

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	STATE

1/16

TUS-21-38.17
TUS-250-2.16

TUS-21-38.17 TUS-250-2.16

TUSCARAWAS COUNTY

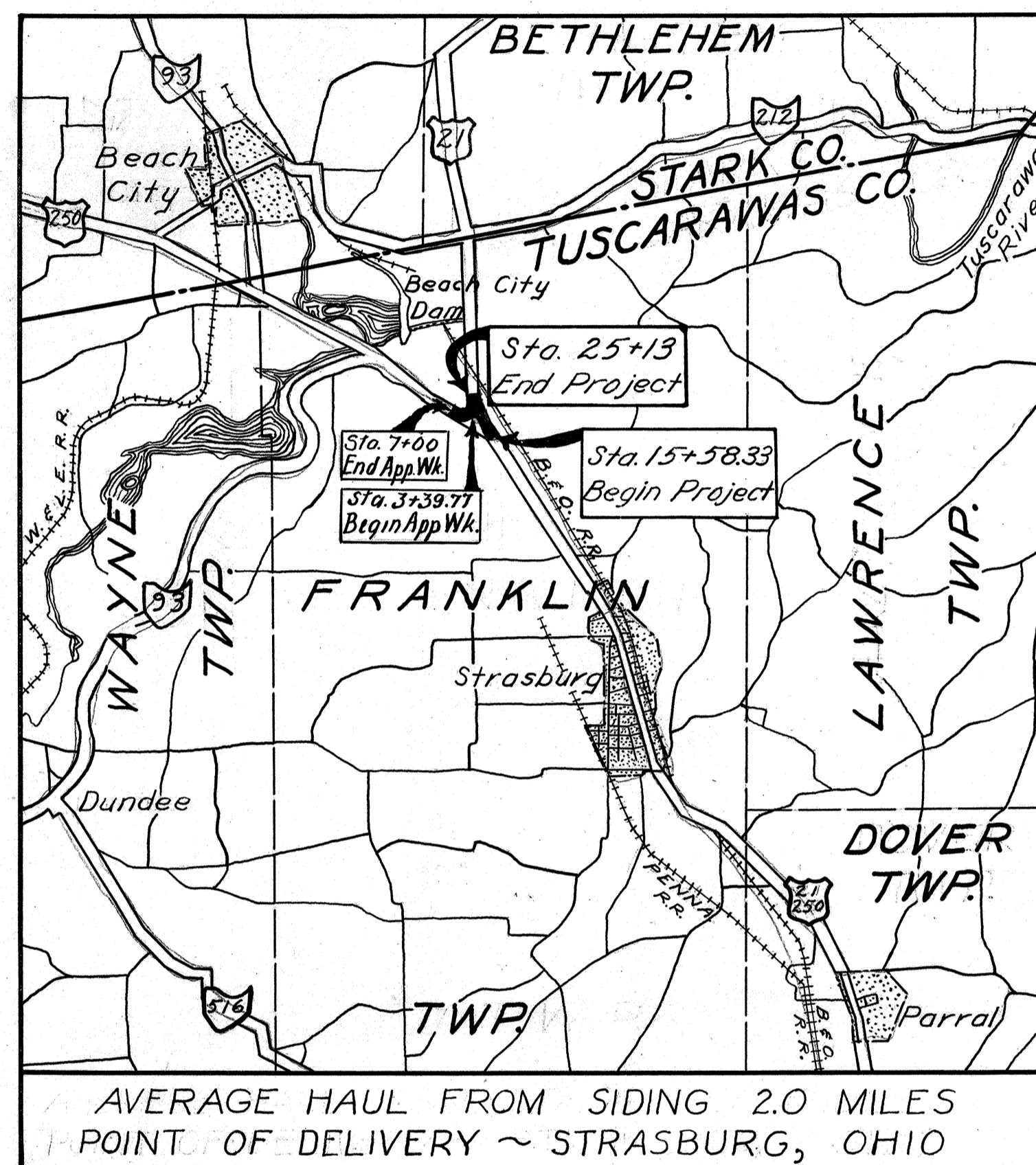
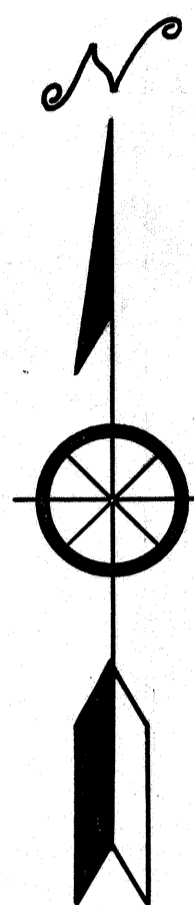
FRANKLIN TOWNSHIP

CONVENTIONAL SIGNS

COUNTY LINE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
CORPORATION LINE	-----
CENTER LINE	-----
PROPERTY LINE	-----
POLE LINE	-----
FENCE LINE	-----
RAILROADS	-----
GUARD RAIL	-----
DRAIN PIPE	-----

Telephone ϕ Electric ϕ

New \bullet Old \circ



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

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

The Right of Way for this improvement will be provided by the State of Ohio.

Approved: Dean Polster
Date: 1-30-57 Division Deputy Director.

Approved: C. H. Makever
Date: 2-20-57 Deputy Director of Planning and Programming.

Approved: _____
Date: _____ Engineer of Bridges.

Approved: R. E. Shultz
Date: 2-18-57 Engineer of Location and Design.

Approved: R. E. Masten
Date: 2/13/57 Deputy Director of Design and Construction.

Approved: _____
Date: _____ First Assistant Director.

Approved: George J. Thornhill
Date: 2/23/57 Acting Director of Highways

INDEX OF SHEETS

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LINE DATA

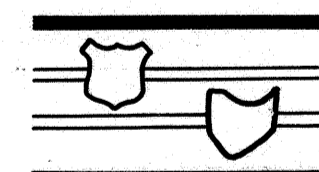
BEGIN PROJECT STA. 15+58.33
END PROJECT STA. 25+13.00
NO ADDITIONS OR DEDUCTIONS.
NET LENGTH OF PROJECT --- 954.67 LIN. FT. OR 0.180 MILE.
BEGIN WORK USR 21 STA. 14+29
END WORK USR 21 STA. 25+13
LENGTH OF WORK (USR 21) --- 1084 LIN. FT.

BEGIN APPROACH WORK (USR 250) STA. 3+39.77
END APPROACH WORK (USR 250) STA. 7+00
NO ADDITIONS OR DEDUCTIONS
NET LENGTH OF APPROACH WORK --- 360.23 LIN. FT.
TOTAL LENGTH WORK (USR 21 & 250) --- 1,444.23 LIN. FT. OR 0.273 MILE.

LOCATION PLAN

SCALE 1 IN. = 1 MI.

PORTION TO BE IMPROVED
FEDERAL ROADS
STATE ROADS
OTHER ROADS



SCALES

PLAN	1" = 50'
PROFILE - HORIZONTAL	1" = 50'
PROFILE - VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10'

CONSTRUCTION BUREAU
MAR 9 1959
GROUND PHOTOLAB

STANDARD DRAWINGS

L-3	4-1-50	DR-1	1-3-55	I-8 M.H. No.1	5-1-52
L-3-A	4-1-50	G-7.07	6-1-56	I-8 M.H. No.1A	1-3-55
RI-1	1-3-55	B-7.50-70-71E No.1	10-1-47	L.J. No.1	7-1-55
I-8 C.B. 1-2-A & B	5-1-52	S-27 RC.2	3-15-48	I-8 C.B. 2-5 & 2-6	5-1-52
I-12	7-1-54	S-27 RC.3	2-20-45		
I-15 No.2	12-1-54	S-27 RC.4	1-4-54		
I-15 No.2-A	7-2-56	I-1,2,3,4 & 5	2-20-45		
I-21-23	8-1-56	I-15 No.1	8-1-55		

SUPPLEMENTAL SPECIFICATIONS

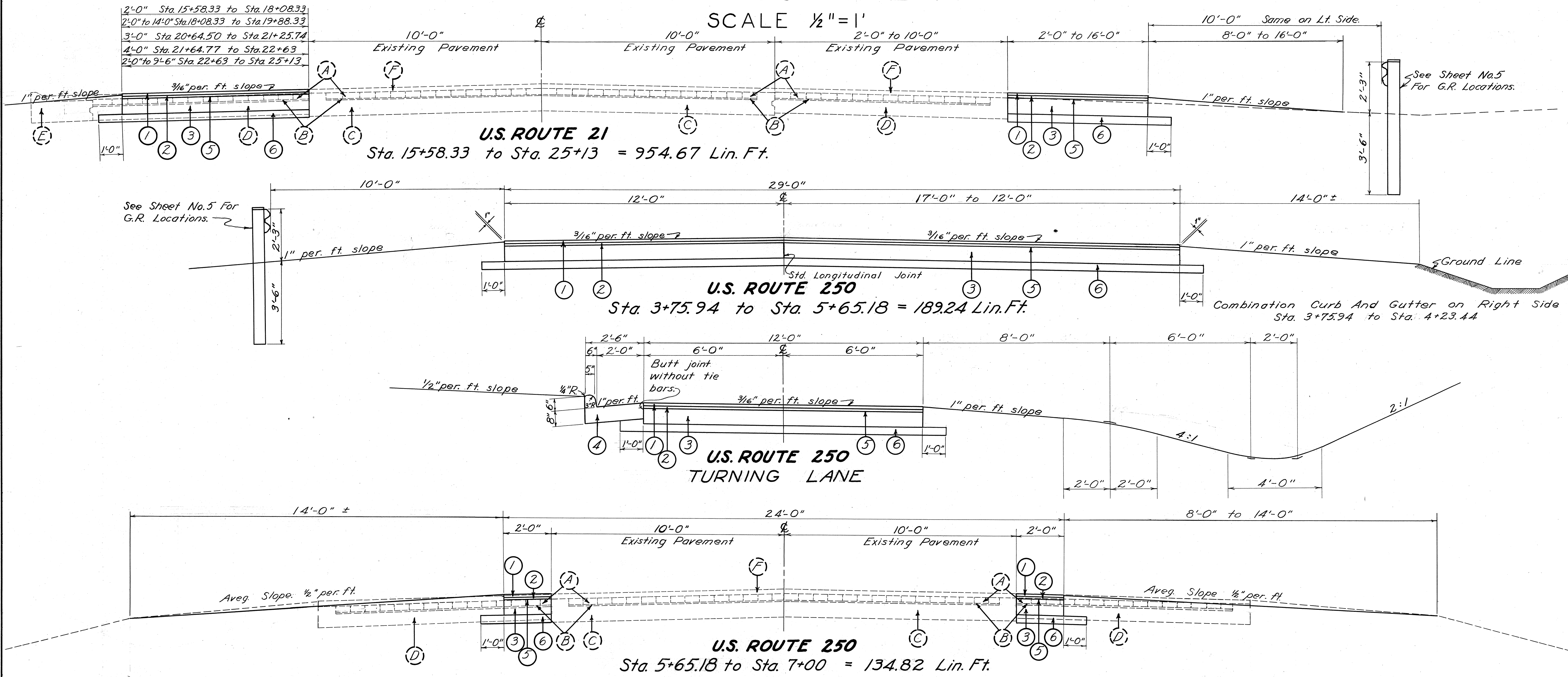
E-101	1-1-57

FILE N ^o	TUS-21-38.17	TUS-250-2.16
Date of Letting	_____, 195__	
Contract N ^o	_____	

TYPICAL SECTION

TYPE T-35 ON B-70

SCALE 1/2" = 1'



- (A) — 3" Brick Surface.
 - (B) — 3/4" Sand Cushion.
 - (C) — 8" Concrete Base.
 - (D) — 7" Reinforced Concrete Base.
 - (E) — Combination Curb And Gutter.
 - (F) — 2 1/2" Asphaltic Concrete Surface Course.
- ① — ITEM T-35 1 1/4" Asphaltic Concrete Surface Course Type "A" (70-85).
 - ② — ITEM B-35 1 1/4" Asphaltic Concrete Leveling Course (70-85).
 - ③ — ITEM B-70 8" Portland Cement Concrete Base Course.
 - ④ — ITEM I-12 Combination Curb And Gutter, Type 2, Standard.
 - ⑤ — ITEM T-30 Bituminous Tack Coat, Sec. M-5.5 MS-2 or RS-1 or Sec. M-5.2 RC-1 or RC-2 applied at rate of 0.1 gal. per. sq.yd.
 - ⑥ — ITEM I-22 4" Subbase, Grading "C" or "D".

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

3
16

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BERMS AND SLOPES:~ Berms and slopes shall be finished in accordance with the Typical Sections except where otherwise shown on the cross sections. While the cross sections, as drawn, show straight lines and angles, in construction all corners shall be rounded as shown on the Typical Sections, or on Standard Drawing No. RI-1.

FIELD OFFICE:~ The contractor shall provide a suitable "Field Office" in accordance with Sec. S-001(b) having a minimum of 150 square feet of floor space. The contractor shall have a telephone installed and maintained during construction.

SEEDING:~ Quantities for seeding are calculated for the soil areas within the work limits as shown on the cross sections and payment shall not be made for seeding beyond these limits.
SUBGRADE COMPACTION FOR DRIVES~ The subgrade for drives and mail-box approaches shall be compacted to a depth of six inches (6") to the density requirements shown in Table III, Item E-101. Payment for subgrade compaction as specified above shall be included in the unit price bid for Item E-101, Roadway Excavation.

APPROACHES:~ Resident drives and business approaches shall be paved with 8 inches of T-70 Concrete. Dimensions of drives shall be in accordance with Type 1 & 2 Driveway on Standard Drawing DR-1, except drive 5-A which shall be Type 2 Modified as per plan.

