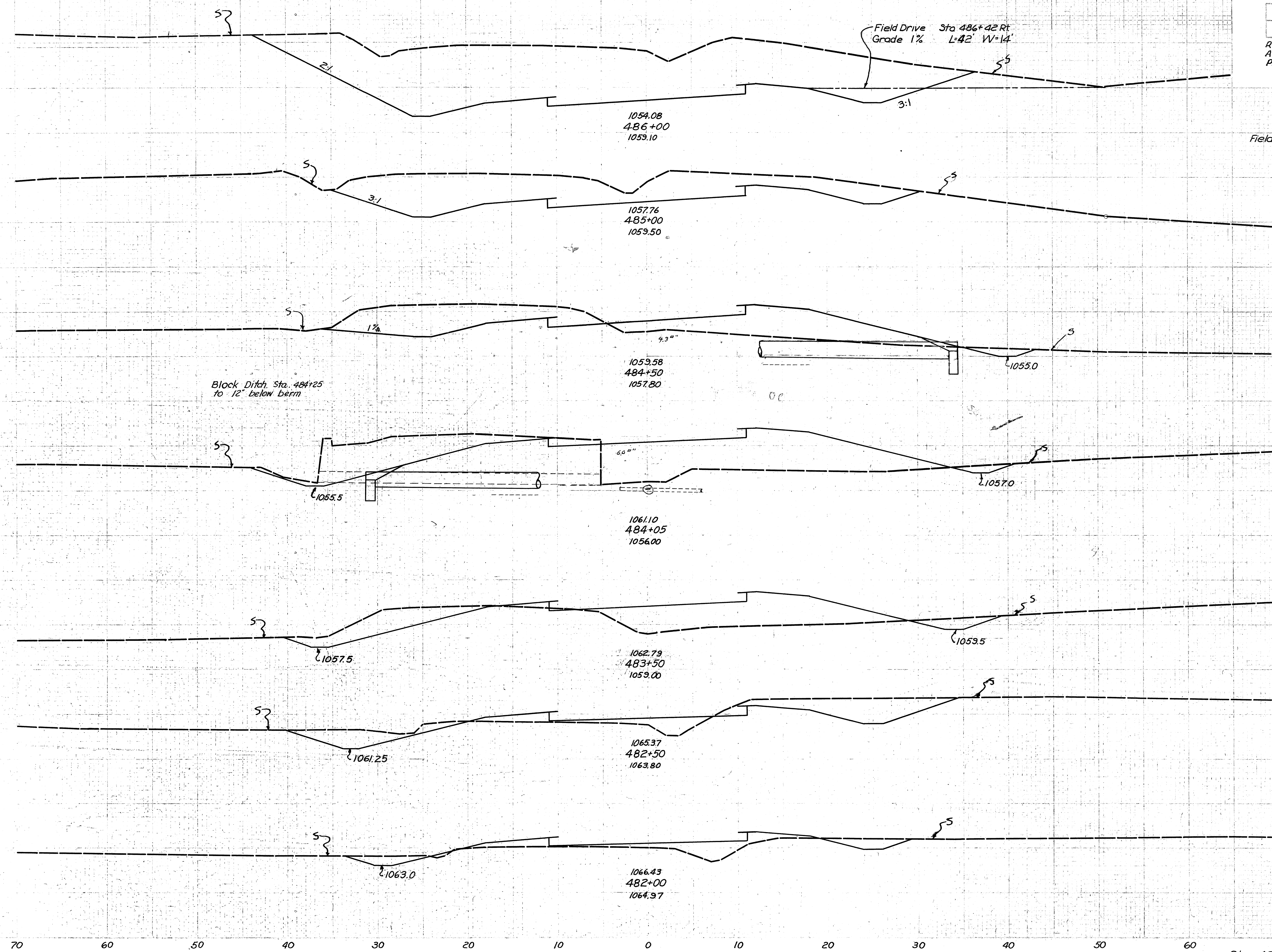
R/C-545-(6.44)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART II





END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
9	22	1	2
16	21	6	11
		31	23
30	13		
		3	0
		85	15
		2	0
62	3		
		52	1
59	0		
		96	8
36	8		
		28	7
32	9		

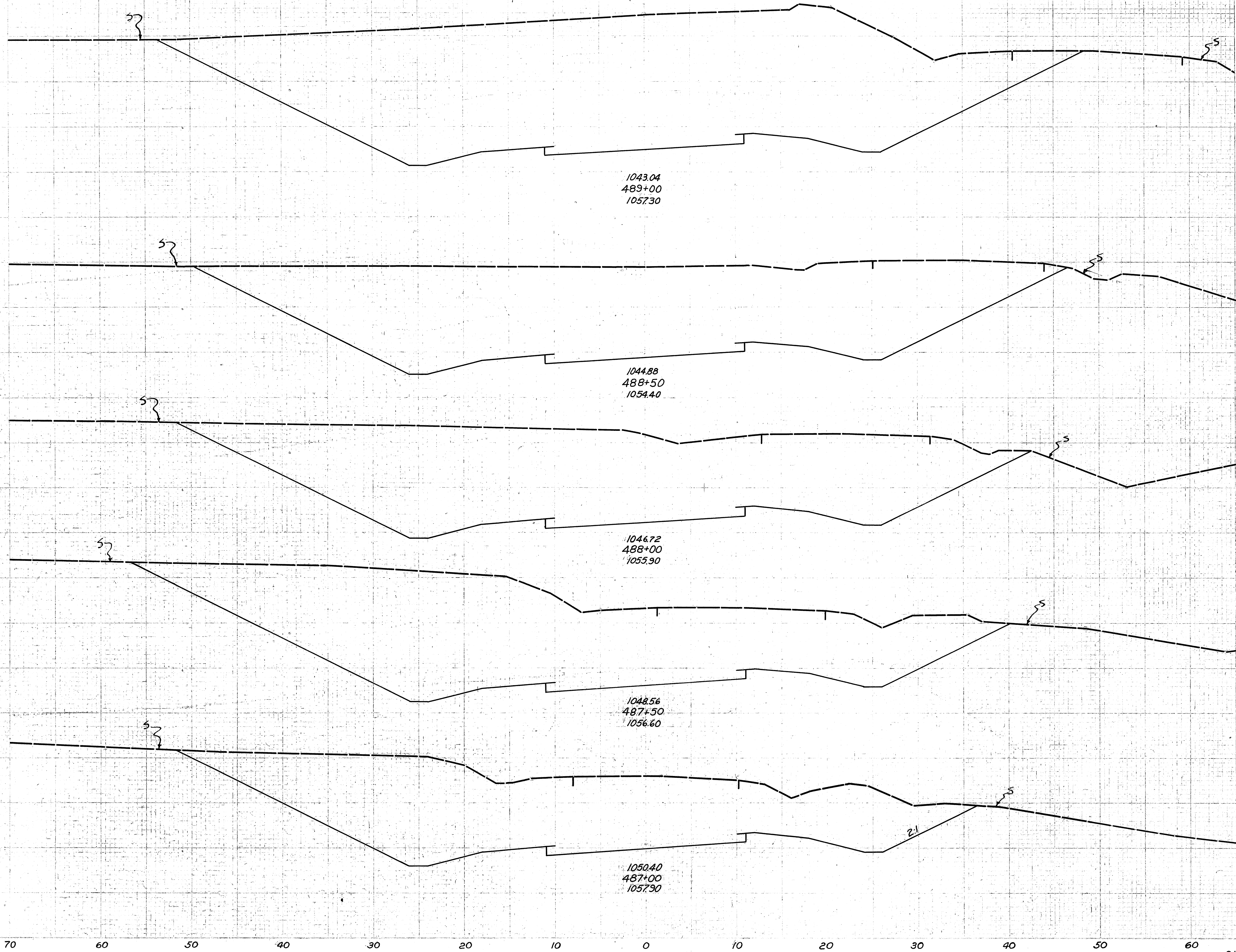
RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART II



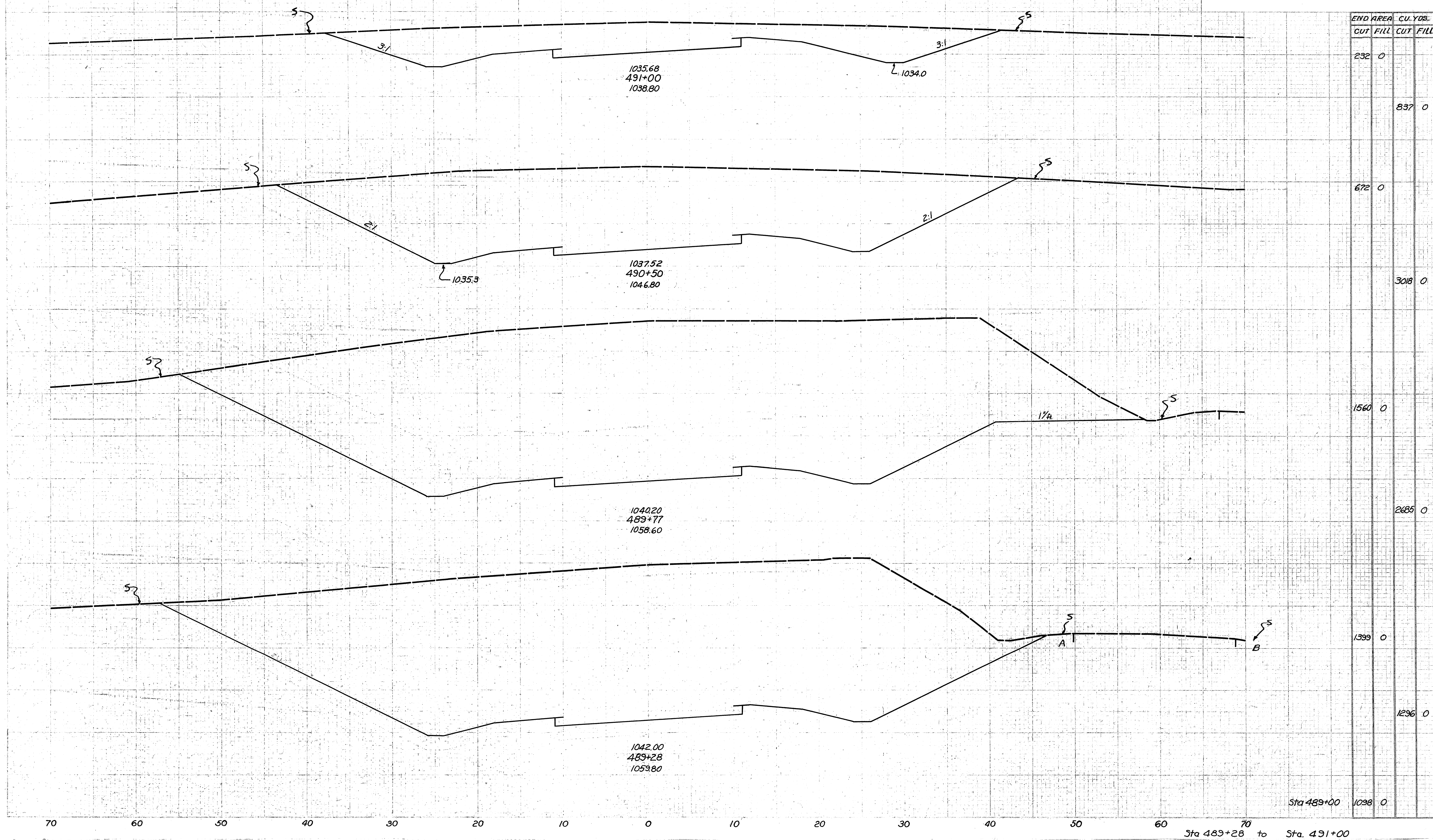
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
403	0	13	0
172	0	1065	0
		233	68
79	73	124	171
70	132	116	225
44	89	194	204
61	21	71	47
15	29	44	94
9	22		

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART II

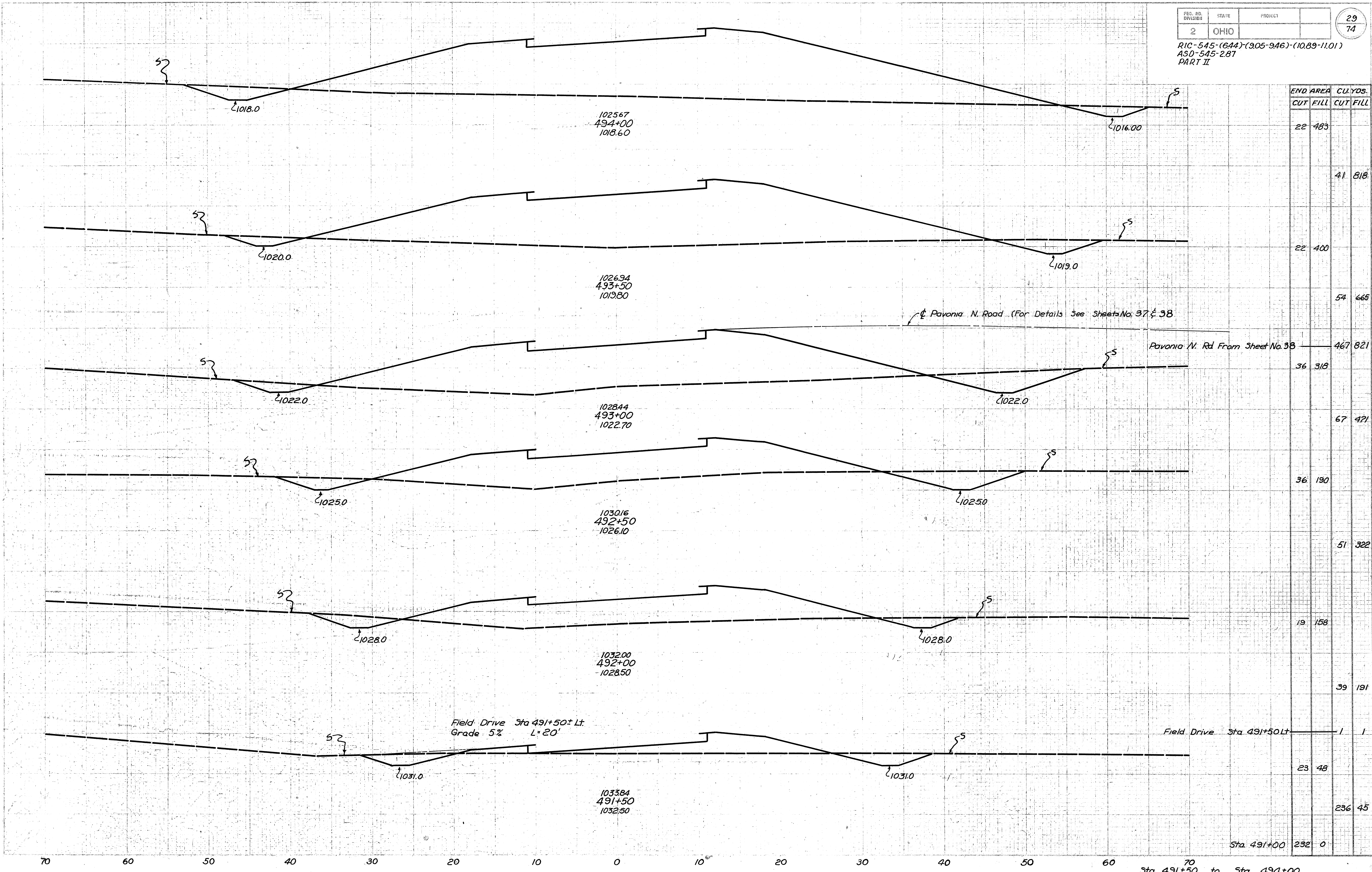
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1098	0		
		1755	0
797	0		
		1448	0
767	0		
		1432	0
779	0		
		1299	0
624	0		
		1902	0
Sta 486+00	403	0	



RIC-545-(644)-(905-946)-(10,89-11,01)
 ASD-545-287
 PART II



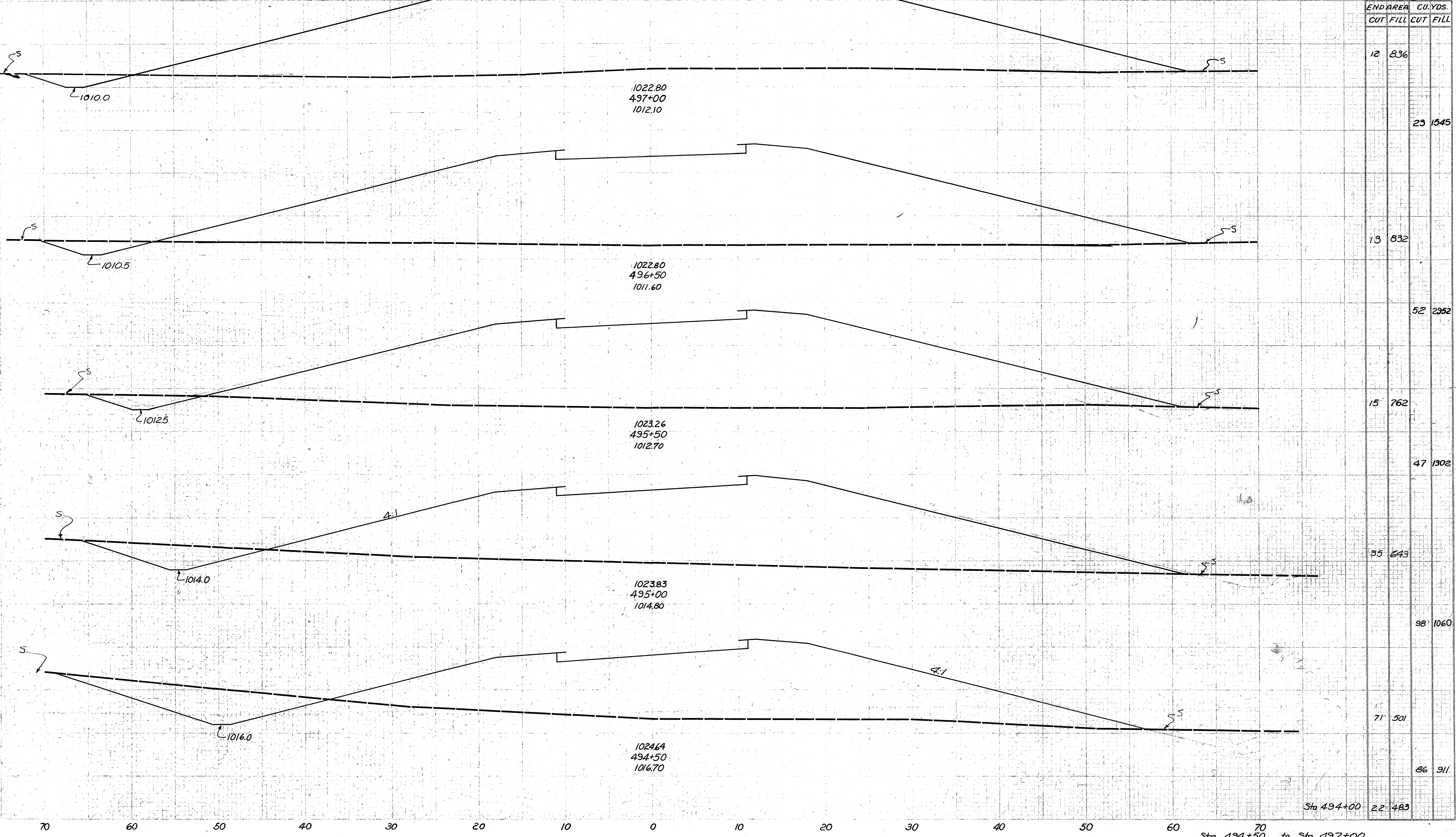
RIC-545-(644)-(905-946)-(10.89-11.01)
 ASD-545-287
 PART II

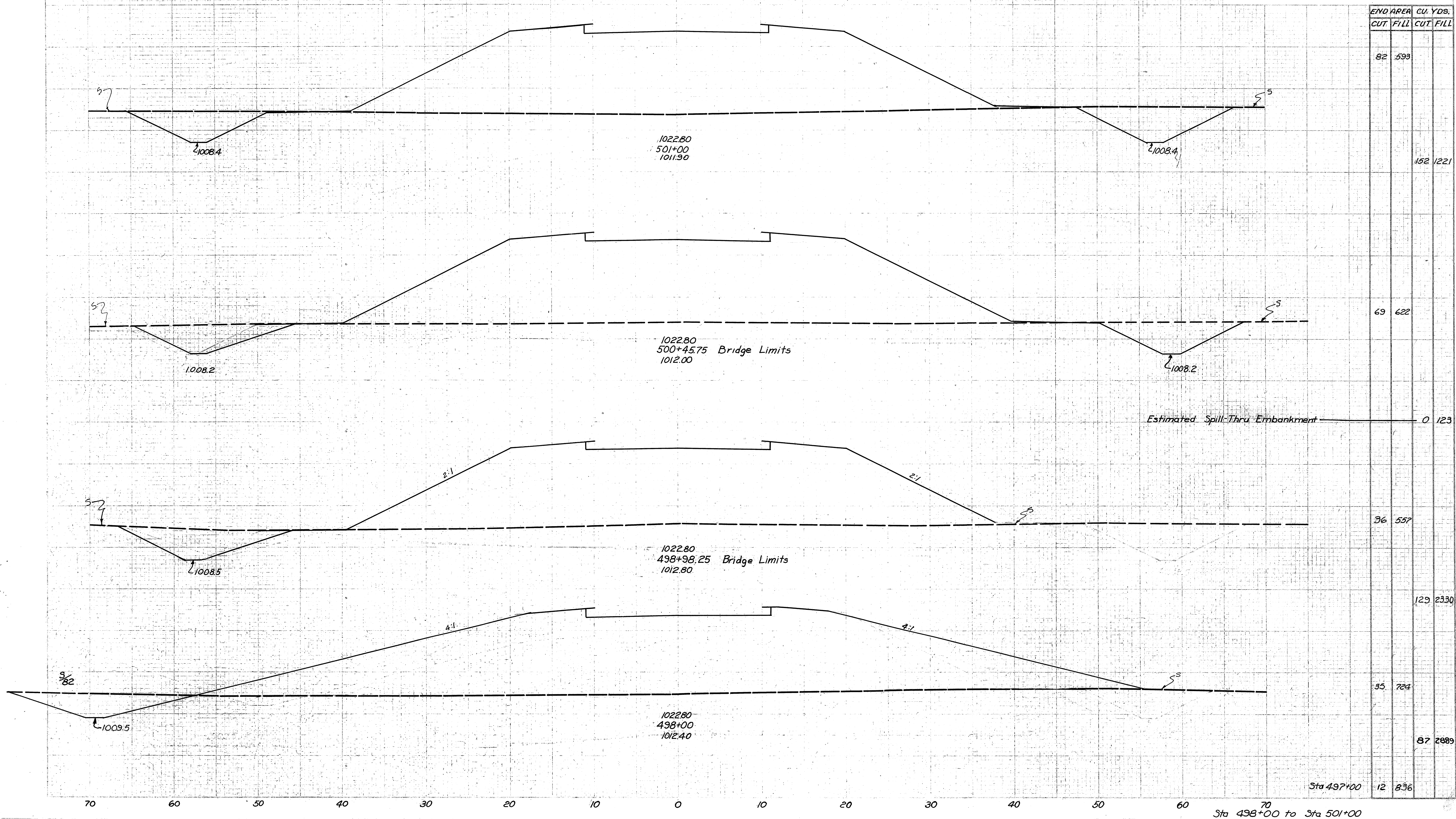


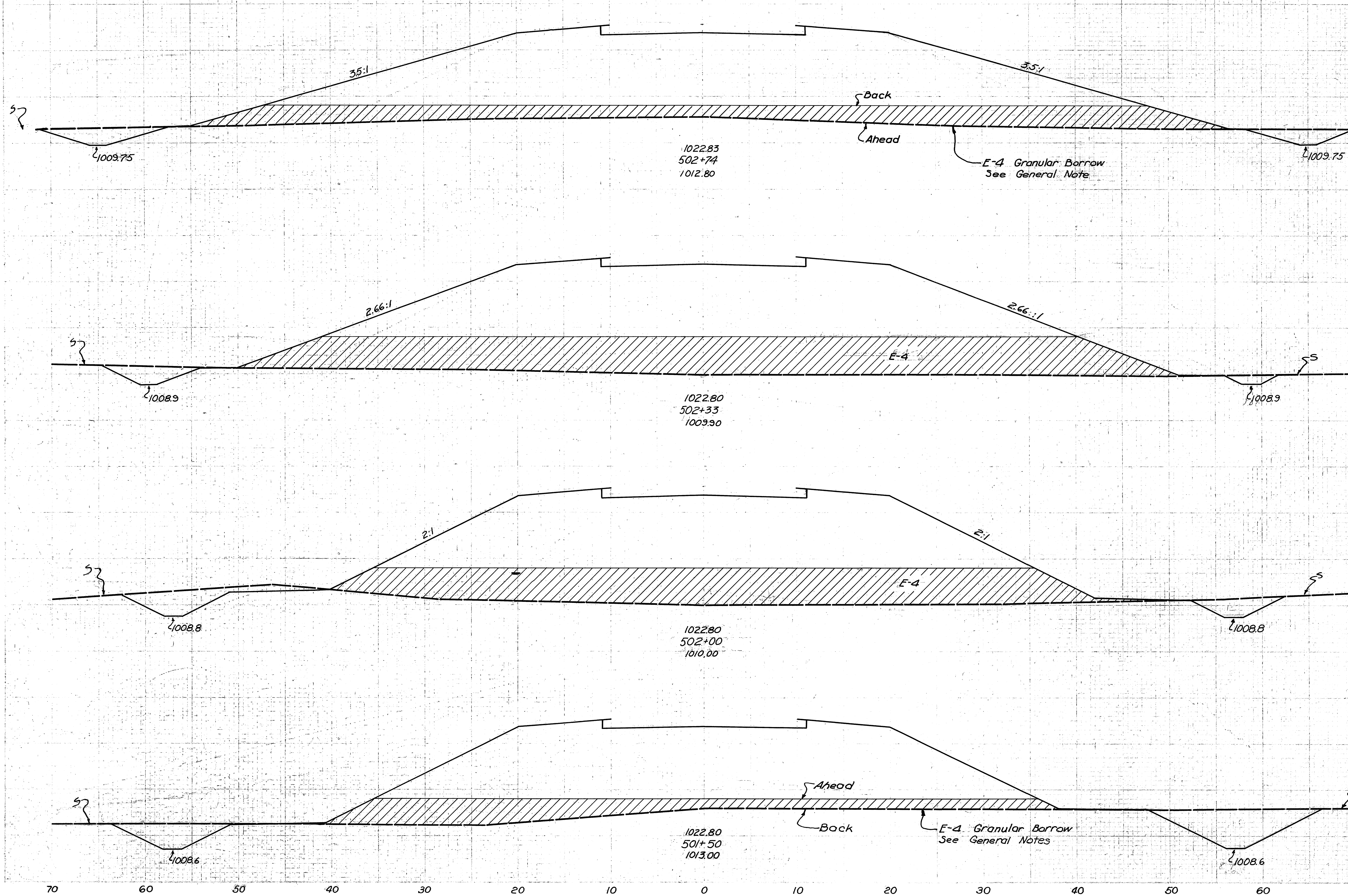
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
22	483		
		41	818
22	400		
		54	665
		467	821
36	318		
		67	471
36	190		
		51	322
19	158		
		39	191
		1	1
23	48		
		236	45
Sta 491+00	232	0	

Sta 491+50 to Sta 494+00

RIC-545(244)-(905-946)-(10.89-11.01)
 ASD-545-2.87
 PART II

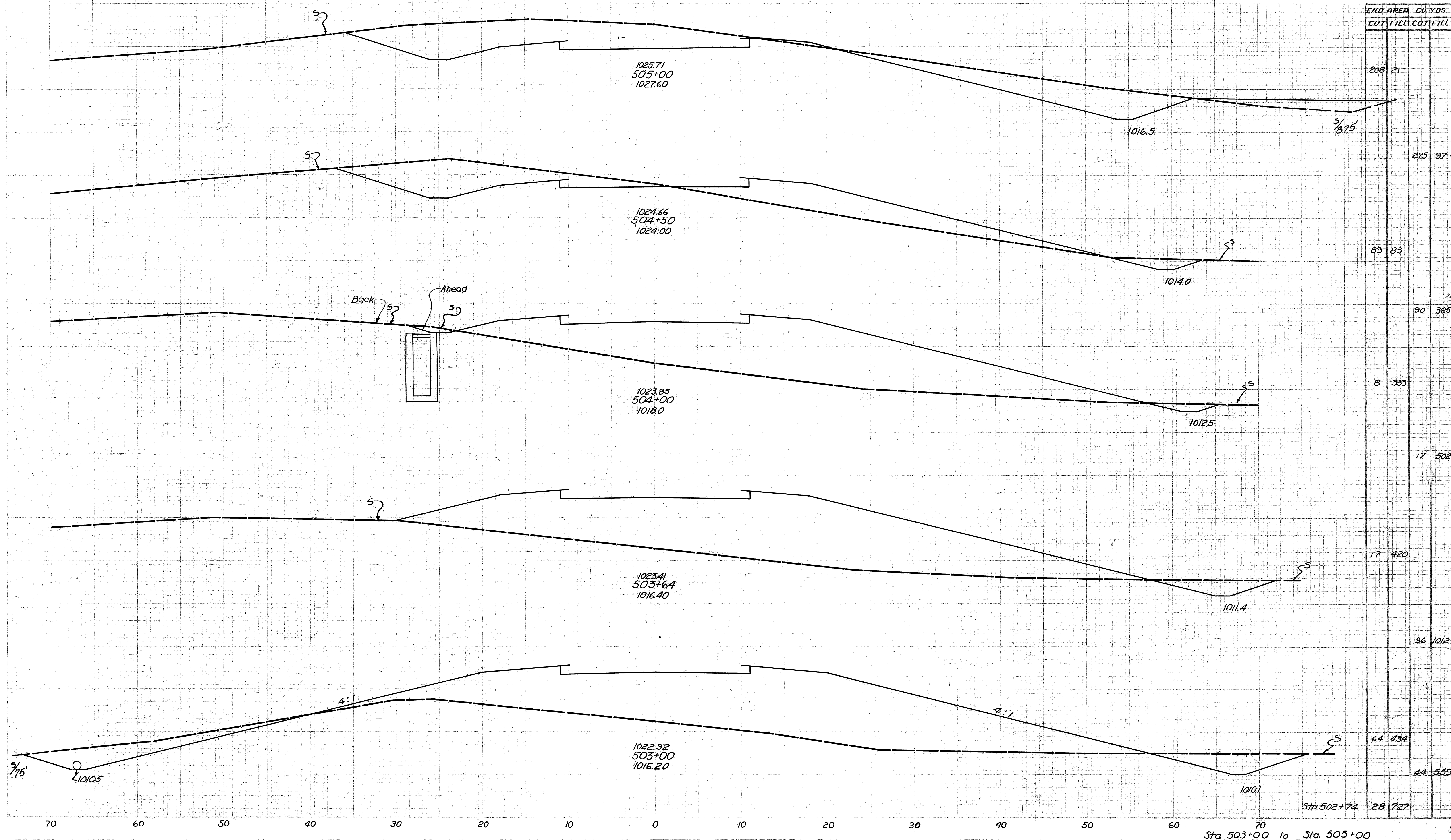




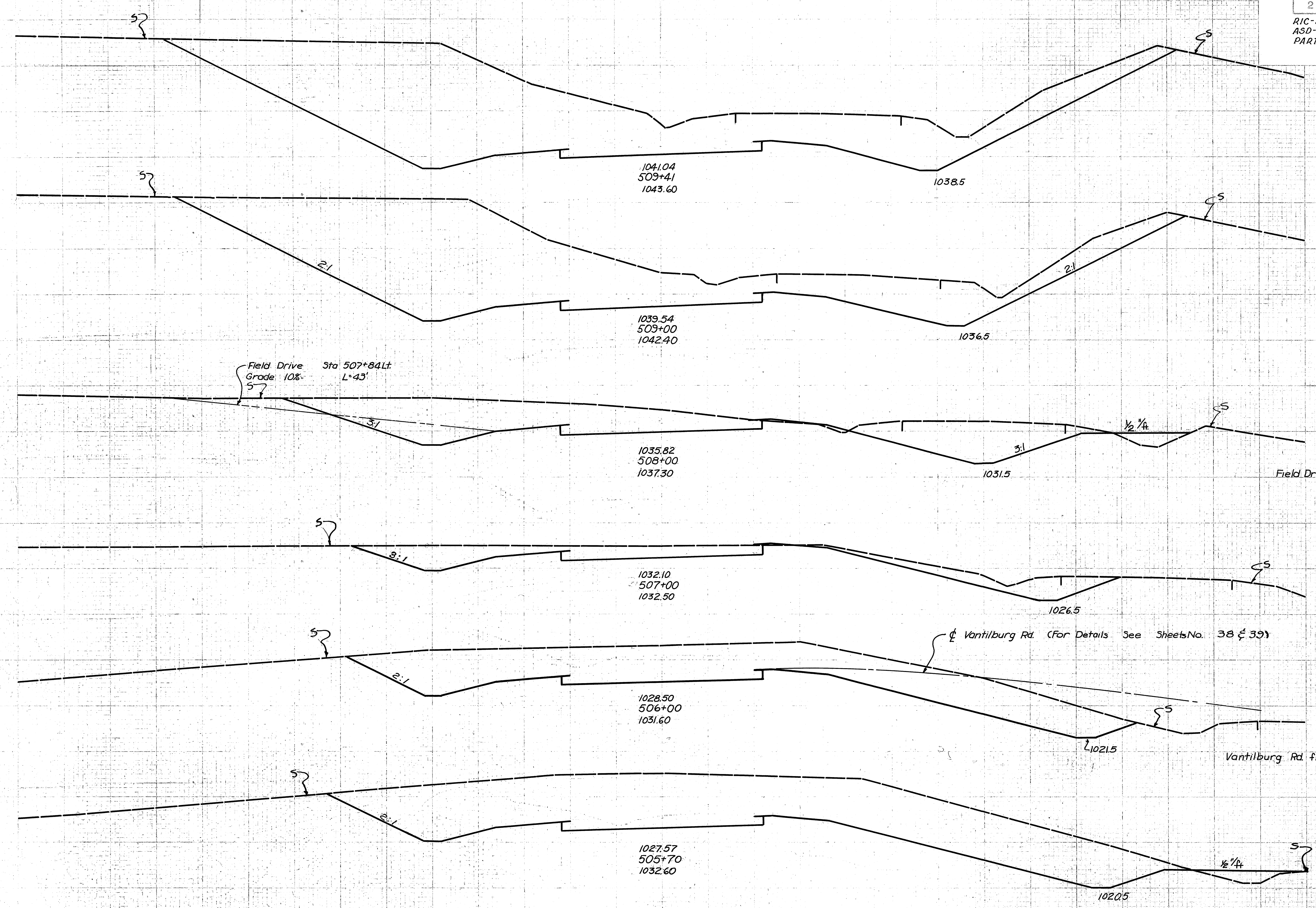


	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Ahead	28	727		
Back	28	528		
E-4				
AREA				
VOL.				
199				
418		35	771	
351	18	487		
395		36	570	
296	41	445		
396		100	824	
131				
1209				
Total E-4 (Carried to Sheet No. 3)				
Ahead	67	445		
Back	67	576		
		138	1083	
Sta 501+00	82	593		