MAINTAINING TRAFFIC:~ Two-way traffic shall be maintained at all times on U.S. Route 21 and on U.S. Route 250, except that one-way traffic will be permitted between Sta. 4+70 and Sta. 7+00 on U.S. Route 250 during paving operations and when constructing Structure I-S. The existing pavement on U.S. Route 250, between its intersection with U.S. Route 21 and Sta. 4+70, shall remain in place until traffic can be placed on the new pavement.

Temporary traffic lanes shall be surfaced with T-10 material, treated with calcium chloride and the surface maintained daily in a manner satisfactory to the Engineer. Two-way traffic lanes shall be surfaced with aggregate at least 20 ft. wide and one-way traffic lanes shall have the surfacing aggregate not less than 12 ft. in width.

Maintenance of traffic shall be in accordance with the provisions of Sec. G-707. Payment for construction, maintaining and removing temporary traffic lanes, except furnishing and placing T-10 and M-10 Items, shall be included in the lump sum bid for "Maintaining Traffic."

T-10 MATERIAL:~ The aggregate for the T-10 material used on this project shall meet the requirements of Section I-18.02. Method of measurement shall be in accordance with Section I-18.04.

ITEM E-101:~ This item has been used to differentiate between the roadway excavation and embankment required for highway work and the excavation and embankment required for the construction of a structure of mass concrete walls, retaining walls, etc. The quantity of the subgrade material to be excavated shall be measured in accordance with the requirements of Item E-101. The quantity of the excavation, from the original ground surface, shall be measured and disposed of by the contractor.

EARTHWORK AND SEEDING							
Station		Exc.	Embk.	Seeding	Fertilizer	Lime	
From	To						
15+58.33	25+13		1749	1803	9003	0.81	4.05
3+67.26	7+00		422	396	1418	0.13	0.65
RESERVOIR			5577	113			
Totals			7748	2312	10421	0.94	4.69

Excess: 7748 Cu.Yds. - 2312 Cu.Yds. = 5436 Cu.Yds.

ITEM T-10, Traffic Compacted Surface Course For Maintaining Traffic.
 $(563.76 \text{ Lin. Ft.} \div 100) \times 150 =$ 850 Cu.Yds.

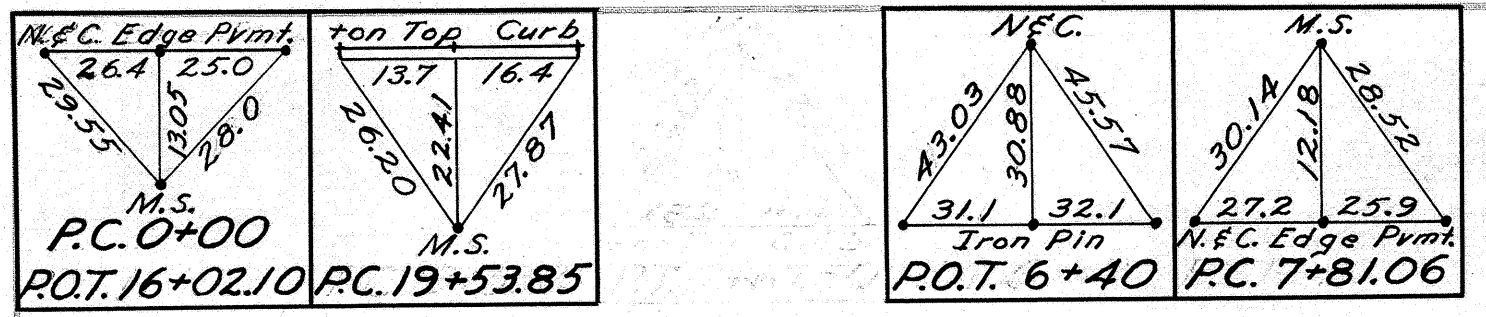
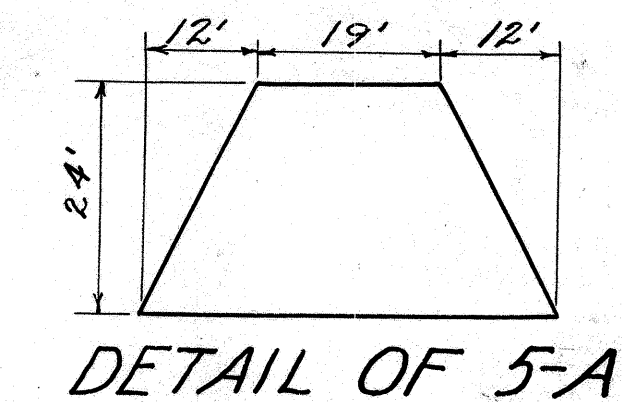
ITEM M-10, Calcium Chloride, Furnished And Applied For Maintaining Traffic.
 $850 \text{ Cu.Yds.} \times 1 \text{ Ton} / 50 \text{ Cu.Yds.} =$ 17 Tons.

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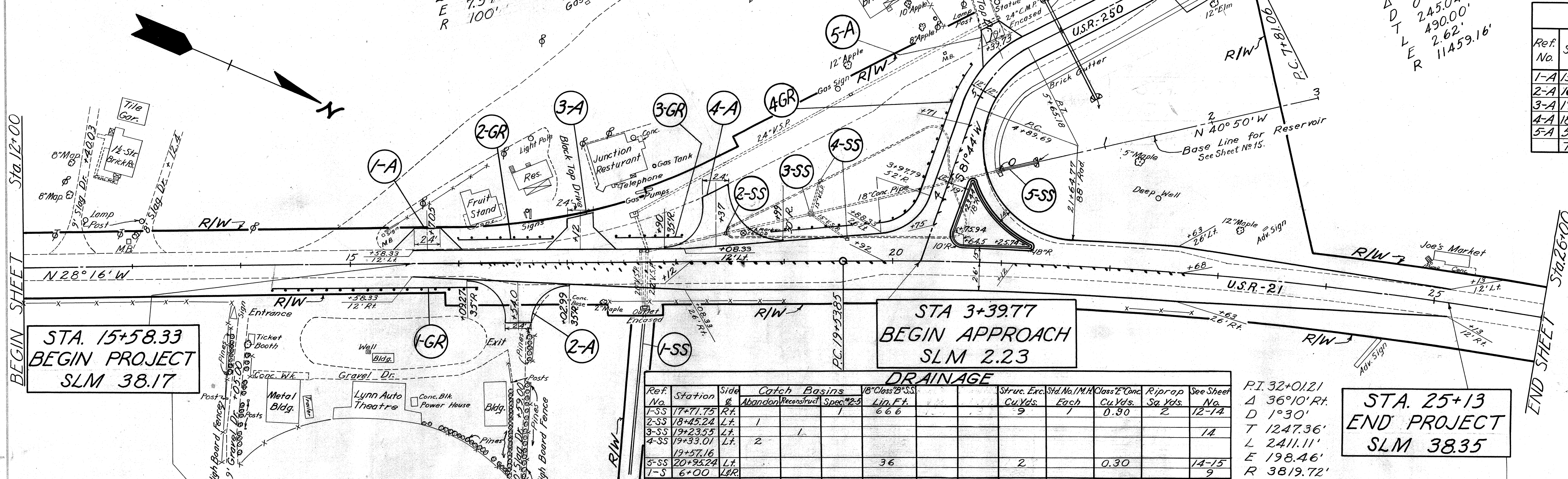
APPROACHES				
Ref. No.	Station	Side &	8" T-70 Pavement Sq. Yds.	Remarks
1-A	15+70.5	Lt.	98	Joints shall be
2-A	16+54.0	Rt.	163	constructed in
3-A	17+12.0	Lt.	123	accordance with
4-A	18+37	Lt.	237	Standard Drawing
5-A	5+39.73	Lt.	82	DR-1.
Total			703	

GUARD RAIL				
Ref. No.	Station		Side &	New Guard Rail Lin. Ft.
	From	To		
1-GR	14+29	16+16.5	Rt.	187.5
2-GR	16+00	16+87.5	Lt.	87.5
3-GR	17+44.5	18+07.5	Lt.	62.5
*4-GR	18+88.1	5+18.03	Lt.	27.5
TOTAL				622.5

*Includes: 50 Lin. Ft. of 42' Rad. G.R.
37.5 Lin. Ft. of 122' Rad. G.R.



P.I. 5+29.33
Δ 43°15' Rt.
D 17'45"
T 39.64'
L 75.49'
E 7.57'
R 100'



Ref. No.	Station	Side	Catch Basins		18" Class B.S.S. Lin. Ft.	Struc. Exc. Cu. Yds.	Std. No./M.H.	Class 2' Conc. Cu. Yds.	Riprap Sa. Yds.	See Sheet No.
			Abandon	Reconstructed						
1-SS	17+71.75	Rt.		1	6.6					12-14
2-SS	18+45.24	Lt.	1							
3-SS	19+23.55	Lt.		1						14
4-SS	19+33.01	Lt.	2							
	19+57.16				36					
5-SS	20+95.24	Lt.				2	0.30			14-15
1-S	6+00	Lt.								9
Totals			3	1	702	11	1.20	2		

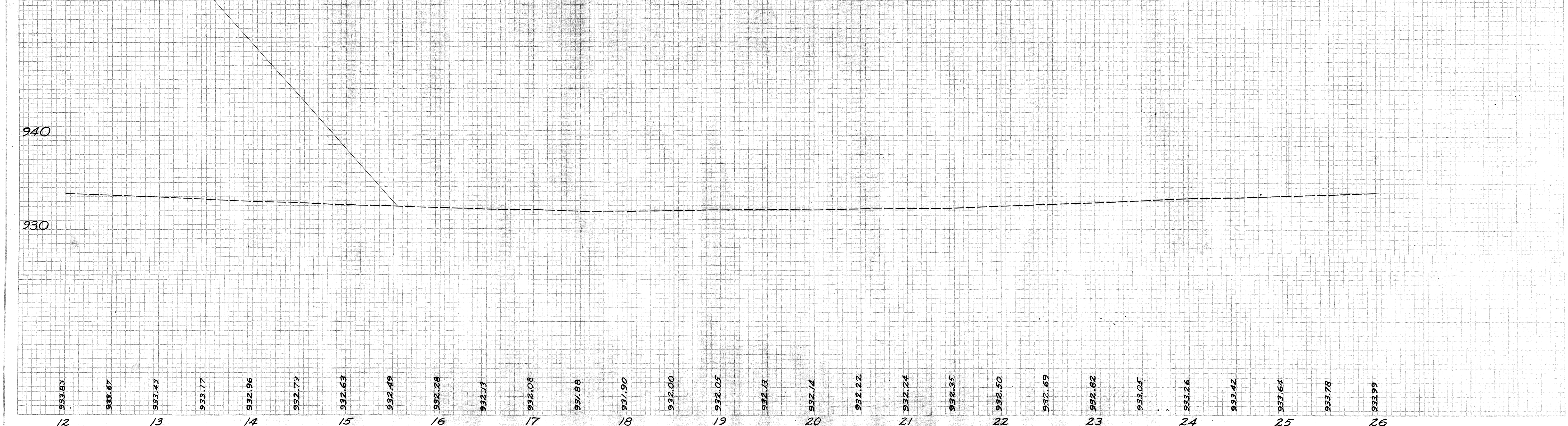
P.I. 32+01.21
Δ 36°10' Rt.
D 1°30'
T 1247.36'
L 2411.11'
E 198.46'
R 3819.72'

B.M. Sta. 12+30
Mine Spike in Telephone Pole #T-171 29.5' Lt.
Elev. 935.17

B.M. Sta. 16+98
on Concrete Base
34.5' Rt.
Elev. 931.94

B.M. 9+40.80
South End Lowest Tread
Front Steps 60' Rt.
Elev. 937.55

B.M. Sta. 24+92
on Concrete at Joe's Market 33.5' Lt.
Elev. 933.45



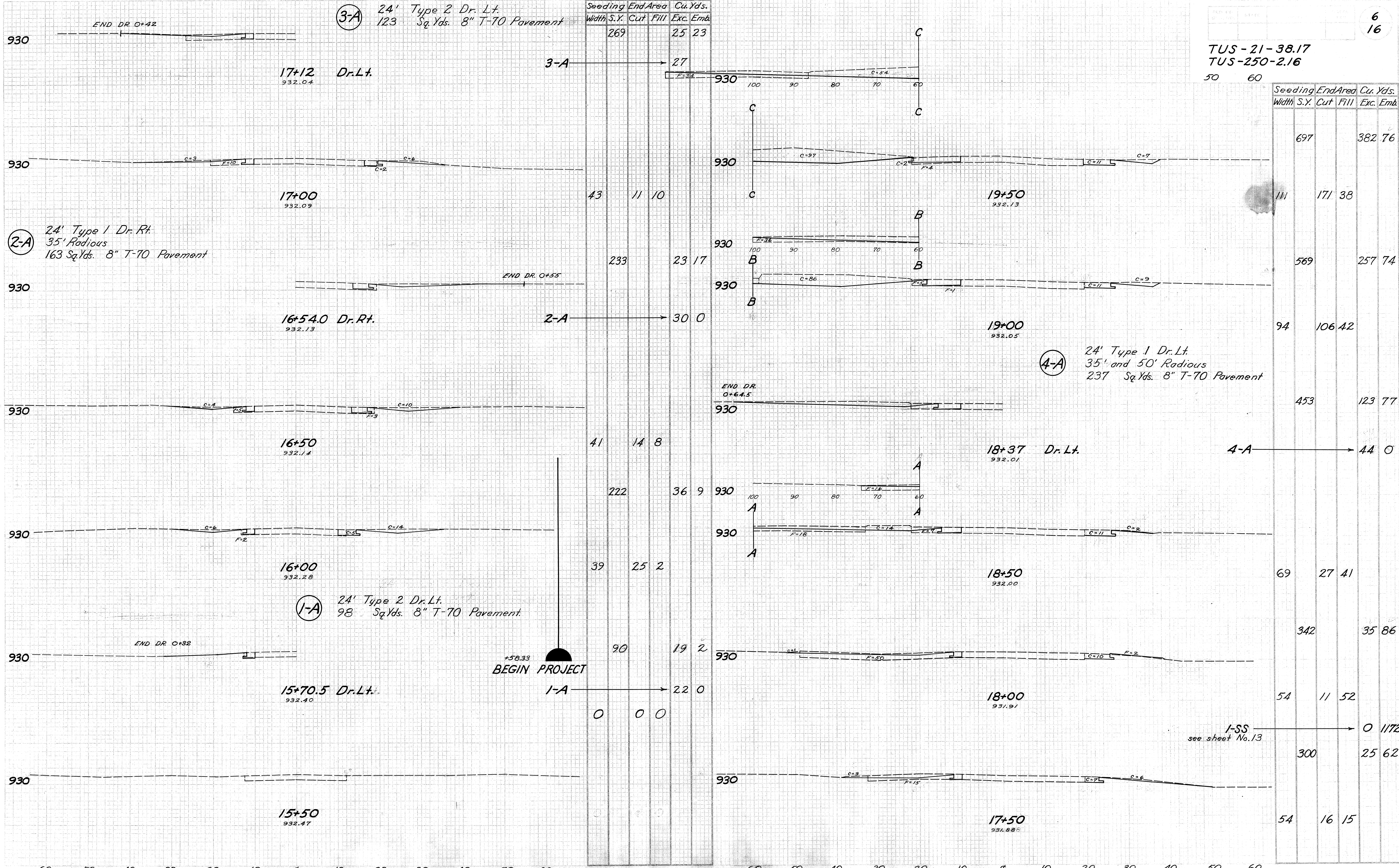
PLAN & PROFILE : STA. 12+00 TO STA. 26+00

60 50 40 30 20 10 0 10 20 30 40 50 60 60 50 40 30 20 10 0 10 20 30 40

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TUS-250-2.16
50 60

Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
269		25	23		

Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
697		382	76		
111	171	38			
569		257	74		
94	106	42			
453		123	77		
		44	0		
		36	9		
39	25	2			
90		19	2		
0	0	0			
		22	0		
		0	1172		
300		25	62		
		54	16	15	



3-A 24' Type 2 Dr. Lt.
123 Sq.Yds. 8" T-70 Pavement

17+12 Dr. Lt.
932.04

3-A → 27

2-A 24' Type 1 Dr. Rt.
35' Radii
163 Sq.Yds. 8" T-70 Pavement

17+00
932.09

43 11 10

16+54.0 Dr. Rt.
932.13

2-A → 30 0

4-A 24' Type 1 Dr. Lt.
35' and 50' Radii
237 Sq.Yds. 8" T-70 Pavement

16+50
932.14

41 14 8

18+37 Dr. Lt.
932.01

4-A → 44 0

16+00
932.28

39 25 2

18+50
932.00

69 27 41

1-A 24' Type 2 Dr. Lt.
98 Sq.Yds. 8" T-70 Pavement

+58.33
BEGIN PROJECT

1-A → 22 0

18+00
931.91

54 11 52

1-SS
see sheet No. 13

0 1172

15+50
932.47

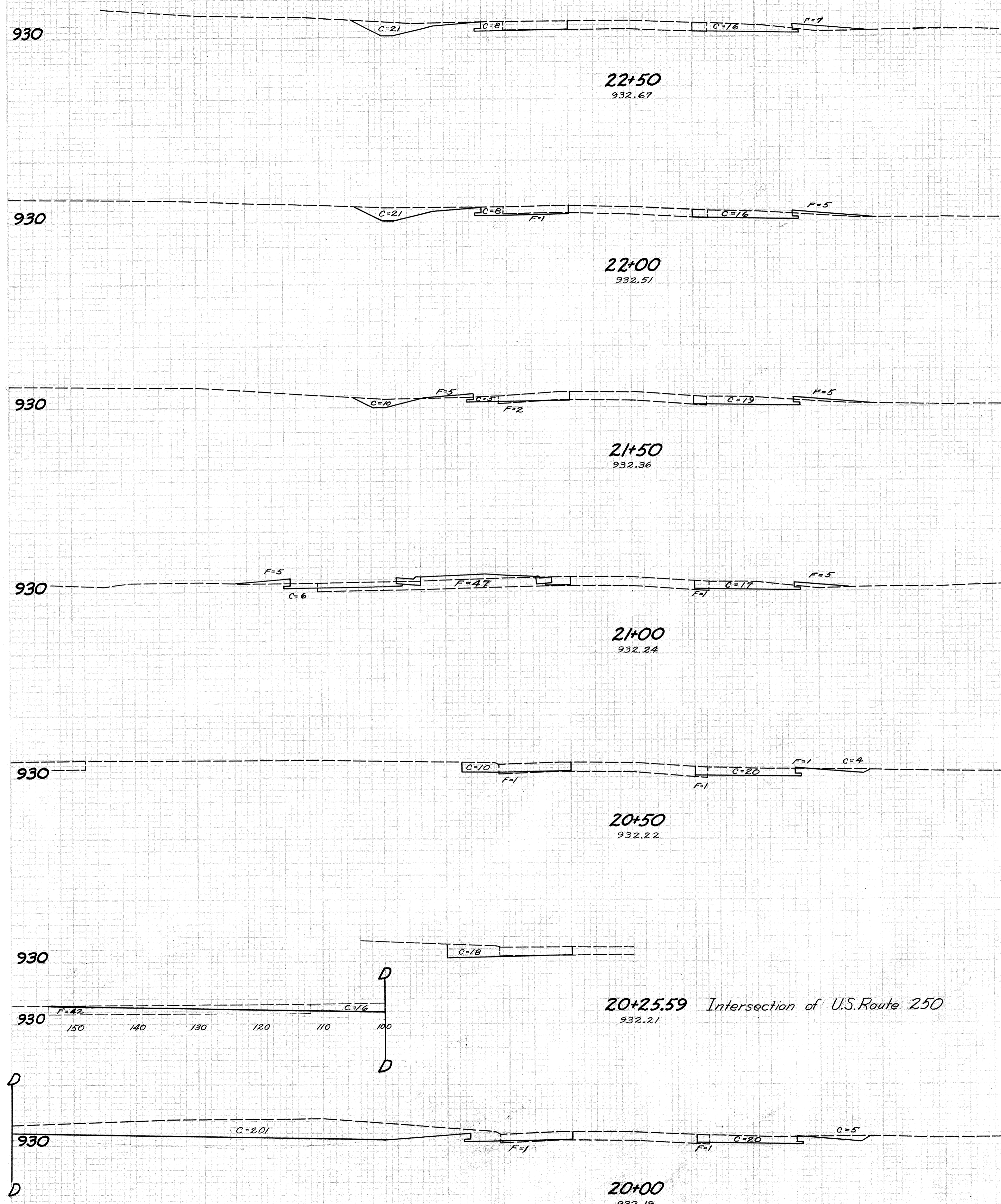
0 0 0

17+50
931.88

54 16 15

90 80 70 60 50 40 30 20 10 0 10 20 30 40 50

50 40 30 20 10 0 10 20 30

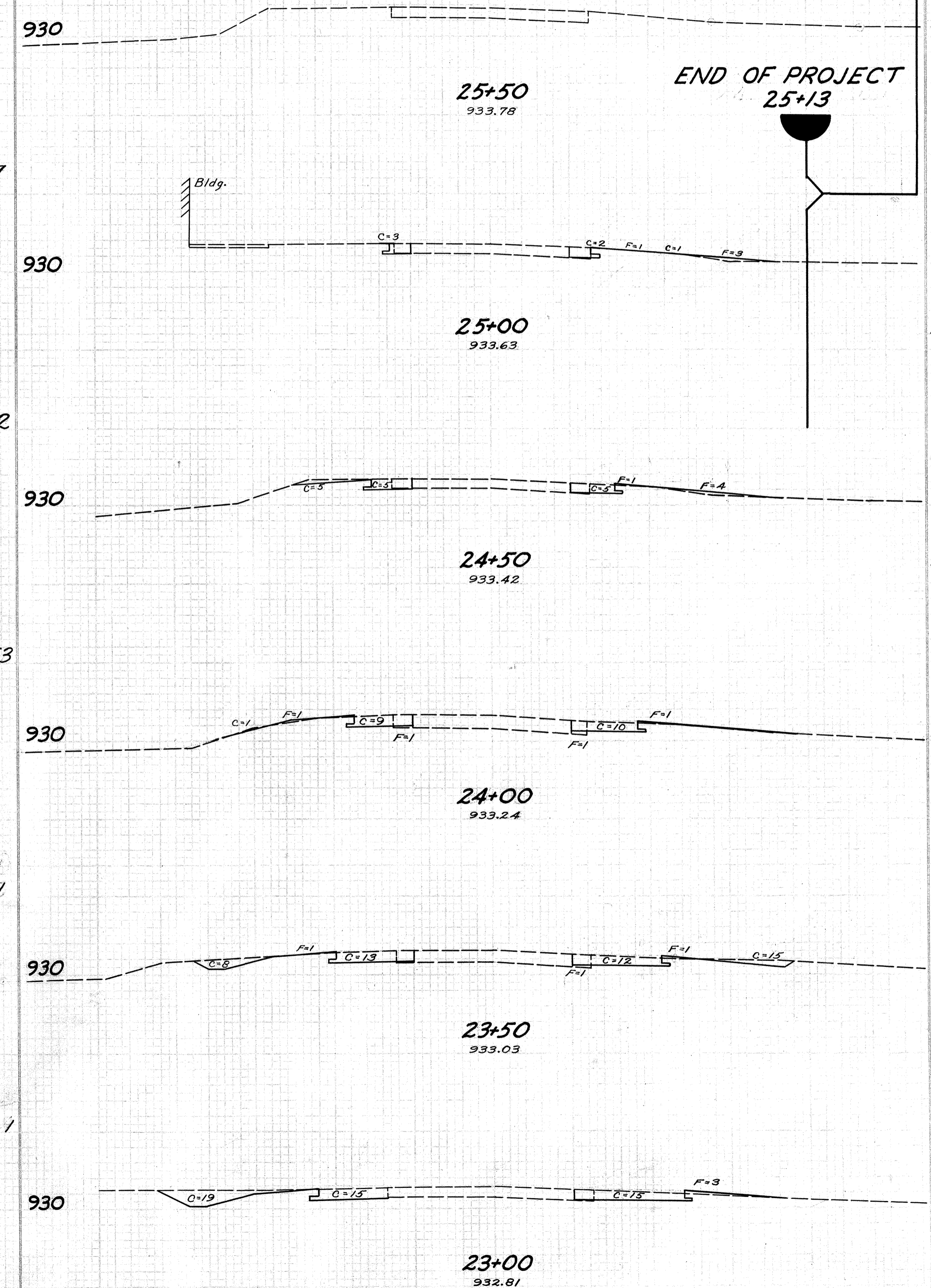


Seeding Width	End Area		Cu. Yds.	
	S.Y.	Cut	Fill	Exc. Emb.
183			87	9
33	45	7		
186			83	12
34	45	6		
186			73	17
33	34	12		
200			53	62
39	23	55		
142			53	53
12	34	2		
16			24	1
0	18	0		
199			123	21
140			242	44

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TUS-250-2.16
40 50

Excavation 1749 Cu.Yds.
Embankment 1803 Cu.Yds.
Seeding 4910 Sq.Yds.

END OF PROJECT
25+13



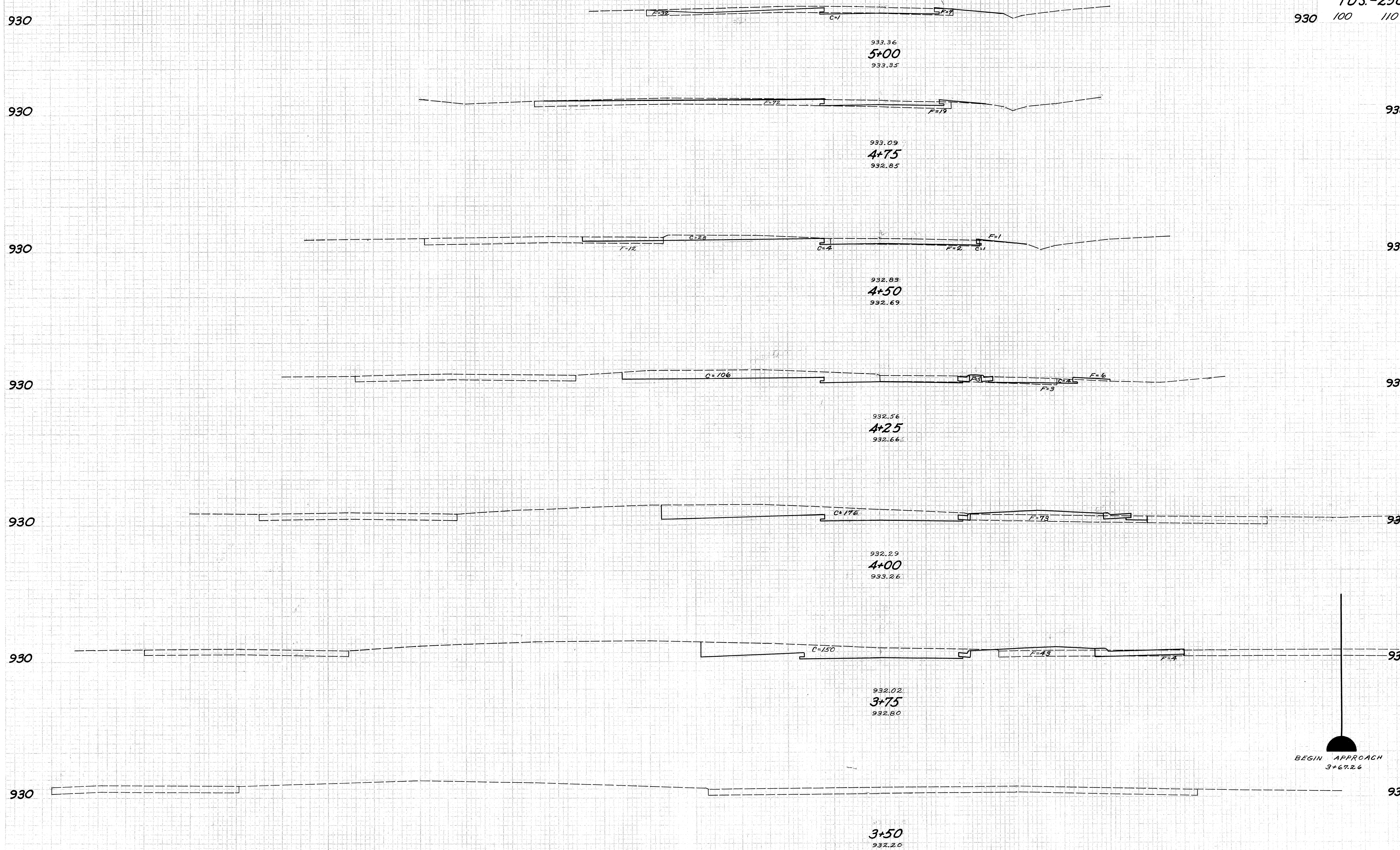
Seeding Width	End Area		Cu. Yds.	
	S.Y.	Cut	Fill	Exc. Emb.
0	0	0		
18			1	1
25	6	4		
147			19	8
28	15	5		
175			32	8
35	20	4		
194			63	7
35	48	3		
189			90	6
33	49	3		