RIC-545-(644)-(905-946)-(1089-1101)
 ASD-545-2.87
 PART II



RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART II



END AREA	CU. YDS.	
	CUT	FILL
603	0	
		881 0
557	0	
		1446 17
224	9	
		15 0
		607 17
104	0	
		761 0
307	0	
		47 578
		426 5
460	9	
		866 39
Sta 505+00	208	21

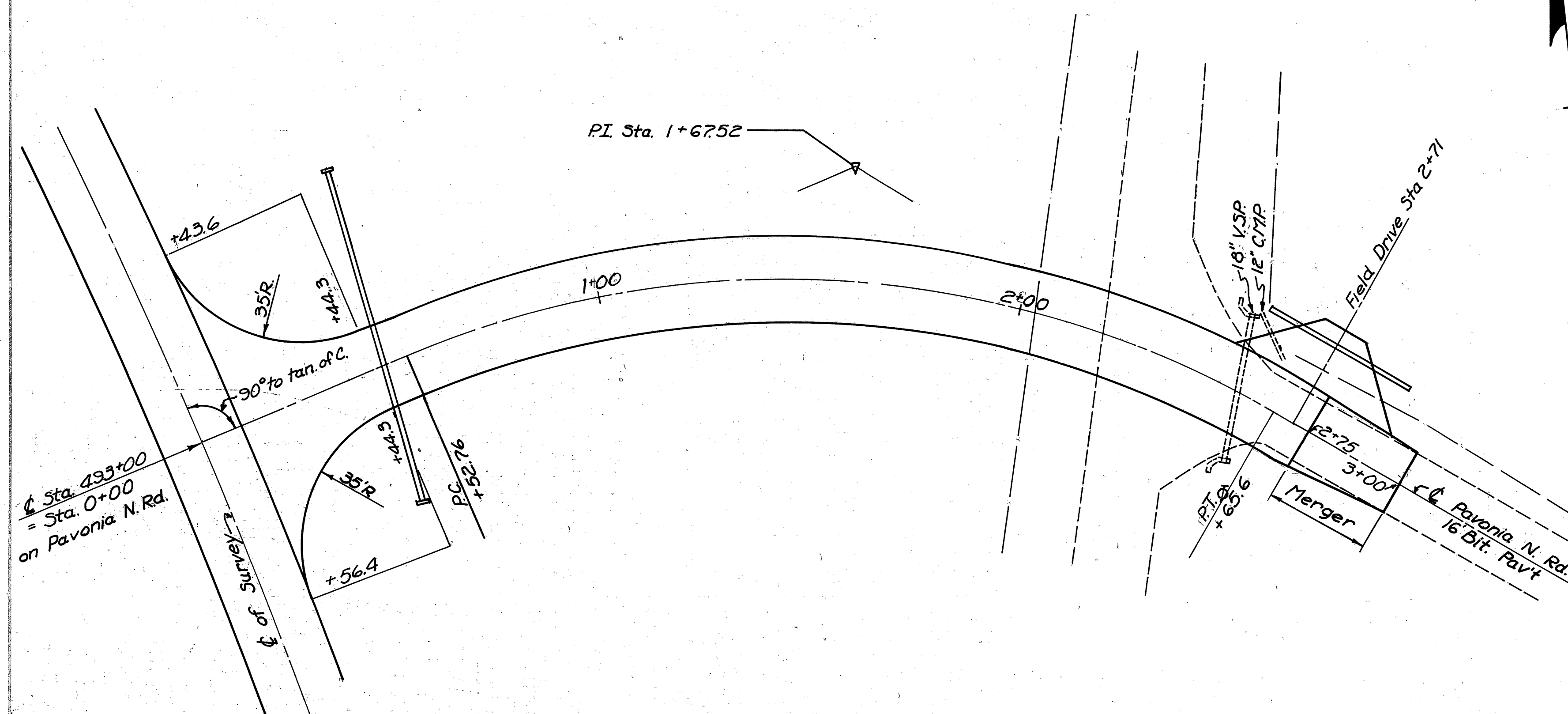
RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART II



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
353	0	1578	0
499	0	162	0
		1022	0
605	0		
		1187	0
677	0		
		1159	0
574	0		
		965	0
489	0		
		1193	0
603	0		

Sta 509+41
 Sta 510+00 to Sta 513+00

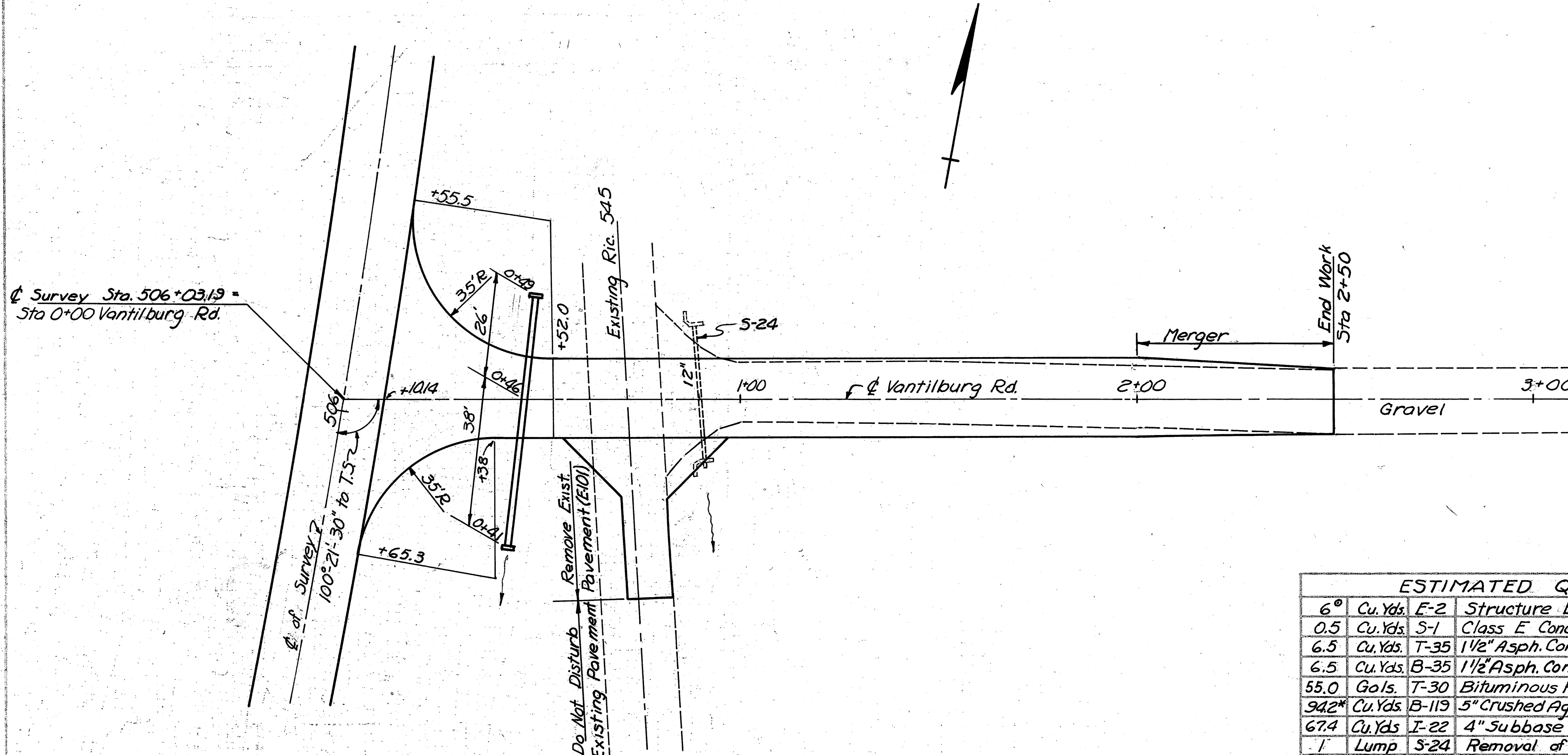
PI-Sta. 1+67.52
 $\Delta = 53^{\circ} 07' R$
 $D = 24.956'$
 $T = 114.76$
 $L = 212.84'$
 $R = 229.59'$



ESTIMATED QUANTITIES			
2.0	Cu.Yds.	E-2	Structure Excavation
27.8	Cu.Yds.	T-35	1 1/2" Asphaltic Conc. Surface Course
27.8	Cu.Yds.	B-35	1 1/2" Asphaltic Conc. Leveling Course
223.0	Gal.	T-30	Bituminous Prime Coat
100.9*	Cu.Yds.	B-119	5" Crushed Aggregate Base course
77.9	Cu.Yds.	I-22	4" Subbase
0.6	Cu.Yds.	S-1	Class E Concrete for Structures
62	Lin.Ft.	S-27	18" Pipe for Roadway Culverts
38	Lin.Ft.	I-1	12" Pipe for Driveways

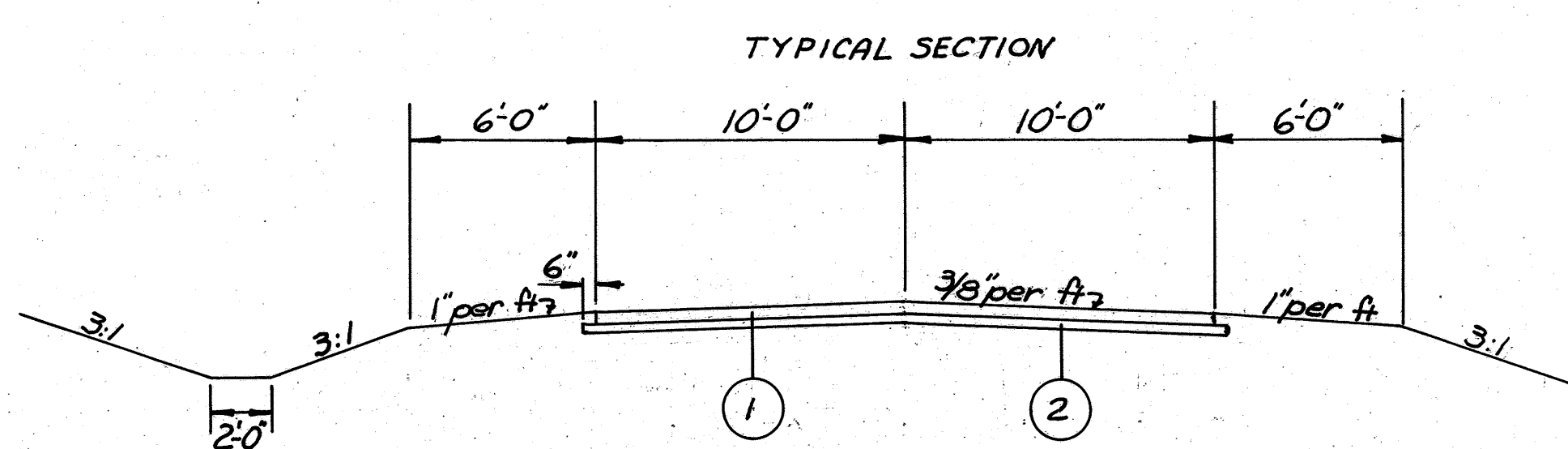
* Includes 75 CY B-119 for Fla. Drive Sta. 2+71 Lt. L=15'
 ° Quantity Calculated after Roadway Excavation
 For Typical Section, See Sheet No.17
 Cross Sections of Pavonia N. Rd., see Sheet No.38





ESTIMATED QUANTITIES			
6°	Cu.Yds.	F-2	Structure Excavation
0.5	Cu.Yds.	S-1	Class E Concrete for Structures
6.5	Cu.Yds.	T-35	1 1/2" Asph. Conc. Surface Course
6.5	Cu.Yds.	B-35	1 1/2" Asph. Conc. Leveling Course
55.0	Gals.	T-30	Bituminous Prime Coat
942*	Cu.Yds.	B-119	5" Crushed Aggr. Base Course
674	Cu.Yds.	I-22	4" Subbase
1	Lump	S-24	Removal of Existing Structure
64'	Lin.Ft.	S-27	15" Pipe for Roadway Culverts

*Includes 13.1 C.Y. @ 6" Thick for drive Sta 0+75 Rt, L+40'
 ° Quantity Calculated after Roadway Excavation

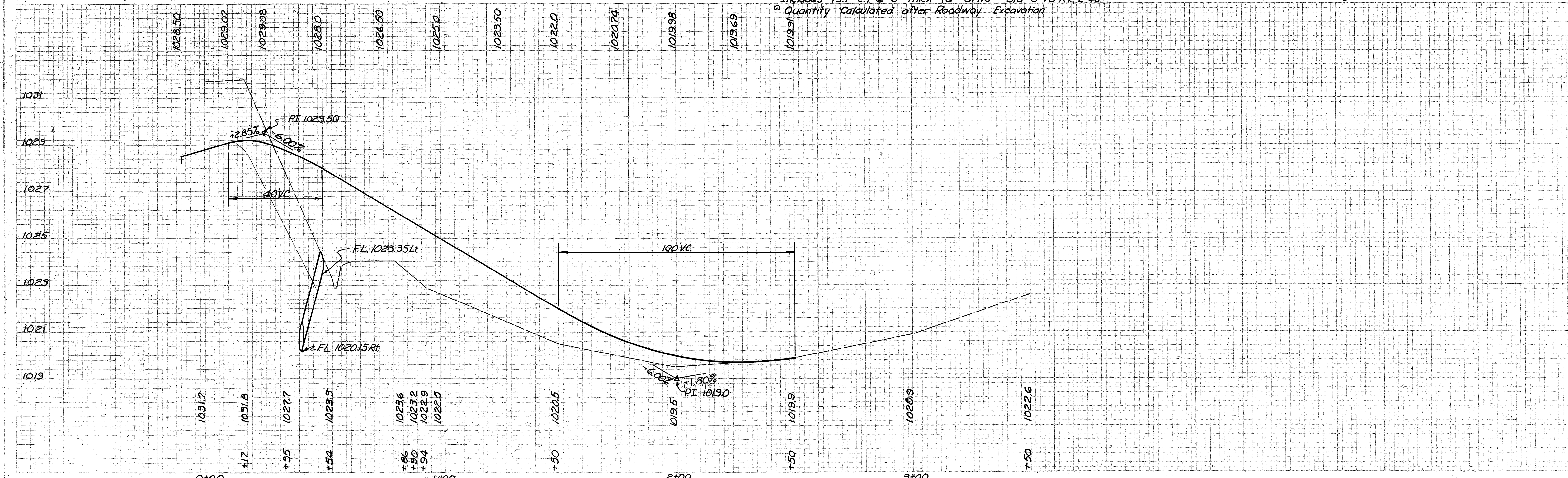


- ① B-119 5" Crushed Aggregate Base Course
- ② I-22 4" Subbase

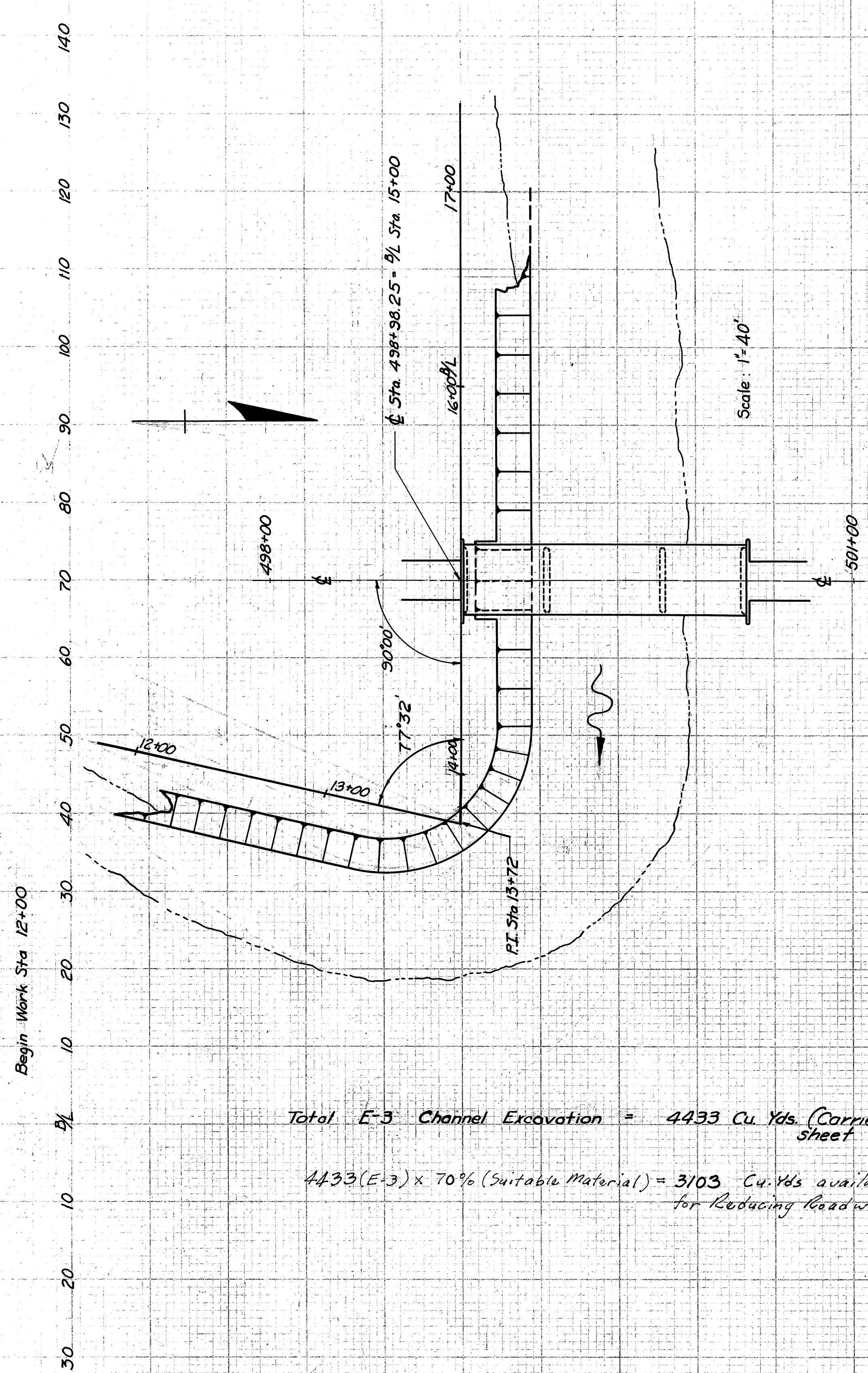
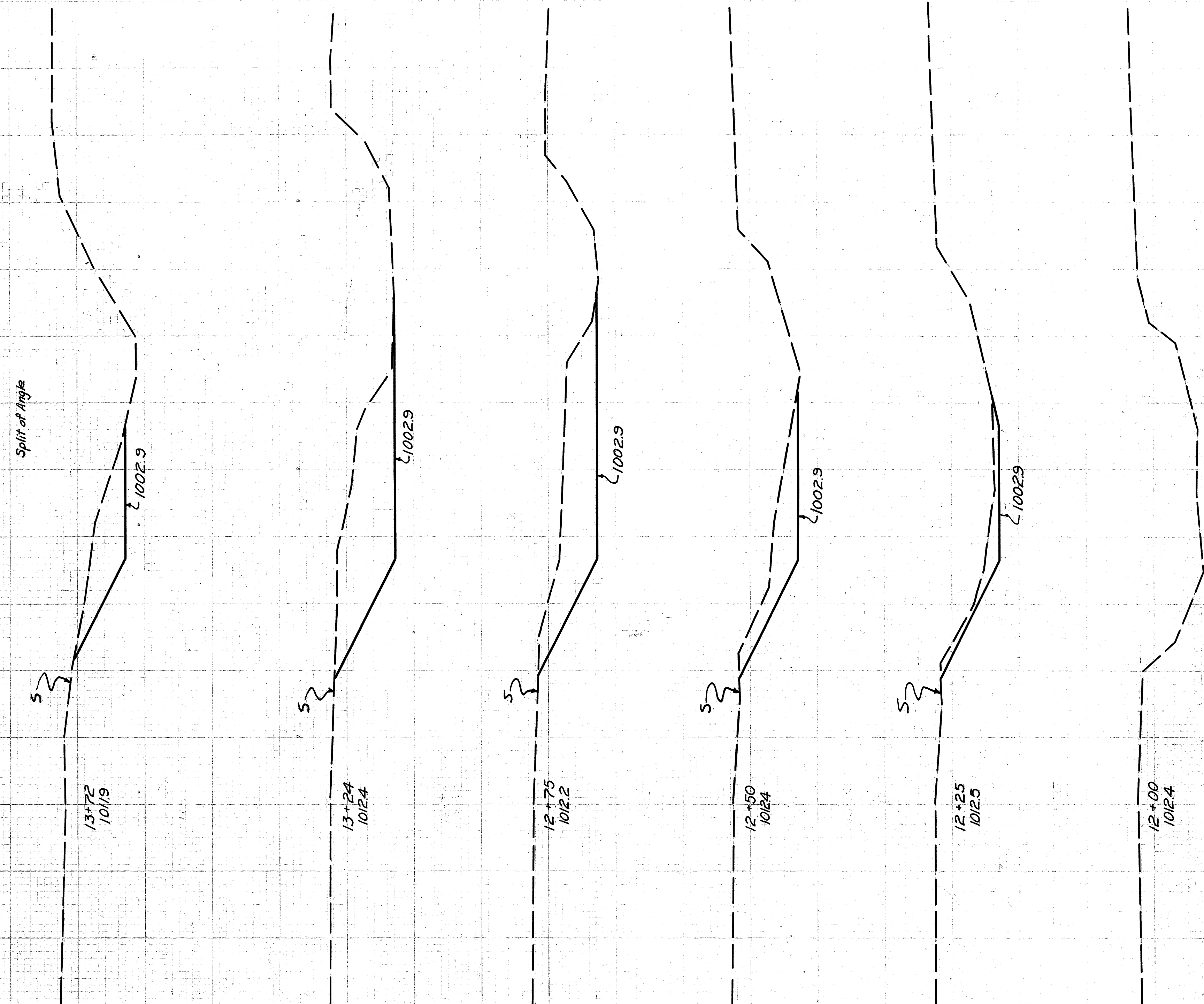
Sta 0+52.8 to Sta 2+00
 Sta 2+00 to Sta 2+50 (Width 20' to 16')

For Typical Section of Pav't from Sta 0+10.14 to Sta 0+52.8 See Sheet No.17

For Cross Sections Vantilburg Rd - See Sheet No. 38



CUT	EA	CY
14+20	440	477
13+72	96	96
13+24	253	
12+75	227	
12+50	89	
12+25	48	
12+00	0	
	310	
	436	
	146	
	64	
	22	



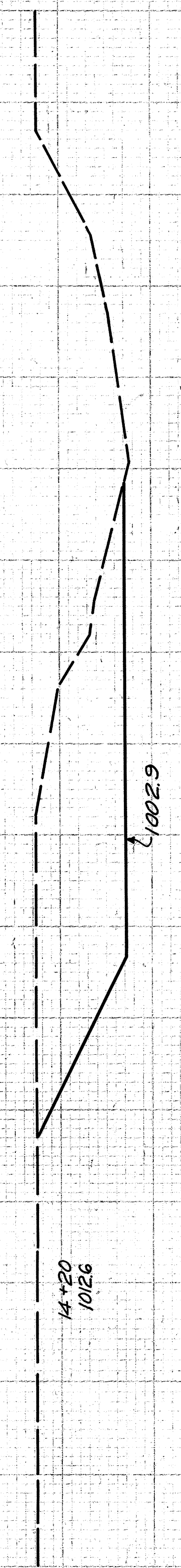
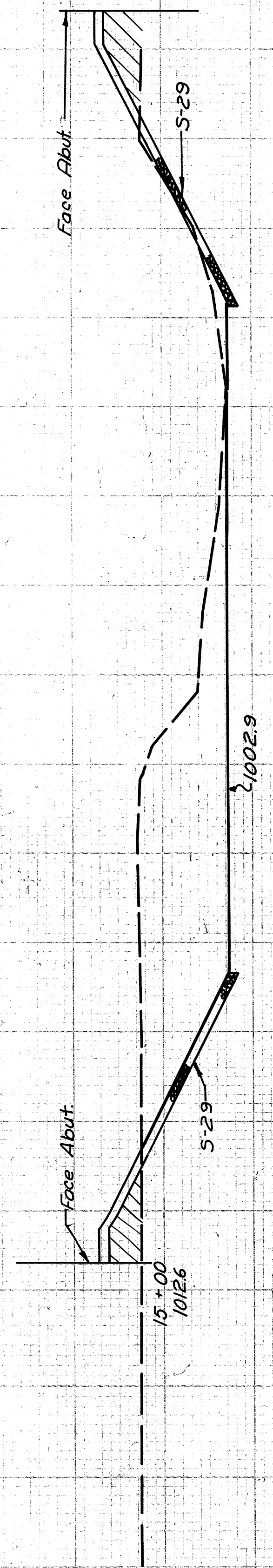
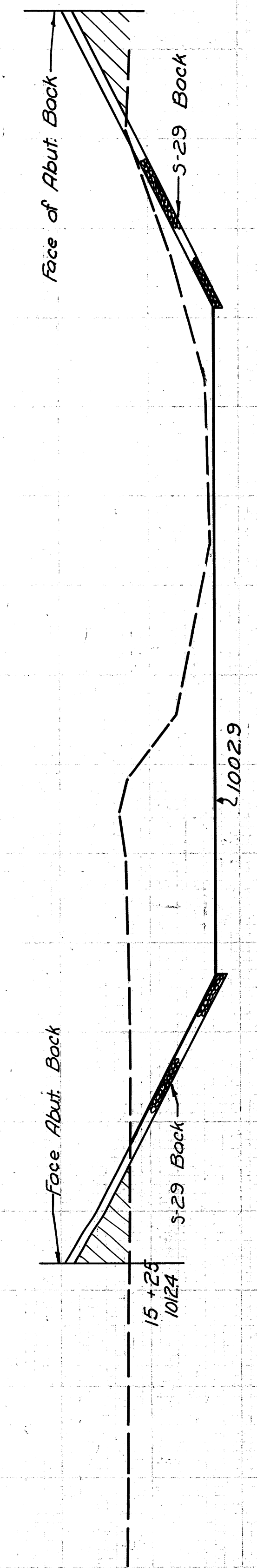
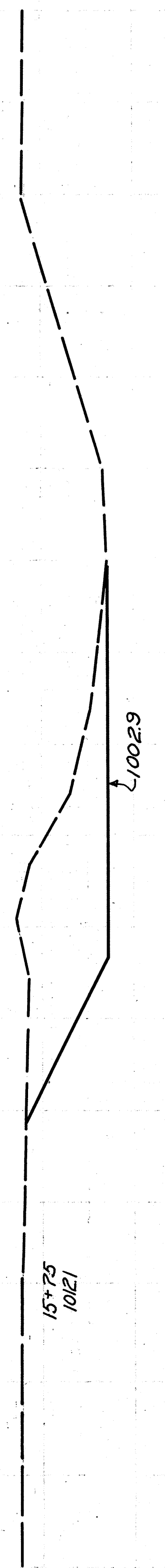
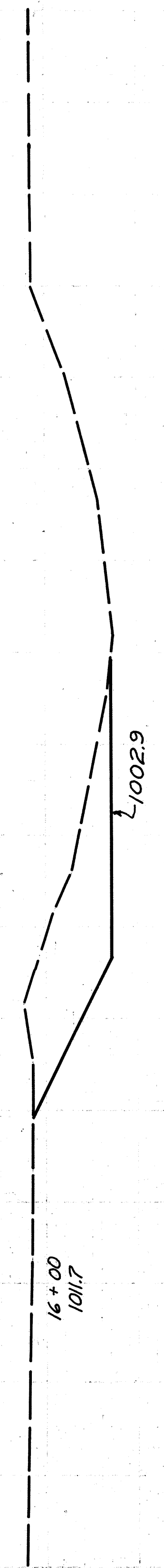
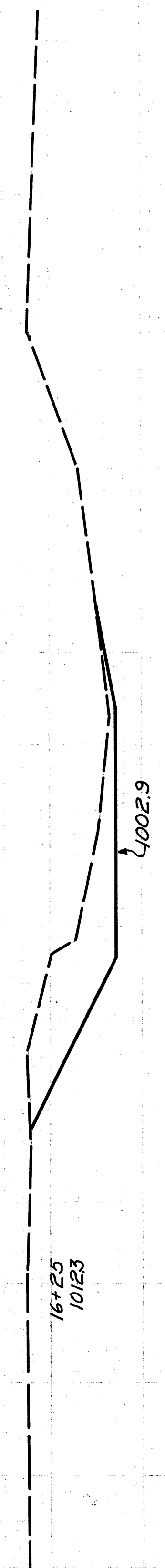
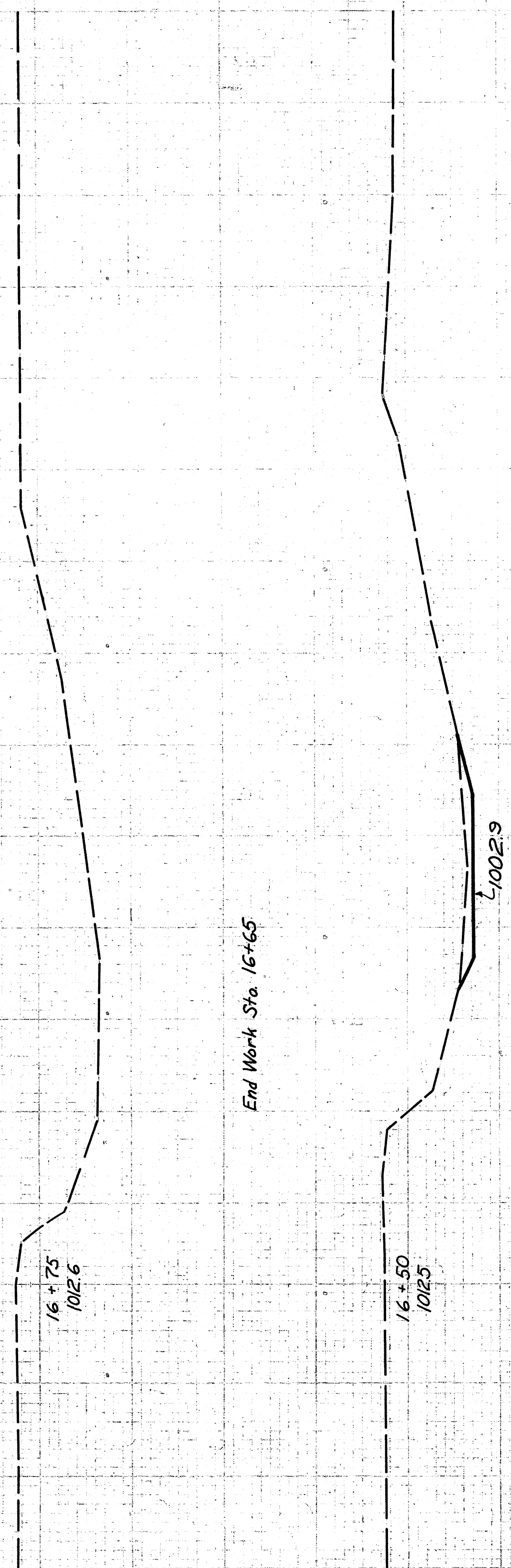
Total E-3 Channel Excavation = 4433 Cu. Yds. (Carried to sheet No. 63)

$4433(E-3) \times 70\%$ (Suitable Material) = 3103 Cu. Yds. available for Reducing Roadway Borrow

CUT	EA CY
-----	-------

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

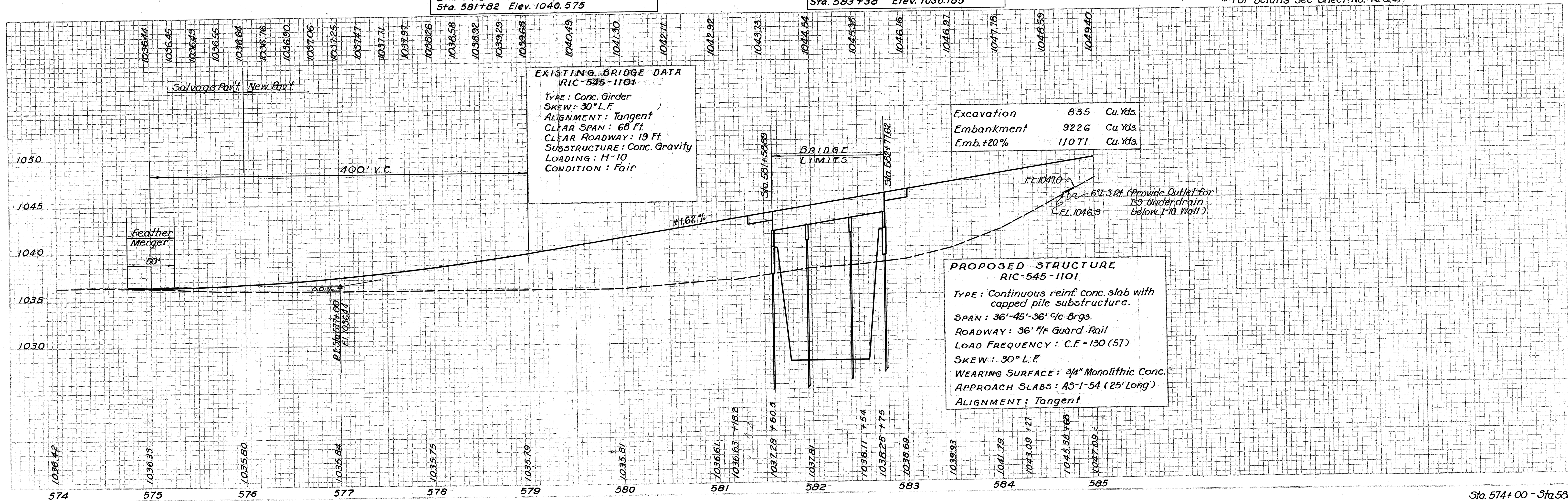
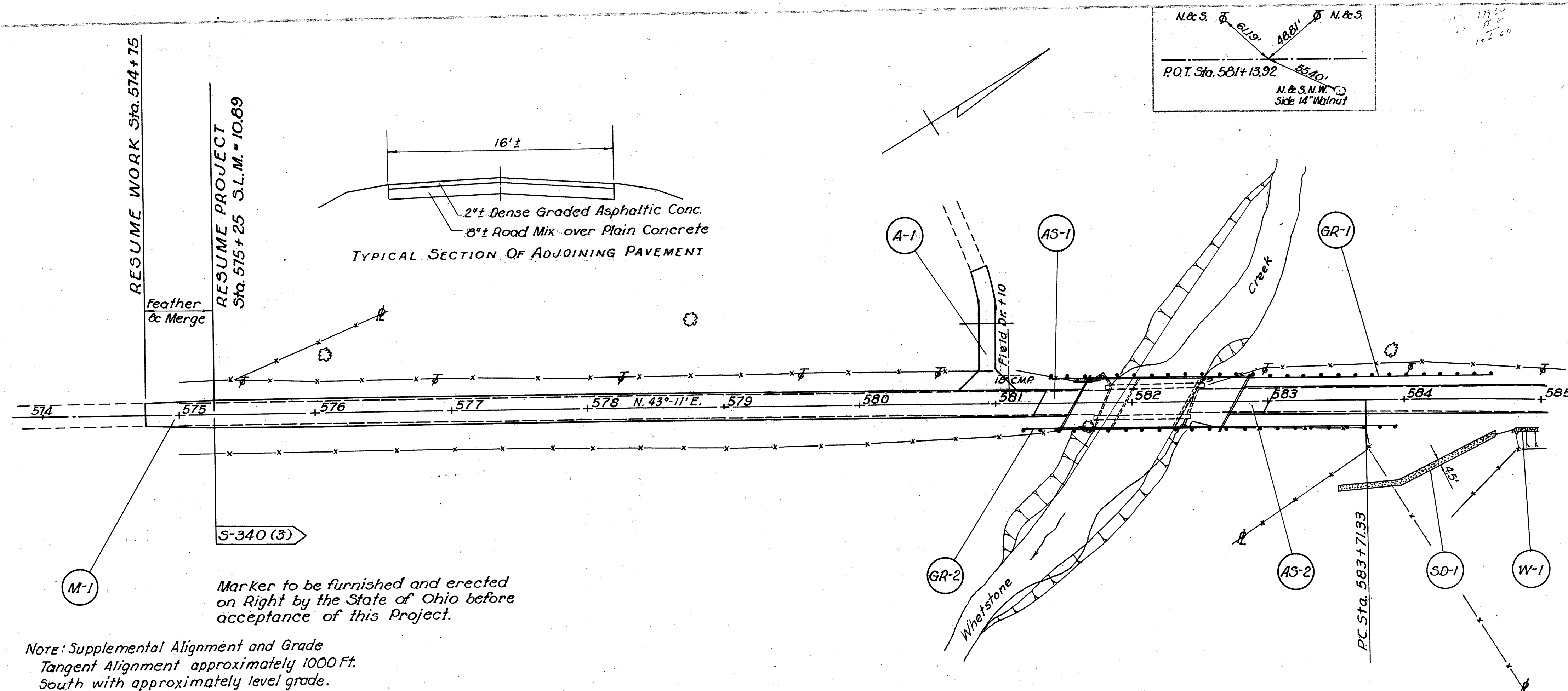
RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
PART II

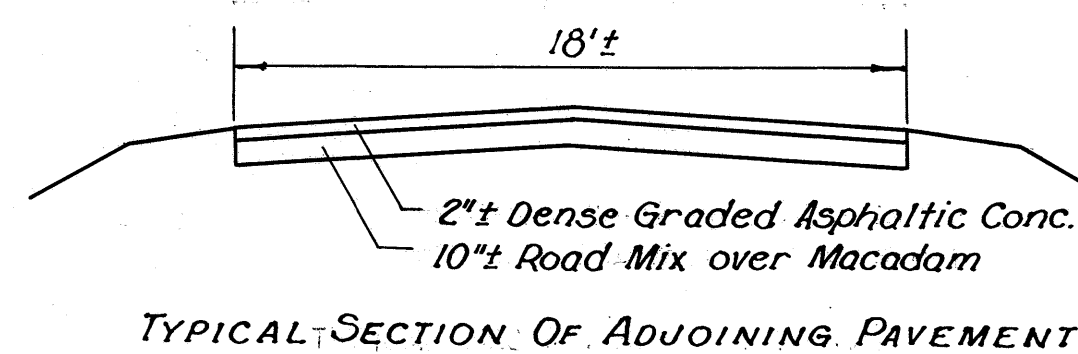


Ref. No.	Station	I-22 Subbase	B-119 Crushed Aggregate Base Course	B-35 Asphaltic Concrete Leveling Course	T-35 Asphaltic Concrete Surface Course	E-12 Pipe Removed Over 15"	I-7 Reinforced Concrete Slabs	I-15 Guard Rail Steel Deep	I-1 Drive Pipe	L-10 Sod 1/2 Yd. per Lin. Ft.
		Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Lin. Ft.	Sq. Yds.	Lin. Ft.	Lin. Ft.	Sq. Yds.
M-1	574+75 - 575+25	2.5	2.3	1.0	3.0					
A-1	580+95 L=90'		24.1			16			40	
AS-1	581+33.89 - 581+58.89						55.56			
AS-2	582+71.62 - 583+02.62						55.56			
GR-1	581+41.30 - 584+66.30 Lt.							206.27		
GR-2	581+20.22 - 583+95.22 Rt.							156.27		
SD-1	583+50 - 584+70 Rt.									60
	Totals	2.5	26.4	1.0	3.0	16	111.12	362.54	40	60

Ref. No.	Station	I-10 Riprap Type "A" As per plan	I-9 Stone Under-drain as per plan	I-3 Roadway Drainage						
		Sq. Yds.	Lin. Ft.	Lin. Ft.						
*W-1	584+79 - 585+00	7	23	12						
	Totals	7	23	12						

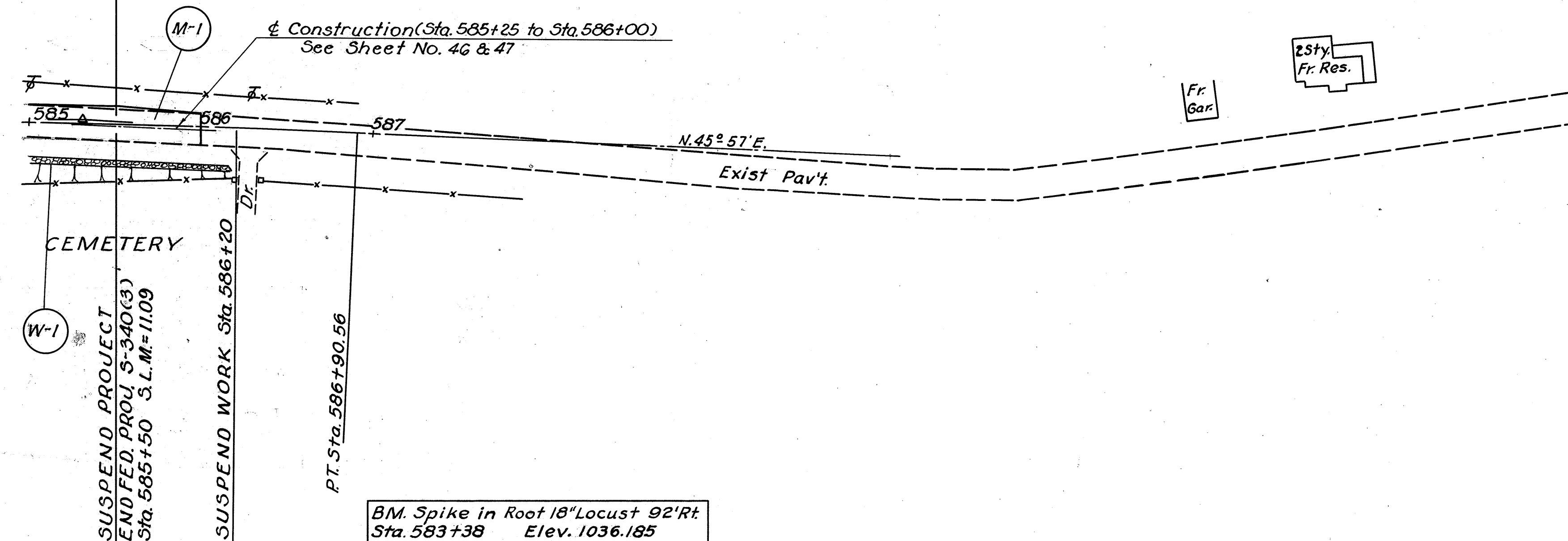
* For Details see Sheet No. 46 & 47





Marker to be furnished and erected
on Left by the State of Ohio before
acceptance of this project.

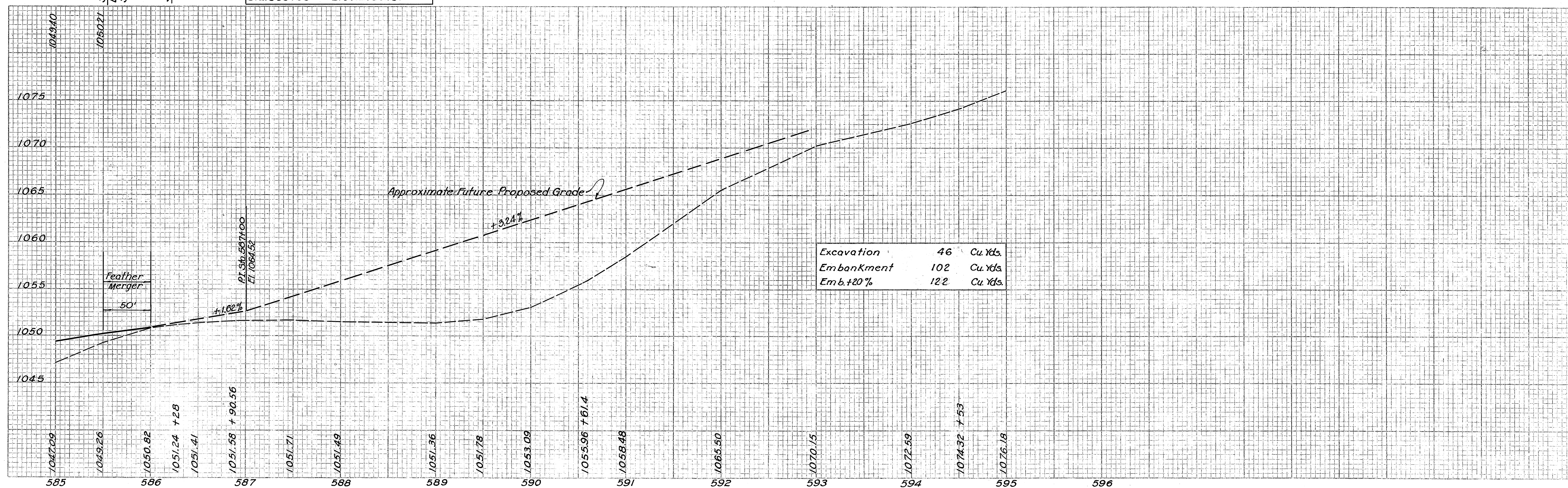
Construction (Sta. 585+25 to Sta. 586+00)
See Sheet No. 46 & 47



BM. Spike in Root 18" Locust 92' Rt.
Sta. 583+38 Elev. 1036.185

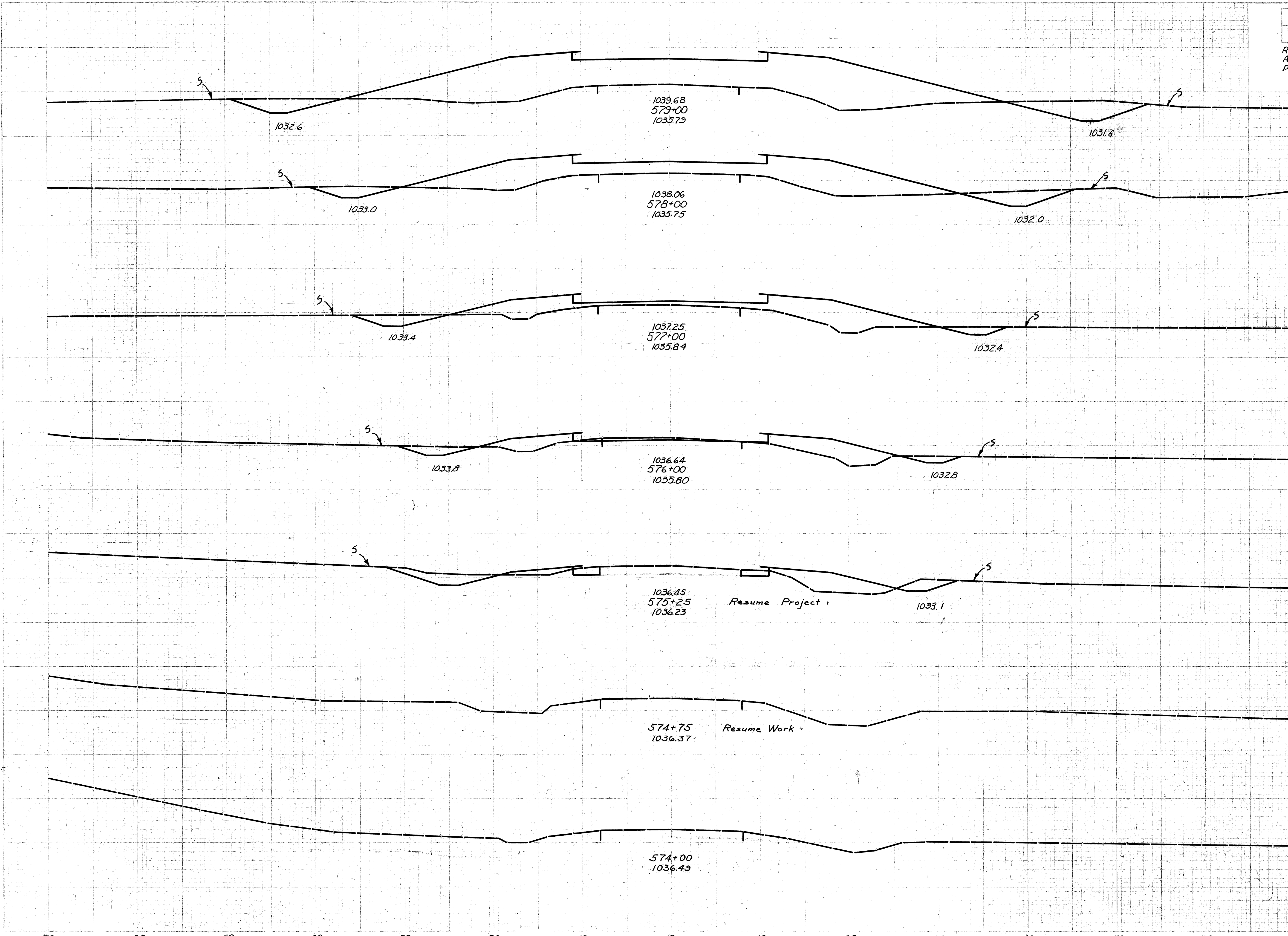
<i>Ref. No.</i>	<i>Station</i>	<i>I-22 Subbase</i>	<i>B-119 Crushed Aggregate Base Course Cu. Yds.</i>	<i>B-35 Asphaltic Concrete Leveling Course Cu. Yds.</i>	<i>T-35 Asphaltic Concrete Surface Course Cu. Yds.</i>	<i>I-10 Riprap Type "A" As per plan Sq. Yds.</i>	<i>I-9 Stone Under - drain As per plan Lin. Ft.</i>		
		<i>Cu. Yds.</i>	<i>Cu. Yds.</i>	<i>Cu. Yds.</i>	<i>Cu. Yds.</i>	<i>Sq. Yds.</i>	<i>Lin. Ft.</i>		
		<i>Var.</i>	<i>Var.</i>	<i>Var.</i>	<i>Var.</i>				
*M-I-	585+50-586+00	1.5	6.0	3.4	4.1				
PW-I	585+00-586+19					73	121		
	<i>Totals</i>	<i>1.5</i>	<i>6.0</i>	<i>3.4</i>	<i>4.1</i>	<i>73</i>	<i>121</i>		

* Feather & Merger shall be constructed similar to Typical Section "C" on sheet No. 2.
 □ For Details see Sheet No's. 46 & 47

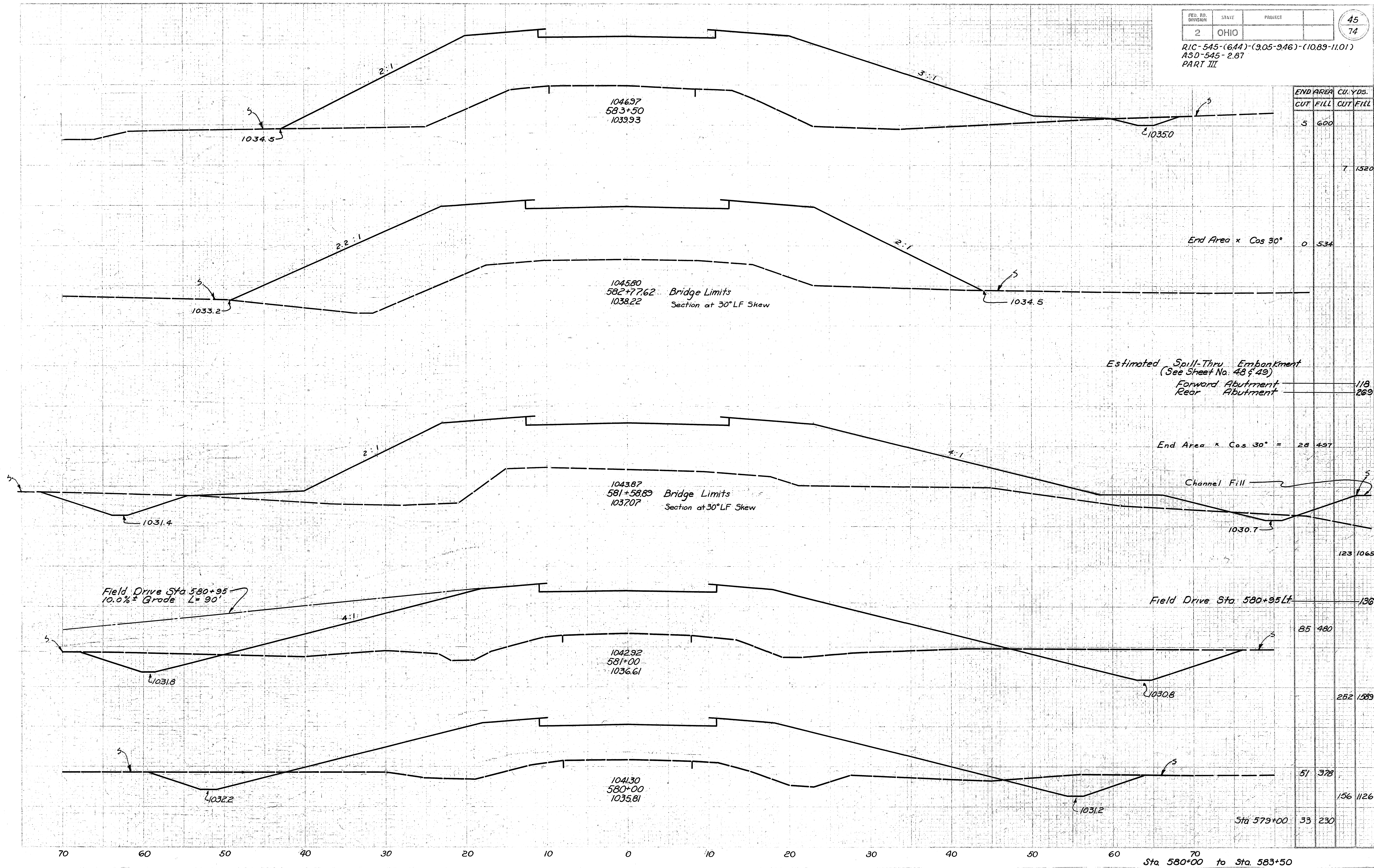


Sta. 585+00 - Sta. 596+00

RIC-545-(644)-(905-946)-(1089-1101)
 ASD-545-2.87
 PART III

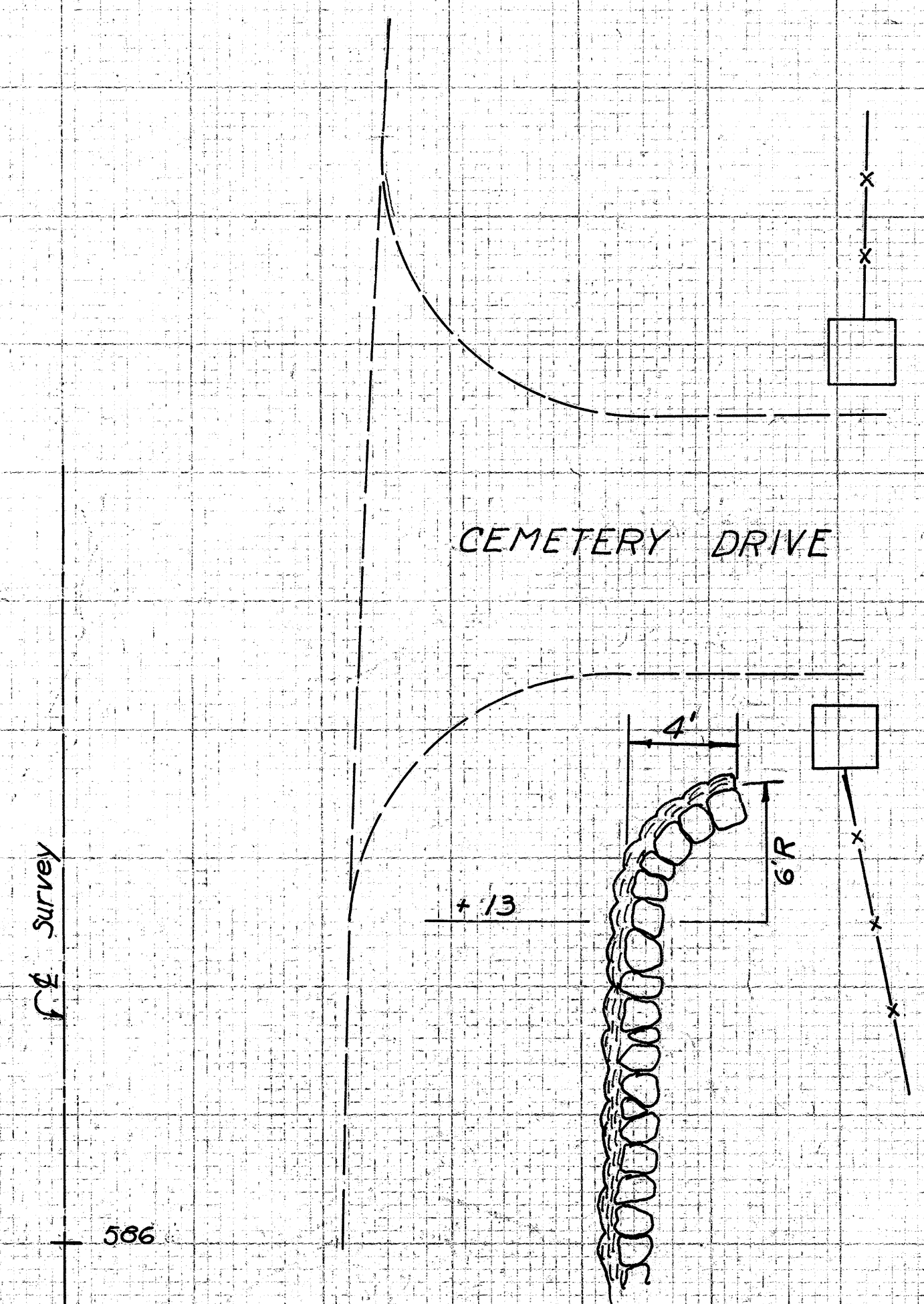
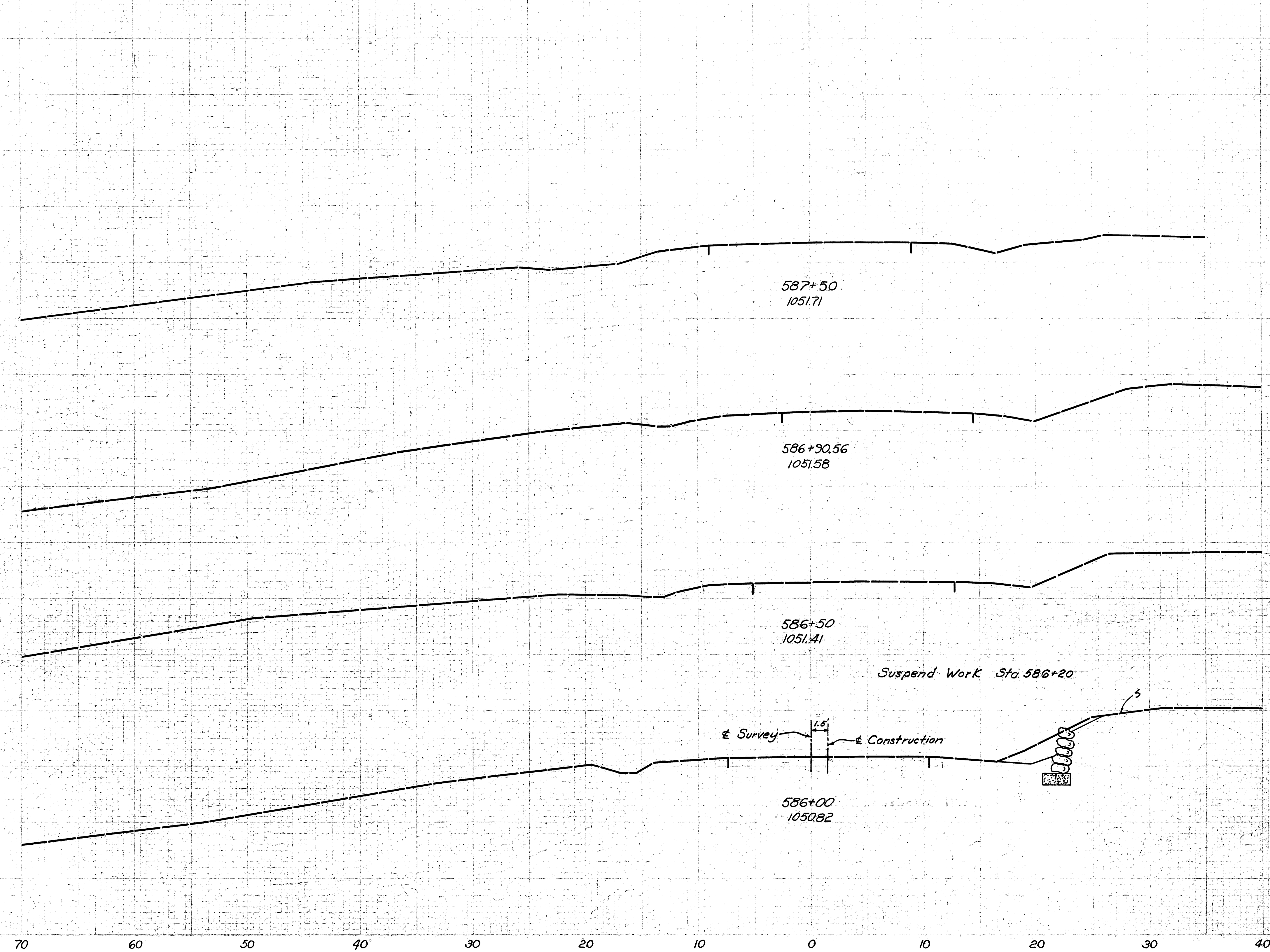