90 80 70 60 50 40 30 20 10 0 10 20 30 40 50

50 40 30 20 10 0 10 20 30

180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90

TUS-21-38.17
TUS-250-2.16

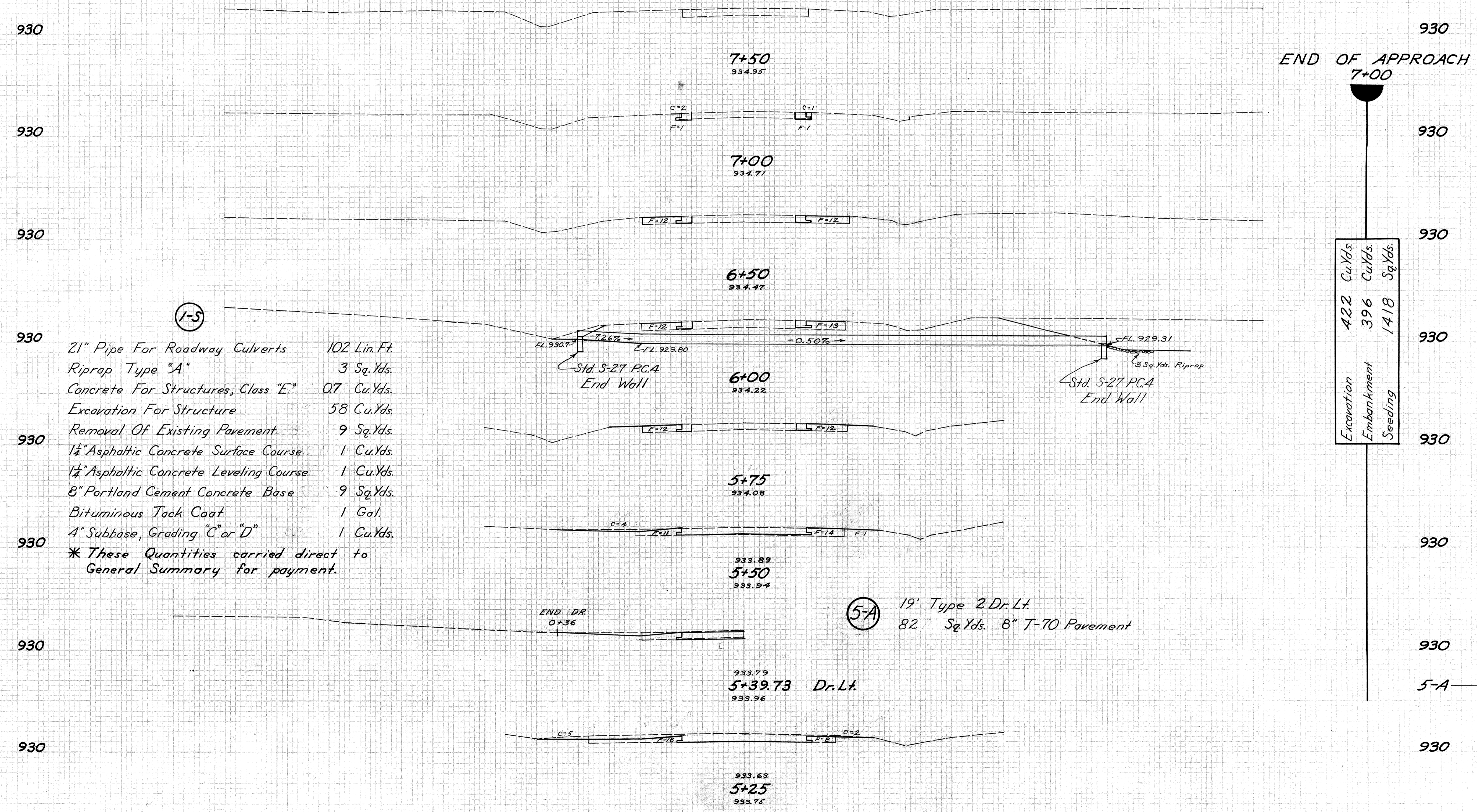


930 100 110

Seeding Width	End Area S.Y.	Area Cut	Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
54	7	39			
	174			1	60
71	0	91			
	188			15	49
64	33	15			
	165			66	13
55	110	14			
	165			132	40
64	176	73			
	157			151	56
49	150	47			
	21			22	7
0	0	0			

180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

U.S. Route 250 - Sta. 3+50 to Sta. 5+00



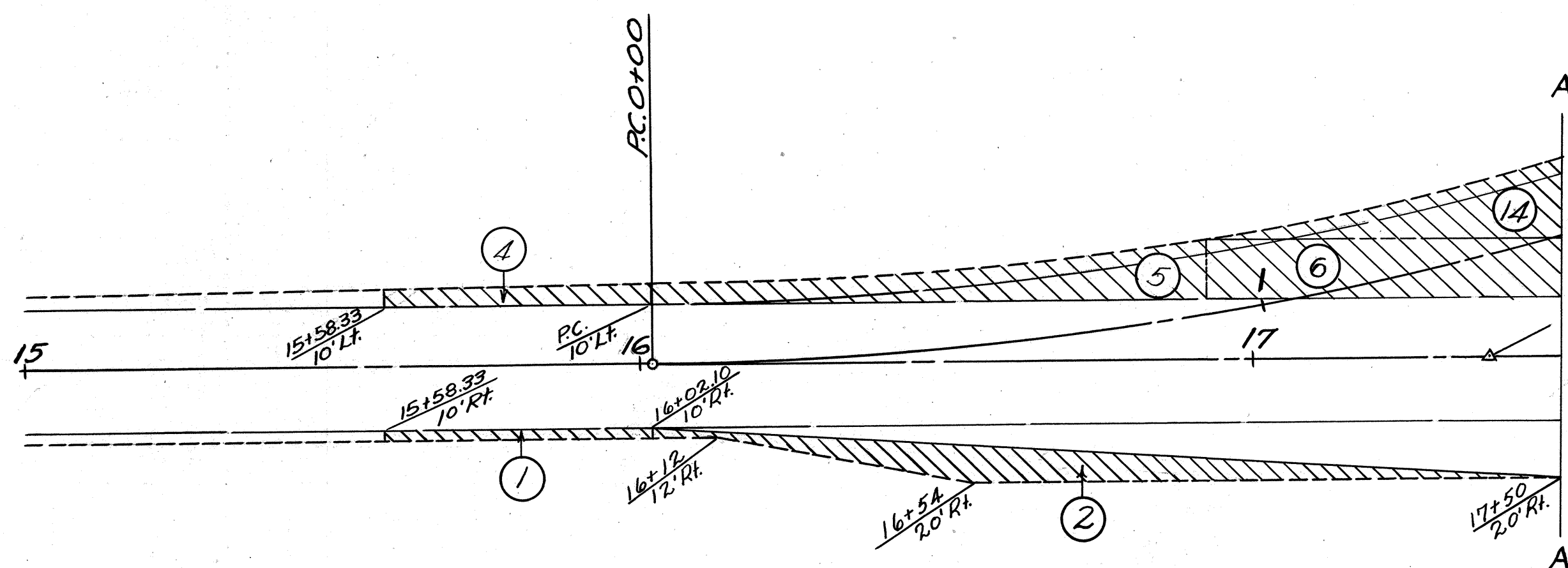
- (1-S)
- 21" Pipe For Roadway Culverts 102 Lin. Ft.
 - Riprap Type "A" 3 Sq. Yds.
 - Concrete For Structures, Class "E" 0.7 Cu. Yds.
 - Excavation For Structure 58 Cu. Yds.
 - Removal Of Existing Pavement 9 Sq. Yds.
 - 1 1/2" Asphaltic Concrete Surface Course 1 Cu. Yds.
 - 1 1/2" Asphaltic Concrete Leveling Course 1 Cu. Yds.
 - 8" Portland Cement Concrete Base 9 Sq. Yds.
 - Bituminous Tack Coat 1 Gal.
 - 4" Subbase, Grading "C" or "D" 1 Cu. Yds.
- * These Quantities carried direct to General Summary for payment.

(5-A) 19' Type 2 Dr. Lt.
82 Sq. Yds. 8" T-70 Pavement

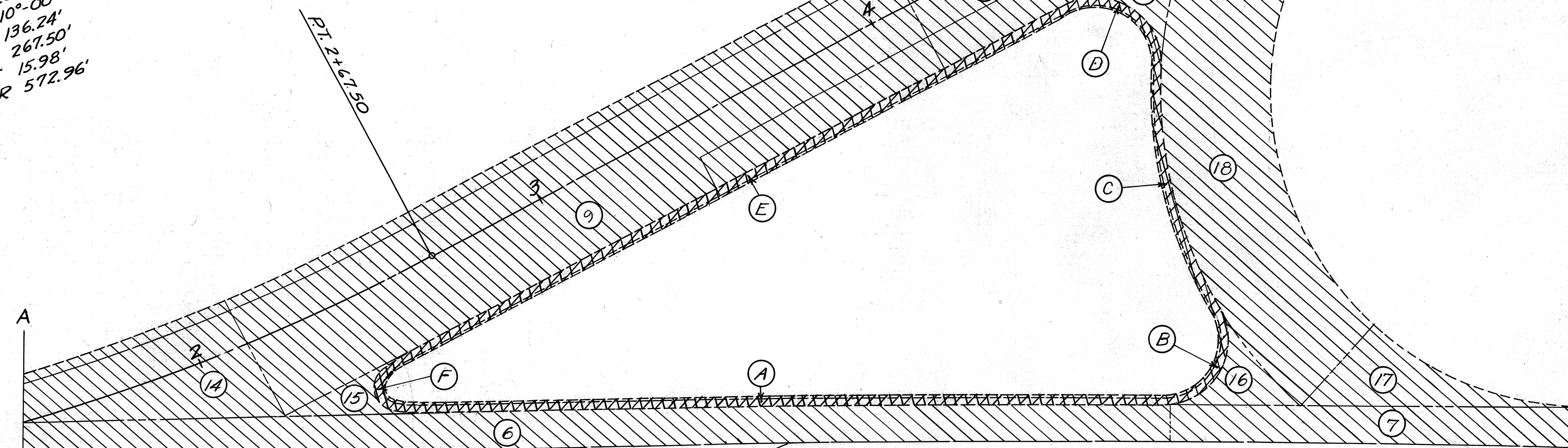
Excavation 422 Cu. Yds.
Embankment 396 Cu. Yds.
Seeding 1418 Sq. Yds.