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
53	230		
		96	659
19	126		
		59	363
13	70		
		48	193
13	34		
		46	83
20	26		
		19	24
Sta 574+75	0	0	0



RIC-545-644)-(905-946)-(1089-1101)
 ASD-545-287
 PART III

END	AREA	CUT	YDS.
CUT	FILL	CUT	FILL

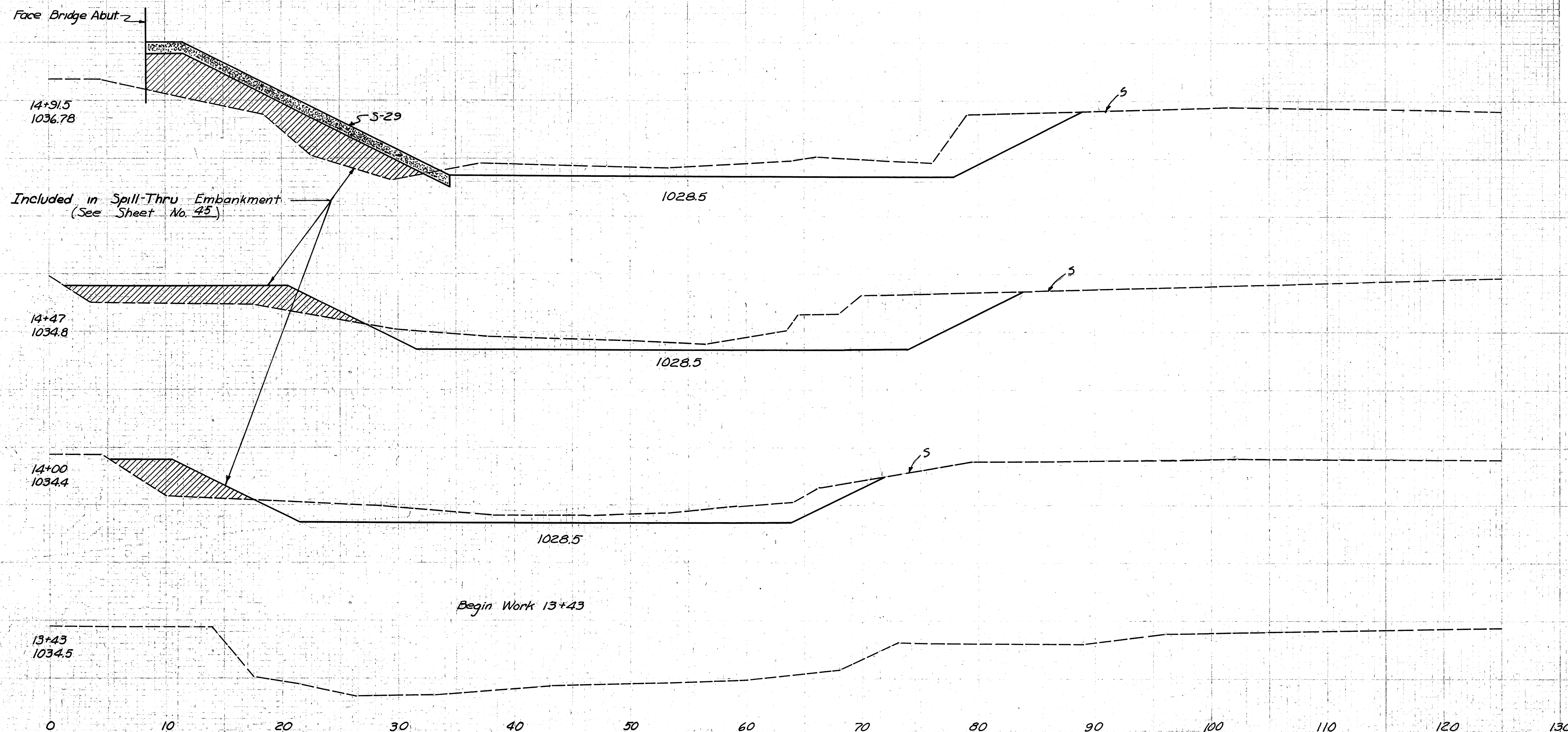


TOP OF WALL ELEVATIONS

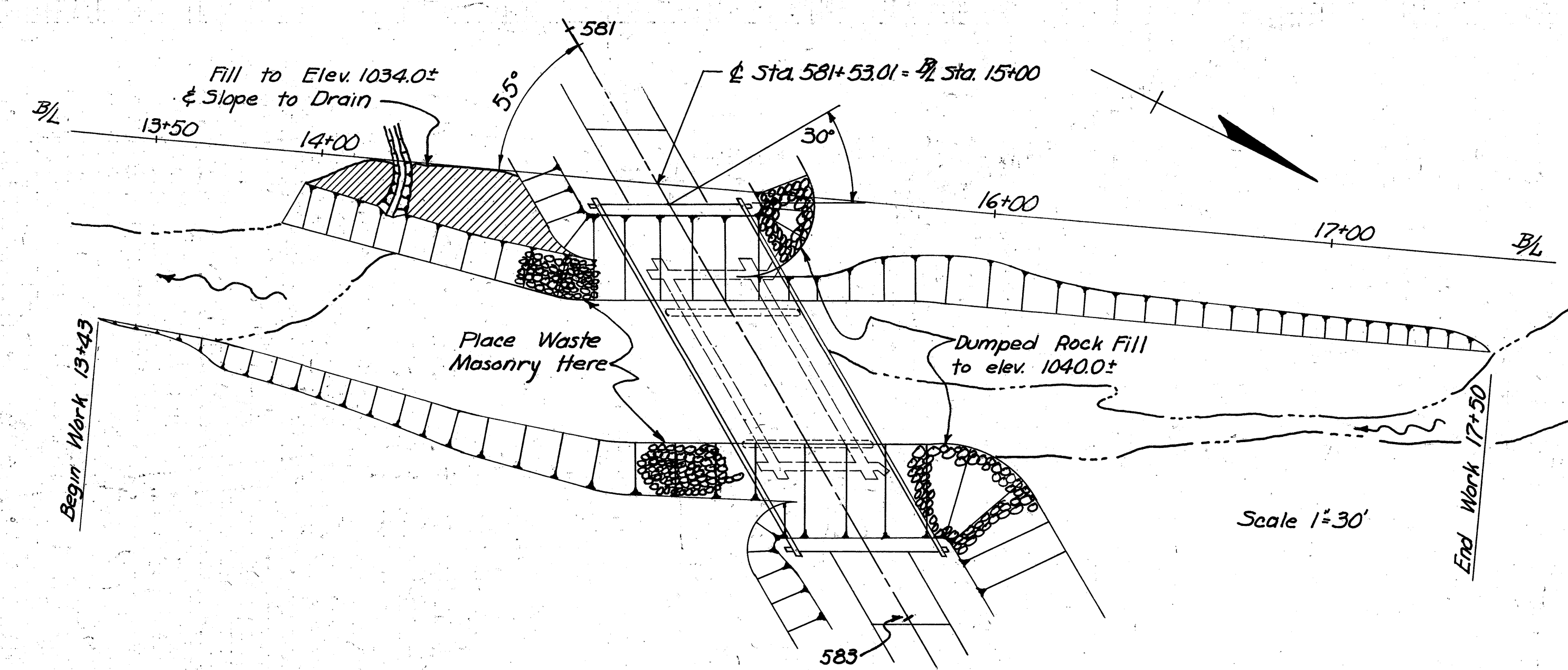
Station	Elev
586+19	To Fit
586+00	1053.5
585+75	1054.5
585+50	1055.0
585+25	1054.0
585+00	1052.0
584+79	To Fit

Sta 586+20	0	0		
Sta 586+00	6	0		
Sta 585+50	20	19	24	18

Sta 586+00 to Sta 587+50



	CUT	
	EA	CY
Sta. 15+20	38	63
Sta. 14+91.5	81	148
	99	142
	64	68
	0	0



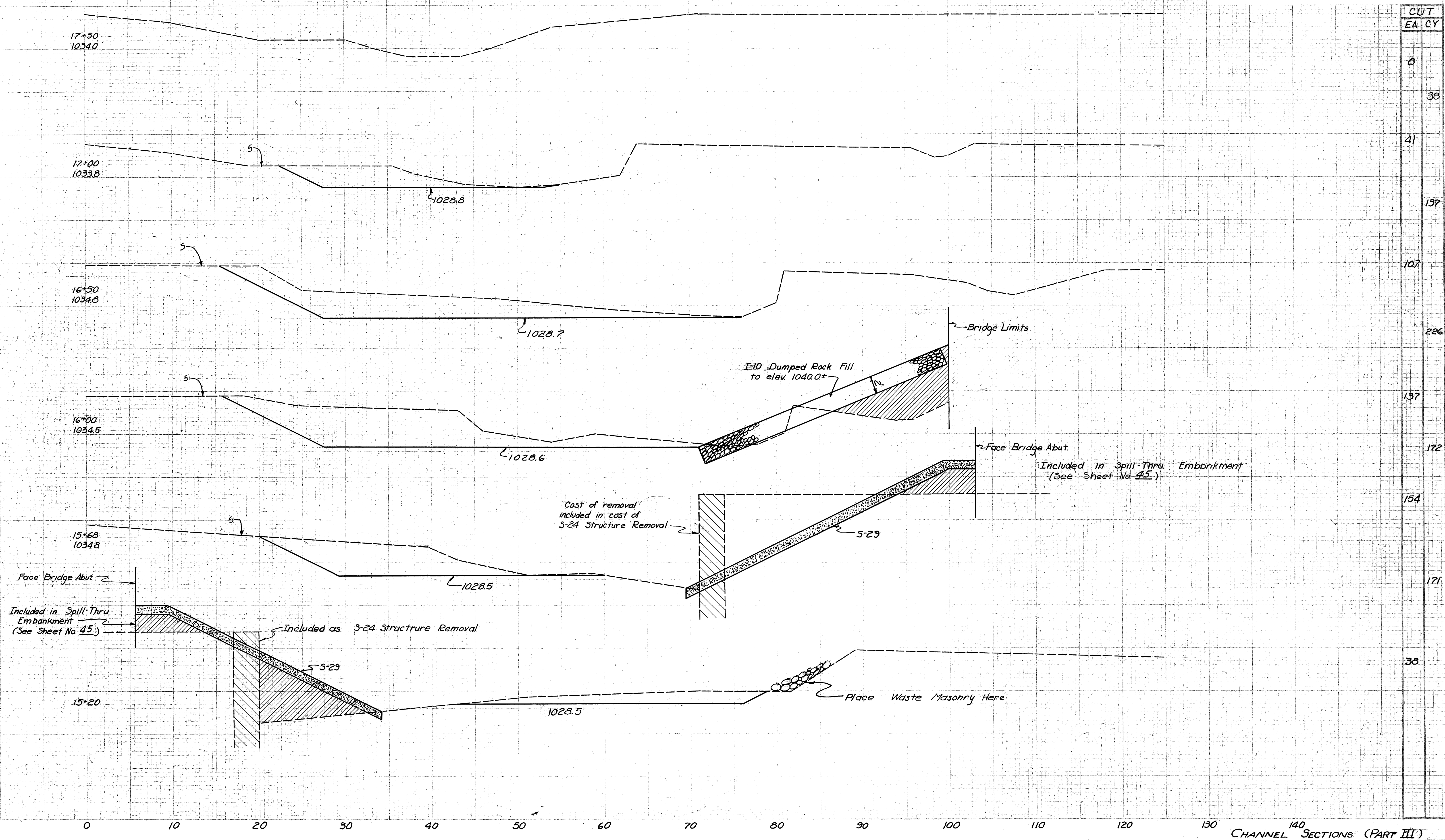
Estimated Quantities
 E-3 Channel Excavation = 1165 Cu. Yds. (Carried to Sheet No. 66)
 1165 (E-3) x 75% (Suitable Material) = 874 Cu. Yds. available for Reducing Roadway Borrow

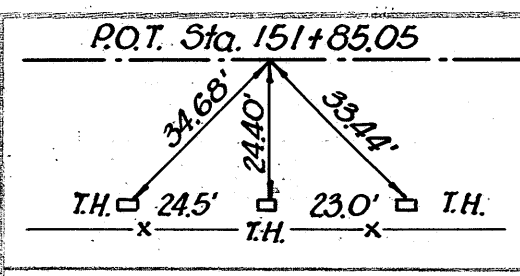
End Work Sta. 17+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

49
74

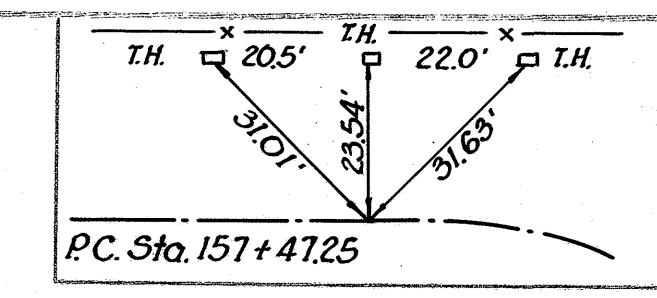
RIC-545-(644)-(905-946)-(1089-1101)
ASD-545-2.87
PART III





RESUME WORK
Sta. 151+00
RESUME PROJECT
Sta. 151+50 S.L.M. = 2.87

Structure No. 1. ASD-545-0295
Sta. 155+70.3 Remove Exist. 18" Pipe Culv.
Sta. 156+00 Construct 24"x112" Pipe
Culvert 64' Lt. & 48' Rt. on 30° R.F. Skew
Use P.C.4 Endwalls, F.L. El. 1109.14
F.L. El. 1108.02 Place Dump Rock
Channel Protection at outlet as
shown.
D.A. = 25 Acres Fill on Culv. @ 110"
Structure No. 2. ASD-545-0299
Sta. 158+18 Remove Exist. 14"x5"
Slab Culvert. Sta. 158+00 Construct
12'-6"x7'-11" by 80' Pipe Arch Culvert (Gage 7-5)
39' Lt. & 41' Rt. on 30° L.F. Skew. For
Special Endwall Details see sheet No. 51
F.L. El. 1107.31 F.L. El. 1106.67
For Channel Details see sheet No. 58
D.A. = 1.6 Sq. Mi. Fill on Culv. @ 25'

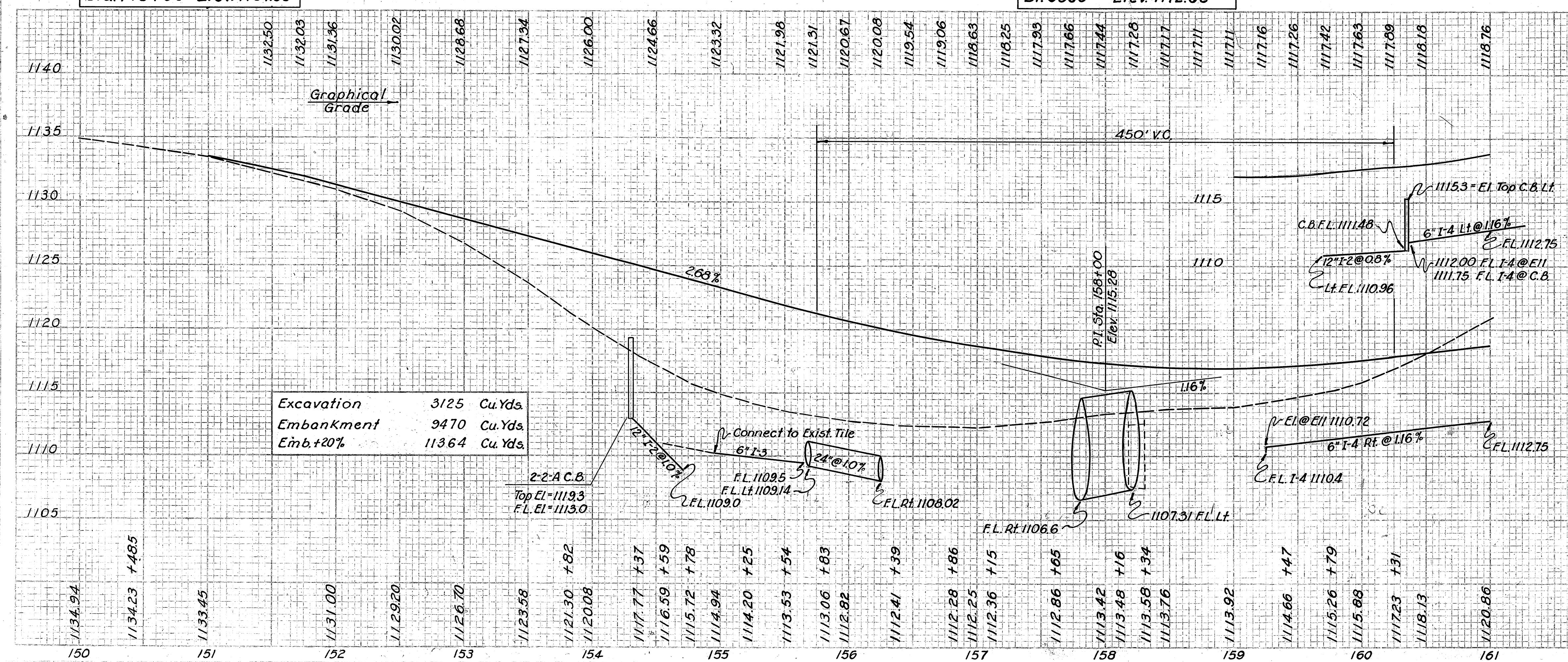
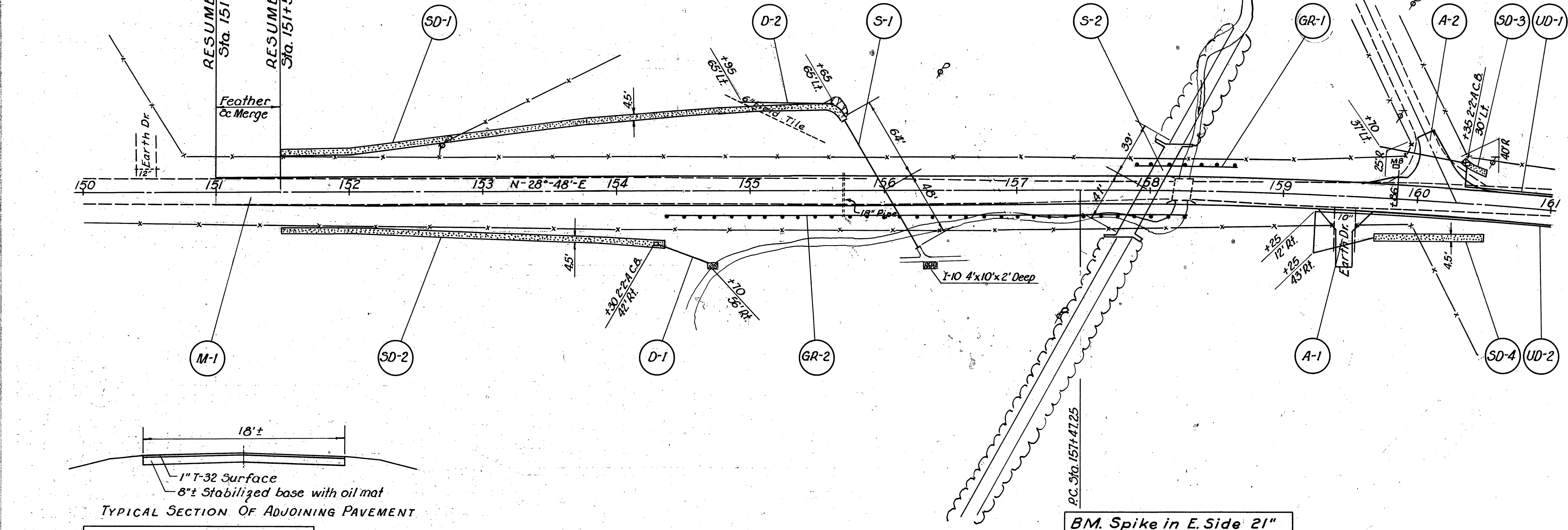


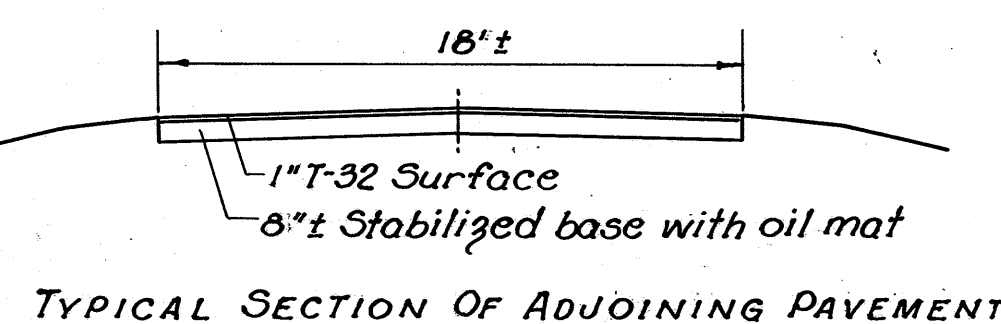
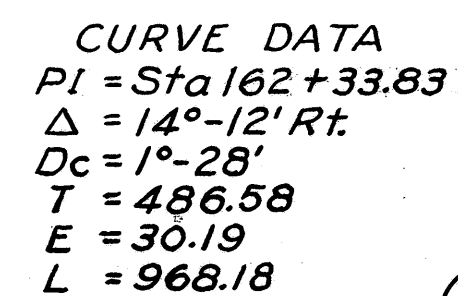
Ref. No.	Station	T-35 Asphaltic Concrete Surface Course Cu. Yds.	B-35 Asphaltic Concrete Base Course Cu. Yds.	B-119 Crushed Concrete Aggregate Course Cu. Yds.	I-2 Class "A" Storm Sewer Lin. Ft.	I-8 Catch Basin No. 2-2-A Each	I-10 Dumped Rock Channel Protect. Cu. Yds.	I-3 Roadway Drainage Lin. Ft.	I-22 Subbase Cu. Yds.	I-1 Drive Pipe Lin. Ft.
A-1	159+46 Rt.									
A-2	160+31 Lt.	6.7		17.6	64	1	0.2			46
D-1	154+30-154+70 Rt.				40	1	0.2			
D-2	154+95-155+65 Lt. From S-1						0.3	70		
M-1	151+00-151+50	3.3	1.1	1.5					1.9	
	Totals	10.0	1.1	34.9	40	2	0.9	70	1.9	46

Ref. No.	Station	S-27 Pipe For Culv. Lin. Ft.	S-28 Sect. Cor. For Rdway Metal Struc. Lin. Ft.	S-1 Concrete Reinforc. For Structure Cu. Yds.	S-4 Excavation For Structure Cu. Yds.	E-2 Channel Excavation Cu. Yds.	E-3 Channel Excavation Cu. Yds.	I-10 Dumped Rock Cu. Yds.	S-24 Removal Existing Structure Lump
S-1	156+00	112		0.82	36	2	0.3	1	
S-2*	158+00	80		18.3	350	65	130.1	1	
	Totals	112	80	19.12	350	101	130.3	see Above	2

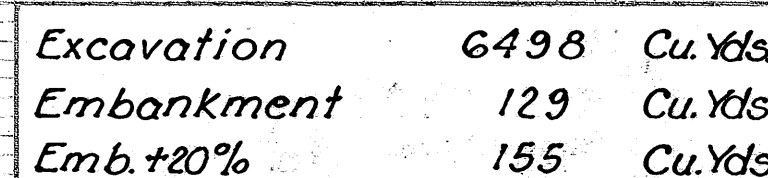
Ref. No.	Station	L-10 Sodding 1/2 Yard per Ft. Sq. Yds.	I-4 Pipe Underdrains Lin. Ft.	I-5 6"-90° Bend For Pipe Underdrains Each	I-15 Guard Rail Steel Beam Deep Lin. Ft.
UD-1	160+35-161+00 Lt.		76	1	
UD-2	159+25-161+00 Rt.		192	10	
S-1	151+50-155+70 Lt.	210			
S-2	151+50-154+40 Rt.	145			
S-3	160+30-160+50 Lt.	10			
S-4	159+70-160+50 Rt.	40			
GR-1	157+87.5-158+62.5 Lt.				75
GR-2	154+37.5-158+25 Rt.				387.5
	Totals	405	268	10	462.5

* E-3 Channel Excavation was calculated across the roadbed before excavation for structures (E-2) was calculated.
• Any additional excavation required to obtain a stable foundation for the structure shall be measured and paid for as Item E-3, Channel Excavation.