Station	Seeding Width S.Y.	End Area		Cu. Yds.	
		Cut	Fill	Exc.	Emb.
7+50	0	0	0		
7+00	11			3	2
6+50	4	3	2		
6+00	56			3	24
5+75	16	0	24		
5+50	89			0	45
5+39.73	16	0	25		
5+25	60			0	23
5-A	27	0	24		
5+25	90			2	23
5+25	38	4	26		
5+25	110			5	24
5-A				18	0
5+25	41	7	26		
5+25	132			4	30

TUS - 21 - 38.17
TUS - 250 - 2.16



PI. 11+36.24
Δ 26°-45' Lt.
D 10°-00'
T 136.24'
L 267.50'
E 15.98'
R 572.96'



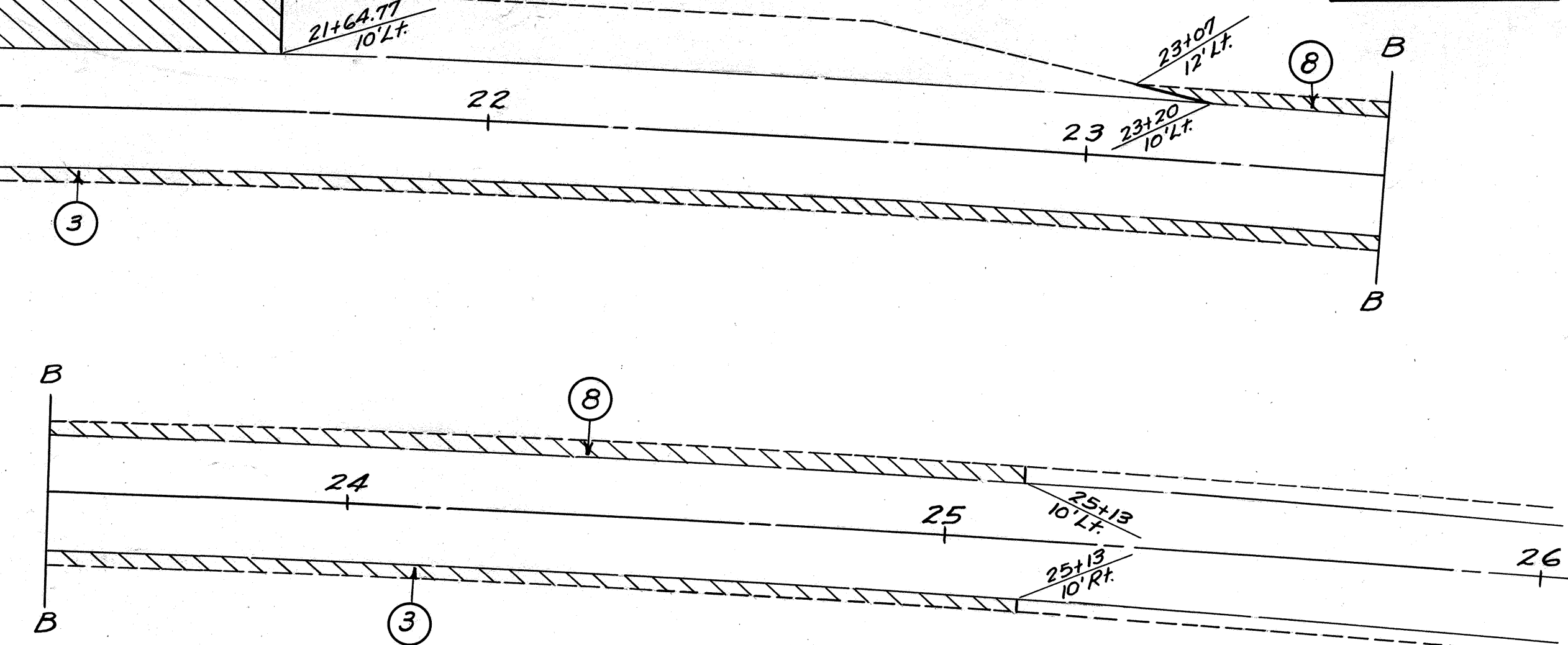
PI. 32+01.21
Δ 36°-10' Rt.
D 1°-30'
L 2411.11'
T 1247.36'
E 198.46'
R 3819.72'

Removal Of Existing Pavement

①	(43.77' x 2')	+ 9	=	9.73 Sq.Yd.
②	(1/2 x 147.5' x 6')	+ 9	=	49.17 Sq.Yd.
③	(1/2 x 7' x 2')	+ 9	=	0.78 Sq.Yd.
	(51.5' x 2')	+ 9	=	114.44 Sq.Yd.
④	(43.77' x 2')	+ 9	=	115.22 Sq.Yd.
⑤	(90.01' x 2')	+ 9	=	9.73 Sq.Yd.
	(1/2 x 90.01' x 7.25')	+ 9	=	20.00 Sq.Yd.
			=	36.25 Sq.Yd.
⑥	(363.3' x 9.25')	+ 9	=	56.25 Sq.Yd.
⑦	(109.27' x 10')	+ 9	=	373.39 Sq.Yd.
⑧	(1/2 x 13.5' x 2')	+ 9	=	1.50 Sq.Yd.
	(19.3' x 2')	+ 9	=	42.89 Sq.Yd.
⑨	(196.5' x 31.25')	+ 9	=	56.25 Sq.Yd.
⑩	(1/2 x 37' x 8')	+ 9	=	373.39 Sq.Yd.
	(37' x 31.25')	+ 9	=	128.47 Sq.Yd.
⑪	(116.68' x 39.25')	+ 9	=	44.39 Sq.Yd.
⑫	(2 x 84.82' x 10')	+ 9	=	682.29 Sq.Yd.
⑬	(2 x 50' x 20')	+ 9	=	144.91 Sq.Yd.
	(2 x 1/2 x 50' x 8')	+ 9	=	507.55 Sq.Yd.
			=	188.49 Sq.Yd.
⑭	(1/2 x 31.5' x 130')	+ 9	=	66.66 Sq.Yd.
⑮	(1/2 x 12.5' x 24')	+ 9	=	227.50 Sq.Yd.
⑯	(1/2 x 23' x 29.5')	+ 9	=	16.67 Sq.Yd.
⑰	(1/2 x 29' x 56.5')	+ 9	=	37.69 Sq.Yd.
⑱	(29.25' x 117.80')	+ 9	=	91.03 Sq.Yd.
⑳	(1/2 x 22.25' x 28')	+ 9	=	382.86 Sq.Yd.
	(1/2 x 29' x 56.5')	+ 9	=	34.61 Sq.Yd.
			=	91.03 Sq.Yd.
Total				3250.58 Sq.Yd.
				use 3251 Sq.Yd.

Removal Of Existing Combination Curb & Gutter

A	Sta 18+53.5 to Sta 20+55.5	=	202.00 Lin.Ft.
B	(15.25' x 2.1121393)	=	32.21 Lin.Ft.
C	(116.75' x 0.5765405)	=	67.31 Lin.Ft.
D	(15.25' x 2.1121393)	=	32.21 Lin.Ft.
E	Sta 2+49.5 to Sta 4+51.75	=	202.25 Lin.Ft.
F	(5.25' x 0.3409091)	=	15.40 Lin.Ft.
Total			551.38 Lin.Ft.
			use 552 Lin.Ft.

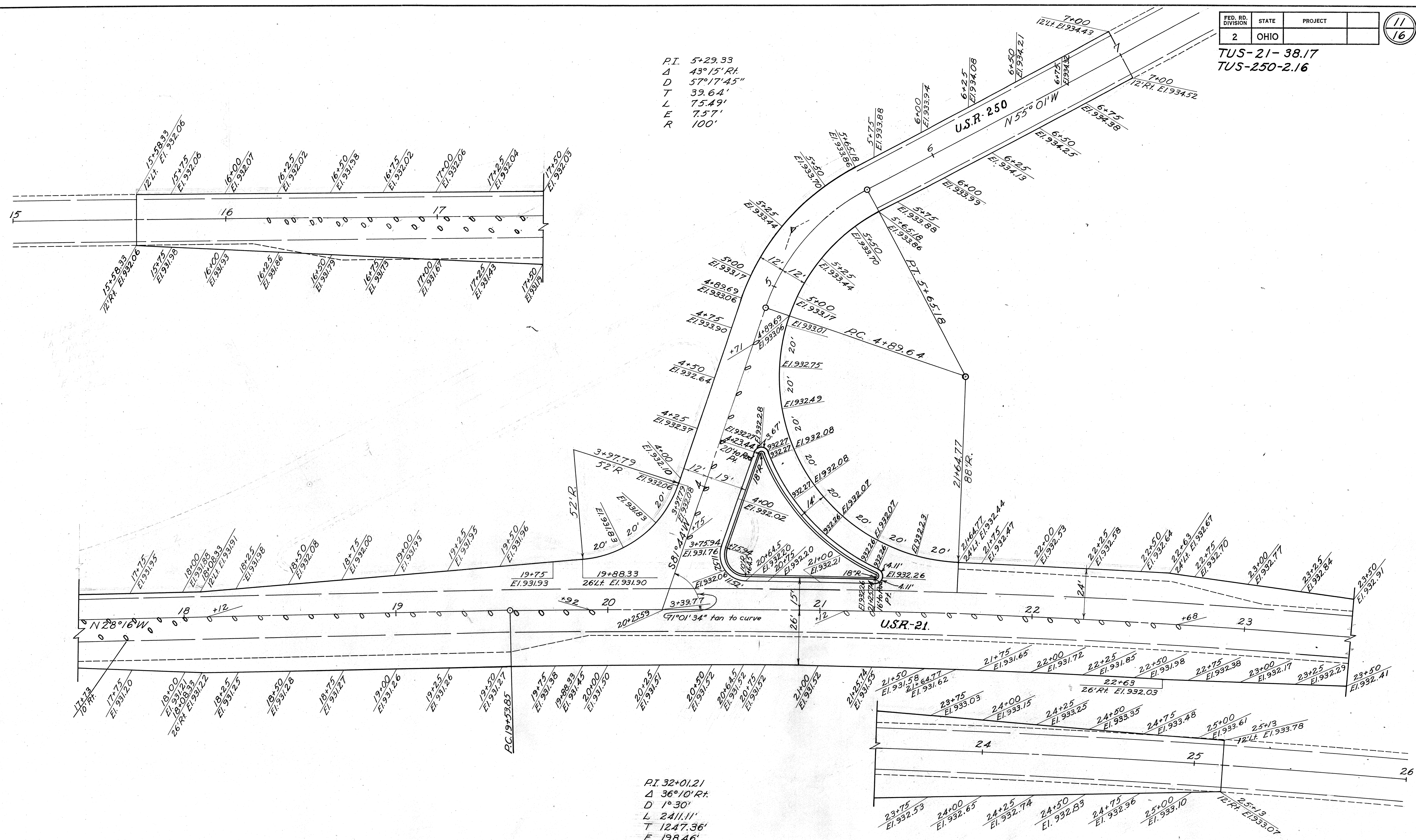


DETAIL OF EXIST. PAV'T & COMBINATION CURB & GUTTER TO BE REMOVED

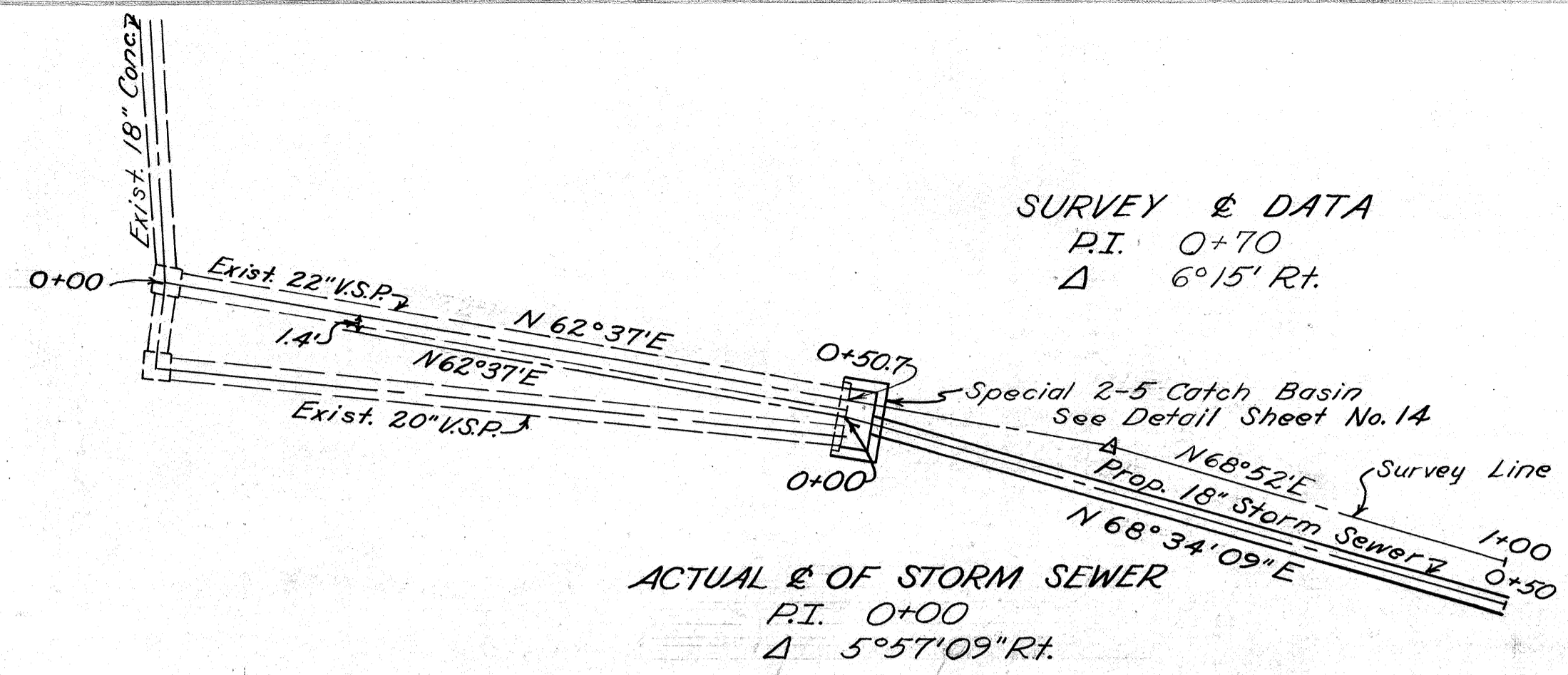
TUS-21-38.17
TUS-250-2.16

P.I. 5+29.33
 Δ 43°15' R.
 D 57°17'45"
 T 39.64'
 L 75.49'
 E 7.57'
 R 100'