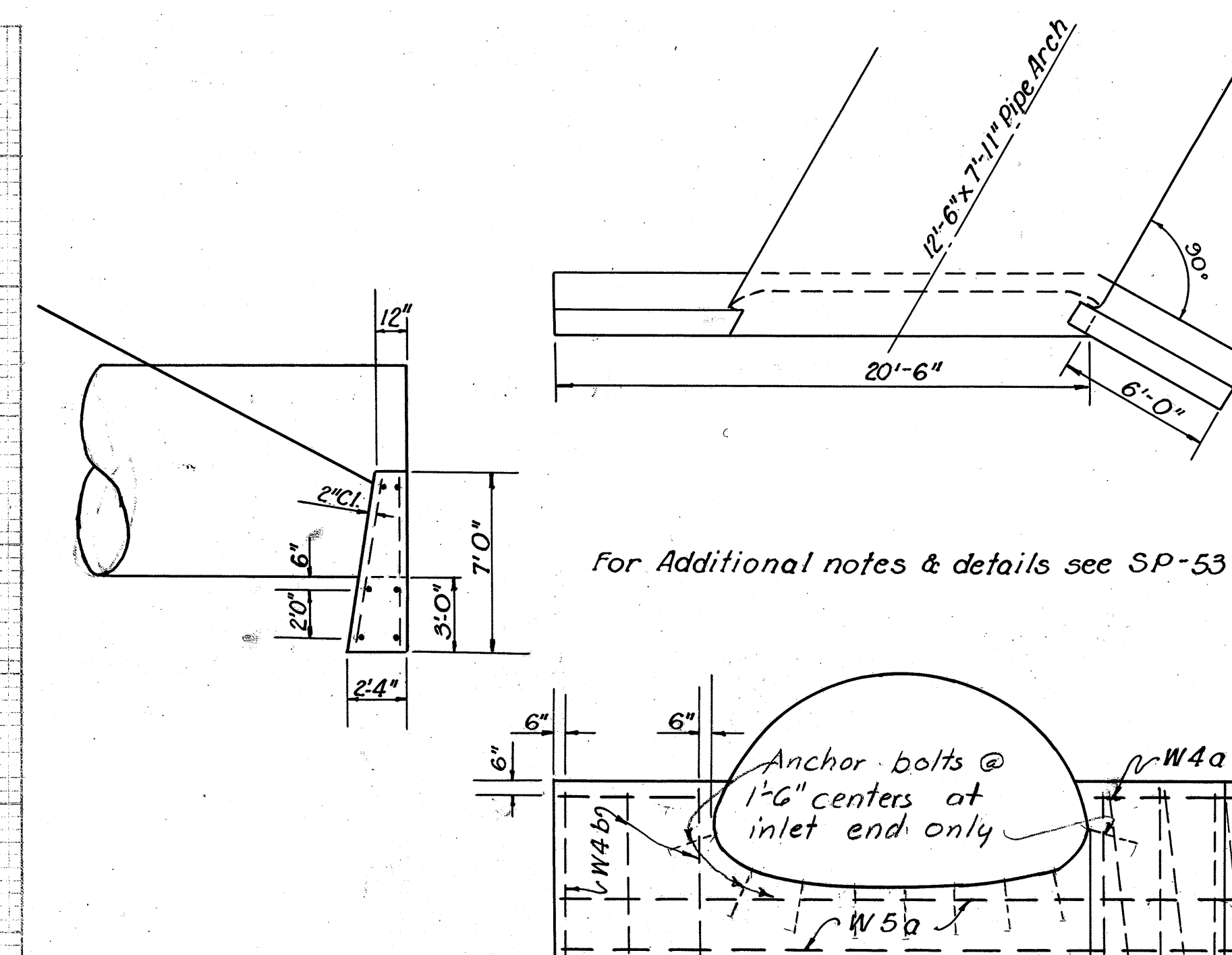


BM. Spike in T. Pole 24' Lt.
Sta. 169+64.5 Elev. 1126.33



Ref. No.	Station	T-35 Asphaltic Concrete Surface Course Cu. Yds.		B-35 Asphaltic Concrete Leveling Course Cu. Yds.		B-119 Crushed Aggregate Base Course Cu. Yds.		I-22 Subbase Cu. Yds.		I-4 Pipe Under- drains Lin. Ft.	
		Var.	2"	Var.		5"		4"		6"	
M-1	168+00-168+50	3.3		3.7		1.7		1.7			
UD-1	161+00-168+00 Lt									700	
UD-2	161+00-168+00 Rt.									700	
* MB-1	164+00 Lt.		1.6			4.4					
	Totals	4.9		3.7		6.1		1.7		1400	

* As per Std. Drwg. DR-



For Additional notes & details see SP-53

Mark	No.	Dia.	Length	Wt.(Lbs)
W5a *	8	5/8"	26'0"	217
W4a	8	1/2"	5'6"	29
W4b	24	1/2"	6'6"	104
Total				350

* Field Bend

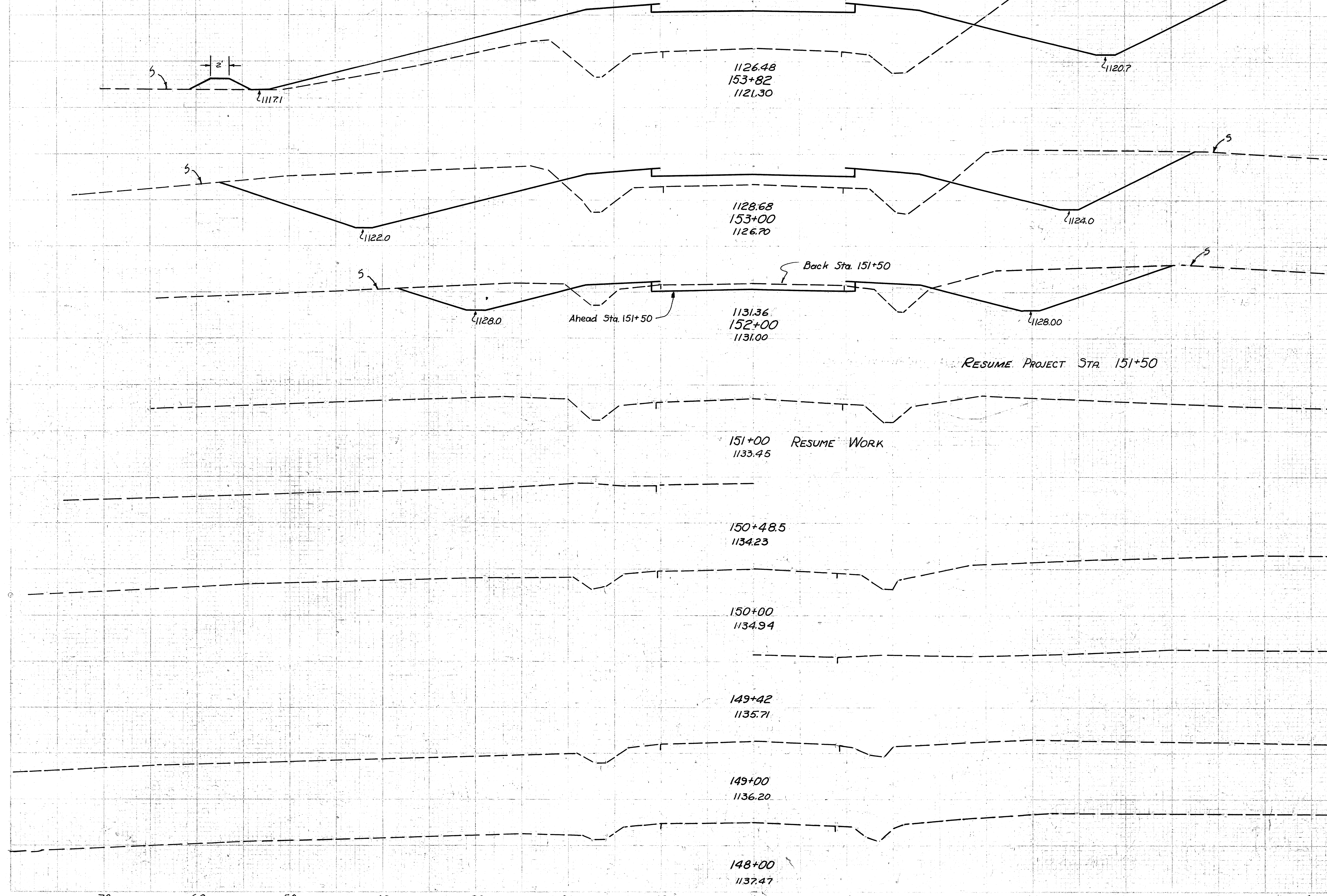
Anchor Bolt details
added by JHB 9/19/12

ENDWALL DETAILS
Sta. 158+00

ANCHOR BOLT
Bolts and nuts to be hot dip
galvanized with threads chased to give
class 2 fit. Include with CMP. for payments

Sta. 161+00 - Sta. 171+00

R/C - 545 - (644) - (9.05-9.46) - (10.89-11.01)
ASD - 545 - 2.87
PART IV



Sta 153+82

END AREA		CU YDS.	
CUT	FILL	CUT	FILL
125	262		
		556	524
241	83		
		657	196
114	23		
		211	43
114	23		
98	23		
		91	22
0	0		

Sta. 151+50

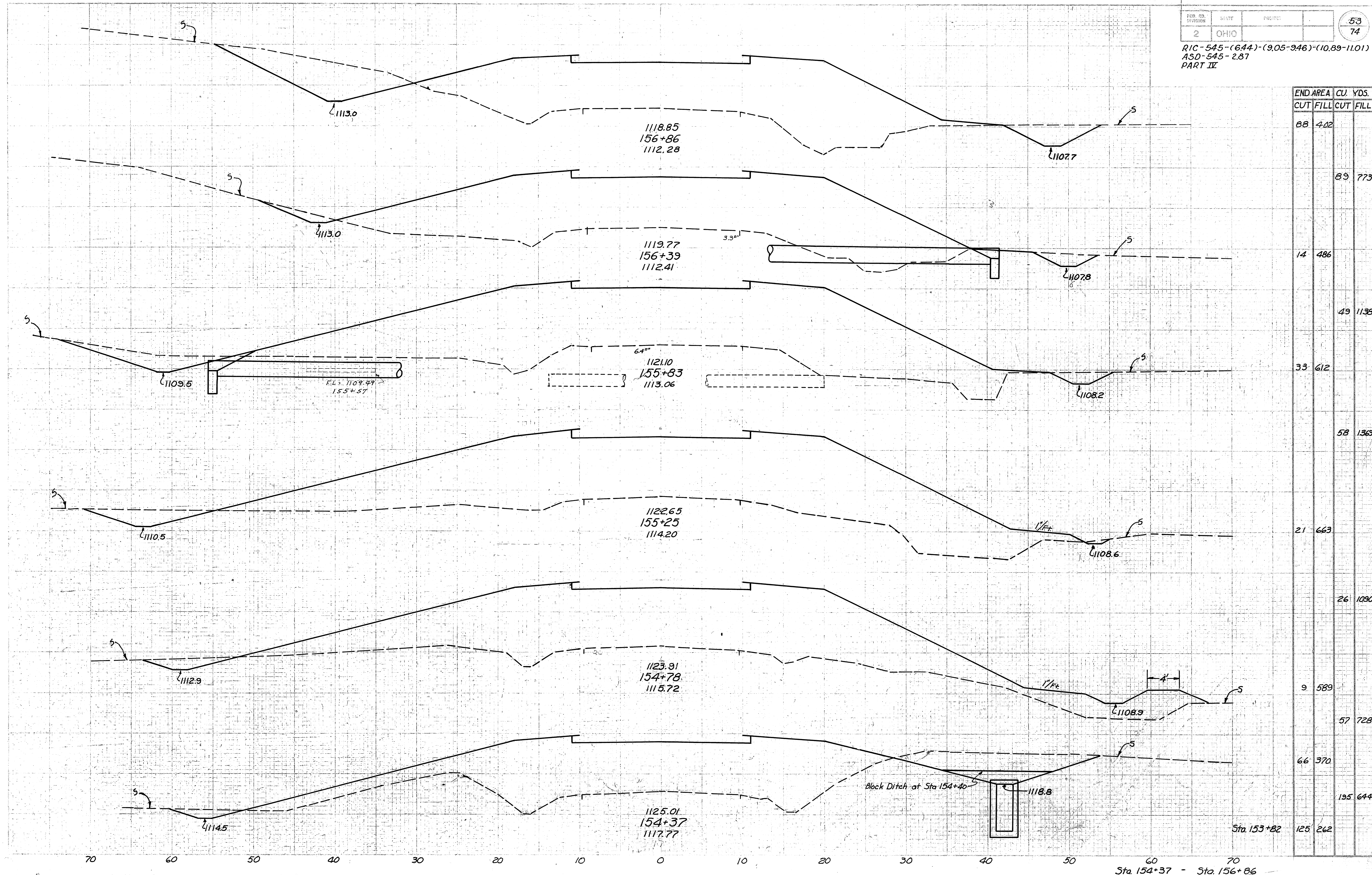
Ahead
Back

RESUME PROJECT STA. 151+50

RESUME WORK

Sta 148+00 - Sta 153+82

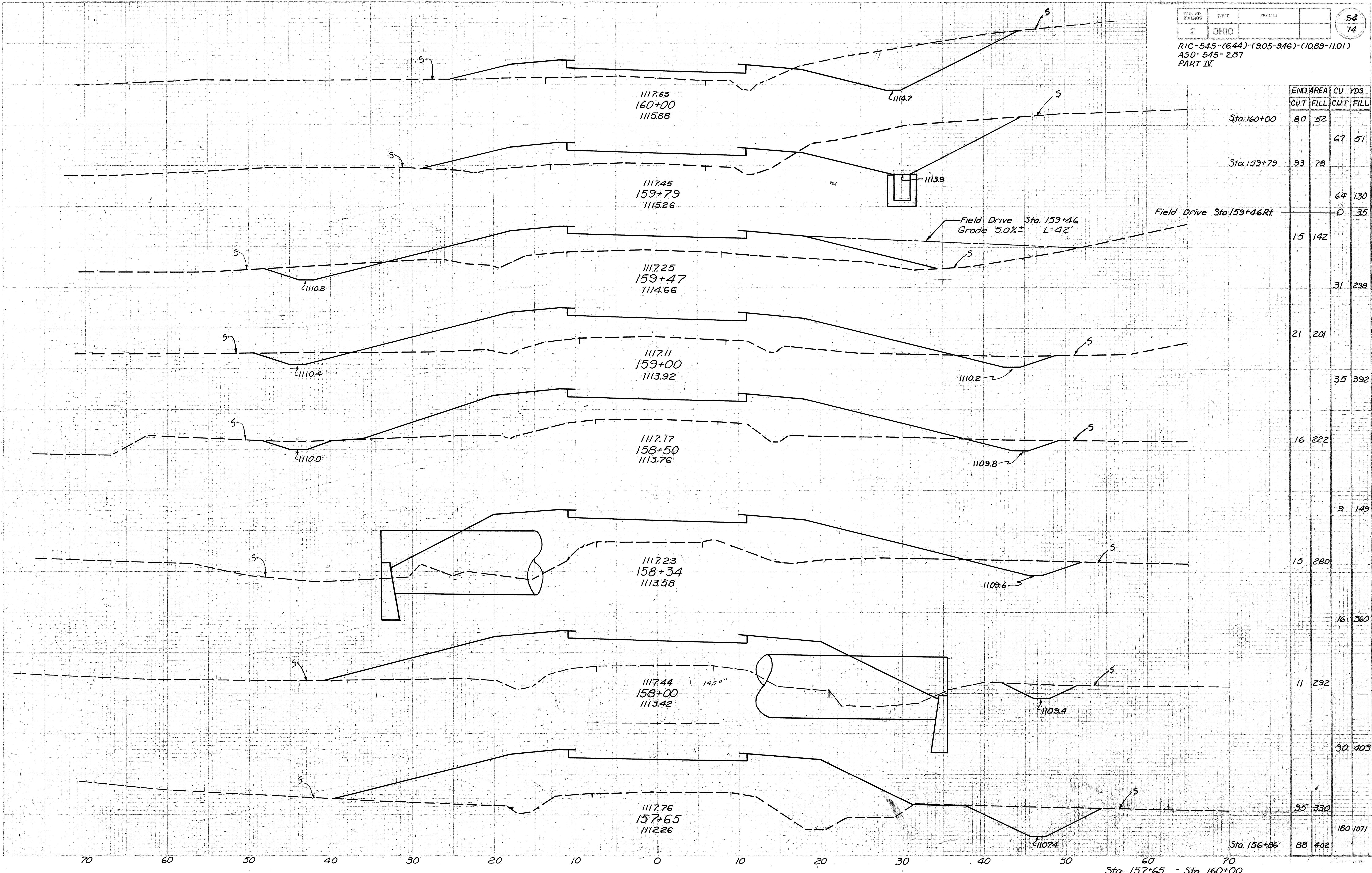
RIC-545-(644)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART IV



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
88	402		
		69	773
14	486		
		49	1138
33	612		
		58	1369
21	663		
		26	1090
9	589		
		57	728
66	370		
		135	644
125	262		

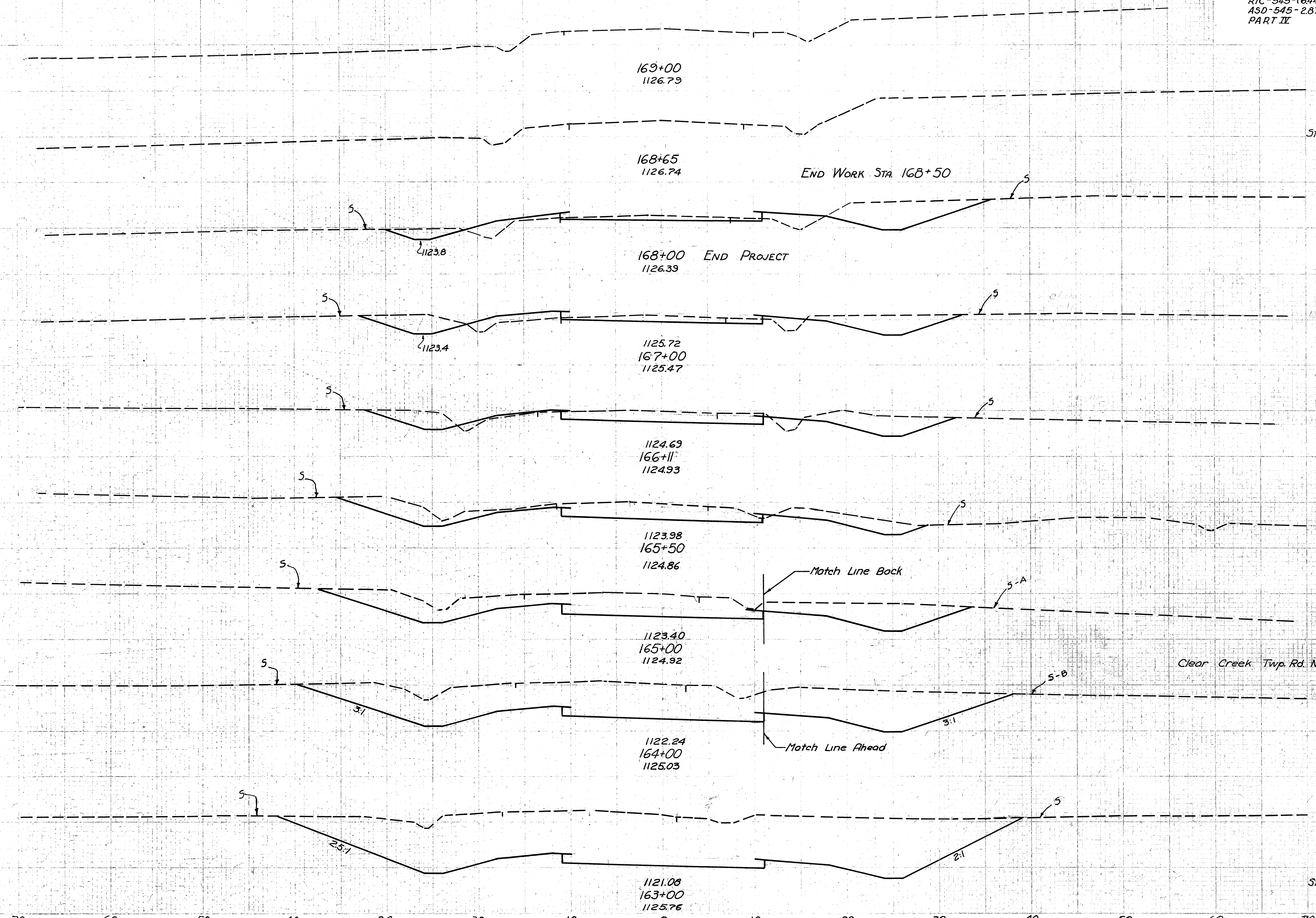
Sta 154+37 - Sta 156+86

RIC-545-(644)-(905-946)-(1089-1101)
 ASD-545-2.87
 PART II



END AREA		CU YDS	
CUT	FILL	CUT	FILL
Sta. 160+00	80	52	
		67	51
Sta. 159+79	93	78	
		64	130
Field Drive Sta. 159+46 Rt		0	35
	15	142	
		31	298
	21	201	
		35	392
	16	222	
		9	149
	15	280	
		16	360
	11	292	
		30	403
	35	330	
		180	1071
Sta. 156+86	88	402	

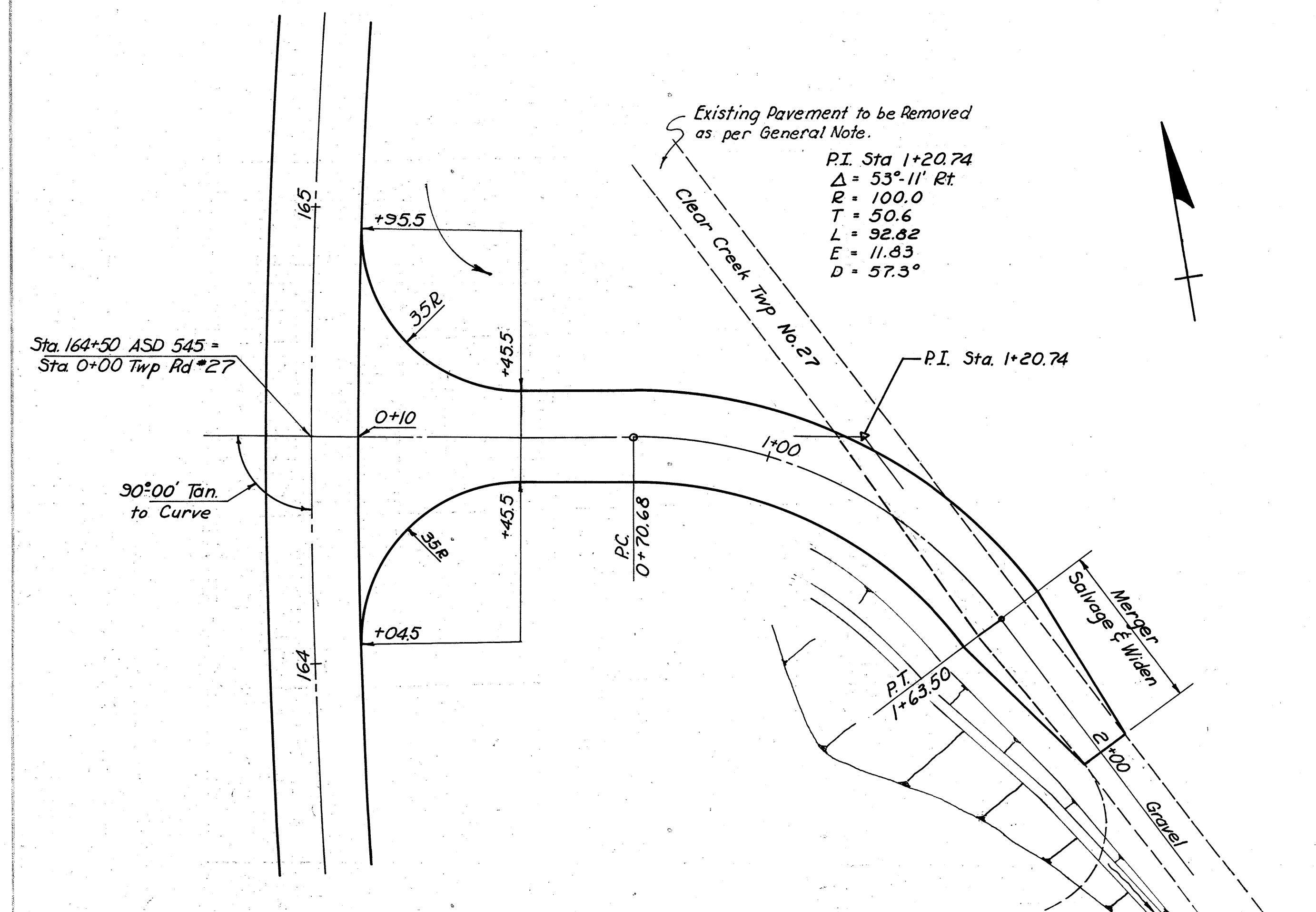
Sta. 157+65 - Sta. 160+00



END AREA		CU YDS	
CUT	FILL	CUT	FILL
0	0		
		49	15
53	16		
		191	56
50	14		
		182	36
60	8		
		151	9
74	0		
		188	0
129	0		
92	0		
		233	0
		681	13
159	0		
235	0		
		1133	0
377	0		
		809	0
496	0		

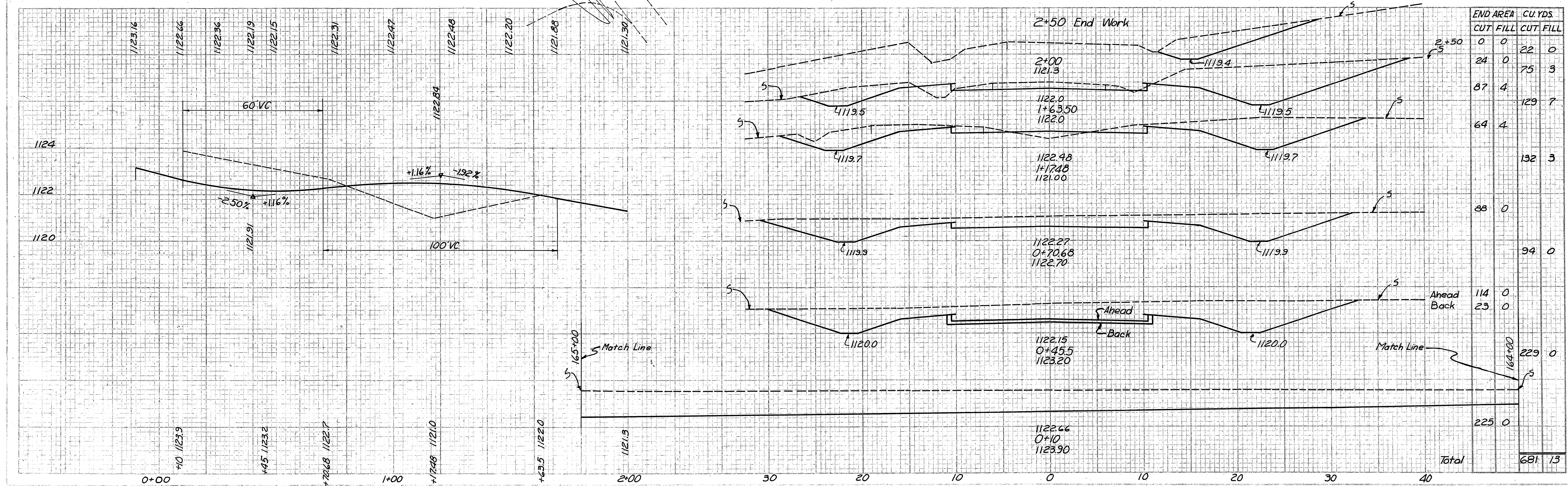
Sta. 163+00 - Sta. 169+00

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
 ASD-545-2.87
 PART IV

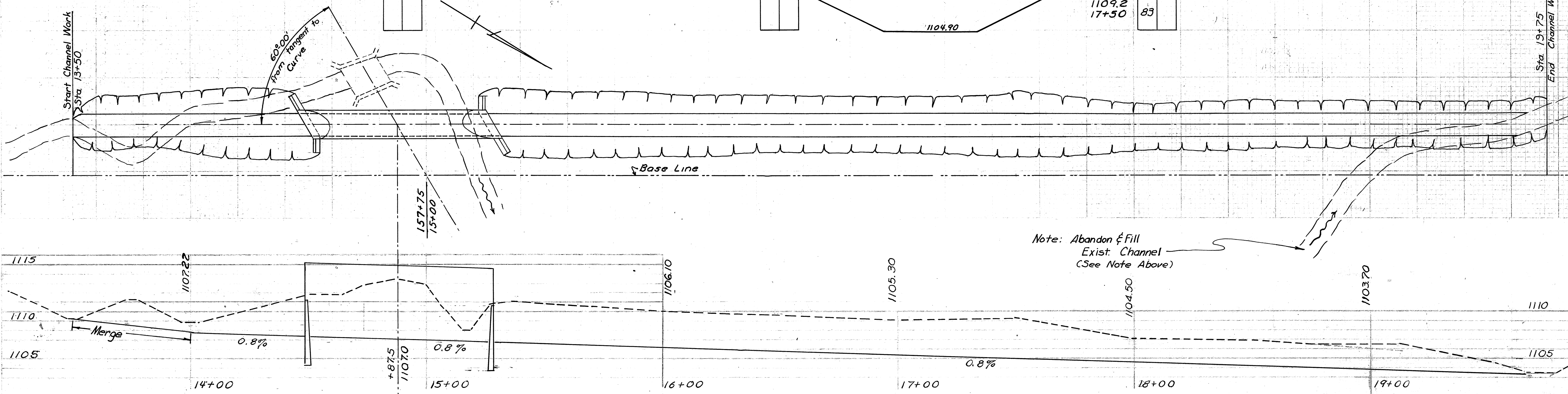
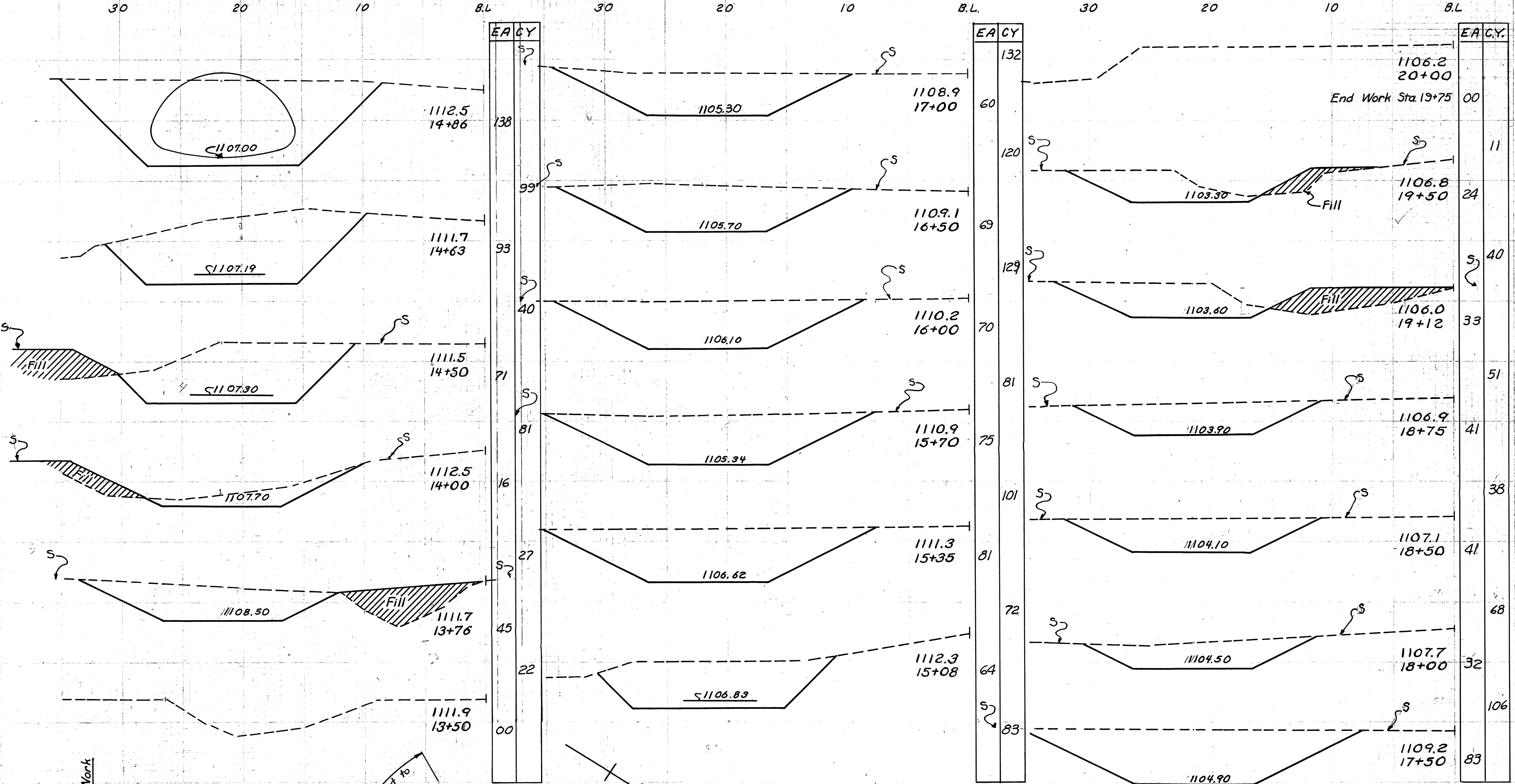


ESTIMATED QUANTITIES				
5.8	CuYds	T-35	1 1/2" Asphaltic Conc. Surface Course	
5.8	CuYds	B-35	1 1/2" Asphaltic Conc. Leveling Course	
49.0	Gal.	T-30	Bituminous Prime Coat	
60.0	CuYds	B-119	5" Crushed Aggregate Base Course	
49.7	CuYds	F-22	4" Subbase	

Pav't from Sta 0+10 to Sta 0+45.5 - See Typical on Sheet No. 17
 Pav't from Sta 0+45.5 to Sta 1+63.5 - See Typical on Sheet No. 39



RIC-545-(644)-(905-946)-(10.89-11.01)
 ASD-545-287
 PART II



NOTE: The stations are identified in the field by a Tacked Hub with a Flat Stake with Stations Painted thereon.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

59
74

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
PART I
4.9 Mi. ± N. of Mansfield

10' With Guard Rail
20' Pavement
8' Without Guard Rail
Flexible Type Pavement with T-35 Surface
Proposed Typical Section

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.

B.M. Chiseled X on
South West Wingwall
Elev. 1067.41 - 102'
Lt. Sta. 355+63

EXISTING BRIDGE DATA
RIC-545-0675
Type: Low Steel Truss
Skew: 0°
Alignment: 1° Rt Rear; 18° R.C. Fwd
Clear Span: Rt. 37'-3"; Lt. 36'-2"
Clear Roadway: 15'-6"
Substructure: Rear - Stone, Conc. Gravity
Forward - Stone
Loading: S-3.6 - 46 (Legal loads reduced 55%)
Condition: Fair

DRAINAGE AREA = 2.3 Sq. Miles

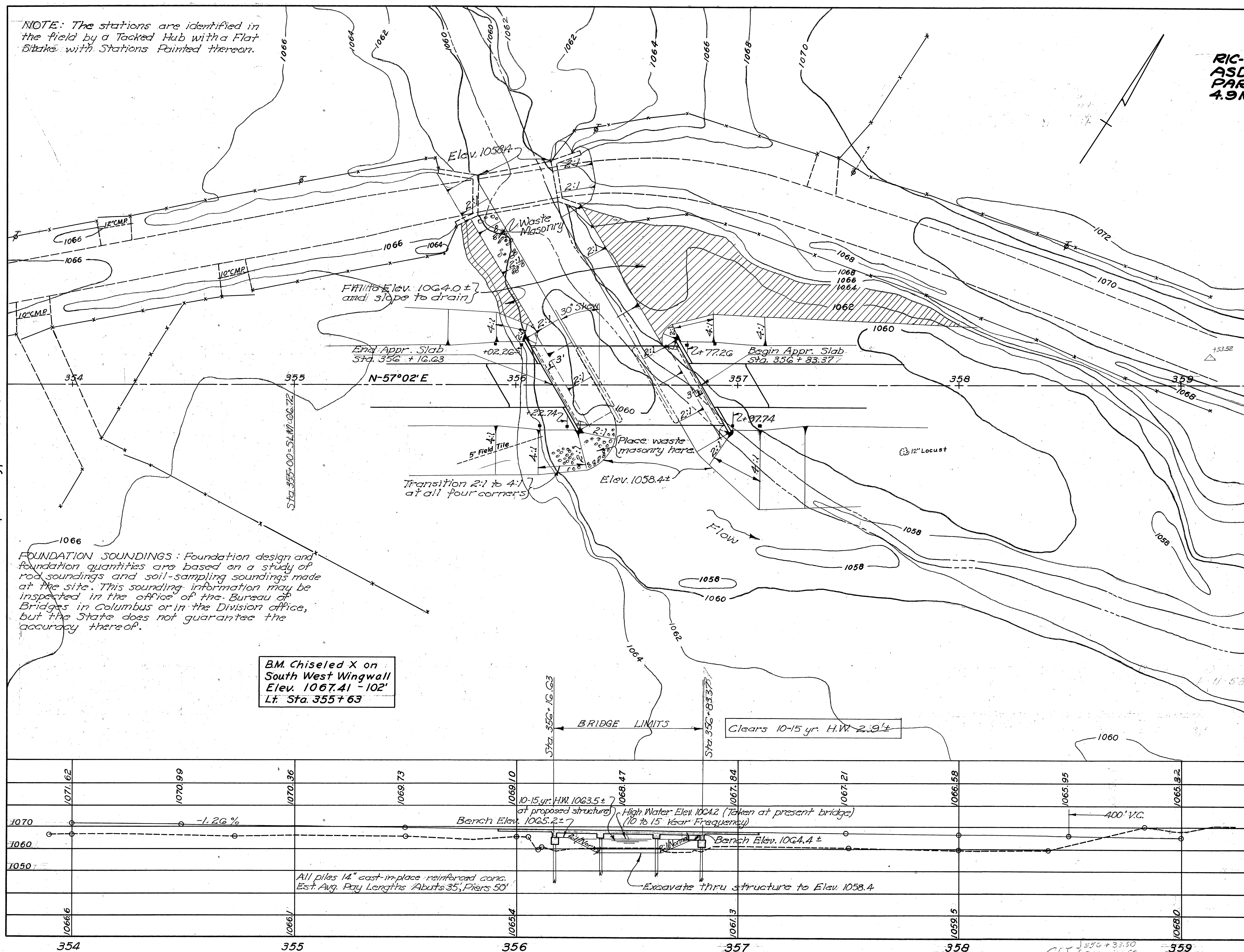
PROPOSED STRUCTURE
TYPE: Continuous reinf. conc. slab
with capped pile substructure.
SPAN: 20'-25'-20' c/c brg's.
ROADWAY: 36' w/ guard rails.
LOAD FREQUENCY: CF=130(57)
SKEW: 30° R.F.
WEARING SURFACE: 3" Mono. Conc.
APPR. SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. RIC-545-0675
RICHLAND CO. OVER BRANCH OF BRUBAKER CREEK
SEC. RIC-545-06.44 Sta. 356+16.83
SCALE 1"=20' to 356+83.37

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGN	DRAWN	CHECKED	REVIEWED
	B.D.H.	B.D.H.	D.H.S.	J.H.B.	



354

355

356

357

358

359

RIC-545-(8.44)-(9.05-9.4Q)-(10.89-11.01)
ASD-545-2.87
PART I

GENERAL NOTES

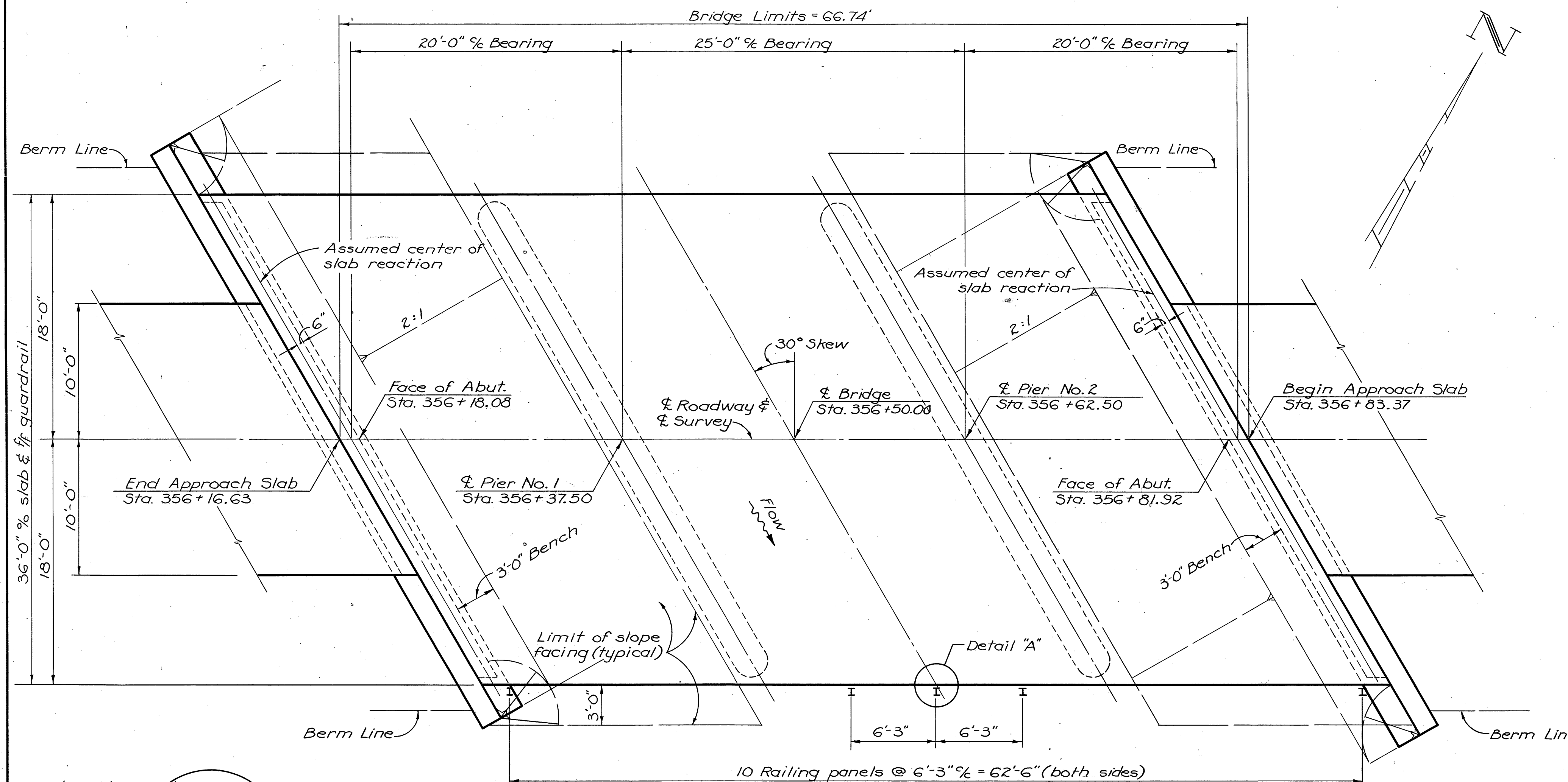
REFERENCE shall be made to Standard Drawings A-1-54 & P-1-54, revised 12-1-54 and CS-1-54 revised 7-16-56.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Stringers, floor beams and guard rail (including guard rail on approaches) shall be carefully dismantled and piled along the right-of-way for disposal by the State's forces. Suitable waste masonry may be placed as bank protection where shown on plans or at the direction of the Engineer.

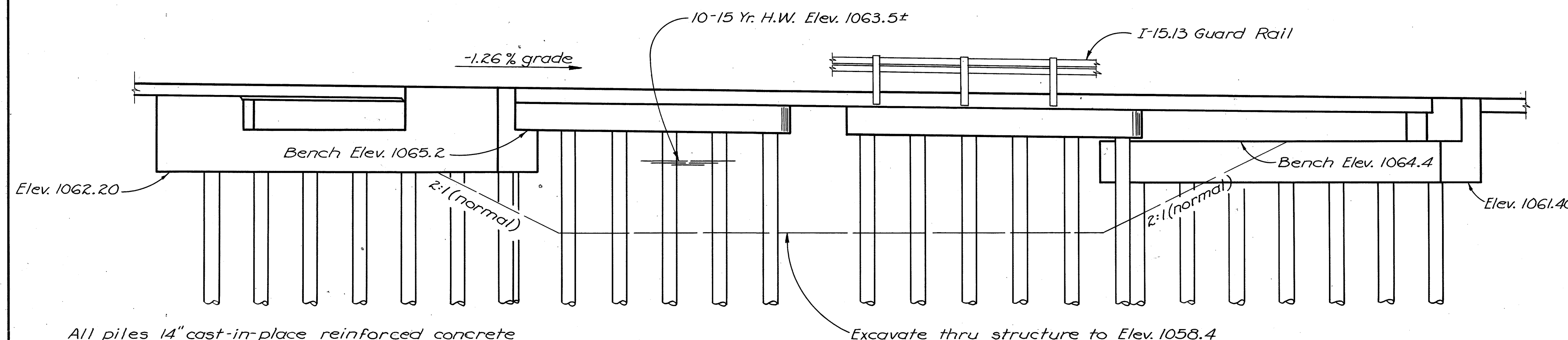
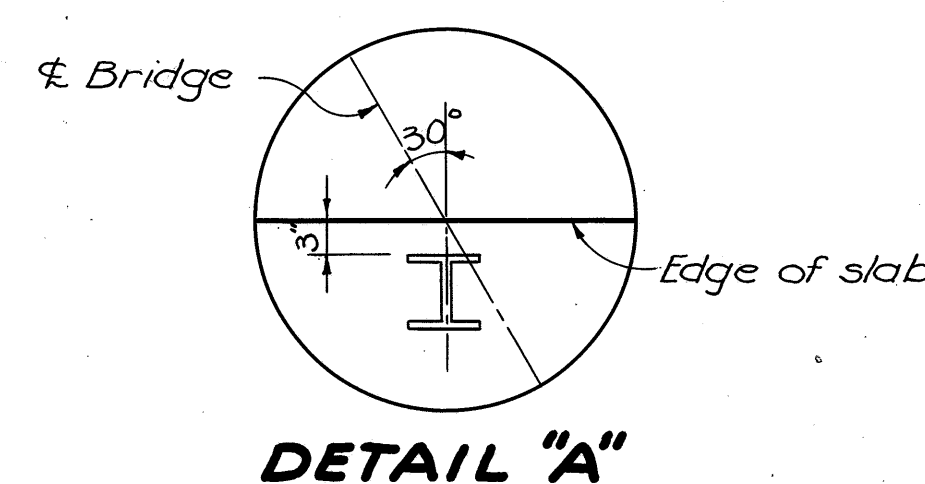
PILES shall be driven to a minimum bearing capacity of 20 tons per pile for the abutments and 29 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than No. 7 gauge, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

SLOPE FACING (S-29.05 TYPE) shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 1058.4 and transversely to 3 ft. outside the edge of the superstructure.



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abut.	Piers	Super.	Gen'l
E-2	56	Cu. Yd.	Unclassified excavation	56			
E-3	325	Cu. Yd.	Channel excavation				325
S-1	108	Cu. Yd.	Class "C" concrete, superstructure and pier caps		15	93	
S-1	50	Cu. Yd.	Class "E" concrete, abutments	50			
S-4	32,184	Lbs.	Reinforcing steel	5,287	3,932	22,965	
S-14	133.48	Lin. Ft.	Railing (Type I-15.13 with galvanized steel posts and bolts)			133.48	
S-16	Lump	Sum	First test pile				Lump
S-18	1090	Lin. Ft.	14" cast-in-place reinforced concrete piles	490	600		
S-24	Lump	Sum	Removal of existing structure				Lump
S-29	16	Cu. Yd.	Porous backfill	16			
S-29	60	Cu. Yd.	Slope facing (S-29.05 type)				60

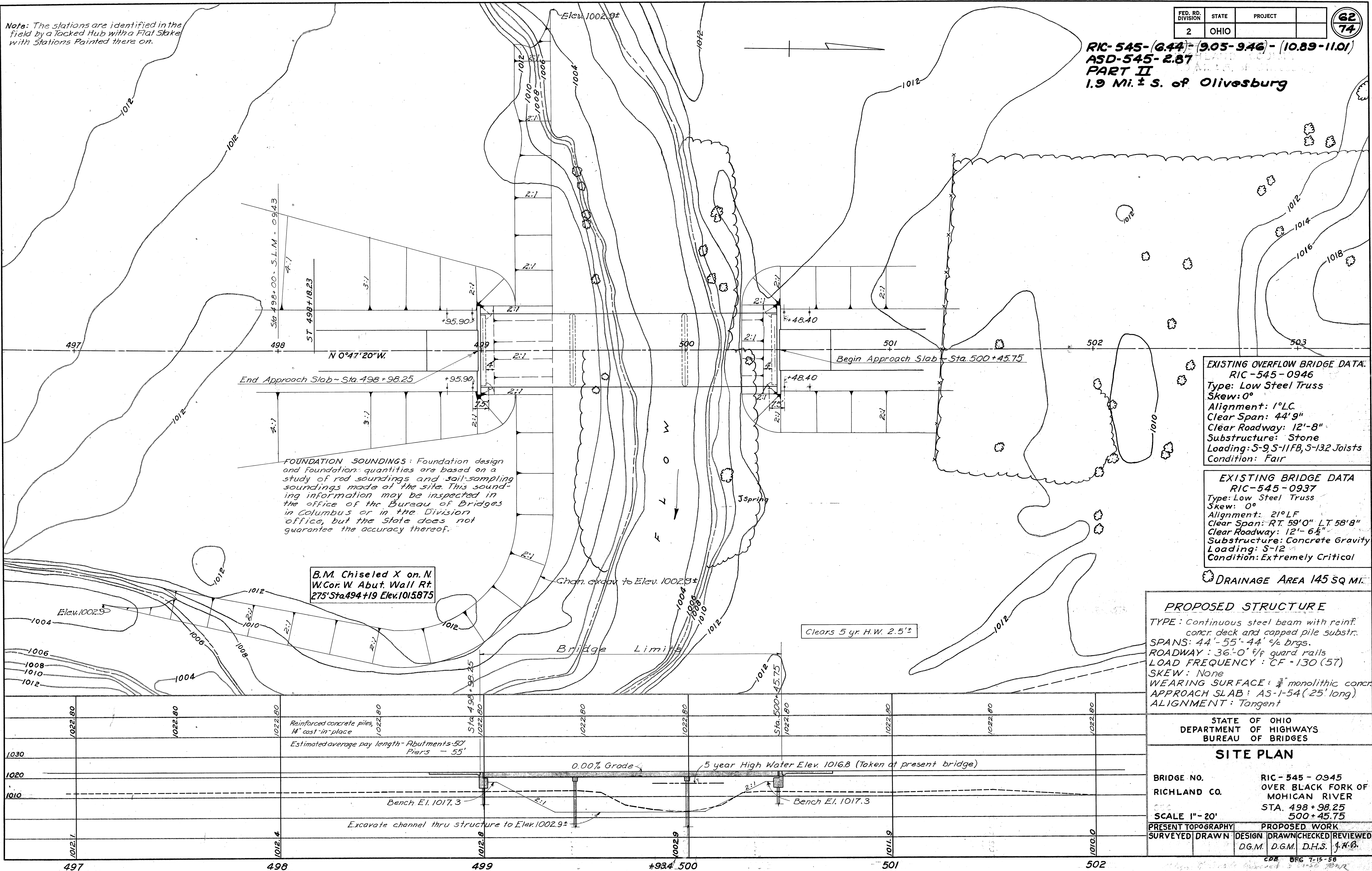
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES						
BRIDGE NO. RIC-545-0675 OVER BR. OF BRUBAKER CREEK						
RICHLAND COUNTY				STA. 356+16.63 TO 356+83.37		
DESIGNED Dm	DRAWN Dm	TRACED JGW	CHECKED WJ	REVIEWED CDB	DATE	REVISED
				BFG 6-26-58		

Note: The stations are identified in the field by a Tocked Hub with a Flat Stake with Stations Painted there on.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

62
74

RIC-545-(644)-(905-946)-(10.89-11.01)
ASD-545-2.87
PART II
1.9 Mi. ± S. of Olivesburg



EXISTING OVERFLOW BRIDGE DATA
RIC-545-0946
Type: Low Steel Truss
Skew: 0°
Alignment: 1° LC
Clear Span: 44' 9"
Clear Roadway: 12'-8"
Substructure: Stone
Loading: S-9S-11FB, S-132 Joists
Condition: Fair

EXISTING BRIDGE DATA
RIC-545-0937
Type: Low Steel Truss
Skew: 0°
Alignment: 21° LF
Clear Span: RT. 59' 0" LT. 58' 8"
Clear Roadway: 12'-6"
Substructure: Concrete Gravity
Loading: S-12
Condition: Extremely Critical

DRAINAGE AREA 145 SQ. MI.

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinf. concr. deck and capped pile substr.
SPANS: 44' - 55' - 44' 3/4 brgs.
ROADWAY: 36'-0" w/ guard rails
LOAD FREQUENCY: CF - 130 (57)
SKEW: None
WEARING SURFACE: 3" monolithic concr.
APPROACH SLAB: AS-1-54 (25' long)
ALIGNMENT: Tangent

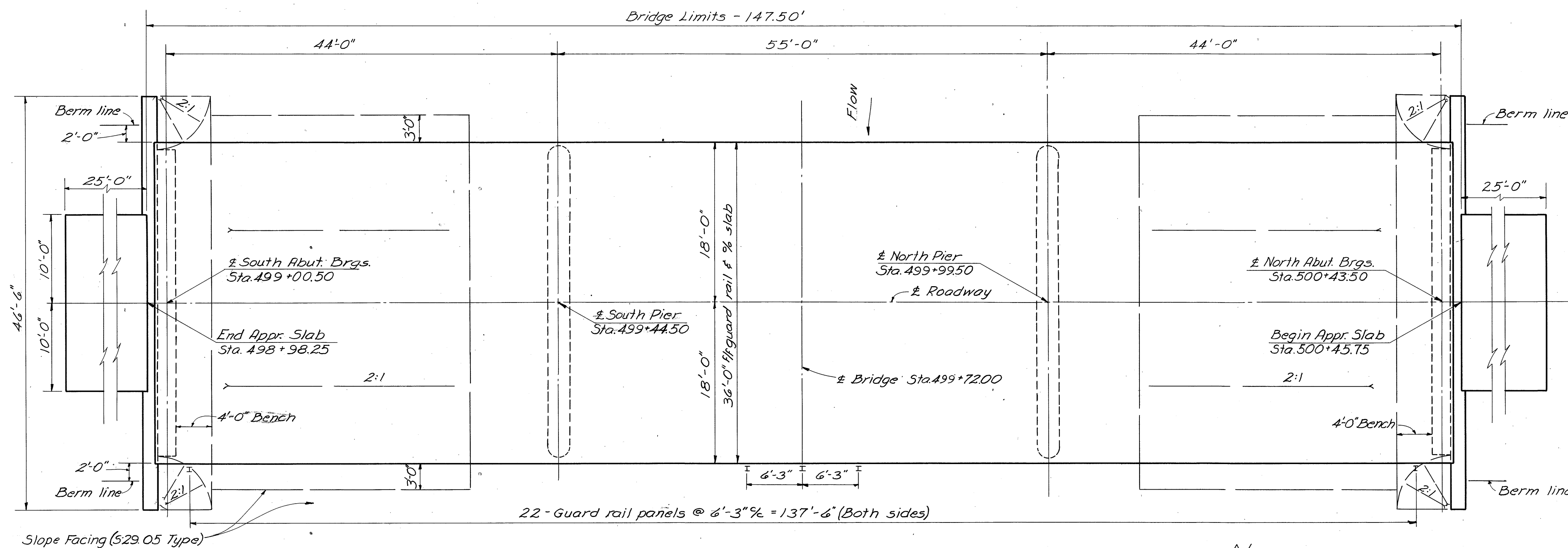
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

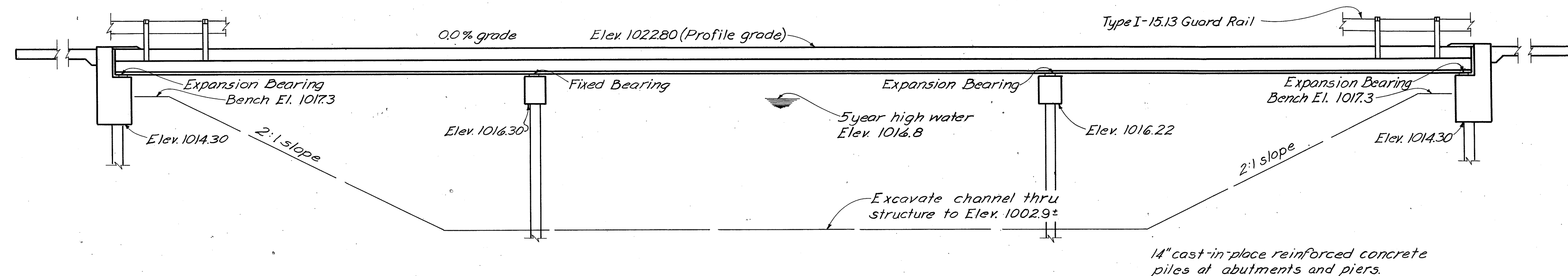
BRIDGE NO. RIC-545-0945
RICHLAND CO. OVER BLACK FORK OF MOHICAN RIVER
STA. 498+98.25
500+45.75

SCALE 1"=20'
PRESENT TOPOGRAPHY
SURVEYED DRAWN DESIGN DRAWN CHECKED REVIEWED
D.G.M. D.G.M. D.H.S. J.K.O.

RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
PART II



GENERAL PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CSB-1-55, sheets 1, 2, and 6, all revised 3-1-58.

REMOVAL OF EXISTING STRUCTURES: When no longer needed to maintain traffic the existing structures shall be removed. Floor beams and stringers on RIC-545-0946, temporary end post support on RIC-545-0937, and guardrail on both bridges and on approaches to both bridges shall be placed along the right-of-way at the disposal of the State's forces.

PILES shall be driven to a minimum bearing capacity of 27 tons per pile for the abutments and 33 tons per pile for the piers.

SLOPE FACING (S-29.05 Type) shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 1002.9 and transversely to 3ft. outside the edge of the superstructure.

BUMPER ANGLES as detailed on Standard Drawing CSB-1-55, sheet 1, shall be provided.

SLAB THICKNESS is 7 1/4" which includes 3/4" for monolithic wearing surface.

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN'L
E-2	57	Cu. Yd.	Unclassified excavation		57		
E-3	4433	Cu. Yd.	Channel excavation				4433
S-1	132	Cu. Yd.	Class "C" concrete, superstructure	132			
S-1	20	Cu. Yd.	Class "C" concrete, pier caps			20	
S-1	77	Cu. Yd.	Class "E" concrete, abutments		77		
S-4	45,493	Lb.	Reinforcing steel	35,815	5563	4115	
S-7	103,300	Lb.	Structural steel	103,300			
S-8	103,300	Lb.	Field painting of structural steel	103,300			
S-14	295	Lin. Ft.	Railing (Type I-15.13 with galvanized steel posts and bolts)	295			
S-16	Lump	Sum	First test pile				Lump
S-18	1370	Lin. Ft.	14" cast-in-place reinforced concrete piles.		600	770	
S-24	Lump	Sum	Removal of existing structures.				Lump
S-29	18	Cu. Yd.	Porous backfill		18		
S-29	116	Cu. Yd.	Slope Facing (S-29.05 Type)				116

REINFORCING STEEL LIST

MARK	No.	LENGTH	WEIGHT	SHR	BENDING DIAGRAMS		MARK	No.	LENGTH	WEIGHT	SHR
Superstructure							Piers				
S 401	247	35'-8"	13,232	S			P 1001	12	32'-6"	1678	S
S 402	212	37'-6"	11,941	S			P 801	8	32'-6"	694	S
S 403	44	22'-0"	1,454	S			P 701	84	4'-0"	687	S
S 501	247	35'-8"	9,188	S			P 501	4	32'-6"	136	S
Abutments							P 502	72	6'-3"	449	B
A 801	24	18'-4"	1175	S			P 503	12	6'-4"	79	B
A 802	24	24'-4"	1559	S			P 504	50	3'-3"	169	B
A 601	28	10'-11"	459	B			P 401	56	5'-5"	203	B
A 602	38	12'-10"	732	B			Replacement Bars				
A 501	52	9'-4"	504	B			RE 1001	1	7'-2"	-	S
A 502	16	23'-11"	399	S			RE 801	1	6'-6"	-	S
A 503	24	7'-11"	198	S			RE 701	1	4'-0"	-	S
A 504	8	7'-5"	62	S			RE 601	1	5'-11"	-	S
A 505	4	4'-11"	21	S			RE 501	1	5'-7"	-	S
A 506	4	12'-11"	54	S			RE 401	1	6'-2"	-	B
A 507	2	23'-2"	48	S							
A 508	50	2'-11"	152	B							
A 401	48	6'-2"	198	B							

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES							
GENERAL PLAN AND ELEVATION, NOTES & ESTIMATED QUANTITIES, & REINFORCING STEEL LIST BRIDGE NO. RIC-545-0945 OVER BLACK FORK OF MOHICAN RIVER RICHLAND COUNTY STA 498+98.25 500+45.75							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
MRG	MRG	JEP	NJB	EDB	7-15-58		

RIC-545-(6.44)-(9.05-9.46)-
(10.89-11.01)

ASD-545-2.87
PART III
9.1[±] Mi. N. OF MANSFIELD

CURVE DATA
P.I. Sta. 585+31.10
Δ=2° 46"
Dc=0° 52"
T=159.65'
E=1.92'
L=319.23'

Note: Survey identified in field
by Nail & Shiner and yellow paint.

Nail & Shiner in
1st T. Pole S. of Ric.
545-1101 Br.

Nail & Shiner in
N.W. Side 14" Walnut
End of S.E. Wing Ric.
545-1101 Br.

P.O.T. Sta.
581+13.92

Dumped Rock Fill 2' thick
to Elev. 1040.0.

Transition 4:1 to 2:1

Elev. 1028.0±

N 43° 11' E

End Appr. Slab
Sta. 581+58.89

Slope Transition

Place waste
masonry here

Begin Appr. Slab
Sta. 582+77.62

Fill to Elev. 1034.0±
and slope to drain

B.M. Spike in Root 18" Locust 92' Rt.
Sta. 583+38 Elev. 1036.185

Clears Assumed 5-10 yr. H.W. G-2 ±

EXISTING BRIDGE DATA
RICHLAND - 545-1101
Type - Conc. Girder
Skew - 30° L.F.
Alignment - Tangent
Clear Span - 68'
Clear Roadway - 19'
Substructure - Conc. Gravity
Loading - H-10
Condition - Fair

DRAINAGE AREA 12.0 SQ. MI.

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.

PROPOSED STRUCTURE
TYPE: Continuous reinf. conc. slab with capped pile substructure.
SPAN: 36'-45'-36' % brgs.
ROADWAY: 36' 1/4 guard rails.
LOAD FREQUENCY: CF=130(57)
SKEW: 30° L.F.
WEARING SURFACE: 3/4" Mono Conc.
APPR. SLAB: 45'-54' (25' long)
ALIGNMENT: Tangent.

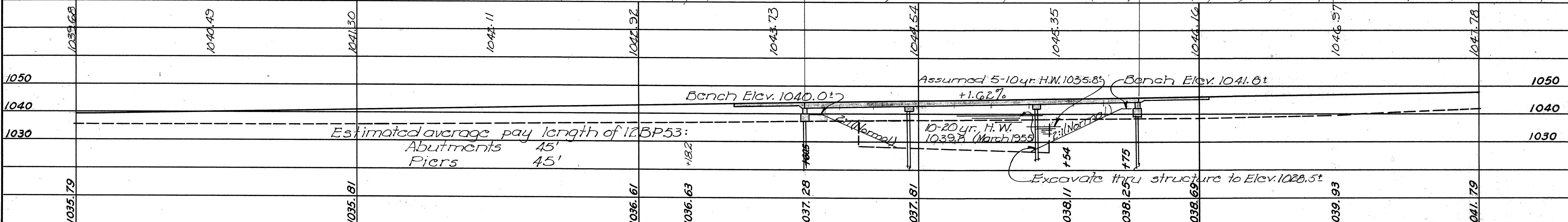
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. RIC 545-1101
RICHLAND CO. OVER WHETSTONE CREEK.
S. R. 545

SEC. STA. 581+58.89
SCALE 1"=20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	B.D.H.	B.D.H.	H.L.C.	J.H.B.