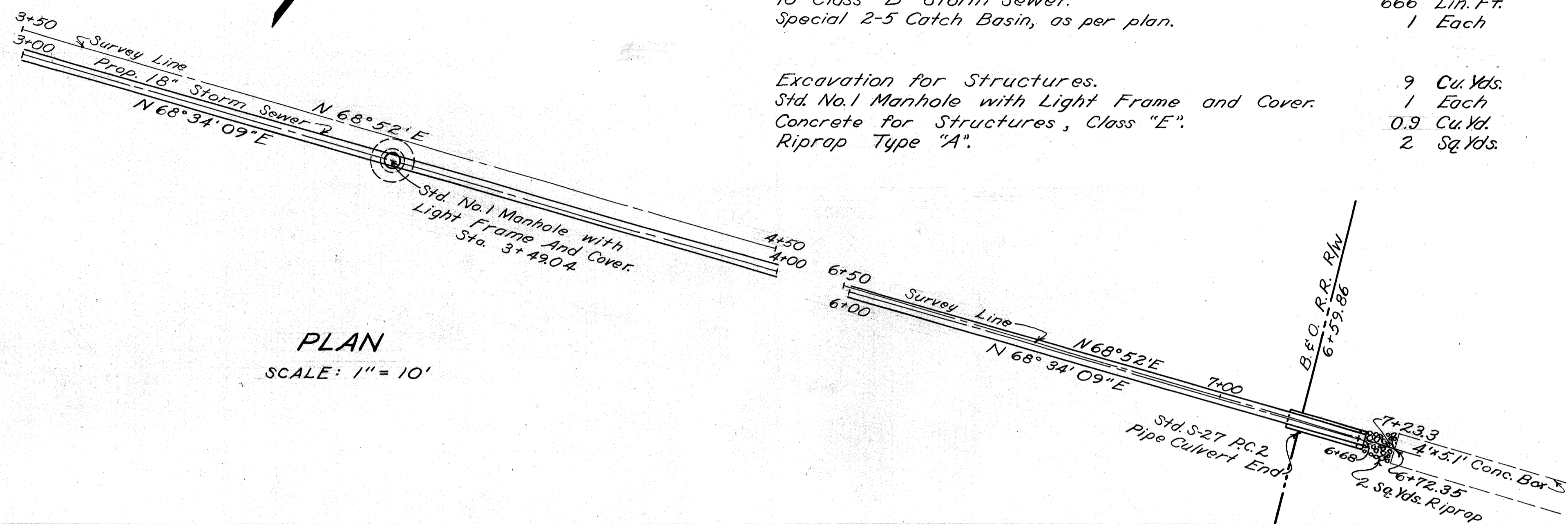
P.I. 32+01.21
 Δ 36°10' R.
 D 1°30'
 L 2411.11'
 T 1247.36'
 E 198.46'
 R 3819.72'



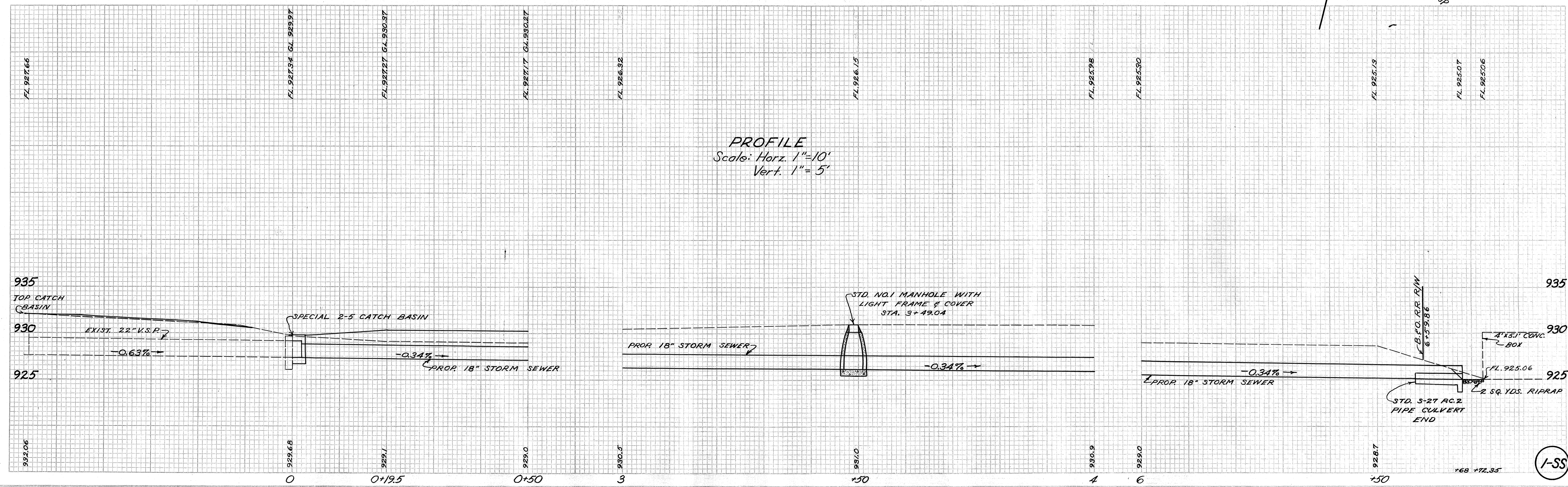
TUS-21-38.17
TUS-250-2.16



WORK REQUIRED
Construct Special Catch Basin #2-5 at end of existing 20" and 22" pipe structure. Build 18" storm sewer as per plan. Construct Std. No.1 Manhole.



PLAN
SCALE: 1" = 10'



18"x666' STORM SEWER

50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

50 40 30 20 10 0 10 20

FED. RD. DISTRICT	STATE	PROJECT
2	OHIO	

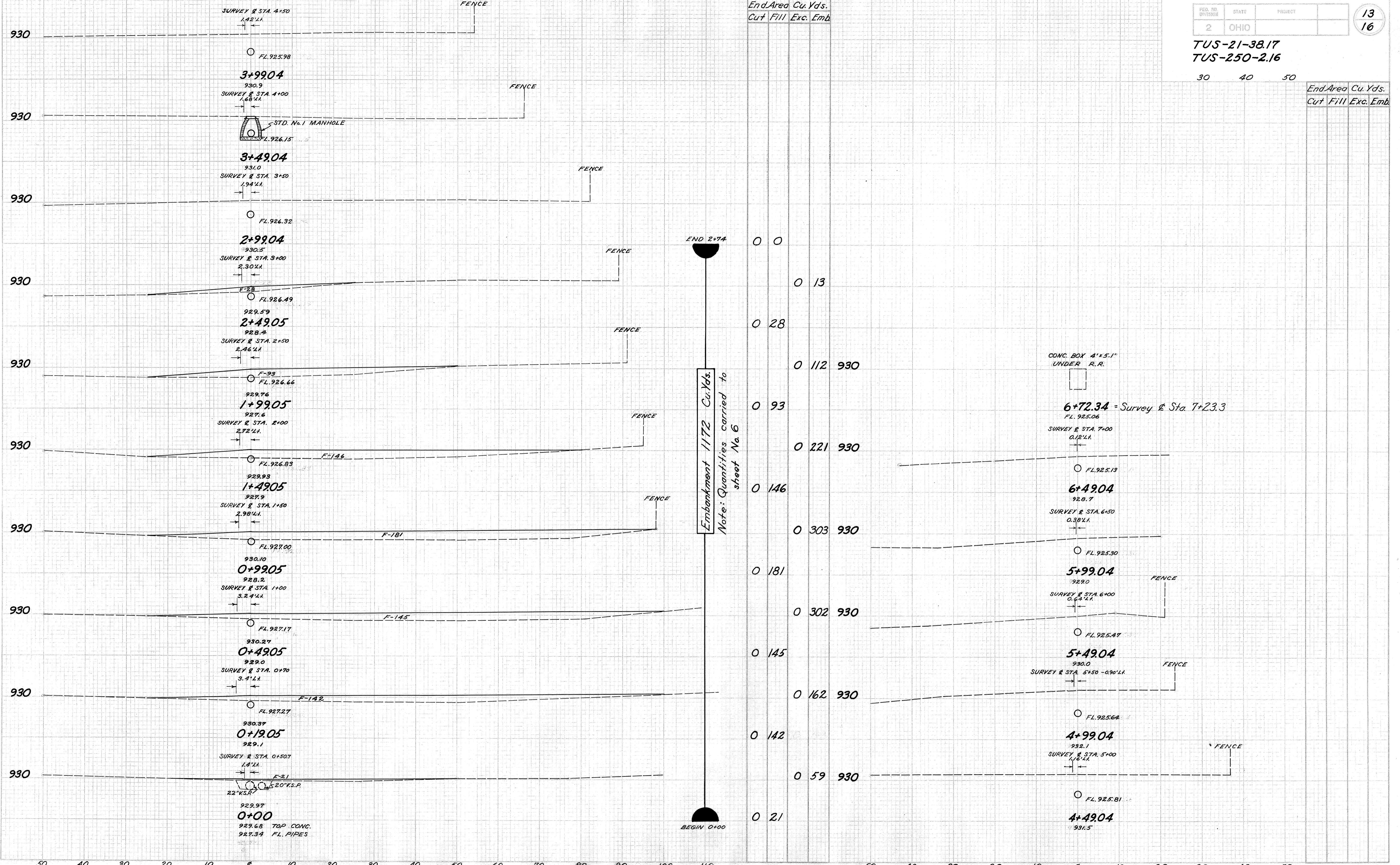
13
16

TUS-21-38.17
TUS-250-2.16

30 40 50

End Area	Cu. Yds.
Cut	Fill
Exc.	Emb.

End Area	Cu. Yds.
Cut	Fill
Exc.	Emb.



Embankment 1172 Cu. Yds.
Note: Quantities carried to sheet No. 6

END 2+74

BEGIN 0+00

0	0		
0	13		
0	28		
0	112	930	
0	93		
0	221	930	
0	146		
0	303	930	
0	181		
0	302	930	
0	145		
0	162	930	
0	142		
0	59	930	
0	21		

CONC. BOX 4'x5.1' UNDER R.R.

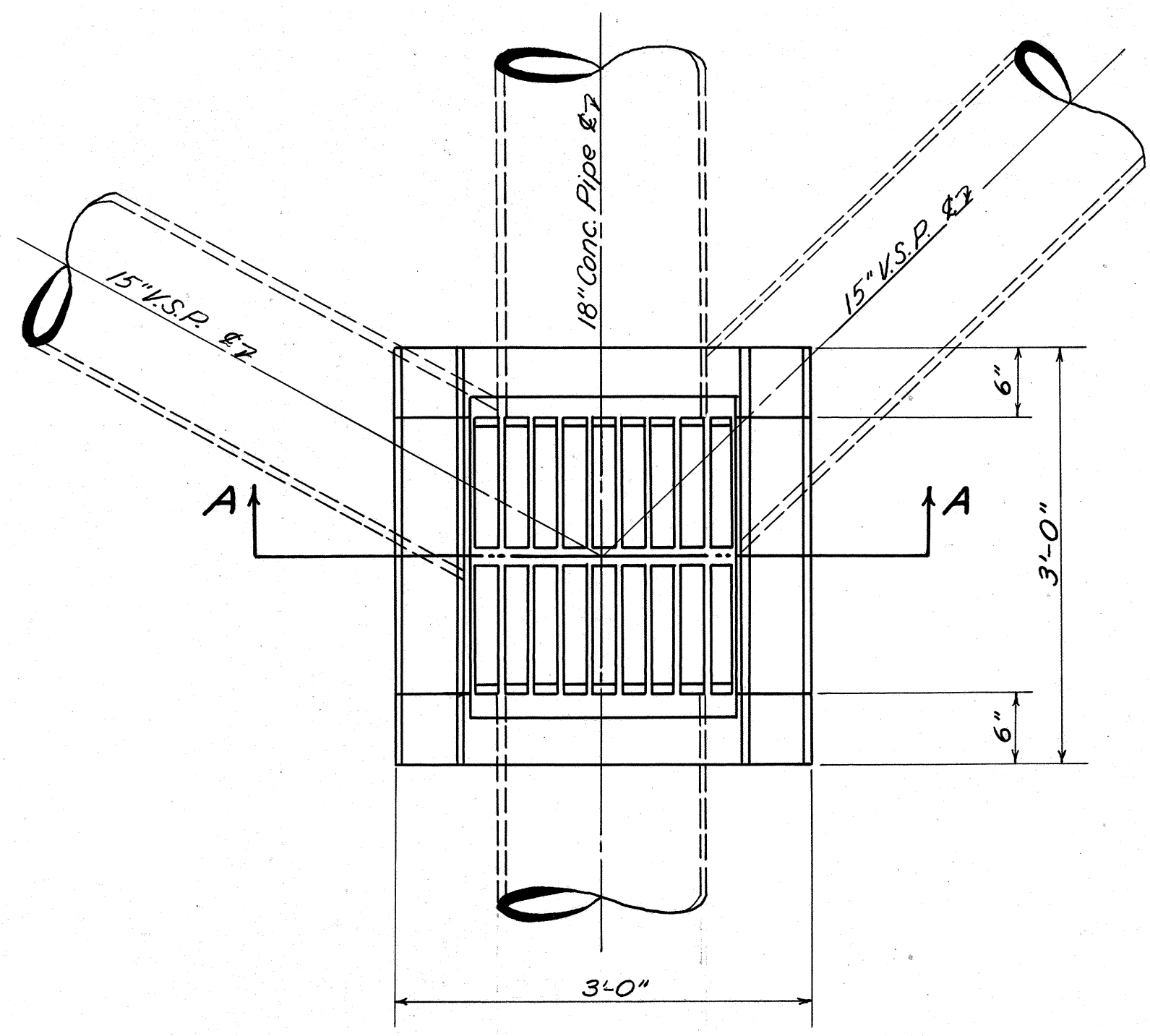
6+72.34 = Survey & Sta. 7+23.3

FENCE

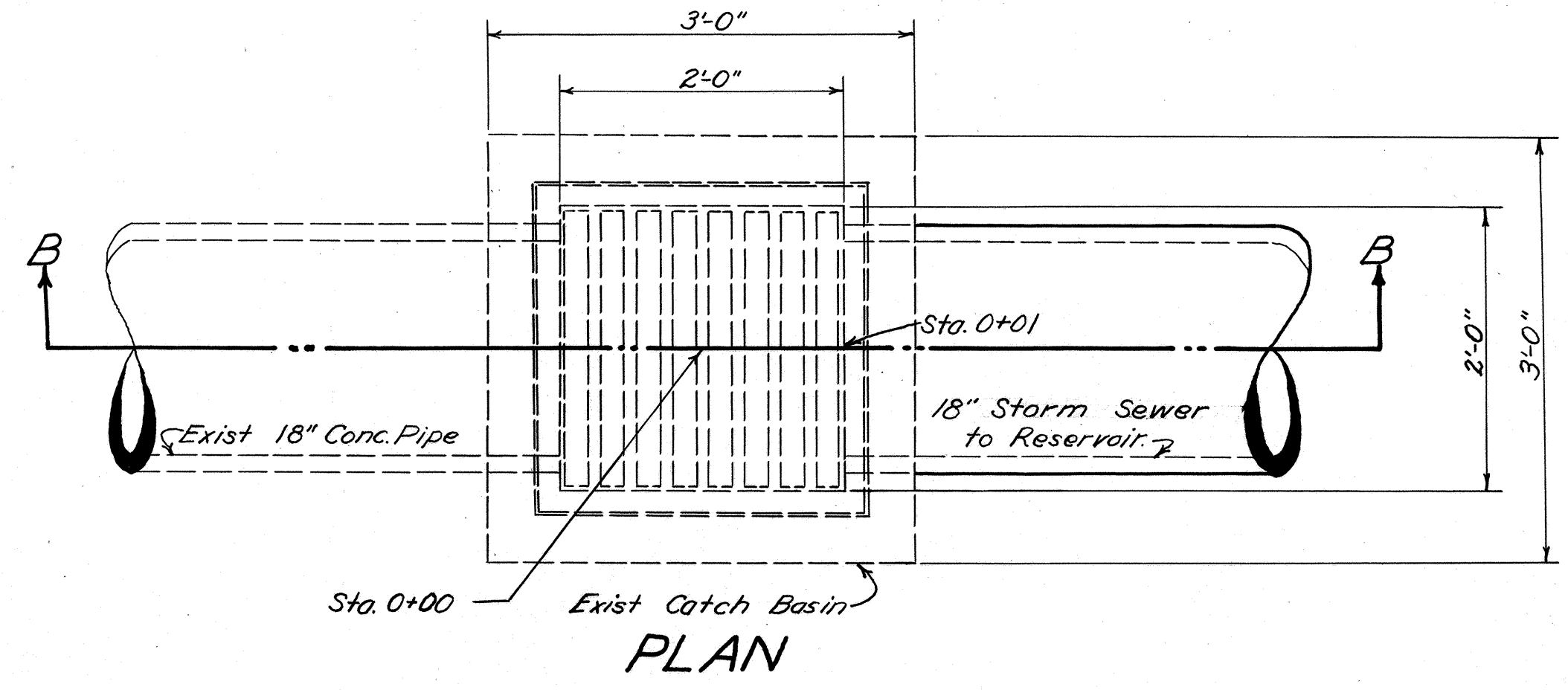
FENCE

FENCE

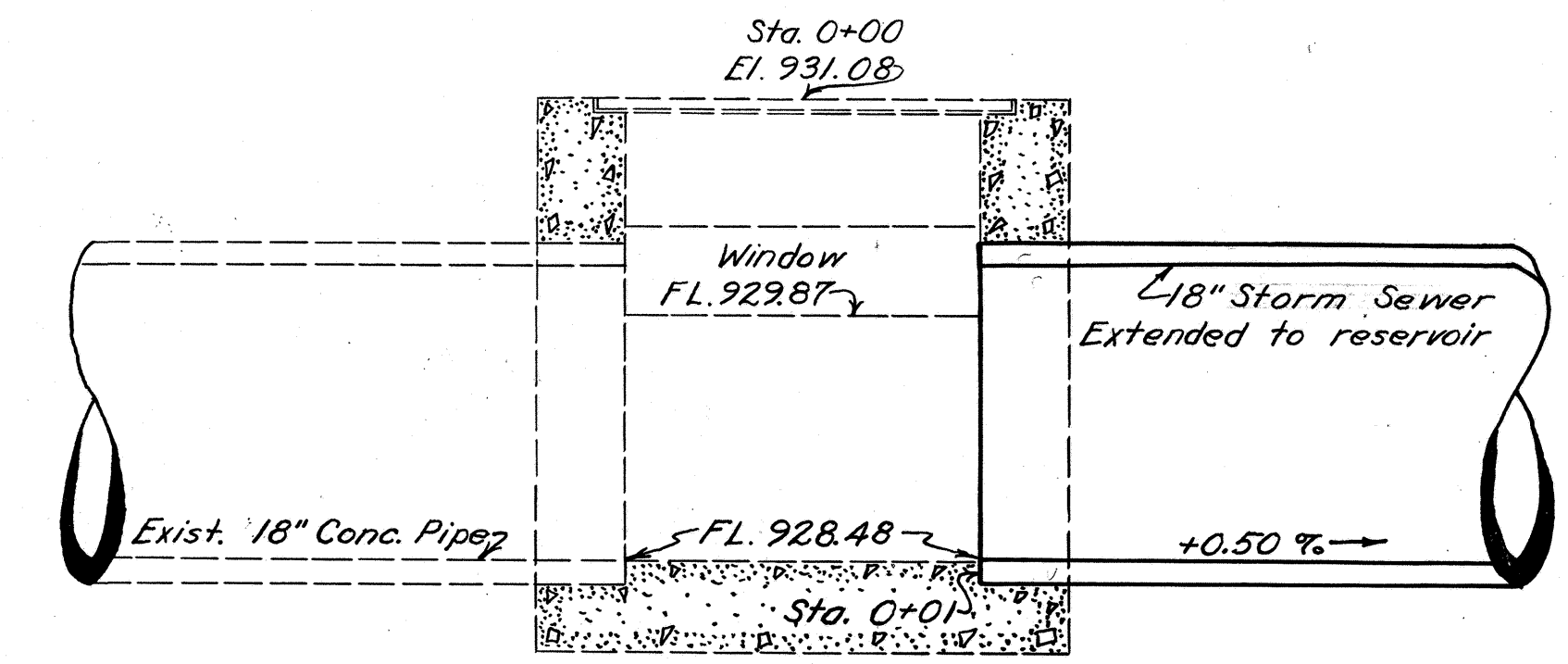
TUS-21-38.17
TUS-250-2.16



PLAN



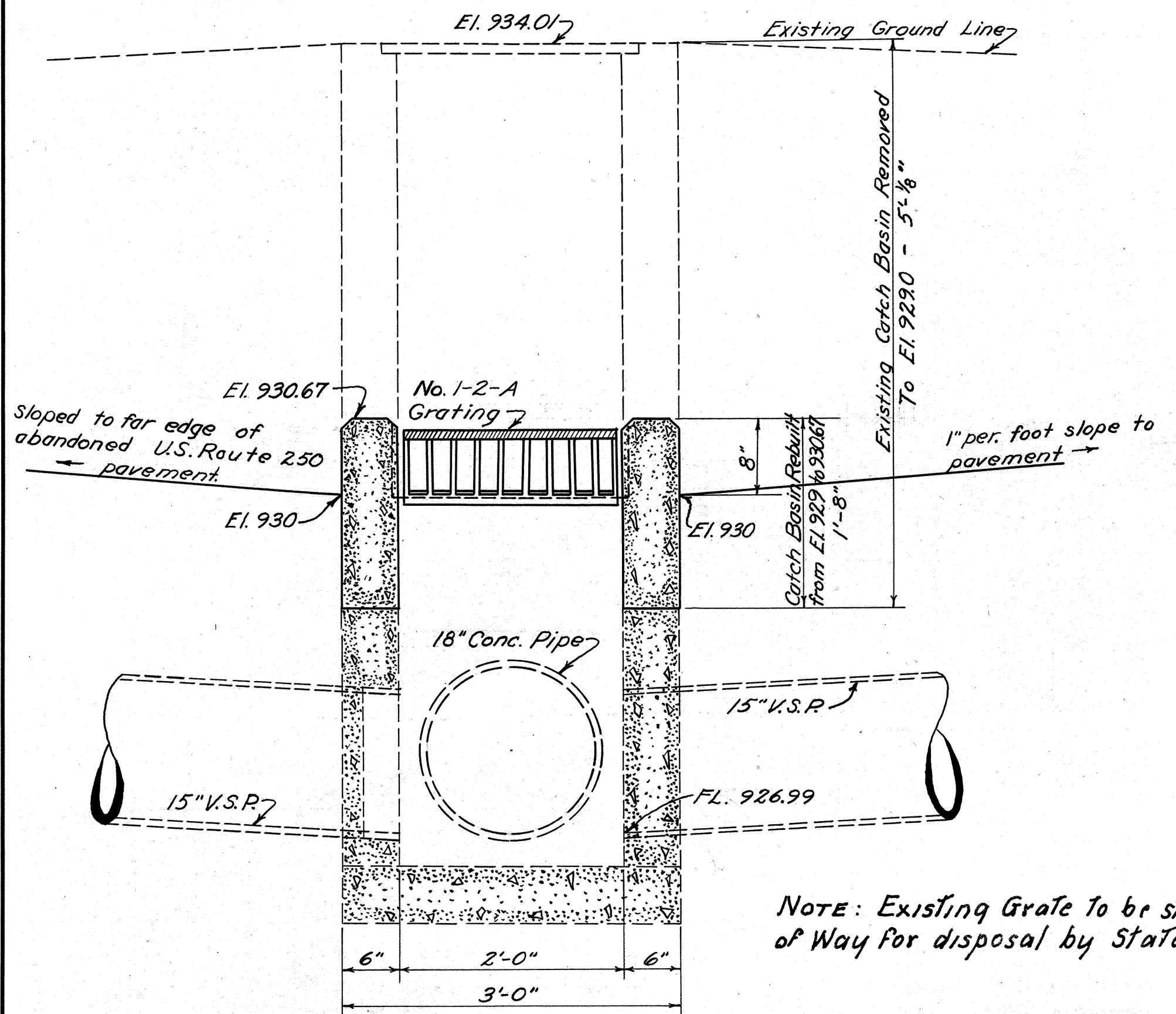
PLAN



SECTION B-B

Datum 927

5-SS
PROPOSED CONNECTION TO EXISTING CATCH BASIN
STA. 20+95.24 Lt.

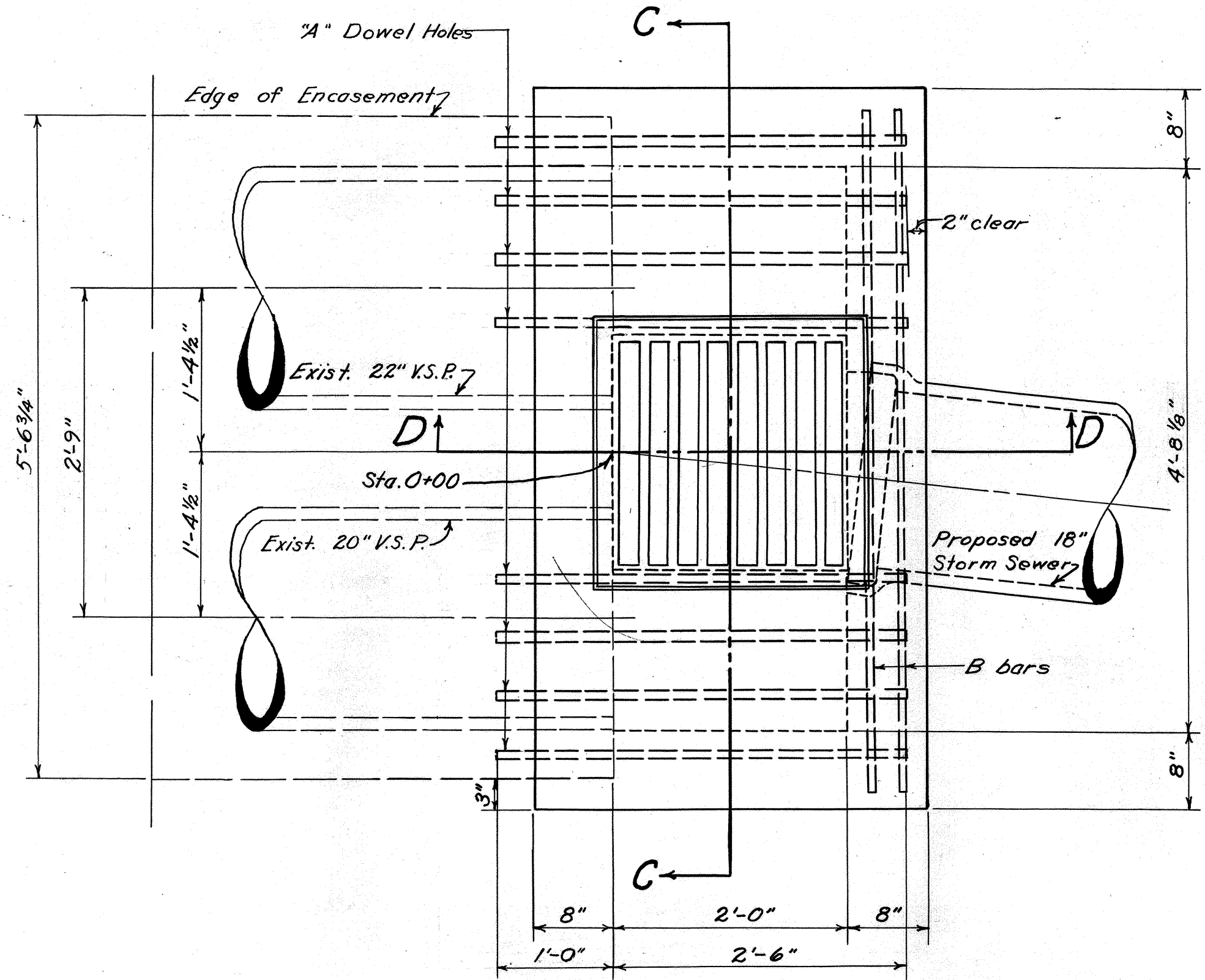


SECTION A-A

Datum 925

3-SS

DETAIL OF RECONSTRUCTED CATCH BASIN
STA. 19+23.55 Lt.