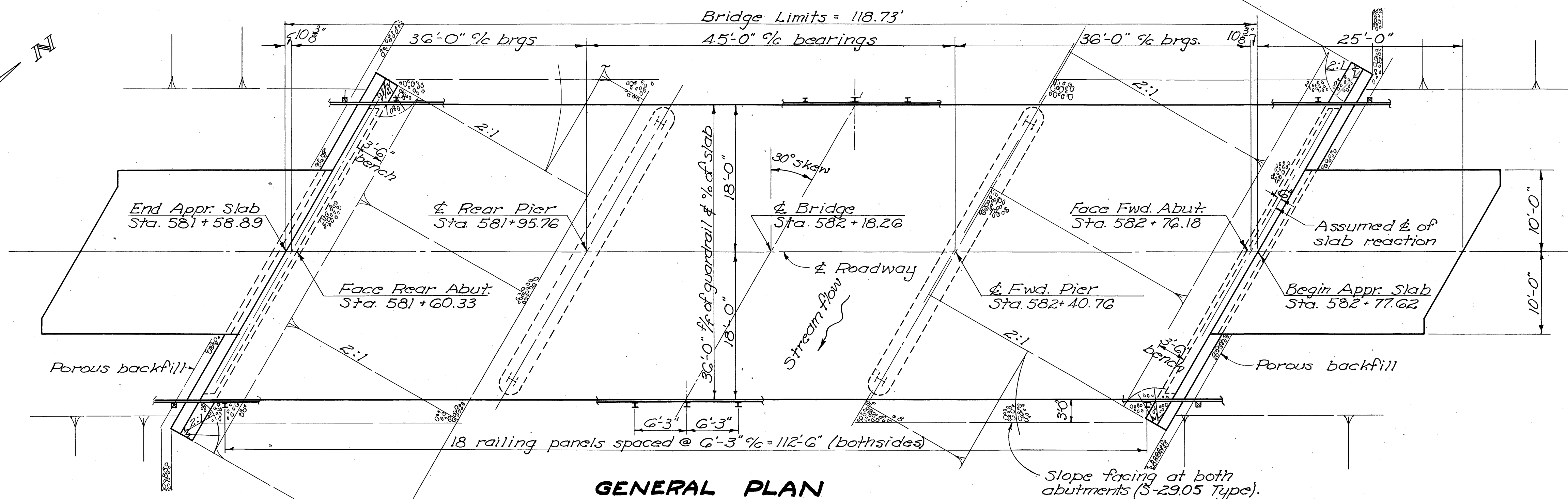


Estimated average pay length of 12 BP 53:
Abutments 45'
Piers 45'

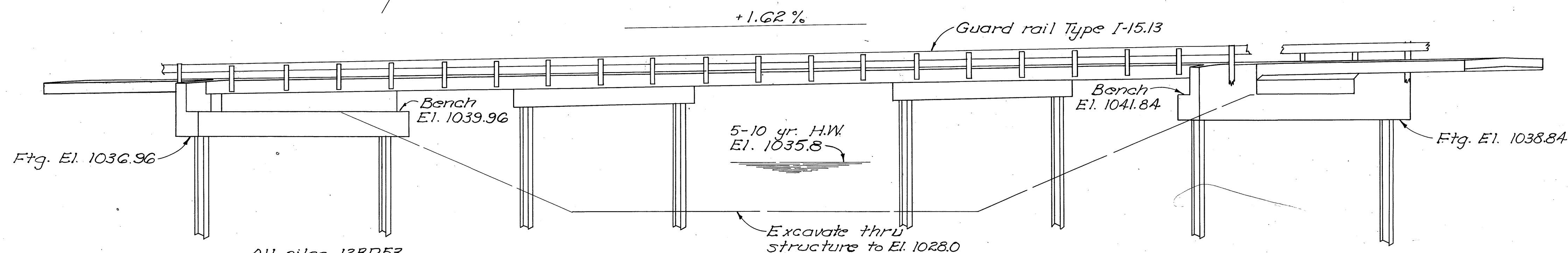
Bench Elev. 1040.0±

Assumed 5-10 yr. H.W. 1035.8±
10-20 yr. H.W. 1039.8 (March 1959)

Excavate thru structure to Elev. 1028.5±



GENERAL PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-54, Sheets 1&2 revised 7-16-56, and A-1-54 and P-1-54, both revised 12-1-54.

REMOVAL OF EXISTING STRUCTURE : When no longer needed to maintain traffic the existing structure shall be removed. Suitable waste masonry may be used as bank protection at the direction of the Engineer.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles:

32 tons per pile using a 11,000 ft. lb. hammer
29 tons per pile using a 15,000 ft. lb. or greater hammer

For the pier piles:

46 tons per pile using a 15,000 ft. lb. or greater hammer

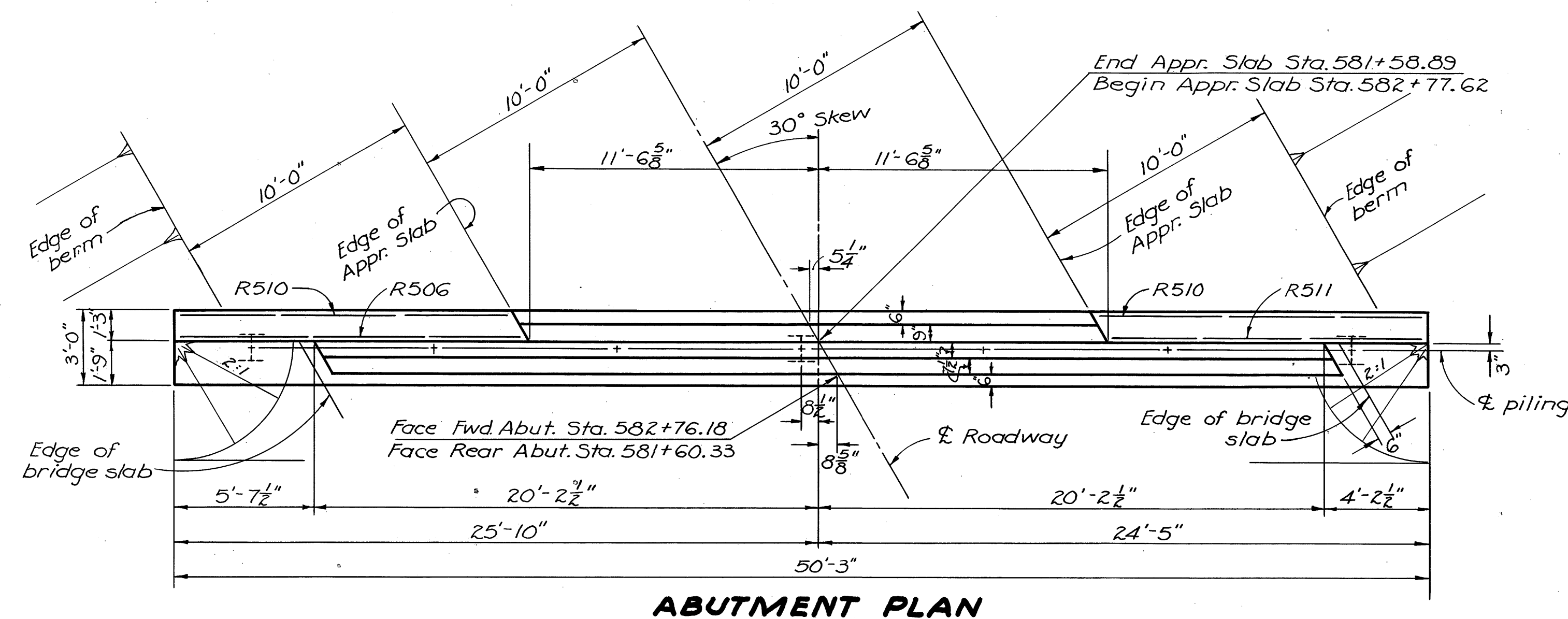
If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 29 tons per pile for the abutment piles and 39 tons per pile for the pier piles.

PIER PILE ENCASEMENT as shown on Std. Dwg. P-1-54 is not required. The painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

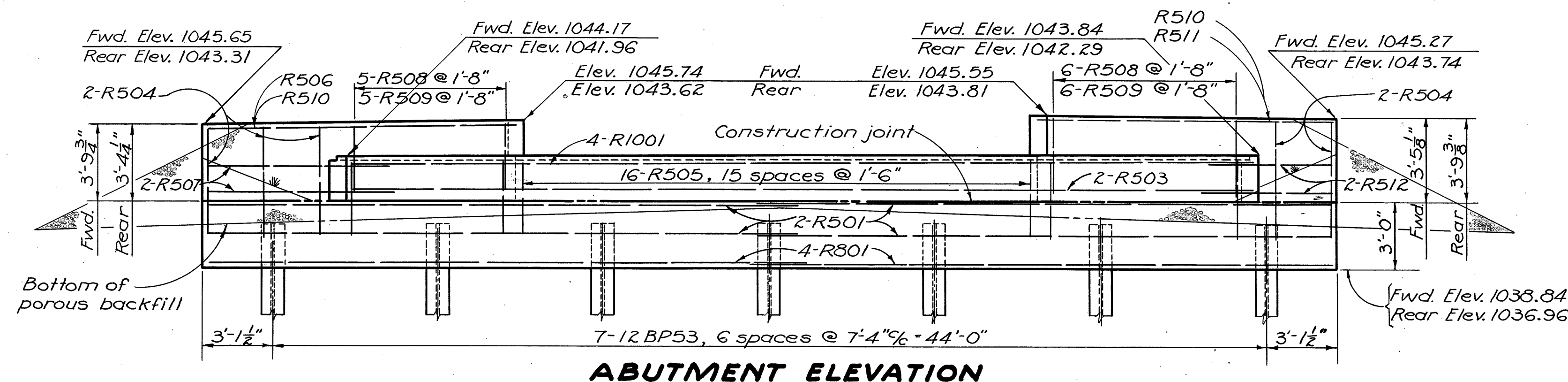
SLOPE FACING (S-29.05 Type) shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 1028.0 and transversely to 3 ft. outside the edge of the superstructure.

ESTIMATED QUANTITIES

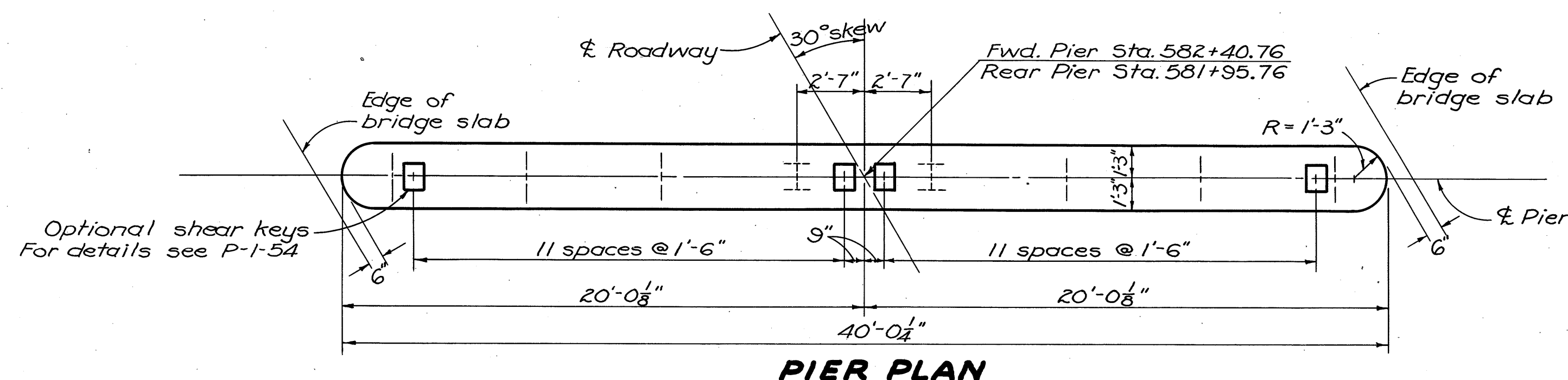
Item	Total	Unit	Description	Super.	Piers	Abuts	General
E-2	58	Cu.Yd.	Unclassified excavation			58	
E-3	1165	Cu.Yd.	Channel excavation				1165
I-10	115	Cu.Yd.	Dumped rock fill				115
S-1	254	Cu.Yd.	Class "C" concrete, superstructure & pier caps	239	15		
S-1	54	Cu.Yd.	Class "E" concrete, abutments			54	
S-4	66,777	Lbs.	Reinforcing steel	58,208	3,398	5,171	
S-14	23,746	Lin.Ft.	Railing (Type I-15.13 with galvanized steel posts & bolts.)	23,746			
S-16	Lump	Sum	First test pile				Lump
S-18	1350	Lin.Ft.	Steel piles 12BP53		720	630	
S-24	Lump	Sum	Removal of existing structure				Lump
S-29	18	Cu.Yd.	Porous backfill			18	
S-29	100	Cu.Yd.	Slope facing (S-29.05 Type)				100



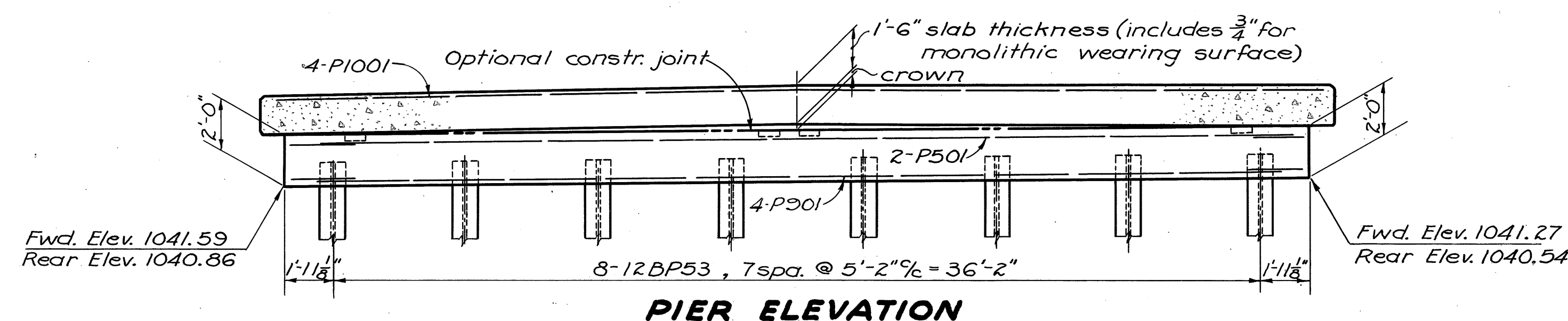
ABUTMENT PLAN



ABUTMENT ELEVATION



PIER PLAN



PIER ELEVATION

REINFORCING STEEL LIST					Bending Diagrams	
Mark	No.	Length	Weight	Shp		
SUPERSTRUCTURE						
A1030	93	41'-6"	16,607	S		
B1030	30	29'-7"	3,818	B		
C1030	30	25'-8"	3,314	B		
D1030	15	26'-0"	1,678	S		
E1030	15	18'-10"	1,215	S		
F1130	62	34'-11"	11,503	S		
G1130	30	19'-6"	3,108	S		
H1130	30	15'-9"	2,510	S		
J601	32	24'-0"	1,154	S		
K601	16	14'-3"	342	S		
N601	73	41'-0"	4,495	S		
M701	101	41'-0"	8,464	S		
ABUTMENTS						
R401	56	5'-5"	203	B		
R501	16	25'-10"	431	S		
R502	136	6'-7"	933	B		
R503	4	40'-0"	167	S		
R504	20	5'-4"	111	S		
R505	32	7'-11"	264	B		
R506	2	13'-10"	29	S		
R507	8	7'-3"	60	S		
R508	22	6'-8"	153	B		
R509	22	8'-5"	193	B		
R510	4	13'-1"	55	S		
R511	2	12'-6"	26	S		
R512	8	5'-9"	48	S		
R801	16	26'-3"	1,121	S		
R1001	8	40'-0"	1,377	S		
PIERS						
P401	64	5'-5"	232	B		
P501	4	37'-6"	156	S		
P502	56	9'-0"	526	B		
P503	8	6'-4"	53	B		
P901	8	37'-6"	1,020	S		
P1001	8	41'-0"	1,411	S		
REPLACEMENT BARS						
RE401	1	5'-5"	-	B		
RE501	1	5'-7"	-	S		
RE601	1	5'-11"	-	S		
RE701	1	6'-2"	-	S		
RE801	1	6'-6"	-	S		
RE901	1	6'-10"	-	S		
RE1001	2	7'-2"	-	S		
RE1101	1	7'-6"	-	S		

REPLACEMENT BARS : If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

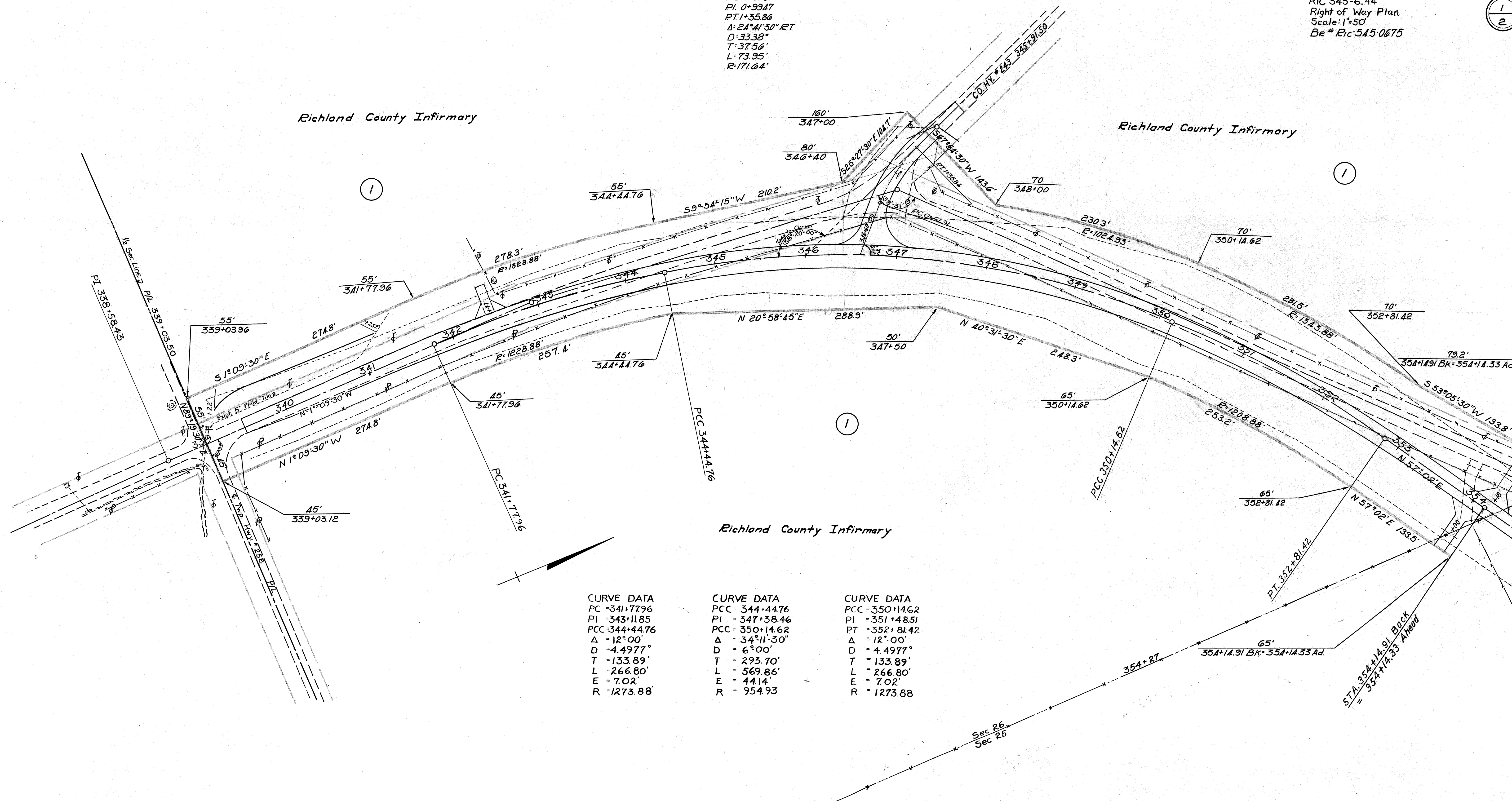
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

68
74

RIC 545-6.44
Right of Way Plan
Scale: 1"=50'
Be # Ric-545-0675

1
2

CURVE DATA FOR Co. Hx #343
PC: 0+61.91
PI: 0+99.47
PT: 1+35.86
Δ: 24°41'30" RT
D: 33.38'
T: 37.56'
L: 73.95'
R: 171.64'

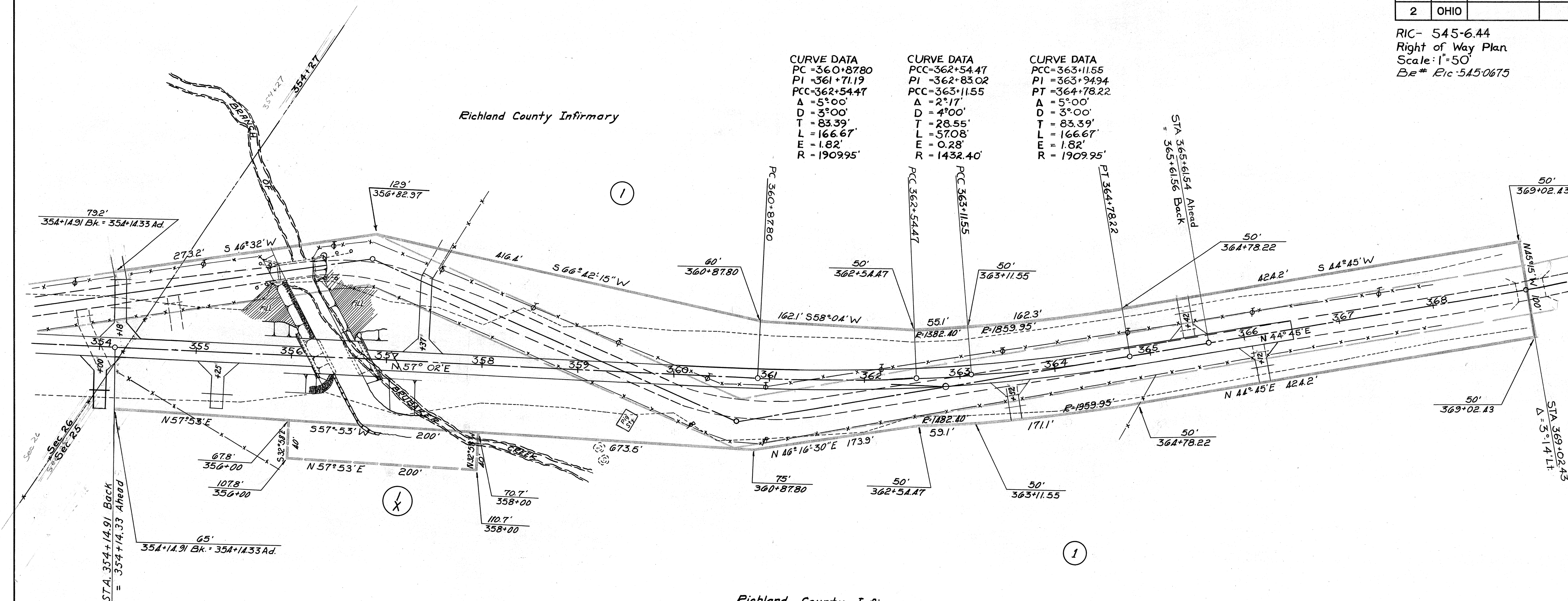


RIC- 545-6.44
Right of Way Plan
Scale: 1"=50'
Be# Ric-545-0675

CURVE DATA
PC=360+87.80
PI=361+71.19
PCC=362+54.47
Δ=5°00'
D=3°00'
T=83.39'
L=166.67'
E=1.82'
R=1909.95'

CURVE DATA
PCC=362+54.47
PI=362+83.02
PCC=363+11.55
Δ=2°17'
D=4°00'
T=28.55'
L=57.08'
E=0.28'
R=1432.40'

CURVE DATA
PCC=363+11.55
PI=363+94.94
PT=364+78.22
Δ=5°00'
D=3°00'
T=83.39'
L=166.67'
E=1.82'
R=1909.95'



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

70
74

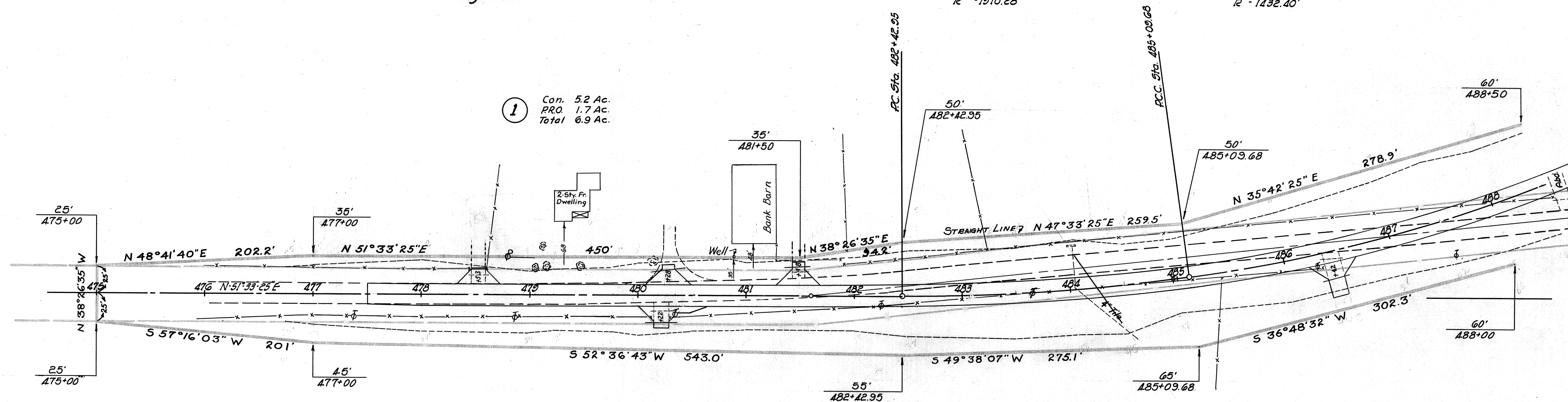
RIC-545-(9.05-9.46)
Right of Way Plan
Scale: 1"=50'
Br # Ric-545-0945

1
3

CURVE DATA
PC - 482+42.95
PI - 483+76.53
PCC - 485+09.68
Δ - 8°00'
D - 2.9993'
T - 133.58'
L - 266.73'
E - 4.66'
R - 1910.25'

CURVE DATA
PCC - 485+09.68
PI - 489+79.88
PCC - 494+18.33
Δ - 36°20'45"
D - 4°00'
T - 470.20'
L - 909.65'
E - 75.20'
R - 1432.40'

Edythe O. Imhoff



1
Con. 5.2 Ac.
PRO. 1.7 Ac.
Total 6.9 Ac.

1
Con. - 5.2 Ac.
PRO - 1.7 Ac.
Total - 6.9 Ac.

Edythe O. Imhoff

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

RIC-545-(9.05-9.46)
Right-of-Way Plan
Scale: 1"=50'
Br # Ric-545-0945

71
74
2
3

CURVE DATA
P.C.C. - 485+09.68
P.I. - 489+79.88
P.C.C. - 494+18.33
Δ - 36°20'45"
D - 4°00'
T - 470.20'
L - 908.65'
E - 75.20'
R - 1432.40'

CURVE DATA
P.C.C. - 494+18.33
P.I. - 495+51.91
P.T. - 496+85.06
Δ - 8°00'
D - 23093°
T - 133.58'
L - 266.73'
E - 4.66'
R - 1010.23'

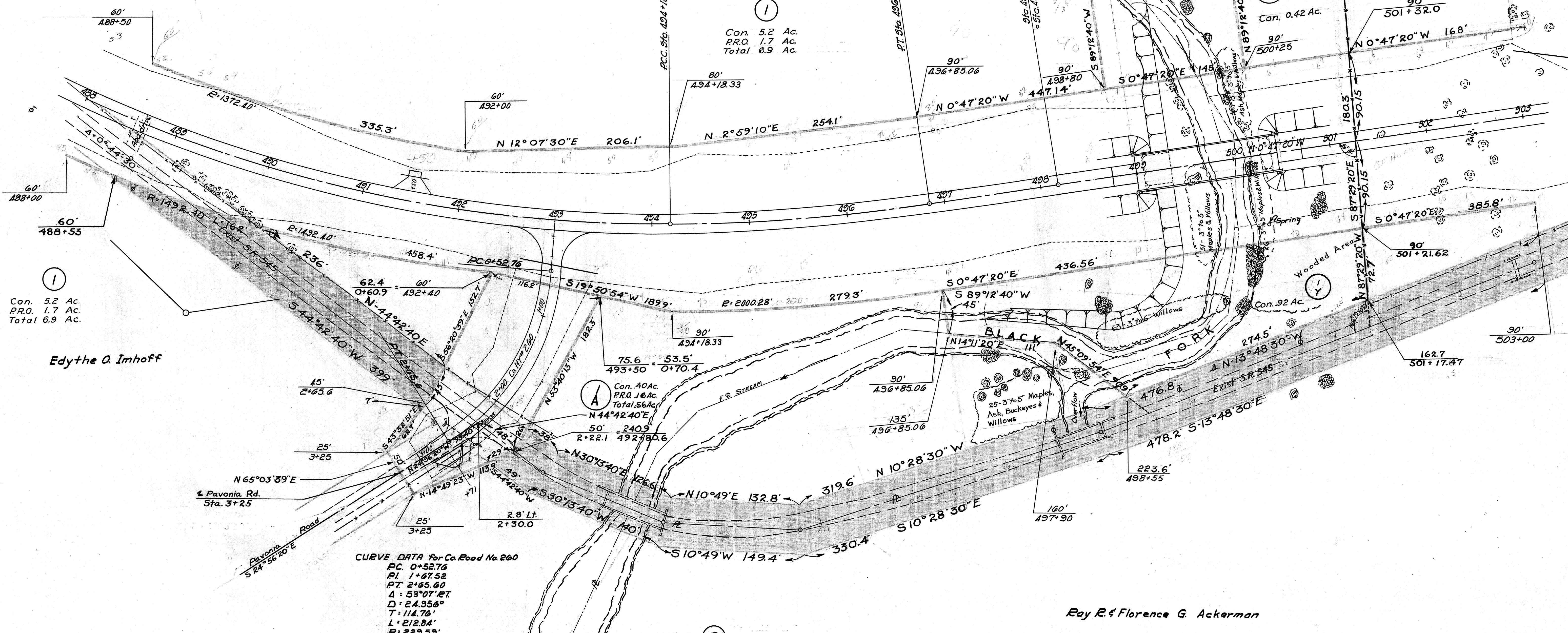
Charles F. Anderson Et Al

Con. 3.6 Ac.
PRQ. 1.5 Ac.
Total 5.1 Ac.

3

Edythe O. Imhoff

Con. 5.2 Ac.
PRQ. 1.7 Ac.
Total 6.9 Ac.



CURVE DATA for Co. Road No. 260
P.C. 0+52.76
P.I. 1+67.52
P.T. 2+65.60
Δ - 53°07'27"
D - 24.956°
T - 114.76'
L - 212.84'
R - 229.59'

SHADED AREA - VACATED BY ENTRY ON DIRECTORS JOURNAL DATED-AUGUST 15, 1958, RECORDED IN VOL. 43, PG. 722.

Ray E. Florence G. Ackerman

RICHLAND CO. WELLS TWP T-24N R-17W SEC-18

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

72
74

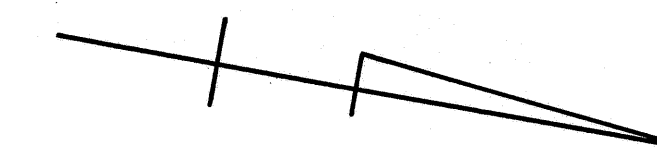
RIC-545 - (9.05-9.46)
Right-of-Way Plan
Scale: 1"=50'
Br.# Ric-545-0945

3
3

CURVE DATA
P.C. - 505+07.42
P.I. - 505+74.09
P.C.C. - 506+40.74
Δ - 2°00'
D - 1.5001°
T - 66.67'
L - 133.32'
E - 0.58'
R - 3819.51'

CURVE DATA
P.C.C. - 506+40.74
P.I. - 507+71.11
P.C.C. - 509+01.29
Δ - 5°12'40"
D - 2°00'
T - 130.37'
L - 260.55'
E - 2.96'
R - 2864.79'

CURVE DATA
P.C.C. - 509+01.29
P.I. - 509+67.96
P.T. - 510+34.61
Δ - 2°00'
D - 1.5001°
T - 66.67'
L - 133.32'
E - 0.58'
R - 3819.51'



Charles F. Anderson Et Al

3 Con. 3.6 Ac.
PRO. 1.5 Ac.
Total 5.1 Ac.

Charles F. Anderson Et Al

3 A Con. .07 Ac.
PRO. .09 Ac.
Total .16 Ac.

Con. .09 Ac.
PRO. .09 Ac.
Total .18 Ac.

SHADED AREA - VACATED BY ENTRY ON
DIRECTOR'S JOURNAL DATED-AUGUST 15,
1958 RECORDED IN VOL. 43, PG. 722.