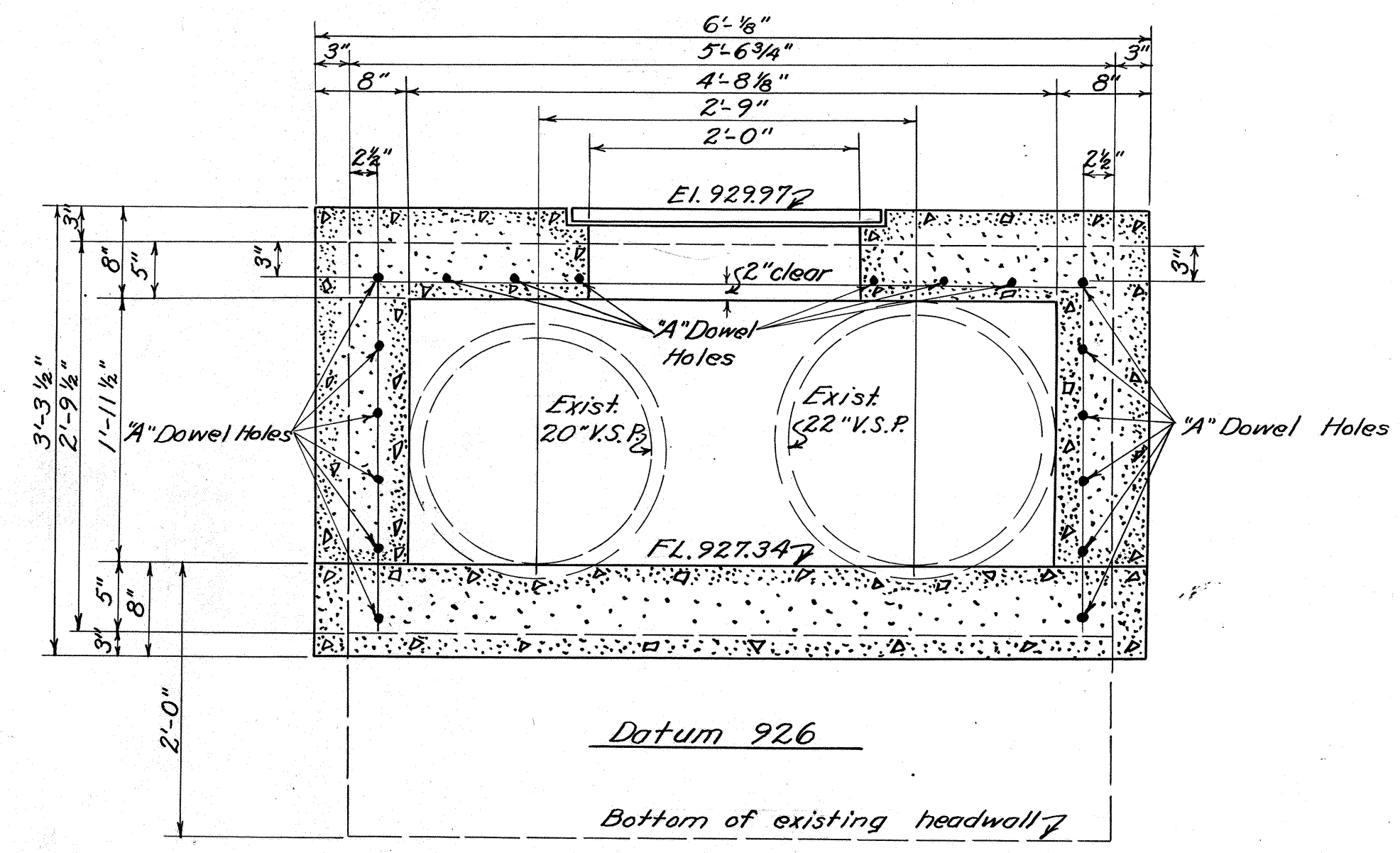


PLAN

STEEL LIST						
No.	Mark	Size	Spacing	Length	Shape	Weight
18	A	#6	0'-6" %	3'-6"	Straight	95
2	B	#6	0'-6" %	5'-8"	Straight	9
Total						#104

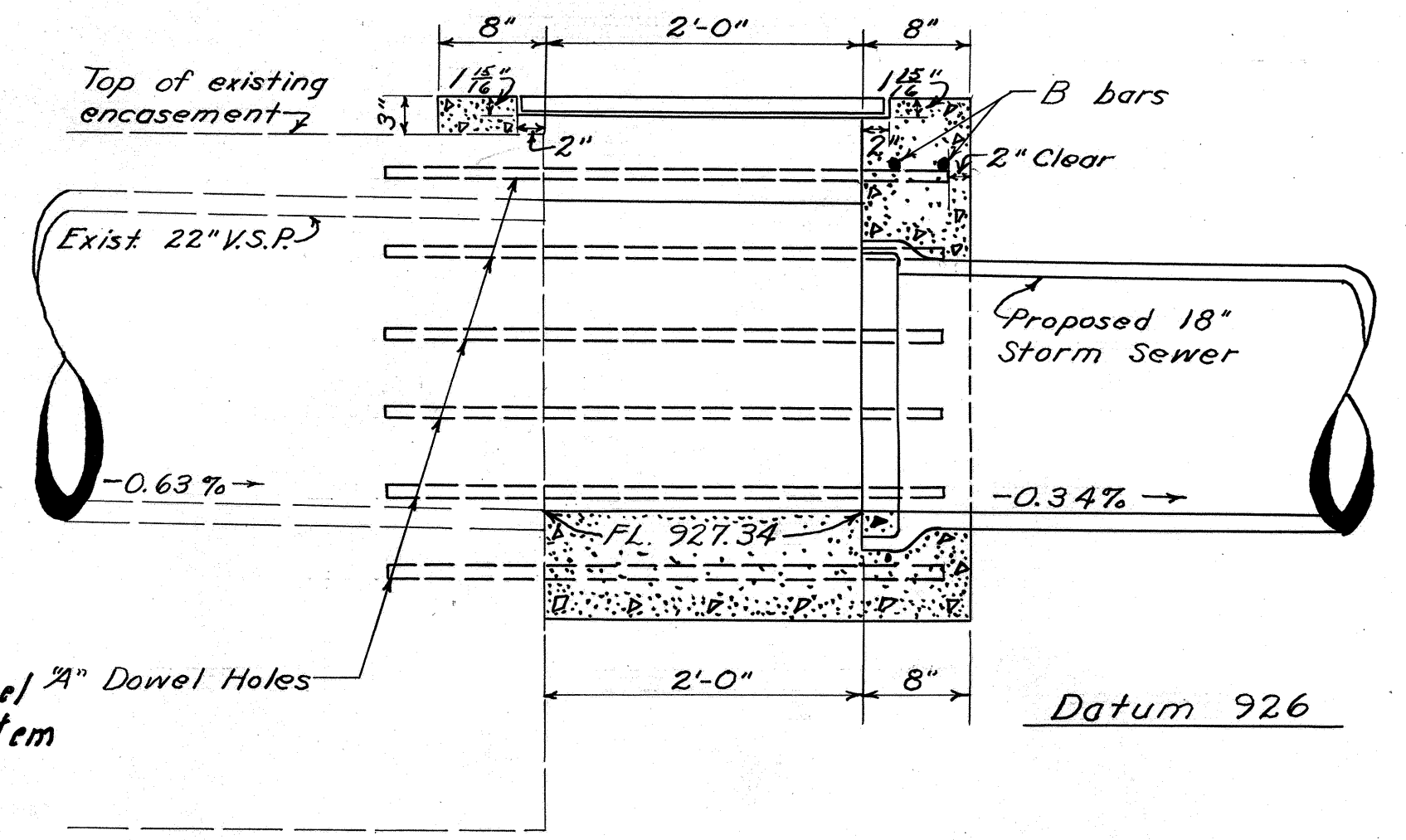
*Note: Payment for Reinforcing Steel and for Dowel 'A' Dowel Holes required is included in the unit price bid for Item I-B Special No. 2-5 Catch Basin, as per plan.

1-SS
SPECIAL 2-5 CATCH BASIN
STA. 17+73.15 Rt.



SECTION C-C

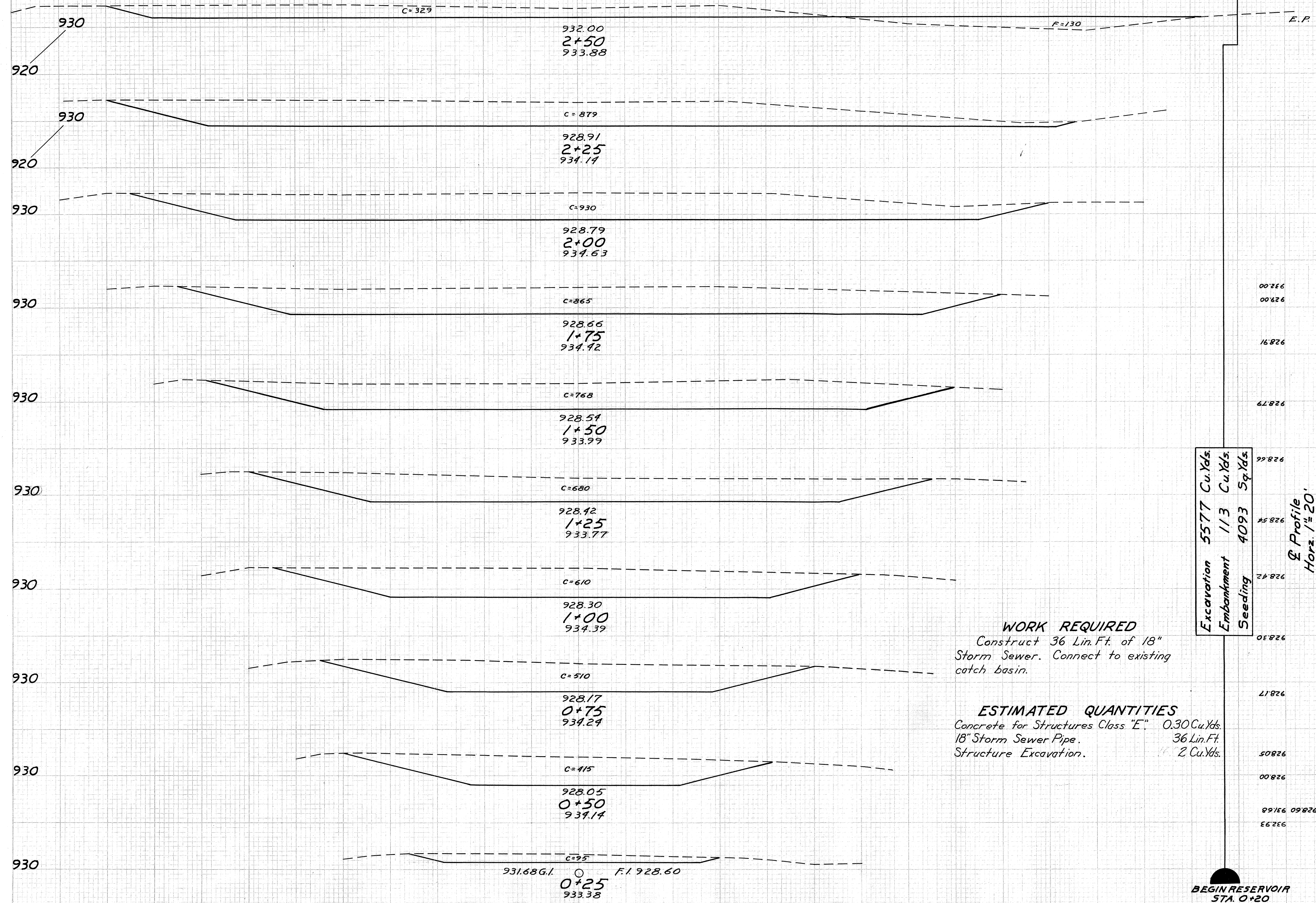
Datum 926



SECTION D-D

Datum 926

TUS.-21-38.17
TUS.-250-2.16



SEEDING	END AREA	CU. YDS.
Width	Sq. Yds.	Exc. Emb.
0	325	134 53
234	329 130	
51'566	611	559 60
58'466	206	879 0
61'656	557	838 0
62'746	195	930 0
63'836	514	831 0
64'926	175	865 0
66'016	464	756 0
67'106	159	768 0
68'196	421	670 0
69'286	144	680 0
70'376	374	597 0
71'466	125	610 0
72'556	319	519 0
73'646	105	510 0
74'736	272	428 0
75'826	16	415 0
76'916	218	236 0
78'006	66	95 0
79'096	18	9 0
80'186	0	0 0

WORK REQUIRED
Construct 36 Lin.Ft. of 18" Storm Sewer. Connect to existing catch basin.

ESTIMATED QUANTITIES
Concrete for Structures Class "E." 0.30 Cu.Yds.
18" Storm Sewer Pipe. 36 Lin.Ft.
Structure Excavation. 2 Cu.Yds.

Excavation 5577 Cu.Yds.
Embankment 113 Cu.Yds.
Seeding 4093 Sq.Yds.