RICHLAND CO. WELLER TWP T-24N R-17W SEC-18

11/6/58
10/7/58

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 141 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	A-1-a ₍₁₀₎	A-1-a	66	15	8	8	3	NP	NP	12	8
Gravel with sand	A-1-b ₍₁₀₎	A-1-b	42	26	14	12	6	NP	NP	14	13
Coarse and fine sand	—	A-3a	4	24	50	15	7	NP	NP	20	4
Gravel with sand and silt	A-2-4 ₍₁₀₎	A-2-4	33	16	21	19	11	24	5	18	7
Gravel with sand, silt, and clay	A-2-6 ₍₁₀₎	A-2-6	45	14	13	17	11	27	11	20	1
Sandy silt	A-4 ₍₅₎	A-4a	11	6	25	36	22	26	5	22	32
Silt	A-4 ₍₈₎	A-4b	1	2	14	57	26	30	4	28	14
Silt and clay	A-6 ₍₈₎	A-6a	9	6	13	40	32	31	12	21	33
Silty clay	A-6 ₍₁₁₎	A-6b	11	5	10	39	35	37	17	24	7
Elastic clay with some organic material unless otherwise noted	A-7-5 ₍₁₃₎	A-7-5	0	2	9	43	46	52	16	57	9
Clay	A-7-6 ₍₁₄₎	A-7-6	3	3	9	39	46	45	22	35	13

Auger boring plotted to vertical scale only. Sod & top soil = 'X' = Approx. depth • Water content nearly equal to or greater than liquid limit.

Auger boring - plan view Berm material W — Free water

Lab. Nos. So. 89537-89677 incl.

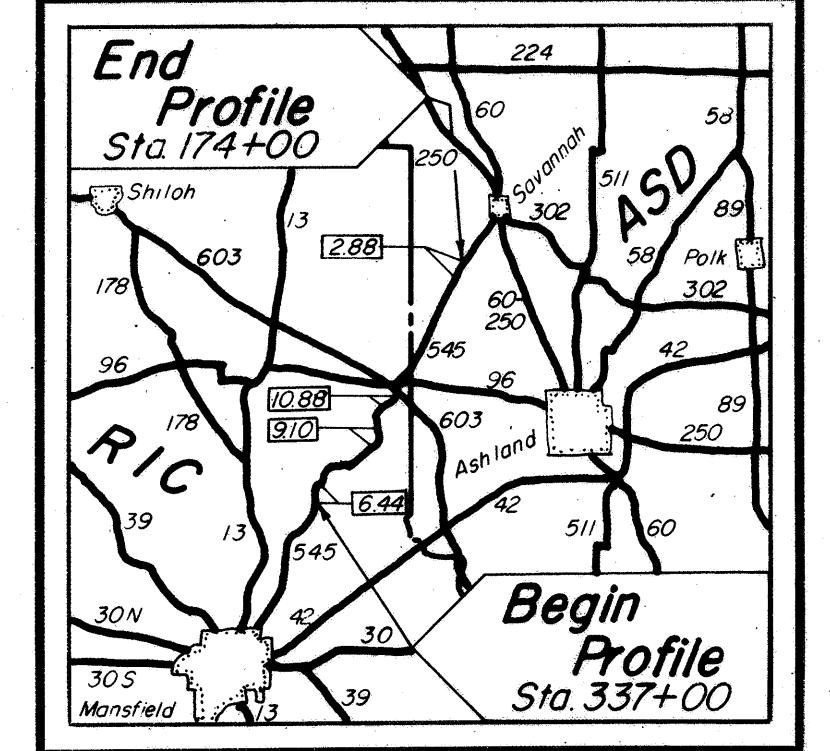
Note: Figures beside borings indicate water content in percent.

SOIL PROFILE
RICHLAND-ASHLAND COS.
RIC-545-(6.44)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
 O. S. U. CAMPUS, COLUMBUS, OHIO

1
6

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

Fed. No. S-340(3)



LOCATION MAP
 Recon. - PAH - 3/21/58
 Drilling - CAC-BDL - 4/22/58
 Drafting - DM-JHW-HHS - 5/19/58

Summary of Soil Test Data

Note: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class.
RIC-545-6.44										
337+00 12'LT	0.4-6.0 6.0-8.0	0 43	2 11	6 8	56 21	36 17	36 37	16 17	25 27	A-6b A-6b
341+00 12'LT	0.6-4.0 4.0-8.0	15 19	12 11	28 37	15 22	30 11	27 NP	12 18	17 18	A-6a A-2-4
345+00 12'LT	0.6-9.0 9.0-12.0	22 45	8 14	14 13	33 17	23 11	32 27	14 20	18 20	A-6a A-2-6
348+00 CL	0.3-10.0 10.0-15.0	7 57	5 18	13 9	49 11	26 5	34 NP	13 NP	23 17	A-6a A-1-b
353+00 CL	0.4-6.0 6.0-15.0	69 0	2 12	10 49	6 21	3 22	NP NP	12 17	17 17	A-1-a A-4a
356+00 CL	0.4-4.0 4.0-9.0 9.0-27.0 27.0-30.0	0 51 37 4	2 6 27 13	17 16 18 69	48 18 12 2	33 9 6 2	33 25 NP NP	17 9 14 21	16 22 14 21	A-6b A-2-4 A-1-b A-3a
358+00 CL	0.4-5.0 5.0-15.0	69 10	7 3	11 4	55 28	3 31	NP NP	11 11	14 25	A-1-a A-6a
361+00 22'RT	0.4-5.0 5.0-12.0	0 0	1 0	2 49	49 39	40 28	12 8	25 24	25 24	A-6a A-4b
361+00 CL	0.4-9.0	0	1	6	52	41	38	19	27	A-6b
364+00 12'LT	0.6-8.0	6	2	14	47	31	35	14	25	A-6a
368+00 12'RT	0.6-8.0	8	6	16	43	27	33	12	21	A-6a
RIC-545-9.10										
477+00 12'LT	0.4-8.0	28	9	18	27	18	22	7	15	A-4a
480+00 12'RT	0.4-4.0 4.0-8.0	0 0	2 2	4 47	54 37	40 14	33 NP	13 19	21 21	A-6a A-4a
484+00 12'RT	0.0-8.0	0	3	7	51	39	32	8	30	A-4b
487+00 12'LT	0.3-5.0 5.0-8.5 8.5-12.0 12.0-16.0	0 13 26 29	2 14 18 35	3 13 19 13	51 32 22 13	44 28 15 10	42 29 27 24	21 14 18 5	25 19 18 15	A-7-6 A-6a A-4a A-1-b
489+50 CL	0.3-5.0 5.0-9.0 9.0-14.0 14.0-17.0	4 6 48 33	6 5 34 33	13 10 7 16	42 61 18 12	35 18 4 6	28 NP NP 20	11 NP NP 3	17 10 5 5	A-6a A-4b A-1-b A-1-b

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class.
493+00 CL	0.0-4.0 4.0-8.0	30 37	10 15	19 24	26 15	15 29	11 11	18 19	18 19	A-6a A-6a
497+00 CL	3.5-6.0 6.0-8.0 8.0-12.0 12.0-14.0	0 0 0 0	1 2 0 0	15 44 23 21	53 36 49 54	35 18 28 25	30 NP 30 13	10 NP 35 40	34 41 35 40	A-4b A-4a A-4a A-6a
499+40 CL	0.3-4.0 4.0-8.5 8.5-13.0 13.0-20.0 20.0-30.0	0 0 0 42 36	0 0 1 27 46	28 17 57 8 9	51 56 26 22 7	21 27 16 NP 2	NP NP NP NP NP	26 30 27 14 19	NP NP NP NP NP	A-4b A-4b A-4a A-1-b A-1-b
500+40 CL	4.0-6.0 6.0-8.5 8.5-10.0 10.0-17.0 17.0-24.0	0 0 0 5 64	0 0 1 5 21	8 11 19 41 6	58 58 57 42 8	34 31 23 26 1	31 33 NP 26 NP	9 13 NP 12 NP	37 40 40 40 12	A-4b A-6a A-4b A-4a A-1-a
500+40 50'LT	7.5-10.0 10.0-12.0	0 0	1 6	25 22	60 56	14 16	NP NP	NP NP	34 29	A-4b A-4b
501+50 50'LT	0.5-3.5 3.5-7.0 7.0-10.0 10.0-15.0	0 0 0 0	3 1 0 5	7 3 11 32	48 58 71 44	42 38 18 19	50 38 32 NP	21 15 19 NP	48 35 34 45	A-7-6 A-6a A-4b A-4a
501+50 CL	3.0-9.0 9.0-13.0 13.0-15.0	0 0 12	1 4 2	16 27 15	48 27 40	35 26 31	32 NP 25	12 NP 6	25 35 21	A-6a A-4a A-4a
501+50 50'RT	0.5-3.5 3.5-9.0 9.0-15.0 15.0-20.0	0 0 21 33	2 11 35	4 31 10	52 49 17 17	42 49 31 5	48 41 36 23	17 16 15 7	38 27 25 20	A-7-5 A-7-6 A-6a A-2-4
502+60 50'LT	13.0-15.0	47	8	29	12	4	NP	NP	22	A-1-b
502+60 CL	0.0-4.0 4.0-6.0 6.0-20.0	0 9 8	4 10 39	11 25 33	41 25 17	44 41 3	NP NP NP	21 21 24	37 37 24	A-7-6 A-7-6 A-3a
502+60 50'RT	1.0-6.0 6.0-10.0 10.0-16.0	0 17 14	1 5 7	6 16 9	33 36 31	60 28 39	46 30 40	24 13 17	54 35 29	A-7-6 A-6a A-6b
506+00 CL	0.3-2.5 2.5-8.0 8.0-12.0	0 0 3	3 30 14	7 39 61	47 19 12	36 12 10	34 NP NP	15 4 17	19 18 17	A-6a A-3a A-3a

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class.
510+00 CL	0.3-8.0 8.0-12.0	22 58	16 26	31 6	18 7	13 3	NP NP	5 6	18 6	A-2-4 A-1-a
512+00 12'LT	1.0-2.5 2.5-4.0	0 0	3 1	6 3	57 50	53 46	26 41	38 19	32 32	A-7-6 A-7-6
512+50 50'LT	0.0-1.0 1.0-3.0 3.0-5.0	0 0 18	4 1 5	13 49 11	54 49 29	29 46 39	34 24 17	6 48 25	32 48 25	A-4b A-7-6 A-6b
512+50 12'LT	0.3-1.0 1.0-3.0	19 0	10 2	24 6	36 42	11 50	NP 49	NP 11	9 57	A-4a A-7-5
512+50 12'RT	0.3-2.0 2.0-3.0 3.0-5.0	0 0 0	4 2 13	9 12 55	31 48 30	56 48 48	50 16 13	18 16 61	48 43 61	A-7-5 A-7-5 A-7-5
513+00 12'LT	0.3-3.0 3.0-4.0 4.0-5.5 5.5-10.0 10.0-15.0	0 0 0 4 15	1 1 4 5 13	5 6 19 10 35	33 47 52 41 35	61 46 25 40 30	58 20 58 27 26	69 19 12 9 9	69 53 109 23 17	A-7-5 A-7-5 A-7-5 A-4a A-4a
513+50 12'LT	0.3-4.0 4.0-8.0	8 7	3 6	13 13	32 31	44 43	24 20	33 24	33 24	A-7-6 A-7-6
516+00 12'LT	0.3-3.5 3.5-6.0 6.0-10.0	9 10 10	9 4 6	21 13 11	39 34 31	22 46 42	37 19 31	19 19 11	14 14 14	A-4a A-6b A-6a
519+00 25'LT	0.3-2.5 2.5-6.5 6.5-8.0	0 34 16	3 15 11	27 20 12	47 14 29	23 24 32	23 14 29	9 6 11	20 17 15	A-4a A-2-4 A-6a
RIC-545-10.88										
575+00 11'LT	0.3-1.5 1.5-4.0 4.0-8.0	3 0 3	5 2 7	15 10 35	42 53 30	35 53 30	36 21 12	12 21 27	25 37 24	A-6a A-7-5 A-6a
579+00 12'RT	1.5-5.0 5.0-10.0 10.0-12.0	6 3 7	4 3 13	19 30 13	39 41 24	32 23 31	35 NP 24	11 NP 8	29 40 14	A-6a A-4a A-4a
581+50 11'RT	0.3-7.0 7.0-9.0 9.0-11.5 11.5-19.0 19.0-26.0 26.0-28.0	57 81 39 62 31 57	12 7 12 17 47 12	15 4 5 7 9 9	9 5 10 12 11 14	7 3 10 2 9 8	NP NP NP NP NP NP	NP NP NP NP NP NP	11 14 12 9 16 11	A-1-b A-1-a A-2-4 A-1-a A-1-b A-1-b

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHTL Class.
583+00 11'LT	0.3-5.0 5.0-9.0 9.0-14.0 14.0-24.0	26 0 70 57	13 3 9 25	16 35 8 9	24 42 10 6	21 25 3 3	25 NP NP NP	9 4 11 21	12 22 21 11	A-4a A-4a A-1-a A-1-a
586+00 11'RT	0.3-3.0 3.0-8.0	38 34	21 16	16 16	15 16	10 30	22 9	4 18	18 18	A-1-b A-2-4
589+50 25'RT	0.3-5.0 5.0-9.0 9.0-11.0 11.0-13.0 13.0-15.0	20 4 13 4 8	12 4 6 2 5	17 21 16 61 15	29 46 36 18 42	27 25 26 18 30	26 9 9 NP NP	9 14 11 NP 4	14 26 16 16 14	A-4a A-4a A-6a A-4b A-4a
592+50 10'LT	0.3-5.0 5.0-8.0 8.0-10.0	11 20 23	7 6 12	17 19 22	45 37 30	20 18 13	21 5 16	5 11 1	12 16 16	A-4a A-4a A-4a
ASD-545-2.88										
150+00 12'RT	0.4-3.0 3.0-8.0	6 6	3 6	11 9	35 27	45 52	45 30	21 11	21 15	A-7-6 A-6a
154+00 12'LT	0.4-2.0 2.0-3.0 3.0-5.0 5.0-12.0	0 4 14 15	3 4 10 5	12 9 24 11	51 50 34 38	34 42 18 26	31 13 7 11	13 20 25 13	20 25 14 13	A-6a A-6a A-7-6 A-6a
158+00 12'LT	0.3-4.0 4.0-7.0 7.0-27.0	2 33 31	7 7 6	30 22 9	39 24 33	22 14 21	25 26 25	3 5 7	19 25 15	A-4a A-4a A-4a
161+00 22'LT	0.4-2.0 2.0-6.0 6.0-15.0	6 23 22	8 7 6	17 16 13	39 33 32	30 21 27	27 25 25	11 8 8	12 14 17	A-6a A-4a A-4a
163+00 5'RT	0.4-8.0 8.0-15.0	5 7	7 6	13 10	38 38	37 39	28 11	11 12	15 15	A-6a A-6a
167+00 10'RT	0.4-8.0 8.0-10.0	0 8	3 8	6 13	55 40	36 31	27 25	7 12	22 14	A-4b A-6a
170+00 12'RT	0.4-7.0 7.0-8.0	10 37	5 19	13 13	39 15	33 6	NP NP	11 14	16 14	A-6a A-1-b

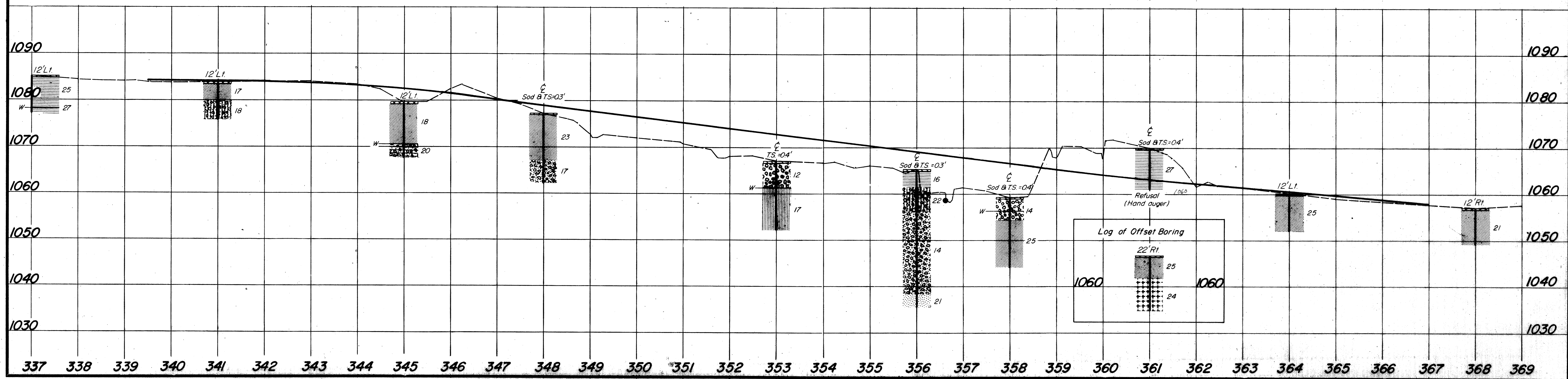
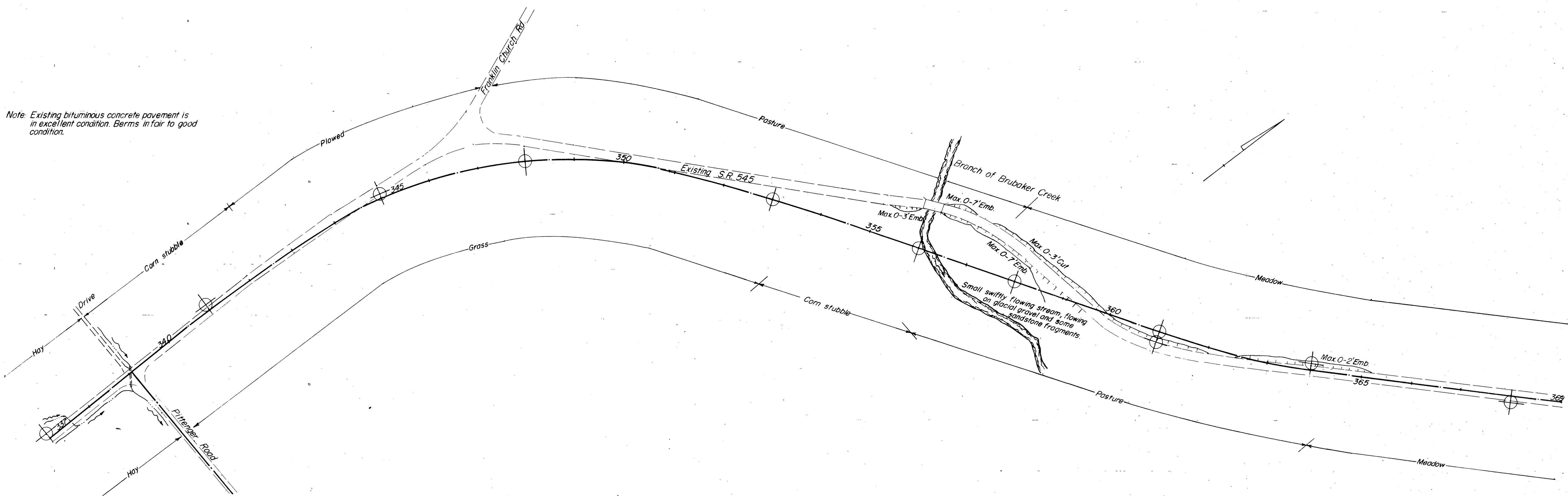
RIC-545-(6.44)

SOIL PROFILE
RICHLAND-ASHLAND COS.
RIC-545-(4.66)-(9.05-9.46)-(10.89-11.01)
ASD-545-2.87
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

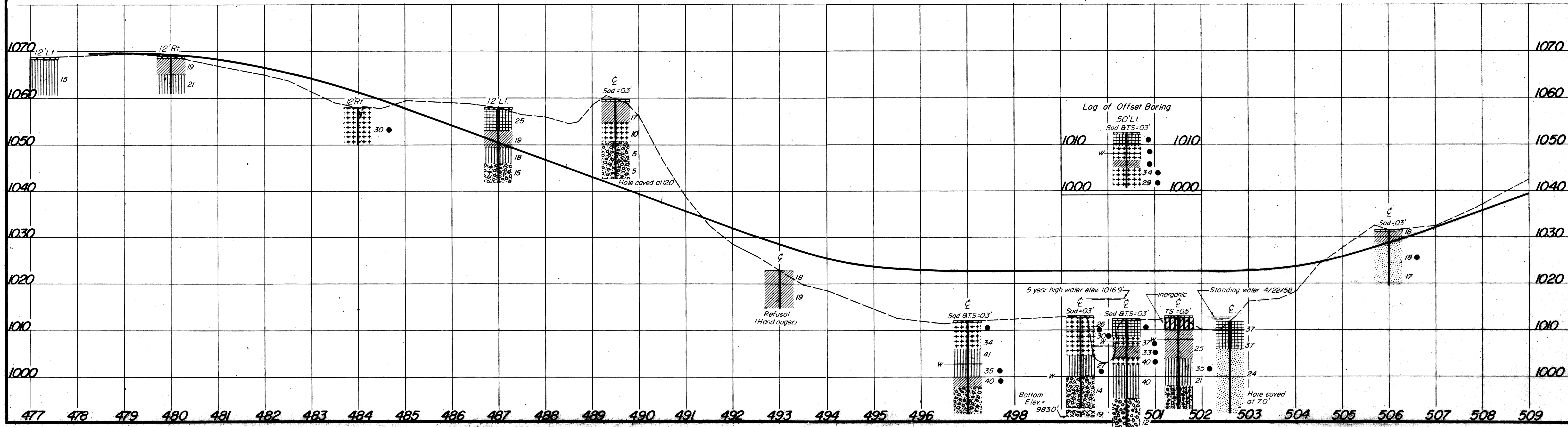
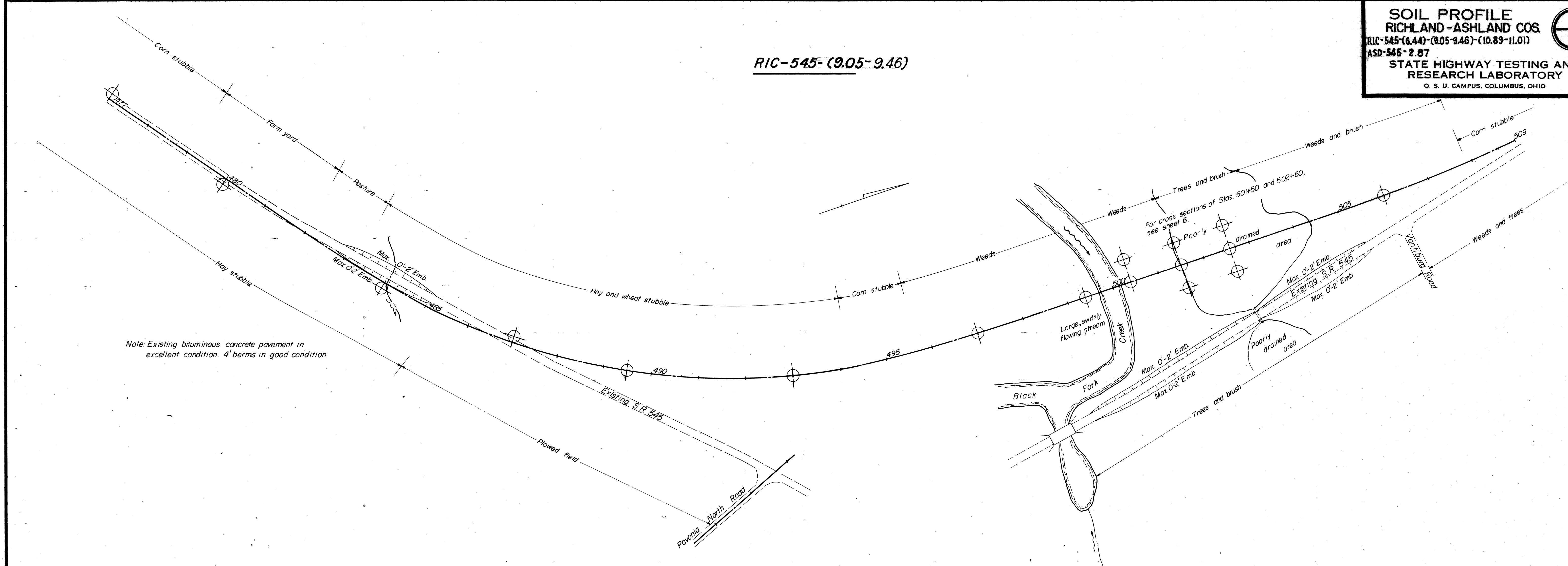
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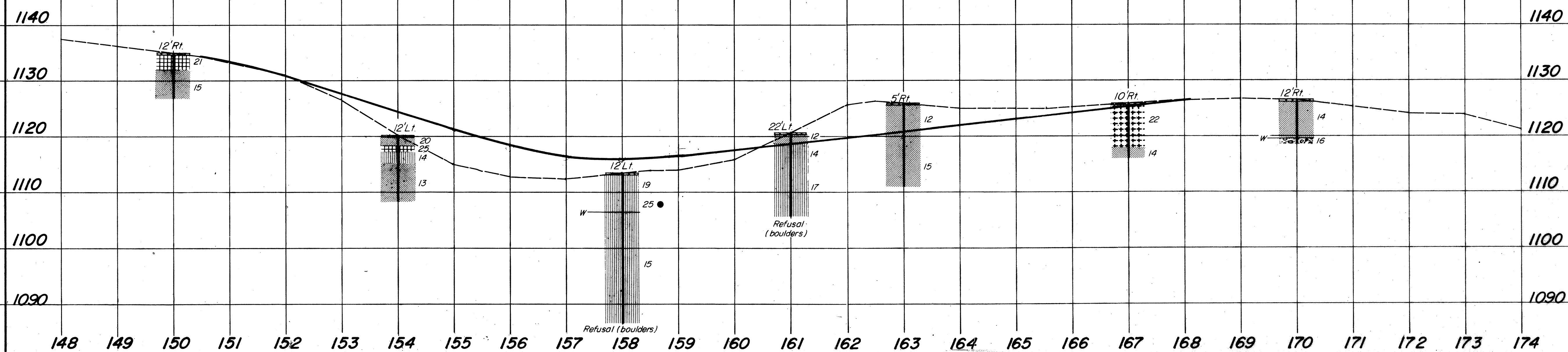
6

Note: Existing bituminous concrete pavement is in excellent condition. Berms in fair to good condition.

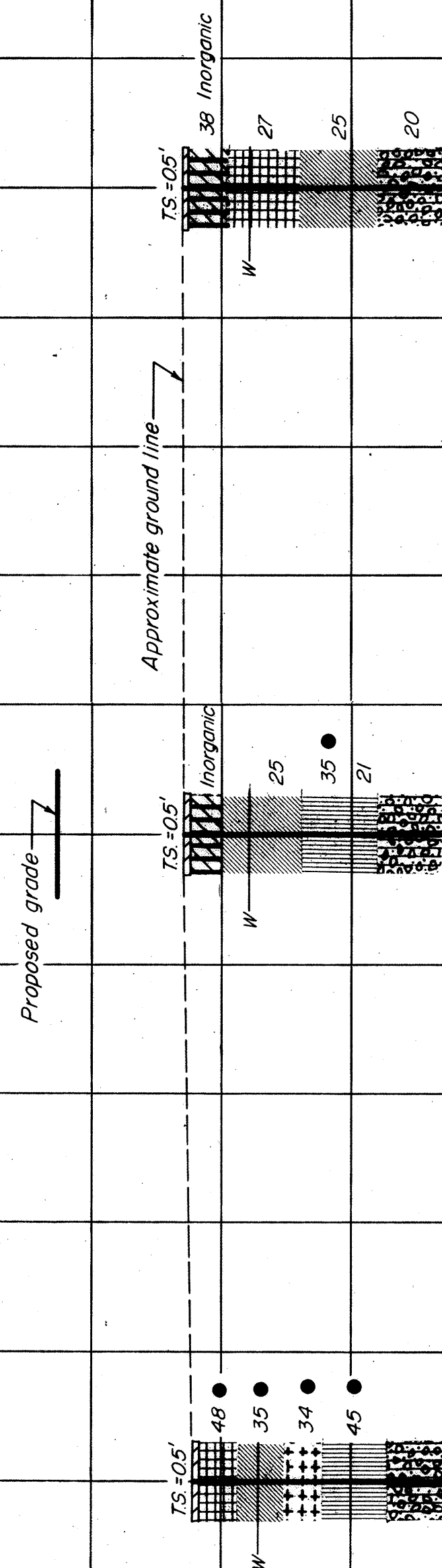


RIC-545-(9.05-9.46)

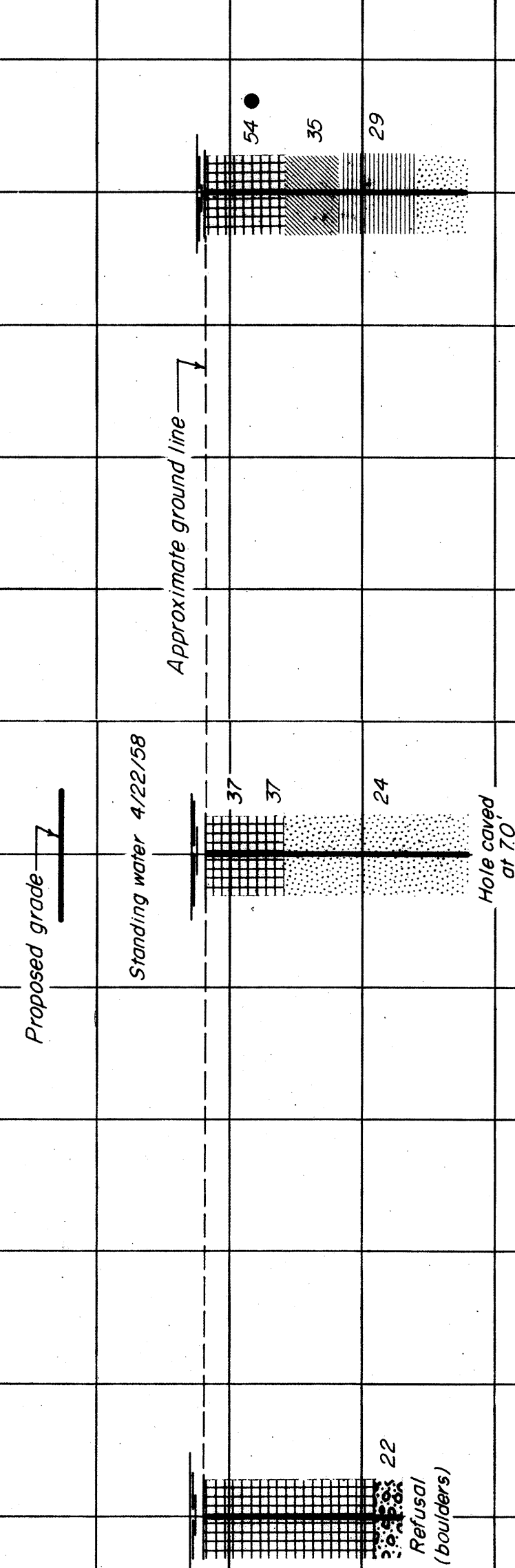


[illegible]

Cross Section
Sta. 501+50



Cross Section
Sta. 502+60



Cross Section
Sta. 512+50

